City of Banning

Community Development Department

NOTICE OF AVAILABILITY/NOTICE OF INTENT
MITIGATED NEGATIVE DECLARATION
Project Title: Ivy Substation

NOTICE IS HEREBY GIVEN that the City of Banning (City), as Lead Agency under the California Environmental Quality Act (CEQA), has prepared a Notice of Availability (NOA) and Notice of Intent (NOI) to adopt a Mitigated Negative Declaration (MND) for the proposed Ivy Substation ("Project"). The MND has been prepared pursuant to CEQA and the CEQA Guidelines. Copies of available materials may be reviewed or obtained from the City's office at the address cited below.

Project Location: The 1.5-acre Project will be located on approximately 4.35 gross acres at 1581 Charles Street (APN 543-090-008), Banning, California, in Riverside County, south of the Interstate 10 freeway.

Project Description: The City of Banning Electric Utility ("Banning Electric") proposes the construction and operation of a step down distribution transformation electric substation to replace the existing Airport Substation, located approximately 0.20 miles east of the Project site along East Westward Avenue. Once the Project has been commissioned and operational, the Airport Substation will be decommissioned within twelve months.

Environmental Issues: Environmental issues addressed in the MND include: aesthetics; agricultural 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.

Environmental Effects: The Initial Study Checklist determined that the proposed Project would result in potentially significant effects, but the Project Applicant will incorporate mitigation measures that would avoid or mitigate effects to a point where clearly no significant environmental impacts on the environment will occur. Mitigation has been included to address Biological and Paleontological Resources.

Public Review Period: The MND will be available for a 20-day public review period from **June 19, 2020 to July 8, 2020.**

Written comments on this MND should be addressed to:
City of Banning
Community Development Department
99 E. Ramsey Street, Banning, CA 92220
Attn: Adam Rush, Community Development Director

A copy of the Public Review of the Mitigated Negative Declaration is available at the above address as well as at the City Community Development Department's website at http://www.banningca.gov/DocumentCenterii.aspx?FID=19.

All comments must be received in writing at the address below no later than 5 p.m. on July 8, 2020. Comments received and issues and concerns raised will be evaluated to determine if the mitigation has adequately addressed the concerns. All comments received will be included as part of the record.

BY ORDER OF THE COMMUNITY DEVELOPMENT DIRECTOR OF THE CITY OF BANNING, CALIFORNIA.

Adam B. Rush
Community Development Director

Dated: June 16, 2020
Date Published: June 19, 2020

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR

City of Banning Electric Utility Ivy Substation Project

Prepared for:

City of Banning
99 E. Ramsey Street
Banning, CA 92220
Contact: Adam Rush, Community Development Director
(951) 922-3131

Prepared by:

Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506
Contact: Stephanie Standerfer, Vice President
(951) 686-1070

June 2020

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

ACRONYMS LIST

Acronym	Definition
AB52	Assembly Bill 52
ADA	American Disabilities Act
ALUC	Airport Land Use Commission
AQMP	Air Quality Management Plan
APN	Assessor Parcel Number
BMPs	Best Management Practices
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of Banning
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
dBA	A-Weighted Decibels
EIC	Eastern Information Center
EIR	Environmental Impact Report
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping Management Program
GHG	Greenhouse Gas
GP	City of Banning Comprehensive General Plan and Zoning Ordinance
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
IS/MND	Initial Study Mitigated Negative Declaration
JPR	Joint Project Review
LID	Low Impact Design
LST	Localized Significance Threshold
MRZ	Mineral Resources Zone
MS4	Municipal Separate Storm Water Sewer System
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
$MTCO_2e$	Metric Tons Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
NEPSSA	Narrow Endemic Plant Species Survey Area
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
PM-2.5	Particulate Matter Less Than 2.5 Microns in Diameter
PM-10	Particulate Matter Less Than 10 Microns in Diameter
RCA	Regional Conservation Authority
RCTC	Riverside County Transportation Commission

RTA	Riverside Transit Agency
RWQCB	Regional Water Quality Control Board
SF	Square Feet
SCAQMD	South Coast Air Quality Management District
SLF	Sacred Lands File
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	US Army Corps of Engineers
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WQMP	Water Quality Management Plan

ENVIRONMENTAL CHECKLIST FORM

1. **Project title:**
   Ivy Electric Substation (Project)

2. **Lead agency name and address:**
   City of Banning
   99 E. Ramsey Street
   Banning, CA 92220
   (951) 922-3131

3. **Contact person email address and phone number**:
   Adam Rush
   Community Development Director
   arush@banningca.gov(951) 922-3131

4. **Project location:**
   The Project includes the Ivy Electric Substation (APN 543-090-008) and the Airport Substation located at 1973 E Westward Avenue (APN 532-130-013), Banning, California, in Riverside County, south of the Interstate 10 freeway, as shown in **Figure 1 – Vicinity Map, Figure 2 – Aerial Map** and **Figure 3 – USGS Topographic Map.**

5. **Project sponsor's name and address:**
   City of Banning
   99 E. Ramsey Street
   Banning, CA 92220
   (951) 922-3131

6. **General plan designation:**
   The proposed Project's use is a permitted use consistent with the City of Banning General Plan (GP) land use designation of Industrial (I). See **Figure 4 – General Plan Land Use and Zoning Designations**.

7. **Zoning:**
   The Project's zoning is the same as the City of Banning General Plan land use designation of Industrial (I). See **Figure 4 – General Plan Land Use and Zoning Designations**.

8. **Project Description:**
   Background
   The Ivy Electric Substation and the Airport Substation ("Project" or "proposed Project") are part of the City of Banning's ("the City") electric infrastructure improvement projects recommended in the City's 2018 *Long Term Load Forecast* which considers planned new development within the City. These recommendations are part of the City's Ten-Year Electric System Master Plan for 2004 – 2014. The City of Banning Electric Utility ("Banning Electric") proposes the construction and operation of a step-down distribution transformation electric substation to replace the existing Airport Substation, located approximately 0.20 mile east of the Ivy Electric Substation site along East Westward Avenue. Once the Ivy Electric Substation has been commissioned and operational, the Airport Substation will be decommissioned by the City within six months to a year (See **Figure 2**). The decommissioning of

the Airport Substation is part of the proposed Project. The Airport Substation footprint is approximately 0.2-acres in size and will include the removal of existing equipment and soil sampling. The City will retain the Airport Substation property.

Project Location

The Ivy Electric Substation will be located on approximately 4.35 gross acres on the southwest corner of East Westward Avenue and South Hathaway Street (APN 543-090-008) and the Airport Substation is located at 1973 East Westward Avenue (APN 532-130-013), Banning, California, in Riverside County, south of the Interstate 10 freeway as shown in **Figure 1 – Vicinity Map, Figure 2 – Aerial Map** and **Figure 3 – USGS Topographic Map**. Specifically, the Ivy Electric Substation will be located on the northern portion of the 4.35-acre site in the southwest intersection of East Westward Avenue and South Hathaway Street, to ensure compatibility and integration with the surrounding industrial uses to the west, north and east, and away from the residential uses to the south, past Charles Street. The Ivy Electric Substation will not exceed 1.5-acres of the 4.35-acre site. The remainder of the Ivy Electric Substation site will be left undeveloped and undisturbed. The proposed Ivy Electric Substation's use and the Airport Substation's current use are permitted uses consistent with the City's GP and Zoning land use designation of Industrial (I). No General Plan Amendment, Specific Plan Amendment, or Zone Change is required. The proposed Project is a City-owned and operated facility and will not require the City Council or the Planning Commission's approval.

Ivy Electric Substation

The Ivy Electric Substation is a 34.5 kiloVolt (kV) to 12.47kV step-down distribution transformation station. The station will support a 34.5kV entrance with four (4) underground 12.47 kV "get-a-ways" rising to an interconnection with the existing overhead lines located adjacent to the westerly right-of-way (ROW) of Hathaway Street. The total substation capacity will accommodate 40 megawatts (MW); initially the Ivy Electric Substation will install 20 MW and may add another 20 MW. Increasing the capacity to 40 MW is an equipment upgrade and does not propose additional construction. The Ivy Electric Substation components include an approximate 640 square foot (SF) metal-clad Switchgear control building, two power transformers, and power circuit breakers with an attached bus structure that would not exceed 40-feet (ft) in height. There will be a perimeter block wall ranging from 8-10 ft in height, security cameras, and nighttime lighting installed. The Ivy Electric Substation will have a foundation concrete pad for the building, two concrete pads for the power transformers, and two concrete pads for the circuit breakers. Type II mineral oil-filled transformers will be used. Each transformer will have an oil spill containment apron around it. The remaining Ivy Electric Substation site will be covered by ¾ rock calcified earth, and asphalt for the two proposed driveways. Excavation for the construction of the foundation will not exceed 10 ft in depth.

The Ivy Electric Substation proposes curb, gutter, and sidewalk improvements along the Ivy Electric Substation's frontage on the southerly ROW of East Westward Avenue and the westerly ROW of South Hathaway Street. The existing powerline poles on East Westward Avenue and on South Hathaway Street will be relocated to within the ROW to accommodate improvements. The existing fire hydrant on East Westward Avenue, adjacent to the Ivy Electric Substation site, will be relocated within the vicinity of the East Westward Avenue and South Hathaway intersection.

Ivy Electric Substation Construction and Operation

Construction is expected not to exceed nine months. During the construction period, construction materials will be stored at the City's corporate yard, located at 176 East Lincoln Street, Banning,

approximately 1.2 miles from the Ivy Electric Substation site. Construction of the proposed Ivy Electric Substation would involve mass grading of the site and will balance onsite.

During Ivy Electric Substation operations, it is anticipated that one to two maintenance vehicles per day would inspect the substation. Maintenance vehicles would visit the Ivy Electric Substation site during Banning Electric's normal business hours. The Ivy Electric Substation would have two vehicular access entrances – one entrance from East Westward Avenue and another entrance from Hathaway Street.

Airport Substation
The planned decommissioning of the existing Airport Substation will occur approximately six months to one year after the Ivy Electric Substation is operational, as determined by the City. The process of decommissioning would include above- and below-ground equipment removal and the taking and testing of soil samples to determine remediation steps, if necessary. Following any necessary remediation, the former Airport Substation site would be used by the City for possible storage of maintenance materials.

9. Surrounding land uses and setting:
The adjacent area to the north and west of the of the Ivy Electric Substation site is primarily vacant and undeveloped; the adjacent area to the south of the Ivy Electric Substation site is occupied by residential units; the adjacent area to the west of the Ivy Electric Substation site is industrial with one non-conforming residential unit.

The adjacent areas to the north, east, and west of the Airport Substation site contain industrial and storage uses, as well as vacant land; the adjacent area to the south of the Airport Substation site contains industrial and scattered residential uses, as well as vacant land.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):
- N/A

11. Tribal Consultation:

To help determine whether a project may have an impact on tribal cultural resources, Public Resource Code section 21080.3.1 requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. The City, as lead agency, is also required to coordinate with Native American Tribes through the Assembly Bill 52 (AB52) consultation process and the Senate Bill 18 (SB18) process where a GP Amendment is being considered (not applicable in this case).

AB52 went into effect in July of 2015. Section 1 of AB52 states the legislature's intent as follows: In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent of the Legislature, in enacting this act, to accomplish all of the following:

- Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
- Establish a new category of resources in the California Environmental Quality Act called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
- Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
- Recognize that California Native American tribes may have expertise regarding their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because the California Environmental Quality Act calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.
- In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the California Environmental Quality Act environmental review process, so that tribal cultural resources can be Discussion Draft Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA.

As a result of AB52, the following requirements were put into place: 1) prescribed notification and response timelines; 2) consultation on alternatives, resource identification, significance determinations, impact evaluation, and mitigation measures; and 3) documentation of all consultation efforts to support CEQA findings. Under AB52, if a lead agency determines that a project may cause a substantial adverse change to a Tribal Cultural Resource, the lead agency must consider measures to mitigate that impact.

On November 14, 2019, the City of Banning notified local tribal governments in writing of the proposed Project pursuant to AB52 pertaining to tribal cultural resources consultation. The consultation process is discussed in Section XVIII of this Initial Study.

Figure 1 – Vicinity Map

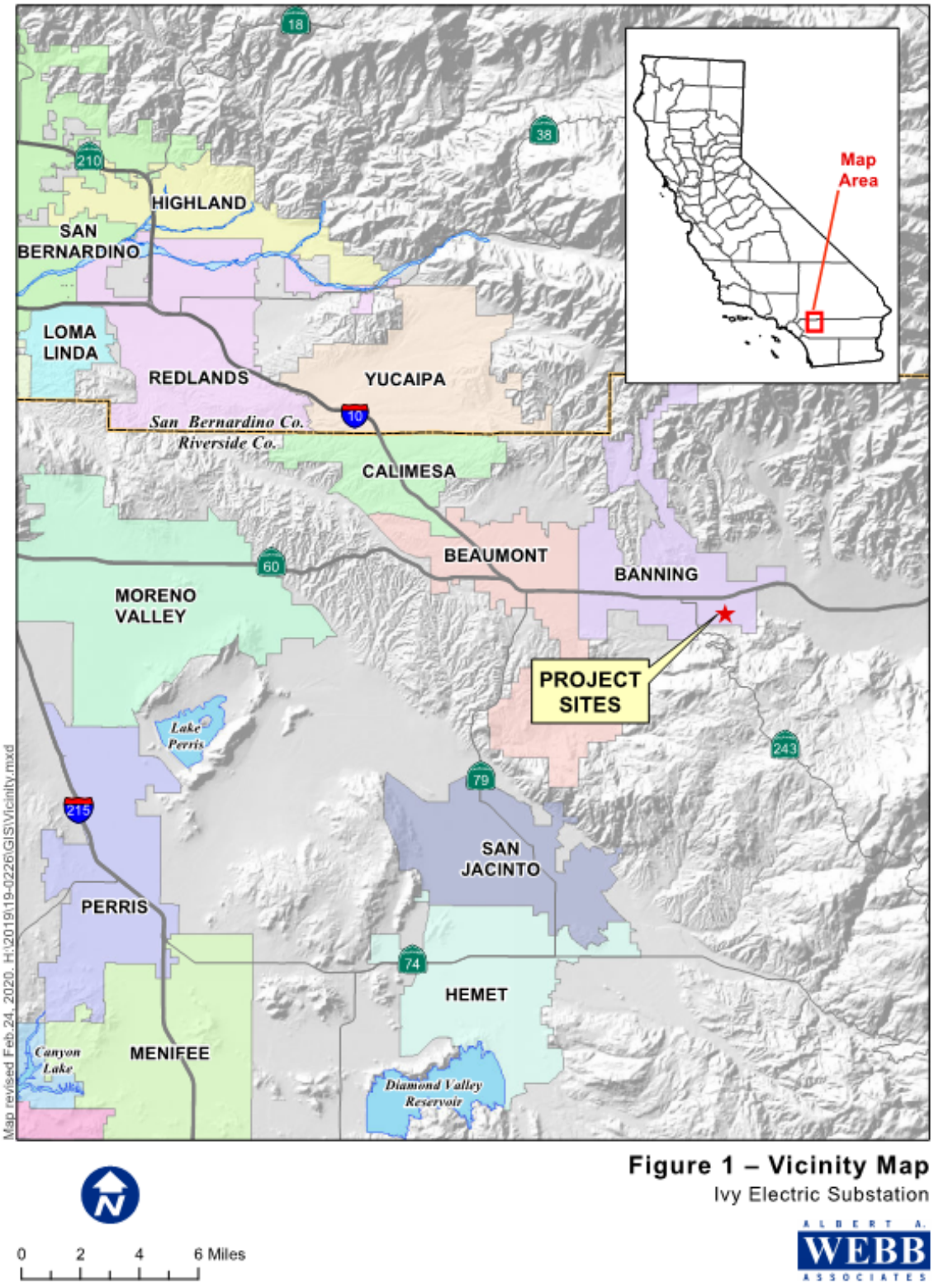


Figure 2 – Aerial Map

Figure 3 – USGS Topographic Map

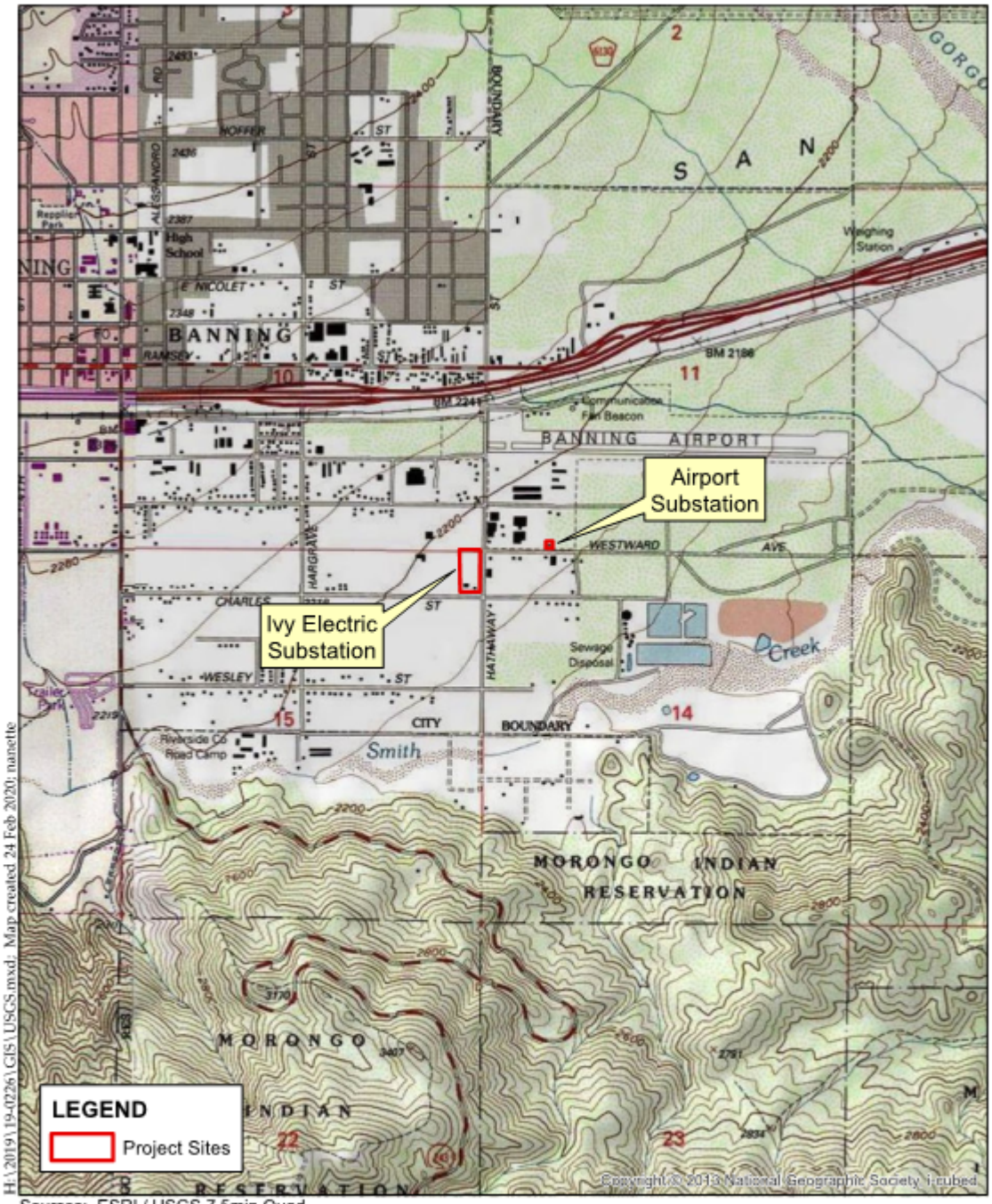


Figure 4 – General Plan Land Use and Zoning Designations

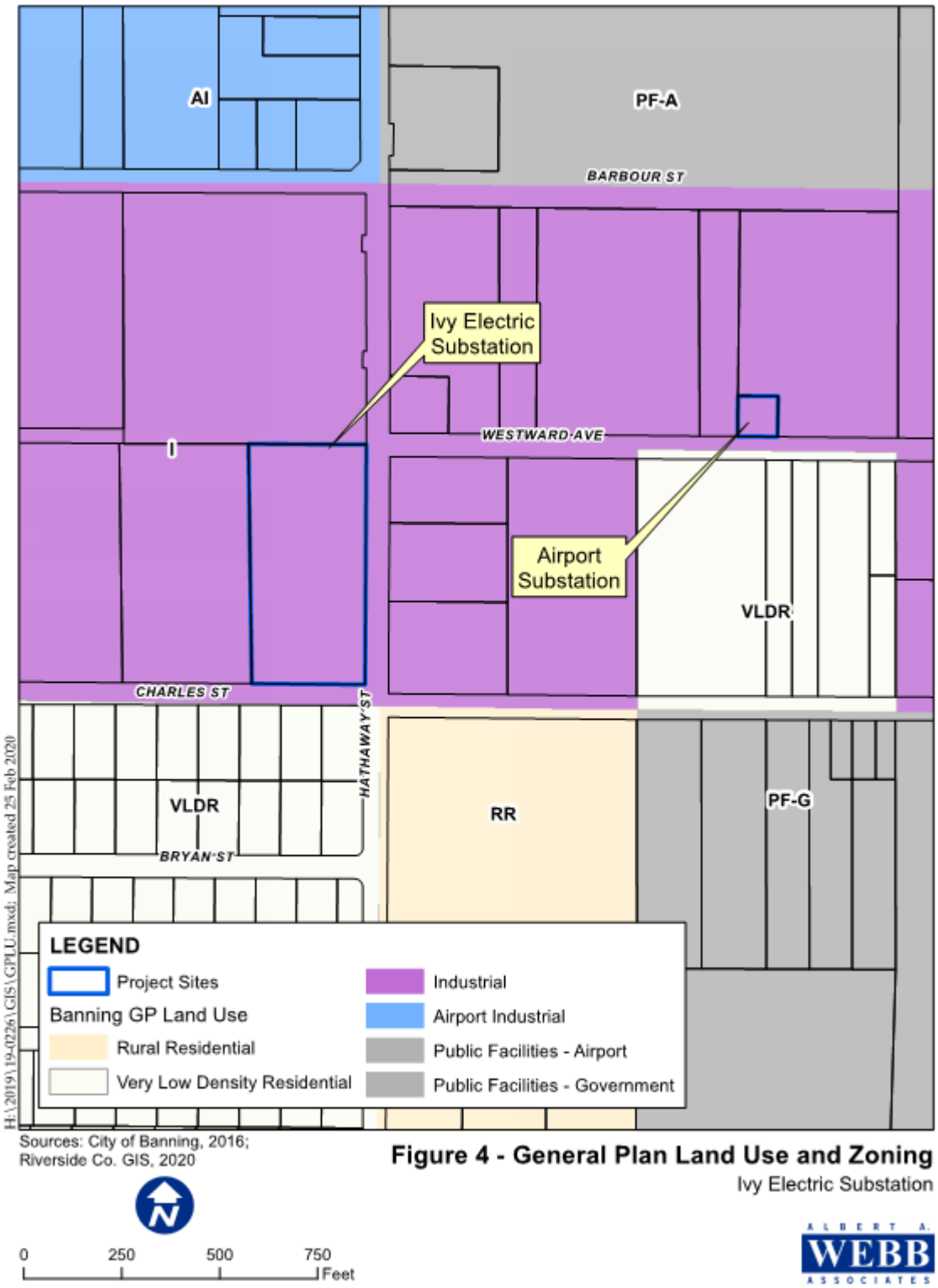


Figure 4 - General Plan Land Use and Zoning
Ivy Electric Substation

Figure 5 – Site Plan

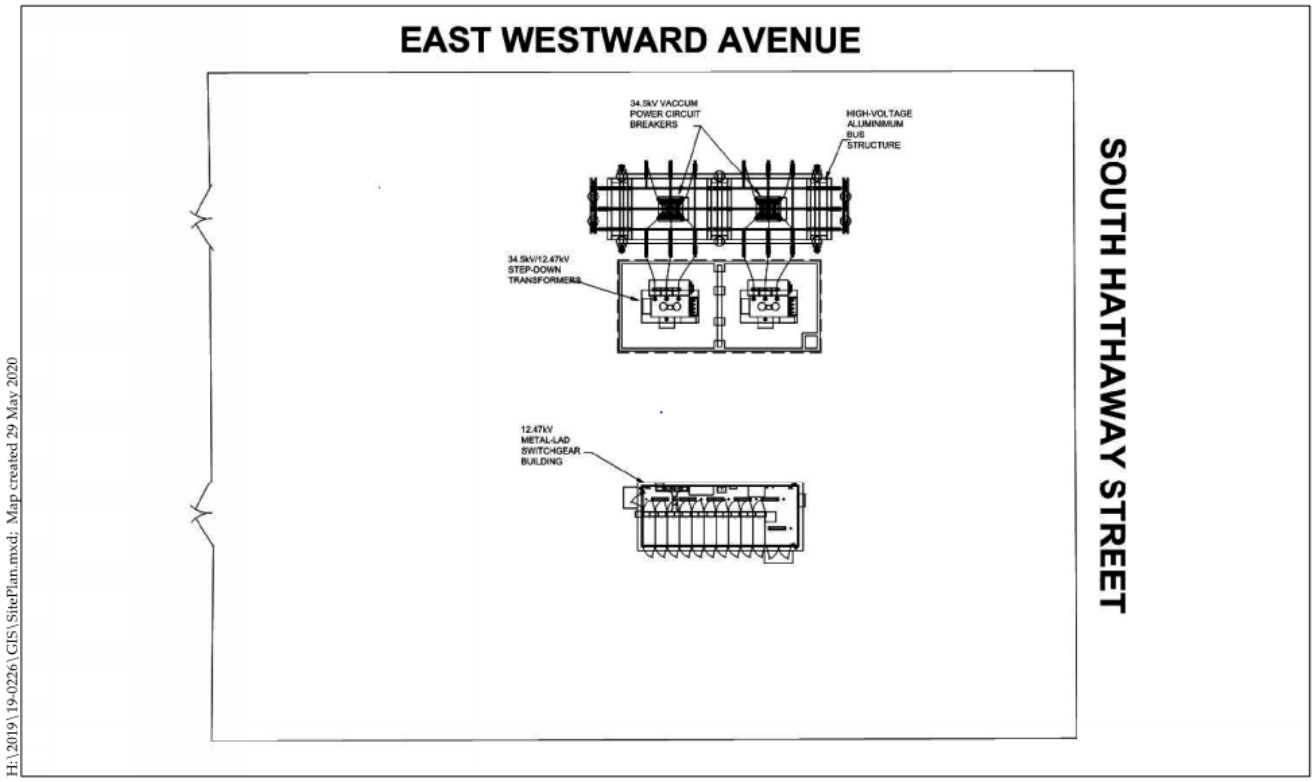


Figure 5 - Ivy Substation Site Plan
Ivy Electric Substation

Not to Scale

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 and 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:

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

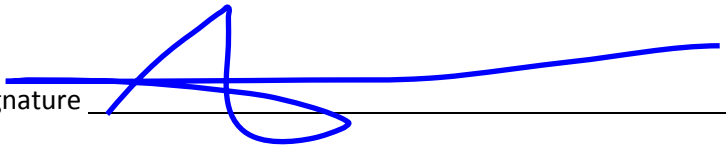
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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.

Signature  Date 06-15-2020

Adam Rush,
Printed Name

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. 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 involved *(e.g., the project falls outside 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)*.

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "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.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063I(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 above 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.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts *(e.g., general plans, zoning ordinances)*. Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

    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 CHECKLIST

Environmental Factors:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*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?	☐	☐	☒	☐

Aesthetics Discussion:

a) Have a substantial adverse effect on a scenic vista?

The City defines visual resources as those physical features that enhance the City's aesthetic and scenic character. The majority of the City is located within the narrow east-west trending valley of the San Gorgonio Pass, which is dominated by the San Bernardino Mountains along the northern end of the valley and the San Jacinto Mountains along the southern end of the valley (GP Draft Environmental Impact Report (DEIR), p. III-189). These mountain ranges present impressive viewsheds and dramatic scenery, including frequently snow-covered mountain peaks and ranges with rugged slopes. The GP Environmental Impact Report (EIR) determined that the GP buildout will generally have a limited impact on the visual resources of the City. All development facilitated by the GP will be characterized by low profile structures which will be designed and constructed in a manner compatible to surrounding built and natural environments (GP EIR, p. III-190).

The Ivy Electric Substation, a public utility facility-which is an allowable use, and the decommissioning of the Airport Substation, also a public utility facility-which is an allowable use, are located within the Industrial GP land use and zoning designations (BMC, 17.12.020). As such, the Project is compatible with adjacent uses. The tallest component of the Ivy Electric Substation, the power circuit breakers, would not exceed 40 feet in height, which is the typical height of nearby existing electricity poles. Views to the San Bernardino Mountains and the San Jacinto Mountains would still be visible from nearby areas. Further, as noted in the Project description above, there will be a perimeter block wall constructed at the Ivy Electric Substation site ranging from 8-10 ft in height to screen the substation. The decommissioning of the Airport Substation entails the removal of the substation itself; afterwards, the Airport Substation site would be utilized to store maintenance items owned by the City. The proposed Project would comply with applicable GP EIR Visual Resources mitigation measures MM A and MM C through MM F, which require projects to: comply with community design standards, effectively screened utility infrastructures, limit outdoor lighting to preserve City's visual resources, and limit signage to provide functional identification. As such, the implementation of the Project would not have a substantial adverse effect on a scenic vista. Therefore, impacts will be **less than significant.**

Source: GP EIR; BMC

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

A portion of State Route (SR) 243 is designated as a state scenic highway where it occurs in the City's southern Sphere of Influence where it becomes the Esperanza Firefighters Memorial Highway and extends to State Route 74 (GP EIR, p. III-21; CAH). The SR 243 increases elevation as it bisects the southern hills and travels in the north west portion of the San Rosa and San Jacinto Mountains National Monument. Development, pursuant to the City's GP, would have a limited impact to viewsheds along this corridor (GP EIR, p. III-190).

The proposed Project site is located approximately 0.70 miles to the north and several hundred feet below the elevation of the SR 243 state scenic highway designation. However, the Project is not within the SR 243 scenic highway corridor. Further, the proposed Ivy Electric Substation is located on the northern portion of the site and would not require tree removal. Similarly, the decommissioning of the Airport Substation would not require tree removal. The Project site does not contain outcroppings or buildings. As such, the implementation of the Project would not damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Therefore, impacts will be **less than significant.**

Source: GP DEIR; CAH

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?

To be conservative, impacts to both urbanized and non-urbanized areas have been analyzed. The Project proposes a new substation, an allowable use, and the decommissioning of an existing substation within the City's industrial GP and zoning designation. The Ivy Electric Substation's tallest components would be the power circuit breakers, which would be approximately the same height as the existing nearby electricity poles, which are approximately 40 feet. The decommissioning of the Airport Substation would result in the removal of the substation itself and a vacant lot would remain which would not degrade the character or quality of the site and its surroundings. Further, the proposed Project would comply with applicable GP EIR Visual Resources mitigation measures MM A and MM C through MM F, which limit impacts to City's visual resources. As such, implementation of the Project would not introduce a new use to the vicinity, conflict with existing zoning, violate any regulations governing scenic quality, and will not substantially degrade public views, the quality of the site or its surroundings. Therefore, impacts will be **less than significant.**

Source: GP EIR; Project Description

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

The Ivy Electric Substation would create a new source of light, as security lighting will be installed. However, the Ivy Electric Substation would direct lighting downward and away from any adjacent uses as directed by City's municipal code (BMC, 17.24.100). Glare is typically associated with installation of windows and other reflective surfaces; however, the Ivy Electric Substation does not propose the installation of windows or other reflective surfaces. The decommissioning of the Airport Substation would result in the removal of the substation itself and a vacant lot would remain which would not create a new source of light or glare. As such,

the implementation of the Project would not create a new source of substantial light or glare. Therefore, impacts will be **less than significant.**

Source: BMC; Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
II. Agricultural and Forestry 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?	☐	☐	☐	☒

Agricultural Resources Discussion:

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?

The proposed Project is not located within areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. According to the California Department of Conservation *Farmland Mapping and Monitoring Program* (FMMP), the Project site consists of Farmland of Local Importance, and is adjacent to Urban and Built-Up Land directly adjacent on east and south. As such, the implementation of the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, **no impacts** would occur.

Source: FMMP

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

As of 2004, there were three Williamson Act contracts in effect over approximately 3,500 acres in the City (GP, p. IV-21). These include lands located in the City limits near the Banning Bench, in the northwest portion of the planning area between Highland Springs Avenue and Highland Home Road, and in the City's southerly

sphere of influence south of Westward Avenue. (GP, p. IV-21; GP EIR, p. III-10). These lands are being phased out due to urbanization, although residential land uses that allow for agricultural and ranching activities are provided for under the GP (GP DEIR, p. III-11).

The Project is not located within a Williamson Act contract. Further, as noted in the Project Description above, the Project site is within the Industrial GP land use designation and zoning area and there are no agricultural zoning/land use designations adjacent to the Project site (see **Figure 4**). As such, the implementation of the Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Therefore, **no impacts** would occur.

Source: GP; GP DEIR

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))?

The City does not have any areas designated forest land, timberland, or timberland zoned Timberland Production. As such, the implementation of the Project would not conflict with existing forestland or timberland zoning. Therefore, **no impacts** would occur.

Source: GP

d) Result in the loss of forest land or conversion of forest land to non-forest use?

As noted in *Response 2c* above, the City does not have any areas designated as forest land. Further, the Project site is zoned Industrial. As such, the implementation of the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, **no impacts** would occur.

Source: GP

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?

As noted in *Response II.a.- II.d.* above, the City does not have any Farmland designation or forest land designation within the City's boundary. The Project site is within Industrial GP land use and zoning designations, and the surrounding areas are either industrial or residential uses. As such, the implementation of the Project would not result in the conversion of Farmland to non-agricultural use, or the conversion of forest land to a non-forest use. Therefore**, no impacts** would occur.

Source: GP

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
III. Air Quality				
Where available, the significance criteria established by the applicable air quality management district 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?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) affecting a substantial number of people?	☐	☐	☐	☒

Air Quality Discussion:

a) Conflict with or obstruct implementation of the applicable air quality plan?

The City of Banning and the San Gorgonio Pass are located in the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) prepares the Air Quality Management Plan (AQMP) for the Basin. The AQMD sets forth a comprehensive program that will lead the Basin into compliance with all federal and state air quality standards. The AQMP's control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, if a project demonstrates compliance with local land use plans and/or population projections, then the AQMP would have accounted for such uses when it was developed.

According to the City's GP and Zoning Map, the proposed Project site's GP land use and zoning designation is Industrial. The proposed use is consistent with the City's GP and Zoning Map. As such, the proposed Project will not conflict with any local land use plan. Additionally, the proposed Project does not propose any new housing or businesses and therefore will not cause a direct increase in population. Rather, the Project will accommodate planned new development within the City. Thus, the proposed Project will not conflict with or obstruct implementation of the AQMP. Therefore, **no impacts** would occur.

Source: GP; Project Description

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?

The portion of the Basin within which the proposed Project site is located is designated as a non-attainment area for ozone and PM-2.5 under both the State and federal standards and in a non-attainment area for PM-10 under State standards established by the California Air Resources Board (CARB). The SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same (SCAQMD-A). Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on SCAQMD's regulatory jurisdiction over regional air quality, it is reasonable to rely on its thresholds to determine whether there is a cumulative air quality impact.

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts will occur during site grading and Project construction. Long-term air quality impacts will occur once the Project is in operation. Operational emissions would only be from the Ivy Electric Substation operations, which is anticipated that one to two maintenance vehicles per day would visit the site, and are considered negligible; therefore, only short-term construction impacts were evaluated.

Short-term emissions were evaluated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer program. The CalEEMod modeling output (WEBB-A) is included in Appendix A. Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. The default parameters within CalEEMod were used, except as identified below, and these default values generally reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions.

The estimated construction period for the Ivy Substation is approximately one year and ten months followed by the decommissioning of the Airport Substation, as identified in **Table A – Construction Schedule**.

Table A – Construction Schedule

Construction Activity	Start Date	End Date	Total Working Days
Ivy Substation			
Grading	June 1, 2020	June 8, 2020	6 days
Substation Construction	June 9, 2020	April 12, 2021	220 days
Paving	March 30, 2021	April 12, 2021	10 days
Airport Substation			
Decommissioning	October 12, 2021	October 12, 2022	262 days

The equipment to be used for each construction activity is shown in **Table B – Construction Equipment List** and is based on CalEEMod defaults and City-provided information. Each piece of equipment is assumed to operate 8 hours per day.

Table B – Construction Equipment List

Construction Activity	Off-Road Equipment	Unit Amount
Ivy Substation		
Grading	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	1
Substation Construction	Cranes	1
	Forklifts	1
	Generator Sets	1
	Tractors/Loaders/Backhoes	2
	Welders	3
	Air Compressors	1
	Bore/Drill Rigs	1
Paving	Cement and Mortar Mixers	1
	Pavers	1
	Paving Equipment	1
	Rollers	2
	Tractor/Loader/Backhoes	1

Airport Substation		
Decommissioning	Tractors/Loaders/Backhoes	3
	Forklifts	1
	Cranes	1

- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions. For the Ivy Substation portion of the Project, ten (10) one-way vendor trips per day were added to the grading activities to account for water truck trips, concrete truck trips, and material delivery. For the Airport Substation portion of the Project, eight (8) one-way vendor trips per day were added to the grading activities to account for water truck trips and material hauling activities.
- The Project site will balance onsite; no soil import/export will be required.
- Off-site infrastructure improvements will also be required for storm water and roadway improvements. Off-site improvements along the westerly portion of Hathaway Street and may include up to half-width road improvements such as road widening, curb, gutter; off-site improvements to the southerly portion of Westward Avenue along the Project's frontage may include up to half-widths improvements such as pavement widening, curb, gutter, and sidewalk. Total off-site improvements are assumed to disturb approximately 36,000 SF, or 0.83 acres.

Maximum daily emissions from Project construction and decommissioning are summarized in **Table C** and **Table D**, below, and compared to the SCAQMD's daily regional thresholds (SCAQMD-B):

Table C – Ivy Substation Unmitigated Estimated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Grading-2020	1.84	20.84	8.80	0.02	**3.61**	**2.18**
Substation Construction-2020	3.31	26.78	23.57	0.05	1.89	1.41
Substation Construction-2021	**2.98**	**24.32**	**23.01**	**0.05**	1.71	1.23
Paving-2021	**1.09**	**8.76**	**10.38**	**0.02**	0.61	0.47
Maximum[1]	**4.07**	**33.08**	**33.39**	**0.07**	**3.61**	**2.18**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of either grading or substation construction alone in 2020, or the sum of substation construction and paving in 2021 since these activities overlap. Maximum emissions are shown in bold.

Table D – Airport Substation Unmitigated Estimated Maximum Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Decommissionsing-2021	**1.18**	**12.49**	**10.60**	**0.02**	**0.81**	**0.62**
Decommissioning-2022	1.05	11.00	10.38	0.02	0.71	0.53
Maximum[1]	**1.18**	**12.49**	**10.60**	**0.02**	**0.81**	**0.62**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of either activity. Maximum emissions are shown in bold.

As shown in the tables above, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants. No mitigation is required.

In addition to the daily regional thresholds, the SCAQMD has developed localized significance threshold (LST) methodology that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term) (SCAQMD-C). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area. The Project site is located in source receptor area 29.

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO_x, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST tables can be used as a screening tool to determine if dispersion modeling would be necessary. If project-related emissions are below the LST table emissions, no further analysis is necessary. Although the Ivy Substation disturbs approximately 2.33 acres, it is anticipated that an area of approximately 1.5 acres would be disturbed per day during construction. The Airport Substation would disturb no more than 0.23 acres. Therefore, to be conservative, the LST for the one-acre site was utilized for each of the respective Project sites.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors to the Ivy Substation construction site are the residential properties approximately 29 feet south of the Ivy Substation site, on the southwest corner of Hathaway Street and Charles Street. The closest receptor distance on the LST look-up tables is 25 meters. According to LST methodology, projects with boundaries closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, a receptor distance of 25 meters (85 feet) was used. **Table E – Ivy Substation Unmitigated LST Results for Daily Construction Emissions** identifies the worst-case on-site construction emissions.

Table E – Ivy Substation Unmitigated LST Results for Daily Construction Emissions

Pollutant	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST Threshold for 1-acre at 25 meters	**103**	**1,000**	**6**	**4**
Grading-2020	19.76	8.23	**3.45**	**2.13**
Substation Construction 2020	24.86	21.38	1.29	1.24
Substation Construction 2021	**22.57**	**21.01**	1.11	1.06
Paving 2021	**8.72**	**9.90**	0.47	0.43
Maximum[1]	**31.29**	**30.91**	**3.45**	**2.13**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: [1] Maximum emissions are the greater of either grading or substation construction alone in 2020, or the sum of substation construction and paving in 2021 since these activities overlap.

The closest sensitive receptors to the Airport Substation construction site are the residential properties approximately 82 feet south east of the Airport Substation site, along E Westward Avenue. This property is currently vacant; however, in the event it is occupied in the future this location is considered a sensitive receptor. The closest receptor distance on the LST look-up tables is 25 meters. According to LST methodology, projects with boundaries closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, a receptor distance of 25 meters (85 feet) was used. **Table F – Airport Substation Unmitigated LST Results for Daily Construction Emissions** identifies the worst-case on-site construction emissions.

Table F – Airport Substation Unmitigated LST Results for Daily Construction Emissions

Pollutant	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST Threshold for 1-acre at 25 meters	**103**	**1,000**	**6**	**4**
Decommissioning-2021	**11.69**	**9.92**	**0.62**	**0.57**
Decommissioning-2022	10.24	9.75	0.51	0.47
Maximum	**11.69**	**9.92**	**0.62**	**0.57**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: Maximum emissions are the greater of either activity.

As shown in **Table E** and **Table F**, all concentrations of pollutants would be below the SCAQMD's short-term LST. Therefore, short-term LST significant air quality impacts would be less than significant**.** No mitigation is required.

The long-term emissions from the Project, as discussed previously, are primarily in the form of mobile source emissions, with no stationary sources of emissions present. According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or on-site mobile equipment generating on-site emissions of criteria pollutants. The proposed Project does not include such uses. Thus, long-term LST analysis is not required.

Therefore, since the Project's short-term emissions do not exceed the SCAQMD established thresholds of significance, and since the Project does not include stationary sources or on-site mobile equipment generating on-site emissions, the Project will not result in a cumulatively considerable net increase in criteria pollutant emissions for which the Project region is non-attainment and thus impacts are considered **less than significant**. No mitigation measures are required.

Source: CARB; SCAQMD-A; SCAQMD-B; SCAQMD-C; WEBB-A

c) Expose sensitive receptors to substantial pollutant concentrations?

As discussed earlier, the closest sensitive receptors to the Project site are the residences located approximately 85 feet south of the Ivy Substation and the Airport Substation site. Short-term emissions will be generated in the Project area during construction of the proposed Project and have been found to be below the Localized Significance Threshold established for the Project area by SCAQMD and, thus, are less than significant (see Response III.b, above, and Appendix A). Thus, the proposed Project will not expose sensitive receptors to substantial pollutant concentrations. Therefore, impacts will be **less than significant**.

Source: WEBB-A

d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?

The proposed Project presents the potential for generation of other emissions such as odors in the form of diesel exhaust during construction in the immediate vicinity of the proposed Project site. Odors generated during construction will be short-term and will not result in a long-term odorous impact to the surrounding area. Additionally, since the Project involves operation of an electric substation there will be no long-term odors from the Project site once construction has been completed. Recognizing the short-term duration and quantity of emissions in the proposed Project area, the proposed Project will not result in other emissions such as odors that would adversely affect a substantial number of people. Therefore, no impacts would occur.

Source: WEBB-A

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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 U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

Biological Resource Discussion:

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 Wildlife or U.S. Fish and Wildlife Service?

A *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis* (Biological Report) dated December 5, 2019 was prepared for the Ivy Electric Substation by Wood Environmental and Infrastructure Solutions and is included as Appendix D of this IS (cited herein as "WOOD-A"*)*. The Biological Report consisted of an extensive literature review, compilation of existing documentation, and field reconnaissance. The Biological Report focused on documenting resources considered to be significant and /or sensitive as outlined by CEQA and the Western Riverside County MSHCP. The discussion below summarizes the Biological Report.

The results of the literature review and field reconnaissance indicate the Ivy Electric Substation site is currently undeveloped, with no existing structures, and appears to be regularly mowed/disked for weed abatement and fire control purposes. It is dominated by disturbed non-native grassland vegetation (WOOD-A, p. 1). The Ivy Electric Substation site lies within the Pass Area Plan and the San Timoteo Habitat Management Unit (HMU). However, the nearest criteria cell (#1708) is approximately 3.7 miles southwest (WOOD-A, p. 8). The

nearest Public/Quasi-Public Lands (PQP Lands) is 2.3 miles southwest of the Ivy Electric Substation site, therefore it does not lie within and/or adjacent to any PQP Lands (WOOD-A, p. 8). A habitat assessment was not required for Narrow Endemic Area Plant Species, Criteria Area Plant Species, and Sensitive Mammals Surveys or Sensitive Amphibian Surveys were not required (WOOD-A, p. 1).The Electric Ivy Substation is located within the Western Riverside Count MSHCP designated burrowing owl survey area and due to the presence of suitable habitat, required burrowing owl surveys which were conducted on March 6, 2020, April 3, 2020, April 24, 2020, and May 1, 2020. (See Appendix D-1, *Ivy Substation Project Focused Surveys for Burrowing Owl*, dated May 2020, prepared for the Ivy Electric Substation by Wood Environmental and Infrastructure Solutions (cited herein as "WOOD-B").

Vegetation

The plants compiled during the assessment consists of fourteen species, which does not reflect the total number of plant species likely to occur on the site, as the surveys were conducted in fall when many species are dormant and /or undetectable (WOOD-A, p. 8). The majority of vegetation observed on-site include non-native grasslands. Dominated non-native vegetation observed on-site include Russian thistle (*Salsola tragus*), short podded mustard (*Hirschfeldia incana*), an unknown oat species (*Avena sp.),* ripgut brome (*Bromus diandrus), and red brome (Bromus rubens).* One dominant native plant was observed on site, jimson weed *(Datura wrightii)* was scattered throughout the edges of the site (WOOD-A, pp. 8-9*).*

Plant Species

The site lies within the Narrow Endemic Plant Species Survey Area (NEPSSA) for two (2) narrow endemic plant species: Yucaipa onion (Allium marvinii) and many stemmed dudleya (Dudleya multicaulis). Both species listed below are considered absent due to lack of suitable habitat and/or soils on-site are not consistent for either plant to occur. Additionally, the nearest recorded occurrence of the Yucaipa onion is over ten miles northwest of the site; and the nearest recorded occurrence of the many stemmed dudleya is over ten miles southwest of the site.

Riparian/Riverine Areas

Site conditions observed during the site visit did not identify any riparian/riverine areas and/or vernal pool areas. No suitable habitat for least bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-billed cuckoo (*Coccyzus americanus*) or fairy shrimp species occurs within the site. Due to a lack of suitable habitat, additional focused surveys and/or mitigation measures are not required for riparian/riverine species. The riparian avian species mentioned above are commonly associated with moderate to dense riparian habitat. This habitat is not found within the site or immediate vicinity. Also, fairy shrimp habitat is characterized under the MSHCP as any area that ponds water long enough to support fairy shrimp species. The site does not contain any areas that pond water or areas that have evidence of ponding. The site contains one soil type, Gorgonio gravelly loamy fine sand (GmD). This soil allows for the rapid percolation of water (i.e. it does not hold water); and therefore, will not provide the necessary ponding required for fairy shrimp. (WOOD-A, p. 9)

Birds

The site contains suitable nesting habitat for nesting birds protected under the migratory Bird Treaty Act (MTBA) and MSHCP. On the southeast corner there is one pine tree (*Pinus sp*.), two eucalyptus trees (*Eucalyptus sp*.), and two China berry trees (*Melia azedarach*), and on the northeast corner there is one Mexican palo verde (*Parkinsonia aculeata*). These trees provide suitable nesting habitat to a variety of species covered under the MBTA such as killdeer (*Charadrius vociferous*) and horned lark (*Eremophila alpestris*). Impacts to nesting birds, both direct and indirect, can be minimized and/or eliminated by conducting work activities outside of the breeding season. (WOOD-A, p. 7) If ground disturbance and/or construction activities occur during nesting bird season (typically February 1 through August 31) a preconstruction clearance survey will be required to avoid any indirect impacts to nesting birds, as required by implementation of mitigation measure **MM BIO-1.**

Additional Surveys

The site does not lie within Criteria Area Species Survey Area (CASSA). The reconnaissance survey confirmed the site does not support any suitable soils for any of the CASSA plants and no additional focused surveys are required for criteria area plant species. (WOOD-A, p. 18) Further, the site is not within a sensitive amphibian survey area. The reconnaissance survey confirmed there is no suitable habitat (i.e. ponds, marshes, rivers, streams, and or irrigation ditches with aquatic vegetation) present for amphibian species. Therefore, no additional focused surveys are required for amphibian species.

Burrowing Owl

The site is located within the Western Riverside MSHCP burrowing owl survey area, which requires a pre-construction MSHCP protocol survey for burrowing owl. The burrowing owl is considered a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC). During the October 2019 site visit, a habitat assessment was conducted in accordance with Western Riverside County MSHCP Burrowing Owl Survey Instructions and published by the Riverside Conservation Authority. Moderate suitable quality habitat was found (low-growing, non-native grassland field with small mammal burrows, earthen berm) on the site, therefore, focused burrowing owl surveys are required to be conducted during the breeding season, which is typically in the spring and summer from March – early September depending on weather conditions.

Four BUOW focused surveys were conducted in addition to the Habitat Assessment starting on March 6, 2020, as shown in **Table G – Focused Burrowing Owl Survey Schedule.** Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. (WOOD-B, p. 5). The distances between transect centerlines were approximately 60 feet apart. (WOOD-B, p. 5). During visual surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if BUOWs utilize these features, when present. All burrows were monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present. (WOOD-B, p. 5).

Table G – Focused Burrowing Owl Survey Schedule

Survey	Date	Conditions	Results
1	March 6, 2020	Partly cloudy (10% cloud cover), winds ~ 0-3 mph	No owls on Project site.
2	April 3, 2020	Partly cloudy (55-60% cloud cover), winds ~ 0-6 mph	No owls on Project site.
3	April 24, 2020	Clear (0% cloud cover), winds ~ 2-8 mph	No owls on Project site.
4	May 1, 2020	Clear (0% cloud cover), winds ~ 2.5-8 mph	No owls on Project site.

Source: Table 1 of WOOD-B, p. 5.

The results of the BUOW focused surveys indicate that no characteristic signs of BUOWs were found on the Project site, such as white-wash, feathers, tracks, or pellets (WOOD-B p. 6).

Due to the potential for burrowing owls to occur on the site at any time in the future, and considering that construction is not scheduled to occur after Summer 2020, it is a requirement of the MSHCP that a 30-day pre-construction clearance survey be conducted immediately prior to commencement of construction activities to ensure no owls have migrated onto the site to prevent impacts to any burrowing owls. Implementation of mitigation measure **MM BIO-2** will ensure impacts to burrowing owls is less than significant.

Thus, implementation of mitigation measures **MM BIO-1** and **MM BIO-2** will mitigate any potential direct or indirect impacts to any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. Therefore, impacts will be **less than significant with mitigation.**

MM BIO-1: To avoid impacts to nesting birds, ground disturbance activities and vegetation removal shall be completed outside avian breeding season (between September 1 and January 31) to the greatest extent feasible. If ground disturbance activities (including cleaning and grubbing) cannot be avoided during the nesting season a qualified biologist shall conduct a nesting bird survey no more than one (1) week prior to any ground-disturbance or vegetation removal activities. The survey area shall consist of full coverage of the proposed Project footprint and up to a 300-foot buffer. The specific survey buffer shall be determined in the field by the project biologist and will take into account the species nesting in the area and access. If no active nests are found, no additional measures are required.

If active nests are found, the nest locations shall be mapped by the qualified biologist utilizing Global Positioning System (GPS) equipment, where feasible. The nesting bird species shall be documented and, to the degree feasible, the nesting stage (e.g., incubation of eggs, feeding of young, near fledging). The biologist shall establish a no-disturbance buffer around each active nest. The size of the buffer shall be determined by the qualified biologist based on the biology of the species present and surrounding habitat. No construction or ground-disturbance activities shall be conducted within the buffer until the biologist has determined through non-invasive methods that the nest is no longer active and has informed the construction supervisor that activities may resume.

MM BIO-2: To avoid harming burrowing owls, a qualified biologist shall conduct a burrowing owl preconstruction survey no more than 30 days prior to the initiation of construction-related activities. The survey would cover the entire Project site to ensure that burrowing owls do not occur within the grading footprint. If no occupied burrows are found, no additional measures are required. If an occupied burrow is found during the nesting season (February 1 to August 31), avoidance would be required unless it can conclusively be shown by a qualified biologist that an active nest is not present within the burrow.

Source: WOOD-A, WOOD-B

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 Wildlife or U.S. Fish and Wildlife Service?

According the Biological Report, no riparian/riverine areas or vernal pools were documented on the Project site and vegetation is primarily non-native grassland (WOOD-A, pp. 1, 9). Accordingly, no additional focused surveys and/or mitigation measures are required. Thus, the Project will not have a substantial effect on riparian habitat or other sensitive natural communities. Therefore, **no impacts** are anticipated.

Source: WOOD-A

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

According to the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual, Technical Report, three criteria must be satisfied to classify an area as a jurisdictional wetland: 1) A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); 2) Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and 3) Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology). (USACE).

Further, wetland vegetation is characterized by vegetation in which more than 50 percent of the composition of dominant plant species are obligate wetland, facultative wetland, and/or facultative species that occur in wetlands

The Project site does not have potential for riparian/riverine areas or jurisdictional water features (streams, rivers, etc.) (WOOD-A, p. 27). However, a roadside ditch which runs parallel to the existing roads (on Hathaway Street and Charles Street) show evidence of bed and bank, which may be considered jurisdictional (WOOD-A, p 27). A previous biological assessment dated December 2014, was conducted in the same area for an unrelated Riverside County Flood project. This biological assessment analyzed the same roadside ditches and determined that the ditches do not constitute jurisdictional waters. The ditches provide ephemeral flow, are not natural drainages, and do not contain wildlife value (NRA, p.29). Therefore, a jurisdictional delineation is not required to assess the impacts (if any) to drainage features within the Project site. Therefore, **no impacts** are anticipated.

Source: WOOD-A, NRA

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?

The Project site was assessed to determine if a wildlife corridor occurs on or within a portion of the Project site. The Project site does not lie within any designated MSHCP core linkages or proposed linkages; the nearest designated MSHCP core linkages lies approximately ten miles northeast of the Project site (WOOD-A, p. 28). As noted in the Project description above, the Project site is adjacent to residential homes to the south and industrial use to the east and is not connected to any large blocks of undisturbed lands that may be used as a wildlife corridor. Thus, the Project is not anticipated to interfere with the movement of any native resident or migratory fish or wildlife species. Therefore, **no impacts** are anticipated.

Source: WOOD-A

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Several large trees are located in the southeast corner of the parcel, one pine tree, two eucalyptus trees and two china berry trees (WOOD-A, p. 27). Prior to removal of any trees in excess of 50 years of age, the City of Banning Municipal Code (BMC) Section 17.32.060 requires preparation of a tree removal and replacement plan, unless removal is required to protect the public health and safety. However, the Project does not propose to remove these existing trees at this time. Further, the proposed Project will be required to pay applicable MSHCP fees pursuant to Municipal Code Section 15.72.080. Through compliance with the MSHCP and this ordinance, development within the Project area will not conflict with any local policies or ordinances protecting biological resources. Therefore, impacts will be **less than significant**.

Source: AMEC-A, BMC

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?

The Project site does not lie within and is not adjacent to any MSHCP Conservation Areas (WOOD-A, p. 28). Therefore, no Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) are required. The nearest proposed Core Linkage is approximately ten miles northeast of the Project site (WOOD-A, p. 28). Thus, the Project will not require design features to minimize potential impacts associated with the Urban/Wildlands interface (WOOD-A, p. 28). The Project site does not support any MSHCP Section 6.1.2 riparian/riverine areas or vernal pools (WOOD-A, p. 9). Pursuant to MSHCP Section 6.3.2 and mitigation

measure **MM BIO 2**, burrowing owl surveys will be conducted prior to any ground disturbing activities at the Project site. As discussed in Response IV.a, above, the Project site is located within the MSHCP designated Narrow Endemic Plant Species Survey Area (NEPSSA) for Yucaipa onion (*Allium marvinii*) and many-stemmed dudleya (*Dudleya multicaulis*); however, the Project site does not contain suitable habitat for these species (WOOD-A, p. 9). Further, the Project area does not lie within MSHCP Criteria Area Plant species survey area (CASSA), mammal species survey area, or sensitive amphibian survey area and thus not require Critical Area Plant Species, Sensitive Mammals Surveys or Sensitive Amphibian surveys (WOOD-A, pp.18-20). Therefore, impacts will be **less than significant with mitigation**.

Source: WOOD-A

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
V. Cultural Resources Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Cultural Resource Discussion:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

A *Cultural Resource Constraints Analysis* (AE-A) dated December 4, 2019 was prepared by Applied Earthworks (AE) for this Project and included in Appendix B. As part of this assessment, a cultural resource literature and records search was conducted at the Eastern Information Center (EIC) at the University of California, Riverside, indicating that 27 cultural resources investigations have been conducted previously within the Project Site and a one-mile wide buffer zone (Study Area). Two of these investigations specifically involved portions of the Project site and as a result 100 percent of the Project site has been studied previously. One of the previous investigations that involved the Project site conducted a sensitivity assessment for archaeological resources. This assessment, like the GP, concluded the Project site is within an area of low archaeological sensitivity. (AE-A, p. 1; GP Exhibit IV-6 Archeological Resources Sensitivity Map).

The 27 cultural investigations resulted in the identification of a total of 100 cultural resources in the Study Area. Sixty-seven are built-environment resources and 33 are archaeological resources. The 67 built-environment resources include historical houses, commercial buildings, a segment of the Union Pacific Railroad, and existing utility lines. However, no resources have been documented previously within the Project site. The archaeological resources are made up of 10 prehistoric sites, 2 prehistoric isolated finds, 14 historic sites, and 7 historic isolated finds. The 12 prehistoric cultural resources documented are south of the Project site along the foothills of the San Jacinto Mountains within the Study Area; however, most of these prehistoric sites are located south of the Project area along the foothills of the San Jacinto Mountains. Historic properties (National Register of Historic Places [NRHP]-eligible) or historical resources (California Register of Historical Resources [CRHR]-eligible) are unlikely to be discovered within the Project site since the max excavation is 8-feet below ground surface (bgs) and the Project site is identified as sporadic-occurrence of historic-period buildings area. (AE-A, pp. 1, 4, 7; GP Exhibit IV-7 Historic Resources Sensitivity Map)

In addition to the EIC research, AE also consulted the 1901 San Jacinto 30-minute USGS topographic quadrangle map, the 1943 and 1956 Banning 15-minute USGS topographic quadrangle maps, and the 1956 and 1996 Cabazon 7.5-minute USGS topographical quadrangle maps to assess historical land uses in the Study Area and for historical archeological sites within the Project site. All the USGS maps also depict houses and outbuildings outside the Project site immediately to the north, east, and west on Barbour Street, Westward Avenue, and Charles Street. No other structures, roads, or features of historical interest are shown within or in the vicinity of the Project site on any of the reviewed historical maps. (AE-A, pp. 6, 7)

As noted above, the Project site is identified as an area of low archaeological sensitivity and an area of sporadic-occurrence of historic-period buildings. The *Cultural Resource Constraints Analysis* did not locate

cultural resources on the Project site, and the excavation would not exceed 8-feet bgs. Therefore, impacts will be **less than significant.**

Source: AE-A, GP

b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?

Archaeological Resources

As discussed in V.a, AE conducted a *Cultural Resource Constraints Analysis* (AE-A) dated December 4, 2019, prepared by Applied Earthworks (AE) for this Project and included in Appendix B. AE found that 10 prehistoric sites and 2 prehistoric isolated finds were documented within Study Area. Fourteen historic sites and 7 historic isolated finds were also documented in the Study Area. However, no prehistoric or historic cultural resources were found on the Project site. (AE-A, pp. 1, 4, 7)

Tribal Resources

AE contacted the Native American Heritage Commission (NAHC) on October 30, 2019, for a review of the Sacred Lands File (SLF) to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project site. The NAHC responded on November 4, 2019, stating the SLF search was completed with negative results. The NAHC provided a list of Native American individuals and organizations for follow-up to elicit information and/or concerns regarding cultural resource issues related to the Project, if any (AE-A, p. 7). Tribal outreach was conducted by the City of Banning through AB52 consultation, which is discussed in the Tribal Cultural Resources section of this IS/MND. No Tribal consultation was requested; therefore, impacts will be less than significant.

Source: AE-A.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

The proposed Project site is not located on any known cemetery. However, if human remains are encountered during Project construction, in a location other than a dedicated cemetery on non-federal lands, the steps and procedures specified in the California Health and Safety Code §7050.5 (HSC 7050.5), State CEQA Guidelines 15064.5(d), and California Public Resource Code §5097.98 (PRC 5097.98), in accordance with PRC 5097.98, must be implemented. In accordance with PRC 5097.98, the Riverside County Coroner must be notified within 24 hours of the discovery of potentially human remains. The Coroner must then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she must contact the NAHC by phone within 24 hours, in accordance with PRC 5097.98. The NAHC then designates a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification. The MLD will then have the opportunity to recommend to the Project proponent means for treating or disposing of, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification. Therefore, impacts will be **less than significant**.

Source: HSC 7050.5; PRC 5097.98

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

Energy Discussion:

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

The analysis in this section addresses each of the six potential energy impacts identified in Appendix F of the *CEQA Guidelines* and utilizes the assumptions from CalEEMod evaluated in Section III. Air Quality and Section X. Greenhouse Gas Emissions, of this Initial Study (IS), respectively

Appendix F of the *CEQA Guidelines* provides for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. Pursuant to impact possibilities listed in *CEQA Guidelines* Appendix F, an impact with regard to energy consumption and conservation will occur if implementation of the proposed Project will result in the wasteful, inefficient, or unnecessary consumption of energy. Impacts may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal;
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity;
3. The effects of the project on peak and base period demands for electricity and other forms of energy;
4. The degree to which the project complies with existing energy standards;
5. The effects of the project on energy resources; and
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The analysis below addresses each of the six potential energy impacts identified in Appendix F of the CEQA Guidelines.

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal.

The Project consists of the construction of a substation and the subsequent decommissioning of an existing substation. The long-term operational energy use from this Project would be limited to infrequent vehicle trips associated with maintenance of the substation. As such, operational energy use would be negligible and would have a less than significant effect on energy resources.

Project construction would require the use of construction equipment for each of the construction activities identified in Response III.b, as well as construction workers and vendors traveling to and from the Project site. Construction equipment requires diesel as the fuel. However, fuel consumed during construction would be temporary in nature and would not represent a significant demand on

energy resources. Construction equipment is also required to comply with regulations limiting idling to five minutes or less (CCR Title 13 § 2449(d)(3)). Furthermore, there are no unusual Project site 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 State. For comparison, the State of California consumed 15.6 billion gallons of gasoline[1] in 2018 and 3.0 billion gallons of diesel fuel in 2019[2], which is the most recent published data. Thus, the fuel usage during Project construction would account for a negligible percent of the existing gasoline and diesel fuel related energy consumption in the State of California. Furthermore, it is expected that construction-related fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Based on the limited amount of construction energy consumption and compliance with regulatory programs would ensure that the Project would not result in the inefficient, unnecessary, or wasteful consumption of energy. Therefore, impacts to energy resources during construction or operation will be less than significant. No mitigation measures are required.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.

The proposed Project is an infrastructure project and will not create a demand for local or regional gas or electricity energy supplies. Therefore, impacts to local and regional energy supplies during construction or operation will be less than significant. No mitigation measures are required.

3. The effects of the project on peak and base period demands for electricity and other forms of energy.

As an infrastructure project, the construction and operation activities of the Project will not substantially affect peak and base period demands for electricity or other forms of energy, such as natural gas. Therefore, impacts to local and regional energy supplies during construction or operation will be less than significant. No mitigation measures are required.

4. The degree to which the project complies with existing energy standards.

The proposed Project would be required to comply with City, state and federal energy conservation measures related to construction and operations. Although many of the regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, promoting sustainability through energy conservation measures, as well as reducing water consumption, this Project will comply with applicable regulations. As such, the construction and operation activities of the Project will meet and/or exceed these regulatory requirements. No mitigation measures are required.

Through implementation of energy conservation measures and sustainable practices, the Project will not use large amounts of energy in a manner that is wasteful or otherwise inconsistent with adopted plans or policies.

5. The effects of the project on energy resources.

[1] *California Energy Commission Fuel Data, Facts and Statistics* available at https://www.cdtfa.ca.gov/taxes-and-fees/MVF-10-Year-Report.pdf.
[2] *California Energy Commission Fuel Data, Facts and Statistics* available at https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm

The Project would replace the Airport Substation with the Ivy Substation. The Project is an energy project and therefore would not increase the effect on the existing energy resources.

6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Energy impacts associated with transportation during construction and operation of the Project would be negligible and would not result in the inefficient, unnecessary, or wasteful consumption of energy. No mitigation measures are required.

For the reason sated above, impacts will be **less than significant.**

Source: *Project Description*

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Implementation of the Project will not result in inefficient, unnecessary, or wasteful consumption of energy, as outlined in Response VI.a. The proposed Project would be required to comply with state and federal energy conservation measures related to construction and operations, as noted above. As such, impacts to obstructing a state or local plan for renewable energy or energy efficiency during construction or operation will be **less than significant**.

Source: Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*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 direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Geology and Soils Discussion:

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.

The City lies at the boundary of two great tectonic plates (the Pacific Oceanic Plate and the North American Continental Plate), which slide past one another in a horizontal displacement (in a relative right-lateral motion), creating the San Andreas Fault system. (GP EIR, p III-63). The San Andreas is the closest Alquist-Priolo Earthquake Fault, approximately 1.76 miles northwest of the Project site (RCLIS). There are no other Alquist-Priolo Earthquake Fault within or immediately adjacent to the Project site that could rupture during an earthquake (GP, Exhibit V-3; GP DEIR, Exhibit III-13; RCIILS). Moreover, the Ivy Electric Substation and the decommissioning of the Airport Substation would be required to be in conformance with the California Occupational Safety and Health Administration (Cal-OSHA), American National Standard National Electrical Safety Code (NESC) (also known as American National Standards Institute or ANSI Standard C2), and Institute of Electrical and Electronic Engineers (IEEE) safety requirements. These

standards and regulations are designed to reduce construction workers, maintenance worker, and the public's exposure to impacts related to hazards including earthquake faults. Moreover, the Project does not propose office space or habitable structures, that could pose a substantial risk to people or other structures in the event of strong seismic ground shaking. As such, the implementation of the Project would not rupture a known earthquake fault that would cause the risk of loss, injury, or death. Therefore, impacts will be **less than significant**.

Source: GP; GP DEIR; RCLIS

ii) Strong seismic ground shaking?

Given its physical and geologic location, the Banning area is susceptible to potential intense seismic ground shaking that could affect the safety and welfare of the general community. The effects of ground motion on structures are difficult to predict, and depend on the intensity of the quake, the distance from the epicenter to the site, the composition of soils and bedrock, building design, and other physical criteria (GP DEIR, p. III-74). Based on these factors, ground shaking may cause no, little, or major structural damage or destruction; however, in general, peak ground accelerations and seismic intensity values decrease with increasing distance from the causative fault.

As noted in *Response VII.a.i.* above, the proposed Project does include office or habitable structures and would be designed, constructed, appropriately decommissioned in accordance to OSHA, ANSI Standard C2, and IEEE standards. As such, the implementation of the Project would not cause strong shaking due to seismic activity that would cause the risk of loss, injury, or death. Therefore, impacts will be **less than significant.**

Source: GP DEIR

iii) Seismic-related ground failure, including liquefaction?

Liquefaction occurs primarily in saturated, loose, fine to medium grained soils in areas where the groundwater table is within 50-feet of the surface. During liquefaction, involved soils behave like a liquid or semi-viscous substance and can cause structural distress or failure due to ground settlement, a loss of load-bearing capacity in foundation soils, and the buoyant rise of buried structures. (GP, p. V-17).

The City prepared an *Ivy Substation Project Geology and Soils Analysis*, dated April 27, 2020, which is included as Appendix F of this IS (cited herein as "City-A"). As explained in that study, three general conditions induce liquefaction: 1) strong ground shaking for a sustained period, 2) presence of unconsolidated granular sediments, and 3) occurrence of water-saturated sediments within 50 feet of the ground surface. (City-A, page 5). According to the California Geological Survey, the project area has not been evaluated for liquefaction. (City-A, page 5; Figure 5 thereto). There is a low potential for liquefaction as the reported water level below the ground surface varies between 480-feet and 639-feet according to the United States Geological Survey National Water Information System (USGS NWIS). (City-A, page 5; Figure 6 thereto).

Moreover, according to the United States Department of Agriculture (USDA) Web Soil Survey, the site is mapped as having Gorgonio gravelly loamy fine sand (GmD), with 2% to 15% slopes. GmD soils consist of gravelly loamy fine sand overlaid on stratified gravelly loamy sand to gravelly loamy fine sand and drains excessively, with the water table depth to be more than 80 inches. According to the City's GP, the Project site is located in an area with low liquefaction susceptibility (GP, Exhibit V-4; GP DEIR, Exhibit III-14).

In sum, there is a low potential for liquefaction at the Project Site (Riverside County Parcel Report for APN 543-090-008). (City-A, page 5). Further, the Project contains no habitable structures. Therefore, impacts will be **less than significant.**

Source: City-A; GP; GP DEIR; City of Banning; USDA

iv) Landslides?

Landslides have become significant hazards as development within the City reaches higher elevations on the hill slopes. Rock falls, rockslides, and to a lesser degree, large landslides are likely to occur in areas of high relief, such as along steep canyon walls in the southern Banning Bench area, and along the portions of the natural slopes facing the southern edge of the City (GP, p. V-6). There are several factors that contribute to slope failure, including slope height, slope steepness, shear strength and orientation of weak layers in the underlying geologic units, as well as pore water pressure. The proposed Project site is not located adjacent to any areas with low, moderate, or high risk of seismically induced settlement and slope instability and no known landslides have occurred in the Project vicinity (GP, Exhibit V-2; GP DEIR, Exhibit III-15). Moreover, surrounding topography is relatively flat and as noted in *Response VII.a.i.* above, the Project contains no habitable structures. As such, the implementation of the Project would not cause the risk of loss, injury, or death due to landslides. Therefore, impacts will be **less than significant.**

Source: GP; GP DEIR

b) Result in substantial soil erosion or the loss of topsoil?

Climate, topography, soil and rock types and vegetation are key factors to erosion, runoff, and sedimentation processes. Human activities such as agricultural or land development accelerate natural erosion. Grading which could involve altering natural drainage patterns, soil compaction, and cut and fill slopes increases the potential for erosion, and sedimentation. Development that creates impermeable surfaces increases the potential for flooding and sedimentation downstream of the project. (GP, p. V-9) The City requires the preparation of erosion control plans as part of the grading permit process (GP DEIR, p. III-81). In addition to the preparation of the erosion control plan, the Ivy Electric Substation would be design in accordance with the most recently adopted Uniform Building Code and the seismic design parameters of the Structural Engineers Association of California as required by the City (GP DEIR, p II-81). The Ivy Electric Substation would also be required to obtain a National Pollutant Elimination System (NPDES) general construction permit from the State Water Resources Control Board and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to the start of construction activities. The SWPPP shall incorporate applicable Best Management Practices (BMPs) to reduce loss of topsoil or substantial erosion. Like the Ivy Electric Substation, the Airport Substation decommissioning would be required to prepare an erosion control plan for a grading permits; however, no additional permits would be required due to it being less than one acre in size. As such, implementation of the proposed Project would not result in substantial soil erosion or the loss of topsoil. Therefore, impacts will be **less than significant**.

Source: GP; GP DEIR; SWRCB

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?

Impacts related to landslides are addressed in *Response VII.a.iv* above; impacts related to liquefaction are addressed in *Response VIIa.iii*, above and in Appendix F hereto. The following analysis addresses impacts related to unstable soils, as a result of lateral spreading, subsidence, or collapse. Lateral spreading refers to

the lateral movement of gently to steeply sloping saturated soil deposits caused by earthquake-induced liquefaction.

Subsidence in the Banning area is closely associated with groundwater levels and the most populated part of the City occurs in an area with geologic conditions vulnerable to ground subsidence. In particular, the alluvial sediments within the groundwater basins from which the City's water is withdrawn are subject to subsidence if rapid groundwater extraction occurs in response to increased water demands as a result of population growth or prolonged drought (GP DEIR, p. III-69). Structures sensitive to slight changes in elevation, such as canals, sewers and drainage improvements are generally sensitive to the effects of subsidence and may be damaged if subsidence occurs. (GP DEIR, p III-80). Data from the California Department of Water Resources Water Data Library estimated the shallowest groundwater measured at the closest State well station to the Project (approximately 0.91 mile east) is approximately 392 feet below ground surface (DWR, p. 4).

A substantial portion of the City's valley and canyon areas are underlain by potentially compressible and/or collapsible soils consisting of young sediments with low density that will settle under the added weight of fill embankments or buildings (GP DEIR, p. III-81). Elevations at the Project Site range from approximately 2,187-feet amsl at the northwesterly end to approximately 2,175 feet amsl at the southeasterly end; there are no hills or prominent landforms in the immediate vicinity. (City-A, page 9). The potential for some total and differential settlements due to ground shaking may be expected; however, based on adjacent completed projects within the vicinity, earthquake induced settlement is within tolerable limits. (City-A, page 9). Moreover, implementation of the proposed Ivy Electric Substation Project would include hardscape, concrete pads, and drainage improvements to a currently vacant site. The decommissioning of the Airport Substation would include the removal of all equipment including the below grade ground grid, then the site would be recompacted and leveled to the existing grade. Therefore, the implementation of the Project will not contribute to or expose people or structures to substantial adverse effects associated with on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Impacts would be **less than significant**.

Source: GP DEIR; DWR; City-A

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils are those that contain significant amount of clay particles that have a high shrink (dry) and swell (wet) potential. The upward pressures induced by the swelling of expansive soils under moist condition can have harmful effect upon structures. In the City, expansive soils are primarily associated with areas underlain by older fan deposits containing argillic (clay-rich) soil profiles, which are in the moderately expansive range. Since the low-lying areas of the City are underlain by alluvial fan sediments that are composed primarily of granular soils, the expansion potential ranges from very low to moderately low (GP DEIR, p. III-69). Moreover, the substation would be design in accordance with the most recently adopted Uniform Building Code and the seismic design parameters of the Structural Engineers Association of California as required by the City (GP DEIR, p II-81). As such, the implementation of the proposed Project would not create a risk direct or indirect to life or property. According to the United States Department of Agriculture (USDA) Web Soil Survey, the site is mapped as having Gorgonio gravelly loamy fine sand (GmD), with 2% to 15% slopes. GmD soils consist of gravelly loamy fine sand overlaid on stratified gravelly loamy sand to gravelly loamy fine sand and drains excessively, which is not an expansive soil. Therefore, impacts will be **less than significant.**

Source: GP DEIR; USDA; City of Banning

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed Project does not include wastewater or tying into existing infrastructure for disposal of wastewater and no septic tanks or alternative wastewater disposal systems will be required. Therefore, **no impacts** are anticipated.

Source: Project Description

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

AE conducted a *Paleontological Memorandum: Constraints Analysis* (AE-B) for the Project site dated December 5, 2019 and included in Appendix C. AE uses guidelines developed by the County of Riverside to determine the likelihood of the presence of paleontological resources at a given site. Following the County's established process, baseline information is used to assign the paleontological sensitivity of a geologic unit(s) (or members thereof) to one of four categories—Low, Undetermined, High A (Ha), and High B (Hb) potential. Geologic units are "sensitive" for paleontological resources and have a High paleontological resource potential if they are known to contain significant fossils anywhere in their extent, even if outside the Project site. High A (Ha) sensitivity is based on the occurrence of fossils that may be present at the ground surface of the Project site, while High B (Hb) sensitivity is based on the occurrence of fossils at or below 4 feet of depth, which may be impacted during construction activities (AE-B, pp. 1-3). AE determined that although the entire area was identified as "Low" paleontological sensitivity ranking on the County of Riverside and consequently on the GP map, AE's evaluation of the existing geologic maps and published fossil occurrences determined the Project Area has more of a "High b" (Hb) sensitivity (AE-B, p. 6).

The Project site is located within a thin surface exposure of younger Quaternary alluvial deposits (Qy), although exposures of the underlying older and very old Quaternary alluvial deposits (Qo and Qvo) are also mapped within 2 miles to the west and northwest of the Project area, respectively. The older and very old alluvial deposits are Middle Pleistocene to Holocene in age. (AE-B, p. 4)

The youngest Holocene-age deposits, particularly those less than 5,000 years old, are typically too young for the fossilization process to occur. Therefore, the Holocene-age alluvial deposits across the ground surface of the Project site are unlikely to preserve fossils. The underlying older Holocene- and Pleistocene-age alluvial deposits have yielded significant fossils throughout Southern California from the coastal areas to the inland valleys. (AE-B, p. 4).

The records search resulted in numerous localities within 10 miles that share the same subsurface characteristics as the Project site, such as Late Pleistocene to Holocene alluvial deposits, which are considered to be of high paleontological potential. However, no paleontological resources were identified at Project site or within one mile of the Project site. (AE-B, pp. 4-5).

The Project may include excavations to a maximum depth of 8 feet bgs. Excavation to that depth has a high likelihood of exposing underlying Pleistocene deposits with high paleontological sensitivity and encountering significant and intact paleontological resources. (AE-B, p. 6) In order to mitigate for the potentially significant impact to undiscovered paleontological resources and comply with the County of Riverside's guidelines for areas with a High A (Ha) paleontological sensitivity ranking, the Project includes mitigation measures **MM GEO 1** through **MM GEO 3**. Implementation of **MM GEO 1** through **MM GEO 3** will ensure impacts to paleontological resources are **less than significant with mitigation incorporated**.

MM GEO 1: Worker's Environmental Awareness Training. Prior to the start of construction, the City of Banning shall retain a Project Archaeologist and qualified paleontologist (the Project Paleontologist) to provide a preconstruction training for the Project construction contractor and construction crews. The Project Archaeologist will provide input during the training. The training shall identify the types of

archaeological resources and fossils that could be found in the area (particularly fossils that can be found in the San Timoteo Formation and Pleistocene alluvial fan and axial channel deposits), the procedures to follow should archaeological and/or paleontological resources be encountered and contact information for the Project Archaeologist, and Project Paleontologist and/or their designee(s). Paleontological information shall follow the Society of Vertebrate Paleontology (2010) guidelines. The training may be conducted concurrently with other environmental training (e.g., biological, safety training).

MM GEO 2: Inadvertent Paleontological Discovery. Should any paleontological resource(s) be accidentally discovered during construction, construction activities shall be moved to other parts of the construction site and a qualified paleontologist shall be retained to determine the significance of the resource(s). If the find is determined to be a unique paleontological resource, as defined in Section 15064.5 of the State *CEQA Guidelines*, then a mitigation program shall be developed in accordance with the provisions of CEQA as well as the guidelines of the Society of Vertebrate Paleontology (2010).

The paleontologist (or designee(s)) shall wash any collected samples of sediments to recover small invertebrate and vertebrate fossils. Recovered specimens shall be prepared so that they can be identified and permanently preserved. Specimens shall be identified and curated at a repository with permanent retrievable storage to allow further research in the future (e.g., Western Science Center, Raymond Alf Museum, or the Natural History Museum of Los Angeles County). The cost of curation is assessed by the repository and is the responsibility of the landowner. If specimens are found, the qualified paleontologist shall prepare a report of findings, including an itemized inventory of recovered specimens, upon completion of all Project fieldwork. The report shall include a discussion of the significance of all recovered specimens. The report and inventory, when submitted to the City of Banning, shall signify completion of the program to mitigate impacts paleontological resources. If the monitoring efforts produced fossils, then a copy of the report will also be submitted to the curation facility.

MM GEO 3: Paleontological Monitoring. Prior to the start of construction, the City shall retain a Qualified Paleontologist for full-time construction monitoring. This stretch of road may have previously undisturbed deposits determined to have a high paleontological sensitivity. Monitoring shall follow the Society of Vertebrate Paleontology (2010) guidelines. Monitoring should include the visual inspection of excavated or graded areas, trench sidewalls, spoils, and any other disturbed sediment. In the event that a paleontological resource is discovered, the procedures outlined in mitigation measure **MM CR-3** shall apply. The approved paleontological monitor will have the authority to halt or divert temporarily the construction equipment around the find until it is assessed for scientific significance and collected. Paleontological monitoring can be reduced or eliminated at the discretion of the Qualified Paleontologist if no fossil resources are encountered after 50 percent of the excavation along this stretch is completed.

Source: AE-B

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐

Greenhouse Gas Emissions Discussion:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Unlike the criteria pollutants, GHG do not have adopted significance thresholds associated with them at this time. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD has been working on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tons per year of carbon dioxide equivalents ($MTCO_2E$/yr) for stationary source projects where SCAQMD is the lead agency (SCAQMD-D). The most recent draft proposal was in September 2010 and included significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 $MTCO_2E$/yr, respectively (SCAQMD-D). Alternatively, a lead agency has the option to use 3,000 $MTCO_2E$/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also evaluate construction emissions by amortizing them over an expected project life of 30 years.

The CalEEMod software was used to estimate GHG emissions from fuel usage by construction equipment and construction-related activities, such as construction worker trips, for the Project (WEBB-A). **Table H – Project Construction Equipment GHG Emissions**, below, summarizes the modeling output and indicates that an estimated 724.50 metric tons of carbon dioxide equivalent ($MTCO_2E$) will occur from construction equipment over the course of the estimated construction period.

Table H – Project Construction Equipment GHG Emissions

Year	Metric Tons per year (MT/yr)			
	Total CO_2	Total CH_4	Total N_2O	Total CO_2E
Ivy Substation				
2020	325.87	0.06	0.00	327.45
2021	162.41	0.03	0.00	163.20
Airport Substation				
2021	52.42	0.01	0.00	52.78
2022	179.84	0.05	0.00	181.07
Total	**720.54**	**0.154**	**0**	**724.50**
			Amortized	**24.15**

Source: WEBB-A

Note: CO_2 = Carbon dioxide; CH_4 = Methane; N_2O = Nitrous oxide; CO_2E = Carbon dioxide equivalent.

The proposed Project does not fit into the categories provided (industrial, commercial, and residential) in the draft thresholds from SCAQMD. The Project's emissions were compared to the 3,000 $MTCO_2E$/yr threshold for non-industrial projects. Since the draft SCAQMD GHG threshold guidance document released in October 2008 recommends that construction emissions be amortized for a project lifetime of 30 years to, the total

GHG emissions from Project construction were amortized and are below the SCAQMD recommended screening level of 3,000 $MTCO_2E$/year (SCAQMD-E). Due to the estimated amount of emissions from Project construction and negligible operational emissions from infrequent maintenance vehicles related to the substation, the proposed Project will not generate GHG emissions that exceed the screening threshold.

Due to the estimated amount of emissions from Project construction, and negligible operational emissions from infrequent maintenance vehicles, the proposed Project will not generate a substantial amount of GHG emissions and the impact is considered to be **less than significant**. No mitigation is required.

Source: WEBB-A; SCAQMD-D; SCAQMD-E

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As described in Response VIII.a, above, the proposed Project will not generate greenhouse emissions that may have a significant impact on the environment. The proposed Project will not result in any changes to the existing land use patterns within the Project area. Thus, the proposed Project does not conflict with any regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, impacts will be **less than significant**.

Source: WEBB-A

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Hazards and Hazardous Materials Discussion:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Operation of the substation would not necessitate the transportation or use of hazardous materials. However, construction may include the transportation and storage of hazardous materials, such as fuels for the construction equipment. The transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. Any amount of hazardous substances used during Project construction and operation will be subject to a number of federal and state agencies' strict regulations for the safe transportation of hazardous materials. Hazardous material transport, storage and response to upsets or accidents are primarily subject to federal regulation by the United States Department of Transportation (DOT) Office of Hazardous Materials Safety in accordance with Title 49 of the Code of Federal Regulations (CFR). California regulations applicable to Hazardous material transport, storage and response to upsets or accidents are codified in Title 13 (Motor Vehicles), Title 8 (Cal/OSHA), Title 22 (Management of Hazardous Waste), Title 26 (Toxics) of the California Code of Regulations (CCR), and the Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory).

Compliance with all applicable federal and state laws related to the transportation, use, storage and response to upsets or accidents that may involve hazardous materials would reduce the likelihood and severity of upsets and accidents during transit and storage. Moreover, construction activities would be temporary and short term. Therefore, impacts will be **less than significant**.

Source: CHSC; CCR; CFR

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?

As noted in *Response IX.a* above, the Project may involve the use of small amounts of hazardous materials during construction. However, the Project shall comply with all applicable federal and state laws pertaining to the transport, use, disposal, handling, and storage of hazardous materials, including but not limited to Title 49 of the Code of Federal Regulations and Title 13, (motor vehicles) Title 8 (Cal/OSHA), Title 22 (Health and Safety Code), Title 26 (Toxics) of the California Code of Regulations, and Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory), which describes strict regulations for the safe transportation of hazardous materials. Compliance with all applicable federal and state laws related to the transportation, use and storage of hazardous materials would reduce the likelihood and severity of accidents during transit, use and storage. Thus, the Project is not expected to result in the use of large amounts of hazardous materials that would create a hazard to the public or environment. Therefore, impacts will be **less than significant**.

Source: CHSC; CCR; CFR

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The proposed Project is located approximately 0.90 miles to the east of the existing Banning High School and 0.90 miles south of Hoffer Elementary School. However, as discussed in *Response IX.a* above, operation of the Project site is not anticipated to require use or storage of hazardous materials, substances, or waste. Temporary construction activities which may transport or use hazardous materials, substances, or transport waste generated at the Project site will be stored and transported in compliance with all applicable local and state codes. Therefore, impacts will be **less than significant.**

Source: CHSC; CCR; CFR

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?

Per a review of the California Department of Toxic Substances Control (DTSC) EnviroStor Database, the proposed Project site is not itself a listed hazardous materials site. The closest listed hazardous materials cleanup site is the TYCO Electronics Corporation site (60002152), located at 700 South Hathaway Street, northeast of the Project site (DTSC). After remediation to address the presence of metals, petroleum hydrocarbons and volatile organic compounds in shallow soil below the site, DTSC determined the site did not pose a risk. The 60002152 site is currently restricted to industrial/commercial uses.

The Project is a public facility and would not have workers at the Project site on a regular basis. One to two maintenance vehicle per day for inspection are anticipated, and those visits would be short in duration. As such, it is unlikely that any contamination remaining at 6002152 cleanup site would impact the Project workers. Thus, because the proposed Project site is not on a list of hazardous materials sites compiled

pursuant to Government Code Section 65962.5 or are there any listed sites adjacent to the Project site, the Project will not create a significant hazard to the public or the environment. At the Airport Substation, decommissioning will include soil testing that conforms to the following Environmental Protection Agency (EPA) methodology:

- EPA Method 8015B for total petroleum hydrocarbon (TPH) as Gasoline and Diesel;
- EPA Method 8082 for Polychlorinated Biphenyls (PCBs);
- EPA Method 6010b for trace elements, including metals; and
- Any additional, applicable analysis based on the use of the parcel as an electric substation.

Therefore, impacts will be **less than significant.**

Source: DTSC; EPA

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?

The Banning Municipal Airport is located approximately 0.27 miles to the north of the Project site. Land use designations within the City have been arranged to accommodate for continued safe operation of the Banning Municipal Airport (GP DEIR, p. III-62). The Project is within the Banning Municipal Airport Land Use Compatibility Plan (BM/ALUCP) and is within Compatibility Zone E which represents the area with the lowest noise impact and lowest flight hazards. The Compatibility Zone E restricts objects to 100 feet tall. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds to increase is also prohibited (ALUC). However, the tallest component of the Project would be power circuit breakers with an attached bus structure that would not exceed 40-feet (ft) in height. Moreover, the Project would not have workers at the Project site on a regular basis. One to two maintenance vehicle per day for inspection are anticipated and will be on site for a short duration. Thus, the proposed Project will not result in a safety hazard or excessive noise for people working in the Project area. Therefore, impacts will be **less than significant.**

Source: ALUC; GP DEIR

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City adopted the Multi-Hazard Functional Planning Guidance document in 1996. The document is organized into three-parts, which include: 1) the Banning Emergency Plan; 2) twelve functional Annexes that describe the emergency response organization; and 3) a listing of operational data such as resources, key personnel, and essential facilities and contacts (GP, p. VI-42). The City's plan was used until Riverside County adopted their Emergency Operations Plan (EOP). The Riverside County Operational Area (OA) EOP, adopted in 2006, addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Riverside County (EOP, p. 1-1). According to the City's GP, the City does not have established evacuation routes, although depending on the location and extent of emergency, major surface streets could be utilized to route traffic through the City (GP, p. VI-45). The proposed Project would not require road closures and the operation of the substation in it and of itself would not interfere with the EOP. Therefore, impacts will be **less than significant**.

Source: EOP; GP

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

The proposed Project is located north of the City's High Fire Hazard Zone, within which relief is minimal and hardscape (concrete, asphalt, and structures) and landscaping vegetation predominate (GP, Exhibit V-10). According to California Department of Forest and Fire Protection (Cal Fire), the proposed Project borders a local responsibility area (LRA) to the north and a state responsibility area (SRA) to the south. The Project is not within or in the vicinity of a very high fire hazard severity zone (CalFire). The City contracts with the Riverside County Fire Department for fire services; in turn, the County contracts with Cal Fire. The City's Fire Marshal is authorized and directed to enforce the provisions of the Fire Code throughout the City. As part of these responsibilities, the Fire Marshal reviews plans for new construction and additions, coordinates with the City for disaster preparedness programs, and manages the City's weed abatement program. Thus, with Fire Marshal review and approval of ultimate plans for the road, the Project will not result in exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts will be **less than significant**.

Source: CAL FIRE; GP

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

Hydrology and Water Quality Discussion:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Water quality standards may be affected by the Project discharging sediment or other materials during construction as activities associated with the construction of the proposed Project would include grading and site preparation, which may have the potential to release pollutants (e.g., oil from construction equipment) and silt off-site which could impact water quality. However, the City will be required to adhere to BMC 18.15 Erosion and Sediment Control which includes the preparation of a Stormwater Pollution Prevention Plan (SWPPP) pursuant to the statewide General Construction Permit (NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, adopted September 2, 2009 and effective as of July 2, 2010) issued by the State Water Resources Control Board (SWRCB) for construction projects one or more acres in size. Compliance with the SWPPP in combination with existing regulations will result in a less than significant impact with regard to violation of water quality standards.

Development of the Project site will add impervious surfaces associated with driveways and sidewalk improvements. During Project operation, the Project has minimal potential to introduce sources of water pollution from the infrequent maintenance vehicle trips.

As a co-permittee to the Municipal Separate Storm Sewer System permit ('MS4', Colorado River Basin RWQCB Order No. R7-2013-0011, NPDES No. CAS617002), Banning is required to regulate the discharges of urban runoff as they enter the City's MS4 facilities (i.e., storm drains) in order to prevent the degradation of water quality in receiving waters, pursuant to the Whitewater River MS4 Stormwater Water Management Plan (SWMP). One method of regulation in the SWMP is the requirement of a Water Quality Management Plan (WQMP) for all Priority Development Projects to treat post-construction stormwater runoff in perpetuity. The City would be required to develop a WQMP for review that outlines how stormwater runoff generated within the plant will be treated prior to release from the site (or infiltrated). The WQMP must also detail whether hydro modification conditions of concern exist, how source control practices can be implemented, and identify responsible entities for ongoing maintenance and funding. This WQMP must be accepted by the City Engineer prior to the issuance of grading permits, as outline in BMC 18.06.040

Through compliance of BMC 18.15 and BMC 18.06.040, the proposed Project will address potential storm water runoff. Therefore, implementation of the proposed Project would not violate water quality standards or waste discharge requirements. Therefore, impacts will be **less than significant.**

Source: Project Description; BMC; MS4; SWRCB

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

The City of Banning overlies the San Gorgonio Pass Groundwater Subbasin (SGPGS), a portion of the Coachella Valley Groundwater Basin. The SGPGS is divided into several water storage units from which the City extracts groundwater: the Banning Storage Unit, the Banning Bench Storage Unit, the Banning Canyon Storage Unit, the Cabazon Storage Unit, and the Beaumont Storage Unit.

The proposed Project consists of a step-down electrical substation and the decommissioning of an existing substation at the airport. This public facility in and of itself will not cause an increase in the production of groundwater or cause a significant change to the groundwater recharge potential of the pervious portions of the Project site. Therefore, the Project will not impede with sustainable groundwater management of the underlying groundwater basin. Impacts to groundwater supplies will be **less than significant**.

Source: Project Description; UWMP

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?

There are no watercourses or wetlands located on the Project site (WOOD-A, p. 28). Further, the Project site is generally flat with a gentle slope to the southeast and the site is regularly disked for weed control. The Project will disturb no more than one and one-half acre of the 4.35-acre parcel as well as frontage road improvements (curb and gutter) along the westerly ROW of Hathaway Street, the northly ROW of Charles Street, and the southerly ROW of East Westward Avenue. These improvements will replace the dirt road shoulders with impervious (concrete) curb and gutter. The area within the substation footprint will be graded, compacted and covered with gravel and generally pervious around the proposed machinery and concrete building of 640 SF. Because the Project site will be generally flat after construction is complete, the onsite stormwater runoff will stay onsite or sheet flow to the undeveloped remainder of the parcel for settling and infiltration. The proposed frontage road improvements will increase the impervious surface; however, the curb will improve the drainage conditions of these streets by containing stormwater on the property and the gutter will convey runoff generated in the street without eroding the road shoulder. Through project design, and compliance with existing regulations and policies for the control of erosion, the Project does not substantially alter the existing drainage patterns already existing in the area and would not result in substantial erosion or siltation on- or off-site. Therefore, impacts will be **less than significant**.

Source: WOOD-A; Project Description; Site Plan

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

The Project site is located within flood hazard zone "X" as designated by the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (FIRM) No. 06065C0836G (Effective August 28, 2008). Flood hazard zone X includes "areas of 0.2 percent annual chance flood [500-year flood]; areas of 1 percent annual chance flood [100-year flood] with average depths of less than one foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood [100-year flood]."

As discussed in Response X.c.i. above, there are no watercourses or wetlands located on the Project site. Development of the Project site for an electrical substation will introduce impervious machinery and subsurface equipment surrounded by a flat, gravel (pervious) yard. While the substation equipment and frontage road improvements (curb and gutter) will increase impervious surfaces, the overall drainage pattern of the site will remain unchanged. The curb and gutter around the property will contain some stormwater on the property that would have previously run-off, and the gutter will convey runoff without eroding the road shoulder. Through project design, and compliance with existing regulations and policies for proper drainage, the Project does not substantially alter the existing drainage patterns already existing in the area and would not result in flooding on- or off-site. Therefore, impacts will be **less than significant**.

Source: FEMA; Project Description, Site Plan

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?

The Project site is located within the Banning Master Drainage Plan (MDP) area as designed by the Riverside County Flood Control & Water Conservation District (RCFCWCD). Specifically, the Project site

will drain to future Line H storm drain located along Hathaway Street between Barbour Street and Smith Creek located approximately 0.5 mile south of the Project site. RCFCWCD recently sought bids to construct Line H (bid due date 01/22/20).

As discussed in Responses X.c.i and X.c.ii above, the Project site will remain relatively flat and mostly pervious. The substation will be surrounded on three sides by undeveloped land that will allow sheet flow and infiltration from the substation area. Therefore, the Project will not create or contribute so much runoff water that the capacities of existing and planned drainage systems would be exceeded. The proposed curb and gutter will help to keep stormwater generated onsite on the parcel and convey flows in the street without eroding the soft road shoulders and thus improving downstream water quality. Therefore, through project design and compliance with existing regulations to protect water quality, impacts will be **less than significant**.

Source: Project Description; RCFCWCD; ebidboard.com.

iv) Impede or redirect flood flows?

As shown on FEMA Panel No. 06065C0836G, the proposed Project is located within Zone X, which is an area outside of the Special Flood Hazard Area with minimal flood hazard and higher than the elevation of the 0.2-percent-annual-chance (500-year flood) floodplain. The proposed Project includes a concrete building of approximately 640 SF and slabs that will be the base for the substation equipment. As such, in the unlikely event that flood flows pass through the site, there is little to impede or redirect flows by substantial structures. Thus, the Project will not place structures within a 100-year flood hazard area or impede or redirect flood flows. Therefore, impacts will be **less than significant.**

Source: FEMA; Project Description

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

As shown on FEMA Panel No. 06065C0836G, the proposed Project does not have any identified levees or dams within the Project boundary. Additionally, because the proposed Project is located within flood hazard zone X, as classified by FEMA, the Project is not in a Special Flood Hazard Area and the likelihood of flooding at the Project site is very limited.

Seiches are seismically induced oscillation or sloshing of water contained in enclosed bodies of water including lakes, ponds, reservoirs, and swimming pools. This hazard is dependent upon the frequency of seismic waves, distance and direction from the epicenter, and site-specific design criteria of the enclosed body of water. Swimming pools and other small bodies of water are likely to incur minor damages in the event of seismically induced seiches. However, seiching could result in the failure of larger bodies of water, including water tanks, retention basins, recharge basins and other water storage structures, and could result in the inundation of land and structures downslope (GP DEIR, p. III-79). There are no such bodies of water in the immediate Project vicinity. Thus, Project inundation by seiche is unlikely.

Tsunamis are large waves that occur in coastal areas. Because the City is not located in a coastal area, no impacts due to tsunamis will occur. As discussed in *Response VII.a.iv* above, strong ground motions can result in landslides, rockslides and rock falls, particularly where saturated ground conditions exist. During an earthquake, groundwater conditions have an influence in the development of seismically induced slope failures, as well as landslides and mudflows. The proposed Project site is not located adjacent to any areas with low, moderate, or high risk of seismically induced settlement and slope instability and no known landslides have occurred in the Project vicinity (GP, Exhibit V-2; GP DEIR, Exhibit III-15).

Moreover, there are no Project components that would become a source of pollutants that would be at risk of release in the event of a flood. As described in the Project Description, the Ivy Substation transformers will be Type II mineral oil-filled surrounded by an oil spill containment apron. Thus, the Project site will not risk release of pollutants due to project inundation in a flood hazard, tsunami, or seiche zone. Therefore, impacts will be **less than significant.**

Source: GP; GP DEIR; FEMA

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project is located within the Water Quality Control Plan (Basin Plan) boundary of the Colorado River RWQCB. The Project will be required to comply with NPDES requirements for the protection of water quality during construction. This includes implementation of a SWPPP for the minimization of non-stormwater discharges and control of erosion during construction. The Project does not qualify for a post-construction Water Quality Management Plan (WQMP) as a Priority Development Project pursuant to the MS4 Permit. The City has the option to require one on any project. Regardless, because the City is a co-permittee to the MS4 Permit and therefore regulated by the federal Clean Water Act, the substation cannot discharge non-stormwater discharges into receiving waters after construction is completed.

The Project is located within the San Gorgonio Pass Groundwater Sustainability Agency (GSA) boundary and overlies the Cabazon Storage Unit. The GSA will be submitting a Groundwater Sustainability Plan (GSP) to the State by 2022. Currently, the Project area is not subject to a sustainable groundwater management plan and the Project site is not an existing or planned groundwater recharge site.

Therefore, through compliance with existing regulations to protect water quality during construction and post-construction, the Project will not conflict with the Basin Plan or a GSP. Therefore, impacts will be **less than significant**

Source: Project Description, RWQCB, SGMA; SWRCB

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XI. Land Use and Planning Would the project:				
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Land Use and Planning Discussion:

a) Physically divide an established community?

The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations and will not change the surrounding zoning and land use designations. The Project will not physically divide an established community. Therefore, impacts will be **less than significant**.

Source: Project Description

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

The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations and will not change the surrounding zoning and land use designations. Therefore, the Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts will be **less than significant.**

Source: Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☐	☒

Mineral Resources Discussion:

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?

Sand and gravel, collectively referred to as aggregate, is the primary mineral resource that is actively being developed in the eastern portion of the City. Weathering, erosion, and other geological processes have deposited materials from the surrounding mountains and hills, forming an alluvial fan with significant deposits of these mineral resources. The Surface Mining and Reclamation Act (SMARA) was developed to assure the preservation of mineral resources while concurrently addressing the need for protecting the environment. Under the direction of SMARA, the State of California Department of Conservation, Division of Mines and Geology, released a report identifying regionally significant mineral deposits in an effort to conserve and develop them; and to help in anticipating aggregate production needs of the region (GP, p. IV-82).

The proposed Project site is located within the Mineral Resource Zone 3 (MRZ-3) area (GP, Exhibit IV-8). MRZ-3 area contains mineral deposits; however, the significance of these deposits cannot be evaluated from available data (GP, p. IV-83). Per the BMC 17.12.010, the Industrial-Mineral Resources (I-MR) district allows surface mining operations on lands designated by the City or the state as having significant potential for mineral resources; all the requirements of the State Department of Mining and Geology shall apply (BMC). The I-MR designation is assigned to the existing Robertson's Ready Mix sand and gravel facility at the Banning Quarry (GP EIR, p III-18; GP P IV-83). Further, the Project site is not within the I-MR district, and so mining activities are not permitted (GP DEIR, Table I-18; BZM). Therefore, since the Project site is not targeted for development of mineral resource mining by either the City or the State. Thus, the proposed Project will not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. Therefore, impacts will be **less than significant.**

Source: GP; GP DEIR; BMC; BMZ

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?

An approximately 6.5 acre area of Mineral Resource Zone 2, where adequate information indicates that significant mineral deposits are present or that a high likelihood for their presence exists, in the eastern portion of the City along the alluvial fan of the San Gorgonio River that lies southeast of the Banning Bench, north and south of Interstate 10 (GP Exhibit IV-8 and p. IV-83). The Banning Quarry, operated by Robertson's Ready Mix, was the only aggregate producer within the MRZ-2 designated area of the City (GP p. IV-83).

The proposed Project is not located within or adjacent to the Banning Quarry or any other locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Further,

as described in *Resource XII.a* above, the proposed Project is not within the I-MR land use designation in the City's GP. Thus, the Project will not result in the loss of availability of a locally important mineral resource recovery site. Therefore, **no impacts** are anticipated.

Source: GP

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*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?	☐	☐	☒	☐

Noise Discussion:

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?

Construction

A *Noise Impact Analysis* dated March 20, 2020 was prepared dBF Associates (dBF) to determine potential noise impacts related to the construction of the electric substation, and is included herein as Appendix E (cited to as "dBF"). During construction, temporary increases to ambient noise levels may occur as a result of the use of construction equipment such as compactors, cranes, excavators, and generators and from a worker-related increase in traffic within the vicinity of the Project site. Sensitive receptors that may be affected by Project generated noise during construction include private residences near the proposed substation.

However, Title 8 (Health and Safety) of the Banning Municipal Code (BMC) outlines regulations related to noise in Chapter 8.44 (Noise). According to Title 8, Chapter 8.44.085, sound emanating from capital improvement projects of a governmental agency is exempt from the provisions of Chapter 8.44. "Capital Improvement" is defined as major construction, acquisition or maintenance/repair projects. Typical examples of major construction would include new street improvements, park development and construction of public buildings or structures, treatment plants. Structures include lighting, sewer and water pipelines and other related utility structures including treatment plants, gas, electric and other infrastructure, landscaping and drainage facilities and all other public infrastructure.

Since the implementing Project involves construction of an electric substation that is identified as a capital improvement project, the Project is exempt from any noise restrictions during construction. Any maintenance or repair of the substation once operational will also be exempt from noise restrictions. The Project will be required to comply with all applicable City noise standards and codes. Thus, normal operation of the road is not anticipated to be a significant new source of noise. Therefore, impacts will be **less than significant.**

Source: BMC; dBF

Operation

The primary existing noise sources in the vicinity of the Project are natural activity, vehicular traffic on nearby roadways, industrial facilities, railroad traffic, and occasional aircraft. (dBF, page 9). Ambient sound level measurements were conducted near the Project site to estimate the existing acoustical environment. (dBF, page 9). A RION Model NL-31 American National Standards Institute (ANSI) Type 2 Integrating Sound Level Meter (SLM) was used as the data-collection device. The meter was mounted on a tripod roughly 5 feet above ground to simulate the average height of the human ear. The microphone was fitted with a windscreen. Weather conditions during the measurements were approximately 85 degrees F, 30% relative humidity, 0-2 mph wind speed, and clear skies. The sound level meter was calibrated before each measurement period. The measurement results are summarized below:

Table I – Sound Level Measurement (dBA)

Measurement Location	Date	Time	Leq	Lmin	Lmax	L10	L50	L90
1550 Charles Street, Northeast corner of front yard	9/18/2019	12:15 p.m. – 12:25 p.m.	55.8	46.6	74.4	55.8	49.9	47.8
Northwest corner of project site	11/13/2019	11:10 a.m. – 11:20 a.m.	48.7	43.5	60.4	51.1	46.9	45.2

Source: dBF, page 9.

The only noise-producing Project components are the transformers. (dBF, page 10). The closest Project property line to the proposed transformers is the north property line, which is approximately 45 feet away from both transformers. (dBF, page 10). Each transformer would produce a maximum noise level of approximately 34 dBA Leq at the north property line. Together, both transformers would produce a combined maximum noise level of approximately 37 dBA Leq at the north property line. (dBF, page 10). All other property lines are further away from the proposed transformers. (dBF, page 10).

The Project would produce noise levels below the nighttime (most restrictive) allowable level of 45 dBA Leq at residential property lines. (dBF, page 10). The Project would produce noise levels below the allowable level of 75 dBA at nonresidential land uses. (dBF, page 10).

Based on the foregoing analysis, the Project will not cause a substantial permanent increase in ambient or operational noise levels in the Project vicinity and impacts will be **less than significant**.

Source: Project Description; dBF

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

Construction has the potential to generate ground-borne vibration. In general, demolition of structures preceding construction generates the highest vibrations. The proposed Project site is currently vacant and does not necessitate demolition of any existing structures. Construction equipment such as vibratory compactors or rollers, pile drivers and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight and pavement conditions. Other than the typical construction equipment and methods needed to construct the Project components, no significant groundborne vibration or noise is expected. Further, development of the proposed facilities will not involve the use of highly vibratory equipment within 25 feet of the Project property line adjacent to a sensitive receptor.

Since the Project construction methods are not anticipated to generate any significant sources of groundborne vibration or noise above those that would normally be associated with construction, and any noise generated during construction will adhere to the Banning Municipal Code standards. Thus, the Project will not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Therefore, impacts will be **less than significant**.

Source: BMC; dBF

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

The Banning Municipal Airport is located approximately 0.27 miles to the north of the Project site. Land use designations within the City have been arranged to accommodate for continued safe operation of the Banning Municipal Airport (GP DEIR, p. III-62). The Project is within the Banning Municipal Airport Land Use Compatibility Plan (BM/ALUCP) and is within Compatibility Zone E which represents the area with the lowest noise impact and lowest flight hazards. Therefore, it will not expose people residing or working within the Project area to excessive noise levels. Additionally, the proposed Project is not located within the vicinity of a private airstrip. Therefore, impacts will be **less than significant.**

Source: ALUC; GP DEIR

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. Population and Housing Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Population and Housing Discussion:

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

The Project's purpose is to replace the existing Airport Substation, located approximately 0.20 mile east of the Project site along East Westward Avenue. The Airport Substation would be decommissioned once the Project has been commissioned and operational six months to a year. The proposed Project would continue to meet the planned electricity demand consistent with the land use policy. Although temporary employment opportunities may be created during construction of the Project facilities, this will not induce substantial population growth in the City or Western Riverside County as there exists an ample and available regional labor force. As such, the Project will not result in direct or indirect unplanned population growth. Therefore, impacts would **be less than significant**.

Source: Project Description

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project construction and operation will not necessitate the demolition or relocation of existing housing units. The Project site is currently vacant and zoned Industrial. Since no housing will be displaced, no people will be displaced as a result of Project implementation. Therefore, **no impacts** are anticipated.

Source: Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XV. Public Services				
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:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Public Service Discussion:

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?

i) Fire protection?

Fire protection services are provided to the City of Banning through a contractual agreement with the Riverside County Fire Department, which in turn contracts with the California Department of Forestry CAL FIRE. The contract provides various fire related services, including emergency medical services, fire prevention, disaster preparedness, fire safety inspections, hazardous materials business plan programs and plan reviews. When an emergency call is received, the station that is physically closest to the emergency will respond, even if the emergency is located outside the station's official "jurisdiction." (GP, p. VI-35). Per the Riverside County Fire Department, there are two fire stations located in the City: Fire Station 63, located at 49575 Orchard Road, and Fire Station 89, located at 172 North Murray Road (RCFD). Fire Station 20, located in the City of Beaumont at 1550 E. 6th Street, also responds to fire emergencies that occur in the City. Fire Station 20 is approximately 1.5 miles to the northwest of the Project site and would likely provide emergency response services to the Project site (the closest fire station in the City is Fire Station 89, approximately 2.2 miles to the northeast of the Project). The Riverside County Fire Department is rated as Class 4 by the Insurance Service Office (ISO), a private company, which rates fire departments throughout the country based on a scale of 1 to 10, with Class 1 being the highest possible score. The City aims for a ratio of above 0.70 fire personnel per 1,000 residents, which would be 58 firefighters at General Plan buildout. (GP DEIR, p. III-202).

The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response 14a* above, the Project will not induce population growth and would not necessitate the construction of new governmental facilities or increase the demand for fire protection services. Therefore, **no impacts** are anticipated.

Source: GP; GP DEIR; RCFD

ii. Police protection?

Police protection services within City limits are provided by the Banning Police Department (GP, p. VI-32). The Banning Police Department has 35 sworn officers and maintains a ratio of 1.4 sworn officers for every 1,000 residents (GP DEIR, p. III-200). The City's police station is located at 125 East Ramsey Street, approximately one mile northwest of the Project site.

The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response 14a* above, the Project will not induce population and would not necessitate the construction of new governmental facilities or increase the demand for police protection services. Therefore, **no impacts** are anticipated

Source: GP; GP DEIR

iii. Schools?

The majority of the City is served by the Banning Unified School District, with a small area in the western portion of the City served by the Beaumont Unified School District (GP, pp. VI-24 – VI-25). The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response 14a* above, the Project will not induce population and would not necessitate the construction of new governmental facilities or increase the demand for school services. Therefore, **no impacts** are anticipated.

Source: GP

iv. Parks?

Parks and recreation services within the City are provided by the City Community Services Department. The Riverside County Regional Park and Open Space District also provides recreational facilities and services at County owned parks facilities within the City (GP, p. III-83). The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response 14a* above, the Project will not induce population growth and would not necessitate the construction of new governmental facilities or increase the demand for parks. Therefore, **no impacts** are anticipated.

Source: GP

v. Other public facilities?

Other public facilities in the City include one U.S. Post Office, the Banning Municipal Airport, San Gorgonio Memorial Hospital, and a number of public utility facilities operated by the City Public Works Department. The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response 14a* above, the Project will not

induce population growth and would not necessitate the construction of new governmental facilities or increase the demand for other park facilities. Therefore, **no impacts** are anticipated.

Source: GP

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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?	☐	☐	☐	☒

Recreation Discussion:

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?

Parks and recreation services within the City are provided by the City Community Services Department. The Riverside County Regional Park and Open Space District also provides recreational facilities and services at County owned parks facilities within the City (GP, p. III-83). The proposed Project involves the construction and operation of an electrical substation, curb and gutter, and sidewalk improvements. The proposed Project is an allowable use and is consistent with the City's existing land use and zoning designations. Moreover, as noted in *Response XIV.a.* and *Response XV.a.iv*. above, the Project will not induce population and would not necessitate the construction of new governmental facilities or increase the demand for park facilities. Therefore, **no impacts are anticipated**.

Source: GP

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?

As noted in *Response XV.a.iv.* and *Response XV.Ia.* above, the Project would not necessitate the construction of park facilities, as the Project is an electrical substation. Therefore, **no impacts** are anticipated.

Source: Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

Transportation and Traffic Discussion:

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

Each county in California is required to develop a Congestion Management Program (CMP) that analyzes at the links between land use, transportation and air quality. The Riverside County Transportation Commission (RCTC) is the County of Riverside's Congestion Management Agency. The RCTC prepares and periodically updates the County's CMP to meet federal Congestion Management System guidelines and state CMP legislation. According to Table 2-1-CMP System of Highways and Roadways, in the 2011 Riverside County Congestion Management Program, Interstate 10 and Highway 243 are the only roads in proximity to the Project site listed as part of the CMP System of Highways and Roadways (RCTC CMP). There are currently no bikeways within the planning area. Several Class II and III bikeways have been proposed along City streets. However, development of a network of bikeways is constrained by the existing condition of street rights-of-way (GP, p II-65). The Banning Municipal Transit System and the Beaumont Municipal Transit System, together known as the Pass Area Transit Plan provide transit services to the City of Banning and the City of Beaumont (GP, p III-66).

The Project site is not directly adjacent to Interstate 10 and Highway 243 or near any existing or future transit routes and would not conflict with CPM or transit plan. The Project will provide sidewalk improvements in accordance with the City's GP. Moreover, the Project would not necessitate the closure of roadway or pedestrian facilities during construction or operation activities. Therefore, the Project will not conflict program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, **no impacts** are anticipated.

Source: GP; RCTC CMP

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Senate Bill 743 (SB743) was passed by the California State Legislature and signed into law by Governor Brown in 2013. SB 743 required the Office of Planning and Research and the California Natural Resources Agency to develop alternative methods of measuring transportation impacts under the California Environmental Quality Act (CEQA). In December 2018, the California Natural Resources Agency finalized updates to the CEQA Guidelines, which included SB743. Section 15064.3 of the 2019 CEQA Guidelines provide that transportation impacts of projects are, in general, best measured by evaluating the project's vehicle miles traveled (VMT).

Automobile delay (often called Level of Service) will no longer be considered to be an environmental impact under CEQA. Automobile delay can, however, still be used by agencies to determine local operational impacts.

The provisions of this section are not mandatory until July 1, 2020; however, local agencies may choose to opt in before that date. At the time of preparation of this report, the City of had not updated their procedures to analyze VMT; thus, this Project is not currently subject to section 15064.3 of the 2019 CEQA Guidelines. Impacts would be **less than significant**.

Source: SB 743

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

The Project will not result in changes to the existing roadway configurations and geometrics. The Project does not include any component that will result in an incompatible use of the existing roadways. Thus, the Project would not increase hazards due to a design feature or incompatible use. Therefore, impacts will be **less than significant**.

Source: Project Description

d) Result in inadequate emergency access?

Construction and operation of the proposed Project would not impact emergency access as the Project would construct an electric substation. No road closures during construction or operation are anticipated. The Project will be designed with two access driveways. Moreover, the Project's design will be reviewed by City Planning, Police, and Fire Department staff to ensure that there is sufficient emergency access provided. As the Project will be required to comply with the recommendations of applicable reviewers, it will not result in inadequate emergency access. Therefore, impacts will be **less than significant**.

Source: Project Description

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. Tribal Cultural Resources Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource 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 Resource 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.	☐	☐	☒	☐

Tribal Cultural Resources Discussion:

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 Resource Code section 5020.1(k)

As identified in *Response V.a* above, a *Cultural Resource Constraints Analysis* dated December 4, 2019 was prepared by Applied Earthworks (AE) and no eligible historic properties or significant historical resources have been recorded on the Project site (AE, p. 5). The Sacred Land File Search also indicated that no know cultural resources were identified within the Study Area and within the Project site (AE-A, p. 7). Therefore, impacts will be **less than significant**.

Source: AE

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.

Assembly Bill 52 (AB 52), signed into law in 2014, amended CEQA and established new requirements for tribal notification and consultation. AB 52 applies to all projects for which a notice of preparation or notice of intent to adopt a negative declaration/mitigated negative declaration is issued after July 1, 2015. AB 52 also broadly defines a new resource category of tribal cultural resources and established a more robust process for meaningful consultation that includes:

- prescribed notification and response timelines;
- consultation on alternatives, resource identification, significance determinations, impact evaluation, and mitigation measures; and
- documentation of all consultation efforts to support CEQA findings

Pursuant to the provisions of AB 52, the City of Banning Planning Department sent notification to 13 tribes on November 14, 2019. Of the 13 tribes contacted, the Fort Mojave and Agua Caliente tribes responded requesting additional information. No further consultation or request have been received from the Fort Mojave and Agua Caliente tribes.

Therefore, impacts will be **less than significant**.

Source: City of Banning

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIX. Utilities and Service Systems Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastruction, 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?	☐	☐	☒	☐

Utilities and Service Systems Discussion:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The following entities serve the City residents and businesses, including the Project site: City of Banning Public Works Department–Wastewater Division provides sanitary wastewater services; City Public Works Department provides domestic water service, and the City's Municipal Electric Company provides electric service to the City. The Southern California Gas Company is the natural gas purveyor and Spectrum is the telecommunications purveyor for the City.

The proposed Project consists of the construction of a new electrical substation and the decommissioning of an existing electrical substation to serve the electrical needs of the City. The Project will not require natural gas, water, or wastewater services. The Project will require electrical connection to the City Electric Company. The Project will include sidewalk improvements including curb and gutter along the Project's frontage on the southerly ROW of East Westward Avenue and the westerly ROW of South Hathaway Street. The existing powerline poles on East Westward Avenue and on South Hathaway Street will be relocated to within the ROW to accommodate improvements. Also, the existing fire hydrant on East Westward Avenue, adjacent to the Projects site, will be relocated within the vicinity of the East Westward Avenue and South Hathaway intersection. These improvements and relocations will be conducted along the property edge and existing roadways where environmental effects are minimal due to the lack of resources identified therein. Further, the improvements and relocations will be done in accordance with the City's construction guidelines. Therefore, the proposed Project will result in the relocation of existing powerlines and a fire hydrant; however, the construction and relocation of these utilities will not cause significant environmental effects, and impacts are **less than significant**.

Source: Project Description; GP DEIR

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

The City Public Works Department provides domestic water services to the City of Banning and unincorporated County of Riverside lands located southwesterly of the City limits. The proposed Project is an electrical substation facility that will not create a demand for water, and water usage during construction activities will be only that which is necessary for construction. Therefore, impacts to water supplies will be **less than significant.**

Source: GP DEIR; UWMP

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?

The City of Banning Public Works Department provides sanitary wastewater services to the City of Banning, including the Project site. The proposed Project is an electrical substation facility that will not create a demand for wastewater services. Therefore, impacts will be **less than significant.**

Source: GP DEIR

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?

Solid waste collection and disposal services are provided by Waste Management Inland Empire and trash collected from the City is disposed at the Lamb Canyon Sanitary Landfill, El Sobrante Landfill, and the Badlands Landfill (GP EIR, p. III-211). The Lamb Canyon Landfill has a permitted daily capacity of 5,000 tons per day; El Sobrante Landfill has a permitted capacity of16,054 tons per day; and the Badlands Landfill has a permitted daily capacity of 4,800 tons per day (Cal-R). According to the CalRecycle databases, the Lamb Canyon Landfill will remain operational until 2029, the El Sobrante Landfill until 2051, and the Badlands Landfill will remain operational until 2022 (Cal-R).

The decommissioning of the existing airport substation will generate waste to be disposed of properly in landfills. The City will be responsible to identify where the waste can be disposed of or recycled, if possible. Construction and operation of the proposed Project is not anticipated to generate a significant amount of waste to exceed the landfills that serve the City. Because the landfills that serve the City have sufficient capacity to meet the planned waste generation of the City, impacts to meeting solid waste disposal goals will be **less than significant.**

Source: GP DEIR; CAL-R

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The collection and disposal of solid waste will conform to applicable federal, State, and local plans and regulations, including AB 939 (Integrated Waste Management Act) that requires local jurisdictions divert at least 50 percent of all solid waste. The proposed Project is a City infrastructure project and will adhere to all federal, State and local regulations related to solid waste during construction and operation. Therefore, the proposed Project will comply with federal, state, and local statutes and regulations related to solid waste and impacts will be **less than significant**.

Source: AB 939

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*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?	☐	☐	☒	☐

Wildfire Discussion:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

The GP designates five fire threat zones; No Fuel, Moderate, High, Very High, and Extreme. According to the GP, the proposed Project is within an area classified as High fire threat zone. This zone includes most of the developed central portion of the City along the Interstate 10 freeway (I-10). In this zone, relief is minimal and hardscape (concrete, asphalt and structures) and landscaping vegetation predominate. (GP, p. V63; Exhibit V-10). According to CalFire, the proposed Project borders a LRA to the north and a SRA to the south. The Project is not within or in the vicinity of a very high fire hazard severity zone (CalFire). As such, implementation of the proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant**.

Source: GP, CalFire

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?

As discussed in the *Response XX.a.* above, the Project site is not within or in the vicinity of a very high fire hazard severity zone. Further, the proposed Project propose an electric facility which would only be visited by a few people for infrequent service and maintenance. Therefore, implementation of the proposed Project would not expose Project occupants to pollutants from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors, as the Project site is not within a very high fire hazard severity zone. Impacts would be **less than significant**.

Source: CalFire

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?

As discussed in the *Response XX.a.* above, the Project site is not within or in the vicinity of a very high fire hazard severity zone. The proposed Project would comply with safety construction and operational regulations for the electric facility as required by OSHA and NESC. Therefore, the implementation of the proposed Project would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Impacts would be **less than significant**.

Source: CalFire

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?

As discussed in the *Response XX.a.* above, the Project is within or in the vicinity of very high fire hazard severity zone. The Project site is on relatively flat area and so does not pose a risk to a downslope or downstream flooding or landslides. Moreover, the Project did not change existing drainage patterns. Therefore, impacts to exposing people or structures to significant risk including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, are **less than significant**.

Source: CalFire

ENVIRONMENTAL FACTORS:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
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 an 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?	☐	☒	☐	☐

Mandatory Findings of Significance Discussion:

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 an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed throughout the Initial Study, the proposed Project area contains some sensitive biological resources that could potentially be affected by the project. All potentially significant impacts to biological resources would be avoided or reduced to a less than significant impact with the implementation of mitigation measures **MM BIO-1** through **MM BIO-2** identified in this initial study and measures already incorporated into the project.

The presence of any previously recorded or potential cultural or historic resources were not found on the proposed Project site or within the Project vicinity. Further, the site has been previously disturbed and it is highly unlikely that any cultural resources could exist. However, in order to provide protection in the unlikely event that paleontological resources are unearthed during Project construction, implementation of mitigation measures **MM GEO-1 through MM GEO-3** will reduce potential impacts to less than significant with mitigation.

Thus, the proposed Project will not 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 an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Therefore, impacts will be **less than significant with mitigation**.

Source: Above Initial Study

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)?

As demonstrated by the analysis in this Initial Study, most of the proposed Project's potential impacts are temporary and will cease once construction is complete. The proposed Project will not result in any impacts that are individually limited, but cumulatively considerable. The Project is consistent with local and regional plans, and the Project's air quality emissions do not exceed established thresholds of significance. The Project adheres to all other land use plans and policies with jurisdiction in the Project area, and will not increase traffic volumes within the Project area. The Project is not considered growth-inducing as defined by State *CEQA Guidelines* Section 15126.2(d) and will not induce, either directly or indirectly, population and/or housing growth. Therefore, impacts will be **less than significant**.

Source: Above Initial Study

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

Effects on human beings were evaluated as part of this initial study and found to be less than significant with implementation of mitigation measures in biological resources and paleontological resources.

Based on the analysis and conclusions in this initial study, the proposed Project will not cause substantial adverse effects directly or indirectly to human beings. Therefore, potential direct and indirect impacts on human beings that result from the proposed Project are considered **less than significant with mitigation** incorporated.

Source: Above Initial Study

EARLIER ANALYSES

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations Section 1503 (c) (3) (D).

Earlier Analysis Used, if any: City of Banning, *Draft Environmental Impact Report for the City of Banning Comprehensive General Plan and Zoning Ordinance*, June 2005.

REFERENCES

The following documents were referred to as information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section. Some of these documents may also be available at the Banning Public Library.

Cited As:	Source:
AB 939	California Assembly Bill 939. Integrated Waste Management Act. (Available at https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=198919900AB939, accessed January 8, 2020.)
AE-A	Applied Earthworks, *Cultural Resource Constraints Analysis for the Banning Electric Utility-Ivy Distribution Substation, City of Banning, Riverside County, California,* December 4, 2019. (Appendix B)
AE-B	Applied Earthworks, *Paleontological Memorandum: Constraints Analysis for the Banning Electric Utility-Ivy Distribution Substation Project in the City of Banning, Riverside County, California, December 5*, 2019. (Appendix C)
ALUC	Riverside County, Airport Land Use Commission, *Riverside County Airport Land Use Compatibility Pla– Policy Document - Banning Municipal Airport 2016 Amendment*, 2016. (Available at http://www.rcaluc.org/, accessed January 7, 2020.)
BMC	City of Banning, *California Municipal Code*. (Available at https://www.municode.com/library/ca/banning/codes/code_of_ordinances?nodeId=BANNING_CALIFORNIAMUCO, accessed September 13, 2019.)
BZM	City of Banning, *General Plan with Zoning Overlay*, Updated January 1, 2016. (Available at http://www.ci.banning.ca.us/DocumentCenter/View/4051, accessed January 10, 2020.)
CAH	California Highways, *State Route 43*, November 30, 2019. (Available at https://www.cahighways.org/241-248.html#243, accessed December 6, 2019.)
CalFire	California Department of Forestry and Fire Protection, *Banning-Very High Fire Hazard Severity Zones in LRA,* December 21, 2009 (Available at https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/, accessed January 3, 2020.)
CAL-R	California Department of Resources Recycling and Recovery, *Solid Waste Information System (SWIS)*. (Available at https://www2.calrecycle.ca.gov/SWFacilities/Directory/, accessed on January 8, 2020.)
CARB	California Air Resources Board, *State and Federal Standard Area Designations* webpage, June 12, 2018. (Available at https://www.arb.ca.gov/desig/desig.htm , accessed February 24, 2020.)
CCR	California Code of Regulations. (Available at https://govt.westlaw.com/calregs/Index?transitionType=Default&contextData=%28sc.Default%29, accessed January 7, 2020.)
CFR	Code of Federal Regulations, *Title 49 Transportation*. (Available at http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title49/49tab_02.tpl, accessed January 7, 2020.)
CHSC	California Health and Safety Code. (Available at https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=HSC, accessed January 7, 2020.)

City-A	City of Banning, *Ivy Substation Project Geology and Soils Analysis*, April 27, 2020, (Appendix F).
dBF	dBF Associates, *Noise Impact Analysis,* March 20, 2020, (Appendix E).
DTSC	California Department of Toxic Substances Control, *EnviroStor Database*. (Available at https://www.envirostor.dtsc.ca.gov/public/, accessed January 7, 2020.)
DWR	California Department of Water Resources, *Water Data Library*. (Available at http://wdl.water.ca.gov/waterdatalibrary/, accessed February 6, 2020)
ebidboard.com	Banning MDP Line H, Stage 1 Contractor Bid Advertisement on www.ebidboard.com (Accessed February 19, 2020.)
FEMA	Federal Emergency Management Agency, *Flood Insurance Rate Map Number 06065C0836G*, August 28, 2008. (Available at https://msc.fema.gov/portal/search, accessed January 6, 2020.)
FMMP	California Department of Conservation, *Farmland Mapping and Monitoring Program, Riverside County Important Farmland 2016 West.* (Available online at ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/riv16_w.pdf, accessed September 13, 2019.)
GP	Terra Nova Planning & Research, Inc. *City of Banning General Plan*. Adopted January 31, 2006 (Available at City of Banning.)
GP EIR	City of Banning, *Draft Environmental Impact Report for the City of Banning Comprehensive General Plan and Zoning Ordinance*, June, 2005. (Available at http://www.ci.banning.ca.us/DocumentCenter/Home/Index/19, accessed September 11, 2019.)
HSC 7050.5	California Health and Safety Code, *Division 7, Part 1, Chapter 2, Section 7050.5,* last amended 1987. (Available at http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=7050.5, accessed January 3, 2020.)
MS4	Colorado River Basin Regional Water Quality Control Board, *National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System Permit (MS4 Permit) to the Riverside County Flood Control & Water Conservation District and County of Riverside (as Principal Permittees) and co-permittees (Order No. R7-2013-0011).* (Available at http://rcflood.org/downloads/NPDES/Documents/WW_Other/Final%20Adopted%20Order%20No.R7-2013-0011.pdf, accessed February 19, 2020.)
NRA	Natural Resources Assessment, Inc., *General Biological Resources Assessment Banning Master Drainage Plan Line H, Stage1 Project, Riverside County Flood Control and Water Conservation District*, December 5, 2014. (Available at Riverside County Flood Control)
PRC 5097.98	California Public Resources Code, *Division 5, Chapter 1.75, Section 5097.98,* last amended 2009, effective January 1, 2010. (Available at https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=5097.98.&lawCode=PRC, accessed January 3, 2020.)
RCFCWCD	Riverside County Flood Control & Water Conservation District, *Banning Master Drainage Plan (MDP) Digital Exhibit Map created Nov. 2014*. (Available at http://rcflood.org/Downloads/Master%20Drainage%20Plans/Updated/Zone%205/exhibits/BanningMDPexhibit.pdf, accessed February 19, 2020.)

RCFD	Riverside County Fire Department, Fire Stations. (Available at http://www.rvcfire.org/stationsAndFunctions/FireStations/Pages/default.aspx, accessed January 10, 2020.)
RCLIS	County of Riverside, Riverside County Geographic Information System, *Map My County – Riverside County*. (Available at https://gis.rivcoit.org/, accessed December 7, 2019.)
RCTC CMP	Riverside County Transportation Commission, *2011 Riverside County Congestion Management Program*, December 14, 2011. (Available at Riverside County Transportation Commission) http://www.rctc.org/uploads/media_items/congestionmanagementprogram.original.pdf, accessed January 8, 2020.)
RWQCB	Colorado River Regional Water Quality Control Board, *Water Quality Control Plan for the Colorado River Basin Region, includes amendments effective on or before January 8, 2019.* (Available at https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/bp032014/r7_bp2019cover.jpg, accessed February 19, 2020.)
SB 743	California State Legislature, *Senate Bill No. 743*, September 27, 2013. (Available at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743, accessed January 10, 2020.)
SCAQMD-A	South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003. (Available at http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf , accessed February 24, 2020.)
SCAQMD-B	South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*, April 2019. (Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2, accessed February 24, 2020.)
SCAQMD-C	South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds, accessed February 24, 2020.)
SCAQMD-D	South Coast Air Quality Management District, *Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group Meeting #15*, September 28, 2010. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2 , accessed February 24, 2020
SCAQMD-E	South Coast Air Quality Management District, *Draft Guidance Document- Interim CEQA Greenhouse (GHG) Significance Threshold*, October 2008. (Available at http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2 , accessed February 24, 2020.)
SGMA	California Department of Water Resources, *Sustainable Groundwater Management Act (SGMA) Portal, GSA Map Viewer*. (Available at https://sgma.water.ca.gov/portal/#gsa, accessed February 19, 2020.)
SWRCB	State Water Resources Control Board, *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ, NPDES No. CAS000002*, July 17, 2012. (Available at http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf, accessed on February 19, 2020.)

USDA	United States Department of Agriculture – Natural Resource Conservation Service, *Web Soil Survey,* 2017. (Available at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed on February 18, 2020.)
USACE	United States Army Corps of Engineers, Regional. Corps of Engineers Wetlands Delineation Manual, January 197. (Available at https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf, accessed on February 5, 2020.)
UWMP	Krieger & Stewart Engineering Consultants, *City of Banning 2015 Urban Water Management Plan,* May 2016. (Available at http://www.ci.banning.ca.us/22/WaterWastewater, accessed on January 8, 2020.)
WEBB-A	Albert A. Webb Associates, *California Air Emissions Estimator Model (CalEEMod) Output Files*, February 2020. (Appendix A)
WOOD-A	WOOD, *Western Riverside County Multiple Species Habitat Consistency Plan Consistency Analysis City of Banning Ivy Substation Project, California*, December 5, 2019. (Appendix D)
WOOD-B	WOOD, *Ivy Substation Project Focused Surveys for Burrowing Owl*, May 2020, (Appendix D-1).

LIST OF INITIAL STUDY PREPARERS

Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

Planning and Environmental Services Department
Stephanie Standerfer, Vice President
Emily Webb, Senior Entitlement Specialist
Eliza Laws, Senior Environmental Analyst
Autumn DeWoody, Senior Environmental Analyst

Ivy Substation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.74	Acre	1.74	75,794.40	0
Other Asphalt Surfaces	0.59	Acre	0.59	25,700.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use - Per Engineer

Construction Phase -

Off-road Equipment - Per City

Off-road Equipment - Per City

Off-road Equipment - Per City

Trips and VMT - 10-one way truck trips for material delivery/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	5/13/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	7/9/2020	6/8/2020
tblConstructionPhase	PhaseEndDate	5/27/2021	4/12/2021
tblConstructionPhase	PhaseStartDate	7/10/2020	6/9/2020
tblConstructionPhase	PhaseStartDate	7/2/2020	6/1/2020
tblConstructionPhase	PhaseStartDate	5/14/2021	3/30/2021
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.2925	26.7740	23.5670	0.0504	6.7058	1.3040	7.6020	3.4096	1.2484	4.2343	0.0000	4,797.5581	4,797.5581	0.9170	0.0000	4,820.4825
2021	4.0443	33.0697	33.3993	0.0669	0.7348	1.5841	2.3189	0.1973	1.4999	1.6972	0.0000	6,379.6770	6,379.6770	1.3610	0.0000	6,413.7014
Maximum	**4.0443**	**33.0697**	**33.3993**	**0.0669**	**6.7058**	**1.5841**	**7.6020**	**3.4096**	**1.4999**	**4.2343**	**0.0000**	**6,379.6770**	**6,379.6770**	**1.3610**	**0.0000**	**6,413.7014**

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					
2020	3.2925	26.7740	23.5670	0.0504	2.7088	1.3040	3.6050	1.3555	1.2484	2.1802	0.0000	4,797.5581	4,797.5581	0.9170	0.0000	4,820.4825
2021	4.0443	33.0697	33.3993	0.0669	0.7348	1.5841	2.3189	0.1973	1.4999	1.6972	0.0000	6,379.6770	6,379.6770	1.3610	0.0000	6,413.7014
Maximum	**4.0443**	**33.0697**	**33.3993**	**0.0669**	**2.7088**	**1.5841**	**3.6050**	**1.3555**	**1.4999**	**2.1802**	**0.0000**	**6,379.6770**	**6,379.6770**	**1.3610**	**0.0000**	**6,413.7014**

	ROG	NOx	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**	**53.72**	**0.00**	**40.29**	**56.95**	**0.00**	**34.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-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
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**0.0000**	**5.4000e-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	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-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
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**0.0000**	**5.4000e-004**

	ROG	NOx	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	Grading	Grading	6/1/2020	6/8/2020	5	6	
2	Building Construction	Building Construction	6/9/2020	4/12/2021	5	220	
3	Paving	Paving	3/30/2021	4/12/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 2.33

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
Building Construction	Air Compressors	1	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2020

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.7648	19.7629	8.2258	0.0183		0.8903	0.8903		0.8191	0.8191		1,770.8297	1,770.8297	0.5727		1,785.1477
Total	**1.7648**	**19.7629**	**8.2258**	**0.0183**	**6.5523**	**0.8903**	**7.4427**	**3.3675**	**0.8191**	**4.1866**		**1,770.8297**	**1,770.8297**	**0.5727**		**1,785.1477**

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
Vendor	0.0328	1.0494	0.2499	2.5700e-003	0.0640	5.2000e-003	0.0692	0.0184	4.9700e-003	0.0234		274.4485	274.4485	0.0172		274.8792
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0690**	**1.0737**	**0.5769**	**3.4900e-003**	**0.1534**	**5.8800e-003**	**0.1593**	**0.0421**	**5.5900e-003**	**0.0477**		**366.0019**	**366.0019**	**0.0199**		**366.4984**

3.2 Grading - 2020

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.7648	19.7629	8.2258	0.0183		0.8903	0.8903		0.8191	0.8191	0.0000	1,770.8297	1,770.8297	0.5727		1,785.1477
Total	**1.7648**	**19.7629**	**8.2258**	**0.0183**	**2.5554**	**0.8903**	**3.4457**	**1.3133**	**0.8191**	**2.1324**	**0.0000**	**1,770.8297**	**1,770.8297**	**0.5727**		**1,785.1477**

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
Vendor	0.0328	1.0494	0.2499	2.5700e-003	0.0640	5.2000e-003	0.0692	0.0184	4.9700e-003	0.0234		274.4485	274.4485	0.0172		274.8792
Worker	0.0362	0.0243	0.3271	9.2000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		91.5534	91.5534	2.6300e-003		91.6192
Total	**0.0690**	**1.0737**	**0.5769**	**3.4900e-003**	**0.1534**	**5.8800e-003**	**0.1593**	**0.0421**	**5.5900e-003**	**0.0477**		**366.0019**	**366.0019**	**0.0199**		**366.4984**

3.3 Building Construction - 2020

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	3.0421	24.8593	21.3843	0.0411		1.2915	1.2915		1.2366	1.2366		3,838.8962	3,838.8962	0.8735		3,860.7346
Total	**3.0421**	**24.8593**	**21.3843**	**0.0411**		**1.2915**	**1.2915**		**1.2366**	**1.2366**		**3,838.8962**	**3,838.8962**	**0.8735**		**3,860.7346**

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
Vendor	0.0558	1.7839	0.4248	4.3700e-003	0.1088	8.8400e-003	0.1176	0.0313	8.4500e-003	0.0398		466.5624	466.5624	0.0293		467.2947
Worker	0.1946	0.1308	1.7579	4.9400e-003	0.4806	3.6500e-003	0.4843	0.1275	3.3600e-003	0.1308		492.0995	492.0995	0.0142		492.4532
Total	**0.2504**	**1.9147**	**2.1827**	**9.3100e-003**	**0.5894**	**0.0125**	**0.6019**	**0.1588**	**0.0118**	**0.1706**		**958.6619**	**958.6619**	**0.0434**		**959.7479**

3.3 Building Construction - 2020

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	3.0421	24.8593	21.3843	0.0411		1.2915	1.2915		1.2366	1.2366	0.0000	3,838.8962	3,838.8962	0.8735		3,860.7346
Total	**3.0421**	**24.8593**	**21.3843**	**0.0411**		**1.2915**	**1.2915**		**1.2366**	**1.2366**	**0.0000**	**3,838.8962**	**3,838.8962**	**0.8735**		**3,860.7346**

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
Vendor	0.0558	1.7839	0.4248	4.3700e-003	0.1088	8.8400e-003	0.1176	0.0313	8.4500e-003	0.0398		466.5624	466.5624	0.0293		467.2947
Worker	0.1946	0.1308	1.7579	4.9400e-003	0.4806	3.6500e-003	0.4843	0.1275	3.3600e-003	0.1308		492.0995	492.0995	0.0142		492.4532
Total	**0.2504**	**1.9147**	**2.1827**	**9.3100e-003**	**0.5894**	**0.0125**	**0.6019**	**0.1588**	**0.0118**	**0.1706**		**958.6619**	**958.6619**	**0.0434**		**959.7479**

3.3 Building Construction - 2021

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	2.7322	22.5715	21.0097	0.0411		1.1113	1.1113		1.0636	1.0636		3,841.3640	3,841.3640	0.8568		3,862.7838
Total	**2.7322**	**22.5715**	**21.0097**	**0.0411**		**1.1113**	**1.1113**		**1.0636**	**1.0636**		**3,841.3640**	**3,841.3640**	**0.8568**		**3,862.7838**

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
Vendor	0.0473	1.6214	0.3848	4.3400e-003	0.1088	3.2700e-003	0.1121	0.0313	3.1200e-003	0.0345		463.1454	463.1454	0.0280		463.8458
Worker	0.1815	0.1177	1.6199	4.7800e-003	0.4806	3.5400e-003	0.4842	0.1275	3.2600e-003	0.1307		476.1834	476.1834	0.0128		476.5036
Total	**0.2288**	**1.7391**	**2.0047**	**9.1200e-003**	**0.5894**	**6.8100e-003**	**0.5963**	**0.1588**	**6.3800e-003**	**0.1652**		**939.3288**	**939.3288**	**0.0408**		**940.3494**

3.3 Building Construction - 2021

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	2.7322	22.5715	21.0097	0.0411		1.1113	1.1113		1.0636	1.0636	0.0000	3,841.3640	3,841.3640	0.8568		3,862.7838
Total	**2.7322**	**22.5715**	**21.0097**	**0.0411**		**1.1113**	**1.1113**		**1.0636**	**1.0636**	**0.0000**	**3,841.3640**	**3,841.3640**	**0.8568**		**3,862.7838**

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
Vendor	0.0473	1.6214	0.3848	4.3400e-003	0.1088	3.2700e-003	0.1121	0.0313	3.1200e-003	0.0345		463.1454	463.1454	0.0280		463.8458
Worker	0.1815	0.1177	1.6199	4.7800e-003	0.4806	3.5400e-003	0.4842	0.1275	3.2600e-003	0.1307		476.1834	476.1834	0.0128		476.5036
Total	**0.2288**	**1.7391**	**2.0047**	**9.1200e-003**	**0.5894**	**6.8100e-003**	**0.5963**	**0.1588**	**6.3800e-003**	**0.1652**		**939.3288**	**939.3288**	**0.0408**		**940.3494**

3.4 Paving - 2021

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	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.1546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0284**	**8.7235**	**9.8952**	**0.0152**		**0.4650**	**0.4650**		**0.4289**	**0.4289**		**1,455.0218**	**1,455.0218**	**0.4595**		**1,466.5091**

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
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
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0549**	**0.0356**	**0.4897**	**1.4400e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**143.9624**	**143.9624**	**3.8700e-003**		**144.0592**

3.4 Paving - 2021

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	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.1546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0284**	**8.7235**	**9.8952**	**0.0152**		**0.4650**	**0.4650**		**0.4289**	**0.4289**	**0.0000**	**1,455.0218**	**1,455.0218**	**0.4595**		**1,466.5091**

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
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
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0549**	**0.0356**	**0.4897**	**1.4400e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**143.9624**	**143.9624**	**3.8700e-003**		**144.0592**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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**

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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Unmitigated	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004

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	7.7300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0360					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

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	7.7300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0360					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Ivy Substation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.74	Acre	1.74	75,794.40	0
Other Asphalt Surfaces	0.59	Acre	0.59	25,700.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use - Per Engineer

Construction Phase -

Off-road Equipment - Per City

Off-road Equipment - Per City

Off-road Equipment - Per City

Trips and VMT - 10-one way truck trips for material delivery/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	5/13/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	7/9/2020	6/8/2020
tblConstructionPhase	PhaseEndDate	5/27/2021	4/12/2021
tblConstructionPhase	PhaseStartDate	7/10/2020	6/9/2020
tblConstructionPhase	PhaseStartDate	7/2/2020	6/1/2020
tblConstructionPhase	PhaseStartDate	5/14/2021	3/30/2021
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.3128	26.7845	23.4406	0.0500	6.7058	1.3041	7.6020	3.4096	1.2485	4.2344	0.0000	4,752.2249	4,752.2249	0.9182	0.0000	4,775.1798
2021	4.0686	33.0791	33.2313	0.0664	0.7348	1.5842	2.3190	0.1973	1.5000	1.6973	0.0000	6,326.0951	6,326.0951	1.3619	0.0000	6,360.1431
Maximum	**4.0686**	**33.0791**	**33.2313**	**0.0664**	**6.7058**	**1.5842**	**7.6020**	**3.4096**	**1.5000**	**4.2344**	**0.0000**	**6,326.0951**	**6,326.0951**	**1.3619**	**0.0000**	**6,360.1431**

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					
2020	3.3128	26.7845	23.4406	0.0500	2.7088	1.3041	3.6051	1.3555	1.2485	2.1802	0.0000	4,752.2249	4,752.2249	0.9182	0.0000	4,775.1798
2021	4.0686	33.0791	33.2313	0.0664	0.7348	1.5842	2.3190	0.1973	1.5000	1.6973	0.0000	6,326.0951	6,326.0951	1.3619	0.0000	6,360.1430
Maximum	**4.0686**	**33.0791**	**33.2313**	**0.0664**	**2.7088**	**1.5842**	**3.6051**	**1.3555**	**1.5000**	**2.1802**	**0.0000**	**6,326.0951**	**6,326.0951**	**1.3619**	**0.0000**	**6,360.1430**

	ROG	NOx	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**	**53.72**	**0.00**	**40.29**	**56.95**	**0.00**	**34.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-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
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**0.0000**	**5.4000e-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	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-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
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**0.0000**	**5.4000e-004**

	ROG	NOx	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	Grading	Grading	6/1/2020	6/8/2020	5	6	
2	Building Construction	Building Construction	6/9/2020	4/12/2021	5	220	
3	Paving	Paving	3/30/2021	4/12/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 2.33

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
Building Construction	Air Compressors	1	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2020

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.7648	19.7629	8.2258	0.0183		0.8903	0.8903		0.8191	0.8191		1,770.8297	1,770.8297	0.5727		1,785.1477
Total	**1.7648**	**19.7629**	**8.2258**	**0.0183**	**6.5523**	**0.8903**	**7.4427**	**3.3675**	**0.8191**	**4.1866**		**1,770.8297**	**1,770.8297**	**0.5727**		**1,785.1477**

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
Vendor	0.0344	1.0483	0.2786	2.5000e-003	0.0640	5.2800e-003	0.0693	0.0184	5.0500e-003	0.0235		266.5128	266.5128	0.0185		266.9755
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0739**	**1.0749**	**0.5731**	**3.3600e-003**	**0.1534**	**5.9600e-003**	**0.1594**	**0.0421**	**5.6700e-003**	**0.0478**		**352.1420**	**352.1420**	**0.0210**		**352.6661**

3.2 Grading - 2020

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	1.7648	19.7629	8.2258	0.0183		0.8903	0.8903		0.8191	0.8191	0.0000	1,770.8297	1,770.8297	0.5727		1,785.1477
Total	**1.7648**	**19.7629**	**8.2258**	**0.0183**	**2.5554**	**0.8903**	**3.4457**	**1.3133**	**0.8191**	**2.1324**	**0.0000**	**1,770.8297**	**1,770.8297**	**0.5727**		**1,785.1477**

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
Vendor	0.0344	1.0483	0.2786	2.5000e-003	0.0640	5.2800e-003	0.0693	0.0184	5.0500e-003	0.0235		266.5128	266.5128	0.0185		266.9755
Worker	0.0395	0.0266	0.2945	8.6000e-004	0.0894	6.8000e-004	0.0901	0.0237	6.2000e-004	0.0243		85.6292	85.6292	2.4600e-003		85.6906
Total	**0.0739**	**1.0749**	**0.5731**	**3.3600e-003**	**0.1534**	**5.9600e-003**	**0.1594**	**0.0421**	**5.6700e-003**	**0.0478**		**352.1420**	**352.1420**	**0.0210**		**352.6661**

3.3 Building Construction - 2020

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	3.0421	24.8593	21.3843	0.0411		1.2915	1.2915		1.2366	1.2366		3,838.8962	3,838.8962	0.8735		3,860.7346
Total	**3.0421**	**24.8593**	**21.3843**	**0.0411**		**1.2915**	**1.2915**		**1.2366**	**1.2366**		**3,838.8962**	**3,838.8962**	**0.8735**		**3,860.7346**

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
Vendor	0.0585	1.7821	0.4736	4.2500e-003	0.1088	8.9700e-003	0.1178	0.0313	8.5800e-003	0.0399		453.0718	453.0718	0.0315		453.8583
Worker	0.2122	0.1432	1.5828	4.6200e-003	0.4806	3.6500e-003	0.4843	0.1275	3.3600e-003	0.1308		460.2569	460.2569	0.0132		460.5869
Total	**0.2707**	**1.9252**	**2.0564**	**8.8700e-003**	**0.5894**	**0.0126**	**0.6021**	**0.1588**	**0.0119**	**0.1707**		**913.3287**	**913.3287**	**0.0447**		**914.4452**

3.3 Building Construction - 2020

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	3.0421	24.8593	21.3843	0.0411		1.2915	1.2915		1.2366	1.2366	0.0000	3,838.8962	3,838.8962	0.8735		3,860.7346
Total	**3.0421**	**24.8593**	**21.3843**	**0.0411**		**1.2915**	**1.2915**		**1.2366**	**1.2366**	**0.0000**	**3,838.8962**	**3,838.8962**	**0.8735**		**3,860.7346**

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
Vendor	0.0585	1.7821	0.4736	4.2500e-003	0.1088	8.9700e-003	0.1178	0.0313	8.5800e-003	0.0399		453.0718	453.0718	0.0315		453.8583
Worker	0.2122	0.1432	1.5828	4.6200e-003	0.4806	3.6500e-003	0.4843	0.1275	3.3600e-003	0.1308		460.2569	460.2569	0.0132		460.5869
Total	**0.2707**	**1.9252**	**2.0564**	**8.8700e-003**	**0.5894**	**0.0126**	**0.6021**	**0.1588**	**0.0119**	**0.1707**		**913.3287**	**913.3287**	**0.0447**		**914.4452**

3.3 Building Construction - 2021

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	2.7322	22.5715	21.0097	0.0411		1.1113	1.1113		1.0636	1.0636		3,841.3640	3,841.3640	0.8568		3,862.7838
Total	**2.7322**	**22.5715**	**21.0097**	**0.0411**		**1.1113**	**1.1113**		**1.0636**	**1.0636**		**3,841.3640**	**3,841.3640**	**0.8568**		**3,862.7838**

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
Vendor	0.0498	1.6163	0.4306	4.2100e-003	0.1088	3.3700e-003	0.1122	0.0313	3.2200e-003	0.0346		449.7353	449.7353	0.0301		450.4876
Worker	0.1983	0.1289	1.4557	4.4700e-003	0.4806	3.5400e-003	0.4842	0.1275	3.2600e-003	0.1307		445.3372	445.3372	0.0119		445.6356
Total	**0.2481**	**1.7451**	**1.8863**	**8.6800e-003**	**0.5894**	**6.9100e-003**	**0.5964**	**0.1588**	**6.4800e-003**	**0.1653**		**895.0725**	**895.0725**	**0.0420**		**896.1232**

3.3 Building Construction - 2021

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	2.7322	22.5715	21.0097	0.0411		1.1113	1.1113		1.0636	1.0636	0.0000	3,841.3640	3,841.3640	0.8568		3,862.7838
Total	**2.7322**	**22.5715**	**21.0097**	**0.0411**		**1.1113**	**1.1113**		**1.0636**	**1.0636**	**0.0000**	**3,841.3640**	**3,841.3640**	**0.8568**		**3,862.7838**

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
Vendor	0.0498	1.6163	0.4306	4.2100e-003	0.1088	3.3700e-003	0.1122	0.0313	3.2200e-003	0.0346		449.7353	449.7353	0.0301		450.4876
Worker	0.1983	0.1289	1.4557	4.4700e-003	0.4806	3.5400e-003	0.4842	0.1275	3.2600e-003	0.1307		445.3372	445.3372	0.0119		445.6356
Total	**0.2481**	**1.7451**	**1.8863**	**8.6800e-003**	**0.5894**	**6.9100e-003**	**0.5964**	**0.1588**	**6.4800e-003**	**0.1653**		**895.0725**	**895.0725**	**0.0420**		**896.1232**

3.4 Paving - 2021

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	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289		1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.1546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0284**	**8.7235**	**9.8952**	**0.0152**		**0.4650**	**0.4650**		**0.4289**	**0.4289**		**1,455.0218**	**1,455.0218**	**0.4595**		**1,466.5091**

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
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
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0600**	**0.0390**	**0.4401**	**1.3500e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**134.6368**	**134.6368**	**3.6100e-003**		**134.7270**

3.4 Paving - 2021

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	0.8738	8.7235	9.8952	0.0152		0.4650	0.4650		0.4289	0.4289	0.0000	1,455.0218	1,455.0218	0.4595		1,466.5091
Paving	0.1546					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0284**	**8.7235**	**9.8952**	**0.0152**		**0.4650**	**0.4650**		**0.4289**	**0.4289**	**0.0000**	**1,455.0218**	**1,455.0218**	**0.4595**		**1,466.5091**

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
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
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0600**	**0.0390**	**0.4401**	**1.3500e-003**	**0.1453**	**1.0700e-003**	**0.1464**	**0.0385**	**9.9000e-004**	**0.0395**		**134.6368**	**134.6368**	**3.6100e-003**		**134.7270**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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**

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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Unmitigated	0.0437	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004

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	7.7300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0360					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

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	7.7300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0360					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		5.1000e-004	5.1000e-004	0.0000		5.4000e-004
Total	**0.0437**	**0.0000**	**2.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.1000e-004**	**5.1000e-004**	**0.0000**		**5.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Ivy Substation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.74	Acre	1.74	75,794.40	0
Other Asphalt Surfaces	0.59	Acre	0.59	25,700.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use - Per Engineer

Construction Phase -

Off-road Equipment - Per City

Off-road Equipment - Per City

Off-road Equipment - Per City

Trips and VMT - 10-one way truck trips for material delivery/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Ivy Substation - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	5/13/2021	4/12/2021
tblConstructionPhase	PhaseEndDate	7/9/2020	6/8/2020
tblConstructionPhase	PhaseEndDate	5/27/2021	4/12/2021
tblConstructionPhase	PhaseStartDate	7/10/2020	6/9/2020
tblConstructionPhase	PhaseStartDate	7/2/2020	6/1/2020
tblConstructionPhase	PhaseStartDate	5/14/2021	3/30/2021
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2490	2.0473	1.7626	3.7800e-003	0.0630	0.0992	0.1621	0.0218	0.0949	0.1166	0.0000	325.8741	325.8741	0.0632	0.0000	327.4538
2021	0.1120	0.9204	0.8767	1.8800e-003	0.0216	0.0426	0.0641	5.8100e-003	0.0407	0.0465	0.0000	162.4102	162.4102	0.0314	0.0000	163.1958
Maximum	**0.2490**	**2.0473**	**1.7626**	**3.7800e-003**	**0.0630**	**0.0992**	**0.1621**	**0.0218**	**0.0949**	**0.1166**	**0.0000**	**325.8741**	**325.8741**	**0.0632**	**0.0000**	**327.4538**

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					
2020	0.2490	2.0473	1.7626	3.7800e-003	0.0510	0.0992	0.1502	0.0156	0.0949	0.1105	0.0000	325.8738	325.8738	0.0632	0.0000	327.4535
2021	0.1120	0.9204	0.8767	1.8800e-003	0.0216	0.0426	0.0641	5.8100e-003	0.0407	0.0465	0.0000	162.4100	162.4100	0.0314	0.0000	163.1956
Maximum	**0.2490**	**2.0473**	**1.7626**	**3.7800e-003**	**0.0510**	**0.0992**	**0.1502**	**0.0156**	**0.0949**	**0.1105**	**0.0000**	**325.8738**	**325.8738**	**0.0632**	**0.0000**	**327.4535**

	ROG	NOx	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**	**14.19**	**0.00**	**5.30**	**22.36**	**0.00**	**3.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.9668	0.9668
2	9-1-2020	11-30-2020	0.9778	0.9778
3	12-1-2020	2-28-2021	0.9084	0.9084
4	3-1-2021	5-31-2021	0.4683	0.4683
		Highest	0.9778	0.9778

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	7.9700e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9700e-003**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

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	7.9700e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9700e-003**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

	ROG	NOx	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	Grading	Grading	6/1/2020	6/8/2020	5	6	
2	Building Construction	Building Construction	6/9/2020	4/12/2021	5	220	
3	Paving	Paving	3/30/2021	4/12/2021	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 2.33

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
Building Construction	Air Compressors	1	8.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2020

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					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2900e-003	0.0593	0.0247	5.0000e-005		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	4.8194	4.8194	1.5600e-003	0.0000	4.8584
Total	**5.2900e-003**	**0.0593**	**0.0247**	**5.0000e-005**	**0.0197**	**2.6700e-003**	**0.0223**	**0.0101**	**2.4600e-003**	**0.0126**	**0.0000**	**4.8194**	**4.8194**	**1.5600e-003**	**0.0000**	**4.8584**

3.2 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.2000e-003	7.9000e-004	1.0000e-005	1.9000e-004	2.0000e-005	2.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.7379	0.7379	5.0000e-005	0.0000	0.7391
Worker	1.1000e-004	8.0000e-005	9.1000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2370	0.2370	1.0000e-005	0.0000	0.2372
Total	**2.1000e-004**	**3.2800e-003**	**1.7000e-003**	**1.0000e-005**	**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**0.0000**	**0.9749**	**0.9749**	**6.0000e-005**	**0.0000**	**0.9763**

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					7.6700e-003	0.0000	7.6700e-003	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2900e-003	0.0593	0.0247	5.0000e-005		2.6700e-003	2.6700e-003		2.4600e-003	2.4600e-003	0.0000	4.8194	4.8194	1.5600e-003	0.0000	4.8584
Total	**5.2900e-003**	**0.0593**	**0.0247**	**5.0000e-005**	**7.6700e-003**	**2.6700e-003**	**0.0103**	**3.9400e-003**	**2.4600e-003**	**6.4000e-003**	**0.0000**	**4.8194**	**4.8194**	**1.5600e-003**	**0.0000**	**4.8584**

3.2 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-004	3.2000e-003	7.9000e-004	1.0000e-005	1.9000e-004	2.0000e-005	2.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.7379	0.7379	5.0000e-005	0.0000	0.7391
Worker	1.1000e-004	8.0000e-005	9.1000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2370	0.2370	1.0000e-005	0.0000	0.2372
Total	**2.1000e-004**	**3.2800e-003**	**1.7000e-003**	**1.0000e-005**	**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**0.0000**	**0.9749**	**0.9749**	**6.0000e-005**	**0.0000**	**0.9763**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2251	1.8396	1.5824	3.0400e-003		0.0956	0.0956		0.0915	0.0915	0.0000	257.7115	257.7115	0.0586	0.0000	259.1776
Total	**0.2251**	**1.8396**	**1.5824**	**3.0400e-003**		**0.0956**	**0.0956**		**0.0915**	**0.0915**	**0.0000**	**257.7115**	**257.7115**	**0.0586**	**0.0000**	**259.1776**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2100e-003	0.1343	0.0333	3.2000e-004	7.9300e-003	6.6000e-004	8.5900e-003	2.2900e-003	6.3000e-004	2.9200e-003	0.0000	30.9408	30.9408	2.0300e-003	0.0000	30.9915
Worker	0.0142	0.0109	0.1205	3.5000e-004	0.0349	2.7000e-004	0.0352	9.2700e-003	2.5000e-004	9.5200e-003	0.0000	31.4275	31.4275	9.0000e-004	0.0000	31.4501
Total	**0.0184**	**0.1451**	**0.1538**	**6.7000e-004**	**0.0428**	**9.3000e-004**	**0.0438**	**0.0116**	**8.8000e-004**	**0.0124**	**0.0000**	**62.3683**	**62.3683**	**2.9300e-003**	**0.0000**	**62.4416**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2251	1.8396	1.5824	3.0400e-003		0.0956	0.0956		0.0915	0.0915	0.0000	257.7112	257.7112	0.0586	0.0000	259.1773
Total	**0.2251**	**1.8396**	**1.5824**	**3.0400e-003**		**0.0956**	**0.0956**		**0.0915**	**0.0915**	**0.0000**	**257.7112**	**257.7112**	**0.0586**	**0.0000**	**259.1773**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2100e-003	0.1343	0.0333	3.2000e-004	7.9300e-003	6.6000e-004	8.5900e-003	2.2900e-003	6.3000e-004	2.9200e-003	0.0000	30.9408	30.9408	2.0300e-003	0.0000	30.9915
Worker	0.0142	0.0109	0.1205	3.5000e-004	0.0349	2.7000e-004	0.0352	9.2700e-003	2.5000e-004	9.5200e-003	0.0000	31.4275	31.4275	9.0000e-004	0.0000	31.4501
Total	**0.0184**	**0.1451**	**0.1538**	**6.7000e-004**	**0.0428**	**9.3000e-004**	**0.0438**	**0.0116**	**8.8000e-004**	**0.0124**	**0.0000**	**62.3683**	**62.3683**	**2.9300e-003**	**0.0000**	**62.4416**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0984	0.8126	0.7564	1.4800e-003		0.0400	0.0400		0.0383	0.0383	0.0000	125.4538	125.4538	0.0280	0.0000	126.1533
Total	**0.0984**	**0.8126**	**0.7564**	**1.4800e-003**		**0.0400**	**0.0400**		**0.0383**	**0.0383**	**0.0000**	**125.4538**	**125.4538**	**0.0280**	**0.0000**	**126.1533**

3.3 Building Construction - 2021

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	1.7400e-003	0.0592	0.0147	1.5000e-004	3.8600e-003	1.2000e-004	3.9800e-003	1.1100e-003	1.1000e-004	1.2300e-003	0.0000	14.9418	14.9418	9.4000e-004	0.0000	14.9654
Worker	6.4500e-003	4.7700e-003	0.0539	1.6000e-004	0.0170	1.3000e-004	0.0171	4.5100e-003	1.2000e-004	4.6300e-003	0.0000	14.7936	14.7936	4.0000e-004	0.0000	14.8035
Total	**8.1900e-003**	**0.0640**	**0.0686**	**3.1000e-004**	**0.0208**	**2.5000e-004**	**0.0211**	**5.6200e-003**	**2.3000e-004**	**5.8600e-003**	**0.0000**	**29.7354**	**29.7354**	**1.3400e-003**	**0.0000**	**29.7689**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0984	0.8126	0.7564	1.4800e-003		0.0400	0.0400		0.0383	0.0383	0.0000	125.4536	125.4536	0.0280	0.0000	126.1532
Total	**0.0984**	**0.8126**	**0.7564**	**1.4800e-003**		**0.0400**	**0.0400**		**0.0383**	**0.0383**	**0.0000**	**125.4536**	**125.4536**	**0.0280**	**0.0000**	**126.1532**

3.3 Building Construction - 2021

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	1.7400e-003	0.0592	0.0147	1.5000e-004	3.8600e-003	1.2000e-004	3.9800e-003	1.1100e-003	1.1000e-004	1.2300e-003	0.0000	14.9418	14.9418	9.4000e-004	0.0000	14.9654
Worker	6.4500e-003	4.7700e-003	0.0539	1.6000e-004	0.0170	1.3000e-004	0.0171	4.5100e-003	1.2000e-004	4.6300e-003	0.0000	14.7936	14.7936	4.0000e-004	0.0000	14.8035
Total	**8.1900e-003**	**0.0640**	**0.0686**	**3.1000e-004**	**0.0208**	**2.5000e-004**	**0.0211**	**5.6200e-003**	**2.3000e-004**	**5.8600e-003**	**0.0000**	**29.7354**	**29.7354**	**1.3400e-003**	**0.0000**	**29.7689**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3700e-003	0.0436	0.0495	8.0000e-005		2.3200e-003	2.3200e-003		2.1400e-003	2.1400e-003	0.0000	6.5999	6.5999	2.0800e-003	0.0000	6.6520
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.1400e-003**	**0.0436**	**0.0495**	**8.0000e-005**		**2.3200e-003**	**2.3200e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**6.5999**	**6.5999**	**2.0800e-003**	**0.0000**	**6.6520**

3.4 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.2700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6212	0.6212	2.0000e-005	0.0000	0.6216
Total	**2.7000e-004**	**2.0000e-004**	**2.2700e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6212**	**0.6212**	**2.0000e-005**	**0.0000**	**0.6216**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3700e-003	0.0436	0.0495	8.0000e-005		2.3200e-003	2.3200e-003		2.1400e-003	2.1400e-003	0.0000	6.5999	6.5999	2.0800e-003	0.0000	6.6520
Paving	7.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.1400e-003**	**0.0436**	**0.0495**	**8.0000e-005**		**2.3200e-003**	**2.3200e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**6.5999**	**6.5999**	**2.0800e-003**	**0.0000**	**6.6520**

3.4 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	2.2700e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6212	0.6212	2.0000e-005	0.0000	0.6216
Total	**2.7000e-004**	**2.0000e-004**	**2.2700e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6212**	**0.6212**	**2.0000e-005**	**0.0000**	**0.6216**

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
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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

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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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					
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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

	ROG	NOx	CO	SO2	Fugitive 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	7.9700e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-005
Unmitigated	7.9700e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5600e-003					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	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-005
Total	**7.9700e-003**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5600e-003					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	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.0000e-005	6.0000e-005	0.0000	0.0000	6.0000e-005
Total	**7.9700e-003**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	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			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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

Institute Recycling and Composting Services

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Ivy Substation- Decommissioning Airport Substation

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use -

Construction Phase - Per Engineer

Off-road Equipment - Per City

Off-road Equipment - Per Engineer

Trips and VMT - 8-one way truck trips for material removal/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Ivy Substation- Decommissioning Airport Substation - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	262.00
tblConstructionPhase	PhaseEndDate	10/13/2021	10/12/2022
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.1791	12.4886	10.5951	0.0201	0.1965	0.6176	0.8142	0.0533	0.5683	0.6216	0.0000	1,968.4625	1,968.4625	0.5366	0.0000	1,981.8786
2022	1.0512	11.0004	10.3773	0.0200	0.1965	0.5156	0.7121	0.0533	0.4744	0.5276	0.0000	1,962.5083	1,962.5083	0.5361	0.0000	1,975.9118
Maximum	**1.1791**	**12.4886**	**10.5951**	**0.0201**	**0.1965**	**0.6176**	**0.8142**	**0.0533**	**0.5683**	**0.6216**	**0.0000**	**1,968.4625**	**1,968.4625**	**0.5366**	**0.0000**	**1,981.8786**

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					
2021	1.1791	12.4886	10.5951	0.0201	0.1965	0.6176	0.8142	0.0533	0.5683	0.6216	0.0000	1,968.4625	1,968.4625	0.5366	0.0000	1,981.8786
2022	1.0512	11.0004	10.3773	0.0200	0.1965	0.5156	0.7121	0.0533	0.4744	0.5276	0.0000	1,962.5083	1,962.5083	0.5361	0.0000	1,975.9118
Maximum	**1.1791**	**12.4886**	**10.5951**	**0.0201**	**0.1965**	**0.6176**	**0.8142**	**0.0533**	**0.5683**	**0.6216**	**0.0000**	**1,968.4625**	**1,968.4625**	**0.5366**	**0.0000**	**1,981.8786**

	ROG	NOx	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**

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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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
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
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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
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
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

	ROG	NOx	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	Grading	Grading	10/12/2021	10/12/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.23

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
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Forklifts	1	8.00	89	0.20
Grading	Cranes	1	8.00	231	0.29

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
Grading	5	13.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2021

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1020	11.6900	9.9243	0.0166		0.6150	0.6150		0.5658	0.5658		1,606.5493	1,606.5493	0.5196		1,619.5390
Total	**1.1020**	**11.6900**	**9.9243**	**0.0166**	**0.0000**	**0.6150**	**0.6150**	**0.0000**	**0.5658**	**0.5658**		**1,606.5493**	**1,606.5493**	**0.5196**		**1,619.5390**

3.2 Grading - 2021

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
Vendor	0.0223	0.7630	0.1811	2.0400e-003	0.0512	1.5400e-003	0.0527	0.0147	1.4700e-003	0.0162		217.9508	217.9508	0.0132		218.2804
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0771**	**0.7986**	**0.6708**	**3.4800e-003**	**0.1965**	**2.6100e-003**	**0.1991**	**0.0533**	**2.4600e-003**	**0.0557**		**361.9132**	**361.9132**	**0.0171**		**362.3396**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1020	11.6900	9.9243	0.0166		0.6150	0.6150		0.5658	0.5658	0.0000	1,606.5493	1,606.5493	0.5196		1,619.5390
Total	**1.1020**	**11.6900**	**9.9243**	**0.0166**	**0.0000**	**0.6150**	**0.6150**	**0.0000**	**0.5658**	**0.5658**	**0.0000**	**1,606.5493**	**1,606.5493**	**0.5196**		**1,619.5390**

3.2 Grading - 2021

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
Vendor	0.0223	0.7630	0.1811	2.0400e-003	0.0512	1.5400e-003	0.0527	0.0147	1.4700e-003	0.0162		217.9508	217.9508	0.0132		218.2804
Worker	0.0549	0.0356	0.4897	1.4400e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		143.9624	143.9624	3.8700e-003		144.0592
Total	**0.0771**	**0.7986**	**0.6708**	**3.4800e-003**	**0.1965**	**2.6100e-003**	**0.1991**	**0.0533**	**2.4600e-003**	**0.0557**		**361.9132**	**361.9132**	**0.0171**		**362.3396**

3.2 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9788	10.2440	9.7533	0.0166		0.5132	0.5132		0.4721	0.4721		1,607.6569	1,607.6569	0.5200		1,620.6556
Total	**0.9788**	**10.2440**	**9.7533**	**0.0166**	**0.0000**	**0.5132**	**0.5132**	**0.0000**	**0.4721**	**0.4721**		**1,607.6569**	**1,607.6569**	**0.5200**		**1,620.6556**

3.2 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	0.0000	0.0000	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	0.0209	0.7243	0.1711	2.0200e-003	0.0512	1.3300e-003	0.0525	0.0147	1.2700e-003	0.0160		216.0473	216.0473	0.0127		216.3646
Worker	0.0515	0.0322	0.4529	1.3900e-003	0.1453	1.0400e-003	0.1464	0.0385	9.6000e-004	0.0395		138.8041	138.8041	3.5000e-003		138.8916
Total	**0.0724**	**0.7564**	**0.6240**	**3.4100e-003**	**0.1965**	**2.3700e-003**	**0.1989**	**0.0533**	**2.2300e-003**	**0.0555**		**354.8514**	**354.8514**	**0.0162**		**355.2562**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9788	10.2440	9.7533	0.0166		0.5132	0.5132		0.4721	0.4721	0.0000	1,607.6569	1,607.6569	0.5200		1,620.6556
Total	**0.9788**	**10.2440**	**9.7533**	**0.0166**	**0.0000**	**0.5132**	**0.5132**	**0.0000**	**0.4721**	**0.4721**	**0.0000**	**1,607.6569**	**1,607.6569**	**0.5200**		**1,620.6556**

3.2 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	0.0000	0.0000	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	0.0209	0.7243	0.1711	2.0200e-003	0.0512	1.3300e-003	0.0525	0.0147	1.2700e-003	0.0160		216.0473	216.0473	0.0127		216.3646
Worker	0.0515	0.0322	0.4529	1.3900e-003	0.1453	1.0400e-003	0.1464	0.0385	9.6000e-004	0.0395		138.8041	138.8041	3.5000e-003		138.8916
Total	**0.0724**	**0.7564**	**0.6240**	**3.4100e-003**	**0.1965**	**2.3700e-003**	**0.1989**	**0.0533**	**2.2300e-003**	**0.0555**		**354.8514**	**354.8514**	**0.0162**		**355.2562**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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					
Other Non-Asphalt Surfaces	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					
Other Non-Asphalt Surfaces	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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Unmitigated	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**5.0000e-005**

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	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**5.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Ivy Substation- Decommissioning Airport Substation

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use -

Construction Phase - Per Engineer

Off-road Equipment - Per City

Off-road Equipment - Per Engineer

Trips and VMT - 8-one way truck trips for material removal/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	262.00
tblConstructionPhase	PhaseEndDate	10/13/2021	10/12/2022
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.1854	12.4896	10.5670	0.0199	0.1965	0.6177	0.8142	0.0533	0.5683	0.6216	0.0000	1,952.8262	1,952.8262	0.5374	0.0000	1,966.2602
2022	1.0572	11.0005	10.3511	0.0199	0.1965	0.5156	0.7121	0.0533	0.4744	0.5277	0.0000	1,947.2220	1,947.2220	0.5368	0.0000	1,960.6427
Maximum	**1.1854**	**12.4896**	**10.5670**	**0.0199**	**0.1965**	**0.6177**	**0.8142**	**0.0533**	**0.5683**	**0.6216**	**0.0000**	**1,952.8262**	**1,952.8262**	**0.5374**	**0.0000**	**1,966.2602**

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					
2021	1.1854	12.4896	10.5670	0.0199	0.1965	0.6177	0.8142	0.0533	0.5683	0.6216	0.0000	1,952.8262	1,952.8262	0.5374	0.0000	1,966.2602
2022	1.0572	11.0005	10.3511	0.0199	0.1965	0.5156	0.7121	0.0533	0.4744	0.5277	0.0000	1,947.2220	1,947.2220	0.5368	0.0000	1,960.6427
Maximum	**1.1854**	**12.4896**	**10.5670**	**0.0199**	**0.1965**	**0.6177**	**0.8142**	**0.0533**	**0.5683**	**0.6216**	**0.0000**	**1,952.8262**	**1,952.8262**	**0.5374**	**0.0000**	**1,966.2602**

	ROG	NOx	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**

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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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
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
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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
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
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

	ROG	NOx	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	Grading	Grading	10/12/2021	10/12/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.23

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
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Forklifts	1	8.00	89	0.20
Grading	Cranes	1	8.00	231	0.29

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
Grading	5	13.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2021

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1020	11.6900	9.9243	0.0166		0.6150	0.6150		0.5658	0.5658		1,606.5493	1,606.5493	0.5196		1,619.5390
Total	**1.1020**	**11.6900**	**9.9243**	**0.0166**	**0.0000**	**0.6150**	**0.6150**	**0.0000**	**0.5658**	**0.5658**		**1,606.5493**	**1,606.5493**	**0.5196**		**1,619.5390**

3.2 Grading - 2021

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
Vendor	0.0234	0.7606	0.2026	1.9800e-003	0.0512	1.5900e-003	0.0528	0.0147	1.5200e-003	0.0163		211.6402	211.6402	0.0142		211.9942
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0834**	**0.7996**	**0.6427**	**3.3300e-003**	**0.1965**	**2.6600e-003**	**0.1992**	**0.0533**	**2.5100e-003**	**0.0558**		**346.2770**	**346.2770**	**0.0178**		**346.7212**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1020	11.6900	9.9243	0.0166		0.6150	0.6150		0.5658	0.5658	0.0000	1,606.5493	1,606.5493	0.5196		1,619.5390
Total	**1.1020**	**11.6900**	**9.9243**	**0.0166**	**0.0000**	**0.6150**	**0.6150**	**0.0000**	**0.5658**	**0.5658**	**0.0000**	**1,606.5493**	**1,606.5493**	**0.5196**		**1,619.5390**

3.2 Grading - 2021

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
Vendor	0.0234	0.7606	0.2026	1.9800e-003	0.0512	1.5900e-003	0.0528	0.0147	1.5200e-003	0.0163		211.6402	211.6402	0.0142		211.9942
Worker	0.0600	0.0390	0.4401	1.3500e-003	0.1453	1.0700e-003	0.1464	0.0385	9.9000e-004	0.0395		134.6368	134.6368	3.6100e-003		134.7270
Total	**0.0834**	**0.7996**	**0.6427**	**3.3300e-003**	**0.1965**	**2.6600e-003**	**0.1992**	**0.0533**	**2.5100e-003**	**0.0558**		**346.2770**	**346.2770**	**0.0178**		**346.7212**

3.2 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9788	10.2440	9.7533	0.0166		0.5132	0.5132		0.4721	0.4721		1,607.6569	1,607.6569	0.5200		1,620.6556
Total	**0.9788**	**10.2440**	**9.7533**	**0.0166**	**0.0000**	**0.5132**	**0.5132**	**0.0000**	**0.4721**	**0.4721**		**1,607.6569**	**1,607.6569**	**0.5200**		**1,620.6556**

3.2 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	0.0000	0.0000	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	0.0220	0.7214	0.1916	1.9600e-003	0.0512	1.3800e-003	0.0526	0.0147	1.3200e-003	0.0161		209.7554	209.7554	0.0136		210.0959
Worker	0.0564	0.0352	0.4062	1.3000e-003	0.1453	1.0400e-003	0.1464	0.0385	9.6000e-004	0.0395		129.8098	129.8098	3.2600e-003		129.8912
Total	**0.0784**	**0.7566**	**0.5978**	**3.2600e-003**	**0.1965**	**2.4200e-003**	**0.1989**	**0.0533**	**2.2800e-003**	**0.0556**		**339.5651**	**339.5651**	**0.0169**		**339.9872**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9788	10.2440	9.7533	0.0166		0.5132	0.5132		0.4721	0.4721	0.0000	1,607.6569	1,607.6569	0.5200		1,620.6556
Total	**0.9788**	**10.2440**	**9.7533**	**0.0166**	**0.0000**	**0.5132**	**0.5132**	**0.0000**	**0.4721**	**0.4721**	**0.0000**	**1,607.6569**	**1,607.6569**	**0.5200**		**1,620.6556**

3.2 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	0.0000	0.0000	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	0.0220	0.7214	0.1916	1.9600e-003	0.0512	1.3800e-003	0.0526	0.0147	1.3200e-003	0.0161		209.7554	209.7554	0.0136		210.0959
Worker	0.0564	0.0352	0.4062	1.3000e-003	0.1453	1.0400e-003	0.1464	0.0385	9.6000e-004	0.0395		129.8098	129.8098	3.2600e-003		129.8912
Total	**0.0784**	**0.7566**	**0.5978**	**3.2600e-003**	**0.1965**	**2.4200e-003**	**0.1989**	**0.0533**	**2.2800e-003**	**0.0556**		**339.5651**	**339.5651**	**0.0169**		**339.9872**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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					
Other Non-Asphalt Surfaces	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					
Other Non-Asphalt Surfaces	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	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Unmitigated	4.3100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-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	lb/day										lb/day					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**5.0000e-005**

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	7.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		5.0000e-005
Total	**4.3100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**5.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Ivy Substation- Decommissioning Airport Substation

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.23	Acre	0.23	10,018.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
Utility Company	User Defined				
CO2 Intensity (lb/MWhr)	684.6	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.01

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Banning Electric Co. 33% RPS Included

Land Use -

Construction Phase - Per Engineer

Off-road Equipment - Per City

Off-road Equipment - Per Engineer

Trips and VMT - 8-one way truck trips for material removal/ water truck trips

Energy Use -

Construction Off-road Equipment Mitigation - Per Rule 403

Waste Mitigation - Per AB341

Ivy Substation- Decommissioning Airport Substation - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	262.00
tblConstructionPhase	PhaseEndDate	10/13/2021	10/12/2022
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0	0.029
tblProjectCharacteristics	CO2IntensityFactor	0	684.6
tblProjectCharacteristics	N2OIntensityFactor	0	0.01
tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0348	0.3689	0.3118	5.9000e-004	5.7000e-003	0.0182	0.0239	1.5500e-003	0.0168	0.0183	0.0000	52.4212	52.4212	0.0144	0.0000	52.7804
2022	0.1067	1.1179	1.0508	2.0200e-003	0.0196	0.0523	0.0719	5.3200e-003	0.0482	0.0535	0.0000	179.8398	179.8398	0.0494	0.0000	181.0745
Maximum	**0.1067**	**1.1179**	**1.0508**	**2.0200e-003**	**0.0196**	**0.0523**	**0.0719**	**5.3200e-003**	**0.0482**	**0.0535**	**0.0000**	**179.8398**	**179.8398**	**0.0494**	**0.0000**	**181.0745**

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					
2021	0.0348	0.3689	0.3118	5.9000e-004	5.7000e-003	0.0182	0.0239	1.5500e-003	0.0168	0.0183	0.0000	52.4212	52.4212	0.0144	0.0000	52.7804
2022	0.1067	1.1179	1.0508	2.0200e-003	0.0196	0.0523	0.0719	5.3200e-003	0.0482	0.0535	0.0000	179.8397	179.8397	0.0494	0.0000	181.0744
Maximum	**0.1067**	**1.1179**	**1.0508**	**2.0200e-003**	**0.0196**	**0.0523**	**0.0719**	**5.3200e-003**	**0.0482**	**0.0535**	**0.0000**	**179.8397**	**179.8397**	**0.0494**	**0.0000**	**181.0744**

	ROG	NOx	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**

Ivy Substation- Decommissioning Airport Substation - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-12-2021	1-11-2022	0.4430	0.4430
2	1-12-2022	4-11-2022	0.3875	0.3875
3	4-12-2022	7-11-2022	0.3917	0.3917
4	7-12-2022	9-30-2022	0.3486	0.3486
		Highest	0.4430	0.4430

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	7.9000e-004	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	7.9000e-004	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

	ROG	NOx	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	Grading	Grading	10/12/2021	10/12/2022	5	262	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.23

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
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Forklifts	1	8.00	89	0.20
Grading	Cranes	1	8.00	231	0.29

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
Grading	5	13.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2021

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3449	0.2928	4.9000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	42.9944	42.9944	0.0139	0.0000	43.3420
Total	**0.0325**	**0.3449**	**0.2928**	**4.9000e-004**	**0.0000**	**0.0181**	**0.0181**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**42.9944**	**42.9944**	**0.0139**	**0.0000**	**43.3420**

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	6.7000e-004	0.0228	5.6600e-003	6.0000e-005	1.4900e-003	5.0000e-005	1.5300e-003	4.3000e-004	4.0000e-005	4.7000e-004	0.0000	5.7619	5.7619	3.6000e-004	0.0000	5.7710
Worker	1.6000e-003	1.1800e-003	0.0134	4.0000e-005	4.2100e-003	3.0000e-005	4.2400e-003	1.1200e-003	3.0000e-005	1.1500e-003	0.0000	3.6650	3.6650	1.0000e-004	0.0000	3.6674
Total	**2.2700e-003**	**0.0240**	**0.0190**	**1.0000e-004**	**5.7000e-003**	**8.0000e-005**	**5.7700e-003**	**1.5500e-003**	**7.0000e-005**	**1.6200e-003**	**0.0000**	**9.4268**	**9.4268**	**4.6000e-004**	**0.0000**	**9.4384**

3.2 Grading - 2021

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3449	0.2928	4.9000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	42.9943	42.9943	0.0139	0.0000	43.3420
Total	**0.0325**	**0.3449**	**0.2928**	**4.9000e-004**	**0.0000**	**0.0181**	**0.0181**	**0.0000**	**0.0167**	**0.0167**	**0.0000**	**42.9943**	**42.9943**	**0.0139**	**0.0000**	**43.3420**

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	6.7000e-004	0.0228	5.6600e-003	6.0000e-005	1.4900e-003	5.0000e-005	1.5300e-003	4.3000e-004	4.0000e-005	4.7000e-004	0.0000	5.7619	5.7619	3.6000e-004	0.0000	5.7710
Worker	1.6000e-003	1.1800e-003	0.0134	4.0000e-005	4.2100e-003	3.0000e-005	4.2400e-003	1.1200e-003	3.0000e-005	1.1500e-003	0.0000	3.6650	3.6650	1.0000e-004	0.0000	3.6674
Total	**2.2700e-003**	**0.0240**	**0.0190**	**1.0000e-004**	**5.7000e-003**	**8.0000e-005**	**5.7700e-003**	**1.5500e-003**	**7.0000e-005**	**1.6200e-003**	**0.0000**	**9.4268**	**9.4268**	**4.6000e-004**	**0.0000**	**9.4384**

3.2 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0994	1.0398	0.9900	1.6900e-003		0.0521	0.0521		0.0479	0.0479	0.0000	148.0318	148.0318	0.0479	0.0000	149.2288
Total	**0.0994**	**1.0398**	**0.9900**	**1.6900e-003**	**0.0000**	**0.0521**	**0.0521**	**0.0000**	**0.0479**	**0.0479**	**0.0000**	**148.0318**	**148.0318**	**0.0479**	**0.0000**	**149.2288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1700e-003	0.0745	0.0184	2.0000e-004	5.1200e-003	1.4000e-004	5.2600e-003	1.4800e-003	1.3000e-004	1.6100e-003	0.0000	19.6502	19.6502	1.2100e-003	0.0000	19.6803
Worker	5.1600e-003	3.6700e-003	0.0425	1.3000e-004	0.0145	1.1000e-004	0.0146	3.8400e-003	1.0000e-004	3.9400e-003	0.0000	12.1578	12.1578	3.1000e-004	0.0000	12.1655
Total	**7.3300e-003**	**0.0782**	**0.0609**	**3.3000e-004**	**0.0196**	**2.5000e-004**	**0.0198**	**5.3200e-003**	**2.3000e-004**	**5.5500e-003**	**0.0000**	**31.8080**	**31.8080**	**1.5200e-003**	**0.0000**	**31.8458**

3.2 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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0994	1.0398	0.9900	1.6900e-003		0.0521	0.0521		0.0479	0.0479	0.0000	148.0317	148.0317	0.0479	0.0000	149.2286
Total	**0.0994**	**1.0398**	**0.9900**	**1.6900e-003**	**0.0000**	**0.0521**	**0.0521**	**0.0000**	**0.0479**	**0.0479**	**0.0000**	**148.0317**	**148.0317**	**0.0479**	**0.0000**	**149.2286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1700e-003	0.0745	0.0184	2.0000e-004	5.1200e-003	1.4000e-004	5.2600e-003	1.4800e-003	1.3000e-004	1.6100e-003	0.0000	19.6502	19.6502	1.2100e-003	0.0000	19.6803
Worker	5.1600e-003	3.6700e-003	0.0425	1.3000e-004	0.0145	1.1000e-004	0.0146	3.8400e-003	1.0000e-004	3.9400e-003	0.0000	12.1578	12.1578	3.1000e-004	0.0000	12.1655
Total	**7.3300e-003**	**0.0782**	**0.0609**	**3.3000e-004**	**0.0196**	**2.5000e-004**	**0.0198**	**5.3200e-003**	**2.3000e-004**	**5.5500e-003**	**0.0000**	**31.8080**	**31.8080**	**1.5200e-003**	**0.0000**	**31.8458**

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
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.548858	0.043235	0.200706	0.120309	0.016131	0.005851	0.021034	0.033479	0.002070	0.001877	0.004817	0.000707	0.000925

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

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					
Other Non-Asphalt Surfaces	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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	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			
Other Non-Asphalt Surfaces	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

	ROG	NOx	CO	SO2	Fugitive 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	7.9000e-004	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	7.9000e-004	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5000e-004					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	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	1.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.5000e-004					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	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**7.9000e-004**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	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			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	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

Institute Recycling and Composting Services

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Applied EARTHWORKS Inc.
3550 E. Florida Ave., Suite H
Hemet, CA 92544-4937
O: (951) 766-2000 | F: (951) 766-0020

December 4, 2019

Ms. Stephanie Standerfer, Vice President
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506
Transmitted via email to stephanie.standerfer@webbassociates.com

RE: Cultural Resource Constraints Analysis for the Banning Electric Utility – Ivy Distribution Substation, City of Banning, Riverside County, California

Dear Ms. Standerfer:

This letter report, prepared by Applied EarthWorks, Inc. (Æ) on behalf of Albert A. Webb Associates, summarizes the results of the cultural resource constraints analysis in support of an Initial Study/Mitigated Negative Declaration (IS/MND) for the Banning Electric Utility – Ivy Distribution Substation (Project) on approximately 4.4 acres of land within Assessor's Parcel Number 543-090-008, in the City of Banning (City), Riverside County, California (Figure 1).

The proposed Project involves the construction of a step-down distribution transformation station on the northwest corner of Hathaway and Charles streets. The proposed Project is in the northeast corner of Section 15, Township 3 South, Range 1 East as indicated on the Cabazon, California 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle map (Figure 2). Maximum depth of Project ground-disturbing activities is approximately 8 feet below ground surface (bgs). The City is the lead agency for compliance with the California Environmental Quality Act (CEQA).

CULTURAL RESOURCE RECORDS SEARCH AND LITERATURE REVIEW

On November 15, 2019, Æ archaeologist, Andrew DeLeon, M.A., RPA (#17087), conducted an archaeological literature and records search at the Eastern Information Center (EIC) of the California Historical Resource Information System (CHRIS), housed at the University of California, Riverside. The objective of this records search was to determine whether any cultural resources had been recorded previously within the Project area surrounded by a 1-mile-wide buffer zone (Study Area). The records search indicated 27 cultural resource investigations have been conducted previously within the Study Area (Table 1).

Two of these investigations specifically involved portions of the Project area. As a result, 100 percent of the Project area has been studied previously. No cultural resources were identified within the Project area during the two previous investigations. In addition, one of the previous investigations that involved the Project area (Table 1; RI-08449) conducted a sensitivity assessment for archaeological resources. This assessment concluded the Project is within an area of low archaeological sensitivity.

Table 1
Previous Cultural Resource Investigations in the Study Area

Author(s)	Date	EIC Reference #	Title
Brown, Mary A.	1978	RI-00339	Archaeological Assessment of Tentative Parcel Map 10436, Gavilan Hills, Riverside County, California
Rector, Carol and Philip J. Wilke	1980	RI-01004	Devers to Valley & Valley to Serrano 500 KV Transmission Route and Serrano to Villa Park 220 KV Transmission Route, San Gorgonio Pass Addendum, Riverside County, California
Bouscaren, Stephen and Daniel McCarthy	1984	RI-01837	An Archaeological Assessment of the Proposed Devers-Valley 500 KV Transmission Line and Corridor and the Proposed Valley-Auld-Skylark 115 KV T/L Corridor, Riverside County, California
Compton, Bruce A.	1986	RI-01998	Negative Archaeological Survey Report: Route 243, P.M. 26.7/27.1
Underwood, J., J. Cleland, C. M. Wood, and R. Apple	1986	RI-02210	Preliminary Cultural Resources Survey Report for the US Telecom Fiber Optic Cable Project, From San Timoteo Canyon to Socoroo, Texas; The California Segment
Apple, R. M. and J. E. Wooley	1988	RI-02350	MCI Rialto to El Paso Fiber Optics Project - Intensive Cultural Resource Survey - San Bernardino and Riverside Counties, California
Dillon, Brian D.	1998	RI-04077	Cultural Resource Assessment, Banning Wastewater Treatment Facility Improvement Project, City of Banning, Riverside County, California
Mason, Roger, Philippe Lapin, and Brant A. Brechbiel	1998	RI-04119	Cultural Resources Records Search and Survey Report for a Pacific Bell Mobile Services Telecommunications Facility: CM426-05, City of Banning, California
Padon, Beth	2003	RI-04777	Archaeological Survey of 6-Acre Parcel, Smith Correctional Facility, Riverside County
Dice, Michael	2005	RI-06098	Phase I Cultural Resources Survey Report for Parcel #532-025 Located at Hathaway and Wesley, City of Banning, California
Taniguchi, Christeen	2004	RI-06099	Letter Report: Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate RV60XC847A (Creeken Property) 60 South Aola Street, Banning, Riverside County, California
Pollack, Katherine H. and Michael K. Lerch	2005	RI-06853*	Archaeological Survey of the Stubby and Townhall Transmission Lines, Banning to Desert Hot Springs, Riverside County, California
Patterson, Joshua	2007	RI-07101	Archaeological Survey Report for, Southern California Edison Company, Deteriorated Poles #1780186E and #1780188E on the, Devers-Banning-Windpark-Zanja 115kV Circuit Project, Riverside County, California, (WO#4570-0081, JO#2155 & #2156).
Holmes, Amy and Marcey Rockman	2007	RI-07215	Results of Cultural and Paleontological Resources Due Diligence Constraints Analysis for the Approximately 115-Acre Banning Property, City of Banning, Riverside County, California
Tang, Bai "Tom," Josh Smallwood, and Melissa Hernandez	2007	RI-07339	Identification and Evaluation of Historic Properties: Wastewater Treatment Plant Expansion and Recycled Water System, City of Banning, Riverside County, California

Table 1
Previous Cultural Resource Investigations in the Study Area

Author(s)	Date	EIC Reference #	Title
McLean, Roderic, Shannon Carmack, Jay Michalsky, and Judith Marvin	2006	RI-07970	A Study of the Past in San Timoteo Canyon and San Gorgonio Pass: Cultural Resource Assessment Oak Valley Substation Project, Riverside County
McLean, Roderic, Shannon Carmack, Phil Fulton, Maria Aron, Jay Michalsky, Daniel Ewers, Casey Tibbet, and Brook Smith	2008	RI-08012	Supplemental Cultural Resource Assessment, Oak Valley Substation Project, San Bernardino and Riverside Counties
Jacquemain, Terri, Daniel Ballester, and Laura H. Shaker	2009	RI-08246	Identification and Evaluation of Historical Properties: Assessor's Parcel Nos. 541-200-009, -010, -015, and -016, US Department of Health and Human Services Grant No. C76HF09417, City of Banning, Riverside County, California
Shaver, Noelle C., Theodore G. Cooley, and Stacey Jordan	2009	RI-08249	Cultural Resources Survey and Evaluation for the Granite Construction Liberty Quarry Project, Riverside County, California (Addendum Report)
Tang, Bai "Tom," Michael Hogan, Josh Smallwood, and Terri Jacquemain	2004	RI-08449*	Cultural Resources Technical Report, City of Banning General Plan
Tang, Bai "Tom"	2011	RI-08531	Letter Report: Historic Building Evaluation, 280 E. Ramsey Street, Assessor's Parcel No. 541-183-004, City of Banning, Riverside County, California
Bonner, Wayne H. and Sarah A. Williams	2012	RI-08839	Letter Report: Cultural Resources Records Search and Site Visit Results for Sitemaster, Inc. Candidate CA201 (Banning Eon)
Williams, Sarah and Wayne H. Bonner	2012	RI-08852	Letter Report: Cultural Resources Records Search and Site Visit Results for Sitemaster, Inc. Candidate CA201 (Banning Eon)
McLean, Roderic, Natalie Brodie, Jacqueline Hall, Shannon Carmack, Phil Fulton, Ingri Quon, Erin Martinelli, Richard Erickson, and Jay Michalski	2013	RI-09167	Cultural Resources Assessment and Class III Inventory Volume I West of Devers Project, San Bernardino and Riverside Counties, California
DeCarlo, Matthew M. and Diane L. Winslow	2015	RI-09385	Engineering Refinement Survey and Recommendation of Eligibility for Cultural Resources with Southern California Edison Company's West of Devers Upgrade Project, Riverside and San Bernardino Counties, California
Borkan, William and Tiffany Clark	2017	RI-10014	Cultural Resource Assessment of Lions Park Expansion Project, City of Banning, Riverside County, California
Eckhardt, William T., Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach	2015	RI-10461	Archaeological Investigations and Monitoring for the Construction of the Devers-Palo Verde No. 2 Transmission Line Project, Riverside County, California

*Investigations that involved portions of the Project area.

The 27 previous investigations resulted in the identification of a total of 100 cultural resources in the Study Area (Table 2). Thirty-three are archaeological and 67 are built-environment resources. The archaeological resources are made up of 10 prehistoric sites, 2 prehistoric isolated finds, 14 historic sites, and 7 historic isolated finds. The 67 built-environment resources include historical houses, commercial buildings, a segment of the Union Pacific Railroad, and existing utility lines. No resources have been documented previously within the Project area.

Table 2
Cultural Resources within the Study Area

Primary	Trinomial	Description
Prehistoric Archaeological Sites		
33-000057	CA-RIV-57	Habitation site
33-000372	CA-RIV-372	Habitation site
33-011332	CA-RIV-6761	Bedrock milling site
33-015102	CA-RIV-9192	Bedrock milling site
33-015104	CA-RIV-9191	Bedrock milling site
33-015678		Bedrock milling site
33-016546	CA-RIV-8692	Ephemeral quartzite quarry
33-016963		Bedrock milling site
33-016964		Rock shelter
33-017592	CA-RIV-9120	Bedrock milling site
Isolated Prehistoric Finds		
33-000254	CA-RIV-254	Isolated olla
33-020324		Isolated mano
Historic Archaeological Sites		
33-003443	CA-RIV-3443	Refuse scatter
33-007886	CA-RIV-5848/H	Foundation pad, and refuse scatter
33-011280	CA-RIV-6727H	Old Banning/Idyllwild Road
33-015103		Segment of dirt road, terminating at a hard-rock mine
33-015293		Amethyst glass
33-015847		Remains of a residence
33-016025		Rock and cement line flood control canal
33-016207		Rural landscape features
33-016208	CA-RIV-8364H	Refuse scatter
33-016545		1930s Powerline
33-016547	CA-RIV-8693	Prospecting pits
33-022387		Refuse scatter
33-022388		Refuse scatter
33-026821		Paved road segment
Isolated Historic Finds		
33-012626		Isolated scatter of amethyst and aqua insulator glass
33-015294		Isolated scatter of amethyst glass
33-018645		Isolated cobalt blue medicine/cosmetic bottle

Table 2
Cultural Resources within the Study Area

Primary	Trinomial	Description
33-018646		Isolated brown glass bottle base
33-018647		Isolated piece of brown transfer print porcelain plate
33-025811		Poured concrete water distribution box
33-025814		Poured concrete water distribution box
Built Environment		
33-008332*		1890 Vernacular wood frame house
33-008333*		1892 Vernacular wood frame house
33-008334*		1900 Vernacular wood frame house
33-008335*		1920s Mediterranean/Spanish style house
33-008336*		1895 Vernacular wood frame house
33-008337*		1892 Vernacular wood frame ranch house
33-008338*		1900 Vernacular wood frame house
33-008347*		1915 Vernacular wood frame house
33-008350*		1888 Vernacular wood frame house
33-008352*		1900 Vernacular wood frame house
33-008356*		1884 San Gorgonio Inn building
33-008363*		1910 Vernacular wood frame house
33-008400		1888 Vernacular wood frame house with barn
33-009104*		1906 Bungalow style house
33-009153*		1930 Spanish Colonial Revival commercial building
33-009158*		1915 Bungalow style house
33-009159*		1915 Vernacular wood frame house
33-009177*		1930 Vernacular stone house
33-009498	CA-RIV-6381	Segment of Southern Pacific Railroad
33-015183		1950 California Ranch style house
33-015184		1949 California Ranch style house
33-015185		1952 California Ranch Style house
33-015186		1920s Craftsman style house
33-015187		1946 Minimal Traditional style house
33-015188		1927 Minimal Traditional style house
33-015189		1940s California Ranch style house
33-015190*		1930s Spanish Revival style house
33-015191		1930 Minimal Traditional style house
33-015192		1920s Craftsman style house
33-015193		1920s Craftsman style house
33-015194		1947 Minimal Traditional style house
33-015195		1940s California Ranch style house
33-015208		1920 Minimal Traditional style house
33-015225		1939 Minimal Traditional style house
33-015226		1954 California Ranch style house
33-015290		1935 Minimal Traditional style house

Table 2
Cultural Resources within the Study Area

Primary	Trinomial	Description
33-015802		1955 Buildings associated with the City of Banning Public Works Department
33-015843		1954 Electrical substation
33-016888		1963 California Ranch style house
33-016891		1949 Vernacular gable-front house
33-016913		Flores Property
33-023484		Telecommunications line associated with existing Southern California Edison transmission and distribution lines.
33-023524		1967 Constructed house
33-023532		1967 Constructed house
33-023533		Pre-1967 Commercial building
33-023534		Pre-1967 Commercial building
33-023535		Pre-1967 Commercial building
33-023536		1967 Constructed house
33-023537		Pre-1967 Residences on a single parcel
33-023538		1955 Apartment building
33-023539		1944 Minimal Traditional style house
33-023540		1948 Constructed house
33-023541		1952 California Ranch style house
33-023542		1953 California Ranch style house
33-023543		1947 Minimal Traditional style house
33-023544		1953 California Ranch style house
33-023545		1953 California Ranch style house
33-023550		1967 Constructed house
33-023553		1949 Constructed house
33-024108		1946 Minimal Traditional style house
33-024109		1939 Wood frame front gable house
33-024111		1958 Modern style house
33-024112		1950 Stucco Ranch style house
33-024163		1957 Stucco building formerly Harvey Israel office building
33-024164		1958 Deutsch Co. Electronic Components Division Building
33-024895		1927 Banning Municipal Airport
33-026820		Electrical utility line

*properties listed on the HPD

In addition to the EIC research, Æ also consulted the 1901 San Jacinto 30-minute USGS topographic quadrangle map, the 1943 and 1956 Banning 15-minute USGS topographic quadrangle maps, and the 1956 and 1996 Cabazon 7.5-minute USGS topographic quadrangle maps to assess historical land uses in the Study Area and potential for historical archaeological sites within the Project area. The following cultural attributes were recognized during the examination of the historical maps:

- **1956 Cabazon 7.5-minute and 1956 Banning 15-minute USGS topographic quadrangle maps** - a single house within the Project area on the southeast corner. Both maps also exhibit a short segment of Westward Avenue along the northern edge of the Project area.
- **1972 Cabazon 7.5-minute USGS topographic quadrangle map** - the addition of an outbuilding directly adjacent to the house.
- **1996 Cabazon 7.5-minute USGS topographic quadrangle map** - both structures are still present.
- **1996 Google Earth images** - no structures are visible within the Project area.

No other structures, roads, or features of historical interest are shown within or in the vicinity of the Project area on any of the reviewed historical maps. All the USGS maps also depict houses and outbuildings outside the Project area immediately to the north, east, and west on Barbour Street, Westward Avenue, and Charles Street.

SACRED LANDS FILE SEARCH

Æ contacted the Native American Heritage Commission (NAHC) on October 30, 2019, for a review of the Sacred Lands File (SLF) to determine if any known Native American cultural properties (e.g., traditional use or gathering areas, places of religious or sacred activity) are present within or adjacent to the Project area. The NAHC responded on November 4, 2019, stating the SLF search was completed with negative results. The NAHC provided a list of Native American individuals and organizations for follow-up to elicit information and/or concerns regarding cultural resource issues related to the Project, if any. Results of the NAHC SLF search and Native American contact list are included in Attachment 1.

MANAGEMENT RECOMMENDATIONS

Æ's records search indicates 100 percent of the Project area was studied previously and no cultural resources have been recorded within the Project area. In addition, one of the previous investigations that involved the Project area conducted a sensitivity assessment for archaeological resources. This assessment concluded the Project is within an area of low archaeological sensitivity.

Twelve prehistoric cultural resources are documented within the Study Area; however, most of these prehistoric sites are located south of the Project area along the foothills of the San Jacinto Mountains, where bedrock outcrops are abundant. The SLF search was completed with negative results. The maximum depth of the Project's ground-disturbing activities will not exceed 8 feet bgs. Based on these findings, Æ suggests historic properties (National Register of Historic Places [NRHP]-eligible) or historical resources (California Register of Historical Resources [CRHR]-eligible) are unlikely within the Project area. No further cultural resource management is recommended for the Project area.

If you have any questions or concerns regarding the information provided above, please feel free to contact me at (951) 766-2000.

Best regards,

Andrew DeLeon, M.A., RPA (#17087)
Staff Archaeologist
Applied EarthWorks, Inc.

ATTACHMENTS

NAHC SLF Results

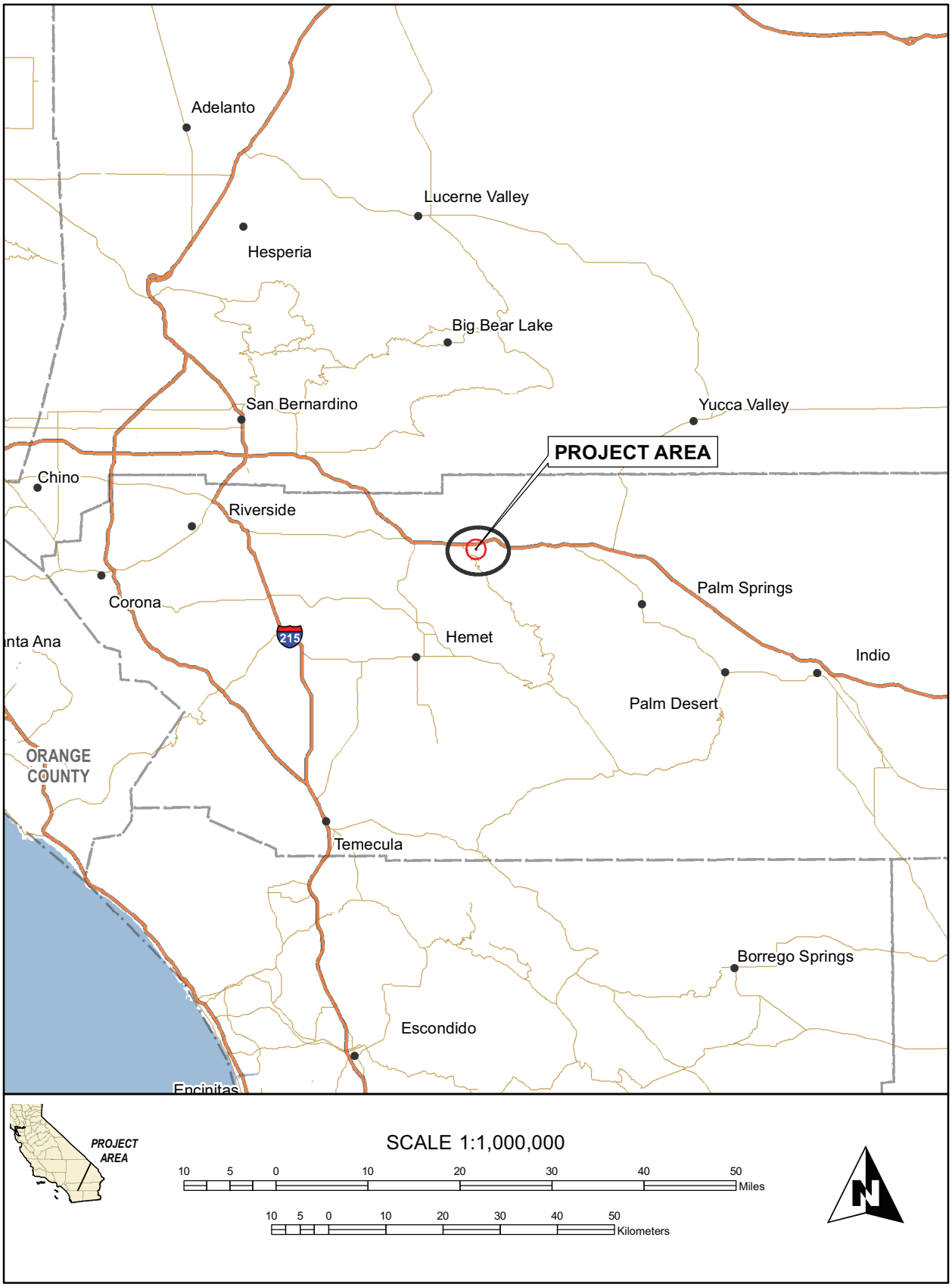


Figure 1 Project vicinity in Riverside County, California.

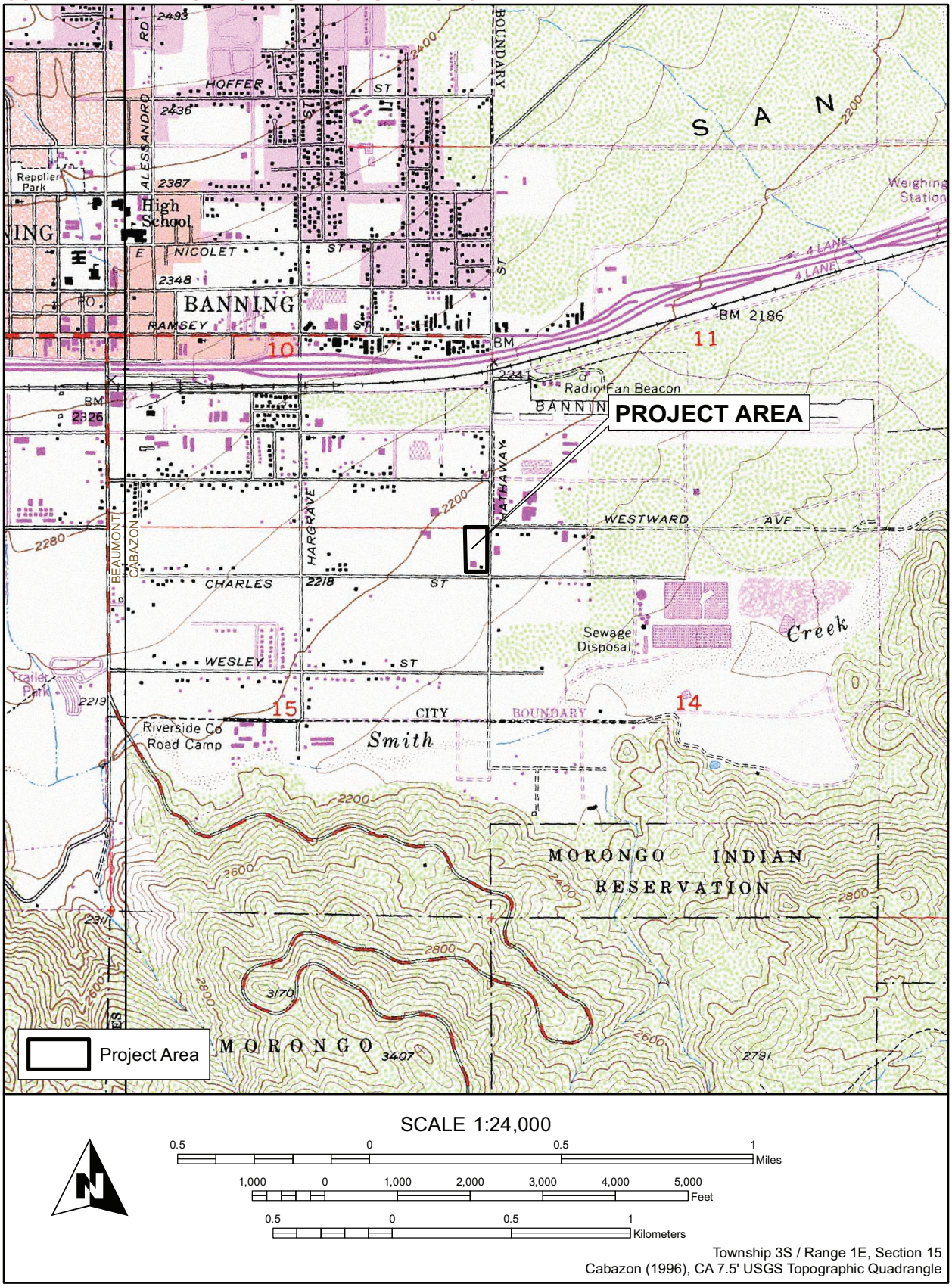


Figure 2 Project location.

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
916-373-3710
916-657-5390 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Date: 10/30/2019

Project: Banning Electric Utility-Ivy Distribution Substation (AE#4115)

County: Riverside

USGS Quadrangle Name: Cabazon (1996)

Township: 3South **Range:** 1East **Section(s):** 15

Company/Firm/Agency: Applied EarthWorks, Inc.

Contact Person: Andrew DeLeon

Street Address: 3550 East Florida Avenue, Suite H

City: Hemet **Zip:** 92544

Phone: (951) 766-2000

Fax: (951) 766-0020

Email: adeleon@appliedearthworks.com

Project Description:

The proposed Project will construct a step-down distribution transformation station in the City of Banning, CA and will result in ground disturbance. Applied EarthWorks, Inc. has been contracted to conduct a cultural resource study of the Project area for compliance with the California Environmental Quality Act (CEQA).

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

November 4, 2019

Andrew DeLeon
Applied EarthWorks, Inc.

VIA Email to: adeleon@appliedearthworks.com

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Banning Electric Utility-Ivy Distribution Substation (AE#4115) Project, Riverside County

Dear Mr. DeLeon:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;

- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.
4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Riverside County
11/4/2019

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Campo Band of Diegueno Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Tribe
Robert Pinto, Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
wmicklin@leaningrock.net

Ewiiaapaayp Tribe
Michael Garcia, Vice Chairperson
4054 Willows Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Jamul Indian Village
Lisa Cumper, Tribal Historic Preservation Officer
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4855
lcumper@jiv-nsn.gov

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817
epinto@jiv-nsn.gov

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Diegueno Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Los Coyotes Band of Cahuilla and Cupeño Indians
Shane Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Banning Electric Utility-Ivy Distribution Substation (AE#4115) Project, Riverside County.

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Mesa Grande Band of Diegueno Mission Indians
Michael Linton, Chairperson
P.O Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramona-nsn.gov

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 Kitanemuk
Newhall, CA, 91322 Vanyume
Phone: (503) 539 - 0933 Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

San Pasqual Band of Diegueno Mission Indians
Allen Lawson, Chairperson
P.O. Box 365 Diegueno
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

Santa Rosa Band of Cahuilla Indians
Steven Estrada, Chairperson
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mflaxbeard@santarosacahuilla-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Banning Electric Utility-Ivy Distribution Substation (AE#4115) Project, Riverside County.

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Sycuan Band of the Kumeyaay Nation
Cody Martinez, Chairperson
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Thomas Tortez, Chairperson
P.O. Box 1160 — Cahuilla
Thermal, CA, 92274
Phone: (760) 397 - 0300
Fax: (760) 397-8146
tmchair@torresmartinez.org

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place — Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov

Viejas Band of Kumeyaay Indians
John Christman, Chairperson
1 Viejas Grade Road — Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337

Applied EARTHWORKS Inc.

133 N. San Gabriel Blvd., Suite 201
Pasadena, CA 91107-3414
O: (626) 578-0119 | F: (626) 204-5500

December 5, 2019

Ms. Stephanie Standerfer
Vice President
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506
Transmitted via email to stephanie.standerfer@webbassociates.com

RE: **Paleontological Memorandum: Constraints Analysis for the Banning Electric Utility – Ivy Distribution Substation Project in the City of Banning, Riverside County, California**

Dear Ms. Standerfer,

At the request of Webb Associates, Applied EarthWorks, Inc. (Æ) completed a paleontological constraints analysis for the Banning Electric Utility – Ivy Distribution Substation Project (Project), City of Banning (City), Riverside County (County), California. The City proposes to construct a step-down distribution transformation station on the northwest corner of Hathaway and Charles streets.

Written by Æ's paleontology staff who meet Society of Vertebrate Paleontology (SVP, 2010) qualifications standards, the preparation of this memorandum (memo) followed guidelines set forth by the County of Riverside (2015a, 2015b). In addition to providing constraints guidance, this memo also can be utilized for compliance with the California Environmental Quality Act (CEQA). Æ's scope of work for the completion of this memo included desktop review of geologic maps, paleontological literature, and museum records searches. The City is the lead agency for compliance with CEQA.

PROJECT DESCRIPTION AND BACKGROUND

The Project area is south of East Barbour Street, west of South Hathaway Street, north of Charles Street in the northeast corner of Section 15 of Township 3 South, Range 1 East, as shown on the Cabazon, California 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle map.

The Project area spans approximately 4.4 acres and was subdivided as part of the Banning Colony Lands subdivision. The Project includes portions of Assessor's Parcel Number 543-090-008. Construction of the distribution station will feature a primary 34.5 kV overhead entrance with four underground 12.47 kV "get-a-ways." Additionally there will be a perimeter fence and new curbs and drainages for three sides of the parcel. The proposed maximum depth of ground disturbance for the Project is 8 feet below ground surface (bgs). As the selected parcel has a slope of 13 feet across the Project area, leveling through grading is likely to result in exposure of subsurface strata.

REGULATORY CONTEXT

No federal involvement in this Project, but state laws and regulations in addition to local goals and policies are applicable. The City follows the County's regulations and does not have additional city-level

codes that reference paleontological resources. The following sections provide an overview of the laws and regulations relevant to the Project.

State

Paleontological resources are protected under CEQA, which requires detailed studies that analyze the environmental effects of a proposed project. If a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered. Specifically, in Section VII(f) of Appendix G of the CEQA Guidelines, the Environmental Checklist Form, the question is posed, "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" If paleontological resources are identified as being within the proposed project area, the sponsoring agency must take those resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

Local

Several policies cover paleontological resources within the County's *General Plan*, *Multipurpose Open Space (OS) Element* (County of Riverside, 2015a:OS-51):

- **OS 19.6:** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, paleontological resource impact mitigation program (PRIMP) shall be filed with the Riverside County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

- **OS 19.7:** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the Riverside County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

- **OS 19.8:** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the Riverside County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

- **OS 19.9:** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

PALEONTOLOGICAL RESOURCE POTENTIAL

Most professional paleontologists in California adhere to the guidelines set forth by the Society of Vertebrate Paleontology (SVP, 2010) to determine the course of paleontological mitigation for a given project unless specific city, county, state, or federal guidelines are available. The County has developed its own guidelines that establish detailed protocols for the assessment of the paleontological sensitivity

of a project area and outline measures to follow in order to mitigate adverse impacts to known or unknown fossil resources during project development (County of Riverside, 2015b).

Following the County's established process, baseline information is used to assign the paleontological sensitivity of a geologic unit(s) (or members thereof) to one of four categories—Low, Undetermined, High A (Ha), and High B (Hb) potential (County of Riverside, 2015b). Geologic units are considered to be "sensitive" for paleontological resources and have a High paleontological resource potential if they are known to contain significant fossils anywhere in their extent, even if outside the Project area. High A (Ha) sensitivity is based on the occurrence of fossils that may be present at the ground surface of the Project area, while High B (Hb) sensitivity is based on the occurrence of fossils at or below 4 feet of depth, which may be impacted during construction activities (County of Riverside, 2015b). A coarse-grained paleontological sensitivity map of Riverside County indicates the sensitivity rankings across the ground surface based on the County's established process (County of Riverside, 2015a: Figure OS-8, OS-55).

Methodology

Æ's scope of work required only desktop research and no fieldwork. The desktop investigation began by *Æ* overlaying the Project area on the County's (2015a) paleontological sensitivity map, which shows the Project area as "Low," although areas of "High A (Ha)" ranking are shown approximately 5 miles to the north and areas ranked as "Unclassified" are depicted 5 miles or less directly to the west, and 5 miles or more to the northwest and northeast. To refine the paleontological sensitivity presented in the countywide map, *Æ* reviewed published geologic maps and paleontological literature for geologic units exposed at the ground surface and those likely to occur in the subsurface of the Project area. *Æ* also retained the Western Science Center of Hemet (WSC) to conduct a records search for fossil localities recorded in their collections (Radford, 2019). To augment these results, *Æ* also conducted searches of the University of California Museum of Paleontology (UCMP), Paleobiology Database (PBDB), and the Raymond M. Alf Paleontological Museum (ALF) online databases.

RESOURCE CONTEXT

The Project area is in the San Gorgonio Pass, an area of semi-arid badlands and alluvial plains (Rewis et al., 2006) at the boundary between the Transverse Ranges and Peninsular Ranges Geomorphic Provinces (California Geological Survey, 2002). A geomorphic province is a region of unique topography and geology that is distinguished from other regions based on its landforms and tectonic history (American Geological Institute, 1976). The San Gorgonio Pass is bordered by the San Bernardino Mountains of the Transverse Ranges to the north, the San Jacinto Mountains of the Peninsular Ranges to the south, the San Timoteo Badlands to the southwest, and the Salton Trough to the east. The Transverse Ranges shape the local topography of roughly east-west trending mountain ranges and basins (Rewis et al., 2006). The San Bernardino Mountains are being displaced south along one trace of the San Andreas Fault in this geomorphic province, resulting in a high rate of uplift and a thickening of the crust (California Geological Survey, 2002).

Extensive previous work was conducted during surveys of the geology of the San Gorgonio Pass, starting with paleontological exploration of the Cenozoic valley fill units by Frick (1921) in the late 1910s to early 1920s, who concentrated on the Timoteo Badlands west-northwest of the Project area. Vaughan (1922) was the first to map the Banning Fault, an important trace of the San Andreas just north

of the Project area. The most recent extensive geologic mapping was conducted by Dibblee (1982) based on earlier work, with Cenozoic stratigraphy, geochronology, and paleontology most recently updated by Albright (1999).

The entire valley base forming the San Gorgonio Pass is composed of Late Cenozoic sedimentary rocks unconformably overlying crystalline basement rocks (Rewis et al., 2006). The crystalline basement rocks are composed primarily of Mesozoic granites and some older metasedimentary rocks, and are presumed to completely underlie the basin. However, as the Banning Fault runs roughly east-west, many units are only exposed on a single side of the fault zone (Rewis et al., 2006). Previous studies found some parts of the San Gorgonio Pass to have upwards of 4,500 feet of Cenozoic sedimentary fill above the older basement rocks (Langenheim et al., 2005); however, only younger sedimentary sequences play a role in the geology within the City of Banning.

The Cenozoic geologic units can be separated into Late Miocene-Pliocene, Pleistocene, and Holocene deposits (Rewis et al., 2006). These geologic units are all terrestrial, and record local history of uplift along the fault zone, which resulted in erosion of the basins. Ongoing uplift and rotation along the Banning Fault have deformed the Miocene-Pleistocene sedimentary sequences into a broad anticline, plunging gently toward the northwest (Morton, 1999). The structural geology in the area also places the older sedimentary rocks of the Mt. Eden Formation and the San Timoteo beds (Frick, 1921) at a shallow subsurface depth under much of Banning, and exposed at the surface just north of the City on the Banning Shelf (QTso: Rewis et al., 2006). Both the Mt. Eden Formation and San Timoteo Formation are fossiliferous (Reynolds and Reeder, 1986; Albright, 1999, 2000). According to Matti et al. (2010) the Mt. Eden Formation and earliest beds of the San Timoteo Formation span the Late Miocene-Early Pliocene.

Dating to the Pleistocene Epoch, the younger sedimentary rocks are represented by the upper parts of the San Timoteo beds. The lower member of the San Timoteo Formation (Qsl) is only exposed far in the hills north of the Cherry Valley Fault, whereas the upper member (Qsu) is well exposed in the hills north of San Timoteo Canyon and south of Calimesa (Rewis et al., 2006); all of these surface exposures are a great distance northwest of the Project area.

The Project area is located within a thin surface exposure of younger Quaternary alluvial deposits (Qy), although exposures of the underlying older and very old Quaternary alluvial deposits (Qo and Qvo) are also mapped within 2 miles to the west and northwest of the Project area, respectively (Rewis et al., 2006). The older and very old alluvial deposits are Middle Pleistocene to Holocene in age.

The youngest Holocene-age deposits, particularly those less than 5,000 years old, are typically too young for the fossilization process to occur (SVP, 2010). Therefore, the Holocene-age alluvial deposits across the ground surface of the Project area are unlikely to preserve fossils. The underlying older Holocene- and Pleistocene-age alluvial deposits have yielded significant fossils throughout Southern California from the coastal areas to the inland valleys (Reynolds and Reynolds, 1991; Springer et al., 2009).

RECORDS SEARCH RESULTS

Radford (2019) reports no fossil localities from the WSC collections within the Project area or within a 1-mile-wide buffer zone. However, numerous localities are within 10 miles of the Project area. Such

localities include subsurface geologic units likely in the Project area at unknown depths, such as the older (Qo) and very old (Qvo) alluvial deposits mapped by Rewis, et al. (2006). According to Radford (2019), the subsurface lithology of the Project area is mapped as Late Pleistocene to Holocene alluvial deposits, and are considered to be of high paleontological potential. For instance, the El Casco Substation, which is within 10 miles of the Project area and mapped with the same surficial geology (Dibblee, 1982), yielded over 16,000 fossils from 77 taxa including plants, mollusks, fish, amphibians, birds, rodents, deer, camels, horses, sloths, and two saber-toothed cats (Reynolds et al., 2013; LSA, 2019), demonstrating the high likelihood of fossil preservation in the units underlying the Project area. As such, development for the Project may encounter alluvial deposits with scientifically significant fossils. The significant vertebrate taxa represented by fossils from the El Casco Substation include:

- Modern horse genus (*Equus*) widespread in the Pleistocene and extinct by 10,000 years ago.
- Scimitar-toothed cat (*Homotherium* sp.) possibly extinct by the Middle Pleistocene in the Western Hemisphere.
- One of the largest Pleistocene giant ground sloths, *Paramylodon* sp., which became extinct about 11,000 years ago.
- The largest camel species in North America (*Megatylopus*), represented by a nearly complete skeleton.

Æ's search of the UCMP online paleontological database search resulted in over 2,000 fossil specimen listings in Riverside County. However, there are no specimens or localities listed within 10 miles of the Project area (UCMP, 2019). Likewise, the ALF online database also does not list fossil specimens within 10 miles of the Project area, although several hundred are within 25 miles, including numerous remains of Pleistocene megafauna, such as bison, horse, camel, and mammoth (ALF, 2019).

The online PBDB search (2019) did return over four dozen published fossil localities, each with several fossiliferous sites within the broader locality, within 10 miles of the Project area, although none are within one mile of the Project area. The following museum fossil collections are reported in the PBDB from about 8 miles west of the Project area:

- UCMP - Pleistocene bear (*Plionarctos*). This listing in the PBDB conflicts with Æ's finding during the UCMP online database search, as described above.
- San Bernardino County Museum - abundant small vertebrates, such as lizards, fish, rodents, and rabbits, as well as the Pleistocene horse *E. scotti*, pronghorn antelope, and deer of Pleistocene age; Pleistocene-age packrat midden; large mammalian fauna including dogs, cats, bears, peccaries, pronghorn antelope, horses, camels, tapirs, elephants, rhinoceroses, and extinct lineages such as the giraffe-like palaeomerycids of Pliocene age.
- Natural Historic Museum of Los Angeles County (NHMLAC) - Pleistocene rodents and occasional horse fossils.
- University of California, Riverside and the American Museum of Natural History - rodent fossils used to date much of the surrounding geology (Albright, 1999).

All localities date to the Pliocene to Pleistocene Epochs, primarily spanning the Blancan (4.75 to 1.81 million B.P.) and Racholabrean (240,000 to 11,000 B.P.) faunal stages of the North American Land Mammal Age (NALMA). The localities are particularly rich in terrestrial mammal faunas, with both

megafauna (e.g., mammoth, horse, bison, bear, sloths, dogs, and cats) and diverse microvertebrates with over 50 species of rodents and rabbits.

In addition to the particularly rich Pleistocene fossil sites concentrated to the west, two other important fossil localities are also within the 10-mile-long radius. Four miles directly south of the Project area is the NHMLAC Invertebrate Paleontology Locality #437 (Soboba Reservation). This locality is dated to the Irvingtonian faunal stage (1.9 million to 250,000 B.P.) of the NALMA and yielded the holotypes of several species of fossil insects (Pierce, 1965). About 8 miles to the east of the Project area are the Super Creek Miocene-age localities, which have previously yielded fossil whales (Thomas and Barnes, 1993).

FINDINGS AND RECOMMENDATIONS

Æ began with the County's (2015b) sensitivity criteria to determine the paleontological potential of the Project area. When placed over the County's (2015a) paleontological sensitivity map, the entire surface area of the Project area is mapped as "Low." However, Æ's desktop efforts and the museum records searches contradict this ranking, as the surficial Holocene-age alluvial deposits with low paleontological sensitivity thinly overlie very shallow Pleistocene deposits with a wide variety of recorded vertebrate fossils and even some fossil insects throughout the area.

Construction activities to 8 feet depth in the Project area are likely to expose underlying Pleistocene deposits with high paleontological sensitivity. Therefore, Project-related ground disturbance has a high likelihood of encountering significant and intact paleontological resources. While the Project area falls within an area assigned a "Low" paleontological sensitivity ranking on the County of Riverside (2015a) map, Æ's evaluation of the existing geologic maps and published fossil occurrences cause us to revise this to "High b" (Hb) sensitivity. This revised classification is recommended, because significant paleontological resources are known from the geologic units. The ranking of "High b" is assigned rather than "High a" based on the occurrence of fossils at a specified depth below the surface, rather than at the ground surface (2015a). As such, further paleontological resource management will be required prior to the issuance of construction permits, and we recommend the presence of a paleontological monitor during Project-related ground disturbance.

Sincerely,

Wm McLaughlin
Senior Paleontologist
Applied EarthWorks, Inc.

Edited and Approved By:

Amy L. Ollendorf, Ph.D., M.S., RPA 12588
Paleontology Program Manager
Applied EarthWorks, Inc.

Encl. References

REFERENCES CITED

Albright, L. B. 1999. Magnetostratigraphy and biochronology of the San Timoteo Badlands, southern California, with implications for local Pliocene-Pleistocene tectonic and depositional patterns. Geological Society of America Bulletin 111:1265–1293.

Albright, L. B. 2000. Biostratigraphy and Vertebrate Paleontology of the San Timoteo Badlands, Southern California. University of California Publications in Geosciences 144. University of California Press, Berkeley, 134 pp.

ALF (Raymond M. Alf Museum of Paleontology). 2019. Unpublished online museum records search. Claremont, CA. Available at https://alfmuseum.org/search.php. Accessed November 23, 2019.

American Geological Institute. 1976. Dictionary of Geological Terms. Anchor Press, New York, 472 pp.

California Geological Survey. 2002. California Geomorphic Provinces. California Department of Conservation, California Geological Survey Note 36. Available at https://www.conservation.ca.gov/cgs/Documents/Note_36.pdf. Accessed November 23, 2019.

County of Riverside. 2015a. Multipurpose Open Space Element, General Plan Revised, December 8, 2015. Riverside County Planning Department. Available at https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833. Accessed November 23, 2019.

County of Riverside. 2015b. Section 4.9: Cultural and Paleontological Resources, Environmental Impact Report No. 521, Public Review Draft, February 2015. Riverside County Planning Department. Available at https://planning.rctlma.org/Portals/14/genplan/general_plan_2015/DEIR%20521/04-09_CulturalAndPaleoResrcs.pdf. Accessed November 24, 2019.

Dibblee, T. W., Jr. 1982. Geology of the San Bernardino Mountains, southern California, pp. 148–149 in D. L. Fife J. A. Minch (eds.), Geology and Mineral Wealth of the California Transverse Ranges: South Coast Geological Society Guidebook 10 (Mason Hill volume).

Frick, C. 1921. Extinct vertebrate fauna of the badlands of Bautista Creek and San Timoteo Canyon, southern California. University of California Department of Geology Bulletin 12(5):277–424.

Langenheim, V. E., R. C. Jachens, J. C. Matti, D. M. Morton, E. Hauksson, A. Christensen. 2005. Geophysical evidence for wedging in the San Gorgonio Pass structural knot, southern San Andreas Fault zone, southern California. Geological Society of America Bulletin 117:1554–1572.

LSA. 2019. Recovering fossils during excavation for substation project. Available at https://lsa.net/project/el-casco-substation/. Accessed December 3, 2019.

Matti, J. C., D. M. Morton, and V. E. Langenheim. 2015. Geologic and geophysical maps of the El Casco 7.5' quadrangle, Riverside County, Southern California, with accompanying geologic-map database. U.S. Geological Survey Open-File Report 2010-1274.

Morton, D. M. 1999. Preliminary digital geologic map of the Santa Ana 30' X 60' Quadrangle, southern California, U. S. 1:100,000. U.S. Geological Survey Open-File Report 99-172.

Paleobiology Database (PBDB). 2019. Unpublished online museum records search, geographical search centered over Banning CA. Available at https://paleobiodb.org/navigator/. Accessed November 23, 2019.

Pierce, W. D. 1965. Fossil arthropods of California 26. Three new fossil insect sites in California. Bulletin of the Southern California Academy of Sciences 64:157–162.

Radford, D. 2019. Museum collections record search for the Sun Lakes Boulevard Realignment Project in the City of Banning, Riverside County, California. Western Science Center report submitted September 24, 2019 to Applied EarthWorks.

Rewis, D. L., A. H. Christensen, J. C. Matti, J. A. Hevesi, J.A., T. Nishikawa, and P. Martin. 2006. Geology, groundwater hydrology, geochemistry, and ground-water simulation of the Beaumont and Banning storage units, San Gorgonio Pass area, Riverside County, California. U.S. Geological Survey Scientific Investigations Report 2006–5026, 173 pp.

Reynolds, R. E., and W. A. Reeder. 1986. Age and fossil assemblages of San Timoteo Formation, Riverside County, California, pp. 51–56 in M. A. Kooser and R. E. Reynolds (eds.), Geology Around the Margins of the Eastern San Bernardino Mountains: Redlands, California. Publications of the Inland Geological Society Volume 1.

Reynolds, R. E., and R. L. Reynolds. 1991. The Pleistocene beneath our feet: near-surface Pleistocene fossils in inland southern California basins; pp. 41–43 in M. O. Woodburne, R. E. Reynolds, and D. P. Whistler (eds.), Inland Southern California: the last 70 million years. San Bernardino County Museum Association, Redlands, California.

Reynolds, R., L. Sample, S. Cooking. 2013. The El Casco Substation fauna and flora: new recordes from the Pliocene-Pleistocene age San Timoteo Formation, Riverside County, California. Journal of Vertebrate Paleontology, Program and Abstracts, 2013, <197>.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. Available at http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx. Accessed November 23, 2019.

Springer, K., E. Scott, J. C. Sagebiel, and L. K. Murray. 2009. The Diamond Valley Lake local fauna: Late Pleistocene vertebrates from inland southern California; pp. 217–235 in L. B. I. Albright (ed.), Papers on Geology, Vertebrate Paleontology, and Biostratigraphy in Honor of Michael O. Woodburne: Flagstaff, Arizona. Museum of Northern Arizona Bulletin 65.

Thomas, H. W., and L. W. Barnes. 1993. Discoveries of fossil whales from the Imperial Formation, Riverside County, California. San Bernardino County Museum Association Special Publication 93(1):34–36.

University of California Museum of Paleontology (UCMP). 2019. Unpublished online museum records search. University of California, Berkeley. Available at https://ucmpdb.berkeley.edu/. Accessed November 23, 2019.

Vaughan, F. E. 1922. Geology of the San Bernardino Mountains north of San Gorgonio Pass. California University Publications in Geological Sciences 13:319–411.

Western Riverside County
Multiple Species Habitat Conservation Plan
Consistency Analysis
City of Banning
Ivy Substation Project

Submitted to:
Albert A. Webb Associates
3788 McCray Street
Riverside, California 92506
Contact: Stephanie Standerfer, Vice President
stephanie.standerfer@webbassociates.com

Prepared By:
Wood Environment & Infrastructure Solutions, Inc.
1845 Chicago Avenue, Suite D
Riverside, California 92507
Principal Investigator: Lisa Wadley, Project Coordinator/Biologist
lisa.wadley@woodplc.com

December 5, 2019

This page initially left blank

EXECUTIVE SUMMARY

Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a biological resources assessment and prepared a Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP) consistency analysis for a 4.35-acre project site located at 1581 East Charles Street, in the city of Banning, Riverside County, California. The proposed project includes the development of a new step-down distribution transformation station which will be owned and operated by the City of Banning Electric Utility ("Utility").

The City of Banning Ivy Substation Project (project site) lies within Assessor Parcel Number (APN) 543-090-008 and is currently undeveloped, with no existing structures, and appears to be regularly mowed for weed abatement and fire control purposes. It is dominated by disturbed non-native grassland vegetation. Surrounding land use includes existing residential development, commercial development, and vacant land adjacent to the project site

Tasks performed by Wood included a literature review, a general biological field assessment, and analysis of the project relative to the Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP). The assessment also included a burrowing owl (*Athene cunicularia*) habitat assessment and an evaluation of the site for other WRCMSHCP sensitive biological resources and/or habitat. The general biological field assessment was completed on 30 October 2019.

The project site is located within the WRCMSHCP designated burrowing owl survey area. Suitable habitat (low growing, non-native grasslands) was found to be present on-site. The nearest known burrowing owl occurrence is over five miles south of the project site. Due to the presence of suitable habitat, a focused burrowing owl survey is required to determine presence or absence of this species.

The project site is in the Pass Area Plan of the WRCMSHCP and does not lie within any WRCMSHCP Criteria Cells. The RCA MSHCP Information Map Generator indicates that the project area does not require a habitat assessment for Narrow Endemic Area Plant Species, Criteria Area Plant Species, Sensitive Mammals Surveys or Sensitive Amphibian survey.

The RCA MSHCP Information Map Generator indicates that the project area does not lie within or adjacent to any riparian/riverine areas or vernal pools. Following a site visit/assessment the project site was found not support any wetlands adjacent to rivers, streams, or vernal pool habitat, and therefore no additional focused surveys and/or mitigation measures are required for riparian/riverine species.

The project site is not located within any United States Fish and Wildlife Service (USFWS) designated Critical Habitat for any species.

The area of the project site proposed for development does not have any evidence of riparian/riverine areas or jurisdictional water features. A roadside ditch is present adjacent to the eastern and southern boundaries of the parcel. The earthen ditch runs parallel to the existing dirt road and appears to capture road runoff. The ditch shows evidence of bed and bank and may be considered jurisdictional by Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. A jurisdictional delineation is required to assess the impacts (if any) to potential drainage areas adjacent to the project site by the proposed project.

According to the WRCMSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the WRCMSHCP Conservation Areas (WRCMSHCP, pages 6-42). The project site is not within or immediately adjacent to any conservation areas or WRCMSHCP Core Linkages; therefore, the project will not need to incorporate Urban/Wildlife Interface Guidelines during construction.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

APN	Assessor's Parcel Number
BLM	Bureau of Land Management
CASSA	Criteria Area Species Survey Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CWA	Clean Water Act
ESA	Endangered Species Act
FESA	Federal Endangered Species Act
GIS	Geographic Information System
GPS	Global Positioning System
HMU	Habitat Management Unit
I-15	Interstate 15
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Plan
NEPSSA	Narrow Endemic Plant Species Survey Area
PQP	Public Quasi-Public Lands
RCA	Western Riverside County Regional Conservation Authority
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
USACE	United States Army Corps of Engineers
USDA NRCS	United States Department of Agriculture, Natural Resources Conservation Service
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
Wood	Wood Environment & Infrastructure Solutions, Inc.
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

This page intentionally left blank

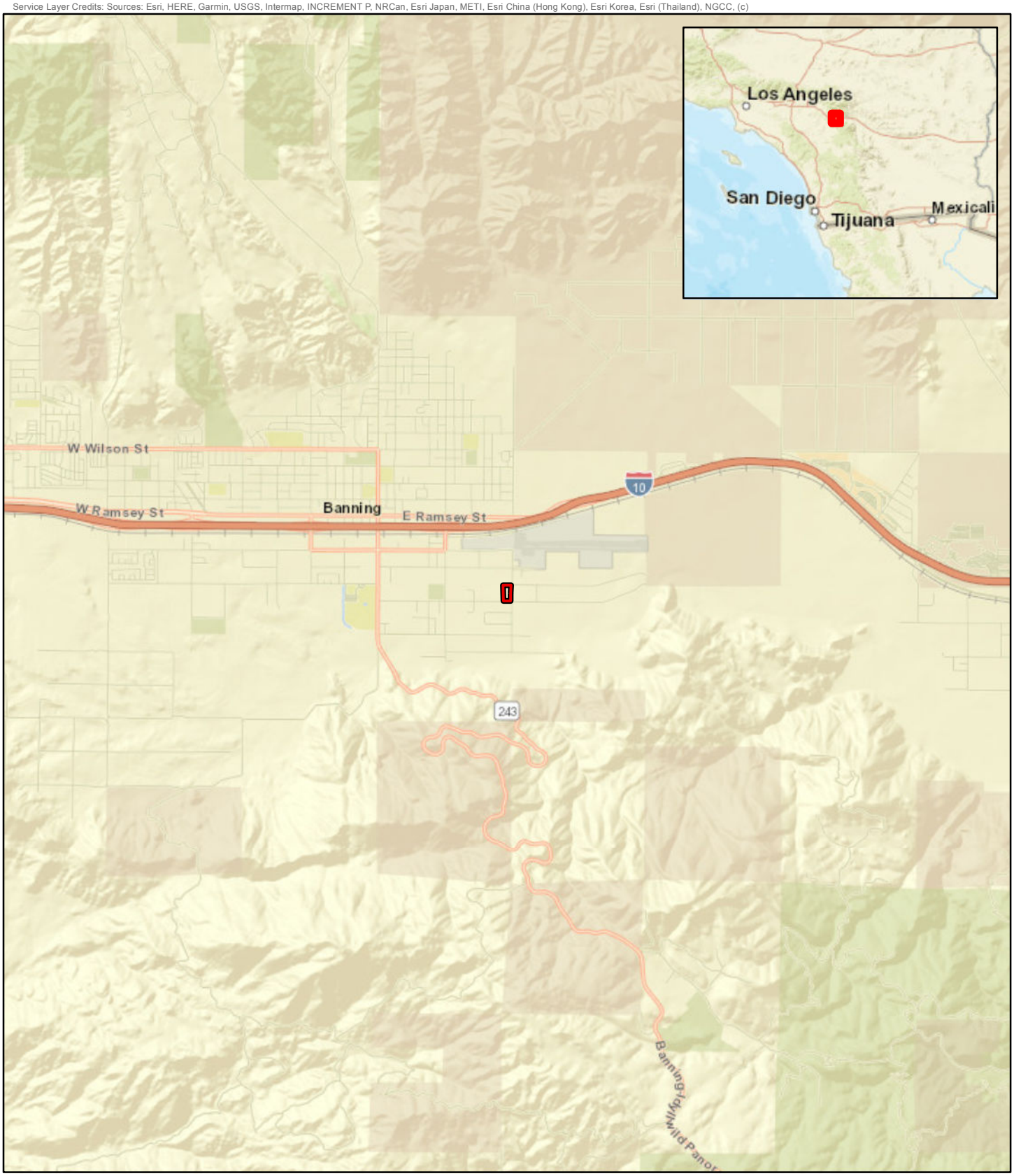
1 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) was contracted by Albert A. Webb Associates (Webb) to conduct a biological resources assessment and a Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP) consistency analysis for a 4.35-acre project site located at 1581 East Charles Street, in the city of Banning, Riverside County, California. The proposed project involves the development of a parcel located north of Charles Street, south of East Westward Avenue, east of Driftwood Circle, and west of South Hathaway Street. The proposed project includes the development of no more than one (1) acre of the parcel for an Ivy Distribution Substation which entails a 34.5 kilo-Volt (kV) to 12.47 kV step-down distribution transformation station.

The city of Banning requires a biological resources assessment in compliance with the WRCMSHCP as part of the California Environmental Quality Act (CEQA) requirements.

1.1 Project Area

The 4.35-acre project site encompasses APN 543-090-008 and is currently undeveloped with no existing structures. Disturbed non-native grassland dominates the site. The study area appears to be regularly mowed/disked for weed abatement and fire control purposes. Surrounding land use includes existing residential development to the south, commercial development to the east, and vacant lots to the north and west. The proposed project does not include any off-site improvements or staging areas. The Ivy substation footprint will not exceed one (1) acre in size and will be positioned as far to the northerly portion of the parcel as possible to ensure compatibility and integration with the surrounding commercial land uses to the north, east, and west. The project proposes to install both curb and gutter improvements along the westerly right of way of Hathaway Streetand the southerly right of way of east Westward Avenue. Total acreage (permanent impact) will not exceed the size of one acre. At this time, there is no project being proposed for the development of the remaining 3.35 acres of the site.



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig1_Regional.mxd, chris.nixon 10/31/2019

1 inch = 1 miles

0 0.5 1 Miles

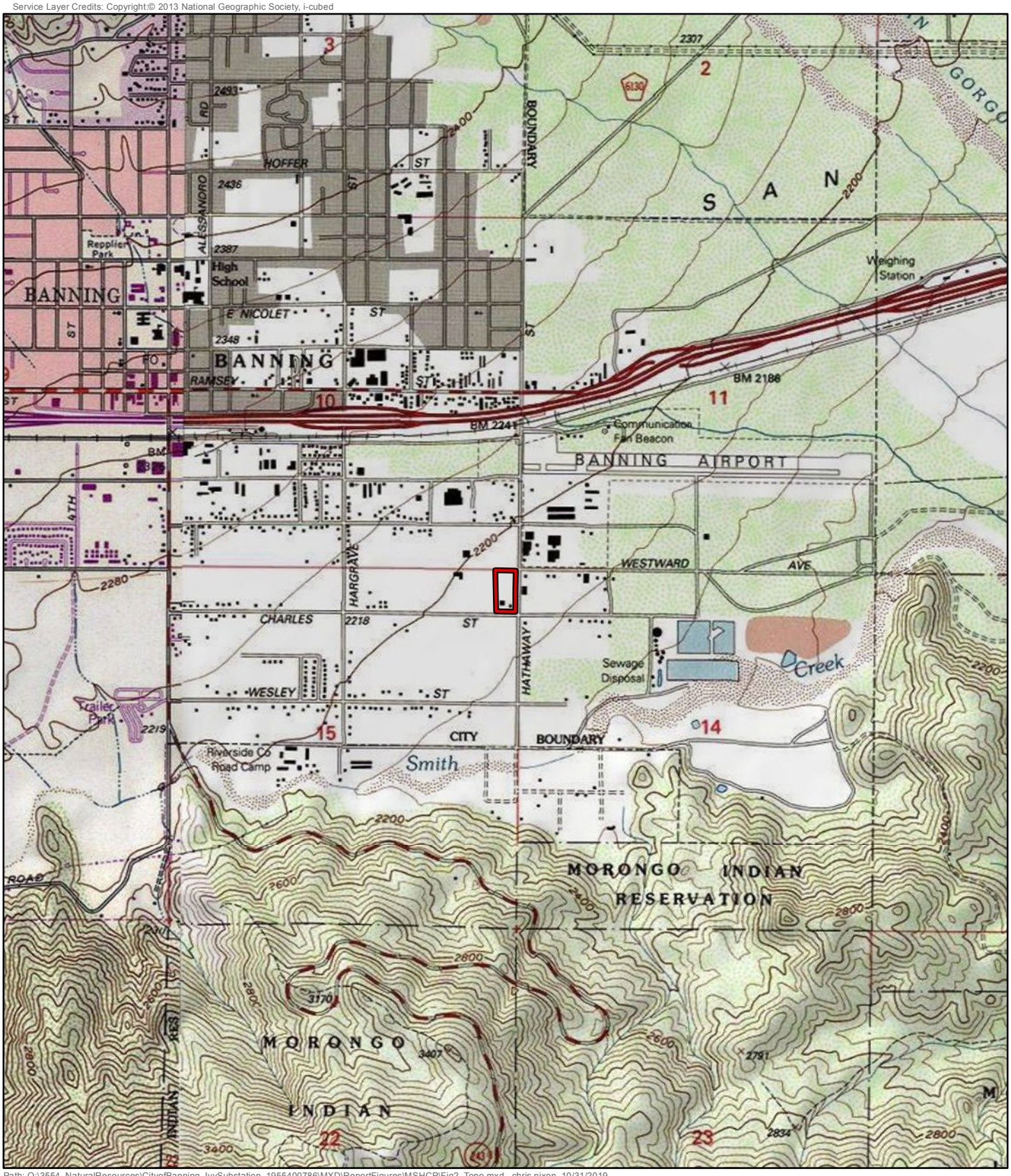
wood.

Project Boundary

FIGURE 1

Regional Location
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig2_Topo.mxd, chris.nixon 10/31/2019

1 inch = 2,000 feet
0 1,000 2,000 Feet

wood.

Project Boundary

FIGURE 2

Topographic Map
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank

Service Layer Credits: Nearmap, Esri, HERE, Garmin, (c) OpenStreetMap contributors

Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig3_LocalVicinity.mxd, chris.nixon 10/31/2019

1 inch = 100 feet
0 50 100 Feet

wood.

Project Boundary

FIGURE 3

Local Vicinity Map
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank

1.2 Project Description

The project site is generally located north and east of State Route 243 and south of I-10 (Figure 1). The site is specifically located north of Charles Street, southeast of East Westward Avenue, east of South Hargrave Street, and west of South Hathaway Street (Figure 2). It can be found in the northeast corner of Section 15 of Township 3 South and Range 1 East, as shown on the *Cabazon, California,* United States Geological Survey (USGS) 7.5-minute quadrangle. The elevation of the project site ranges from 2,172 to 2,188 feet above sea level. The geographic coordinates near the middle of the site are 33.5502.07° North latitude and -116.5136.03° West longitude.

1.3 General Setting

The 4.35-acre project site is currently undeveloped with no existing structures. Disturbed non-native grassland dominates the site. The project site appears to be regularly mowed and disked for weed abatement and fire control purposes.

2 RESERVE ASSEMBLY ANALYSIS

The project site lies within the Pass Area Plan and the San Timoteo Habitat Management Unit (HMU). The nearest criteria cell (#1708) is approximately 3.7 miles southwest, therefore, the project site does not lie within and/or adjacent to any WRCMSHCP cell group or criteria cell. Thus, the project site is not subject to any conservation of land within the site boundary.

2.1 Public Quasi-Public Lands

2.1.1 Public Quasi-Public Lands in Reserve Assembly Analysis

The nearest Public/Quasi-Public Lands (PQP Lands) is 2.3 miles southwest, therefore the project site does not lie within and/or adjacent to any PQP Lands. Thus, the project will not have any impacts, directly or indirectly to PQP lands.

3 VEGETATION MAPPING

As shown in the Photographic Exhibits (Appendix A), the site is considered disturbed and is best described as a non-native grassland. The plant list compiled by Wood during the assessment consists of fourteen species. This number does not reflect the total number of plant species likely to occur on the site, as surveys were conducted during the fall when many species are dormant and/or undetectable. The majority of vegetation observed on-site include non-native grasslands. Dominated non-native vegetation observed on-site include Russian thistle (*Salsola tragus*), short podded mustard *(Hirschfeldia incana*), an unknown oat species (*Avena sp.*), ripgut brome (*Bromus*

diandrus), and red brome (*Bromus rubens*). One dominant native plant was observed on site, jimson weed (*Datura wrightii*) was scattered throughout the edges of the parcel. The project site appears to have been mowed and/or disked for weed abatement and fire control purposes and portions of the borders showed evidence of recent mowing during the site visit on 30 October 2019.

4 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

The Western Riverside County Regional Conservation Authority (RCA) WRCMSHCP Information Map Generator indicates that the project area does not have mapped areas of riparian/riverine areas and thus potentially vernal pools. Current site conditions observed during the site visit on 30 October 2019 did not identify any riparian/riverine areas and/or vernal pool areas. The project site also does not support or lie adjacent to riparian/riverine areas; and therefore, no suitable habitat for least bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-billed cuckoo (*Coccyzus americanus*) or fairy shrimp species occurs within the project site. Due to a lack of suitable habitat, additional focused surveys and/or mitigation measures are not required for riparian/riverine species. The riparian avian species mentioned above are commonly associated with moderate to dense riparian habitat with willows as the document plant species. This habitat is not found within the project site or immediate vicinity. Also, fairy shrimp habitat is characterized under the MSHCP as any area that ponds water long enough to support fairy shrimp species. The project site does not contain any areas that pond water or areas that have evidence of ponding. Therefore, the habitat associated with fairy shrimp species does not occur within project. The project site contains one soil type, Gorgonio gravelly loamy fine sand (GmD). This soil allows for the rapid percolation of water (i.e. it does not hold water); and therefore, will not provide the necessary ponding required for fairy shrimp.

5 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

The RCA MSHCP Information Map Generator indicates that the project area lies within the Narrow Endemic Plant Species Survey Area (NEPSSA) (Figure 5) for two (2) narrow endemic plant species: Yucaipa onion (*Allium marvinii*) and many stemmed dudleya (*Dudleya multicaulis*). Table 1 below describes the narrow endemic plants and their habitat requirements. Both species listed below are considered absent due to lack of suitable habitat and/or soils on-site are not consistent for either plant to occur. Additionally, the nearest recorded occurrence of the Yucaipa onion is over ten miles northwest of the project area; and the nearest recorded occurrence of the many stemmed dudleya is over ten miles southwest of the project area.

Table 1 – Narrow Endemic Plant Species

Scientific/Common Name	Federal / State / CNPS Status Codes	Suitable Habitat	Soils	Blooming Period	Potential to Occur
Allium marvinii **Yucaipa onion**	None / None / 1B.2	Openings in chaparral habitat with clay openings at elevations between 760 to 1,065 meters (2,490 to 3,495 feet).	Clay soils	April to May	**Absent:** Suitable habitat (chaparral and/or clay soils) are not present on site for this species. Additionally, the project site is below elevation requirements for this species.
Dudleya multicaulis **Many-stemmed dudleya**	None / SP / 1B	Clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, coastal sage scrub, and southern needlegrass grasslands. Found in elevations between 15 to 790 meters (49 to 2,591 feet).	Clay soils	May to June although flowering can take place as early as March in coastal locations.	**Absent:** Suitable habitat (openings in chaparral, coastal sage scrub, and/or southern needlegrass grasslands or clay soils) are not present on site for this species.

Definitions of status designations and occurrence probabilities.

Federal designations: (federal Endangered Species Act, USFWS):
- END: Federally listed, Endangered.
- THR: Federally listed, Threatened.
- BCC: Birds of Conservation Concern
- C: Candidate for Federal listing
- ND: Not designated.
- BCC: Bird of Conservation Concern.
- USFS:S USDA Forest Service Regional Forester's Sensitive Plant Species

State designations: (California Endangered Species Act, California Dept. of Fish and Game)
- END: State listed, Endangered.
- THR: State listed, Threatened.
- RARE: State listed as Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
- CSC: California Special Concern Species.
- WL: Watch List Species.
- ND: Not designated.

California Native Plant Society (CNPS) designations: (Non-regulatory, compilation by a non-profit organization which tracks rare plants)
CNPS California Rare Plant Ranks (CRPR) Note: According to the CNPS (http://www.cnps.org/programs/Rare_Plant/inventory/names.htm), ALL plants on Lists 1A, 1B, 2A, and 2B meet definitions for state listing as threatened or endangered under Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code. Certain plants on Lists 3 and 4 do as well.
The CDFW (http://www.dfg.ca.gov/hcpb/species/t_e_spp/nat_plnt_consv.shtml) states that plants on Lists 1A, 1B, 2A, and 2B of the CNPS Inventory consist of plants that may qualify for listing, and recommends they be addressed in CEQA projects (CEQA Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, CDFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 and 4.
- **List 1A**: Plants presumed extinct in California.
- **List 1B**: Plants rare and endangered in California and throughout their range.
- **List 2A**: Plants presumed extirpated in California, but more common elsewhere.
- **List 2B**: Plants rare, threatened, or endangered in California, but more common elsewhere.
- **List 3**: Plants for which more information is needed.
- **List 4**: Plants of limited distribution; a "watch list."

CA Endemic: Taxa that occur only in California
CNPS Threat Code:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened, or no current threats known)
Note: All List 1A (presumed extinct in California) and some List 3 (need more information- a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

Definitions of occurrence probability:

Occurs: Observed on the site by AMEC personnel, or recorded on-site by other qualified biologists.
High: Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.
Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.
Low: Site is within the known range of the species but habitat on the site is rarely used by the species.
Absent: A focused study failed to detect the species, or, no suitable habitat is present.

CDFW CNDDB rankings: Plants
S1 = Less than 6 viable occurrences OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known
S2 = 6-20 viable occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known
S3 = 21-80 viable occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known
S4 = Apparently secure within California; this rank is clearly lower than S3, but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.
S5 = Demonstrably secure to ineradicable in California.

6 *Methods*

Prior to the field visit, a literature review was conducted of the environmental and regulatory setting for the biological project site. The literature review provides a baseline from which to evaluate the biological resources potentially occurring within the study area, and within the local and regional vicinity.

Wood senior biologist Lisa Wadley and biologist Carla Sanchez conducted a reconnaissance-level field survey first on 30 October 2019 from 7:50 a.m. to 08:35 a.m. Weather conditions during the survey were clear skies with temperatures ranging from 45°F to 46°F (degrees Fahrenheit) and winds between 11 and 21 mph. The habitat was assessed based on the presence and/or absence of key constituent elements of suitable habitat (e.g., soils, vegetation and topography) that are characteristic of potentially occurring special status species determined by the literature review/database search. All flora and vertebrate fauna observed or otherwise detected (e.g., vocalizations, presence of scat, tracks, and/or bones) on the project site during this assessment were recorded and are included in Appendix A.

6.1 Existing Conditions and Results

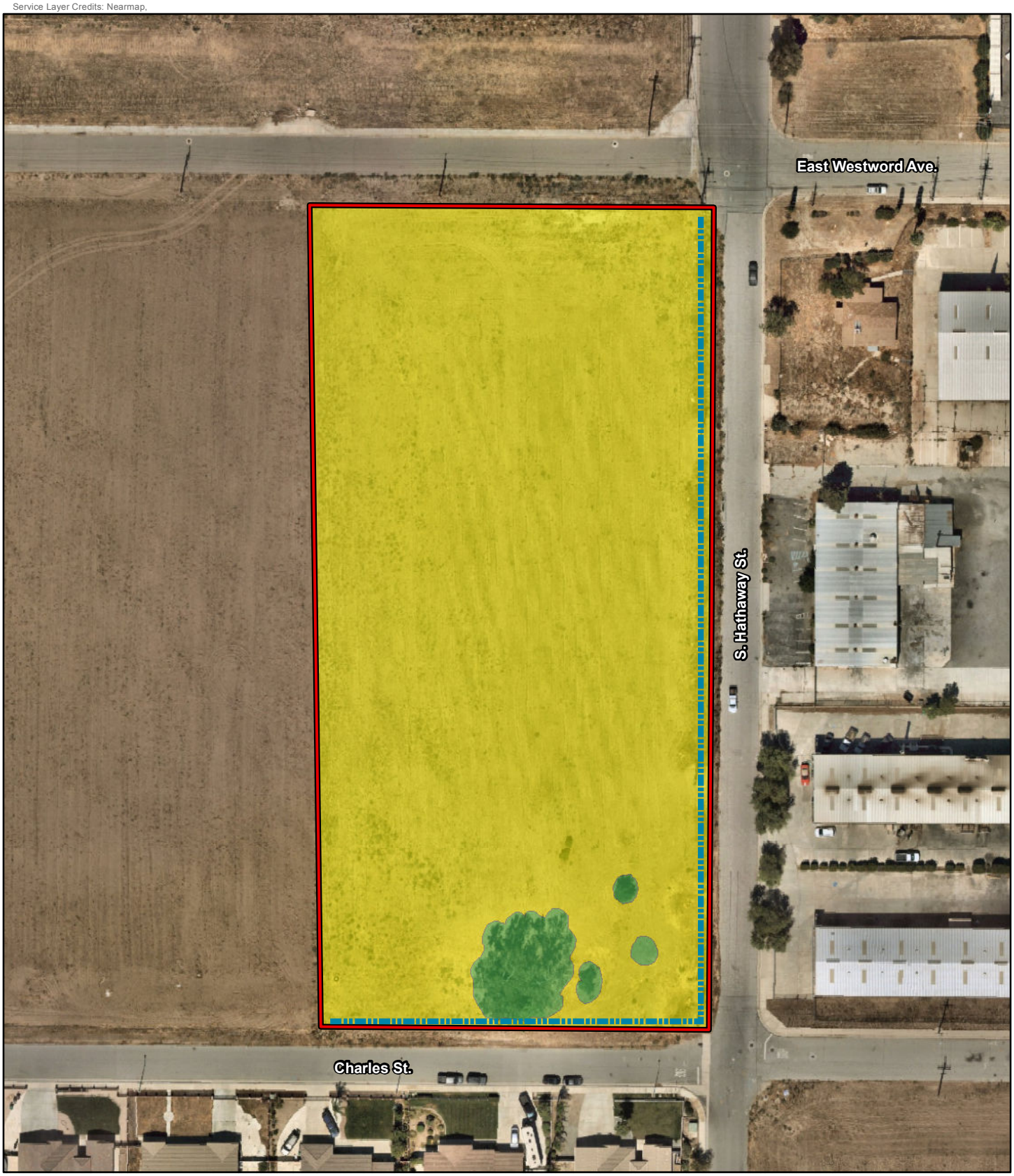
The 4.35-acre project site encompasses one parcel APN 543-090-008 and is currently undeveloped with no existing structures. The site consists of sandy soils and non-native grasslands dominate the project site. There are a few pine (*Pinus* sp.) and eucalyptus (*Eucalyptus*

sp.) trees present in the southeast corner of the proposed project site (Figure 4). The extension of Westward Avenue is a paved road along the north boundary of the parcel, Charles Street makes up the south boundary, South Hathaway Street makes up the east boundary, and open land lies to the west. The general area is made up of residential housing to the south and east, vacant land to the north and west; and industrial business to the west of the proposed project site.

Suitable habitat for these two NEPSSA plant species (i.e. clay soils, chaparral, coastal sage scrub, and/or vernal pools, meadows, seeps, marshes and swamps or riparian forests etc.) were not found on and/or adjacent to the project site. Therefore, these species are considered absent due to no suitable habitat and/or soils consistent with their growing onsite. Therefore, no additional focused surveys are required for narrow endemic plant species.

This page initially left blank

Service Layer Credits: Nearmap,



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig4_Vegetation.mxd, chris.nixon 12/5/2019

1 inch = 100 feet

0 50 100 Feet

Project Boundary

Roadside Ditch

Vegetation

Non-Native Grassland

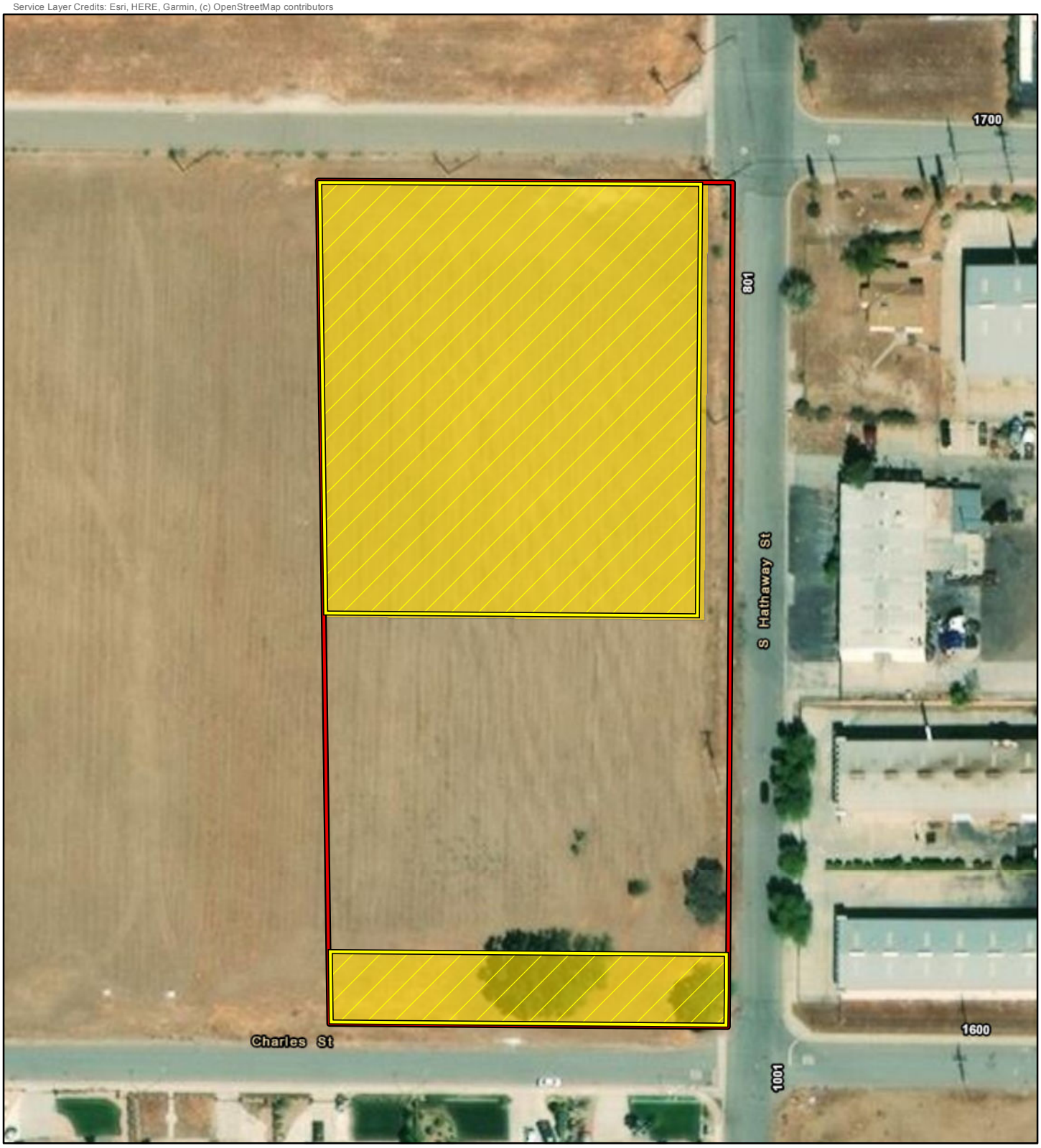
Trees

wood.

FIGURE 4

Vegetation Map
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig5_MSHCP.mxd, chris.nixon 11/14/2019

1 inch = 100 feet
0 50 100 Feet

Project Boundary

MSHCP Burrowing Owl Survey Area

Yucaipa Onion (*Allium marvinii*), Many Stemmed Dudleya (*Dudleya multicaulis*)

FIGURE 5

WRCMSHCP Survey Areas
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank

7 ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

A literature review was conducted of the environmental setting for the project site. The literature review provides a baseline from which to evaluate the biological resources potentially occurring within the study area, and within the local and regional vicinity. A list of special status plant and wildlife species and their habitats, known to occur near the project site was compiled. The primary source for this data was the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB 2019), which is a sensitive species and plant community database. Wood conducted a query of the CNDDB records based on a 5-mile radius surrounding the project site that included the Beaumont, *Cabazon, San Jacinto and, White Water,* California USGS 7.5-minute topographic quadrangle maps.

Additionally, a review of pertinent literature and database search was conducted, including records from the California Native Plant Society (CNPS 2019) on-line inventory database was also queried for the project site and vicinity. The CNPS on-line inventory provided additional sensitive species information for many species that have not been reported to the CNDDB database. The on-line Web Soil Survey (United States Department of Agriculture, Natural Resources Conservation Service [USDA NRCS] 2019), and the RCA MSHCP Information Map Generator and website (Western Riverside County 2019) were also queried for the project site and vicinity. The collective knowledge of Wood staff was also utilized. Scientific nomenclature for this report is from the following standard reference sources: plant communities, Sawyer Keeler Wolf (1995); flora, Baldwin et al (2012) and Munz (1974).; reptiles, Center for North American Herpetology (2014); mammals, California Department of Fish and Game, The California Natural Diversity Database; and, birds, American Ornithologists Union (2013).

7.1 Criteria Area Survey Species

The RCA MSHCP Information Map Generator indicates that the project area does not lie within WRCMSHCP Criteria Area plant species survey area (CASSA) (Figure 5). Wood biologists conducted a site visit on 30 October 2019 and site conditions confirmed that the project site does not have vernal pools present within the project site. Additionally, based on the historical soils mapping the project site does not support any suitable soils for any of the CASSA plants; including the San Jacinto Valley crownscale (*Atriplex coronate* var. *notatior*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), round-leaved filaree (*California* (*Erodium*) *macrophylla*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus* ssp. *apus*), and mud nama (*Nama stenocarpum*). Therefore, no additional focused surveys are required for criteria area plant species.

7.2 Amphibians

The RCA MSHCP Information Map Generator indicates that the project area is not within a sensitive amphibian survey area. Additionally, there is no suitable habitat (i.e. ponds, marshes,

rivers, streams, and/or irrigation ditches with aquatic vegetation) present on-site for amphibian species. Therefore, no additional focused surveys are required for amphibian species.

7.3 Burrowing Owl

Portions of the site (1.79 of the 4.15 acres) is located within the WRCMSHCP designated burrowing owl (*Athene cunicularia*) survey area (Figure 5). Wood conducted a habitat assessment and analysis of the project site in relation to burrowing owl habitat. The survey (habitat assessment) was conducted in accordance with WRCMSHCP Burrowing Owl Survey Instructions (RCA 2006).

The burrowing owl is classified as a California Species of Special Concern (SSC) by California Department of Fish and Wildlife (CDFW) and sensitive by the Bureau of Land Management (BLM) and is protected under the federal Migratory Bird Treaty Act (MBTA). Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation and flat to moderate slopes with less than 30 percent canopy cover of trees and shrubs. In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use manmade structures (also known as 'burrow surrogates'), such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. In California, the species often occurs in association with colonies of the California ground squirrel (*Otospermophilus beecheyi*), where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. The species is active both day and night and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of burrowing owls, nest burrows are a critical component of their habitat.

7.3.1 Methods

Step I – Habitat Assessment

Wood senior wildlife biologist Lisa Wadley and biologist Carla Sanchez conducted a habitat assessment survey on 30 October 2019 within the entire site and the 500-foot buffer (where accessible). Moderate quality suitable habitat was found (low-growing, non-native grassland field with small mammal burrows, earthen berms) on the project site. Portions of the project site had been recently mowed, presumably for weed and fire abatement, allowing open areas scattered within the parcel. These areas have the potential for small mammal burrows, and thus providing suitable burrowing owl habitat. Additionally, suitable small mammal burrows were observed

within the 500 buffer (i.e. fallow fields north and west of the parcel with earthen berms). A focused survey to determine presence or absence of this species on the proposed project site and a pre-construction survey are required.

7.4 Mammals

The RCA MSHCP Information Map Generator indicates that the project site does not lie within any mammal species survey area (i.e. Los Angeles pocket mouse, San Bernardino kangaroo rat and Aguanga kangaroo rat). Therefore, no additional focused surveys are required for these sensitive mammal species.

8 INFORMATION ON OTHER SPECIES

8.1 Delhi Sands Flower Loving Fly

The site does not occur within areas with mapped Delhi Sand soils. The United States Department of Agriculture National Resources Conservation Service (USDA NCRS) maintains an on-line searchable soils database, the Web Soil Survey (USDA 2015), which was consulted during the project literature search in order to determine the soil associations and soil types occurring on the project site. One soil type, Gorgonio gravelly loamy fine sand (GmD) (2 to 15 percent slopes) is mapped on the project site (Figure 6).

This page initially left blank

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors

Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\MSHCP\Fig6_Soils.mxd, chris.nixon 11/14/2019

1 inch = 100 feet
0 50 100 Feet

Project Boundary

Soil Type

GmD - Gorgonio gravelly loamy fine sand, 2 to 15 percent slopes

wood.

FIGURE 6

Soil Type
MSHCP Consistency Report
City of Banning Ivy Substation
Banning, CA.

This page initially left blank

8.2 Species Not Adequately Conserved

Of the 146 Covered Species addressed in the WRCMSHCP (Section 2.1.4 of the MSHCP), 128 species are adequately conserved (MSHCP, 2015). The remaining eighteen (18) Covered Species will be adequately conserved when conservation requirements are met as identified in the species-specific conservation objectives for those species. For ten (10) of the eighteen (18) species, (identified in WRCMSHCP Table 9-3), species-specific conservation objectives, must be satisfied to shift those species to the list of 'Covered Species Adequately Conserved'. For the remaining eight (8) species, a Memorandum of Understanding must be executed with the Forest Service that addresses management for these species on Forest Service Land in order to shift these species to the list of 'Covered Species Adequately Conserved'. The project site does not lie within and/or adjacent to USFS land.

It is presumed that seventeen of these eighteen species are absent and have no potential to occur on the project site due to lack of suitable habitat. One bird species has a low potential to occur within the project area: the grasshopper sparrow (*Ammodramus savannarum*). Foraging habitat is present on-site for this species. The grasshopper sparrow prefers grasslands, old fields, and grassy slopes. This habitat has been mapped to occur onsite. However, the nearest know location is over 10 miles south of the project site within San Diego County.

Table 2 lists the Species Not Adequately Conserved, summarizes habitat requirements for each species, and potential for occurrence on the project site.

Table 2 – Species Not Adequately Conserved under the WRCMSHCP

Species*	Status	Habitat and Distribution	Occurrence Probability
Plants			
Deinandra mohavensis **Mojave tarplant**	F: None S: END CNPS RPR: 1B WRCMSHCP: P	Low sand bars in riverbeds, mostly in riparian areas or in ephemeral grassy areas, in riparian scrub and mesic chaparral at 850 to 1,600 meters (2,800 to 5,200 feet) elevation. Known from the San Jacinto Mountains in Riverside County, and from San Diego and Kern Counties. Believed extirpated from San Bernardino County.	**Absent:** Suitable habitat (sand bars in riverbeds) is not present on site for this species. Project site is below elevation requirements for this species.
Dudleya viscida **Sticky-leaved dudleya**	F: None C: CSC CNPS RPR: 1B MSHCP: P	Perennial herb found in rocky areas in coastal bluff scrub, chaparral, coastal sage scrub; below 550 meters (1,800 feet) elevation. Orange and San Diego Counties	**Absent:** Suitable habitat (chaparral, coastal bluff scrub or coastal sage scrub) is not present on site for this species.

Galium californicum ssp. primum **California bedstraw**	F: None C: CSC CNPS RPR: 1B WRCMSHCP: P	Perennial herb found in granitic soils in chaparral and lower montane coniferous forest; 1,350 to 1,700 meters (4,400 to 5,600 feet).	**Absent:** Suitable habitat (chaparral, montane conifer forest) is not present on site for this species. Project site is below elevation requirements for this species.
Heuchera hirsutissima **Shaggy-haired alumroot**	F: None C: CSC CNPS RPR: 1B WRCMSHCP: P	Rocky areas in upper montane and subalpine coniferous forest 1,830 to 3,500 meters (6,000 to 11,500 feet) elevation in Riverside County.	**Absent:** Suitable habitat (rocky areas in montane or subalpine conifer forest) is not present on site for this species. Project site is below elevation requirements for this species.
Lilium humboldtii ssp. *oscellatum* **Ocellated Humboldt lily**	F: None S: None CNPS RPR: 4.2 WRCMSHCP: No	Found in openings within chaparral, cismontane woodland, coastal scrub, yellow pine forest, and riparian woodland at 30-1,800-meter (98 to 5,910) elevation.	**Absent:** Suitable habitat (woodlands, coastal scrub, yellow pine forest or riparian woodlands) is not present on site for this species.
Lilium parryi **Lemon lily**	F: None S: CSC CNPS RPR: 1B WRCMSHCP: P	Bulbiferous perennial herb of wet areas in meadows and riparian and montane coniferous forests at 1,300 to 2,790 meters (4,300 to 9,200 feet) elevation. In California, known from Los Angeles, Riverside, San Bernardino, and San Diego Counties.	**Absent:** Suitable habitat (meadows, riparian and montane conifer forests) is not present on site for this species. Project site is below elevation requirements for this species.
Muhlenbergia californica **California muhly**	F: None C: CSC CNPS RPR: 1B WRCMSHCP: P	Streambanks, canyons, and other moist sites in chaparral, coastal sage scrub, coniferous forest, and meadows; 100 to 2,000 meters (300 to 6,600 feet) elevation; San Gabriel, San Bernardino, and San Jacinto Mountains.	**Absent:** Suitable habitat (chaparral, coastal sage scrub, conifer forest) is not present on site for this species.
Mimulus clevelandii **Cleveland's bush monkeyflower**	F: None C: None CNPS RPR: 4.2	Found in chaparral, lower montane coniferous forest, and yellow pine forest habitats at 450 to 200 meters (1,475 to 6,600 feet elevation).	**Absent:** Suitable habitat (chaparral, montane conifer or yellow pine forests) is not present on site for this species.
Potentilla rimicola **Cliff cinquefoil**	F: None S: CSC CNPS RPR: 2 WRCMSHCP: P	Granitic crevices and rocky slopes in subalpine coniferous forest and upper montane coniferous forest at 2,400 to 2,800 meters (7,900 to 9,200 feet) elevation. In California, known only from the San Jacinto Mountains, Riverside County.	**Absent:** Suitable habitat (granitic crevices, rocky slopes) is not present on site for this species. Project site is below elevation requirements for this species.
Birds			
Ammodramus savannarum (nesting) **Grasshopper sparrow**	F: None S: CSC WRCMSHCP: P	Grasslands, agricultural fields, prairie, old fields and open savanna. Uncommon and local summer resident on grassy slopes and mesas west of the deserts. Only rarely in migration and in winter. Coastal Southern California.	**Low:** Marginally suitable habitat (disturbed, fallow agricultural field, non-native grassland) is present on site for this species. Nearest known occurrence is greater than 10 miles south of site in San Diego County.

Melospiza lincolnii (breeding) **Lincoln's sparrow**	F: None S: CSC WRCMSHCP: P	Occurs in bogs, wet meadows, and riparian thickets, mostly in northern and montane areas. Winters in brushy areas, thickets, hedgerows, understory of open woodlands, forest edges, clearings, and scrubby areas.	**Absent:** Suitable habitat (bogs, wet meadows, and riparian thickets) is not present on site for this species.
Sphyrapicus thyroideus **Williamson's sapsucker**	US: None WRCMSHCP: P	Occurs primarily in conifer forests (spruce, fir, and lodge pole pine). Winters in mostly pine and pine-oak woodlands in the mountains. Cavity nesters.	**Absent:** Suitable habitat (conifer forests) is not present on site for this species.
Strix occidentalis **California spotted owl**	US: TH CA: CSC WRCMSHCP: P	Resident of old-growth forests. Cavity Nester.	**Absent:** Suitable habitat (old growth forests) is not present on site for this species.
Reptiles			
Charina umbratica **Southern rubber boa**	US: – CA: ST WRCMSHCP: P	Found in montane conifer forest; near rock outcrops and woody debris in the San Bernardino and San Jacinto Mountains at 1,525 to 2,440 meters (5,000 to 8,000 feet) elevation.	**Absent:** Suitable habitat (montane conifer forest, rocky outcrops) is not present on site for this species.
Lampropeltis zonata (parvirubra) **California mountain kingsnake** (San Bernardino population)	F: None S: CSC WRCMSHCP: P	Occurs in well-illuminated canyons with rocky outcrops or rock talus in association with big cone spruce and various canyon chaparral species at lower elevations, and with black oak, incense cedar, Jeffrey pine, and ponderosa pine at higher elevations. Generally, occurs above 1,500 meters (4,900 feet) elevation in inland areas, but documented from elevations as low as 370 meters (1,200 feet.)	**Absent:** Suitable habitat (canyons with rocky outcrops, chaparral, or mountain habitats) is not present on site for this species.
Lampropeltis zonata (pulchra) **San Diego mountain kingsnake**	F: None S: CSC WRCMSHCP: P	Occurs in the interior mountain ranges, this subspecies occurs primarily in associations of ponderosa, Jeffrey, and Coulter pine, and black oak. At lower elevations and in the coastal ranges, it occurs in riparian woodlands, usually in canyon bottoms, that have western sycamore, Fremont's cottonwood, coast live oak, willows, wild rose, poison oak, and blackberries. Found most commonly in the vicinity of rocks or boulders near streams or lake shores. Species has been documented from sea level to about 1,800 meters (5,900 feet) elevation.	**Absent:** Suitable habitat (mountain or pine and riparian habitats) is not present on site for this species.
Sceloporus graciosus vandenburgianus **Southern sagebrush lizard**	F: None S: None WRCMSHCP: P	Lives in shrub lands such as chaparral, manzanita, and ceaothus, as well as open pine and Douglas fir forests, mainly in the mountains. Prefers open areas with scattered low bushes, logs, rocks, or brush piles, and found basking on rocks and logs in full sun.	**Absent:** Suitable habitat (shrub lands, chaparral, pine or Douglas fir forests) is not present on site for this species.

Mammals			
Glaucomys sabrinus californicus **San Bernardino flying squirrel**	US: – CA: CSC WRCMSHCP: P	Inhabits a wide variety of woodland habitats primarily consisting of conifers, mixed coniferous-deciduous forest and occasionally broad-leaf-deciduous forest. Commonly found in white fir, coulter pine, Jeffrey pine, sugar pine, lodge pole pine forests, and ponderosa pine forest. May occur in hardwoods where old or dead trees have numerous woodpecker-type nesting holes. Requires nearby water. Occurs at elevations between 1,200 to 2,560 meters (4,000 to 8,400 feet) in the San Bernardino and San Jacinto Mountains.	**Absent:** Suitable habitat (woodland habitats) is not present on site for this species

8.3 Drainages and/or Jurisdictional Waters

The area of the project site proposed for development does not have any evidence of riparian/riverine areas or jurisdictional water features (i.e. streams, rivers). A roadside ditch is present adjacent to the east and south borders of the parcel (See attached Figure 4). The earthen ditch runs parallel to the existing roads and appears to capture road runoff (Site Photograph 4, attached). The ditch shows evidence of bed and bank and may be considered jurisdictional by Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. A jurisdictional delineation is required to assess the impacts (if any) by the proposed project to the roadside ditch that lies adjacent to the east and south portions of the project site.

8.4 Migratory Bird Treaty Act and Section 3503 of California Fish and Game Code

The project site contains suitable nesting habitat for nesting birds protected under the MBTA and Section 6.1.6 of the MSHCP. On the southeast corner there is one pine tree (*Pinus sp.*), two eucalyptus trees (*Eucalyptus sp.*), and two China berry trees (*Melia azedarach)* that are suitable for tree nesting bird species, as well as a Mexican palo verde (*Parkinsonia aculeata)* on the northeast corner. These trees provide suitable nesting habitat to a variety of species covered under the MBTA. Additionally, the project site also contains suitable nesting habitat for ground nesting birds protected under the MBTA, such as killdeer (*Charadrius vociferous*) and horned lark (*Eremophila alpestris*). Impacts to nesting birds, both direct and indirect, can be minimized and/or eliminated by conducting work activities outside of the breeding season. Although some nesting birds can occur year-round in Southern California, typical avian breeding season is from February 1 through August 31, so it is recommended to schedule work between September 1 and January 31 to avoid nesting activity. If work must be done during the nesting season, the project site and adjacent areas (500-foot buffer) should be examined by a qualified biologist 30-days prior to any ground

disturbance or vegetation removal, especially where there could be any direct impacts to suitable nesting habitat. If active nests are found, the nests should be avoided, and a no disturbance buffer zone established around the nest. A qualified biologist should monitor the nest until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted, the CDFW generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case by case basis by the biological monitor and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the biological monitor with CDFW concurrence.

9 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)

According to the WRCMSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the WRCMSHCP Conservation Areas (WRCMSHCP, pages 6-42). The nearest proposed Core Linkage is over ten miles northeast of the project site. Thus, the project will not require design features to minimize potentially significant impacts associated with the Urban/Wildlands interface and/or will not need to incorporate Urban/Wildlife Interface Guidelines during construction.

10 BEST MANAGEMENT PRACTICES (VOLUME I, APPENDIX C)

Standard best management practices (BMP) should be implemented to avoid impacts to biological resources. The project site is currently an undeveloped parcel that is regularly disked for weed abatement; and lacking any significant biological resources (i.e. riparian/riverine, wetlands, etc.). No impacts to the goals of the MSHCP, special status biological resources, and other protected biological resources is expected. A pre-construction survey for burrowing owl by a qualified biologist prior to construction activities would ensure no direct impacts to an owl or owls that may occupy the site. Pre-construction nesting bird surveys will be required if construction occurs during the nesting season. Other standard best management practices (BMP) should be implemented to avoid indirect impacts. These would include trash management, project speed limits, and dust control measures as well as standard BMPs for road maintenance such as curb and gutter and/or periodic street sweeping during construction activities

11 REFERENCES

American Ornithologists' Union. 2015. Checklist of North American Birds, 7th edition + supplements. Online at: http://checklist.aou.org/.

Baldwin, B.D., et al. 2012. The Jepson Manual: Higher Plants of California. Univ. Calif. Press, Berkeley.

California Department of Fish and Game. 2006. Complete List of Amphibians, Reptiles, Birds, and Mammals in California. Online at: http://www.dfg.ca.gov/biogeodata/cwhr/pdfs/species_list.pdf.

California Department of Fish and Game, CNDDB. 2019. Special Animals List. Online at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf .

California Native Plant Society. 2019; Inventory of Rare and Endangered Plants. California Native Plant Society. Sacramento, CA. Online at: http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi.

Riverside County Transportation & Land Management Agency. Western Riverside County Multiple Species Habitat Conservation Plan (website) and Conservation Summary Generator. 2019. Online at: http://www.rctlma.org/mshcp/.

Sawyer, J.O., T. Keeler-Wolf and J. M. Evans, 2009, A Manual of California Vegetation, Second Ed., California Native Plant Society Press, Sacramento, CA.

United States Department of Agriculture Natural Resources Conservation Service. 2019. Web Soil Survey. Online at: http://websoilsurvey.nrcs.usda.gov/app/.

United State Fish and Wildlife Service. 1997. Bird Laws and Treaties. Online at; http://migratorybirds.fws.gov/intrnltr/tblcont.html.

United States Geological Survey (USGS). 1979. *Cabazon*, California 7.5-Minute Topographic Quadrangle Map. Department of the Interior. U.S. Government Printing Office Washington, D.C.

This page initially left blank

APPENDIX A

PHOTOGRAPHIC EXHIBITS

City of Banning Ivy Substation Project
Banning, Riverside County, California

Photo 1. View of northeast corner of the project site facing west. Representative condition of typical disturbed habitat throughout the site.

Photo 2. View of northeast corner of the project site facing south. Representative condition of typical grassland habitat throughout the site.

Photo 3. View of northeast corner of the project site facing southwest. Representative condition of typical grassland habitat throughout the site.

Photo 4. Photo of the roadside ditch running along the eastern and south project site boundaries. View as seen facing north with S. Hathaway Street in the background. A jurisdictional delineation of the roadside ditch is necessary to determine if proposed project will impact a jurisdictional water feature.

This page initially left blank

APPENDIX B

PLANT AND WILDLIFE SPECIES LIST

Appendix B: Plant Species Compendia

Scientific Name	Common Name	Special Status
Pinaceae	**Pine Family**	
** Pinus sp.*	unknown pine sp.	
Amaranthaceae	**Amaranth Family**	
Amaranthus fimbriatus	fringed amaranth	
Asteraceae	**Sunflower Family**	
Erigeron canadensis	Canada horseweed	
Helianthus sp.	unknown sunflower sp.	
Brassicaceae	**Mustard Family**	
** Hirschfeldia incana*	short podded mustard	
Chenopodiaceae	**Goosefoot Family**	
** Salsola tragus*	Russian thistle	
Fabaceae	**Legume Family**	
** Parkinsonia aculeata*	Mexican palo verde	
Meliaceae	**Mahogany Family**	
* *Melia azedarach*	China berry tree	
Myrtaceae	**Myrtle Family**	
** Eucalyptus sp.*	unknown eucalyptus sp.	
Solanaceae	**Nightshade Family**	
Datura wrightii	jimson weed	
Poaceae	**Grass Family**	
** Avena sp.*	unknown oat sp.	
** Bromus diandrus*	ripgut brome	
* *Pennisetum setaceum*	fountain grass	
** Bromus madritensis ssp. rubens*	red brome	

Legend

*= Non-native or invasive species Special Status:

Federal:
FE = Endangered FT = Threatened

State:
SE = Endangered
ST =Threatened

CRPR – California Rare Plant Rank
1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

Threat Ranks
.1 - Seriously endangered in California
.2 – Fairly endangered in California

Appendix C: Wildlife Species Compendia

Scientific Name	Common Name	Special Status
AVES	**BIRDS**	
Corvidae	**Jays and Crows**	
Corvus corax	common raven	
Falconidae	**Caracaras and Falcons**	
Falco sparverius	American Kestrel	

This page initially left blank

Ivy Substation Project
Assessor's Parcel Number 543-090-008
Focused Surveys for Burrowing Owl

Submitted to:
Albert A. Webb Associates
3788 McCray Street
Riverside, California 92506
Contact: Stephanie Standerfer, Vice President
stephanie.standerfer@webbassociates.com

Prepared By:
Wood Environment & Infrastructure Solutions, Inc.
1845 Chicago Avenue, Suite D
Riverside, California 92507

Principal Investigator: Michael D. Wilcox, Senior Biologist
michael.wilcox@woodplc.com

20 May 2020

TABLE OF CONTENTS

PAGE

LIST OF MAPS, TABLES, AND PHOTOS

LIST OF APPENDICES

1.0 INTRODUCTION

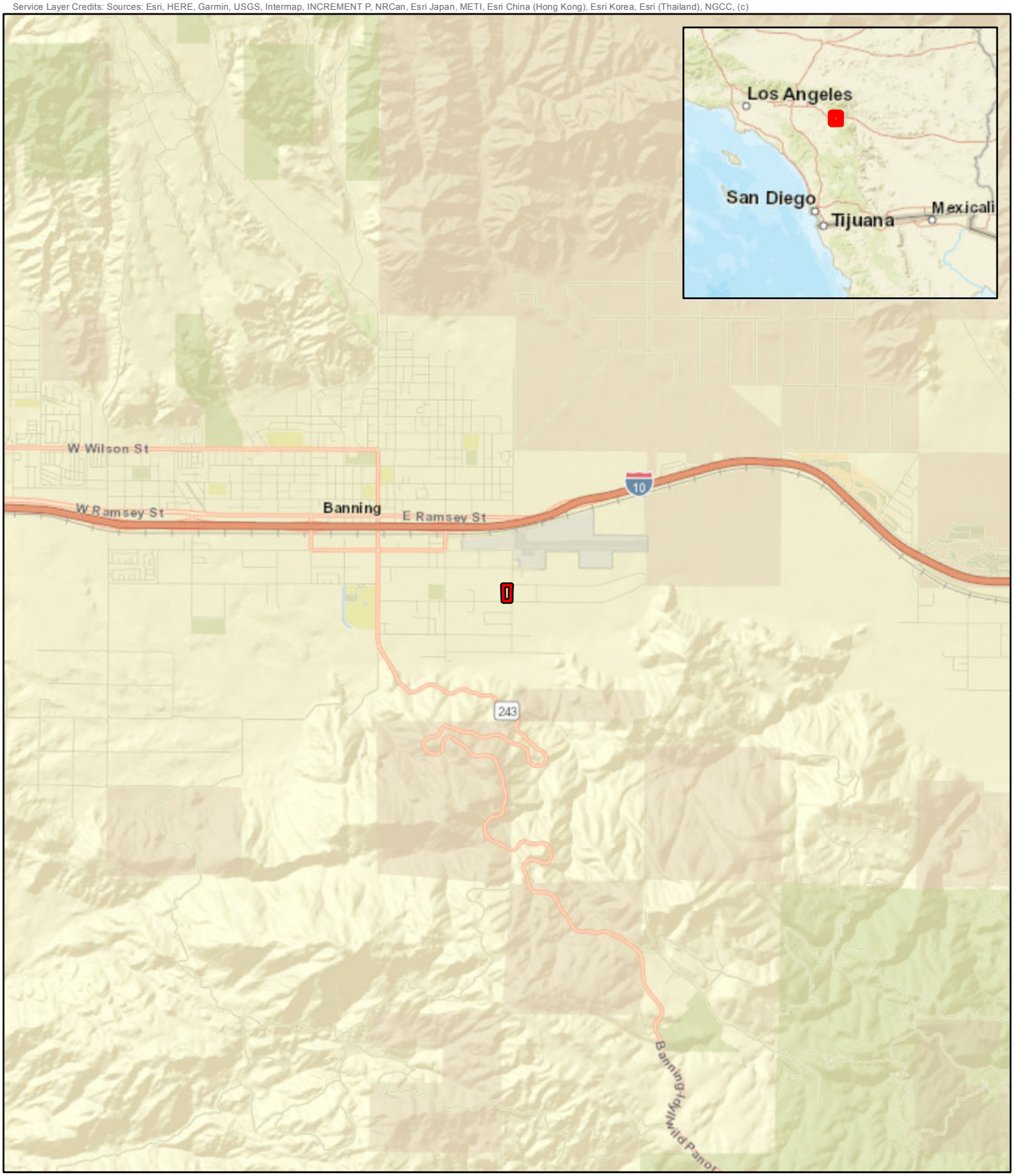
Wood Environment & Infrastructure Solutions, Inc. (Wood) was contracted by Albert A. Webb Associates (Webb) to conduct a burrow search and focused survey for the burrowing owl (*Athene cunicularia*) in accordance with Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Burrowing Owl Survey Instructions for a 4.35-acre project site located at 1581 East Charles Street, in the city of Banning, Riverside County, California (Figure 1). The proposed project involves the development of a parcel located north of Charles Street, south of East Westward Avenue, east of Driftwood Circle, and west of South Hathaway Street. The proposed project includes the development of no more than one (1) acre of the parcel for an Ivy Distribution Substation which entails a 34.5 kilo-Volt (kV) to 12.47 kV step-down distribution transformation station.

This report was prepared under the standards and survey requirements (criteria) of the MSHCP. The City of Banning is a signatory to this plan, which provides incidental take permit coverage for threatened and endangered species and unlisted species, including the burrowing owl, throughout western Riverside County. The project site is within the specified burrowing owl survey area shown on Figure 6-4 of the MSHCP. A two-step process of surveys is utilized for detection of this species. An initial habitat assessment is performed, and if suitable habitat is present, a focused protocol survey is conducted. These two steps were combined for this study.

2.0 SITE DESCRIPTION

The 4.35-acre project site occurs on Assessor's Parcel Number (APN) 543-090-008 in the City of Banning, Riverside County, California (Figure 1). The project site is specifically located north of Charles Street, southeast of East Westward Avenue, east of South Hargrave Street, and west of South Hathaway Street (Figure 2). It can be found in the northeast corner of Section 15 of Township 3 South and Range 1 East, as shown on the *Cabazon, California,* United States Geological Survey (USGS) 7.5-minute quadrangle. The elevation of the project site ranges from 2,172 to 2,188 feet above sea level. The geographic coordinates near the middle of the site are 33.5502.07° North latitude and -116.5136.03° West longitude.

The site is currently vacant with no existing structures. The on-site plant community is entirely disturbed non-native grassland. The site appears to be regularly mowed/disked for weed abatement and fire control purposes. Surrounding land use includes existing residential development to the south, commercial development to the east, and vacant lands similar in nature to what is present on the site to the north and west. The proposed project does not include any off-site improvements or staging areas. The Ivy substation footprint will not exceed one (1) acre in size and will be positioned as far to the northerly portion of the parcel as possible to ensure compatibility and integration with the surrounding commercial land uses to the north, east, and west. The project proposes to install both curb and gutter improvements along the westerly right of way of Hathaway Street and the southerly right of way of east Westward Avenue. Total acreage (permanent impact) will not exceed the size of one acre. The remaining 3.35 acres of the site are proposed to remain as undeveloped open space at this time.



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\BUOW\Fig1_Regional.mxd, chris.nixon 10/31/2019

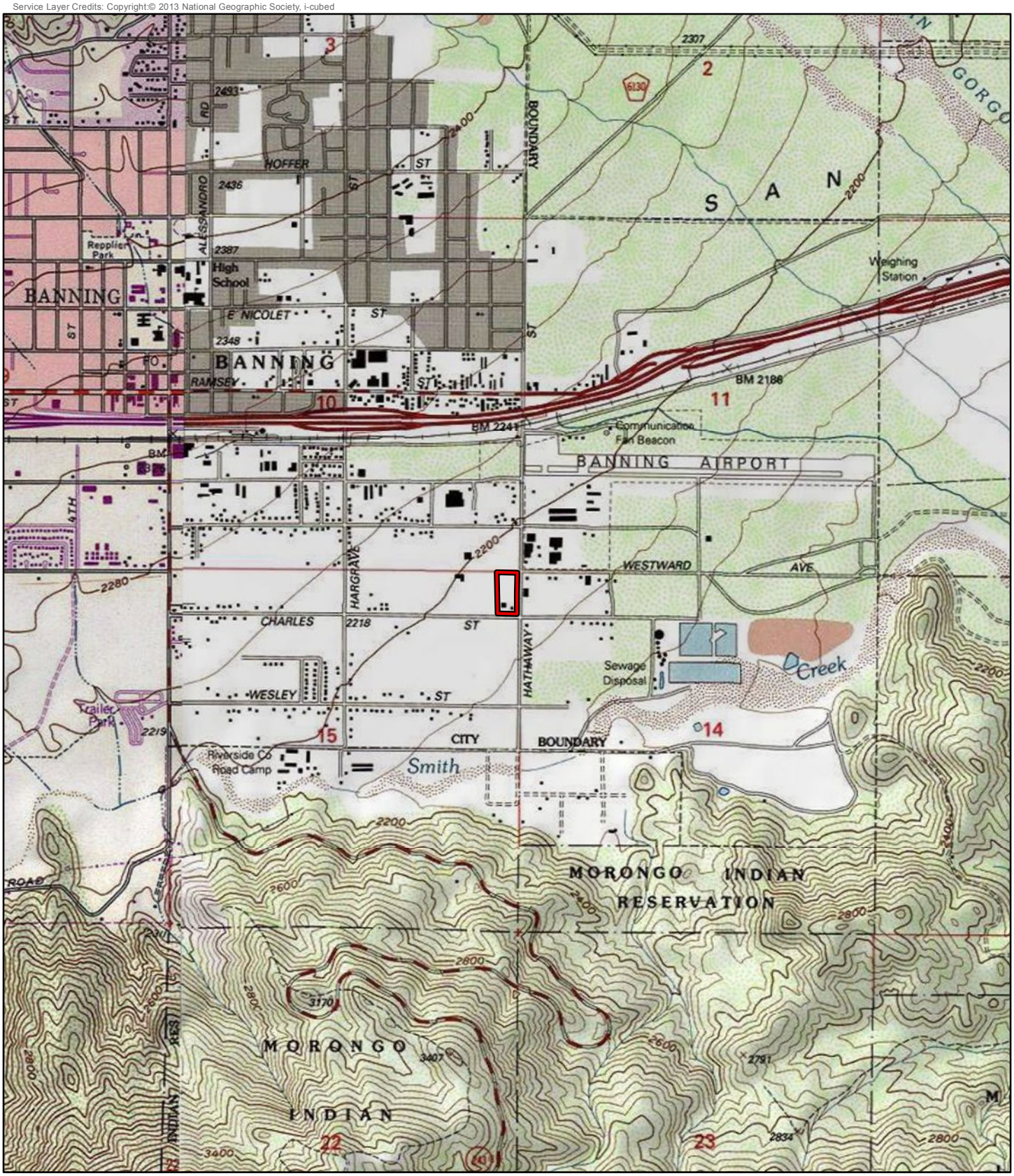
1 inch = 1 miles
0 0.5 1 Miles

wood.

Project Boundary

FIGURE 1

Regional Location
BUOW Survey Report
City of Banning Ivy Substation
Banning, CA.



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\BUOW\Fig2_Topo.mxd, chris.nixon 5/15/2020

1 inch = 2,000 feet
0 1,000 2,000 Feet

wood.

Project Boundary

FIGURE 2

Topographic Map
BUOW Survey Report
City of Banning Ivy Substation
Banning, CA.

3.0 SPECIES BACKGROUND INFORMATION

The burrowing owl is a small, tan, short-tailed, ground-dwelling owl that occupies underground burrows. A member of the Strigidae (typical owls family), this species is associated with grasslands and other arid open terrain, including Sonoran creosote bush scrub, throughout much of the western United States. Burrowing owls are opportunistic in their selection of burrows, typically utilizing the burrows of small mammals (*e.g.*, ground squirrels, kit fox), but also use desert tortoise (*Gopherus agassizii*) burrows, drain pipes, culverts, and other suitable natural or manmade cavities at or below ground level. In California, the species often occurs in association with colonies of the California ground squirrel, where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. The species is active both day and night and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of burrowing owls, nest burrows are a critical component of their habitat.

In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. Despite their apparent tolerance to human activities, burrowing owl populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal Endangered Species Acts (CDFG 1995). The declines in burrowing owl populations are attributed to loss and degradation of habitat, to ongoing residential and commercial development, and to rodent control programs. The burrowing owl is currently designated a California Species of Concern (CSC) by the California Department of Fish and Wildlife (CDFW 2020), managed as a Bird of Conservation Concern by the United States Fish and Wildlife Service (USFWS), is considered "sensitive" by the U. S. Bureau of Land Management (BLM), and protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800.

The California Burrowing Owl Consortium (CBOC) developed the Burrowing Owl Survey Protocol and Mitigation Guidelines to meet the need of uniform standards when surveying burrowing owl populations and evaluating impacts from development projects (CBOC 1997). In 1995 the CDFG issued the Staff Report on Burrowing Owl Mitigation to all its regional managers to ensure consistency in standards, policies, and regulatory mandates relating to the burrowing owl (CDFG 1995). Due to the continued decline of burrowing owl populations statewide and as an attempt to reverse this trend, the CDFG issued more effective, viable, coordinated and concerted approach to burrowing owl conservation actions with the release of an updated Staff Report on Burrowing Owl Mitigation (CDFG 2012). In the MSHCP planning area, the Western Riverside County Regional Conservation Authority (RCA), in coordination with the Riverside County wildlife agencies and the CDFW, developed the Western Riverside County Burrowing Owl Survey Instructions that burrowing owl surveys must follow for MSCHP compliance (RCA 2006).

The non-native grassland vegetation and California ground squirrel and other mammal burrows on and immediately adjacent to the project site provides suitable habitat for burrowing owls (Figure 3; Appendix B). Photos included in Appendix B are representative of the general site conditions at the time of the focused surveys.

4.0 METHODS

A burrow search and the first focused survey was conducted on 6 March 2020 by Wood senior biologists Nathan T. Moorhatch and Michael D. Wilcox. The site and immediately adjacent undeveloped areas within a 500-foot buffer zone area were surveyed on foot, mapping the locations of California ground squirrel burrows that were suitable for burrowing owl use. The surveys were conducted via pre-dawn/early morning pedestrian transects spread approximately 60 feet apart over 100% of the site in accordance with protocol established by the California Burrowing Owl Consortium (1997), the CDFW and RCA. Binoculars were used to visually inspect potential perching locations (i.e., rocks, debris, dirt mounds) as well as the entrances to all on-site mammal burrows and debris providing potential shelter (i.e., piles of concrete slabs, cement drainpipes). Mammal burrows were carefully examined for evidence of burrowing owl occupation (i.e., animal dung, feathers, whitewash, pellets, debris, etc.). Table 1 presents information on each survey (i.e., date, surveyor, survey duration, and weather variables). All wildlife detected was recorded in field notes.

Table 1. Survey Data.

Date	Surveyor	Time	Weather, Wind	Temp.
6 March 20	NM & MW	0615-0745	Partly cloudy (10% cloud cover), winds ~ 0-3 mph	53-60°F
3 April 20	NM	0623-0838	Partly cloudy (55-60% cloud cover), winds ~ 0-6 mph	52-57°F
24 April 20	LW	0545-0805	Clear (0% cloud cover), winds ~ 2-8 mph	71-72°F
1 May 20	LW	0540-0815	Clear (0% cloud cover), winds ~ 2.5-8 mph	58-63°F

NM – Nathan Moorhatch
LW – Lisa Wadley
MW – Michael Wilcox

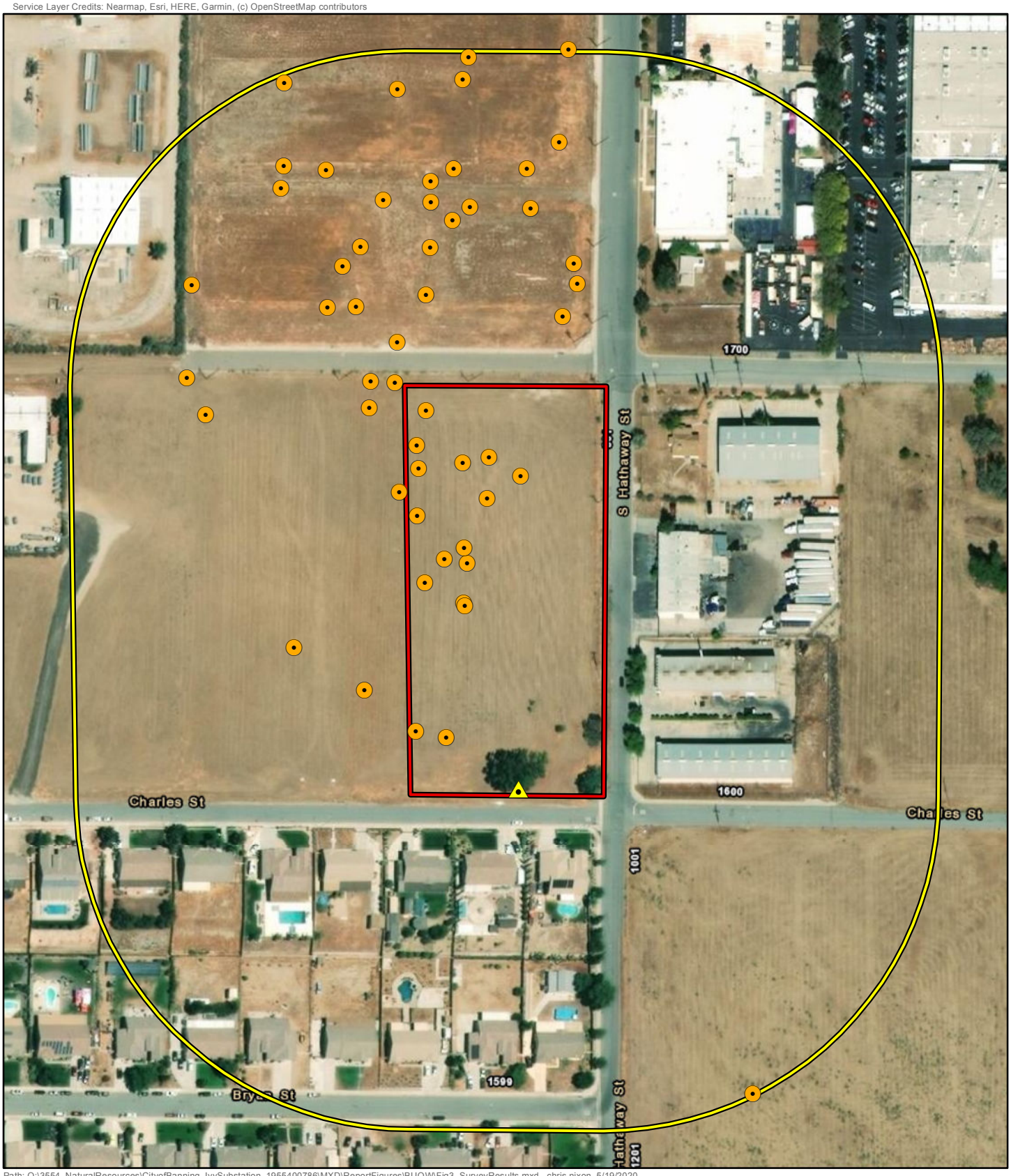
5.0 RESULTS

California ground squirrel burrows suitable for burrowing owls were detected and mapped on-site and within the adjacent buffer zone areas during the burrow search. No burrowing owls, or evidence thereof, were observed on the project site or within the adjacent 500-foot buffer zone area during the focused surveys. One other special status species, yellow-headed blackbird (*Xanthocephalus xanthocephalus*) was detected during the surveys. Yellow-headed blackbirds are not listed as threatened or endangered but are designated as a CSC by the CDFW. This species nests in dense emergent and/or riparian vegetation present at wetland areas. There are no wetlands, emergent or riparian vegetation suitable for yellow-headed blackbird nesting on or immediately adjacent to the project site. For these reasons, impacts to nesting yellow-headed blackbirds are not anticipated to occur as a result of project implementation.

Although not detected on the project site during the protocol level surveys, burrowing owls are highly mobile, and suitable habitat is present throughout the project site and on adjacent lands. For this reason, burrowing owls may colonize the site at any time in the foreseeable future. Therefore, additional focused surveys may be required if construction is not initiated within one year of completion of this survey. In addition, the MSHCP states:

> "*Pre-construction presence/absence surveys for burrowing owls within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season."*

In compliance with the MSCHP, a pre-construction presence/absence survey for the burrowing owl is recommended within 30-days of any proposed vegetation removal, grading, or any other disturbance of the site. Also, if grading and/or vegetation clearance is scheduled to be conducted during the nesting season, which is generally from 1 February through 31 August, a nesting bird clearance survey should be completed immediately prior (within approximately 7 days) to commencement of the scheduled work. If nesting birds protected by the MBTA and/or Fish and Game Code are determined to be active on-site at that time, an Environmentally Sensitive Area (ESA) or "no disturbance buffer zone area" will need to be established and monitored until the completion of nesting activities and young have fledged. CDFW generally recommends ESA's to be a 300-foot radius around nest(s) for unlisted species (which includes common raven and songbirds) and 500-foot radius around nests of listed species and raptors (i.e., hawks, falcons, kites and owls). If timed accordingly, the preconstruction survey for burrowing owl and nesting birds can be conducted concurrently.



Path: Q:\3554_NaturalResources\CityofBanning_IvySubstation_1955400786\MXD\ReportFigures\BUOW\Fig3_SurveyResults.mxd, chris.nixon 5/19/2020

1 inch = 200 feet
0 100 200 Feet

wood.

- California Ground Squirrel Burrows
- Raven Nest
- Project Boundary
- Survey Area

FIGURE 3

Survey Results
BUOW Survey Report
City of Banning Ivy Substation
Banning, CA.

Additionally, one active avian nest was detected in a mature pine tree located in the southeastern portion of the project site. A common raven (*Corvus corax*) nest was observed being built and later occupied by at least two common ravens during the latter half of the survey. Common ravens are not listed as threatened or endangered, nor are they designated as a CSC by the CDFW. Like all other native bird species, common ravens are protected while nesting by the MBTA and California Fish and Game Code. For these reasons, project operations (i.e., grading, vegetation clearance, operation of heavy equipment or machinery generating loud [i.e., >60 decibels]) should be avoided in areas near the nest during the nesting season (i.e., generally 1 February through 31 August) or while the nest remains active. After the nesting cycle is complete and the young have fledged the nest, project operations may proceed without further consideration of this common raven nest. CDFW generally recommends a 300-foot radius no disturbance buffer zone area around unlisted, non-raptor, bird species. These buffer zones can sometimes be negotiated down in size, based on topography, vegetation and the high tolerance of some species to human presence and activities.

A total of twenty-three (23) bird species, three (3) mammals, and three (3) reptiles were detected during the surveys on- and/or immediately adjacent to the site. Appendix A provides a list of all the wildlife species detected during the surveys. The relatively low total number of wildlife species observed on the site is an indication of the disturbed nature of the site.

6.0 LITERATURE CITED AND REFERENCES

California Bird Records Committee. 2019. Official California Checklist. Accessed online at: http://californiabirds.org/ca_list.asp.

California Burrowing Owl Consortium. 1997. Burrowing Owl Survey Protocol and Mitigation Guidelines. Journal of Raptor Research Report, The Raptor Research Foundation, Inc.

California Department of Fish and Game (CDFG). 2012. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.

CDFG. 1995. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.

CDFG. 2012. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2020. Special Animals List. July. Periodic publication. Sacramento, CA. Accessed online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline

CDFW. 2016. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Accessed online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=87155&inline

Riverside County Transportation and Land Management Agency. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (website).

Western Riverside County Regional Conservation Authority (RCA). 2005. Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan. Wood. 2019. Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis, City of Banning, Ivy Substation Project. Unpub. technical report submitted to Albert A. Webb Associates on 5 December 2019.

APPENDIX A
WILDLIFE SPECIES LIST

This list reports only the wildlife observed on and/or immediately adjacent to the project site by this study. Other species may have been overlooked or undetectable due to their activity seasons. Unless noted otherwise, nomenclature and systematics follow California Bird Records Committee (2020) for avifauna, and CDFW (2016) for herpetofauna and mammals.

SYMBOLS AND ABBREVIATIONS:
* Nonnative species.

I. WILDLIFE

HERPETOFAUNA	REPTILES & AMPHIBIANS
Phrynosomatidae	**Spiny Lizards & Relatives**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard

AVIFAUNA	BIRDS
Charadriidae	**Plovers & Relatives**
Charadrius vociferous	killdeer
Columbidae	**Pigeons and Doves**
Columba livia	dock dove
**Streptopelia decaocto*	Eurasian collared dove
Zenaida macroura	mourning dove
Corvidae	**Jays, Magpies, and Crows**
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Emberizidae	**Wood Warblers, Sparrows, Blackbirds**
Passerculus sandwichensis	savannah sparrow
Zonotrichia leucophrys	white-crowned sparrow
Falconidae	**Caracaras and Falcons**
Falco sparverius	American kestrel
Fringillidae	**Fringilline and Cardueline Finches**
Carpodacus mexicanus	house finch

Hirundinidae	**Swallows**
Tachycineta thalassina	violet-green swallow
Stelgidopteryx serripennis	northern rough-winged swallow
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	northern mockingbird
Icteridae	**Blackbirds & Relatives**
Icterus cucullatus	hooded oriole
Sturnella neglecta	western meadowlark
***Xanthocephalus xanthocephalus*	yellow-headed blackbird
Sturnidae	**Starlings**
**Sturnus vulgaris*	European starling
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Apodidae	**Swifts**
Chaetura vauxi	Vaux's swift
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Passeridae	**Old World Sparrows**
**Passer domesticus*	house sparrow

MAMMALS

Leporidae	**Rabbits**
Silvilagus audubonii	Audubon's (Desert) Cottontail
Sciuridae	**Squirrels**
Otospermophilus beecheyi	California ground squirrel
Geomyidae	**Pocket Gophers**
Thomomys bottae	Botta's pocket gopher

APPENDIX B
Site Photographs

City of Banning Ivy Substation Project
Banning, Riverside County, California

Photo 1. View from north boundary facing south. Representative condition of proposed Ivy Substation site during the habitat assessment and burrow search.

Photo 2. Representative example of California ground squirrel burrows found on-site that were suitable for burrowing owl occupation.

City of Banning Ivy Substation Project
Banning, Riverside County, California

Photo 3. Representative example of California ground squirrel burrows found on-site that were suitable for burrowing owl occupation.

Photo 4. Mature pine tree (left) that contained an active common raven nest during the focused surveys.

NOISE ANALYSIS REPORT

IVY ELECTRIC SUBSTATION

Banning, CA

March 20, 2020 DRAFT

Prepared for:
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

Prepared by:

dBF Associates, Inc.
3129 Tiger Run Court, Suite 202
Carlsbad, CA 92010
619-609-0712

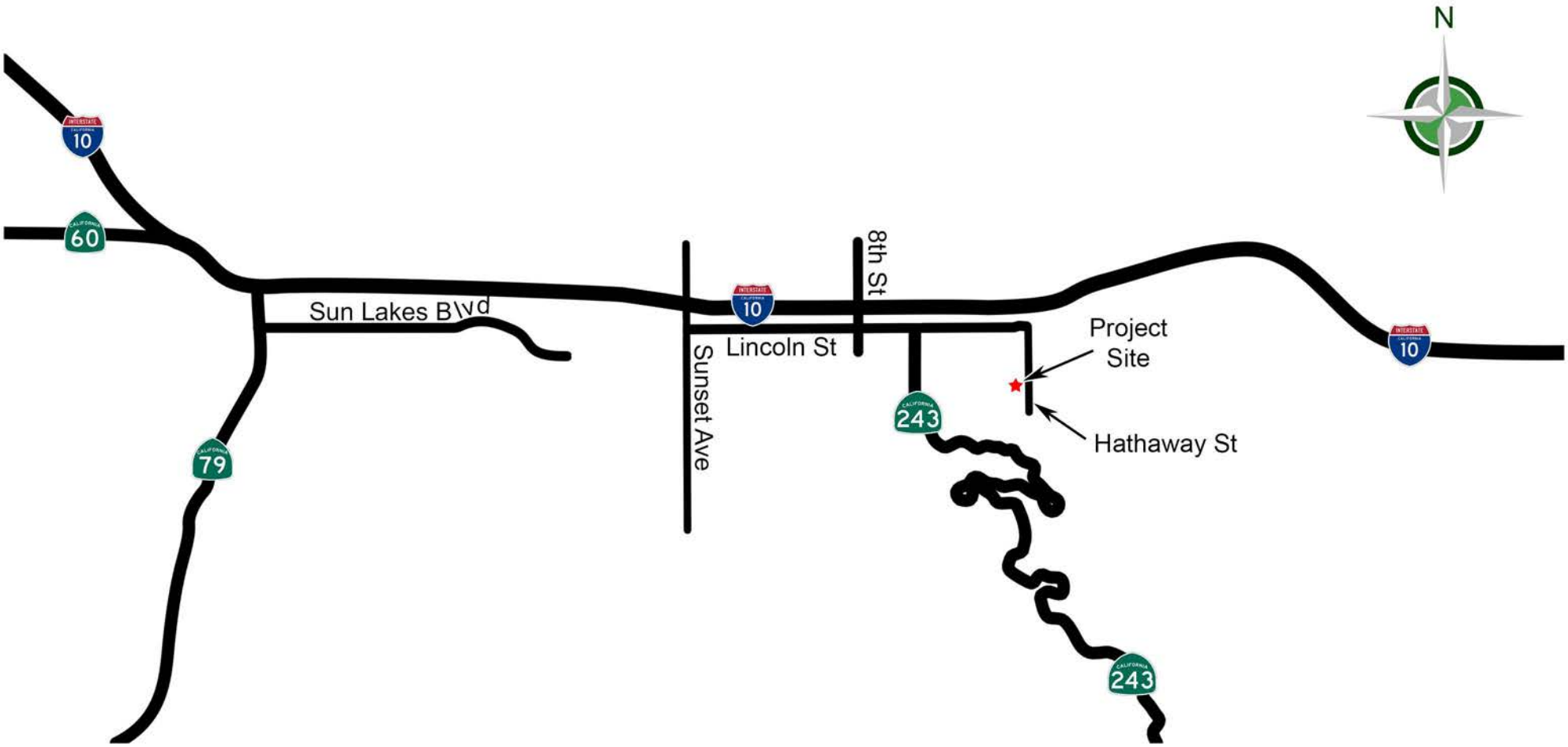
Tables

Figures

EXECUTIVE SUMMARY

This analysis evaluates noise associated with the proposed Ivy Substation in the City of Banning, California (Figure 1).

The Project would generate operational noise levels below 45 dBA Leq at residential property lines and below 75 dBA at nonresidential property lines. The impact of Project-generated noise would be less than significant.



dBF Associates, Inc.

FIGURE 1
Vicinity Map

1.0 PROJECT DESCRIPTION

Background

The Ivy Electric Substation ("Project" or "proposed Project") is the part of the City of Banning's ("the City") electric infrastructure improvement projects recommended in the 2018 Long Term Load Forecast which considers planned new development within the City. These recommendations are part of the City's Master Plan for 2004 – 2014. The City of Banning Electric Utility ("Banning Electric") proposes the construction and operation of a step-down distribution transformation electric substation to replace the existing Airport Substation, located approximately 0.20 miles east of the Project site along East Westward Avenue. Once the Project has been commissioned and is operational, the Airport Substation would be decommissioned within six months to a year.

Project Location

The Project would be located on approximately 4.35 gross acres at 1581 Charles Street (APN 543-090-008), Banning, California, in Riverside County, south of the Interstate 10 freeway. Specifically, the Project would be located on the northern portion of the 4.35-acre Project site, at the southwest intersection of East Westward Avenue and South Hathaway Street, to ensure compatibility and integration with the surrounding industrial uses to the west, north and east, and away from the residential uses to the south, past Charles Street. The Project would not exceed one to one-and-a-half acres of the 4.35-acre site. The remainder of the Project site would be left undeveloped and undisturbed. The proposed Project's use is a permitted use consistent with the City's GP and Zoning land designation of Industrial (I). No General Plan Amendment, Specific Plan Amendment, or zone change is required. The proposed Project is a city owned and operated facility and would not require the City Council or the Planning Commission's approval.

Project Components

The Project is a 34.5-kilovolt (kV) to 12.47-kV step-down distribution transformation station. The station would support a 34.5-kV entrance with four (4) underground 12.47-kV "get-a-ways" rising to an interconnection with the existing overhead lines located adjacent to the westerly right-of-way (ROW) of Hathaway Street. The total substation capacity would accommodate 40 megawatts (MW); initially the Project would install 20 MW and may add another 20 MW. Increasing the capacity to 40 MW is an equipment upgrade and does not propose additional construction. The Project components include an approximate 640 square foot (sf) metal-clad Switchgear control building, two power transformers, and power circuit breakers with an attached bus structure that would not exceed 40 feet (ft) in height. There would be a perimeter block wall ranging from 8-10 ft in height, security cameras, and nighttime lighting installed. The Project would have a foundation concrete pad for the building, two concrete pads for the power transformers, and two concrete pads for the circuit breakers. The remaining Project site would be covered by ¾ rock, calcified earth, and asphalt for the two proposed driveways. Excavation for the construction of the foundation would not exceed 10 ft in depth.

The Project proposes curb, gutter, and sidewalk improvements along the Project's frontage on the southerly ROW of East Westward Avenue and the westerly ROW of South Hathaway Street. The existing powerline poles on East Westward Avenue and on South Hathaway Street would be relocated to within the ROW to accommodate improvements. The existing fire hydrant on East Westward Avenue, adjacent to the Project site, would be relocated within the vicinity of the East Westward Avenue and South Hathaway Street intersection.

Project Construction and Operation

Construction is expected not to exceed nine months. Construction materials would be stored at the City's corporate yard, located at 176 East Lincoln Street, Banning, approximately 1.2 miles from the Project site. Construction of the proposed Project would involve mass grading of the site; the Project would balance onsite.

During Project operations, it is anticipated that one to two maintenance vehicle(s) per day would visit the Project site for substation inspection during Banning Electric's normal business hours. The Project site would have two vehicular access entrances: one entrance from East Westward Avenue and another entrance from Hathaway Street.

2.0 ENVIRONMENTAL NOISE BACKGROUND

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound typically associated with human activity and that interferes with or disrupts normal activities. The human environment is characterized by a certain consistent noise level which varies with each area. This is called ambient noise. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, perceived importance of the noise and its appropriateness in the setting, time of day and type of activity during which the noise occurs, and sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and intensity. Frequency describes the sound's pitch and is measured in cycles per second, or hertz (Hz), whereas intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually as pain at still higher levels. Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and would likely evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would cause a community response [Caltrans 2013a]. Sound levels of typical noise sources and environments are provided in Table 2.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. A simple rule is useful, however, in dealing with sound levels. If a sound's intensity is doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example, 60 dB + 60 dB = 63 dB, and 80 dB + 80 dB = 83 dB. The normal human ear can detect sounds that range in frequency from about 20 Hz to 20,000 Hz.

However, all sounds in this wide range of frequencies are not heard equally well by the human ear, which is most sensitive to frequencies in the range of 1,000 Hz to 4,000 Hz. This frequency dependence can be taken into account by applying a correction to each frequency range to approximate the human ear's sensitivity within each range. This is called A-weighting and is commonly used in measurements of community environmental noise. The A-weighted sound pressure level (abbreviated as dBA) is the sound level with the "A-weighting" frequency correction. In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve.

Table 1. Sound Levels of Typical Noise Sources and Noise Environments

Noise Source (at Given Distance)	Noise Environment	A-Weighted Sound Level	Human Judgment of Noise Loudness (Relative to Reference Loudness of 70 Decibels*)
Military Jet Takeoff with Afterburner (50 ft)	Carrier Flight Deck	140 Decibels	128 times as loud
Civil Defense Siren (100 ft)		130	64 times as loud
Commercial Jet Take-off (200 ft)		120	32 times as loud **Threshold of Pain**
Pile Driver (50 ft)	Rock Music Concert Inside Subway Station (New York)	110	16 times as loud
Ambulance Siren (100 ft) Newspaper Press (5 ft) Gas Lawn Mower (3 ft)		100	8 times as loud **Very Loud**
Food Blender (3 ft) Propeller Plane Flyover (1,000 ft) Diesel Truck (150 ft)	Boiler Room Printing Press Plant	90	4 times as loud
Garbage Disposal (3 ft)	Noisy Urban Daytime	80	2 times as loud
Passenger Car, 65 mph (25 ft) Living Room Stereo (15 ft) Vacuum Cleaner (10 ft)	Commercial Areas	70	Reference Loudness **Moderately Loud**
Normal Speech (5 ft) Air Conditioning Unit (100 ft)	Data Processing Center Department Store	60	1/2 as loud
Light Traffic (100 ft)	Large Business Office Quiet Urban Daytime	50	1/4 as loud
Bird Calls (distant)	Quiet Urban Nighttime	40	1/8 as loud **Quiet**
Soft Whisper (5 ft)	Library and Bedroom at Night Quiet Rural Nighttime	30	1/16 as loud
	Broadcast and Recording Studio	20	1/32 as loud Just Audible
		0	1/64 as loud Threshold of Hearing

Source: Compiled by dBF Associates, Inc.

Because community noise fluctuates over time, a single measure called the Equivalent Sound Level (Leq) is often used to describe the time-varying character of community noise. The Leq is the energy-averaged A-weighted sound level during a measured time interval, and is equal to the level of a continuous steady sound containing the same total acoustical energy over the averaging time period as the actual time-varying sound. Additionally, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the Lmax and Lmin indicators, which represent the root-mean-square maximum and minimum noise levels obtained during the measurement interval. The Lmin value obtained for a particular monitoring location is often called the "acoustic floor" for that location.

To describe the time-varying character of environmental noise, the statistical noise descriptors L10, L50, and L90 are commonly used. They are the noise levels equaled or exceeded during 10, 50, and 90 percent of a stated time, respectively. Sound levels associated with L10 typically describe transient or short-term events, whereas levels associated with L90 describe the steady-state (or most prevalent) noise conditions.

3.0 REGULATORY FRAMEWORK

To limit exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, state of California, and local governments have established standards and ordinances to control noise and vibration. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources and noise / land use compatibility is left to local agencies.

No federal regulations are applicable to this project.

3.1 City of Banning

Chapter 8.44 of the City of Banning Municipal Code establishes noise limits within the City.

The most-restrictive noise level limits at residential land uses are hourly limits of 55 dBA Leq during daytime (7:00 a.m. – 10:00 p.m.) and 45 dBA Leq during nighttime (10:00 p.m. – 7:00 a.m.).

The noise level limit at nonresidential land uses is 75 dBA at any time.

4.0 ENVIRONMENTAL SETTING AND EXISTING CONDITIONS

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise.

4.1 Surrounding Land Uses and Environmental Setting

The project site is located along the west side of Hathaway Street, between Westward Avenue and Charles Street. Adjacent land uses include vacant land to the northwest and north, commercial and industrial buildings to the northeast and east, vacant land to the southeast, single-family residences to the south and southwest, and vacant land to the west.

The primary existing noise sources in the vicinity of the project are natural activity, vehicular traffic on nearby roadways, industrial facilities, railroad traffic, and occasional aircraft.

4.2 Ambient Sound Levels

Ambient sound level measurements were conducted near the project site to estimate the existing acoustical environment. A RION Model NL-31 American National Standards Institute (ANSI) Type 2 Integrating Sound Level Meter (SLM) was used as the data-collection device. The meter was mounted on a tripod roughly 5 feet above ground to simulate the average height of the human ear. The microphone was fitted with a windscreen. Weather conditions during the measurements were approximately 85°F, 30% relative humidity, 0-2 mph wind speed, and clear skies. The sound level meter was calibrated before each measurement period. The measurement results are summarized in Table 2 and correspond to the locations depicted on Figure 3.

Table 2. Sound Level Measurements (dBA)

Measurement Location		Date / Time	Leq	Lmin	Lmax	L10	L50	L90
ML1	1550 Charles Street Northeast corner of front yard	9/18/2019 12:15 p.m. – 12:25 p.m.	55.8	46.6	74.4	55.8	49.9	47.8
ML2	Northwest corner of project site	11/13/2019 11:10 a.m. – 11:20 a.m.	48.7	43.5	60.4	51.1	46.9	45.2

dBF Associates, Inc.

FIGURE 2

Sound Level Measurement Locations

5.0 POTENTIAL NOISE IMPACTS

The only noise-producing Project components are the transformers.

Acoustical calculations were performed to estimate the sound level from the transformers at the Project property lines. Each transformer was considered to be a point source. Sound from a point source generally decays at a rate of six dBA per doubling of distance from the source. This is a logarithmic relationship describing the acoustical spreading of a pure, undisturbed spherical wave in air. The rule applies to the propagation of sound waves with no ground interaction. Sound levels were calculated using the formula

$$SPL_2 = SPL_1 - 20\log\left(\frac{d_2}{d_1}\right)$$ where

SPL_1 = known sound level,
SPL_2 = desired sound level,
d_1 = known distance, and
d_2 = desired distance.

The closest Project property line to the proposed transformers is the north property line, which is approximately 45 feet away from both transformers.

National Electrical Manufacturers (NEMA) Standards Publication ST 20-2014 limits transformers to a maximum allowable noise level of 67 decibels at 1 foot.

Each transformer would produce a maximum noise level of approximately 34 dBA Leq at the north property line. Together, both transformers would produce a combined maximum noise level of approximately 37 dBA Leq at the north property line. All other property lines are further away from the proposed transformers, and would experience lower transformer noise levels.

The Project would produce noise levels below the nighttime (most restrictive) allowable level of 45 dBA Leq at residential property lines. The Project would produce noise levels below the allowable level of 75 dBA at nonresidential land uses.

The impact of Project-generated operational noise would be less than significant.

6.0 RECOMMENDATIONS

No significant impacts were identified. Therefore, no recommendations are required.

7.0 REFERENCES

City of Banning. 2019. Municipal Code. November 15.

Harris, Cyril M. 1998. Handbook of Acoustical Measurements and Noise Control, Third Edition. Acoustical Society of America. Woodbury, NY.

International Organization for Standardization (ISO). 1996a. ISO 1996/1. Acoustics – Description and Measurement of Environmental Noise – Part 1: Basic Quantities and Procedures.

1996b. ISO 1996-2. Acoustics – Description and Measurement of Environmental Noise – Part 2: Acquisition of Data Pertinent to Land Use.

1996c. ISO 1996-3. Acoustics – Description and Measurement of Environmental Noise – Part 3: Application to Noise Limits.

8.0 LIST OF PREPARERS

_____

Steven Fiedler, INCE
Principal, dBF Associates, Inc.

City of Banning

Community Development Department

April 27, 2020

To: Albert A. Webb Associates
Attn: Stephanie Standerfer
3788 McCray Street
Riverside, CA 92506

Subject: City of Banning Ivy Substation Project Geology and Soils Desk Top CEQA Analysis

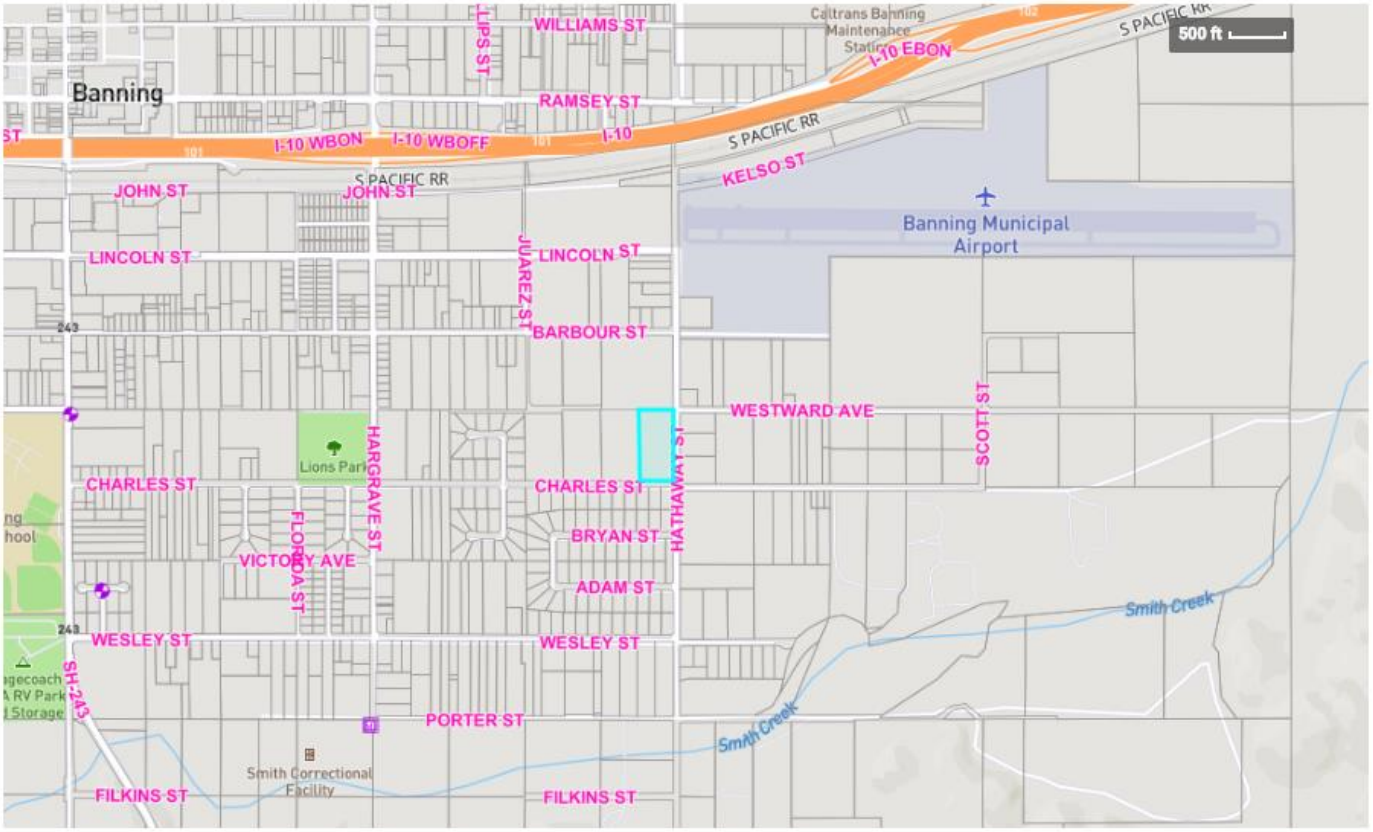
SUMMARY:

The Ivy Electric Substation ("Project" or "proposed Project") is part of the City of Banning's ("the City") electric infrastructure improvement projects recommended in the 2018 *Long Term Load Forecast* which considers planned new development within the City. These recommendations are part of the City's Master Plan for 2004 – 2014. The City of Banning Electric Utility ("Banning Electric") proposes the construction and operation of a step-down distribution transformation electric substation to replace the existing Airport Substation, located approximately 0.20 miles east of the Project site along East Westward Avenue. Once the Project has been commissioned and operational, the Airport Substation will be decommissioned within six months to a year.

The Project will be located on approximately 4.35-acres of land, at 1581 Charles Street (APN 543-090-008), Banning, California, in Riverside County (**Figure 1**). Specifically, the Project will be located on the northern portion of the 4.35-acre Project site in the southwest intersection of East Westward Avenue and South Hathaway Street**,** to ensure compatibility and integration with the surrounding industrial uses to the west, north and east, and away from the residential uses to the south, past Charles Street (**Figure 2**). The Project will not exceed one and a half acres of the 4.35-acre site. The remainder of the Project site will be left undisturbed. The proposed use is consistent with the City's General Plan and Zoning land designation of Industrial (I) (**Figure 3**). No General Plan Amendment, Specific Plan Amendment, or zone change is required. The proposed Project is a city-owned and operated facility and will not require City Council or Planning Commission approval.

Figure 1

Ivy Substation Vicinity Map



1" = 1370 ft	Ivy Substation 543-090-008	04/16/2020	

This map may represents a visual display of related geographic information. Data provided here on is not guarantee of acutual field conditions. To be sure of complete accuracy, please contact the responsible staff for most up-to-date information.

Figure 2

Ivy Substation Aerial Map

1" = 262 ft	Ivy Substation 543-090-008	04/16/2020	

This map may represents a visual display of related geographic information. Data provided here on is not guarantee of acutual field conditions. To be sure of complete accuracy, please contact the responsible staff for most up-to-date information.

Figure 3

Ivy Substation Zoning Map

1" = 316 ft	Ivy Substation 543-090-008	04/16/2020	

This map may represents a visual display of related geographic information. Data provided here on is not guarantee of acutual field conditions. To be sure of complete accuracy, please contact the responsible staff for most up-to-date information.

CEQA ANALYSIS:

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.

No Impact. *The San Gorgonio Pass Fault is the closest Alquist-Priolo Earthquake Fault Zone to the Project site as delineated in the latest State Earthquake Fault Zone maps and in Exhibit V-3 of the General Plan. The San Gorgonio Pass Fault is located approximately 2.5 miles north of Interstate 10 (**Figure 4**). The San Gorgonio Pass fault zone is comprised of a series of north-dipping reverse and thrust faults connected by strike tear*

faults. The most recently active strands of faults occur at the base of the Banning Bench, in the north central part of Banning. The Highland Scarp, along the western edge of the City, is considered an active segment of the San Gorgonio Pass fault zone. The San Gorgonio Pass fault can produce a maximum credible earthquake magnitude of 7.4 – 7.6 (M_{max}). The Project Site is not located within an Alquist-Priolo Earthquake Fault Zone; therefore, no impacts from fault rupture on-site are anticipated and no mitigation measures are necessary.

ii) Strong seismic ground shaking?

Less than Significant Impact. *The Proposed Project involves the construction and operation of a step-down distribution transformation electric substation. While the Project Site may be subject to seismic ground shaking associated with area faults, any ground shaking that might occur on-site are consistent with the risk from seismic activity typical of the region. In addition, all structures must comply with seismic building standards contained in the California Uniform Building Code. Consequently, potential adverse impacts from exposure to strong seismic ground shaking are considered less than significant and no mitigation measures beyond compliance with applicable regulations are necessary.*

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact*. Liquefaction occurs primarily in saturated, loose, fine to medium grained soils in areas where the groundwater table is within 50-feet of the surface. During liquefaction, involved soils behave like a liquid or semi-viscous substance and can cause structural distress or failure due to ground settlement, a loss of load-bearing capacity in foundation soils, and the buoyant rise of buried structures. Three general conditions induce liquefaction: 1) strong ground shaking for a sustained period, 2) presence of unconsolidated granular sediments, and 3) occurrence of water-saturated sediments within 50 feet of the ground surface. According to the California Geological Survey, the project area has not been evaluated for liquefaction. (**Figure 5**). There is a low potential for liquefaction as the reported water level below the ground surface varies between 480-feet and 639-feet according to the United States Geological Survey National Water Information System, USGS NWIS (**Figure 6**).*

There is a low potential for liquefaction at the Project Site (Riverside County Parcel Report for APN 543-090-008). Consequently, potential adverse effects related to seismically induced ground failure including liquefaction are considered less than significant and no mitigation measures beyond compliance with applicable regulations are necessary.

Figure 4

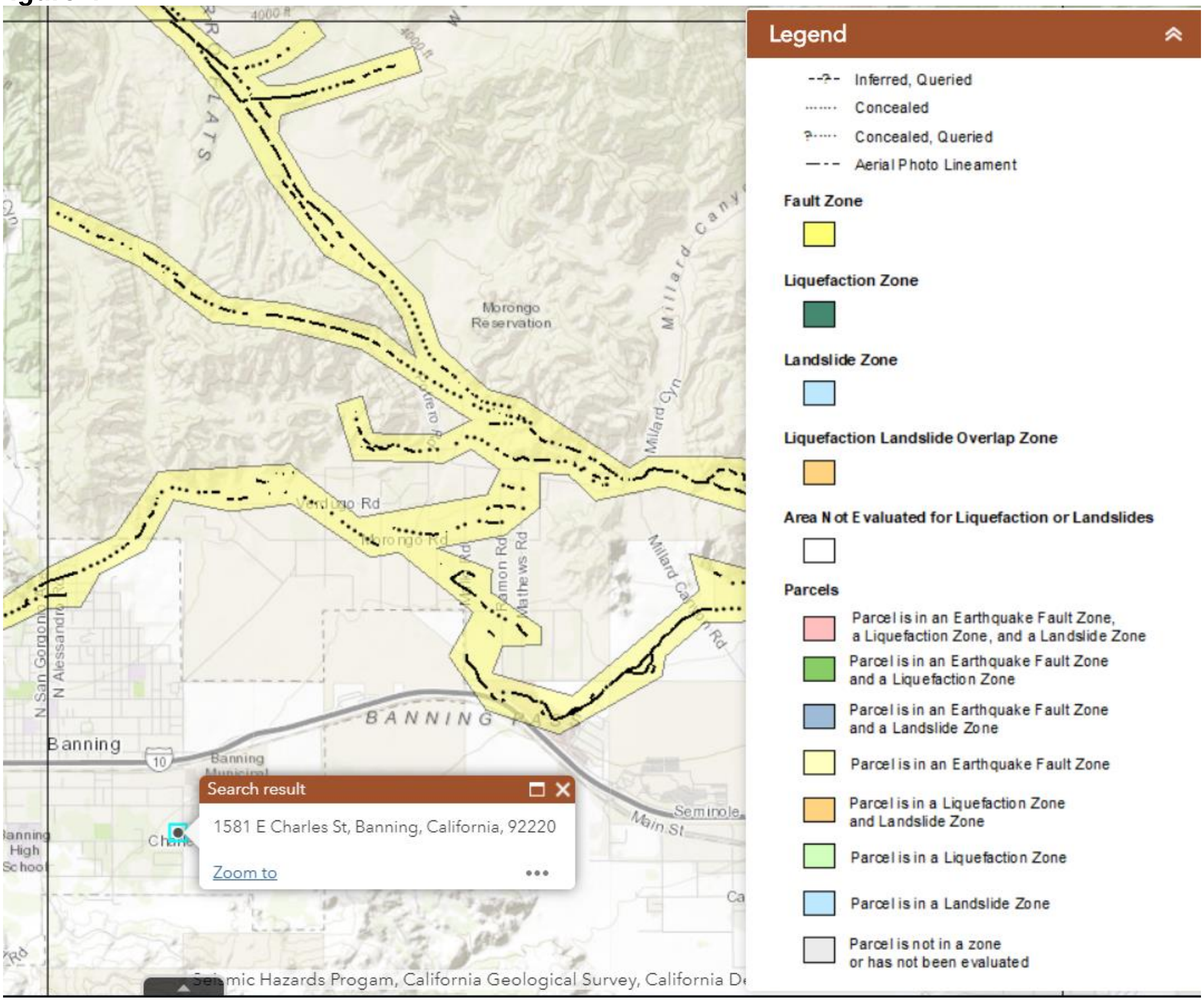

Legend
Inferred, Queried
Concealed
Concealed, Queried
Aerial Photo Lineament
Fault Zone
Liquefaction Zone
Landslide Zone
Liquefaction Landslide Overlap Zone
Area Not Evaluated for Liquefaction or Landslides
Parcels
Parcel is in an Earthquake Fault Zone, a Liquefaction Zone, and a Landslide Zone
Parcel is in an Earthquake Fault Zone and a Liquefaction Zone
Parcel is in an Earthquake Fault Zone and a Landslide Zone
Parcel is in an Earthquake Fault Zone
Parcel is in a Liquefaction Zone and Landslide Zone
Parcel is in a Liquefaction Zone
Parcel is in a Landslide Zone
Parcel is not in a zone or has not been evaluated
Morongo Reservation
Verdugo Rd
Morongo Rd
Millard Cyn
Ramon Rd
Mathews Rd
BANNING PASS
Banning
Search result
1581 E Charles St, Banning, California, 92220
Zoom to
Seminole
Main St
N San Gorgonio
N Alessandro
Seismic Hazards Progam, California Geological Survey, California D

Figure 5

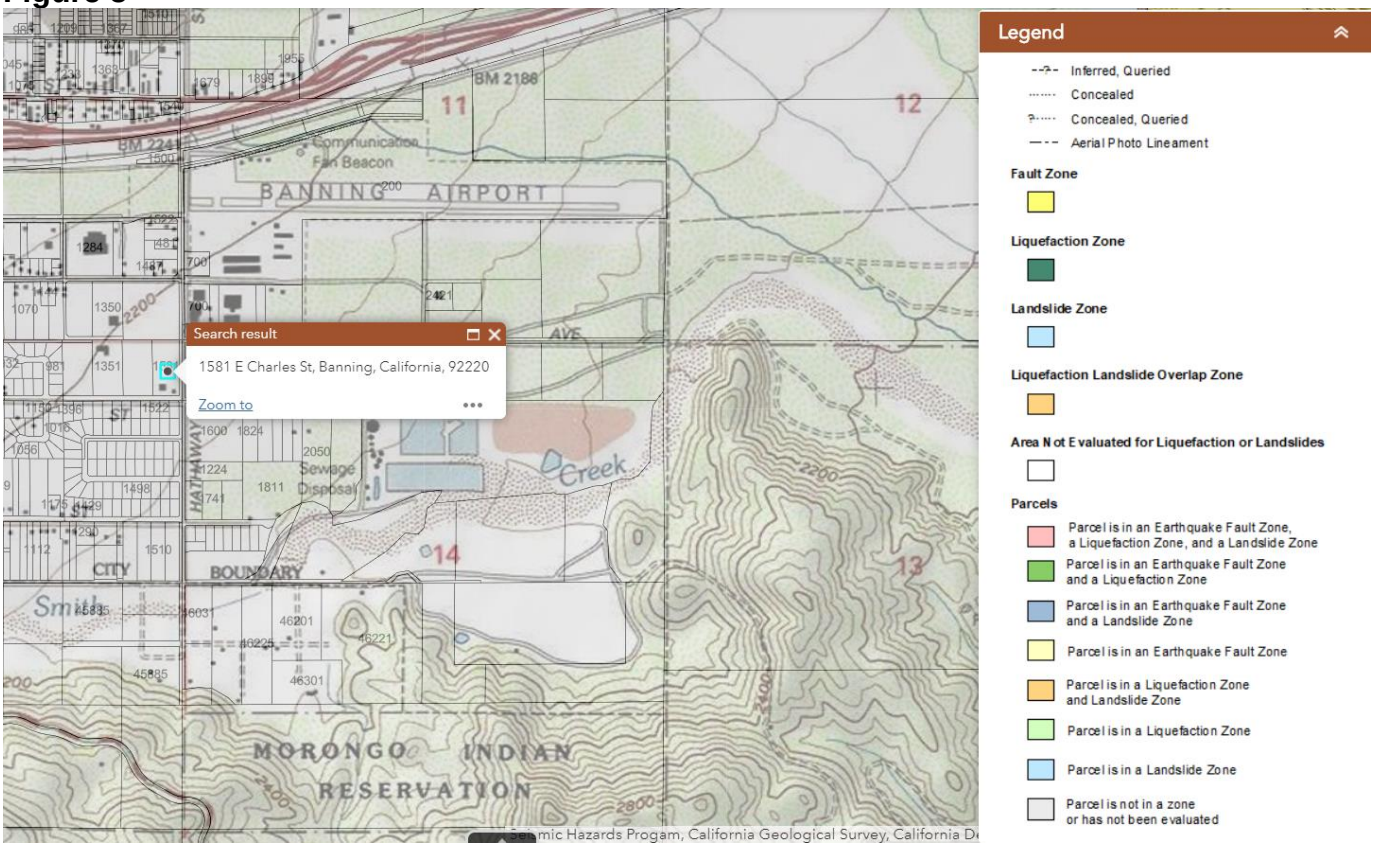
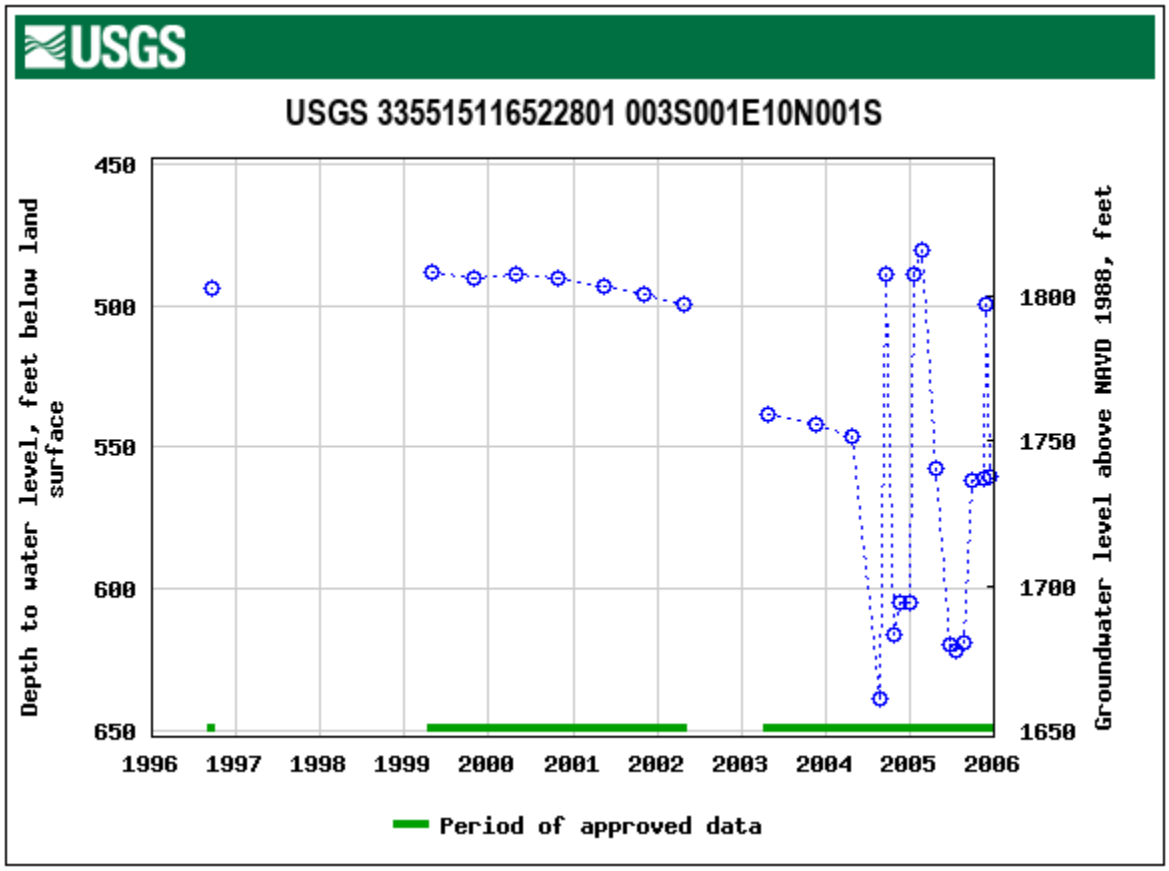


Figure 6



iv) Landslides?

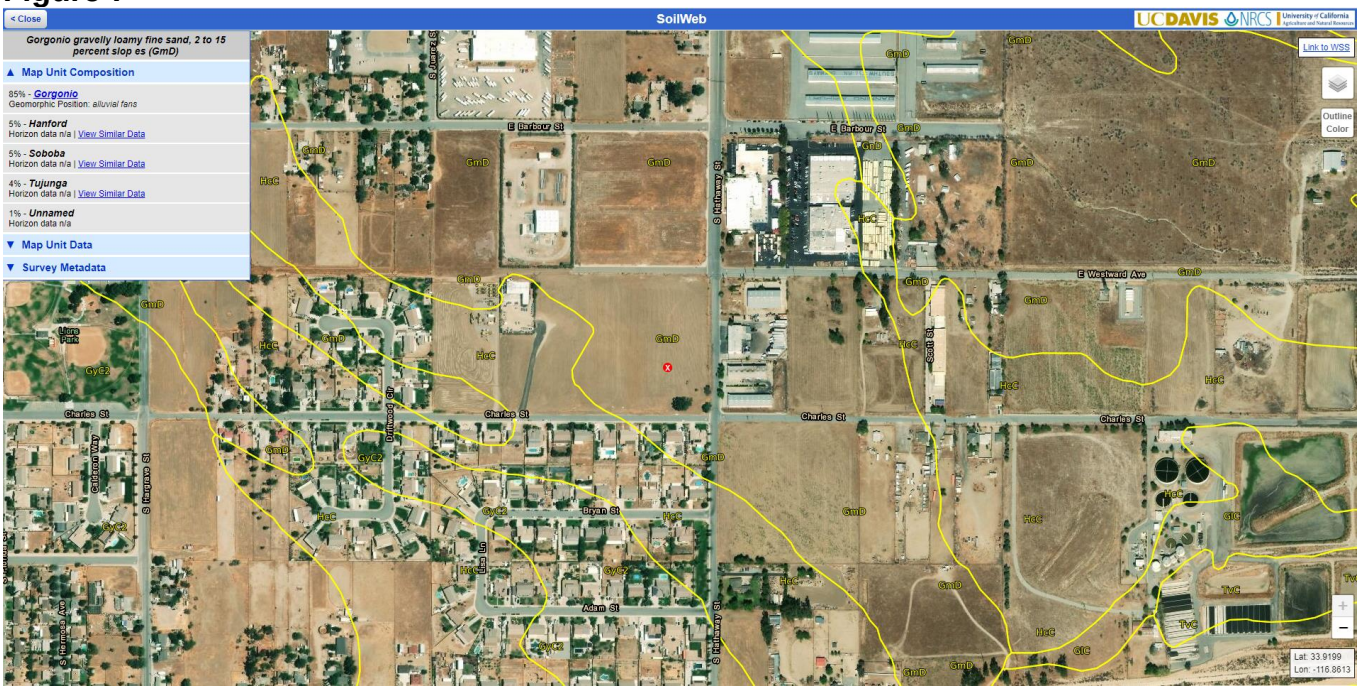
No Impact. *The City of Banning General Plan identifies an increased potential for landslides to occur where there is a high seismic potential, including areas with steep slopes and deeply incised canyons, rock with inherently weak components, or highly fractured and folded rock. The northernmost and southernmost portions of the City are described as highly susceptible to seismically induced slope failure due to the proximity to mountains and hillsides. Additionally, areas with slopes steeper than 15 degrees are described as generally subject to slope failure. Elevation at the Project site ranges from approximately 2,187 feet above mean sea level (amsl) at the northwesterly end to approximately 2,175 feet amsl at the southeasterly end; no hillsides with slopes greater than 15 degrees occur on-site or in the immediate vicinity. Consequently, no adverse effects related to on-site landslides are anticipated.*

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. *According to the UC Davis Soils Web Site, the soil type is considered, Gorgonio. Gorgonio soils have dark grayish brown and brown, gravelly loamy fine sand, slightly and medium acid A horizons and brown, somewhat stratified, medium acid, gravelly loamy sand C horizons. Gorgonia soils are nearly level to moderately sloping. They are on alluvial fans at elevations of 20 to 3,000-feet amsl. They formed in coarse textured alluvium derived from granite, granodiorite, schist, and related rocks. The climate is one of long dry summers and cold, moist winters with an average annual precipitation of 10 to 25-inches. The soil is somewhat excessively drained; slow or medium runoff; rapid permeability (**Figure 7**).*

Additionally, the project proposes to have not import or export of soils during grading activities. Considering the soil type and grading activities; no substantial soil erosion or loss of topsoil is anticipated.

Figure 7



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?

Less than Significant Impact. *According to the General Plan, the City of Banning is bounded to the north by the San Bernardino Mountains and the San Jacinto Mountains to the south. Most of the City area is in a narrow, east-trending valley known as the San Gorgonio Pass. The pass extends westward from the Coachella Valley and joins with the Beaumont Plain and the San Timoteo Badlands farther west. Its highest elevation is approximately 2,600-feet, which occurs near Beaumont. Several major streams, and many other smaller streams and tributaries occur along the canyons of the San Bernardino Mountains, including the San Gorgonio River that flows through the Banning Canyon. For the greater part of the year, streams in the Banning area are dry and convey significant flows only during the wet winter months.*

Geologic and climatic processes have influenced the physical features of the Banning area in the last few million years. The City of Banning is located at the junction of two distinct geomorphic/geologic boundaries. Banning is located at the boundary of two great tectonic plates, the North American Plate, and the Pacific Plate. The San Andreas Fault forms the boundary for the said tectonic plates. In addition to this, the City is located within two geomorphic provinces, each of which has its own unique physical characteristics. The Transverse Ranges Province, which encompasses most of the planning area, and the Peninsular Ranges Province, which includes the planning area's southern edge. The San Gorgonio Pass marks the boundary between them. The San Gorgonio Pass was created by tectonic forces and constitutes a down dropped landmass filled with thick deposits of alluvium.

There are six types of geologic deposits that underlie the Banning planning area. These consist of: 1) igneous, granitic, and metamorphic rocks associated with the San Bernardino and San Jacinto Mountains; 2) sedimentary rocks located in the eastern, central and southern portions of the Banning planning area; 3) bedrock and rubble associated with landslides and occurring to the north and south of the plan area; 4) older alluvial fan deposits; 5) young or recent alluvium deposits; and 6) artificial fill. Please refer to Exhibit V-1 of the General Plan for the geologic map of the Banning area.

Elevations at the Project Site range from approximately 2,187-feet amsl at the northwesterly end to approximately 2,175 feet amsl at the southeasterly end; there are no hills or prominent landforms in the immediate vicinity. The potential for some total and differential settlements due to ground shaking may be expected; however, based on adjacent completed projects within the vicinity, earthquake induced settlement is within tolerable limits. Therefore, it is not anticipated that implementation of the Proposed Project would result in soil that would become unstable as a result of the project or cause off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. No impacts are anticipated.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

***No Impact**. Expansive soils (shrink-swell) are fine grained clay soils generally found in historical floodplains and lakes. Expansive soils are subject to swelling and shrinkage in relation to the amount of moisture present in the soil. Structures built on expansive soils may incur damage due to differential settlements of the soil as expansion and contraction takes place. Information about shrink-swell classes and linear extensibility is available in the Natural Resource Conservation Service (NRCS) soil survey reports. A high shrink-swell potential indicates a hazard to maintenance of structures built in/on/or with material having this rating. Moderate to low ratings lessen the hazard. A site investigation determined, on-site soils were found to be sandy in nature and are not considered expansive. The Project would implementation all recommendations in the General Plan and Municipal Code; therefore, no impacts related to expansive soils are anticipated.*

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

***No Impact.** No septic tanks or alternative wastewater disposal is proposed. Upon approval of the Proposed Project, if needed, the project would connect to the City's sewer collection system that currently serves the immediate vicinity. No impacts from soils incapable of adequately supporting septic tanks or alternative wastewater disposal systems would result.*

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

***No Impact.** The approximately 4.35-acre project site is characterized by relatively flat (2% slope) sandy/gravelly soil with scattered vegetation. The project is in the Industrial Zoning District within the City of Banning. The site is not recognized as a unique paleontological or a unique geologic feature. However, per the City of Banning General Plan, if a unique paleontological resource or site or unique geologic feature are found during excavation, all work will be suspended until the area has been thoroughly examined.*

Resources:

1. City of Banning Municipal Code.
2. City of Banning General Plan.
3. USGS National Water Information System Mapper. Maps.waterdata.usgs.gov/mapper.
4. UC Davis Agriculture and Natural Resources website. Casoilresource.lawr.ucdavis.edu.
5. Riverside County Geographic Information System. Gis.rivcoit.org.
6. California Department of Conservation Soils Maps. Maps.conservation.ca.gov/cgs/EQZApp/.
7. Google Earth Pro.
8. Geo Viewer Online. New.geoviewer.io.
9. United States Geological Survey website. USGS.gov.
10. Natural Resource Conservation Service (NRSC). Nrsc.usda.gov.