NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

Notice is hereby given that, as Lead Agency, the City of Roseville, Development Services Department, Planning Division has prepared an Initial Study leading to a Mitigated Negative Declaration for the project referenced below. This Mitigated Negative Declaration is available for public review and comment.

Project Title/File#: INFILL PCL 285 – Concrete Batch Plant; File # PL24-0965

Project Location: 2021 Lendell Lane, Roseville, Placer County CA 95678; APN 473-100-045-000

Project Owner: Balwinder Singh Gill, Roseville Ready Star Mix

Project Applicant: Joshua Gisi, CWE

Project Planner: Kinarik Shallago, Associate Planner

Project Description: The proposed project will develop the site with a prefabricated wet concrete (ready-mix) batch plant consisting of a 4,320-square-foot office with one caretaker's unit, associated aggregate storage in concrete masonry unit (CMU) bunkers, a storage container, and associated site improvements including parking, landscaping, and lighting. The project entitlements include a Design Review Permit to review the site design and building architecture, a Variance to allow the two batch plant silos to exceed the 50-foot height limit of the M2 zone by 2.5 feet, and an Administrative Permit to allow an on-site caretaker's unit in the M2 zone.

The project site is not identified on any list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5.

Document Review and Availability: The public review and comment period begins on **September 12, 2025** and ends on **October 2, 2025**. The Mitigated Negative Declaration may be reviewed online at: https://www.roseville.ca.us/environmentaldocuments (under Private Development Projects). **Written comments on the adequacy of the Mitigated Negative Declaration may be submitted to Kinarik Shallago, Associate Planner at kshallago@roseville.ca.us or in person at 311 Vernon Street, Roseville, CA 95678 (Monday—Friday, 8 a.m. to 4 p.m.), and must be received no later than 5:00 pm on October 2, 2025.**

This project will be scheduled for a public hearing before the City's Design Committee. At this hearing, the Design Committee will consider the Mitigated Negative Declaration and associated project entitlements. Separate notices will be published when the hearing is scheduled.

Mike Isom
Development Services Director

Dated: September 10, 2025

Publish: September 12, 2025

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

MITIGATED NEGATIVE DECLARATION

Project Title/File Number:	INFILL PCL 285 – Concrete Batch Plant; File # PL24-0965
Project Location:	2021 Lendell Lane, Roseville, Placer County CA 95678; APN 473-100-045-000
Project Applicant:	Joshua Gisi, CWE; (916) 772-7800; 2260 Douglas Boulevard, Roseville, CA 95661
Property Owner:	Balwinder Singh Gill, Roseville Ready Star Mix; (916) 709-6619; 1801 PFE Road, Roseville, CA 95747
Lead Agency Contact Person:	Kinarik Shallago, Associate Planner - City of Roseville; (916) 746-1309
Date:	September 10, 2025

Project Description:

The proposed project will develop the site with a prefabricated wet concrete (ready-mix) batch plant consisting of a 4,320-square-foot office with one caretaker's unit, associated aggregate storage in concrete masonry unit (CMU) bunkers, a storage container, and associated site improvements including parking, landscaping, and lighting. The project entitlements include a Design Review Permit to review the site design and building architecture, a Variance to allow the two batch plant silos to exceed the 50-foot height limit of the M2 zone by 2.5 feet, and an Administrative Permit to allow an on-site caretaker's unit in the M2 zone.

DECLARATION

The Planning Manager has determined that the above project will not have significant effects on the environment and therefore does not require preparation of an Environmental Impact Report. The determination is based on the attached initial study and the following findings:

A. The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species, reduce the number or restrict the range of rare or endangered plants or animals or eliminate important examples of the major periods of California history or prehistory.

B. The project will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.

C. The project will not have impacts, which are individually limited, but cumulatively considerable.

D. The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

E. No substantial evidence exists that the project may have a significant effect on the environment.

F. The project incorporates all applicable mitigation measures identified in the attached initial study.

G. This Mitigated Negative Declaration reflects the independent judgment of the lead agency.

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT–PLANNING DIVISION

311 Vernon St, Roseville, CA 95678 (916) 774-5276

INITIAL STUDY & ENVIRONMENTAL CHECKLIST

Project Title/File Number:	INFILL PCL 285 – Concrete Batch Plant; File #PL24-0965
Project Location:	2021 Lendell Lane, Roseville, Placer County, CA 95678 (APN 473-100-045-000)
Project Description:	The proposed project will develop the site with a prefabricated wet concrete (ready-mix) batch plant consisting of a 4,320-square-foot office with one caretaker's unit, associated aggregate storage in concrete masonry unit (CMU) bunkers, a storage container, and associated site improvements including parking, landscaping, and lighting. The project entitlements include a Design Review Permit to review the site design and building architecture, a Variance to allow the two batch plant silos to exceed the 50-foot height limit of the M2 zone by 2.5 feet, and an Administrative Permit to allow an on-site caretaker's unit in the M2 zone.
Project Applicant:	Joshua Gisi, CWE
Property Owner:	Balwinder Singh Gill, Roseville Star Ready Mix
Lead Agency Contact:	Kinarik Shallago, Associate Planner; Phone (916) 746-1309

This initial study has been prepared to identify and assess the anticipated environmental impacts of the above described project application. The document relies on the 2035 General Plan Update EIR and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents in order to determine whether, based on their own professional judgment and expertise, staff found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment, and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a mitigated negative declaration shall be prepared.

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PROJECT DESCRIPTION

Project Location

The project site is located on Parcel 285 in the City's Infill Planning area (see Figure 1). The property is 7.87 acres and has an address of 2021 Lendell Lane (APN 473-100-044-000).

Figure 1: Project Site

Background

On November 9, 2006, the Planning Commission approved a request for a Tentative Subdivision Map (File #2006PL-076) to subdivide a 26.81-acre parcel into 16 parcels for the March Road Industrial Park Unit 2. This map created the subject parcel on which the project is now proposed. Concurrent with this map, a Design Review Permit was approved to construct four (4) buildings totaling 26,688 square feet with associated landscaping, lighting, and parking as part of Phase 1 of the March Road Industrial Park Unit 2. However, these buildings were never constructed. Additionally, a Tree Permit was approved to remove one (1) native oak tree and to allow potential construction impacts within the protected zone of two others. As part of this project, an Initial Study and Mitigated Negative Declaration was prepared which analyzed the grading and installation of improvements associated with the Tentative Subdivision Map. Mitigation measures BIO -1, 2, 3, and 4 were included with the March Industrial Park Mitigated Negative Declaration to reduce impacts related to biological resources to less than significant levels. At this time, two of the 16 parcels within the March Road Industrial Park Unit 2 have been developed.

Environmental Setting

The site is currently undeveloped and has a zoning designation of General Industrial (M2) and a General Plan land use designation of General Industrial (IND). Curb, gutter, and sidewalk are provided along Lendell Lane, which fronts onto the project site. Surrounding land uses include a landscape materials supply business to the north, a self-storage business to the east, a vacant M2 parcel to the south, and a recycling, scrap, and dismantling yard to the west across Lendell Lane.

Table 1: Site and Surrounding Zoning/Land Use

Location	Zoning	General Plan Land Use	Actual Use of Property
Site	General Industrial (M2)	General Industrial (IND)	Vacant
North	M2	IND	Landscape material supply business
South	M2	IND	Vacant
East	M2	IND	Self-storage
West	M2	IND	Recycling, scrap and dismantling yard

Proposed Project

The proposed project will develop the site with a prefabricated wet concrete (ready-mix) batch plant consisting of a 4,320-square-foot office with one caretaker's unit, associated aggregate storage in concrete masonry unit (CMU) bunkers, a storage container, and associated site improvements including parking, landscaping, and lighting. The project entitlements include a Design Review Permit to review the site design and building architecture, a Variance to allow the two batch plant silos to exceed the 50-foot height limit of the M2 zone by 2.5 feet, and an Administrative Permit to allow an on-site caretaker's unit in the M2 zone.

CITY OF ROSEVILLE MITIGATION ORDINANCES, GUIDELINES, AND STANDARDS

For projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, CEQA Guidelines section 15183(f) allows a lead agency to rely on previously adopted development policies or standards as mitigation for the environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). The City of Roseville adopted CEQA Implementing Procedures (Implementing Procedures) which are consistent with this CEQA Guidelines section. The current version of the Implementing Procedures were adopted in April 2008 (Resolution 08-172), along with Findings of Fact, and were updated in January 2021 (Resolution 21-018). The below regulations and ordinances were found to provide uniform mitigating policies and standards, and are applicable to development projects. The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist.

- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- City of Roseville Improvement Standards (Resolution 02-37 and as further amended)
- City of Roseville Design and Construction Standards (Resolution 01-208 and as further amended)
- Tree Preservation Ordinance (RMC Ch.19.66)
- Internal Guidance for Management of Tribal Cultural Resources and Consultation (Tribal Consultation Policy) (Resolution 20-294)

- Subdivision Ordinance (RMC Title 18)
- Community Design Guidelines
- Specific Plan Design Guidelines:
    - Development Guidelines Del Webb Specific Plan
    - Landscape Design Guidelines for North Central Roseville Specific Plan
    - North Roseville Specific Plan and Design Guidelines
    - Northeast Roseville Specific Plan (Olympus Pointe) Signage Guidelines
    - North Roseville Area Design Guidelines
    - Northeast Roseville Specific Plan Landscape Design Guidelines
    - Southeast Roseville Specific Plan Landscape Design Guidelines
    - Stoneridge Specific Plan and Design Guidelines
    - Highland Reserve North Specific Plan and Design Guidelines
    - West Roseville Specific Plan and Design Guidelines
    - Sierra Vista Specific Plan and Design Guidelines
    - Creekview Specific Plan and Design Guidelines
    - Amoruso Ranch Specific Plan and Design Guidelines
- City of Roseville 2035 General Plan

OTHER ENVIRONMENTAL DOCUMENTS RELIED UPON

- 2035 General Plan Update Final Environmental Impact Report, certified August 5, 2020

Pursuant to CEQA Guidelines Section 15183, any project which is consistent with the development densities established by zoning, a Community Plan, or a General Plan for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. The 2035 General Plan Update EIR (General Plan EIR) updated all Citywide analyses, including for vehicle miles traveled, greenhouse gas emissions, water supply, water treatment, wastewater treatment, and waste disposal. The proposed project is consistent with the adopted land use designations examined within the environmental documents listed above, and thus this Initial Study focuses on effects particular to the specific project site, impacts which were not analyzed within the EIR, and impacts which may require revisiting due to substantial new information. When applicable, the topical sections within the Initial Study summarize the findings within the environmental documents listed above. The analysis, supporting technical materials, and findings of the environmental document are incorporated by reference, and are available for review at the Civic Center, 311 Vernon Street, Roseville, CA.

EXPLANATION OF INITIAL STUDY CHECKLIST

The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project on the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix G Environmental Checklist Form, contained in the CEQA Guidelines. Within each topical section (e.g. Air Quality) a description of the setting is provided, followed by the checklist responses, thresholds used, and finally a discussion of each checklist answer.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained below:

1) A "Potentially Significant Impact" is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially significant Impact" entries are made, an EIR is required.

2) A "Less Than Significant With Mitigation" answer is appropriate when the lead agency incorporates mitigation measures to reduce an impact from "Potentially Significant" to "Less than Significant." For example, floodwater impacts could be reduced from a potentially-significant level to a less-than-significant level by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level. Mitigation measures are identified as MM followed by a number.

3) A "Less Than significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or the application of development policies and standards to the project will reduce the impact(s) to a less-than-significant level. For instance, the application of the City's Improvement Standards reduces potential erosion impacts to a less-than-significant level.

4) A "No Impact" answer is appropriate where it can be demonstrated that the impact does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area with no agricultural lands on or adjacent to the project area clearly would not have an adverse effect on agricultural resources or operations. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the Initial Study. Where a "No Impact" answer is adequately supported by the information sources cited in the Initial Study, further narrative explanation is not required. A "No Impact" answer is explained when it is based on project-specific factors as well as generous standards.

All answers must take account of the whole action involved, including off- and on-site, indirect, direct, construction, and operation impacts, except as provided for under State CEQA Guidelines.

INITIAL STUDY CHECKLIST

I. Aesthetics

The project site is located in a typical urbanized setting within an industrial zoned area of the City. Public views of the site are from Lendell Lane to the west and its adjacent sidewalks. The site is surrounded by General Industrial (M2) parcels that are either vacant or developed with industrial uses such as a landscape material supply business to the north, self-storage to the east, and a recycling, scrap and dismantling yard to the west across Lendell Lane.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

Thresholds of Significance and Regulatory Setting:

The significance of an environmental impact cannot always be determined through the use of a specific, quantifiable threshold. CEQA Guidelines Section 15064(b) affirms this by the statement "an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting." This is particularly true of aesthetic impacts. As an example, a proposed parking lot in a dense urban center would have markedly different visual effects than a parking lot in an open space area. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–d of the checklist below. The Findings of the Implementing Procedures indicate that compliance with the Zoning Ordinance (e.g. building height, setbacks, etc), Subdivision Ordinance (RMC Ch. 18), Community Design Guidelines (Resolution 95-347), and applicable Specific Plan Policies and/or Specific Plan Design Guidelines will prevent significant impacts in urban settings as it relates to items a, b, and c, below.

Discussion of Checklist Answers:

a–b) There are no designated or eligible scenic vistas or scenic highways within or adjacent to the City of Roseville.

c) The project site is in an industrial setting, and as a result lacks any prominent or high-quality natural features which could be negatively impacted by development. The City of Roseville has adopted Community Design Guidelines (CDG) for the purpose of creating building and community designs which are a visual asset to the

community. The CDG includes guidelines for building design, site design and landscape design, which will result in a project that enhances the existing urban visual environment. The City of Roseville Zoning Ordinance limits the height of structures in the M2 zone to 50 feet. The batch plant equipment includes two silos that have a height of 49' to the top, however with the inclusion of the 42" safety handrail, the overall height is 52'-6". Therefore, the project includes a Variance to allow an additional 2'-6" of height. With approval of the Variance, the project does not conflict with applicable zoning and other regulations governing scenic quality. Accordingly, the aesthetic impacts of the project are less than significant.

d) The project involves nighttime lighting to provide for the security and safety of project users. However, the project is already located within an urbanized setting with many existing lighting sources. Lighting is conditioned to comply with City standards (i.e. CDG) to limit the height of light standards and to require cut-off lenses and glare shields to minimize light and glare impacts. The project will not create a new source of substantial light. None of the project elements are highly reflective, and thus the project will not contribute to an increased source of glare.

II. Agricultural & Forestry Resources

The State Department of Conservation oversees the Farmland Mapping and Monitoring Program, which was established to document the location, quality, and quantity of agricultural lands, and the conversion of those lands over time. The primary land use classifications on the maps generated through this program are: Urban and Built Up Land, Grazing Land, Farmland of Local Importance, Unique Farmland, Farmland of Statewide Importance, and Prime Farmland. According to the current California Department of Conservation Placer County Important Farmland Map (2012), the majority of the City of Roseville is designated as Urban and Built Up Land and most of the open space areas of the City are designated as Grazing Land. There are a few areas designated as Farmland of Local Importance and two small areas designated as Unique Farmland located on the western side of the City along Baseline Road. The current Williamson Act Contract map (2013/2014) produced by the Department of Conservation shows that there are no Williamson Act contracts within the City, and only one (on PFE Road) that is adjacent to the City. None of the land within the City is considered forest land by the Board of Forestry and Fire Protection.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Thresholds of Significance and Regulatory Setting:

Unique Farmland, Farmland of Statewide Importance, and Prime Farmland are called out as protected farmland categories within CEQA Guidelines Appendix G. Neither the City nor the State has adopted quantified significance thresholds related to impacts to protected farmland categories or to agricultural and forestry resources. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–e of the checklist above.

Discussion of Checklist Answers:

a–e) The project site is not used for agricultural purposes, does not include agricultural zoning, is not within or adjacent to one of the areas of the City designated as a protected farmland category on the Placer County Important Farmland map, is not within or adjacent to land within a Williamson Act Contract, and is not considered forest land. Given the foregoing, the proposed project will have no impact on agricultural resources.

III. Air Quality

The City of Roseville, along with the south Placer County area, is located in the Sacramento Valley Air Basin (SVAB). The SVAB was, until recently, within the Sacramento Federal Ozone Non-Attainment Area. In 2025, the US EPA determined that Placer County and the SVAB had reached attainment for the National Ambient Air Quality 2008 Ozone standard for the region by the 2024 deadline. Under the Clean Air Act, Placer County has been designated a "serious non-attainment" area for the federal 8-hour ozone standard, “non-attainment” for the state ozone standard, and a "non-attainment" area for the federal and state PM_{10} standard (particulate matter less than 10 microns in diameter). Within Placer County, the Placer County Air Pollution Control District (PCAPCD) is responsible for ensuring that emission standards are not violated. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Thresholds of Significance and Regulatory Setting:

In responding to checklist items a–c, project-related air emissions would have a significant effect if they would result in concentrations that either violate an ambient air quality standard or contribute to an existing air quality violation. To assist in making this determination, the PCAPCD adopted thresholds of significance, which were developed by considering both the health-based ambient air quality standards and the attainment strategies outlined in the State Implementation Plan. The PCAPCD-recommended significance threshold for reactive organic gases (ROG) and nitrogen oxides (NO_x) is 82 pounds daily during construction and 55 pounds daily during operation, and for particulate matter (PM) is 82 pounds per day during both construction and operation. For all other constituents, significance is determined based on the concentration-based limits in the Federal and State Ambient Air Quality Standards. Toxic Air Contaminants (TAC) are also of public health concern, but no thresholds or standards are provided because they are considered to have no safe level of exposure. Analysis of TAC is based on the *Air Quality and Land Use Handbook – A Community Health Perspective (*April 2005, California Air Resources Board), which lists TAC sources and recommended buffer distances from sensitive uses. For checklist item c, the PCAPCD's *CEQA Air Quality Handbook* (*Handbook*) recommends that the same thresholds used for the project analysis be used for the cumulative impact analysis.

With regard to checklist item d, there are no quantified significance thresholds for exposure to objectionable odors or other emissions. Significance is determined after taking into account multiple factors, including screening distances from odor sources (as found in the PCAPCD CEQA Handbook), the direction and frequency of prevailing winds, the time of day when emissions are detectable/present, and the nature and intensity of the emission source.

Discussion of Checklist Answers:

a–c) Analyses are not included for sulfur dioxide, lead, and other constituents because there are no mass emission thresholds; these are concentration-based limits in the Federal and State Ambient Air Quality Standards which require substantial, point-source emissions (e.g. refineries, concrete plants, etc) before exceedance will occur, and the SVAB is in attainment for these constituents. Likewise, carbon monoxide is not

analyzed because the SVAB is in attainment for this constituent, and it requires high localized concentrations (called carbon monoxide "hot spots") before the ambient air quality standard would be exceeded. "Hot spots" are typically associated with heavy traffic congestion occurring at high-volume roadway intersections. The General Plan EIR analysis of Citywide traffic indicated that more than 70% of signalized intersections would operate at level of service C or better—that is, they will not experience heavy traffic congestion. It further indicated that analyses of existing CO concentrations at the most congested intersections in Roseville show that CO levels are well below federal and state ambient air quality standards. The discussions below focus on emissions of ROG**,** NO_x, or PM**.** A project-level analysis has been prepared to determine whether the project will, on a singular level, exceed the established thresholds.

HELIX Environmental Planning, Inc. ("HELIX") prepared a technical report that includes an assessment of potential air quality and greenhouse gas (GHG) emissions impacts resulting from construction and operation of the proposed project (see Attachment 2). HELIX used the California Emissions Estimator Model (CalEEMod 2022) to evaluate emissions related to construction and operation of the project. The complete modeling results are included as Appendices A and B of Attachment 2. Construction emissions are primarily related to exhaust from construction equipment and dust from material movement. In compliance with PCAPCD Rule 228, which establishes standards for activities generating fugitive dust, the project's fugitive dust emissions calculations assume application of water on exposed surfaces a minimum of two times per day during construction. Operational emissions are those which result from the completed project, and are primarily from energy consumption, "area" emissions such as landscaping equipment usage, concrete batch plant dust, and mobile emissions from vehicles traveling to and from the operational project.

The model analysis of construction used default model values based on the size of the site and proposed buildings. For the operational analysis, HELIX supplemented the model with calculations for sources specific to concrete batching activities using the U.S. Environmental Protection Agency's (USEPA's) AP-42: Compilation of Air Pollutant Emission Factors. In addition, PM_{10} and $PM_{2.5}$ fugitive dust emissions from operation of the batch plant were calculated using the methodology and emissions factors from the USEPA's AP42, Chapter 11.12: *Concrete Batching* (USEPA 2006) and fugitive dust resulting from trucks circulating within the project's paved yard was calculated using the USEPA's AP42, Chapter 13.2.1, *Paved Roads* (USEPA 2011). Fugitive dust control would be accomplished using filtration systems within the batch plant (e.g. bag house); three wall bunkers for aggregate and sand storage piles; paving the batch plant yard and truck circulation route; and periodic cleaning of the paved yard area. A water truck would be used to wet stockpiles and surfaces to minimize fugitive dust from vehicle traffic and wind. Mitigation Measure AQ-1 related to dust and construction control measures has been applied to ensure impacts are less than significant (see Attachment 1 – Mitigation Monitoring and Reporting Program).

As evaluated in the technical report, project batch plant truck VMT would be a redistribution of existing VMT related to concrete production in the area and would not be new to the region. Therefore, the mobile source emissions related to those truck trips would not be new to the region. To be conservative, the mobile source emissions include batch plant truck emissions.

As demonstrated in Attachment 2, the proposed project's construction and operational emissions of ROG**,** NO_x, or PM would not exceed the applicable thresholds of significance for air pollutant emissions. As such, the project would not conflict with or obstruct implementation of the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (which is the SIP) or contribute substantially to the PCAPCD's nonattainment status for ozone. In addition, because the proposed project would not produce substantial emissions of criteria air pollutants, CO, or TACs, adjacent residents would not be exposed to significant levels of pollutant concentrations during construction or operation. Therefore, implementation of the proposed project would result in less than significant impacts, and consistent with the analysis methodology outlined in the Significance Thresholds and Regulatory Setting section, cumulative impacts are less than significant.

With regard to TAC, there are hundreds of constituents which are considered toxic, but they are typically generated by stationary sources like gas stations, facilities using solvents, and heavy industrial operations. The proposed project is not a TAC-generating use, nor is it within the specified buffer area of a TAC-generating use, as established in the *Air Quality and Land Use Handbook – A Community Health Perspective*. Impacts due to substantial pollutant concentrations are less than significant.

d) Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions are minimal and regulated. Typical urban projects such as residences and retail businesses generally do not result in substantial objectionable odors when operated in compliance with City Ordinances (e.g. proper trash disposal and storage). The Project is a typical urban development that lacks any characteristics that would cause the generation of substantial unpleasant odors. Thus, construction and operation of the proposed project would not result in the creation of objectionable odors affecting a substantial number of people. A review of the project surroundings indicates that there are no substantial odor-generating uses near the project site; the project location meets the recommended screening distances from odor-generators provided by the PCAPCD. Impacts related to odors are less than significant.

IV. Biological Resources

The site is currently vacant and has been disturbed based on aerial views of the property. There are no natural features such as wetlands or native oak trees present on the site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Thresholds of Significance and Regulatory Setting:

There is no ironclad definition of significance as it relates to biological resources. Thus, the significance of impacts to biological resources is defined by the use of expert judgment supported by facts, and relies on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to biological resources (as cited and described in the Discussion of Checklist Answers section). Thresholds for assessing the significance of environmental impacts are based on the CEQA Guidelines checklist items a–f, above. Consistent with CEQA Guidelines Section 15065, a project may have a significant effect on the environment if:

> The project has the potential to substantially degrade the quality of the environment*;* substantially reduce the habitat of a fish or wildlife species*;* cause a fish or wildlife population to drop below self-sustaining levels*;* threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species . . .

Various agencies regulate impacts to the habitats and animals addressed by the CEQA Guidelines checklist. These include the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration–Fisheries, United States Army Corps of Engineers, Central Valley Regional Water Quality Control Board, and California Department of Fish and Wildlife. The primary regulations affecting biological resources are described in the sections below.

Checklist item a addresses impacts to special status species. A “special status” species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be “fully protected” by the California Department of Fish and Wildlife (California Fish and Wildlife), those granted “special animal” status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS). The primary regulatory protections for special status species are within the Federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and the Federal Migratory Bird Treaty Act.

Checklist item b addresses all “sensitive natural communities” and riparian (creekside) habitat that may be affected by local, state, or federal regulations/policies while checklist item c focuses specifically on one type of such a community: protected wetlands. Focusing first on wetlands, the 1987 Army Corps Wetlands Delineation Manual is used to determine whether an area meets the technical criteria for a wetland. A delineation verification by the Army Corps verifies the size and condition of the wetlands and other waters in question, and determines

the extent of government jurisdiction as it relates to Section 404 of the Federal Clean Water Act and Section 401 of the State Clean Water Act.

The Clean Water Act protects all "navigable waters", which are defined as traditional navigable waters that are or were used for commerce, or may be used for interstate commerce; tributaries of covered waters; and wetlands adjacent to covered waters, including tributaries. Non-navigable waters are called isolated wetlands, and are not subject to either the Federal or State Clean Water Act. Thus, isolated wetlands are not subject to federal wetland protection regulations. However, in addition to the Clean Water Act, the State also has jurisdiction over impacts to surface waters through the Porter-Cologne Water Quality Control Act (Porter-Cologne), which does not require that waters be "navigable". For this reason, isolated wetlands are regulated by the State of California pursuant to Porter-Cologne. The City of Roseville General Plan also provides protection for wetlands, including isolated wetlands, pursuant to the General Plan Open Space and Conservation Element. Federal, State and City regulations/policies all seek to achieve no net loss of wetland acreage, values, or function.

Aside from wetlands, checklist item b also addresses other "sensitive natural communities" and riparian habitat, which includes any habitats protected by local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The City of Roseville General Plan Open Space and Conservation Element includes policies for the protection of riparian areas and floodplain areas; these are Vegetation and Wildlife section Policies 2 and 3. Policy 4 also directs preservation of additional area around stream corridors and floodplain if there is sensitive woodland, grassland, or other habitat which could be made part of a contiguous open space area. Other than wetlands, which were already discussed, US Fish and Wildlife and California Department of Fish and Wildlife habitat protections generally result from species protections, and are thus addressed via checklist item a.

For checklist item d, there are no regulations specific to the protection of migratory corridors. This item is addressed by an analysis of the habitats present in the vicinity and analyzing the probable effects on access to those habitats which will result from a project.

The City of Roseville Tree Preservation ordinance (RMC Ch.19.66) requires protection of native oak trees, and compensation for oak tree removal. The Findings of the Implementing Procedures indicate that compliance with the City of Roseville Tree Preservation ordinance (RMC Ch.19.66) will prevent significant impacts related to loss of native oak trees, referenced by item e, above.

Regarding checklist item f, there are no adopted Habitat Conservation Plans within the City of Roseville.

Discussion of Checklist Answers:

a-c) The General Plan EIR evaluated the biological resources in the City and anticipated development of the project site. There are no new or more severe impacts which would occur as a result of the project. No sensitive or special status species are known to exist on the site, nor are there wetlands or trees present on the site

d) The City includes an interconnected network of open space corridors and preserves located throughout the City, to ensure that the movement of wildlife is not substantially impeded as the City develops. The development of the project site will not negatively impact these existing and planned open space corridors, nor is the project site located in an area that has been designated by the City, United States Fish and Wildlife, or California Department of Fish and Wildlife as vital or important for the movement of wildlife or the use of native wildlife nursery sites.

e) No oak trees will be removed as a part of the proposed project, and no other conflicts with City policy adopted for the purpose of mitigating environmental effects have been identified. There is no impact.

f) There are no Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or state habitat conservation plans that apply to the project site.

V. Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City's open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. The gold rush which began in 1848 marked another settlement period, and evidence of Roseville's ranching and mining past are still found today. Historic features include rock walls, ditches, low terraces, and other remnants of settlement and activity. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historic resource pursuant to in Section 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

Thresholds of Significance and Regulatory Setting:

The significance of impacts to cultural resources is based directly on the CEQA Guidelines checklist items a–e listed above. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant resources (Policies 1 and 2). There are also various federal and State regulations regarding the treatment and protection of cultural resources, including the National Historic Preservation Act and the Antiquities Act (which regulate items of significance in history), Section 7050.5 of the California Health and Safety Code, Section 5097.9 of the California Public Resources Code (which regulates the treatment of human remains) and Section 21073 et seq. of the California Public Resources Code (regarding Tribal Cultural Resources). The CEQA Guidelines also contains specific sections, other than the checklist items, related to the treatment of effects on historic resources.

Pursuant to the CEQA Guidelines, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR)

(Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Public Resources Code Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR.

Discussion of Checklist Answers:

a–b) No cultural resources are known to exist on the project site; however, standard mitigation measures (Mitigation Measures CUL-01 and CUL-02) apply which are designed to reduce impacts to cultural resources, should any be found on-site. No requests to consult were received from tribal entities in response to AB-52 notification. The mitigation measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. With mitigation, project-specific impacts are less than significant.

c) No paleontological resources are known to exist on the project site; however, standard mitigation measures (Mitigation Measure CUL-02) apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. With mitigation, project-specific impacts are less than significant.

VI. Energy

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy inefficiency?			X	

Thresholds of Significance and Regulatory Setting:

Established in 2002, California's Renewable Portfolio Standard (RPS) currently requires that 33 percent of electricity retail sales by served by renewable energy resources by 2020, and 50 percent by 2030. The City published a Renewables Portfolio Standard Procurement Plan in June 2018, and continues to comply with the RPS reporting and requirements and standards. There are no numeric significance thresholds to define "wasteful, inefficient, or unnecessary" energy consumption, and therefore significance is based on CEQA Guidelines checklist items a and b, above, and by the use of expert judgment supported by facts, relying on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to energy. The analysis considers compliance with regulations and standards, project design as it relates to energy use (including transportation energy), whether the project will result in a substantial unplanned demand on the City's energy resources, and whether the project will impede the ability of the City to meet the RPS standards.

Discussion of Checklist Answers:

a & b) As part of the HELIX technical report, CalEEMod was used to estimate the likely energy use of the project in kilowatt hours (kWh). The results estimate that the project would generate a total of 120,962 kWh/yr. The CalEEMod outputs are included as Appendix A to Attachment 2. As stated in the thresholds of significance section, there is no stated numeric significance threshold to define "wasteful, inefficient, or unnecessary"; however, Roseville Electric has reviewed the proposed project and found that the Department has adequate capacity to serve the site. The project would consume energy both during project construction and during project operation.

During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. However, the energy consumed during construction would be temporary, and would not represent a significant demand on available resources. There are no unusual project characteristics that would necessitate the use of construction equipment or methods that would be less energy-efficient or which would be wasteful.

The completed project would consume energy related to building operation, exterior lighting, landscape irrigation and maintenance, and vehicle trips to and from the use. In accordance with California Energy Code Title 24, the project would be required to meet the Building Energy Efficiency Standards. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls, and ceilings; and appliances, to name a few. The project would also be eligible for rebates and other financial incentives from both the electric and gas providers for the purchase of energy-efficient appliances and systems, which would further reduce the operational energy demand of the project. The project was distributed to both PG&E and Roseville Electric for comments, and was found to conform to the standards of both providers; energy supplies are available to serve the project.

The project is consistent with the existing land use designation in the General Plan. The Environmental Impact Report (EIR) for the General Plan included an assessment of energy impacts for the entire plan area. The analysis included consideration of transportation energy, and evaluated walkability, alternative transportation modes, and the degree to which the mix and location of uses would reduce vehicle miles traveled in the plan area. The EIR also included a citywide assessment of energy demand based on the existing and proposed land uses within the City. Impacts related to energy consumption were found to be less than significant. The project is consistent with the existing land use designation, and therefore is consistent with the current citywide assessment of energy demand, and will not result in substantial unplanned, inefficient, wasteful, or unnecessary consumption of energy; impacts are less than significant.

VII. Geology and Soils

As described in the Safety Element of the City of Roseville General Plan, there are three inactive faults (Volcano Hill, Linda Creek, and an unnamed fault) in the vicinity, but there are no known active seismic faults within Placer County. The last seismic event recorded in the South Placer area occurred in 1908, and is estimated to have been at least a 4.0 on the Richter Scale. Due to the geographic location and soil characteristics within the City, the General Plan indicates that soil liquefaction, landslides, and subsidence are not a significant risk in the area.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?			X	
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to geology and soils is based directly on the CEQA Guidelines checklist items a–f listed above. Regulations applicable to this topic include the Alquist-Priolo Act, which addresses earthquake safety in building permits, and the Seismic Hazards Mapping Act, which requires the state to gather and publish data on the location and risk of seismic faults. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant archeological resources, which for this evaluation will include paleontological resources (Policies 1 and 2). Section 50987.5 of the California Public Code Section is only applicable to public land; this section prohibits the excavation, removal, destruction, or defacement/injury to any vertebrate paleontological site, including fossilized footprints or other paleontological feature.

The Findings of the Implementing Procedures indicate that compliance with the Flood Damage Prevention Ordinance (RMC Ch.9.80) and Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist item b. The Ordinance and standards include permit requirements for construction and development in erosion-prone areas and ensure that grading activities will not result in significant soil erosion or loss of topsoil. The use of septic tanks or alternative waste systems is not permitted in the City of Roseville, and therefore no analysis of criterion e is necessary.

Discussion of Checklist Answers:

a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.

i–iii) According to United States Geological Service mapping and literature, active faults are largely considered to be those which have had movement within the last 10,000 years (within the Holocene or Historic time periods)[1] and there are no major active faults in Placer County. The California Geological Survey has prepared a map of the state which shows the earthquake shaking potential of areas throughout California based primarily on an area's distance from known active faults. The map shows that the City lies in a relatively low-intensity ground-shaking zone. Commercial, institutional, and residential buildings as well as all related infrastructure are required, in conformance with Chapter 16, *Structural Design Requirements*, Division IV, *Earthquake Design* of the California Building Code, to lessen the exposure to potentially damaging vibrations through seismic-resistant design. In compliance with the Code, all structures in the Project area would be well-built to withstand ground shaking from possible earthquakes in the region; impacts are less than significant.

iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. The existing and proposed slopes of the project site are not steep enough to present a hazard during development or upon completion of the project. In addition, measures would be incorporated during construction to shore minor slopes and prevent potential earth movement. Therefore, impacts associated with landslides are less than significant.

b) Grading activities will result in the disruption, displacement, compaction and over-covering of soils associated with site preparation (grading and trenching for utilities). Grading activities for the project will be limited to the project site. Grading activities require a grading permit from the Engineering Division. The grading permit is reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control, and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans and improvement plans. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the project are less than significant.

[1] United States Geological Survey, http://earthquake.usgs.gov/learn/glossary/?term=active%20fault, Accessed January 2016

c, d) A review of the Natural Resources Conservation Service Soil Survey for Placer County, accessed via the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/), indicates that the soils on the site are 100 hundred percent Urban land-Xerarents-Fiddyment complex, 0 to 8 percent slopes, which is not listed as geologically unstable or sensitive.

f) No paleontological resources are known to exist on the project site per the General Plan EIR; however, standard mitigation measures apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the General Plan EIR; project-specific impacts are less than significant.

VIII. Greenhouse Gases

Greenhouse gases trap heat in the earth's atmosphere. The principal greenhouse gases (GHGs) that enter the atmosphere because of human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. As explained by the United States Environmental Protection Agency[2], global average temperature has increased by more than 1.5 degrees Fahrenheit since the late 1800s, and most of the warming of the past half century has been caused by human emissions. The City has taken proactive steps to reduce greenhouse gas emissions, which include the introduction of General Plan policies to reduce emissions, changes to City operations, and climate action initiatives.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Thresholds of Significance and Regulatory Setting:

In Assembly Bill 32 (the California Global Warming Solutions Act), signed by Governor Schwarzenegger of California in September 2006, the legislature found that climate change resulting from global warming was a threat to California, and directed that "the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases . . .". The target established in AB 32 was to reduce emissions to 1990 levels by the year 2020. CARB subsequently prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008. The Scoping Plan provides the outline for actions to reduce California's GHG emissions, and has been updated twice.

The current 2017 Scoping Plan updated the target year from 2020 to 2030, based on the targets established in Senate Bill 32 (SB 32). SB 32 was signed by the Governor on September 8, 2016, to establish a reduction target of 40 percent below 1990 levels by 2030. Critically, the 2017 Scoping Plan also sets the path toward compliance

[2] http://www3.epa.gov/climatechange/science/overview.html, Accessed January 2016

with the 2050 target embodied within Executive Order S-3-05 as well. According to the 2017 Scoping Plan the statewide 2030 target is 260 million metric tons. The Scoping Plan recommends an efficiency target approach for local governments for 2030 and 2050 target years.

The Placer County Air Pollution Control District (PCAPCD) recommends that thresholds of significance for GHG be related to statewide reduction goals and has adopted thresholds of significance which take into account the 2030 reduction target. The thresholds include a de minimis and a bright-line maximum threshold, as well as residential and non-residential efficiency thresholds. However, the City developed its own thresholds as part of the 2035 General Plan Update project approved in July 2020. The justification for the City's thresholds is contained within the General Plan EIR. The thresholds were developed based on statewide emissions data adjusted for relevant local conditions and land uses. The significance thresholds are shown in Table 1 below.

Table 1: GHG Significance Thresholds

	2020	2030	2035	2050
Per Capita Emissions Efficiency Targets (MT CO_2e/capita/yr)	**7.21**	**4.00**	**3.22**	**1.19**
Per Service Population Emissions Efficiency Targets (MT CO_2e/SP/yr)	**5.07**	**2.79**	**2.25**	**0.83**
Projects which use these thresholds for environmental analysis should include a brief justification of the type of efficiency target and the target year selected. Per capita is most applicable to projects which only include residential uses, or in cases where reliable data to generate a service population estimate is unavailable. Projects should generally use the 2035 target year. Note that future projects consistent with the General Plan will not require further analysis, per the tiering provisions of CEQA. Note: MMT CO_2e = million metric tons of carbon dioxide equivalent; Service Population (SP) = population + employment				

Discussion of Checklist Answers:

a–b) Greenhouse gases are primarily emitted as a result of vehicle operation associated with trips to and from a project, and energy consumption from operation of the buildings. Greenhouse gases from vehicles is assessed based on the vehicle miles traveled (VMT) resulting from the project, on a Citywide basis. Residential projects, destination centers (such as a regional mall), and major employers tend to increase VMT in a study area, either by adding new residents traveling in an area, or by encouraging longer trip lengths and drawing in trips from a broader regional area. However, non-residential projects and neighborhood-serving uses (e.g. neighborhood parks) tend to lower VMT in a study area because they do not generate new trips within the study area, they divert existing trips. These trips are diverted because the new use location is closer to home, on their way to another destination (e.g. work), or is otherwise more convenient.

As mentioned in the Air Quality section of this Initial Study, HELIX prepared a technical report that includes evaluation of potential impacts of the project related to the generation of GHG emissions. As discussed in the technical report, GHG emissions resulting from operation of the project's batch plant come primarily from transporting concrete components and the ready-mix concrete product, the use of off-road material handling equipment, the electricity used to operate the batch plant, and the energy used to source and treat the water used by the batch plant. Project construction GHG emissions were estimated using CalEEMod (see Appendix A of Attachment 2). The modeling shows that the project construction emissions would not exceed the PCAPCD project-level construction GHG threshold of 10,000 MT CO_2e per year.

Adding a new source of ready-mix concrete to a region tends to shorten delivery trips and reduce truck VMT. The technical report determined that because the project would not result in an increase in regional concrete batch plant associated truck VMT, the mobile source GHG emissions generated by the project's truck trips (671 MT CO2e per year, as calculated via CalEEMod) would not be new to the region. Instead, the emissions would

be a redistribution of existing regional truck trips and GHG emissions. The project operational GHG emissions new to the region (mobile sources other than batch plant truck trips, area sources, energy use, water use, solid waste generation, refrigerant leaks, and off-road equipment) were determined not to exceed the PCAPCD operational non-residential threshold (see Table 12 in Attachment 2).

In addition, the City's General Plan EIR included an analysis of GHG emissions, which would result from buildout of the City's General Plan. The EIR concluded that the General Plan build out would exceed the City's threshold of 2.25 MT CO2e per service population and that the effect was cumulatively considerable. Although mitigation measures were adopted as part of the General Plan, those measures would not reduce impacts to less than significant levels, and impacts were considered significant and unavoidable. The proposed project is consistent with the land use assumptions in the General Plan EIR and does not require further analysis per the tiering provisions of CEQA. The project includes reasonable and feasible design measures to reduce emissions, including implementation of the latest Cal-Green and energy efficiency code requirements. The project complies with General Plan policy related to GHG and the project does not result in any new GHG impacts not previously analyzed in the General Plan EIR; therefore, impacts are less than significant.

Thus, project-generated GHG emissions would not conflict with and are consistent with statewide goals for greenhouse gas emissions reduction. This impact is considered less than significant.

IX. Hazards and Hazardous Materials

There are no hazardous cleanup sites of record within 1,000 feet of the site according to both the State Water Resources Control Envirostor database (http://geotracker.waterboards.ca.gov/) and the Department of Toxic Substances Control Envirostor database (http://www.envirostor.dtsc.ca.gov/public/). The project is not located on a site where existing hazardous materials have been identified, and the project does not have the potential to expose individuals to hazardous materials. Asbestos and lead, which can be present in older buildings, are not onsite as the site is currently undeveloped.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hazardous materials is based directly on the CEQA Guidelines checklist items a–g listed above. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency. The determination of significance based on the above criteria depends on the probable frequency and severity of consequences to people who might be exposed to the health hazard, and the degree to which Project design or existing regulations would reduce the frequency of or severity of exposure. As an example, products commonly used for household cleaning are classified as hazardous when transported in large quantities, but one would not conclude that the presence of small quantities of household cleaners at a home would pose a risk to a school located within ¼-mile.

Many federal and State agencies regulate hazards and hazardous substances, including the United States Environmental Protection Agency (US EPA), California Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (Regional Water Board), and the California Occupational Safety and Health Administration (CalOSHA). The state has been granted primacy (primary responsibility for oversight) by the US EPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health risks. California regulations pertaining to hazardous waste management are published in the California Code of Regulations (see 8 CCR, 22 CCR, and 23 CCR).

The project is not within an airport land use plan or within two miles of a public or private use airport. Therefore, no further discussion is provided for item e.

Discussion of Checklist Answers:

a, b) Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints and paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public. The materials only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. a vehicle accident) or mishandling. In addition to construction use, the operational project would result in the use of common hazardous materials as well, including bleach, solvents, and herbicides. Regulations pertaining to the transport of materials are codified in 49 Code of Federal Regulations 171–180, and transport regulations are enforced and monitored by the California Department of Transportation and by the California Highway Patrol. Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. These same codes require that all hazardous materials be used and stored in the manner specified on the material packaging. Existing regulations and programs are sufficient to ensure that potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels.

c) See response to Items (a) and (b) above. While development of the site will result in the use, handling, and transport of materials deemed to be hazardous, the materials in question are commonly used in both residential and commercial applications, and include materials such as bleach and herbicides. The project will not result in the use of any acutely hazardous materials, substances, or waste.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5[3]; therefore, no impact will occur.

e) This project is located within an area currently receiving City emergency services and development of the site has been anticipated and incorporated into emergency response plans. As such, the project will cause a less than significant impact to the City's Emergency Response or Management Plans. Furthermore, the project will be required to comply with all local, State and federal requirements for the handling of hazardous materials, which will ensure less-than-significant impacts. These will require the following programs:

- A Risk Management and Prevention Program (RMPP) is required of uses that handle toxic and/or hazardous materials in quantities regulated by the California Health and Safety Code and/or the City.

- Businesses that handle toxic or hazardous materials are required to complete a Hazardous Materials Management Program (HMMP) pursuant to local, State, or federal requirements.

g) The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating

[3] http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm

Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. The project site is in an urban area, and therefore would not expose people to any risk from wildland fire. There would be no impact with regard to this criterion.

X. Hydrology and Water Quality

As described in the Open Space and Conservation Element of the City of Roseville General Plan, the City is located within the Pleasant Grove Creek Basin and the Dry Creek Basin. Pleasant Grove Creek and its tributaries drain most of the western and central areas of the City and Dry Creek and its tributaries drain the remainder of the City. Most major stream areas in the City are located within designated open space.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
i) result in substantial erosion or siltation on or off-site;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?			X	
d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	
e) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project innundation?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hydrology and water quality is based directly on the CEQA Guidelines checklist items a–e listed above. For checklist item a, c (i), d, and e, the Findings of the Implementing Procedures indicate that compliance with the City of Roseville Design/Construction Standards (Resolution 07-107), Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20), and Stormwater Quality Design Manual (Resolution 16-152) will prevent significant impacts related to water quality or erosion. The standards require preparation of an erosion and sediment control plan for construction activities and includes designs to control pollutants within post-construction urban water runoff. Likewise, it is indicated that the Drainage Fees for the Dry Creek and Pleasant Grove Watersheds (RMC Ch.4.48) and City of Roseville Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist items c (ii) and c (iii). The ordinance and standards require the collection of drainage fees to fund improvements that mitigate potential flooding impacts, and require the design of a water drainage system that will adequately convey anticipated stormwater flows without increasing the rate or amount of surface runoff. These same ordinances and standards prevent impacts related to groundwater (items a and d), because developers are required to treat and detain all stormwater onsite using stormwater swales and other methods which slow flows and preserve infiltration. Finally, it is indicated that compliance with the Flood Damage Prevention Ordinance (RMC Ch. 9.80) will prevent significant impacts related to items c (iv) and e. The Ordinance includes standard requirements for all new construction, including regulation of development with the potential to impede or redirect flood flows, and prohibits development within flood hazard areas. Impacts from tsunamis and seiches were screened out of the analysis (item e) because the project is not located near a water body or other feature that would pose a risk of such an event.

Discussion of Checklist Answers:

a,c (i),d, e) The project will involve the disturbance of on-site soils and the construction of impervious surfaces, such as asphalt paving and buildings. Disturbing the soil can allow sediment to be mobilized by rain or wind, and cause displacement into waterways. To address this and other issues, the developer is required to receive

approval of a grading permit and/or improvement plants prior to the start of construction. The permit or plans are required to incorporate mitigation measures for dust and erosion control. In addition, the City has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the Central Valley Regional Water Quality Control Board which requires the City to reduce pollutants in stormwater to the maximum extent practicable. The City does this, in part, by means of the City's 2016 Design/Construction Standards, which require preparation and implementation of a Stormwater Pollution Prevention Plan. All permanent stormwater quality control measures must be designed to comply with the City's Manual for Stormwater Quality Control Standards for New Development, the City's 2016 Design/Construction Standards, Urban Stormwater Quality Management and Discharge Control Ordinance, and Stormwater Quality Design Manual. For these reasons, impacts related to water quality are less than significant.

b, d) The project does not involve the installation of groundwater wells. The City maintains wells to supplement surface water supplies during multiple dry years, but the effect of groundwater extraction on the aquifer was addressed in the City's Urban Water Master Plan and evaluated in the General Plan EIR. The proposed project is consistent with the General Plan land use designation, and is thus consistent with the citywide evaluation of water supply. Project impacts related to groundwater extraction are less than significant. Furthermore, all permanent stormwater quality control measures must be designed to comply with the Stormwater Quality Design Manual, which requires the use of bioswales and other onsite detention and infiltration methods. These standards ensure that stormwater will continue to infiltrate into the groundwater aquifer.

c (ii and iii)) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project includes adequate and appropriate facilities to ensure no net increase in the amount or rate of stormwater runoff from the site, and which will adequately convey stormwater flows.

c (iv) and e) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project is not located within either the Federal Emergency Management Agency floodplain or the City's Regulatory Floodplain (defined as the floodplain which will result from full buildout of the City). Therefore, the project will not impede or redirect flood flows, nor will it be inundated. The proposed project is located within an area of flat topography and is not near a waterbody or other feature which could cause a seiche or tsunami. There would be no impact with regard to these criterion.

XI. Land Use and Planning

The project site is currently undeveloped and has a zoning designation of General Industrial (M2) and a General Plan land use designation of General Industrial (IND). The project has frontage on Lendell Lane to the west. Parcels immediately adjacent to the site to the north, east, and south have a land use of IND, and the parcel across Lendell Lane to the west is also designated as IND. Surrounding uses include a landscape material supply business to the north, self-storage to the east, a vacant parcel to the south, and a recycling, scrap and dismantling yard to the west across Lendell Lane.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to land use is based directly on the CEQA Guidelines checklist items a and b listed above. Consistency with applicable City General Plan policies, Improvement Standards, and design standards is already required and part of the City's processing of permits and plans, so these requirements do not appear as mitigation measures.

Discussion of Checklist Answers:

a) The project area has been master planned for development, including adequate roads, pedestrian paths, and bicycle paths to provide connections within the community. The project will not physically divide an established community.

b) As part of project review, staff considered consistency with all City policies and regulations, including those which are intended to avoid an environmental effect, and found the project to be consistent.

XII. Mineral Resources

The Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Geologist to classify land into Mineral Resource Zones (MRZ's) based on the known or inferred mineral resource potential of that land. The California Division of Mines and Geology (CDMG) was historically responsible for the classification and designation of areas containing—or potentially containing—significant mineral resources, though that responsibility now lies with the California Geological Survey (CGS). CDMG published Open File Report 95-10, which provides the mineral classification map for Placer County. A detailed evaluation of mineral resources has not been conducted within the City limits, but MRZ's have been identified. There are four broad MRZ categories (MRZ-1 through MRZ-4), and only MRZ-2 represents an area of known significant mineral resources. The City of Roseville General Plan EIR included Exhibit 4.1-3, depicting the location of MRZ's in the City limits. There is only one small MRZ-2 designation area, located at the far eastern edge of the City.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to mineral resources is based directly on the CEQA Guidelines checklist items a and b listed above.

Discussion of Checklist Answers:

a–b) The project site is not in the area of the City known to include any mineral resources that would be of local, regional, or statewide importance; therefore, the project has no impacts on mineral resources.

XIII. Noise

The project site is located to the east of Lendell Lane, which is not identified as a transportation noise source in the City's General Plan Noise Element. However, the project site is located approximately 0.6 mile west of Foothills Boulevard, which is identified as a transportation noise source in the City's General Plan Noise Element. In the existing and future conditions, the 65 db Ldn noise contour line covers the entire project site (City of Roseville General Plan 2035 Noise Element, Figures IX-1 and IX-2). Other uses in the vicinity include a landscape materials supply business to the north, a self-storage business to the east, a vacant M2 parcel to the south, and a recycling, scrap, and dismantling yard to the west across Lendell Lane. The site is also located approximately 800 feet west of Union Pacific Railroad. The nearest sensitive receptor is a single-family residence located approximately 1,200 feet northeast of the project site.

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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?			X	
b) Generation of excessive ground borne vibration of ground borne noise levels?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
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 project area to excessive noise levels?				X

Thresholds of Significance and Regulatory Setting:

Standards for transportation noise and non-transportation noise affecting existing or proposed land uses are established within the City of Roseville General Plan Noise Element, and these standards are used as the thresholds to determine the significance of impacts related to items a and c. The significance of other noise impacts is based directly on the CEQA Guidelines checklist items b and c listed above. The Findings of the Implementing Procedures indicate that compliance with the City Noise Regulation (RMC Ch. 9.24) will prevent significant non-transportation noise as it relates to items a and b. The Ordinance establishes noise exposure standards that protect noise-sensitive receptors from a variety of noise sources, including non-transportation/fixed noise, amplified sound, industrial noise, and events on public property. The project is not within an airport land use plan, within two miles of a public or public use airport and there are also no private airstrips in the vicinity of the project area. Therefore, item c has been ruled out from further analysis.

Discussion of Checklist Answers:

a) The City of Roseville General Plan Noise Element includes Policy 7, which requires proposed fixed noise sources to be mitigated so as not to exceed the noise level performance standards contained within Noise Element Table IX-3. These standards are included in Table 1 below. Fixed noise sources are defined as noises that come from a specified area, while moving noise sources are from transportation facilities (roadway noise, train noise, etc.); the proposed project will generate fixed noise.

Table 1: Noise Element Table IX-3

PERFORMANCE STANDARDS FOR NON-TRANSPORTATION NOISE SOURCES OR PROJECTS AFFECTED BY NON-TRANSPORTATION NOISE SOURCES (As Measured at the Property Line of Noise-Sensitive Uses)

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	50	45
Maximum level, dB	70	65

[1] For municipal power plants consisting primarily of broadband, steady state noise sources, the hourly (Leq) noise standard may be increased up to 10 dB(A), but not exceed 55 dB(A) Hourly Leq dB.

Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

No standards have been included for interior noise levels. Standard construction practices should, with exterior noise levels identified, result in acceptable interior noise levels.

The proposed project would develop the site with a prefabricated wet concrete (ready-mix) batch plant, associated aggregate storage in concrete masonry unit (CMU) bunkers, a 4,320-square-foot office building with one caretaker's unit, and associated parking, lighting, and landscaping. Additional site improvements include an 8-foot-tall CMU wall on the north, east, and south property lines. HELIX prepared a noise assessment to determine the potential construction and operational noise impacts associated with the proposed project (see Attachment 3). The on-site noise sources are anticipated to include the concrete batch plant, front-end loader used to transfer aggregate and sand to the batch plant, trucks circulating on the project site, building heating, ventilation, and air conditioning (HVAC) systems, and off-site vehicular traffic.

Modeling of the on-site noise sources would result in approximately 72.6 dBA L_{eq}, measured at the project's northeast property line. The nearest sensitive receptor is a single-family residence located approximately 1,200 feet northeast of the project site. When measured at the nearest sensitive receptor, the project on-site operation noise would be 43.2 dBA L_{eq}, accounting for noise attenuation from the industrial buildings and landscape supply business structures between the project site and the residence. As a result, the project's on-site operational noise would not exceed the City's 50 dBA L_{eq} daytime noise standard or 45 dBA L_{eq} nighttime noise standard measured at the nearest sensitive receptor. Therefore, impacts would be less than significant.

b) Surrounding uses may experience short-term increases in groundborne vibration, groundborne noise, and airborne noise levels during construction. However, these increases would only occur for a short period of time. When conducted during daytime hours, construction activities are exempt from Noise Ordinance standards, but the standards do apply to construction occurring during nighttime hours. While the noise generated may be a minor nuisance, the City Noise Regulation standards are designed to ensure that impacts are not unduly intrusive. Based on this, the impact is less than significant.

XIV. Population and Housing

The project site is located within the Infill planning area and has a land use designation of General Industrial (IND). The City of Roseville General Plan Table II-4 identifies the total number of residential units and population

anticipated as a result of buildout of the City, and the Specific Plan likewise includes unit allocations and population projections for the Plan Area. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, though extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to population and housing is based directly on the CEQA Guidelines checklist items a and b listed above.

Discussion of Checklist Answers:

a) The CEQA Guidelines identify several ways in which a project could have growth-inducing impacts (Public Resources Code Section 15126.2), either directly or indirectly. Growth-inducement may be the result of fostering economic growth, fostering population growth, providing new housing, or removing barriers to growth. Growth inducement may be detrimental, beneficial, or of no impact or significance under CEQA. An impact is only deemed to occur when it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be shown that the growth will significantly affect the environment in some other way. The project is consistent with the land use designation of the site. Therefore, while the project in question will induce some level of growth, this growth was already identified and its effects disclosed and mitigated within the General Plan EIR. Therefore, the impact of the project is less than significant.

b) The project site is vacant. No housing exists on the project site, and there would be no impact with respect to these criteria.

XV. Public Services

Fire protection, police protection, park services, and library services are provided by the City. The project is located within the Dry Creek Joint Elementary School District and the Roseville Joint Union High School District.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which

could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to public services is based directly on the CEQA Guidelines checklist items a–e listed above. The General Plan EIR addressed the level of public services which would need to be provided in order to serve planned growth in the community. Development Agreements and other conditions have been adopted in all proposed growth areas of the City which identify the physical facilities needed to serve growth, and the funding needed to provide for the construction and operation of those facilities and services; the project is consistent with the General Plan. In addition, the project has been routed to the various public service agencies, both internal and external, to ensure that the project meets the agencies' design standards (where applicable) and to provide an opportunity to recommend appropriate conditions of approval.

Discussion of Checklist Answers:

a) Existing City codes and regulations require adequate water pressure in the water lines, and construction must comply with the Uniform Fire and Building Codes used by the City of Roseville. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Sales taxes and property taxes resulting from development will add revenue to the General Fund, which provides funding for police services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

c) The project is not a residential use and will not have an impact on school services.

d) The project is not a residential use and will not have an impact on parks facilities.

e) The City charges fees for end-users for other services, such as garbage and greenwaste collection, in order to fund those services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

XVI. Recreation

The nearest park facility is Royer Park, which is located approximately 4 miles northeast of the project site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to recreation services is based directly on the CEQA Guidelines checklist items a–b listed above.

Discussion of Checklist Answers:

a) The EIR for the General Plan addressed the level of park services—including new construction, maintenance, and operations—which would need to be provided in order to serve planned growth in the community. Given that the project is consistent with the General Plan, the project would not cause any unforeseen or new impacts related to the use of existing or proposed parks and recreational facilities. There is no impact to use of park facilities as a result of this project.

b) The proposed project is a concrete batch plant, and it is not located within the vicinity of any existing parks. The project will not cause any unforeseen or new impacts related to the construction or expansion of recreational facilities.

XVII. Transportation

The project site is located on Lendell Lane, south of PFE Road. The project frontage along Lendell Lane is improved with sidewalks, curb, and gutter. Ingress and egress for the project will be provided by two new driveways on Lendell Lane. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature(s) (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Thresholds of Significance and Regulatory Setting:

The City has adopted the following plans, ordinances, or policies applicable to checklist item a: Pedestrian Master Plan, Bicycle Master Plan, Short-Range Transit Plan, and General Plan Circulation Element. The project is evaluated for consistency with these plans and the policies contained within them. For checklist item b, the CEQA Guidelines Section 15064.3 establishes a detailed process for evaluating the significance of transportation impacts. In accordance with this section, the analysis must focus on the generation of vehicle miles traveled (VMT); effects on automobile delay cannot be considered a significant impact. The City developed analysis guidance and thresholds as part of the 2035 General Plan Update project approved in July 2020. The detailed evaluation and justification is contained within the General Plan EIR.

Future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA. For projects which are inconsistent, CEQA Guidelines Section 15064.3(b) allows lead agencies discretion to determine, in the context of a particular project, whether to rely on a qualitative analysis or performance-based standards. CEQA Guidelines Section 15064.7(b) allows lead agencies the discretion to select their own thresholds and allow for differences in thresholds based on context.

Quantitative analysis would not be required if it can be demonstrated that the project would generate VMT which is equivalent to or less than what was assumed in the General Plan EIR. Examples of such projects include:

- Local-serving retail and other local-serving development, which generally reduces existing trip distances by providing services in closer proximity to residential areas, and therefore reduce VMT.
- Multi-family residences, which generally have fewer trips per household than single-family residences, and therefore also produce less VMT per unit.
- Infill projects in developed areas generally have shorter trips, reduced vehicle trips, and therefore less VMT.
- Pedestrian, bicycle, transit, and electric vehicle transportation projects.

- Residential projects in low per-capita household VMT areas and office projects in low per-worker VMT areas (85 percent or less than the regional average) as shown on maps maintained by SACOG or within low VMT areas as shown within Table 4.3-8 of the General Plan EIR.

When quantitative analysis is required, the threshold of 12.8 VMT/capita may be used for projects not within the scope of the General Plan EIR, provided the cumulative context of the 2035 General Plan has not changed substantially. Since approval of the 2035 General Plan, the City has not annexed new land, substantially changed roadway network assumptions, or made any other changes to the 2035 assumptions which would require an update to the City's VMT thresholds contained within the General Plan EIR. Therefore, the threshold of 12.8 VMT/capita remains appropriate.

A qualitative VMT analysis was conducted for the proposed project, as the development is consistent with the General Plan land use designation. Further evaluation is provided below in item b.

Impacts with regard to items c and d are assessed based on the expert judgment of the City Engineer and City Fire Department, as based upon facts and consistency with the City's Design and Construction Standards.

Discussion of Checklist Answers:

a) The City of Roseville has adopted a Pedestrian Master Plan, Bicycle Master Plan, and Short-Range Transit Plan. The project was reviewed for consistency with these documents, and no conflicts were identified. The project is located in an area planned for industrial uses. The proposed project will be constructed consistent with the existing roadway system and in compliance with the requirements of the Pedestrian Master Plan, Bicycle Master Plan, and Short Range Transit Plan.

b) The proposed project is non-residential development of a vacant property, surrounded by existing development. The project will construct a ready-mix concrete batch plant, which is considered an industrial use consistent with the General Plan land use designation. The project does not include any unique characteristics which would draw in regional traffic, or which would prompt longer trips. The project would locate services and employment in proximity to existing developed areas, and would therefore have a neutral or positive impact on VMT. The project is consistent with the General Plan land use designation, and is therefore consistent with the VMT assumptions in the General Plan EIR; impacts are less than significant.

c, d) The project has been reviewed by the City Engineering and City Fire Department staff, and has been found to be consistent with the City's Design Standards. Furthermore, standard conditions of approval added to all City project require compliance with Fire Codes and other design standards. Compliance with existing regulations ensure that impacts are less than significant.

XVIII. Tribal Cultural Resources

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City's open space (in Maidu Park). Numerous smaller tribal cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. A majority of documented sites within the City are located in areas designated for open space uses. The United Auburn Indian Community (UAIC) is a federally recognized Tribe comprised of both Miwok and Maidu (Nisenan) Tribal members who are traditionally and culturally affiliated with the project area. The UAIC has indicated that "the Tribe has deep spiritual, cultural, and physical ties to their ancestral land and are contemporary stewards of their culture and landscapes. The Tribal community represents a continuity and endurance of their ancestors by maintaining their connection to their history and culture. It is the Tribe's goal to ensure the preservation and continuance of their cultural heritage for current and future generations."

Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Thresholds of Significance and Regulatory Setting:

Tribal cultural resources are defined in Public Resources Code Section 21074, as either 1) a site, feature, place, geographically-defined cultural landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources or as 2) a resource determined by the lead agency, supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

Discussion of Checklist Answers:

a) The project site is located within the Infill area of the City, and no tribal cultural resources are known to exist on the site. However, standard mitigation measures apply which are designed to reduce impacts to any previously undiscovered resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. With mitigation; project-specific impacts are less than significant.

b) Notice of the proposed project was mailed to tribes which had requested such notice pursuant to AB 52. A request for consultation was not received. As discussed in item a, above, no resources are known to occur in the area. However, standard mitigation measures apply which are designed to reduce impacts to resources,

should any be found on-site. The measure requires an immediate cessation of work and contact with the appropriate agencies to address the resource before work can resume. With mitigation, project-specific impacts are less than significant.

XIX. Utilities and Service Systems

Water and sewer services will be provided by the City of Roseville. The developer will be responsible for extending new lines onto the site to serve the project. Storm water will be collected on-site and transferred via pipe into an off-site storm drain system. Solid waste will be collected by the City of Roseville's Refuse Department. The City of Roseville will provide electric service to the site, while natural gas will be provided by PG&E. Comcast will provide cable. The project has been reviewed by the City's Engineering Division, Environmental Utilities, Roseville Electric and PG&E. Adequate services are available for the project.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–e listed above.

Discussion of Checklist Answers:

a) The project is consistent with the Specific Plan, and will be required to construct any utilities infrastructure necessary to serve the project, as well as pay fees which fund the operation of the facilities and the construction of major infrastructure. The construction impacts related to building the major infrastructure were disclosed in the EIR for the Specific Plan, and appropriate mitigation was adopted. Minor additional infrastructure will be constructed within the project site to tie the project into the major systems, but these facilities will be constructed in locations where site development is already occurring as part of the overall project; there are no additional substantial impacts specific or particular to the minor infrastructure improvements.

b) The City of Roseville 2020 Urban Water Management Plan (UWMP), adopted June 2021, estimates water demand and supply for the City through the year 2045, based on existing land use designations and population projections. In addition, the General Plan EIR estimates water demand and supply for ultimate General Plan buildout. The project is consistent with existing land use designations, and is therefore consistent with the assumptions of the UWMP and General Plan EIR. The UWMP indicates that existing water supply sources are sufficient to meet all normal years, and during single-dry and in certain multiple-dry years, water supply deficit may occur. The UWMP estimates a near-term (2025) demand of 51,585 acre-feet per year (AFY), and a long-term, buildout (2045) demand of 62,547 AFY. In normal years, supply exceeds demand by approximately 13,000 AFY in the near-term and by approximately 8,000 AFY at buildout. The UWMP establishes some water supply deficit during dry year scenarios, ranging from approximately 1,500 AFY to 5,000 AFY depending on the scenario, but establishes that mandatory water conservation measures and the use of groundwater to offset reductions in surface water supplies are sufficient to offset the deficit. The project, which is consistent with existing land use designations, would not require new or expanded water supply entitlements.

c) The proposed project would be served by the Dry Creek Wastewater Treatment Plant (DCWWTP). The Central Valley Regional Water Quality Control Board (RWQCB) regulates water quality and quantity of effluent discharged from the City's wastewater treatment facilities. The DCWWTP has the capacity to treat 18 million gallons per day (mgd) and is currently treating 9.3[4] mgd. The project is consistent with existing land use designations, which is how infrastructure capacity is planned. Therefore, the volume of wastewater generated by the proposed project could be accommodated by the facility; the proposed project will not contribute to an exceedance of applicable wastewater treatment requirements. The impact would be less than significant.

d, e) The Western Placer Waste Management Authority is the regional agency handling recycling and waste disposal for Roseville and surrounding areas. The regional waste facilities include a Material Recovery Facility (MRF) and the Western Regional Sanitary Landfill (WRSL). Currently, the WRSL is permitted to accept up to 1,900 tons of municipal solid waste per day. According to the solid waste analysis of the General Plan EIR, under

[4] Dave Samuelson, City of Roseville Environmental Utilities, Personal communication, July 6, 2016.

current projected development conditions the WRSL has a projected lifespan extending through 2058. There is sufficient existing capacity to serve the proposed project. Though the project will contribute incrementally to an eventual need to find other means of waste disposal, this impact of City buildout has already been disclosed and mitigation applied as part of each Specific Plan the City has approved. All residences and business in the City pay fees for solid waste collection, a portion of which is collected to fund eventual solid waste disposal expansion. The project will not result in any new impacts associated with major infrastructure. Environmental Utilities staff has reviewed the project for consistency with policies, codes, and regulations related to waste disposal and waste reduction regulations and policies and has found that the project design is in compliance.

XX. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Thresholds of Significance and Regulatory Setting:

The significance of impacts related to wildfire is based directly on the CEQA Guidelines checklist items a–d listed above. The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility.

Discussion of Checklist Answers:

a–d) Checklist questions a–d above do not apply, because the project site is not within a Very High Fire Hazard Severity Zone and is not in a CAL FIRE responsibility area.

XXI. Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	
c) Does the project have environmental effects which will cause substantial adverse effects			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
on human beings, either directly or indirectly?				

Significance Criteria and Regulatory Setting:

The significance of impacts related to mandatory findings of significance is based directly on the CEQA Guidelines checklist items a–c listed above.

Discussion of Checklist Answers:

a–c) Long term environmental goals are not impacted by the proposed project. The cumulative impacts do not deviate beyond what was contemplated in the General Plan EIR, and mitigation measures have already been incorporated via the General Plan EIR. With implementation of the City's Mitigating Ordinances, Guidelines, and Standards and best management practices, mitigation measures described in this chapter, and permit conditions, the proposed project will not have a significant impact on the habitat of any plant or animal species. Based on the foregoing, the proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species, or create adverse effects on human beings.

ENVIRONMENTAL DETERMINATION:

In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that with mitigation the impacts are less than significant. As demonstrated in the initial study checklist, there are no "project specific significant effects which are peculiar to the project or site" that cannot be reduced to less than significant effects through mitigation (CEQA Section 15183) and therefore an EIR ***is not*** *required. Therefore,* ***on the basis of the foregoing initial study:***

[**X**] I find that the proposed project COULD, but with mitigation agreed to by the applicant, clearly will not have a significant effect on the environment and a *MITIGATED NEGATIVE DECLARATION* has been prepared.

Initial Study Prepared by:

Kinarik Shallago

Kinarik Shallago, Associate Planner
City of Roseville, Development Services – Planning Division

Attachments:

1. Mitigation Monitoring and Reporting Program
2. HELIX Air Quality and Greenhouse Gas Emissions Technical Report, March 2025
3. HELIX Noise Study, March 2025

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

MITIGATION MONITORING AND REPORTING PROGRAM

Project Title/File Number:	INFILL PCL 285 – Concrete Batch Plant; File #PL24-0965
Project Location:	2021 Lendell Lane, Roseville, Placer County, CA 95678 (APN 473-100-045-000)
Project Description:	The proposed project will develop the site with a prefabricated wet concrete (ready-mix) batch plant consisting of a 4,320-square-foot office with one caretaker's unit, associated aggregate storage in concrete masonry unit (CMU) bunkers, a storage container, and associated site improvements including parking, landscaping, and lighting. The project entitlements include a Design Review Permit to review the site design and building architecture, a Variance to allow the two batch plant silos to exceed the 50-foot height limit of the M2 zone by 2.5 feet, and an Administrative Permit to allow an on-site caretaker's unit in the M2 zone.
Environmental Document	Mitigated Negative Declaration
Project Applicant:	Joshua Gisi, CWE
Property Owner:	Balwinder Singh Gill, Roseville Star Ready Mix
Lead Agency Contact Person:	Kinarik Shallago, Associate Planner; Phone (916) 746-1309

Section 21081.6 of the California Public Resources Code requires public agencies to "adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This Mitigation Monitoring and Reporting Program has been adopted for the purpose of avoiding environmental impacts

MONITORING PROCESS: Existing monitoring mechanisms are in place that assist the City of Roseville in meeting the intent of CEQA. These existing monitoring mechanisms eliminate the need to develop new monitoring processes for each mitigation measure. These mechanisms include grading plan review and approval, improvement/building plan review and approval and on-site inspections by City Departments. Given that these monitoring processes are requirements of the project, they are not included in the mitigation monitoring program.

It shall be the responsibility of the project applicant/owner to provide written notification to the City using the Mitigation Verification Cover Sheet and Forms, in a timely manner, of the completion of each Mitigation Measure as identified on the following pages. The City will verify that the project is in compliance with the adopted Mitigation Monitoring and Reporting Program. Any non-compliance will be reported by the City to the applicant/owner, and it shall be the project applicant's/owner's responsibility to rectify the situation by bringing the project into compliance. The purpose of this program is to ensure diligent and good faith compliance with the Mitigation Measures which have been adopted as part of the project.

TABLE OF MITIGATION MEASURES

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to City	Staff Use Only

MM AQ-1 Dust and Construction Control Measures
 	
In accordance with the PCAPCD, the applicant shall comply with all applicable rules and regulations (e.g., Rule 202, 218 and 228).
 	
The following mitigation measures shall be implemented to reduce short-term construction-related air quality impacts. In addition, dust control measures are required to be implemented by all projects in accordance with the City of Roseville Grading Ordinance, and the PCAPCD Fugitive Dust Rule 228.
 	
• Applicant shall submit to PCAPCD a Construction Emission / Dust Control Plan within 30 days prior to groundbreaking. If the PCAPCD does not respond within 20 days, the plan shall be considered approved. The plan must address the minimum requirements found in section 300 and 400 of District Rule 228, Fugitive Dust (www.placer.ca.gov/airpollution/airpolut.htm). The applicant shall keep a hard or electronic copy of Rule 228, Fugitive Dust on-site for reference.
 	
• The Construction Emission/Dust Control Plan shall include a comprehensive inventory (i.e. make, model, year, emission rating) of all heavy-duty off-road equipment (50 horsepower (HP) of greater) that will be used an aggregate of 40 or more hours for the construction project. If any new equipment is added after submission of the inventory, the prime contractor shall the prime contractor shall contact the APCD prior to the new equipment being utilized. The project representative shall provide PCAPCD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The plan shall demonstrate that the heavy-duty (> 50 HP) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_X reduction and 45% particulate reduction compared to the most recent ARB fleet average. PCAPCD shall be contacted for average fleet emission data. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. Contractors can access the Sacramento Metropolitan Air Quality Management District's web site to determine if their off-road fleet meets the requirements listed in this measure (http://www.airquality.org/ceqa/Construction_Mitigation_Calculator.xls).
 	
The following measures are also included to reduce construction-related ROG, NOx, PM10 and PM2.5 emissions:
 	
• All construction equipment shall be maintained in good operating condition. Contractor shall ensure that all construction equipment is being properly serviced and maintained as per the manufacturer's specifications. Maintenance records shall be available at the construction site for verification. This measure will reduce combustion emissions of all criteria air pollutants.
 	
• Prior to the issuance of any grading permits, all applicants shall submit construction plans denoting the proposed schedule and projected equipment use. Construction contractors shall provide evidence that low emission mobile construction will be used, or that their use was investigated and found to be infeasible for the project. Low emission equipment is defined as meeting the California Air Resources Board's Tier III standards. Contractors shall also conform to any construction measures imposed by the PCAPCD as well as City Planning Staff. This measure will primarily reduce ROG, NOx, PM10, and PM2.5 exhaust emissions.
 	
• Paints and coating shall be applied either by hand or by high volume, low-pressure spray. This measure will reduce evaporative ROG emissions.
 	
• All construction shall comply with the following measures to reduce fugitive dust related emissions of PM10 and PM2.5:
 	
  ○ Maintain a minimum 24-inch freeboard on soil haul trucks or cover payloads using tarps or other suitable means.
 	
  ○ Suspend grading operations during high winds (greater than 15 mph).
	The applicants shall submit construction management plans as part of the Grading Permit or Improvement Plan application.
	
	Engineering will review plans for inclusion of these measures prior to issuance of permits or approval of plans.
		Pre-Construction: Prior to issuance of Grading Permits or Improvement Plans.
		
		Add as note on Improvement Plans.
			Engineering	Dust Control Plan and proof of submittal to PCAPCD	

○ Sweep streets as necessary if silt is carried off-site to adjacent public thoroughfares or occurs as a result of hauling. ○ Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices. ○ Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods. ○ Phase grading into smaller areas to prevent the susceptibility of larger areas to erosion over extended periods of time. ○ Pave or apply gravel to any on-site haul roads. ○ Reestablish ground cover on the construction site through seeding and water. ○ Clean earth moving construction equipment with water or sweep clean, once per day, or as necessary (e.g., when moving onsite), consistent with National Pollutant Discharge Elimination System Best Management Practices and the Roseville Grading Ordinance. Water shall be applied to control dust as needed to prevent dust impacts offsite. Operational water truck(s), shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned, as needed, to prevent dust, silt, mud, and dirt from being released or tracked off-site. ○ Spread soil binders on unpaved roads and employee/equipment parking areas. Soil binders shall be non-toxic in accordance with state and local regulations. Apply approved chemical soil stabilizers, or vegetated mats, etc. according to manufacturers' specifications, to all-inactive construction areas (previously graded areas which remain inactive for 96 hours). ○ Minimize diesel idling time to a maximum of five minutes. ○ Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators, if feasible. ○ An applicant representative, ARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely (i.e., once per week) evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement for projects grading more than 20 acres in size, regardless of how many acres are to be disturbed daily. ○ Construction equipment exhaust emissions shall not exceed the PCAPCD Visible Emissions Rule 202. Fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours. The following measures will be required: 1. Include the following standard note on the Improvement/Grading Plan: *If required by the Public Works Department, the contractor shall hold a pre-construction meeting prior to grading activities. The contractor shall invite the Placer County APCD to the pre-construction meeting in order to discuss the construction emission/dust control plan with employees and/or contractors.* 2. Prior to building permit approval, the applicant shall show, on the plans submitted to the Building Department, that electrical outlets shall be installed on the exterior walls of both the front and back of all residences or all commercial buildings to promote the use of electric landscape maintenance equipment. 3. Prior to the issuance of a Building Permit, the applicant shall show that all flat roofs with parapets shall include a white or silver cap sheet to reduce energy demands. 4. Diesel trucks shall be prohibited from idling more than five minutes. Prior to the issuance of a Building Permit, the applicant shall show that all truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel Trucks idling for more than five minutes shall be required to connect to the 110/208 volt power to run any auxiliary equipment. 2'x3' signage which indicates "Diesel engine Idling Limited to a Maximum of 5 Minutes" shall be shown on the building elevations and shall be submitted to the Placer County APCD prior to the issuance of Building Permits for the project. 5. Prior to approval of Improvement Plans, an enforcement plan shall be established, and submitted to the APCD for review, in order to evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities on a weekly basis, using					

standards as defined in California Code of Regulations, Title 13, Sections 2180 – 2194. An Environmental Coordinator, hired by the prime contractor or property owner, and who is CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified by APCD and the equipment must be repaired within 72 hours. (California Code of Regulations, Title 13, Sections 2180 – 2194) *The project shall comply with all applicable Placer County Air Pollution Control District rules and regulations, and shall obtain applicable permits and/or clearances from the District prior to the start of construction.* • The contractor shall use CARB ultra-low sulfur diesel fuel for all diesel–powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. (California Standards for Motor Vehicle Diesel Fuel, title 13, article 4.8, chapter 9, California Code of Regulations). • Processes that discharge 2 pounds per day or more of air contaminants, as defined by Health and Safety Code Section 39013, to the atmosphere may require a permit. Permits are required for both construction and operation. Developers/contractors should contact the District prior to construction and obtain any necessary permits prior to the issuance of a Building Permit. (Rule 501) • Pursuant to the Placer County Air Pollution Control District Rule 501, General Permit Requirements, the proposed project may need a permit from the District prior to construction. In general, any engine greater than 50 brake horsepower or any boiler with heat greater than 1,000,000 Btu per hour shall require a permit issued by the District. (Rule 501) • All on-site stationary equipment which is classified as 50 hp or greater shall either obtain a state issued portable equipment permit or a Placer County APCD issued portable equipment permit. (California Portable Equipment Registration Program, Section 2452). • The contractor shall utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators if feasible. • During construction, the contractor shall minimize idling time to a maximum of 5 minutes for all diesel powered equipment. During construction, traffic speeds on all unpaved surfaces shall be limited to 15 miles per hour or less. **(**Rule 228 / section 401.2)					
MM CUL-01 Unanticipated Discovery. If subsurface deposits believed to be cultural or human in origin, or tribal cultural resources, are discovered during construction, all work shall halt within a 100-foot radius of the discovery, and the Construction Manager shall immediately notify the City of Roseville Development Services Director by phone. The Construction Manager shall also immediately coordinate with the monitoring archeologist or project archaeologist and (if present) tribal monitor, or, in the absence of either, contact consulting tribes and a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for archaeology and subject to approval by the City, to evaluate the significance of the find and develop appropriate management recommendations. All management recommendations shall be provided to the City in writing for the City's review and approval. If recommended by the qualified professional and consulting tribes and approved by the City, this may include modification of the no-work radius. The professional archaeologist must make a determination, based on professional judgement and supported by substantial evidence, within one business day of being notified, as to whether or not the find represents a cultural resource or has the potential to be a tribal cultural resource. The subsequent actions will be determined by the type of discovery, as described below. These include: 1) a work pause that, upon further investigation, is not actually a discovery and the work pause was simply needed in order to allow for closer examination of soil (a "false alarm"); 2) a work pause and subsequent action for discoveries that are clearly not related to tribal resources, such as can and bottle dumps, artifacts of European origin, and remnants of built environment features; and 3) a work pause and subsequent action for discoveries that are likely related to tribal resources, such as midden soil, bedrock mortars,	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	*Construction*: Measure applies if resources are discovered during construction. Add as note on Improvement Plans and Building Plans.	Engineering and Building	None	

groundstone, or other similar expressions. Whenever there is question as to whether or not the discovery represents a tribal resource, culturally affiliated tribes shall be consulted in making the determination. Whenever a tribal monitor is present, the monitor shall be consulted. The following processes shall apply, depending on the nature of the find, subject to the review and approval of the City: Response to False Alarms: If the professional archaeologist determines that the find is negative for any cultural indicators, then work may resume immediately upon notice to proceed from the City's representative. No further notifications or tribal consultation is necessary, because the discovery is not a cultural resource of any kind. The professional archaeologist shall provide written documentation of this finding to the City. Response to Non-Tribal Discoveries: If a tribal monitor is not present at the time of discovery and a professional archaeologist determines that the find represents a non-tribal cultural resource from any time period or cultural affiliation, the City shall be notified immediately, to consult on a finding of eligibility and implementation of appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. The professional archaeologist shall provide a photograph of the find and a written description to the City of Roseville. The City of Roseville will notify any [tribe(s)] who, in writing, requested notice of unanticipated discovery of non-tribal resources. Notice shall include the photograph and description of the find, and a tribal representative shall have the opportunity to determine whether or not the find represents a tribal cultural resource. If a response is not received within 24 hours of notification (none of which time period may fall on weekends or City holidays), the City will deem this portion of the measure completed in good faith as long as the notification was made and documented. If requested by a [tribe(s)], the City may extend this timeframe, which shall be documented in writing (electronic communication may be used to satisfy this measure). If a notified tribe responds within 24 hours to indicate that the find represents a tribal cultural resource, then the Response to Tribal Discoveries portion of this measure applies. If the tribe does not respond or concurs that the discovery is non-tribal, work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to its satisfaction. Response to Tribal Discoveries: If the find represents a tribal or potentially tribal cultural resource that does not include human remains, the **UAIC** and City shall be notified. The City will consult with the tribe(s) on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be either a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines, or a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code. Preservation in place is the preferred treatment, if feasible. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) not a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code; or 3) that the treatment measures have been completed to its satisfaction. Response to Human Remains: If the find includes human remains, or remains that are potentially human, the construction supervisor or on-site archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall notify the City and Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and Assembly Bill 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Public Resources Code § 5097.94 provides structure for mediation through the NAHC if necessary.					

If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains in a respectful manner where they will not be further disturbed (§ 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.					
MM CUL-02 Cease Work and Consult With Qualified Paleontologist Should any evidence of paleontological resources (e.g. fossils) be encountered during grading or excavation, work shall be suspended within 100 feet of the find, and the City of Roseville shall be immediately notified. At that time, the City shall coordinate any necessary investigation of the site with a qualified paleontologist to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance, if feasible in light of project design or layout, or data recovery excavations. The contractor shall implement any measures deemed feasible and necessary by City staff in consultation with the paleontologist for the protection of the paleontological resources.	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	*Construction*: Measure applies if resources are discovered during construction. Add as note on Improvement Plans and Building Plans.	Engineering and Building	None	

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #	INFILL PCL 285 – Concrete Batch Plant; File #PL24-0965
Project Address	2021 Lendell Lane, Roseville, Placer County, CA 95678 (APN 473-100-045-000)
Property Owner	Balwinder Singh Gill, Roseville Star Ready Mix
Planning Division Contact	Kinarik Shallago, Associate Planner; Phone (916) 746-1309

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete

I HAVE ATTACHED THE FOLLOWING REQUIRED ITEMS:

☐ Table of Applicable Mitigation Measures

☐ Mitigation Verification Form(s)

☐ Specific supporting documentation required by measure(s), if applicable (e.g. biologist's report)

I hereby certify under penalty of perjury under the laws of the State of California that I am the property owner or an agent of the property owner and am authorized to submit this Mitigation Verification Form. I also certify that the above-listed mitigation measures have been completed in the manner required, and that all of the information in this submittal is true and correct, to the best of my knowledge:

Signature and Date	Print Name	Contact Number

MITIGATION VERIFICATION FORM

Mitigation Measure

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

INSTRUCTIONS

COVER SHEET:

A Cover Sheet for the project/development is prepared by City staff, with the top portion filled out. Each time Mitigation Verification Forms(s) are being submitted, a Cover Sheet completed by the Developer, Contractor, or Designee is required. An example of a completed summary table is provided below. The signature on the Cover Sheet must be *original wet ink*.

EXAMPLE MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #	New Coffee Shop, PL15-0000
Project Address	10 Justashort Street
Property Owner	Jane Owner
Planning Division Contact	Joe Planner, Associate Planner, (916) 774-####

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete
MM-3	Copy of survey report signed by biologist	5/10/2016
MM-4	All information included in Mitigation Verification Form	5/12/2016
MM-5	E-mail from Air District approving Dust Control Plan	5/05/2016

MITIGATION VERIFICATION FORM:

A Mitigation Verification Form is provided by City staff, along with the Cover Sheet and Table of Applicable Mitigation Measures. A form is filled in and submitted for each mitigation measure by the Developer, Contractor, or Designee. The form needs only the mitigation number to be filled in, along with the Description of Monitoring and Verification Work Performed. Multiple forms may be submitted simultaneously, under one cover sheet. It is also permissible to submit a form for each part of a measure, on separate dates. For instance, in the example measure MM-4 in the table above, the actual mitigation requires informing construction workers *and* retaining a qualified archeologist if resources are uncovered. Thus, a developer may submit a form in May certifying that construction workers have been informed, and also submit a second copy of the form in July because resources were discovered and additional actions had to be undertaken.

Each mitigation measure specifies the type of supporting documentation required; this must be submitted in order for the City to accept the mitigation as complete. An example of a completed Mitigation Verification Form is provided below.

EXAMPLE
MITIGATION VERIFICATION FORM

Mitigation Measure MM3

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

The mitigation measure text is included on the Improvement Plans General Notes page (Improvement Plan EN15-0001). On May 4, 2016, prior to any ground-disturbing activities (the pre-construction phase), a site meeting was held. At this meeting, workers on the site were informed of the potential to unearth remains, and were instructed to cease work and notify their supervisor immediately if any resources were observed.

2021 Lendell Lane Project

Air Quality and Greenhouse Gas Emissions Technical Report

March 2025 | 09418.00001.001

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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
AAM	Annual Arithmetic Mean
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADT	average daily trips
APS	alternative planning strategy
AR2	IPCC Second Assessment Report
AR4	IPCC Fourth Assessment Report
AR5	IPCC Fifth Assessment Report
BAAQMD	Bay Area Air Quality Management District
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CF_4	tetraflouromethane
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
City	City of Roseville
CMU	concrete masonry unit
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CY	cubic yard
DPM	diesel particulate matter
EO	Executive Order

ACRONYMS AND ABBREVIATIONS (cont.)

GHG	greenhouse gas
g/L	gram per liter
GWP	global warming potential
HFC	hydrofluorocarbon
IEM	Iowa Environmental Mesonet
IND	General Industrial
IPCC	Intergovernmental Panel on Climate Change
km	kilometer
kW	kilowatt
kWh	kilowatt-hour
LCFS	Low Carbon Fuel Standard
mg/m^3	milligrams per cubic meter
MMT	million metric tons
mph	miles per hour
MPO	metropolitan planning organization
MT	metric ton
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_X	nitrogen oxides
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
Pb	lead
PCAPCD	Placer County Air Pollution Control District
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
Ppb	part per billion
ppm	parts per million

ACRONYMS AND ABBREVIATIONS (cont.)

ROG	reactive organic gas
RTP	Regional Transportation Plan
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	hexafluoride
SIP	State Implementation Plan
SLCP	short-lived climate pollutant
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SO_X	sulfur oxides
SVAB	Sacramento Valley Air Basin
TAC	toxic air contaminant
USEPA	U.S. Environmental Protection Agency
UNFCCC	United Nations Framework Convention on Climate Change
VMT	vehicle miles traveled
VOC	volatile organic compound
WRCC	Western Regional Climate Center
µg/m3	micrograms per cubic meter

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts resulting from construction and operation of the proposed 2021 Lendell Lane Project (project). The project site is located at 2021 Lendell Lane in the City of Roseville (City), Placer County, California. The project would develop the 1.0-acre site with a prefabricated wet concrete (ready-mix) batch plan, associated aggregate storage in concrete masonry unit (CMU) bunkers, and an approximately 4,230 square foot (SF) ancillary office/employee building.

The project site is designated General Industrial (IND) in the City General Plan and zoned General Industrial. The project would be consistent with the City's General Plan land use designation and zoning. As such, the project's growth would be accounted for in the applicable air quality plan—the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. The project's emissions would not exceed the Placer County Air Pollution Control District (PCAPCD) development project ozone threshold. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

The project would result in emissions of criteria air pollutants during construction and operation. Project emissions of criteria pollutants during construction or operation would not exceed the PCAPCD development project construction or operational thresholds. Therefore, construction and operational emissions of criteria pollutants and precursors associated with implementation of the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone or particulate matter less than 10 microns (PM_{10}), and the impact would be less than significant.

Construction or operations of the project would not result in exposure of sensitive receptors to significant quantities of toxic air contaminants (TACs), including diesel particulate matter, crystalline silica, and trace quantities of metal present in cement dust. Operation of the project would not expose sensitive receptors to substantial concentrations of criteria pollutants, including carbon monoxide (CO) hotspots. Impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Implementation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and the impact would be less than significant.

Implementation of the project would not result in construction or operational period emissions of GHGs exceeding the PCAPCD's threshold. The project would not conflict with the California Air Resources Board's (CARB's) Scoping Plan. The project would not conflict with the Sacramento Area Council of Governments' (SACOG's) 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The project would not conflict with an applicable GHG reduction plan, and the impact would be less than significant.

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1.0 INTRODUCTION

This report presents an assessment of potential air quality and greenhouse gas (GHG) emissions impacts during construction and operation of the proposed 2021 Lendell Lane Project (project). This report has been prepared to support environmental review in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code [PRC] §21000 et seq.); State CEQA Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.).

1.1 PROJECT LOCATION

The approximately 1.0-acre project site is comprised of Assessor's Parcel Number (APN) 473-100-045. The project site is located at 2021 Lendell Lane in the City of Roseville (City), Placer County, California. The project site is approximately 380 feet (0.07 mile) south of Pfe Road and 1.2 miles northwest of Interstate 80 (I-80; see Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*).

1.2 PROJECT DESCRIPTION

The project would develop the site with a prefabricated wet concrete (ready-mix) batch plan, associated aggregate storage in concrete masonry unit (CMU) bunkers, and an approximately 4,230 square foot (SF) ancillary office/employee building with 137 SF of garage space. The project is anticipated to produce up to 150 cubic yards (CY) of ready-mix concrete per day, and up to 25,000 CY of ready-mix concrete annually. Othe project improvements would include paved driveways and yard/truck circulation space, seven parking spaces near the building, an 8-foot-high CMU wall on the project site's north, east, and south property lines, and landscaping around the project perimeter. The project would require minor off-site improvements in the Lendell Lane right-of-way including driveway aprons and underground utility connections. See Figure 3, *Site Plan*.

1.3 CONSTRUCTION ACTIVITIES AND PHASING

Construction of the project is anticipated to be completed in one phase commencing as early as May 2025 and completing in approximately 10.5 months. Project construction activities would include site preparation, grading, installation of underground utilities, building construction and batch plant installation, paving, and architectural coating (e.g., painting). The project would not require demolition, as the site is currently vacant and undeveloped. Detailed construction activity and equipment assumptions are summarized in Section 4.1, *Methodology*, and provided in Appendix A, *CalEEMod Output*.

2.0 REGULATORY SETTING

2.1 AIR QUALITY

The project site is located within the Placer County portion of the Sacramento Valley Air Basin (SVAB). Air quality in the Placer County portion SVAB is regulated by the U.S. Environmental Protection Agency (USEPA) at the federal level, by the California Air Resources Board (CARB) at the state level, and by the Placer County Air Pollution Control District (PCAPCD) at the regional level.

2.1.1 Air Pollutants of Concern

2.1.1.1 Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the public. In general, criteria air pollutants include the following compounds:

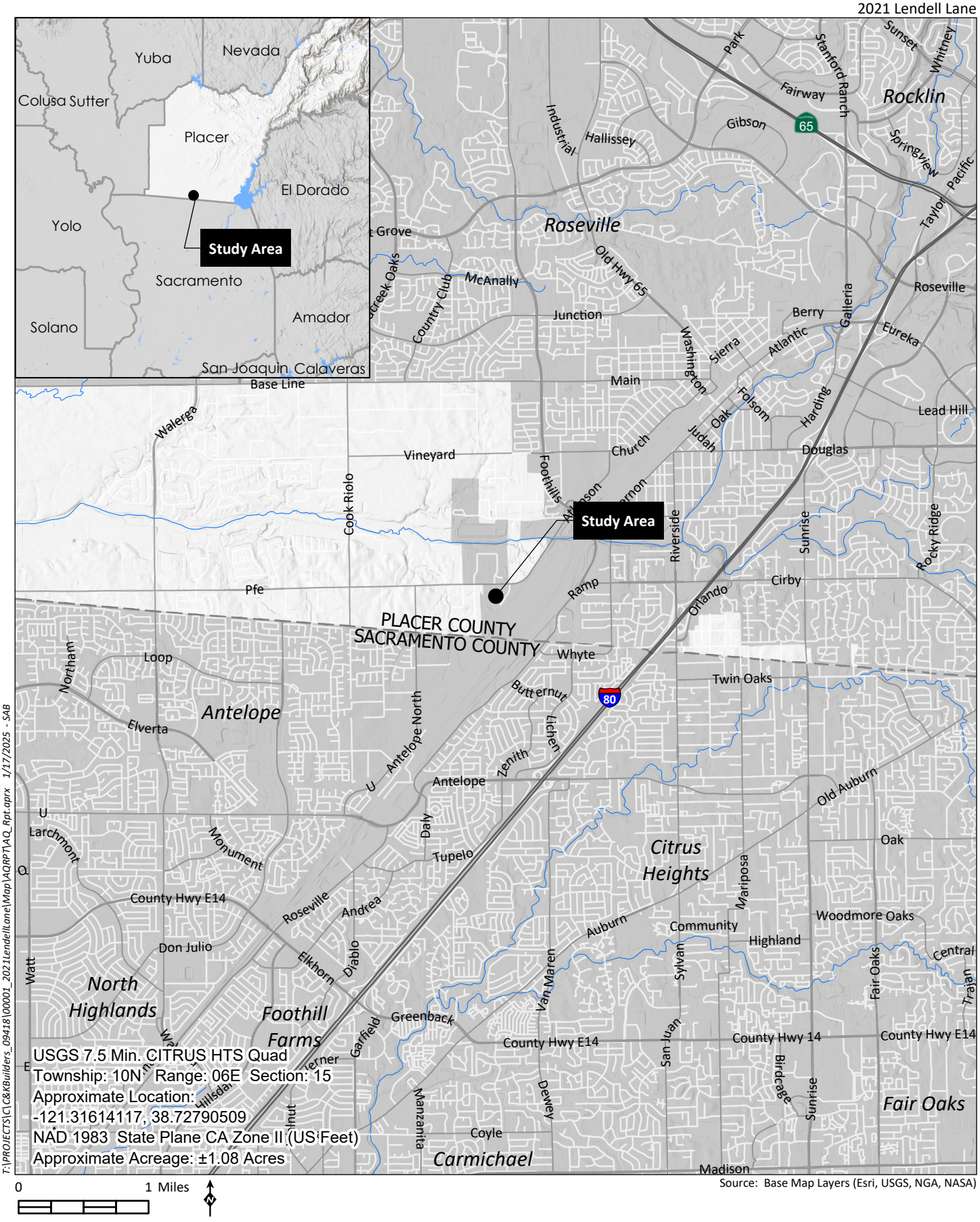
- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Particulate matter (PM), which is further subdivided:
  - Coarse PM, 10 microns or less in diameter (PM_{10})
  - Fine PM, 2.5 microns or less in diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$). PM_{10} and $PM_{2.5}$ can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Common Sources and Human Health Effects of Criteria Air Pollutants*. Specific adverse health effects on individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology and atmospheric conditions, and the number and characteristics of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region.

Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be meaningfully correlated to the incremental contribution from the project.

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.



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Site and Vicinity Map

Figure 1

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0 100 Feet

Source: Aerial (Maxar, 2022)

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Aerial Map

Figure 2

Source: CWE, 2025

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Site Plan

Figure 3

Table 1
COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading, which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid, which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CARB 2025a; USEPA 2025a

2.1.1.2 Toxic Air Contaminants

The Health and Safety Code (§39655, subd. (a).) defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2025b). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxins in California is attributable to DPM (CARB 2025b).

Crystalline silica is a common mineral found in the earth's crust. Materials like sand, stone, concrete, and mortar contain crystalline silica. Respirable crystalline silica—very small particles at least 100 times smaller than ordinary sand—is created when cutting, sawing, grinding, drilling, and crushing stone, rock, concrete, brick, and mortar. Potential health risks resulting from inhalation of respirable crystalline silica include silicosis, an incurable lung disease; lung cancer; chronic obstructive pulmonary disease; and kidney disease (U.S. Occupational Safety and Health Administration 2018).

2.1.2 Federal Air Quality Regulations

2.1.2.1 Federal Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the public. The USEPA is responsible for enforcing the CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several criteria pollutants. On February 7, 2024, the USEPA announced a final rule to lower the annual arithmetic mean (AAM) primary NAAQS for $PM_{2.5}$ from 12 micrograms per cubic meter ($\mu g/m^3$) to 9 $\mu g/m^3$. The new final rule retains the existing 24-hour primary NAAQS for $PM_{2.5}$ of 35 $\mu g/m^3$ and the existing AAM secondary NAAQS for $PM_{2.5}$ of 15.0 $\mu g/m^3$ (USEPA 2024b). Table 2, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

Table 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	9 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	No Federal Standards

Source: CARB 2016; USSEPA 2024

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect public health.

[2] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O_3 = ozone; ppm: parts per million; µg/m^3 = micrograms per cubic meter; PM_{10} = particulate matter with an aerodynamic diameter of 10 microns or less; AAM = Annual Arithmetic Mean; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; km = kilometer; – = No Standard

The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," "maintenance," or "unclassified" for each criteria air pollutant, based on whether the NAAQS have been achieved. Upon attainment of a standard for which an area was previously designated nonattainment, the area will be classified as a maintenance area. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The project site is located within the Placer County portion of the SVAB and, as such, is in an area

designated as a nonattainment area for certain pollutants that are regulated under the CAA. Table 3, *Placer County Attainment Status*, lists the federal and state attainment status of Placer County for the criteria pollutants. With respect to federal air quality standards, the USEPA classifies Placer County as unclassified/attainment or unclassified for $PM_{2.5}$, CO, NO_2, SO_2, and lead, in nonattainment for ozone (8-hour), and unclassified for PM_{10} (CARB 2022a).

Table 3
PLACER COUNTY ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
O_3	Nonattainment	Nonattainment
CO	Unclassified/Attainment	Unclassified
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Unclassified/Attainment	Unclassified
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified/Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility	(No federal standard)	Unclassified

Source: CARB 2023

2.1.3 California Air Quality Regulations

2.1.3.1 California Clean Air Act

The federal CAA allows states to adopt ambient air quality standards and other regulations if they are at least as stringent as federal standards. CARB, a part of the CalEPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California Ambient Air Quality Standards (CAAQS). CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In addition to primary and secondary AAQS, the state has established a set of episode criteria for ozone, CO, NO_2, SO_2, and PM. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that endanger public health. Table 3, above, lists the state attainment status of Placer County for the criteria pollutants. Under state designation, Placer County is currently in nonattainment for ozone (1-hour and 8-hour) and PM_{10}, and attainment or unclassified for all other criteria pollutants.

2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items that are included in the California SIP (CARB 2009). At any one time, several California submittals are pending USEPA approval (CARB 2025c).

2.1.3.3 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space and water heating) results primarily in GHG emissions. The California Energy Code is discussed in further detail in Section 2.2.4, below.

2.1.4 Local Regulations

2.1.4.1 Placer County Air Quality Pollution Control District

As a regional agency, the PCAPCD works directly with local governments and cooperates actively with all federal and state government agencies. The PCAPCD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

Air Quality Plans

The applicable air plan is the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, developed by the air districts in the Sacramento region to bring the region into attainment for the ozone NAAQS and CAAQS. The plan is a joint project between the Sacramento Metropolitan Air Quality Management District (SMAQMD), the PCAPCD and three other air districts in the Sacramento region. The plan covers the western portion of Placer County, including the City of Rocklin and the project site (SMAQMD 2017).

PCAPCD Rules and Regulations

All projects are subject to rules and regulations adopted by the PCAPCD in effect at the time of construction. Specific rules applicable to implementation of the proposed project include, but are not limited to, the following:

Rule 202 Visible Emissions

A person shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three (3) in any one (1) hour which is (PCAPCD 1993a):

a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Subsection (A) above.

Rule 205 Nuisance

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property (PCAPCD 1993b).

Rule 218 Architectural Coatings

Rule 218 limits the quantity of VOCs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within Pacer County (PCAPCD 2010).

Rule 228 Fugitive Dust

Rule 228 establishes standards to be met by activities generating fugitive dust. Among these standards to be met is a prohibition on visible dust crossing the property boundary, generation of high levels of visible dust (dust sufficient to obscure vision by 40 percent), controls on the track-out of dirt and mud on to public roads, the requirement for control of wind-driven fugitive dust. The regulation also establishes minimum dust mitigation and control requirements (PCAPCD 2003).

2.1.4.2 City of Roseville

The Air Quality and Climate Change Element of the City's 2035 General Plan contains the following policies that may be applicable to the project (City 2020a):

- Policy AQ1.2. Work with the Placer County Air Pollution Control District to monitor air pollutants of concern on a continuous basis, and support Air District efforts to minimize emissions from stationary sources.

- Policy AQ1.3. Projects that could generate or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce exposure to such emissions using measures recommended by the Placer County Air Pollution Control District and other applicable, feasible strategies, as needed, to avoid significant air quality impacts.

- Policy AQ1.4. As part of the development review process, develop mitigation measures to minimize stationary and area source emissions.

Appendix A, Implementation Measures, to the City's 2035 General Plan contains the following implementation measures that may be applicable to the project (City 2020b):

- **Air Quality and Climate Change Mitigation Strategies - Area and Stationary Sources (Ongoing).** Require area and stationary source projects that generate significant amounts of air pollutants

to incorporate air quality mitigation in their design, including the use of best available control technology for stationary industrial sources; clean fuel sources for heating and cooling; clean fuel technology at fueling stations; and other strategies, in consultation with PCAPCD.

- **Air Quality and Climate Change Mitigation Strategies – Land Use (Ongoing).** Encourage development to be located and designed to minimize greenhouse gas and air pollutant emissions and avoid exposure to substantial pollutant concentrations by doing the following:

    - Locate point sources, such as manufacturing and extracting facilities, in areas designated for industrial development and separated from residential areas and other sensitive receptors (e.g., homes, schools, and hospitals).

- **Toxic Air Contaminant Strategies (Proposed)**. The City shall require, as part of plans for development within the Planning Area, the implementation of CARB's Air Quality and Land Use Handbook: A Community Health Perspective guidance concerning land use compatibility and recommended setback distances with regard to sources of TAC emissions and sensitive land uses, or related guidance as it may be updated in the future.

2.2 GREENHOUSE GASES

2.2.1 Climate Change Overview

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming. The newest release in long-term warming trends announced 2024 ranked as the warmest year on record with an increase of 2.3 degrees Fahrenheit (°F) compared to the 1951-1980 average (National Aeronautics and Space Administration [NASA] 2025). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

2.2.2 Types of Greenhouse Gases

The GHGs defined under California's Assembly Bill (AB) 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. As measured at the Mauna Loa Observatory, the atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of December 2024, the CO_2 concentration exceeded 427 ppm, a 53 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2025).

Methane. CH_4 is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. CO_2e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (AR2). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, the United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values, and statewide and

national GHG inventories have not yet updated their GWP values to the AR5 values. GHG emissions in this analysis are reported using the AR4 GWP values.

By applying the GWP ratios, CO_2e emissions can be tabulated in metric tons (MT) per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4, *Global Warming Potentials and Atmospheric Lifetimes*.

Table 4
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	IPCC SAR GWP	IPCC AR4 GWP	IPCC AR5 GWP
Carbon Dioxide (CO_2)	50-200	1	1	1
Methane (CH_4)	12	21	25	28
Nitrous Oxide (N_2O)	114	310	298	265
HFC-134a	14	1,300	1,430	1,300
PFC: Tetrafluoromethane (CF_4)	50,000	6,500	7,390	6,630
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200	12,200	11,100
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800	23,500

Source: IPCC 2007; IPCC 2013
IPCC = Intergovernmental Panel on Climate Change; GWP = global warming potential; HFC = hydrofluorocarbon; PFC = perfluorocarbon

2.2.3 Federal Greenhouse Gas Regulations

2.2.3.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people (USEPA 2025b). This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

2.2.3.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and improve the fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On June 7, 2024, the NHSTA announced the most recent Final Rule for model years 2027 through 2031 CAFE standards which requires an industry-wide fleet average of approximately 50.4 miles per gallon in model year 2031 for passenger cars and light trucks (USEPA and NHSTA 2024).

2.2.4 California Greenhouse Gas Regulations

2.2.4.1 California Code of Regulations, Title 24, Part 6

CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for space or water heating) results in GHG emissions. The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Title 24 standards became effective on January 1, 2023. The 2022 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. New for the 2022 Title 24 standards are non-residential on-site photovoltaic (solar panels) electricity generation requirements (California Energy Commission [CEC] 2022).

The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards—the energy budgets—that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach.

2.2.4.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for all non-residential buildings (including industrial buildings) and residential buildings for which no other state agency has the authority to adopt green building standards. CALGreen also contains voluntary measures (i.e., Tier 1, Tier 2) which exceed minimum regulatory requirements. The 2022 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings became effective on January 1, 2023 (California Building Standards Commission [CBSC] 2022).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

2.2.4.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce

climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

2.2.4.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

2.2.4.5 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

2.2.4.6 Senate Bill 32

Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

2.2.4.7 Assembly Bill 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.

2.2.4.8 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. In 2012, CARB launched the Advanced Clean Cars I program which combines several regulations into one package including the Low-Emission Vehicle (LEV) criteria and greenhouse gas regulations and the zero-emission vehicle (ZEV) regulation. In October 2023, CARB launched the

Advanced Clean Cars II program which included updates to the tailpipe greenhouse gas emission standard and limited revisions to the LEV and ZEV regulations. By 2035 all new passenger cars, trucks and SUVs sold in California will be ZEVs (CARB 2025d).

2.2.4.9 Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012, and went into effect on July 1, 2012.

2.2.4.10 Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

2.2.4.11 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce GHG emissions, and increase the use of clean energy.

2.2.4.12 Senate Bill 375

SB 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPOs). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or

Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline California Environmental Quality Act (CEQA) processing.

2.2.4.13 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sales of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

2.2.4.14 Executive Order N-79-20

EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for the implementation of zero emissions vehicles in California: first, 100 percent of in-state sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the state will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

2.2.4.15 Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, the California Climate Crisis Act, declares the policy of the State to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO_2 from the atmosphere (carbon capture), and an almost complete transition away from fossil fuels.

2.2.4.16 Senate Bill 905

Approved by Governor Newsom on September 16, 2022, SB 905, Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program, requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and CO_2 removal technologies and facilitate the capture and sequestration of CO_2 from those technologies, where appropriate. SB 905 is an integral part of achieving the state policies mandated in AB 1279.

2.2.4.17 California Air Resources Board: Scoping Plan

The Scoping Plan is a strategy CARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across California's society and economy to reduce emissions and reach climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emission targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants (SLCPs). The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030.

On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic 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 SLCPs; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022b).

2.2.5 Regional GHG Policies and Plans

2.2.5.1 Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is the MPO for the Sacramento region, including the western portion of Placer County and the City of Roseville. As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), SACOG has developed the 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce vehicle miles traveled (VMT; SACOG 2019).

2.2.5.2 City of Roseville

The City has not adopted a Climate Action Plan or similar program-level GHG reduction plan. The Air Quality and Climate Change Element of the City's 2035 General Plan contains the following policies related to GHG emissions that may be applicable to the project (City 2020a):

- Policy AQ1.6. Require new development and City projects to reduce greenhouse gas emissions sources in the Planning Area consistent with the State's legislative framework, to the greatest degree feasible.

- Policy AQ1.13. Identify feasible strategies to reduce transportation emissions from new projects and existing development within the Planning Area.

- Policy AQ1.17. Conserve energy and reduce air pollutant emissions by encouraging energy efficient building designs and transportation systems and promoting energy efficiency retrofits of existing structures.

3.0 EXISTING CONDITIONS

The project site is currently vacant and is located in an industrial area adjacent approximately 520 feet east of the Union Pacific Roseville Railroad Yards. Land uses surrounding the project site include a landscape material supply company adjacent to the project site to the north, light industrial businesses (including a metal finishing/plating business) adjacent to the project site to the east and southeast, a vacant industrial zoned lot to the south, and an auto dismantling business approximately 75 feet to the west, across Lendell Drive. See Figure 2.

3.1 CLIMATE AND METEOROLOGY

The project site is in the southeastern portion of the SVAB. The SVAB comprises Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Butte, Tehama, and Shasta County, as well as parts of Solano and Placer County.

The climate of the SVAB is characterized by hot dry summers and mild rainy winters. During the year, the temperature may range from 20 to 115 °F with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist breezes from the south to dry land flows from the north. The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when certain meteorological conditions are right, and a temperature inversion (areas of warm air overlying areas of cooler air) exists. Air stagnation in the autumn and early winter occurs when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with increased levels of smoke or when temperature inversions trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the SVAB is characterized by stagnant morning air or light winds with the breeze arriving in the afternoon out of the southwest from the San Francisco Bay. Usually, the evening breeze transports the airborne pollutants to the north out of the SVAB. During about half of the days from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern and pollutants to circle back southward. This phenomenon’s effect exacerbates the pollution levels in the area and increases the likelihood of violating the federal and state air quality standards (SMAQMD 2020).

The predominant wind direction in the vicinity of the project site is from the southeast and the average wind speed is approximately 6.0 miles per hour (mph), as measured at the Sacramento McClellan Airport, approximately 6.1 miles southwest of the project site (Iowa Environmental Mesonet [IEM] 2023). The annual average maximum temperature in the project area, as measured at the Sacramento 5 ESE climatic station, approximately 14 miles southwest of the project site, is approximately 73.1 °F, and the annual average minimum temperature is approximately 49.8°F. Total precipitation in the project

area averages approximately 18.2 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2017).

3.2 SENSITIVE RECEPTORS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: adults over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptor to the project site is a single-family residence located approximately 1,200 feet to the northeast. There are no schools, hospitals, or daycare centers within 0.5 mile of the project site.

3.3 EXISTING AIR QUALITY

3.3.1 Criteria Pollutants

3.3.1.1 Attainment Designations

Attainment designations are discussed in Section 2.1 and Table 4. Placer County is a federal nonattainment area for ozone (8-hour) and a state nonattainment area for ozone (1-hour and 8-hour) and PM_{10}.

3.3.1.2 Monitored Air Quality

The PCAPCD maintains monitoring stations to measure ambient concentrations of pollutants in Placer County. The nearest monitoring station to the project site is the Roseville-North Sunrise Boulevard monitoring station, approximately 3 miles to the northeast. Table 5, *Air Quality Monitoring Data*, presents a summary of the ambient pollutant concentrations monitored at the two air quality monitoring stations during the most recent three years (2020 through 2022) for which the PCAPCD has reported data (CARB 2025e).

Table 5
AIR QUALITY MONITORING DATA

Pollutant Standard	2021	2022	2023
Ozone (O_3) – Roseville Station			
Maximum concentration 1-hour period (ppm)	0.104	0.087	0.093
Maximum concentration 8-hour period (ppm)	0.090	0.075	0.081
Days above 1-hour state standard (>0.09 ppm)	1	0	0
Days above 8-hour state/federal standard (>0.070 ppm)	5	4	8
Coarse Particulate Matter (PM_{10}) – Roseville Station			
Maximum 24-hour concentration (µg/m^3)	155.7	82.2	47.9
Measured Days above 24-hr state standard (>50 µg/m^3)	1	0	0
Measured Days above 24-hr federal standard (>150 µg/m^3)	5	1	0

Pollutant Standard	2021	2022	2023
Annual average (µg/m^3)	21.1	17.8	16.0
Exceed state annual standard (20 µg/m^3)	Yes	No	No
Fine Particulate Matter ($PM_{2.5}$) – Roseville Station			
Maximum 24-hour concentration (µg/m^3)	130.5	44.5	31.9
Measured Days above 24-hour federal standard (>35 µg/m^3)	10	1	0
Annual average (µg/m^3)	11.3	7.8	7.5
Exceed state and federal annual standard (12 µg/m^3)	No	No	No
Nitrogen Dioxide (NO_2) – Roseville Station			
Maximum 1-hour concentration (ppm)	0.047	0.036	0.041
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0
Annual average (ppm)	0.006	0.006	0.006
Exceed annual federal standard (0.053 ppm)	No	No	No
Exceed annual state standard (0.030 ppm)	No	No	No

Source: CARB 2025e
ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter, * = insufficient data available.

As shown in Table 5: the 1-hour ozone standard was exceeded once in 2021; the 8-hour ozone was exceeded on multiple days in 2021 through 2023: PM_{10}, and $PM_{2.5}$ standards were exceeded on multiple days in 2021 and 2022; and data for NO_2 showed no exceedances in 2021 through 2023.

3.3.2 Greenhouse Gases

3.3.2.1 Worldwide GHG Inventory

In 2020, total GHG emissions worldwide were estimated at 50,510 million metric tons (MMT) of CO_2e emissions (Climate Watch 2025). By country, the U.S. contributed the second largest portion (11.3 percent) of global GHG emissions, behind the largest contributor, China (with 24.4 percent of global emissions). The total U.S. GHG emissions were 5,289 MMT CO_2e in 2021 (Climate Watch 2025). On a national level, approximately 90 percent of GHG emissions were associated with energy, including transportation energy (Climate Watch 2025).

3.3.2.2 California GHG Inventory

CARB performed Statewide inventories for the years 2000-2022, as shown in Table 6, *California Greenhouse Gas Emissions by Sector*. The inventory is divided into five broad sectors of economic activity: agriculture, commercial and residential, electricity generation, industrial, and transportation. Emissions are quantified in MMT CO_2e.

Table 6
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Emissions (MMT CO_2e)			
	1990	2000	2020	2022
Agriculture and Forestry	18.9 (4%)	30.8 (7%)	31.4 (9%)	29.8 (8%)
Commercial and Residential	44.1 (10%)	44.3 (10%)	39.0 (11%)	39.5 (11%)
Electricity Generation	110.5 (26%)	104.7 (22%)	59.5 (16%)	59.8 (16%)
High Global Warming Potential	-	6.6 (1%)	21.3 (6%)	21.3 (6%)
Industrial	105.3 (24%)	92.8 (20%)	73.6 (20%)	72.7 (20%)
Recycling and Waste	-	7.0 (2%)	8.5 (2%)	8.2 (2%)
Transportation	150.6 (35%)	176.7 (38%)	135.2 (37%)	139.9 (38%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
Total	**430.7**	**462.9**	**368.5**	**371.1**

Source: CARB 2007 and CARB 2025f
MMT = million metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 6, Statewide GHG source emissions totaled 430.7 MMT CO_2e in 1990, 462.9 MMT CO_2e in 2000, 368.5 MMT CO_2e in 2020, and 371.1 MMT CO_2e in 2022. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions (CARB 2007 and CARB 2025f).

4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.1 METHODOLOGY

Criteria pollutant and GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air quality management and air pollution control districts. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide, and Appendices C, D, and G (CAPCOA 2022).

In brief, CalEEMod is a computer model that estimates criteria air pollutant and greenhouse gas emissions from mobile (i.e., on-road vehicular) sources, area sources (e.g., fireplaces, woodstoves, landscape maintenance equipment, and consumer products), energy use (electricity and natural gas used in space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, solid waste disposal, and refrigerants. Emissions are estimated based on land use information input to the model by the user.

In the first module, the user defines the specific land uses that would occur at the project site. The user also selects the appropriate land use setting (urban or rural), operational year, location, climate zone, and utility provider. The input land uses, size features, and population are used throughout CalEEMod in determining default parameters and calculations in each of the subsequent modules. The input land use

information consists of land use subtypes (such as convenience store with gas pumps) and their unit or square footage quantities.

Subsequent modules include construction and operations, each of which contains submodules including off-road equipment, mobile sources (on-road vehicle emissions), area sources (e.g., architectural coatings [painting], consumer products [cleansers, aerosols, solvents]), water and wastewater, solid waste, and refrigerants. Each module comprises multiple components including an associated mitigation module to account for further reductions in the reported baseline calculations. Other inputs include trip generation rates, trip lengths, vehicle fleet mix (percentage autos, trucks, etc.), trip distribution (percent work to home, etc.), duration and schedule of construction activities, construction equipment usage, construction material import and export, as well as other parameters.

In various places the user can input additional information and/or override the default assumptions to account for project- or location-specific parameters. For this assessment, the default parameters were not changed unless project specific information was available and noted. The CalEEMod output files are included in Appendix A to this report.

Because project maximum daily production of concrete (150 CY) is anticipated to be much higher than the annual average daily production (68 CY), project emissions were modeled using two CalEEMod runs: one for construction emissions and maximum daily operational emissions; and one for annual operational emissions.

CalEEMod does not calculate emissions from concrete batch plants. Project concrete batch plant PM_{10} and $PM_{2.5}$ emissions were calculated using the methodology and emissions factors from the USEPA's AP42: *Compilation of Emissions Factors from Stationary Sources*, Chapter 11.12: *Concrete Batching* (USEPA 2006). A printout of the concrete batch plant emissions calculation sheet is included as Appendix B, *Batch Plant PM Calculations*, to this report.

4.1.1 Construction Emissions

CalEEMod has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. In compliance with PCAPCD Rule 228, fugitive dust emissions calculations assume application of water on exposed surfaces a minimum of two times per day. CalEEMod estimates construction emissions for each year of construction activity based on the annual construction equipment profile and other factors determined as needed to complete all phases of construction by the target completion year. As such, each year of construction activity has varying quantities of GHG emissions.

4.1.1.1 Construction Activities

Construction emissions were estimated based on the earliest potential construction start date provided by the project engineer and on CalEEMod defaults. Project construction would commence as early as May 2025 and be completed in March 2026. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction would be delayed or occur over a longer time period, emissions could be reduced because of: (1) a more modern and

cleaner-burning construction equipment fleet mix than assumed in the modeling; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Construction activities would include site preparation, grading/underground utilities, building construction, paving, and architectural coatings. The project would not require demolition, as the site is currently vacant and undeveloped. Construction was assumed to occur five days per week with equipment operating up to eight hours per day. Per the project engineer, approximately 1,170 CY of soil would be exported during grading. The anticipated construction schedule is shown in Table 7, *Anticipated Construction Schedule*.

Table 7
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Number of Working Days
Site Preparation	5/1/2025	5/2/2025	2
Grading	5/3/2025	5/8/20255	4
Building Construction and Batch Plant installation	5/9/2025	2/12/2025	200
Paving	2/13/2026	2/26/2026	10
Architectural Coatings	2/27/2026	3/12/2026	10

Source: CalEEMod

4.1.1.2 Construction Off-Road Equipment

Construction would require the use of heavy off-road equipment. All construction equipment estimates are based on default values in CalEEMod with a water truck added for fugitive dust control during earth moving activities. Table 8, *Construction Equipment*, presents a summary of the modeled equipment.

Table 8
CONSTRUCTION EQUIPMENT

Equipment	Horsepower	Number	Hours/Day
Site Preparation			
Graders	148	1	8
Rubber Tired Dozers	367	1	7
Tractors/Loaders/Backhoes	84	1	8
Water Trucks	376	1	2
Grading			
Graders	148	1	8
Rubber Tired Dozers	367	1	8
Tractors/Loaders/Backhoes	84	2	7
Water Trucks	376	1	2
Building Construction and Batch Plant Installation			
Cranes	367	1	6
Forklifts	82	2	6
Generator Sets	14	1	8
Tractors/Loaders/Backhoes	84	1	6
Welders	46	1	8

Equipment	Horsepower	Number	Hours/Day
Paving			
Cement and Mortar Mixers	10	1	6
Pavers	81	1	6
Paving Equipment	89	1	8
Rollers	36	1	7
Tractors/Loaders/Backhoes	84	1	8
Architectural Coating			
Air Compressors	37	1	6

Source: CalEEMod

4.1.1.3 Construction On-Road Trips

Worker commute trips and vendor delivery trips were modeled based on CalEEMod defaults. Worker trips are anticipated to vary between 1 and 13 trips per day, depending on construction activity. Exporting soil from the site during grading would result in approximately 37 one-way haul trips per day. The CalEEMod default worker, vendor and haul trip distances were used in the model.

4.1.1.4 Construction Architectural Coatings

Architectural coatings applied during construction were assumed to be interior and exterior building coatings and traffic marking coatings, all with a maximum VOC content of 100 grams per liter (g/L) per CalEEMod defaults for Placer County.

4.1.2 Operation Emissions

Operational impacts were estimated using CalEEMod. Operational sources of emissions include area, energy, transportation, water use, solid waste, off-road equipment, and concrete batch plant dust.

4.1.2.1 Area Sources

Area sources include emissions from landscaping equipment, the use of consumer products, and the reapplication of architectural coatings for maintenance. Emissions associated with area sources were estimated using the CalEEMod default values.

4.1.2.2 Energy Sources

The project building would use electricity and natural gas for building lighting, heating, and cooling. The project batch plant would be all-electric (no natural gas use). Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which is then transmitted to end users. A building's electricity use is thus associated with the off-site or indirect emission of GHGs at the source of electricity generation (power plant). Emissions associated with energy sources for the project building were estimated using the CalEEMod default values. Estimates for the concrete batch plant electricity use were not available at the time of this analysis. Therefore, a conservative estimate of concrete bath plant annual electricity used was calculated assuming the batch plant would operate at its maximum rated throughput of 190 CY per hour and drawing the maximum specified power of 250 kilowatts (kW), resulting in electrical consumption of 32,895 kilowatt-hours (kWh) per year for the production of 25,000 CY of concrete annually.

4.1.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with project-related VMT calculated in the model from trip generation and trip lengths. Project employee trips, vendor trips (other than batch plant supply deliveries), and customer trips were estimated using CalEEMod defaults for the project office building, resulting in approximately 42 average daily one-way weekday trips. Truck trips for operation of the batch plant were calculated based on the anticipated maximum daily and annual throughput of concrete (150 CY per day; 25,000 CY per year) and the calculated volume of concrete components required (aggregate, sand, cement, and cement supplement). Mixed concrete delivery trucks were assumed to have a capacity of 9 CY per the project applicant, and component delivery trucks were assumed to have a capacity of 16 CY. The project would result in approximately 16 to 17 truckloads of mixed concrete per day (33 roundtrips per day) and approximately 2,778 truckloads of mixed concrete per year (5,556 roundtrips per year). Per the project applicant, the average one-way concrete delivery truck trip would be 12 miles. Delivery of the raw materials for the concrete would in approximately 13 to 14 truckloads of mixed concrete per day (27 roundtrips per day) and approximately 2,238 truckloads of mixed concrete per year (4,476 roundtrips per year). Per the project applicant, the average raw material delivery truck trip would be 75 miles. All project batch plant trucks were assumed to be heavy-heavy-duty category (total vehicle weight between 30,000 and 60,000 tons).

4.1.2.4 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. Solid waste was modeled using CalEEMod defaults.

4.1.2.5 Water Sources

Water-related GHG emissions are from the conveyance and treatment of water and wastewater. Water and wastewater for the office building and landscape were modeled using CalEEMod defaults. Water use for operation of the batch plant was calculated using the average volume of water per CY concrete (20.9 gallons) and assuming up to an additional 500 gallons per day would be used for cleanup and dust suppression, resulting in an annual batch plant water use of approximately 704,375 gallons.

4.1.2.6 Refrigerants

CalEEMod calculates GHG emissions associated with refrigerants (typically HFCs or blends of gases containing HFCs) which are emitted through leakage or maintenance from project refrigeration systems, freezers, and air conditioning systems. Refrigerant emissions were calculated using CalEEMod defaults.

4.1.2.7 Off-Road Equipment

Per the project applicant, operation of the batch plant would require the use of a diesel-powered front-end loader with 110 horsepower. The loader was assumed to operate up to 8 hours per day. Exhaust emissions from the loader were calculated within CalEEMod. Fugitive dust emission resulting from the loader transferring aggregate and sand from the storage bunkers to the batch plant were calculated as part of the batch plant dust emissions, described below.

4.1.2.8 Batch Plant Dust

PM_{10} and $PM_{2.5}$ fugitive dust emissions from operation of the batch plant were calculated using the methodology and emissions factors from the USEPA's AP42, Chapter 11.12: *Concrete Batching* (USEPA 2006) and fugitive dust resulting from truck circulated within the project's paved yard was calculated using the USEPA's AP42, Chapter 13.2.1, *Paved Roads* (USEPA 2011). A printout of the concrete batch plant emissions calculation sheet is included as Appendix B. PM emissions from the following concrete batch plant operation sources were calculated:

- Aggregate delivery to ground storage (bunkers)
- Sand Delivery to ground storage (bunkers)
- Aggregate transfer to elevated storage (by frontend loader)
- Sand transfer to elevated storage (by frontend loader)
- Cement delivery to silos (pneumatic transfer)
- Cement supplement delivery to silos (pneumatic transfer)
- Weigh hopper loading (by gravity)
- Central mix loading (by gravity)
- Truck circulation on pavement

Fugitive dust control would be accomplished using: filtration systems within the batch plant (e.g. bag house); three wall bunkers for aggregate and sand storage piles; paving the batch plant yard and truck circulation route; and periodic cleaning of the paved yard area. Where available, controlled emissions factors from AP42 Chapter 11.12 were used to account for project batch plant fugitive dust control.

4.2 SIGNIFICANCE CRITERIA

4.2.1 Air Quality

Thresholds used to evaluate potential air quality and odor impacts are based on applicable criteria in the State's CEQA 2021 Guidelines Appendix G. A significant air quality and/or odor impact could occur if the implementation of the project would:

(1) Conflict with or obstruct implementation of the applicable air quality plan; or

(2) Result in a cumulatively considerable net increase of any criteria pollutant for which Placer County is non-attainment under an applicable NAAQS or CAAQS; or

(3) Expose sensitive receptors to substantial pollutant concentrations; or

(4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The PCAPCD has developed thresholds of significance to determine if a land use project's construction and/or operational emissions would result in potential air quality impacts. Table 9, *Air Quality Significance Thresholds*, presents the PCAPCD significance thresholds (PCAPCD

2017). A project with daily emission rates below these thresholds is generally considered to have a less than significant effect on air quality.

Table 9
AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Maximum Daily Emissions Thresholds (pounds per day)	
	Construction	Operation
ROG	82	55
NO_X	82	55
CO	None	None
SO_X	None	None
PM_{10}	82	82
$PM_{2.5}$	None	None

Source: PCAPCD 2017
ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = coarse particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = fine particulate matter with a diameter of 2.5 microns or less; SO_X = sulfur oxides

For a Type A project (siting a new source of emissions), the PCAPCD recommends the following thresholds for the project's incremental contribution to community health risks (PCAPCD 2017):

- Cancer Risk – An increased risk of 10 in 1 million for the maximally exposed individual to project emissions.

- Chronic and Acute Health Risk – A Hazard Index of 1 for the maximally exposed individual to project emissions.

4.2.2 Greenhouse Gases

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Therefore, the potential for a significant GHG impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

(1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

(2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The PCAPCD has established GHG thresholds of significance or other guidance for determining the significance of a land use development project's GHG impacts. For project level short-term construction GHG emissions, the PCAPCD has adopted a threshold of 10,000 MT CO_2e per year. For non-residential

project long-term operational GHG emissions, the PCAPCD has adopted a de minimis level of 1,100 MT CO_2e per year (PCAPCD 2017).

5.0 AIR QUALITY IMPACT ANALYSIS

This section evaluates potential impacts related to air pollutant emissions resulting from implementation of the project. Project-level air quality modeling was completed as part of this analysis. Complete modeling results are included as Appendices A and B of this report.

5.1 ISSUE 1: CONSISTENCY WITH AIR QUALITY PLANS

5.1.1 Impacts

As discussed in Section 4.2.1, the PCAPCD has established thresholds of significance for a project's criteria pollutant and precursor emissions for both temporary construction-related emissions and long-term operational-related emissions. These significance thresholds have been established to assist lead agencies in determining whether a project may have a significant air quality impact during the initial study. A project with emissions lower than the thresholds would not conflict with or obstruct implementation of the district's air quality plans for attainment of the applicable NAAQS and CAAQS. As discussed in Section 5.2 and shown in Tables 10 and 11, below, the project would not exceed the temporary construction-related or long-term operational-related thresholds of significance for criteria pollutants and precursor emissions.

Long-range air quality planning throughout the state is based on population and employment growth assumptions. A key component of these growth assumptions is input from local government, including the City's General Plan. A project's contribution to regional growth would be consistent with the growth assumptions in the General Plan if it is consistent with the land use designation. The project site has a general plan designation of General Industrial (IND) and is zoned General Industrial. The project's proposed concrete batch plant would be a permitted use for the land use designation (a conditional use permit may be required, but the project would not require a change in land use designation or rezone). Therefore, the project's contribution to employment growth in the city would be consistent with the growth projections in the City's General Plan and the growth projections used to develop the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan.

5.1.2 Significance of Impacts

Because implementation the project would not result in criteria pollutant emissions in excess of thresholds and the project would be consistent with regional growth projections, the project would not conflict with or obstruct implementation of the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. The impact would be less than significant.

5.1.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

5.1.4 Significance After Mitigation

Impacts related to conflicts with the applicable air quality plan would be less than significant.

5.2 ISSUE 2: CUMULATIVELY CONSIDERABLE NET INCREASE OF NONATTAINMENT CRITERIA POLLUTANTS

5.2.1 Impacts

By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the region. The project would generate criteria pollutants and precursors in the short-term during construction and the long-term during operation. To determine whether a project would result in cumulatively considerable emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the PCAPCD (as shown in Table 9).

5.2.1.1 Construction

The project construction emissions were estimated using the CalEEMod model as described in Section 4.1.1. The complete CalEEMod output files are included in Appendix A to this report. The results of the calculations for the construction of the project are compared to the PCAPCD thresholds in Table 10, *Maximum Daily Construction Emissions*. The data shown assumes application of water on exposed surfaces a minimum of two times per day in compliance with PCAPCD Rule 228 Fugitive Dust.

Table 10
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Activity	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Site Preparation	1.5	12.8	13.4	<0.1	3.1	1.7
Grading	1.7	18.4	16.6	<0.1	4.3	2.2
Building Construction	1.1	9.0	10.1	<0.1	0.3	0.3
Paving	0.7	4.4	6.9	<0.1	0.3	0.2
Architectural Coating	3.8	0.9	1.1	<0.1	<0.1	<0.1
Maximum Daily Emissions	**1.7**	**18.4**	**16.6**	**<0.1**	**4.3**	**2.2**
Threshold	*82*	*82*	*None*	*None*	*82*	*None*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A); Thresholds PCAPCD 2017
ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides;
PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 10, the project's short-term construction-related emissions would not exceed the PCAPCD's significance thresholds for emissions of ROG, NO_X, and PM_{10}. Accordingly, construction activities associated with development of the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone and PM_{10}. Therefore, construction of the proposed project would not violate an air quality standard or contribute to an existing or projected air quality violation.

5.2.1.2 Operation

The project operational emissions were estimated using CalEEMod, supplemented with calculations for sources specific to concrete batching activities using USEPA's AP42 Chapters 11.12 and 13.2.1, as described in Section 4.1.2. Model outputs are provided in Appendices A and B to this report. Table 11,

Maximum Daily Operational Emissions, shows the operational emissions in the first full year of operation (2027). As discussed in Section 6.1, below, project batch plant truck VMT would be a redistribution of existing VMT related to concrete production in the area and would not be new to the region. Therefore, the mobile source emissions related to those truck trips would not be new to the region. To be conservative, the mobile source emissions shown in Table 11 include batch plant truck emissions.

Table 11
MAXIMUM DAILY OPERATIONAL EMISSIONS

Source	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile	0.3	10.9	3.1	<0.1	2.7	0.8
Area	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Energy	<.1	<0.1	<0.1	<0.1	<0.1	<0.1
Off-Road Equipment	<0.1	0.9	2.3	<0.1	<0.1	<0.1
Batch Plant Dust	-	-	-	-	4.6	0.9
Total Maximum Daily Emissions[1, 2]	**0.6**	**11.8**	**5.6**	**<0.1**	**7.3**	**1.7**
Threshold	*55*	*55*	*None*	*None*	*82*	*None*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A); USEPA 2006 (calculation printout is provided in Appendix B); Thresholds PCAPCD 2017

[1] Total may not sum due to rounding.

[2] Maximum daily emissions of ROG and CO occur during summer, maximum daily emission of NO_X occur during winter, emissions of SO_X, PM_{10} and $PM_{2.5}$ are not seasonally dependent.

lb/day = pounds per day; ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

5.2.2 Significance of Impacts

As shown in Tables 10 and 11, above, the proposed project's construction and operational emissions of ROG, NOx, and PM_{10} would be below the applicable PCAPCD thresholds of significance. Therefore, the project's construction and operational emissions would not contribute to the PCAPCD's nonattainment status of ozone and PM, operations of the project would not violate an air quality standard or contribute to an existing or projected air quality violation and the impact would be less than significant.

For cumulative emissions, the PCAPCD recommends using the region's existing attainment plans as a basis for analysis of cumulative emissions and the PCAPCD concluded that if a project's ozone precursor (i.e., ROG, NO_X) and PM_{10} emissions would be greater than the PCAPCD's operational-level thresholds, the project could be expected to conflict with relevant attainment plans and could result in a cumulatively considerable contribution to a significant cumulative impact. As shown in Table 11 above, ROG, NO_X and PM_{10} emissions resulting from implementation of the project would not exceed the PCAPCD's operational thresholds. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The impact would be less than significant.

5.2.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

5.2.4 Significance After Mitigation

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which Placer County is non-attainment, and the impact would less than significant.

5.3 ISSUE 3: IMPACTS TO SENSITIVE RECEPTORS

5.3.1 Impacts

5.3.1.1 Construction Activities

Fugitive Dust

As discussed in Section 5.2.2, construction of the project would not result in emission of PM in excess of the PCAPCD thresholds. In addition, the project would be required to implement fugitive dust control measures in compliance with PCAPCD Rule 228.

Toxic Air Contaminants (DPM)

Implementation of the project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction. In addition, concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005). As discussed in Section 3.2, above, the closest sensitive receptor to the project site is located approximately 1,200 feet to the northeast.

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the short duration (nine months overall, but only four days of grading) of construction activity, the distance to the nearest sensitive receptor, the highly dispersive nature of DPM, and the fact that construction activities

would occur at various locations throughout the project site, construction of the project would not expose sensitive receptors to substantial DPM concentrations.

5.3.1.2 Operational Activities

CO Hotspots

Vehicle exhaust is the primary source of CO in California. In an urban setting, the highest CO concentrations are generally found near congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increases. Project-generated traffic has the potential of contributing to localized "hot spots" of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections. However, the volume of traffic required for CO concentrations to exceed the NAAQS and CAAQS is very high. The Bay Area Air Quality Management District (BAAQMD) provide screening guidance in their CEQA Guidelines concerning the volume of traffic which could result in a CO Hotspot: intersections which carry more than 44,000 vehicles per hour; or intersections which carry more than 24,000 vehicles per hour and where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway) (BAAQMD 2023).

The highest volume intersection in the project area would be the Interstate-80 and Riverside Avenue interchange. Per the California Department of Transportation (Caltrans) 2022 traffic census, Interstate-80 carries a peak hour traffic volume of 16,100 average daily trips (ADT) in the area of Riverside Avenue (Caltrans 2025). This traffic volume is well below the 44,000 vehicles per hour screening level for CO hotpots suggested by the BAAQMD. Therefore, long-term operation of the project would not expose sensitive receptors to substantial localized concentrations of CO.

Batch Plant Toxic Air Contaminants

Operation of the batch plant would be a source of DPM from the front-end loader used to transfer aggregate and sand, and from truck circulating and idling on the project site. In addition, fugitive dust associated with the aggregate and sand used to make concrete can be a source of crystalline silica; and fugitive dust associated with cement and cement supplement can contain trace amounts of metals including arsenic, beryllium, cadmium, chromium, manganese, nickel, phosphorus, and selenium (USEPA 2006).

Fugitive dust control would be accomplished using: filtration systems within the batch plant (e.g. bag house); three wall bunkers for aggregate and sand storage piles; paving the batch plant yard and truck circulation route; and periodic cleaning of the paved yard area. Diesel powered trucks operating on the project site would be subject to the CARB Airborne Toxic Control Measure to limit diesel-fueled commercial motor vehicle idling (Title 13, CCR, section 2485) which prohibits diesel-fueled commercial motor vehicles from idling the vehicle's primary diesel engine longer than five minutes at any location. As discussed in Section 3.2, above, the closest sensitive receptor to the project site is located approximately 1,200 feet to the northeast. Therefore, due to the distance to the nearest sensitive receptor, fugitive dust control employed on the project site, and State diesel vehicle idling restrictions, operation of the project would not expose sensitive receptors to substantial DPM concentrations.

5.3.2 Significance of Impacts

Construction of the project would not expose sensitive receptors to substantial DPM concentrations. Long-term operation of the project would not result in significant localized concentrations of criteria pollutants, including CO hotspots. Long-term operation of the project would not expose sensitive receptors to substantial DPM concentrations, or substantial concentrations of TAC contained in fugitive dust from concrete batch plant. Therefore, implementation of the project would not expose sensitive receptors to substantial pollutant concentrations, and the impact less than significant.

5.3.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

5.3.4 Significance After Mitigation

Implementation of the project would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

5.4 ISSUE 4: OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS)

5.4.1 Impacts

According to the PCAPCD *CEQA Handbook*, land uses associated with odor complaints include, wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, food packaging plants, and feed lots/dairies (PCAPCD 2017). The project, involving a concrete batch plant and associated office building, would not include any of these uses nor are there any of these land uses in the project vicinity.

Emissions from construction equipment, such as diesel exhaust, may generate odors; however, these odors would be temporary, intermittent, and not expected to affect a substantial number of people. Additionally, noxious odors would be confined to the immediate vicinity of construction equipment.

5.4.2 Significance of Impacts

Implementation of the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and the impact would be less than significant.

5.4.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

5.4.4 Significance After Mitigation

Impacts related to other emissions (such as those leading to odors) would be less than significant.

6.0 GREENHOUSE GAS IMPACT ANALYSIS

This section evaluates potential impacts of the project related to the generation of GHG emissions. Complete modeling results are included as Appendix A of this report.

6.1 ISSUE 1: GREENHOUSE GAS EMISSIONS

6.1.1 Impacts

6.1.1.1 Construction Emissions

Project construction GHG emissions were estimated using the CalEEMod model as described in Section 4.1.1. The complete CalEEMod output files are included in Appendix A to this report. The modeling shows that short-term construction of the project would result in 154 MT of CO_2e during 2025 and 313 MT of CO_2e during 2026. Project construction emissions would not exceed the PCAPCD project-level construction GHG threshold of 10,000 MT CO_2e per year.

6.1.1.2 Operational Emissions

The concrete industry is a well-known source of GHG emissions, estimated to contribute 5 to 8 percent of global anthropogenic GHG emissions. The primary source of concern for concrete GHG emissions is in the manufacture of cement, which is a component of ready-mix concrete. GHGs are released via the energy used to heat limestone and other ingredients, and the chemical reaction which decomposes limestone to create cement releases CO_2 (Cheng, D. et al 2023).

The GHG emissions from the manufacture of cement are not part of the project's GHG emissions inventory. Curing the concrete mix (cement, cement supplement, aggregate, sand, and water) does not result in substantial GHG emissions (Cheng, D. et al 2023). GHG emissions resulting from operation of the project's batch plant come primarily from transporting concrete components and the ready-mix concrete product, the use of off-road material handling equipment, the electricity used to operate the batch plant, and the energy used to source and treat the water used by the batch plant.

The demand for concrete by construction projects is not supply-driven, meaning a new supply of ready-mix concrete does not generate new construction projects. A new source of ready-mix concrete tends to retribute regional VMT associated with concrete trucks rather than creating new trips. Because of the weight of ready-mix concrete and the time-sensitive nature the product, construction project managers will typically purchase necessary concrete products from the closest available source with acceptable quality. Therefore, adding a new source of ready-mix concrete to a region tends to shorten delivery trips and reduce truck VMT.

Because the project would not result in an increase in regional concrete batch plant associated truck VMT, the mobile source GHG emissions generated by the project's truck trips (671 MT CO_2e per year, as calculated in CalEEMod) would not be new to the region—the emissions would be a redistribution of existing regional truck trips and GHG emissions. The project operational GHG emissions new to the region (mobile sources other than batch plant truck trips, area sources, energy use, water use, solid waste generation, refrigerant leaks, and off-road equipment) are compared to the PCAPCD threshold in Table 12*, New Regional Operational GHG Emissions*.

Table 12
NEW REGIONAL OPERATIONAL GHG EMISSIONS

Emission Source	First Full Year (2027) Emissions (MT CO_2e)
Mobile (excluding batch plant truck trips)	43.5
Area	<0.1
Energy	27.0
Water/Wastewater	1.7
Solid Waste	1.2
Refrigerants	<0.1
Off-Road Equipment	61.1
Total Annual project Emissions[1]	**134.5**
PCAPCD Threshold	**1,100**
Exceed Threshold?	**No**

Source: CalEEMod (output data is provided in Appendix A)
[1] Totals may not sum due to rounding.
GHG = greenhouse gas; MT = metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 12, project operational emissions would not exceed the PCAPCD operational non-residential threshold.

6.1.2 Significance of Impacts

Implementation of the project would not result in annual construction or operational emissions exceeding the PCAPCD threshold.

6.1.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

6.1.4 Significance After Mitigation

Impacts related to GHG emissions would be less than significant.

6.2 ISSUE 2: CONFLICT WITH APPLICABLE PLANS ADOPTED FOR THE PURPOSE OF REDUCING GHG EMISSIONS

6.2.1 Impacts

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the Statewide level; as such, compliance at the project level is not addressed. Therefore, the project would not conflict with those plans and regulations.

The CARB Scoping Plan is the primary State plan for achieving the GHG reduction goals mandated by AB 32, SB 32, and AB 1279. As described in Section 6.1, above, the project would tend to shorten truck trips and reduce truck VMT in the region related to transport of ready-mix concrete for the construction

industry. A reduction in regional VMT (and VMT-related GHG emissions) is a primary objective of the SACOG's 2020 MTP/SCS. Implementation of the MTP/SCS plans in the state's metropolitan areas to reduce VMT is a key component of the mobile source GHG emissions reduction policies and control measures in the CARB 2022 Scoping Plan.

The project would be constructed in accordance with the energy-efficiency standards, water reduction goals, and other requirements contained in the applicable Title 24 Part 6 Building Energy Efficiency Standards and Title 24 Part 11 CALGreen Standards. As discussed in Section 6.1, above, project GHG emissions would not exceed the PCPACD's thresholds and would be less than significant. In addition, a key component of growth assumptions in the CARB's 2022 Scoping Plan and the SACOG's 2020 MTP/SCS is input from local government, including the City's General Plan. A project's contribution to regional growth would be consistent with the growth assumptions in the General Plan if it is consistent with the land use designation. The project site has a general plan designation and zoning of General Industrial. The project's proposed concrete batch plant and associated office building would be consistent with the project site's industrial land use designation. Therefore, the project's contribution to employment growth in the county would be consistent with the growth projections in the City's General Plan and the growth projections used to develop the CARB's 2022 Scoping Plan and the SACOG's 2020 RTP/SCS. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

6.2.2 Significance of Impacts

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, including the CARB Scoping Plan and the SACOG's 2020 MTP/SCS. The impact would be less than significant.

6.2.3 Mitigation Framework

Impacts would be less than significant; therefore, no mitigation measures would be required.

6.2.4 Significance After Mitigation

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and the impact would be less than significant.

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8.0 REFERENCES

BAAQMD 2023. 2022 CEQA Guidelines, Chapter 3 – Screening for Criteria Air Pollutants and Precursors. Revised April 20, 2023. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-4-screening_final-pdf.pdf?sc_lang=en.

California Air Resources Board (CARB). 2025a. California Ambient Air Quality Standards. Available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed January 8.

2025b. Overview: Diesel Exhaust and Health. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health. Accessed January 8.

2025c. State Implementation Plan Background. Available at: https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/about. Accessed January 8.

2025d. Advanced Clean Cars Program. Available at: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about. Accessed January 8.

2025e. iADAM Air Quality Data Statistics. Available at: https://www.arb.ca.gov/adam. Accessed January 22.

2025f. Current California GHG Emission Inventory Data. Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed January 8.

2023. Maps of State and Federal Area Designations. Available at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

2022. Final 2022 Scoping Plan Update and Appendices. December. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

2016. Ambient Air Quality Standards. May 4. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-03/aaqs2_0.pdf.

2007. California Greenhouse Gas Inventory – By Sector and Activity. November 19. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ghg_inventory_sector_sum_90-04_AR4.pdf.

2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf.

California Building Standards Commission (CBSC). 2022. CALGreen (CCR Title 24, Part 11). Available at: https://www.dgs.ca.gov/BSC/CALGreen.

California Department of Transportation (Caltrans). 2025. Traffic Census Program. Available at: https://dot.ca.gov/programs/traffic-operations/census. Accessed January 8.

California Energy Commission (CEC). 2022. CCR Title 24 Part 6, 2022 Building Energy Efficiency Standards. Available at: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.

Cheng, D., Reiner, D.M., Yang, F. et al. 2023. Projecting future carbon emissions from cement production in developing countries. Nature Communications. Available at: https://www.nature.com/articles/s41467-023-43660-x.

Climate Watch. 2025. Historical GHG Emissions. Available at: https://www.climatewatchdata.org/ghg-emissions?source=CAIT. Accessed January 8

Intergovernmental Panel on Climate Change (IPCC). 2014. Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/report/ar5/wg3/.

2013. Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available at: https://www.ipcc.ch/report/ar5/wg1/.

2007. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. February. Available at: https://www.ipcc.ch/report/ar4/wg1/.

Iowa Environmental Mesonet (IEM). 2024. Lincoln Regional Airport Wind Rose Plot. Generated November 13. Available at: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=MCC&network=CA_ASOS.

Placer County Air Pollution Control District (PCAPCD). 2017. 2017 CEQA Handbook. Available at: https://www.placerair.org/1801/CEQA-Handbook.

2010. Rule 281, Architectural Coatings. Amended October. Available at: https://www.placerair.org/DocumentCenter/View/2194/Rule-218-PDF.

2003. Rule 228, Fugitive Dust. Amended April. Available at: https://www.placerair.org/DocumentCenter/View/2203/Rule-228-PDF.

1993a. Rule 202, Visible Emissions. Amended October. Available at: https://www.placerair.org/DocumentCenter/View/2178/Rule-202-PDF.

1993b. Rule 205, Nuisance. Amended October. Available at: https://www.placerair.org/DocumentCenter/View/2181/Rule-205-PDF.

National Aeronautics and Space Administration, Goddard Institute for Space Studies (NASA). 2025. Temperatures Rising: NASA Confirms 2024 Warmest Year on Record. January 10. Available at: https://www.nasa.gov/news-release/temperatures-rising-nasa-confirms-2024-warmest-year-on-record/#:~:text=Earth's%20average%20surface%20temperature%20in,the%20record%20set%20in%202023.

National Oceanic and Atmospheric Administration (NOAA). 2024. Trends in Atmospheric Carbon Dioxide. Available at: https://www.esrl.noaa.gov/gmd/ccgg/trends. Accessed March 6.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

Roseville, city of (City). 2020. 2035 General Plan Air Quality and Climate Change Section. Available at: https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/Final%20General%20Plan%202020/04%20Air%20Quality%20and%20Climate%20Change_Final.pdf.

Sacramento Metropolitan Air Quality Management District (SMAQMD). 2020. Guide to Air Quality Assessment in Sacramento County (CEQA Guide), Chapter 1: Introduction and Air Quality. Available at: https://www.airquality.org/LandUseTransportation/Documents/Ch1IntroAq4-25-2020.pdf.

2017. Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. Available at: https://www.airquality.org/ProgramCoordination/Documents/Sac%20Regional%202008%20NAAQS%20Attainment%20and%20RFP%20Plan.pdf.

U.S. Environmental Protection Agency (USEPA). 2025a. Criteria Air Pollutants. Available at: https://www.epa.gov/criteria-air-pollutants. Accessed January 8.

2025b. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act. Last updated September 10. Available at: https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a. Accessed January 8.

2024. Final Rule to Strengthen the National Air Quality Health Standard for Particulate Matter Fact Sheet. Available at: https://www.epa.gov/system/files/documents/2024-02/pm-naaqs-overview.pdf.

2011. Compilation of Emissions Factors from Stationary Sources, Fifth Edition, Volume I Chapter 13: Miscellaneous Sources, Chapter 13.2.1: Paved Roads. Available at: https://www.epa.gov/sites/production/files/2020-10/documents/13.2.1_paved_roads.pdf.

2006. Compilation of Emissions Factors from Stationary Sources, Fifth Edition, Volume I Chapter 11: Mineral Products Industry, Chapter 11.12: Concrete Batching. Available at: https://www.epa.gov/sites/production/files/2020-10/documents/c11s12.pdf.

USEPA and National Highway Traffic Safety Administration (USEPA and NHTSA). 2024. Model Years 2027-2031 Corporate Average Fuel Economy Standards and Model Years 2030-2035 Heavy-Duty Pickup Trucks and Vans Vehicle Fuel Efficiency Standards. June 7. Available at: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.

U.S. Occupational Safety and Health Administration. 2018. Safety and Health Topics/Silica. https://www.osha.gov/dsg/topics/silicacrystalline/.

Western Regional Climate Center. 2017. Period of Record Monthly Climate Summary 07/11/1877 to 06/09/2016, Sacramento 5 ESE, California (047633). Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7633.

Appendix A

CalEEMod Output

2021 Lendell Lane Max Daily Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	2021 Lendell Lane Max Daily
Construction Start Date	5/1/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	18.0
Location	38.7279470920862, -121.31607441119115
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	441
EDFZ	15
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	4.32	1000sqft	0.10	4,320	10,000	—	—	—

Other Asphalt Surfaces	0.93	Acre	0.93	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.73	18.4	16.6	0.06	0.72	3.58	4.30	0.66	1.55	2.22	5,802
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.75	8.98	10.1	0.02	0.33	0.13	0.35	0.30	0.03	0.31	1,842
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.52	4.44	4.93	0.01	0.16	0.06	0.23	0.15	0.03	0.18	932
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.10	0.81	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	154

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.73	18.4	16.6	0.06	0.72	3.58	4.30	0.66	1.55	2.22	5,802

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
2025	1.07	8.98	10.1	0.02	0.33	0.02	0.35	0.30	< 0.005	0.31	1,842
2026	3.75	8.60	10.0	0.02	0.29	0.13	0.31	0.27	0.03	0.27	1,841
Average Daily	—	—	—	—	—	—	—	—	—	—	—
2025	0.52	4.44	4.93	0.01	0.16	0.06	0.23	0.15	0.03	0.18	932
2026	0.21	0.87	1.06	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	189
Annual	—	—	—	—	—	—	—	—	—	—	—
2025	0.10	0.81	0.90	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	154
2026	0.04	0.16	0.19	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	31.4

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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.61	11.0	5.60	0.09	0.19	2.53	2.72	0.18	0.68	0.86	9,811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.55	11.8	5.19	0.09	0.19	2.53	2.72	0.18	0.68	0.86	9,764
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.53	11.5	4.95	0.09	0.19	2.43	2.62	0.18	0.65	0.83	9,693
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.10	2.10	0.90	0.02	0.04	0.44	0.48	0.03	0.12	0.15	1,605

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.33	10.0	3.08	0.08	0.15	2.53	2.67	0.14	0.68	0.82	9,261
Area	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.61	11.0	5.60	0.09	0.19	2.53	2.72	0.18	0.68	0.86	9,811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	10.9	2.85	0.08	0.15	2.53	2.67	0.14	0.68	0.82	9,214
Area	0.11	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.55	11.8	5.19	0.09	0.19	2.53	2.72	0.18	0.68	0.86	9,764
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.26	10.6	2.52	0.08	0.15	2.43	2.58	0.14	0.65	0.79	9,142
Area	0.12	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.38
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.53	11.5	4.95	0.09	0.19	2.43	2.62	0.18	0.65	0.83	9,693

Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	1.94	0.46	0.02	0.03	0.44	0.47	0.03	0.12	0.14	1,514
Area	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06
Energy	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0
Water	—	—	—	—	—	—	—	—	—	—	1.65
Waste	—	—	—	—	—	—	—	—	—	—	1.25
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Off-Road	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1
Total	0.10	2.10	0.90	0.02	0.04	0.44	0.48	0.03	0.12	0.15	1,605

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	12.8	12.9	0.02	0.59	—	0.59	0.54	—	0.54	2,406
Dust From Material Movement	—	—	—	—	—	2.44	2.44	—	1.17	1.17	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	13.2

Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	2.18
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	113
Vendor	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 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
Hauling	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	0.00	0.00	< 0.005	< 0.005	0.00	< 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
Hauling	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 (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.7	15.3	0.03	0.67	—	0.67	0.61	—	0.61	2,797
Dust From Material Movement	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	30.7
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	5.08
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	141
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.06	3.58	0.67	0.03	0.05	0.68	0.73	0.05	0.19	0.24	2,863
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.41
Vendor	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	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	31.3
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.23
Vendor	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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	5.19

3.5. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	4.15	4.65	0.01	0.15	—	0.15	0.14	—	0.14	838
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.76	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	139

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	15.6
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	21.1
Hauling	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	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.8
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	21.1
Hauling	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	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	6.58
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	9.78
Hauling	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.09
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.62
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	1,807
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.72	0.84	< 0.005	0.02	—	0.02	0.02	—	0.02	152
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.13	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	25.2
Onsite truck	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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	13.5
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	20.7
Hauling	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	1.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.74
Hauling	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	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.19
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.29
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	4.41	6.48	0.01	0.18	—	0.18	0.17	—	0.17	995
Paving	0.24	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.12	0.18	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	27.3
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
Annual	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	4.51
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
Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.45	0.00	0.00	0.13	0.13	0.00	0.03	0.03	122
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	3.44
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.57
Vendor	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

3.11. Architectural Coating (2026) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	134
Architectural Coatings	3.63	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	3.67
Architectural Coatings	0.10	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.61
Architectural Coatings	0.02	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	2.70
Vendor	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.08
Vendor	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
Annual	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.01
Vendor	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

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.19	0.15	1.54	< 0.005	< 0.005	0.30	0.30	< 0.005	0.08	0.08	373
Other Asphalt Surfaces	0.14	9.89	1.53	0.08	0.14	2.22	2.37	0.14	0.60	0.74	8,888

Total	0.33	10.0	3.08	0.08	0.15	2.53	2.67	0.14	0.68	0.82	9,261
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.17	0.18	1.30	< 0.005	< 0.005	0.30	0.30	< 0.005	0.08	0.08	341
Other Asphalt Surfaces	0.13	10.7	1.55	0.08	0.14	2.22	2.37	0.14	0.60	0.74	8,874
Total	0.30	10.9	2.85	0.08	0.15	2.53	2.67	0.14	0.68	0.82	9,214
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.02	0.18	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	43.6
Other Asphalt Surfaces	0.03	1.92	0.28	0.01	0.03	0.40	0.43	0.02	0.11	0.13	1,470
Total	0.05	1.94	0.46	0.02	0.03	0.44	0.47	0.03	0.12	0.14	1,514

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	86.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	32.4
Total	—	—	—	—	—	—	—	—	—	—	119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	86.8

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	32.4
Total	—	—	—	—	—	—	—	—	—	—	119
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	14.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	5.37
Total	—	—	—	—	—	—	—	—	—	—	19.7

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.28
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00

Total	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.28

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78
Total	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—
Total	0.11	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06
Total	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	8.86
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	1.12
Total	—	—	—	—	—	—	—	—	—	—	9.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	8.86
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	1.12
Total	—	—	—	—	—	—	—	—	—	—	9.98
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	1.47
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.19
Total	—	—	—	—	—	—	—	—	—	—	1.65

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.58
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.58
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.58
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	1.25
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	1.25

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Annual	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1
Total	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	5/1/2025	5/2/2025	5.00	2.00	—
Grading	Grading	5/3/2025	5/8/2025	5.00	4.00	—
Building Construction	Building Construction	5/9/2025	2/12/2026	5.00	200	—
Paving	Paving	2/13/2026	2/26/2026	5.00	10.0	—
Architectural Coating	Architectural Coating	2/27/2026	3/12/2026	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	7.00	84.0	0.37
Grading	Off-Highway Trucks	Diesel	Average	1.00	2.00	376	0.38
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45

Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	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	10.0	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.5	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	36.8	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	1.38	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	0.71	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	12.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.28	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

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	6,480	2,160	2,428

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	—	—	1.88	0.00	—
Grading	1,170	—	4.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.93

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Other Asphalt Surfaces	0.93	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	391	0.03	< 0.005
2026	0.00	375	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	42.1	9.55	3.02	11,626	425	96.3	30.5	117,308
Other Asphalt Surfaces	60.2	60.2	60.2	21,969	2,413	2,413	2,413	880,926

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	6,480	2,160	2,428

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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	88,067	358	0.0330	0.0040	136,863
Other Asphalt Surfaces	32,895	358	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	767,810	115,052
Other Asphalt Surfaces	0.00	704,375

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	4.02	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	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
Rubber Tired Loaders	Diesel	Average	1.00	8.00	110	0.36

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	26.2	annual days of extreme heat
Extreme Precipitation	6.75	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	4.25	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	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3

Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	64.7
AQ-PM	19.6
AQ-DPM	46.0
Drinking Water	56.4
Lead Risk Housing	50.5
Pesticides	44.9
Toxic Releases	16.9
Traffic	24.4
Effect Indicators	—

CleanUp Sites	94.3
Groundwater	95.0
Haz Waste Facilities/Generators	95.9
Impaired Water Bodies	66.7
Solid Waste	93.7
Sensitive Population	—
Asthma	37.7
Cardio-vascular	77.1
Low Birth Weights	23.9
Socioeconomic Factor Indicators	—
Education	30.9
Housing	32.7
Linguistic	30.7
Poverty	51.9
Unemployment	17.1

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	32.18272809
Employed	70.02438085
Median HI	32.41370461
Education	—
Bachelor's or higher	34.49249326
High school enrollment	100
Preschool enrollment	8.17400231
Transportation	—

Auto Access	68.11240857
Active commuting	66.61106121
Social	—
2-parent households	77.78775824
Voting	71.73104068
Neighborhood	—
Alcohol availability	35.24958296
Park access	38.07262928
Retail density	36.45579366
Supermarket access	25.8052098
Tree canopy	81.75285513
Housing	—
Homeownership	47.18336969
Housing habitability	53.63788015
Low-inc homeowner severe housing cost burden	79.16078532
Low-inc renter severe housing cost burden	65.58449891
Uncrowded housing	42.73065572
Health Outcomes	—
Insured adults	19.59450789
Arthritis	30.2
Asthma ER Admissions	53.9
High Blood Pressure	53.6
Cancer (excluding skin)	45.0
Asthma	18.0
Coronary Heart Disease	40.3
Chronic Obstructive Pulmonary Disease	17.9
Diagnosed Diabetes	57.0
Life Expectancy at Birth	39.3

Cognitively Disabled	56.3
Physically Disabled	15.4
Heart Attack ER Admissions	43.8
Mental Health Not Good	24.7
Chronic Kidney Disease	55.3
Obesity	29.7
Pedestrian Injuries	42.4
Physical Health Not Good	33.1
Stroke	39.4
Health Risk Behaviors	—
Binge Drinking	17.1
Current Smoker	14.6
No Leisure Time for Physical Activity	40.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	23.1
Elderly	52.4
English Speaking	56.9
Foreign-born	37.3
Outdoor Workers	34.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	62.4
Traffic Density	23.8
Traffic Access	51.1
Other Indices	—
Hardship	56.1
Other Decision Support	—

2016 Voting	67.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	55.0
Healthy Places Index Score for Project Location (b)	45.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site is vacant, no demolition.
Construction: Off-Road Equipment	Off Highway Truck (water truck) added to Site Prep and Grading for dust suppression.
Operations: Vehicle Data	Truck trips for component supply delivery and concrete delivery applied to "Other Asphalt surfaces"; 33.33 average daily mixed concrete truck round trips (12 miles per trip) and 26.85 average daily component supply delivery truck round trips (75 miles per trip).
Operations: Fleet Mix	All delivery trucks assumed to be HHD
Operations: Off-Road Equipment	Loader for batch plant operation per applicant.

Operations: Energy Use	Batch plant electricity use estimated from anticipated annual throughput and plant specifications.
Operations: Water and Waste Water	Batch plant water use based on estimated annual throughput from applicant and water content of typical wet concrete mix, plus an additional 500 gallons per day for cleanup and dust suppression.

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	2021 Lendell Lane Annual
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	18.0
Location	38.7279470920862, -121.31607441119115
County	Placer-Sacramento
City	Roseville
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	441
EDFZ	15
Electric Utility	Roseville Electric
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	4.32	1000sqft	0.10	4,320	10,000	—	—	—

Other Asphalt Surfaces	0.93	Acre	0.93	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.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.53	5.57	4.77	0.04	0.12	1.32	1.43	0.11	0.35	0.46	4,981
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.47	5.97	4.35	0.04	0.12	1.32	1.43	0.11	0.35	0.46	4,942
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	5.82	4.11	0.04	0.11	1.23	1.35	0.11	0.33	0.44	4,867
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	1.06	0.75	0.01	0.02	0.22	0.25	0.02	0.06	0.08	806

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.25	4.67	2.24	0.04	0.07	1.32	1.39	0.07	0.35	0.42	4,430
Area	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78

Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.53	5.57	4.77	0.04	0.12	1.32	1.43	0.11	0.35	0.46	4,981
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.23	5.06	2.01	0.04	0.07	1.32	1.39	0.07	0.35	0.42	4,392
Area	0.11	—	—	—	—	—	—	—	—	—	—
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.47	5.97	4.35	0.04	0.12	1.32	1.43	0.11	0.35	0.46	4,942
Average Daily	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.19	4.92	1.68	0.04	0.07	1.23	1.30	0.06	0.33	0.39	4,317
Area	0.12	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.38
Energy	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	163
Water	—	—	—	—	—	—	—	—	—	—	9.98
Waste	—	—	—	—	—	—	—	—	—	—	7.58
Refrig.	—	—	—	—	—	—	—	—	—	—	0.01
Off-Road	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.45	5.82	4.11	0.04	0.11	1.23	1.35	0.11	0.33	0.44	4,867
Annual	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.03	0.90	0.31	0.01	0.01	0.22	0.24	0.01	0.06	0.07	715
Area	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06
Energy	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	27.0

Water	—	—	—	—	—	—	—	—	—	—	1.65
Waste	—	—	—	—	—	—	—	—	—	—	1.25
Refrig.	—	—	—	—	—	—	—	—	—	—	< 0.005
Off-Road	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1
Total	0.08	1.06	0.75	0.01	0.02	0.22	0.25	0.02	0.06	0.08	806

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.19	0.15	1.54	< 0.005	< 0.005	0.30	0.30	< 0.005	0.08	0.08	373
Other Asphalt Surfaces	0.06	4.52	0.70	0.04	0.07	1.02	1.08	0.06	0.27	0.34	4,058
Total	0.25	4.67	2.24	0.04	0.07	1.32	1.39	0.07	0.35	0.42	4,430
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.16	0.18	1.30	< 0.005	< 0.005	0.30	0.30	< 0.005	0.08	0.08	341
Other Asphalt Surfaces	0.06	4.89	0.71	0.04	0.07	1.02	1.08	0.06	0.27	0.34	4,051
Total	0.23	5.06	2.01	0.04	0.07	1.32	1.39	0.07	0.35	0.42	4,392
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.02	0.02	0.18	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	43.5

Other Asphalt Surfaces	0.01	0.87	0.13	0.01	0.01	0.18	0.20	0.01	0.05	0.06	671
Total	0.03	0.90	0.31	0.01	0.01	0.22	0.24	0.01	0.06	0.07	715

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	86.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	32.4
Total	—	—	—	—	—	—	—	—	—	—	119
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	86.8
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	32.4
Total	—	—	—	—	—	—	—	—	—	—	119
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	14.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	5.37
Total	—	—	—	—	—	—	—	—	—	—	19.7

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	44.0
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.28
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00
Total	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	7.28

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78
Total	0.14	< 0.005	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.78
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.10	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—
Total	0.11	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.02	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06
Total	0.02	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.06

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	8.86
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	1.12

Total	—	—	—	—	—	—	—	—	—	—	9.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	8.86
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	1.12
Total	—	—	—	—	—	—	—	—	—	—	9.98
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	1.47
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.19
Total	—	—	—	—	—	—	—	—	—	—	1.65

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.58
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	7.58

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.58
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	1.25
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	1.25

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	0.01
Total	—	—	—	—	—	—	—	—	—	—	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	< 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Total	0.14	0.87	2.31	< 0.005	0.04	—	0.04	0.04	—	0.04	369
Annual	—	—	—	—	—	—	—	—	—	—	—
Rubber Tired Loaders	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1
Total	0.03	0.16	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	61.1

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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	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	42.1	9.55	3.02	11,626	425	96.3	30.5	117,308
Other Asphalt Surfaces	27.5	27.5	27.5	10,030	1,102	1,102	1,102	402,188

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	6,480	2,160	2,428

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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	88,067	358	0.0330	0.0040	136,863
Other Asphalt Surfaces	32,895	358	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	767,810	115,052
Other Asphalt Surfaces	0.00	704,375

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	4.02	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	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
Rubber Tired Loaders	Diesel	Average	1.00	8.00	110	0.36

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	26.2	annual days of extreme heat
Extreme Precipitation	6.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	4.25	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	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	64.7
AQ-PM	19.6
AQ-DPM	46.0
Drinking Water	56.4
Lead Risk Housing	50.5

Pesticides	44.9
Toxic Releases	16.9
Traffic	24.4
Effect Indicators	—
CleanUp Sites	94.3
Groundwater	95.0
Haz Waste Facilities/Generators	95.9
Impaired Water Bodies	66.7
Solid Waste	93.7
Sensitive Population	—
Asthma	37.7
Cardio-vascular	77.1
Low Birth Weights	23.9
Socioeconomic Factor Indicators	—
Education	30.9
Housing	32.7
Linguistic	30.7
Poverty	51.9
Unemployment	17.1

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	32.18272809
Employed	70.02438085
Median HI	32.41370461
Education	—

Bachelor's or higher	34.49249326
High school enrollment	100
Preschool enrollment	8.17400231
Transportation	—
Auto Access	68.11240857
Active commuting	66.61106121
Social	—
2-parent households	77.78775824
Voting	71.73104068
Neighborhood	—
Alcohol availability	35.24958296
Park access	38.07262928
Retail density	36.45579366
Supermarket access	25.8052098
Tree canopy	81.75285513
Housing	—
Homeownership	47.18336969
Housing habitability	53.63788015
Low-inc homeowner severe housing cost burden	79.16078532
Low-inc renter severe housing cost burden	65.58449891
Uncrowded housing	42.73065572
Health Outcomes	—
Insured adults	19.59450789
Arthritis	30.2
Asthma ER Admissions	53.9
High Blood Pressure	53.6
Cancer (excluding skin)	45.0
Asthma	18.0

Coronary Heart Disease	40.3
Chronic Obstructive Pulmonary Disease	17.9
Diagnosed Diabetes	57.0
Life Expectancy at Birth	39.3
Cognitively Disabled	56.3
Physically Disabled	15.4
Heart Attack ER Admissions	43.8
Mental Health Not Good	24.7
Chronic Kidney Disease	55.3
Obesity	29.7
Pedestrian Injuries	42.4
Physical Health Not Good	33.1
Stroke	39.4
Health Risk Behaviors	—
Binge Drinking	17.1
Current Smoker	14.6
No Leisure Time for Physical Activity	40.8
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	23.1
Elderly	52.4
English Speaking	56.9
Foreign-born	37.3
Outdoor Workers	34.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	62.4
Traffic Density	23.8

Traffic Access	51.1
Other Indices	—
Hardship	56.1
Other Decision Support	—
2016 Voting	67.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	55.0
Healthy Places Index Score for Project Location (b)	45.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Site is vacant, no demolition.
Construction: Off-Road Equipment	Off Highway Truck (water truck) added to Site Prep and Grading for dust suppression.

Operations: Vehicle Data	Truck trips for component supply delivery and concrete delivery applied to "Other Asphalt surfaces"; 5,555.56 annual mixed concrete truck round trips (12 miles per trip) and 4,475.74 annual component supply delivery truck round trips (75 miles per trip).
Operations: Fleet Mix	All delivery trucks assumed to be HHD
Operations: Off-Road Equipment	Loader for batch plant operation per applicant.
Operations: Energy Use	Batch plant electricity use estimated from anticipated annual throughput and plant specifications.
Operations: Water and Waste Water	Batch plant water use based on estimated annual throughput from applicant and water content of typical wet concrete mix, plus an additional 500 gallons per day for cleanup and dust suppression.

Appendix B

Batch Plant PM Calculations

Concrete Batch Plant and Yard PM Dust Emissions

Throughput[1]

	CY	Truckloads
Maximum Daily Throughput Concrete	150	16.67
Average Annual Throughput Concrete	25000	2,777.78

Batch Plant PM Emissions

	PM10			PM2.5		
Process	Factor	Max Daily (lbs)	Annual (tons)	Factor	Max Daily (lbs)	Annual (tons)
Aggregate delivery to ground storage (lbs/ton)[2,3]	0.003300	0.462	3.85E-02	0.000532	0.074	6.20E-03
Sand delivery to ground storage (lbs/ton)[2,3]	0.000990	0.106	8.84E-03	0.000160	0.017	1.43E-03
Aggregate transfer to elevated storage (lbs/ton)$_{2,3}$	0.003300	0.462	3.85E-02	0.000532	0.074	6.20E-03
Sand transfer to elevated storage (lbs/ton)[2,3]	0.000990	0.106	8.84E-03	0.000160	0.017	1.43E-03
Cement delivery to silo (lbs/ton)[2,3]	0.000340	0.167	1.04E-03	0.000055	0.027	1.68E-04
Cement supplement delivery to silo (lbs/ton)[2,3]	0.004900	0.358	2.24E-03	0.000790	0.058	3.61E-04
Weigh hopper loading (lbs/ton)[2,3]	0.002800	0.692	5.76E-02	0.000452	0.112	9.30E-03
Central mix loading (lbs/ton)[2,3]	0.005500	0.233	1.94E-02	0.000887	0.038	3.13E-03
On-site truck circulation (paved yard; lbs/VMT)[4]	0.620293	1.994	1.66E-01	0.164660	0.529	4.41E-02
Total		**4.578**	**0.34**		**0.946**	**0.07**

Composition of Concrete[5]

Component	lbs/CY
Coarse Aggregate	1865
Sand	1428
Cement	491
Cement Supplement	73
Water	167

Concrete Component Delivery

	Max Daily			Annual		
	Tons	CY	Truckloads	Tons	CY	Truckloads
Coarse Aggregate (1.35 tons per CY; 16 CY per truckload)	139.88	103.61	6.48	23,312.50	17,268.52	1,079.28
Sand (1.375 tons per CY; 16 CY/truckload)	107.10	77.89	4.87	17,850.00	12,981.82	811.36
Cement (1.269 tons per CY; 16 CY per truckload)	36.83	29.02	1.81	6,137.50	4,836.49	302.28
Cement Supplement (1.269 tons per CY; 16 CY per truckload)	5.48	4.31	0.27	912.50	719.07	44.94
Total			**13.43**			**2,237.87**

Paved Roads Emissions Factor Calculations[4]

Pollutant	k	sL (g/m^2)	W (tons)	E (lbs/VMT)
PM10	0.0022	12	27.5	0.620293
PM2.5	0.000584	12	27.5	0.164660

On-Site Truck VMT[5]

Truck circulation distance (miles)	0.1068
Daily VMT (miles)	3.21
Annual VMT (miles)	535.67

Notes:
1. Daily and annual throughput estimated by applicant, 9 cubic yards (CY) per truckload of mixed concrete.
2. Emission factors for concrete batch plant operation calculated from USEPA AP42 Chapter 11.12, Concrete Batching, Table 11.12-2.
3. Table 11.12-2 does not contain factors for PM2.5; PM2.5 emission factors calculated assuming ratio of PM2.5 to PM10 would be similar to the ration shown in Table 11.12-3 for uncontrolled truck ix operations: 0.31 pounds PM10 per ton and 0.05 pounds PM2.5 per ton.
4. Emissions factor for dust from on-site truck circulation within the paved yard calculated from USEPA AP42 Chapter 13.2.1, Paved Roads, Formula 13.2.1.3, Table 13.2.1-1, and Table 13.2.1-3, where emissions factor $E = k(sL)^{0.91} \times (W)^{1.02}$ and k = particle site multiplier (pounds per vehicle miles traveled); sL = road surface silt loading (grams per square meter) for a concrete batch plant; and W = average truck weight (20 tons empty and 35 tons loaded).
5. Composition of concrete from AP42 Chapter 11.12.

2021 Lendell Lane Project

Noise and Vibration Technical Report

March 2025 | 09418.00001.001

Prepared for:

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ACRONYMS AND ABBREVIATIONS

ADT	average daily trips
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
CadnaA	DataKustic Computer Aided Noise Abatement model
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
City	City of Roseville
CMU	concrete masonry unit
CNEL	Community Noise Equivalent Level
CY	cubic yard
dB	decibel
dBA	A-weighted decibel
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
Hz	hertz
kHz	kilohertz
L_{DN}	Day Night sound level
L_{EQ}	time-averaged noise level
L_V	vibration velocity level
mph	miles per hour
PPV	peak particle velocity
µPa	micro-Pascals
NSLU	noise-sensitive land use
RCNM	Roadway Construction Noise Model
SF	square foot/feet
S_{PL}	sound pressure level
S_{WL}	Sound Power Level

ACRONYMS AND ABBREVIATIONS (cont.)

TNM	Traffic Noise Model
USDOT	U.S. Department of Transportation
VdB	vibration velocity in decibels

EXECUTIVE SUMMARY

This report assesses potential construction and operational noise impacts associated with the 2021 Lendell Lane Project (project) located in the City of Roseville (City), California. The project would develop the site with a prefabricated wet concrete (ready-mix) batch plant, associated aggregate storage in concrete masonry unit (CMU) bunkers, and an ancillary office/employee building.

Noise from heavy construction equipment use and from daily operational noise on the project site would not result in noise exceeding the City standards, measured at the nearest noise sensitive land use). The addition of project traffic (including project trucks) to existing traffic on area roadways would not result in a perceptible increase in ambient traffic noise. The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance, and the impact would be less than significant.

Project construction would not result in significant vibrations affecting nearby residents or damaging nearby buildings. Project operations would not be a significant source of vibrations. The project would not result in the generation of excessive ground-borne vibration or ground-borne noise levels, and the impact would be less than significant.

The project site is not located within the contours for the Sacramento McClellan Airport southwest of the project site. Therefore, persons working in the project area would not be exposed to substantial noise from airports or aircraft, and the impact would be less than significant.

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1.0 INTRODUCTION

This report presents an assessment of potential noise and vibration impacts during construction and operation of the proposed 2021 Lendell Lane Project (project). This report has been prepared to support environmental review in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code [PRC] §21000 et seq.); State CEQA Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.).

1.1 PROJECT LOCATION

The approximately 1.0-acre project site is comprised of Assessor's Parcel Number (APN) 473-100-045. The project site is located at 2021 Lendell Lane in the City of Roseville (City), Placer County, California. The project site is approximately 380 feet (0.07 mile) south of Pfe Road and 1.2 miles northwest of Interstate 80 (I-80; see Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*).

1.2 PROJECT DESCRIPTION

The project would develop the site with a prefabricated wet concrete (ready-mix) batch plant, associated aggregate storage in concrete masonry unit (CMU) bunkers, and an approximately 4,230 square foot (SF) ancillary office/employee building with 137 SF of garage space. The project is anticipated to produce up to 150 cubic yards (CY) of ready-mix concrete per day, and up to 25,000 CY of ready-mix concrete annually. Other project improvements would include paved driveways and yard/truck circulation space, seven parking spaces near the building, an 8-foot-high CMU wall on the project site's north, east, and south property lines, and landscaping around the project perimeter. The project would require minor off-site improvements in the Lendell Lane right-of-way including driveway aprons and underground utility connections. See Figure 3, *Site Plan*.

1.2.1 Construction Activities and Phasing

Construction of the project is anticipated to be completed in one 10.5-month phase commencing as early as May 2025. Project construction activities would include site preparation, grading, installation of underground utilities, building construction and batch plant installation, paving, and architectural coating (e.g., painting). The project would not require demolition, as the site is currently vacant and undeveloped. No nighttime construction activities are anticipated.

1.3 NOISE DESCRIPTORS AND TERMINOLOGY

1.3.1 Noise Descriptors

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL and L_{DN} are always based on dBA. These metrics are used to

express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

1.3.2 Noise Terminology

1.3.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound. In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determine the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

1.3.2.2 Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

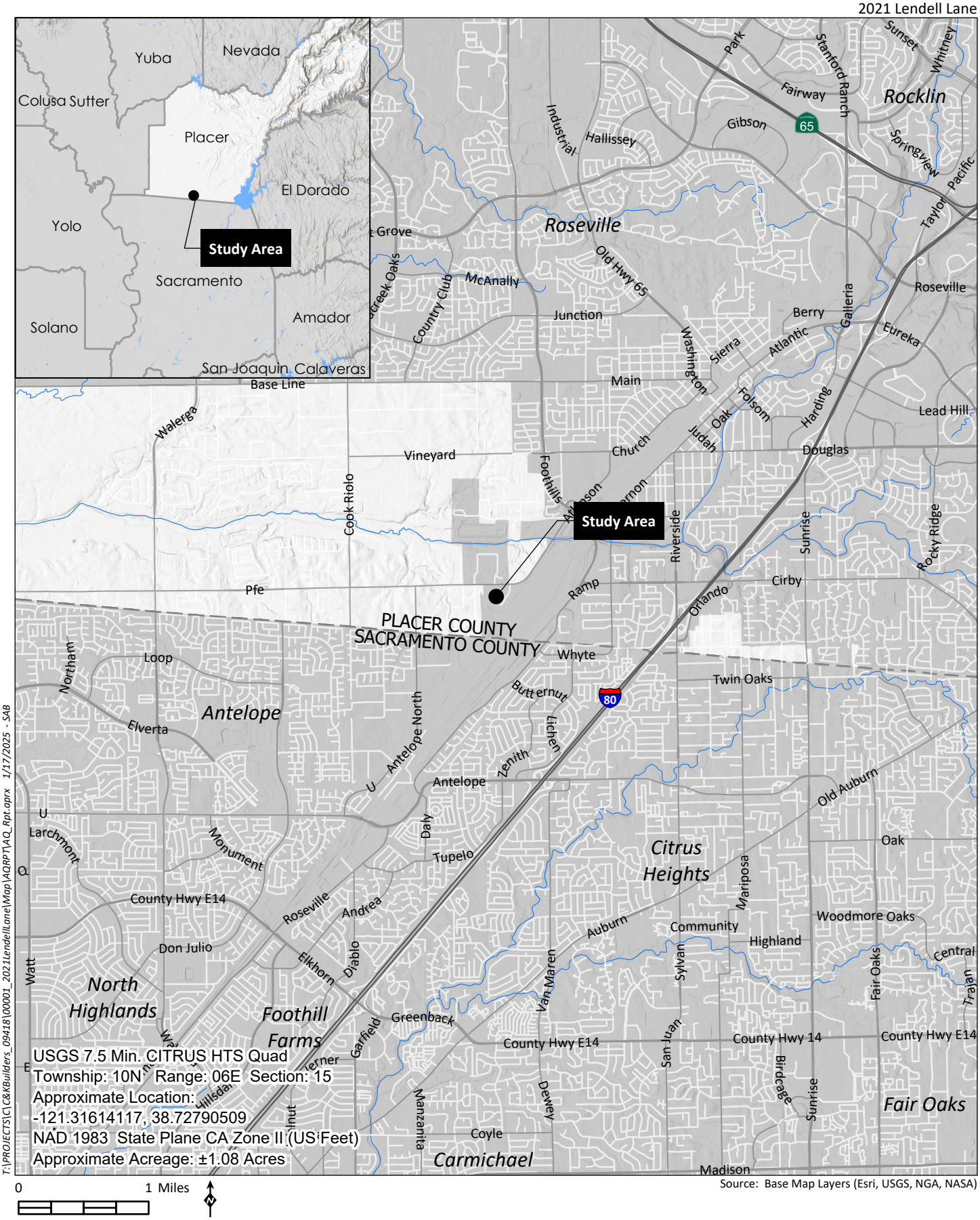
1.3.2.3 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (µPa). One µPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this wide range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (S_{PL}) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 µPa.

1.3.2.4 Addition of Decibels

Because decibels are logarithmic units, S_{PL} cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an S_{PL} of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1 dBA changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz to 8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level



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Source: Base Map Layers (Esri, USGS, NGA, NASA)

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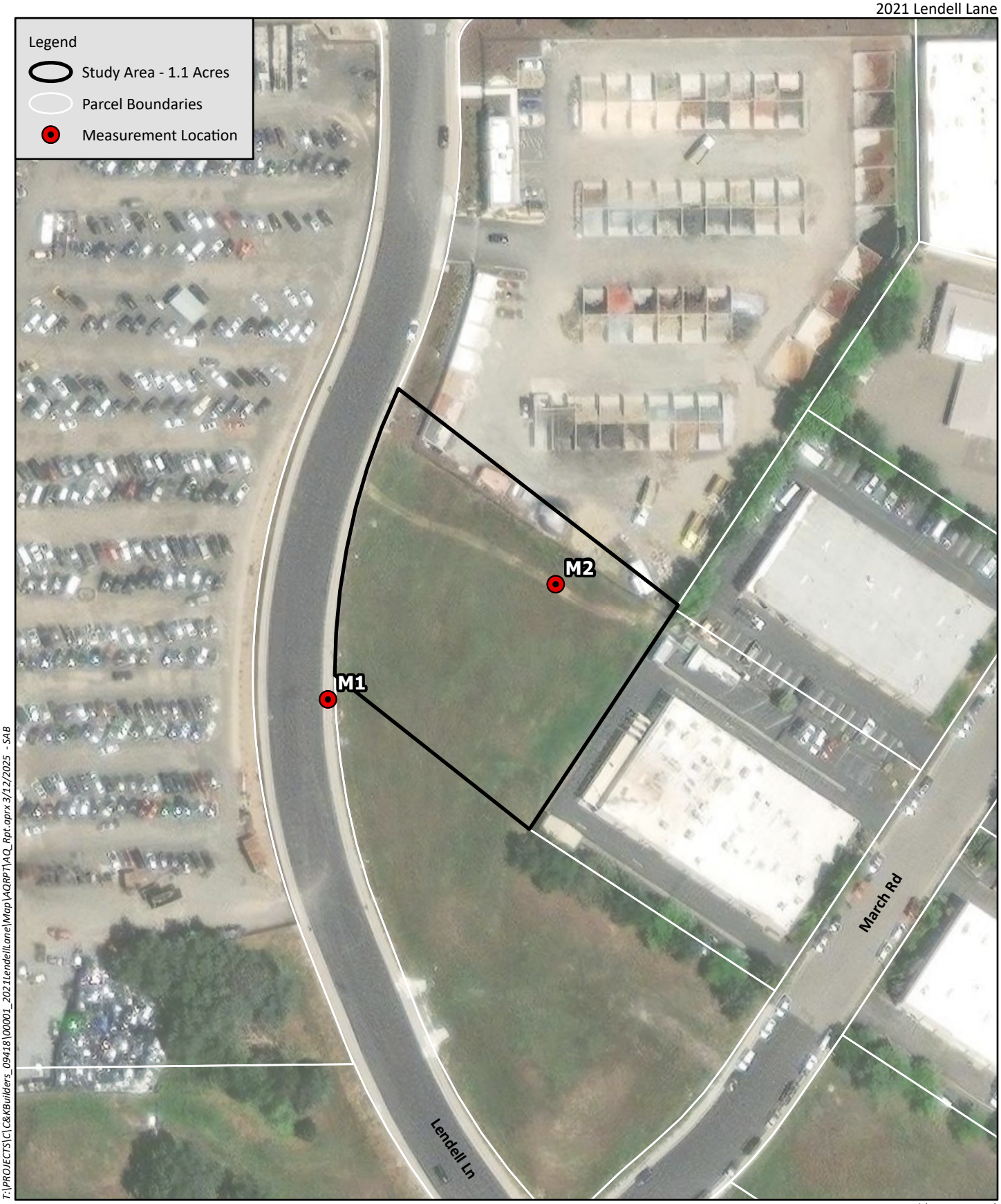
Site and Vicinity Map

Figure 1



Source: Aerial (Maxar, 2022)

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Aerial Map

Figure 2

Source: CWE, 2025

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Site Plan

Figure 3

increases of 3 dBA in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

No known studies have directly correlated the ability of a healthy human ear to discern specific levels of change in traffic noise over a 24-hour period. Many ordinances, however, specify a change of 3 CNEL as the significant impact threshold. This is based on the concept of a doubling in noise energy resulting in a 3 dBA change in noise, which is the amount of change in noise necessary for the increase to be perceptible to the average healthy human ear.

1.4 GROUND-BORNE VIBRATION DESCRIPTORS AND TERMINOLOGY

Ground-borne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. The rumbling sound caused by the vibration of room surfaces due to ground-borne vibration is called ground-borne noise. Ground-borne noise is highly dependent on the characteristics of the structure subject to vibration. Therefore, this analysis focuses on ground-borne vibrations. Sources of ground-borne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration wave. Decibels are also used to compress the range of numbers required to describe vibration. Vibration velocity level (L_V) with units of VdB (referenced to one-micro-inch per second velocity) are commonly used in evaluating human reactions to vibrations. For the purposes of this analysis, a PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage, and L_V with units of VdB is used to evaluate human reactions.

1.5 NOISE AND VIBRATION SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Noise receptors are individual locations that may be affected by noise. The closest existing NSLUs to the project site is a single-family residence located approximately 1,200 feet to the northeast on the northwest side of Atkinson Street. There are no hospitals, schools, hotels, resorts, or libraries within 0.5 mile of the project site.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, hospitals, and university research operations (California Department of Transportation [Caltrans] 2020), are considered “vibration-sensitive.” The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses, schools, or transient lodging. There are no land uses in the project area that are subject to annoyance from ground-borne vibration.

1.6 REGULATORY FRAMEWORK

1.6.1 California Noise Control Act

The California Noise Control Act is a section within the California Health and Safety Code that describes excessive noise as a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

1.6.2 California Building Code

The California Building Code sets forth building design and construction requirements relating to fire and life safety, structural safety, and access compliance. Title 24, Part 2, Section 1206, Sound Transmission, requires interior noise levels in habitable rooms not to exceed 45 dB. The 45 dB requirement may be measured as either the L_{DN} or CNEL, as used in the applicable general plan noise element.

1.6.3 City of Roseville General Plan

The City's General Noise Element contains the following policies related to noise that would be applicable to the project (City 2020a):

Policy N1.1 The City's exterior noise compatibility standards for uses affected by transportation noise sources are included as Table IX-1. Exterior noise levels shall be mitigated to the extent feasible using site planning, building orientation, and/or other construction techniques or design features. Noise barriers should only be used after other feasible noise reduction strategies are exhausted, and not where they would interrupt existing or future community pedestrian or bicycle connectivity.

Table IX-1 from the Noise Element does not contain noise compatibility standards for industrial land uses.

Policy N1.2 The City's interior noise compatibility standards for uses affected by transportation noise sources are 45 dBA L_{DN} for noise-sensitive uses such as residences, lodging, hospitals, assisted living facilities, and other places where people normally sleep. For noise-sensitive uses where people do not sleep, such as offices, schools, and uses with similar noise sensitivity, noise levels should be no greater than 45 dBA L_{EQ}. Proposed projects should incorporate noise reduction strategies, if necessary, to achieve these interior noise levels.

Policy N1.3 The City's exterior noise compatibility standards for uses affected by non-transportation-related noise are defined within the City's Noise Ordinance and should be applied consistent with the Noise Ordinance.

Policy N1.5 If existing noise levels exceed the noise compatibility standards in Table IX-1 or Policy N1.2, then feasible methods of reducing noise to levels consistent with standards should

be considered, but are not required. However, if existing noise levels exceed noise compatibility standards and a project results in a significant increase in noise (as defined below), then feasible methods of reducing noise to avoid a significant noise increase should be applied. In no case should a project result in a Clearly Unacceptable noise level according to Table IX-1.

- Where existing exterior noise is less than 60 dB, a ≥ 5 dBA increase in noise is significant.
- Where existing exterior noise is between 60 and 65 dBA, a ≥ 3 dB increase in noise is significant.
- Where existing exterior noise is greater than 65 dB a ≥ 1.5 dBA increase in noise is significant.

Table IX-1 from the Noise Element defines normally acceptable noise levels for residential uses as 60 or less L_{DN} or CNEL, and clearly unacceptable noise levels for residential uses as 70 or more L_{DN} or CNEL.

Policy N1.9 Construction-related noise that is consistent with the City's Noise Ordinance is exempt from the noise standards outlined in this Element.

1.6.4 City of Roseville Municipal Code

The City Municipal Code contains the following ordinances related to noise that would be applicable to the project:

9.24.100. Sound limits for sensitive receptors

It is unlawful for any person at any location to create any sound, or to allow the creation of any sound, on property owned, leased, occupied or otherwise controlled by such person, which causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by three dBA or exceed the sound level standards as set forth in Table 1, by three dBA, whichever is greater.

Table 1
SOUND LEVEL STANDARDS
(for non-transportation or fixed sound sources)

Sound Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{EQ}, dBA	50	45
Maximum Level, dBA	70	65

Source: City Municipal Code Section 9.24.100, Table 1

A. Each of the sound level standards specified in Table 1 shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus three dBA.

B. If the intruding sound source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient sound level can be measured, the sound level measured while the source is in operation shall be compared directly to the sound level standards of Table 1.

9.24.120. Sound limits for industrial properties

Notwithstanding the provisions of Section 9.24.100, it is unlawful for any person to create any sound, or to allow the creation of any sound, on property with an industrial zoning designation that is owned, leased, occupied or otherwise controlled by such person where an industrial land use shares a common property line with a sensitive receptor or is separated from a sensitive receptor by a roadway, which causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by 7 dBA, or exceed the sound level standards as set forth in Table 1 by 7 dBA, whichever is greater.

9.24.160. Exceptions

B. If the applicant can show to the City manager, or his or her designee that a diligent investigation of available sound suppression techniques for construction-related noise indicates that immediate compliance with the requirements of this chapter would be impractical or unreasonable, due to the temporary nature or short duration of the exception, a permit to allow exception from the provisions contained in all or a portion of this chapter may be issued. Factors that the approving authority must consider for construction related exceptions shall include but not be limited to the following:

1. Conformance with the intent of this chapter;
2. Uses of property and existence of sensitive receptors within the area affected by sound;
3. Factors related to initiating and completing all remedial work;
4. The time of the day or night the exception will occur;
5. The duration of the exception; and
6. The general public interest, welfare and safety.

2.0 ENVIRONMENTAL SETTING

2.1 EXISTING NOISE ENVIRONMENT

Noise sources in the project vicinity are primarily from the surrounding industrial businesses and the Union Pacic Roseville Railroad Yards approximately 520 feet southeast of the project site. The project site and all surrounding parcels have a general plan designation of General Industrial (IND) and are zoned General Industrial. Land uses surrounding the project site include a landscape material supply company adjacent to the project site to the north, light industrial businesses (including a metal finishing/plating business) adjacent to the project site to the east and southeast, a vacant industrial zoned lot to the south, and an auto dismantling business approximately 75 feet to the west, across Lendell Lane.

2.2 NOISE SURVEY

A site visit and noise survey was conducted on November 19, 2024, which included two short-term (15 minute) ambient noise measurements. Measurement M1 was conducted on the sidewalk of Lendell Land adjacent to the project. Traffic counts on Lendell Lane were conducted during measurement M1. Measurement M2 was conducted on the project site approximately 25 feet from the project site's northeastern border. See Figure 2 for measurement locations. The noise measurement survey notes are included as Appendix A, *Noise Survey Notes*, to this report. The measured noise levels are shown in Table 2, Noise Measurement Results.

Table 2
NOISE MEASUREMENT RESULTS

M1	
Date	November 19, 2024
Time	10:07 a.m. – 10:22 a.m.
Location	On the sidewalk of Lendell Lane adjacent to the project.
Noise Level	58.4 dBA L_{EQ}
Notes	Some train movements in the railyard to the southeast (peak of 60 dBA shown on the meter). Most notable continuous noise from the mechanical systems on the roof of the industrial metal plating business to the southeast (peak of 58 dBA shown on the meter). Some noise from equipment and vehicles in the auto salvage business to the west, across Lendell Lane.
Traffic Counts	2 cars
M2	
Date	November 19, 2024
Time	10:24 a.m. – 10:39 a.m.
Location	On the project site approximately 25 feet from the project site's northeastern border.
Noise Level	60.8 dBA L_{EQ}
Notes	Most notable continuous noise from the mechanical systems on the roof of the industrial metal plating business to the southeast (peak of 62 dBA shown on the meter). Noise from a loader with a backup alarm in the landscape supply business to the northeast (peak of 62 dBA shown on the meter).

3.0 METHODOLOGY AND ASSUMPTIONS

3.1 METHODOLOGY

3.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels at the project site:

- Piccolo II Noise Meter
- Larson Davis Model CA150 Calibrator
- Windscreen and tripod for the noise meter

The sound level meter was calibrated prior to the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report were made with a sound level meter that

conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

3.1.2 Noise Modeling Software

Modeling of the exterior noise environment for this report was accomplished using Computer Aided Noise Abatement (CadnaA) version 2023. CadnaA is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed model, and uses the most up-to-date calculation standards to predict outdoor noise impacts. The latest site plans provided by the project applicant (see Figure 3), were used.

Traffic noise was calculated using TNM version 2.5, released in February 2004 by the U.S. Department of Transportation (USDOT). TNM calculates the daytime average hourly L_{EQ} from three-dimensional model inputs and traffic data (USDOT 2004). Input variables included road alignment, lane configuration, projected peak-hour traffic volumes, projected peak-hour truck volumes, and vehicle speeds.

Peak-hour traffic volumes were estimated based on the assumption that approximately 10 percent of the average daily traffic would occur during a peak hour. The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic. Peak hour L_{EQ} can be converted to CNEL using the following equation, where $L_{EQ}(h)pk$ is the peak hour L_{EQ}, P is the peak hour volume percentage of the average daily trips (ADT), d and e are divisions of the daytime fraction of ADT to account for daytime and evening hours, and N is the nighttime fraction of ADT:

$$CNEL = L_{EQ}(h)pk + 10log10\ 4.17/P + 10log10(d + 4.77e + 10N)$$

The model-calculated one-hour L_{EQ} noise output is, therefore, approximately equal to the CNEL when peak-hour traffic volumes are typical (around 10 percent of ADT) (Caltrans 2013).

Project construction noise was analyzed using the Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

3.2 ASSUMPTIONS

3.2.1 Construction

Project construction activities would include site preparation, grading a, building construction and installation of the batch plant, architectural coating (e.g., painting), and paving. The project would not require demolition activities. The most intensive use of heavy construction equipment would occur during site preparation (e.g., clearing and grubbing) and grading using typical earthmoving equipment including dozers, graders, and backhoes. Construction equipment noise was evaluated using the RCNM and methodology from the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment Manual*, Option A for a quantitative construction noise assessment. Using this method, equipment is assumed to operate at the center or centerline of the project site, and the two noisiest pieces of construction equipment are assumed to operate concurrently in close proximity to each other (FTA 2018 pp. 177-178).

3.2.2 Operations

Anticipated project operational noise sources would include the concrete batch plant; a front-end loader used to transfer aggregate and sand to the batch plant; trucks circulating on the project site; building heating, ventilation, and air conditioning (HVAC) systems; and off-site vehicular traffic.

3.2.2.1 Concrete Batch Plant

Noise from operation of the concrete batch plant was modeled as a point source using data from an acoustic measurement report provided by the batch plant manufacturer. Per the acoustic measurement report, the batch plant would result in a continuous sound level of 66.5 dBA L_{EQ}, measured at a distance of 15 meters (49.2 feet). Assuming hemispherical sound propagation, the resulting batch plant sound power level would be 98 dBA S_{WL}. The batch plant acoustical report is included as Appendix B, *Batch Plant Acoustical Report*.

3.2.2.2 Front-End Loader

Noise from a front-end loader was modeled as a line source using data from an acoustic measurement report provided by the batch plant manufacturer. Per the acoustic measurement report, a front-end loader feeding aggregate and sand to the batch plant would result in a continuous sound level of 73.4 dBA LEQ, measured at a distance of 10 meters (32.8 feet). Assuming hemispherical sound propagation, the resulting front-end loader sound power level would be 101 dBA S_{WL}.

3.2.2.3 On-Site Truck Circulation

Trucks circulating on the project site were modeled as a road source with 100 percent heavy trucks traveling at an average speed of 5 miles per (mph) hour. Road sources in CadnaA are based on the data and methodology used in the USDOT's TNM. Truck volumes were based on data provided by the project applicant: 16 to 17 truckloads of mixed concrete per day (about 2 roundtrips per hour), and 13 to 14 truckloads of raw material delivered per day (about 2 roundtrips per hour).

3.2.2.4 Heating, Ventilation, and Air Conditioning

The project would use a commercial-sized HVAC units located on the ground near the building. The exact HVAC model has not been determined as of this analysis. Standard HVAC planning assumes approximately one ton of HVAC for every 350 SF of habitable space (American Society of Heating, Refrigeration, and Air Conditioning Engineers [ASHRAE] 2012). Based on the building sizes, one Carrier 50PG 12-ton unit (or similar systems) would be required for the project building. A Carrier 50PG 12-ton HVAC units, with a sound power level (S_{WL}) of 80.0 dBA, was used to model the noise from the project's HVAC system (Carrier 2008). The manufacturer's noise data for the HVAC units is provided below in Table 3, *HVAC Condenser Noise Data.*

Table 1
HVAC CONDENSER NOISE DATA

63 Hz[1]	125 Hz[1]	250 Hz[1]	500 Hz[1]	1 kHz[1]	2 kHz[1]	4 kHz[1]	8 kHz[1]	Overall Noise Level[1]
90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6	80.0

Source: Carrier 2008

[1] Sound Power Levels (S_{WL}), dBA

Hz = Hertz; kHz = kilohertz

3.2.2.5 Off-Site Vehicular Traffic

The project would contribute to existing traffic noise on area roads. Trips associated with project employees, customers, and non-batch plant related vendors are estimated to be 42 average daily trips (ADT), or about 20 peak hours commute trips, based on modeling from the project Air Quality and Greenhouse Gas Emissions Report (HELIX 2025). Truck volumes were based on data provided by the project applicant: 16 to 17 truckloads of mixed concrete per day (about 4 one-way truck trips per hour), and 13 to 14 truckloads of raw material delivered per day (about 4 one-way truck trips per hour).

The increase in ambient traffic noise was modeled near residences on the routes anticipated to be used by project traffic:

- Aggregate/sand delivery trucks would access the site using the designated City truck route from I-80: Exit Riverside Avenue, then Cirby Way, Foothills Boulevard, Atkinson Street, Pfe Road, and Lendell Lane.

- Concrete trucks would travel to construction sites in the area, the route can only be predicted in the immediate project vicinity: trucks headed east/northeast would use Pfe Road, Atkinson Street, and Foothill Boulevard; trucks headed west would use Pfe Road.

For the road segments anticipated to be used by project traffic, only Cirby Way, Atkinson Street, and Pfe Road have nearby NSLUs (residences). Existing traffic data for the local roads is limited. Traffic on Cirby Way was modeled using traffic counts from the City 2035 General Plan Final Environmental Impact report: 38,700 ADT/3,8700 afternoon peak hours trips (City 2020b). Traffic on Pfe Road was modeled based on traffic counts taken by Placer County in 2018 at a point on Pfe Road just west of the City limits (approximately; 0.38 miles west of the project site): 5,122 ADT/444 afternoon peak hours trips (Placer County 2018). Traffic count data for Atkinson Street was not available. Traffic on Atkinson Street between Pfe Road and Foothill Boulevard was assumed to be similar to the traffic on Pfe Road just to the west. Existing traffic was modeled assuming a mix typical of suburban areas: 96 percent cars and light trucks, 3 percent medium-duty trucks; and 1 percent heavy-duty trucks. Because the distribution of project traffic on each road segment was unknown, all project trips were conservatively assumed to travel on each road segment. Traffic was modeled as traveling at the posted speed limit for each analyzed road segment: 40 mph for Cirby Way; 45 mph for Atkinson Street; and 45 mph for Pfe Road. The modeled afternoon peak hour traffic volumes are shown in Table 4, PM Peak Hour Traffic Volumes.

Table 4
PM PEAK HOUR TRAFFIC VOLUMES

Roadway Segment	Existing (cars/medium trucks/heavy trucks)	Existing + Project (cars/medium trucks/heavy trucks)
Cirby Way – Riverside Ave to Foothill Blvd	704/22/7	724/22/15
Atkinson Street – Foothill Blvd to Pfe Rd	426/13/5	446/13/13
Pfe Road – Atkinson St to Cook Riolo Rd	426/13/5	446/13/13

Source: City 2020b; Placer County 2018

3.3 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the project would result in a significant adverse impact if it would:

Threshold 1: *Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance.*

Per the City Municipal Code Section 9.24.100, a temporary increase in ambient noise levels from construction noise generated on the project site would be potentially significant if the construction noise would exceed 50 dBA L_{EQ} daytime or 45 dBA L_{EQ} nighttime measured at the property line of an NSLU, unless a permit has been approved by the City in accordance with City Municipal Code Section 9.24.160.

Per the City Municipal Code Sections 9.24.100 and 9.24.120, a permanent increase in ambient noise levels from operational noise generated on the project site would be potentially significant if the noise would exceed the existing ambient noise level by 7 dBA or more, or if the noise would exceed 50 dBA L_{EQ} daytime or 45 dBA L_{EQ} nighttime measured at the property line of an NSLU.

Per City General Plan Policy N1.5, a permanent increase in traffic noise levels resulting from the addition of project traffic to area roads would be potentially significant if the increase exceeds:

- Where existing exterior noise is less than 60 dBA, a ≥ 5 dBA increase in noise, or
- Where existing exterior noise is between 60 and 65 dBA, a ≥ 3 dBA increase in noise, or
- Where existing exterior noise is greater than 65 dBA a ≥ 1.5 dBA increase.

Threshold 2: *Generate excessive ground-borne vibration levels.*

The City has not adopted thresholds of significance for ground-borne vibration. Therefore, based on guidance from the FTA, ground-borne vibration would be potentially significant if the project would result in ground-borne vibration which exceeds architectural damage potential criteria for non-engineered timber and masonry buildings of 0.2 inch per second PPV, for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and heavy construction equipment) (FTA 2018). In addition, ground-borne vibration which would occur at night would be potentially significant if the project would result in ground-borne vibration which exceeds 75 VdB L_V (the approximate barely perceivable threshold for occasional events) in buildings where people normally sleep (FTA 2018).

Threshold 3: *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 use airport or private airstrip, expose people residing or working in the project area to excessive noise.*

Excessive noise exposure is defined as noise levels that exceed the land use compatibility standards in the City General Plan Noise Element Table IX-1 for the associated land use.

4.0 IMPACTS

4.1 ISSUE 1: INCREASE IN AMBIENT NOISE LEVELS

Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance?

4.1.1 Temporary Construction Noise

Construction of the project would require the use of heavy off-road equipment for site preparation, grading, building construction and batch plant installation, and paving. The magnitude of the noise impact would depend on the type of construction activity, type of equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures.

Heavy off-road construction equipment would not all operate at the same time or location and would not be in constant use during the 8-hour operating day. Further, not all the pieces of equipment would be used near off-site residential property lines. The most intensive daytime use of heavy construction equipment would be from earth-moving activities during site preparation and grading. Construction equipment noise was evaluated using methodology from the FTA's *Transit Noise and Vibration Impact Assessment Manual*, Option A for a quantitative construction noise assessment. Using this method, equipment is assumed to operate at the center of the project, and the two noisiest pieces of construction equipment are assumed to operate concurrently in close proximity to each other (FTA 2018 pp. 177-178). During site preparation and grading, the two noisiest pieces of equipment would be a dozer and a grader. Evaluating construction noise using the RCNM, the combined noise from a dozer and a grader would be 82.7 dBA at a distance of 50 feet. However, there are no NSLUs near the project site. At the closest NSLU, a single-family residence located approximately 1,320 feet northeast from the center of the project site, the combined noise from a dozer and a grader would be 54.2 dBA L_{EQ}, not accounting for intervening structures. However, the direct line of sight between the project site and the NSLU on Atkinson Street is completely blocked by multiple structures including two approximately 30-feet high industrial buildings which are anticipated to provide 15 dBA or more noise attenuation. In addition, as discussed in Section 4.1.2.2, below, the calculated existing ambient traffic noise level at the NSLU along Atkinson Street is 63.1 CNEL. Therefore, the project construction noise would be substantially less than the existing ambient noise level and would not be discernable. Therefore, project construction noise would not exceed the City's 50 dBA L_{EQ} daytime noise standard measured at the nearest NSLU. The RCNM output is provided in Appendix C, *Noise Modeling Output*, to this report.

4.1.2 Operation Noise

4.1.2.1 On-Site Noise Generation

Anticipated project operating hours were unknown at the time of this analysis. However, because ready-mix concrete is temperature sensitive, during warmer weather the project could provide concrete to area construction sites during nighttime hours (10 p.m. to 7 a.m.). Modeling of project on-site noise sources, as described in Section 3.2.2, above, would result in approximately 72.6 dBA L_{EQ}, measured at the project's northeast property line. However, there are no NSLUs near the project site. At the closest NSLU, a single-family residence located approximately 1,200 feet northeast of the project site, the project on-site operation noise would be 43.2 dBA L_{EQ}, accounting for noise attenuation from the

industrial buildings and landscape supply business structures between the project site and the NSLU. In addition, as discussed in Section 4.1.2.2, below, the calculated existing ambient traffic noise level at the NSLU along Atkinson Street is 63.1 CNEL. Therefore, the project on-site operational noise would be substantially less than the existing ambient noise level, would not be discernable, and would not exceed the 7 dBA increase limit per City Municipal Code Section 9.24.120. Therefore, project on-site operational noise would not exceed the City's 50 dBA L_{EQ} daytime noise standard or 45 dBA L_{EQ} nighttime noise standard measured at the nearest NSLU. The CadnaA output is provided in Appendix C, *Noise Modeling Output*, to this report.

4.1.2.2 Off-Site Transportation Noise Generation

The project would generate vehicular traffic along nearby roadways. As described in Section 3.2.2, TNM was used to calculate the peak hour noise (equivalent to CNEL). The results of the off-site transportation noise modeling are shown in Table 5, *Off Site Traffic Noise Levels*. The TNM modeling output tables are included in Appendix C to this report.

Table 5
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)	Existing CNEL (dBA)	Existing + Project (dBA L_{EQ})	Project-Generated Increase (dBA L_{EQ})
Cirby Way – Riverside Ave to Foothill Blvd	70	63.8	64.3	0.5
Atkinson Street – Foothill Blvd to Pfe Rd	70	63.1	63.9	0.8
Pfe Road – Atkinson St to Cook Riolo Rd	80	62.5	63.3	0.8

Source: TNM

As shown in Table 5, the maximum traffic noise increase because of the addition of project traffic on any analyzed road segment would be 0.8 dBA on Atkinson Street and Pfe Road. Therefore, the increase in traffic noise resulting from the addition of project-related traffic (including project trucks) would be less than the most restrictive 1.5 dBA increase threshold and would not result in a perceptible increase in ambient noise levels.

4.1.3 Significance of Impacts

Project construction would not result in temporary noise exceeding the City's Municipal Code standards measured at the nearest NSLU. Operation noise generated on the project site would not result in noise exceeding the City's Municipal Code standards measured at the nearest NSLU. The addition of project traffic to areas roads would not result in a perceptible increase in ambient traffic noise. Therefore, the project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance, and the impact would be less than significant.

4.1.4 Mitigation Framework

The impact would be less than significant, and no mitigation measures would be required.

4.1.5 Significance After Mitigation

The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance, and the impact would be less than significant.

4.2 THRESHOLD 2: GROUNDBORNE VIBRATION

Would the project result in generation of excessive ground-borne vibration levels?

4.2.1 Construction Vibration

Typical ground-borne vibration levels produced by common construction equipment at a distance of 25 feet are shown in Table 6, *Construction Equipment Vibrations* (FTA 2018).

Table 6
CONSTRUCTION EQUIPMENT VIBRATIONS

Equipment	PPV at 25 feet (inches per second)	L_V at 25 feet (VdB)
Pile Driver, Impact	0.644	104
Pile Drive, Vibratory	0.170	93
Large Vibratory Roller	0.210	94
Large Dozer	0.089	87
Loaded Truck, Off-Road	0.076	86
Jackhammer	0.035	79
Small Dozer	0.003	58

Source: FTA 2018

PPV = peak particle velocity; L_V = vibration velocity level

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. The piece of construction equipment with the highest typical vibration level that would be used during project construction activities would be a vibratory roller used for gravel or pavement compaction. A vibratory roller could be used up to 35 feet from the closest off-site structure, an industrial building on the southeast side of the project site. A large vibratory roller would create approximately 0.127 inch per second PPV at 35 feet (FTA 2018), which would not exceed the 0.2 inch per second PPV threshold for damage to non-engineered timber and masonry buildings.[1] There are no residences or vibration sensitive land uses near the project site. Therefore, project construction would not have the potential to result in sleep disturbance or other adverse human reactions to ground-born vibrations from project construction. Once operational, the project would not be a source of ground-borne vibrations. Therefore, the project would not result in generation of excessive ground-borne vibration or ground-borne noise levels, and the impact would be less than significant.

4.2.2 Mitigation Framework

The impact would be less than significant, and no mitigation measures would be required.

[1] Equipment PPV = Reference PPV * $(25/D)^n$(in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receptor in feet, and n= 1.5 (the value related to the attenuation rate through the ground); formula from FTA 2018. VdB = 20 * Log ($PPV/4/10^{-6}$).

4.2.3 Significance After Mitigation

The project would not result in generation of excessive ground-borne vibration or ground-borne noise levels, and the impact would be less than significant.

4.3 THRESHOLD 3: AIRPORT NOISE EXPOSURE

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 project area to excessive noise levels?

The closest airport to the project site is the Sacramento McCellan airport, approximately 5.2 miles to the southwest. The project site is not within any of the mapped airport noise contours (Sacramento Area Council of Governments [SACOG] 2021). Therefore, although aircraft may be audible in the airspace around the project site, persons working in the project area would not be exposed to excessive noise levels from aircraft or airports.

4.3.1 Mitigation Framework

The impact would be less than significant, and no mitigation measures would be required.

4.3.2 Significance After Mitigation

The project would not expose people residing or working in the project area to excessive noise levels from aircraft or airports, and the impact would be less than significant.

5.0 LIST OF PREPARERS

Martin Rolph,	Senior Noise Specialist/Project Manager
Joanne Dramko, AICP	Principal Noise Specialist, QA/QC

6.0 REFERENCES

American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). 2012. ASHRAE Handbook.

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf.

2013. Technical Noise Supplement (TeNS) to the Traffic Noise Protocol. September. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

HELIX Environmental Planning. 2025. Lendell Lane Project Air Quality and Greenhouse Gas Emissions Technical Report. March.

Placer, County of. 2018. Traffic Count Data. Available at: https://gis-placercounty.opendata.arcgis.com/apps/f8c1911ae9f341ee8cc55a8cbd5e6714/explore.

Roseville, City of (City). 2020a. City of Roseville General Plan 2035 Noise Element. Available at: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/Final%20General%20Plan%202020/09%20Noise_Final.pdf.

2020b. City of Roseville 2035 General Plan Update Final Environmental Impact Report. August 5. Available at: https://cdnsm5-hosted.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/Final%20General%20Plan%20EIR/City%20of%20Roseville%20EIR.pdf.

Sacramento Area Council of Governments (SACOG). 2021. SACOG Open Data Portal Airport Noise Contours. Available at: https://data.sacog.org/datasets/e10a0fad5da942d2979b68e6710a9c10.

U.S. Department of Transportation (USDOT). 2008. Roadway Construction Noise Model Version 1.1. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/.

2004. Traffic Noise Model Version 2.5. Available at: https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/tnm_v25/.

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Appendix A

Noise Survey Notes

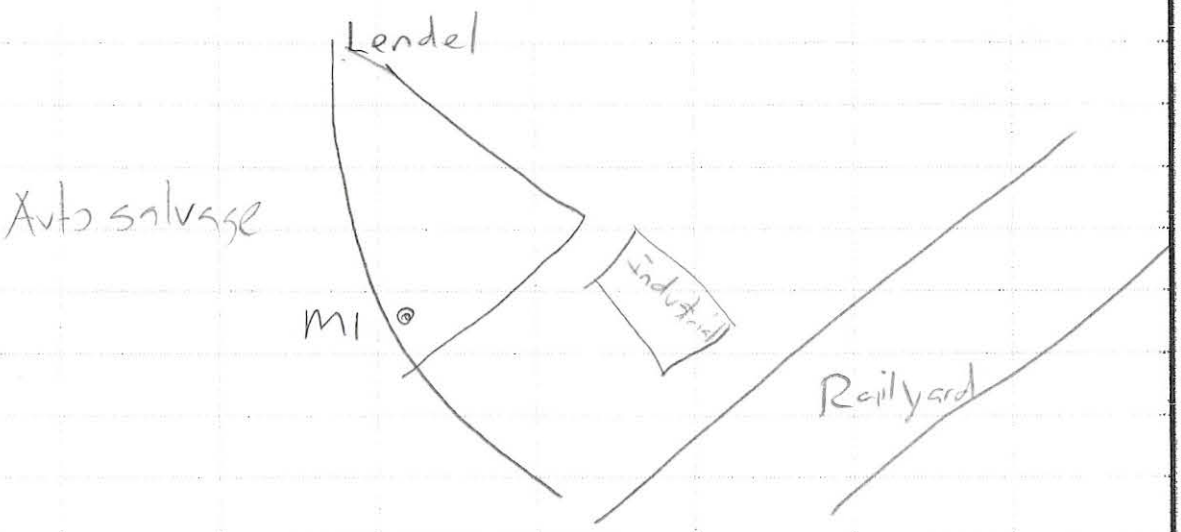
M1

Site Survey

Job #	Project Name: 2021 Lendell Ln.		
Date: 11/19/24	Site #:	Engineer: M. Rolph	
Address:			
Meter: Piccolo-II	Serial #: P0221031711	Calibrator: CAL150	Serial #: 5529

Notes: Some train movements in railyard (60 dBA)
Rooftop mechanical on industrial building SE (metal finishing) 58dBA. Some noise from auto dismantler across Lendell

Sketch:



Temp: 45°F	Wind Spd: 2	mph	Humidity: 64	%	
Start of Measurement: 10:07a	End of Measurement: 10:22a		58.4	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
2 cars		
Noise Measurement for Information Only No Through Roadways No Calibration Analysis Will Be Provided		

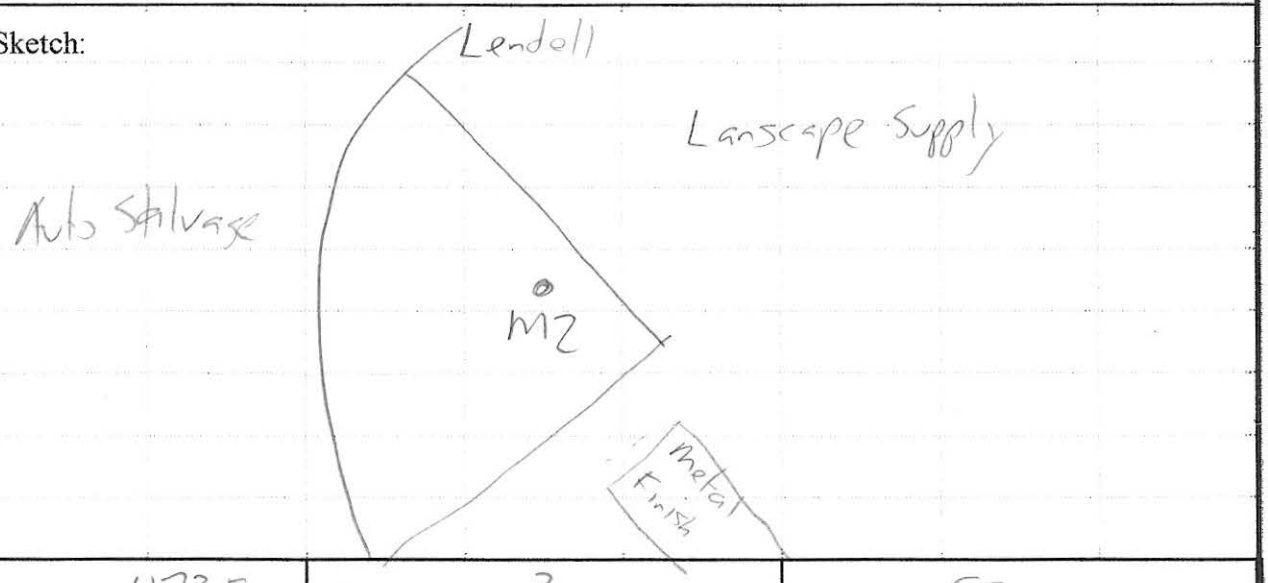
M2

Site Survey

Job #	Project Name: 2021 Lendell Ln.		
Date: 11/19/24	Site #:	Engineer: M. Ralph	
Address:			
Meter: Piccolo-II	Serial #: P0221031711	Calibrator: CAL150	Serial #: 5529

Notes: Rooftop mechanical from metal finishing building (62 dBA)
Loader w/ backup alarm at landscape business (62 dBA)

Sketch:



Temp: 47° F	Wind Spd: 3	mph	Humidity: 59	%	
Start of Measurement: 10:24a	End of Measurement: 10:39a		60.8	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Appendix B

Batch Plant Acoustical Report

TAS SACHVERSTÄNDIGENBÜRO
FÜR TECHNISCHE AKUSTIK SV-GmbH

Emil - Rathenau - Straße 1 A - 4030 Linz
Tel: +43 (0) 732 - 38 38 80 www.tas.at
Fax:+43 (0) 732 - 38 38 80 - 8 office@tas.at

ACCREDITED TESTING LABORATORY

GENERALLY SWORN AND
JUDICIALLY CERTIFIED EXPERTS

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AUTHORISED REP. ING. GERHARD STROHMAYER
AUTHORISED REP. ING. FRANZ MITTER
ING. HELMUT WIESINGER
ING. GERHARD LEEB
DIPL.-HTL-ING. ANDREAS DOPPLER

ACOUSTIC MEASUREMENT REPORT

"Acoustic emission measurement of Euromix 2000"

SBM Wageneder Gesellschaft m. b. H.
Arbeiterheimstraße 46
4663 Laakirchen

G. Strohmayer
For the management

TAS
SACHVERSTÄNDIGENBÜRO FÜR
TECHNISCHE AKUSTIK SV-GmbH
A-4030 Linz
Emil-Rathenau-Straße 1

W. Reichel
Project manager

Ref.: 99A0100T **WR/db** **Linz, 07.02.2006**

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1 General

1.1 Task

The task is to carry out acoustic emissions measurements on a mobile ready-mix concrete mixing plant of type "Euromix 2000". The sound power level of the overall analysis shall be determined based on the emission measurement results.

1.2 Client

SBM Wageneder Gesellschaft m.b.H.
Arbeiterheimstraße 46
4663 Laakirchen

1.3 Basics

- Site plan of mobile ready-mix concrete mixing plant, type Euromix 2000
- DIN 45635 "Measurement of noise emitted by machines" framework procedure for 3 accuracy classes
- DIN EN ISO 3746 "Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane"

2 MEASUREMENT REPORT

2.1 Measurement date / time

03/05/1999 from 14:00 hrs

2.2 Measurement object

Wheels of a mobile ready-mix concrete mixing plant, brand: SBM Wageneder, type Euromix 2000, capacity approx. 90 m^3 per hour

2.3 Measurement location / installation

The plant was set up on the site of a gravel works. The terrain is to be considered acoustically level in the vicinity of the plant. The ground was covered with a layer of hard gravel. There were no relevant reflecting bodies within 30 m of the plant.

The ambient noise was largely determined by the constant operating noise of a nearby gravel plant. A diesel unit for power supply was provided by the customer directly next to the cement silo, and housed in a container.

2.4 Brief description of the plant

From an acoustic point of view, the plant consists of the following components:

- Mobile hopper and weighing unit
- Cement silo including charging screws
- Gravel conveyor belt
- Mixing plant

All soundproofing components are enclosed.

Other sound sources are relevant for an overall consideration of concrete production:

- Wheel loader travel for gravel feeding
- Diesel power unit (if no local power line available)
- Truck mixer filling process

2.5 Measurement positions

The measurement points were selected along a hemispherical enveloping surface at a distance of 15 m from the acoustic centre, to the left and right of the plant. The microphone height was roughly 2.0 m above the ground.

The location of the measurement points can be seen from the site plan attached in the appendices.

The plant can be essentially described as "symmetrical". The average sound source height is about 3 m above the ground.

2.6 Measuring equipment

- **Precision sound pressure level meter** B & K, type 2230, class 0.7, serial no. 1654871
  Preamplifier: B & K, ZC0020; microphone: B & K 4189, serial no. 1858334, calibration 1997
- **Calibrator 93.8 dB** B & K, type 4230, class 0.6, serial no. 1594795, calibration 1999
- **Measuring station** CASA®, consisting of:
  - AD-converter SR-001, class 0.7; serial no. 008E, calibration 1997
  - Sharp PC 4600 laptop computer; serial no. 93010206Z
- Recording by means of **DAT recorder** Casio, type DA-7, serial no. 1004873
- Evaluation by means of **2-channel real-time frequency analyser** Norwegian Electronics NOR 830, class 0.7, serial no. 11597, calibration 1998

2.7 Measurement results

The following table summarises the measurement results for the respective operating conditions.

Measuring point	A Ambient noise (Plant at standstill) $L_{p,A,eg}$ [dB]	B Diesel unit in operation $L_{p,A,eg}$ [dB]	C Plant in operation (Conveyor belt, mixer, weighing device, diesel unit) $L_{p,A,eg}$ [dB]	D Operation-specific emissions (C - B) $L_{p,A,eg}$ [dB]
MP1 [1) 2)]	62.6	69.0	(71.0)	(66.7)
MP2	64.2	70.5 [1)]	(72.4)	(67.9)
MP3	61.8	68.1	(70.2)	(66.0)
MP4	52.4	55.4	66.5 [1)]	66.1
MP5	54.6	58.1	68.3	67.9
MP6	56.8	58.5	65.8	64.9

[1)].....Third-octave band frequency analysis in the plant

[2)].....Level gauge in the plant

Bracket value:.....Ambient noise too high - measured values therefore cannot be used for the sound power calculation.

Since the ambient noise influence at measurement positions 1, 2 and 3 exceeds the minimum requirements according to DIN EN ISO 3746, only the measurement results for MP4, MP5 and MP6 are used for the calculation of the measurement area level.

This approach appears permissible due to the symmetry of the plant.

It is expressly stated at this point that the sound power level that could be determined on the basis of the ambient conditions found could only be determined based on the standards and guidelines listed in the basics section.

Measurement surface level at a distance of 15 m from the acoustic centre of the plant:

Equivalent continuous sound level: $L_{p,A,eg}$ = 66.5 dB

Measurement area measure (hemispherical sound propagation):

LS = 20 lg r + 10 lg 2 π

r = 15 m

LS = 31.5 dB

A-weighted sound power level $\mathbf{L_{w,A,eq}}$ **= 98 dB** (rounded)

Noise description

The plant has no audible sound components and can be described as slightly fluctuating continuous noise without significant peak levels.

2.8 Further noise emission sources for an overall consideration of fresh concrete production

In addition to the plant noise of the concrete mixing plant, the following additional noise emissions for fresh concrete production are pertinent:

- Wheel loader travel including gravel feeding
- Diesel power unit
- Truck mixer filling processes

The following table summarises the sound emission measurements of these individual components

Sound source	Measuring distance [m]	Measurement results [dB]		Sound power level [2] $L_{W,A,eq}$ values rounded to whole [dB]
		$L_{p,A,eg}$	$L_{p,A,max}$	
Wheel loader gravel feeding CAT 28 B	10	73.4	82.5	101
Diesel unit [1] (on-site)	6	74.3	76.1	98
Mobile mixer filling process [1]	10	77.9 (76.9)	81.9 (81.5)	105 [1]

[1] .....Frequency analysis and level gauge in the plant

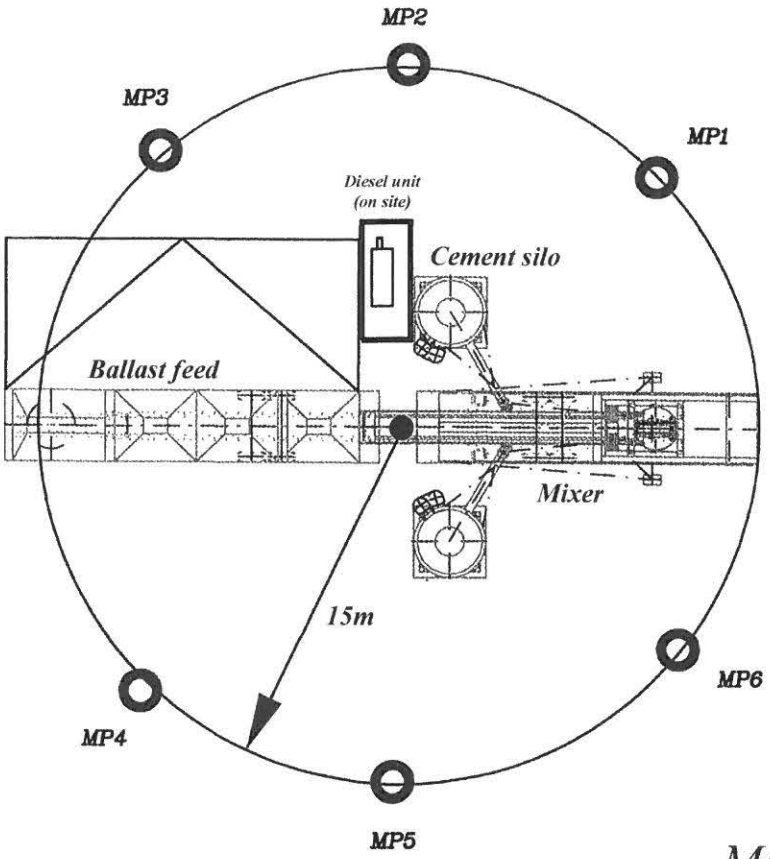
[2] .....For hemispherical sound propagation

Bracket value: .....With ambient noise corrected operation-specific emission component

(ambient $L_{A,eq}$ = 71.0 dB)

Number of pages, project: 8 Number of pages, annexes: 9

Site plan



Measuring point height... h=2m

TAS Sachverständigenbüro für
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A-4030 Linz, Emil-Rathenau-Str.1
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www.tas.at office@tas.at

Scale:	Plan content:
1:200	Measuring point overview

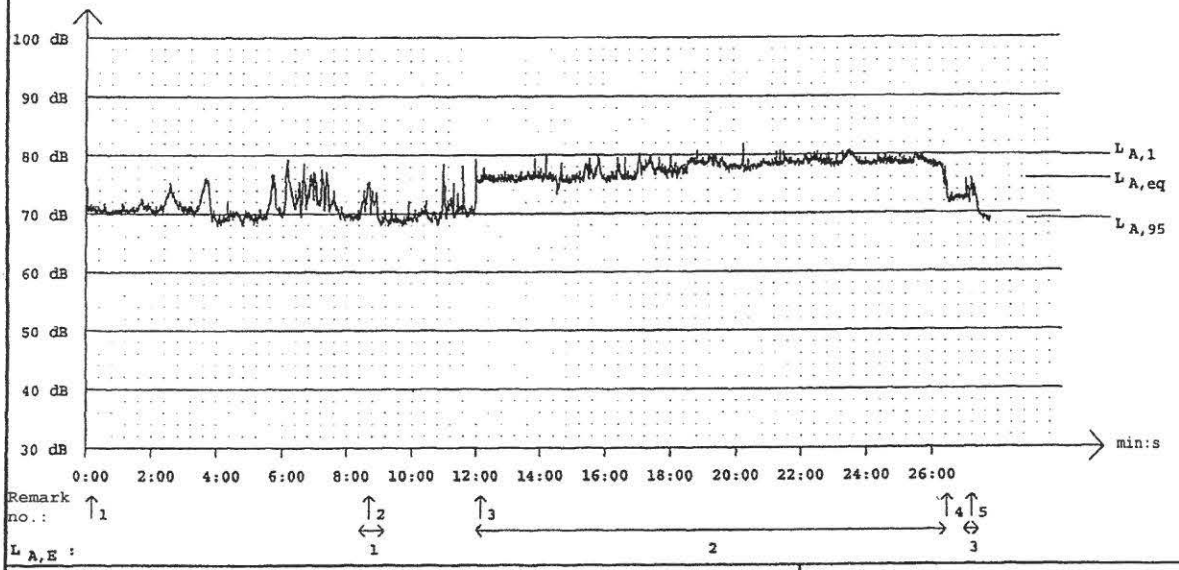
	Date	Name
Edited	07/02/2006	PH
Checked	07/02/2006	WR
Plan no.:	1	
Project:	99-0100T	
File name: Messpunkteübersicht.dwg		

Level gauges

CASA(R) sound measurement		Report no.	1-2
Measurement location: Ohlsdorf Euromix 2000 mixing plant	Postcode: A-4694	Project no: 99-0100T /WR Measurement date: 03/05/1999 Start of measurement: 14:40	
Microphone height: 2m Microphone position: MP1		Weather: calm	

Level gauge:

Feed: 30 cm/h; Calibration level: 93.8 dB



Frequency distribution:

Measurement results:

$L_{A,eq}$ = 75.9 dB

$L_{A,1}$ = 79.9 dB

$L_{A,95}$ = 69.0 dB

Cycle: 0.1 s

Samples: 16700

Individual events: No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Duration (s)	45.1	864.1	27.1												
$L_{A,eq}$ (dB)	72.0	77.9	73.3												
$L_{A,E}$ (dB)	88.5	107.3	87.6												
$L_{A,max}$ (dB)	75.7	81.9	75.9												
Measuring distance approx. (m)	10.0	10.0	10.0												

Remarks:

1:Environment + unit + plant in op.

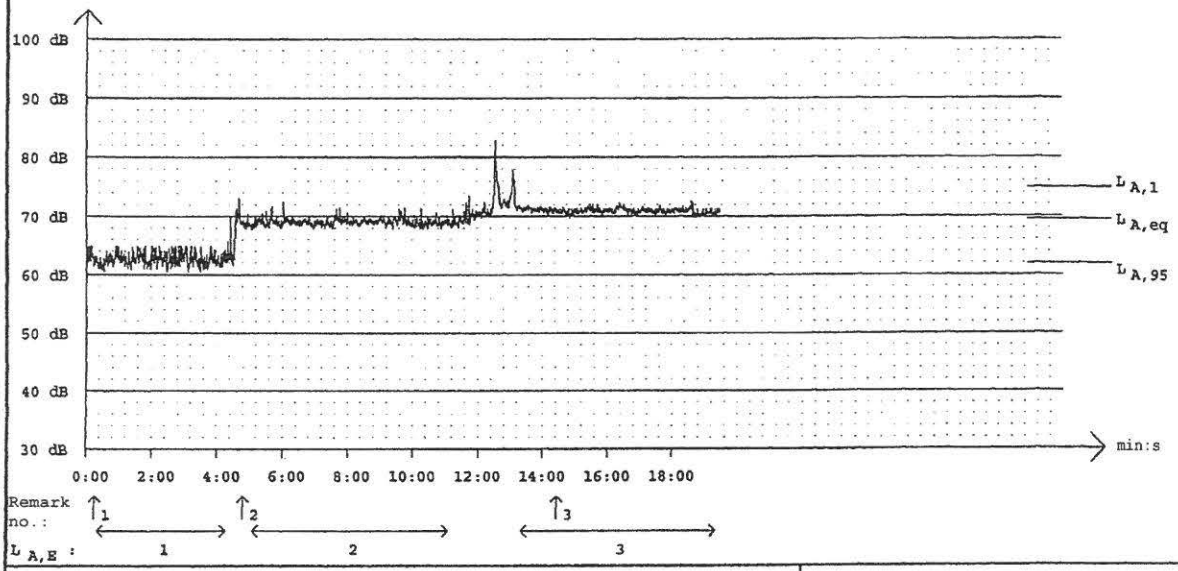
2:Mobile mixer access to mixing tower <1> 6:Mobile mixer departure <3>

3:to4: Mobile mixer filling process at 10m distance from the vehicle axle <2>

CASA(R) sound measurement		Report no.	1-1
Measurement location: Ohlsdorf Euromix 2000 mixing plant	Postcode: A-4694	Project no: 99-0100T /WR Measurement date: 03/05/1999 Start of measurement: 14:00	
Microphone height: 2m Microphone position: MP1		Weather: clear	

Level gauge:

Feed: 30 cm/h; Calibration level: 93.8 dB



Frequency distribution:

Measurement results:

$L_{A,eq}$ = 69.5 dB

$L_{A,1}$ = 74.9 dB

$L_{A,95}$ = 61.9 dB

Cycle: 0.1 s

Samples: 11724

Individual events:

No.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Duration	(s)	235.3	360.1	360.1												
$L_{A,eq}$	(dB)	62.6	69.0	71.0												
$L_{A,E}$	(dB)	86.3	94.6	96.5												
$L_{A,max}$	(dB)	64.9	72.5	72.7												
Measuring distance approx.	(m)	100.0	15.0	15.0												

Remarks:

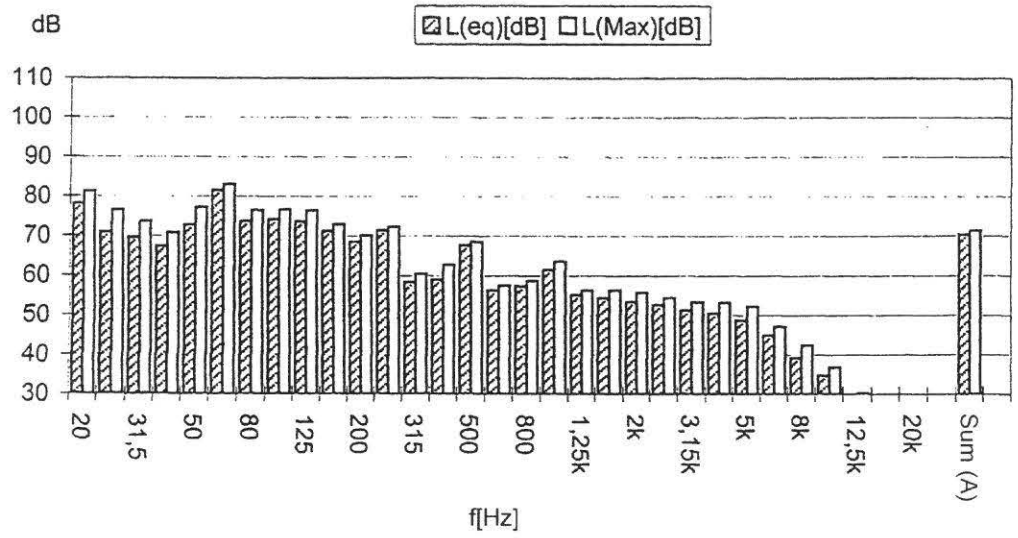
1:Environment alone {ballast works) <1>

2:Environment + power unit (on site) <2>

3:Plant in operation (gravel conveyor belt,weighing unit,mixer) <3>

Frequency analyses

Emissions measurement
SBM Wageneder
Euromix 2000



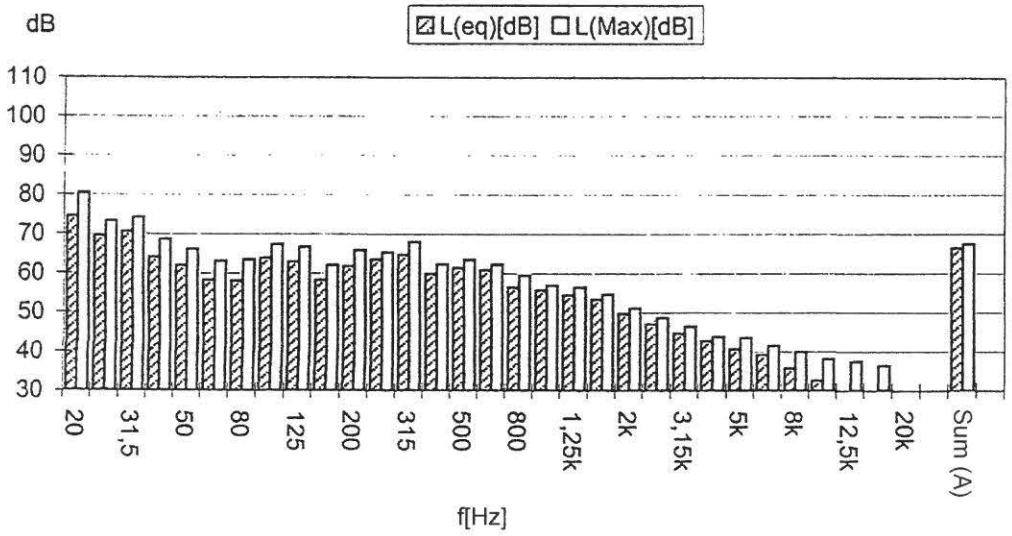
f[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800
$L_{(eq)}$[dB]	78.1	70.9	69.7	67.4	72.8	81.7	73.8	74.2	73.6	71.2	68.6	71.4	58.4	59.1	67.7	56.3	57.4
$L_{(Max)}$[dB]	81.3	76.5	73.7	70.9	77.3	83.1	76.6	76.7	76.5	72.9	70.1	72.4	60.5	62.7	68.5	57.5	58.7

f[Hz]	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k	Sum (A)	
$L_{(eq)}$[dB]	61.5	55.3	54.4	53.5	52.8	51.3	50.5	48.8	45.0	39.3	34.9	29.4	23.3	21.2	70.4	
$L_{(Max)}$[dB]	63.6	56.4	56.4	55.8	54.5	53.4	53.3	52.3	47.2	42.5	36.9	30.2	23.8	21.4	71.5	

Description of the source(s):	Ambient noise - diesel unit
Measurement position:	MP2
Distance to sources and other relevant objects:	10m in front of unit
Meteorology:	clear
Measurement date:	03/05/1999
Time:	from 14:00 hrs
Subj. audio sample:	Continuous muffled diesel unit noise
Background noise:	approx.55 dB

Emissions measurement

SBM Wageneder
Euromix 2000

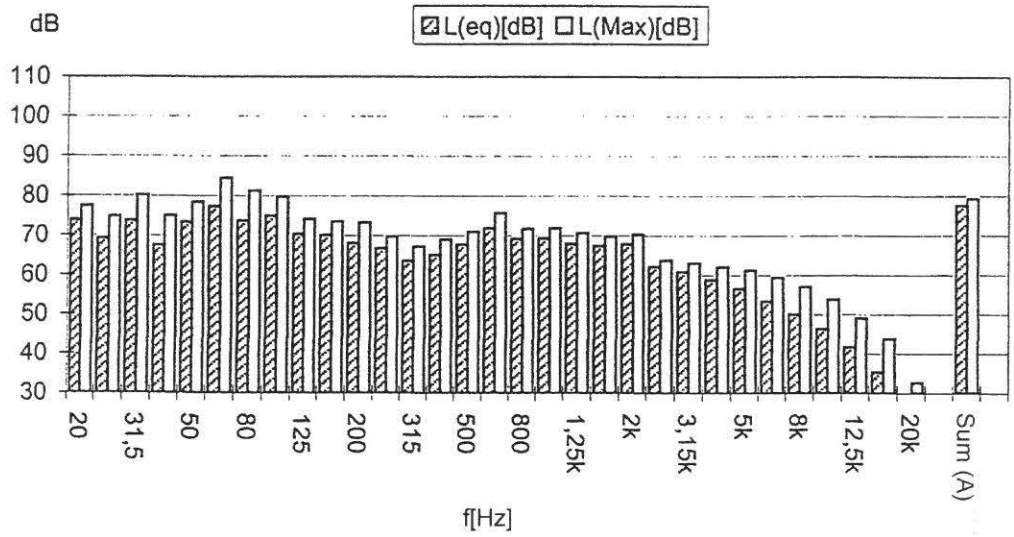


f[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800
$L_{(eq)}$[dB]	74.5	69.5	70.7	64.1	62.0	58.4	58.1	63.9	62.9	58.4	61.8	63.6	64.7	59.9	61.5	60.9	56.5
$L_{(Max)}$[dB]	80.4	73.4	74.3	68.7	66.1	63.1	63.5	67.4	66.7	62.1	65.9	65.3	68.0	62.3	63.5	62.3	59.5

f[Hz]	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k	Sum (A)		
$L_{(eq)}$[dB]	55.8	54.6	53.4	49.8	47.1	44.7	42.8	40.8	39.3	35.8	32.7	28.3	24.9	21.1		66.5	
$L_{(Max)}$[dB]	57.0	56.5	54.7	51.2	48.7	46.5	43.9	43.6	41.6	40.0	38.2	37.5	36.5	28.3		67.6	

Description of the source(s):	Plant noise (conveyor belt, weighing scale, mixer)
Measurement position:	MP4
Distance to sources and other relevant objects:	15m
Meteorology:	clear
Measurement date:	03/05/1999
Time:	from 14:00 hrs
Subj. audio sample:	Consistent machine noise (broadband)
Background noise:	approx.55 dB

Emissions measurement
SBM Wageneder
Euromix 2000



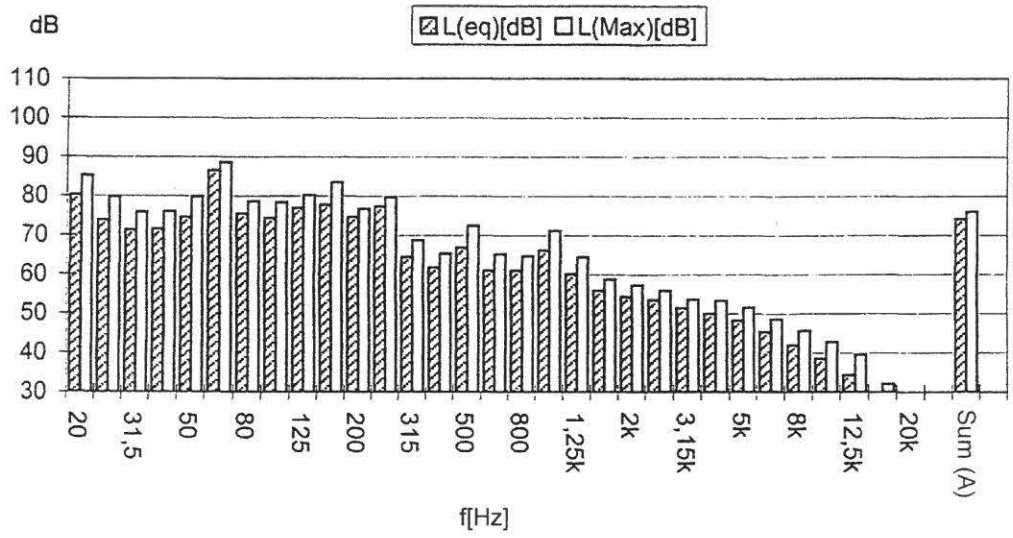
f[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800
$L_{(eq)}$[dB]	73.9	69.3	73.8	67.6	73.4	77.4	73.8	75.0	70.4	70.2	68.1	66.8	63.6	65.2	67.8	71.9	69.2
$L_{(Max)}$[dB]	77.5	74.9	80.2	75.0	78.5	84.4	81.3	79.8	74.2	73.5	73.3	69.8	67.3	69.0	71.0	75.8	71.7

f[Hz]	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k	Sum (A)		
$L_{(eq)}$[dB]	69.4	68.0	67.4	67.9	62.2	60.9	58.9	56.6	53.4	50.1	46.4	41.7	35.3	24.3		77.7	
$L_{(Max)}$[dB]	71.9	70.7	69.8	70.4	63.8	63.1	62.1	61.2	59.4	57.1	53.9	49.1	43.9	32.7		79.3	

Description of the source(s):	Truck mixer filling process
Measurement position:	MP1
Distance to sources and other relevant objects:	10m to the side of the vehicle axle
Meteorology:	clear
Measurement date:	03/05/1999
Time:	from 14:00 hrs
Subj. audio sample:	Constant engine noise
Background noise:	approx.71 dB

Emissions measurement

SBM Wageneder
Euromix 2000



f[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800
$L_{(eq)}$[dB]	80.3	73.9	71.3	71.6	74.6	86.5	75.6	74.4	77.0	77.8	74.7	77.5	64.5	61.8	66.9	61.0	61.0
$L_{(Max)}$[dB]	85.3	79.9	75.9	76.1	79.9	88.7	78.7	78.5	80.3	83.6	76.8	79.8	68.8	65.3	72.5	65.3	64.8

f[Hz]	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k	Sum (A)		
$L_{(eq)}$[dB]	66.2	60.2	56.0	54.4	53.5	51.5,	50.1	48.3	45.4	42.0	38.6	34.4	26.8	19.4		74.3	
$L_{(Max)}$[dB]	71.2	64.5	58.8	57.4	56.0	53.7	53.4	51.6	48.7	45.7	42.8	39.6	32.1	21.7		76.1	

Description of the source(s):	Diesel unit present on site
Measurement position:	6m from acoustic centre point
Distance to sources and other relevant objects:	6m
Meteorology:	clear
Measurement date:	03/05/1999
Time:	from 14:00 hrs
Subj. audio sample:	Muffled diesel unit noise (continuous)
Background noise:	approx.63 dB

Explanations and definition

EXPLANATIONS ON THE SOUND MEASUREMENT REPORT

LEVEL GAUGE

In the diagram, the A-weighted sound level in dB is plotted on the ordinate and the measurement time in minutes on the abscissa.

Below the diagram, outstanding occurrences are marked with remark numbers (remark no.), which are provided with vertically directed arrows, and which are explained briefly at the end of the measurement report or on a supplementary sheet.

The horizontal double arrows and the corresponding number (Sei-No.) mark "single events" if necessary, whose values are listed under this designation.

FREQUENCY DISTRIBUTION

This indicates how often the occurring sound levels are reached, and is given as a percentage of the measurement time.

The frequency distribution can be used to record the statistical characteristics of fluctuating noises.

DEFINITIONS

A-WEIGHTING
The A-weighted sound pressure level $L_{p,A}$ is the sound pressure level determined with A-weighting - specified in the Ordinance of the Federal Office of Metrology and Surveying of 29/07/1979.

BASE LEVEL ($L_{A,95}$)
The A-weighted sound pressure level of the sound level frequency distribution of any noise exceeded in 95 % of the measurement time.

BASIC NOISE LEVEL ($L_{A,GG}$)
The lowest A-weighted sound pressure level in dB measured at a location during a specific period of time that is caused by distant sounds and is perceived to be quiet when exposed to them. It is the lowest value to which the display of the sound level meter (display dynamics "fast") repeatedly falls back.

It can only be determined if neighbouring operations or other sound sources involved in the generation of clearly discernible sound events can be switched off. In this case, if a sound level frequency distribution is available, the sound pressure level *L95* exceeded in 95 % of the measurement period can be used as the basic noise level in certain cases.

ENERGY EQUIVALENT CONTINUOUS SOUND LEVEL ($L_{A,eq}$)
Single-number specification used to describe sound events with a fluctuating sound pressure level. The energy-equivalent continuous sound level is calculated as the sound pressure level that is energy-equivalent to the interrupted noise, or noise with a fluctuating sound pressure level during continuous exposure.

Essentially, there are three methods of determining the energy-equivalent continuous sound level:

- Integration of the square of the sound pressure
- Scanning method
- Classification procedure

MEAN PEAK LEVEL ($L_{A,1}$)
The A-weighted sound pressure level exceeded in 1 % of the measurement time.

MAXIMUM LEVEL ($L_{A,max}$)
The highest A-weighted value occurring during the measurement time, with the display dynamic "fast" or "pulse" determined sound pressure level.

EVALUATION LEVEL (L_r)
The A-weighted energy-equivalent continuous sound level of the noise to be evaluated, referred to the reference time, which - if necessary - is provided with supplements. It is the essential basis for the assessment of a sound emission situation.

SINGLE EVENT LEVEL ($L_{A,E}$ or $L_{A,Sel}$)
Sound level that is used to describe a single sound event and that has the same energy content for a duration of one second as the total sound event that fluctuates over the entire course of time.

TOTAL SOUND EMISSIONS
Sum total of all sound effects from the surroundings.

SPECIFIC SOUND EMISSIONS
Specific noise attributable to a particular sound source or group of sound sources (e.g. one blower alone, one engine alone or operating noise alone, traffic noise alone).

LOCAL SOUND EMISSIONS
Noise usually present at the measurement location after switching off all sound sources involved in the specific sound emissions to be investigated (e.g. emissions from traffic systems, previously approved operating installations or parts of operating installations, natural noises).

MINERAL PROCESSING
A Member of MFL Group

sound technological measurement report
mobile concrete mixing plant, Type EUROMIX

The following list of sound technical data is a short summary of the sound technical measurement report 99-0100T from 07.02.2006.

Object of measurement: mobile concrete mixing plant, manufactured by SBM, Type EUROMIX 2000, approx. 100 m³/h concrete output

A-weighted sound power level: **$L_{w,A,eq}$ = 98 dB**

measurement area level at 15 m distance from the acoustic centre:
$L_{p,A,eq}$ = 66,5 dB

Sound description:

The plant noise is described as constant level of noise with no sound components.
The aforementioned sound power level includes the following operating noises:
- Mobile hopper and weighing unit
- Mobile mixing unit (inclined belt conveyor and mixer)
- Cement silo and screw

As part of an overall examination the following additional sound technical components have been recorded:
- Diesel generator set (supplied by customer): $L_{w,A}$ = 98 dB
- Driving and aggregate feeding with wheel loader: $L_{w,A}$ = 101 dB
- Discharge into truck mixers: $L_{w,A}$ = 105 dB

One truck mixer filling sequence lasts for about 8 minutes.

Because of the design-technical characteristics (same process flow, enclosure of the mixing unit with ISO-panels, ...) is this measurement / test report applicable for following types of mixing plants:
- EUROMIX 1000 isolated version
- EUROMIX 1600 isolated version
- EUROMIX 2000
- EUROMIX 2000 ECO
- EUROMIX 3000
- EUROMIX 3300
- EUROMIX 3300 SPACE
- EUROMIX 3000 ECO
- EUROMIX 4000

SBM Mineral Processing GmbH
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Tel. + 43 3612 / 270

Appendix C

Noise Modeling Output

Report date: 3/12/2025
Case Description: 2021 Lendell Lane

				---- Receptor #1 ----			
		Baselines (dBA)					
Description	Land Use	Daytime	Evening	Night			
Residence	Residential	60	60	60			

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	1320	0
Grader	No	40	85		1320	0

		Results	
	Calculated (dBA)		
			Day
Equipment		*Lmax	Leq	Lmax
Dozer		53.2	49.3	N/A
Grader		56.6	52.6	N/A
	Total	56.6	54.2	N/A

*Calculated Lmax is the Loudest value.

2021 Lendell Lane

CadnaA Local Library Table

Name	ID	Type	1/3 Oktave Spectrum (dB)											
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin
	G	Lw (c)			94.9	93.9	92.5	103.9	104.2	110.9	106.9	99.9	114.3	113.8
		Li			108.5	97.8	95	95.7	94.9	97.4	91.9	87.9	101.8	109.8
Carrier 50PG03-12	CarrierAC	Li			82.4	83.4	81.6	79.1	78.8	76.9	72.9	70.2	83.8	88.9
Batch Plant	BP	Li		106.8	94.5	99	99.7	97.6	91.9	85.9	78.9	71.7	98.1	108.8

2021 Lendell Lane

CadnaA Point Source Table

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft^2)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
HVAC			HVAC	83.8	83.8	83.8	Lw	CarrierAC		0	0	0							0		(none)	5	r	2120535.54	14068030.1	5
Batch Plant			Batch Plant	98.1	98.1	98.1	Lw	BP		0	0	0							0		(none)	5	r	2120624.61	14067953.1	5

2021 Lendell Lane

CadnaA Line Source Table

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night			
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft^2)		(min)	(min)	(min)	(dB)	(Hz)	
				116.5	116.5	116.5	101	101	101	Lw'	101		0	0	0							0	500	(none)

2021 Lendell Lane

CadnaA Road Source Table

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface	
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)	
Truck Circulation				55	0	55			4	0	4	100	0	100	5	5	0	0	1

2021 Lendell Lane

CadnaA Receiver Table

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use		Height			Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
Propety Line				72.6	72.6	0	0		x	Total	5	r	2120645.25	14068092.1	5
R1				43.2	43.2	0	0		x	Total	5	r	2121501.66	14068613.7	5

<Organization?>				13 March 2025							
<Analysis By?>				TNM 2.5							
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	<Project Name?>						a State highway agency substantiates the use				
RUN:	<Run Title?>						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Cirby Way	50.0	point3	3	-1,000.0	0.0	0.00				Average	
		point4	4	1,000.0	0.0	0.00					

<Organization?>				13 March 2025								
<Analysis By?>				TNM 2.5								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	<Project Name?>											
RUN:	<Run Title?>											
Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Cirby Way	point3	3	724	40	22	40	15	40	0	0	0	0
	point4	4										

<Organization?>						13 March 2025					
<Analysis By?>						TNM 2.5					
INPUT: RECEIVERS											
PROJECT/CONTRACT:	<Project Name?>										
RUN:	<Run Title?>										
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active
			X	Y	Z	above	Existing	Impact Criteria		NR	in
						Ground	LAeq1h	LAeq1h	Sub'l	Goal	Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
35	22	1	0.0	35.0	0.00	5.00	0.00	66	10.0	8.0	Y
40	23	1	0.0	40.0	0.00	5.00	0.00	66	10.0	8.0	Y
45	24	1	0.0	45.0	0.00	5.00	0.00	66	10.0	8.0	Y
50	25	1	0.0	50.0	0.00	5.00	0.00	66	10.0	8.0	Y
55	26	1	0.0	55.0	0.00	5.00	0.00	66	10.0	8.0	Y
60	29	1	0.0	60.0	0.00	5.00	0.00	66	10.0	8.0	Y
65	30	1	0.0	65.0	0.00	5.00	0.00	66	10.0	8.0	Y
70	31	1	0.0	70.0	0.00	5.00	0.00	66	10.0	8.0	Y
75	32	1	0.0	75.0	0.00	5.00	0.00	66	10.0	8.0	Y
80	33	1	0.0	80.0	0.00	5.00	0.00	66	10.0	8.0	Y
85	34	1	0.0	85.0	0.00	5.00	0.00	66	10.0	8.0	Y
90	35	1	0.0	90.0	0.00	5.00	0.00	66	10.0	8.0	Y
95	36	1	0.0	95.0	0.00	5.00	0.00	66	10.0	8.0	Y
100	37	1	0.0	100.0	0.00	5.00	0.00	66	10.0	8.0	Y
110	38	1	0.0	110.0	0.00	5.00	0.00	66	10.0	8.0	Y
120	39	1	0.0	120.0	0.00	5.00	0.00	66	10.0	8.0	Y
130	40	1	0.0	130.0	0.00	5.00	0.00	66	10.0	8.0	Y
140	41	1	0.0	140.0	0.00	5.00	0.00	66	10.0	8.0	Y
150	42	1	0.0	150.0	0.00	5.00	0.00	66	10.0	8.0	Y
160	43	1	0.0	160.0	0.00	5.00	0.00	66	10.0	8.0	Y
170	45	1	0.0	170.0	0.00	5.00	0.00	66	10.0	8.0	Y
180	46	1	0.0	180.0	0.00	5.00	0.00	66	10.0	8.0	Y

190	47	1	0.0	190.0	0.00	5.00	0.00	66	10.0	8.0	Y
200	48	1	0.0	200.0	0.00	5.00	0.00	66	10.0	8.0	Y

<Organization?>					13 March 2025						
<Analysis By?>					TNM 2.5						
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	<Project Name?>						a State highway agency substantiates the use				
RUN:	<Run Title?>						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Altkinson Street	50.0	point3	3	-1,000.0	0.0	0.00				Average	
		point4	4	1,000.0	0.0	0.00					

INPUT: TRAFFIC FOR LAeq1h Volumes **<Project Name?>**

<Organization?>				**13 March 2025**									
<Analysis By?>				**TNM 2.5**									
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	**<Project Name?>**												
RUN:	**<Run Title?>**												
Roadway	**Points**												
Name	**Name**	**No.**	**Segment**										
			Autos		**MTrucks**		**HTrucks**		**Buses**		**Motorcycles**		
			V	**S**	**V**	**S**	**V**	**S**	**V**	**S**	**V**	**S**	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Altkinson Street	point3	3	446	45	13	45	13	45	0	0	0	0	
	point4	4											

<Organization?>
<Analysis By?>

13 March 2025
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
35	22	1	0.0	35.0	0.00	5.00	0.00	66	10.0	8.0	Y
40	23	1	0.0	40.0	0.00	5.00	0.00	66	10.0	8.0	Y
45	24	1	0.0	45.0	0.00	5.00	0.00	66	10.0	8.0	Y
50	25	1	0.0	50.0	0.00	5.00	0.00	66	10.0	8.0	Y
55	26	1	0.0	55.0	0.00	5.00	0.00	66	10.0	8.0	Y
60	29	1	0.0	60.0	0.00	5.00	0.00	66	10.0	8.0	Y
65	30	1	0.0	65.0	0.00	5.00	0.00	66	10.0	8.0	Y
70	31	1	0.0	70.0	0.00	5.00	0.00	66	10.0	8.0	Y
75	32	1	0.0	75.0	0.00	5.00	0.00	66	10.0	8.0	Y
80	33	1	0.0	80.0	0.00	5.00	0.00	66	10.0	8.0	Y
85	34	1	0.0	85.0	0.00	5.00	0.00	66	10.0	8.0	Y
90	35	1	0.0	90.0	0.00	5.00	0.00	66	10.0	8.0	Y
95	36	1	0.0	95.0	0.00	5.00	0.00	66	10.0	8.0	Y
100	37	1	0.0	100.0	0.00	5.00	0.00	66	10.0	8.0	Y
110	38	1	0.0	110.0	0.00	5.00	0.00	66	10.0	8.0	Y
120	39	1	0.0	120.0	0.00	5.00	0.00	66	10.0	8.0	Y
130	40	1	0.0	130.0	0.00	5.00	0.00	66	10.0	8.0	Y
140	41	1	0.0	140.0	0.00	5.00	0.00	66	10.0	8.0	Y
150	42	1	0.0	150.0	0.00	5.00	0.00	66	10.0	8.0	Y
160	43	1	0.0	160.0	0.00	5.00	0.00	66	10.0	8.0	Y
170	45	1	0.0	170.0	0.00	5.00	0.00	66	10.0	8.0	Y
180	46	1	0.0	180.0	0.00	5.00	0.00	66	10.0	8.0	Y

190	47	1	0.0	190.0	0.00	5.00	0.00	66	10.0	8.0	Y
200	48	1	0.0	200.0	0.00	5.00	0.00	66	10.0	8.0	Y

<Organization?>					13 March 2025						
<Analysis By?>					TNM 2.5						
INPUT: ROADWAYS							Average pavement type shall be used unless				
PROJECT/CONTRACT:	<Project Name?>						a State highway agency substantiates the use				
RUN:	<Run Title?>						of a different type with the approval of FHWA				
Roadway		Points									
Name	Width	Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Pfe Road	50.0	point3	3	-1,000.0	0.0	0.00				Average	
		point4	4	1,000.0	0.0	0.00					

<Organization?>				13 March 2025								
<Analysis By?>				TNM 2.5								
INPUT: TRAFFIC FOR LAeq1h Volumes												
PROJECT/CONTRACT:	<Project Name?>											
RUN:	<Run Title?>											
Roadway	Points											
Name	Name	No.	Segment									
			Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Pfe Road	point3	3	446	45	13	45	13	45	0	0	0	0
	point4	4										

<Organization?>
<Analysis By?>

13 March 2025
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: <Project Name?>
RUN: <Run Title?>

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
35	22	1	0.0	35.0	0.00	5.00	0.00	66	10.0	8.0	Y
40	23	1	0.0	40.0	0.00	5.00	0.00	66	10.0	8.0	Y
45	24	1	0.0	45.0	0.00	5.00	0.00	66	10.0	8.0	Y
50	25	1	0.0	50.0	0.00	5.00	0.00	66	10.0	8.0	Y
55	26	1	0.0	55.0	0.00	5.00	0.00	66	10.0	8.0	Y
60	29	1	0.0	60.0	0.00	5.00	0.00	66	10.0	8.0	Y
65	30	1	0.0	65.0	0.00	5.00	0.00	66	10.0	8.0	Y
70	31	1	0.0	70.0	0.00	5.00	0.00	66	10.0	8.0	Y
75	32	1	0.0	75.0	0.00	5.00	0.00	66	10.0	8.0	Y
80	33	1	0.0	80.0	0.00	5.00	0.00	66	10.0	8.0	Y
85	34	1	0.0	85.0	0.00	5.00	0.00	66	10.0	8.0	Y
90	35	1	0.0	90.0	0.00	5.00	0.00	66	10.0	8.0	Y
95	36	1	0.0	95.0	0.00	5.00	0.00	66	10.0	8.0	Y
100	37	1	0.0	100.0	0.00	5.00	0.00	66	10.0	8.0	Y
110	38	1	0.0	110.0	0.00	5.00	0.00	66	10.0	8.0	Y
120	39	1	0.0	120.0	0.00	5.00	0.00	66	10.0	8.0	Y
130	40	1	0.0	130.0	0.00	5.00	0.00	66	10.0	8.0	Y
140	41	1	0.0	140.0	0.00	5.00	0.00	66	10.0	8.0	Y
150	42	1	0.0	150.0	0.00	5.00	0.00	66	10.0	8.0	Y
160	43	1	0.0	160.0	0.00	5.00	0.00	66	10.0	8.0	Y
170	45	1	0.0	170.0	0.00	5.00	0.00	66	10.0	8.0	Y
180	46	1	0.0	180.0	0.00	5.00	0.00	66	10.0	8.0	Y

190	47	1	0.0	190.0	0.00	5.00	0.00	66	10.0	8.0	Y
200	48	1	0.0	200.0	0.00	5.00	0.00	66	10.0	8.0	Y