FLEMING AND SONS CONCRETE YARD PROJECT

CLASS 32 EXEMPTION CHECKLIST

Planning Application No. 2023-19
Industrial Design Review No. 2023-02
Conditional Use Permit No. 2023-09

Lead Agency:

City of Lake Elsinore
Community Development Department
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Acronym List

ADA	Americans with Disabilities Act
ADT	Average Daily Trips
AQMP	Air Quality Management Plan
AB	Assembly Bill
AFY	Acre-Feet Yearly
APN	Assessor Parcel Number
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CMU	Concrete Masonry Unit
CO	Carbon Monoxide
CY	Cubic Yards
dBA	A-weighted decibel
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FTA	Federal Transit Administration
GPCD	Gallons per day per capita
GHG	Greenhouse Gas
HVAC	Heating, Ventilation and Air Conditioning
ITE	Institute of Transportation Engineers
kBTU	thousand British thermal units
kWh	kilowatt-hour
LCFS	Low Carbon Fuel Standard
LEMC	Lake Elsinore Municipal Code
LID	Low Impact Development
LOS	Level of Service
LST	Local Significance Thresholds
MBTA	Migratory Bird Treaty Act
MG	Million Gallons
mgd	million gallons per day
MLD	Most Likely Descendant
MTCO2e	metric tons carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System

NAHC	Native American Heritage Commission
NOx	Nitrous Oxides
OPR	Governor's Office of Planning and Research
PM	Particulate Matter
PPV	peak particle velocity
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SLF	Sacred Lands File
SOx	Oxides of Sulfur
SR	State Route
SRA	Source Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminant
TAZ	Traffic Analysis Zone
VdB	velocity in decibels
VMT	Vehicle Miles Traveled
TIA	Traffic Impact Analysis
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
UWMP	Urban Water Management Plan
WDRs	Waste Discharge Requirements
WQMP	Water Quality Management Plan

1.0 INTRODUCTION

The applicant for the proposed Project is requesting approval from the City of Lake Elsinore to construct a one-story 7,500 square foot building with associated parking, circulation, landscaping, and infrastructure. The site would be used for parking, maintenance, and administrative functions for a concrete pump truck business. The City of Lake Elsinore is the Lead Agency for the proposed Project. The Lead Agency will utilize this document as evidence that the proposed Project qualifies for a Class 32 Infill Exemption, which is further described below.

1.1 PURPOSE OF THE NOTICE OF EXEMPTION

This Class 32 Infill Exemption has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.)
- California Code of Regulations, Title 14, Division 6, Chapter 3 (CEQA Guidelines, Sections 15000 et seq.).

Article 19 of the California Environmental Quality Act (CEQA) Guidelines includes, as required by Public Resources Code Section 21084, a list of classes of projects which have been determined not to have a significant effect on the environment. This document demonstrates that the proposed Project qualifies for a CEQA Exemption as an Infill Development Project (Class 32 Exemption), consistent with the provisions of CEQA Guidelines Sections 15332 and 15300.2 and provides information for City decision-makers to find that the proposed Project is exempt under CEQA.

Pursuant to CEQA Guidelines Section 15332, the Project qualifies for a Class 32 Exemption because it is: (1) consistent with the General Plan designation and policies and zoning regulations; (2) is located within the City limits, surrounded by urban uses and is less than 5 acres in size; (3) has no value for endangered, rare or threatened species; (4) would not result in any significant effects related to traffic, noise, air quality or water quality; and (5) can be adequately served by all required utilities and public services. Additionally, this document demonstrates that the Project and its circumstances would not result in any exceptions identified in CEQA Guidelines Section 15300.2.

Existing Regulations that Reduce Potential Impacts
Throughout the analysis in this Class 32 Exemption Checklist, reference is made to requirements that are applied to all development on the basis of federal, state, or local law, which effectively reduce the potential for environmental impacts to occur. Where applicable, these existing regulations are listed to show their effect in reducing potential environmental impacts.

1.2 DOCUMENT ORGANIZATION

This Class 32 Exemption Checklist includes the flowing sections:

Section 1.0 Introduction
Provides information about CEQA, its requirements for environmental review, and explains the Exemption Checklist that evaluates the potential impacts of the proposed Project to the physical environment.

Section 2.0 Project Setting
Provides information about the Project's location, a description of existing site uses, and identifies the existing General Plan and zoning designations.

Section 3.0 Project Description
Includes a description of the Project's physical features, along with construction and operational activities. Describes anticipated approvals and permits needed for implementation of the proposed Project.

Section 4.0 Class 32 Infill Exemption Requirements
Provides the CEQA Guidelines detailing the types of projects exempt from CEQA review related to urban infill development and exceptions to the exemptions.

Section 5.0 Proposed Project CEQA Exemption Compliance Analysis
Includes the Exemption Checklist and evaluates the Project's potential to result in significant adverse effects to the physical environment and identifies applicable regulations.

Section 6.0 References
Includes a list of sources that were used in preparation of this CEQA document.

2.0 PROJECT SETTING

2.1 PROJECT LOCATION

The Project site is located to the southwest of the W. Minthorn Street and N. Riley Street intersection in the southcentral portion of the City of Lake Elsinore, as shown in Figure 1, *Regional Location*. Regional access to the site is provided by Interstate 15 (I-15) and the Main Street interchange, which is located approximately 0.3 mile east/northeast of the site. The Project location is shown in Figure 2, *Local Vicinity*.

The Project site is identified as Assessor Parcel Numbers (APNs): 377-232-006, 007, and 009; and is located within the La Laguna (Stearns) land grant of the Elsinore United States Geological Survey (USGS) 7.5' topographic quadrangle. The center point latitude and longitude for the Project site are 33° 40' 39.7418" North, 117° 19' 37.8928" West.

2.2 EXISTING PROJECT SITE

The 1.65-acre Project site is an undeveloped triangular shaped parcel that is located adjacent to two roadways and a paved trail/bikeway that is followed by the Temescal Wash, as shown in Figure 3, *Aerial View*. The site is covered in gravel and comprised of sparse non-native vegetation. Two of the three sides of the site are bound by chain linked fencing. The site is relatively flat with elevations ranging from 1,263 feet to 1,283 feet above mean sea level (AMSL).

2.3 EXISTING LAND USES AND REGULATORY SETTING OF THE PROJECT SITE

The Project site has a City of Lake Elsinore General Plan land use designation of Historic District Business Professional and a Zoning designation of Limited Manufacturing District (M-1) and surrounding development consists of light industrial uses, undeveloped parcels, and a paved trail/bikeway that is followed by an undeveloped easement and then the Temescal Wash that is identified as a floodway. Zoning of the Project site and surrounding areas are shown in Figure 4

2.4 SURROUNDING LAND USES

The Project site is located within a fully developed area. The surrounding land uses and zoning are described in Table 1.

Table 1: Surrounding Existing Land Uses and Designations

Direction	Existing Land Use	General Plan Land Use Designation	Zoning Designations
North	Light industrial and undeveloped parcel	Limited Industrial (LI)	Manufacturing District (M-1)
East	Light industrial	Historic District Business Professional (BP)	Manufacturing District (M-1)
Southeast	Light industrial and undeveloped parcel	Historic District Business Professional (BP)	Manufacturing District (M-1)

Direction	Existing Land Use	General Plan Land Use Designation	Zoning Designations
Southwest/West	Paved trail/bikeway that is followed by an undeveloped easement and the Temescal Wash.	Historic District Floodway (F)	Floodway (F)

Figure 1: Regional Location

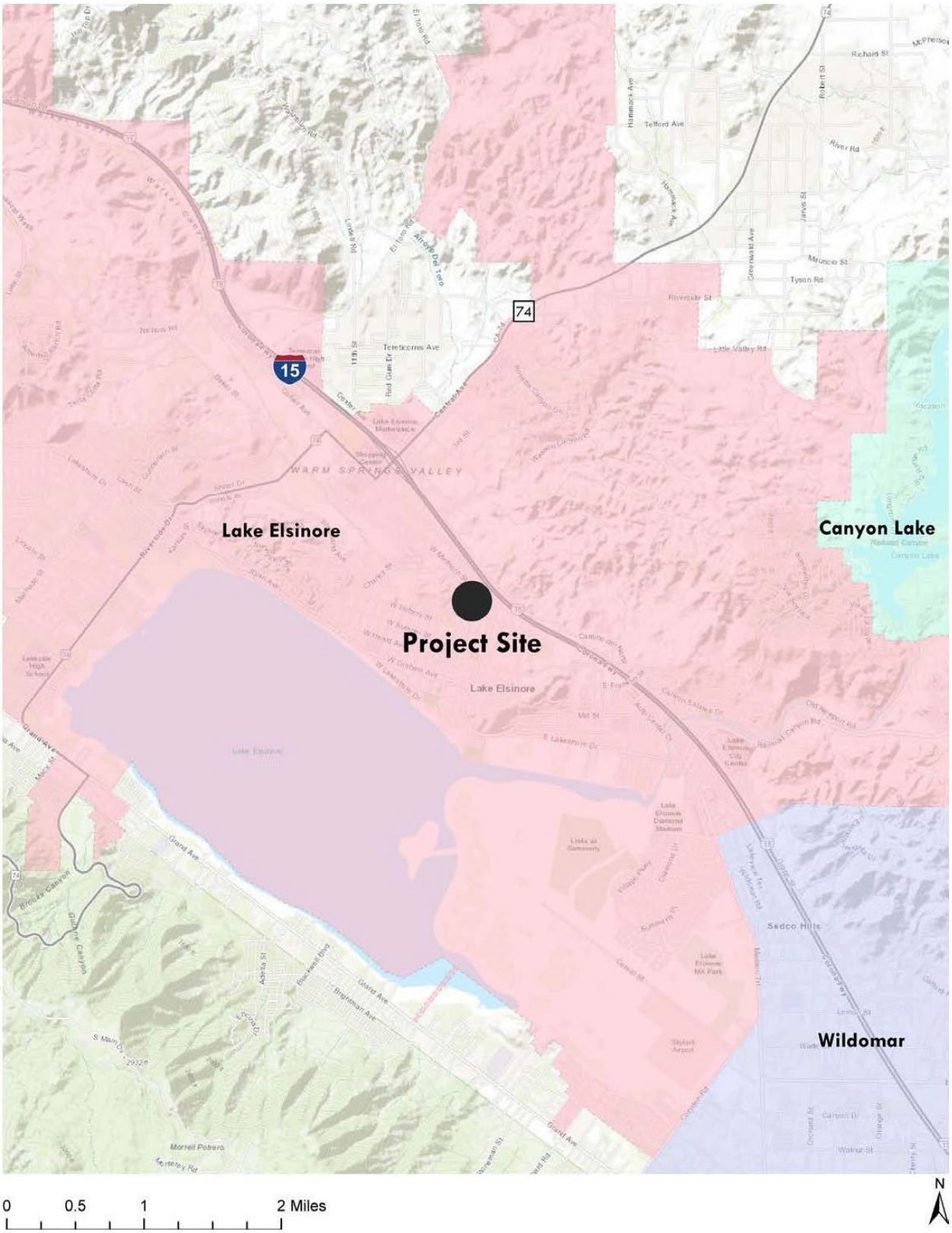


Figure 2: Local Vicinity

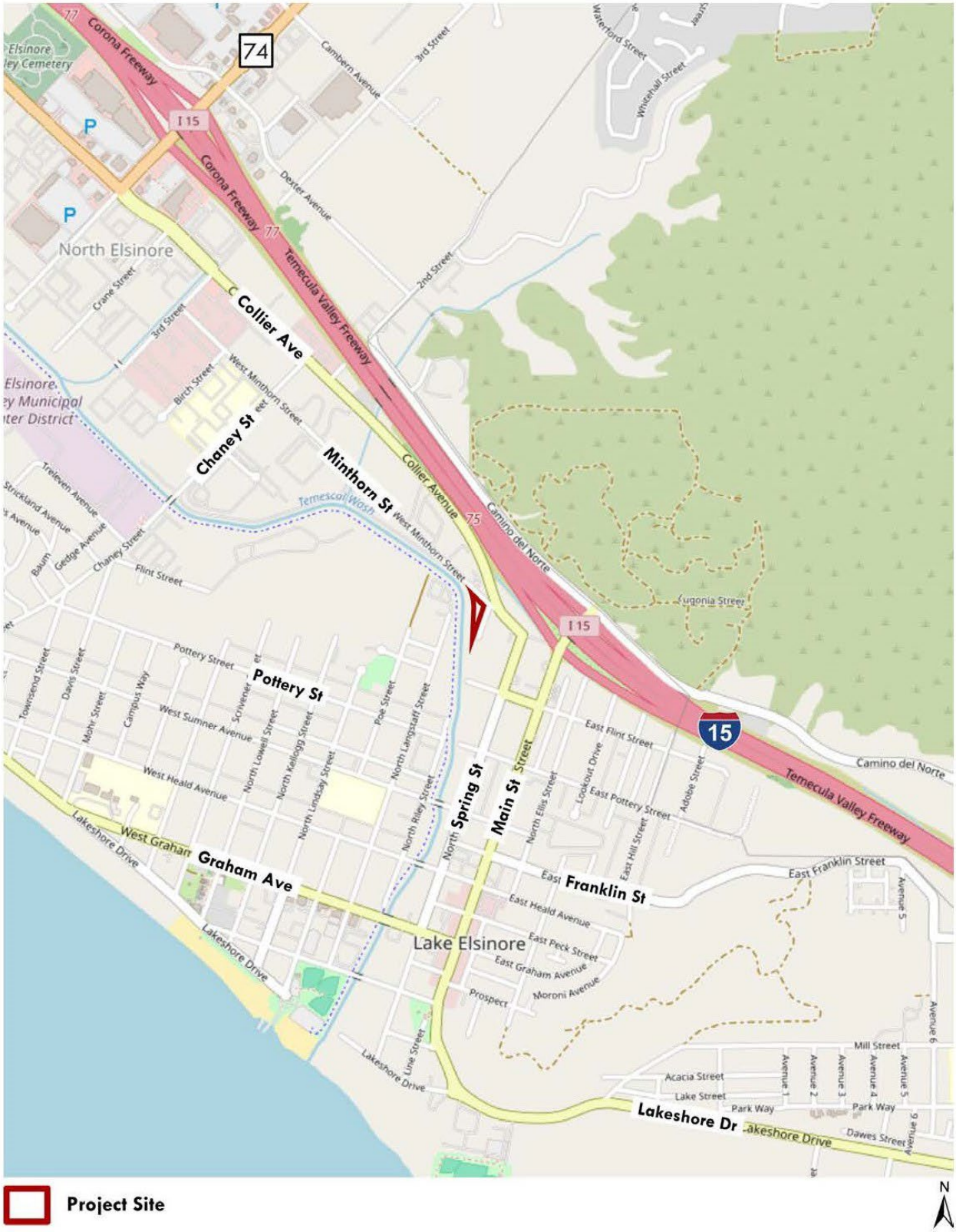
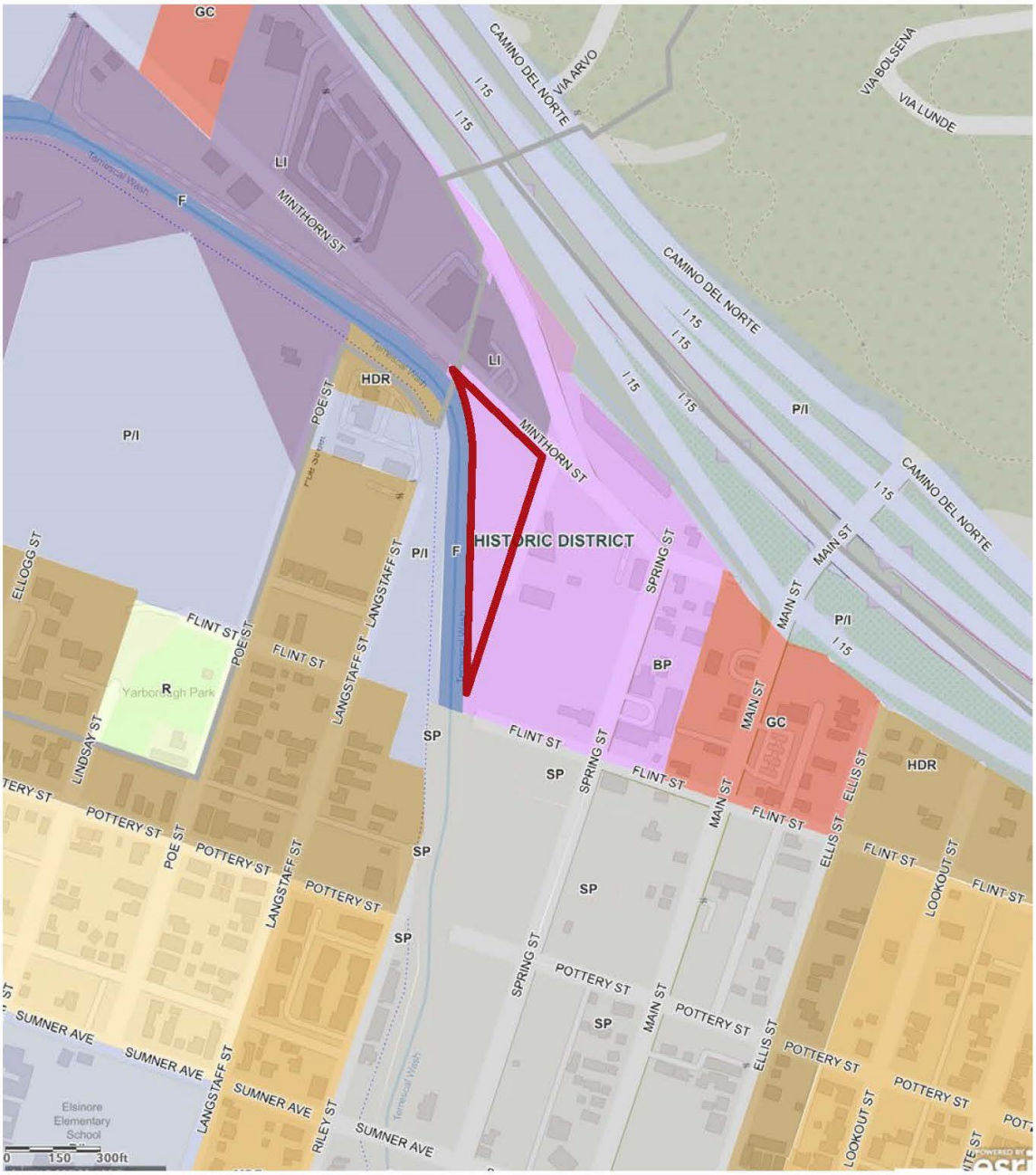


Figure 3: Aerial View

Figure 4: Project Site and Surrounding Zoning Designations



3.0 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The proposed Project would develop the site with a new concrete pumping truck parking yard with a one-story 7,500 square foot premanufactured steel building, parking for 12 concrete pump trucks, 13 passenger vehicles, one loading space, and site landscaping. The Project site would be bound by walls and landscape buffers along W. Minthorn Street and N. Riley Street. Other improvements include installation of a bioretention basin to capture, filter, and infiltrate stormwater; and curb, and gutter improvements. Access to the Project site would be provided by two driveways along N. Riley Street. The proposed Project would result in a Floor Area Ratio (FAR) of 0.10, which is within the allowable FAR of 0.45 of the M-1 zone. The Project requires approval of a Conditional Use Permit (CUP) and Industrial Design Review (IDR).

3.2 PROJECT FEATURES

Building Structure
The proposed Project would develop the site with a one-story 7,500 square foot premanufactured steel building that would be 125 feet in length and 60 feet in width, as shown in Figure 5, *Conceptual Site Plan*. The building would have a maximum height of 20-feet 6-inches. The building would contain approximately 1,000 square feet of office space, three concrete truck vehicle maintenance bays with roll up doors, restrooms, and storage areas.

The building would be constructed with galvanized metal panel walls and painted fiber cement wall panels. Windows and doors would have painted steel awnings, and business signage would be provided on the north, south, and east sides of the building, as shown in Figures 6 through 8. The proposed building would have a minimum front setback of 20 feet in compliance with Lake Elsinore Municipal Code (LEMC) Chapter 17.136.070.

Off-Street Parking
The Project includes 12 concrete pump truck parking spaces, 13 vehicle parking spaces, and one loading space.

Access and Circulation
The proposed Project would be accessed through two gated driveways along N. Riley Street that would provide turnaround circulation. Entrance to the site would be provided by a 40-foot-wide right-in-right-out driveway that would have a 6-foot-wide landscaped median and rolling gates. Concrete truck exit from the site would be provided by a 36-foot-wide gated driveway, as shown in Figure 5 *Conceptual Site Plan*. An interior driveway would provide access to the parking areas and the maintenance bays and would be a minimum of 24 feet wide and meet emergency access requirements.

Lighting
Outdoor lighting included as part of the Project would be typical of light industrial uses and would consist of primarily wall-mounted lighting and parking lot lighting. All the Project's outdoor lighting would be directed downward and shielded to minimize off-site spill in compliance with LEMC Section 17.112.040.

Landscaping
The proposed Project would include landscaping around the proposed building, parking areas, and driveways. The Project would have a 6-foot-wide landscape median and 15 to 25-foot-wide landscape buffers along N. Riley Street and W. Minthorn Street. As shown in Figure 9, *Conceptual Landscape Plan,* the landscaping would include 15-gallon and 24-inch box trees, various shrubs, and ground cover per LEMC Section 17.136.100. Landscaping would be drought tolerant, in compliance with the City's landscaping regulations.

Walls and Gates
The Project includes installation of a 6-foot-high concrete masonry unit (CMU) retaining wall to be located along the western boundary of the site. The proposed retaining wall would replace the existing chain linked fence and would be adjacent to the existing off-site paved trail/bikeway and set back 20 to 25-feet from the start of the slope that leads down to Temescal Wash.

The Project would also install a 6-foot-high CMU wall along N. Riley Street and an 8-foot-high CMU wall along W. Minthorn Street, which would both be set back behind 15 to 25-foot-wide landscape buffers. The Project would install 6-foot-high rolling gates at both of the proposed driveways on N. Riley Street.

Infrastructure Improvements
The proposed Project would install new utilities on the Project site that would serve the Project and connect to existing offsite infrastructure.

Water and Sewer: The proposed Project would install onsite water lines and sewer lines that would connect to the existing water and sewer lines in N. Riley Street.

Drainage: The proposed Project would install an onsite drainage and bioretention system to capture and treat stormwater. Stormwater on the Project site would be conveyed to landscape areas and onsite storm drains that would drain to two proposed bioretention basins that would collect, treat, and infiltrate runoff into the site soils.

Roadway Improvements: The proposed Project would remove and replace the existing roadway pavement along the street frontages of N. Riley Street and W. Minthorn Street and would install a sidewalk with a curb and gutter.

3.3 PROJECT OPERATIONS

The Project would provide for storage and operation of 10-12 concrete pump trucks. Each day most of the trucks would leave the site for work. Trucks that are not working would receive light duty maintenance such as tires, pipes, hoses, check and maintain fluids, fix mirrors or windshields, etc. to be ready for use the following day. No major repair work would be completed on the site and no fueling would occur onsite.

After leaving the Project site, concrete pump trucks meet concrete mixing trucks at jobsites to mix and convey concrete to construction areas. The concrete pump trucks would be washed offsite before returning to the Project site. The proposed office area would be used by sales and parts ordering personnel. Typical operations are planned to occur from 4:00 AM to 6:00 PM and would involve approximately 10-12 employees working on the site and an additional 12 truck drivers.

3.4 GENERAL PLAN LAND USE AND ZONING

The Project site has City of Lake Elsinore General Plan land use designation of Historic District Business Professional. The General Plan states that the Business Professional designation provides for office and administrative uses, light industrial, research and development, office-based firms, including office support facilities, restaurants, medical clinics, public and quasi-public uses, and similar and compatible uses. The General Plan states that the FAR shall not exceed 0.45. The Project proposes to develop a 7,500 square foot building on the 1.65-acre site, which would result in a FAR of 0.10.

The Project site has a zoning designation of Limited Manufacturing District (M-1), which allows the development of light industrial uses that are relatively free of nuisance or hazardous characteristics and to protect these areas from intrusion by residential, commercial, and other inharmonious uses. The M-1 zone allows buildings to be a maximum of 40-feet in height. As further detailed herein, the Project is consistent with the M-1 development standards. Thus, the proposed Project is consistent with the existing land use and zoning designations of the Project site.

3.5 PROJECT CONSTRUCTION

Construction activities for the Project would occur over one phase lasting approximately eight months and in the following stages: (1) site preparation; (2) grading and excavation; (3) building construction; (4) paving; and (5) application of architectural coatings. The Project would require 2,500 cubic yards of exported soil during the grading phase. Table 2 details total working days for each phase of construction for analytical purposes. Construction activities would be limited to the hours allowable by LEMC Section 17.176.080, which prohibits construction activities between the hours of 7:00 p.m. and 7:00 a.m. or at any time on weekends or on holidays.

Table 2: Construction Schedule

Construction Phase	Working Days
Site Preparation	2
Grading	4
Building Construction	200
Paving	10
Architectural Coating	10

3.6 DISCRETIONARY APPROVALS AND PERMITS

The following discretionary approval and permits are anticipated from the City of Lake Elsinore to be necessary for implementation of the proposed Project:

- Approval of a Conditional Use Permit (CUP) for outdoor storage
- Approval of an Industrial Design Review (IDR) for construction of a new industrial building
- Adoption of this Class 32 Exemption with the determination that the exemption has been prepared in compliance with the requirements of CEQA
- Approvals and permits necessary to execute the proposed Project, including but not limited to, grading permit, building permit, etc.

Figure 5: Conceptual Site Plan

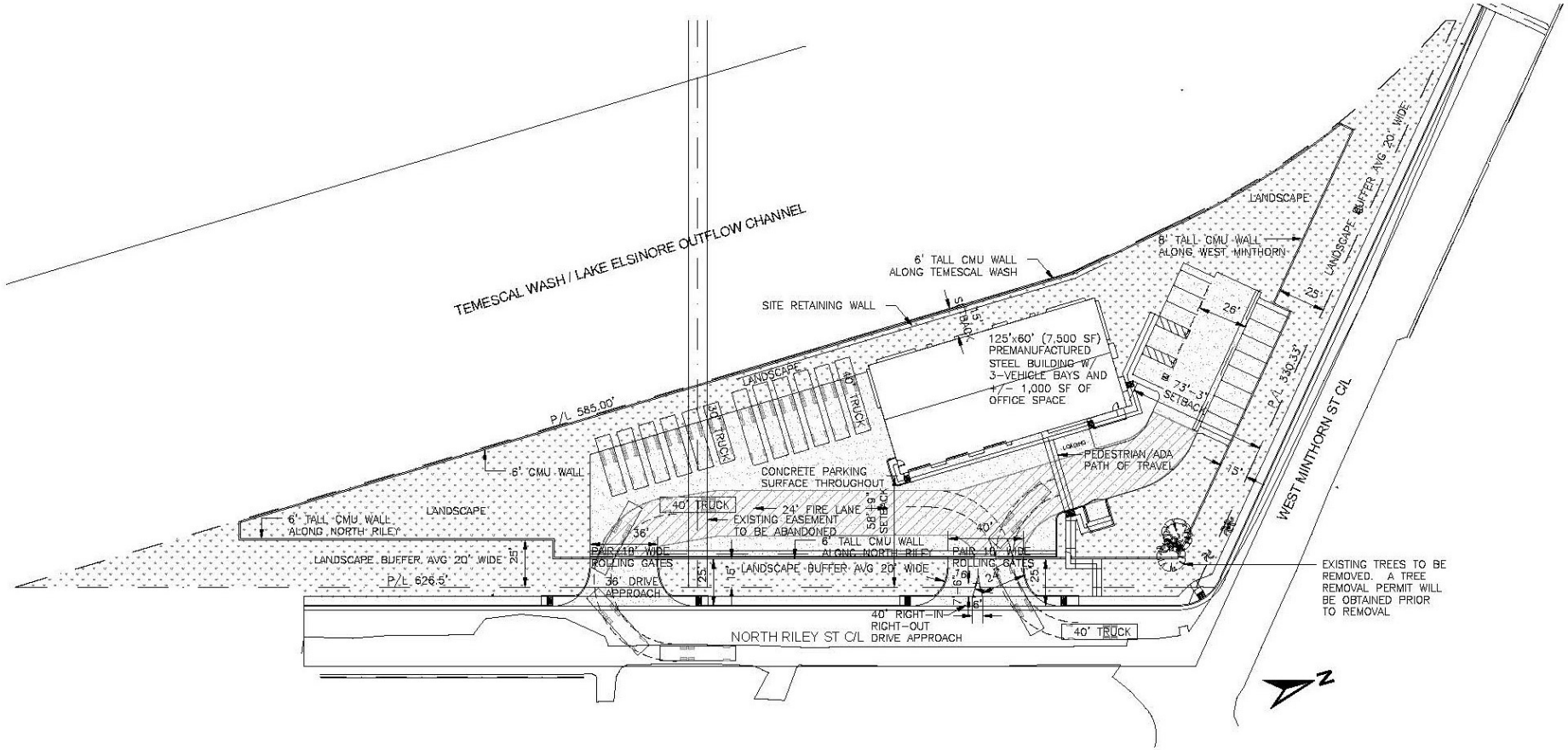


Figure 6: Building Elevations

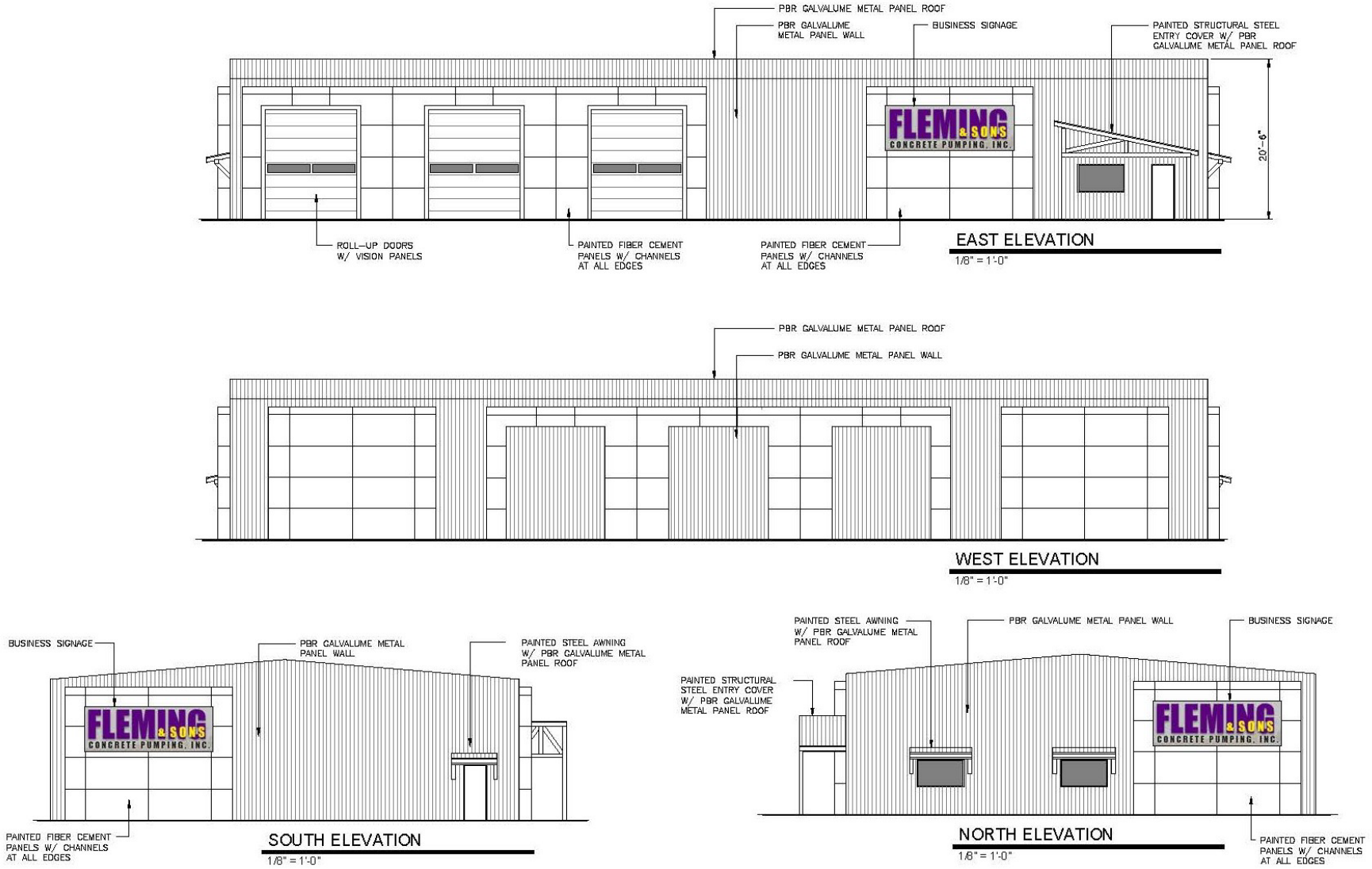


Figure 7: Northeast Elevation

NORTHEAST ELEVATION

Figure 8: Southwest Elevation

SOUTHWEST ELEVATION

Figure 9: Conceptual Landscape Plan

PLANT PALLETTE

SYMBOL	BOTANICAL NAME/COMMON NAME	SIZE	QTY.	WATER USE FACTOR
PROPOSED TREES:				
	PARKINSONIA 'DESERT MUSEUM' / DESERT MUSEUM PALO VERDE	24" BOX	8	0.2
	QUERCUS AGRIFOLIA / COAST LIVE OAK	24" BOX	21	0.2
	PINUS ELDARICA / AFGHAN PINE	15 G. / 24" BOX	30 / 15	0.2
	STREET TREE - 50' MAX. SPACING - GEIJERA PARVIFOLIA / AUSTRALIAN WILLOW	24" BOX	14	0.2
	NOTE: PROVIDE A PRE-APPROVED ROOT BARRIER FOR ALL TREES PLANTED WITHIN 8'-0" OF HARDSCAPE OR WALLS AND PROVIDE A MINIMUM OF 3'-0" CLEARANCE BETWEEN TREE TRUNK AND ADJACENT STRUCTURE OR WALLS			
PROPOSED SHRUBS & GROUND COVER:				
	MUHLENBERGIA DUMOSA / PINK MUHLY	5 G./4' O.C.	112	0.2
	SALVIA LEUCANTHA / MEXICAN BUSH SAGE	5 G./4' O.C.	96	0.2
	HETEROMELES ARBUTIFOLIA / TOYON	5 G./6' O.C.	73	0.2
	BACCHARIS P. 'TWIN PEAKS' / DWARF COYOTE BUSH	1 G./12' O.C.	191 19,055 S.F.	0.2
	AGAVE 'BLUE GLOW' / BLUE GLOW AGAVE	5 G./3' O.C.	107	0.2
	TRICHOSTEMA LANATUM / WOOLLY BLUE CURLS	5 GAL./3' O.C.	153	0.2
	LEUCOPHYLLUM FRUTESCENS / DWARF TEXAS RANGER	5 GAL./3' O.C.	145	0.2
	ROSMARINUS O. 'LOCKWOOD DE FOREST' / DWARF ROSEMARY	1 G./12' O.C.	198 19,766 S.F.	0.2
PROPOSED VINE:				
	MACFYDENA UNGIS-CATI / CAT'S CLAW VINE	5 GAL.	19	0.2
BASINS:				
	MUHLENBERGIA RIGENS / DEER GRASS	5 GAL./4' O.C.	68 1,072 S.F.	0.2
MULCH:				
NO SYMBOL	MEDIUM SHREDDED WOOD MULCH THROUGHOUT ALL PLANTER AREAS	3" LAYER	369 CU. YDS.	N.A.

NOTES:
1. ALL PROPOSED TREES, SHRUBS, VINE, AND GROUND COVER ARE TO BE IRRIGATED WITH AN AUTOMATIC ET BASED CONTROLLER AND DRIP IRRIGATION SYSTEM.
2. WOOD MULCH DEPTH REQUIREMENT IS 3" FOR ALL PLANTER AREAS.
3. TOTAL LOT AREA: 1.65 AC. / 71,874 S.F.
   TOTAL LANDSCAPE AREA: 39,893 S.F. = 56%
4. TOTAL PARKING SPACES: 13 EA.
   TOTAL QTY OF TREES: 8 EA. = 1 / 1.65 SPACES

4.0 CLASS 32 INFILL EXEMPTION REQUIREMENTS

Article 19 of the California Environmental Quality Act (CEQA Guidelines Sections 15300 to 15333), includes a list of classes of projects that have been determined to not have a significant effect on the environment and as a result, are exempt from review under CEQA.

Class 32 Infill Exemption
One of the classes of projects exempt from CEQA review are projects that are specified as urban infill development. CEQA Guidelines Section 15332 defines the Class 32 Infill Exemption as a project that meets the following five requirements:

a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

c) The project site has no value as habitat for endangered, rare, or threatened species.

d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

e) The site can be adequately served by all required utilities and public services.

Exceptions
In addition to meeting the requirements listed above, the CEQA Guidelines Section 15300.2 provides specific instances where exceptions apply to a project that would otherwise meet the requirements for an exemption. These exceptions are:

a) Location: Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

b) Cumulative Impact: All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

c) Significant Effects: A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

d) Scenic Highways: A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e) Hazardous Waste Sites: A categorical exemption shall not be used for a project located on a site which is included on any list complied pursuant to Section 65962.5 of the Government Code.

f) Historical Resources: A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

5.0 PROPOSED PROJECT CEQA EXEMPTION

The analysis below provides substantial evidence that the Project properly qualifies for an exemption under CEQA Guidelines Section 15332 (i.e., Class 32) and, as a result, would not have a significant effect on the environment. Additionally, the analysis shows there are no exceptions to qualifying for the categorical exemption, as identified in CEQA Guidelines Section 15300.2.

a. Criterion Section 15332(a): General Plan and Zoning Consistency: *The Project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations.*

The Project site has City of Lake Elsinore General Plan land use designation of Historic District Business Professional that allows development at a FAR of 0.45. The zoning designation of the site is Limited Manufacturing District (M-1), which allows for a variety of light industrial uses with buildings up to 40-feet in height. Table 3 shows the Project's consistency with the Business Professional land use and M-1 zoning development standards. As shown, the proposed Project would meet all of the proposed development standards, including density, setbacks, lot area, building height, street frontage, and landscape buffer requirements. Therefore, the Project would be consistent with the applicable zoning regulations.

Table 3: Consistency with Applicable Land Use and Zoning Development Standards

Development Feature	General Plan or Zoning Requirement	Proposed Project Consistency
Maximum Density	FAR of up to 0.45	**Consistent.** The proposed Project would result in a FAR of 0.10
Maximum Building Height	40 feet	**Consistent.** The proposed building would be 20-feet 6-inches high.
Minimum Lot Area	20,000 SF	**Consistent.** The proposed Project site is approximately 71,874 SF.
Minimum Street Frontage	100 feet	**Consistent.** The Project site has an approximate frontage of 377 feet along W. Minthorn Street and 465 feet along N. Riley Street.
Front Setback	Average of 20-feet, no less than 15-feet in width	**Consistent.** The Project would install 15 to 25-foot-wide landscape buffer setbacks along N. Riley Street and W. Minthorn Street.
Streetside Parcel Landscaping	Minimum of 15 feet and an average of 20 feet in depth, between the parking areas and the public right-of-way	**Consistent.** The Project would install 15 to 25-foot-wide landscape buffer setbacks along N. Riley Street and W. Minthorn Street between the parking areas and the public right-of-way.

b. Criterion Section 15332(b): Project Location, Size, and Context: *The proposed development occurs within City limits on a Project site of no more than five acres substantially surrounded by urban uses.*

The Project is within the City limits of the City of Lake Elsinore, on an approximately 1.65-acre site. As shown in Figure 3 and detailed in Section 2.4, the site is surrounded by roadways to the north and east, that are followed by light industrial uses. A paved trail/bikeway that is followed by the Temescal Wash and then light

industrial uses are located to the west of the site. As the Project site is less than five acres and substantially surrounded by urban uses, it meets the criteria of CEQA Guidelines Section 15332(b).

c. Criterion Section 15332(c): Endangered, Rare, or Threatened Species: *The Project site was determined to have no value as habitat for endangered, rare, or threatened species.*

A General Biological Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis was prepared for the Project site, which is included as Appendix A. The 1.65-acre Project site is undeveloped, and the site consists of disturbed/developed habitat. The General Biological Assessment describes that the site is covered in gravel with sparse non-native vegetation such as tree of heaven (*Ailanthus altissima*), shortpod mustard (*Hirschfeldia incana*), California buckwheat (*Eriogonum fasciculatum),* and saltcedar *(Tamarix sp.)*. The General Biological Assessment did not identify any sensitive species on the site or with the potential to be present on the site and determined that impacts to sensitive species would not occur from implementation of the Project.

The General Biological Assessment also determined that the Project site does not contain any streams or drainages or riparian habitat. There are no California Department of Fish and Wildlife (CDFW), United States Army Corps of Engineers (USACE), or Regional Water Quality Control Board (RWQCB) jurisdictional waters within the Project site boundaries; and that the site does not contain any wetlands or vernal pools. Thus, no aquatic, riparian, or wetland related resources would be impacted by the proposed Project.

In addition, as a standard condition of approval, the Applicant is required to comply with Sections 3503, 3503.5, and 3513 of the California Fish and Game Code and the Migratory Bird Treaty Act (MBTA). Compliance with the California Fish and Game Code and MBTA would ensure that impacts to nesting birds and raptors, which may use vegetation, including existing scattered non-native trees, on or near the Project site for nesting, during construction would not occur.

The MSHCP Consistency Analysis (Appendix A) determined that the Project site is located outside of a MSHCP Criteria Cell. The Project site is not located within a Cell Group, or within plan-defined areas requiring surveys for criteria area species, narrow endemic species, burrowing owl (*Athene cunicularia*), amphibian species, or mammalian species. Additionally, the Project site does not contain any habitat that would be considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside MSHCP, and no vernal pools were observed within the Project boundaries. Thus, no impacts related to MSHCP compliance would occur from implementation of the Project.

The proposed Project site has no value as habitat for endangered, rare, or threatened species and meets the criteria of CEQA Guidelines Section 15332(c).

d. Criterion Section 15332(d): Significant Effects: *Approval of the Project would not result in any significant effects relating to traffic, noise, air quality, or water quality.*

TRAFFIC

The Project proposes the construction of a light industrial development that would be used for concrete trucking related uses on the Project site. The Project would provide for storage and operation of 10-12 concrete pump trucks that would travel to and from jobsites daily. In addition, office staff would travel to and from the Project site daily.

CEQA Guidelines Section 15064.3 - Determining the Significance of Transportation Impacts states that VMT is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. A VMT Screening Analysis was prepared (included in Appendix B) using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition (2021) and the *City of Lake Elsinore Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (June 2020).

As shown in Table T-1, the operation of the proposed Project would generate 88 daily trips including 7 trips during the AM peak hour and 17 trips during the PM peak hour as calculated using trip rates from the ITE.

Table T-1: Project Trip Generation

Land Use[1]	Units	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Specialty Trade Contractor	Employees	180	0.451	0.159	0.610	0.230	0.490	0.720	3.630
Passenger Cars			0.208	0.073	0.281	0.225	0.485	0.710	3.420
4+-Axle Trucks			0.005	0.005	0.010	0.005	0.005	0.010	0.210
Actual Vehicles:									
Concrete Pump Truck Storage Yard	24 Employees								
Passenger Cars:			5	2	7	5	12	17	82
4+-axle Trucks:			0	0	0	0	0	0	6
Total Trips (Actual Vehicles)[2]			**5**	**2**	**7**	**5**	**12**	**17**	**88**

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] Total Trips = Passenger Cars + Truck Trips.
Source: *VMT Screening Analysis*, Appendix B.

The City of Lake Elsinore's criteria to identify projects that would have a less-than significant impact on VMT and therefore could be screened out from further analysis includes the following:

1. Transit Priority Area (TPA) Screening: Projects which are located within a TPA are presumed to have a less than significant impact on VMT.
2. Low VMT Area Screening: This screening threshold applies to residential or office projects that are located within a low VMT-generating area, which are identified by WRCOG as traffic analysis zones (TAZ) where total daily VMT per service population performs at or below the jurisdictional average of total VMT per service population under base year (2012) conditions. Projects which are located within a low VMT-generating area are presumed to have a less than significant impact on VMT.
3. Project Type Screening: Local serving projects listed in the TIA Guidelines and projects that generate fewer than 110 net new daily vehicle trips (or 11 single-family residences) are presumed to have a less than significant impact on VMT. Also, projects that generate less than 3,000 MTCO2e per year are considered to have a less than significant impact related to VMT.

The applicability of each criterion to the proposed Project is discussed below.

Screening Criteria 1 – TPA Screening: According to the City's guidelines, projects located in a TPA may be presumed to have a less than significant impact if the floor area ratio (FAR) is 0.75 or higher, includes no more parking for residents, customers, or employees than the City code mandates, and is consistent with the Sustainable Communities Strategy (SCS). The proposed Project is not located in a TPA. The proposed Project

site is not located within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor. Therefore, the Project would not meet the TPA Screening Criteria.

Screening Criteria 2 - Low VMT Area Screening: The City Guidelines states that "Residential and office projects located within a low VMT- generating area are presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per service population that is similar to the existing land uses in the low VMT area." City Guidelines identifies low VMT generating traffic analysis zones as those that generate VMT per service population below the City of Lake Elsinore's baseline's VMT per service population.

The Western Riverside Council of Governments (WRCOG) Transportation Model was used to determine the existing VMT per service population for TAZ 1025, where the Project is located. TAZ 1025 was found to generate 29.6 VMT per service population, which is below the City of Lake Elsinore's current citywide average VMT per service population of 35.5. The Project's proposed construction-related land use is consistent with the existing land uses in TAZ 1025, such as construction and industrial employees, and is not anticipated introduce changes travel patterns in the area. The Project is located in a low VMT-generating area based on VMT per service population. Figure T-1 provides the Screening Tool output for the Project's TAZ. Therefore, the proposed Project would meet Screening Criteria 2, and impacts would be less than significant.

Screening Criteria 3 – Project Trip Generation Screening: The City's guidelines state that local serving retail projects less than 50,000 square feet, local serving projects, and projects generating fewer than 110 daily vehicle trips may be presumed to have a less than significant impact. As shown in Table T-1, the Project would generate 88 daily trips, which is less than 110. Therefore, the Project would also meet Screening Criteria 3, and impacts related to VMT would be less than significant.

Transit Services. There is no existing bus service within the Project vicinity. The closest existing bus stop is approximately 0.8 mile from the site at West Pottery Street and North Kellogg Street, which is served by Riverside Transit Agency Bus Route 8 that runs every 30 to 90 minutes, 7 days per week. The existing transit services could serve Project site employees. The proposed Project would not alter or conflict with existing transit stops and schedules, and impacts related to transit services would not occur.

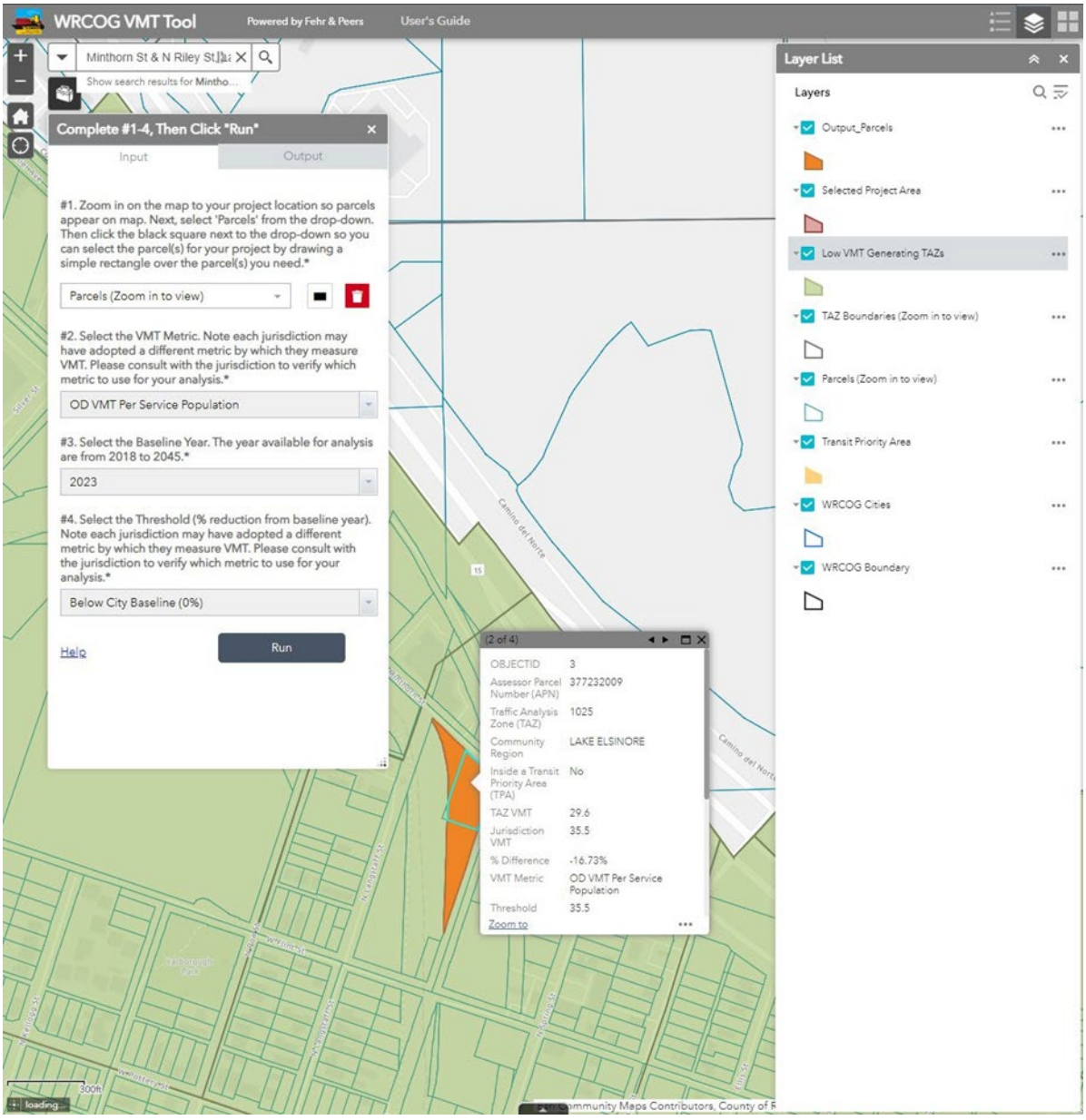
Bicycle and Pedestrian Facilities. There is no existing bicycle infrastructure such as bicycle trails/lanes on the surrounding streets. Therefore, the Project would not alter or conflict with any bicycle facilities. The Project includes installation of a new sidewalk along the site frontage of the site along both N. Riley Street and W. Minthorn Street. This would facilitate pedestrian use and walking to nearby locations. Therefore, the proposed Project would install and improve, and not conflict with, pedestrian facilities.

Emergency Access. The proposed construction activities, including equipment and supply staging and storage, would occur within the Project site, and would not restrict access of emergency vehicles to the Project site or adjacent areas. The connections to existing infrastructure systems and roadway improvements that would be implemented during construction of the proposed Project could require the temporary closure of one side or portions of N. Riley Street and W. Minthorn Street for a short period of time (i.e., hours or a few days). However, the construction activities would be required to ensure emergency access in accordance with Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), which would be ensured through the City's permitting process. The construction permitting process would ensure provision adequate

and safe circulation to, from, and through the Project site, and would provide routes for emergency responders to access different portions of the Project site. N. Riley Street and W. Minthorn Street would normally remain open and accessible to all vehicle traffic including emergency responders, except for possibly interim or partial closures for construction activities for a few hours or days with a City permit. Because the Project is required to comply with all applicable City codes, as verified by the City, potential impacts related to inadequate emergency access would be less than significant.

The proposed Project would not result in any significant effects relating to traffic; therefore, the proposed Project meets the traffic related criteria of CEQA Guidelines Section 15332(d).

Figure T-1: Low VMT Screening



NOISE

A Noise Impact Analysis (Appendix C) was prepared for the proposed Project to assess the project's potential noise and vibration related impacts. The following analysis incorporates information from the study.

Noise Terminology

- **Leq:** The equivalent sound level, which is used to describe noise over a specified period of time, typically 1-hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.
- **Lmax:** The instantaneous maximum noise level experienced during a given period of time.
- **Lmin:** The instantaneous minimum noise level experienced during a given period of time.
- **CNEL:** The Community Noise Equivalent Level, which, similar to the Ldn, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 pm to 10:00 pm and after an addition of 10 dBA to noise levels between the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.
- **Ambient Noise:** The "ambient noise level" is the background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

Noise Regulations

General Plan

The City's General Plan Public Safety and Welfare Element includes a compatibility matrix (Table 3-1) to determine if new land uses are compatible with the existing noise environment. The table identifies noise environments that are less than 70 dBA CNEL to be normally compatible with residential uses, and areas that have existing ambient noise levels above 75 dBA CNEL are considered clearly incompatible with residential uses. Commercial and industrial uses are normally compatible with noise levels up to 85 dBA CNEL.

Lake Elsinore Municipal Code

Section 17.176.060, Exterior Noise Limits, identifies the maximum permissible sound levels by receiving land use. For light industrial uses, noise levels can be 70 dBA at any time. For residential land uses, the noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 50 dBA L50 and 40 dBA L50 during the nighttime (10:00 p.m. to 7:00 a.m.) hours for:

- a cumulative period of 30 minutes in any hour (L_{50}); or
- the standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour (L_{25}); or
- the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L8); or
- the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour (L2); or
- the standard plus 20 dBA for any period of time (Lmax).

LEMC Section 17.176.060 for residential and light industrial uses are detailed in Table N-1.

Table N-1: LEMC Residential Exterior Noise Level Standards

Receiving Land Use	Condition	Based Exterior Noise Level Standards (dBA)				
		L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
Single-Family Residential	Daytime	50	55	60	65	70
	Nighttime	40	45	50	55	60
Light Industrial	Anytime	70	75	80	85	90

Section 17.176.080.F, Construction/Demolition, states that the following is prohibited:

1. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.
2. Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected residential properties will not exceed those listed in the following schedule:

   Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:

	Type I Areas Single-Family Residential	Type II Areas Multifamily Residential	Type III Areas Semi-Residential/ Commercial
Daily, except Sundays and Legal Holidays 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA

   Stationary Equipment: Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment:

	Type I Areas Single-Family Residential	Type II Areas Multifamily Residential	Type III Areas Semi-Residential/ Commercial
Daily, except Sundays and Legal Holidays 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA
Daily,7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA

Section 17.176.080.G, Vibration, states that it is prohibited to operate any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on public space or public right-of-way. However, the LEMC does not define a quantitative vibration threshold. The California Department of Transportation (Caltrans) has published thresholds that are used for construction analyses. As shown in Table N-2, the threshold at which there is a risk to older residential structures is a peak particle velocity (PPV) of 0.3. Table N-3 shows that a PPV of 0.04 is the threshold at which groundborne vibration becomes distinctly perceptible and results in an annoyance impact (California Department of Transportation, 2020).

Table N-2: Caltrans Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.08
Fragile buildings	0.10
Historic and some old buildings	0.25
Older residential structures	0.30

Source: *Noise Impact Analysis*, Appendix C.

Table N-3: Caltrans Construction Vibration Annoyance Criteria

Human Perception	Maximum PPV (in/sec)
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.10
Severe	0.40

Source: *Noise Impact Analysis*, Appendix C.

Existing Ambient Noise Levels

To document existing ambient noise levels at existing sensitive receptors in the Project area, three 15-minute daytime noise measurements were taken on November 28, 2023 and one long-term 24-hour noise measurement was taken from November 28, 2023, to November 29, 2023. Figure N-1 shows the noise measurement locations. As shown in Table N-4, the short-term ambient noise levels ranged between 53 and 67.7 dBA Leq. Table N-5 shows that the long-term measurements of hourly noise levels ranged from 49.7 to 61.3 dBA Leq. The dominant noise source is vehicle traffic associated with the I-15 Freeway, W. Flint Street, N. Spring Street, N. Langstaff and other surrounding roadways.

Table N-4: Short-Term Noise Measurement Summary (dBA)

Site Location	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
STNM1	12:23 PM	53.0	57.6	49.0	55.9	54.8	53.6	52.7
STNM2	1:17 PM	60.9	76.9	46.5	67.6	64.7	61.3	56.9
STNM3	1:50 PM	67.7	81.9	51.3	74.5	71.6	68.2	65.2

Source: *Noise Impact Analysis*, Appendix C.

Table N-5: Long-Term Noise Measurement Summary (dBA)

Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
Summary	**57.3**	**83.5**	**42.8**	**63.1**	**61.1**	**58.2**	**55.3**
4:00 PM	49.7	64.7	44.6	55.1	51.4	50.0	48.7
5:00 PM	55.1	77.4	44.4	61.9	55.7	53.8	50.3
6:00 PM	57.2	69.6	50.9	61.5	59.3	57.8	56.2
7:00 PM	61.3	71.1	53.8	64.4	63.3	62.0	60.8
8:00 PM	58.7	70.8	51.7	63.4	62.1	59.5	57.5
9:00 PM	58.6	64.5	50.8	62.7	61.4	59.6	57.9
10:00 PM	58.3	65.7	51.5	62.0	60.7	59.0	57.6
11:00 PM	57.1	65.2	47.7	61.6	60.1	58.5	56.4
12:00 AM	55.3	61.5	47.6	59.1	57.7	56.1	54.8
1:00 AM	55.3	62.1	46.2	59.5	57.9	56.3	54.7
2:00 AM	54.2	61.2	47.0	58.1	56.7	55.1	53.7

Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
3:00 AM	56.4	62.8	48.1	60.1	59.0	57.4	55.8
4:00 AM	59.8	69.7	54.4	62.8	61.6	60.6	59.5
5:00 AM	60.0	70.2	52.8	63.5	62.5	61.2	59.5
6:00 AM	61.1	76.3	53.0	64.7	63.6	62.4	60.6
7:00 AM	59.2	71.0	51.0	63.8	61.9	60.3	58.8
8:00 AM	54.7	67.3	47.8	58.8	57.1	55.6	54.0
9:00 AM	54.0	78.4	43.9	57.6	55.5	53.8	51.7
10:00 AM	53.0	62.2	42.8	58.0	56.7	54.5	51.3
11:00 AM	56.8	72.1	49.8	64.4	57.5	55.8	54.6
12:00 PM	55.2	70.2	47.7	60.3	57.7	55.5	53.9
1:00 PM	54.1	66.9	46.8	58.8	56.7	55.1	53.4
2:00 PM	58.0	83.5	44.0	63.0	56.5	52.4	49.5
3:00 PM	53.9	75.7	44.1	61.2	56.9	52.1	49.0

Source: *Noise Impact Analysis*, Appendix C.

Sensitive Receivers

Noise sensitive receivers are defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land, including: residences, schools, hospitals, churches, libraries, and recreation areas. The closest noise sensitive receptors to the Project site are the existing residences that are as close as 300 feet from the Project site.

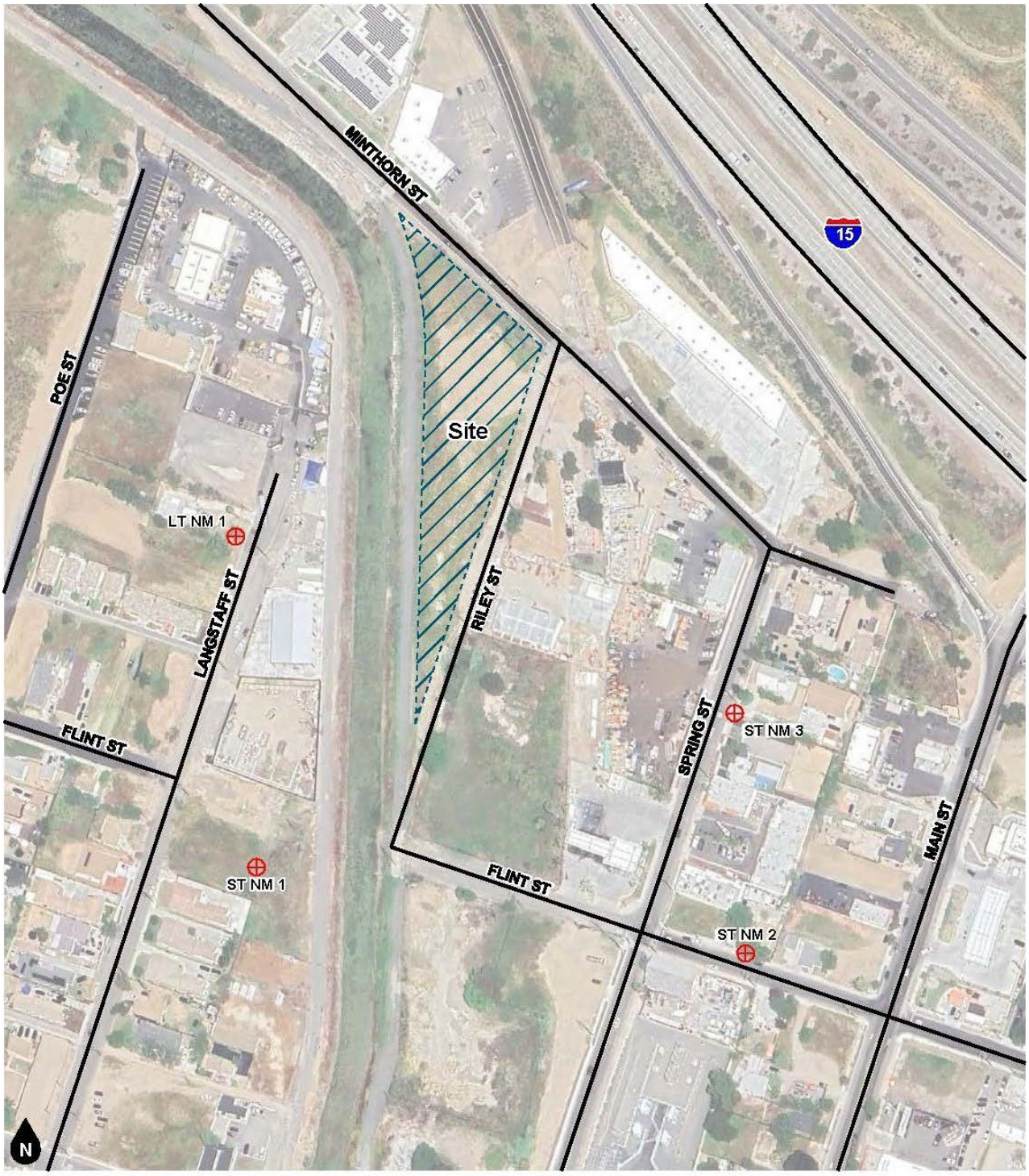
Construction Noise Impacts

The construction noise from the proposed Project would occur throughout various portions of the Project site over an eight-month period. Noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Construction is expected to occur in the following stages: site preparation, grading, building construction, paving, and architectural coating. Construction noise would not be stationary, as construction equipment would move throughout the site during various stages of each activity.

The modeled construction noise levels reach up to 66.3 dBA Leq at the nearest residential property line to the northeast (131 Minthorn Street), 65.4 dBA Leq at the nearest residential property line to the east, 62.2 dBA Leq at the nearest residential property line to the southeast, 62.6 dBA Leq at the nearest residential property line to the southwest, 69.1 dBA Leq at the nearest single-family residential property line to the west, and 66.9 dBA Leq at the nearest multi-family residential property line to the west of the Project site, as shown on Table N-6. This is below the allowable construction noise level of 75 dBA in residential areas per LEMC Section 17.167.080(f). Therefore, impacts related to construction noise would be less than significant.

In addition, construction noise would be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use. Further, per LEMC Section 17.176.080, construction activities are prohibited between the hours of 7:00 p.m. and 7:00 a.m. or at any time on weekend or on holidays. The construction activities would be in compliance with the City's construction-related noise standards.

Figure N-1: Noise Measurement Locations



Legend

NM 1 Noise Measurement Location

ST NM Short-Term Noise Measurement

LT NM Long-Term Noise Measurement

Table N-6: Project Construction Noise Levels at Nearest Sensitive Noise Receptors

Phase	Receptor Location	Noise Levels (dBA Leq)
Site Preparation	Residence to the East (131 W Minthorn St)	65.0
	Residence to East (520 N Spring St)	64.2
	Residence to Southeast (109 W Flint St)	61.0
	Residence to Southwest (416 N Langstaff St)	61.3
	Residence to West (513 N Langstaff St)	67.9
	Residence to West (508 N Langstaff St)	65.6
Grading	Residence to the east (131 W Minthorn St)	66.3
	Residence to East (520 N Spring St)	65.4
	Residence to Southeast (109 W Flint St)	62.2
	Residence to Southwest (416 N Langstaff St)	62.6
	Residence to West (513 N Langstaff St)	69.1
	Residence to West (508 N Langstaff St)	66.9
Building Construction	Residence to the east (131 W Minthorn St)	63.7
	Residence to East (520 N Spring St)	62.8
	Residence to Southeast (109 W Flint St)	59.6
	Residence to Southwest (416 N Langstaff St)	60.0
	Residence to West (513 N Langstaff St)	66.5
	Residence to West (508 N Langstaff St)	64.3
Paving	Residence to the east (131 W Minthorn St)	63.4
	Residence to East (520 N Spring St)	62.6
	Residence to Southeast (109 W Flint St)	59.4
	Residence to Southwest (416 N Langstaff St)	59.7
	Residence to West (513 N Langstaff St)	66.3
	Residence to West (508 N Langstaff St)	64.0
Architectural Coating	Residence to the east (131 W Minthorn St)	54.4
	Residence to East (520 N Spring St)	53.5
	Residence to Southeast (109 W Flint St)	50.3
	Residence to Southwest (416 N Langstaff St)	50.7
	Residence to West (513 N Langstaff St)	57.2
	Residence to West (508 N Langstaff St)	55.0

Source: *Noise Impact Analysis*, Appendix C.

Operation Noise Impacts

Onsite Operational Noise. Onsite operational noise would largely be generated by vehicles and trucks moving on the site and from heating and air conditioning units. The mechanical equipment used for maintaining the cement pump trucks would be located inside of the proposed building. Modeling of the proposed uses identified that operational noise is expected to range between 35.8 and 43.9 dBA Leq at nearby land uses and would not exceed the applicable stationary noise standards, as shown on Table N-7 and shown on Figure N-2. Therefore, impacts would be less than significant.

Table N-7: Project Operational Noise Levels At Nearest Sensitive Noise Receptors

Receiving Land Use		Time Period	Ordinance Noise Level Limits (dBA)	Measured Noise Levels	Adjusted Noise Level Limits	Project Operational Noise Level (dBA, Leq)	Exceed Threshold?
R1	Single-Family Residential	10 PM to 7 AM	40	53	55	37.8	No
		7 AM to 10 PM	50	54	55		No
R2	Single-Family Residential	10 PM to 7 AM	40	53	65	36.5	No
		7 AM to 10 PM	50	54	55		No
R3	Single-Family Residential	10 PM to 7 AM	40	68	70	39.6	No
		7 AM to 10 PM	50	54	55		No
R4	Single-Family Residential	10 PM to 7 AM	40	68	70	39.6	No
		7 AM to 10 PM	50	54	55		No
R5	Light Industrial	Anytime	70	68	70	43.9	No
R6	General Commercial	10 PM to 7 AM	60	68	70	35.8	No
		7 AM to 10 PM	65	54	65		No
R7	Single-Family Residential	10 PM to 7 AM	40	50	50	43.3	No
		7 AM to 10 PM	50	54	55		No
R8	Multiple Dwelling Residential	10 PM to 7 AM	45	50	50	41.2	No
		7 AM to 10 PM	50	54	55		No

Source: *Noise Impact Analysis*, Appendix C.
1. If the measured ambient level differs from that permissible, the allowable noise exposure standard shall be adjusted in 5 dB increments in each category as appropriate to encompass or reflect said ambient noise level.

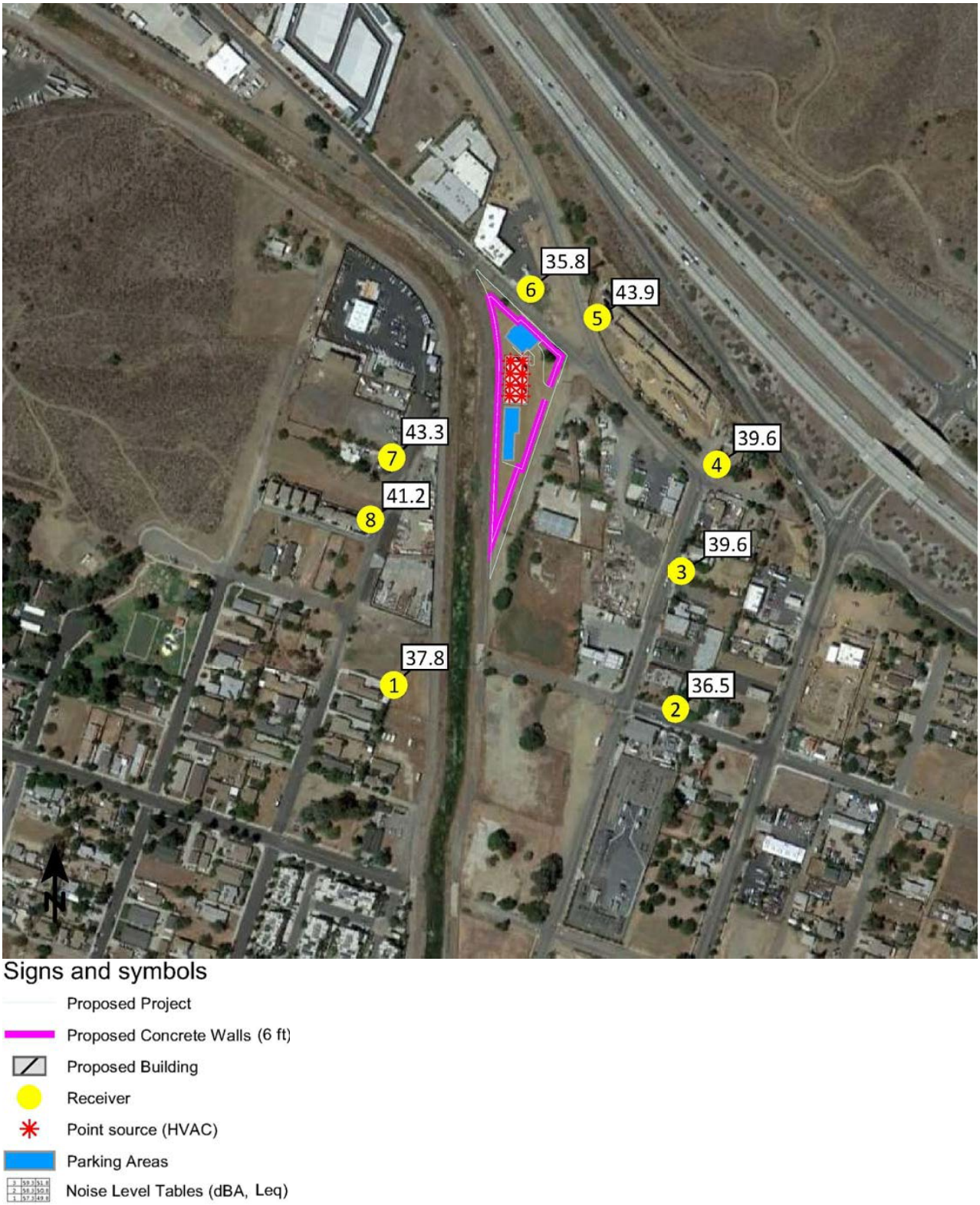
Traffic Noise. Vehicle and truck trips from operation of the Project would generate offsite noise. During operation, the proposed Project is expected to generate approximately 88 average daily trips with 7 trips during the AM peak-hour and 17 trips during the PM peak-hour. As shown in Table N-8, modeled existing traffic noise levels range between 71.14 and 72.18 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 71.24 and 72.24 dBA CNEL at the right-of-way of each study roadway segment. Thus, with implementation of the Project, offsite traffic noise levels would increase by 0.10 dBA CNEL, which is less than the 1.5 dBA CNEL threshold. Therefore, impacts related to operational traffic noise would be less than significant.

Table N-8: Project Traffic Noise Levels at Nearest Sensitive Noise Receptors

Roadway	Distance from roadway centerline to right-of-way (feet)	Modeled Noise Levels (dBA CNEL)			
		Existing Without Project at right-of-way	Existing Plus Project at right-of-way	Change in Noise Level	Increase of 1.5 dB or More?
Minthorn Street near the Project site	25	71.14	71.24	0.10	No
Riley Street south of Minthorn Street	20	72.18	72.24	0.06	No

Source: *Noise Impact Analysis*, Appendix C.

Figure N-2: Operational Noise Levels



Vibration Impacts

Construction Vibration. Construction activities for development of the Project would include excavation and grading, which have the potential to generate low levels of groundborne vibration. People residing in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. As shown in Table N-9, a vibratory roller could generate up to 0.21 in/sec PPV at and operation of a large bulldozer could generate up to 0.089 PPV at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 in/sec PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

Table N-9: Construction Equipment Vibration Source Levels

Equipment	PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Noise Impact Analysis*, Appendix C.

Based on the groundborne vibration modeling, use of a vibratory roller is expected to generate a PPV of 0.104 in/sec and use of a bulldozer is expected to generate a PPV of 0.044 in/sec at the closest off-site building, which is a commercial use located approximately 40 feet east of the Project site, which is less than the threshold of 0.3 PPV. In addition, the vibration level at the closest residence would be 0.005 PPV, which is less than the vibration annoyance criteria of 0.04 PPV. Therefore, impacts related to construction vibration would be less than significant.

Table N-10: Construction Vibration Levels at Nearest Structures

Receptor Location	Property Line to Nearest Structure (feet)	Equipment	PPV (in/sec)	Threshold Exceeded?
Commercial/Public Works to West (521 N Langstaff Street)	225	Vibratory Roller	0.008	No
	225	Large Bulldozer	0.003	No
Single-Family Residence to West (513 N Langstaff Street)	363	Vibratory Roller	0.004	No
	363	Large Bulldozer	0.002	No
Multi-Family Residence to West (508 N Langstaff Street)	352	Vibratory Roller	0.004	No
	352	Large Bulldozer	0.002	No
Single-Family Residence to Southwest (416 N Langstaff Street)	322	Vibratory Roller	0.005	No
	322	Large Bulldozer	0.002	No
Commercial to East (522 N Riley Street)	40	Vibratory Roller	0.104	No

Receptor Location	Property Line to Nearest Structure (feet)	Equipment	PPV (in/sec)	Threshold Exceeded?
	40	Large Bulldozer	0.044	No
	152	Vibratory Roller	0.014	No
Commercial to Northeast (233 Minthorn Street)	152	Large Bulldozer	0.006	No
	43	Vibratory Roller	0.093	No
Commercial to North (311 Minthorn Street)	43	Large Bulldozer	0.039	No

Source: *Noise Impact Analysis*, Appendix C.

Overall, the proposed Project would not result in any significant effects relating to noise or vibration; therefore, the proposed Project meets the noise related criteria of CEQA Guidelines Section 15332(d).

AIR QUALITY

This section is based on the Air Quality and Greenhouse Gas Assessment prepared for the proposed Project that is provided in Appendix D. The Project's construction and operational emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.20 pursuant to the South Coast Air Quality Management District (SCAQMD) methodology criteria.

Air Quality Management Plan. The Project site is located in the South Coast Air Basin, which is under the jurisdictional boundaries of the SCAQMD. The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG use land use designations contained in General Plan documents to forecast, inventory, and allocate regional emissions from land use and development-related sources.

As described in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993), for purposes of analyzing consistency with the AQMP, if a proposed project would have a development density and vehicle trip generation that is substantially greater than what was anticipated in the General Plan, then the proposed project would conflict with the AQMP. On the other hand, if a project's density is consistent with the General Plan, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with SCAQMD's attainment plans. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.

The Project site has a General Plan land use designation of Business Professional that allows development at a FAR of 0.45. The Project proposes to develop a 7,500 square foot building on the 1.65-acre site, which would result in a FAR of 0.10; and therefore, is consistent with the allowable density and would not conflict with the AQMP.

Also, as described in the analysis below, emissions generated by construction and operation of the proposed Project would not exceed thresholds. Thus, the Project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation, and no impacts would occur.

Construction Emissions. Construction activities associated with the proposed Project would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, building construction, paving, and architectural coating. The volume of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring. Construction activities would generate emissions from onsite construction equipment, haul of soils export and import of construction materials, and construction worker vehicle trips to and from the Project site during the estimated eight months of construction.

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 403 for controlling fugitive dust, PM_{10}, and $PM_{2.5}$ emissions from construction activities. Rule 403 requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the proposed project site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12-inches, and maintaining effective cover over exposed areas. Compliance with Rule 403 was accounted for in the construction emissions modeling and is ensured through the City's development permitting process.

In addition, implementation of SCAQMD Rule 1113 that governs the volatile organic compounds (VOC) content in architectural coating, paint, thinners, and solvents, would be required and is also ensured through the City's development permitting process. As shown in Table AQ-1, CalEEMod modeling results show that construction emissions generated by the proposed Project would not exceed SCAQMD regional thresholds. Therefore, construction activities would result in a less than significant impact.

Table AQ-1: Regional Construction Emissions Summary

	Maximum Daily Emissions (lbs/day)					
Source	**VOC**	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
2024 Summer	2.13	24.74	18.57	0.06	4.79	2.38
2024 Winter	7.80	17.80	21.40	0.04	0.95	0.73
Maximum Daily Emissions	**7.80**	**24.74**	**21.40**	**0.06**	**4.79**	**2.38**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: *Air Quality and Greenhouse Gas Assessment,* Appendix D

Operational Emissions. Implementation of the Project would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas and electricity consumption, landscaping, applications of architectural coatings, and consumer products. However, operational vehicular emissions would generate a majority of the emissions generated from the Project.

Operational emissions associated with the proposed Project were modeled using CalEEMod and are presented in Table AQ-2. As shown, the proposed Project would result in long-term regional emissions of the criteria pollutants that would be below the SCAQMD's applicable thresholds. Therefore, the Project's operational emissions would not exceed the national ambient air quality standards (NAAQS) or the California Ambient Air Quality Standards (CAAQS) and would not result in a cumulatively considerable net increase of any criteria pollutant. Impacts would be less than significant.

Table AQ-2: Summary of Regional Operational Emissions

Operational Source	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer						
Mobile	0.35	1.06	3.99	0.02	0.95	0.25
Area	0.23	2.75E-03	0.33	1.95E-05	5.80E-04	4.38E-04
Energy	3.06E-03	0.06	0.05	3.33E-04	4.22E-03	4.22E-03
Total Maximum Daily Emissions	**0.59**	**1.12**	**4.37**	**0.02**	**0.95**	**0.26**
SCAQMD Significance Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
Mobile	0.33	1.12	3.32	0.01	0.95	0.25
Area	0.18	0.00	0.00	0.00	0.00	0.00
Energy	3.06E-03	0.06	0.05	3.33E-04	4.22E-03	4.22E-03
Total Maximum Daily Emissions	**0.52**	**1.17**	**3.37**	**0.02**	**0.95**	**0.26**
SCAQMD Significance Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: *Air Quality and Greenhouse Gas Assessment*, Appendix D

Local Emissions. The SCAQMD recommends the evaluation of localized NO_x, CO, PM_{10}, and $PM_{2.5}$ construction-related impacts to sensitive receptors in the immediate vicinity of the Project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. The impacts were analyzed pursuant to the SCAQMD's Final Localized Significance Threshold Methodology. According to the LST Methodology, off-site mobile emissions from the Project should not be included in the emissions compared to the LSTs. SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NO_x, CO, PM_{10}, and $PM_{2.5}$ pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The Project site is located in SRA 25, Lake Elsinore.

Sensitive receptors include uses such as residences, schools, playgrounds, childcare centers, and athletic facilities. The nearest LST sensitive receptors to the Project site are the residences to the west and southwest. In addition, non-sensitive receptors are adjacent to the site, as listed below and shown in Figure AQ-1:

- Receptor R1 represents the residence at 508-C North Langstaff Street, approximately 355 feet west of the Project site.
- Receptor R2 represents the residence at 416 North Langstaff Street, approximately 455 feet southwest of the Project site.
- Receptor R3 represents a light industrial commercial building at 522 North Riley Street, approximately 61 feet east of the Project site.
- Receptor R4 represents the commercial building at 18921 Collier Avenue, approximately 65 feet north of the Project site.
- Receptor R5 represents the building at the City of Lake Elsinore Public Works facility located at 521 North Langstaff Street, approximately 212 feet west of the Project site.

Figure AQ-1: Air Quality Receptor Locations

Construction LST. The localized thresholds from the mass rate look-up tables in SCAQMD's Final Localized Significance Threshold Methodology document, were developed for use on projects that are less than or equal to 5-acres in size or have a disturbance of less than or equal to 5 acres daily and were used to evaluate LSTs. The maximum number of acres disturbed on the peak day of construction was calculated from the CalEEMod model construction equipment list, which identifies that crawler tractors, graders, and rubber-tired dozers disturb 0.5-acre in an 8-hour day and scrapers disturb 1.0-acre in an 8-hour day. It was determined that the Project's construction activities could disturb a maximum of approximately 1.5 acres per day for site preparation and 2 acres per day for grading activities. As shown in Table AQ-3, with implementation of SCAQMD Rules 403 and 1113, the maximum daily construction emissions from the proposed Project would not exceed the applicable SCAQMD LST thresholds. Therefore, impacts would be less than significant.

Table AQ-3: Localized Construction Emissions

Emissions	Maximum Daily Emissions (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Site Preparation				
Maximum Daily Emissions	16.14	14.15	2.81	1.67
SCAQMD Significance Thresholds	198	925	20	37
Threshold Exceeded?	**No**	**No**	**No**	**No**
Grading				
Maximum Daily Emissions	18.50	16.24	3.13	1.85
SCAQMD Significance Thresholds	234	1,110	24	41
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: *Air Quality and Greenhouse Gas Assessment,* Appendix D

Operational LST. The localized operational emissions from the proposed Project were modeled to identify a maximum potential impact from the Project. Table AQ-4 shows all of the onsite stationery and mobile sources of emissions. As detailed, emissions resulting from operation of the proposed Project would not exceed the localized thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, operational LST impacts would be less than significant.

Table AQ-4: Localized Operational Emissions

Onsite Emissions	Maximum Daily Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	0.20	0.98	0.02	0.01
SCAQMD Localized Threshold	371	1,965	15	4
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: *Air Quality and Greenhouse Gas Assessment,* Appendix D

Greenhouse Gas Emissions: The City of Lake Elsinore has not adopted a numerical significance threshold to evaluate greenhouse gas (GHG) impacts. SCAQMD does not have approved thresholds; however, it does have draft thresholds that provides a tiered approach to evaluate GHG impacts, which includes the following:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.

- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
  - Residential and Commercial land use: 3,000 metric tons of carbon dioxide equivalent (MTCO2e) per year
  - Industrial land use: 10,000 MTCO2e per year
  - Based on land use type: residential: 3,500 MTCO2e per year; commercial: 1,400 MTCO2e per year; or mixed use: 3,000 MTCO2e per year

The SCAQMD's draft threshold uses the Executive Order S-3-05 year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 parts per million (ppm), thus stabilizing global climate. Therefore, for purposes of examining potential GHG impacts from implementation of the proposed Project, and to provide a conservative analysis of potential impacts, the Tier 3 screening level for all land use projects of 3,000 MTCO2e was selected as the significance threshold. In addition, SCAQMD methodology for evaluating a project's construction emissions are to amortize them over 30-years and then add them to the project's operational emissions to determine if the project would exceed the screening values listed above.

Project GHG Emissions. Construction activities generate sources of GHG emissions from construction equipment and workers' commutes to and from the site. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. As shown on Table AQ-5, construction of the Project is estimated to generate 6.52 MTCO2e per year from construction emissions amortized over 30 years per SCAQMD methodology.

During operations, the proposed Project would generate long-term GHG emissions from vehicular/truck trips, mechanical operations related to truck maintenance; water, natural gas, and electricity consumption; and solid waste generation. Water use results in indirect GHG emissions from the energy required to transport water from its source. Natural gas use results in the emission of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. As shown in Table AQ-5, the Project would generate approximately 246.65 MTCO2e per year, which is less than the SCAQMD threshold of 3,000 MTCO2e. Therefore, impacts would be less than significant.

Table AQ-5: Project Total GHG Emissions

Source	Emission (lbs/day)				
	CO_2	**CH_4**	**N_2O**	**R**	**Total CO_2e**
Annual construction-related emissions amortized over 30 years	6.48	2.54E-04	1.21E-04	6.40E-04	6.52
Mobile	187.83	0.01	0.02	0.25	193.74
Area	0.15	6.38E-06	1.31E-06	0.00	0.15
Energy	40.60	3.78E-03	3.61E-04	0.00	40.80
Water	1.86	0.04	1.05E-03	0.00	3.26
Waste	0.62	0.06	0.00	0.00	2.18
Refrigerants	0.00	0.00	0.00	2.05E-03	2.05E-03
Total CO_2e (All Sources)	**246.65**				

Source: *Air Quality and Greenhouse Gas Assessment,* Appendix D

Project Compliance with Applicable GHG Policies. The proposed development Project would comply with state programs that are designed to be energy efficient. The proposed Project would comply with all mandatory measures under the California Title 24, California Energy Code, and the CalGreen Code, which would provide efficient energy and water consumption. The City's administration of the requirements includes review of the energy conservation measures during the permitting process, which ensures that all requirements are met.

The City of Lake Elsinore adopted a Climate Action Plan (CAP) in 2011. Table AQ-6 provides an analysis of the proposed Project's consistency with the policies in the City's CAP.

Table AQ-6: Project Consistency with the City's Climate Action Plan

CAP Measure	Applicability to Proposed Project	Consistency
Measure T-1.2: Pedestrian Infrastructure	Not Applicable	**Not Applicable.** This measure requires the installation of sidewalks along new and reconstructed streets and sidewalks or paths to internally link all uses and provide connections to neighborhood activity centers, major destinations, and transit facilities contiguous with the project site. The Project site is located within a light industrial area that does not include neighborhood activity centers, major destinations, and transit facilities contiguous with the site. However, the Project would provide pedestrian/ADA paths of travel from the vehicular parking lot to the proposed building. As such, the proposed Project would not conflict with this measure.
Measure T-1.4: Bicycle Infrastructure	Not Applicable	**Not Applicable.** This measure requires new development to implement and connect to the network of Class I, II and III bikeways, trails and safety features identified in the General Plan, Bike Lane Master Plan, Trails Master Plan and Western Riverside County Non- Motorized Transportation plan. The General Plan Figure 3.4-11 does not identify any new planned bicycle lanes along the Project site frontages. The Project does not involve bicycle infrastructure. As such, the proposed Project would not conflict with this measure.
Measure T-1.5: Bicycle Parking Standards	Not Applicable	**Not Applicable.** This measure requires the City to enforce short-term and long-term bicycle parking standards for new non- residential developments. This measure is not applicable to the concrete pump truck Project. As such, the proposed Project would not conflict with this measure.
Measure T-2.1: Designated Parking for Fuel Efficient Vehicles	Applicable	**Consistent.** This measure requires new non-residential developments to designate 10% of total parking spaces for low-emitting, fuel-efficient vehicles. The Project would provide a total of 13 passenger vehicle spaces and 4 of these

CAP Measure	Applicability to Proposed Project	Consistency
		would be EV parking spaces. As such, the proposed Project would not conflict with this measure.
Measure T-4.1: Commute Trip Reduction Program	Applicable	**Consistent.** This measure requires the City to institute a commute trip reduction program for employers with fewer than 100 employees. This measure would be implemented with the Project's occupancy permits. As such, the proposed Project would not conflict with this measure.
Measure E-1.1: Tree Planting Requirements	Applicable	**Consistent.** This measure requires new developments to plant at minimum one 15-gallon non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings. The Project would comply with this measure as shown on Figure 9, *Conceptual Landscape Plan*. This measure is implemented by the City through the development review process, and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-1.2: Cool Roof Requirements	Applicable	**Consistent.** This measure requires new non-residential development to use roofing materials having solar reflectance, thermal emittance, or Solar Reflectance Index consistent with CALGreen Tier 1 values. This measure would be implemented by the proposed Project and verified during the development permitting process.
Measure E-1.3: Energy Efficient Building Standards	Applicable	**Consistent.** This measure requires that new construction exceed the California Energy Code requirements through either the performance-based or prescriptive approach described in the California Green Building Code. This measure is implemented by the Departments of Planning, Public Works, and Building through the development review process, and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-3.2: Energy Efficient Street and Traffic Signal Lights	Applicable	**Consistent.** This measure requires the City to work with Southern California Edison to replace existing high-pressure sodium streetlights and traffic lights with high efficiency alternatives, such as Low Emitting Diode (LED) lights; replace existing City owned traffic lights with LED lights; require any new street and traffic lights to be LED. This measure is currently being implemented by the Department of Public Works through renovation. This measure would apply to any street and/or traffic lights replaced or installed as part of the Project. This measure is implemented by the Departments of Planning, Public Works, and Building through the development review process, and conditions of

CAP Measure	Applicability to Proposed Project	Consistency
		approval. As such, the proposed Project would not conflict with this measure.
Measure E-4.1: Landscaping Ordinance	Applicable	**Consistent.** This measure requires the City to enforce the City's AB 1881 Landscaping Ordinance, which requires that landscaping be water efficient, thereby consuming less energy and reducing emissions. The proposed Project is consistent with the City's landscaping and irrigation requirements. This measure is verified by the Departments of Planning, Public Works, and Building through the development review process, and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-4.2: Indoor Water Conservation Requirements	Applicable	**Consistent.** This measure requires that development projects reduce indoor water consumption. The proposed Project is designed to be consistent with the Title 24 water conservation requirements. This measure would be verified by the Departments of Building and Planning through project permitting. As such, the proposed Project would not conflict with this measure.
Measure E-5.1: Renewable Energy Incentives	Applicable	**Consistent.** This measure facilitates the voluntary installation of small-scale renewable energy systems, such as solar photovoltaic and solar hot water systems, by connecting residents and businesses with technical and financial assistance through the City website. This measure is implemented by the Departments of Building and Planning through outreach and incentive programs. The proposed Project is designed to be consistent with the Title 24 energy requirements. The proposed Project would not conflict with this measure.
Measure S-1.4: Construction and Demolition Waste Diversion	Applicable	**Consistent.** This measure requires development projects to divert, recycle or salvage nonhazardous construction and demolition debris generated at the site, and requires all construction and demolition projects to be accompanied by a waste management plan for the project. This measure is implemented by the Departments of Planning and Building through City contracts, LEMC amendments, development and review process, and conditions of approval. The proposed Project would implement construction and demolition waste diversion, as required by Section 5.408.1 of the California Green Building Standards Code. As such, the proposed Project would not conflict with this measure.

Overall, the proposed Project would not result in any significant effects relating to air quality or greenhouse gas emissions; therefore, the proposed Project meets the air quality related criteria of CEQA Guidelines Section 15332(d).

WATER QUALITY

The Project site is located within the Santa Ana River Watershed, which includes the approximately 100-mile-long Santa Ana River and more than 50 tributaries, making it the largest river basin in Southern California. The City of Lake Elsinore is underlain by the Elsinore Groundwater Basin, which covers 40.2 square miles in western Riverside County. The City is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB), which sets water quality standards for all ground and surface waters within its region. Water quality standards are defined under the Clean Water Act (CWA) to include both the beneficial uses of specific water bodies and the levels of water quality that must be met and maintained to protect those uses (water quality objectives). Water quality standards for all ground and surface waters overseen by the RWQCB are documented in its Basin Plan, and the regulatory program of the RWQCB is designed to minimize and control discharges to surface and groundwater, largely through permitting, such that water quality standards are effectively attained.

Construction. Construction of the proposed Project would require grading and excavation of soils, which would loosen sediment, and then have the potential to mix with surface water runoff and degrade water quality. The Project includes development of a retaining wall that would be 20-25-feet from the start of the slope that leads down to Temescal Wash. Additionally, construction would use heavy equipment and construction-related chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. These potentially harmful materials could be accidentally spilled or improperly disposed of during construction and, if mixed with surface water runoff could wash into and pollute waters.

These types of water quality impacts during construction of the Project would be prevented through implementation of a stormwater pollution prevention plant (SWPPP). Construction of the Project would disturb more than one acre of soil; therefore, the proposed Project would be required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (and LEMC Section 14.08). Construction activity subject to this permit includes clearing, grading, and ground disturbances such as trenching, stockpiling, or excavation. The Construction General Permit requires implementation of a SWPPP that is required to identify all potential sources of pollution that are reasonably expected to affect the quality of storm water discharges from the construction site. The SWPPP would generally contain a site map showing the construction perimeter, proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways. An Erosion and Sediment Transport Control Plan is also required to be prepared by a qualified SWPPP developer (QSD) to be included in the SWPPP for the Project with construction Best Management Practices (BMPs) such as:

- Prompt revegetation of proposed landscaped areas;
- Perimeter gravel bags or silt fences to prevent off-site transport of sediment;
- Storm drain inlet protection (filter fabric gravel bags and straw wattles), with gravel bag check dams within paved roadways;
- Regular sprinkling of exposed soils to control dust during construction and soil binders for forecasted wind storms;

- Specifications for construction waste handling and disposal;
- Contained equipment wash-out and vehicle maintenance areas;
- Erosion control measures including soil binders, hydro mulch, geotextiles, and hydro seeding of disturbed areas ahead of forecasted storms;
- Construction of stabilized construction entry/exits to prevent trucks from tracking sediment on City roadways;
- Construction timing to minimize soil exposure to storm events; and
- Training of subcontractors on general site housekeeping.

Adherence to the existing requirements and implementation of the appropriate BMPs as ensured through the City's construction permitting process would ensure that the Project would not violate any water quality standards or waste discharge requirements, potential water quality degradation associated with construction activities would be minimized, and impacts (including those to Temescal Wash) would be less than significant.

Operations. The proposed Project includes operation of truck parking and maintenance, vehicle parking, and landscaping. Potential pollutants associated with the proposed uses include various chemicals from cleaners; truck maintenance oils, lubricants, fluids; sediment from landscaping; trash and concrete debris; and oil and grease from vehicles in the parking lots. If these pollutants discharge into surface waters, it could result in degradation of water quality. However, operation of the proposed Project would be required to comply with the requirements of the Santa Ana Regional MS4 Permit through preparation of a project-specific Hydrology Study and Water Quality Management Plan (WQMP) that describes the low-impact development (LID) infrastructure and non-structural, structural, and source control and treatment control BMPs that are included in the Project's design to protect water quality.

The Santa Ana Regional MS4 Permit regulations are included in the LEMC in Chapter 14.08. The MS4 Permit:

- Provides the framework for the program management activities and plan development;
- Provides the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment;
- Ensures that all new development and significant redevelopment incorporates appropriate Site Design, Source Control, and Treatment Control BMPs to address specific water quality issues; and
- Ensures that construction sites implement control practices that address construction related pollutants including erosion and sediment control and onsite hazardous materials and waste management.

The Santa Ana Regional MS4 Permit requires that new development and significant redevelopment projects (or priority projects), such as the proposed Project, develop and implement a WQMP that includes BMPs and LID design features that would provide onsite treatment of stormwater to prevent pollutants from onsite uses from leaving the site. A WQMP is required to be approved prior to the issuance of a building or grading permit.

The proposed Project would install an onsite drainage and bioretention system to capture and treat stormwater. Stormwater on the Project site would be conveyed to landscape areas and onsite storm drains that would drain to two proposed bioretention basins that would collect, treat, and infiltrate runoff into the site soils. The system

is required to be sized to treat runoff from the Design Capture Storm (85th percentile, 24-hour) from the Project site. The Project's WQMP would be reviewed and approved by the City to ensure it complies with the Santa Ana RWQCB MS4 Permit regulations. In addition, the City's permitting process would ensure that all BMPs in the WQMP would be implemented with the Project. Overall, implementation of the WQMP pursuant to the existing regulations would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and no new impacts would occur.

The proposed Project would not result in any significant effects relating to water quality; therefore, the proposed Project meets the water quality related criteria of CEQA Guidelines Section 15332(d).

e. Criterion Section 15332(e): Utilities: The site can be adequately served by all required utilities and public services.

The utilities necessary to construct and operate the proposed Project (electric, natural gas, trash, water, and sewage) would be adequately provided by existing utility service systems. The Project site is located in an urbanized and developed area. The proposed Project would connect to existing utility service lines surrounding the Project site. The proposed Project would install onsite 6-inch domestic water lines and 8-inch sewer lines that would connect to the existing water main and sewer line in N. Riley Street. Similarly, onsite electrical systems would be installed on the site and would connect to existing infrastructure within N. Riley Street. Trash collection services would be arranged prior to the issuance of building permits. All service confirmations would be addressed prior to occupancy. Given the Project size and its location within an area that is currently served by utilities, the site can be adequately served by all required utilities and public services. Therefore, the proposed Project meets the criteria of CEQA Guidelines Section 15332(e).

5.1 EXCEPTIONS FOR EXEMPTIONS

In addition to investigating the applicability of CEQA Guidelines Section 15332 (Class 32), this CEQA document also assesses whether any of the exceptions to qualifying for the Class 32 categorical exemption for an Infill Project are present. The following analysis compares the criteria of CEQA Guidelines Section 15300.2 (Exceptions) to the Project.

a. Criterion 15300.2(a): Location: Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

The Project does not qualify for an exemption under Classes 3, 4, 5, 6 or 11. The Project is located within an urban area, and as detailed previously, is not located within a sensitive environment. In addition, the Project would not result in any impacts on an environmental resource of hazardous or critical concern, as described throughout this Exemption Checklist document. Therefore, the exception under criterion 15300.2(a) is not applicable.

b. Criterion 15300.2(b): Cumulative Impact: *All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.*

The proposed Project would create needed employment and light industrial uses within the City on an underutilized parcel of land that is planned for Limited Manufacturing District (M-1) uses. The proposed Project would redevelop a site that is disturbed, vacant, and undeveloped, and is adjacent to existing utility infrastructure, transportation infrastructure, and within public service areas. Any construction effects would be temporary, confined to the Project vicinity, and reduced to a less than significant level by implementing existing applicable regulatory requirements, such as SCAQMD Rules and RWQCB regulations that are implemented and verified through the City's development permitting process. The Project would develop the site consistent with the City's land use plan, which would implement the City's General Plan and Zoning Code. Thus, the potential cumulative impacts of the Project have been previously evaluated in the City's General Plan EIR (SCH # 2005121019). No additional potential cumulative impacts would result from the Project. Therefore, the exception under CEQA Guidelines Section 15300.2 (b) does not apply to the proposed Project.

c. Criterion 15300.2(c): Significant Effects: A *categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.*

There are no known unusual circumstances that are applicable to the Project, and which may result in a significant effect on the environment. The proposed Project consists of the development of the site for light industrial uses within a developed area that is served by utilities and transportation. The Project site would be consistent with the City's General Plan land use and the Zoning Code requirements. Implementation of the proposed Project in a manner consistent with existing City planning and zoning would not introduce a new activity to the area that could result in a significant effect on the environment. Therefore, the exception under CEQA Guidelines Section 15300.2(c) does not apply to the Project.

d. Criterion 15300.2(d): Scenic Highways: *A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.*

The Project site is not located within a state scenic highway. However, Interstate 15 (I-15) is an Eligible State Scenic Highway and is located approximately 420 feet to the northeast of the Project site and is separated from the site by three roadways, two-story commercial/industrial buildings, landscaping, an embankment adjacent to the I-15, freeway facing billboard signs, and various powerlines and power poles. Due to the elevation difference between the site and the I-15 embankment, the angle of views from the freeway, and the intervening structures and landscaping, the potential views of the Project site from motorists on the I-15 is limited.

The proposed Project would develop the gravel covered, partially chain linked, undeveloped site with a one-story building that would be 20-feet 6-inches high. The proposed size and height of the building would blend into the existing views of the urban area and would not encroach into views related to I-15. The building would be consistent with the height of existing nearby buildings and the mature landscaping in the area. The existing buildings, billboard signs, fences, and other such structures located between the Project site and I-15 would screen views of the proposed Project. Thus, views from the I-15 of the Project site would not substantially change; and the proposed Project would not result in damage to scenic resources related to the Eligible State Scenic Highway.

In addition, the Project site is undeveloped and does not contain any historic-period structures. Similarly, the developed areas surrounding the Project site contain modern structures, manufacturing buildings, and industrial facilities that are not historic buildings. Therefore, the proposed Project would not cause damage to historic buildings within a state scenic highway. In addition, the Project site and surrounding areas are developed and do not contain rock outcroppings. Thus, scenic resources related to rock outcroppings would not occur from implementation of the Project. The trees that are located within and surrounding the Project site are non-native ornamental landscaping, which do not consist of significant scenic resources. The Project would install new drought tolerant low water use ornamental landscaping that would include groundcovers, shrubs, and trees that would be consistent with the City's landscaping requirements. The Project would not damage scenic resources related to trees within a state scenic highway. As such, no impacts to scenic resources within a state scenic highway would occur from implementation of the proposed Project. Therefore, the exception under CEQA Guidelines Section 15300.2(d) does not apply to the Project.

e. Criterion 15300.2(e): Hazardous Waste Sites: *A categorical exemption shall not be used for a project located on a site which is included on any list complied pursuant to Section 65962.5 of the Government Code.*

The Project site is a vacant undeveloped site that does not contain any identified hazardous waste. A review of the California Department of Toxic Substances Control EnviroStor database identifies that the Project site and adjacent areas do not contain hazardous waste sites and are not on any list complied pursuant to Section 65962.5 of the Government Code. Therefore, this exception is not applicable.

f. Criterion 15300.2(f): Historical Resources: *A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resources.*

CEQA defines a historical resource as something that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources; (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and CEQA Guidelines Section 15064.5[a]).

The California Register defines a "historical resource" as a resource that meets one or more of the following criteria: (1) associated with events that have made a significant contribution to the broad patterns or local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or (4) has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The Project site is a vacant undeveloped site that does not contain any structures or historic resources. The site is covered in gravel and comprised of sparse non-native vegetation. Two of the three sides of the site are bound by chain linked fencing. Thus, there are no historic or potentially historic resources on the Project site that could be impacted. The Project site is located adjacent to two roadways and a paved trail/bikeway that is followed by the Temescal Wash. Buildings beyond the adjacent roadways consist of light industrial buildings, modern commercial buildings, and undeveloped parcels; and buildings beyond the Temescal Wash consist of City Public Works uses and additional light industrial uses. Neither the site or the surrounding properties are

strongly associated with events that have made a significant contribution to the broad patterns of national or state history or with significant persons from the past. The site does not contain historic resources or yield information important to history of prehistory. As a result, the Project would not result in impacts to historic resources; and this exception under CEQA Guidelines Section 15300.2(e) does not apply to the Project.

Conclusion

On the basis of the evidence provided above, the Project is eligible for a Class 32 Categorical Exemption in accordance with Section 15332, Infill Development Projects, of the CEQA Guidelines. Because the proposed Project meets the criteria for categorically exempt infill development projects listed in CEQA Guidelines Section 15332 and it would not have a significant effect on the environment, this analysis finds that a Notice of Exemption may be prepared for the Project.

6.0 REFERENCES

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General Biological Assessment (GBA) and Western Riverside County MSHCP Consistency Analysis, prepared by Hernandez Environmental Services. Appendix A

Noise Impact Analysis, 2024. Prepared by Ganddini. Appendix C

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Appendix A: General Biological Assessment and Western Riverside County MSHCP Consistency Analysis

GENERAL BIOLOGICAL ASSESSMENT
AND
WESTERN RIVERSIDE COUNTY MSHCP
CONSISTENCY ANALYSIS
FOR
TENTATIVE TRACT MAP (TTM) 33356

CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA

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DECEMBER 2023

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APPENDICES

1.0 Introduction

HES was contracted to prepare a General Biological Assessment (GBA) and Western Riverside County MSHCP Consistency Analysis for Assessor's Parcel Numbers (APNs) 377-232-006, 377-232-007, and 377-232-009. The project site consists of approximately 1.65 acres located south of W Minthorn Street in the City of Lake Elsinore, County of Riverside, California.

1.1 Project Site Location

The project site consists of Riverside County Assessor's Parcel Numbers (APNs) 377-232-006, 377-232-007, and 377-232-009. The 1.65-acre property is located southwest of the intersection of W Minthorn Street and N Riley Street in the City of Lake Elsinore, County of Riverside, California. Specifically, the project site is located within La Laguna (Stearns) land grant of the *Elsinore* United States Geological Survey (USGS) 7.5' topographic quadrangle. The center point latitude and longitude for the project site are 33° 40' 39.7418" North, 117° 19' 37.8928" West (Figures 1 and 2, *Location Map* and *Vicinity Map*).

1.2 Project Description

The proposed project includes the construction of a new concrete pumping truck parking yard with a one-story 7,500 SF maintenance and administrative office building. The project also includes a site retaining wall along Temescal Wash, related parking lots, and storm drains (Figure 3, *Project Plans*). The project will result in impacts to the entire 1.65-acre site.

2.0 Methodology

2.1 Literature Review

HES conducted a literature review and reviewed aerial photographs and topographic maps of the project site and surrounding areas. A five-mile radius was used to identify sensitive species with the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Endangered Species Lists, and the California Native Plant Society (CNPS) rare plant lists to obtain species information for the project area. The CNDDB and USFWS critical habitat databases were utilized, together with Geographic Information System (GIS) software, to locate the previously recorded locations of sensitive plant and wildlife occurrences and designated critical habitat and determine the distance from the project site. Additionally, the Western Riverside County MSHCP was reviewed for information on known occurrences of sensitive species within Riverside County.

2.1.1 Western Riverside County MSHCP

The Western Riverside County MSHCP (Dudek and Associates 2003) is a comprehensive, multijurisdictional habitat conservation planning program for western Riverside County, California. The purpose of the Western Riverside County MSHCP is to preserve native habitats,

and to this end, the plan focuses upon the habitat needs of multiple species rather than one species at a time. The Western Riverside County MSHCP provides coverage/take authorization for some species listed under the federal or state Endangered Species Act (ESA) as well as non-listed special-status plant and wildlife species. It also provides mitigation for impacts to special-status species and their associated habitats.

Through agreements with the USFWS and California Department of Fish and Wildlife (CDFWG), 146 listed and special-status plant and animal species receive some level of coverage under the Western Riverside County MSHCP. Of the 146 covered species, the majority have no additional survey needs or conservation requirements. Furthermore, the Western Riverside County MSHCP provides mitigation for project-specific impacts to these species, thereby reducing the degree of impact to below a level of significance, pursuant to the California Environmental Quality Act (CEQA).

Several of the species covered under the Western Riverside County MSHCP have additional survey requirements. These include the riparian communities and associated species addressed in Section 6.1.2 of the Western Riverside County MSHCP document ("Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools"), plants identified in Section 6.1.3 ("Narrow Endemic Plant Species"); and plants and animal species addressed in Section 6.3.2 ("Additional Survey Needs and Procedures").

2.1.2 Project Relationship to the Western Riverside County MSHCP

The project area is located within the Western Riverside County MSHCP boundaries. The City of Lake Elsinore, acting as the lead agency for the proposed project, is a permittee under the Western Riverside County MSHCP and, therefore, is afforded coverage under the state or federal ESAs for impacts to listed species covered by the plan. The City is required to document consistency with the Western Riverside County MSHCP in conjunction with any discretionary approvals for the project. As such, this report was prepared to provide all necessary information required to determine project consistency with the Western Riverside County MSHCP.

The project site is located outside of a MSHCP Criteria Cell. The project site is not located within a Cell Group, or within plan-defined areas requiring surveys for criteria area species, narrow endemic species, burrowing owl (*Athene cunicularia*), amphibian species, or mammalian species. Additionally, the project area does not contain any habitat that would be considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside MSHCP, and no vernal pools were observed within the project boundaries.

2.2 Field Survey

On October 27, 2023, HES conducted a field survey of the site. Ambient temperature at 12:00 P.M. was 69 degrees Fahrenheit, clear skies, with winds ranging from 0 to 2 miles per hour to the northeast. The purpose of the field survey was to document the existing habitat conditions, obtain

plant and animal species information, view the surrounding land uses, assess the potential for state and federal waters, assess the potential for wildlife movement corridors, and assess the presence of constituent elements for critical habitat if present.

Linear transects spaced approximately 50 feet apart were walked across the project site for 100 percent coverage. All species observed were recorded. Global Positioning System (GPS) waypoints were taken to delineate specific habitat types, species locations, state or federal waters, and any other information that would be useful for the assessment of the project site. A comprehensive list of all plant and wildlife species that were detected during the field survey within the project site is included in Appendix A, *Species List*. Sensitive plant and wildlife species with the potential to occur within the project area are listed in Appendix B, *Species Probability List*. Representative site photographs were taken and are included within Appendix C, *Site Photographs*.

3.0 Existing Conditions and Results

3.1 Environmental Setting

The 1.65-acre project site is located adjacent to Temescal Wash, west of N Riley Street, and south of W Minthorn Street in the City of Lake Elsinore, County of Riverside, California. The site consists of commercial development to the north, Temescal Wash to the west, undeveloped land to the south, and the Interstate 15 Freeway to the north. The property is relatively flat with elevations ranging from 1,263 feet to 1,283 feet above mean sea level (AMSL).

3.2 Soils

Two soil classes are identified to occur on the project site by the USDA Web Soil Survey (Appendix D, *Soils Map*). Soils at the project site are classified as follows:

- Garretson gravelly very fine sandy loam (GdC), 2 to 8 percent slopes; and
- Waukena loamy fine sand (Wa), saline-alkali.

The soils above are not classified as hydric soils.

3.3 Plant and Habitat Communities

The 1.65-acre project site consists of disturbed/developed habitat (Figure 4, *Habitat Map*). Following is a description of this habitat type:

Disturbed/Developed

The project site contains approximately 1.65 acres of ruderal habitat. This area is covered in gravel and comprised of sparse non-native vegetation such as tree of heaven (*Ailanthus altissima*), shortpod mustard (*Hirschfeldia incana*), California buckwheat (*Eriogonum*

fasciculatum), and saltcedar (*Tamarix* sp.). The property is open but has a chain link fence around portions of the border.

3.4 Wildlife

General wildlife species documented on the project site or within the vicinity of the site includes the common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*) and American bushtit (*Psaltriparus minimus*).

3.5 Regional Connectivity/Wildlife Movement

Wildlife movement corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbances. The project area was evaluated for its function as a wildlife corridor that species use to move between wildlife habitat zones. Usually, mountain canyons or riparian corridors are used by wildlife as corridors.

The project area was evaluated for its function as a wildlife corridor that species use to move between wildlife habitat zones. The project site consists of flat, ruderal land surrounded by urban development, including disturbed land, commercial buildings, and Interstate 215. No wildlife movement corridors were found to be present on the project site.

3.6 Sensitive Biological Resources

According to the CNDDB, a total of 58 sensitive species of plants and 59 sensitive species of animals has the potential to occur on or within the vicinity of the project area. These include those species listed or candidates for listing by the U. S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS). All habitats with the potential to be used by sensitive species were evaluated during the site visit and a determination has been made for the presence or probability of presence within this report. This section will address those species listed as Candidate, Rare, Threatened, or Endangered under the state and federal endangered species laws or directed to be evaluated under the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). Sensitive species which have a potential to occur will also be discussed in this section. Other special status species are addressed within Appendix B, *Species Probability List*.

3.6.1 Sensitive Plant Resources

A total of nineteen plant species are listed as state and/or federal Threatened, Endangered, or Candidate species; are 1B.1 listed plants on the CNPS Rare Plan Inventory; or have been found to have a potential to exist on the project site. Below are descriptions of these species:

Chaparral sand-verbena

Chaparral sand-verbena (*Abronia villosa var. aurita*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is found in sandy areas of chaparral, coastal scrub, and desert dunes habitats. No habitat for this species is present on the project site. **This species is not present.**

Munz's onion

Munz's onion (*Allium munzii*) is a federally Endangered, state Threatened, and CNPS 1B.1 listed plant species. It is found in chaparral, coastal scrub, valley and foothill grasslands, cismontane woodland, and pinyon and juniper woodland. The project site does not have suitable habitat for this species. **This species is not present.**

San Diego ambrosia

San Diego ambrosia (*Ambrosia pumila*) is listed as federally Endangered and ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes wetlands in chaparral, coastal sage scrub, valley and foothill grassland. It is commonly found in sandy loam or clay soil and sometimes in alkaline soils. This species persists where disturbance has been superficial. It is also sometimes found on margins or near vernal pools. No habitat for this species is present on the project site. **This species is not present.**

Rainbow manzanita

Rainbow Manzanita (*Arctostaphylos rainbowensis*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is usually found in gabbro chaparral habitat. No habitat for this species is present on the project site. **This species is not present.**

San Jacinto Valley crownscale

San Jacinto Valley crownscale (*Atriplex coronata var. notatior*) is a federally listed endangered species and is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes playas, valley and foothill grassland, and vernal pools. It is commonly found in the alkaline areas in the San Jacinto River Valley. No habitat for this species is present on the project site. **This species is not present.**

Parish's brittlescale

Parish's brittlescale (*Atriplex parishii*) is ranked 1B.1 in the CNPS Rare Plant inventory. Its habitat includes shadescale scrub, alkali sink, riparian, playas, vernal pools and wetland. It is usually found on drying alkali flats with fine soils. No habitat for this species is present on the project site. **This species is not present.**

Thread-leaved brodiaea

The thread-leaved brodiaea (*brodiaea filifolia*) is a federally Threatened and state Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. It is found in chaparral,

cismontane woodlands, coastal sage scrub, valley and foothill grasslands, vernal pools and wetland. No habitat for this species is present on the project site. **This species is not present.**

Smooth tarplant

Smooth tarplant (*Centromadia pungens ssp. laevis*) is ranked 1B.1 in the CNPS Rare Plant Inventory. The species occurs in habitats that include alkali playa, chenopod scrub, meadows and seeps, riparian woodlands, wetlands, and valley and foothill grasslands. No habitat for this species is present on the project site. **This species is not present.**

Parry's spineflower

Parry's spineflower (*Chorizanthe parryi var. parryi*) is ranked 1B.1 in the CNPS Rare Plant Inventory. The species occurs in dry, sandy soils on dry slopes and flats, sometimes at the interface of two vegetations types, such as chaparral and oak woodland. Its habitat includes coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. No habitat for this species is present on the project site. **This species is not present.**

Slender-horned spineflower

Slender - horned spineflower (*Dodecahema leptoceras*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes chaparral, cismontane woodland, and coastal scrub (alluvial fan sage scrub). No habitat for this species exists on the project site. **This species is not present.**

San Diego button-celery

San Diego button-celery (*Eryngium aristulatum var. parishii*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes coastal scrub, valley & foothill grasslands, vernal pools, and wetlands. No habitat for this species is present on the project site. **This species is not present.**

Campbell's liverwort

Campbell's liverwort (*Geothallus tuberosus*) is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes coastal scrub, and vernal pools. No habitat for this species is present on the project site. **This species is not present.**

Tecate cypress

Tecate cypress (*Hesperocyparis forbesii*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is found on clay or gabbro, primarily on north-facing slopes and in groves often associated with chaparral habitat. Its habitat includes closed-cone coniferous forest, and chaparral. No habitat for this species is present on the project site. **This species is not present.**

Mesa horkelia

Mesa horkelia (*Horkelia cuneate var. puberula*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found in sandy or gravelly sites. Its habitat includes chaparral, cismontane woodland, and coastal scrub. No habitat for this species is present on the project site. **This species is not present.**

Coulter's goldfields

Coulter's goldfields (*Lasthenia glabrata ssp.coulteri*) is ranked 1B.1 in the CNPS Rare Plant Inventory. This species is usually found on alkaline soils in playas, sinks, and grasslands and flowers during April through May. Its habitat includes alkali playas, marsh, swamp, salt marsh, vernal pool, and wetland. No habitat for this species is present on the project site. **This species is not present.**

Parish's meadowfoam

Parish's meadowfoam (*Limnanthes alba ssp. parishii*) is a state listed Endangered species. It is ranked 1B.2 in the CNPS Rare Plant Inventory. This species is typically found in vernally moist areas and temporary seeps of highland meadows and plateaus. They are also often found bordering lakes and streams. It is found in lower montane coniferous forest, meadows and seeps, wetland, and vernal pools. No habitat for this species exists on the project site. **This species is not present.**

Spreading navarretia

Spreading navarretia (*Navarretia fossalis*) is a federally listed Threatened Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes alkali playa, chenopod scrub, marsh and swamp, vernal pools, and wetlands. This species is typically found in swales and vernal pools, often surrounded by other habitat types. No habitat for this species is present on the project site. **This species is not present.**

California Orcutt grass

California Orcutt grass (*Orcuttia californica*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. It is found in vernal pools. No habitat for this species is present on the project site. **This species is not present.**

Bottle liverwort

Bottle liverwort (*Sphaerocarpos drewiae*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found in chaparral and coastal scrub in openings on soil. No habitat for this species is present on the project site. **This species is not present.**

3.6.2 Sensitive Animal Resources

A total of sixteen animal species listed as state and/or federal Threatened, Endangered, Candidate will be reviewed in this section. Sensitive species which have a potential to occur will also be

discussed in this section. All sensitive species within a 5-mile radius of project area were reviewed and a complete list of those species are discussed within Appendix B, *Species Probabilty List*. Below are descriptions of these species:

Tricolored blackbird
Tricolored blackbird (*Agelaius tricolor)* is a state listed Threatened Species and listed by the CDFW as a Species of Special Concern. The species occupies freshwater marshes with canopies of willows and other riparian trees. This species requires open accessible water and suitable foraging space. There is no habitat for this species on the project site. **This species is not present.**

Arroyo Toad
Arroyo Toad (*Anaxyrus californicus*) is a federally listed Endangered Species and a CDFW Species of Special Concern. The most favorable breeding habitat for this species consists of slow-moving shallow pools, nearby sandbars, and adjacent stream terraces. There is no habitat for this species on the project site. **The species is not present.**

Crotch bumble bee
Crotch bumble bee (*Bombus crotchii*) is a state Candidate Endangered species. Its located in coastal California east to the Sierra-Cascade crest and south into Mexico. Its food plan genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*. There is no habitat for this species on the project site. **This species is not present.**

Burrowing owl
Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern. This species is found in coastal prairie, coastal scrub, great basin grassland, great basin scrub, Mojave Desert scrub, Sonoran Desert scrub, and valley and foothill grassland. This species is typically found in open and dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. It is a subterranean nester and is dependent upon burrowing mammals, most notably the California ground squirrel. No ground squirrel activity or burrows were observed onsite and the site was covered in gravel. The project site appears to be disturbed by weed abatement and grading. The project site does not contain suitable habitat for this species. **This species is not present.**

Vernal pool fairy shrimp
Vernal pool fairy shrimp (*Branchinecta lynchi*) is a federally listed Threatened Species. This species is found in seasonal pools of water in valley and foothill grasslands. This species typically inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools. The project site does not contain suitable habitat for this species. **This species is not present.**

San Diego fairy shrimp
San Diego fairy shrimp (*Branchinecta sandiegonensis*) is a federally listed Endangered Species. This species is found in chaparral, coastal scrub, vernal pool, and wetland habitats. There is no habitat for this species on the project site. **The species is not present.**

Swainson's hawk
Swainson's hawk (*Buteo swainsoni*) is a state listed Threatened Species. This species favors open grasslands for foraging but also occurs in agricultural settings. It relies on scattered stands of trees near agricultural fields and grasslands for nesting sites. Its habitats include great basin grassland, riparian forest, riparian woodland, and valley and foothill grassland. The project site does not contain suitable habitat for this species. **This species is not present.**

Western snowy plover
Western snowy plover (*Charadrius alexandrinus nivosus*) is federally listed Threatened species and a CDFW Species of Special Concern. It is found in great basin standing waters, sand shore, and wetland. This species needs sandy, gravelly, or friable soils for nesting. The project site does not contain suitable habitat for this species. **This species is not present.**

San Bernardino kangaroo rat
San Bernardino kangaroo rat (*Dipodomys merriami parvus*) is a federally listed Endangered Species, state listed Candidate Endangered Species, and a CDFW Species of Special Concern. It is found in coastal scrub habitat. This species is found in alluvial scrub vegetation on sandy loam substrates, characteristic of alluvial fans and flood plains. It needs early to intermediate seral stages. The project site does not contain suitable habitat for this species. **This species is not present.**

Stephen's kangaroo rat
Stephens' kangaroo rat (*Dipodomys stephensi*) is a federally listed Endangered and state listed Threatened Species. This species is found in coastal sage scrub with sparse vegetation cover, and in valley and foothill grasslands. This species prefers buckwheat, chamise, brome grass, and filaree and will burrow into firm soil. The project site does not have suitable habitat for this species. **This species is not present.**

Quino checkerspot butterfly
Quino checkerspot butterfly (*Euphydryas editha quino*) is a federally listed Endangered Species. It is found in chaparral and coastal sage scrub. This species requires high densities of food plants, including *Plantago erecta, P. insularis*, and *Orthocarpus purpurescens*. The project site does not have suitable habitat for this species. **This species is not present.**

Bald eagle

Bald eagle (*Haliaeetus leucocephalus*) is a state listed Endangered and CDFW Fully Protected species. This species is found in lower montane coniferous forest and old growth. They nest in large old-growth or tress with open branches, especially ponderosa pine (*Pinus ponderosa*). The project site does not contain suitable habitat for this species. **This species is not present.**

Steelhead-southern California DPS

Steelhead-southern California DPS (*Oncorhynchus mykiss irideus pop. 10*) is a federally listed endangered species. This species is likely to have greater physiological tolerances to warmer water and more variable conditions. Its habitats include aquatic and south coast flowing waters. The project site does not have suitable habitat for this species. **This species is not present.**

Coastal California gnatcatcher

Coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed Threatened Species and CDFW Species of Special Concern. This species is found in coastal bluff scrub and coastal scrub habitat. This species is typically found in low, coastal sage scrub in arid washes, on mesas and slopes. The project site does not have suitable habitat for this species. **This species is not present.**

California red-legged frog

California red-legged frog (*Rana draytonii*) is a federally Threatened Species and a CDFW Species of Special Concern. It is found in a variety of aquatic habitats, flowing waters, and standing waters, and requires 11-20 weeks of permanent water for larval development. The project site does not contain suitable habitat for this species. **This species is not present.**

Riverside fairy shrimp

Riverside fairy shrimp (*Streptocephalus woottoni*) is a federally listed Endangered Species. This species is found in coastal scrub, valley and foothill grassland, vernal pool, and wetland habitat. This species typically inhabits seasonally astatic pools filled by winter/spring rains. The project site does not contain suitable habitat for this species. **This species is not present.**

Least Bell's vireo

Least Bell's vireo (*Vireo bellii pusillus)* is a federal and state listed Endangered Species. This species is found in riparian forest, riparian scrub, and riparian woodland. Nesting habitat of this species is restricted to willow and/or mulefat dominated riparian scrub along permanent or nearly permanent streams. The project site does not contain suitable habitat for this species. **This species is not present.**

3.6.3 Nesting Birds

Migratory non-game native bird species are protected under the federal Migratory Bird Treaty Act. Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. The project site contains or is bordered by trees that can support nesting songbirds during the nesting bird season of February 1 through September 15.

3.7 Jurisdictional Waters

The project area does not contain any streams or drainages or riparian habitat. There are no CDFW, United States Army Corps of Engineers (USACE), or Regional Water Quality Control Board (RWQCB) jurisdictional waters within the project boundaries. Further, the project area does not contain any wetlands or vernal pools.

4.0 Project Impacts

4.1 Impacts to Habitats

The 1.65-acre project site contains disturbed/developed habitat. The construction of the pumping truck parking yard and associated development is expected to impact the entire 1.65 acres of disturbed/developed habitat on site (Figure 5, *Impacts Map*).

4.2 Impacts to Sensitive Species

No sensitive species were found to be present or have the potential to be present on site. Therefore, future development of the site will not result in impacts to sensitive species.

4.3 Impacts to Nesting Birds

Potential impacts to nesting birds may occur if ground disturbing activities or vegetation removal occur during the bird nesting season. Implementation of the measures identified in the Recommendations section of this report will ensure that potential impacts to nesting birds are less than significant.

4.4 Impacts to Critical Habitat

The project is not located within designated federal critical habitat. No impact to critical habitat is expected to occur.

4.5 Impacts to Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbances. The project site was evaluated for its function as a wildlife corridor that species would use to move between wildlife habitat zones. Typically, mountain canyons or riparian corridors are used by wildlife as corridors; the

project site does not contain these features. The project site consists of flat, ruderal land. No wildlife movement corridors were found to be present on the project site. No impacts to wildlife movement corridors are expected.

4.6 Conflict with Local Policies or Ordinances Protecting Biological Resources

Should the proposed project result in the removal of trees, it will be required to comply with County of Riverside Ordinance No. 559.

4.7 Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local, Regional, or State Habitat Conservation Plan

The project is within the Western Riverside MSHCP. If Western Riverside MSHCP guidelines and requirements are followed, no conflicts are expected.

4.8 State and Federal Drainages

The project area does not contain any streams, drainages, or riparian habitat; therefore, no impacts to state or federal jurisdictional drainages will result from project implementation.

5.0 Western Riverside County MSHCP Consistency Analysis

5.1 MSHCP Requirements

The project site is located outside of a MSHCP Criteria Cell. The project site is not located within a Criteria Cell or Cell Group. A discussion of the applicable Western Riverside County MSHCP requirements follows:

Section 6.1.2 Species Associated with Riparian/Riverine Habitat and Vernal Pools

The project site does not contain habitat that may be considered riparian/riverine areas as defined in Section 6.1.2 of the Western Riverside County MSHCP. Due to the lack of suitable riparian habitat on the project site, focused surveys for riparian/riverine bird species listed in Section 6.1.2 of the MSHCP are not warranted.

Vernal pools are seasonal depressional wetlands that occur under Mediterranean climate conditions of the west coast and in glaciated conditions of northeastern and midwestern states. They are covered by shallow water for variable periods from winter to spring but may be completely dry most of the summer and fall. Vernal pools are usually associated with hard clay layers or bedrock, which helps keep water in the pools. Vernal pools and seasonal depressions are usually dominated by hydrophytic plants, hydric soils, and evidence of hydrology.

The entire project area was evaluated for habitat that is suitable for fairy shrimp. The project area does not contain any vernal pools or seasonal depressions that can hold water at a sufficient

depth and duration so that a large branchiopod to complete its lifecycle. Further, the project area did not contain any anthropogenic features such as tire ruts, agriculture, and construction ditches, borrow pits, or cattle troughs that have the potential to hold water for a significant period of time. The project site contains no habitat suitable for large branchiopods such as fairy shrimp.

Section 6.1.3 Sensitive Plant Species

The project site is not located within the Western Riverside County MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA) pursuant to Section 6.1.3 of the MSHCP. Therefore, the NEPSSA requirements are not applicable to the project.

Section 6.1.4 Urban/Wildlands Interface Guidelines

The project site is not located within or adjacent to a Western Riverside County MSHCP Conservation Area; therefore, the project site is not required to address Section 6.1.4 of the Western Riverside County MSHCP.

Section 6.3.2 Additional Surveys and Procedures

The project site is not located within the Western Riverside County MSHCP Additional survey areas for amphibians, burrowing owls, mammals, or any special linkage areas. In addition, the project site is not located within the Western Riverside County MSHCP Criteria Area Plant Species Survey Area (CAPSSA) pursuant to Section 6.3.2 of the Western Riverside County MSHCP.

The habitat assessment found that the project site does not provide suitable burrows/nesting opportunities for burrowing owl. No suitable burrowing owl habitat or burrow surrogates such as cement culverts, or debris piles were found on site. No signs of ground squirrels were identified on the project site. The project site appears to be disturbed by weed abatement and grading. Due to disturbance and lack of ground squirrel activity on the site, the habitat assessment resulted in the finding that there is no suitable habitat for this species present on the project site.

6.0 Recommendations

Implementation of the following measures will mitigate any potential impacts resulting from project activities.

<u>Nesting Birds</u>

- It is recommended that vegetation removal be conducted during the non-nesting season for migratory birds to avoid direct impacts. The non-nesting season is between September 16 to January 31.

- If vegetation removal will occur during the migratory bird nesting season, between February 1 and September 15, it is recommended that pre-construction nesting bird surveys be performed within three days prior to vegetation removal.

- If active nests are found during nesting bird surveys, they shall be flagged, and a 200-foot buffer shall be fenced around the nests.

- A biological monitor shall visit the site once a week during ground disturbing activities to ensure all fencing is in place and no sensitive species are being impacted.

7.0 Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date 12-15-2023 Signed _____

PROJECT MANAGER

Fieldwork Performed By:

Elizabeth Gonzalez

SENIOR BIOLOGIST

Sarah Vasquez

ASSOCIATE BIOLOGIST

8.0 References

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Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed October 2023.

Western Riverside County Multiple Species Habitat Conservation Plan. Burrowing *Owl Instructions for Western Riverside Multiple Species Habitat Conservation Plan.*

Western Riverside County Multiple Species Habitat Conservation Plan. Section *6.0 MSHCP Implementing Structure.*

FIGURE 1

Figure 1

Location Map
TTM No. 33356
City of Lake Elsinore
Riverside County, California

Legend

Project Site

N

Hernandez Environmental Services

FIGURE 2

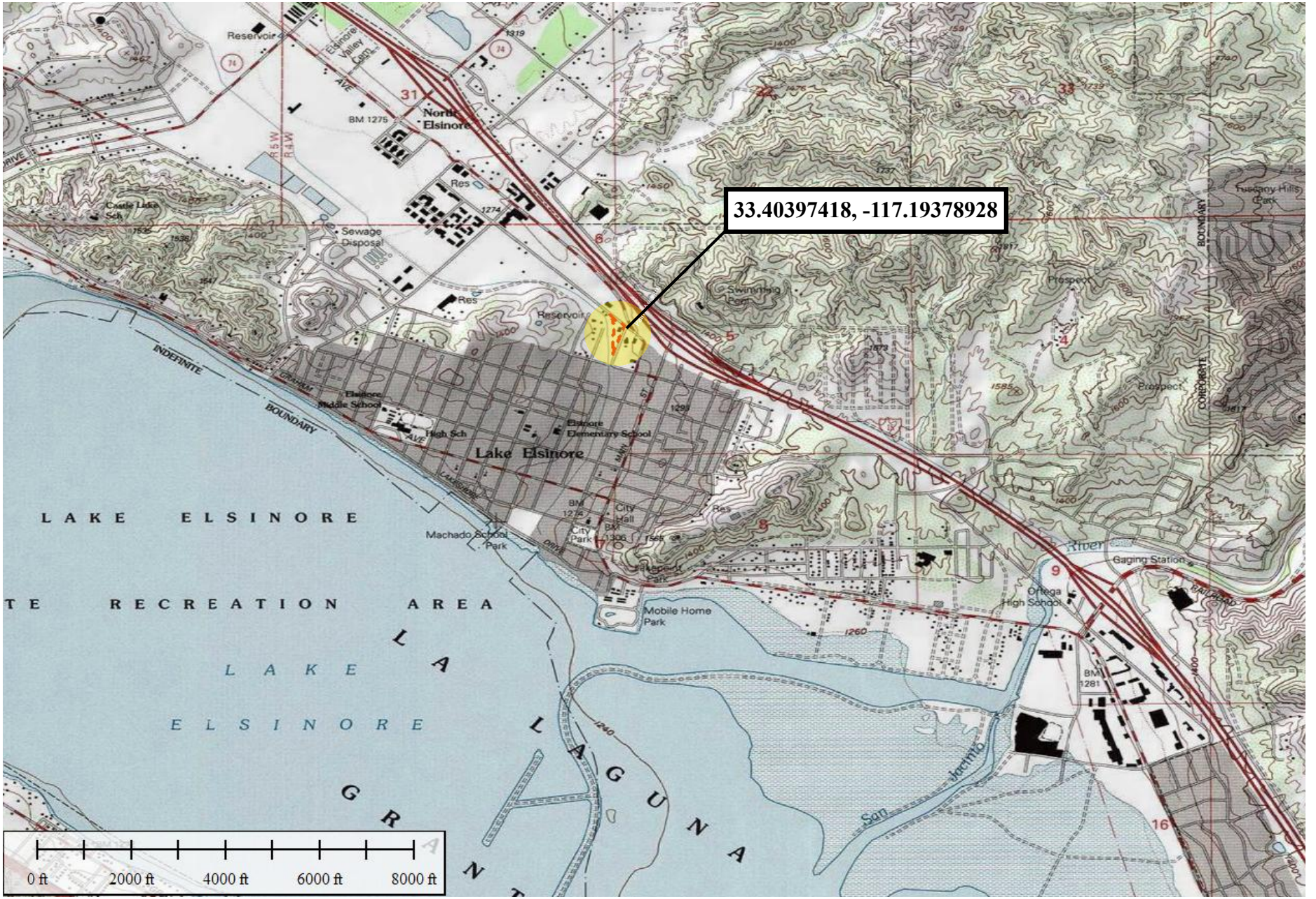


Figure 2

Vicinity Map
TTM No. 33356
City of Lake Elsinore
Riverside County, California

Legend

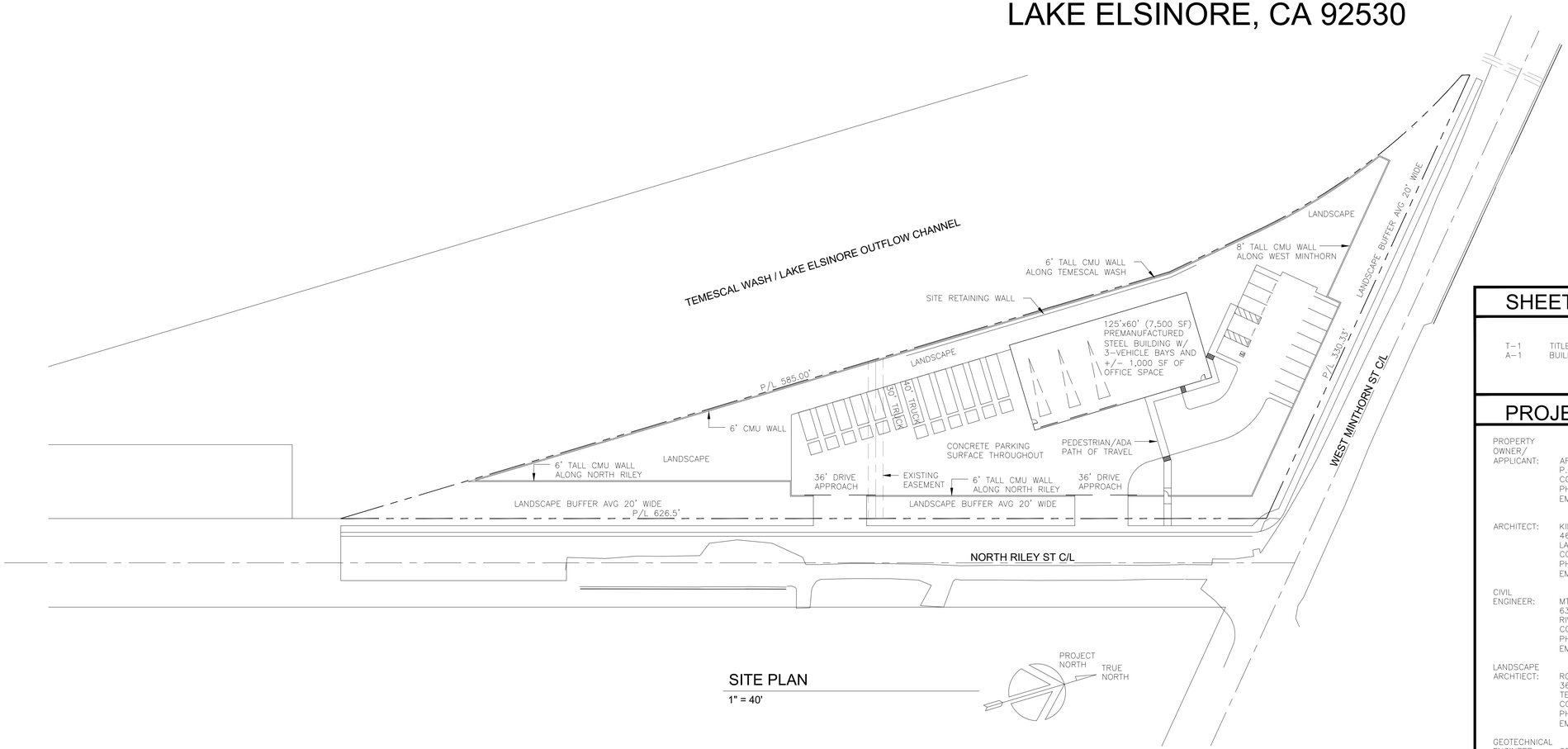
Project Site

N

Hernandez Environmental Services

FIGURE 3

AF PROPERTIES, LLC
FLEMING AND SONS CONCRETE PUMPING, INC.
TRUCK YARD
LAKE ELSINORE, CA 92530



SITE PLAN
1" = 40'

SHEET INDEX

PROJECT DIRECTORY

PROPERTY OWNER/ APPLICANT:
AF PROPERTIES, LLC
P.O. BOX 1854
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LAKEBAY, WA 98349
CONTACT: KIM QUON
PHONE: (951) 201-1271
EMAIL: KIM@KIMQUONARCHITECT.COM

CIVIL ENGINEER:
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GEOTECHNICAL ENGINEER:
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RIVERSIDE, CA 92503
CONTACT: HAYTHAM NABILSI
EMAIL: HAYTHAM@GEOMATLABS.COM

PROJECT DATA

PROJECT DESCRIPTION:

DEVELOP NEW CONCRETE PUMPING TRUCK PARKING YARD WITH ONE-STORY 7,500 SF PREMANUFACTURED STEEL MINOR MAINTENANCE AND ADMINISTRATIVE OFFICE BUILDING

PROPERTY INFORMATION:

GENERAL PLAN DESIGNATION:	HISTORIC DISTRICT BUSINESS PROFESSIONAL
ZONING DESIGNATION:	M-1 LIMITED MANUFACTURING DISTRICT
ADDRESS:	TO BE DETERMINED
APNS:	377-232-006, 377-232-007, 377-232-009
LOT AREA:	APPROX. 1.65 ACRES

BUILDING:

ONE-STORY 125'x60' (7,500 SF) PREMANUFACTURED STEEL
850 SF ADMINISTRATIVE OFFICE SPACE
410 SF STORAGE AND RESTROOMS
6,240 SF MINOR VEHICLE MAINTENANCE

OCCUPANCY AND TYPE CLASSIFICATION:

OCCUPANCY GROUPS: B AND S-1 OCCUPANCIES
TYPE OF CONSTRUCTION: TYPE VB SPRINKLERED

USE PERMIT:

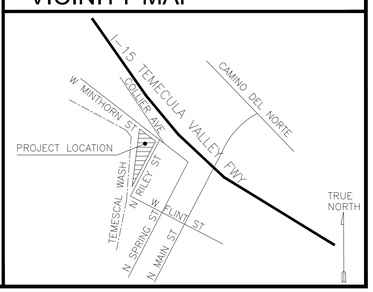
PLANNING APPLICATION NO. 2023-XXXX
CONDITIONAL USE PERMIT NO. 2023-XXXX

APPLICABLE CODES

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA FIRE CODE

AS MODIFIED BY THE CITY OF LAKE ELSINORE

VICINITY MAP



REVISION:

LICENSED ARCHITECT
DENNIS KIM QUON
Digitally signed by Dennis Kim Quon
Date: 2023.05.17 10:41:35
Email: kim@kimquonarchitect.com
NO. C18103
EXP.11-30-23
STATE OF CALIFORNIA

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AF PROPERTIES, LLC
P.O. BOX 1854
SANTA ANA, CA

SITE PLAN

AF PROPERTIES, LLC
FLEMING & SONS
CONCRETE PUMPING, INC.

WEST MINTHORN ST / NORTH RILEY ST
LAKE ELSINORE, CA 92530

PLOT DATE: 05/17/23

EDIT DATE: 05/17/23

PROJECT: 2213

DRAWN: K.Q.

SCALE: 1" = 40'

SHEET T-1

FIGURE 4

Figure 4

Habitat Map
TTM No. 33356
City of Lake Elsinore
Riverside County, California

Legend

Project Site

Disturbed/ Developed (1.65 Acres)

N

Hernandez Environmental Services

FIGURE 5

Figure 5

Impacts Map
TTM No. 33356
City of Lake Elsinore
Riverside County, California

Legend

Project Site

Disturbed/ Developed (1.65 Acres)

N

Hernandez Environmental Services

APPENDIX A

Species List

Plant List

Ailanthus altissima	Tree of heaven
Eriogonum fasciculatum	California buckwheat
Hirschfeldia incana	Shortpod mustard
Ricinus communis	Castor bean
Tamarix sp.	Saltcedar

Animal List

Buteo jamaicensis	Red-tailed hawk
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Psaltriparus minimus	American bushtit

APPENDIX B

Scientific Name	Common Name	Taxon Group	Federal List	State List	Rare Plant Rank	Other Status	Habitats	General Habitat	Microhabitat	Presence/ Absence
Abronia villosa var. aurita	chaparral sand-verbena	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Desert dunes	Chaparral, coastal scrub, desert dunes.	Sandy areas. - 60-1570 m.	There is no suitable habitat on site. **This species is not present.**
Allium marvinii	Yucaipa onion	Monocots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral	Chaparral.	In openings on clay soils. 850-1070 m.	There is no suitable habitat on site. **This species is not present.**

Allium munzii	Munz's onion	Monocots	Endangered	Threatened	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub | Pinon & juniper woodlands | Valley & foothill grassland	Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland.	Heavy clay soils; grows in grasslands and openings within shrublands or woodlands. 375-1040 m.	There is no suitable habitat on site. **This species is not present.**
Almutaster pauciflorus	alkali marsh aster	Dicots	None	None	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Meadow & seep	Meadow and seeps.	Alkaline. 60-765 m.	There is no suitable habitat on site. **This species is not present.**

Ambrosia pumila	San Diego ambrosia	Dicots	Endangered	None	1B.1	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	There is no suitable habitat on site. **This species is not present.**

Arctostaphylos rainbowensis	Rainbow manzanita	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Ultramafic	Chaparral.	Usually found in gabbro chaparral. 100-870 m.	There is no suitable habitat on site. **This species is not present.**
Atriplex coronata var. notatior	San Jacinto Valley crownscale	Dicots	Endangered	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Alkali playa | Valley & foothill grassland | Vernal pool | Wetland	Playas, valley and foothill grassland, vernal pools.	Alkaline areas in the San Jacinto River Valley. 35-460 m.	There is no suitable habitat on site. **This species is not present.**
Atriplex parishii	Parish's brittlescale	Dicots	None	None	1B.1	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Alkali playa | Chenopod scrub | Meadow & seep | Vernal pool | Wetland	Vernal pools, chenopod scrub, playas.	Usually on drying alkali flats with fine soils. 4-1420 m.	There is no suitable habitat on site. **This species is not present.**

Atriplex serenana var. davidsonii	Davidson's saltscale	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub | Coastal scrub	Coastal bluff scrub, coastal scrub.	Alkaline soil. 0-480 m.	There is no suitable habitat on site. **This species is not present.**
Ayenia compacta	California ayenia	Dicots	None	None	2B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Desert wash | Mojavean desert scrub | Sonoran desert scrub	Mojavean desert scrub, Sonoran desert scrub.	Sandy and gravelly washes in the desert; dry desert canyons. 60-1830 m.	There is no suitable habitat on site. **This species is not present.**
Brodiaea filifolia	thread-leaved brodiaea	Monocots	Threatened	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools.	Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	There is no suitable habitat on site. **This species is not present.**

Brodiaea santarosae	Santa Rosa Basalt brodiaea	Monocots	None	None	1B.2	USFS_S-Sensitive	Valley & foothill grassland	Valley and foothill grassland.	Santa Rosa Basalt. 585-1045 m.	There is no suitable habitat on site. **This species is not present.**
Calochortus weedii var. intermedius	intermediate mariposa-lily	Monocots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Coastal scrub, chaparral, valley and foothill grassland.	Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	There is no suitable habitat on site. **This species is not present.**
Canyon Live Oak Ravine Forest	Canyon Live Oak Ravine Forest	Riparian	None	None			Riparian forest			**This is not present.**
Caulanthus simulans	Payson's jewelflower	Dicots	None	None	4.2	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Coastal scrub	Chaparral, coastal scrub.	Frequently in burned areas, or in disturbed sites such as streambeds; also on rocky, steep slopes. Sandy, granitic soils. 90-2200 m.	There is no suitable habitat on site. **This species is not present.**

Centromadia pungens ssp. laevis	smooth tarplant	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Alkali playa | Chenopod scrub | Meadow & seep | Riparian woodland | Valley & foothill grassland | Wetland	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland.	Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	There is no suitable habitat on site. **This species is not present.**
Chorizanthe parryi var. parryi	Parry's spineflower	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland.	Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	There is no suitable habitat on site. **This species is not present.**

Chorizanthe polygonoides var. longispina	long-spined spineflower	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Coastal scrub | Meadow & seep | Ultramafic | Valley & foothill grassland | Vernal pool	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools.	Gabbroic clay. 30-1630 m.	There is no suitable habitat on site. **This species is not present.**
Clinopodium chandleri	San Miguel savory	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub | Riparian woodland | Ultramafic | Valley & foothill grassland	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	Rocky, gabbroic or metavolcanic substrate. 120-975 m.	There is no suitable habitat on site. **This species is not present.**

Comarostaphylis diversifolia ssp. diversifolia	summer holly	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Cismontane woodland	Chaparral, cismontane woodland.	Often in mixed chaparral in California, sometimes post-burn. 30-855 m.	There is no suitable habitat on site. **This species is not present.**
Dodecahema leptoceras	slender-horned spineflower	Dicots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub).	Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m.	There is no suitable habitat on site. **This species is not present.**

Dudleya multicaulis	many-stemmed dudleya	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	In heavy, often clayey soils or grassy slopes. 1-910 m.	There is no suitable habitat on site. **This species is not present.**
Dudleya viscida	sticky dudleya	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal bluff scrub | Coastal scrub	Coastal scrub, coastal bluff scrub, chaparral, cismontane woodland.	On north and south-facing cliffs and banks. 20-870 m.	There is no suitable habitat on site. **This species is not present.**
Eryngium aristulatum var. parishii	San Diego button-celery	Dicots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Vernal pools, coastal scrub, valley and foothill grassland.	San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m.	There is no suitable habitat on site. **This species is not present.**

Geothallus tuberosus	Campbell's liverwort	Bryophytes	None	None	1B.1	IUCN_CR-Critically Endangered	Coastal scrub | Vernal pool | Wetland	Coastal scrub, vernal pools.	Liverwort known from mesic soil. 60-610 m.	There is no suitable habitat on site. **This species is not present.**
Harpagonella palmeri	Palmer's grapplinghook	Dicots	None	None	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral | Coastal scrub | Valley & foothill grassland	Chaparral, coastal scrub, valley and foothill grassland.	Clay soils; open grassy areas within shrubland. 20-955 m.	There is no suitable habitat on site. **This species is not present.**

Hesperocyparis forbesii	Tecate cypress	Gymnosperms	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | SB_UCSC-UC Santa Cruz | SB_USDA-US Dept of Agriculture | USFS_S-Sensitive	Chaparral | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral.	Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 60-1650 m.	There is no suitable habitat on site. **This species is not present.**
Horkelia cuneata var. puberula	mesa horkelia	Dicots	None	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Chaparral, cismontane woodland, coastal scrub.	Sandy or gravelly sites. 15-1645 m.	There is no suitable habitat on site. **This species is not present.**

Juncus luciensis	Santa Lucia dwarf rush	Monocots	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	Chaparral | Great Basin scrub | Lower montane coniferous forest | Meadow & seep | Vernal pool | Wetland	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub.	Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 280-2035 m.	There is no suitable habitat on site. **This species is not present.**
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden	Alkali playa | Marsh & swamp | Salt marsh | Vernal pool | Wetland	Coastal salt marshes, playas, vernal pools.	Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	There is no suitable habitat on site. **This species is not present.**

Lepechinia cardiophylla	heart-leaved pitcher sage	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Cismontane woodland | Closed-cone coniferous forest	Closed-cone coniferous forest, chaparral, cismontane woodland.	115-1345 m.	There is no suitable habitat on site. **This species is not present.**
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Dicots	None	None	4.3		Chaparral | Coastal scrub	Chaparral, coastal scrub.	Dry soils, shrubland. 4-1435 m.	There is no suitable habitat on site. **This species is not present.**

Lilium parryi	lemon lily	Monocots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Lower montane coniferous forest | Meadow & seep | Riparian forest | Upper montane coniferous forest | Wetland	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest.	Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows and seeps. 625-2930 m.	There is no suitable habitat on site. **This species is not present.**
Limnanthes alba ssp. parishii	Parish's meadowfoam	Dicots	None	Endangered	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_USDA-US Dept of Agriculture | USFS_S-Sensitive	Lower montane coniferous forest | Meadow & seep | Vernal pool | Wetland	Lower montane coniferous forest, meadows and seeps, vernal pools.	Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 605-1805 m.	There is no suitable habitat on site. **This species is not present.**

Monardella hypoleuca ssp. intermedia	intermediate monardella	Dicots	None	None	1B.3		Chaparral | Cismontane woodland | Lower montane coniferous forest	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes).	Often in steep, brushy areas. 195-1675 m.	There is no suitable habitat on site. **This species is not present.**
Monardella macrantha ssp. hallii	Hall's monardella	Dicots	None	None	1B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Broadleaved upland forest | Chaparral | Cismontane woodland | Lower montane coniferous forest | Valley & foothill grassland	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland.	Dry slopes and ridges in openings. 700-1800 m.	There is no suitable habitat on site. **This species is not present.**
Myosurus minimus ssp. apus	little mousetail	Dicots	None	None	3.1	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Valley & foothill grassland | Vernal pool | Wetland	Vernal pools, valley and foothill grassland.	Alkaline soils. 20-640 m.	There is no suitable habitat on site. **This species is not present.**

Navarretia fossalis	spreading navarretia	Dicots	Threatened	None	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Alkali playa | Chenopod scrub | Marsh & swamp | Vernal pool | Wetland	Vernal pools, chenopod scrub, marshes and swamps, playas.	San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrouded by other habitat types. 15-850 m.	There is no suitable habitat on site. **This species is not present.**
Navarretia prostrata	prostrate vernal pool navarretia	Dicots	None	None	1B.2		Coastal scrub | Meadow & seep | Valley & foothill grassland | Vernal pool | Wetland	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps.	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.	There is no suitable habitat on site. **This species is not present.**

Nolina cismontana	chaparral nolina	Monocots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_SBBG-Santa Barbara Botanic Garden | USFS_S-Sensitive	Chaparral | Coastal scrub | Ultramafic	Chaparral, coastal scrub.	Primarily on sandstone and shale substrates; also known from gabbro. 140-1100 m.	There is no suitable habitat on site. **This species is not present.**
Orcuttia californica	California Orcutt grass	Monocots	Endangered	Endangered	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Vernal pool | Wetland	Vernal pools.	10-660 m.	There is no suitable habitat on site. **This species is not present.**
Pseudognaphalium leucocephalum	white rabbit-tobacco	Dicots	None	None	2B.2		Chaparral | Cismontane woodland | Coastal scrub | Riparian woodland	Riparian woodland, cismontane woodland, coastal scrub, chaparral.	Sandy, gravelly sites. 35-515 m.	There is no suitable habitat on site. **This species is not present.**

Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Cismontane woodland | Lower montane coniferous forest	Chaparral, cismontane woodland, lower montane coniferous forest.	In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 425-2000 m.	There is no suitable habitat on site. **This species is not present.**
Sibaropsis hammittii	Hammitt's clay-cress	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive	Chaparral | Valley & foothill grassland	Valley and foothill grassland, chaparral.	Mesic microsites in open areas on clay soils in Stipa grassland. Often surrounded by Adenostoma chaparral. 715-1040 m.	There is no suitable habitat on site. **This species is not present.**
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	Riparian	None	None			Riparian forest			**This is not present.**
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	Riparian	None	None			Riparian forest			**This is not present.**

Southern Interior Basalt Flow Vernal Pool	Southern Interior Basalt Flow Vernal Pool	Herbaceous	None	None			Vernal pool | Wetland			**This is not present.**
Southern Riparian Forest	Southern Riparian Forest	Riparian	None	None			Riparian forest			**This is not present.**
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	Riparian	None	None			Riparian woodland			**This is not present.**
Southern Willow Scrub	Southern Willow Scrub	Riparian	None	None			Riparian scrub			**This is not present.**
Sphaerocarpos drewiae	bottle liverwort	Bryophytes	None	None	1B.1	IUCN_EN-Endangered	Chaparral | Coastal scrub	Chaparral, coastal scrub.	Liverwort in openings; on soil. 60-585 m.	There is no suitable habitat on site. **This species is not present.**

Symphyotrichum defoliatum	San Bernardino aster	Dicots	None	None	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Cismontane woodland | Coastal scrub | Lower montane coniferous forest | Marsh & swamp | Meadow & seep | Valley & foothill grassland	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland.	Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	There is no suitable habitat on site. **This species is not present.**
Tetracoccus dioicus	Parry's tetracoccus	Dicots	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | USFS_S-Sensitive	Chaparral | Coastal scrub | Ultramafic	Chaparral, coastal scrub.	Stony, decomposed gabbro soil. 135-705 m.	There is no suitable habitat on site. **This species is not present.**

Texosporium sancti-jacobi	woven-spored lichen	Lichens	None	None	3		Chaparral	Chaparral.	Open sites; in California with Adenostoma fasciculatum, Eriogonum, Selaginella. Found on soil, small mammal pellets, dead twigs, and on Selaginella. 60-870 m.	There is no suitable habitat on site. **This species is not present.**
Tortula californica	California screw moss	Bryophytes	None	None	1B.2	BLM_S-Sensitive	Chenopod scrub | Valley & foothill grassland	Chenopod scrub, valley and foothill grassland.	Moss growing on sandy soil. 45-750 m.	There is no suitable habitat on site. **This species is not present.**
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	Dicots	None	None	2B.1		Marsh & swamp | Meadow & seep | Riparian forest | Vernal pool | Wetland	Marshes and swamps, riparian forest, meadows and seeps, vernal pools.	Mud flats of vernal lakes, drying river beds, alkali meadows. 5-435 m.	There is no suitable habitat on site. **This species is not present.**

Valley Needlegrass Grassland	Valley Needlegrass Grassland	Herbaceous	None	None			Valley & foothill grassland			**This is not present.**
Viguiera purisimae	La Purisima viguiera	Dicots	None	None	2B.3		Chaparral | Coastal bluff scrub	Coastal bluff scrub, chaparral.	Dry, rocky places in open shrubland. 365-425 m.	There is no suitable habitat on site. **This species is not present.**

Scientific Name	Common Name	Taxon Group	Federal List	State List	Other Status	Habitats	General Habitat	Microhabitat	Presence/ Absence
Accipiter cooperii	Cooper's hawk	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Cismontane woodland | Riparian forest | Riparian woodland | Upper montane coniferous forest	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	There is no suitable habitat on site. **This species is not present.**

Agelaius tricolor	tricolored blackbird	Birds	None	Threatened	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Marsh & swamp | Swamp | Wetland	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	There is no suitable habitat on site. **This species is not present.**
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	Birds	None	None	CDFW_WL-Watch List	Chaparral | Coastal scrub	Resident in Southern California coastal sage scrub and sparse mixed chaparral.	Frequents relatively steep, often rocky hillsides with grass and forb patches.	There is no suitable habitat on site. **This species is not present.**

Anaxyrus californicus	arroyo toad	Amphibians	Endangered	None	CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered	Desert wash | Riparian scrub | Riparian woodland | South coast flowing waters | South coast standing waters	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc.	Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	There is no suitable habitat on site. **This species is not present.**

Anniella stebbinsi	Southern California legless lizard	Reptiles	None	None	CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Broadleaved upland forest | Chaparral | Coastal dunes | Coastal scrub	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County.	Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	There is no suitable habitat on site. **This species is not present.**

Aquila chrysaetos	golden eagle	Birds	None	None	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | CDFW_WL-Watch List | IUCN_LC-Least Concern	Broadleaved upland forest | Cismontane woodland | Coastal prairie | Great Basin grassland | Great Basin scrub | Lower montane coniferous forest | Pinon & juniper woodlands | Upper montane coniferous forest | Valley & foothill grassland	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	There is no suitable habitat on site. **This species is not present.**

Arizona elegans occidentalis	California glossy snake	Reptiles	None	None	CDFW_SSC-Species of Special Concern		Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	There is no suitable habitat on site. **This species is not present.**
Artemisiospiza belli belli	Bell's sparrow	Birds	None	None	CDFW_WL-Watch List	Chaparral | Coastal scrub	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range.	Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	There is no suitable habitat on site. **This species is not present.**

Asio otus	long-eared owl	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Cismontane woodland | Great Basin scrub | Riparian forest | Riparian woodland | Upper montane coniferous forest	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses.	Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	There is no suitable habitat on site. **This species is not present.**
Aspidoscelis hyperythra	orange-throated whiptail	Reptiles	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Cismontane woodland | Coastal scrub	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	There is no suitable habitat on site. **This species is not present.**

Aspidoscelis tigris stejnegeri	coastal whiptail	Reptiles	None	None	CDFW_SSC-Species of Special Concern		Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas.	Ground may be firm soil, sandy, or rocky.	There is no suitable habitat on site. **This species is not present.**
Athene cunicularia	burrowing owl	Birds	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Coastal prairie | Coastal scrub | Great Basin grassland | Great Basin scrub | Mojavean desert scrub | Sonoran desert scrub | Valley & foothill grassland	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	There is no suitable habitat on site. **This species is not present.**

Bombus crotchii	Crotch bumble bee	Insects	None	Candidate Endangered	IUCN_EN-Endangered		Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	There is no suitable habitat on site. **This species is not present.**

Bombus pensylvanicus	American bumble bee	Insects	None	None	IUCN_VU-Vulnerable	Coastal prairie | Great Basin grassland | Valley & foothill grassland		Long-tongued; forages on a wide variety of flowers including vetches (Vicia), clovers (Trifolium), thistles (Cirsium), sunflowers (Helianthus), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	There is no suitable habitat on site. **This species is not present.**

Branchinecta lynchi	vernal pool fairy shrimp	Crustaceans	Threatened	None	IUCN_VU-Vulnerable	Valley & foothill grassland | Vernal pool | Wetland	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools.	Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	There is no suitable habitat on site. **This species is not present.**
Branchinecta sandiegonensis	San Diego fairy shrimp	Crustaceans	Endangered	None	IUCN_EN-Endangered	Chaparral | Coastal scrub | Vernal pool | Wetland	Endemic to San Diego and Orange County mesas.	Vernal pools.	There is no suitable habitat on site. **This species is not present.**
Buteo regalis	ferruginous hawk	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Great Basin grassland | Great Basin scrub | Pinon & juniper woodlands | Valley & foothill grassland	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	There is no suitable habitat on site. **This species is not present.**

Buteo swainsoni	Swainson's hawk	Birds	None	Threatened	BLM_S-Sensitive | IUCN_LC-Least Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	There is no suitable habitat on site. **This species is not present.**
Chaetodipus californicus femoralis	Dulzura pocket mouse	Mammals	None	None		Chaparral | Coastal scrub | Valley & foothill grassland	Variety of habitats including coastal scrub, chaparral, and grassland primarily in San Diego County.	Attracted to grass-chaparral edges.	There is no suitable habitat on site. **This species is not present.**

Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Mammals	None	None		Chaparral | Coastal scrub	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County.	Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	There is no suitable habitat on site. **This species is not present.**
Charadrius nivosus nivosus	western snowy plover	Birds	Threatened	None	CDFW_SSC-Species of Special Concern	Great Basin standing waters | Sand shore | Wetland	Sandy beaches, salt pond levees and shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.	There is no suitable habitat on site. **This species is not present.**

Cicindela senilis frosti	senile tiger beetle	Insects	None	None		Mud shore/flats | Wetland	Inhabits marine shoreline, from Central California coast south to salt marshes of San Diego. Also found at Lake Elsinore.	Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	There is no suitable habitat on site. **This species is not present.**
Coturnicops noveboracensis	yellow rail	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern	Freshwater marsh | Meadow & seep	Summer resident in eastern Sierra Nevada in Mono County.	Freshwater marshlands.	There is no suitable habitat on site. **This species is not present.**

Crotalus ruber	red-diamond rattlesnake	Reptiles	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Chaparral | Mojavean desert scrub | Sonoran desert scrub	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains.	Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	There is no suitable habitat on site. **This species is not present.**
Diadophis punctatus modestus	San Bernardino ringneck snake	Reptiles	None	None	USFS_S-Sensitive		Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams.	Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	There is no suitable habitat on site. **This species is not present.**
Dipodomys merriami parvus	San Bernardino kangaroo rat	Mammals	Endangered	Candidate Endangered	CDFW_SSC-Species of Special Concern	Coastal scrub	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	Needs early to intermediate seral stages.	There is no suitable habitat on site. **This species is not present.**

Dipodomys stephensi	Stephens' kangaroo rat	Mammals	Threatened	Threatened	IUCN_VU-Vulnerable	Coastal scrub | Valley & foothill grassland	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover.	Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	There is no suitable habitat on site. **This species is not present.**
Elanus leucurus	white-tailed kite	Birds	None	None	BLM_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern	Cismontane woodland | Marsh & swamp | Riparian woodland | Valley & foothill grassland | Wetland	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	There is no suitable habitat on site. **This species is not present.**

Emys marmorata	western pond turtle	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Aquatic | Artificial flowing waters | Klamath/North coast flowing waters | Klamath/North coast standing waters | Marsh & swamp | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	There is no suitable habitat on site. **This species is not present.**

Eremophila alpestris actia	California horned lark	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Marine intertidal & splash zone communities | Meadow & seep	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	There is no suitable habitat on site. **This species is not present.**
Eumops perotis californicus	western mastiff bat	Mammals	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern	Chaparral | Cismontane woodland | Coastal scrub | Valley & foothill grassland	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Roosts in crevices in cliff faces, high buildings, trees and tunnels.	There is no suitable habitat on site. **This species is not present.**

Euphydryas editha quino	quino checkerspot butterfly	Insects	Endangered	None		Chaparral | Coastal scrub	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties.	Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	There is no suitable habitat on site. **This species is not present.**
Gila orcuttii	arroyo chub	Fish	None	None	AFS_VU-Vulnerable | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Aquatic | South coast flowing waters	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins.	Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	There is no suitable habitat on site. **This species is not present.**

Haliaeetus leucocephalus	bald eagle	Birds	Delisted	Endangered	BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern | USFS_S-Sensitive	Lower montane coniferous forest | Oldgrowth	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	There is no suitable habitat on site. **This species is not present.**
Icteria virens	yellow-breasted chat	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Riparian forest | Riparian scrub | Riparian woodland	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses.	Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	There is no suitable habitat on site. **This species is not present.**

Lanius ludovicianus	loggerhead shrike	Birds	None	None	CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Broadleaved upland forest | Desert wash | Joshua tree woodland | Mojavean desert scrub | Pinon & juniper woodlands | Riparian woodland | Sonoran desert scrub	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes.	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	There is no suitable habitat on site. **This species is not present.**
Lasiurus xanthinus	western yellow bat	Mammals	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Desert wash	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	Roosts in trees, particularly palms. Forages over water and among trees.	There is no suitable habitat on site. **This species is not present.**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Mammals	None	None		Coastal scrub	Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges.	Coastal sage scrub habitats in Southern California.	There is no suitable habitat on site. **This species is not present.**

Linderiella occidentalis	California linderiella	Crustaceans	None	None	IUCN_NT-Near Threatened	Vernal pool	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	There is no suitable habitat on site. **This species is not present.**
Linderiella santarosae	Santa Rosa Plateau fairy shrimp	Crustaceans	None	None		Vernal pool	Found only in the vernal pools on Santa Rosa Plateau in Riverside County.	Southern basalt flow vernal pools.	There is no suitable habitat on site. **This species is not present.**
Myotis yumanensis	Yuma myotis	Mammals	None	None	BLM_S-Sensitive | IUCN_LC-Least Concern	Lower montane coniferous forest | Riparian forest | Riparian woodland | Upper montane coniferous forest	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	There is no suitable habitat on site. **This species is not present.**

Neolarra alba	white cuckoo bee	Insects	None	None			Known only from localities in Southern California.	Cleptoparasitic in the nests of perdita bees.	There is no suitable habitat on site. **This species is not present.**
Neotoma lepida intermedia	San Diego desert woodrat	Mammals	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	There is no suitable habitat on site. **This species is not present.**
Nyctinomops femorosaccus	pocketed free-tailed bat	Mammals	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Joshua tree woodland | Pinon & juniper woodlands | Riparian scrub | Sonoran desert scrub	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc.	Rocky areas with high cliffs.	There is no suitable habitat on site. **This species is not present.**

Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Fish	Endangered	Candidate Endangered	AFS_EN-Endangered	Aquatic | South coast flowing waters	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County).	Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	There is no suitable habitat on site. **This species is not present.**
Onychomys torridus ramona	southern grasshopper mouse	Mammals	None	None	CDFW_SSC-Species of Special Concern	Chenopod scrub	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	There is no suitable habitat on site. **This species is not present.**
Pandion haliaetus	osprey	Birds	None	None	CDF_S-Sensitive | CDFW_WL-Watch List | IUCN_LC-Least Concern	Riparian forest	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	There is no suitable habitat on site. **This species is not present.**

Perognathus longimembris brevinasus	Los Angeles pocket mouse	Mammals	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin.	Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	There is no suitable habitat on site. **This species is not present.**
Phrynosoma blainvillii	coast horned lizard	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Chaparral | Cismontane woodland | Coastal bluff scrub | Coastal scrub | Desert wash | Pinon & juniper woodlands | Riparian scrub | Riparian woodland | Valley & foothill grassland	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	There is no suitable habitat on site. **This species is not present.**

Plegadis chihi	white-faced ibis	Birds	None	None	CDFW_WL-Watch List | IUCN_LC-Least Concern	Marsh & swamp | Wetland	Shallow freshwater marsh.	Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	There is no suitable habitat on site. **This species is not present.**
Polioptila californica californica	coastal California gnatcatcher	Birds	Threatened	None	CDFW_SSC-Species of Special Concern	Coastal bluff scrub | Coastal scrub	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	There is no suitable habitat on site. **This species is not present.**

Rana draytonii	California red-legged frog	Amphibians	Threatened	None	CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Aquatic | Artificial flowing waters | Artificial standing waters | Freshwater marsh | Marsh & swamp | Riparian forest | Riparian scrub | Riparian woodland | Sacramento/San Joaquin flowing waters | Sacramento/San Joaquin standing waters | South coast flowing waters | South coast standing waters | Wetland	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	There is no suitable habitat on site. **This species is not present.**

Salvadora hexalepis virgultea	coast patch-nosed snake	Reptiles	None	None	CDFW_SSC-Species of Special Concern	Coastal scrub	Brushy or shrubby vegetation in coastal Southern California.	Require small mammal burrows for refuge and overwintering sites.	There is no suitable habitat on site. **This species is not present.**
Spea hammondii	western spadefoot	Amphibians	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Cismontane woodland | Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Vernal pools are essential for breeding and egg-laying.	There is no suitable habitat on site. **This species is not present.**
Streptocephalus woottoni	Riverside fairy shrimp	Crustaceans	Endangered	None	IUCN_EN-Endangered	Coastal scrub | Valley & foothill grassland | Vernal pool | Wetland	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub.	Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	There is no suitable habitat on site. **This species is not present.**

Taricha torosa	Coast Range newt	Amphibians	None	None	CDFW_SSC-Species of Special Concern		Coastal drainages from Mendocino County to San Diego County.	Lives in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow moving streams.	There is no suitable habitat on site. **This species is not present.**

Taxidea taxus	American badger	Mammals	None	None	CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Alkali marsh | Alkali playa | Alpine | Alpine dwarf scrub | Bog & fen | Brackish marsh | Broadleaved upland forest | Chaparral | Chenopod scrub | Cismontane woodland | Closed-cone coniferous forest | Coastal bluff scrub | Coastal dunes | Coastal prairie | Coastal scrub | Desert dunes | Desert wash | Freshwater marsh | Great Basin grassland | Great Basin scrub | Interior dunes | Ione formation |	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	There is no suitable habitat on site. **This species is not present.**

Thamnophis hammondii	two-striped gartersnake	Reptiles	None	None	BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive	Marsh & swamp | Riparian scrub | Riparian woodland | Wetland	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation.	Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	There is no suitable habitat on site. **This species is not present.**
Vireo bellii pusillus	least Bell's vireo	Birds	Endangered	Endangered		Riparian forest | Riparian scrub | Riparian woodland	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	There is no suitable habitat on site. **This species is not present.**

APPENDIX C

Existing site access. Disturbed habitat onsite. View looking east.

Work trucks and items stored on site. View looking north.

Office building on site with a fence along the perimeter of the site. View looking northeast.

Hernandez Environmental Services

APPENDIX D

Soil Map—Western Riverside Area, California
(Property Line)

Map Scale: 1:1,460 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 16, Aug 30, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 14, 2022—Mar 17, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GdC	Garretson gravelly very fine sandy loam, 2 to 8 percent slopes	0.0	0.0%
Wa	Waukena loamy fine sand, saline-alkali	1.6	100.0%
Totals for Area of Interest		**1.6**	**100.0%**

Appendix B: VMT Screening Evaluation

MEMORANDUM

URBAN CROSSROADS

Approved
BB
11/14/2023

DATE: November 2, 2023
TO: Alan Fleming, AF Properties, LLC
FROM: Alex So, Urban Crossroads, Inc.
JOB NO: 15715-01 VMT

FLEMING & SONS CONCRETE, INC. PUMPING TRUCK YARD VEHICLE MILES TRAVELED (VMT) SCREENING EVALUATION

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Screening Evaluation for the proposed Fleming & Sons Concrete, Inc. Pumping Truck Yard (**Project**), which is located at southwest corner of the intersection of West Minthorn and North Riley in the City of Lake Elsinore.

PROJECT OVERVIEW

It is our understanding that the Project is to consist of a concrete pumping truck parking yard, minor maintenance, and administrative office building (7,500 square feet). The approximately 1.6-acre property is currently vacant.

A preliminary site plan for the proposed Project is found in Attachment A.

PROJECT OPERATIONAL CHARATERISTICS

The Project would provide for parking and maintenance of 10-12 concrete pump semi-trucks on site. Each day most will leave the yard and return. Trucks that are not working receive needed light duty maintenance such as tires, pipes, hoses, check and maintain fluids, fix mirror or windshield, etc. to be ready for use the following day. No major repair work is done on-site. Typical operations include the trucks exiting the yard and going directly to different jobsites each day, meet with concrete mixing trucks at the site and concrete is poured from the concrete trucks through the pumps to place concrete at the jobsite. Trucks will be washed out and cleaned off-site before returning to the yard. Trucks will also be re-fueled off-site. Sales and parts ordering personnel will work out of the administrative office. Typical operations will occur Monday through Friday (with occasional weekend operations) from 4:00 AM to 6:00 PM. There will be approximately 10-12 employees on the site at any given time.

BACKGROUND

The California Environmental Quality Act (CEQA) requires all lead agencies to adopt VMT as the measure for identifying transportation impacts for land use projects.

To comply with CEQA, the City of Lake Elsinore adopted analytical procedures, screening tools, and impact thresholds for VMT, which are documented in the Traffic Impact Analysis Preparation Guide (Revised November 2022) (**City Guidelines**) (1).The City Guidelines were used to determine if the proposed Project can be screened from further VMT analysis.

VMT SCREENING

The City Guidelines provide details on appropriate screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed project level analysis. To aid in the project-level VMT screening process, the City of Lake Elsinore utilizes the WRCOG VMT Screening Tool (**Screening Tool**). The web-based Screening Tool allows a user to select the Project's parcel to determine if its location meets one or more of the land use screening criteria identified in the City Guidelines. The City of Lake Elsinore's VMT screening steps as described within the City Guidelines are listed below and a land use project need only to meet one to result in a less than significant impact:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

STEP 1: TPA SCREENING

Consistent with guidance identified in the City Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool results, the Project is not located within a ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor. (See Attachment B)

TPA Screening step is not met.

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").
[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

STEP 2: LOW VMT AREA SCREENING

The City Guidelines states that "Residential and office projects located within a low VMT-generating area are presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per service population that is similar to the existing land uses in the low VMT area." City Guidelines identifies low VMT generating traffic analysis zones as those that generate VMT per service population below the City of Lake Elsinore's baseline[3] VMT per service population.

The latest version of the Riverside County Transportation Model (RIVCOM) was used to determine the existing VMT per service population for TAZ 1025, where the Project is located. TAZ 1025 was found to generate 29.7 VMT per service population, which is below the City of Lake Elsinore's current citywide average VMT per service population of 35.5. The Project's proposed construction-related land use aligns with the existing land uses in TAZ 1025, such as construction and industrial employees, and is not anticipated introduce changes travel patterns in the area. The Project is located in a low VMT-generating area based on VMT per service population. Attachment B contains a screen shot of the Screening Tool output for the Project TAZ.

Low VMT Area Screening step is met.

STEP 3: PROJECT TYPE SCREENING

The City Guidelines identifies that local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition to local serving retail, other types of local serving use (e.g., local parks, local serving gas stations, non-destination hotels, affordable housing, places of worship, etc.) may also be presumed to have a less than significant impact as their uses are local serving in nature and would tend to shorten vehicle trips.[4]

Based on the Project's operational characteristics the Project does not lend itself to be considered a local serving use.

In addition, the City Guidelines states that small land use projects generating 110 or fewer daily vehicle trips are assumed to cause a less than significant impact on VMT.

TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (**ITE**) Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation. The latest Trip Generation Manual does not have

[3] Baseline refers to the year the VMT analysis is performed or the Project's Notice of Preparation Year.
[4] City Guidelines; Page 5

a land use category for the proposed storage yard for concrete pump trucks. As such, the following land use category has been selected from the Trip Generation Manual which closely estimates the anticipated traffic for the proposed Project:

- The trip generation rates for ITE land use code 180 (Specialty Trade Contractor) have been used to derive site specific trip generation estimates for the Project based on the total number of employees. In addition to the 10-12 employees on site within the administrative offices, the calculations also assume an additional 12 drivers for the trucks (e.g., up to 24 employees). The vehicle mix has been obtained from the ITE's Trip Generation Manual. All trucks are assumed to be 4+-axle in an effort to conduct a conservative analysis.

As noted in Table 1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type).

TABLE 1: PROJECT TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicle Trip Generation Rates									
Specialty Trade Contractor	EMP	180	0.451	0.159	0.610	0.230	0.490	0.720	3.630
Passenger Cars			0.208	0.073	0.281	0.225	0.485	0.710	3.420
4+-Axle Trucks			0.005	0.005	0.010	0.005	0.005	0.010	0.210

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] Emp = Employees

The Project is estimated to generate a total of 88 two-way trips per day on a typical weekday as shown in Table 2.

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:									
Concrete Pump Truck Storage Yard	24	Emp							
Passenger Cars:			5	2	7	5	12	17	82
4+-axle Trucks:			0	0	0	0	0	0	6
Total Trips (Actual Vehicles)[2]			**5**	**2**	**7**	**5**	**12**	**17**	**88**

[1] Emp = Employees

[2] Total Trips = Passenger Cars + Truck Trips.

The Project is forecasted to generate 88 daily vehicle trips, which is below the 110 daily trip threshold.

The Project Type Screening step is met.

CONCLUSION

In Summary, the proposed Project was evaluated consistent with the City Guidelines and was found to meet the Low Area VMT screening step and the Project Type screening step. Therefore,

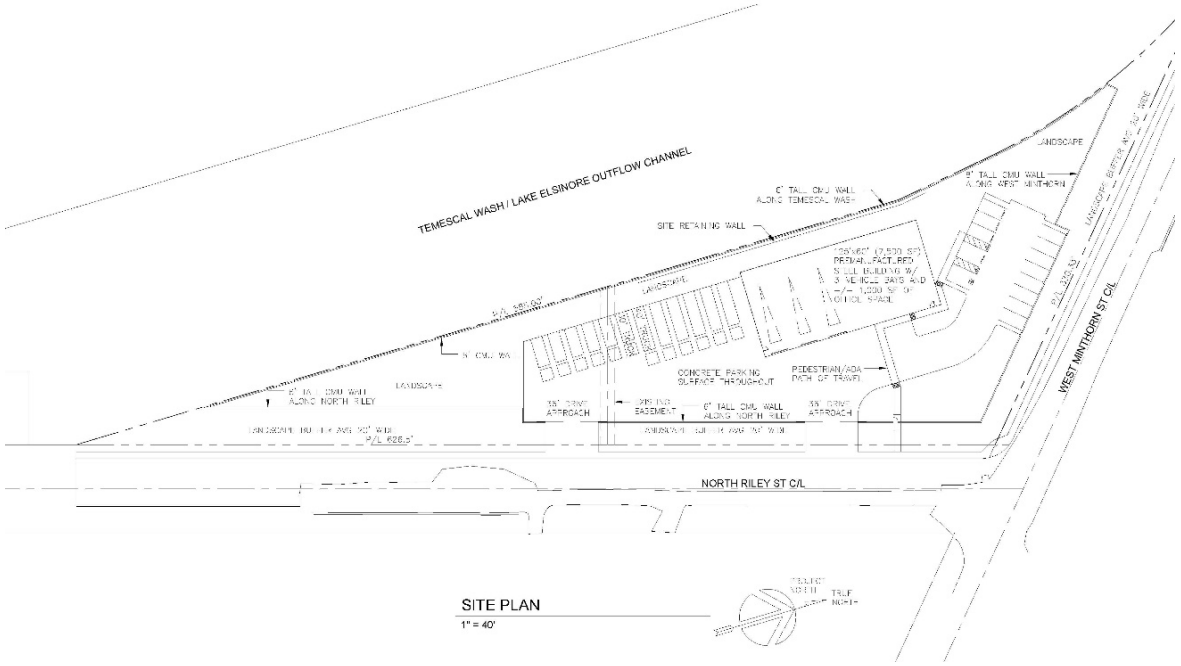
the Project is presumed to have a less than significant impact and no further VMT analysis is required.

If you have any questions, please contact me directly at aso@urbanxroads.com.

REFERENCES

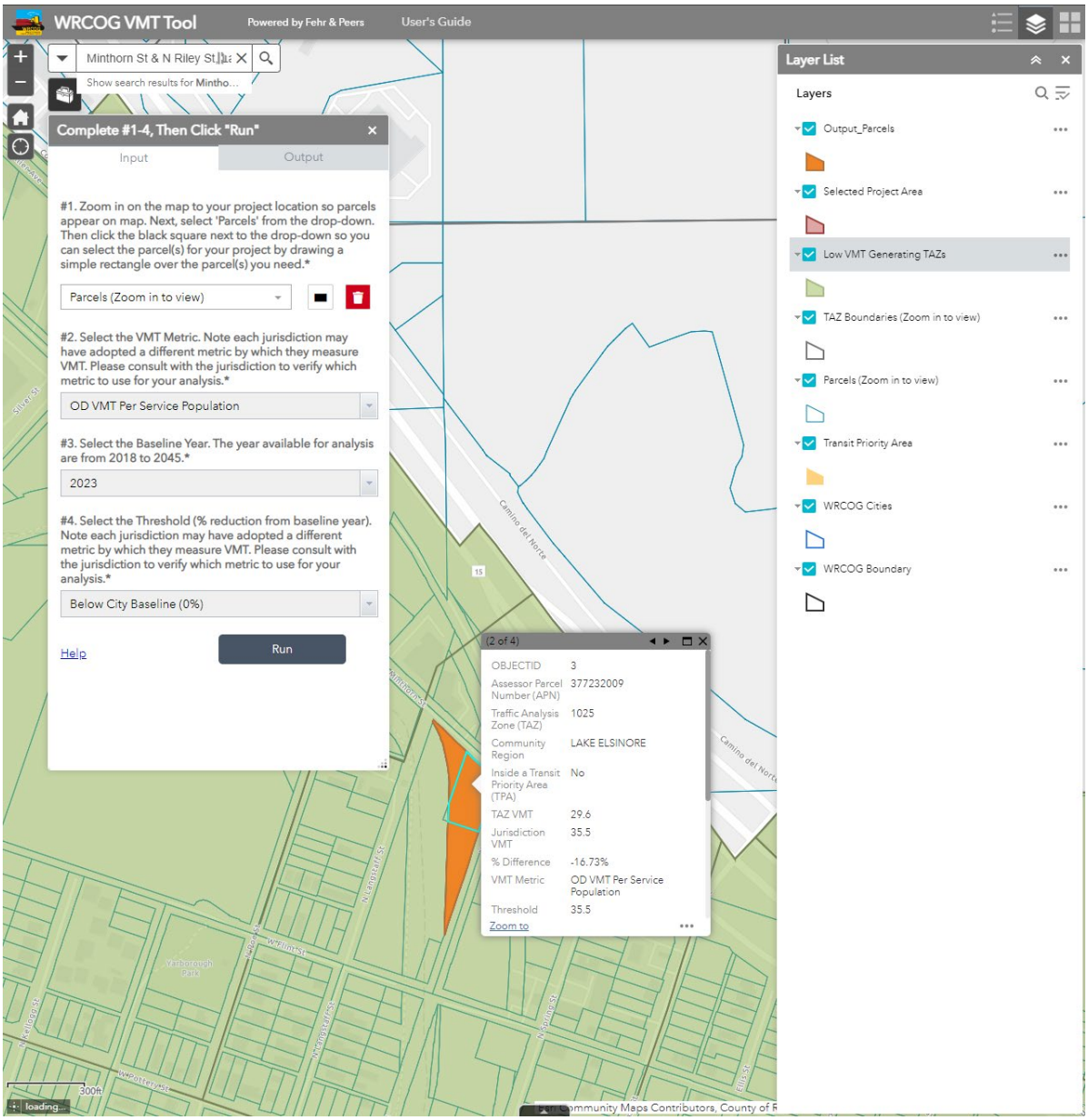
1. **City of Lake Elsinore.** *Traffic Impact Analysis Preparation Guide.* City of Lake Elsinore : s.n., June 2020.

ATTACHMENT A
PRELIMINARY SITE PLAN



SITE PLAN
1" = 40'

ATTACHMENT B
WRCOG SCREENING TOOL


WRCOG VMT Tool
Powered by Fehr & Peers
User's Guide
Minthorn St & N Riley St
Show search results for Mintho...
Complete #1-4, Then Click "Run"
Input
Output
#1. Zoom in on the map to your project location so parcels appear on map. Next, select 'Parcels' from the drop-down. Then click the black square next to the drop-down so you can select the parcel(s) for your project by drawing a simple rectangle over the parcel(s) you need.*
Parcels (Zoom in to view)
#2. Select the VMT Metric. Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
OD VMT Per Service Population
#3. Select the Baseline Year. The year available for analysis are from 2018 to 2045.*
2023
#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Below City Baseline (0%)
Help
Run
Layer List
Layers
Output_Parcels
Selected Project Area
Low VMT Generating TAZs
TAZ Boundaries (Zoom in to view)
Parcels (Zoom in to view)
Transit Priority Area
WRCOG Cities
WRCOG Boundary
(2 of 4)
OBJECTID 3
Assessor Parcel Number (APN) 377232009
Traffic Analysis Zone (TAZ) 1025
Community Region LAKE ELSINORE
Inside a Transit Priority Area (TPA) No
TAZ VMT 29.6
Jurisdiction VMT 35.5
% Difference -16.73%
VMT Metric OD VMT Per Service Population
Threshold 35.5
Zoom to
Camino del Norte
Yarborough Park
300ft
loading...

Appendix C: Noise Impact Analysis

FLEMING CONCRETE PUMPING TRUCK YARD NOISE IMPACT ANALYSIS

City of Lake Elsinore
December 11, 2023
(Revised July 26, 2024)

gandini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

FLEMING CONCRETE PUMPING TRUCK YARD NOISE IMPACT ANALYSIS

City of Lake Elsinore

December 11, 2023
(Revised July 26, 2024)

prepared by
Roma Stromberg INCE, MS
Catherine Howe, MS

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Project No. 19687

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EXECUTIVE SUMMARY

The approximately 1.6-acre project site is located at the southwest corner of the intersection of West Minthorn Street and North Riley Street in the City of Lake Elsinore, California. The project site is currently vacant and zoned as Limited Manufacturing District (M-1).

The proposed project includes the development of a concrete pumping truck storage yard, minor maintenance, and administrative office building of approximately 7,500 square feet. Access to the site would be accommodated via the two proposed driveways on North Riley Street.

The Project will have 10-12 concrete pump semi-trucks parked on the site. Each day most will leave the yard and return. Trucks that are not working receive needed light duty maintenance such as tires, pipes, hoses, check and maintain fluids, fix mirror or windshield, etc. to be ready for use the following day. No major repair work is done on-site. Trucks will leave the yard, go directly to different jobsites each day, meet with concrete mixing trucks at the site and concrete is poured from the concrete trucks through the pumps to place concrete at the jobsite. Trucks will be washed out and cleaned off-site before returning to the yard. Trucks will also be re-fueled off-site. Sales and parts ordering personnel will work out of the administrative office. Typical operations will occur Monday through Friday (with occasional weekend operations) from 4:00 AM to 6:00 PM. There will be approximately 10-12 employees on the site at any given time.

Existing Noise Environment

Sensitive receptors that may be affected by project generated noise include the property lines of the existing single-family residential uses located approximately 480 feet to the east (at the northeast corner of Minthorn Street and Spring Street), 425 feet to the southwest (along Langstaff Street), 460 feet east (along Spring Street), and 595 feet southeast (along Flint Street) and the single-family and multi-family residential uses located approximately 300 feet to the west (along Langstaff Street) of the project site boundaries.

Measured short-term ambient noise levels in the project vicinity ranged between 53 and 67.7 dBA L_{eq} and long-term ambient noise levels ranged between 49.7 to 61.3 dBA L_{eq}. The dominant noise source in the project vicinity was vehicle traffic Interstate 15, W Flint Street, N Spring Street, N Langstaff and other surrounding roadways.

Construction Noise Impacts

The project will comply with the hours specified in Section 17.176.080 of the City of Lake Elsinore Municipal Code. Based on the modeled construction noise levels, project construction noise levels will not exceed the applicable City mobile equipment noise thresholds at any of the modeled receptors. No mitigation is required.

On-Site Operation Noise Impacts

project operational noise is expected to range between 35.8 and 43.9 dBA L_{eq} at nearby land uses and will not exceed the applicable stationary noise standards. This impact would be less than significant. No mitigation is required.

Mobile Source Noise Impacts

The addition of project trips is not expected to change noise levels more than the applicable threshold at any of the study roadway segments. The project impact is less than significant; no mitigation is required.

Groundborne Vibration Impacts

Groundborne vibration generated by project construction would not exceed the levels necessary to cause architectural damage to sensitive receptors. In addition, due to the distance to the nearest sensitive receptors, the threshold for annoyance due to vibration would not be anticipated to be exceeded. Furthermore, perceptibility of construction vibration would be temporary and would occur only during daytime hours. This impact would be less than significant. No mitigation is required.

Air Traffic Impacts

The closest airport to the project site is Skylark Airport, with airport runways located as close as approximately 3.06 miles to the southeast of the project site. Therefore, as Skylark Airport is further than two miles from the project site and is a small private airport, the proposed project would not expose people residing in or working in the area to excessive noise levels. The impact would be less than significant; no mitigation is required.

1. INTRODUCTION

This section describes the purpose of this study and the proposed project.

PURPOSE AND OBJECTIVES

The purpose of this report is to provide an assessment of the noise impacts resulting from development of the proposed project and to identify mitigation measures that may be necessary to reduce those impacts. The noise issues related to the proposed land use and development have been evaluated in light of applicable federal, state and local policies, including those of the City of Lake Elsinore, in the context of the California Environmental Quality Act (CEQA).

Although this is a technical report, effort has been made to write the report clearly and concisely. A list of acronyms and glossary are provided in Appendix A and Appendix B of this report to assist the reader with technical terms related to noise and vibration analysis.

PROJECT LOCATION

The approximately1.6-acre project site is located at the southwest corner of the intersection of West Minthorn Street and North Riley Street in the City of Lake Elsinore, California. The project site is currently vacant and zoned as Limited Manufacturing District (M-1). A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

The proposed project includes the development of a concrete pumping truck storage yard, minor maintenance, and administrative office building of approximately 7,500 square feet. Access to the site would be accommodated via the two proposed driveways on North Riley Street. Figure 2 illustrates the project site plan.

The Project will have 10-12 concrete pump semi-trucks parked on the site. Each day most will leave the yard and return. Trucks that are not working receive needed light duty maintenance such as tires, pipes, hoses, check and maintain fluids, fix mirror or windshield, etc. to be ready for use the following day. No major repair work is done on-site. Trucks will leave the yard, go directly to different jobsites each day, meet with concrete mixing trucks at the site and concrete is poured from the concrete trucks through the pumps to place concrete at the jobsite. Trucks will be washed out and cleaned off-site before returning to the yard. Trucks will also be re-fueled off-site. Sales and parts ordering personnel will work out of the administrative office. Typical operations will occur Monday through Friday (with occasional weekend operations) from 4:00 AM to 6:00 PM. There will be approximately 10-12 employees on the site at any given time.

Figure 1
Project Location Map

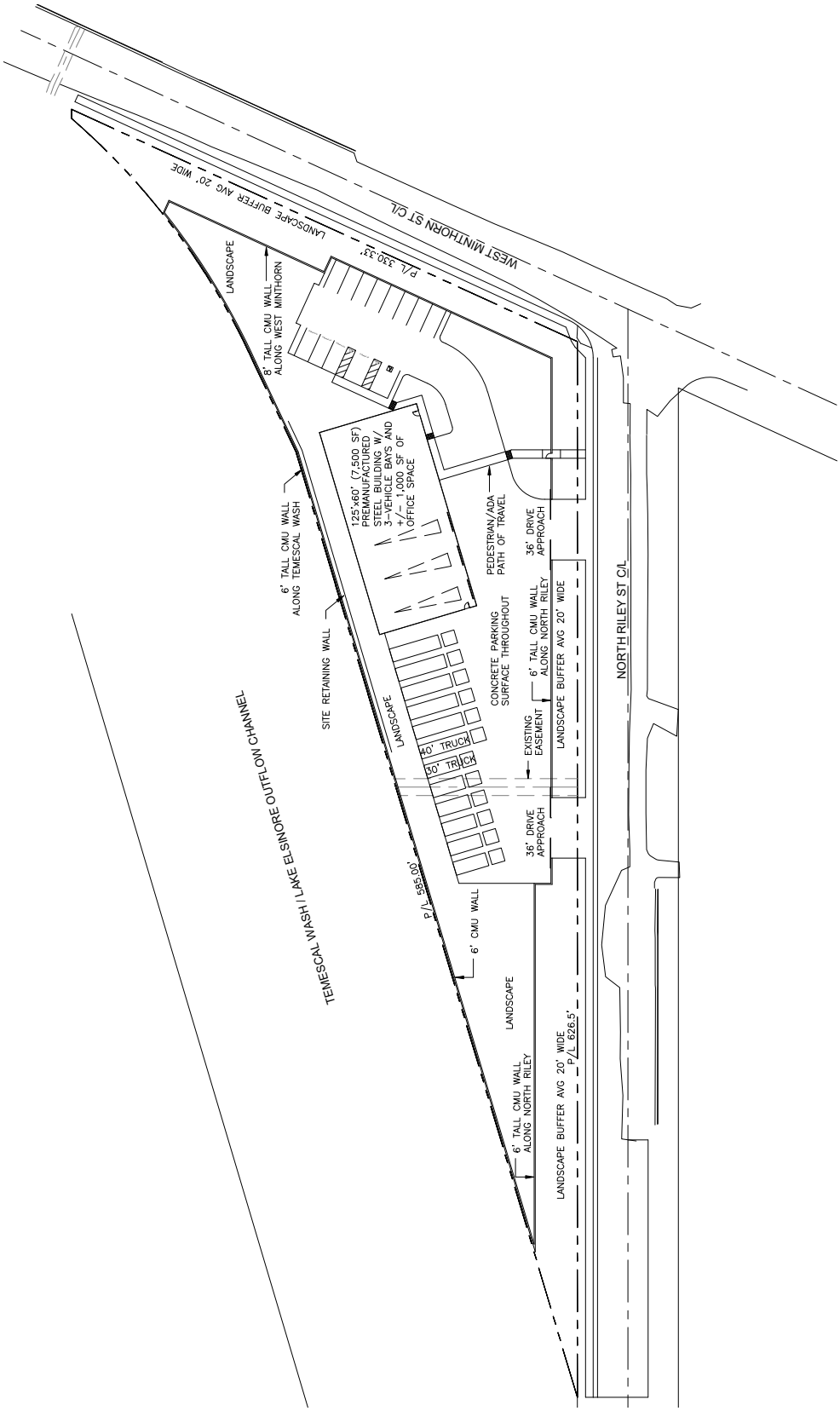


Figure 2
Site Plan

2. NOISE AND VIBRATION FUNDAMENTALS

This section provides an overview of key noise and vibration concepts.

NOISE FUNDAMENTALS

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Appendix B. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 3 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3\text{-}hr)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (DNL). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. DNL is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013).

VIBRATION FUNDAMENTALS

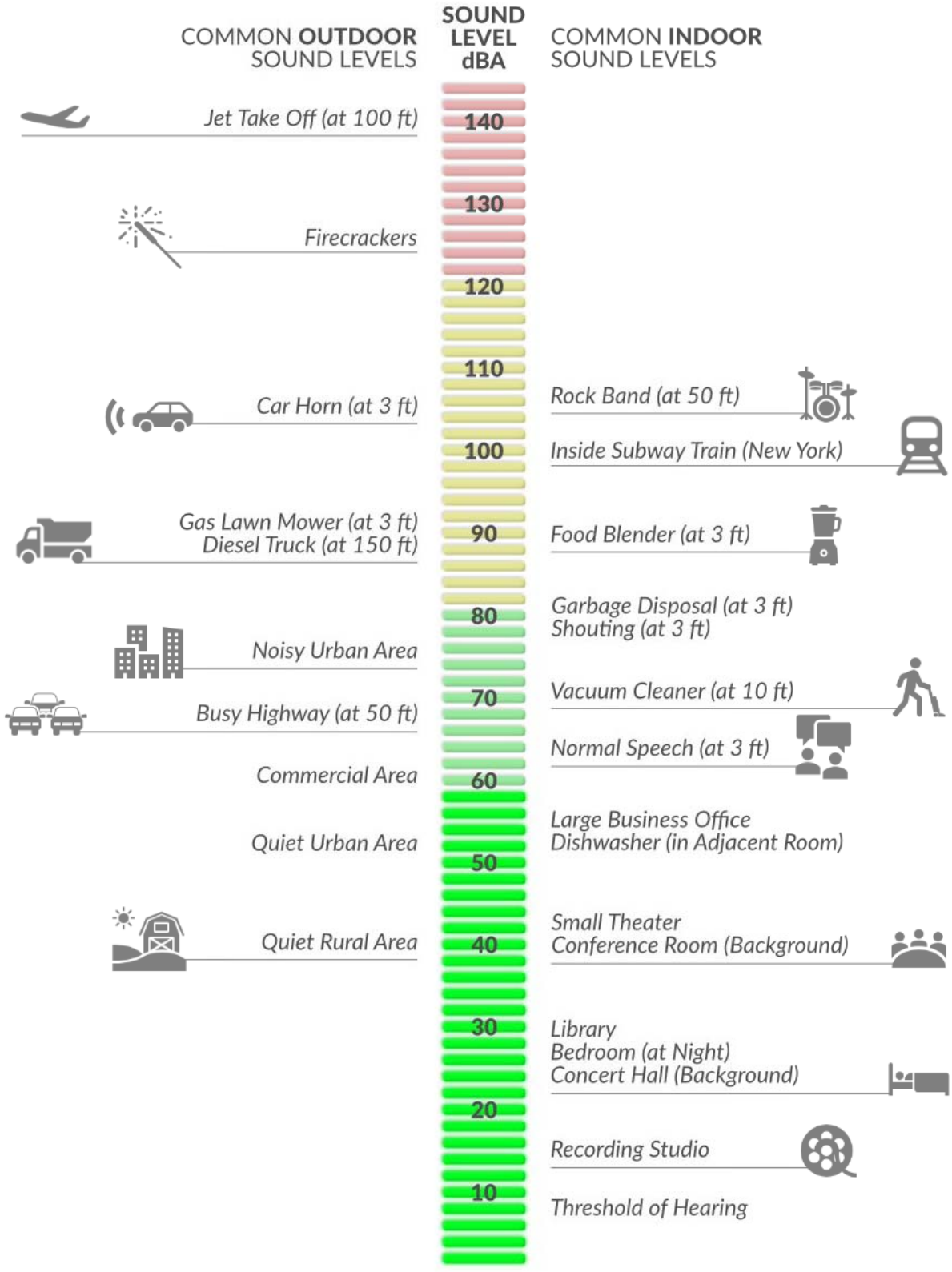
The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves.

Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors, L_{eq} and L_{max} can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 4 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown in the figure, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Vibration tolerance limits for sensitive instruments such as magnetic resonance imaging (MRI) or electron microscopes could be much lower than the human vibration perception threshold.



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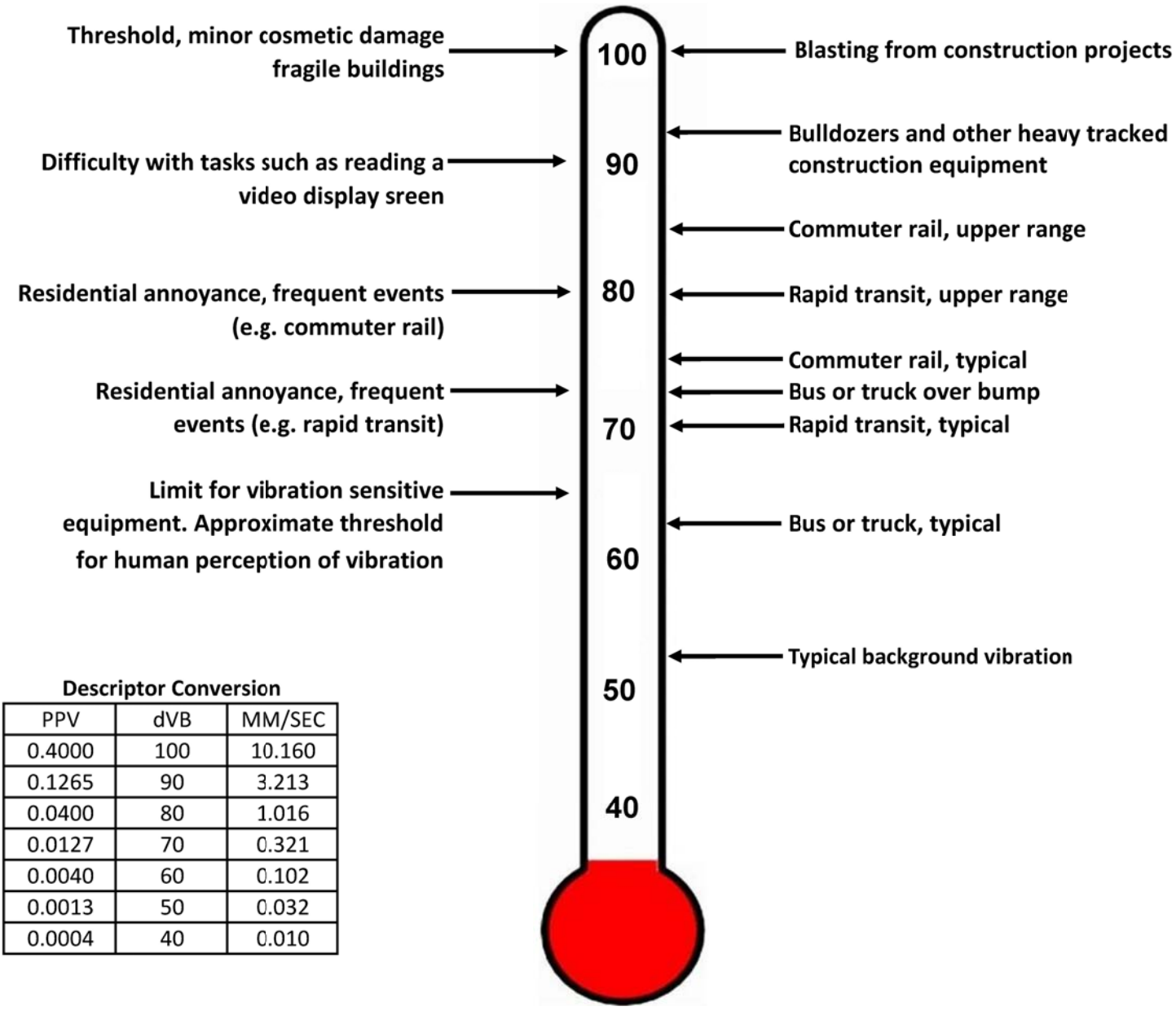
Based on Policy & Guidance from Federal Aviation Administration

Figure 3
A-Weighted Comparative Sound Levels



Descriptor Conversion

PPV	dVB	MM/SEC
0.4000	100	10.160
0.1265	90	3.213
0.0400	80	1.016
0.0127	70	0.321
0.0040	60	0.102
0.0013	50	0.032
0.0004	40	0.010

Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

Figure 4
Typical Levels of Groundborne Vibration

3. EXISTING NOISE ENVIRONMENT

This section describes the existing noise setting in the project vicinity.

EXISTING LAND USES AND SENSITIVE RECEPTORS

The project site is generally bordered by W Minthorn Street to the north; N Riley Street to the east; W Flint Street to the south; and the Temescal Wash/Lake Elsinore Outflow Channel to the west.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas.

Sensitive land uses that may be affected by project noise include the property lines of the existing single-family residential uses located approximately 480 feet to the east (at the northeast corner of Minthorn Street and Spring Street), 425 feet to the southwest (along Langstaff Street), 460 feet east (along Spring Street), and 595 feet southeast (along Flint Street) and the single-family and multi-family residential uses located approximately 300 feet to the west (along Langstaff Street) of the project site boundaries.

AMBIENT NOISE MEASUREMENTS

An American National Standards Institute (ANSI Section S1.4 2014 Class 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, three (3) 15-minute daytime noise measurements were taken between 12:23 PM and 2:05 PM on November 28, 2023. In addition, one (1) long-term 24-hour noise measurement was also taken from November 28, 2023, to November 29, 2023. Figure 5 shows the noise measurement location map. Field worksheets and noise measurement worksheets are provided in Appendix C.

As shown in Figure 5, the noise meter was placed at the following locations:

- STNM1: represents the existing noise environment of the single-family residential uses located southwest of the project site along Langstaff Street (416 N Langstaff Street, Lake Elsinore). The noise meter was placed just northeast of the residential use.

- STNM2: represents the existing noise environment of the single-family residential uses along W Flint Street (109 W Flint Street, Lake Elsinore). The noise meter was placed just south of the southern property line of the residential use and just north of W Flint Street.

- STNM3: represents the existing noise environment of the single-family residential uses located to the east of the project site along N Spring Street (516 N Spring Street, Lake Elsinore). The noise meter was placed just west of the western property line of the residential use and just east of N Spring Street.

- LTNM1: represents the existing noise environment of the residential uses located west of the project site along N Langstaff Street (513 N Langstaff Street, Lake Elsinore). The noise meter was placed just east of the eastern property line of the residential use and just west of N Langstaff Street.

Table 1 provides a summary of the short-term ambient noise data. Table 2 provides hourly interval ambient noise data from the long-term noise measurements. Measured short-term ambient noise levels ranged between 53 and 67.7 dBA L_{eq}. Long-term hourly noise measurement ambient noise levels ranged from 49.7 to 61.3 dBA L_{eq}. The dominant noise source was vehicle traffic associated with the 15 Freeway, W Flint Street, N Spring Street, N Langstaff and other surrounding roadways.

Table 1
Short-Term Noise Measurement Summary (dBA)

Site Location	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
STNM1	12:23 PM	53.0	57.6	49.0	55.9	54.8	53.6	52.7
STNM2	1:17 PM	60.9	76.9	46.5	67.6	64.7	61.3	56.9
STNM3	1:50 PM	67.7	81.9	51.3	74.5	71.6	68.2	65.2

Notes:
(1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.
(2) Noise measurements performed on November 28, 2023.

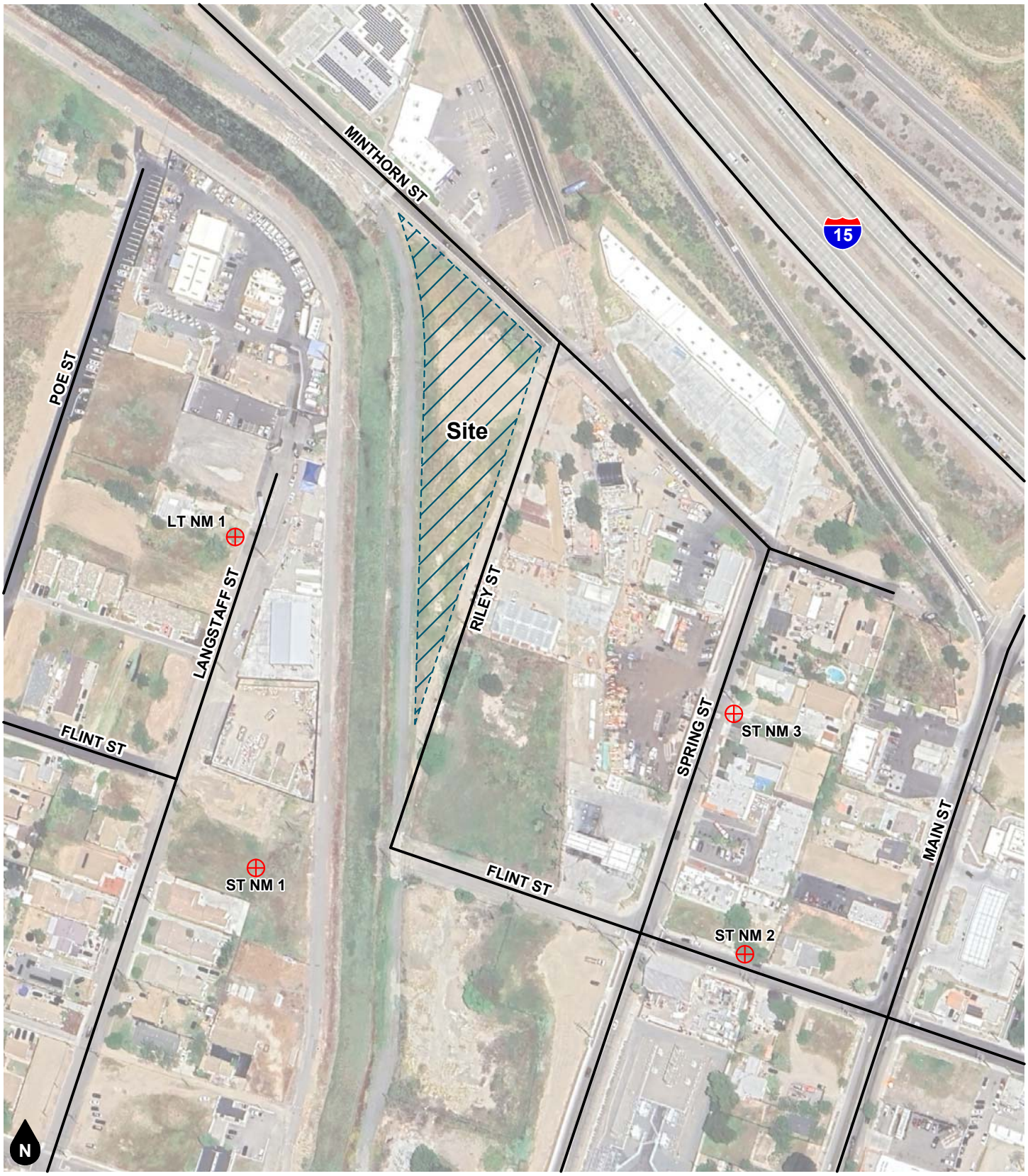
Table 2
Long-Term Noise Measurement Summary (dBA)

24-Hour Ambient Noise[1,2]								
Hourly Measurements	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
Overall Summary	4:00 PM	57.3	83.5	42.8	63.1	61.1	58.2	55.3
1	4:00 PM	49.7	64.7	44.6	55.1	51.4	50.0	48.7
2	5:00 PM	55.1	77.4	44.4	61.9	55.7	53.8	50.3
3	6:00 PM	57.2	69.6	50.9	61.5	59.3	57.8	56.2
4	7:00 PM	61.3	71.1	53.8	64.4	63.3	62.0	60.8
5	8:00 PM	58.7	70.8	51.7	63.4	62.1	59.5	57.5
6	9:00 PM	58.6	64.5	50.8	62.7	61.4	59.6	57.9
7	10:00 PM	58.3	65.7	51.5	62.0	60.7	59.0	57.6
8	11:00 PM	57.1	65.2	47.7	61.6	60.1	58.5	56.4
9	12:00 AM	55.3	61.5	47.6	59.1	57.7	56.1	54.8
10	1:00 AM	55.3	62.1	46.2	59.5	57.9	56.3	54.7
11	2:00 AM	54.2	61.2	47.0	58.1	56.7	55.1	53.7
12	3:00 AM	56.4	62.8	48.1	60.1	59.0	57.4	55.8
13	4:00 AM	59.8	69.7	54.4	62.8	61.6	60.6	59.5
14	5:00 AM	60.0	70.2	52.8	63.5	62.5	61.2	59.5
15	6:00 AM	61.1	76.3	53.0	64.7	63.6	62.4	60.6
16	7:00 AM	59.2	71.0	51.0	63.8	61.9	60.3	58.8
17	8:00 AM	54.7	67.3	47.8	58.8	57.1	55.6	54.0
18	9:00 AM	54.0	78.4	43.9	57.6	55.5	53.8	51.7
19	10:00 AM	53.0	62.2	42.8	58.0	56.7	54.5	51.3
20	11:00 AM	56.8	72.1	49.8	64.4	57.5	55.8	54.6
21	12:00 PM	55.2	70.2	47.7	60.3	57.7	55.5	53.9
22	1:00 PM	54.1	66.9	46.8	58.8	56.7	55.1	53.4
23	2:00 PM	58.0	83.5	44.0	63.0	56.5	52.4	49.5
24	3:00 PM	53.9	75.7	44.1	61.2	56.9	52.1	49.0

Notes:

(1) See Figure 5 for noise measurement locations. Noise measurement was performed over a 24-hour duration.

(2) Noise measurement performed from November 28, 2023 to November 29, 2023.



Legend

NM 1 Noise Measurement Location

ST NM Short-Term Noise Measurement

LT NM Long-Term Noise Measurement

Figure 5
Noise Measurement Location Map

4. REGULATORY SETTING

This section documents the regulatory framework and applicable noise standards.

FEDERAL REGULATION

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

STATE REGULATIONS

State of California General Plan Guidelines 2017

Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally unacceptable" ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed project.

California Department of Transportation (Caltrans)

The California Department of Transportation has published one of the seminal works for the analysis of ground-borne noise and vibration relating to transportation- and construction-induced vibrations and although the project is not subject to these regulations, it serves as useful tools to evaluate vibration impacts.

As shown in Table 3, the threshold at which there is a risk to "architectural" damage to historic and some older buildings is a peak particle velocity (PPV) of 0.25, at older residential structures a PPV of 0.3, and at new residential structures a PPV of 0.5. Table 4 shows that a PPV of 0.04 is the threshold at which groundborne vibration becomes distinctly perceptible in regard to annoyance. Therefore, these guidelines recommend that

a standard of 0.3 inches per second (in/sec) PPV not be exceeded for the protection of older residential structures (California Department of Transportation, 2020).

LOCAL REGULATIONS

City of Lake Elsinore General Plan

The City of Lake Elsinore General Plan has established the following goals and policies in regard to noise which apply to the proposed project.

Goal 7 *Maintain an environment for all City residents and visitors free of unhealthy, obtrusive, or otherwise excessive noise.*

Policies

7.1 *Apply the noise standards set forth in the Lake Elsinore Noise and Land Use Compatibility Matrix (see* Table 5*) and Interior and Exterior Noise Standards (see* Table 6*) when considering all new development and redevelopment proposed within the City.*

7.2 *Require that mixed-use structures and areas be designed to prevent transfer of noise and vibration from commercial areas to residential areas.*

7.3 *Strive to reduce the effect of transportation noise on the I-15.*

7.4 *Consider estimated roadway noise contours based upon Figure 3.6, Noise Contours of the General Plan, when making land use design decisions along busy roadways throughout the City.*

7.5 *Participate and cooperate with other agencies and jurisdictions in the development of noise abatement plans for highways.*

City of Lake Elsinore Municipal Code

Section 17.176.060 Exterior noise limits.

A. Maximum permissible sound Levels by receiving land use.

1. *The noise standards for the various categories of land use identified by the Noise Control Office(r) as presented in* Table 7 *shall, unless otherwise specifically indicated, apply to all such property within a designated zone.*
2. *No person shall operate, or cause to be operated, any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, either incorporated or unincorporated, to exceed:*
    a. *The noise standard for that land use as specified in* Table 7 *for a cumulative period of more than 30 minutes in any hour; or*
    b. *The noise standard plus five dB for a cumulative period of more than 15 minutes in any hour; or*
    c. *The noise standard plus 10 dB for a cumulative period of more than five minutes in any hour; or*
    d. *The noise standard plus 15 dB for a cumulative period of more than one minute in any hour; or*
    e. *The noise standard plus 20 dB or the maximum measured ambient level, for any period of time.*
3. *If the measured ambient level differs from that permissible within any of the fast four noise limit categories above, the allowable noise exposure standard shall be adjusted in five dB increments in each category as appropriate to encompass or reflect said ambient noise level.*

4. *If the measurement location is on a boundary between two different zones, the noise level limit applicable to the lower noise zone plus six dB shall apply.*
5. *If possible, the ambient noise shall be measured at the same location along the property line utilized in subsection (A)(2) of this section with the alleged offending noise source inoperative. If, for any reason, the alleged offending noise source cannot be shut down, the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the noise from the source is at least 10 dB below the ambient in order that only the ambient level be measured. If the difference between the ambient and the noise source is five to 10 dB, then the level of the ambient itself can be reasonably determined by subtracting a one-decibel correction to account for the contribution of the source.*

B. *Correction for Character of Sound. In the event the alleged offensive noise, as judged by the Noise Control Officer, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in* Table 7 *shall be reduced by five dB.*

Section 17.176.070 Interior noise standards.

A. *Maximum permissible dwelling interior sound levels.*
   1. *The interior noise standards for multifamily residential dwellings as presented in* Table 8 *shall apply, unless otherwise specifically indicated, within all such dwellings with windows in their normal seasonal configuration.*
   2. *No person shall operate or cause to be operated within a dwelling unit, any source of sound or allow the creation of any noise which causes the noise level when measured inside a neighboring receiving dwelling unit to exceed:*
      a. *The noise standard as specified in* Table 8 *for a cumulative period of more than five minutes in any hour; or*
      b. *The noise standard plus five dB for a cumulative period of more than one minute in any hour; or*
      c. *The noise standard plus 10 dB or the maximum measured ambient, for any period of time.*
   3. *If the measured ambient level differs from that permissible within any of the noise limit categories above, the allowable noise exposure standard shall be adjusted in five dB increments in each category as appropriate to reflect said ambient noise level.*

B. *Correction for Character of Sound. In the event the alleged offensive noise, as judged by the Noise Control Officer, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in* Table 8 *shall be reduced by five dB. [Ord. 772 § 17.78.070, 1986. Code 1987 § 17.78.070].*

Section 17.176.080 Prohibited acts.

No person shall unnecessarily make, continue, or cause to be made or continued, any noise disturbance. The following acts, and the causing or permitting thereof, are declared to be in violation of this chapter:

E. *Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 PM and 7:00 AM in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of LEMC 17.176.060(A).*

F. *Construction/Demolition.*
   1. *Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 PM and 7:00 AM, or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.*

2. *Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the schedule provided in* Table 9.
3. *All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with suitable exhaust and air intake silencers in proper working order.*

G. *Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way.*

K. *Noise Sensitive Zones.*
1. *Creating or causing the creation of any sound within any noise sensitive zone, so as to exceed the specified land use noise standards set forth in LEMC 17.176.060(A); provided, that conspicuous signs are displayed indicating the zone; or*
2. *Creating or causing the creation of any sound within or adjacent to any noise sensitive zone, containing a hospital, nursing home, school, court or other designated area, so as to interfere with the functions of such activity or annoy the occupants in the activity; provided, that conspicuous signs are displayed indicating the presence of the zone.*

Table 3
Guideline Vibration Damage Potential Threshold Criteria

Structure Condition	Maximum PPV (in/sec)	
	Transient Sources	Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 19, April 2020.

Notes:

1. Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 4
Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 20, April 2020.

Notes:

1. Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 5
City of Lake Elsinore Noise and Land Use Compatibility Matrix

Land Use Categories		Day-Night Noise Level (LDN)						
Categories	Uses	55	60	65	70	75	80	
Residential	Single, Family, Duplex, Multiple Family	A	A	B	B	C	D	D
Residential	Mobile Homes	A	A	B	C	C	D	D
Commerical - Regional District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial - Regional Village, District Special	Commercial, Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
Commercial - Recreation	Children's Amusement Park, Miniature Golf Course, Go-Cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial - General , Special Industrial Institutional	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional -General	Hospital, Church, Library, Schools, Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
Agriculture	Agriculture	A	A	A	A	A	A	A

Zone A - ClearlyCompatible: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B - Normally Compatible: New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C - Normally Incompatible: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the

Zone D - Clearly Incompatible: New construction or development should generally not be undertaken.

Notes:

(1) Source: City of Lake Elsinore General Plan, Table 3-1.

Table 6
City of Lake Elsinore Interior and Exterior Noise Standards

Land Use Categories		Energy Average Ldn	
Categories	Uses	Interior[1]	Exterior[2]
Residential	Single Family, Duplex, Multiple Family	45 [3,5]	60
	Mobile Homes	-	60 [4]
Commercial, Industrial	Hotel, Motel, Transient Lodging	45 [5]	-
	Hospital, School's classroom	45	-
	Church, Library	45	-

Source: City of Lake Elsinore General Plan, Table 3-2.

Notes:

(1) Indoor environment excluding: bathrooms, toilets, closets, corridors.

(2) Outdoor environment limited to: Private yard of single family, multi-family private patio or balcony which is served by a means of exit from inside, Mobile Home Park.

(3) Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.

(4) Exterior noise level should be such that interior noise level will not exceed 45 CNEL.

(5) As per California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Section T25-28.

Table 7
City of Lake Elsinore Exterior Noise Limits

Reeiving Land Use Category	Time Period	Noise Level (dBA)
Single-Family Residential	10:00 PM to 7:00 AM	40
	7:00 AM 10 10:00 PM	50
Multiple Dwelling Residential	10:00 PM to 7:00 AM	45
	7:00 AM 10 10:00 PM	50
Public Space		
Limited Commercial and Office	10:00 PM to 7:00 AM	55
	7:00 AM 10 10:00 PM	60
General Commercial	10:00 PM to 7:00 AM	60
	7:00 AM 10 10:00 PM	65
Light Industrial	Anytime	70
Heavy Industrial	Anytime	75

Source: City of Lake Elsinore Municipal Code, 17.176.060 Exterior Noise Limits.

Table 8
City of Lake Elsinore Interior Noise Limits

Noise Zone	Type of Land Use	Time Internal	Allowable Interior Noise Level (dBA)
All	Multifamily Residential	10:00 PM to 7:00 AM	35
		7:00 AM to 10:00 PM	45

Source: City of Lake Elsinore Municipal Code, 17.176.070 Interior noise standards.

Table 9
City of Lake Elsinore Construction/Demolition Schedule

At Residential Properties			
Description	Type 1 Areas Single Family Residential	Type II Areas Multi-Family Residential	Type III Areas Semi-Residential/ Commercial
Mobile Equipment			
Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and Legal Holidays 7:00 AM to 7:00 PM	75 dBA	80 dBA	85 dBA
Daily, 7:00 PM to 7:00 AM and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA
Stationary Equipment			
Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment:			
Daily, except Sundays and Legal Holidays 7:00 Am to 7:00 PM	60 dBA	65 dBA	70 dBA
Daily, 7:00 PM to 7:00 AM and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA
At Business Properties			
Mobile Equipment			
Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:	Daily, including Sundays and Legal Holidays, all hours: maximum of 85 dBA.		
Stationary Equipment			
Maximum noise levels for repetitively scheduled and relatively long-term operation of stationary equipment:	Daily, including Sundays and Legal Holidays, all hours: maximum of 75 dBA.		

Source: City of Lake Elsinore Municipal Code, 17.176.080 Prohibited acts.

5. ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

This section discusses the analysis methodologies used to assess noise impacts.

CONSTRUCTION NOISE MODELING

Construction noise will vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work.

Construction noise associated with the proposed project was calculated at the sensitive receptor locations utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters, including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the project site.

The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the CalEEMod modeling in the Air Quality and Greenhouse Gas Assessment prepared for the proposed project (Urban Crossroads, 2023). For analysis purposes, the distance measured from the project site to sensitive receptors was assumed to be the acoustical center of the project site to the property line of residential properties with existing residential buildings. Sound emission levels associated with typical construction equipment as well as typical usage factors are provided in Table 10. Construction noise worksheets are provided in Appendix D.

STATIONARY SOURCE/OPERATIONAL NOISE MODELING

The SoundPLAN acoustical modeling software was utilized to model project operational stationary noise levels from the proposed project to adjacent sensitive uses (e.g., residences). SoundPLAN is capable of evaluating stationary noise sources (e.g., parking lots, drive-through menus, car wash equipment, vacuums, etc.). The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. In addition to the information provided below, noise modeling input and outputs assumptions are provided in Appendix E.

Operational noise levels were modeled utilizing representative sound levels in the SoundPLAN model. Modeled noise sources include parking lot noise and HVAC equipment. All noise sources were modeled to be in full operation for an entire hour.

Parking Lot Noise

Parking lot noise was calculated using SoundPLAN methodology. Specifically, the traffic volume of the parking lot is entered with the number of moves per parking space, the hour and the number of parking bays. The user defines whether the parking lots are for automobiles, motorcycles, or trucks, and the emission level of a parking lot is automatically adjusted accordingly. The values for the number of parking moves for each time slice is the number of parking moves per reference unit (most often per parking bay), averaged for the hour[1].

SoundPLAN utilizes parking lot noise emission levels from the 6th revised edition of the parking lot study "Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus Stations as well as of Multi-Story Car Parks and Underground Car Parks" published by the Bavarian Landesamt für Umwelt provides calculation methods to determine the emissions of parking lots.

[1] SoundPLAN Essential 4.0 Manual. SoundPLAN International, LLC. May 2016.

The parking lot emission table documents the reference level (Lw, ref) from parking lot study:

Lw, ref = Lw0 + KPA + KI + KD + KStrO + 10 log(B) [dB(A)]

With the following parameters:

Lw0 = Basic sound power, sound power level of one motion / per hour on P+R areas = 63 dB(A)
KPA = Surcharge parking lot type
KI = Surcharge for impulse character
KD = Surcharge for the traffic passaging and searching for parking bays in the driving lanes 2.5 * lg (f * B - 9)
f = Parking bays per unit of the reference value
B = Reference value
KStrO = Surcharge for the road surface
B = Reference value

Mechanical Equipment (HVAC Units) Noise

A noise reference level of 67.7 dBA at 3 feet (sound power level of 78.7 dB) was utilized to represent rooftop 50 Ton Carrier HVAC units[2]. The noise source height for each HVAC unit was assumed at 1 meter above the roof top. Roof top is assumed to be approximately 40 feet (~12.2 meters) above grade. It is assumed that no HVAC equipment will be stored at ground level outside of the proposed building. A total of eight rooftop units were modeled.

MOBILE SOURCE NOISE MODELING

Noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Key model parameters and REMEL adjustments are presented below:

- Roadway classification (e.g., freeway, major arterial, arterial, secondary, collector, etc.)
- Roadway active width (distance between the center of the outer most travel lanes on each side of the roadway)
- Average Daily Traffic (ADT) Volumes, Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period.

Table 11 shows the roadway volumes, speeds, and site conditions used in the analysis. The following outlines key adjustments made to the REMEL for project site parameter inputs:

- Vertical and horizontal distances (sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

Traffic noise levels were calculated at the right-of-way based on distance from the centerline of the analyzed roadway. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the modeled noise levels are shown

2 MD Acoustics, LLC Noise Measurement Data for RTU –Carrier 50TFQ0006.

for comparative purposes only to show the difference between with and without project conditions. The traffic noise calculation worksheets are included in Appendix F.

GROUNDBORNE VIBRATION MODELING

Groundborne vibration modeling was performed using vibration propagation equations and construction equipment source levels obtained from the FTA *Transit Noise and Vibration Impact Assessment Manual* (2018). Table 12 shows typical vibration levels associated with commonly used construction equipment based on data from the FTA.

There are several types of construction equipment that can cause vibration levels high enough to annoy people in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. For example, as shown in Table 12, a vibratory roller could generate up to 0.21 in/sec PPV at and operation of a large bulldozer could generate up to 0.089 PPV at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 in/sec PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (25/D_{rec})^{n}$$

Where: PPV_{ref} = *reference PPV at 25ft.*
D_{rec} = *distance from equipment to receiver in ft.*
n = 1.5 (*the value related to the attenuation rate through ground*)

Groundborne vibration calculations are provided in Appendix G.

Table 10
CA/T Equipment Noise Emissions and Acoustical Usage Factor Database

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Spec. Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow)	No. of Actual Data Samples (Count)
Backhoe	No	40	80	78	372
Compressor (air)	No	40	80	78	18
Concrete Mixer Truck	No	40	85	79	40
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Excavator	No	40	85	81	170
Forklift[2,3]	No	50	n/a	61	n/a
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Grader	No	40	85	-N/A-	0
Paver	No	50	85	77	9
Paving Equipment	No	50	85	77	9
Roller	No	20	85	80	16
Scraper	No	40	85	84	12
Tractor	No	40	84	-N/A-	0
Welder/Torch	No	40	73	74	5

Notes:

(1) Source: FHWA Roadway Construction Noise Model User's Guide January 2006.

(2) Warehouse & Forklift Noise Exposure - NoiseTesting.info Carl Stautins, November 4, 2014 http://www.noisetesting.info/blog/carl-strautins/page-3/

(3) Data provided Leq as measured at the operator. Sound Level at 50 feet is calculated using Inverse Square Law.

Table 11
Project Average Daily Traffic Volumes and Roadway Parameters

Roadway	Segment	Average Daily Traffic Volume[1,2]		Posted Travel Speeds (MPH)	Site Conditions
		Existing	Existing Plus Project		
Minthorn Street	In vicinity of the project site	10,050	10,138	40	Hard
Riley Street	South of Minthorn Street	25,700	25,788	25	Hard

Vehicle Distribution (Light Mix)[3]			
Motor-Vehicle Type	(7 AM-7 PM)	(7 PM-10 PM)	(10 PM-7 AM)
Automobiles	75.56	13.96	10.49
Medium Trucks	48.91	2.17	48.91
Heavy Trucks	47.30	5.41	47.30

Notes:

(1) As no existing average daily traffic volumes for Minthorn Street or Riley Street were available, to be conservative, this analysis utilized ambient noise measurements to estimate existing average daily vehicle trips. STNM3 (see Table 1) was used to estimate the existing average daily vehicle trips on both Minthorn Street and Riley Street. It should be noted, that the modeled noise levels for this analysis are shown for comparative purposes only to show the difference between with and without project conditions.

(2) Project average daily traffic volumes and vehicle mix percentages obtained from the *Fleming & Sons Concrete Pumping, Inc. Truck Yard Trip Generation Assessment* prepared by Urban Crossroads (November 2, 2023).

(3) Existing vehicle percentages are based on the Riverside County Industrial Hygiene Letter for Traffic Noise.

Table 12
Construction Equipment Vibration Source Levels

Equipment		PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment Manual, 2018.
*RMS velocity in decibels, VdB re 1 micro-in/sec

6. NOISE AND VIBRATION IMPACTS

This section analyzes the significance of project-related noise and groundborne vibration impacts relative to standards established by the City of Lake Elsinore and other applicable agencies in the context of CEQA. Appendix G of the California Environmental Quality Act Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) includes an environmental checklist that identifies issues upon which findings of significance should be made. The CEQA Environmental Checklist Appendix G, XIII. Noise, requires determination if the project would result in:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

b) *Generation of excessive groundborne vibration or groundborne noise levels?*

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?*

NOISE IMPACTS

Would the project result in:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Finding: Less Than Significant

In relation to the Environmental Checklist noise issue "a", applicable standards established by the City of Lake Elsinore can be categorized into the following areas:

- Construction Noise
- Stationary Source Noise
- Mobile Source Noise

Construction Noise

Construction noise is regulated within Section 17.176.080 of the City of Lake Elsinore Municipal Code (see Regulatory Setting section of this report). Accordingly, the project would result in a significant impact if:

- Project construction occurs outside the weekday hours of 7:00 AM and 7:00 PM or at any time on weekends or holidays; or if project construction noise exceeds the following (see Table 9):
    - At a place of business: 85 dBA from mobile equipment and 75 dBA from stationary equipment,
    - At a single-family residence: 75 dBA for mobile equipment and 60 dBA for stationary equipment,
    - At a multi-family residential building: 80 dBA for mobile equipment and 65 dBA for stationary equipment.

Project construction noise levels at nearby sensitive receptors were calculated using the FTA methodology. Modeled locations are shown on Figure 6. Construction noise modeling worksheets for each phase are provided in Appendix D. Anticipated noise levels during each construction phase are presented in Table 13.

As shown in Table 13, modeled construction noise levels reach up to 66.3 dBA L_{eq} at the nearest residential property line to the northeast (131 Minthorn Street), up to 67.4 dBA L_{eq} at the nearest commercial property line to the northwest, 68.8 dBA L_{eq} at the nearest commercial property line to the northeast, 81 dBA L_{eq} at the nearest industrial property line to the east, 65.4 dBA L_{eq} at the nearest residential property line to the east, 62.2 dBA L_{eq} at the nearest residential property line to the southeast, 62.6 dBA L_{eq} at the nearest residential property line to the southwest, 72.9 dBA L_{eq} at the nearest commercial property line to the west, 69.1 dBA L_{eq} at the nearest single-family residential property line to the west, and 66.9 dBA L_{eq} at the nearest multi-family residential property line to the west of the project site.

The project will comply with the allowed hours for construction specified in Section 17.176.080 of the City of Lake Elsinore Municipal Code; and based on the modeled construction noise levels (see Table 13), project construction noise levels will not exceed the applicable City mobile equipment noise thresholds at any of the modeled receptors.

Project Operational Noise (Onsite)

Interior and exterior noise standards for limiting noise pollution from one property to another are provided in the City of Lake Elsinore Municipal Code (see Table 7 and Table 8). Although not typically considered as "noise sensitive" land uses, noise standards are provided for commercial, industrial, and public land uses in addition to residential land uses. It should be noted that neither the General Plan nor the Municipal Code make clear as to whether the standards apply to existing land uses, the zone, or to the General Plan land use designation. Existing sensitive receptors (existing residential land uses) in the project area are shown in Figure 6. The zoning of the project area is shown in Figure 7. For the purposes of this analysis, the more conservative assumption was utilized (existing land use). It should also be noted that per footnote 2 of Table 7, noise standards were adjusted based on existing measured noise levels.

Accordingly, the project would result in a significant impact if:

- Onsite operational would result in a significant impact if it exceeds any of the criteria provided below:

Land Use	Exterior Daytime Leq	Exterior Nighttime Leq	Interior Daytime Leq	Interior Nighttime Leq
Single family residential	50	40		
Multiple family residential	50	45	35	45
Limited Commercial/Office	60	55		
General Commercial	65	60		
Light Industrial	70	70		
Heavy Industrial	75	75		

Onsite operational noise levels at nearby land uses were modeled using the SoundPLAN acoustical model. SoundPLAN modeling worksheets are provided in Appendix E. A description of each noise source and model parameters are discussed in Section 5 of this report.

A conservative assumption was made that the total number of daily truck trips would occur during the modeled hour. As shown in Table 14, and on Figure 8 and Figure 9, project operational noise is expected to range between 35.8 and 43.9 dBA L_{eq} at nearby land uses and will not exceed the applicable stationary noise standards. This impact would be less than significant. No mitigation is required.

Project Operational Noise (Offsite)

California courts have rejected use of what is effectively a single "absolute noise level" threshold of significance (e.g., exceed 65 dBA CNEL) on the grounds that the use of such a threshold fails to consider the magnitude or severity of increases in noise levels attributable to the project in different environments (see *King and Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814). California courts have also upheld the use of "ambient plus increment" thresholds for assessing project noise impacts as consistent with CEQA, noting however, that the severity of existing noise levels should not be ignored by incorporating a smaller incremental threshold for areas where existing ambient noise levels were already high (see *Mission Bay Alliance v. Office of Community Investment and Infrastructure* (2016) 6 Cal.App.5th 160).

It is widely accepted that the average healthy human ear can barely perceive changes of 3 dBA in an outdoor environment and that a change of 5 dBA is readily perceptible.[3] Therefore, considering relevant case law, the project would result in a significant impact if:

- The addition of project trips on surrounding roadways causes noise levels to increase by:
  - 5 dBA where the existing ambient noise level is less than or equal to a CNEL of 60 dBA; or,
  - 3 dBA where the existing ambient noise level is a CNEL of 60 dBA to 65 dBA; or
  - 1.5 dBA where the existing ambient noise level is greater than or equal to a 65 dBA CNEL.

Mobile Source Noise

Roadway noise levels were calculated at roadways included in the *Fleming & Sons Concrete, Pumping, Inc. Truck Yard Trip Generation Assessment* (Ganddini Group, Inc., November 2, 2023) based on the FHWA Traffic Noise Prediction Model methodology. During operation, the proposed project is expected to generate approximately 88 average daily trips with 7 trips during the AM peak-hour and 17 trips during the PM peak-hour. Roadway noise levels were calculated for the following scenarios:

- *Existing (without Project)*: This scenario refers to existing year traffic noise conditions.
- *Existing Plus Project*: This scenario refers to existing year plus project traffic noise conditions.

Table 15 shows the change in existing roadway noise levels with the addition of project-generated operational trips. FHWA Traffic Noise Prediction Model calculation worksheets are provided in Appendix F.

As shown in Table 15, modeled existing traffic noise levels range between 71.14 and 72.18 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 71.24 and 72.24 dBA CNEL at the right-of-way of each study roadway segment.

In no case will project generated vehicle traffic result in an increase greater than 1.5 dB, and therefore, will not result in substantial increases in ambient noise levels along affected road segments (see Table 15). This impact is less than significant; no mitigation is required.

Construction Source Noise

Construction truck trips would occur throughout the construction period. Given the project site's proximity to the 15 Freeway, it is anticipated that vendor and/or haul truck traffic would take the most direct route to the appropriate freeway ramps.

[3] California Department of Transportation's *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013)

Minthorn Street currently handles approximately 10,050 average daily vehicle trips.[4] According to the CalEEMod modeling in the Air Quality and Greenhouse Gas Assessment prepared for the proposed project (Urban Crossroads, 2023), the greatest number of construction-related vehicle trips per day would be during the grading phase of construction at up to approximately 88 vehicle trips per day (10 worker and 78.3 hauling trips per day). Therefore, vehicle traffic generated during project construction is nominal relative to existing roadway volumes and would not result in the doubling of traffic volume necessary to increase noise levels by 3 dBA. The project impact is less than significant; no mitigation is required.

GROUNDBORNE VIBRATION IMPACTS

Would the project result in:

b) Generation of excessive groundborne vibration or groundborne noise levels?

Finding: Less Than Significant

In relation to the Environmental Checklist noise issue "b", the City of Lake Elsinore Municipal Code Section 17.176.080 states that operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. However, the City does not specify a numerical threshold of significance concerning groundborne vibration. In the absence of a City-established numerical threshold, groundborne vibration impacts are based on guidance from the *Transportation and Construction Vibration Guidance Manual* (California Department of Transportation, 2020) (see Regulatory Setting section). Accordingly, the project would result in a significant impact if:

- Groundborne vibration levels generated by the project have the potential to cause architectural damage at nearby buildings by exceeding the following PPV:
  - 0.08 in/sec at extremely fragile historic buildings, ruins, ancient monuments
  - 0.10 in/sec at fragile buildings
  - 0.25 in/sec at historic and some old buildings
  - 0.30 in/sec at older residential structures
  - 0.50 in/sec at new residential structures and modern industrial/commercial buildings.
- Groundborne vibration levels generated by the project have the potential to cause annoyance to people living or working in nearby buildings by exceeding a PPV of 0.04 in/sec.

Groundborne vibration modeling worksheets are provided in Appendix G.

Based on the groundborne vibration modeling, use of a vibratory roller is expected to generate a PPV of 0.104 in/sec and use of a bulldozer is expected to generate a PPV of 0.044 in/sec at the closest off-site building, a commercial use located approximately 40 feet east of the project site (Table 16). Therefore, groundborne vibration generated by project construction would not exceed the levels necessary to cause architectural damage.

As shown in Table 16, at all modeled sensitive uses, groundborne vibration would not exceed the annoyance threshold of a PPV of 0.04 in/sec. Therefore, groundborne vibration generated by project construction would not exceed the levels necessary to cause annoyance to persons living or working in nearby buildings. The project impact is less than significant; no mitigation is required.

[4] As no existing average daily traffic volumes for Minthorn Street were available, to be conservative, this analysis utilized ambient noise measurements to estimate existing average daily vehicle trips. STNM3 (see Table 1) was used to estimate the existing average daily vehicle trips on Minthorn Street.

The most substantial sources of groundborne vibration during post-construction project operations will include the movement of passenger vehicles and trucks on paved and generally smooth surfaces. Loaded trucks generally have a PPV of 0.076 at a distance of 25 feet (Caltrans 2020), which is a substantially lower PPV than that of a vibratory roller (0.210 in/sec PPV at 25 feet). Therefore, groundborne vibration levels generated by project operation would not exceed those modeled for project construction.

AIR TRAFFIC IMPACTS

Would the project result in:

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?*

Finding: No Impact

The closest airport to the project site is Skylark Airport, with airport runways located as close as approximately 3.06 miles to the southeast of the project site. The City of Lake Elsinore General Plan sates that Skylark Airport is a privately owned airport which provides glider and skydiving opportunities with a gravel and sand runway surface, which does not permit optimal conditions for frequent and convenient airport operations. Therefore, as Skylark Airport is further than two miles from the project site and is a small private airport, the proposed project would not expose people residing in or working in the area to excessive noise levels. There is no impact, and no mitigation is required.

Table 13 (1 of 2)
Construction Noise Levels (dBA Leq)

Phase	Receptor Location	Construction Noise Levels (dBA Leq)	Applicable City Mobile Source Noise Threshold (dBA Leq)	Exceeds City Mobile Source Noise Threshold?
Site Preparation	Residential to the east (131 W Minthorn St)	65.0	75	No
	Commercial to Northwest (Mr. Nice Guy Dispensary, 311 W Minthorn St)	66.1	85	No
	Commercial to Northeast (233 W Minthorn St)	67.6	85	No
	Industrial to East (522 N Riley St)	79.7	85	No
	Residential to East (520 N Spring St)	64.2	75	No
	Residential to Southeast (109 W Flint St)	61.0	75	No
	Residential to Southwest (416 N Langstaff St)	61.3	75	No
	Commercial to West (Lake Elsinore Public Works, 521 N Langstaff St)	71.6	85	No
	Residential to West (513 N Langstaff St)	67.9	75	No
	Residential to West (508 N Langstaff St)	65.6	80	No
Grading	Residential to the east (131 W Minthorn St)	66.3	75	No
	Commercial to Northwest (Mr. Nice Guy Dispensary, 311 W Minthorn St)	67.4	85	No
	Commercial to Northeast (233 W Minthorn St)	68.8	85	No
	Industrial to East (522 N Riley St)	81.0	85	No
	Residential to East (520 N Spring St)	65.4	75	No
	Residential to Southeast (109 W Flint St)	62.2	75	No
	Residential to Southwest (416 N Langstaff St)	62.6	75	No
	Commercial to West (Lake Elsinore Public Works, 521 N Langstaff St)	72.9	85	No
	Residential to West (513 N Langstaff St)	69.1	75	No
	Residential to West (508 N Langstaff St)	66.9	80	No
Building Construction	Residential to the east (131 W Minthorn St)	63.7	75	No
	Commercial to Northwest (Mr. Nice Guy Dispensary, 311 W Minthorn St)	64.8	85	No
	Commercial to Northeast (233 W Minthorn St)	66.2	85	No
	Industrial to East (522 N Riley St)	78.4	85	No
	Residential to East (520 N Spring St)	62.8	75	No
	Residential to Southeast (109 W Flint St)	59.6	75	No
	Residential to Southwest (416 N Langstaff St)	60.0	75	No
	Commercial to West (Lake Elsinore Public Works, 521 N Langstaff St)	70.3	85	No
	Residential to West (513 N Langstaff St)	66.5	75	No
	Residential to West (508 N Langstaff St)	64.3	80	No

Table 13 (2 of 2)
Construction Noise Levels (dBA Leq)

Phase	Receptor Location	Construction Noise Levels (dBA Leq)	Applicable City Mobile Source Noise Threshold (dBA Leq)	Exceeds City Mobile Source Noise Threshold?
Paving	Residential to the east (131 W Minthorn St)	63.4	75	No
	Commercial to Northwest (Mr. Nice Guy Dispensary, 311 W Minthorn St)	64.5	85	No
	Commercial to Northeast (233 W Minthorn St)	66.0	85	No
	Industrial to East (522 N Riley St)	78.2	85	No
	Residential to East (520 N Spring St)	62.6	75	No
	Residential to Southeast (109 W Flint St)	59.4	75	No
	Residential to Southwest (416 N Langstaff St)	59.7	75	No
	Commercial to West (Lake Elsinore Public Works, 521 N Langstaff St)	70.1	85	No
	Residential to West (513 N Langstaff St)	66.3	75	No
	Residential to West (508 N Langstaff St)	64.0	80	No
Architectural Coating	Residential to the east (131 W Minthorn St)	54.4	75	No
	Commercial to Northwest (Mr. Nice Guy Dispensary, 311 W Minthorn St)	55.5	85	No
	Commercial to Northeast (233 W Minthorn St)	56.9	85	No
	Industrial to East (522 N Riley St)	69.1	85	No
	Residential to East (520 N Spring St)	53.5	75	No
	Residential to Southeast (109 W Flint St)	50.3	75	No
	Residential to Southwest (416 N Langstaff St)	50.7	75	No
	Commercial to West (Lake Elsinore Public Works, 521 N Langstaff St)	61.0	85	No
	Residential to West (513 N Langstaff St)	57.2	75	No
	Residential to West (508 N Langstaff St)	55.0	80	No

Notes:
(1) Construction noise worksheets are provided in Appendix D.

Table 14
Project Compliance with City of Lake Elsinore Stationary Noise Standards

Affected Receptor[1]	Reeiving Land Use Category	Ordinance Time Period	Ordinance Noise Level Limits (dBA)[2]	Measured Noise Levels Daytime/Nighttime	Adjusted Noise Level Limits[3]	Modeled Operational Noise Level (dBA, Leq)	Exceeds Applicable Standard (Y/N)
R1	Single-Family Residential	10:00 PM to 7:00 AM	40	53	55	37.8	N
		7:00 AM 10 10:00 PM	50	54	55		N
R2	Single-Family Residential	10:00 PM to 7:00 AM	40	53	65	36.5	N
		7:00 AM 10 10:00 PM	50	54	55		N
R3	Single-Family Residential	10:00 PM to 7:00 AM	40	68	70	39.6	N
		7:00 AM 10 10:00 PM	50	54	55		N
R4	Single-Family Residential	10:00 PM to 7:00 AM	40	68	70	39.6	N
		7:00 AM 10 10:00 PM	50	54	55		N
R5	Light Industrial	Anytime	70	68	70	43.9	N
R6	General Commercial	10:00 PM to 7:00 AM	60	68	70	35.8	N
		7:00 AM 10 10:00 PM	65	54	65		N
R7	Single-Family Residential	10:00 PM to 7:00 AM	40	50	50	43.3	N
		7:00 AM 10 10:00 PM	50	54	55		N
R8	Multiple Dwelling Residential	10:00 PM to 7:00 AM	45	50	50	41.2	N
		7:00 AM 10 10:00 PM	50	54	55		N

Source: City of Lake Elsinore Municipal Code, 17.176.060 Exterior Noise Limits.

Notes:

1. See Figure 6.
2. Levels Not to be Exceeded More than 30 Minutes in Any Hour.
3. If the measured ambient level differs from that permissible within any of the fast four noise limit categories above, the allowable noise exposure standard shall be adjusted in five dB increments in each category as appropriate to encompass or reflect said ambient noise level.

Table 15
Increase in Existing Noise Levels Along Roadways as a Result of Project (dBA CNEL)

Roadway	Segment	Distance from roadway centerline to right-of-way (feet)[2]	Modeled Noise Levels (dBA CNEL)[1]			
			Existing Without Project at right-of-way	Existing Plus Project at right-of-way	Change in Noise Level	Increase of 1.5 dB or More?
Minthorn Street	In vincinity of the project site	25	71.14	71.24	0.10	No
Riley Street	South of Minthorn Street	20	72.18	72.24	0.06	No

Notes:
(1) Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway.
(2) Distance from centerline to right-of-way estimated based on Google Earth Pro (2021).

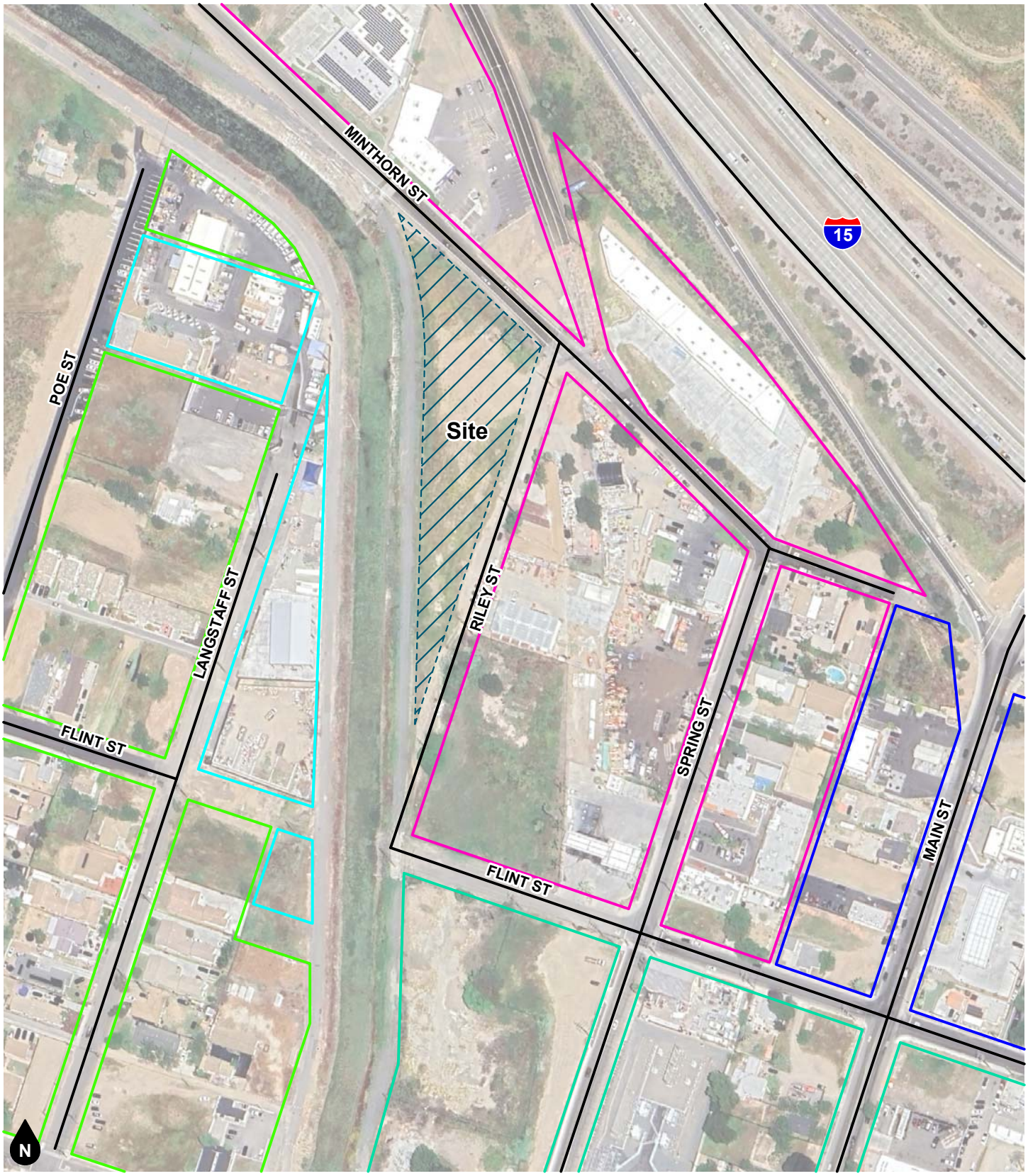
Table 16
Construction Vibration Levels at the Nearest Receptors

Receptor Location	Distance from Property Line to Nearest Structure (feet)	Equipment	Vibration Level PPV (in/sec)	Threshold Exceeded?[1]
Architectural Damage Analysis				
Commercial/Public Works to West (521 N Langstaff Street, Lake Elsinore)	225	Vibratory Roller	0.008	No
	225	Large Bulldozer	0.003	No
Single-Family Residential to West (513 N Langstaff Street, Lake Elsinore)	363	Vibratory Roller	0.004	No
	363	Large Bulldozer	0.002	No
Multi-Family Residential to West (508 N Langstaff Street, Lake Elsinore)	352	Vibratory Roller	0.004	No
	352	Large Bulldozer	0.002	No
Single-Family Residential to Southwest (416 N Langstaff Street, Lake Elsinore)	322	Vibratory Roller	0.005	No
	322	Large Bulldozer	0.002	No
Commercial to East (522 N Riley Street, Lake Elsinore)	40	Vibratory Roller	0.104	No
	40	Large Bulldozer	0.044	No
Commercial to Northeast (233 Minthorn Street, Lake Elsinore)	152	Vibratory Roller	0.014	No
	152	Large Bulldozer	0.006	No
Commercial to North (311 Minthorn Street, Lake Elsinore)	43	Vibratory Roller	0.093	No
	43	Large Bulldozer	0.039	No

Notes:

(1) Caltrans identifies the threshold at which there is a risk of architectural damage to older residential structures as a PPV of 0.3 in/sec and to modern industrial/commercial buildings as a PPV of 0.5 in/sec (see Table 3). In addition, vibration becomes distinctly perceptible to sensitive uses at 0.04 PPV (in/sec).

Figure 6
Existing Sensitive Receptors



Legend
- M1 - Limited Manufacturing
- C2 - General Commercial
- SP - Specific Plan
- PI - Public/Institutional
- R3 - High Density Residential

Figure 7
Zoning

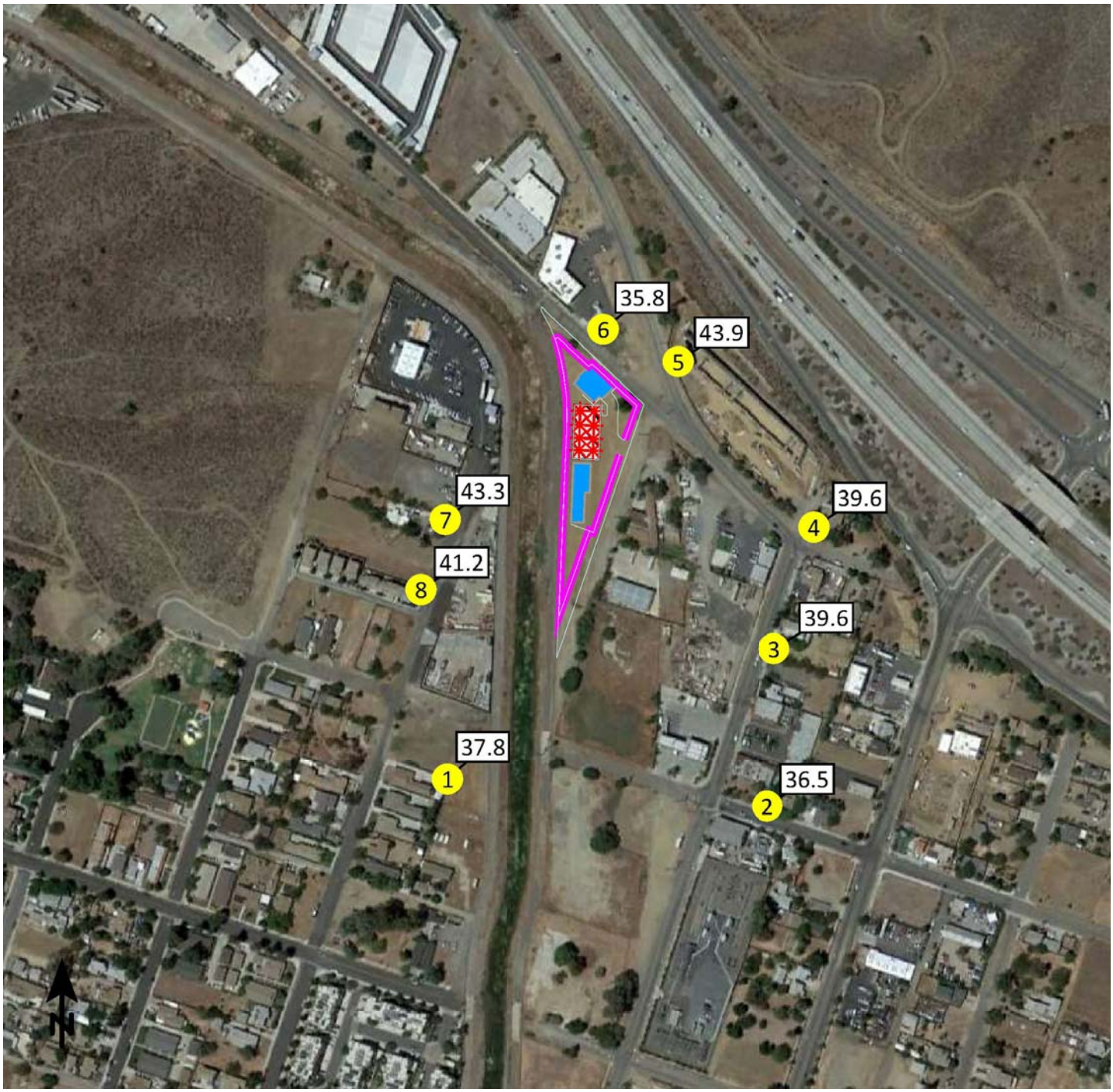


Figure 8
Operational Noise Levels (dBA Leq)

Figure 9
Operational Noise Contours (dBA Leq)

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APPENDICES

Appendix A List of Acronyms
Appendix B Definitions of Acoustical Terms
Appendix C Noise Measurement Field Worksheets
Appendix D Construction Noise Model Worksheets
Appendix E SoundPLAN Worksheets
Appendix F FHWA Traffic Noise Model Worksheets
Appendix G Groundborne Vibration Worksheets

APPENDIX A

LIST OF ACRONYMS

Term	Definition
ADT	Average Daily Traffic
ANSI	American National Standard Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
D/E/N	Day / Evening / Night
dB	Decibel
dBA or dB(A)	Decibel "A-Weighted"
dBA/DD	Decibel per Double Distance
dBA L_{eq}	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L_{02},L_{08},L_{50},L_{90}	A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period
DNL	Day-Night Average Noise Level
$L_{eq(x)}$	Equivalent Noise Level for '"x" period of time
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Level of Noise (measured using a sound level meter)
L_{min}	Minimum Level of Noise (measured using a sound level meter)
Lp	Sound Pressure Level
LOS C	Level of Service C
Lw	Sound Power Level
OPR	California Governor's Office of Planning and Research
PPV	Peak Particle Velocities
RCNM	Road Construction Noise Model
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square

APPENDIX B

DEFINITIONS OF ACOUSTICAL TERMS

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
L_{02}, L_{08}, L_{50}, L_{90}	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
L_{max}, L_{min}	Lmax is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. Lmin is the minimum level.
Offensive/ Offending/Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

APPENDIX C

NOISE MEASUREMENT FIELD WORKSHEETS

Noise Measurement
Field Data

Project Name: Fleming Concrete Pumping Truck Yard, Lake Elsinore **Date:** November 28, 2023

Project #: 19687

Noise Measurement #: STNM1 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 416 N Langstaff St, Lake Elsinore, CA 92530

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Just northeast of the residential use located at 314 N Langstaff St. Adjacent: 15 Fwy (running NW-SE) ~1,400' NE. Vacant land to north and east with commercial uses further north, residential uses to south, vacant land to west with Langstaff St and residential uses further west.

Weather: Clear skies, sunshine. Sunset 4:41 PM. **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 2 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 12:23 PM **End Time:** 12:38 PM **Run Time:**

Leq:	53 dB	**Primary Noise Source:**	Traffic ambiance from vehicles traveling along the 15 Fwy.
Lmax	57.6 dB		Traffic ambiance from vehicles on other roads.
L2	55.9 dB	**Secondary Noise Sources:**	Some residential ambiance, distant overhead air traffic. Bird song.
L8	54.8 dB		Distant jack hammer in operation.
L25	53.6 dB		
L50	52.7 dB		

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/17/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	11/28/2023		

Noise Measurement
Field Data

PHOTOS:

STNM1 looking SW towards backyard of residence 416 N Langstaff Street, Lake Elsinore.

STNM1 looking WNW across N Langstaff Street (~160') towards residence 417 N Langstaff Street (~210').

Summary	
File Name on Meter	LxT_Data.363.s
File Name on PC	LxT_0003099-20231128 122307-LxT_Data.363.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM1 33°40'32.43"N 117°19'41.85"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.

Measurement	
Start	2023-11-28 12:23:07
Stop	2023-11-28 12:38:07
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-11-28 12:22:37
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.5 dB

Results				
L_{Aeq}	53.0			
LAE	82.5			
EA	19.78451	µPa²h		
EA8	633.1042	µPa²h		
EA40	3.165521	mPa²h		
$L_{Apeak\ (max)}$	2023-11-28 12:24:51	86.2 dB		
L_{ASmax}	2023-11-28 12:28:20	57.6 dB		
L_{ASmin}	2023-11-28 12:23:28	49.0 dB		
			Statistics	
L_{Ceq}	64.6 dB		**LA2.00**	55.9 dB
L_{Aeq}	53.0 dB		**LA8.00**	54.8 dB
L_{Ceq} - L_{Aeq}	11.7 dB		**LA25.00**	53.6 dB
L_{AIeq}	53.9 dB		**LA50.00**	52.7 dB
L_{Aeq}	53.0 dB		**LA66.60**	52.1 dB
L_{AIeq} - L_{Aeq}	0.9 dB		**LA90.00**	50.9 dB
Overload Count	0			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.363.s	Computer's File Name	LxT_0003099-20231128 122307-LxT_Data.363.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM1 33°40'32.43"N 117°19'41.85"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.		
Start Time	2023-11-28 12:23:07	Duration	0:15:00.0
End Time	2023-11-28 12:38:07	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	53.0 dB		
LAE	82.5 dB	SEA	--- dB
EA	19.8 µPa²h	LAFTM5	54.9 dB
EA8	633.1 µPa²h		
EA40	3.2 mPa²h		
LA_{peak}	86.2 dB	2023-11-28 12:24:51	
LAS_{max}	57.6 dB	2023-11-28 12:28:20	
LAS_{min}	49.0 dB	2023-11-28 12:23:28	
LA_{eq}	53.0 dB		
LC_{eq}	64.6 dB	LC_{eq} - LA_{eq}	11.7 dB
LAI_{eq}	53.9 dB	LAI_{eq} - LA_{eq}	0.9 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

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

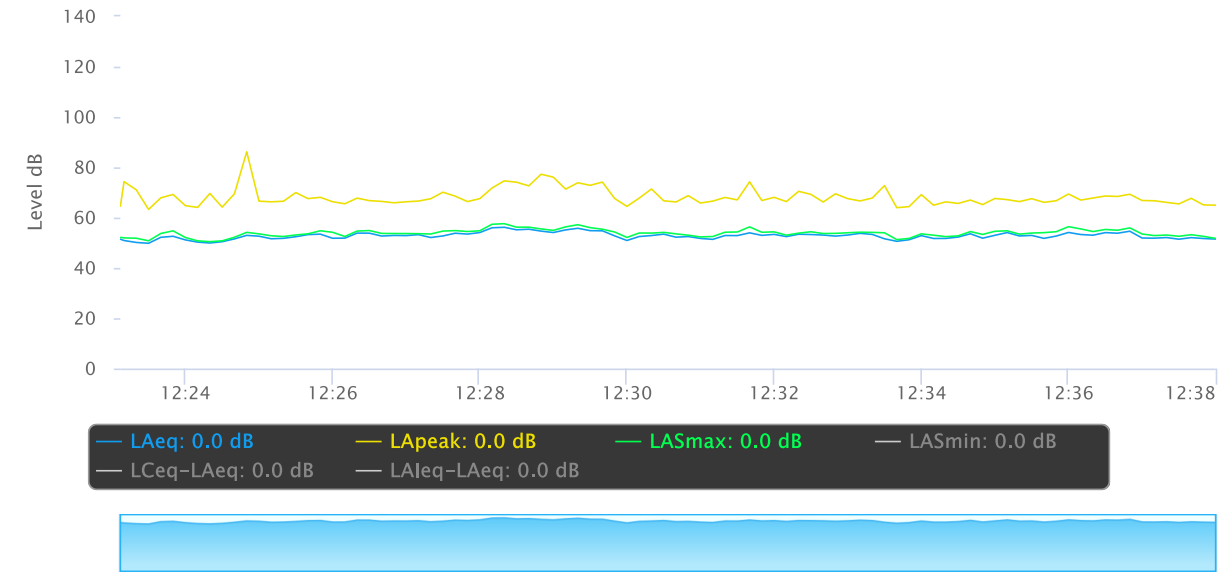
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	53.0 dB		64.6 dB		--- dB	
$L_{S(max)}$	57.6 dB	2023-11-28 12:28:20	--- dB		--- dB	
$L_{S(min)}$	49.0 dB	2023-11-28 12:23:28	--- dB		--- dB	
$L_{Peak(max)}$	86.2 dB	2023-11-28 12:24:51	--- dB		--- dB	

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

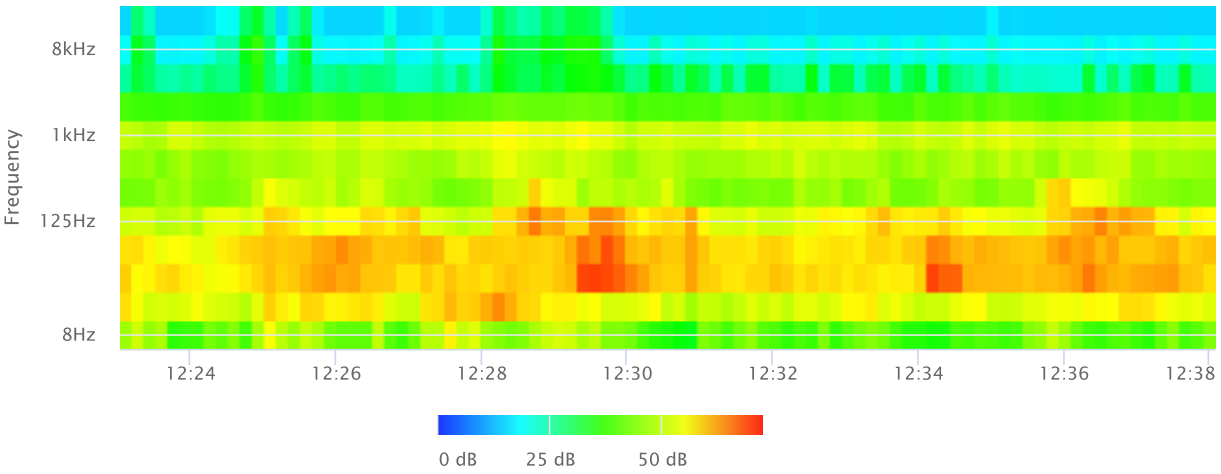
Statistics

LAS 2.0	55.9 dB
LAS 8.0	54.8 dB
LAS 25.0	53.6 dB
LAS 50.0	52.7 dB
LAS 66.6	52.1 dB
LAS 90.0	50.9 dB

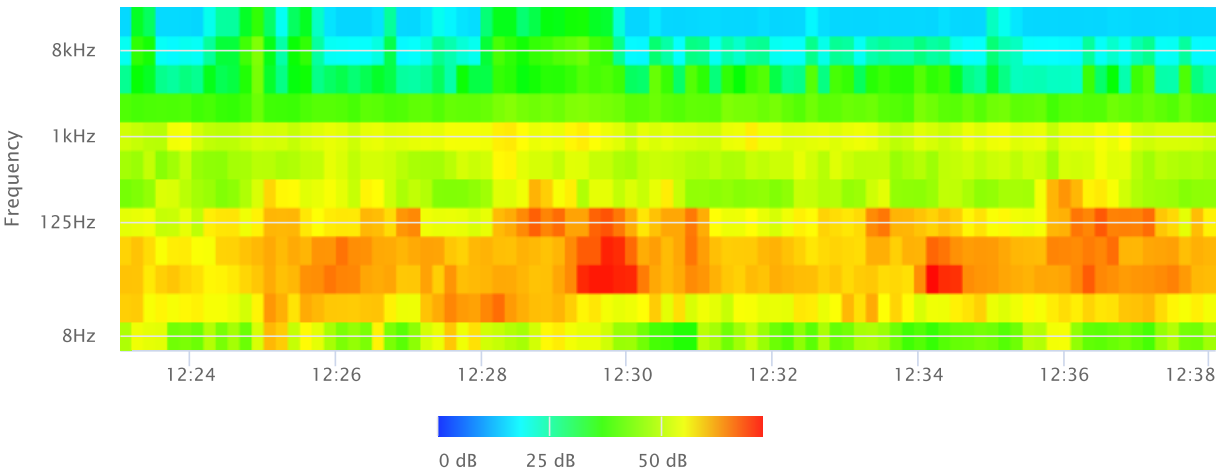
Time History



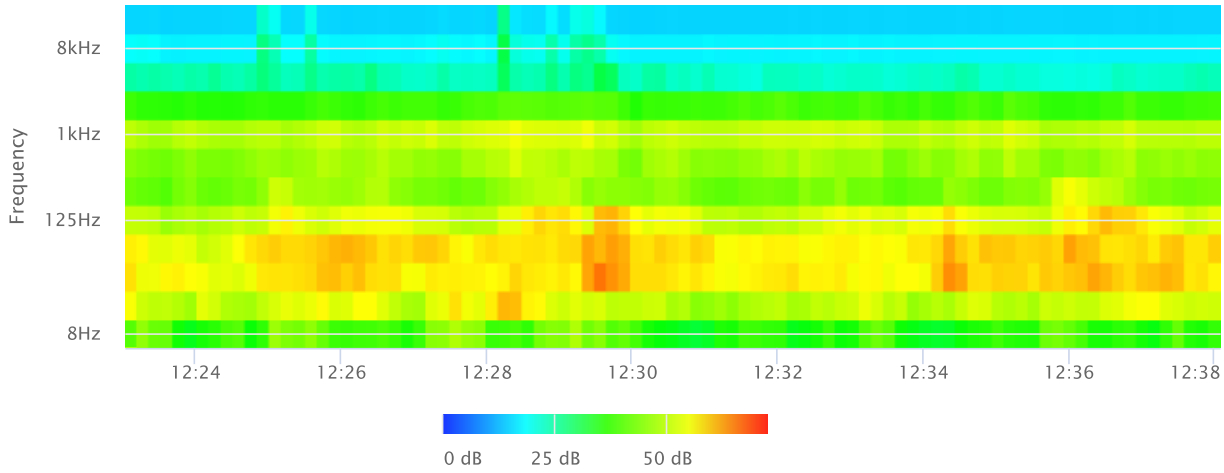
OBA 1/1 Leq



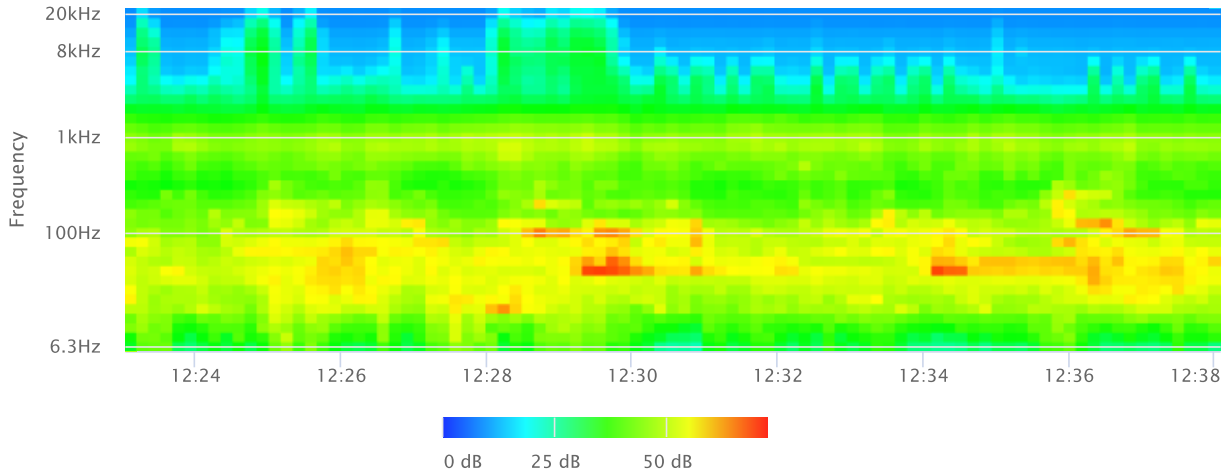
OBA 1/1 Lmax



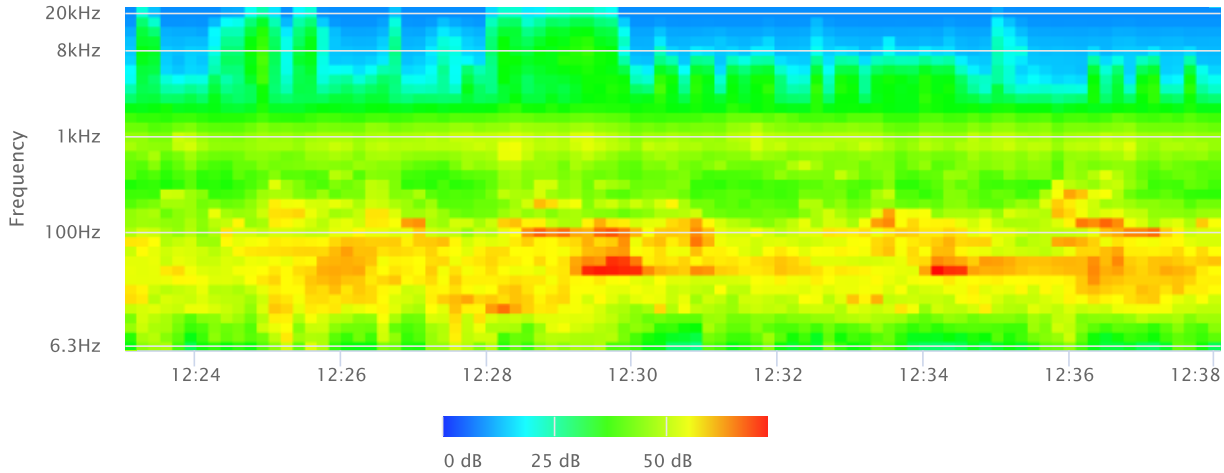
OBA 1/1 Lmin



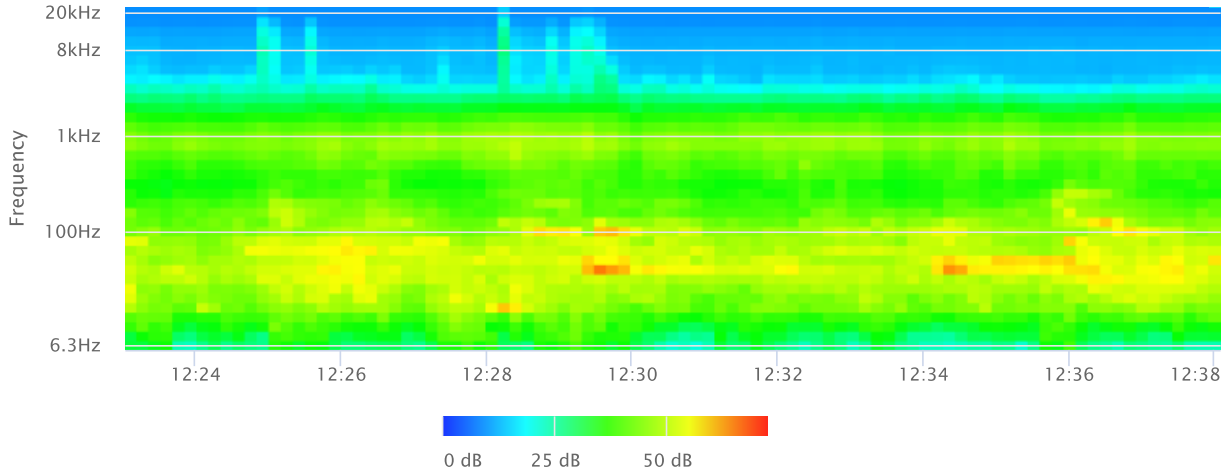
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
12:24
12:26
12:28
12:30
12:32
12:34
12:36
12:38
0 dB
25 dB
50 dB

Noise Measurement
Field Data

Project Name: Fleming Concrete Pumping Truck Yard, Lake Elsinore **Date:** November 28, 2023

Project #: 19687

Noise Measurement #: STNM2 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 109 W Flint St, Lake Elsinore, CA 92530

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Just south of the residential use at 109 W Flint St and north of Flint St. Adjacent: 15 Fwy (running NW-SE) ~850' NE. Residential use to north, Flint St to south with commerical and residnetial uses further south, residential to east, and commercial uses to west.

Weather: Clear skies, sunshine. Sunset 4:41 PM. **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 2 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 1:17 PM **End Time:** 1:32 PM **Run Time:**

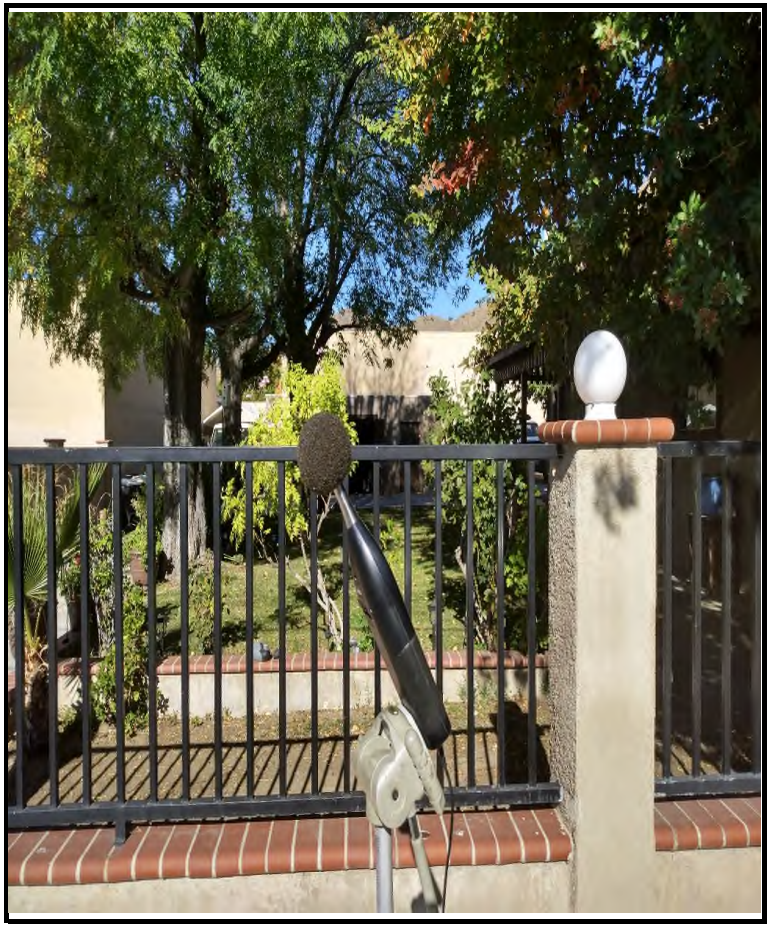
Leq:	60.9	dB	**Primary Noise Source:** Traffic noise from the 50 vehicles traveling along W Flint St during 15 minute
Lmax	76.9	dB	measurement .Traffic ambiance from vehicles on 15 Fwy & other roads.
L2	67.6	dB	**Secondary Noise Sources:** Some residential ambiance, distant overhead air traffic. Bird song.
L8	64.7	dB	Distant jack hammer in operation.
L25	61.3	dB	
L50	56.9	dB	

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/17/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	11/28/2023		

Noise Measurement
Field Data

PHOTOS:

STNM2 looking WNW down W Fint Street towards N Spring Street intersection, (stop sign ~150').



STNM2 looking NNE towards frontyard of residence 109 W Flint Street, Lake Elsinore.

Summary	
File Name on Meter	LxT_Data.364.s
File Name on PC	LxT_0003099-20231128 131725-LxT_Data.364.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM2 33°40'31.26"N 117°19'32.42"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.

Measurement	
Start	2023-11-28 13:17:25
Stop	2023-11-28 13:32:25
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-11-28 13:17:05
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighti	C Weighting
OBA Max Spectrum	At LMax
Overload	122.4 dB

Results		
LA_{eq}	60.9	
LAE	90.4	
EA	122.2353	µPa²h
EA8	3.911531	mPa²h
EA40	19.55766	mPa²h
$LA_{peak\ (max)}$	2023-11-28 13:29:24	93.0 dB
LAS_{max}	2023-11-28 13:22:55	76.9 dB
LAS_{min}	2023-11-28 13:27:56	46.5 dB

		Statistics	
LC_{eq}	72.8 dB	**LA2.00**	67.6 dB
LA_{eq}	60.9 dB	**LA8.00**	64.7 dB
LC_{eq} - LA_{eq}	12.0 dB	**LA25.00**	61.3 dB
LAI_{eq}	62.8 dB	**LA50.00**	56.9 dB
LA_{eq}	60.9 dB	**LA66.60**	54.2 dB
LAI_{eq} - LA_{eq}	1.9 dB	**LA90.00**	49.4 dB
Overload Count	0		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.364.s	Computer's File Name	LxT_0003099-20231128 131725-LxT_Data.364.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM2 33°40'31.26"N 117°19'32.42"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.		
Start Time	2023-11-28 13:17:25	Duration	0:15:00.0
End Time	2023-11-28 13:32:25	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	60.9 dB		
LAE	90.4 dB	SEA	--- dB
EA	122.2 µPa²h	LAFTM5	65.5 dB
EA8	3.9 mPa²h		
EA40	19.6 mPa²h		
LA_{peak}	93.0 dB	2023-11-28 13:29:24	
LAS_{max}	76.9 dB	2023-11-28 13:22:55	
LAS_{min}	46.5 dB	2023-11-28 13:27:56	
LA_{eq}	60.9 dB		
LC_{eq}	72.8 dB	LC_{eq} - LA_{eq}	12.0 dB
LAI_{eq}	62.8 dB	LAI_{eq} - LA_{eq}	1.9 dB

Exceedances	Count	Duration
LAS > 65.0 dB	26	0:01:34.6
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

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

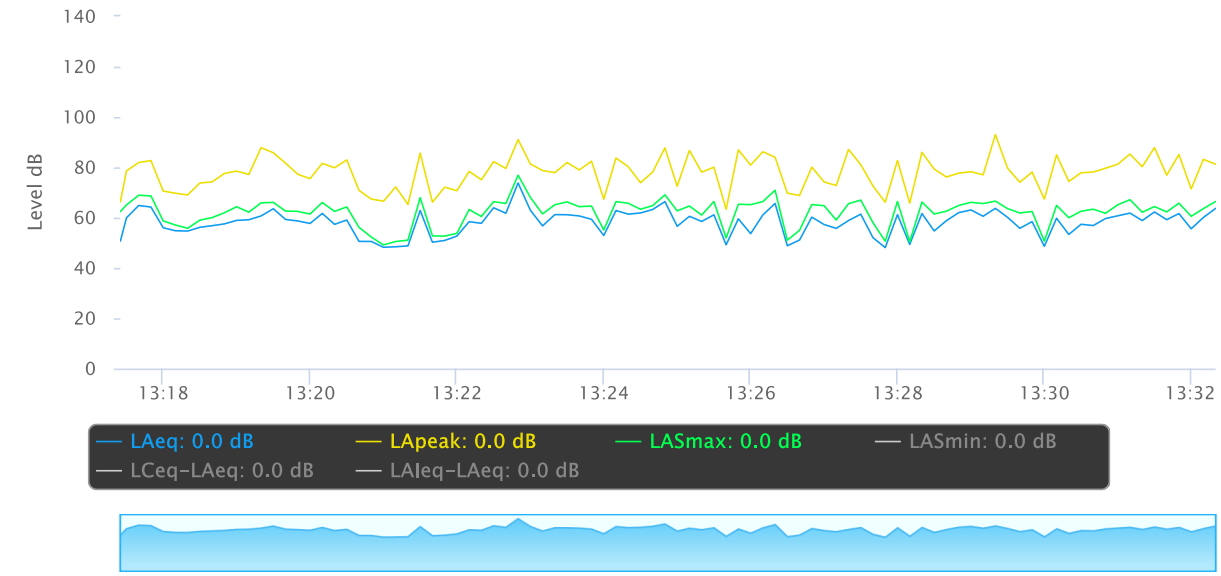
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.9 dB		72.8 dB		--- dB	
$L_{S(max)}$	76.9 dB	2023-11-28 13:22:55	--- dB		--- dB	
$L_{S(min)}$	46.5 dB	2023-11-28 13:27:56	--- dB		--- dB	
$L_{Peak(max)}$	93.0 dB	2023-11-28 13:29:24	--- dB		--- dB	

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

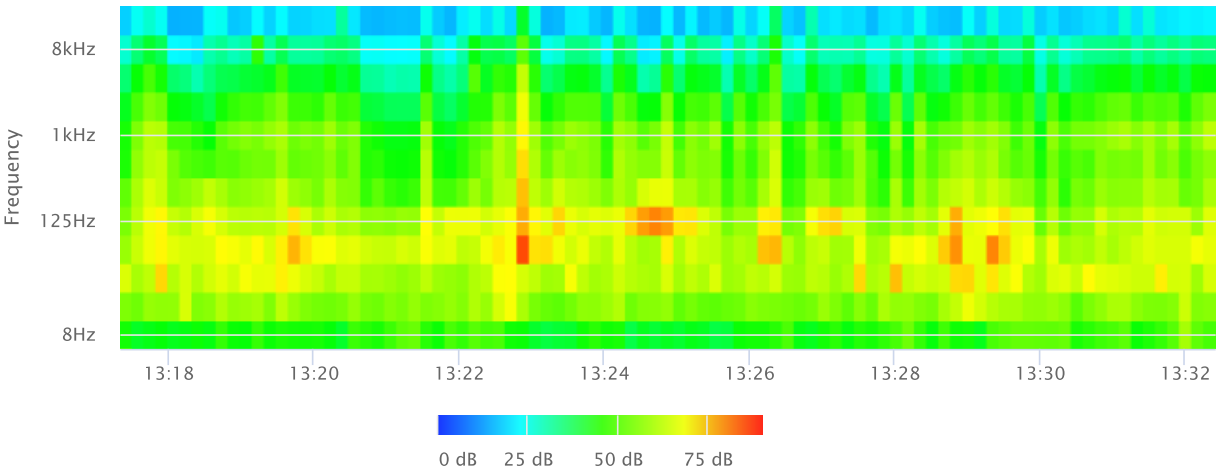
Statistics

LAS 2.0	67.6 dB
LAS 8.0	64.7 dB
LAS 25.0	61.3 dB
LAS 50.0	56.9 dB
LAS 66.6	54.2 dB
LAS 90.0	49.4 dB

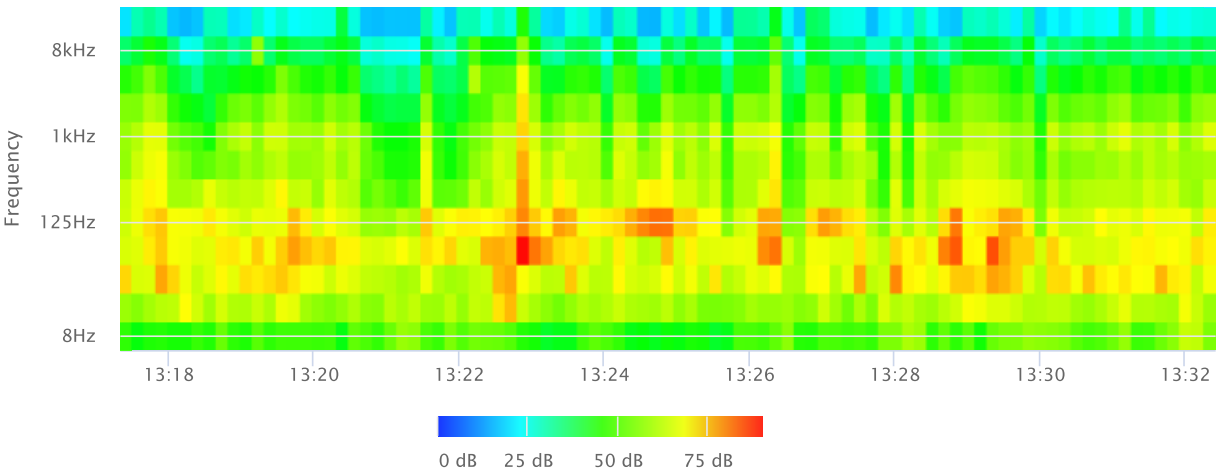
Time History



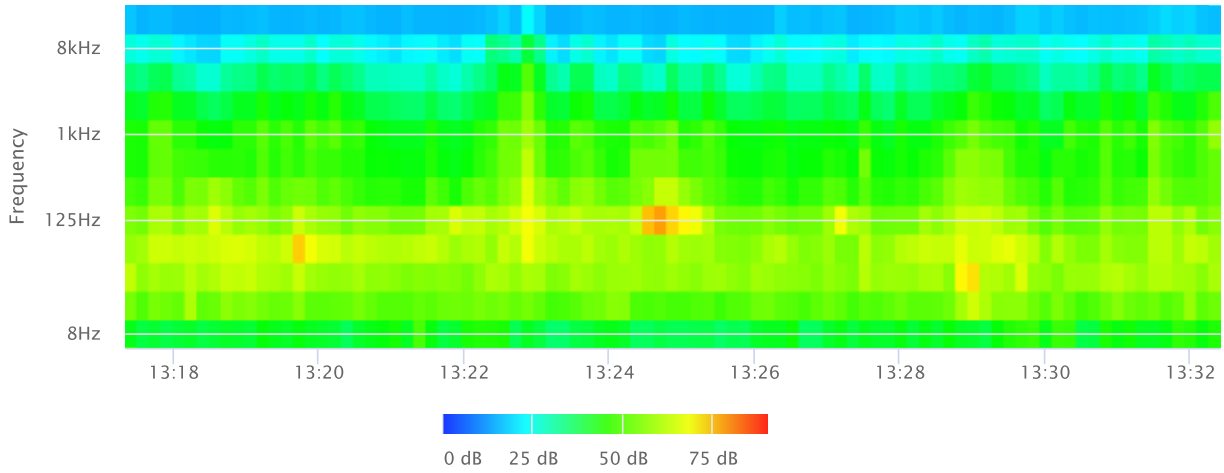
OBA 1/1 Leq



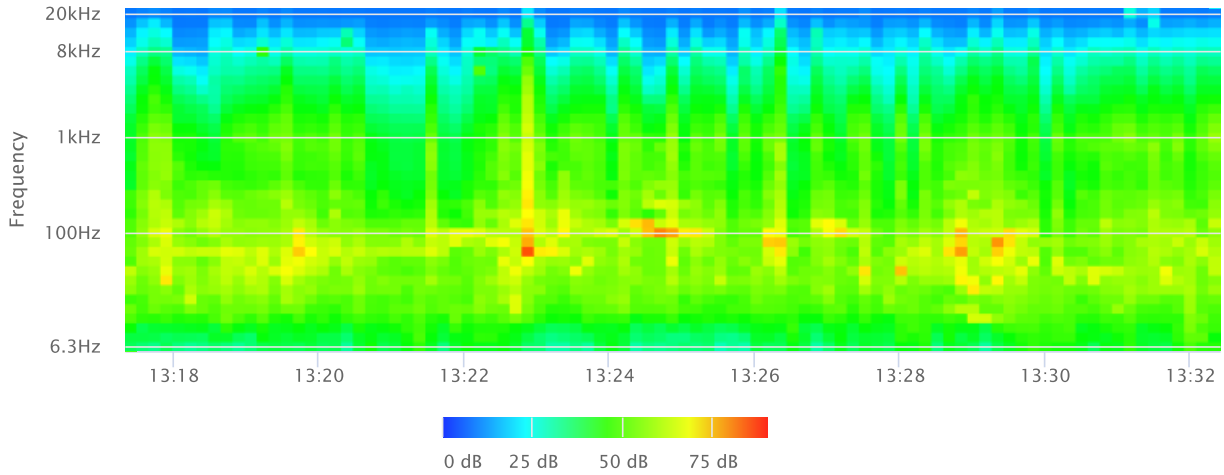
OBA 1/1 Lmax



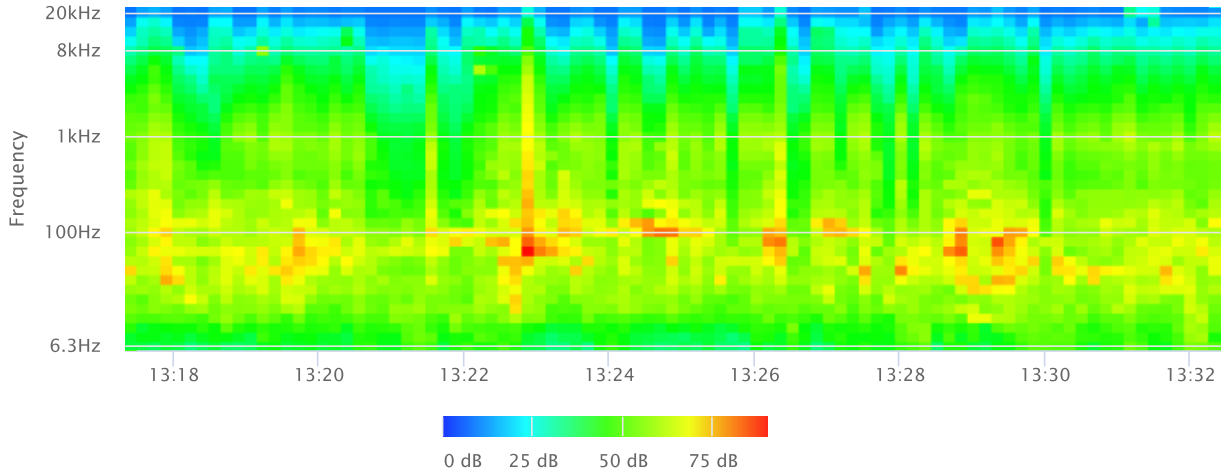
OBA 1/1 Lmin



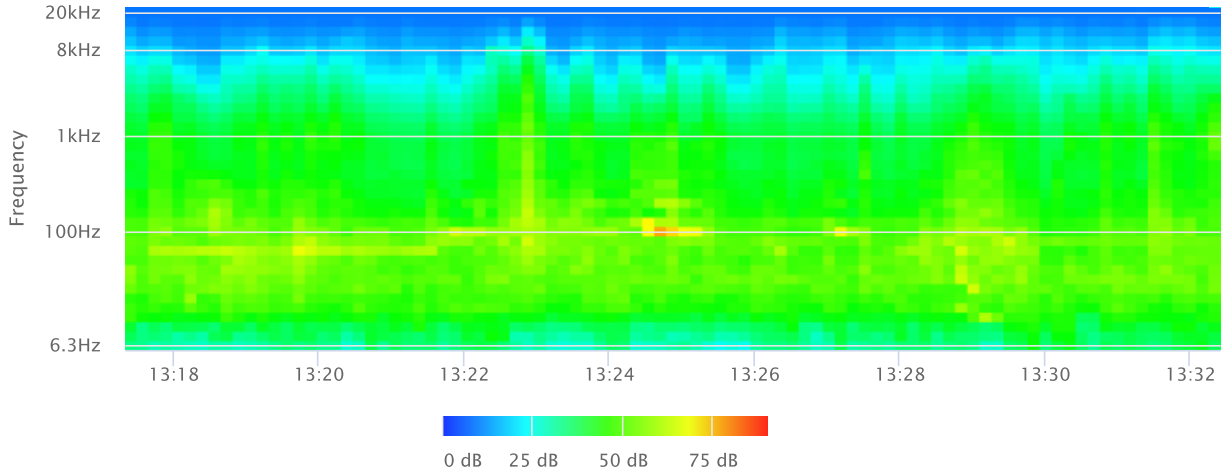
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:18
13:20
13:22
13:24
13:26
13:28
13:30
13:32
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Fleming Concrete Pumping Truck Yard, Lake Elsinore **Date:** November 28, 2023

Project #: 19687

Noise Measurement #: STNM3 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 516 N Spring Street, Lake Elsinore, CA 92530

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Near southwestern corner of the residential use at 516 N Spring Street just east of Spring St. Adjacent: 15 Fwy (running NW-SE) ~850' NE. Residential to northeast, residential to southeast, and Spring St to west with commercial uses further west. Commercial and residential throughout surrounding area.

Weather: Clear skies, sunshine. Sunset 4:41 PM. **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 2 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 1:50 PM **End Time:** 2:05 PM **Run Time:**

Leq: 67.7 dB

Lmax 81.9 dB

L2 74.5 dB

L8 71.6 dB

L25 68.2 dB

L50 65.2 dB

Primary Noise Source: Traffic noise from the 168 vehicles traveling along N Spring St during 15 minute measurement. Traffic ambiance from vehicles on 15 Fwy & other roads.

Secondary Noise Sources: Some residential ambiance, distant overhead air traffic. Bird song. Distant jack hammer in operation. Forklift noise from storage yard across N Spring St.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/17/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	11/28/2023		

Noise Measurement
Field Data

PHOTOS:

STNM3 looking NE at frontyard/driveway to residence 516 N Spring Street, Lake Elsinore .

STNM3 looking NW across N Spring Street towards E entryway to storage yard of building 202 W Minthorn Street, Lake Elsinore.

Summary	
File Name on Meter	LxT_Data.365.s
File Name on PC	LxT_0003099-20231128 135049-LxT_Data.365.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM3 33°40'35.09"N 117°19'32.62"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.

Measurement	
Start	2023-11-28 13:50:49
Stop	2023-11-28 14:05:49
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-11-28 13:50:30
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.6 dB

Results				
LA_{eq}	67.7			
LAE	97.2			
EA	582.7355 µPa²h			
EA8	18.64754 mPa²h			
EA40	93.23768 mPa²h			
$LA_{peak\ (max)}$	2023-11-28 13:52:12	99.2 dB		
LAS_{max}	2023-11-28 13:52:30	81.9 dB		
LAS_{min}	2023-11-28 14:05:22	51.3 dB		

		Statistics	
LC_{eq}	78.4 dB	**LA2.00**	74.5 dB
LA_{eq}	67.7 dB	**LA8.00**	71.6 dB
LC_{eq} - LA_{eq}	10.7 dB	**LA25.00**	68.2 dB
LAI_{eq}	70.8 dB	**LA50.00**	65.2 dB
LA_{eq}	67.7 dB	**LA66.60**	63.3 dB
LAI_{eq} - LA_{eq}	3.1 dB	**LA90.00**	57.8 dB
Overload Count	0		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.365.s	Computer's File Name	LxT_0003099-20231128 135049-LxT_Data.365.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM3 33°40'35.09"N 117°19'32.62"W
Job Description	15 minute noise measurement (1 x 15 minutes)		
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.		
Start Time	2023-11-28 13:50:49	Duration	0:15:00.0
End Time	2023-11-28 14:05:49	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	67.7 dB		
LAE	97.2 dB	SEA	--- dB
EA	582.7 µPa²h	LAFTM5	73.3 dB
EA8	18.6 mPa²h		
EA40	93.2 mPa²h		
LA_{peak}	99.2 dB	2023-11-28 13:52:12	
LAS_{max}	81.9 dB	2023-11-28 13:52:30	
LAS_{min}	51.3 dB	2023-11-28 14:05:22	
LA_{eq}	67.7 dB		
LC_{eq}	78.4 dB	LC_{eq} - LA_{eq}	10.7 dB
LAI_{eq}	70.8 dB	LAI_{eq} - LA_{eq}	3.1 dB

Exceedances	Count	Duration
LAS > 65.0 dB	34	0:09:27.4
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

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

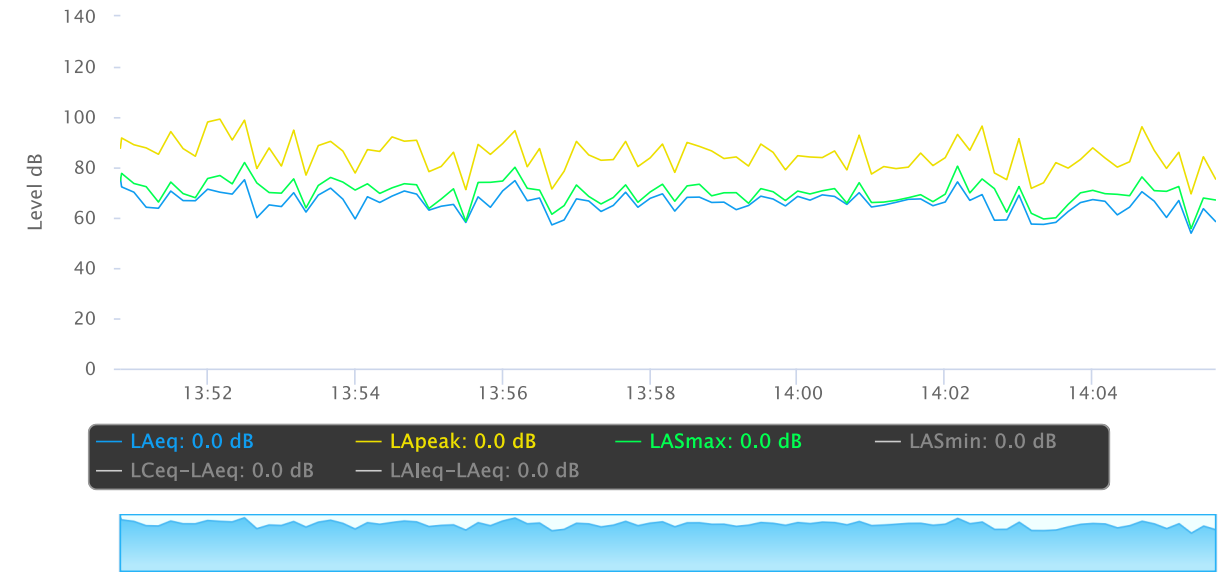
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	67.7 dB		78.4 dB		--- dB	
$L_{S(max)}$	81.9 dB	2023-11-28 13:52:30	--- dB		--- dB	
$L_{S(min)}$	51.3 dB	2023-11-28 14:05:22	--- dB		--- dB	
$L_{Peak(max)}$	99.2 dB	2023-11-28 13:52:12	--- dB		--- dB	

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

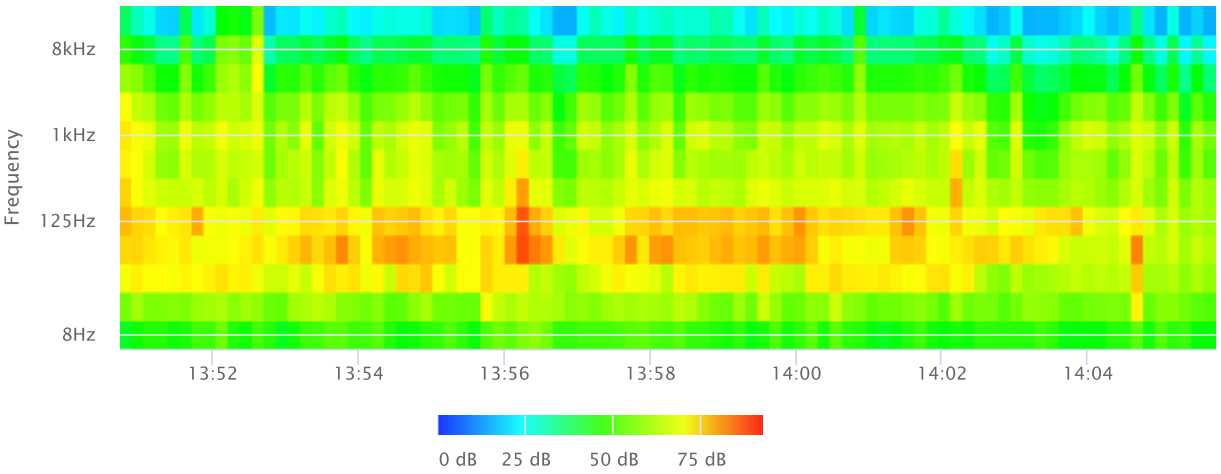
Statistics

LAS 2.0	74.5 dB
LAS 8.0	71.6 dB
LAS 25.0	68.2 dB
LAS 50.0	65.2 dB
LAS 66.6	63.3 dB
LAS 90.0	57.8 dB

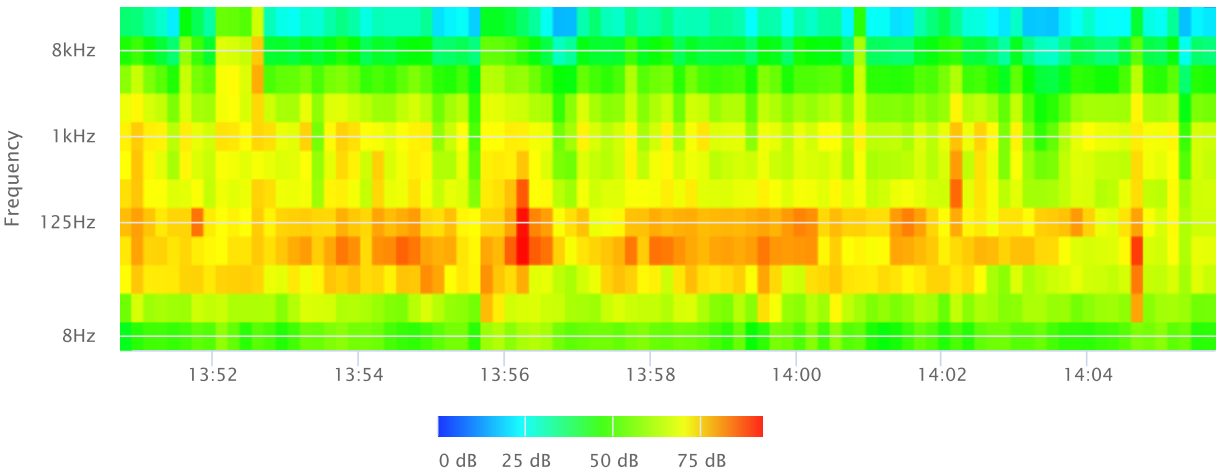
Time History



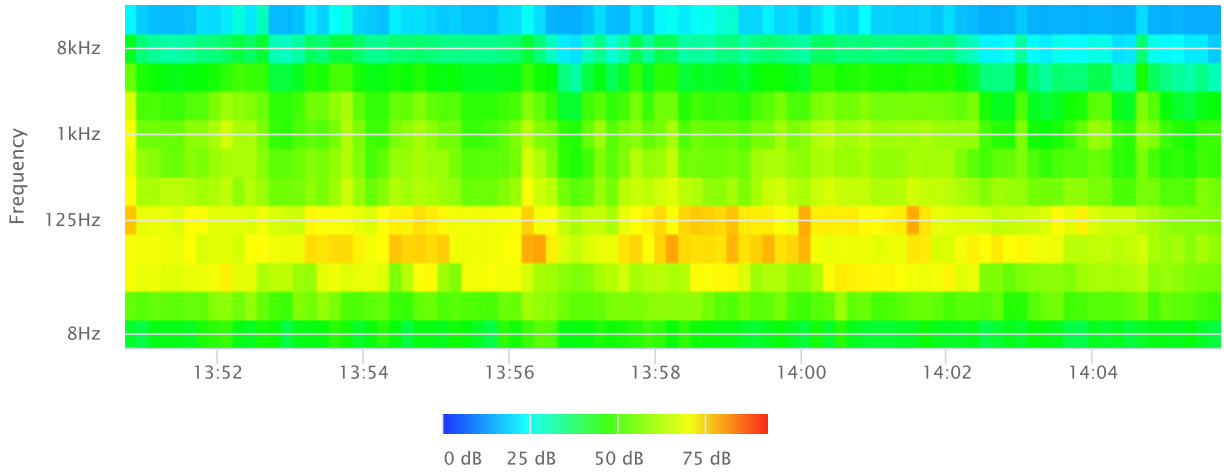
OBA 1/1 Leq



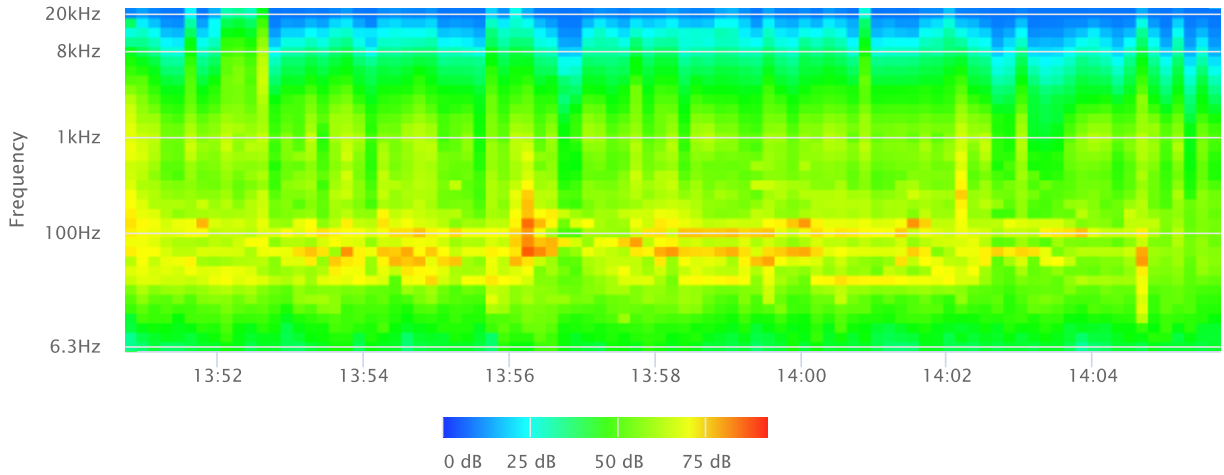
OBA 1/1 Lmax



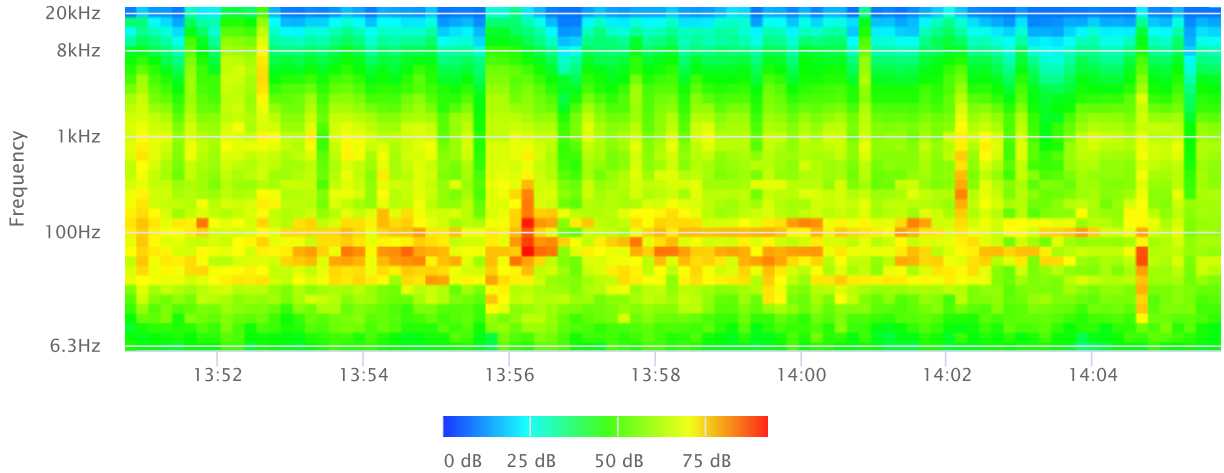
OBA 1/1 Lmin



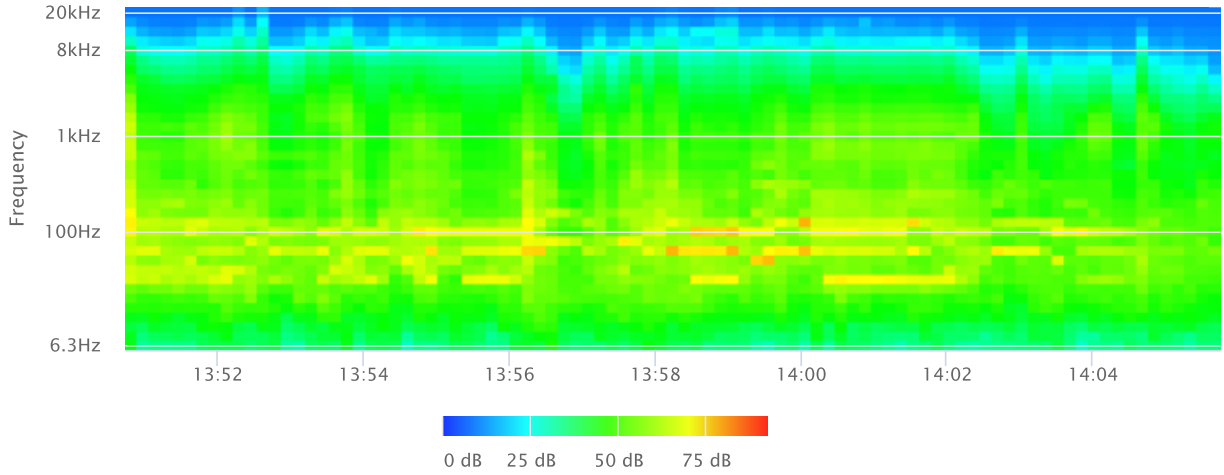
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:52
13:54
13:56
13:58
14:00
14:02
14:04
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Fleming Concrete Pumping Truck Yard, Lake Elsinore **Date:** November 28-29, 2023

Project #: 19687

Noise Measurement #: LTNM1 Run Time: 24 hours (24 x 1 hours) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 513 N Langstaff Street, Lake Elsinore, CA 92530

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Near the eastern property line of the residence at 513 Langstaff Street and just west of Langstaff St. Adjacent: 15 Fwy (running NW-SE) ~1,100' NE. Langstaff St to east, single-family residential to west, commercial uses to north, & multi-family residential to south.

Weather: Clear skies, sun by day . Sunset/rise: 4:41 PM/ 6:33AM **Settings:** SLOW FAST

Temperature: 40-70 deg F **Wind:** 0-8 mph **Humidity:** 20-55% **Terrain:** Flat

Start Time: 4:00 PM **End Time:** 4:00 PM **Run Time:**

Leq:	57.3	dB	**Primary Noise Source:** Traffic noise from vehicles traveling along N Langstaff St during 24 hour
Lmax	83.5	dB	measurement. Traffic ambiance from vehicles on 15 Fwy & other roads.
L2	63.1	dB	**Secondary Noise Sources:** Some residential ambiance, distant overhead air traffic. Bird song by day.
L8	61.1	dB	Industrial ambiance from storage yard on opposite side of N Langstaff St.
L25	58.2	dB	
L50	55.3	dB	

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/17/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	11/28/2023		

Noise Measurement
Field Data

PHOTOS:

LTNM1 looking at microphone (~7' above ground) located in evergreen tree just south of residence 513 N LangStaff Street, Lake Elsinore.

LTNM1 aerial view, showing location of microphone relative to surrounding area.

Summary	
File Name on Meter	LxT_Data.366.s
File Name on PC	LxT_0003099-20231128 160000-LxT_Data.366.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	LTNM1 33°40'37.58"N 117°19'42.56"W
Job Description	24 hour noise measurement (24 x 1 hours)
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.

Measurement	
Start	2023-11-28 16:00:00
Stop	2023-11-29 16:00:00
Duration	24:00:00.0
Run Time	24:00:00.0
Pause	00:00:00.0
Pre-Calibration	2023-11-28 14:51:24
Post-Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	122.6 dB

Results		
LA_{eq}	57.3	
LAE	106.7	
EA	5.215	mPa^2h
EA8	1.738	mPa^2h
EA40	8.691	mPa^2h
$LA_{peak\ (max)}$	2023-11-29 14:46:40	96.4 dB
LAS_{max}	2023-11-29 14:46:42	83.5 dB
LAS_{min}	2023-11-29 10:55:02	42.8 dB

		Statistics	
LC_{eq}	63.4 dB	**LA2.00**	63.1 dB
LA_{eq}	57.3 dB	**LA8.00**	61.1 dB
LC_{eq} - LA_{eq}	6.0 dB	**LA25.00**	58.2 dB
LAI_{eq}	58.4 dB	**LA50.00**	55.3 dB
LA_{eq}	57.3 dB	**LA90.00**	49.0 dB
LAI_{eq} - LA_{eq}	1.0 dB	**LA99.00**	46.1 dB
Overload Count	0		

Record #	Date	Time	Run Duration	Run Time	Pause	LAeq	LASmin	LASmin Time	LASmax	LASmax Time	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS99.00
1	2023-11-28	16:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.7	44.6	16:49:59	64.7	16:59:09	55.1	51.4	50.0	48.7	47.1	45.9
2	2023-11-28	17:00:00	01:00:00.0	01:00:00.0	00:00:00.0	55.1	44.4	17:24:06	77.4	17:42:35	61.9	55.7	53.8	50.3	46.6	45.3
3	2023-11-28	18:00:00	01:00:00.0	01:00:00.0	00:00:00.0	57.2	50.9	18:52:20	69.6	18:40:32	61.5	59.3	57.8	56.2	53.9	51.8
4	2023-11-28	19:00:00	01:00:00.0	01:00:00.0	00:00:00.0	61.3	53.8	19:01:54	71.1	19:50:20	64.4	63.3	62.0	60.8	58.5	55.5
5	2023-11-28	20:00:00	01:00:00.0	01:00:00.0	00:00:00.0	58.7	51.7	20:24:33	70.8	20:18:31	63.4	62.1	59.5	57.5	54.6	53.0
6	2023-11-28	21:00:00	01:00:00.0	01:00:00.0	00:00:00.0	58.6	50.8	21:11:25	64.5	21:38:14	62.7	61.4	59.6	57.9	55.0	52.3
7	2023-11-28	22:00:00	01:00:00.0	01:00:00.0	00:00:00.0	58.3	51.5	22:18:53	65.7	22:41:55	62.0	60.7	59.0	57.6	55.6	54.1
8	2023-11-28	23:00:00	01:00:00.0	01:00:00.0	00:00:00.0	57.1	47.7	23:45:38	65.2	23:11:31	61.6	60.1	58.5	56.4	52.0	49.5
9	2023-11-29	00:00:00	01:00:00.0	01:00:00.0	00:00:00.0	55.3	47.6	00:50:54	61.5	00:26:32	59.1	57.7	56.1	54.8	52.0	50.0
10	2023-11-29	01:00:00	01:00:00.0	01:00:00.0	00:00:00.0	55.3	46.2	01:39:26	62.1	01:28:59	59.5	57.9	56.3	54.7	51.6	48.2
11	2023-11-29	02:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.2	47.0	02:25:03	61.2	02:11:29	58.1	56.7	55.1	53.7	51.3	48.9
12	2023-11-29	03:00:00	01:00:00.0	01:00:00.0	00:00:00.0	56.4	48.1	03:26:11	62.8	03:10:31	60.1	59.0	57.4	55.8	52.6	49.7
13	2023-11-29	04:00:00	01:00:00.0	01:00:00.0	00:00:00.0	59.8	54.4	04:06:10	69.7	04:57:05	62.8	61.6	60.6	59.5	57.4	55.9
14	2023-11-29	05:00:00	01:00:00.0	01:00:00.0	00:00:00.0	60.0	52.8	05:37:38	70.2	05:47:47	63.5	62.5	61.2	59.5	56.4	54.4
15	2023-11-29	06:00:00	01:00:00.0	01:00:00.0	00:00:00.0	61.1	53.0	06:48:59	76.3	06:53:34	64.7	63.6	62.4	60.6	56.3	54.2
16	2023-11-29	07:00:00	01:00:00.0	01:00:00.0	00:00:00.0	59.2	51.0	07:55:22	71.0	07:40:46	63.8	61.9	60.3	58.8	54.1	52.6
17	2023-11-29	08:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.7	47.8	08:39:25	67.3	08:54:20	58.8	57.1	55.6	54.0	50.9	48.5
18	2023-11-29	09:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.0	43.9	09:36:03	78.4	09:00:34	57.6	55.5	53.8	51.7	47.5	45.6
19	2023-11-29	10:00:00	01:00:00.0	01:00:00.0	00:00:00.0	53.0	42.8	10:55:02	62.2	10:23:20	58.0	56.7	54.5	51.3	47.3	45.3
20	2023-11-29	11:00:00	01:00:00.0	01:00:00.0	00:00:00.0	56.8	49.8	11:00:00	72.1	11:05:14	64.4	57.5	55.8	54.6	52.7	50.9
21	2023-11-29	12:00:00	01:00:00.0	01:00:00.0	00:00:00.0	55.2	47.7	12:30:06	70.2	12:27:12	60.3	57.7	55.5	53.9	51.2	48.9
22	2023-11-29	13:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.1	46.8	13:59:56	66.9	13:38:55	58.8	56.7	55.1	53.4	49.8	47.7
23	2023-11-29	14:00:00	01:00:00.0	01:00:00.0	00:00:00.0	58.0	44.0	14:21:02	83.5	14:46:42	63.0	56.5	52.4	49.5	46.7	45.0
24	2023-11-29	15:00:00	01:00:00.0	01:00:00.0	00:00:00.0	53.9	44.1	15:30:05	75.7	15:40:09	61.2	56.9	52.1	49.0	46.7	45.7

Measurement Report

Report Summary

Meter's File Name	LxT_Data.366.s	Computer's File Name	LxT_0003099-20231128 160000-LxT_Data.366.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	LTNM1 33°40'37.58"N 117°19'42.56"W
Job Description	24 hour noise measurement (24 x 1 hours)		
Note	Ganddini Project#19687 Fleming Concrete Pumping Truck Yard, Lake Elsinore.		
Start Time	2023-11-28 16:00:00	Duration	24:00:00.0
End Time	2023-11-29 16:00:00	Run Time	24:00:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	57.3 dB		
LAE	106.7 dB	SEA	--- dB
EA	5.2 mPa²h	LAFTM5	59.5 dB
EA8	1.7 mPa²h		
EA40	8.7 mPa²h		
LA_{peak}	96.4 dB	2023-11-29 14:46:40	
LAS_{max}	83.5 dB	2023-11-29 14:46:42	
LAS_{min}	42.8 dB	2023-11-29 10:55:02	
LA_{eq}	57.3 dB		
LC_{eq}	63.4 dB	LC_{eq} - LA_{eq}	6.0 dB
LAI_{eq}	58.4 dB	LAI_{eq} - LA_{eq}	1.0 dB

Exceedances	Count	Duration
LAS > 65.0 dB	71	0:11:40.4
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

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

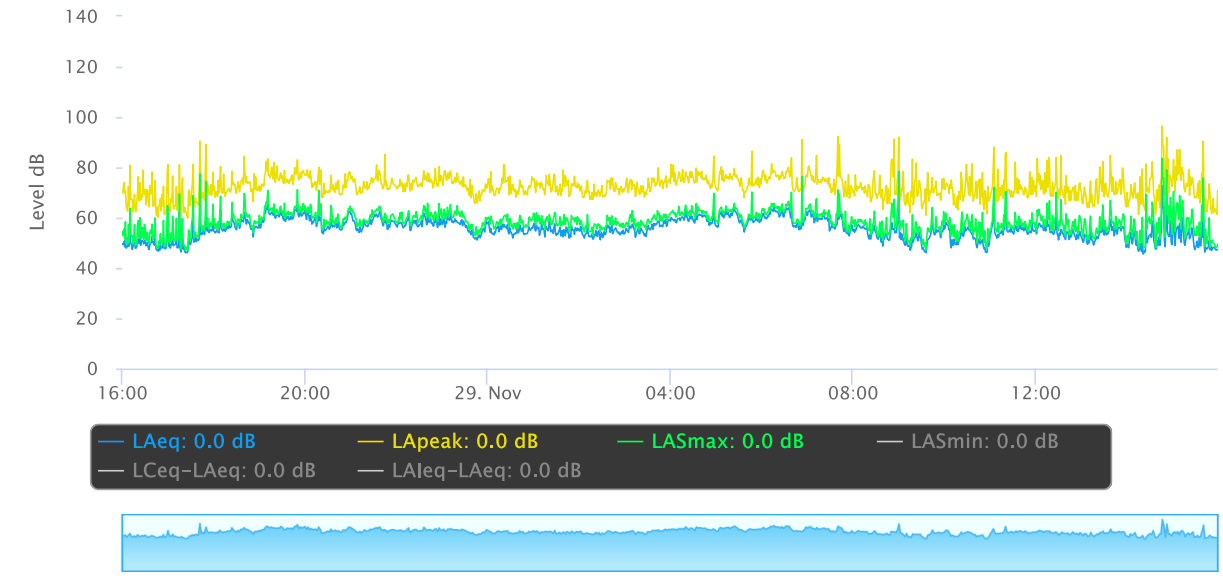
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	57.3 dB		63.4 dB		--- dB	
$L_{S(max)}$	83.5 dB	2023-11-29 14:46:42	--- dB		--- dB	
$L_{S(min)}$	42.8 dB	2023-11-29 10:55:02	--- dB		--- dB	
$L_{Peak(max)}$	96.4 dB	2023-11-29 14:46:40	--- dB		--- dB	

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

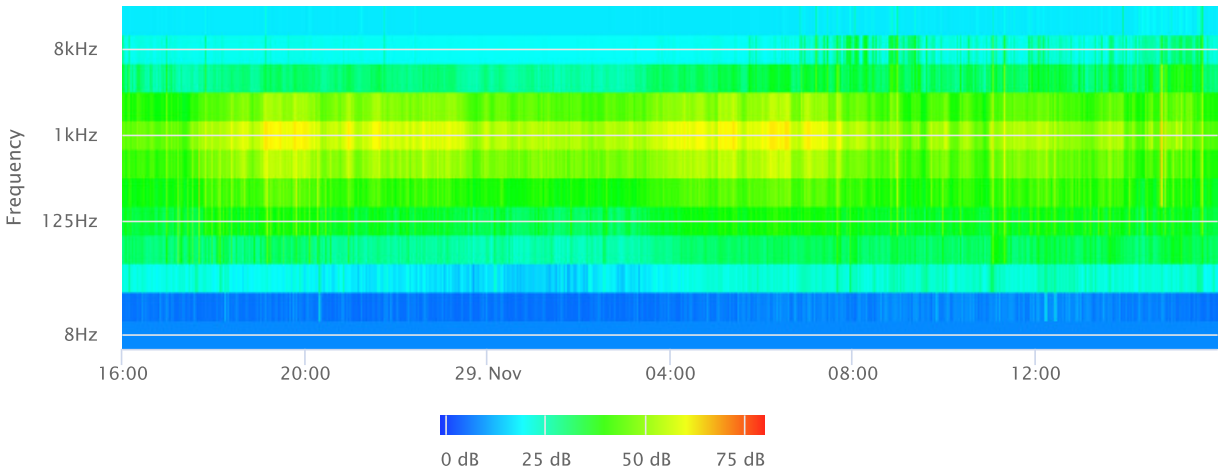
Statistics

LAS 2.0	63.1 dB
LAS 8.0	61.1 dB
LAS 25.0	58.2 dB
LAS 50.0	55.3 dB
LAS 90.0	49.0 dB
LAS 99.0	46.1 dB

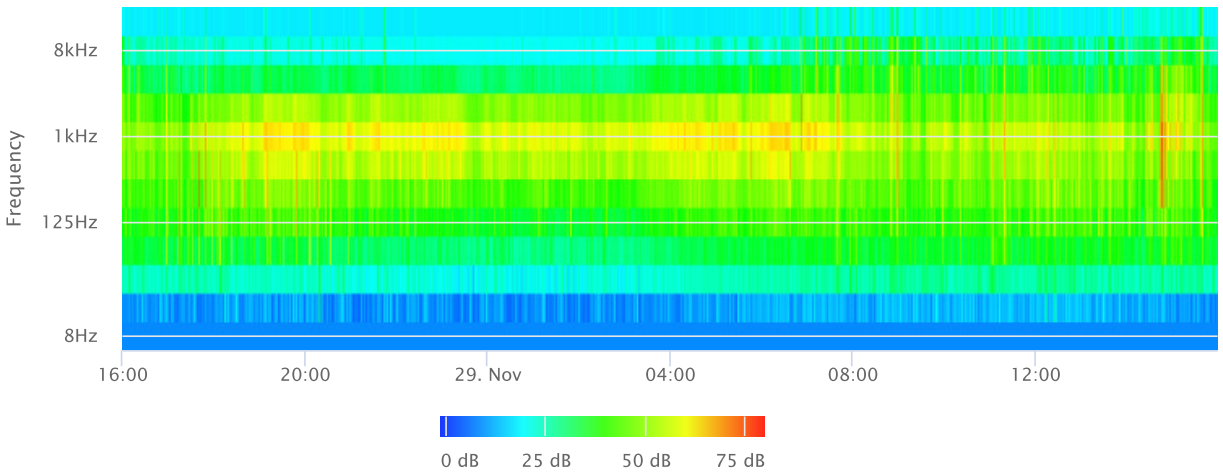
Time History



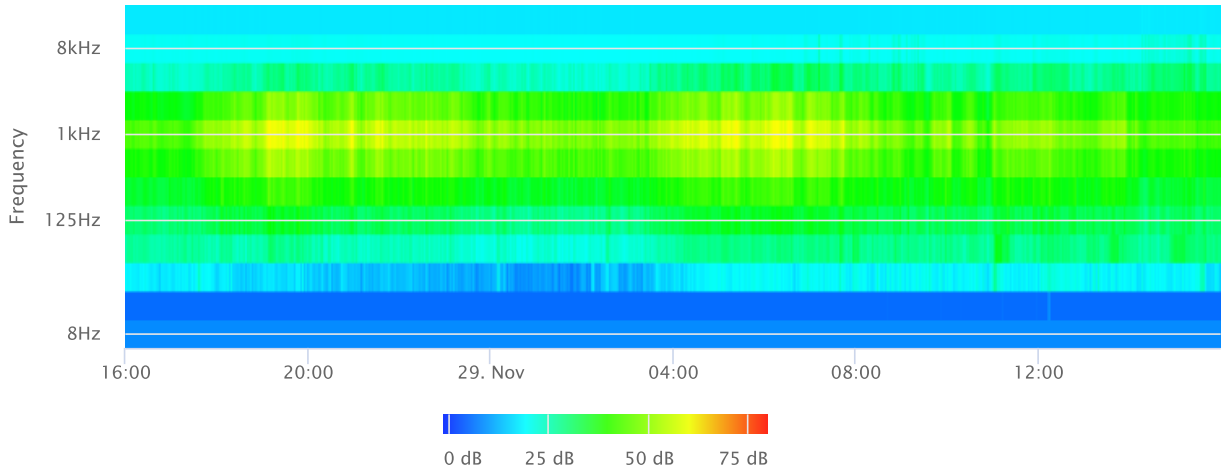
OBA 1/1 Leq



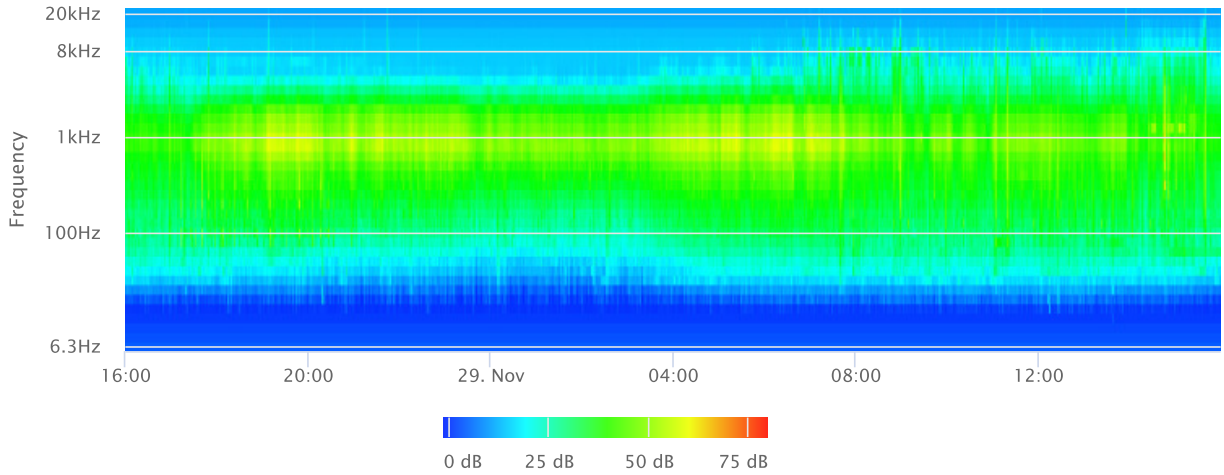
OBA 1/1 Lmax



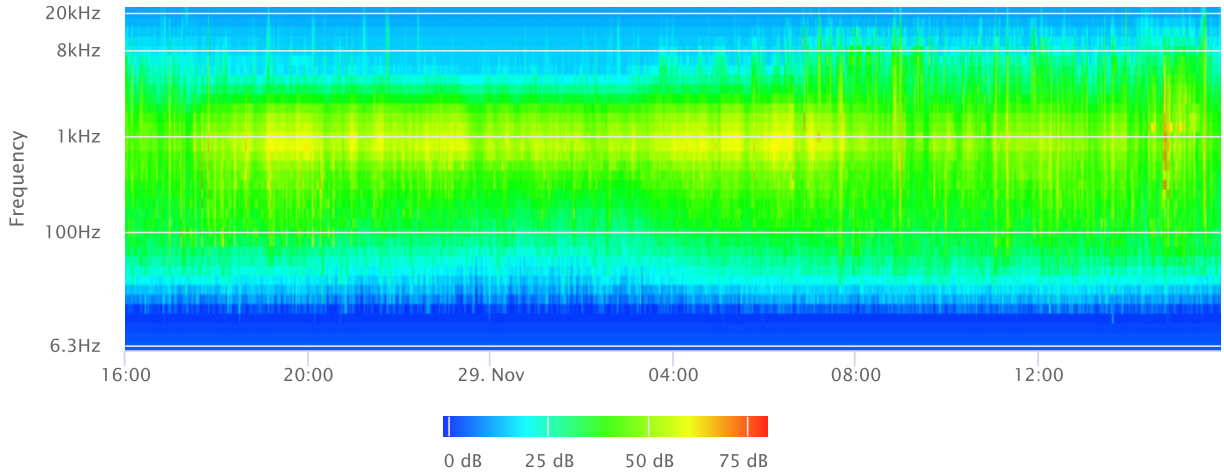
OBA 1/1 Lmin



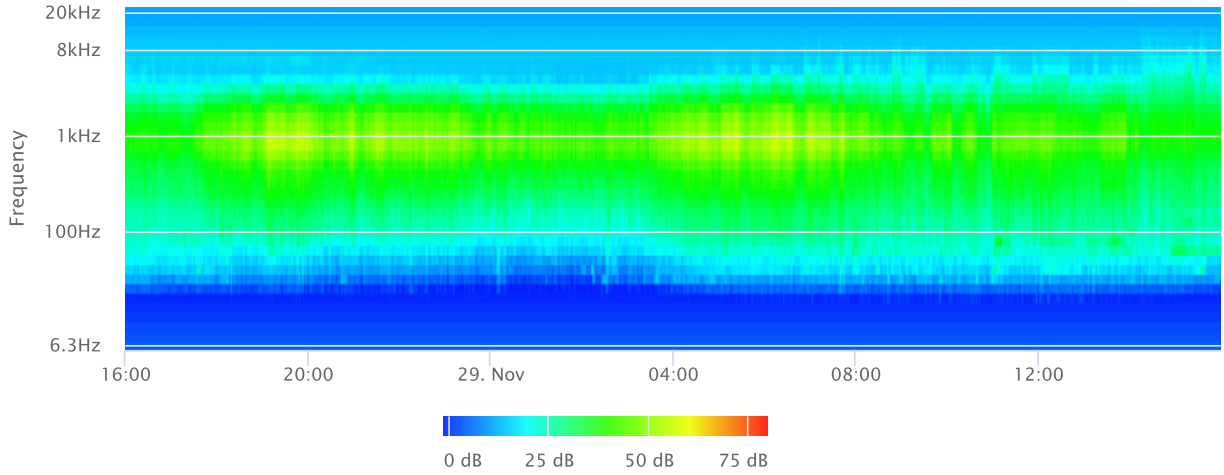
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
16:00
20:00
29. Nov
04:00
08:00
12:00
0 dB
25 dB
50 dB
75 dB

APPENDIX D

CONSTRUCTION NOISE MODEL WORKSHEETS

Receptor - Residential to the East (131 W Minthorn Street Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	480	40	0.40	-19.6	-4.0	65.4	61.4
Rubber Tired Dozers	1	82	480	40	0.40	-19.6	-4.0	62.4	58.4
Tractors/Loaders/Backhoes	1	84	480	40	0.40	-19.6	-4.0	64.4	60.4
								Log Sum	65.0
Grading									
Rubber Tired Dozers	1	82	480	40	0.40	-19.6	-4.0	62.4	58.4
Tractors/Loaders/Backhoes	2	84	480	40	0.80	-19.6	-1.0	64.4	63.4
Graders	1	85	480	40	0.40	-19.6	-4.0	65.4	61.4
								Log Sum	66.3
Building Construction									
Cranes	1	81	480	16	0.16	-19.6	-8.0	61.4	53.4
Forklifts[2]	1	48	480	40	0.40	-19.6	-4.0	28.4	24.4
Generator Sets	1	81	480	50	0.50	-19.6	-3.0	61.4	58.3
Welders	3	74	480	40	1.20	-19.6	0.8	54.4	55.1
Tractors/Loaders/Backhoes	1	84	480	40	0.40	-19.6	-4.0	64.4	60.4
								Log Sum	63.7
Paving									
Tractors/Loaders/Backhoes	1	84	480	40	0.40	-19.6	-4.0	64.4	60.4
Pavers	1	77	480	50	0.50	-19.6	-3.0	57.4	54.3
Paving Equipment	1	77	480	50	0.50	-19.6	-3.0	57.4	54.3
Rollers	1	80	480	20	0.20	-19.6	-7.0	60.4	53.4
Cement and Mortar Mixer	1	79	480	40	0.40	-19.6	-4.0	59.4	55.4
								Log Sum	63.4
Architectural Coating									
Air Compressors	1	78	480	40	0.40	-19.6	-4.0	58.4	54.4
								Log Sum	54.4

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Commercial to Northwest (Mr. Nice Guy Marijuana Dispensary, 311 W Minthorn Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	422	40	0.40	-18.5	-4.0	66.5	62.5
Rubber Tired Dozers	1	82	422	40	0.40	-18.5	-4.0	63.5	59.5
Tractors/Loaders/Backhoes	1	84	422	40	0.40	-18.5	-4.0	65.5	61.5
								Log Sum	66.1
Grading									
Rubber Tired Dozers	1	82	422	40	0.40	-18.5	-4.0	63.5	59.5
Tractors/Loaders/Backhoes	2	84	422	40	0.80	-18.5	-1.0	65.5	64.5
Graders	1	85	422	40	0.40	-18.5	-4.0	66.5	62.5
								Log Sum	67.4
Building Construction									
Cranes	1	81	422	16	0.16	-18.5	-8.0	62.5	54.5
Forklifts[2]	1	48	422	40	0.40	-18.5	-4.0	29.5	25.5
Generator Sets	1	81	422	50	0.50	-18.5	-3.0	62.5	59.5
Welders	3	74	422	40	1.20	-18.5	0.8	55.5	56.3
Tractors/Loaders/Backhoes	1	84	422	40	0.40	-18.5	-4.0	65.5	61.5
								Log Sum	64.8
Paving									
Tractors/Loaders/Backhoes	1	84	422	40	0.40	-18.5	-4.0	65.5	61.5
Pavers	1	77	422	50	0.50	-18.5	-3.0	58.5	55.5
Paving Equipment	1	77	422	50	0.50	-18.5	-3.0	58.5	55.5
Rollers	1	80	422	20	0.20	-18.5	-7.0	61.5	54.5
Cement and Mortar Mixer	1	79	422	40	0.40	-18.5	-4.0	60.5	56.5
								Log Sum	64.5
Architectural Coating									
Air Compressors	1	78	422	40	0.40	-18.5	-4.0	59.5	55.5
								Log Sum	55.5

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Commercial to Northeast (233 W Minthorn Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	357	40	0.40	-17.1	-4.0	67.9	63.9
Rubber Tired Dozers	1	82	357	40	0.40	-17.1	-4.0	64.9	60.9
Tractors/Loaders/Backhoes	1	84	357	40	0.40	-17.1	-4.0	66.9	62.9
								Log Sum	67.6
Grading									
Rubber Tired Dozers	1	82	357	40	0.40	-17.1	-4.0	64.9	60.9
Tractors/Loaders/Backhoes	2	84	357	40	0.80	-17.1	-1.0	66.9	66.0
Graders	1	85	357	40	0.40	-17.1	-4.0	67.9	63.9
								Log Sum	68.8
Building Construction									
Cranes	1	81	357	16	0.16	-17.1	-8.0	63.9	56.0
Forklifts[2]	1	48	357	40	0.40	-17.1	-4.0	30.9	26.9
Generator Sets	1	81	357	50	0.50	-17.1	-3.0	63.9	60.9
Welders	3	74	357	40	1.20	-17.1	0.8	56.9	57.7
Tractors/Loaders/Backhoes	1	84	357	40	0.40	-17.1	-4.0	66.9	62.9
								Log Sum	66.2
Paving									
Tractors/Loaders/Backhoes	1	84	357	40	0.40	-17.1	-4.0	66.9	62.9
Pavers	1	77	357	50	0.50	-17.1	-3.0	59.9	56.9
Paving Equipment	1	77	357	50	0.50	-17.1	-3.0	59.9	56.9
Rollers	1	80	357	20	0.20	-17.1	-7.0	62.9	55.9
Cement and Mortar Mixer	1	79	357	40	0.40	-17.1	-4.0	61.9	57.9
								Log Sum	66.0
Architectural Coating									
Air Compressors	1	78	357	40	0.40	-17.1	-4.0	60.9	56.9
								Log Sum	56.9

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Industrial to East (522 N Riley Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	88	40	0.40	-4.9	-4.0	80.1	76.1
Rubber Tired Dozers	1	82	88	40	0.40	-4.9	-4.0	77.1	73.1
Tractors/Loaders/Backhoes	1	84	88	40	0.40	-4.9	-4.0	79.1	75.1
								Log Sum	79.7
Grading									
Rubber Tired Dozers	1	82	88	40	0.40	-4.9	-4.0	77.1	73.1
Tractors/Loaders/Backhoes	2	84	88	40	0.80	-4.9	-1.0	79.1	78.1
Graders	1	85	88	40	0.40	-4.9	-4.0	80.1	76.1
								Log Sum	81.0
Building Construction									
Cranes	1	81	88	16	0.16	-4.9	-8.0	76.1	68.1
Forklifts[2]	1	48	88	40	0.40	-4.9	-4.0	43.1	39.1
Generator Sets	1	81	88	50	0.50	-4.9	-3.0	76.1	73.1
Welders	3	74	88	40	1.20	-4.9	0.8	69.1	69.9
Tractors/Loaders/Backhoes	1	84	88	40	0.40	-4.9	-4.0	79.1	75.1
								Log Sum	78.4
Paving									
Tractors/Loaders/Backhoes	1	84	88	40	0.40	-4.9	-4.0	79.1	75.1
Pavers	1	77	88	50	0.50	-4.9	-3.0	72.1	69.1
Paving Equipment	1	77	88	50	0.50	-4.9	-3.0	72.1	69.1
Rollers	1	80	88	20	0.20	-4.9	-7.0	75.1	68.1
Cement and Mortar Mixer	1	79	88	40	0.40	-4.9	-4.0	74.1	70.1
								Log Sum	78.2
Architectural Coating									
Air Compressors	1	78	88	40	0.40	-4.9	-4.0	73.1	69.1
								Log Sum	69.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to East (520 N Spring Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	528	40	0.40	-20.5	-4.0	64.5	60.5
Rubber Tired Dozers	1	82	528	40	0.40	-20.5	-4.0	61.5	57.5
Tractors/Loaders/Backhoes	1	84	528	40	0.40	-20.5	-4.0	63.5	59.5
								Log Sum	64.2
Grading									
Rubber Tired Dozers	1	82	528	40	0.40	-20.5	-4.0	61.5	57.5
Tractors/Loaders/Backhoes	2	84	528	40	0.80	-20.5	-1.0	63.5	62.6
Graders	1	85	528	40	0.40	-20.5	-4.0	64.5	60.5
								Log Sum	65.4
Building Construction									
Cranes	1	81	528	16	0.16	-20.5	-8.0	60.5	52.6
Forklifts[2]	1	48	528	40	0.40	-20.5	-4.0	27.5	23.5
Generator Sets	1	81	528	50	0.50	-20.5	-3.0	60.5	57.5
Welders	3	74	528	40	1.20	-20.5	0.8	53.5	54.3
Tractors/Loaders/Backhoes	1	84	528	40	0.40	-20.5	-4.0	63.5	59.5
								Log Sum	62.8
Paving									
Tractors/Loaders/Backhoes	1	84	528	40	0.40	-20.5	-4.0	63.5	59.5
Pavers	1	77	528	50	0.50	-20.5	-3.0	56.5	53.5
Paving Equipment	1	77	528	50	0.50	-20.5	-3.0	56.5	53.5
Rollers	1	80	528	20	0.20	-20.5	-7.0	59.5	52.5
Cement and Mortar Mixer	1	79	528	40	0.40	-20.5	-4.0	58.5	54.5
								Log Sum	62.6
Architectural Coating									
Air Compressors	1	78	528	40	0.40	-20.5	-4.0	57.5	53.5
								Log Sum	53.5

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to Southeast (109 W Flint Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	763	40	0.40	-23.7	-4.0	61.3	57.3
Rubber Tired Dozers	1	82	763	40	0.40	-23.7	-4.0	58.3	54.3
Tractors/Loaders/Backhoes	1	84	763	40	0.40	-23.7	-4.0	60.3	56.3
								Log Sum	61.0
Grading									
Rubber Tired Dozers	1	82	763	40	0.40	-23.7	-4.0	58.3	54.3
Tractors/Loaders/Backhoes	2	84	763	40	0.80	-23.7	-1.0	60.3	59.4
Graders	1	85	763	40	0.40	-23.7	-4.0	61.3	57.3
								Log Sum	62.2
Building Construction									
Cranes	1	81	763	16	0.16	-23.7	-8.0	57.3	49.4
Forklifts[2]	1	48	763	40	0.40	-23.7	-4.0	24.3	20.3
Generator Sets	1	81	763	50	0.50	-23.7	-3.0	57.3	54.3
Welders	3	74	763	40	1.20	-23.7	0.8	50.3	51.1
Tractors/Loaders/Backhoes	1	84	763	40	0.40	-23.7	-4.0	60.3	56.3
								Log Sum	59.6
Paving									
Tractors/Loaders/Backhoes	1	84	763	40	0.40	-23.7	-4.0	60.3	56.3
Pavers	1	77	763	50	0.50	-23.7	-3.0	53.3	50.3
Paving Equipment	1	77	763	50	0.50	-23.7	-3.0	53.3	50.3
Rollers	1	80	763	20	0.20	-23.7	-7.0	56.3	49.3
Cement and Mortar Mixer	1	79	763	40	0.40	-23.7	-4.0	55.3	51.3
								Log Sum	59.4
Architectural Coating									
Air Compressors	1	78	763	40	0.40	-23.7	-4.0	54.3	50.3
								Log Sum	50.3

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to Southwest (416 N Langstaff Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	733	40	0.40	-23.3	-4.0	61.7	57.7
Rubber Tired Dozers	1	82	733	40	0.40	-23.3	-4.0	58.7	54.7
Tractors/Loaders/Backhoes	1	84	733	40	0.40	-23.3	-4.0	60.7	56.7
								Log Sum	61.3
Grading									
Rubber Tired Dozers	1	82	733	40	0.40	-23.3	-4.0	58.7	54.7
Tractors/Loaders/Backhoes	2	84	733	40	0.80	-23.3	-1.0	60.7	59.7
Graders	1	85	733	40	0.40	-23.3	-4.0	61.7	57.7
								Log Sum	62.6
Building Construction									
Cranes	1	81	733	16	0.16	-23.3	-8.0	57.7	49.7
Forklifts[2]	1	48	733	40	0.40	-23.3	-4.0	24.7	20.7
Generator Sets	1	81	733	50	0.50	-23.3	-3.0	57.7	54.7
Welders	3	74	733	40	1.20	-23.3	0.8	50.7	51.5
Tractors/Loaders/Backhoes	1	84	733	40	0.40	-23.3	-4.0	60.7	56.7
								Log Sum	60.0
Paving									
Tractors/Loaders/Backhoes	1	84	733	40	0.40	-23.3	-4.0	60.7	56.7
Pavers	1	77	733	50	0.50	-23.3	-3.0	53.7	50.7
Paving Equipment	1	77	733	50	0.50	-23.3	-3.0	53.7	50.7
Rollers	1	80	733	20	0.20	-23.3	-7.0	56.7	49.7
Cement and Mortar Mixer	1	79	733	40	0.40	-23.3	-4.0	55.7	51.7
								Log Sum	59.7
Architectural Coating									
Air Compressors	1	78	733	40	0.40	-23.3	-4.0	54.7	50.7
								Log Sum	50.7

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Commercial to West (Lake Elsinore Public Works, 521 N Langstaff Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	223	40	0.40	-13.0	-4.0	72.0	68.0
Rubber Tired Dozers	1	82	223	40	0.40	-13.0	-4.0	69.0	65.0
Tractors/Loaders/Backhoes	1	84	223	40	0.40	-13.0	-4.0	71.0	67.0
								Log Sum	71.6
Grading									
Rubber Tired Dozers	1	82	223	40	0.40	-13.0	-4.0	69.0	65.0
Tractors/Loaders/Backhoes	2	84	223	40	0.80	-13.0	-1.0	71.0	70.0
Graders	1	85	223	40	0.40	-13.0	-4.0	72.0	68.0
								Log Sum	72.9
Building Construction									
Cranes	1	81	223	16	0.16	-13.0	-8.0	68.0	60.1
Forklifts[2]	1	48	223	40	0.40	-13.0	-4.0	35.0	31.0
Generator Sets	1	81	223	50	0.50	-13.0	-3.0	68.0	65.0
Welders	3	74	223	40	1.20	-13.0	0.8	61.0	61.8
Tractors/Loaders/Backhoes	1	84	223	40	0.40	-13.0	-4.0	71.0	67.0
								Log Sum	70.3
Paving									
Tractors/Loaders/Backhoes	1	84	223	40	0.40	-13.0	-4.0	71.0	67.0
Pavers	1	77	223	50	0.50	-13.0	-3.0	64.0	61.0
Paving Equipment	1	77	223	50	0.50	-13.0	-3.0	64.0	61.0
Rollers	1	80	223	20	0.20	-13.0	-7.0	67.0	60.0
Cement and Mortar Mixer	1	79	223	40	0.40	-13.0	-4.0	66.0	62.0
								Log Sum	70.1
Architectural Coating									
Air Compressors	1	78	223	40	0.40	-13.0	-4.0	65.0	61.0
								Log Sum	61.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to West (513 N Langstaff Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	345	40	0.40	-16.8	-4.0	68.2	64.2
Rubber Tired Dozers	1	82	345	40	0.40	-16.8	-4.0	65.2	61.2
Tractors/Loaders/Backhoes	1	84	345	40	0.40	-16.8	-4.0	67.2	63.2
								Log Sum	67.9
Grading									
Rubber Tired Dozers	1	82	345	40	0.40	-16.8	-4.0	65.2	61.2
Tractors/Loaders/Backhoes	2	84	345	40	0.80	-16.8	-1.0	67.2	66.3
Graders	1	85	345	40	0.40	-16.8	-4.0	68.2	64.2
								Log Sum	69.1
Building Construction									
Cranes	1	81	345	16	0.16	-16.8	-8.0	64.2	56.3
Forklifts[2]	1	48	345	40	0.40	-16.8	-4.0	31.2	27.2
Generator Sets	1	81	345	50	0.50	-16.8	-3.0	64.2	61.2
Welders	3	74	345	40	1.20	-16.8	0.8	57.2	58.0
Tractors/Loaders/Backhoes	1	84	345	40	0.40	-16.8	-4.0	67.2	63.2
								Log Sum	66.5
Paving									
Tractors/Loaders/Backhoes	1	84	345	40	0.40	-16.8	-4.0	67.2	63.2
Pavers	1	77	345	50	0.50	-16.8	-3.0	60.2	57.2
Paving Equipment	1	77	345	50	0.50	-16.8	-3.0	60.2	57.2
Rollers	1	80	345	20	0.20	-16.8	-7.0	63.2	56.2
Cement and Mortar Mixer	1	79	345	40	0.40	-16.8	-4.0	62.2	58.2
								Log Sum	66.3
Architectural Coating									
Air Compressors	1	78	345	40	0.40	-16.8	-4.0	61.2	57.2
								Log Sum	57.2

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to West (508 N Langstaff Street, Lake Elsinore)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Preparation									
Graders	1	85	447	40	0.40	-19.0	-4.0	66.0	62.0
Rubber Tired Dozers	1	82	447	40	0.40	-19.0	-4.0	63.0	59.0
Tractors/Loaders/Backhoes	1	84	447	40	0.40	-19.0	-4.0	65.0	61.0
								Log Sum	65.6
Grading									
Rubber Tired Dozers	1	82	447	40	0.40	-19.0	-4.0	63.0	59.0
Tractors/Loaders/Backhoes	2	84	447	40	0.80	-19.0	-1.0	65.0	64.0
Graders	1	85	447	40	0.40	-19.0	-4.0	66.0	62.0
								Log Sum	66.9
Building Construction									
Cranes	1	81	447	16	0.16	-19.0	-8.0	62.0	54.0
Forklifts[2]	1	48	447	40	0.40	-19.0	-4.0	29.0	25.0
Generator Sets	1	81	447	50	0.50	-19.0	-3.0	62.0	59.0
Welders	3	74	447	40	1.20	-19.0	0.8	55.0	55.8
Tractors/Loaders/Backhoes	1	84	447	40	0.40	-19.0	-4.0	65.0	61.0
								Log Sum	64.3
Paving									
Tractors/Loaders/Backhoes	1	84	447	40	0.40	-19.0	-4.0	65.0	61.0
Pavers	1	77	447	50	0.50	-19.0	-3.0	58.0	55.0
Paving Equipment	1	77	447	50	0.50	-19.0	-3.0	58.0	55.0
Rollers	1	80	447	20	0.20	-19.0	-7.0	61.0	54.0
Cement and Mortar Mixer	1	79	447	40	0.40	-19.0	-4.0	60.0	56.0
								Log Sum	64.0
Architectural Coating									
Air Compressors	1	78	447	40	0.40	-19.0	-4.0	59.0	55.0
								Log Sum	55.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006).

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

APPENDIX E

SOUNDPLAN WORKSHEETS

Noise emissions of industry sources

Source name	Reference	Level	Frequency spectrum [dB(A)]										Corrections		
		Day	31	63	125	250	500	1	2	4	8	16	Cwall	CI	CT
		dB(A)	Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	kHz	dB	dB	dB
HVAC1	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HAVAC2	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC3	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC4	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC5	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC6	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC7	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC8	Lw/unit	-	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-

Noise emissions of parking lot traffic

Name	Parking lot type	Size	Movements per hour Day	Road surface	Separated method	Lw,ref dB(A)
P1	Motorway station (resting trucks)	12 Parking bays	6.000	Asphaltic driving lanes	no	89.0
P2	Visitors and staff	13 Parking bays	1.300	Asphaltic driving lanes	no	75.6

Receiver list

No.	Receiver name	Building side	Floor	Limit Day dB(A)	Level Day dB(A)	Conflict Day dB
1	1	-	EG	-	37.8	-
2	2	-	EG	-	36.5	-
3	3	-	EG	-	39.6	-
4	4	-	EG	-	39.6	-
5	5	-	EG	-	43.9	-
6	6	-	EG	-	35.8	-
7	7	-	EG	-	43.3	-
8	8	-	EG	-	41.2	-

APPENDIX F

FHWA TRAFFIC NOISE MODEL WORKSHEETS

FHWA Traffic Noise Prediction Model FHWA-RD-77-108

Existing Traffic Noise

Project: **19687 Fleming Concrete Pumping Truck Yard**

Road: **Minthorn Street**

Segment: **In vicinity of project site**

	DAYTIME			EVENING			NIGHTTIME			ADT	10050.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	25.00
INPUT PARAMETERS											
Vehicles per hour	616.36	7.54	2.93	455.50	1.34	1.34	114.09	10.05	3.91	% A	97.4
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	0.74
ADJUSTMENTS											
Flow	21.57	2.45	-1.66	20.26	-5.06	-5.05	14.25	3.69	-0.41		
Distance	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.14
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.70
LEQ	66.87	56.70	57.44	65.56	49.19	54.05	59.55	57.95	58.69	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.70		EVENING LEQ	65.95		NIGHT LEQ	63.55		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.14**								

FHWA Traffic Noise Prediction Model FHWA-RD-77-108

Existing Plus Project Traffic Noise

Project: **19687 Fleming Concrete Pumping Truck Yard**

Road: **Minthorn Street**

Segment: **In vicinity of project site**

	DAYTIME			EVENING			NIGHTTIME			ADT	10138.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	25.00
INPUT PARAMETERS											
Vehicles per hour	621.52	7.54	3.17	459.32	1.34	1.45	115.05	10.05	4.22	% A	97.36
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.82
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	0.79
ADJUSTMENTS											
Flow	21.61	2.45	-1.32	20.29	-5.06	-4.71	14.28	3.69	-0.07		
Distance	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.24
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.76
LEQ	66.91	56.70	57.78	65.59	49.19	54.39	59.58	57.95	59.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.76		EVENING LEQ	66.00		NIGHT LEQ	63.68		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.24**								

FHWA Traffic Noise Prediction Model FHWA-RD-77-108

Existing Traffic Noise

Project: **19687 Fleming Concrete Pumping Truck Yard**

Road: **Riley Street**

Segment: **South of Minthorn Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	25700.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	25.00
										DISTANCE	20.00
INPUT PARAMETERS											
Vehicles per hour	1576.17	19.27	7.50	1164.81	3.42	3.43	291.76	25.70	10.00	% A	97.4
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24	% HT	0.74
ADJUSTMENTS											
Flow	27.69	8.56	4.46	26.38	1.06	1.07	20.37	9.81	5.71		
Distance	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.18
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.70
LEQ	66.04	58.56	60.61	64.73	51.05	57.22	58.71	59.81	61.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.70		EVENING LEQ	65.59		NIGHT LEQ	65.10		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.18**								

FHWA Traffic Noise Prediction Model FHWA-RD-77-108

Existing Plus Project Traffic Noise

Project: **19687 Fleming Concrete Pumping Truck Yard**

Road: **Riley Street**

Segment: **South of Minthorn Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	25788.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	25.00
										DISTANCE	20.00
INPUT PARAMETERS											
Vehicles per hour	1581.33	19.27	7.73	1168.63	3.42	3.54	292.72	25.70	10.31	% A	97.39
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.83
NOISE CALCULATIONS											
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24	% HT	0.76
ADJUSTMENTS											
Flow	27.70	8.56	4.60	26.39	1.06	1.20	20.38	9.81	5.85		
Distance	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	3.91	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.24
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.74
LEQ	66.05	58.56	60.75	64.74	51.05	57.35	58.73	59.81	62.00	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.74		EVENING LEQ	65.62		NIGHT LEQ	65.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.24**								

APPENDIX G

GROUNDBORNE VIBRATION WORKSHEETS

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial/Public Works to West		
Address:	521 N Langstaff Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	225.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.008	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard		Date: 11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial/Public Works to West		
Address:	521 N Langstaff Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	225.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.003	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard		Date: 11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Single-Family Residential to West		
Address:	513 N Langstaff Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	363.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.004	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Single-Family Residential to West		
Address:	513 N Langstaff Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	363.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Multi-Family Residential to West		
Address:	508 N Langstaff Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	352.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.004	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Multi-Family Residential to West		
Address:	508 N Langstaff Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type =	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	352.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Single-Family Residential to Southwest		
Address:	416 N Langstaff Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	322.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.005	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard		Date: 11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Single-Family Residential to Southwest		
Address:	416 N Langstaff Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	322.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard		Date: 11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to East		
Address:	522 N Riley Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	40.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.104	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to East		
Address:	522 N Riley Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	40.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.044	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to Northeast		
Address:	233 Minthorn Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type =	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	152.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.006	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to Northeast		
Address:	233 Minthorn Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	152.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.014	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19687 Fleming Concrete Pumping Truck Yard		Date: 11/6/23
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to North		
Address:	311 Minthorn Street, Lake Elsinore		
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	43.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.			
RESULTS			
PPV =	0.093	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19687 Fleming Concrete Pumping Truck Yard	Date:	11/6/23
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to North		
Address:	311 Minthorn Street, Lake Elsinore		

PPV = PPVref(25/D)^n (in/sec)

INPUT

Equipment Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	43.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	

Note: Based on reference equations from the Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020, pg 37.

RESULTS

PPV =	0.039	IN/SEC	OUTPUT IN BLUE

GANDDINI GROUP INC.

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Appendix D: Air Quality and Greenhouse Gas Assessment

MEMORANDUM

URBAN CROSSROADS

DATE: July 22, 2024
TO: Alan Fleming, AF Properties, LLC
FROM: Haseeb Qureshi
Ali Dadabhoy
Shannon Wong
JOB NO: 15715-03 AQ & GHG Assessment

FLEMING & SONS CONCRETE PUMPING, INC. TRUCK YARD AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Alan Fleming,

Urban Crossroads, Inc. is pleased to provide the following Air Quality & Greenhouse Gas Assessment for the Fleming & Sons Concrete Pumping, Inc. Truck Yard (**Project**), which is located on the southwest corner of the intersection of West Minthorn Street and North Riley Street in the City of Lake Elsinore (**City**) (Assessor's Parcel Number **APN** 377-232-006, 377-232-007, and 377-232-009).

PROJECT OVERVIEW

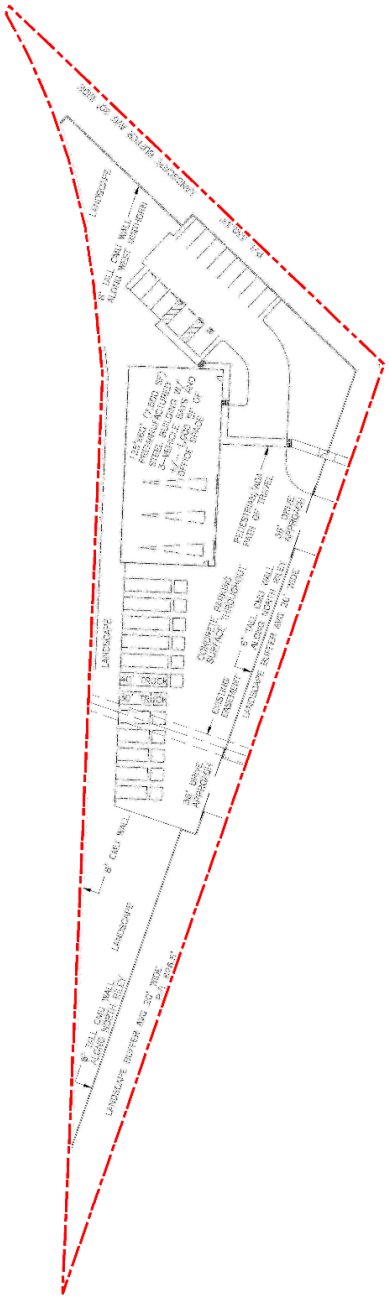
The proposed Project includes the development of a concrete pumping truck storage yard, minor maintenance, and administrative office building of approximately 7,500 square feet on a currently vacant 1.65-acre site. The proposed Project is anticipated to have an opening year of 2024. The preliminary site plan for the proposed Project is shown on Exhibit 1.

The Project will have 10-12 concrete pump semi-trucks parked on the site. Each day most will leave the yard and return. Trucks that are not working receive needed light duty maintenance such as tires, pipes, hoses, check and maintain fluids, fix mirror or windshield, etc. to be ready for use the following day. No major repair work is done on-site. Trucks will leave the yard, go directly to different jobsites each day, meet with concrete mixing trucks at the site and concrete is poured from the concrete trucks through the pumps to place concrete at the jobsite. Trucks will be washed out and cleaned off-site before returning to the yard. Trucks will also be re-fueled off-site. Sales and parts ordering personnel will work out of the administrative office. Typical operations will occur Monday through Friday (with occasional weekend operations) from 4:00 AM to 6:00 PM. There will be approximately 10-12 employees on the site at any given time.

SUMMARY OF FINDINGS

Results of the assessment indicate that the Project would result in a less than significant with respect to air quality and greenhouse gases.

EXHIBIT 1: PRELIMINARY SITE PLAN



N

LEGEND:

PROJECT AIR QUALITY IMPACTS

AIR QUALITY SETTING

SOUTH COAST AIR BASIN (SCAB)

The Project site is located in the SCAB within the jurisdiction of South Coast Air Quality Management District (SCAQMD) (1). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent (%) along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

Wind Patterns and Project Location

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Criteria Pollutants

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3) (precursor emissions include NO_X and reactive organic gases (ROG), CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Riverside County portion of the SCAB is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$.

Toxic Air Contaminants (TAC) Trend

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary products, and consumer products. According to the Ambient and Emission Trends of Toxic Air Contaminants in California journal article (2) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)[1]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

Sensitive Receptor Locations

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

Receptors in the Project study area are described below. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade,

[1] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

whichever is closer to the Project site. Receptors in the Project study area are shown on Exhibit 2 under the Localized Construction Emissions section later in the report.

- Receptor R1 represents the existing residence at 508-C North Langstaff St, approximately 355 feet west of the Project site.
- Receptor R2 represents the existing residence at 416 North Langstaff St, approximately 455 feet southwest of the Project site.
- Receptor R3 represents an existing light industrial commercial building at 522 North Riley St, approximately 61 feet east of the Project site.
- Receptor R4 represents the existing commercial building at 18921 Collier Ave, approximately 65 feet north of the Project site.
- Receptor R5 represents the existing building at the City of Lake Elsinore Public Works facility located at 521 North Langstaff St, approximately 212 feet west of the Project site.

REGULATORY BACKGROUND

FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the national ambient air quality standards (NAAQS) for O_3, CO, NO_X, SO_2, PM_{10}, and lead (Pb) (3). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (4). The CAA also mandates that each state submit and implement state implementation plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (5) (6). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

CALIFORNIA REGULATIONS

CARB

The CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the California ambient air quality standards (CAAQS) for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (7) (8).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (9). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

APPLICABLE REGULATORY REQUIRMENTS

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings) (10) (11).

SCAQMD Rule 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported offsite will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

SCAQMD Rule 1113

This rule serves to limit the volatile organic compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SCAQMD must comply with the current VOC standards set in this rule.

METHODOLOGY

In May 2023, the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of the CalEEMod Version 2022.1.1.20. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (12). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality and greenhouse gas emissions.

Standards of Significance

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the California Environmental Quality Act Guidelines (CEQA Guidelines) (14 CCR

§§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (13):

- **Threshold 1**: Conflict with or obstruct implementation of the applicable air quality plan.
- **Threshold 2**: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- **Threshold 3**: Expose sensitive receptors to substantial pollutant concentrations.
- **Threshold 4**: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

AIR QUALITY REGIONAL EMISSIONS THRESHOLDS

The SCAQMD has developed regional significance thresholds for criteria pollutants, as summarized at Table 1 (14). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the South Coast Air Basin (SCAB) with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day

lbs/day – Pounds Per Day

AIR QUALITY LOCALIZED EMISSIONS THRESHOLDS

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Lake Elsinore monitoring station (SRA 25). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size. The SCAQMD's screening look-up tables are utilized in determining localized impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds. Consistent with SCAQMD guidance, the thresholds presented in Table 2 were calculated by interpolating the threshold values for the Project's disturbed acreage.

The acres disturbed is based on the equipment list and days in the site preparation and grading phase according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday. The equipment-specific grading rates are summarized in the CalEEMod user's guide, Appendix A: Calculation Details for CalEEMod (15). It should be noted that

the disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Appendix A of the CalEEMod User Manual only identifies equipment-specific grading rates for Crawler Tractors, Graders, Rubber Tired Dozers, and Scrapers; therefore, Tractors/Loaders/Backhoes equipment that was included in the demolition, site preparation and grading phase was replaced with Crawler Tractors. For analytical purposes, emissions associated with peak site preparation and grading activities are considered for purposes of localized significance thresholds (LSTs) since this phase represents the maximum localized emissions that would occur. The Project's construction activities could disturb a maximum of approximately 1.5 acres per day for site preparation and 2 acres per day for grading activities. Any other construction phases of development would result in lesser emissions and consequently lesser impacts than what is disclosed herein. As such, Table 2 presents thresholds for localized construction and operational emissions.

TABLE 2: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS

Source	Activity	Emissions (lbs/day)			
		VOC	NO_X	PM_{10}	$PM_{2.5}$
Construction	Site Preparation	198 lbs/day	925 lbs/day	20 lbs/day	37 lbs/day
	Grading	234 lbs/day	1,110 lbs/day	24 lbs/day	41 lbs/day
Operations	N/A	371 lbs/day	1,965 lbs/day	15 lbs/day	4 lbs/day

[1]Source of localized significance threshold (LSTs) is provided on page 16.

CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading (Import/Export)
- Building Construction
- Paving
- Architectural Coating

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Per client provided data, the Project would require 2,500 cubic yards of export for

earthwork activities. The CalEEMod default trip length of 20-miles will be used to analyze the emissions associated with export activities.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. Worker and hauling trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in April 2024 and would last through November 2024. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[2]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA Guidelines (16).

CONSTRUCTION EQUIPMENT

CalEEMod default parameters for equipment has been used. Consistent with industry standards and typical construction practices, each piece of equipment will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

OFF-SITE PROJECT SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS

To support the Project development, there will be off-site improvements associated with street improvements and underground utilities. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints such as, roadway travel lanes, traffic signals, and sidewalks which would limit the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals.

[2] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

REGIONAL CONSTRUCTION EMISSIONS SUMMARY

The estimated maximum daily construction emissions are summarized on Table 3, and as shown, the Project construction-source emissions would not exceed SCAQMD regional thresholds. Thus, the Project would result in a less than significant impact associated with construction activities. Detailed construction model outputs are presented in Attachment A.

TABLE 3: REGIONAL CONSTRUCTION EMISSIONS SUMMARY

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2024	2.13	24.74	18.57	0.06	4.79	2.38
Winter						
2024	7.80	17.80	21.40	0.04	0.95	0.73
Maximum Daily Emissions	**7.80**	**24.74**	**21.40**	**0.06**	**4.79**	**2.38**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

[1]PM_{10} and $PM_{2.5}$ source emissions reflect 3x daily watering per SCAQMD Rule 403 for fugitive dust.

REGIONAL OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational related emissions are expected from the following primary sources: area source emissions, energy source emissions, and mobile source emissions.

The proposed Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the Fleming & Sons Concrete Pumping, Inc. Truck Yard Trip Generation Assessment were utilized in this analysis (17). It should be noted that the Trip Generation Assessment assumed 4+-axle Trucks only in an effort to conduct a conservative analysis.

To determine emissions from trucks for the proposed industrial use, the analysis incorporated the SCAQMD recommended truck trip length of 39.9 miles for 4+-axle (HHDT) trucks. The trip length function for trucks in CalEEMod has been revised to 39.9 miles, with an assumption of 100% primary trips for the proposed industrial land use.

The estimated operation-source emissions from the Project are summarized on Table 4. Detailed operation model outputs are presented in Attachment A. As shown on Table 4, operational-source emissions would not exceed the applicable SCAQMD regional thresholds for emissions of any criteria pollutant.

TABLE 4: TOTAL PROJECT REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	0.35	1.06	3.99	0.02	0.95	0.25
Area Source	0.23	2.75E-03	0.33	1.95E-05	5.80E-04	4.38E-04
Energy Source	3.06E-03	0.06	0.05	3.33E-04	4.22E-03	4.22E-03
Total Maximum Daily Emissions	**0.59**	**1.12**	**4.37**	**0.02**	**0.95**	**0.26**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Mobile Source	0.33	1.12	3.32	0.01	0.95	0.25
Area Source	0.18	0.00	0.00	0.00	0.00	0.00
Energy Source	3.06E-03	0.06	0.05	3.33E-04	4.22E-03	4.22E-03
Total Maximum Daily Emissions	**0.52**	**1.17**	**3.37**	**0.02**	**0.95**	**0.26**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

SENSITIVE RECEPTORS

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (18). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[3]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses. It should be noted that SCAQMD also states that Projects that are statutorily or categorically exempt under CEQA would not be subject to LST analyses. Projects exempt from CEQA also include infill projects that meet the H&S Code provisions. As such,

[3] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

although not required for this Project, LST analysis is presented to further underscore that there are in fact no significant impacts associated with the Project.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual or cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is location R1, represented by the existing residence at 508-C North Langstaff St, approximately 355 feet (108 meters) west of the Project site. Receptors in the Project study area shown on Exhibit 2.

As previously stated, and consistent with LST Methodology, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assume that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of NO_X and CO is location R3, represented by an existing light industrial commercial building at 522 North Riley St, approximately 61 feet (19 meters) east of the Project site.

It should be noted that the *LST Methodology* explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters* (18)." As such, for evaluation of localized NO_x and CO, a 25-meter distance will be used.

EXHIBIT 2: SENSITIVE RECEPTOR LOCATIONS

LOCALIZED CONSTRUCTION EMISSIONS

Table 5 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Outputs from the model runs for construction LSTs are provided in Attachment A. For analytical purposes, emissions associated with peak site preparation and grading activities are considered for purposes of LSTs since these phases represents the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in less emissions and consequently less impacts than what is disclosed herein. As shown in Table 5, emissions resulting from the Project construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related construction-source emissions and no mitigation is required.

TABLE 5: PROJECT LOCALIZED CONSTRUCTION IMPACTS

On-Site Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Site Preparation				
Maximum Daily Emissions	16.14	14.15	2.81	1.67
SCAQMD Localized Threshold	198	925	20	37
Threshold Exceeded?	NO	NO	NO	NO
Grading				
Maximum Daily Emissions	18.50	16.24	3.13	1.85
SCAQMD Localized Threshold	234	1,110	24	41
Threshold Exceeded?	NO	NO	NO	NO

LOCALIZED OPERATIONAL EMISSIONS

Table 6 identifies the localized operational impacts at the nearest receptor location in the vicinity of the Project. In an effort to establish a maximum potential impact scenario for analytical purposes, the emissions shown on Table 6 represent all on-site Project-related stationary (area) sources and on-site mobile source emissions. It should be noted that the longest on-site distance is roughly 0.16 miles for both trucks and passenger vehicles. As such, a separate CalEEMod run for operational LSTs has been prepared which accounts for the 0.16-mile on-site travel distance. Outputs from the model runs for operational LSTs are provided in Attachment B. As shown in Table 6, emissions resulting from the Project operation will not exceed the numerical localized thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized Project-related operational-source emissions and no mitigation is required.

TABLE 6: PROJECT LOCALIZED OPERATIONAL IMPACTS

On-Site Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	0.20	0.98	0.02	0.01
SCAQMD Localized Threshold	371	1,965	15	4
Threshold Exceeded?	NO	NO	NO	NO

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 1

Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the Final 2022 AQMP (2022 AQMP). The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (19). Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (20). The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook (21). These indicators are discussed below.

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that under this criterion refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded. As evaluated, the Project's regional and localized construction and operational-source emissions would not exceed applicable regional significance thresholds. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The 2022 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Lake Elsinore General Plan is considered to be consistent with the AQMP.

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

The City of Lake Elsinore General Plan designates the Project site as "Historic District Business Professional" for APNs 377-232-006, -007, and -009. The "Historic District Business Professional" designation provides for office and administrative uses, light industrial, research and development, office-based firms, including office support facilities, restaurants, medical clinics, public and quasi-public uses, and similar compatible uses. This designation allows for a maximum FAR of 0.45 (22).

The zoning designation for the Project site is "M-1 Limited Manufacturing District," which allows for light industrial uses that are relatively free of nuisance or hazardous characteristics and protect these areas from intrusion by residential, commercial, and other inharmonious uses.

The proposed Project includes the development of a concrete pumping truck storage yard, minor maintenance, and administrative office building of approximately 7,500 square feet on a currently vacant 1.5-acre site. As previously stated, the Project is consistent with the current land use and zoning designation. As such, the proposed Project would not conflict with the goals and objectives of the AQMP. Furthermore, the Project, as evaluated herein would not exceed the regional or localized air quality significance thresholds.

On the basis of the preceding discussion, the Project is determined to be consistent with the AQMP and a less than significant impact is expected.

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 2

Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

The CAAQS designate the Project site as nonattainment for O_3, PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (23). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, the proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 3

Would the expose sensitive receptors to substantial pollutant concentrations?

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project will not exceed the SCAQMD localized significance thresholds during operational activity. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods[4]. This "hot spot" analysis did not predict any exceedance of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 7.

TABLE 7: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (*1992 CO Plan*), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion

[4] The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

at a particular intersection. As evidence of this, for example, of the 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (i.e., the highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (24). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.9 ppm and 0.6 ppm, respectively (data from Lake Elsinore Area monitoring station for 2022). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore, if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.9 ppm and 7.6 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (25). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 8. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (24).

TABLE 8: CO MODEL RESULTS

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

AIR QUALITY IMPACTS – CONSISTENCY WITH THRESHOLD NO. 4

Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required (26).

PROJECT GHG ANALYSIS

CLIMATE CHANGE SETTING

Global climate change (GCC) is the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this memo cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this memo will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

REGULATORY SETTING

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.

- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Assembly Bill (AB) 32

The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."

CARB approved the 1990 GHG emissions level of 427 million metric ton of CO_2 equivalent per year ($MMTCO_2e$) on December 6, 2007 (27). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (28). At that level, a 28.4% reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, CARB prepared an updated BAU 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7% reduction from BAU is required to achieve 1990 levels (29).

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012 (30). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 $MMTCO_2e$ (AB 32 2020 target)
- 2000: 463 $MMTCO_2e$ (an average 8% reduction needed to achieve 1990 base)
- 2010: 450 $MMTCO_2e$ (an average 5% reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4% and the latest reduction from 2020 BAU is 21.7%.

- 2020: 545 $MMTCO_2e$ BAU (an average 21.7% reduction from BAU needed to achieve 1990 base)

Senate Bill (SB) 32

On September 8, 2016, Governor Jerry Brown signed the SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (31).

AB 197

A condition of approval for SB 32 was the passage of AB 197. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

Executive Order B-55-18 and SB 100

Executive Order B-55-18 and SB 100. SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Title 24 California Code of Regulations (CCR)

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, industrial, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that was effective on January 1, 2023[5]. As construction of the Project is anticipated to be completed in 2024, the Project would be required to comply with the Title 24 standards in place at that time.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and commercial land use: 3,000 metric ton of CO_2 equivalent ($MTCO_2e/yr$)

[5] The 2022 California Green Building Standard Code will be published July 1, 2022.

  - Industrial land use: 10,000 $MTCO_2e/yr$
  - Based on land use type: residential: 3,500 $MTCO_2e/yr$; commercial: 1,400 $MTCO_2e/yr$; or mixed use: 3,000 $MTCO_2e/yr$

- Tier 4 has the following options:
  - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$ per SP per year for projects and 6.6 $MTCO_2e$ per SP per year for plans;
  - Option 3, 2035 target: 3.0 $MTCO_2e$ per SP per year for projects and 4.1 $MTCO_2e$ per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, Southern California (SoCal) Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

CITY OF LAKE ELSINORE CLIMATE ACTION PLAN (CAP)

The City of Lake Elsinore CAP is a comprehensive document to ensure that the City reduces community-wide GHG emissions (32). The CAP was prepared concurrently with the City's General Plan and environmental impact report (EIR), to serve as the City's primary information and policy document for GHG emissions reductions in order to analyze and reduce potentially significant GHG emissions resulting from development under the City of Lake Elsinore General Plan.

The CAP includes a "Project-Level CAP Consistency Worksheet" to determine if further analysis is required. It should be noted that the "Project-Level CAP Consistency Worksheet" is generally applicable to traditional land use development projects. As such, pursuant to the CAP documentation, consistency with the CAP is evaluated on Table 10.

GHG IMPACTS

Standards of Significance

According to the CEQA Guidelines Appendix G thresholds, to determine whether impacts from GHG emissions are significant. Would the project:

- **Threshold 1**: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- **Threshold 2**: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a "threshold of significance." For establishing significance thresholds, the Office of Planning and Research's amendments to the CEQA Guidelines Section 15064.7(c) state "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4(a) further states, ". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be

adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Discussion on Establishment of Significance Thresholds

The City of Lake Elsinore has not adopted its own numeric threshold of significance for determining impacts with respect to project level GHG emissions. However, an acceptable approach, for small projects, is using a screening threshold of 3,000 MT CO_2e/yr to determine if additional analysis is required. This approach is an accepted screening method used by the City of Lake Elsinore and numerous local agencies throughout South Coast Air Basin and is based on the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required (33). As noted by the SCAQMD:

> *"…the…screening level for stationary sources is based on an emission capture rate of 90% for all new or modified projects…the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90% of all new or modified stationary source projects. A GHG significance threshold based on a 90% emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90% emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than 1% of future 2050 statewide GHG emissions target (85 [MMT CO_2e/yr]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility."* (34)

Thus, and based on guidance from the SCAQMD, if an industrial project would emit GHGs less than 3,000 MT CO_2e per year, the project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. On the other hand, if an industrial project would emit GHGs in excess of 3,000 MT CO_2e/yr, then the project could be considered a substantial GHG emitter, which would require additional analysis and potentially mitigation.

GHG IMPACTS – CONSISTENCY WITH THRESHOLD NO. 1

Would the Project have the potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment?

PROJECT GHG EMISSIONS

The estimated GHG emissions for the Project land use are summarized on Table 9. The estimated GHG emission include emissions from Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), and Refrigerants (R). As shown on Table 9, the Project would generate a total of approximately 246.65 $MTCO_2e$/yr. Detailed operation model outputs for the proposed Project are presented in Attachment A.

TABLE 9: TOTAL PROJECT GHG EMISSIONS

Source	Emission (lbs/day)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Annual construction-related emissions amortized over 30 years	6.48	2.54E-04	1.21E-04	6.40E-04	6.52
Mobile	187.83	0.01	0.02	0.25	193.74
Area	0.15	6.38E-06	1.31E-06	0.00	0.15
Energy	40.60	3.78E-03	3.61E-04	0.00	40.80
Water	1.86	0.04	1.05E-03	0.00	3.26
Waste	0.62	0.06	0.00	0.00	2.18
Refrigerants	0.00	0.00	0.00	2.05E-03	2.05E-03
Total CO_2e (All Sources)	**246.65**				

As discussed previously, the City of Lake Elsinore has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 MTCO2e/yr to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by the County of Riverside (35) and numerous cities in the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required (34) projects that generate less than 3,000 MTCO2e/yr would have a less-than-significant GHG emissions impact.

As shown, the proposed Project would generate a total of 246.65 MTCO2e/yr and would therefore not exceed the 3,000 MTCO2e/yr significance threshold. Thus, the Project would result in a less than significant impact with respect to GHG emissions.

GHG IMPACTS – CONSISTENCY WITH THRESHOLD NO. 2

Would the Project have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

Pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (36).

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas (GHG) emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon (37).

Additionally, the Project will result in approximately 246.65 $MTCO_2e$/yr and would not exceed the screening threshold of 3,000 $MTCO_2e$/yr. Thus, Project-related emissions would not have a significant direct or indirect impact on GHG and climate change and would comply with the City's GHG policies under the CAP without mitigation as shown on Table 10. Overall, the proposed Project would not conflict with the City's CAP and impacts would be less than significant.

Finally, the Project is consistent with the general plan land use designation, density, building intensity, and applicable policies specified for the Project area in SCAG's Sustainable Community Strategy/ Regional Transportation Plan, which pursuant to SB 375 calls for the integration of transportation, land-use and housing policies to plan for achievement of the GHG-emissions target for the region. Thus, a less than significant impact related to GHG emissions from Project construction and operation would occur and no mitigation is required.

CONSISTENCY WITH CITY OF LAKE ELSINORE CAP

The City's CAP, adopted in 2011, certified that the City's target is consistent with AB 32's 2020 goals. Although the Project will be completed post-2020, at the time this analysis was prepared, an updated CAP has not been formally adopted. The following table consists of an analysis of Project consistency with the policies in the CAP.

TABLE 10: PROJECT CONSISTENCY WITH CITY OF LAKE ELSINORE CAP

CAP Measure	Applicability to Proposed Project	Remarks
Measure T-1.2: Pedestrian Infrastructure	Applicable	This measure requires the installation of sidewalks along new and reconstructed streets and sidewalks or paths to internally link all uses and provide connections to neighborhood activity centers, major destinations, and transit facilities contiguous with the project site. This measure is implemented by the Department of Public Works and

CAP Measure	Applicability to Proposed Project	Remarks
		Building Department through policy development, development review, and conditions of approval. The proposed Project elements would be required to comply with conditions of approval imposed by the City. As such, the proposed Project would not conflict with this measure.
Measure T-1.4: Bicycle Infrastructure	Applicable	This measure requires new development to implement and connect to the network of Class I, II and III bikeways, trails and safety features identified in the General Plan, Bike Lane Master Plan, Trails Master Plan and Western Riverside County Non- Motorized Transportation plan. This measure is implemented by the Department of Public Works, Community Services Department, and Building Department through policy development, development review, and conditions of approval. The proposed Project elements would be required to comply with conditions of approval imposed by the City. As such, the proposed Project would not conflict with this measure.
Measure T-1.5: Bicycle Parking Standards	Applicable	This measure requires the City to enforce short-term and long-term bicycle parking standards for new non- residential developments. This measure is implemented by the Department of Public Works and Building Department through development review and conditions of approval. The proposed Project elements would be required to comply with conditions of approval imposed by the City. As such, the proposed Project would not conflict with this measure.
Measure T-2.1: Designated Parking for Fuel Efficient Vehicles	Applicable	This measure requires new non-residential developments to designate 10% of total parking spaces for low-emitting, fuel-efficient vehicles. This measure is

CAP Measure	Applicability to Proposed Project	Remarks
		implemented by the Department of Planning, Public Works and Building through development review and conditions of approval. The proposed Project elements would be required to comply with conditions of approval imposed by the City. As such, the proposed Project would not conflict with this measure.
Measure T-4.1: Commute Trip Reduction Program	Applicable	This measure requires the City to institute a commute trip reduction program for employers with fewer than 100 employees. This measure is implemented by the Department of Planning through amendment to the Municipal Code. The proposed Project elements would be required to comply with the City's Municipal Code. As such, the proposed Project would not conflict with this measure.
Measure E-1.1: Tree Planting Requirements	Applicable	This measure requires new developments to plant at minimum one 15-gallon non-deciduous, umbrella-form tree per 30 linear feet of boundary length near buildings. This measure is implemented by the Departments of Planning, Public Works, and Parks and Recreation through City ordinance, development review process, and conditions of approval. The proposed Project elements would be required to comply with the City ordinances and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-1.2: Cool Roof Requirements	Applicable	This measure requires new non-residential development to use roofing materials having solar reflectance, thermal emittance, or Solar Reflectance Index consistent with CALGreen Tier 1 values. This measure is implemented by the Departments of Planning and Building through City ordinance, development review process, and

CAP Measure	Applicability to Proposed Project	Remarks
		conditions of approval. The proposed Project elements would be required to comply with the City ordinances and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-1.3: Energy Efficient Building Standards	Applicable	This measure requires that new construction exceed the California Energy Code requirements through either the performance-based or prescriptive approach described in the California Green Building Code. This measure is implemented by the Departments of Planning, Public Works, and Building through City ordinance, development review process, and conditions of approval. The proposed Project elements would be required to comply with the City ordinances and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-3.2: Energy Efficient Street and Traffic Signal Lights	Applicable	This measure requires the City to work with Southern California Edison to replace existing high-pressure sodium streetlights and traffic lights with high efficiency alternatives, such as Low Emitting Diode (LED) lights; replace existing City owned traffic lights with LED lights; require any new street and traffic lights to be LED. This measure is currently being implemented by the Department of Public Works through renovation. The Planning Department obtains compliance through Municipal Code amendment, the development and review process, and conditions of approval. This measure would apply to any traffic lights replaced or installed as part of the Project. The proposed Project elements would be required to comply with the municipal code

CAP Measure	Applicability to Proposed Project	Remarks
		and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-4.1: Landscaping Ordinance	Applicable	This measure requires the City to enforce the City's AB 1881 Landscaping Ordinance, which requires that landscaping be water efficient, thereby consuming less energy and reducing emissions. This measure is implemented by the Departments of Building and Planning through City ordinance, development and review process, and conditions of approval. The proposed Project elements would be required to comply with these landscape requirements. As such, the proposed Project would not conflict with this measure.
Measure E-4.2: Indoor Water Conservation Requirements	Applicable	This measure requires that development projects reduce indoor water consumption. This measure is implemented by the Departments of Building and Planning through amendments to the Municipal Code and conditions of approval. The proposed Project elements would be required to comply with the City's Municipal Code and conditions of approval. As such, the proposed Project would not conflict with this measure.
Measure E-5.1: Renewable Energy Incentives	Applicable	This measure facilitates the voluntary installation of small-scale renewable energy systems, such as solar photovoltaic and solar hot water systems, by connecting residents and businesses with technical and financial assistance through the City website. This measure is implemented by the Departments of Building and Planning through outreach and incentive programs. No elements of the proposed Project would conflict with this measure.

CAP Measure	Applicability to Proposed Project	Remarks
Measure S-1.4: Construction and Demolition Waste Diversion	Applicable	This measure requires development projects to divert, recycle or salvage nonhazardous construction and demolition debris generated at the site, and requires all construction and demolition projects to be accompanied by a waste management plan for the project. This measure is implemented by the Departments of Planning and Building through City contracts, Municipal Code amendments, development and review process, and conditions of approval. The proposed Project project-specific elements would be required to comply with the City's Municipal Code and conditions of approval. As such, the proposed Project would not conflict with this measure.

CONCLUSION

Results of the assessment indicate that the Project is not anticipated to result in a significant impact during construction or operational activities associated with air quality and greenhouse gases and no mitigation is required.

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ATTACHMENT A
CALEEMOD PROPOSED PROJECT EMISSIONS MODEL OUTPUTS

15715 - Fleming Concrete Pumping Truck Yard Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15715 - Fleming Concrete Pumping Truck Yard
Construction Start Date	4/1/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.20
Location	33.677925, -117.327131
County	Riverside-South Coast
City	Lake Elsinore
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5522
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

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

General Office Building	7.50	1000sqft	0.17	7,500	0.00	—	—	—
Parking Lot	25.0	Space	1.48	0.00	0.00	—	—	—
User Defined Commercial	7.50	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.65	2.13	24.7	18.6	0.06	1.11	3.67	4.79	1.03	1.35	2.38	—	8,149	8,149	0.21	0.91	12.2	8,438
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.56	7.80	17.8	21.4	0.04	0.74	0.21	0.95	0.68	0.05	0.73	—	3,682	3,682	0.15	0.04	0.03	3,698
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	0.81	5.64	6.01	0.01	0.23	0.08	0.30	0.21	0.03	0.23	—	1,174	1,174	0.05	0.02	0.12	1,182
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.14	0.15	1.03	1.10	< 0.005	0.04	0.01	0.06	0.04	< 0.005	0.04	—	194	194	0.01	< 0.005	0.02	196

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.65	2.13	24.7	18.6	0.06	1.11	3.67	4.79	1.03	1.35	2.38	—	8,149	8,149	0.21	0.91	12.2	8,438
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.56	7.80	17.8	21.4	0.04	0.74	0.21	0.95	0.68	0.05	0.73	—	3,682	3,682	0.15	0.04	0.03	3,698
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.79	0.81	5.64	6.01	0.01	0.23	0.08	0.30	0.21	0.03	0.23	—	1,174	1,174	0.05	0.02	0.12	1,182
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.14	0.15	1.03	1.10	< 0.005	0.04	0.01	0.06	0.04	< 0.005	0.04	—	194	194	0.01	< 0.005	0.02	196

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.46	0.59	1.12	4.37	0.02	0.02	0.93	0.95	0.02	0.24	0.26	6.31	1,857	1,864	0.71	0.16	4.83	1,934
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.52	1.17	3.37	0.02	0.02	0.93	0.95	0.02	0.24	0.26	6.31	1,797	1,803	0.71	0.16	0.14	1,869
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.32	0.46	0.89	2.79	0.01	0.02	0.68	0.69	0.02	0.17	0.19	6.31	1,389	1,396	0.69	0.12	1.53	1,450

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.08	0.16	0.51	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	1.05	230	231	0.12	0.02	0.25	240

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.40	0.35	1.06	3.99	0.02	0.02	0.93	0.95	0.02	0.24	0.25	—	1,602	1,602	0.04	0.15	4.81	1,653
Area	0.06	0.23	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.46	0.59	1.12	4.37	0.02	0.02	0.93	0.95	0.02	0.24	0.26	6.31	1,857	1,864	0.71	0.16	4.83	1,934
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.38	0.33	1.12	3.32	0.01	0.02	0.93	0.95	0.02	0.24	0.25	—	1,543	1,543	0.05	0.15	0.12	1,590
Area	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.39	0.52	1.17	3.37	0.02	0.02	0.93	0.95	0.02	0.24	0.26	6.31	1,797	1,803	0.71	0.16	0.14	1,869
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	0.28	0.24	0.83	2.52	0.01	0.01	0.68	0.69	0.01	0.17	0.19	—	1,135	1,135	0.03	0.11	1.52	1,170
Area	0.04	0.22	< 0.005	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.92	0.92	< 0.005	< 0.005	—	0.92
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.32	0.46	0.89	2.79	0.01	0.02	0.68	0.69	0.02	0.17	0.19	6.31	1,389	1,396	0.69	0.12	1.53	1,450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.04	0.15	0.46	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	—	188	188	0.01	0.02	0.25	194
Area	0.01	0.04	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.6	40.6	< 0.005	< 0.005	—	40.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26
Waste	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.06	0.08	0.16	0.51	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	1.05	230	231	0.12	0.02	0.25	240

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	1.72	16.1	14.2	0.02	0.83	—	0.83	0.76	—	0.76	—	2,235	2,235	0.09	0.02	—	2,243

Dust From Material Movement	—	—	—	—	—	—	1.98	1.98	—	0.91	0.91	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.2	12.2	< 0.005	< 0.005	—	12.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.03	2.03	< 0.005	< 0.005	—	2.03
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.37	1.99	18.5	16.2	0.02	1.01	—	1.01	0.93	—	0.93	—	2,525	2,525	0.10	0.02	—	2,534
Dust From Material Movement	—	—	—	—	—	—	2.13	2.13	—	0.92	0.92	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	27.7	27.7	< 0.005	< 0.005	—	27.8
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.58	4.58	< 0.005	< 0.005	—	4.60
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.83	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.57	146
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.23	0.09	6.19	1.49	0.04	0.10	1.42	1.52	0.10	0.40	0.50	—	5,480	5,480	0.10	0.88	11.6	5,758
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.47	1.47	< 0.005	< 0.005	< 0.005	1.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.1	60.1	< 0.005	0.01	0.05	63.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.24	0.24	< 0.005	< 0.005	< 0.005	0.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.95	9.95	< 0.005	< 0.005	0.01	10.4

3.5. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54	1.28	10.9	11.6	0.02	0.44	—	0.44	0.40	—	0.40	—	2,159	2,159	0.09	0.02	—	2,167
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54	1.28	10.9	11.6	0.02	0.44	—	0.44	0.40	—	0.40	—	2,159	2,159	0.09	0.02	—	2,167
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.59	5.06	5.39	0.01	0.20	—	0.20	0.19	—	0.19	—	1,000	1,000	0.04	0.01	—	1,003
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.11	0.92	0.98	< 0.005	0.04	—	0.04	0.03	—	0.03	—	166	166	0.01	< 0.005	—	166
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.20	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.5	34.5	< 0.005	< 0.005	0.14	35.1
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.2	38.2	< 0.005	0.01	0.11	40.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.7	31.7	< 0.005	< 0.005	< 0.005	32.1
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.2	38.2	< 0.005	0.01	< 0.005	39.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.02	18.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.50
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.93	2.93	< 0.005	< 0.005	< 0.005	3.06
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2024) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.60	5.52	7.25	0.01	0.26	—	0.26	0.24	—	0.24	—	1,103	1,103	0.04	0.01	—	1,106
Paving	—	0.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.2	30.2	< 0.005	< 0.005	—	30.3
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.00	5.00	< 0.005	< 0.005	—	5.02
Paving	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.79	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	165	165	0.01	0.01	0.02	167

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.59	4.59	< 0.005	< 0.005	0.01	4.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.21	1.53	< 0.005	0.04	—	0.04	0.04	—	0.04	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	5.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.88	4.88	< 0.005	< 0.005	—	4.89
Architectural Coatings	—	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.81	0.81	< 0.005	< 0.005	—	0.81
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.35	6.35	< 0.005	< 0.005	< 0.005	6.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.37	0.34	0.20	3.82	0.01	< 0.005	0.71	0.72	< 0.005	0.18	0.18	—	773	773	0.03	0.02	3.04	783
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	0.03	0.01	0.86	0.17	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	829	829	0.02	0.13	1.77	870
Total	0.40	0.35	1.06	3.99	0.02	0.02	0.93	0.95	0.02	0.24	0.25	—	1,602	1,602	0.04	0.15	4.81	1,653
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.35	0.32	0.22	3.15	0.01	< 0.005	0.71	0.72	< 0.005	0.18	0.18	—	714	714	0.03	0.02	0.08	721
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Commercial	0.03	0.01	0.90	0.17	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	829	829	0.01	0.13	0.05	869
Total	0.38	0.33	1.12	3.32	0.01	0.02	0.93	0.95	0.02	0.24	0.25	—	1,543	1,543	0.05	0.15	0.12	1,590
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.05	0.04	0.03	0.44	< 0.005	< 0.005	0.09	0.10	< 0.005	0.02	0.02	—	87.5	87.5	< 0.005	< 0.005	0.16	88.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	< 0.005	< 0.005	0.12	0.02	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	100	100	< 0.005	0.02	0.09	105
Total	0.05	0.04	0.15	0.46	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	—	188	188	0.01	0.02	0.25	194

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	125	125	0.01	< 0.005	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	53.9	53.9	0.01	< 0.005	—	54.3
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	179	179	0.02	< 0.005	—	180

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	125	125	0.01	< 0.005	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	53.9	53.9	0.01	< 0.005	—	54.3
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	179	179	0.02	< 0.005	—	180
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	20.7	20.7	< 0.005	< 0.005	—	20.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.93	8.93	< 0.005	< 0.005	—	8.98
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	29.6	29.6	< 0.005	< 0.005	—	29.8

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Total	0.06	0.23	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15

Total	0.01	0.04	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2024	4/2/2024	5.00	2.00	2
Grading	Grading	4/3/2024	4/8/2024	5.00	4.00	4
Building Construction	Building Construction	4/9/2024	11/29/2024	5.00	169	200
Paving	Paving	11/18/2024	11/29/2024	5.00	10.0	10
Architectural Coating	Architectural Coating	11/18/2024	11/29/2024	5.00	10.0	10

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	7.50	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	78.3	20.0	HHDT

Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	2.40	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	1.23	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.48	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	11,250	3,750	3,868

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	3.00	0.00	—
Grading	—	2,500	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.48

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Parking Lot	1.48	100%
User Defined Commercial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

General Office Building	82.0	6.94	2.78	21,884	1,023	86.6	34.6	273,149
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	6.00	0.51	0.20	1,601	239	20.3	8.08	63,897

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	11,250	3,750	3,868

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	130,824	349	0.0330	0.0040	206,900
Parking Lot	56,475	349	0.0330	0.0040	0.00

User Defined Commercial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	1,333,003	0.00
Parking Lot	0.00	0.00
User Defined Commercial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	6.98	—
Parking Lot	0.00	—
User Defined Commercial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	User Defined	150	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.9	annual days of extreme heat
Extreme Precipitation	4.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	16.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	82.5
AQ-PM	52.6
AQ-DPM	65.0
Drinking Water	31.7
Lead Risk Housing	79.5
Pesticides	0.00
Toxic Releases	28.9
Traffic	83.5
Effect Indicators	—
CleanUp Sites	17.1
Groundwater	6.97
Haz Waste Facilities/Generators	76.7
Impaired Water Bodies	51.2
Solid Waste	9.67
Sensitive Population	—
Asthma	66.1
Cardio-vascular	98.8
Low Birth Weights	49.0
Socioeconomic Factor Indicators	—

Education	83.3
Housing	71.2
Linguistic	82.1
Poverty	92.9
Unemployment	93.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	16.19402027
Employed	19.97946875
Median HI	20.2232773
Education	—
Bachelor's or higher	10.61208777
High school enrollment	100
Preschool enrollment	23.662261
Transportation	—
Auto Access	22.57153856
Active commuting	38.20094957
Social	—
2-parent households	44.66829206
Voting	18.82458617
Neighborhood	—
Alcohol availability	43.41075324
Park access	44.29616322
Retail density	73.2580521

Supermarket access	23.3927884
Tree canopy	4.016424997
Housing	—
Homeownership	22.76401899
Housing habitability	41.03682792
Low-inc homeowner severe housing cost burden	95.63711023
Low-inc renter severe housing cost burden	47.02938535
Uncrowded housing	15.89888361
Health Outcomes	—
Insured adults	10.45810343
Arthritis	0.0
Asthma ER Admissions	50.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	7.4
Cognitively Disabled	9.6
Physically Disabled	19.5
Heart Attack ER Admissions	3.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	56.4
Physical Health Not Good	0.0

Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	20.2
SLR Inundation Area	0.0
Children	11.1
Elderly	88.2
English Speaking	26.7
Foreign-born	68.6
Outdoor Workers	7.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	81.1
Traffic Density	75.7
Traffic Access	23.0
Other Indices	—
Hardship	86.9
Other Decision Support	—
2016 Voting	37.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	83.0
Healthy Places Index Score for Project Location (b)	15.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data. Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis. Construction schedule compressed to account for 2024 Opening Year.
Land Use	Taken from site plan.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Trip Generation assessment.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 4 axle trucks

ATTACHMENT B

CALEEMOD PROPOSED PROJECT OPERATIONAL LST EMISSIONS MODEL OUTPUTS

15715 - Fleming Concrete Pumping Truck Yard (Operational LSTs) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15715 - Fleming Concrete Pumping Truck Yard (Operational LSTs)
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.20
Location	33.677925, -117.327131
County	Riverside-South Coast
City	Lake Elsinore
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5522
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	7.50	1000sqft	0.17	7,500	0.00	—	—	—

Parking Lot	25.0	Space	1.48	0.00	0.00	—	—	—
User Defined Commercial	7.50	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.32	0.49	0.20	0.98	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	6.31	292	298	0.68	0.02	0.06	320
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.25	0.42	0.20	0.74	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	6.31	290	296	0.68	0.02	0.01	318
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	0.39	0.16	0.78	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	6.31	281	288	0.67	0.01	0.03	309
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.07	0.03	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.05	46.6	47.6	0.11	< 0.005	< 0.005	51.1

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.26	0.25	0.14	0.61	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	0.02	0.01	0.05	39.5
Area	0.06	0.23	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.32	0.49	0.20	0.98	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	6.31	292	298	0.68	0.02	0.06	320
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.24	0.23	0.15	0.69	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.2	36.2	0.02	0.01	< 0.005	39.2
Area	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.25	0.42	0.20	0.74	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	6.31	290	296	0.68	0.02	0.01	318
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.18	0.17	0.10	0.51	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.5	26.5	0.01	0.01	0.01	28.7
Area	0.04	0.22	< 0.005	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.92	0.92	< 0.005	< 0.005	—	0.92
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	245	245	0.02	< 0.005	—	246
Water	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Waste	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Total	0.22	0.39	0.16	0.78	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	6.31	281	288	0.67	0.01	0.03	309
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.03	0.02	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	< 0.005	4.74
Area	0.01	0.04	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	40.6	40.6	< 0.005	< 0.005	—	40.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26
Waste	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.04	0.07	0.03	0.14	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.05	46.6	47.6	0.11	< 0.005	< 0.005	51.1

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.25	0.25	0.05	0.55	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.7	23.7	0.01	0.01	0.04	25.9
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.01	13.6
Total	0.26	0.25	0.14	0.61	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.6	36.6	0.02	0.01	0.05	39.5

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.24	0.23	0.05	0.63	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.1	23.1	0.01	0.01	< 0.005	25.3
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	0.01	< 0.005	0.09	0.06	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	< 0.005	13.8
Total	0.24	0.23	0.15	0.69	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.2	36.2	0.02	0.01	< 0.005	39.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.03	0.03	0.01	0.08	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.81	2.81	< 0.005	< 0.005	< 0.005	3.09
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.66
Total	0.03	0.03	0.02	0.09	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	< 0.005	4.74

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	125	125	0.01	< 0.005	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	53.9	53.9	0.01	< 0.005	—	54.3
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	179	179	0.02	< 0.005	—	180
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	125	125	0.01	< 0.005	—	126
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	53.9	53.9	0.01	< 0.005	—	54.3
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	179	179	0.02	< 0.005	—	180
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	20.7	20.7	< 0.005	< 0.005	—	20.8
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	8.93	8.93	< 0.005	< 0.005	—	8.98
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	29.6	29.6	< 0.005	< 0.005	—	29.8

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	66.3	66.3	0.01	< 0.005	—	66.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.05	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Total	0.06	0.23	< 0.005	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.34	1.34	< 0.005	< 0.005	—	1.35
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.01	0.04	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.55	8.67	11.2	0.26	0.01	—	19.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.42	1.43	1.86	0.04	< 0.005	—	3.26

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.76	0.00	3.76	0.38	0.00	—	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Commercial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.18

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

General Office Building	82.0	6.94	2.78	21,884	13.1	1.11	0.44	3,501
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Commercial	6.00	0.51	0.20	1,601	0.96	0.08	0.03	256

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	11,250	3,750	3,868

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	130,824	349	0.0330	0.0040	206,900
Parking Lot	56,475	349	0.0330	0.0040	0.00

User Defined Commercial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	1,333,003	0.00
Parking Lot	0.00	0.00
User Defined Commercial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	6.98	—
Parking Lot	0.00	—
User Defined Commercial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	User Defined	150	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

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

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.9	annual days of extreme heat
Extreme Precipitation	4.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	16.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score

Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	82.5
AQ-PM	52.6
AQ-DPM	65.0
Drinking Water	31.7
Lead Risk Housing	79.5
Pesticides	0.00
Toxic Releases	28.9
Traffic	83.5
Effect Indicators	—
CleanUp Sites	17.1
Groundwater	6.97
Haz Waste Facilities/Generators	76.7
Impaired Water Bodies	51.2
Solid Waste	9.67
Sensitive Population	—
Asthma	66.1
Cardio-vascular	98.8
Low Birth Weights	49.0
Socioeconomic Factor Indicators	—

Education	83.3
Housing	71.2
Linguistic	82.1
Poverty	92.9
Unemployment	93.3

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	16.19402027
Employed	19.97946875
Median HI	20.2232773
Education	—
Bachelor's or higher	10.61208777
High school enrollment	100
Preschool enrollment	23.662261
Transportation	—
Auto Access	22.57153856
Active commuting	38.20094957
Social	—
2-parent households	44.66829206
Voting	18.82458617
Neighborhood	—
Alcohol availability	43.41075324
Park access	44.29616322
Retail density	73.2580521

Supermarket access	23.3927884
Tree canopy	4.016424997
Housing	—
Homeownership	22.76401899
Housing habitability	41.03682792
Low-inc homeowner severe housing cost burden	95.63711023
Low-inc renter severe housing cost burden	47.02938535
Uncrowded housing	15.89888361
Health Outcomes	—
Insured adults	10.45810343
Arthritis	0.0
Asthma ER Admissions	50.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	7.4
Cognitively Disabled	9.6
Physically Disabled	19.5
Heart Attack ER Admissions	3.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	56.4
Physical Health Not Good	0.0

Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	20.2
SLR Inundation Area	0.0
Children	11.1
Elderly	88.2
English Speaking	26.7
Foreign-born	68.6
Outdoor Workers	7.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	81.1
Traffic Density	75.7
Traffic Access	23.0
Other Indices	—
Hardship	86.9
Other Decision Support	—
2016 Voting	37.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	83.0
Healthy Places Index Score for Project Location (b)	15.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Taken from client data. Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis. Construction schedule compressed to account for 2024 Opening Year.
Land Use	Taken from site plan.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Trip Generation assessment.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively.
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 4 axle trucks