DRAFT SUPPLEMENTAL ENVIROMENTAL IMPACT REPORT

July 2022

Prepared for:

CITY OF ROSEVILLE
PLANNING DIVISION
311 Vernon Street
Roseville, CA 95678

CONTACT:
Kinarik Shallow
Associate Planner



Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

Prepared by:

DUDEK

1102 R STREET
SACRAMENTO, CA 95811
Christine Kronenberg, AICP

Draft Supplemental EIR

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	average daily traffic
AFY	acre-feet per year
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
Campus	Medical Center Campus
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
City	City of Roseville
CIWMB	California Integrated Waste Management Board
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CUP	central utility plant
dBA	A-weighted decibel
DMA	drainage management area
DPM	diesel particulate matter
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
GHG	greenhouse gas
gpd	gallons per day
GWP	global warming potential
HAP	hazardous air pollutant
HCAI	Department of Health Care Access and Information
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plan
HVAC	heating, ventilation, and air conditioning

Acronym/Abbreviation	Definition
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ksf	thousand square feet
LEED	Leadership in Energy and Environmental Design
LOS	level of service
LRSP	Local Road Safety Plan
mgd	million gallons per day
MMT	million metric tons
MRF	Material Recovery Facility
MT	metric ton
MTP	Metropolitan Transportation Plan
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NERSP	Northeast Roseville Specific Plan
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	oxides of nitrogen
O_3	ozone
OPR	California Governor's Office of Planning and Research
PCAPCD	Placer County Air Pollution Control District
PFC	perfluorocarbons
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
ppm	parts per million
PRC	California Public Resources Code
Project	Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project
ROG	reactive organic gas
RTP	Regional Transportation Plan
SACOG	Sacramento Area Council of Governments
SAP	Sustainability Action Plan
SB	Senate Bill
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SEIR	Supplemental Environmental Impact Report
SF_6	sulfur hexafluoride
SHS	State Highway System
SO_2	sulfur dioxide
SOx	sulfur oxides
SR	State Route
SRTP	Short-Range Transit Plan

Acronym/Abbreviation	Definition
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	travel analysis zone
TISG	Transportation Impact Study Guide
TNC	transportation network company
TRC	tribal cultural resource
TSM	Transportation Systems Management
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WRSL	Western Regional Sanitary Landfill
WWTP	Wastewater Treatment Plant
ZEV	zero-emission vehicle

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ES Executive Summary

This chapter provides a summary of the Draft Supplement (or Supplemental) Environmental Impact Report (Draft SEIR) for the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project). Included in this summary are areas of known controversy and issues to be resolved, a summary of all Project impacts and associated mitigation measures, and a statement of the ultimate level of significance after mitigation is applied.

ES.1 Document Purpose

This Draft SEIR was prepared by the City of Roseville (City), as lead agency, and updates the analysis in the 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH No. 2003062014) (2004 Expansion Project EIR) to inform decision makers, public agencies and the public of the potential significant environmental effects associated with the proposed Project. This Draft SEIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines; 14 CCR 15000 et seq.) published by the Natural Resources Agency of the State of California.

In 1992, the City prepared a Supplement to the Northeast Roseville Specific Plan EIR to evaluate site-specific impacts associated with the original development of the Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus). In 2004, the City evaluated an expansion to the 1992-approved project to add over 700,000 square feet of medical uses. Buildout of the Medical Center Campus and potential impacts associated with construction activity site disturbance were analyzed in the 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH no.2003062014) (2004 Expansion Project EIR). The 2004 Expansion Project EIR evaluated a new medical office building, a new Women and Children's Center, a new five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit addition to the existing hospital building, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, two new parking structures, including a three-story 400-space parking garage, a new helicopter landing pad, and an expansion and remodeling of the cafeteria, central utility plant and other existing buildings. Significant and unavoidable impacts identified in the 2004 Expansion Project EIR included impacts related to short-term construction-related air pollutant emissions, long-term operational air pollutant emissions from traffic, cumulative plus project traffic impacts at six intersections, and cumulative plus project plus West Roseville Specific Plan traffic impacts at five intersections. All remaining impacts were determined to have no impact, less-than-significant impact, or less than significant with the incorporation of mitigation measures.

The purpose of this Draft SEIR is to analyze those Project components that were not previously evaluated in the 2004 Expansion Project EIR analysis and potential effects on the environment resulting from any "changed condition" (i.e., changed circumstances, Project changes, or new information of substantial importance) that may result in environmental impact significance conclusions that the lead agency has determined may be significant. Based on the analysis in Chapter 3, Issues Addressed in the 2004 Expansion Project EIR, the 2004 Expansion Project EIR adequately evaluated impacts associated with the proposed Project and it was determined the proposed Project would not result in any new significant impacts in the following issue areas: Agriculture and Forestry Resources; Biological Resources; Geology, Soils, Seismicity; Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Population and Housing; Public Services and Recreation; and Wildfire. The issue areas where either new impacts not previously evaluated in the 2004 Expansion Project EIR, or the severity of the impact would be more severe, include: Aesthetics; Air Quality; Greenhouse Gases; Land Use; Public Utilities; and

Transportation. Therefore, this Draft SEIR further evaluates these resource areas and also recommends feasible mitigation measures, including prior mitigation measures included in the 2004 Expansion Project EIR still applicable to the proposed Project, that could reduce or avoid significant environmental impacts.

The CEQA Guidelines were last updated in 2018 and Wildfire was added as a new topic to Appendix G and vehicle miles traveled replaced level of service as the appropriate metric to evaluate traffic impacts. The CEQA Guidelines were also updated in 2016 to include tribal cultural resources as a new topic and in 2010 to include Energy as a new topic, and to clarify the methodology to evaluate impacts to greenhouse gases. The checklist in Chapter 3, Issues Addressed in the 2004 EIR, addresses the potential for an increase in energy demand, wildfire impacts and vehicle miles traveled and concludes that impacts would be less than significant. Please see Chapter 3 for additional information. To address the potential for tribal cultural resources to be present, the City has conducted outreach to the local tribes, consistent with Assembly Bill (AB) 52, as described in Chapter 1, Introduction. Therefore, these topics do not require further analysis in this Draft SEIR.

ES.2 Project Location

The Project site is located on the existing 49-acre Kaiser Permanente Roseville Medical Center campus (Campus) at 1600 Eureka Road. The campus is bordered by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Eureka Road on the east, and Rocky Ridge Drive on the west. The project site is located approximately 1 mile east of Interstate 80 and is bordered by commercial and office uses.

ES.3 Project Description and Background

The proposed Project would increase the size and capacity of the previously approved 2004 Kaiser Permanente Roseville Medical Center Expansion Project (2004 Expansion Project) on the existing Medical Center Campus. All of the buildings approved as part of the 2004 Expansion Project, described above, have been constructed with the exception of the five-story, 155,000 square-foot Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building, a three-level, approximately 400-space parking garage located in the northeast corner of the Medical Center Campus, and helicopter landing pad.

The proposed Project would increase the height and capacity of the previously approved buildings that were not constructed and add a few additional elements. As discussed in Chapter 2, Project Description, the proposed Project revises the 2004 Expansion Project to allow for an approximately 278,000 square foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved Surgery and Intensive Care Unit Facility, expansion of the Emergency Department (which is part of the Main Hospital Building) to add 36 new treatment bays (change of use with no additional square footage); a new four-level garage with rooftop parking to accommodate approximately 800 stalls located on the site of the prior approved parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; a new generator yard; and internal upgrades to the existing central utility plant. At project completion there will be 20 electric vehicle charging stations and 107 electric-vehicle capable stall on-site.

The proposed revisions to the approved 2004 Expansion Project are detailed in Table ES-1, 2004 Expansion Project as Compared to the Proposed Project, and details of the number of available hospital beds and staffing numbers are provided in Table ES-2, Hospital Beds and Staffing Levels, below.

Table ES-1. 2004 Expansion Project as Compared to the Proposed Project

	2004 Expansion Project	Proposed Project	2004 Expansion Project	Proposed Project
Building Description	Surgery and Intensive Care Unit Facility	Inpatient Tower Building	Parking Structure	Parking garage with roof-top parking
Building Size	155,000 gsf	278,000 gsf	N/A	260,897 gsf
Number of Stories	5	6	3 levels	4 levels
Building Height	83 feet	107 feet	23 feet	46 feet

Source: Kaiser Permanente 2022.
gsf = gross square feet

Table ES-2. Hospital Beds and Staffing Levels

	2004 Expansion Project	Existing	Proposed Project	Incremental Increase
Number of Hospital Beds	432	352	138	58
Number of Staff	3,459	2,800	728	69

Source: Kaiser Permanente 2022.

This Draft SEIR evaluates the potential environmental effects associated with changes to the previously approved 2004 Expansion Project.

ES.4 Project Objectives

CEQA Guidelines Section 15124(b) require that the Project Description include a statement of the objectives of a project. Section 15124(b) further states that "the statement of objectives should include the underlying purpose of the project and may discuss the project benefits." The underlying purpose of the proposed Project is to accommodate both current and future demand for hospital space, including emergency services, by expanding facilities on the current Medical Center Campus.

Specific Project objectives are:

1. Expand the Kaiser Permanente Roseville Medical Center Campus through the construction and operation of new medical facilities in order to accommodate future growth of Kaiser Permanente members and the need to provide additional medical services that benefit the community.
2. Optimize the use of the development potential on the existing Medical Center Campus by developing a comprehensively planned, integrated Medical Campus within the existing campus boundaries. Construction of a new hospital tower and expanded emergency department services will keep pace with increasing population growth in the City and in the region.
3. Maintain current services at the existing Roseville Medical Center Campus, including 24/7 emergency services, without interruption.
4. Provide parking sufficient to accommodate membership and patient parking needs, as well as staff parking to meet current and projected future demand.

5. Redesign internal circulation on the Medical Center Campus in order to optimize safety, provide enhanced health and wellness, and create a seamless flow between pedestrians and vehicle traffic throughout the campus.
6. Foster the creation of employment opportunities in healthcare by providing jobs for skilled personnel in specialty healthcare departments and improving the jobs/housing balance within the City of Roseville and the surrounding area.
7. Implement the vision, objectives and policies of the Northeast Roseville Specific Plan and the City of Roseville General Plan (2035).
8. Incorporate sustainable green building design features developed by the Leadership in Energy and Environmental Design (LEED) to meet the LEED Gold performance standards and Kaiser Permanente's long-term environmental stewardship goals.

ES.5 Areas of Known Controversy and Issues to be Resolved

Pursuant to Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation from February 25, 2022 to March 28, 2022 to interested agencies, organizations, and parties. A total of three comment letters were received during the scoping period and are included in Appendix A. No issues were raised concerning the scope of the analysis or areas of controversy. The comment letters generally re-iterate requirements for addressing air quality, cultural resources, and water quality.

ES.6 Summary of Environmental Impacts and Mitigation Measures

Table ES-1, Summary of Environmental Impacts and Mitigation Measures, provides an overview of the impact analysis and a summary of environmental impacts (before and after mitigation) resulting from implementation of the Project, pursuant to CEQA Guidelines Section 15123(b)(1). Table ES-1, Summary of Impacts and Mitigation Measures has text shown in underline/strike out format. Text with the strikethrough is prior mitigation language from the 2004 Expansion Project EIR that is outdated and needs to be updated for the proposed Project. The updated mitigation measure language is underlined for ease of identification of the change. For a more detailed discussion of Project impacts, please see Chapters 3 and 4 of this Draft SEIR.

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1 Aesthetics			
Impact 4.1-1: The proposed Project would not conflict with applicable zoning and other regulations governing scenic quality	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.1-2: The proposed Project would not create a new source of light or glare which would adversely affect day or nighttime views in the area.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.1-3: The proposed Project would contribute to a cumulative increase in light and glare.	Potentially Significant	Given the location of the Project within a developed area of the City, the addition of new lights would be relatively limited; however, the 2035 General Plan EIR, which considered build out of the project site, determined it is not feasible to mitigate light and glare impacts completely without prohibiting the use of light in new development and no other feasible mitigation measures are available. Therefore, the Project's cumulative contribution would be considerable, and the impact would be significant and unavoidable.	Significant and Unavoidable
4.2 Air Quality			
Impact 4.2-1: The proposed Project would not conflict with or obstruct implementation of the Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.2-2: The proposed Project could result in a cumulatively considerable	Potentially Significant	**Mitigation Measure 4.2-2(a): Prepare a Construction Emission/Dust Control Plan**	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
increase of any criteria pollutant for which the Project region is in non-attainment.		a. Thirty days prior to the start of construction, the Placer County Air Pollution Control District (PCAPCD) requires, at a minimum, preparation of a Construction Emission/Dust Control Plan (CEDCP) and submittal of the CEDCP to the PCAPCD for review and approval. The CEDCP shall identify mitigation measures to reduce the level of construction-related emissions below the PCAPCD threshold of 82 pounds per day in accordance with the standards of the PCAPCD. ~~Mitigation measures could include some or all of the following to reduce emissions to less than significant levels (below the PCAPCD threshold of 82 pounds per day):~~ Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations. b. The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated and submitted monthly throughout the duration of the Project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty offroad equipment, the Project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the Project manager and on-site foreman.	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		c. ~~An enforcement plan shall be established to evaluate project-related on- and off-road heavy-duty vehicle engine emission opacities weekly, using standards as defined in California Code of Regulations, Title 13, Sections 2180 - 2194. An Environmental Coordinator, 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 and the equipment must be repaired within 72 hours.~~ An Independent Environmental Coordinator or Placer County Air Pollution Control District staff, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate Project-related off-road and heavy-duty on-road equipment emissions during construction for compliance with engine emission opacities, using standards as defined in the California Code of Regulations, Title 13, Sections 2180-2194. Operators of vehicles and equipment found to exceed opacity limits shall be notified and the equipment must be removed from service and repaired prior to being placed back in service. Equipment owners and operators found to be operating equipment that is out of compliance shall be subject to a notice of violation and monetary fines. d. The Project shall provide a plan for approval by the PCAPCD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction Project, including owned, leased and subcontractor vehicles, will achieve	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		a Project-wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. 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. e. There shall be no open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered to waste-to-energy facilities. f. Minimize idling time to 10 minutes. g. Earth-moving construction equipment shall be cleaned with water once per day. h. Soil binders shall be spread on unpaved roads and employee/equipment parking areas. i. Approved chemical soil stabilizers shall be applied according to manufacturer's specifications to all inactive construction areas (i.e., previously graded areas which remain inactive for 96 hours). j. Use existing line power sources located on the site or clean fuel generators rather than temporary power generators, except during the first four weeks of construction of the first structure, when temporary generators may be used if line power sources are not feasible. k. All grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour (as measured by an on-site anemometer) and dust is impacting adjacent properties.	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		l. All truck and equipment wheels shall be washed prior to leaving the site. m. An operational water truck shall be on site at all times. Apply water to control dust at least twice daily (morning and evening), and as needed to prevent dust impacts off site. n. Streets shall be washed or wet-broomed if silt is carried over to adjacent public thoroughfares. o. Traffic speeds on all unpaved surfaces shall be 15 miles per hour or less. In addition to the above measures, the Project applicant shall consider any of the following measures to further reduce construction-related exhaust emissions: p. Employ construction activity management techniques, such as extending the construction period outside the ozone season of May through October; reducing the number of pieces used simultaneously; increasing the distance between emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours. q. Construction contracts shall include language that prohibits the use of pre-1996 off-road heavy-duty construction equipment on declared Spare the Air Days and prohibits the use of all heavy-duty diesel equipment on days forecast to exceed the federal one-house standard. r. Use low-sulfur fuel for stationary construction equipment. s. The applicant shall include a provision in contract language that earth-moving contractors	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		shall not operate pre-1996 heavy-duty diesel equipment on forecast Spare the Air Days. t. Use low-emission stationary equipment on site. u. Provide a flag person to guide traffic properly and ensure safety at construction sites. v. Schedule operations affecting traffic for off-peak hours. w. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. x. Minimize obstruction of through-traffic lanes. y. Develop trip reduction plan to achieve 1.5 AVR (average vehicle ridership) for construction employees In addition to the above PCAPCD measures, the following dust control measures would be required under the grading permit by the Roseville Grading Ordinance: aa. Cover all haul trucks or maintain at least two feet of freeboard. bb. Sweep all paved access roads, parking areas, or staging areas on a daily basis at construction sites, particularly where silt has carried over to adjacent public thoroughfares. cc. Cover, watering twice daily, or apply (non-toxic) soil binders to any exposed stockpiles (dirt, sand, etc.), particularly over weekends if stockpiles are located in proximity to the existing hospital. dd. If landscaping is not planted immediately in areas where construction has been completed,	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		hydroseed undeveloped areas. Appropriate application of such materials (appropriate seed mixture used in hydroseeding) shall be reviewed and approved by a qualified biologist. 4.2-2(b) Contribute Air Quality Fees to offset long-term operational ozone precursor emissions. The landowner shall contribute ~~fifty six thousand dollars ($56,000)~~ $48,279 per ton of NO_x emissions to the City to offset long-term operational NO_x emissions (the "Air Quality Fee"). The City and PCAPCD shall enter into an agreement for the collection and disbursement of the Air Quality fee for off-site air quality mitigation. The Air Quality Fee is to be used for projects, programs and services that result in reduced emission sources that directly benefit City residents. Such projects, programs and services may include, but are not limited to, replacing non-EPA certified wood stoves, transit vehicle conversions, and retrofitting vehicles with cleaner burning fuels. 4.2-2(c) All flat roofs shall be made of material(s) that reduce energy demand. 4.2-2(d) Provide power outlet at loading docks and prohibit diesel truck idling for more than five minutes. All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and must be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage shall be provided.	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Impact 4.2-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.2-4: The proposed Project could result in a cumulative impact related to air quality.	Potentially Significant	Implement Mitigation Measures 4.2-2(a) through 4.2-2(d)	Less than Significant
4.3 Greenhouse Gas Emissions			
Impact 4.3-1: The proposed Project would not generate GHG emissions that may have a significant effect on the environment.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.3-2: The proposed Project would not conflict with any plan policy or regulation adopted for reducing GHG emissions.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.3-3: The proposed Project would not result in a cumulative impact related to GHG emissions.	Less than Significant	No mitigation measures would be required.	Less than Significant
4.4 Land Use and Planning			
Impact 4.4-1: The proposed Project would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	No mitigation measures would be required.	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.5 Utilities			
Impact 4.5-1: The proposed Project would not require the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.5-2: Sufficient water supplies would be available to serve the proposed Project.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.5-3: The proposed Project would not result in inadequate wastewater treatment capacity to serve the Project's projected increase in demand.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.5-4: The proposed Project would not generate an increase in solid waste exceeding capacity of the landfill or impair the attainment of solid waste reduction goals.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.5-5: The proposed Project would comply with reduction statutes and regulations related to solid waste.	Less than Significant	No mitigation measure would be required.	Less than Significant
Impact 4.5-6: The proposed Project, when combined with current and reasonably foreseeable future projects,	Less than Significant	No mitigation measure would be required.	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
would not result in cumulatively considerable impacts related to utilities and service systems.			
4.6 Transportation and Circulation			
Impact 4.6-1: The proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.6-2: The proposed Project would not conflict with adopted programs, plans, ordinances, or policies regarding bicycle facilities.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.6-3: The proposed Project would not conflict with adopted programs, plans, ordinances, or policies regarding pedestrian facilities.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.6-4: The proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards.	Less than Significant	No mitigation measures would be required.	Less than Significant
Impact 4.6-5: The proposed Project would not result in roadway and transportation facilities that impede access for emergency response vehicles.	Less than Significant	No mitigation measures would be required.	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Chapter 3, Initial Study Checklist			
3.2.5 Cultural Resources			
The proposed Project could cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. The proposed Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. The proposed Project could disturb any human remains, including those interred outside of formal cemeteries. The proposed Project could cause a substantial adverse change in the significance of a tribal cultural resource 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).	Potentially Significant	**Mitigation Measure CUL-1** In the event of discovery of buried paleontological, archaeological or historic deposits, project activities in the vicinity of the find shall be temporarily halted and a qualified archaeologist consulted to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. If human remains are found, the Placer County Coroner's Office shall be contacted immediately. The coroner shall contact the Native American Heritage Commission, which shall notify the appropriate descendant.	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.2.7 Geology and Soils			
The project could result in substantial soil erosion or the loss of topsoil. The project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The project could 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.	Potentially Significant	**Mitigation Measure GEO-1**[1] The project sponsor has agreed to abide by the recommendations of the Geotechnical and Geohazards Reports prepared for the proposed Project, which addresses the following: ▪ General Earthwork and Grading ▪ Earthwork Shrinkage and Subsidence ▪ Removals and Overexcavation ▪ Rippability and Rock Disposal ▪ Subdrains ▪ Fill and Cut Slopes ▪ Faulting ▪ Seismic Design Parameters ▪ Liquefaction and Secondary Earthquake Hazards ▪ Foundations ▪ Rock Anchors ▪ Foundation Setbacks from Slopes ▪ Slabs on Grade ▪ Miscellaneous Concrete Flatwork ▪ Footing Excavation and Slab Preparations ▪ Lateral Load Resistance ▪ Drainage and Moisture Proofing ▪ Cement Type and Corrosion Potential ▪ Temporary Slopes ▪ Utility Trench Backfill ▪ Pavement Sections ▪ Observation and Testing	Less than Significant

[1] This mitigation measure was not named or numbered in the 2004 IS. For the purposes of identification in this IS, this mitigation measure has been labeled with an abbreviation of the topic it addresses and its chronological order of introduction within the analysis.

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
The proposed Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	Implement Mitigation Measure CUL-1.	Less than Significant
3.2.10 Hydrology and Water Quality			
The proposed Project could 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 could: i) result in substantial erosion or siltation on- or off-site. ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. iv) Impede or redirect flood flows.	Potentially Significant	**Mitigation Measure 4.6-2** Coordination with Placer County Flood Control and Water Conservation District and appropriation of drainage fees to support implementation of the Dry Creek Watershed Flood Control Plan. **Mitigation Measure 4.6-3** Coordination with City of Roseville Public Works Department and appropriate drainage fees to support improvement of the culvert under Huntington Drive.	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.2.13 Noise			
The proposed Project could cause the 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. The proposed Project could cause the generation of excessive ground borne vibration or ground borne noise levels.	Potentially Significant	**Mitigation Measure 4.5-1: Implement noise controls on Medical Center campus.** A. Kaiser shall use best efforts to avoid construction outside daytime hours established by Municipal Code. All construction equipment will be required to be fitted with factory-installed muffling devices, and all construction equipment shall be maintained in good working order. Such equipped and maintained equipment shall generate noise levels no greater than 75 dBA (Leq) at 50 feet, except for pavers or pneumatic tools, which can generate up to 80 dBA (Leq) at 50 feet (see Table 4.5-2, with controls). B. The applicant's contractor, as part of Kaiser's operational plan, shall use best efforts to minimize disturbance of hospital patients within the existing hospital. The following measures shall be implemented where construction occurs within 100 feet of hospital receptors (200 feet for impact equipment) to the extent necessary to help maintain acceptable interior noise levels for patients in the hospital:	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ Equipment used for project construction shall be hydraulically- or electrically-powered impact tools (e.g., jackhammers, pavement breakers, and rock drills) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler should lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this should achieve a reduction of 5 dBA. Quieter procedures such as drilling rather than impact equipment shall be used whenever feasible. ▪ Stationary noise sources shall be located as far from hospital receptors as possible. If they must be located near hospital receptors, they shall be adequately muffled and enclosed within temporary sheds. Portable sound blankets or existing building facades should be used as necessary to reduce noise generated by construction and demolition activities at hospital receptors and nearby residential uses. Such blankets can provide up to a 10- dBA noise reduction. ▪ As part of Kaiser's operational plan to be implemented during all construction phases, there shall be close coordination between construction staff, hospital staff, and medical office building (MOB) tenants. Hospital and medical office staffs shall be made aware of the construction schedule and activities.	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ During all construction phases, locations of staging areas, truck routes, and loading areas shall consider exposure to on-site hospital patient receptors, utilizing existing building facades to provide maximum shielding for these receptors. **Mitigation Measure 4.5-2: Implement appropriate noise attenuation measures in proposed hospital facilities and medical buildings.** Proposed hospital facilities and medical office buildings shall be designed with appropriate noise attenuation measures (increased insulation, fixed windows, mechanical ventilation) to ensure that interior noise levels do not exceed 45 dBA (CNEL) for hospital facilities and 45 dBA (Leq) for medical office buildings under future noise conditions, considering future traffic increases and proposed hospital operations (including the Central Utility Plant expansion).	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
3.2.19 Tribal Cultural Resources			
The Project could cause a substantial adverse change in the significance of a tribal cultural resource 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). The Project could cause a substantial adverse change in the significance of a tribal cultural resource that is significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.	Potentially Significant	**Mitigation Measure TCR-1: Post-Review Discovery Procedures** 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 contact 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 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	Less than Significant

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		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, 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	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		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 the 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 tribe(s) and City shall be notified. The City will	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		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	

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		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.	
Per the Migratory Bird Treaty Act and the Fish and Game Code			
Preconstruction Nesting Bird Surveys. If construction or tree removal is proposed during the breeding season (February 1 through August 30), a preconstruction nesting bird survey shall be conducted at the project site (including a 250-foot buffer for raptors) by a qualified biologist 14 days prior to the beginning of construction activities, in order to identify any active nests in the vicinity of the project area. If no active nests are found during the preconstruction survey, no further actions are required.			

Table ES-3. Summary of Impacts and Mitigation Measures

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
If any active nests are found within 250 feet of disturbance areas, a temporary buffer shall be determined and flagged by the qualified biologist based on the location of the nest and planned construction activity in the vicinity of the nest. These nests shall be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.			

ES.7 Comments Received in Response to the Notice of Preparation

The Notice of Preparation (NOP) for this Draft SEIR was released on February 25, 2022, and the public comment period closed on March 28, 2022. A total of three letters were received, as shown in the table below. The purpose of the NOP process is to solicit input from public agencies and the public on the scope of the SEIR analysis. Although, CEQA does not require a NOP be released for a Supplemental EIR, the lead agency opted to prepare a NOP for this Project. Opinions on the merits of the Project are noted but are not considered relevant under CEQA for the purposes of defining the scope of the analysis. All of the NOP comment letters received are included in Appendix A.

Written comments in response to the NOP were received from the following agencies and Native American tribes. No comments were received from organizations or members of the public.

Table ES-4. Comments Received in Response to the NOP

Agencies
Native American Heritage Commission (NAHC) – February 28, 2022
Placer County Air Pollution Control District (PCAPCD)– March 28, 2022
Central Valley Regional Water Quality Board (RWQCB) – March 29, 2022

The Native American Heritage Commission letter states that the Project must comply with AB 52, which requires formal notification and consultation with California Native American tribes. The City sent letters to the United Auburn Indian Community, the Tsi Akim Maidu, Ione Band of Miwok Indians, Shingle Springs Band of Miwok Indians, and the Wilton Rancheria. The last day to request consultation was April 13, 2022. The United Auburn Indian Community reached out but did not request consultation, indicating there were no tribal cultural resources on the site. The United Auburn Indian Community did request that the standard unanticipated discoveries measure be included. Wilton Rancheria responded but did not request consultation and the other tribes did not respond.

The Placer County Air Pollution Control District (PCAPCD) letter provided the District's CEQA thresholds for greenhouse gas emissions, a link to the PCAPCD's CEQA Air Quality 2017 Handbook, PCAPCD mitigation measures and regulatory requirements, and a link to District's Rule 228 to address fugitive dust. These comments have been addressed and incorporated into Section 4.2, Air Quality and Section 4.3, Greenhouse Gas Emissions, of this Draft SEIR.

The Central Valley Regional Water Quality Board's letter provided information on the regulatory setting of the Project, including the basin plan and antigradation considerations. The comment letter stated the Project must comply with the Construction General Permit, Phase I and II Municipal Separate Storm Sewer System (MS4) Permits, the Industrial Storm Water General Permit, Clean Water Act Section 404 and 401 Permits, Waste Discharge Requirements, and National Pollutant Discharge Elimination System Permits, if they are applicable to the proposed Project. The proposed Project would be required to comply with all regulatory permitting requirements, including those listed within the Central Valley Regional Water Quality Board's comment letter.

ES.8 Areas of Controversy/Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the summary prepared as part of the EIR and Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved. There are no known areas of controversy or issues identified to be resolved for this Project.

ES.9 Summary of Project Alternatives

CEQA Guidelines Section 15163, states that a SEIR is required to contain only the information needed to analyze modifications made to the prior approved project, including changed circumstances and any new information requiring additional environmental review. Where existing information and analysis in the 2004 Expansion Project EIR are sufficient to evaluate the impacts of the proposed Project, no additional environmental review is required. Please see Chapter 3 of this Draft SEIR, which provides a checklist that documents environmental issue areas where potential impacts of the proposed Project are adequately addressed in the certified 2004 Expansion Project EIR and, therefore, no further analysis is required.

Project alternatives were analyzed in the 2004 Expansion Project EIR and included a No Project Alternative, a Reduced Intensity Alternative, and an Off-Site Alternative. While the 2004 Expansion Project EIR determined the No Project Alternative would be the environmentally superior alternative due to a decrease in air quality and traffic impacts, the CEQA Guidelines require that an environmentally superior alternative be designated if the No Project Alternative is the environmentally superior choice. Therefore, the Off-Site Alternative was determined to be the environmentally superior alternative due to its reduction in air quality and traffic impacts. The City's 2035 General Plan EIR assumed future buildout of the Campus and concluded the cumulative increase in light and glare would be a significant and unavoidable impact. Therefore, the proposed Project's cumulative contribution would be considerable, and the impact would be significant and unavoidable. The analysis of Project alternatives in Chapter 6, Alternatives of the 2004 Expansion Project EIR is still applicable to the proposed Project because the proposed Project would not result in any new or potentially significant impacts or cumulative impacts not previously identified; therefore, an analysis of additional Project alternatives is not required.

ES.10 References

City of Roseville. 2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

1 Introduction and Scope of the SEIR

1.1 Purpose and Intended Use of this SEIR

This Draft Supplemental Environmental Impact Report (SEIR) updates the analysis in the 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH no.2003062014) (2004 Expansion Project EIR) to inform responsible agencies, trustee agencies, the general public, the local community, other interested public agencies, and the City Council regarding the potential significant environmental effects resulting from implementation of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project), as well as feasible measures to mitigate those significant effects. Specifically, this document addresses potential impacts to aesthetics, air quality, greenhouse gases, land use, utilities, and transportation and circulation per the scoping of the environmental analysis provided in Chapter 3 of this Draft SEIR.

The lead agency for the proposed Project is the City of Roseville (City). The City has determined that a SEIR is the appropriate California Environmental Quality Act (CEQA) action in accordance with CEQA Guidelines 15163 because the changes to the certified 2004 Expansion Project EIR resulting from the proposed Project are minor and do not rise to the level that requires preparation of a Subsequent EIR, per Section 15162 of the CEQA Guidelines. This Draft SEIR was prepared in accordance with the requirements of the City and in compliance with CEQA which includes the CEQA Guidelines contained within the California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, Sections 15000-15387 (CCR or CEQA Guidelines), while the CEQA statute is codified as Public Resources Code (PRC) Sections 21000-21189.57 (PRC or CEQA Statute). As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses the reasonably foreseeable environmental impacts of a proposed project, as well as identifies potentially feasible mitigation measures and alternatives to a proposed project that could reduce or avoid adverse environmental impacts. This SEIR (which includes both a Draft and Final version) is an informational document intended for use by both decision makers and the public.

As the designated lead agency, the City has assumed responsibility for preparing this document. The decision to implement the proposed Project is within the purview of the Roseville City Council. When deciding whether to approve the proposed Project, the City Council will use the information provided in this Draft SEIR along with the Final SEIR to consider potential impacts to the physical environment associated with the proposed Project. The City Council will consider all written comments received on the Draft SEIR during the 45-day public review period, as well as any communications received prior to the close of the administrative record in this proceeding, in making its decision to certify the SEIR as complete and in compliance with CEQA and in making its determination whether to approve or deny the proposed Project.

1.2 Project Background and Overview

In 1987, the City prepared and certified the Northeast Roseville Specific Plan EIR (SCH no. 86042805) (NERSP EIR), which concluded that development of the 955-acre Specific Plan area, including the project site, would result in a number of significant and unavoidable impacts related to: the conversion from a large open space area to an urbanized area; contributions to regional air quality, including attainment of air quality standards; elimination of vernal pools, and changes in visual resources due to elimination of open space. In 1992, the City prepared a Supplement to the NERSP EIR to evaluate site-specific impacts associated with development of the Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus) and concluded all impacts were

adequately addressed and mitigated in the NERSP EIR, with the exception of air quality. Based on new standards and thresholds to evaluate air quality it was determined impacts would be significant and unavoidable for ozone precursor emissions and a statement of overriding considerations was adopted.

In April 2004, the City evaluated an expansion to the 1992-approved project to include construction and operation of a 705,360-square-foot expansion to the existing Medical Center Campus (2004 Expansion Project). The 2004 Expansion Project proposed a new medical office building, a new Women and Children's Center, a new five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit addition to the existing hospital building, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, two new parking structures, including a three-story 400-space parking garage, a new helicopter landing pad, and an expansion and remodeling of the cafeteria, Central Utility Plant and other existing buildings. The 2004 Expansion Project was evaluated in the scoping Initial Study (incorporated into the EIR as Appendix A) and the corresponding 2004 EIR, which covered those topics not dismissed in the Initial Study. The City approved the 2004 Expansion Project and certified the EIR in 2004. Neither the Surgery and Intensive Care Unit Facility, nor the three-story parking garage–both approved as part of the 2004 Expansion Project–have been constructed. Rather, the sites have been temporarily developed with approximately 851 surface parking spaces.

Project Location

The project site is located within the existing Medical Center Campus at 1600 Eureka Road in the City (Assessor's Parcel Number 048-012-001). The approximately 49-acre project site is within the NERSP area and is bounded by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Rocky Ridge Drive on the west, and Eureka Road on the east. Interstate 80 is approximately 1 mile west of the project site and the City's eastern boundary is approximately 0.25 miles to the east of the site.

Project Description

The proposed Project would increase the height and capacity of the previously approved buildings that were not constructed and add a few additional elements. As discussed in Chapter 2, Project Description, the proposed Project revises the 2004 Expansion Project to allow for an approximately 278,000 square foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved Surgery and Intensive Care Unit Facility, expansion of the Emergency Department (which is part of the Main Hospital Building) to add 36 new treatment bays (change of use with no additional square footage); a new four-level garage with rooftop parking to accommodate approximately 800 stalls located on the site of the prior approved parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; a new generator yard; and internal upgrades to the existing Central Utility Plant. Please see Tables ES-1 and ES-2 in the Executive Summary for a comparison between the 2004 Expansion Project and the proposed Project.

1.3 Scope of the Draft SEIR

This Draft SEIR evaluates the proposed Project to the extent feasible by establishing the existing environmental resources or conditions within the project site, analyzing potential impacts on those resources due to implementation of the proposed Project, and identifying mitigation measures to reduce significant impacts. Where Project-specific information is available, this Draft SEIR quantifies and/or evaluates Project impacts at a level of detail commensurate with information available at the time the analysis was conducted.

1.4 CEQA Process

CEQA (California PRC, Section 21000 et seq.) requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant effect on the environment. According to Section 21002.1(a) of the PRC, "[T]he purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project and to indicate the manner in which those significant effects can be mitigated or avoided." CEQA also establishes mechanisms whereby the public and decision makers can be informed about the nature of the project being proposed, as well as the extent and types of impacts that the project and its alternative would have on the environment if implemented.

According to CEQA Guidelines Section 15162(a)(3)(A), when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows that the project will have one or more significant effects not discussed in the previous EIR.

CEQA Guidelines Section 15163(a) states "A Lead or Responsible Agency may prepare a supplement to an EIR rather than a Subsequent EIR if: (1) any of the conditions described in Section 15162 would require the preparation of a subsequent EIR, and (2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation."

Furthermore, when the agency decides whether to approve the project, the decision-making body shall consider the previous EIR as revised by the Supplemental EIR (CEQA Guidelines, Section 15163[e]). A finding under Section 15091 shall be made for each significant effect shown in the previous EIR.

According to CEQA Guidelines Section 15163, a Supplemental EIR needs to only contain only the information needed to analyze the modified Project, including changed circumstances and new information requiring additional environmental review. Where the existing information and analysis in the 2004 Expansion Project Final EIR is sufficient to evaluate the impacts of the proposed Project, no additional environmental review was is required. A CEQA Checklist has been prepared for this Project and is included in Chapter 3 of this document.

Based on the analysis in the Checklist (see Chapter 3), the 2004 Expansion Project EIR has adequately evaluated impacts associated with the proposed Project and the proposed changes to the earlier approved Project would not result in any significant impacts in the following issue areas: Agriculture and Forestry Resources; Biological Resources; Geology, Soils, Seismicity; Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Population and Housing; Public Services and Recreation; and Wildfire. The issue areas where either a new impact not previously evaluated in the 2004 Expansion Project EIR or the severity of the impact would be more severe include: Aesthetics; Air Quality; Greenhouse Gases; Land Use; Public Utilities; and Transportation. Therefore, this Draft SEIR contains revised impact analysis for these resource areas and recommends feasible mitigation measures, including mitigation measures from the 2004 Expansion Project EIR still applicable to the proposed Project, that could reduce or avoid significant environmental impacts.

In addition, as discussed in the Executive Summary, the CEQA Guidelines were last updated in 2018 and Wildfire was added as a new topic to Appendix G and vehicle miles traveled replaced level of service as the appropriate metric to evaluate traffic impacts. The CEQA Guidelines were also updated in 2010 and 2016 to include Energy and Tribal Cultural Resources (TCRs) as new topics. The Checklist in Chapter 3, Issues Addressed in the 2004 EIR, addresses the potential for an increase in energy demand, wildfire impacts and vehicle miles traveled and

concludes that impacts to both topical areas would be less than significant. To address the potential for TCRS to be present the City has conducted outreach to the local tribes, consistent with Assembly Bill (AB) 52, as described below. Therefore, these topics do not require further analysis in this Draft SEIR.

Project alternatives were analyzed in the 2004 EIR and included the No Project Alternative, the Reduced Intensity Alternative, and the Off-Site Alternative. While the EIR determined the No Project Alternative would be the environmentally superior alternative due to a decrease in air quality and traffic impacts, the CEQA Guidelines require that an environmentally superior alternative be designated if the no project alternative is the environmentally superior choice. Therefore, the Off-Site Alternative was determined to be the environmentally superior alternative due to a reduction in air quality and traffic impacts. The City's 2035 General Plan EIR assumed future buildout of the Campus and concluded the cumulative increase in light and glare would be a significant and unavoidable impact. Therefore, the proposed Project's cumulative contribution would be considerable, and the impact would be significant and unavoidable. The analysis of alternatives in Chapter 6, Alternatives of the 2004 Expansion Project EIR is still applicable to the proposed Project because the proposed Project would not result in any new or potentially significant Project level impacts or cumulative impacts not previously identified; therefore, an analysis of additional Project alternatives is not required.

Notice of Preparation

In accordance with CEQA Guidelines Section 15082, a Notice of Preparation was circulated for public and agency review from February 25, 2022 to March 28, 2022. The purpose of the Notice of Preparation is to provide notification that a SEIR for the proposed Project was to be prepared and to solicit guidance on the scope and content of the document. A copy of the Notice of Preparation and comments received is included in Appendix A. The City received a total of three comment letters from the following agencies:

- Native American Heritage Commission
- Placer County Air Pollution Control District
- Central Valley Regional Water Quality Control Board

The letters all reiterated requirements for the CEQA analysis but none raised any concerns regarding the Project or the scope of the SEIR.

AB 52 Compliance

In compliance with AB 52, the City sent letters to the United Auburn Indian Community, the Tsi Akim Maidu, Ione Band of Miwok Indians, Shingle Springs Band of Miwok Indians, and the Wilton Rancheria. The last day to request consultation was April 13, 2022. The United Auburn Indian Community reached out but did not request consultation, indicating there were no TCRs on the site. The United Auburn Indian Community did request that the standard unanticipated discoveries measure be included. Wilton Rancheria responded but did not request consultation and the other tribes did not respond.

The 2004 EIR includes an Initial Study (provided in Appendix A) which addressed potential impacts to cultural resources and included a mitigation measure that lays out the process to follow in the event an undiscovered cultural resource is unearthed (see Chapter 3). Because the proposed Project's development footprint would not change relative to the 2004 Expansion Project, an analysis of cultural resources and TCRs was not required to be evaluated in this Draft SEIR.

Draft Supplemental EIR and Public Review

This Draft SEIR is being circulated for public review and comment for a period of 45 days pursuant to CEQA Guidelines Section 15105. The 45-day public review period for the Draft SEIR will be from July 22, 2022 through September 6, 2022. The public can review the Draft SEIR at the following address during normal business hours (Monday through Friday, 8 a.m. to 12:00 p.m. and 1 p.m. to 4 p.m.) or on the City's website at: www.roseville.ca.us/environmentaldocuments.

City of Roseville Planning Division
311 Vernon Street
Roseville, California 95678

The City encourages all comments on the Draft SEIR to be submitted in writing. All comments or questions regarding the Draft SEIR should be addressed to:

Kinarik Shallow
Associate Planner
City of Roseville Planning Division
311 Vernon Street
Roseville, California 95678
Email: kshallow@roseville.ca.us

Final Supplemental EIR

Upon completion of the Draft SEIR public review period, a Final SEIR will be prepared that will include written responses to all substantive comments received during the public review period on the adequacy of the Draft SEIR. The Final SEIR will also include the Mitigation Monitoring and Reporting Program prepared in accordance with CEQA Guidelines Section 15097. The Mitigation Monitoring and Reporting Program will include applicable mitigation measures from the 2004 Expansion Project EIR, as well as any new mitigation measures required as part of the proposed Project. The Final SEIR will address any revisions to the Draft SEIR made in response to agency or public comments. The Draft SEIR and Final SEIR together will comprise the SEIR for the proposed Project. Before the City can approve the Project, it must first certify that the SEIR has been completed in compliance with CEQA, that the City has reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the City. The City also would be required to adopt Findings of Fact, along with a Statement of Overriding Considerations if there are any significant and unavoidable impacts where no feasible mitigation is available to reduce the severity of the impact (see CEQA Guidelines Sections 15091 and 15093).

SEIR Adequacy

The level of detail contained throughout this Draft SEIR is consistent with Section 15151 of the CEQA Guidelines, which states the following:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR

should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

1.5 Lead, Responsible and Trustee Agencies

Lead Agency

In accordance with CEQA Guidelines Sections 15050 and 15367, the City has been designated the "'lead agency," which is defined as the "public agency which has the principal responsibility for carrying out or disapproving a project." The lead agency is also responsible for determining the scope of the environmental analysis, preparing the SEIR, and responding to comments received on the Draft SEIR. Prior to making a decision to approve a project, the lead agency is required to certify that the SEIR has been completed in compliance with CEQA, that the decision making body has reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the City.

Responsible Agencies

Responsible agencies are state and local public agencies, other than the lead agency, that have some authority to carry out or approve a project or that are required to approve a portion of the project or approve a permit for which a lead agency is preparing or has prepared an EIR or Initial Study/Negative Declaration (CEQA Guidelines Section 15813). The following agencies would potentially act as a responsible agency for the purposes of this Project:

- Placer County Air Pollution Control District
- California Department of Health Care Access and Information

The State Department of Health Care Access and Information (HCAI) reviews and issues permits for hospital additions and renovation permits. In essence, HCAI serves as a building department for permit application review for all hospital projects in California. HCAI would review all proposed Project components (with the exception of the parking garage and relocation of the loop road). HCAI would review the Inpatient Tower Building, internal improvements to the Central Utility Plant and generator yard and issue building permits for these Project components.

Trustee Agencies

Trustee agencies are designated public agencies with legal jurisdiction over natural resources that are held in trust for the people of California and that would be affected by a project, whether or not the agencies have authority to approve or implement the project (CEQA Guidelines Section 15386). The following agency was identified as a trustee agency with potential jurisdiction over the proposed Project:

- California Department of Fish and Wildlife

1.6 Use of Previously Prepared Environmental Documentation

This Draft SEIR relies in part on data, environmental evaluations, mitigation measures, and other components of EIRs and plans prepared by the City for areas within the project vicinity. These documents are listed below and used as source documents for this Draft SEIR. All documents are available for public review during normal business hours (Monday through Friday, 8 a.m. to noon and 1 p.m. to 4 p.m.) at the City of Roseville Planning Division, 311 Vernon Street, Roseville, CA and on the City's website at: https://www.roseville.ca.us/government/departments/development_services/planning.

- Kaiser Permanente Roseville Medical Center Expansion Project Final Environmental Impact Report (SCH #2003062014) - April 2004
- Northeast Roseville Specific Plan - Adopted April 1987, Resolution #87-52. Last Amended September 2013, Resolution #13-374.
- Final Environmental Impact Report, Northeast Roseville Specific Plan (SCH #86042805) – March 1987
- City of Roseville General Plan 2035 – August 2020
- City of Roseville 2035 General Plan Update Final Environmental Impact Report – August 2020

1.7 Organization of the Draft SEIR

The Draft SEIR is organized in the following chapters: Executive Summary, Introduction and Scope of the EIR, Project Description, Introduction to the Environmental Analysis, Impacts and Mitigation Measures (Setting, Impacts, and Mitigation Measures), CEQA Considerations, Alternatives, EIR Preparers.

Chapter ES, Executive Summary—Provides an overview of areas of known controversy and issues to be resolved. This chapter also summarizes the elements of the proposed Project and the environmental impacts that could result from implementation of the Project and provides a table which lists impacts, describes proposed mitigation measures, and indicates the level of significance of impacts before and after mitigation.

Chapter 1, Introduction and Scope of the Draft SEIR—Provides an introduction and overview of the SEIR process and describes the intended use of the SEIR and the review process.

Chapter 2, Project Description—Provides a detailed description of the proposed Project, including its location, background information, Project history, Project objectives, and technical characteristics.

Chapter 3, Issues Addressed in the 2004 EIR – Includes a modified checklist to evaluate if the proposed Project would result in new impacts or more severe impacts than what was previously evaluated in the 2004 Expansion Project EIR.

Chapter 4, Introduction to the Environmental Analysis—Describes the baseline environmental setting and provides an assessment of potential Project impacts for the only technical issue area addressed in the Draft SEIR; transportation. The section is divided into four sub-sections: Introduction, Environmental Setting, Regulatory Background, and Impacts and Mitigation Measures (Project-specific and cumulative).

Chapter 5, CEQA Considerations—Provides information required by CEQA regarding impacts that would result from the proposed Project, including a summary of cumulative impacts, including potential secondary impacts resulting from growth inducement, and significant irreversible changes to the environment

Chapter 6, SEIR Preparation—Lists report authors who provided technical assistance in the preparation and review of the SEIR.

Appendices—Includes various documents and data that support the analysis presented in the Draft SEIR.

1.8 References

City of Roseville. 1987. Final Environmental Impact Report, Northeast Roseville Specific Plan (SCH #86042805). March 1987. Available: https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/northeast_roseville_specific_plan. Accessed: April 27, 2022.

2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

2013. Northeast Roseville Specific Plan, Adopted April 8, 1987, Resolution #87-52. Last Amended September 18, 2013, Resolution #13-374. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Northeast%20Roseville%20Specific%20Plan/Northeast%20Roseville%20Specific%20Plan.pdf. Accessed: April 20, 2022.

2020a. August. City of Roseville 2035 General Plan Update Final Environmental Impact Report. Certified August 5, 2020. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/Final%20General%20Plan%20EIR/City%20of%20Roseville%20EIR.pdf. Accessed: April 27, 2022.

2020b. August. City of Roseville General Plan 2035. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed: April 27, 2022.

2 Project Description

This chapter describes the location, background, objectives, characteristics, design features, and discretionary actions for the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) in the City of Roseville (City).

2.1 Introduction

The proposed Project would increase the size and capacity of the previously approved 2004 Kaiser Roseville Medical Center Expansion Project (2004 Expansion Project) on the existing Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus or Campus). The 2004 Expansion Project was evaluated in the 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH no. 2003062014) (2004 Expansion Project EIR). The 2004 Expansion Project included construction and operation of a new medical office building, a new Women's and Children's Center, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, a new parking structure, as well as expansion and remodeling of the cafeteria, and central utility plant (CUP). To date, all of these buildings have been constructed on the Medical Center Campus. In addition to these buildings, the 2004 Expansion Project included a five-story, 155,000 square-foot Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building, a three-level, approximately 400-space parking garage located in the northeast corner of the Campus, and a helicopter landing pad; however, the Surgery and Intensive Care Unit Facility, parking structure and helicopter landing pad were never constructed.

The proposed Project would increase the height and capacity of the previously approved buildings that were not constructed and add a few additional elements. Specifically, the proposed Project revises the 2004 Expansion Project to allow for an approximately 278,000 square foot, six-story Inpatient Tower building on the site of the prior approved Surgery and Intensive Care Unit Facility, expansion of the Emergency Department (which is part of the Main Hospital Building) to add 36 new treatment bays (change of use with no additional square footage); a new four-level parking garage with rooftop parking to accommodate approximately 800 stalls located on the site of the prior approved parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; a new generator yard; and internal upgrades to the existing CUP.

The proposed revisions to the previously approved Surgery and Intensive Care Unit facility and parking garage buildings are provided in Table 2-1, 2004 Expansion Project as Compared to the Proposed Project, and the number of available hospital beds and staffing numbers are provided in Table 2-2, Hospital Beds and Staffing Levels.

Table 2-1. 2004 Expansion Project as Compared to the Proposed Project

	2004 Expansion Project	Proposed Project	2004 Expansion Project	Proposed Project
Building Description	Surgery and Intensive Care Unit Facility	Inpatient Tower Building	Parking Structure	Parking garage with roof-top parking
Building Size	155,000 gsf	278,000 gsf	N/A	260,897gsf
Number of Stories	5	6	3 levels	4 levels
Building Height	83 feet	107 feet	23 feet	46 feet

Source: Kaiser Permanente 2022.
gsf = gross square feet

Table 2-2. Hospital Beds and Staffing Levels

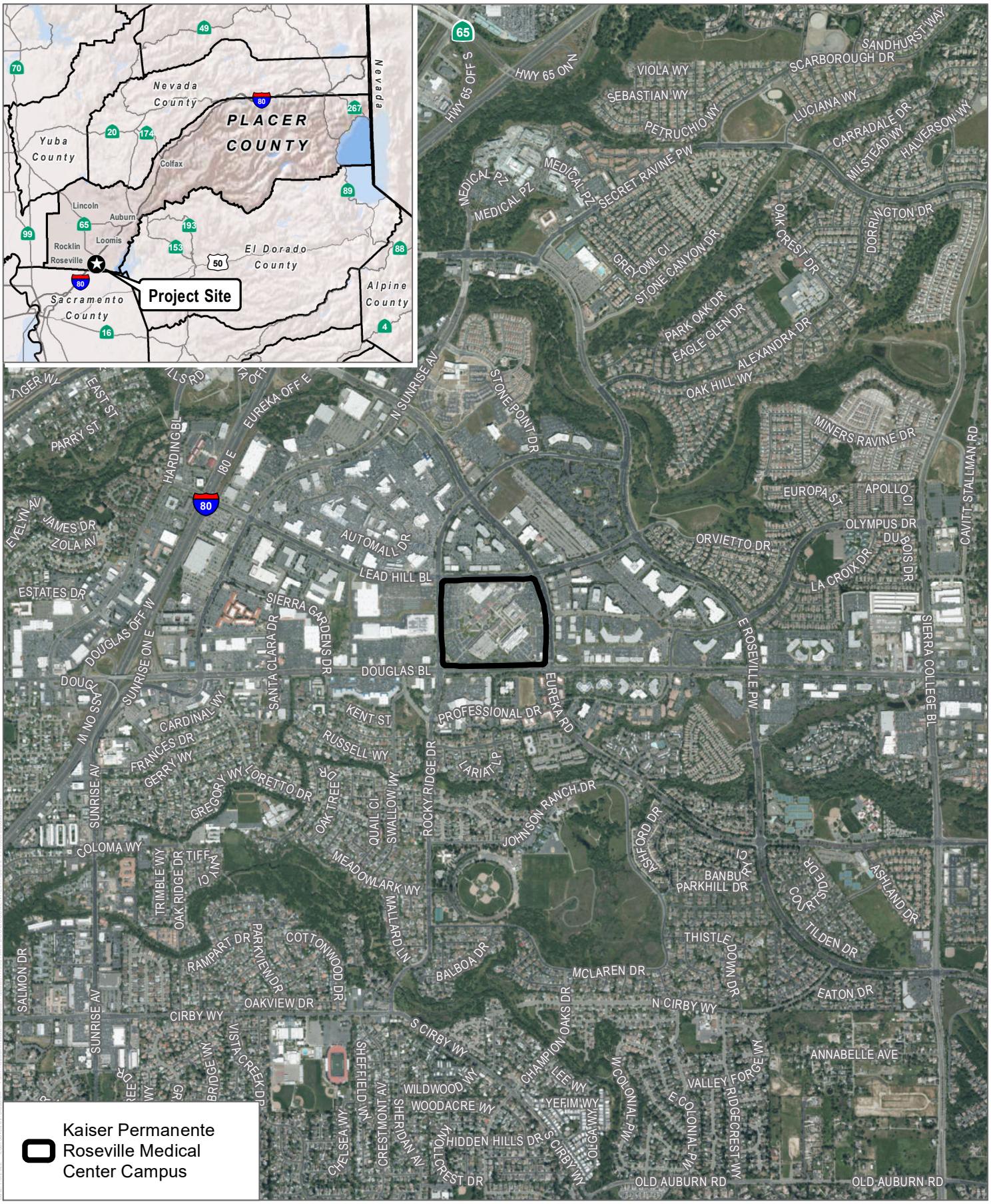
	2004 Expansion Project Analysis	Existing	Proposed Project	Incremental Increase
Number of Hospital Beds	432	352	138	58
Number of Staff	3,459	2800	728	69

Source: Kaiser Permanente 2022.

To address changes to the 2004 Expansion Project, this Draft SEIR has been prepared to disclose relevant information concerning the potential environmental effects associated with changes to the previously approved project elements.

2.2 Project Location

The Medical Center Campus (Assessor's Parcel Number 048-012-001) is located on 49-acres at 1600 Eureka Road, as shown on Figure 2-1, Regional Location and Project Site. The Campus is bordered by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Eureka Road on the east, and Rocky Ridge Drive on the west. Interstate 80 is located approximately one mile west of the Project site. Current access to the Campus is provided from all adjacent roads with the main entrance off Eureka Road. The Project site is included within the Northeast Roseville Specific Plan (NERSP) area. Adjacent commercial and office uses surround the Campus.



SOURCE: City of Roseville 2019

FIGURE 2-1

Project Location

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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2.3 Project Background

In 1987, the City prepared and certified the Northeast Roseville Specific Plan EIR (SCH no. 86042805), which concluded development of the 955-acre area (including the project site) would result in a number of significant and unavoidable project impacts related to the following: conversion from a large open space area to an urbanized area; contributions to regional air quality, including attainment of air quality standards; elimination of vernal pools, and changes in visual resources due to elimination of open space. In 1992, the City prepared a Supplement to the NERSP EIR to evaluate site-specific impacts associated with development of the Medical Center Campus and concluded all impacts with the exception of air quality were adequately addressed and mitigated in the NERSP EIR. Based on new standards and thresholds to evaluate air quality it was determined impacts would be significant and unavoidable for ozone precursor emissions and a statement of overriding considerations was adopted.

In April 2004, the City evaluated an expansion to the 1992-approved project to include construction and operation of a 705,360-square-foot expansion to the existing Medical Center Campus (2004 Expansion Project). The 2004 Expansion Project proposed a new medical office building, a new Women and Children's Center, a new Surgery and Intensive Care Unit addition to the existing hospital building, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, two new parking structures, a new helicopter landing pad, and expansion and remodeling of the cafeteria, CUP and other existing buildings. The City approved the 2004 Expansion Project and certified the EIR in 2004. The 2004 Expansion Project included proposed construction of a five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building and a 3-level, approximately 400-space parking garage located in the northeast corner of the Campus. Neither the Surgery and Intensive Care Unit Facility nor the three-story parking garage, as approved by the 2004 Expansion Project, have been constructed. During the interim, rather, the sites have been developed with approximately 851 surface parking spaces. The Medical Center Campus currently contains over one million square feet of medical facilities, 352 inpatient beds, 3,077 parking spaces, and 2,800 employees.

A copy of the 2004 Expansion Project EIR is available for public review at the City of Roseville Planning Division, 311 Vernon Street, Roseville, California 95678. The information contained in the 2004 Expansion Project EIR is hereby incorporated by reference into this document and available for review during normal business hours at the City of Roseville Planning Division office at 311 Vernon Street, Roseville, CA 95678.

2.4 Existing Project Site

The Medical Center Campus (or project site) is currently developed with seven buildings totaling 1,497,201 square feet, along with 3,077 square feet of surface and garage parking spaces and associated signage and landscaping, as shown in Figure 2-2.

The Medical Center Campus is comprised of approximately 49 acres and is primarily developed with buildings, surface parking lots or small areas of landscaping along the perimeter of the site and internal to the site. A number of landscape trees are present throughout the site. The elevation of the project site varies from approximately 200 feet to 235 feet above mean sea level. The portion of the project site where the new Inpatient Tower building and parking garage are proposed is currently developed with surface parking lots.

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SOURCE: City of Roseville 2019

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0 115 230 Feet

FIGURE 2-1

Existing Campus Buildings

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Surrounding Land Uses and Setting

The area surrounding the project site is characterized as developed and includes a mix of land uses. Across Rocky Ridge Drive to the west is a retail center that includes Target and Walmart stores; to the north, across Lead Hill Boulevard is an office development with numerous medical-related services; to the east, across Eureka Road are more office buildings; and to the south, across Douglas Boulevard are more retail uses in the Rocky Ridge Town Center.

Land Use and Zoning

The project site is designated Business Professional (BP) on the City's General Plan land use map (last updated December 2021) and also in the NERSP. Uses allowed under this land use designation include business park and professional office, medical campus, and research and development. The General Plan notes that hospitals and clinics may also be permitted under this land use designation. As such, the proposed Project's use is consistent with the General Plan and NERSP.

The NERSP's Chapter V(d)(I), Medical Campus Component also provides goals, policies, and implementation measures for development of medical campus sites within the City, including the site. Implementation Measure ii(a) under Plan Policy 2 for Goal 1 requires a minimum of a 100-foot setback from the ultimate back of curb of any adjacent existing or planned public roadway to any portion of a building three stories or more in height. As such, the proposed project would require a NERSP amendment in order to modify the setback requirement for the new parking garage from 100 feet to 50 feet for its proposed location at the northeast corner of Eureka Road and Lead Hill Boulevard (existing landscape setbacks would be maintained). In addition, the proposed amendment would allow for ancillary right turn lanes, bus turn-outs, and standard roadway tapers to be permitted as reductions to the required setbacks described above.

The site is zoned Planned Development for Medical Campus (PD 470). Uses permitted include professional offices and general medical services, so the proposed Project is consistent with City zoning.

2.5 Proposed Project Description

Project Objectives

California Environmental Quality Act (CEQA) Guidelines section 15124(b) require that the Project Description include a statement of the objectives of a proposed project. Section 15124(b) further states that "the statement of objectives should include the underlying purpose of the project and may discuss the project benefits." The underlying purpose of the proposed Project is to accommodate both current and future demand for hospital space, including emergency services, by expanding facilities on the current Medical Center Campus.

Specific Project objectives are:

1. Expand the Kaiser Permanente Roseville Medical Center Campus through the construction and operation of new medical facilities in order to accommodate future growth of Kaiser Permanente members and the need to provide additional medical services that benefit the community.
2. Optimize the use of the development potential on the existing Medical Center Campus by developing a comprehensively planned, integrated medical campus within the existing Campus boundaries. Construction of a new hospital tower and expanded emergency department services will keep pace with increasing population growth in the City and in the region.

3. Maintain current services at the existing Roseville Medical Center Campus including 24/7 emergency services without interruption.
4. Provide parking sufficient to accommodate membership and patient parking needs, as well as staff parking to meet current and projected future demand.
5. Redesign internal circulation on the Roseville Medical Center Campus in order to optimize safety, provide enhanced health and wellness, and create a seamless flow between pedestrians and vehicle traffic throughout the Campus.
6. Foster the creation of employment opportunities in healthcare by providing jobs for skilled personnel in specialty healthcare departments and improving the jobs/housing balance within the City of Roseville and the surrounding area.
7. Implement the vision, objectives and policies of the Northeast Roseville Specific Plan and the City of Roseville General Plan (2035).
8. Incorporate sustainable green building design features developed by the Leadership in Energy and Environmental Design (LEED) to meet the LEED Gold performance standards and Kaiser Permanente's long-term environmental stewardship goals.

Project Components

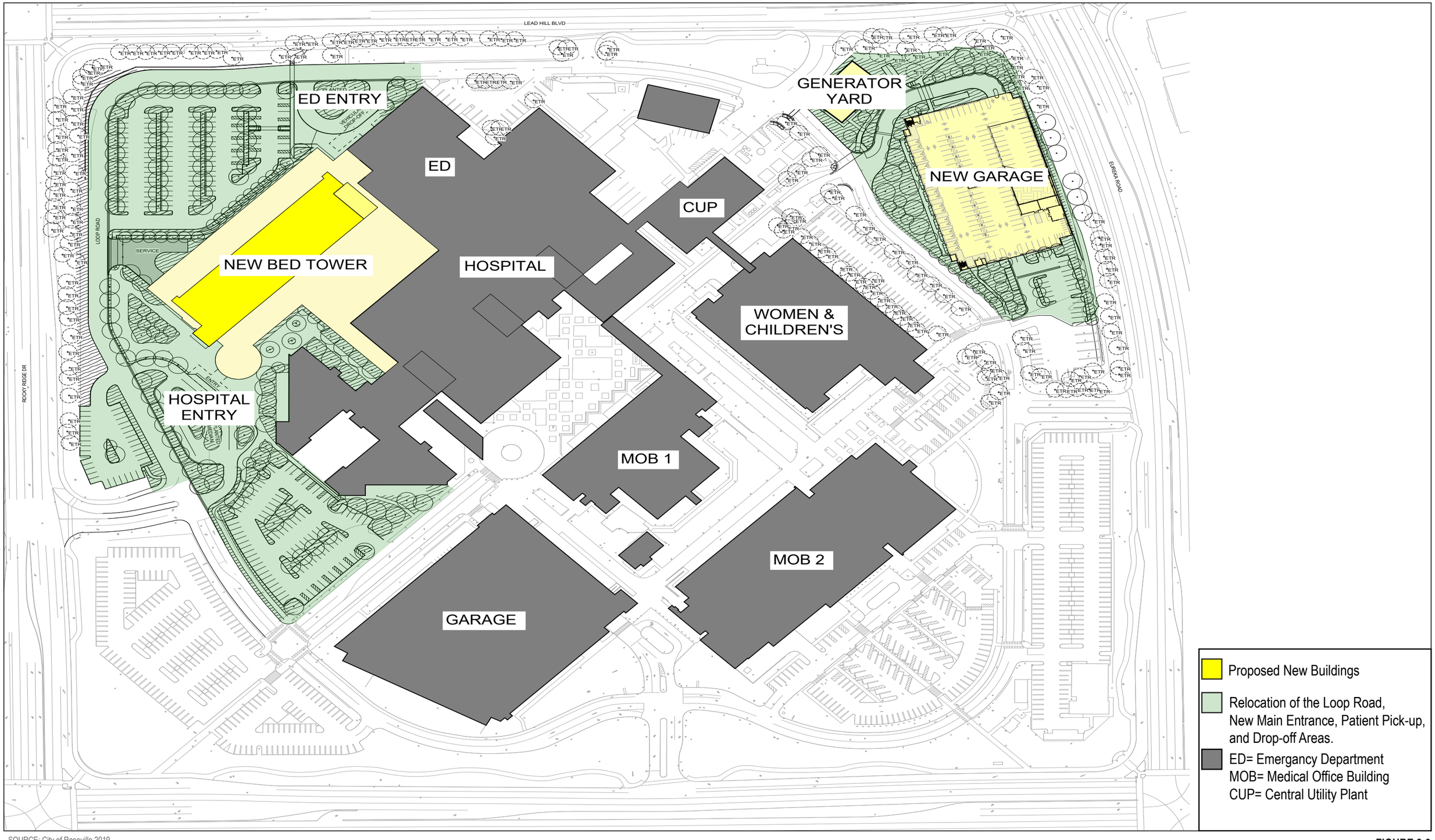
The proposed Project would increase the size and capacity of the previously approved 2004 Expansion Project on the existing Medical Center Campus, as described above in Tables 2-1 and 2-2. Specifically, the proposed Project revises the 2004 Expansion Project to allow for: a larger approximately 278,000 square-foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved, but not yet constructed, Intensive Care Unit Facility; addition of 36 new treatment bays to the Emergency Department; a new four-level garage with rooftop parking on the northeast corner of the Campus to accommodate approximately 800 stalls, on the site of the prior approved, but not yet constructed, parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; a new generator yard; and internal upgrades to the existing CUP. At project completion there will be 20 electric vehicle charging stations and 107 electric vehicle capable stalls on-site. The proposed site plan is shown on Figure 2-3.

Inpatient Tower Building

The Inpatient Tower building is an approximately 278,000 square-foot, six-story, 138-bed building on the site of the prior approved Surgery and Intensive Care Unit Facility. The proposed 107-foot tall Inpatient Tower building would include 138 beds (108 medical beds, 30 Intensive Care Unit beds), six additional operating rooms, 36 additional Emergency Department treatment bays, and an in-patient pharmacy. As shown on Figure 2-3, the new Inpatient Tower building would be located near the existing hospital in the northwest portion of the site in an area currently developed with an interim surface parking lot.

The following Medical Center Campus departments are anticipated to relocate to the new Inpatient Tower building once constructed:

- Sterile Processing Department. Vacated space would be backfilled with anesthesia offices.
- Inpatient Pharmacy. Food services would expand into the vacated pharmacy.
- Inpatient Pharmacy Administration. Hospital-based physicians would expand into the vacated space.
- Emergency Department Administration. Vacated space would be backfilled with other Emergency Department offices.
- Existing operators, respiratory, volunteer, and meditation (meditation room is a non-denominational area of respite for visitors and staff).



SOURCE: City of Roseville 2019

FIGURE 2-3

Proposed Site Plan

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project.

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Inpatient Tower Building Design

The available footprint for the Inpatient Tower building was predicated by site constraints, including the hospital loop road to the west, the existing emergency department to the north, and the existing hospital entrance and courtyard to the south. The expansion of the surgery suite operating rooms, emergency department and intensive care unit results in the base of the building being located to the northwest of the existing entrance. Given the significance of this new Inpatient Tower building, a new main lobby entrance and entry drop-off would be provided for the hospital with primary access off of Rocky Ridge Drive. Connections between the new Inpatient Tower building and the existing hospital building would be through a public corridor that would connect the lobbies of both buildings and be bordered by landscaped courtyards and amenity spaces. Clear wayfinding and convenient access from the existing main entrance was a major factor in the decision to locate the vertical circulation and connection atrium of the new Inpatient Tower building. A series of renovated spaces make the transition from the existing building to the new Inpatient Tower building seamless.

The Inpatient Tower building design seeks to create a supportive and healing place amidst the stress of the surgery, intensive care and emergency departments by creating a "tower in the park" with landscaped courtyards and gardens, areas of respite, and an interior design that is integrated with the building architecture.

Recognizing that this new Inpatient Tower building would have a significant presence on the Medical Center Campus given its location and size, the massing and architectural design strives to be highly functional. The Inpatient Tower building would be clad in metal panel, with a concrete base. Entering into a garden plaza drop-off, visitors arrive under a canopy, and proceed into a light-filled rotunda with direct access to the main elevator core, as shown on Figure 2-4, Conceptual Inpatient Tower Building Elevations.

Signage on the Inpatient Tower building would consist of Kaiser Permanente skyline signs on the north and south parapets of the building. The overall Medical Center Campus signage and directories would be updated to incorporate wayfinding for the new Inpatient Tower and parking garage.

Parking Garage

A new four level plus rooftop parking garage is proposed as part of the Project and would provide approximately 800 new parking stalls. As shown on Figure 2-3, the new parking garage would be located near the Women and Children's Center in the northeastern portion of the site in an area currently developed with an interim surface parking lot.

Parking Garage Building Design

The parking structure would be a painted cast-in-place concrete structure that has been designed as a rectangular building to allow for the most efficient parking stall layout as shown in Figure 2-5, Conceptual Parking Garage Building Elevations. Perimeter concrete crash walls would be used both for crash protection and to reduce light pollution. Elevator shafts would be constructed of concrete masonry units, with additional cladding to enhance the vertical circulation corners of the structure. Since this garage is at the intersection of Eureka Road and Lead Hill Boulevard, attention would be paid to the exterior elevations of the building, especially on those elevations visible along the main street frontages. Existing mature trees along the frontage would be maintained to the extent possible to enhance and screen the structure from view. The building façade would be a combination of materials and colors acceptable to the City.

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Conceptual view of the southwest side of the proposed Inpatient Tower Building near the Hospital Entry, looking northeast.



Conceptual view of the northeast side the proposed Inpatient Tower Building near the Emergency Department, looking southwest.

SOURCE: Hellmuth, Obata + Kassabaum, Inc., 2022

FIGURE 2-4

Conceptual Inpatient Tower Building Elevations

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Conceptual view of the northeast corner of the proposed Parking Garage near the intersection of Lead Hill Blvd. and Eureka Rd., looking southwest.



Conceptual view of the southeast corner of the proposed Parking Garage off Eureka Rd., looking northwest.

SOURCE: Hellmuth, Obata + Kassabaum, Inc., 2022

FIGURE 2-5

Conceptual Parking Garage Building Elevations

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Signage on the parking structure would consist of a Kaiser Permanente skyline sign on the north elevation. Additional wayfinding signage within the garage would be typical of Kaiser Permanente's sign program.

Central Utility Plant

Internal upgrades to the existing hospital CUP would replacing end of life pumps; increase oxygen supply system to support the expansion; and upgrade seismic restraints for existing equipment, overhead ductwork, and pipes. A new generator yard would be built on a paved pad across from the existing CUP to house two 2-megawatt emergency generators to support the Inpatient Tower building. In addition, fuel supply would be increased to meet the California Department of Health Care Access and Information[1] standards for Non-Structural Performance Category 5 requirements. As shown on Figure 2-3, the CUP area is currently located next to the existing hospital in the northeastern portion of the site.

Lighting and Landscaping

To provide for the safety and security of Kaiser staff and the public, the proposed Project would include overhead roadway pole lights, low-level lighting on bollards to illuminate landscaped areas and sidewalks, and building-mounted lighting at entrances. Architectural lighting would also be used to illuminate key architectural features. Light fixtures would use premium-efficiency LED light sources. Area lighting would automatically turn off during the day, and motion-activated controls would be provided to dim the lighting at night when there is no activity. Lighting would be designed to meet the City's Community Design Guidelines and would minimize light trespass, reduce sky-glow to increase night sky access, and improve nighttime visibility through glare reduction.

It is anticipated that the Project's landscaping would use native and drought resistant plants where feasible and would comply with the City's Water Efficient Landscape Ordinance. Since this Project is an expansion to an existing Campus, the landscaping plan is designed to blend with the existing plant palette and species that are currently on site. Based on an arborist survey completed in January 2022, there are no protected trees on the Medical Center Campus that would require additional compliance with the City's Municipal Code Chapter 19.66, Tree Preservation.

Circulation and Parking

With the proposed Project, the new main entry and patient drop-off to the hospital would be from Rocky Ridge Drive, as shown in Figure 2-3, Site Plan. The main entry would include a public two-way driveway and direct access to a new hospital drop-off area fronting the new hospital entrance atrium and plaza.

Existing access to the Medical Center Campus from Eureka Road and Douglas Boulevard would not change. Access to the new parking structure would be via the existing Medical Center Campus entry located off of Eureka Road, directly south of the proposed parking structure. A new driveway off Lead Hill Boulevard, near Rocky Ridge Drive will be constructed to provide additional access to the project site, in addition to closing the existing center block driveway on Lead Hill Boulevard.

An existing temporary parking lot at 2130 Douglas Boulevard would provide parking for Kaiser Permanente employees during construction.

[1] Formerly the California Office of Statewide Health Planning and Development (OSHPD).

Sustainability Measures

The proposed Project will be designed to meet Kaiser Permanente's sustainability requirements, which include Leadership in Energy and Environmental Design (LEED) HC v4 Gold certification. Developed specifically for hospitals, this healthcare version of the LEED rating system aligns with Kaiser's sustainable design and performance goals. The proposed Project would include the following sustainability features:

- Daylight dimming of electric lighting
- Light pollution reduction, including LED lighting
- Electrochromic glass at select locations to reduce heating, ventilation, and air conditioning (HVAC) energy use and improve occupant visual comfort
- Indoor environmental quality with an optimized HVAC system
- "Solar ready" approach to easily integrate solar photovoltaics at a later date
- Enhanced commissioning, as well as measurement and verification of energy usage
- Alternative transportation, including preferred parking spaces for high-efficient and low-emitting vehicles, and charging stations for electric vehicles
- Preferred parking for high-occupancy vehicles (two or more people)
- Bicycle facilities including storage and changing rooms for all occupants and showers for staff
- Indoor water use reduction, including low-flow and low-flush plumbing fixtures with flush and flow rates significantly below the national standard set by the US Department of Energy's Energy Policy Act (EPACT) 1992
- Outdoor water use reduction, including high efficiency irrigation systems
- Low-emitting materials such as adhesives, sealants, paint, coatings, flooring systems, and composite wood

Utilities and Storm Drainage

The Inpatient Tower building would tie into existing City water, wastewater, and storm drain lines, as well as dry utilities that serve the existing Medical Center Campus buildings. An existing 8-inch domestic water loop for the Campus is serviced via connections to the City's water mains in Eureka Road and Lead Hill Road. A new domestic water connection to the Inpatient Tower building would tie into the existing 8-inch domestic water loop. There is an existing 12-inch fire water loop line that is serviced via connections to the City's water mains in Rocky Ridge Road and Eureka Road. The fire water loop provides access to water in the event of a fire and connects to the existing pump room. An existing 10-inch boosted fire sprinkler loop is serviced downstream of the pump room. A new fire water connection to the Inpatient Tower building would be fed from the boosted fire sprinkler loop.

Sewage would be conveyed via a new 8-inch line that runs parallel and connects to an existing 8-inch line servicing the existing hospital. The existing 8-inch sewer line connection to the City's 12-inch main in Rocky Ridge Drive would remain. No off-site upgrades to the existing water, wastewater, and stormwater infrastructure would be required as part of this Project.

The proposed Project would add and replace impervious surfaces on the currently developed project site. The entire 49-acre Campus is divided into four drainage management areas (DMAs) and the Project would increase the impervious surfaces by 35,176 square feet, for a total of approximately 390,091 square feet of impervious surface on the Medical Center Campus at full Project buildout. The Inpatient Tower building is located within DMA 1 and

DMA 2, while the parking garage and CUP are located within DMA 4. The Project's proposed storm drain network would closely match the areas and layout for the existing network and would tie into the existing stormwater system.

Electricity is provided by Roseville Electric.

Project Operations

The Medical Center Campus is an existing 24-hour operation with approximately 2,800 full and part-time employees. Once construction of the proposed Project is complete, an additional 728 employees would be required in order to properly staff expanded operations. Hospital shifts include: 6:45 a.m. to 3:15 p.m. (day); 2:45 p.m. to 11:15 p.m. (evening); and 10:45 p.m. to 7:15 a.m. (night).

Project Construction/Phasing

Construction of the proposed Project, if approved, would take approximately 56 months, or 4.5 years, to complete. Site grading, trenching for utilities and re-aligning the loop road would take approximately 6 months, followed by construction of the buildings. The intent is to have the parking structure built first in order to provide additional parking on site while the Inpatient Tower building is under construction in the northwest corner of the Campus.

An off-site parking lot located at 2130 Douglas Boulevard would provide temporary parking for Kaiser employees during Project construction.

Kaiser Foundation Hospitals contracts with unionized labor for all construction work and would do so for this Project.

2.6 Required Approvals

The following discretionary approvals would be required for the Project:

- Certification of the SEIR
- Major Project Permit Stages 1-3
- Specific Plan Amendment to the Northeast Roseville Specific Plan
- Amendment to the Development Agreement

In addition, the state Department of Health Care Access and Information (HCAI) reviews and issues permits for hospital additions and renovation permits. In essence, HCAI serves as a building department for permit application review and issuance for all hospital projects in California. HCAI would review all proposed project components (with the exception of the parking garage and relocation of the loop road) and issue building permits for the Inpatient Tower building, internal improvements to the CUP and generator yard Project components.

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3 Issues Addressed in the 2004 Expansion Project EIR

3.1 Introduction

The Supplemental EIR (SEIR) needs to contain only the information required to analyze the proposed changes to the prior adopted project, including any changed circumstances and new information requiring additional environmental review, as set forth in California Environmental Quality Act (CEQA) Guidelines Sections 15162 and 15163. Where existing information and analysis in the 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH No. 2003062014) (2004 Expansion Project EIR) are sufficient to evaluate the impacts of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project), no additional environmental review is warranted. This chapter includes a checklist that summarizes environmental issues for which potential impacts of the proposed Project are adequately addressed in the 2004 Expansion Project EIR (which includes information from an initial study [IS] provided in Appendix A of the 2004 Expansion Project EIR) and no further analysis is required.

As summarized in this chapter, the proposed Project would not result in new circumstances that would result in new or substantially more severe impacts, and the 2004 Expansion Project EIR adequately addresses potential impacts in the following resource areas: Agriculture and Forestry Resources; Biological Resources; Cultural Resources; Geology, Soils, Seismicity; Mineral Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Population and Housing; Public Services and Recreation; Tribal Cultural Resources, and Wildfire. Therefore, these topics do not require further analysis in the Draft SEIR.

3.2 Project Overview

The proposed Project consists of the expansion of the previously approved 2004 Expansion Project, which was evaluated in the 2004 Expansion Project EIR. The proposed Project would increase the size and capacity of the previously approved 2004 Expansion Project on the existing Medical Center Campus, as described in Tables 2-1 and 2-2 in Chapter 2, Project Description. Specifically, the proposed Project revises the 2004 Expansion Project to allow for: a larger approximately 278,000 square-foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved, but not yet constructed, Intensive Care Unit Facility; addition of 36 new treatment bays to the Emergency Department; a new four-level garage with rooftop parking on the northeast corner of the Campus to accommodate approximately 800 stalls, on the site of the prior approved, but not yet constructed, parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; a new generator yard; and internal upgrades to the existing central utility plant. The environmental analysis in this chapter examines: (1) whether proposed changes to the approved 2004 Expansion Project could trigger any new significant impacts that were not previously identified in the 2004 Expansion Project EIR; and (2) whether there is any substantial increase in the severity of previously identified effects.

Evaluation of Environmental Impacts

The purpose of this checklist is to evaluate the categories in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in environmental

impact significance conclusions different from those found in the 2004 Expansion Project EIR. The 2004 Expansion Project EIR addressed impacts associated with site disturbance on the Medical Center Campus associated with construction activities. The analysis and impacts and mitigation measures associated with development would still be applicable to the proposed Project, with the exception of air quality and greenhouse gas emissions, which are evaluated in detail in this Draft SEIR. Therefore, the 2004 Expansion Project EIR mitigation measures would still be applicable to the proposed Project and are identified in the Checklist below.

The row titles of the Checklist include the full range of environmental topics, as presented in Appendix G of the CEQA Guidelines. The column titles of the Checklist have been modified from Appendix G to answer the questions to be addressed pursuant to Public Resources Code Section 21166 and CEQA Guidelines Sections 15162 and 15163.

3.2.1 Aesthetics

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☒	☐	☐
c) In non-urbanized areas, 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 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?	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐

a,b) Would the project have a substantial adverse effect on a scenic vista?

Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As noted in the City's General Plan EIR, there are no scenic vistas within City limits, which includes the Northeast Roseville Specific Plan (NERSP) area and the project site (City of Roseville 2020). In addition, developed areas within the City are not visible from any scenic vista. Therefore, there would be no impact related to Project effects on a scenic vista.

According to the California State Scenic Highway System Map, there are no officially designated or eligible scenic highways in the immediate project vicinity (Caltrans 2022). The nearest eligible scenic highway is State Route 49, approximately 14.5 miles east of the project site. The nearest officially designated highways are State Route 160, approximately 20 miles southeast of the Project and State Route 50, approximately 24 miles east of the project site. These highways are not visible from the highway due to topography and intervening trees, buildings, and structures. The project site does not contain any scenic resources such as rock outcroppings, or other significant natural or historical features that are visible from a state scenic highway and the proposed Project would not limit views of such features.

The 2004 Expansion Project EIR evaluates impacts to visual and aesthetic resources in Section 4.2. Impact 4.2-2 states there are no designated vistas or scenic highways in the vicinity of the project site; thus, the EIR concluded there would be a less-than-significant impact. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR. Given the above, these impacts were adequately addressed in the 2004 Expansion Project EIR.

c) In an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The proposed Project would increase the size and capacity of the previously approved 2004 Expansion Project. The new Inpatient Tower building is proposed to be a 107-foot tall, 6-story building with 278,000 square feet as compared to the 2004 Expansion Project which proposed an 83-foot, 5-story building with 155,000 square feet. The parking garage is proposed to be a 46-foot tall, 4-level parking structure as compared to the 2004 Expansion Project which proposed a 23-foot tall, 3-level parking structure. Because the Project is located in an urbanized area, an analysis of potential conflicts with the underlying zoning and other regulations that govern scenic quality is required. The proposed Project could have the potential to conflict with required zoning standards and other applicable regulations specific to scenic resources, potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

To provide for the safety and security of Kaiser staff and the public, the proposed Project would include overhead roadway pole lights, low-level lighting on bollards to illuminate landscaped areas and sidewalks, and building-mounted lighting at entrances. Architectural lighting would also be used to illuminate key architectural features. Lighting would be designed to meet the NERSP and the City's Community Design Guidelines; however; because the Project would potentially introduce new sources of light not analyzed in the 2004 Expansion Project EIR, the proposed Project could result in new or substantially more severe impacts to be further analyzed in the SEIR.

Mitigation Measures

The 2004 Expansion Project EIR concluded aesthetic impacts were less than significant and no mitigation measures were required.

3.2.2 Agriculture and Forestry Resources

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
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?	☒	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☒	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☒	☐	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☒	☐	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐

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

Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

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

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

The 2004 Expansion Project EIR "scoped out" the issue of agricultural resources in the 2004 IS (2004 Expansion Project EIR Appendix A) because the project site is within a developed urban area and does not contain any agricultural land and was not zoned for agricultural resources or operations. According to the

2004 IS (2004 IS p.7), the majority of the native vegetation (rolling grasslands) on the project site were removed when the existing Medical Center was constructed. The project site continues to support the existing Medical Center and contains no agricultural or forestry resources. Therefore, no substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded that Agriculture and Forestry Resources impacts were less than significant and no mitigation measures were required.

3.2.3 Air Quality

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐
b) 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?	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐

a-c) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Would the project expose sensitive receptors to substantial pollutant concentrations?

The 2004 Expansion Project EIR analyzed air quality impacts related to the 2004 Expansion Project in Section 4.4 (2004 EIR p. 4.4-1). The 2004 Expansion Project EIR determined that construction emissions from the 2004 Expansion Project would result in significant impacts related to short-term air pollutant emissions and long-term effects on local and regional air quality. Mitigation measures were proposed in order to reduce significant impacts to less-than-significant levels except for the project's contribution to individual and cumulatively significant regional construction emissions (PM_{10} and NO_x) during construction, which would remain significant and unavoidable.

The proposed Project would increase the size and capacity of the previously approved Expansion Project. This would include a new 278,000-square-foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved Intensive Care Unit facility, addition of 36 new treatment bays to the Emergency Department located in the main hospital building, a new four-level garage with rooftop parking to accommodate approximately 800 stalls, and a new generator yard, among other revisions that would affect project construction and operations emissions, potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR. Emissions will be estimated using the latest version of the California Emissions Estimator Model (CalEEMod) using new scenario assumptions, including phasing, equipment mix, and vehicle trips. The proposed Project would have the potential to generate an increase in air pollutants due to development of larger buildings potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impacts related to odorous emissions and consistency with air quality plans were determined to be less than significant in the 2004 Expansion Project EIR. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The following mitigation measures were included in the 2004 Expansion Project EIR and remain applicable to the proposed Project unless otherwise revised in the SEIR. If the SEIR concludes that there are remaining significant impacts, the SEIR will either propose new mitigation measures or modifications to the previously adopted measures listed below.

Mitigation Measure 4.4-1 Prepare a Construction Emission/Dust Control Plan.

a. Thirty days prior to the start of construction, the Placer County Air Pollution Control District (PCAPCD) requires, at a minimum, preparation of a Construction Emission/Dust Control Plan (CEDCP) and submittal of the CEDCP to the PCAPCD for review and approval. The CEDCP shall identify mitigation measures to reduce the level of construction-related emissions in accordance with the standards of the PCAPCD. Mitigation measures could include some or all of the following to reduce emissions to less-than-significant levels (below the PCAPCD threshold of 82 pounds per day): Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations.
b. The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty offroad equipment, the project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

c. An Independent Environmental Coordinator or Placer County Air Pollution Control District staff, CARB-certified to perform Visual Emissions Evaluations (VEE), will routinely evaluate project-related off-road and heavy-duty on-road equipment emissions for compliance with engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be removed from service and repaired prior to being placed back in service. Equipment owners and operators found to be operating equipment that is out of compliance will be subject to a notice of violation and monetary fines.

d. The project shall provide a plan for approval by the PCAPCD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. 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

e. There shall be no open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered to waste-to-energy facilities.

f. Minimize idling time to 10 minutes.

g. Earth-moving construction equipment shall be cleaned with water once per day.

h. Soil binders shall be spread on unpaved roads and employee/equipment parking areas.

i. Approved chemical soil stabilizers shall be applied according to manufacturer's specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours).

j. Use existing line power sources located on the site or clean fuel generators rather than temporary power generators, except during the first four weeks of construction of the first structure, when temporary generators may be used if line power sources are not feasible.

k. All grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour (as measured by an on-site anemometer) and dust is impacting adjacent properties.

l. All truck and equipment wheels shall be washed prior to leaving the site.

m. An operational water truck shall be on site at all times. Apply water to control dust at least twice daily (morning and evening), and as needed to prevent dust impacts off site.

n. Streets shall be washed or wet-broomed if silt is carried over to adjacent public thoroughfares.

o. Traffic speeds on all unpaved surfaces shall be 15 miles per hour or less.

In addition to the above measures, the project applicant shall consider any of the following measures to further reduce construction-related exhaust emissions:

p. Employ construction activity management techniques, such as extending the construction period outside the ozone season of May through October; reducing the number of pieces used simultaneously; increasing the distance between emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours.

q. Construction contracts shall include language that prohibits the use of pre-1996 off-road heavy-duty construction equipment on declared Spare the Air Days and prohibits the use of all heavy-duty diesel equipment on days forecast to exceed the federal one-house standard.

r. Use low-sulfur fuel for stationary construction equipment.

s. The applicant shall include a provision in contract language that earth-moving contractors shall not operate pre-1996 heavy-duty diesel equipment on forecast Spare the Air Days.

t. Use low-emission stationary equipment on site.

u. Provide a flag person to guide traffic properly and ensure safety at construction sites.

v. Schedule operations affecting traffic for off-peak hours.

w. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.

x. Minimize obstruction of through-traffic lanes.

y. Develop trip reduction plan to achieve 1.5 AVR (average vehicle ridership) for construction employees

In addition to the above Placer County APCD measures, the following dust control measures would be required under the grading permit by the Roseville Grading Ordinance:

aa. Cover all haul trucks or maintain at least two feet of freeboard.

bb. Sweep all paved access roads, parking areas, or staging areas on a daily basis at construction sites, particularly where silt has carried over to adjacent public thoroughfares.

cc. Cover, watering twice daily, or apply (non-toxic) soil binders to any exposed stockpiles (dirt, sand, etc.), particularly over weekends if stockpiles are located in proximity to the existing hospital.

dd. If landscaping is not planted immediately in areas where construction has been completed, hydroseed undeveloped areas. Appropriate application of such materials (appropriate seed mixture used in hydroseeding) shall be reviewed and approved by a qualified biologist.

Mitigation Measure 4.4-2 Contribute Air Quality Fees to offset long-term operational ozone precursor emissions.

Landowner shall contribute fifty-six thousand dollars ($56,000) to the City to offset long-term operational ozone precursor emissions (the “Air Quality Fee”). The City and Placer County Air Pollution Control District shall enter into an agreement for the collection and disbursement of the Air Quality Fee for off-site air quality mitigation. The Air Quality Fee is to be used for projects, programs and services that result in reduced emission sources that directly benefit City residents. Such projects, programs and service may include, but are not limited to, replacing non-EPA certified wood stoves, transit vehicle conversions, and retrofitting vehicles with cleaner burning fuels.

Mitigation Measure 4.4-3 Incorporate electric vehicle charging stations into project plans.

Kaiser will provide two electric vehicle charging stations (one conductive and one inductive) with signage prohibiting parking for non-electric vehicles.

Mitigation Measure 4.4-4

All flat roofs shall be made of material(s) that reduce energy demand.

Mitigation Measure 4.4-5

Provide power outlet at loading docks and prohibit diesel trucks idling for more than five minutes. All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and must be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage shall be provided.

3.2.4 Biological Resources

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
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?	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐
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?	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐

a-f) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Would the project 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?

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The 2004 Expansion Project EIR "scoped out" the issue of biological resources in the 2004 IS (2004 Expansion Project EIR Appendix A). Because the 2004 Expansion Project was proposed within areas already developed, graded, and/or paved on the existing Campus and no rare or threatened species or habitat were identified or known to be present on the site the IS determined no impacts to biological resources would result as part of the 2004 Expansion Project (2004 IS p. 20). Prior to construction, the Campus contained large areas of grassland habitat. The Campus also contained approximately 0.95 acres of wetlands, including two vernal pools, which were subsequently removed as part of the initial development of the site. The project site is not located near any water bodies and is not known to support any native resident or migratory wildlife corridors or native wildlife nursery sites. The 2004 IS determined that the 2004 Expansion Project would disturb and remove some landscape vegetation, including trees, but impacts would not be considered significant because none of the trees were considered protected under the City's tree preservation ordinance (2004 IS p.20).

The proposed Project would remove approximately 350 trees within the Campus as part of project construction. Based on an arborist survey completed in January 2022, there are no protected trees on the Campus that would require compliance with the City's Municipal Code Chapter 19.66, Tree Preservation. Street trees, shrubs, and plants are protected under Title 8 of the City's Municipal Code. However, no tree permit or other approval would be required from the City's Parks and Recreation Department. The Project would replace 214 existing trees and would meet the City's shade requirements.

The project site does contain trees that would support nests, but this nesting habitat is of low quality due to the developed nature of the project site and the surrounding area. Although these nesting and foraging habitats are of low quality, the proposed Project would be subject to pre-construction nesting bird surveys because nesting birds are treated as special-status under the state Fish and Game Code and the federal Migratory Bird Treaty Act. Therefore, compliance with the standard conditions to conduct nesting bird

surveys under the Migratory Bird Treaty Act and Fish and Game Code prior to tree removal and construction activities would be required. This includes conducting the following:

> **Preconstruction Nesting Bird Surveys.** If construction or tree removal is proposed during the breeding season (February 1 through August 30), a preconstruction nesting bird survey shall be conducted at the project site (including a 250-foot buffer for raptors) by a qualified biologist 14 days prior to the beginning of construction activities, in order to identify any active nests in the vicinity of the project area. If no active nests are found during the preconstruction survey, no further actions are required.
>
> If any active nests are found within 250 feet of disturbance areas, a temporary buffer shall be determined and flagged by the qualified biologist based on the location of the nest and planned construction activity in the vicinity of the nest. These nests shall be avoided until the chicks have fledged and the nests are no longer active, as determined by the qualified biologist.

No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR. The 2004 Expansion Project EIR concluded impacts were less than significant and no mitigation measures were required.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to biological resources were less than significant and no mitigation measures were required.

3.2.5 Cultural Resources

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒

a-c) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

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

The 2004 Expansion Project EIR "scoped out" the issue of cultural resources in the 2004 IS (2004 Expansion Project EIR Appendix A) because there was no evidence of any cultural resources on the project site or adjacent parcels and no resources were reported unearthed during construction of the existing Medical Center (2004 IS p. 30). However, ground-disturbing activities may still have the potential to uncover or disturb buried and previously undiscovered cultural resources or human remains. The 2004 IS proposed a mitigation measure which states that if paleontological, archaeological, or historic deposits are found, project activities would be halted and a qualified archaeologist consulted to provide management recommendations. If human remains are found, the County Coroner and/or Native American Heritage Commission would be contacted. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The following mitigation measure was introduced in the 2004 IS and remains applicable to the proposed Project.

Mitigation Measure CUL-1[1]

In the event of discovery of buried paleontological, archaeological or historic deposits, project activities in the vicinity of the find shall be temporarily halted and a qualified archaeologist consulted to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. If human remains are found, the Placer County Coroner's Office shall be contacted immediately. The coroner shall contact the Native American Heritage Commission, which shall notify the appropriate descendant.

[1] This mitigation measure was not named or numbered in the 2004 IS. For the purposes of identification in this Checklist, this mitigation measure has been labeled with an abbreviation of the topic it addresses and its chronological order of introduction within the analysis.

3.2.6 Energy

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐

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

Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

An evaluation of Energy was added as a new topic in Appendix G when the CEQA Guidelines were updated in March 2010. Prior to that energy conservation was addressed under Appendix F of the CEQA Guidelines. The 2004 Expansion Project EIR "scoped out" the issue of energy in the 2004 IS (2004 Expansion Project EIR Appendix A) because it assumed the 2004 Expansion Project would be constructed to meet or exceed state and local standards and therefore determined that no impacts would occur related to wasteful consumption of energy resources or conflict with state or local plans (2004 IS p. 21). Similarly, the proposed Project would comply with all standards and regulations related to energy resources during project construction and operation regarding energy consumption, including Title 24 of the California Code of Regulations. Additionally, Kaiser Permanente's sustainability requirements include compliance with Leadership in Energy and Environmental Design (LEED) HC v4 Gold certification. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded energy impacts were less than significant and no mitigation measures were required

3.2.7 Geology and Soils

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☒	☐	☐
ii) Strong seismic ground shaking?	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☒	☐	☐
iv) Landslides?	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☒	☐	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

As stated in the 2004 IS (2004 IS p. 12), the project site is not located within an Alquist-Priolo Earthquake Fault Zone and surface ground rupture is not expected to occur on or near the project site. The project site is situated in an area of relatively low seismic activity and would have a low probability of experiencing strong seismic ground shaking. The 2004 IS (2004 IS p. 13) states that the likelihood of liquefaction at the site is low because the groundwater table is low and the soil at the site consists of dense sand and gravel. There are no steep slopes at the site and the soil is not prone to landslides. Therefore, the 2004 IS determined there would be no impacts related to these geologic hazards. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the proposed Project would not result in any new or different impacts from those previously addressed in that document.

b-d,f) Would the project result in substantial soil erosion or the loss of topsoil?

Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Would the project 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?

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Refer to the discussion above in (a) for discussion related to landslides and liquefaction, and the Cultural Resources section (c) of this Checklist for discussion related to paleontological resources.

The 2004 IS states that the soils in the project area have a low probability of erosion and no evidence was found to indicate that the grading and excavation activities included in the 2004 Expansion Project would encourage erosion of soils in the project vicinity (2004 IS p. 13). Rough grading plans would be reviewed by the City of Roseville Development Services Engineering Division to ensure all grading activities implement grading and erosion control measures. According to the 2004 IS (2004 IS p. 13), visual inspection of the project site did not reveal the presence of slumps, surface features, or depressions that would indicate land subsidence. A Geotechnical and Geohazards Report was prepared for the 2004 Expansion Project EIR and exploratory boring and trenching was conducted that encountered dense silty sand, gravel, and cobble beneath the project site, which is not prone to slumping or subsidence. Additionally, the 2004 IS considered potential impacts related to unstable or expansive soils and concluded

that the project site does include potentially expansive clay soils (2004 IS p. 14). New Geotechnical Reports have been prepared for the proposed Project and recommendations set forth in these reports by the geotechnical consultant would ensure that impacts related to expansive soils would be less than significant (RMA Group 2021, 2022a, 2022b).

According to the 2004 IS (2004 IS p. 14), the project site does not have any unique geologic features. In addition, in the event a buried paleontological resource is discovered, Mitigation Measure CUL-1 would be implemented which requires project activities be halted and a qualified archaeologist consulted to provide management recommendations. With implementation of Mitigation Measure CUL-1, impacts related to paleontological resources would be less than significant. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the proposed Project would not result in any new or different impacts from those previously addressed in that document.

e) Would the project 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?

The proposed Project would not require the use of septic tanks or alternative wastewater disposal systems, just as the 2004 Expansion Project did not. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the proposed Project would not result in any new or different impacts from those previously addressed in that document.

Mitigation Measures

The following mitigation measure was included in the 2004 IS and has been updated to reflect the new geotechnical and geohazards investigations completed for the proposed Project.

Mitigation Measure GEO-1[2]

The project sponsor has agreed to abide by the recommendations of the Geotechnical and Geohazards Reports prepared for the proposed Project, which addresses the following:

- General Earthwork and Grading
- Earthwork Shrinkage and Subsidence
- Removals and Overexcavation
- Rippability and Rock Disposal
- Subdrains
- Fill and Cut Slopes
- Faulting
- Seismic Design Parameters
- Liquefaction and Secondary Earthquake Hazards
- Foundations
- Rock Anchors

[2] This mitigation measure was not named or numbered in the 2004 IS. For the purposes of identification in this IS, this mitigation measure has been labeled with an abbreviation of the topic it addresses and its chronological order of introduction within the analysis.

- Foundation Setbacks from Slopes
- Slabs on Grade
- Miscellaneous Concrete Flatwork
- Footing Excavation and Slab Preparations
- Lateral Load Resistance
- Drainage and Moisture Proofing
- Cement Type and Corrosion Potential
- Temporary Slopes
- Utility Trench Backfill
- Pavement Sections
- Observation and Testing

The conditions of approval for the MPP will require compliance with the recommendations put forward in the Geotechnical and Geohazards Reports, which would decrease any potential impacts to a less-than-significant level.

3.2.8 Greenhouse Gas Emissions

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
VIII. GREENHOUSE GAS EMISSIONS – Would the project:			
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐

a,b) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Would the project generate conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Greenhouse gas (GHG) emissions were added as a new topic in Appendix G when the CEQA Guidelines were updated in March 2010. As such, the 2004 Expansion Project EIR does not expressly address the topic of GHG emissions. Under CEQA Guidelines Section 15162, a SEIR is not required unless there are substantial changes to the project or its circumstances or if there is new information of substantial importance. The addition of GHG emissions as a topic in Appendix G is not considered to be new information of substantial importance because the concept of climate change and the role of GHG emissions were generally

understood at the time of certification of the 2004 Expansion Project EIR and were included in the overall analysis as such.

The proposed Project would increase the size and capacity of the previously approved Expansion Project. As such, construction and operation of the proposed Project would result in GHG emissions associated with use of off-road construction equipment and other sources including haul trucks, vendor trucks, and worker vehicles, GHG emissions from area sources (landscaping equipment), energy sources (electricity consumption), solid waste generation, water supply, and wastewater treatment potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR.

Mitigation Measures

The 2004 Expansion Project EIR concluded greenhouse gas impacts were less than significant and no mitigation measures were required.

3.2.9 Hazards and Hazardous Materials

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☒	☐	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☒	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☒	☐	☐

a-c) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The 2004 IS determined that the 2004 Expansion Project would have less-than-significant impacts regarding the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials and accidental release of hazardous materials into the environment (2004 IS p. 22). While the proposed Project would increase the size and capacity of medical facilities relative to the 2004 Expansion Project, there would be no change in the use of the site and the Medical Center would continue to require transportation, use, and disposal of hazardous materials. This would include biohazardous waste (generated from medical activities and procedures) and chemicals used for vehicle maintenance, air conditioning, and medical diagnostics. As stated in the 2004 IS (2004 IS p. 24), the Medical Center currently implements strategies and plans for managing safety hazards associated with hazardous materials in conformance with existing health and safety regulations. When the project is completed, Kaiser's Safety Office would continue to be responsible for monitoring and establishing health and safety procedures and for ensuring compliance with environmental laws and regulations. Implementation of these health and safety plans and procedures, in conformance with federal, state and local requirements, reduces the risk of significant hazards to the public or the environment. Therefore, no substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

The closest school to the project site is Maidu Elementary School, approximately 0.5 miles south of the project site. As stated above, the Medical Center would continue to implement strategies and plans for managing safety hazards associated with hazardous materials in conformance with existing health and safety regulations. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

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

As stated on page 22 of the 2004 IS, the 2004 Expansion Project would not create a significant hazard to the public or the environment. The project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. According to a search of the Department of Toxic Substances Control EnviroStor database, the Medical Center is not listed as an environmental cleanup site (DTSC 2022). The closest listed cleanup site is at 5400 Douglas Boulevard, adjacent to the southwest boundary of the project site; however, cleanup at this site (associated with potential diesel and fuels from a previous sand and gravel quarry) was completed and considered closed in January 1993 (DTSC 1993). No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

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?

As stated in the 2004 Expansion project EIR (2004 EIR p. 4.3-22), the closest airport to the project site is Lincoln Airport, located approximately 10 miles north of the City along State Route 65, and the site is not within an airport land use plan. The 2004 Expansion Project EIR (2004 EIR p. 4.5-17) analyzed a heliport to be used for emergency transport, this component of the project was never constructed and is not proposed as part of this Project. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The 2004 IS (2004 IS p. 24) determined that the 2004 Expansion Project would not interfere with emergency response or evacuation plans. As part of the proposed Project, the internal circulation system at the Medical Center would be slightly redesigned. The new main entry and patient drop-off to the main hospital would be from Rocky Ridge Drive in order to optimize safety, provide enhanced health and wellness, and to create a seamless flow between pedestrians and vehicle traffic throughout the Campus. The main entry would include a public two-way driveway and direct access to a new hospital drop-off area fronting the new hospital entrance atrium and plaza. As stated in the 2004 IS (2004 IS p. 24), the Roseville Fire Department has a copy of the Kaiser Safety Manual and Hazard Plan containing evacuation plans and health and safety procedures. These materials would be updated for the expanded facilities and would continue to be updated on an annual basis, as is currently required. Kaiser would continue to comply with local, state, and federal health and safety requirements. The Medical Center would continue to provide emergency vehicle access through the site and the Project would not result in significant road closures, traffic detours, or congestion that could hinder evacuation during an emergency. Therefore, the proposed expansion would not interfere with emergency evacuation or response plans. The proposed expansion of the emergency facilities and hospital would increase Kaiser's ability to respond to emergencies in the community. Therefore, no substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

As stated in the 2004 IS (2004 IS p. 25) the project site is graded and developed and adjacent properties are either developed, under construction, or do not contain highly flammable vegetation. The City is within a local responsibility area and is not in a Very High Fire Hazard Severity Zone (CAL FIRE 2007). The closest Very High Fire Hazard Severity Zone is approximately 17 miles northeast, past the City of Auburn. In addition, all development is subject to the California Building Code and the requirements under the California Fire Code, as well as any requirements for hospital buildings set forth by the Department of Health Care Access and Information. Compliance with the standard condition of approval, which requires appropriate installation of hydrants with minimum fire flow requirements, access and turnaround requirements, automatic sprinkler systems, and fuel clearance requirements, would reduce potential impacts for wildland fires to less than significant. The proposed Project would not exacerbate any risk for wildland fires and would involve construction on a developed site, which already has a low risk of wildland fires. Therefore, no substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded hazardous materials impacts were less than significant and no mitigation measures were required.

3.2.10 Hydrology and Water Quality

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐
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:			
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒
iv) impede or redirect flood flows?	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☒	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐

a-b) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As stated in the 2004 Expansion Project EIR (2004 EIR p. 4.6-11), the proposed Project would be subject to stormwater requirements under the federal Clean Water Act. This would include conformance to the City's stormwater ordinance (Chapter 14.20 of the Roseville Municipal Code). As discussed in the 2004 Expansion Project EIR (2004 EIR p. 4.6-7), all construction sites greater than one-acre are required to obtain and comply with a National Pollutant Discharge Elimination System permit. Under this permit, the project applicant is required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the State Water Resources Control Board Water Quality Order No. 2003-0005-DWQ to control the discharge of pollutants from the site. The City also has its own Best Management Practices (BMP) Guidance Manual for construction projects, which provides guidance on construction site stormwater runoff control, pollution prevention, and illicit discharge detection and elimination (City of Roseville 2011).

As stated in the 2004 Expansion Project EIR (2004 EIR p. 4.6-6), the Project is not located within the watershed of a public water supply, and therefore would not contaminate a public water supply. Runoff from the project site would be discharged into the City's existing storm drain infrastructure and would be required to implement applicable best management practices consistent with the requirements of the City's Stormwater Ordinance and project's site-specific SWPPP. In addition, the Project would involve minimal excavation, and would therefore have no effect on groundwater resources. While the increase in impervious surface (discussed below) would reduce the on-site infiltration, the Project would not substantially affect groundwater recharge to the overall groundwater system. In addition, based on the requirements of Senate Bill 610, the proposed Project would not trigger the need for a Water Supply Assessment as it does not demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project.

As such, the proposed Project would be required to comply with the existing state and local requirements and would not violate any water standards or otherwise degrade water quality to ensure impacts would remain less than significant. In addition, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin and impacts would remain less than significant. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site?

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

iv) Impede or redirect flood flows?

The proposed Project is sited within the existing Medical Campus Center that has existing stormwater drainage and infrastructure serving the area. However, the project could introduce new impervious areas that could affect current site drainage patterns. The 2004 Expansion Project EIR (2004 EIR p. 4.6-6) determined that water quality impacts could result from stormwater runoff during construction due to the increased potential for erosion and sedimentation and for chemicals to enter stormwater. The proposed Project would increase the amount of impervious surfaces by 35,176 square feet, for a total of approximately 390,091 square feet of impervious surface on the Campus at full Project buildout. As stated in the 2004 IS (2004 IS p. 16), there are no significant on-site water recharge sources on the project site and therefore no significant impact on groundwater supplies. However, new impervious surfaces could contribute to polluted surface runoff discharged to receiving waters in Cirby Creek and the Dry Creek watershed. Use and storage of motor-powered vehicles, equipment and fuels on-site would also increase the potential for spills and leaks of petroleum products and other chemicals that, in turn, could be carried via stormwater runoff to the storm drain system and downstream creeks and affect water quality.

Consistent with the 2004 Expansion Project EIR, the proposed Project's drainage design would be required to be consistent with the City's Municipal Separate Storm Sewer System program and City's stormwater ordinance (Chapter 14.20 of the Roseville Municipal Code) that address stormwater quality impacts for project construction and operation. A project-specific SWPPP would be developed and would include BMPs designed to minimize polluted runoff and non-stormwater discharges. Therefore, potential alterations of drainage patterns are not expected to cause on- or off-campus erosion, siltation, or flooding. The City has adopted a Storm Water Quality Control Criteria Plan that also identifies BMPs required to be incorporated into project plans. Compliance with the provisions of the Storm Water Quality Control Criteria Plan, including all applicable BMPs, would reduce impacts related to runoff to a level that would be less than significant.

New impervious surfaces at the project site would also increase the risk of regional and localized flooding. As stated in the 2004 Expansion Project EIR (2004 EIR p. 4.6-10), Kaiser would be required to pay or would have already paid appropriate fees to the City, and, in turn, the City would pay or would have already paid drainage fees to the Flood Control District for funding flood control projects and services identified in the Dry Creek Watershed Flood Control Plan. According to the 2004 Expansion Project EIR (2004 EIR p. 4.6-10), the project may also exacerbate flooding at an undersized culvert along Huntington Drive and Queens Court, and therefore Kaiser would be required to pay fees that would contribute toward the improvement of the culvert. The proposed Project would also be subject to the City of Roseville's Flood Damage Prevention Ordinance (Ch. 9.80 of the Roseville Municipal Code), which includes standard requirements for all new construction, including regulation of development with the potential to impede or redirect flood flows. These requirements are adopted as Mitigation Measures 4.6-2 and 4.6-3 in the 2004 Expansion Project EIR and would remain applicable to the proposed Project.

As stated in the 2004 IS (2004 IS p. 15), the project site is not located within a designated 100-year or 500-year flood inundation area. The Project would therefore have no impact on any flood flows. Overall, there would be a less-than-significant impact related to alteration of the existing drainage pattern of the site.

Therefore, no substantial changes in the project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

d-e) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As stated previously, the 2004 IS (2004 IS p. 15) state the project site is not located within a designated 100-year or 500-year flood inundation area. Additionally, there are no dams or levees in the vicinity that would cause inundation at the project site. The project site is physically removed from any large body of water that would pose seiche or tsunami hazards. Therefore, the Project would have no impact related to flooding or other water-related hazards. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The following mitigation measures were included in the 2004 Expansion Project EIR and remain applicable to the proposed Project.

Mitigation Measure 4.6-2

Coordination with Placer County Flood Control and Water Conservation District and appropriation of drainage fees to support implementation of the Dry Creek Watershed Flood Control Plan.

Mitigation Measure 4.6-3

Coordination with City of Roseville Public Works Department and appropriate drainage fees to support improvement of the culvert under Huntington Drive.

3.2.11 Land Use and Planning

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Physically divide an established community?	☒	☐	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐

a) Would the project physically divide an established community?

As stated in the 2004 IS (2004 IS p. 9), expansion of the Medical Center would not disrupt or divide the physical arrangement of an established community. The Project would involve development at the existing Medical Center, which is currently developed and does not contain any established communities. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The NERSP was amended in 2004 to accommodate development of the Medical Center Campus and provided development standards and requirements. Similarly, in order to accommodate development of this project, the NERSP will have to be amended. Chapter V(d)(I), Medical Campus Component of the NERSP provides goals, policies, and implementation measures for development of Medical Campus sites within the City of Roseville, including the project site. Implementation Measure ii(a) under Plan Policy 2 for Goal 1 requires a minimum of a 100-foot setback from the ultimate back of curb of any adjacent existing or planned public roadway to any portion of a building three stories or more in height. This project would require an amendment to the NERSP to modify the setback requirement for the new parking garage from 100 feet to 50 feet to accommodate the proposed location at the northeast corner of Eureka Road and Lead Hill Boulevard (existing landscape setbacks would be maintained). In addition, the proposed amendment would allow for ancillary right turn lanes, bus turn-outs, and standard roadway tapers to be permitted as reductions to the required setbacks described above. Therefore, the proposed Project could result in new or substantially more severe impacts to be further analyzed in the SEIR.

Mitigation Measures

The 2004 Expansion Project EIR concluded land use and planning impacts were less than significant and no mitigation measures were required.

3.2.12 Mineral Resources

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
XII. MINERAL RESOURCES – Would the project:			
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☒	☐	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☒	☐	☐

a,b) ***Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

The 2004 IS does not identify any known mineral resources within the plan area (2004 IS p. 21). The proposed expansion of the Medical Center would not result in the loss of availability of a known mineral resource or mineral resource recovery site that would be of future value to the region or the state. There are no Mineral Resources Zone 2 (MRZ-2) locations known to exist on the project site (DOC 1995). No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to mineral resources were less than significant and no mitigation measures were required.

3.2.13 Noise

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐

a) Would the project result in 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?

The 2004 Expansion Project EIR concludes that construction could result in a temporary increase of ambient noise levels resulting in a potentially significant impact (2004 EIR p. 4.5-13). Since construction noise is exempt from the City's noise ordinance (Section 9.24.030 of the Roseville municipal code), construction-related noise is not considered significant during designated daytime hours (7:00 a.m. through 7:00 p.m. on weekdays and 8:00 a.m. through 8:00 p.m. on weekends). However, the noise ordinance requires that all construction equipment be fitted with muffling devices and maintained in good working order. This requirement is included as Mitigation Measure 4.5-1 in the 2004 Expansion Project EIR, which would remain applicable to the proposed Project.

Additionally, the 2004 Expansion Project EIR states that there may be traffic noise increases from expansion of the Medical Center; however, hospital facilities are required to be designed to ensure compatibility with future noise levels (2004 EIR p. 4.5-16). The proposed Project would be required to meet the City's 45 A-weighted decibel (dBA) interior noise standard for hospital uses, and proposed facilities may need to attenuate noise levels by up to 30 dBA in order to meet this standard under future traffic conditions. This potentially significant future noise compatibility impact would be mitigated to a less-than-significant level with implementation of appropriate noise attenuation measures, per Mitigation Measure 4.5-2, which would remain applicable to the proposed Project. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The 2004 Expansion Project EIR considers the potential vibration impacts of construction under Impact 4.5-1 on page 4.5-13. The analysis notes that vibration impacts are generally considered significant when there is a potential for structural damage or for disturbance of people. Vibration levels that would occur as a result of project construction are not expected to cause structural damage. However, vibration levels may affect hospital patients. Since pile drivers and rock drills would not be required for project construction, vibration impacts typically associated with use of this type of equipment would be avoided.

Proposed implementation of an operational plan per Mitigation Measure 4.5-1 would also minimize the potential for adverse effects due to construction-related vibration. The proposed Project would continue to comply with this mitigation measure. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

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?

The proposed Project is not within an airport land use plan or two miles of a public airport or public use airport. The closest airport is Lincoln Airport, located approximately 10 miles north of the project site. The 2004 Expansion Project EIR (2004 EIR p. 4.5-17) analyzed a heliport to be used for emergency transport, however, this component of the project was never constructed and is not proposed as part of this Project. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document

Mitigation Measures

The following mitigation measures were included in the 2004 Expansion Project EIR and remain applicable to the proposed Project.

Mitigation Measure 4.5-1 Implement noise controls on Medical Center Campus

a. Kaiser shall use best efforts to avoid construction outside daytime hours established by Municipal Code. All construction equipment will be required to be fitted with factory-installed muffling devices, and all construction equipment shall be maintained in good working order. Such equipped and maintained equipment shall generate noise levels no greater than 75 dBA (Leq) at 50 feet, except for pavers or pneumatic tools, which can generate up to 80 dBA (Leq) at 50 feet (see Table 4.5-2, with controls).

b. The applicant's contractor, as part of Kaiser's operational plan, shall use best efforts to minimize disturbance of hospital patients within the existing hospital. The following measures shall be implemented where construction occurs within 100 feet of hospital receptors (200 feet for impact equipment) to the extent necessary to help maintain acceptable interior noise levels for patients in the hospital:

   - Equipment used for project construction shall be hydraulically- or electrically-powered impact tools (e.g., jackhammers, pavement breakers, and rock drills) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. However, where

use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler should lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this should achieve a reduction of 5 dBA. Quieter procedures such as drilling rather than impact equipment shall be used whenever feasible.

- Stationary noise sources shall be located as far from hospital receptors as possible. If they must be located near hospital receptors, they shall be adequately muffled and enclosed within temporary sheds. Portable sound blankets or existing building facades should be used as necessary to reduce noise generated by construction and demolition activities at hospital receptors and nearby residential uses. Such blankets can provide up to a 10- dBA noise reduction.
- As part of Kaiser's operational plan to be implemented during all construction phases, there shall be close coordination between construction staff, hospital staff, and medical office building (MOB) tenants. Hospital and medical office staffs shall be made aware of the construction schedule and activities.
- During all construction phases, locations of staging areas, truck routes, and loading areas shall consider exposure to on-site hospital patient receptors, utilizing existing building facades to provide maximum shielding for these receptors.

Mitigation Measure 4.5-2 Implement appropriate noise attenuation measures in proposed hospital facilities and medical buildings

Proposed hospital facilities and medical office buildings shall be designed with appropriate noise attenuation measures (increased insulation, fixed windows, mechanical ventilation) to ensure that interior noise levels do not exceed 45 dBA (CNEL) for hospital facilities and 45 dBA (Leq) for medical office buildings under future noise conditions, considering future traffic increases and proposed hospital operations (including the Central Utility Plant expansion).

3.2.14 Population and Housing

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☒	☐	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☒	☐	☐

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

Once construction of the proposed Project is complete, an anticipated additional 728 employees would be required in order to properly staff expanded operations. As such, the proposed Project would increase local and regional employment, and therefore may contribute to increased population in the City and surrounding areas. However, similar to what was stated in the 2004 Expansion Project EIR (2004 EIR Impact 4.9-1 p. 4.9-5 through 4.9-6), it is anticipated that most new employees would already be residing in the City or in the surrounding area. The increase in residents would not increase population growth in the City beyond what is assumed in the 2035 General Plan and would represent a small percentage of local, state and regional growth projections for employment and housing in the project area. Additionally, the 2004 IS (2004 IS p. 11) discloses that there are no housing units located on the project site, and therefore implementation of the Project would not displace existing housing units. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to population and housing were less than significant and no mitigation measures were required.

3.2.15 Public Services

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			
Fire protection?	☒	☐	☐
Police protection?	☒	☐	☐
Schools?	☒	☐	☐
Parks?	☒	☐	☐
Other public facilities?	☒	☐	☐

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

Fire protection?

As stated in the 2004 Expansion Project EIR (2004 EIR Impact 4.7-2, p.4.7-5), expansion of the Medical Center could increase call volumes related to emergency medical services. However, the Project itself would provide more emergency medical facilities in the City and could reduce distances traveled by ambulances because of the increase in hospital capacity. As stated in the Population and Housing section of this Checklist, the anticipated increase of 728 employees would represent a small percentage of local, state and regional growth projections. The proposed Project would not cause a significant increase in population that would require new or physically altered fire stations in order to maintain service ratios or response times. Therefore, no substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Police protection?

The 2004 Expansion Project EIR concludes that the increase in demand for police services would be less than significant (2004 EIR Impact 4.7-1, p. 4.7-3) even with an increase in hospital capacity at the site. As discussed above, the proposed Project would not cause a significant increase in population, and therefore would not result in the need for new or physically altered police stations in order to maintain service ratios or response times. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Schools?

The proposed Project is anticipated to result in an anticipated increase of 728 employees. To the extent that increased employment increases the number of residents in the Roseville area, additional demand for school services would be created. However, as stated in the 2004 IS (2004 IS p. 27), school districts can collect impact mitigation fees from both residential and non-residential development in accordance with Section 9599 of the California Government Code. Payment of school mitigation fees represents full mitigation for the impact of new development on schools. Kaiser would be required to pay all applicable school impact fees. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Parks or other public facilities?

As discussed in Population and Housing section of this Checklist, the anticipated increase in 728 employees would represent a small percentage of local, state and regional growth projections for employment and housing in the project area. This increase would not cause for new or physically altered parks or other public facilities. Additionally, the 2004 IS states that Kaiser would be required to pay Placer County Capital Facilities Fees, which were adopted by the City to mitigate the impacts of growth within the

City on facilities needed to accommodate general County services, such as libraries. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to public services were less than significant and no mitigation measures were required.

3.2.16 Recreation

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☒	☐	☐
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?	☒	☐	☐

a,b) ***Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

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?

The 2004 IS (2004 IS p. 31) states that the 2004 Expansion Project would not have direct or indirect impacts on recreation since there would be no residences constructed as part of the project that would increase use of existing parks or demand for new parks. As discussed in the Population and Housing section of this Checklist, the anticipated increase in 728 employees would represent a small percentage of local, state and regional growth projections for employment and housing in the project area. Additionally, it is anticipated that most new employees would be existing residents of the City or County and therefore are already served by the parks and recreational facilities in the area. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, impacts were adequately addressed in that document.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to recreation were less than significant and no mitigation measures were required.

3.2.17 Transportation

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐
d) Result in inadequate emergency access?	☐	☒	☐

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

The proposed Project would include the construction of a new parking structure and changes to the internal circulation system at the Medical Center Campus. Therefore, the project may conflict with a program, plan, ordinance, or policy addressing a circulation system potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR. The SEIR will describe the location, nature, and operation of existing transportation systems serving the project site and vicinity and evaluate consistency with applicable transportation plans and impacts on or related to alternative travel modes, such as pedestrian, bicycle and transit services and facilities.

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

As of July 1, 2020, CEQA Guidelines Section 15064.3(b) states that the recommended metric for the evaluation of transportation impacts is vehicle miles traveled (VMT). However, per CEQA Guidelines section 15007(c): "If a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved." The 2004 Expansion Project EIR analyzed transportation impacts using level of service (LOS) methodology, which complied with the CEQA Guidelines in effect at that time. However, the proposed Project includes new components that were not analyzed in the 2004 Expansion Project EIR and, therefore, the potential for VMT impacts is discussed below.

Section 15064.3(b) of the CEQA Guidelines outlines the criteria for analyzing a project's transportation impacts. For land use projects, this section states that "[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact."

According to the City's VMT guidelines detailed in the 2021 Amendments to City of Roseville Design and Construction Standards (City of Roseville 2021), a project would result in a significant transportation impact if it would:

- Not qualify for screening per the screening criteria outlined in Section 4-9-A of the City of Roseville VMT Impact Standards. The criteria states that a project may be screened from additional VMT analysis if it complies with one or more of the following conditions: (1) is within the scope of a prior CEQA analysis; (2) is a small project (generating 110 trips or less per day); (3) is within 0.5 miles of an existing major transit stop; (4) is an affordable housing development; or (5) is a redevelopment project leading to a decrease in VMT compared to existing uses.
- Exceed the applicable VMT threshold identified in Section 4-10 of the City of Roseville VMT Impact Standards. Per Section 4-10, the applicable VMT threshold for a non-residential project is 15% below baseline VMT per service population; or a net overall decrease in total City VMT when compared to baseline VMT.

The City adopted its General Plan 2035 and certified the corresponding EIR in August 2020 (City of Roseville 2020). The General Plan EIR explicitly states that "future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA." This is in reference to CEQA Guidelines Section 15183(a): "CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Further, the General Plan EIR states that "quantitative analysis would not be required if it can be demonstrated that a project is consistent with the General Plan and would generate VMT which is equivalent or less than what was assumed in this General Plan EIR." This is consistent with Section 4-9-A of the City's VMT Impact Standards described above.

The transportation impact analysis for the General Plan EIR used the Roseville travel forecasting model to estimate VMT for the City. The Medical Center Campus is located within its own travel analysis zone (TAZ) (TAZ 256) of the travel forecasting model. Table 3-1 below presents the land use inputs for TAZ 256 (the Kaiser Permanente Roseville Medical Center Campus) in the 2035 travel forecasting modelTable 3 and also compares these land use inputs to the proposed Project's proposed gross floor area totals.

Table 3-1. Roseville 2035 General Plan EIR - Traffic Model Land Use Assumptions

Land Use	Roseville 2035 General Plan EIR: Travel Forecasting Model – TAZ 256	Kaiser Permanente Roseville Medical Center Campus with Proposed Project
Hospital	962,000 sf	823,574 sf
Medical Office	434,000 sf	382,688 sf
General Office	362,000 sf	—
Total	**1,758,000 sf**	**1,206,262[1] sf**

Source: Roseville 2035 General Plan Update Final EIR, 2020. Kaiser Permanente, 2022.
Notes: SF = square feet
1. Excludes support buildings, such as the existing auxiliary building, fire pump building, and existing and proposed parking garages.

Table 3-1 shows that the land use inputs assumed for the General Plan EIR are greater than for the existing medical buildings in addition to the proposed Project.[3] Including the proposed Project, the Medical Center Campus would increase to 1,206,262 square feet. Since the travel forecasting model used for the 2035 General Plan EIR assumed more development than the proposed Project, it can reasonably be determined that the proposed Project would generate less daily VMT than what was assumed for the General Plan EIR. Therefore, pursuant to Section 4-9-A of the City's Design Standards, the proposed Project would qualify for screening from additional VMT analysis, as the VMT impact of the proposed Project was considered in the VMT impact assessment disclosed in the General Plan EIR. Thus, since the proposed Project is consistent with the General Plan EIR, it would qualify for streamlining under Section 15183 of the CEQA Guidelines.

The Roseville Medical Center currently has a Transportation Systems Management Plan that will be updated, as needed, to include the Project. It is anticipated the City will work with Kaiser to include Conditions of Approval for amendments to the Transportation Systems Management Plan. The City's Transportation Commission will review and approve any amendments to the Transportation Systems Management Plan.

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

The proposed Project would change the internal circulation system at the Medical Center. The new main entry would include a public two-way driveway and direct access to a new hospital drop-off area fronting the new hospital entrance atrium and plaza. While these design features are compatible with the proposed and neighboring uses, they could be hazardous due to their geometric design and interaction with existing traffic conditions potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR.

d) Would the project result in inadequate emergency access?

The Project would result in a significant transportation impact if it would result in roadway and transportation facilities that impede access for emergency response vehicles. The Project would close the existing center driveway (i.e., driveway signed "ambulance only") on Lead Hill Boulevard and add a new driveway on Lead Hill Boulevard, potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR.

Mitigation Measures

The 2004 Expansion Project EIR included mitigation measures to improve LOS at certain intersections. However, since LOS is no longer considered in CEQA analysis, there are no mitigation measures applicable to the proposed Project.

[3] Note: The existing Campus contains seven buildings totaling 1,497,201 square feet. The General Plan EIR and the traffic analysis for the project excludes support buildings, such as the existing auxiliary building, fire pump building, and existing and proposed parking garages.

3.2.18 Utilities and Service Systems

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
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?	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐
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?	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐

a-e) Would the project 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?

Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Would the project 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?

Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed Project would be served by the existing infrastructure at the Medical Center Campus, including water, wastewater collection, stormwater drainage, electric power, natural gas, and telecommunications infrastructure. However, it is possible the proposed Project may require the expansion of utilities or infrastructure needed to serve new project components such as the Inpatient Tower building or the expanded Emergency Department. The proposed Project could also lead to increases in water and wastewater demand and generation of solid waste associated with the Medical Center expansion potentially resulting in new or substantially more severe impacts to be further analyzed in the SEIR. The SEIR will identify any necessary extension or expansion of water, wastewater, storm drainage, solid waste, and other utilities required to serve the project and the potential environmental impacts of those extensions. In addition, consistency with applicable General Plan goals and policies, the City's Urban Water Management Plan and Water Conservation and Water Efficient Ordinances will be evaluated. The contribution to the City's Wastewater Treatment Plant will also be quantified to determine if adequate capacity exists to serve the new uses.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts to public utilities were less than significant and no mitigation measures were required.

3.2.19 Tribal Cultural Resources

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
a) 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)?	☐	☐	☒
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.	☐	☐	☒

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource 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)?

Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

The United Auburn Indian Community 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 Tribe has a 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.

Tribal cultural resources (TCRs) were added as a new topic in Appendix G when the CEQA Guidelines were updated in September 2016. Prior to that, TCRs were generally addressed under the Cultural Resources section of Appendix G of the CEQA Guidelines. As such, the 2004 Expansion Project EIR does not expressly address the topic of TCRs, but does address the general topic of cultural resources in the 2004 IS (2004 EIR Appendix A), including the potential for impacts to cultural resources which would affect "unique ethnic cultural values" (2004 IS, p. 29). The 2004 IS concluded that there was no evidence to conclude cultural resources exist on the site and there are no known "unique ethnic or sacred uses" associated with the site (2004 IS, p. 30). Nonetheless, the IS acknowledges that ground-disturbing activities may still have the potential to uncover or disturb buried and previously undiscovered cultural resources or human remains. The 2004 IS proposed a mitigation measure which states that if paleontological, archaeological, or historic deposits are found, project activities would be halted and a qualified archaeologist consulted to provide management recommendations. If human remains are found, the County Coroner and/or Native American Heritage Commission would be contacted. The mitigation measure from the 2004 IS has been revised to include the City's current TCR mitigation requirements as detailed in Mitigation Measure TCR-1, below.

Under CEQA Guidelines Section 15162, a SEIR is not required unless there are substantial changes to the project or its circumstances or if there is new information of substantial importance. The addition of TCRs as a topic in Appendix G is not considered to be new information of substantial importance because the concept of TCRs were generally understood at the time of certification of the 2004 Expansion Project EIR. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and therefore, the impact was adequately addressed in that document.

Mitigation Measures

Mitigation Measure CUL-1[4] was introduced in the 2004 IS and has been updated for the proposed Project to include the City's current TRC mitigation requirements. This mitigation measure is in addition to Mitigation Measure CUL-1 included in Section 3.3.5, Cultural Resources of this document.

[4] This mitigation measure was not named or numbered in the 2004 IS. For the purposes of identification in this Checklist, this mitigation measure has been labeled with an abbreviation of the topic it addresses and its chronological order of introduction within the analysis.

Mitigation Measure TCR-1 Post-Review Discovery Procedures

In the event of discovery of buried paleontological, archaeological or historic deposits, project activities in the vicinity of the find shall be temporarily halted and a qualified archaeologist consulted to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. If human remains are found, the Placer County Coroner's Office shall be contacted immediately. The coroner shall contact the Native American Heritage Commission, which shall notify the appropriate descendant.

In the event of discovery of subsurface deposits believed to be cultural (archaeological or historic deposits) or human in origin, or tribal cultural resources, are discovered during construction, all work shall be temporarily halted within a 100-foot radius of the discovery to assess the resource, and the Construction Manager shall immediately notify the City of Roseville Development Services Director by phone. The Construction Manager shall also immediately contact 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 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, 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 the 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 tribe(s) 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.

3.2.20 Wildfire

	Impact was Adequately Analyzed in Prior EIR	Proposed Changes or New Circumstances Result in New or Substantially More Severe Impacts	Prior EIR Mitigation Measures Address Potential Impacts
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:			
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐
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?	☒	☐	☐
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?	☒	☐	☐
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?	☒	☐	☐

a-d) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Would the project 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?

Would the project 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?

Wildfire impacts were added as a new topic in Appendix G when the CEQA Guidelines were updated in December 2018. As such, the 2004 Expansion Project EIR does not expressly address the topic of wildfire since it was completed prior to 2018. Prior to 2018, hazards associated with wildfire were addressed in Appendix G under Hazards and Hazardous Materials. Under CEQA Guidelines Section 15162, a Subsequent EIR is not required unless there are substantial changes to the project or its circumstances or if there is new information of substantial importance. In this case, the addition of Wildfire as a topic in Appendix G does is not considered as new information of substantial importance because the concept of wildfires and wildfire hazards were generally understood at the time of certification of the 2004 Expansion Project EIR and were included in the overall analysis as such.

CEQA analysis is concerned with a project's impact on the environment, not the impact of the environment on a project. Therefore, wildfire analysis in CEQA is focused on addressing whether a project exacerbates the risk of a natural disaster by bringing new development to vulnerable areas. As discussed in the Hazards and Hazardous Materials section, the City is within a local responsibility area and is not in a Very High Fire Hazard Severity Zone (CAL FIRE 2007). The closest Very High Fire Hazard Severity Zone is approximately 17 miles northeast, past the City of Auburn. In addition, all development is subject to the California Building Code and the requirements under the California Fire Code as well as any requirements of the Department of Health Care Access and Information. This includes appropriate installation of hydrants with minimum fire flow requirements, access and turnaround requirements, automatic sprinkler systems, and fuel clearance requirements. Emergency evacuation plans would be updated in accordance with project changes and the Roseville Fire Department would review project plans for compliance with emergency access requirements. The Project would not exacerbate any risk for wildland fires and would involve construction on a developed site, which already has a low risk of wildland fires. The Project would require electrical wiring and utility extensions; however, this would not exacerbate fire risk as the project site is located in an area that is already served by existing utilities. As noted in the Geology and Soils and Hydrology and Water Quality sections of this IS, the project site is not prone to landslides and flooding and therefore would not expose people or structures to significant risks in the event of a post-fire situation. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and the Project would not contribute to increasing the potential for wildfire; therefore, the impact is less than significant and not required to be further evaluated in the SEIR.

Mitigation Measures

The 2004 Expansion Project EIR concluded impacts related to the impairment of an adopted emergency response plan or emergency evacuation plan or exposure of people or structures to a significant risk of loss, injury or death involving wildland fires were less than significant and no mitigation measures were required.

3.3 References

14 CCR 15000–15387 and Appendices A through L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Public Resources Code, Section 21000–21177. California Environmental Quality Act, as amended.

CAL FIRE (California Department of Forestry and Fire Protection). 2007. Fire Hazard Severity Zones in SRA – Placer County. Accessed April 21, 2022. https://osfm.fire.ca.gov/media/6742/fhszs_map31.pdf

CalTrans. 2022. California State Scenic Highway Map (GIS). Accessed April 20, 2022. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

CDFW (California Department of Fish and Wildlife). 2021. "NCCP Plan Summary – Placer County Conservation Plan". Accessed April 20, 2022. https://wildlife.ca.gov/Conservation/Planning/NCCP/Plans/Placer-County

City of Roseville. 2020. 2035 General Plan Update Final Environmental Impact Report. Certified August 5, 2020. Accessed April 20, 2022.https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/Final%20General%20Plan%20EIR/City%20of%20Roseville%20EIR.pdf

DTSC (Department of Toxic Substances Control), 1993. Accessed April 21, 2022. "PLACER RESOURCES CORPORATION (SLT5S2303269)". https://geotracker.waterboards.ca.gov/profile_report?global_id=SLT5S2303269

DTSC. 2022. EnviroStor Database Search. Accessed April 21, 2022. https://www.envirostor.dtsc.ca.gov/public/

RMA Group. 2021. Geotechnical and Geohazards Investigation for Proposed In-Patient Tower; Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. December 9.

RMA Group 2022a. Geotechnical and Geohazards Investigation for Proposed Generator Yard (CAP025185); Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. April 22.

RMA Group 2022b. Geotechnical and Geohazards Investigation for New Parking Structure; Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. April 22.

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4 Introduction to the Environmental Analysis

4.0.1 Scope of the SEIR Analysis

This chapter of the Draft Supplemental Environmental Impact Report (SEIR) describes the environmental and regulatory setting, impacts, and mitigation measures provided in the technical sections included within Chapter 4. In addition, this chapter provides an overview of the prior analysis and environmental issues where no additional review is required. This Draft SEIR considers the following environmental issue areas in evaluation of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project):

- Aesthetics
- Air Quality
- Greenhouse Gas Emissions
- Land Use and Planning
- Public Utilities
- Transportation and Circulation

Implementation of the proposed Project must generally be consistent with the City of Roseville's General Plan goals and policies, Northeast Roseville Specific Plan, and all applicable regulations such as California Building Code standards. Therefore, such policies and standards are not identified as mitigation; rather, compliance with relevant goals, policies, and federal, state and/or City of Roseville (City) requirements are instead described within the impact analysis.

Technical Studies and Memorandums

The following technical studies and memorandums were prepared for the proposed Project:

- Kaiser Roseville Medical Center Inpatient Bed Tower – Air Quality and Greenhouse Gas Calculations (Appendix C)
- Kaiser Roseville Medical Center Inpatient Bed Tower – General Plan Consistency Memorandum – Transportation (Appendix D)
- Kaiser Roseville Medical Center Inpatient Bed Tower Project Water Demand Calculations (Appendix E)
- Kaiser Permanente Roseville Medical Center Sanitary Sewer Study (Appendix F)
- Kaiser Roseville Bed Tower Storm Water Management – Hydromodification Variance Supplemental Memorandum (Appendix G)
- Geotechnical and Geohazards Investigations for Proposed In-Patient Tower, Proposed Generator Yard, and Proposed Parking Structure (RMA Group 2021, 2022a, 2022b)

Environmental Setting

According to subdivision (a) of Section 15125 of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must include a description of the existing physical environmental conditions in

the vicinity of the project as they exist at the time when the Notice of Preparation is published. This "environmental setting" normally constitutes the "baseline condition" against which project-related impacts are compared. Therefore, the baseline conditions for this Draft SEIR, unless noted otherwise, are based on conditions that existed in February and March 2022, when the Notice of Preparation was published and circulated. The CEQA Guidelines recognize that the data for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time, the use of environmental baselines that differ from the date of the Notice of Preparation is reasonable and appropriate in certain circumstances when doing so results in a more accurate or conservative environmental analysis.

As noted in Chapter 2, Project Description, the City previously approved a 705,360 square-foot expansion to the Kaiser Permanente Roseville Medical Center campus (2004 Expansion Project) and certified the EIR in 2004 (2004 Expansion Project EIR). Since 2004, a majority of the Medical Center has been developed, with the exception of a 155,000 square foot Surgery and Intensive Care Unit addition to the existing hospital building and a 400-space parking structure. This Draft SEIR evaluates changes to the previously approved 2004 Expansion Project, and, where possible addresses the delta between what was approved and what is currently proposed. However, in some instances due to changes in the regulatory environment, existing conditions and assessment methodology it is not possible to only analyze the delta of change. In those instances, the analysis conservatively evaluates the whole of the proposed Project.

The 2004 Expansion Project EIR analyzed the traffic and transportation effects of the 2004 Expansion Project. This included the 2004 Expansion Project's impact on traffic congestion (i.e., level of service [LOS]) at City signalized intersections, roadway segments, and state highways, impacts on bicycle transportation and transit services, and the impact of a proposed helistop. The 2004 Expansion Project EIR found the 2004 Expansion Project had a significant impact to LOS at City signalized intersections and a significant impact to transit services. The impacts under existing plus Project were found to be less than significant after mitigation, while the cumulative LOS impact at City intersections was found to be significant and unavoidable.

Pursuant to Senate Bill 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3, the state has determined that vehicle miles traveled (VMT) is the most appropriate measure for transportation impacts; and that automobile delay, as described by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment under CEQA. Therefore, the significant impacts to traffic congestion (i.e., LOS) at City intersections presented in the 2004 Expansion Project EIR are no longer considered a significant impact on the environment. Rather, Chapter 3 describes the proposed Project's potential impact from VMT, per the current CEQA statute and guidelines.

In addition, the impacts of the existing environment on a project or plan (as opposed to impacts of a project or plan on the environment) are beyond the scope of required CEQA review. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project." (*Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, 473.)

4.0.2 Environmental Issues and Prior Project Alternatives that do not Require Additional Analysis

CEQA Guidelines Section 15163, states a SEIR is required to contain only the information needed to analyze modifications made to the prior approved Project, including changed circumstances and any new information requiring additional environmental review. Where existing information and analysis in the 2004 Expansion Project

EIR are sufficient to evaluate the impacts of the proposed Project, no additional environmental review is required. Please see Chapter 3, which provides a Checklist that documents those environmental issue areas where potential impacts of the proposed Project are adequately addressed in the certified 2004 Expansion Project EIR and no further analysis is required.

The City adopted its 2035 General Plan Update and certified the associated Final EIR in August 2020. The transportation impact analysis for the Final EIR used the Roseville travel forecasting model to estimate VMT for the City. The Final EIR explicitly states that "future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA." Further, it states that "quantitative analysis would not be required if it can be demonstrated that a project is consistent with the General Plan and would generate VMT which is equivalent or less than what was assumed in this General Plan EIR." This is also consistent with Section 4-9-A of the City's Design Standards which states that "a project may be screened from additional VMT analysis if…the VMT generated by the project is within the scope of a prior California Environmental Quality Act (CEQA) analysis and is therefore covered by a prior analysis." Prior analysis includes analysis performed for the General Plan. The environmental analysis of the Project's VMT relies on Sections 15168 and 15183 of the CEQA Guidelines, which governs program EIRs and projects consistent with a general plan or community plan.

Under Section 15183 of the CEQA Guidelines, where a project is consistent with the development density established under an existing general plan or zoning ordinance for which the city has already certified an EIR, no additional environmental review is required "except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site." Because the General Plan Final EIR included buildout of the Medical Center Campus assuming a total of 1,758,000 square feet, and buildout of the medical facilities on the Campus, including the proposed Project, would total 1,206,262 gross square feet,[1] the transportation modeling conducted for the Final EIR captured the proposed Project. Therefore, a project-level analysis of VMT is not required for the Project. Please see Chapter 3 for additional detail.

Project alternatives were analyzed in the 2004 Expansion Project EIR and included the No Project Alternative, a Reduced Intensity Alternative, and an Off-Site Alternative. While the 2004 Expansion Project EIR determined the No Project Alternative would be the environmentally superior alternative due to a decrease in air quality and traffic impacts, the CEQA Guidelines require that an environmentally superior alternative be designated if the no project alternative is the environmentally superior choice. Therefore, the Off-Site Alternative was determined to be the environmentally superior alternative due to a reduction in air quality and traffic impacts. The City's 2035 General Plan EIR assumed future buildout of the Campus and concluded the cumulative increase in light and glare would be a significant and unavoidable impact. Therefore, the proposed Project's cumulative contribution would be considerable, and the impact would be significant and unavoidable. The analysis of alternatives in Chapter 6, Alternatives of the 2004 Expansion Project EIR is still applicable to the proposed Project because the proposed Project would not result in any new or significant project level impacts or cumulative impacts not previously identified; therefore, an analysis of additional Project alternatives is not required.

[1] Excludes support buildings, such as the existing auxiliary building, fire pump building, and existing and proposed parking garages.

4.0.3 Format of the SEIR

Section Format

Each section in Chapter 3 begins with a description of the Project's **environmental setting** and **regulatory setting** as it pertains to a particular issue.

The environmental setting identifies the existing conditions present on the Project site. The regulatory setting provides a summary of applicable federal, state, and local regulations, plans, policies, and laws that are relevant to the topic. The regulatory setting description is followed by a discussion of **project-level impacts**. The Project-specific impacts discussion is followed by an analysis of the **cumulative impacts** of the Project. The impact portion includes an impact statement, prefaced by a number for ease of identification followed by an analysis of that impact and a determination of whether the impact would be significant (exceed the applicable threshold) or less than significant (below the applicable threshold). If a significant impact is identified, mitigation measures are recommended, if available, to reduce the severity of the impact. All **mitigation measures** are identified at the end of each impact discussion. The degree to which the identified mitigation measure(s) would reduce the impact is also described.

In determining the level of significance of environmental impacts associated with the proposed Project, the analysis in this Draft SEIR assumes that the proposed Project would comply with relevant federal and state laws and regulations, and relevant City ordinances, unless otherwise noted. Therefore, such mandatory policies, ordinances, and standards are not identified as mitigation measures, but rather are discussed as part of the "Regulatory Setting" governing the proposed Project and compliance with these requirements often mitigate potential impacts.

An example of an impact statement is shown below.

Impact 4.1-1 The proposed Project could result in inadequate emergency access.

A discussion of potential impacts of the proposed Project is presented in paragraph form. The direct and indirect impacts associated with implementation of the Project are evaluated and compared to the threshold of significance for the particular impact. The analysis discusses the applicable local, state, and federal laws and regulations/standards that would reduce impacts and assumes that the Project would comply with applicable requirements. In many instances, the actions that are necessary to reduce a project impact are already required by compliance with existing laws or requirements. Further, it is assumed all necessary permits would be obtained and all required conditions of those permits would be complied with. The impact analysis concludes with a determination of the impact's significance in **bold type** (e.g., **significant impact/significant and unavoidable impact/potentially significant impact/less-than-significant impact**).

Mitigation Measures

Following each impact analysis is a discussion of the applicable mitigation measures identified to reduce the significance of an impact, if required.

This section includes a statement indicating whether the mitigation measure will reduce the impact to a less-than-significant level. A discussion of how the mitigation would reduce the impact is included before the mitigation measure.

Mitigation measures, if applicable, are numbered and presented in the following format.

4.1-1: Statement of what, if any, mitigation measures are required.

Note that CEQA Guidelines, Section 15370, defines mitigation as:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- Compensating for the impact by replacing or providing substitute resources or environments.

In some instances, contribution of a Project's fair-share to an established program provided there is a "reasonable plan for mitigation" and fair-share contributions are clearly designated to mitigate the impact are considered adequate mitigation for both Project and cumulative impacts under CEQA.[2]

Cumulative Analysis

According to CEQA, "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable" (CEQA Guidelines Section 15130[a]).

The proposed Project's cumulative effects are assessed against future, or "cumulative," conditions, generally defined as buildout of the City of Roseville 2035 General Plan. Existing conditions and cumulative conditions can differ by issue area. Each technical section in Chapter 4 defines the existing conditions and cumulative conditions for the impacts being analyzed and an analysis of cumulative impacts follows the evaluation of Project impacts.

In determining the level of significance of environmental impacts associated with the proposed Project, the analysis in this EIR assumes that the proposed Project would comply with relevant federal and state laws and regulations, City General Plan policies, ordinances, and other adopted City documents, unless otherwise noted. Therefore, such mandatory policies, ordinances, and standards are not identified as mitigation measures, but rather are discussed as part of the "Regulatory Setting" governing the proposed Project.

Adopted Mitigation Measures and Environmental Commitments

The proposed Project includes all the applicable adopted mitigation measures listed in the 2004 Expansion Project EIR, as shown below. These applicable mitigation measures (listed below), along with any new or updated mitigation measures included in the technical sections of this Draft SEIR and listed in the Executive Summary (see Table ES-1) would also be provided in the Project's Mitigation Monitoring and Reporting Program.

[2] See *Save Our Peninsula Com. v. Monterey County Bd. of Supervisors,* (2001) 87 Cal.App.4th 99, 141; and CEQA Guidelines, §15130, subd. (a)(3) ([recognizing that a project's contribution to a cumulative impact may be less than cumulatively considerable where "the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact"]). See also *Anderson First Coalition v. City of Anderson,* (2005) 130 Cal.App.4th 1173).

Air Quality

Mitigation Measure 4.4-1 Prepare a Construction Emissions/Dust Control Plan

a. Thirty days prior to the start of construction, the Placer County Air Pollution Control District (PCAPCD) requires, at a minimum, preparation of a Construction Emission/Dust Control Plan (CEDCP) and submittal of the CEDCP to the PCAPCD for review and approval. The CEDCP shall identify mitigation measures to reduce the level of construction-related emissions in accordance with the standards of the PCAPCD. Mitigation measures could include some or all of the following to reduce emissions to less-than-significant levels (below the PCAPCD threshold of 82 pounds per day): Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations.

b. The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty offroad equipment, the project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

c. An Independent Environmental Coordinator or Placer County Air Pollution Control District staff, CARB-certified to perform Visual Emissions Evaluations (VEE), will routinely evaluate project-related off-road and heavy-duty on-road equipment emissions for compliance with engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be removed from service and repaired prior to being placed back in service. Equipment owners and operators found to be operating equipment that is out of compliance will be subject to a notice of violation and monetary fines.

d. The project shall provide a plan for approval by the PCAPCD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. 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

e. There shall be no open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered to waste-to-energy facilities.

f. Minimize idling time to 10 minutes.

g. Earth-moving construction equipment shall be cleaned with water once per day.

h. Soil binders shall be spread on unpaved roads and employee/equipment parking areas.

i. Approved chemical soil stabilizers shall be applied according to manufacturer's specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours).

j. Use existing line power sources located on the site or clean fuel generators rather than temporary power generators, except during the first four weeks of construction of the first structure, when temporary generators may be used if line power sources are not feasible.
k. All grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour (as measured by an on-site anemometer) and dust is impacting adjacent properties.
l. All truck and equipment wheels shall be washed prior to leaving the site.
m. An operational water truck shall be on site at all times. Apply water to control dust at least twice daily (morning and evening), and as needed to prevent dust impacts off site.
n. Streets shall be washed or wet-broomed if silt is carried over to adjacent public thoroughfares.
o. Traffic speeds on all unpaved surfaces shall be 15 miles per hour or less.

In addition to the above measures, the project applicant shall consider any of the following measures to further reduce construction-related exhaust emissions:

p. Employ construction activity management techniques, such as extending the construction period outside the ozone season of May through October; reducing the number of pieces used simultaneously; increasing the distance between emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours.
q. Construction contracts shall include language that prohibits the use of pre-1996 off-road heavy-duty construction equipment on declared Spare the Air Days and prohibits the use of all heavy-duty diesel equipment on days forecast to exceed the federal one-house standard.
r. Use low-sulfur fuel for stationary construction equipment.
s. The applicant shall include a provision in contract language that earth-moving contractors shall not operate pre-1996 heavy-duty diesel equipment on forecast Spare the Air Days.
t. Use low-emission stationary equipment on site.
u. Provide a flag person to guide traffic properly and ensure safety at construction sites.
v. Schedule operations affecting traffic for off-peak hours.
w. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.
x. Minimize obstruction of through-traffic lanes.
y. Develop trip reduction plan to achieve 1.5 AVR (average vehicle ridership) for construction employees

In addition to the above PCAPCD measures, the following dust control measures would be required under the grading permit by the Roseville Grading Ordinance:

aa. Cover all haul trucks or maintain at least two feet of freeboard.
bb. Sweep all paved access roads, parking areas, or staging areas on a daily basis at construction sites, particularly where silt has carried over to adjacent public thoroughfares.
cc. Cover, watering twice daily, or apply (non-toxic) soil binders to any exposed stockpiles (dirt, sand, etc.), particularly over weekends if stockpiles are located in proximity to the existing hospital.

dd. If landscaping is not planted immediately in areas where construction has been completed, hydroseed undeveloped areas. Appropriate application of such materials (appropriate seed mixture used in hydroseeding) shall be reviewed and approved by a qualified biologist.

Mitigation Measure 4.4-2 Contribute Air Quality Fees to offset long-term operational ozone precursor emissions

Landowner shall contribute fifty-six thousand dollars ($56,000) to the City to offset long-term operational ozone precursor emissions (the "Air Quality Fee"). The City and Placer County Air Pollution Control District shall enter into an agreement for the collection and disbursement of the Air Quality Fee for off-site air quality mitigation. The Air Quality Fee is to be used for projects, programs and services that result in reduced emission sources that directly benefit City residents. Such projects, programs and service may include, but are not limited to, replacing non-EPA certified wood stoves, transit vehicle conversions, and retrofitting vehicles with cleaner burning fuels.

Mitigation Measure 4.4-3

Kaiser will provide two electric vehicle charging stations (one conductive and one inductive) with signage prohibiting parking for non-electric vehicles.

Mitigation Measure 4.4-4

All flat roofs shall be made of material(s) that reduce energy demand.

Mitigation Measure 4.4-5

All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and must be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage shall be provided.

Cultural Resources

Mitigation Measure CUL-1

In the event of discovery of buried paleontological, archaeological or historic deposits, project activities in the vicinity of the find shall be temporarily halted and a qualified archaeologist consulted to assess the resource and provide proper management recommendations. Possible management recommendations for important resources could include resource avoidance or data recovery excavations. If human remains are found, the Placer County Coroner's Office shall be contacted immediately. The coroner shall contact the Native American Heritage Commission, which shall notify the appropriate descendant.

Noise

Mitigation Measure 4.5-1 Implement noise controls on Medical Center Campus

a. Kaiser shall use best efforts to avoid construction outside daytime hours established by Municipal Code. All construction equipment will be required to be fitted with factory-installed muffling devices, and all construction equipment shall be maintained in good working order. Such

equipped and maintained equipment shall generate noise levels no greater than 75 dBA (Leq) at 50 feet, except for pavers or pneumatic tools, which can generate up to 80 dBA (Leq) at 50 feet (see Table 4.5-2, with controls).

b. The applicant's contractor, as part of Kaiser's operational plan, shall use best efforts to minimize disturbance of hospital patients within the existing hospital. The following measures shall be implemented where construction occurs within 100 feet of the hospital receptors (200 feet for impact equipment) to the extent necessary to help maintain acceptable interior noise levels for patients in the hospital:

- Equipment used for project construction shall be hydraulically – or electrically – powered impact tools (e.g., jackhammers, pavement breakers, and rock drills) wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. However, where use of pneumatically powered tools is unavoidable, and exhaust muffler on the compressed air exhaust shall be used; this muffler should lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this should achieve a reduction of 5 dBA. Quieter procedures such as drilling rather than equipment shall be used whenever feasible.
- Stationary noise sources shall be located as far from hospital receptors as possible. If they must be located near hospital receptors, they shall be adequately muffled and enclosed within temporary sheds. Portable sound blankets or existing building facades should be used as necessary to reduce noise generated by construction and demolition activities as hospital receptors and nearby residential uses. Such blankets can provide up to a 10 dBA noise reduction.
- As part of Kaiser's operation plan to be implemented during all construction phases, there shall be close coordination between construction staff, hospital staff, and medical office building (MOB) tenants. Hospital and medical office staffs shall be made aware of the construction schedule and activities.
- During all construction phases, locations of stating areas, truck routes, and loading areas shall consider exposure to on-site hospital patient receptors, utilizing existing building facades to provide maximum shielding for these receptors.

Mitigation Measure 4.5-2 Implement appropriate noise attenuation measures in proposed hospital facilities and medical buildings

Proposed hospital facilities and medical office buildings shall be designed with appropriate noise attenuation measures (increased insulation, fixed windows, mechanical ventilation) to ensure that interior noise levels do not exceed 45 dBA (CNEL) for hospital facilities and 45 dBA (Leq) for medical office buildings under future noise conditions, considering future traffic increases and proposed hospital operations (including the Central Utility Plant expansion). .

Geology and Soils

Mitigation Measure GEO-1[3]

The project sponsor has agreed to abide by the recommendations of the Geotechnical and Geohazards Report (2002), which addresses the following:

- General site clearing;
- Soil moisture conditions;
- Acceptable fill;
- Soil/rock processing and fill compaction;
- Slopes;
- Surface drainage;
- Subsurface drainage;
- Foundations;
- Retaining and below-grade walls; and
- Pavement design

Hydrology and Water Quality

Mitigation Measure 4.6-2

Coordination with Placer County Flood Control and Water Conservation District and appropriation of drainage fees to support implementation of the Dry Creek Watershed Flood Control Plan.

Mitigation Measure 4.6-3

Coordination with City of Roseville Public Works Department and appropriate drainage fees to support improvement of the culvert under Huntington Drive.

Tribal Cultural Resources

Mitigation Measure TCR-1: Post-Review Discovery Procedures

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 contact 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 approved by the City, this may include modification of the no-work radius.

[3] This mitigation measure was not named or numbered in the 2004 IS. For the purposes of identification in this document, this mitigation measure has been labeled with an abbreviation of the topic it addresses and its chronological order of introduction within the analysis.

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, 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 the 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.

Terminology Used in the SEIR

This Draft SEIR uses the following terminology to describe environmental effects of the proposed Project:

- **Standards of Significance:** A set of criteria used by the lead agency to determine at what level or "threshold" an impact would be considered significant. Standards of significance used in this EIR include those set forth in CEQA Guidelines Section 15065 (Mandatory Findings of Significance) and those derived from questions set forth in Appendix G to the CEQA Guidelines; criteria based on regulatory standards of local, state, and federal agencies; and criteria based on goals and policies identified in other applicable planning documents. In fashioning criteria based on these sources, City staff and the EIR preparers have also relied on their own professional judgment and experience in some instances. In determining the level of significance, the analysis assumes that the proposed Project would comply with relevant federal, state, and local regulations and ordinances.
- **Less-than-Significant Impact:** A Project impact is considered less than significant when it does not reach the standard of significance, indicating that there would be no substantial change in the environment. No mitigation is required for less-than-significant impacts.
- **Potentially Significant Impact:** A potentially significant impact is an environmental effect that could cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Significant Impact:** A Project impact is considered significant if it results in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of Project effects in the context of specified significance criteria. When available, potentially feasible mitigation measures and/or Project alternatives are identified to reduce these effects to the environment.
- **Significant and Unavoidable Impact:** A Project impact is considered significant and unavoidable if it results in a substantial adverse change in the physical conditions of the environment and there are no potentially feasible mitigation measures are available to reduce these effects to less than significant.

4.0.4 References

RMA Group. 2021. Geotechnical and Geohazards Investigation for Proposed In-Patient Tower; Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. December 9.

RMA Group 2022a. Geotechnical and Geohazards Investigation for Proposed Generator Yard (CAP025185); Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. April 22.

RMA Group 2022b. Geotechnical and Geohazards Investigation for New Parking Structure; Kaiser Roseville Medical Center, 1600 Eureka Road, Roseville, CA. April 22.

4.1 Aesthetics

4.1.1 Introduction

This section evaluates consistency of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) with the underlying zoning and other local regulations that address scenic quality, as well as changes in light and glare that could result from Project implementation. This analysis identifies the existing visual setting and associated regulatory requirements, evaluates potential impacts, and if necessary, identifies mitigation measures. As discussed in Chapter 3, Issues Addressed in the 2004 Expansion Project EIR, the proposed Project would not result in new information or changes to the 2004 Expansion Project Environmental Impact Report (2004 Expansion Project EIR) regarding the evaluation of a scenic vista, or scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Therefore, impacts to these issue areas remain less than significant and are not further evaluated. Please see Chapter 3 for additional information.

No comments related to aesthetics were received during public review of the Notice of Preparation. A copy of the Notice of Preparation and comment letters received are included in Appendix A.

The analysis in this section is based on review of photographs taken of the existing project site, review of site plans, and design elements. Applicable information from the 2004 Expansion Project EIR is incorporated into this section by reference, in accordance with the provisions of Section 15150 of the California Environmental Quality Act (CEQA) Guidelines.

4.1.2 Environmental Setting

This section details the existing environmental setting for aesthetics and updates the information described in Section 4.2, Visual Resources on pages 4.2-1 through 4.2-4 of the 2004 Expansion Project EIR.

Regional Setting

The City of Roseville (City) lies in a transitional zone between the Sacramento Valley and the Sierra Nevada foothills. The City is located approximately 15 miles northeast of downtown Sacramento in the northeastern portion of the Sacramento Metropolitan area within Placer County. The City is the largest in Placer County and has a historic downtown core located west of Interstate (I) 80. The City has a large amount of non-residential development such as retail, commercial, office, and industrial uses.

Project Site

The proposed Project is located within the existing Medical Center Campus (assessor's parcel number 048-012-001) located on 49-acres at 1600 Eureka Road. The project site is bounded by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Rocky Ridge Drive on the west, and Eureka Road on the east (see Figure 2-1 in Chapter 2, Project Description). I-80 is approximately 1 mile west of the Project site and the City's eastern boundary is approximately one-quarter mile to the east of the site. The project site is located within the Northeast Roseville Specific Plan (NERSP) area.

Surrounding Development

As described in the 2004 Expansion Project EIR, intensive retail and office development surround the project site on all sides. Surrounding buildings are between one and three stories in height and vary in size. Surface parking lots occupy the areas where buildings are not present. Buildings and parking areas are separated from the streets by landscaped corridors that have a minimum width of 35 feet along Rocky Ridge Drive, Lead Hill Boulevard, and Eureka Road and a minimum width of 50 feet along Douglas Boulevard. Specific details regarding the surrounding development are as follows and also shown on Figure 4.1-1, Surrounding Development.

North of Lead Hill Boulevard

The Eureka Corporate Plaza is located north of the project site directly across Lead Hill Boulevard. This Plaza is primarily used for medical and professional offices and is comprised of 14 separate building ranging from one to three stories. Buildings are neutral in color with large black mirrored windows. Paved parking lots surround the buildings and are landscaped with shrubs, mature trees, and grass. Directional signage is present throughout the facility, along with hydrants and enclosed waste collection areas. The Roseville Theater and a variety of restaurants are to the east of Eureka Corporate Plaza and an auto mall with several dealerships is located farther to the west.

South of Douglas Boulevard

The Rocky Ridge Town Center is south of the project site directly across Douglas Boulevard and contains a mix of retail uses and various dine-in restaurants. All buildings in this Center are single story and many are designed according to the typical franchise requirements. The L-shaped strip mall itself has a contemporary design with neutral colors. Large parking lots with lighting and landscaping front the strip mall. Directly east of the strip mall is a large two-story brick building comprised of offices with mature trees and landscaping surrounding the parking area and building. A vacant, graded lot is also in the area. Another two-story brick office building is located on the corner of Douglas Boulevard and Eureka Road.

East of Eureka Road

Lava Ridge Court is a two-lane road that runs east west and provides access to the businesses in this area. South of Lava Ridge Court is developed with multiple buildings ranging from one to two stories and contains a mix of office uses. North of Lava Ridge Court is also developed with multiple buildings ranging from one to two stories and contains a mix of commercial and retail uses. Buildings are neutral in color and have large, mirrored windows. A Bank of America is located at the intersection of Eureka Road and Douglas Boulevard. Parking lots and the areas surrounding the buildings are landscaped and have mature trees, shrubs, and grass. There is a slight increase in elevation in this area and some buildings sit higher than those directly adjacent to Eureka Road.

West of Rocky Ridge Drive

Two major shopping centers are located west of the project site, directly across Rocky Ridge Drive. The first is a Walmart Supercenter which includes an auto care center and a pharmacy. This single-story Supercenter is designed as a typical Walmart building in neutral colors and has a large parking lot for customers. The parking lot dividers are landscaped with mature trees as is the perimeter. A GameStop, Panda Express, and small graded vacant lot are in the eastern portion of the Walmart parking lot. The second major shopping center is Roseville Center, a single-story strip mall that contains a Target, Petco, and Raley's. The strip mall itself is in a neutral palette with tile roofing.

There are multiple individual single-story buildings that surround the main parking area for the strip mall. These include a furniture store, sporting goods store, FedEx office, and multiple fast-food restaurants. The parking lot dividers are landscaped with mature trees as is the perimeter.

Visual Characteristics of the Existing Campus

The Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus or Campus) is currently developed with seven buildings totaling 1,497,201 building gross square feet, along with 3,077 surface and garage parking spaces and associated signage and landscaping, as shown on Figure 4.1-2, Existing On-Site Development. The Campus is primarily developed with buildings and surface parking lots; however, as described in the 2004 Expansion Project EIR, there are areas of landscaping along the perimeter of the site and internal to the site. The elevation of the project site varies from approximately 200 feet to 235 feet above mean sea level.

Main Hospital

The main hospital building is located in the northwestern portion of the Medical Center Campus and is a large, two-story building. The building is terracotta and white in color and has windows on both levels. A covered entryway from the internal parking circle provides pedestrian access to the main hospital. Two three-story buildings are connected to the northwest portion of the main hospital building. These buildings are terracotta in color, with the lower level being a darker color than the upper two stories.

The Emergency Department is a single-story wing on the north side of the main hospital building. This single-story wing is primarily beige in color with dark terracotta accents. Five ambulance bays are located in the northeast portion of the Emergency Department and are dark terracotta in color. The main entrance is located on the northwest side of the building and has a large, covered walkway and outdoor seating area near the patient drop-off area.

Douglas Parking Garage

The Douglas Parking Garage is for patient and visitor parking and is located in the southwestern portion of the Campus. This parking garage is four stories in height and has a contemporary look. The building is a light beige with dark terracotta accents on the bottom level. A stairwell with guardrail is located in the northeastern part of the building.

Medical Office Building 1

This building is located directly south of the main hospital and is three stories in height and has windows on each floor. This building is a light terracotta color with dark terracotta and grey accents. A covered second story walkway connects this building to the main hospital building.

Medical Office Building 2

This building is located in the southeastern portion of the Campus and contains the pharmacy, laboratory, and member service facilities. This four-story building is light grey and beige with terracotta colored tile and decorative windows enhancing the entrance at the patient and visitor drop off area.

Central Utility Plant

The central utility plant (CUP) includes a one-story building located adjacent to the main hospital in the northeastern portion of the Medical Center Campus. The light terracotta colored single-story building houses the hospital's main utilities and fire pumps and vents are visible along the bottom portion of the windowless building. This area also includes a small surface parking lot and storage area surrounded by a block wall connected to the CUP building. This area houses the hospital's ventilation system with large vents visible on the southern portion of the building. The blocked-in area is accessible through an electronic gate at the northern side of the lot. Utility boxes line the walkway on the southern side of the CUP building.

Women's and Children's Center

The Women's and Children's Center is located in the eastern portion of Campus and is a 3-story building with glass windows spanning the entire 3-stories at the building's southeast entrance. The building is primarily beige in color with dark terracotta accents. A covered entrance provides a space for patient and visitor drop-off. A second-story covered walkway on the northwest side of the building connects to the CUP.

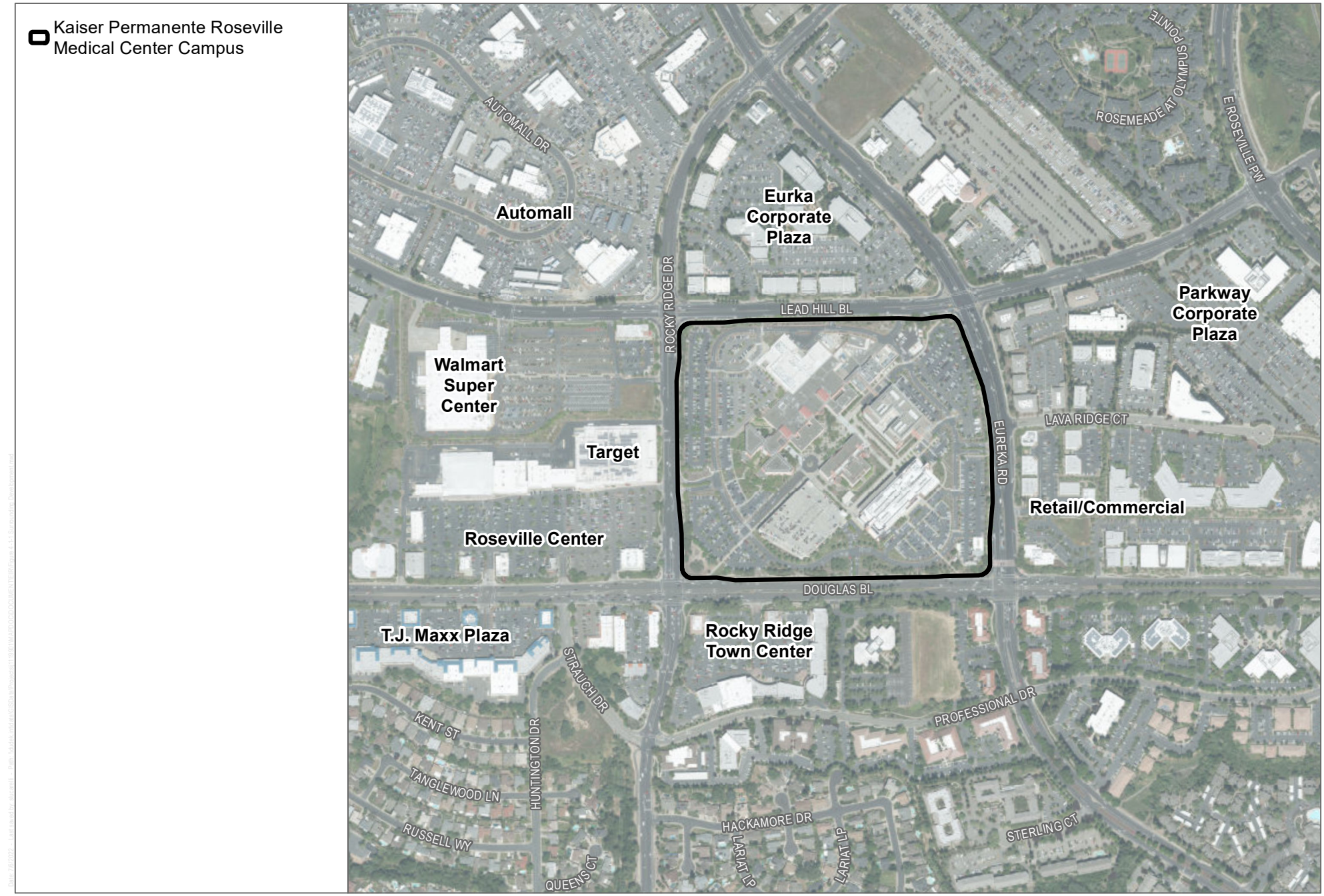
Landscaping and Surface Parking

Mature trees and vegetation are present throughout the Medical Center Campus, including around the perimeter which screens the Medical Center Campus from the surrounding roadways. As part of the initial Medical Center Campus development, the site was extensively landscaped. The vegetation is maturing and large trees, such as southern live and cork oaks, tulip, London plane, Chinese pistache, and ash are established along the property perimeter and inside of the interior ring road area.

There are currently five entrances to the Medical Center Campus: two from Lead Hill Boulevard and one each from Rocky Ridge Drive, Douglas Boulevard, and Eureka Road. An interior perimeter loop road connects all entrances and provides access throughout the entire Campus. Main access to the hospital entrance and the Douglas Parking Garage is from the southwest corner of the Campus and terminates in a traffic circle at the hospital entrance drop off area. Parking lots surround the entire perimeter of the Campus and all connect to the loop road. Pathways and crosswalks provide pedestrian access from the parking lots and garage to the buildings within the Campus.

Photographs of the Existing Campus

Photos of the project site were taken on April 6, 9, 12, and 26, 2022, and representative viewpoints of the existing site are shown in Figure 4.1-3, Photo Viewpoints. Viewpoints 1 through 5 on Figures 4.1-4a through 4.1-4c show photographs of the existing Campus from the various off-site viewpoints. In addition, Viewpoints 6 through 10 on Figures 4.1-4c through 4.1-4e, show viewpoints from within the Campus. Viewpoints 10 and 11 on Figure 4.1-4f show the existing site where the proposed Inpatient Tower building and parking garage with rooftop parking would be located, respectively.



SOURCE: City of Roseville 2019

DUDEK

0 335 670 Feet

FIGURE 4.1-1

Surrounding Development

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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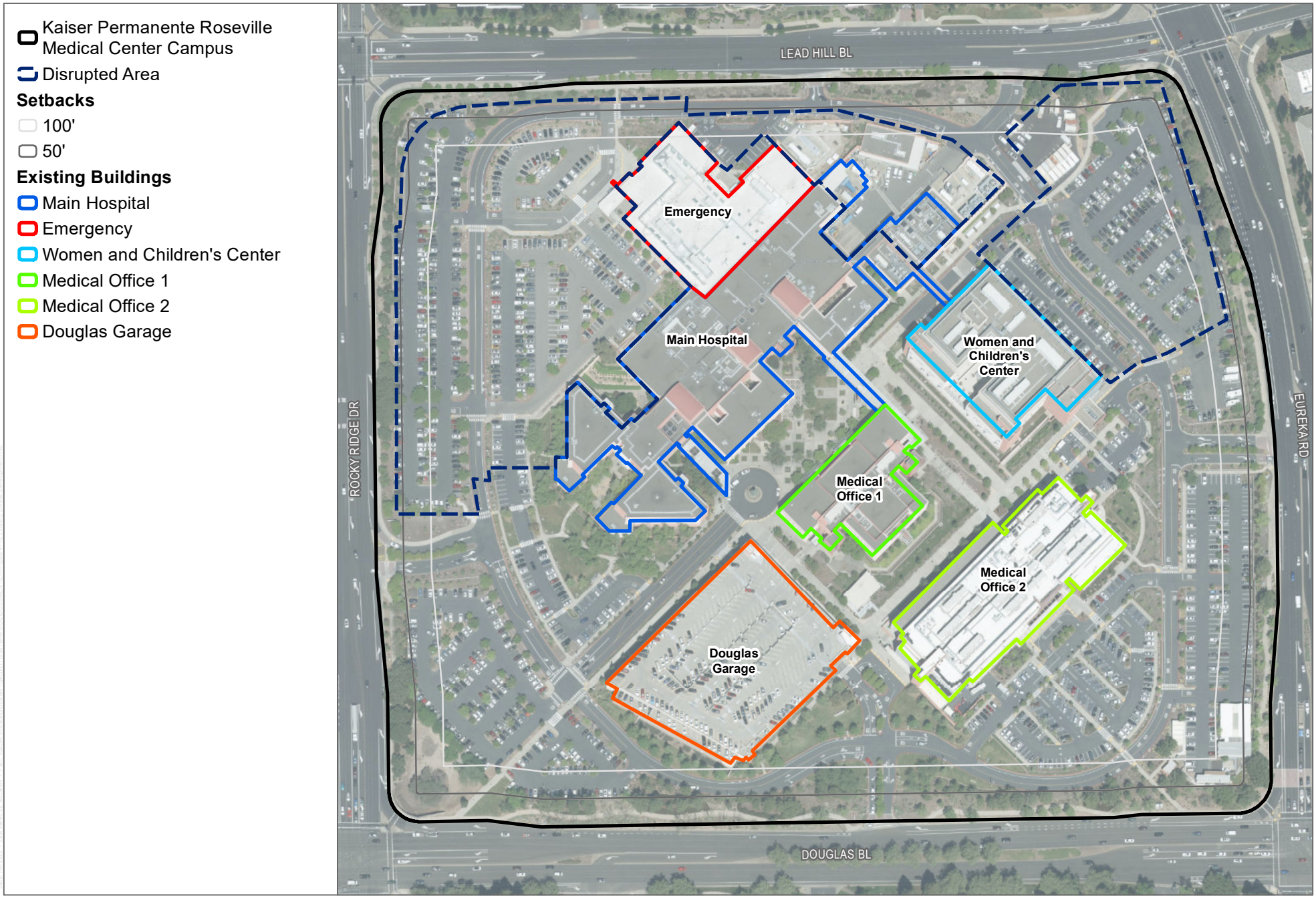

SOURCE: City of Roseville 2019

DUDEK

0 115 230 Feet

FIGURE 4.1-2

Existing On-Site Development

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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SOURCE: City of Roseville 2019

DUDEK

0 150 300 Feet

FIGURE 4.1-3

Photo Viewpoints

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 1: From the intersection of Douglas Boulevard and Rocky Ridge Drive, looking northeast at the existing campus.



Viewpoint 2: From the east side of Eureka Road, at the midpoint between the Lead Hill Boulevard and Lava Ridge Court, looking west.

FIGURE 4.1-4a

Viewpoints 1 & 2

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 3: From the north side of Lead Hill Boulevard, looking south at the northeastern portion of the campus.



Viewpoint 4: From the north side of Lead Hill Boulevard, looking south at the northwestern portion of the campus.

FIGURE 4.1-4b

Viewpoints 3 & 4

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 5: From the west side of Rocky Ridge Drive at the transit stop, looking east at the northwestern portion of the campus.



Viewpoint 6: From main hospital entrance road, looking northeast at the parking garage on the right and MOB1 in the right background, and the hospital on the left.

FIGURE 4.1-4c

Viewpoints 5 & 6

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 7: From the Central Roundabout, looking southeast at the parking garage on the right and the medical office buildings on the left, with MOB 1 in the foreground and MOB 2 in the background.



Viewpoint 8: From the southeast corner of the project site, looking northwest at the MOB2.

FIGURE 4.1-4d

Viewpoints 7 & 8

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 9: From the Eureka Road entrance, looking northwest at the Woman's and Children's Center Building.



Viewpoint 10: From the northeast corner of the campus, looking southwest at the CUP building on the right with the hospital in the right background, and the Woman's and Children's Center on the left.

FIGURE 4.1-4e

Viewpoints 9 & 10

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Viewpoint 11: From the Eureka Road entrance, looking north at a parking area. This is the location of the proposed 4-story parking garage.



Viewpoint 12: From the northwest corner of the campus, looking southeast at the hospital (Emergency Department entrance is on the left). This is the location of the proposed Inpatient Bed Tower.

FIGURE 4.1-4f

Viewpoints 11 & 12

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Light and Glare

Nighttime lighting is used in order to provide for the safety and security of the public. Lighting, however, can sometimes create a nuisance for nearby light-sensitive receptors, such as residential neighborhoods, by illuminating areas beyond those intended. This is called light trespass and includes unintentional illumination of nearby areas such as spillover light and glare. Oftentimes, artificial light sources will cause spillover light by lighting surfaces around the intended area. This effect is reduced when the intensity of the lighting source is increased, thereby decreasing the amount of light that dissipates into the surrounding area. The use of light sources that are modern, energy-efficient, and shielded or downward facing are useful in reducing spillover light.

Glare occurs when light is reflected off of surfaces and causes a nuisance to surrounding sensitive-receptors. Glare can result from sunlight or from artificial light reflecting off building exteriors, such as glass windows or other highly reflective surface materials. Squinting or turning away from a light source is an indication of glare. Glare resulting from sunlight reflecting off building exteriors can be reduced with design features that use low-reflective glass and exterior materials and colors that absorb, rather than reflect, light. Glare can be avoided or reduced by redirecting light sources so that there is no direct line of sight to the light source, or by blocking the direct line of sight, using low-intensity light fixtures, or reducing the reflectiveness of building exteriors and materials used.

Existing sources of light and glare within the Campus include overhead lights in the parking lots, interior and exterior building lighting, light from vehicle headlights, and emergency vehicle lights. Existing sources of light from street lights and building lights is visible at night from adjacent retail and commercial uses surrounding the Campus. Neighboring retail and office facilities also use building and parking lot lighting for security. While minimal, the existing buildings on the Campus may produce some glare due to the sun reflecting off surfaces such as building windows and vehicles.

Land Use and Zoning

The project site is designated Business Professional (BP) on the City's General Plan Figure II-2, Land Use Map (last updated December 2021) and is designated as Medical Campus in Chapter V(d)(I) of the NERSP. Uses allowed under this land use designation include business park and professional office, medical campus, and research and development. Per the Compatibility Matrix in the General Plan, the BP designation is compatible or conditionally compatible with all adjacent land use designations. The General Plan notes that hospitals and clinics may also be permitted under this land use designation. The business professional land use designation may be applied to lands that are adjacent to regional and community commercial designated lands. May also be used as a buffer between residential areas and arterials, community commercial, and light industrial. Floor area ratios should range between 20% and 40%. The intent of the Medical Campus land use designation within the NERSP is to provide a setting for medical hospitals and health care related uses.

The project site is zoned Planned Development for Medical Campus (PD 470). Uses permitted include professional offices and general medical services. No changes in the underlying zoning from that described in the 2004 Expansion Project EIR would occur.

4.1.3 Regulatory Setting

The regulatory setting for aesthetics is the same as described on page 4.2-4 of the 2004 Expansion Project EIR, with the following updates.

Federal and State

There are no new or updated federal or state laws or regulations that pertain to aesthetic resources applicable to the proposed Project.

Local

The 2004 Expansion Project EIR details the regulatory framework applicable to the proposed Project and describes the regulatory requirements of the City's General Plan, NERSP, existing zoning, and Community Design Guidelines as they pertain to the proposed Project. Any new or updated information is provided below and in Appendix B.

Northeast Roseville Specific Plan

The City has 14 adopted Specific Plans located within the City limits, including the NERSP. The NERSP is incorporated as a part of the General Plan and should be referred to for specific requirements, as discussed below. The NERSP was originally approved in 1987 and the last update was approved in September 2013 to amend the land use map and text of the NERSP for the Stone Point Major Project Permit. The NERSP is primarily intended for commercial and employment-generating uses, but also has significant residential and open space components. The NERSP has been updated since 2004 Expansion Project was approved. Therefore, the NERSP's most current goals, policies, and implementation measures applicable to the proposed Project under Chapter V(d)(I), Medical Campus Component, are listed below.

Goal 1. Create a well-defined medical campus incorporating superior development and landscaping design.

Plan Policy 2. Establish a review process and design standards applicable to the Medical Campus land use designation.

Implementation:

i. All development with the Medical Campus land use designation shall be subject to the City of Roseville design review process and all other applicable City permit requirements. The project proponent shall work with the City of Roseville and the Office of Statewide Health Planning and Development to insure that all City required conditions are implemented.

ii. The following design standard shall apply:

Setback:

a. From the ultimate back of curb of any adjacent existing or planned public roadway:
   - A minimum of 50 feet for buildings of two stories and less in height, and any parking, paved or enclosed areas.
   - A minimum of 100 feet for any building three stories or more in height.

Lot Coverage. Shall be calculated as the square footage of the building footprint, exclusive of overhangs and balconies, and shall not exceed 35% of the gross square footage of the parcel upon which the building is being constructed.

Land Coverage. Shall be calculated inclusive of all required setbacks, and shall be a minimum of 20% of the gross square footage of the parcel.

Landscape Design. Shall be implemented in accordance with the NERSP Landscape Design Guidelines. Drought tolerant landscape materials, in combination with efficient irrigation systems, shall be the predominant for of landscaping. Native plant materials shall be utilized within the setbacks adjacent to open space areas, to create a transition between the natural and built environment.

Building Height. Concurrent with the submittal of development plans for each phase a visual impact analysis shall be prepared. The purpose of the analysis will be to evaluate the visual impacts of the proposed development on Plan Area vistas, including the Interstate 80 vista. Based upon the findings of the analysis, and any overriding factors, maximum building heights will be approved by the City.

Site/Building Design. Shall comply with the Design Guidelines contained in Chapter VII of the NERSP. In particular, the Business Professional Office/Research and Development Guidelines shall apply to the development of the Medical Campus land use. Concurrent with the submittal of development plans for phase 1 of each Medical Campus, detailed design guidelines shall be submitted for City approval which shall regulate the design of all phases of development. Such guidelines shall address design standards for issues including grading treatment, building, siting, architectural treatment and building materials, vehicular access and parking, pedestrian access and connections, landscape material s and treatment, screening and fencing, and signage. The intent of the guidelines will be to insure consistent and coordinated treatment of all phases of development with the Medical Campus land use.

Storage. No outside unenclosed/unscreened storage permitted.

The Design Guidelines contained in Chapter VII applicable to the proposed Project are as follows:

Goals:

1. Create building densities and designs reflective of the suburban character of a larger community.
2. Develop building design bulk and layout in a manner which emphasizes harmony in architectural form, detail, materials, landscaping and signage within an individual project as well as within the character of the immediate area.
3. Design projects to minimize disruption of existing natural features and blend with the natural environment and topography.
4. Orient Development towards vistas and the ravine systems to enhance living and working spaces.
5. Maximize the potential for energy conservation through building orientations and landscape designs which recognize the climatic conditions in the area.
6. Utilize design, construction and landscaping which are reflective of the high quality and aesthetically superior development envisioned within the Plan Area.

C. Business Professional Office/Research and Development Guidelines

1. Design the Research and Development Park and recognized office complexes to have unified design utilizing consistent building material, architectural style, textures, detail, colors, landscaping, and signage.
2. Utilize diverse building layouts and orientations, varying setbacks, building heights and bulk, staggering of building and roof-lines and unique architectural styles to create visual interest.
3. Although unique designs are encouraged, such designs should be compatible with adjacent projects.
4. Utilize consistent building materials, architectural style, textures, detail, colors, roof-treatment and landscaping on all sides of building visible from roadways, adjacent properties or the general public.
5. Location of taller building should relate to project scale with lower profile structures adjacent to street frontages.
6. Orient buildings adjacent to roadways with rear and/or side parking when practical.
7. All building and project entries should be well defined and afford a sense of entry.
8. Incorporate pedestrian plazas with landscaping, seating, drinking fountains and points of interest such as water elements or art sculptures into project design.
9. Provide secured bike storage, exercise and jogging facilities, lockers, showers, and outdoor eating and seating areas for employee utilization.

F. Right-of-way Landscape Area Standards[1]

- Rocky Ridge Drive – 35-foot landscape area
- Lead Hill Boulevard – 35-foot landscaped area
- Eureka Road – 35-foot landscaped area
- Douglas Boulevard – 50-foot landscaped area

H. Lighting Guidelines

1. Provide exterior lighting for safety and security as well as to enhance building design and landscaping.
2. Design lighting so as not to create glare for project occupants or neighboring properties.
3. The style and design of lighting fixtures should be compatible and consistent with building design.
4. Utilize energy efficient lighting types.

NERSP Landscape Guidelines

The NERSP includes separate landscape guidelines (1987) developed to establish landscaping concepts for street frontage, open space floodway corridors, parking areas and utility easements. The applicable goals, objectives, and implementation measures described in the Guidelines are listed below.

[1] This is a 35-foot setback between adjacent roadways that surround the Campus and development on the Campus.

Goals:

- To coordinate and unify the urban landscape in the Specific Plan area thereby creatin an attractive, healthy community.
- To provide information and understanding of the natural landscape and its environmental factors so that plan materials can be appropriately selected and property used in planning the landscape.
- To help unify diverse architectural structures by requiring specific street trees along the defined corridors and suggesting subordinate landscape materials that will complement the required street tree plantings.
- To plan effectively for existing adverse soil conditions in developing an aesthetically pleasing environment.

Objective:

- The primary objective is to set minimum landscape corridor standards to be used by developers and landscape architects during development of the NERSP.

Implementation:

- It will be the responsibility of individual property owners within the NERSP area to conform to the landscape design guidelines in preparation of their landscape plans. The City requires a licensed landscape architect to prepare landscape plans according to these guidelines.

City of Roseville 2035 General Plan

The General Plan serves as a long-term policy guide for physical, economic, and environmental growth and was last updated in 2020 (City of Roseville 2020). The City's General Plan emphasizes a Community Design component of the Land Use Element to maintain a design framework that reflects the City's goal of high-quality, community-wide design. To assist in achieving this goal, the City has developed policies that address aesthetics and function, the integration of the built and the natural environments, art in public places, and community character. The goals and policies in the Land Use Element applicable to the proposed Project will be implemented through the application of the City's Community Design Guidelines. The City's General Plan has been updated since 2004 Expansion Project was approved. Therefore, the most current goals and policies are provided below.

Goals and Policies - Community Design

Goal LU7.1. Achieve a consistent level of high-quality aesthetic and functional design through the development of, and adherence to superior design concepts and principles, as defined in the Community Design Guidelines.

Goal LU7.4. Emphasize the preservation and enhancement of historically and culturally significant buildings, native oak trees, woodlands, and other significant features, as a primary element in defining Roseville's community character.

Policy LU7.1. Through the design review process, apply design standards that promote the use of high-quality building materials, architectural and site designs, landscaping signage, and amenities.

Policy LU7.2. Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and compatibility between adjacent developments.

Policy LU7.3. Encourage designs that strike a balance between the incorporation of aesthetic and development requirements, and the economic considerations associated with development.

Policy LU7.4. Promote flexibility in the design review process to achieve design objectives, and encourage projects with innovative, unique, and creative architectural style and design.

Policy LU7.6. Encourage project designs that place a high priority and value on open space, and the preservation, enhancement and incorporation of natural resources and other features including consideration of topography, vegetation, wetlands, and water courses.

Policy LU7.9. Control artificial lighting to avoid spill-over lighting onto adjacent properties. Use anti-reflective architectural materials and coatings to prevent glare.

Community Design Guidelines

As discussed in the 2004 Expansion Project EIR, the City adopted the Community Design Guidelines (Guidelines) in 1995. These Guidelines were amended in March 2008 to reaffirm policies and guidelines already in place and make modifications where necessary, so the City's vision aligned with the community's expectations. It should be noted the guidelines pertaining to office, industrial, and other special planning areas remain as adopted with the 1995 Community Design Guidelines as presented in the 2004 Expansion Project EIR. These Guidelines discuss site layout and design, on and off-site circulation, parking, landscaping, shading requirements, light and screening, architecture, and building design, features, and materials used. These Guidelines supplement the NERSP Design Guidelines, which are not as specific as the Community Design Guidelines and help clearly define design goals applicable to projects similar to the proposed Project. The Guidelines include the following overarching goals to seek site designs that preserve, enhance, and incorporate the natural features of a site as an element within the overall design.

- To require project designs to incorporate pedestrian and transit linkages within the project, with adjacent properties, and with the City as a whole.
- To promote designs that achieve a balance between appearance and function, where form and function rely on each other for a successful project design.
- To establish a streetscape presence and appearance through setbacks, landscaping, building placement and architecture that defines the pedestrian and vehicle corridor, and presents an appealing and continuous theme along a sidewalk or street.
- To encourage designs that show awareness of and consideration for the energy requirements of a proposed design with respect to heating, cooling and material selection at a particular location
- To encourage original building designs that are tailored to the site and discourage generic or trademark buildings and site designs.
- To encourage designs that add to the character of the community by providing opportunities for Integration of the project with the adjacent properties, the neighborhood, and the City.
- To promote designs that consider, and respond appropriately, to adjacent uses.

The Guidelines are also intended to provide design professionals, property owners, planning commissioners, staff, and residents with a clear understanding of the City's expectations for the planning, design, and review of development proposals, and to increase the community's awareness and appreciation of design considerations. Please see Appendix B for the specific Design Guidelines applicable to the Project.

City of Roseville Municipal Code

The City Municipal Code includes requirements for zoning, signage, and the construction of buildings. It is assumed the project would comply with the City's Municipal Code regulations.

Sign Ordinance

The City of Roseville adopted the Sign Ordinance as Title 17 of the Roseville Municipal Code. This Ordinance implements sign regulations to facilitate communication and simultaneously serve various public interests, including but not limited to safety and community aesthetics.

Major Permit Processing

Title 19, Zoning, Article V. Administration and Procedures, Chapter 19.82, Major Projects Permit Processing, details the three stages that projects are subject to, including Preliminary Development Plan Review, Architecture and Landscape Review, and Final Plans.

4.1.4 Impacts and Mitigation Measures

Methods of Analysis

Since the 2004 Expansion Project EIR was prepared the CEQA Guidelines were last updated in 2018 to no longer require an analysis of visual character or public views for projects located in an urbanized area. Per Section 21071 of the Public Resources Code, an "urbanized area" is defined as an incorporated city that has a population of at least 100,000 persons or an unincorporated area that is completely surrounded by one or more incorporated cities and the population density of the unincorporated area at least equals the population density of the surrounding city or cities. Because the project site is located within a developed area with a population over 100,000 persons and is surrounded by development an analysis of visual character or quality of public views is not required.

A description of the project site and the surrounding area is derived from a site visit and photographs. The City's General Plan, NERSP, Zoning Ordinance, and Community Design Guideless were reviewed to determine what visual regulations and plans are applicable to the proposed Project. The impact analysis focuses on the manner in which development of the project site would be consistent and in compliance with applicable guidelines and regulations as well as the change in ambient illumination levels or create new sources of glare.

This analysis assumes that development of the proposed Project would comply with the City's 2035 General Plan and NERSP goals, policies, and implementation measures, Zoning Ordinance, Community Design Guidelines, and other relevant requirements; therefore, such policies and requirements are not specifically identified as mitigation.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the proposed Project would do any of the following:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- conflict with applicable zoning and other regulations governing scenic quality (for projects in urbanized areas); or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impacts addressed in Chapter 3, Issues Addressed in the 2004 Expansion Project EIR

As explained in Chapter 3, there are no scenic vistas within City limits, which includes the NERSP area and the project site. In addition, developed areas within the City are not visible from any scenic vista. Therefore, there would be no impact related to Project effects on a scenic vista.

There are no officially designated or eligible scenic highways in the immediate project vicinity. The nearest eligible scenic highway is State Route 49, approximately 14.5 miles east of the project site. The project site also does not contain any scenic resources such as rock outcroppings, or other significant natural or historical features that are visible from a state scenic highway; therefore, the Project would not limit views of such features and there would be no impact. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impacts were adequately addressed in that document and are not further evaluated.

Project Impacts

Impact 4.1-1 The proposed Project would not conflict with applicable zoning and other regulations governing scenic quality.

The 2004 Expansion Project EIR analyzed aesthetic impacts associated with construction and operation of a new Medical Center Campus that included a new medical office building, a new Women's and Children's Center, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, a new parking structure, a new helicopter landing pad, as well as expansion and remodeling of the cafeteria, and CUP. To date, all of these buildings have been constructed on the Campus. In addition to these buildings, the 2004 Expansion Project EIR evaluated aesthetic impacts of development of a five-story, Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building and with a three-level, approximately 400-space parking garage located in the northeast corner of the Campus; however, these buildings have not been constructed. The 2004 Expansion Project EIR determined potential impacts to degradation of the existing visual character or quality of public views within the study area were determined to be less than significant and no mitigation was required.

The proposed Project would increase the height and capacity of the previously approved buildings that were not constructed. Specifically, the proposed Project revises the 2004 Expansion Project to allow for Inpatient Tower building on the site of the prior approved Surgery and Intensive Care Unit Facility, expansion of the Emergency

Department (which is part of the Main Hospital Building) to add 36 new treatment bays; a new four-level garage with rooftop parking to accommodate approximately 800 stalls located on the site of the prior approved parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; and a new generator yard and internal upgrades to the existing CUP, as shown in Figure 2-3, Proposed Site Plan in Chapter 2, Project Description. The new Inpatient Tower building is proposed to be a 107-foot tall, 6-story building with 278,000 square feet as compared to the 2004 Expansion Project which proposed an 83-foot, 5-story building with 155,000 square feet. The new parking garage is proposed to be a 46-foot tall, 4-level parking structure as compared to the 2004 Expansion Project which proposed a 23-foot tall, 3-level parking structure. Both the proposed Inpatient Tower building and the parking garage would change the visual appearance of the site in a manner similar to the visual analysis discussed on pages 4.2-6 through 4.2-13 of the 2004 Expansion Project EIR. The proposed revisions to the previously approved Surgery and Intensive Care Unit facility and parking garage buildings are detailed in Table 2-1 in Chapter 2, Project Description. Figures 2-4 through 2-5 also provided in Chapter 2 show elevations of the proposed new buildings.

The proposed Project is located in, and entirely occupies, the Planned Development for Medical Campus (PD 470) zoning district. Uses within this zone district include professional offices and general medical services. No changes in the underlying zoning from that described in the 2004 Expansion Project EIR would occur. The project site is designated Business Professional (BP) on the City's General Plan Figure II-2, Land Use Map and the NERSP specifically designates 100.64 acres of medical campus within the Specific Plan area. Uses allowed under this land use designation include business park and professional office, medical campus, and research and development. No change is land use designation or zoning is required for the Project.

Construction

Construction activities would require demolition of the existing parking lots, tree and landscape removal, and minor grading to prepare for development. The landscaped setback area adjacent to Lead Hill Boulevard and Eureka Road where the proposed parking garage would be located would also be removed. This area contains multiple large trees and shrubs; however, none are protected resources under Chapter 19.66 of the City's Municipal Code. These existing mature trees along the frontage that forms the perimeter of the project site would be maintained to the extent possible during construction. Site grading, trenching for utilities and re-aligning the loop road would take approximately 6 months, followed by construction of the buildings. The intent is to have the parking structure built first in order to provide sufficient parking on site while the new Inpatient Tower Building is under construction. Landscaping of the setback area along Lead Hill Boulevard and Eureka Road would occur immediately after construction is completed. All design and construction plans would be submitted to the City for review and approval prior to the start of construction. Any necessary permits would be obtained prior to the start of construction. Temporary construction activities of the proposed Project would not result in conflicts with applicable zoning or other regulations governing scenic quality and impacts would be **less than significant**.

Operations

Chapter V(d)(I), Medical Campus Component, of the NERSP addresses the development of two medical campuses within the Specific Plan area, including the approximately 49-acre Medical Center Campus. The NERSP provides a comprehensive master plan for the orderly development of the project site and addresses the need for continued development to accommodate existing and future demands for medical care.

The proposed Project has been designed to be consistent with the design standards listed under Plan Policy 2 of the NERSP, the Design Guidelines in Chapter VII of the NERSP, and the NERSP Landscape Guidelines, as well as the City's Community Design Guidelines for Office and Industrial Development to ensure compatibility with the surrounding development. The new buildings would be designed to be compatible with the existing Medical Center Campus buildings. The Inpatient Tower Building would be clad in metal panel with a concrete base. Entering a garden plaza drop-off, visitors would arrive under a canopy, and proceed into a light-filled rotunda with direct access to the main elevator core (see Figure 2-4, Building Elevations – Inpatient Tower).

The new four level with rooftop parking garage would be a painted cast-in-place concrete structure that has been designed as a rectangular building to allow for the most efficient parking stall layout. Perimeter concrete crash walls would be used both for crash protection and light pollution reduction. Elevator shafts would be constructed of concrete masonry units, with additional cladding to enhance the vertical circulation corners of the structure. Since this garage is at the intersection of Eureka Road and Lead Hill Boulevard, attention would be paid to the exterior elevations of the building, especially on those visible along the main street frontages. The building façade would be a combination of materials and colors acceptable to the City (see Figure 2-5, Building Elevation – Parking Garage).

Consistent with NERSP Goal 1, which details policies related to landscape design, building height, site and building design, and storage, the Project's proposed six-story Inpatient Tower and four-story parking garage would be required to adhere to the requirements in the NERSP to create a well-defined medical campus through the incorporation of superior development and landscape design for all the various components. As shown in Table 4.4-2, of Chapter 4.4, Land Use and Planning, the proposed Project would meet the standards of the NERSP and site zoning with respect to setbacks and lot coverage after approval of the amendment to the Specific Plan to reduce the building setback from Eureka Road. The NERSP amendment would modify the setback requirement for the new parking garage from 100 feet to 50 feet for its proposed location at the northeast corner of Eureka Road and Lead Hill Boulevard (existing landscape setbacks would be maintained). In addition, the proposed amendment would allow for ancillary right turn lanes, bus turn-outs, and standard roadway tapers to be permitted reductions to the required setbacks stated above. The City's Zoning Ordinance and the NERSP allow for taller buildings as part of design review or a Major Project Permit. The applicant is requesting a Major Project Permit to permit both the proposed 107-foot-tall Inpatient Tower building and the 46-foot-tall four-story parking garage.

Signage on the new Inpatient Tower building would consist of Kaiser Permanente skyline signs on the north and south parapet of the building. The overall Campus signage and directories would be updated to incorporate wayfinding for the Inpatient Tower and parking garage. All signs would comply with the City's Sign Ordinance which provides guidelines for the location, number, size, design, and relevance signs must adhere to and ensures maintenance requirements to avoid clutter, confusion, and aesthetic blight. Adherence to the Sign Ordinance would ensure the Project's new signage would facilitate communication and simultaneously serve various public interests, including but not limited to safety and community aesthetics.

The proposed Project is consistent with the City's General Plan and NERSP requiring a well-defined medical campus that incorporates development and landscaping design compatible with the existing Campus. The design standards listed under Plan Policy 2 of the NERSP include guidelines for setbacks, total lot coverage, land coverage, landscape design, building height, and site and building design, and storage. Chapter VII of the NERSP includes additional design guidelines that would be implemented by the Project to ensure the new facilities are reflective of the existing character of the community, harmonious in architectural form with the existing buildings, including in building detail, materials, and landscaping within the Medical Campus and surrounding development. These design guidelines also provide that those areas designated as Business Professional should have a unified design, use diverse building

layouts, clearly define building and site entries, and ensure taller buildings relate to the Project's scale with lower profile structures adjacent to street frontages. These Project design guidelines apply to all development with the NERSP area to assure a Project fulfills the goals and policies of the NERSP.

In addition, the Project would also be designed consistent with the City's Community Design Guidelines for Office and Industrial Development, which help to ensure building and community designs are visual assets to the community. The Community Design Guidelines include guidelines for building design, site design, and landscape design and were developed to enhance the existing urban visual environment in the City. The guidelines emphasize that buildings should be placed, designed, and arranged in a way that ensures connectivity with their surroundings. The Community Design Guidelines state that buildings should be located to allow for a transition to surrounding uses that respect the existing community character. The building entrances should be enhanced by landscaping and be consistent with the visual character of the surrounding development. The Community Design Guidelines also state that the natural topography of the site should be preserved as much as is feasible.

It is anticipated that the Project's new landscaping would use native and drought resistant plants and would comply with the NERSP Landscape Design Guidelines and the City's Water Efficient Landscape Ordinance. Since this Project includes upgrades to an existing Medical Center Campus, the Project's landscaping plan would be designed to blend with the existing plant palette and species that are currently on the site. Based on an arborist survey completed in January 2022, there are no protected trees on the Campus that would require compliance with the City's tree preservation requirements set forth in Municipal Code Chapter 19.66, Tree Preservation and no tree permit or other approval would be required. As noted above, landscaping of the 35-foot setback area along Lead Hill Boulevard and Eureka Road would occur immediately after construction is completed as required by the Design Guideless in Chapter VII of the NERSP. Existing mature trees along the frontage that forms the perimeter of the project site would be maintained to the extent possible to enhance and screen the new parking structure from view. It is anticipated that approximately 350 trees would require removal to accommodate the Project.

As the project site is primarily surrounded by one to two-story buildings, the upper floors of the Inpatient Tower building would be visible from roadways and businesses near the site. There are no residential uses adjacent to the project site and the nearest apartments are located approximately 1,000 feet to the northeast. It is not anticipated the Inpatient Tower building or garage would be visually prominent from the residential properties, due to the retail and office development immediately surrounding the site. As noted, the building design and landscaping complies with the design standards listed under Plan Policy 2 of the NERSP, the Design Guidelines in Chapter VII of the NERSP, and the NERSP Landscape Guidelines, as well as the City's Community Design Guidelines to ensure compatibility with the surrounding development, including any nearby residential areas.

The other Project elements, including the expansion of the Emergency Department to add 36 new treatment bays; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; and a new generator yard and internal upgrades to the existing CUP would also be consistent with the underlying zoning and the NERSP design guidelines for the Campus. While the Inpatient Tower building and parking garage would be prominent features within the Campus, the proposed Project would be built within the existing developed 49-acre Campus site and would not conflict with the design standards and guidelines of the NERSP, General Plan, and Zoning Ordinance after approval of the amendment to the Specific Plan. Therefore, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality and impacts would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.1-2 The proposed Project would not create a new source of light or glare which would adversely affect day or nighttime views in the area.

Construction

Construction of the project site would require demolition of the existing parking lots, tree and landscape removal, and minor grading to prepare for development. In accordance with the City's Noise Ordinance in Chapter 9.24 of the Roseville Municipal Code, the hours of Project construction shall be limited to the following: 7:00 AM to 7:00 PM, Monday through Friday 8:00 AM to 8:00 PM, Saturday, Sunday and Holidays. While the majority of construction would occur during daylight hours, there is a potential based on the proposed Project's anticipated construction hours that construction could require the use of artificial lighting. Potential for nighttime lighting uses would be greatest during winter months when daylight hours are shortest in the year. Outdoor lighting sources, such as floodlights, spotlights, and/or headlights associated with construction equipment and hauling trucks, are typically used during evening construction activities. However, with the exception of security lighting that would operate overnight to deter unauthorized access onto construction sites, the use of nighttime lighting would be temporary, infrequent, and would cease upon completion of Project construction. Overnight security lighting would generally operate during the duration of construction activities. Construction at the project site would be partially screened from view of nearby pedestrians due to the perimeter landscaping. Further, the limited lighting anticipated during construction activities would not significantly impact nighttime views at off-site locations in the surrounding areas or adversely impact day or nighttime views in the area.

Daytime glare could potentially occur during construction activities if reflective construction materials were positioned in highly visible locations where the reflection of sunlight could occur. However, any glare generated during construction would be highly transitory and experienced over a short-term duration. In addition, large and particularly reflective surfaces that are generally required to generate substantial glare are typically not an element of construction activities. Furthermore, as noted above, construction would primarily occur during the daytime hours in accordance the City's ordinance. The existing mature landscape surrounding the Campus would also intercept potential glare generated by on-site sources at the ground level.

Therefore, as it relates to construction activities, there would be a negligible potential for the Project to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area during construction. Impacts would be **less than significant**.

Operations

The existing Medical Center Campus uses lighting sources in its parking lots, for signage and on buildings. Neighboring commercial and business uses in the area also use lighting for building security, signage and for parking lots. There are no buildings that create glare conditions in the area or on the project site. Existing sources of light from streetlights and building lights are visible at night from the surrounding commercial and business park uses surrounding the project site, and from vehicle headlights on adjacent roadways and parking lots.

As analyzed in the 2004 Expansion Project EIR, the Medical Center Campus is illuminated at night for safety. The addition of new lights was determined to be a less-than-significant impact. The potential for glare to result from new buildings was also found to be a less-than-significant impact. Similar to the 2004 Expansion Project, the Project includes new building lights and roadway lights to provide for the safety and security of staff and the public. The proposed Project would include overhead roadway pole lights, low-level security lighting on bollards to illuminate landscaped areas and sidewalks, building-mounted lighting at entrances, and lights for signage. Architectural lighting would also be used to illuminate key architectural features. Because the hospital provides 24-hour care, hours of operation would be seven days a week, 24 hours per day.

The NERSP requires that exterior lighting be provided for safety and security and to enhance building design and landscaping, that lighting is designed so as not to create glare for Project occupants or neighboring properties, that the style and design of lighting fixtures be compatible and consistent with building design, and the utilization of energy efficient lighting types. The City requires new lighting to comply with the Community Design Guidelines, which include limiting the height of light standards and requiring cut-off lenses and glare shields to minimize light and glare impacts. The Project's exterior light fixtures would use premium-efficiency LED light sources. Area lighting would automatically turn off during the day, and motion-activated controls would be provided to dim the lighting at night when there is no activity. New overhead pole lights along the loop road would be a maximum of 25 feet in height, consistent with the Community Design Guidelines.

The proposed Project would include identifying signs on the buildings, as well as directional signage. The Inpatient Tower building would include illuminated exterior signage to direct patients, visitors, and staff. A large, illuminated sign would be mounted at the top of the Inpatient Tower building and would be visible from the site entries and immediate vicinity. The parking garage would also include illuminated signage. All signs would adhere to the design requirements of the City's Sign Ordinance, Zoning Ordinance, and Community Design Guidelines.

The proposed Project would have the potential to create glare during daylight hours due to the installation of potentially reflective materials (primarily glass windows) on building exteriors. However, the Inpatient Tower building would be designed in a contemporary architectural style and would feature a variety of exterior building materials similar to the current buildings within the Campus and surrounding areas. Furthermore, to reduce glare, all exterior windows and glass used on building surfaces would be non-reflective or treated with an anti-reflective coating to minimize glare (e.g., minimize the use of glass with mirror coatings). The avoidance of highly reflective glass would minimize the potential for glare that could adversely affect the quality of daytime views. In addition, the Project is sited within an existing Campus and there are no residences directly adjacent to the project site.

The increase in light and glare associated with car headlights would not be a substantial change from existing conditions and associated glare and light spillover from car headlights, parking lights and building lighting would be shielded, part, with existing landscaping. The existing mature trees along the frontage that forms the perimeter of the project site would be maintained to the extent possible to shield the new parking structure from view at the street level. Landscaping of the 35-foot setback area along Lead Hill Boulevard and Eureka Road would occur immediately after construction is completed as required by the Design Guideless in Chapter VII of the NERSP. The parking garage does not contain any large expanse of glass or other reflective surfaces that could create glare.

As detailed above, the proposed Project would be required to comply with the lighting standards set forth in the NERSP and Community Design Standards and would be designed to minimize light and glare at the project site. The mature landscaped perimeter of the project site would further shield light spillover from the site. Therefore,

similar to the analysis in the 2004 Expansion Project EIR, the Project would not create a new source of light and glare that could affect day or nighttime views in the area and impacts would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Cumulative Impacts

As defined in CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The geographic context for the analysis of cumulative impacts related to light and glare would include the past, present and future development located in a proximity that creates a potential increase in light and glare impacts upon the same properties as the Project. The scope of the cumulative analysis includes areas within the view shed of and from the project site into the foreseeable future.

Thus, although development of the proposed Project, in combination with development of other projects in the NERSP area, would result in a general intensification of land uses in an already urbanized area of the City, the analysis of consistency with the General Plan and underlying zoning is not additive; therefore, a cumulative analysis of the potential for the Project to conflict with applicable zoning and other regulations governing scenic quality is not required.

Impact 4.2-3 The proposed Project would contribute to a cumulative increase in light and glare.

As it relates to light and glare, the proposed Project is located within a developed Medical Campus in a largely urbanized area of the City, on a site that has been developed with surface parking lots, landscaping and roads. The 2004 Expansion Project EIR concluded that cumulative impacts related to light and glare would be less than significant. Development of the Project, in combination with buildout of the 2035 General Plan, which includes the NERSP, would result in elevated levels of ambient light and glare. However, as discussed above, the proposed Project is in a developed urbanized area and the presence of additional nighttime illumination resulting from the Project would comply with the City's lighting guidelines and would not represent a substantial alteration to the existing nighttime visual environment. Ambient light produced by the proposed Project is anticipated to be minimal.

The City's 2035 General Plan EIR determined compliance with the City's Community Design Guidelines would help to reduce light and glare effects and additional requirements requiring all new development to control artificial lighting to avoid spillover lighting and preserve the night sky, and to use anti-reflective architectural materials and coatings to prevent glare. However, the 2035 General Plan EIR, which assumed buildout of the Campus, determined it is not feasible to mitigate light and glare impacts completely without prohibiting the use of light in new development and no other feasible mitigation measures are available. Therefore, the cumulative impact associated with the contribution of nighttime lighting and daytime glare was determined to be a cumulatively significant and unavoidable impact.

The Project would adhere to the City's standards and regulations regarding lighting and reflective materials, which would avoid new source of substantial light or glare. However, the 2035 General Plan EIR assumed future buildout of the Campus and concluded the cumulative increase in light and glare would be a significant and unavoidable impact. Therefore, the Project's cumulative contribution would be considerable and the impact would be **significant and unavoidable.**

Mitigation Measures

No feasible mitigation measures are available; therefore, the impact would be significant and unavoidable.

4.1.5 References

City of Roseville. 2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

2008. Community Design Guidelines for the City of Roseville. Adopted December 6, 1995, Resolution #95-347. Last Amended March 19, 2008, Resolution #08-142. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Citywide%20Planning%20Documents/Community%20Design%20Guidelines.pdf. Accessed: April 17, 2022.

2008. City of Roseville Sign Ordinance, Ordinance #4648. Adopted April 2, 2008. Last Amended July 20, 2016, Ordinance #5720. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Citywide%20Planning%20Documents/Sign%20Ordinance.pdf. Accessed: April 18, 2022.

2013. Northeast Roseville Specific Plan, Adopted April 8, 1987, Resolution #87-52. Last Amended September 18, 2013, Resolution #13-374. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Northeast%20Roseville%20Specific%20Plan/Northeast%20Roseville%20Specific%20Plan.pdf. Accessed: April 17, 2022.

2020. August. City of Roseville General Plan 2035. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed: April 20, 2022.

2016. Water Efficient Landscape Ordinance. Adopted March 16, 2016. Available: https://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=10866100. Accessed: April 17, 2022.

2017. Zoning Map. Adopted July 26, 1996, Ordinance #3014. Last updated March 2017. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Zoning%20Information/Zoning_30X40_2017%20FINAL_20170324.pdf. Accessed: April 17, 2022.

2020. August. City of Roseville General Plan 2035. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed: April 17, 2022.

N.D. Zoning of the Roseville Municipal Code. Available: https://library.qcode.us/lib/roseville_ca/pub/municipal_code. Accessed: April 17, 2022.

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4.2 Air Quality

4.2.1 Introduction

This section describes the existing air quality conditions present within and around the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) site and project vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project. As discussed in Chapter 3, Issues Addressed in the 2004 Expansion Project EIR, the proposed Project would not result in new information or changes to the Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (2004 Expansion Project EIR) regarding odors. Therefore, impacts to this issue area would remain less than significant and are not further evaluated. Please see Chapter 3 for additional information.

One comment letter was received from the Placer County Air Pollution Control District (PCAPCD) in response to the Notice of Preparation, which included recommendations that the proposed Project's air quality and greenhouse gas (GHG) emissions are to be evaluated using the PCAPCD's significance criteria. The PCAPCD recommended using the 2017 California Environmental Quality Act (CEQA) Air Quality Handbook, which provides analytical approaches and feasible mitigation measures when preparing air quality analyses for land use projects. In addition, the PCAPCD recommended that for any equipment proposed, including generators, boilers, or hot water heaters, the Project applicant should contact the PCAPCD if a permit is required, and a dust control plan should be submitted per PCAPCD Rule 228 for areas disturbed greater than one-acre. The Notice of Preparation and comments received are provided in Appendix A.

Information contained in this section is based on the latest version of California Emissions Estimator Model (CalEEMod), Version 2020.4.0, to estimate the proposed Project's criteria air pollutant emissions from both construction and operations. The CalEEMod 2020 Model is currently in the process of being updated; however, as of the release of this Draft Supplemental Environmental Impact Report (SEIR), the 2022 Model is not available. For the relevant data, refer to Appendix C, Air Quality and Greenhouse Gas Emissions Calculations. Additional sources reviewed to prepare this section include information contained in Section 4.6, Transportation and Circulation, the PCAPCD CEQA Air Quality Handbook, the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (2016 MTP/SCS), and the state's 2015 Triennial Progress Report.

4.2.2 Environmental Setting

This section details the existing environmental setting for air quality and updates the information described In Section 4.4, Air Quality, starting on page 4.4-1 of the 2004 Expansion Project EIR.

Regional Setting

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions (for example, wind speed, wind direction, and air temperature) in combination with local surface topography (for example, geographic features such as mountains and valleys), determine how air pollutant emissions affect local air quality.

The proposed Project is located in central Placer County, within the City of Roseville (City), which lies within the Sacramento Valley Air Basin (SVAB) and is within the jurisdictional boundaries of the PCAPCD. Air quality in the vicinity is influenced by both local and distant emission sources. Local sources include the emissions from vehicle traffic on nearby roadways, area sources such as landscaping maintenance, and stationary sources such as residential woodstoves and barbeques as well as local industry. Distant emission sources include the vehicle traffic and various industries in the Sacramento metropolitan area and beyond. Carried to the foothills region by the prevailing southwesterly winds found in the valley, pollutants emitted in Sacramento and the San Francisco Bay area affect local ambient pollutant concentrations. Inversion layers occur when a layer of warm air traps a layer of cold air beneath it, preventing vertical dispersion of air contaminants. These layers are created by seasonal temperatures and contribute to seasonal concentrations of airborne contaminants, elevating air pollution levels.

Climate and Meteorology

Mild, wet winters and hot, dry summers characterize the climate of central and western Placer County. Precipitation generally occurs between November and April. Prevailing winds are from the south and southwest, and local air quality is influenced by the transportation of emissions from upwind mobile and stationary pollution sources in south Placer County, the Sacramento metropolitan area, and the San Francisco Bay area. Additionally, in the late fall and early spring the SVAB frequently experiences calm atmospheric conditions, contributing to the creation of inversion layers, which results in higher concentrations of pollutants near ground level.

Site-Specific Meteorological Conditions

The local climate in Placer County is characterized by relatively low rainfall, with warm summers and mild winters. Average temperatures range from a high of 76°F in August to a low of 65°F in January. Precipitation averages about 1.40 to 2.67 inches, falling mostly from November through March (WRCC 2016).

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[1]

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also termed reactive organic gas [ROG]). The maximum effects of precursor emissions on O_3 concentrations usually occur several

[1] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2021a), as well as the California Air Resources Board's "Glossary" (CARB 2019a) and "Fact Sheet: Air Pollution Sources, Effects and Control" (CARB 2009).

hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies on the effects of O_3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016b).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and

[2] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the Project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 parts per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter, which is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2022).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2022).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including IQ performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere and can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate ambient air quality standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions

sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2019f). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2019f). The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2019f). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The nearest existing off-site sensitive receptors to the proposed Project site are single-family residences, located approximately 1,040 feet to the south, and multi-family residential uses, located approximately 1,140 feet to the northeast of the project site, respectively. In addition to the existing offsite sensitive receptors, the hospital within the Kaiser Permanente Medical Center Campus (Medical Center Campus or Campus) is considered a sensitive receptor, as well.

Existing Air Quality

Placer County Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS. Table 4.2-1 depicts the current attainment status of Placer County with respect to the NAAQS and CAAQS.

Table 4.2-1. Placer County Portion of the Sacramento Valley Air Basin Attainment Classification

Pollutant	Designation/Classification	
	National Standards	California Standards
Ozone (O_3) – 1 hour	No National Standard	**Nonattainment**
Ozone (O_3) – 8 hour	**Severe Nonattainment**	**Nonattainment**
Nitrogen Dioxide (NO_2)	Unclassifiable/Attainment	Attainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Unclassifiable/Attainment	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	**Serious Nonattainment**	Attainment
Lead	Nonattainment	Attainment
Hydrogen Sulfide	No National Standard	Unclassified
Sulfates	No National Standard	Attainment
Visibility-Reducing Particles	No National Standard	Unclassified
Vinyl Chloride	No National Standard	No designation

Sources: EPA 2020 (national); CARB 2020 (California).
Notes: Attainment = meets the standards; Attainment/Maintenance = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/ Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data

In summary, the Placer County portion of the SVAB, where the proposed Project is located, meets the NAAQS for all criteria air pollutants except federal O_3 and $PM_{2.5}$ standards and meets the CAAQS for all criteria air pollutants except ozone and PM_{10} standards.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. PCAPCD operates a network of ambient air monitoring stations throughout Placer County, which

measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The CARB monitors air quality conditions at 5 locations throughout the Placer County. Due to proximity to the site and similar geographic and climactic characteristics, the Roseville-North Sunrise Avenue monitoring station concentrations for 8-hour O_3, 1-hour O_3, NO_2, PM_{10}, and PM_2 criteria air pollutants are considered most representative of the project site. Concentrations of CO and SO_2 were available at the Sacramento-Del Paso monitoring station. Ambient concentrations of pollutants from 2018 through 2020 (the most current data available) are presented in Table 4.2-2.

Table 4.2-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2018	2019	2020	2018	2019	2020
Ozone (O_3) – Roseville-North Sunrise Avenue									
Maximum 1-hour concentration	ppm	State	0.12	0.110	0.089	0.096	0	0	1
Maximum 8-hour concentration	ppm	State	0.070	0.084	0.077	0.081	11	3	4
		Federal	0.070	0.083	0.076	0.080	11	1	3
Nitrogen Dioxide (NO_2) – Roseville-North Sunrise Avenue									
Maximum 1-hour concentration	ppm	State	0.18	0.054	0.050	0.041	0	0	0
		Federal	0.100	0.054	0.050	0.041	0	0	0
Annual concentration	ppm	State	0.030	0.007	0.006	ND	—	—	—
		Federal	0.053	0.008	0.007	0.006	—	—	—
Carbon Monoxide (CO) – Sacramento-Del Paso									
Maximum 1-hour concentration	ppm	State	20	3.9	1.6	2.5	0	0	0
		Federal	35	3.9	1.6	2.5	0	0	0
Maximum 8-hour concentration	ppm	State	9.0	3.8	1.2	2.1	0	0	0
		Federal	9	3.8	1.2	2.1	0	0	0
Sulfur Dioxide (SO_2) – Sacramento-Del Paso									
Maximum 1-hour concentration	ppm	Federal	0.075	0.036	0.040	0.086	0	0	0
Maximum 24-hour concentration	ppm	Federal	0.14	0.011	0.011	0.017	0	0	0
Annual concentration	ppm	Federal	0.030	0.0037	0.0038	0.0046	—	—	—
Coarse Particulate Matter (PM_{10})[a] – Roseville-North Sunrise Avenue									
Maximum 24-hour concentration	µg/m³	State	50	211.3	63.1	244.3	ND (16)	2.0 (2)	38.0 (36)
		Federal	150	202.2	61.3	251.8	2.0 (2)	0.0 (0)	5.3 (5)
Annual concentration	µg/m³	State	20	ND	15.4	27.7	—	—	—

Table 4.2-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2018	2019	2020	2018	2019	2020
Fine Particulate Matter ($PM_{2.5}$)[a] – Roseville-North Sunrise Avenue									
Maximum 24-hour concentration	µg/m³	Federal	35	171.8	28.2	121.3	17.3 (3)	0.0 (0)	19.7 (3)
Annual concentration	µg/m³	State	12	12.2	6.5	ND	—	—	—
		Federal	12.0	11.9	6.5	13.3	—	—	—

Sources: CARB 2021a; EPA 2021b.
Notes: ppm = parts per million by volume; ND = insufficient data available to determine the value; — = not available; µg/m³ = micrograms per cubic meter.
Data taken from CARB iADAM (http://www.CARB.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.
Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM10, or 24-hour SO2, nor is there a state 24-hour standard for PM2.5.
The Roseville-North Sunrise Avenue monitoring station is located at 151 North Sunrise Ave, Roseville, CA 95661.
The Sacramento-Del Paso monitoring station is located at 2701 Avalon Drive, Sacramento, CA 95821.
[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.3 Regulatory Setting

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames. The Clean Air Act identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of sensitive receptors. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established CAAQS, which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded.

California air districts have based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health.

All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.2-3.

Table 4.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None

Table 4.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day Average	1.5 µg/m³	—	—
	Calendar Quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—
Visibility reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016a.

Notes: µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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

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

[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

CARB's Mobile Source Strategy

On May 16, 2016, CARB released the 2016 Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next fifteen years. The actions contained in the 2016 Mobile Source Strategy will deliver broad environmental and public health benefits, as well as support much needed efforts to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth in the mobile sector.

The estimated benefits of the strategy in reducing emissions from mobile sources includes an 80% reduction of smog-forming emissions and a 45% reduction in DPM. Statewide, the 2016 Mobile Source Strategy would also result in a 45% reduction in GHG emissions, and a 50% reduction in the consumption of petroleum-based fuels (CARB 2016b).

In September 2019, Governor Newsom signed Senate Bill (SB) 44 which acknowledges the ongoing need to evaluate opportunities for mobile source emissions reductions and requires CARB to update the 2016 Strategy by 2021 and every five years thereafter. Specifically, SB 44 requires CARB to update the 2016 Strategy to include a comprehensive strategy for the deployment of medium- and heavy-duty vehicles for the purpose of meeting air quality standards and reducing GHG emissions. It also directs CARB to set reasonable and achievable goals for reducing emissions by 2030 and 2050 from medium- and heavy-duty vehicles that are consistent with the State's overall goals and maximizes the reduction of criteria air pollutants. In September 2021, CARB developed the 2020 Mobile Source Strategy that, similar to the 2016 Mobile Source Strategy, is a framework to identify the technology trajectories and programmatic concepts to meet our criteria pollutant, GHG, and TAC emission reduction goals from mobile sources. The 2020 Mobile Source Strategy will be incorporated in other planning efforts such as the State Implementation Plan and 2022 Climate Change Scoping Plan Update.

The estimated benefits of the strategy in reducing emissions from mobile sources includes an 82% reduction of smog-forming emissions by 2037 and a 66% reduction in DPM by 2031. The 2020 Mobile Source Strategy would also result in a 76% reduction in GHG emissions by 2045, and 85% and 77% of passenger cars and heavy-duty trucks would be zero-emission vehicles (ZEV) or plug-in hybrid electric vehicles in 2045 (CARB 2021c).

Executive Order B-48-18: Zero-Emission Vehicles

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook (Eckerle and Jones 2015) to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100% of all new passenger car and truck sales in the state will be zero-emissions by 2035. It also sets a goal that 100% of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of drayage trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100% of new off-road vehicle sales in the state to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road

Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025). On June 25, 2020, the CARB adopted the final rule for new standards that require the sale of zero-emission heavy-duty trucks, starting with the 2024 model year. The Advanced Clean Trucks rulemaking finalizes standards that were initially proposed on October 22, 2019 and strengthened in a revised proposal on April 28, 2020 (CARB 2021b). The Advanced Clean Trucks would require manufacturers to sell increasing percentages of zero-emission trucks, is expected to reduce the lifecycle emission of GHGs, eliminate tailpipe emissions of air pollutants, and foster a market for zero-emission heavy-duty trucks.

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This Section also applies to sources of objectionable odors.

Local

Placer County Air Pollution Control District

The PCAPCD regulates many sources of air pollutants and is responsible for implementing certain programs and regulations for controlling air pollutant emissions to improve air quality and attain NAAQS and CAAQS. Various development projects have the potential to generate air pollutants that would result in adverse environmental impacts. In order to evaluate air pollutant emissions from development projects, the PCAPCD recommends significance thresholds for emissions of ROG, NO_x, CO, and PM_{10}. The PCAPCD recommends significance thresholds as listed in Table 4.2-5, expressed in pounds per day, which serve as air quality standards that may be used in the evaluation of air quality impacts associated with development projects. These thresholds were included in the 2017 update to their CEQA Air Quality Handbook.

PCAPCD Rules and Regulations

Appendices B and D of the PCAPCD CEQA Air Quality Handbook include an all-inclusive list of rules and regulations required and recommended for all projects.[3] Project proponents are responsible for compliance with the adopted PCAPCD rules. To facilitate rule compliance, the City includes applicable rules as standard notes on improvement plans, grading plans, or design review permits.

A general summary of the key PCAPCD rules and regulations is presented below.

- **Rule 202 – Visible Emissions:** Rule 202 limits the amount of time during which air pollutant emissions of a certain shade of darkness or degree of opacity may be discharged, specifically to no more than 3 minutes in any 1 hour.

[3] In addition, a complete listing of all PCAPCD rules can be found at http://www.placer.ca.gov/Departments/Air/Rules.aspx.

- **Rule 205 – Nuisance:** Rule 205 prohibits a 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.
- **Rule 217 – Cutback and Emulsified Asphalt Paving Materials:** Rule 217 limits the VOC (ROG) content of asphalt paving materials used in the district.
- **Rule 218 – Architectural Coatings:** Rule 218 requires that architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the PCAPCD area meet specified maximum VOC (ROG) content levels.
- **Rule 228 – Fugitive Dust:** Rule 228 is intended to reduce the amount of particulate matter entrained in the ambient air, or discharged into the ambient air, as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. The provisions of Rule 228 apply to any activity or man-made condition capable of generating fugitive dust within Placer County.
- **Rule 501 – General Permit Requirements:** Rule 501 provides an orderly procedure for the review of new sources of air pollution, and modification and operation of existing sources, through the issuance of permits.
- **Rule 502 – New Source Review:** Rule 502 provides for the review of new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct for such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

Ozone Attainment Plan

For air quality planning purposes, western Placer County is classified as a severe non-attainment area for O_3. The "severe" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the PCAPCD update the Clean Air Plan every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The PCAPCD's record of progress in implementing previous measures must also be reviewed. The Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Draft 2017 SIP Revisions) (PCAPCD 2017b), demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the federal 8-hour O_3 standard. The Ozone Attainment Plan is the currently adopted and applicable air quality plan for the region. Therefore, the PCAPCD, along with other local air districts in the Sacramento region, is required to comply with and implement the Ozone Attainment Plan.

Triennial Progress Report

To comply with the planning requirements of the California Clean Air Act, the PCAPCD has prepared several triennial progress reports that build upon the Air Quality Attainment Plan adopted in 1991. The *2015 Triennial Progress Report* (SMAQMD 2016) is the most recent report. The triennial progress report, like the Ozone Attainment Plan, includes a current emission inventory and projected future inventories of ROG and NO_x emissions in Placer County. The future inventories reflect future growth rates of population, travel, employment, industrial/commercial activities, and energy use, as well as controls imposed through local, state, and federal emission reduction measures. The Triennial Report discusses rules that the PCAPCD has amended or adopted during the previous three years, incentive programs that have been implemented, and other measures that would supplement those in the Ozone Attainment Plan to achieve annual emission reductions required by the Clean Air Act.

The Triennial Report indicates that a majority of ROG and NO_x emission in Placer County come from mobile sources. Additionally, emission trends within Placer County show a 47% decrease in ROG emissions from 39 tons per day to 21 tons per day and a 43% decrease in NO_x emissions from 36 tons per day to 21 tons per day between 1990 and 2015.

City of Roseville 2035 General Plan

The following policies from the City of Roseville General Plan 2035 (2020) Air Quality and Climate Change Element are relevant to the proposed Project.

Goal AQ1.1. Reduce local air pollutant emissions to assist with meeting and maintaining ambient air quality standards and minimizing public exposure to toxic or hazardous air pollutants and unpleasant odors.

Goal AQ1.3. Coordinate all forms of public transport to decrease VMT [vehicle miles traveled], while encouraging an increase in the commute vehicle occupancy rate.

Goal AQ1.4. Increase the capacity of the pedestrian, bicycle, and public transportation systems and promote vehicular transportation that uses less-polluting fuels, such as electricity.

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 PCAPCD and other applicable, feasible strategies, as needed, to avoid significant air quality impacts.

Policy AQ1.3. As part of the development review process, develop mitigation measures to minimize stationary and area source emissions.

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

Policy AQ1.14. Encourage alternative modes of transportation, including pedestrian, bicycle, and transit use.

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.

Policy AQ1.20. Separate air pollution-sensitive land uses from sources of harmful air pollution.

Northeast Roseville Specific Plan

The Northeast Roseville Specific Plan does not include specific goals, policies, implementation measures that are applicable to Air Quality for the proposed Project.

4.2.4 Impacts and Mitigation Measures

Methods of Analysis

Construction Emissions

Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project applicant and CalEEMod default values when Project specifics were not known (e.g., used model defaults for mix of construction equipment based on similar projects, see Table 4.2-4). Construction emissions were evaluated in the 2004 Expansion Project EIR under Impact 4.4-1 on page 4.4-8, which evaluated development of numerous new buildings including a five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit building and a 3-level approximately 400-space parking garage. Both of these buildings were never constructed and are proposed to be replaced by the proposed 278,000-square-foot Inpatient Tower building and 800-space parking structure, in addition to other proposed Project modifications. Because the regulatory environment, existing air quality conditions and modeling tools have changed since the 2004 Expansion Project EIR was prepared (URBEMIS was used to model criteria air pollutant emissions in the 2004 Expansion Project EIR), this analysis conservatively evaluates construction emissions associated with all of the new Project components and does not limit the analysis to only the delta or difference between what was previously approved and what is proposed. As such, the total construction emissions calculated in this Draft SEIR are greater than what the proposed Project would actually emit.

For purposes of estimating Project emissions, and based on information provided by the Project applicant, construction on the proposed Project would begin in January 2023 for a duration of approximately 4 years, with full buildout achieved in February 2027. Therefore, the analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition: 20 days (January 1, 2023 – January 27, 2023)
- Site Preparation (Parking Structure): 37 days (January 26, 2023 – March 17, 2023)
- Site Preparation (Bed Tower): 34 weeks (February 21, 2023 – October 12, 2023)
- Grading (Parking Structure): 8 weeks (March 6, 2023 – April 28, 2023)
- Grading (Bed Tower): 49 weeks (March 21, 2023 – February 26, 2024)
- Building Construction (Parking Structure): 60 weeks (May 1, 2023 – June 19, 2024)
- Building Construction (Bed Tower): 157 weeks (February 27, 2024 – February 27, 2027)
- Paving: 179 weeks (March 21, 2023 – August 20, 2026)
- Architectural Coating: 82 weeks (January 7, 2025 – August 3, 2026)

Construction-worker estimates, vendor and haul truck trips by construction phase were based on information provided by the applicant. Haul truck trips during each grading phase were based on approximate earthwork quantities. Grading for the parking structure was estimated to involve a total of 23,498 cubic yards of cut and 9,836 cubic yards of fill, resulting in 13,662 cubic yards of soil exported. For the Inpatient Bed Tower, grading would result in approximately 4,015 cubic yards of cut and 4,116 cubic yards of fill, resulting in approximately 101 cubic yards of soil imported. It is assumed construction activities would result in a total of approximately 201 round trips (402 one-way truck trips) for demolition, 854 round trips (1,708 one-way truck trips) during grading of the Inpatient Bed Tower, and 7 round trips (13 one-way truck trips) during grading of the parking garage. CalEEMod default trip characteristics including the trip length values were used for the distances for worker, vendor, and haul trips.

Fugitive dust generated during truck loading is included in CalEEMod as an on-site source of fugitive dust emissions and is calculated based on estimated throughput of loaded and unloaded material.

The construction equipment mix and vehicle trips used for estimating the project-generated construction emissions are shown in Table 4.2-4. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site 5 days per week (22 days per month) during project construction.

Table 4.2-4. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Workers Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Type	Quantity	Usage Hours
Inpatient Tower						
Demolition	28	2	402	Excavators	6	8
				Rubber Tired Dozers	2	8
				Cranes	2	8
				Bore/Drill Rigs	1	8
Site Preparation	25	0	0	Rubber Tired Dozers	3	8
				Tractors/Loaders/ Backhoes	4	8
				Compactors	3	8
Grading	18	0	1,708	Excavators	3	8
				Scrapers	2	8
				Compactors	2	8
Building Construction	89	46	0	Cranes	3	8
				Bore/Drill Rigs	1	8
Paving	13	2	0	Excavators	3	8
				Plate Compactors	1	8
				Blade	1	8
Architectural Coating	18	0	0	Air Compressors	1	6
Parking Structure						
Site Preparation	15	0	0	Graders	1	8
				Compactors	3	8
				Scrapers	1	8
				Tractors/Loaders/ Backhoes	1	7
Grading	10	0	13	Graders	1	8
				Rubber Tired Dozers	1	8
				Tractors/Loaders/ Backhoes	2	7
Building	112	44	0	Cranes	1	7

Table 4.2-4. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Workers Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Type	Quantity	Usage Hours
Construction				Forklifts	2	7
				Generator Sets	1	8
				Tractors/Loaders/ Backhoes	1	6
				Welders	3	8

Source: See Appendix C for details.
Notes: Equipment types noted in parenthesis represent the equipment equivalent used in Operational Emissions

Operational Emissions

Year 2027 was assumed as the first full year of operations after completion of construction.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating, water heating, and stoves are calculated in the building energy use module of CalEEMod, as described in the following text.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2021). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of nonresidential buildings and on the default factor of pounds of VOC per building square foot per day.

ROG off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the ROG evaporative emissions from application of residential surface coatings based on the ROG emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the nonresidential surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2021).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For Placer County, the average annual operational days for landscape equipment are estimated at 180 days per year (CAPCOA 2021).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, because criteria pollutant emissions occur at the site of the power plant, which is typically off-site. Therefore, for the purposes of the air quality analysis, the energy source parameters focus on criteria air pollutants generated as a result of natural gas consumption within the built environment. Natural gas consumption is attributed to systems like heating, ventilation, and air conditioning and water heating.

Mobile Sources

Mobile sources for the proposed Project would primarily be motor vehicles (automobiles and light-duty trucks) traveling to and from the project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. The anticipated trip generation, including the trip rates and total trips, are based on the Project's transportation analysis (provided in Section 4.6, Transportation and Circulation). Specifically, the Project would generate approximately an additional 3,297 trips per day to the campus. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2027 were used to estimate emissions associated with full buildout of the proposed project. The Project would also provide 20 EV charging stations and 107 EV capable stalls on-site.

Emergency Generator

Two 2-megawatt emergency, or stand-by, generators are required for the proposed Project in the event of a power outage. While use of generators during an emergency is not included in the emissions inventory as they are speculative, emissions associated with testing and maintenance of the generators is included. The generators are intended to be used only for emergency situations in order to provide continuous power during utility power outages, as required by the California Building Standards Code. Outside of emergency situations, periodic testing of the generators would occur; however, such testing would be limited to approximately one hour per month, totaling 12 hours per year. CalEEMod was used to estimate emissions from emergency generator testing and maintenance. Use, testing, and maintenance of such generators would be subject to PCAPCD Regulation 5 and the permitting requirements therein.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the proposed Project would do any of the following:

- conflict with or obstruct implementation of the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Placer County Air Pollution Control District

As previously discussed, the PCAPCD regulates many sources of air pollutants and is responsible for implementing certain programs and regulations for controlling air pollutant emissions to improve air quality and attain NAAQS and CAAQS. Various development projects have the potential to generate air pollutants that would result in adverse environmental impacts. In order to evaluate air pollutant emissions from development projects, the PCAPCD recommends significance thresholds for emissions of ROG, NO_x, CO, and PM_{10}. The PCAPCD recommends significance thresholds as listed in Table 4.2-5, expressed in pounds per day, which serve as air quality standards that may be used in the evaluation of air quality impacts associated with development projects. These thresholds were included in the 2017 update to their CEQA Air Quality Handbook.

Table 4.2-5. PCAPCD Significance Thresholds for Criteria Pollutants

Pollutant	Construction Threshold	Operational Threshold	Operational Cumulative-Level Threshold
	Pounds per Day		
ROG	82	55	55
NO_X	82	55	55
PM_{10}	82	82	82

Source: PCAPCD 2017a.

The PCAPCD recommends that a project would not result in significant project-level criteria pollutant emissions of ROG, NO_x, and $PM_{10,}$ for which the region is designated non-attainment if it does not exceed the construction and operational significance thresholds. In addition, a project would not be considered to be cumulatively considerable and would result in a less-than-significant cumulative impact if it does not exceed the PCAPCD cumulative-level significance thresholds.

Impacts addressed in Chapter 3, Issues Addressed in the 2004 Expansion Project EIR

As explained in Chapter 3, impacts related to odorous emissions and consistency with air quality plans were determined to be less than significant in the 2004 Expansion Project EIR. No substantial changes in the Project or the Project circumstances have occurred since the certification of the 2004 Expansion Project EIR and, therefore, the impact was adequately addressed in that document and not further evaluated.

Project Impacts

Impact 4.2-1 The proposed Project would not conflict with or obstruct implementation of the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan.

The 2004 Expansion Project EIR evaluated consistency with applicable state and local plans under Impact 4.4-5 on page 4.4-17. The 2004 Expansion Project was determined consistent with existing plans and the impact was deemed less than significant.

As previously discussed, the Medical Center Campus is under the jurisdiction of the PCAPCD within the SVAB. The SVAB is designated nonattainment for both federal and state ozone standards. Accordingly, the PCAPCD, along with other local air districts in the SVAB, is required to comply with and implement the SIP to demonstrate when and how the region can attain the federal O3 standards. As such, the PCAPCD, along with the other air districts in the region, prepared the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. The Ozone Attainment Plan addresses attainment of the federal 8-hour O3 standard, while the 2015 Triennial Report and Air Quality Plan Revision address attainment of the California 1-hour and 8-hour O3 standards (SMAQMD 2016). These are the latest plans adopted by the PCAPCD in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties, and they incorporate land use assumptions and travel demand modeling provided by the Sacramento Area Council of Governments. The purpose of a consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and state air quality standards. In general, projects are considered consistent with, and would not conflict with or obstruct implementation of the air quality plan if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the air quality management plan.

Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) were developed by the Sacramento Area Council of Governments for its 2016 MTP/SCS (SACOG 2016) based on general plans for cities and counties in the SVAB. The air quality management plans rely on the land use and population projections provided in the 2016 MTP/SCS, which is generally consistent with the local plans; therefore, the air quality management plans are generally consistent with local government plans.

As discussed in Section 4.4, Land Use and Planning, the project site is designated Business Professional (BP) on the City's General Plan Figure II-2, Land Use Map (last updated December 2021) and also in the Northeast Roseville Specific Plan. Uses allowed under this land use designation include business park and professional office, medical campus, and research and development. Per the Compatibility Matrix in the General Plan, the Business Professional (BP) designation is compatible or conditionally compatible with all adjacent land use designations. Because development of the proposed Project would include development of a new Inpatient Tower, parking garage, expansion of the Emergency Department, and emergency generator yard, the proposed Project would not conflict with the existing zoning and land use designations for the site. Additionally, the proposed Project would not induce population growth to the area. Per CEQA Guideline Section 15206(b), the proposed Project would not be considered regionally significant because it would not have the potential to substantially affect housing, employment, or population projections within the Sacramento region, which are the basis of the air quality management plan. As such, the proposed Project would be consistent with projections of the Sacramento Area Council of Governments and impacts relating to the proposed Project's potential to conflict with or obstruct implementation of the applicable air quality management plan would be **less than significant.**

Mitigation Measures

No mitigation measures would be required.

Impact 4.2-2 The proposed Project would not result in a cumulatively considerable increase of any criteria pollutant for which the project region is in non-attainment.

The 2004 addressed construction impacts under Impact 4.4-1 on page 4.1-8. The analysis concludes even with mitigation projected emissions of NO_x would exceed the thresholds in place at the time resulting in a significant and unavoidable impact. The Project's operational air quality impacts were addressed under Impact 4.4-2. The analysis determined the Project's increase in ROG and PM_{10} associated with vehicle trips would result in a significant and unavoidable impact. Since 2004, the efficiency of the vehicle fleet has increased eliminating the significant impacts associated with ROG and PM_{10} emissions. Notably, equipment and vehicle emission factors are less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Construction Emissions

Construction of the proposed Project would generate construction-related air pollutant emissions from entrained dust, equipment and vehicle exhaust emissions, asphalt pavement, and architectural coatings. Exhaust from internal combustion engines used by construction equipment, vendor trucks (delivery trucks), haul trucks, and worker vehicles would result in emissions of ROG, NO_x, and PM_{10}. Construction of the proposed Project would also generate CO, SO_x and $PM_{2.5}$ emissions; however, only the criteria air pollutants that the PCAPCD have adopted thresholds for are presented in Table 4.2-2, though all criteria air pollutant emissions are included in Appendix G of the CEQA Guidelines. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. To account for compliance with PCAPCD Rule 228 (fugitive dust), it was assumed that the active sites would be watered at least twice daily, or as necessary depending on weather conditions. The application of architectural coatings, such as exterior/interior paint and other finishes, would also produce VOC (ROG) emissions. The proposed Project would comply with the requirements of PCAPCD Rule 218 (Architectural Coatings), which sets a cap for the VOC content in paint of 100 grams of VOC per liter of coating for non-flat coatings.

Predicted construction emissions for the worst-case day for each of the construction years are presented in Table 4.2-6 and are compared to the PCAPCD significance thresholds.

Table 4.2-6. Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
2023	9.18	91.43	26.50
2024	4.96	42.37	7.55
2025	9.36	20.48	3.52
2026	9.32	20.41	3.52
2027	1.70	13.83	2.75
Maximum Daily	**9.36**	**91.43**	**26.50**
PCAPCD threshold	*82*	*82*	*82*
Threshold exceeded?	**No**	**Yes**	**No**

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Source: Appendix C.

As shown in Table 4.2-6, daily unmitigated construction emissions associated with the proposed Project exceed the PCAPCD thresholds for NO_x. As such, construction of the proposed Project would result in a **potentially significant impact**.

In order to mitigate for this potential impact, development of the proposed Project would be required to implement Mitigation Measure 4.4-1a from the 2004 Expansion Project EIR (re-numbered as Mitigation Measure 4.2-2(a), below). This would ensure that the proposed Project would reduce NO_x emissions generated during construction, requiring the use of lower emitting construction equipment. Table 4.2-7 shows the proposed Project's construction emissions after implementation of Mitigation Measure 4.2-2(a). For additional construction details assumptions, see Appendix C of this Draft SEIR.

Table 4.2-7. Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
2023	3.05	15.58	20.23
2024	2.52	14.62	3.91
2025	8.08	9.50	2.89
2026	8.04	8.43	2.89
2027	0.85	5.76	2.33
Maximum Daily	**8.08**	**15.58**	**20.23**
PCAPCD threshold	*82*	*82*	*82*
Threshold exceeded?	**No**	**No**	**No**

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Source: Appendix C.

As shown in Table 4.2-7, with implementation of Mitigation Measure 4.2-2(a), the daily mitigated construction emissions associated with the proposed Project would not exceed the PCAPCD thresholds for any criteria air pollutant.

Operational Emissions

Operation of the proposed Project would produce ROG, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from area sources, including natural gas combustion, use of consumer products, and motor vehicle trips to project land uses. However, the PCAPCD only has significance thresholds for ROG, NO_x, and PM_{10}. The proposed Project would primarily impact air quality through vehicular traffic generated by employees and visitors. The estimation of proposed operational emissions was based on proposed land use defaults and total area (i.e., square footage) of buildings that would be in operation by 2027. The Project is designed to meet Leadership in Energy and Environmental Design (LEED) Gold requirements, would be constructed in compliance with current CALGreen building codes, and would also include a variety of sustainability measures listed in Chapter 2, Project Description. Specifically, the proposed Project would include a "Solar Ready" approach to the new buildings to easily integrate solar photovoltaics at a later date; alternative transportation, including preferred parking spaces for high-efficient and low-emitting vehicles, and charging stations for electric vehicles; and preferred parking for high-occupancy vehicles (two or more people).

Table 4.2-8 presents the maximum daily emissions associated with operation of the proposed Project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix C.

Table 4.2-8. Maximum Daily Operational Criteria Air Pollutant Emissions

Year	ROG	NO_x	PM_{10}
	Pounds per Day		
Area Sources	6.81	<0.01	<0.01
Energy	0.69	6.26	0.48
Motor Vehicles	9.88	11.94	17.67
Emergency Generators	8.80	39.37	1.29
Total Project Emissions	**26.19**	**57.57**	**19.45**
PCAPCD threshold	*55*	*55*	*82*
Threshold exceeded?	**No**	**Yes**	**No**

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; PCAPCD = Placer County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Source: Appendix C.

As shown in Table 4.2-8, daily unmitigated operational emissions associated with the proposed Project exceed the PCAPCD thresholds for NO_x. As such, operation of the proposed Project would result in a **potentially significant impact**. In order to mitigate for this potential impact, development of the proposed Project would be required to implement Mitigation Measures 4.4-2, 4.4-4 and 4.4-5 from the 2004 Expansion Project EIR (re-numbered as Mitigation Measures 4.2-2(b) through 4.2-2(d), below). Mitigation Measure 4.2-2(b) would require the Project applicant to contribute an air quality fee to offset long-term operational ozone (ROG and NO_x) precursor emissions. In addition, Mitigation Measure 4.2-2(c) would require all flat roofs incorporate building materials that reduce energy demand, and Mitigation Measure 4.2-2(d) would require power outlets at all loading docks and the prohibition of diesel truck idling for more than five minutes.

Mitigation Measures

The following mitigation measures, which are based on the 2004 Expansion Project EIR mitigation measures, would still be applicable during Project construction and operation. In some instances, the mitigation measure is updated to reflect current requirements or editorial clarifications to the text. These changes are shown in strike through and underline text. Since the approval of the 2004 Expansion Project EIR, the use of fuel-efficient vehicles and EVs has been promoted and encouraged by the State of California and the City. The Project proposes provide 20 EV charging stations and 107 EV capable stalls on-site. Therefore, Mitigation Measure 4.4-3 from the 2004 Expansion Project EIR, which required two EV charging stations be incorporated into the site plans, would no longer be applicable and was removed as mitigation and the mitigation measures below were renumbered accordingly.

The total tons of NO_x that would need to be offset through off-site mitigation would be 2.57 pounds per day, which equates to 0.2313 tons of NOx per year. An estimate of potential minimum offset fees is as follows:

- 0.2313 tons of NO_x * $20,873/ton = $4,828
- Calculated over 10 years = $4,828 * 10 = $48,280
- Total estimated NO_x offset fees = $48,280

Based on the most recent information provided by the PCAPCD, the Project applicant would need to pay a one-time fee of $48,280 into the off-site mitigation program in order to offset the excessive ozone precursor emissions from Project operations (see Mitigation Measure 4.2-2).

With implementation of Mitigation Measure 4.2-2(a), the daily mitigated construction emissions associated with the proposed Project would not exceed the PCAPCD thresholds for any criteria air pollutant, as shown in Table 4.2-7. As such, construction impacts would be reduced to less than significant. With implementation of Mitigation Measures 4.2-2(b) through 4.2-2(d), operational emissions associated with the proposed Project would not exceed the PCAPCD thresholds for any criteria air pollutant. Therefore, air pollutants associated with operation of the proposed Project would be reduced to less than significant.

4.2-2(a) Prepare a Construction Emission/Dust Control Plan

a. Thirty days prior to the start of construction, the Placer County Air Pollution Control District (PCAPCD) requires, at a minimum, preparation of a Construction Emission/Dust Control Plan (CEDCP) and submittal of the CEDCP to the PCAPCD for review and approval. The CEDCP shall identify mitigation measures to reduce the level of construction-related <u>emissions below the PCAPCD threshold of 82 pounds per day</u> in accordance with the standards of the PCAPCD. ~~Mitigation measures could include some or all of the following to reduce emissions to less-than-significant levels (below the PCAPCD threshold of 82 pounds per day):~~ Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations.

b. The prime contractor shall submit to the District a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty offroad equipment, the project

representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

c. ~~An enforcement plan shall be established to evaluate project related on- and off-road heavy-duty vehicle engine emission opacities weekly, using standards as defined in California Code of Regulations, Title 13, Sections 2180 - 2194. An Environmental Coordinator, 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 and the equipment must be repaired within 72 hours.~~ An Independent Environmental Coordinator or Placer County Air Pollution Control District staff, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project-related off-road and heavy-duty on-road equipment emissions during construction for compliance with engine emission opacities, using standards as defined in the California Code of Regulations, Title 13, Sections 2180-2194. Operators of vehicles and equipment found to exceed opacity limits shall be notified and the equipment must be removed from service and repaired prior to being placed back in service. Equipment owners and operators found to be operating equipment that is out of compliance shall be subject to a notice of violation and monetary fines.

d. The project shall provide a plan for approval by the PCAPCD demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. 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

e. There shall be no open burning of removed vegetation during infrastructure improvements. Vegetative material should be chipped or delivered to waste-to-energy facilities.

f. Minimize idling time to 10 minutes.

g. Earth-moving construction equipment shall be cleaned with water once per day.

h. Soil binders shall be spread on unpaved roads and employee/equipment parking areas.

i. Approved chemical soil stabilizers shall be applied according to manufacturer's specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours).

j. Use existing line power sources located on the site or clean fuel generators rather than temporary power generators, except during the first four weeks of construction of the first structure, when temporary generators may be used if line power sources are not feasible.

k. All grading operations shall be suspended when wind speeds (as instantaneous gusts) exceed 25 miles per hour (as measured by an on-site anemometer) and dust is impacting adjacent properties.

l. All truck and equipment wheels shall be washed prior to leaving the site.

m. An operational water truck shall be on site at all times. Apply water to control dust at least twice daily (morning and evening), and as needed to prevent dust impacts off site.

n. Streets shall be washed or wet-broomed if silt is carried over to adjacent public thoroughfares.

o. Traffic speeds on all unpaved surfaces shall be 15 miles per hour or less.

In addition to the above measures, the project applicant shall consider any of the following measures to further reduce construction-related exhaust emissions:

p. Employ construction activity management techniques, such as extending the construction period outside the ozone season of May through October; reducing the number of pieces used simultaneously; increasing the distance between emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours.
q. Construction contracts shall include language that prohibits the use of pre-1996 off-road heavy-duty construction equipment on declared Spare The Air Days and prohibits the use of all heavy duty diesel equipment on days forecast to exceed the federal one-hour standard.
r. Use low-sulfur fuel for stationary construction equipment.
s. The applicant shall include in contract language that earth-moving contractors shall not operate pre-1996 heavy-duty diesel equipment on forecast Spare The Air Days.
t. Use low-emission stationary equipment on site.
u. Provide a flag person to guide traffic properly and ensure safety at construction sites.
v. Schedule operations affecting traffic for off-peak hours.
w. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.
x. Minimize obstruction of through-traffic lanes.
y. Develop trip reduction plan to achieve 1.5 AVR (average vehicle ridership) for construction employees

In addition to the above PCAPCD measures, the following dust control measures would be required under the grading permit by the Roseville Grading Ordinance:

aa. Cover all haul trucks or maintain at least two feet of freeboard.
bb. Sweep all paved access roads, parking areas, or staging areas on a daily basis at construction sites, particularly where silt has carried over to adjacent public thoroughfares.
cc. Cover, watering twice daily, or apply (non-toxic) soil binders to any exposed stockpiles (dirt, sand, etc.), particularly over weekends if stockpiles are located in proximity to the existing hospital.
dd. If landscaping is not planted immediately in areas where construction has been completed, hydroseed undeveloped areas. Appropriate application of such materials (appropriate seed mixture used in hydroseeding) shall be reviewed and approved by a qualified biologist.

4.2-2(b) Contribute Air Quality Fees to offset long-term operational ozone precursor emissions.

The landowner shall contribute ~~fifty-six thousand dollars ($56,000)~~ $48,279 to the City to offset long-term operational ozone precursors emissions (the "Air Quality Fee"). The City and PCAPCD shall enter into an agreement for the collection and disbursement of the Air Quality fee for off-site air quality mitigation. The Air Quality Fee is to be used for projects, programs and services that result in reduced emission sources that directly benefit City residents. Such projects, programs and services may include, but are not limited to, replacing non-EPA certified wood stoves, transit vehicle conversions, and retrofitting vehicles with cleaner burning fuels.

4.2-2(c) All flat roofs shall be made of material(s) that reduce energy demand.

4.2-2(d) Provide power outlet at loading docks and prohibit diesel truck idling for more than five minutes.

All truck loading and unloading docks shall be equipped with one 110/208 volt power outlet for every two dock doors Diesel trucks shall be prohibited from idling more than five minutes and must be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage shall be provided.

Impact 4.2-3 The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.

The 2004 Expansion Project EIR did not evaluate impacts associated with TACs or DPM, both of which are analyzed below.

Health Impacts of Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be DPM emissions from heavy equipment operations and heavy-duty trucks during construction of the Project and the associated potential health impacts to sensitive receptors. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts; however, no short-term, acute relative exposure level has been established for DPM. Total construction activities would last approximately 4 years, after which Project-related TAC emissions would cease. According to the Office of Environmental Health Hazard Assessment, health risk assessments (which determine the exposure of sensitive receptors to toxic emissions) should be based on a 30-year exposure period for the maximally exposed individual receptor; however, such assessments should also be limited to the period/duration of activities associated with the Project. A 4-year construction schedule represents a short duration of exposure (14% of a 30-year exposure period) while cancer and chronic risk from DPM are typically associated with long-term exposure. Thus, the proposed Project would not result in a long-term source of TAC emissions.

Exhaust PM_{10} is typically used as a surrogate for DPM, as shown in Table 4.2-5, which presents total PM_{10} from fugitive dust and exhaust, Project-generated construction PM_{10} emissions are anticipated to be minimal. Offsite sensitive receptors including single-family residences and multi-family residential uses, which are located approximately 1,040 feet to the south and approximately 1,140 feet to the northeast of the Project site, would have a reduced exposure to TACs as TAC emissions dispersion increases with distance. In addition to the existing offsite sensitive receptors, the hospital within the Medical Center Campus would be considered a sensitive receptor, as well; however, as previously discussed, due to this relatively short period of exposure (14% of a 30-year exposure period) and minimal DPM emissions on site, TACs generated during construction would not be expected to result in concentrations that could cause significant health risks. Therefore, TAC-related impacts from construction of the proposed Project would be **less than significant**.

Land uses that are more likely to generate substantial TAC emissions include industrial land uses that involve stationary sources and manufacturing processes, some commercial land uses such as dry-cleaning establishments and gasoline dispensing facilities, as well as any land uses with diesel-fueled backup generators. Such stationary sources and any others that may emit TACs would be subject to PCAPCD Rules and Regulations. Non-stationary sources of TACs also include portable engines, cargo handling equipment, transportation refrigeration units, and idling by commercial vehicles and large haul trucks. The proposed Project would include two 2-megawatt emergency

generators which would be subject to PCAPCD rules and regulations, including but not limited to Rule 501, General Permit Requirements and Rule 502, New Source Review. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source review standards and air toxics control measures. PCAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Due to the distance of potential operational sources of TACs is greater than 1,000 feet from the closest sensitive receptors, long-term Project operational activities would not expose sensitive receptors to substantial TAC concentrations and impacts associated with operational TACs would be **less than significant**.

Local Carbon Monoxide Concentrations

The 2004 Expansion Project EIR addressed impacts associated with CO emissions effects on local air quality under Impact 4.4-3 on page 4.4-11. The analysis concludes that the Project resulted in a less-than-significant impact on all intersections projected to operate at level of service (LOS) of "E" or "F" under both existing and future conditions. Furthermore, the 2004 Expansion Project EIR determined that implementation of the Project would not result in the exceedance of the 1-hour and 8-hour state and federal CO AAQS.

Mobile source impacts occur on two scales of motion. Regionally, project-related travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SVAB. Locally, Project generated traffic would be added to the City's roadway system near the project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds and is operating on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SVAB is steadily decreasing.

The PCAPCD recommends using the following screening criteria to determine whether the evaluation of local CO emission impact should be conducted (PCAPCD 2017a).

> When a project's CO emissions from vehicle operation are more than 550 pounds/day and if either of the following scenarios is true for any intersection affected by the project traffic, the project should conduct a site-specific CO dispersion modeling analysis to evaluate the potential local CO emission impact at roadway intersections:
>
> - A traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or
> - A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where a delay would increase by 10 seconds or more when project-generated traffic is included.

The proposed Project would comply with the PCAPCD screening criteria, as described in the Expansion Traffic Analysis memorandum prepared for the City to assess the Project's increase in traffic on area roadways, which is no longer required to be evaluated in a CEQA document. Accordingly, Project-related traffic would not exceed CO

standards and therefore, no further analysis was conducted for CO impacts. Thus, the CO emissions impact would be considered **less than significant** on a project-level and cumulative basis.

Cumulative Impacts

The 2004 Expansion Project EIR evaluated the cumulative effects of project operation under Impact 4.4-6 on page 4.4-17. The analysis concluded that cumulative impacts would be significant and unavoidable due to emissions of NO_x and PM_{10} exceeding the PCAPCD significance thresholds during construction, while impacts associated with long-term effects are now addressed under cumulative. The cumulative context of an air pollutant is dependent on the specific pollutant being considered. O_3 precursors are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire SVAB. This means that O_3 precursors generated in one location do not necessarily have O_3 impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the SVAB. Consequently, all O_3 precursors generated throughout the SVAB are part of the cumulative context.

The geographic scope for the Project's cumulative analysis includes the City and surrounding areas within the SVAB for O_3. The SVAB includes Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, and portions of Solano and Placer counties. The SVAB extends from south of Sacramento to north of Redding and is bounded on the west by the Coast Ranges and on the north and east by the Cascade Range and the Sierra Nevada.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be considered speculative and is not further evaluated.[4]

Impact 4.2-4 The proposed Project could result in a cumulative impact related to air quality.

Criteria air pollutant emissions associated with construction activity of the proposed Project would be reduced through implementation of control measures required by the PCAPCD. Cumulative PM_{10} emissions would be reduced because all future projects would be subject to PCAPCD Rule 228 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the PCAPCD. In addition, ROG emissions would be subject to PCAPCD 217 (Cutback and Emulsified Asphalt Paving Materials) and Rule 218 (Architectural Coatings). However, as presented in Tables 4.2-6 and 4.2-8, the proposed Project would result in the exceedance of the NO_x construction and operational PCAPCD significance thresholds, as a result, the proposed Project could potentially result in a cumulatively considerable contribution to regional O_3 concentrations or other criteria pollutant emissions.

The analysis for local CO hotspot impacts under Impact 4.2-3 is a qualitative assessment that demonstrated a less-than-significant impact is inherently a cumulative analysis, and the cumulative impact would be less than significant. Because of the distance to the closest sensitive receptors (greater than 1,000 feet) to the project site, the proposed Project would not result in short- or long-term health risk impacts in the project area.

Based on the prior considerations, the proposed Project's contribution to the cumulative impact would be **potentially significant**.

[4] The state CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided in an effort to show good-faith analysis and comply with CEQA's information disclosure requirements.

Mitigation Measures

Implementation of Mitigation Measures 4.2-2(a) through 4.2-2(d) would reduce cumulative air quality operational impacts primarily associated with NO_x emissions to a level a level of less than significant.

4.2.5 References

13 CCR 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets.14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.

CAPCOA. 2021. California Emissions Estimator Model (CalEEMod) User's Guide Version 2020.4.0 Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. May 2021. Accessed May 2021. http://www.caleemod.com.

CARB (California Air Resources Board). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October 2000. Accessed May 2019. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April 2005. Accessed August 2016. http://www.arb.ca.gov/ch/landuse.htm.

CARB. 2009. Fact Sheet: Air Pollution Sources, Effects and Control.

CARB. 2016a. "Ambient Air Quality Standards." May 4, 2016. Accessed December 2021. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. 2016b. 2016 Mobile Source Strategy. May 2016. Accessed November 2021. https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf.

CARB. 2019a. "Glossary of Air Pollution Terms." CARB website. Accessed June 2019. http://www.arb.ca.gov/html/gloss.htm.

CARB. 2019b. "Ozone & Health." Accessed December 2021. https://ww2.arb.ca.gov/resources/ozone-and-health.

CARB. 2019c. "Nitrogen Dioxide & Health." https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health.

CARB. 2019d. "Carbon Monoxide & Health." https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health.

CARB. 2019e. “Sulfur Dioxide & Health.” https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health.

CARB. 2019f. “Overview: Diesel Exhaust and Health.” Overview: Diesel Exhaust & Health, California Air Resources Board.

CARB. 2020. “Area Designation Maps/State and National.” Last updated October 2020. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

CARB. 2021a. “iADAM: Air Quality Data Statistics.” Accessed April 2022. http://www.arb.ca.gov/adam/topfour/topfour1.php.

CARB. 2021b. Advanced Clean Trucks Fact Sheet. August 20, 2021. Accessed November 2021. https://ww2.arb.ca.gov/sites/default/files/2021-08/200625factsheet_ADA.pdf.

CARB. 2021c. 2020 Mobile Source Strategy. September 2021. Accessed November 2021. https://ww2.arb.ca.gov/sites/default/files/2021-09/Proposed_2020_Mobile_Source_Strategy.pdf.

CARB. 2022. “Inhalable Particulate Matter and Health (PM2.5 and PM10).”https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health

City of Roseville. 2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

Eckerle and Jones. 2015. 2015 Hydrogen Station Permitting Guidebook. Accessed 2022. https://static.business.ca.gov/wp-content/uploads/2019/12/GO-Biz_Hydrogen-Station-Permitting-Guidebook_Sept-2020.pdf

EPA (U.S. Environmental Protection Agency). 2013. Integrated Science Assessment of Ozone and Related Photochemical Oxidants. U.S. EPA, EPA/600R-10/076F, 2013.

EPA. 2016b. Integrated Science Assessment for Oxides of Nitrogen-Health Criteria (2016 Final Report). U.S. EPA, EPA/600/R-15/068, 2016.

EPA. 2020. “EPA Region 9 Air Quality Maps and Geographic Information.” Last updated November 11, 2020. Accessed April 2022. https://www3.epa.gov/region9/air/maps/.

EPA. 2021a. “Criteria Air Pollutants.” August 16, 2021. Accessed January 2022. https://www.epa.gov/criteria-air-pollutants.

EPA. 2021b. “AirData: Access to Air Pollution Data.” Last updated November 17, 2020. Accessed April 2022. http://www.epa.gov/airdata/ad_rep_mon.html.

NRC (National Research Council). 2005. Interim Report of the Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants. Washington, DC: The National Academies Press. https://doi.org/10.17226/11208.

PCAPCD (Placer County Air Pollution Control District). 2017a. CEQA Air Quality Handbook. August 2017.

PCAPCD. 2017b. Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Draft 2017 SIP Revisions). July 24, 2017.

SACOG (Sacramento Area Council of Governments). 2016. Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2036. Adopted February 18, 2016.

SMAQMD (Sacramento Metropolitan Air Quality Management District). 2016. 2015 Triennial Progress Report. Accessed April 2022. http://www.airquality.org/ProgramCoordination/Documents/11)%20%202015TriennialReportandProgressRevision.pdf.

WRCC (Western Region Climate Center). 2016. Period of Record Monthly Climate Summary for Auburn, California. Accessed April 2022. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0383.

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4.3 Greenhouse Gas Emissions

4.3.1 Introduction

This section describes the environmental setting related to climate change and greenhouse gas (GHG) emissions of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

In response to the Notice of Preparation a letter was received from the Placer County Air Pollution Control District (PCAPCD) which included recommendations that the proposed Project's air quality and GHG emissions be evaluated using the PCAPCD's significance criteria. The PCAPCD recommended using the 2017 CEQA Air Quality Handbook. which provides recommended analytical approaches and feasible mitigation measures when preparing air quality and GHG analyses for land use projects. The analysis of the Project's GHG emissions uses the guidance provided in PCAPCD's 2017 CEQA Air Quality Handbook and also PCAPCD's significance criteria. A copy of the Notice of Preparation and letters received is included in Appendix A.

Information contained in this section is based on the latest version of California Emissions Estimator Model (CalEEMod), Version 2020.4.0, to estimate the proposed Project's GHG emissions from construction and operations. The CalEEMod 2020 Model is currently in the process of being updated; however, as of the release of this Draft Supplemental Environmental Impact Report (SEIR), the 2022 Model is not available. Sources reviewed to prepare this section includes information from the Transportation and Circulation analysis contained in Section 4.6, and the 2017 PCAPCD CEQA Air Quality Handbook. Model assumptions and output data is included in Appendix C.

4.3.2 Environmental Setting

The California Environmental Quality Act (CEQA) Guidelines were updated in 2009 to include GHG emissions. The 2004 Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH No. 2003062014 – 2004 Expansion Project EIR) predates the requirement under CEQA to evaluate GHG emissions. Therefore, the analysis in this section does not rely on information contained in the 2004 Expansion Project EIR.

Climate Change Overview

Climate change refers to any significant change in measures of climate—such as temperature, precipitation, or wind patterns—lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017).

The greenhouse effect is the trapping and buildup of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a three-part process as follows: (1) short-wave radiation emitted by the Sun is absorbed by the Earth, (2) the Earth emits a portion of this energy in the form of long-wave radiation, and (3) GHGs in the upper atmosphere absorb this long-wave radiation and emit it both into space and back toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional

GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. However, recent climate changes, in particular the warming observed over the past century, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of warming since the mid-twentieth century and are the most significant driver of observed climate change (IPCC 2013; EPA 2017). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). (See also CEQA Guidelines, Section 15364.5.) Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[1]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure

[1] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Terms Used in GHG Inventories" (2021a), and EPA's "Glossary of Climate Change Terms" (2017).

management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (e.g., rockets, racecars, and aerosol sprays).

- **Fluorinated Gases.** Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:
- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric ozone (O_3).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e).

The current version of CalEEMod (Version 2020.4.0) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project. As noted above, the updated version of the CalEEMOD has not yet been released; therefore, the 2020 version of the model was used for the analysis.

Greenhouse Gas Inventories and Climate Change Conditions

Global Inventory

Anthropogenic (human-caused) GHG emissions worldwide in 2019 (the most recent year for which data is available) totaled approximately 38,020 million metric tons (MMT) CO_2e, excluding land use change and forestry (PBL 2020). Six countries (China, the United States, the Russian Federation, India, Japan, and Brazil) and the European Union accounted for approximately 68% of the total global emissions, or approximately 26,010 MMT CO_2e (PBL 2020). Table 4.3-1 presents the top GHG-emissions-producing countries.

Table 4.3-1. Six Top Greenhouse-Gas-Producing Countries and the European Union

Emitting Countries (Listed in Order of Emissions)	Greenhouse Gas Emissions (MMT CO_2e)[b]
China	11,580
United States	5,110
European Union	3,300
India	2,600
Russian Federation	1,790
Japan	1,150
Brazil	480
Total[a]	**26,010**

Source: PBL 2020.
Notes: MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Total may not sum precisely due to rounding.
[b] GHG emissions do not include land use change and forestry-related GHG emissions.

National and State Inventories

According to the 2021 U.S. Environmental Protection Agency Inventory of U.S. GHG Emissions and Sinks: 1990–2019, total U.S. GHG emissions were approximately 6,558 MMT CO_2e in 2019 (EPA 2021). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 80.1% of total GHG emissions (5,256 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 74.1% of CO_2 emissions in 2019 (4,857 MMT CO_2e). Relative to the 1990 emissions level, gross U.S. GHG emissions in 2019 were 1.8% higher; however, the gross emissions were down from a high of 15.6% above the 1990 level that occurred in 2007. GHG emissions decreased from 2018 to 2019 by 1.7% (113 MMT CO_2e) and, overall, net emissions in 2019 were 13% below 2005 levels (EPA 2021).

According to California's 2000–2019 GHG emissions inventory (2021 edition), California emitted 418 MMT CO_2e in 2019, including emissions resulting from out-of-state electrical generation (CARB 2021b). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high-GWP substances, and recycling and waste. Table 4.3-2 presents California GHG emission source categories (as defined in CARB's 2008 Scoping Plan) and their relative contributions to the emissions inventory in 2019.

Table 4.3-2. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total
Transportation	166.14	40
Industrial uses	88.18	21
Electricity generation	58.83	14
Residential and commercial uses	43.81	10
Agriculture	31.75	8
High-GWP substances	20.58	5
Recycling and waste	8.85	2
Total[a]	**418.14**	**100**

Source: CARB 2021b.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent; GWP = global warming potential.

Emissions reflect 2019 California GHG inventory.
[a] Totals may not sum precisely due to rounding.

Between 2000 and 2019, per capita GHG emissions in California dropped from a peak of 14.0 MT per person in 2001 to 10.5 MT per person in 2019, representing a 25% decrease. Overall trends in the inventory also continue to demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) is declining (CARB 2021b). The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California achieved the 2020 target of 431 MMT CO_2e.

City of Roseville Inventory

Table 4.3-3 presents the City's 2008 baseline GHG emissions and the percent contribution of each emissions source (energy, transportation, wastewater and water use. and solid waste).

Table 4.3-3. City of Roseville Baseline Greenhouse Gas Emissions Inventory (2008)

Emissions Source	Annual GHG Emissions (MT CO_2e/year)	Percent of Total
Residential Energy Use	156,267	13%
Commercial/Industrial Energy Use	292,730	24%
Residential Natural Gas Use	102,996	9%
Commercial/Industrial Natural Gas Use	53,827	4%
On-Road Mobile Sources	530,088	44%
Solid Waste	13,110	1%
Wastewater Treatment	39,068	3%
Water Use	14,298	1%
Total[a]	**1,202,383**	**100%**

Source: City of Roseville 2010.
Notes: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent per year.
[a] Totals may not sum precisely due to rounding.

As shown in Table 4.3-3, the primary generators of GHGs within the City were attributed to transportation, accounting for 44% and commercial/industrial energy use, accounting for 24% of the City's GHG emissions in 2008 (the latest information available), respectively.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 Intergovernmental Panel on Climate Change Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting

the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87°C, or likely between 33.35°F and 33.78°C, higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting the state. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring within the state and is having significant, measurable impacts. Changes in the state's climate have been observed including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—on which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life-cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency has released four California Climate Change Assessments (2006, 2009, 2012, and 2018b), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (2018) includes reports for nine regions of the state, including the Sacramento Valley Region, where the proposed Project is located. Key projected climate changes for the Sacramento Valley Region include the following (CNRA 2018a):

- Continued future warming over Sacramento Valley Region. Across the region, average maximum temperatures are projected to increase around 2.7°F to 10.8°F by the late century.

- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 7.2°F warmer for many locations across the Sacramento Valley Region by the late century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Tule fog in the Sacramento Valley during California's winter season has important implications for crops and ecosystems. Reductions in Tule fog have been observed in recent years because conditions have been either too wet or too dry for fog to form.
- The Sacramento Valley Region will continue to exhibit high year-to-year variability—"booms and busts"—with very wet and very dry years. The Sacramento Valley Region's largest winter storms will likely become more intense, and potentially more damaging, in the coming decades. Wet winters and drier summers are likely to increase summer and fall wildfire activity.
- Future increases in temperature, regardless of whether total precipitation goes up or down, will likely cause longer and deeper California droughts, posing major problems for water supplies, natural ecosystems, and agriculture.

4.3.3 Regulatory Setting

This section presents a description of the laws, regulations, and plans relevant to GHGs, which may be applicable to the proposed Project. Please see Appendix C for additional regulations.

Federal

Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the U.S. Environmental Protection Agency (EPA) administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Federal Vehicle Standards

In 2007, in response to the *Massachusetts v. EPA* U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG

emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200), and NHTSA intends to set standards for model years 2022 through 2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23% over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018 (during the administration of President Trump), the EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards then in place, the 2018 proposal increased U.S. fuel consumption by approximately half a million barrels per day (2–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1°C by 2100 (EPA and NHTSA 2018).

In September 2019, the EPA and NHTSA published the final Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program ([SAFE I] 84 FR 51310), which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. The EPA and NHTSA subsequently issued the Part Two Rule in March 2020, which set less aggressive CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026.

On January 20, 2021, President Joe Biden issued an EO on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which called for review of Part One Rule by April 2021 and review of the Part Two Rule by July 2021 (The White House 2021). After reviewing the public comments submitted on the NHTSA's April 2021 Notice of Proposed Rulemaking, the NHTSA concluded that SAFE I overstepped the Agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that SAFE I will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges (NHTSA 2021).

EO 14057

President Joe Biden signed EO 14057 on December 8, 2021, which sets a path for reducing GHG emissions across federal operations, invest in clean energy industries and manufacturing, and create clean, healthy, and resilient communities to achieve carbon neutrality by 2050. The EO outlines five goals:

- 100% carbon pollution-free electricity by 2030, at least half of which will be locally supplied clean energy to meet 24/7 demand;
- 100% zero-emission vehicle acquisitions by 2035, including 100% zero-emission light-duty vehicle acquisitions by 2027;
- Net-zero emissions from federal procurement no later than 2050, including a Buy Clean policy to promote use of construction materials with lower embodied emissions;
- A net-zero emissions building portfolio by 2045, including a 50% emissions reduction by 2032; and
- Net-zero emissions from overall federal operations by 2050, including a 65% emissions reduction by 2030.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued reports from 2006 to 2010 (CAT 2006, 2010).

Assembly Bill 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted Assembly Bill (AB) 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32

provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the scoping plan to express the 2030 target in terms of million metric tons (MMT) CO_2e. EO B-30-15 also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill 32 and AB 197

Senate Bill (SB) 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the scoping plan.

CARB's 2007 Statewide Limit

In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e).

CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code, Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
2. Achieving a statewide renewable energy mix of 33%
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets

5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (17 CCR 95480 et seq.)
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012. The *First Update* concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The *First Update* recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including: energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level, using more recent global warming potentials identified by the IPCC, from 427 MMT CO_2e to 431 MMT CO_2e (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB's Governing Board adopted the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Under 2 Memorandum of Understanding (Under 2 2016) and the Paris Agreement, which are

developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through climate action plans) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project level review where there is a legally adequate Climate Action Plan.[2]

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent if it will further the objectives and not obstruct their attainment.

CARB presently is preparing the 2022 Scoping Plan Update, which will assess progress towards achievement of the state's 2030 reduction target and lay out a path for the state's achievement of carbon neutrality by 2045. CARB has held a number of public workshops to provide information on the plan update and solicit feedback from stakeholders. A draft plan has not yet been released for public review and comment.

EO B-55-18

EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This EO directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code [PRC], Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built

[2] *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490; *San Francisco Tomorrow et al. v. City and County of San Francisco* (2015) 229 Cal.App.4th 498; *San Franciscans Upholding the Downtown Specific Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656; *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 719.

to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018).

The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the California Building Standards Code in December 2021. The 2022 Energy Code will go into effect on January 1, 2023. The 2022 standards focus on four key areas in new construction: encouraging electric heat pump technology and use; establishing electric-ready requirements when natural gas is installed; expanding solar photovoltaic system and battery storage standards; and strengthening ventilation standards to improve indoor air quality.

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24), which is commonly referred to as CALGreen, establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2019 CALGreen standards are the current applicable standards. For nonresidential projects, which includes projects with both residential and nonresidential components, some of the key mandatory CALGreen 2019 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle (EV) charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR Part 11). The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of local agencies and applicants. Compliance with the CALGreen code is enforced through the building permit process.

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Renewable Energy and Energy Procurement

SB 350

SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the Renewable Portfolio Standard by establishing a goal of 50% of the total electricity sold to retail customers in California per year by

December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

SB 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Mobile Sources

CARB's Mobile Source Strategy

On May 16, 2016, CARB released the 2016 Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years. The actions contained in the 2016 Mobile Source Strategy will deliver broad environmental and public health benefits, as well as support much needed efforts to modernize and upgrade transportation infrastructure, enhance system-wide efficiency and mobility options, and promote clean economic growth in the mobile sector. The 2016 Mobile Source Strategy would also result in a 45% reduction in GHG emissions and a 50% reduction in the consumption of petroleum-based fuels (CARB 2016).

AB 1493

AB 1493 (2002) was enacted in response to the transportation sector accounting for more than half of California's CO_2 emissions at the time of its drafting (California Health and Safety Code Section 43018.5 and Section 42823 amendments). AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards were projected to result in a reduction of approximately 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of approximately 30%.

Heavy-Duty Diesel

The Heavy-Duty Truck and Bus Regulation that went into effect January 2012, requires diesel particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by

January 1, 2015. CARB adopted the proposed amendments to the Heavy-Duty Truck and Bus Regulation on December 31, 2014, to reduce diesel particulate matter, a major source of black carbon, and oxides of nitrogen emissions from heavy-duty diesel vehicles (13 CCR, Part 2025). The rule requires nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR, Part 2485).

EO S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 and 20% by 2030 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered.

SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise an SCS to achieve the GHG reduction target, the metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code, Section 65080(b)(2)(K), an SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In 2019, Sacramento Area Council of Governments (SACOG), the designated Metropolitan Planning Organization for the Sacramento region, adopted the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The 2020 MTP/SCS depicts a way for local agencies within the region to grow through 2050 in a manner consistent with the seven smart growth principles which are built on from the Sacramento Region Blueprint: (1) transportation choices, (2) mixed-use developments, (3) compact development, (4) housing choice and diversity, (5) use of existing assets, (6) quality design, and (7) natural resources conservation. The seven smart growth principles provide guidance for land use planners, which, when implemented, would ultimately result in an overall reduction in vehicle miles traveled (VMT), emissions of criteria pollutants, and GHG emissions.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars program (January 2012) is an emission-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025, cars will emit 75% less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The zero-emission vehicle program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of zero-emission vehicles and plug-in hybrid EVs in the 2018 to 2025 model years.

The Advanced Clean Cars II program is currently in development to establish the next set of low-emission vehicle and zero-emission vehicle requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021c). The main objectives of Advanced Clean Cars II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to zero-emission vehicles through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An Advanced Clean Cars II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, is anticipated to be presented to CARB for consideration in June 2022. In March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and zero-emission vehicle sales mandate (EPA 2022). This action concludes the agency's reconsideration of 2019's SAFE I by finding that the actions taken under the previous administration as a part of SAFE I were decided in error and are now entirely rescinded.

Advanced Clean Trucks Regulation

The Advanced Clean Trucks Regulation was also approved by CARB in 2020. The purpose of the Advanced Clean Trucks Regulation is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021d). The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

- Zero-emission truck sales: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b-3 truck sales, 75% of Class 4-8 straight truck sales, and 40% of truck tractor sales.
- Company and fleet reporting: Large employers including retailers, manufacturers, brokers and others will be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Water

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

EO B-37-16

Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The SWRCB and Department of Water Resources will develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Solid Waste

AB 939, AB 341, AB 1826, and AB 1383

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations and an evaluation of program effectiveness (CalRecycle 2015).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste

that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75% reduction by 2025. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20% of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019).

Local

Sacramento Region Blueprint

In 2007, SACOG, the designated Metropolitan Planning Organization for the Sacramento region, adopted the Preferred Blueprint Scenario for 2050 (Blueprint). Although not a binding regulatory document, the Blueprint depicts a way for local agencies within the region to grow through 2050 in a manner consistent with the seven smart growth principles: (1) transportation choices, (2) mixed-use developments, (3) compact development, (4) housing choice and diversity, (5) use of existing assets, (6) quality design, and (7) natural resources conservation. The seven smart growth principles provide guidance for land use planners, which, when implemented, would ultimately result in an overall reduction in VMT, emissions of criteria pollutants, and GHG emissions.

SACOG the Metropolitan Transportation Plan/Sustainable Communities Strategy

On November 18, 2019, SACOG adopted the latest update to the 2020 MTP/SCS (SACOG 2019). SACOG is the metropolitan planning organization for the Sacramento region, maintaining a regional transportation plan in coordination with each of the local 28 member cities and counties, including Placer County. SACOG plays a central role in transportation infrastructure planning for the region, while also serving as a forum for the study, planning and resolution of other planning issues facing the local member governments. Building on prior plans, including the Blueprint Growth Strategy and the 2008 MTP, the SCS accommodates future growth through a more compact land use pattern largely within the region's current development footprint, emphasizes operational improvements over new roadway capacity projects, and reflects other factors that have tended to reduce motor vehicle use. The SCS demonstrates that, if implemented, the region will achieve a 7% below 2005 per-capita GHG reduction in passenger vehicle emissions in 2020 and a 19% reduction in 2035. These reductions meet the GHG targets for SACOG. The 2020 MTP/SCS focused on refinement of and addressing implementation challenges to the previous (2016) plan.

City of Roseville Communitywide Sustainability Action Plan

The Roseville Communitywide Sustainability Action Plan (SAP) sets forth a comprehensive strategy to reduce GHG emissions, as well as to promote economic growth based on clean technology and sustainable practices (City of Roseville 2010). Although it was ultimately not adopted by the City of Roseville, the SAP was published, and includes important information about GHG emissions within the City, including a baseline 2006 GHG emissions inventory and an efficiency-based emissions target for the year 2020. While the 2035 General Plan includes goals and policies that guide the City's approach to addressing sustainability and climate change, the SAP serves as a more detailed strategy to implement the City's sustainability and climate change policies. The SAP includes GHG

emissions reduction targets of reducing emissions from the baseline level of 7.5 MT CO_2e per service population to 6.0 MT CO_2e per service population by 2020. The SAP also contains five sustainable action strategies, with specific measures under each designed to achieve the City's goals and targets. The actions include bike and pedestrian enhancements in the Transportation Strategy.

City of Roseville 2035 General Plan

The 2035 General Plan serves as a long-term policy guide for physical, economic, and environmental growth and was last updated in 2020. The City has 14 adopted Specific Plans located within the City limits, including the Northeast Roseville Specific Plan (NERSP). The NERSP is incorporated as a part of the General Plan and is referred to for specific requirements. Applicable policies from the City's General Plan are listed below.

Goal AQ1.3. Coordinate all forms of public transport to decrease VMT, while encouraging an increase in the commute vehicle occupancy rate.

Goal AQ1.4. Increase the capacity of the pedestrian, bicycle, and public transportation systems and promote vehicular transportation that uses less-polluting fuels, such as electricity.

Goal AQ1.5. Provide adequate pedestrian and bicycle facilities for present and future transportation needs.

Goal AQ1.7. Improve transit, bicycle, and pedestrian access to lessen dependence on automobile travel and reduce household transportation costs.

Goal AQ1.8. Reduce City GHG emissions, consistent with local, regional, and state goals.

Goal AQ1.9. Enhance Roseville's resilience to local impacts of climate change.

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

Policy AQ1.10. Improve overall health and sustainability of the community by reducing emissions of GHGs that contribute to climate change.

Policy AQ1.14. Encourage alternative modes of transportation, including pedestrian, bicycle, and transit use.

Policy AQ1.15. Promote and incentivize low-emissions vehicles and associated charging infrastructure, and pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.

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.

Northeast Roseville Specific Plan

The NERSP, last updated on April 21, 2004, does not include specific goals, policies, or implementation measures that are applicable to reducing GHG emissions or addressing climate change.

4.3.4 Impacts and Mitigation Measures

Methods of Analysis

Construction Emissions

Construction of the proposed Project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.2, Air Quality, are also applicable for the estimation of construction-related GHG emissions. As such, see Section 4.2 for a discussion of construction emissions calculation methodology and assumptions.

Operational Emissions

As with Air Quality, emissions from the operational phase of the proposed Project were estimated using CalEEMod Version 2020.4.0.. Operational year 2027 was assumed consistent with completion of project construction.

Area Sources

CalEEMod was used to estimate GHG emissions from the Project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 4.2, for a discussion of landscaping equipment emissions calculations.

Energy Sources

The estimation of operational energy emissions for the proposed Project was based on CalEEMod land use defaults and total area (i.e., square footage) of the project's land use.

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The current Title 24, Part 6 standards, referred to as the 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020. As such, the analysis herein assumes compliance with the 2019 Title 24 Standards. CalEEMod was used to estimate proposed Project emissions from electricity uses (see Appendix C for calculations). CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kilowatt-hour) for Pacific Gas & Electric Company (PG&E), which serves the City including the project site. As explained in Section 4.2.2, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020, and SB 100 calls for further development of renewable energy, with a target of 60% by 2030. The CO_2 emissions intensity factor for utility energy use was based on PG&E's default values in CalEEMod in which the delivered electricity had a GHG emissions intensity of 204 pounds of CO_2e per megawatt-hour.

Mobile Sources

All details for criteria air pollutants discussed in Section 4.2 are also applicable for the estimation of operational mobile source GHG emissions.

Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state.

In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel economy improvements was evaluated using the CalEEMod emission factors for motor vehicles in 2027 to the extent it was captured in EMFAC2017 model. The Project would also provide 20 EV charging stations and 107 EV capable stalls on-site.

Solid Waste

The proposed Project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste for the proposed Project.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the proposed Project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the proposed Project requires the use of electricity for conveyance and treatment, and GHG emissions will be generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values. The electricity use for water supply, treatment, distribution, and wastewater treatment are based on the electricity intensity factors from CalEEMod for the County and the indoor and outdoor water use default values in CalEEMod.

Emergency Generator

Two 2-megawatt emergency, or stand-by, generators are required for the proposed Project in event of a power outage. While use of generators during an emergency is not included in the emissions inventory as they are speculative, emissions associated with testing and maintenance of the generators is included. The generators are intended to be used only for emergency situations in order to provide continuous power during utility power outages, as required by the California Building Standards Code. Outside of emergency situations, periodic testing of the generators would occur; however, such testing would be limited to approximately one hour per month, totaling 12 hours per year. CalEEMod was used to estimate emissions from emergency generator testing and maintenance. Use, testing, and maintenance of such generators would be subject to PCAPCD Regulation 5 and the permitting requirements therein.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the proposed Project would do any of the following:

- generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment; or
- conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Placer County Air Pollution Control District

The GHG thresholds include a bright-line threshold for the construction and operational phases of land use projects and stationary source projects, a screening level threshold for the operational phase of land use projects, and

efficiency thresholds for the operational phase of land use projects that result in GHG emissions that fall between the bright-line threshold and the screening level threshold. The bright-line threshold of 10,000 MT CO_2e per year represents the level at which a project's GHG emissions would be substantially large enough to contribute to cumulative impacts and mitigation to lessen the emissions would be mandatory.

The PCAPCD further recommends use of the 10,000 MT CO_2e per year for analysis of construction-related GHG emissions for land use projects. Any project with GHG emissions below the screening level threshold of 1,100 MT CO_2e/year is judged by the PCAPCD as having a less-than-significant impact related to GHG emissions and would not conflict with any state or regional GHG emissions reduction goals. Projects that would result in GHG emissions above the 1,100 MT CO_2e/year screening level threshold, but below the bright-line threshold of 10,000 MT CO_2e/year, must result in GHG emissions below the efficiency thresholds in order to be considered to result in a less-than-significant impact related to GHG emissions and not conflict with any state or regional GHG emission reduction goals. The GHG efficiency thresholds, which are in units of MT CO_2e/year per capita or per square-foot, are presented in Table 4.3-4.

Table 4.3-4. PCAPCD Operational GHG Efficiency Thresholds

Non-Residential (MT CO_2e/1,000 square feet)	
Urban	Rural
26.5	27.3

Source: PCAPCD 2017.
Notes: MT CO_2e = metric tons of carbon dioxide equivalent per year.

In accordance with PCAPCD recommendations, if the proposed Project results in construction GHG emissions in excess of 10,000 MT CO_2e/year, and/or operational GHG emissions in excess of 1,100 MT CO_2e/year and are unable to show that emissions would achieve the efficiency threshold presented in Table 4.3-4, the proposed Project would be considered to result in a cumulatively considerable contribution to global climate change. The Project is located in a developed urban area so would be subject to the Urban threshold.

Project Impacts

Impact 4.3-1 The proposed Project would not generate GHG emissions that may have a significant effect on the environment.

Construction Emissions

Construction of the proposed Project would result in GHG emissions that would primarily be associated with use of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in 4.2, Air Quality, of this Draft SEIR. Project construction is anticipated to commence in January 2023 and would be completed by February 2027, for a total duration of approximately 4 years.

Table 4.3-5 presents construction GHG emissions of the proposed Project for 2023 through 2027.

Table 4.3-5. Estimated Annual Construction Greenhouse Gas Emissions

	CO_2	CH_4	N_2O	CO_2e
Year	Metric Tons per Year			
2023	1,515.96	0.39	0.02	1,535.82

Table 4.3-5. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2024	1,140.04	0.21	0.04	1,158.29
2025	980.23	0.18	0.04	996.18
2026	855.92	0.15	0.04	870.67
2027	102.92	0.02	0.01	104.96
Total	**4,595.07**	**0.95**	**0.15**	**4,665.91**

Source: Appendix C.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent

As shown in Table 4.3-5, total construction GHG emissions would be approximately 4,666 MT CO_2e as a result of construction-related activities. As previously discussed, the PCAPCD identifies a GHG emission threshold for construction-related emissions of 10,000 MT CO_2e per year. Table 4.3-5 indicates that the proposed Project would not exceed the PCAPCD GHG threshold for any construction year. Therefore, the proposed Project's construction-related GHG emissions would represent a **less-than-significant impact**.

Operational Emissions

Operation of the Project would generate GHG emissions through motor vehicle and delivery truck trips to and from the project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 4.3.4.

The estimated existing and operational Project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation are shown in Table 4.3-6. Details of the emission calculations are provided in Appendix C.

Table 4.3-6. Estimated Annual Operational Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	0.05	<0.01	0.00	0.01
Energy	1,771.31	0.11	0.03	1,783.92
Mobile	2,344.50	0.15	0.13	2,386.27
Solid Waste	609.46	36.02	0.00	1,509.91
Water Supply and Wastewater	30.68	1.14	0.03	67.29
Emergency Generators	24.51	<0.01	0.00	24.60
Total	**4,780.52**	**37.42**	**0.19**	**5,772.00**

Source: Appendix C.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; <0.01 = reported value less than 0.01.

As shown in Table 4.3-6, the estimated operational GHG emissions from mobile sources, area sources, energy consumption, solid waste, water consumption, wastewater treatment, and stationary sources associated with the proposed Project in 2027 would be approximately 5,772 MT CO_2e. As previously discussed, projects that would

result in GHG emissions above the 1,100 MT CO_2e/year screening level threshold, but below the bright-line threshold of 10,000 MT CO_2e/year, must result in GHG emissions below the efficiency thresholds in order to be considered to result in a less-than-significant impact related to GHG emissions and not conflict with any state or regional GHG emission reduction goals. As presented in Table 4.3-4, the non-residential GHG threshold applicable to the proposed Project would be the 26.5 MT CO_2e/1,000 square feet (ksf) for urban land uses. The proposed Project would result in GHG emissions of 20.8 MT CO_2e/ksf (5,772 MT CO_2e ÷ 278 ksf = 20.8 CO_2e/ksf) Therefore, the proposed Project's GHG emissions would result in a **less-than-significant impact**.

Mitigation Measures

No mitigation measures are required.

Impact 4.3-2 The proposed Project would not conflict with any plan, policy or regulation adopted for reducing GHG emissions.

The proposed Project's potential to conflict with an applicable plan, policy, or regulation is analyzed below. The proposed Project's consistency with SB 32 (2017 Scoping Plan), the City's 2035 General Plan and SAP, is discussed below. The NERSP does not include any goals or policies specific to GHG.

Consistency with the 2035 General Plan and Communitywide Sustainability Action Plan

The proposed Project would be consistent with adopted policies and implementation measures in the City's 2035 General Plan and Communitywide SAP (see Section 4.3.3, above) designed to reduce GHG emissions from energy and mobile sources, which are the largest sources of GHG emissions resulting from the proposed Project. Key policies and measures include:

- Providing adequate pedestrian and bikeway facilities for present and future transportation needs (General Plan, Air Quality and Climate Change Goal AQ1.5);
- Encouraging alternative modes of transportation including pedestrian, bicycle, and transit usage (General Plan, Air Quality and Climate Change Policy AQ1.7);
- Promote and incentivize low-emissions vehicles and associated charging infrastructure and pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles (General Plan, Air Quality and Climate Change Element Policy, AQ1.15);
- Conserve energy and reduce air pollutant emissions by encouraging energy efficient building designs and transportation systems and promoting energy efficiency retrofits of existing structures (General Plan, Air Quality and Climate Change Element Policy, AQ1.17);
- Analyze strategies to increase transit use and pursue funding sources for transit improvements (SAP, Transportation T-4.1);
- Promote bicycle use through focused community outreach and education programs (SAP, Transportation T-5.2);
- Maximize pedestrian travel through high-quality design, enhanced infrastructure, and enforcing pedestrian travel rights (SAP, Transportation T-6.1);
- Facilitate green building design and construction standards in the community to reduce emissions (SAP, Land Use and Green Building Measures and Actions LU-4.1);
- Qualifying new commercial construction should strive to achieve ENERGY STAR performance criteria. This denotes that the building's estimated energy use is intended to be in the top 25% compared to similar

buildings throughout the nation. Once the building is built and operating for at least one year, it may qualify to receive an ENERGY STAR plaque (SAP, Energy E-1.4); and

- Continue to explore innovative ways to promote energy efficiency and renewable energy use in the community (SAP, Energy E-1.5).

The proposed Project would comply with the General Plan and SAP measures through meeting state building code requirements and through Kaiser Permanente's sustainability requirements, which include Leadership in Energy and Environmental Design (LEED) HC v4 Gold certification. The proposed Project would include the following sustainability features:

- Daylight dimming of electric lighting
- Light pollution reduction, including LED lighting
- Electrochromic glass at select locations to reduce heating, ventilation, and air conditioning (HVAC) energy use and improve occupant visual comfort
- Indoor environmental quality with an optimized HVAC system
- "Solar ready" approach to easily integrate solar photovoltaics at a later date
- Enhanced commissioning, as well as measurement and verification of energy usage
- Alternative transportation, including preferred parking spaces for high-efficient and low-emitting vehicles, and charging stations for electric vehicles
- Preferred parking for high-occupancy vehicles (two or more people)
- Bicycle facilities including storage and changing rooms for all occupants and showers for staff
- Indoor water use reduction, including low-flow and low-flush plumbing fixtures with flush and flow rates significantly below the national standard set by the US Department of Energy's Energy Policy Act (EPACT) 1992
- Outdoor water use reduction, including high efficiency irrigation systems
- Low-emitting materials such as adhesives, sealants, paint, coatings, flooring systems, and composite wood

Furthermore, the campus is currently served directly by three local fixed-route bus routes operated by Roseville Transit. Two additional local fixed-route bus routes have bus stops within a quarter mile walk from the southwest corner of the campus. As discussed in Section 4.6, Transportation and Circulation, the City of Roseville Short-Range Transit Plan indicates that these routes have very low ridership. Therefore, these routes have sufficient capacity to accommodate additional riders generated by the proposed Project, which would encourage visitors and/or staff commuters to take alternative modes of travel to the campus.

Consistency with the Metropolitan Transportation Plan/Sustainable Communities Strategy

The SACOG 2020 MTP/SCS is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Sacramento region. The MTP/SCS incorporates population growth and local land use forecasts and contains regional transportation system improvements including the following: active transportation (non-motorized transportation—biking and walking); transportation demand management; transportation system management; transit; passenger and high-speed rail; goods movement; aviation and airport ground access; highways; arterials; and operations and maintenance. The 2020 MTP/SCS is not directly applicable to the proposed Project because the underlying purpose of the 2020 MTP/SCS is to provide direction and guidance by making the best transportation and land use choices for future development. The proposed Project would increase the size and capacity of the previously approved 2004 Expansion Project. Specifically, the proposed Project

revises the 2004 Expansion Project to allow for an approximately 278,000 square foot (sf), six-story, 138-bed Inpatient Tower building on the site of the prior approved Intensive Care Unit facility, addition of 36 new treatment bays to the Emergency Department within the main hospital building; a new four-level garage with rooftop parking to accommodate approximately 800 stalls on the site of the prior approved parking garage; and other site improvements. As discussed in Section 4.2, Air Quality, the proposed Project would not introduce substantial population and employment growth that is not accounted for in local plans or the MTP/SCS. Therefore, the proposed Project would be considered consistent with the regional growth forecasts in the MTP/SCS.

Consistency with CARB's Scoping Plan

The Scoping Plan (approved by CARB in 2008 and updated in 2014 and 2017) provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[3] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 4.3-7 highlights measures that have been developed under the 2030 Scoping Plan and the Project's consistency with those measures. Table 4.3-7 also includes measures recommended in the 2030 Scoping Plan. To the extent that these regulations are applicable to the project, or uses, the proposed Project would comply with all applicable regulations adopted in furtherance of the Scoping Plan. Only those measures applicable to the Project are included in the Table.

Table 4.3-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	*Consistent.* The proposed Project's employees and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	*Consistent.* This is a statewide measure that cannot be implemented by a project applicant or lead agency. Nonetheless, this standard would be applicable to the fuel used by vehicles that would access the project site (i.e., motor vehicles driven by the project's employees and visitors would use compliant fuels).

[3] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

Table 4.3-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Regional Transportation-Related GHG Targets	T-3	*Consistent*. The proposed Project would install 20 EV charging stations and 107parking spaces with EV capabilities to encourage use of alternative forms of transportation.
Reduction in VMT	Recommended	*Consistent.* The proposed Project would be developed within proximity of existing transit infrastructure and would be included within Kaiser's Transportation Demand Management Plan which would help reduce the proposed Project's VMT. The proposed Project is served by Roseville Transit Local service.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	*Consistent.* These standards would be applicable to the light-duty vehicles that would access the project site. Motor vehicles driven by the project employees and visitors would maintain proper tire pressure when their vehicles are serviced. The Project's employees and visitors would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the Project's employees and visitors would use low-friction oils when their vehicles are serviced. The Project's employees and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. In addition, the proposed Project would not prevent CARB from implementing this measure.
Heavy-Duty Vehicle GHG Emission Reduction ▪ Tractor-Trailer GHG Regulation ▪ Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	*Consistent.* Heavy-duty vehicles would be required to comply with CARB GHG reduction measures. In addition, the proposed Project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Proposed Project	T-8	*Consistent.* The proposed Project's medium- and heavy-duty vehicles (e.g., delivery trucks) could take advantage of the vehicle hybridization action, which would reduce GHG emissions through increased fuel efficiency. In addition, the proposed Project would not prevent CARB from implementing this measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	*Consistent.* The proposed Project would comply with the Roseville City Code and with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	*Consistent.* The proposed Project would comply with the Roseville City Code and with current Title 24, Part 6, of the California Code of Regulations.

Table 4.3-7. Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Renewables Portfolio Standard (33% by 2020)	E-3	*Consistent*. The electricity used by the proposed Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
Renewables Portfolio Standard (50% by 2050)	Recommended	*Consistent*. The electricity used by the proposed Project would benefit from reduced GHG emissions resulting from increased use of renewable energy sources.
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	*Consistent*. The proposed Project would be required to meet at minimum, the applicable current Title 24 Building Energy Efficiency Standards regarding the installation of rooftop solar systems.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	*Consistent.* The proposed Project would be required to be constructed in compliance with the Roseville City Code and CALGreen requirements in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	*Consistent.* The proposed Project would be required to be constructed in compliance with the Roseville City Code and CALGreen requirements in effect at the time of building construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	*Consistent.* The proposed Project would be required to be constructed in compliance with Roseville City Code and CALGreen requirements in effect at the time of building construction.
Recycling and Waste Management Sector		
Mandatory Commercial Recycling	RW-3	*Consistent.* During both construction and operation of the proposed Project, the proposed Project would comply with all state and local regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended.
High GWP Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	*Consistent.* The proposed Project's employees and visitors would be prohibited from performing air conditioning repairs and would be required to use professional servicing.
Limit High GWP Use in Consumer Products	H-4	*Consistent.* The proposed Project's employees and visitors would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	*Consistent.* Motor vehicles driven by the proposed Project's residents and visitors would comply with the leak test requirements during smog checks.

Source: CARB 2008, 2017.

Notes: GHG = greenhouse gas; CARB = California Air Resources Board; EV = electric vehicle; VMT = vehicle miles traveled; SB = Senate Bill; SF_6 = sulfur hexafluoride.

Based on the analysis in Table 4.3-7, the proposed Project would be consistent with the applicable strategies and measures in the Scoping Plan.

Consistency with SB 32 and EO S-3-05

The proposed Project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and SB 32. As discussed in Section 4.3.2, EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the 2030 Scoping Plan, which states (CARB 2017):

> The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

The proposed Project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 because the proposed Project would not exceed the PCAPCD GHG significance threshold for land use projects. Because the proposed Project would meet the threshold, this analysis provides support for the conclusion that the Project would not impede the state's trajectory toward the previously described statewide GHG reduction goals for 2030 or 2050. In September 2018, EO B-55-18 was signed, which commits the state to total carbon neutrality by 2045. However, the specific path to compliance for the state in regard to the long-term goals will likely require development of technology or other changes that are not currently known or available.

Conclusion

Based on the above considerations, the proposed Project is consistent with the 2020 MTP/SCS, Scoping Plan, SB 32, and EO S-3-05. Thus, the proposed Project would not conflict with any plans adopted with the purpose of reducing GHG emissions and the proposed Project's impacts with respect to GHG emissions would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The issue of global climate change is inherently a cumulative issue as the GHG emissions of individual projects cannot be shown to have any material effect on the global climate. Thus, the proposed Project's impact to climate change is addressed only as a cumulative impact. The cumulative context for climate change comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe, and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. Subsequently, California has established legislation and regulatory measures providing a statewide context for developing an enforceable statewide cap on GHG emissions. Given the environmental consequences resulting from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs, even relatively small (on a global basis) contributions.

As discussed in Impact 4.3-1, to evaluate whether the proposed Project would generate GHG emissions that are cumulatively considerable, the proposed Project's GHG emissions were compared to the PCAPCD GHG significance threshold of 26.5 MT CO_2e/ksf for urban land uses. The proposed Project was determined to result in GHG emissions of 20.8 MT CO_2e/ksf, which is below the PCAPCD significance threshold. Therefore, cumulatively, proposed Project GHG emissions would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

4.3.5 References

CalRecycle (California Department of Resources Recycling and Recovery). 2015. AB 341 Report to the Legislature. August 2015.

CalRecycle. 2019. Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions. Lasted Updated April 16, 2019. Accessed January 2022. https://www.calrecycle.ca.gov/Climate/SLCP/

CARB (California Air Resources Board). 2008. Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act. Sacramento, California. October 24, 2008.

CARB. 2012. "News Release: California Air Resources Board Approves Advanced Clean Car Rules." January 27, 2012. Accessed October 2016. https://www.arb.ca.gov/ newsrel/newsrelease.php?id=282.

CARB. 2014. First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006. May 2014. Accessed August 2014. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CARB. 2016. 2016 Mobile Source Strategy. May 2016. Accessed November 2021. https://ww3.arb.ca.gov /planning/sip/2016sip/2016mobsrc.pdf.

CARB. 2017. The 2017 Climate Change Scoping Plan. December 2017. Accessed December 2021.

CARB. 2021a. "Glossary of Terms Used in Greenhouse Gas Inventories." Accessed November 2021. https://ww2.arb.ca.gov/ghg-inventory-glossary.

CARB. 2021b. "California Greenhouse Gas Emission Inventory—2019 Edition." July 28, 2021. Accessed November 2021. https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan _sum_2000-19.pdf.

CARB. 2021c. Advanced Clean Cars Program. Accessed November 2021. https://ww2.arb.ca.gov/our-work /programs/advanced-clean-cars-program.

CARB. 2021d. Advanced Clean Trucks Fact Sheet. August 20, 2021. Accessed November 2021. https://ww2.arb.ca.gov/sites/default/files/2021-08/200625factsheet_ADA.pdf.

CAT (California Climate Action Team). 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature. Sacramento, California: California Environmental Protection Agency, California Climate Action Team. March 2006. http://www.climatechange.ca.gov/climate_action_team/reports/2006report /2006-04-03_FINAL_CAT_REPORT.PDF.

CAT. 2010. Climate Action Team Report to Governor Schwarzenegger and the California Legislature. Sacramento, California: California Environmental Protection Agency, California Climate Action Team. December 2010. Accessed February 2014. http://www.energy.ca.gov/ 2010publications/CAT-1000-2010-005 /CAT-1000-2010-005.PDF.

CEC (California Energy Commission). 2018. "2019 Building Energy Efficiency Standards: Frequently Asked Questions." December 2018. Accessed January 2019.

City of Roseville. 2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

2010. "Roseville Communitywide Sustainability Action Plan. Accessed April 2022.

CNRA (California Natural Resources Agency). 2009. Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97. December 2009.

CNRA. 2014. Safeguarding California: Reducing Climate Risk: An Update to the 2009 California Climate Adaptation Strategy. July 2014. Accessed October 2016.

CRNA. 2016. Safeguarding California: Implementing Action Plans. March 2016. http://resources.ca.gov/docs/climate/safeguarding/Safeguarding percent20California-Implementation percent20Action percent20Plans.pdf.

CNRA. 2018a. California's Fourth Climate Change Assessment – San Francisco Bay Area Region Report. https://barc.ca.gov/sites/default/files/documents/2020-12/20190116-sanfranciscobayarea.pdf.

CNRA. 2018b. Safeguarding California Plan: 2018 Update: California's Climate Adaptation Strategy. January 2018. Accessed October 2018. http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf.

EPA (U.S. Environmental Protection Agency). 2007. Energy Independence and Security Act of 2007. Accessed December 2016. https://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf.

EPA. 2017. Climate Change: Basic Information. https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html#difference.

EPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2019. EPA 430-R-21-005. April 2021. Accessed November 2021. https://www.epa.gov/sites/default/files/2021-04/documents/us-ghg-inventory-2021-main-text.pdf?VersionId=yu89kg1O2qP754CdR8Qmyn4RRWc5iodZ.

EPA. 2022. "EPA Restores California's Authority to Enforce Greenhouse Gas Emission Standards for Cars and Light Trucks." March 2022. Accessed March 2022. https://www.epa.gov/newsreleases/epa-restores-californias-authority-enforce-greenhouse-gas-emission-standards-cars-and.

EPA and NHTSA (Department of Transportation's National Highway Traffic Safety Administration). 2016. "Regulations and Standards: Heavy-Duty. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles." Last updated November 4, 2016. https://www3.epa.gov/otaq/climate/regs-heavy-duty.htm.

EPA and NHTSA. 2018. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule for Model Years 2021-2026 Passenger Vehicles and Light Trucks. Proposed Rule August 2018. Accessed May 2019. https://www.govinfo.gov/content/pkg/FR-2018-08-24/pdf/2018-16820.pdf.

IPCC (Intergovernmental Panel on Climate Change). 2007. IPCC Fourth Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the U.N. Framework Convention on Climate Change.

IPCC. 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, edited by T.F. Stocker, D. Qin, G.K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P.M. Midgley. New York, New York: Cambridge University Press. http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.

IPCC. 2014. Climate Change 2014 Synthesis Report: A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Accessed August 2016. http://www.ipcc.ch/report/ar5/syr/.

IPCC. 2018. "Summary for Policymakers." In Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Accessed July 2019. https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf.

NHTSA (National Highway Traffic Safety Administration). 2021. NHTSA Withdraws Rule That Sought to Preempt States from Setting Their own Greenhouse Gas Emissions Standards and Zero-Emissions Vehicle Mandates. Accessed January 2022. https://www.nhtsa.gov/press-releases/cafe-preemption-final-rule

OEHHA (Office of Environmental Health Hazard Assessment). 2018. Indicators of Climate Change in California. May 9, 2018. https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf.

OPR (Governor's Office of Planning and Research). 2008. CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review.

PBL (PBL Netherlands Environmental Assessment Agency). 2020. Trends in Global CO2 and Total Greenhouse Gas Emissions, 2020 Report. Accessed April 2022.

Placer County Air Pollution Control District (PCAPCD). 2017. CEQA Air Quality Handbook. August 2017.

SACOG (Sacramento Area Council of Governments). 2019. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy.

The White House. 2021. Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. January 20, 2021. Accessed January 2021. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/.

4.4 Land Use and Planning

4.4.1 Introduction

This section evaluates the existing land uses and applicable land use plans and the consistency of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) with those plans. This analysis identifies the existing land use setting and associated regulatory requirements, evaluates potential impacts, and if necessary, identifies mitigation measures related to the implementation of the proposed Project. As discussed in Chapter 3, Issues Adequately Addressed in the 2004 Expansion Project EIR, the proposed Project would not result in new information or changes to the Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (2004 Expansion Project EIR) regarding the potential for the Project to physically divide an existing community. Therefore, impacts would remain less than significant and are not further evaluated. Please see Chapter 3 for additional information.

No comments related to land use and planning were received during public review of the Notice of Preparation. A copy of the Notice of Preparation and comments received is included in Appendix A.

The analysis in this section is based on review of state and local land use plans, policies, and regulations and review of site plans and Project designs elements. The analysis also considers California Environmental Quality Act (CEQA) Guidelines Appendix G and applicable federal, state, and local regulations. Information from the 2004 Expansion Project EIR is incorporated into this by reference, in section in accordance with the provisions of Section 15150 of the CEQA Guidelines.

4.4.2 Environmental Setting

This section details the existing environmental setting for land use and planning and updates the information in Section 4.1, Land Use and Planning, described on pages 4.1-1 through 4.1-2 of the 2004 Expansion Project EIR. While land use and planning was addressed in the 2004 Expansion Project EIR, this section updates Project information based on the City's updated 2035 General Plan and the Project's proposed amendment to the Northeast Roseville Specific Plan (NERSP).

Regional Setting

The City of Roseville (City) lies in a transitional zone between the Sacramento Valley and the Sierra Nevada foothills. The City is located approximately 15 miles northeast of downtown Sacramento in the northeastern portion of the Sacramento Metropolitan area within Placer County.

Project Site

The Project site is located within the approximately 49-acre Kaiser Permanente Medical Center Campus (Medical Center Campus or Campus) located at 1600 Eureka Road. The Campus is bounded by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Rocky Ridge Drive on the west, and Eureka Road on the east (see Figure 2-1 in Chapter 2, Project Description). Interstate (I) 80 is approximately 1 mile west of the Project site and the City's eastern boundary is approximately one-quarter mile to the east of the site. The project site is located within the NERSP area.

Land Use Planning Designations

The project site is designated Business Professional (BP) on the City's General Plan Figure II-2, Land Use Map (last updated December 2021) and also in the NERSP. Uses allowed under this land use designation include business park and professional office, medical campus, and research and development. Per the Compatibility Matrix in the General Plan, the BP designation is compatible or conditionally compatible with all adjacent land use designations. The General Plan notes that hospitals and clinics may also be permitted under this land use designation. The Business Professional (BP) land use designation may be applied to lands that are adjacent to regional and community commercial designated lands and also may be used as a buffer between residential areas and arterials, community commercial, and light industrial. Floor area ratios should range between 20% and 40%, although this is a guideline and not an absolute restriction.

The NERSP was last amended in 2004 to accommodate development of the Medical Center Campus and provided development standards and requirements. Similarly, in order to accommodate development of this Project, the NERSP would be required to be amended. Chapter V(d)(I), Medical Campus Component of the NERSP provides goals, policies, and implementation measures for development of Medical Campus sites within the City, including the project site. Implementation Measure ii(a) under Plan Policy 2 for Goal 1 requires a minimum of a 100-foot setback from the ultimate back of curb of any adjacent existing or planned public roadway to any portion of a building three stories or more in height. The proposed Project would require an amendment to the NERSP to modify the setback requirement for the proposed new parking garage from 100 feet to 50 feet to accommodate the proposed location at the northeast corner of Eureka Road and Lead Hill Boulevard (existing landscape setbacks would be maintained). In addition, the proposed amendment would allow for ancillary right turn lanes, bus turn-outs, and standard roadway tapers to be permitted reductions to the required setbacks stated above.

Zoning

The project site is zoned Planned Development for Medical Campus (PD 470). Uses permitted include professional offices and general medical services. No changes in the underlying zoning from that described in the 2004 Expansion Project EIR would be required.

Surrounding Development

As described in the 2004 Expansion Project EIR, intensive retail and office development surround the project site on all sides. Across Rocky Ridge Drive to the west is a retail center that includes Target and Walmart stores; to the north across Lead Hill Boulevard is an office development with numerous medical-related services; to the east across Eureka Road are more office buildings; and to the south, across Douglas Boulevard are more retail uses in the Rocky Ridge Town Center. Surrounding land uses are detailed in Table 4.4-1, below.

As noted on page 4.1-2 of the 2004 EIR, there are no residential developments directly adjacent to the existing Campus. The nearest residential areas are the Rosemeade Apartments located approximately 1,200 feet northeast of the project site and a neighborhood area located approximately 1,000 feet south of the Project site, south of Professional Drive.

Table 4.4-1. Surrounding Land Uses

Direction from Project Site	Existing Land Use	Existing Specific Plan Designation	Existing Zoning Classification
North	Eureka Corporate Plaza (includes medical offices), Roseville Theater, Restaurants, Automall	*NERSP:* Regional Commercial – Automall (RC); Business Professional (BP); and Community Commercial and Business Professional (CC/BP)	Planned Development 247 (PD 247); Business Professional/Special Area-Northeast (BP/SA-NE); and Community Commercial/Special Area-Northeast (CC/SA-NE)
South	Rocky Ridge Town Center (Includes Sprouts, restaurants, other commercial retail), office buildings, vacant lot	*SERSP*[1]*:* Community Commercial (CC); and Business Professional (BP)	Community commercial (CC); Community Commercial/Special Area-Southeast (CC/SA-SE); and Business Professional/Special Area-Southeast (BP/SA-SE)
East	Medical offices, retail businesses, bank	*NERSP:* BP	BP/SA-NE
West	Walmart Supercenter, Roseville Center (includes Target, Raley's, and other retail), fast food restaurants, and other retail businesses	*NERSP:* CC	CC/SA-NE; CC

Sources: Google Earth, 2022; NERSP (2013); SERSP (2014); and Zoning Map (2017).
1 SERSP = Southeast Roseville Specific Plan

4.4.3 Regulatory Setting

Federal

There are no applicable land use federal regulations and polices that pertain to the proposed Project.

State

California Department of Health Care Access and Information

The state Department of Health Care Access and Information, formerly the Office of Statewide Health Planning and Development, reviews and issues permits for hospital additions and renovation permits. In essence, the Department of Health Care Access and Information serves as a building department for permit application review for all hospital projects in California. The state Department of Health Care Access and Information would review and issue permits for all proposed Project components except the parking garage and relocation of the loop road.

Local

The 2004 Expansion Project EIR details the regulatory framework and describes the regulatory requirements of the City's General Plan, NERSP, and existing zoning. The information provided is still applicable to the proposed Project with any new or updated information provided below.

City of Roseville 2035 General Plan

The General Plan serves as a long-term policy guide for physical, economic, and environmental growth and was last updated in 2020 (City of Roseville 2020). The City has 14 adopted Specific Plans located within the City limits, including the NERSP in which the Project is located. Roseville's Specific Plans play an important role in guiding development and conservation and are the primary mechanism for implementing the goals and policies of the General Plan. The Specific Plans establish detailed policies and implementation programs for portions of the City, consistent with the goals and policies established in the General Plan. The Specific Plans are incorporated as a part of the General Plan and should be referred to for specific requirements.

Key provisions from the General Plan are summarized below.

Land Use Element

Where appropriate, land use definitions are broad in scope to allow the flexibility necessary to achieve the General Plan's polices related to pedestrian orientation and convenience gained by allowing mixed-use projects. This is achieved through the permitted secondary uses associated with each land use designation. The extent of the secondary uses permitted, and conditions related to their use, are specified in the overlying zoning, specific plan, and/or other master plan.

Business Professional

Purpose: To provide areas for small and large office uses, including uses supportive of offices.

Primary Uses: The business professional land use category includes administrative, professional, government and medical offices, and research and development (not including any assembly or manufacturing). Hospitals and clinics may also be permitted by this land use designation.

Secondary Uses: Limited service commercial uses (e.g., banks, restaurants, day care centers, travel agencies, florists, etc.) are encouraged where they would minimize the need for vehicle travel for convenience trips, but only as secondary uses in proximity to large office parks and complexes. In association with clinics and hospitals, pharmacies and other medical related retail may be permitted.

Northeast Roseville Specific Plan

The NERSP was originally adopted in 1987 and was last updated in September 2013. This Specific Plan is primarily intended for commercial and employment-generating uses but also has significant residential and open space components. The applicable goals, policies, and implementation measures applicable to the proposed Project under Chapter V(d)(I), Medical Campus Component, are described below.

Background

As Roseville and South Placer area continue to grow, a need is generated for expanded medical care facilities. The intent of the Medical Campus land use is to provide a setting for medical hospitals and health care related uses. A 56-acre site has been designated for an integrated medical campus northeast of the corner of Sunrise Avenue and Roseville Parkway, while a 49.5-acre site has also been designated for the Kaiser Roseville Medical Center Campus. These locations provide good regional and local access from I-80, and from major arterial roadways such as Sunrise Avenue, Taylor Road, Eureka Road, Douglas Boulevard, and Roseville Parkway. In addition, both sites are in relatively close proximity to the existing Douglas Boulevard medical community on Sunrise Avenue south of Douglas Boulevard.

The Medical Campus Site provided in Exhibit B (NERSP 2013, Resolution 04-145, p. 8) is intended to provide for the comprehensive master planning and orderly development of the Kaiser Roseville site. Continued development at the Medical Campus is intended to accommodate existing and future demands for medical care in Roseville, Placer County and surrounding communities. This comprehensive health care campus strives to maximize member convenience and operational efficiencies while accommodating changes in medical practice and technologies.

Goal 1. Create a well-defined medical campus incorporating superior development and landscaping design.

Plan Policy 1. Limit the utilization of the Medical Campus Facility to health care and closely related uses.

Implementation:

i. The Medical campus land use is structured to provide a setting for medical hospitals and other health care associated activities. The intent is to create a land use category which permits medical and health related uses that can take advantage of the benefits offered by proximity and centralization.

   The primary use within the land use category will be a hospital. The hospital may include general and acute in-patient and outpatient services ranging from prevention, diagnosis and treatment, rehabilitation services, medical testing and analysis services, and food services. Concurrent with or after approval of a hospital facility, the following uses will be permitted with the Medical Campus land use designation and as defined by the Medical Campus Planned Development Zone District:

   1. Medical Offices and Laboratories
   2. Retail Pharmacy
   3. Medical Equipment Retail
   4. Medical Related Residential
   5. Child Care Facilities

The following uses are also permitted in the Medical Campus land use designation subject to City approval of a use permit:

1. Non-Medical, Health Related Offices
2. Ambulance/medical facilities
3. Assisted Residential
4. Restricted Retail
5. Medical Related Research, Education and Instructional
6. Conference Center
7. Temporary Residential

Plan Policy 2. Establish a review process and design standards applicable to the Medical Campus land use designation.

Implementation

i. All development with the Medical Campus land use designation shall be subject to the City of Roseville design review process and all other applicable City permit requirements. The project proponent shall work with the City of Roseville and the Office of Statewide Health Planning and Development to insure that all City required conditions are implemented.

ii. The following design standard shall apply:

Setback:

a. From the ultimate back of curb of any adjacent existing or planned public roadway:
   - A minimum of 50 feet for buildings of two stories and less in height, and any parking, paved or enclosed areas.
   - A minimum of 100 feet for any building three stories or more in height.

Lot Coverage – shall be calculated as the square footage of the building footprint, exclusive of overhangs and balconies, and shall not exceed 35% of the gross square footage of the parcel upon which the building is being constructed.

Land Coverage – Shall be calculated inclusive of all required setbacks, and shall be a minimum of 20% of the gross square footage of the parcel.

Landscape Design. Shall be implemented in accordance with the NERSP Landscape Design Guidelines. Drought tolerant landscape materials, in combination with efficient irrigation systems, shall be the predominant for of landscaping. Native plant materials shall be utilized within the setbacks adjacent to open space areas, to create a transition between the natural and built environment.

Building Height. Concurrent with the submittal of development plans for each phase a visual impact analysis shall be prepared. The purpose of the analysis will be to evaluate the visual impacts of the proposed development on Plan Area vistas, including the Interstate 80 vista. Based upon the findings of the analysis, and any overriding factors, maximum building heights will be approved by the City.

Site/Building Design. Shall comply with the Design Guidelines contained in Chapter VII of the NERSP. In particular, the Business Professional Office/Research and Development Guidelines shall apply to the development of the Medical Campus land use. Concurrent with the submittal of development plans for phase 1 of each Medical Campus, detailed design guidelines shall be submitted for City approval which shall regulate the design of all phases of development. Such guidelines shall address design standards for issues including grading treatment, building, siting, architectural treatment and building materials, vehicular access and parking, pedestrian access and connections, landscape material s and treatment, screening and fencing, and signage. The intent of the guidelines

will be to insure consistent and coordinated treatment of all phases of development with the Medical Campus land use.

Parking. Shall be in accordance with the City of Roseville Zoning Ordinance, but may be modified upon City approval of a parking study, which justifies an alternative standard.

TSM. Development within the Medical Campus land use shall comply with the City of Roseville TSM Ordinance. A Transportation Plan shall be submitted for the review, and approval of the Transportation Commission, concurrent with the submittal of any development plans.

Storage. No outside unenclosed/unscreened storage permitted.

Goal 2. Minimize the Environment Impacts Associated with Development of the Medical Campus Land use of the Medical Campus land use.

Implementation:

iv. For Site B, ensure compliance with Kaiser Roseville Medical Center Final EIR Certified by the Roseville City Council, April 2004 (SCH# 2003062014)

v. For Site B, the mitigation measures contained within the Kaiser Roseville Medical Center Expansion Project EIR, Certified by the Roseville City Council, April 2004 (SCH# 2003062014) shall be implemented through the processing, design and approval of development within the Medical Campus land use.

vi. The project proponents shall work with the City and the Office of Statewide Health Planning and Development to insure implementation of the corresponding EIR Mitigation Monitoring Program, and any additional documentation and requirements determined necessary by the City of Roseville.

Development Agreement

A Development Agreement by and between the City of Roseville and Kaiser Foundation Hospitals was recorded on August 13, 2004, to ensure compliance and timely development of the Project. This Agreement establishes development rights within the property that is the subject of the development project application. The Agreement would be amended to include the additional size and capacity of the proposed Project.

City of Roseville Municipal Code

The City Municipal Code includes requirements for zoning, signage, and the construction of buildings within Title 19 Zoning. It is assumed the Project would comply with the City's Municipal Code regulations. Key provisions from Title 19 of the Roseville Municipal Code are summarized below.

Article II. Regulations for the Principal and Special Purpose Zones

19.08.010 Purpose.

The purpose of this chapter is to classify land uses according to use types on the basis of common functional, product, or compatibility characteristics. (Ord. 5428 § 1, 2014.)

19.08.020 Primary and accessory uses.

A. Primary Uses. Primary uses shall be defined as either principal, conditional, or administrative uses. A principally permitted use is allowed in a zoning district and subject to the restrictions applicable to that district. A conditionally permitted use is a use permitted in a particular zone district upon showing that such use will comply with all the conditions and standards as specified in the zoning ordinance and authorized in the Conditional Use Permit. An administratively permitted use may be permitted in a zone district upon administrative approval by the Planning Manager. Primary uses are established and regulated by this article.

19.08.090 Commercial Use Types

Commercial use types include the distribution, sale and rental of goods, and the provision of services other than those classified as civic or industrial use types. Specific commercial use types referred to in this title are:

R. **Medical services,** includes establishments primarily engaged in the provision of personal health services on an outpatient basis ranging from prevention, diagnosis and treatment, or rehabilitation services provided by physicians, dentists, nurses, and other health personnel as well as the provision of medical testing and analysis-services, but excludes uses classified under any civic use type. Medical services use types include:

1. **General,** includes the range of medical services described above. Typical uses include individual medical and dental offices, dental and medical laboratories, health maintenance organizations, substance abuse treatment clinics, immediate care facilities and offices for physical therapists, chiropractors, and acupuncturists.
2. **Low traffic generating,** includes medical services with a low patient frequency or longer than average patient appointment time which creates a lower parking demand. Typical uses include dialysis clinics and imaging services.
3. **Medical campus/medical office building (MOB),** includes a cluster of buildings or a singular building that provides a range of outpatient services such as medical offices, dental or medical laboratories, imaging, physical therapists, and pharmacy services, with a range of parking demands.

Article III. General Development Regulations, Chapter 19.20 through Chapter 19.26 apply to all zones and all use classifications unless otherwise stated and include:

- Chapter 19.20 – General Development Standards
- Chapter 19.22 – Accessory Uses and Structures
- Chapter 19.24 – Nonconforming Uses, Structures and Parcels
- Chapter 19.26 – Off-Street Parking and Loading

Article V. Administration and Procedures, Chapter 19.82, Major Projects Permit Processing, details the three stages that projects are subject to, including Preliminary Development Plan Review, Architecture and Landscape Review, and Final Plans

4.4.4 Impacts and Mitigation Measures

Methods of Analysis

To evaluate the Project's impacts related to land use and planning, this analysis examines the Project's consistency with applicable local plans, policies, and regulations that regulate uses on the project site.

CEQA Guidelines Section 15125(d) requires that an EIR include a discussion of any inconsistencies with applicable land use policies and ordinances that were adopted to mitigate or avoid an environmental effect. Additionally, a conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency will result in an adverse physical change to the environment that is a "significant environmental effect" as defined by CEQA Guidelines Section 15382. An excerpt from the legal practice guide, "Continuing Education of the Bar, Practice Under the California Environmental Quality Act," Section 12.34 illustrates the point:

> … if a project affects a river corridor, one standard for determining whether the impact is *significant* might be whether the project violates plan policies protecting the corridor; the environmental *impact,* however, is the physical impact on the river corridor.

Analysis of conflicts and consistency with applicable plans is included in this impact section. Under State Planning and Zoning law (Government Code Section 65000, et seq.) strict conformity with all aspects of a plan is not required. Generally, plans reflect a range of competing interests, and agencies are given great deference to determine consistency with their own plans. Generally, given that land use plans reflect a range of competing interests, a project should be compatible with a plan's overall goals and objectives but need not be in perfect conformity with every plan policy.

The analysis below examines the Project's consistency with applicable plans, policies, and regulations that regulate uses on the project site. To the extent that the Project's potential conflict with a plan, program, or policy is analyzed in another section of this Draft SEIR, those plans or policies are not further discussed in this section (see Sections 4.1, Aesthetics and 4.1, Air Quality). Land use impacts were analyzed in the 2004 Expansion Project EIR on pages 4.1-1 through 4.1-13 and potential impacts related to consistency with City adopted plans and policies, compatibility with existing land uses in the project vicinity, and interim and permanent helistops were evaluated and impacts were determined to be less than significant and no mitigation was required.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the proposed Project would do the following:

- conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Project Impacts

Impact 4.4-1 The proposed Project would not conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The 2004 Expansion Project EIR analyzed land use impacts associated with construction and operation of a new medical office building, a new Women's and Children's Center, renovation and expansion of the Emergency Department and Radiology Department, a new fire pump building, a new parking structure, a new helicopter landing pad, and expansion and remodeling of the cafeteria and central utility plant and concluded impacts would be less than significant. To date, all of these buildings have been constructed on the Campus. In addition to these buildings, the 2004 Expansion Project EIR also evaluated land use impacts resulting from the development of a five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building along with a three-level approximately 400-space parking garage located in the northeast corner of the Campus; however, these buildings have not been constructed.

The proposed Project would increase the size and capacity of the previously approved project. Specifically, the proposed Project revises the 2004 Expansion Project to allow for an approximately 278,000 square-foot, six-story, 138-bed Inpatient Tower building on the site of the prior approved Surgery and Intensive Care Unit Facility, expansion of the Emergency Department to add 36 new treatment bays; a new four-level garage with rooftop parking to accommodate approximately 800 stalls located in the northeast corner of the Campus, on the site of the prior approved parking garage; relocation of the northwest corner loop road; a new main hospital entrance and drop off area; and a new generator yard and internal upgrades to the existing central utility plant.

2035 General Plan

As detailed in the 2004 Expansion Project EIR, the General Plan includes broad land use policies that are intended to guide development within the City. The City's General Plan has been updated since 2004; therefore, consistency with applicable goals and policies from the 2035 General Plan is addressed. The Medical Center Campus currently has a General Plan land use designation of Business Professional (BP), which includes hospitals and clinics listed as a primary use. The Project does not propose a change in land use designation as the facilities proposed by the Project would remain compatible with the Business Professional (BP) designation. While the General Plan states floor area ratios should range between 20% and 40%, this is a guideline and not an absolute restriction. Per the Compatibility Matrix in the General Plan, the Business Professional (BP) designation is compatible or conditionally compatible with all adjacent land use designations and would not conflict with the adjacent and surrounding land use designations of BP, CC (Community Commercial), RC (Automall), and CC/BP. The proposed Project would not change the analysis of consistency with the General Plan under Impact 4.1-1 on page 4.1-7 of the 2004 Expansion Project EIR. The Project would not conflict with the applicable goals, policies, and objectives of the 2035 General Plan and therefore, Project impacts related to potential conflict with the General Plan would be less than significant, the same as they were in the 2004 Expansion Project EIR.

NERSP

As discussed in the 2004 EIR, the NERSP is a comprehensive planning document that is intended to guide development of the roughly 885-acrea specific plan area. The NERSP identifies land uses for the various parcels within its boundary and includes goals, policies, and implementation measures for development within each land use area. The current land use designation for the approximately 49-acre existing Medical Center Campus as shown on Exhibit B, Northeast Roseville Land Use Plan, of the NERSP, is Business Park Medical Campus.

No change in the underlying land use designation is proposed by the Project. The proposed Project is consistent with Plan Policy 1, which limits the utilization of the Medical Campus Facility to health care and closely related uses as the Project is proposing development of healthcare uses that were previously approved, but with some

modifications. The Project is also generally consistent with applicable NERSP goals and policies, including the new goals and policies adopted in 2004.

The Project does, however, propose an Amendment to the NERSP to modify the 100-foot setback requirement for any building 3 stories or higher to accommodate the new four-level parking garage. This Amendment would reduce the setback from 100 feet to 50 feet from the edge of the City's right of way, which includes the acceleration lane on Eureka Road. The setback would accommodate the proposed location of the new garage at the northeast corner of Eureka Road and Lead Hill Boulevard (see Figure 2-3 in Chapter 2, Project Description). This reduction in setback would not change the right-of-way landscape requirement of 35-feet for both Lead Hill Boulevard and Eureka Road. In addition, the placement of the parking garage would allow visitors, patients, and employees to park closer to the Medical Center Campus buildings and would use existing vacant space within the already permitted Campus. Upon approval of the amendment to the NERSP, the proposed Project would be consistent with the development requirements. All other components of the proposed Project would meet the existing NERSP development requirements.

The NERSP design standards applicable to the Medical Center Campus land use designation under Policy 2 of Chapter V(d)(I), Medical Campus Component are listed in Table 4.4-2, Design Standards Consistency Analysis. An analysis of the Project's consistency with these standards is provided.

Table 4.4-2. Design Standards Consistency Analysis

Design Standard	Standard Requirement	Proposed Project	Consistent?
Setbacks	From the ultimate back of curb of any adjacent existing or planned public roadway: ▪ A minimum of 50 feet for buildings of two stories and less in height, and any parking, paved or enclosed areas. ▪ A minimum of 100 feet for any building three stories or more in height.	This Project would require an amendment to the NERSP to modify the setback requirement for the new parking garage only from 100 feet to 50 feet to accommodate the proposed location at the northeast corner of Eureka Road and Lead Hill Boulevard. All other components of the proposed Project would have the required setbacks.	***Consistent:*** Upon Project approval, the NERSP would be amended to modify the setback requirement for the new parking garage from 100 feet to 50 feet from the edge of the City's right of way. This reduction in setback would remain consistent with the right-of-way landscape requirement of 35-feet for both Lead Hill Boulevard and Eureka Road.
Lot Coverage	Shall not exceed 35% of the gross square footage of the parcel upon which the building is being constructed.	Lot Coverage is 30% ▪ Total Building Footprint: 641,527 SF ▪ Total Site: 49 acres or 2,134,440 SF	***Consistent:*** The lot coverage for the Project would be approximately 30%, which would not exceed the less than 35% lot coverage requirement.
Landscape Coverage	Shall be a minimum of 20% of the gross square footage of the parcel	Landscape Coverage is 22.6% ▪ Total Existing Landscape: 401,594 SF	***Consistent:*** The landscape coverage for the Project would be approximately 22.6%, which is above the 20%

Table 4.4-2. Design Standards Consistency Analysis

Design Standard	Standard Requirement	Proposed Project	Consistent?
		▪ Total Proposed Landscape: 80,213 SF ▪ Total Landscape 481,807 SF	minimum landscape requirement.
Building Height	The BP MC designation does not establish a maximum building height, but rather allows the City to determine the appropriate building height based upon the findings of the aesthetics analysis, and any overriding factors.	The maximum building height will be 107 feet.	***Consistent:*** In making their decision, the Planning Commission and City Council would rely on information in this Draft SEIR and the visual impact analysis provided in Section 4.1, Aesthetics.
Right-of-Way Landscape Area Standards	Rocky Ridge – 35' landscape area	35-foot landscape area	***Consistent:*** The right-of-way landscaped areas surrounding the project site would comply with the standards provided of 35 feet and 50 feet.
	Lead Hill – 35' landscape area	35-foot landscape area	
	Eureka – 35' landscape area	35-foot landscape area	
	Douglas – 50' landscape area	50-foot landscape area	
Floor Area Ratio	20-40% as a general guideline, but not an absolute restriction	Floor Area Ratio is 0.57 ▪ Total Floor Area (Existing and Proposed Structures): 1,206,262 square feet (SF) ▪ Total Site: 49 acres or 2,134,440 SF	***Consistent:*** The Project will have a floor area ratio of 57%. While the goal of the General Plan is between 20% and 40%, this is not an absolute restriction. The Project would add additional medical facilities to the existing medical Campus, thus reducing the need to site a new medical facility to serve the community.

Upon approval of the Specific Plan Amendment, the Project would not conflict with the applicable goals, policies, and objectives of the NERSP and therefore, Project impacts related to a potential conflict with the NERSP would be less than significant.

Title 19 - Zoning Ordinance

As described in the 2004 Expansion Project EIR, the project site is zoned Planned Development for a Medical Campus (PD 470). The Project is consistent with the existing underlying zoning and no change is proposed. As noted in Table 4.4-2, above, per Article V. Administration and Procedures, Chapter 19.82, Major Projects Permit Processing, of the Zoning Ordinance, the Project is subject to the City's major permit process. When making their decision, the Planning Commission and City Council would rely on information in this Draft SEIR and the visual

impact analysis provided in Section 4.1, Aesthetics, to review the overall height of the proposed buildings and proposed Specific Plan Amendment to modify the setback requirement for the new parking garage from 100 feet to 50 feet from the edge of the City's right of way. In addition, the Project would adhere to the parking requirements listed in the Zoning Ordinance and shall also submit a Transportation Plan for review and approval by the Transportation Commission concurrent with the submittal of the development plans. Based on the Project's required adherence to the Major Projects permit processing requirements and the Planning Commission's and City Council's review processes, the Project would not conflict with the Zoning Ordinance and therefore, Project impacts related to potential conflict would be less than significant.

Summary of Land Use Impacts

Consistent with the 2004 Expansion Project EIR and based on the analysis above, the proposed Project would not conflict with applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts would be **less than significant.**

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The land use analysis in an EIR does not typically include a discussion of cumulative impacts because the consistency analysis for applicable land use goals and policies is not an additive effect. Therefore, an analysis of cumulative impacts is not required.

4.4.5 References

City of Roseville. 2004, June 5. Development Agreement by and between the City of Roseville and Kaiser Foundation Hospitals. Filed August 13, 2004. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Northeast%20Roseville%20Specific%20Plan/Kaiser%20Medical%20Center.pdf. Accessed: April 20, 2022.

2013. Northeast Roseville Specific Plan, Adopted April 8, 1987, Resolution #87-52. Last Amended September 18, 2013, Resolution #13-374. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Northeast%20Roseville%20Specific%20Plan/Northeast%20Roseville%20Specific%20Plan.pdf. Accessed: April 20, 2022.

2014. Southeast Roseville Specific Plan Land Use Summary and Figure 7. Last updated December 10, 2014. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Southeast%20Roseville%20Specific%20Plan/Southeast%20Tables%20and%20Map.pdf. Accessed: April 24, 2022.

2017. Zoning Map. Adopted July 26, 1996, Ordinance #3014. Last updated March 2017. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Zoning%20Information/Zoning_30X40_2017%20FINAL_20170324.pdf. Accessed: April 20, 2022.

2020. August. City of Roseville General Plan 2035. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed: April 20, 2022.

N.D. Title 19, Zoning of the Roseville Municipal Code. Available: https://library.qcode.us/lib/roseville_ca/pub/municipal_code/item/title_19. Accessed: April 20, 2022.

Google Earth Pro. 2022.

Governor's Office of Planning and Research. State of California 2017 General Plan Guidelines. Available: https://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. Accessed: April 24, 2022.

4.5 Utilities

4.5.1 Introduction

This section analyzes the potential impacts of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project) on public utilities, including mitigation, if any, that may be needed to reduce impacts to less than significant. This analysis includes an analysis of water infrastructure and supply, wastewater and storm drain infrastructure and capacity, solid waste, and dry utilities (electric power, natural gas, and telecommunications) as well as the associated project demands on the ability of these utilities to serve the Project.

There were no comments received in response to the Notice of Preparation regarding Public Utilities. A copy of the Notice of Preparation and comments received are included in Appendix A.

The primary sources referenced in preparing the analysis include the 2020 Urban Water Management Plan, City of Roseville, Waterworks Engineers, June 2021 (City of Roseville 2021); Project Water Demand Calculations provided by Kaiser Permanente (included in Appendix E); a Sanitary Sewer Study by BKF Engineers dated March 23, 2022 (Appendix F), and a Hydromodification Variance Memorandum dated March 22, 2022 (Appendix G).

4.5.2 Environmental Setting

This section details the existing environmental setting for utilities and updates the information described in Section 4.8, Utilities, on pages 4.8-1 through 4.8-16 of the Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (2004 Expansion Project EIR).

Water Supply

The existing Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus or Campus) receives its water supply from the City of Roseville (City), which has yearly water entitlements for up to 66,000 acre-feet from the U.S. Bureau of Reclamation, Placer County Water Agency, and San Juan Water District. Every spring, the U.S. Bureau of Reclamation determines the yearly water allocation based on factors such as precipitation and snowpack. In normal or wet years, this is typically 100% of the contracted entitlement. However, during drought years, that allocation can be reduced, which then requires enacting the additional water contacts the City has, such as the contract entitlement with the Central Valley Project supplies of up to 32,000 acre-feet. In addition, the City's 2020 Urban Water Management Plan (UWMP) includes a Water Shortage Contingency Plan (WSCP) which provides measures such as limitations or prohibitions on landscape irrigation, water features, and pools that can be enacted to conserve water demands during drought periods (City of Roseville 2021).

The City is a member of the Sacramento River Forum and a signatory to the Water Forum Agreement. Accordingly, the City has agreed to limit its diversions from the upper American River to 58,900 acre-feet per year (AFY) during Normal and Wet water years, and to between 58,900 AFY and 43,800 AFY in Drier and Driest water years (City of Roseville 2021). The water is treated at the Barton Road Water Treatment Plant prior to distribution to the end users. The water treatment facility has a capacity to treat up to 100 million gallons per day (mgd).

The City also has groundwater wells that are used to supplement water supply demands. The City currently operates five groundwater well facilities that are capable of delivering approximately 17,500 AFY of water supply if run full time for the entire year. The wells are maintained primarily as a backup water supply and for improving water supply

reliability. The City has plans to expand its groundwater well network by adding 8 additional groundwater wells, which would increase delivery up to a total of 38,400 AFY. The City is also in the process of expanding their Aquifer Storage Recovery program to inject treated surface water, when available, for later recovery. In addition, the City also operates a recycled water program that is used primarily for landscape irrigation including City's parks as well as golf courses, and roadway medians.

Table 4.5-1 provides the actual and projected water use for the calendar year 2020 and projected water supplies out to the year 2045.

Table 4.5-1. Actual and Forecast Water Supplies (acre-feet per year)

Source	2020[1]	2025	2030	2035	2040	2045
Commercial	2,630	6,135	6,508	7,017	7,017	7,017
Industrial	254	4,175	4,726	5,123	5,123	5,123
Institutional/Governmental	412	8,904	9,494	10,231	10,231	10,231
Multi-Family	1,416	1,752	2,029	2,725	2,725	2,725
Single Family	17,115	22,564	24,508	26,281	26,281	26,281
Landscape	6,422	644	765	805	805	805
Losses	1,600	1,429	1,401	1,587	1,587	1,587
Groundwater Recharge	597	1,560	2,720	3,350	3,350	3,350
Total	**30,445**	**47,163**	**52,151**	**57,210**	**57,210**	**57,210**

Source: City of Roseville 2021.
1 Data for 2020 is actual and the other years are forecasts.

Water supply for the existing Medical Center Campus is served by an 8-inch potable water line that loops around the Campus and ties into the City's water mains in Eureka Road and Lead Hill Boulevard. There is also an existing 12-inch fire water line that forms a loop and connects to the City's water mains in Rocky Ridge Road and Eureka Road.

Wastewater

As detailed in the 2004 Expansion Project EIR, the City's Environmental Utilities Department handles the collection and treatment of wastewater in the City. Wastewater is treated at the Dry Creek Wastewater Treatment Plant (WWTP), which is located in the southwest region of the City. In addition, since publication of the 2004 Expansion Project EIR, the City has brought online a second wastewater treatment plant, the Pleasant Grove WWTP, which combined has a capacity to treat up to 25.5 million gallons of wastewater a day average dry weather flow. Wastewater from the Project would be treated at the Dry Creek WWTP. The Dry Creek WWTP is permitted to treat 16 mgd average dry weather flow and 45 mgd peak wet weather flow. The current average dry weather flow is approximately 9.3 mgd (City of Roseville 2020). Wastewater lines through the City range from 6 to 78 inches in diameter and the City also operates four wastewater pump stations and 18 lift stations. The two facilities not only serve the City but also handles wastewater from the cities of Rocklin, Loomis, Granite Bay and portions of Placer County.

The wastewater infrastructure for the existing Campus is serviced by an 8-inch line that runs west and connects downstream to the City's main 12-inch trunk line on Rocky Ridge Drive and several service lines that connect to an 8-inch main line running through the Campus within a drainage and sewer easement.

Stormwater

The City's storm drainage system is also managed by the Environmental Utilities Department. Multiple pump stations and lift stations are used to pump treated drainage into receiving waters. Major receiving waters include Pleasant Grove Creek, Curry Creek, Dry Creek, and Steelhead Creek. All of these streams ultimately discharge to the Sacramento River. There is an existing storm drain system that serves the Campus and ties into surrounding street infrastructure.

Solid Waste

Roseville, along with the cities of Lincoln and Rocklin, and Placer County, formed the Western Placer Waste Management Authority that provides solid waste management and policy making in the region. The Western Placer Waste Management Authority owns and operates the Western Regional Sanitary Landfill (WRSL), located at 3195 Athens Road in unincorporated Placer County, which serves the western portion of the County, including the City. The WRSL is classified as a Class III non-hazardous site, and a private firm under contract to the Western Placer Waste Management Authority manages its operation. According to CalRecycle, the WRSL has a maximum permitted throughput of 1,900 tons per day and has a total maximum permitted capacity of 36.4 million cubic yards (CalRecycle 2022b). The WRSL has a remaining capacity of approximately 29.1 million cubic yards and an anticipated closure date of January 1, 2058 (CalRecycle 2022b).

Collection of solid waste within the City is operated and managed by the Environmental Utilities Department, Solid Waste Utility. Temporary refuse collection and disposal, as in construction and demolition, may be handled by private haulers licensed through the City, which hold a Non-Exclusive Franchise Agreement.

To reach state-mandated recycling goals, the City participated, through the Western Placer Waste Management Authority, in the development of the Material Recovery Facility (MRF) at the WRSL. Most of the solid waste generated in the City is first transported to the MRF where it is separated for recycling, reuse, or conversion to energy resources. The MRF has a mixed waste processing capacity of 1,900 tons per day and a permitted processing capacity of 1,750 tons per day (CalRecycle 2022a). In addition to processing mixed solid waste a green waste compost facility is also provided.

Electricity and Natural Gas

The City of Roseville Electric Department (Roseville Electric) provides electrical service to customers within the City limits. Roseville Electric consists of transmission and generation facilities, sub-transmission and substation facilities, and distribution facilities that serve existing development within the City. Pacific Gas & Electric is the natural gas service provider for the city. Pacific Gas & Electric's underground transmission lines are located throughout City rights-of-way to serve existing development within the City.

Telecommunications

Telecommunications in the City was formerly served by the Roseville Telephone company which became Roseville Communications in 1986 and then changed its name to SureWest in 2000. In 2012, SureWest was taken over by Consolidated Communications Holdings.

4.5.3 Regulatory Setting

The regulatory setting for utilities is the same as described starting on page 4.8-1 of the 2004 Expansion Project EIR, with the following updates.

Federal

Clean Water Act

The federal Clean Water Act and regulations set forth by the California Department of Health Services and State Water Resources Control Board (SWRCB) are aimed primarily at discharges of effluent to surface waters. Title 40 of the Code of Federal Regulations (CFR) Part 503, Title 23 California Code of Regulations (CCR), and standards established by the Central Valley Regional Water Quality Control Board regulate the disposal of biosolids generated by wastewater treatment plants. Under the Clean Water Act, the Central Valley Regional Water Quality Control Board issues both general and individual permits for discharges to surface waters, including for both point-source and non-point-source discharges. The Clean Water Act mandates permits for municipal stormwater discharges. The City of Roseville is required to comply with the Phase II National Pollutant Discharge Elimination System for discharges from Municipal Separate Storm Sewer Systems that serve populations under 100,000. On February 5, 2013, the SWRCB adopted a Statewide General Storm Water Permit for all Phase 2 communities which include the City of Roseville, National Pollutant Discharge Elimination System No. CAS0085324, Order No. 2013-0001-DWQ.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (CFR Title 40, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

California Water Plan Update 2013

The California Water Plan is the state's blueprint for integrated water management and sustainability. The California Department of Water Resources updates the Water Plan approximately every 5 years. California Water Plan Update 2013 is the latest edition of the water plan and provides statewide strategic plan for water management to the year 2050. The California Water Plan provides framework and resource management strategies promoting two major initiatives: integrated regional water management that enables regions to implement strategies appropriate for their own needs and helps them become more self-sufficient, and improved statewide water management systems that provide for upgrades to large physical facilities, such as the State Water Project, and statewide management programs essential to the California economy (DWR 2013).

Drought Emergency Regulation, Executive Order B-29-15

In response to the 2012–2015 drought, the Governor issued Executive Order B-29-15 on April 1, 2015, directing the SWRCB to develop regulations regarding water use. The executive order included a mandatory 25% reduction of urban potable water use for the State between June 2015 and February 2016. On May 5, 2015, the SWRCB adopted the Drought Emergency Regulation (Resolution No. 2015-0032) mandating potable water use reductions

for all water suppliers in California and implementing a number of water use restrictions. The Drought Emergency Regulation placed each urban water supplier in a conservation tier, ranging between 8 and 36%, based residential per capita water use for the months of July – September 2014. Cal Water was required to reduce potable water use by 32%. Resolution No. 2015-0032 also directed staff to work with stakeholders to further develop and consider a range of factors that contribute to water use, including but not limited to climate, growth, investment in local, drought resilient supplies, and others.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000 and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, making a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 requires that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020. This bill requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multifamily apartments with five or more units are also required to form a recycling program. The City's most recent, 2020 disposal rate was 4.4 pounds per resident per day and 8.3 pounds per resident per day per employee compared to target goals of 8.8 and 14.3 pounds per resident per day, respectively (CalRecycle 2022c).

Senate Bill 1374: Construction and Demolition Waste Reduction

Senate Bill 1374 required that annual reports submitted by local jurisdictions to CIWMB (now CalRecycle) include a summary of the progress made in the diversion of construction and demolition waste materials. In addition, Senate Bill 1374 required the CIWMB to adopt a model ordinance suitable for adoption by any local agency that

required 50% to 75% diversion of construction and demolition waste materials from landfills. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWMB's model by default but they are required to adhere to reporting requirements which the City complies with.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

California Medical Waste Management Act

California Health and Safety Code Sections 117600–118360, last updated September 2015, is known as the Medical Waste Management Act and regulates proper handling, storage, treatment, and transportation of medical waste. The Medical Waste Management Act outlines requirements for small and large generators of medical waste, including registration as a medical waste generator and payment of annual permit fees, as well as completion of a Medical Waste Management Plan. Additionally, the Medical Waste Management Act regulates medical waste haulers and medical waste treatment facilities.

California Health and Safety Code Sections 25500–25547.8

Under Health and Safety Code Chapter 6.95, Hazardous Materials Release Response Plans and Inventory, individual generators of hazardous waste would be required to prepare a Hazardous Materials Business Plan (HMBP). HMBPs are required when hazardous materials are generated in quantities greater than 55 gallons, 500 pounds, or 200 cubic feet. The HMBP includes basic information about the location, types, quantities, and health risks of hazardous materials stored, used, or disposed of at the site, as well as information about employee training and emergency response plans. The local Certified Unified Program Agency is responsible for implementing unified programs for hazardous materials. The Certified Unified Program Agency for the City is the City of Roseville Fire Department (City of Roseville 2016h).

Local

City of Roseville Municipal Code

Title 14

Title 14 of the City's Municipal Code (City of Roseville 2016e) contains regulations associated with water rates (Chapter 14.08), water conservation (Chapter 14.09), and installation of water facilities (Chapter 14.08).

Water Efficiency Landscape Ordinance

In response to AB 1881 in 2006, the City adopted the Water Efficiency Landscape Ordinance in order to protect the state's limited water resources and increase water conservation in landscaping. This Ordinance was adopted as Chapter 14.18 of Title 14 of the Roseville Municipal Code. All new development is required to comply with this ordinance which implements planting and irrigation design, appropriate use of plants, and intelligent landscape management to ensure that excessive water demands are reduced. Efficient design practices include installation of irrigation systems that apply water within the root zone of the plants, automatic irrigation controllers that allow

for early morning watering when there is less heat and wind allowing for more efficient irrigation, and properly maintained moisture sensors that override automatic irrigation when the soil is already wet or moist.

Per Section 14.18.050, Submittal Requirements, a complete landscape package must be submitted to the City for review and approval prior to the issuance of building permits. The submittal also requires completion of the City's Water Efficient Landscape Worksheet, a soil management report, a landscape plan, an irrigation plan, and a grading and drainage plan.

Title 9

Title 9, Chapter 9.17 of the Health and Safety Code for the City includes provisions for refuse hauling and recycling that covers solid waste disposal for both construction and operation of projects in the City.

City of Roseville 2019 Design and Construction Standards

The City's Design and Construction Standards apply to transportation, storm drainage, sewer, wastewater pumping, water distribution, graywater distribution, underground pipelines, roadways, and other improvements, and are designed, in part, to avoid impacts related to geologic constraints and to control erosion and stormwater runoff.

City of Roseville Stormwater Quality BMP Guidance Manual for Construction

The Stormwater Quality BMP Guidance Manual for Construction was developed as part of the City's program to implement the goals contained in the City of Roseville Stormwater Management Program (City of Roseville 2004), as required by the National Pollutant Discharge Elimination System municipal stormwater permit from the SWRCB. The BMP Guidance Manual provides the requirements for preparation and submittal of Stormwater Pollution Prevention Plans for construction activities, including City and state procedural requirements for Stormwater Pollution Prevention Plan submittals and site inspections related to stormwater quality. The BMP Guidance Manual also identifies the various construction related best management practices (BMPs) that can be used within the City to control construction site runoff. The manual addresses issues such as erosion control, sediment control, and good housekeeping practices.

City of Roseville 2035 General Plan

The City's 2035 General Plan serves as a long-term policy guide for physical, economic, and environmental growth and was last updated in 2020 (City of Roseville 2020). The City has 14 adopted Specific Plans located within the City limits, including the Northeast Roseville Specific Plan, which includes the Campus. The Northeast Roseville Specific Plan is incorporated as a part of the General Plan and should be referred to for specific requirements.

Applicable goals and policies from the Public Facilities Element are listed below.

Water Supply

Goal PF6.1. Maintain a water system that adequately serves the existing community and planned growth levels through buildout, ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner.

Goal PF6.4. Actively pursue water efficiency measures to ensure compliance with all State of California mandates.

Goal PF7.3. Actively pursue the use of recycled water, where appropriate, and expand recycled water distribution system to deliver and meet estimated City demands for landscape irrigation.

Goal PF7.4. Meet State and federal standards for the discharge of treated wastewater, as well as State water quality standards for the production of recycled water.

Policy PF7.3. Ensure that wastewater treatment capacity is available for planned development and intensification and that wastewater generation is minimized.

Policy PF7.6. Prevent hazardous materials from entering the wastewater system.

Solid Waste

Goal PF8.3. Continue to participate in local and regional approaches to source reduction, material recovery, recycling, and solid waste disposal.

Policy PF8.2. Comply with the source reduction and recycling standards by reducing the projected quantity of solid waste disposed at the regional landfill.

Policy PF8.3. Require a waste characterization profile for proposed large-scale commercial and industrial development projects.

Dry Utilities

Goal PF4.1. Reliability: maintain a resilient and highly reliable electric system with sufficient resource capacity and reserves to meet current and future demand.

Goal PF4.3. Compliance: Comply with applicable local, state, and federal mandates.

Policy PF4.4. Comply with federal, state, and local greenhouse gas reduction targets, renewable portfolio standards and carbon-free electricity requirements.

Policy PF4.5. Maintain an Integrated Resource Plan, incorporating energy efficiency, demand and supply-side management, greenhouse gas reduction, renewable portfolio standard compliance, conservation, load management, and reliability strategies.

Policy PF4.8. Require new development to pay a fair share of the cost of new sub-transmission and distribution needed to serve the development and to dedicate sites and easements needed for substations, transmission, sub-transmission, and distribution.

Northeast Roseville Specific Plan

The Northeast Roseville Specific Plan was approved by the City Council on April 8, 1987, and was most recently amended in September 2013. Relevant goals, policies, and implementation measures applicable to the proposed project are listed below.

Goal 1. Develop the Northeast Area in a manner consistent with the City of Roseville's General Plan goals to provide services in a time frame consistent with development of the site and the City.

Plan Policy 1. Extend sewer service to the [development] site as a pre-condition to development.

Plan Policy 2. Allow development to occur only to the extent capacity is available at the sewage treatment plant.

4.5.4 Impacts and Mitigation Measures

Methods of Analysis

The following impact analysis considers the potential impacts of the proposed changes to the previously approved project components that were analyzed in the 2004 Expansion Project EIR. Where existing information and analysis in the 2004 Expansion Project EIR are considered sufficient to evaluate the impacts of the proposed Project, no additional environmental review is provided.

The potable water demand created by the proposed Project is compared against the City's water supply portfolio and its ability to obtain water from its sources in dry/normal/wet year conditions. The previously approved 155,000-square-foot (sf) Surgery and Intensive Care building was estimated to have a water demand of 17,050 gallons per day (gpd) or 19.1 AFY based on a water demand ratio of 0.11 gpd per square foot, which was the overall average for the Campus at that time (155,000 sf x 0.11 gpd/sf = 17,050 gpd). Overall, the total water demand associated at buildout of the 2004 Expansion Project was estimated to be 160,000 gpd. In 2021, the Campus had a consumption rate of 126,000 gpd leaving a remaining 34,000 gpd.

The City has indicated that adequate water supplies are available to serve the proposed Project, as described below.

Thresholds of Significance

Consistent with Appendix G of the California Environmental Quality Act Guidelines, a significant impact would occur if development of the proposed Project would do any of the following:

- require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects;
- have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- 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; or
- not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Project Impacts

Impact 4.5-1 The proposed Project would not require the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities.

The 2004 Expansion Project EIR concluded that the Project's water demand at that time could be met based on (a) the fact that it had already been accounted for in the planning of the City's 2002 UWMP, (b) the water recycling program was about to come online and reduce the City's potable demands, (c) the City's water budgets were conservative, and (d) there was confirmation from the City's Environmental Utilities Department that sufficient water supplies were available to serve the Project and impacts would be less than significant.

For wastewater conveyance, the 2004 Expansion Project EIR concluded that with an extension of an 8-inch line that terminated just past Douglas Street by stubbing out to the 10-inch line in Rocky Ridge Drive would provide adequate capacity to serve the proposed Project. This was confirmed by the City's Environmental Utilities Department. For wastewater treatment, the 2004 Expansion Project EIR concluded impacts would be less than significant because of sufficient capacity in the Dry Creek WWTP and the anticipation of the new Pleasant Grove WWTP.

Stormwater was not specifically addressed as part of the Utilities section of the 2004 Expansion Project EIR. Potential impacts related to solid waste were found to be less than significant in the 2004 Expansion Project EIR because of adequate capacity in the local landfills. For dry utilities, including electricity and telecommunications, the 2004 Expansion Project EIR also concluded impacts would be less than significant because of existing long term planning efforts by Roseville Electric and even though new telecommunication facilities were going to be required, the construction of those facilities was already addressed in other sections of the 200 Expansion Project EIR.

Water Facilities

The proposed Project would tie into existing water service lines, which serve the Medical Center Campus consisting of an existing 8-inch line that loops around the Campus and ties into the City's water mains in Eureka Road and Lead Hill Boulevard. There is also an existing 12-inch fire water line that forms a loop and connects to the City's water mains in Rocky Ridge Drive and Eureka Road. The proposed Inpatient Tower building would tie into these existing lines with newly constructed 6-inch lines and include an emergency storage tank. The construction of these proposed water tie-ins has been considered as part of the Project, and impacts associated with construction including trenching has been addressed in the 2004 Expansion Project EIR, with the exception of impacts associated with construction-related air quality and greenhouse gas emissions which are addressed in Sections 4.2 and 4.2 of this Draft Supplemental Environmental Impact Report (SEIR). There are no unique impacts associated with the installation of water infrastructure to serve the proposed Project that have not been previously evaluated in the 2004 Expansion Project EIR. Project construction would occur in accordance with all applicable regulatory requirements.

The Barton Road Water Treatment Plant has a capacity to treat up to of 100 mgd (approximately 112,000 AFY) and projected City water demands are below that amount. As discussed below under Impact 4.5-2, the Project would require treatment of approximately 21,382 gpd or approximately 24 AFY. The Project's water demand is not that far from what was estimated in the 2004 Expansion Project EIR and still well within the anticipated amount at full buildout. It is anticipated that although the Project is larger than what was evaluated in the 2004 Expansion Project EIR due to the use of more sophisticated water conservation features as well as a more precise method of estimating water demand the Project's water demand has not increased significantly relative to the 2004 Expansion Project. The Barton Road Water Treatment Plant has sufficient capacity to treat the additional water demands associated with the proposed Project. Therefore, impacts associated with the construction of new water facilities would be **less than significant**.

Wastewater Conveyance Facilities

The wastewater infrastructure for the existing Medical Center Campus is serviced by an 8-inch line that runs west and connects downstream to the City's main 12-inch trunk line on Rocky Ridge Drive and several service lines that connect to an 8-inch main line running through the Campus within a drainage and sewer easement. Based on information provided by the City, the existing 12-inch main in Rocky Ridge Drive has an available capacity of about 0.9 mgd (BKF 2022). The proposed Project would convey sewage in a new 8-inch line that runs parallel and connects to the existing 8-inch servicing the existing hospital. The existing 8-inch connection to the City main on Rocky Ridge Drive would remain. The proposed Inpatient Tower building would produce an average dry weather flow of 69,000 gpd. This results in a peak wet weather flow of 496,800 gpd using the City's Design Standards for wastewater (BKF 2022). Per the City's sewer network model, the existing 12-inch line in Rocky Ridge Drive has a peak flow of 0.256 mgd downstream of the existing 8-inch connection. With the addition of the peak flow from the proposed inpatient Tower building, the peak flow in the system would be 0.756 mgd. The capacity of a 12-inch pipe at full flow is 1.00 mgd and at 0.7 depth is 0.85 mgd, per the City's Design Standards (BKF 2022). Therefore, the additional peak flow from the new improvements would not exceed the capacity limits for the 12-inch main per the City design standards and the existing sewer line that the proposed Project would tie into can accommodate the increase in flows from the Project. There are no other unique impacts associated with the installation of sewer connections to serve the Project that have not been previously discussed and accounted for in the 2004 Expansion Project EIR or this Draft SEIR document. Project construction would occur in accordance with all applicable regulatory requirements. Therefore, impacts associated with the construction of wastewater conveyance facilities would be **less than significant**.

Wastewater Treatment Facilities

As discussed above in the Environmental Setting, wastewater in the City is treated at either the Dry Creek WWTP, which is located in the southwest region of the City, or at the newer Pleasant Grove WWTP. Flows from the Project would be directed to Dry Creek WWTP which has a maximum capacity of 46 mgd. The current (2020) average dry weather flow to the Dry Creek WWTP is approximately 8.5 mgd, of which approximately 65%, or 5.5 mgd comes from the City (City of Roseville 2021). The Pleasant Grove WWTP currently (2020) treats approximately 8.1 million gallons average dry weather flow with approximately 65% or 5.3 mgd coming from the City (City of Roseville 2021). The Pleasant Grove WWTP is currently undergoing improvements to increase treatment capacity from 9.5 to 12 mgd. According to the sewer study prepared for the proposed Project, the Project would generate approximately 0.756 mgd of wastewater per day and 847 acre-feet annually (BKF 2022). Given the remaining capacity of the Dry Creek WWTP and the anticipated expansion of the Pleasant Grove WWTP, there is sufficient capacity to adequately accommodate the Project's contribution of wastewater. As such, no improvements to either of the wastewater facilities would be required to ensure sewer service to accommodates the demand of the Project. Therefore, impacts associated with wastewater treatment facilities would be **less than significant**.

Stormwater Drainage Facilities

The existing Medical Center Campus is largely developed and predominantly covered in impervious surfaces with the exception of landscaped areas. Under existing conditions, the drainage management areas on the west side of the Campus drain to proprietary stormwater treatment devices (CDS units) prior to connecting to the existing City stormwater infrastructure. The proposed Project would increase impervious surfaces from 359,114 square feet to 376,127 square feet, for an increase of 17,013 square feet. The Campus has been divided into five different drainage management areas and post-project peak storm flows for three of these areas would be less than under existing conditions. However, two of the drainage areas would experience an increase in peak storm flows which

would require that drainage control features are constructed to capture the volumetric difference between post-project and pre-project flows, in accordance with the City's Municipal Separate Storm Sewer Systems permit. The proposed Project includes construction of proprietary devices (CDS units) for treatment of stormwater runoff. Stormwater flow entering the CDS units is first directed into a separation chamber that utilizes water velocities to create a swirling vortex to capture debris and allow sediment to settle into an isolated sump. Stormwater is then directed through a hydrocarbon baffle that treats stormwater that exits the system. Downstream of the CDS units, stormwater would then drain to detention pipes (subsurface holding areas for storage of peak flows) such that peak flows would be less than under existing conditions, and prior to connecting to the City stormwater infrastructure.

The construction of the proposed storm drain improvements described above has the potential to cause environmental effects associated with buildout of the Project. The construction impacts associated with the storm drain improvements have been previously considered as part of the Project, and their disturbance footprints and construction techniques, as well as their associated impacts, have been accounted for within the 2004 Expansion Project EIR and this Draft SEIR. There are no unique impacts associated with the installation of storm drain improvements to serve the Project; therefore, impacts associated with stormwater drainage facilities would be **less than significant**.

Electric Power, Natural Gas, and Telecommunications

Upgrades would be required with respect to electric power, natural gas, and telecommunication facilities to facilitate the proposed Project. These utilities would be part of a dry utility package that would be installed on site and connect with existing infrastructure to provide service to the Project. Upgrades would be confined to the connections within the existing Campus and not any off-site centralized facilities. The existing feeder infrastructure is located within and directly adjacent to the Campus and within public streets. Connection to these existing utilities would require limited construction, which would be temporary. Project construction would occur in accordance with all applicable regulatory requirements. Therefore, impacts associated with electric, natural gas, and telecommunication lateral connections would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.5-2 Sufficient water supplies would be available to serve the proposed Project.

Development of the proposed Project would increase water demand for operation of the proposed Inpatient Tower building and other associated improvements. The 2004 Expansion Project EIR considered a water demand for the project that was based on the Campus demand at the time that EIR was prepared in 2004. As noted above, the 2004 Expansion Project EIR concluded that there was sufficient water supply to meet the project's proposed demand.

In 2004, the average water usage for the entire campus was calculated as 0.11 gpd per building square foot. On that basis, the analysis of the 155,000-square-foot Surgery and Intensive Care building evaluated in the 2004 Expansion Project EIR had an estimated demand of 17,050 gpd. The proposed Inpatient Tower building is approximately 123,000 square feet larger than the Surgery and Intensive Care building, at 278,000 square feet. However, a more accurate estimate of the proposed water demand for the proposed Project was made including design specifics, occupancy estimates, and planned fixture types. This method determined a projected water demand of 10,782 gpd (see Appendix E). In addition, the proposed Inpatient Tower building would have additional water demands associated with sterilization equipment requirements, which would represent another 10,600 gpd, for a total water demand of 21,382 gpd which is 4,332 gpd greater than what was analyzed in the 2004 Expansion

Project EIR (Appendix E). This would represent a 25% increase in water demand relative to the previously approved Surgery and Intensive Care building. This relatively small increase for a substantially larger facility is likely due to a combination of using more water efficient fixtures to meet current building code requirements, as well as a more precise method of estimating water demand. In the 2004 Expansion Project EIR, the total water demand at full buildout of the site was analyzed at 160,000 gpd and for 2021, the Campus had a consumption rate of 126,000 gpd leaving a remaining 34,000 gpd.

The Project would also be designed to meet the Leadership in Energy and Environmental Design (LEED) HC v4 Gold certification and also includes a variety of sustainability measures that would conserve water. Specifically, the Project would reduce indoor water usage by including low-flow and low-flush plumbing fixtures with flush and flow rates significantly below the national standard set by the U.S. Department of Energy's Energy Policy Act; and reduce outdoor water use by including high efficiency irrigation systems. Lastly, the Project would be constructed in compliance with the California Green Building Standards also known as CALGreen. These standards include regulations for water efficiency and conservation that are continually updated and adapted based on new legislation and changing conditions.

According to the City's 2020 UWMP, the supply reliability and drought risk assessments considered the water supply available for a single-year and five-year consecutive drought period for both the near-term and long-term buildout of the 2035 General Plan. The supply availability was compared to the total water use to determine if a deficit is projected under any of the conditions. The supply availability is subject to seasonal and climatic shortages and so in a dry or critically dry years increasing limitations are placed on the City for the volume of water available from Folsom Lake. The supply and drought risk assessment demonstrated that there may be minor deficits in supply versus demand conditions under certain drought related circumstances (City of Roseville 2021). These minor shortages may occur in the near-term extended drought scenario (5 years), as well as over the longer term for both extended and single year drought conditions. The highest level of deficiency identified represents less than 8% of the annual demand and can be remedied by the simple application of basic conservation measures, estimated to achieve a 13% savings (City of Roseville 2021).

In order to reduce the projected deficits during drought conditions, a Water Shortage Contingency Plan was prepared as part of the UWMP. The Water Shortage Contingency Plan outlines the procedures that the City would take annually to determine whether there would be a water deficit based on projected water demand and supply availability. If a deficit is anticipated the City would formally declare a water shortage emergency condition of varying levels dependent on the severity of the deficit. The declaration of the water shortage emergency condition would then trigger a set of demand reduction actions that the City and all water users would be required to adhere to. These demand reduction actions are set forth in the Municipal Code Chapter 14.09 Water Conservation and Drought Mitigation Ordinance. The legal authority of the City to enforce compliance with the demand reduction actions is granted by this Ordinance.

Therefore, considering that the proposed Project would only result in an increase of 4,332 gpd over the 2004 Expansion Project EIR, and that the Draft 2020 UWMP shows an ability to meet projected growth for normal years and only minor deficiencies in five consecutive dry years that can be addressed by implementation of conservation measures, the potential impact related to water supplies is considered **less than significant.**

Mitigation Measures

No mitigation measures would be required.

Impact 4.5-3 The proposed Project would not result in inadequate wastewater treatment capacity to serve the Project's projected increase in demand.

The 2004 Expansion Project EIR concluded that there was sufficient capacity in the Dry Creek WWTP and, in addition, the Pleasant Grove WWTP was about to come online to provide additional capacity. As such, the potential impacts related to wastewater treatment capacity were found to be less than significant

As discussed above in Impact 4.5-1, wastewater in the City is treated at either the Dry Creek WWTP or Pleasant Grove WWTP. Combined they have a capacity to treat up to 30 mgd of wastewater and have recently averaged a combined average dry weather flow of 16.6 mgd. Pleasant Grove WWTP is also undergoing improvements to expand capacity. According to the sewer study prepared for the proposed Project, the Project would generate approximately 0.756 mgd of wastewater that would be treated at the Dry Creek WWTP (BKF 2022). Given the remaining capacity of the two treatment plants and the anticipated expansion for Pleasant Grove, there is sufficient capacity to adequately accommodate the Project's contribution of wastewater. As such, the existing wastewater facilities have sufficient capacity to serve the proposed Project. Therefore, impacts associated with capacities of wastewater treatment facilities would be **less than significant.**

Impact 4.5-4 The proposed Project would not generate an increase in solid waste exceeding capacity of the landfill or impair attainment of solid waste reduction goals.

Solid waste associated with buildout of the campus was analyzed in the 2004 Expansion EIR. The estimated increase in solid waste production was approximately 712 tons per year which was about 0.5% of the total waste received by the WRSL at the time (2004 EIR p.4.8-10). For the proposed Project, the Inpatient Tower building is approximately 79% larger than the Surgery and Intensive Care building and thus would be considered to produce up to 1,274 tons per year. According to recent CalRecycle data, the WRSL has a remaining capacity of approximately 29.1 million cubic yards (approximately 3.3 million tons) and an anticipated closure date of January 1, 2058 (CalRecycle 2019b).

Approximately 465 acres west of the WRSL and across Fiddyment Road were acquired and are available for a future landfill expansion. Additionally, the Western Placer Waste Management Authority has also purchased the parcel east of the landfill. Both parcels provide opportunity for expanding the landfill to increase capacity; however, plans for expansion of the landfill capacity beyond 2058 have not been developed or approved to date.

In addition, the existing Medical Center Campus is otherwise adhering to all applicable state and local standards that apply to solid waste reduction goals, including Assembly Bills 939, 341, 1327,1826 and Senate Bill 1374. The proposed Project would handle solid waste consistent with current operations of the existing Medical Center that is conforming to these waste reduction goals and requirements as well as proper disposal of medical waste (discussed below under Impact 4.5-5). Therefore, considering the current available capacity at WRSL and the potential available expansion opportunities as well as continued compliance with solid waste reduction measures that the existing hospital is adhering to, the potential impact would be considered **less than significant.**

Mitigation Measures

No mitigation measures would be required.

Impact 4.5-5 The proposed Project would comply with all reduction statutes and regulations related to solid waste.

In compliance with the City's Municipal Code, Chapter 9.17, all construction and demolition debris generated within the City must be delivered to the WRSL for recycling or disposal. Collection of solid waste within the City is operated and managed by the City's Environmental Utilities Department. Permitted non-exclusive franchise haulers may handle temporary refuse collection and disposal for construction and demolition.

To minimize the amount of solid waste generated by the proposed Project, as required by Section 9.17 of the City's Municipal Code, the project contractor would submit a plan to the City's Department of Environmental Utilities to ensure recycling, storage, and disposal of all construction debris occurs in compliance with relevant federal, state, and local statutes.

During operation, all solid waste associated with the proposed Project would first go to the MRF for sorting to capture any recyclable materials and the remaining waste would then be shipped to the WRSL for disposal in accordance with current operations at the existing hospital which conforms to all applicable reduction statutes and regulations (such as ABs 939, 341, 1327, and 1826) related to solid waste disposal. Medical or bio-hazardous waste generated would be collected on-site and picked up by Stericycle for proper disposal in accordance with requirements of the Medical Waste Management Act. As a generator of medical waste, the existing Medical Center is registered with the California Department of Public Health and has a Medical Waste Management Plan on file with the state. The Management Plan would need to be amended to include medical waste generated by the inpatient Tower. Additionally, Kaiser Permanente would be required to update their existing HMBP to include the proposed facilities, which includes basic information about the location, types, quantities, and health risks of hazardous waste that are stored and disposed of at the site, as well as information about employee training and emergency response plans. The Medical Waste Management Plan and the HMBP would be prepared or updated and would include a complete list of the quantities and locations of the hazardous waste materials on site, as well as procedures and training for proper handling, storage, and disposal of these materials in compliance with all applicable laws and regulations. As noted previously all solid waste would be delivered to the MRF for sorting prior to disposal at the WRSL, consistent with existing state and local requirements to reduce solid waste to the landfill. Therefore, the potential impact related to complying with federal, state, and local management is considered **less than significant.**

Mitigation Measures

No mitigation measures would be required.

Cumulative Impacts

The cumulative context for water supply is buildout of the City's 2035 General Plan and the associated 2020 UWMP.

The cumulative context for wastewater treatment buildout of the service areas of the Dry Creek and Pleasant Grove WWTPs that includes the City and surrounding communities and parts of Placer County.

The cumulative context for solid waste is buildout of the City's 2035 General Plan.

Impact 4.5-6 The proposed Project, when combined with current and reasonably foreseeable future projects, would not result in cumulatively considerable impacts related to utilities and service systems.

Water Supply

Development of the proposed Project combined with buildout under the 2035 General Plan would increase water supply demands for the City. The City has prepared the 2020 UWMP, which provides current and projected water demands for the City through 2045 that is based on the buildout of the General Plan. The 2020 UWMP also included a supply and drought risk assessment to evaluate projected growth with available water supplies through normal and 5-year drought periods. The assessments demonstrate that there may be minor deficits in supply versus demand conditions under certain drought related circumstances (City of Roseville 2021). These minor shortages may occur in the near-term extended drought scenario (5 years) as well as over the longer term for both extended and single year drought conditions. However, the City's Water Shortage Contingency Plan provides the procedures and authority to enforce reduction actions (e.g., limitations and prohibitions on landscape irrigation or water features, pools, and car washes) that can address these potential minor deficiencies. In addition, the City may also choose to consider operating groundwater pumping in any year type based on water supply conditions and/or operations and maintenance strategies to augment water supplies (City of Roseville 2021). The City would determine the needed balance between water conservation and groundwater pumping on a case by-case basis consistent with the City's Municipal Code. The City also continues to plan for and analyze opportunities for water supply projects or exchanges that would increase the reliability of the raw water supplies diverted from the American River (City of Roseville 2021). According to the water supply reliability analysis for multiple dry year scenarios, enactment of the Water Shortage Contingency Plan would result in meeting the projected water demands without a deficit (City of Roseville 2021). Therefore, a significant cumulative impact has not been identified. As such, the Project when combined with past, present and reasonably foreseeable future projects identified in the City's General Plan would be expected to have sufficient water supplies based on growth forecasts and would not contribute to an existing cumulative impact. Therefore, the potential cumulative impact related to sufficient water supplies would be **less than significant**.

Wastewater Conveyance

Development of the Project combined with cumulative projects would increase wastewater flows to the existing City sewer system. The wastewater collection and treatment facilities within the City's service area are maintained and operated by the City. Projects are evaluated individually by the City during environmental review to determine adequate capacity for each project. As cumulative increases in wastewater conveyance are found to require upgrades, the City would require that capital improvements are completed to sufficiently accommodate increased wastewater inflows to existing sewer lines. The City's General Plan EIR did not identify a significant cumulative impact on wastewater conveyance. As such, the City's system would have adequate capacity to serve the Project including cumulative projects' projected demand, and the Project would not contribute to an existing cumulative impact. Therefore, cumulative impacts would not be **less than significant**.

Wastewater Treatment Facilities

As discussed above, the City operates two wastewater treatment facilities that have a capacity to treat up to 30 mgd. As noted above, both WWTPs are currently operating at approximately 16 mgd combined during average dry weather flows, well below the full capacity of the facilities. In addition, Pleasant Grove WWTP is undergoing expansion improvements to increase capacity in anticipation of future growth. The City's General Plan EIR did not identify a significant cumulative impact on wastewater treatment. Therefore, considering the current available capacity, planned capital improvements to increase capacity, and other long-term planning efforts by the City, the Project would not contribute to an existing cumulative impact. Therefore, the potential impact related to wastewater treatment facilities would be **less than significant**.

Solid Waste

The proposed Project combined with current and reasonably foreseeable future projects would increase land-use intensities in the area, resulting in an increase in solid waste generation in the service area for the WRLF. However, per CALGreen requirements, 65% of construction and debris waste must be diverted from landfills. Once operational, AB 939 mandates that cities divert from landfills, at a minimum, 50% of the total solid waste generated to recycling facilities. In addition, to reduce on-site solid waste generation, the Project would be required to implement waste reduction, diversion, and recycling during both construction and operation in accordance with current regulatory requirements. In addition, the City's General Plan EIR notes that adequate capacity is available at the WRSL through 2058 and the cumulative impact is less than significant. Therefore, through compliance with state and local solid waste diversion requirements and because the Project would not contribute to an existing cumulative impact, the Project would result in a **less-than-significant cumulative impact.**

Stormwater

Development of the Project combined with cumulative projects could increase stormwater flows to the City's existing stormwater drainage system for all projects that increase impervious surfaces. However, not all projects involve increases to impervious surfaces and new development as well as redevelopment that replace impervious surfaces are required to include drainage control measures such that peak storm flows are equal to or less than existing conditions. Projects are evaluated individually by the City during environmental review to determine adequate capacity for each project and adherence to drainage control requirements. The City's General Plan EIR did not identify a significant cumulative impact associated with stormwater. As such, due to the analysis of project specific demands, current drainage control requirements and the City's long-term planning efforts, the City's system would have adequate capacity to serve the Project and cumulative projects with respect to stormwater infrastructure, and the Project would not contribute to an existing cumulative impact. Therefore, the impact would be **less than significant**.

Electricity, Natural Gas, and Telecommunications

Development of the Project combined with cumulative projects would increase demands on the electricity and natural gas infrastructure and could increase demands on telecommunication facilities. Typically, upgrades to electric utility networks fall under the jurisdiction of the California Public Utilities Commission and would be subject to environmental review as electrical projects are proposed. As a result of this process which involves ongoing monitoring and electrical project development, Roseville Electric ensures that it can provide adequate electrical service to the City with anticipated future growth.

Given the nature of telecommunication and gas lines (which are not typically subject to the constraints of existing facilities), beyond local connections to existing infrastructure, no additional telecommunication or gas line construction is anticipated to be required for most if not all cumulative construction. Additionally, cumulative development would be subject to review on a case-by-case basis. Should the applicable service provider determine that upgrades or extensions of infrastructure be required, any such upgrades would be included within each project's environmental review. The City's General Plan EIR did not identify a significant cumulative impact associated with the increase in demand for electric, natural gas, and telecommunication services. Therefore, the Project would not contribute to an existing cumulative impact and the impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

4.5.5 References

BKF Engineers, 2022. Kaiser Permanente Roseville Medical Center, Sanitary Sewer Study, March 23, 2022.

CalRecycle, 2022a. SWIS Facility Activity/Site Details, MRF Roseville California, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2537?siteID=2269, accessed April 19, 2022.

CalRecycle, 2022b. Jurisdiction Diversion/Disposal Rate Summary, Roseville California, https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2542?siteID=2273, accessed April 19, 2022.

CalRecycle, 2022c. Jurisdiction Diversion/Disposal Rate Summary, Roseville California, 2020, https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006, accessed April 28, 2022.

City of Roseville. 2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

City of Roseville. 2020. August. City of Roseville General Plan 2035. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed: April 20, 2022.

City of Roseville. 2013. Northeast Roseville Specific Plan, Adopted April 8, 1987, Resolution #87-52. Last Amended September 18, 2013, Resolution #13-374. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Northeast%20Roseville%20Specific%20Plan/Northeast%20Roseville%20Specific%20Plan.pdf. Accessed: April 17, 2022.

City of Roseville. 2021. 2020 Urban Water Management Plan, June 2021.

Yi, Chang, 2022. Personal Communication, email, Projected Water Demand Calculations, email received April 25, 2022.

4.6 Transportation and Circulation

4.6.1 Introduction

This section describes the regulatory and environmental setting for evaluating the Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (proposed Project) transportation effects, followed by an analysis of those effects to determine their significance and potential mitigation measures. For any significant impacts, feasible mitigation measures are proposed to reduce impacts.

No transportation-related comments were received in response to the Notice of Preparation (NOP). A copy of the NOP and comments received is included in Appendix A.

The analysis in this section references the following sources:

- City of Roseville 2035 General Plan Update Final EIR
- City of Roseville Short Range Transit Plan 2018-2025
- City of Roseville Bicycle Master Plan
- City of Roseville Pedestrian Master Plan
- City of Roseville VMT Impact Standards (Section 4-9 of the 2021 Amendments to City of Roseville Design and Construction Standards)

Appendix D of this Draft Supplemental EIR (Draft SEIR) presents a detailed analysis that compares the proposed Project to the traffic analysis inputs and outputs of the *Roseville 2035 General Plan Update Final EIR*. As described in the Checklist provided in Chapter 3 of this Draft SEIR, the analysis shows that the proposed Project was considered in the analysis of vehicle miles traveled (VMT) conducted for the *Roseville 2035 General Plan Update Final EIR*. Since the Project is consistent with the General Plan EIR, it would qualify for streamlining per Section 15183 of the CEQA Guidelines. Therefore, an analysis of VMT is not further addressed in this section.

4.6.2 Environmental Setting

This section details the existing environmental setting for transportation and updates the information described in Section 4.3, Traffic and Circulation starting on page 4.3-1 of the *Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report* (2004 Expansion Project EIR).

This section describes the existing environmental setting, which is the baseline scenario upon which Project-specific impacts are evaluated. The baseline for this analysis represents transportation conditions in February 2022, the when the NOP was released. In some cases, traffic data collected in May 2019 is used to represent baseline traffic levels because traffic data from the City contained in the Roseville traffic volume database indicate that traffic volumes in the study area were approximately seven to 14% lower in February 2022 than May 2019. The lower traffic volumes in February 2022 indicate that the traffic volumes in the study area have not quite fully recovered from the effects of the novel coronavirus (COVID-19) pandemic. The area surrounding the Kaiser Permanente Roseville Medical Center Campus (Medical Center Campus or Campus) has many professional office buildings, and workers employed by these businesses may choose (or are required) to work from home. Traffic volumes may rise as more workers resume their conventional commute travel and the public engages more frequently in in-person activities. Therefore, this analysis is conservative in

using the higher May 2019 traffic data to represent baseline conditions, where noted. The environmental setting for transportation includes baseline descriptions for roadway, transit, bicycle, and pedestrian facilities.

Existing Project Site

The Kaiser Permanente Medical Center Campus (Medical Center Campus or Campus) is bordered by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Eureka Road on the east, and Rocky Ridge Drive on the west, as shown on Figure 2-2 in Chapter 2, Project Description. The Campus is currently developed with seven buildings totaling 1,497,201 square feet (sf), as shown in Table 4.6-1, along with 3,077 surface and garage parking spaces.

Table 4.6-1. Kaiser Permanente Roseville Medical Center – Building Floor Area

Land Use	Building	Existing Floor Area	With Project Floor Area
Hospital	Existing Main Hospital	350,579 BGSF	350,579 BGSF
	Women & Children's Center	194,995 BGSF	194,995 BGSF
	Proposed Inpatient Bed Tower	—	278,000 BGSF
	Hospital Sub-Total	*545,574 BGSF*	*823,574 BGSF*
Medical Office	Medical Office Building 1	110,282 BGSF	110,282 BGSF
	Medical Office Building 2	272,406 BGSF	272,406 BGSF
	Medical Office Sub-Total	*382,688 BGSF*	*382,688 BGSF*
	Total Hospital + Medical Office	**928,262 BGSF**	**1,206,262 BGSF**
Support	Douglas Parking Garage	563,577 BGSF	563,577 BGSF
	Auxiliary Building	4,970 BGSF	4,970 BGSF
	Fire Pump Building	392 BGSF	392 BGSF
	New Parking Garage	—	260,959 BGSF
	Support Sub-Total	*568,257 BGSF*	*829,898 BGSF*
	Total Medical Center Campus	**1,497,201 BGSF**	**2,036,160 BGSF**

Notes: BGSF = building gross square feet
Source: Kaiser Permanente, 2022.

Figure 4.6-1 shows the existing Campus site plan and access points from these adjacent roads. Figure 4.6-1 also shows the feasible turning movements at each Campus access point. As shown, right-turn ingress and right-turn egress (i.e., right-in/right-out) are permitted at all driveways. The access points on Eureka Road and Rocky Ridge Drive also permit left-turn ingress (i.e., left-in). The existing center driveway on Lead Hill Boulevard on the north side of the Campus has a sign stating "Ambulance Only" and has inbound arrow pavement markings indicating the driveway was intended for ambulance entry into the Campus. However, the traffic counts collected at this driveway indicate that vehicles use this driveway for both ingress to and egress from the Campus. Since there are no physical impediments (i.e., raised median, diverter islands, etc.). Figure 4.6-1 shows all movements (i.e., right-in, right-out, left-in, and left-out) are feasible at this driveway.

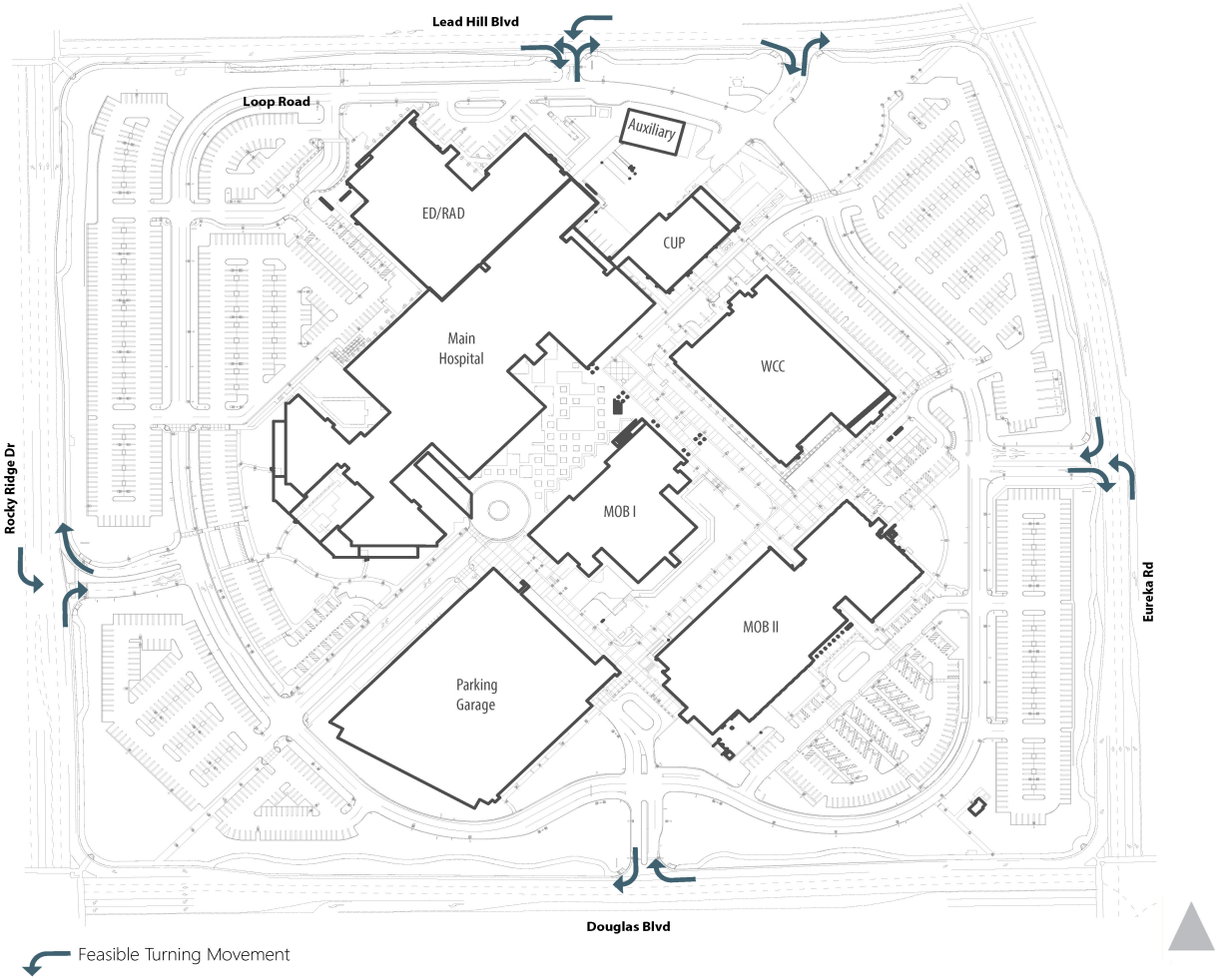

FIGURE 4.**6-1**

Existing Kaiser Permanente Roseville Medical Center Campus

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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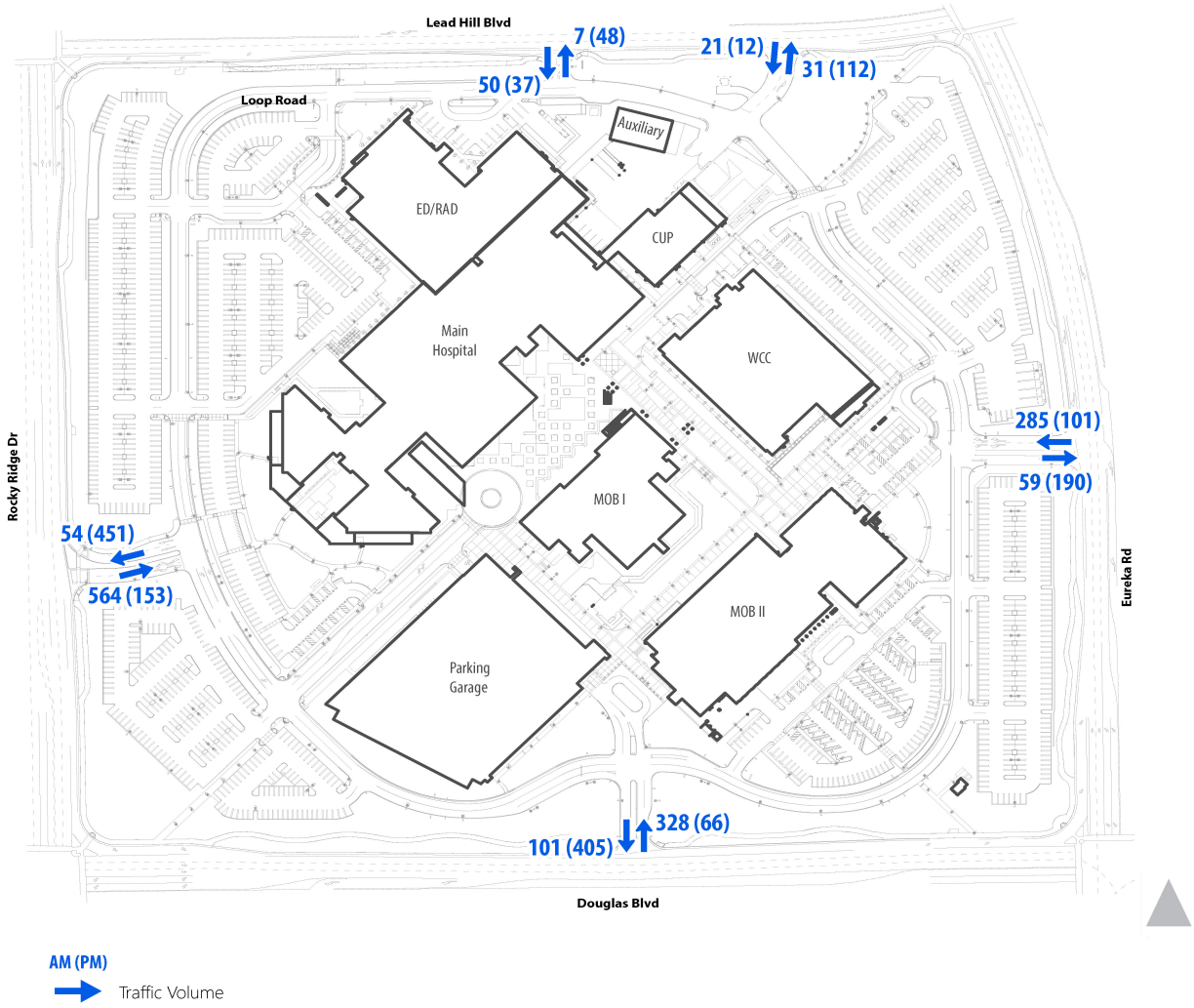

FIGURE 4.6-2

Baseline (2019) AM & PM Peak Hour Driveway Volumes

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Baseline Campus Trip Generation

Traffic counts at the Campus driveways were collected on May 14-15, 2019. Figure 4.6-2 shows the baseline (2019) AM and PM peak hour volumes at the five Campus driveways. Table 4.6-2 presents the existing Medical Center's vehicle trip generation based on these 2019 traffic counts.

Table 4.6-2. Baseline Trip Generation (2019) – Kaiser Permanente Roseville Medical Center

Time Period	Land Use[1]	Observed Trip Generation[2]			Trip Generation Rate[3]		
		Total	In	Out	Total	In	Out
Weekday Daily	928.3 KSF	19,898	9,949	9,949	21.44	50%	50%
Weekday Morning Peak Hour (7:45 AM to 8:45 AM)		1,487	1,239	248	1.60	83%	17%
Weekday Evening Peak Hour (4:30 PM to 5:30 PM)		1,593	365	1,228	1.72	23%	77%

Notes: KSF = thousand square feet

1. Land Use is the baseline occupied square footage of inpatient hospital and outpatient medical office on the Kaiser Permanente Roseville Medical Center Campus.
2. Observed trip generation is the average of traffic counts collected at all Campus driveways on May 14-15, 2019.
3. Trip generation rate is calculated by dividing the observed trip generation by the total occupied square footage (i.e., trips per KSF).

Source: Fehr & Peers, 2022.

As shown in Table 4.6-2, the Medical Center generated approximately 19,900 vehicle trips per day, with 1,487 vehicle trips occurring during the weekday AM peak hour (7:45 to 8:45 AM) and 1,593 vehicle trips occurring the weekday PM peak hour (4:30 to 5:30 PM) under baseline (2019) conditions. This is based on the average of the two days of traffic counts collected on May 14-15, 2019, and represents traffic levels reflecting the operating conditions of the Medical Center during the May 2019 data collection period.

The Medical Center consists of both inpatient hospital and outpatient medical office buildings. These two uses generate vehicle trips at different rates (i.e., outpatient medical office space generates more vehicle trips per thousand square feet of floor area compared to inpatient hospital space). Therefore, this analysis uses the existing observed baseline trip generation shown in Table 4.6-2, the existing mix of hospital and medical office space, and weighted average trip generation rates contained in the *Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers (ITE) 2021) to develop calibrated vehicle trip generation rates specific to the Kaiser Permanente Roseville Medical Center. Table 4.6-3 presents these calibrated hospital and medical office vehicle trip generation rates. The detailed calculation of these calibrated vehicle trip generation rates is provided in Appendix D.

Table 4.6-3. Kaiser Permanente Roseville Medical Center Trip Generation Rates

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
Existing Hospital	11.86	0.83	74%	26%	0.88	30%	70%
Existing Medical Office	35.09	2.71	87%	13%	2.91	20%	80%

Notes: Trip generation rates are presented in vehicle trips per thousand square feet (KSF).
Trip generation rates are calculated using the Campus's observed trip generation shown in Table 4.6-2, the existing mix of hospital and medical office space, and weighted average trip generation rates contained in the *Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers (ITE) 2021).

Source: Fehr & Peers, 2022.

These trip generation rates represent the travel behavior reflecting the operating conditions of the Medical Center during May 2019. Since these trip generation rates represent pre-COVID-19 pandemic travel behavior, actual trip generation rates of the Campus could be lower or higher in the future depending on what aspects of pandemic travel behavior remain long-term.

Project Study Area

As shown, the proposed Project would construct an Inpatient Tower building in the northwest quadrant of the Campus in an area currently developed with an interim surface parking lot, as shown in Figure 4.6-3, Project Site Plan. As part of the proposed Inpatient Tower building, a new main lobby entrance and entry drop-off would be provided for the hospital on the west side of the building adjacent to the Rocky Ridge Drive access. The Inpatient Tower building would also affect existing parking and circulation in the northwest quadrant of the Campus. The loop road would be realigned, and surface parking lots would be reconfigured to accommodate the new building.

A new four-level plus rooftop parking garage would be constructed near the Women and Children's Center in the northeastern corner of the Campus in area currently developed with an interim surface parking lot. The new garage would have two vehicular access points: one at the northeast corner and one on south side of the new garage. Pedestrian access would be provided at the northwest and southwest corners of the garage.

A new generator yard would be built across from the existing central utility plant to house two two-megawatt emergency generators to support the new Inpatient Tower building. As a support facility for the hospital, the new generator yard is not expected to independently generate new trips. Similarly, the new parking garage would serve vehicle trips to/from the Campus but would not independently generate additional trips to the Campus.

Figure 4.6-4 presents the vehicular and pedestrian circulation associated with the new Inpatient Tower building and new parking garage. The new main entry and patient drop-off to the hospital would be from Rocky Ridge Drive. The main entry would include a public two-way driveway and direct access to a new hospital drop-off area fronting the new hospital entrance atrium and plaza. Vehicular access to the new parking garage would primarily occur via the existing Medical Center accesses on Eureka Road and Lead Hill Boulevard, which are directly south and northeast of the proposed parking structure, respectively.

Existing access to the Campus from Eureka Road and Douglas Boulevard would not change. The existing center block driveway on Lead Hill Boulevard would be closed, and a new driveway on Lead Hill Boulevard approximately 450 feet east of Rocky Ridge Drive would be constructed to provide additional access to the Campus. The new driveway would be located at the end of the acceleration lane taper for northbound right-turn movements from Rocky Ridge Drive onto Lead Hill Boulevard. This driveway would allow right-in, right-out, and left-in access only. Left-turn egress would be prohibited via a raised median. This driveway would be located approximately 200 feet east of an existing bus stop shelter, which is currently not used by existing fixed-route transit service.

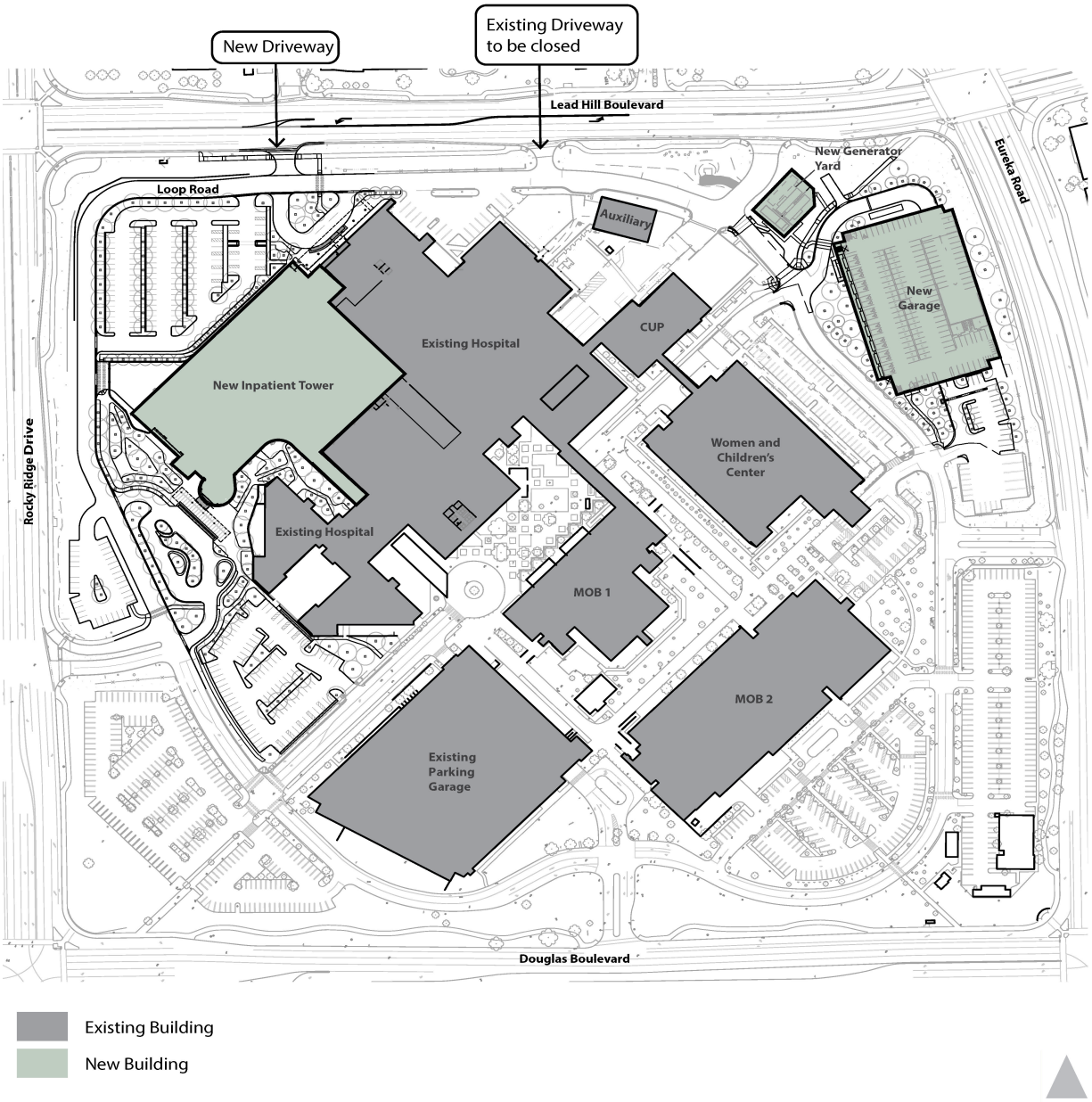

FIGURE 4.6-3

Project Site Plan

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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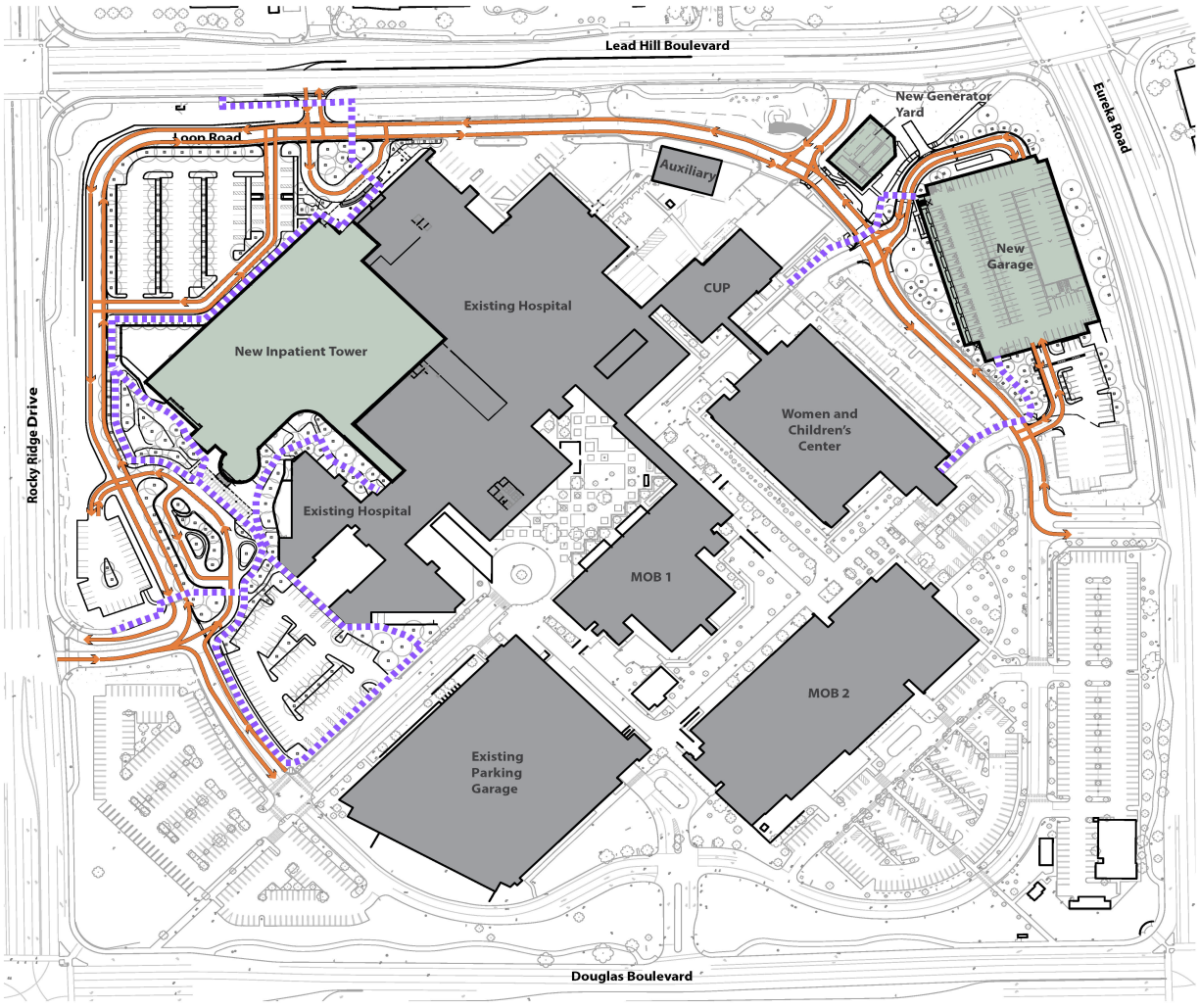

FIGURE 4.6-4

Project Vehicular & Pedestrian Circulation

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Transit System

Roseville Transit provides fixed-route local and commuter bus service, general public dial-a-ride demand-response bus service, and Americans with Disabilities Act (ADA) paratransit service in the City. Figure 4.6-5 shows the local fixed-route transit service in the immediate study area. Routes E, G, and L directly serve the Campus, as shown on Figure 4.6-5. As of April 19, 2022, Routes E and G, which provide service to Sierra College in Rocklin, are temporarily suspended due to COVID-19 college impacts (Roseville Transit 2022); however, a Public Hearing on July 19, 2022 was held to reinstate this service, with modifications, beginning on August 22, 2022. In addition, Routes C and F are accessible via local bus stops that are a quarter mile walk from the Douglas Boulevard / Rocky Ridge Drive intersection (i.e., the southwest corner of the Campus). The *City of Roseville Short-Range Transit Plan* (SRTP) 2018-2025 indicates that Routes C, E, F, G, and L (i.e., the local fixed-route bus service that serve the Campus) have very low ridership.

Route L operates Monday through Saturday with bus stops on the perimeter of the Campus at Eureka Road north of Douglas Boulevard and Douglas Boulevard east of Eureka Road. The Sierra Gardens Transfer Point is approximately a half-mile west of the Medical Center Campus, and serves Routes A, B, C, E, F, G, and L (Roseville Transit 2022). The Sierra Gardens Transfer Point provides connections to multiple transit routes, which provide transit riders with access to multiple destinations in the city.

In addition to the transit facilities and services described above, there is an existing bus stop shelter on the south side of Lead Hill Boulevard approximately 200 feet east of the Rocky Ridge Drive near the northwest corner of the Campus. This bus shelter is not currently served by any fixed-route transit service. Similarly, an existing bus shelter pad (i.e., concrete pad without a bus shelter or signed bus stop) is located on the east side of Rocky Ridge Drive approximately 200 feet north of the Medical Center Campus driveway. This pad is not currently served by any fixed-route transit service.

South Placer Express/Rapid Link

Roseville Transit, working closely with the Placer County Transportation Planning Agency, Placer County, and the City of Lincoln has identified an opportunity to provide fixed-route bus service between downtown Lincoln, the Westfield Galleria at Roseville, Sutter Roseville Medical Center, Kaiser Permanente Roseville Medical Center, and the Sacramento Regional Transit (SacRT) Watt/I-80 light rail station. This new regional service, called the South Placer Express in grant applications and branded as “Rapid Link” by Roseville Transit, will help address key mobility and traffic congestion issues along the State Route (SR) 65 corridor between Interstate 80 (I-80) and downtown Lincoln. This bus route will operate on weekdays only and will provide service with 30-minute headways from approximately 6:00 AM to 9:00 PM. The route is scheduled to begin in 2023 as a three-year pilot program and will include the purchase of five grant funded new electric buses. The schedule will be structured to provide transfer opportunities to Placer County Transit at the Westfield Galleria transit center and to SacRT light rail service at the Watt/I-80 light rail station.

The planned Rapid Link bus service would serve the Kaiser Roseville Medical Center via an existing bus stop on westbound Douglas Boulevard west of Eureka Road and a new bus stop on northbound Rocky Ridge Drive north of the Medical Center Campus driveway. Southbound buses from the Westfield Galleria and Sutter Roseville would use the Douglas Boulevard stop while northbound buses from the Watt/I-80 light rail station would use the Rocky Ridge Drive stop.

Bicycle/Pedestrian System

There are bicycle and pedestrian facilities located along the entire perimeter of the Medical Center Campus. Figure 4.6-6 displays the existing (February 2022) bicycle and pedestrian facilities in the project vicinity. Class II bike lanes (on-street lane with appropriate pavement markings and signs) are present in both directions on all the arterial roadways in the project vicinity. Rocky Ridge Drive, Lead Hill Boulevard, Eureka Road, Douglas Boulevard, and East Roseville Parkway all have Class II bike lanes, which provide bikeway connections to the immediate surrounding area. The Miners Ravine trail, a class I bike path, is located approximately one-half mile east of the Campus via Lead Hill Boulevard and provides a recreational and commuter bikeway that provides connections to downtown Roseville, east Roseville, and Granite Bay.

Pedestrian facilities surround the entire perimeter of the Campus and include sidewalks and crosswalks that connect to an internal pedestrian circulation system on the Campus. This existing pedestrian system provides access routes between the Medical Center Campus and transit stops located along the perimeter of the Campus. Signalized intersections in the study area generally include marked crosswalks across most legs of the intersection with push-button and pedestrian signal heads to facilitate pedestrian crossings.

Roadway System

Figure 4.6-7 illustrates the existing roadway network in the study area including the number of travel lanes on major streets.

The following key roadways would serve the Project:

- **Douglas Boulevard** is a major east-west arterial connecting the City and unincorporated community of Granite Bay. It extends from Vernon Street in Downtown Roseville on the west to the Folsom Lake State Park – Granite Bay Entrance on the east. Douglas Boulevard provides access to Interstate 80 (I-80) via an interchange approximately one mile west of the Medical Center Campus. East of I-80, Douglas Boulevard features three travel lanes in each direction, generally divided by a raised median. It has posted speed limits that range from 35 to 45 miles per hour (mph) in the study area.
- **Eureka Road** is a major arterial connecting the City and unincorporated community of Granite Bay. It begins at the I-80 / Eureka Road/Atlantic Street interchange, which is approximately one mile northwest of the Campus, and extends easterly approximately 5.5 miles to Auburn Folsom Road in Granite Bay. Adjacent to the Campus, Eureka Road features three travel lanes in each direction divided by a raised landscaped median with a posted speed limit of 40 mph.
- **Rocky Ridge Drive** is a minor north-south arterial that extends from Cirby Way northerly to East Roseville Parkway. The roadway is approximately two miles long and features two travel lanes in each direction generally separated by a striped center two-way left-turn lane with a posted speed limit of 40 mph.
- **Lead Hill Boulevard** is a minor east-west arterial that extends from Harding Boulevard easterly to East Roseville Parkway. The roadway is approximately 1.5 miles in length and features two travel lanes in each direction generally separated by a striped center two-way left-turn lane with a posted speed limit of 40 mph.

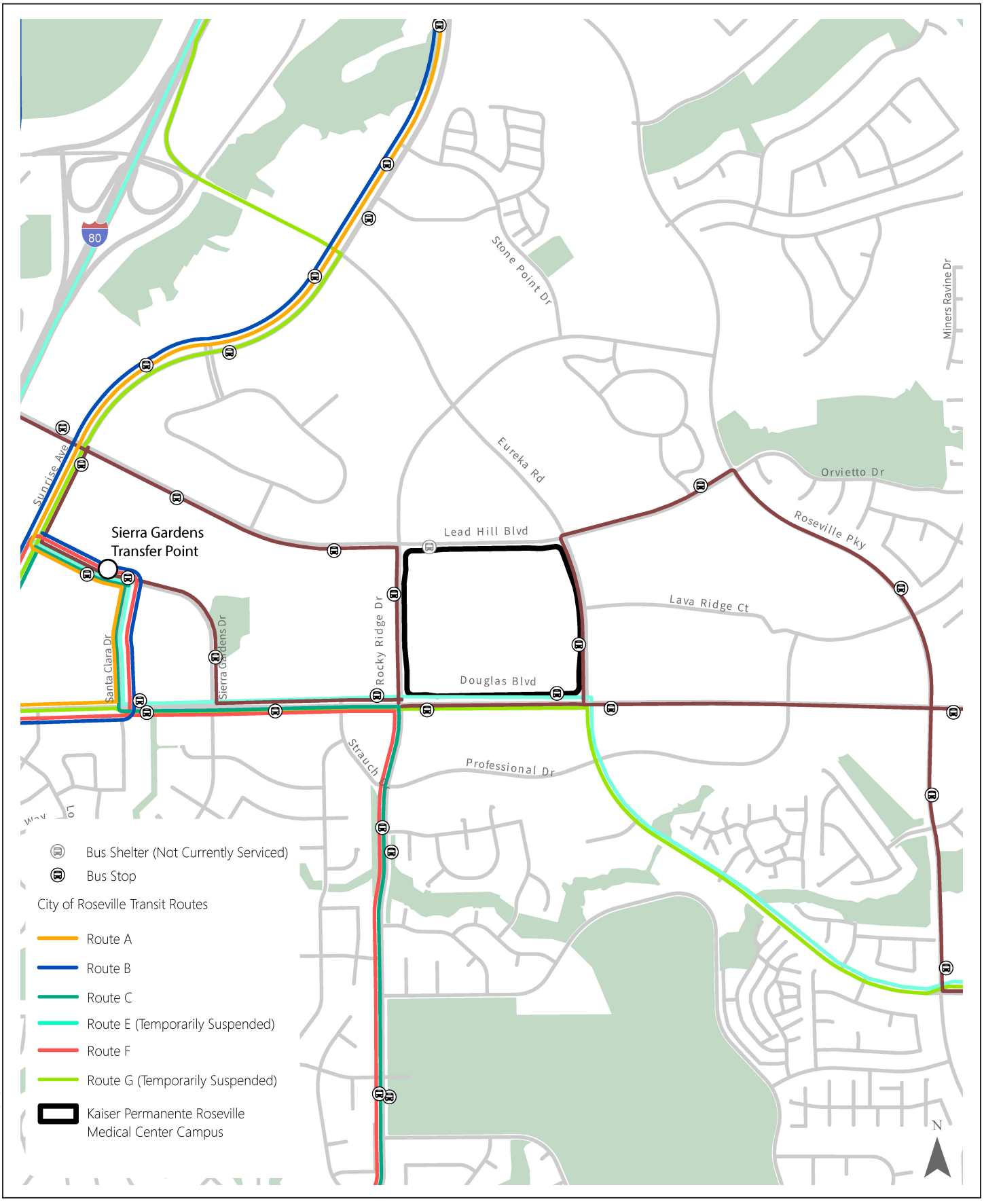

FIGURE 4.6-5

Traffic

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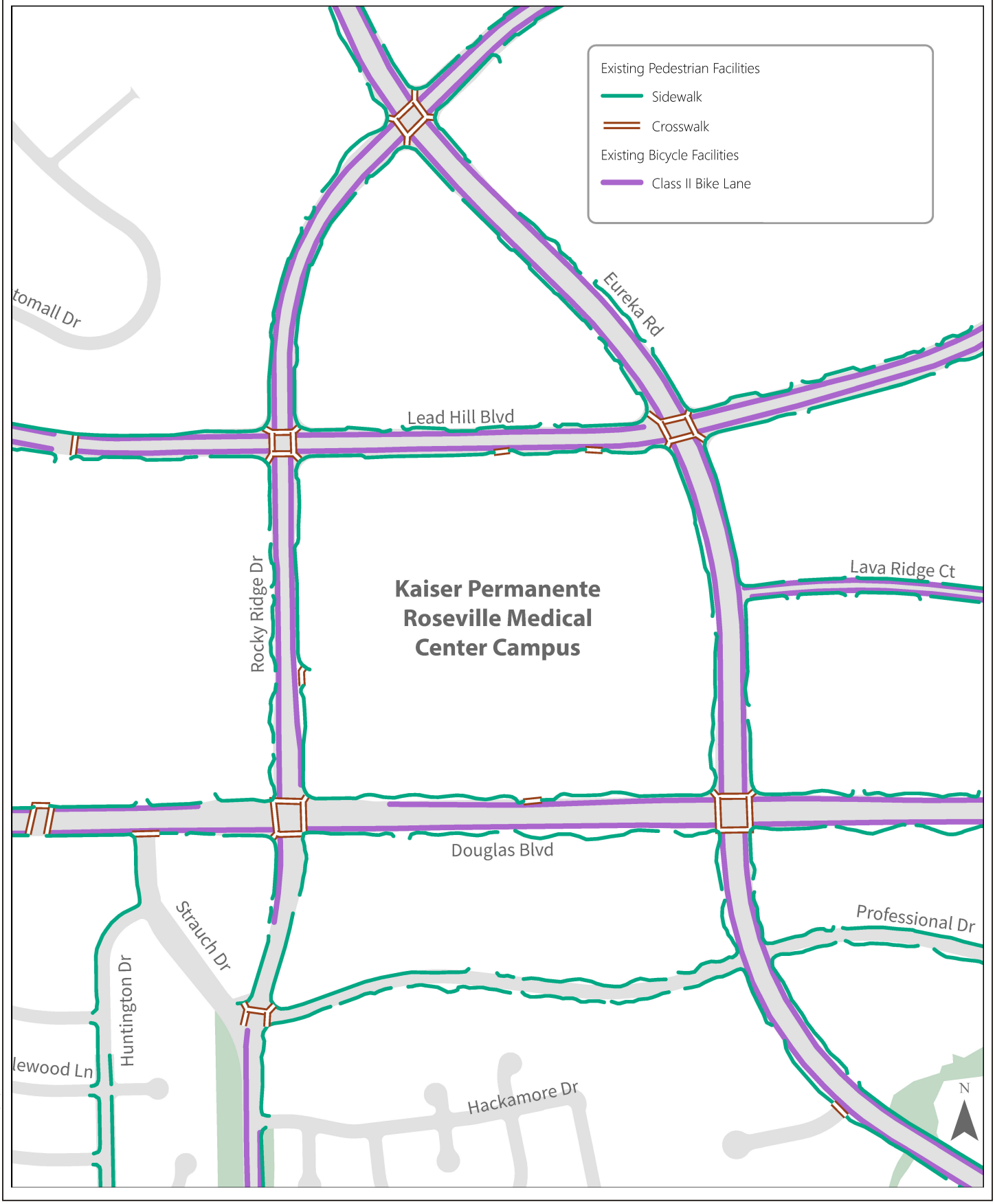

FIGURE 4.6-6

Bicycle and Pedestrian Facilities

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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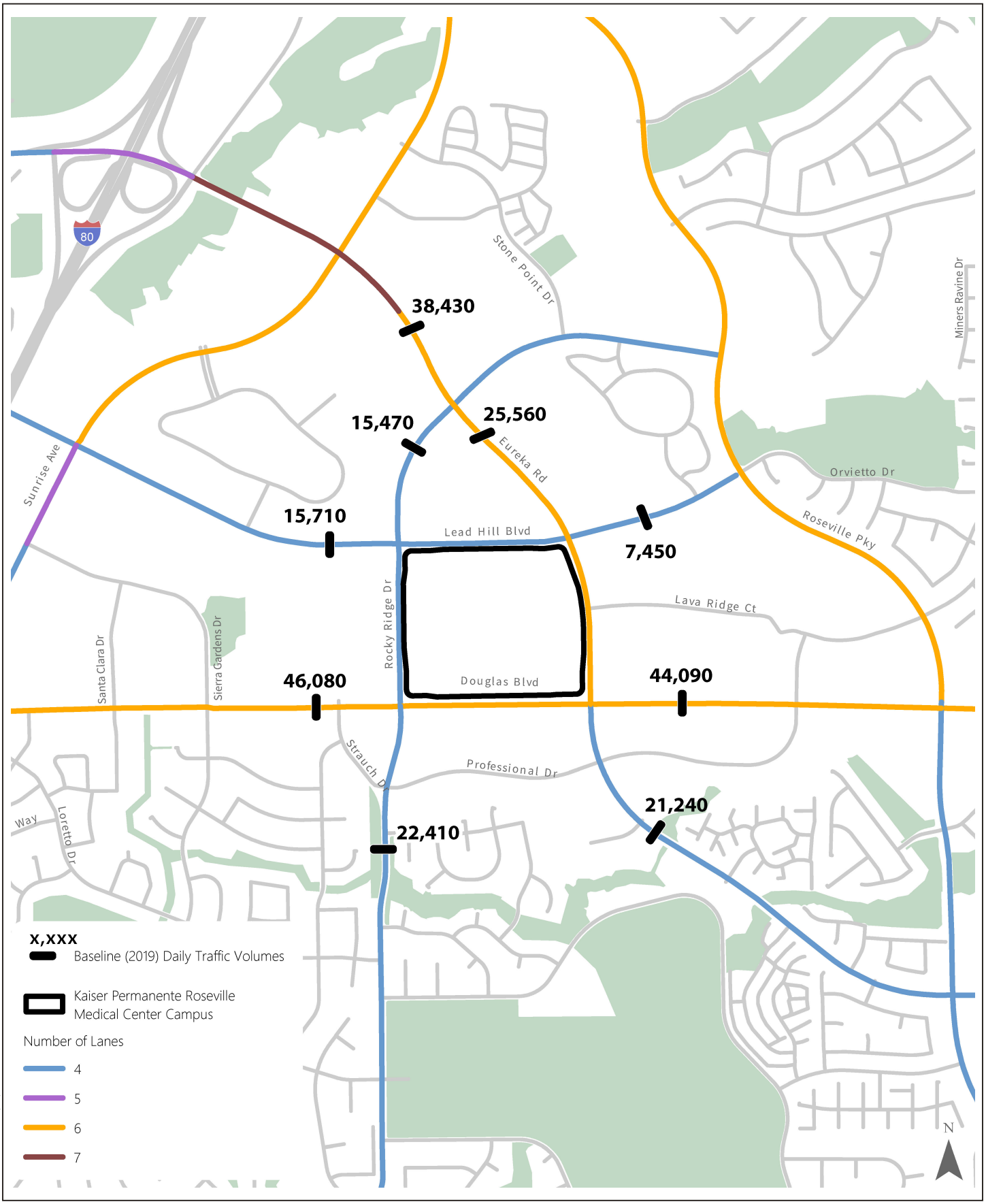

FIGURE 4.6-7

Existing Roadway Network

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Baseline Traffic Volumes

As described above under 4.6.2, Environmental Setting, the analysis conservatively and primarily relies upon traffic count data collected in May 2019 to represent baseline vehicle traffic conditions. Figure 4.6-7 presents the baseline (2019) average daily traffic (ADT) volumes on major roadways in the study area. This is presented for informational purposes only and is not used for any type of roadway capacity or level of service (LOS) analysis.

Emerging Transportation Technology and Travel Options

Transportation and mobility are being transformed through several forces ranging from new technologies, different personal preferences, and the unique effects of the COVID-19 pandemic, the combination of which could alter traditional travel demand relationships in the near term and long term. These disruptive trends increase uncertainty in forecasting future travel conditions, especially considering that new technologies such as automated vehicles (AVs) may operate on future transportation networks. Information about how technology is affecting and will affect travel is accumulating over time.

Furthermore, the COVID-19 pandemic and subsequent actions by federal, state, and local governments to curtail mobility and encourage physical distancing (i.e., limit in-person economic and social interactions) has temporarily but profoundly changed travel conditions. While travel activity will likely stabilize after the pandemic has subsided, it is possible that some of these temporary changes will influence people's travel choices into the future, including either accelerating or diminishing some of the emerging trends in transportation that were already underway prior to the pandemic. Some of the emergent changes already influencing travel behavior that could accelerate in the future include the following.

- Substituting internet shopping and home delivery for some shopping or meal-related travel.
- Substituting participating on social media platforms for social/recreational travel.
- Substituting telework for in-office work/commute travel.
- Substituting telemedicine appointments for eligible in-person medical appointments.
- Using new travel modes and choices. Transportation network companies such as Uber and Lyft, car sharing, bicycle/scooter sharing, and on-demand micro-transit services have increased the options available to travelers in the Sacramento area and have contributed to changes in traditional travel demand relationships. For example, combined bus and rail ridership on SacRT declined by approximately 19% between 2016 and 2019. The SACSIM model was calibrated to 2016 conditions and may not fully capture all the factors influencing transit ridership declines today or in the future.
- Automation of vehicles. Both passenger vehicles and commercial vehicles and trucks are evolving to include more automation. Research, development, and deployment testing is proceeding on autonomous vehicles (AVs); AVs do not require an operator and navigate roadways autonomously. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and marketing of AVs vary widely both on the pace of the transition and the market acceptance of fully automated operation. More uncertainty exists around the behavioral response to AVs. In terms of VMT impacts on the transportation system and the environment, the worst-case scenario would be one in which AVs are privately owned, as they are now, but the automated function of AVs would cause them to be used more.

Safety

The City and Caltrans are the owners and operators of the transportation network in the immediate study area. Both agencies have developed their transportation networks consistent with applicable design standards and monitor collision data to address safety concerns. Design standards are used to provide consistent expectations and experiences for transportation network users to help minimize potential conflicts that could contribute to collisions.

In December 2021, the City adopted the *City of Roseville Local Road Safety Plan* (LRSP) (City of Roseville 2021b). The LRSP utilizes a collision database and creates a data-driven framework to guide the process of future transportation safety improvements. The stated intent of the LRSP is to:

- Create a greater awareness of road safety and risks
- Reduce the number of fatal and severe-injury crashes
- Develop lasting partnerships through collaboration among professionals in various disciplines
- Support for grant/funding applications
- Assist in prioritizing investments in traffic safety

As described in section 4.6.3, "Regulatory Setting," Caltrans approaches safety through three primary elements—design standard compliance, collision history, and collision risk. The agency has standardized traffic safety investigations and is responsible for safety of I-80, SR 65, and the interchanges with Douglas Boulevard and Eureka Road/Atlantic Street in the study area.

4.6.3 Regulatory Setting

Federal

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the proposed Project.

State

The State of California has enacted several pieces of legislation that outline the state's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with state climate goals. The legislation with applicability to the analysis of the project includes senate bill (SB) 743.

Senate Bill 743

SB 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to amend the CEQA guidelines to establish new metrics for determining the significance of transportation impacts. Enacted as part of SB 743 (2013), Public Resources Code (PRC) section 21099, subdivision (b)(1), directed the OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

Subdivision (b)(2) of PRC section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017 which included proposed updates related to analyzing transportation impacts pursuant to SB 743. The updated CEQA Guidelines were adopted on December 28, 2018; and according to the new CEQA Guidelines Section 15064.3, VMT replaced congestion as the metric for determining transportation impacts. The guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

To provide guidance to agencies implementing the new CEQA requirements, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory) in December 2018. The Technical Advisory describes considerations agencies may use in selecting VMT metrics, calculation methodologies, and significance thresholds. The Technical Advisory does not mandate the use of specific metrics, methodologies or significance thresholds, because agencies have discretion to select those that are appropriate for the local land use and transportation context. Please see Chapter 3 of this SEIR for a discussion of the project's VMT.

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Within the study area, this includes I-80 and SR 65. As part of these responsibilities, Caltrans reviews local development projects subject to CEQA to assess potential impacts on the SHS based on the following technical guidance.

- *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (VMT TISG) (Caltrans 2020a)
- *Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance* (Caltrans Safety Impact Guidance) (Caltrans 2020b)

VMT – Focused Transportation Impact Study Guide

On May 20, 2020, Caltrans adopted the *VMT-Focused Transportation Impact Study Guide* (TISG) (Caltrans 2020a). The TISG provides guidance on how Caltrans will review land use projects, with focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals; as well as identifying land use projects' possible transportation impacts to the State Highway System and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus and references the OPR Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

As described in the Checklist provided in Chapter 3 of this Draft SEIR, the analysis shows that the proposed Project was considered in the analysis of VMT conducted for the *Roseville 2035 General Plan Update Final EIR*. Since the

Project is consistent with the General Plan EIR, it would qualify for streamlining per Section 15183 of the CEQA Guidelines, as addressed in Chapter 3. Therefore, an analysis of VMT is not further addressed in this section.

Caltrans Safety Impact Guidance

In December 2020, Caltrans released the *Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance* (Caltrans 2020b). The Caltrans Safety Impact Guidance provides technical instructions on how to evaluate potential safety impacts on the SHS. This guidance largely focuses on the actions of Caltrans district staff in performing the analysis and providing relevant impact information to lead agencies. The interim guidance recommends that safety analyses include a review of three primary elements related to transportation safety—design standard compliance, collision history, and collision risk (consistent with the Federal Highway Administration's Systemic Approach to Safety). The interim guidance does not establish specific analysis methods or significance thresholds for determining safety impacts under CEQA. Additionally, Caltrans notes that local agencies may use the interim guidance at their own discretion as a guide for review of local facilities.

Local

City of Roseville 2035 General Plan

The following policies from the *City of Roseville General Plan 2035* (2020) Circulation Element are relevant to the proposed Project.

Policy CIRC3.1. Promote transit service that is convenient, cost-effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.

Policy CIRC3.5. Consider access to health care, community services and employment, and the needs of persons who may be transit-dependent when making decisions regarding transit service.

Policy CIRC3.7. Pursue transit routes that optimize ridership.

Policy CIRC4.1. The City will review and condition projects as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.

Policy CIRC4.3. Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.

Policy CIRC4.4. If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.

Policy CIRC5.1. Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major destinations (including employment) and housing areas and between its existing and planned bikeways.

Policy CIRC6.1. Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.

Policy CIRC6.3. Enhance pedestrian-friendly street environments and design public spaces and destinations in a way that encourages walking.

Policy CIRC6.4. Sidewalks shall be required in all new Specific Plan Areas, with new roadway construction, and with roadway expansion.

Policy CIRC6.5. In reviewing proposed development projects and implementing public projects, the City will incorporate standards designed to protect the security of pedestrians and minimize the potential for collisions involving pedestrians.

Northeast Roseville Specific Plan

The Kaiser Permanente Roseville Medical Center is located within the NERSP, which was originally adopted by the City on April 8, 1987, and has been amended multiple times since its original adoption, with the latest amendment occurring on September 18, 2013. The NERSP establishes goals, policies, and implementation measures for the provision, phasing, and financing of land use, community services, roadways, and infrastructure. The following transportation policies and implementation measures applicable to the proposed project:

- The Medical Campus Component of the Specific Plan states that "[d]evelopment within the Medical Campus land use shall comply with the City of Roseville TSM Ordinance. A TSM Plan shall be submitted for the review, and approval of the Transportation Commission, concurrent with the submittal of any development plans." A description of the City of Roseville TSM Ordinance is provided under Section 3.6.3, "Regulatory Setting," of this SEIR.
- The Circulation Component of the Specific Plan includes the following policy and implementation measures:
  - Plan Policy 2: Provide for alternatives to the automobile as the means around and through the site.
    - Implementation:
      - Long-term and short-term bicycle parking will be required for all non-residential developments consistent with the California Green Building Code.
      - Designated parking spaces for Clean Air/Carpool/EV will be required for all non-residential developments consistent with the California Green Building Code.

      vii. require that all development comply with and implement the City of Roseville TSM ordinance.

City of Roseville Short-Range Transit Plan 2018–2025

The *City of Roseville Short-Range Transit Plan* (SRTP) 2018-2025 (LSC 2018) provides a detailed business plan to guide transit improvements in the City. The plan reviews demographics and transit needs, evaluates effectiveness and efficiency of existing services, analyzes a wide range of system options, and provides operational, capital and institutional plans, including an implementation plan. The City's plan was prepared jointly with the development of

parallel SRTPs for Placer County Transit, Auburn Transit, and the Western Placer Consolidated Transit Service Agency and is anticipated to be updated in 2023.

This analysis references the SRTP to identify baseline transit data and potential planned transit improvements in the study area that are relevant to this impact analysis.

Within the study area, the plan recommends revising Routes C, G, F, E, and L. The plan notes that ridership on Routes C, G, F, and E is very low; and that ridership on Route L to the east of Eureka Road is low with few boardings and alightings. To this end, the plan recommends two potential strategies for further consideration:

- Modifying Routes C, G, F, E, and L to eliminate unproductive segments and provide one-hour headways minimum. Figures 23 and 32 in the SRTP show examples for how this could be accomplished. It should be noted that under both of these examples, the recommended local fixed-route service would continue to serve the Campus and the bus stops along the Campus's perimeter.
- Eliminate Routes C, G, F, and E; modify Route L, and replace with transportation network company (TNC) or microtransit service. By eliminating Routes C, G, F, and E, the City would replace this service with a TNC subsidy program or microtransit service. The TNC/microtransit service would be provided in areas of the City previously served by Routes C, G, F, E, and L. Figure 24 in the SRTP shows an example for how Route L would be modified and supplemented with TNC service. In this example, Route L would continue to serve the Campus and the bus stops along the Campus's perimeter.

City of Roseville Bicycle Master Plan

The *City of Roseville Bicycle Master Plan* (2008) includes the following policies that are relevant to the Project:

- Support facilities that encourage bicycling should, to the extent feasible, be made a standard component of all new public and private projects.
- Provide short-term bike parking (bike racks) conveniently located at businesses entrances and safe, secure long-term covered bike parking (lockers, cages, rooms) at employment sites.
- Where construction operations occur near Class II or III bikeways, the developer/ contractor will be responsible for maintaining clear and clean paths of travel.
- Street maintenance overlay projects and other construction projects within the public right-of-way and along designated bikeways shall be reviewed for conformance with the Bicycle Master Plan. Where existing facilities are not in conformance with the Bicycle Master Plan and current City standards, the facilities may be brought up to standards where determined feasible by the Public Works Director/City Engineer.

City of Roseville Pedestrian Master Plan

The *City of Roseville Pedestrian Master Plan* (2011) was adopted by the City Council to establish policies, projects, and programs that improve the pedestrian system in Roseville and increase walking for transportation, recreation, and health. The Pedestrian Master Plan includes goals, policies, and implementation measures for pedestrian improvements and programs; a recommended pedestrian network; and a Capital Improvements Program (CIP) that establishes a 20-year framework for improvements to the pedestrian environment. The Pedestrian Master Plan includes the following policies that are relevant to the Project:

- Provide continuous and direct pedestrian connections between residential areas, schools, shopping areas, public services, employment centers, parks, and public transit stops.
- Sidewalks and street crossings should provide access for all people, regardless of physical abilities, consistent with the Americans with Disabilities Act (ADA) and ADA Transition Plan.

City of Roseville Design and Construction Standards

The *current City of Roseville Design and Construction Standards* (City of Roseville 2021a) provide for coordinated and standardized development of City facilities, including roadways. The Design and Construction Standards apply to, regulate, and guide preparation of VMT impact studies, the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, bus shelter pads, and related public improvements. All public roadway infrastructure improvements must be designed and constructed in accordance with the City's Design and Construction Standards, Caltrans' *Standard Specifications* (Caltrans 2018), and the latest edition of the City's *Americans with Disabilities Act (ADA) Transitions Plan* (City of Roseville 2009).

The City's Design and Construction Standards includes an updated Section 4 titled "VMT Impact Standards," which describes the City's guidelines for preparing Traffic Impact Studies and VMT Impact Studies. Section 4-7 of the VMT Impact Standards states that the purpose of VMT impact studies is to "provide the necessary information to allow an assessment of the potential VMT effects associated with proposed projects as they relate to circulation policies established by the City. VMT impact studies are also used to identify appropriate mitigation and/or recommendations where practicable to offset project impacts."

Section 4-9 describes the methodology for conducting a VMT impact study. This includes whether a project may qualify for screening from additional VMT analysis, or whether a full VMT analysis with comparison to the appropriate threshold is required. The City's guidelines note that a project may be screened from additional VMT analysis if it is within the scope of a prior CEQA analysis and covered by a prior analysis, including the General Plan. Because the City's 2035 General Plan Update assumes a larger buildout of the Medical Center, the Project meets this screening threshold. Please see Chapter 3 for additional information regarding the Project's VMT.

The City's Design Standards also set forth the requirements for project site access and driveway locations (Section 5); traffic signals, signs, and striping (Section 6); street design, including street classes and widths, rights-of-way, pavement engineering, curb and gutters, sidewalks, pedestrian walks and bike paths, intersections, sight distances, and driveway standards (Section 7); traffic noise barriers (Section 12); and bikeway design standards (Section 13).

The Construction Standards regulate construction-area traffic control (Section 12); set forth the developer's and contractor's responsibilities (Section 21); specify the details for construction of street improvements including barricades, bikeways, bridges, bollards, curb, curb and gutter, driveways, pavement, curb ramps, sidewalk, survey monuments and tunnels (Section 71); application of traffic stripes and pavement markings (Section 84); installation of pavement markers (Section 85); and installation of traffic signals (Section 86).

Transportation Systems Management Ordinance

The City has a Transportation Systems Management (TSM) program, the purpose of which is to develop an integrated and cooperative approach between the City and the business community to promote alternative transportation options, reduce traffic congestion, and improve air quality in the Roseville area. The TSM program applies to businesses or common work locations (such as office building/complex, commercial/retail center, or

industrial building/park) with 50 or more employees. The City's TSM requirements are located in Chapter 11.33 of the Roseville Municipal Code.

The goals and intent of the TSM program are to:

- Reduce total vehicle emissions in the City by reducing the number of vehicular trips that might otherwise be generated by home-to-work commuting.
- Reduce peak-hour traffic circulation in the City by reducing both the number of vehicular trips and the vehicular miles traveled that might otherwise be generated by home-to-work commuting by a minimum of 20%.
- Increase the efficiency of the existing transportation network in the City.
- Promote an integrated and cooperative approach between the City and the business community to promote alternative transportation opportunities and improve the air quality in Roseville.
- Cooperate and coordinate with other cities, counties, communities, and regional agencies in these endeavors.

Typical measures included in a TSM include the provision of bicycle lockers and on-site showering facilities, workplace ride-share programs, and employee education and incentive programs to use alternative transportation.

The NERSP specifically states that "[d]evelopment within the Medical Campus land use shall comply with the City of Roseville TSM Ordinance. A TSM Plan shall be submitted for the review, and approval of the Transportation Commission, concurrent with the submittal of any development plans."

The Project is subject to the City's TSM ordinance requirements. Kaiser has a TSM plan already in place that would be amended to include the proposed Project. These requirements would reduce the number of vehicle trips and VMT that might otherwise be generated by the Project.

Traffic Impact Fee Programs

The City currently participates in four traffic mitigation fee programs to fund capital projects in Roseville and south Placer County. Within the City, traffic impact fees are used to fund improvements contained in the CIP. The funding for those improvements is nexus-based and is designed to fund improvements. The fee structure considers both the number and length of trips generated by new land developments, and as such, it is considered a type of VMT-based fee program. The traffic mitigation fees are collected by the participating agencies at building permit issuance. The payment of Roseville impact fees in lieu of improvements has typically been determined to function as mitigation for those projects consistent with the general plan. The fee program is funding improvements identified and required as part of the 2035 General Plan EIR and the payment of fees reflects individual projects' fair share contribution towards these improvements. This Project would be subject to City traffic impact fee programs, which would represent its fair share contribution towards these improvements.

4.6.4 Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify potential significant impacts of the Project on the transportation system. Transportation and circulation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

Methods of Analysis

The transportation and circulation methodology considers the City's policies and standards outlined in section 4.6.3, "Regulatory Setting," to assess whether the proposed Project is consistent with the applicable City policies and standards. This includes reviewing the project's potential effects on existing or planned transportation facilities. The impact analysis also follows the City's VMT Impact Standards, as outlined in Section 4 of the current *City of Roseville Design and Construction Standards* (City of Roseville 2021a). Pursuant to PRC section 21099, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment. Therefore, this issue is not evaluated or discussed further in this Draft SEIR.

This analysis also presents the Project's travel characteristics and resulting ADT volumes on major roadways in the study area for informational purposes.

Project Travel Characteristics

Trip Generation

The proposed Project would expand the amount of inpatient hospital space on the Campus by approximately 278,000 gsf. This analysis applies vehicle trip generation rates that are calibrated to the Campus to estimate the Project's vehicle trip generation (see Table 4.6-3). These calibrated vehicle trip generation rates consider the Medical Center's existing inpatient hospital to outpatient medical office composition, the baseline (2019) Campus trip generation (see section 4.6.2, "Environmental Setting"), and weighted average trip generation rates contained in the *Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers (ITE) 2021).

Table 4.6-4 presents the Project's estimated weekday daily, AM peak hour, and PM peak hour vehicle trip generation, as well as the Medical Center's total vehicle trip generation with the proposed Project.

Table 4.6-4. Vehicle Trip Generation Estimate – Inpatient Tower

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
Proposed Project							
New Inpatient Tower Building (Hospital)[1]	3,297	230	170	60	245	74	171
Kaiser Permanente Roseville Medical Center Campus Baseline							
Existing Medical Center campus[2]	19,898	1,487	1,239	248	1,593	365	1,228
Campus: Baseline Plus Project	**23,195**	**1,717**	**1,409**	**308**	**1,838**	**439**	**1,399**

Notes:
1. Vehicle trip generation estimate for the proposed Inpatient Tower building calculated using the Campus specific trip generation rate for hospital presented in Table 4.6-3.
2. Baseline vehicle trip generation of the Campus based on counts collected on May 14-15, 2019, as shown in Table 4.6-2.

Source: Fehr & Peers, 2022.

As shown, the proposed Project would generate approximately 3,300 daily vehicle trips, with 230 vehicle trips occurring during the weekday AM peak hour (7:45 to 8:45 AM) and 245 vehicle trips occurring the weekday PM peak hour (4:30 to 5:30 PM), with the Project. This would result in a total of 23,195 daily vehicle trips, 1,717 AM peak hour vehicle trips, and 1,838 PM peak hour vehicle trips for the entire Campus. As noted in section 4.6.2, "Environmental Setting," this trip generation estimate assumes the Project's trip generation rate would be comparable to pre-COVID-19

pandemic (i.e., May 2019) levels. The actual trip generation rate for the Project could be lower or higher depending on what aspects of pandemic behavior remain long-term.

Trip Distribution/Assignment

Figure 4.6-8 presents the anticipated distribution of Project vehicle trips. This distribution is based on the existing distribution of traffic to/from the Campus, which is estimated using the baseline traffic counts collected at the campus driveways and adjacent intersections.

Project trips are assigned to roadways in the area in accordance with the project trip generation and distribution. These trips are added to baseline traffic volumes to yield baseline plus project volumes, which are shown in Figure 4.6-9.

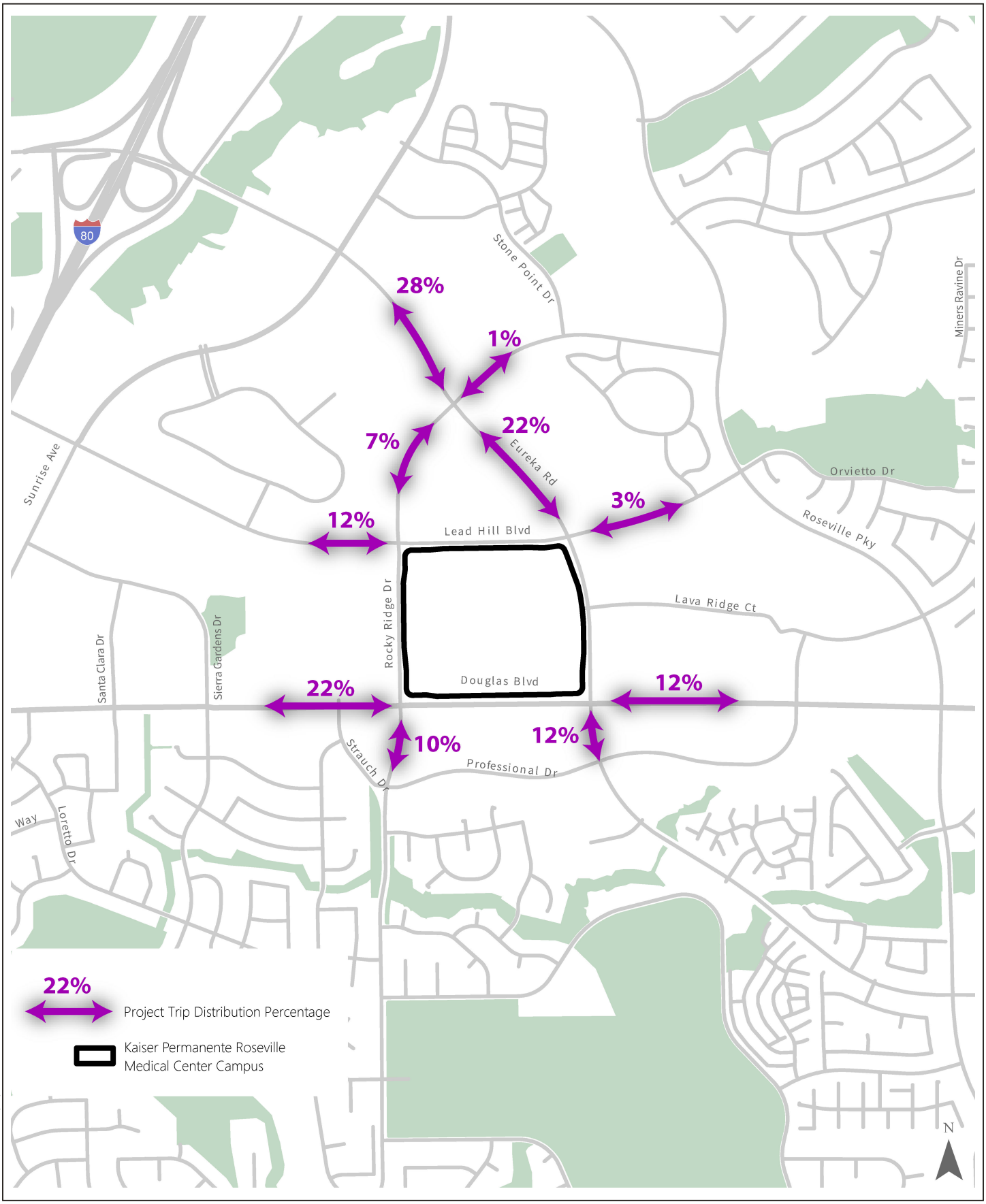

FIGURE 4.6-8

Anticipated Distribution of Project Vehicle Trips

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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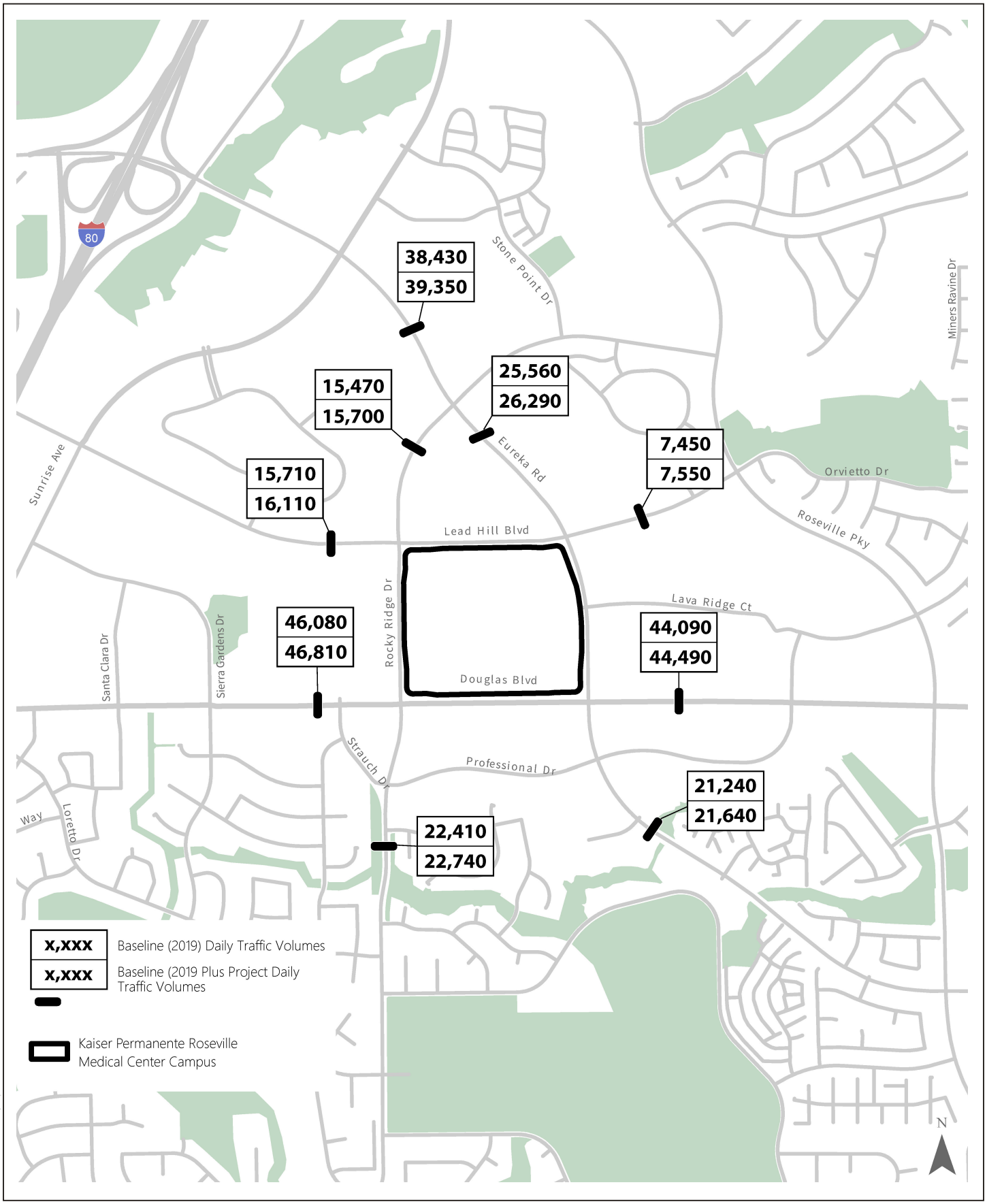

FIGURE 4.6-9

Baseline Plus Project Volumes

Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project

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Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, a significant impact would occur if development of the proposed Project would do any of the following:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities.
- Substantial increase in hazards because of a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Potential to cause inadequate emergency access.

These questions alone do not identify specific measurable thresholds to determine impact significance. To supplement the questions, additional information is provided below to define how the City determines impact significance.

Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System

The Project would result in a significant transportation impact if it would do any of the following.

- Physically disrupt an existing transit service/facility, bicycle facility, or pedestrian facility within the City of Roseville.
- Interfere with implementation of a planned transit service/facility, bicycle facility, or pedestrian facility within the City of Roseville as identified in the City of Roseville 2035 General Plan, City of Roseville Short-Range Transit Plan, City of Roseville Bicycle Master Plan, or City of Roseville Pedestrian Master Plan.

Increase in Hazards Because of a Geometric Feature or Incompatible Uses

The Project would result in a significant transportation impact if it would result in a geometric design feature that is inconsistent with applicable design standards of the City, as presented in the current *City of Roseville Design and Construction Standards* (City of Roseville 2021a).

Potential to Cause Inadequate Emergency Access

The Project would result in a significant transportation impact if it would result in roadway and transportation facilities that impede access for emergency response vehicles.

Project Impacts

Impact 4.6-1 The proposed Project would not physically disrupt an existing transit service/facility, or conflict with adopted programs, plans, ordinances, or policies regarding transit service and transit facilities.

The Medical Center Campus is currently served directly by three local fixed-route bus routes operated by Roseville Transit. Two additional local fixed-route bus routes have bus stops within a quarter mile walk from the southwest corner of the Campus. As described under Impacts 4.6-2 and 4.6-3 below, the Campus provides adequate pedestrian and bicycle facilities to access these existing bus stops and local fixed-route bus service. The proposed Project would not disrupt these existing bus transit services, nor would it disrupt access to existing transit facilities.

The proposed Project would result in additional employment and capacity for serving patients in area served by existing transit, consistent with General Plan policy CIRC 4.1. This would potentially result in additional transit ridership demand.

The SRTP indicates that the local fixed-route buses that serve the study area have very low ridership with few boardings and alightings. Therefore, these routes would have sufficient capacity to accommodate additional riders generated by the Project. Furthermore, the proposed Project would not conflict with policies related to transit in the City's General Plan and NERSP.

The proposed Campus driveway on Lead Hill Boulevard would add right-turn ingress vehicle movements approximately 200 feet east of this existing unused bus shelter. These movements combined with existing northbound right-turn movements from Rocky Ridge Drive in the acceleration lane on Lead Hill Boulevard could result in potential conflicts with transit vehicles stopping at this bus shelter if future transit service is routed along this segment of Lead Hill Boulevard. However, the proposed Campus driveway is consistent with adopted City design standards as the driveway is more than 240 feet from the Rocky Ridge Drive intersection and is not within a bus turnout or the straight portion of an acceleration lane. Therefore, the proposed Project would not disrupt an existing transit facility or conflict with adopted programs, plans, ordinances, or policies regarding transit service and transit facilities and this impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.6-2 The proposed Project would not physically disrupt an existing bicycle facility, or conflict with adopted programs, plans, ordinances, or policies regarding bicycle facilities.

A continuous set of on-street and/or off-street bicycle facilities are present to connect the Campus with neighborhoods to the north, south, west and east. A bicyclist can ride on existing class II bike lanes on Lead Hill Boulevard, Eureka Road, Douglas Boulevard, or Rocky Ridge Drive to travel between the Campus and origins/destinations in the surrounding area. The Miners Ravine Trail (Class I bike path) is approximately a half mile east of the Campus via Lead Hill Boulevard and provides bicyclists a fully separated bikeway to travel between the study area and Downtown Roseville, east Roseville, and Granite Bay.

The proposed Project would not disrupt these existing bicycle facilities. These bikeways provide defined bicycle facilities for bicyclists to use to travel between the project site and the surrounding area. The Project would be consistent with applicable policies, plans, and programs contained in the City's General Plan and Pedestrian Master Plan. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.6-3 The proposed Project would not physically disrupt an existing pedestrian facility, or conflict with adopted programs, plans, ordinances, or policies regarding pedestrian facilities.

Continuous pedestrian facilities are present or proposed on the Medical Center Campus for medical staff, visitors, or patients to use to walk between major destinations on the Campus (e.g., medical office buildings, main hospital, Women & Children's Center, parking garages, and surface parking lots). Furthermore, pedestrian facilities are present that connect the major destinations on the Campus to public sidewalks on the surrounding roadways. This includes sidewalks connecting to existing commercial services and public transit stops along Eureka Road, Lead Hill Boulevard, Rocky Ridge Drive, and Douglas Boulevard. This is consistent with the relevant policies in the City's

2035 General Plan and City's Pedestrian Master Plan; specifically, Policy CIRC6.1 which specifies that connections should be provided between residential areas, employment centers, and transit transfer points.

Existing sidewalks surround the entire perimeter of the Campus along adjacent local streets. The proposed Project would not require or cause changes to these existing sidewalks, with one exception. The proposed new driveway on Lead Hill Boulevard near the Emergency Department drop-off would require modifying the existing sidewalk along the south side of Lead Hill Boulevard. The existing sidewalk is sloped with spaced landings due to the elevation change along Lead Hill Boulevard and ADA requirements. The new driveway location would require the sloped sidewalk to extend further west to ensure the sidewalk grade does not exceed the maximum allowed slope per ADA requirements. This modification would replace the existing sidewalk and would result in a continuous pedestrian sidewalk along Lead Hill Boulevard as exists currently. Although the Project would modify the existing sidewalk to accommodate the new driveway to comply with applicable ADA regulations, it would not eliminate or permanently disrupt the existing sidewalk facility or pedestrian network. Therefore, the Project would not physically disrupt an existing pedestrian facility, or conflict with adopted programs, plans, ordinances, or policies regarding pedestrian facilities and this impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.6-4 The proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards.

The existing roadways immediately surrounding the Medical Center Campus and the existing access points to the Campus are consistent with City design standards. The proposed Project would generally not change the design of these adjacent local roadways.

The Project would close the existing center driveway (i.e., driveway signed "ambulance only") on Lead Hill Boulevard and add a new driveway on Lead Hill Boulevard approximately 450 feet east of Rocky Ridge Drive. This driveway would be located at the end of the acceleration lane taper for northbound right-turn movements from Rocky Ridge Drive onto Lead Hill Boulevard, and beyond the 240-foot zone where no driveways are allowed. The driveway would be designed per City standard design drawings. Therefore, this new driveway is consistent with applicable City design standards.

This driveway would allow right-in, right-out, and left-in access, but prohibit left-turn egress via a raised median. Closing the existing center driveway and adding the new driveway would provide additional distance between the Campus access point and access to the business park to the north of the Campus. This would reduce the potential for head-on conflicts in the center two-way left-turn lane on Lead Hill Boulevard for vehicles making simultaneous left-turns into the Campus and the business park to the north.

Since the proposed Project is consistent with applicable design standards and would not result in a geometric design feature that is inconsistent with the City's design standards and would reduce the potential for vehicle conflicts, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.6-5 The proposed Project would not result in roadway and transportation facilities that impede access for emergency response vehicles.

The existing roadways immediately surrounding the Medical Center Campus and the existing access points to the Campus are consistent with existing City design standards. The proposed Project would generally not change the design of these adjacent local roadways.

The Project would close the existing center driveway (i.e., driveway signed "ambulance only") on Lead Hill Boulevard and add a new driveway on Lead Hill Boulevard constructed consistent with City design standards as described in Impact 4.6-4 above. The new driveway would be approximately the same distance to the emergency department ambulance bays as the existing center driveway. Therefore, ambulances traveling to the Campus would have approximately the same distance of travel and would not be adversely affected by the proposed driveway closure or addition of the new driveway on Lead Hill Boulevard.

The City of Roseville Fire Department Station No. 4 is located approximately one-half mile south of the Campus at 1900 Eureka Road, while City of Roseville Fire Department Station No. 6 is located approximately one mile north of the Campus at 1430 East Roseville Parkway. The proposed Project would not result in changes to the roadway or transportation facilities that would block the access of fire department vehicles as they travel from either of these stations. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Cumulative Impacts

The cumulative context is buildout of the City's 2035 General Plan and NERSP. The analysis assesses whether cumulative impacts from past, present, and probable future projects, as well as the proposed Project, are significant. If the cumulative impacts are not significant, then a determination is made whether or not the Project's contribution would be great enough to result in a cumulatively considerable contribution. If the cumulative impacts are significant, a determination is then made as to whether the Project's incremental contribution to those impacts is "cumulatively considerable" (that is, significant in and of itself).

Impact 4.6-6 The proposed Project, in combination with cumulative development within the City, would not interfere with implementation of planned transit service or planned transit facilities.

The SRTP recommends modifying the local fixed-route bus service in the study area. Specifically, the SRTP recommends revising Routes C, G, F, E, and L, noting that ridership on Routes C, G, F, and E is very low; and that ridership on Route L to the east of Eureka Road is low with few boardings and alightings. To this end, the SRTP recommends two potential strategies for further consideration, outlined above under the Regulatory Setting. In summary, the SRTP recommends eliminating unproductive segments and provide one-hour headways minimum and modify Route L and replace with transportation network company (TNC) or microtransit service.

Although the SRTP identifies these recommended changes to local fixed-route bus service, the ultimate modifications to local fixed-route bus service have not been determined, but microtransit service is anticipated to begin in 2023. Roseville Transit evaluates transit routes and is in the process of conducting a comprehensive operational analysis.

A bus stop shelter is located on the south side of Lead Hill Boulevard approximately 200 feet east of the Rocky Ridge Drive near the northwest corner of the Campus. No existing bus routes currently use this bus shelter. Since the SRTP recommends modifying the local fixed-route bus service in the study area, it is possible that these modifications could result in future bus transit service utilizing this existing bus shelter. However, it is speculative to make that assessment since the specific changes to the local-fixed route bus service have not been determined.

The planned Rapid Link bus service, described on page 4.6-13 would serve an existing bus stop on westbound Douglas Boulevard as well as a new bus stop on northbound Rocky Ridge Drive approximately 200 feet north of the Medical Center Campus driveway. The Project would not result in any major changes to roadways or existing transit facilities along Douglas Boulevard or Rocky Ridge Drive that would interfere with the implementation of this future bus service.

Based on the known planned changes to transit service, the Project would not interfere with the implementation of planned transit services or facilities. There is not an existing cumulative impact that the Project would combine with that would result in a cumulatively considerable contribution. Since the Project would not contribute to an existing cumulative impact this impact is **less than significant**.

Mitigation Measures

No mitigation measures would be required.

Impact 4.6-7 The proposed Project, in combination with other cumulative development would not interfere with implementation of planned bicycle or pedestrian facilities identified in local plans.

The City has not identified that an existing cumulative impact exists associated with implementation of any planned bicycle or pedestrian facilities. The planned bicycle network identified in the City's 2035 General Plan and City's Bicycle Master Plan is largely built out in the study area. Specifically, the class II on-street bike lanes on the surrounding arterial streets (i.e., Lead Hill Boulevard, Douglas Boulevard, Eureka Road, and Rocky Ridge Drive) identified in the General Plan and Bicycle Master Plan exist today and as noted in Impact 4.6-2, the proposed Project would not disrupt these existing bicycle facilities.

Similarly, existing sidewalks surround the entire perimeter of the Campus, and sidewalks would continue to surround the perimeter of the Campus with the addition of the Project, as described in Impact 4.6-3. The City's Pedestrian Master Plan does not identify any additional planned pedestrian facilities in the study area beyond what exists under baseline conditions. Since the proposed Project would not contribute to an existing cumulative impact, this impact is **less than significant**.

Mitigation Measures

No mitigation measures would be required.

4.6.5 References

City of Roseville. 1987. Northeast Roseville Specific Plan.

2004. Kaiser Permanente Roseville Medical Center Expansion Project (SCH #2003062014). Publication Date: April 4, 2004.

——. 2008. *City of Roseville Bicycle Master Plan.*

——. 2011. *City of Roseville 2011 Pedestrian Master Plan.*

——. 2020 (August). *City of Roseville General Plan 2035*. Adopted August 5, 2020. Roseville, CA. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2021.

——. 2020 (August). *City of Roseville General Plan EIR 2035*.

——. 2021 (January). *Amendments to City of Roseville Design and Construction Standards*. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Engineering/Design%20and%20Construction%20Standards/Standards%20Amendment/2021%20Amendment%20-%20Combined%20Document.pdf.

——. 2021 (December). *Local Road Safety Plan (LRSP)*. Adopted December 2021. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Public%20Works/Roadways%20&%20Traffic/Traffic/RosevilleLocalRoadSafetyPlan-FINAL_Adopted12-2021.pdf

Institute of Transportation Engineers. 2021 (October). *Trip Generation Manual, 11th Edition*.

ITE. *See* Institute of Transportation Engineers.

Governor's Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. OPR. *See* Governor's Office of Planning and Research.

LSC Transportation Engineers. 2018. *City of Roseville Final Short-Range Transit Plan 2018-2025.*

Roseville Transit. 2019 (November 18). Roseville Transit Local Bus Service Guide. Local service route map. Available: https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8756381

——. 2020 (April). *Commuter Bus Services Guide.*

——. 2020. (May). *Local Bus Services Guide.* Turnstone Consulting. 2004. *Kaiser Permanente Roseville Medical Center Expansion Project.*

5 CEQA Considerations

This chapter identifies the following: (1) significant environmental effects of the proposed Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project (Project), (2) significant environmental effects that cannot be avoided if the proposed Project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed Project, and (4) growth-inducing impacts of the proposed Project. As explained in Chapter 1 of this Draft Supplemental Environmental Impact Report (Draft SEIR), the project alternatives included in the 2004 Expansion Project Environmental Impact Report (EIR) are still adequate and no new project alternatives are required to evaluated. Additionally, cumulative impacts are addressed in the technical sections included in Chapter 4.

5.1 Significant Environmental Effects

The significant environmental effects of developing the Project have been addressed in the 2004 Expansion Project EIR and also in the Executive Summary and Chapters 3 and 4 of this SEIR. As shown in the Executive Summary and Chapters 3 and 4, the proposed Project would not result in any new impacts that were not previously identified in the 2004 Expansion Project EIR.

5.2 Significant and Unavoidable Impacts

Section 15126.2(b) of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of development are addressed in the 2004 Expansion Project EIR, which concluded the following significant and unavoidable impacts would occur:

- project level and cumulative level of service impact would result at six intersections
- short-term construction-related air quality impact
- long-term air quality impact to regional air quality
- cumulative short-term and long-term air quality impacts

In addition to the significant and unavoidable impacts listed above, it was determined through this Draft SEIR analysis that because the 2035 General Plan EIR assumed future buildout of the Campus and concluded the cumulative increase in light and glare would be a significant and unavoidable impact, the proposed Project would result in a significant and unavoidable cumulative impact related to light and glare.

Impacts specific to the proposed Project are discussed in detail in the technical sections contained in Chapter 4, Environmental Analysis, of this Draft SEIR.

5.3 Significant Irreversible Environmental Effects

Section 15126.2(d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental change that would be caused by the proposed Project. Generally, a project would result in significant irreversible changes if:

- The primary and secondary impacts would generally commit future generations to similar uses (such as highway improvement that provides access to a previously inaccessible area);

- Irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources; or
- The proposed consumption of resources is not justified.

Implementation of the proposed Project would result in the long-term commitment of resources and would likely result in or contribute to the following irreversible environmental change:

- use of various new raw materials such as lumber and forest products, metals (e.g., iron, steel), sand and gravel, asphalt, petrochemicals, and other materials for construction. Some of these resources are already being depleted worldwide.
- irreversible consumption of energy and natural resources (fossil fuels, natural gas, gasoline) associated with the future use of the site.

Development of the proposed Project would continue the commitment of the Medical Center Campus to urban development. Resources that would be permanently and continually consumed by Project implementation include water, electricity, natural gas, and fossil fuels. Wood products, asphalt, and concrete would be used in construction, along with gas and diesel fuel. With respect to operational activities, compliance with all applicable state and local building codes, as well as mitigation measures, planning policies, and standard conservation features, would ensure that resources are conserved to the maximum extent possible. The Project would incorporate a number of sustainable practices that reduce the consumption of energy. Nonetheless, construction activities related to the proposed Project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline and diesel for automobiles and construction equipment.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by environmental accidents associated with a project. While the proposed Project would result in the use, transport, storage, and disposal of minor amounts of hazardous materials during Project construction and operation, as described in Chapter 3, all such activities would comply with applicable local, state and federal laws related to the use, storage and transport of hazardous materials, which significantly reduces the likelihood and severity of accidents that could result in irreversible environmental damage.

Implementation of the proposed Project would result in the long-term commitment of resources to urban development, consistent with current conditions. The most notable significant irreversible impacts include the use of non-renewable and/or slowly renewable natural and energy resources, such as lumber and other forest products and water resources during construction activities. Operations associated with future uses would also consume an increase in natural gas and electricity compared to existing conditions. These irreversible impacts, which are unavoidable consequences of urban growth, are described in detail in the appropriate sections of this Draft SEIR (see Chapter 4).

5.4 Growth Inducing Impacts

As required by Section 15126.2(e) of the CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, the stimulation of economic activity within the region, or the establishment of policies or other precedents that directly or indirectly

encourage additional growth. Under CEQA, this growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. Induced growth would be considered a significant impact if it can be demonstrated that the potential growth, directly or indirectly, significantly affects the environment.

In general, a project could foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area, or a change in zoning or General Plan amendment approval), or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion). These circumstances are further described below.

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed project removes infrastructure limitations or provides infrastructure capacity or removes regulatory constraints that could result in growth unforeseen at the time of project approval.
- **Population Effects:** This addresses if a project would increase the population, which may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects
- **Other Activities:** This refers to if a project would encourage and facilitate other activities that could significantly affect the environment.

Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect, though not necessarily a significant one (i.e., one that results in significant environmental effects). A physical obstacle to growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. The proposed Project is located in a developed area of the City of Roseville (City) and the project site is currently served by City utilities. Development of the Project would not eliminate any obstacles to future growth.

The elimination of physical obstacles to growth is considered a growth-inducing effect, though not necessarily a significant one. There are no known physical constraints to growth in the vicinity of the project site.

The proposed Project would introduce new development within the existing Medical Center Campus in areas already approved for development. The Medical Center Campus is completely surrounded by urban development within the City and would not induce any new growth in areas surrounding the Campus. The Project does not require upsizing of any on or off-site utility infrastructure to accommodate the Project. Due to the location of the project site and the fact that the proposed Project would not remove any constraints that could potentially be obstacles to growth, implementation of the proposed Project would not induce growth within this area of the City.

Population Effects

The proposed Project would involve the buildout of the existing Medical Center Campus to include a new Inpatient Tower, new parking garage, expansion of the Emergency Department, upgrades to the central utility plant, redesign of the hospital's main entrance and loop road, and additional hospital-related facilities. The proposed Project does not propose any new housing or residential units and therefore would not result in a direct increase in population. Expansion of the medical facilities on the Campus would provide a comprehensive range of health care services to

Kaiser Permanente members in the City and surrounding communities. As the local population grows and ages, the demand for medical services and hospital beds in the area would also increase, while more efficient means to meet these demands will also be needed to otherwise keep potentially rising costs down. The proposed Project also projects the need for an approximately 728 additional employees to serve the Project at full buildout. However, meeting projected demands for hospital and medical services would not induce growth. Indirectly, the proposed Project could result in an added attractive community asset that is currently not fully in existence. However, the proposed Project is not expected to result in population or employment growth above City General Plan forecasts.

Overall, the proposed Project would indirectly stimulate population growth through the addition of new hospital staff members. However, this level of growth would be consistent with employment growth envisioned in local and regional land use plans and in projections made by regional planning authorities, since the planned growth of the Medical Center Campus and its land use intensity have been factored into the underlying growth projections of the City and the Sacramento Area Council of Governments Regional Growth Forecast.

Increased future employment generated by employee spending ultimately results in physical development of space to accommodate those employees. It is the characteristics of this physical space and its specific location that will determine the type and magnitude of environmental impacts of this additional economic activity. The proposed Project would affect the local economy through the construction of a larger medical facilities. The new hospital building would create approximately 728 new jobs. The addition of new jobs would help contribute to both indirect and induced employment opportunities. Although some degree of economic effect can be predicted, but the actual environmental implications of this type of economic growth are too speculative to predict or evaluate, since they likely would be spread throughout the City, Placer County, and beyond.

Impacts of Induced Growth

The growth induced directly and indirectly by the proposed Project could contribute to its environmental impacts, discussed in Chapter 4, in the City and adjacent Placer County, as well as the greater regional area. Any such environmental effects, however, are too diffuse and speculative to predict or describe with any particularity.

Indirect and induced population growth in the City would further contribute to the loss of open space because it would encourage the conversion of undeveloped land to urban uses for additional housing and infrastructure. However, it is assumed this new growth would occur within areas of the City designated and zoned for development. In addition, even if any open space were converted to urban uses, the particular open space that might be converted cannot be predicted with any certainty. According to the City of Roseville Housing Element, the City has an unbuilt housing supply of over 13,000 residential units in its approved Specific Plan areas (City of Roseville 2021, p. X-72).

In summary, although the proposed Project can be said to induce some growth, the consequences of such growth-inducement are too speculative to predict and thus cannot be said to contribute meaningfully to any significant environmental effect. Growth-inducing effects are therefore **less than significant**.

5.5 References

City of Roseville 2021. X Housing Element. City of Roseville. 2021. Available: https://p1cdn4static.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/10%20Housing%20Element%20Adopted%208.18.21.pdf. Accessed: April 27, 2022.

6 List of Preparers

Report Preparers

City of Roseville (Lead Agency)

Derek Ogden, Senior Planner
Kinarik Shallow, Associate Planner

Dudek (Environmental Consultant)

Christine Kronenberg, AICP Principal
Ronelle Candia, Project Manager
Eric Schniewind, Senior Hydrogeologist
Angelica Chiu, Planner
Ian McIntire, Air Resource Specialist
Spenser Lucarelli, GIS and Graphics

Fehr & Peers (Transportation Consultant)

Robert Hananouchi, Associate

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Appendix A

February 2022 Notice of Preparation and Comment Letters

CITY OF ROSEVILLE PLANNING DEPARTMENT
311 Vernon Street, Roseville, CA 95678 (916) 774-5276

NOTICE OF PREPARATION

Date:	February 25, 2022
To:	State Clearinghouse Responsible Agencies Trustee Agencies Interested Parties
Subject:	Notice of Preparation of a Supplement to the Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH # 2003062014) for the proposed Inpatient Bed Tower Project
Project Title/File Number:	Kaiser Permanente Roseville Medical Center Inpatient Bed Tower File number: PL 22-0038
NOP Comment Period:	End of posting period is March 28, 2022 at 5:00 p.m.
Project Location:	1600 Eureka Road, Roseville 95661 APN 048-012-001
Project Applicant:	Kaiser Foundation Hospitals Attn: Skyler Denniston, Director, Land Use & Entitlements 393 E. Walnut Street, 4th Floor Pasadena, CA 91188
Property Owner:	Kaiser Foundation Hospitals
Lead Agency and Contact Person:	Kinarik Shallow, Associate Planner City of Roseville Planning Department 311 Vernon Street Roseville, CA 95678 (916) 746-1347 Fax: (916) 774-5219 Email: kshallow@roseville.ca.us Website: www.roseville.ca.us

INTRODUCTION

The City of Roseville (City) will be the lead agency for the Roseville Medical Center Inpatient Bed Tower project ("Proposed Project" or "Project"). This Notice of Preparation (NOP) has been issued to notify responsible and trustee agencies and other interested parties that the City will be preparing a Supplement to the Kaiser Permanente Roseville Medical Center Expansion Project Environmental Impact Report (SCH #2003062014) (2004 EIR) that evaluated expansion of the existing Kaiser Permanente Medical Center site located at 1600 Eureka Road. To address updates to what was previously approved, a Supplemental Environmental Impact Report (SEIR) is proposed for the Project. The purpose of this NOP is to solicit feedback on the scope and content of the analysis to be evaluated in the SEIR.

The SEIR will evaluate changes in the physical environment that could occur as a result of approval of the Proposed Project and whether these issues would result in new or substantially more severe significant impacts than identified in the 2004 EIR. This SEIR is being prepared by the City in compliance with Section 15163 of the California Environmental Quality Act (CEQA) to evaluate potential significant environmental effects associated with implementation of the Proposed Project and to recommend mitigation measures, as required.

The Proposed Project description, location map, vicinity map, and site plan are provided in this NOP and are also available on the City's website:

https://www.roseville.ca.us/environmentaldocuments.

NOP Comment Period: Due to the time limits mandated by state law, your response to this NOP must be sent no later than 30 calendar days after receipt of this notice and should be received by March 28, 2022 (30 days after the date this notice was first posted). Please submit comments to City of Roseville no later than 5 p.m. on March 28, 2022. Please provide written comments to:

Kinarik Shallow, Associate Planner
City of Roseville Planning Department
311 Vernon Street
Roseville, CA 95678
Phone: (916) 746-1309
Fax: (916) 774-5129
Email: kshallow@roseville.ca.us

PROJECT BACKGROUND

In April 2004, the City approved the Kaiser Permanente Roseville Medical Center Expansion Project (2004 Expansion Project) and certified the 2004 EIR. The 2004 Expansion Project included construction and operation of a 705,360 square-foot expansion to the existing Kaiser Permanente Medical Center (Medical Center) located at 1600 Eureka Road. The Medical Center currently contains over one million square feet of medical facilities, 352 inpatient beds, and 3,077 parking spaces. The 2004 Expansion Project approvals included a five-story, 155,000 gross-square-foot Surgery and Intensive Care Unit Facility located along the north elevation of the existing main hospital building, and a three-level approximately 400-space parking garage located in the northeast corner of the site. Neither the Surgery and Intensive Care Unit Facility nor the three-story parking garage have been constructed, although those sites have been developed in the interim with approximately 851 surface parking spaces.

The 2004 Expansion Project EIR evaluated the following issue areas:

- Land Use and Planning
- Visual Resources
- Air Quality
- Hydrology and Water Quality
- Population/Employment/Housing
- Public Services
- Noise
- Utilities
- Traffic and Circulation

The City determined any potential Project effects in the following issue areas would be less than significant and would not require further evaluation in the 2004 EIR:

- Geology
- Biological Resources
- Cultural Resources
- Energy/Mineral Resources
- Hazards
- Recreation

Project Location

The Project site (Property) is located on the existing 49-acre Medical Center campus at 1600 Eureka Road, as shown in Figure 1, Regional Location and Project Site. The Property is bordered by Lead Hill Boulevard on the north, Douglas Boulevard on the south, Eureka Road on the east, and Rocky Ridge Drive on the west. Adjacent commercial and office uses surround the Property.

The Property's assessor's parcel number (APN) is 048-012-001.

PROJECT DESCRIPTION

The Proposed Project would increase the size and capacity of the previously approved 2004 Expansion Project. Specifically, the Proposed Project revises the 2004 Expansion Project to allow for an approximately 278,000 square-foot, six-story, 138-bed Inpatient Tower building (on the site of the prior approved Surgery and Intensive Care Unit Facility); a relocation of the northwest corner loop road; and a new four-level garage with rooftop parking to accommodate approximately 800 stalls located in the northeast corner of the campus (on the site of the prior approved parking garage); a new main hospital entrance and drop off area; expansion of the existing Emergency Department to add 36 new treatment bays; and a new generator yard and internal upgrades to the existing Central Utility Plant (CUP).

The Proposed Project would be constructed on portions of the Property currently occupied by surface parking lots.

Project Setting and Surrounding Land Uses

The Property is currently developed with seven buildings totaling 1,441,750 square feet that comprise the Medical Center, along with 3,077 surface and garage parking spaces and associated signage and landscaping. The Property is designated Business Professional (BP) on the City's General Plan land use map (last updated September 2015) and the City's Northeast Roseville Specific Plan. The Property is

zoned Planned Development for Medical Campus (PD 470). Uses permitted include professional offices and general medical services.

The Property is primarily developed with buildings and surface parking lots; however, there are areas of landscaping along the perimeter of, and internal to, the Property. A number of landscape trees are present throughout the Property. Although existing trees and landscaping would be removed to accommodate the Project, there are no mature or protected trees on site and new landscaping would be designed to enhance the areas within the Project boundary. The elevation of the Property varies from approximately 200 feet to 235 feet above mean sea level.

Proposed Project Elements

The Project applicant proposes to develop an approximately 278,000 square-foot, six-story (107-foot tall) inpatient hospital building that includes 138 beds (108 medical beds, 30 ICU beds), six additional operating rooms, 36 additional Emergency Department treatment bays, and an in-patient pharmacy in the portion of the Property previously approved for the 2004 Expansion Project's Surgery and Intensive Care Unit Facility. Other proposed improvements include relocating the northwest portion of the campus loop road and creating a new main entrance and patient drop off area for both the new hospital tower and the existing Emergency Department. A new four-level plus rooftop (47-foot tall) 800 stall parking structure is proposed in the northeast corner of the campus in an area previously approved for a parking structure as part of the 2004 Expansion Project. In addition, the Project includes internal renovations to the CUP building and a new emergency generator yard. The Project site plan is shown in Figure 2. The SEIR will evaluate the potential environmental effects associated with the net new increase in square footage and building height of the new inpatient tower and parking structure.

Project Access and Parking

The new main entry and patient drop-off to the Medical Center would be from Rocky Ridge Drive, as shown in Figure 2, Site Plan. The main entry would include a public two-way driveway and direct access to a new hospital drop-off area fronting the new hospital entrance atrium and plaza.

Existing access to the Property from Lead Hill Boulevard, Eureka Road and Douglas Boulevard would not change. Access to the new parking structure would be via the existing Medical Center entry off Eureka Road, which is directly south of the proposed parking structure. A new driveway off Lead Hill Boulevard, near Rocky Ridge Drive may be constructed to provide additional access to the Property.

A temporary parking lot currently under construction at 2130 Douglas Boulevard would provide interim parking for Kaiser Permanente employees during construction.

Lighting and Landscaping

It is anticipated that the Project's landscaping would use native and drought resistant plants where feasible and would comply with the City's Water Efficient Landscape Ordinance. Since the Project is an expansion to an existing Medical Center, the landscaping plan is designed to blend with the existing plant palette and species that are currently on the Property. Based on an arborist survey

completed in January 2022, there are no protected trees on the Property that would require compliance with the City's Municipal Code Chapter 19.66, Tree Preservation.

Project lighting would be provided in the surface parking areas and within the landscaped areas around the building to provide required illumination along pathways for security as well as for aesthetics.

Sustainability Features

The Proposed Project will be designed to meet Kaiser Permanente's sustainability requirements, which include Leadership in Energy and Environmental Design (LEED) Gold certification or equivalent. The Project must also comply with the most recent update to the California Energy Code, Title 24.

Public Utilities

The new inpatient hospital building would tie into existing water, wastewater and storm drain lines, as well as dry utilities that serve the existing Medical Center buildings. Should additional capacity of the existing on-site utilities be required as part of the Proposed Project, upgrades or improvements would be completed during construction.

Construction Timeline

Construction of the Project, if approved, would take approximately 48 months to complete. Site grading would take approximately 12 months followed by trenching for utilities and construction of the buildings. The intent is to have the parking structure built first in order to provide sufficient parking on site while the new inpatient hospital building and loop road relocation are being constructed on the northwest corner of the Property.

Kaiser Permanente contracts with unionized labor for all construction work and would do so for this Project.

PROJECT APPROVALS

This SEIR will serve as the environmental document for City approvals and any permits required from other governmental bodies for Project construction and operation. The SEIR will analyze construction and operation of the Proposed Project on a project-specific level (CEQA Guidelines Section 15161). The SEIR analysis will also provide the basis for CEQA compliance for subsequent approvals for the Project, such as any use permits, design review permits, and other discretionary permits issued by the City or any other regulatory agency.

The following discretionary approvals would be obtained for the Project:

- Certification of the SEIR
- Major Project Permit Stages 1-3

- Specific Plan Amendment to the Northeast Roseville Specific Plan
- Development Agreement Amendment

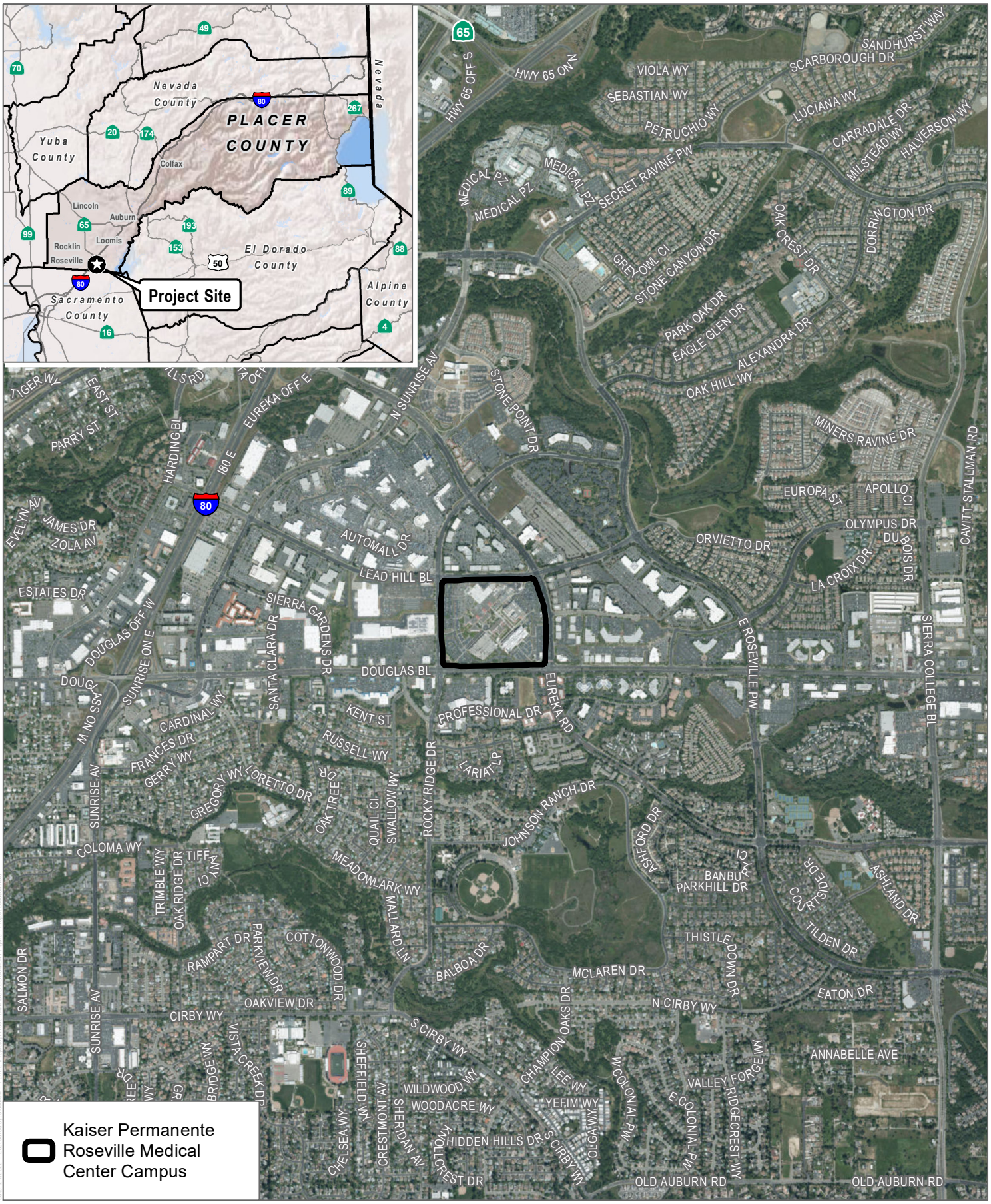
PROBABLE ENVIRONMENTAL EFFECTS AND SCOPE OF THE SEIR

The SEIR will address those Project components that were not previously evaluated in the 2004 EIR. It is anticipated that the proposed changes to the approved 2004 Expansion Project would be minor and may not require new mitigation measures. To evaluate potential environmental impacts associated with the proposed land use changes, CEQA Guidelines Section 15163 sets forth the circumstances under which a project may warrant a supplemental (rather than subsequent) EIR. Specifically, a lead agency shall prepare a supplement to an EIR if any of the conditions described in Section 15162 requiring a further EIR are found, but only minor additions or changes would be necessary to make the original EIR adequate. Based on the proposed changes to the approved 2004 Expansion Project, the City has determined a SEIR is the appropriate CEQA document. The SEIR will provide a project-specific environmental analysis to determine if the Proposed Project would result in any significant impacts not adequately addressed in the 2004 EIR and/or if additional mitigation measures beyond those adopted in the EIR's Mitigation Monitoring and Reporting Program would be required to reduce impacts to a less-than-significant level.

Based on a review of the proposed changes to the 2004 Expansion Project, it is anticipated that potential environmental impacts associated with Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Recreation, and Public Services, would not change from the 2004 EIR and the analysis and mitigation measures contained in the Kaiser Permanente Roseville Medical Center Expansion Project EIR are still adequate. The only issue where either new impacts not previously evaluated in the 2004 EIR or the severity of the impact may be more severe would occur in the following: Aesthetics, Air Quality, Greenhouse Gases, Land Use, Public Utilities, and Transportation. Three new issue areas added to the CEQA Guidelines and not previously evaluated in the 2004 EIR include Energy, Tribal Cultural Resources, and Wildfire. All of these issue areas will be evaluated qualitatively in the SEIR Executive Summary and it is anticipated no new impacts would occur.

CUMULATIVE IMPACTS ANALYSIS

As required by CEQA, the SEIR will also evaluate the cumulative impacts of the Proposed Project. As stated in CEQA Section 15065(a)(3), proposed projects should be evaluated to determine whether the project's impacts are "cumulatively considerable," which means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of current projects, and the effects of probable future projects."



SOURCE: City of Roseville 2019

FIGURE 1

Project Location

Kaiser Roseville Medical Center Expansion Project

DUDEK

0 1,000 2,000 Feet

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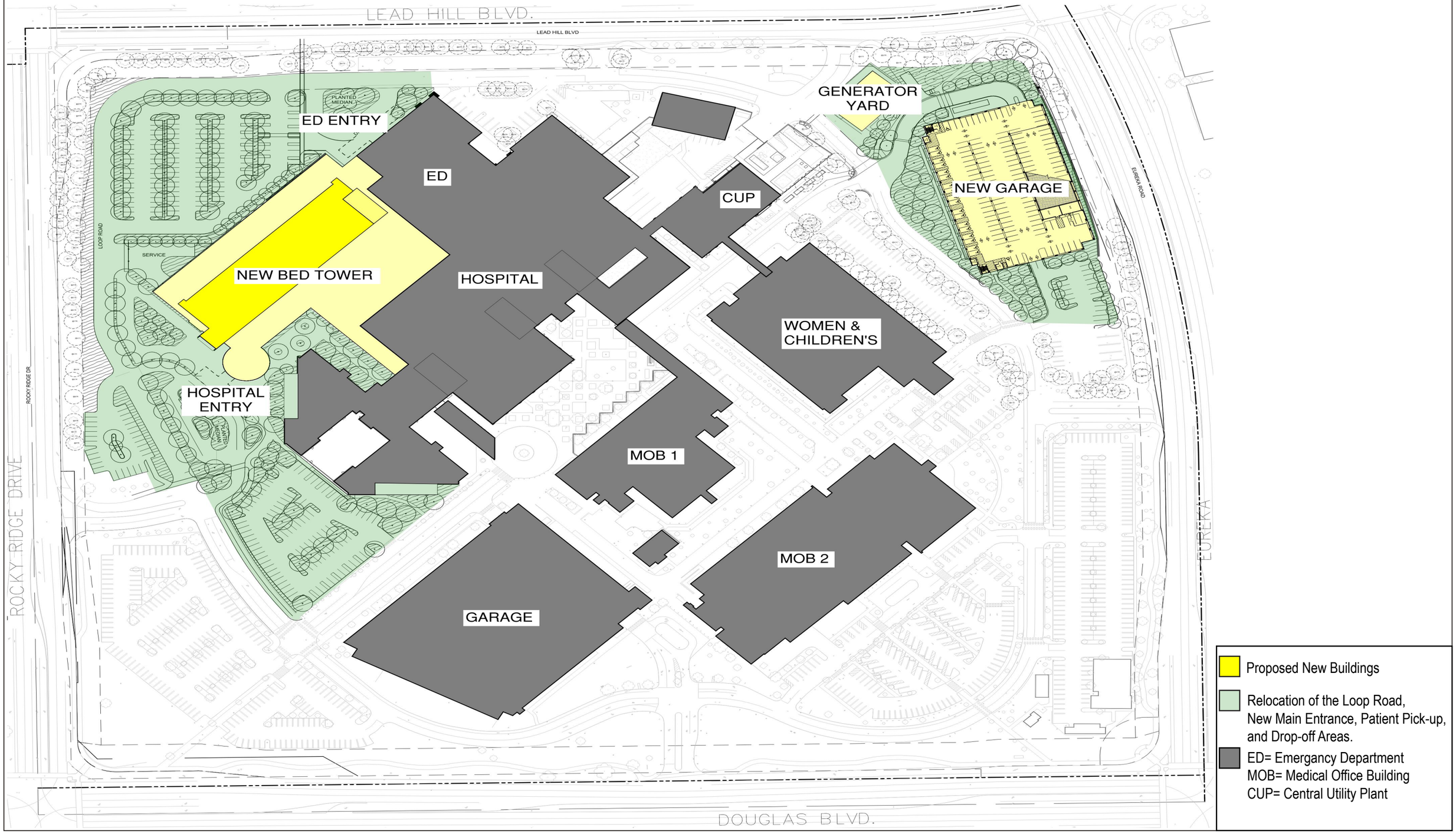

SOURCE: City of Roseville 2019

FIGURE 2

Site Plan

Kaiser Roseville Medical Center Expansion Project

DUDEK

NATIVE AMERICAN HERITAGE COMMISSION

Governor's Office of Planning & Research

Mar 04 2022

STATE CLEARINGHOUSE

February 28, 2022

Kinarik Shallow, Associate Planner
City of Roseville
311 Vernon Street
Roseville, CA 95678

Re: 2022020590, Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project, Placer County

Dear Ms. Shallow:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse

Placer County
AIR POLLUTION CONTROL DISTRICT

110 Maple Street, Auburn, CA 95603 • (530) 745-2330 • Fax (530) 745-2373 • www.placerair.org

Erik C. White, Air Pollution Control Officer

March 28, 2022

SENT VIA E-MAIL: kshallow@roseville.ca.us

Kinarik Shallow, Associate Planner
City of Roseville, Planning Department
311 Vernon Street
Roseville, CA 95678

SUBJECT: Notice of Preparation of a Supplement to the Kaiser Permanent Roseville Medical Center Expansion Project Environmental Impact Report (SCH#2003062014) for the proposed Inpatient Bed Tower Project

Ms. Shallow;

Thank you for submitting the Notice of Preparation of a Supplement to the Kaiser Permanent Roseville Medical Center Expansion Project Environmental Impact Report (SCH#2003062014) for the proposed Inpatient Bed Tower Project (Project) to the Placer County Air Pollution Control District (District) for review and comment. The District provides the following comments for consideration.

1. The District's CEQA Thresholds of Significance for criteria pollutants and Greenhouse Gas (GHG) are summarized in the tables below:

Criteria Pollutant Thresholds								
Construction Phase			Operational Phase Project-Level			Operational Phase Cumulative-Level		
ROG	NOx	PM_{10}	ROG	NOx	PM_{10}	ROG	NOx	PM_{10}
(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)
82	82	82	55	55	82	55	55	82

Greenhouse Gas Thresholds			
Bright-line Threshold 10,000 MT CO2e/yr			
Efficiency Matrix			
Residential		Non-residential	
Urban	Rural	Urban	Rural
(MT CO2e/capita)		(MT CO2e/1,000sf)	
4.5	5.5	26.5	27.3
De Minimis Level 1,100 MT CO2e/yr			

The District recommends applying the District's adopted thresholds to determine the level of significance for the Project's related criteria pollutants and GHG impacts.

2. The District's California Environmental Quality Act (CEQA) Air Quality 2017 Handbook (Handbook) provides recommended analytical approaches and feasible mitigation measures when preparing air quality analyses for land use projects. The Handbook is available on the District's website at http://www.placerair.org/landuseandceqa/ceqaairqualityhandbook. Except where noted below additional detail relating to the following recommended items can be found within the Handbook.

   - The Project is located within the Sacramento Valley Air Basin (SVAB) and is under the jurisdiction of the District. The SVAB is designated as nonattainment for federal and state ozone (O_3) standards and non-attainment for the federal PM2.5 – 24-hour standard. Within the Air Quality section, the District recommends the discussion include the area designations for the federal and state standards for the SVAB.

- The California Emissions Estimator Model (CalEEMod) is recommended to estimate the Project related air pollutants emissions from construction and operational phases. CalEEMod quantifies criteria pollutant emissions, including greenhouse gases (GHGs) from construction and operation (including vehicle use), as well as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance. In addition, CalEEMod calculates the benefits from implementing mitigation measures, including GHG mitigation measures, developed and approved by California Air Pollution Control Officers Association. The new CalEEMod version 2022.1 is accessible online at https://www.caleemod.com/.

  The District also requests that copies of all modeling analysis files be provided during the public review and comment period of the environmental documents.

- In the event the air quality analysis demonstrates the potential for the Project to cause or generate significant adverse air quality related impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. Additional mitigation measures can be found in the District's CEQA Handbook within the following related appendices.

  Appendix A. District Rules and Regulations (Construction and Operational)

  Appendix C. Recommended Mitigation Measures (Construction)

  Appendix E. Recommended Mitigation Measures (Operational)

  Appendix F. Mitigation Measures (Greenhouse Gases)

- The District recommends a CALINE 4 modeling analysis for carbon monoxide (CO) concentration be performed and discussed within the environmental document either of the following scenarios is true for any intersection affected by the project traffic, the project should conduct a site-specific CO dispersion modeling analysis to evaluate the potential local CO emission impact at roadway intersections:

- A traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or

- A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where a delay would increase by 10 seconds or more when project-generated traffic is included.

3. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permits(s) from the District. The applicant, developer, or operator of a project that include generators, boilers, or hot water heaters should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower are required to have a PCAPCD permit to operate or a California Air Resources Board portable equipment registration.

4. District Rule 228, Fugitive Dust (PDF), establishes standards to be met by activities generating fugitive dust. When an area to be disturbed is greater than one acre, a dust control plan must be submitted to and approved by the District. The District has developed an application for this purpose, which can be found on the District website: https://placerair.org/FormCenter/Air-Pollution-Control-6/Dust-Control-Form-52 .

Thank you for allowing the District this opportunity to review the project NOP document. Please do not hesitate to contact me at 530.745.2327 or ahobbs@placer.ca.gov if you have any questions.

Sincerely,

Ann Hobbs
Associate Planner
Placer County Air Pollution Control District, Planning & Monitoring Section

29 March 2022

Kinarik Shallow
City of Roseville
311 Vernon Street
Roseville, CA 95678
kshallow@roseville.ca.us

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, KAISER PERMANENTE ROSEVILLE MEDICAL CENTER INPATIENT BED TOWER PROJECT, SCH#2022020590, PLACER COUNTY

Pursuant to the State Clearinghouse's 25 February 2022 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Kaiser Permanente Roseville Medical Center Inpatient Bed Tower Project, located in Placer County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has

adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the

State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage

under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4709 or Greg.Hendricks@waterboards.ca.gov.

Greg Hendricks
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Appendix B

Community Design Guidelines
Applicable to the Proposed Project

Community Design Guidelines

The following Community Design Guidelines are applicable to the proposed Project:

I. Site Design Guidelines

A. Site Planning and Building Siting

OI-1. Buildings should be clustered to defi ne, connect, and activate pedestrian edges and public spaces and to provide convenient access to transit stops.

OI-3. Buildings should be placed on project sites to create a street presence and enhance community character.

- When necessary, setbacks should be used to provide sound attenuation by creating space for the placement of sound barriers.
- Projects with two story buildings should have larger setbacks than those with single story buildings.

OI-4. If a project is proposed in phases, each phase shall be designed to function independently, without reliance on improvements included in subsequent phases.

B. Edge and Boundary Treatment

OI-6. Landscaping, public spaces, art and/or other "gateway" features should be used to defi ne the entryways into the project.

OI-7. Entryway features should reflect the overall architectural identity or character of the development

D. Green Site Design

OI-18. Consistent with the City's Stormwater Treatment Manual, surface water and pollutant runoff should be reduced by maximizing the use of pervious surfaces and vegetative ground cover.

- Use of permeable paving, pavers, turf stone, brick, and decomposed granite is encouraged.
- Use natural topographic features or built swales for site drainage, provide pervious or semi-pervious pavement, etc.

E. Access, Circulation, and Parking

OI-22. Paving material for driveways, drive aisles, and walkways should be consistent with the architectural style of the buildings and should incorporate similar accent elements.

- Stamped and/or colored concrete or other decorative accent is encouraged.

OI-23. Site circulation should allow for and facilitate emergency access to the site and all buildings.

- Speed bumps are strongly discouraged as they impede emergency response.
- Long, straight drives are discouraged to prevent speeding and conflicts with pedestrians.

OI-25. Street and drive aisle widths, throat depths, stacking distances, and parking shall comply with current City standards.

OI-26. Sidewalk corridors in parking lots should have a minimum of five feet of landscaping on at least one side of the walkway or alternating form one side to the other to provide shade and scale for pedestrians.

II. Architectural Guidelines

A. Architectural Design Concept

OI-32. Overall character of the development should be defined through the use of a consistent design concept.

- Building design should be consistent with the defined architectural style and should incorporate the architectural embellishments commonly associated with that style.
- Facades should be designed to include authentic architectural elements.

OI-33. Architectural design concepts of neighboring projects should be considered.

- The project may adopt a consistent or contrasting approach.
- Buildings should be designed to conform to their surroundings with respect to height and scale.
- Repetition and duplication ("copycat effect") of architecture should be avoided.

B. Forming and Massing

OI-34. Variation of wall planes, rooflines, and building form should be considered to create visually engaging designs.

- Architectural elements such as varied roof forms, articulation of the facade, breaks in the roof, walls with texture materials and ornamental details, and landscaping should be incorporated to add visual interest.
- Architectural elements such as fenestrations and recessed planes should be incorporated into façade design. Large areas of flat, blank wall and lack of treatment are strongly discouraged.
- Roof height, pitch, ridgelines, and roof materials should be varied to create visual interest and avoid repetition. Architectural style should be considered when designing the roof plan.

- Stairs and other entry access requirements such as wheelchair ramps and elevators should be integrated into the overall project design

OI-35. Proportional relationship between adjacent buildings and between the building and the street should be maintained.

- Unit/building layout should ensure the gradual transition of building height and mass.
- Pedestrian scaled entry should be a prominent feature of the front elevation.

OI-36. Landscaping and architectural detail at the street level should be used to soften the edge of the building and enhance the pedestrian scale and streetscape.

OI-37. Main building entries should be emphasized through building articulation and form to allow easy identification from the street and parking lot, and convenient access for pedestrians.

- Building entry zones should be clearly defined through the use, or combined use, of elements such as accent paving, accent planting, color pots and bollards.
- Architectural detail such as windows, awnings, trellises, articulation, arcades, landscape planters, and material changes at the street level should be used to soften the edge of the building and enhance pedestrian scale.

OI-38. Setbacks shall comply with the requirements of the Zoning Ordinance and building codes where applicable.

C. Use of Exterior Building Materials and Color

OI-39. Variation in color and materials should be considered to create visually engaging designs.

- High quality and durable materials, such as stone, brick, and cementious siding are encouraged.
- Creative use of plaster and stucco finishes that add visual depth and texture is highly encouraged.
- Creative and appropriate use of color is encouraged.
- Use of color should be consistent with the overall architectural style or theme of the project.
- Variation in exterior treatment of adjacent buildings is encouraged.

OI-40. Architectural treatment should be applied to all elevations of a building and may include elements such as color, materials, or form drawn from the design of the primary frontage.

- Rear and side elevations of buildings facing a street should be given particular emphasis.

- Side and back walls of units/buildings on corners should include treatment on walls facing the street, and should incorporate design features such as wall plane projections and other visual relief, variation in building mass, and window placement.

OI-41. Architectural features that enhance the façade or building form are encouraged.

- Architectural features such as decorative moldings, windows, dormers, and landscaped elements such as lattices that add detail to a façade are encouraged.

OI-42. Columns, wall plane projections, and other visual relief should provide visual depth and shade and shadow interest.

D. Green Building Design

OI-43. Green building design should be considered in the project.

- Natural climate control features such as roofs with larger overhangs and trellises or deciduous trees over south-facing windows are encouraged to reduce energy demand.
- Use of windows for natural light indoors as much as possible is encouraged. Windows should be placed for cross-ventilation and airflow to promote natural cooling.
- Building materials that are less hazardous and/or are made from recycled materials are encouraged.
- Building designs that incorporate opportunities for renewable energy production such as solar panels are encouraged.
- Use of native vegetation is encouraged to reduce water consumptions for landscaping.
- Use of recycled water is encouraged for landscaping.

III. Public Space Guidelines

A. Streetscape Design

OI-44. Safe and comfortable pedestrian environments should be provided in the project.

- Physical separation from streets and drive aisles should be provided through landscaping to encourage walking.
- Pedestrian amenities such as appropriate signage, street furniture, landscaping and pedestrian-scale lighting should be provided.
- Wider sidewalks should be provided to allow for two persons to walk comfortably side-by-side.

OI-45. Streetscape design should include the following elements:

- Primary street trees that provide shade for pedestrians, soften and frame the street, and define the public space.
- Secondary trees that complement and support the primary trees in form and function.
- Accent trees that are used to define entrances, add variety in form and color, or highlighting other focal points of the street.
- Primary, secondary and accent shrubs which are used to form the understory and further define entrances and provide screening of parked cars where necessary
- Groundplane treatment, groundcovers and seasonal color plantings.
- Hardscape elements such as pavers, planters, bus stops, sidewalks, benches, bollards, bike paths, site access paths, and street lights.

OI 47. Utilities and mechanical equipment should be screened from public view.

- Ground-mounted HVAC units should be located away from activity areas and screened from public view through landscaping and/or screen walls.
- Public utility infrastructure and other utility components should be oriented away from public view to the extent possible and screened with evergreen shrubs to the extent allowed by the utilities.
- Ground or wall mounted equipment should be located out of public view to the extent possible and screened or placed in an enclosure to the extent allowed by the utility companies.
- Screening for equipment shall be integrated into the building and roof design and use compatible materials, colors and forms. Wood lattice or fence like coverings are inappropriate for screening and are discouraged.
- Roof mounted equipment, including but not limited to air conditioners, fans, vents, antennas, and microwave dishes shall be setback from the roof edge, or placed behind a parapet or in a well so that they are not visible to motorists or pedestrians on the adjacent streets.

OI-49. A combination of landscaping, berming, and screen walls to a height of three feet should be used to screen views of parked cars adjacent to the streetscape.

B. Landscaping

OI-50. Landscaping shall be used extensively throughout the project to achieve multiple objectives. Objectives to be achieved through landscaping may include:

- Adding texture to walls and other vertical surfaces;
- Screening undesirable views;
- Strengthening the pedestrian scale;
- Buffering pedestrian walkways from the street and buildings;
- Providing shade in public spaces and parking lots;

- Assisting in neighborhood way finding;
- Softening transitions between horizontal and vertical planes;
- Providing a visual and noise buffer; and
- Relieving the visual appearance of large expanses of hard surfaces.

OI-51. Layered landscaping and a mix of deciduous and evergreen trees shall be incorporated in the landscape design. The plant palette should emphasize massing and form rather than individual or small groupings of shrubs and trees.

OI-52. Tree placement should provide maximum shading of sidewalks, and outdoor public spaces.

OI-53. Trees should shade at least 50% of the paved parking areas as measured at 15 year maturity based on the tree species and mid summer sun angle conditions. The shade values for various tree species are located in the specific plan landscape guidelines. Shade calculations shall be made in accordance with the Parking Lot Shade Diagram in Appendix C.

OI-54. Native planting or compatible species of drought-tolerant plants should be used as much as possible to reduce water consumption.

- Use of turf is not permitted in median strips or within the protected zone of any native oak tree, or as provided in the Roseville Water Efficient Landscape Requirements.
- Turf should be limited to accent areas, activity areas, or in parkway areas between sidewalks and street curbs.
- Plants should be grouped according to their water needs and irrigated separately from other groupings with dissimilar water needs.

OI-55. Visual surveillance of common open space, parking areas, or building entries should not be obscured through landscaping.

OI-56. Landscape designs should consider adjacent site landscaping, either existing or planned, and enhance rather than duplicate the landscaping effort.

OI-57. Plant materials shall be selected and located to avoid conflicts with the underground or above ground utilities.

OI-58. Trees and shrubs planted at all intersections and driveways shall be selected and located to maintain safe sight line distances per the City's Clear Vision Triangle as defined in the Zoning Ordinance.

OI-59. Plant selection should consider site geology and soil conditions and provide suitable mitigation to ensure successful establishment of the introduced landscaping.

OI-60. All required landscaping improvements shall be continually preserved and maintained to professional maintenance industry standards.

- Plant materials that have died or are in a visible state of decline shall be replaced to meet the requirements of the original landscape plan approval.
- All proposed tree work on native oak trees that is considered to be a regulated activity under the Tree Preservation Ordinance shall require approval of a tree permit.

OI-61. Tree selection and placement should allow for sufficient root space adjacent to paved surfaces. The following minimum planter widths (measured inside curbs) should be provided:

- Eight feet for large canopy trees
- Six to eight feet for medium to large canopy trees
- Six feet for medium to small canopy trees
- Four feet for small canopy trees

OI-62. Planters shall be protected from vehicles by use of raised curbs or wheel stops.

OI-63. Trees should be a minimum of fifteen gallon size. It is recommended that larger sized trees be incorporated for accent or activity areas.

OI-64. Shrubs should be a minimum of one gallon in size; however, a mix of one gallon and five gallon shrubs is encouraged. Screen plantings may require five gallon minimum sizes in order to provide immediate effectiveness. Shrub ground covers may be specified in either liner or one gallon sizes.

OI-65. Landscape plans should be prepared by a licensed landscape architect and shall be prepared in accordance with the Water Efficient Landscape Requirements.

OI-66. Slopes for landscaped areas should not exceed three to one, and the minimum slope shall be two percent.

OI-68. The top and toe of slopes within landscaped areas shall be setback a minimum of two feet from fences, walls, property lines, street curbs, pedestrian/bike paths or other hardscape surfaces in order to prevent drainage across these surfaces.

C. Plazas & Outdoor Spaces

OI-69. Active use of outdoor spaces should be encouraged.

- Plazas or other outdoor activity spaces used for sitting, eating, strolling, and gathering should be designed into the project.
- Where multiple buildings are proposed, buildings should be clustered to create pedestrian plazas and gathering spaces.

- Plaza design should emphasize the active nature of these spaces and incorporate some combination of accent materials, site furniture, shade structures, accent lighting, interesting colors, textures and forms, and art, graphics or other focal elements.
- Plaza design should provide amenities for varying light and climate conditions, protection from sun and wind, moveable furniture, climate control elements, children's play areas, and performance areas.
- Furniture should be selected not only for its functional and aesthetic qualities but also focus on the quality of materials and finishes that provide long term durability and resistance to vandalism.
- The relationship between indoor and outdoor spaces and uses should be considered in plaza and outdoor space designs.

E. Lighting

OI-71. Pedestrian-scale lighting should be incorporated in outdoor areas such as pedestrian walkways, plazas, play lots and parking areas.

OI-72. Pedestrian-scale lighting should be integrated into building and landscape design. Light fixtures should be compatible with the architectural style, materials, color, and scale of the project.

OI-73. Safety and security in the project and its immediate surroundings shall be enhanced through lighting design.

OI-74. Energy efficiency and overall effect should be considered for lighting design.

OI-75. Exterior lighting should reinforce the architectural features and blend into the landscape. Special lighting may be used to highlight unique design elements or art features

OI-76. Main entries / storefronts should have the highest level of illumination followed by pedestrian walking areas.

OI-77. Lighting that is less than 10 feet in height is considered pedestrian scale.

OI-78. Lighting sources shall have cut off lenses and should be located to avoid light spillage and glare on adjacent properties and in private spaces.

OI-79. Project addresses shall be clearly displayed and illuminated for easy identification by emergency response personnel.

OI-80. Pedestrian-scale light fixtures shall be of durable and vandal resistant materials and construction.

OI-81. Streets, entry drives, drive aisles, and parking areas shall have a minimum illumination level of 1.0 footcandle at the pavement surface.

OI-82. Pole mounted lighting should be spaced for maximum energy efficiency and be no taller than 25 feet for office projects and 35 feet for industrial projects.

OI-83. Pedestrian walks should have minimum maintained illumination levels of 0.5 footcandles at the walking surface.

G. Signage

OI-87. Thoughtfully integrated design themes and styles for project signage that conforms to the Roseville Sign Ordinance are highly encouraged.

OI-88. Sign type and locations should be consistent throughout the project and the sign materials and graphics should complement the project design.

OI-89. Building and site addressing shall be illuminated and comply with applicable City addressing policies.

Appendix C

Kaiser Roseville Medical Center Inpatient Bed Tower – Air Quality and GHG Calculations

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

Kaiser Bed Tower Project - Bed Tower

Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	278.00	1000sqft	8.77	278,000.00	0
User Defined Industrial	1.00	User Defined Unit	0.13	5,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 278,000 SF bed tower and 5,600 SF generator yard.

Construction Phase - Project construction would begin January 2023, with buildout in February 2027.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated construction equipment per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per information from applicant.

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Off-road Equipment - Default equipment assumed.

Off-road Equipment - Default equipment assumed. Included 3 compactors.

Trips and VMT - Default trips assumed. Added vendor truck to demolition, grading, and paving for water truck.

Demolition - 4,055 tons of pavement removed.

Grading - Cut: 23,498 CY, Fill: 9,836 CY.

Vehicle Trips - Updated trip rates per traffic analysis.

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 final equipment.

Stationary Sources - Emergency Generators and Fire Pumps - Two 2 MW emergency generators.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	15,654.00
tblAreaCoating	Area_Parking	0	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstructionPhase	NumDays	10.00	168.00
tblConstructionPhase	NumDays	20.00	245.00
tblConstructionPhase	NumDays	20.00	893.00
tblConstructionPhase	NumDays	230.00	784.00
tblConstructionPhase	NumDays	20.00	410.00
tblGrading	AcresOfGrading	490.00	768.00
tblGrading	AcresOfGrading	252.00	279.00
tblGrading	MaterialExported	0.00	13,662.00
tblLandUse	LandUseSquareFeet	0.00	5,600.00
tblLandUse	LotAcreage	6.38	8.77
tblLandUse	LotAcreage	0.00	0.13
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	46.00	89.00
tblTripsAndVMT	WorkerTripNumber	28.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	91.00	201.00

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

tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	ST_TR	7.72	8.54
tblVehicleTrips	SU_TR	6.77	7.49
tblVehicleTrips	WD_TR	10.72	11.86

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

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.6225	6.0792	6.2148	0.0127	2.1761	0.2658	2.4419	0.9168	0.2448	1.1616	0.0000	1,121.3263	1,121.3263	0.3313	0.0105	1,132.7477
2024	0.3458	3.0866	3.5869	0.0102	0.6697	0.1142	0.7839	0.1153	0.1053	0.2206	0.0000	919.9857	919.9857	0.1888	0.0344	934.9552
2025	1.1966	2.8936	3.6464	0.0109	0.3393	0.1047	0.4439	0.0921	0.0970	0.1892	0.0000	980.2317	980.2317	0.1797	0.0384	996.1800
2026	0.8017	2.5711	2.8651	9.4800e-003	0.3167	0.0898	0.4065	0.0861	0.0831	0.1692	0.0000	855.9171	855.9171	0.1516	0.0368	870.6744
2027	0.0337	0.3194	0.2478	1.1300e-003	0.0443	0.0102	0.0544	0.0121	9.3600e-003	0.0214	0.0000	102.9206	102.9206	0.0162	5.4700e-003	104.9568
Maximum	**1.1966**	**6.0792**	**6.2148**	**0.0127**	**2.1761**	**0.2658**	**2.4419**	**0.9168**	**0.2448**	**1.1616**	**0.0000**	**1,121.3263**	**1,121.3263**	**0.3313**	**0.0384**	**1,132.7477**

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1708	0.8466	7.2665	0.0127	1.0118	0.0234	1.0352	0.4213	0.0233	0.4446	0.0000	1,121.3251	1,121.3251	0.3313	0.0105	1,132.7464
2024	0.1574	0.9103	4.5107	0.0102	0.4453	0.0162	0.4615	0.0911	0.0160	0.1070	0.0000	919.9850	919.9850	0.1888	0.0344	934.9545
2025	1.0367	1.0892	4.6082	0.0109	0.3393	0.0223	0.3616	0.0921	0.0220	0.1142	0.0000	980.2311	980.2311	0.1797	0.0384	996.1793
2026	0.6612	0.9513	3.7067	9.4800e-003	0.3167	0.0174	0.3341	0.0861	0.0172	0.1033	0.0000	855.9165	855.9165	0.1516	0.0368	870.6738
2027	0.0170	0.1156	0.3470	1.1300e-003	0.0443	1.5200e-003	0.0458	0.0121	1.4900e-003	0.0136	0.0000	102.9205	102.9205	0.0162	5.4700e-003	104.9567
Maximum	**1.0367**	**1.0892**	**7.2665**	**0.0127**	**1.0118**	**0.0234**	**1.0352**	**0.4213**	**0.0233**	**0.4446**	**0.0000**	**1,121.3251**	**1,121.3251**	**0.3313**	**0.0384**	**1,132.7464**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**31.91**	**73.82**	**-23.42**	**0.00**	**39.16**	**86.19**	**45.82**	**42.52**	**85.18**	**55.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2429	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003
Energy	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,629.8199	1,629.8199	0.0863	0.0304	1,641.0295
Mobile	1.3673	1.8721	12.5093	0.0254	2.7711	0.0215	2.7926	0.7423	0.0202	0.7624	0.0000	2,344.5001	2,344.5001	0.1498	0.1276	2,386.2696
Stationary	0.0528	0.2362	0.1347	2.5000e-004		7.7700e-003	7.7700e-003		7.7700e-003	7.7700e-003	0.0000	24.5112	24.5112	3.4400e-003	0.0000	24.5971
Waste						0.0000	0.0000		0.0000	0.0000	609.4601	0.0000	609.4601	36.0181	0.0000	1,509.9115
Water						0.0000	0.0000		0.0000	0.0000	11.0670	19.6160	30.6830	1.1399	0.0272	67.2922
Total	**2.7887**	**3.2505**	**13.6060**	**0.0325**	**2.7711**	**0.1161**	**2.8872**	**0.7423**	**0.1148**	**0.8570**	**620.5270**	**4,018.4522**	**4,638.9792**	**37.3975**	**0.1852**	**5,629.1052**

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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2429	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003
Energy	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,629.8199	1,629.8199	0.0863	0.0304	1,641.0295
Mobile	1.3673	1.8721	12.5093	0.0254	2.7711	0.0215	2.7926	0.7423	0.0202	0.7624	0.0000	2,344.5001	2,344.5001	0.1498	0.1276	2,386.2696
Stationary	0.0528	0.2362	0.1347	2.5000e-004		7.7700e-003	7.7700e-003		7.7700e-003	7.7700e-003	0.0000	24.5112	24.5112	3.4400e-003	0.0000	24.5971
Waste						0.0000	0.0000		0.0000	0.0000	609.4601	0.0000	609.4601	36.0181	0.0000	1,509.9115
Water						0.0000	0.0000		0.0000	0.0000	11.0670	19.6160	30.6830	1.1399	0.0272	67.2922
Total	**2.7887**	**3.2505**	**13.6060**	**0.0325**	**2.7711**	**0.1161**	**2.8872**	**0.7423**	**0.1148**	**0.8570**	**620.5270**	**4,018.4522**	**4,638.9792**	**37.3975**	**0.1852**	**5,629.1052**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	2/21/2023	10/12/2023	5	168	
3	Grading	Grading	3/21/2023	2/26/2024	5	245	
4	Paving	Paving	3/21/2023	8/20/2026	5	893	
5	Building Construction	Building Construction	2/27/2024	2/27/2027	5	784	
6	Architectural Coating	Architectural Coating	1/7/2025	8/3/2026	5	410	

Acres of Grading (Site Preparation Phase): 279

Acres of Grading (Grading Phase): 768

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 425,400; Non-Residential Outdoor: 141,800; Striped Parking Area: 15,654

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Bore/Drill Rigs	1	8.00	221	0.50
Demolition	Cranes	2	8.00	231	0.29
Demolition	Excavators	6	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Paving Equipment	3	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	3	8.00	158	0.38
Grading	Plate Compactors	2	8.00	8	0.43
Grading	Scrapers	2	8.00	367	0.48
Paving	Excavators	3	8.00	158	0.38
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Cranes	3	8.00	231	0.29
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	15.00	2.00	401.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	20.00	2.00	1,708.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	15.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	201.00	89.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0434	0.0000	0.0434	6.5700e-003	0.0000	6.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.3322	0.3146	6.9000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	60.6696	60.6696	0.0196	0.0000	61.1601
Total	**0.0342**	**0.3322**	**0.3146**	**6.9000e-004**	**0.0434**	**0.0148**	**0.0582**	**6.5700e-003**	**0.0136**	**0.0202**	**0.0000**	**60.6696**	**60.6696**	**0.0196**	**0.0000**	**61.1601**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.9000e-004	0.0273	6.0500e-003	1.2000e-004	3.3800e-003	2.4000e-004	3.6200e-003	9.3000e-004	2.3000e-004	1.1600e-003	0.0000	11.7311	11.7311	2.0000e-005	1.8400e-003	12.2810
Vendor	2.0000e-005	9.2000e-004	2.9000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3884	0.3884	0.0000	6.0000e-005	0.4059
Worker	3.9000e-004	2.6000e-004	3.4000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9187	0.9187	3.0000e-005	3.0000e-005	0.9270
Total	**9.0000e-004**	**0.0285**	**9.7400e-003**	**1.3000e-004**	**4.6900e-003**	**2.6000e-004**	**4.9400e-003**	**1.2800e-003**	**2.5000e-004**	**1.5200e-003**	**0.0000**	**13.0382**	**13.0382**	**5.0000e-005**	**1.9300e-003**	**13.6139**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0195	0.0000	0.0195	2.9600e-003	0.0000	2.9600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.4900e-003	0.0368	0.4066	6.9000e-004		1.1300e-003	1.1300e-003		1.1300e-003	1.1300e-003	0.0000	60.6695	60.6695	0.0196	0.0000	61.1601
Total	**8.4900e-003**	**0.0368**	**0.4066**	**6.9000e-004**	**0.0195**	**1.1300e-003**	**0.0207**	**2.9600e-003**	**1.1300e-003**	**4.0900e-003**	**0.0000**	**60.6695**	**60.6695**	**0.0196**	**0.0000**	**61.1601**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.9000e-004	0.0273	6.0500e-003	1.2000e-004	3.3800e-003	2.4000e-004	3.6200e-003	9.3000e-004	2.3000e-004	1.1600e-003	0.0000	11.7311	11.7311	2.0000e-005	1.8400e-003	12.2810
Vendor	2.0000e-005	9.2000e-004	2.9000e-004	0.0000	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3884	0.3884	0.0000	6.0000e-005	0.4059
Worker	3.9000e-004	2.6000e-004	3.4000e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1800e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9187	0.9187	3.0000e-005	3.0000e-005	0.9270
Total	**9.0000e-004**	**0.0285**	**9.7400e-003**	**1.3000e-004**	**4.6900e-003**	**2.6000e-004**	**4.9400e-003**	**1.2800e-003**	**2.5000e-004**	**1.5200e-003**	**0.0000**	**13.0382**	**13.0382**	**5.0000e-005**	**1.9300e-003**	**13.6139**

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

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6655	0.0000	1.6655	0.8502	0.0000	0.8502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2664	2.7160	2.1768	4.2200e-003		0.1260	0.1260		0.1159	0.1159	0.0000	371.1652	371.1652	0.1200	0.0000	374.1662
Total	**0.2664**	**2.7160**	**2.1768**	**4.2200e-003**	**1.6655**	**0.1260**	**1.7915**	**0.8502**	**0.1159**	**0.9661**	**0.0000**	**371.1652**	**371.1652**	**0.1200**	**0.0000**	**374.1662**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-003	2.6200e-003	0.0343	1.0000e-004	0.0119	6.0000e-005	0.0119	3.1600e-003	5.0000e-005	3.2100e-003	0.0000	9.2602	9.2602	2.7000e-004	2.6000e-004	9.3439
Total	**3.9000e-003**	**2.6200e-003**	**0.0343**	**1.0000e-004**	**0.0119**	**6.0000e-005**	**0.0119**	**3.1600e-003**	**5.0000e-005**	**3.2100e-003**	**0.0000**	**9.2602**	**9.2602**	**2.7000e-004**	**2.6000e-004**	**9.3439**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7495	0.0000	0.7495	0.3826	0.0000	0.3826	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0518	0.2244	2.5345	4.2200e-003		6.9000e-003	6.9000e-003		6.9000e-003	6.9000e-003	0.0000	371.1647	371.1647	0.1200	0.0000	374.1658
Total	**0.0518**	**0.2244**	**2.5345**	**4.2200e-003**	**0.7495**	**6.9000e-003**	**0.7564**	**0.3826**	**6.9000e-003**	**0.3895**	**0.0000**	**371.1647**	**371.1647**	**0.1200**	**0.0000**	**374.1658**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-003	2.6200e-003	0.0343	1.0000e-004	0.0119	6.0000e-005	0.0119	3.1600e-003	5.0000e-005	3.2100e-003	0.0000	9.2602	9.2602	2.7000e-004	2.6000e-004	9.3439
Total	**3.9000e-003**	**2.6200e-003**	**0.0343**	**1.0000e-004**	**0.0119**	**6.0000e-005**	**0.0119**	**3.1600e-003**	**5.0000e-005**	**3.2100e-003**	**0.0000**	**9.2602**	**9.2602**	**2.7000e-004**	**2.6000e-004**	**9.3439**

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4080	0.0000	0.4080	0.0441	0.0000	0.0441	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2264	2.2150	2.2918	4.7800e-003		0.0915	0.0915		0.0843	0.0843	0.0000	417.2799	417.2799	0.1336	0.0000	420.6188
Total	**0.2264**	**2.2150**	**2.2918**	**4.7800e-003**	**0.4080**	**0.0915**	**0.4995**	**0.0441**	**0.0843**	**0.1284**	**0.0000**	**417.2799**	**417.2799**	**0.1336**	**0.0000**	**420.6188**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7500e-003	0.0969	0.0215	4.3000e-004	0.0120	8.5000e-004	0.0128	3.3000e-003	8.1000e-004	4.1100e-003	0.0000	41.6051	41.6051	7.0000e-005	6.5400e-003	43.5554
Vendor	2.3000e-004	9.4200e-003	2.9900e-003	4.0000e-005	1.3300e-003	6.0000e-005	1.3900e-003	3.9000e-004	5.0000e-005	4.4000e-004	0.0000	3.9617	3.9617	1.0000e-005	6.0000e-004	4.1405
Worker	5.2700e-003	3.5300e-003	0.0463	1.4000e-004	0.0160	8.0000e-005	0.0161	4.2600e-003	7.0000e-005	4.3400e-003	0.0000	12.4940	12.4940	3.7000e-004	3.5000e-004	12.6069
Total	**7.2500e-003**	**0.1099**	**0.0708**	**6.1000e-004**	**0.0293**	**9.9000e-004**	**0.0303**	**7.9500e-003**	**9.3000e-004**	**8.8900e-003**	**0.0000**	**58.0608**	**58.0608**	**4.5000e-004**	**7.4900e-003**	**60.3028**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1836	0.0000	0.1836	0.0198	0.0000	0.0198	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0657	0.3003	2.6362	4.7800e-003		9.6600e-003	9.6600e-003		9.6600e-003	9.6600e-003	0.0000	417.2794	417.2794	0.1336	0.0000	420.6183
Total	**0.0657**	**0.3003**	**2.6362**	**4.7800e-003**	**0.1836**	**9.6600e-003**	**0.1933**	**0.0198**	**9.6600e-003**	**0.0295**	**0.0000**	**417.2794**	**417.2794**	**0.1336**	**0.0000**	**420.6183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7500e-003	0.0969	0.0215	4.3000e-004	0.0120	8.5000e-004	0.0128	3.3000e-003	8.1000e-004	4.1100e-003	0.0000	41.6051	41.6051	7.0000e-005	6.5400e-003	43.5554
Vendor	2.3000e-004	9.4200e-003	2.9900e-003	4.0000e-005	1.3300e-003	6.0000e-005	1.3900e-003	3.9000e-004	5.0000e-005	4.4000e-004	0.0000	3.9617	3.9617	1.0000e-005	6.0000e-004	4.1405
Worker	5.2700e-003	3.5300e-003	0.0463	1.4000e-004	0.0160	8.0000e-005	0.0161	4.2600e-003	7.0000e-005	4.3400e-003	0.0000	12.4940	12.4940	3.7000e-004	3.5000e-004	12.6069
Total	**7.2500e-003**	**0.1099**	**0.0708**	**6.1000e-004**	**0.0293**	**9.9000e-004**	**0.0303**	**7.9500e-003**	**9.3000e-004**	**8.8900e-003**	**0.0000**	**58.0608**	**58.0608**	**4.5000e-004**	**7.4900e-003**	**60.3028**

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3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4080	0.0000	0.4080	0.0441	0.0000	0.0441	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0439	0.4121	0.4541	9.6000e-004		0.0171	0.0171		0.0158	0.0158	0.0000	83.8357	83.8357	0.0268	0.0000	84.5065
Total	**0.0439**	**0.4121**	**0.4541**	**9.6000e-004**	**0.4080**	**0.0171**	**0.4251**	**0.0441**	**0.0158**	**0.0599**	**0.0000**	**83.8357**	**83.8357**	**0.0268**	**0.0000**	**84.5065**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0193	4.3200e-003	9.0000e-005	2.4100e-003	1.7000e-004	2.5800e-003	6.6000e-004	1.6000e-004	8.3000e-004	0.0000	8.1971	8.1971	1.0000e-005	1.2900e-003	8.5814
Vendor	5.0000e-005	1.8800e-003	5.9000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.7805	0.7805	0.0000	1.2000e-004	0.8157
Worker	9.9000e-004	6.3000e-004	8.6900e-003	3.0000e-005	3.2200e-003	2.0000e-005	3.2300e-003	8.6000e-004	1.0000e-005	8.7000e-004	0.0000	2.4286	2.4286	7.0000e-005	7.0000e-005	2.4497
Total	**1.3900e-003**	**0.0218**	**0.0136**	**1.3000e-004**	**5.9000e-003**	**2.0000e-004**	**6.0900e-003**	**1.6000e-003**	**1.8000e-004**	**1.7900e-003**	**0.0000**	**11.4062**	**11.4062**	**8.0000e-005**	**1.4800e-003**	**11.8468**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1836	0.0000	0.1836	0.0198	0.0000	0.0198	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0132	0.0604	0.5298	9.6000e-004		1.9400e-003	1.9400e-003		1.9400e-003	1.9400e-003	0.0000	83.8356	83.8356	0.0268	0.0000	84.5064
Total	**0.0132**	**0.0604**	**0.5298**	**9.6000e-004**	**0.1836**	**1.9400e-003**	**0.1855**	**0.0198**	**1.9400e-003**	**0.0218**	**0.0000**	**83.8356**	**83.8356**	**0.0268**	**0.0000**	**84.5064**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0193	4.3200e-003	9.0000e-005	2.4100e-003	1.7000e-004	2.5800e-003	6.6000e-004	1.6000e-004	8.3000e-004	0.0000	8.1971	8.1971	1.0000e-005	1.2900e-003	8.5814
Vendor	5.0000e-005	1.8800e-003	5.9000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.7805	0.7805	0.0000	1.2000e-004	0.8157
Worker	9.9000e-004	6.3000e-004	8.6900e-003	3.0000e-005	3.2200e-003	2.0000e-005	3.2300e-003	8.6000e-004	1.0000e-005	8.7000e-004	0.0000	2.4286	2.4286	7.0000e-005	7.0000e-005	2.4497
Total	**1.3900e-003**	**0.0218**	**0.0136**	**1.3000e-004**	**5.9000e-003**	**2.0000e-004**	**6.0900e-003**	**1.6000e-003**	**1.8000e-004**	**1.7900e-003**	**0.0000**	**11.4062**	**11.4062**	**8.0000e-005**	**1.4800e-003**	**11.8468**

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

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0792	0.6630	1.2791	2.0500e-003		0.0321	0.0321		0.0297	0.0297	0.0000	178.5202	178.5202	0.0570	0.0000	179.9461
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0792**	**0.6630**	**1.2791**	**2.0500e-003**		**0.0321**	**0.0321**		**0.0297**	**0.0297**	**0.0000**	**178.5202**	**178.5202**	**0.0570**	**0.0000**	**179.9461**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	9.4200e-003	2.9900e-003	4.0000e-005	1.3300e-003	6.0000e-005	1.3900e-003	3.9000e-004	5.0000e-005	4.4000e-004	0.0000	3.9617	3.9617	1.0000e-005	6.0000e-004	4.1405
Worker	3.9500e-003	2.6500e-003	0.0347	1.0000e-004	0.0120	6.0000e-005	0.0121	3.2000e-003	6.0000e-005	3.2500e-003	0.0000	9.3705	9.3705	2.8000e-004	2.6000e-004	9.4552
Total	**4.1800e-003**	**0.0121**	**0.0377**	**1.4000e-004**	**0.0133**	**1.2000e-004**	**0.0135**	**3.5900e-003**	**1.1000e-004**	**3.6900e-003**	**0.0000**	**13.3322**	**13.3322**	**2.9000e-004**	**8.6000e-004**	**13.5957**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0287	0.1321	1.5367	2.0500e-003		4.2700e-003	4.2700e-003		4.2700e-003	4.2700e-003	0.0000	178.5200	178.5200	0.0570	0.0000	179.9459
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0287**	**0.1321**	**1.5367**	**2.0500e-003**		**4.2700e-003**	**4.2700e-003**		**4.2700e-003**	**4.2700e-003**	**0.0000**	**178.5200**	**178.5200**	**0.0570**	**0.0000**	**179.9459**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3000e-004	9.4200e-003	2.9900e-003	4.0000e-005	1.3300e-003	6.0000e-005	1.3900e-003	3.9000e-004	5.0000e-005	4.4000e-004	0.0000	3.9617	3.9617	1.0000e-005	6.0000e-004	4.1405
Worker	3.9500e-003	2.6500e-003	0.0347	1.0000e-004	0.0120	6.0000e-005	0.0121	3.2000e-003	6.0000e-005	3.2500e-003	0.0000	9.3705	9.3705	2.8000e-004	2.6000e-004	9.4552
Total	**4.1800e-003**	**0.0121**	**0.0377**	**1.4000e-004**	**0.0133**	**1.2000e-004**	**0.0135**	**3.5900e-003**	**1.1000e-004**	**3.6900e-003**	**0.0000**	**13.3322**	**13.3322**	**2.9000e-004**	**8.6000e-004**	**13.5957**

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

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0977	0.7802	1.6474	2.6300e-003		0.0379	0.0379		0.0350	0.0350	0.0000	229.3328	229.3328	0.0733	0.0000	231.1645
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0977**	**0.7802**	**1.6474**	**2.6300e-003**		**0.0379**	**0.0379**		**0.0350**	**0.0350**	**0.0000**	**229.3328**	**229.3328**	**0.0733**	**0.0000**	**231.1645**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0120	3.7800e-003	5.0000e-005	1.7100e-003	7.0000e-005	1.7800e-003	5.0000e-004	7.0000e-005	5.6000e-004	0.0000	4.9876	4.9876	1.0000e-005	7.5000e-004	5.2127
Worker	4.7300e-003	3.0400e-003	0.0417	1.3000e-004	0.0154	7.0000e-005	0.0155	4.1100e-003	7.0000e-005	4.1700e-003	0.0000	11.6393	11.6393	3.2000e-004	3.1000e-004	11.7407
Total	**5.0300e-003**	**0.0151**	**0.0454**	**1.8000e-004**	**0.0171**	**1.4000e-004**	**0.0173**	**4.6100e-003**	**1.4000e-004**	**4.7300e-003**	**0.0000**	**16.6268**	**16.6268**	**3.3000e-004**	**1.0600e-003**	**16.9534**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0368	0.1697	1.9736	2.6300e-003		5.4900e-003	5.4900e-003		5.4900e-003	5.4900e-003	0.0000	229.3325	229.3325	0.0733	0.0000	231.1643
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0368**	**0.1697**	**1.9736**	**2.6300e-003**		**5.4900e-003**	**5.4900e-003**		**5.4900e-003**	**5.4900e-003**	**0.0000**	**229.3325**	**229.3325**	**0.0733**	**0.0000**	**231.1643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0120	3.7800e-003	5.0000e-005	1.7100e-003	7.0000e-005	1.7800e-003	5.0000e-004	7.0000e-005	5.6000e-004	0.0000	4.9876	4.9876	1.0000e-005	7.5000e-004	5.2127
Worker	4.7300e-003	3.0400e-003	0.0417	1.3000e-004	0.0154	7.0000e-005	0.0155	4.1100e-003	7.0000e-005	4.1700e-003	0.0000	11.6393	11.6393	3.2000e-004	3.1000e-004	11.7407
Total	**5.0300e-003**	**0.0151**	**0.0454**	**1.8000e-004**	**0.0171**	**1.4000e-004**	**0.0173**	**4.6100e-003**	**1.4000e-004**	**4.7300e-003**	**0.0000**	**16.6268**	**16.6268**	**3.3000e-004**	**1.0600e-003**	**16.9534**

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

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0898	0.6761	1.6358	2.6200e-003		0.0329	0.0329		0.0304	0.0304	0.0000	228.4656	228.4656	0.0730	0.0000	230.2905
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0898**	**0.6761**	**1.6358**	**2.6200e-003**		**0.0329**	**0.0329**		**0.0304**	**0.0304**	**0.0000**	**228.4656**	**228.4656**	**0.0730**	**0.0000**	**230.2905**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-004	0.0119	3.7200e-003	5.0000e-005	1.7000e-003	7.0000e-005	1.7800e-003	4.9000e-004	7.0000e-005	5.6000e-004	0.0000	4.8616	4.8616	1.0000e-005	7.4000e-004	5.0810
Worker	4.4200e-003	2.7300e-003	0.0390	1.2000e-004	0.0154	7.0000e-005	0.0154	4.0900e-003	6.0000e-005	4.1600e-003	0.0000	11.2000	11.2000	2.9000e-004	2.9000e-004	11.2946
Total	**4.7100e-003**	**0.0146**	**0.0427**	**1.7000e-004**	**0.0171**	**1.4000e-004**	**0.0172**	**4.5800e-003**	**1.3000e-004**	**4.7200e-003**	**0.0000**	**16.0616**	**16.0616**	**3.0000e-004**	**1.0300e-003**	**16.3757**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0367	0.1690	1.9661	2.6200e-003		5.4700e-003	5.4700e-003		5.4700e-003	5.4700e-003	0.0000	228.4654	228.4654	0.0730	0.0000	230.2902
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0367**	**0.1690**	**1.9661**	**2.6200e-003**		**5.4700e-003**	**5.4700e-003**		**5.4700e-003**	**5.4700e-003**	**0.0000**	**228.4654**	**228.4654**	**0.0730**	**0.0000**	**230.2902**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-004	0.0119	3.7200e-003	5.0000e-005	1.7000e-003	7.0000e-005	1.7800e-003	4.9000e-004	7.0000e-005	5.6000e-004	0.0000	4.8616	4.8616	1.0000e-005	7.4000e-004	5.0810
Worker	4.4200e-003	2.7300e-003	0.0390	1.2000e-004	0.0154	7.0000e-005	0.0154	4.0900e-003	6.0000e-005	4.1600e-003	0.0000	11.2000	11.2000	2.9000e-004	2.9000e-004	11.2946
Total	**4.7100e-003**	**0.0146**	**0.0427**	**1.7000e-004**	**0.0171**	**1.4000e-004**	**0.0172**	**4.5800e-003**	**1.3000e-004**	**4.7200e-003**	**0.0000**	**16.0616**	**16.0616**	**3.0000e-004**	**1.0300e-003**	**16.3757**

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

3.5 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0571	0.4300	1.0404	1.6700e-003		0.0209	0.0209		0.0193	0.0193	0.0000	145.3077	145.3077	0.0464	0.0000	146.4683
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0571**	**0.4300**	**1.0404**	**1.6700e-003**		**0.0209**	**0.0209**		**0.0193**	**0.0193**	**0.0000**	**145.3077**	**145.3077**	**0.0464**	**0.0000**	**146.4683**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	7.4800e-003	2.3400e-003	3.0000e-005	1.0800e-003	5.0000e-005	1.1300e-003	3.1000e-004	4.0000e-005	3.6000e-004	0.0000	3.0265	3.0265	1.0000e-005	4.6000e-004	3.1631
Worker	2.6400e-003	1.5800e-003	0.0234	8.0000e-005	9.7800e-003	4.0000e-005	9.8200e-003	2.6000e-003	4.0000e-005	2.6400e-003	0.0000	6.8999	6.8999	1.7000e-004	1.8000e-004	6.9567
Total	**2.8200e-003**	**9.0600e-003**	**0.0258**	**1.1000e-004**	**0.0109**	**9.0000e-005**	**0.0110**	**2.9100e-003**	**8.0000e-005**	**3.0000e-003**	**0.0000**	**9.9264**	**9.9264**	**1.8000e-004**	**6.4000e-004**	**10.1198**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.1075	1.2504	1.6700e-003		3.4800e-003	3.4800e-003		3.4800e-003	3.4800e-003	0.0000	145.3075	145.3075	0.0464	0.0000	146.4681
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0233**	**0.1075**	**1.2504**	**1.6700e-003**		**3.4800e-003**	**3.4800e-003**		**3.4800e-003**	**3.4800e-003**	**0.0000**	**145.3075**	**145.3075**	**0.0464**	**0.0000**	**146.4681**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	7.4800e-003	2.3400e-003	3.0000e-005	1.0800e-003	5.0000e-005	1.1300e-003	3.1000e-004	4.0000e-005	3.6000e-004	0.0000	3.0265	3.0265	1.0000e-005	4.6000e-004	3.1631
Worker	2.6400e-003	1.5800e-003	0.0234	8.0000e-005	9.7800e-003	4.0000e-005	9.8200e-003	2.6000e-003	4.0000e-005	2.6400e-003	0.0000	6.8999	6.8999	1.7000e-004	1.8000e-004	6.9567
Total	**2.8200e-003**	**9.0600e-003**	**0.0258**	**1.1000e-004**	**0.0109**	**9.0000e-005**	**0.0110**	**2.9100e-003**	**8.0000e-005**	**3.0000e-003**	**0.0000**	**9.9264**	**9.9264**	**1.8000e-004**	**6.4000e-004**	**10.1198**

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1332	1.3717	0.8136	2.9600e-003		0.0553	0.0553		0.0508	0.0508	0.0000	260.0112	260.0112	0.0841	0.0000	262.1135
Total	**0.1332**	**1.3717**	**0.8136**	**2.9600e-003**		**0.0553**	**0.0553**		**0.0508**	**0.0508**	**0.0000**	**260.0112**	**260.0112**	**0.0841**	**0.0000**	**262.1135**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4513	0.1420	1.9500e-003	0.0642	2.7300e-003	0.0670	0.0186	2.6100e-003	0.0212	0.0000	187.2138	187.2138	5.3000e-004	0.0283	195.6652
Worker	0.0535	0.0343	0.4709	1.4300e-003	0.1744	8.3000e-004	0.1753	0.0464	7.6000e-004	0.0472	0.0000	131.5593	131.5593	3.6500e-003	3.5400e-003	132.7054
Total	**0.0646**	**0.4856**	**0.6128**	**3.3800e-003**	**0.2387**	**3.5600e-003**	**0.2422**	**0.0650**	**3.3700e-003**	**0.0684**	**0.0000**	**318.7731**	**318.7731**	**4.1800e-003**	**0.0319**	**328.3705**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0364	0.1578	1.3354	2.9600e-003		4.8600e-003	4.8600e-003		4.8600e-003	4.8600e-003	0.0000	260.0109	260.0109	0.0841	0.0000	262.1132
Total	**0.0364**	**0.1578**	**1.3354**	**2.9600e-003**		**4.8600e-003**	**4.8600e-003**		**4.8600e-003**	**4.8600e-003**	**0.0000**	**260.0109**	**260.0109**	**0.0841**	**0.0000**	**262.1132**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4513	0.1420	1.9500e-003	0.0642	2.7300e-003	0.0670	0.0186	2.6100e-003	0.0212	0.0000	187.2138	187.2138	5.3000e-004	0.0283	195.6652
Worker	0.0535	0.0343	0.4709	1.4300e-003	0.1744	8.3000e-004	0.1753	0.0464	7.6000e-004	0.0472	0.0000	131.5593	131.5593	3.6500e-003	3.5400e-003	132.7054
Total	**0.0646**	**0.4856**	**0.6128**	**3.3800e-003**	**0.2387**	**3.5600e-003**	**0.2422**	**0.0650**	**3.3700e-003**	**0.0684**	**0.0000**	**318.7731**	**318.7731**	**4.1800e-003**	**0.0319**	**328.3705**

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

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1498	1.4837	0.9456	3.5000e-003		0.0607	0.0607		0.0559	0.0559	0.0000	307.0654	307.0654	0.0993	0.0000	309.5481
Total	**0.1498**	**1.4837**	**0.9456**	**3.5000e-003**		**0.0607**	**0.0607**		**0.0559**	**0.0559**	**0.0000**	**307.0654**	**307.0654**	**0.0993**	**0.0000**	**309.5481**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.5283	0.1656	2.2600e-003	0.0759	3.1900e-003	0.0791	0.0220	3.0500e-003	0.0250	0.0000	216.3405	216.3405	6.1000e-004	0.0327	226.1059
Worker	0.0592	0.0365	0.5220	1.6400e-003	0.2060	9.3000e-004	0.2069	0.0548	8.6000e-004	0.0557	0.0000	150.0803	150.0803	3.9200e-003	3.9300e-003	151.3482
Total	**0.0720**	**0.5648**	**0.6876**	**3.9000e-003**	**0.2819**	**4.1200e-003**	**0.2860**	**0.0768**	**3.9100e-003**	**0.0807**	**0.0000**	**366.4208**	**366.4208**	**4.5300e-003**	**0.0367**	**377.4542**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0430	0.1864	1.5772	3.5000e-003		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	307.0650	307.0650	0.0993	0.0000	309.5478
Total	**0.0430**	**0.1864**	**1.5772**	**3.5000e-003**		**5.7400e-003**	**5.7400e-003**		**5.7400e-003**	**5.7400e-003**	**0.0000**	**307.0650**	**307.0650**	**0.0993**	**0.0000**	**309.5478**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0129	0.5283	0.1656	2.2600e-003	0.0759	3.1900e-003	0.0791	0.0220	3.0500e-003	0.0250	0.0000	216.3405	216.3405	6.1000e-004	0.0327	226.1059
Worker	0.0592	0.0365	0.5220	1.6400e-003	0.2060	9.3000e-004	0.2069	0.0548	8.6000e-004	0.0557	0.0000	150.0803	150.0803	3.9200e-003	3.9300e-003	151.3482
Total	**0.0720**	**0.5648**	**0.6876**	**3.9000e-003**	**0.2819**	**4.1200e-003**	**0.2860**	**0.0768**	**3.9100e-003**	**0.0807**	**0.0000**	**366.4208**	**366.4208**	**4.5300e-003**	**0.0367**	**377.4542**

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1498	1.4837	0.9456	3.5000e-003		0.0607	0.0607		0.0559	0.0559	0.0000	307.0654	307.0654	0.0993	0.0000	309.5481
Total	**0.1498**	**1.4837**	**0.9456**	**3.5000e-003**		**0.0607**	**0.0607**		**0.0559**	**0.0559**	**0.0000**	**307.0654**	**307.0654**	**0.0993**	**0.0000**	**309.5481**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0127	0.5236	0.1640	2.2100e-003	0.0759	3.1500e-003	0.0790	0.0220	3.0200e-003	0.0250	0.0000	211.7558	211.7558	5.9000e-004	0.0320	221.3132
Worker	0.0557	0.0333	0.4934	1.5900e-003	0.2060	8.9000e-004	0.2069	0.0548	8.2000e-004	0.0556	0.0000	145.3708	145.3708	3.5900e-003	3.7200e-003	146.5676
Total	**0.0684**	**0.5569**	**0.6574**	**3.8000e-003**	**0.2818**	**4.0400e-003**	**0.2859**	**0.0768**	**3.8400e-003**	**0.0806**	**0.0000**	**357.1266**	**357.1266**	**4.1800e-003**	**0.0357**	**367.8809**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0430	0.1864	1.5772	3.5000e-003		5.7400e-003	5.7400e-003		5.7400e-003	5.7400e-003	0.0000	307.0650	307.0650	0.0993	0.0000	309.5478
Total	**0.0430**	**0.1864**	**1.5772**	**3.5000e-003**		**5.7400e-003**	**5.7400e-003**		**5.7400e-003**	**5.7400e-003**	**0.0000**	**307.0650**	**307.0650**	**0.0993**	**0.0000**	**309.5478**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0127	0.5236	0.1640	2.2100e-003	0.0759	3.1500e-003	0.0790	0.0220	3.0200e-003	0.0250	0.0000	211.7558	211.7558	5.9000e-004	0.0320	221.3132
Worker	0.0557	0.0333	0.4934	1.5900e-003	0.2060	8.9000e-004	0.2069	0.0548	8.2000e-004	0.0556	0.0000	145.3708	145.3708	3.5900e-003	3.7200e-003	146.5676
Total	**0.0684**	**0.5569**	**0.6574**	**3.8000e-003**	**0.2818**	**4.0400e-003**	**0.2859**	**0.0768**	**3.8400e-003**	**0.0806**	**0.0000**	**357.1266**	**357.1266**	**4.1800e-003**	**0.0357**	**367.8809**

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0235	0.2331	0.1485	5.5000e-004		9.5400e-003	9.5400e-003		8.7700e-003	8.7700e-003	0.0000	48.2363	48.2363	0.0156	0.0000	48.6263
Total	**0.0235**	**0.2331**	**0.1485**	**5.5000e-004**		**9.5400e-003**	**9.5400e-003**		**8.7700e-003**	**8.7700e-003**	**0.0000**	**48.2363**	**48.2363**	**0.0156**	**0.0000**	**48.6263**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9700e-003	0.0816	0.0256	3.4000e-004	0.0119	4.9000e-004	0.0124	3.4500e-003	4.7000e-004	3.9200e-003	0.0000	32.5164	32.5164	9.0000e-005	4.9200e-003	33.9839
Worker	8.2500e-003	4.7900e-003	0.0737	2.4000e-004	0.0324	1.3000e-004	0.0325	8.6100e-003	1.2000e-004	8.7300e-003	0.0000	22.1679	22.1679	5.2000e-004	5.6000e-004	22.3465
Total	**0.0102**	**0.0864**	**0.0992**	**5.8000e-004**	**0.0443**	**6.2000e-004**	**0.0449**	**0.0121**	**5.9000e-004**	**0.0127**	**0.0000**	**54.6842**	**54.6842**	**6.1000e-004**	**5.4800e-003**	**56.3304**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7600e-003	0.0293	0.2478	5.5000e-004		9.0000e-004	9.0000e-004		9.0000e-004	9.0000e-004	0.0000	48.2363	48.2363	0.0156	0.0000	48.6263
Total	**6.7600e-003**	**0.0293**	**0.2478**	**5.5000e-004**		**9.0000e-004**	**9.0000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**48.2363**	**48.2363**	**0.0156**	**0.0000**	**48.6263**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9700e-003	0.0816	0.0256	3.4000e-004	0.0119	4.9000e-004	0.0124	3.4500e-003	4.7000e-004	3.9200e-003	0.0000	32.5164	32.5164	9.0000e-005	4.9200e-003	33.9839
Worker	8.2500e-003	4.7900e-003	0.0737	2.4000e-004	0.0324	1.3000e-004	0.0325	8.6100e-003	1.2000e-004	8.7300e-003	0.0000	22.1679	22.1679	5.2000e-004	5.6000e-004	22.3465
Total	**0.0102**	**0.0864**	**0.0992**	**5.8000e-004**	**0.0443**	**6.2000e-004**	**0.0449**	**0.0121**	**5.9000e-004**	**0.0127**	**0.0000**	**54.6842**	**54.6842**	**6.1000e-004**	**5.4800e-003**	**56.3304**

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

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0220	0.1472	0.2325	3.8000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	32.8093	32.8093	1.7900e-003	0.0000	32.8541
Total	**0.8687**	**0.1472**	**0.2325**	**3.8000e-004**		**6.6200e-003**	**6.6200e-003**		**6.6200e-003**	**6.6200e-003**	**0.0000**	**32.8093**	**32.8093**	**1.7900e-003**	**0.0000**	**32.8541**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0116	7.1600e-003	0.1023	3.2000e-004	0.0404	1.8000e-004	0.0406	0.0107	1.7000e-004	0.0109	0.0000	29.4090	29.4090	7.7000e-004	7.7000e-004	29.6575
Total	**0.0116**	**7.1600e-003**	**0.1023**	**3.2000e-004**	**0.0404**	**1.8000e-004**	**0.0406**	**0.0107**	**1.7000e-004**	**0.0109**	**0.0000**	**29.4090**	**29.4090**	**7.7000e-004**	**7.7000e-004**	**29.6575**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0220	0.1472	0.2325	3.8000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	32.8093	32.8093	1.7900e-003	0.0000	32.8540
Total	**0.8687**	**0.1472**	**0.2325**	**3.8000e-004**		**6.6200e-003**	**6.6200e-003**		**6.6200e-003**	**6.6200e-003**	**0.0000**	**32.8093**	**32.8093**	**1.7900e-003**	**0.0000**	**32.8540**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0116	7.1600e-003	0.1023	3.2000e-004	0.0404	1.8000e-004	0.0406	0.0107	1.7000e-004	0.0109	0.0000	29.4090	29.4090	7.7000e-004	7.7000e-004	29.6575
Total	**0.0116**	**7.1600e-003**	**0.1023**	**3.2000e-004**	**0.0404**	**1.8000e-004**	**0.0406**	**0.0107**	**1.7000e-004**	**0.0109**	**0.0000**	**29.4090**	**29.4090**	**7.7000e-004**	**7.7000e-004**	**29.6575**

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3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5041					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0131	0.0876	0.1384	2.3000e-004		3.9400e-003	3.9400e-003		3.9400e-003	3.9400e-003	0.0000	19.5324	19.5324	1.0700e-003	0.0000	19.5590
Total	**0.5171**	**0.0876**	**0.1384**	**2.3000e-004**		**3.9400e-003**	**3.9400e-003**		**3.9400e-003**	**3.9400e-003**	**0.0000**	**19.5324**	**19.5324**	**1.0700e-003**	**0.0000**	**19.5590**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-003	3.8800e-003	0.0576	1.8000e-004	0.0240	1.0000e-004	0.0241	6.4000e-003	1.0000e-004	6.4900e-003	0.0000	16.9587	16.9587	4.2000e-004	4.3000e-004	17.0983
Total	**6.5000e-003**	**3.8800e-003**	**0.0576**	**1.8000e-004**	**0.0240**	**1.0000e-004**	**0.0241**	**6.4000e-003**	**1.0000e-004**	**6.4900e-003**	**0.0000**	**16.9587**	**16.9587**	**4.2000e-004**	**4.3000e-004**	**17.0983**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5041					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0131	0.0876	0.1384	2.3000e-004		3.9400e-003	3.9400e-003		3.9400e-003	3.9400e-003	0.0000	19.5324	19.5324	1.0700e-003	0.0000	19.5590
Total	**0.5171**	**0.0876**	**0.1384**	**2.3000e-004**		**3.9400e-003**	**3.9400e-003**		**3.9400e-003**	**3.9400e-003**	**0.0000**	**19.5324**	**19.5324**	**1.0700e-003**	**0.0000**	**19.5590**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-003	3.8800e-003	0.0576	1.8000e-004	0.0240	1.0000e-004	0.0241	6.4000e-003	1.0000e-004	6.4900e-003	0.0000	16.9587	16.9587	4.2000e-004	4.3000e-004	17.0983
Total	**6.5000e-003**	**3.8800e-003**	**0.0576**	**1.8000e-004**	**0.0240**	**1.0000e-004**	**0.0241**	**6.4000e-003**	**1.0000e-004**	**6.4900e-003**	**0.0000**	**16.9587**	**16.9587**	**4.2000e-004**	**4.3000e-004**	**17.0983**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3673	1.8721	12.5093	0.0254	2.7711	0.0215	2.7926	0.7423	0.0202	0.7624	0.0000	2,344.5001	2,344.5001	0.1498	0.1276	2,386.2696
Unmitigated	1.3673	1.8721	12.5093	0.0254	2.7711	0.0215	2.7926	0.7423	0.0202	0.7624	0.0000	2,344.5001	2,344.5001	0.1498	0.1276	2,386.2696

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	3,297.08	2,374.12	2082.22	7,534,349	7,534,349
User Defined Industrial	0.00	0.00	0.00		
Total	3,297.08	2,374.12	2,082.22	7,534,349	7,534,349

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696
User Defined Industrial	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	386.3386	386.3386	0.0625	7.5800e-003	390.1588
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	386.3386	386.3386	0.0625	7.5800e-003	390.1588
NaturalGas Mitigated	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,243.4813	1,243.4813	0.0238	0.0228	1,250.8707
NaturalGas Unmitigated	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,243.4813	1,243.4813	0.0238	0.0228	1,250.8707

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	2.3302e+007	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,243.4813	1,243.4813	0.0238	0.0228	1,250.8707
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1257**	**1.1423**	**0.9595**	**6.8500e-003**		**0.0868**	**0.0868**		**0.0868**	**0.0868**	**0.0000**	**1,243.4813**	**1,243.4813**	**0.0238**	**0.0228**	**1,250.8707**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hospital	2.3302e+007	0.1257	1.1423	0.9595	6.8500e-003		0.0868	0.0868		0.0868	0.0868	0.0000	1,243.4813	1,243.4813	0.0238	0.0228	1,250.8707
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1257**	**1.1423**	**0.9595**	**6.8500e-003**		**0.0868**	**0.0868**		**0.0868**	**0.0868**	**0.0000**	**1,243.4813**	**1,243.4813**	**0.0238**	**0.0228**	**1,250.8707**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	4.17556e+006	386.3386	0.0625	7.5800e-003	390.1588
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**386.3386**	**0.0625**	**7.5800e-003**	**390.1588**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hospital	4.17556e+006	386.3386	0.0625	7.5800e-003	390.1588
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**386.3386**	**0.0625**	**7.5800e-003**	**390.1588**

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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2429	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003
Unmitigated	1.2429	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1351					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1076					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003
Total	**1.2429**	**2.0000e-005**	**2.5600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.9900e-003**	**4.9900e-003**	**1.0000e-005**	**0.0000**	**5.3100e-003**

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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1351					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1076					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.9900e-003	4.9900e-003	1.0000e-005	0.0000	5.3100e-003
Total	**1.2429**	**2.0000e-005**	**2.5600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.9900e-003**	**4.9900e-003**	**1.0000e-005**	**0.0000**	**5.3100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.6830	1.1399	0.0272	67.2922
Unmitigated	30.6830	1.1399	0.0272	67.2922

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	34.8836 / 6.64449	30.6830	1.1399	0.0272	67.2922
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**30.6830**	**1.1399**	**0.0272**	**67.2922**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hospital	34.8836 / 6.64449	30.6830	1.1399	0.0272	67.2922
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**30.6830**	**1.1399**	**0.0272**	**67.2922**

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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	609.4601	36.0181	0.0000	1,509.9115
Unmitigated	609.4601	36.0181	0.0000	1,509.9115

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	3002.4	609.4601	36.0181	0.0000	1,509.9115
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**609.4601**	**36.0181**	**0.0000**	**1,509.9115**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hospital	3002.4	609.4601	36.0181	0.0000	1,509.9115
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**609.4601**	**36.0181**	**0.0000**	**1,509.9115**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	1	12	2682	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0528	0.2362	0.1347	2.5000e-004		7.7700e-003	7.7700e-003		7.7700e-003	7.7700e-003	0.0000	24.5112	24.5112	3.4400e-003	0.0000	24.5971
Total	**0.0528**	**0.2362**	**0.1347**	**2.5000e-004**		**7.7700e-003**	**7.7700e-003**		**7.7700e-003**	**7.7700e-003**	**0.0000**	**24.5112**	**24.5112**	**3.4400e-003**	**0.0000**	**24.5971**

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

Kaiser Bed Tower Project - Bed Tower

Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	278.00	1000sqft	8.77	278,000.00	0
User Defined Industrial	1.00	User Defined Unit	0.13	5,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 278,000 SF bed tower and 5,600 SF generator yard.

Construction Phase - Project construction would begin January 2023, with buildout in February 2027.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated construction equipment per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per information from applicant.

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Off-road Equipment - Default equipment assumed.

Off-road Equipment - Default equipment assumed. Included 3 compactors.

Trips and VMT - Default trips assumed. Added vendor truck to demolition, grading, and paving for water truck.

Demolition - 4,055 tons of pavement removed.

Grading - Cut: 23,498 CY, Fill: 9,836 CY.

Vehicle Trips - Updated trip rates per traffic analysis.

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 final equipment.

Stationary Sources - Emergency Generators and Fire Pumps - Two 2 MW emergency generators.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	15,654.00
tblAreaCoating	Area_Parking	0	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstructionPhase	NumDays	10.00	168.00
tblConstructionPhase	NumDays	20.00	245.00
tblConstructionPhase	NumDays	20.00	893.00
tblConstructionPhase	NumDays	230.00	784.00
tblConstructionPhase	NumDays	20.00	410.00
tblGrading	AcresOfGrading	490.00	768.00
tblGrading	AcresOfGrading	252.00	279.00
tblGrading	MaterialExported	0.00	13,662.00
tblLandUse	LandUseSquareFeet	0.00	5,600.00
tblLandUse	LotAcreage	6.38	8.77
tblLandUse	LotAcreage	0.00	0.13
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	46.00	89.00
tblTripsAndVMT	WorkerTripNumber	28.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	91.00	201.00

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tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	ST_TR	7.72	8.54
tblVehicleTrips	SU_TR	6.77	7.49
tblVehicleTrips	WD_TR	10.72	11.86

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	6.3461	61.7082	62.5363	0.1261	23.7427	2.7230	26.4657	10.6375	2.5079	13.1454	0.0000	12,232.8574	12,232.8574	3.6458	0.2122	12,351.6453
2024	3.0046	27.1750	35.8213	0.0801	3.7673	1.1352	4.9025	0.6482	1.0471	1.5245	0.0000	7,962.1148	7,962.1148	2.0663	0.3235	8,095.9466
2025	9.3564	21.9506	28.5599	0.0849	2.7196	0.8028	3.5224	0.7353	0.7444	1.4797	0.0000	8,423.9024	8,423.9024	1.5149	0.3213	8,557.5164
2026	9.3165	21.8871	28.2338	0.0839	2.7196	0.8020	3.5216	0.7353	0.7437	1.4790	0.0000	8,329.1312	8,329.1312	1.5114	0.3132	8,460.2482
2027	1.7045	15.3620	12.4864	0.0561	2.2542	0.4955	2.7496	0.6116	0.4567	1.0683	0.0000	5,633.8323	5,633.8323	0.8694	0.2917	5,742.5010
Maximum	**9.3564**	**61.7082**	**62.5363**	**0.1261**	**23.7427**	**2.7230**	**26.4657**	**10.6375**	**2.5079**	**13.1454**	**0.0000**	**12,232.8574**	**12,232.8574**	**3.6458**	**0.3235**	**12,351.6453**

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Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.7190	8.0704	72.6961	0.1261	11.0057	0.2303	11.2359	4.8731	0.2297	5.1028	0.0000	12,232.8574	12,232.8574	3.6458	0.2122	12,351.6453
2024	1.3074	6.9931	42.0068	0.0801	2.3910	0.1473	2.5101	0.6482	0.1468	0.7655	0.0000	7,962.1148	7,962.1148	2.0663	0.3235	8,095.9466
2025	8.1310	8.1239	35.9302	0.0849	2.7196	0.1714	2.8910	0.7353	0.1696	0.9050	0.0000	8,423.9024	8,423.9024	1.5149	0.3213	8,557.5164
2026	8.0912	8.0604	35.6041	0.0839	2.7196	0.1707	2.8902	0.7353	0.1689	0.9042	0.0000	8,329.1312	8,329.1312	1.5114	0.3132	8,460.2482
2027	0.8863	5.4211	17.3262	0.0561	2.2542	0.0742	2.3284	0.6116	0.0726	0.6842	0.0000	5,633.8323	5,633.8323	0.8694	0.2917	5,742.5010
Maximum	**8.1310**	**8.1239**	**72.6961**	**0.1261**	**11.0057**	**0.2303**	**11.2359**	**4.8731**	**0.2297**	**5.1028**	**0.0000**	**12,232.8574**	**12,232.8574**	**3.6458**	**0.3235**	**12,351.6453**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**32.27**	**75.24**	**-21.43**	**0.00**	**40.09**	**86.68**	**46.90**	**43.12**	**85.68**	**55.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Energy	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
Mobile	9.8825	10.3935	76.9622	0.1631	17.5443	0.1304	17.6747	4.6823	0.1223	4.8046		16,600.2415	16,600.2415	0.9283	0.8140	16,866.0093
Stationary	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**26.1854**	**56.0177**	**104.6930**	**0.2429**	**17.5443**	**1.9011**	**19.4454**	**4.6823**	**1.8930**	**6.5752**		**28,614.1606**	**28,614.1606**	**1.7038**	**0.9517**	**28,940.3483**

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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Energy	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
Mobile	9.8825	10.3935	76.9622	0.1631	17.5443	0.1304	17.6747	4.6823	0.1223	4.8046		16,600.2415	16,600.2415	0.9283	0.8140	16,866.0093
Stationary	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**26.1854**	**56.0177**	**104.6930**	**0.2429**	**17.5443**	**1.9011**	**19.4454**	**4.6823**	**1.8930**	**6.5752**		**28,614.1606**	**28,614.1606**	**1.7038**	**0.9517**	**28,940.3483**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	2/21/2023	10/12/2023	5	168	
3	Grading	Grading	3/21/2023	2/26/2024	5	245	
4	Paving	Paving	3/21/2023	8/20/2026	5	893	
5	Building Construction	Building Construction	2/27/2024	2/27/2027	5	784	
6	Architectural Coating	Architectural Coating	1/7/2025	8/3/2026	5	410	

Acres of Grading (Site Preparation Phase): 279

Acres of Grading (Grading Phase): 768

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 425,400; Non-Residential Outdoor: 141,800; Striped Parking Area: 15,654

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Bore/Drill Rigs	1	8.00	221	0.50
Demolition	Cranes	2	8.00	231	0.29
Demolition	Excavators	6	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Paving Equipment	3	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	3	8.00	158	0.38
Grading	Plate Compactors	2	8.00	8	0.43
Grading	Scrapers	2	8.00	367	0.48
Paving	Excavators	3	8.00	158	0.38
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Cranes	3	8.00	231	0.29
Architectural Coating	Air Compressors	1	6.00	78	0.48

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	15.00	2.00	401.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	20.00	2.00	1,708.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	15.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	201.00	89.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.3387	0.0000	4.3387	0.6569	0.0000	0.6569			0.0000			0.0000
Off-Road	3.4194	33.2166	31.4610	0.0691		1.4814	1.4814		1.3629	1.3629		6,687.6770	6,687.6770	2.1629		6,741.7502
Total	**3.4194**	**33.2166**	**31.4610**	**0.0691**	**4.3387**	**1.4814**	**5.8200**	**0.6569**	**1.3629**	**2.0198**		**6,687.6770**	**6,687.6770**	**2.1629**		**6,741.7502**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0508	2.5966	0.6001	0.0122	0.3511	0.0239	0.3750	0.0963	0.0229	0.1191		1,292.3426	1,292.3426	2.3700e-003	0.2031	1,352.9239
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0972**	**2.7075**	**1.0101**	**0.0137**	**0.4878**	**0.0251**	**0.5129**	**0.1328**	**0.0240**	**0.1568**		**1,445.0564**	**1,445.0564**	**5.2500e-003**	**0.2122**	**1,508.4133**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9524	0.0000	1.9524	0.2956	0.0000	0.2956			0.0000			0.0000
Off-Road	0.8490	3.6791	40.6614	0.0691		0.1132	0.1132		0.1132	0.1132	0.0000	6,687.6770	6,687.6770	2.1629		6,741.7502
Total	**0.8490**	**3.6791**	**40.6614**	**0.0691**	**1.9524**	**0.1132**	**2.0656**	**0.2956**	**0.1132**	**0.4088**	**0.0000**	**6,687.6770**	**6,687.6770**	**2.1629**		**6,741.7502**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0508	2.5966	0.6001	0.0122	0.3511	0.0239	0.3750	0.0963	0.0229	0.1191		1,292.3426	1,292.3426	2.3700e-003	0.2031	1,352.9239
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0972**	**2.7075**	**1.0101**	**0.0137**	**0.4878**	**0.0251**	**0.5129**	**0.1328**	**0.0240**	**0.1568**		**1,445.0564**	**1,445.0564**	**5.2500e-003**	**0.2122**	**1,508.4133**

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

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8275	0.0000	19.8275	10.1209	0.0000	10.1209			0.0000			0.0000
Off-Road	3.1716	32.3329	25.9145	0.0503		1.4999	1.4999		1.3799	1.3799		4,870.7093	4,870.7093	1.5753		4,910.0914
Total	**3.1716**	**32.3329**	**25.9145**	**0.0503**	**19.8275**	**1.4999**	**21.3273**	**10.1209**	**1.3799**	**11.5007**		**4,870.7093**	**4,870.7093**	**1.5753**		**4,910.0914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0528	0.0276	0.4574	1.3100e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		131.9271	131.9271	3.3100e-003	3.1300e-003	132.9423
Total	**0.0528**	**0.0276**	**0.4574**	**1.3100e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**131.9271**	**131.9271**	**3.3100e-003**	**3.1300e-003**	**132.9423**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9224	0.0000	8.9224	4.5544	0.0000	4.5544			0.0000			0.0000
Off-Road	0.6164	2.6712	30.1720	0.0503		0.0822	0.0822		0.0822	0.0822	0.0000	4,870.7093	4,870.7093	1.5753		4,910.0914
Total	**0.6164**	**2.6712**	**30.1720**	**0.0503**	**8.9224**	**0.0822**	**9.0045**	**4.5544**	**0.0822**	**4.6366**	**0.0000**	**4,870.7093**	**4,870.7093**	**1.5753**		**4,910.0914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0528	0.0276	0.4574	1.3100e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		131.9271	131.9271	3.3100e-003	3.1300e-003	132.9423
Total	**0.0528**	**0.0276**	**0.4574**	**1.3100e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**131.9271**	**131.9271**	**3.3100e-003**	**3.1300e-003**	**132.9423**

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3307	0.0000	3.3307	0.3599	0.0000	0.3599			0.0000			0.0000
Off-Road	2.2198	21.7153	22.4683	0.0468		0.8965	0.8965		0.8264	0.8264		4,509.5333	4,509.5333	1.4433		4,545.6166
Total	**2.2198**	**21.7153**	**22.4683**	**0.0468**	**3.3307**	**0.8965**	**4.2272**	**0.3599**	**0.8264**	**1.1863**		**4,509.5333**	**4,509.5333**	**1.4433**		**4,545.6166**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0177	0.9028	0.2087	4.2500e-003	0.1221	8.3200e-003	0.1304	0.0335	7.9600e-003	0.0414		449.3503	449.3503	8.2000e-004	0.0706	470.4146
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0587	0.0306	0.5082	1.4500e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		146.5857	146.5857	3.6700e-003	3.4800e-003	147.7137
Total	**0.0787**	**1.0214**	**0.7457**	**6.1000e-003**	**0.2999**	**9.6600e-003**	**0.3096**	**0.0810**	**9.2100e-003**	**0.0902**		**638.7106**	**638.7106**	**4.6200e-003**	**0.0806**	**662.8324**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4988	0.0000	1.4988	0.1620	0.0000	0.1620			0.0000			0.0000
Off-Road	0.6437	2.9442	25.8455	0.0468		0.0947	0.0947		0.0947	0.0947	0.0000	4,509.5333	4,509.5333	1.4433		4,545.6166
Total	**0.6437**	**2.9442**	**25.8455**	**0.0468**	**1.4988**	**0.0947**	**1.5935**	**0.1620**	**0.0947**	**0.2566**	**0.0000**	**4,509.5333**	**4,509.5333**	**1.4433**		**4,545.6166**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0177	0.9028	0.2087	4.2500e-003	0.1221	8.3200e-003	0.1304	0.0335	7.9600e-003	0.0414		449.3503	449.3503	8.2000e-004	0.0706	470.4146
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0587	0.0306	0.5082	1.4500e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		146.5857	146.5857	3.6700e-003	3.4800e-003	147.7137
Total	**0.0787**	**1.0214**	**0.7457**	**6.1000e-003**	**0.2999**	**9.6600e-003**	**0.3096**	**0.0810**	**9.2100e-003**	**0.0902**		**638.7106**	**638.7106**	**4.6200e-003**	**0.0806**	**662.8324**

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

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3307	0.0000	3.3307	0.3599	0.0000	0.3599			0.0000			0.0000
Off-Road	2.1411	20.1025	22.1501	0.0468		0.8352	0.8352		0.7699	0.7699		4,507.9509	4,507.9509	1.4428		4,544.0214
Total	**2.1411**	**20.1025**	**22.1501**	**0.0468**	**3.3307**	**0.8352**	**4.1658**	**0.3599**	**0.7699**	**1.1298**		**4,507.9509**	**4,507.9509**	**1.4428**		**4,544.0214**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0176	0.8939	0.2090	4.1600e-003	0.1221	8.3100e-003	0.1304	0.0335	7.9500e-003	0.0414		440.4954	440.4954	8.2000e-004	0.0692	461.1446
Vendor	2.3300e-003	0.0873	0.0284	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.9286	41.9286	1.2000e-004	6.3400e-003	43.8206
Worker	0.0547	0.0274	0.4743	1.4000e-003	0.1643	7.5000e-004	0.1650	0.0436	6.9000e-004	0.0443		141.7443	141.7443	3.3300e-003	3.2500e-003	142.7962
Total	**0.0746**	**1.0086**	**0.7117**	**5.9600e-003**	**0.2999**	**9.6100e-003**	**0.3095**	**0.0810**	**9.1700e-003**	**0.0901**		**624.1682**	**624.1682**	**4.2700e-003**	**0.0788**	**647.7614**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4988	0.0000	1.4988	0.1620	0.0000	0.1620			0.0000			0.0000
Off-Road	0.6437	2.9442	25.8455	0.0468		0.0947	0.0947		0.0947	0.0947	0.0000	4,507.9509	4,507.9509	1.4428		4,544.0214
Total	**0.6437**	**2.9442**	**25.8455**	**0.0468**	**1.4988**	**0.0947**	**1.5935**	**0.1620**	**0.0947**	**0.2566**	**0.0000**	**4,507.9509**	**4,507.9509**	**1.4428**		**4,544.0214**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0176	0.8939	0.2090	4.1600e-003	0.1221	8.3100e-003	0.1304	0.0335	7.9500e-003	0.0414		440.4954	440.4954	8.2000e-004	0.0692	461.1446
Vendor	2.3300e-003	0.0873	0.0284	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.9286	41.9286	1.2000e-004	6.3400e-003	43.8206
Worker	0.0547	0.0274	0.4743	1.4000e-003	0.1643	7.5000e-004	0.1650	0.0436	6.9000e-004	0.0443		141.7443	141.7443	3.3300e-003	3.2500e-003	142.7962
Total	**0.0746**	**1.0086**	**0.7117**	**5.9600e-003**	**0.2999**	**9.6100e-003**	**0.3095**	**0.0810**	**9.1700e-003**	**0.0901**		**624.1682**	**624.1682**	**4.2700e-003**	**0.0788**	**647.7614**

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

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7769	6.5001	12.5405	0.0201		0.3151	0.3151		0.2907	0.2907		1,929.2634	1,929.2634	0.6164		1,944.6731
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7769**	**6.5001**	**12.5405**	**0.0201**		**0.3151**	**0.3151**		**0.2907**	**0.2907**		**1,929.2634**	**1,929.2634**	**0.6164**		**1,944.6731**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0464**	**0.1109**	**0.4100**	**1.4900e-003**	**0.1368**	**1.1400e-003**	**0.1379**	**0.0366**	**1.0700e-003**	**0.0377**		**152.7138**	**152.7138**	**2.8800e-003**	**9.0700e-003**	**155.4894**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.2634	1,929.2634	0.6164		1,944.6731
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.2634**	**1,929.2634**	**0.6164**		**1,944.6731**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3800e-003	0.0879	0.0288	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.7746	42.7746	1.3000e-004	6.4600e-003	44.7042
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0464**	**0.1109**	**0.4100**	**1.4900e-003**	**0.1368**	**1.1400e-003**	**0.1379**	**0.0366**	**1.0700e-003**	**0.0377**		**152.7138**	**152.7138**	**2.8800e-003**	**9.0700e-003**	**155.4894**

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

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7456	5.9560	12.5754	0.0201		0.2893	0.2893		0.2670	0.2670		1,929.7412	1,929.7412	0.6166		1,945.1549
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7456**	**5.9560**	**12.5754**	**0.0201**		**0.2893**	**0.2893**		**0.2670**	**0.2670**		**1,929.7412**	**1,929.7412**	**0.6166**		**1,945.1549**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3300e-003	0.0873	0.0284	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.9286	41.9286	1.2000e-004	6.3400e-003	43.8206
Worker	0.0410	0.0206	0.3557	1.0500e-003	0.1232	5.6000e-004	0.1238	0.0327	5.2000e-004	0.0332		106.3082	106.3082	2.5000e-003	2.4400e-003	107.0972
Total	**0.0433**	**0.1079**	**0.3841**	**1.4500e-003**	**0.1368**	**1.1100e-003**	**0.1379**	**0.0366**	**1.0500e-003**	**0.0376**		**148.2368**	**148.2368**	**2.6200e-003**	**8.7800e-003**	**150.9177**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.7412	1,929.7412	0.6166		1,945.1549
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.7412**	**1,929.7412**	**0.6166**		**1,945.1549**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3300e-003	0.0873	0.0284	4.0000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.9286	41.9286	1.2000e-004	6.3400e-003	43.8206
Worker	0.0410	0.0206	0.3557	1.0500e-003	0.1232	5.6000e-004	0.1238	0.0327	5.2000e-004	0.0332		106.3082	106.3082	2.5000e-003	2.4400e-003	107.0972
Total	**0.0433**	**0.1079**	**0.3841**	**1.4500e-003**	**0.1368**	**1.1100e-003**	**0.1379**	**0.0366**	**1.0500e-003**	**0.0376**		**148.2368**	**148.2368**	**2.6200e-003**	**8.7800e-003**	**150.9177**

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

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6883	5.1809	12.5351	0.0201		0.2520	0.2520		0.2326	0.2326		1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6883**	**5.1809**	**12.5351**	**0.0201**		**0.2520**	**0.2520**		**0.2326**	**0.2326**		**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0866	0.0281	3.9000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.2000e-004	4.4300e-003		41.0256	41.0256	1.2000e-004	6.2000e-003	42.8767
Worker	0.0384	0.0185	0.3336	1.0200e-003	0.1232	5.3000e-004	0.1238	0.0327	4.9000e-004	0.0332		102.6710	102.6710	2.2700e-003	2.2900e-003	103.4103
Total	**0.0407**	**0.1051**	**0.3617**	**1.4100e-003**	**0.1368**	**1.0800e-003**	**0.1379**	**0.0366**	**1.0100e-003**	**0.0376**		**143.6966**	**143.6966**	**2.3900e-003**	**8.4900e-003**	**146.2870**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2900e-003	0.0866	0.0281	3.9000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.2000e-004	4.4300e-003		41.0256	41.0256	1.2000e-004	6.2000e-003	42.8767
Worker	0.0384	0.0185	0.3336	1.0200e-003	0.1232	5.3000e-004	0.1238	0.0327	4.9000e-004	0.0332		102.6710	102.6710	2.2700e-003	2.2900e-003	103.4103
Total	**0.0407**	**0.1051**	**0.3617**	**1.4100e-003**	**0.1368**	**1.0800e-003**	**0.1379**	**0.0366**	**1.0100e-003**	**0.0376**		**143.6966**	**143.6966**	**2.3900e-003**	**8.4900e-003**	**146.2870**

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

3.5 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6883	5.1809	12.5351	0.0201		0.2520	0.2520		0.2326	0.2326		1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6883**	**5.1809**	**12.5351**	**0.0201**		**0.2520**	**0.2520**		**0.2326**	**0.2326**		**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2600e-003	0.0858	0.0278	3.8000e-004	0.0136	5.4000e-004	0.0141	3.9000e-003	5.2000e-004	4.4200e-003		40.1556	40.1556	1.2000e-004	6.0700e-003	41.9673
Worker	0.0362	0.0169	0.3152	9.8000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		99.4374	99.4374	2.0700e-003	2.1700e-003	100.1354
Total	**0.0385**	**0.1027**	**0.3430**	**1.3600e-003**	**0.1368**	**1.0500e-003**	**0.1378**	**0.0366**	**9.9000e-004**	**0.0376**		**139.5930**	**139.5930**	**2.1900e-003**	**8.2400e-003**	**142.1027**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2600e-003	0.0858	0.0278	3.8000e-004	0.0136	5.4000e-004	0.0141	3.9000e-003	5.2000e-004	4.4200e-003		40.1556	40.1556	1.2000e-004	6.0700e-003	41.9673
Worker	0.0362	0.0169	0.3152	9.8000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		99.4374	99.4374	2.0700e-003	2.1700e-003	100.1354
Total	**0.0385**	**0.1027**	**0.3430**	**1.3600e-003**	**0.1368**	**1.0500e-003**	**0.1378**	**0.0366**	**9.9000e-004**	**0.0376**		**139.5930**	**139.5930**	**2.1900e-003**	**8.2400e-003**	**142.1027**

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2058	12.4139	7.3625	0.0268		0.5001	0.5001		0.4601	0.4601		2,593.7854	2,593.7854	0.8389		2,614.7574
Total	**1.2058**	**12.4139**	**7.3625**	**0.0268**		**0.5001**	**0.5001**		**0.4601**	**0.4601**		**2,593.7854**	**2,593.7854**	**0.8389**		**2,614.7574**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1039	3.8864	1.2640	0.0177	0.6031	0.0246	0.6277	0.1736	0.0236	0.1972		1,865.8210	1,865.8210	5.4000e-003	0.2821	1,950.0148
Worker	0.5496	0.2754	4.7665	0.0141	1.6512	7.5000e-003	1.6587	0.4380	6.9000e-003	0.4449		1,424.5305	1,424.5305	0.0335	0.0327	1,435.1019
Total	**0.6534**	**4.1618**	**6.0305**	**0.0318**	**2.2542**	**0.0321**	**2.2863**	**0.6116**	**0.0305**	**0.6421**		**3,290.3514**	**3,290.3514**	**0.0389**	**0.3148**	**3,385.1166**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7854	2,593.7854	0.8389		2,614.7574
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7854**	**2,593.7854**	**0.8389**		**2,614.7574**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1039	3.8864	1.2640	0.0177	0.6031	0.0246	0.6277	0.1736	0.0236	0.1972		1,865.8210	1,865.8210	5.4000e-003	0.2821	1,950.0148
Worker	0.5496	0.2754	4.7665	0.0141	1.6512	7.5000e-003	1.6587	0.4380	6.9000e-003	0.4449		1,424.5305	1,424.5305	0.0335	0.0327	1,435.1019
Total	**0.6534**	**4.1618**	**6.0305**	**0.0318**	**2.2542**	**0.0321**	**2.2863**	**0.6116**	**0.0305**	**0.6421**		**3,290.3514**	**3,290.3514**	**0.0389**	**0.3148**	**3,385.1166**

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

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1021	3.8521	1.2487	0.0173	0.6030	0.0244	0.6274	0.1736	0.0234	0.1970		1,825.6371	1,825.6371	5.2600e-003	0.2760	1,908.0136
Worker	0.5151	0.2483	4.4701	0.0136	1.6512	7.1600e-003	1.6583	0.4380	6.5900e-003	0.4446		1,375.7919	1,375.7919	0.0304	0.0307	1,385.6980
Total	**0.6173**	**4.1004**	**5.7188**	**0.0309**	**2.2542**	**0.0316**	**2.2858**	**0.6116**	**0.0299**	**0.6415**		**3,201.4290**	**3,201.4290**	**0.0356**	**0.3067**	**3,293.7116**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1021	3.8521	1.2487	0.0173	0.6030	0.0244	0.6274	0.1736	0.0234	0.1970		1,825.6371	1,825.6371	5.2600e-003	0.2760	1,908.0136
Worker	0.5151	0.2483	4.4701	0.0136	1.6512	7.1600e-003	1.6583	0.4380	6.5900e-003	0.4446		1,375.7919	1,375.7919	0.0304	0.0307	1,385.6980
Total	**0.6173**	**4.1004**	**5.7188**	**0.0309**	**2.2542**	**0.0316**	**2.2858**	**0.6116**	**0.0299**	**0.6415**		**3,201.4290**	**3,201.4290**	**0.0356**	**0.3067**	**3,293.7116**

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1007	3.8176	1.2367	0.0169	0.6030	0.0241	0.6271	0.1736	0.0231	0.1967		1,786.9241	1,786.9241	5.1500e-003	0.2701	1,867.5464
Worker	0.4850	0.2262	4.2237	0.0132	1.6512	6.8000e-003	1.6580	0.4380	6.2600e-003	0.4442		1,332.4605	1,332.4605	0.0277	0.0291	1,341.8143
Total	**0.5856**	**4.0438**	**5.4604**	**0.0301**	**2.2542**	**0.0309**	**2.2851**	**0.6116**	**0.0293**	**0.6409**		**3,119.3846**	**3,119.3846**	**0.0329**	**0.2992**	**3,209.3608**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1007	3.8176	1.2367	0.0169	0.6030	0.0241	0.6271	0.1736	0.0231	0.1967		1,786.9241	1,786.9241	5.1500e-003	0.2701	1,867.5464
Worker	0.4850	0.2262	4.2237	0.0132	1.6512	6.8000e-003	1.6580	0.4380	6.2600e-003	0.4442		1,332.4605	1,332.4605	0.0277	0.0291	1,341.8143
Total	**0.5856**	**4.0438**	**5.4604**	**0.0301**	**2.2542**	**0.0309**	**2.2851**	**0.6116**	**0.0293**	**0.6409**		**3,119.3846**	**3,119.3846**	**0.0329**	**0.2992**	**3,209.3608**

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0994	3.7851	1.2269	0.0165	0.6030	0.0238	0.6268	0.1736	0.0228	0.1964		1,746.7208	1,746.7208	5.0600e-003	0.2640	1,825.5279
Worker	0.4573	0.2077	4.0139	0.0128	1.6512	6.4000e-003	1.6576	0.4380	5.8900e-003	0.4439		1,293.3826	1,293.3826	0.0255	0.0277	1,302.2726
Total	**0.5567**	**3.9928**	**5.2407**	**0.0293**	**2.2542**	**0.0302**	**2.2844**	**0.6116**	**0.0287**	**0.6403**		**3,040.1035**	**3,040.1035**	**0.0305**	**0.2917**	**3,127.8005**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0994	3.7851	1.2269	0.0165	0.6030	0.0238	0.6268	0.1736	0.0228	0.1964		1,746.7208	1,746.7208	5.0600e-003	0.2640	1,825.5279
Worker	0.4573	0.2077	4.0139	0.0128	1.6512	6.4000e-003	1.6576	0.4380	5.8900e-003	0.4439		1,293.3826	1,293.3826	0.0255	0.0277	1,302.2726
Total	**0.5567**	**3.9928**	**5.2407**	**0.0293**	**2.2542**	**0.0302**	**2.2844**	**0.6116**	**0.0287**	**0.6403**		**3,040.1035**	**3,040.1035**	**0.0305**	**0.2917**	**3,127.8005**

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

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1025	0.0494	0.8896	2.7100e-003	0.3286	1.4200e-003	0.3300	0.0872	1.3100e-003	0.0885		273.7894	273.7894	6.0500e-003	6.1100e-003	275.7608
Total	**0.1025**	**0.0494**	**0.8896**	**2.7100e-003**	**0.3286**	**1.4200e-003**	**0.3300**	**0.0872**	**1.3100e-003**	**0.0885**		**273.7894**	**273.7894**	**6.0500e-003**	**6.1100e-003**	**275.7608**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1025	0.0494	0.8896	2.7100e-003	0.3286	1.4200e-003	0.3300	0.0872	1.3100e-003	0.0885		273.7894	273.7894	6.0500e-003	6.1100e-003	275.7608
Total	**0.1025**	**0.0494**	**0.8896**	**2.7100e-003**	**0.3286**	**1.4200e-003**	**0.3300**	**0.0872**	**1.3100e-003**	**0.0885**		**273.7894**	**273.7894**	**6.0500e-003**	**6.1100e-003**	**275.7608**

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

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0965	0.0450	0.8405	2.6200e-003	0.3286	1.3500e-003	0.3299	0.0872	1.2500e-003	0.0884		265.1663	265.1663	5.5200e-003	5.7800e-003	267.0277
Total	**0.0965**	**0.0450**	**0.8405**	**2.6200e-003**	**0.3286**	**1.3500e-003**	**0.3299**	**0.0872**	**1.2500e-003**	**0.0884**		**265.1663**	**265.1663**	**5.5200e-003**	**5.7800e-003**	**267.0277**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0965	0.0450	0.8405	2.6200e-003	0.3286	1.3500e-003	0.3299	0.0872	1.2500e-003	0.0884		265.1663	265.1663	5.5200e-003	5.7800e-003	267.0277
Total	**0.0965**	**0.0450**	**0.8405**	**2.6200e-003**	**0.3286**	**1.3500e-003**	**0.3299**	**0.0872**	**1.2500e-003**	**0.0884**		**265.1663**	**265.1663**	**5.5200e-003**	**5.7800e-003**	**267.0277**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.8825	10.3935	76.9622	0.1631	17.5443	0.1304	17.6747	4.6823	0.1223	4.8046		16,600.2415	16,600.2415	0.9283	0.8140	16,866.0093
Unmitigated	9.8825	10.3935	76.9622	0.1631	17.5443	0.1304	17.6747	4.6823	0.1223	4.8046		16,600.2415	16,600.2415	0.9283	0.8140	16,866.0093

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	3,297.08	2,374.12	2082.22	7,534,349	7,534,349
User Defined Industrial	0.00	0.00	0.00		
Total	3,297.08	2,374.12	2,082.22	7,534,349	7,534,349

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696
User Defined Industrial	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
NaturalGas Unmitigated	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	63841	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.6885**	**6.2589**	**5.2575**	**0.0376**		**0.4757**	**0.4757**		**0.4757**	**0.4757**		**7,510.7043**	**7,510.7043**	**0.1440**	**0.1377**	**7,555.3366**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	63.841	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.6885**	**6.2589**	**5.2575**	**0.0376**		**0.4757**	**0.4757**		**0.4757**	**0.4757**		**7,510.7043**	**7,510.7043**	**0.1440**	**0.1377**	**7,555.3366**

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Unmitigated	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Total	**6.8118**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0611**	**0.0611**	**1.6000e-004**		**0.0650**

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

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Total	**6.8118**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0611**	**0.0611**	**1.6000e-004**		**0.0650**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	1	12	2682	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

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

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**8.8027**	**39.3650**	**22.4450**	**0.0423**		**1.2949**	**1.2949**		**1.2949**	**1.2949**		**4,503.1538**	**4,503.1538**	**0.6313**		**4,518.9373**

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

Kaiser Bed Tower Project - Bed Tower

Placer-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hospital	278.00	1000sqft	8.77	278,000.00	0
User Defined Industrial	1.00	User Defined Unit	0.13	5,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 278,000 SF bed tower and 5,600 SF generator yard.

Construction Phase - Project construction would begin January 2023, with buildout in February 2027.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated construction equipment per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per information from applicant.

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Off-road Equipment - Default equipment assumed.

Off-road Equipment - Default equipment assumed. Included 3 compactors.

Trips and VMT - Default trips assumed. Added vendor truck to demolition, grading, and paving for water truck.

Demolition - 4,055 tons of pavement removed.

Grading - Cut: 23,498 CY, Fill: 9,836 CY.

Vehicle Trips - Updated trip rates per traffic analysis.

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 final equipment.

Stationary Sources - Emergency Generators and Fire Pumps - Two 2 MW emergency generators.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	15,654.00
tblAreaCoating	Area_Parking	0	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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

tblConstructionPhase	NumDays	10.00	168.00
tblConstructionPhase	NumDays	20.00	245.00
tblConstructionPhase	NumDays	20.00	893.00
tblConstructionPhase	NumDays	230.00	784.00
tblConstructionPhase	NumDays	20.00	410.00
tblGrading	AcresOfGrading	490.00	768.00
tblGrading	AcresOfGrading	252.00	279.00
tblGrading	MaterialExported	0.00	13,662.00
tblLandUse	LandUseSquareFeet	0.00	5,600.00
tblLandUse	LotAcreage	6.38	8.77
tblLandUse	LotAcreage	0.00	0.13
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	6.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	46.00	89.00
tblTripsAndVMT	WorkerTripNumber	28.00	15.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblTripsAndVMT	WorkerTripNumber	91.00	201.00

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

tblTripsAndVMT	WorkerTripNumber	18.00	40.00
tblVehicleTrips	ST_TR	7.72	8.54
tblVehicleTrips	SU_TR	6.77	7.49
tblVehicleTrips	WD_TR	10.72	11.86

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	6.3336	61.8079	62.4242	0.1257	23.7427	2.7231	26.4657	10.6375	2.5079	13.1454	0.0000	12,195.3469	12,195.3469	3.6475	0.2129	12,314.6511
2024	2.9964	27.2659	35.7565	0.0786	3.7673	1.1352	4.9026	0.6482	1.0471	1.5245	0.0000	7,815.5686	7,815.5686	2.0672	0.3299	7,951.4520
2025	9.3041	22.3256	28.1272	0.0832	2.7196	0.8029	3.5225	0.7353	0.7445	1.4798	0.0000	8,255.8482	8,255.8482	1.5217	0.3282	8,391.7023
2026	9.2672	22.2531	27.8326	0.0823	2.7196	0.8021	3.5217	0.7353	0.7438	1.4791	0.0000	8,166.6953	8,166.6953	1.5177	0.3198	8,299.9311
2027	1.6663	15.7000	12.1996	0.0549	2.2542	0.4956	2.7497	0.6116	0.4568	1.0684	0.0000	5,511.0119	5,511.0119	0.8739	0.2968	5,621.3088
Maximum	**9.3041**	**61.8079**	**62.4242**	**0.1257**	**23.7427**	**2.7231**	**26.4657**	**10.6375**	**2.5079**	**13.1454**	**0.0000**	**12,195.3469**	**12,195.3469**	**3.6475**	**0.3299**	**12,314.6511**

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.7065	8.1701	72.5840	0.1257	11.0057	0.2303	11.2360	4.8731	0.2297	5.1028	0.0000	12,195.3469	12,195.3469	3.6475	0.2129	12,314.6511
2024	1.2593	7.3652	41.9420	0.0786	2.3910	0.1473	2.5102	0.6482	0.1468	0.7656	0.0000	7,815.5686	7,815.5686	2.0672	0.3299	7,951.4520
2025	8.0787	8.4988	35.4974	0.0832	2.7196	0.1715	2.8911	0.7353	0.1697	0.9051	0.0000	8,255.8482	8,255.8482	1.5217	0.3282	8,391.7023
2026	8.0419	8.4264	35.2029	0.0823	2.7196	0.1708	2.8903	0.7353	0.1690	0.9043	0.0000	8,166.6953	8,166.6953	1.5177	0.3198	8,299.9311
2027	0.8481	5.7591	17.0394	0.0549	2.2542	0.0743	2.3285	0.6116	0.0727	0.6843	0.0000	5,511.0119	5,511.0119	0.8739	0.2968	5,621.3088
Maximum	**8.0787**	**8.4988**	**72.5840**	**0.1257**	**11.0057**	**0.2303**	**11.2360**	**4.8731**	**0.2297**	**5.1028**	**0.0000**	**12,195.3469**	**12,195.3469**	**3.6475**	**0.3299**	**12,314.6511**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**32.58**	**74.41**	**-21.60**	**0.00**	**40.09**	**86.67**	**46.90**	**43.12**	**85.67**	**55.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Energy	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
Mobile	8.0687	11.9411	81.0338	0.1516	17.5443	0.1305	17.6748	4.6823	0.1224	4.8046		15,441.5812	15,441.5812	1.0730	0.8844	15,731.9632
Stationary	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**24.3716**	**57.5654**	**108.7647**	**0.2315**	**17.5443**	**1.9012**	**19.4455**	**4.6823**	**1.8931**	**6.5753**		**27,455.5003**	**27,455.5003**	**1.8485**	**1.0221**	**27,806.3022**

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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Energy	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
Mobile	8.0687	11.9411	81.0338	0.1516	17.5443	0.1305	17.6748	4.6823	0.1224	4.8046		15,441.5812	15,441.5812	1.0730	0.8844	15,731.9632
Stationary	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**24.3716**	**57.5654**	**108.7647**	**0.2315**	**17.5443**	**1.9012**	**19.4455**	**4.6823**	**1.8931**	**6.5753**		**27,455.5003**	**27,455.5003**	**1.8485**	**1.0221**	**27,806.3022**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	2/21/2023	10/12/2023	5	168	
3	Grading	Grading	3/21/2023	2/26/2024	5	245	
4	Paving	Paving	3/21/2023	8/20/2026	5	893	
5	Building Construction	Building Construction	2/27/2024	2/27/2027	5	784	
6	Architectural Coating	Architectural Coating	1/7/2025	8/3/2026	5	410	

Acres of Grading (Site Preparation Phase): 279

Acres of Grading (Grading Phase): 768

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 425,400; Non-Residential Outdoor: 141,800; Striped Parking Area: 15,654

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Bore/Drill Rigs	1	8.00	221	0.50
Demolition	Cranes	2	8.00	231	0.29
Demolition	Excavators	6	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Paving Equipment	3	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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Grading	Excavators	3	8.00	158	0.38
Grading	Plate Compactors	2	8.00	8	0.43
Grading	Scrapers	2	8.00	367	0.48
Paving	Excavators	3	8.00	158	0.38
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Cranes	3	8.00	231	0.29
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	15.00	2.00	401.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	20.00	2.00	1,708.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	15.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	201.00	89.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	40.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.3387	0.0000	4.3387	0.6569	0.0000	0.6569			0.0000			0.0000
Off-Road	3.4194	33.2166	31.4610	0.0691		1.4814	1.4814		1.3629	1.3629		6,687.6770	6,687.6770	2.1629		6,741.7502
Total	**3.4194**	**33.2166**	**31.4610**	**0.0691**	**4.3387**	**1.4814**	**5.8200**	**0.6569**	**1.3629**	**2.0198**		**6,687.6770**	**6,687.6770**	**2.1629**		**6,741.7502**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0470	2.7876	0.6128	0.0122	0.3511	0.0240	0.3750	0.0963	0.0229	0.1192		1,294.2271	1,294.2271	2.1900e-003	0.2034	1,354.8937
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0902**	**2.9108**	**0.9903**	**0.0136**	**0.4878**	**0.0251**	**0.5129**	**0.1328**	**0.0240**	**0.1569**		**1,436.1802**	**1,436.1802**	**5.5500e-003**	**0.2129**	**1,499.7626**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9524	0.0000	1.9524	0.2956	0.0000	0.2956			0.0000			0.0000
Off-Road	0.8490	3.6791	40.6614	0.0691		0.1132	0.1132		0.1132	0.1132	0.0000	6,687.6770	6,687.6770	2.1629		6,741.7502
Total	**0.8490**	**3.6791**	**40.6614**	**0.0691**	**1.9524**	**0.1132**	**2.0656**	**0.2956**	**0.1132**	**0.4088**	**0.0000**	**6,687.6770**	**6,687.6770**	**2.1629**		**6,741.7502**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0470	2.7876	0.6128	0.0122	0.3511	0.0240	0.3750	0.0963	0.0229	0.1192		1,294.2271	1,294.2271	2.1900e-003	0.2034	1,354.8937
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0902**	**2.9108**	**0.9903**	**0.0136**	**0.4878**	**0.0251**	**0.5129**	**0.1328**	**0.0240**	**0.1569**		**1,436.1802**	**1,436.1802**	**5.5500e-003**	**0.2129**	**1,499.7626**

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

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.8275	0.0000	19.8275	10.1209	0.0000	10.1209			0.0000			0.0000
Off-Road	3.1716	32.3329	25.9145	0.0503		1.4999	1.4999		1.3799	1.3799		4,870.7093	4,870.7093	1.5753		4,910.0914
Total	**3.1716**	**32.3329**	**25.9145**	**0.0503**	**19.8275**	**1.4999**	**21.3273**	**10.1209**	**1.3799**	**11.5007**		**4,870.7093**	**4,870.7093**	**1.5753**		**4,910.0914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0491	0.0344	0.4171	1.1800e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		118.9011	118.9011	3.8900e-003	3.6200e-003	120.0778
Total	**0.0491**	**0.0344**	**0.4171**	**1.1800e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**118.9011**	**118.9011**	**3.8900e-003**	**3.6200e-003**	**120.0778**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9224	0.0000	8.9224	4.5544	0.0000	4.5544			0.0000			0.0000
Off-Road	0.6164	2.6712	30.1720	0.0503		0.0822	0.0822		0.0822	0.0822	0.0000	4,870.7093	4,870.7093	1.5753		4,910.0914
Total	**0.6164**	**2.6712**	**30.1720**	**0.0503**	**8.9224**	**0.0822**	**9.0045**	**4.5544**	**0.0822**	**4.6366**	**0.0000**	**4,870.7093**	**4,870.7093**	**1.5753**		**4,910.0914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0491	0.0344	0.4171	1.1800e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		118.9011	118.9011	3.8900e-003	3.6200e-003	120.0778
Total	**0.0491**	**0.0344**	**0.4171**	**1.1800e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**118.9011**	**118.9011**	**3.8900e-003**	**3.6200e-003**	**120.0778**

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

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3307	0.0000	3.3307	0.3599	0.0000	0.3599			0.0000			0.0000
Off-Road	2.2198	21.7153	22.4683	0.0468		0.8965	0.8965		0.8264	0.8264		4,509.5333	4,509.5333	1.4433		4,545.6166
Total	**2.2198**	**21.7153**	**22.4683**	**0.0468**	**3.3307**	**0.8965**	**4.2272**	**0.3599**	**0.8264**	**1.1863**		**4,509.5333**	**4,509.5333**	**1.4433**		**4,545.6166**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.9693	0.2131	4.2500e-003	0.1221	8.3300e-003	0.1304	0.0335	7.9700e-003	0.0414		450.0056	450.0056	7.6000e-004	0.0707	471.0995
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0546	0.0382	0.4635	1.3100e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		132.1123	132.1123	4.3200e-003	4.0200e-003	133.4197
Total	**0.0731**	**1.1020**	**0.7064**	**5.9700e-003**	**0.2999**	**9.6800e-003**	**0.3096**	**0.0810**	**9.2200e-003**	**0.0902**		**624.9868**	**624.9868**	**5.2000e-003**	**0.0812**	**649.3233**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4988	0.0000	1.4988	0.1620	0.0000	0.1620			0.0000			0.0000
Off-Road	0.6437	2.9442	25.8455	0.0468		0.0947	0.0947		0.0947	0.0947	0.0000	4,509.5333	4,509.5333	1.4433		4,545.6166
Total	**0.6437**	**2.9442**	**25.8455**	**0.0468**	**1.4988**	**0.0947**	**1.5935**	**0.1620**	**0.0947**	**0.2566**	**0.0000**	**4,509.5333**	**4,509.5333**	**1.4433**		**4,545.6166**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.9693	0.2131	4.2500e-003	0.1221	8.3300e-003	0.1304	0.0335	7.9700e-003	0.0414		450.0056	450.0056	7.6000e-004	0.0707	471.0995
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0546	0.0382	0.4635	1.3100e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		132.1123	132.1123	4.3200e-003	4.0200e-003	133.4197
Total	**0.0731**	**1.1020**	**0.7064**	**5.9700e-003**	**0.2999**	**9.6800e-003**	**0.3096**	**0.0810**	**9.2200e-003**	**0.0902**		**624.9868**	**624.9868**	**5.2000e-003**	**0.0812**	**649.3233**

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

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3307	0.0000	3.3307	0.3599	0.0000	0.3599			0.0000			0.0000
Off-Road	2.1411	20.1025	22.1501	0.0468		0.8352	0.8352		0.7699	0.7699		4,507.9509	4,507.9509	1.4428		4,544.0214
Total	**2.1411**	**20.1025**	**22.1501**	**0.0468**	**3.3307**	**0.8352**	**4.1658**	**0.3599**	**0.7699**	**1.1298**		**4,507.9509**	**4,507.9509**	**1.4428**		**4,544.0214**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.9598	0.2134	4.1700e-003	0.1221	8.3300e-003	0.1304	0.0335	7.9700e-003	0.0414		441.1467	441.1467	7.6000e-004	0.0693	461.8255
Vendor	2.1600e-003	0.0939	0.0294	4.0000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.0229	42.0229	1.1000e-004	6.3600e-003	43.9204
Worker	0.0510	0.0342	0.4336	1.2600e-003	0.1643	7.5000e-004	0.1650	0.0436	6.9000e-004	0.0443		127.7776	127.7776	3.9300e-003	3.7600e-003	128.9964
Total	**0.0694**	**1.0878**	**0.6764**	**5.8300e-003**	**0.2999**	**9.6400e-003**	**0.3095**	**0.0810**	**9.1900e-003**	**0.0901**		**610.9473**	**610.9473**	**4.8000e-003**	**0.0795**	**634.7422**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4988	0.0000	1.4988	0.1620	0.0000	0.1620			0.0000			0.0000
Off-Road	0.6437	2.9442	25.8455	0.0468		0.0947	0.0947		0.0947	0.0947	0.0000	4,507.9509	4,507.9509	1.4428		4,544.0214
Total	**0.6437**	**2.9442**	**25.8455**	**0.0468**	**1.4988**	**0.0947**	**1.5935**	**0.1620**	**0.0947**	**0.2566**	**0.0000**	**4,507.9509**	**4,507.9509**	**1.4428**		**4,544.0214**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0163	0.9598	0.2134	4.1700e-003	0.1221	8.3300e-003	0.1304	0.0335	7.9700e-003	0.0414		441.1467	441.1467	7.6000e-004	0.0693	461.8255
Vendor	2.1600e-003	0.0939	0.0294	4.0000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.0229	42.0229	1.1000e-004	6.3600e-003	43.9204
Worker	0.0510	0.0342	0.4336	1.2600e-003	0.1643	7.5000e-004	0.1650	0.0436	6.9000e-004	0.0443		127.7776	127.7776	3.9300e-003	3.7600e-003	128.9964
Total	**0.0694**	**1.0878**	**0.6764**	**5.8300e-003**	**0.2999**	**9.6400e-003**	**0.3095**	**0.0810**	**9.1900e-003**	**0.0901**		**610.9473**	**610.9473**	**4.8000e-003**	**0.0795**	**634.7422**

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

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7769	6.5001	12.5405	0.0201		0.3151	0.3151		0.2907	0.2907		1,929.2634	1,929.2634	0.6164		1,944.6731
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7769**	**6.5001**	**12.5405**	**0.0201**		**0.3151**	**0.3151**		**0.2907**	**0.2907**		**1,929.2634**	**1,929.2634**	**0.6164**		**1,944.6731**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0431**	**0.1232**	**0.3775**	**1.3900e-003**	**0.1368**	**1.1500e-003**	**0.1379**	**0.0366**	**1.0700e-003**	**0.0377**		**141.9531**	**141.9531**	**3.3600e-003**	**9.5000e-003**	**144.8689**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.2634	1,929.2634	0.6164		1,944.6731
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.2634**	**1,929.2634**	**0.6164**		**1,944.6731**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2100e-003	0.0945	0.0299	4.1000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.8689	42.8689	1.2000e-004	6.4800e-003	44.8041
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0431**	**0.1232**	**0.3775**	**1.3900e-003**	**0.1368**	**1.1500e-003**	**0.1379**	**0.0366**	**1.0700e-003**	**0.0377**		**141.9531**	**141.9531**	**3.3600e-003**	**9.5000e-003**	**144.8689**

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

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7456	5.9560	12.5754	0.0201		0.2893	0.2893		0.2670	0.2670		1,929.7412	1,929.7412	0.6166		1,945.1549
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7456**	**5.9560**	**12.5754**	**0.0201**		**0.2893**	**0.2893**		**0.2670**	**0.2670**		**1,929.7412**	**1,929.7412**	**0.6166**		**1,945.1549**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1600e-003	0.0939	0.0294	4.0000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.0229	42.0229	1.1000e-004	6.3600e-003	43.9204
Worker	0.0382	0.0256	0.3252	9.5000e-004	0.1232	5.6000e-004	0.1238	0.0327	5.2000e-004	0.0332		95.8332	95.8332	2.9500e-003	2.8200e-003	96.7473
Total	**0.0404**	**0.1195**	**0.3546**	**1.3500e-003**	**0.1368**	**1.1200e-003**	**0.1379**	**0.0366**	**1.0500e-003**	**0.0376**		**137.8562**	**137.8562**	**3.0600e-003**	**9.1800e-003**	**140.6677**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.7412	1,929.7412	0.6166		1,945.1549
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.7412**	**1,929.7412**	**0.6166**		**1,945.1549**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1600e-003	0.0939	0.0294	4.0000e-004	0.0136	5.6000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		42.0229	42.0229	1.1000e-004	6.3600e-003	43.9204
Worker	0.0382	0.0256	0.3252	9.5000e-004	0.1232	5.6000e-004	0.1238	0.0327	5.2000e-004	0.0332		95.8332	95.8332	2.9500e-003	2.8200e-003	96.7473
Total	**0.0404**	**0.1195**	**0.3546**	**1.3500e-003**	**0.1368**	**1.1200e-003**	**0.1379**	**0.0366**	**1.0500e-003**	**0.0376**		**137.8562**	**137.8562**	**3.0600e-003**	**9.1800e-003**	**140.6677**

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

3.5 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6883	5.1809	12.5351	0.0201		0.2520	0.2520		0.2326	0.2326		1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6883**	**5.1809**	**12.5351**	**0.0201**		**0.2520**	**0.2520**		**0.2326**	**0.2326**		**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1200e-003	0.0931	0.0291	3.9000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.1195	41.1195	1.1000e-004	6.2200e-003	42.9760
Worker	0.0358	0.0231	0.3055	9.2000e-004	0.1232	5.3000e-004	0.1238	0.0327	4.9000e-004	0.0332		92.5736	92.5736	2.6900e-003	2.6500e-003	93.4298
Total	**0.0380**	**0.1162**	**0.3346**	**1.3100e-003**	**0.1368**	**1.0800e-003**	**0.1379**	**0.0366**	**1.0200e-003**	**0.0376**		**133.6931**	**133.6931**	**2.8000e-003**	**8.8700e-003**	**136.4059**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1200e-003	0.0931	0.0291	3.9000e-004	0.0136	5.5000e-004	0.0141	3.9000e-003	5.3000e-004	4.4300e-003		41.1195	41.1195	1.1000e-004	6.2200e-003	42.9760
Worker	0.0358	0.0231	0.3055	9.2000e-004	0.1232	5.3000e-004	0.1238	0.0327	4.9000e-004	0.0332		92.5736	92.5736	2.6900e-003	2.6500e-003	93.4298
Total	**0.0380**	**0.1162**	**0.3346**	**1.3100e-003**	**0.1368**	**1.0800e-003**	**0.1379**	**0.0366**	**1.0200e-003**	**0.0376**		**133.6931**	**133.6931**	**2.8000e-003**	**8.8700e-003**	**136.4059**

CalEEMod Version: CalEEMod.2020.4.0

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

3.5 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6883	5.1809	12.5351	0.0201		0.2520	0.2520		0.2326	0.2326		1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6883**	**5.1809**	**12.5351**	**0.0201**		**0.2520**	**0.2520**		**0.2326**	**0.2326**		**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0900e-003	0.0923	0.0288	3.8000e-004	0.0136	5.4000e-004	0.0141	3.9000e-003	5.2000e-004	4.4200e-003		40.2489	40.2489	1.1000e-004	6.0900e-003	42.0658
Worker	0.0338	0.0210	0.2890	8.9000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		89.6710	89.6710	2.4600e-003	2.5100e-003	90.4792
Total	**0.0359**	**0.1133**	**0.3178**	**1.2700e-003**	**0.1368**	**1.0500e-003**	**0.1378**	**0.0366**	**9.9000e-004**	**0.0376**		**129.9198**	**129.9198**	**2.5700e-003**	**8.6000e-003**	**132.5451**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2810	1.2952	15.0655	0.0201		0.0419	0.0419		0.0419	0.0419	0.0000	1,929.8104	1,929.8104	0.6166		1,945.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2810**	**1.2952**	**15.0655**	**0.0201**		**0.0419**	**0.0419**		**0.0419**	**0.0419**	**0.0000**	**1,929.8104**	**1,929.8104**	**0.6166**		**1,945.2246**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0900e-003	0.0923	0.0288	3.8000e-004	0.0136	5.4000e-004	0.0141	3.9000e-003	5.2000e-004	4.4200e-003		40.2489	40.2489	1.1000e-004	6.0900e-003	42.0658
Worker	0.0338	0.0210	0.2890	8.9000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		89.6710	89.6710	2.4600e-003	2.5100e-003	90.4792
Total	**0.0359**	**0.1133**	**0.3178**	**1.2700e-003**	**0.1368**	**1.0500e-003**	**0.1378**	**0.0366**	**9.9000e-004**	**0.0376**		**129.9198**	**129.9198**	**2.5700e-003**	**8.6000e-003**	**132.5451**

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

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2058	12.4139	7.3625	0.0268		0.5001	0.5001		0.4601	0.4601		2,593.7854	2,593.7854	0.8389		2,614.7574
Total	**1.2058**	**12.4139**	**7.3625**	**0.0268**		**0.5001**	**0.5001**		**0.4601**	**0.4601**		**2,593.7854**	**2,593.7854**	**0.8389**		**2,614.7574**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0963	4.1790	1.3100	0.0177	0.6031	0.0247	0.6278	0.1736	0.0237	0.1973		1,870.0207	1,870.0207	5.0600e-003	0.2829	1,954.4586
Worker	0.5120	0.3432	4.3573	0.0127	1.6512	7.5000e-003	1.6587	0.4380	6.9000e-003	0.4449		1,284.1652	1,284.1652	0.0395	0.0378	1,296.4135
Total	**0.6083**	**4.5222**	**5.6673**	**0.0304**	**2.2542**	**0.0322**	**2.2865**	**0.6116**	**0.0306**	**0.6422**		**3,154.1859**	**3,154.1859**	**0.0446**	**0.3207**	**3,250.8721**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7854	2,593.7854	0.8389		2,614.7574
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7854**	**2,593.7854**	**0.8389**		**2,614.7574**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0963	4.1790	1.3100	0.0177	0.6031	0.0247	0.6278	0.1736	0.0237	0.1973		1,870.0207	1,870.0207	5.0600e-003	0.2829	1,954.4586
Worker	0.5120	0.3432	4.3573	0.0127	1.6512	7.5000e-003	1.6587	0.4380	6.9000e-003	0.4449		1,284.1652	1,284.1652	0.0395	0.0378	1,296.4135
Total	**0.6083**	**4.5222**	**5.6673**	**0.0304**	**2.2542**	**0.0322**	**2.2865**	**0.6116**	**0.0306**	**0.6422**		**3,154.1859**	**3,154.1859**	**0.0446**	**0.3207**	**3,250.8721**

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

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0945	4.1430	1.2940	0.0173	0.6030	0.0245	0.6275	0.1736	0.0235	0.1971		1,829.8186	1,829.8186	4.9300e-003	0.2768	1,912.4335
Worker	0.4801	0.3092	4.0940	0.0123	1.6512	7.1600e-003	1.6583	0.4380	6.5900e-003	0.4446		1,240.4862	1,240.4862	0.0360	0.0355	1,251.9598
Total	**0.5746**	**4.4522**	**5.3880**	**0.0296**	**2.2542**	**0.0317**	**2.2859**	**0.6116**	**0.0300**	**0.6416**		**3,070.3048**	**3,070.3048**	**0.0410**	**0.3123**	**3,164.3932**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0945	4.1430	1.2940	0.0173	0.6030	0.0245	0.6275	0.1736	0.0235	0.1971		1,829.8186	1,829.8186	4.9300e-003	0.2768	1,912.4335
Worker	0.4801	0.3092	4.0940	0.0123	1.6512	7.1600e-003	1.6583	0.4380	6.5900e-003	0.4446		1,240.4862	1,240.4862	0.0360	0.0355	1,251.9598
Total	**0.5746**	**4.4522**	**5.3880**	**0.0296**	**2.2542**	**0.0317**	**2.2859**	**0.6116**	**0.0300**	**0.6416**		**3,070.3048**	**3,070.3048**	**0.0410**	**0.3123**	**3,164.3932**

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

3.6 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0930	4.1067	1.2813	0.0170	0.6030	0.0242	0.6272	0.1736	0.0232	0.1968		1,791.0744	1,791.0744	4.8200e-003	0.2709	1,871.9297
Worker	0.4524	0.2814	3.8729	0.0119	1.6512	6.8000e-003	1.6580	0.4380	6.2600e-003	0.4442		1,201.5911	1,201.5911	0.0330	0.0336	1,212.4214
Total	**0.5454**	**4.3881**	**5.1542**	**0.0288**	**2.2542**	**0.0310**	**2.2852**	**0.6116**	**0.0294**	**0.6410**		**2,992.6655**	**2,992.6655**	**0.0378**	**0.3045**	**3,084.3512**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0930	4.1067	1.2813	0.0170	0.6030	0.0242	0.6272	0.1736	0.0232	0.1968		1,791.0744	1,791.0744	4.8200e-003	0.2709	1,871.9297
Worker	0.4524	0.2814	3.8729	0.0119	1.6512	6.8000e-003	1.6580	0.4380	6.2600e-003	0.4442		1,201.5911	1,201.5911	0.0330	0.0336	1,212.4214
Total	**0.5454**	**4.3881**	**5.1542**	**0.0288**	**2.2542**	**0.0310**	**2.2852**	**0.6116**	**0.0294**	**0.6410**		**2,992.6655**	**2,992.6655**	**0.0378**	**0.3045**	**3,084.3512**

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

3.6 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1477	11.3692	7.2456	0.0268		0.4652	0.4652		0.4280	0.4280		2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**1.1477**	**11.3692**	**7.2456**	**0.0268**		**0.4652**	**0.4652**		**0.4280**	**0.4280**		**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0917	4.0726	1.2709	0.0166	0.6030	0.0239	0.6269	0.1736	0.0229	0.1965		1,750.8337	1,750.8337	4.7200e-003	0.2648	1,829.8689
Worker	0.4268	0.2582	3.6831	0.0115	1.6512	6.4000e-003	1.6576	0.4380	5.8900e-003	0.4439		1,166.4493	1,166.4493	0.0304	0.0320	1,176.7394
Total	**0.5185**	**4.3308**	**4.9540**	**0.0281**	**2.2542**	**0.0303**	**2.2845**	**0.6116**	**0.0288**	**0.6404**		**2,917.2830**	**2,917.2830**	**0.0351**	**0.2968**	**3,006.6083**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3296	1.4283	12.0855	0.0268		0.0440	0.0440		0.0440	0.0440	0.0000	2,593.7289	2,593.7289	0.8389		2,614.7005
Total	**0.3296**	**1.4283**	**12.0855**	**0.0268**		**0.0440**	**0.0440**		**0.0440**	**0.0440**	**0.0000**	**2,593.7289**	**2,593.7289**	**0.8389**		**2,614.7005**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0917	4.0726	1.2709	0.0166	0.6030	0.0239	0.6269	0.1736	0.0229	0.1965		1,750.8337	1,750.8337	4.7200e-003	0.2648	1,829.8689
Worker	0.4268	0.2582	3.6831	0.0115	1.6512	6.4000e-003	1.6576	0.4380	5.8900e-003	0.4439		1,166.4493	1,166.4493	0.0304	0.0320	1,176.7394
Total	**0.5185**	**4.3308**	**4.9540**	**0.0281**	**2.2542**	**0.0303**	**2.2845**	**0.6116**	**0.0288**	**0.6404**		**2,917.2830**	**2,917.2830**	**0.0351**	**0.2968**	**3,006.6083**

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

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0956	0.0615	0.8147	2.4400e-003	0.3286	1.4200e-003	0.3300	0.0872	1.3100e-003	0.0885		246.8629	246.8629	7.1700e-003	7.0600e-003	249.1462
Total	**0.0956**	**0.0615**	**0.8147**	**2.4400e-003**	**0.3286**	**1.4200e-003**	**0.3300**	**0.0872**	**1.3100e-003**	**0.0885**		**246.8629**	**246.8629**	**7.1700e-003**	**7.0600e-003**	**249.1462**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0956	0.0615	0.8147	2.4400e-003	0.3286	1.4200e-003	0.3300	0.0872	1.3100e-003	0.0885		246.8629	246.8629	7.1700e-003	7.0600e-003	249.1462
Total	**0.0956**	**0.0615**	**0.8147**	**2.4400e-003**	**0.3286**	**1.4200e-003**	**0.3300**	**0.0872**	**1.3100e-003**	**0.0885**		**246.8629**	**246.8629**	**7.1700e-003**	**7.0600e-003**	**249.1462**

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

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0900	0.0560	0.7707	2.3700e-003	0.3286	1.3500e-003	0.3299	0.0872	1.2500e-003	0.0884		239.1226	239.1226	6.5700e-003	6.6800e-003	241.2779
Total	**0.0900**	**0.0560**	**0.7707**	**2.3700e-003**	**0.3286**	**1.3500e-003**	**0.3299**	**0.0872**	**1.2500e-003**	**0.0884**		**239.1226**	**239.1226**	**6.5700e-003**	**6.6800e-003**	**241.2779**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.5891					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.7600**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0900	0.0560	0.7707	2.3700e-003	0.3286	1.3500e-003	0.3299	0.0872	1.2500e-003	0.0884		239.1226	239.1226	6.5700e-003	6.6800e-003	241.2779
Total	**0.0900**	**0.0560**	**0.7707**	**2.3700e-003**	**0.3286**	**1.3500e-003**	**0.3299**	**0.0872**	**1.2500e-003**	**0.0884**		**239.1226**	**239.1226**	**6.5700e-003**	**6.6800e-003**	**241.2779**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	8.0687	11.9411	81.0338	0.1516	17.5443	0.1305	17.6748	4.6823	0.1224	4.8046		15,441.5812	15,441.5812	1.0730	0.8844	15,731.9632
Unmitigated	8.0687	11.9411	81.0338	0.1516	17.5443	0.1305	17.6748	4.6823	0.1224	4.8046		15,441.5812	15,441.5812	1.0730	0.8844	15,731.9632

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hospital	3,297.08	2,374.12	2082.22	7,534,349	7,534,349
User Defined Industrial	0.00	0.00	0.00		
Total	3,297.08	2,374.12	2,082.22	7,534,349	7,534,349

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hospital	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696
User Defined Industrial	0.474352	0.062718	0.210643	0.147759	0.030828	0.007876	0.016376	0.011784	0.000542	0.000449	0.031048	0.000930	0.004696

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
NaturalGas Unmitigated	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	63841	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.6885**	**6.2589**	**5.2575**	**0.0376**		**0.4757**	**0.4757**		**0.4757**	**0.4757**		**7,510.7043**	**7,510.7043**	**0.1440**	**0.1377**	**7,555.3366**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hospital	63.841	0.6885	6.2589	5.2575	0.0376		0.4757	0.4757		0.4757	0.4757		7,510.7043	7,510.7043	0.1440	0.1377	7,555.3366
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.6885**	**6.2589**	**5.2575**	**0.0376**		**0.4757**	**0.4757**		**0.4757**	**0.4757**		**7,510.7043**	**7,510.7043**	**0.1440**	**0.1377**	**7,555.3366**

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Unmitigated	6.8118	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Total	**6.8118**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0611**	**0.0611**	**1.6000e-004**		**0.0650**

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

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.0690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6200e-003	2.6000e-004	0.0284	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		0.0611	0.0611	1.6000e-004		0.0650
Total	**6.8118**	**2.6000e-004**	**0.0284**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**0.0611**	**0.0611**	**1.6000e-004**		**0.0650**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	2	1	12	2682	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel	8.8027	39.3650	22.4450	0.0423		1.2949	1.2949		1.2949	1.2949		4,503.1538	4,503.1538	0.6313		4,518.9373
Total	**8.8027**	**39.3650**	**22.4450**	**0.0423**		**1.2949**	**1.2949**		**1.2949**	**1.2949**		**4,503.1538**	**4,503.1538**	**0.6313**		**4,518.9373**

CalEEMod Version: CalEEMod.2020.4.0

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

Kaiser Bed Tower Project - Parking Garage

Placer-Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	260.96	1000sqft	2.85	260,959.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 260,897 SF parking garage.

Construction Phase - Project construction would begin January 2023 with buildout in June 2024.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Trips and VMT - Default trips assumed.

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

Demolition -

Grading - Cut: 4,015 CY, Fill: 4,116 CY

Architectural Coating -

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 equipment.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	0	141800
tblAreaCoating	Area_Nonresidential_Interior	0	425400
tblAreaCoating	Area_Parking	15658	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	298.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	3.00	37.00

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

tblEnergyUse	T24E	3.50	3.92
tblFleetMix	HHD	0.01	0.00
tblFleetMix	LDA	0.47	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.8760e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	4.6960e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	5.4200e-004	0.00
tblFleetMix	SBUS	9.3000e-004	0.00
tblFleetMix	UBUS	4.4900e-004	0.00
tblGrading	MaterialImported	0.00	101.00
tblLandUse	LandUseSquareFeet	260,960.00	260,959.00
tblLandUse	LotAcreage	5.99	2.85
tblTripsAndVMT	VendorTripNumber	43.00	44.00
tblTripsAndVMT	WorkerTripNumber	110.00	112.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2339	1.9561	1.9003	4.5500e-003	0.2771	0.0778	0.3549	0.1005	0.0737	0.1742	0.0000	397.6326	397.6326	0.0612	0.0131	403.0725
2024	0.1179	0.9235	1.0522	2.5200e-003	0.0718	0.0341	0.1059	0.0195	0.0326	0.0522	0.0000	220.0563	220.0563	0.0251	8.8900e-003	223.3320
Maximum	**0.2339**	**1.9561**	**1.9003**	**4.5500e-003**	**0.2771**	**0.0778**	**0.3549**	**0.1005**	**0.0737**	**0.1742**	**0.0000**	**397.6326**	**397.6326**	**0.0612**	**0.0131**	**403.0725**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1279	0.7044	2.0934	4.5500e-003	0.2771	0.0202	0.2973	0.1005	0.0201	0.1206	0.0000	397.6323	397.6323	0.0612	0.0131	403.0722
2024	0.0753	0.4424	1.1344	2.5200e-003	0.0718	0.0114	0.0832	0.0195	0.0113	0.0309	0.0000	220.0561	220.0561	0.0251	8.8900e-003	223.3318
Maximum	**0.1279**	**0.7044**	**2.0934**	**4.5500e-003**	**0.2771**	**0.0202**	**0.2973**	**0.1005**	**0.0201**	**0.1206**	**0.0000**	**397.6323**	**397.6323**	**0.0612**	**0.0131**	**403.0722**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**42.21**	**60.17**	**-9.32**	**0.00**	**0.00**	**71.76**	**17.43**	**0.00**	**70.41**	**33.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1522	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	141.4892	141.4892	0.0229	2.7700e-003	142.8883
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1522**	**2.0000e-005**	**2.3900e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**141.4938**	**141.4938**	**0.0229**	**2.7700e-003**	**142.8932**

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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1522	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	141.4892	141.4892	0.0229	2.7700e-003	142.8883
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1522**	**2.0000e-005**	**2.3900e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**141.4938**	**141.4938**	**0.0229**	**2.7700e-003**	**142.8932**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/26/2023	3/17/2023	5	37	
2	Grading	Grading	3/6/2023	4/28/2023	5	40	
3	Building Construction	Building Construction	5/1/2023	6/19/2024	5	298	

Acres of Grading (Site Preparation Phase): 55.5

Acres of Grading (Grading Phase): 40

Acres of Paving: 2.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Plate Compactors	3	8.00	8	0.43
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

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Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	112.00	44.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0294	0.0000	0.0294	3.1800e-003	0.0000	3.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0263	0.2781	0.1927	4.8000e-004		0.0106	0.0106		9.7600e-003	9.7600e-003	0.0000	41.5931	41.5931	0.0131	0.0000	41.9199
Total	**0.0263**	**0.2781**	**0.1927**	**4.8000e-004**	**0.0294**	**0.0106**	**0.0400**	**3.1800e-003**	**9.7600e-003**	**0.0129**	**0.0000**	**41.5931**	**41.5931**	**0.0131**	**0.0000**	**41.9199**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	4.8000e-004	6.3000e-003	2.0000e-005	2.1800e-003	1.0000e-005	2.1900e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.6996	1.6996	5.0000e-005	5.0000e-005	1.7149
Total	**7.2000e-004**	**4.8000e-004**	**6.3000e-003**	**2.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1900e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.6996**	**1.6996**	**5.0000e-005**	**5.0000e-005**	**1.7149**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0294	0.0000	0.0294	3.1800e-003	0.0000	3.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7900e-003	0.0381	0.2311	4.8000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	41.5931	41.5931	0.0131	0.0000	41.9199
Total	**7.7900e-003**	**0.0381**	**0.2311**	**4.8000e-004**	**0.0294**	**1.2800e-003**	**0.0307**	**3.1800e-003**	**1.2800e-003**	**4.4600e-003**	**0.0000**	**41.5931**	**41.5931**	**0.0131**	**0.0000**	**41.9199**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	4.8000e-004	6.3000e-003	2.0000e-005	2.1800e-003	1.0000e-005	2.1900e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.6996	1.6996	5.0000e-005	5.0000e-005	1.7149
Total	**7.2000e-004**	**4.8000e-004**	**6.3000e-003**	**2.0000e-005**	**2.1800e-003**	**1.0000e-005**	**2.1900e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.6996**	**1.6996**	**5.0000e-005**	**5.0000e-005**	**1.7149**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1417	0.0000	0.1417	0.0685	0.0000	0.0685	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.2894	0.1741	4.1000e-004		0.0121	0.0121		0.0111	0.0111	0.0000	36.2078	36.2078	0.0117	0.0000	36.5006
Total	**0.0267**	**0.2894**	**0.1741**	**4.1000e-004**	**0.1417**	**0.0121**	**0.1538**	**0.0685**	**0.0111**	**0.0796**	**0.0000**	**36.2078**	**36.2078**	**0.0117**	**0.0000**	**36.5006**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.9000e-004	2.0000e-004	0.0000	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3803	0.3803	0.0000	6.0000e-005	0.3981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.5000e-004	4.5400e-003	1.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2249	1.2249	4.0000e-005	3.0000e-005	1.2360
Total	**5.4000e-004**	**1.2400e-003**	**4.7400e-003**	**1.0000e-005**	**1.6800e-003**	**2.0000e-005**	**1.7000e-003**	**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**0.0000**	**1.6052**	**1.6052**	**4.0000e-005**	**9.0000e-005**	**1.6341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1417	0.0000	0.1417	0.0685	0.0000	0.0685	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0400e-003	0.0219	0.2181	4.1000e-004		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	36.2078	36.2078	0.0117	0.0000	36.5005
Total	**5.0400e-003**	**0.0219**	**0.2181**	**4.1000e-004**	**0.1417**	**6.7000e-004**	**0.1423**	**0.0685**	**6.7000e-004**	**0.0692**	**0.0000**	**36.2078**	**36.2078**	**0.0117**	**0.0000**	**36.5005**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.9000e-004	2.0000e-004	0.0000	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3803	0.3803	0.0000	6.0000e-005	0.3981
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.5000e-004	4.5400e-003	1.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2249	1.2249	4.0000e-005	3.0000e-005	1.2360
Total	**5.4000e-004**	**1.2400e-003**	**4.7400e-003**	**1.0000e-005**	**1.6800e-003**	**2.0000e-005**	**1.7000e-003**	**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**0.0000**	**1.6052**	**1.6052**	**4.0000e-005**	**9.0000e-005**	**1.6341**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1499	1.1921	1.2438	2.1900e-003		0.0537	0.0537		0.0515	0.0515	0.0000	181.7393	181.7393	0.0344	0.0000	182.5985
Total	**0.1499**	**1.1921**	**1.2438**	**2.1900e-003**		**0.0537**	**0.0537**		**0.0515**	**0.0515**	**0.0000**	**181.7393**	**181.7393**	**0.0344**	**0.0000**	**182.5985**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4200e-003	0.1778	0.0564	7.8000e-004	0.0252	1.0700e-003	0.0262	7.2800e-003	1.0200e-003	8.3000e-003	0.0000	74.7676	74.7676	2.1000e-004	0.0113	78.1420
Worker	0.0253	0.0170	0.2224	6.5000e-004	0.0770	3.8000e-004	0.0773	0.0205	3.5000e-004	0.0208	0.0000	60.0200	60.0200	1.7700e-003	1.6700e-003	60.5625
Total	**0.0297**	**0.1948**	**0.2787**	**1.4300e-003**	**0.1021**	**1.4500e-003**	**0.1036**	**0.0278**	**1.3700e-003**	**0.0291**	**0.0000**	**134.7876**	**134.7876**	**1.9800e-003**	**0.0130**	**138.7044**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0841	0.4480	1.3544	2.1900e-003		0.0168	0.0168		0.0168	0.0168	0.0000	181.7391	181.7391	0.0344	0.0000	182.5983
Total	**0.0841**	**0.4480**	**1.3544**	**2.1900e-003**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**181.7391**	**181.7391**	**0.0344**	**0.0000**	**182.5983**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4200e-003	0.1778	0.0564	7.8000e-004	0.0252	1.0700e-003	0.0262	7.2800e-003	1.0200e-003	8.3000e-003	0.0000	74.7676	74.7676	2.1000e-004	0.0113	78.1420
Worker	0.0253	0.0170	0.2224	6.5000e-004	0.0770	3.8000e-004	0.0773	0.0205	3.5000e-004	0.0208	0.0000	60.0200	60.0200	1.7700e-003	1.6700e-003	60.5625
Total	**0.0297**	**0.1948**	**0.2787**	**1.4300e-003**	**0.1021**	**1.4500e-003**	**0.1036**	**0.0278**	**1.3700e-003**	**0.0291**	**0.0000**	**134.7876**	**134.7876**	**1.9800e-003**	**0.0130**	**138.7044**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0982	0.7886	0.8672	1.5400e-003		0.0331	0.0331		0.0317	0.0317	0.0000	127.7441	127.7441	0.0238	0.0000	128.3389
Total	**0.0982**	**0.7886**	**0.8672**	**1.5400e-003**		**0.0331**	**0.0331**		**0.0317**	**0.0317**	**0.0000**	**127.7441**	**127.7441**	**0.0238**	**0.0000**	**128.3389**

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0500e-003	0.1242	0.0391	5.4000e-004	0.0177	7.5000e-004	0.0184	5.1200e-003	7.2000e-004	5.8300e-003	0.0000	51.5126	51.5126	1.5000e-004	7.7900e-003	53.8380
Worker	0.0166	0.0107	0.1460	4.4000e-004	0.0541	2.6000e-004	0.0544	0.0144	2.4000e-004	0.0146	0.0000	40.7996	40.7996	1.1300e-003	1.1000e-003	41.1551
Total	**0.0196**	**0.1348**	**0.1851**	**9.8000e-004**	**0.0718**	**1.0100e-003**	**0.0728**	**0.0195**	**9.6000e-004**	**0.0205**	**0.0000**	**92.3122**	**92.3122**	**1.2800e-003**	**8.8900e-003**	**94.9931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0557	0.3076	0.9493	1.5400e-003		0.0104	0.0104		0.0104	0.0104	0.0000	127.7439	127.7439	0.0238	0.0000	128.3387
Total	**0.0557**	**0.3076**	**0.9493**	**1.5400e-003**		**0.0104**	**0.0104**		**0.0104**	**0.0104**	**0.0000**	**127.7439**	**127.7439**	**0.0238**	**0.0000**	**128.3387**

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0500e-003	0.1242	0.0391	5.4000e-004	0.0177	7.5000e-004	0.0184	5.1200e-003	7.2000e-004	5.8300e-003	0.0000	51.5126	51.5126	1.5000e-004	7.7900e-003	53.8380
Worker	0.0166	0.0107	0.1460	4.4000e-004	0.0541	2.6000e-004	0.0544	0.0144	2.4000e-004	0.0146	0.0000	40.7996	40.7996	1.1300e-003	1.1000e-003	41.1551
Total	**0.0196**	**0.1348**	**0.1851**	**9.8000e-004**	**0.0718**	**1.0100e-003**	**0.0728**	**0.0195**	**9.6000e-004**	**0.0205**	**0.0000**	**92.3122**	**92.3122**	**1.2800e-003**	**8.8900e-003**	**94.9931**

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.4892	141.4892	0.0229	2.7700e-003	142.8883
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.4892	141.4892	0.0229	2.7700e-003	142.8883
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.52922e+006	141.4892	0.0229	2.7700e-003	142.8883
Total		**141.4892**	**0.0229**	**2.7700e-003**	**142.8883**

CalEEMod Version: CalEEMod.2020.4.0

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

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.52922e+006	141.4892	0.0229	2.7700e-003	142.8883
Total		**141.4892**	**0.0229**	**2.7700e-003**	**142.8883**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1522	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003
Unmitigated	0.1522	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1351					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0169					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003
Total	**0.1522**	**2.0000e-005**	**2.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.6600e-003**	**4.6600e-003**	**1.0000e-005**	**0.0000**	**4.9700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1351					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0169					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.6600e-003	4.6600e-003	1.0000e-005	0.0000	4.9700e-003
Total	**0.1522**	**2.0000e-005**	**2.3900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.6600e-003**	**4.6600e-003**	**1.0000e-005**	**0.0000**	**4.9700e-003**

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

Kaiser Bed Tower Project - Parking Garage

Placer-Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	260.96	1000sqft	2.85	260,959.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 260,897 SF parking garage.

Construction Phase - Project construction would begin January 2023 with buildout in June 2024.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Trips and VMT - Default trips assumed.

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Demolition -

Grading - Cut: 4,015 CY, Fill: 4,116 CY

Architectural Coating -

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 equipment.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	0	141800
tblAreaCoating	Area_Nonresidential_Interior	0	425400
tblAreaCoating	Area_Parking	15658	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	298.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	3.00	37.00

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tblEnergyUse	T24E	3.50	3.92
tblFleetMix	HHD	0.01	0.00
tblFleetMix	LDA	0.47	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.8760e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	4.6960e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	5.4200e-004	0.00
tblFleetMix	SBUS	9.3000e-004	0.00
tblFleetMix	UBUS	4.4900e-004	0.00
tblGrading	MaterialImported	0.00	101.00
tblLandUse	LandUseSquareFeet	260,960.00	260,959.00
tblLandUse	LotAcreage	5.99	2.85
tblTripsAndVMT	VendorTripNumber	43.00	44.00
tblTripsAndVMT	WorkerTripNumber	110.00	112.00

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.8301	29.5821	19.7622	0.0486	8.8847	1.1769	10.0616	3.6526	1.0851	4.7377	0.0000	4,678.0966	4,678.0966	1.4289	0.1617	4,716.0946
2024	1.9547	14.8983	17.3810	0.0416	1.2182	0.5544	1.7726	0.3299	0.5308	0.8606	0.0000	4,005.8507	4,005.8507	0.4478	0.1577	4,064.0264
Maximum	**2.8301**	**29.5821**	**19.7622**	**0.0486**	**8.8847**	**1.1769**	**10.0616**	**3.6526**	**1.0851**	**4.7377**	**0.0000**	**4,678.0966**	**4,678.0966**	**1.4289**	**0.1617**	**4,716.0946**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.3423	7.2257	24.0430	0.0486	8.8847	0.2084	8.9891	3.6526	0.2075	3.7569	0.0000	4,678.0966	4,678.0966	1.4289	0.1617	4,716.0946
2024	1.2632	7.0756	18.7169	0.0416	1.2182	0.1852	1.4033	0.3299	0.1843	0.5142	0.0000	4,005.8507	4,005.8507	0.4478	0.1577	4,064.0264
Maximum	**1.3423**	**7.2257**	**24.0430**	**0.0486**	**8.8847**	**0.2084**	**8.9891**	**3.6526**	**0.2075**	**3.7569**	**0.0000**	**4,678.0966**	**4,678.0966**	**1.4289**	**0.1617**	**4,716.0946**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**45.55**	**67.85**	**-15.12**	**0.00**	**0.00**	**77.27**	**12.18**	**0.00**	**75.75**	**23.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**	**0.0000**	**0.0608**

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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**	**0.0000**	**0.0608**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/26/2023	3/17/2023	5	37	
2	Grading	Grading	3/6/2023	4/28/2023	5	40	
3	Building Construction	Building Construction	5/1/2023	6/19/2024	5	298	

Acres of Grading (Site Preparation Phase): 55.5

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Acres of Grading (Grading Phase): 40

Acres of Paving: 2.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Plate Compactors	3	8.00	8	0.43
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	112.00	44.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4230	15.0341	10.4135	0.0260		0.5712	0.5712		0.5278	0.5278		2,478.3016	2,478.3016	0.7788		2,497.7720
Total	**1.4230**	**15.0341**	**10.4135**	**0.0260**	**1.5908**	**0.5712**	**2.1619**	**0.1718**	**0.5278**	**0.6996**		**2,478.3016**	**2,478.3016**	**0.7788**		**2,497.7720**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0440**	**0.0230**	**0.3812**	**1.0900e-003**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**109.9393**	**109.9393**	**2.7500e-003**	**2.6100e-003**	**110.7853**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	0.4211	2.0573	12.4909	0.0260		0.0694	0.0694		0.0694	0.0694	0.0000	2,478.3016	2,478.3016	0.7788		2,497.7720
Total	**0.4211**	**2.0573**	**12.4909**	**0.0260**	**1.5908**	**0.0694**	**1.6602**	**0.1718**	**0.0694**	**0.2412**	**0.0000**	**2,478.3016**	**2,478.3016**	**0.7788**		**2,497.7720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0440	0.0230	0.3812	1.0900e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		109.9393	109.9393	2.7500e-003	2.6100e-003	110.7853
Total	**0.0440**	**0.0230**	**0.3812**	**1.0900e-003**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**109.9393**	**109.9393**	**2.7500e-003**	**2.6100e-003**	**110.7853**

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0829	0.0000	7.0829	3.4248	0.0000	3.4248			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0829**	**0.6044**	**7.6872**	**3.4248**	**0.5560**	**3.9808**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.2000e-004	0.0421	9.7300e-003	2.0000e-004	5.6900e-003	3.9000e-004	6.0800e-003	1.5600e-003	3.7000e-004	1.9300e-003		20.9482	20.9482	4.0000e-005	3.2900e-003	21.9302
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0293	0.0153	0.2541	7.3000e-004	0.0822	3.9000e-004	0.0825	0.0218	3.6000e-004	0.0222		73.2929	73.2929	1.8400e-003	1.7400e-003	73.8568
Total	**0.0302**	**0.0574**	**0.2638**	**9.3000e-004**	**0.0878**	**7.8000e-004**	**0.0886**	**0.0234**	**7.3000e-004**	**0.0241**		**94.2411**	**94.2411**	**1.8800e-003**	**5.0300e-003**	**95.7870**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0829	0.0000	7.0829	3.4248	0.0000	3.4248			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**7.0829**	**0.0336**	**7.1165**	**3.4248**	**0.0336**	**3.4584**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.2000e-004	0.0421	9.7300e-003	2.0000e-004	5.6900e-003	3.9000e-004	6.0800e-003	1.5600e-003	3.7000e-004	1.9300e-003		20.9482	20.9482	4.0000e-005	3.2900e-003	21.9302
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0293	0.0153	0.2541	7.3000e-004	0.0822	3.9000e-004	0.0825	0.0218	3.6000e-004	0.0222		73.2929	73.2929	1.8400e-003	1.7400e-003	73.8568
Total	**0.0302**	**0.0574**	**0.2638**	**9.3000e-004**	**0.0878**	**7.8000e-004**	**0.0886**	**0.0234**	**7.3000e-004**	**0.0241**		**94.2411**	**94.2411**	**1.8800e-003**	**5.0300e-003**	**95.7870**

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0524	1.9340	0.6339	8.9100e-003	0.2982	0.0122	0.3103	0.0858	0.0117	0.0975		941.0402	941.0402	2.7600e-003	0.1422	983.4914
Worker	0.3285	0.1716	2.8460	8.1200e-003	0.9201	4.4000e-003	0.9245	0.2440	4.0500e-003	0.2481		820.8799	820.8799	0.0206	0.0195	827.1966
Total	**0.3808**	**2.1056**	**3.4799**	**0.0170**	**1.2182**	**0.0166**	**1.2348**	**0.3299**	**0.0157**	**0.3456**		**1,761.9201**	**1,761.9201**	**0.0233**	**0.1617**	**1,810.6881**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9615	5.1202	15.4788	0.0250		0.1918	0.1918		0.1918	0.1918	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**0.9615**	**5.1202**	**15.4788**	**0.0250**		**0.1918**	**0.1918**		**0.1918**	**0.1918**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0524	1.9340	0.6339	8.9100e-003	0.2982	0.0122	0.3103	0.0858	0.0117	0.0975		941.0402	941.0402	2.7600e-003	0.1422	983.4914
Worker	0.3285	0.1716	2.8460	8.1200e-003	0.9201	4.4000e-003	0.9245	0.2440	4.0500e-003	0.2481		820.8799	820.8799	0.0206	0.0195	827.1966
Total	**0.3808**	**2.1056**	**3.4799**	**0.0170**	**1.2182**	**0.0166**	**1.2348**	**0.3299**	**0.0157**	**0.3456**		**1,761.9201**	**1,761.9201**	**0.0233**	**0.1617**	**1,810.6881**

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

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**		**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0513	1.9214	0.6249	8.7300e-003	0.2981	0.0122	0.3103	0.0858	0.0117	0.0975		922.4283	922.4283	2.6700e-003	0.1395	964.0522
Worker	0.3062	0.1535	2.6559	7.8500e-003	0.9201	4.1800e-003	0.9242	0.2440	3.8500e-003	0.2479		793.7682	793.7682	0.0186	0.0182	799.6588
Total	**0.3576**	**2.0748**	**3.2809**	**0.0166**	**1.2182**	**0.0164**	**1.2345**	**0.3299**	**0.0155**	**0.3454**		**1,716.1966**	**1,716.1966**	**0.0213**	**0.1577**	**1,763.7110**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9057	5.0008	15.4361	0.0250		0.1688	0.1688		0.1688	0.1688	0.0000	2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**0.9057**	**5.0008**	**15.4361**	**0.0250**		**0.1688**	**0.1688**		**0.1688**	**0.1688**	**0.0000**	**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0513	1.9214	0.6249	8.7300e-003	0.2981	0.0122	0.3103	0.0858	0.0117	0.0975		922.4283	922.4283	2.6700e-003	0.1395	964.0522
Worker	0.3062	0.1535	2.6559	7.8500e-003	0.9201	4.1800e-003	0.9242	0.2440	3.8500e-003	0.2479		793.7682	793.7682	0.0186	0.0182	799.6588
Total	**0.3576**	**2.0748**	**3.2809**	**0.0166**	**1.2182**	**0.0164**	**1.2345**	**0.3299**	**0.0155**	**0.3454**		**1,716.1966**	**1,716.1966**	**0.0213**	**0.1577**	**1,763.7110**

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Unmitigated	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0924					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4500e-003	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**		**0.0608**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0924					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4500e-003	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**		**0.0608**

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

Kaiser Bed Tower Project - Parking Garage

Placer-Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	260.96	1000sqft	2.85	260,959.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	74
Climate Zone	2			**Operational Year**	2027
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Kaiser Bed Tower Project. Placer County.

Land Use - Project includes 260,897 SF parking garage.

Construction Phase - Project construction would begin January 2023 with buildout in June 2024.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Off-road Equipment - Default equipment assumed.

Off-road Equipment - Updated per applicant.

Trips and VMT - Default trips assumed.

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Demolition -

Grading - Cut: 4,015 CY, Fill: 4,116 CY

Architectural Coating -

Construction Off-road Equipment Mitigation - Water twice daily. Use of Tier 4 equipment.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	0	141800
tblAreaCoating	Area_Nonresidential_Interior	0	425400
tblAreaCoating	Area_Parking	15658	15654
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	298.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	3.00	37.00

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tblEnergyUse	T24E	3.50	3.92
tblFleetMix	HHD	0.01	0.00
tblFleetMix	LDA	0.47	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	7.8760e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	4.6960e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	5.4200e-004	0.00
tblFleetMix	SBUS	9.3000e-004	0.00
tblFleetMix	UBUS	4.4900e-004	0.00
tblGrading	MaterialImported	0.00	101.00
tblLandUse	LandUseSquareFeet	260,960.00	260,959.00
tblLandUse	LotAcreage	5.99	2.85
tblTripsAndVMT	VendorTripNumber	43.00	44.00
tblTripsAndVMT	WorkerTripNumber	110.00	112.00

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.8250	29.5947	19.7065	0.0484	8.8847	1.1769	10.0616	3.6526	1.0851	4.7377	0.0000	4,660.0355	4,660.0355	1.4297	0.1652	4,698.2591
2024	1.9300	15.0807	17.1757	0.0409	1.2182	0.5545	1.7727	0.3299	0.5308	0.8607	0.0000	3,929.7134	3,929.7134	0.4510	0.1609	3,988.9442
Maximum	**2.8250**	**29.5947**	**19.7065**	**0.0484**	**8.8847**	**1.1769**	**10.0616**	**3.6526**	**1.0851**	**4.7377**	**0.0000**	**4,660.0355**	**4,660.0355**	**1.4297**	**0.1652**	**4,698.2591**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.3158	7.4134	23.9872	0.0484	8.8847	0.2085	8.9891	3.6526	0.2076	3.7569	0.0000	4,660.0355	4,660.0355	1.4297	0.1652	4,698.2591
2024	1.2386	7.2580	18.5116	0.0409	1.2182	0.1852	1.4034	0.3299	0.1843	0.5142	0.0000	3,929.7134	3,929.7134	0.4510	0.1609	3,988.9442
Maximum	**1.3158**	**7.4134**	**23.9872**	**0.0484**	**8.8847**	**0.2085**	**8.9891**	**3.6526**	**0.2076**	**3.7569**	**0.0000**	**4,660.0355**	**4,660.0355**	**1.4297**	**0.1652**	**4,698.2591**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	46.28	67.16	-15.23	0.00	0.00	77.26	12.18	0.00	75.75	23.71	0.00	0.00	0.00	0.00	0.00	0.00

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**	**0.0000**	**0.0608**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**	**0.0000**	**0.0608**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/26/2023	3/17/2023	5	37	
2	Grading	Grading	3/6/2023	4/28/2023	5	40	
3	Building Construction	Building Construction	5/1/2023	6/19/2024	5	298	

Acres of Grading (Site Preparation Phase): 55.5

Acres of Grading (Grading Phase): 40

Acres of Paving: 2.85

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Plate Compactors	3	8.00	8	0.43
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	13.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	112.00	44.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.4230	15.0341	10.4135	0.0260		0.5712	0.5712		0.5278	0.5278		2,478.3016	2,478.3016	0.7788		2,497.7720
Total	**1.4230**	**15.0341**	**10.4135**	**0.0260**	**1.5908**	**0.5712**	**2.1619**	**0.1718**	**0.5278**	**0.6996**		**2,478.3016**	**2,478.3016**	**0.7788**		**2,497.7720**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0409**	**0.0287**	**0.3476**	**9.8000e-004**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**99.0843**	**99.0843**	**3.2400e-003**	**3.0200e-003**	**100.0648**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	0.4211	2.0573	12.4909	0.0260		0.0694	0.0694		0.0694	0.0694	0.0000	2,478.3016	2,478.3016	0.7788		2,497.7720
Total	**0.4211**	**2.0573**	**12.4909**	**0.0260**	**1.5908**	**0.0694**	**1.6602**	**0.1718**	**0.0694**	**0.2412**	**0.0000**	**2,478.3016**	**2,478.3016**	**0.7788**		**2,497.7720**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0409	0.0287	0.3476	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		99.0843	99.0843	3.2400e-003	3.0200e-003	100.0648
Total	**0.0409**	**0.0287**	**0.3476**	**9.8000e-004**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**99.0843**	**99.0843**	**3.2400e-003**	**3.0200e-003**	**100.0648**

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0829	0.0000	7.0829	3.4248	0.0000	3.4248			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0829**	**0.6044**	**7.6872**	**3.4248**	**0.5560**	**3.9808**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-004	0.0452	9.9300e-003	2.0000e-004	5.6900e-003	3.9000e-004	6.0800e-003	1.5600e-003	3.7000e-004	1.9300e-003		20.9787	20.9787	4.0000e-005	3.3000e-003	21.9621
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0191	0.2317	6.5000e-004	0.0822	3.9000e-004	0.0825	0.0218	3.6000e-004	0.0222		66.0562	66.0562	2.1600e-003	2.0100e-003	66.7099
Total	**0.0281**	**0.0643**	**0.2417**	**8.5000e-004**	**0.0878**	**7.8000e-004**	**0.0886**	**0.0234**	**7.3000e-004**	**0.0241**		**87.0349**	**87.0349**	**2.2000e-003**	**5.3100e-003**	**88.6720**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0829	0.0000	7.0829	3.4248	0.0000	3.4248			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**7.0829**	**0.0336**	**7.1165**	**3.4248**	**0.0336**	**3.4584**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-004	0.0452	9.9300e-003	2.0000e-004	5.6900e-003	3.9000e-004	6.0800e-003	1.5600e-003	3.7000e-004	1.9300e-003		20.9787	20.9787	4.0000e-005	3.3000e-003	21.9621
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0273	0.0191	0.2317	6.5000e-004	0.0822	3.9000e-004	0.0825	0.0218	3.6000e-004	0.0222		66.0562	66.0562	2.1600e-003	2.0100e-003	66.7099
Total	**0.0281**	**0.0643**	**0.2417**	**8.5000e-004**	**0.0878**	**7.8000e-004**	**0.0886**	**0.0234**	**7.3000e-004**	**0.0241**		**87.0349**	**87.0349**	**2.2000e-003**	**5.3100e-003**	**88.6720**

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

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0486	2.0792	0.6571	8.9300e-003	0.2982	0.0123	0.3104	0.0858	0.0117	0.0976		943.1149	943.1149	2.5900e-003	0.1427	985.6900
Worker	0.3056	0.2140	2.5953	7.3200e-003	0.9201	4.4000e-003	0.9245	0.2440	4.0500e-003	0.2481		739.8291	739.8291	0.0242	0.0225	747.1506
Total	**0.3542**	**2.2933**	**3.2523**	**0.0163**	**1.2182**	**0.0167**	**1.2348**	**0.3299**	**0.0158**	**0.3457**		**1,682.9439**	**1,682.9439**	**0.0268**	**0.1652**	**1,732.8406**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9615	5.1202	15.4788	0.0250		0.1918	0.1918		0.1918	0.1918	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**0.9615**	**5.1202**	**15.4788**	**0.0250**		**0.1918**	**0.1918**		**0.1918**	**0.1918**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0486	2.0792	0.6571	8.9300e-003	0.2982	0.0123	0.3104	0.0858	0.0117	0.0976		943.1149	943.1149	2.5900e-003	0.1427	985.6900
Worker	0.3056	0.2140	2.5953	7.3200e-003	0.9201	4.4000e-003	0.9245	0.2440	4.0500e-003	0.2481		739.8291	739.8291	0.0242	0.0225	747.1506
Total	**0.3542**	**2.2933**	**3.2523**	**0.0163**	**1.2182**	**0.0167**	**1.2348**	**0.3299**	**0.0158**	**0.3457**		**1,682.9439**	**1,682.9439**	**0.0268**	**0.1652**	**1,732.8406**

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

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**		**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0476	2.0660	0.6477	8.7500e-003	0.2981	0.0122	0.3104	0.0858	0.0117	0.0975		924.5046	924.5046	2.5000e-003	0.1399	966.2492
Worker	0.2853	0.1912	2.4279	7.0800e-003	0.9201	4.1800e-003	0.9242	0.2440	3.8500e-003	0.2479		715.5548	715.5548	0.0220	0.0211	722.3796
Total	**0.3329**	**2.2573**	**3.0756**	**0.0158**	**1.2182**	**0.0164**	**1.2346**	**0.3299**	**0.0156**	**0.3454**		**1,640.0593**	**1,640.0593**	**0.0245**	**0.1609**	**1,688.6288**

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9057	5.0008	15.4361	0.0250		0.1688	0.1688		0.1688	0.1688	0.0000	2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**0.9057**	**5.0008**	**15.4361**	**0.0250**		**0.1688**	**0.1688**		**0.1688**	**0.1688**	**0.0000**	**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0476	2.0660	0.6477	8.7500e-003	0.2981	0.0122	0.3104	0.0858	0.0117	0.0975		924.5046	924.5046	2.5000e-003	0.1399	966.2492
Worker	0.2853	0.1912	2.4279	7.0800e-003	0.9201	4.1800e-003	0.9242	0.2440	3.8500e-003	0.2479		715.5548	715.5548	0.0220	0.0211	722.3796
Total	**0.3329**	**2.2573**	**3.0756**	**0.0158**	**1.2182**	**0.0164**	**1.2346**	**0.3299**	**0.0156**	**0.3454**		**1,640.0593**	**1,640.0593**	**0.0245**	**0.1609**	**1,688.6288**

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Unmitigated	0.8350	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0924					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4500e-003	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**		**0.0608**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7401					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0924					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4500e-003	2.4000e-004	0.0266	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0571	0.0571	1.5000e-004		0.0608
Total	**0.8350**	**2.4000e-004**	**0.0266**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0571**	**0.0571**	**1.5000e-004**		**0.0608**

Appendix C-2 - Regulatory Setting

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits.

State

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions

CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (40 CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per year threshold are required to have their GHG emission report verified by a CARB-accredited third-party verified.

EO B-18-12

EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

SB 605 and SB 1383

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state; and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for methane and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its *Short-Lived Climate Pollutant Reduction Strategy* (SLCP Reduction Strategy) in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

SB 1078

SB 1078 (Sher) (September 2002) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and S-21-09).

SB 1368

SB 1368 (September 2006) required the California Energy Commission (CEC) to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

AB 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

EO S-14-08

EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The Natural Resources Agency, through collaboration with the CEC and California Department of Fish and Wildlife was directed to lead this effort.

EO S-21-09 and SB X1-2

EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1 2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

Advanced Clean Trucks Regulation

EO B-16-12

EO B-16-12 (March 2012) required that state entities under the Governor's direction and control support and facilitate the rapid commercialization of zero-emission vehicles. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025.

On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

EO N-79-20

Governor Newsom's EO N-79-20 (September 2020) sets a course to end the sale of new internal combustion passenger vehicles by 2035. The primary mechanism to facilitate achievement of this executive specific target is the ACC II program under development that is discussed above. The EO also sets zero-emission vehicle penetration targets for medium- and heavy-duty vehicles, drayage trucks, as well as off-road vehicles and equipment.

AB 1236

AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of electric vehicle charging stations is a matter of statewide concern. The bill required electric vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations, as specified. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt this ordinance by September 30, 2017.

Other State Actions

SB 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The Natural Resources Agency adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to

implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018b).

Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions

On December 9, 2021, CARB approved proposed amendments to the SORE Regulations, which would require most newly manufactured small off-road engines (SORE), such as those found in leaf blowers, lawn mowers and other equipment, be zero emission starting in 2024. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.

Appendix D

General Plan Consistency Memorandum
(Transportation)

FEHR PEERS

Memorandum

Date: April 20, 2022

To: Marc Stout, City of Roseville

CC: Christine Kronenberg, Dudek
Skyler Denniston & Chang Yi, Kaiser Permanente

From: Rob Hananouchi & Rod Brown, Fehr & Peers

Subject: Kaiser Roseville Medical Center Inpatient Bed Tower – Consistency with Roseville General Plan EIR Traffic Analysis

RS22-4142

This memorandum presents a review of the proposed inpatient bed tower project at the Kaiser Permanente Roseville Medical Center (KPRMC) campus, and its consistency with the vehicle miles traveled (VMT) impact analysis conducted for the *City of Roseville 2035 General Plan Update Final Environmental Impact Report* (EIR) (City of Roseville, 2020). This memorandum presents a summary of the proposed inpatient bed tower project, the growth assumptions used in the General Plan Update EIR VMT impact analysis, and the relevant conclusions from this evaluation.

Background & Methodology

Pursuant to Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3, the State of California has determined that VMT is the most appropriate measure for transportation impacts.

Section 4-9 of the City of Roseville Design Standards describes the City's requirements for VMT impact analysis to comply with State law. Section 4-9 states that "VMT impacts may be determined by screening, if a project meets any of the screening criteria" outlined in Section 4-9-A of the City's Design Standards. Section 4-9-A states that "a project may be screened from additional VMT analysis if…the VMT generated by the project is within the scope of a prior California Environmental Quality Act (CEQA) analysis and is therefore covered by a prior analysis. Prior analysis includes analysis performed for the General Plan."

This study reviews the proposed amount of development for the inpatient bed tower project at the KPRMC campus and compares it to the amount of development assumed for the KPRMC campus in the City of Roseville 2035 General Plan Update Final EIR VMT traffic modeling. Pursuant to Section 4-9-A of

the City's Design Standards, the inpatient bed tower project would qualify for screening if the General Plan Update EIR VMT impact analysis included the VMT generated by the project and thereby analyzed the project's VMT impact as part of the General Plan EIR.

Project Description

The proposed project would expand upon the existing facilities at the KPRMC campus. Specifically, the project proposes constructing the following:

- A six-story inpatient tower building that is approximately 278,000 square feet. The proposed inpatient tower would include 138 beds (108 medical beds and 30 intensive care unit (ICU) beds), six additional operating rooms, 36 additional emergency department treatment bays, and an in-patient pharmacy.
- As part of the proposed inpatient tower building, a new main lobby entrance and entry drop-off would be provided for the hospital with primary access from Rocky Ridge Drive.
- The proposed inpatient bed tower would require relocation of the northwest corner loop road on the KPRMC campus.
- A new four-level plus rooftop parking garage would provide approximately 800 new parking stalls. The parking garage would be in the northeastern corner of the KPRMC campus in area currently developed with a surface parking lot.
- A new generator yard would be built across from the existing central utility plant to house two two-megawatt emergency generators to support the new inpatient tower building.

Table 1 presents the amount of building floor area of inpatient hospital and outpatient medical office space on the KPRMC campus with and without the proposed project.

Table 1: KPRMC Building Floor Area

Land Use	Building	Existing Floor Area	With Project Floor Area
Hospital	Existing Main Hospital	350,579 BGSF	350,579 BGSF
	Women & Children's Center	194,995 BGSF	194,995 BGSF
	Proposed Inpatient Bed Tower	-	278,000 BGSF
	Hospital Sub-Total	**545,574 BGSF**	**823,574 BGSF**
Medical Office	Medical Office Building 1	110,282 BGSF	110,282 BGSF
	Medical Office Building 2	272,406 BGSF	272,406 BGSF
	Medical Office Sub-Total	**382,688 BGSF**	**382,688 BGSF**
Hospital + Medical Office Total		**928,262 BGSF**	**1,206,262 BGSF**

Notes:
BGSF = building gross square feet

Source: Kaiser Permanente, 2022.

Note that Table 1 excludes support buildings, such as the existing auxiliary building, fire pump building, and existing and proposed parking garages.

Roseville 2035 General Plan Update EIR

The City of Roseville adopted the General Plan 2035 and certified the 2035 General Plan Update Final EIR in August 2020. The land use plan identifies the KPRMC campus as Business Professional (BP), which is consistent with other medical center and professional office areas in the city.

The transportation impact analysis for the Roseville 2035 General Plan Update Final EIR used the Roseville travel forecasting model to estimate VMT for the City. The Roseville 2035 General Plan Update Final EIR explicitly states that "future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA." Further, it states that "quantitative analysis would not be required if it can be demonstrated that a project is consistent with the General Plan and would generate VMT which is equivalent or less than what was assumed in this General Plan EIR." This is also consistent with Section 4-9-A of the City's Design Standards described in the Background & Methodology section above.

The KPRMC campus is located within its own travel analysis zone (TAZ) of the Roseville travel forecasting model. This TAZ (TAZ 256) is bounded by Lead Hill Boulevard to the north, Eureka Road to the east, Douglas Boulevard to the south, and Rocky Ridge Drive to the west, as shown in **Figure 1**.

Table 2 presents the land use inputs for TAZ 256 (i.e., the KPRMC campus) in the 2035 Roseville travel forecasting model, which was used for the Roseville 2035 General Plan Update Final EIR. Table 2 also compares these General Plan EIR land use inputs to the project's proposed gross floor area totals.

Table 2: Roseville 2035 General Plan - Traffic Model Land Use Assumptions

Land Use	Roseville 2035 General Plan EIR: Travel Forecasting Model – TAZ 256	KPRMC Campus with Proposed Project
Hospital	962,000 SF	823,574 SF
Medical Office	434,000 SF	382,688 SF
General Office	362,000 SF	-
Total	**1,758,000 SF**	**1,206,262 BGSF**

Notes:
SF = square feet
Source: *Roseville 2035 General Plan Update Final EIR*, 2020. Kaiser Permanente, 2022.

Table 2 shows land use inputs assumed for the Roseville 2035 General Plan EIR are greater than the proposed project for the KPRMC campus.

Model Trip Generation Comparison

Table 3 presents the Roseville travel forecasting model's raw daily and PM peak hour trip generation estimate for TAZ 256 using the land use assumptions used for the Roseville 2035 General Plan Update Final EIR.

Table 3: Model Trip Generation – Roseville 2035 General Plan EIR

		Daily		PM Peak Hour	
Land Use	Floor Area Input	Model Trip Rate[1]	Raw Trips	Model Trip Rate[2]	Raw Trips
Hospital	962,000 SF	17.6 trips per KSF	16,931	1.33 trips per KSF	1,279
Medical Office	434,000 SF	36.1 trips per KSF	15,667	2.72 trips per KSF	1,181
General Office	362,000 SF	17.7 trips per KSF	6,407	1.44 trips per KSF	521
Total	**1,758,000 SF**		**39,006**		**2,981**

Notes:
SF = square feet
KSF = thousand square feet
1. Daily trip rates obtained from City of Roseville Travel Demand Forecasting Model Development Report (Fehr & Peers, 2021).
2. PM peak hour trip rates obtained from City of Roseville staff via email in May 2019.
Source: Fehr & Peers, 2022.

Table 4 presents the Roseville travel forecasting model's raw daily and PM peak hour trip generation estimate for the proposed project.

Table 4: Model Trip Generation – Proposed Bed Tower Project

		Daily		PM Peak Hour	
Land Use	Floor Area Input	Model Trip Rate[1]	Raw Trips	Model Trip Rate[2]	Raw Trips
Hospital	823,574 SF	17.6 trips per KSF	14,495	1.33 trips per KSF	1,095
Medical Office	382,688 SF	36.1 trips per KSF	13,815	2.72 trips per KSF	1,041
Total	**1,206,262 BGSF**		**28,310**		**2,136**

Notes:
SF = square feet
KSF = thousand square feet
1. Daily trip rates obtained from City of Roseville Travel Demand Forecasting Model Development Report (Fehr & Peers, 2021).
2. PM peak hour trip rates obtained from City of Roseville staff via email in May 2019.
Source: Fehr & Peers, 2022.

When the total model trip generation shown in Table 3 and Table 4 are compared, the proposed project is forecast to result in 10,696 fewer daily trips than assumed in the Roseville 2035 General Plan Update Final EIR travel modeling.

Conclusions

Since Table 3 and Table 4 show the proposed project would generate fewer trips than assumed in the Roseville 2035 General Plan Update Final EIR travel modeling, it can reasonably be determined that the proposed project would generate less daily VMT than was assumed for the Roseville 2035 General Plan Update Final EIR. Therefore, pursuant to Section 4-9-A of the City's Design Standards, the inpatient bed tower project would qualify for screening from additional VMT analysis, as the VMT impact of the proposed project was considered in the VMT impact assessment disclosed in the Roseville 2035 General Plan Update Final EIR.

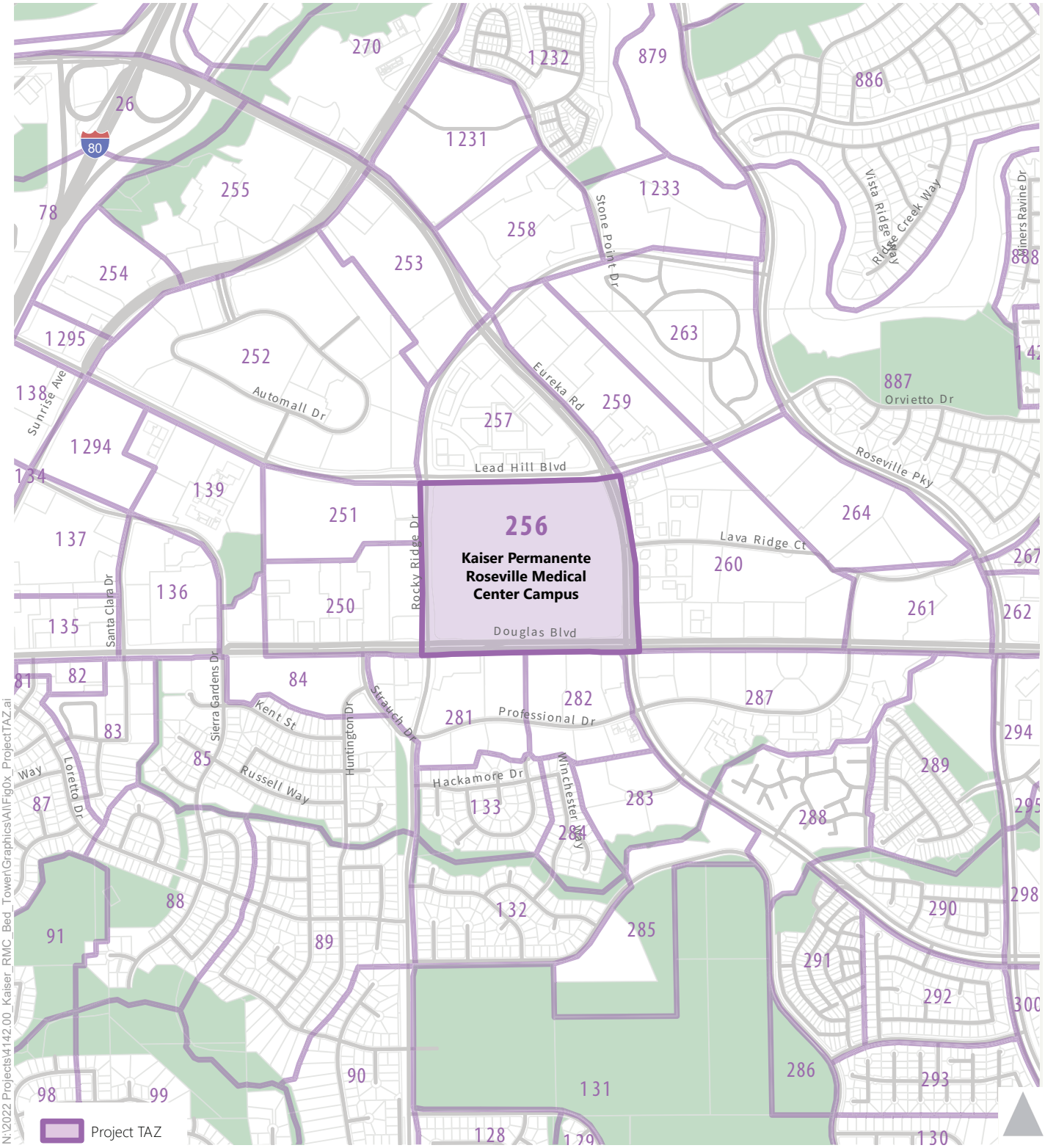

Figure 1

Project TAZ

Appendix E

Kaiser Roseville Medical Center Inpatient Bed Tower Project Water Demand Calculations

Occupancy assumptions (Hospital)		
Staff count	Daytime (16 hours)	Nighttime (8 hours)
Doctors	28	22
Nurses	49	40
Other staff	105	75
Staff FTE	**182**	**137**
Patients	354	246
Visitors	708	246
Total Occupancy	**1244**	**766**

Occupancy assumptions (Operating Rooms)	
Surgery assumptions	Operations (Daily)
Surgeries *per day per OR*	6
Doctors attending surgery	7
Nurses attending surgery	21
Total medical staff	28
Scrub washes *per day per OR*	168
Number of ORs	6
Total scrub washes	**1008**

Water consumption calculations							
#	Fixture type	Fixture water use (Gallons)		Quantity	Uses per day	Duration	Daily water use (gallons)
1	Water closet	1.28	per flush	(N/A)	3,254	N/A	4,165
2	Lavatory	0.5	per minute	(N/A)	3,354	20 seconds	559
3	Sink	1.5	per minute	(N/A)	432	20 seconds	216
4	Scrub sink	1.5	per minute	(N/A)	1,008	2 minutes	3,024
5	Shower	1.5	per minute	120	60	10 minutes	900
6	Clinical sink	6.5	per flush	12	24	N/A	1,872
7	Service sink	1.5	per minute	13	3	10 minutes	45
8	Drinking fountain	0.25	per minute	6	16	15 seconds	1
Total water use:							10,782

KP Roseville Hospital Expansion - Sterilization equipment requirements									
Product Information			Use by cycle (gal)				Water consumption		
Equipment	Make / Model	Quantity	CW	HW	PW	Steam	Water use (gallon per cycle)	Cycles per day	Water use per day (gallons)
Cart washer	WACA209	2		8		11	19	20	775
Washer disinfector	WASD233	6	10	19	10	24	63	15	5,709
Steam sterilizer (76"W)	MST 6012VS2	4	69			20	89	9	3,208
Self contained sterilizer (39"W)	MST 606VS2E	2	42		3	0	45	5	450
Steam sterilizer (Single door)	STER273-1	4	58			5	63	2	503
Total									**10,600**

Appendix F

Kaiser Permanente Roseville Medical Center
Sanitary Sewer Study

March 23, 2022
BKF No 20178129

City of Roseville
311 Vernon St.
Roseville, Ca 95678
Transmitted Electronically

Subject: Kaiser Permanente Roseville Medical Center
Sanitary Sewer Study

The sewer for the main hospital is serviced by an 8-inch line that runs west and connects downstream to the City's main 12-inch trunk line on Rocky Ridge Drive and several service lines that connect to a City 8-inch main line running through the campus within a drainage and sewer easement. Based on information provided by the City of Roseville, the existing 12-inch main on Rocky Ridge Drive has an available capacity of about 0.9 MGD (see figure 1 below for location).

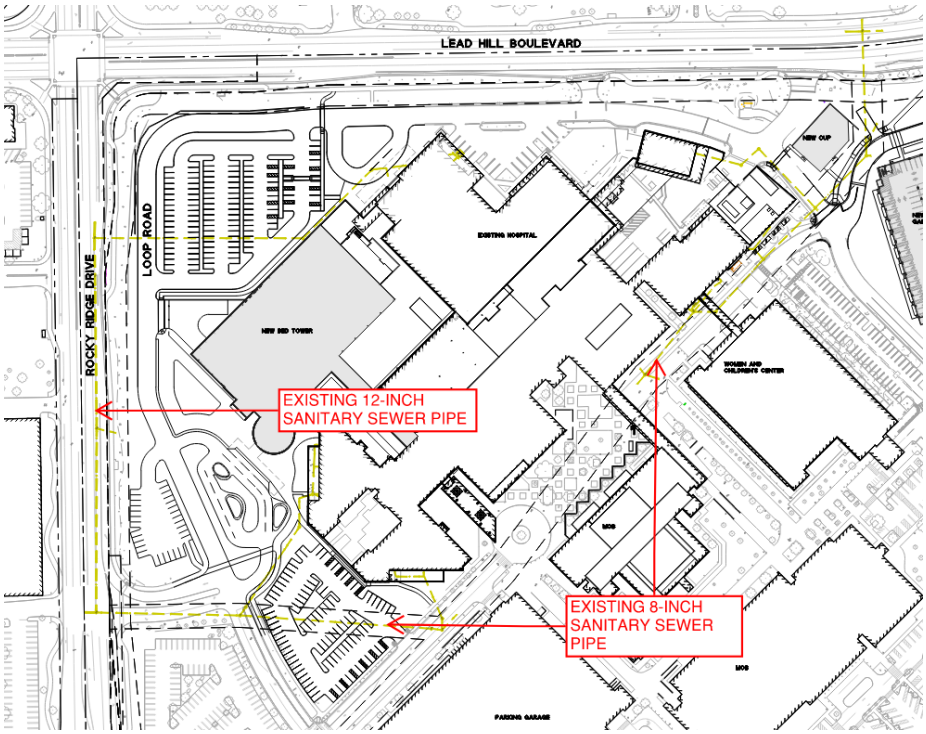

Figure 1: Existing Sewer Network

The proposed hospital development will convey sewage in a new 8-inch line that runs parallel and connects to the existing 8-inch servicing the hospital. The existing 8-inch connection to the City main on Rocky Ridge Drive will remain. The new bed tower provides an average dry weather flow (ADWF) of 69,000 gallons per day. This results in a peak wet weather flow of 496,800 gallons per day using the City of Roseville Design Standards for wastewater (see table 1 below). Per the City's sewer network model, the existing 12-inch pipe on Rocky Ridge Drive has a peak flow of 0.256 MGD downstream of the existing 8-inch connection. Adding the peak flow from the new bed tower to the existing peak flow in the system results in 0.756 MGD. Refer to Table 2 below. The capacity of a 12-inch pipe at full flow is 1.00 MGD and at 0.7 depth is 0.85 MGD per table 2 in section 9 of the City of Roseville Design Standards (see figure 2 below). Therefore, the additional peak flow from the new improvements will not exceed the capacity limits for the 12-inch main per the City of Roseville design standards.

Table 1 – Proposed Average Dry Wet Weather Flow (ADWF) and Peak Wet Weather Flow (PWWF)					
New Bed Tower ADWF (GPD)	**Safety Factor**	**Max Day Sewage Flow (GPD)**	**Peaking Factor**	**PWWF (GPD)**	**PWWF (MGD)**
69,000	2.00	138,000	3.6	496,800	0.5

Table 2 – Total New Peak Flow Added to Existing System				
New Bed Tower Peak Flow (MGD)	**Existing 12-inch Peak Flow (MGD)**	**Total Peak Flow for 12-inch (MGD)**	**Full Flow Capacity for 12-inch (MGD)**	**0.7 Depth Capacity for 12-inch (MGD)**
0.5	0.256	0.756	1.0	0.85

PIPE DIAMETER (IN)	SLOPE (ft/ft)	CAPACITY AT 0.7 DEPTH	CAPACITY FLOWING FULL
6	0.0050	0.22 MGD	
8	0.0035	0.38 MGD	
10	0.0025	0.58 MGD	
12	0.0020	0.85 MGD	1.00 MGD
15	0.0015	1.32 MGD	1.60 MGD
18	0.0012	1.95 MGD	2.35 MGD

Figure 2: Table 2 of Section 9 of the City of Roseville Design Standards

Sincerely,

BKF Engineers

Stephany Romero, PE
Project Manager

Appendix G

Kaiser Roseville Bed Tower
Storm Water Management - Hydromodification
Variance Supplemental Memorandum

SUPPLEMENTAL MEMORANDUM

Date: **March 22, 2022** **BKF Job Number: C20178129**

Deliver To: **City of Roseville**
Planning Division, Development Services

From: **BKF Engineers, Stephany Romero, P.E.**

Subject: **Kaiser Roseville Bed Tower**
Storm Water Management – Hydromodification Variance

To Whom It May Concern:

BKF Engineers has prepared this Supplemental Memorandum to provide clarity on our stormwater design intent. The project is a regulated redevelopment project subject to hydromodification management. In the existing condition, the drainage management areas on the west drain to CDS units (proprietary treatment devices) prior to connecting to the City mains. In the proposed condition, the drainage management areas will drain to proprietary devices for treatment and then drain to detention pipes for storage. We are planning to omit detention for drainage management areas that do not increase the pre-project peak runoff rate. In addition, we have designed to incorporate the existing proprietary devices for treatment in areas that do not exceed the pre-project runoff flow.

Refer to table 1 – Hydromodification Summary Table for impervious area pre- and post- project condition. DMAs 2, 4, and 5 provide similar site conditions and do not add impervious surface. The calculations in Form 4-2-Hydromodification Target for Peak Runoff of the West Placer Stormwater Quality Plan spreadsheet confirms that the post-construction peak runoff rates are less than or equal to pre-construction peak runoff rate for DMAs 2, 4 and 5. The West Placer County Storm Water Quality Design Manual, Section 4 – Requirements for Hydromodification Management Project states, "post-construction peak runoff rates (shall discharge) less than or equal to pre-construction peak runoff rate for a 2-year, 24-hr storm event." Therefore, DMAs 2, 4 and 5 will not require hydromodification.

Table 1:

HYDROMODIFICATION SUMMARY TABLE											
PRE-PROJECT CONDITION						**POST-PROJECT CONDITION**					
Drainage Management Area (DMA)	DMA 1	DMA 2	DMA 3	DMA 4	DMA 5	Drainage Management Area (DMA)	DMA 1	DMA 2	DMA 3	DMA 4	DMA 5
DMA Area (SF)	114,129	161,378	42,602	117,324	14,742	DMA Area (SF)	137,522	161,296	46,026	117,324	14,742
DMA Area (acres)	2.620	3.705	0.978	2.693	0.338	DMA Area (acres)	3.157	3.703	1.057	2.693	0.338
Pre Project Pervious Area (SF)	22,984	30,268	14,839	21,194	1,776	Post Project Pervious Area (SF)	15,853	31,825	9,085	36,197	8,441
Pre Project Impervious Area (SF)	91,145	131,110	27,763	96,130	12,966	Post Project Impervious Area (SF)	121,669	129,471	36,941	81,127	6,301
Pre Project Peak Runoff (cfs)*	5.21	7.36	1.94	5.35	0.67	Post Project Peak Runoff (cfs)	6.28	7.36	2.10	5.34	0.67

*Values taken from West Placer Stormwater Quality Plan spreadsheet form 4-2 "Hydromodification Target for Peak Runoff"

The existing Contech CDS treatment devices are used to screen, separate and trap trash, debris, sediment and hydrocarbons from stormwater runoff. Existing and proposed stormwater piping is rerouted to the existing Contech CDS treatment devices to treat the runoff before entering the city system. All DMAs will provide additional proposed treatment options to treat the additional project runoff. DMA 2 decreases the impervious area and provides the same pre- and post- project peak runoff as shown in table 1. Therefore, we are proposing that all runoff from DMA 2 will be treated by the existing Contech CDS treatment devices. In addition, Form 3-5 of the West Placer Stormwater Quality Plan spreadsheet calculates DMA 2 as required to treat 0.59 cfs of water quality flow. The existing Contech CDS treatment device can treat 1.6 cfs of runoff and achieve 80% annual solid load reduction with an average particle size distribution of 125um or larger. Therefore, no additional proprietary treatment device is required for this drainage management area.

Please contact me if you have any questions.

Sincerely,



Stephany Romero, PE
Project Manager
BKF Engineers

DUDEK

800.450.1818 | HELLO@DUDEK.COM

DUDEK.COM