Initial Study/Mitigated Negative Declaration

Mt. San Antonio College
Radio and Communications Tower Replacement

Prepared for

Mt. San Antonio College
1100 North Grand Avenue
Walnut, California 91789

Prepared by

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June 2022

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SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY

The purpose of this Initial Study (IS) is to (1) describe the Mt. San Antonio College Radio and Communications Tower Replacement project (hereinafter referred to as the "proposed project"), which is located on the campus of Mt. San Antonio College (Mt. SAC) in Walnut, Los Angeles County, California; and (2) provide an evaluation of potential environmental effects associated with the proposed project's construction and use. This IS has been prepared pursuant to the California Environmental Quality Act (CEQA), as amended (*California Public Resources Code* §21000 et seq.) and in accordance with the State CEQA Guidelines (*California Code of Regulations* §15000 et seq.).

Pursuant to Section 15367 of the State CEQA Guidelines, Mt. San Antonio Community College District (District) is the lead agency for the project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect on the environment. The District, as the lead agency, has the authority for project approval and certification of the accompanying environmental documentation.

1.2 SUMMARY OF FINDINGS

This IS is based on the Environmental Checklist Form (Form) included in Appendix G of the 2022 State CEQA Guidelines. The Form is found in Section 3.1 of this IS. It contains a series of questions about the proposed project for each of the listed environmental topics. The Form is used to evaluate whether or not any potentially significant environmental effects are associated with implementation of the proposed project based on the adopted Mt. SAC 2016 CEQA Thresholds of Significance. The explanation for each answer is included in Section 3.1.

The Form is used to review the potential environmental effects of the proposed project for each of the following areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

The proposed project incorporates mitigation measures (MMs) from the 2018 Educational and Facilities Master Plan Environmental Impact Report (2018 EFMP EIR), which are assumed in the analysis presented this IS and restated in Section 5.0 of this document. These MMs are applicable campus wide and applicable MMs have been identified in the analysis presented in the IS. As

identified through the analysis presented in this IS, the proposed project would have no impacts or less than significant impacts related to aesthetics; agriculture and forestry resources; air quality; biological resources; cultural resources; energy geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use; mineral resources; noise population and housing; public services; recreation; transportation; tribal cultural resources; utilities/service systems; and wildfire.

According to the State CEQA Guidelines, a Mitigated Negative Declaration (MND) is appropriate if the proposed project will not have a significant impact on the environment after incorporation of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after incorporation of mitigation measures, the proposed project would have a significant impact on the environment.

1.3 PUBLIC REVIEW

This IS and proposed MND have been circulated by the State Office of Planning and Research (State Clearinghouse) for review by State agencies and to any responsible agencies, trustee agencies, and interested parties, as required by CEQA. A Notice of Intent to adopt the proposed MND for review and comment has been posted in locations both on the project site and offsite in a publicly accessible area. The environmental documentation is also available for review on Mt. SAC's website:

www.mtsac.edu/construction/reports-and-publications/environmental-impact-reports.html

A 30-day public review period has been established for the IS and the proposed MND. The review period has been established in accordance with Section 15073 of the State CEQA Guidelines. The IS and proposed MND's 30-day review period will extend from **June 1, 2022, to June 30, 2022**. Comments regarding the IS and proposed MND must be received no later than 5:00 PM on **June 30, 2022.**

Comments on the IS and the analysis contained herein may be mailed or emailed to the following address:

John Gaston, Special Projects Director
Facilities Planning & Management
Mt. San Antonio College
1100 North Grand Avenue
Walnut, California 91789
facilitiesplanning@mtsac.edu

Please designate a contact person in your agency and send responses to the address above.

If you have any questions about the environmental review for the proposed Mt. SAC Radio and Communications Tower Replacement, please contact John Gaston at 909.274.5130.

Following receipt and evaluation of comments from agencies, organizations, and/or individuals, the District will determine whether any substantial new environmental issues have been raised. If so, further documentation may be required. If not, the District may adopt the MND.

1.4 INITIAL STUDY ORGANIZATION

This document has been organized into the following sections:

- ***Section 1 – Introduction.*** This section provides an introduction and overview describing the conclusions of the IS.
- ***Section 2 – Project Description.*** This section provides an overview of the proposed project location; a description of existing on-site and surrounding land uses; and key project characteristics and includes a list of anticipated discretionary actions.
- ***Section 3 – Environmental Checklist Form.*** The completed Environmental Checklist Form provides an overview of the potential impacts that may or may not result from project implementation.
- ***Section 4 – Environmental Evaluation.*** This section contains an analysis of environmental impacts identified in the environmental checklist.
- ***Section 5 – Summary of Mitigation Measures.*** This section identifies MMs from the 2018 EFMP EIR. These MMs are applicable campus wide and applicable MMs have been identified in the analysis presented in the IS.
- ***Section 6 – Report Preparers.*** This section identifies those individuals responsible for preparing the IS/MND.
- ***Section 7 – References.*** The References section identifies resources used to prepare this document.

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SECTION 2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The project site is located south of West Temple Avenue and west of Bonita Drive within the southeastern portion of the Mt. SAC campus in the City of Walnut, Los Angeles County, California. Local access to the project site is provided from Temple Avenue; Interstate 10, and State Routes (SR) 57 and 60. Exhibit 1, Vicinity Map, depicts the regional location and local vicinity of the project site.

The project site is located on the Mt. SAC campus, which forms the City of Walnut's eastern boundary. The campus is located approximately 25 miles east of the City of Los Angeles, in the Pomona-Walnut Valley, and is adjacent to California State Polytechnic University, Pomona (Cal Poly Pomona). Mt. SAC serves students from within the Mt. SAC District service area as well as students from throughout the San Gabriel Valley in areas as far east as Fontana and as far west as Monterey Park.

As shown in the aerial photograph provided in Exhibit 2, the project site is located along the top of a disturbed ridgeline. The project site and immediate vicinity are mostly undeveloped except for an unpaved access road and the existing tower facility. The site is adjacent to two elevated storage tanks, which are approximately the same length as the existing tower facility.

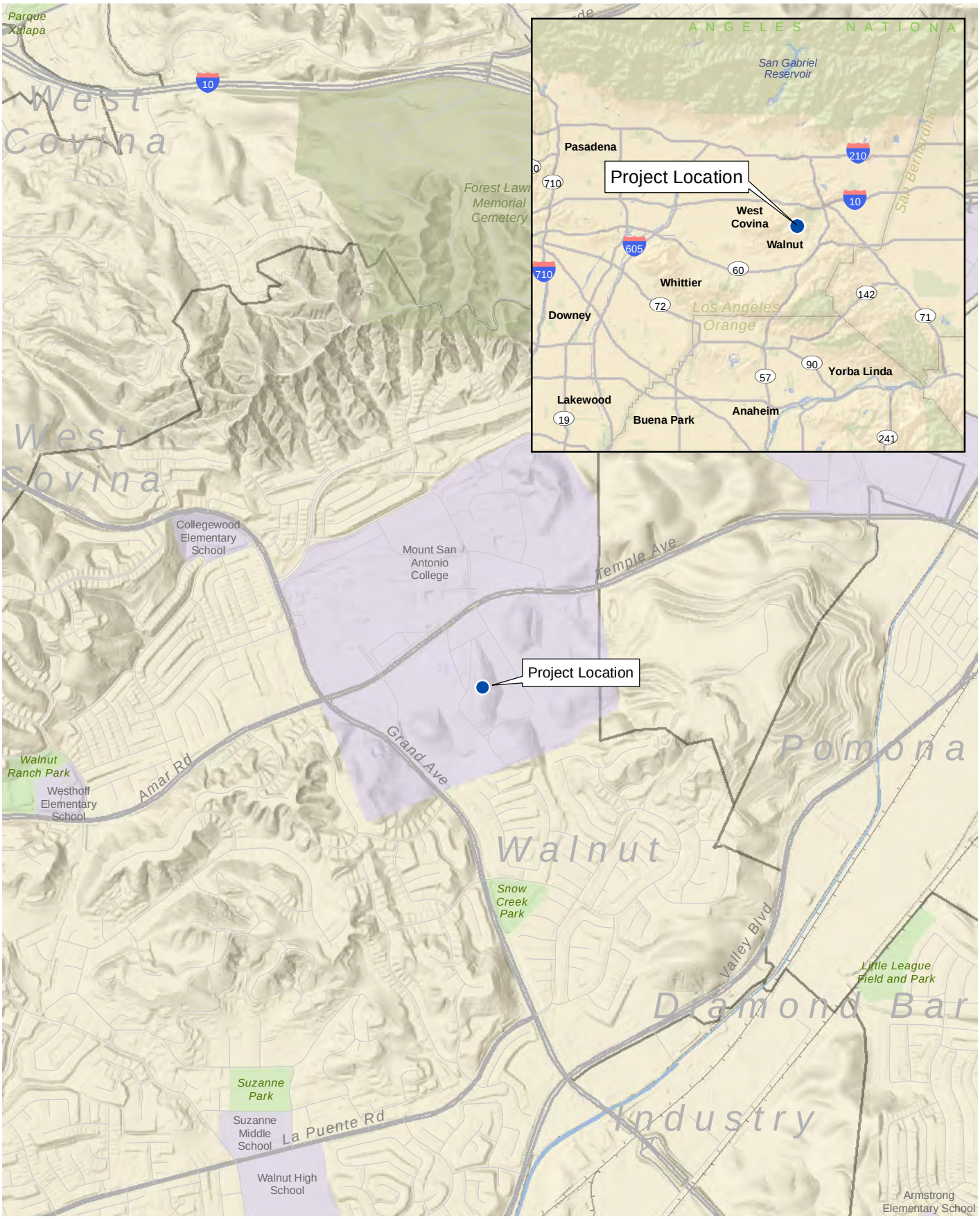
The project site is bounded by the Gateway Parking Structure to the north, Parking Lot M and a natural hillside to the south, existing modular buildings to the east, and the Golf Practice Facility to the west.

The site is located on a hilltop ridge at an approximate elevation of 808 to 809 feet above mean seal level (AMSL). Earth materials beneath the site consist of fill soils placed during previous site grading operations, natural colluvial soils, and sedimentary bedrock of the Puente Formation to a maximum depth of 51.5 feet below ground surface (bgs). Undocumented fill, approximately a foot in thickness, is known to occur on the project site and deeper artificial fill may also exist at the site. The fill and colluvial soil deposits onsite consist primarily of silty sand. The sedimentary bedrock primarily consists of slightly to moderately weathered siltstone (Converse 2015).

The undeveloped areas onsite and adjacent to the site are predominantly comprised of non-native annual grasses and low-growing invasive plant species. Two mature ornamental oak trees were recently transplanted along the western side of the existing tower facility and storage tanks. Neither tree will be affected by the proposed project. No southern California black walnut trees are present onsite or in the vicinity. Approximately 50 feet downslope to the west from the project site is a large, native shrub restoration area. None of these plant species would be affected as a result of the proposed project. No drainage features, wetlands, or sensitive plant communities have been identified in the project site. No federally and/or State listed as Endangered or Threatened plant or wildlife species reported in the vicinity have the potential to occur in the project site because the area does not support suitable habitat.

2.2 PROJECT DESCRIPTION

The project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a 6-foot-high chain-link fence as detailed in Exhibit 3, Conceptual Site Plan.



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Vicinity Map

Exhibit 1

Radio and Communications Tower Replacement Project

N W E S

2,000 1,000 0 2,000 Feet

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Aerial Source: Hexagon Geosystems, 2020

Aerial Photograph

Exhibit 2

Radio and Communications Tower Replacement Project

N
W
E
S

200 100 0 200 Feet

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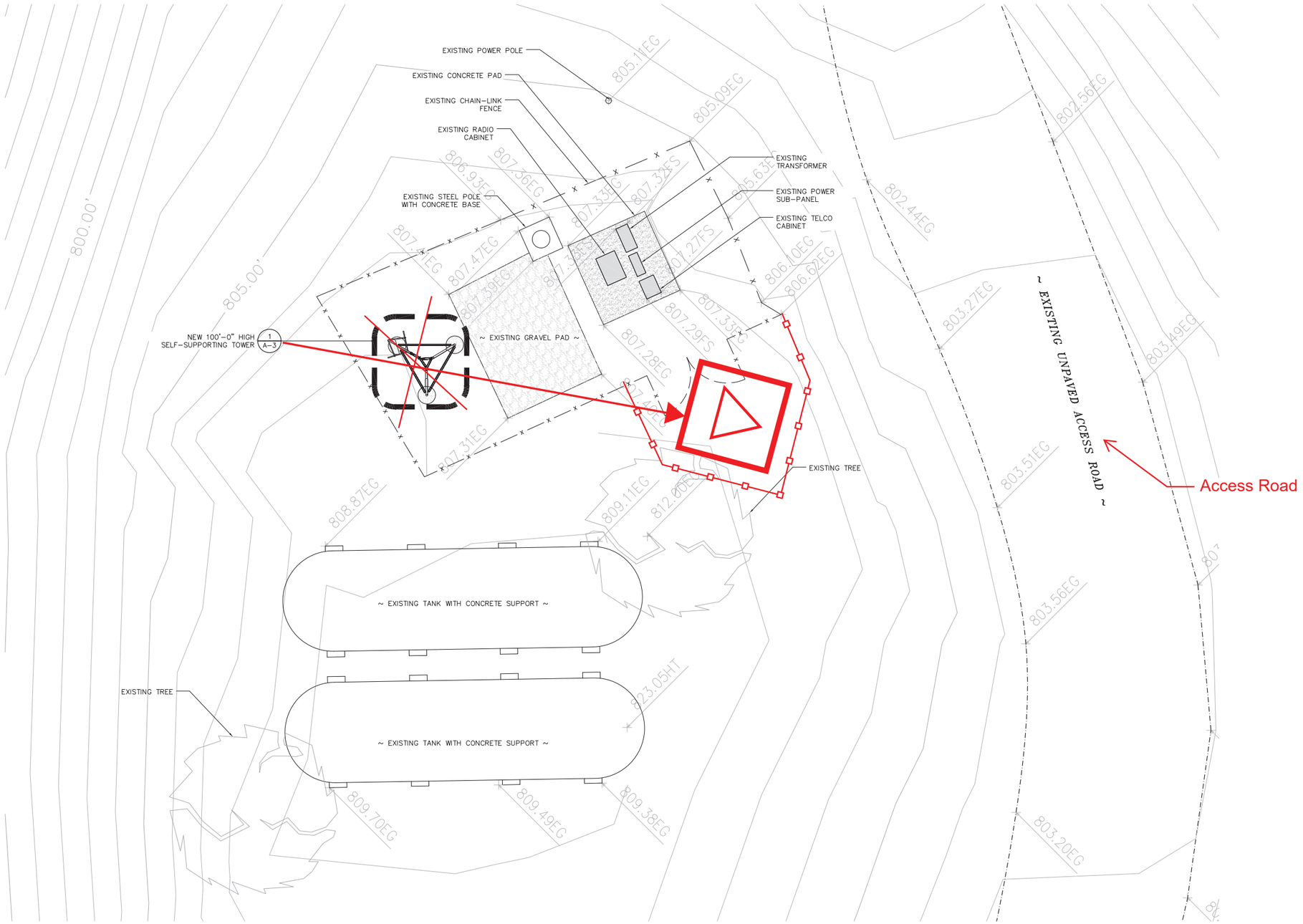
SCALE NOTE:

IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

NOTES:

1. UTILITY DESIGN AND RUNS ARE PRELIMINARY. PENDING FINAL DESIGN FROM UTILITY PROVIDERS.



Source: Eukon Group, 2019

Conceptual Site Plan

Exhibit 3

Radio and Communications Tower Replacement Project

N W E S

0 16 32 64 Feet

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The proposed communications tower would replace the existing 40-foot-high tower, at a location slightly southeast of the existing tower on Reservoir Hill. The existing tower site consists of a power pole, concrete pad, chain-link fence, radio cabinet, steel pole with concrete base, transformer, power sub-panel, and telco cabinet as shown on Exhibit 4, Proposed and Existing Towers and Equipment. Removal of these facilities is included as part of the proposed project. A gravel pad, and two existing tanks with concrete support are also located on the site.

The new 100-foot-high self-supporting tower is comprised of a pier foundation, one JamPro-JMPC single bay antenna, and three Browning-BR6155 antennas as shown on Exhibit 5, Equipment and Antenna Specifications.

The proposed tower would support 2-way communication for the campus associated with the Emergency Operations Center (EOC), the Altertus campus emergency mass notification system, and broadcast transmission for the campus radio station, 90.1 FM Mt. Rock.

Parking, Access, and Circulation

Access to the project site would continue to be provided from an existing unpaved access road, which is accessible from Bonita Drive and Stadium Way.

Utilities

Municipal and private utility services necessary to serve the proposed project are currently available within or adjacent to the project site. On-site utility infrastructure necessary to serve the proposed project would be installed with the proposed development and would connect to the existing utilities. The final sizing and design of on-site facilities would occur during final project design. Low-voltage and electrical infrastructure design includes the following:

- Relocation of the existing ultra-high frequency (UHF) antennas;
- Providing conduit and cable tray pathways from the existing communications shed to the new tower location;
- Providing power from the existing shed to support new rack for the new FM antenna;
- Providing for relocation or addition of security cameras;
- Providing for future lighting; and
- Providing for future cellular antennas.

Construction

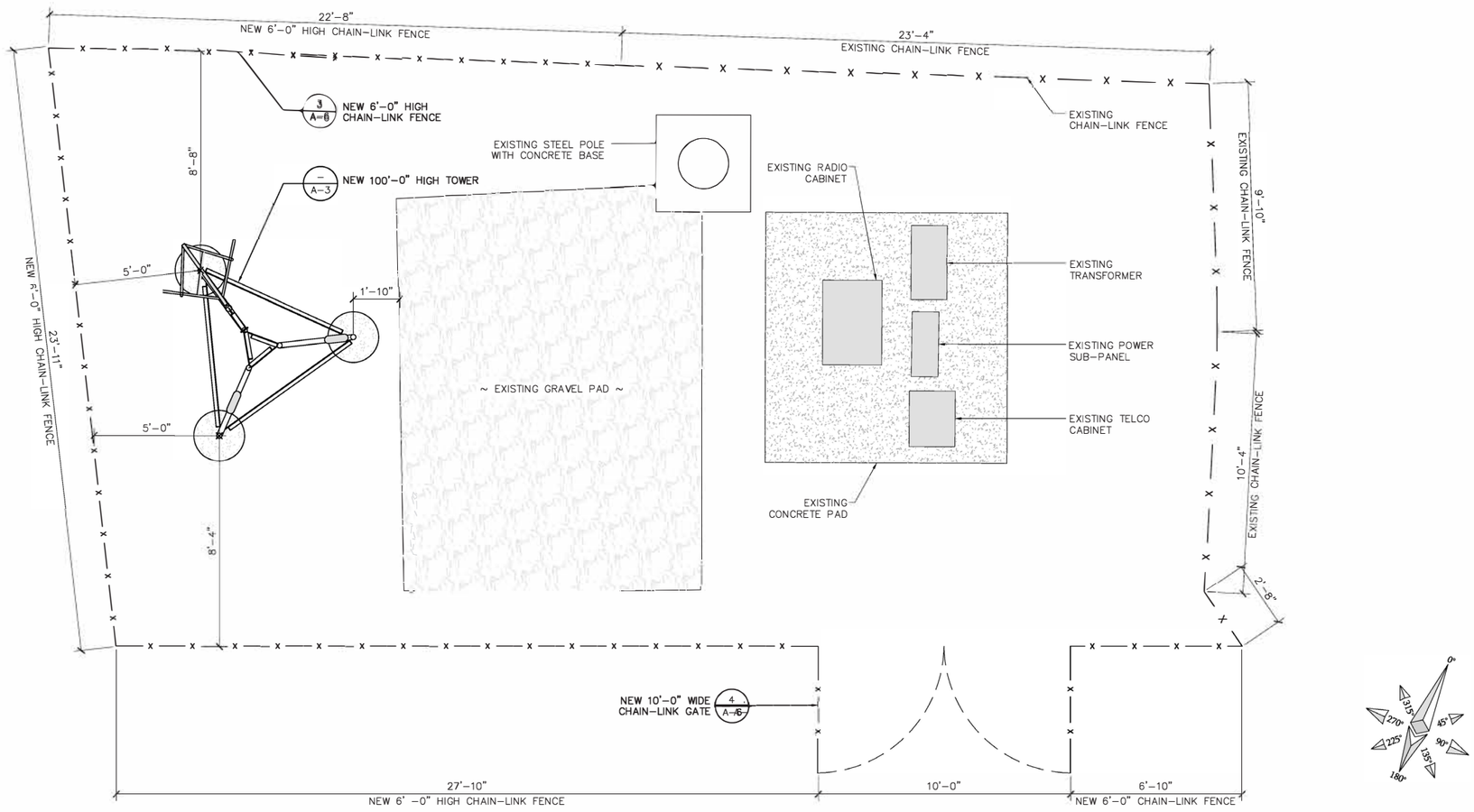
Construction is anticipated to take place of over a two-month period. Typical construction activities would occur five days a week (Monday through Friday) from 7:00 AM to 3:00 PM. Per the *City of Walnut Municipal Code*, construction activity is limited to the hours of 7:00 AM to 7:00 PM. No weekend or nighttime construction would occur with this project.

Construction staging and parking would occur on site and construction access would be available from Bonita Drive and Stadium Way.

Operation and Maintenance

The project is proposed to be operational in Summer 2023. Maintenance related trips for the proposed project would be limited to 1 to 2 times per year.

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



PROPOSED AND EXISTING TOWERS AND EQUIPMENT

2' 0 1' 2' 4' 8'

1

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Source: Eukon Group, 2019

Proposed and Existing Towers and Equipment

Exhibit 4

Radio and Communications Tower Replacement Project

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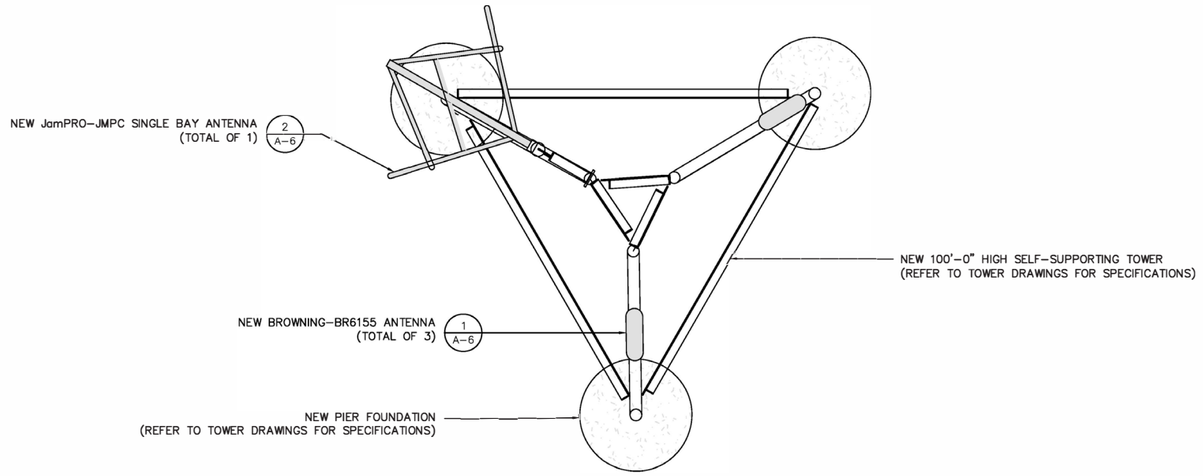
NOTE:
PENDING PROPAGATION STUDY



PROPOSED TOWER BIRD'S–EYE VIEW

1" 0 6" 1' 2' 4'

2

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Source: Eukon Group, 2019

Equipment and Antenna Specifications

Exhibit 5

Radio and Communications Tower Replacement Project

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2.3 DISCRETIONARY AND NONDISCRETIONARY ACTIONS

Table 1, Anticipated Discretionary Actions/Approvals, lists the approvals and permits required from the Mt. San Antonio Community College District (District), as the lead agency, the City of Walnut, and other agencies to implement the proposed project.

TABLE 1
ANTICIPATED DISCRETIONARY ACTIONS/APPROVALS

Lead Agency	**Action**
Mt. San Antonio College Community College District	• Adoption of the Final Tiered IS/MND • Adoption of the Mitigation Monitoring and Reporting Program • Approval of the design • Approval of the project budget • Approval of financing
Responsible Agencies	**Action**
California Division of the State Architect (DSA)	• Title 24 structural, access compliance, fire/life safety, and energy reviews
State of California Fire Marshal	• Fire/life safety

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SECTION 3.0 ENVIRONMENTAL CHECKLIST FORM

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION:

On the basis of this initial evaluation:

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

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

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

John Gaston

Digitally signed by John Gaston
DN: C=US, E=jgaston1@mtsac.edu, O=Mt. San Antonio College, OU=Facilities Planning and Management, CN=John Gaston
Location: Mt. San Antonio College
Reason: I have reviewed this document
Contact Info: John Gaston
Date: 2022.05.26 14:23:55-07'00'

Signature	**5-26-2022** Date
John Gaston Special Projects Director, Facilities Planning & Management Printed Name/Title	909.274.5130 Phone No.

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2) A list of "Supporting Information Sources" must be attached and other sources used or individuals contacted should be cited in the Narrative Summary for each section.

3) Response Column Heading Definitions:

   a) **Potentially Significant Impact** is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

   b) **Less Than Significant Impact With Mitigation** applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The mitigation measures must be described, along with a brief explanation of how they reduce the effect to a less than significant level.

   c) **Less Than Significant Impact** applies where the project creates no significant impacts, only Less Than Significant impacts.

   d) **No Impact** applies where a project does not create an impact in that category. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one proposed (e.g., the project falls outside of a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

4) Earlier analyses may be used where, pursuant to a tiering, program EIR, Master EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15062(c)(3)(D)). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

   Incorporate into the checklist any references to information sources for potential impacts (e.g., the General Plan, zoning ordinance). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

   The explanation of each issue should identify the following:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significant.

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☑	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
c) 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?	☐	☐	☑	☐
II. AGRICULTURE & FOREST RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to 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?	☐	☐	☐	☑
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) 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?	☐	☐	☑	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☑
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §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?	☐	☐	☑	☐
VI. ENERGY -- Would the project:				
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?	☐	☐	☑	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS -- Would the project:				
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 risks to life or property?	☐	☐	☑	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☑	☐
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?	☐	☐	☑	☐
IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or 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 which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
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 of public use airport, would the project result in a safety hazard 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?	☐	☐	☑	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑
X. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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;	☐	☐	☑	☐
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?	☐	☐	☐	☑
XI. LAND USE AND PLANNING -- Would the project:				
a) Physically divide an established community?	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
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?	☐	☐	☐	☑

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
XIII. NOISE -- Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☑
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?	☐	☐	☐	☑
XIV. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☑	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
XVI. PUBLIC SERVICES -- 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?	☐	☐	☑	☐
XVI. RECREATION --				
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?	☐	☐	☑	☐
XVII. TRANSPORTATION -- Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☑	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☑	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☑
XVIII. TRIBAL CULTURAL RESOURCES -- 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), or	☐	☐	☐	☑
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.	☐	☐	☑	☐
XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Would the proposed project require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction 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?	☐	☐	☑	☐

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

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SECTION 4.0 ENVIRONMENTAL EVALUATION

I. AESTHETICS

The analysis of Aesthetics is tiered from the 2018 EFMP EIR as addressed in Section 4.1, Aesthetics, of that document. Relevant elements of the proposed project related to aesthetics includes grading for tower foundation, and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and is incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM AES-1 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City that the contractor specifications require any temporary nighttime lighting installed during construction for security or any other purpose be downward-facing and hooded or shielded to prevent light from spilling outside the staging area and from directly broadcasting security light into the sky or onto adjacent residential properties. Compliance with this measure shall be verified by the City's Building and Safety Department during inspections of the construction site.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Aesthetics	New substantial light or glare impacts that adversely affect day or nighttime views; Light and glare impacts in sensitive biological resource areas or off-site residential areas.	Compliance with IES's Sports and Recreational Area Lighting (IES RP-6-15) standards for site-specific athletics facilities (excluding the Stadium, Flex and Practice Fields); New permanent lighting standards in Parking Lot M and Lot W immediately adjacent to sensitive biological habitat areas (i.e., Wildlife Sanctuary/Open Space Zone) shall not exceed 0.2 foot-candles at five (5) feet outside of the parking lot boundary.	California Department of Fish and Wildlife (CDFW)	If needed, case-by-case light and glare or massing studies, elevations, or perspectives for potential aesthetic impacts; Special lighting plans for select major projects; Limit direct significant flare and prolonged exposure off-site.

Project Impact Analysis

Question A: Would the project have a substantial adverse effect on a scenic vista?

Discussion

The analysis of Impact 4.1-1 in Section 4.1, Aesthetics, of the 2018 EFMP EIR concluded that development under the 2018 EFMP would result in a less than significant impact to scenic vistas.

As mentioned in Section 4.1.1, Regulatory Setting, of the 2018 EFMP EIR, the *City of Walnut General Plan* (WGP) does not designate any scenic highways, routes, or vistas; however, the City does designate gateways, corridors, landmarks, and nodes as shown in Figure LCD-11 of the WGP Land Use and Community Design Element (City of Walnut 2018b). There is one Major Gateway at the intersection of Temple Avenue and Grand Avenue and one Minor Gateway on Temple Avenue at the eastern City boundary. Grand Avenue also serves as a Landscape Corridor from the southern City boundary to the northern City boundary. A portion of Grand Avenue from Temple Avenue to the southern boundary of Snow Creek Park is a Trail Corridor. Additionally, a Creek Corridor runs to the east of Grand Avenue from Temple Avenue to La Puente Road and another Creek Corridor runs along the Snow Creek neighborhood residential Trail Corridor to the south of the Mt. SAC campus and terminates at the southern end of campus near the Hammer Throw area and Poop Out Hill. Figure LCD-11 also identifies a Historical/Cultural Landmark at the southeast corner of the Temple Avenue/Grand Avenue intersection.

Although the Scenic Highway Element of the WGP does not officially designate any scenic highways, routes, or vistas, it does describe certain streets that possess scenic attributes that qualify them as scenic routes. In the vicinity of the Mt. SAC campus, these include Temple Avenue from the west City limits to the east City limits, Mountaineer Road between Grand Avenue and San Dimas Avenue, and Grand Avenue between Valley Boulevard and the northern City limits (City of Walnut 2018b).

As shown in the aerial photograph provided in Exhibit 2, the project site is located west of an existing unpaved service road within the southeastern portion of the Mt. SAC campus. The proposed project would be visible from the Major Gateway due to its location along the top of a disturbed ridgeline (Reservoir Hill). However, proposed development would not exceed applicable height restrictions as set forth by applicable zoning, would be surrounded by existing development, and would not further obstruct any distant views of the hillsides from the Major Gateway. Additionally, the proposed project would not be viewed from or affect a Historical/Cultural Landmark. Therefore, impacts related to scenic vistas would be less than significant which is consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not impact scenic vistas. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

As discussed on page 4.1-11 of the 2018 EFMP EIR, the campus is not located within or near a State scenic highway. According to the California State Scenic Highway System Map, the nearest Officially Designated and Eligible State Scenic Highways are approximately 20 miles north and over 2.5 miles south of the Mt. SAC campus and proposed project site, respectively (Caltrans 2018). Views of the project site from the portion of SR-57, which is an Eligible State Scenic Highway, are completely obstructed by intervening topography. Therefore, implementation of the proposed project would not damage scenic resources within a State scenic highway consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not substantially damage scenic resources within a scenic highway. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question C: Would the project 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?

Discussion

The analysis of Impact 4.1-3 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would result in a less than significant impact to the visual character or quality of the campus and the immediately surrounding area.

As stated previously, the proposed communications tower would replace the existing 40-foot-high tower, at a location slightly to the southeast of the existing tower on Reservoir Hill. The existing tower site consists of a power pole, concrete pad, chain-link fence, radio cabinet, steel pole with concrete base, transformer, power sub-panel, and telco cabinet. A gravel pad, and two existing tanks with concrete support are also located on the site. The project proposes to remove the existing tower and associated facilities and construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a 6-foot-high chain-link fence.

The existing visual character of the project site and immediate surrounding areas is depicted in the site photographs provided on Exhibits 6a through 6b and are described below.

View 1 – View of the project site from the intersection of Mt. SAC Way and Temple Avenue looking east.

View 2 – View of the project site from Stadium Way looking south.

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Site Photographs

Exhibit 6a

Radio and Communications Tower Replacement Project

PSOMAS

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View 3 – View of the project site from Bonita Drive looking northwest.

View 4 – View of the project site from Parking Lot M looking northeast.

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Site Photographs

Exhibit 6b

Radio and Communications Tower Replacement Project

PSOMAS

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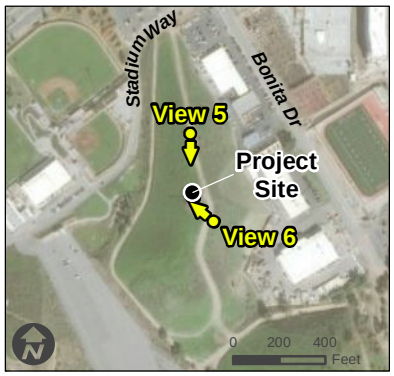
View 5 – View of the project site from the existing unpaved access road looking south.



View 6 – View of the project site from the existing unpaved access road looking northwest.

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Site Photographs

Exhibit 6c

Radio and Communications Tower Replacement Project

PSOMAS

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- **View 1** on Exhibit 6a, Site Photographs, shows the view of the project site from the intersection of Mt. SAC Way and Temple Avenue looking east. The intersection is the dominant view in this photograph. As shown, there are several cars traveling along Temple Avenue. Additionally, a utility vehicle can be seen traveling along Mt. SAC Way. The Mt. SAC soccer fields can also be seen in this photograph. The fields are surrounded by green opaque fencing and stadium lighting. Further down Temple Avenue, Mt. SAC Mazmanian baseball fields can be seen surrounded by sports field netting. The Gateway Parking Structure can be seen in the distance. The existing hillside and communications tower can be seen in the background view of the photograph.
- **View 2** on Exhibit 6a, Site Photographs, shows the view of the project site from Stadium Way looking south. This view shows the staff lot and Building 23, which is surrounded by chain link fencing. This parking lot contains electrical boxes and overhead utility lines. On the left-hand side of the photograph, an unpaved access road can be seen leading up to the communications tower located on Reservoir Hill. The road is surrounded by mature trees and vegetation on both sides. The MSAC sign on the adjacent hillside can be seen in the distance.
- **View 3** on Exhibit 6b, Site Photographs, shows the view of the project site from Bonita Drive looking northwest. The staff lot and Building 48 (Receiving/Transportation) are the main focal point in this photograph. The parking lot is surrounded by a chain link fence and contains multiple large vehicles (vans) and pole mounted lighting. Just outside of the parking lot, a large palm tree can be seen along with a small wooden fence line. The Gateway Parking Structure can be seen at the end of Bonita Drive in the right-hand side of the photograph. The existing communications tower can be seen in the background with additional hillside areas surrounding the Mt. SAC campus to the north.
- **View 4** on Exhibit 6b, Site Photographs, shows the view of the project site from Parking Lot M looking northeast. The vacant parking lot is the main focal point in this photograph. The parking lot contains pole mounted lighting. The existing communication tower can be seen at the top of Reservoir Hill. The hillside is covered with mature trees and vegetation. A chain link fence can be seen in the right-hand side of the photograph providing access to an unpaved access road also containing overhead lighting. Additional campus facilities and hillside areas can be seen in the distance of the photograph.
- **View 5** on Exhibit 6c, Site Photographs, shows the view of the project site from the existing unpaved access road looking south. As shown, the unpaved access road is surrounded by grass and low-lying shrubs and vegetation. The existing 40-foot-high communications tower and associated equipment can be seen surrounded by a chain link fence atop the ridgeline. Adjacent to the tower are two large oak trees. An elevated storage tank can also be seen behind the tower. The top of a modular building can be seen in the left-hand side of the photograph. Distant views include additional hillside areas.
- **View 6** on Exhibit 6c, Site Photographs, the view of the project site from the existing unpaved access road looking northwest. Two elevated storage tanks, approximately the same length as the existing tower facility, are the main focal point of this photograph. The existing 40-foot-high communications tower and associated equipment can be seen surrounded by a chain link fence adjacent to the storage tanks. Existing campus facilities can be seen in the right-hand of the photograph. Background views include single-family residences and hillside areas.

Implementation of the proposed project would represent a change to the existing visual character of the project site through grading for tower foundation, and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements. During grading and construction, construction equipment and activities would be visible from the immediately surrounding uses. This visual change would be temporary in nature and typical of construction sites in an urban environment; therefore, temporary impacts during construction would be less than significant consistent with the findings of the 2018 EFMP EIR.

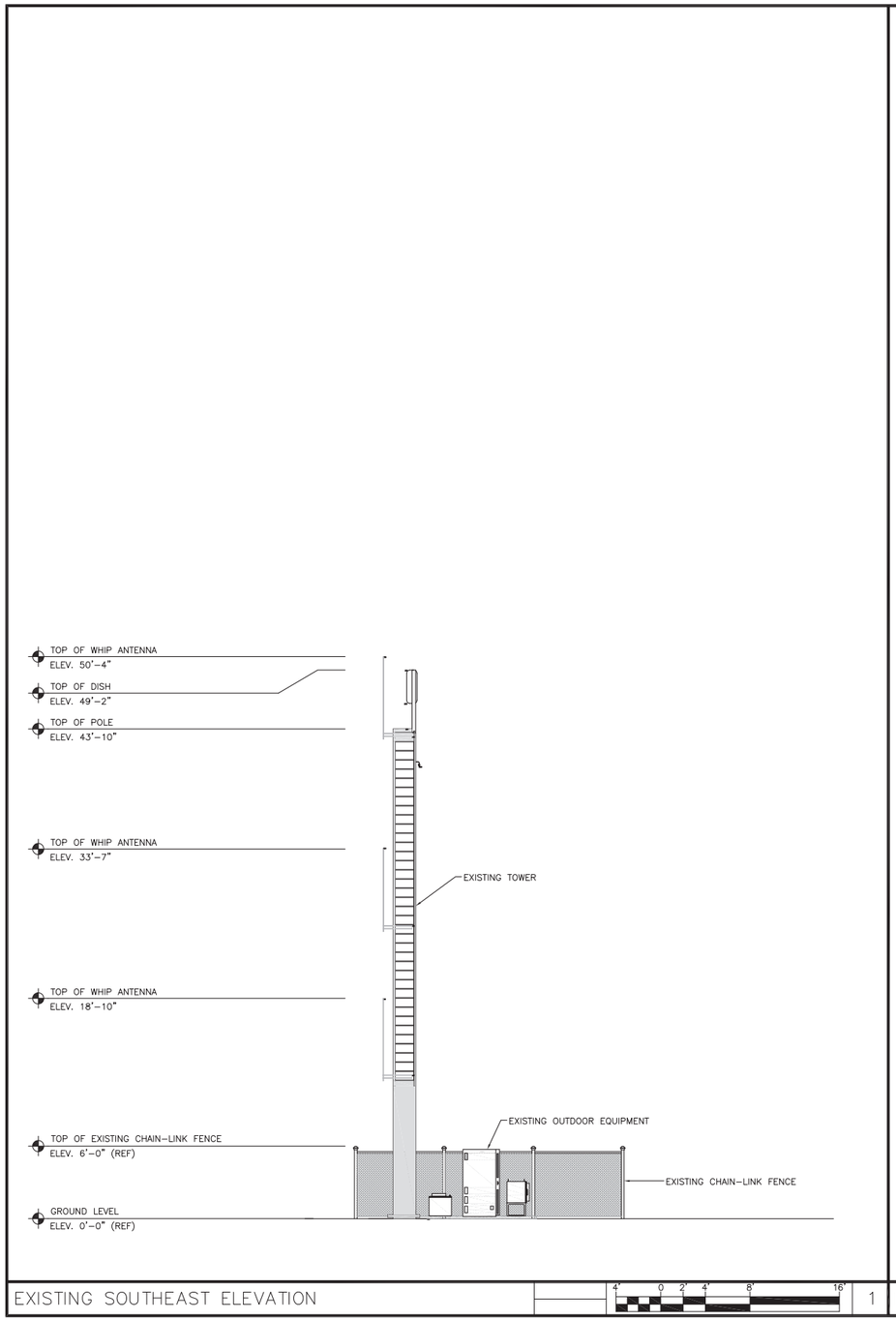
To address visual changes associated with implementation of the proposed project and to address the relationship between the proposed project and the existing land uses surrounding the project site, elevations are provided on Exhibits 7a and 7b. Additionally, photo simulations were prepared to depict the existing and proposed views of the tower as shown on Exhibits 8a through 8c and described below.

- **View 1** on Exhibit 8a, Photo Simulations, shows the existing and proposed view as seen looking northeast from Stonybrook Drive. The existing and proposed communications tower can be seen on Reservoir Hill. Two elevated storage tanks, approximately the same length as the existing tower facility, can also be seen in this view. The tower would not substantially impede views due to the relatively narrow structure and the type of materials proposed. Views are also limited due to mature trees and intervening topography.
- **View 2** on Exhibit 8b, Photo Simulations, shows the existing and proposed view as seen looking northwest from Buckskin Drive. The existing and proposed communications tower can be seen on Reservoir Hill. Two elevated storage tanks, approximately the same length as the existing tower facility, can also be seen in this view. The tower would not substantially impede views due to the relatively narrow structure and the type of materials proposed. Existing campus facilities can also be seen in this view. Background views include single-family residences and hillside areas.
- **View 3** on Exhibit 8c, Photo Simulations, shows the existing and proposed view as seen looking south from East Fort Bowie Drive. Existing campus facilities are the main focal point of this view. The existing and proposed communications tower can be seen on Reservoir Hill. The tower would not substantially impede views due to the relatively narrow structure and the type of materials proposed. Additional commercial development and hillside areas can be seen in the background of this view.

The proposed project would alter the existing visual character of the project area and views from surrounding vantage points; however, all new construction projects on campus, including the proposed project, would be reviewed by the Campus Master Plan Coordinating Team (CMPCT). The review process through CMPCT is conducted on a project-by-project basis. Additionally, the proposed project is assumed within the 2018 EFMP and has been designed consistent with the guidelines included in the 2018 EFMP. Consistency review by the CMPCT and incorporation of the guidelines set forth in the 2018 EFMP would ensure that the introduction of the proposed project and associated site improvements would be visually compatible with the existing campus uses in the surrounding area. Therefore, the visual appearance of the proposed uses would be generally similar in nature to the existing uses adjacent to the project and would not be considered a degradation of the existing visual character or quality of the project site or its surroundings. The proposed project would result in a less than significant impact related to change in visual character or quality of the project sites and surrounding areas consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

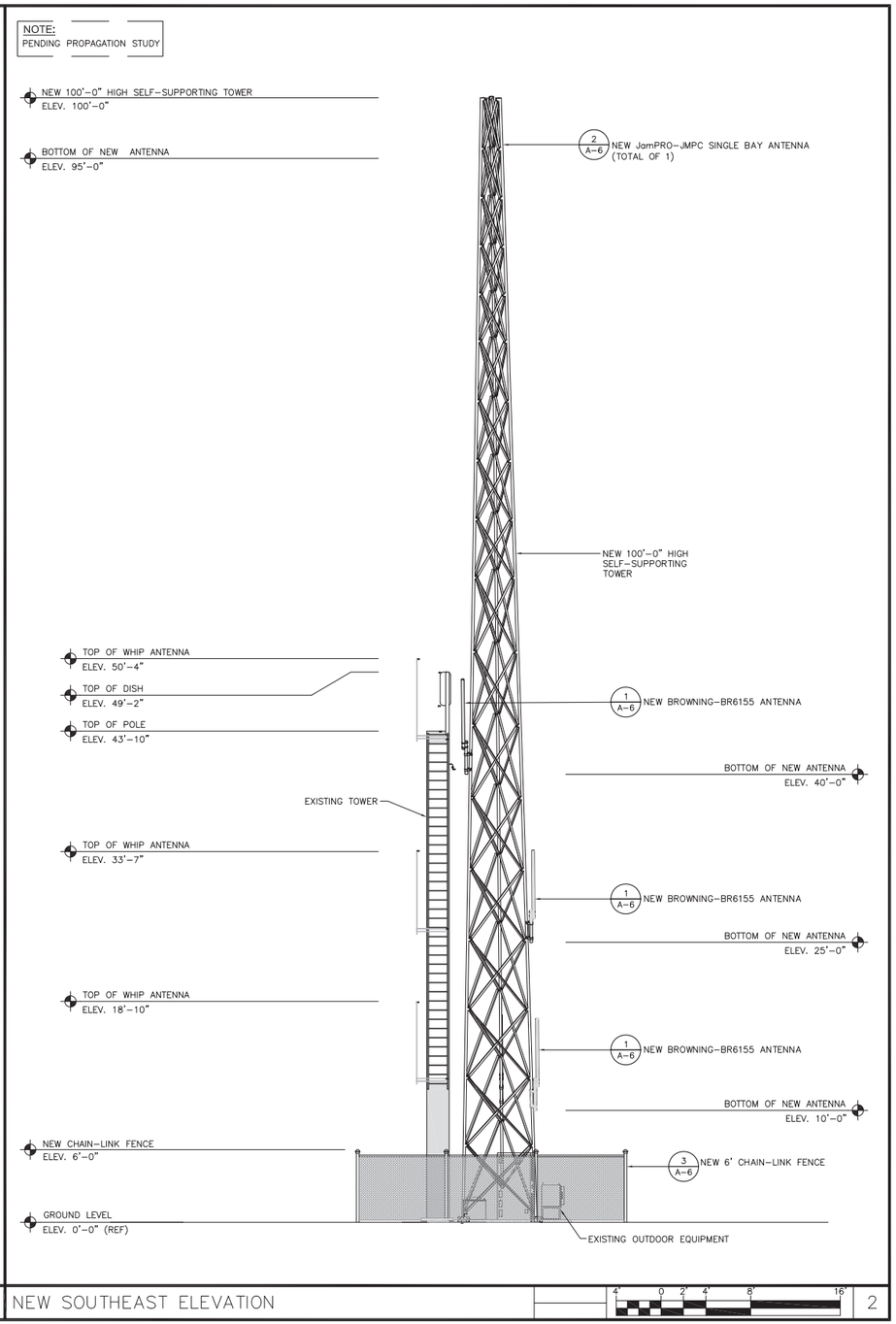
None required.



EXISTING SOUTHEAST ELEVATION

4' 0 2' 4' 8' 16'

1



NEW SOUTHEAST ELEVATION

4' 0 2' 4' 8' 16'

2

Source: Eukon Group, 2019

Elevations

Exhibit 7a

Radio and Communications Tower Replacement Project

PSOMAS

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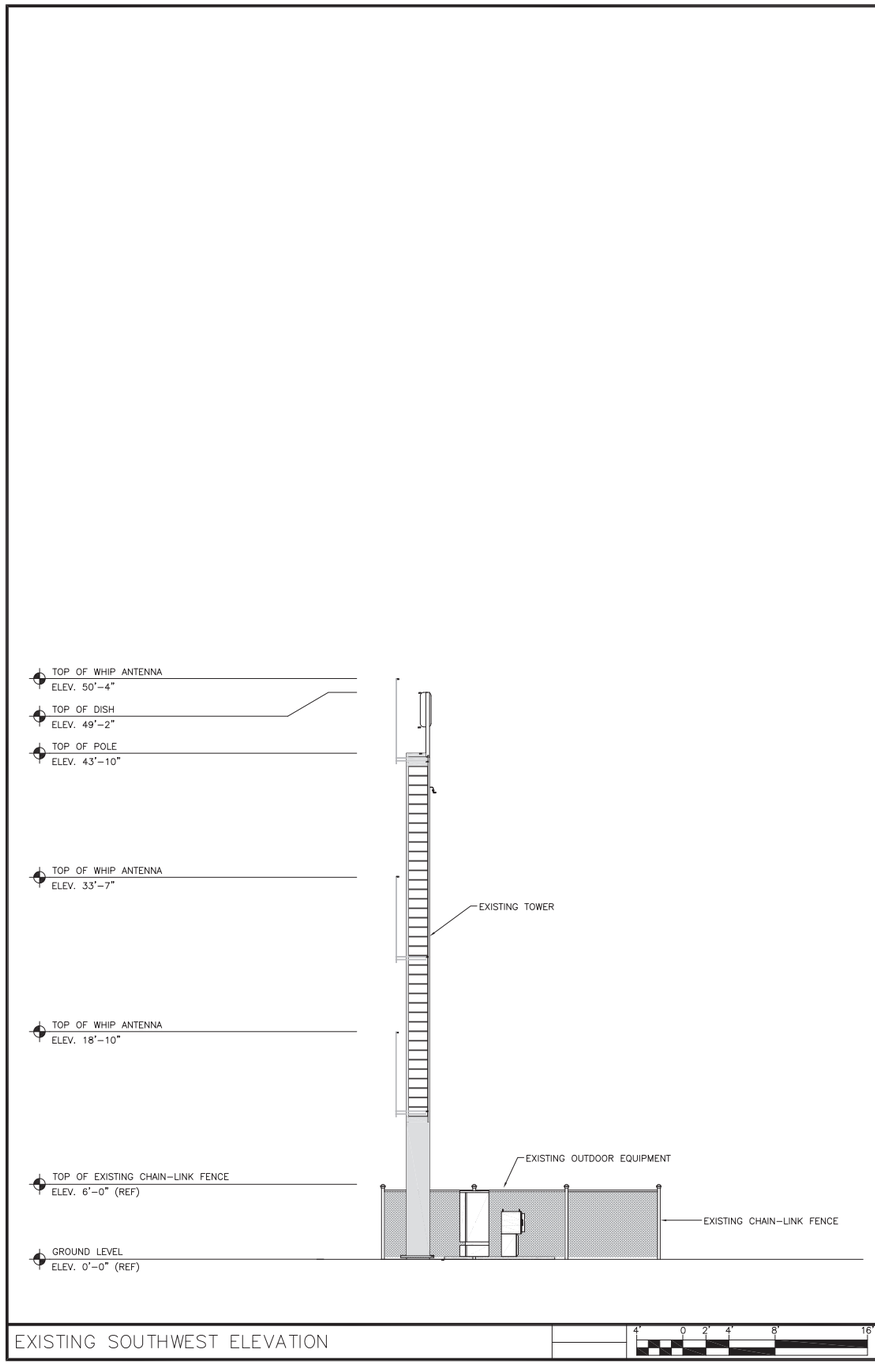
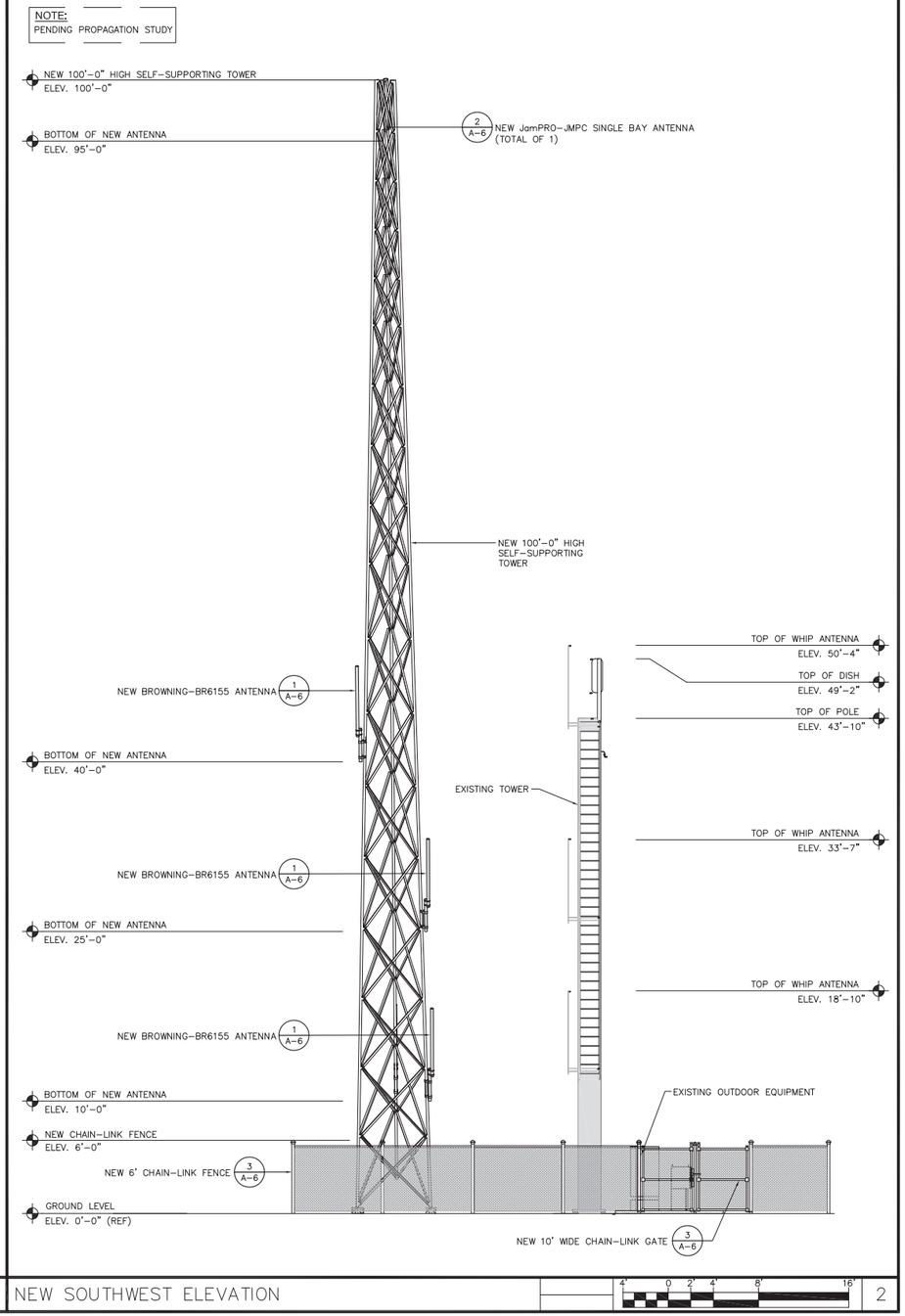


EXISTING SOUTHWEST ELEVATION 1



NEW SOUTHWEST ELEVATION 2

Source: Eukon Group, 2019

Elevations

Exhibit 7b

Radio and Communications Tower Replacement Project

PSOMAS

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View 1 – Existing photograph as seen looking northeast from Stonybrook Drive.

View 1 – Photo simulation as seen looking northeast from Stonybrook Drive.

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Photo Simulations

Exhibit 8a

Radio and Communications Tower Replacement Project

PSOMAS

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View 2 – Existing photograph as seen looking northwest from Buckskin Drive.

View 2 – Photo simulation as seen looking northwest from Buckskin Drive.

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Photo Simulations

Exhibit 8b

Radio and Communications Tower Replacement Project

PSOMAS

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View 3 - Existing photograph as seen looking southeast from East Fort Bowie Drive.

View 3 - Photo simulation as seen looking southeast from East Fort Bowie Drive.

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Photo Simulations

Exhibit 8c

Radio and Communications Tower Replacement Project

PSOMAS

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Level of Significance

The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

The analysis of Impact 4.1-4 in the 2018 EFMP EIR concluded that implementation of MM AES-1 would ensure that light and glare impacts on adjacent land uses resulting from development under the 2018 EFMP would be reduced or avoided, resulting in a less than significant impact.

Light

Short-Term (Construction-Related) Impacts

Construction activities associated with development of the proposed project would not occur after 7:00 PM Mondays through Saturdays. No construction activities are permitted on Sundays and federal holidays except for emergencies. Temporary lighting installed in construction areas to provide security for construction equipment and construction materials may cause a significant impact in the form of a nuisance to Timberline residents to the north and south of the campus. MM AES-1 requires that temporary nighttime lighting that is installed for security purposes be downward-facing and hooded or shielded to prevent security lighting from spilling outside the staging area or from directly broadcasting security lighting into the sky or onto adjacent residential properties. With implementation of MM AES-1, potential lighting impacts during construction would be reduced to a less than significant level, consistent with the findings of the 2018 EFMP EIR.

Long-Term (Operational) Impacts

Consistent with the Landscape Guidelines included in the Appendix to the 2018 EFMP, exterior site lighting would be provided as necessary to promote safety, security, sustainability, and a unified campus character through the design, installation, and maintenance of outdoor lighting. Lighting would be associated with new and reconfigured parking areas, roadways, pedestrian walkways, bikeways and bicycle storage facilities, buildings, and landscape features.

Lighting for the proposed project would be designed and installed so that all direct rays are confined to the site and adjacent properties are protected from glare. In general, lighting would be consistent with existing conditions on campus and on the project site associated with the existing 40-foot tower and appurtenant facilities and would not create a new source of substantial light that would adversely affect nighttime views in the area. This impact would be less than significant consistent with the findings of the 2018 EFMP EIR.

Glare

Short-Term (Construction-Related) Impacts

Temporary lighting would likely be used within the construction areas (notably the construction staging areas within the project site) to provide security for construction equipment and construction materials. MM AES-1 requires that temporary nighttime lighting that is installed for

security purposes be downward-facing and hooded or shielded to prevent security lighting from spilling outside the staging area or from directly broadcasting security lighting into the sky or onto nearby residential properties. These measures would also serve to reduce potential glare impacts to a less than significant level consistent with the findings of the 2018 EFMP EIR.

Long-Term (Operational) Impacts

Glare can occur during daytime and nighttime hours. Daylight glare is typically caused by light reflections from building materials such as reflective glass and polished surfaces, pavement, and vehicles. To address these potential issues under the 2018 EFMP, Mt. SAC developed design guidelines and building standards to provide direction regarding the physical design of building elements, including exterior building materials. These guidelines and standards require that building materials and finishes reduce glare and minimize reflectivity wherever possible; and, with installation of planned landscaping around the buildings, exterior building materials would not result in potentially significant glare impacts within the campus or surrounding areas, consistent with existing conditions. The potential for glare from proposed structures and facilities is less than significant, consistent with the findings of the 2018 EFMP EIR.

The proposed project would involve the installation of new lighting as necessary to provide sufficient lighting for proposed activities, security, and safety. The project site is currently subject to nighttime lighting from surrounding uses, including lighting standards associated with Parking Lot M, sports fields to the west, security lighting for existing buildings to the east, and streetlights along West Temple Avenue, as well as security lighting associated with the existing 40-foot tower and appurtenant facilities. All proposed lighting would be similar in nature to existing conditions and designed and installed so that all direct rays are confined to the site and adjacent properties are protected from glare. Additionally, vehicular access would follow existing patterns and the number of vehicles accessing the site during daytime and nighttime hours would be consistent with existing conditions. Therefore, the potential increase in glare from campus safety and security lighting and vehicle headlights that would occur with implementation of the proposed project would not represent a new source of substantial glare; this impact would be less than significant which is consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

There would be a less than significant impact associated with the creation of a new source of substantial light or glare affecting day or nighttime views in the area with the incorporation of the MM AES-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

II. AGRICULTURE AND FOREST LAND RESOURCES

Section 15128 of the State CEQA Guidelines states that "an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR". Through review of the 2018 EFMP site, Mt. SAC determined that detailed discussions for agricultural resources (designated farmland) and forestry resources were not required because the proposed project would result in effects found not to be significant due to the lack of resources on the 2018 EFMP site.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to agricultural resources.

Project Impact Analysis

Question A: 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?

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

Question C: 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 in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

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

Question E: 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?

Discussion

Based on current farmland mapping (2018) published by the California Department of Conservation, the Mt. SAC campus is mapped as "Urban and Built-Up Land" and "Other Land." The college has divided the campus into different zones, including an approximate 110-acre Agricultural Zone (also referred to as The Farm) in the northeast portion of the campus; this zone reflects the agricultural-related educational focus for this area and is not reflective of its use as for agricultural production purposes. The project site is not located within the 110-acre Agricultural Zone, nor is it used for agricultural use. According to the City of Walnut General Plan and West Valley Specific Plan Draft EIR, there are no zoning provisions related to agricultural or forestry resources, nor does the project site contain any agricultural, forest land, or timberland (City of Walnut 2018a). The project site is not considered to be farmland of significance or land in agricultural use and is not subject to any California Land Conservation Act (Williamson Act) contracts.

No forest land or timberland occurs on the campus. The project site is not defined as forest land according to Section 12220(g) of the *California Public Resources Code*, which defines forest land as "land that can support 10 percent native tree cover of any species, including hardwoods, under

natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits", nor is it zoned for Timberland Production as defined by Section 51104(g) of the *California Government Code*.

Since the project site is in an urban area, project-related changes would not result in conversion of farm or forest land to non-agricultural or non-forest uses. No impacts related to agricultural and forest land resources would occur, and no mitigation is required.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

There would be no impacts to Farmland, forest land, timberland, or Williamson Act Contracts.

III. AIR QUALITY

The analysis of air quality is tiered from the 2018 EFMP EIR and was addressed in Section 4.2, Air Quality, of that document. Relevant elements of the proposed project related to air quality include grading for tower foundation; use of diesel-powered off-road construction equipment and on-road trucks used for material deliveries/debris hauling; and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and is incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM AQ-1 All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 final off-road emissions standards. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB). Any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

Thresholds of Significance

South Coast Air Quality Management District Air Quality Significance Thresholds

The South Coast Air Quality Management District's (SCAQMD's) Air Quality Analysis Handbook (CEQA Handbook) provides significance thresholds for both construction and operation of projects within the SCAQMD's jurisdictional boundaries. The SCAQMD recommends that projects be evaluated in terms of the quantitative thresholds established to assess both the regional and localized impacts of project-related air pollutant emissions. Mt. SAC uses the current SCAQMD thresholds to determine whether a proposed project would have a significant impact. These SCAQMD thresholds are identified in Table 2, South Coast Air Quality Management District Air Quality Significance Thresholds.

TABLE 2
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds (lbs/day)[a]		
Pollutant	**Construction[b]**	**Operation**
VOC	75	55
NO_x	100	55
CO	550	550
PM10	150	150
PM2.5	55	55
SOx	150	150
Lead	3	3
Toxic Air Contaminants		
TACs (carcinogenic and noncarcinogenic)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants[c]		
NO_2	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation) Annual average ≥ 1.0 µg/m^3	
PM2.5	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation)	
CO	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 1-hour average ≥ 20.0 ppm (State) 8-hour average ≥ 9.0 ppm (State/federal)	
Sulfate	24-hour average ≥ 1.0 µg/m^3	
Lead 30-day average Rolling 3-month average	1.5 µg/m^3 (State) 0.15 µg/m^3 (federal)	

lbs/day: pounds per day; VOC: volatile organic compound; NO_x: nitrogen oxides; CO: carbon monoxide; PM10: respirable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; SOx: sulfur oxides; TAC: toxic air contaminant; SCAQMD: South Coast Air Quality Management District; GHG: greenhouse gas; MT/yr CO_2eq: metric tons per year of carbon dioxide equivalent; NO_2: nitrogen dioxide; ppm: parts per million; µg/m^3: micrograms per cubic meter.

[a] Source: SCAQMD CEQA Handbook (SCAQMD 1993).

[b] Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

[c] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
Source: SCAQMD 2019.

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Air Quality	Localized and regional air quality	An air quality impact for multiple projects in an Educational and Facilities Master Plan (EFMP) occurs if SCAQMD daily construction and daily operational thresholds, due to the net trip increase from baseline to buildout (based on fall student enrollment headcount increases), are exceeded; Site-specific project thresholds for single projects are stated below. A significant construction or operational air quality impact occurs if the SCAQMD construction and operation thresholds (See Table 1 of Report 15-116A) are exceeded. Localized Significant Thresholds (LST) analysis is required for construction emissions for all site-specific projects of 56,000 assignable square feet (asf) (80,000 gross square feet [gsf]); when a new building is located less than 417 feet (130 meters) from a sensitive receptor off-site (See Table 3 of Report 15-116A). See Report 15-116A for evaluating Scenario 1A in support of the air quality thresholds; watering twice per day, painting with 80 grams per liter (g/l) or less to lower Volatile Organic Compounds (VOCs) for the site-specific Scenario 1A. The stated thresholds apply to project air quality impacts only (existing + project baseline); not to air quality cumulative impacts (existing + project + cumulative).	CARB; California Environmental Protection Agency (CalEPA); SCAQMD; SCAQMD Localized Significance Thresholds (LST) standards.	All California Emissions Estimator Model (CalEEMod) analyses shall include watering the project site at least twice per day during grading (MM-3h). If project air quality impacts are not significant, each site-specific project remains subject to the applicable air quality Mitigation Measures included in the latest approved Educational and Facilities Master Plan (EFMP) Mitigation Monitoring Program (MMP). Renovation projects are usually excluded from further CalEEMod analyses because the construction activities do not result in significant net emissions.

Project Impact Analysis

Question A: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Discussion

The project site is located in the Los Angeles County portion of the South Coast Air Basin (SoCAB) and, for air quality regulation and permitting, is under the jurisdiction of the SCAQMD. Air quality data for the project site is represented by the Pomona Monitoring Station located at 924 North Garey Avenue, Pomona, located approximately 5 miles east of the project site, and the Azusa Monitoring Station, located at 803 North Loren Avenue, Azusa, located approximately 7 miles northwest of the project site. Pollutants measured at the Pomona Monitoring Station include ozone (O_3) and nitrogen dioxide (NO_2). Data for fine particulate matter with a diameter of less than or equal to 2.5 microns (PM2.5) and respirable matter with a diameter of less than or equal to 10 microns (PM10), and carbon monoxide (CO) was not provided for this monitoring station from the CARB website (CARB 2022a). Therefore, data for PM2.5 and PM10 was taken from the Azusa Monitoring Station. The monitoring data is presented in Table 3, Air Quality Levels Measured at the Pomona and Azusa Monitoring Stations. Table 3 also presents federal and State air quality standards with the frequency that may be exceeded.

TABLE 3
AIR QUALITY LEVELS MEASURED AT THE POMONA AND AZUSA MONITORING STATIONS

Pollutant	California Standard	National Standard	Year	Maximum Level[a]	Days State Standard Exceeded	Days National Standard Exceeded
Pomona Monitoring Station Data						
O_3 (1-hour)	0.09 ppm	None	2018	0.112	7	NA
			2019	0.098	3	NA
			2020	0.180	51	NA
O_3 (8-hour)	0.070 ppm	0.070 ppm	2018	0.092	11	10
			2019	0.083	13	12
			2020	0.124	88	84
NO_2 (1-Hour)	0.18 ppm	0.100 ppm	2018	0.067	0	NA
			2019	0.064	0	NA
			2020	0.067	0	NA
Azusa Monitoring Station Data						
PM10 (24-hour)	50 µg/m^3	150 µg/m^3	2018	78.3	10	0
			2019	80.3	4	0
			2020	149.1	9	0
PM2.5 (24-Hour)	None	35 µg/m^3	2018	41.8	NA	1
			2019	70.3	NA	1
			2020	102.7	NA	5

–: Data Not Reported or insufficient data available to determine the value; O_3: ozone; ppm: parts per million; NO_2: nitrogen dioxide; PM10: respirable particulate matter with a diameter of 10 microns or less; µg/m^3: micrograms per cubic meter; PM2.5: fine particulate matter with a diameter of 2.5 microns or less.

[a] California maximum levels were used.

Source: CARB 2022a.

The U.S. Environmental Protection Agency (USEPA) defines seven "criteria" air pollutants: O_3, CO, NO_2, sulfur dioxide (SO_2), PM10, PM2.5, and lead. These pollutants are called criteria pollutants because the USEPA has established National Ambient Air Quality Standards (NAAQS) for the concentrations of these pollutants. CARB has also established standards for the criteria pollutants, known as California Ambient Air Quality Standards (CAAQS), and the State standards are generally more restrictive than the NAAQS. When a region has air quality that fails to meet the standards, the USEPA and CARB designate the region as "nonattainment"; and the regional air quality agency must develop plans to attain the standards.

Based on monitored air pollutant concentrations, the USEPA and CARB designate an area's status in attaining the NAAQS and the CAAQS, respectively, for selected criteria pollutants. These attainment designations are shown in Table 4, Attainment Status of Criteria Pollutants in the South Coast Air Basin. As identified in Table 4, Los Angeles County is a nonattainment area for O_3, lead, PM10, and PM2.5.

TABLE 4
ATTAINMENT STATUS OF CRITERIA POLLUTANTS
IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1-hour)	Nonattainment	No standard
O_3 (8-hour)		Extreme Nonattainment
PM10	Nonattainment	Attainment/Maintenance
PM2.5	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Attainment/Nonattainment*
All others	Attainment/Unclassified	No standards

O_3: ozone; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; CO: carbon monoxide; NO_2: nitrogen dioxide; SO_2: sulfur dioxide.

* Los Angeles County is classified nonattainment for lead; the remainder of the SoCAB is in attainment of the State and federal standards.

Source: CARB 2022b.

O_3 is a secondary pollutant created when nitrogen oxides (NO_x) and VOCs react in the presence of sunlight. The predominant source of air emissions generated by project development would be from vehicle emissions. Motor vehicles primarily emit CO, NO_x, and VOCs. The NAAQS and CAAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. The NAAQS and CAAQS for O_3, CO, NO_2, SO_2, PM10, PM2.5, and lead are shown in Table 5, California and Federal Ambient Air Quality Standards.

TABLE 5
CALIFORNIA AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[a]	Secondary[b]
O_3	1-Hour	0.09 ppm (180 µg/m^3)	—	—
	8-Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM10	24-Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	—	Same as Primary
PM2.5	24-Hour	—	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1-Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8-Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	—	—
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1-Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	—
SO_2	24-Hour	0.04 ppm (105 µg/m^3)	—	—
	3 Hour	—	—	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	—
Lead	30-day Avg.	1.5 µg/m^3	—	—
	Calendar Quarter	—	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	—	0.15 µg/m^3	
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24-Hour	25 µg/m^3		
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m^3)		

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM10: respirable particulate matter 10 microns or less in diameter; AAM: Annual Arithmetic Mean; —: No Standard; PM2.5: fine particulate matter 2.5 microns or less in diameter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer.

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

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

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

Source: SCAQMD 2016.

Sensitive receptors include, but are not limited to, children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. The project site is located on the Mt. SAC campus. In accordance with the Mt. SAC 2016 CEQA Thresholds of Significance, sensitive receptors are limited to off-campus areas. However, for the purposes of this project, the nearest receptors are considered to be persons located in on-campus buildings, including administrative buildings (Buildings 23, 23A, 46A, 46, 46B, and 47, and 48),

Kinesiology/Athletics/Dance (Building 45), and outdoor fields, including Mazmanian Baseball Field (45B) and a softball field (45SB), none of which would be considered sensitive receptors. The nearest off-campus sensitive land uses are residential uses located approximately 1,250 feet to the south of the project site.

Air Quality Management Plan Consistency

On March 3, 2017, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP), which incorporates the latest scientific and technical information and planning assumptions, including the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and Southern California Association of Government's (SCAG's) latest growth forecasts. The main purpose of an AQMP is to bring an area into compliance with the requirements of federal and State air quality standards. For a project to be consistent with the AQMP, the pollutants emitted from the project should not (1) exceed the SCAQMD CEQA air quality significance thresholds or (2) conflict with or exceed the assumptions in the AQMP.

As shown in the response to Question B, below, pollutant emissions from the proposed project would be less than the SCAQMD thresholds and would not result in a significant impact. The project provides additional building capacity for academic instruction consistent with the goals of the 2018 EFMP.

With respect to the second criterion for consistency with the AQMP, the 2016–2040 RTP/SCS was adopted on April 7, 2016, and includes the most updated available local demographic data for Los Angeles County, which includes the Mt. SAC Geographic Boundaries and Service Area and has been used for SCAG's 2016 Regional Growth Forecast projections included in the 2016–2040 RTP/SCS. Since the 2016–2040 RTP/SCS contains updated projections through the 2040 horizon year encompassing the Mt. SAC Geographic Boundaries and Service Area, both the 2018 EFMP population profile data (based on the SCAG 2012 RTP Regional Growth Forecast) and SCAG's 2016 Regional Growth Forecast projections are included. Because the 2018 EFMP is consistent with the goals of the AQMP, no conflict with the 2016 AQMP would occur with the proposed project.

Because the project would not exceed the SCAQMD CEQA air quality significance thresholds, and is consistent with the goals and assumptions of the AQMP, no conflict with the 2016 AQMP would occur with the proposed project consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not conflict with the 2016 AQMP. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: 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?

Discussion

A project may have a significant impact if project-related emissions exceed federal, State, or regional standards or thresholds or if project-related emissions substantially contribute to an existing or projected air quality violation. The SCAQMD has developed construction and operational thresholds to determine whether projects would potentially result in contributing toward a violation of ambient air quality standards.

A project with daily emission rates below the SCAQMD's established air quality significance thresholds (shown in Table 5) would have a less than significant effect on regional air quality. Project emissions were estimated using the CalEEMod version 2020.4.0, based on construction activities data provided by Mt. SAC.

Construction Emissions

Air pollutant emissions would occur from construction equipment exhaust; fugitive dust from site grading; exhaust from trucks hauling debris and materials and from vehicles trips by construction workers; and VOCs from painting and asphalt paving operations. Project construction rules such as SCAQMD Rule 403, Fugitive Dust which requires watering of active grading areas as well as MM AQ-1, Tier 4 off-road engines, have been incorporated into the proposed project and are included in the emissions calculations. Additional input details are included in Appendix A.

Regional Emissions Thresholds – Maximum Daily Regional Emissions

Table 6, Estimated Maximum Daily Regional Construction Emissions, presents the estimated maximum daily emissions during construction of the proposed project and compares the estimated emissions with the SCAQMD's daily regional emission thresholds. As shown in Table 6, project construction mass daily emissions would be less than the SCAQMD's thresholds for all criteria air pollutants assuming implementation of SCAQMD Rule 403 and MM AQ-1, as discussed previously. As such, emissions from construction activities would not violate any air quality standard or substantially contribute to an existing or projected air quality violation. Although no significant impacts would result, MM AQ-1 is included as part of the 2018 EFMP EIR.

TABLE 6
ESTIMATED MAXIMUM DAILY REGIONAL CONSTRUCTION EMISSIONS

Year	Emissions (lbs/day)					
	VOC	**NO_x**	**CO**	**SOx**	**PM10**	**PM2.5**
2022	<1	1	12	<1	3	1
Maximum	***<1***	***1***	***12***	***<1***	***3***	***1***
SCAQMD Thresholds (Table 5)	*75*	*100*	*550*	*150*	*150*	*55*
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

lbs/day: pounds per day; VOC: volatile organic compound; NO_x: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; SCAQMD: South Coast Air Quality Management District.

See Appendix A, Air Quality and Greenhouse Gas Emission Modeling Data, for CalEEMod outputs.

In accordance with the Mt. SAC CEQA Thresholds of Significance, the project does not require preparation of analysis pursuant to the SCAQMD LST methodology due to the distance of the project site from the nearest offsite sensitive receptor. However, for informational purposes, Table 7 provides a LST analysis consistent with SCAQMD's LST methodology. Consistent with the LST methodology guidelines, when quantifying mass emissions for localized analysis, only emissions that occur onsite are considered. For the CO and NO_2 LST exposure analysis, receptors who could be exposed for one hour or more are considered. For the PM10 and PM2.5 LST exposure analysis, receptors who could be exposed for 24 hours are considered. The nearest receptors that could be exposed for 1 hour are students, faculty, and staff members at the administrative buildings (Buildings 23 and 23A). The nearest receptors who could be exposed for 24 hours (e.g., residences) are located approximately 1,220 feet to the south of the project site. However, to provide a conservative analysis of potential localized air pollutant exposure, the nearest on-campus uses were analyzed with the shortest distance specified within the LST guidance (SCAQMD 2008a) of 25 meters is used for all pollutants. Table 7 shows the highest maximum localized daily construction emissions for NO_x, CO, PM10, and PM2.5 for onsite construction activities. These project-related construction emissions would not exceed the localized significance thresholds developed by the SCAQMD to determine whether localized air quality impacts would occur at receptor locations proximate to the project site. Locations further from these analyzed locations would result in less exposure to air pollutants. As such, no significant localized air quality impacts would occur from construction related air pollutant emissions attributable to the project consistent with the findings of the 2018 EFMP EIR.

TABLE 7
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS (LBS/DAY)

Year	NO_x	CO	PM10	PM2.5
Maximum Daily Emissions	1	11	2	1
SCAQMD LST[a]	***103***	***612***	***4***	***3***
Exceeds Thresholds	***No***	***No***	***No***	***No***

lbs/day: pounds per day; NO_x: nitrogen oxides; CO: carbon monoxide; PM10: respirable particulate matter 10 microns or less in diameter; PM2.5: fine particulate matter 2.5 microns or less in diameter; SCAQMD: South Coast Air Quality Management District; LST: Localized Significance Threshold.

[a] Thresholds for Source Receptor Area 10, Pomona/Walnut Valley for a 1-acre site, 25-meter receptor distance.

Sources: SCAQMD 2009.

Operational Emissions

Operational emissions for the project would consist of one to two annual trips to the site for maintenance, which is consistent with current operations for the existing use. The project would not result in electrical or natural gas consumption. As such, the project would have very minimal emissions. Therefore, the project's operational impact on regional emissions would be less than significant; and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

The proposed project would not result in any regional or localized air quality impacts and no additional project-specific mitigation measures are necessary.

Level of Significance

The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State

ambient air quality standard with incorporation of MM AQ-1. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question C: Would the project expose sensitive receptors to substantial pollutant concentrations?

Discussion

A significant impact may occur when a project would generate pollutant concentrations to a degree that would significantly affect sensitive receptors, which include populations more susceptible to the effects of air pollution than the population at large. Exposure of sensitive receptors is addressed for the following situations: CO hotspots, criteria pollutants and toxic air contaminants (TACs), specifically diesel particulate matter [DPM]) from on-site construction, and exposure to off-site TAC emissions.

Carbon Monoxide Hotspot

In an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations generally are found close to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (e.g., congested intersection) increases. Therefore, for purposes of providing a conservative worst-case impact analysis, CO concentrations typically are analyzed at congested intersection locations. If impacts are less than significant when measured near congested intersections, impacts would also be less than significant at more distant sensitive-receptors and other locations. An initial screening procedure is provided in the *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol), developed in 1997 for the California Department of Transportation to determine whether a project poses the potential to generate a CO hotspot. The key criterion is whether the project would worsen traffic congestion at signalized intersections operating at level of service (LOS) E or F. If a project poses a potential for a CO hotspot, a quantitative screening is required.

The 2018 EFMP EIR was evaluated for the potential for CO hotspots and was found to not result in the generation of CO hotspots at intersections local to the campus and consequently result in less than significant impacts. Because the proposed project would require one to two annual trips, traffic generated by the proposed project would not generate CO hotspots and result in less than significant impacts, consistent with the findings of the 2018 EFMP EIR.

Criteria Pollutants

Exposure of persons to NO_x, CO, PM10, and PM2.5 emissions is discussed in response to Question B, above. There would be no significant impacts consistent with the findings of the 2018 EFMP EIR.

Toxic Air Contaminant Emissions

Construction activities would result in short-term, project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., grading and excavation), paving, building construction, and other miscellaneous activities. CARB identified DPM as a TAC in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer time period. According to the Office of Environmental Health Hazard Assessment, health risk assessments—which determine the exposure of sensitive receptors to TAC emissions—should be based on a

30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project.

Relatively few pieces of off-road, heavy-duty diesel equipment would be operated; and the total construction period would be relatively short when compared to a 30-year exposure period. In addition, the nearest off-site residential development is located approximately 1,220 feet away. This large distance would allow for the relative low amounts of DPM generated by the project to disperse such that health risk exposure impact resulting from the project would be less than significant, and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

The project's operations phase emissions would be negligible, as the project does not generate trips (other than one to two annual maintenance trips) or consume power. Therefore, the impact would be less than significant, and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None.

Level of Significance

The proposed project would not expose sensitive receptors to substantial pollutant concentrations. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

According to the SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The project does not include any uses identified by the SCAQMD as being associated with odors and, therefore, would not produce objectionable odors. As such, the project would have no significant impact in regard to objectionable odors and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None.

Level of Significance

The proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

IV. BIOLOGICAL RESOURCES

The analysis of biological resources is tiered from the 2018 EFMP EIR and was addressed in Section 4.3, Biological Resources, of that document. Relevant elements of the proposed project related to biological resources include removal of vegetation and minor grading activity within the project site.

The following MMs were identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and are incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM BIO-3 No project-related activities shall result in the failure of a nest protected under the conditions set forth in the *California Fish and Game Code*. The nature of the project may require that work would be initiated during the breeding season for nesting birds (March 15–September 15) and nesting raptors (February 1–June 30). To avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within three days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed.

If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone (at a minimum of 25 feet) around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 feet for nesting birds and 300–500 feet for nesting raptors), unless otherwise determined by a qualified Biologist; and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Biological Resources	Rare and endangered species	Non-compliance with a Conservation Plan in the latest FMP for a site-specific project is a significant impact; Non-compliance with responsible agencies' biological resources regulations, permits or environmental standards for the latest FMP or for a site-specific project is a significant impact; (See Section 1: Aesthetics for light and glare thresholds for biological resources areas)	U.S. Army Corps of Engineers U.S. Fish and Wildlife Service (USFWS) State Water Resources Control Board (SWRCB) California Department of Fish and Wildlife (CDFW)	Approved permits from responsible agencies; Case studies if needed; Unless there are unusual circumstances, no additional mitigation for biological resources beyond that included in the latest approved FMP MMP.

Project Impact Analysis

Question A: 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?

Discussion

The analysis of Impact 4.3-1 in the 2018 EFMP EIR concluded that, with implementation of MMs BIO-1 through BIO-3, development under the 2018 EFMP would result in less than significant impacts on candidate, sensitive, and special-status plant and wildlife species.

The project site is located along the top of a disturbed ridgeline. The project site and vicinity are mostly undeveloped except for the dirt access road and the existing tower facility. The site is also adjacent to two elevated storage tanks, which are approximately the same length as the existing tower facility. The undeveloped areas onsite and adjacent to the site are predominantly comprised of non-native annual grasses and low-growing invasive plant species, including brome grass (*Bromus* sp.), mustard (*Brassica* spp.), Russian thistle (*Salsola tragus*), and castor beach (*Ricinus communis*). Two mature ornamental oak trees (*Quercus* sp.) were recently transplanted along the western side of the existing tower facility and storage tanks. Neither tree will be affected by the proposed project. No southern California black walnut trees are present onsite or in the vicinity and no impacts to this species are anticipated. Approximately 50 feet downslope to the west from the project site is a large, native shrub restoration area. The species present include California

sagebrush (*Artemesia californica*), California encelia (*Encelia californica*), blue elderberry (*Sambucas nigra*), and mule fat (*Baccharis salisifolia*). None of these plant species would be affected as a result of the proposed project.

No native plant species were observed within the proposed project impact area. The 2018 EFMP EIR concluded that no special status plant species are likely to occur on the proposed impact area or vicinity. Therefore, no impacts to any special status plant species are anticipated and no further measures are necessary.

Although the project site lacks native vegetation and is disturbed, special status wildlife species have potential to occur in the vicinity and may traverse the project site, specifically San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and coastal whiptail (*Aspidoscelis tigris stejnegeri*), both California Species of Special Concern. Potential impacts to these species were appropriately addressed in the 2018 EFMP EIR and no changes in the level of potential impact significance are anticipated.

The vegetation adjacent to the project site, including the oak trees and restoration area to the west, have the potential to support nesting birds and raptors protected by the Migratory Bird Treaty Act (MBTA) and the *California Fish and Game Code*. Impacts on an active bird/raptor nest would be considered potentially significant. Implementation of MM BIO-3 is identified to ensure compliance with these laws and policies. With implementation of BIO-3, the proposed project would result in less than significant impacts on nesting birds consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not 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 CDFW or the USFWS. Impacts would be less significant with incorporation of the BIO-3 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: 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 US Fish and Wildlife Service?

Discussion

The analysis of Impact 4.3-2 in the 2018 EFMP EIR concluded that, with implementation of MMs BIO-1 through BIO-3, development under the 2018 EFMP would result in less than significant impacts to riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

As stated previously, the project site is currently undeveloped. No riparian habitat and no sensitive communities identified in local or regional plans or policies by the CDFW or by the USFWS are located on the project site. Additionally, the project site does not support any federally protected wetlands as defined by Section 404 of the Clean Water Act; therefore, the proposed project would not impact any marsh, vernal pool, or coastal habitats. The proposed project would not impact

any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS consistent with the findings of the 2018 EFMP EIR and no mitigation measures are recommended.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not affect any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

The analysis of Impact 4.3-3 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would result in less than significant impacts to federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.

As stated previously, the project site is currently undeveloped. The project site does not support any drainage features or potentially federally protected wetlands as defined by Section 404 of the Clean Water Act. The proposed project would not impact any marsh, vernal pool, or coastal habitats. No impact would occur, and no mitigation would be required.

Level of Significance

The proposed project would not impact any federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question D: 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?

Discussion

The analysis of Impact 4.3-4 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would result in less than significant impacts to the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The project site is very small in size and although impacts would include undeveloped areas, they would abut existing structures (the existing tower facility). No wildlife corridors or native nursery

sites would be lost as a result of the proposed project. Any potential impact would be less than significant, and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would result in less than significant impacts related to the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

The analysis of Impact 4.3-5 in the 2018 EFMP EIR concluded that, with implementation of MM BIO-2, development under the 2018 EFMP would result in less than significant impacts to local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

No trees of any species, including southern California black walnut, shall be impacted by the proposed project and no conflicts with the Mt. San Antonio College California Black Walnut Management Plan would occur (Psomas 2019). The proposed project is not subject to any additional applicable policies or ordinances related to the protection of biological resources on the project site. Therefore, no impacts would occur consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to conflict with EMFP policies protecting biological resources. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question F: 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?

Discussion

The analysis of Impact 4.3-6 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would result in less than significant impacts to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

The project site is not located within a USFWS or CDFW designated habitat conservation plan or natural community conservation plan. It should be noted that the campus is organized into multiple zones, including three which support biological resources and habitats: (1) the Land Use Management and Athletics Zone, (2) the Wildlife Sanctuary/Open Space Zone, and (3) the Agricultural/Sustainable Development Zone. The project site is not located in these designated areas on campus and would not conflict with these campus plans. The proposed project would not conflict with any adopted habitat or conservation plans. No impact would occur consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to 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 proposed project impacts were adequately addressed in the 2018 EFMP EIR.

V. CULTURAL RESOURCES

The analysis of cultural resources is tiered from the 2018 EFMP EIR and was addressed in Section 4.4, Cultural Resources, of that document. Information in this section is also from a cultural resource research conducted in support of the Mt. SAC 2015 Facilities Master Plan Update and Physical Education Projects Subsequent Program and Project Final Environmental Impact Report (2015 SEIR). The results of these research methods were used to assess the potential impacts for the proposed project.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and is incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM CULT-3 Prior to initiation of grading activities, the following requirements shall be incorporated on the cover sheet of the Grading Plan under the general heading "Conditions of Approval":

a. A qualified archaeologist that meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in Archaeology (Archaeologist) shall be present at the pre-grade meeting to consult with the Contractor and other consultants prior to the start of earth-moving activities.

b. During construction grading and site preparation activities, the Contractor shall monitor all construction activities. In the event that cultural resources (i.e., prehistoric sites, historic sites, and/or isolated artifacts) are discovered, work shall be halted immediately within 50 feet of the discovery and the Contractor shall inform the Mt. SAC Project Manager. The Archaeologist shall analyze the significance of the discovery and recommend further appropriate measures to reduce further impacts on archaeological resources. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Facilities Planning & Management shall monitor compliance.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Cultural Resources	Historic, archaeological, and paleontological resources	Non-compliance with California law and/or an approved final cultural resources study's mitigation measures is a significant impact for an FMP or a site-specific project.	Office of Historic Places Native American Heritage Commission (NAHC) California Assembly Bill No. 52 California Senate Bill No. 18	Case studies Unless there are special circumstances, no additional mitigation for cultural resources beyond that included in a case study or the latest approved FMP MMP.

Project Impact Analysis

Question A: Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Discussion

As discussed in Section 2.0, Project Description, the proposed 100-foot communications tower would replace the existing 40-foot communications tower, at a location slightly to the southeast of the existing tower on Reservoir Hill. As detailed on Exhibit 4.4-1, Mt. SAC Historic District, of the 2018 EFMP EIR, the existing communications tower is located within the Mt. SAC Historic District; however, it has not been determined that it is eligible for individually listing (Mt. SAC 2019). Therefore, the proposed project would not impact or demolish any known historical resources listed either on the California Register of Historic Resources (CRHR) or determined to be potentially eligible for the California Register. Nor would the project negatively impact any contributing element to the Mt. SAC Historic District. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The project would have no impact related to the potential to cause a substantial adverse change to a significant historical resource as defined in Section 15064.5 of the State CEQA Guidelines. The project's impacts were adequately addressed in the 2015 SEIR and 2018 EFMP EIR.

Question B: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Discussion

According to the SCCIC literature review and records search conducted for the 2018 EFMP EIR, 15 cultural resource studies have been undertaken within a half mile of the campus; none of these reports included the campus. The records search did not identify any archaeological resources

(e.g. village sites, shell or trash middens) on the campus. Furthermore, the search failed to identify archaeological resources within ½ mile of the campus. As such, there are no known archaeological resources within the proposed project site or within ½ mile of the project site.

Based on archival research for the local area, it is likely that Native Americans (Tongva) traversed through the project site in prehistoric times. However, the project site and surrounding area has been developed through significant landscaping and hardscaping. Nevertheless, there is always the potential for intact archaeological resources buried beneath the surface. Therefore, there is always the possibility intact archaeological resources may be damaged by earthmoving activities during project construction, which would represent a significant impact. To avoid impacts to archaeological resources, MM CUL-3 requires that a qualified Archaeologist (a crossed trained Archaeologist/Paleontologist is acceptable) be retained for on-call services in the event of the discovery of cultural resources during trenching activities. Any discovered resources would be evaluated for significance by the monitor and a mitigation plan would be developed. Impacts on archaeological resources would be less than significant with implementation of MM CULT-3 consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The project would have less than significant impact related to a substantial adverse changed in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines with the incorporation of MM CULT-3 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

Based on archival research and review of the project site, there are no known human remains within the project site. In the unlikely event of an unanticipated encounter with human remains, all work is required to halt in the immediate vicinity of the discovery and the County Coroner must be notified (*California Public Resources Code* §5097.98). The Coroner is required to determine whether the remains are of forensic interest. If the Coroner, with the aid of an Archaeologist, determines that the remains are prehistoric, s/he is required to contact the NAHC. The NAHC is responsible for designating the most likely descendant (MLD), who is responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code.* The MLD is required to make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation is required to be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD's recommendations, the landowner is required to rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

There would be a less than significant impact, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant potential to disturb any human remains, including those interred outside of formal cemeteries. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

VI. ENERGY

The analysis of energy is tiered from the 2018 EFMP EIR and was addressed in Section 4.5, Energy, of that document. Relevant elements of the proposed project related to energy include grading for tower foundation; use of diesel-powered off-road construction equipment and on-road trucks used for material deliveries/debris hauling; and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and is incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM AQ-1 All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 final off-road emissions standards. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB). Any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the 2018 EFMP, they shall be applied to determine the proposed Project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
CEQA Checklist Item V (a – c);	Wasteful, inefficient, or unnecessary consumption of energy; Renewable energy or energy efficiency measures	Non-compliance with an Energy Conservation Plan for site-specific projects is a significant impact	CEC	
CEC: California Energy Commission				

Project Impact Analysis

Would the project:

Question A: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Discussion

Construction

Construction energy use would be considered wasteful, inefficient, or unnecessary if construction equipment is not well maintained such that its energy efficiency is substantially lower than newer equipment; if equipment idles even when not in use; if construction trips utilize longer routes than

necessary; or if excess electricity and water[1] are used during construction activities. Pursuant to the *California Code of Regulations* (specifically, Title 13, Section 2485), all diesel-fueled commercial motor vehicles must not idle for more than five consecutive minutes at any location. Mandatory compliance should reduce fuel use by construction vehicles. Based on MM AQ-1, construction equipment would utilize equipment that complies with Tier 4 final engine standards. Tier 4 final engines are the newest, lowest emitting off-road engines. Fuel efficiency for these engines would not be considered inefficient. Fuel energy consumed during construction would also be temporary in nature, and there are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the region or State. Short-term energy usage for construction of the project and other 2018 EFMP projects would result in long-term energy savings from renovated and newly constructed buildings that are compliant with the current Title 24 *California Building Code* and goals/strategies adopted by Mt. SAC.

Construction of the project would require the use of construction equipment for site preparation and building activities; all off-road construction equipment is assumed to use diesel fuel. Transportation energy use depends on the type and number of trips, vehicle miles traveled, fuel efficiency of vehicles, and travel mode. During construction, transportation energy would be used for the transport and use of construction equipment, from delivery vehicles and haul trucks, and from construction employee vehicles that would use gasoline and/or diesel fuel. The use of these energy resources fluctuates according to the phase of construction and would be temporary. Table 8 quantifies anticipated energy use during construction activities.

TABLE 8
CONSTRUCTION-RELATED ENERGY USE

Source	Gasoline Fuel (gallons)	Diesel Fuel (gallons)
Off-road Construction Equipment	0	1,408
Worker commute	462	2
Vendors	47	1
On-road haul	0	12
Totals	**509**	**1,423**

Construction related to the project would result in less than significant impacts to energy with implementation of AQ-1, consistent with the findings of the 2018 EFMP EIR.

Operations

The operations phase of the project would result in energy consumption related to transportation. In addition, as detailed previously, potential energy impacts of the project are evaluated with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include the following:

(1) Decreasing overall per capita energy consumption;
(2) Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
(3) Increasing reliance on renewable energy sources.

[1] Indirect energy use for the extraction, treatment, and conveyance of water.

Long-term energy use would be considered inefficient if alternative energy sources are not used when they are feasible/available. The communications tower replacement would be developed to support 2-way communication for the campus associated with the EOC, the Altertus campus emergency mass notification system, and broadcast transmission for the campus radio station, 90.1 FM Mt. Rock. This project supports communications with emergency service providers, campus staff, faculty, students, as well as provides broadcast of the campus radio station. The project would not require additional power consumption for the operation of the new tower. Transportation energy use would be associated with two maintenance and inspection trips per year to ensure proper operation of the communications equipment. As such, energy consumption for this project is considered minimal. Because the project would be constructed to meet emergency services communication in addition to educational entertainment and educational needs, energy use associated with the project would be minimal and not be considered inefficient, wasteful, or unnecessary. As such, the energy used for the construction and operations of the project would result in less than significant impacts to energy, and no mitigation measures are required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts related to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation with implementation of MM AQ-1. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Discussion

As discussed above, strategies and measures have been implemented at the State level with the California's Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings and the *CALGreen Code* and at the local level with the City of Walnut's adoption of the *CALGreen Code* and Title 24 Energy Efficiency Standards, Title 31 of the County Code (the *Los Angeles County Green Building Standards Code*). The 2018 CAP includes four distinct areas that identify broad strategies for achieving a more sustainable campus: Sustainable Building Strategies, Mobile Source Emissions Reduction Strategies, Solid Waste Reduction Strategies, and Water Conservation Strategies. Mt. SAC would implement the 2018 CAP to the fullest extent possible, consistent with budgetary constraints, and regulatory and programmatic requirements.

The project would not require additional electricity consumption for the operation of the proposed tower. Therefore, the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The impact would be less than significant; no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts related to conflicting with or obstructing a State or local plan for renewable energy or energy efficiency. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

VII. GEOLOGY AND SOILS

The following analysis is based on Appendix C, *Geotechnical Study Report for Proposed Radio Tower and Related Improvements Mount San Antonio College, Walnut, California* (Geotechnical Report), prepared for the site by Converse Consultants (2015).

The following MMs were identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and are incorporated as part of the proposed project and assumed in the analysis presented in this section. It should be noted that inclusion of recommendations from final geotechnical reports is a standard condition applied to all projects on campus (not just project included in the 2018 EFMP).

MM GEO-1 Prior to the approval of project plans by the Division of the State Architect (DSA), a site-specific geotechnical study shall be prepared for each proposed structure. The Geotechnical Report shall be prepared by a registered Civil Engineer or certified Engineering Geologist and shall contain site-specific evaluations of the seismic and geologic hazards affecting the project and shall identify recommendations for earthwork and construction. All recommendations from forthcoming site-specific geotechnical studies shall be included in the site preparation and building design specifications. Compliance with this requirement shall be verified by the DSA as part of the project certification process, which includes review and approval of the site-specific geotechnical studies by the California Geological Survey (CGS).

MM GEO-4 Prior to initiation of grading activities, the following requirements shall be incorporated on the cover sheet of the Grading Plan under the general heading "Conditions of Approval":

a. A qualified Paleontologist and Paleontological Monitor shall be present at the pre-grade meeting to consult with the grading contractor and other consultants prior to the start of earth-moving activities. At the meeting, the Paleontologist shall establish procedures for paleontological resources surveillance based on the location and depths of paleontologically sensitive sediments, and shall establish, in cooperation the Mt. SAC Project Manager, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the fossils as appropriate.

b. A qualified Paleontological Monitor shall be present at the site when grading and excavation in paleontologically sensitive sediments (Puente Formation and Quaternary older alluvial fan deposits). Paleontological monitoring is not required in areas where excavation occurs within fill soils.

c. The Monitor shall have the authority to temporarily direct, divert, or halt grading to allow recovery of paleontological resources. In areas rich in micro-vertebrates, collection of large bulk samples of matrix for later water screening to recover small bones and teeth shall be part of the paleontological salvage program.

d. Fossils recovered from this project shall be cleaned, stabilized, identified, and documented. A report on the paleontological resources recovered from the parcels shall be prepared by the Paleontologist and submitted to Mt. SAC Facilities Planning & Management.

e. Fossils with their contextual data must be deposited at a recognized museum or institution.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Open Space, Managed Resources, and Working Landscapes	Open spaces containing natural resources and working landscapes; Conversion of oak woodlands; Groundwater recharge; Soil erosion or the loss of topsoil; Special management due to hazards including unstable soil areas, liquefaction zones, areas subject to landslides and expansive soil areas.	Construction of a new building on campus located in a California Seismic Hazard Zone is a significant impact; Exposure of buildings or persons to liquefaction or subsidence safety hazards identified in an approved site-specific or FMP geology/soils report is a significant impact; Safety risks for buildings or persons due to expansive soil identified in an approved site-specific or FMP geology/soils report is a significant impact.	CGS DSA	Case studies; State law and civil engineers' recommendations; Unless there are unusual circumstances, no additional mitigation for geology/soils beyond that included in the latest approved FMP MMP; Obtain assessment and recommendations from civil engineers if damage from ground-borne vibration may occur during construction.

Project Impact Analysis

Question 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.

The analysis of Impact 4.6-1(i) in the 2018 EMFP EIR determined that there would be less than significant impacts related to fault rupture.

Discussion

The project site, as with the entire Southern California region, is subject to secondary effects from earthquakes. Ground rupture occurs when movement on a fault breaks through the surface. The State of California has established Earthquake Fault Zones for the purpose of mitigating the hazard of fault rupture by prohibiting the location of most human occupancy structures across the traces of active faults. The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. No surface faults are known to project through or towards the site (Converse 2015). Since no known active or potentially active faults traverse the campus, no impact from risk of loss, injury, or death involving fault rupture of a known earthquake fault would be associated with implementation of the proposed project consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have not impact related to rupture of a known earthquake fault. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

(ii) Strong seismic ground shaking?

Discussion

The analysis of Impact 4.6-1(ii) in the 2018 EFMP EIR determined that, with implementation of MMs GEO-1, there would be less than significant impacts related to strong seismic ground shaking.

The Mt. SAC campus is situated in a seismically active area that has historically been affected by generally moderate to occasionally high levels of ground motion. The closest known faults to the project site with a mappable surface expression are the San Jose Fault, located approximately 0.7 mile to the north, and the Chino-Central Avenue (Elsinore) Fault, located approximately 3.7 miles to the southeast. Because the project site is located in a seismically active region, as is all of Southern California, the Geotechnical Report identifies that the project area would likely experience ground shaking during the life of the project.

All structures constructed as part of the proposed project would be designed in accordance with applicable building standards at the time the grading plans are submitted. The Geotechnical Report concludes that the proposed project is feasible from a geotechnical standpoint, provided the recommendations provided in the Geotechnical Report are incorporated into the design and construction of the proposed project. Implementation of recommendations identified in the Geotechnical Report is standard practice at Mt. SAC (refer to MM GEO-1). Adherence to all applicable building codes and implementation of the recommendations in the Geotechnical Report would ensure that impacts associated with ground shaking would be less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts related to strong seismic ground shaking with incorporation of MM GEO-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

(iii) Seismic-related ground failure, including liquefaction?

Discussion

The analysis of Impact 4.6-1(iii) in the 2018 EFMP EIR determined that, with implementation of MM GEO-1, there would be less than significant impacts related to seismic-related ground failure, including liquefaction.

Liquefaction is the sudden decrease in the strength of cohesionless soils due to dynamic or cyclic shaking. Saturated soils behave temporarily as a viscous fluid (liquefaction) and, consequently, lose their capacity to support the structures founded on them. The potential for liquefaction decreases with increasing clay and gravel content, but increases as the ground acceleration and duration of shaking increase. Liquefaction potential has been found to be the greatest where the groundwater level and loose sands occur within 50 feet of the ground surface.

According to the State of California Seismic Hazard Zones Map, the site is located within an area of potential liquefaction (Converse 2015). Groundwater was not encountered in the borings drilled to a maximum depth of 51.5 feet. The historically highest groundwater level at the site is greater than 50 feet bgs. All the soils below 5 feet are dense bedrock materials. As a result of the absence of shallow groundwater and shallow bedrock materials, it is concluded that the subject site is not considered susceptible to liquefaction. The total seismically-induced settlement is anticipated to be on the scale of 0.50 inches and differential settlement to be less than 0.25 inches over a distance of 30 feet (Converse 2015).

Seismically induced lateral spreading involves primarily lateral movement of earth materials due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. The topography at the project site and in the immediate vicinity of the site is relatively flat, with no significant nearby slopes or embankments. Under these circumstances, the potential for lateral spreading at the project site is considered negligible (Converse 2015).

Therefore, the proposed project would not be exposed to seismic-related ground failure, and no mitigation is required. The Geotechnical Report concludes that the proposed project is feasible from a geotechnical standpoint, provided the recommendations provided in the Geotechnical Report are incorporated into the design and construction of the proposed project. Implementation of recommendations identified in the Geotechnical Report is standard practice at Mt. SAC (refer to MM GEO-1). Impacts related to seismically-induced settlement would be less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts related to seismic-related ground failure, including liquefaction with incorporation of MM GEO-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

(iv) Landslides?

Discussion

The analysis of Impact 4.6-1(iv) in the 2018 EFMP EIR determined that, with implementation of MMs GEO-1 and GEO-3, there would be less than significant impacts related to landslides.

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. According to the Geotechnical Report, the project site is not located within an area of earthquake induced landslides. The project site is underlain by dense, shallow bedrock on a hilltop ridge. No evidence of landslides was observed on descending hillside slopes below the site. The potential for seismically induced landslides to affect the proposed site is considered to be very low (Converse 2015). Additionally, no portion of the campus is identified on the State of California Seismic Hazard Zones San Dimas Quadrangle (DMG 1998) as “Earthquake-Induced Landslide” area. Therefore, the impact related to potential exposure to seismic-related landslides would be less than significant consistent with the findings of the 2018 EFMP EIR.

Despite this finding, MM GEO-1 would be implemented which requires all recommendations from forthcoming site-specific geotechnical studies to be included in the site preparation and building design specifications. Therefore, design and construction following the recommendations contained in the project-specific geotechnical studies and compliance with applicable local and State regulations would ensure the potential for landslide hazards is less than significant consistent with the findings of the 2018 EFMP EIR. In addition, proposed project would be required to comply with current California Building Code and Uniform Building Code, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts related to landslides with incorporation of MMs GEO-1 and GEO-3 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: Would the project result in substantial soil erosion or the loss of topsoil?

Discussion

The analysis of Impact 4.6-2 in the 2018 EFMP EIR concluded that there would be less than significant impacts related to soil erosion and loss of topsoil with implementation of MM GEO-3 and MM HYD-1 compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit.

As discussed in Section IX, Hydrology and Water Quality, construction activities associated with the proposed project would be required to comply with standard construction practices, and the

proposed project would comply with the NPDES Construction General Permit through the development and implementation of a stormwater pollution prevention plan (SWPPP). As part of the SWPPP, erosion and sediment control Best Management Practices (BMPs) would be required. In addition to the requirements of the NPDES General Construction Permit, regulatory and grading permit requirements include provisions that require reduction of erosion and sedimentation impacts during construction. Full compliance with applicable local, State, and federal regulations would ensure that water quality impacts resulting from erosion during construction would be less than significant. No significant impacts related to erosion on the project site are anticipated, and no mitigation is required.

As detailed in Section 4.6, Geology and Soils, of the 2018 EFMP EIR ground disturbance during grading and construction could lead to erosion and topsoil loss during wind or rain events, resulting in a potentially significant impact. Development projects that disturb one acre or more of land are required to comply with the NPDES Construction General Permit. In compliance with the NPDES permit, erosion potential during construction activities would be managed with BMPs implemented at each construction site as part of an SWPPP during construction activities to minimize erosion impacts. As part of the SWPPP, erosion and sediment control BMPs would be required pursuant to the NPDES General Construction Permit as well as permanent stormwater management features that would collectively meet the requirements set forth in the Low Impact Development (LID) Manual and include permanent BMPs that would reduce loose soils, sediment, and other pollutants from stormwater runoff. The project would also have to comply with the grading requirements of the City of Walnut, which would reduce erosion during construction and operation.

Compliance with the NPDES Construction General Permit would reduce erosion and sedimentation impacts during construction and long-term operations. Stormwater quality impacts resulting from erosion during construction and long-term operations would be less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to soil erosion and the loss of topsoil. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question C: 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?

Discussion

The analysis of Impacts 4.6-3 in the 2018 EFMP EIR determined that, with implementation of MMs GEO-1 and GEO-3, there would be less than significant impacts related to unstable geologic materials.

According to the Geotechnical Report, soil materials encountered at the site consist of existing fill soils placed during previous site grading operations, natural colluvial soils, and sedimentary bedrock of the Puente Formation to a maximum depth of 51.5 bgs. Undocumented fills, approximately a foot in thickness were encountered in the borings. Deeper artificial fill may exist

at the site. The fill and colluvial soil deposits encountered consists primarily of silty sand. The sedimentary bedrock primarily consists of slightly to moderately weathered siltstone, claystone, and sandstone.

As discussed previously, the Geotechnical Report concluded that the potential for earthquake-induced landslides, lateral spreading, and liquefaction would be negligible to very low and not represent a significant impact. Additionally, no water extractions or similar practices are anticipated to be necessary that are typically associated with project-related subsidence effects.

Project construction would be required to comply with applicable building standards. Also, the Geotechnical Report concludes that the project is feasible from a geotechnical standpoint, provided the recommendations in the Geotechnical Report are incorporated into the design and construction of the proposed project. Implementation of recommendations identified in the Geotechnical Report is standard practice at Mt. SAC (refer to MM GEO-1). There would be less than significant impacts related to unstable soils with adherence to applicable building code requirements and building standards and with implementation of recommendations identified in the Geotechnical Report consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts associated with unstable soils with incorporation of MM GEO-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question D: 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?

Discussion

The analysis of Impact 4.6-4 in the 2018 EFMP EIR determined that, with implementation of MM GEO-1 and MM GEO-3, there would be less than significant impacts related to expansive soils.

Expansive soils are materials that, when subject to a constant load, are prone to expand when exposed to water. Foundations constructed on these soils are subject to uplifting forces caused by swelling. As stated in the Geotechnical Report, the upper 5 feet of soils on the site have a very low expansion potential. Because on-site soil materials would be mixed during grading and the expansion potential may change, the Geotechnical Report recommends that expansion potential of soils be verified after grading.

Project construction would be required to comply with all applicable building standards. Also, the Geotechnical Report concludes that the project is feasible from a geotechnical standpoint, provided the conclusions and recommendations in the Geotechnical Report are incorporated into the project plans and specifications and are followed during construction of the proposed project Implementation of recommendations identified in the Geotechnical Report is standard practice at Mt. SAC (refer to MM GEO-1). There would be less than significant impacts related to expansive soils with adherence to applicable building code requirements and building standards and with

implementation of recommendations identified in the Geotechnical Report consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have less than significant impacts associated with expansive soils with incorporation of MM GEO-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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?

Discussion

Mt. SAC has a piped sewage collection system that conveys wastewater off site for treatment and disposal. No areas on the campus contain existing or past septic systems or improvements; therefore, no impact would occur, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to 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 impacts were adequately addressed in the 2018 EFMP EIR.

Question F: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Discussion

The Mt. SAC campus is located within the San Jose Hills, a northeast-trending structural upwarp in the northeast portion of the Los Angeles Basin. It is bounded to the north by the San Gabriel Valley and to the south by the Puente Hills (Sylvester and Gans 2016). The campus is underlain by four members of the Miocene Puente Formation in the hills primarily in the northeast and southern portion of the campus, and Quaternary alluvial deposits in the remainder of the campus.

Due to the unpredictable nature of the fossil record in given depositional environments, the significance of a specific fossil type is variable. Vertebrate fossils, especially those with stratigraphic or ecological context, are considered scientifically significant. Invertebrate and plant fossils may be considered significant, dependent on the stratigraphic, ecological, temporal, or evolutionary indicators they provide.

Sensitivity of paleontological resources is highly correlated with the geology in which they are found. The Society of Vertebrate Paleontology has categorized the paleontological potential of rock types as having either high, low, undetermined, or no potential. The rock types can be further broken down into geologic formations with varying sensitivity. A geologic formation is defined as a rock unit that is lithologically distinct, geographically widespread, and able to be easily distinguished from formations above and below. A formation can be a single rock type, or it can contain a suite of closely related rock types that are commonly found in a specific depositional environment. Rock types are distinguished from geologic formations in that rock types are based solely on lithologic characteristics, while formations include age and geographic range.

A paleontological resources records search and literature review was conducted by Dr. Sam McLeod at the Los Angeles County Natural History Museum (LACM), Vertebrate Paleontology Department of the LACM on April 5, 2018, to determine if any vertebrate fossil records within the LACM collections database had been recovered at the Mt. SAC campus or in the general vicinity. The results indicate that no vertebrate fossil localities are directly within the boundaries of the campus; however, five fossil-bearing localities are recorded within approximately 5.0 miles from the campus. An additional search of the Paleobiology Database (paleobiodb.org) resulted in one additional fossil locality, known as the Featherstone Quarry, approximately 2 miles northwest of the campus. Fossils from this quarry include two separate holotype (single physical example of an organism) genera.

Surface sediments at and surrounding the project area consist of Pleistocene and Holocene alluvial deposits, with Miocene Puente Formation in the hills. A search of the database of Late Pleistocene vertebrate localities for California, which includes institutional records and published references, indicates that no previously recorded fossil localities have been recorded within 1.0 mile of the campus.

As identified under the results of the LACM records search, surficial deposits composed of Pleistocene and Holocene alluvial deposits within the Miocene Puente Formation are found in the hills within the campus. No fossil localities were found during the LACM and PaleoBiology records search that lie within the project site or the Mt. SAC college campus, although many have been documented nearby from similar-aged sediments within the same geologic formations. For example, terrestrial vertebrate fossil localities include bison (*Bison* sp.), horse *(Equus* sp.), and camel (*Camelops* sp.) have been identified within the Pleistocene and Holocene alluvial deposits. Fossil localities dating to the Miocene Puente Formation consist of marine vertebrate fossil localities and include three separate species of herring (*Ganolytes* sp.*, Etringus* sp.*, and Lembicus meikleiohn* sp.), pipefish (*Sygnathus emeritus*), deep sea smelt (*Bathylagidae*), jackfish (*Carangidaes* sp.), mackerel (*Tunita* sp.), and unidentified fish species. Therefore, Mt. SAC is moderately sensitive for paleontological resources.

No unique geologic feature is known to exist, and no fossils have been documented on the campus. However, excavation activities associated with development of projects implementing the proposed project could encounter deposits of the Pleistocene and Holocene alluvial deposits and the Miocene Puente Formation. Excavation in these sediments could potentially impact sensitive paleontological resources in areas where surficial deposits from the Puente Formation are present or when excavations exceed 10 feet in depth in areas with Pleistocene and Holocene sediments. This is a potentially significant impact. Implementation of MM GEO-4 for 2018 EFMP projects that have the potential to encounter deposits of the Pleistocene and Holocene alluvial deposits and the Miocene Puente Formation would reduce potential impacts to paleontological resources to less than significant, consistent with the findings of the 2018 EFMP EIR. MM GEO-4 requires attendance by a qualified paleontologist at the pre-grade conference, requires paleontological monitoring in paleontologically sensitive sediments, and identifies measures to take if paleontological resources are discovered.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, with incorporation of the MM GEO-4 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

VIII. GREENHOUSE GAS EMISSIONS

The analysis of GHG emissions is tiered from the 2018 EFMP EIR and was addressed in Section 4.7, Greenhouse Gas Emissions, of that document. Relevant elements of the proposed project related to greenhouse gas (GHG) emissions include grading for tower foundation; use of diesel-powered off-road construction equipment and on-road trucks used for material deliveries/debris hauling; and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR. As the project is not a major capital project, or a building, MM GHG-1 was not applied to this analysis.

MM GHG-1 All major capital projects (10,000 square feet and above) shall be designed to outperform Title 24, Part 6, Energy Efficiency Standards, by a minimum of 15%.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Greenhouse Gas Emissions	Carbon dioxide equivalent (CO^2EQ) annual operational emissions and annualized construction emissions	Written evidence supporting the District's GHG emissions thresholds is identified in Footnote 4. Site-specific projects of less than 3.0 acres with import or export of 10,000 cy and buildings of 56,000 asf (80,000 gsf) do not exceed the GHG standard of 3,000 metric tonne per year (MT/Year) CO^2EQ for annual operational and 30-year amortized construction GHG emissions. See Table 5 of Report 15-116A. See Report 15-116A for information regarding the GHG thresholds[4]; all assumptions for Scenario 1A for air quality (i.e., watering twice per day, and painting with 80 g/l or less) are required in a GHG analysis. The stated GHG thresholds apply to GHG	CalEPA CARB	Same criteria as stated for air quality in Section 2: Air Quality If GHG projects are not significant, each project remains subject to the applicable GHG MM in the latest approved FMP MMP (i.e., as conditions of approval) to reduce GHG regional emissions.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
		impacts only (existing + project balance); not to GHG cumulative impacts (existing + project + cumulative) or global GHG emission impacts.		

Greenhouse Gas Emissions Background Information

Climate change refers to any significant change in measures of climate (e.g., average temperature, precipitation, or wind patterns) over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). General discussions on climate change often include water vapor, atmospheric ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, or climate change groups, such as the California Climate Action Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided.

Regulatory Background

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05, which calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

The principal overall State plan and policy adopted for the purpose of reducing GHG emissions is AB 32 (California Global Warming Solutions Act of 2006). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 recognizes that California is the source of substantial amounts of GHG emissions. The statute states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal

> businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to avert these consequences, AB 32 establishes a State goal of reducing GHG emissions to 1990 levels by the year 2020, codifying the goal of EO S-3-05.

CARB approved a *Climate Change Scoping Plan* as required by AB 32 in 2008; this plan is updated every five years as required. The *Climate Change Scoping Plan* proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (CARB 2008). The *Climate Change Scoping Plan* has a range of GHG-reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation regulation to fund the program. On February 10, 2014, CARB released the Draft Proposed First Update to the *Climate Change Scoping Plan* (CARB 2014). The board approved the final *First Update to the Climate Change Scoping Plan* on May 22, 2014. The first update describes California's progress towards AB 32 goals, stating that "California is on track to meet the near-term 2020 greenhouse gas limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). The latest update occurred in January 2017 and incorporates the 40 percent reduction to 1990 emissions levels by 2030.

The Sustainable Communities and Climate Protection Act of 2008, Senate Bill (SB) 375, established a process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 required SCAG to incorporate a SCS into its RTPs that will achieve GHG emission reduction targets though several measures, including land use decisions. SCAG's SCS is included in the SCAG 2016–2040 RTP/SCS (SCAG 2016). The goals and policies of the RTP/SCS that reduce vehicle miles traveled (VMT) focus on transportation and land use planning that include building infill projects; locating residents closer to where they work and play; and designing communities so there is access to high quality transit service.

On April 29, 2015, Governor Brown signed EO B-30-15, which ordered an interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. Five key goals for reducing GHG emissions through 2030 include (1) increasing renewable electricity to 50 percent; (2) doubling the energy efficiency savings achieved in existing buildings and making heating fuels cleaner; (3) reducing petroleum use in cars and trucks by up to 50 percent; (4) reducing emissions of short-lived climate pollutants; and (5) managing farms, rangelands, forests, and wetlands to increasingly store carbon. EO B-30-15 also directs CARB to update the *Climate Change Scoping Plan* to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

On September 8, 2016, the Governor signed SB 32 to codify the GHG reduction goals of EO B-30-15, requiring the State to reduce GHG emissions by 40 percent below 1990 levels by 2030 (Health and Safety Code Section 38566). As stated above, this goal is expected to keep the State on track to meeting the goal set by EO S-3-05 of reducing GHG emissions by 80 percent below 1990 levels by 2050.

AB 197 was signed at the same time to ensure that the SB 32 goals are met by requiring CARB to provide annual reports of GHGs, criteria pollutants, and TACs by facility, City and sub-county level, and sector for stationary sources and at the County level for mobile sources. It also requires

the CARB to prioritize specified emission reduction rules and regulations and to identify specified information for emission reduction measures (e.g., alternative compliance mechanism, market-based compliance mechanism, and potential monetary and nonmonetary incentive) when updating the Scoping Plan.

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of EO B-30-15. The objectives of SB 350 are as follows:

1. To increase from 33 percent to 50 percent, the procurement of our electricity from renewable sources; and
2. To double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

The text of SB 350 sets a December 31, 2030, target for 50 percent of electricity to be generated from renewable sources. SB 350 also requires the State to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. Additionally, SB 350 sets requirements for large utilities to develop and submit integrated resources plans, which detail how utilities would meet their customers' resource needs, reduce GHG emissions, and integrate clean energy resources (CEC 2015).

On September 10, 2018, Governor Brown signed SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 requires renewable energy and zero-carbon resources to supply 100 percent of electric retail sales to end-use customers and 100 percent of electricity procured to serve state agencies by December 31, 2045. This policy requires the transition to zero-carbon electric systems that do not cause contributions to increase of GHG emissions elsewhere in the western electricity grid (CEC 2020). SB 100 also creates new standards for the Renewable Portfolio Standard goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly owned utilities from 50 percent to 60 percent by 2030.

Further, on September 10, 2018, Governor Brown also signed California EO B-55-18, which sets a new statewide goal of carbon neutrality as soon as possible, and no later than 2045 and achieve net negative emissions thereafter. EO B-55-18 was added to the existing Statewide targets of reducing GHG emissions, including the targets previously established by Governor Brown of reducing emissions to 40 percent below 1990 levels by 2030 (EO B-30-15 and SB 32), and by Governor Schwarzenegger of reducing emissions to 80 percent below 1990 levels by 2040 (EO S-3-05).

Mt. SAC has is also committed to the reduction of greenhouse gas emissions and is developing the Climate Action Plan & Sustainability. Mt. SAC prepared the 2018 Climate Action Plan (2018 CAP) to provide guidance for the campus towards becoming a more sustainable institution (Mt. SAC 2018). The 2018 CAP articulates the goals, objectivities and strategies for having net-zero carbon emissions. The following areas of sustainability and established goals are listed in the 2018 CAP:

> **Greenhouse Gas Reduction:** Reduce energy consumption from the 2014 baseline by 20% by the end of 2025, 50% by 2035, and 100% by 2050.
>
> **Green Building Standard:** All new, major capital projects (10,000 square feet and above) will outperform Title 24 Standards by at least 15%, and all major renovation projects will outperform Title 24 by at least 10%.
>
> **Water Use Reduction:** Reduce water use per student by 50% from 2014 levels by 2030.

Waste Diversion and Management: Net Zero Waste by 2050.

Institutionalization: Hire a full-time Sustainability Director by the end of 2018. Secure release time for a Sustainability Coordinator starting Fall 2019. Establish a Sustainability Center by 2020.

Curriculum Integration: Build sustainability into the educational experience of 50% of students by 2025, and 100% of students by 2035.

Professional Development: Establish professional development in sustainability for all new faculty and adjunct instructors by 2020. Integrate sustainability into campus Professional Development Plan by 2020. Offer online Sustainability Certificate for faculty.

Research and Community Outreach: Publicize campus sustainability efforts to surrounding community annually, starting in 2019.

Project Impact Analysis

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

Discussion

Based on the proposed construction activities described previously, the principal source of construction GHG emissions would be internal combustion engines of construction equipment, on-road construction vehicles, and workers' commuting vehicles. GHG emissions from construction activities were obtained from the CalEEMod model, as detailed in Section 4.III, Air Quality. The estimated construction GHG emissions for the project would be 48 metric tons of carbon dioxide equivalent ($MTCO_2e$), as shown in Table 9, Estimated Greenhouse Gas Emissions from Construction. Because impacts from construction activities occur over a relatively short period of time, they contribute a relatively small portion of the GHG emissions for the overall lifetime of the project. In addition, GHG emission reduction measures for construction equipment are relatively limited. The SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime so that GHG reduction measures address construction GHG emissions as part of the operational GHG reduction strategies (SCAQMD 2008b).

TABLE 9
ESTIMATED GREENHOUSE GAS
EMISSIONS FROM CONSTRUCTION

Source	Emissions ($MTCO_2e$)
2022	48
Total	48
Amortized Emissions[a]	**2**

$MTCO_2e$: metric tons of carbon dioxide equivalent

[a] Total derived by dividing construction emissions by 30.

Notes:

- Detailed calculations in Appendix A.

As noted above, Mt. SAC has established a GHG threshold related to project-level emissions from land use projects. The threshold for combined amortized construction and operational emissions is 3,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/yr). The GHG emissions for the project would be 2 $MTCO_2e$/yr, as shown in Table 9, which is far below the

threshold of 3,000 $MTCO_2e$/yr. The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. MM GHG-1 is not required to reduce impacts to less than significant level; however, it is a standard practice for Mt. SAC.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to GHG emissions, even without incorporation of the MM GHG-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

Mt. SAC developed the 2018 Climate Action Plan to minimize GHG emissions associated with the campus. As shown in Table 9, Estimated Total Project Annual Greenhouse Gas Emissions, the project's GHG emissions would be below the threshold of significance established by Mt. SAC. The State policy and standards adopted for the purpose of reducing GHG emissions that are applicable to the proposed project are Executive Order S-3-05, AB 32, the California Global Warming Solutions Act of 2006, and SB 32, which are further discussed in Appendix A. The quantitative goal of these regulations is to reduce GHG emissions to 1990 levels by 2020 to 80 percent below 1990 levels by 2050; and, for SB 32, to 40 percent below 1990 levels by 2030. Statewide plans and regulations (such as GHG emissions standards for vehicles, the Low Carbon Fuel Standard, Cap-and-Trade, and renewable energy) are being implemented at the statewide level; and compliance at a project level is not addressed.

As described above, the project would not consume appreciable energy, as it would not require the use of power, including electricity, natural gas, or diesel. One or two annual trips would be required for maintenance, consistent with current conditions. The proposed project would not impede the policies described in CARB's Scoping Plan Update, or others, that will help achieve established goals.

The 2018 CAP includes four distinct areas that identify broad strategies for achieving a more sustainable campus: Sustainable Building Strategies, Mobile Source Emissions Reduction Strategies, Solid Waste Reduction Strategies, and Water Conservation Strategies. Mt. SAC would implement the 2018 CAP to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements. The project is part of the development plan evaluated under the DEIR of the 2018 EFMP. The 2018 EFMP was found to be consistent with State, local, and campus plans related to the minimization of GHG emissions. Since the project is a component of the 2018 EFMP, the project would likewise be consistent with the GHG emission reduction plans, measures, and regulations related to GHG emissions. The impact would be less than significant, and no mitigation is required.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

IX. HAZARDS AND HAZARDOUS MATERIALS

The analysis of hazards and hazardous materials is tiered from the 2018 EFMP EIR and was addressed in Section 4.8, Hazards and Hazardous Materials and Wildfire, of that document. Relevant elements of the proposed project related to hazards and hazardous materials include grading for tower foundation, and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements. The design of the proposed project ensures that emergency access to and around the project site is maintained.

Section 4.8 of the 2018 EFMP EIR provides a detailed description of the hazardous materials and wastes handled and/or generated at Mt. SAC and the policies, programs, and practices implemented to manage these materials in compliance with local, State, and federal regulations, as applicable. At the local level, the Health Hazardous Materials Division of the Los Angeles County Fire Department (LACoFD), has the primary responsibility for hazardous waste enforcement. As identified in Section 3.16.010 of the City of Walnut Municipal Code, the City has adopted the 2017 Los Angeles Fire Code which is based on both the adopted sections of the 2016 California Fire Code and the unadopted sections of the California Fire Code found in the 2015 International Fire Code. Additionally, Mt. SAC has its own Campus Emergency Response and Evacuation Plan.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to hazards and hazardous materials.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Hazards/Hazardous Materials	Public exposure to hazardous materials	Non-compliance with an approved Phase 1 or Phase 2 ESA Report's recommendations is a significant impact.	Division Of Occupational Safety & Health (Cal/OSHA) CalEPA DSA LACoFD	Case studies Unless there are unusual circumstances, no additional mitigation for hazards beyond that included in the latest approved FMP MMP.

Project Impact Analysis

Question A: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Question B: 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?

Discussion

The analysis of Impacts 4.8-1 and 4.8-2 in the 2018 EFMP EIR concluded that development under the 2018 LRDP would have a less than significant impact during construction and long-term operations related to public exposure to hazards from (1) the routine transport, use, or disposal of hazardous materials and (2) a reasonably foreseeable upset and accident condition involving the release of hazardous materials.

As defined in the 2018 EFMP EIR, for purposes of this analysis, hazardous materials include inorganic and organic chemicals and products (chemical reagents and reactions) containing such substances as defined by California laws and regulations, radioactive materials, and biohazardous materials.

Construction Activities

Construction associated with the proposed project would involve grading for tower foundation and construction of a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. During the construction phase, there is a limited risk of accidental release of hazardous materials such as gasoline, oil, or other fluids in the operation and maintenance of construction equipment. These materials are common to typical construction activities and are used routinely and do not pose a significant risk of upset or hazard to the public or environment, consistent with the findings of the 2018 EFMP EIR.

Operation

The project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. Routine operations would continue, including regular maintenance that may use some hazardous materials such as standard cleaning products and pesticides or herbicides. The amount of hazardous materials that are handled at any one time is relatively small, reducing the potential consequences of an accident during handling.

With respect to transport of hazardous materials, under current conditions, Mt. SAC currently transports hazardous materials to and from campus on an as-needed basis, or as otherwise required by existing campus procedures. With implementation of the modified project, hazardous materials and wastes would continue to be transported to and from the campus to support instructional and other on-campus activities.

As with existing conditions, the transport of hazardous materials and wastes can result in accidental spills, leaks, and toxic releases; however, it is heavily regulated and requires licensed vendors to bring hazardous materials to and from the campus. The established procedures for transport of hazardous materials and hazardous wastes to and from the campus would continue

to be followed including the completion of manifests, which are maintained by Risk Management for all hazardous waste that is transported in connection with campus activities. The campus would continue to comply with all applicable federal, State, and local laws and regulations and existing campus programs related to the use, handling, transport, and storage of hazardous materials on campus. Compliance with applicable federal, State, and local laws and campus procedures would ensure that impacts associated with upset or accident conditions remain less than significant. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question C: 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?

Discussion

The analysis of Impact 4.8-3 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would have a less than significant impact related to hazardous emissions or handling hazardous materials within ¼ mile of a school.

The Mt. SAC Child Development Center (Buildings 70 through 72) on campus provides childcare to children of college students, staff members, and the community at large year-round. Off campus, two schools exist within 0.25 mile of Mt. SAC. Collegewood Elementary School, a public school at 20725 Collegewood Drive, is located approximately 0.20 mile to the northwest of campus, while the International School of Montessori at 20781 Amar Road is located less than 0.10 mile to the west of the campus.

As previously described, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. It is not anticipated that any operations associated with the proposed project would require the use or storage of any hazardous materials that are not currently used in some capacity on campus or result in a significant increase in quantities of hazardous materials. The on-campus Child Development Center is currently in operation and would continue as a childcare center. The on-campus Child Development Center is currently in operation and would continue as a childcare center. Hazardous materials would continue to be handled in compliance with federal, State, and local regulations as well as continued compliance with established campus procedures related to the use, storage, disposal, and transport of hazardous materials and wastes. This would ensure that potential impacts associated with hazardous materials within 0.25 mile of a school would be less than significant. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to handling hazardous materials within 0.25 mile of a school. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

Discussion

The analysis of Impact 4.8-4 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would have a less than significant impact related to construction on a site included on the Cortese List, which is compiled pursuant to Section 65962.5 of the *California Government Code.*

Research on the Department of Toxic Substances Control (DTSC) EnviroStor database, which identifies those sites/addresses on the hazardous waste and substances site list (Cortese list), indicated that the Mt. SAC campus is not located on a site which is included on a list of hazardous materials pursuant to Section 65962.5 (DTSC 2018). A search of the EnviroStor database for listings in the City of Walnut or at Mt. SAC yielded no results.

The EDR Radius Map™ Report with GeoCheck®: Mt. San Antonio College Parking & Circulation MP, 1100 North Grand Avenue, Walnut, California 91789 (Inquiry Number 5085390.2s) (EDR Report) was prepared by Environmental Data Resources (EDR 2017). The EDR Report was prepared for the Mt. SAC 2017 Parking and Circulation Master Plan (2017 PCMP) project; however, it remains relevant to the proposed project because it covers the entire campus. The EDR Report incorporates data from a search of government databases to determine the presence or absence of significant hazardous materials or conditions on or near the campus. A search of the EDR report indicates that no sites located on the campus are included on the hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 (CalEPA 2022). Therefore, the proposed project would not create a significant hazard to the public or the environment. Compliance with federal, State, and local regulations regarding hazardous material and hazardous waste management would ensure that the proposed project would not result in a significant hazard to the public or the environment. No significant impact would occur, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to *California Government Code* Section 65962.5 and would have less than significant impacts. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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?

Discussion

As detailed in Section 4.8, Hazards and Hazardous Materials and Wildfire, of the 2018 EFMP EIR, the Mt. SAC campus is not located within 2 miles of a public airport or public use airport. The nearest airport is Brackett Field, which is located approximately 4.5 miles northeast of the campus. This airport serves general aviation (GA) aircraft. According to the Brackett Field Airport Land Use Compatibility Plan (LACALUC 2015), the campus is not located in the Airport Influence Area of the airport. Additionally, according to a communication from the Federal Aviation Administration, Southwest Regional Office Obstruction Evaluation Group, the proposed tower does not exceed obstruction standards and would not be a hazard to air navigation and no special marking or lighting is required (FAA 2022). Therefore, the proposed project would not result in any impacts from safety hazards associated with airports or airstrips consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impacts related to public use airports or private airstrips. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question F: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Discussion

The analysis of Impact 4.8-6 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would have a less than significant impact related to impairing the implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

Mt. SAC has a Campus Emergency Response and Evacuation Plan (Mt. SAC 2022a) that identifies procedures for emergencies, including campus emergency notification procedures, building evacuation procedures, and evacuation assembly areas. Approximately 20 assembly areas are identified on the Emergency Assembly Map included in the Campus Emergency Response and Evacuation Plan (Mt. SAC 2022a). While development of the 2018 EFMP would impact assembly areas, it is likely that only a small number of assembly areas would be affected at any one time since implementation of the project components would not occur at the same time. The Department of Campus Safety would ensure that alternate assembly areas would be identified to replace the impacted assembly area and/or ensure that existing assembly areas can meet the needs of the campus.

As indicated in the Emergency Response and Evacuation Plan, Mt. San Antonio College Police and Campus Safety Officers, the Los Angeles County Sheriff's Department, or the Los Angeles County Fire Department are the first responders to critical incidents on campus. These agencies work together to manage emergencies on campus. With implementation of the 2018 EFMP, an updated Campus Emergency Response and Evacuation Plan will be prepared and would

incorporate the anticipated new status of Mt. SAC's Police and Campus Safety Department as a police force to enable it to participate more fully in the evacuation of the campus than in the past. Specifically, the Department would be authorized to implement traffic control measures on public roads to more quickly evacuate the campus. These and other measures would be included in the campus emergency response plan and be coordinated with the emergency response agencies of local governments.

Additionally, the City of Walnut provides emergency preparedness guidance for the City's response to emergency situations such as natural disasters, brush hazards, and emergency flood planning (Walnut 2018a). The City does not have an adopted emergency response plan or emergency evacuation plan.

Construction of the proposed project would not interfere with the implementation of the Mt. SAC Campus Emergency Response and Evacuation Plan or the City's Emergency Management Plan or the Campus Emergency Quick Plan. During project construction or operation and consistent with the existing conditions, should an emergency occur on campus that would necessitate evacuation, the existing street system would provide access off campus. Impacts would be less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan. The proposed project impacts were adequately addressed in the EMFP EIR.

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

Discussion

The analysis of Impact 4.8-7 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would have a less than significant impact related to wildfires. The Mt. SAC campus is not within a designated Very High Fire Hazard Severity Zone (VHFHSZ) as defined by the California Department of Forestry and Fire Protection (CalFire).

As discussed in Section 4.3, Biological Resources, of the 2018 EFMP EIR, the Mt. SAC campus contains ornamental vegetation throughout as well as natural habitat areas that support ecological and educational objectives of the campus. The campus is surrounded by developed land to the north, south, and west and open space and undeveloped areas to the east. These open space areas are limited in acreage and abut development or agricultural areas and livestock areas associated with Cal Poly Pomona, thus reducing the potential for wildland fires. In the event of fire emergency, Mt. SAC has an established Campus Emergency Response and Evacuation Plan that identifies procedures and actions for emergencies, including wildfires. All recommended structures associated with the 2018 EFMP would be constructed to meet current building and fire codes, and the buildings would be sprinklered accordingly. Implementation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Additionally, because thresholds 8.8 through 8.11 of the 2018 EFMP EIR apply only to those projects that are "located in or near state responsibility areas or lands classified as very high fire hazard severity zones", no impacts related to these thresholds would occur.

Specifically, implementation of the proposed project would not impair an adopted emergency response plan or evacuation plan; expose project occupants to pollutant concentrations from wildfire; require installation or maintenance of infrastructure that may exacerbate fire risk; and would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. No impacts would occur consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to wildland fires. The proposed project was adequately addressed in the 2018 EFMP EIR.

X. HYDROLOGY AND WATER QUALITY

The analysis of hydrology and water quality is primarily tiered from the 2018 EFMP EIR and is addressed in Section 4.9 of the document. The analysis of hydrology and water quality is applicable to the proposed project which would involve the similar types of uses, and a similar amount of pervious and impervious surface.

The following MMs were identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR and are incorporated as part of the proposed project and assumed in the analysis presented in this section.

MM HYD-1 Prior to the issuance of grading permits, Mt. SAC shall ensure preparation of a site-specific hydrologic evaluation for each proposed development project based on the project-specific grading plan and site design of each individual project. This evaluation shall include, but not be limited to: (1) an assessment of runoff quality, volume, and flow rate from the proposed Project site; (2) identification of project-specific BMPs (structural and non-structural) to reduce the runoff rate and volume to appropriate levels; and (3) identification of the need for new or upgraded storm drain infrastructure (on and off campus) to serve the project. Project design shall include measures to upgrade and expand campus storm drain capacity where necessary, as identified through the project-specific hydrologic evaluation. Design of future projects shall include measures to reduce runoff, including, but not limited to, the provision of permeable landscaped areas adjacent to structures to absorb runoff and the use of pervious or semi-pervious paving materials. All recommendations from forthcoming site-specific hydrologic evaluations shall be included in the site preparation and building design specifications.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Hydrology/Water Quality	Adequate facilities Water quality Erosion or exceed the capacity of the Master Stormwater Drainage Plan	Non-compliance with an applicable SWPPP Non-compliance with an applicable Water Quality Management Plans (WQMP)	Los Angeles Department of Water and Power's (DPW's) Hydrology Manual NPDES – SWPPP – WQMP regulations	Case studies Unless there are unusual circumstances, no additional mitigation for hydrology and water quality beyond that included in the latest approved FMP MMP.

Project Impact Analysis

Question A: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Discussion

The analysis of Impacts 4.9-1 in the 2018 EFMP EIR concluded that, with implementation of MM HYD-1, there would be a less than significant impact related to violation of existing water quality standards or waste discharge requirements (WDRs) and degradation of water quality.

Construction-Related Water Quality

Construction associated with the proposed project would primarily involve grading for tower foundation and construction of a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. The potential impacts of construction activities, construction materials, and non-stormwater runoff on water quality during the construction phase would primarily be due to sediment (total suspended solids and turbidity) and certain non-sediment-related pollutants. Construction-related activities that are primarily responsible for sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Such activities include removal of vegetation from the site, grading of the site, and trenching for infrastructure improvements. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Non-sediment-related pollutants that are also of concern during construction relate to construction materials and non-stormwater flows and include construction materials (e.g., paint and stucco); chemicals, liquid products, and petroleum products used in building construction or the maintenance of heavy equipment; and concrete-related pollutants.

The SWRCB's NPDES General Permit for Stormwater Discharges Associated with Construction Activity is referred to as the "Construction General Permit". Construction impacts due to development of the proposed project would be minimized through compliance with the Construction General Permit, which requires completing a construction site risk assessment to determine appropriate coverage level, filing a Notice of Intent (NOI) with the SWRCB, and having a Qualified SWPPP Developer prepare a SWPPP. The SWPPP must include erosion- and sediment-control BMPs that would meet or exceed measures required by the determined risk level of the Construction General Permit in addition to BMPs that control the other potential construction-related pollutants. A Construction Site Monitoring Program that identifies monitoring and sampling requirements implemented by a Qualified SWPPP Practitioner during construction is also a required component of the SWPPP.

Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap or filter sediment once it has been mobilized. In addition to erosion- and sediment-control BMPs, the following types of BMPs would be implemented, as needed, during construction: waste and materials management; non-stormwater management; training and education; and inspections, maintenance, monitoring, and sampling. The BMPs would be implemented in compliance with the Construction General Permit and the general waste discharge requirements in the General WDRs.

The construction-phase BMPs would ensure effective control not only of sediment discharge, but also of pollutants associated with sediments (e.g., nutrients, heavy metals, and certain pesticides, including legacy pesticides). In addition, compliance with Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology (BAT/BCT)

requires that BMPs used to control construction water quality impacts are updated over time as new water quality control technologies are developed and become available for use. Therefore, compliance with the BAT/BCT performance standard ensures mitigation of construction water quality impacts over time.

In summary, compliance with the Construction General Permit, including filing an NOI, which includes preparation of an SWPPP by a Qualified SWPPP Developer, would ensure impacts to receiving waters from non-stormwater flows during construction are less than significant consistent with the findings of the 2018 EFMP EIR.

Operational Water Quality

Development associated with the 2018 EFMP is expected to be a source of various pollutants entering the stormwater. Pollutants of concern for the campus, including proposed uses in the 2018 EFMP, include those expected pollutants that coincide with pollutants on the 303(d) list for receiving waters. Pollutants that are typically found in urban stormwater runoff include the following:

- Sediment – soils or other surface materials
- Nutrients – inorganic substances such as nitrogen and phosphorus
- Trash – paper, plastic, glass, polystyrene foam
- Metals – cadmium, aluminum, chromium, copper, lead, mercury, and zinc
- Bacteria – indicator of the presence of viruses
- Oil and grease – petroleum hydrocarbon products, esters, oils, fats, and waxes
- Organics – leaves, grass cuttings, food waste, and carbon-based substances found in solvents and hydrocarbons
- Pesticides (including herbicides) – chemical compounds used to control nuisance growth of organisms

As previously discussed, existing campus infrastructure generally drains southward and conveys stormwater to several public main lines. The western portions of campus generally drain to Snow Creek in the Wildlife Sanctuary, while the eastern portions of campus generally drain to an unnamed tributary of Snow Creek. Storm drainage lines that serve the academic core are adequately sized to accommodate a 25-year storm as required by the Los Angeles County Department of Public Works. In addition, Mt. SAC is in the process of improving its stormwater management system.

The anticipated pollutants of concern that may be generated on site as identified in Table 4.9-2 of the 2018 EFMP EIR, include Ammonia, Coliform Bacteria, pH, Total Dissolved Solids, and Toxicity, would result in a significant impact. However, implementation of MM HYD-1 requires site-specific water quality management plans to be prepared for each new building and site project, as part of the 2018 EFMP, to determine the pre-development runoff and to identify design strategies that would minimize the post-development runoff. The design of new site improvement and building projects would comply with the Los Angeles County stormwater quality management program and LID Ordinance. Infiltration systems that treat and percolate stormwater to recharge the local aquifer would be most highly prioritized, followed by stormwater capture and reuse and high-removal-efficiency biofiltration. The proposed project would incorporate permanent stormwater management features that will collectively meet the requirements set forth in the LID Manual and include treatment control BMPs as well as source control BMPs. These stormwater quality design measures would provide “High” removal efficiency for the targeted pollutants of

concern and would include stormwater quality design measure maintenance providing inspection criteria, maintenance indicators, and maintenance activities for the BMPs requiring permanent maintenance. BMPs would be implemented as part of the project to ensure compliance is maintained with all applicable NPDES requirements at the time of the construction. BMPs that may be implemented include, but are not limited to, the following: site design principles, including site planning, and minimizing impervious area; LID BMPs including stormwater planters and vegetated bioswales; non-structural source-control BMPs such as BMP inspection and maintenance; and structural source-control BMPs including storm drain message and signage, outdoor material storage area, outdoor trash storage and waste handling area, landscape irrigation practices, and building material selection.

All BMPs would be located within the development footprint of the project as analyzed throughout this document. The final BMP system for the proposed project would be sized and the outlet structures designed to ensure that the post-development stormwater runoff flows comply with the applicable requirements. This would occur during final design and through preparation of final WQMPs for the proposed project; therefore, implementation of MM HYD-1 would reduce impacts related to water quality to less than significant levels consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to the violation of water quality standards or waste discharge requirements, or otherwise substantially degrade water quality with incorporation of the MM HYD-1 noted above. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: 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?

The analysis of Impact 4.9-2 in the 2018 EFMP EIR concluded that there would be a less than significant impact related to substantial depletion of groundwater supplies or interference with groundwater recharge.

Discussion

Mt. SAC purchases all of its potable water on a wholesale basis from Three Valleys Municipal Water District (TVMWD). As a local water agency, Mt. SAC has the legal right to produce groundwater from its own wells located on campus for on-campus domestic uses, landscape irrigation, athletic field irrigation, pasture and rangeland irrigation, and wildlife sanctuary uses. Development of the proposed project would result in a minor increase in impervious area and the reduction in groundwater recharge would be nominal when compared to existing conditions.

Further, impacts to groundwater supplies as a result of increased on-site development are not expected to occur because the project is not expected to increase water demand. Therefore, a less than significant impact would be related to groundwater recharge. No additional mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to substantial decrease of groundwater supplies; it would have a less than significant impact related to interference with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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; or

iv) impede or redirect flood flows?

The analysis of Impacts 4.9-3(i)-(iv) in the 2018 EFMP EIR concluded that there would be a less than significant impact related to alteration of existing drainage patterns and storm drain system capacity.

Discussion

Existing stormwater runoff at Mt. SAC predominantly drains to the southwest and is gathered by a network of catch basins, area drains, and storm drains and is directed into five main public storm drain lines that ultimately discharge to San Jose Creek Reach 2 (Psomas 2016). Stormwater runoff currently drains to a public, City-owned storm drain line in Temple Avenue. The proposed project would continue to drain to the same storm drain system as existing conditions.

Because this project involves the replacement of an existing 40-foot tower and appurtenant structures with a 100-foot free-standing tower and related site improvements, no changes to drainage are anticipated. Development of the proposed project would result in a nominal increase in impervious area, and the anticipated change in the rate and volume of storm flows is also anticipated to be nominal and the BMPs being considered for the project would ensure that stormwater flows exiting the site would not exceed current conditions. The proposed project would not result in an impact to the capacity of the stormwater drainage system and no impacts related to on- or off-site flooding would occur. Compliance with required construction and long-term BMPs identified in the response to Question A would reduce any erosion-related impacts to less than significant levels, consistent with the findings of the 2018 EFMP EIR.

As discussed previously, the proposed project would result in a nominal increase in impervious surface and associated runoff as under existing conditions. The proposed project would continue to drain to the same public storm drain line in Temple Avenue as under current conditions and would not result in an impact to the capacity of the stormwater drainage system.

The proposed project would comply with the NPDES Construction General Permit to control construction-related pollutants. Therefore, the proposed project would not result in substantial additional sources of polluted runoff. This impact is less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to (1) altering the existing drainage pattern in a manner that would result in substantial erosion or siltation on- or off-site; (2) altering the existing drainage pattern or substantially increasing the rate or amount of surface runoff in a manner that would result in flooding on- or off-site; and (3) creating or contributing to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question D: Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The analysis of Impacts 4.9-4 in the 2018 EFMP EIR concluded that there would be no impact related to flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Discussion

The Puddingstone Reservoir is the nearest dam to the project site, located approximately 3 miles to the northeast. Due to distance and intervening topography, the reservoir's inundation area would not affect the City of Walnut, including the project site (City of Walnut 2018a). Additionally, according to the County of Los Angeles All-Hazard Mitigation Plan, the City of Walnut, including the project site, is not located within a dam inundation area (County of Los Angeles 2014). Therefore, there would be no impacts associated with the risk of loss, injury, or death involving flooding. No mitigation is required, consistent with the findings of the 2018 EFMP EIR.

The nearest large body of water is the Puddingstone Reservoir, located approximately 3 miles to northeast of the project site. Due to distance and intervening topography, a seiche at the Puddingstone Reservoir would not affect the project site. The project site is located over 35 miles east of the Pacific Ocean; therefore, there is no potential for inundation of the project site by tsunami. No impact would occur, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

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

The analysis of Impact 4.9-5 in the 2018 EFMP EIR concluded that the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Discussion

As discussed previously, surface flow from the project enters the municipal storm drain system which outlets into the San Gabriel River and ultimately discharges into the Pacific Ocean (City of Walnut 2018a). Table 4.9-1 in the 2018 EFMP EIR lists the designated beneficial uses for San Jose Creek Reach 2 and San Gabriel River Reach 3, the water bodies that would receive discharges from the campus. The Mt. SAC campus is located within the San Gabriel Watershed and is part of the San Gabriel River Watershed Management Area. Implementation of the 2018 EFMP would be developed in compliance with all applicable requirements articulated in the Water Quality Control Plan for the Basin Plan, designed to preserve and enhance water quality and protect the beneficial uses of all regional waters (LARWQCB 2022).

In addition, implementation of the proposed project would be required to comply with the Los Angeles County Department of Public Works Hydrology Manual (2006), including the Standard Urban Storm Water Mitigation Plan (SUSMP) that applies to development and re-development projects within Los Angeles County. The SUSMP includes Total Maximum Daily Loads for pollutants in Clean Water Act (CWA) Section 303(d) and contains BMPs for managing stormwater quality during construction projects and design techniques for storm drain systems (City of Walnut 2018a).

Development under the 2018 EFMP would be required to comply with all requirements of the Walnut Municipal Code Article IV, Standard Urban Stormwater Mitigation Plan, which requires new development and significant redevelopment projects (as described in the NPDES permit) to prepare a SUSMP. Further, prior to issuance of a grading permit, building permit, and/or safety permit for any new development or significant redevelopment, the property owner is required to submit to and obtain the approval of the SUSMP by the City (City of Walnut 2018a). Thus, implementation of the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impacts related implementation of a water quality control plan or sustainable groundwater management plan. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XI. LAND USE AND PLANNING

The analysis of land use and planning is tiered from the 2018 EFMP EIR and was addressed in Section 4.10, Land Use and Planning, of the document. Relevant elements of the proposed project related to hazards and hazardous materials include grading for tower foundation, and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to land use and planning.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Land Use/Planning	FMPs Campus Zoning Districts	Inconsistency with the District Land Use Plan (e.g., location, gsf) in the latest FMP or for a site-specific project is a significant impact Inconsistency with a Campus Zoning District in the latest FMP is a significant impact	SCAG's Regional Comprehensive Plan – Land Use & Housing Chapter Certain District facilities are exempt from local agencies' land use and planning controls	Chapter 2.5: Definitions: Section 21061.3. Infill Site; Section 21071 Urbanized Area; Definition; Chapter 2.6: General: Section 21080.09 Public Higher Education; Campus Location; Long-Range Development Plans; Chapter 3: Guidelines for Implementation of the California Environmental Quality Act: Section 15061, subsection (b)(3) Review for Exemption under "common sense" provision; Section 15300 Categorical Exemptions; Section 15301, subsection (e)(2) Existing Facilities with 10,000 sf increase; Section 15304 Minor Alterations to Land, including grading, trenching or backfilling;

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
				Section 15323 Normal Operations of Facilities for Public Gatherings including stadiums, auditoriums, amphitheaters, planetariums, and swimming pools; Section 15332 In-Fill Development Projects, no more than five (5) acres when compatible with campus zoning.

Project Impact Analysis

Question A: Would the project physically divide an established community?

Discussion

The analysis of Impact 4.10-1 in the 2018 EFMP EIR concluded that the project would not physically divide an established community.

The Mt. SAC campus is bound by residential development to the north and south, commercial and residential uses to the west, and open space to the east. As shown in Exhibits 1 and 2, the proposed project is located west of an existing unpaved service road within the southeastern portion of the Mt. SAC campus. As described in Section 2.0, Project Description, the proposed project does not involve the introduction of any new roadways or uses that have the potential to physically divide an established community. No impacts related to the project physically dividing an established community would result and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to physically dividing an established community. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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?

Discussion

The analysis of Impact 4.10-2 in the 2018 EFMP EIR concluded that development of the Mt. SAC campus under the 2018 EFMP would not conflict with applicable local or regional land use plans, policies, or regulations.

The Mt. SAC campus is bound by residential development to the north and south, commercial and residential uses to the west, and open space to the east. As shown in Exhibits 1 and 2, the proposed project is located west of an existing unpaved service road within the southeastern portion of the Mt. SAC campus. As described in Section 2.0, Project Description, the proposed project does not involve the introduction of any new roadways or uses that have the potential to physically divide an established community. No impacts related to the modified project physically dividing an established community would result, and no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XII. MINERAL RESOURCES

Section 15128 of the State CEQA Guidelines states that "an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR". Through review of the 2018 EFMP site, Mt. SAC determined that detailed discussions for mineral resources were not required because the proposed project would result in effects found not to be significant due to the lack of resources on the 2018 EFMP site. Additionally, there are no relevant MMs adopted as part of the 2018 EFMP EIR.

Question A: 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?

Question B: 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?

Discussion

Important mineral resource areas are recognized at the federal and State levels through environmental resource management plans and adopted mineral resource mapping. Based on review of the California Geological Survey Updated Mineral Land Classification map for Portland Cement Concrete-Grade Aggregate in the Claremont-Upland Production-Consumption Region, Los Angeles and San Bernardino Counties, California (CGS 2007), no locally important mineral resources recovery sites are designated in the City of Walnut. Therefore, implementation of the proposed project would not result in the loss of such mineral resources. No mineral resources impacts would occur, and no mitigation is required, consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to (1) the availability of a known mineral resource that would be of value to the region and the residents of the State or (2) the availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

XII. NOISE

The analysis of noise is tiered from the 2018 EFMP EIR and was addressed in Section 4.11, Noise, of that document. Relevant elements of the proposed project related to noise and vibration include grading for tower foundation; use of diesel-powered off-road construction equipment and on-road trucks used for material deliveries/debris hauling; and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements.

MMs adopted as part of the 2018 EFMP EIR related to noise are not applicable to this project.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Noise	Traffic and construction-related noise	Written evidence supporting the District's noise thresholds is identified in Footnote 5. Traffic-generated net noise increase on public roadways equal or less than 3 dBA (A-weighted decibels) at 100 feet from centerline that result in noise levels at or below 65 Community Noise Equivalent Level (CNEL) in off-campus sensitive-noise-receptor areas (residential or hospitals), or at or below 70 CNEL for off-campus commercial areas, due to baseline versus buildout project net FMP trip increases are not a significant impact. Cumulative projects traffic-generated noise impacts (existing + project baseline versus existing + project + cumulative) are not significant if the same noise criteria stated above is applied to sensitive receptors or commercial areas off-campus. Site-specific construction projects lasting one year or less for site preparation, demolition,	Office of Planning and Research's (OPR's) General Plan Guidelines, Chapter 4: Required Elements (Noise Element)	Case-by-case studies for unusually high noise issues (i.e. on-campus for permanent new equipment, or new special events with attendance above 8,000 weekdays except for summer intersessions; Whenever feasible, classrooms, campus housing, laboratories, auditoriums, and libraries shall be located in areas where the existing noise environment is 65 CNEL or less. If not, special sound attenuation measures are required; Unless there are special circumstances (i.e. biological, special projects, etc.), no additional mitigation for construction noise beyond that included in the latest approved FMP MMP (e.g. MM-5a) for new construction or renovation; If applicable, prepare a site-specific ground-borne vibration study to ascertain potential building damage if rough grading occurs within 50 feet of

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
		grading and shell building construction located within 1,500 feet or less from a sensitive off-site land use have a significant construction noise impact if construction occurs outside of permitted construction hours. Construction hours are defined in MM-5a in the latest approved FMP MMP, as 7 AM to 7 PM, Monday through Saturday, excluding federal holidays, except for emergencies; A significant construction equipment vibration occurs for a site-specific project is a peak particle velocity (PPV) of 0.04 inches/second or more occurs off-site in a sensitive receptor area for more than fifteen (15) minutes in any one hour. See Report 15-116; Site-specific projects that generate operational noise as measured at a residential property line greater than 55 dBA Leq during the day from 7 AM to 10 PM and 50 dBA Leq during the night from 10 PM to 7 AM have a significant noise impact. The maximum operational noise level shall not exceed 75 dBA maximum sound level (Lmax) during the day or 70 dBA Lmax during the night, nor should they exceed 55 dBA Leq (average noise energy level) from 7 AM to 10 PM and 50 dBA Leq from 10 PM to 7 AM. If the ambient noise levels are higher than the stated Leq or Lmax criteria, the Leq and Lmax criteria levels are increased to the ambient noise level. Noise		off-site buildings in sensitive receptor areas; MM-5a: All construction activities, except in emergencies or unusual circumstances, shall be limited to the hours of 7 am to 7 pm Monday-Saturday, excluding federal holidays. Staging areas for construction shall be located away from existing off-site residences. All construction equipment shall use properly operating mufflers. These requirements shall be included in construction contracts and implemented. Facilities Planning & Management shall monitor compliance. (Revised from 2012 FMP MMP)

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
		levels below the stated criteria are not significant; Site-specific construction projects lasting more than one year, with site preparation, demolition, grading, and shell building construction, located within 1,500 feet or less from a sensitive off-site land use have a significant construction noise impact if: (1) Construction occurs outside of permitted construction hours. (Construction hours are defined in MM-5a in the MMP) and; (2) Lmax noise levels from 7 AM to 7 PM are less than 90 dBA and less than 65 dBA Leq at any off-site sensitive receptor property line and; (3) From 7 PM to 7 AM, the Lmax is less than 75 dBA and less than 55 dBA Leq off-site at any off-site sensitive property line; See Report 15-116 On-campus generated site-specific operational noise shall not exceed 55 dBA Leq during the day from 7 AM to 10 PM and 50 dBA Leq during the night from 10 PM to 7 AM. (The noise level criterion is applied to the closest property line of the off-campus noise sensitive receptor); A site-specific project shall also not exceed 75 dBA Lmax during the day or 70 dBA Lmax during the night from 10 PM to 7 AM at any noise sensitive land use. (If the ambient noise levels are higher than the noise criteria, the standard should be increased to the ambient noise level. See Report 15-116)[5].		

Project Impact Analysis

Would the project result in:

Question 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?

Discussion

As discussed in the 2018 EFMP EIR, Mt. SAC has established its own CEQA thresholds of significance for noise, allowing for construction activities between the hours of 7:00 AM and 7:00 PM, Monday through Saturday. All construction activities would conform to Mt. SAC standards.

Construction Noise

Project construction is estimated to start in 2022 and be completed within the year. Construction activities associated with the project would include grading and construction activities. Construction noise levels for each phase of construction (ground clearing, excavation, foundation construction, building construction, paving, and site cleanup) are based on a typical construction equipment mix for a school project and do not include use of atypical, very loud, and vibration-intensive equipment (e.g., pile drivers).

The degree to which noise-sensitive receptors are affected by construction activities depends heavily on their proximity. Estimated noise levels attributable to the development of the project are shown in Table 10, Construction Noise Levels at Noise-Sensitive Uses.

TABLE 10
CONSTRUCTION NOISE LEVELS AT NOISE-SENSITIVE USES

	Noise Levels (L_{eq} dBA)			
	Residents to the North of the Project Site	**Residents to the West of the Project Site**	**Residents to the South of the Project Site**	**Residents to the East of the Project Site**
Construction Phase	**(dBA@3,060 ft)**	**(dBA@2,370 ft)**	**(dBA@1,250 ft)**	**(dBA@6,020 ft)**
Ground Clearing	48	50	56	42
Excavation (Site Preparation)	43	45	51	37
Foundation Construction	42	44	50	36
Building Construction	39	41	47	33
Finishing and Site Cleanup	39	41	47	33
Mt. SAC Construction Noise Limit	**65**	**65**	**65**	**65**
Exceeds Threshold?	**No**	**No**	**No**	**No**

L_{eq} dBA: Average noise energy level; ft: feet
Note: Noise levels from construction activities do not take into account attenuation provided by intervening structures.
Source: Psomas 2021.

Table 10 shows the noise levels for construction equipment. Noise levels at off-campus residences from general project-related construction activities would range from 33 to 56 dBA L_{eq}. Noise level reductions from intervening structures were not included. The noise levels provided by the USEPA's *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances* indicates that noise levels from construction equipment would be below Mt.

SAC's noise limit of 65 dBA for construction activities. Substantially noisy equipment, such as pile drivers, would not be used for the project. Consequently, noise associated with project-related construction would not result in significant impacts, and no mitigation is required.

Operational Noise

Noise Generated by On-Site Sources

The Project proposes the replacement of a 40-foot communications tower with a 100-foot tower. The tower will have four antennas and a fence enclosure. Operational noise sources associated with the project would be limited to one to two annual visits per year related to maintenance and inspection activities. Noise generated by these visits by maintenance trucks would not result in a significant impact to noise due to their small magnitude of noise generation and infrequency.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to 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 impacts were adequately addressed in the 2018 EFMP EIR.

Question B: Generation of excessive groundborne vibration or groundborne noise levels?

Discussion

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. During construction of a project, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, the project does not involve receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration is described as ppv, which is defined as the maximum instantaneous peak of the vibration signal. The units for ppv are normally inches per second (in/sec) and the threshold of perception is approximately 0.3 ppv.

Pile driving and blasting are generally the sources of the most severe vibration during construction. Neither pile driving nor blasting would be used during project construction. Conventional construction equipment would be used for grading activities. As noted previously, the project site is located within the Mt. SAC campus with the nearest off-site residential properties located approximately 1,220 feet away.

As shown in Table 11, the Mt. SAC 2016 CEQA Thresholds of Significance indicates that a significant impact would occur if a ppv of 0.04 in/sec or more occurs off-site in a sensitive receptor area for more than fifteen (15) minutes in any one hour.

TABLE 11
VIBRATION ANNOYANCE CRITERIA AT SENSITIVE USES

Equipment	Vibration Levels (ppv)			
	Residents to the North of the Project Site (ppv@3,060 ft)	Residents to the East of the Project Site (ppv@2,370 ft)	Residents to the South of the Project Site (ppv@1,220 ft)	Residents to the West of the Project Site (ppv@6,020 ft)
Large bulldozer	0.0	0.0	0.0	0.0
Small bulldozer	0.0	0.0	0.0	0.0
Jackhammer	0.0	0.0	0.0	0.0
Loaded trucks	0.0	0.0	0.0	0.0
Mt. SAC Significance Criteria	**0.04**	**0.04**	**0.04**	**0.04**
Exceeds Criteria?	**No**	**No**	**No**	**No**

ppv: peak particle velocity; ft: feet
Source: Psomas 2021.

As shown in Table 11, the project would not generate or expose persons or structures to excessive groundborne vibration from the construction phase as there would be no increase in ppv resulting from project construction activities.

The operations phase of the project would not result in machinery or vehicles that generate substantial levels of vibration that would exceed Mt. SAC's vibration limits or be perceptible at residential uses adjacent to the campus. Maintenance related vehicles traveling to the project site are travelling on air-filled tires that do not effectively transmit vibration.

As shown in Table 11, construction related vibration levels would be below the significance thresholds for vibration and vibration impacts from construction of the project and would be less than significant. Project operations would not generate traffic that would cause substantial levels of vibration resulting from operations. Construction and operational vibration impacts would be less than significant, and no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than impact related to generation of excessive groundborne vibration or groundborne noise levels. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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?

Discussion

The project site is not located within 2 miles of a public airport or private use airport. The nearest airport is Brackett Field, which is located approximately 4 miles northeast of the campus. This airport serves GA aircraft. According to the Brackett Field Airport Land Use Compatibility Plan (LACALUC 2015), the site is not located in the Airport Influence Area of the airport; therefore, no impact would result, and no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to public use airports or private airstrips. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XIV. POPULATION AND HOUSING

The analysis of population and housing is tiered from the 2018 EFMP and was addressed in Section 4.12, Population and Housing, of that document. Relevant elements of the proposed project related to population and housing include maintenance related trips for the proposed project limited to 1 to 2 times per year.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to population and housing.

Project Impact Analysis

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

Discussion

The analysis of Impact 4.12-1 in the 2018 EFMP EIR determined that implementation of the 2018 EFMP would not induce substantial population growth, directly or indirectly.

As stated previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. No housing would be developed as part of the proposed project. Additionally, there would be no increase in employment associated with the proposed project. Therefore, the proposed project would not result in substantial population growth or growth beyond what was projected in the 2018 EFMP. This impact is less than significant, and no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to inducing substantial population growth in the area either directly or indirectly. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question B: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Discussion

As discussion in Section 4.12, Population and Housing, of the 2018 EFMP EIR, no housing is present on campus, and the proposed project would not result in the displacement of housing necessitating the construction of replacement housing elsewhere. No impact would result, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impacts related to displacement of a substantial amount of existing housing that would necessitate the construction of replacement housing or displacement of substantial numbers of people that would necessitate the construction of replacement housing. The proposed project impacts were adequately addressed in the LRDP EIR.

XV. PUBLIC SERVICES

The analysis of the provision of public services on campus (i.e., fire, police, schools, and other public facilities) is tiered from the 2018 EFMP EIR and is addressed in Section 4.13, Public Services, of those documents. Relevant elements of the proposed project related to hazards and hazardous materials include grading for tower foundation, and construction of a new self-supporting 100-foot-high communication tower and related on-site improvements. The design of the proposed project ensures that emergency access to and around the project site is maintained.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to public services.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Public Services	Fire & police protection	Substantial adverse physical impacts from new construction associated with required new or physically altered facilities required for the latest FMP or for a site-specific campus project to maintain acceptable performance objectives for fire or police protection is a significant impact.	Los Angeles County Sheriff's Department (LASD) LACoFD	Impacts of new facilities on physical environment only; Unless there are special circumstances, no additional mitigation measures for public services beyond those included in the latest approved FMP MMP.

Project Impact Analysis

Question 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?

Discussion

The analysis of Impact 4.13-1 in the 2018 EFMP EIR concluded that there would be less than significant direct and cumulative impacts related to the need for new or physically altered fire protection facilities to accommodate the increased demand resulting from implementation of the 2018 EFMP and to maintain acceptable service levels.

The LACoFD provides fire protection, fire suppression, and emergency medical services on a contract basis to the City of Walnut, including Mt. SAC and the project area. Fire Station No. 153 located at 1577 East Cypress Street in Covina, is approximately 3.1 miles from the campus and is the jurisdictional station for the project area, providing first response. Fire Station 153 is staffed with a 4-person quint company. Fire Station No. 85 provides secondary response to the project area. This station has a three-person engine company and a two-person emergency support team. Fire Station No. 85 located at 650 East Gladstone Street in Glendora, is approximately 4.2 miles from the campus.

As stated previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. Based on correspondence with Los Angeles County Fire Department (Takeshita 2018), the proposed project would not affect the Fire Department's ability to maintain acceptable response times. In addition, the proposed project would not require the construction of new facilities, the expansion of existing facilities, or additional personnel or equipment to maintain acceptable response times. Impacts would be less than significant, and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact on fire protection services. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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:

Police Protection?

Discussion

The analysis of Impact 4.13-2 in the 2018 EFMP EIR identified that the proposed project would have a less than significant impact to police services.

Police protection services for the Mt. SAC campus including the project area are provided by the LASD. The Mt. SAC Department of Police and Campus Safety also provides safety and security services to the campus; however, Mt. SAC police personnel are not sworn peace officers. The nearest LASD station is the Walnut/Diamond Bar Sheriff's Station located at 21695 East Valley Boulevard in Walnut. The Walnut/Diamond Bar Station is responsible for policing the cities of Walnut and Diamond Bar and the unincorporated areas of Rowland Heights, Covina Hills, and West Covina. The station is currently staffed by 102 sworn law enforcement officers and 50 civilian support staff. The City of Walnut contracts for nine deputies, which equates to three patrol units on the day shift, three patrol units on the evening shift, and three patrol units on the early morning shift. The LASD uses the following response time standards: 10 minutes (emergency calls), 20 minutes (priority calls), and 60 minutes (routine calls). The Walnut/Diamond Bar Station has the following response time averages in the City of Walnut for a one-year timeframe: 4.2 minutes for

emergency calls for service, 8.5 minutes for priority calls for service, and 20.9 minutes for routine calls for service. Based on consultation with the LASD (Reyes 2018), the proposed project would not generate demand for additional staffing or affect current response times. Existing LASD facilities would be sufficient to serve the proposed project along with the existing demand of the area; therefore, a less than significant impact related to the construction of law enforcement facilities would occur, and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact to police services. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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:

Schools?

Discussion

The analysis of Impact 4.13-3 in the 2018 EFMP EIR identified that the proposed project would have a less than significant impact to schools and no new or altered school facilities would be required.

The 2018 EFMP does not involve the development of new residential uses or include a housing element that would result in a direct increase/generation of students in the Mt. San Antonio Community College District encompassed by the Mt. SAC boundary or within the service area. However, the 2018 EFMP would generate a relatively small number of new staff. As previously discussed in Section XIV, Population and Housing, these positions would likely be filled by the local labor pool. Therefore, it is not expected that a substantial number of new students attending schools within the Mt. SAC boundaries or service area school districts would be generated as a result of the 2018 EFMP.

As stated previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. No housing is proposed as part of the project. Additionally, there would be no increase in employment associated with the proposed project. Therefore, substantial adverse impacts associated with new or physically altered school facilities would not result from implementation of the proposed project, and there would be a less than significant impact, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact to schools; no new or altered school facilities would be required. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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:

Other public facilities?

Discussion

The analysis of Impact 4.13-4 in the 2018 EFMP EIR identified that the proposed project would have a less than significant impact to other public facilities, including libraries.

The development and renovation of the institutional and library uses identified in the 2018 EFMP would involve the construction of a new, expanded Library/Learning Resources facility in Phase 2. Based on an analysis of the Mt. SAC Library usage, including gate count, study room reservations, instructional workshops, and circulation of print and media materials, between 2012–2013 and 2015–2016 student use of the Mt. SAC Library increased 14 percent, college-wide student headcount increased approximately 10 percent, and seating capacity increased by 9 percent and is currently at the maximum capacity allowed to ensure Americans with Disabilities Act compliance. The Mt. SAC Library added 24/7 online chat reference librarian service, electronic databases, online library research guides, and other digital learning tools; extended operation hours during finals week; and added operations on Sundays (Mt. SAC 2022b). To facilitate the growing demand for library services, implementation of the 2018 EFMP, which includes the construction of a new, expanded Library/Learning Resources facility, will meet the demands of the projected growth.

As discussed previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. No housing is proposed as part of the project. As such, the project would not result in an increased demand for on- or off-campus library services or other public services not identified in the 2018 EFMP EIR. Therefore, impacts associated with new or physically altered libraries or other public services would be less than significant. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact to other public facilities, including libraries. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question 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:

Parks?

Discussion

As discussed previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. No housing is proposed as part of the project. Therefore, the modified project would result in a less than significant impact related to parks. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not involve the development of new and expanded recreational facilities, and no new or altered park/recreation facilities would be required as a result of the proposed project. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XVI. RECREATION

The analysis of recreation is tiered from the 2018 LRDP EIR and was addressed in Section 4.13, Public Services and Recreation, of that document. The proposed project does not include the development of any recreational facilities or propose a use that would result in a substantial increase in campus population above what was identified in the 2018 EFMP EIR.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to recreation.

Project Impact Analysis

Question 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?

Question B: Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Discussion

The analysis of Impacts 4.13-5 and 4.13-6 in the 2018 EFMP EIR identified that the proposed project would not involve the development of new and expanded recreational facilities, and no new or altered park/recreation facilities would be required as a result of the proposed project.

As discussed previously, the project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. No housing is proposed as part of the project. Therefore, the proposed project would result in a less than significant impact related to substantial or accelerated physical deterioration of existing neighborhood or regional parks or other recreational facilities. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would result in less than significant impacts related to the development of new and expanded recreational facilities, and no new or altered park/recreation facilities would be required as a result of the proposed project. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XVII. TRANSPORTATION

The analysis of transportation is tiered from the 2018 EFMP EIR and was addressed in Section 4.14, Transportation and Traffic, of that document. Relevant elements of the proposed project related to transportation include temporary construction activities that would involve heavy trucks on the identified construction routes and maintaining existing emergency vehicle access in addition to providing adequate access for the new communication tower.

SB 743, signed into law in 2013, changed transportation impact analysis as part of CEQA compliance. SB 743 required Office of Planning and Research to identify new metrics for identifying and mitigating transportation impacts and eliminated capacity and level of service as a consideration for determining significance under CEQA. In December 2018, the California Natural Resources Agency finalized updates to CEQA Guidelines to incorporate VMT-based analysis methodology and thresholds for the purposes of evaluating transportation impacts. Statewide application of the new guidelines was required beginning July 1, 2020.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to transportation.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Transportation	Intersection, freeway ramp, and main line capacity	Non-compliance with campus parking demand projections based on parking demand and supply studies completed for the latest FMP (or every five years if no FMP has occurred beginning in 2020), based on fall student headcount enrollment and projected faculty and staff levels, is a significant impact.	SCAG's 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy; California Department of Transportation (Caltrans); Metropolitan Transportation Authority; Los Angeles Department of Water & Power;	Unless there are unusual circumstances, no additional mitigation measures for traffic and parking beyond those included in the latest approved FMP MMP; Haul Routes – Specific traffic congestion analysis is required when truck hauling exceeds 15 trucks per hour and 100,000 cubic yards (cy) of earth movement for a single project. Both criteria must be met to require a Truck Haul Plan (MM-2c in 2015 Addendum to 2012 FMP EIR); Beginning in 2015, whenever there is not a traffic/parking study for a FMP, a new

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
				traffic/parking study shall be completed every 5 years; Complete a site-specific traffic study for 56,000 asf (80,000 gsf) or more of new construction for a site-specific project (excludes renovation) that generates more than 1,925 daily trips [waived when included in FMP in last 5) years; Based on ITE trip rate of 27.49/thousand square feet (ksf): Site-specific traffic and parking studies for new special events are required with projected maximum daily attendance above 15,000 weekdays (excludes summer intersession and campus holidays).

Project Impact Analysis

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

Discussion

The analysis of Impact 4.14-1 in the 2018 EFMP EIR concluded that, with implementation of MM TRA-1 and MM TRA-2, impacts would be reduced to a less than significant level for 11 of the 15 intersections for the proposed 2018 EFMP. However, the implementation of the identified improvements is subject to the approval of the cities of Walnut, Pomona, and West Covina as well as the County of Los Angeles. While Mt. SAC would work with these jurisdictions to implement the recommended improvements, Mt. SAC does not have the legal ability to compel these agencies to implement the improvements needed to mitigate this impact to a level of insignificance. Therefore, impacts would be significant and unavoidable.

Construction activities associated with the proposed project could result in temporary closure of on-campus traffic lanes or roadway segments in the project vicinity to permit the delivery of construction materials; to transport exported soil; or to provide adequate site access during construction of utility connections or other project-related features located adjacent to, or within, Temple Avenue, Bonita Drive, and Stadium Way. As previously discussed, grading for tower foundation is anticipated to occur over a 4-week period. Grading activities would generate approximately 4 heavy truck round trips related to hauling during the grading period.

Additionally, there is a chance that construction of the proposed project may overlap with construction of other on-campus projects that are either proposed or approved; however, it is not expected that they would have overlapping construction traffic routes. The proposed project would not require lane closures or other access restrictions for extended periods of time.

The proposed project would not require lane closures or other access restrictions for extended periods of time. Access to the project site is provided from an existing unpaved access road, which is accessible from Bonita Road and Stadium Way. Construction is not expected to affect access for other areas of campus. Service vehicles and emergency vehicles would have access to the site as needed.

After construction, the site would be visited 1 to 2 times annually for routine maintenance activities and trips to the site would be largely unchanged from the existing operations. Therefore, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and is assumed to have a less than significant impact on transportation consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The proposed project impacts were adequately analyzed in the 2018 EFMP EIR.

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

Discussion

The analysis of Impact 4.14-2 in Section 4.14, Transportation/Traffic, of the 2018 EFMP EIR, concluded that impacts related to a conflict with or inconsistent with CEQA Guidelines section 15064.3, subdivision (b) would be less than significant.

Per the *Los Angeles County Transportation Impact Analysis Guidelines*, if a project is located within one-half mile of a major transit stop, the project is determined to have a less-than-significant impact on transportation and no further VMT analysis is required. In addition to the existing transit routes which operate within one-half mile of the project site, a transit center is currently being constructed on the Mt. SAC campus. The transit center would be located less than one-half mile from the project site and would serve multiple Foothill Transit routes. Therefore, the project is exempt from further VMT analysis and is assumed to have a less than significant impact on transportation consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to a conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which would be reduced to less than significant from the analysis provided in the 2018 EFMP EIR.

Question 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)?

Discussion

The analysis of Impact 4.14-3 in Section 4.14, Transportation/Traffic, of the 2018 EFMP EIR, concluded that impacts related to increased hazards due to a geometric design feature or incompatible uses would be less than significant.

The proposed project would maintain and use the existing access road to access the project site and no new roadway construction would be required. No impacts would occur related to an increase in hazards due to a design feature or incompatible uses and no mitigation is required consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to a substantial increase in traffic hazards due to a design feature or incompatible uses. The proposed project impacts were adequately addressed in the LRDP EIR.

Question D: Would the project result in inadequate emergency access?

Discussion

The analysis of Impact 4.14-4 in the 2018 EFMP EIR concluded that, with implementation of MM TRA-1 through MM TRA-8, impacts related to emergency access would be reduced to a less than significant level.

Access to the project site is provided from an existing unpaved access road, which is accessible from Bonita Drive and Stadium Way. Throughout project-related construction, vehicular access along Temple Avenue as well as access to the surrounding land uses would be maintained and would not interfere with vehicle movement or emergency access along this roadway.

During the project operation, the project area would not experience an increase in traffic volumes; therefore, the proposed project would not interfere with the movement of emergency vehicles along local roadways.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to emergency access. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XVIII. TRIBAL CULTURAL RESOURCES

The analysis of tribal cultural resources is tiered from the 2018 EFMP EIR and was addressed in Section 4.15, Tribal Cultural Resources, of that document. Additionally, information in this section is synthesized from cultural resource research conducted in support of the Mt. SAC 2015 Facilities Master Plan Update and Physical Education Projects Subsequent Program and Project Final Environmental Impact Report (2015 SEIR). The results of these research methods were used to assess the potential impacts for the proposed project.

The following MM was identified in the 2019 Mitigation Monitoring Program prepared for the certified 2018 EFMP EIR is provided for reference below. This MM has been modified and expanded to reflect address Project-specific requirements and is noted below as Project Level ("PL") MM TCR-1 and PL MM TCR-2.

MM TCR-1 Tribal Cultural Resources Monitoring. Prior to the commencement of any grading activities in which native soil is disturbed, Mt. SAC shall ensure that a Native American monitor has been retained to observe grading activities in native sediment and to salvage and catalogue tribal cultural resources as necessary. The Native American monitor shall be present at the pre-grading conference, shall establish procedures for tribal cultural resource surveillance, and shall establish, in cooperation with Mt. SAC, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the tribal cultural resource as appropriate. If the tribal cultural resources are found to be significant, the Native American observer shall determine appropriate actions, in cooperation with Mt. SAC for exploration and/or recovery.

Project Impact Analysis

Question A: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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)?

Discussion

There are no resources on the project site that are currently listed, individually or collectively, in either the National Register of Historic Places or the CRHR. Therefore, there would be no impacts to tribal cultural resources as defined in Public Resources Code section 5021.1(k).

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to tribal cultural resources.

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

Discussion

Pursuant to AB 52, on January 26, 2022, Mt. SAC sent an informational letter to the Gabrieleño Band of Mission Indians – Kizh Nation, describing the project and offering to formally consult with the tribe (refer to Appendix E). An email, dated February 11, 2022, was sent to the Gabrieleño Band of Mission Indians – Kizh Nation from John Gaston, Project Manager, Facilities Planning & Management, to indicate that the request for consultation was received and to initiate phone consultation with the tribe. Mt. SAC formally initiated consultation with the Gabrieleño Band of Mission Indians – Kizh Nation via teleconference on April 21, 2022. At that confidential meeting, Mt. SAC and the Tribal representatives discussed the proposed Project and the IS/MND analytical approach. The tribal representatives discussed the importance of the Project site to the Gabrieleño Band of Mission Indians – Kizh Nation. However, the project site and surrounding area has been developed through significant landscaping and hardscaping. As such, potential archaeological resources buried beneath the site's surface are likely to be heavily disturbed. While unlikely, buried resources, such as prehistoric artifacts relating to Gabrieleño village sites, historic artifacts relating to Spanish ranching, and human remains could exist on the Project site and be damaged by drilling activities for project construction, which would represent a significant impact.

Additionally, in the unlikely event of an unanticipated encounter with human remains, as defined by Section 7001 of the *California Health and Safety Code*, all work is required to halt in the immediate vicinity of the discovery and the County Coroner must be notified (*California Public Resources Code* §5097.98). The Coroner is required to determine whether the remains are of forensic interest. If the Coroner, with the aid of an Archaeologist, determines that the remains are prehistoric, s/he is required to contact the NAHC. The NAHC is responsible for designating the most likely descendant (MLD), who is responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the *California Health and Safety Code.* The MLD is required to make his/her recommendation within 48 hours of being granted access to the site. The MLD's recommendation is required to be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials (*California Health and Safety Code* §7050.5). If the landowner rejects the MLD's recommendations, the landowner is required to rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (*California Public Resources Code* §5097.98).

To avoid impacts to tribal cultural resources, PL MM TCR-1 and PL MM TCR-2, were drafted based on consultation with tribal representatives during preparation of the 2018 EFMP EIR and modified based on project-specific communications during the consultation process for this project. Impacts on tribal cultural resources would be less than significant with implementation of PL MM TCR-1 and PL MM TCR-2 consistent with the findings of the 2018 EFMP EIR and the findings related to this project.

Modified Project-Level Mitigation Measures

MM TCR-1, adopted in connection with the 2018 EFMP EIR, has been reviewed and modified as follows, PL MM TCR-1. Additionally, PL MM TCR-2 is recommended to reduce potentially significant impacts to less than significant levels.

PL MM TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

a. A Native American monitor ("Monitor") shall be present on the project site during any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, below-grade tree removal, boring, grading, excavation, drilling, and trenching.

b. Mt. SAC shall enter into a monitoring agreement prior to the commencement of any ground-disturbing activity. The monitoring agreement shall be between Mt. SAC and a group recognized by the NAHC as culturally affiliated with the area. The Gabrieleño Band of Mission Indians – Kizh Nation, as a consulting party for the Project, shall be contacted first and given 10 days to respond with a complete scope of work for Native American monitoring. In the unlikely event that mutual agreement as to the terms of a monitoring agreement cannot be reached between Mt. SAC and the Gabrieleño Band of Mission Indians – Kizh Nation, or if no response is received within 10 days of a soliciting a request, Mt. SAC may contact another California Native American Tribal representative included on the NAHC Tribal Contact List and is culturally affiliated with the area.

c. The Monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the tribe. Monitor logs will identify and describe any discovered tribal cultural resources, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCRs"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to Mt. SAC upon written request to the tribe.

d. On-site Native American monitoring shall conclude upon either of the following (1) written confirmation from Mt. SAC to the Monitor that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Monitor to Mt. SAC that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact TCRs.

e. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50 feet) and shall not resume until the discovered TCR has been fully

assessed by a qualified archaeologist in consultation with the Monitor. Construction activities may continue in other areas of the Project site in coordination with the qualified archaeologist and Monitor. The Monitor will recover and retain all discovered TCRs in the form and/or manner the tribe deems appropriate, in the tribe's sole discretion, and for any purpose the tribe deems appropriate, including for educational, cultural and/or historic purposes.

PL MM TCR-2 Procedures for Burials and Funerary Remains

a. Upon discovery of "human remains" as defined by the Monitor and, including but not limited to the soil surrounding the burial, any funerary objects found with the deceased, and the remains of ceremonial burning of human remains, the Monitor shall direct the removal and reburial of any human remains.

b. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered, protected, and secured in place under the direction of the Monitor.

c. In the event preservation in place is not possible despite good faith efforts by Mt. SAC, before ground-disturbing activities may resume on the project site, but in no event later than 10 business days following discovery, Mt. SAC and the Monitor shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects.

d. Mt. SAC will work closely with the Monitor to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery (i.e., archaeological excavation) is approved by the tribe, the Monitor shall prepare documentation to include (at a minimum) detailed descriptive notes and sketches. All data recovery and data recovery-related forms of documentation shall be approved in advance by the tribe. If any data recovery is performed, upon completion, a final report shall be submitted to the tribe and the NAHC. No scientific study or utilization of any invasive and/or destructive diagnostics on human remains shall occur.

e. In the event that PL MM TCR-2 conflicts with the *California Health and Safety Code* or the *California Public Resources Code* (collectively, the "Codes"), the Codes shall control.

Level of Significance

The proposed project would have a less than significant impact related to tribal cultural resources with the incorporation of PL MM TCR-1 and PL MM TCR-2.

XIX. UTILITIES AND SERVICE SYSTEMS

The analysis of utilities and service systems (i.e., water supply, solid waste, wastewater, and energy) is tiered from the 2018 EFMP and was addressed in Section 4.16, Utilities and Service Systems, of that document. Relevant elements of the proposed project related to utilities and service systems include an approximately 253,866 gross gsf of building space at the project site, which would subsequently increase the demand for water and energy and the generation of solid waste and wastewater at the project site. The proposed project would be designed to achieve, at a minimum, a LEED Silver rating.

There were no applicable MMs adopted as part of the 2018 EFMP EIR related to agricultural resources.

Thresholds of Significance

Mt. SAC 2016 CEQA Thresholds of Significance

To the extent the following thresholds of significance are applicable to the project, they shall be applied to determine the project's environmental impact.

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
Energy	Wasteful, inefficient or unnecessary consumption of energy; Renewable energy or energy efficiency measures.	Non-compliance with an Energy Conservation Plan for site-specific projects is a significant impact.	CEC	
Utilities/Service Systems	Demand and supply availability; Water and sewer facilities and infrastructure; Landfill capacity; Compliance with solid waste regulations.	Significant physical impacts of construction of new water, wastewater treatment, or stormwater drainage facilities required for the latest FMP or for a site-specific project is a significant impact; Inadequate capacity of a water provider to have sufficient supplies to serve the latest FMP's or for a site-specific project's projected demand during normal, dry and multiple dry years in addition to their existing commitments is a significant impact; Inadequate capacity of a wastewater treatment provider to serve the	Los Angeles County Sanitation District (LACSD) TVMWD DPW Solid waste regulations	Permits required from LACSD for occupied buildings (net increase in gsf) when the Utility Master Plan is updated for a FMP or every 5 years, beginning in 2020; Consultation with DPW for regional landfill capacity; Consultation for special circumstances; Unless there are special circumstances, no additional mitigation measures for utilities/service systems beyond those included in the latest approved FMP MMP;

Environmental Topic in the CEQA Checklist	Impact	Mt. San Antonio Community College District Threshold of Significance	Agencies and Regulations	CEQA Procedures
		latest FMP or site-specific project's projected demand in addition to their existing commitments is a significant impact; Non-compliance with federal and State statutes and regulations related to solid waste and lack of sufficient permitted landfill capacity to accommodate the latest FMP or a site-specific project's needs is a significant impact.		Request "will serve" letters from TVMWD and LACSD for projects 56,000 asf (80,000 gsf) or more [waived when included in FMP or Utility Master Plan in last 5 years].

Project Impact Analysis

Question A: **Would the proposed project require or result in the relocation or construction of new or expanded water, wastewater treatment facilities or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?**

Discussion

Water and Wastewater Treatment

The analysis of Impact 4.16-1 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded water and wastewater treatment facilities.

The campus is currently provided with water service (potable and recycled) from TVMWD. To calculate water demand for the 2018 EFMP, the assumption that new water demands would be strictly from inside use and be equivalent to the increase in sewer demand was used.

Consistent with existing conditions, no water demand would occur with the proposed project. The only water infrastructure in the area is related to off-site irrigation which would be unchanged by the project. Therefore, no infrastructure improvements related to water distribution or treatment would be required to serve the proposed project.

Wastewater service for the campus is provided by LACSD. Consistent with existing conditions, the proposed project would not require wastewater service; therefore, no impacts related to the relocation or construction of new or expanded wastewater treatment facilities would occur.

Stormwater Drainage

The analysis of Impact 4.16-1 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded stormwater drainage.

Existing and proposed storm drain lines that would serve the 2018 EFMP are shown on Exhibit 3-38 Existing Stormwater System and Exhibits 3-42, 3-43a–c, 3-44, 3-46a–c, 3-48, 3-50a–d, 3-51, and 3-52, in the 2018 EFMP EIR. The backbone infrastructure would be protected in place during construction and operation and it is not anticipated that upgrades to the backbone infrastructure would be required to implement facilities proposed as part of the 2018 EFMP including the proposed project. The proposed project would result in a nominal increase in impervious surface area and would not result in an increase in stormwater drainage. Impacts would be less than significant, and no mitigation is required. Therefore, impacts from the proposed project related to storm drain facilities would be less than significant consistent with the findings of the 2018 EFMP EIR.

Electric Power

The analysis of Impact 4.16-1 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded electric power.

Southern California Edison provides electricity to the campus. The college's 12 kilovolt (medium-voltage) electrical distribution system distributes power from the utility to each building on campus. To meet the needs of new facilities and renovations identified in the 2018 EFMP, it would be necessary to further increase the capacity and extent of the medium voltage electrical distribution system and reconsider the phasing of system-wide improvements.

The existing communication shed has 3-phase 408-volt (v) electrical power that steps down via a transformer to 208/120v, 45 Kilovolt-amp (kVA). Proposed low-voltage and electrical infrastructure design associated with the project includes: (1) relocation of the existing (UHF) antennas; (2) providing conduit and cable tray pathways from the existing communications shed to the new tower location; (3) providing power from the existing shed to support new rack for the new FM antenna; (4) providing for relocation or addition of security cameras; (5) providing for future lighting; and (6) providing for future cellular antennas.

There is no anticipated change in power requirement for the proposed project. No impacts associated with construction of electrical facility upgrades or connections to existing facilities would occur. Impacts would be less than significant, and no mitigation is required. Therefore, impacts from the proposed project related to electric power facilities would be less than significant consistent with the findings of the 2018 EFMP EIR.

Natural Gas

The analysis of Impact 4.16-1 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded natural gas. Southern California Gas (SCG) provides natural gas to the campus. The campus is currently supplied from SCG's high-pressure system.

There is no existing natural gas consumption at the project site. Additionally, there would be no natural gas usage associated with the proposed project.

No impacts associated with construction of natural gas upgrades or connections to existing facilities would occur. Therefore, impacts from the proposed project related to natural gas facilities would be less than significant consistent with the findings of the 2018 EFMP EIR.

Telecommunications Facilities

The analysis of Impact 4.16-1 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded telecommunications facilities.

The proposed project is implementing an improvement to support the on-campus telecommunications system. A proposed 100-foot-high communications tower would be constructed to replace the existing facility on Reservoir Hill, at a location slightly to the southeast of the existing 40-foot tower, and would tie into the infrastructure that is already in place. The proposed tower would support 2-way communication for the campus associated with the Emergency Operations Center, Alertus (campus mass notification system), and the campus radio station (90.1 FM Mt Rock transmitter).

No impacts associated with construction of telecommunication upgrades or connections to existing facilities would occur. Impacts would be less than significant, and no mitigation is required. Therefore, impacts from the proposed project related to telecommunications facilities would be less than significant consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

Water/Wastewater Treatment

The proposed project would not require construction of new wastewater treatment facilities, and would have no impact related to the capacity of existing wastewater systems. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Water Distribution

The proposed project would have no impact on water distribution facilities. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Wastewater Collection

There are adequate wastewater collection facilities available to serve the proposed project resulting in a less than significant impact. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Electricity and Natural Gas

The proposed project would have no impact related to electricity or natural gas. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Telecommunications Facilities

The proposed project would have a less than significant impact related to telecommunications facilities. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Storm Water Drainage

There is a less than significant impact related to the need for new or expanded storm drainage facilities beyond the installation of new storm waste management facilities to serve the proposed project. The physical limits of construction are within the impact area addressed throughout this IS. Impacts associated with the proposed project were adequately addressed in the 2018 EFMP EIR.

Question B: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Discussion

The analysis of Impact 4.16-2 in the 2018 EFMP EIR concluded there would be a less than significant impact related to water supply. As discussed previously, there would be no demand for water; therefore, no impacts related to water supply would occur.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

There would be no demand for water associated with the proposed project. No impact to water supply would occur. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question C: 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?

Discussion

The analysis of Impact 4.16-3 in the 2018 EFMP EIR concluded there would be a less than significant impact related to construction of new or expanded wastewater treatment facilities. As discussed previously, the proposed project would not generate wastewater; therefore, no impacts related to wastewater treatment would occur.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would not generate wastewater that exceeds the capacity of the wastewater treatment facilities resulting in no impact. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question D: 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?

Discussion

The analysis of Impact 4.16-4 in the 2018 EFMP EIR concluded there would be a less than significant impact related to landfill capacity.

According to the 2018 EFMP, Mt. SAC generated approximately 11.9 pounds of solid waste per GSF, or 8,314 metric tons (575.7 pounds) of solid waste per capita in 2012. This total includes mixed construction and demolition waste from campus construction projects, as well as paper, aluminum, glass, plastic, food waste, electronic waste, and clinical waste from non-construction waste. Except for construction waste, Mt. SAC does not track waste generated from different sources separately.

With implementation of the proposed project, a limited amount of solid waste would be generated during construction, and there would be no solid waste generated during operation. Although the anticipated volume of construction-related waste would be small due to the small size of the project site and limited amount of grading, any materials would be recycled or reused as appropriate, thus reducing the overall amount of solid waste generated.

As such, it is not anticipated that the proposed project additional waste stream would exceed the capacity of these landfills. Therefore, there would be less than significant impacts related to landfill capacity, and no mitigation is required. This is consistent with the findings for the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to landfill capacity and solid waste disposal. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

Question G: Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Discussion

The analysis of Impact 4.16-5 in the 2018 EFMP EIR concluded there would be a less than significant impact related to compliance with applicable federal, State, and local solid waste-related statutes and regulations.

Solid waste practices in California are governed by multiple federal, State, and local agencies that enforce legislation and regulations to ensure that landfill operations minimize impacts to public health and safety and the environment. Construction of the proposed project would comply with all applicable construction waste regulations. As previously discussed, construction-related waste would be recycled or reused as appropriate, and the project would not generate any operational-related waste. Therefore, impacts related to solid waste regulations would be less than significant, and no mitigation is required, consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have a less than significant impact related to compliance with applicable federal, State, and local statutes and regulations related to solid waste. The proposed project impacts were adequately addressed in the 2018 EFMP EIR.

XX. WILDFIRE

The issue of wildfires was not addressed in the 2018 EFMP EIR.

Project Impact Analysis

Question A: Substantially impair an adopted emergency response plan or emergency evacuation plan?

Question 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?

Question 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?

Question 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?

Discussion

The analysis of Impacts 4.8-8 through 4.8-11 in the 2018 EFMP EIR concluded that development under the 2018 EFMP would have a less than significant impact related to wildfires.

As previously described, the Mt. SAC campus is not within a designated VHFHSZ as defined by CalFire. As discussed in Section 4.3, Biological Resources, of the 2018 EFMP EIR, the Mt. SAC campus contains ornamental vegetation throughout as well as natural habitat areas that support ecological and educational objectives of the campus. The campus is surrounded by developed land to the north, south, and west and open space and undeveloped areas to the east. These open space areas are limited in acreage and abut development or agricultural areas and livestock areas associated with Cal Poly Pomona, thus reducing the potential for wildland fires. In the event of fire emergency, Mt. SAC has an established Campus Emergency Response and Evacuation Plan that identifies procedures and actions for emergencies, including wildfires. All recommended structures associated with the 2018 EFMP would be constructed to meet current building and fire codes, and the buildings would be sprinklered accordingly. Implementation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Additionally, because thresholds 8.8 through 8.11 of the 2018 EFMP EIR apply only to those projects that are “located in or near state responsibility areas or lands classified as very high fire hazard severity zones”, no impacts related to these thresholds would occur. Specifically, implementation of the proposed project would not impair an adopted emergency response plan or evacuation plan; expose project occupants to pollutant concentrations from wildfire; require installation or maintenance of infrastructure that may exacerbate fire risk; and would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. No impacts would occur consistent with the findings of the 2018 EFMP EIR.

Additional Project-Level Mitigation Measures

None required.

Level of Significance

The proposed project would have no impact related to wildland fires. The proposed project was adequately addressed in the 2018 EFMP EIR.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Question A: Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Discussion

There are no sensitive biological resources, habitats, or species on the project site that would be affected by the proposed project. Incorporation of MM BIO-3 (MBTA and nesting birds) into the proposed project would ensure a less than significant impact on biological resources.

Due to the location of the project site in a developed, urban area that has been subjected to previous disturbance related to urban development, and because excavation would not occur in native sediments, no impacts to archaeological resources or paleontological resources would occur. However, the proposed project incorporates MM CULT-3 which outlines steps to take in the event that cultural resources are discovered. Incorporation of this measure into the proposed project would ensure a less than significant impact.

Question B: Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Discussion

As identified in the preceding analysis provided in Section 4.0, Environmental Evaluation, of this IS/MND, applicable mitigation measures identified in the certified 2018 EFMP EIR are incorporated as part of the proposed project and assumed in the analysis and all project-level impacts have been determined to be less than significant. Thus, with continued implementation of applicable MMs (identified for each environmental topic analyzed above in Sections 4.I through 4.XIX of this IS/MND), the proposed project's impacts would be limited and its contribution to cumulative impacts would not be cumulatively considerable.

Question C: Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Discussion

Based on the preceding analysis provided in Section 4.0, Environmental Evaluation, of this IS/MND, applicable mitigation measures identified in the certified 2018 EFMP EIR are incorporated as part of the proposed project and assumed in the analysis. Implementation of the proposed project would not result in significant impacts that could degrade the quality of the environment or cause substantial adverse effects on human beings, either directly or indirectly.

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SECTION 5.0 SUMMARY OF MITIGATION MEASURES

The proposed project incorporates mitigation measures (MMs) identified in the 2018 Mitigation Monitoring Program prepared for the 2018 Educational and Facilities Master Plan (EFMP) EIR which are assumed in the analysis presented this IS as well as project-level (PL) MMs to address potentially significant impacts. The following mitigation measures are organized by environmental topics as presented in the IS and the numbering is consistent with the 2018 Mitigation Monitoring Program. All applicable MMs are noted below.

I. Aesthetics

MM AES-1 Prior to the issuance of grading permits, the Project Applicant shall provide evidence to the City that the contractor specifications require any temporary nighttime lighting installed during construction for security or any other purpose be downward-facing and hooded or shielded to prevent light from spilling outside the staging area and from directly broadcasting security light into the sky or onto adjacent residential properties. Compliance with this measure shall be verified by the City's Building and Safety Department during inspections of the construction site.

III. Air Quality

MM AQ-1 All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 final off-road emissions standards. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by the California Air Resources Board (CARB). Any emissions-control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

IV. Biological Resources

MM BIO-3 No project-related activities shall result in the failure of a nest protected under the conditions set forth in the *California Fish and Game Code*. The nature of the project may require that work would be initiated during the breeding season for nesting birds (March 15–September 15) and nesting raptors (February 1–June 30). To avoid direct impacts on active nests, a pre-construction survey shall be conducted by a qualified Biologist for nesting birds and/or raptors within three days prior to clearing of any vegetation or any work near existing structures (i.e., within 50 feet for nesting birds and within 500 feet for nesting raptors). If the Biologist does not find any active nests within or immediately adjacent to the impact area, the vegetation clearing/construction work shall be allowed to proceed.

If the Biologist finds an active nest within or immediately adjacent to the construction area and determines that the nest may be impacted or breeding activities substantially disrupted, the Biologist shall delineate an appropriate buffer zone (at a minimum of 25 feet) around the nest depending on the sensitivity of the species and the nature of the construction activity. Any nest found during survey efforts shall be mapped on the construction plans. The active nest shall be protected until nesting activity has ended. To protect any nest site, the following restrictions to construction activities shall be required until nests are no longer

active, as determined by a qualified Biologist: (1) clearing limits shall be established within a buffer around any occupied nest (the buffer shall be 25–100 feet for nesting birds and 300–500 feet for nesting raptors), unless otherwise determined by a qualified Biologist; and (2) access and surveying shall be restricted within the buffer of any occupied nest, unless otherwise determined by a qualified Biologist. Encroachment into the buffer area around a known nest shall only be allowed if the Biologist determines that the proposed activity would not disturb the nest occupants. Construction can proceed when the qualified Biologist has determined that fledglings have left the nest or the nest has failed.

V. Cultural Resources

MM CULT-3 Prior to initiation of grading activities, the following requirements shall be incorporated on the cover sheet of the Grading Plan under the general heading "Conditions of Approval":

a. A qualified archaeologist that meets the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in Archaeology (Archaeologist) shall be present at the pre-grade meeting to consult with the Contractor and other consultants prior to the start of earth-moving activities.

b. During construction grading and site preparation activities, the Contractor shall monitor all construction activities. In the event that cultural resources (i.e., prehistoric sites, historic sites, and/or isolated artifacts) are discovered, work shall be halted immediately within 50 feet of the discovery and the Contractor shall inform the Mt. SAC Project Manager. The Archaeologist shall analyze the significance of the discovery and recommend further appropriate measures to reduce further impacts on archaeological resources. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. Facilities Planning & Management shall monitor compliance.

VII. Geology and Soils

MM GEO-1 Prior to the approval of project plans by the Division of the State Architect (DSA), a site-specific geotechnical study shall be prepared for each proposed structure. The Geotechnical Report shall be prepared by a registered Civil Engineer or certified Engineering Geologist and shall contain site-specific evaluations of the seismic and geologic hazards affecting the project and shall identify recommendations for earthwork and construction. All recommendations from forthcoming site-specific geotechnical studies shall be included in the site preparation and building design specifications. Compliance with this requirement shall be verified by the DSA as part of the project certification process, which includes review and approval of the site-specific geotechnical studies by the California Geological Survey (CGS).

MM GEO-3 In accordance with the Memorandum of Agreement (MOA) between the Mt. San Antonio Community College District and the City of Walnut, grading and drainage plans for all future Mt. SAC exempt education facilities shall be subject to administrative review and approval by the City of Walnut's Building Official.

MM GEO-4 Prior to initiation of grading activities, the following requirements shall be incorporated on the cover sheet of the Grading Plan under the general heading "Conditions of Approval":

a. A qualified Paleontologist and Paleontological Monitor shall be present at the pre-grade meeting to consult with the grading contractor and other consultants prior to the start of earth-moving activities. At the meeting, the Paleontologist shall establish procedures for paleontological resources surveillance based on the location and depths of paleontologically sensitive sediments, and shall establish, in cooperation the Mt. SAC Project Manager, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the fossils as appropriate.

b. A qualified Paleontological Monitor shall be present at the site when grading and excavation in paleontologically sensitive sediments (Puente Formation and Quaternary older alluvial fan deposits). Paleontological monitoring is not required in areas where excavation occurs within fill soils.

c. The Monitor shall have the authority to temporarily direct, divert, or halt grading to allow recovery of paleontological resources. In areas rich in micro-vertebrates, collection of large bulk samples of matrix for later water screening to recover small bones and teeth shall be part of the paleontological salvage program.

d. Fossils recovered from this project shall be cleaned, stabilized, identified, and documented. A report on the paleontological resources recovered from the parcels shall be prepared by the Paleontologist and submitted to Mt. SAC Facilities Planning & Management.

e. Fossils with their contextual data must be deposited at a recognized museum or institution.

VIII. Greenhouse Gas Emissions

MM GHG-1 All major capital projects (10,000 square feet and above) shall be designed to outperform Title 24, Part 6, Energy Efficiency Standards, by a minimum of 15%.

X. Hydrology and Water Quality

MM HYD-1 Prior to the issuance of grading permits, Mt. SAC shall ensure preparation of a site-specific hydrologic evaluation for each proposed development project based on the project-specific grading plan and site design of each individual project. This evaluation shall include, but not be limited to: (1) an assessment of runoff quality, volume, and flow rate from the proposed Project site; (2) identification of project-specific BMPs (structural and non-structural) to reduce the runoff rate and volume to appropriate levels; and (3) identification of the need for new or upgraded storm drain infrastructure (on and off campus) to serve the project. Project design shall include measures to upgrade and expand campus storm drain capacity where necessary, as identified through the project-specific hydrologic evaluation. Design of future projects shall include measures to reduce runoff, including, but not limited

to, the provision of permeable landscaped areas adjacent to structures to absorb runoff and the use of pervious or semi-pervious paving materials. All recommendations from forthcoming site-specific hydrologic evaluations shall be included in the site preparation and building design specifications.

XVIII. Tribal Cultural Resources

PL MM TCR-1 Retain a Native American Monitor Prior to Commencement of Ground-Disturbing Activities

a. A Native American monitor ("Monitor") shall be present on the project site during any "ground-disturbing activity" for the subject project at all project locations (i.e., both on-site and any off-site locations that are included in the project description/definition and/or required in connection with the project, such as public improvement work). "Ground-disturbing activity" shall include, but is not limited to, demolition, pavement removal, potholing, auguring, grubbing, below-grade tree removal, boring, grading, excavation, drilling, and trenching.

b. Mt. SAC shall enter into a monitoring agreement prior to the commencement of any ground-disturbing activity. The monitoring agreement shall be between Mt. SAC and a group recognized by the NAHC as culturally affiliated with the area. The Gabrieleño Band of Mission Indians – Kizh Nation, as a consulting party for the Project, shall be contacted first and given 10 days to respond with a complete scope of work for Native American monitoring. In the unlikely event that mutual agreement as to the terms of a monitoring agreement cannot be reached between Mt. SAC and the Gabrieleño Band of Mission Indians – Kizh Nation, or if no response is received within 10 days of a soliciting a request, Mt. SAC may contact another California Native American Tribal representative included on the NAHC Tribal Contact List and is culturally affiliated with the area.

c. The Monitor will complete daily monitoring logs that will provide descriptions of the relevant ground-disturbing activities, the type of construction activities performed, locations of ground-disturbing activities, soil types, cultural-related materials, and any other facts, conditions, materials, or discoveries of significance to the tribe. Monitor logs will identify and describe any discovered tribal cultural resources, including but not limited to, Native American cultural and historical artifacts, remains, places of significance, etc., (collectively, tribal cultural resources, or "TCRs"), as well as any discovered Native American (ancestral) human remains and burial goods. Copies of monitor logs will be provided to Mt. SAC upon written request to the tribe.

d. On-site Native American monitoring shall conclude upon either of the following (1) written confirmation from Mt. SAC to the Monitor that all ground-disturbing activities and phases that may involve ground-disturbing activities on the project site or in connection with the project are complete; or (2) a determination and written notification by the Monitor to Mt. SAC that no future, planned construction activity and/or development/construction phase at the project site possesses the potential to impact TCRs.

e. Upon discovery of any TCRs, all construction activities in the immediate vicinity of the discovery shall cease (i.e., not less than the surrounding 50

feet) and shall not resume until the discovered TCR has been fully assessed by a qualified archaeologist in consultation with the Monitor. Construction activities may continue in other areas of the Project site in coordination with the qualified archaeologist and Monitor. The Monitor will recover and retain all discovered TCRs in the form and/or manner the tribe deems appropriate, in the tribe's sole discretion, and for any purpose the tribe deems appropriate, including for educational, cultural and/or historic purposes.

PL MM TCR-2 Procedures for Burials and Funerary Remains

a. Upon discovery of "human remains" as defined by the Monitor and, including but not limited to the soil surrounding the burial, any funerary objects found with the deceased, and the remains of ceremonial burning of human remains, the Monitor shall direct the removal and reburial of any human remains.

b. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered, protected, and secured in place under the direction of the Monitor.

c. In the event preservation in place is not possible despite good faith efforts by Mt. SAC, before ground-disturbing activities may resume on the project site, but in no event later than 10 business days following discovery, Mt. SAC and the Monitor shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects.

d. Mt. SAC will work closely with the Monitor to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery (i.e., archaeological excavation) is approved by the tribe, the Monitor shall prepare documentation to include (at a minimum) detailed descriptive notes and sketches. All data recovery and data recovery-related forms of documentation shall be approved in advance by the tribe. If any data recovery is performed, upon completion, a final report shall be submitted to the tribe and the NAHC. No scientific study or utilization of any invasive and/or destructive diagnostics on human remains shall occur.

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APPENDIX A

AIR QUALITY AND GHG ANALYSIS

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mt. SAC Radio Tower

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.63	1000sqft	0.01	625.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - SF of footing

Construction Phase - .

Off-road Equipment -

Off-road Equipment - Assumed for drilled piers

Trips and VMT - .

Grading - .

Vehicle Trips - .

Consumer Products - .

Area Coating - no painting

Energy Use - .

Water And Wastewater - .

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - MM AQ-1 of 2018 EFMP EIR

Operational Off-Road Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	313	0
tblAreaCoating	Area_Nonresidential_Interior	938	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	2.00	21.00
tblConstructionPhase	NumDays	1.00	22.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	0.00
tblEnergyUse	T24NG	13.51	0.00

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tblGrading	MaterialExported	0.00	32.00
tblLandUse	LandUseSquareFeet	630.00	625.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	145,687.50	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0295	0.3119	0.2253	5.4000e-004	0.0664	0.0134	0.0797	0.0289	0.0123	0.0412	0.0000	47.6037	47.6037	0.0139	3.1000e-004	48.0432
Maximum	**0.0295**	**0.3119**	**0.2253**	**5.4000e-004**	**0.0664**	**0.0134**	**0.0797**	**0.0289**	**0.0123**	**0.0412**	**0.0000**	**47.6037**	**47.6037**	**0.0139**	**3.1000e-004**	**48.0432**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	7.4400e-003	0.0308	0.2832	5.4000e-004	0.0325	8.6000e-004	0.0333	0.0137	8.5000e-004	0.0145	0.0000	47.6036	47.6036	0.0139	3.1000e-004	48.0432
Maximum	**7.4400e-003**	**0.0308**	**0.2832**	**5.4000e-004**	**0.0325**	**8.6000e-004**	**0.0333**	**0.0137**	**8.5000e-004**	**0.0145**	**0.0000**	**47.6036**	**47.6036**	**0.0139**	**3.1000e-004**	**48.0432**

	ROG	NOx	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	**74.76**	**90.12**	**-25.71**	**0.00**	**51.06**	**93.57**	**58.20**	**52.58**	**93.09**	**64.68**	**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 Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2022	8-31-2022	0.3444	0.0382
		Highest	0.3444	0.0382

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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	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	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.1583	0.0000	0.1583	9.3600e-003	0.0000	0.3923
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.1583**	**2.0000e-005**	**0.1584**	**9.3600e-003**	**0.0000**	**0.3923**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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	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	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.1583	0.0000	0.1583	9.3600e-003	0.0000	0.3923
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.1583**	**2.0000e-005**	**0.1584**	**9.3600e-003**	**0.0000**	**0.3923**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	6/30/2022	5	22	
2	Grading	Grading	7/1/2022	7/31/2022	5	21	
3	Building Construction	Building Construction	8/1/2022	8/31/2022	5	23	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 11

Acres of Grading (Grading Phase): 15.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	6.00	0.00	14.70	6.90	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 Applied

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8300e-003	0.0000	5.8300e-003	6.3000e-004	0.0000	6.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3800e-003	0.0763	0.0436	1.1000e-004		2.8300e-003	2.8300e-003		2.6000e-003	2.6000e-003	0.0000	9.4054	9.4054	3.0400e-003	0.0000	9.4815
Total	**6.3800e-003**	**0.0763**	**0.0436**	**1.1000e-004**	**5.8300e-003**	**2.8300e-003**	**8.6600e-003**	**6.3000e-004**	**2.6000e-003**	**3.2300e-003**	**0.0000**	**9.4054**	**9.4054**	**3.0400e-003**	**0.0000**	**9.4815**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	2.0400e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4989	0.4989	1.0000e-005	1.0000e-005	0.5033
Total	**1.9000e-004**	**1.6000e-004**	**2.0400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4989**	**0.4989**	**1.0000e-005**	**1.0000e-005**	**0.5033**

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3.2 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6200e-003	0.0000	2.6200e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3100e-003	5.6800e-003	0.0585	1.1000e-004		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	9.4054	9.4054	3.0400e-003	0.0000	9.4815
Total	**1.3100e-003**	**5.6800e-003**	**0.0585**	**1.1000e-004**	**2.6200e-003**	**1.7000e-004**	**2.7900e-003**	**2.8000e-004**	**1.7000e-004**	**4.5000e-004**	**0.0000**	**9.4054**	**9.4054**	**3.0400e-003**	**0.0000**	**9.4815**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	2.0400e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4989	0.4989	1.0000e-005	1.0000e-005	0.5033
Total	**1.9000e-004**	**1.6000e-004**	**2.0400e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.4989**	**0.4989**	**1.0000e-005**	**1.0000e-005**	**0.5033**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0558	0.0000	0.0558	0.0270	0.0000	0.0270	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0137	0.1499	0.0838	2.5000e-004		6.2000e-003	6.2000e-003		5.7000e-003	5.7000e-003	0.0000	21.7026	21.7026	7.0200e-003	0.0000	21.8781
Total	**0.0137**	**0.1499**	**0.0838**	**2.5000e-004**	**0.0558**	**6.2000e-003**	**0.0620**	**0.0270**	**5.7000e-003**	**0.0327**	**0.0000**	**21.7026**	**21.7026**	**7.0200e-003**	**0.0000**	**21.8781**

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	1.0000e-005	3.5000e-004	8.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1235	0.1235	1.0000e-005	2.0000e-005	0.1295
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	3.6000e-004	3.0000e-004	3.9000e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9524	0.9524	3.0000e-005	3.0000e-005	0.9608
Total	**3.7000e-004**	**6.5000e-004**	**3.9800e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0760**	**1.0760**	**4.0000e-005**	**5.0000e-005**	**1.0904**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

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					0.0251	0.0000	0.0251	0.0121	0.0000	0.0121	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0400e-003	0.0132	0.1202	2.5000e-004		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	21.7026	21.7026	7.0200e-003	0.0000	21.8780
Total	**3.0400e-003**	**0.0132**	**0.1202**	**2.5000e-004**	**0.0251**	**4.1000e-004**	**0.0255**	**0.0121**	**4.1000e-004**	**0.0126**	**0.0000**	**21.7026**	**21.7026**	**7.0200e-003**	**0.0000**	**21.8780**

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	1.0000e-005	3.5000e-004	8.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1235	0.1235	1.0000e-005	2.0000e-005	0.1295
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	3.6000e-004	3.0000e-004	3.9000e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.9524	0.9524	3.0000e-005	3.0000e-005	0.9608
Total	**3.7000e-004**	**6.5000e-004**	**3.9800e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0760**	**1.0760**	**4.0000e-005**	**5.0000e-005**	**1.0904**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8900e-003	0.0808	0.0823	1.3000e-004		4.2800e-003	4.2800e-003		3.9300e-003	3.9300e-003	0.0000	11.5170	11.5170	3.7200e-003	0.0000	11.6101
Total	**7.8900e-003**	**0.0808**	**0.0823**	**1.3000e-004**		**4.2800e-003**	**4.2800e-003**		**3.9300e-003**	**3.9300e-003**	**0.0000**	**11.5170**	**11.5170**	**3.7200e-003**	**0.0000**	**11.6101**

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	1.3000e-004	3.5500e-003	1.1800e-003	1.0000e-005	4.3000e-004	3.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.3176	1.3176	4.0000e-005	1.9000e-004	1.3754
Worker	7.9000e-004	6.6000e-004	8.5400e-003	2.0000e-005	2.5200e-003	2.0000e-005	2.5400e-003	6.7000e-004	2.0000e-005	6.8000e-004	0.0000	2.0863	2.0863	6.0000e-005	6.0000e-005	2.1046
Total	**9.2000e-004**	**4.2100e-003**	**9.7200e-003**	**3.0000e-005**	**2.9500e-003**	**5.0000e-005**	**3.0100e-003**	**8.0000e-004**	**5.0000e-005**	**8.4000e-004**	**0.0000**	**3.4039**	**3.4039**	**1.0000e-004**	**2.5000e-004**	**3.4800**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6100e-003	6.9600e-003	0.0889	1.3000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	11.5170	11.5170	3.7200e-003	0.0000	11.6101
Total	**1.6100e-003**	**6.9600e-003**	**0.0889**	**1.3000e-004**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**11.5170**	**11.5170**	**3.7200e-003**	**0.0000**	**11.6101**

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	1.3000e-004	3.5500e-003	1.1800e-003	1.0000e-005	4.3000e-004	3.0000e-005	4.7000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.3176	1.3176	4.0000e-005	1.9000e-004	1.3754
Worker	7.9000e-004	6.6000e-004	8.5400e-003	2.0000e-005	2.5200e-003	2.0000e-005	2.5400e-003	6.7000e-004	2.0000e-005	6.8000e-004	0.0000	2.0863	2.0863	6.0000e-005	6.0000e-005	2.1046
Total	**9.2000e-004**	**4.2100e-003**	**9.7200e-003**	**3.0000e-005**	**2.9500e-003**	**5.0000e-005**	**3.0100e-003**	**8.0000e-004**	**5.0000e-005**	**8.4000e-004**	**0.0000**	**3.4039**	**3.4039**	**1.0000e-004**	**2.5000e-004**	**3.4800**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	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**

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					
General Light Industry	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

Mt. SAC Radio Tower - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1583	9.3600e-003	0.0000	0.3923
Unmitigated	0.1583	9.3600e-003	0.0000	0.3923

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0.78	0.1583	9.3600e-003	0.0000	0.3923
Total		**0.1583**	**9.3600e-003**	**0.0000**	**0.3923**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0.78	0.1583	9.3600e-003	0.0000	0.3923
Total		**0.1583**	**9.3600e-003**	**0.0000**	**0.3923**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mt. SAC Radio Tower

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.63	1000sqft	0.01	625.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - SF of footing

Construction Phase - .

Off-road Equipment -

Off-road Equipment - Assumed for drilled piers

Trips and VMT - .

Grading - .

Vehicle Trips - .

Consumer Products - .

Area Coating - no painting

Energy Use - .

Water And Wastewater - .

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - MM AQ-1 of 2018 EFMP EIR

Operational Off-Road Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	313	0
tblAreaCoating	Area_Nonresidential_Interior	938	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	2.00	21.00
tblConstructionPhase	NumDays	1.00	22.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	0.00
tblEnergyUse	T24NG	13.51	0.00

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	MaterialExported	0.00	32.00
tblLandUse	LandUseSquareFeet	630.00	625.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	145,687.50	0.00

2.0 Emissions Summary

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	1.3428	14.3283	8.3787	0.0247	5.4272	0.5910	6.0182	2.5991	0.5437	3.1429	0.0000	2,395.3605	2,395.3605	0.7404	0.0232	2,415.2287
Maximum	**1.3428**	**14.3283**	**8.3787**	**0.0247**	**5.4272**	**0.5910**	**6.0182**	**2.5991**	**0.5437**	**3.1429**	**0.0000**	**2,395.3605**	**2,395.3605**	**0.7404**	**0.0232**	**2,415.2287**

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					
2022	0.3249	1.3115	11.8448	0.0247	2.5056	0.0395	2.5451	1.1864	0.0395	1.2259	0.0000	2,395.3605	2,395.3605	0.7404	0.0232	2,415.2287
Maximum	**0.3249**	**1.3115**	**11.8448**	**0.0247**	**2.5056**	**0.0395**	**2.5451**	**1.1864**	**0.0395**	**1.2259**	**0.0000**	**2,395.3605**	**2,395.3605**	**0.7404**	**0.0232**	**2,415.2287**

	ROG	NOx	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	**75.80**	**90.85**	**-41.37**	**0.00**	**53.83**	**93.31**	**57.71**	**54.35**	**92.74**	**60.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
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	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
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	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	6/30/2022	5	22	
2	Grading	Grading	7/1/2022	7/31/2022	5	21	
3	Building Construction	Building Construction	8/1/2022	8/31/2022	5	23	

Acres of Grading (Site Preparation Phase): 11

Acres of Grading (Grading Phase): 15.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.1191	0.5162	5.3170	9.7300e-003		0.0159	0.0159		0.0159	0.0159	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.1191**	**0.5162**	**5.3170**	**9.7300e-003**	**0.2386**	**0.0159**	**0.2545**	**0.0258**	**0.0159**	**0.0416**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3121	0.0000	5.3121	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	1.3073	14.2710	7.9772	0.0235		0.5900	0.5900		0.5428	0.5428		2,278.3806	2,278.3806	0.7369		2,296.8025
Total	**1.3073**	**14.2710**	**7.9772**	**0.0235**	**5.3121**	**0.5900**	**5.9021**	**2.5686**	**0.5428**	**3.1114**		**2,278.3806**	**2,278.3806**	**0.7369**		**2,296.8025**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.9000e-004	0.0320	7.4600e-003	1.2000e-004	3.3300e-003	2.4000e-004	3.5700e-003	9.1000e-004	2.3000e-004	1.1400e-003		12.9672	12.9672	6.9000e-004	2.0600e-003	13.5975
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	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.0355**	**0.0573**	**0.4016**	**1.1400e-003**	**0.1151**	**9.6000e-004**	**0.1161**	**0.0306**	**8.9000e-004**	**0.0314**		**116.9799**	**116.9799**	**3.5100e-003**	**4.5600e-003**	**118.4263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3905	0.0000	2.3905	1.1559	0.0000	1.1559			0.0000			0.0000
Off-Road	0.2894	1.2542	11.4432	0.0235		0.0386	0.0386		0.0386	0.0386	0.0000	2,278.3806	2,278.3806	0.7369		2,296.8025
Total	**0.2894**	**1.2542**	**11.4432**	**0.0235**	**2.3905**	**0.0386**	**2.4290**	**1.1559**	**0.0386**	**1.1945**	**0.0000**	**2,278.3806**	**2,278.3806**	**0.7369**		**2,296.8025**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.9000e-004	0.0320	7.4600e-003	1.2000e-004	3.3300e-003	2.4000e-004	3.5700e-003	9.1000e-004	2.3000e-004	1.1400e-003		12.9672	12.9672	6.9000e-004	2.0600e-003	13.5975
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	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.0355**	**0.0573**	**0.4016**	**1.1400e-003**	**0.1151**	**9.6000e-004**	**0.1161**	**0.0306**	**8.9000e-004**	**0.0314**		**116.9799**	**116.9799**	**3.5100e-003**	**4.5600e-003**	**118.4263**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0118	0.2939	0.1008	1.1800e-003	0.0384	2.8000e-003	0.0412	0.0111	2.6800e-003	0.0137		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0692	0.0505	0.7883	2.0400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		208.0254	208.0254	5.6300e-003	5.0000e-003	209.6576
Total	**0.0810**	**0.3445**	**0.8890**	**3.2200e-003**	**0.2620**	**4.2300e-003**	**0.2662**	**0.0704**	**4.0000e-003**	**0.0744**		**334.3024**	**334.3024**	**9.8500e-003**	**0.0232**	**341.4626**

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	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0118	0.2939	0.1008	1.1800e-003	0.0384	2.8000e-003	0.0412	0.0111	2.6800e-003	0.0137		126.2770	126.2770	4.2200e-003	0.0182	131.8051
Worker	0.0692	0.0505	0.7883	2.0400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		208.0254	208.0254	5.6300e-003	5.0000e-003	209.6576
Total	**0.0810**	**0.3445**	**0.8890**	**3.2200e-003**	**0.2620**	**4.2300e-003**	**0.2662**	**0.0704**	**4.0000e-003**	**0.0744**		**334.3024**	**334.3024**	**9.8500e-003**	**0.0232**	**341.4626**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
General Light Industry	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**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Unmitigated	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004

Mt. SAC Radio Tower - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mt. SAC Radio Tower

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.63	1000sqft	0.01	625.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - SF of footing

Construction Phase - .

Off-road Equipment -

Off-road Equipment -

Trips and VMT - .

Grading - .

Vehicle Trips - .

Consumer Products - .

Area Coating - no painting

Energy Use - .

Water And Wastewater - .

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - MM AQ-1 of 2018 EFMP EIR

Operational Off-Road Equipment -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	313	0
tblAreaCoating	Area_Nonresidential_Interior	938	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	2.00	21.00
tblConstructionPhase	NumDays	1.00	22.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.10	0.00
tblEnergyUse	NT24E	5.75	0.00
tblEnergyUse	NT24NG	4.45	0.00
tblEnergyUse	T24E	2.01	0.00
tblEnergyUse	T24NG	13.51	0.00

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	MaterialExported	0.00	32.00
tblLandUse	LandUseSquareFeet	630.00	625.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblVehicleTrips	ST_TR	1.99	0.00
tblVehicleTrips	SU_TR	5.00	0.00
tblVehicleTrips	WD_TR	4.96	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	145,687.50	0.00

2.0 Emissions Summary

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	1.3452	14.3323	8.3466	0.0246	5.4272	0.5910	6.0182	2.5991	0.5437	3.1429	0.0000	2,389.8649	2,389.8649	0.7404	0.0236	2,409.7853
Maximum	**1.3452**	**14.3323**	**8.3466**	**0.0246**	**5.4272**	**0.5910**	**6.0182**	**2.5991**	**0.5437**	**3.1429**	**0.0000**	**2,389.8649**	**2,389.8649**	**0.7404**	**0.0236**	**2,409.7853**

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					
2022	0.3274	1.3154	11.8127	0.0246	2.5056	0.0396	2.5451	1.1864	0.0395	1.2259	0.0000	2,389.8649	2,389.8649	0.7404	0.0236	2,409.7853
Maximum	**0.3274**	**1.3154**	**11.8127**	**0.0246**	**2.5056**	**0.0396**	**2.5451**	**1.1864**	**0.0395**	**1.2259**	**0.0000**	**2,389.8649**	**2,389.8649**	**0.7404**	**0.0236**	**2,409.7853**

	ROG	NOx	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	**75.67**	**90.82**	**-41.53**	**0.00**	**53.83**	**93.31**	**57.71**	**54.35**	**92.74**	**60.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
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	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
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	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	6/30/2022	5	22	
2	Grading	Grading	7/1/2022	7/31/2022	5	21	
3	Building Construction	Building Construction	8/1/2022	8/31/2022	5	23	

Acres of Grading (Site Preparation Phase): 11

Acres of Grading (Grading Phase): 15.75

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	20.00	6.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.1191	0.5162	5.3170	9.7300e-003		0.0159	0.0159		0.0159	0.0159	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.1191**	**0.5162**	**5.3170**	**9.7300e-003**	**0.2386**	**0.0159**	**0.2545**	**0.0258**	**0.0159**	**0.0416**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3121	0.0000	5.3121	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	1.3073	14.2710	7.9772	0.0235		0.5900	0.5900		0.5428	0.5428		2,278.3806	2,278.3806	0.7369		2,296.8025
Total	**1.3073**	**14.2710**	**7.9772**	**0.0235**	**5.3121**	**0.5900**	**5.9021**	**2.5686**	**0.5428**	**3.1114**		**2,278.3806**	**2,278.3806**	**0.7369**		**2,296.8025**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.7000e-004	0.0333	7.5900e-003	1.2000e-004	3.3300e-003	2.4000e-004	3.5700e-003	9.1000e-004	2.3000e-004	1.1400e-003		12.9710	12.9710	6.9000e-004	2.0600e-003	13.6015
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	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.0379**	**0.0612**	**0.3695**	**1.0900e-003**	**0.1151**	**9.6000e-004**	**0.1161**	**0.0306**	**8.9000e-004**	**0.0314**		**111.4843**	**111.4843**	**3.5400e-003**	**4.7300e-003**	**112.9828**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3905	0.0000	2.3905	1.1559	0.0000	1.1559			0.0000			0.0000
Off-Road	0.2894	1.2542	11.4432	0.0235		0.0386	0.0386		0.0386	0.0386	0.0000	2,278.3806	2,278.3806	0.7369		2,296.8025
Total	**0.2894**	**1.2542**	**11.4432**	**0.0235**	**2.3905**	**0.0386**	**2.4290**	**1.1559**	**0.0386**	**1.1945**	**0.0000**	**2,278.3806**	**2,278.3806**	**0.7369**		**2,296.8025**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.7000e-004	0.0333	7.5900e-003	1.2000e-004	3.3300e-003	2.4000e-004	3.5700e-003	9.1000e-004	2.3000e-004	1.1400e-003		12.9710	12.9710	6.9000e-004	2.0600e-003	13.6015
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	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.0379**	**0.0612**	**0.3695**	**1.0900e-003**	**0.1151**	**9.6000e-004**	**0.1161**	**0.0306**	**8.9000e-004**	**0.0314**		**111.4843**	**111.4843**	**3.5400e-003**	**4.7300e-003**	**112.9828**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0117	0.3060	0.1043	1.1800e-003	0.0384	2.8100e-003	0.0412	0.0111	2.6900e-003	0.0138		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0741	0.0558	0.7237	1.9400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		197.0266	197.0266	5.7000e-003	5.3500e-003	198.7627
Total	**0.0858**	**0.3619**	**0.8280**	**3.1200e-003**	**0.2620**	**4.2400e-003**	**0.2662**	**0.0704**	**4.0100e-003**	**0.0744**		**323.3510**	**323.3510**	**9.9100e-003**	**0.0236**	**330.6219**

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	0.1397	0.6052	7.7261	0.0114		0.0186	0.0186		0.0186	0.0186	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.1397**	**0.6052**	**7.7261**	**0.0114**		**0.0186**	**0.0186**		**0.0186**	**0.0186**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0117	0.3060	0.1043	1.1800e-003	0.0384	2.8100e-003	0.0412	0.0111	2.6900e-003	0.0138		126.3244	126.3244	4.2100e-003	0.0182	131.8592
Worker	0.0741	0.0558	0.7237	1.9400e-003	0.2236	1.4300e-003	0.2250	0.0593	1.3200e-003	0.0606		197.0266	197.0266	5.7000e-003	5.3500e-003	198.7627
Total	**0.0858**	**0.3619**	**0.8280**	**3.1200e-003**	**0.2620**	**4.2400e-003**	**0.2662**	**0.0704**	**4.0100e-003**	**0.0744**		**323.3510**	**323.3510**	**9.9100e-003**	**0.0236**	**330.6219**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.546774	0.061880	0.186704	0.127505	0.022909	0.005912	0.010702	0.008032	0.000940	0.000617	0.023937	0.000692	0.003397

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
General Light Industry	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**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	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	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Unmitigated	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Mt. SAC Radio Tower - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

ENERGY ANALYSIS

Offroad Construction Equipment Energy Use

PhaseName	OffRoadEquipmentType	OffRoadEquipmentUnitAmount	UsageHours	HorsePower	Load Factor	Horsepower Category	Num Days	Year	Fuel Consumption Rate (gal/hour)	Fuel Type	Total Fuel Consumption (gal/construction period)
Site Preparation	Graders	1	8	187	0.41	175	22	2022	3.2	Diesel	227
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37	100	22	2022	1.6	Diesel	104
Grading	Bore/Drill Rigs	1	8	221	0.5	100	21	2022	2.2	Diesel	185
Grading	Graders	1	6	187	0.41	175	21	2022	3.2	Diesel	163
Grading	Rubber Tired Dozers	1	6	247	0.4	300	21	2022	4.5	Diesel	229
Grading	Tractors/Loaders/Backhoes	1	7	97	0.37	100	21	2022	1.6	Diesel	87
Building Construction	Cranes	1	4	231	0.29	300	23	2022	3.3	Diesel	88
Building Construction	Forklifts	2	6	89	0.2	100	23	2022	2.0	Diesel	111
Building Construction	Tractors/Loaders/Backhoes	2	8	97	0.37	100	23	2022	1.6	Diesel	217

Total	**Gasoline**	**-**
Total	**Diesel**	**1,408**

Onroad Construction Energy Use

Year 2022

Vehicle Types	MPG by Fuel Type			Population by Fuel Type			
	GAS	DSL	ELEC	GAS	DSL	ELEC	Total
LDA	30.8	48.7		6,542,832	58,938	127,533	6,601,770
LDT1	26.5	22.6		736,906	387	5,339	737,293
LDT2	24.7	35.7		2,246,303	14,235	22,590	2,260,537
LHDT1	10.5	21.6		175,903	119,381		295,284
LHDT2	9.2	19.5		30,010	47,336		77,346
MCY	36.4			295,960			295,960
MDV	20.0	27.4		1,579,640	33,349	11,658	1,612,989
MH	5.2	10.6		35,098	12,759		47,857
MHDT	5.1	10.7		25,445	123,310		148,755
HHDT	4.2	6.7		78	108,362		108,440
OBUS	5.0	8.5		5,959	4,274		10,234
SBUS	9.1	7.6		2,631	6,631		9,262
UBUS	4.9	6.0		952	14	17	966

Input							Gasoline Consumption			Diesel Consumption		
Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker	Vendor	Haul	Worker	Vendor	Haul
Site Preparation	5	0	0	14.7	6.9	20						
Grading	10	0	4	14.7	6.9	20						
Building Construction	20	6	0	14.7	6.9	20						
Adjusted												
Site Preparation	110	0	0	14.7	6.9	20	65	0	0	0	0	0
Grading	210	0	4	14.7	6.9	20	124	0	0	1	0	12
Building Construction	460	138	0	14.7	6.9	20	272	47	0	1	1	0
Total							**462**	**47**	**0**	**2**	**1**	**12**

APPENDIX C

GEOTECHNICAL REPORT

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

GEOTECHNICAL STUDY REPORT
Proposed Radio Tower and Related Improvements
Mount San Antonio College
Walnut, California

Converse Project No. 15-31-101-01

May 26, 2015

Prepared For:

Mount San Antonio College
Facilities Planning & Management
1100 North Grand Avenue, Building No. 47
Walnut, California 91789

Prepared By:

Converse Consultants
222 East Huntington Drive, Suite 211
Monrovia, California 91016

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

May 26, 2014

Ms. Caryn Cowin
Construction Project Manager
Mt. San Antonio College
Facilities Planning & Management
1100 North Grand Avenue, Building 47
Walnut, California 91789

Subject: **GEOTECHNICAL STUDY REPORT**
Proposed Radio Tower and Related Improvements
Mount San Antonio College
Walnut, California
Converse Project No. 15-31-101-01

Dear Ms. Cowin:

Converse Consultants (Converse) has prepared this geotechnical report to present the findings, conclusions and recommendations of our geologic and geotechnical study for the proposed Radio Tower and Related Improvements at Mt. San Antonio College, Walnut, California. In accordance with California Education Code, Sections 17212 and 81033, this report was prepared consistent with the current edition of California Building Code, Title 24, Chapter 16A and Chapter 18A; California Administrative Code, Part 1, Title 24, CCR, Section 4-317 (e) and CGS Note 48-Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals and Essential Services Buildings, for design and for the Division of the State Architect (DSA) submittal purposes. Converse evaluated the nature and engineering properties of the subsurface soils and bedrock to provide recommendations for site earthwork, foundation design and construction for the proposed development. Our services were performed in accordance with our proposal dated December 17, 2014.

We appreciate the opportunity to be of continued service to Mount San Antonio College. If you should have any questions, please do not hesitate to contact us at (626) 930-1200.

CONVERSE CONSULTANTS

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
Vice President/Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
KATHIRAVETPILLAI SIVATHASAN
No. 2708
Exp. 6-30-16
GEOTECHNICAL
STATE OF CALIFORNIA

Dist: 3/Addressee
AF/MM/MBS/SKS/jjl

PROFESSIONAL CERTIFICATION

This report for the proposed Radio Tower and Related Improvements Project located within the campus of Mt. San Antonio College, in the City of Walnut, California, has been prepared by the staff of Converse under the professional supervision of the individuals whose seals and signatures appear hereon.

The findings, recommendations, specifications or professional opinions contained in this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice in this area of Southern California. There is no warranty, either expressed or implied.

In the event that changes to the property occur, or additional, relevant information about the property is brought to our attention, the conclusions contained in this report may not be valid unless these changes and additional relevant information are reviewed and the recommendations of this report are modified or verified in writing.

Mohammad-Saad Malim, E.I.T.
Senior Staff Engineer

Mark B. Schluter, PG, CEG, CHG
Senior Engineering Geologist

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
Vice President / Principal Engineer

EXECUTIVE SUMMARY

The following is the summary of our geotechnical study, findings, conclusions, and recommendations, as presented in the body of this report. Please refer to the appropriate sections of the report for complete conclusions and recommendations. In the event of a conflict between this summary and the report, or an omission in the summary, the report shall prevail.

- The proposed development consists of construction of a new Radio Tower as well as related improvements located west of a service road on a hilltop ridge. It is anticipated the Radio Tower structure will have shallow footings or pier footings.
- A total of two (3) borings (BH-1 through BH-3) were drilled on April 27, 2015 at the project site. Soil borings approximately 6 inches in diameter were excavated utilizing a truck-mounted, hollow-stem auger drill rig to a maximum depth of 51.5 feet below ground surface (bgs).
- The earth materials encountered during our investigation consist of existing fill soils placed during previous site grading operations, natural colluvial soils, and sedimentary bedrock of the Puente Formation to a maximum depth of 51.5 feet bgs. Undocumented fills, approximately a foot in thickness were encountered in the borings. Deeper artificial fill may exist at the site. The fill and colluvial soil deposits encountered consists primarily of silty sand. The sedimentary bedrock primarily consists of slightly to moderately weathered siltstone and claystone.
- During our exploration, groundwater was not encountered. The regional groundwater table is not expected to be encountered during the planned construction.
- The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. No surface faults are known to project through or towards the site.
- The site is not located within an area of potential liquefaction. We anticipate total seismically-induced settlement to be on the scale of 0.50 inches and differential settlement to be less than 0.25 inches over a distance of 30 feet.
- The upper five (5) feet of soils have a “Very Low” expansion potential. Mitigation for expansive soil is not considered necessary.
- Site soils tested have “negligible” concentrations of water soluble sulfates, which is considered “non-corrosive” to concrete.
- The pH value, chloride content and resistivity of the sample tested is in the “non-corrosive” range.
- The proposed radio tower should be supported on Cast-In-Drilled-Hole (CIDH) piles extending into competent bedrock. Related improvements can be supported on shallow foundations embedded into future compacted fill or bedrock.

Results of our study indicate that the site is suitable from a geotechnical standpoint for the proposed development, provided that the recommendations contained in this report are incorporated into the design and construction of the project.

TABLE OF CONTENTS

Tables

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Drawings

Following Page Number

Appendices

1.0 INTRODUCTION

This report contains the findings and recommendations of our geotechnical study performed at the site of the proposed Radio Tower and Related Improvements Project located within the campus of Mt. San Antonio College in Walnut, California, as shown on Drawing No. 1, *Site Location Map*.

The purpose of the study was to generate a report for geologic and geotechnical design parameters and the Division of the State Architect (DSA) submittal purposes, consistent with current edition of 2010 California Building Code, Title 24, Chapter 16A - Structural Design, Chapter 18A - Soils and Foundations, Appendix J - Grading, California Geologic Survey-Note 48, Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals and Essential Services Buildings, and the California Administrative Code, Part 1, Title 24, Chapter 4, Section 4-317(e).

This report is written for the project described herein and is intended for use solely by Mount San Antonio College and its design team. It should not be used as a bidding document but may be made available to the potential contractors for information on factual data only. For bidding purposes, the contractors should be responsible for making their own interpretation of the data contained in this report.

2.0 SITE AND PROJECT DESCRIPTION

2.1 Site Description

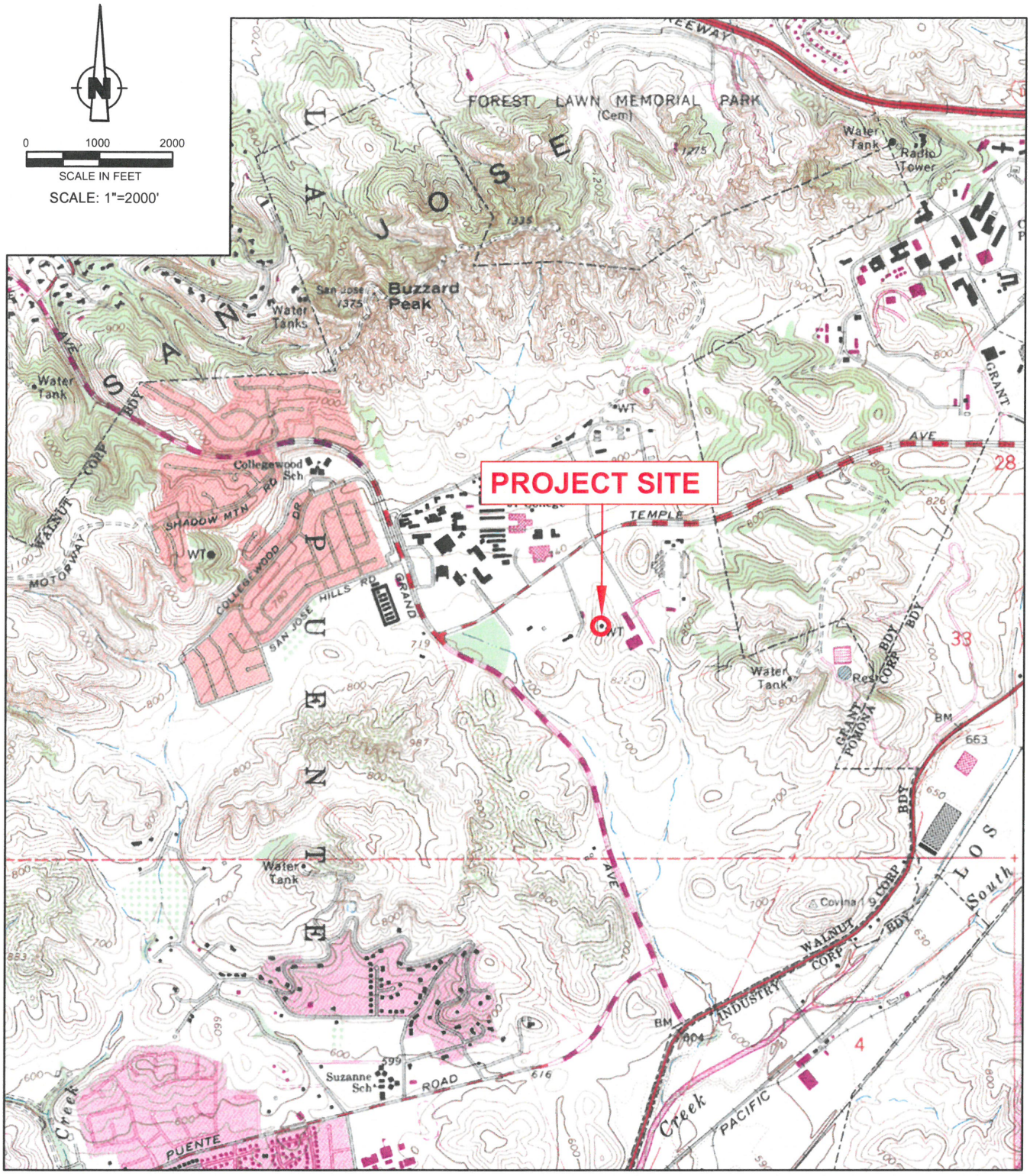
The proposed Radio Tower and Related improvements is located west of a hilltop service road within the southeastern portion of the campus of Mt. San Antonio College in Walnut, California. The site is located on a hilltop ridge at approximate elevation 808 to 809 feet. The site coordinates are: 34.0438 degrees North Latitude, 117.8400 degrees West Longitude. These coordinates at the subject site were used to calculate the earthquake ground motions.

2.2 Project Description

The proposed development consists of construction of a new Radio Tower as well as related improvements. At the time this report was prepared, detailed structural load information was not available but the loads are anticipated to be low to moderate. It is anticipated the Radio Tower will have shallow footings or pier footings. The project site is shown on Drawing No. 2, *Site Plan and Boring Location Map*.

3.0 SCOPE OF WORK

Our scope of work consists of the tasks described in the following subsections.



REFERENCE: USGS MAP
SAN DIMAS QUADRANGLE 1966 PHOTO REVISED 1981

SITE LOCATION MAP

MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No.

15-31-101-01

Drawing No.

1

Converse Consultants

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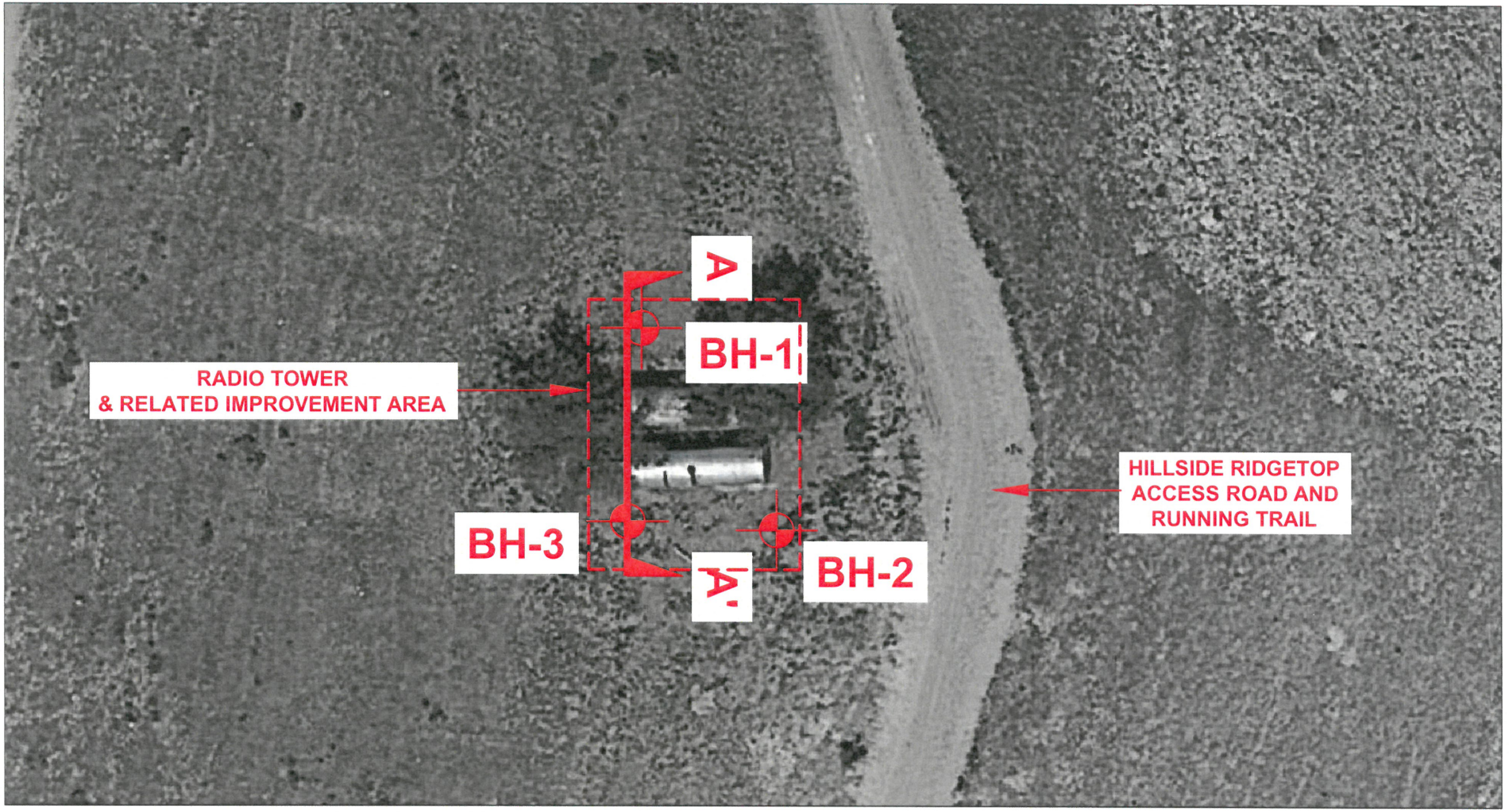


LEGEND

APPROXIMATE LOCATION OF BORING

GEOLOGIC CROSS SECTION

N

0 40 80

APPROXIMATE SCALE IN FEET

SITE PLAN AND BORING LOCATION MAP

Converse Consultants

MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. 2

3.1 Site Reconnaissance

Our field exploration included a site reconnaissance by a member of the Converse staff on April 17, 2015. The purpose of the site reconnaissance was to observe surface conditions and to mark exploratory boring locations such that drill rig access to all locations was feasible.

3.2 Subsurface Exploration

Three (3) exploratory borings (BH-1 through BH-3) were drilled within the project site on April 27, 2015. The borings were advanced using a truck mounted drill rig with an 6-inch diameter hollow stem auger to depths ranging from 11.5 to 51.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse geologist and sampled at regular intervals and at changes in subsurface soils. Detailed descriptions of the field exploration and sampling program are presented in Appendix A, *Field Exploration*.

California Modified Sampler (Ring samples), Standard Penetration Test samples, and bulk soil samples were obtained for laboratory testing. Standard Penetration Tests (SPTs) were performed in selected borings at selected intervals using a standard (1.4 inches inside diameter and 2.0 inches outside diameter) split-barrel sampler. The bore holes were backfilled and compacted with soil cuttings by reverse spinning of the auger following the completion of drilling.

The approximate locations of the exploratory borings are shown in Drawing No. 2, *Site Plan and Boring Location Map.* For a description of the field exploration and sampling program see Appendix A, *Field Exploration*.

3.3 Laboratory Testing

Representative samples of the site soils were tested in the laboratory to aid in the classification and to evaluate relevant engineering properties. The tests performed included:

- *In situ* moisture contents and dry densities (ASTM Standard D2216)
- Grain Size Distribution (ASTM Standard C136)
- Percent finer than Sieve No. 200 (ASTM Standard D1140)
- Maximum dry density and optimum-moisture content relationship (ASTM Standard D1557)
- Direct shear (ASTM Standard D3080)
- Expansion Index (ASTM Standard D4829)
- Soil corrosivity tests (Caltrans 643, 422, 417, and 532)

3.4 Analyses and Report

Data obtained from the exploratory fieldwork and laboratory-testing program were analyzed and evaluated with respect to the planned construction. This report was prepared to provide the findings, conclusions and recommendations developed during our study and evaluation.

4.0 GEOLOGIC CONDITIONS

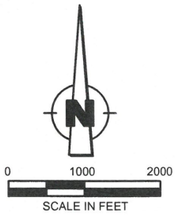
4.1 Regional Geologic Setting

The subject site is located in the San Jose Hills along the western edge of the Pomona Valley within the Transverse Ranges geomorphic province of California. The Pomona Valley is situated at the junction of the two major convergent fault systems: 1) Northwest-trending high angle strike slip faults of the San Andreas system projecting from the northern terminus of the Peninsular Ranges Province, and 2) East-trending low angle reverse or reverse-oblique faults bounding the south margin of the Transverse Ranges. Faults in group one include the Palos Verdes, Newport-Inglewood, Whittier-Elsinore and San Jacinto fault zones. Group two faults include the Malibu-Santa Monica, Hollywood, Raymond, and Sierra Madre and Cucamonga fault zones. While no faults are shown running through or projecting towards the project site, the development is located within a seismically active region.

The Geologic Map of the San Dimas and Ontario Quadrangles prepared by Thomas W. Dibblee, Jr. (DF-91, dated July, 2002) was reviewed The map shows the location of Mt. San Antonio College campus within an alluvial basin surrounded by hillsides consisting of sedimentary bedrock. No faults are shown running through or projecting through the project site. The subject site is located on the southern side of this basin and is bordered by hillsides depicted as Monterey (Puente) Formation, Yorba Shale Member (map symbol Tmy) consisting of thinly bedded, diatomaceous, semi-siliceous clay shale, siltstone and minor sandstone. A portion of the map by Thomas W. Dibblee has been reproduced and is shown as Drawing No. 3, *Geologic Map of Site Vicinity*.

4.2 Subsurface Profile of Project Site

The earth materials encountered during our investigation consist of existing fill soils placed during previous site grading operations, natural colluvial soils, and sedimentary bedrock of the Puente Formation to a maximum depth of 51.5 feet bgs. Undocumented fills, approximately a foot in thickness were encountered in the borings. Deeper artificial fill may exist at the site. The fill and colluvial soil deposits encountered consists primarily of silty sand. The sedimentary bedrock primarily consist of slightly to moderately weathered siltstone, claystone and sandstone.



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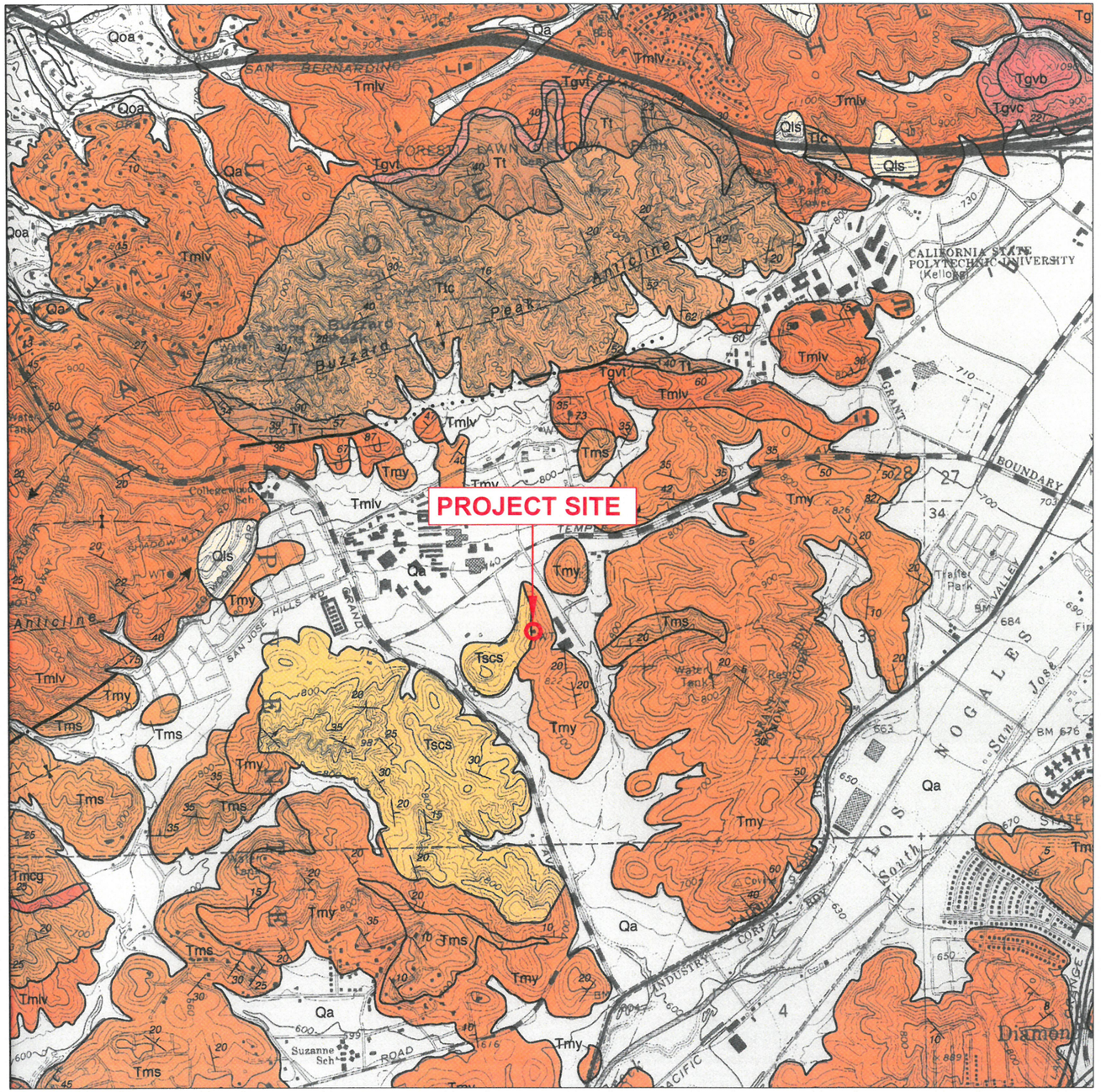

SAN DIMAS AND ONTARIO MAP (DF-91)

LEGEND

SURFICIAL SEDIMENTS — Holocene — Quaternary

af *artificial fill*
Qg *alluvial gravel and sand of stream channels, some artificially channelized*
Qa *alluvial gravel and sand of valley areas*

LANDSLIDE AND TALUS RUBBLE — Holocene — Quaternary

— UNCONFORMITY —

OLDER, DISSECTED SURFICIAL SEDIMENTS — Pleistocene — Quaternary

Qoa *low remnants of elevated alluvial gravel*
Qog *high remnants of elevated older alluvial gravel, including coarse boulder gravel*

— UNCONFORMITY —

SEDIMENTARY AND VOLCANIC ROCKS — Miocene — Tertiary — Cenozoic

SYCAMORE CANYON FORMATION
Sycamore Canyon Formation (uppermost member of Puente Formation of Durham & Yerkes 1964, Tan 1998) shallow marine clastic; latest Miocene age.
Tscg *conglomerate, light gray, of cobbles and pebbles of plutonic rocks in sandstone matrix.*
Tscs *sandstone, light gray, similar to **Tms**. Includes some conglomerate similar to **Tscg**, and siltstone.*

MONTEREY (PUENTE) FORMATION
Monterey Formation (Puente form of Eldridge & Arnold, 1907, Durham & Yerkes 1964; Tan 1998, marine biogenic & clastic; late Miocene age, (Mohnian Stage))
Tm *unassigned shale; similar to **Tmlv** & **Tmly***
Tmy *Yorba shale Member – light gray, thin bedded, diatomaceous, semi-siliceous to clay shale, siltstone, minor sandstone; fish scales.*
Tmcg *conglomerate facies of cobbles & pebbles of plutonic rocks in sandstone matrix lenses in unit **Tms**, deposited as submarine deltas.*
Tms *Soquel sandstone facies, partly intertongued into **Tmy** & **Tmlv**, light gray to tan, moderately lithified, bedded, arkosic, contains concretions, some interbedded silty shale, derived from plutonic terrane & deposited as submarine fans, unfossiliferous*
Tmlv *La Vida Shale Member, white, weathered; thin bedded, platy, siliceous shale, clay shale, and siltstone, some strata of tan dolomite and sandstone; fish scales, foraminifera.*

TOPANGA FORMATION
(of Shelton, 1955; Tan. 1998; marine clastic; middle Miocene age, unfossiliferous, locally intertongued into Glendora volcanics). age late ? Miocene
Tt *sandstone, light gray to tan, moderately lithified, bedded, arkosic, locally pebbly, includes interbedded siltstone or clay shale.*
Ttc *conglomerate (Buzzard Peak Conglomerate member of Woodford et al. 1946, light gray to tan, semi-lithified, vaguely bedded, composed of cobbles and pebbles of mostly plutonic rocks in sandstone matrix.*

GLENDORA VOLCANIC ROCKS
Glendora Volcanics (of Shelton, 1955, Tan, 1999; extrusive volcanic rocks; middle Miocene age locally intertongued into Topanga Formation). (radiometric age ±16 MA (Weigand, P.W., oral communication 2001)
Tgv *undifferentiated volcanic rock, mostly brown andesitic flows and breccias*
Tgvc *volcanic conglomerate, gray to brown, of volcanic detritus.*
Tgvb *basalt flows, gray to black, massive to vesicular.*
Tgvp *basaltic pelagonitic tuff & pillow lavas.*
Tgvt *rhyolitic tuff breccia, tan to white*
Tgva *andesite flows and flow breccias, brown, porphyritic, massive.*
Tgvr *rhyolitic-dacitic flows, tan to light brown, aphanitic, massive to flow-banded, hard, fractured*
Tgve *rhyolite-dacite breccia exposed only at Elephant Hill.*

— UNCONFORMITY —

CRYSTALLINE BASEMENT ROCKS

GRANITIC ROCKS

MOUNTAIN MEADOWS DACITE
Mountain Meadows dacite (of Shelton 1955, Tan, 1999 intrusive into qd; early Miocene? Age)
Mds *dacite light gray, hard, massive, fine grained, contains small feldspar phenocrysts and biotite flakes.*

QUARTZ DIORITIC PLUTONIC ROCKS
quartz diorite; plutonic igneous rock, late Mesozoic- Cretaceous age
qd *biotite quartz diorite, light gray, massive.*
qdb *Bonsall Tonalite of Larsen 1948 similar to **qd**, but slightly gneissoid & contains dark gray fine grained xenoliths elongated parallel to gneissoid structure up to 9 in. long.*

REFERENCE: THOMAS W. DIBBLE, Jr. (DF-91)
SAN DIMAS QUADRANGLE
AND ONTARIO QUADRANGLE (2002)

GEOLOGIC MAP OF SITE VICINITY

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Project No.	Drawing No.
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Drawing No. 4, *Geologic Cross Section A-A'* has been drawn across the subject site to illustrate the subsurface conditions. For a detailed description of the materials encountered during our exploration, see Appendix A*, Field Exploration.*

4.3 Groundwater

During our exploration, groundwater was not encountered. Based upon regional groundwater data compiled by the CDMG (1998), historic high groundwater levels for the subject site are reportedly greater than 50 feet below the ground surface.

In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present within the near-surface deposits due to local conditions or during rainy seasons. Groundwater conditions below any given site vary depending on numerous factors including seasonal rainfall, local irrigation, and groundwater pumping, among other factors. The regional groundwater table is not expected to be encountered during the planned construction. However, the possibility of perched groundwater encountered during future grading and excavation cannot be completely precluded.

4.4 Subsurface Variations

Based on results of the subsurface exploration and our experience, some variations in the continuity and nature of subsurface conditions within the project site should be anticipated. Because of the uncertainties involved in the nature and depositional characteristics of the earth material at the site, care should be exercised in interpolating or extrapolating subsurface conditions between or beyond the boring locations. If, during construction, subsurface conditions differ significantly from those presented in this report, this office should be notified immediately so that recommendations can be modified, if necessary.

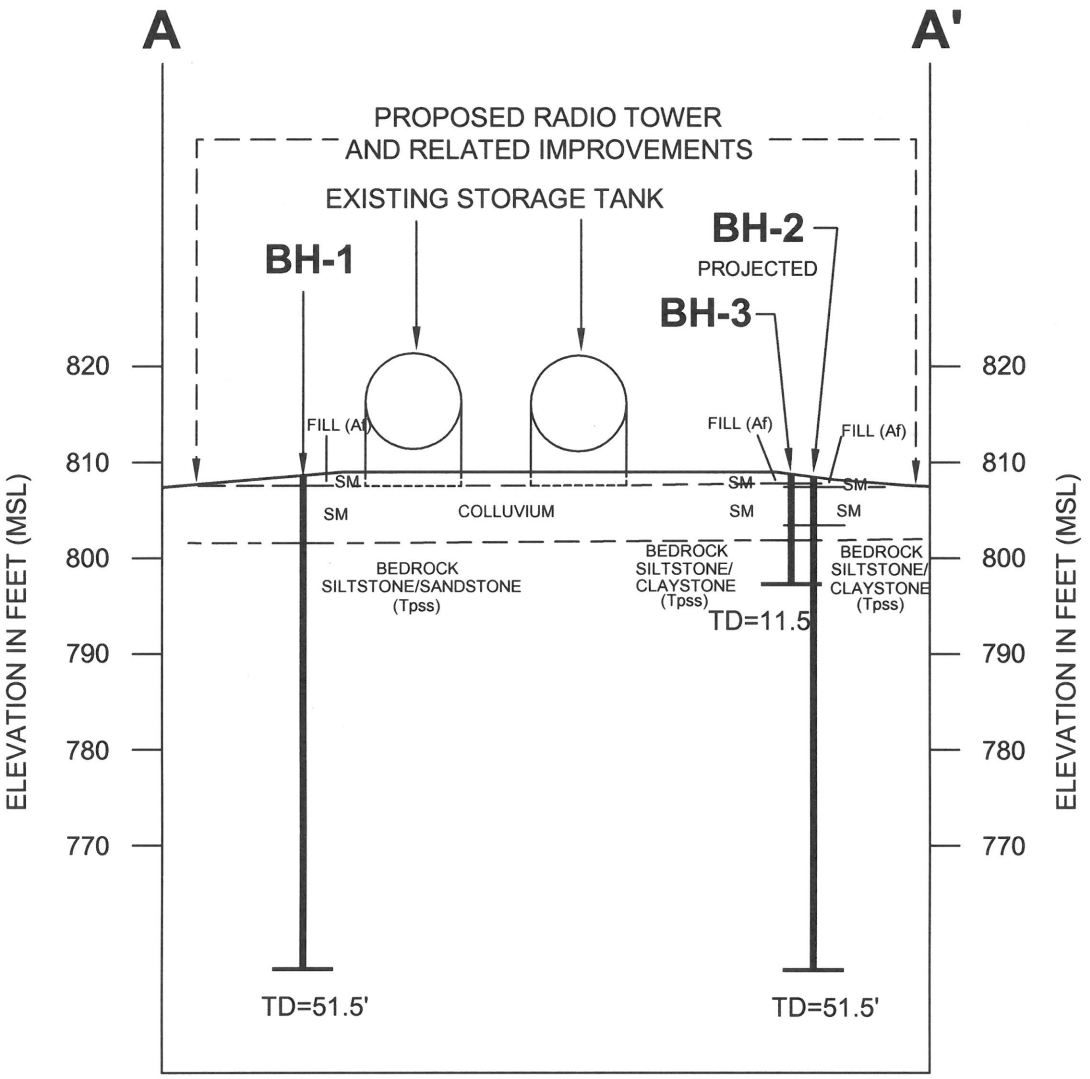
5.0 FAULTING AND SEISMIC HAZARDS

Geologic hazards are defined as geologically related conditions that may present a potential danger to life and property. Typical geologic hazards in Southern California include earthquake ground shaking, fault surface rupture, liquefaction and seismically induced settlement, lateral spreading, landslides, earthquake induced flooding, tsunamis and seiches, and volcanic eruption hazard.

Results of a site-specific evaluation for each type of possible seismic hazards are discussed in the following sections.

5.1 Seismic Characteristics of Nearby Faults

No surface faults are known to project through or towards the site. The closest known faults to the project site with mappable surface expressions are the San Jose Fault (1.1 kilometers to the north) and Chino-Central Avenue (Elsinore) Fault (6.0 kilometers to the



PROFILE:
HORIZONTAL=1"=20'
VERTICAL=1"=20'

GEOLOGIC CROSS SECTION A-A'

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Project No. 15-31-101-01

Drawing No. 4

southeast). The concealed Puente Hills Blind Thrust Fault (Coyote Hills segment) along with other regional faults was included as active fault sources for the probabilistic seismic hazard analysis for the site. The approximate locations of these local active faults with respect to the project site are tabulated on Table No. 1, *Summary of Regional Faults,* and are shown on Drawing No. 5, *Southern California Regional Fault Map*.

The Pomona Valley Basin is bounded to the north by the San Jose Fault and to the southwest by the Chino-Central Avenue faults. These two fault systems do not exhibit evidence of surface movement within Holocene time and are not considered active based on current geologic information. The San Jose and Chino-Central Avenue faults are considered Late Quaternary, having exhibited displacement and movement within the past 738,000 years.

Review of recent seismological and geophysical publications indicates that the seismic hazard for the Pomona Basin is high. The Pomona Basin is bounded by active regional faults on all sides and underlain by alluvial sediments and buried thrust faults. The seismic hazard for the heavily populated Pomona Basin was illustrated by the 1971 San Fernando, 1987 Whittier Narrows, 1991 Sierra Madre and 1994 Northridge earthquakes. The epicenters for these earthquakes are shown on Drawing No. 6, *Epicenters Map of Southern California Earthquakes (1800-1999).*

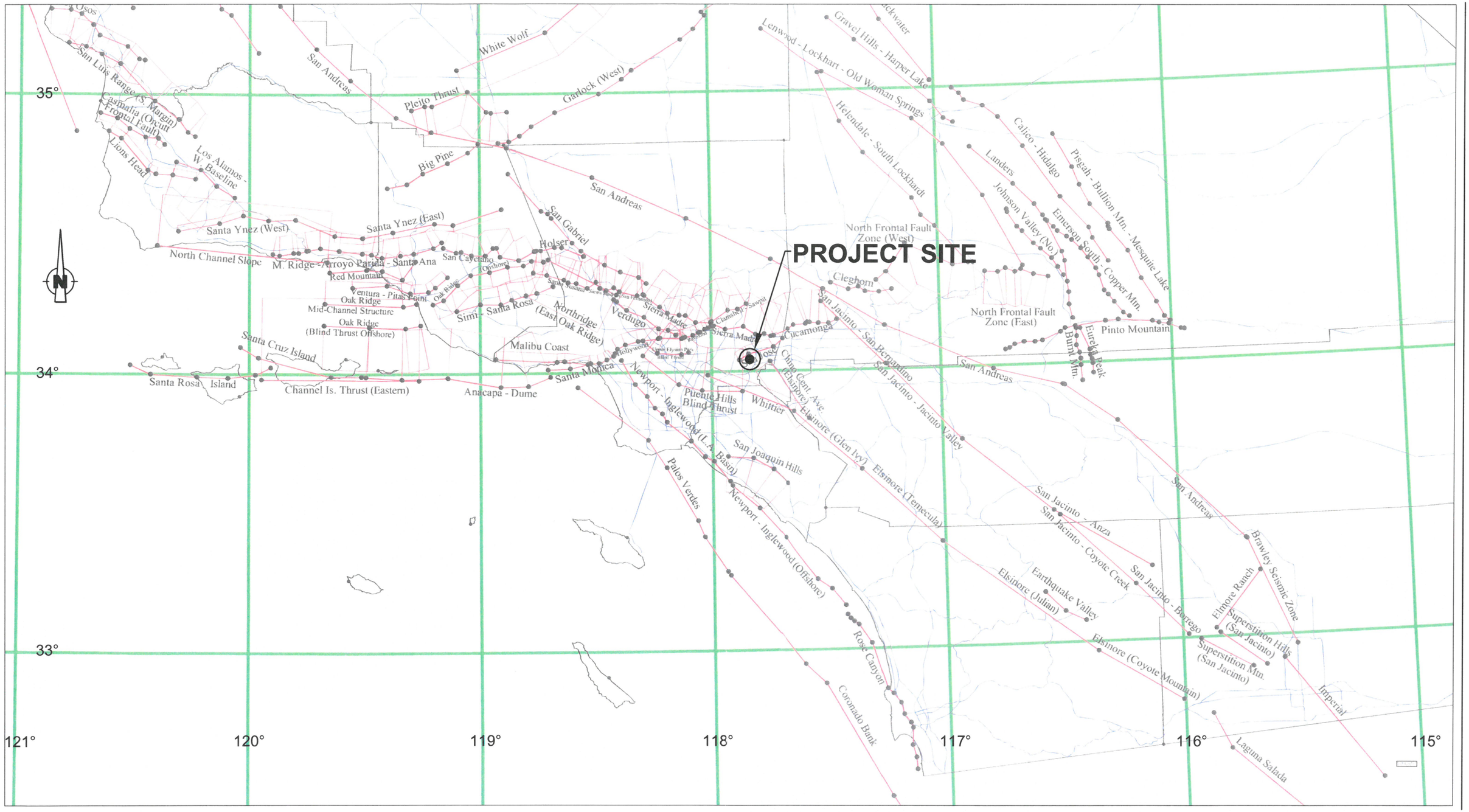
San Jose Fault

The San Jose Fault lies along the southern flank of the northeast trending San Jose Hills. The fault trends northeast and dips to the north. The mapped trace of the San Jose Fault is located approximately 3,800 feet north of the project site.

Geotechnical investigations performed on the campus of California State Polytechnic University at Pomona (Geocon, 2001) indicated that the San Jose is an active reverse separation fault. Because of the lack of success in previous fault trench excavations, Geocon based its conclusions on a series of closely spaced boreholes along several traverses across a subtle topographic bench on the campus. They discovered two shallowly to moderately north-dipping thrust faults with the most recent displacement being about 1 meter and occurred since 3500 yrs. B.P. on the basis of radiocarbon dating of faulted alluvium. These findings would show this segment of the fault is active, but is a reverse separation fault south of the San Jose Hills (Yeats, 2004).

Chino-Central Avenue Faults

The Chino and Central Avenue faults trend northwest along the southwest portion of the Chino Basin. The fault ties along the northeast edge of the Puente Hills. The Chino and Central Avenue faults are considered part of the Elsinore fault which is one of the major right lateral strike slip faults of the Peninsular Ranges geomorphic province. The Elsinore fault splits near Prado Dam into the Chino-Central Avenue and Whittier faults. The Chino-Central Avenue faults are two separate fault strands that strike northwest. The Chino



REFERENCE: PORTION OF CGS 2002 CALIFORNIA FAULT MODEL MODIFIED FOR USE WITH FRISKSP AND EQFAULT BY THOMAS F. BLAKE, AUGUST 2004

FAULT SOURCES

BLIND THRUST FAULT, POLYGONS INDICATE RUPTURE PLANES AND DIP DIRECTION

SOUTHERN CALIFORNIA REGIONAL FAULT MAP

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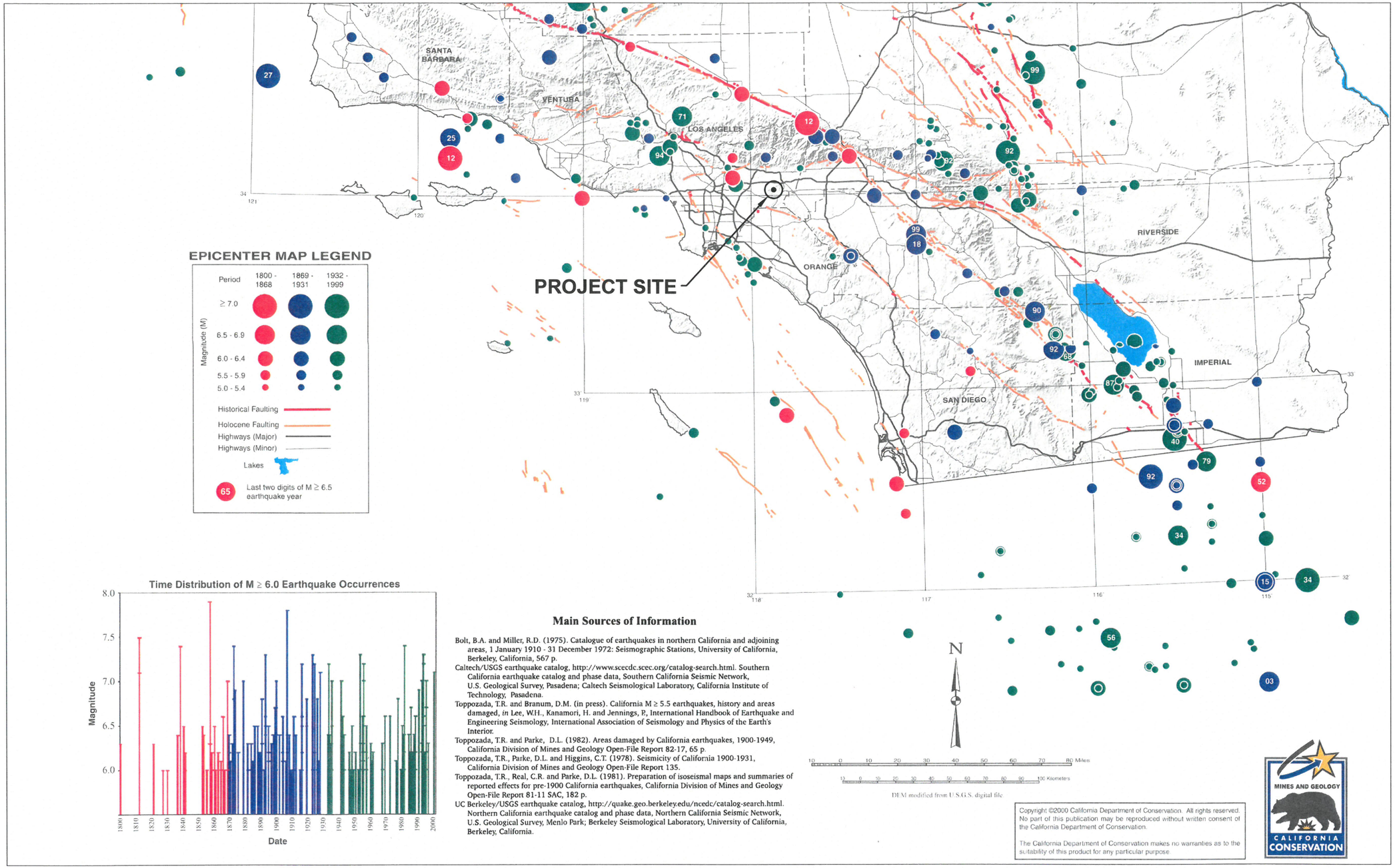
Project No. 15-31-101-01

Drawing No. 5



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M) ≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Historical Faulting
Holocene Faulting
Highways (Major)
Highways (Minor)
Lakes
65 Last two digits of M ≥ 6.5 earthquake year

Time Distribution of M ≥ 6.0 Earthquake Occurrences

Main Sources of Information

Bolt, B.A. and Miller, R.D. (1975). Catalogue of earthquakes in northern California and adjoining areas, 1 January 1910 - 31 December 1972: Seismographic Stations, University of California, Berkeley, California, 567 p.

Caltech/USGS earthquake catalog, http://www.scecdc.scec.org/catalog-search.html. Southern California earthquake catalog and phase data, Southern California Seismic Network, U.S. Geological Survey, Pasadena; Caltech Seismological Laboratory, California Institute of Technology, Pasadena.

Toppozada, T.R. and Branum, D.M. (in press). California M ≥ 5.5 earthquakes, history and areas damaged, *in* Lee, W.H., Kanamori, H. and Jennings, P., International Handbook of Earthquake and Engineering Seismology, International Association of Seismology and Physics of the Earth's Interior.

Toppozada, T.R. and Parke, D.L. (1982). Areas damaged by California earthquakes, 1900-1949, California Division of Mines and Geology Open-File Report 82-17, 65 p.

Toppozada, T.R., Parke, D.L. and Higgins, C.T. (1978). Seismicity of California 1900-1931, California Division of Mines and Geology Open-File Report 135.

Toppozada, T.R., Real, C.R. and Parke, D.L. (1981). Preparation of isoseismal maps and summaries of reported effects for pre-1900 California earthquakes, California Division of Mines and Geology Open-File Report 81-11 SAC, 182 p.

UC Berkeley/USGS earthquake catalog, http://quake.geo.berkeley.edu/ncedc/catalog-search.html. Northern California earthquake catalog and phase data, Northern California Seismic Network, U.S. Geological Survey, Menlo Park; Berkeley Seismological Laboratory, University of California, Berkeley, California.

DEM modified from U.S.G.S. digital file

MINES AND GEOLOGY
CALIFORNIA CONSERVATION

REFERENCE: PORTION OF EPICENTERS AND AREAS DAMAGED BY M≥5 CALIFORNIA EARTHQUAKES, 1800-1999 CALIFORNIA DEPARTMENT OF CONSERVATION, MAP SHEET 49 DATED 2000.

EPICENTERS MAP OF SOUTHERN CALIFORNIA EARTHQUAKES (1800-1999)

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fault dips southwest and is at least 18 km in length. The Central Avenue fault is about 8 km in length and concealed by younger alluvial deposits.

As is the case for most areas of Southern California, ground-shaking resulting from earthquakes associated with nearby and more distant faults may occur at the project site. During the life of the project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the site.

Table No. 1, *Summary of Regional Faults,* summarizes selected data of known faults capable of seismic activity within 50 kilometers of the site. The data presented below was calculated using EQFAULT Version 3.0 with updated fault data from "The Revised 2002 California Probabilistic Seismic Hazard Maps (Cao et al., 2003)", Appendix A, and other published geologic data.

Table No. 1, *Summary of Regional Faults*

Fault Name and Section	Approximate * Distance to Site (kilometers)	Max. Moment* Magnitude (Mmax)	Slip Rate* (mm/yr)
San Jose*	1.6	6.4	0.50
Chino-Central Ave. (Elsinore)	6.0	6.7	1.00
Elysian Park Blind Thrust*	8.1	6.7	1.50
Puente Hills Blind Thrust*	8.3	7.3	0.70
Sierra Madre*	10.0	7.2	2.00
Whittier	12.3	6.8	2.50
Cucamonga*	13.6	6.9	5.00
Clamshell-Sawpit	20.2	6.5	0.50
Raymond	20.6	6.5	1.50
Elsinore-Glen Ivy	28.1	6.8	5.00
Verdugo*	29.5	6.9	0.50
Compton Thrust	29.8	6.8	1.50
Hollywood	37.0	6.4	1.00
San Jacinto – San Bernardino	37.8	7.5	24.00
San Andreas – 1857 Rupture*	39.3	7.4	30.00
San Andreas – Mojave*	39.3	7.4	30.00
Newport-Inglewood (L.A. Basin)*	39.6	7.1	1.00
San Andreas – San Bernardino*	40.9	7.5	24.00
San Andreas – Southern*	40.9	7.2	25.00
Cleghorn*	45.5	6.7	12.00
Sierra Madre (San Fernando)	49.4	6.7	2.00

*****Review of published geologic data and mapping including Appendix A of the 2002 California Fault Parameters Report (Cao et al., 2003). Distance from the site to nearest subsurface projection, per Shaw et al., 2002.

5.2 Seismic History

An analysis of the seismic history of the site was conducted using the computer program EQSEARCH, (Blake, 2000), and attenuation relationships proposed by Boore et al. (1997) for stiff soil conditions. The Southern California Earthquake Catalog with the Southern California Earthquake Center was also utilized (SCEC, 2011).

Based on the analysis of seismic history, the number of earthquakes with a moment magnitude of 5.0 or greater occurring within a distance of 100 kilometers was 171, since the year 1800. Based on the analysis, the largest earthquake-induced ground acceleration affecting the site since the year 1800 is a 7.0 magnitude earthquake in 1858 with a calculated ground acceleration of 0.154g at the site.

Review of recent seismological and geophysical publications indicates that the seismic hazard for the Pomona Basin is high. The Pomona Basin is bounded by active regional faults on all sides and underlain by alluvial sediments and buried thrust faults. The seismic hazard for the heavily populated Pomona Basin was illustrated by the 1971 San Fernando, 1987 Whittier Narrows, 1991 Sierra Madre and 1994 Northridge earthquakes. The epicenters for these earthquakes are shown on Drawing No. 6, *Epicenters Map of Southern California Earthquakes (1800-1999).*

5.3 Surface Fault Rupture

The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to zone “active faults” within the State of California. An “active fault” has exhibited surface displacement with Holocene time (within the last 11,000 years) hence constituting a potential hazard to structures that may be located across it. Public school structures are required to be set-back at least 50 feet from an active fault. The active fault set-back distance is measured perpendicular from the dip of the fault plane. Based on a review of existing geologic information, no known active faults project through or toward the site. The potential for surface rupture resulting from the movement of the nearby major faults is considered remote.

5.4 Liquefaction and Seismically-Induced Settlement

Liquefaction is the sudden decrease in the strength of cohesionless soils due to dynamic or cyclic shaking. Saturated soils behave temporarily as a viscous fluid (liquefaction) and, consequently, lose their capacity to support the structures founded on them. The potential for liquefaction decreases with increasing clay and gravel content, but increases as the ground acceleration and duration of shaking increase. Liquefaction potential has been found to be the greatest where the groundwater level and loose sands occur within 50 feet of the ground surface.

According to the State of California Seismic Hazard Zones Map, the site is not located within an area of potential liquefaction as shown on Drawing No. 7, *Seismic Hazard Zones Map*. Groundwater was not encountered in the borings drilled to a maximum depth of 51.5 feet. The historically highest groundwater level at the site is greater than 50 feet bgs. All the soils below 5 feet are dense bedrock materials. As a result of the absence of shallow groundwater and shallow bedrock materials, it is concluded that the subject site is not considered susceptible to liquefaction. We anticipate total seismically-induced settlement to be on the scale of 0.50 inches and differential settlement to be less than 0.25 inches over a distance of 30 feet.

5.5 Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of earth materials due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. The topography at the project site and in the immediate vicinity of the site is relatively flat, with no significant nearby slopes or embankments. Under these circumstances, the potential for lateral spreading at the subject site is considered negligible.

5.6 Seismically-Induced Slope Instability

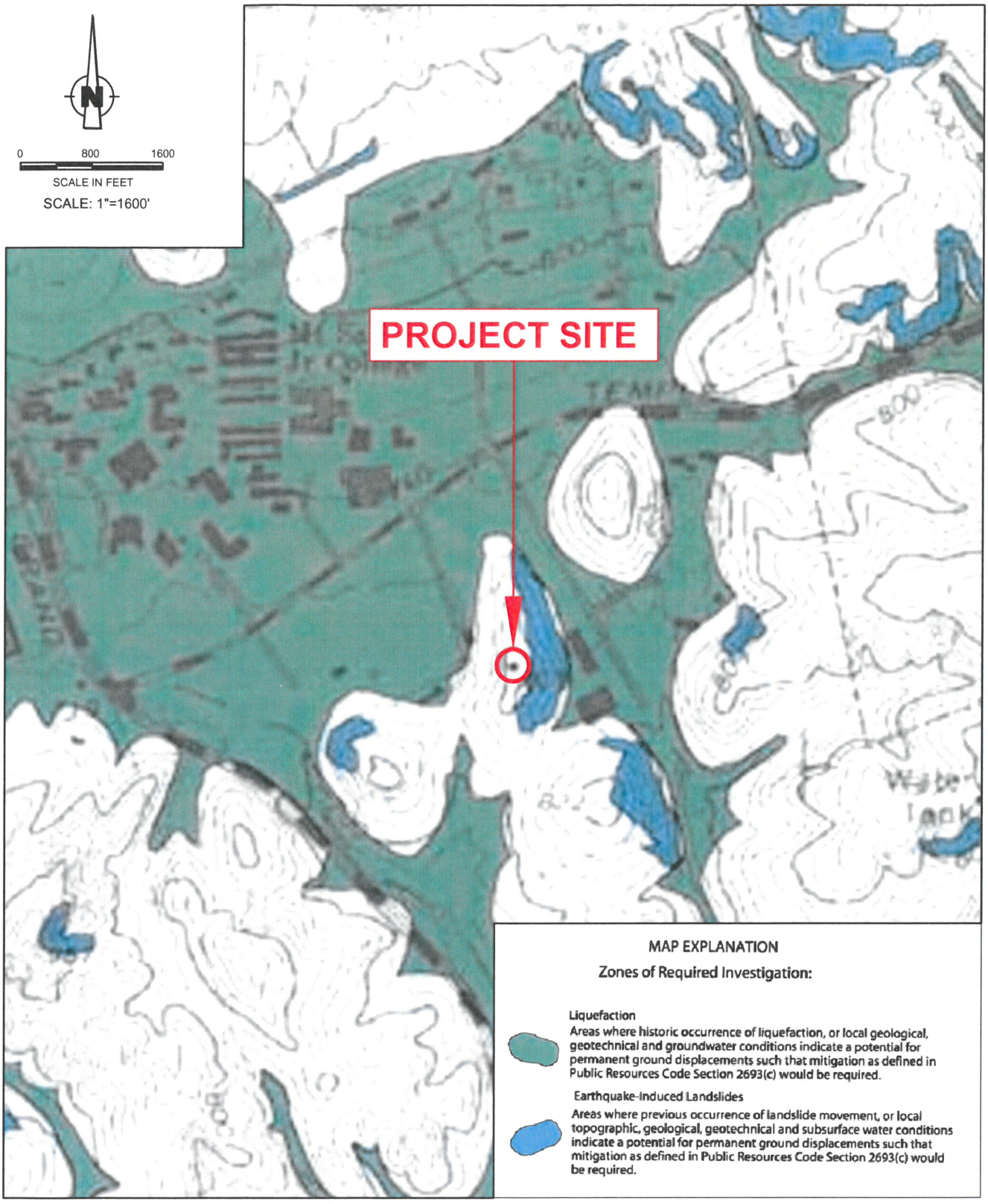
Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The project site is not located within an area of earthquake-induced landslide as shown on Drawing No. 7, *Seismic Hazard Zones Map*. The project site is underlain by dense, shallow bedrock on a hilltop ridge. No evidence of landslides was observed on descending hillside slopes below the site. The potential for seismically induced landslides to affect the proposed site is considered to be very low.

5.7 Earthquake-Induced Flooding

Review of the Flood Insurance Rate Map (FIRM), Panel 1725 of 2350, from the FEMA Map Service Center Viewer, indicates that the site is in an area designated as Zone D, “Areas in which flood hazards are undetermined, but possible.” Due to the absence of groundwater at shallow depths, distance of the subject site from large bodies of water and regional flood control structures, the potential for flooding at the subject site is considered remote.

5.8 Tsunami and Seiches

Tsunamis are seismic sea waves generated by fault displacement or major ground movement. Based on the location of the site from the ocean (over 20 kilometers), tsunamis do not pose a hazard. Seiches are large waves generated in enclosed bodies



REFERENCE: SAN DIMAS QUADRANGLE 1999
SEISMIC HAZARD ZONES STATE OF CALIFORNIA

SEISMIC HAZARD ZONES MAP

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WALNUT, CALIFORNIA

Project No.	Drawing No.
15-31-101-01	7

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of water in response to ground shaking. Based on site location away from lakes and reservoirs, seiches do not pose a hazard.

5.9 Volcanic Eruption Hazard

There are no known volcanoes near the site. According to Jennings (1994), the nearest potential hazards from future volcanic eruptions is the Amboy Crater-Lavic Lake area located in the Mojave Desert more than 120 miles east/northeast of the site. Volcanic eruption hazards are not present.

6.0 SEISMIC ANALYSIS

6.1 CBC Seismic Design Parameters

Seismic parameters based on the 2013 California Building Code are calculated using the United States Geological Survey *U.S. Seismic Design Maps* website application and the site coordinates (34.0438 degrees North Latitude, 117.8400 degrees West Longitude). The seismic parameters are presented below.

Table No. 2, CBC Seismic Design Parameters

Seismic Parameters	2013 CBC
Site Class	D
Mapped Short period (0.2-sec) Spectral Response Acceleration, S_S	2.183 g
Mapped 1-second Spectral Response Acceleration, S_1	0.779 g
Site Coefficient (from Table 1613.5.3(1)), F_a	1.0
Site Coefficient (from Table 1613.5.3(2)), F_v	1.5
MCE 0.2-sec period Spectral Response Acceleration, S_{MS}	2.183 g
MCE 1-second period Spectral Response Acceleration, S_{M1}	1.168 g
Design Spectral Response Acceleration for short period, S_{DS}	1.455 g
Design Spectral Response Acceleration for 1-second period, S_{D1}	0.779 g
Seismic Design Category	E

6.2 Site-Specific Response Spectra

The subject site is located in a Seismic Hazard Zone. Based on 2013 CBC Section 1616A.1.3, a site-specific ground motion analysis is required A site-specific response spectrum was developed for the project for a Maximum Considered Earthquake (MCE), defined as a horizontal peak ground acceleration that has a 2 percent probability of being exceeded in 50 years (return period of approximately 2,475 years).

In accordance with ASCE 7-10, Section 21.2 the site-specific response spectra can be taken as the lesser of the probabilistic maximum rotated component of MCE ground motion and the 84th percentile of deterministic maximum rotated component of MCE

ground motion response spectra. The design response spectra can be taken as 2/3 of site-specific MCE response spectra, but should not be lower than 80 percent of CBC general response spectra. The risk coefficient C_R has been incorporated at each spectral response period for which the acceleration was computed in accordance with ASCE 7-10, Section 21.2.1.1.

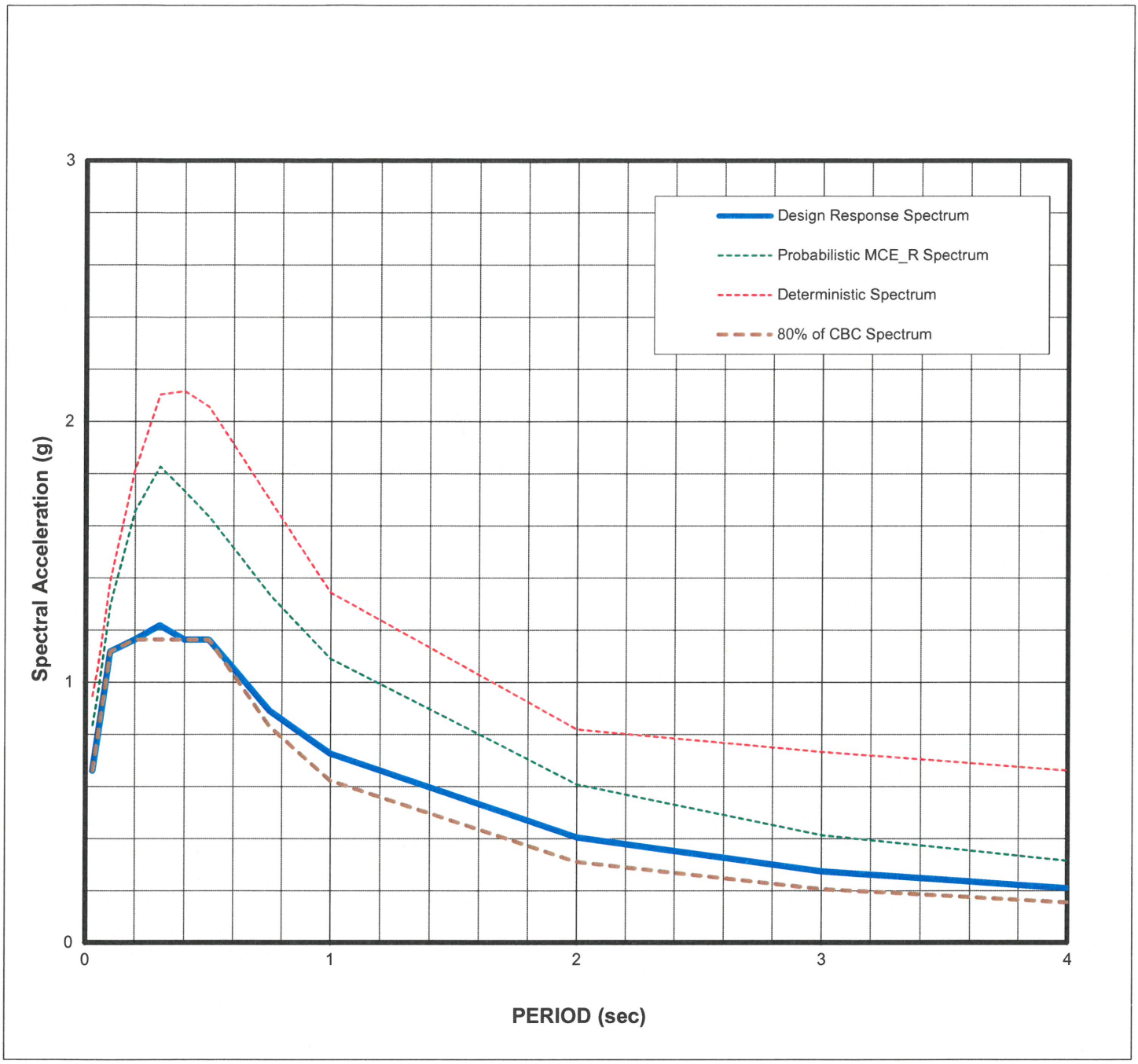
The 2013 CBC mapped acceleration parameters are provided in the following table. These parameters were determined using the United States Geological Survey *U.S. Seismic Design Maps* website application, and in accordance with ASCE 7-10 Sections 11.4, 11.6, 11.8 and 21.2.

Table No. 3, 2013 CBC Mapped Acceleration Parameters

Site Class	D	Seismic Design Category	E
S_s	2.183	C_{RS}	1.011
S_1	0.779	C_{R1}	1.022
F_a	1	**0.08 F_v/F_a**	0.120
F_v	1.5	**0.4 F_v/F_a**	0.600
S_{MS}	2.183	T_0	0.107
S_{M1}	1.169	T_S	0.535
S_{DS}	1.455	T_L	8
S_{D1}	0.779		

A Site-Specific response analysis, using faults within 100 kilometers of the site, was developed using the computer program EZ-FRISK by Risk Engineering (v. 7.62) and the 2008 USGS Fault Model database. Attenuation relationships proposed by Boore and Atkinson (2008), Campbell and Bozorgnia (2008), Chiou and Youngs (2008) were used in the analysis. These attenuation relationships are based on Next Generation Attenuation (NGA) project model. Maximum rotated components were determined using Huang (2008) method. An average shear wave velocity at upper 30 meters of soil profile (V_{s30}) of 270 meters per second, depth to bedrock of with a shear wave velocity 1,000 meters per second at 150 meters below grade, and depth of bedrock where the shear wave velocity is 2,500 meters per second at 3,000 meters below grade were selected for EZ-Frisk Analysis.

Applicable response spectra data are presented in the table below and on Drawing No. 8, *Site-Specific Design Response Spectra.* These curves correspond to response values obtained from above attenuation relations for horizontal elastic single-degree-of-freedom systems with equivalent viscous damping of 5 percent of critical damping.



Note: Calculated using EZFRISK program Risk Engineering, version 7.62
and USGS 2008 fault model database.

SITE SPECIFIC DESIGN RESPONSE SPECTRUM

Proposed Radio Tower Mt. SAC

Walnut, CA

For : Mt. San Antonio College

Project Number:

15-31-101-01

Converse Consultants

Drawing No.

8

Table No. 4, Site-Specific Response Spectrum Data

Period (sec)	2% in 50yr Probabilistic Spectral Acceleration (g)	Risk Coefficient C_R	Probabilistic MCE_R Spectral Acceleration (g)	84th Percentile Deterministic MCE Response Spectra, (g)	Deterministic CBC Lower Level, (g)	Site Specific MCE_R Spectral Acceleration (g)	80% CBC Design Response Spectrum	Site Specific Design Spectral Acceleration (g)
0.03	0.985	1.009	0.994	1.034	0.825	0.994	0.661	**0.663**
0.05	1.099	1.009	1.109	1.550	0.975	1.109	0.791	**0.791**
0.10	1.515	1.009	1.529	1.527	1.350	1.527	1.117	**1.117**
0.20	1.991	1.009	2.009	1.983	1.500	1.983	1.163	**1.322**
0.30	2.174	1.010	2.197	2.288	1.500	2.197	1.163	**1.464**
0.40	2.087	1.012	2.112	2.269	1.500	2.112	1.163	**1.408**
0.50	1.987	1.013	2.013	2.222	1.500	2.013	1.163	**1.342**
0.75	1.600	1.017	1.627	1.884	1.200	1.627	0.830	**1.084**
1.00	1.288	1.020	1.314	1.549	0.900	1.314	0.622	**0.876**
2.00	0.772	1.020	0.787	0.970	0.450	0.787	0.311	**0.525**
3.00	0.548	1.020	0.559	0.752	0.300	0.559	0.207	**0.373**
4.00	0.435	1.020	0.444	0.666	0.225	0.444	0.156	**0.296**

Vertical acceleration at the site may be calculated using the ASCE 7-10, Section 12.4.

The site-specific design response parameters are provided in the following table. These parameters were determined from Design Response Spectra presented in table above, and following guidelines of ASCE Section 21.4.

Table No. 5, Site-Specific Seismic Design Parameters

	Design Parameters (5% Damping)	Lower Limit, 80% of CBC Design Spectra
Site-Specific 0.2-second period Spectral Response Acceleration, S_{MS}	1.983	1.744
Site-Specific1-second period Spectral Response Acceleration, S_{M1}	1.575	0.934
Site-Specific Design Spectral Response Acceleration for short period S_{DS}	1.322	1.163
Site-Specific Design Spectral Response Acceleration for 1-second period, S_{D1}	1.050	0.622

7.0 GEOTECHNICAL EVALUATIONS AND CONCLUSIONS

Based on the results of our background review, subsurface exploration, laboratory testing, geotechnical analyses, and understanding of the planned site development, it is our opinion that the proposed project is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are incorporated into the project plans, specifications, and are followed during site construction.

The following is a summary of the major geologic and geotechnical factors to be considered for the planned project:

- Undocumented fills, approximately a foot in thickness were encountered in the borings. Deeper artificial fill may exist at the site. The fill and colluvial soil deposits encountered consists primarily of silty sand. The sedimentary bedrock primarily consist of slightly to moderately weathered siltstone, claystone and sandstone.
- During our exploration, groundwater was not encountered, and is not anticipated within the zone of construction.
- The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to zone “active faults” within the State of California.
- The site is not located within an area of potential liquefaction. We anticipate total seismically-induced settlement to be on the scale of 0.50 inches and differential settlement to be less than 0.25 inches over a distance of 30 feet.
- The upper five (5) feet of soils have a “Very Low” expansion potential. Mitigation for expansive soil is not considered necessary.
- Site soils tested have “negligible” concentrations of water soluble sulfates, which is considered “non-corrosive” to concrete.
- The pH value, chloride content, and resistivity of the sample tested is in the “non-corrosive” range. .
- The earth materials at the site should be excavatable with conventional heavy-duty earth moving and trenching equipment. The on-site materials contain about 5 to 10 percent gravel up to 3 inches in maximum dimension. Larger gravels, cobbles and possible boulders may exist at the site. Earthwork should be performed with suitable equipment for gravelly materials.
- The proposed radio tower should be supported on Cast-In-Drilled-Hole (CIDH) piles extending into competent bedrock. Related improvements can be supported on shallow foundations embedded into future compacted fill or bedrock.

8.0 EARTHWORK AND SITE GRADING RECOMMENDATIONS

8.1 General Evaluation

Based on our field exploration, laboratory testing, and analyses of subsurface conditions at the site, remedial grading will be required to prepare the sites for support of the proposed structures that are constructed with conventional shallow footings. To reduce differential settlement, variations in the soil type, degree of compaction, and thickness of

the compacted fill, the thickness of compacted fill placed underneath the footings should be kept uniform.

Site grading recommendations provided below are based on our experience with similar projects in the area and our evaluation of this investigation.

Site preparation for the proposed structure may require removal of existing structures, improvements, and other existing underground manmade structures and utilities.

The site soils can be excavated utilizing conventional heavy-duty earth-moving equipment. The excavated site soils, free of vegetation, shrub and debris, may be placed as compacted fill in structural areas after proper processing. Rocks larger than three (3) inches in the largest dimension should not be placed as fill.

On-site clayey soils and with an expansion index exceeding 20 should not be re-used for compaction within 2 feet below the proposed foundations. Soils containing organic materials should not be used as structural fill. The extent of removal should be determined by the geotechnical representative based on soil observation during grading.

9.2 Over-Excavation

Prior to the start of construction, all loose soil, fill and soil disturbed during demolition should be removed to firm acceptable native material or compacted fill. In order to provide uniform support for the structure, the minimum depth of over-excavation should be 2 feet below the ground surface, or depth of undocumented fill, whichever is deeper. Deeper over-excavation will be needed if soft, yielding soils or fill soils are exposed on the excavation bottom. Over-excavation should extend a least two (2) feet laterally beyond the limits of footings or as limited by the existing structures. Excavation activities should not disturb existing utilities, buildings, and remaining structures.

The exposed bottom of the over-excavation area should be scarified at least 6 inches, moisture conditioned as needed to near-optimum moisture content, and compacted to 90 percent relative compaction. Over-excavation should not undermine adjacent off-site improvements. Remedial grading should not extend within a projected 1:1 (horizontal to vertical) plane projected down from the outer edge of adjacent off-site improvements. If loose, yielding soil conditions are encountered at the excavation bottom, the following options can be considered:

a. Over-excavate until reach firm bottom.
b. Scarify or over-excavate additional 18 inches deep, and then place at least 18-inch-thick compacted base material (CAB or equivalent) to bridge the soft bottom. Base should be compacted to 90% relative compaction.
c. Over-excavate additional 18 inches deep, and then place a layer of geofabric i.e. Marifi HP570, X600 or equivalent), place 18-inch-thick compacted base material

(CAB or equivalent) to bridge the soft bottom. Base should be compacted to 90% relative compaction. An additional layer of geofabric may be needed on top of base depending on the actual site conditions.

The actual depth of removal should be based on recommendations and observation made during grading. Therefore, some variations in the depth and lateral extent of over-excavation recommended in this report should be anticipated.

9.3 Structural Fill

Following observation of the excavation bottom, subgrade soil surfaces should be scarified to a depth of at least six inches. The scarified soil should be moisture-conditioned within three (3) percent of optimum moisture for granular soils and to approximate three (3) percent above the optimum moisture for fine-grained soil. Scarified soil shall be compacted to a minimum 90 percent of the laboratory maximum dry density as determined by the ASTM Standard D1557 test method.

To mitigate the expansive soils on site, a minimum 18 inches of imported sandy soils, lime-treated soil or base (Caltrans Class 2 CAB or equivalent) should be used for compaction of subgrade soils. Imported sandy fills should extend at least two (2) feet beyond the foundations.

Any import fill should be tested and approved by Project Geotechnical Consultant. The import fill should have an expansion potential less than 20. The imported materials should be thoroughly mixed and moisture conditioned within three (3) percent above the optimum moisture. All fill, if not specified otherwise elsewhere in this report, should be compacted to at least 90 percent of the laboratory dry density in accordance with the ASTM Standard D1557 test method.

Where the fill is not within the areas specified above or is not to support any structures, excavated site soils, free of deleterious materials and rock particles larger than three inches in the largest dimension, should be suitable for placement as compacted fill. The site materials should be thoroughly mixed and moisture conditioned to approximate three percent above the optimum moisture, and then compacted to at least 90 percent of relative compaction.

9.4 Excavatability

Based on our field exploration, the earth materials at the site should be excavatable with conventional heavy-duty earth moving and trenching equipment. Some gravel should be expected during excavation.

9.5 Expansive Soil Mitigation

The upper five (5) feet of soils have a “Very Low” expansion potential. Mitigation for expansive soil is not considered necessary.

The recommendations contained in this report are based upon the anticipated on expansion soil conditions. Any proposed import fill should have an expansion index less than 20, and should be evaluated and approved by Converse prior to import to the site.

9.6 Shrinkage and Subsidence

Soil shrinkage and/or bulking as a result of remedial grading depends on several factors including the depth of over-excavation, and the grading method and equipment utilized, and average relative compaction. For preliminary estimation, bulking and shrinkage factors for various units of earth material at the site may be taken as presented below:

- The approximate shrinkage factor for the native alluvial soils is estimated to range from five (5) to fifteen (15) percent.
- For estimation purposes, ground subsidence may be taken as 0.15 feet as a result of remedial grading.

Although these values are only approximate, they represent our best estimates of the factors to be used to calculate lost volume that may occur during grading. If more accurate shrinkage and subsidence factors are needed, it is recommended that field-testing using the actual equipment and grading techniques be conducted.

9.7 Subgrade Preparation

Final subgrade soils for structures should be uniform and non-yielding. To obtain a uniform subgrade, soils should be well mixed and uniformly compacted. The subgrade soils should be non-expansive and well-drained. The near-surface site soils should be free draining. We recommend that at least the upper two (2) inches of subgrade soils underneath the slab-on-grade should be comprised of well-drained granular soils such as sands, gravel or crushed aggregate satisfying the following criteria:

- Maximum size $\leq$ 1.5 inches
- Percent passing U.S. #200 sieve $\leq$ 12 percent
- Sand equivalent $\geq$ 30

The subgrade soils should be moisture conditioned before placing concrete.

10.0 DESIGN RECOMMENDATIONS

10.1 General Evaluation

The project site, from a geotechnical standpoint, is suitable for the proposed construction, provided that the recommendations presented in this report are incorporated in preparation of the foundation design, and construction of the project.

The proposed buildings can be supported on shallow foundations embedded into future compacted fill or bedrock. The proposed antenna should be supported on Cast-In-Drilled-Hole (CIDH) piles extending into competent bedrock.

10.2 Shallow Foundations

10.2.1 Vertical Capacity

Shallow pad footing should be at least 24 inches square, and continuous footings should be at least 15 inches wide. Footings should be embedded at least 18 inches below lowest adjacent grade into compacted fill soils or on bedrock. The footing reinforcement should be based on the structural design. Conventional spread footings founded on compacted fill soils may be designed for a net bearing pressure of 3,500 pounds per square foot (psf) for dead-plus-live-loads.

The net allowable bearing pressure can be increased by 400 psf for each additional foot of excavation depth and width up to a maximum value of 5,000 psf.

The net allowable bearing values indicated above are for the dead loads and frequently applied live loads and are obtained by applying a factor of safety of 3.0 to the net ultimate bearing capacity.

10.2.2 Lateral Capacity

Resistance to lateral loads can be provided by friction acting at the base of the foundation and by passive earth pressure. A coefficient of friction of 0.35 may be assumed with normal dead load forces. An allowable passive earth pressure of 350 psf per foot of depth up to a maximum of 5,000 psf may be used for footings poured against properly compacted fill or undisturbed stiff natural soils. The values of coefficient of friction and allowable passive earth pressure include a factor of safety of 1.5.

10.2.3 Settlement

The static settlement of structures supported on continuous and/or spread footings founded on compacted fill will depend on the actual footing dimensions and the imposed vertical loads. Most of the footing settlement at the project site is expected to occur immediately after the application of the load. Based on the maximum allowable net

bearing pressures presented above, static settlement is anticipated to be less than 0.5 inch. Differential settlement is expected to be up to one-half of the total settlement over a 30-foot span.

10.2.4 Dynamic Increases

Bearing values indicated above are for total dead load and frequently applied live loads. The above vertical bearing may be increased by 33% for short durations of loading which will include the effect of wind or seismic forces. The allowable passive pressure may be increased by 33% for lateral loading due to wind or seismic forces.

10.3 Cast-In-Drilled-Hole (CIDH) Piles

Cast-In-Drilled-Hole (CIDH) piles deriving their capacities primarily from the skin friction should be used for support of the proposed radio tower structure.

10.3.1 Axial Pile Capacity

The CIDH piles should be at least 24-inch in diameter extending to at least 18 feet into bedrock, and can be designed for an allowable skin friction of 700 psf for pile perimeter against bedrock. The diameter and length of pile shall be determined by the project structural engineer based on the design loads. The piles can be connected to grade beams, determined by structural engineer, to control the deflections under the design tolerance.

A factor of safety of 2.0 has been applied to obtain the allowable values from the ultimate capacities. The Uplift capacities can be taken as one-half of compressive capacities for pile design. In order to eliminate reductions in capacities due to group efficiency and problems in construction, the minimum pile spacing, if any, should be 3 diameters on center.

Settlement of single piles designed and constructed in accordance with the recommendations presented herein is estimated to be less than 0.25 inch. Actual settlement would depend on the applied loads. Pile group settlement would depend on pile spacing, diameter, number of piles and/or the minimum dimensions of the pile group cap.

The allowable capacities may be increased by one-third for short-term transient loads, including wind or seismic forces. Short term uplift capacities can be assumed to be equal to half of the short term downward friction capacities.

10.3.2 Lateral Pile Capacity

The allowable passive earth pressure in terms of equivalent fluid pressure of 350 pcf for bedrock up to a maximum of 5,000 psf can be used for lateral design. The value of

allowable passive earth pressure includes a factor of safety of 1.5. The passive pressure can be doubled if the pile spacing is greater than 3 times pile diameter. The point of fixity can be assumed to be 5 feet below the lowest adjacent ground surface.

10.4 Modulus of Subgrade Reaction

For the subject project, design of the structures supported on compacted fill subgrade prepared in accordance with the recommendations provided in this report may be based on a soil modulus of subgrade reaction of (k_s) of 150 pounds per square inch per inch.

10.5 Slabs-on-Grade

Slabs-on-grade should have a minimum thickness of four inches nominal for support of normal ground-floor live loads. Minimum reinforcement for slabs-on-grade should be No. 3 reinforcing bars, spaced at 18 inches on-center each way. The thickness and reinforcement of more heavily loaded slabs will be dependent upon the anticipated loads and should be designed by a structural engineer. A static modulus of subgrade reaction equal to 150 pounds per square inch per inch may be used in structural design of concrete slabs-on-grade.

It is critical that the exposed subgrade soils should not be allowed to desiccate prior to the slab pour. Care should be taken during concrete placement to avoid slab curling. Slabs should be designed and constructed as promulgated by the ACI and Portland Cement Association (PCA). Prior to the slab pour, all utility trenches should be properly backfilled and compacted.

In areas where a moisture-sensitive floor covering (such as vinyl tile or carpet) is used, a 10-mil-thick moisture retarder/barrier between the bottom of slab and subgrade that meets the performance criteria of ASTM E 1745 Class A material. Retarder/barrier sheets should be overlapped a minimum of six inches, and should be taped or otherwise sealed per the product specifications.

10.6 Soil Corrosivity Evaluation

Converse retained the Environmental Geotechnology Laboratory, Inc., located in Arcadia, California, to test one (1) bulk soil sample taken in the general area of the proposed structures. The tests included minimum resistivity, pH, soluble sulfates, and chloride content, with the results summarized on the following table:

Table No. 6, Soil Corrosivity Test Results

Boring No.	Sample Depth (feet)	pH (Caltrans 643)	Soluble Chlorides (Caltrans 422) ppm	Soluble Sulfate (Caltrans 417) % by Weight	Saturated Resistivity (Caltrans 532) Ohm-cm
BH-1	0-5	6.52	195	0.005	4200

In accordance with the Caltrans Corrosive Guidelines (2012), the pH value, chloride content, and resistivity of the sample tested is in the “non-corrosive” range.

Soluble sulfate concentrations tested for this project are less than 2,000 ppm in the soil. Mitigation measures to protect concrete in contact with the soils are not anticipated. Type I or II Portland Cement may be used for the construction of the foundations and slabs.

The test results presented herein are considered preliminary. If advanced corrosivity study is desired by the design team, a corrosion engineer can be consulted for appropriate mitigation procedures and construction design.

In general, conventional corrosion mitigation measures may include the following:

- Steel and wire concrete reinforcement should have at least three inches of concrete cover where cast against soil, unformed.
- Below-grade ferrous metals should be given a high-quality protective coating, such as 18-mil plastic tape, extruded polyethylene, coal-tar enamel, or Portland cement mortar.
- Below-grade metals should be electrically insulated (isolated) from above-grade metals by means of dielectric fittings in ferrous utilities and/or exposed metal structures breaking grade.

10.7 Site Drainage

Adequate positive drainage should be provided away from the structures to prevent ponding and to reduce percolation of water into structural backfill. We recommend that the landscape area immediately adjacent to the foundation shall be designed sloped away from the building with a minimum 5% slope gradient for at least 10 feet measured perpendicular to the face of the wall. Impervious surfaces within 10 feet of the foundation shall have a minimum 2 percent slope away from the building per 2010 CBC.

Planters and landscaped areas adjacent to the building perimeter should be designed to minimize water infiltration into the subgrade soils.

11.0 CONSTRUCTION CONSIDERATIONS

11.1 General

Site soils should be excavatable using conventional heavy-duty excavating equipment. Temporary sloped excavation is feasible if performed in accordance with the slope ratios provided in Section 11.2, *Temporary Excavations*. Existing utilities should be accurately located and either protected or removed as required.

11.2 Temporary Excavations

Based on the sandy materials encountered in the exploratory borings, sloped temporary excavations (if necessary) may be constructed according to the slope ratios presented in Table No. 7, *Slope Ratios for Temporary Excavations*. Any loose utility trench backfill or other fill encountered in excavations will be less stable than the native soils. Temporary cuts encountering loose fill or loose dry sand may have to be constructed at a flatter gradient than presented in the following table:

Table No. 7, Slope Ratios for Temporary Excavations

Maximum Depth of Cut (feet)	Maximum Slope Ratio* (horizontal: vertical)
0 – 4	vertical
4 – 8	0.5:1
>8	1:1

*Slope ratio assumed to be uniform from top to toe of slope.

Surfaces exposed in slope excavations should be kept moist but not saturated to minimize raveling and sloughing during construction. Adequate provisions should be made to protect the slopes from erosion during periods of rainfall. Surcharge loads, including construction, should not be placed within five (5) feet of the unsupported trench edge. The above maximum slopes are based on a maximum height of six (6) feet of stockpiled soils placed at least five (5) feet from the trench edge.

All applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act of 1987 and current amendments, and the Construction Safety Act should be met. The soils exposed in cuts should be observed during excavation by the project's geotechnical consultant. If potentially unstable soil conditions are encountered, modifications of slope ratios for temporary cuts may be required.

11.3 Geotechnical Services During Construction

This report has been prepared to aid in the site preparation and site grading plans and specifications, and to assist the architect, civil and structural engineers in the design of the proposed structure. It is recommended that this office be provided an opportunity to

review final design drawings and specifications to verify that the recommendations of this report have been properly implemented.

Recommendations presented herein are based upon the assumption that adequate earthwork monitoring will be provided by Converse. Excavation bottoms should be observed by a Converse representative prior to the placement of compacted fill. Structural fill and backfill should be placed and compacted during continuous observation and testing by this office. Footing excavations should be observed by Converse prior to placement of steel and concrete so that footings are founded on satisfactory materials and excavations are free of loose and disturbed materials.

During construction, the geotechnical engineer and/or their authorized representatives should be present at the site to provide a source of advice to the client regarding the geotechnical aspects of the project and to observe and test the earthwork performed. Their presence should not be construed as an acceptance of responsibility for the performance of the completed work, since it is the sole responsibility of the contractor performing the work to ensure that it complies with all applicable plans, specifications, ordinances, etc.

This firm does not practice or consult in the field of safety engineering. We do not direct the contractor's operations, and cannot be responsible for other than our own personnel on the site; therefore, the safety of others is the responsibility of the contractor. The contractor should notify the owner if he considers any recommended actions presented herein to be unsafe.

12.0 CLOSURE

The findings and recommendations of this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice. We make no other warranty, either expressed or implied. Our conclusions and recommendations are based on the results of the field and laboratory investigations, combined with an interpolation and extrapolation of soil conditions between and beyond boring locations. If conditions encountered during construction appear to be different from those shown by the borings, this office should be notified.

Design recommendations given in this report are based on the assumption that the earthwork and site grading recommendations contained in this report are implemented. Additional consultation may be prudent to interpret Converse's findings for contractors, or to possibly refine these recommendations based upon the review of the final site grading and actual site conditions encountered during construction. If the scope of the project changes, if project completion is to be delayed, or if the report is to be used for another purpose, this office should be consulted.

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APPENDIX A

FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

Field exploration included an initial site reconnaissance, and subsurface drilling. During the site reconnaissance, surface conditions were noted and the locations of the test borings were determined. Borings were approximately located using existing features as a guide.

Field exploration consisted of drilling three (3) 6-inch diameter exploratory hollow stem borings (BH-1 through BH-3) on April 27, 2015 to a maximum depth of 51.5 feet bgs. Soils were continuously logged and classified in the field by visual/manual examination, in accordance with the Unified Soil Classification System. Field descriptions have been modified, where appropriate, to reflect laboratory test results.

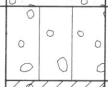
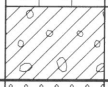
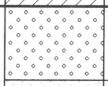
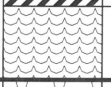
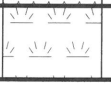
Relatively undisturbed ring and bulk samples of the subsurface soils were obtained at frequent intervals in the borings. The undisturbed samples were obtained using a California Steel Sampler (2.4 inches inside diameter and 3.0 inches outside diameter) lined with thin sample rings. The sampler was driven into the bottom of the boreholes with successive drops of a 140-pound hammer falling 30 inches by means of a mechanically driven pulley. The number of successive drops of the driving weight ("blows") required for every 6-inch of penetration of the sampler are shown on the Logs of Borings in the "blows" column.

The soil was retained in brass rings (2.4 inches in diameter and one inch in height). The central portion of the sample was retained and carefully sealed in waterproof plastic containers for shipment to the laboratory. Bulk soil samples were also collected in plastic bags and brought to the laboratory.

Standard Penetration Tests (SPTs) were also performed. In this test, a standard split-spoon sampler (1.4 inches inside diameter and 2.0 inches outside diameter) was driven into the ground with successive drops of a 140-pound hammer falling 30 inches by means of an automatic hammer. The number of successive drops of the driving weight ("blows") required for every 6-inch of penetration of the sampler are shown on the Logs of Borings in the "blows" column. The soil retrieved from the spoon sampler was carefully sealed in waterproof plastic containers for shipment to the laboratory.

It should be noted that the exact depths at which material changes occur cannot always be established accurately. Changes in material conditions that occur between driven samples are indicated in the logs at the top of the next drive sample. A key to soil symbols and terms is presented as Drawing No. A 1, *Soil Classification Chart*. The logs of the exploratory boring are presented in Drawing Nos. *A-2a through A-4 Log of Borings.*

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

BORING LOG SYMBOLS

SAMPLE TYPE

- STANDARD PENETRATION TEST — Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE 2.42" I.D. sampler.
- DRIVE SAMPLE No recovery
- BULK SAMPLE
- GRAB SAMPLE
- GROUNDWATER WHILE DRILLING
- GROUNDWATER AFTER DRILLING

NOTE: 10-DCP BLOWS

LW=LIGHT WEIGHT
HW= HEAVY WEIGHT

LABORATORY TESTING ABBREVIATIONS

TEST TYPE
(Results shown in Appendix B)

CLASSIFICATION

Plasticity	pi
Grain Size Analysis	ma
Passing No. 200 Sieve	wa
Sand Equivalent	se
Expansion Index	ei
Compaction Curve	max
Hydrometer	h

STRENGTH

Pocket Penetrometer	p
Direct Shear	ds
Direct Shear (single point)	ds*
Unconfined Compression	uc
Triaxial Compression	tx
Vane Shear	vs
Consolidation	c
Collapse Test	col
Resistance (R) Value	r
Chemical Analysis	ca
Electrical Resistivity	er

UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. **15-31-101-01**

Drawing No. **A-1**

Log of Boring No. BH-1

Dates Drilled: 4/27/2015 Logged by: WB Checked By: SKS

Equipment: 6" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 809 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FT	MOISTURE (%)	DRY UNIT WT. (pcf)	TEST
		FILL (Af): **SILTY SAND (SM):** fine to medium-grained, with gravels up to 3" in maximum dimension, brown.						ei,ma,ca
		COLLUVIUM (Qal): **SILTY SAND (SM):** fine to coarse-grained, with gravels up to 3" in maximum dimension and cobbles up to 4" in maximum dimension, light brown.						
5			■		50(6")	10	102	ds
		BEDROCK-PUENTE FORMATION (Tpss): **SILTSTONE/SANDSTONE:** moderately weathered, no apparent bedding, olive brown/light brown						
10			■		23/36/45	30	92	wa(fc=37%)
15		-lightly weathered, thinly bedded, near vertical bedding, trace caliche, light brown	■		10/23/40	24	92	
20			⊠		10/14/17			wa(fc=62%)
25		-olive brown/grayish brown	■		10/24/30	31	97	
30			⊠		7/12/15			wa(fc=75%)

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. A-2a

Log of Boring No. BH-1

Dates Drilled: 4/27/2015 Logged by: WB Checked By: SKS

Equipment: 6" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 809 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FT	MOISTURE (%)	DRY UNIT WT. (pcf)	TEST
		BEDROCK-PUENTE FORMATION (Tpss): **SILTSTONE/SANDSTONE:** moderately weathered, no apparent bedding, olive brown/light brown	■		7/14/28	39	82	
40			☒		10/15/18			wa(fc=76%)
45		-near approximately 45° bedding angle, olive brown/light brown	■		10/18/50	60	72	
50			☒		7/12/14			
		End of boring at 51.5 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 4-27-15.						

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. A-2b

Log of Boring No. BH-2

Dates Drilled: 4/27/2015 Logged by: WB Checked By: SKS

Equipment: 6" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 808 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FT	MOISTURE (%)	DRY UNIT WT. (pcf)	TEST
		FILL (Af): **SILTY SAND (SM):** fine to medium-grained, brown.						max
		COLLUVIUM (Qal): **SILTY SAND (SM):** fine to medium-grained, with gravels up to 3" in maximum dimension, grayish brown.						
5		**BEDROCK-PUENTE FORMATION (Tpss):** **SILTSTONE/CLAYSTONE:** slightly weathered, no apparent bedding, with caliche, olive gray	■		21/35/58	27	72	
10		-laminated bedding, near vertical bedding, olive brown	■		14/40/50(4")	29	92	
15			☒		8/13/18			
20		-thinly bedded, near vertical bedding, light brown to olive brown	■		17/38/50	22	95	
25		-no apparent bedding, olive brown	☒		9/13/16			
30			■		22/45/50(4")	29	89	

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. A-3a

Log of Boring No. BH-2

Dates Drilled: 4/27/2015 Logged by: WB Checked By: SKS

Equipment: 6" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 808 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FT	MOISTURE (%)	DRY UNIT WT. (pcf)	TEST
		BEDROCK-PUENTE FORMATION (Tpss): **SILTSTONE/CLAYSTONE:** slightly weathered, no apparent bedding, olive gray	X		8/21/34			
40			■		8/18/42	36	112	
45			X		10/13/17			
50		-olive brown to brownish orange	■		11/27/33	31	88	
		End of boring at 51.5 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 4-27-15.						

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. A-3b

Log of Boring No. BH-3

Dates Drilled: 4/27/2015 Logged by: WB Checked By: SKS

Equipment: 6" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 808 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FT	MOISTURE (%)	DRY UNIT WT. (pcf)	TEST
		FILL (Af): **SILTY SAND (SM):** fine to medium-grained, with gravels up to 2" in maximum dimension, brown. **COLLUVIUM (Qal):** **SILTY SAND (SM):** fine to medium-grained, light brown.						
5		**BEDROCK-PUENTE FORMATION (Tpss):** **SILTSTONE/CLAYSTONE:** moderately weathered, no apparent bedding, light brown/dark brown			50(3")	5	125	ds,dist. refusal to spt
10					50(3")			no recovery refusal to spt
		End of boring at 11.5 feet due to refusal. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 4-27-15.						

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. 15-31-101-01

Drawing No. A-4

APPENDIX B

LABORATORY TESTING PROGRAM

APPENDIX B

LABORATORY TESTING PROGRAM

Tests were conducted in our laboratory on representative soil samples for the purpose of classification and evaluation of their relevant physical characteristics and engineering properties. The amount and selection of tests were based on the geotechnical requirements of the project. Test results are presented herein and on the Logs of Borings in Appendix A, *Field Exploration*. The following is a summary of the laboratory tests conducted for this project.

Moisture Content and Dry Density

Results of moisture content and dry density tests, performed on relatively undisturbed ring samples were used to aid in the classification of the soils and to provide quantitative measure of the *in situ* dry density. Data obtained from this test provides qualitative information on strength and compressibility characteristics of site soils. For test results, see the Logs of Borings in Appendix A, *Field Exploration*.

Grain-Size Analysis

To assist in classification of soils, mechanical grain-size analysis was performed on one (1) selected sample. Testing was performed in general accordance with the ASTM Standard C136 test method. Grain-size curves are shown in Drawing No. B-1, *Grain Size Distribution Results*.

Percent Finer Than Sieve No. 200

The percent finer than sieve No. 200 test were performed on four (4) selected soil samples to aid in the classification of the on-site soils and to estimate other engineering parameters. Testing was performed in general accordance with the ASTM Standard D1140 test method. The test results are presented in the following table and boring logs.

Table No. B-1, Summary of Percent Passing Sieve #200 Test Results

Boring No.	Depth (feet)	Soil Classification	Percent Passing Sieve No. 200
BH-1	0-5	Silty Sand (SM)	19
BH-1	10	Siltstone/ClayStone (Tpss)	37
BH-1	20	Siltstone/ClayStone (Tpss)	62
BH-1	30	Siltstone/ClayStone (Tpss)	75
BH-1	40	Siltstone/ClayStone (Tpss)	76

* Results from grain-size analysis

Maximum Dry Density Test

A laboratory maximum dry density-moisture content relationship test was performed on one (1) representative bulk sample. The test was conducted in accordance with ASTM Standard D1557 laboratory procedure. The test result is presented on Drawing No. B-2 *Moisture-Density Relationship Results*.

Direct Shear

Direct shear tests were performed on two (2) remolded soil samples. The tests were performed at soaked moisture conditions. For this test the sample, contained in brass sampler rings, was placed directly into the test apparatus and subjected to a range of normal loads appropriate for the anticipated conditions. The sample was then sheared at a constant strain rate of 0.005 inch/minute. Shear deformation was recorded until a maximum of about 0.25-inch shear displacement was achieved. Ultimate strength was selected from the shear-stress deformation data and plotted to determine the shear strength parameters. For test data, including sample density and moisture content, see Drawing No. B-3, *Direct Shear Test Results,* and in the following table:

Table No. B-2, Direct Shear Test Results

Boring No.	Depth (feet)	Soil Classification	Ultimate Strength Parameters	
			Friction Angle (degrees)	Cohesion (psf)
BH-1	5	Silty Sand (SM)	35	0
BH-3	5	Silty Sand (SM)	32	110

Expansion Index Test

One (1) representative bulk sample was tested to evaluate the expansion potential of material encountered at the site. The test was conducted in accordance with ASTM D4829 Standard. Test results are presented in the following table:

Table No. B-3, Expansion Index Test Result

Boring No.	Depth (feet)	Soil Description	Expansion Index	Expansion Potential
BH-1	0 - 5	Silty Sand (SM)	2	Very Low

Soil Corrosivity

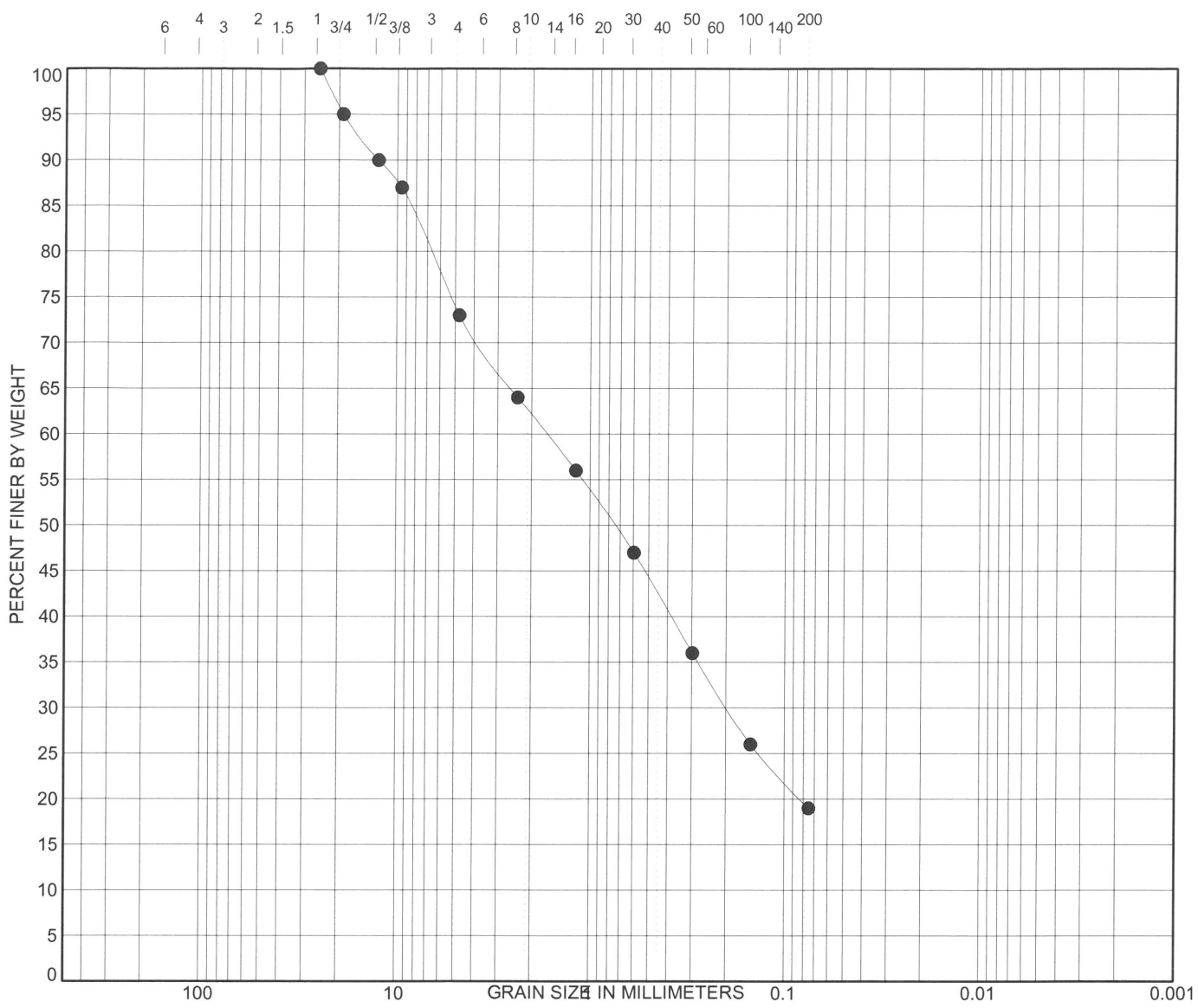
Converse retained the Environmental Geotechnology Laboratory, Inc., located in Arcadia, California, to test one (1) bulk soil sample taken in the general area of the proposed structures. The tests included minimum resistivity, pH, soluble sulfates, and chloride content, with the results summarized on the following table:

Table No. B-4, Corrosivity Test Results

Boring No.	Sample Depth (feet)	pH (Caltrans 643)	Soluble Chlorides (Caltrans 422) ppm	Soluble Sulfate (Caltrans 417) % by Weight	Saturated Resistivity (Caltrans 532) Ohm-cm
BH-1	0-5	6.52	195	0.005	4,200

Sample Storage

Soil samples presently stored in our laboratory will be discarded 30 days after the date of this report, unless this office receives a specific request to retain the samples for a longer period.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring No.	Depth (ft)	Description	LL	PL	PI	Cc	Cu
●	**BH-1**	**0-5**	**SILTY SAND (SM)**					

	Boring No.	Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**BH-1**	**0-5**	**25**	**1.669**	**0.196**		**27.0**	**54.0**	**19.0**	

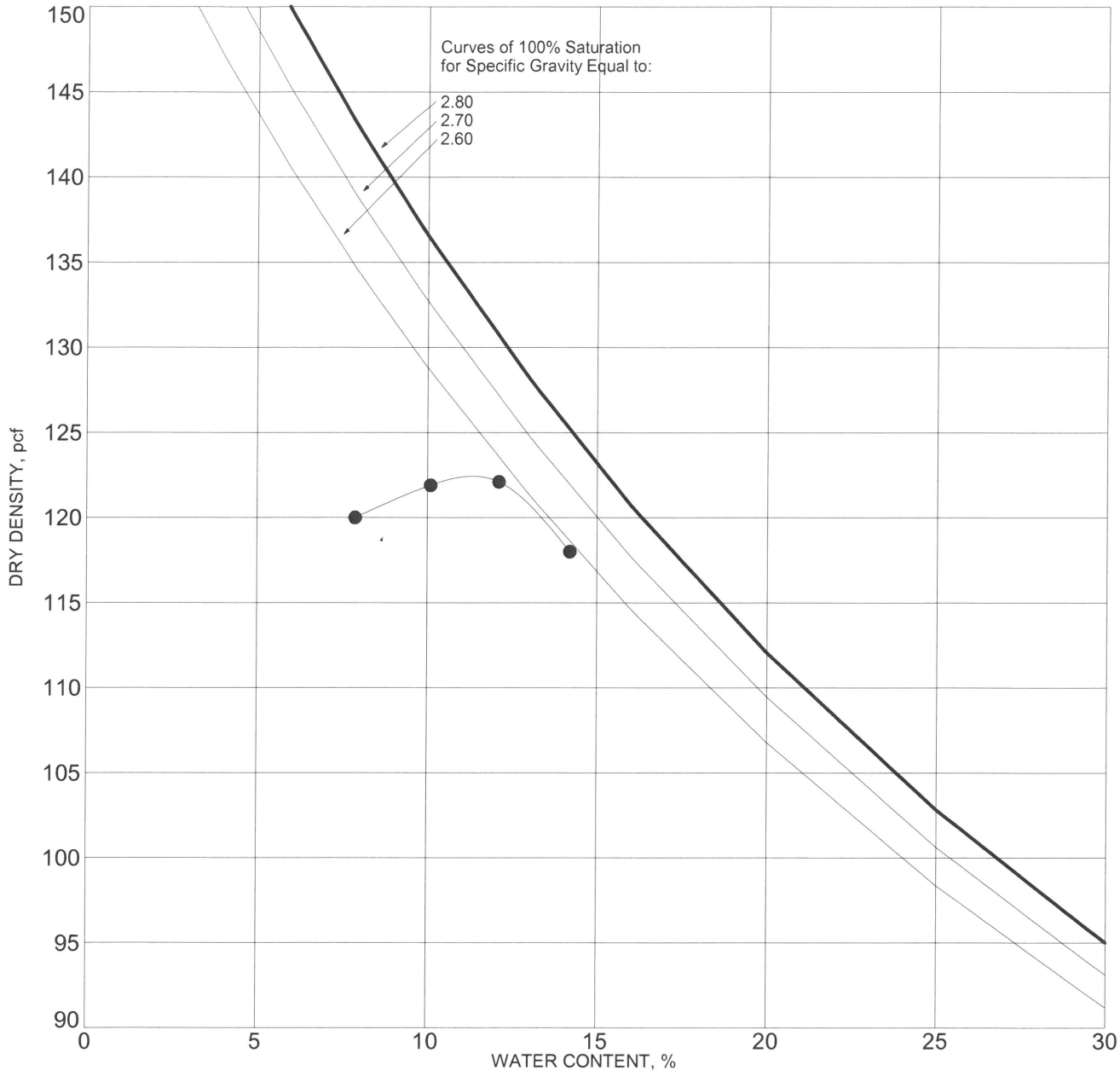
GRAIN SIZE DISTRIBUTION RESULTS

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No.
15-31-101-01

Drawing No.
B-1



SYMBOL	BORING NO.	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	BH-3	0-5	SILTY SAND (SM)	D1557 Method B	11.1	122.6

NOTE:

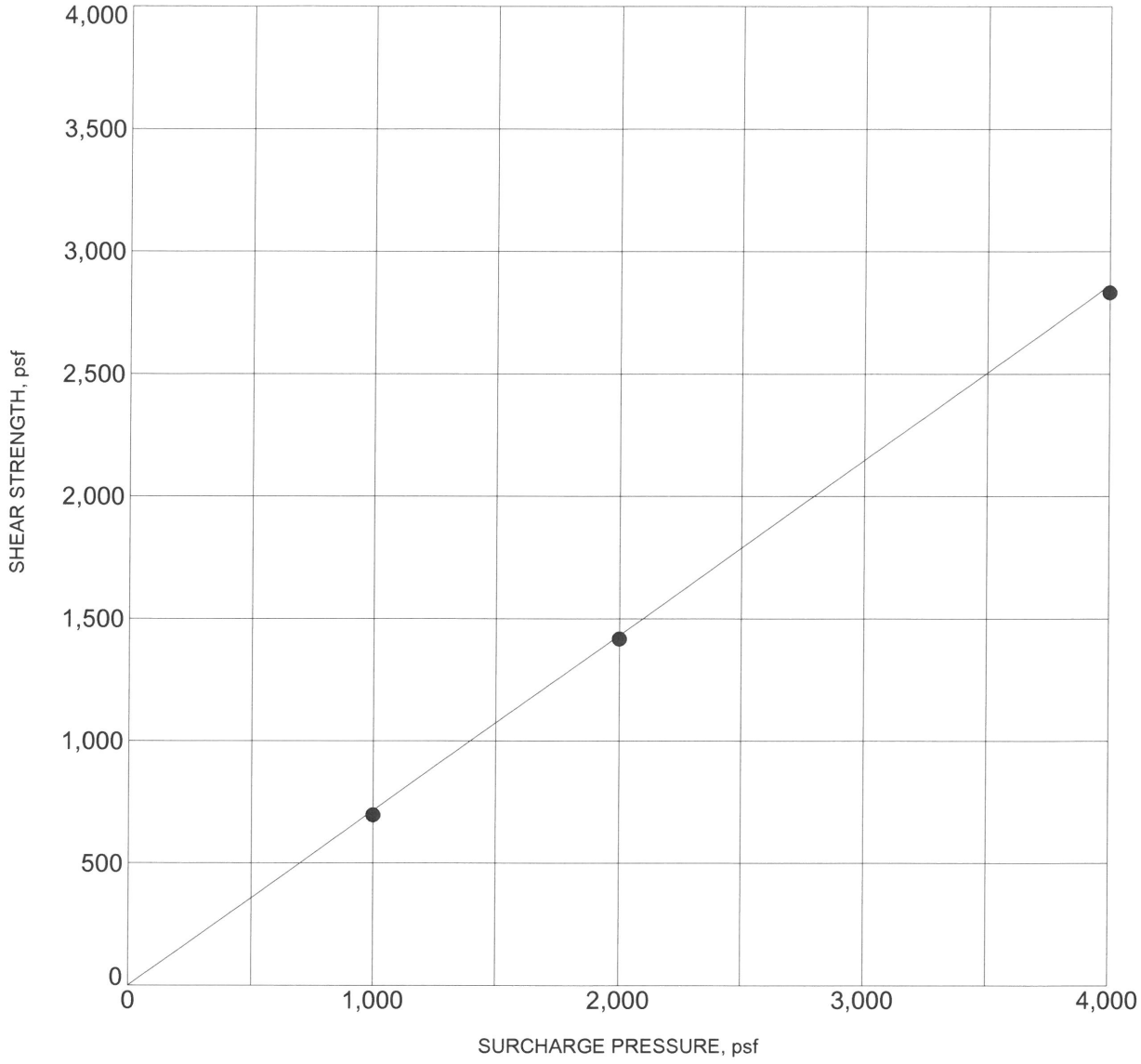
MOISTURE-DENSITY RELATIONSHIP RESULTS

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No.
15-31-101-01

Drawing No.
B-2



BORING NO.	:	**BH-1**	DEPTH (ft)	:	**5**
DESCRIPTION	:	**SILTY SAND (SM)**			
COHESION (psf)	:	**0**	FRICTION ANGLE (degrees):		**35**
MOISTURE CONTENT (%)	:	**4.3**	DRY DENSITY (pcf)	:	**126.5**

NOTE: Ultimate Strength.

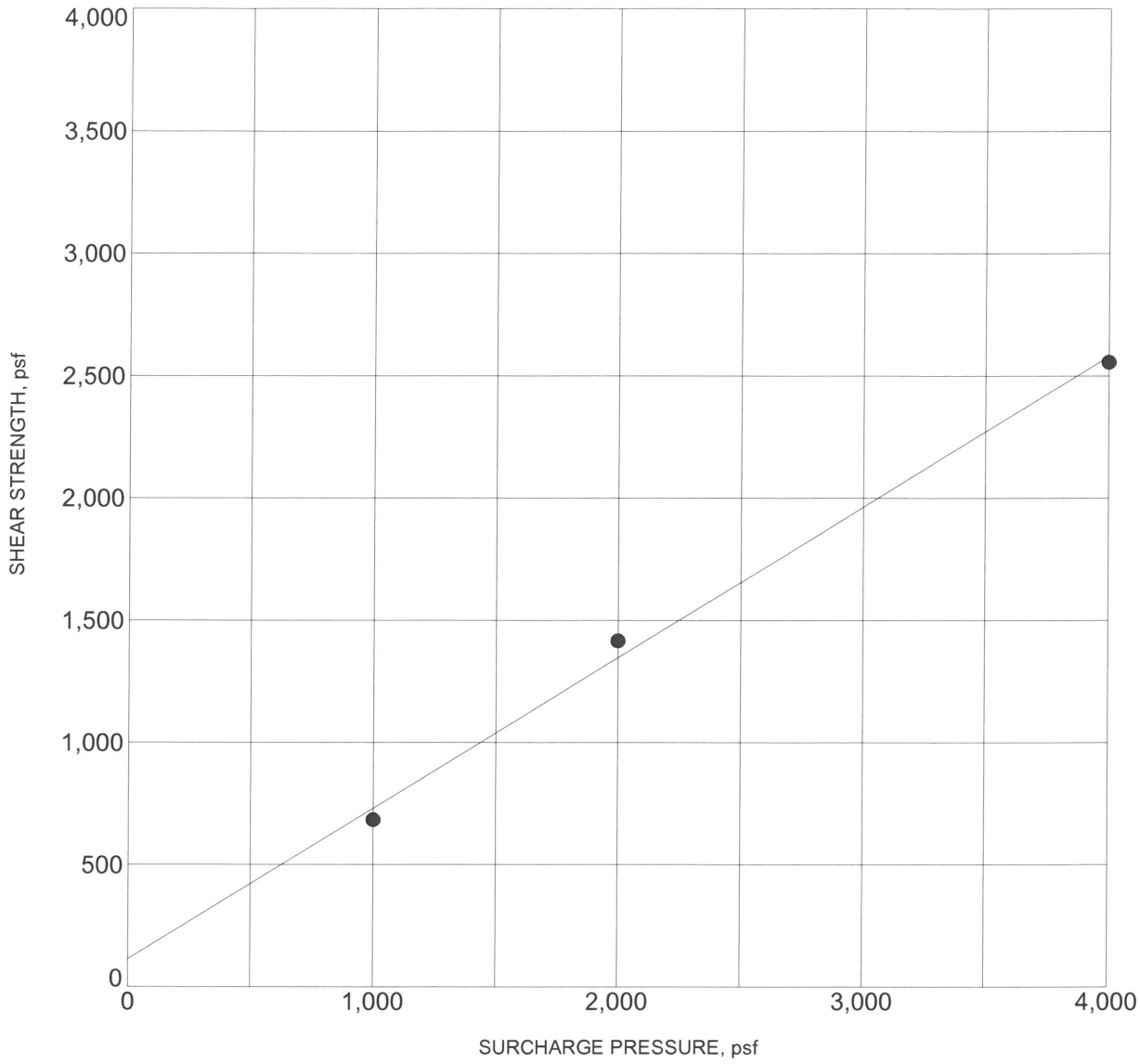
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. **15-31-101-01**

Drawing No. **B-3A**



BORING NO.	:	**BH-3**	DEPTH (ft)	:	**5**
DESCRIPTION	:	**SILTY SAND (SM)**			
COHESION (psf)	:	**110**	FRICTION ANGLE (degrees):		**32**
MOISTURE CONTENT (%)	:	**5.4**	DRY DENSITY (pcf)	:	**125.4**

NOTE: Ultimate Strength.

DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
MT. SAN ANTONIO COLLEGE
RADIO TOWER
WALNUT, CALIFORNIA

Project No. **15-31-101-01**

Drawing No. **B-3B**

APPENDIX C

EARTHWORK SPECIFICATIONS

APPENDIX C

EARTHWORK SPECIFICATIONS

C1.1 Scope of Work

The work includes all labor, supplies and construction equipment required to construct the building pads in a good, workman-like manner, as shown on the drawings and herein specified. The major items of work covered in this section include the following:

- Site Inspection
- Authority of Geotechnical Engineer
- Site Clearing
- Excavations
- Preparation of Fill Areas
- Placement and Compaction of Fill
- Observation and Testing

C1.2 Site Inspection

1. The Contractor shall carefully examine the site and make all inspections necessary, in order to determine the full extent of the work required to make the completed work conform to the drawings and specifications. The Contractor shall satisfy himself as to the nature and location of the work, ground surface and the characteristics of equipment and facilities needed prior to and during prosecution of the work. The Contractor shall satisfy himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered. Any inaccuracies or discrepancies between the actual field conditions and the drawings, or between the drawings and specifications must be brought to the Owner's attention in order to clarify the exact nature of the work to be performed.

2. This *Geotechnical Study Report* by Converse Consultants may be used as a reference to the surface and subsurface conditions on this project. The information presented in this report is intended for use in design and is subject to confirmation of the conditions encountered during construction. The exploration logs and related information depict subsurface conditions only at the particular time and location designated on the boring logs. Subsurface conditions at other locations may differ from conditions encountered at the exploration locations. In addition, the passage of time may result in a change in subsurface conditions at the exploration locations. Any review of this information shall not relieve the Contractor from performing such independent investigation and evaluation to satisfy himself as to the nature of the surface and subsurface conditions to be encountered and the procedures to be used in performing his work.

C1.3 Authority of the Geotechnical Engineer

1. The Geotechnical Engineer will observe the placement of compacted fill and will take sufficient tests to evaluate the uniformity and degree of compaction of filled ground.

2. As the Owner's representative, the Geotechnical Engineer will (a) have the authority to cause the removal and replacement of loose, soft, disturbed and other unsatisfactory soils and uncontrolled fill; (b) have the authority to approve the preparation of native ground to receive fill material; and (c) have the authority to approve or reject soils proposed for use in building areas.

3. The Civil Engineer and/or Owner will decide all questions regarding (a) the interpretation of the drawings and specifications, (b) the acceptable fulfillment of the contract on the part of the Contractor and (c) the matters of compensation.

C1.4 Site Clearing

1. Clearing and grubbing shall consist of the removal from building areas to be graded of all existing structures, pavement, utilities, and vegetation.

2. Organic and inorganic materials resulting from the clearing and grubbing operations shall be hauled away from the areas to be graded.

C1.5 Excavations

1. Based on observations made during our field explorations, the surficial soils can be excavated with conventional earthwork equipment.

C1.6 Preparation of Fill Areas

1. All organic material, organic soils, incompetent alluvium, undocumented fill soils and debris should be removed from the proposed building areas.

2. In order to provide uniform support for the new building, the minimum depth of over-excavation should be four (4) feet below the existing grade, or 18 inches below proposed foundations whichever is deeper. Deeper over-excavation will be needed if soft, yielding soils are exposed on the excavation bottom. The actual depth of removal should be determined based on observations made during grading. Over-excavation should extend a least three (3) feet beyond the limits of footings, or equal distance of over-excavation depth, whichever is greater, or as limited by the existing structures. Excavation activities should not disturb existing utilities, buildings, and remaining structures. Existing utilities should be removed and adequately capped at the project boundary line, or salvaged/rerouted as designed for sidewalks and flatwork area, at least the upper

24 inches of existing soils should be scarified and recompacted to at least 90 percent of compaction. Deeper over-excavation will be needed if soft, yielding soils are exposed on the excavation bottom. The excavation should be extended to at least 12 inches beyond the driveway and flatwork limit where space is permitted.

3. The subgrade in all areas to receive fill shall be scarified to a minimum depth of six inches, the soil moisture adjusted within three (3) percent above optimum, and then compacted to at least 90 percent of the laboratory maximum dry density as determined by ASTM Standard D1557 test method.

4. Compacted fill may be placed on native soils that have been properly scarified and recompacted as discussed above.

5. All areas to receive compacted fill will be observed and approved by the Geotechnical Engineer before the placement of fill.

C1.7 Placement and Compaction of Fill

1. Compacted fill placed for the support of footings, slabs-on-grade, exterior concrete flatwork, and driveways will be considered structural fill. Structural fill may consist of approved on-site soils or imported fill that meets the criteria indicated below.

2. Fill consisting of selected on-site earth materials or imported soils approved by the Geotechnical Engineer shall be placed in layers on approved earth materials. Soils used as compacted structural fill shall have the following characteristics:

   a. All fill soil particles shall not exceed three (3) inches in nominal size, and shall be free of organic matter and miscellaneous inorganic debris and inert rubble.

   b. Imported fill materials shall have an Expansion Index (EI) less than 20. All imported fill should be compacted to at least 90 percent of the laboratory maximum dry density (ASTM Standard D1557) at about to three percent above optimum moisture.

3. Fill soils shall be evenly spread in maximum 8-inch lifts, watered or dried as necessary, mixed and compacted to at least the density specified below. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Engineer.

4. All fill placed at the site shall be compacted to at least 90 percent of the laboratory maximum dry density as determined by ASTM Standard D1557 test method. The on-site soils shall be moisture conditioned at approximate three (3) percent above the optimum moisture content.

5. Representative samples of materials being used, as compacted fill will be analyzed in the laboratory by the Geotechnical Engineer to obtain information on their physical properties. Maximum laboratory density of each soil type used in the compacted fill will be determined by the ASTM Standard D1557 compaction method.

6. Fill materials shall not be placed, spread or compacted during unfavorable weather conditions. When site grading is interrupted by heavy rain, filling operations shall not resume until the Geotechnical Engineer approves the moisture and density conditions of the previously placed fill.

7. It shall be the Grading Contractor's obligation to take all measures deemed necessary during grading to provide erosion control devices in order to protect slope areas and adjacent properties from storm damage and flood hazard originating on this project. It shall be the contractor's responsibility to maintain slopes in their as-graded form until all slopes are in satisfactory compliance with job specifications, all berms have been properly constructed, and all associated drainage devices meet the requirements of the Civil Engineer.

C1.8 Trench Backfill

The following specifications are recommended to provide a basis for quality control during the placement of trench backfill.

1. Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials at the time of backfill placement.

2. Trench backfill shall be compacted to a minimum relative compaction of 90 percent as per ASTM Standard D1557 test method.

3. Rocks larger than one inch should not be placed within 12 inches of the top of the pipeline or within the upper 12 inches of pavement or structure subgrade. No more than 30 percent of the backfill volume shall be larger than 3/4-inch in largest dimension. Rocks shall be well mixed with finer soil.

4. The pipe design engineer should select bedding material for the pipe. Bedding materials generally should have a Sand Equivalent (SE) greater than or equal to 30, as determined by the ASTM Standard D2419 test method.

5. Trench backfill shall be compacted by mechanical methods, such as sheepsfoot, vibrating or pneumatic rollers, or mechanical tampers, to achieve the density specified herein. The backfill materials shall be brought to between optimum and three percent above optimum, then placed in horizontal layers. The thickness of uncompacted layers should not exceed eight inches. Each layer shall be evenly

spread, moistened or dried as necessary, and then tamped or rolled until the specified density has been achieved.

6. The contractor shall select the equipment and processes to be used to achieve the specified density without damage to adjacent ground and completed work.

7. The field density of the compacted soil shall be measured by the ASTM Standard D1556 or ASTM Standard D2922 test methods or equivalent.

8. Observation and field tests should be performed by Converse during construction to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compactive effort shall be made with adjustment of the moisture content as necessary, until the specified compaction is obtained.

9. It should be the responsibility of the Contractor to maintain safe conditions during cut and/or fill operations.

10. Trench backfill shall not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the project's geotechnical consultant indicate that the moisture content and density of the fill are as previously specified.

C1.9 Observation and Testing

1. During the progress of grading, the Geotechnical Engineer will provide observation of the fill placement operations.

2. Field density tests will be made during grading to provide an opinion on the degree of compaction being obtained by the contractor. Where compaction of less than specified herein is indicated, additional compactive effort with adjustment of the moisture content shall be made as necessary, until the required degree of compaction is obtained

3. A sufficient number of field density tests will be performed to provide an opinion to the degree of compaction achieved. In general, density tests will be performed on each one-foot lift of fill, but not less than one for each 500 cubic yards of fill placed.

Geotechnical Engineering,
Environmental & Groundwater Science,
Inspection and Testing Services

222 East Huntington Drive, Suite 211
Monrovia, California 91016-3500

Telephone: (626) 930-1200
Facsimile: (626) 930-1212

Converse Consultants

Transmittal

Date June 3, 2015

Project
Proposed Radio Tower and Related Improvements
Mt. San Antonio College
Walnut, California
Converse Project No. 15-31-101-01

To
Ms. Caryn Cowin
Construction Project Manager
Mt. San Antonio College
Facilities Planning & Management
1100 North Grand Avenue, Building 47
Walnut, California 91789

We are sending you the following

- ☒ Regular Mail
- ☐ Express Mail
- ☐ Messenger
- ☐ FedEx
- ☐ CA Overnight
- ☐ Client Pickup
- ☐ Converse Deliver
- ☐ Overnight Express

Quantity	Description
3	Geotechnical Study Report

Remarks

From

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
Vice President / Principal Engineer

/jjl

APPENDIX D

NOISE ANALYSIS

Construction Generated Noise

Building Type		**Distance (ft)**
Construction Noise at 50 Feet (dBA Leq)		50
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	84	
Excavation	79	
Foundation Construction	78	
Building Construction	75	
Finishing and Site Cleanup	75	

Residence to the South		
Maximum Construction Noise (dBA Leq)		1,250
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	56	
Excavation (Site Preparation)	51	
Foundation Construction	50	
Building Construction	47	
Finishing and Site Cleanup	47	
Average Construction Noise (dBA Leq)		1,250
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	56	
Excavation (Site Preparation)	51	
Foundation Construction	50	
Building Construction	47	
Finishing and Site Cleanup	47	

Residence to the West		
Maximum Construction Noise (dBA Leq)		2,370
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	50	
Excavation (Site Preparation)	45	
Foundation Construction	44	
Building Construction	41	
Paving	41	
Average Construction Noise (dBA Leq)		2,370
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	50	
Excavation (Site Preparation)	45	
Foundation Construction	44	
Building Construction	41	
Paving	41	

Residence to the North		
Maximum Construction Noise (dBA Leq)		3,060
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	48	
Excavation (Site Preparation)	43	
Foundation Construction	42	
Building Construction	39	
Finishing and Site Cleanup	39	
Average Construction Noise (dBA Leq)		3,060
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	48	
Excavation (Site Preparation)	43	
Foundation Construction	42	
Building Construction	39	
Finishing and Site Cleanup	39	

Residence to the East		
Maximum Construction Noise (dBA Leq)		6,020
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	42	
Excavation (Site Preparation)	37	
Foundation Construction	36	
Building Construction	33	
Finishing and Site Cleanup	33	
Average Construction Noise (dBA Leq)		6,020
Construction Phase	**Minimum Required Equipment in Use**[1]	
Ground Clearing/Demolition	42	
Excavation (Site Preparation)	37	
Foundation Construction	36	
Building Construction	33	
Finishing and Site Cleanup	33	

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the USEPA, December 31, 1971. Based on analysis for Office Building, Hotel, Hospital, School, and Public Works.

Construction Generated Vibration

Residence to the South		Closest Distance (feet):	1,250
	Approximate RMS a 66	Approximate RMS 73.000	
Equipment	inch/second	inch/second	
Large bulldozer	0.089	0.000	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.000	
Loaded trucks	0.076	0.000	
	Criteria	0.250	1700
Residence to the West		Closest Distance (feet):	2,370
	Approximate RMS a Velocity at 25 ft,	Approximate RMS Velocity Level,	
Equipment	inch/second	inch/second	
Large bulldozer	0.089	0.000	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.000	
Loaded trucks	0.076	0.000	
	Criteria	0.250	
Residence to the North		Closest Distance (feet):	3,060
	Approximate RMS a Velocity at 25 ft,	Approximate RMS Velocity Level,	
Equipment	inch/second	inch/second	
Large bulldozer	0.089	0.000	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.000	
Loaded trucks	0.076	0.000	
	Criteria	0.250	
Residence to the East		Closest Distance (feet):	6,020
	Approximate RMS a Velocity at 25 ft,	Approximate RMS Velocity Level,	
Equipment	inch/second	inch/second	
Large bulldozer	0.089	0.000	
Small bulldozer	0.003	0.000	
Jackhammer	0.035	0.000	
Loaded trucks	0.076	0.000	
	Criteria	0.250	

Based on distance to nearest structure

[1.] Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* (2006).

APPENDIX E

AB 52 CORRESPONDENCE

MT. SAC
Mt. San Antonio College

1100 North Grand Avenue
Walnut, CA 91789-1399
909.274.7500 • www.mtsac.edu

January 26, 2022

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians-Kizh Nation
PO BOX 393
Covina, CA 91723

Subject: Assembly Bill (AB) 52 (Public Resources Code §21080.3.1): Mt. San Antonio College Radio and Communications Tower Replacement Project, City of Walnut, Los Angeles County, California

Dear Mr. Salas:

Mt. San Antonio College (Mt. SAC) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed Mt. San Antonio College Radio and Communications Replacement Project ("Project"). The Project site is located west of a hilltop service road within the southeastern portion of the campus of Mt. San Antonio College in the City of Walnut, Los Angeles County, California. The Project proposes to construct a new self-supporting 100-foot-high communication tower and related improvements, including outdoor equipment and a chain-link fence. The proposed communications tower would replace the existing 50-foot-high tower, at a location slightly to the southeast of the existing tower on Reservoir Hill.

AB 52 requires lead agencies to consult with California Native American tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND). To that end, Mt. SAC is notifying you of this Project. AB 52 allows tribes 30 days after receiving notification to request consultation.

Your participation in this local planning process is important. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the Project site, and wish to consult with Mt. SAC regarding these resources or mitigation measures to reduce the impacts of the Project on them, please direct your email to jgaston1@mtsac.edu or any correspondence on this matter to:

John Gaston
Special Projects Director
Facilities Planning & Management
Mt. San Antonio College
1100 N. Grand Ave
Walnut, CA 91789

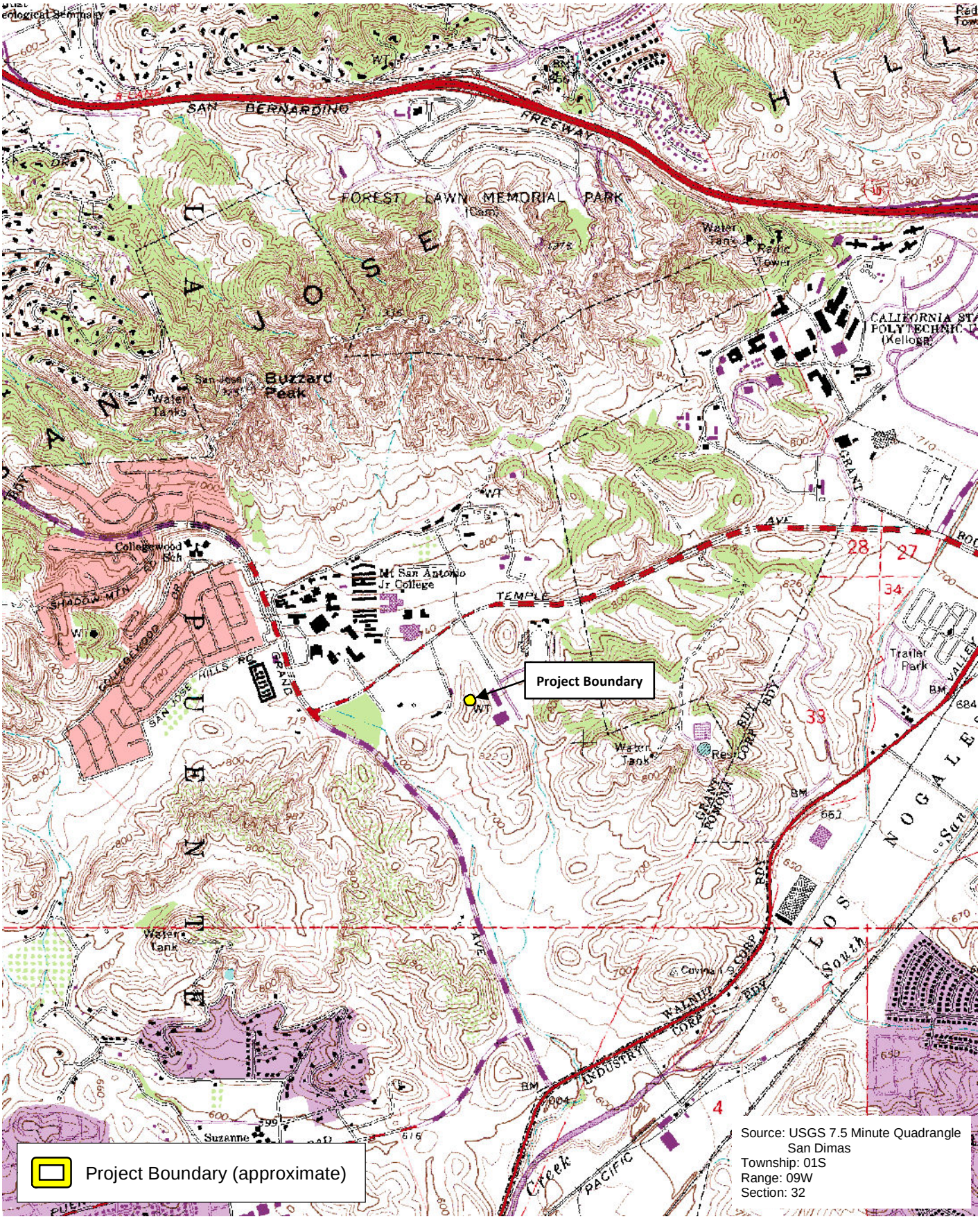
Mt. SAC would welcome a response at your earliest possible convenience, but no later than 30 days after receiving this letter. Should we not receive a response within 30 days, we will presume that you have declined consultation under AB 52. Please do not hesitate to let us know if you have any questions or would like to discuss this proposed Project. I can be reached by phone at (909) 274-5130.

Thank you very much for your assistance.

Sincerely,

John Gaston
Special Projects Director

Attachment – Exhibit 1, AB 52 Consultation Map



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Assembly Bill 52 Consultation Map

Exhibit 1

Radio and Communications Tower Replacement Project

N W E S

2,000 1,000 0 2,000 Feet

PSOMAS

(Rev: 01/25/2022 JVR) R:\Projects\MTS\3MTS010675\graphics\Cultural\ex_Consultation_Map.pdf