ATTACHMENT E

INITIAL STUDY

FOR THE

MISSION SPRINGS WATER DISTRICT S-BCT AND REGIONAL WATER RECLAMATION FACILITY SOLAR DEVELOPMENT PROJECT

Prepared for:

Mission Springs Water District
66575 Second Street
Desert Hot Springs, CA 92240

Prepared by:

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September 2025

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LIST OF ABBREVIATIONS AND ACROYNMS

°F	Fahrenheit
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACBCI	Agua Caliente Band of Cahuilla Indians
AF	acre feet
AF	Acre Feet
AFY	acre feet per year
AKA	also known as
amsl	above mean sea level
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASTM	American Society for Testing and Materials
BACMs	Best Available Control Measures
bgs	belowground surface
BMPs	Best Management Practices
BPELS	Building and Professions Code Sections
BRA	Biological Resources Assessment
BUOW	Burrowing Owl
C	Commercial
C-BP	Commercial Business Park
C-H	Commercial Highway
C&D	construction and demolition
C_2Cl_4	perchloroethylene
C_2H_4O	acetaldehyde
C_4H_6	1,3-butadiene
C_6H_6	benzene
CAA	Clean Air Act
CAAA	Clean Air Act Amendment
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAR	California Climate Action Registry
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_2O	formaldehyde
CH_4	methane
CHRIS	California Historical Resources Information System

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	carbon dioxide
COA	Conditions of Approval
COCs	constituents of concern
Corps	U.S. Army Corps of Engineers
CRECs	controlled recognized environmental conditions
CRHR	California Register of Historical Resources
CRMP	Cultural Resource Management Plan
CVMSHCP	Coachella Valley Multiple Species Habitat Conservation Plan
CVWD	Coachella Valley Water District
CWA	Clean Water Act
CY	cubic yard
dB	decibel
dBA	A-weighted decibel
DDW	Division of Drinking Water
DPM	diesel particulate matter
DTSC	Department of Toxic Substance Control
DWA	Desert Water Agency
DWR	Department of Water Resources
EAP	Energy Action Plan
EIR	Environmental Impact Report
EO	Executive Orders
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FGC	Fish & Game Code
FHSZ	Fire Hazard Severity Zone
FIRM	Flood Insurance Rate Maps
FT	Federal Threatened
FTA	Federal Transit Association
GCC	Global Climate Change
GHG	Greenhouse Gas
gpm	gallons per minute
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plans
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons
hP	horse power
HREC	historical recognized environmental conditions
HSA	Hydrologic Sub-Area
HSC	Health and Safety Code
I	Industrial
I-10	Interstate 10
I-L	Industrial Light

in/sec	inches per second
IWA	Indio Water Authority
km	kilometers
kWh	kilowatt hour
lbs./day	Pounds Per Day
Leq	equivalent continuous sound level
LF	lineal feet
LRA	Local Responsibility Area
LSA	Lake or Streambed Alteration
LST	Localized Significance Thresholds
LUCI	Governor's Office of Land Use and Climate Innovation
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MCL	maximum contamination level
MLD	Most Likely Descendant
MM	Mitigation Measure
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MSHCP	Multi-Species Habitat Conservation Plan
MSWD	Mission Springs Water District
MT	Metric Ton
$MTCO_2e/yr$	Metric Tons of CO_2 equivalent per year
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NBP	Nesting Bird Plan
NCCP	Natural Community Conservation Plan
No.	Number
NO2 or NOx	Nitrogen Dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
NWI	National Wetlands Inventory
O3	Ozone
OPR	Governor's Office of Planning and Research
OS	Open Space
Pb	Lead
PFCs	perfluorocarbons
PM 10	Fine Particulate Matter
PM 2.5	Fine Particulate Matter
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resource Code
PV	Photovoltaic
R	Refrigerants
R-RD	Residential Rural Desert
RCFD	Riverside County Fire Department

RECs	recognized environmental conditions
ROG	reactive organic gases
ROW	Rights-of-Way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Colorado River Basin Regional Water Quality Control Board
RWRF	Regional Wastewater Reclamation Facility
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SEAs	Significant Ecological Areas
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SGMP	Sustainable Groundwater Management Plan
SLF	Sacred Land File
SO2	Sulfur Dioxide
SOI	Secretary of Interior
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCR	Tribal Cultural Resources
TGA	Trip Generation Assessment
THPO	Tribal Historic Preservation Office
USACE	United States Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration-velocity decibel
VES	Vapor Encroachment Screen
VMT	vehicle miles traveled
VOCs	Volatile Organic Compounds
vph	vehicles per hour
WOTUS	Waters of the United States
WQMP	Water Quality Management Plan
ZNE	Zero Net Energy

ENVIRONMENTAL CHECKLIST

Project Title	RES-BCT and Regional Water Reclamation Facility Solar Development Project
Lead Agency Name	Mission Springs Water District
Address	66575 Second Street, Desert Hot Springs, CA 92240
Contact Person	Danny Friend, Director of Operations
Phone Number	(760) 329-6448
Email	dfriend@mswd.org

Project Location

The Mission Springs Water District (MSWD or District) service area is located in southern California within the northwestern portion of the Coachella Valley. The project will occur within several parcels owned by the District along Little Morongo Road, at and just north of the Nancy Wright Regional Water Reclamation Facility (RWRF). The project is generally located at 19011 Little Morongo Road, Desert Hot Springs, CA 92240, and surrounds the existing photovoltaic system owned by the District. The project is located within the USGS Topo 7.5-minute map for Desert Hot Springs, CA, and is located in Section 14, Township 3 South and Range 4 East. The approximate GPS coordinates of the project area are 33.911291°, -116.528833°. Refer to **Figures 1 and 2** for the regional and site location maps.

Project Sponsor Name	Mission Springs Water District
Address	66575 Second Street, Desert Hot Springs, CA 92240
Land Use Designation	Industrial (Industrial Cannabis Overlay)
Zoning Classification	Industrial Light (I-L) (Industrial Cannabis Overlay)

Project Description

Introduction

Mission Springs Water District (MSWD or District) provides water and sewer services to the communities of Desert Hot Springs, West Garnet, North Palm Springs, and various portions of unincorporated Riverside County. In August of 2019, MSWD certified the Environmental Impact Report (EIR) for the West Valley Water Reclamation Program, which consisted of constructing municipal wastewater collection and treatment systems that would facilitate the elimination of individual septic systems that overlie the Mission Creek aquifer. The West Valley Water Reclamation Program consisted of three components: construction of a wastewater treatment plant (the Nancy Wright Regional Wastewater Reclamation Facility [Nancy Wright RWRF]), construction of a conveyance system connection existing sewered areas to the Nancy Wright RWRF, and construction a collection system for the GQPP Area M2 (to be served by the Nancy

Wright RWRF, and construction a collection system for the GQPP Area M2 (to be served by the Nancy Wright RWRF). As part of the District's continued development of the Wright RWRF, the District has determined that its operations would be best served with expanded solar generation to the north of the Nancy Wright RWRF site. Thus, the District will serve as the California Environmental Quality Act (CEQA) lead agency for the proposed project, which would involve installation of ground mounted solar to the north and west of the existing solar plant located at the northwest intersection of 19th Avenue and Little Morongo Road. The proposed project plans are illustrated on **Figures 3 and 6**.

Existing Setting

The proposed project is located in a relatively undeveloped portion of the City of Desert Hot Springs, with the project site consisting of disturbed Sonoran mixed woody and succulent scrub habitat. At present, the sites within which the solar will be installed are vacant, with MSWD's existing solar plant located to the south of the RES-BCT solar system site, and east of the Nancy Wright RWRF solar site.

Project Description

The proposed project would install ground mounted solar (also termed photovoltaic) systems at to the north and west of the existing solar plant located at the northwest intersection of 19th Avenue and Little Morongo Road.

The first photovoltaic system would be installed in support of the existing RES-BCT site (north of the existing photovoltaic system along Little Morongo Road) and would be sized at 3,585 kilowatts (kW) (the system's Direct Current [DC] system rating). Refer to **Figures 3 and 4**, which portray the plans for the site. This system will be interconnected to the electrical utility grid per the requirements of the utility company and all applicable local, state, and federal codes. The photovoltaic installation at this property would include the installation of 5,736 modules, which are each 97.01" x 44.65" x 1.38" in size. The RES-BCT solar system will include the installation of 9 inverters with a total output of 3,150 kW AC. The DC design will be based on a 1,500 Volt DC that would accommodate the 2% average highest temperature (44° Celsius) and the extreme minimum (3° Celsius). The RES-BCT solar system would be configured in 31 rows with 4 columns of photovoltaic panels. The area within which the RES-BCT solar system would be installed within a fence with an area of 9.82 acres, while the solar array would cover about 8.55 acres within the site. Development of the RES-BCT solar system site includes a setback of 20' at the western, northern, and easter site boundary, and 27' at the southern site boundary. Inverters would be installed in the center of the site. An AC combiner panel, and transformer would be installed at the central eastern portion of the site. The access point to the site would be along Little Morongo Road at the central eastern portion of the site near the transformer. The project would also install medium voltage primary service line to the existing power pole across the street along Little Morongo Road (east of the project site) from the transformer that would be installed within the project site. The length of the medium voltage primary service line is 60 lineal feet (LF) with a trench width of 24", and depth of 34". The whole of the project site would be fenced.

The second photovoltaic system would be installed in support of the Nancy Wright RWRF site (west of the existing photovoltaic system along 19th Avenue), and would be sized at 309.24 kW (the system's DC system rating). Refer to **Figures 5, 6, and 7**, which portray the plans for the site. This system will be interconnected to the electrical utility grid per the requirements of the utility company and all applicable

local, state, and federal codes. The photovoltaic installation at this property would include the installation of 648 modules, which are each 93.86" x 44.65" x 1.18" in size. The Nancy Wright RWRF solar system will include the installation of 5 inverters with a total output of 300 kW AC. The DC design will be based on a 1,000 Volt DC that would accommodate the 2% average highest temperature (44° Celsius) and the extreme minimum (3° Celsius). The Nancy Wright RWRF solar system would be configured in 16 rows of photovoltaic panels containing between 50 and 98 individual modules within each individual row. The area within which the Nancy Wright RWRF solar system would be installed is about 15,456 square feet (SF) or the equivalent of about 0.355 acres. Development of the Nancy Wright RWRF solar system site includes a setback of 20'4" at the western site boundary, 22'10" at the eastern site boundary, with a 20-foot setback at the northern and southern site boundaries. Inverters would be installed along the eastern portion of several rows. An AC combiner panel, and transformer would be installed at the southeastern corner of the site. The access point to the site would be along 19th Avenue at the southwestern corner of the site. The project would also install 183'7" transmission line to the line side tap in the main service panel (4,000 amps, 480 volts), AC disconnect, and 400 KVA (1,000 volt-amps) transformer within the Nancy Wright RWRF site to the south of the project site. The length of the medium voltage primary service line is 1,641.83 lineal feet (LF) with a trench width of 24", and depth of 34". The whole of the project site would be fenced.

The general layout of the solar facilities may be slightly modified in the future as actual development occurs, but the proposed project will remain within the footprint shown on **Figures 3 through 7**.

Construction Scenario

Construction is anticipated to begin in Quarter 4 2025 and conclude in the second quarter of 2026. Please identify which of the following construction activities will be implemented during construction of your project with a short description of how long a phase is scheduled to occur; type of equipment used; and number of employees onsite.

The project would require clearing and grubbing for two to three days for each site. The project would prepare subgrade for one to two days for each site. No mass grading and no soil import or export is anticipated to be required. The proposed project would install stormwater management within each site to control runoff, which would require about one day of construction. The project would require some trenching for the medium voltage primary line, which would require about one day at the RES-BCT site, and two days at the Nancy Wright RWRF. Trenching at the Nancy Wright RWRF will be carried out utilizing a backhoe for both native and RWRF footprint; construction will require asphalt removal and replacement in areas that are already developed within the RWRF footprint. The installation of the ground mounted solar, transformers, and other appurtenances would require about one and a half month for the RES-BCT site, and less than a month for the RWRF site. The project will not install any landscaping. The sites will be fenced, and fencing installation will require about four days to install at each site. The final electrical system would require about seven days to install.

All construction equipment, material and employees will access the project site from either 19th Avenue or Little Morongo Road. The maximum number of employees on the site at any one time is estimated to be 10 persons and the maximum number of truck deliveries of equipment and material will be 3 trucks per day. The construction equipment that is anticipated to be used is as follows: a skip loader or grader to grub and crew trucks to transport workers and tools; a backhoe to dig the trenches; a street saw to cut out

existing asphalt at the RWRF; a dump truck to transport demo asphalt and front-end loader to load truck; a dump truck to deliver new asphalt and small roller to compact.

Operational Scenario

The photovoltaic systems at the Nancy Wright RWRF and RES-BCT would generate a combined 3.97 MW of electricity per day. Periodic maintenance of the solar facilities will occur. This includes washing the panels by hand or using cleaning robots.

Surrounding land uses and setting:

The proposed project is located in a relatively undeveloped portion of the City of Desert Hot Springs, with the surrounding area consisting of disturbed Sonoran mixed woody and succulent scrub habitat. Mission Creek is also to the east of Little Morongo Road, and the Nancy Wright RWRF construction was completed in February 2025 and is south of the Nancy Wright RWRF solar system site. The land uses surrounding the project site are shown in Table 1, below.

Table 1: Surrounding Land Uses

Location	Existing Land Use	Land Use Category	Zoning Classification
North	Vacant	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)
South	Nancy Wright RWRF	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)
East	Vacant / Mission Creek	Open Space (OS)	OS-C: Open Space Conservation
West	Vacant	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)

Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Implementation of the proposed project may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds.

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Colorado River Basin Regional Water Quality Control Board enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the Regional Board and county providing enforcement oversight.
- If listed species are involved, the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife (CDFW) may have to issue incidental take permits or permits may be obtained under the Multi-Species Habitat Conservation Plan (MSHCP).
- The Corps of Engineers, CDFW and Colorado River Basin Regional Water Quality Control Board

Assembly Bill 52 Consultation

Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?[1]

AB 52 consultation letters were sent on July 9, 2025 to the only tribe that has requested construction from the District: Agua Caliente Band of Cahuilla Indians. The Tribe responded on July 23, 2025 requesting several items:

- *Tribal Monitoring during construction as cultural resources have been noted in the surrounding area.*
- *AB-52 Consultation*
- *Final Reports and site records*

The District has included mitigation measures to address these requests, and has provided or will provide the requested materials to the Tribe.

[1] Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

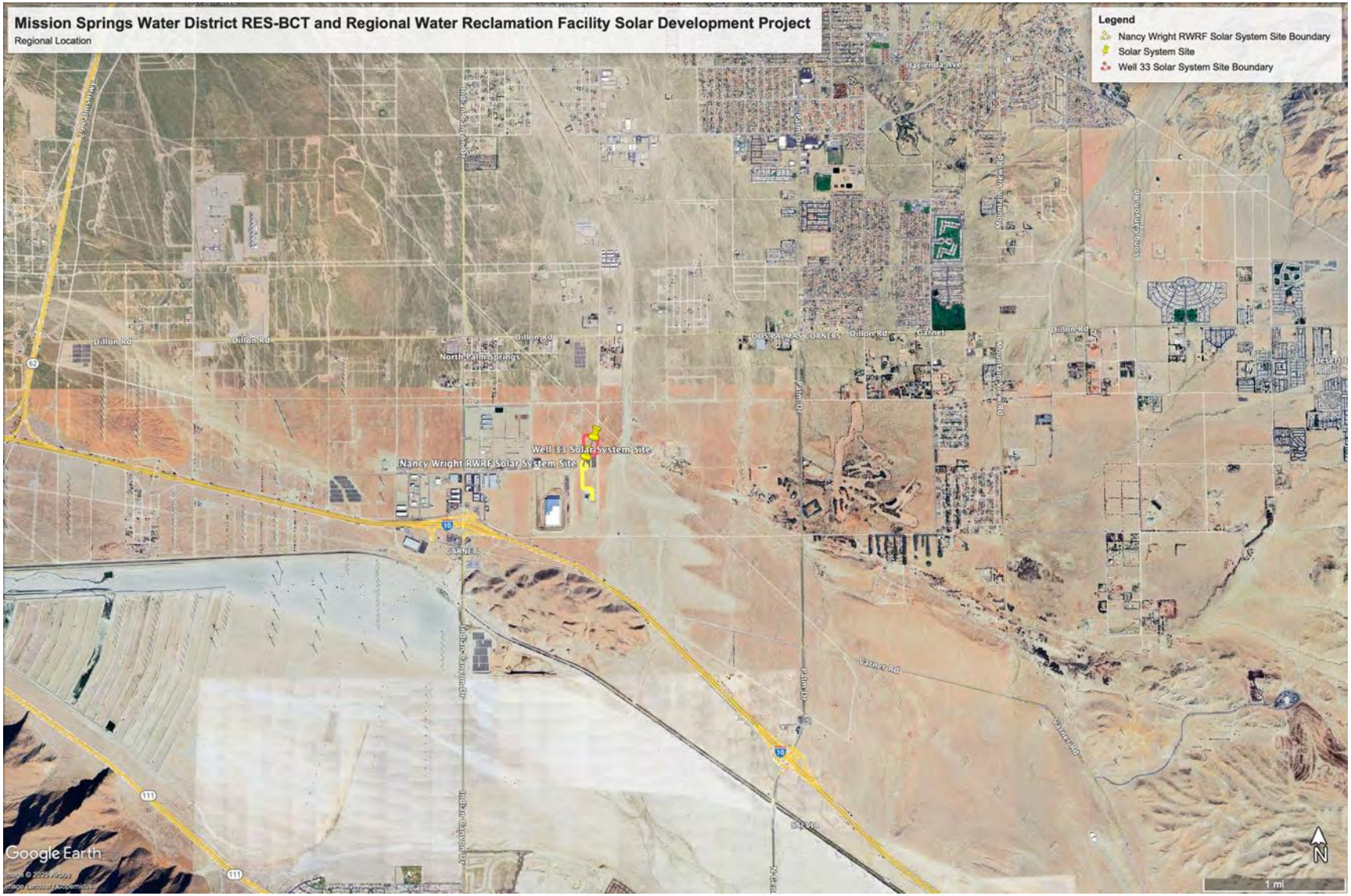

FIGURE 1

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Environmental Consultants

Regional Project Location

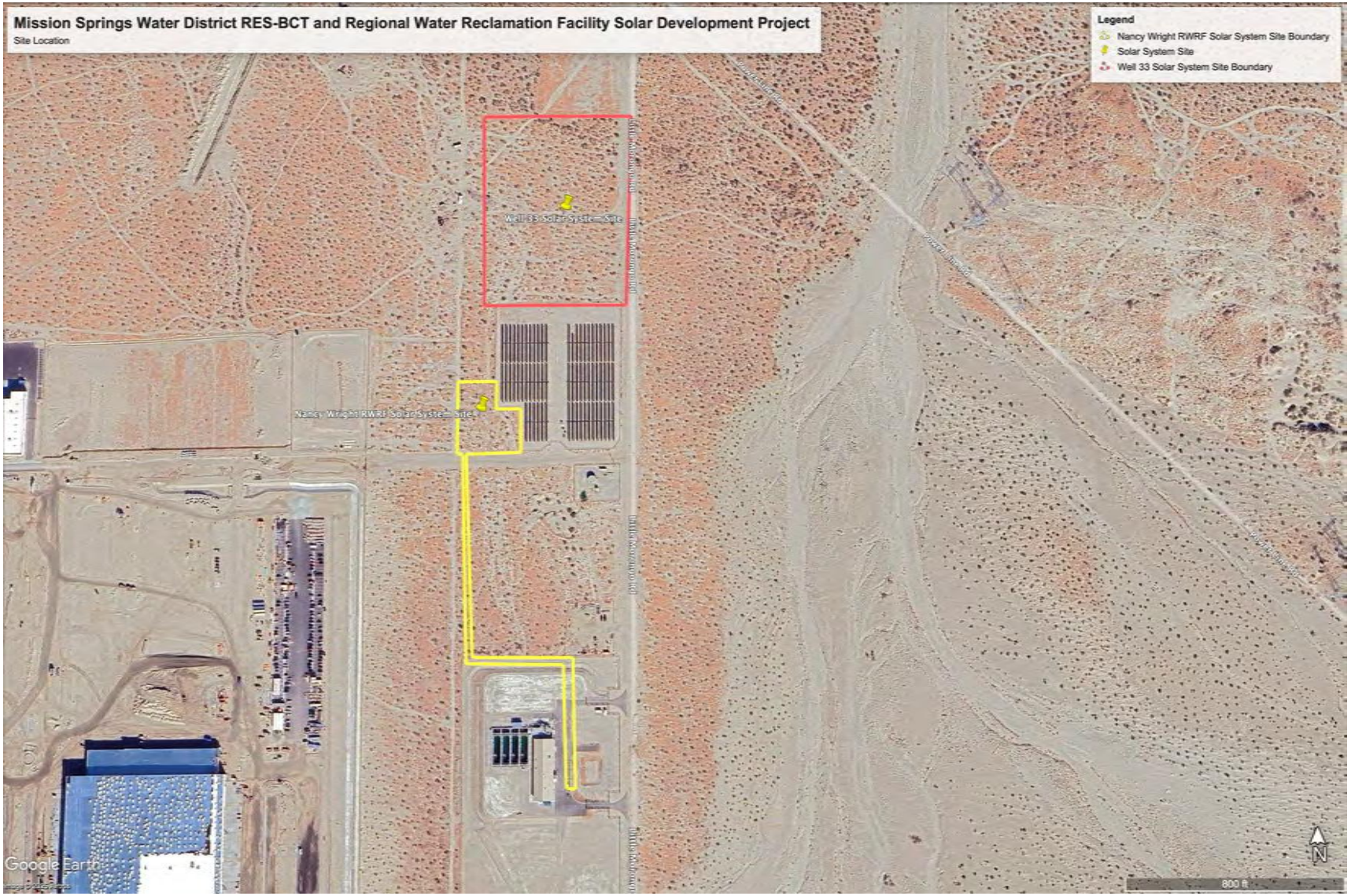

FIGURE 2

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Site Location

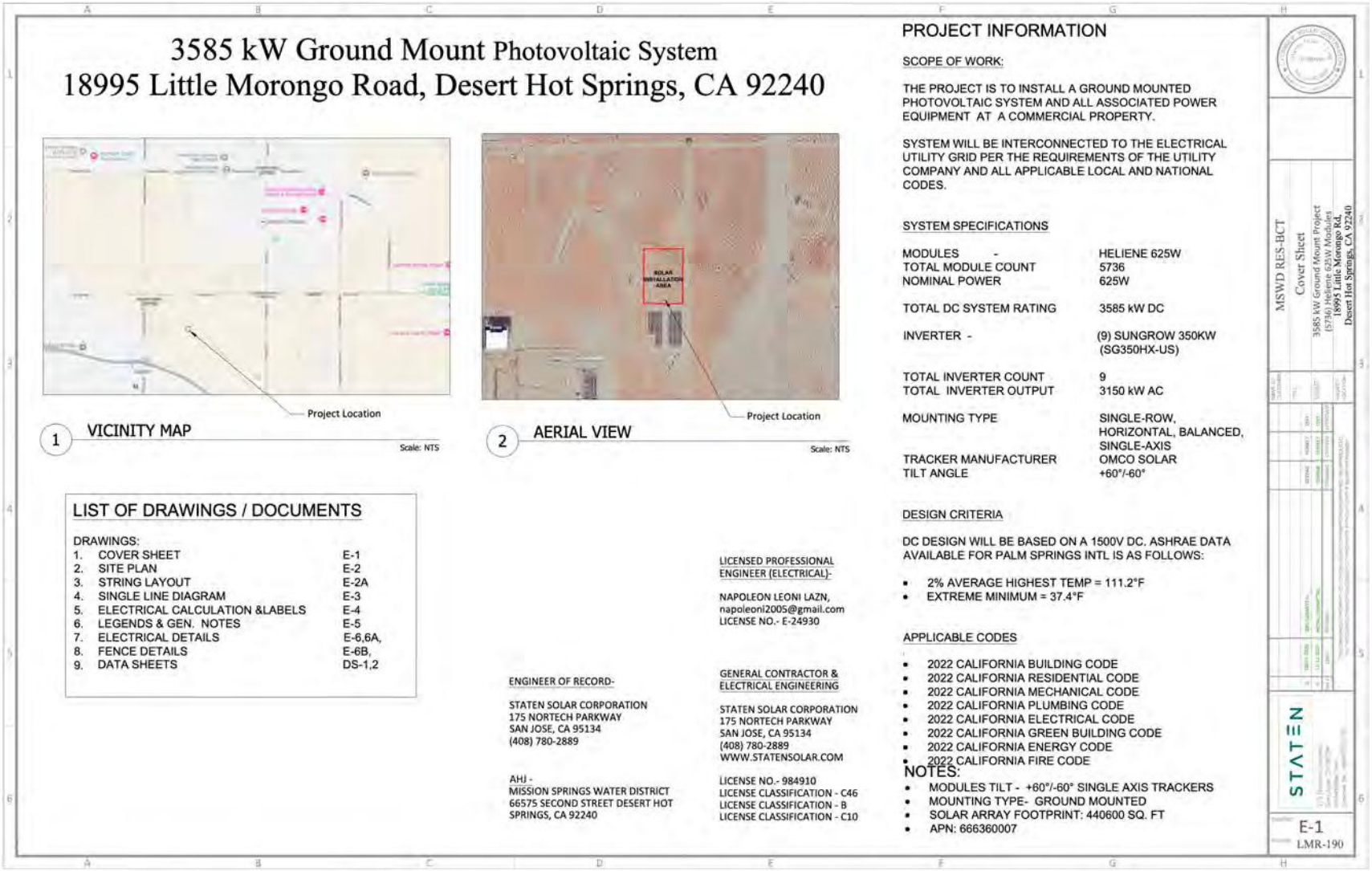

FIGURE 3

Tom Dodson & Associates
Environmental Consultants

Well 33 RES-BCT Solar System Plan Detail

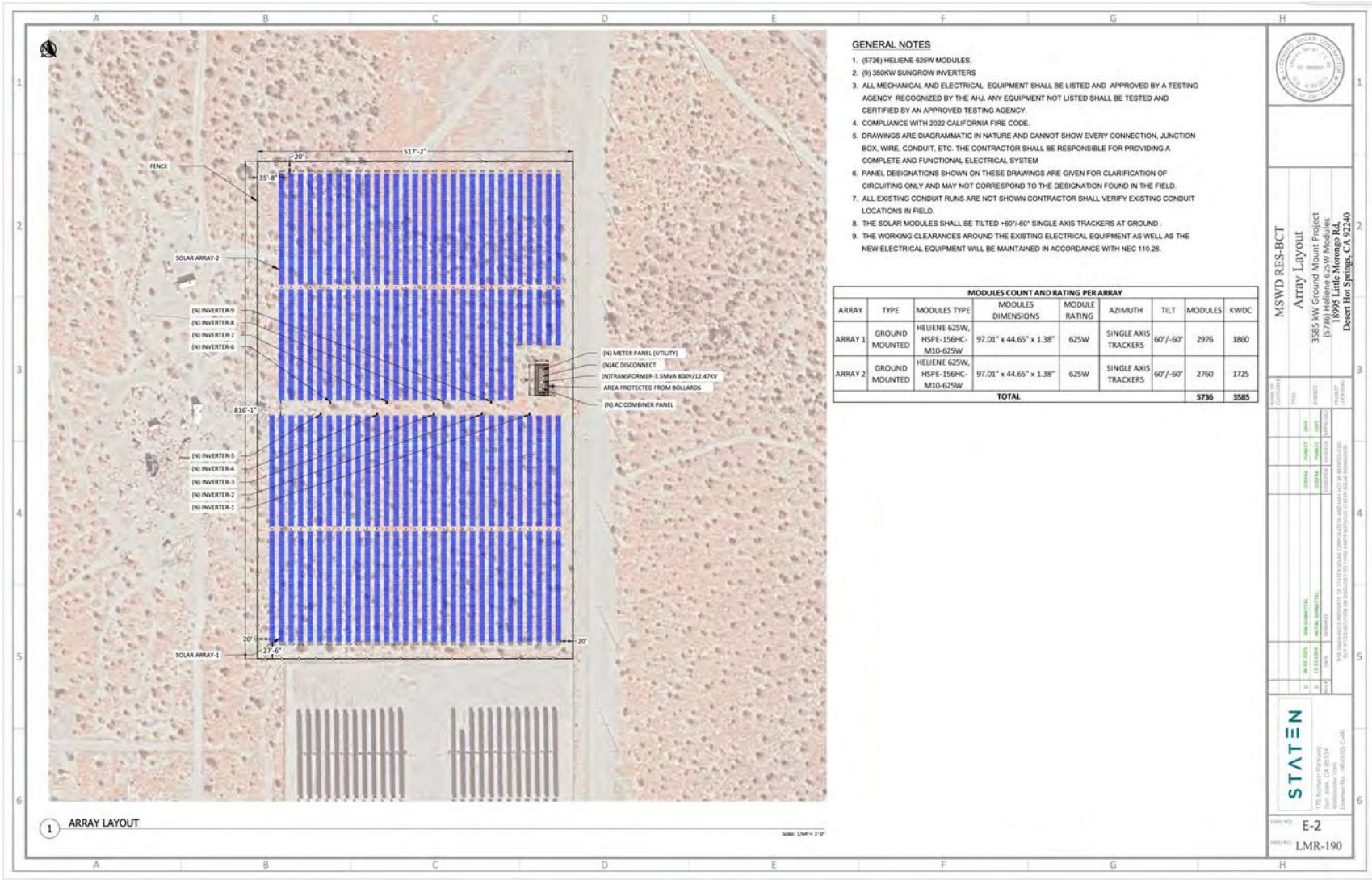

FIGURE 4

Tom Dodson & Associates
Environmental Consultant

Well 33 RES-BCT Solar System Site Plan

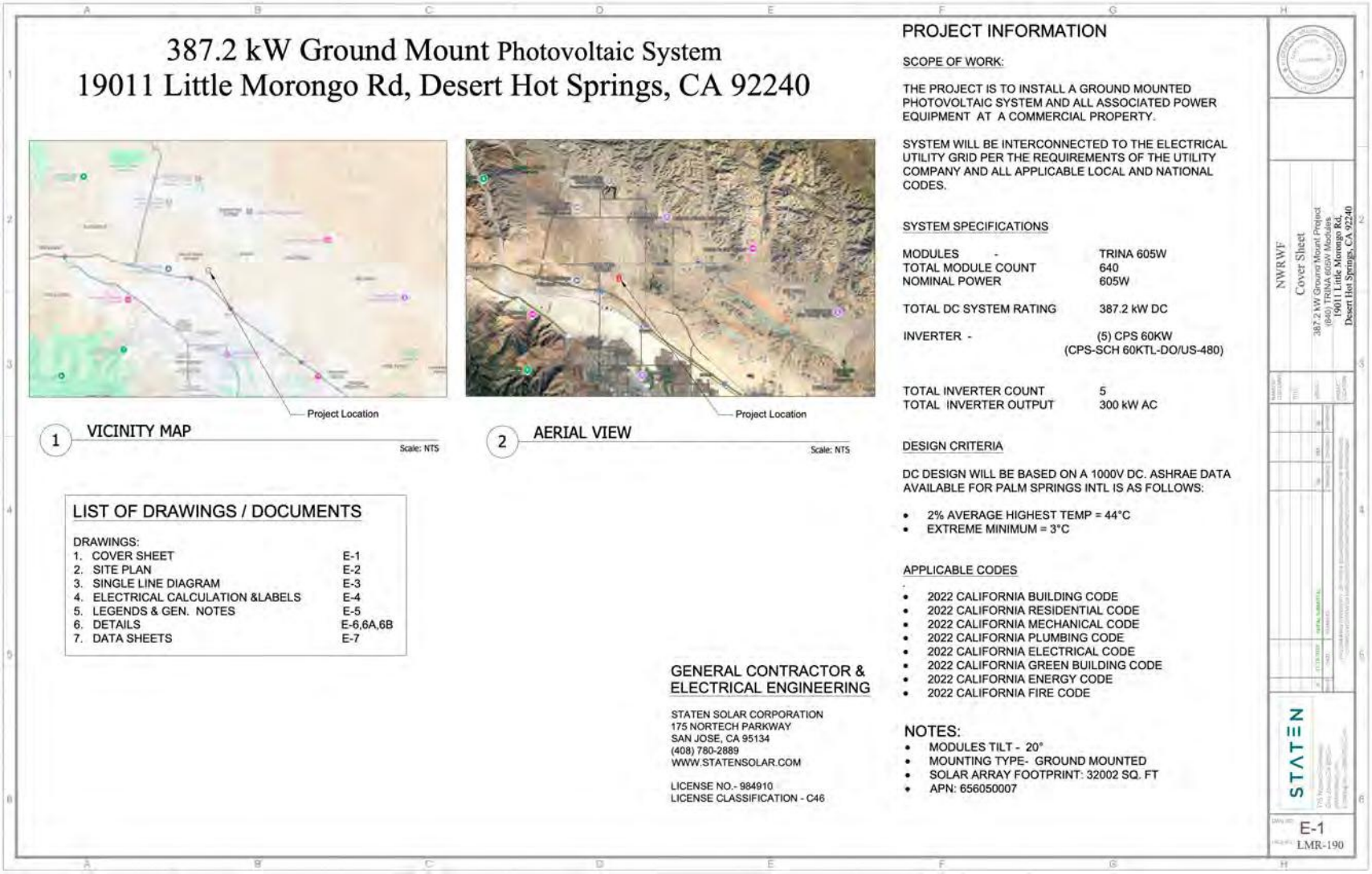

FIGURE 5

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Nancy Wright RWRF Solar System Plan Detail

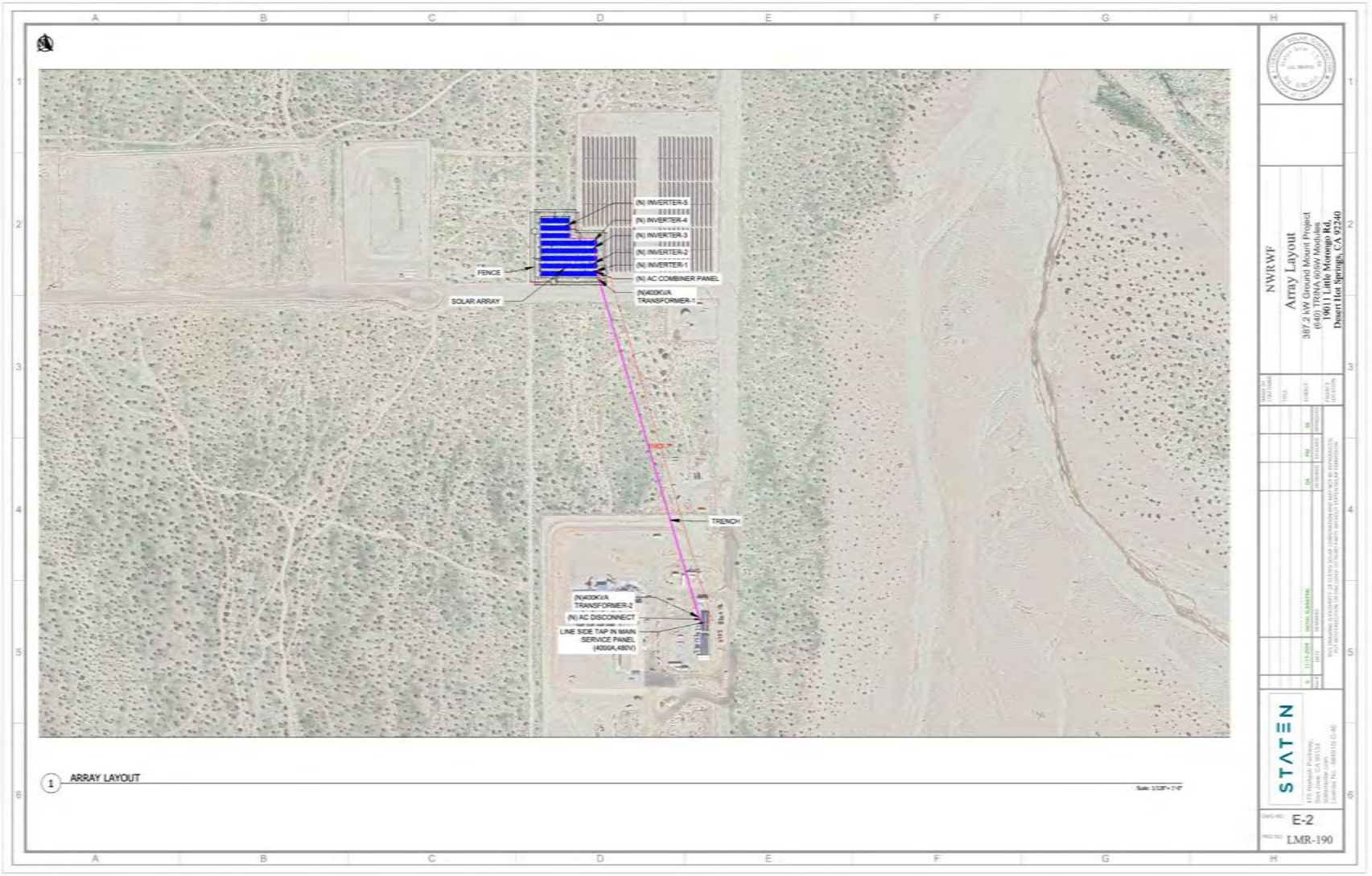

FIGURE 6

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Nancy Wright RWRF Solar System Site Plan Overview

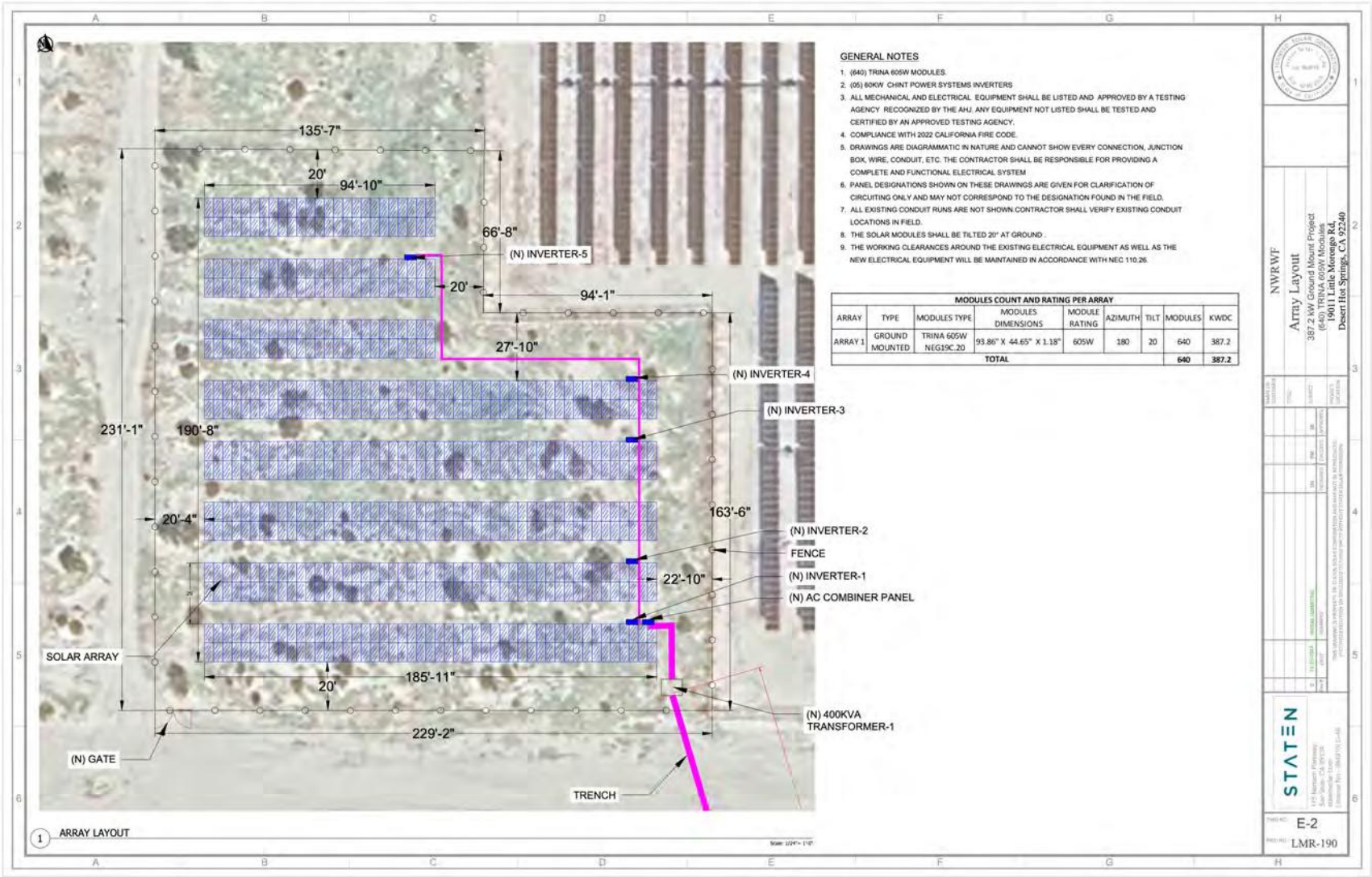

FIGURE 7

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Environmental Consultants

Nancy Wright RWRF Solar System Site Plan

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, the following finding is made:

☐	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	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.
☐	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	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.
☐	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.

Tom Dodson & Associates — Prepared by

09/09/25 — Date

Lead Agency (signature)

Date

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 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the 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 significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 or 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?	☐	☐	☒	☐

SUBSTANTIATION

Impact Analysis

a. *Less Than Significant Impact* – MSWD proposes to install ground mounted solar (also termed photovoltaic) systems (solar arrays). Each solar facility will also have a transmission line installed. These proposed solar will be installed directly next to an existing solar facility, located at the northwest intersection of 19th Avenue and Little Morongo Road. As such, the solar arrays will not substantially alter any existing scenic views. The existing scenic views within the project area include the San Bernardino and Little San Bernardino Mountains, which surround the City of Desert Hot Springs to the west and north. The adjoining mountains and the San Jacinto and Santa Rosa Mountains to the southwest and south, also provide dramatic and valuable viewsheds. These mountains are located in the middle- and background views and also provide dramatic and valuable viewsheds. The low nature of the solar facilities means that these scenic views will not be significantly impacted.

While the presence of construction equipment and related construction materials would be visible from public vantage points in the project area, such as from Interstate 10 (I-10) or from area roadways (such as 19th Avenue and Little Morongo Road), it would not adversely affect any scenic views or vistas. Construction of the proposed paved roadway would be temporary, and therefore would not permanently affect views or scenic vistas. Furthermore, construction activities are routine within developed areas, and therefore do not typically constitute a significant aesthetic or scenic vista impact. Thus, construction impacts would be less than significant. Furthermore, the area in which the solar arrays would be installed would be adjacent to existing solar arrays, and therefore would

blend in with the existing site and area environs. As a result, the installation of additional solar arrays adjacent to MSWD's existing solar site would conform to the existing environment, and therefore would not degrade views to nearby scenic vistas. Thus, implementation of the proposed project will have no significant impacts on scenic vistas. No mitigation is required.

b. *No Impact* – The proposed project would install two new solar arrays at the Wright RWRF and RES-BCT sites adjacent to the District's existing solar array at the northwest corner of 19th Avenue and Little Morongo Road. None of the roadways within which the proposed project will be installed are designated as a scenic highway by the State of California. The nearest designated state scenic highway is State Highway 62, located approximately four miles west/north of the project site (**Figure I-1**). Highway 62 is the main corridor gateway to Joshua Tree National Park and the main arterial roadway for the communities of Yucca Valley, Joshua Tree and Twenty-Nine Palms. The project site would not be visible from Highway 62 and no impacts to the State Scenic Highway are anticipated. No rock outcroppings or historic buildings exist within the project footprint and no trees will be impacted by the Solar Development Project. Based on the lack of any intrinsic onsite scenic resources, the proposed project will not cause substantial project-specific damage to any such resources. No impacts are anticipated to occur under this issue. No mitigation is required.

c. *Less Than Significant Impact* – The project site is located in a remote area within City of Desert Hot Springs that is quickly being developed; according to the Governor's Office of Land Use and Climate Innovation (LUCI; formerly Office of Planning and Research [OPR]) Site Check, the project area is a defined urban area.[2] The proposed project would install two new solar arrays at the Wright RWRF and RES-BCT sites adjacent to the District's existing solar array at the northwest corner of 19th Avenue and Little Morongo Road. The proposed Solar Development Project will be installed adjacent to a site already that is developed with solar arrays. The site Zoning Classification is Industrial Light (I-L) (Industrial Cannabis Overlay), and the development of the solar arrays at this site will be designed in accordance with local design guidelines. Therefore, although additional solar panels will add to the existing visual setting, the nature of the existing views will not be changed, and as a result, no significant impact will occur. No mitigation is required.

d. *Less Than Significant Impact* – The proposed project would install two new solar arrays at the Wright RWRF and RES-BCT sites adjacent to the District's existing solar array at the northwest corner of 19th Avenue and Little Morongo Road. Construction of the proposed Solar Development Project is not anticipated to require nighttime lighting, and as a result, construction is not anticipated to result in a significant lighting or glare impact. The solar arrays would be located adjacent to existing solar panels, which have not resulted in glare impacts to nearby sensitive receptors or to aircraft fly-overs. The addition of new solar arrays is not anticipated to result in glare impacts to aircraft fly-overs or nearby sensitive receptors, particularly given the lack of nearby sensitive receptors, and that the project site is located outside of any area airport land use compatibility zones. Further, solar panels typically result in less glare than standards windows, as they are designed to absorb light rather than reflect it. [3] Neither construction nor operation of the proposed development is not anticipated to require nighttime lighting. As a result, there would be no new lighting from the proposed Solar

[2] LUCI, 2025. Site Check. https://sitecheck.opr.ca.gov/ (Accessed 06/26/25)
[3] NREL, 2025. Solar Market Research and Analysis. https://www.nrel.gov/solar/market-research-analysis/blog/posts/research-and-analysis-demonstrate-the-lack-of-impacts-of-glare-from-photovoltaic-modules (Accessed 06/26/25)

Development Project and as a result, light and glare impacts would be expected to be less than significant. No mitigation is required.

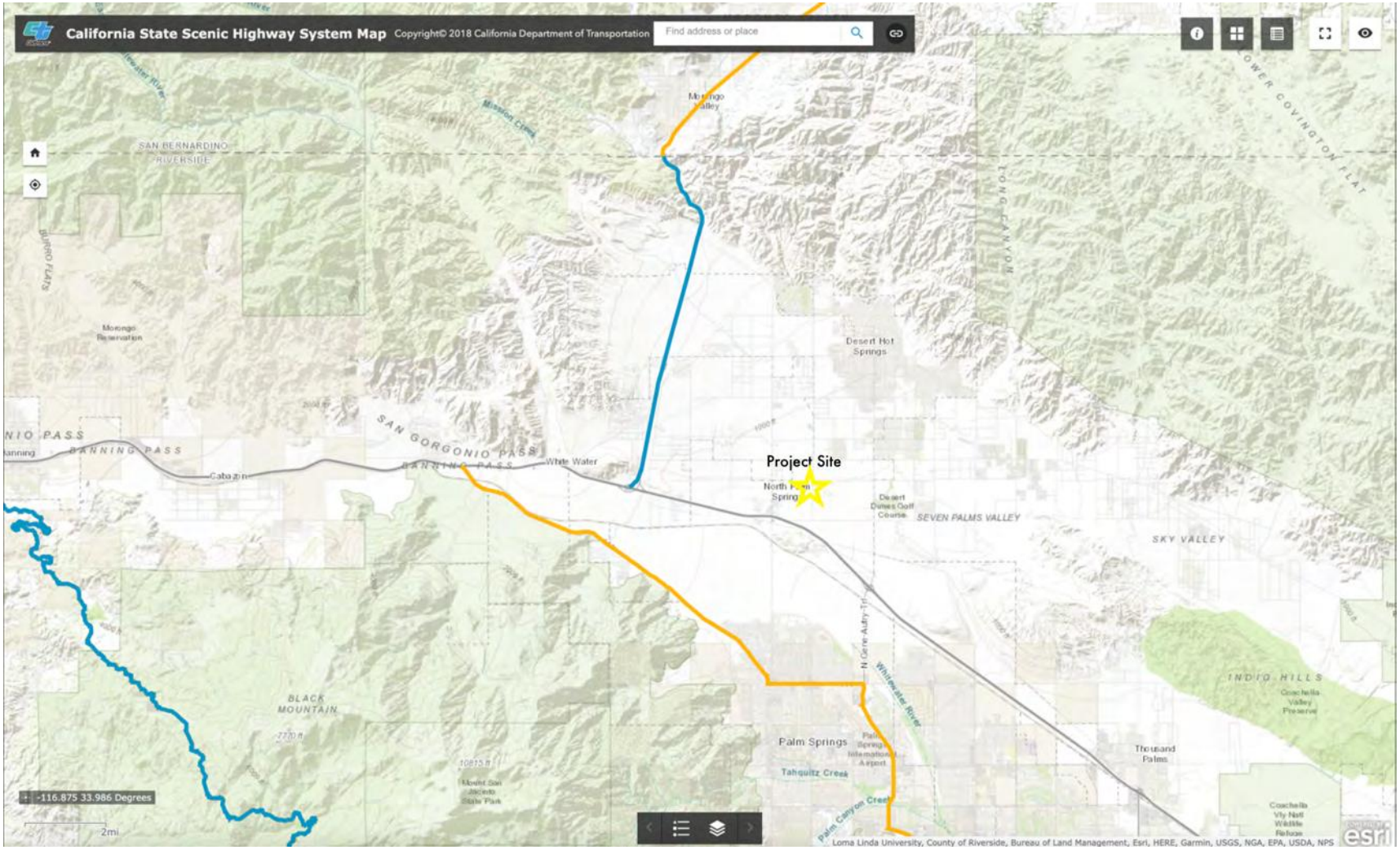

FIGURE I-1

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Scenic Highway Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE 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 Dept. 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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a. *No Impact* – The proposed project us located in the southern portion of the City of Desert Hot

Springs. The area surrounding the project footprint consists of the in-development District's Wright RWRF, Mission Creek, a solar array, and native desert land. Neither the project footprint nor the adjacent and surrounding properties are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project (**Figure II-1**). No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.

b. *No Impact* – The project footprint is not now, nor has it been included in a Williamson Act contract or an Agricultural Preserve. Based on these facts, the proposed project will not cause a significant direct impact or conflict with the Williamson Act or an existing agricultural use. Furthermore, the surrounding uses are not agricultural in nature and the City of Desert Hot Springs does not have any current land use designations or zoning classifications for agricultural use. Therefore, the proposed project would have no potential to conflict with existing zoning for agricultural use or a Williamson Act contract.

c. *No Impact* – There are no existing zoning ordinances within the City of Desert Hot Springs that pertain to forest land, timberland, or timberland zoned Timberland Production. Forest land is defined in Public Resources Code Section 12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." No timberland or lands zoned Timberland Production, as defined above, occur within project area. The project is not located in an area zoned for forest land or timber production. Therefore, the project will not impact the land's ability to support 10 percent native tree cover of any species; thus, no forest lands will be reclassified as non-forest lands under Public Resources Code Section 12220(g). Therefore, there is no potential for indirect effects to existing zoning for forest land, timberland, or timberland zoned Timberland Production would occur due to implementation of the Solar Development Project.

d. *No Impact* – As described in the preceding evaluation, the proposed project has no potential to cause changes in the existing environment that could result in conversion of farmland to non-agricultural uses or forest land to non-forest use. No such agricultural or forest land uses occur in the vicinity of the project area and the proposed project has no potential to cause conversion of actively farmed land to non-agricultural uses or forested lands to non-forest use. No impacts under this issue are anticipated to occur.

e. *No Impact* – Because the project site and surrounding area do not support either agricultural or forestry uses and, furthermore, because the project site and environs are not designated for such uses, implementation of the proposed project would not cause or result in the conversion of farmland or forest land to alternative use. No adverse impact would occur. No mitigation is required.

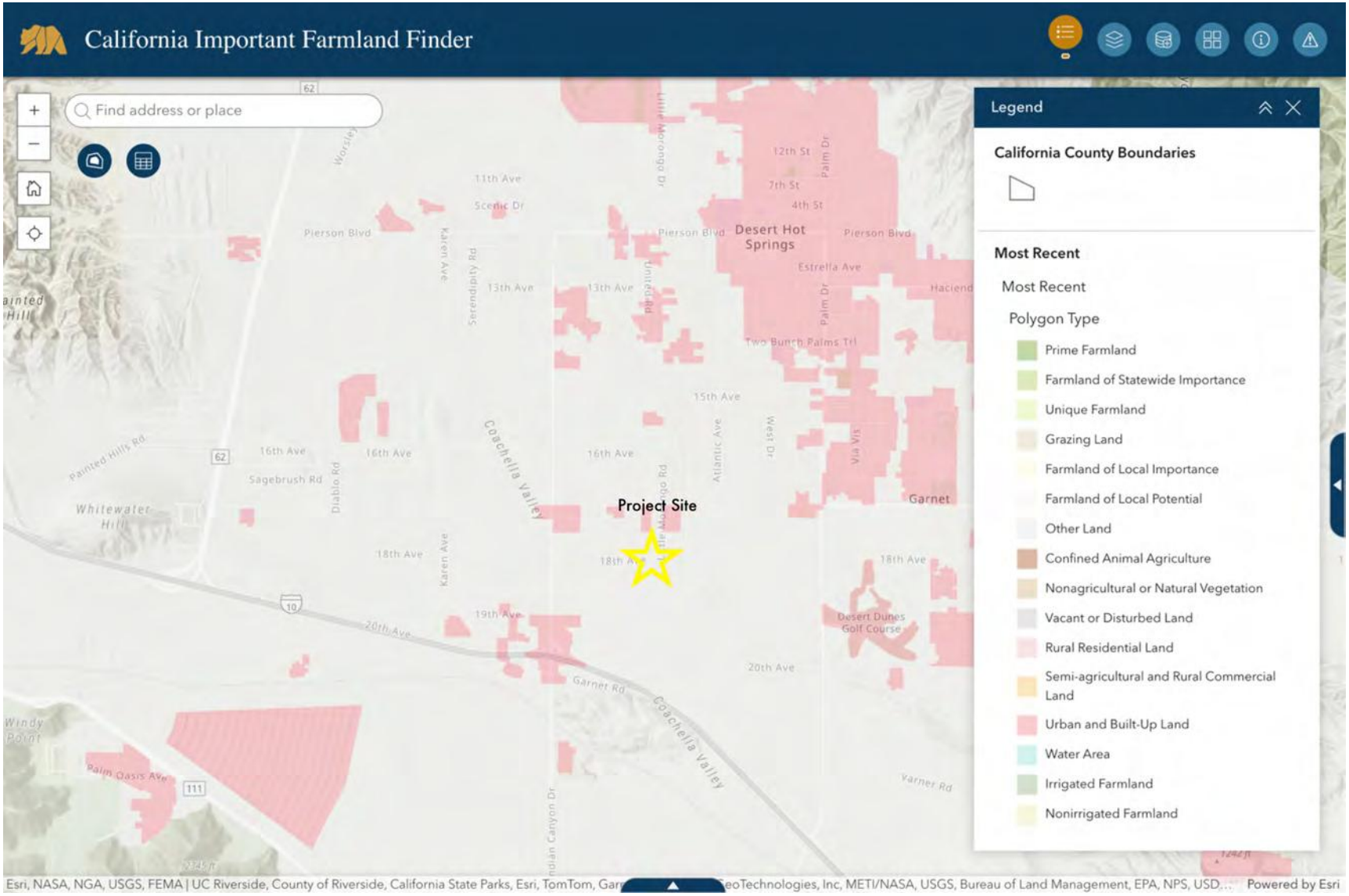

FIGURE II-1

Tom Dodson & Associates
Environmental Consultants

California Important Farmland Finder Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the following technical study: *Mission Springs Water District Well 33 Solar Project Air Quality and Greenhouse Gas Assessment* (AQGGA) prepared by Urban Crossroads, dated September 9, 2025. This AQGGA is provided as **Appendix 2** to this Initial Study.

Background

The project site is located within Salton Sea Air Basin (SSAB) within the jurisdiction of the SCAQMD. The SSAB is aligned in a north-west-southwest orientation stretching from Banning Pass to the Mexican border. The regional climate, as well as the temperature, wind, humidity, precipitation, and amount of sunshine significantly influence the air quality in the Basin.

The climate of the Coachella Valley is a continental, desert-type climate, with hot summers, mild winters, and very little annual rainfall. Precipitation is less than six inches annually and occurs mostly in the winter months from active frontal systems and in the late summer months from thunderstorms. Almost all of the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often being completely dry. Temperatures exceed 100 degrees Fahrenheit (°F), on the average, for four months each year, with daily highs near 110 °F during July and August. Summer nights are cooler with minimum temperatures in the mid-70s. During the winter season, daytime highs are quite mild, but the dry air is conducive to nocturnal radiational cooling, with early morning lows around 40 °F.

The Coachella Valley and adjacent areas are exposed to frequent gusty winds. The flat terrain of the valley and strong temperature differentials, created by intense solar heating, produce moderate winds and deep thermal convection. Wind speeds exceeding 31 miles per hour (mph) occur most frequently in April and

May. On an annual basis, strong winds (greater than 31 mph) are observed 0.6 percent of the time and speeds of less than 6.8 mph account for more than one-half of the observed winds. Prevailing winds are from the northwest through southwest, with secondary flows from the southeast. The strongest and most persistent winds typically occur immediately to the east of Banning Pass, which is noted as a wind power generation resource area. Aside from this locale, the wind conditions in the remainder of the Coachella Valley are geographically distinct. Stronger winds tend to occur closer to the foothills. Less frequently, widespread gusty winds occur over all areas of the Valley.

Portions of the SSAB experience surface inversions almost every day of the year. Inversions in the SSAB are attributed to strong surface heating, but are usually broken, allowing pollutants to disperse more easily. Weak surface inversions are caused by cooling of air in contact with the cold surface of the earth at night. In the valleys and low-lying areas, this condition is intensified by the addition of cold air flowing downslope from the hills and pooling on the valley floor. In addition, inversions in the SSAB caused by the presence of the Pacific high-pressure cell can cause the air mass aloft to sink. As the air descends, compressional heating warms the air to a temperature higher than the air below. This subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. These inversions can persist for one or more days, causing air stagnation and the buildup of pollutants. Subsidence inversions are common from November through June and are relatively absent from July through October.

Within the project area, there is a natural sand migration process, called "blowsand," that has direct and indirect effects on air quality. Blowsand produces particulate matter (PM10) in two ways: (1) by direct particle erosion and fragmentation as natural PM10, and (2) by secondary effects, as sand deposits on road surfaces.

Also, where water has already receded around the Salton Sea, the surface areas contain a salty mix of sediments that can change from a hardened salt crust to a fluffy soft layer of dust depending upon the season. Exposed sediments could elevate PM_{10} levels throughout the region. Almost 120,000 acres of Salton Sea lakebed could be exposed as inflows to the Sea decrease in future years. Local communities may be affected by 60,000 potentially dust-blowing acres, which will cause PM_{10} levels to rise.

Criteria Pollutants

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3) (precursor emissions include NO_X and reactive organic gases (ROG), CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Riverside County portion of the SSAB is designated as a nonattainment area for the federal O_3, PM_{10}, and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}.

Toxic Air Contaminants (TAC) Trend

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks,

stationary products, and consumer products. According to the Ambient and Emission Trends of Toxic Air Contaminants in California journal article which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O).[4] The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

Applicable Regulatory Requirements

SCAQMD Rules that are currently applicable during construction activity for this project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings).

SCAQMD Rule 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

Methodology

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this project to determine construction and operational air quality and GHG emissions.

[4] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

Air Quality Regional Emissions Thresholds

The SCAQMD has developed regional significance thresholds for criteria pollutants, as summarized at Table III-1. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table III-1: Maximum Daily Regional Emissions Thresholds

Pollutant	Construction	Operations
NO_X	100 lbs./day	55 lbs./day
VOC	75 lbs./day	55 lbs./day
PM_{10}	150 lbs./day	150 lbs./day
$PM_{2.5}$	55 lbs./day	55 lbs./day
SO_X	150 lbs./day	150 lbs./day
CO	550 lbs./day	550 lbs./day

lbs./day – Pounds Per Day

Impact Analysis

a. *Less Than Significant Impact* – The project site is located within the SSAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743-square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, certain state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the Final 2022 AQMP (2022 AQMP). The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements. The project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below. SCAG adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal metropolitan planning organization (MPO) requirements under the Sustainable communities and Climate Protection Act. The proposed project would be

developed in accordance with all applicable rules and regulations contained in those plans. It should be noted that although the 2024-2050 RTP was released after approval of the 2022 AQMP, the 2022 AQMP is reliant in part upon the general plan land use designations.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook. These indicators are discussed below.

The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that under this criterion refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded. As evaluated, the project's regional and localized construction and operational-source emissions would not exceed applicable regional significance thresholds. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the project is determined to be consistent with the first criterion.

The project will not exceed the assumptions in the AQMP based on the years of project build-out phase.

The 2022 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in Desert Hot Springs General Plan and further, consistent with the MSWD Urban Water Management Plan, is considered to be consistent with the AQMP.

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

On the basis of the preceding discussion, the project is determined to be consistent with the second criterion, and as a result, the project is determined to be consistent with the AQMP and the project would result in a less than significant impact under this issue.

b. *Less Than Significant Impact* – Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition, grading) and exhaust emissions at the project site.

Long-term emissions generated by future operation of the proposed paved roadway would not differ substantially from that which occurs at present, as the project would reduce fugitive dust generation from automobiles traveling on the existing dirt roadways, and enhance access to future development in the area that may be served by these roadway improvements.

Construction Emissions

Construction Activities

Construction activities associated with the project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following activities:

- Site Preparation
- Grading
- Building Construction (Solar Installation)
- Paving
- Trenching

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on data provided by the Project applicant no import or export of soil would be required.

On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. For worker trips, it is assumed that up to 15 individuals will be working on the construction site per day, though the number of construction workers will vary between 9 and 15 per day. Additionally, it is assumed that up to 5 vendor trucks will visit the site per day. Worker and vendor trips are estimated based on CalEEMod default parameters.

Construction Duration

For purposes of analysis, construction of the Project is expected to commence in November 2025 and end in March 2026. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet.

Construction Equipment

The equipment modeled is based on information provided by MSWD and CalEEMod model defaults. Consistent with industry standards and typical construction practices, each piece of equipment will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

Construction Emissions Summary

Construction emissions were calculated using California Emissions Estimator Model (CalEEMod), version 2022.1. As shown below on Table II-1, the proposed Project construction emissions would not exceed the applicable SCAQMD regional significance thresholds for any pollutant.. Thus, the project would result in a less than significant impact associated with construction activities. Detailed Construction model outputs are presented in Attachment A to **Appendix 2.**

Table III-2: Maximum Daily Construction Air Quality Emissions

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
2025	0	0	0	0	0	0
2026	0	0	0	0	0	0
Winter						
2025	3.92	35.83	31.70	0.06	0.58	0.32
2026	2.70	8.24	12.72	0.02	0.06	0.03
Maximum Daily Emissions	3.92	35.83	31.70	0.06	0.58	0.32
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

lbs/day = pounds per day
VOC = Volatile Organic Compounds
NO_X = Nitrogen Oxides
CO = Carbon Monoxide
SO_2 = Sulfur Dioxide
PM_{10} = Particulate Matter 10 microns in diameter or less
$PM_{2.5}$ = Particulate Matter 2.5 microns in diameter or less

Regional Operational Emissions

The proposed project primarily involves construction activity. Once constructed, only minimal additional traffic would be generated by this project than that which occurs at present or is otherwise planned to occur as part of area development because other than solar facility maintenance which would occur on a routine basis (approximately once a month), no other operational trips are anticipated. The proposed project would generate approximately 9,412.878 kilowatt hours (kWh) of electricity per year, and as a result, operational emissions would be anticipated to be nil or negligible, as the proposed alternative source of energy would offset electricity use from energy sources that generate air quality emissions. As such, the project would not violate an air quality standard or contribute to an existing violation. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

Conclusion

The project, as evaluated herein would not exceed the regional or localized air quality significance thresholds. The CAAQS designates the project site as nonattainment for O_3, PM_{10}, and $PM_{2.5}$ while the NAAQS designates the project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution:

White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. In this report the SCAQMD clearly states (Page D-3):
"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SSAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts: The project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts: The project-specific evaluation of air quality impacts presented in the preceding analysis demonstrates that proposed project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, the proposed project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

c. *Less Than Significant Impact* – The potential impact of project-generated air pollutant emissions at sensitive receptors has also been considered.

Localized Construction Emissions

For this project, the appropriate SRA for the LST analysis is the SCAQMD Coachella Valley monitoring station (SRA 30). LSTs apply to CO, NO2, PM10, and PM2.5. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size. The SCAQMD's screening look-up tables are utilized in determining localized impacts. It should be noted that since the look-up tables identify thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized to determine localized significance thresholds.

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[5]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the sensitive receptor.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the project's potential to cause an individual or cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is over 3,500 feet north of the project site. It should be noted that the look-up tables only identify thresholds up to a 500-meter distance. As a conservative measure, the 500-meter distance will be used in lieu of the 1,176-meter distance in order to evaluate localized PM_{10} and $PM_{2.5}$ emission impacts.

Table III-3 identifies the localized impacts at the nearest receptor location in the vicinity of the project. Outputs from the model runs for construction LSTs are provided in Attachment A of **Appendix 2**. For analytical purposes, emissions associated with peak construction activities are considered for purposes of LSTs since these phases represent the maximum localized emissions that would occur. Any other construction phases of development that overlap would result in lesser emissions and consequently lesser impacts than what is disclosed herein. As shown in Table III-3, emissions resulting from the construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, a less than significant impact would occur for localized project-related construction-source emissions and no mitigation is required.

Table III-3: Project Localized Construction Impacts

Peak Construction	CO		NO_2	PM_{10}	$PM_{2.5}$
	Averaging Time				
	1-Hour	8-Hours	1-Hour	24-Hours	24-Hours
Peak Day Localized Emissions	1.12E-02	2.80E-03	7.95E-03	0.10	0.05
Background Concentration [A]	3.4	1.1	0.031		
Total Concentration	3.41	1.10	0.04	0.10	0.05
SCAQMD Localized Significance Threshold	20	9	0.18	10.4	10.4
Threshold Exceeded?	NO	NO	NO	NO	NO

[5] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

As shown in Table III-3, emissions resulting from the construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant. Thus, results of the LST analysis indicate that the project will not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during project construction.

Localized Operational Emissions

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed, the purpose of the project is to develop an alternative electricity generating facility through the proposed Solar Development Project. The project will not include new stationary or mobile sources. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

d. *Less Than Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the solid waste regulations. The proposed project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed project construction and operations would be less than significant and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 Wildlife 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 Wildlife 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?	☐	☒	☐	☐

SUBSTANTIATION: The following information is provided based on a Biological Resources Assessment prepared by ELMT Consulting, Inc. dated April 2025 and is titled "*Habitat Assessment & Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis.*" The following information is abstracted from the Biological Resources Assessment (BRA) provided as **Appendix 3.**

General Setting

The project area is situated in the City of Desert Hot Springs in the northwestern end of the Coachella Valley, which is bordered on the north and northeast by the Little San Bernardino Mountains, on the east/southeast by the Seven Palms Valley and Edom Hills and on the west by the San Bernardino Mountain foothills. The topography of the project area is generally flat with no significant areas of topographic relief.

Elevation ranges between 757 and 780 feet above mean sea level.

The project sites are historically underlain by Carsitas fine sand (0 to 5 percent slopes) and Carsitas gravelly sand (0 to 9 percent slopes). Additionally, the project site for RES-BCT is underlain by Myoma fine sand (0 to 5 percent slopes)(Refer to **Figure IV-1**). Soils within the project sites are relatively undisturbed.

The project sites are located in an area that has generally undergone a conversion from natural habitats to a mosaic of residential, recreational, commercial, and industrial developments with heavily disturbed/isolated undeveloped parcels, and undisturbed native areas. The sites are bounded to the north by undeveloped, vacant land with commercial and residential developments beyond; to the east by the Willow Hole Conservation Area with residential and vacant land beyond; to the south by commercial land and undeveloped, vacant land with Interstate 10 beyond; and to the west by commercial development with undeveloped, vacant land beyond.

Vegetation

Both project sites support undeveloped land that has been subject to anthropogenic disturbances. Disturbed land is present throughout the site where frequent disturbances (i.e., foot and vehicle traffic, illicit dumping) prevent the establishment of a plant community. Vegetative density in these areas varies from often barren to minimally vegetated, usually with weedy/early successional species. Common plants observed in the disturbed areas of the site include California croton, Saharan mustard and Mediterranean grass.

The project sites support a disturbed creosote bush scrub plant community that varies in density based on proximity to frequent disturbances. This plant community is dominated by creosote (*Larrea tridentata*) and supports an often dense to sparse shrub layer and an herbaceous understory. Common plant species observed in this plant community include burrobush (*Ambrosia dumosa*), cheesebrush (*Ambrosia salsola*), teddy-bear cholla (*Cylindropuntia bigelovii*), California croton (*Croton californicus*), brittlebush (*Encelia farinosa*), desert dandelion (*Malacothrix glabrata*), fourwing saltbrush (*Atriplex canescens*), Saharan mustard (*Brassica tournefortii*), and Mediterranean grass (*Schismus barbatus*).

Wildlife

Fish

No fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on the project. Therefore, no fish are expected to occur and are presumed absent.

Amphibians

No amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on the project. Therefore, no amphibians are expected to occur and are presumed to be absent.

Reptiles

The project site provides limited foraging and cover habitat for local reptile species adapted to regular disturbance and developed conditions. No reptilian species were observed onsite. Reptile species that could be expected to occur on-site include Great Basin fence lizard (*Sceloporus occidentalis longipes*), western fence lizard (*Sceloporus occidentalis*), San Diego gopher snake (Pituophis catenifer annectens),

desert iguana (Dipsosaurus dorsalis), sidewinder (Crotalus cerastes), and coachwhip (*Coluber flagellum piceus*), and western side-blotched lizard (Uta stansburiana elegans).

Birds

The project site provides suitable foraging and nesting habitat for a variety of bird species adapted to urban environments. Bird species detected onsite during the investigation include American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), California towhee (*Melozone crissalis*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other common species that can be expected to occur on-site include house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), red-tailed hawk (*Buteo jamaicensis*), song sparrow (Melospiza melodia), black phoebe (Sayornis nigricans), Say's phoebe (*Sayornis saya*), Nuttall's woodpecker (Picoides nuttallii), house sparrow (Passer domesticus), and northern mocking bird (Mimus polyglottos).

Mammals

The project site provides suitable foraging and denning habitat for mammalian species adapted to routine human disturbance and desert environments. However, most mammal species are nocturnal and are difficult to observe during a diurnal field visit. The only mammalian species detected and/or sign observed during the field investigation was desert cottontail (*Sylvilagus audubonii*). Another common mammalian species that has the potential to occur on the project site is California ground squirrel (*Otospemophilus beecheyi*). No bat species are expected to roost on-site due to a lack of suitable roosting habitat (i.e., trees, crevices, abandoned structures) within and surrounding the project site.

Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted during the breeding season. Although heavily disturbed, the project site and surrounding area have the potential to provide minimal foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to disturbed areas and urban environments. Additionally, the site has potential to support ground-nesting birds such as killdeer (Charadrius vociferus). Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted prior to the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

Special-Status Plants

No special-status plant species were observed on-site during the field investigation. It was determined that the creosote bush scrub habitat in both project sites has a low potential to support Coachella Valley milkvetch (*Astagalus lentiginosus coachellae*). Based on habitat requirements for specific special-status plant species and the availability and quality of habitats on-site, it was determined the project site does not have potential to support any other special-status plant species known to occur in the area and all are presumed absent. Due to regional significance, the potential occurrence of Coachella Valley milkvetch is discussed in further detail below.

Coachella Valley Milk-Vetch

Coachella Valley milk-vetch can be either an annual or perennial herb that blooms between February and

May. It is federally listed as endangered and is designated by the California Native Plant Society (CNPS) with the Rare Plant Rank 1B.2, indicating that is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is covered under the Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP). It is endemic to California and is only known from Riverside County. It occurs in sandy soils within desert dunes and Sonoran Desert scrub, where it typically grows at elevations between 130 and 2,150 feet. Coachella Valley milk-vetch is known to occur in many locations throughout the Coachella Valley. Coachella Valley milk-vetch was not observed during the field investigation. The creosote bush scrub supported by the project sites has the potential to provide marginal suitable habitat for this species; and native soils remain. Therefore, Coachella Valley milk-vetch was determined to have a low potential to occur on-site. Since Coachella Valley milk-vetch is a covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

Special-Status Plant Communities

According to the California Natural Diversity Database (CNDDB), two (2) special-status plant community has been reported in the Desert Hot Springs and Seven Palms Valley quadrangles: desert fan palm oasis woodland and mesquite bosque. Based on the results of the field investigation, no special-status plant communities were observed on-site.

Special-Status Wildlife

No special-status species were observed on-site. Based on habitat requirements for specific species and the availability and quality of on-site and adjacent habitats, it was determined that the proposed project site has a high potential to support Coopers hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (Calypte costae), California horned lark (Eremophila alpestris actia), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and loggerhead shrike (*Lanius ludovicianus*); and a low potential to support Coachella Valley fringe-toed lizard (*Uma inornata),* and flat-tailed horned lizard (*Phrynosoma mcallii*). It was further determined that the project site does not provide suitable habitat for any of the other special-status wildlife species known to occur in the area since the majority of the project site has been heavily disturbed from on-site disturbances and is surrounded by existing development.

Of the aforementioned species, Coachella Valley fringe-toed lizard is both federally listed as Threatened and state listed as Endangered. None of the other species are federally or state listed as Endangered or Threatened. However, the Loggerhead Shrike is designated by the CDFW as a Species of Special Concern (SSC). In addition, Coachella Valley fringe-toed lizard and flat-tailed horned lizard are covered species under the CVMSHCP.

The only aforementioned special-status avian species expected to nest on-site is California horned lark. None of the remaining aforementioned special-status avian species are expected to nest on-site due to the lack of suitable nesting habitat/opportunities. Further, Cooper's hawk, sharp-shinned hawk, and loggerhead shrike are only expected to occur on-site incidentally while foraging in adjacent areas. As a result, in order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance.

Cooper's Hawk
Cooper's hawk does not have any formal protection. In desert habitats, it adapts to the sparser vegetation and open spaces and is a year-round resident in southern California. They tend to nest and hunt near desert riparian areas or places with scattered trees and shrubs, which provide essential cover and hunting opportunities. Cooper's hawk was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to Cooper's hawk to occur.

Sharp-shinned hawk
Sharp-shinned hawk does not have any formal protection. It is a winter resident in southern California, and in desert habitat it is often found near desert riparian zones or areas with some tree coverage, such as along watercourses or in oases. These environments provide essential hunting and nesting opportunities. Sharp- shinned hawk was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to Sharp-shinned hawk occur.

Costa's Hummingbird
Costa's hummingbird does not have any formal protection. It is a year-round resident in southern California and is found in desert and semi-desert, arid brushy foothills and chaparral. This species is breeds in the Sonoran and Mojave Deserts, and departs desert heat moving into chaparral, scrub, and woodland habitats. Departs desert heat moving into chaparral, scrub, and woodland habitats. Costa's hummingbird was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre- construction nesting bird clearance survey shall be conducted to ensure no impacts to Costa's hummingbird occur.

California Horned Lark
California horned lark does not have any formal protection. It is a year-round resident in southern California and is found in landscapes with minimal vegetation, such as deserts, prairies, and tundra. In these areas, they favor bare, dry ground or spaces with short, sparse vegetation to forage and nest. California horned lark was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to California horned lark occur.

Loggerhead Shrike
Loggerhead shrike is designated by the California Department of Fish and Wildlife (CDFW) as a Species of Special Concern. It is a year-round resident of southern California. This species is typically found in open country with short vegetation, including pastures, old orchards, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. It utilizes somewhat prominent perching positions for hunting and eating. This species primarily nests in thorny shrubs and trees, but will nest in brush piles or other debris if no shrubs or trees are present. The general nesting season extends from the end of January through the end of July. Loggerhead shrike was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to loggerhead shrike occur.

Coachella Valley Fringe-toed Lizard
Coachella Valley fringe-toed lizard is designated by the United States Fish and Wildlife Service (USFWS)

as Threatened under the Endangered Species Act (ESA) and by the CDFW as endangered under the California Endangered Species Act (CESA). It is covered under the MSHCP. This species is only found in the Coachella Valley, and occurs on areas containing fine, windblown sands. They are rarely, if ever, found outside of this habitat and do not occur on stabilized sands. Vegetative cover is sparse to moderate and is usually dominated by creosote bush, indigo bush, honey mesquite, and four-winged saltbush (*Atriplex canescens*). This species is typically active from spring through fall, especially between April and October. Up to three clutches of eggs are laid between May and September, with juveniles emerging between August and October. No Coachella Valley fringe-toed lizards were observed during the field investigation. The creosote bush scrub community within the project sites support fine wind-blown sand required by Coachella Valley fringe-toed lizard. Therefore, this species was determined to have high potential to occur on the northwest corner of the site. Since Coachella Valley fringe-toed lizard is a covered species under the CVMSHP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

Burrowing Owl

The burrowing owl (BUOW) is currently listed as a Candidate endangered species under the CESA. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of burrowing mammals (such as ground squirrels) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators. Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Based on the results of the field investigation, it was determined that the project site has a low potential to support burrowing owl. Even though no suitable burrows or sign, was observed onsite, burrowing owls have been documented approximately 0.5 mile west of the project site. As a result, a focused survey is recommended to ensure burrowing owl remain absent from the project site.

Special-Status Habitats

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. The project sites are not located within any federally designated Critical Habitat. The nearest federally designated Critical Habitat occurs 583 feet to the northeast of the project sites for Coachella Valley milk-vetch (Astragalus lentiginosus var. coachellae). As a result, no impacts to Critical Habitat will occur from project implementation.

Jurisdictional Waters

The USFWS National Wetlands Inventory (NWI) and the United States Geological Survey (USGS) National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been

documented within or immediate surrounding the project sites. Based on this review, one blueline streams is mapped as occurring within the project sites. However, upon review of historic aerial footage and during the field investigation, it was determined that the mapped blue-line stream no longer exists due to extensive disturbances upstream. Further, no features were observed on the project sites that would qualify as jurisdictional under the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), or CDFW. No jurisdictional drainage and/or wetland features were observed within the project site during the field survey. Therefore, development of the proposed project will not result in impacts to Corps, RWQCB, or CDFW jurisdiction and regulatory approvals will not be required.

Impact Analysis

a. *Less Than Significant With Mitigation Incorporated* – Implementation of the proposed project is not anticipated to have a potential for an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. As stated above, no special-status animal species were observed on-site during the field investigation. Based on habitat requirements for the identified special-status wildlife species, known distributions, and the and routine disturbance, it was determined that the proposed project site has a high potential to support Coopers hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*), California horned lark (*Eremophila alpestris actia*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and loggerhead shrike (*Lanius ludovicianus*); and a low potential to support Coachella Valley fringe-toed lizard (*Uma inornata*), and flat-tailed horned lizard (*Phrynosoma mcallii*). a systematic search of the project site, no burrowing owls (BUOW) or signs thereof (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Based on the results of the field investigation, it was determined that the project site has a low potential to support burrowing owl. Even though no suitable burrows or sign thereof were observed onsite, burrowing owls have been documented approximately 0.5 mile west of the project site. Therefore, a focused burrowing owl survey is recommended to ensue burrowing owl remain absent from the project site.

The BUOW is a state candidate for listing as an endangered species under CESA. As such, BUOW currently receive the same legal protection afforded to a state listed threatened or endangered species (FGC sections 2074.2 and 2085). If BUOW are determined to be present within the project area prior to project implementation, then any potential project related impacts to BUOW would need to be avoided and coordination with the CDFW may be required. **MMs BIO-1 through BIO-3**, would ensure protection of this species in light of project implementation.

BIO-1 ***Prior to commencement of construction, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012," or the most recent CDFW survey protocol available. The burrowing owl survey shall be conducted with a minimum of four site visits conducted on four separate days.***

BIO-2 ***A preconstruction presence/absence survey shall be conducted no more 30 days in advance of construction. This survey can overlap with the final protocol burrowing owl survey conducted pursuant to MM BIO-1.***

BIO-3 ***If burrowing owl(s) are detected during the focused surveys within the area of potential effect delineated by the construction contractor in coordination with the biologist, the MSWD shall immediately contact CDFW for coordination of next steps prior to commencing project construction or ground disturbing activities. If a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) must cease immediately and CDFW shall to be contacted to determine appropriate management actions. All actions thereafter shall be at the discretion and approval of CDFW in compliance with CESA.***

Additionally, loggerhead shrike was determined to have a high potential to occur on the project site. Loggerhead shrike is designated by the CDFW as a Species of Special Concern. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to loggerhead shrike occur.

BIO-4 ***Regardless of the time of year, a preconstruction survey shall be performed to verify absence of nesting birds. A qualified biologist shall conduct the pre-activity survey within the project areas (including access routes) and a 500-foot buffer surrounding the project areas, no more than three (3) days prior to the initiation of project activities, including, but not limited to clearing, grubbing, and/or rough grading to prevent impacts to birds and their nests. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified biologist shall make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If nesting bird activity is present within the work area or the project's zone of influence (generally 100-300 feet), a no disturbance buffer zone shall be established by the qualified biologist to be marked on the ground around each nest. The buffer shall be a minimum of 500 feet for raptors and 300 feet for songbirds, unless a smaller buffer is specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species. The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Active nest(s) and an established buffer distance(s) shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance. If there is no nesting activity, then no further action is needed for this measure. If an active nest is encountered during the project construction, construction shall stop immediately until a qualified biologist can determine (1) the status of the nest, and (2) when work can proceed without risking violation to state or federal laws.***

There is no suitable habitat for the any other special status species within the project site. Given that the proposed project would not impact any CVMSHCP Conservation Areas, under which the Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard are all CVMSHCP Covered Species and CVMSHCP provides "take" authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species (refer to the discussion under issue "e" below). The CVMSHCP does not identify modeled habitat for any species as occurring within the project site (refer to Appendix E of **Appendix 3** to this Initial Study, CVMSHCP Covered

Species). Based on the results of the field investigation, the project site contains primarily disturbed land that has been subjected to a variety of anthropogenic disturbances. These disturbances have reduced, if not eliminated, the ability of the project site to provide suitable habitat for CVMSHCP Covered species throughout the majority of the project site. However, the creosote bush scrub plant community within the project sites provide suitable habitat for CVMSHCP Covered species. Due to the project footprint occurring within disturbed habitats, potential impacts to CVMSHCP Covered Species are expected to occur from project implementation. No other sensitive species have been identified as having a potential to exist within or be impacted by the proposed project. Therefore, with the implementation of **MMs BIO-1 through BIO-4,** as well as **MM BIO-5,** which shall ensure compliance with the provisions of the CVMSHCP**,** the proposed project would have a less than significant potential to result in 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.

b. *Less Than Significant Impact* – Implementation of the proposed project has minimal potential to have an adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. As stated in the BRA provided as **Appendix 3** prepared by ELMT, the project area does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species, and the project will not result in any loss or adverse modification of Critical Habitat. Furthermore, no intermittent or ephemeral dry washes that would meet the definitions of State and federal jurisdictional waters as defined by Section 1600 of the State of California FGC or "Waters of the United States" (WOTUS) as defined by Section 404 of the Clean Water Act (CWA) occur on the project site. Therefore, no regulatory permits from these agencies will be required for this project. Based on the field survey conducted by ELMT and the information contained in **Appendix 3,** no significant impacts to riparian habitat or other sensitive communities are anticipated to occur as a result of implementation of the proposed project.

c. *No Impact* – According to the data gathered by ELMT in **Appendix 3**, no federally protected wetlands occur within the project footprint. Therefore, no CWA Sections 404/401 permitting through the Corps or RWQCB would be required. Furthermore, the project will not impact any aquatic resources or habitats subject to regulation by the CDFW under Section 1602 of the California Fish and Game Code (FGC) or the RWQCB under the Porter-Cologne Water Quality Control Act, respectively. Thus, implementation of the proposed project will have no potential to impact state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. No mitigation is required.

d. *Less Than Significant With Mitigation Incorporated* – Based on the field survey of the project site, the project will not substantially interfere with the movement of any native resident or migratory species or with established native or migratory wildlife corridors, or impede the use of native nursery sites. Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is

possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both anthropogenic disturbance and natural fluctuations in resources.

According to the CVMSHCP, the project site does not occur within any identified wildlife migratory corridors or linkages. However, the project site lies approximately 65 feet west of the Willow Hole Conservation Area. Since project activities are not expected to extend beyond site boundaries, implementation of the proposed project is not expected to have any direct or indirect impacts to the Willow Hole Conservation Area. As a result, implementation of the proposed project will not disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area.

However, the State does protect all migratory and nesting native birds. Further, the project site and surrounding area consists of habitat that is suitable to support nesting birds. Thus, the project area may include areas that function as nesting locations for native birds. To avoid impacting nesting birds as required by the Migratory Bird Treaty Act (MBTA) and California FGC, the **MM BIO-4** shall be implemented to ensure impacts on nesting birds would be less than significant. Thus, with implementation of the above measure, any effects on wildlife movement or the use of wildlife nursery sites can be reduced to a less than significant impact.

e. *Less Than Significant Impact* – Development of the proposed project would have a less than significant potential to conflict with any local policies or ordinances protecting biological resources. Impacts to biological resources have been addressed above under issues IV(a-d). Due to the nature of the proposed project, which would install ground mounted solar adjacent to an existing solar site, no trees or other locally protected biological resources exist within the project footprint. Therefore, the potential for the project to conflict with local policies or ordinances pertaining to biological resources would be considered less than significant.

f. *Less Than Significant With Mitigation Incorporated* – Please refer to the discussion under Conclusion and issue IV(a), above. The County of Riverside developed the CVMSHCP to enhance and maintain biological diversity and ecosystem processes while allowing future economic growth. The CVMSHCP sets Conservation Goals and Objectives to ensure the conservation of the Covered Species and conserved natural communities in the Multi-Species Habitat Conservation Plan (MSHCP) Reserve System. In addition to setting Conservation Goals and Objectives for the Covered Species and conserved natural communities, the MSHCP has designated Core Habitat, Other Conserved Habitat, Essential Ecological Processes, and Biological Corridors and Linkages. The CVMSHCP area is divided into Conservation Areas based on a combination of ecological and jurisdictional factors. The CVMSHCP is intended to satisfy the legal requirements to authorize the "take" of species covered under the Plan during otherwise lawful activities, by providing for the conservation of the Covered Species. The BRA provided as **Appendix 3** concluded that the project area is outside of any CVMSHCP Conservation Areas, but that the project will need to conform with the Guidelines for projects that are adjacent CVMSHCP Conservation Areas. Thus, the proposed project shall be required to adhere to the CVMSHCP guidelines through the implementation of **MM BIO-5.**

BIO-5 ***The project shall be required to comply with the provisions of the Coachella Valley Multi-Species Habitat Conservation Plan requirements for projects adjacent to***

Conservation Areas.

1) *Drainage – Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.*
2) *Toxics – Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate byproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.*
3) *Lighting – For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.*
4) *Noise – Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA Leq hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.*
5) *Invasives – Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112 [of the CVMSHCP]. The plants listed in Table 4-113 [of the CVMSHCP] shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.*
6) *Barriers – Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.*
7) *Grading/Land Development – Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.*

Further, as discussed under issue IV(a), above, based on the results of the field investigation, the project site contains primarily disturbed land that has been subjected to a variety of anthropogenic disturbances. These disturbances have reduced, if not eliminated, the ability of the project site to provide suitable habitat for CVMSHCP Covered species throughout the majority of the project site. However, the creosote bush scrub plant community within the project sites provide suitable habitat for CVMSHCP Covered species. Due to the project footprint occurring within disturbed habitats,

potential impacts to CVMSHCP Covered Species are expected to occur from project implementation. Therefore, with the implementation of the above mitigation, the project as described would be consistent with the Conservation Goals and Objectives set forth in the CVMSHCP. Impacts are less than significant with mitigation incorporated.

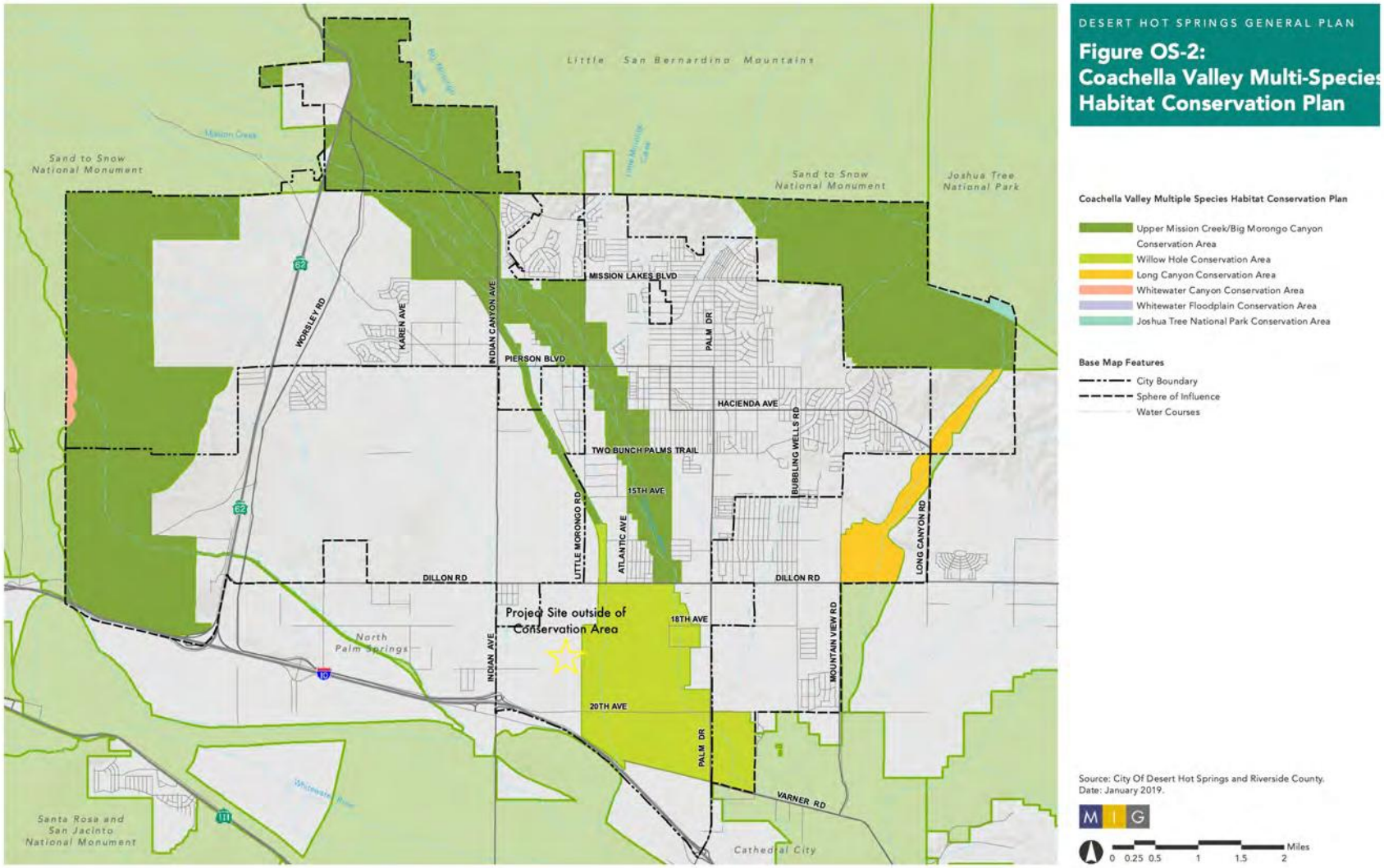

FIGURE IV-1

Tom Dodson & Associates
Environmental Consultants

CVMSHCP Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

SUBSTANTIATION: A cultural resources report has been prepared to evaluate the potential for cultural resources to occur within the project area of potential effect entitled "*Cultural Resources Assessment for the Mission Springs Water District RES-BCT and Regional Water Reclamation Facility Solar Project, Desert Hot Springs, Riverside County California*" prepared by Mojave Archaeological Consulting dated September 5, 2025 (**Appendix 4**). The following information is abstracted from this report. It provides an overview and findings regarding the cultural resources found within the project area.

Background

The project is, in part, part of the continued development of the Nancy Wright RWRF, as a portion of the proposed solar development project would support the electricity needs of the Wright RWRF. The project would also support MSWD's overall growing energy demand within its service area through the new RES-BCT solar development. MSWD will complete street improvements adjacent to the Nancy Wright RWFR. In 2019, the Mission Springs Water District (MSWD), certified an Environmental Impact Report (EIR) for the West Valley Water Reclamation Program for the construction of municipal wastewater collection and treatment systems that would facilitate the individual septic systems that overlie the Mission Creek aquifer. The planned program consisted of three components: construction of the Wright RWRF, construction of a conveyance system connecting existing sewered areas to the Wright RWRF, and construction of a collection system in an area MSWD refers to as M2. A prior cultural resources assessment (Tang and Hogan 2018) was completed for the planned components of the West Valley Water Reclamation Program at that time, including the Wright RWRF. In order to identify any "historical resources" for the proposed project, as defined by CEQA, which includes the RES-BCT and Wright RWRF site, Mojave Archaeological Consulting completed research that included an updated cultural resources records search at the South Coastal Information Center (SCIC), a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), tribal outreach, and a pedestrian field survey (**Appendix 4**).

In order to identify any "historical resources" as defined by CEQA, Mojave Archaeological Consulting reviewed background research, requested a new search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) and a list of Native American contacts, conducted outreach with the Agua Caliente Band of Cahuilla Indians (ACBCI), and completed a pedestrian field survey. The investigation was carried out by Michelle Hart, M.A. Ms. Hart has more than 12 years of experience conducting cultural

resource studies and meets the Secretary of Interior's professional qualifications standards for archaeology, architectural history, and history.

On August 27, 2025, a pedestrian survey of the project site was completed. The survey included the entirety of both photovoltaic solar system locations. The survey was completed using linear transects spaced no more than 15 meters apart. All ground surfaces were closely inspected for any indications of cultural resources. To assess the potential for buried cultural deposits, soil profiles were examined at locations of animal burrows, drainages, disturbed areas, and other exposures. Ground visibility was generally excellent (greater than 90 percent). A large amount of modern trash was observed scattered throughout the survey area. In addition to the modern dumped garbage, several scattered isolated historic cans dating to ca. 1950's to the late 1970's were noted including aluminum top pull-tab beverage, church-key-opened steel body beverage, and one rectangular fuel can. Representative photographs were taken of the historic cans (included in Attachment B of **Appendix 4**) but they were not otherwise formally recorded in consideration that such isolated refuse items are extremely common in roadside settings, offer little information potential, and would not constitute "historical resources" for the purposes of CEQA.

Mojave Archaeological Consulting assessed the proposed project site for potentially significant cultural resources under CEQA. Specifically, CEQA guidelines state "historical resources" include resources listed in or determined to be eligible for listing in the California Register of Historical resources (or determined to be historically significant by the lead agency—generally, in cases where the resource would meet any of the criteria for listing on the California Register of Historical Resources). As discussed above, artifacts located during the survey were limited to a few dispersed cans dating from the mid-century through the late-1970's; these items are not considered to be "historical resources" for the purposes of CEQA. No other cultural resources, either prehistoric, or historic, were found within the project. Mojave Archaeological Consulting recommends to the Mission Springs Water District that the project will have no impact to historical or archaeological resources.

No further cultural resources work is recommended necessary for the proposed project activities. However, if buried cultural materials are encountered during construction, all work should be halted in the vicinity of the discovery until a qualified archaeologist can assess the significance and integrity of the find. If intact and significant archaeological remains are encountered, the impacts of the project should be mitigated appropriately. Additionally, Health and Safety Code Section 7050.5, CEQA Statute & Guidelines Section 15064.5(e), and PRC Section 5097.98 mandate the process to be followed in the event of the discovery of human remains.

Impact Analysis

a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

Per the above discussion and definition, no archaeological sites or isolates were recorded within the project boundaries; thus, no further consideration as part of this study is necessary. In light of this information and pursuant to PRC §21084.1, the following conclusions have been reached for the

project:

- No historical resources within or adjacent to the project area have any potential to be disturbed as they are not within the proposed area in which the facilities will be constructed and developed, and thus, the project as it is currently proposed will not cause a substantial adverse change to any known historical resources.
- No other cultural resources, either prehistoric, or historic, were found within the project.

There is a potential to encounter cultural materials; however, unknown buried cultural materials cannot be discovered until excavation and earthmoving take place, and may be discovered during earthmoving operations associated with the project. As such, the following mitigation measures shall be implemented:

CUL-1 ***Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District's onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

With the above mitigation measure, the potential for impacts to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

c. *Less Than Significant Impact* – As noted in the discussion above, no available information suggests that human remains may occur within the Area of Potential Effect (APE) and the potential for such an occurrence is considered very low. Human remains discovered during the project will need to be treated in accordance with the provisions of HSC §7050.5 and PRC §5097.98, which is mandatory. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts. Thus, the potential for impact to discovery and treatment of human remains will be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

SUBSTANTIATION

Impact Analysis

a&b. *Less Than Significant Impact* – During construction, the proposed project will utilize construction equipment that is CARB approved, minimizing emissions generated and electricity required to the extent feasible (as outlined in Section III, Air Quality, above). As stated in Section III, Air Quality, the construction of the proposed Solar Facility Project would require compliance with regulatory requirements to minimize emissions impacts from construction equipment not in use. These regulatory requirements also apply to energy resources as they require equipment not in use for 5 minutes to be turned off, and for electrical construction equipment to be used where available. for five minutes to be turned off, and for electric equipment to be used where available. These regulatory requirements would prevent a significant impact during construction due to wasteful, inefficient, or unnecessary consumption of energy resources, and would also conform to the CARD regulations regarding energy efficiency.

Southern California Edison Company (SCE) is the primary distribution provider for electricity in the project area. According to the City of Desert Hot Springs General Plan Environmental Impact Report (General Plan EIR), in the 2018 fiscal year, SCE sold approximately 87,143 million kilowatt hours (kWh) of electricity; approximately 46% of the electricity that SCE delivered to customers came from carbon-free resources, including solar energy (approximately 13%), wind energy (approximately 13%), and geothermal energy (approximately 8%). The City's General Plan EIR provides the following analysis related to new development under Chapter 4.6, Energy:

"New development and land use turn over would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CalGreen Code), which would decrease estimated electricity consumption in new and/or retrofitted structures. Additional electricity reductions would be achieved through the implementation of Mitigation Measure GHG-1C, which requires the adoption of a Zero Net Energy (ZNE) ordinance. The adoption and implementation of a ZNE ordinance would require increased building efficiency and the installation of renewable energy infrastructure (e.g., photovoltaic (PV) systems and/or windmills) to offset the building/structure's energy consumption."

A ZNE ordinance has not yet been adopted by the City. Furthermore, the proposed project would be required to comply with Title 24, Part 6, of the California Code of Regulations (the CalGreen Code). Additionally, in July 2013, the City of Desert Hot Springs adopted an Energy Action Plan (EAP), to which the project will be required to adhere. Further, the operation of the solar panels will not require a new source of energy. This is because solar panels generate, and do not require, electricity, thus proving that the proposed project would contribute a new source of energy, and therefore would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project operation. No natural gas would be required to operate the proposed project, and trips to the project footprint would occur only on an as needed basis for maintenance purposes. As such, energy consumption associated with implementation of the Solar Installation Project would not be considered unnecessary, inefficient, or wasteful.

According to SCE's website[6], SCE is committed to delivering power reliably and to meet demand; SCE is expanding and upgrading the transmission and distribution networks to meet the region's growing demand for electricity, and improve grid performance, while meeting California's ambitious renewable-power goals. As such, it is anticipated that SCE will continue to have ample power supply to serve the construction of the project without the need for additional electrical capacity. Therefore, given the lack of energy required to operate the proposed project, it is not anticipated that the project would either result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts under these issues are considered less than significant.

[6] SCE, 2025. Meeting Demand. https://www.sce.com/about-us/reliability/meeting-demand (07/08/25)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 onsite or offsite 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 wastewater disposal systems where RWs are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

SUBSTANTIATION: Geotechnical Investigations were prepared by Salem Engineering Group, Inc. for both the RES-BCT and RWRF sites. These documents are provided as **Appendices 5a and 5b**.

Impact Analysis

a. i. Ground Rupture

Less Than Significant Impact – The project footprint is located in the City of Desert Hot Springs

within the County of Riverside, which is situated proximate to several active faults, including the North and South Branches of the San Andreas fault, which are considered to be Alquist-Priolo fault zones, as well as the Garnet Hill Fault, which is a Riverside County Designated Fault Zone. **Figure VII-1** shows where these faults are located as depicted in the City of Desert Hot Springs General Plan, which depicts faults within the City boundary as well as within and around its Sphere of Influence. According to **Figure VII-1**, the project footprint is located within an Alquist-Priolo fault zone. Note that the RES-BCT site is located within the Alquist-Priolo fault zone, but the RWRF site is located outside of the fault zone. This is confirmed by the data contained in the Geotechnical Reports provided as **Appendices 5a and 5b**.

The Geotechnical Report for the RES-BCT site concluded the following: Based on the proximity to mapped fault traces, fault rupture hazard could be a concern for the subject site. The AP Zoning Act [PRC 2621.5(b) and 2321.6 (a)] is intended for improvements intended for human occupancy or where loss of human life should be considered. Furthermore, 2022 CBC, Chapter 3, Section 312 categorizes solar systems and carport structures to have an accessory characterization and would fall under occupancy category Group U, "Utility and Miscellaneous", where the potential for life hazard is considered incidental to their occupancy. Therefore, evaluation of fault rupture hazards is not required by the current California Building Code or Public Resource Code. This is because the potential for harm to humans from installation of such uses within Alquist-Priolo fault zones is minimal in the event of fault rupture. As a result, and based on the conclusions found in the Geotechnical Reports, fault rupture impacts would be less than significant without the need for mitigation.

ii. Strong Seismic Ground Shaking

Less Than Significant Impact – As stated in the discussion above, several faults run through the City, and as with much of southern California, the proposed project will be subject to strong seismic ground shaking impacts should any major earthquakes occur in the future, particularly due to the site's location within a fault zones, as shown in **Figure VII-2**. Construction of the proposed solar facilities would be temporary, and would be developed outdoors. Construction workers would generally only be at risk when working indoors. This is because seismic ground shaking may cause structural damage that could affect persons inside structures to be exposed to risk associated with strong seismic ground shaking when indoors or atop a roof of a structure. Overall, construction would be temporary in nature and the probability of seismic ground shaking during construction is low. Thus, construction impacts would be less than significant.

The potential impacts to solar facilities due to strong seismic ground shaking consists of damage to panels, with minimal potential harm to humans unless a person is near or beneath the panels damaged by the ground shaking. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by BPELS, provide the basis for regulating and enforcing engineering practice in California. Many such facilities exist and function within areas susceptible to strong ground shaking effects. Further, as discussed under issue (a[ii]) above, evaluation of fault rupture hazards is not required by the current California Building Code or Public Resource Code. This is because the potential for harm to humans from installation of such uses within Alquist-Priolo fault zones is minimal in the event of fault rupture or strong seismic groundshaking. Therefore, given that no habitable structures will be developed in support of the proposed project, there is a less than significant potential for people or structures to

be exposed to strong seismic ground shaking.

iii. Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – The three factors determining whether a site is likely to be subject to liquefaction include seismic shaking, type and consistency of earth materials, and groundwater level. Liquefaction of saturated cohesionless soils can be caused by strong ground motion resulting from earthquakes. Soil liquefaction is a phenomenon in which saturated, cohesionless soils lose their strength due to the build-up of excess pore water pressure during cyclic loading such as that induced by earthquakes. According to the City of Desert Hot Springs General Plan Seismic Hazards Map (**Figure VII-2**), the project site is located within an area known to be susceptible to liquefaction. However, the data contained in the Geotechnical Reports provided as **Appendices 5a and 5b** indicates that the County hazard map states "no groundwater data but, sediments susceptible to liquefaction," and due to the lack of groundwater in the upper 50 feet the potential for liquefaction to occur is low. However, dry seismic settlement may occur due to a design level earthquake event. As with other ground failure potential, solar installations are not susceptible to significant adverse effects associated with liquefaction. Damage to solar panels can occur, but can be the solar panels repaired and placed back into operation with no loss of human life. Therefore, potential impacts associated with seismic-related ground failure would be considered less than significant. No mitigation is required.

iv. Landslide

Less Than Significant Impact – According to the City of Desert Hot Springs General Plan EIR, Landslides are found along the perimeter of the City on properties abutting the surrounding hills and mountains. The proposed project footprint is located in the southern portion of the City near the I-10 and is in a relatively flat area. Further, the data contained in the Geotechnical Reports provided as **Appendices 5a and 5b** indicates that there are no known landslides located at the site, nor is the site in the path of any known or potential landslides. Based on the relatively flat nature of the site, the potential for a landslide would not pose a hazard to the project development. Thus, the project appears to be located within an area of low susceptibility to landslides. Therefore, potential impacts associated with landslides are considered less than significant. No mitigation is required.

b. *Less Than Significant With Mitigation Incorporated* – The proposed Solar Development Project will result in land disturbance within vacant land and adjacent rights-of-way to accommodate the footprint necessary to conduct construction of the solar facilities. Overall existing drainage patterns will remain in place once the solar panels and transmission lines are installed. This project will result in the disturbance of more than one acre of land and will require filing a Notice of Intent (NOI), securing a National Pollutant Discharge Elimination System (NPDES), general construction stormwater discharge permit, and preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include but not be limited to the following measures to mitigate potential impacts associated with erosion and surface water quality degradation during construction:

GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill

material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the project site for future cleanup such that erosion does not occur.

GEO-2 Excavated areas shall be backfilled and compacted such that erosion does not occur.

GEO-3 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the project is being installed.

With implementation of the above mitigation measures, any impacts are considered less than significant. No further mitigation is necessary.

c. *Less Than Significant With Mitigation Incorporated* – As stated under issues VII(a[iii]) and VII(a[iv]) above, the project footprint does is not located within an area that is susceptible to landslides. However, the data contained in the Geotechnical Reports provided as **Appendices 5a and 5b** indicates that the County hazard map states "no groundwater data but, sediments susceptible to liquefaction," and due to the lack of groundwater in the upper 50 feet the potential for liquefaction to occur is low. However, dry seismic settlement may occur due to a design level earthquake event. The Desert Hot Springs General Plan indicates that over drafting of groundwater, drainage of organic soils, underground mining, natural compaction, and thawing of permafrost can cause subsidence. None of these phenomena occur at the project site such that subsidence is likely to occur within the project footprint. According to the Geotechnical Reports provided as **Appendices 5a and 5b,** lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relative flat site topography, the likelihood of lateral spreading is low. Soils in some areas are also subject to collapse if oversaturated; as the soils within the project footprint are not oversaturated, the potential for collapse is low. As stated under issues VII(a[iii]) and VII(a[iv]) above, damage to solar panels from soil instability can occur, but can be repaired and placed back into operation with no loss of human life. The District would be required to adhere to the design recommendations found in **Appendices 5a and 5b** through the implementation of **MM GEO-4**, which would enforce the design recommendations presented in the Geotechnical Investigations as requirements to ensure that soil expansion and other geotechnical constraints/hazards are minimized to a level of less than significant.

GEO-4 Based upon the geotechnical investigation (Appendices 5a and 5b of this document), all of the recommended design parameters identified in Appendices 5a and 5b shall be implemented by the Developer. Implementation of these specific measures will address all of the identified geotechnical constraints identified at project site, including seismic ground shaking.

Thus, the project will have a less than significant potential to 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse.

d. *Less Than Significant Impact* – The entirety of the proposed project will be located within vacant sites adjacent to existing solar panels. According to the Geotechnical Investigations (**Appendices 5a and 5b**), near-surface material consists of alluvial fan deposits of sand, silt, gravel, and cobbles derived from erosion of the Mesozoic granitic and metamorphic rocks of the adjacent San Jacinto Mountains. The project sites are underlain by Quaternary age (Holocene Sediments) alluvial deposits mainly comprised of Alluvial sand, and gravelly sand of valley (Qa). The sediments in the project area exposed during the subsurface exploration are generally similar to those mapped in the vicinity of the site, indicate the surface soils consist of various admixtures of sand and silts with various gravel percentages, the Holocene deposits underlain by unconformity of older Pleistocene alluvial fan gravels, sand, cobbles and boulders. The Geotechnical Investigations (**Appendices 5a and 5b**), indicate that an expansion index test performed on a near surface soil sample resulted in an expansion index of 0 (very low expansion potential) at both sites. Given the above, the proposed project would have a less than significant potential to be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

e. *No Impact* – The proposed project includes the installation of solar arrays and associated transmission line. No septic systems or alternative wastewater disposal systems are proposed as part of the project. Thus, no impacts related to the use of septic tanks or alternative water disposal systems will occur.

f. *Less Than Significant With Mitigation Incorporated* – The potential for discovering paleontological resources during development of the project is possible, but not expected. If previously unknown potentially unique paleontological resources are uncovered during excavation or construction of the development, significant impacts could occur. Thus, even with a low potential for encountering subsurface paleontological resources, it is necessary to incorporate contingency mitigation to ensure that accidental exposure of such resources is managed in a manner to protect the valuable information that can be gained from such exposure during construction. Mitigation would ensure that impacts to paleontological resources are reduced to a level of less than significant. Thus, because paleontological resources are located beneath the surface and can be discovered as a result of ground disturbance activities, the following measure shall be implemented:

GEO-5 ***Should any paleontological resources be encountered during construction of the project, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the MSWD's onsite inspector. The paleontological professional shall assess the find, determine its significance, and determine appropriate management measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.***

The implementation of **MM GEO-5** would mitigate impacts to potentially significant paleontological resources through the creation of procedures to address circumstances in which such resources are uncovered during constriction. This would ensure that impacts under this issue are lowered to a level of less than significant.

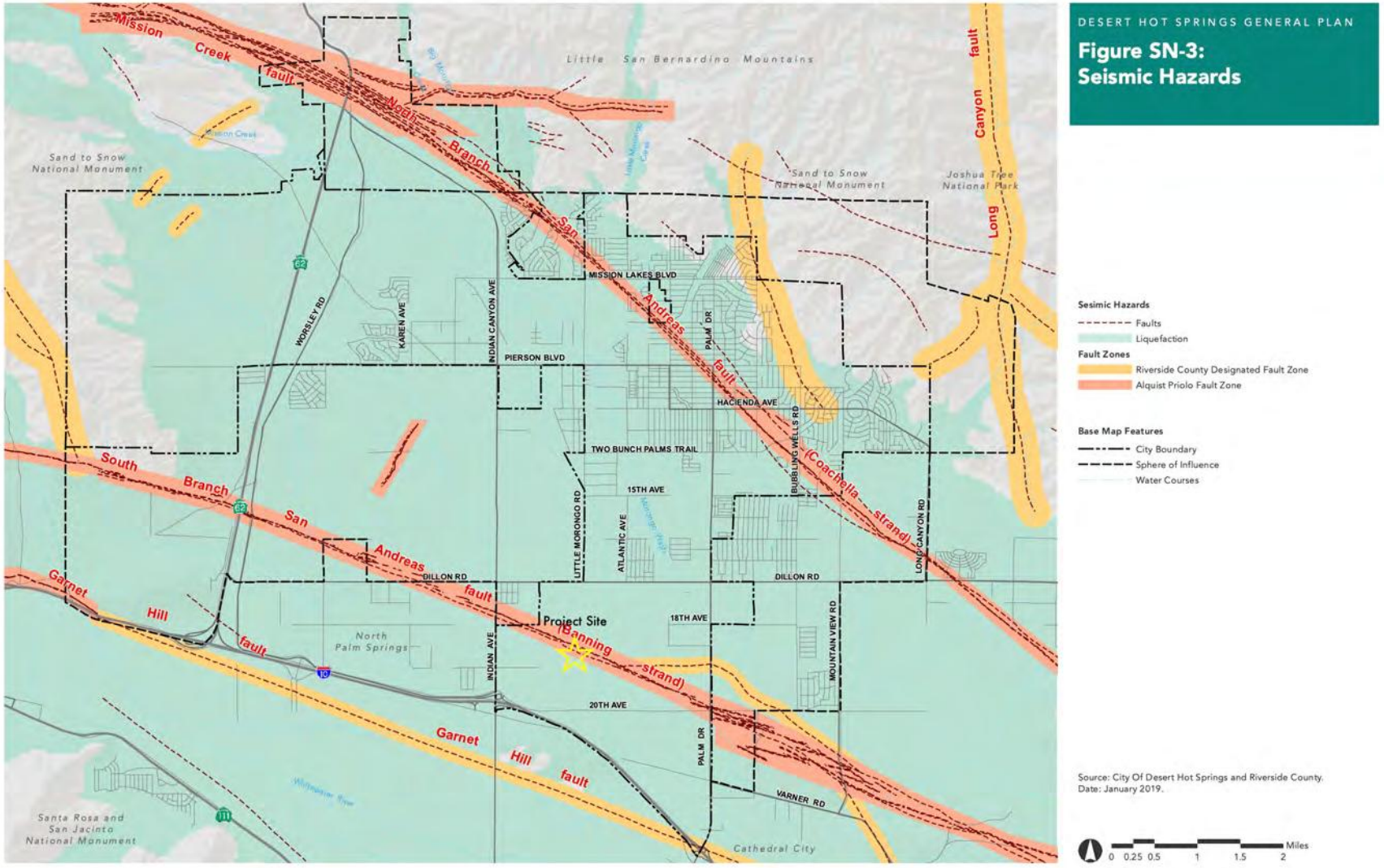

FIGURE VII-1

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City of Desert Hot Springs Seismic Hazards Map

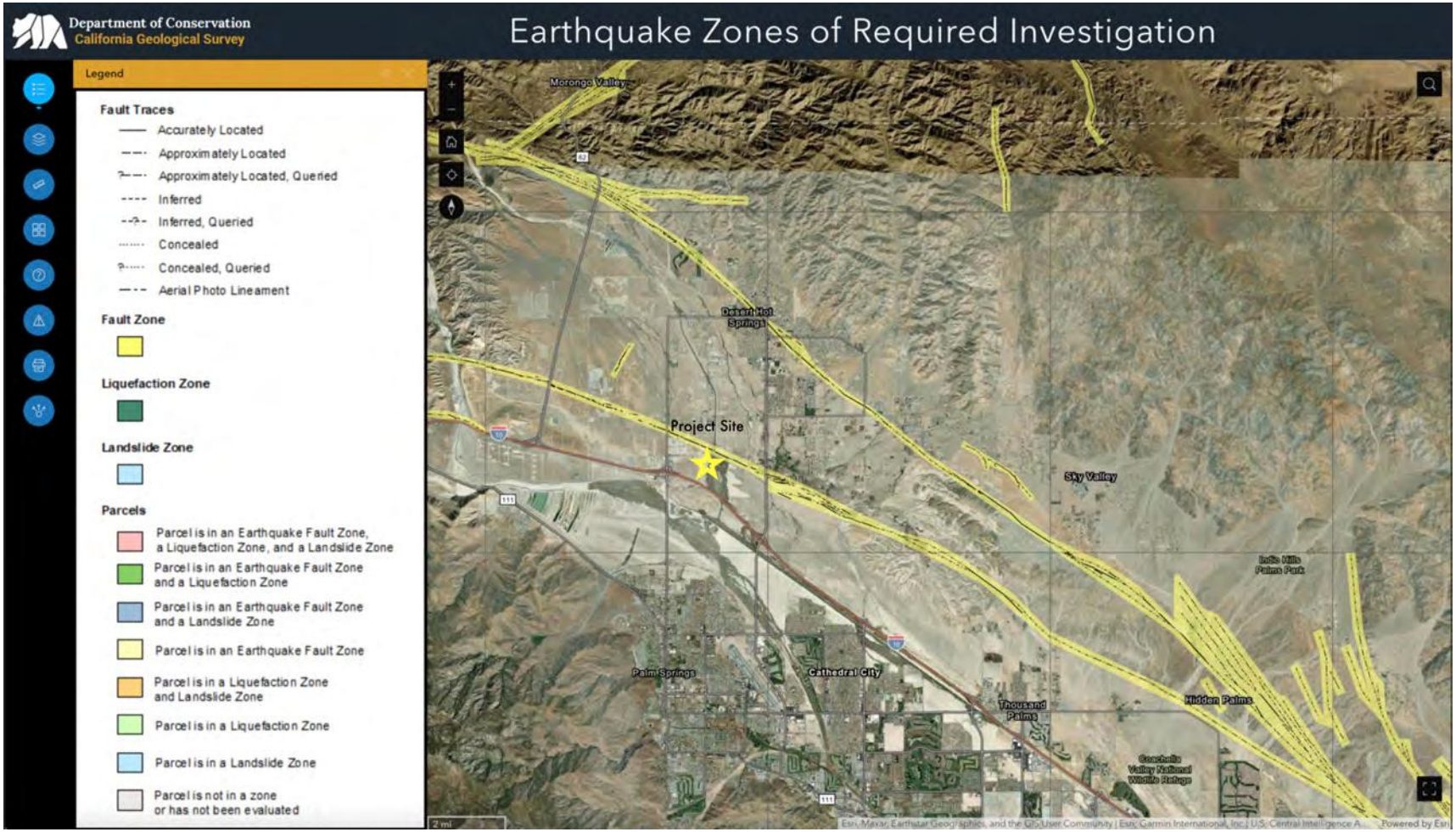

FIGURE VII-2

Tom Dodson & Associates
Environmental Consultants

Earthquake Zones of Required Investigation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the following technical study: *Mission Springs Water District Well 33 Solar Project Air Quality & Greenhouse Gas Assessment prepared* by Urban Crossroads dated September 9, 2025. This technical study is provided as **Appendix 2** to this document.

Climate Change Setting

Global climate change (GCC) is the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed project evaluated in this memo cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this memo will evaluate the potential for the proposed project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's

average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and there are no accepted emissions factors or methodology to accurately calculate these gases.

Standards of Significance

According to the *CEQA Guidelines* Appendix G thresholds, to determine whether impacts from GHG emissions are significant. Would the project:

- **Threshold 1**: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- **Threshold 2**: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a "threshold of significance." For establishing significance thresholds, the Office of Planning and Research's amendments to the *CEQA Guidelines* Section 15064.7(c) state "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4(a) further states, ". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals

or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Establishment of Significance Thresholds

Neither Mission Springs Water District nor the City of Desert Hot Springs has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 MTCO2e/yr to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by the District, City of Desert Hot Springs and numerous cities in the SSAB and is based on the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required. As noted by the SCAQMD:

"…the…screening level for stationary sources is based on an emission capture rate of 90% for all new or modified projects...the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90% of all new or modified stationary source projects. A GHG significance threshold based on a 90% emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90% emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than 1% of future 2050 statewide GHG emissions target (85 [MMTCO2e/yr]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility."

Thus, and based on guidance from the SCAQMD, if a non-industrial project would emit GHGs less than 3,000 MTCO2e/yr, the project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. Conversely, if a non-industrial project would emit GHGs in excess of 3,000 MTCO2e/yr, then the project could be considered a substantial GHG emitter, requiring additional analysis and potential mitigation. As previously discussed, a screening threshold of 3,000 MTCO2e/yr is an acceptable approach for small projects to determine if additional analysis is required and is therefore applied for this project.

Impact Analysis

a. *Less Than Significant Impact* – The estimated GHG emissions for the project land use are summarized in Table VIII-1. The estimated GHG emission includes emissions from Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), and Refrigerants (R). As shown in Table VIII-1, the project would generate a total of approximately 5.67 MTCO2e/yr. Detailed model outputs for the

proposed project are presented in Attachment A of **Appendix 2**.

Table VIII-1: Emissions (Metric Tons CO_2e)

Source	Emissions (MT/year)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Annual construction-related emissions amortized over 30 years	168.00	0.01	<0.05	0.03	170.00
Solar Generation	-1,478.12	-0.14	-0.02	0	-1,486.74
Total CO_2e (All Sources)	**5.67**				

As shown in Table VIII-1, the project will result in approximately 5.67 $MTCO_2e/yr$; the proposed project would not exceed the City's screening threshold of 3,000 $MTCO_2e/yr$. Thus, the project would not have the potential to result in a cumulatively considerable impact with respect to GHG emissions and project GHG emissions would have a less than significant impact.

b. *Less Than Significant Impact* – Pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions.

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85% below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

The project is consistent with the applicable policies specified for the project area in SCAG's Sustainable Community Strategy/Regional Transportation Plan, which pursuant to SB 375 calls for the integration of transportation for achievement of the GHG-emissions target for the region. Thus, a less than significant impact related to GHG emissions from project construction and operation would occur and no mitigation is required.

This project involves the construction of alternative electricity generation facilities through two new solar arrays by MSWD in the City of Desert Hot Springs. The project has been designed to align with the goals of the City's CAP. Sustainable construction practices will be implemented to minimize environmental impact and reduce GHG emissions. Measures will be taken to protect local ecosystems and engage with the community to address any concerns. By adhering to the CAP's objectives, this project aims to contribute positively to the City's sustainability goals while ensuring the efficient delivery of essential services.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a&b. *Less Than Significant With Mitigation Incorporated* – The project should not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; but it may 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 during construction. During construction, there is a potential for accidental release of

petroleum products in sufficient quantity to pose a significant hazard to people and the environment. The following mitigation measure will be incorporated into the SWPPP prepared for the project and it would reduce potentially significant hazard impacts to a less than significant level:

HAZ-1 ***All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately a licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the proposed project. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.***

Additionally, roadways adjacent to the project footprint are public roads that can be used by any common carrier to or from the local area. For such transporters, the existing regulatory mandates ensure that the hazardous materials and any hazardous wastes transported to and from the project site will be properly managed. These regulations are codified in Titles 8, 22, and 26 of the California Code of Regulations. For example, maintenance trucks for construction equipment must transport their hazardous materials in appropriate containers, such as tanks or other storage devices. In addition, the haulers must comply with all existing applicable federal, state and local laws and regulations regarding transport, use, disposal, handling and storage of hazardous wastes and material, including storage, collection and disposal. Compliance with these laws and regulations related to transportation will minimize potential exposure of humans or the environment to significant hazards from transport of such materials and wastes. Impacts are therefore less than significant with mitigation incorporated.

c. *Less Than Significant Impact* – The proposed project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No existing or proposed schools are located within this distance of the project. As previously stated, the project will involve the use of petroleum products and exhaust emissions with construction activities, but will be minimal, as stated under the Air Quality Section of this document. The handling of all hazardous or potentially hazardous materials during construction would comply with all applicable federal, state, and local agencies and regulations pertaining to the handling and use of hazardous materials. Adherence to these policies and regulations will ensure that the project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste, and further, as no schools are located within one-quarter mile of the project, hazards related to school proximity would not occur during either construction or operation of the proposed project. Any impacts under this issue are considered less than significant, and no mitigation is required.

d. *Less Than Significant Impact* – The proposed project footprint is not located in an area that has been included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result it will not create a significant hazard to the public or environment. According to the California State Waterboard's GeoTracker, which provides information regarding Leaking Underground Storage Tanks, there are no locations within a 2,500 foot radius of any of the proposed

project facilities that is identified as Leaking Underground Storage Tank (LUST) site or Department of Toxic Substances Control (DTSC) site (**Figure IX-1** see GeoTracker figure), nor are there any remediated LUST or DTS cleanup sites. Furthermore, the nature of the proposed project is not such that persons working or residing in the area would be exposed to any hazards from any nearby contaminated sites. Further, the proposed use would not be exposed to any contamination because the proposed solar facility transmission lines would not extend more than a few feet below the ground surface. Therefore, the proposed Solar Development Project is not anticipated to create a significant hazard to the population or to the environment from their implementation. Impacts are considered less than significant. No mitigation is required.

e. *No Impact* – According to a review of Google Maps (June 25, 2025), the closest public airport to the project site is the Palm Springs Airport, which is located approximately 5 miles to the southwest of the proposed site. The proposed project footprint is not located within an Influence Area identified in the Palm Springs International Airport section of the Riverside County Airport Land Use Commission's Compatibility Plan.[7] Given the large distance between the proposed project and nearby airports, project implementation would not result in a safety hazard for people residing or working in the project area. Furthermore, there are no private airstrips/public use airports located within two miles of the project site. Therefore, the development of the proposed Solar Development Project would have no potential to result in a safety hazard or excessive noise for people residing or working in the project area.

f. *Less Than Significant With Mitigation Incorporated* – The proposed project will be located within vacant sites surrounding existing solar development within the City of Desert Hot Springs. The proposed Solar Development Project will not be developed adjacent to any identified emergency response or evacuation route. Primary roadways within the project footprint that would be used during an emergency or evacuation order would be Dillon Road (north) and Indian Avenue (west). The proposed project would not be installed within these major roadways. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. At no time during the installation of the proposed solar panels and associated transmission lines will the entirety of either 19th Street or Little Morongo Road be closed. The project would close one lane at a time, which would allow for through-traffic so long as a traffic management plan is developed and implemented; without the implementation of a traffic management plan, impacts could be significant and unavoidable. As such, please refer to the Transportation/Traffic Section of this document, Section XVII. **MM TRAN-1** shall be implemented to address any potential traffic disruption and emergency access issues on area roadways. Impacts are reduced to a less than significant level with mitigation incorporated. No additional mitigation is required.

g. *No Impact* – The proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed project area is located within the southern portion of the City of Desert Hot Springs, as such, the project is not located within or adjacent to a fire hazard zone (**Figure IX-2**). The project will not construct any habitable structures.

[7] Riverside County, 2005. *Riverside County Airport Land Use Compatibility Plan Policy Document.* https://rcaluc.org/sites/g/files/aldnop421/files/migrated/Portals-13-PDFGeneral-plan-newplan-18--20Vol.-201-20Palm-20Springs-20International.pdf (Accessed 07/19/25)

The proposed project site is not located within or in the vicinity of a high wildland fire hazard zone. No impacts are anticipated and no mitigation is required.

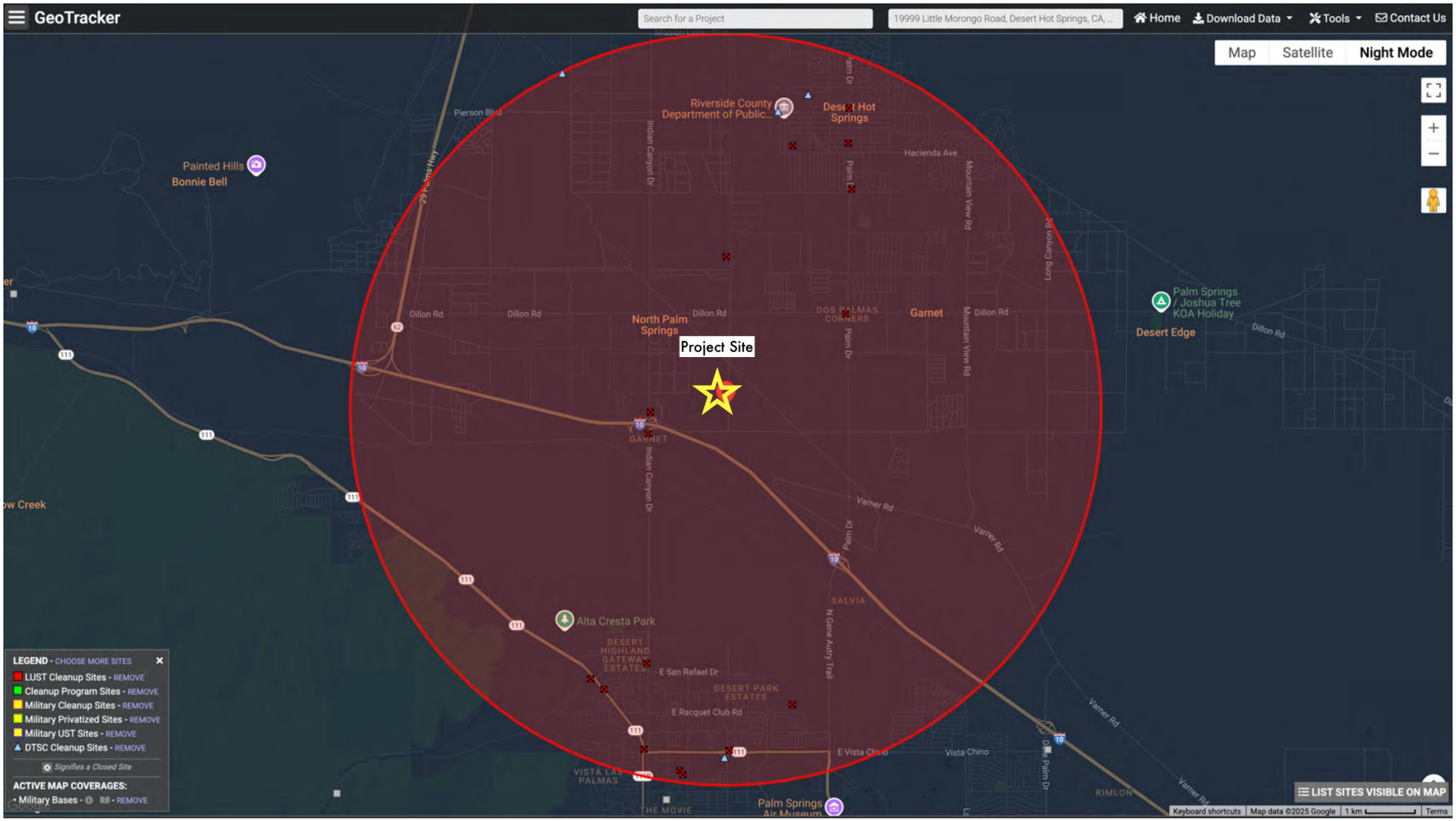

FIGURE IX-1

Tom Dodson & Associates
Environmental Consultants

GeoTracker Map

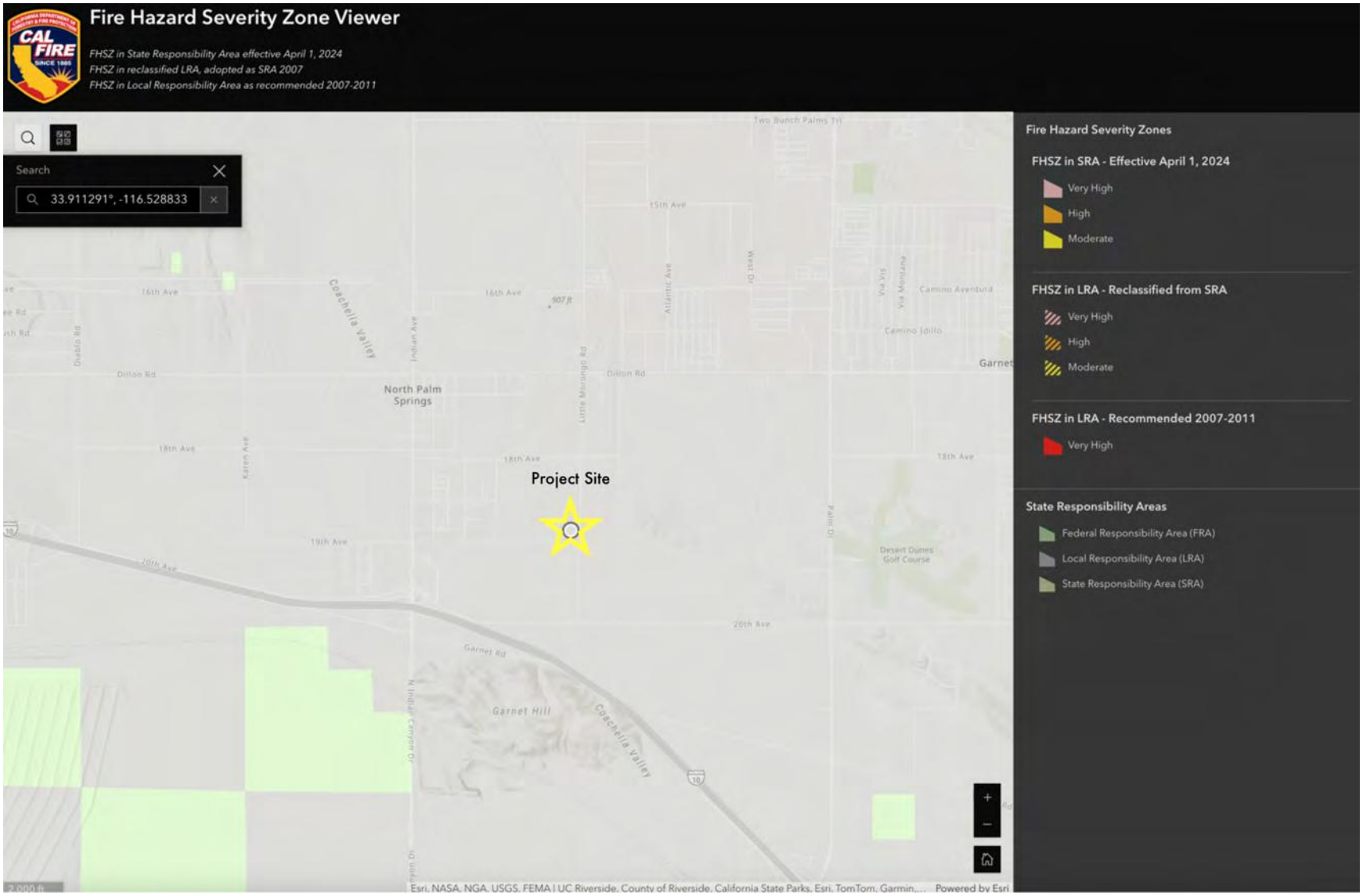

FIGURE IX-2

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Environmental Consultants

CalFire Fire Hazard Severity Zones

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such 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 onsite or offsite?	☐	☒	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	☐	☒	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,	☐	☒	☐	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

SUBSTANTIATION

Impact Analysis

a. *Less Than Significant With Mitigation Incorporated* – The proposed project will install a solar photovoltaic facility to meet overall energy demands. The area of disturbance from the construction and site preparation of the solar sites will occur within vacant sites containing native desert vegetation. Three main sources of potential violation of water quality standards or waste discharge requirements are as follows: from generation of municipal wastewater; from stormwater runoff; and

potential discharges of pollutants, such as accidental spills. To address stormwater and accidental spills within this environment, any new project must ensure that site development implements a Storm Water Pollution Prevention Plan (SWPPP) to control potential sources of water pollution that could violate any standards or discharge requirements during construction and a Water Quality Management Plan (WQMP) to ensure that project-related surface runoff meets discharge requirements over the short- and long-term. In the short term, construction activities will have some potential to affect the quality of stormwater discharged from the project site. Land disturbance activities could result in erosion and sedimentation immediately adjacent to the disturbed project alignment. Spills or leaks of petroleum products used by construction equipment could also potentially affect the quality of surface water. The project will be required to obtain a general construction National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit prior to the start of construction. Obtaining coverage under the General Construction NPDES permit requires the preparation and implementation of the SWPPP, which specifies Best Management Practices (BMPs) that must be implemented during construction of this specific project. Compliance with the terms and conditions of the NPDES and the SWPPP, as well as the WQMP, is mandatory and is judged adequate mitigation by the regulatory agencies for potential impacts to stormwater during construction activities. Implementation of the following mitigation measure would also further reduce potential impacts to stormwater runoff to a less than significant level.

HYD-1 ***MSWD shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:***

- ***The use of silt fences;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

Otherwise, the future proposed solar facilities on the project site do not include activities that will generate wastewater or violate water quality standards or waste discharge requirements. Maintenance of the proposal project would include routine cleaning by robot or by hand, as well as inspections and potential panel replacement. No on site structures are proposed, as the facilities is

proposed to be unmanned. With implementation of these mandatory Plans and their BMPs, as well as **MMs HAZ-1** and **HYD-1** above, the development of the proposed project will not cause a violation of any water quality standards or waste discharge.

b. *Less Than Significant Impact* – The project would be installed within the Indio and Mission Creek Subbasins of the Coachella Valley Groundwater Basin (**Figure X-1**). The project does not propose the installation of any water wells that would directly extract groundwater. The project would not involve the installation of concrete building foundations or other structures that would obstruct groundwater recharge at the solar facility locations. The project would utilize water from the District's existing supply for onsite dust control. The District's water supply source is 100 percent groundwater produced from District-owned and operated wells. Over the approximately 40 day site preparation and ground disturbance period during construction, the project is expected to use about 5,000 gallons of potable water each day which equates to the installation of the paved roadway requiring up to 200,000 gallons of water (0.61-acre feet) during construction. Additionally, up to 200,000 gallons of water per year (0.61-acre feet) may be required in support of cleaning the solar panels as part of project operation. This amount is considered nominal when compared to the availability of supply when compared to demand from the project proponent, MSWD, based on a review of the 2020 Coachella Valley Regional Urban Water Management Plan (UWMP).[8] Thus, based on the estimated water required to support the solar facilities, this project has no potential to cause a cumulatively considerable adverse impact on the regional groundwater resources. Therefore, the project is not anticipated to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Therefore, impacts under this issue are considered less than significant and no mitigation is required.

c.

(i-iii). *Less Than Significant With Mitigation Incorporated* – The project site does not presently contribute to existing or planned stormwater drainage systems. Compliance with the NPDES and SWPPP would be required. Each of these permits and plans would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets. Through compliance with conditions of required permits governing stormwater runoff from construction sites, this project will not substantially alter the existing drainage pattern of the site or area; will not substantially alter the course of a stream or river in such a manner that will result in substantial erosion or siltation either on or off the project footprint; or contribute runoff water that could exceed the capacity of the existing drainage facilities.

During operation of the proposed Solar Development Project, the presence of new facilities at the site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. However, the proposed project would not substantially change the drainage pattern of the site given that the ground mounted solar would not substantially reduce the amount of permeable surface onsite. If overland flows and drainage at the Solar Development Project sites are not assessed and drainage facilities are not designed such

[8] Coachella Valley Water District et. Al., 2021. 2020 Coachella Valley Regional Urban Water Management Plan. https://www.cvwd.org/DocumentCenter/View/5482/Coachella-Valley-RUWMP (Accessed 07/21/25)

that no net increase in runoff would occur, a significant potential for runoff related impacts during operation could occur. Thus, in order to avoid a potentially significant impact, mitigation to address this issue is required. Implementation of drainage improvements within the project site during construction will ensure that, during operation, no substantial increase the rate or amount of surface runoff in a manner that would result in 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 would occur, and impacts are minimized to a less than significant level. As required by **MM HYD-2**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increase in erosion or sedimentation would occur, thereby avoiding potentially significant impacts under this issue.

HYD-2 ***Prior to commencement of construction, the District shall be required to either:***
(1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever feasible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not feasible to eliminate stormwater flows off of a site or where otherwise appropriate, the implementing agency shall:
(2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of Riverside. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, BMPs, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.

MM HYD-2 is required to address the potential for the project to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant with mitigation incorporated.

(iv). *No Impact* – According to the City of Desert Hot Springs General Plan Flood Hazard Map (**Figure X-2**), the proposed project is located within Zone X (areas of 0.2% annual change flood (500-year flood); and areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual flood chance. The proposed project would install solar facilities, but involve little to no alteration to the ground surface itself. Therefore, there would be little to no change to the flood flow of the project site, and no potential to impede or redirect flows such that a significant impact would occur. No mitigation is required.

d. *Less Than Significant Impact* – As stated above under issue X(c[iv]) and according to the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer FIRMette Map, the proposed project is located within Zone X (areas of 0.2% annual change flood (500-year flood)(**Figure X-3**). The project site is not located near any large bodies of water, so impacts associated with seiche or tsunami cannot occur. Mudflow typically occurs on hillsides and the proposed project is not located on a hillside or in an area exposed to significant mudflow. With no human occupancy structures proposed, the development of the solar facilities would not risk release of pollutants due to project inundation. Impacts under this issue are considered less than significant. No mitigation is required.

e. *Less Than Significant Impact* – The proposed project is located within the Indio and Mission Creek subbasin of the Coachella Valley Groundwater Basin. The Indio, Mission Creek, and San Gorgonio Pass Subbasins have been designated as medium-priority, and the Desert Hot Springs Subbasin has been designated as very low-priority, by the DWR.[9] The Sustainable Groundwater Management Act (SMGA) "requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline."[10] The Coachella Valley Water District (CVWD) has been designated an "exclusive" Groundwater Sustainability Agency (GSA) over its service area by the California Department of Water Resources (DWR) in the Indio Subbasin. Desert Water Agency (DWA), Coachella Water Authority (CWA), and Indio Water Authority (IWA), were also designated GSAs in the Indio Subbasin over their respective service areas. The four agencies are working collaboratively to implement the Sustainable Groundwater Management Act (SGMA) in the Indio Subbasin. The Indio Subbasin GSAs prepared the 2022 Indio Subbasin Water Management Plan Update (2022 Alternative Plan Update). The GSAs adopted the 2022 Alternative Plan Update following a public hearing on December 7, 2021 and submitted it to DWR on December 29, 2021.

The three water agencies located within the Mission Creek Subbasin have formed the Management Committee. CVWD and DWA are each exclusive GSAs that oversee and manage portions of the Mission Creek Subbasin that overlay each of their respective service areas. These agencies coordinate with MSWD, a managing partner, to develop the Mission Creek Subbasin Alternative Plan Update.[11] The Alternative Plan was approved by the California Department of Water Resources (DWR) on July 17, 2019. With this approval, DWR made several recommendations for new information and a requirement that the first Alternative Plan Update be prepared by January 1, 2022. The mission statement of the Alternative Plan is: *"The purpose of the Mission Creek and Garnet Hill Water Management Plan is to manage the water resources to meet demands reliably and protect water quality in a sustainable and cost-effective manner."* As the project proponent (MSWD) is a managing partner of the Mission Creek Subbasin Alternative Plan and subsequent updates thereof, and as the proposed project would not demand substantial water resources, nor water resources

[9] CVWD, 2025. Sustainable Groundwater Management Act. https://www.cvwd.org/357/Sustainable-Groundwater-Management-Act (Accessed 07/15/25)
[10] California Department of Water Resources, 2025. Sustainable Groundwater Management Act (SGMA). https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management (Accessed 07/15/25)
[11] Mission Creek Subbasin SGMA, 2025. Management Committee. http://www.missioncreeksubbasinsgma.org/#Management-Committee (Accessed 07/15/25)

beyond the District's supply and demand into the future, it is not anticipated that the project would obstruct groundwater recharge efforts within or surrounding the project area, no conflict or obstruction of a water quality control plan or sustainable groundwater management plan is anticipated. Thus, it is anticipated that the proposed project would have a less than significant potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

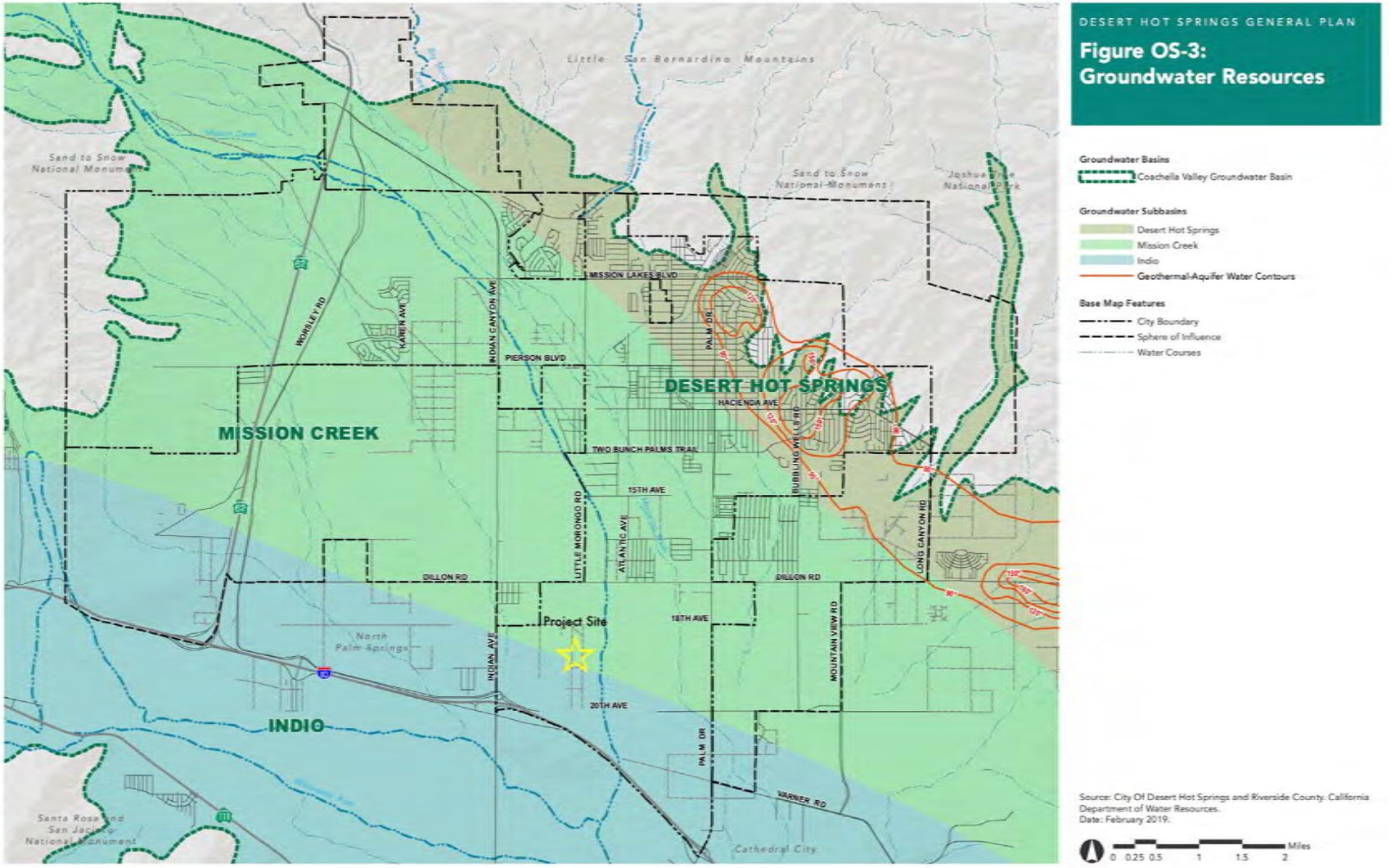

FIGURE X-1

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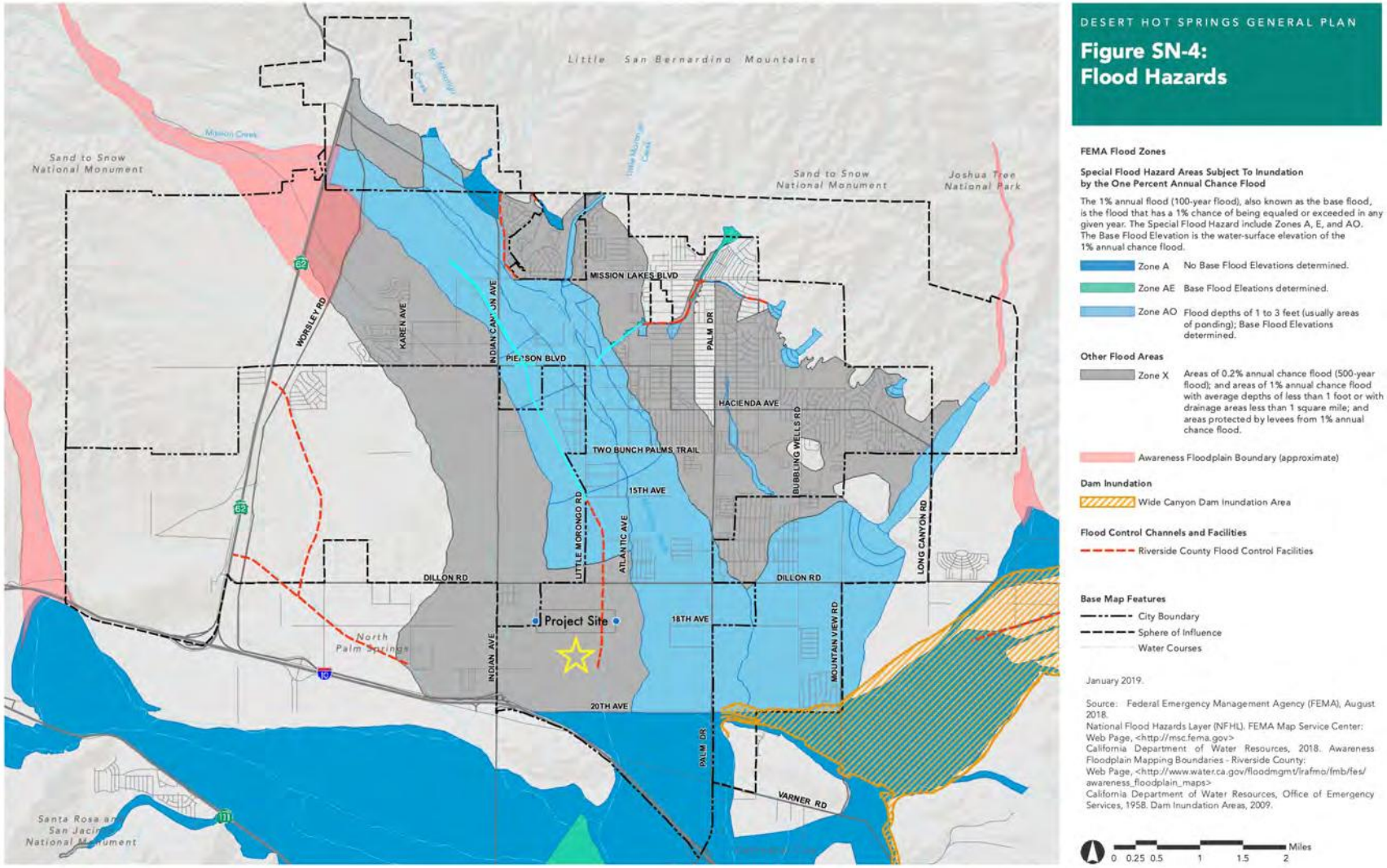
Groundwater Resources Map



DESERT HOT SPRINGS GENERAL PLAN

Figure SN-4: Flood Hazards

FEMA Flood Zones

Special Flood Hazard Areas Subject To Inundation by the One Percent Annual Chance Flood

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard include Zones A, E, and AO. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- Zone A — No Base Flood Elevations determined.
- Zone AE — Base Flood Eleations determined.
- Zone AO — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

Other Flood Areas

- Zone X — Areas of 0.2% annual chance flood (500-year flood); and areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- Awareness Floodplain Boundary (approximate)

Dam Inundation

- Wide Canyon Dam Inundation Area

Flood Control Channels and Facilities

- Riverside County Flood Control Facilities

Base Map Features

- City Boundary
- Sphere of Influence
- Water Courses

January 2019.

Source: Federal Emergency Management Agency (FEMA), August 2018.
National Flood Hazards Layer (NFHL). FEMA Map Service Center: Web Page, <http://msc.fema.gov>
California Department of Water Resources, 2018. Awareness Floodplain Mapping Boundaries - Riverside County: Web Page, <http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/awareness_floodplain_maps>
California Department of Water Resources, Office of Emergency Services, 1958. Dam Inundation Areas, 2009.

0 0.25 0.5 1 1.5 2 Miles

FIGURE X-2

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Flood Hazards

National Flood Hazard Layer FIRMette

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/22/2025 at 3:41 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FIGURE X-3

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FEMA Flood Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a. *No Impact* – The proposed project will install solar panels and fencing at two separate locations located to the north and west of MSWD's existing solar development at the northwest corner of 18th Avenue and Little Morongo Road, which covers a total of 10.175 acres of land. The surrounding land uses of the project site are industrial and open space, see Table XI-1 below, while the proposed project itself is designated as Industrial (Industrial Cannabis Overlay). The project is located within a land use designation that is appropriate for the proposed Solar Development Project. Given that the proposed new solar development would be developed adjacent to a site already containing an existing solar development, the project would have no potential to physically divide an established community. No mitigation measures are required to address potential impact issues under this impact category.

b. *No Impact* – Please refer to the discussion under issue XI(a) above. The proposed project will occur within two vacant sites containing native vegetation characteristic of the Coachella Valley desert, and will be consistent with the City of Desert Hot Springs General Plan and regulations thereof. Refer to land use designations of the surrounding area demonstrated in Table XI-1, below.

Table XI-1: Surrounding Land Uses

Location	Existing Land Use	Land Use Category	Zoning Classification
North	Vacant	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)
South	Nancy Wright RWRF	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)
East	Vacant / Mission Creek	Open Space (OS)	OS-C: Open Space Conservation
West	Vacant	Industrial (I)(Cannabis Overlay)	Industrial Light (I-L)

Furthermore, the City of Desert Hot Springs Municipal Code and Zoning Code therein indicates that the proposed project is an allowed use within the zoning classification and land use designation within which the proposed Solar Development Project would be installed. Thus, the development of the proposed project within the proposed site will be compatible with existing land uses and land use plan, and no conflict or impact thereof has been identified. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a&b. *No Impact* – The proposed Solar Development Project is located within the City of Desert Hot Springs. At present, the sites within which the solar will be installed are vacant, with MSWD's existing solar plant located to the south of the RES-BCT solar site, and east of the Nancy Wright RWRF site. According to the Mineral Resources map prepared for the City of Desert Hot Springs General Plan (**Figure XII-1**), no known mines or mineral resources are known to occur on or in the vicinity of the project footprint. As no current mining operations exist within or adjacent to the proposed Solar Development Project footprint, and as none have been identified by the City, implementation of the proposed project will not result in in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impacts are anticipated under this issue and no mitigation is required.

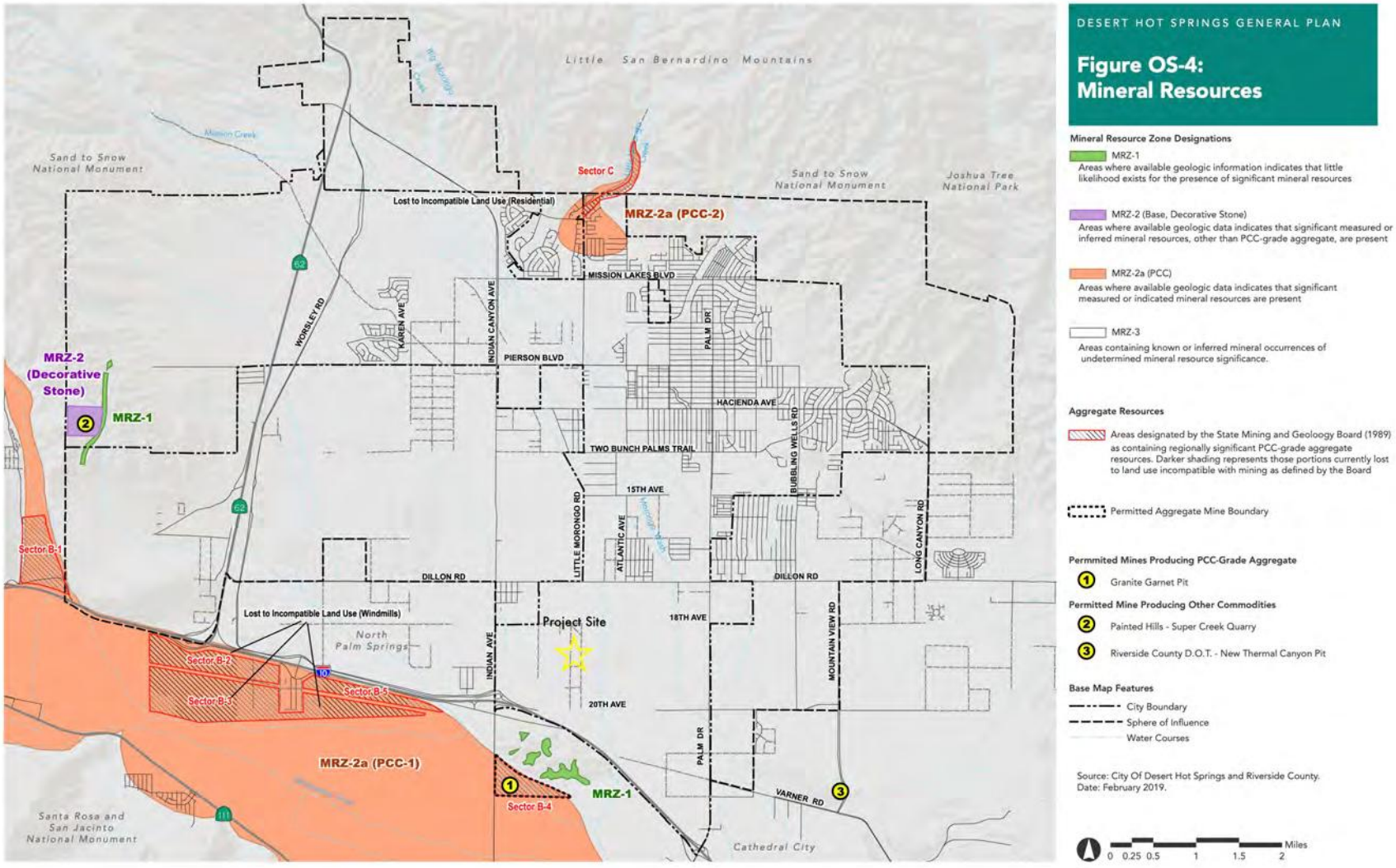

FIGURE XII-1

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Mineral Resource Zones Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a 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?	☐	☐	☐	☒

SUBSTANTIATION

Background

Noise is generally described as unwanted sound. The proposed project would install ground mounted solar facilities at to the north and west of the existing solar facility located at the northwest intersection of 19th Avenue and Little Morongo Road. The project includes the installation of transmission lines associated with the proposed solar development. No habitable structures are features of the project. The project footprint is located in an area that experiences low traffic volume and is not surrounded by highly noise intensive uses, and as a result the project sites are located in a low-background noise environment.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called "A-weighting," written as "dBA."

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise

measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

City of Desert Hot Springs Noise Regulations and Standards

The City of Desert Hot Springs noise standards are found in Section 17-040.180 of the Municipal Code which states:

- In residential areas, no exterior noise level shall exceed 65 dBA and no interior noise level shall exceed 45 dBA.

Construction noise is exempt from these standards as long as work is limited to the hours of 7 am to 5 pm Monday through Saturday. During daylight savings time the permissible hours are 6 am to 6 pm. Construction is not permitted on Sundays.

Impact Analysis

a. *Less Than Significant With Mitigation Incorporated* – The proposed project will install ground mounted solar facilities on two vacant lots. There are no sensitive receptors located adjacent to the sites. As previously stated, the project footprint is located in an area that experiences a low traffic volume and is not surrounded by noise sensitive uses, and as a result is in a low-background noise environment. Once installed the solar array is installed, the noise environment is anticipated to remain consistent with that which exists at present because solar facilities do not generate substantial noise beyond a minimal electrical hum emanating from transformers and other associated electrical appurtenances.

Short Term Construction Noise

Short-term construction noise impacts associated with the proposed project will occur over a period of approximately 105 days, but as the proposed project is located in an area removed from residential uses, there are no sensitive land uses within about 3,500 feet of the project footprint. Construction activities will include noise generated by movement of construction materials to and from the site, trenching and installation of an underground transmission line, and installation of the solar panels. The noise of each of these construction activities varies depending on the type of construction equipment and the location within the footprint within which the construction takes place. The earth-trenching sources are the noisiest type of equipment typically ranging from 82 to 85 dB at 50 feet from the source. Given the great distance between the construction noise sources and nearby sensitive land uses, it is not anticipated that the proposed project would result in noise in excess of the City's noise standards during construction as construction noise would attenuate to an acceptable level. Further, temporary construction noise is exempt from the City's noise standards as long as work is limited to the hours of 7 am to 5 pm Monday through Saturday. The proposed project would be constructed in compliance with the City's noise standards, and construction of the project

would be less than significant. However, to minimize the noise generated on the site to the extent feasible, the following mitigation measures shall be implemented:

NOI-1 ***All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.***

NOI-2 ***All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.***

NOI-3 ***No construction activities shall occur during the hours of 5 PM through 7 AM, Monday through Saturday; at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.***

NOI-4 ***Equipment not in use for five minutes shall be shut off.***

NOI-5 ***Equipment shall be maintained and operated such that loads are secured from rattling or banging.***

NOI-6 ***Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.***

NOI-7 ***MSWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by MSWD.***

NOI-8 ***Construction staging areas shall be located as far from adjacent sensitive receptor locations as possible.***

Long-Term Operational Noise

The proposed project will not cause any measurable permanent increase in ambient noise levels in the vicinity of the project above levels existing without the project, due to the fact that solar panels require minimal noise generating activities in support of their operation. Occasional visits may be required for maintenance and, as previously stated, once installed the solar array is installed, the noise environment is anticipated to remain consistent with that which exists at present because solar facilities do not generate substantial noise beyond a minimal electrical hum emanating from transformers and other associated electrical appurtenances. Therefore, through the implementation of the mitigation measures identified above, neither operation or construction of the proposed project would violate noise standards outlined in the City's Municipal Code. Impacts under this issue are considered less than significant with mitigation incorporated.

b. *Less Than Significant Impact* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction

equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in vibration decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The Federal Transportation Administration (FTA) Assessment states that in contrast to airborne noise, ground-borne vibration is not a common environmental problem. Although the motion of the ground may be noticeable to people outside structures, without the effects associated with the shaking of a structure, the motion does not provoke the same adverse human reaction to people outside. Within structures, the effects of ground-borne vibration include noticeable movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. FTA Assessment further states that it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. However, some common sources of vibration are trains, trucks on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment. The FTA guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential project related vibration impacts. This threshold provides a basis for determining the relative significance of potential project related vibration impacts.

In the short term, it is possible that groundbreaking construction equipment and other equipment required to construct the whole of the project may have some potential to create some vibration at the nearest property line, but there are no sensitive receptors within 3,500 feet of the project footprint, and further there are no historic buildings within the project footprint that would be impacted by construction related vibration. Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration, but as there are no sensitive receptors within a sufficient distance from the project to experience groundborne vibration, the project would comply with the City of Desert Hot Springs Municipal Code, and would not result in vibration impacts within the project area. Therefore, impacts from project related vibration would be considered less than significant. No mitigation is required.

c. *No Impact* – According to the City of Desert Hot Springs General Plan, aircraft noise impacting the community emanates from commercial and general aviation operations at the Palm Springs International Airport, located approximately 4 miles south of the proposed project. The Palm Springs International Airport: Airport Master Plan and Part 150 Noise Compatibility Study indicate that flight tracks and patterns that aircraft are assumed to follow outlined in the Airport Noise Study demonstrate limited over flights in Desert Hot Springs. Ultimately, the Airport Master Plan concluded that existing and future noise levels associated with Airport operations will have no significant impact on the City of Desert Hot Springs or its sphere of influence. Given that the proposed solar facilities are located within the City of Desert Hot Springs, it is not anticipated that persons working in the project area will be exposed to excessive noise levels generated by the nearby Airport. No private airstrips are located in close proximity to the proposed project; therefore, there are no impacts under this issue.

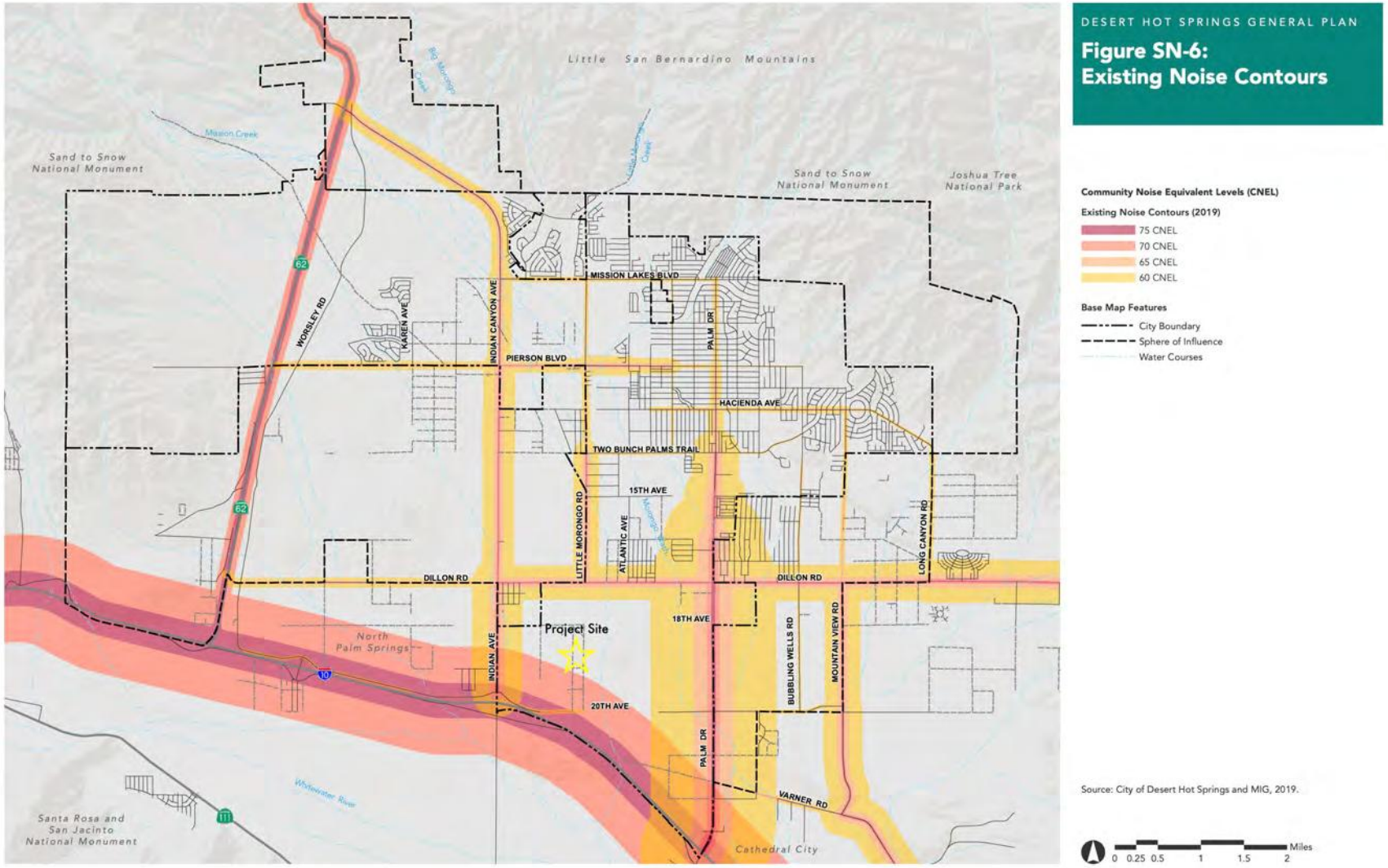

FIGURE XIII-1

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Existing Noise Contours

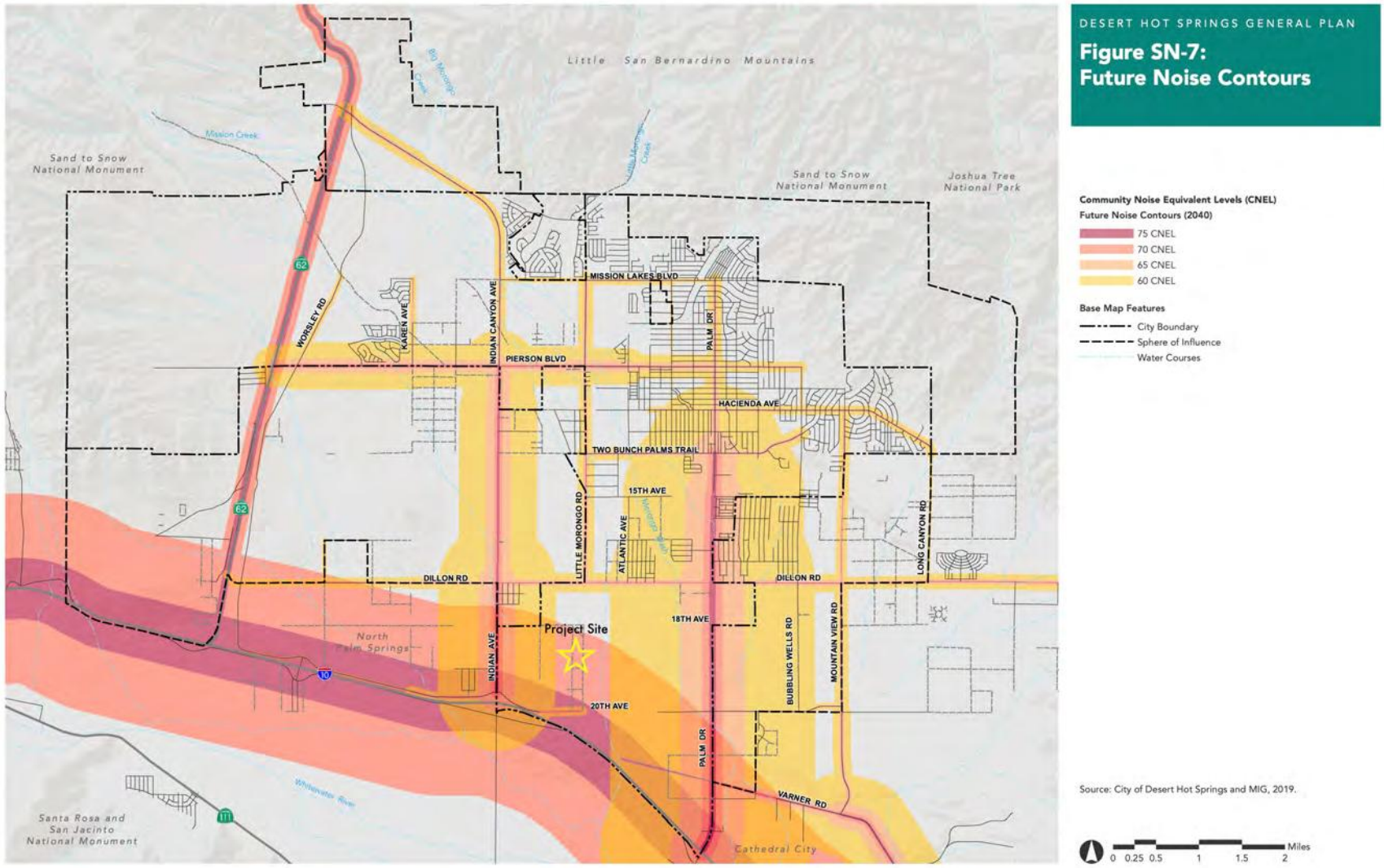

FIGURE XIII-1

Tom Dodson & Associates
Environmental Consultants

Future Noise Contours Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a. *Less Than Significant Impact* – Implementation of the project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). The proposed project will require a temporary work force; however, this is short-term and with a maximum of about 10 employees will not induce substantial population growth. Furthermore, according to the Southern California Association of Governments (SCAG), the total population of Desert Hot Springs in 2020 was 30,036 persons.[12] The City General Plan notes that the City's population is anticipated to grow to 88,476 residents by 2040. This indicates that the City plans for population growth in the future. As such, given that no additional employees will be required once the solar arrays have been installed and are fully operational, the proposed project would have a less than significant potential to induce substantial population growth in an area, either directly or indirectly..

b. *No Impact* – Implementation of the project will not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. There is no existing housing located within the project sites and no persons reside within the project footprint. Therefore, implementation of the project as a whole will not displace any existing housing or displace a substantial number of people that would necessitate the construction of replacement housing elsewhere. No impacts are anticipated and no mitigation is required.

[12] SCAG, 2021. Local Profiles. https://www.arcgis.com/sharing/rest/content/items/4f32535de7444301aee7be8378f4b7ff/data (Accessed 07/25/25)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a. *Less Than Significant Impact* – The City of Desert Hot Springs is currently served by the Riverside County Fire Department (RCFD). The RCFD currently has two fire stations: Station #36 and Station #37, which, together, responded to approximately 5,746 calls in FY15.[13] Given that the population has not grown substantially over the last decade,[14] it is reasonable to assume that roughly the same number of calls are responded to on average yearly. These calls included medical emergencies, vegetation and structure fires, vehicle accidents, public assistance and false alarms. Station #37 and #36 are both located in the northern part of the City, located about 4-5 miles north of the project site. MSWD proposes to install ground mounted solar arrays along with transmission line. These proposed solar will be installed directly next to an existing solar facility, located at the northwest intersection of 19th Avenue and Little Morongo Road. The project will not include the use or storage of highly flammable materials. Implementation of the project will result in an incremental increase in regional fire protection demand, primarily for emergency services. The need for fire protection services would exist during both the construction and operational phases of the project. However, as the facility would not be manned once in operation, and as construction related fire and emergency service calls would be sporadic on an as needed basis for the minimal construction employees that would be on site during construction, it is not anticipated that the demand for fire protection and emergency services would result in a new demand that would cause significant

[13] City of Desert Hot Springs General Plan EIR (pg. 4.15-1)
[14] SCAG, 2021. Local Profiles.
https://www.arcgis.com/sharing/rest/content/items/4f32535de7444301aee7be8378f4b7ff/data (Accessed 01/15/25)

environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. Fire protection services are funded by the City's General Fund. Therefore, any impact to the existing fire protection system is considered random and would therefore be less than significant. No additional mitigation is required.

b. *Less Than Significant Impact* – The proposed project site is located within the southern portion of the City of Desert Hot Springs. The City of Desert Hot Springs Police Department provides the citizens of the Planning Area with police services and protection. According to the City's General Plan EIR, Service is primarily provided from the Police Department Office at 65-950 Pierson Blvd, which is about 4 miles north of the project footprint. Additional personnel are provided at a satellite office at the Police Neighborhood Office at 66140 West Arroyo located in Tedesco Park. Police services are dispatched from the Police Department Office, but the satellite office is centrally located for greater police presence in the neighborhood and efficient response. The project is not anticipated to generate growth within the project area that would create a new demand for police protection because no additional employees will be required once the solar arrays are installed and are fully operational. The construction of the solar arrays will require only a temporary work force. The proposed project will not include the kind of use that would likely attract criminal activity, except for random trespass and theft; however, construction equipment will be stored in such a manner that public will not have access to it, and once in operation, the project will not include any habitable structures. As with fire protection services, police protection services are funded by the City's General Fund. Thus, due to the type of project proposed, no new or expanded police facilities would need to be constructed as a result of the project. Therefore, impacts to police protection resources from implementation of the proposed project are considered less than significant; no mitigation measures are required.

c. *No Impact* – The proposed project is located within the Palm Springs Unified School District. Within the City and SOI, there are five elementary schools, two middle schools, and one high school. As discussed under Chapter XIV, Population and Housing, above, the project would not induce population growth within the City, as it will neither construct housing, nor result in a growth in employment opportunities within the area. Because the project would develop electrical infrastructure facilities that are not commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to school facilities. Thus, the proposed project will not generate an increase in elementary, middle, or high school population. No impacts are anticipated and no mitigation is required.

d. *No Impact* – Because the project would develop electrical infrastructure facilities that are not commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to park facilities. As stated in the preceding sections, the proposed project is not anticipated to create a substantial increase in population because it does require additional MSWD staff to operate the proposed RES-BCT and RWRF Solar Development Project. Implementation of the proposed project will not impact any current or planned park use (refer to **Figure XV-1**), as the project sites are currently vacant. Thus, implementation of the proposed project would not cause a substantial adverse physical impact to any parks within the City. No impacts are anticipated, and no mitigation is required.

e. *No Impact* – Other public facilities include library and general municipal services. The library system in the City of Desert Hot Springs is operated by the Riverside County Library System. Since the project will not directly induce substantial population growth, it is not forecast that the use of such facilities will increase as a result of the proposed project. As a result, the implementation of the project will not 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 public services to include other public facilities. Thus, no impacts are anticipated under this issue and no mitigation is required.

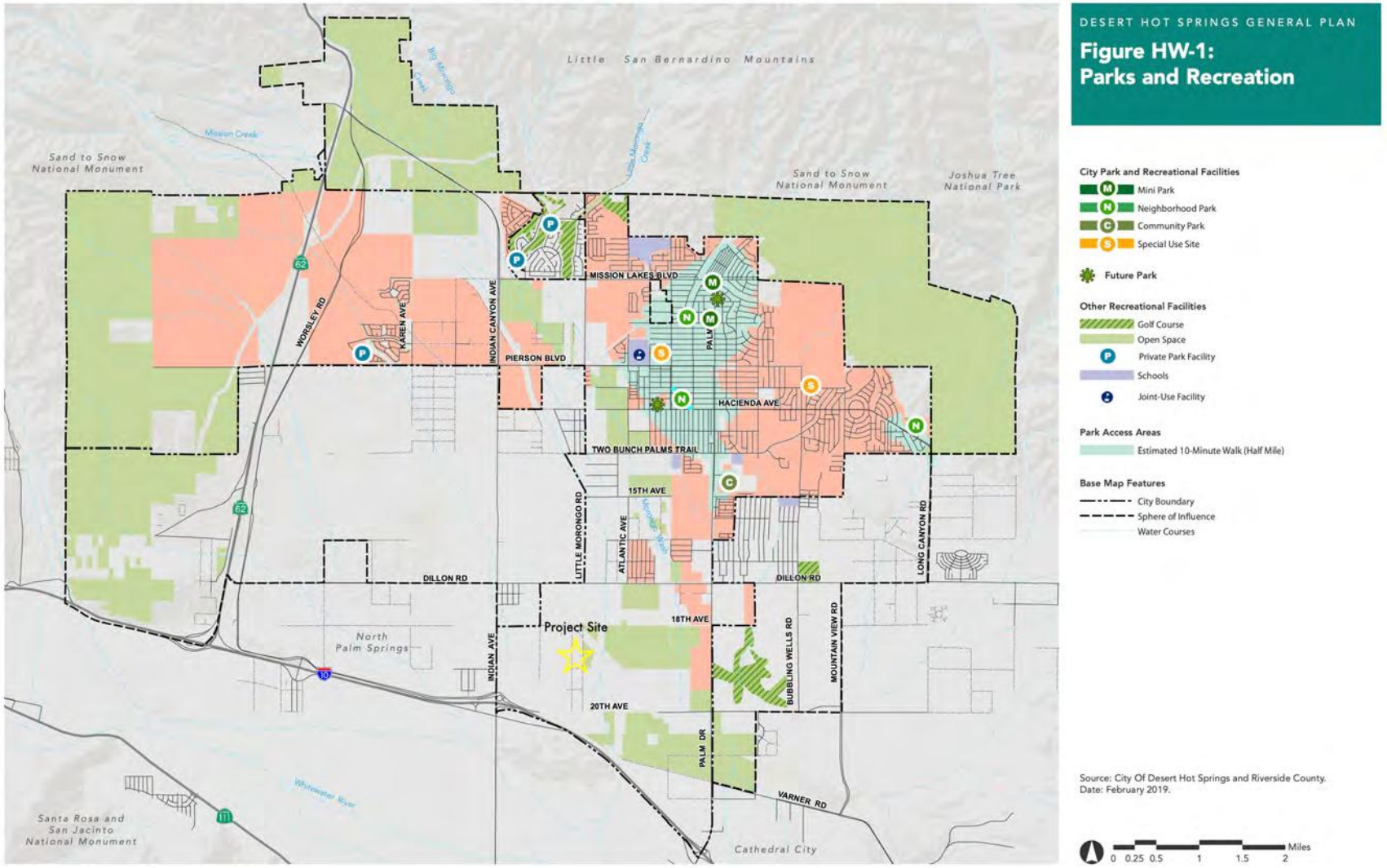

FIGURE XV-1

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Environmental Consultants

Parks and Recreation Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a. *No Impact* – As previously discussed in Section XIV, Population and Housing and Section XV, Public Services, this project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. Therefore, this project will not result in an increase in the demand for parks and other recreational facilities and implementation of the proposed project would not increase the use of any parks within the area, nor would it result in the physical deterioration of other surrounding facilities. No impacts are anticipated. No mitigation is required.

b. *No Impact* – The proposed project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities. The solar facility installation will occur on vacant sites, and does not include the construction or expansion of recreational facilities. Thus, there will be no adverse effects on the recreational facilities from implementing this project. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 inter-sections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

SUBSTANTIATION

Impact Analysis

a. *Less Than Significant With Mitigation Incorporated* – Preliminary estimates indicate that the proposed project will add an estimated 10-20 new roundtrips per day during construction. During future operations the site will likely be visited about once per month or less depending on the facility's need for maintenance. The addition of 10-20 roundtrips on the local roadways is not forecast to conflict automobile circulation along Little Morongo Road or 19th Avenue. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. At no time during the installation of the proposed solar panels and associated transmission lines will the entirety of either 19th Street or Little Morongo Road be closed. The project would close one lane at a time, which would allow for through-traffic so long as a traffic management plan is developed and implemented; without the implementation of a traffic management plan, impacts could be significant and unavoidable. As such, please refer to the Transportation/Traffic Section of this document, Section XVII. **MM TRAN-1** shall be implemented to address any potential automobile circulation conflicts. Implementation of this measure, in conjunction with the temporary character of the construction impacts, is considered sufficient to ensure adequate flow of traffic in a safe manner during trenching for the transmission lines associated with the proposed project:

TRAN-1 The District shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- *Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.*
- *To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.*
- *Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe*

driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.

- ***For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.***
- ***Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.***

Implementation of the project has the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed project will occur within vacant sites located along 19th Street and Little Morongo Road, the latter of which is designated as a Secondary II Street (refer to **Figure XVII-1**). As shown on the Bicycle Plan Map provided as **Figure XVII-2**, the roadways surrounding the proposed project have not been designated as bicycle routes, and as a result, the proposed project would not impact bicycle circulation. As shown on the Pedestrian Plan Map provided as **Figure XVII-3**, the proposed project is not located in an area served by or planned to be served by a pedestrian sidewalk network, and as a result, the proposed project would not impact pedestrian circulation. Finally, the project is not located within an existing or planned transit service route (refer to **Figure XVII-4**), and as a result, the proposed project would not impact transit circulation. Thus, through the implementation of the above mitigation measure requiring a construction traffic management plan, the proposed project would result in a less than significant impact pertaining to the circulation system, particularly given that transit, bicycle, and pedestrian facility circulation will not be disrupted.

b. *Less Than Significant Impact* – The CEQA Guidelines Section 15064.3 identifies the Vehicle Miles Traveled (VMT) as the State's preferred method of evaluating Transportation-related impacts. City of Desert Hot Springs recommends the use of the Riverside County Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled (County Guidelines). The proposed project will require minimal vehicle miles traveled to accomplish once constructed. In the short term, construction of the proposed facilities will result in the generation of up to about 10-20 roundtrips per day on the adjacent roadways by construction personnel and trucks removing any Construction and Demolition (C&D) materials generated by construction on site. The total number of truck roundtrips per day is estimated to be 3 trips, in addition to an anticipated maximum 10 employee roundtrips per day. The vehicle miles traveled in these instances would likely average less than 80 miles round trip. The number of temporary truck trips will be minimized by using 15 cubic yard material haulers instead of smaller 10 cubic yard trucks to haul material onto and off of the site. Additionally, the same trucks that haul material onto the site would also carry material off of the site. Once constructed, only minimal additional traffic would be generated by this project than that which occurs at present or is otherwise planned to occur as part of area development because other than solar facility maintenance which would occur on a routine basis (approximately once a month), no other operational trips are anticipated. This would therefore result in minimal vehicle miles traveled once the solar facilities are operational. As such, development of the proposed Solar Development Project is not anticipated to result in a significant impact related to vehicle miles travelled, and thus would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts under this issue are considered less than significant. No mitigation is required.

c. *Less Than Significant With Mitigation Incorporated* – The proposed project does not propose any specific modifications to any roadways. The proposed project will be located within vacant sites surrounding existing solar development within the City of Desert Hot Springs. A limited potential to create a hazard during construction exists as construction of the transmission lines will require trenching within 19th Street and Little Morongo Road. However, at no time during the installation of the proposed solar panels and associated transmission lines will the entirety of either 19th Street or Little Morongo Road be closed. As stated under issue XVII(a) above, with the implementation of **MM TRAN-1**, which requires implementation of a construction traffic management plan, any potential increase in hazards due to design features or incompatible use will be considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because the proposed project would enhance the roadway through installing pavement, thereby making the roadway alignment less hazardous through project installation. Thus, any impacts are considered less than significant with implementation of mitigation. No additional mitigation is required.

d. *Less Than Significant With Mitigation Incorporated* – The proposed project will be located within vacant sites surrounding existing solar development within the City of Desert Hot Springs. The proposed Solar Development Project will not be developed adjacent to any identified emergency response or evacuation route that would result in conflicts with emergency access to the site or surrounding area. Access to the Solar Development Project sites would occur along Little Morongo Road and 19th Street (refer to **Figures 2, 4 and 6**). According to the City's General Plan, Interstate-10 is considered an emergency access route. The City has a detailed Emergency Operations Plan, with which the proposed project will have no conflicts. No known emergency access plans or emergency response or evacuation plans will be affected by this project in the short- or long-term. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. At no time during the installation of the proposed solar panels and associated transmission lines will the entirety of either 19th Street or Little Morongo Road be closed. The project would close one lane at a time, which would allow for through-traffic so long as a traffic management plan is developed and implemented; without the implementation of a traffic management plan, impacts could be significant and unavoidable. As such, please refer to the Transportation/Traffic Section of this document, Section XVII. **MM TRAN-1** shall be implemented to address any potential emergency access issues on area roadways. Impacts are reduced to a less than significant level with mitigation incorporated. No additional mitigation is required.

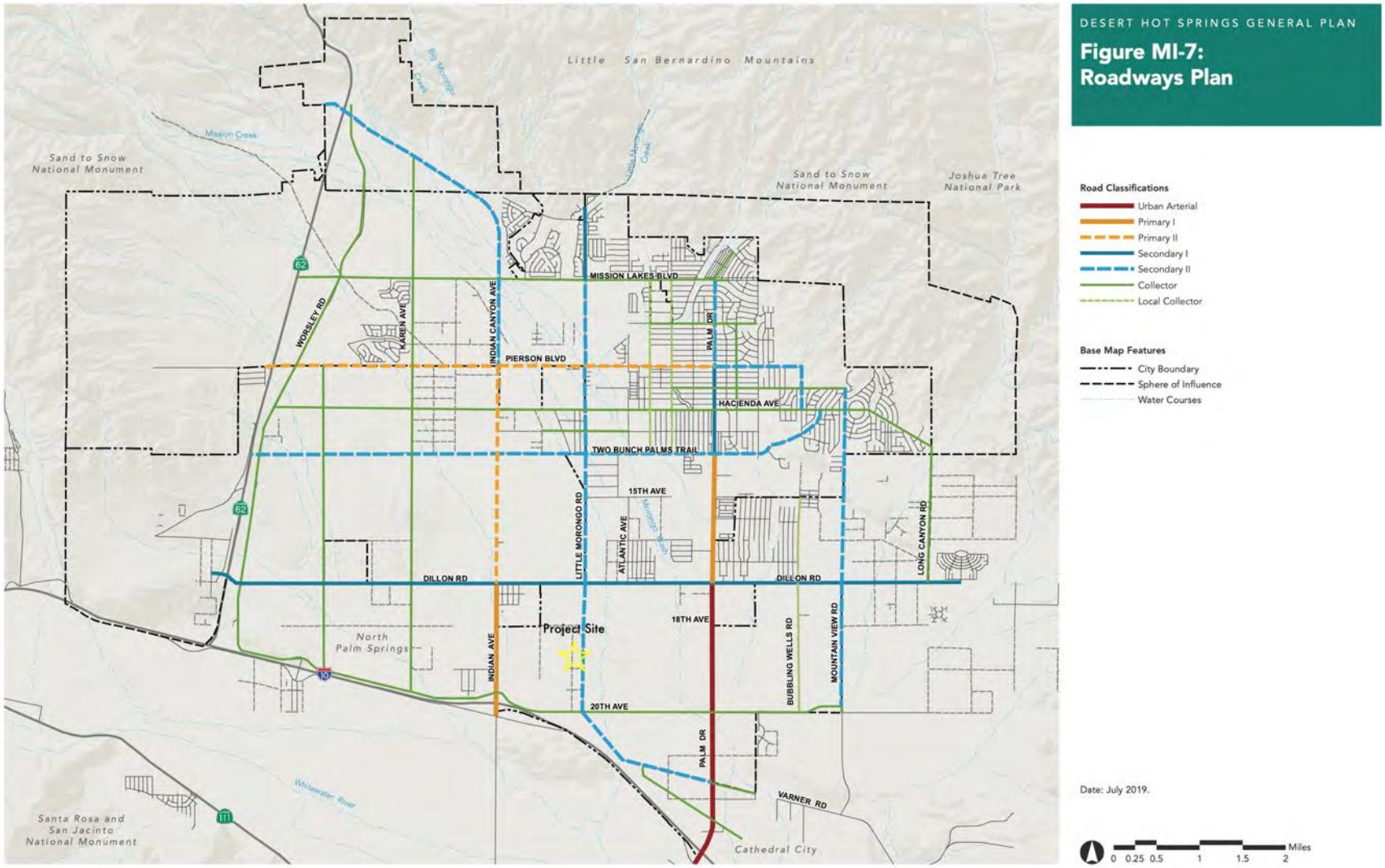

FIGURE XVII-1

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Roadways Plan Map

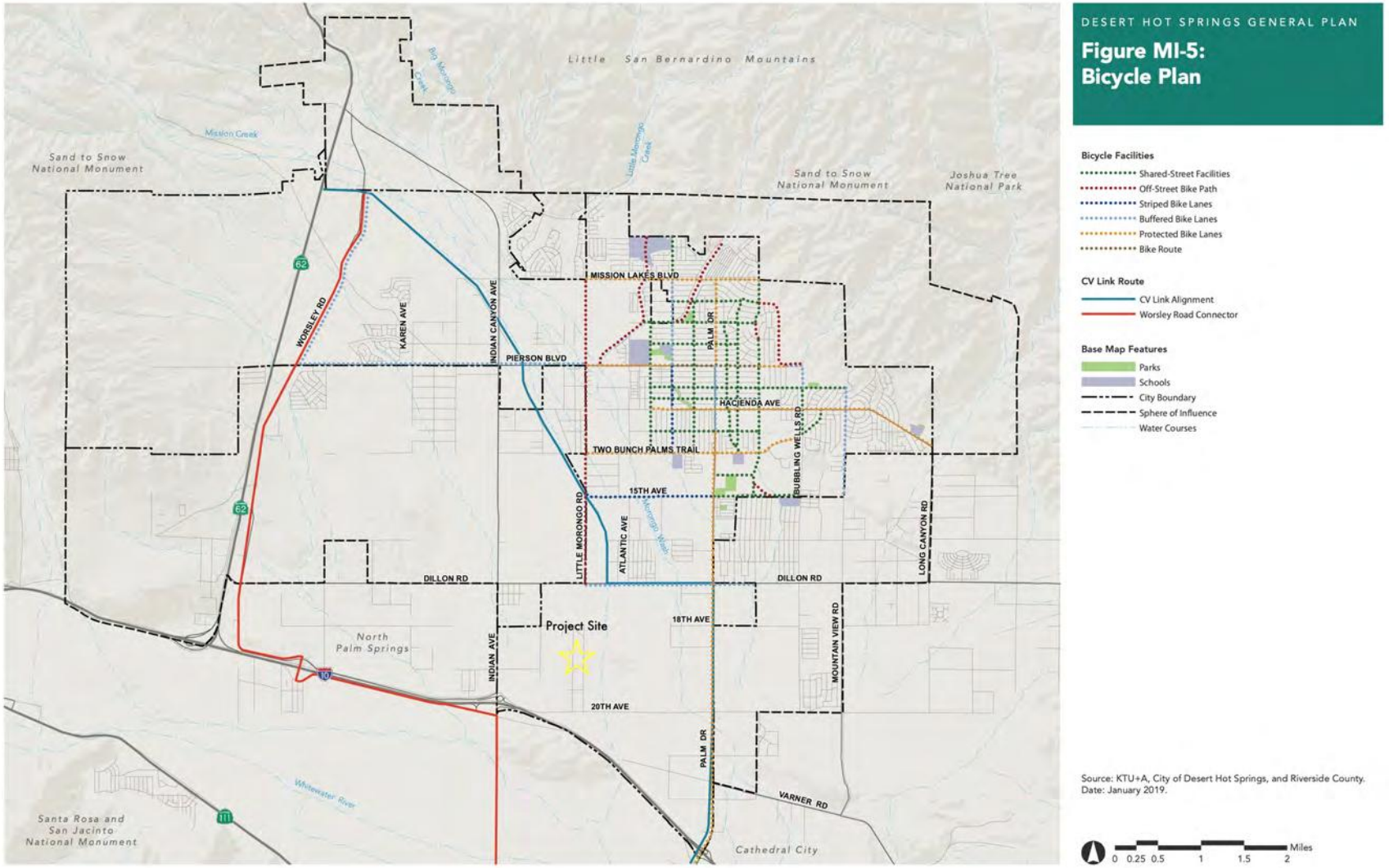

FIGURE XVII-2

Tom Dodson & Associates
Environmental Consultants

Bicycle Plan Map

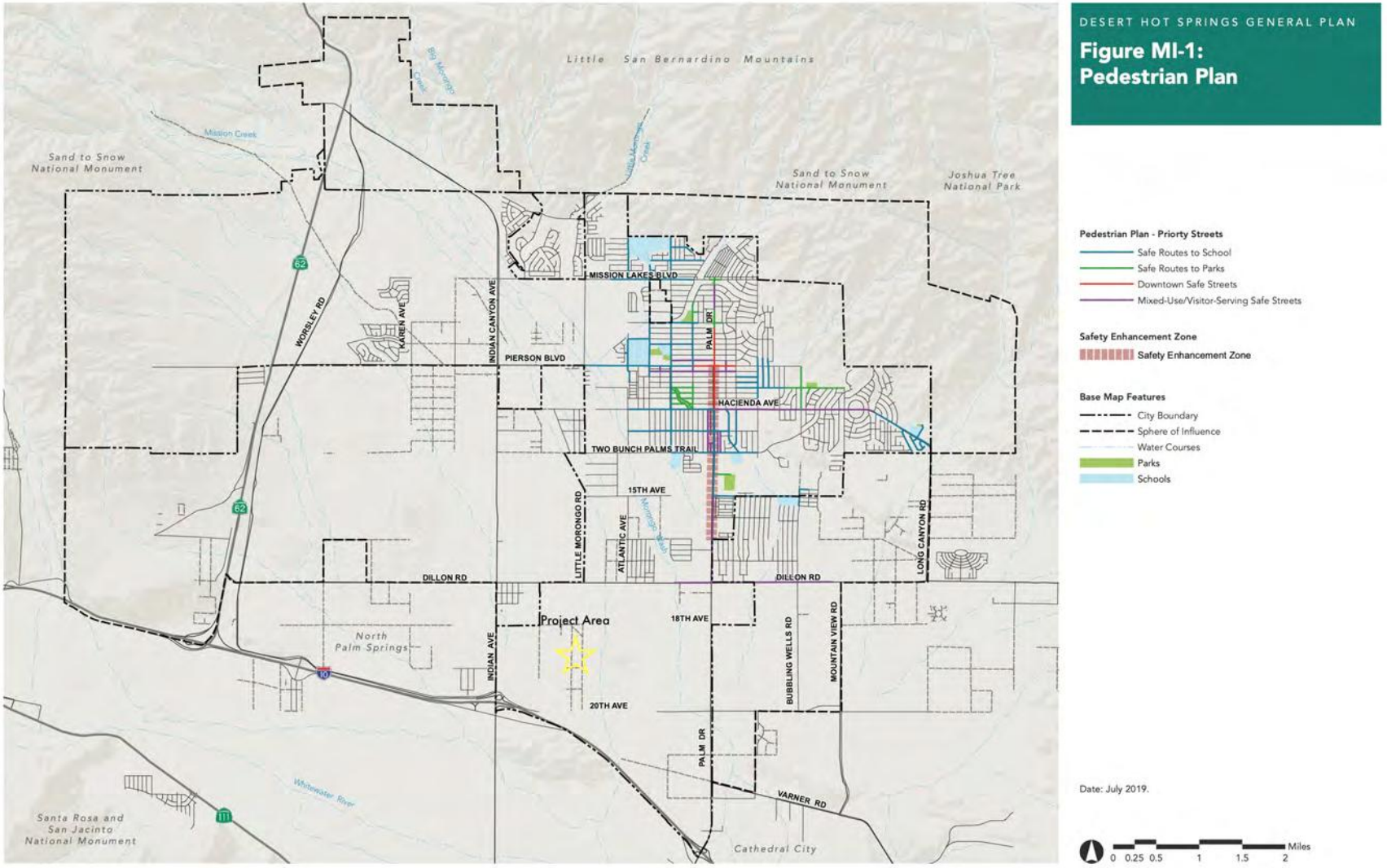

FIGURE XVII-3

Tom Dodson & Associates
Environmental Consultants

Pedestrian Plan Map

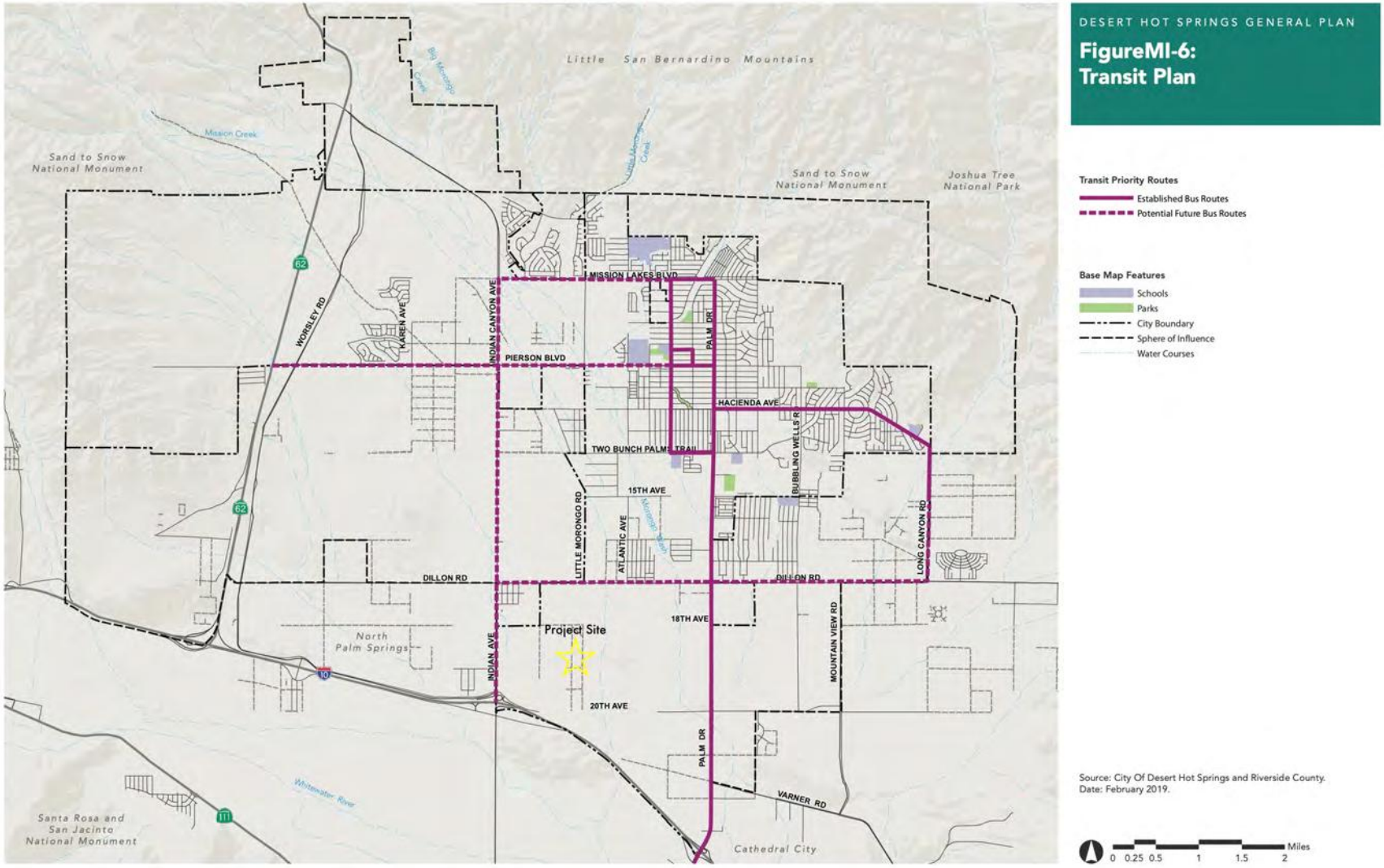

FIGURE XVII-4

Tom Dodson & Associates
Environmental Consultants

Transit Plan Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographic-ally defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in sub-division (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.	☐	☒	☐	☐

SUBSTANTIATION: Please refer to the discussion under Section V, Cultural Resources.

Impact Analysis

a&b. *Less Than Significant With Mitigation Incorporated* – Only one tribe has requested consultation with the District under AB 52, the Agua Caliente Band of Cahuilla Indians. AB 52 consultation letters were sent on July 9, 2025. The Tribe responded on July 23, 2025 requesting several items, as well as the following actions to be carried out during ground disturbing activities:

- *Tribal Monitoring during construction as cultural resources have been noted in the surrounding area.*
- *AB-52 Consultation*
- *Final Reports and site records*

Furthermore, during outreach efforts with the ACBCI conducted as part of the Cultural Resources Report effort, the Tribe expressed concerns regarding the sensitivity for Tribal Cultural Resources within the general area and specified that they would request the presence of "an approved Agua Caliente Native American Cultural Monitor(s) during any ground disturbing activities." Thus, the following mitigation measure requiring tribal monitoring during ground disturbing activities is required to ensure that a significant tribal cultural resource impact does not occur:

TCR-1 Prior to carrying out ground disturbing activities, the District shall enter into a Tribal

Monitoring Services Agreement with the Agua Caliente Band of Cahuilla Indians for the project. The Tribal Monitor shall be onsite during all excavation and trenching activities. The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the excavation activities to allow identification, evaluation, and potential recovery of cultural resources.

As such, through the implementation of **MM TCR-1,** the project has a less than significant potential to cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe and that is either **a)** Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or **b)** A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. No further mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

SUBSTANTIATION

Impact Analysis

a. Water

No Impact – The proposed project will not develop any housing or human-occupied structures that would require connection to MSWD's water distribution system. The proposed project would install two new solar arrays at the Wright RWRF and RES-BCT sites adjacent to the District's existing solar array at the northwest corner of 19th Avenue and Little Morongo Road. MSWD does not plan on connecting the sites to its water service. The water source for cleaning activities will be from connection to existing nearby fire hydrants or similar MSWD water facilities. Therefore, with no connections to MSWD's water distribution system required, site improvements are not forecast to require or result in the construction of new water facilities or expansion of existing facilities in order to serve the project.

Wastewater

No Impact – The proposed project will not develop any housing or human-occupied structures that would require connection to MSWD's water distribution system. Therefore, with no connections to MSWD's wastewater collection system required, site improvements are not forecast to require or result in the construction of new wastewater facilities or expansion of existing facilities in order to serve the project.

Stormwater

Less Than Significant Impact – As stated under issue XI(c[i-iii]), implementation the proposed project is not forecast to significantly alter the volume of surface/stormwater runoff that will be generated from the project footprint. Given that no new stormwater collection facilities are required to implement the proposed project beyond that which has been incorporated into the design of the project, development of the project will not require or result in the construction of new or expansion of existing stormwater drainage facilities. Thus, impacts under this issue are considered less than significant. No mitigation is required.

Electric Power

Less Than Significant Impact – Development of the solar facilities would, in and of itself, constitute the development of electric power facilities. Solar arrays are alternative energy generating facilities. As such, the proposed Solar Development Project would result in the construction of new/expansion of existing alternative electricity infrastructure to serve MSWD facilities; however, the proposed project would not cause or result in the need for additional electricity producing facilities or electricity delivery systems beyond the proposed solar system described herein. As such, though the project would install alternative electrical generation facilities, that the project is not anticipated to result in a significant impact under any issue,. Therefore, the project would result in a less than significant potential to require or result in the relocation or construction of new or expanded electric power facilities, the construction or relocation of which could cause significant environmental effects.

Natural Gas

No Impact – Development of the solar facilities would not require installation of natural gas, nor any connections thereof. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded natural gas facilities. No impacts are anticipated.

Telecommunications

No Impact – Development of the solar facilities would not require installation of wireless internet service or phone service, nor any connections thereof. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded telecommunication facilities. No impacts are anticipated.

b. *Less Than Significant Impact* – The project would utilize water from the District's existing supply for onsite dust control. The District's water supply source is 100 percent groundwater produced from District-owned and operated wells. Over the approximately 40 day site preparation and ground disturbance period during construction, the project is expected to use about 5,000 gallons of potable water each day which equates to the installation of the paved roadway requiring up to 200,000 gallons of water (0.61-acre feet) during construction. Additionally, up to 200,000 gallons of

water per year (0.61-acre feet) may be required in support of cleaning the solar panels as part of project operation. This amount is considered nominal when compared to the availability of supply when compared to demand from the project proponent, MSWD, based on a review of the 2020 Coachella Valley Regional Urban Water Management Plan (UWMP).[15] Thus, as discussed in the Hydrology/Water Quality section of this Initial Study, the construction and operation of the proposed Solar Development Project would not cause an adverse effect on the District's water resources. Thus, implementation of the proposed project will have access to sufficient water supplies available to serve the project from existing entitlements and resources, and as a result, impacts would be less than significant. No mitigation is required.

c. *No Impact* – Please refer to the discussion under X(b) and XIX(a) above. The proposed Solar Development Project will not result in any connections to MSWD's wastewater collection system. Therefore, the project would not create a demand of wastewater treatment services that would impact the provider's ability to collect and treat wastewater within their existing commitments. No impacts are anticipated and no mitigation is required.

d&e. *Less Than Significant Impact* – The project will generate construction waste from the removal of vegetation on site where necessary. The inert wastes can be disposed of at existing municipal solid waste facilities, which have adequate capacity to accept inert wastes generated by this project, or can be recycled onsite. Any construction and demolition (C & D) waste, which in this case is generally anticipated to consist of onsite vegetation, will be transferred to the appropriate green waste facility, and any residual materials will be delivered to one of several C & D disposal sites in the area surrounding the project site. Many of these C & D materials can be reused or recycled, thus prolonging our supply of natural resources and potentially saving money in the process.

In accordance with CALGreen code 5.408.4, 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing must be reused or recycled. As this is a mandatory requirement, no mitigation is required to ensure compliance by MSWD for this project.

Because of increased construction recycling efforts resulting from CalGreen and other regulations, opportunities for construction recycling are becoming easier to find, such as one in Palm Desert that accepts a wide range of construction and demolition debris materials: asphalt, concrete, drywall, gravel, reusable/ deconstructed material, pallets, sand, soil, and wood. There are additional facilities that accept C&D materials located in the surrounding areas[16] including facilities in Coachella, Thousand Palms, Indio, Palm Springs, and Cathedral City that accept a wide range of materials.

The facilities that accept C&D materials, combined with the landfills in the surrounding area, have adequate capacity to serve the proposed project. Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill. The Lamb Canyon Sanitary Landfill and Badlands Landfill serve the project area. The Lamb Canyon Sanitary Landfill has a maximum permitted daily

[15] Coachella Valley Water District et. Al., 2021. 2020 Coachella Valley Regional Urban Water Management Plan. https://www.cvwd.org/DocumentCenter/View/5482/Coachella-Valley-RUWMP (Accessed 07/21/25)
[16] Riverside County, 2022. Construction Demolition Debris Recyclers https://rcwaste.org/sites/g/files/aldnop376/files/migrated/Portals-0-Files-Planning-CD-DebrisRecyclers.pdf (accessed 07/20/25)

capacity of 5,000 tons per day, with a permitted capacity of 38,935,653 cubic yards (CY), with 19,242,950 CY of capacity remaining.[17] The Badlands landfill has a maximum permitted daily capacity of 5,000 tons per day, with a permitted capacity of 82,300,000 CY, with 7,800,000 CY of capacity remaining.[18] Both landfills permit thousands of tons of waste per day, which is beyond what the expected amount of waste would be generated by the construction of the proposed solar facilities, particularly given that there is no concrete or asphalt that would need to be disposed, as the existing roadway consists of compacted dirt. Furthermore, the proposed project is not anticipated to generate any operational waste as the proposed solar facilities would not generate operational use. As such, the proposed project would comply with all federal, State, and local statues related to solid waste disposal.

Any hazardous materials collected within the project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. Therefore, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. No mitigation is necessary.

[17] CalRecycle, 2025. SWIS Facility/Site Activity Details Lamb Canyon Sanitary Landfill (33-AA-0007) https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2246?siteID=2368 (Accessed 07/20/25)
[18] CalRecycle, 2025. SWIS Facility/Site Activity Details Badlands Sanitary Landfill (33-AA-0006) https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2245?siteID=2367 (Accessed 07/20/25)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 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?	☐	☐	☐	☒

SUBSTANTIATION

Impact Analysis

a-d. *No Impact* – The proposed project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zone. The proposed project is located in the southern portion of the City of Desert Hot Springs, where there are no designated fire hazard severity zones (**Figure IX-2**). Solar arrays are not typically susceptible to wildfire hazards and the development of the proposed Solar Development Project will not increase the risk of wildland fires to nearby residences and structures. The proposed project area is within a remote part of the City that is in the process of being developed. Once installed, the proposed solar facilities will not be susceptible to wildfire risk. Therefore, as the proposed project is not located within or adjacent to a very high fire hazard severity zone or within a State Responsibility Zone, no impacts under these wildfire issues are anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

a. *Less Than Significant With Mitigation Incorporated* – The project has no potential to cause a significant impact to any biological or cultural resources as a result of the implementation of mitigation intended to minimize effects thereof. The proposed project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The project requires mitigation to prevent significant impacts to BUOW, loggerhead shrike, and nesting birds from occurring as a result of implementation of the project. Furthermore, the proposed project requires compliance with the CVMSHCP through the implementation of mitigation. Given that the proposed project would not impact any CVMSHCP Conservation Areas, under which the Coachella Valley milk-vetch and Coachella Valley fringe-toed lizard are all CVMSHCP Covered Species and CVMSHCP provides "take" authorization for Covered

Species during otherwise lawful activities, by providing for the conservation of the Covered Species. Based on the historic disturbance of the project footprint, and its current disturbed condition, the potential for impacting cultural resources is low. Based on a records search of the property, as well as a site survey by a qualified archaeologist, it has been determined that no cultural resources of importance are anticipated to occur within the proposed Solar Development Project footprint, so it is not anticipated that any resources could be affected by the project because no cultural resources exist. However, because it is not known what could be unearthed upon any excavation activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential significant adverse impacts. Please see biological and cultural sections of this Initial Study.

b. *Less Than Significant With Mitigation Incorporated* – Based on the analysis in this Initial Study, the proposed Solar Development Project has the potential to cause impacts that are individually or cumulatively considerable. There are no other projects in the vicinity to which this project would make a cumulatively considerable impact, furthermore the provision of new alternative sources of energy is generally viewed as a benefit to the community. The issues of Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, and Tribal Cultural Resources require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have been determined to be less than considerable through the implementation of mitigation and thus, less than significant impacts.

c. *Less Than Significant With Mitigation Incorporated* – The project will achieve long-term community goals by improving the availability of alternative sources of energy within MSWD's service area. As discussed under issue VIII Greenhouse Gas, the actions and outcomes in the 2022 Scoping Plan for Achieving Carbon Neutrality will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon. This project involves the construction of alternative electricity generation facilities through two new solar arrays by MSWD in the City of Desert Hot Springs, and would aid in meeting the provisions of the 2022 Scoping Plan through the deployment of clean technologies and energy sources via the proposed solar development. Further, the project has been designed to align with the goals of the City's CAP. The short-term impacts associated with the project, which are mainly construction-related impacts, are less than significant with mitigation, and the proposed project is compatible with long-term environmental protection. The issues of Geology and Soils, Hazards and Hazardous Materials, and Noise require the implementation of mitigation measures to reduce potential human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Aesthetics, Agricultural and Forestry Resources, Air Quality, Energy, Greenhouse Gas Emissions, Land Use and Planning, Mineral Resources, Population/Housing, Public Services, Recreation, Utilities and Service Systems and Wildfire. The issues of Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, and Tribal Cultural Resources and require the implementation of mitigation measures to reduce impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact.

Based on the findings in this Initial Study, the MSWD proposes to adopt a Mitigated Negative Declaration (MND) for the Mission Springs Water District RES-BCT and Regional Water Reclamation Facility Solar Development Project. A Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) will be issued for this project by the MSWD. The Initial Study and NOI will be circulated for 30 days of public comment. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by MSWD for possible adoption at a future Board meeting, the date for which has yet to be determined. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting dates in accordance with the requirements in Section 21092.5 of CEQA (statute).

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*,(1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; San *Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019
Authority: Public Resources Code sections 21083 and 21083.09
Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Biological Resources

BIO-1 Prior to commencement of construction, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012," or the most recent CDFW survey protocol available. The burrowing owl survey shall be conducted with a minimum of four site visits conducted on four separate days.

BIO-2 A preconstruction presence/absence survey shall be conducted no more 30 days in advance of construction. This survey can overlap with the final protocol burrowing owl survey conducted pursuant to MM BIO-1.

BIO-3 If burrowing owl(s) are detected during the focused surveys within the area of potential effect delineated by the construction contractor in coordination with the biologist, the MSWD shall immediately contact CDFW for coordination of next steps prior to commencing project construction or ground disturbing activities. If a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) must cease immediately and CDFW shall to be contacted to determine appropriate management actions. All actions thereafter shall be at the discretion and approval of CDFW in compliance with CESA.

BIO-4 Regardless of the time of year, a preconstruction survey shall be performed to verify absence of nesting birds. A qualified biologist shall conduct the pre-activity survey within the project areas (including access routes) and a 500-foot buffer surrounding the project areas, no more than three (3) days prior to the initiation of project activities, including, but not limited to clearing, grubbing, and/or rough grading to prevent impacts to birds and their nests. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified biologist shall make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If nesting bird activity is present within the work area or the project's zone of influence (generally 100-300 feet), a no disturbance buffer zone shall be established by the qualified biologist to be marked on the ground around each nest. The buffer shall be a minimum of 500 feet for raptors and 300 feet for songbirds, unless a smaller buffer is specifically determined by a qualified biologist familiar with the nesting phenology of the nesting species. The buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests. Active nest(s) and an established buffer distance(s) shall be monitored daily by the qualified biologist until the qualified biologist has determined the young have fledged or the project has been completed. The qualified biologist has the authority to stop work if nesting pairs exhibit signs of disturbance. If there is no nesting activity, then no further action is needed for this measure. If an active nest is encountered during the project construction, construction shall stop immediately until a qualified biologist can determine (1) the status of the nest, and (2) when work can proceed without risking violation to state or federal laws.

BIO-5 The project shall be required to comply with the provisions of the Coachella Valley Multi-Species

Habitat Conservation Plan requirements for projects adjacent to Conservation Areas.

1) Drainage – Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.
2) Toxics – Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate byproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.
3) Lighting – For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.
4) Noise – Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA Leq hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.
5) Invasives – Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112 [of the CVMSHCP]. The plants listed in Table 4-113 [of the CVMSHCP] shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.
6) Barriers – Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.
7) Grading/Land Development – Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

Cultural Resources

CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District's onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

Geology and Soils

GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the project site for future cleanup such that erosion does not occur.

GEO-2 Excavated areas shall be backfilled and compacted such that erosion does not occur.

GEO-3 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the paved roadway is being installed.

GEO-4 Based upon the geotechnical investigation (Appendices 5a and 5b of this document), all of the recommended design parameters identified in Appendices 5a and 5b shall be implemented by the Developer. Implementation of these specific measures will address all of the identified geotechnical constraints identified at project site, including seismic ground shaking.

GEO-5 Should any paleontological resources be encountered during construction of the project, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the MSWD's onsite inspector. The paleontological professional shall assess the find, determine its significance, and determine appropriate management measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.

Hazards and Hazardous Materials

HAZ-1 All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately a licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared for the proposed project. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.

Hydrology and Water Quality

HYD-1 MSWD shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that

are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:

- The use of silt fences;
- The use of temporary stormwater desilting or retention basins;
- The use of water bars to reduce the velocity of stormwater runoff;
- The use of wheel washers on construction equipment leaving the site;
- The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
- The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
- Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.

HYD-2 Prior to commencement of construction, the District shall be required to either:
(1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever feasible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not feasible to eliminate stormwater flows off of a site or where otherwise appropriate, the implementing agency shall:
(2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County of Riverside. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, BMPs, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.

Noise

NOI-1 All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.

NOI-2 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.

NOI-3 No construction activities shall occur during the hours of 5 PM through 7 AM, Monday through Saturday; at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.

NOI-4 Equipment not in use for five minutes shall be shut off.

NOI-5 Equipment shall be maintained and operated such that loads are secured from rattling or banging.

NOI-6 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.

NOI-7 MSWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by MSWD.

NOI-8 Construction staging areas shall be located as far from adjacent sensitive receptor locations as possible.

Transportation

TRAN-1 The District shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

Tribal Cultural Resources

TCR-1 Prior to carrying out ground disturbing activities, the District shall enter into a Tribal Monitoring Services Agreement with the Agua Caliente Band of Cahuilla Indians for the project. The Tribal Monitor shall be onsite during all excavation and trenching activities. The Tribal Monitor shall have the authority to temporarily divert, redirect, or halt the excavation activities to allow identification, evaluation, and potential recovery of cultural resources.

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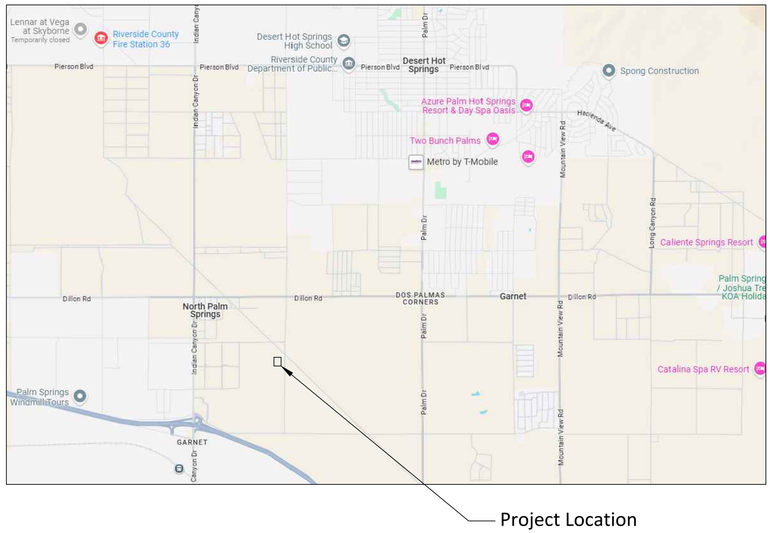
APPENDIX 1a

3585 kW Ground Mount Photovoltaic System
18995 Little Morongo Road, Desert Hot Springs, CA 92240



1 VICINITY MAP

Scale: NTS

2 AERIAL VIEW

Scale: NTS

LIST OF DRAWINGS / DOCUMENTS

DRAWINGS:

1.	COVER SHEET	E-1
2.	SITE PLAN	E-2
3.	STRING LAYOUT	E-2A
4.	SINGLE LINE DIAGRAM	E-3
5.	ELECTRICAL CALCULATION &LABELS	E-4
6.	LEGENDS & GEN. NOTES	E-5
7.	ELECTRICAL DETAILS	E-6,6A,
8.	FENCE DETAILS	E-6B,
9.	DATA SHEETS	DS-1,2

ENGINEER OF RECORD-

STATEN SOLAR CORPORATION
175 NORTECH PARKWAY
SAN JOSE, CA 95134
(408) 780-2889

AHJ -
MISSION SPRINGS WATER DISTRICT
66575 SECOND STREET DESERT HOT SPRINGS, CA 92240

LICENSED PROFESSIONAL ENGINEER (ELECTRICAL)-

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napoleoni2005@gmail.com
LICENSE NO.- E-24930

GENERAL CONTRACTOR & ELECTRICAL ENGINEERING

STATEN SOLAR CORPORATION
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SAN JOSE, CA 95134
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WWW.STATENSOLAR.COM

LICENSE NO.- 984910
LICENSE CLASSIFICATION - C46
LICENSE CLASSIFICATION - B
LICENSE CLASSIFICATION - C10

PROJECT INFORMATION

SCOPE OF WORK:

THE PROJECT IS TO INSTALL A GROUND MOUNTED PHOTOVOLTAIC SYSTEM AND ALL ASSOCIATED POWER EQUIPMENT AT A COMMERCIAL PROPERTY.

SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID PER THE REQUIREMENTS OF THE UTILITY COMPANY AND ALL APPLICABLE LOCAL AND NATIONAL CODES.

SYSTEM SPECIFICATIONS

MODULES -	HELIENE 625W
TOTAL MODULE COUNT	5736
NOMINAL POWER	625W
TOTAL DC SYSTEM RATING	3585 kW DC
INVERTER -	(9) SUNGROW 350KW (SG350HX-US)
TOTAL INVERTER COUNT	9
TOTAL INVERTER OUTPUT	3150 kW AC
MOUNTING TYPE	SINGLE-ROW, HORIZONTAL, BALANCED, SINGLE-AXIS
TRACKER MANUFACTURER	OMCO SOLAR
TILT ANGLE	+60°/-60°

DESIGN CRITERIA

DC DESIGN WILL BE BASED ON A 1500V DC. ASHRAE DATA AVAILABLE FOR PALM SPRINGS INTL IS AS FOLLOWS:

- 2% AVERAGE HIGHEST TEMP = 111.2°F
- EXTREME MINIMUM = 37.4°F

APPLICABLE CODES

.

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA GREEN BUILDING CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

NOTES:

- MODULES TILT - +60°/-60° SINGLE AXIS TRACKERS
- MOUNTING TYPE- GROUND MOUNTED
- SOLAR ARRAY FOOTPRINT: 440600 SQ. FT
- APN: 666360007

LICENSED SOLAR CONTRACTOR
Staten Solar / C46
Lic: 984910
Exp. 6/30/2025
State of California

NAME OF CUSTOMER: MSWD RES-BCT
TITLE: Cover Sheet
SUBJECT: 3585 kW Ground Mount Project (5736) Heliene 625W Modules
PROJECT LOCATION: 18995 Little Morongo Rd, Desert Hot Springs, CA 92240

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DIVY
0	11-15-2024	INITIAL SUBMITTAL	DEEPAK	PUNEET	DIVY

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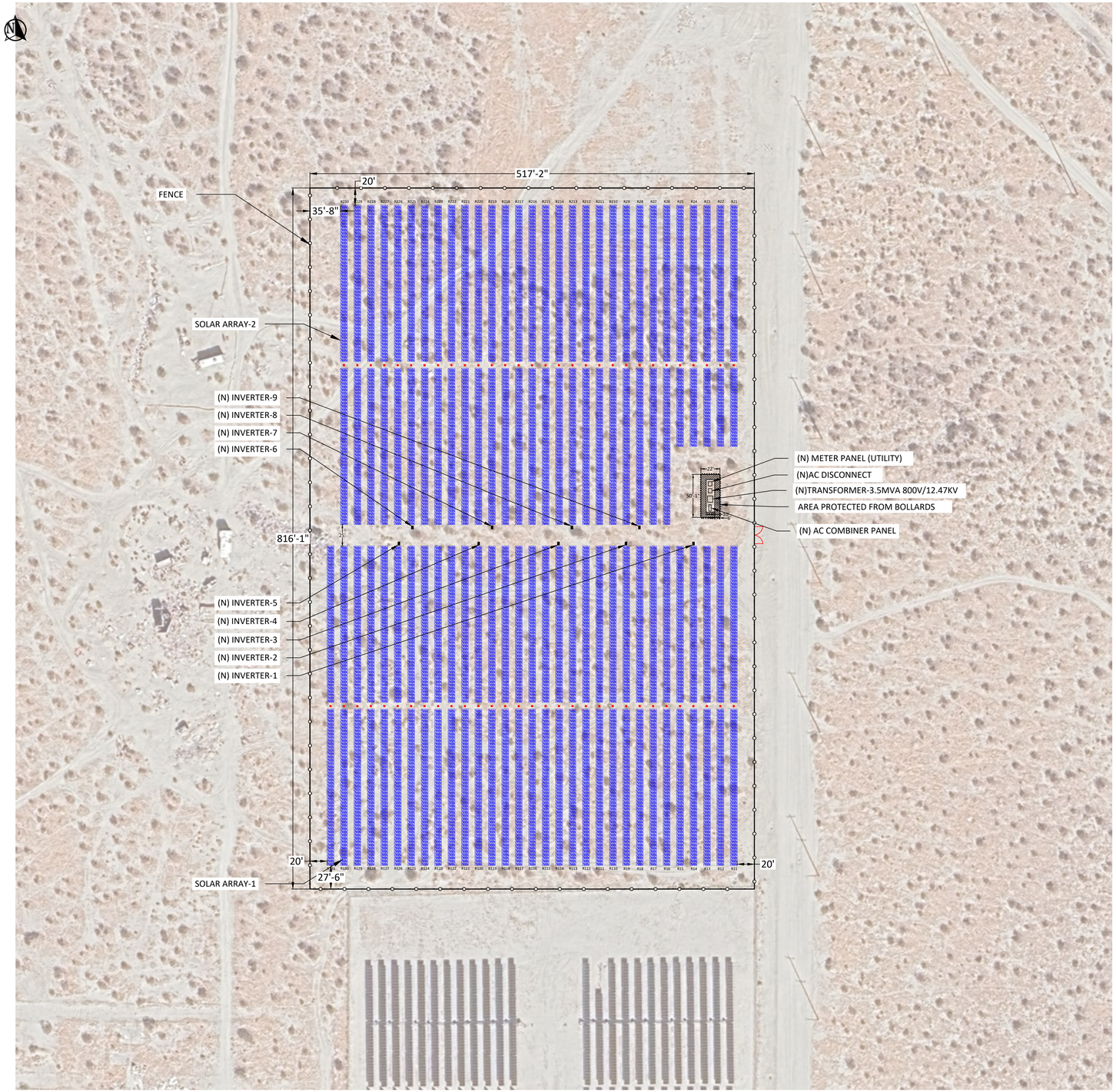
DWG NO: E-1
PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/64"= 1'-0"

GENERAL NOTES

1. (5736) HELIENE 625W MODULES.
2. (9) 350KW SUNGROW INVERTERS
3. ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE LISTED AND APPROVED BY A TESTING AGENCY RECOGNIZED BY THE AHJ. ANY EQUIPMENT NOT LISTED SHALL BE TESTED AND CERTIFIED BY AN APPROVED TESTING AGENCY.
4. COMPLIANCE WITH 2022 CALIFORNIA FIRE CODE.
5. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM
6. PANEL DESIGNATIONS SHOWN ON THESE DRAWINGS ARE GIVEN FOR CLARIFICATION OF CIRCUITING ONLY AND MAY NOT CORRESPOND TO THE DESIGNATION FOUND IN THE FIELD.
7. ALL EXISTING CONDUIT RUNS ARE NOT SHOWN.CONTRACTOR SHALL VERIFY EXISTING CONDUIT LOCATIONS IN FIELD.
8. THE SOLAR MODULES SHALL BE TILTED +60°/-60° SINGLE AXIS TRACKERS AT GROUND .
9. THE WORKING CLEARANCES AROUND THE EXISTING ELECTRICAL EQUIPMENT AS WELL AS THE NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.

MODULES COUNT AND RATING PER ARRAY

ARRAY	TYPE	MODULES TYPE	MODULES DIMENSIONS	MODULE RATING	AZIMUTH	TILT	MODULES	KWDC
ARRAY 1	GROUND MOUNTED	HELIENE 625W, HSPE-156HC-M10-625W	97.01" x 44.65" x 1.38"	625W	SINGLE AXIS TRACKERS	60°/-60°	2976	1860
ARRAY 2	GROUND MOUNTED	HELIENE 625W, HSPE-156HC-M10-625W	97.01" x 44.65" x 1.38"	625W	SINGLE AXIS TRACKERS	60°/-60°	2760	1725
TOTAL							**5736**	**3585**

LICENSED SOLAR CONTRACTOR
Staten Solar | C-46
Lic: 984910
Exp. 6/30/2025
State of California

MSWD RES-BCT

Array Layout

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:

TITLE:

SUBJECT:

PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DVY
0	11-15-2024	INITIAL SUBMITTAL	DEEPAK	PUNEET	DVY

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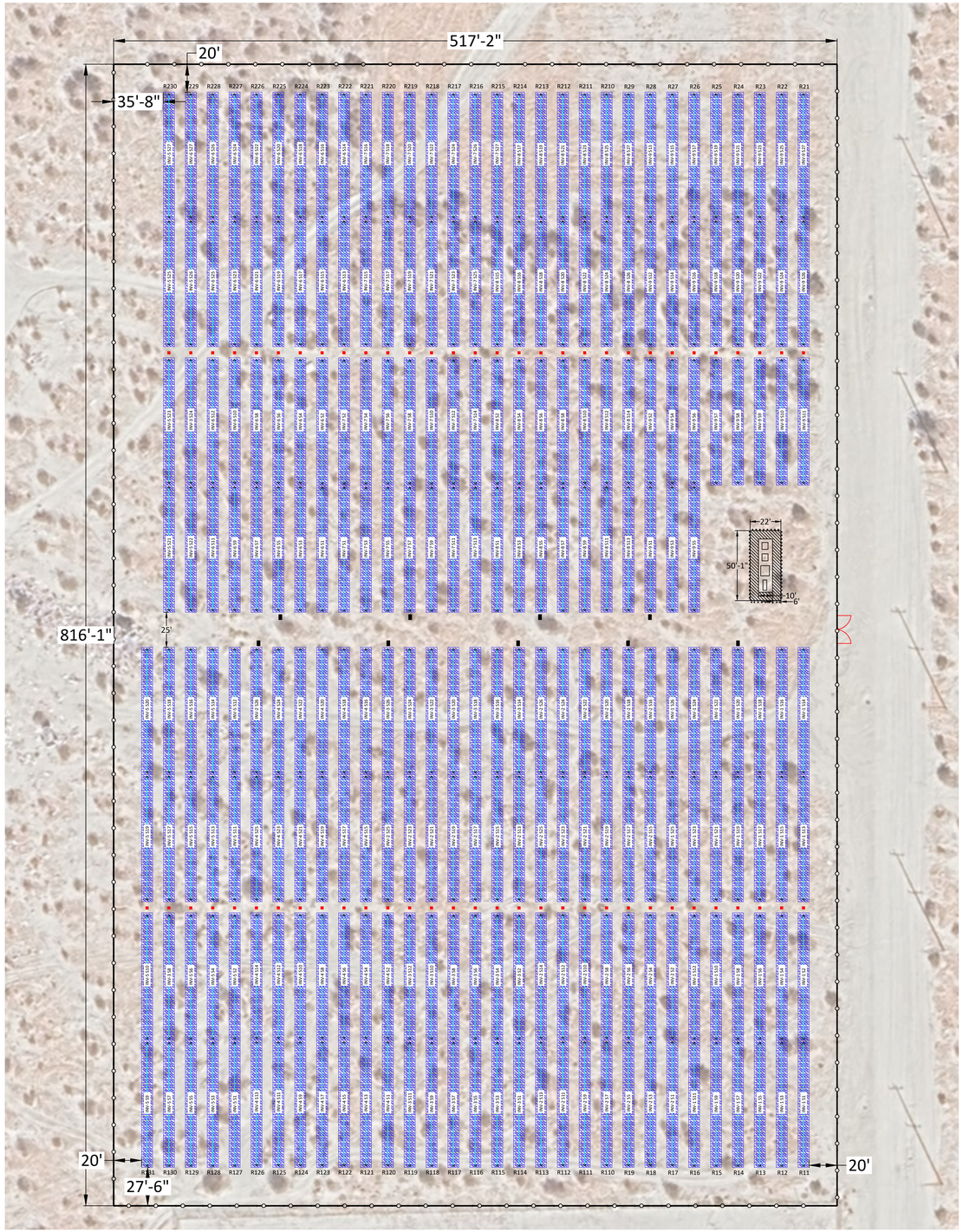
PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/64"= 1'-0"

STRING CONFIGURATION

Array	Inverter No.	Inverter Capacity (KW)	MPPT No.	String Size	No. of Strings	Total Modules	Module Wattage (W)	Total DC Capacity (KW)
1	"Typical for Inv 1 thru 4"	350	1	24	2	48	625	30
			2	24	2	48	625	30
			3	24	2	48	625	30
			4	24	2	48	625	30
			5	24	2	48	625	30
			6	24	2	48	625	30
			7	24	2	48	625	30
			8	24	2	48	625	30
			9	24	2	48	625	30
			10	24	2	48	625	30
			11	24	2	48	625	30
			12	24	2	48	625	30
			13	24	2	48	625	30
1&2	"Typical for Inv 5 thru 9"	350	1	24	2	48	625	30
			2	24	2	48	625	30
			3	24	2	48	625	30
			4	24	2	48	625	30
			5	24	2	48	625	30
			6	24	2	48	625	30
			7	24	2	48	625	30
			8	24	2	48	625	30
			9	24	2	48	625	30
			10	24	2	48	625	30
			11	24	2	48	625	30
			12	24	2	48	625	30
			13	24	2	48	625	30
			14	24	1	24	625	15
TOTAL	**9**	**3150**			**239**	**5736**		**3585**

LICENSED SOLAR CONTRACTOR
Staten Solar / C-46
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Exp. 6/30/2025
State of California

MSWD RES-BCT
String Layout
3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd.
Desert Hot Springs, CA 92240

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
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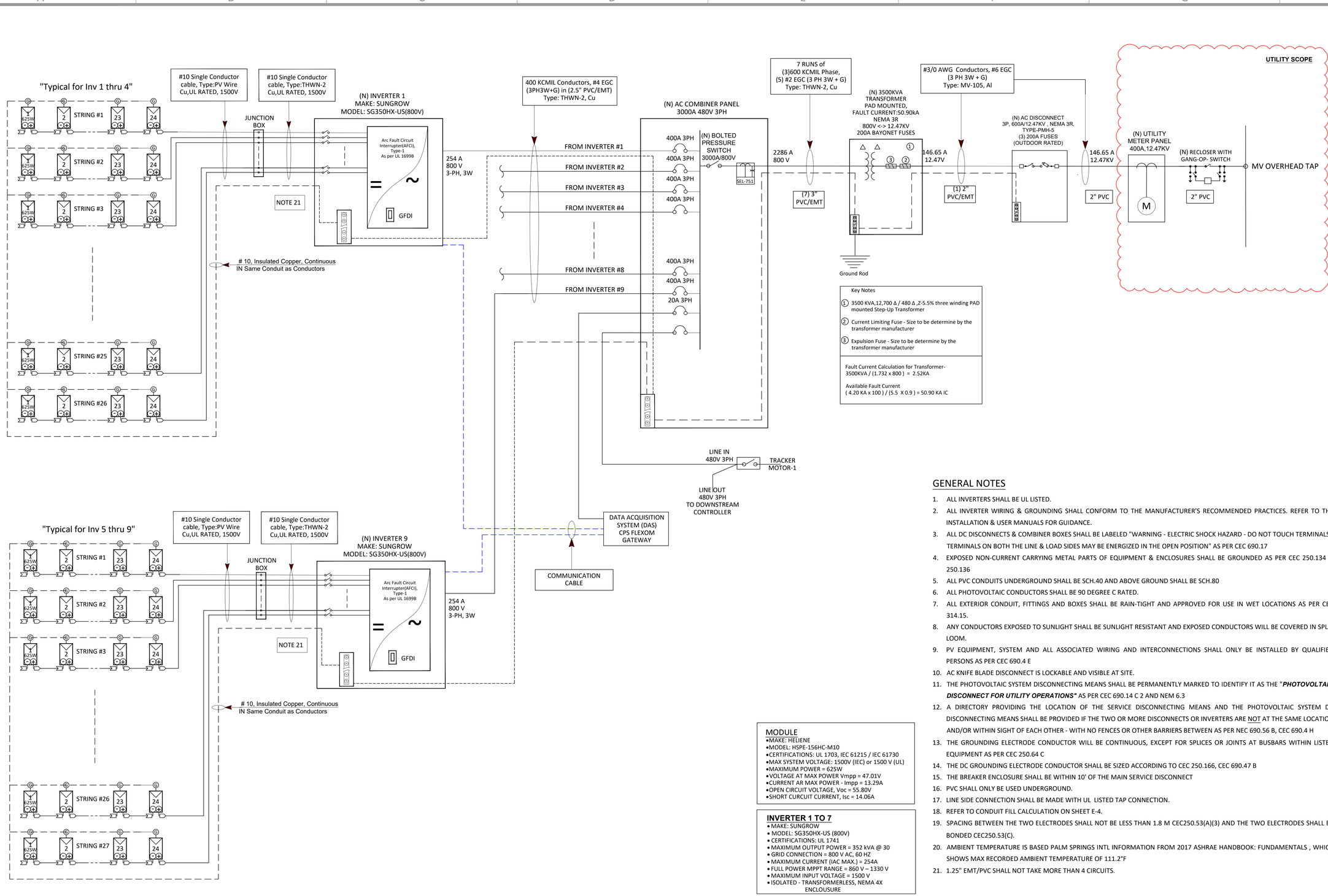

Key Notes

1. 3500 KVA,12,700 Δ / 480 Δ ,Z-5.5% three winding PAD mounted Step-Up Transformer
2. Current Limiting Fuse - Size to be determine by the transformer manufacturer
3. Expulsion Fuse - Size to be determine by the transformer manufacturer

Fault Current Calculation for Transformer-
3500KVA / (1.732 x 800) = 2.52KA

Available Fault Current
(4.20 KA x 100) / (5.5 X 0.9) = 50.90 KA IC

MODULE
- MAKE: HELIENE
- MODEL: HSPE-156HC-M10
- CERTIFICATIONS: UL 1703, IEC 61215 / IEC 61730
- MAX SYSTEM VOLTAGE: 1500V (IEC) or 1500 V (UL)
- MAXIMUM POWER = 625W
- VOLTAGE AT MAX POWER Vmpp = 47.01V
- CURRENT AR MAX POWER - Impp = 13.29A
- OPEN CIRCUIT VOLTAGE, Voc = 55.80V
- SHORT CURCUIT CURRENT, Isc = 14.06A

INVERTER 1 TO 7
- MAKE: SUNGROW
- MODEL: SG350HX-US (800V)
- CERTIFICATIONS: UL 1741
- MAXIMUM OUTPUT POWER = 352 kVA @ 30
- GRID CONNECTION = 800 V AC, 60 HZ
- MAXIMUM CURRENT (IAC MAX.) = 254A
- FULL POWER MPPT RANGE = 860 V – 1330 V
- MAXIMUM INPUT VOLTAGE = 1500 V
- ISOLATED - TRANSFORMERLESS, NEMA 4X ENCLOUSURE

GENERAL NOTES

1. ALL INVERTERS SHALL BE UL LISTED.
2. ALL INVERTER WIRING & GROUNDING SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES. REFER TO THE INSTALLATION & USER MANUALS FOR GUIDANCE.
3. ALL DC DISCONNECTS & COMBINER BOXES SHALL BE LABELED "WARNING - ELECTRIC SHOCK HAZARD - DO NOT TOUCH TERMINALS - TERMINALS ON BOTH THE LINE & LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION" AS PER CEC 690.17
4. EXPOSED NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT & ENCLOSURES SHALL BE GROUNDED AS PER CEC 250.134 & 250.136
5. ALL PVC CONDUITS UNDERGROUND SHALL BE SCH.40 AND ABOVE GROUND SHALL BE SCH.80
6. ALL PHOTOVOLTAIC CONDUCTORS SHALL BE 90 DEGREE C RATED.
7. ALL EXTERIOR CONDUIT, FITTINGS AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS AS PER CEC 314.15.
8. ANY CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE SUNLIGHT RESISTANT AND EXPOSED CONDUCTORS WILL BE COVERED IN SPLIT LOOM.
9. PV EQUIPMENT, SYSTEM AND ALL ASSOCIATED WIRING AND INTERCONNECTIONS SHALL ONLY BE INSTALLED BY QUALIFIED PERSONS AS PER CEC 690.4 E
10. AC KNIFE BLADE DISCONNECT IS LOCKABLE AND VISIBLE AT SITE.
11. THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS THE "***PHOTOVOLTAIC DISCONNECT FOR UTILITY OPERATIONS***" AS PER CEC 690.14 C 2 AND NEM 6.3
12. A DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DC DISCONNECTING MEANS SHALL BE PROVIDED IF THE TWO OR MORE DISCONNECTS OR INVERTERS ARE NOT AT THE SAME LOCATION AND/OR WITHIN SIGHT OF EACH OTHER - WITH NO FENCES OR OTHER BARRIERS BETWEEN AS PER NEC 690.56 B, CEC 690.4 H
13. THE GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AT BUSBARS WITHIN LISTED EQUIPMENT AS PER CEC 250.64 C
14. THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO CEC 250.166, CEC 690.47 B
15. THE BREAKER ENCLOSURE SHALL BE WITHIN 10' OF THE MAIN SERVICE DISCONNECT
16. PVC SHALL ONLY BE USED UNDERGROUND.
17. LINE SIDE CONNECTION SHALL BE MADE WITH UL LISTED TAP CONNECTION.
18. REFER TO CONDUIT FILL CALCULATION ON SHEET E-4.
19. SPACING BETWEEN THE TWO ELECTRODES SHALL NOT BE LESS THAN 1.8 M CEC250.53(A)(3) AND THE TWO ELECTRODES SHALL BE BONDED CEC250.53(C).
20. AMBIENT TEMPERATURE IS BASED PALM SPRINGS INTL INFORMATION FROM 2017 ASHRAE HANDBOOK: FUNDAMENTALS , WHICH SHOWS MAX RECORDED AMBIENT TEMPERATURE OF 111.2°F
21. 1.25" EMT/PVC SHALL NOT TAKE MORE THAN 4 CIRCUITS.

1 SINGLE LINE DIAGRAM

STATEN SOLAR CONTRACTOR ★ Staten Solar / C-46 Lic: 984910 Exp. 6/30/2025 ★ State of California ★

MSWD RES-BCT

Single Line Diagram

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd.
Desert Hot Springs, CA 92240

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NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

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DWG NO: E-3

PROJ NO: LMR-190

CONDUCTOR SCHEDULE

INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	CONDUCTORS PER CONDUIT	CONDUIT	# OF CURRENT CARRYING CONDUCTORS PER CONDUIT	CONDUIT FILL %	OCPD	EGC	TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP AT TERM. TEMP.	DERATED AMP	CABLE TERM. TEMP. RATING	DISTANCE B/W TERMINTION POINTS	VOLTAGE DROP	MAXIMUM VOLTAGE DROPS ALLOWED
ARRAY 1	JUNCTION BOX	10 AWG PV WIRE COPPER, 1500VDC	FREE AIR	NA	NA	NA	10 AWG THWN-2 COPPER	0.87	44ºC	NA	13.12	21.97	NA	NA	90ºC	500 FT	1.15%	2.00%
JUNCTION BOX	INVERTER #1 TO 9	10 AWG THWN-2 COPPER, 1500VDC	1.25" DIA. PVC	8	9.52%	NA	10 AWG THWN-2 COPPER	0.87	44ºC	0.7	13.13	21.97	40	24.36	90ºC	10 FT	0.12%	2.00%
INVERTER # 1 to 9	AC COMBINER PANEL	400 KCMIL THWN-2 COPPER	2.5" DIA. PVC	3	28.52%	400	4 AWG THWN-2 COPPER	0.87	44ºC	1	254	317.50	380	330.6	90ºC	250 FT	1.13%	2.00%
AC COMBINER PANEL	TRANSFORMER	(3) 600 KCMIL Phase, (3 PH 3W + G) Type: THWN-2, Cu (7 RUNS)	(7) 3" DIA.PVC	3	27.93%	3000	(7) 2 AWG THWN-2 COPPER	0.87	44ºC	1	2286.00	2857.50	3325	2892.75	90ºC	30 FT	0.13%	2.00%
TRANSFORMER	MSP	3/0 AWG MV-105 AL.	2" DIA. PVC	3	23.10%	200	6 AWG THWN-2 COPPER	0.87	44ºC	1	146.66	183.32	230	200.10	90ºC	100 FT	0.59%	2.00%

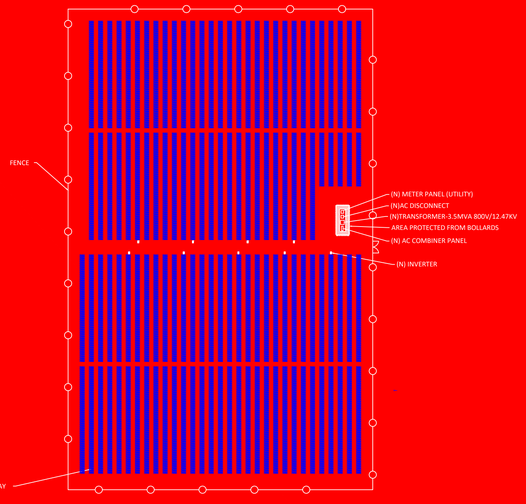
SYSTEM PROPERTIES		
No Of Modules	5736	Nos
Max. Ambient temp @ Site	44	◦C
Min Ambient Temp @ site	3	◦C
STC Temp	25	◦C
No of Modules in a String	24	Nos
Ambient temp (for cable sizing)	41-45	◦C

Module	HELIENE	
Module Power	625	W
Module Voc	55.8	V
Module Vmp	47.01	V
Module Isc	14.06	A
Module Imp	13.29	A
Temp Coeffeicient for Vc	-0.25%	%/◦C
Temp Coeffeicient for Vr	-0.25%	%/◦C
Temp Coeffeicient for Isc	0.0004	%/◦C
Max. System Voltage	1500	V

Maximum System Voltage		
No of Modules in a String	24	
No of Strings	239	Nos
Voc @ Max. Ambient	53.85	V
Voc@ Min. Ambient	59.57	V
Vmp @ Max. Ambient	45.36	V
Vmp @ Min. Ambient	50.18	V
MPPT Lower Range	1088.75	V
MPPT Upper Range	1204.40	V
Min. Operating Voltage	1088.75	V
Max. Operating Voltage	**1204.40**	**V**
ISC/String	14.06	A
Isc @ Max. Ambient	14.14	A
Isc @ Min. Ambient	13.91	A
Max. System Voltage	**1429.60**	**V**

SITE DIRECTORY

CAUTION: THIS SERVICE IS SUPPLIED BY ALTERNATIVE POWER SOURCES WITH DISCONNECTS LOCATED AS SHOWN:



REQUIRED BY NEC 705.12(D)(4)
TO BE MOUNTED ON MAIN SERVICE PANEL

THIS ELECTRIC SERVICE IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

REQUIRED BY NEC 690.17
TO BE MOUNTED ON ALL ELECTRICAL SERVICE PANEL COVERS

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

REQUIRED BY NEC 690.54
TO BE MOUNTED ON MAIN AC DISCONNECT SWITCH

PANELBOARD IS ENERGIZED FROM TWO SOURCES OF AC POWER
SOLAR - 146.66 A AT 12.47V

REQUIRED BY 690.31(E)(3)
TO BE MOUNTED ON ALL EXPOSED RACEWAYS, CABLE TRAYS, COVERS, OR ENCLOSURES OF JUNCTION BOXES, CONDUIT BODY WITH AVAILABLE OPENING

PHOTOVOLTAIC POWER SOURCE

REQUIRED BY NEC 690.53
TO BE MOUNTED AT EACH INVERTER

AC NOMINAL POWER - 350 kW
MAXIMUM DC VOLTAGE - 1500 V
MAXIMUM DC CURRENT - 480 A
MAXIMUM AC VOLTAGE - 800 V
MAXIMUM AC CURRENT -254 A

REQUIRED BY NEC 705.12(B)(3)
TO BE MOUNTED ON MAIN SERVICE PANEL

WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.

REQUIRED BY NEC 690.35(F)
TO BE MOUNTED TO JUNCTION BOXES, COMBINER BOXES, DC DISCONNECTS, INVERTERS

WARNING
ELECTRIC SHOCK HAZARD

THE DC CONDUCTORS OF PV SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

REQUIRED BY 690.14(C)(2)
TO BE MOUNTED ON ALL AC DISCONNECTS

PHOTOVOLTAIC AC DISCONNECT

REQUIRED BY 690.13(B)
TO BE MOUNTED ON ALL DC DISCONNECTS

PHOTOVOLTAIC DC DISCONNECT

REQUIRED BY NEC 690.5(C)
TO BE MOUNTED AT INVERTER

WARNING:
ELECTRIC SHOCK HAZARD

IF A GROUND FAULT IS INDICATED, THE NORMALLY GROUNDED CONDUCTORS MAY BE ENERGIZED AND UNGROUNDED.

LABELS AND WARNINGS NOTES

ALL SIGNS SHALL BE RED BACKGROUND AND WHITE LETTERING. FOR OUTDOOR INSTALLATIONS THEY SHALL BE ENGRAVED PHENOLIC PLASTIC TYPE. LABELS ON RACEWAYS AND OTHER EQUIPMENT SHALL BE REFLECTIVE, WEATHER RESISTANT.

UNLESS OTHERWISE SPECIFIED ALL LETTERING HEIGHT FOR LABELS AND WARNING SHALL BE $\frac{3}{16}$".

DANGER

ELECTRICAL ARC FLASH HAZARD

Will cause severe injury or death.
Turn OFF ALL power before opening. Follow ALL requirements in NFPA 70E for safe work practices and for Personal Protective Equipment.

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Lic: 984910
Exp. 6/30/2025
State of California

MSWD RES-BCT

Electrical Wire, Conduit Schedule & Labels

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

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PROJ NO: LMR-190

ABBREVIATIONS

DRAWINGS

AC	--	ALTERNATING CURRENT
AL	--	ALUMINUM
AWG	--	AMERICAN WIRE GUAGE
CB#--#	--	COMBINER BOX
CT	--	CURRENT TRANSFORMER
CU	--	COPPER
DC	--	DIRECT CURRENT
DIA	--	DIAMETER
E	--	ELECTRICAL
(E)	--	EXISTING
EMT	--	ELECTRICAL METAL CONDUIT
ES	--	ENERGY STORAGE
FO	--	FIBER OPTIC
G	--	GROUND
GFCI	--	GROUND-FAULT CIRCUIT INTERRUPTER
		INTERRUPTER
IMC	--	INTERMEDIATE METAL CONDUIT
IMP	--	CURRENT AT MAXIMUM POWER
ISC	--	CURRENT AT SHORT CIRCUIT
J	--	JUNCTION BOX
M	--	METER
MET	--	METER
MONO	--	MONOCRYSTALLINE SOLAR CELL
(N)	--	NEW
NC	--	NORMALLY CLOSED
NO	--	NORMALLY OPEN
N/S	--	NORTH/SOUTH
P	--	PHASE
PLC	--	PROGRAMMABLE LOGIC CONTROLLER
POLY	--	POLYCRYSTALLINE SOLAR CELL
PT	--	POTENTIAL TRANSFORMER
PTC	--	PV USA TEST CONDITIONS (RATING)
PV	--	PHOTOVOLTAIC
PVC	--	RIGID POLYVINYL CHLORIDE CONDUIT
RMC	--	RIGID METAL CONDUIT
RPVT	--	STRUCTURAL
SCH	--	SCHEDULE
SKID	--	REFERENCES ALL COMPONENTS LOCATED
		ON INVERTER AND TRANSFORMER SKID
SS	--	STAINLESS STEEL
STC	--	FACTORY STANDARD TEST CONDITIONS
		(RATING)
TYP	--	TYPICAL
VMP	--	VOLTAGE AT MAXIMUM POWER
VOC	--	VOLTAGE AT OPEN CURRENT
XFMR	--	TRANSFORMER
+	--	POSITIVE
-	--	NEGATIVE
Ø	--	PHASE

UNITS OF MEASUREMENT

A	--	AMPERES
C	--	CELSIUS
FT	--	FEET
IN	--	INCHES
MW	--	MEGAWATT
KV	--	KILOVOLTS
KVA	--	KILOVOLTS -- AMPERES
KW	--	KILOWATTS
KWHR--	KILOWATTS -- HOUR	
V	--	VOLT
VAC	--	VOLTS IN AC
VDC	--	VOLTS IN DC
W	--	WATT

GENERAL SYMBOLS

DETAIL REFERENCING SHEET NUMBER

KEYNOTE

REVISION

SECTION

LABELS & WARNINGS REFERENCING SHEET NUMBER

KEYNOTE REFERENCING SHEET NUMBER

PLAN SYMBOLS

B — BATTERY ENCLOSURE

BIRD DETERRENT

DC COMBINER BOX

K — CONTROL UNIT

ELECTRICAL PANEL

EX — EXPANSION JOINTS

INV — INVERTER

J — JUNCTION BOX

LIGHT

PV MODULE

RPVT — REMOTE PV TIE

SOLAR LIGHTING POLE MOUNT

TRANSFORMER (XFMR)

WEATHER STATION

PLAN SYMBOLS

X — FENCE LINE

CONDUIT RUN ABOVE GROUND LINE

CONDUIT RUN BELOW GRADE LINE

PROPERTY LINE

OFFSET LINE

SITE & MODULE LINE

DIAGRAM SYMBOLS

ARRESTOR

BIRD DETERRENT

CIRCUIT BREAKER

CURRENT TRANSFORMER

AC POWER BUS

FUSE

FUSE SWITCH

GROUNDING

G — GROUND

GROUND BUS

GROUND BUS BAR

INVERTER

M — METER

NEGATIVE

NEGATIVE BUS

NEGATIVE BUS BAR

N — NEUTRAL

NEUTRAL BUS

NEUTRAL BUS BAR

NC — NORMALLY CLOSED RELAY

NO — NORMALLY OPEN RELAY

OUTLET

POLE TAPE

POSITIVE

POSITIVE BUS

POSITIVE BUS BAR

POTENTIAL TRANSFORMER

PV MODULE

SWITCH

TAP

TRANSFORMER

FUSED KNIFE BLADE DISCONNECT

NOT ALL ABBREVIATIONS, SYMBOLS OR LINE TYPES ARE USED IN THIS PROJECT

1. SCOPE OF WORK

1.1. THE CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.

1.2. THE SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID IN ACCORDANCE WITH THE REQUIREMENTS OF THE ADOPTED CEC AND THE ELECTRICAL UTILITY COMPANY.

1.3. THE CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO REPAIR ANY DAMAGE DONE TO BUILDINGS, GROUNDS OR UTILITIES AT NO ADDITIONAL COST TO THE CUSTOMER. DEFECTIVE MATERIALS OR WORKMANSHIP WILL NOT BE ALLOWED ON THIS PROJECT. REASONABLE HOUSEKEEPING AND CLEAN UP SHALL BE CONDUCTED BOTH DURING THE EXECUTION OF AND AT THE CONCLUSION OF THE PROJECT.

1.4. THE PROJECT IS A NEW PHOTOVOLTAIC SYSTEM CONSISTING OF SOLAR ARRAY(S) AND ASSOCIATED POWER CONDITIONING EQUIPMENT.

1.5. ALL CONSTRUCTION SHALL COMPLY WITH THE ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AND CALIFORNIA ELECTRIC CODE (2022 CEC) AS SPECIFIED IN THE PROJECT SPECIFIC NOTES. IT SHALL ALSO COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL ELECTRICAL UTILITY CODES, RULES AND REGULATIONS.

1.6. THERE WILL BE NO SUBSTITUTION FOR ANY EQUIPMENT WITH A VENDOR PART NUMBER ON THE DRAWINGS. COMMON ITEMS SUCH AS CONDUIT, WIRE, FITTINGS ETC. ARE NOT SPECIFIED BY VENDOR BUT THE SIZES CANNOT BE REDUCED.

1.7. THE CONTRACTOR SHALL PROVIDE LABOR FOR CONSTRUCTION OF THE ARRAY AND INSTALLATION OF THE ELECTRICAL EQUIPMENT. THE CONTRACTOR WILL PROVIDE COMPETENT SUPERVISION FOR THE WORK TO BE ACCOMPLISHED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER AS REQUIRED.

2. GENERAL

2.1. THE ACTUAL SYSTEM EQUIPMENT SPECIFICATIONS FOR THE PHOTOVOLTAIC SYSTEM ARE INCLUDED IN THE PV SYSTEM SPECIFICATIONS TABLE ON THE TITLE PAGE AND THROUGHOUT THE DRAWINGS AS NECESSARY FOR CLARITY. IN ADDITION, THE ACTUAL VENDOR SPECIFICATION DATA SHEETS WILL BE INCLUDED AS PART OF THE PERMIT SUBMITTAL.

2.2. ONLY NEW MATERIALS FREE OF DEFECTS WILL BE INSTALLED AS PART OF THE PROJECT. ALL NEW INSTALLED EQUIPMENT WILL BE APPROPRIATELY LISTED AND NEMA RATED. ALL NEW EQUIPMENT SHALL HAVE PERMANENT PLASTIC ENGRAVED IDENTIFICATION TAGS INSTALLED.

2.3. ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF NEW RACEWAYS AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL WORK SHALL BE PERFORMED BY TRADESMAN EXPERIENCED IN THE WORK REQUIRED. ALL FINISHES SHALL MATCH THE EXISTING ADJACENT FINISHES. OPENINGS IN THE FIRE RATED WALLS WILL BE PATCHED IN A MANNER MAINTAINING THE ORIGINAL FIRE AND SMOKE RATINGS.

2.4. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM.

2.5. CONTRACTOR WILL COORDINATE ALL POWER OUTAGES WITH THE OWNER'S REPRESENTATIVE IN ADVANCE.

2.6. PANEL DESIGNATIONS SHOW ON THESE DRAWINGS ARE GIVEN FOR CLARIFICATION OF CIRCUITING ONLY AND MAY NOT CORRESPOND TO THE DESIGNATION FOUND IN THE FIELD.

2.7 DEVELOPER IS RESPONSIBLE FOR MAINTAINING THE EXISTING FUNCTIONALITY OF EQUIPMENT AND SERVICES IMPACTED BY THE RESULTING WORK; INCLUDING, BUT NOT LIMITED TO, EXISTING IRRIGATION FUNCTIONALITY AND CONTROL AND LIGHTING.

3. CONDUIT AND WIRE

3.1. ALL EXISTING CONDUIT RUNS ARE NOT SHOWN. CONTRACTOR SHALL VERIFY EXISTING CONDUIT LOCATIONS IN FIELD.

3.2. ALL CONDUCTORS SHALL BE INSTALLED IN A RACEWAY AS SPECIFIED IN THE DRAWINGS. THE EXCEPTION IS PV SOURCE CIRCUIT CONDUCTORS MADE OF TYPE USE-2 OR PV WIRE Cable. THESE CONDUCTORS MAY BE EXPOSED WITHIN THE PV ARRAY.

3.3 INDOOR EMT FITTINGS MAY BE COMPRESSION TYPE OR STEEL SET SCREW TYPE. OUTDOOR EMT FITTINGS MUST BE COMPRESSION RAINTIGHT TYPE.

3.4 A PULL ROPE SHALL BE INSTALLED IN ALL EMPTY CONDUITS.

3.5. CONDUCTOR MATERIAL, EITHER COPPER OR ALUMINUM IS SPECIFIED IN THE DRAWINGS. CONDUCTOR INSULATION TYPE SHALL BE XHHW-2 UNLESS OTHERWISE NOTED.

3.6. ALL SERVICE, FEEDER AND BRANCH CONDUCTORS SHALL BE IDENTIFIED TO MATCH THE EXISTING BUILDING OR STRUCTURE IDENTIFICATION SCHEME PER CEC 200.6, 210.5 AND 215.12. WHERE MORE THAN ONE NOMINAL VOLTAGE SYSTEM EXISTS IN A BUILDING OR STRUCTURE, EACH UNGROUNDED CONDUCTOR SHALL BE IDENTIFIED BY PHASE AND SYSTEM. THE IDENTIFICATION SCHEME SHALL BE PERMANENTLY POSTED AT EACH PANELBOARD OR SWITCHBOARD. IF THE BUILDING OR STRUCTURE DOES NOT HAVE AN EXISTING SCHEME, USE THE FOLLOWING:

208/ 120 VOLT		PHASE	480/ 277 VOLT
BLACK	A		BROWN
RED		B	PURPLE
BLUE		C	YELLOW
WHITE		NEUTRAL	GRAY
GREEN		GROUND	GREEN

3.7. CONDUCTORS SIZE #6 AWG AND BELOW SHALL BE COLOR CODED WITH COLORED INSULATION. CONDUCTORS SIZE #4 AWG AND LARGER SHALL BE IDENTIFIED WITH COLORED TAPE AT ALL TERMINATIONS, JUNCTION BOXES AND PULL BOXES. ALL CURRENT CARRYING CONDUCTORS #10 AWG AND LARGER SHALL BE STRANDED.

3.8 ALL ELECTRICAL WRING AND EQUIPMENT HAS BEEN PROPERLY DESIGNED FOR OVERLOAD PROTECTION.

3.9. WHERE WIRING AND CONDUIT SIZES ARE INDICATED FOR HOMERUNS, THESE SIZES APPLY TO THE ENTIRE LENGTH FROM THE PROTECTIVE DEVICE IN THE PANEL TO THE EQUIPMENT OR LAST WIRE DEVICE.

3.10. ALL CONDUIT PENETRATIONS THROUGH ROOFS, FLOORS OR WALLS SHALL BE MADE WATER TIGHT BY PROPER FLASHING, CAULKING OR SEALING.

3.11. WHERE PORTIONS OF A RACEWAY ARE PASSING FROM INTERIOR TO THE EXTERIOR OF A BUILDING OR UNDERGROUND TO ABOVE GROUND, THE RACEWAY SHALL BE FILLED WITH AN APPROVED MATERIAL NEAR THE TRANSITION TO PREVENT THE CIRCULATION OF AIR AND MOISTURE PER CEC 300.7.

3.12 OPENINGS AROUND ELECTRICAL PENETRATIONS INTO OR THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING PER CEC 30021.

3.13 ALL FIXTURES AND DEVICES SHALL BE PROVIDED WITH SUITABLE METAL OUTLET BOXES, CONFORMING TO CEC ARTICLE 314. BOXES SHALL BE SUPPORTED RIGIDLY FROM THE STRUCTURE.

3.14. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. PVC CONDUIT SHALL NOT BE INSTALLED ABOVE GRADE. THE TRANSITION FROM PVC TO METALLIC CONDUIT SHALL BE LOCATED JUST ABOVE THE GRADE.

3.15 RACEWAYS SUBJECT TO PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED STEEL CONDUIT.

3.16. THE CONDUIT ROUTES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE BEST CONDUIT ROUTES BASED ON THE SITE CONDITIONS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IF THE CONTRACTOR'S PREFERRED CONDUIT ROUTES ARE OTHER THAN WHAT ARE INDICATED ON THE DRAWINGS.

4. GROUNDING

4.1. THE GROUNDING SYSTEM SHALL MEET REQUIREMENTS OF THE CEC AND THE LOCAL ADOPTED CODE. ALL ELECTRICAL EQUIPMENT AND RACEWAYS SHALL BE PROPERLY GROUNDED.

4.2. AN INSULATED EQUIPMENT GROUNDING CONDUCTOR, IN ACCORDANCE WITH CEC 250.122 AND 690.47, SHALL BE PROVIDED IN ALL CONDUITS WITH CURRENT CARRYING CONDUCTORS. ALL LUGS AND CONNECTORS SHALL BE RATED FOR THE CONDUCTOR MATERIAL AND CONDITIONS OF USE.

5. EQUIPMENT

5.1. ALL ELECTRICAL COMPONENTS INSTALLED OUTDOORS, EXPOSED TO THE WEATHER OR IN DAMP LOCATIONS SHALL BE RATED FOR NEMA 3R OR GREATER. INSTALLATION OF THESE COMPONENTS MUST COMPLY WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5.2. ALL RACEWAYS, CABINETS, BOXES, FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.

5.3. AT THE COMPLETION OF THE PROJECT NEATLY TYPED ACCURATE PANELBOARD DIRECTORIES INDICATING ALL BRANCH CIRCUITS AND SPARES WILL BE PROVIDED. ALL SPARES SHALL BE LEFT IN THE OFF POSITION.

5.4. ALL SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE WITH COVER INTERLOCK AND HANDLE LOCK OFF PROVISIONS. SWITCHES SHALL BE MANUFACTURED BY A COMPANY CONSISTENT WITH OTHER INSTALLED EQUIPMENT WHENEVER POSSIBLE. PART NUMBERS, RATING AND FUSING SHALL BE AS SHOWN ON THE DRAWINGS.

5.5. CONTRACTOR SHALL ENSURE ALL CEC AND MAINTENANCE CLEARANCE REQUIREMENTS ARE MET FOR NEW EQUIPMENT AND MAINTAINED FOR EXISTING EQUIPMENT.

5.6 CONTRACTOR SHALL FIELD VERIFY EQUIPMENT CLEARANCES AND PLACEMENTS WHILE COORDINATING LOCATIONS WITH OTHER TRADES. CONSTRUCTION MANAGERS, AND SITE SUPERVISORS PRIOR TO PURCHASING AND INSTALLING THE EQUIPMENT.

5.7. EVERY STRUCTURE AND PORTION THEREOF, INCLUDING NONSTRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTION IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A. THE SEISMIC DESIGN CATEGORY FOR A STRUCTURE IS PERMITTED TO BE DETERMINED ACCORDANCE WITH SECTION 1613 OR ASCE 7.

5.8. ALL CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES AND COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE JUNCTION OR DEVICE BOX NOR LESS THAN 15 INCHES MEASURED TO THE BOTTOM OF THE JUNCTION OR DEVICE BOX ABOVE THE FINISHED FLOOR.

5.9 ALL RECEPTACLES OUTLETS ON BRANCH CIRCUITS OF 30-AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED OF THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING THE FINISHED FLOOR.

6. WIRING DEVICES:

6.1. RECEPTACLES SHALL BE AS DESIGNATED ON THE DRAWINGS AND SHOULD BE A BRAND CONSISTENT WITH OTHERS IN THE VICINITY WHENEVER POSSIBLE.

6.2. ALL WIRING DEVICES SHALL BE PROVIDED WITH APPROPRIATE COVERPLATES. ANY EMPTY BOXES WILL HAVE BLANK COVER PLATES. COVERPLATES SHALL BE LEXAN, PLASTIC OR STAINLESS STEEL IN FINISHED AREA. GALVANIZED COVERPLATES MAY BE USED IN EQUIPMENT ROOMS.

NOTE: THE DESIGNS SHOWN AND DESCRIBED HERE INCLUDE ALL TECHNICAL DRAWINGS, GRAPHIC AND MODELS ARE PROPRIETARY AND CANNOT BE COPIED, DUPLICATED OR COMMERCIALLY EXPLOITED, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN PERMISSION OF STATEN SOLAR CO.

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MSWD RES-BCT

Legends & General Notes

3585 kW Ground Mount Project
(5736) Helene 625W Modules
18995 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DIVY
0	11-15-2024	INITIAL SUBMITTAL	DEEPAK	PUNEET	DIVY

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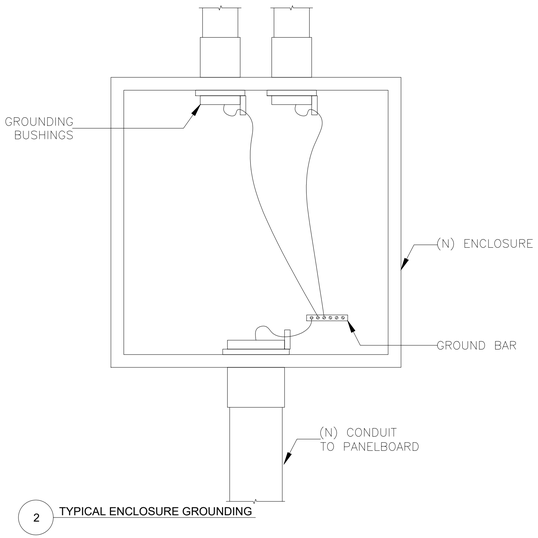
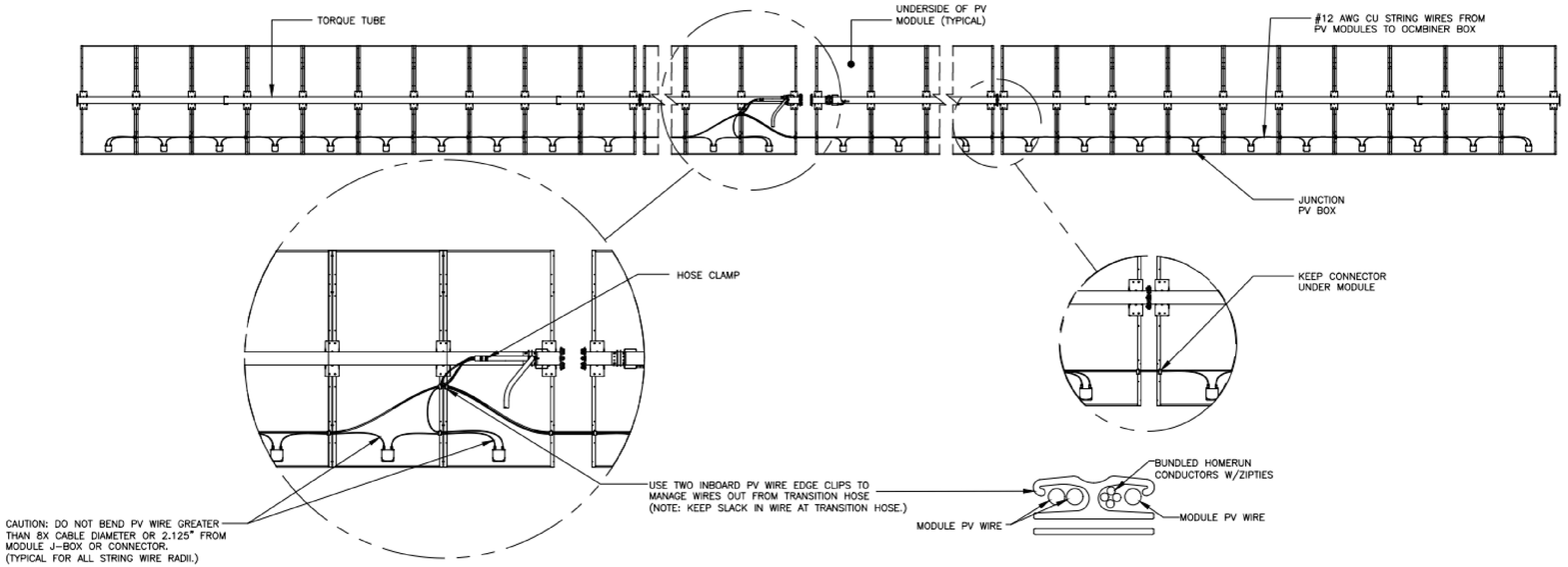
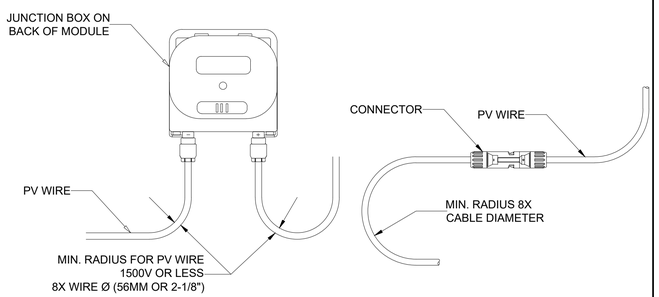
DWG NO: E-5
PROJ NO: LMR-190



2 TYPICAL ENCLOSURE GROUNDING



1 DETAIL MODULE TO MODULE TO TRANSITION HOSE WIRING
SCALE: 5/16" = 1'-0" (VIEW FROM UNDERNEATH PV TRACKER)



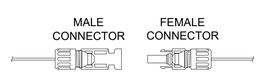
NOTES :

1. OBSERVE MIN. BENDING RADIUS REQUIREMENTS WHEN BUILDING AND SECURING SOURCE CIRCUIT CONDUCTORS TO MODULES AND RACKING.

2. SEE MODULE SPEC SHEET OR CABLE SPECIFICATION FOR CABLE DIAMETER.

3. CONNECTORS WILL REMAIN HIDDEN UNDER PV ARRAY.

3 PV WIRE BENDING REQUIREMENTS



ALL CONNECTORS MUST BE:

1. MATED ONLY TO THE CONNECTORS OF THE SAME MANUFACTURER.

2. LOCKING TYPE, RATED TO 1500VDC.

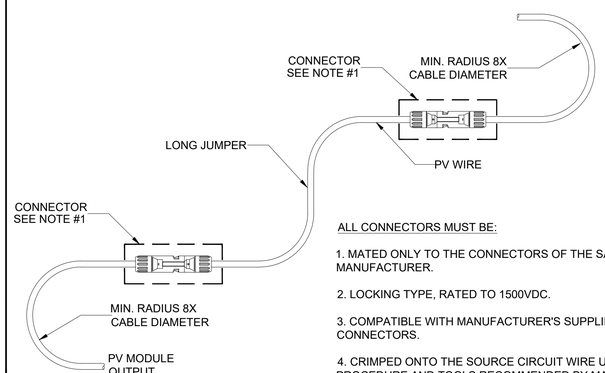
3. COMPATIBLE WITH MANUFACTURER'S SUPPLIED CONNECTORS.

4. CRIMPED ONTO THE SOURCE CIRCUIT WIRE USING PROCEDURE AND TOOLS RECOMMENDED BY MANUFACTURER.

5. SECURED SUCH THAT THEY ARE NOT SUBJECTED TO RAIN OR DIRECT SUNLIGHT, SUCH AS WITHIN MODULE GAPS.

6. ALL CONNECTORS WILL BE STAUBLI MC-4 OR EQUAL

4 MODULE CONNECTOR DETAILS



ALL CONNECTORS MUST BE:

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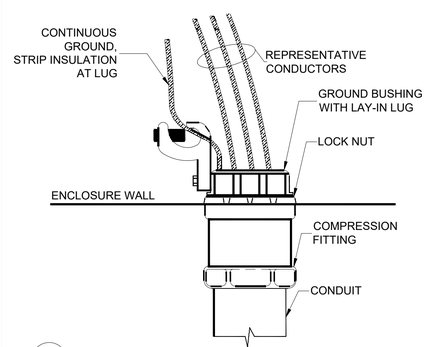
5. SECURED SUCH THAT THEY ARE NOT SUBJECTED TO RAIN OR DIRECT SUNLIGHT, SUCH AS WITHIN MODULE GAPS.

5 CONNECTOR DETAIL



6 CONDUIT GROUNDING

LICENSED SOLAR CONTRACTOR
Staten Solar / C-46
Lic: 984910
Exp. 6/30/2025
State of California

MSWD RES-BCT

Electrical Details

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd.
Desert Hot Springs, CA 92240

	NAME OF CUSTOMER	TITLE:	SUBJECT:	PROJECT LOCATION:
		DIVY	DIVY	APPROVED
		PUNEET	PUNEET	CHECKED
		DEEPAK	DEEPAK	DESIGNED

Rev #	DATE	REMARKS
0	11-15-2024	INITIAL SUBMITTAL
0	06-02-2025	30% SUBMITTAL

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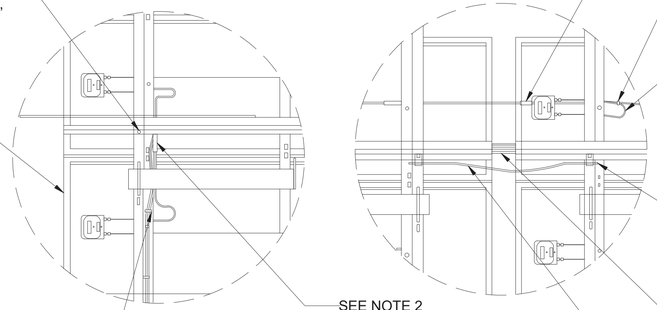
DWG NO: E-6

PROJ NO: LMR-190

EVERY PART OF THE EGC NEEDS TO BE SECURELY ATTACHED TO THE RACK AT BOTH ENDS OF EACH SECTION.
FOR THE FINAL SECTION, USE A BOLT WITH A STAR WASHER AND A NUT THAT ALSO HAS A STAR WASHER, TO CONNECT THE EGC TO THE RACK BY GOING THROUGH THE PURLIN.

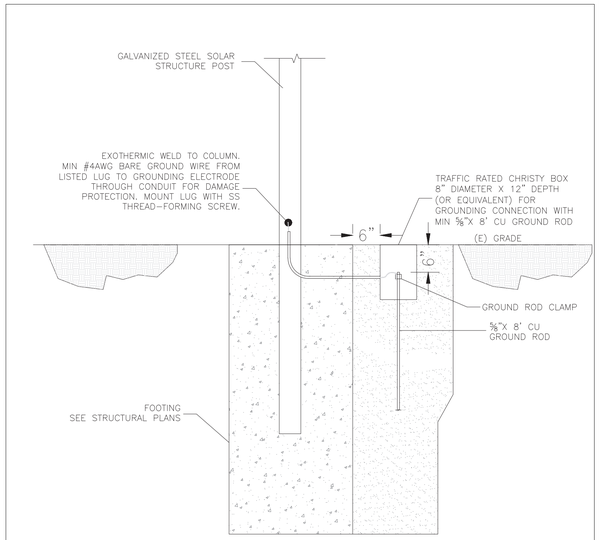


NOTES :

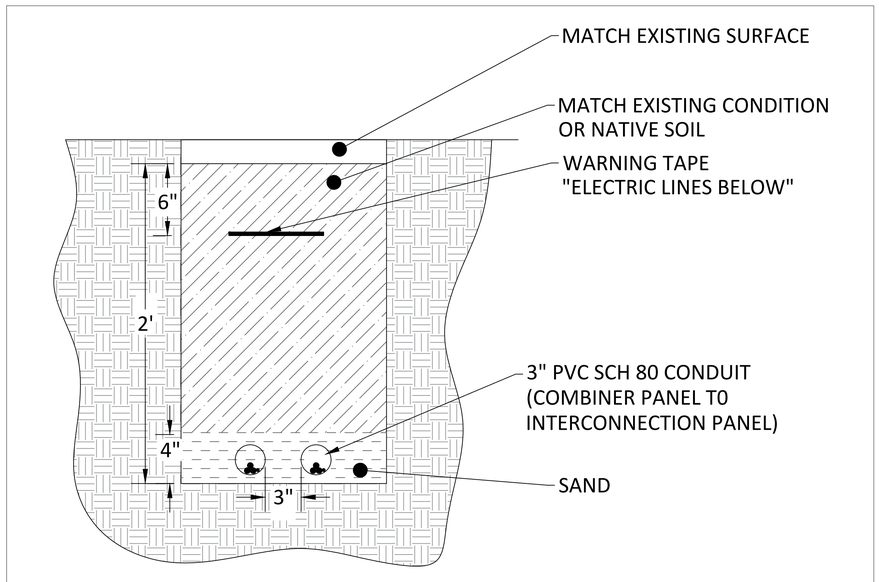
1. NO PLASTIC-ONLY CABLE TIES. TIES SHALL BE BY HELLERMANNTYTON. ACTUAL LENGTH TO BE DETERMINED BY SUBCONTRACTOR BASED ON MOUNTING LOCATION.

2. SUBCONTRACTOR TO PROVIDE MEANS TO PREVENT CHAFING OF WIRES WHERE THEY MAY COME IN CONTACT WITH SHARP EDGES OF RACK. SUBMIT PROPOSED METHOD OF PROTECTION FOR APPROVAL.

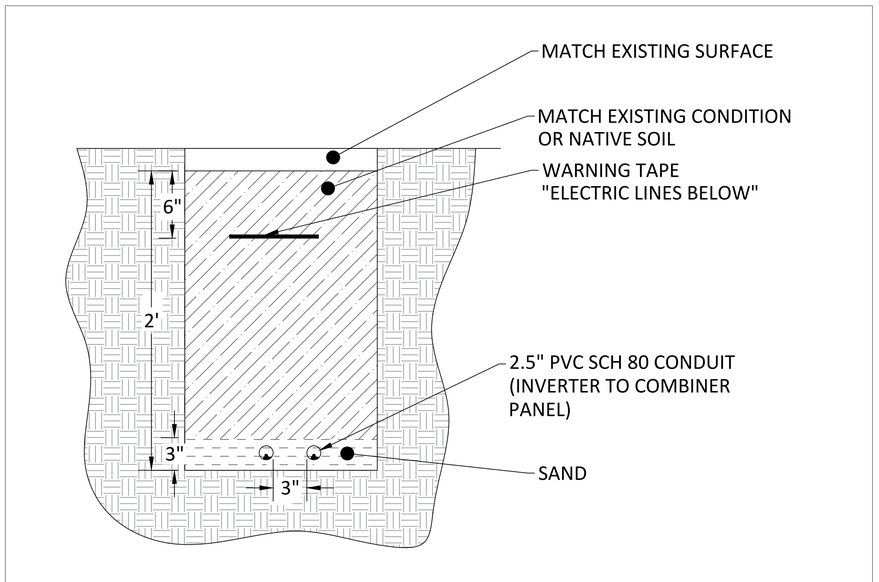
A SOURCE CIRCUIT WIRE MANAGEMENT



B COLUMN GROUNDING DETAIL



C TRENCH DETAILS (COMB. PANEL TO INTERCONNECTION PANEL)
Scale: NTS



D TRENCH DETAILS (INVERTER TO COMB. PANEL)
Scale: NTS

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MSWD RES-BCT

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Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
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0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DIVY

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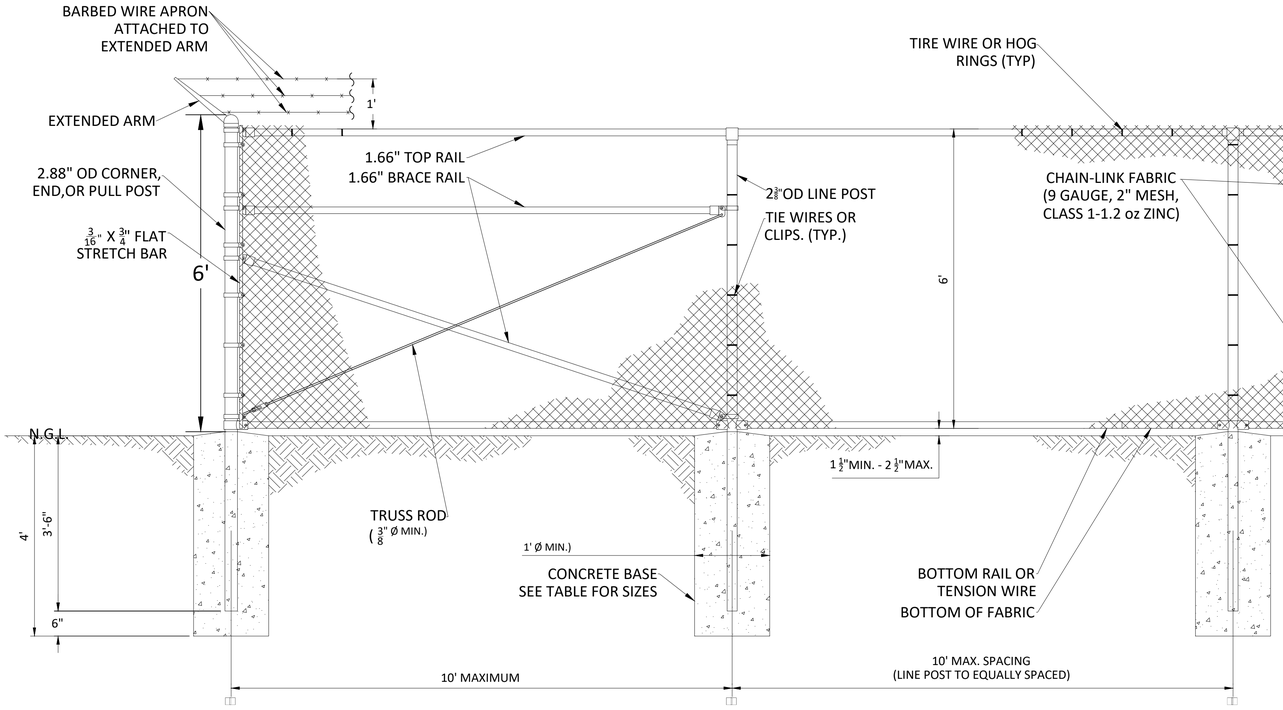
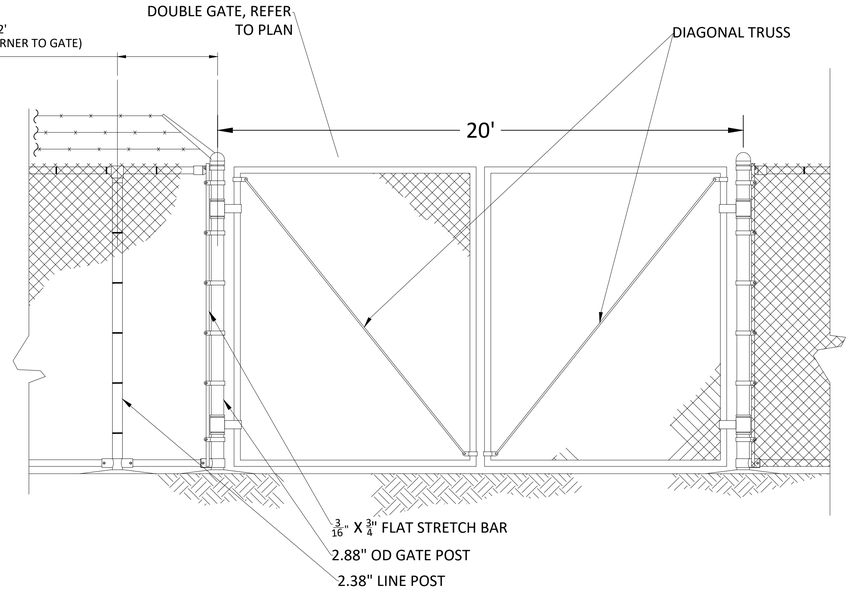


1 CHAIN LINK FENCE DETAILS
SCALE:NTS



2 SWING GATE DETAILS
SCALE:NTS

POST HOLE SIZING CHART (SET-IN POST) - 6' MAX HEIGHT			
MEMBER	HOLE DIA.	HOLE DEPTH	POST EMBEDMENT
CORNER POST	1'-0"	3'-0"	2'-6"
LINE POST	1'-0"	3'-0"	2'-6"
GATE POST	1'-0"	3'-0"	2'-6"

FENCE POST SIZING CHART - 6' MAXIMUM HEIGHT		
MEMBER	AISC SIZE (MIN)	OUTSIDE DIA.
CORNER POST	2 1/2"	2.88"
LINE POST	2"	2.38"
GATE POST	2 1/2"	2.88"
TOP RAIL	1 1/4"	1.66"
STRETCH BAR	3/16" X 3/4" FLAT	-
TRUSS ROD	3/8" Ø	-

POST EMBEDMENT DEPTH (DRIVEN POST) - 6' MAX HEIGHT	
MEMBER	DEPTH
CORNER/LINE/GATE	3'-6"

1 Fence Details
Scale: NTS

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Staten Solar / C-46
Lic: 984910
Exp. 6/30/2025
State of California

MSWD RES-BCT
Fence Details
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DWG NO: E-6B
PROJ NO: LMR-190

SG350HX-US

Multi-MPPT String Inverter for 1500 Vdc System

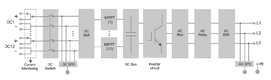
HIGH YIELD
- Up to 16 MPPTs with max. efficiency 99%
- 20A per string, compatible with 500Wp+ module
- Data exchange with tracker system, improving yield

LOW COST
- Q at night function, save investment
- Power line communication (PLC)
- Smart IV Curve diagnosis, active O&M

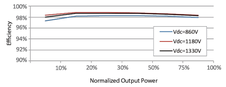
GRID SUPPORT
- SCR ≥ 1.15 stable operation in extremely weak grid
- Reactive power response time < 30 ms

PROVEN SAFETY
- 2 strings per MPPT, no fear of string reverse connection
- 24h real-time AC and DC insulation monitoring

CIRCUIT DIAGRAM



EFFICIENCY CURVE



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SUNGROW
Clean power for all

Type designation	SG350HX-US
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	500 V / 550 V
Nominal PV input voltage	1180 V
MPP voltage range	500 V – 1500 V
Full Power MPP Voltage Range @ 40 °C	860 V – 1330 V *
No. of independent MPP inputs	12 (optional : 16)
Max. number of input connector per MPPT	2
Max. PV input current	12 * 40 A (Optional: 16 * 30 A)
Max. DC short-circuit current per MPPT	60 A
Output (AC)	
AC output power	352 kVA @ 30°C / 320 kVA @ 40 °C
Max. AC output current	254 A
Nominal AC voltage	3 / PE, 800 V
AC voltage range	704 V – 880 V
Nominal grid frequency / Grid frequency range	60 Hz / 55 Hz – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3
Efficiency	
Max. efficiency / CEC efficiency	99.02 % / 98.5 %
Protection	
DC reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch / AC switch	Yes / No
PV string current monitoring	Yes
Q at night function	Yes
Anti-PID and PID recovery function	Optional (EMU200A)
Surge protection	DC Type II / AC Type II
General data	
Dimensions (W * H * D)	1165 mm * 870 mm * 361 mm (45.9 " * 34.3 " * 14.2")
Weight	≤ 123 kg (≤ 272 lbs)
Isolation method	Transformerless
Degree of protection	IP66 (NEMA 4X)
Power consumption at night	< 6 W
Operating ambient temperature range	-30 °C to 60 °C (- 22 °F to 140 °F)
Allowable relative humidity range	0 % – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating) / 13123 ft (> 9843 ft derating)
Display	LED, Bluetooth+APP
Communication	RS485 / PLC
DC connection type	MC4 (Max. 10AWG, optional BAWG)
AC connection type	Support OT / DT terminal (Max. 750 Kcmil)
Compliance	UL 1741, UL 61709-1, CSA C22.2 No.107.1-16, IEEE 1547-2018, IEEE 1547.1-2020, UL 1741 SA/SB, California Rule21, HECO SRD V2.0
Grid Support	Q at night function, LVRT, HVRTactive & reactive power control and power ramp rate control, Q-U control, P-f control

* Full power MPP range is temperature dependent, check the characteristic curve of the inverter for more information.

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156HC M10 NTYP SL Bifacial Module

HELIENE

156HC M10 NTYP SL Bifacial Module

156 Half-Cut Monocrystalline 605W – 635W

22.73%
Utilizes the latest M10 size super high efficiency N-type Silicon Solar Cells. Half cut design further reduces cell to module (CTM) losses.

Stability & Looks
3.2mm fully tempered frontside glass for superior hail resistance. Enhanced frame design to withstand higher wind, snow, and other mechanical stresses. Framed Glass–Backsheet aesthetic is ideal for high visibility

High Energy Yield
Highest efficiency, Excellent Bifaciality & Low temperature coefficient of N-type silicon solar cells enable High Energy yield

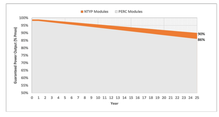
High Reliability
N-type silicon solar cells result in low LID, reducing annual degradation and guaranteeing more power throughout the lifetime.

Highly efficient N-type Silicon Solar Cells

Low LCOE enabled by High Power Output & Low BOS Cost

1% First year degradation & 0.4% Annual Power degradation

No Compromise Guarantee
15 Year Product Warranty
25 Year Linear Performance Guarantee



World-class Quality
- Heliene's fully automated manufacturing facilities with state-of-the-art robotics and computer aided inspection systems ensure the highest level of product quality and consistency
- All manufacturing locations are compliant with international quality standards and are ISO 9001 certified
- Heliene modules have received Top Performer rankings in several categories from PV Evolution Labs (PV EL) independent quality evaluations

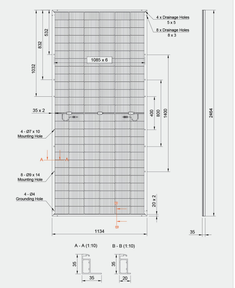
Bankable Reputation
- Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development, Heliene has been able to stay on the cutting edge of advances in module technology and manufacturing efficiency

Local Sales, Service, and Support
- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization capability and just in time last-mile logistics support
- Local sales and customer support means answered phone calls and immediate answers to your technical and logistics questions. We understand your project schedules often change with little warning and endeavor to work with you to solve your project management challenges

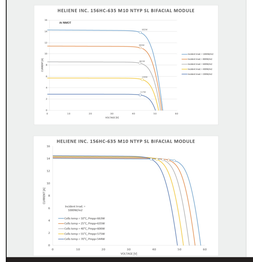
www.heliene.com

156HC M10 NTYP SL Bifacial Module

Dimensions for 156HC M10 NTYP SL Bifacial Series Modules



I-V Curves for 156HC M10 NTYP SL Bifacial Series Modules



Electrical Data (STC)

Peak Rated Power*	P_{max} (W)	635	630	625	620	615	610	605
Maximum Power Voltage	V_{mp} (V)	47.38	47.19	47.01	46.75	46.48	46.20	45.92
Maximum Power Current	I_{mp} (A)	13.40	13.34	13.29	13.25	13.21	13.17	13.13
Open Circuit Voltage*	V_{oc} (V)	56.10	55.95	55.80	55.65	55.50	55.35	55.22
Short Circuit Current**	I_{sc} (A)	14.14	14.10	14.06	14.02	13.99	13.95	13.92
Module Efficiency	Eff (%)	22.73	22.55	22.37	22.19	22.01	21.83	21.65
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30	30	30
Power Sorting Range		[- 0/+3%]						
Bifaciality Factor***		80 ± 5%						

STC - Standard Test Conditions: Irradiation 1000 W/m² · Air mass AM 1.5 · Cell temperature 25 °C;
*P_{max} Production Tolerance ± 3%, V_{oc} Production Tolerance ± 3%, I_{sc} Production Tolerance ± 4%,
***Bifaciality Factor= P_{max} $_{rear}$/P_{max} $_{front}$ where P_{max} $_{rear}$ and P_{max} $_{front}$ are tested at STC

Electrical Data (NMOT)

Maximum Power	P_{max} (W)	482	478	475	471	467	463	459
Maximum Power Voltage	V_{mp} (V)	45.37	45.18	45.01	44.76	44.50	44.24	43.97
Maximum Power Current	I_{mp} (A)	10.63	10.59	10.54	10.52	10.49	10.47	10.45
Open Circuit Voltage	V_{oc} (V)	53.72	53.57	53.43	53.28	53.14	53.00	52.87
Short Circuit Current	I_{sc} (A)	11.40	11.37	11.33	11.30	11.28	11.25	11.22

NMOT - Nominal Module Operating Temperature;
Irradiance at 800W/m², Ambient Temperature 20°C, Wind speed 1m/s

Mechanical Data

Solar Cells	156 Half Cut, M10x, N-type Cells
Module Construction	Framed Glass–Backsheet
Backsheet	Transparent Backsheet with White Pattern
Dimensions (L x W x D)	2464 x 1134 x 35 mm (97.01 x 44.65 x 1.38 inch)
Weight	31 kg (68.34 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Fully Tempered, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	4mm² (12 AWG), 0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification	UL61215, UL61730, CSA C22.2 No. 61730

Temperature Ratings

Nominal Module Operating Temperature (NMOT)	+42°C (±2°C)
Temperature Coefficient of P_{max}	-0.30%/°C
Temperature Coefficient of V_{oc}	-0.25%/°C
Temperature Coefficient of I_{sc}	0.045%/°C

Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400Pa
Mech. Load Test (Back)	50psf / 2400Pa
Fire Type	Type 1

Warranty

15 Year Product Warranty
25 Year Linear Power Guarantee

Packaging Configuration

Modules per Pallet 40' Container:	31 pieces
Modules per 40' Container:	496 pieces
Modules per Pallet 53' Trailer:	28 pieces
Modules per 53' Trailer:	588 pieces

HSPE_156HC_M10_NTYP_SL_Bifacial_Rev 01.pdf
Dec 3rd, 2024

The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancements. Heliene Inc. reserves the right to make necessary adjustment to the information described herein at any time without prior notice. PV modules should be handled and installed only by qualified people. Please carefully read safety and installation instructions available for download from Heliene website before using Heliene PV modules. For warranty details, please refer to Product Warranty Document, also available for download from Heliene website.

OMCO SOLAR

OMCO Origin™

FACTORY-DIRECT TRACKERS
One-In-Portrait

- ADJUSTABLE BEARINGS = FASTER INSTALLATION AND COMPENSATION FOR POST MISALIGNMENT
- 4 STRINGS = FEWER MOTORS AND CONTROLLERS PER MW
- WIDEST RANGE OF MOTION = HIGHEST KWH PRODUCTION
- BALANCED TRACKER = LOW ENERGY CONSUMPTION & LONG, STRAIGHT ROWS
- HIGH DOMESTIC CONTENT - MADE BY OMCO SOLAR IN OUR 6 US MANUFACTURING PLANTS
- ADDED STRUCTURE FOR LARGE FORM FACTOR MODULES = REDUCED RISK OF MICRO-CRACKS

OMCO Origin One-In-Portrait Tracker Technical Specifications

Tracking Technology	Single-row, horizontal, balanced, single-axis
Tracking Range	120°
Modules and Configurations	1-in-portrait Monofacial and bifacial modules Framed silicon module – Up to 120 per tracker First Solar Series 6 & Series 7 modules – Up to 96 per tracker
Dimensions	Height – Modules at 60° – 2.4 m (7.8 feet) Width – Modules horizontal – 2.0 m (6.5 feet) Length – Up to 122 m (400 feet)
Foundations	Driven C posts – OMCO produced, lower cost, faster lead time Driven I or W posts – OMCO sourced OMCO Ground Screw Foundations
Structural Materials	Galvanized steel per ASTM A653
Drive	1 slew drive per tracker 20 drives per MW (typical)
Motor	1 24-volt dc motor per tracker 20 motors per MW (typical)
Control System	1 tracker control unit mounted to each tracker with internal inclinometer DC with 30 or 60-watt module and long-life LiFePO4 battery AC up to 264 vac input 1 network controller per 100 – 150 trackers (wireless) 1 or more meteorological stations per site 1 remote access unit per site – datalogger and modem
Communication	Network controller to tracker controllers: MODBUS over Zigbee wireless Network controller to SCADA: MODBUS TCP/IP over ethernet Cloud app available for remote monitoring and predictive maintenance
Step Size	1°
Tracking Algorithm	Based on United States Naval Observatory Solar Position Algorithm Tracking accuracy ±2°
Backtracking	Optional – Optimized for each tracker based on topography
Night Stow	Yes
Wind Stow	Yes
Snow Stow	Yes
Snow Sensor	Optional
Flood Sensor	Optional
Bearings	Self-lubricating, long-life polymer blend wear surfaces Adjustable in multiple dimensions to take up post misalignment Delivered fully assembled from the OMCO Solar factory
North-South Slopes	Up to 15%
Installation	No welding or cutting in the field
Compliance	UL3703, ASCE7

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Arizona | Ohio | Indiana | Alabama
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ISO 9001 Quality

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US10,944,354 | US11,271,518 | US11,300,979

OMCO SOLAR

OMCO SOLAR

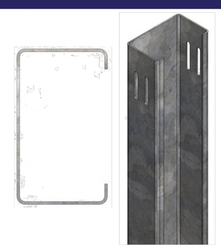
OMCO C PILE FOUNDATION

MAXIMUM BEAM SPANS & REDUCE COST PER WATT

Driven piles for ground mount solar structures are one of the most ideal foundation types. OMCO's C Piles have been designed to offer significant advantages that make them the number one choice for your project. Driven piles are less expensive to manufacture and install.

All piles are made in our U.S. manufacturing facilities from high yield strength steel including roll-formed, holes and slots inline, and pre-galvanized with a G235 zinc coating. A more uniform and reliable service life than the standard hot dipping process which is an expensive and environmentally challenging operation.

The OMCO C Pile offers a higher moment of inertia than typical W Pile sections which reduces deflections and ultimately embedments in some cases. A higher section modulus equates to higher resistance to bending as well.



HIGHEST DOMESTIC CONTENT - MADE BY OMCO SOLAR IN OUR 6 US MANUFACTURING PLANTS

FACTORY DIRECT

- ✓ Short Lead Times
- ✓ Low Freight Costs
- ✓ Enhanced Flexibility
- ✓ Reduced Field Labor
- ✓ Cost Efficient
- ✓ Quality Assurance

OMCO SOLAR

OMCO C PILE FOUNDATION

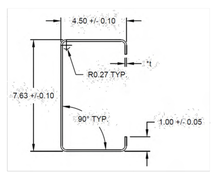
Features and Technical Specifications

Features
- Accommodates challenging soils
- High pull strength
- 2X resistance to buckling
- 2 gauge options for optimized spans
- Cross-sectional area = drivability
- Pile perimeter improves uplift resistance
- Compatible with all OMCO Solar mounting systems

OMCO Solar offers (2) standard pile material thicknesses to support our Choice and Origin product lines.

MEDIUM DUTY (t=0.112") HEAVY DUTY (t=0.145")

OMCO SOLAR C PILE SECTION PROPERTIES	Cross-Section Area (A) $in.^2$	Pile Perimeter (Skin Friction Design), in.	Weight of Pile, lb/ft.	Moment of Inertia (I)	Section Modulus (S)	Radius of Gyration (r)
				X-X Axis $in.^4$	X-X Axis $in.^3$	X-X Axis in.
C Pile (t = 0.112")	2.001	24.25	6.80	19.63	5.15	5.09
C Pile (t = 0.145")	2.561	24.25	8.70	24.82	6.51	5.044



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OMCO SOLAR

LICENSED SOLAR CONTRACTOR
Staten Solar Inc
Lic: 984910
Exp. 6/30/2025
State of California

MSWD RES-BCT

DATA SHEETS

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER: | TITLE: | SUBJECT: | PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DIVY
0	11-15-2024	INITIAL SUBMITTAL	DEEPAK	PUNEET	DIVY

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DWG NO: DS-1
PROJ NO: LMR-190

Table 3. Three-Phase Units (Including mountings with Uni-Rupter Interrupters—less fuse components①)

Model	Connection Diagram②	Fuse Type	Ratings③ kV Nom.	kV Max	kV BIL	Amperes, RMS Fuse with Uni-Rupter Max	Amperes, RMS Fuse with Uni-Rupter Load Dropping	Amperes, RMS Mini-Rupter Cont.	Amperes, RMS Mini-Rupter Load Dropping	Short-Circuit Amperes, RMS, Sym.	Short-Circuit MVA 3-Phase Sym. at Rated Voltage	Catalog Number	Net Wt., Lbs.	Page Reference for Dimensional Information
PMH-3		—	14.4	17	95	—	—	600	600	14 000	350	55232R3	650	21
			25	29	125	—	—	600	600	12 500	540	55233R3	950	
PMH-4●		SML-2⑤	14.4	17	95	200E■	200	—	—	14 000	350	55102R3	525	22
			25	27	125	200E■	200	—	—	12 500	540	55103R3	675	
		SML-4Z	14.4	17	95	200E	200	—	—	12 500	310	55302R3	525	
			25	27	125	200E	200	—	—	12 500▲	540▲	55303R3	675	
		Fault Filter⑤	14.4	17	95	200	200	—	—	14 000	350	55502R3	525	
			25	29	125	200	200	—	—	12 500	540	55503R3	675	
PMH-5◆		SML-2⑤	14.4	17	95	200E■	200	600	600	14 000	350	55112R3	825	23
			25	27	125	200E■	200	600	600	12 500	540	55113R3	1150	
		SML-4Z	14.4	17	95	200E	200	600	600	12 500	310	55312R3	825	
			25	27	125	200E	200	600	600	12 500▲	540▲	55313R3	1150	
		Fault Filter⑤	14.4	17	95	200	200	600	600	14 000	350	55512R3	825	
			25	29	125	200	200	600	600	12 500	540	55513R3	1150	
PMH-6◆		SML-2⑤	14.4	17	95	200E■	200	600	600	14 000	350	55122R4	1475	24
			25	27	125	200E■	200	600	600	12 500	540	55123R3	1975	
		SML-4Z	14.4	17	95	200E	200	600	600	12 500	310	55322R4	1475	
			25	27	125	200E	200	600	600	12 500▲	540▲	55323R3	1975	
		Fault Filter⑤	14.4	17	95	200	200	600	600	14 000	350	55522R4	1475	
			25	29	125	200	200	600	600	12 500	540	55523R3	1975	

① Fuse components are to be ordered separately. Refer to Table 5, Table 6 and Table 7 on page 14,Table 8 on page 15, Table 9 on page 16,Table 10 on page 17, Table 11 and Table 12 on page 18, and Table 13 on page 19.

② Compartment numbers appear in corners of each diagram.

③ The short-circuit ratings expressed in amperes, RMS, asymmetrical are 1.6 times the symmetrical values listed. Fault-closing and/or momentary ratings of switches and bus, and fault-closing capabilities and interrupting ratings of fuses, equal or exceed these values. For complete live-switching (as well as momentary and one-second) ratings for Mini-Rupter Switches and complete live-switching capabilities of Uni-Rupter Interrupters as applied in manual PMH Pad-Mounted Gear, refer to the "Application Notes" section on page 2.

④ These models also accommodate selected current-limiting fuses in S&C Holders; refer to Table 1 of S&C Information Bulletin 660-50. Maximum voltage and maximum ampere ratings as listed in that table apply when current-limiting fuses are used. Consult appropriate current-limiting fuse manufacturer for complete fuse ratings.

● Available only when ultimate user is an electric utility.

■ SMU-20 Fuse Units are available in ratings through 200K amperes as well as 200E amperes.

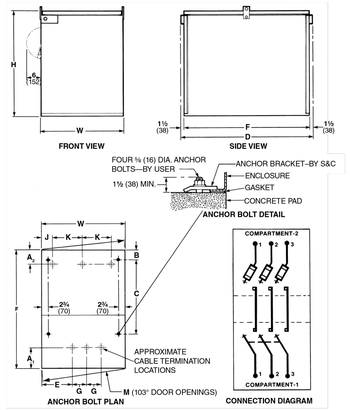
▲ Applicable to solidly grounded-neutral systems only, with fuses connected by single-conductor, concentric-neutral-type cable to a transformer or transformers. Rating is 9400 amperes, RMS, symmetrical (405 MVA) for all other applications.

◆ Key interlocks (catalog number suffix "-C3" or "-C4") are required for ultimate users other than electric utilities.

TABLE CONTINUED ►

Model PMH-5
14.4 kV and 25 kV Nominal

Dimensions in inches (mm)



kV, Nominal	A_1●	A_2	B	C	D	E	F	G	H	J	K	M	W
14.4	9⅞ (251)	7 (178)	5⅛ (130)	31 (787)	54⅝ (1391)	12⅞ (327)	51⅞ (1314)	6 (152)	44 (1118)	4⅜ (124)	9¾ (248)	34 (864)	34½ (886)
25	14⅛ (359)	11⅜ (286)	7⅛ (181)	51 (1295)	68⅛ (1734)	13¾ (349)	65⅛ (1657)	7½ (191)	55 (1397)	6⅝ (168)	12½ (318)	42⅛ (1070)	43 (1092)

● When catalog number suffix "-M1," "-U2," or "-U3" is specified, cable-termination locations will be slightly affected. Consult the nearest S&C Sales Office for details.

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State of California

MSWD RES-BCT

DATA SHEETS

3585 kW Ground Mount Project
(5736) Heliene 625W Modules
18995 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	06-02-2025	30% SUBMITTAL	DEEPAK	PUNEET	DIVY
0	11-15-2024	INITIAL SUBMITTAL	DEEPAK	PUNEET	DIVY

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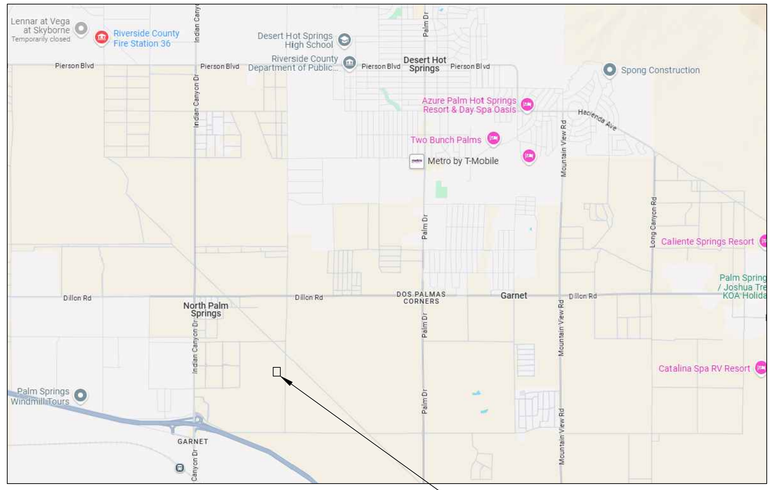
DWG NO: DS-2
PROJ NO: LMR-190

APPENDIX 1b

392.04 kW Ground Mount Photovoltaic System
19999 Little Morongo Rd, Desert Hot Springs, CA 92240



1 VICINITY MAP

Scale: NTS

2 AERIAL VIEW

Scale: NTS

SHEET INDEX	
SHT. NO.	DESCRIPTION
E-1	COVER SHEET
E-2	SITE PLAN
E-2/1	TRENCHING DETAILS
E-2A	ARRAY LAYOUT
E-2B	STRING LAYOUT
E-3	SINGLE LINE DIAGRAM
E-3A	THREE LINE DIAGRAM
E-4	ELECTRICAL WIRE, CONDUIT SCHEDULE & LABELS
E-5	LEGENDS & GEN. NOTES
E-6	ELECTRICAL DETAILS
E-6A	ELECTRICAL DETAILS
E-6B	ELECTRICAL DETAILS
E-6C	ELECTRICAL DETAILS
E-6D	ELECTRICAL DETAILS
E-6E	ELECTRICAL DETAILS
DS-1	DATA SHEETS
DS-2	DATA SHEETS
SR-700	LAYOUT
SR - 101	COVER SHEET
SR - 102	GENERAL STRUCTURAL RACKING NOTES
SR - 200	GFT TABLE CROSS-SECTION AND PARTS LIST
SR - 201	GFT E-W BEAM LOCATION OPTIONS (20 DEGREE TILT)
SR - 400	FOUNDATION DETAILS
SR - 500	RACKING DETAILS
SR - 601-602	RACKING DETAILS - 2X12 & 2x13
TOTAL NUMBER OF SHEETS = 26	

LICENSED PROFESSIONAL ENGINEER (STRUCTURE)-

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LICENSE NO.- C 94191

ENGINEER OF RECORD-

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175 NORTECH PARKWAY
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66575 SECOND STREET DESERT
HOT SPRINGS, CA 92240
(760) 898-6348

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GENERAL CONTRACTOR & ELECTRICAL ENGINEERING

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SAN JOSE, CA 95134
(408) 780-2889
WWW.STATENSOLAR.COM

LICENSE NO.- 984910
LICENSE CLASSIFICATION - C46
LICENSE CLASSIFICATION - B
LICENSE CLASSIFICATION - C10

PROJECT INFORMATION

SCOPE OF WORK:

THE PROJECT IS TO INSTALL A GROUND MOUNTED PHOTOVOLTAIC SYSTEM AND ALL ASSOCIATED POWER EQUIPMENT AT A COMMERCIAL PROPERTY.

SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID PER THE REQUIREMENTS OF THE UTILITY COMPANY AND ALL APPLICABLE LOCAL AND NATIONAL CODES.

SYSTEM SPECIFICATIONS

MODULES -	TRINA 605W
TOTAL MODULE COUNT	648
NOMINAL POWER	605W
TOTAL DC SYSTEM RATING	392.04 kW DC
INVERTER -	(5) CPS 60KW (CPS-SCH 60KTL-DO/US-480)
TOTAL INVERTER COUNT	5
TOTAL INVERTER OUTPUT	300 kW AC

DESIGN CRITERIA

DC DESIGN WILL BE BASED ON A 1000V DC. ASHRAE DATA AVAILABLE FOR PALM SPRINGS INTL IS AS FOLLOWS:

- 2% AVERAGE HIGHEST TEMP = 44°C
- EXTREME MINIMUM = 3°C

APPLICABLE CODES

.

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA GREEN BUILDING CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

NOTES:

- MODULES TILT - 20°
- MOUNTING TYPE- GROUND MOUNTED
- SOLAR ARRAY FOOTPRINT: 32002 SQ. FT
- APN: 656050007

NAPOLEON LEONI LAZN E 24930 EL

4/02/20

LICENSED SOLAR CONTRACTOR ★ Staten Solar ★ Lic: 984910 Exp. 6/30/2025 ★ State of California ★

NWRWR

Cover Sheet

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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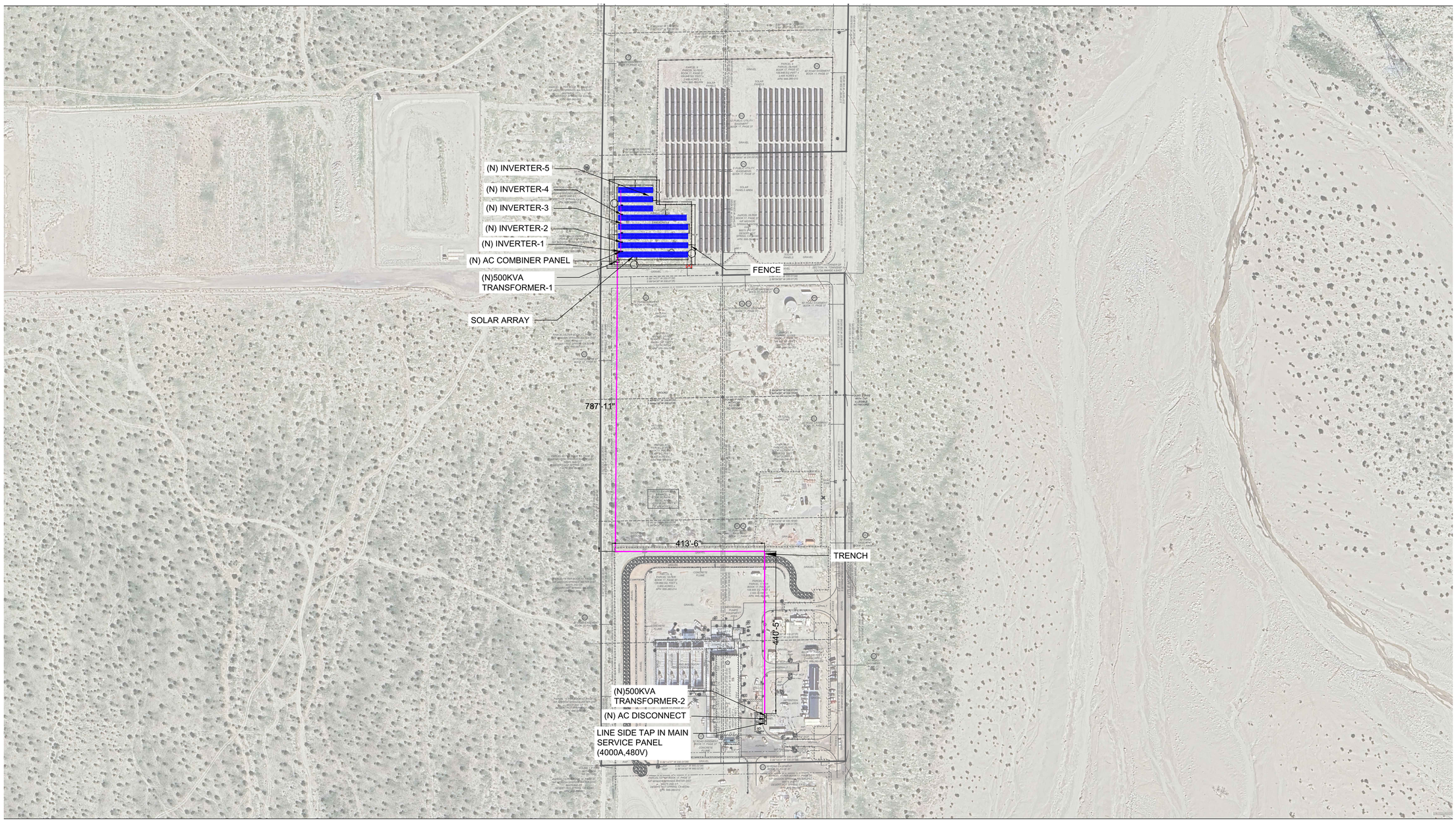
DWG NO: E-1

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/128"= 1'-0"

NAPOLEON LEONTLANZ E 24930

11/02/2024

LICENSED SOLAR CONTRACTOR Staten Solar C-46 Lic: 984910 Exp. 6/30/2025 State of California

NWRWR

Site Plan

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:

TITLE:

SUBJECT:

PROJECT LOCATION:

Rev #	DATE	REMARKS
0	11-15-2024	INITIAL SUBMITTAL

DESIGNED: DA | CHECKED: PM | APPROVED: SB

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STATEN

175 Nortech Parkway,
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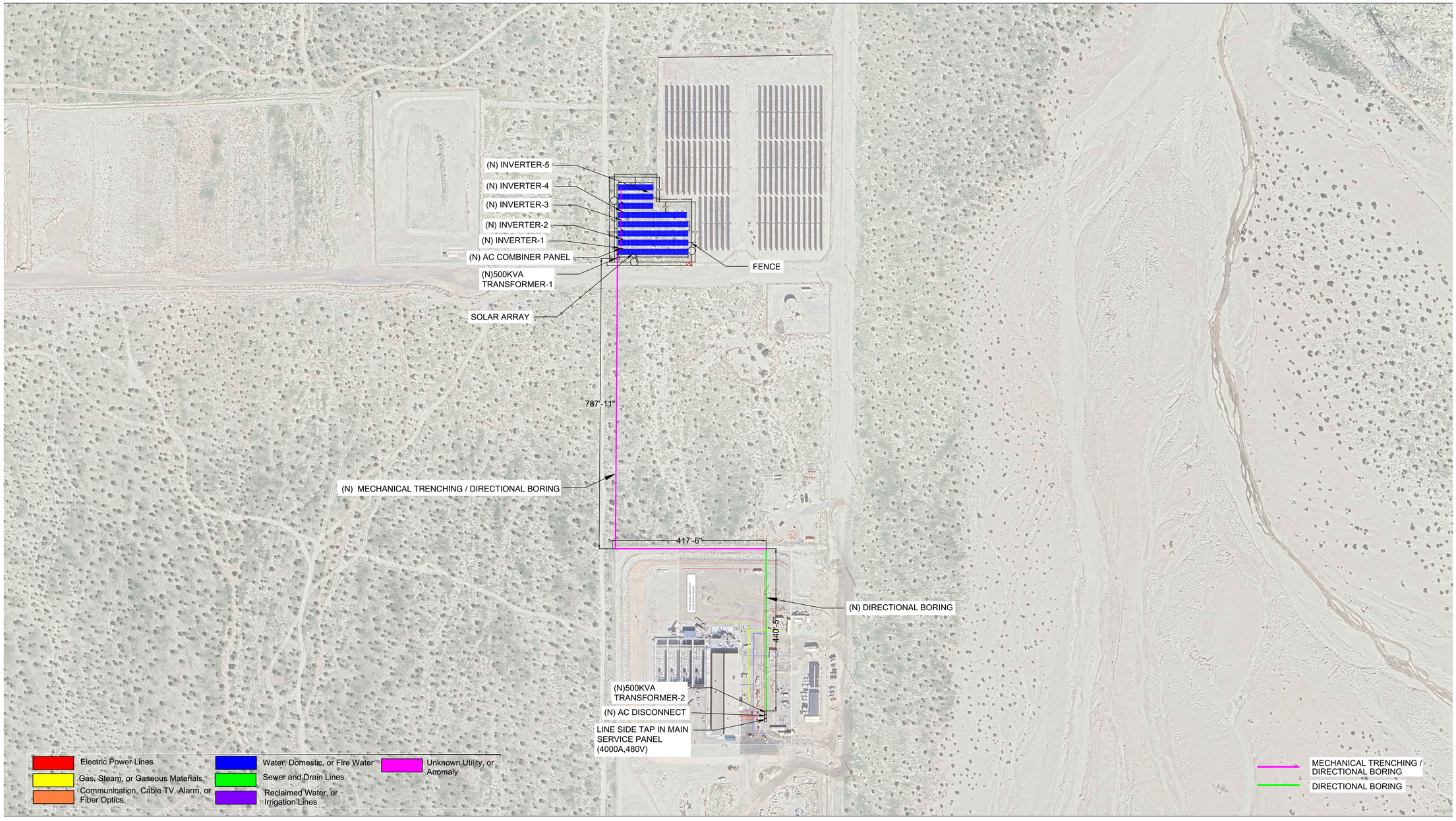
statensolar.com
License No. -984910| C-46

DWG NO: E-2

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/128"= 1'-0"

NAPOLEON LEONI LANZ
E 24930
12/2025

LICENSED SOLAR CONTRACTOR
Staten Solar
Lic: 984910 C-46
Exp. 6/30/2025
State of California

NWRWF

Trenching Details

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:	
TITLE:	
SUBJECT:	
PROJECT LOCATION:	
DESIGNED	DA
CHECKED	PM
APPROVED	SB
0	INITIAL SUBMITTAL
Rev #	REMARKS
11-15-2024	DATE

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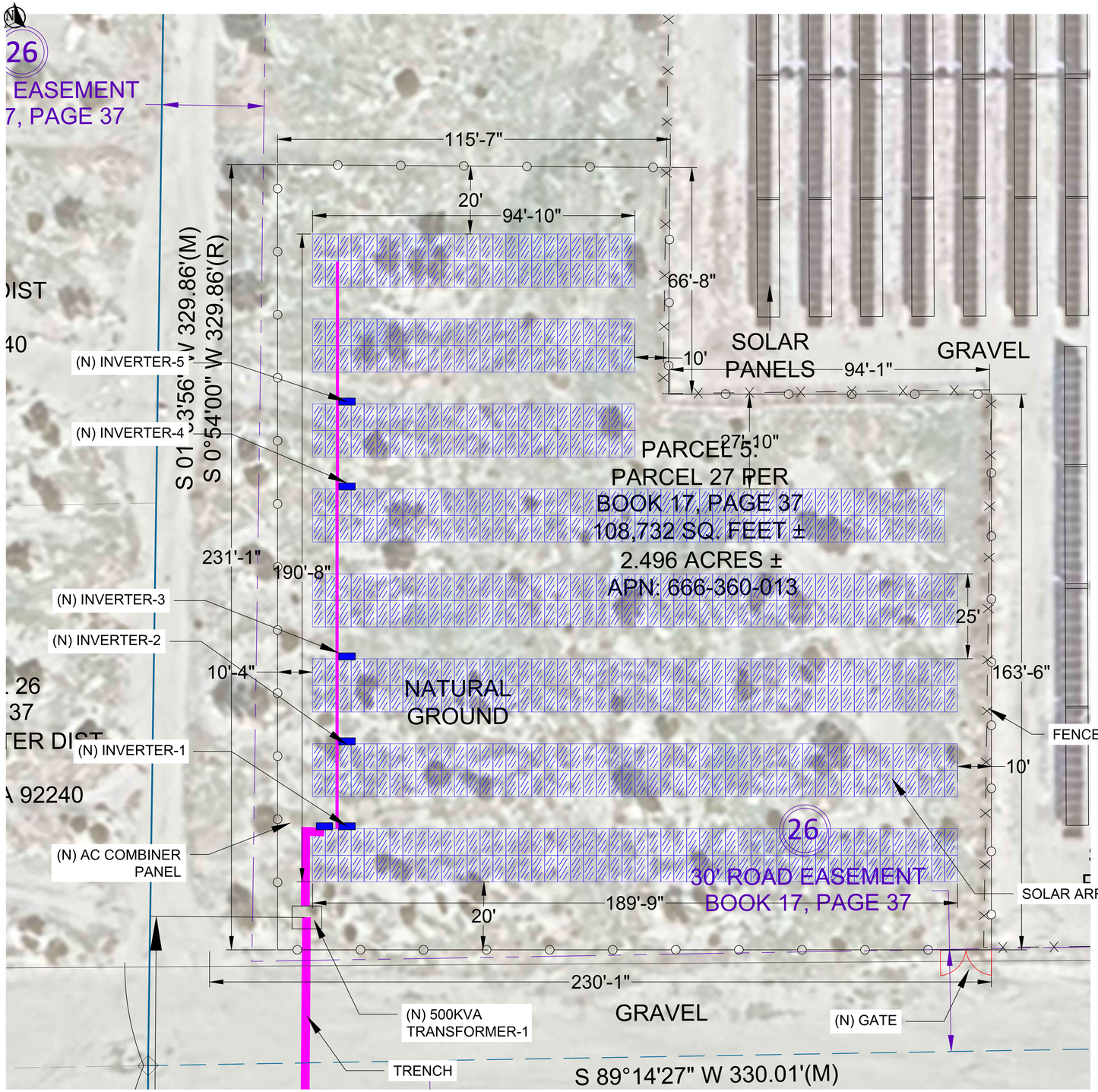

1 ARRAY LAYOUT

Scale: 1/24"= 1'-0"

GENERAL NOTES

1. (648) TRINA 605W MODULES.
2. (05) 60KW CHINT POWER SYSTEMS INVERTERS
3. ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE LISTED AND APPROVED BY A TESTING AGENCY RECOGNIZED BY THE AHJ. ANY EQUIPMENT NOT LISTED SHALL BE TESTED AND CERTIFIED BY AN APPROVED TESTING AGENCY.
4. COMPLIANCE WITH 2022 CALIFORNIA FIRE CODE.
5. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM
6. ALL EXISTING CONDUIT RUNS ARE NOT SHOWN.CONTRACTOR SHALL VERIFY EXISTING CONDUIT LOCATIONS IN FIELD.
7. THE SOLAR MODULES SHALL BE TILTED 20° AT GROUND .
8. THE WORKING CLEARANCES AROUND THE EXISTING ELECTRICAL EQUIPMENT AS WELL AS THE NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.

MODULES COUNT AND RATING PER ARRAY

ARRAY	TYPE	MODULES TYPE	MODULES DIMENSIONS	MODULE RATING	AZIMUTH	TILT	MODULES	KWDC
ARRAY 1	GROUND MOUNTED	TRINA 605W NEG19C.20	93.86" X 44.65" X 1.18"	605W	180	20	648	392.04
TOTAL							**648**	**392.04**

LICENSED SOLAR CONTRACTOR
Staten Solar
Lic: 984910 C-46
Exp. 6/30/2025
State of California

NWRWR

Array Layout

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
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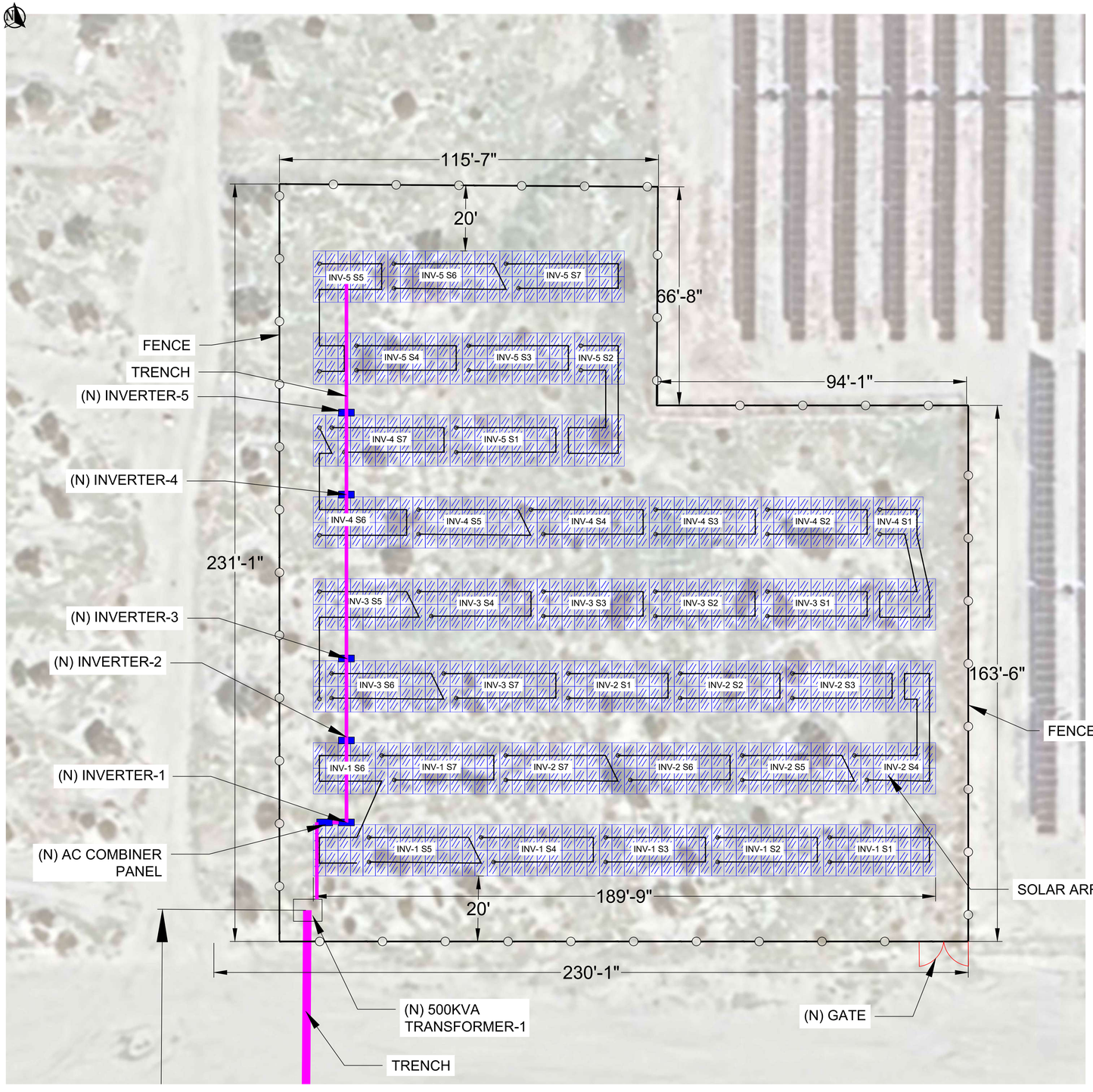
DWG NO: E-2A

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/24"= 1'-0"

STRING CONFIGURATION

Array	Inverter No.	Inverter Capacity (KW)	MPPT No.	String Size	No. of Strings	Total Modules	Module Wattage (W)	Total DC Capacity (KW)	Module Count Per Inverter
1	1	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	2	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	3	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	4	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	5	60	1	18	3	54	605	32.67	128
			2	18	2	36	605	21.78	
			3	19	2	38	605	22.99	
TOTAL	5	300			35	648		392.04	648

MODULE COUNT PER INVERTER

INVERTER \INPUT	STRING SIZE 1	2	3	4	5	6	7	TOTAL MODULE
1	18	18	18	19	19	19	19	130
2	18	18	18	19	19	19	19	130
3	18	18	18	19	19	19	19	130
4	18	18	18	19	19	19	19	130
5	18	18	18	18	18	19	19	128
TOTAL								648

GENERAL NOTES

1. ALL DC WIRING BETWEEN TABLES WILL BE COVERED IN SPLIT-LOOM

LICENSED SOLAR CONTRACTOR — Staten Solar, C-46, Lic: 984910, Exp. 6/30/2025, State of California

NAPOLEON LEONI LANZ E 24930 — 11/02/2024

NWRWR

String Layout

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

Rev #	DATE	REMARKS
0	11-15-2024	INITIAL SUBMITTAL

DESIGNED: DA | CHECKED: PM | APPROVED: SB

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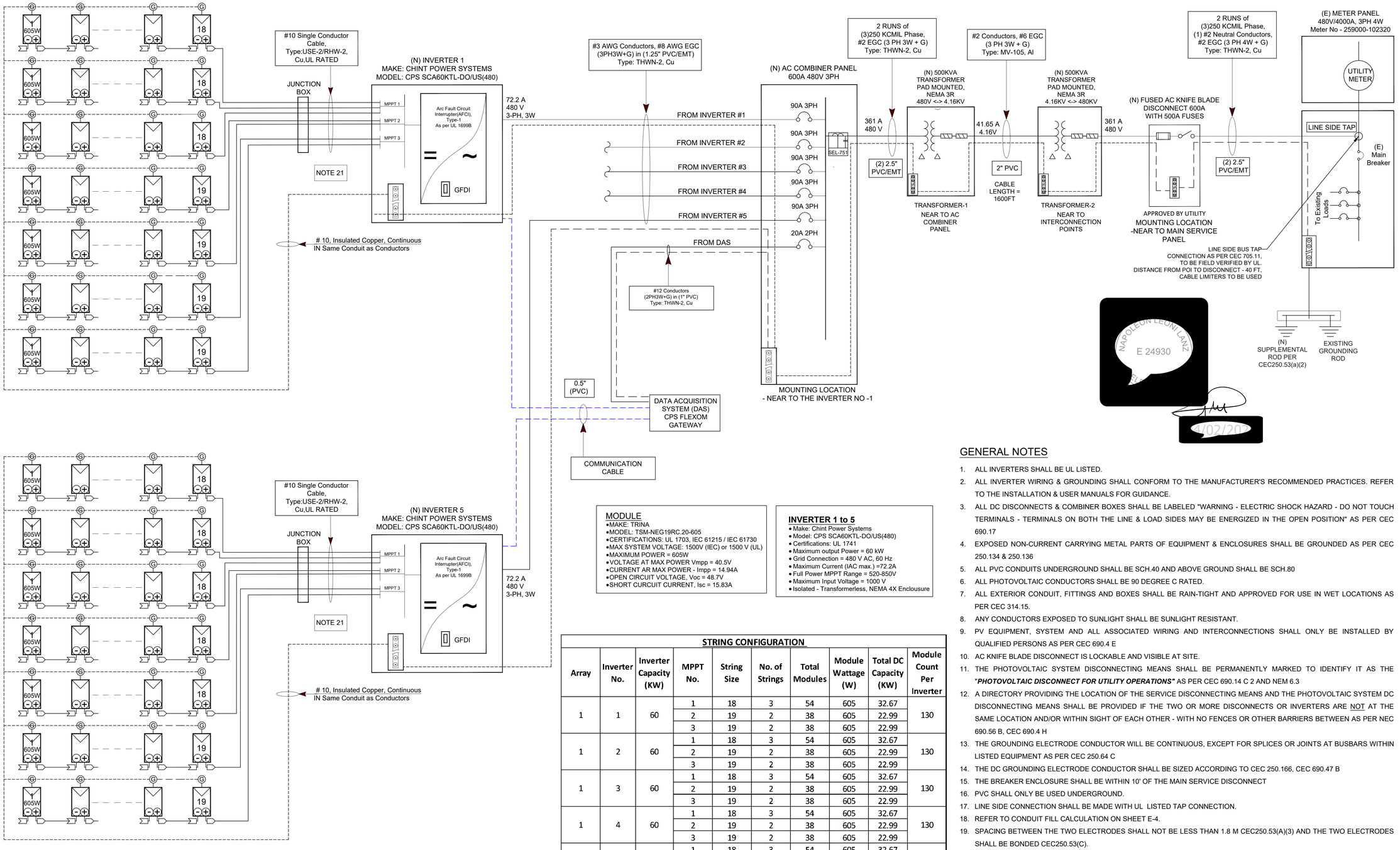
NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

STATEN
175 Nortech Parkway,
San Jose, CA 95134
statensolar.com
License No. -984910| C-46

DWG NO: E-2B

PROJ NO: LMR-190



MODULE
- MAKE: TRINA
- MODEL: TSM-NEG19RC.20-605
- CERTIFICATIONS: UL 1703, IEC 61215 / IEC 61730
- MAX SYSTEM VOLTAGE: 1500V (IEC) or 1500 V (UL)
- MAXIMUM POWER = 605W
- VOLTAGE AT MAX POWER Vmpp = 40.5V
- CURRENT AR MAX POWER - Impp = 14.94A
- OPEN CIRCUIT VOLTAGE, Voc = 48.7V
- SHORT CURCUIT CURRENT, Isc = 15.83A

INVERTER 1 to 5
- Make: Chint Power Systems
- Model: CPS SCA60KTL-DO/US(480)
- Certifications: UL 1741
- Maximum output Power = 60 kW
- Grid Connection = 480 V AC, 60 Hz
- Maximum Current (IAC max.) =72.2A
- Full Power MPPT Range = 520-850V
- Maximum Input Voltage = 1000 V
- Isolated - Transformerless, NEMA 4X Enclosure

STRING CONFIGURATION

Array	Inverter No.	Inverter Capacity (KW)	MPPT No.	String Size	No. of Strings	Total Modules	Module Wattage (W)	Total DC Capacity (KW)	Module Count Per Inverter
1	1	60	1	18	3	54	605	32.67	130
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			3	19	2	38	605	22.99	
1	2	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	3	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	4	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	5	60	1	18	3	54	605	32.67	128
			2	18	2	36	605	21.78	
			3	19	2	38	605	22.99	
TOTAL	5	300			35	648		392.04	648

GENERAL NOTES

1. ALL INVERTERS SHALL BE UL LISTED.
2. ALL INVERTER WIRING & GROUNDING SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PRACTICES. REFER TO THE INSTALLATION & USER MANUALS FOR GUIDANCE.
3. ALL DC DISCONNECTS & COMBINER BOXES SHALL BE LABELED "WARNING - ELECTRIC SHOCK HAZARD - DO NOT TOUCH TERMINALS - TERMINALS ON BOTH THE LINE & LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION" AS PER CEC 690.17
4. EXPOSED NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT & ENCLOSURES SHALL BE GROUNDED AS PER CEC 250.134 & 250.136
5. ALL PVC CONDUITS UNDERGROUND SHALL BE SCH.40 AND ABOVE GROUND SHALL BE SCH.80
6. ALL PHOTOVOLTAIC CONDUCTORS SHALL BE 90 DEGREE C RATED.
7. ALL EXTERIOR CONDUIT, FITTINGS AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS AS PER CEC 314.15.
8. ANY CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE SUNLIGHT RESISTANT.
9. PV EQUIPMENT, SYSTEM AND ALL ASSOCIATED WIRING AND INTERCONNECTIONS SHALL ONLY BE INSTALLED BY QUALIFIED PERSONS AS PER CEC 690.4 E
10. AC KNIFE BLADE DISCONNECT IS LOCKABLE AND VISIBLE AT SITE.
11. THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS THE "***PHOTOVOLTAIC DISCONNECT FOR UTILITY OPERATIONS***" AS PER CEC 690.14 C 2 AND NEM 6.3
12. A DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DC DISCONNECTING MEANS SHALL BE PROVIDED IF THE TWO OR MORE DISCONNECTS OR INVERTERS ARE NOT AT THE SAME LOCATION AND/OR WITHIN SIGHT OF EACH OTHER - WITH NO FENCES OR OTHER BARRIERS BETWEEN AS PER NEC 690.56 B, CEC 690.4 H
13. THE GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AT BUSBARS WITHIN LISTED EQUIPMENT AS PER CEC 250.64 C
14. THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO CEC 250.166, CEC 690.47 B
15. THE BREAKER ENCLOSURE SHALL BE WITHIN 10' OF THE MAIN SERVICE DISCONNECT
16. PVC SHALL ONLY BE USED UNDERGROUND.
17. LINE SIDE CONNECTION SHALL BE MADE WITH UL LISTED TAP CONNECTION.
18. REFER TO CONDUIT FILL CALCULATION ON SHEET E-4.
19. SPACING BETWEEN THE TWO ELECTRODES SHALL NOT BE LESS THAN 1.8 M CEC250.53(A)(3) AND THE TWO ELECTRODES SHALL BE BONDED CEC250.53(C).
20. AMBIENT TEMPERATURE IS BASED PALM SPRINGS INTL INFORMATION FROM 2017 ASHRAE HANDBOOK: FUNDAMENTALS , WHICH SHOWS MAX RECORDED AMBIENT TEMPERATURE OF 44°
21. 1.25" EMT/PVC SHALL NOT TAKE MORE THAN 4 CIRCUITS.

1 SINGLE LINE DIAGRAM

LICENSED SOLAR CONTRACTOR
Staten Solar, C-46
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR

Single Line Diagram

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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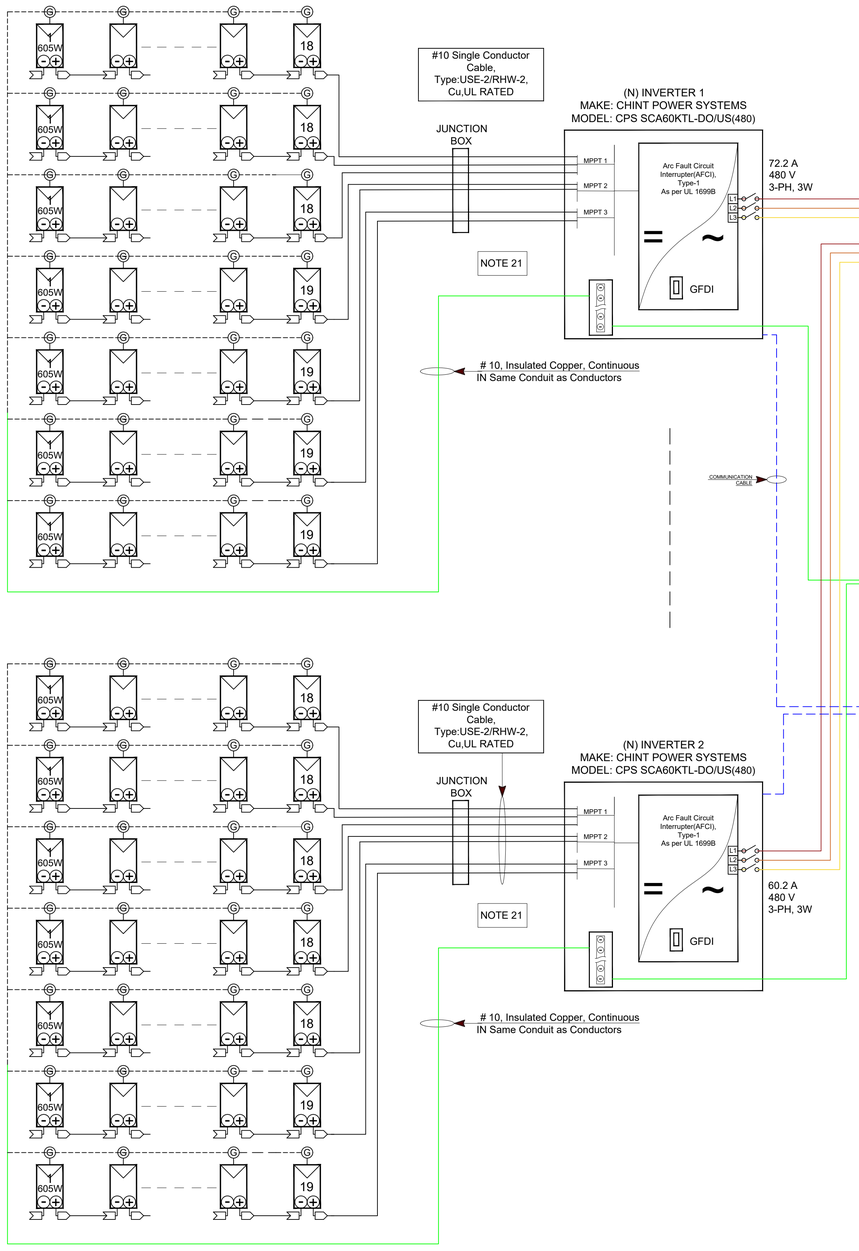
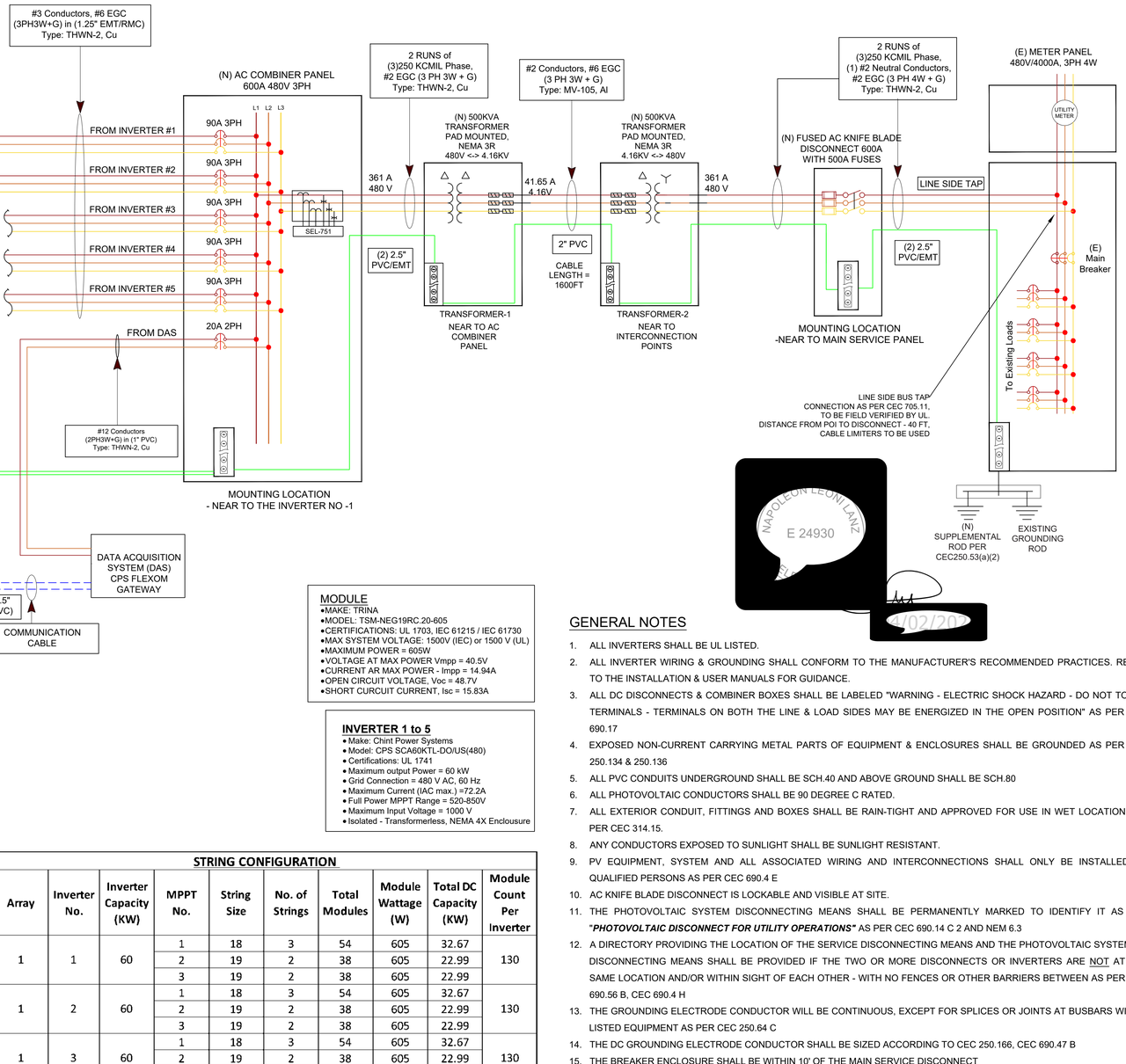
San Jose, CA 95134
statensolar.com
License No. -984910| C-46

DWG NO: E-3

PROJ NO: LMR-190





MODULE

- MAKE: TRINA
- MODEL: TSM-NEG19RC.20-605
- CERTIFICATIONS: UL 1703, IEC 61215 / IEC 61730
- MAX SYSTEM VOLTAGE: 1500V (IEC) or 1500 V (UL)
- MAXIMUM POWER = 605W
- VOLTAGE AT MAX POWER Vmpp = 40.5V
- CURRENT AR MAX POWER - Impp = 14.94A
- OPEN CIRCUIT VOLTAGE, Voc = 48.7V
- SHORT CURCUIT CURRENT, Isc = 15.83A

INVERTER 1 to 5

- Make: Chint Power Systems
- Model: CPS SCA60KTL-DO/US(480)
- Certifications: UL 1741
- Maximum output Power = 60 kW
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- Maximum Current (IAC max.) =72.2A
- Full Power MPPT Range = 520-850V
- Maximum Input Voltage = 1000 V
- Isolated - Transformerless, NEMA 4X Enclousure

STRING CONFIGURATION

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1	2	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	3	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	4	60	1	18	3	54	605	32.67	130
			2	19	2	38	605	22.99	
			3	19	2	38	605	22.99	
1	5	60	1	18	3	54	605	32.67	128
			2	18	2	36	605	21.78	
			3	19	2	38	605	22.99	
TOTAL	**5**	**300**			**35**	**648**		**392.04**	**648**

GENERAL NOTES

1. ALL INVERTERS SHALL BE UL LISTED.
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21. 1.25" EMT/PVC SHALL NOT TAKE MORE THAN 4 CIRCUITS.

1 SINGLE LINE DIAGRAM

LICENSED SOLAR CONTRACTOR — Staten Solar / C-46 Lic: 984910 Exp. 6/30/2025 — State of California

NWRWR

Three Line Diagram

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

NAPOLEON LEON LANZ E 24930 — 4/02/2025

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
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License No.-984910| C-46

DWG NO: E-3A

PROJ NO: LMR-190

CONDUCTOR SCHEDULE

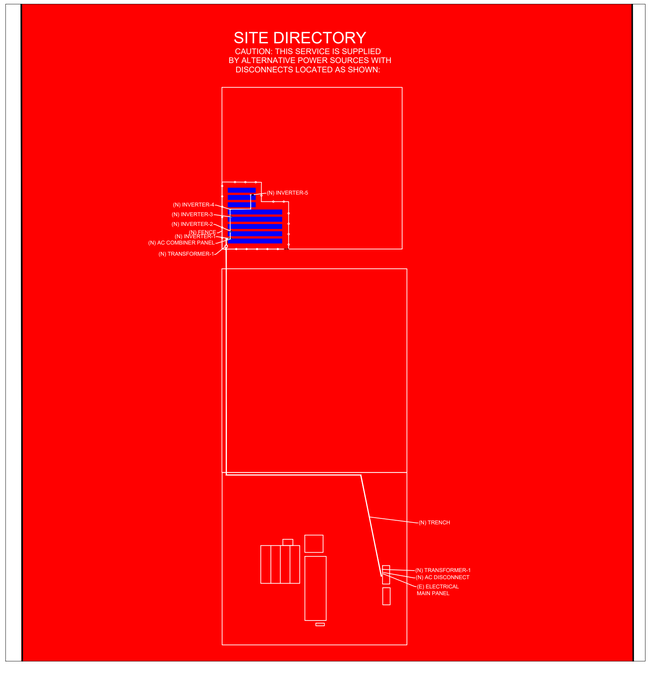
INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	CONDUCTORS PER CONDUIT	CONDUIT	# OF CURRENT CARRYING CONDUCTORS PER CONDUIT	CONDUIT FILL %	OCPD	EGC	TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP AT TERM. TEMP.	DERATED AMP	CABLE TERM. TEMP. RATING	DISTANCE B/W TERMINTION POINTS	VOLTAGE DROP	MAXIMUM VOLTAGE DROPS ALLOWED
ARRAY 1	JUNCTION BOX	10 AWG PV WIRE COPPER, 1500VDC	FREE AIR	NA	NA	NA	10 AWG THWN-2 COPPER	0.87	44°C	NA	14.94	24.73	NA	NA	90°C	100 FT	0.31%	2.00%
JUNCTION BOX	INVERTER #1 TO 5	10 AWG THWN-2 COPPER, 1500VDC	1.25" DIA. PVC	8	9.52%	NA	10 AWG THWN-2 COPPER	0.87	44°C	0.7	14.94	24.73	40	24.36	90°C	10 FT	0.12%	2.00%
INVERTER # 1 TO 5	AC COMBINER PANEL	3 AWG THWN-2 COPPER	1.25" DIA. PVC	3	18.84%	90	8 AWG THWN-2 COPPER	0.87	44°C	1	72.2	90.25	110	95.7	90°C	200 FT	1.12%	2.00%
AC COMBINER PANEL	TRANSFORMER-1	(3) 250 KCMIL Phase, (3 PH 3W + G) Type: THWN-2, Cu (2 RUNS)	(2) 2.5" DIA. PVC	3	25.55%	600	2 AWG THWN-2 COPPER	0.87	44°C	1	361.00	451.25	580	504.60	90°C	20 FT	0.13%	2.00%
TRANSFORMER-1	TRANSFORMER-2	2 AWG MV-105 AL.	2" DIA. PVC	3	17.86%	60	6 AWG THWN-2 COPPER	0.87	44°C	1	41.65	52.07	75	65.25	90°C	1600 FT	0.56%	2.00%
TRANSFORMER-2	MSP	(3) 250 KCMIL Phase, (1) #2 Neutral Conductors, (3 PH 4W + G) Type: THWN-2, Cu (2 RUNS)	(2) 2.5" DIA. EMT/PVC	3	25.55%	600	2 AWG THWN-2 COPPER	0.87	44°C	1	361.00	451.25	580	504.60	90°C	30 FT	0.19%	2.00%

SYSTEM PROPERTIES		
No Of Modules	648	Nos
Max. Ambient temp @ Site	44	◦C
Min Ambient Temp @ site	3	◦C
STC Temp	25	◦C
No of Modules in a String	18,19	Nos
Ambient temp (for cable sizing)	41-45	◦C

Module	TRINA	
Module Power	605	W
Module Voc	48.7	V
Module Vmp	40.5	V
Module Isc	15.83	A
Module Imp	14.94	A
Temp Coeffeicient for Vo	-0.24%	%/◦C
Temp Coeffeicient for Vr	-0.30%	%/◦C
Temp Coeffeicient for Isc	0.04%	%/◦C
Max. System Voltage	1500	V

Maximum System Voltage		
No of Modules in a String	18	
No of Strings	17	Nos
Voc @ Max. Ambient	46.48	V
Voc@ Min. Ambient	51.27	V
Vmp @ Max. Ambient	38.19	V
Vmp @ Min. Ambient	43.17	V
MPPT Lower Range	687.45	V
MPPT Upper Range	777.11	V
Min. Operating Voltage	687.45	V
Max. Operating Voltage	**777.11**	**V**
ISC/String	15.83	A
Isc @ Max. Ambient	15.95	A
Isc @ Min. Ambient	15.69	A
Max. System Voltage	**922.88**	**V**

Maximum System Voltage		
No of Modules in a String	19	
No of Strings	18	Nos
Voc @ Max. Ambient	46.48	V
Voc@ Min. Ambient	51.27	V
Vmp @ Max. Ambient	38.19	V
Vmp @ Min. Ambient	43.17	V
MPPT Lower Range	725.64	V
MPPT Upper Range	820.29	V
Min. Operating Voltage	725.64	V
Max. Operating Voltage	**820.29**	**V**
ISC/String	15.83	A
Isc @ Max. Ambient	15.95	A
Isc @ Min. Ambient	15.69	A
Max. System Voltage	**974.16**	**V**



REQUIRED BY NEC 705.12(D)(4)
TO BE MOUNTED ON MAIN SERVICE PANEL

THIS ELECTRIC SERVICE IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

REQUIRED BY NEC 690.17
TO BE MOUNTED ON ALL ELECTRICAL SERVICE PANEL COVERS

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

REQUIRED BY NEC 690.54
TO BE MOUNTED ON MAIN AC DISCONNECT SWITCH

PANELBOARD IS ENERGIZED FROM TWO SOURCES OF AC POWER
SOLAR - 421.10A AT 480V
UTILITY 2000A AT 480V

REQUIRED BY 690.31(E)(3)
TO BE MOUNTED ON ALL EXPOSED RACEWAYS, CABLE TRAYS, COVERS, OR ENCLOSURES OF JUNCTION BOXES, CONDUIT BODY WITH AVAILABLE OPENING

PHOTOVOLTAIC POWER SOURCE

REQUIRED BY NEC 690.53
TO BE MOUNTED AT EACH INVERTER

AC NOMINAL POWER - 60 kW
MAXIMUM DC VOLTAGE - 1000 V
MAXIMUM DC CURRENT - 270 A
MAXIMUM AC VOLTAGE - 480 V
MAXIMUM AC CURRENT -72.2 A

REQUIRED BY NEC 705.12(B)(3)
TO BE MOUNTED ON MAIN SERVICE PANEL

WARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.

REQUIRED BY NEC 690.35(F)
TO BE MOUNTED TO JUNCTION BOXES, COMBINER BOXES, DC DISCONNECTS, INVERTERS

WARNING
ELECTRIC SHOCK HAZARD

THE DC CONDUCTORS OF PV SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

REQUIRED BY 690.14(C)(2)
TO BE MOUNTED ON ALL AC DISCONNECTS

PHOTOVOLTAIC AC DISCONNECT

REQUIRED BY 690.13(B)
TO BE MOUNTED ON ALL DC DISCONNECTS

PHOTOVOLTAIC DC DISCONNECT

REQUIRED BY NEC 690.5(C)
TO BE MOUNTED AT INVERTER

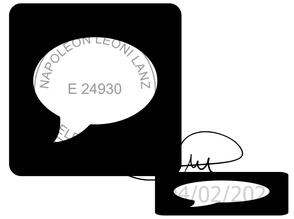
WARNING:
ELECTRIC SHOCK HAZARD

IF A GROUND FAULT IS INDICATED, THE NORMALLY GROUNDED CONDUCTORS MAY BE ENERGIZED AND UNGROUNDED.

LABELS AND WARNINGS NOTES

ALL SIGNS SHALL BE RED BACKGROUND AND WHITE LETTERING. FOR OUTDOOR INSTALLATIONS THEY SHALL BE ENGRAVED PHENOLIC PLASTIC TYPE. LABELS ON RACEWAYS AND OTHER EQUIPMENT SHALL BE REFLECTIVE, WEATHER RESISTANT.

UNLESS OTHERWISE SPECIFIED ALL LETTERING HEIGHT FOR LABELS AND WARNING SHALL BE $\frac{3}{8}$".



DANGER
ELECTRICAL ARC FLASH HAZARD
Will cause severe injury or death.
Turn OFF ALL power before opening. Follow ALL requirements in NFPA 70E for safe work practices and for Personal Protective Equipment.

LICENSED SOLAR CONTRACTOR
Staten Solar / C-46
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR
Electrical Wire, Conduit Schedule & Labels
392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

Rev#	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

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175 Nortech Parkway,
San Jose, CA 95134
statensolar.com
License No.-984910| C-46

DWG NO: E-4
PROJ NO: LMR-190

ABBREVIATIONS

DRAWINGS

AC	--	ALTERNATING CURRENT
AL	--	ALUMINUM
AWG	--	AMERICAN WIRE GUAGE
CB#-#	--	COMBINER BOX
CT	--	CURRENT TRANSFORMER
CU	--	COPPER
DC	--	DIRECT CURRENT
DIA	--	DIAMETER
E	--	ELECTRICAL
(E)	--	EXISTING
EMT	--	ELECTRICAL METAL CONDUIT
ES	--	ENERGY STORAGE
FO	--	FIBER OPTIC
G	--	GROUND
GFCI	--	GROUND-FAULT CIRCUIT INTERRUPTER
		INTERRUPTER
IMC	--	INTERMEDIATE METAL CONDUIT
IMP	--	CURRENT AT MAXIMUM POWER
ISC	--	CURRENT AT SHORT CIRCUIT
J	--	JUNCTION BOX
M	--	METER
MET	--	METER
MONO	--	MONOCRYSTALLINE SOLAR CELL
(N)	--	NEW
NC	--	NORMALLY CLOSED
NO	--	NORMALLY OPEN
N/S	--	NORTH/SOUTH
P	--	PHASE
PLC	--	PROGRAMMABLE LOGIC CONTROLLER
POLY	--	POLYCRYSTALLINE SOLAR CELL
PT	--	POTENTIAL TRANSFORMER
PTC	--	PV USA TEST CONDITIONS (RATING)
PV	--	PHOTOVOLTAIC
PVC	--	RIGID POLYVINYL CHLORIDE CONDUIT
RMC	--	RIGID METAL CONDUIT
RPVT	--	STRUCTURAL
SCH	--	SCHEDULE
SKID	--	REFERENCES ALL COMPONENTS
LOCATED		
		ON INVERTER AND TRANSFORMER SKID
SS	--	STAINLESS STEEL
STC	--	FACTORY STANDARD TEST CONDITIONS
		(RATING)
TYP	--	TYPICAL
VMP	--	VOLTAGE AT MAXIMUM POWER
VOC	--	VOLTAGE AT OPEN CURRENT
XFMR	--	TRANSFORMER
+	--	POSITIVE
-	--	NEGATIVE
Ø	--	PHASE

UNITS OF MEASUREMENT

A	--	AMPERES
C	--	CELSIUS
FT	--	FEET
IN	--	INCHES
MW	--	MEGAWATT
KV	--	KILOVOLTS
KVA	--	KILOVOLTS -- AMPERES
KW	--	KILOWATTS
KWHR	--	KILOWATTS -- HOUR
V	--	VOLT
VAC	--	VOLTS IN AC
VDC	--	VOLTS IN DC
W	--	WATT

GENERAL SYMBOLS

- DETAIL REFERENCING SHEET NUMBER
- KEYNOTE
- REVISION
- SECTION
- LABELS & WARNINGS REFERENCING SHEET NUMBER
- KEYNOTE REFERENCING SHEET NUMBER

PLAN SYMBOLS

- B — BATTERY ENCLOSURE
- BIRD DETERRENT
- DC COMBINER BOX
- K — CONTROL UNIT
- ELECTRICAL PANEL
- EX — EXPANSION JOINTS
- INV — INVERTER
- J — JUNCTION BOX
- LIGHT
- PV MODULE
- RPVT — REMOTE PV TIE
- SOLAR LIGHTING POLE MOUNT
- TRANSFORMER (XFMR)
- WEATHER STATION

PLAN SYMBOLS

- X — FENCE LINE
- CONDUIT RUN ABOVE GROUND LINE
- CONDUIT RUN BELOW GRADE LINE
- PROPERTY LINE
- OFFSET LINE
- SITE & MODULE LINE

DIAGRAM SYMBOLS

- ARRESTOR
- BIRD DETERRENT
- CIRCUIT BREAKER
- CURRENT TRANSFORMER
- AC POWER BUS
- FUSE
- FUSE SWITCH
- GROUNDING
- G — GROUND
- GROUND BUS
- GROUND BUS BAR
- INVERTER
- M — METER
- NEGATIVE
- NEGATIVE BUS
- NEGATIVE BUS BAR
- N — NEUTRAL
- NEUTRAL BUS
- NEUTRAL BUS BAR
- NC — NORMALLY CLOSED RELAY
- NO — NORMALLY OPEN RELAY
- OUTLET
- POLE TAPE
- POSITIVE
- POSITIVE BUS
- POSITIVE BUS BAR
- POTENTIAL TRANSFORMER
- PV MODULE
- SWITCH
- TAP
- TRANSFORMER
- FUSED KNIFE BLADE DISCONNECT

NOT ALL ABBREVIATIONS, SYMBOLS OR LINE TYPES ARE USED IN THIS PROJECT

1. SCOPE OF WORK

1.1. THE CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR SAFETY OF ALL PERSONS AND PROPERTY, AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.

1.2. THE SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID IN ACCORDANCE WITH THE REQUIREMENTS OF THE ADOPTED CEC AND THE ELECTRICAL UTILITY COMPANY.

1.3. THE CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO REPAIR ANY DAMAGE DONE TO BUILDINGS, GROUNDS OR UTILITIES AT NO ADDITIONAL COST TO THE CUSTOMER. DEFECTIVE MATERIALS OR WORKMANSHIP WILL NOT BE ALLOWED ON THIS PROJECT. REASONABLE HOUSEKEEPING AND CLEAN UP SHALL BE CONDUCTED BOTH DURING THE EXECUTION OF AND AT THE CONCLUSION OF THE PROJECT.

1.4. THE PROJECT IS A NEW PHOTOVOLTAIC SYSTEM CONSISTING OF SOLAR ARRAY(S) AND ASSOCIATED POWER CONDITIONING EQUIPMENT.

1.5. ALL CONSTRUCTION SHALL COMPLY WITH THE ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AND CALIFORNIA ELECTRIC CODE (2022 CEC) AS SPECIFIED IN THE PROJECT SPECIFIC NOTES. IT SHALL ALSO COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND LOCAL ELECTRICAL UTILITY CODES, RULES AND REGULATIONS.

1.6. THERE WILL BE NO SUBSTITUTION FOR ANY EQUIPMENT WITH A VENDOR PART NUMBER ON THE DRAWINGS. COMMON ITEMS SUCH AS CONDUIT, WIRE, FITTINGS ETC. ARE NOT SPECIFIED BY VENDOR BUT THE SIZES CANNOT BE REDUCED.

1.7. THE CONTRACTOR SHALL PROVIDE LABOR FOR CONSTRUCTION OF THE ARRAY AND INSTALLATION OF THE ELECTRICAL EQUIPMENT. THE CONTRACTOR WILL PROVIDE COMPETENT SUPERVISION FOR THE WORK TO BE ACCOMPLISHED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY OWNER AS REQUIRED.

2. GENERAL

2.1. THE ACTUAL SYSTEM EQUIPMENT SPECIFICATIONS FOR THE PHOTOVOLTAIC SYSTEM ARE INCLUDED IN THE PV SYSTEM SPECIFICATIONS TABLE ON THE TITLE PAGE AND THROUGHOUT THE DRAWINGS AS NECESSARY FOR CLARITY. IN ADDITION, THE ACTUAL VENDOR SPECIFICATION DATA SHEETS WILL BE INCLUDED AS PART OF THE PERMIT SUBMITTAL.

2.2. ONLY NEW MATERIALS FREE OF DEFECTS WILL BE INSTALLED AS PART OF THE PROJECT. ALL NEW INSTALLED EQUIPMENT WILL BE APPROPRIATELY LISTED AND NEMA RATED. ALL NEW EQUIPMENT SHALL HAVE PERMANENT PLASTIC ENGRAVED IDENTIFICATION TAGS INSTALLED.

2.3. ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF NEW RACEWAYS AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL WORK SHALL BE PERFORMED BY TRADESMAN EXPERIENCED IN THE WORK REQUIRED. ALL FINISHES SHALL MATCH THE EXISTING ADJACENT FINISHES. OPENINGS IN THE FIRE RATED WALLS WILL BE PATCHED IN A MANNER MAINTAINING THE ORIGINAL FIRE AND SMOKE RATINGS.

2.4. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM.

2.5. CONTRACTOR WILL COORDINATE ALL POWER OUTAGES WITH THE OWNER'S REPRESENTATIVE IN ADVANCE.

2.6. PANEL DESIGNATIONS SHOW ON THESE DRAWINGS ARE GIVEN FOR CLARIFICATION OF CIRCUITING ONLY AND MAY NOT CORRESPOND TO THE DESIGNATION FOUND IN THE FIELD.

2.7 DEVELOPER IS RESPONSIBLE FOR MAINTAINING THE EXISTING FUNCTIONALITY OF EQUIPMENT AND SERVICES IMPACTED BY THE RESULTING WORK; INCLUDING, BUT NOT LIMITED TO, EXISTING IRRIGATION FUNCTIONALITY AND CONTROL AND LIGHTING.

3. CONDUIT AND WIRE

3.1. ALL EXISTING CONDUIT RUNS ARE NOT SHOWN. CONTRACTOR SHALL VERIFY EXISTING CONDUIT LOCATIONS IN FIELD.

3.2. ALL CONDUCTORS SHALL BE INSTALLED IN A RACEWAY AS SPECIFIED IN THE DRAWINGS. THE EXCEPTION IS PV SOURCE CIRCUIT CONDUCTORS MADE OF TYPE USE-2 OR PV WIRE Cable. THESE CONDUCTORS MAY BE EXPOSED WITHIN THE PV ARRAY.

3.3 INDOOR EMT FITTINGS MAY BE COMPRESSION TYPE OR STEEL SET SCREW TYPE. OUTDOOR EMT FITTINGS MUST BE COMPRESSION RAINTIGHT TYPE.

3.4 A PULL ROPE SHALL BE INSTALLED IN ALL EMPTY CONDUITS.

3.5. CONDUCTOR MATERIAL, EITHER COPPER OR ALUMINUM IS SPECIFIED IN THE DRAWINGS. CONDUCTOR INSULATION TYPE SHALL BE XHHW-2 UNLESS OTHERWISE NOTED.

3.6. ALL SERVICE, FEEDER AND BRANCH CONDUCTORS SHALL BE IDENTIFIED TO MATCH THE EXISTING BUILDING OR STRUCTURE IDENTIFICATION SCHEME PER CEC 200.6, 210.5 AND 215.12. WHERE MORE THAN ONE NOMINAL VOLTAGE SYSTEM EXISTS IN A BUILDING OR STRUCTURE, EACH UNGROUNDED CONDUCTOR SHALL BE IDENTIFIED BY PHASE AND SYSTEM. THE IDENTIFICATION SCHEME SHALL BE PERMANENTLY POSTED AT EACH PANELBOARD OR SWITCHBOARD. IF THE BUILDING OR STRUCTURE DOES NOT HAVE AN EXISTING SCHEME, USE THE FOLLOWING:

208/ 120 VOLT	PHASE	480/ 277 VOLT
BLACK	A	BROWN
RED	B	PURPLE
BLUE	C	YELLOW
WHITE	NEUTRAL	GRAY
GREEN	GROUND	GREEN

3.7. CONDUCTORS SIZE #6 AWG AND BELOW SHALL BE COLOR CODED WITH COLORED INSULATION. CONDUCTORS SIZE #4 AWG AND LARGER SHALL BE IDENTIFIED WITH COLORED TAPE AT ALL TERMINATIONS, JUNCTION BOXES AND PULL BOXES. ALL CURRENT CARRYING CONDUCTORS #10 AWG AND LARGER SHALL BE STRANDED.

3.8 ALL ELECTRICAL WRING AND EQUIPMENT HAS BEEN PROPERLY DESIGNED FOR OVERLOAD PROTECTION.

3.9. WHERE WIRING AND CONDUIT SIZES ARE INDICATED FOR HOMERUNS, THESE SIZES APPLY TO THE ENTIRE LENGTH FROM THE PROTECTIVE DEVICE IN THE PANEL TO THE EQUIPMENT OR LAST WIRE DEVICE.

3.10. ALL CONDUIT PENETRATIONS THROUGH ROOFS, FLOORS OR WALLS SHALL BE MADE WATER TIGHT BY PROPER FLASHING, CAULKING OR SEALING.

3.11. WHERE PORTIONS OF A RACEWAY ARE PASSING FROM INTERIOR TO THE EXTERIOR OF A BUILDING OR UNDERGROUND TO ABOVE GROUND, THE RACEWAY SHALL BE FILLED WITH AN APPROVED MATERIAL NEAR THE TRANSITION TO PREVENT THE CIRCULATION OF AIR AND MOISTURE PER CEC 300.7.

3.12 OPENINGS AROUND ELECTRICAL PENETRATIONS INTO OR THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING PER CEC 30021.

3.13 ALL FIXTURES AND DEVICES SHALL BE PROVIDED WITH SUITABLE METAL OUTLET BOXES, CONFORMING TO CEC ARTICLE 314. BOXES SHALL BE SUPPORTED RIGIDLY FROM THE STRUCTURE.

3.14. ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. PVC CONDUIT SHALL NOT BE INSTALLED ABOVE GRADE. THE TRANSITION FROM PVC TO METALLIC CONDUIT SHALL BE LOCATED JUST ABOVE THE GRADE.

3.15 RACEWAYS SUBJECT TO PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED STEEL CONDUIT.

3.16. THE CONDUIT ROUTES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE BEST CONDUIT ROUTES BASED ON THE SITE CONDITIONS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER IF THE CONTRACTOR'S PREFERRED CONDUIT ROUTES ARE OTHER THAN WHAT ARE INDICATED ON THE DRAWINGS.

4. GROUNDING

4.1. THE GROUNDING SYSTEM SHALL MEET REQUIREMENTS OF THE CEC AND THE LOCAL ADOPTED CODE. ALL ELECTRICAL EQUIPMENT AND RACEWAYS SHALL BE PROPERLY GROUNDED.

4.2. AN INSULATED EQUIPMENT GROUNDING CONDUCTOR, IN ACCORDANCE WITH CEC 250.122 AND 690.47, SHALL BE PROVIDED IN ALL CONDUITS WITH CURRENT CARRYING CONDUCTORS. ALL LUGS AND CONNECTORS SHALL BE RATED FOR THE CONDUCTOR MATERIAL AND CONDITIONS OF USE.

5. EQUIPMENT

5.1. ALL ELECTRICAL COMPONENTS INSTALLED OUTDOORS, EXPOSED TO THE WEATHER OR IN DAMP LOCATIONS SHALL BE RATED FOR NEMA 3R OR GREATER. INSTALLATION OF THESE COMPONENTS MUST COMPLY WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5.2. ALL RACEWAYS, CABINETS, BOXES, FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.

5.3. AT THE COMPLETION OF THE PROJECT NEATLY TYPED ACCURATE PANELBOARD DIRECTORIES INDICATING ALL BRANCH CIRCUITS AND SPARES WILL BE PROVIDED. ALL SPARES SHALL BE LEFT IN THE OFF POSITION.

5.4. ALL SAFETY SWITCHES SHALL BE HEAVY DUTY TYPE WITH COVER INTERLOCK AND HANDLE LOCK OFF PROVISIONS. SWITCHES SHALL BE MANUFACTURED BY A COMPANY CONSISTENT WITH OTHER INSTALLED EQUIPMENT WHENEVER POSSIBLE. PART NUMBERS, RATING AND FUSING SHALL BE AS SHOWN ON THE DRAWINGS.

5.5. CONTRACTOR SHALL ENSURE ALL CEC AND MAINTENANCE CLEARANCE REQUIREMENTS ARE MET FOR NEW EQUIPMENT AND MAINTAINED FOR EXISTING EQUIPMENT.

5.6 CONTRACTOR SHALL FIELD VERIFY EQUIPMENT CLEARANCES AND PLACEMENTS WHILE COORDINATING LOCATIONS WITH OTHER TRADES. CONSTRUCTION MANAGERS, AND SITE SUPERVISORS PRIOR TO PURCHASING AND INSTALLING THE EQUIPMENT.

5.7. EVERY STRUCTURE AND PORTION THEREOF, INCLUDING NONSTRUCTURAL COMPONENTS THAT ARE PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED AND CONSTRUCTED TO RESIST THE EFFECTS OF EARTHQUAKE MOTION IN ACCORDANCE WITH ASCE 7, EXCLUDING CHAPTER 14 AND APPENDIX 11A. THE SEISMIC DESIGN CATEGORY FOR A STRUCTURE IS PERMITTED TO BE DETERMINED ACCORDANCE WITH SECTION 1613 OR ASCE 7.

5.8. ALL CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES AND COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE JUNCTION OR DEVICE BOX NOR LESS THAN 15 INCHES MEASURED TO THE BOTTOM OF THE JUNCTION OR DEVICE BOX ABOVE THE FINISHED FLOOR.

5.9 ALL RECEPTACLES OUTLETS ON BRANCH CIRCUITS OF 30-AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED OF THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING THE FINISHED FLOOR.

6. WIRING DEVICES:

6.1. RECEPTACLES SHALL BE AS DESIGNATED ON THE DRAWINGS AND SHOULD BE A BRAND CONSISTENT WITH OTHERS IN THE VICINITY WHENEVER POSSIBLE.

6.2. ALL WIRING DEVICES SHALL BE PROVIDED WITH APPROPRIATE COVERPLATES. ANY EMPTY BOXES WILL HAVE BLANK COVER PLATES. COVERPLATES SHALL BE LEXAN, PLASTIC OR STAINLESS STEEL IN FINISHED AREA. GALVANIZED COVERPLATES MAY BE USED IN EQUIPMENT ROOMS.

NOTE: THE DESIGNS SHOWN AND DESCRIBED HERE INCLUDE ALL TECHNICAL DRAWINGS, GRAPHIC AND MODELS ARE PROPRIETARY AND CANNOT BE COPIED, DUPLICATED OR COMMERCIALLY EXPLOITED, IN WHOLE OR IN PART, WITHOUT THE EXPRESS WRITTEN PERMISSION OF STATEN SOLAR CO.

LICENSED SOLAR CONTRACTOR
Staten Solar Co
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR

Legends & General Notes

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

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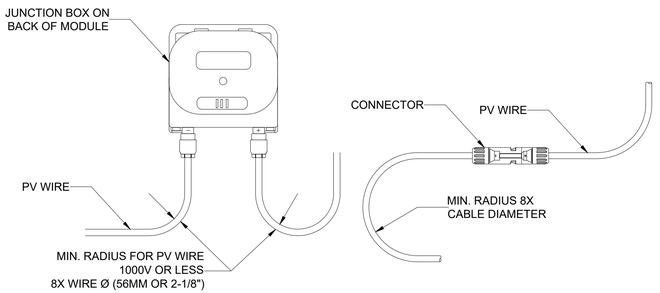


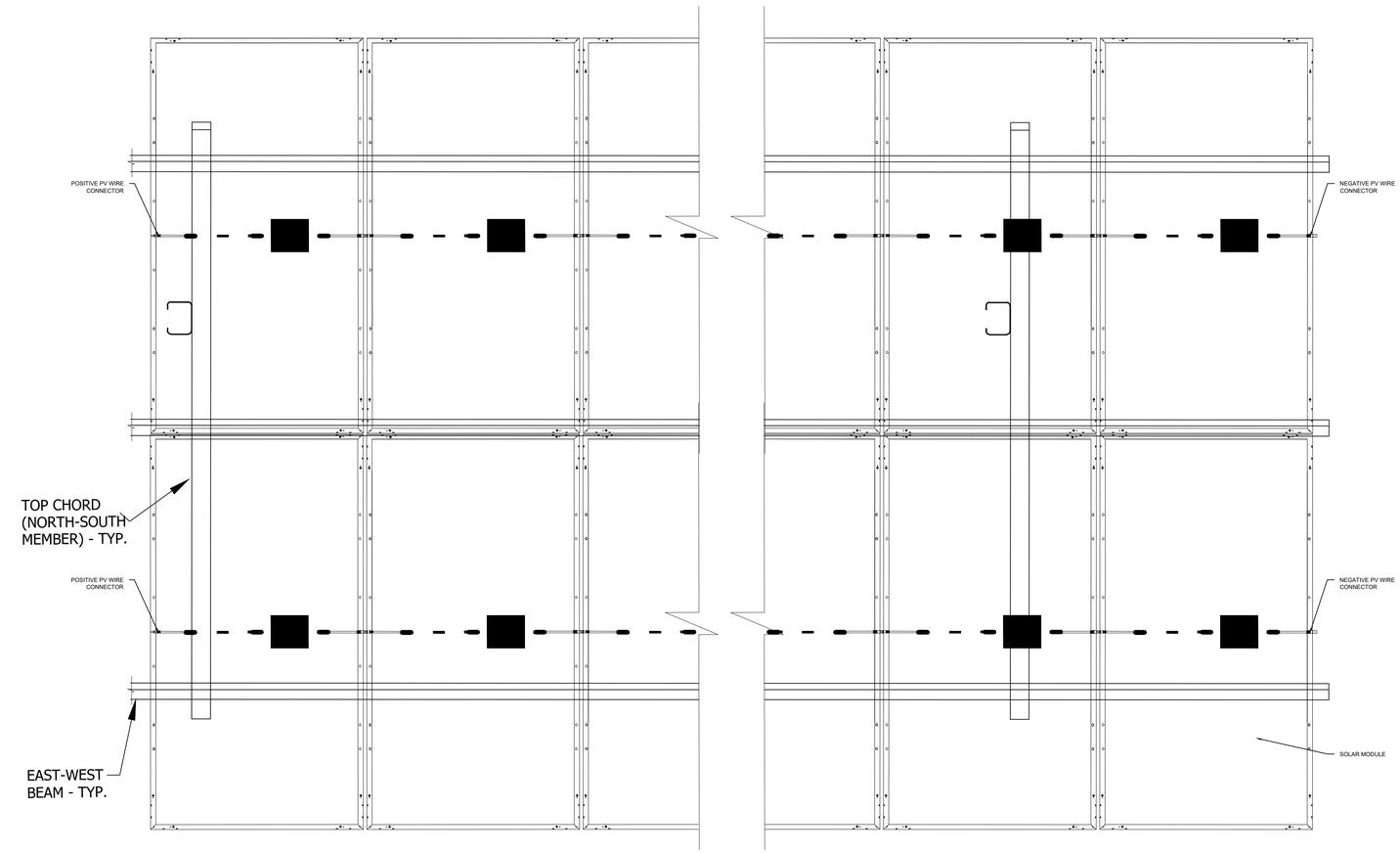
NOTES :

1. OBSERVE MIN. BENDING RADIUS REQUIREMENTS WHEN BUILDING AND SECURING SOURCE CIRCUIT CONDUCTORS TO MODULES AND RACKING.

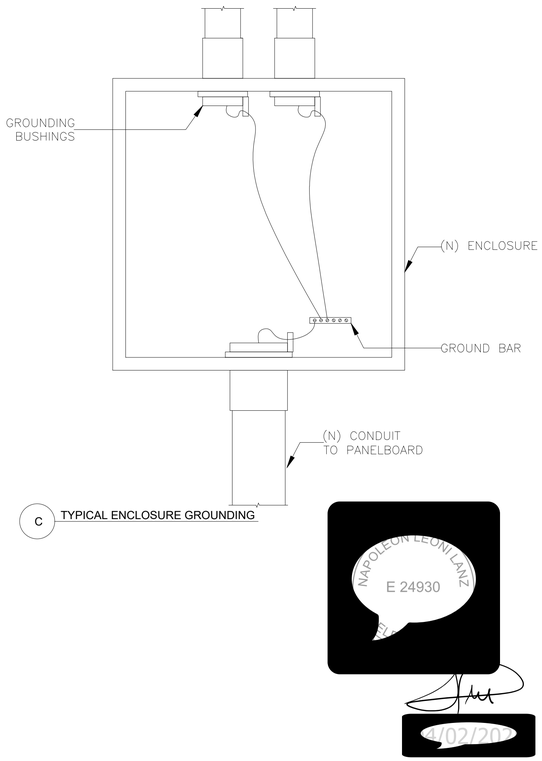
2. SEE MODULE SPEC SHEET OR CABLE SPECIFICATION FOR CABLE DIAMETER.

3. CONNECTORS WILL REMAIN HIDDEN UNDER PV ARRAY.

A PV WIRE BENDING REQUIREMENTS



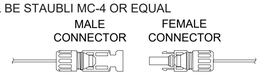
B TYPICAL MODULE TO MODULE WIRE ROUTING FOR GROUND INSTALLATIONS



C TYPICAL ENCLOSURE GROUNDING

NAPOLEON LEONI LANZ
E 24930
4/02/20

6. ALL CONNECTORS WILL BE STAUBLI MC-4 OR EQUAL



ALL CONNECTORS MUST BE:

1. MATED ONLY TO THE CONNECTORS OF THE SAME MANUFACTURER.

2. LOCKING TYPE, RATED TO 1000VDC.

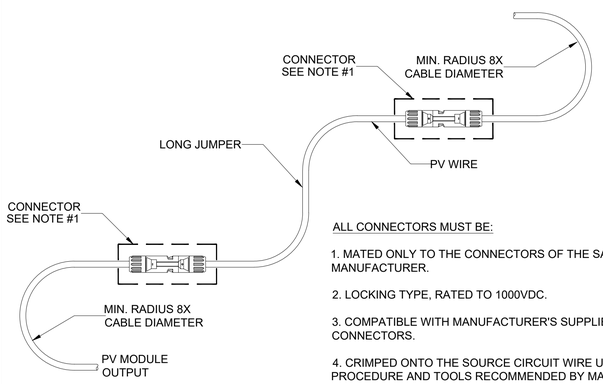
3. COMPATIBLE WITH MANUFACTURER'S SUPPLIED CONNECTORS.

4. CRIMPED ONTO THE SOURCE CIRCUIT WIRE USING PROCEDURE AND TOOLS RECOMMENDED BY MANUFACTURER.

5. SECURED SUCH THAT THEY ARE NOT SUBJECTED TO RAIN OR DIRECT SUNLIGHT, SUCH AS WITHIN MODULE GAPS.

6. ALL CONNECTORS WILL BE STAUBLI MC-4 OR EQUAL

D MODULE CONNECTOR DETAILS



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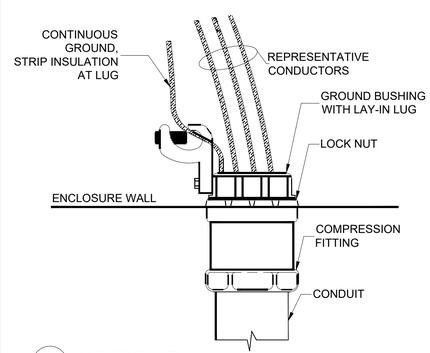

F CONDUIT GROUNDING

STATE OF CALIFORNIA
LICENSED SOLAR CONTRACTOR
Staten Solar / C-46
Lic: 984910
Exp. 6/30/2025

NWRWR

Electrical Details

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

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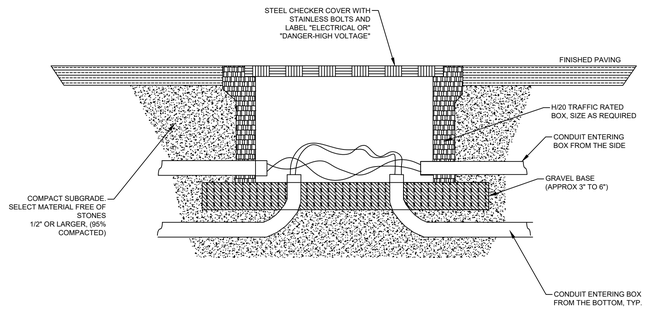
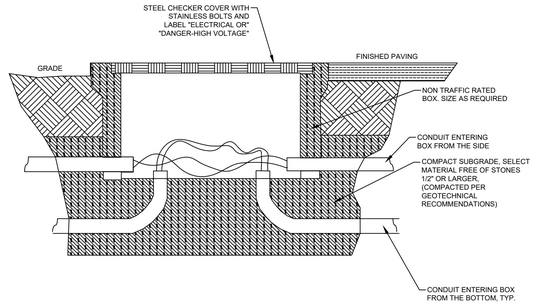


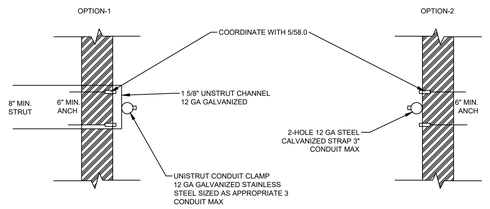
A TRAFFIC RATED PULL BOX

Scale: NTS



B NON-TRAFFIC RATED PULL BOX

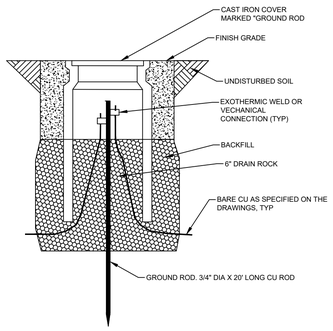
Scale: NTS



NOTE:
1. ALL ANCHORS SHALL BE ICC APPROVED AND ALL ATTACHMENT EQUIPMENT SHALL BE STAINLESS STEEL.
2. EMT, RCS, CONDUIT SHALL BE SUPPORTED WITHIN (3) FEET OF ANY ENCLOSURE, AND MAXIMUM (10) FEET ON CENTER THEREAFTER. LFMC AND NC-PVC JACKETED CABLE WITHIN (1) FEET AND (4.5) FEET.

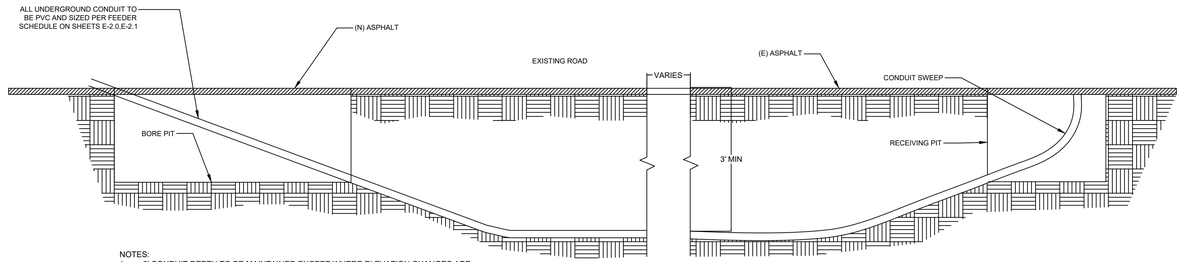
C CONDUIT SUPPORT

Scale: NTS



D GROUND ROD INSPECTION WALL

Scale: NTS



NOTES:
1. 3' CONDUIT DEPTH TO BE MAINTAINED EXCEPT WHERE ELEVATION CHANGES ARE REQUIRED TO AVOID OBSTACLES.

2. LOCATING SERVICE SHALL BE USED ALONG PROPOSED ROUTE. ALL OBSTRUCTIONS SHALL BE POTHOLED TO DETERMINE DEPTH AND LOCATION.

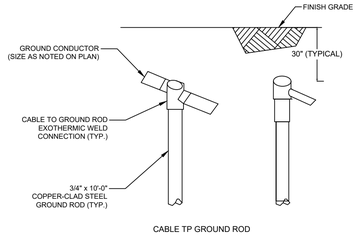
3. BORE AND RECEIVING PIT SHALL BE FILLED. BACKFILL SHOULD BE PLACED IN HORIZONTAL LIFTS AND COMPACTED TO 85% RELATIVE COMPACTION, AS EVALUATED BY ASTM D698. AGGREGATE BASE AND THE UPPER 12 OF SUBCRADE BENEATH PAVEMENT AREAS SHOULD BE COMPACTED TO 95% RELATIVE COMPACTION, AS EVALUATED BY ASTM D698 AND COMPACTED TO 90% FINISH SURFACES SHALL MATCH EXISTING.

4. CONDUIT SWEEP TO BE INSTALLED AT ENDS AFTER BORING IS COMPLETE

E DIRECTIONAL BORING DETAILS

Scale: NTS

NOTES:
1. ALL WELDED BOND MUST BE INSPECTED PRIOR TO DIRECT BURIAL OR EMBEDDED IN CONCRETE.
2. PREFABRICATED CABLE TO REINFORCING BAR BONDING ASSEMBLIES BY ERITECH OR EQUAL.

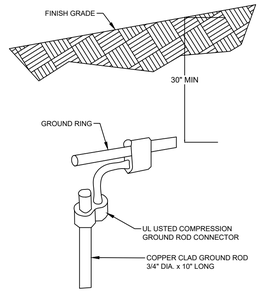


CABLE TP GROUND ROD

F WELDED GROUNDING CONNECTION DETAILS

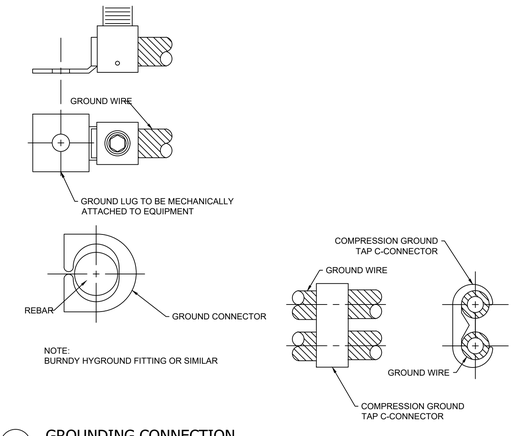
Scale: NTS

6. ALL CONNECTORS WILL BE STAUBLI MC-4 OR EQUAL



G BURIED GROUND ROD DETAILS

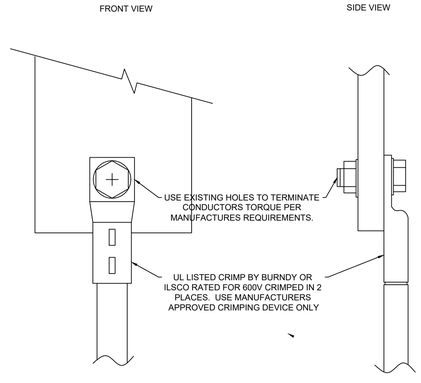
Scale: NTS



NOTE:
BURNDY HYGROUND FITTING OR SIMILAR

H GROUNDING CONNECTION

Scale: NTS



NOTES:

1. FOR GROUNDING CONDUCTOR TERMINATION, USE ONE OF THE ACCEPTABLE METHODS FOUND IN CEC 250.8 (A).

I CONDUCTOR TERMINATION

Scale: NTS

4/02/20

LICENSED SOLAR CONTRACTOR
Staten Solar / C 46
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR

Electrical Details

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER | TITLE: | SUBJECT: | PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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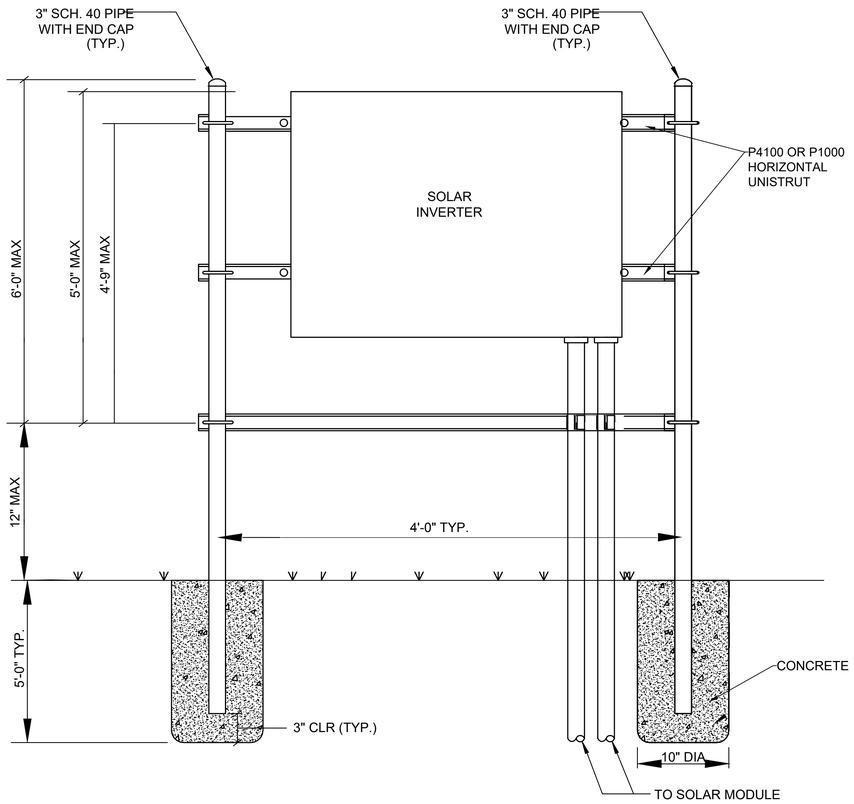
DWG NO: E-6A

PROJ NO: LMR-190

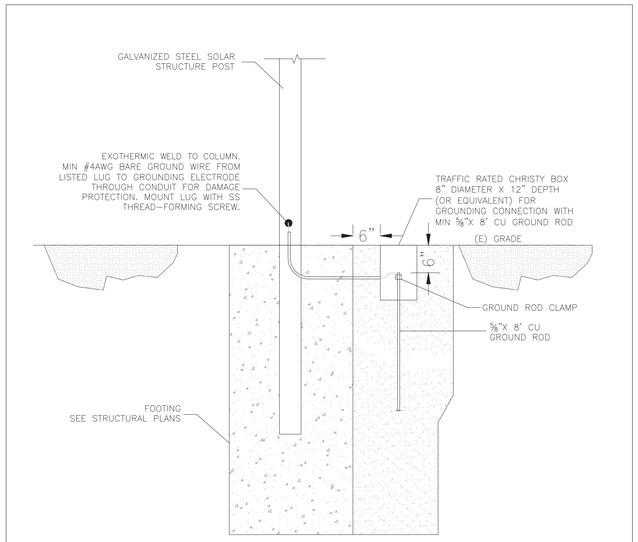


A INVERTER MOUNTING DETAILS

Scale: NTS

Dimensions (H x W x D)	39.4 x 23.6 x 10.24 in (1000 x 600 x 260 mm)
Weight	Inverter: 123.5 lbs (56 kg); Wire-box: 33 lbs (15 kg)

DIMENSION AND WEIGHT OF THE INVERTER



B COLUMN GROUNDING DETAIL

NWRWR

Electrical Details

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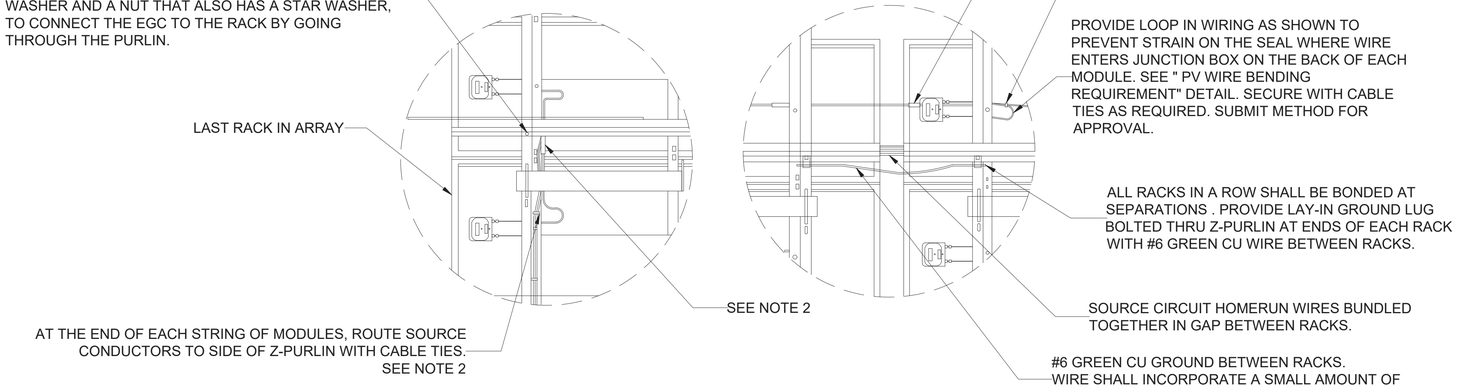
PROJ NO: LMR-190

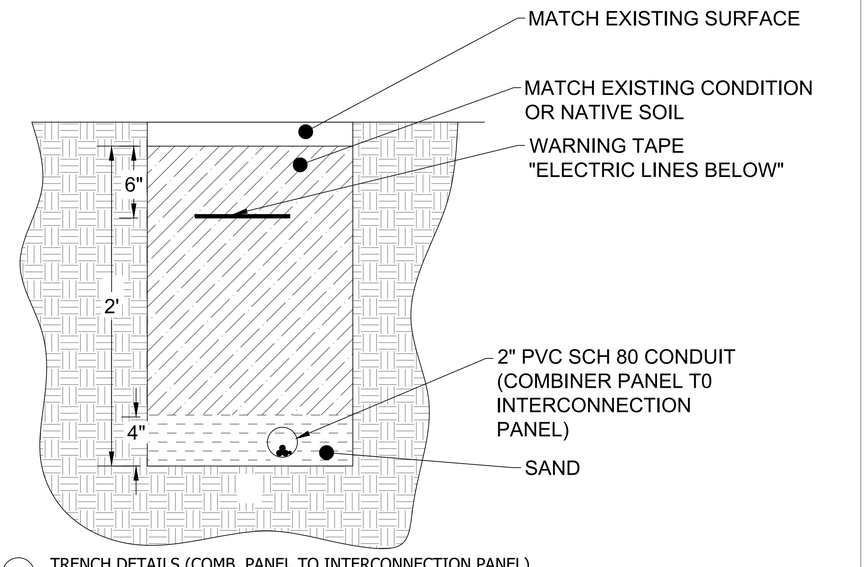


A SOURCE CIRCUIT WIRE MANAGEMENT

NOTES :

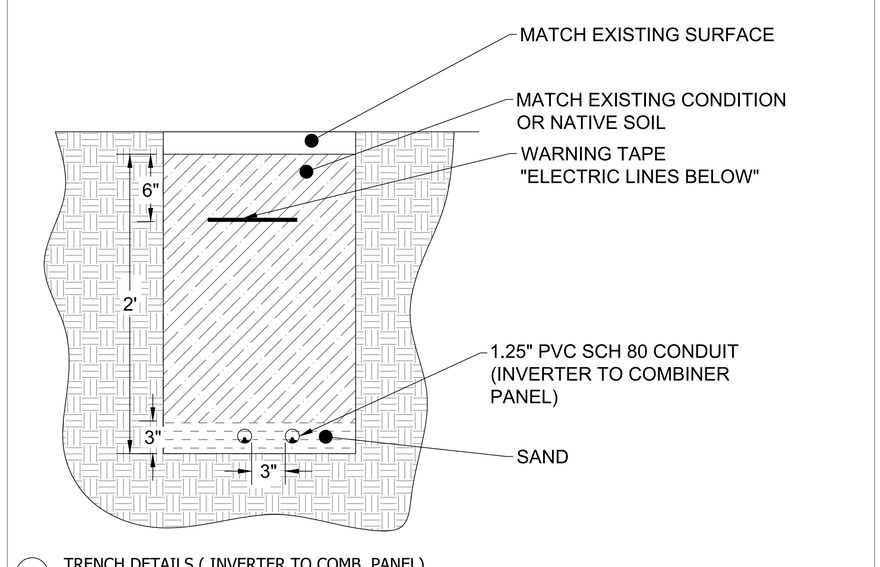
1. NO PLASTIC-ONLY CABLE TIES. TIES SHALL BE BY HELLERMANNTYTON. ACTUAL LENGTH TO BE DETERMINED BY SUBCONTRACTOR BASED ON MOUNTING LOCATION.

2. SUBCONTRACTOR TO PROVIDE MEANS TO PREVENT CHAFING OF WIRES WHERE THEY MAY COME IN CONTACT WITH SHARP EDGES OF RACK. SUBMIT PROPOSED METHOD OF PROTECTION FOR APPROVAL.



B TRENCH DETAILS (COMB. PANEL TO INTERCONNECTION PANEL)

Scale: NTS



C TRENCH DETAILS (INVERTER TO COMB. PANEL)

Scale: NTS

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State of California

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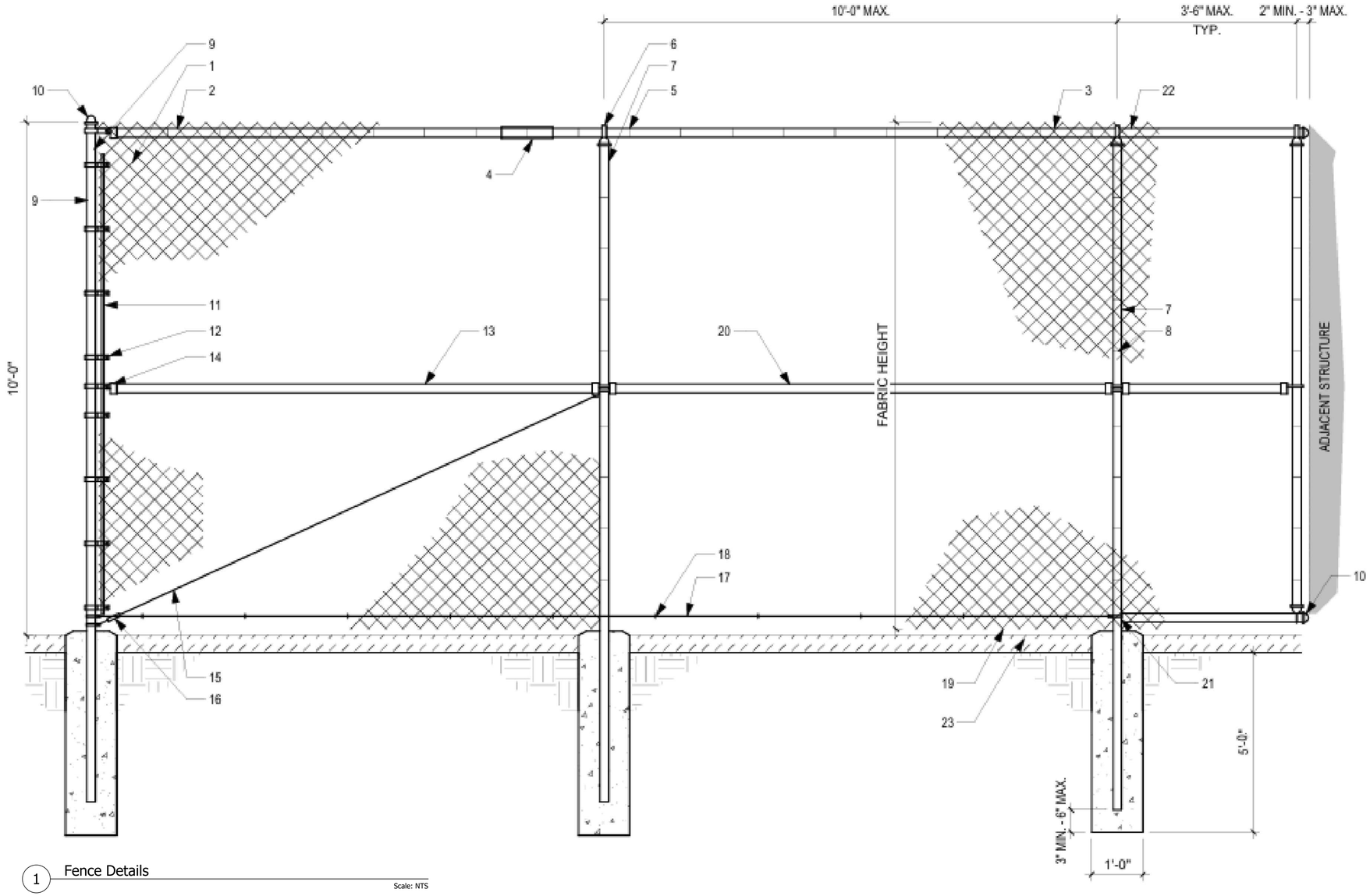
DWG NO: E-6C

PROJ NO: LMR-190

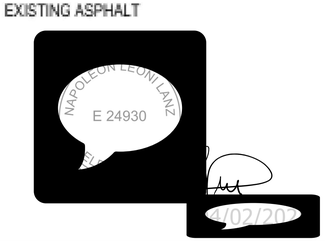


1 Fence Details

Scale: NTS

NOTES:

1. 1" x 1" CHAIN LINK FABRIC.
2. 1.900" OD TOP RAIL FOR 1" X 1" CHAIN LINK FABRIC WITHOUT PRIVACY SLATS.
3. TOP SELVAGE.
4. SLEEVE CONNECTOR AS OCCURS.
5. RAIL TIE IS 18" OC.
6. LINE POST LOOP TOP.
7. 1.900" OD LINE POST.
8. LINE POST TIE AT 12" OC.
9. 1.900" OD TERMINAL POST.
10. TERMINAL POST DOME TOP.
11. TENSION BAR.
12. TENSION BAND AT 15" OC MAXIMUM.
13. BRACE RAIL AT ALL TERMINAL POSTS WHEN FENCE HEIGHT IS GREATER THAN 6'-0". MATCH OD OF TOP RAIL.
14. RAIL END.
15. 3/8" DIAMETER TRUSS ROD.
16. TRUSS ROD ADJUSTING UNIT.
17. 0.177" DIAMETER TENSION WIRE.
18. HOG RING AT 24" OC MAXIMUM.
19. BOTTOM SELVAGE.
20. MIDDLE RAIL AT ALL LINE POSTS WHEN FENCE HEIGHT IS 12'-0" MATCH OD OF TOP RAIL.
21. SHOP WELD PIPE TO VERTICAL, TRIM SAW CUT END IN FIELD AS REQ. SEE DETAIL 13/A0.902.
22. 1.900" OD TOP HORIZONTAL CONTINUOUS OVER TOP, NO SPLICE BETWEEN ADJACENT POSTS.
23. EXISTING ASPHALT



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State of California

NWRWR

Electrical Details

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
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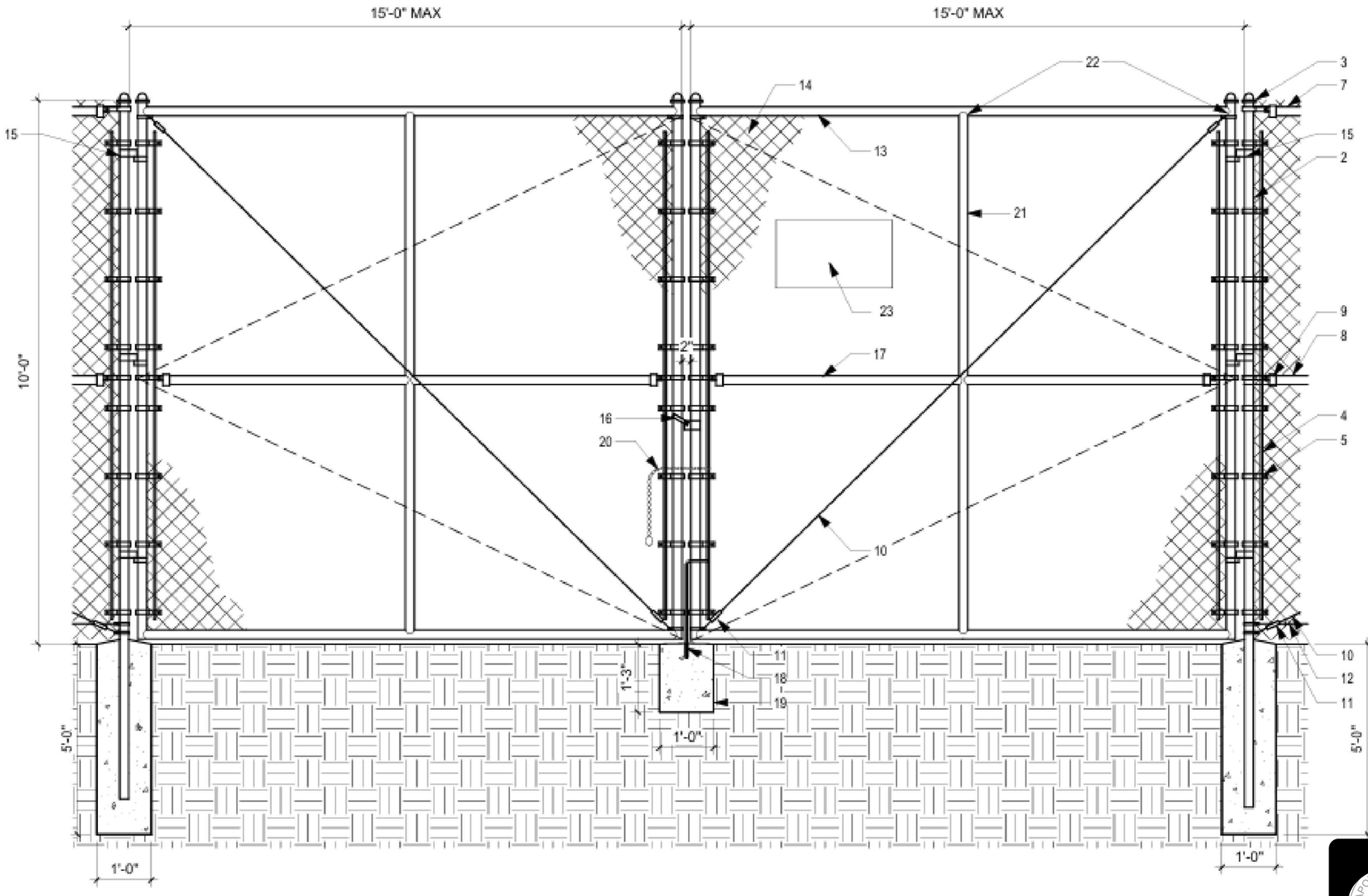
PROJ NO: LMR-190



1 Fence Gate Details

Scale: NTS

NOTES:

1. FOR MAINTENANCE ACCESS VEHICLE GATES IN FENCES OF ANY HEIGHT.
2. 1.900" GATE POST.
3. DOME CAP.
4. TENSION BAR.
5. TENSION BAND AT 15" OC MAXIMUM.
6. CHAIN LINK FANBRIC.
7. 1.900" TOP RAIL FOR 1" X 1" CHAIN LINK FABRIC.
8. BRACE RAIL AT GATE POST. MATCH OD OF TOP RAIL.
9. RAIL END.
10. 3/8" DIAMETER TRUSS ROD.
11. TRUSS ROD ADJUSTING UNIT.
12. 0.177" DIAMETER TENSION WIRE.
13. 2.375" OD GATE FRAME WORK FOR GATES WITH 1" X 1" CHAIN LINK FABRIC.
14. 1" x 1" CHAIN LINK FABRIC TO MATCH FENCE.
15. GATE HINGE, 4 PER LEAF FOR GATES GREATER THAN 8'-0" IN HEIGHT.
16. GATE LATCH. KNOW BOX WHERE REQUIRED PER PLAN.
17. BRACE RAIL WHEN GATE IS 8'-0" OR GREATER MEMBER SECTION TO MATCH GATE FRAMEWORK.
18. DROP ROD AND SLEEVE SET IN CONCRETE.
19. 12" DIAMETER BY 15" DEEP CONCRETE FOOTING FOR DROP ROD AND SLEEVE SET IN CONCRETE FOOTING. 12" WIDE BY 3'-6" DEEP CONCRETE FOR FOOTING WHEN GATE IS OVER OTHER SERVICE THAN CONCRETE SURFACE.
20. 3/8" X 36" LONG CHAIN WITH 3/4" HARNESS SNAP.
21. 2.375" VERTICAL BRACE RAIL WHEN GATE WIDTH IS 8'-0" OR GREATER OD TO MATCH GATE FRAMEWORK.
22. ALL GATE TUBE CONNECTION TO BE SHOP WELDED PRIOR TO GALVANIZING W/ FILLET TO MATCH SMALLEST TUBE WALL THICKNESS.
23. FENCE SIGNAGE POSTED "RESTRICTED ACCESS ROUND LEVEL MOUNTED SOLAR PV MODULE"

NAPOLEON LEONI LANZ
E 24930
4/02/20

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State of California

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Electrical Details
392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd.
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DWG NO: E-6E

PROJ NO: LMR-190

Vertex N

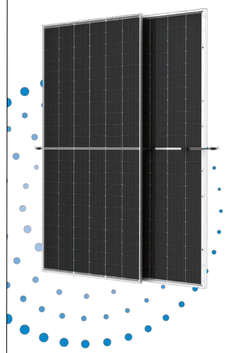
BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

PRODUCT: TSM-NEG19RC.20
POWER RANGE: 580-605W

605W
MAXIMUM POWER OUTPUT

0~+5W
POSITIVE POWER TOLERANCE

22.4%
MAXIMUM EFFICIENCY



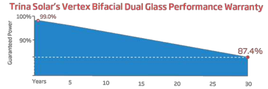
High customer value
- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lowest guaranteed first year and annual degradation;
- Designed for compatibility with existing mainstream system components
- Higher return on Investment

High power up to 605W
- Up to 22.4% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

High reliability
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

High energy yield
- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.30%) and operating temperature
- Up to 30% additional power gain from back side depending on albedo

Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



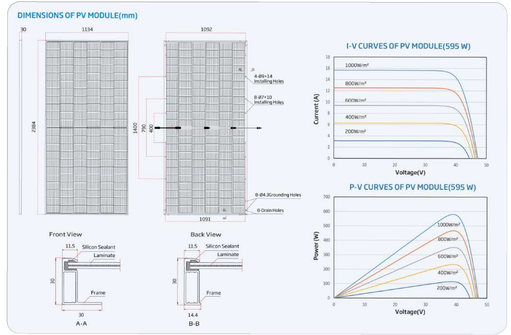
Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716/UL61730
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
OHSAS18001: Occupational Health and Safety Management System

Trinasolar

Vertex N BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(595 W)

P-V CURVES OF PV MODULE(595 W)

ELECTRICAL DATA (STC)

Peak Power Watts-Pmax (Wp)*	580	585	590	595	600	605
Power Tolerance-Pmax (W)	0~+5					
Maximum Power Voltage-Vmpp (V)	39.2	39.5	39.7	40.0	40.3	40.5
Maximum Power Current-Impp (A)	14.79	14.82	14.86	14.89	14.91	14.94
Open Circuit Voltage-Voc (V)	47.2	47.5	47.8	48.1	48.4	48.7
Short Circuit Current-Isc (A)	15.65	15.68	15.72	15.76	15.80	15.83
Module Efficiency η m (%)	21.5	21.6	21.8	22.0	22.2	22.4

STC: Irradiance 1000W/m2, Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

Electrical characteristics with different power bin (reference to 10% irradiance ratio)

Total Equivalent power -Pmax (Wp)	626	632	637	643	648	653
Maximum Power Voltage-Vmpp (V)	39.2	39.5	39.7	40.0	40.3	40.5
Maximum Power Current-Impp (A)	15.97	16.01	16.05	16.08	16.10	16.14
Open Circuit Voltage-Voc (V)	47.2	47.5	47.8	48.1	48.4	48.7
Short Circuit Current-Isc (A)	16.90	16.93	16.98	17.02	17.06	17.10
Irradiance ratio (rear/front)	10%					

Power Bifaciality:(95±5)%.

ELECTRICAL DATA (NOCT)

Maximum Power-Pmax (Wp)	442	446	450	454	458	461
Maximum Power Voltage-Vmpp (V)	36.8	37.1	37.3	37.6	37.8	38.0
Maximum Power Current-Impp (A)	12.00	12.02	12.05	12.08	12.12	12.14
Open Circuit Voltage-Voc (V)	44.7	45.0	45.3	45.6	45.9	46.1
Short Circuit Current-Isc (A)	12.61	12.64	12.67	12.70	12.73	12.76

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1134×30 mm (93.86×44.65×1.18 inches)
Weight	33.1kg (72.97lb)
Front Glass	2.0 mm (0.08 inches), High-Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
Frame	30mm(1.18 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	35A

WARRANTY

12 year Product Workmanship Warranty
30 year Power Warranty
1% first year degradation
0.40% Annual Power Attenuation
(Please refer to product warranty for details)

PACKAGING CONFIGUERATION

Modules per box: 36 pieces
Modules per 40' container: 720 pieces

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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Version number: TSM_EN_2023_PA2
www.trinasolar.com
Preliminary

Trinasolar

CPS

Datasheet

50/60 kW, 1000 Vdc String Inverters for North America

The 50 & 60 kW (55 & 66 kVA) medium-power CPS three-phase string inverters are designed for ground mount, large rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 98.8% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications.

The CPS 50/60KTL products ship with either the Standard Wire-box or the Rapid Shutdown Wire-box, each fully integrated and separable with touch-safe fusing, monitoring, and AC and DC disconnect switches. The integrated PLC transmitter in the Rapid Shutdown Wire-box enables PVRSS certified module-level rapid shutdown when used with the Tigo TS4-F/TS4-A-F/TS4-A-2F products, APS RSD-S-PLC/RSD-D products, and NEP PVG-2 products. The CPS FlexOM Gateway enables monitoring, controls and remote product upgrades.

CPS SCA50KTL-DO/US-480
CPS SCA60KTL-DO/US-480

Key Features

- NEC 2017/2020 PVRSS certified for rapid shutdown
- 55 & 66 kVA rating allows max rated active power @ ±0.91 PF
- Selectable max AC apparent power of 50/55 kVA and 60/66 kVA
- NEC compliant and UL listed arc-fault circuit protection
- 15-90° mounting orientation for low profile roof installs
- Optional FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 3 MPPTs with 5 inputs each for maximum flexibility
- NEMA Type 4X outdoor rated enclosure
- UL 1741-SA certified to CA Rule 21, including SA8 - SA18
- UL 1741-SB and IEEE 1547-2018 certified
- Separable wire-box design for fast service
- Standard 10-year warranty with extensions up to 20 years

50/60KTL Standard Wire-box

50/60KTL Rapid Shutdown Wire-box

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CPS

Technical Data

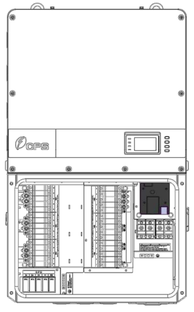
Model Name	CPS SCA50KTL-DO/US-480	CPS SCA60KTL-DO/US-480
DC Input		
Max. PV power	90 kW (33 kW per MPPT)	
Max. DC input voltage	1000 Vdc	
Operating DC input voltage range	200-950 Vdc	
Start-up DC input voltage / power	330 V / 80 W	
Number of MPP trackers	3	
MPPT voltage range @ PF>0.99	480-850 Vdc	540-850 Vdc
Max. PV short-circuit current (Isc x 1.25)	204 A (68 A per MPPT)	
Number of DC inputs	15 inputs, 5 per MPPT	
DC disconnection type	Load-rated DC switch	
DC surge protection	Type II MOV	
AC Output		
Rated AC output power @ PF>0.99 to ±0.91[1]	50 kW	60 kW
Max. AC apparent power (selectable)	50 / 55 kVA	60 / 66 kVA
Rated output voltage	480 Vac	
Output voltage range[2]	422 - 528 Vac	
Grid connection type	3Ø / PE / N (Neutral optional)	
Max. AC output current @ 480 Vac	60.2 / 66.2 A	72.2 / 79.4 A
Rated output frequency	60 Hz	
Output frequency range[3]	57 - 63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current THD @ rated load	<3%	
Max. fault current contribution (1 cycle RMS)	64.1 A (1.06/0.88 PU)	
Max. OCPD rating	110 A	125 A
AC disconnection type	Load-break rated AC switch	
AC surge protection	Type II MOV	
System and Performance		
Topology	Transformerless	
Max. efficiency	98.8%	
CEC efficiency	98.5%	
Stand-by / night consumption	<1 W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range[3]	-22°F to +140°F / -30°C to +60°C	
Non-operating temperature range[4]	No low temp minimum to +158°F / +70°C maximum	
Operating humidity	0 to 100%	
Operating altitude	13123 ft / 4000 m (derating from 9843 ft / 3000 m)	
Audible noise	<60 dBA @ 1 m and 25°C	
Display and Communication		
User interface and display	LCD+LED	
Inverter monitoring	SunSpec, Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (H x W x D)	39.4 x 23.6 x 10.24 in (1000 x 600 x 260 mm)	
Weight	Inverter: 123.5 lbs (56 kg); Wire-box: 33 lbs (15 kg)	
Mounting / installation angle[5]	15 to 90 degrees from horizontal (vertical or angled)	
AC termination	M8 stud type terminal block (wire range: #6 - 3/0 AWG CU/AL; lugs not supplied)	
DC termination[6]	Screw clamp, neg. busbar (RSD version[7]) wire range: #14 - #6 AWG CU	
Fused string inputs (5 per MPPT)[7]	RSD[8] and Standard Wire-box: 20 A fuses provided (fuse values up to 30 A acceptable)	
Safety		
Certifications and standards	UL 1741-SA Ed. 2, UL 1699B, CSA-C22.2 NO.107.1-01, IEEE 1547a-2014, FCC PART15	
Selectable grid standard	IEEE 1547a-2014, CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt	
Warranty		
Standard	10 years	
Extended terms	15 and 20 years	

1) Active power derating begins at PF = ±0.91 to ±0.80 when max AC apparent power is set to 55 or 66 kVA.
2) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.
3) Active power derating begins at 40°C when PF = ±0.9 and MPPT1/mini; at 45°C when PF = 1 and MPPT1/mini; and at 50°C when PF = 1 and MPPT2/700 Vdc.
4) See user manual for further requirements regarding non-operating conditions.
5) Shade cover accessory required for installation angles of 75 degrees or less.
6) RSD-wire box only includes fuse and fuse holders on the positive polarity, compliant with NEC 2017/2020.
7) Fuse values above 20 A have additional spacing requirements or require the use of the Y-Comb Terminal Block. See user manual for more details.
8) Firmware version 17.0 or later required.

CPS

Datasheet

CPS FlexOM Gateway V2



The CPS FlexOM Gateway V2 is a new communications and controls solution for the CPS 25, 36, 50, 60, 100, 125, and 250/275 kW inverters. The gateway is a Modbus client data logger and communications device. This flexible solution enables fast, efficient field service for CPS inverters via remote diagnostics and troubleshooting, setting adjustments, and firmware upgrades facilitated by the CPS Service team.

FlexOM Portal Bundles are offered by CPS with web portal data access to features such as data charting, monitoring alerts, remote resetting, kiosk view, and more!

Key Features

- Can be installed in a single inverter wire-box with no power or extra equipment required*
- Modbus communications input (up to 32 devices per card) - Modbus RS485
- Complete controls functionality via Modbus (per inverter or broadcast command)
- Flexible outbound communications
- Programmable IP address for customer direct data (SunSpec XML HTTPS format)
- Remote firmware update solution reduces the need for a truck roll
- Pass-through data via aux port for local third-party solutions (Modbus RTU via RS485)
- Includes WiFi capability for use with "CPS Connect Pro" iOS or Android smart phone app
- Accessory enclosure allows for DIN rail mounting in third-party communication enclosures
- Distinguishable from the previous FlexOM card by its black printed circuit board

Excluding legacy CPS 36 kW wire-boxes and 250/275 kW inverters

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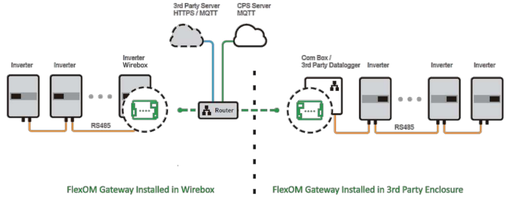
Chint Power Systems America
1380 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

CPS

Technical Data

Model Name	CPS FlexOM Gateway V2	CPS FlexOM Portal Bundle	CPS FlexOM-4G V2 Portal Bundle
Hardware			
FlexOM Gateway V2 Card	X	X	X
Metal DIN rail enclosure	X	X	X
Cellular antenna with 3 m cable, mounting bracket and cable gland (for 4G pkgs only)			X
Misc. connectors and standoff screws	X	X	X
Pre-installed 4G SIM card			X
Software Performance Packages			
5 years of web portal access		X	X
Asset portfolio feature		X	X
Monitoring alerts		X	X
On/off reset remotely		X	X
Arc-fault clearing remotely		X	X
Active power setting remotely		X	X
Power factor setting remotely		X	X
Fault code observation		X	X
Public kiosk view		X	X
5 years of rolling data storage		X	X
"End user" account admin		X	X
Communications			
Inverter to gateway	RS485		
Internet access	Ethernet	Ethernet	4G Cellular
Inverter connections per card	32		
Protocol	SunSpec XML, HTTPS, DHCP, DNS Resolution, CPS Modbus RTU, TCP		
Setup and Programming			
Local programming	CPS Connect Pro app (iOS and Android)		
Remote programming	CPS Service		
Datalogging Specifications			
Data sampling rate	Programmable data sampling (1- to 20-minute sample rate)		
Local data storage	30 days based on 20-minute intervals[1]		
Data parameters	Modbus ID, Inverter S/N's, Model, TYield/DYield(kWh), RunT(min), Mode, Upv(V), Ipv(A), Pack(W), PF, Freq(Hz), Uabc(V), Iabc(A)		
Power Supply			
DC input voltage	9-24 Vdc, 28 Vdc max. (provided when installed in inverter wire-box)		
Power consumption	<6 W		
Environmental Parameters			
Ambient temperature range	-30 to +85°C, natural convection cooling		
Environmental protection	Installed in NEMA 4X inverter wire-box (CPS 36kW inverters require enclosure installed - included in kit)		
Relative humidity	<85% non-condensing		
Mechanical Parameters (per unit)			
FlexOM Gateway Card dimensions (H x W x D)	3.97 x 2.71 x 0.83 in (101 x 69 x 21 mm)		
FlexOM Gateway enclosure dimensions (H x W x D)	4.1 x 3.0 x 1.3 in (103 x 77 x 32 mm)		
FlexOM Gateway Card and enclosure weight	0.3 lb (150 g)		

1) FlexOM Gateway V2 only stores data when the Gateway card is continuously powered.



FlexOM Gateway Installed in Wirebox

FlexOM Gateway Installed in 3rd Party Enclosure

Specifications

Eaton DH366FRK

Catalog Number: DH366FRK

Eaton Enhanced visible blade single-throw safety switch, 600 A, NEMA 3R, Painted galvanized steel, Class H, Three-pole, Three-wire, 600 V, Max Hp: 200, 400, 500 hp (3PH @240,480,600 V), (1)#2-(1)600 kcmil; and (1)#1/0-(1)750 kcmil Al

General specifications

Product Name	Catalog Number
Eaton heavy duty fusible safety switch	DH366FRK
UPC	**Product Length/Depth**
782113207568	58 in
Product Height	**Product Width**
12 in	27.5 in
Product Weight	**Warranty**
160 lb	Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.
Certifications	**Catalog Notes**
UL Listed	Suitable for service entrance use with a Neutral Kit installed

EATON
Powering Business Worldwide

Physical Attributes

Enclosure
NEMA 3R

Enclosure material
Painted galvanized steel

Fuse class provision
Class H

Fuse configuration
Fusible without neutral

Number Of Poles
Three-pole

Number of wires
3

Type
Heavy duty fusible safety switch

Performance Ratings

Amperage Rating
600A

HP rating - max
200, 400, 500 hp (3PH @240,480,600 V)

NEMA rating
NEMA 3R

Voltage rating
600 V

Miscellaneous

Product Category
Heavy Duty, Fusible without neutral

Resources

Specifications and datasheets
Eaton Specification Sheet - DH366FRK

Warranty guides
Selling Policy 25-000 - Distribution and Control Products and Services

NAPOLEON LEONI LANZ
E 24930

4/02/202

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Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

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Eaton.com/socialmedia

LICENSED SOLAR CONTRACTOR
Staten Solar, Inc.
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR

DATA SHEETS
392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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DWG NO: DS-1
PROJ NO: LMR-190

Hammond Power Solutions

SALES QUOTE

1100 Lake Street
Baraboo, Wisconsin, United States
53913
Phone: 608-356-3921

QUOTE #: EDQ230955-1
QUOTE NAME: MV STEP UP STEP DOWN
HPS REFERENCE:
PREPARED ON: 1/9/2025

QUOTE FOR
CED Chi 1053
1210 W 7th St
Chico, California 95928
United States
530-895-8611

Contact: Craig Cardoza, 530-895-8611, ccardoza@cedchico.com

INFORMATION

Prepared By:	Steve DAvanzo	Net Total
Status:	Open	All prices are in USD
Expires On:	2/8/2025	

COMMENTS

General Comments:

- Pricing is valid for only the features and ratings explicitly stated in this quotation. Customer is to advise on any additional requirements for HPS to take into consideration.

- All weights and dimensions are estimated. Approval or Record drawings can be provided if requested at time of order. Drawings based on product type shall be available in approx. 1-3 weeks after receipt of order.

- Pricing is valid for only the features and ratings explicitly stated in this quotation. Customer is to advise on any additional requirements for HPS to take into consideration.

- All Quotations and orders will be subject to tariffs at time of order or shipment.

- All weights and dimensions are estimated. Approval or Record drawings can be provided if requested at time of order. Drawings based on product type shall be available in approx. 1-3 weeks after receipt of order.
Standard production tests performed per IEEE C57.12.01 include:
- D.C. Resistance Measurement
- Voltage Ratio (turns ratio)
- Polarity and Phase-Relation Test
- Dielectric (insulation resistance) Test (ONLY on units greater than 600V)
- Applied Voltage Test
- Induced Voltage Test
- No-Load and Excitation Current Test
- Impedance Voltage and Load Loss Test
- Corona Testing (partial discharge) (ONLY on units greater than 1.2kV)

Optional test reports for catalog parts:
- Pass/Fail serialized report of routine factory tests: $50 adder per unit

Optional test reports for custom parts:
- Pass/Fail serialized report of routine factory tests: $50 adder per unit
- C9 report (w/ measured values): $375 adder per unit (included on units 300kVA and larger)
- Witness testing of standard factory tests available for an additional $1,100.
- Heat Run as per CSA C9 - $750 per unit, witness $1,100 per unit
- BIL Tests as per CSA C9 - $750 per unit, witness $1,100 per unit
- Corona Tests as per CSA C9 (ONLY below 2.5kV) - $750 per unit, witness $1,100 per unit
- Sound Tests as per CSA C9 - $375 per unit, witness $750 per unit
- Any purchased type testing or test report adders must be itemized on the PO

This quotation is subject to the Hammond Power Solutions Inc. (HPS) Standard Terms and Conditions.

Prices quoted may be subject to material cost surcharges for items that ship 90 days past order receipt without prior consent from HPS.
Prices quoted can be subject to adjustment should Duty and Tariff rates change from time of bid/quotation to time of Product shipment. HPS reserves the right to adjust its pricing for Products affected directly or indirectly by changing duties/tariffs/trade agreements

Minimum order restrictions may apply.

All prices quoted are valid ONLY if subsequent order quantity(s) or order release quantity(s) are equal to or greater than the quantity(s) quoted.
Estimated lead times are subject to material availability and manufacturing capacity at the time of order placement. Customer approval drawings, optional tests and certain equipment options can extend lead times.

All prices quoted are Ex Works HPS Factory or HPS Warehouse.
Prepaid freight, when authorized by Seller, will be per either the applicable HPS Customer Freight Policy or HPS Standard Freight Policy. Prepaid freight will only be allowed for one (1) order to one (1) location within North America, with at most two (2) releases. Only complete order line items will be shipped unless otherwise stated on the quotation.
Prepaid freight, when authorized, will be via Seller's authorized carriers only.
Where applicable, shipments requiring additional documentation (customs, etc.) will be subject to additional charges (typically for shipments outside North America).
Special or Custom Products may be combined with Standard Products for prepaid freight with prior Seller's approval only. Otherwise, they will be shipped "Plus Freight".
All weekend shipments to Buyer will have a service charge applied to the order in addition to any other shipping and order charges.

Line Number	Label	Part Number / Description	Quantity	UOM	Net Price	Net Total
1		Transformers **Special**: 3ph 500kVA 480V-4160V 60Hz AL	1	ea		

Technical Particulars:
Product Line: Medium Voltage Distribution Transformer
Duty: General Duty
Phase: 3
Rating: 500 kVA
Frequency: 60Hz
Primary Voltage: 480D
Primary Connection: Delta
Primary BIL: -
Primary FCAN(Std): 2x2.5%
Primary FCBN(Std): 2x2.5%
Secondary Voltage: 4160D
Secondary Connection: Delta
Secondary BIL: 30kV
Material: Aluminum
Vector Configuration: Dd0 (0°)
Ambient Temp Rating: 40°C
Temperature Rise: 150°C
Insulation Class: 220°C
Seismic Compliance: IBC 2018 (Sds=2.0, z/h=0, Ip=1.5)
Sound Level: 60 dBA (IEEE C57.12.01)
Efficiency Regulation: No Efficiency Specification
Approval: CSA, UL
Primary Termination (Std): Mounting Pads
Secondary Termination (Std): Mounting Pads
Enclosure Type: Type 3R / IP24
Enclosure Finish: ANSI 61 Grey, UL50
Enclosure PN (Std): NJ2-N3R
Enclosure Dimensions: 59in/1499mm(H), 48.5in/1232mm(W), 38in/966mm(D)
Net Weight: 2900 lb / 1320 kg
Nameplate: Standard
Testing: C9 Test (Included)
*** Price includes C9 test report of routine factory testing with detailed values.***

Typical Lead Time: 55-60 Working Days - (Non-Returnable)
*** Quoted lead times are for manufacturing only and will commence upon receipt of approved drawings if requested / required.
Freight: Prepaid and Add

Please note that the item(s) quoted within this document each list a level of expected efficiency performance.
It is the customer's responsibility to ensure that the items quoted meet the applicable minimum energy efficiency level mandated by law within the jurisdiction of item installation.
The customer may be expected to validate any claim for exemption within that jurisdiction, based on either item type, special application or exportation.
For additional information please contact HPS.

Line Number	Label	Part Number / Description	Quantity	UOM	Net Price	Net Total
2		Transformers **MG3A0500SKSAHCO**: 3ph 500kVA 4160V-480Y/277V 60Hz AL	1	ea		

Technical Particulars:
Product Line: Medium Voltage Distribution Transformer
Duty: General Duty
Phase: 3
Rating: 500 kVA
Frequency: 60Hz
Primary Voltage: 4160D
Primary Connection: Delta
Primary BIL: 30kV
Primary FCAN (NPL): 2x2.5%
Primary FCBN (NPL): 2x2.5%
Secondary Voltage: 480Y/277
Secondary Connection: Wye-N
Secondary BIL: 10kV
Material: Aluminum
Vector Configuration: Dyn1 (-30°)
Temperature Rise: 150°C
Insulation Class: 220°C
Seismic Compliance: IBC 2018 (Sds=2.0, z/h=0, Ip=1.5)
Sound Level: 60 dBA (IEEE C57.12.01)
Impedance (Std): 4% - 7.5%
Efficiency Regulation: DOE 2016 (US), NRCAN 2019 (Canada), NMX 2021 (Mexico)
Approval: CSA, UL
Primary Termination (NPL): Mechanical Lugs
Secondary Termination (NPL): Mounting Pads
Enclosure Type: Type 3R / IP24
Enclosure Finish: ANSI 61 Grey, UL50
Enclosure PN (NPL): DH7-N3R
Enclosure Dimensions: 72in/1829mm(H), 54in/1372mm(W), 44in/1118mm(D)
Net Weight: 3000 lb / 1370 kg
Nameplate: Standard

Typical Lead Time: 95-105 Working Days - (Non-Returnable)
*** Quoted lead times are for manufacturing only and will commence upon receipt of approved drawings if requested / required.
Freight: Freight Allowed $1500 Catalog Product Only

Product Configuration (EQv2-Lite): https://enggrd01.hammondpowersolutions.com/EQv2-Lite/#G3A0500SKSAHCO
Engineering Drawing (PDF): https://enggrd01.hammondpowersolutions.com/info/en/pn/MG3A0500SKSAHCO

Net Total	44,670.00 USD

SEL-751 Specifications

General	
Displays	2 × 16-character LCD 5-inch color touchscreen display, 800 × 480 pixels
AC Current Inputs	5 A or 1 A phase and 5 A, 1 A, or 200 mA neutral
Rogowski Coil–Based AC Current Inputs (RJ45)	30 Vac (phase-to-neutral) continuous, ±185 V_{peak}, 200 Vac for 10 seconds Compliant with IEC 61869-10 standard
LPCT Inputs (RJ45)	4 Vac continuous, ±11.3 V_{peak}, 200 Vac for 10 seconds
AC Voltage Inputs	300 Vac continuous, 600 Vac for 10 seconds
LEA Voltage Inputs	8 Vac (phase-to-neutral), ±12 V_{peak}, 300 Vac for 10 seconds
LEA Voltage Sensor Inputs (RJ45)	8 Vac (phase-to-neutral), ±12 V_{peak}, 200 Vac for 10 seconds Compliant with IEC 61869-11 standard
Output Contacts	The relay supports Form A, B, and C outputs.
Optoisolated Control Inputs	DC/AC control signals: 250, 220, 125, 110, 48, or 24 V As many as 26 inputs are allowed in ambient temperatures of 85°C (185°F) or less. As many as 34 inputs are allowed in ambient temperatures of 75°C (167°F) or less. As many as 44 inputs are allowed in ambient temperatures of 65°C (149°F) or less.
Frequency and Phase Rotation	System frequency: 50/60 Hz Phase rotation: ABC, ACB Frequency tracking: 15–70 Hz (requires ac voltage inputs)
Arc-Flash Time-Overlight® Elements (TOL1–TOL8)	Pickup time: 2–5 ms Dropout time: 1 cycle
Communications Protocols	SEL (Fast Meter, Fast Operate, and Fast SER), EtherNet/IP, firmware-based IEEE 1588 PTP, Modbus TCP/IP, Modbus RTU, DNP3, FTP, IRIG-B, Telnet, SNTP, IEC 61850 Edition 2, IEC 60870-5-103, the Parallel Redundancy Protocol (PRP) for dual-Ethernet models, Mirrored Bits communications, and IEEE C37.118-2005 (synchrophasors).
Language Support	English and Spanish
Power Supply	110–250 Vdc or 110–240 Vac Input voltage range: 85–300 Vdc or 85–264 Vac 24–48 Vdc Input voltage range: 19.2–60 Vdc
Operating Temperature	–40° to +85°C (–40° to +185°F) Note: LCD contrast is impaired for temperatures below –20°C (–4°F) and above +70°C (+158°F).
Certifications	To view certifications for the SEL-751, please visit **selinc.com/company/certifications**.

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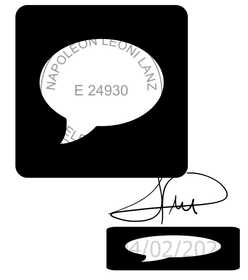

LICENSED SOLAR CONTRACTOR
Staten Solar, Inc.
Lic: 984910
Exp. 6/30/2025
State of California

NWRWR

DATA SHEETS

392.04 kW Ground Mount Project
(648) TRINA 605W Modules
19999 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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DWG NO: DS-2
PROJ NO: LMR-190

2x12

2x13

PLAN NORTH

NOT TO SCALE

NWRWR

Tectonic

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Tectonic Engineering Consultants
Project Contact Info
1279 Route 300
Newburgh, NY 12550

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Fax: (845) 567-4658
www.tectonicengineering.com

LICENSED PROFESSIONAL ENGINEER
MICHAEL THOMAS LANNON
C 94191

FIXED TILT RACKING

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GFT
JRS
JRS
EP
04/05/2025
"D" - 24x36

UNIRAC GFT GROUND FIXED TILT

DESIGN CRITERIA	
BUILDING CODE	ASCE 7-16
OCCUPANCY/RISK CATEGORY	I
WIND SPEED (MPH)	120
GROUND SNOW LOAD (PSF)	0
WIND EXPOSURE	C
SEISMIC S_s	2.507
SEISMIC S_1	1.028
WIND ON ICE (MPH)	N/A
ICE THICKNESS (IN)	N/A
FROST DEPTH (FT)	0
SITE ELEVATION ABOVE MSL (FT)	976

PROJECT OVERVIEW	
PROJECT SIZE (KW DC)	392.04
MODULE QUANTITY	648

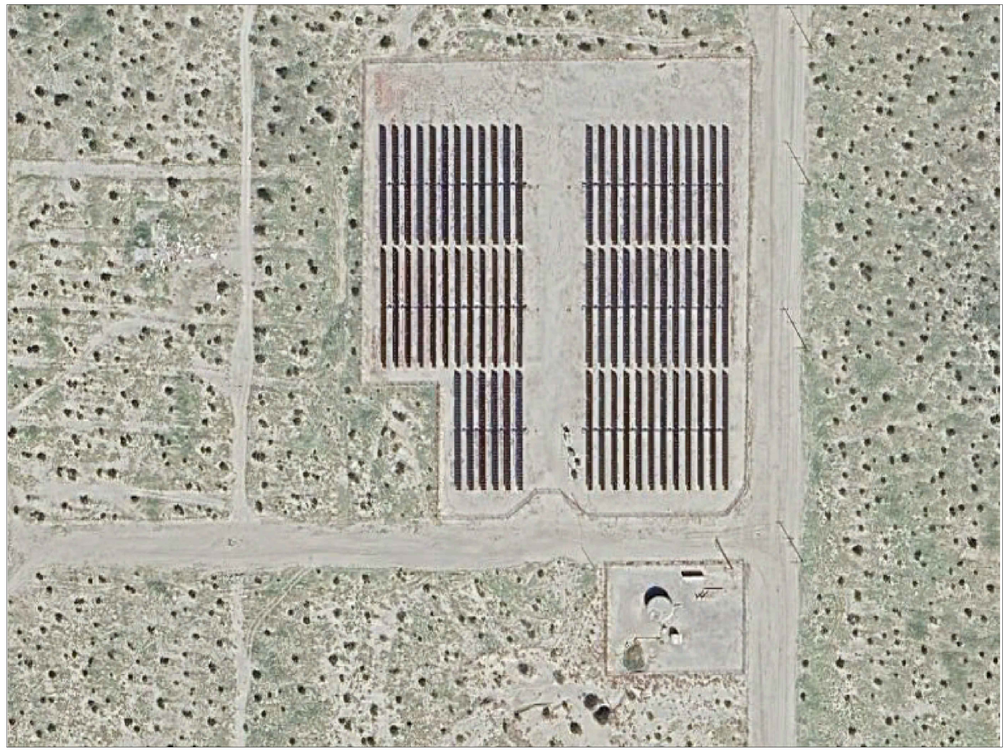
MODULE SPECIFICATIONS	
MANUFACTURER	TRINA SOLAR
MODEL	TSM-NEG19RC.20
LENGTH (IN)	93.86
WIDTH (IN)	44.65
FRAME THICKNESS (IN)	1.18
WEIGHT (LBS)	73
OUTPUT (W)	550

ENGINEERING OUTPUT - GFT - 20°	
PRODUCT LINE	GFT
ARRAY TILT	20
CLAMP SELECTION	UNIVERSAL AF CLAMPS
FOUNDATION TYPE	DRIVEN
FRONT EDGE HEIGHT (FT)	2
PILE LENGTH (FT)	12.5
FOUNDATION DEPTH (FT)	8.04

ARRAY PARTS LIST - GFT		
PART NUMBER	DESCRIPTION	QUANTITY
404001	GFT C-PILE, 150" – (12.50' TOTAL LENGTH)	234
404037	GFT TOP CHORD CHANNEL 20/30 - LGFMT	234
404031	GFTSR DIAG BRACE ASSEMBLY 20D	234
404013	GFT HARDWARE KIT	234
411246M	GFT RAIL 246" MILL	152
411168M	GFT RAIL 168" MILL	160
404014	GFT RAIL SPLICE KIT	208
302045M	UNIVERSAL AF SERIES MID CLAMP MILL	1192
302050M	UNIVERSAL AF SERIES END CLAMP MILL	208
GFT-CAP	GFT RAIL END CAP, UV-BLK	208
404015	GFT WIRE MANAGEMENT CLIP	350

SHEET INDEX

SHEET NUMBER	SHEET TITLE
SR - 101	COVER SHEET
SR - 102	GENERAL STRUCTURAL RACKING NOTES
SR - 200	GFT TABLE CROSS-SECTION AND PARTS LIST (20 DEGREE TILT)
SR - 201	GFT E-W BEAM LOCATION OPTIONS (20 DEGREE TILT)
SR - 400	FOUNDATION OPTION 5 DETAILS
SR - 500	RACKING DETAILS
SR - 601- 602	RACKING DETAILS - 2X12&2x13



19999 LITTLE MORONGO RD
DESERT HOT SPRINGS, CA
92240

REVISION BLOCK		
MARK	DATE	DESCRIPTION
0	06/13/2024	Original Release
A	02/04/2025	UPDATED LAYOUT
B	04/04/2025	UPDATED ADDRESS
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OWNER/CLIENT:
STATEN SOLAR

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PROFESSIONAL SEAL

LICENSED PROFESSIONAL ENGINEER
MICHAEL THOMAS MANTEUFEL
C 94191
CIVIL
STATE OF CALIFORNIA

UNIRAC'S GFT GROUND FIXED TILT STRUCTURAL RACKING DRAWINGS

UNIRAC®

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PROJECT NUMBER:	GFT
ENGINEERED BY:	JRS
DRAFTED BY:	JRS
REVIEWED BY:	EP
ORIGINAL RELEASE DATE:	04/05/2025
DRAWING SHEET SIZE:	'D' - 24x36

SHEET TITLE
COVER SHEET

SHEET NUMBER
SR-101

SHEET 1 of 8

GENERAL NOTES:

1. ALL CONSTRUCTION FOR UNIRAC'S "GROUND FIXED TILT" (GFT) RACKING SYSTEM AND FOUNDATION REQUIREMENTS SHALL CONFORM TO THE 2009, 2012, 2015 & 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).
2. WHEREVER THE TERM CONTRACTOR IS USED IN THE CONSTRUCTION DOCUMENTS, IT SHALL BE DEFINED TO MEAN THE GENERAL CONTRACTOR AND ANY SUB-CONTRACTOR COLLECTIVELY AS APPLICABLE AND AS REQUIRED.
3. THE CONTRACT "STRUCTURAL RACKING" DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS, METHOD, OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE RACKING SYSTEM FROM THE POINT OF MATERIAL DELIVERY THROUGH THE COMPLETION OF CONSTRUCTION. UNIRAC AND THE ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION. UNIRAC AND THE ENGINEER OF RECORD WILL NOT BE RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, OR SAFETY PRECAUTIONS AND PROGRAMS INCIDENT HERETO.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND ENSURE THAT ALL WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL INSPECTION/OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.
5. ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS THAT ARE ENCOUNTERED AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE RACKING DISTRIBUTOR SHALL BE CORRECTED BY THE CONTRACTOR (AT THE CONTRACTOR'S EXPENSE).
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THESE DRAWINGS PRIOR TO BIDDING OR THE START OF CONSTRUCTION. ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS SHALL BE RESOLVED THROUGH YOUR RACKING DISTRIBUTOR PRIOR TO PROCEEDING.
7. DO NOT SCALE OFF OF THESE DRAWINGS. WRITTEN DIMENSIONS SHALL BE USED OR WHERE NO DIMENSION IS PROVIDED CONSULT WITH YOUR RACKING DISTRIBUTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE BID OR THE WORK.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EQUIPMENT AND INSTALLATION PROCESS (MEANS AND METHODS) ARE APPROPRIATE FOR THE FOUNDATIONS AND THAT THE PILES ARE INSTALLED TO THE SPECIFIED TOLERANCES. UNIRAC IS NOT RESPONSIBLE FOR DAMAGED AND/OR OUT-OF-TOLERANCE PILES DUE TO IMPROPER INSTALLATION EQUIPMENT, METHODS, AND SOIL RELATED ISSUES INCLUDING DENSE SOILS, GRAVEL, OR BEDROCK.
9. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER (MOST CONSERVATIVE) REQUIREMENTS SHALL GOVERN. WHERE NO SPECIFIC DETAIL IS SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, OR IF THERE IS NO SIMILAR WORK, THEN CONSTRUCTION SHALL CONFORM TO INDUSTRY STANDARDS. CONTRACTOR MUST INFORM UNIRAC OF ANY DISCREPANCIES.
10. REFER TO SITE PLAN, PILE LAYOUT DRAWING, ELECTRICAL DRAWINGS AND/OR OTHER CIVIL DRAWINGS FOR SPECIFIC PILE LOCATIONS, NORTH-SOUTH PILE SPACING, LOCATION AND DETAILS OF CURBS, INVERTER/EQUIPMENT PADS, TRENCHING/CONDUIT LOCATIONS, JUNCTION BOXES, SITE WORK ITEMS, ETC. AND DIMENSIONS NOT SHOWN ON STRUCTURAL RACKING DRAWINGS.
11. CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, EXISTING FOUNDATIONS, OR OTHER.
12. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST ASTM STANDARD SPECIFICATION.
13. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE LOCAL JURISDICTION.
14. THE FOLLOWING DESIGN CRITERIA ARE EXCLUDED FROM THE RACKING AND FOUNDATION DESIGN: FLOOD LOADING, DEBRIS LOADING, DYNAMIC ANALYSIS, ACTS OF GOD (TORNADO, HURRICANE, WATER INUNDATION LOADING, ETC.), EROSION, EXPANSIVE SOILS, FROST HEAVE, SOIL LIQUEFACTION, DYNAMIC LOADING FROM SEISMIC EVENTS AND CONDITIONS. THE DESIGN CAN CONSIDER THESE CRITERIA FOR SPECIFIC PROJECTS IN A SEPARATE DOCUMENT FROM UNIRAC OR BY A THIRD PARTY ENGINEER.
15. DESIGN CRITERIA PER ASCE 7-05, 7-10, OR ASCE 7-16*:
    DESIGN WIND SPEED = VARIES (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    GROUND SNOW LOAD = VARIES (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    ICE THICKNESS = VARIES (SEE DESIGN PACKAGE AND or UBUILDER DESIGN INPUTS)
    ICE LOAD WIND SPEED = VARIES (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    SEISMIC Ss = VARIES (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    SEISMIC S1 = VARIES (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    SOIL SITE CLASS = D
    WIND EXPOSURE CATEGORY = B OR C (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    HURRICANE ZONE = (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    RISK CATEGORY = I OR II (SEE DESIGN PACKAGE or UBUILDER DESIGN INPUTS)
    MINIMUM OF 20' OFFSET FROM NEAREST ADJACENT BUILDING (TO AVOID SNOW DRIFT.)

    *DESIGN WIND PRESSURES PER ASCE 7-05, SECTION 6.5.13,"WIND LOADS ON OPEN BUILDINGS WITH MONOSLOPE, PITCHED OR TROUGHED ROOFS", AND SECTION 6.5.13.3, "COMPONENTS AND CLADDING" FOR MONOSLOPE FREE ROOFS, ASCE 7-10, SECTION 27.4.3, "WIND LOAD ON OPEN BUILDING WITH MONOSLOPE, PITCHED OR TROUGHED FREE ROOFS", AND SECTION 30.7.1, "COMPONENTS AND CLADDING" FOR MONOSLOPED PITCHED OR TROUGHED ROOFS, OR ASCE 7-16, SECTION 27.3.2, "WIND LOAD ON OPEN BUILDING WITH MONOSLOPE, PITCHED OR TROUGHED ROOFS", AND SECTION 30.7.2, "COMPONENTS AND CLADDING" FOR MONOSLOPE, PITCHED OR TROUGHED ROOFS.
16. SOLAR REQUIREMENTS: FROM OWNER
17. CORROSION PROTECTION REQUIREMENTS:
    COLD-FORMED STEEL MEMBERS = SEE MEMBER SECTION TABLE
    HARDWARE = STAINLESS STEEL OR DELTA PROTEKT
18. ABOVE GRADE CORROSION PROTECTION WILL SUFFICE FOR MOST ENVIRONMENTAL CONDITIONS. BELOW GRADE CORROSION PROTECTION WILL SUFFICE FOR MOST SOILS WITH RESISTIVITY VALUES GREATER THAN 10,000 OHM/CM. IT IS THE OWNER'S RESPONSIBILITY TO DETERMINE IF THE SOILS ARE MORE CORROSIVE AND FURTHER CORROSION PROTECTION WILL BE REQUIRED.
19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SPLICE EAST-WEST BEAMS (AS REQUIRED) TO COMPLETE THE TABLE AND AVOID SPLICE CONFLICTS SPECIFIED IN DETAIL 501 ON SHEET SR-500.
20. EACH ROW CANNOT EXCEED 100 FEET IN LENGTH WITHOUT HAVING A THERMAL BREAK.

SPECIAL INSPECTION (PER CHAPTER 17 OF THE IBC):

STRUCTURAL ONLY: SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED.

1. DRIVEN DEEP ELEMENTS: PERIODICALLY DURING THE PLACEMENT OF ALL DRIVEN DEEP FOUNDATION ELEMENTS ON STRUCTURAL DRAWINGS.
   A. VERIFICATION OF ELEMENT MATERIALS, SIZES, AND LENGTHS.
   B. OBSERVATION AND DOCUMENTATION OF DRIVING OPERATIONS. MAINTAIN A COMPLETE AND ACCURATE RECORD FOR EACH PILE DRIVEN.
   C. VERIFICATION OF PLACEMENT LOCATIONS AND PLUMBNESS, TYPE OF PILE DRIVER, ELEVATION OF TIP AND BUTT, ANY DAMAGE TO FOUNDATION ELEMENT, ETC.
2. BOLTING: VERIFICATION OF TORQUE PER TORQUE TABLE SHOWN.

TORQUE REQUIREMENTS:		
1/4"Ø HARDWARE :		SOCKET SIZE
BEAM CLAMP	= 9 - 11 FT-LBS	9/16"
STANDARD MID 7 END CLAMPS	= 9 - 11 FT-LBS	9/16"
PRO-SERIES MID-CLAMPS	= 10 - 12 FT-LBS	1/2"
PRO-SERIES END CLAMP	= 3 FT-LBS	1/2"
5/8"Ø HARDWARE	= 54 - 66 FT-LBS	15/16"
3/4"Ø HARDWARE	= 99 - 121 FT-LBS	1-1/8"

3. CONCRETE: SEE CHAPTER 17 OF MOST CURRENT IBC FOR REQUIRED INSPECTIONS.

ALUMINUM:

1. ALL ALUMINUM EAST-WEST BEAM MEMBERS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE "ALUMINUM DESIGN MANUAL" BY THE ALUMINUM DESIGN ASSOCIATION, CURRENT EDITION.
2. ALL ALUMINUM EAST-WEST BEAMS CONFORM TO ONE OF THE FOLLOWING:
   ALLOY: 6005A TEMPER: T61 (Ftu = 38 KSI, Fcy = 35 KSI)
   ALLOY: 6351 TEMPER: T5 (Ftu = 38 KSI, Fcy = 35 KSI)
   ALLOY: 6061 TEMPER: T6 (Ftu = 38 KSI, Fcy = 35 KSI)
3. ALL ALUMINUM EAST-WEST BEAMS HAVE A MILL FINISH.
4. WELDING IS NOT REQUIRED OR PERMITTED UNLESS SPECIFICALLY APPROVED BY UNIRAC AND THE ENGINEER OF RECORD.
5. FIELD CUTTING OF ALUMINUM MEMBERS IS PERMITTED WHEN REQUIRED TO ACCOMMODATE PROJECT SPECIFIC MODULE WIDTHS.

HARDWARE:

1. ALL 1/4"Ø HARDWARE SHALL CONFORM TO 18/8 STAINLESS STEEL (AISI 300 SERIES STAINLESS, 304) OF DIMENSIONS PER ASME B18.2.1.
2. ALL 1/4"Ø SELF DRILLING SCREW HARDWARE SHALL CONFORM TO GRADE 5 SAE J429 AND ASTM A449.
3. ALL 5/8"Ø AND 3/4"Ø BOLTS SHALL CONFORM TO GRADE 2 SAE J429 OR ASTM A307.
4. ALL 5/8"Ø AND 3/4"Ø SERRATED FLANGE NUTS SHALL CONFORM TO ASME B.18.16.4.
5. ALL 5/8"Ø AND 3/4"Ø WASHERS SHALL CONFORM TO USS TYPE A WIDE OR ANSI TYPE A WIDE.
6. UNIRAC T-BOLTS, MID CLAMPS, AND END CLAMPS ARE PROPRIETARY. TECHNICAL DATA SHEETS WITH TESTED CAPACITIES CAN BE PROVIDED UPON REQUEST.
7. CORROSION PROTECTION FOR HARDWARE CAN BE FOUND IN THE GENERAL NOTES SECTION OF THIS DOCUMENT, NOTE 17.
8. ALL HARDWARE RECEIVED ON SITE SHALL BE CHECKED BY CONTRACTOR AGAINST THE SPECIFICATIONS ON THIS SHEET SR-100, DIAMETERS AND LENGTHS CALLED OUT ON RACKING DETAILS SHEET SR-500, AS WELL AS THE PROJECT BILL OF MATERIAL. ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS MUST BE RESOLVED WITH THE RACKING DISTRIBUTOR AS SOON AS POSSIBLE AND PRIOR TO PROCEEDING.

UNIRAC GFT GROUND FIXED TILT

COLD FORMED STEEL:

1. ALL COLD FORMED STRUCTURAL STEEL MEMBER CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" CURRENT EDITION.
2. ALL COLD-FORMED STRUCTURAL MEMBERS SHALL BE PER ICC-ER-4943P.
3. ALL COLD-FORMED STEEL CONFORMS TO ONE OF THE FOLLOWING:
   A653 HSLAS 50 (Fy = 50 KSI, Fu = 60 KSI)
   A653 SS 50 CLASS 4 (Fy = 50 KSI, Fu = 60 KSI)
4. ALL COLD-FORMED STEEL MEMBERS ARE GALVANIZED PER ASTM A653 (MOST RECENT EDITION).
5. WELDING IS NOT REQUIRED OR PERMITTED UNLESS SPECIFICALLY APPROVED BY UNIRAC AND/OR THE ENGINEER OF RECORD.
6. FIELD CUTTING OF COLD-FORMED STEEL MEMBERS IS NOT REQUIRED OR PERMITTED UNLESS THE C-PILE IS BEING MODIFIED DUE TO ALTERNATIVE FOUNDATION REQUIREMENTS PROVIDED ON SHEET 400.
7. ALL CALCULATED COLD-FORMED MEMBER PROPERTIES PER AISI SPECIFICATIONS ARE BASED ON THE FOLLOWING MINIMUM THICKNESSES:
   14 GAGE (0.070" OR 70 MILS)
   11 GAGE (0.120" OR 120 MILS)

UNIRAC CUSTOM RACKING MEMBER SECTIONS

RACKING MEMBER		DEPTH	WIDTH	THICKNESS	MIN. CORROSION PROTECT
	ALUMINUM BEAM	3.25 IN.	2.0 IN.	0.063-0.125 IN	AAMA 611-12
	ALUMINUM SPLICE	3.061 IN.	1.818 IN.	0.800-0.110 IN	AA-M12
	TOP CHORD CHANNEL	4.1 IN.	3.42 IN.	14 GAGE	G180
	DIAGONAL BRACE	3 IN.	2 IN.	14 GAGE	G180
	C-PILE	6 IN.	4.5 IN.	11 GAGE	G235

SOLAR DESIGN:

UNIRAC IS NOT THE SOLAR DESIGN ENGINEER OF RECORD AND IS NOT RESPONSIBLE FOR ANY SOLAR DESIGN, OUTPUT EFFICIENCIES, SHADING, ROW SPACING, POWER PRODUCTION, ETC.

ELECTRICAL DESIGN:

UNIRAC IS NOT THE ELECTRICAL ENGINEER OF RECORD AND IS NOT RESPONSIBLE FOR THE ELECTRICAL DESIGN FOR THIS PROJECT. THE UNIRAC GFT RACKING SYSTEM IS CERTIFIED TO UL-2703 WHEN PROPERLY INSTALLED. SEE THE GFT INSTALLATION GUIDE FOR MORE DETAIL.

CIVIL/GRADING/SITE WORK:

UNIRAC IS NOT THE CIVIL ENGINEER OF RECORD FOR THIS PROJECT AND IS NOT RESPONSIBLE FOR ANY SITE GRADING, SURVEYING, TRENCHING, EARTHWORK, LAYOUT, STORM WATER POLLUTION PREVENTION PLANS, SURFACE WATER MITIGATION, PERMITTING, OR EROSION CONTROL PLANS.

MATERIAL MANAGEMENT:

PRIOR TO INSTALLATION, ALL MATERIALS MUST BE STORED PROPERLY. MATERIALS REMAINING IN PLACE FOR MORE THAN ONE WEEK MUST BE IN OPEN AIR CONDITIONS (I.E. OFF THE GROUND). IF TARPS OR OTHER PROTECTIVE COVERS ARE USED, THE ENDS SHALL BE LEFT OPEN FOR VENTILATION. TIGHT FITTING COVERINGS ARE NOT RECOMMENDED AS MATERIAL COATINGS ARE NOT DESIGNED FOR THIS CONDITION. LONG GOODS STORED HORIZONTALLY FOR MORE THAN ONE WEEK SHOULD NOT REMAIN BUNDLED TO PREVENT ACCELERATED CORROSION. BLOCKING IS REQUIRED BENEATH THE LONG GOODS AT PROPER INTERVALS TO ENSURE THE PRODUCT IS OFF THE GROUND.

FOUNDATION NOTES:

1. SEE THE "COLD FORMED STEEL" SECTION FOR STEEL AND GALVANIZATION REQUIREMENTS FOR FOUNDATIONS.
2. UNIRAC SHALL NOT BE HELD LIABLE FOR ANY UTILITY LINES DAMAGED DURING FOUNDATION INSTALLATION. IT SHALL BE THE RESPONSIBILITIES OF OTHERS TO DETERMINE THE PLACEMENT OF EXISTING AND NEW UTILITY LINES.
3. PILES ARE DESIGNED TO SOIL CONDITIONS STATED IN IBC. IT IS THE CLIENTS RESPONSIBILITY TO VERIFY SOILS MEET THE MINIMUM REQUIREMENTS. UNIRAC AND OR THE ENGINEER OF RECORD WILL NOT BE HELD RESPONSIBLE FOR FOUNDATIONS INSTALLED IN SOILS WITH LOWER CAPACITY OR FOR IMPROPER FOUNDATION INSTALLATION OR CHOICE.
4. SOIL CONDITIONS ARE ASSUMED TO HAVE PROPERTIES OF CLASS 4 OR BETTER STATED IN IBC.

NOTE: SEE GFT INSTALLATION GUIDE FOR SYSTEM ADJUSTMENTS AND TOLERANCES

DRIVEN STEEL PILE NOTES:

1. STEEL PILES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE DESIGN CRITERIA STATED IN THE GENERAL NOTES.
2. PILES SHALL BE INSTALLED TO THE PILE TOLERANCES IN THE UNIRAC GFT INSTALLATION GUIDE WITHOUT EXCESSIVE DEFORMATION. EXCESSIVE DEFORMATION IS DEFINED AS DISTORTION PREVENTS THE RACKING FROM CONNECTING FLUSH TO THE PILE.
3. FOUNDATIONS MUST NOT BE INSTALLED IN ORGANIC SOILS OR IN AREAS WITH GROUND WATER WITHIN 12 FEET OF THE SURFACE.
4. IT IS THE OWNER OR CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH FROST ZONE THEIR PROJECT IS LOCATED IN.
5. IF PILE REFUSAL IS ENCOUNTERED, AN ALTERNATE FOUNDATION DESIGN ON SHEET SR-400 CAN BE UTILIZED OR OTHER FOUNDATIONS APPROVED BY A REGISTERED PROFESSIONAL ENGINEER AND UNIRAC.
6. DRAINAGE SHALL BE DIRECTED AWAY FROM PILES. PILES SHALL NOT BE PLACED IN SWALES, DRAINAGE AREAS OR WHERE WATER MAY BE ALLOWED TO FLOW OR STAND WITHOUT SPECIFIC ALLOWANCE IN WRITING FROM UNIRAC. ALL POSSIBLE EFFORTS SHALL BE MADE TO PREVENT WATER FROM FLOWING OR PONDING AROUND OR NEAR TO THE PILES.
7. PILES MAY NOT BE PAINTED PRIOR TO INSTALLATION OF THE RACKING SYSTEM. AFTER INSTALLATION OF THE COMPLETE RACKING SYSTEM, PILES MAY BE PAINTED AT THE CONTRACTORS/CLIENTS DISCRETION. NO ADJUSTMENTS MAY BE MADE AFTER THE PILES HAVE BEEN PAINTED.
8. PILES DRIVEN TOO SHALLOW OR TOO DEEP WILL NEED TO BE ALTERED AT THE CONTRACTORS EXPENSE. UNIRAC HAS PROVIDED TOLERANCES IN THE GFT INSTALLATION GUIDE THAT SHALL BE FOLLOWED.
9. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MEANS AND METHODS FOR DRIVING PILES. THE PILE INSTALLATION METHOD UTILIZED DURING ONSITE PILE TESTING SHALL BE THE SAME AS INSTALLATION. THE CONTRACTOR MUST INSTALL PILES UTILIZING A PILE DRIVING RIG WITH A PERCUSSION PNEUMATIC HAMMER. A VIBRATORY PILE DRIVER IS NOT RECOMMENDED. SEE PILE TEST PLAN FOR DETAILS.
10. THE RACKING DISTRIBUTOR SHALL NOT BE HELD RESPONSIBLE FOR DAMAGE TO THE PILE AFTER IT ARRIVES TO THE SITE OR THE POINT OF AGREED DROP OFF.
11. IF DAMAGE OCCURS WHERE GALVANIZATION IS REMOVED FROM THE PILE, THE PILE SHALL BE TOUCHED UP WITH GALVANIZATION OF EQUAL THICKNESS PRIOR TO INSTALLATION AT THE CONTRACTOR'S EXPENSE.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT VIBRATIONS FROM DRIVING EQUIPMENT AND PILE INSTALLATION DO NOT AFFECT ANY ADJACENT PROPERTY STRUCTURES. THE CONTRACTOR SHALL BE HELD LIABLE FOR DAMAGE TO THE ADJACENT PROPERTY IF DAMAGE OCCURS.
13. ANY EXCAVATIONS NEAR THE PILE SHALL NOT BE MADE CLOSER THAN 2 FEET FROM PILE OR DEEPER THAN 2 FEET FROM GRADE. IF EXCAVATIONS ARE NECESSARY, THEY SHALL BE ON THE EAST OR WEST SIDE OF THE PILE, SHALL BE TEMPORARY, AND SHALL BE COMPACTED PER THE ENGINEER OF RECORD'S RECOMMENDATIONS. NORTH SOUTH EXCAVATIONS SHALL BE A MINIMUM OF 3 FEET FROM THE PILE. IF EXCAVATIONS EXCEED THESE DIMENSIONAL REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY UNIRAC. THE ENGINEER OF RECORD SHALL BE INFORMED OF ANY EXCAVATION AND COMPACTION EFFORTS ON THE SITE.
14. PILES MAY NOT BE ALTERED IN ANY WAY WITHOUT UNIRAC WRITTEN APPROVAL. UNLESS IT IS TO CUT A PILE FOR USE IN THE CONCRETE FOUNDATION OPTION.
15. PILES HAVE BEEN DESIGNED FOR STATIC LOADING UNDER THE DESIGN CRITERIA IN GENERAL NOTE 15.

QUALITY ASSURANCE AND SPECIAL INSPECTION:

1. TESTING LABORATORY: RETAINED BY OWNER AND SATISFACTORY TO ENGINEER OF RECORD (THROUGH UNIRAC) AND GOVERNING CODE AUTHORITY TO PERFORM REQUIRED TESTS AND INSPECTIONS OF THIS CONTRACT AND APPLICABLE CODE. THE TYPE AND FREQUENCY OF SPECIAL INSPECTION, STRUCTURAL TESTING AND SUBSEQUENT REPORTING SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).

CONCRETE:

1. ALL ASPECTS OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND THE LATEST EDITION OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" ACI 301, WITH MODIFICATIONS AS NOTED ON THE PROJECT DRAWINGS AND/OR SPECIFICATIONS.
2. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305, "HOT WEATHER CONCRETING".
3. COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306, "COLD WEATHER CONCRETING".
4. ALL MIX DESIGNS SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND SHALL BE WET STAMPED BY A CIVIL ENGINEER LICENSED IN THE JURISDICTION OF THE PROJECT, AS STIPULATED IN IBC CHAPTER 19.
5. TYPE II PORTLAND CEMENT SHALL BE USED AT ALL CONCRETE ALTERNATE FOUNDATION LOCATIONS FOR THE RACKING SYSTEM - WHERE CONCRETE IS REQUIRED AS AN ALTERNATE SOLUTION. (TYPE V CEMENT SHALL BE USED WHERE THE CONCRETE IS IN CONTACT WITH SOIL CONTAINING SULFATES IN EXCESS OF 3000 PPM. CONCRETE THAT WILL BE EXPOSED TO SULFATE-CONTAINING SOLUTIONS SHALL COMPLY WITH IBC CHAPTER 19 AND ACI 318 SEVERE AND VERY SEVERE SULFATE EXPOSURES AS IDENTIFIED IN THE PROJECT GEOTECHNICAL REPORT, THE WATER-CEMENT RATIO SHALL NOT EXCEED 0.44.)
6. IN THE PRESENCE OF REACTIVE AGGREGATE, CLASS F FLY ASH OR OTHER ASR MITIGATING ADMIXTURE SHALL BE INCORPORATED IN THE MIX SUCH THAT THE EXPANSION PRODUCED BY THE MORTAR-BAR METHOD (ASTM C1567) USING BLENDED AGGREGATES IS LESS THAN 0.1% AT 14 DAYS IMMERSED IN SOLUTION. WHERE CLASS F FLY ASH IS SELECTED AS A SUPPLEMENTAL ADMIXTURE, THE LOSS OF IGNITION SHALL BE LIMITED TO 2%. THE CONTRACTOR SHALL SUBMIT ALL CERTIFICATES SHOWING THE FLY ASH IS IN ACCORDANCE WITH ASTM 6618.
7. DO NOT USE CONCRETE OR GROUT CONTAINING CHLORIDES. WATER SHALL CONTAIN A CHLORIDE CONTENT LESS THAN 1000 PPM AS C1. DO NOT USE CONCRETE CONTAINING ALKALI-CARBONATE AND BICARBONATES PRESENT IN AGGREGATE IN EXCESS OF 1000 PPM. TESTS FOR THEIR EFFECT ON SETTING TIME AND 28-DAY STRENGTH SHALL BE EVALUATED.
8. HARD ROCK CONCRETE AGGREGATE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF THE ASTM C33 CLASS DESIGNATION 35 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH APPROVAL OF THE STRUCTURAL ENGINEER. PROVIDE CONCRETE MIX DESIGN WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.0005 INCHES/INCH.
9. MAXIMUM SIZED AGGREGATE OF 0.75".
10. SLUMP RANGE OF 3" ± 1" PER ASTM C143.
11. CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI STANDARD 304 AND PROJECT SPECIFICATIONS.
12. THE UNIRAC PILE SHALL BE CENTERED IN THE HOLE TO MAXIMIZE CONCRETE COVER AND THE HOLE SHALL BE CENTERED IN THE SPECIFIED LOCATION TO ALLOW FOR RACKING INSTALLABILITY.
13. THE TOP OF THE CONCRETE SHALL BE SMOOTHED AND SLOPED AT 2% TO FACILITATE POSITIVE DRAINAGE AWAY FROM THE UNIRAC PILE.
14. CONCRETE CHLORIDE PERMEABILITY SHALL BE CLASSIFIED AS HAVING "NEGLIGIBLE" TO "VERY LOW" CHLORIDE ION PERMEABILITY PER ASTM C1202.
15. CONCRETE SHOULD BE PLACED IN A CONTINUOUS FLOW WITHOUT SEGREGATING THE CONCRETE. DO NOT ALLOW CONCRETE TO FREE FALL MORE THAN 5 FEET UNLESS MEASURES ARE TAKEN TO ENSURE THAT CONCRETE DOES NOT HIT THE SIDES OF THE EXCAVATION DURING FREE FALL.
16. MECHANICALLY VIBRATE THE CONCRETE AT EACH PIER.
17. PRECAUTIONS SHOULD BE TAKEN DURING THE INSTALLATION OF PIERS TO MINIMIZE THE POSSIBILITY OF CAVING. PIER EXCAVATIONS SHOULD BE FILLED WITH CONCRETE AS SOON AFTER DRILLING AND INSPECTION AS POSSIBLE. SONOTUBES (OR EQUIVALENT) CAN BE UTILIZED, AS REQUIRED, ONLY IN THE UPPER 2 FT. OF THE AUGERED/DRILLED HOLE.
18. CONCRETE MIXING OPERATION SHALL CONFORM TO ASTM C-94.
19. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF THE ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH THE PERMISSION OF THE ENGINEER OF RECORD.
20. THE DENSITY OF CONCRETE SHALL BE BETWEEN 140 PCF TO 150 PCF. THE 28-DAY STRENGTH OF CONCRETE SHALL BE 2500 PSI OR 4500 PSI IF IN A REGION WITH ANY SNOW LOAD WITH A MAXIMUM WATER-CEMENT RATIO OF 0.40.

REVISION BLOCK

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OWNER/CLIENT:
STATEN SOLAR

NWRWR

19999 LITTLE MORONGO RD
DESERT HOT SPRINGS, CA 92240

ENGINEERING CONSULTANT:

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1279 Route 300 Phone: (845) 567-4656
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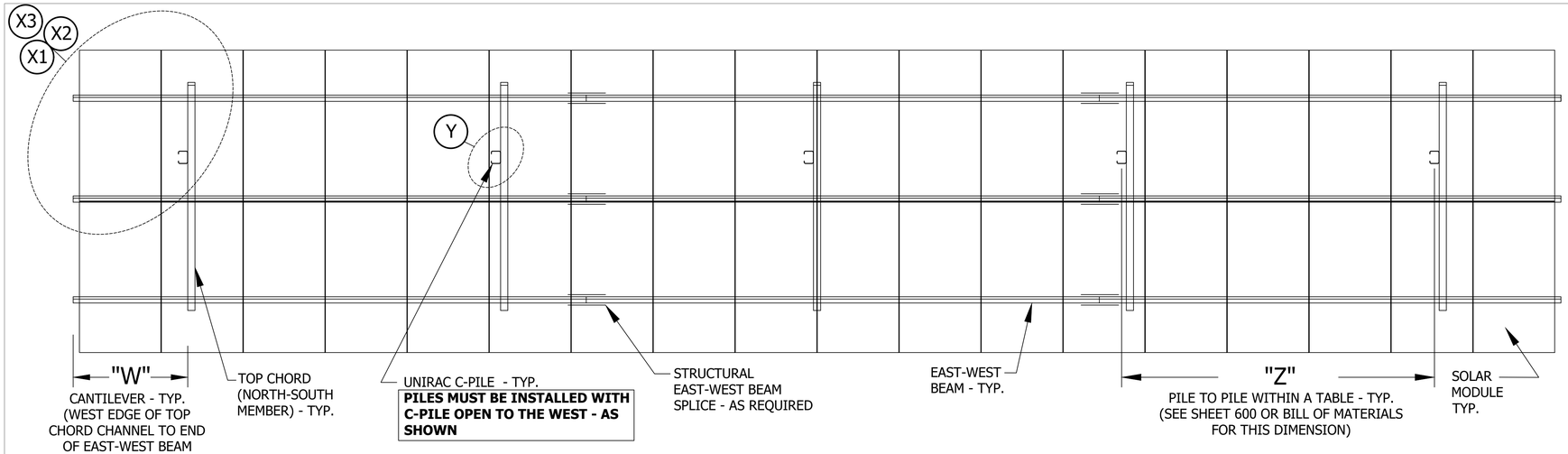
PROJECT NUMBER:	GFT
ENGINEERED BY:	JRS
DRAFTED BY:	JRS
REVIEWED BY:	EP
ORIGINAL RELEASE DATE:	04/05/2025
DRAWING SHEET SIZE:	"D" - 24x36

SHEET TITLE
GENERAL
STRUCTURAL RACKING
NOTES

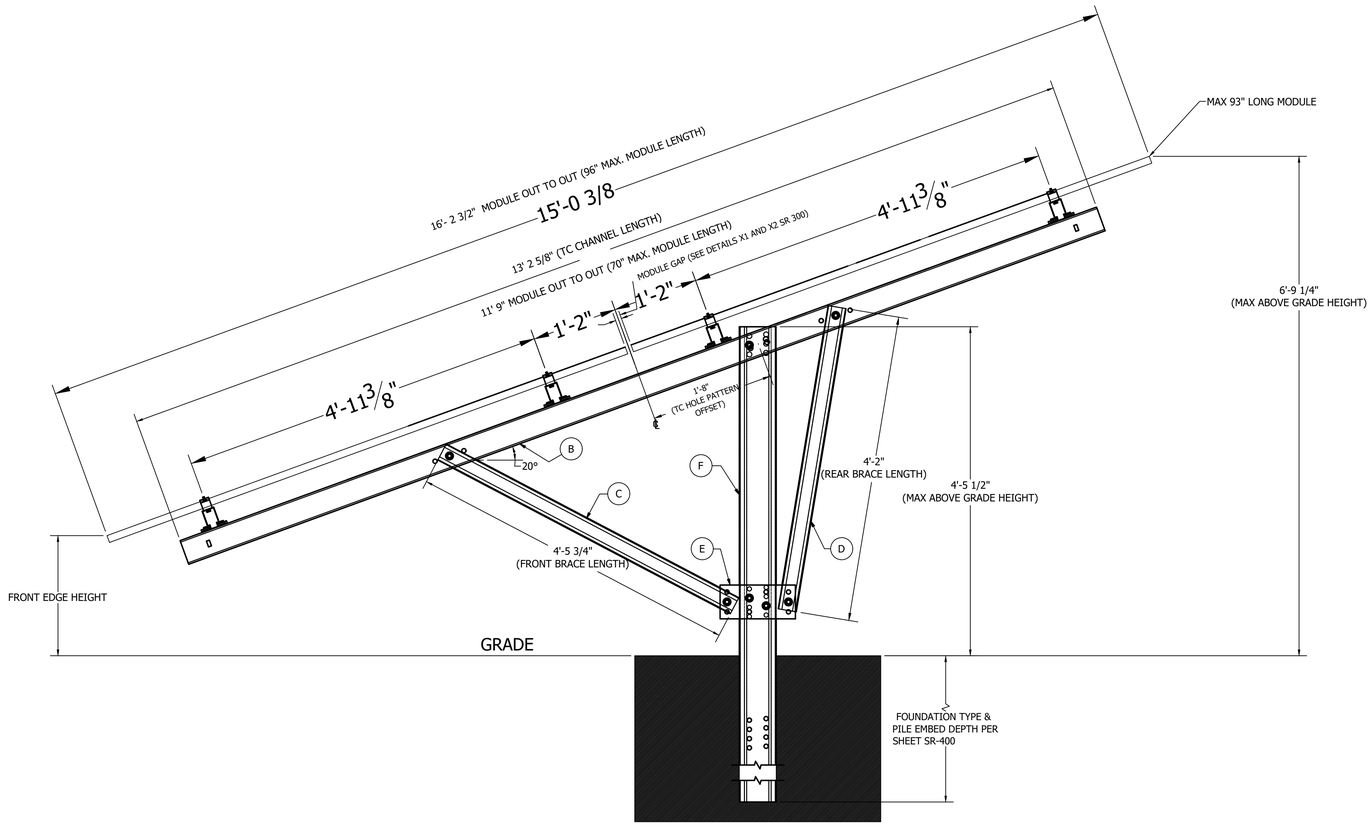
SHEET NUMBER
SR-102

SHEET 2 of 8



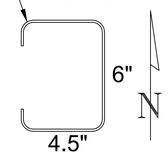
PLAN VIEW OF TABLE

SEE SHEET 600 OR UBUILDER DESIGN OR UNIRAC BOM FOR PILE QUANTITY REQUIREMENT PER TABLE SIZE. TABLE SIZE CANNOT EXCEED 30 COLUMNS OF MODULES

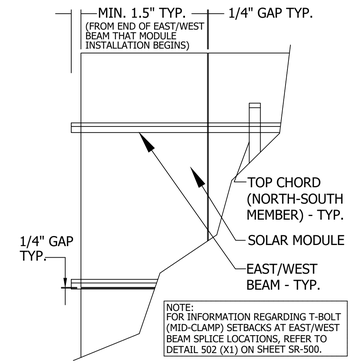


SECTION VIEW OF GFT TABLE - 20° TILT

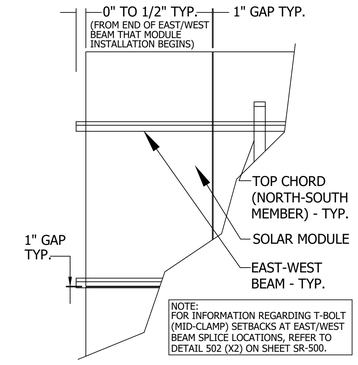
PILES MUST ALWAYS BE INSTALLED WITH C-PILES OPEN TO THE WEST



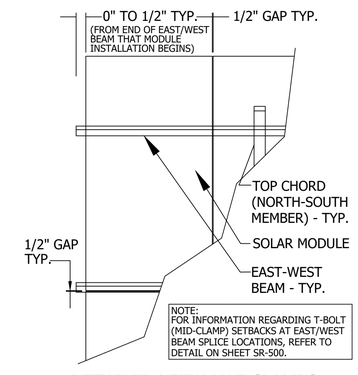
Y DETAILED VIEW



X1 DETAILED VIEW STANDARD CLAMPS
(SEE ALSO SHEET SR-500, DETAIL 501 (X1))



X2 DETAILED VIEW PRO SERIES CLAMPS
(SEE ALSO SHEET SR-500, DETAIL 501 (X2))



X3 DETAILED VIEW UAF CLAMPS
(SEE ALSO SHEET SR-500, DETAIL 502 (X3))

GFT PARTS LIST

REF NUMBER	PART DESCRIPTION	CATALOG #	GUAGE/ THICKNESS	FINISH
A	ALUMINUM E-W BEAM (168" OR 246")	411168M OR 411246M	SEE SHEET SR-102	
B	TOP CHORD CHANNEL	404037	SEE SHEET SR-102	
C	FRONT DIAGONAL BRACE (20°)	404031	SEE SHEET SR-102	
D	REAR DIAGONAL BRACE (20°)		SEE SHEET SR-102	
E	DIAGONAL BRACE PLATE		SEE SHEET SR-102	
F	C-PILE (12.5 FT)	404001	SEE SHEET SR-102	

REVISION BLOCK		
MARK	DATE	DESCRIPTION
0	06/13/2024	Original Release
A	02/04/2025	UPDATED LAYOUT
B	04/04/2025	UPDATED ADDRESS
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REVIEWED BY:	EP
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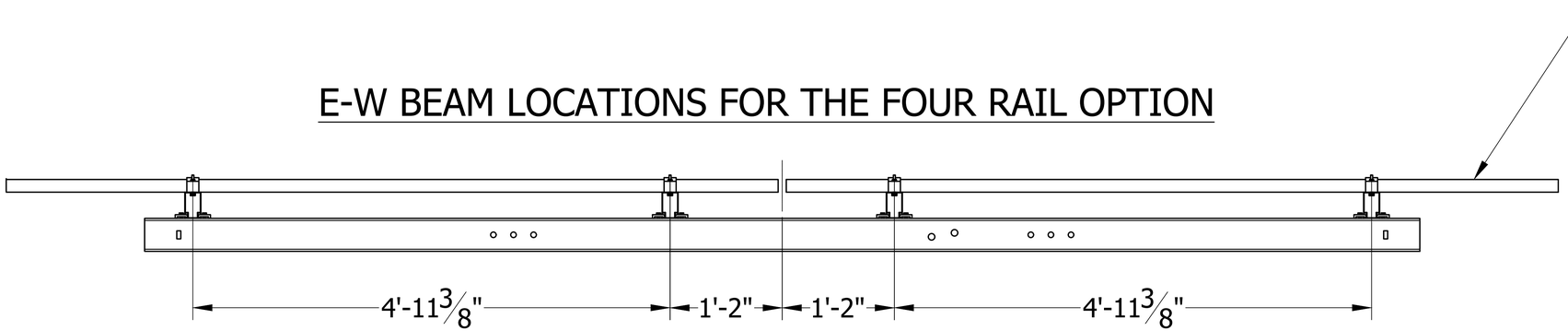
SHEET TITLE
GFT TABLE CROSS-SECTION AND PARTS LIST (20 DEGREE TILT)

SHEET NUMBER
SR-200

SHEET
3 of 8

E-W BEAM LOCATIONS FOR THE FOUR RAIL OPTION



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SHEET TITLE
GFT E-W BEAM LOCATION OPTIONS (20 DEGREE TILT)

SHEET NUMBER
SR-201

SHEET
4 of 8

20 DEGREE UNIRAC STEEL C-PILE FOUNDATION DEPTHS

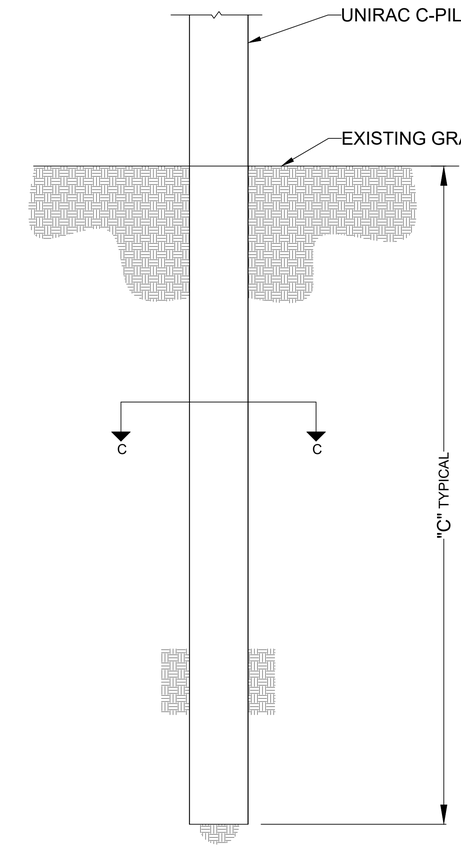
(REFER TO SHEET SR-200 FOR PILE STICK-UP HEIGHT) (c)

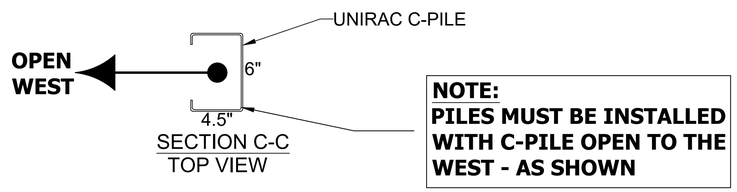
FOUNDATION TYPE	DETAIL NUMBER	DIMENSION "C"
FULLY DRIVEN PILE (b)	403	8.04'
(b) PILE EMBEDMENT DEPTH NEEDS TO BE VERIFIED BY PILE TESTING OR FROM A GEOTECHNICAL OR PROFESSIONAL ENGINEER.		
(c) BASED ON THE PILE STICK-UP HEIGHT FOR A STANDARD 20 DEGREE GFT TABLE, ALL PILE EMBEDMENT DEPTHS THAT ARE 8'-1" OR GREATER, REQUIRE A 15 FT LONG PILE.		

SPECIAL INSPECTION IS REQUIRED FOR DRIVEN C-PILES FOR THE DESIGN REACTIONS LISTED BELOW:

2x12 TABLE
MAXIMUM LATERAL SHEAR FORCE = 464 LBS.
MAXIMUM TENSILE FORCE = 1274 LBS.
MAXIMUM COMPRESSION FORCE = 2052 LBS.
MAXIMUM MOMENT = 4952 LB-FT.

2x13 TABLE
MAXIMUM LATERAL SHEAR FORCE = 503 LBS.
MAXIMUM TENSILE FORCE = 1385 LBS.
MAXIMUM COMPRESSION FORCE = 2215 LBS.
MAXIMUM MOMENT = 5351 LB-FT.





NOTE:
PILES MUST BE INSTALLED WITH C-PILE OPEN TO THE WEST - AS SHOWN

403 FULLY DRIVEN PILE

(ALTERNATE OPTION) NOT TO SCALE

FOUNDATION 403: FULLY DRIVEN PILE

1. DRIVEN PILE FOUNDATIONS MAY NOT BE USED IN SOILS THAT CONTAIN SILT OR CLAY WITH GROUNDWATER WITHIN 12 FEET OF THE SURFACE UNLESS APPROVED BY A GEOTECHNICAL ENGINEER. IT IS RECOMMENDED TO VERIFY GROUNDWATER IS NOT PRESENT IF USING THIS FOUNDATION TYPE IN FROST PRONE REGIONS.
2. PILES MUST BE INSTALLED TO THE FULL DEPTH. PILES NOT DRIVEN TO FULL DEPTH ARE CONSIDERED FAILED PILES AND A DIFFERENT FOUNDATION MUST BE UTILIZED.
3. FOUNDATIONS MUST NOT BE INSTALLED IN ORGANIC SOILS OR IN AREAS WITH GROUNDWATER NEAR THE SURFACE.
4. PILE EMBEDMENT MUST BE DETERMINED BY A LICENSED CIVIL ENGINEER OR BY SITE PILE TESTS.

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DRAFTED BY:	JRS
REVIEWED BY:	EP
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DRAWING SHEET SIZE:	'D' - 24x36

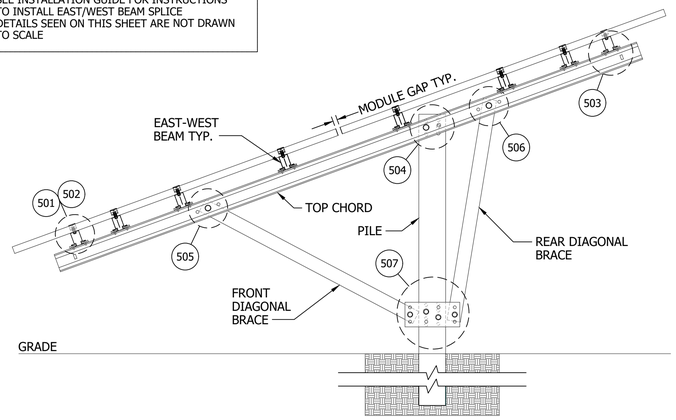
SHEET TITLE
FOUNDATION EMBEDMENT AND FOUNDATION DETAILS

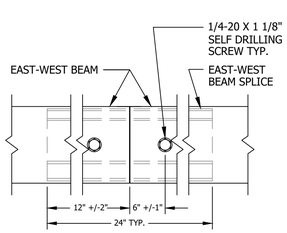
SHEET NUMBER
SR-403

SHEET 5 of 8

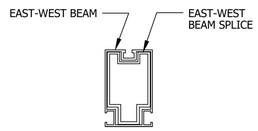
RACKING DETAIL NOTES:

1. SEE INSTALLATION GUIDE FOR PILE TOLERANCES
2. SEE INSTALLATION GUIDE FOR CONNECTION ADJUSTMENT INSTRUCTIONS
3. SEE INSTALLATION GUIDE FOR INSTRUCTIONS TO INSTALL EAST/WEST BEAM SPLICE
4. DETAILS SEEN ON THIS SHEET ARE NOT DRAWN TO SCALE

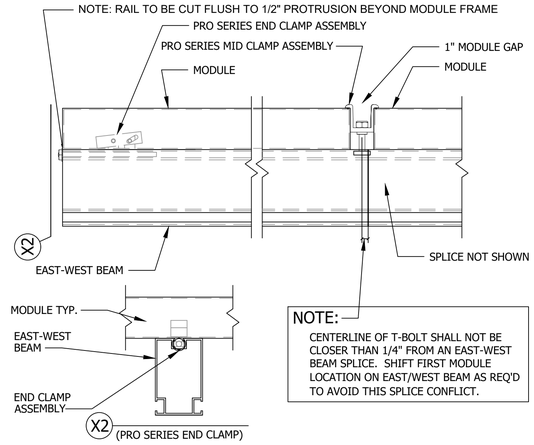


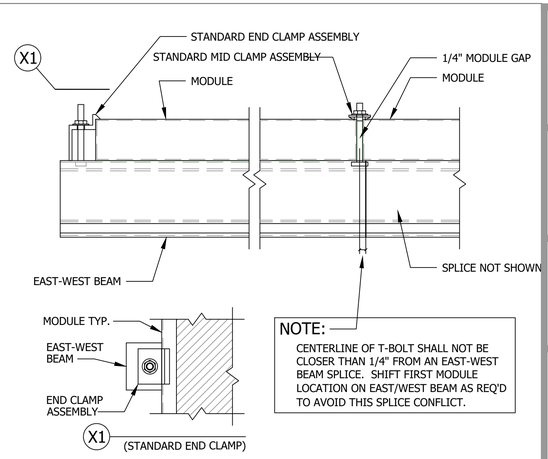


EAST-WEST BEAM WITH SPLICE
(TYPICAL ELEVATION)

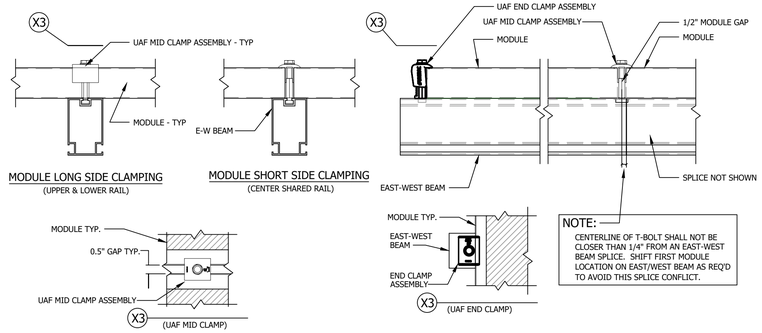


EAST-WEST BEAM WITH SPLICE
(TYPICAL SECTION)

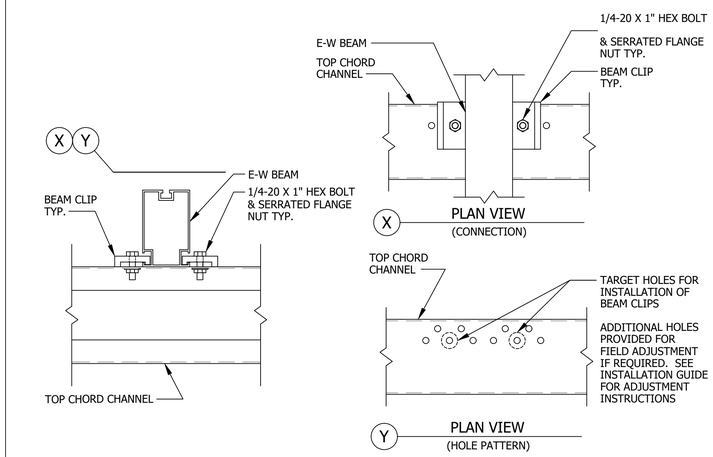




501 MODULE TO EAST-WEST BEAM CLAMP CONNECTION

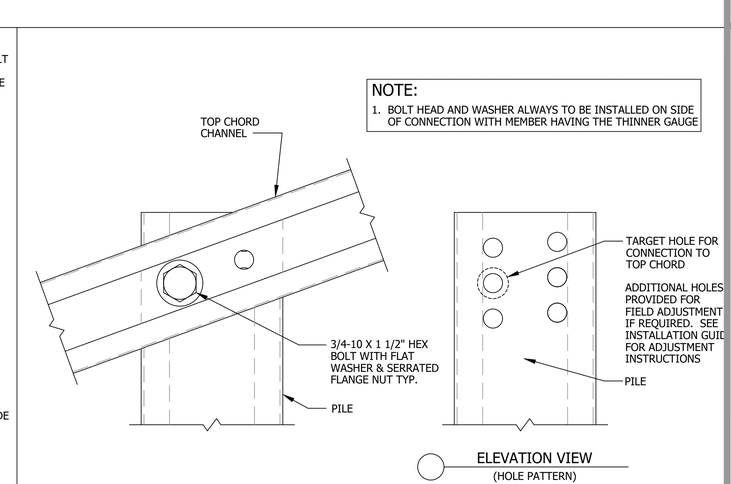


502 MODULE TO EAST-WEST BEAM CLAMP CONNECTION



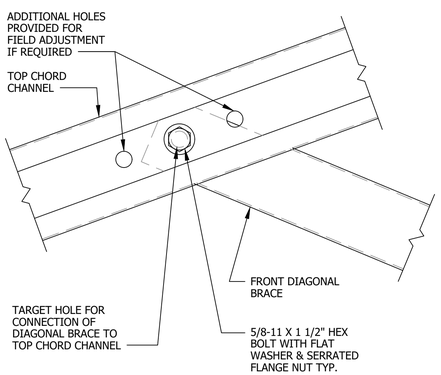
503 EAST-WEST BEAM TO TOP CHORD CONNECTION

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



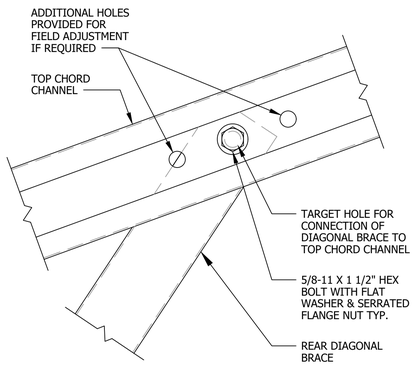
504 TOP CHORD TO PILE CONNECTION

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



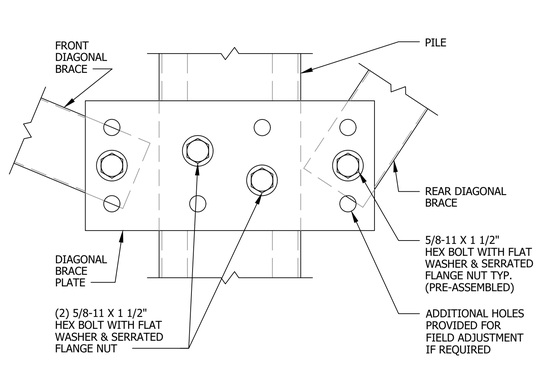
505 TOP CHORD TO DIAGONAL BRACE CONNECTION
(FRONT BRACE)

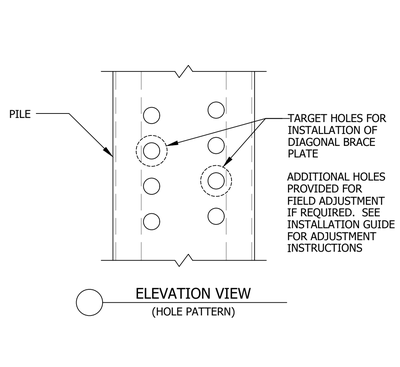
NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE



506 TOP CHORD TO DIAGONAL BRACE CONNECTION
(REAR BRACE)

NOTE:
1. BOLT HEAD AND WASHER ALWAYS TO BE INSTALLED ON SIDE OF CONNECTION WITH MEMBER HAVING THE THINNER GAUGE





507 DIAGONAL BRACE TO PILE CONNECTION

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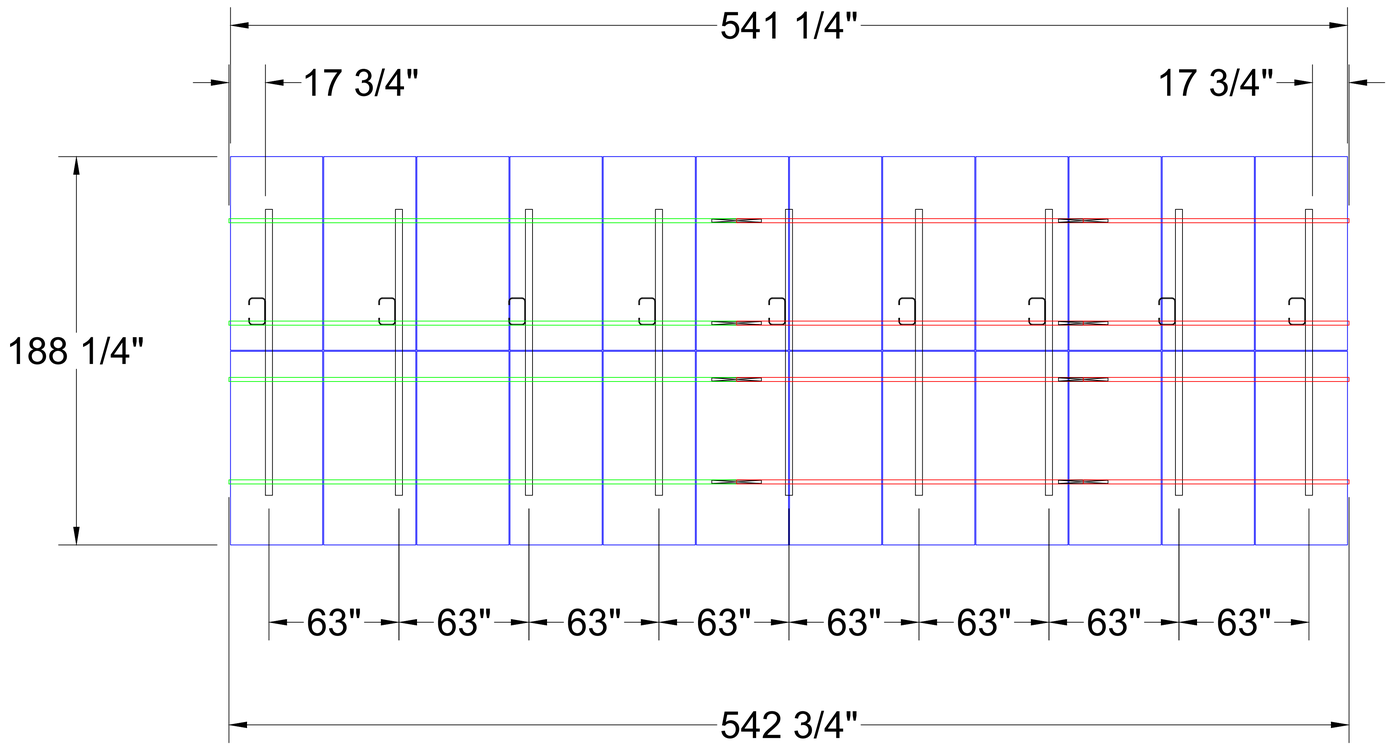
SHEET TITLE
RACKING DETAILS

SHEET NUMBER
SR-500

SHEET
6 of 8



PILES MUST OPEN TO THE WEST

SPLICE

168" GFT RAIL

246" GFT RAIL

EASTERN-MOST GFT RAILS IN ARRAY MUST BE CUT TO FIT

PLAN NORTH

NOT TO SCALE

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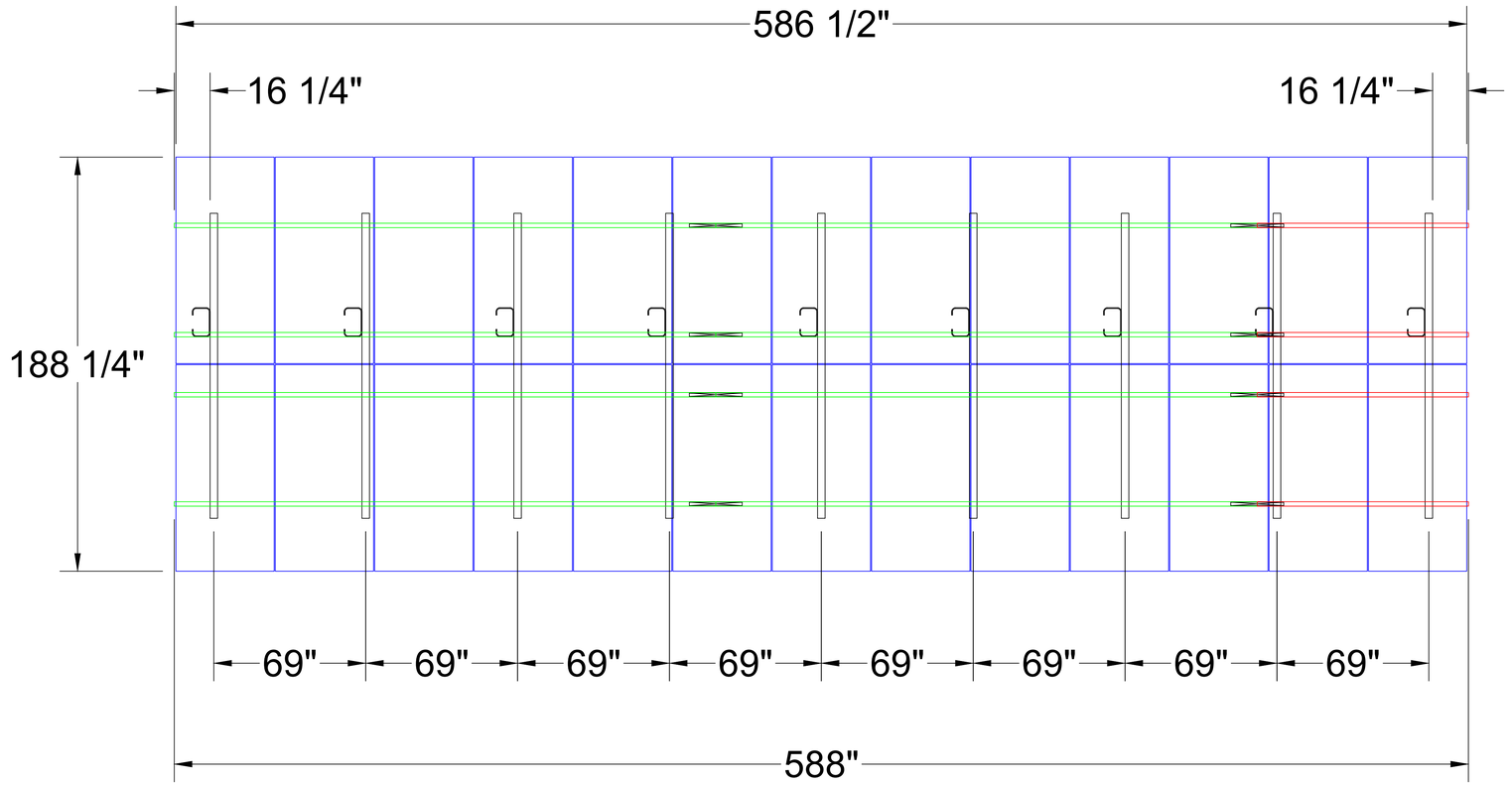
SHEET TITLE

RACKING DETAILS
-2x12

SHEET NUMBER
SR-601

SHEET
7 of 8



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EASTERN-MOST GFT RAILS IN ARRAY MUST BE CUT TO FIT

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B	04/04/2025	UPDATED ADDRESS
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SHEET TITLE

RACKING DETAILS
-2x13

SHEET NUMBER
SR-602

SHEET
8 of 8

APPENDIX 2

DATE: September 9, 2025
TO: Kaitlyn Dodson-Hamilton, Tom Dodson & Associates
FROM: Haseeb Qureshi, Michael Tirohn, Urban Crossroads, Inc.
JOB NO: 16717-03 AQ & GHG Assessment

SUBJECT: MISSION SPRINGS WATER DISTRICT WELL 33 SOLAR PROJECT AQ & GHG ASSESSMENT

Urban Crossroads, Inc. is pleased to provide the following AQ & GHG Assessment for the Mission Springs Water District Well 33 Solar Project, which located at 19011 Little Morongo Road in the City of Desert Hot Springs. This letter describes the Project related air quality and GHG impacts.

PROJECT BACKGROUND

The Project includes the installation of ground-mounted solar photovoltaic systems to the north and west of the existing solar photovoltaics plant located at the northwest intersection of 19th Avenue and Little Morongo Road.

SUMMARY OF FINDINGS

Results of the assessment indicate that Revised Project emissions would not exceed the applicable Southern California Air Quality Management District (SCAQMD) regional or localized significance thresholds during short-term construction activities. Further, the Project would result in a net reduction in GHG emissions as a result of the installation of solar photovoltaics. Therefore, the proposed Project would result in a less than significant impact with regard to air quality and GHGs.

CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ and were calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1. Construction-related emissions are expected from the following activities:

- Site Preparation
- Grading
- Building Construction (Solar Installation)
- Paving
- Trenching

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on data provided by the Project applicant no import or export of soil would be required.

On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. For worker trips, it is assumed that up to 15 individuals will be working on the construction site per day, though the number of construction workers will vary between 9 and 15 per day. Additionally, it is assumed that up to 5 vendor trucks will visit the site per day. Worker and vendor trips are estimated based on CalEEMod default parameters.

Construction Duration

For purposes of analysis, construction of the Project is expected to commence in November 2025 and end in March 2026. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[1] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet.

Construction Equipment

The equipment modeled is based on information provided by the Project Applicant and CalEEMod model defaults. Consistent with industry standards and typical construction practices, each piece of equipment will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

Regional Construction Emissions Summary

As shown below on Table 1, the proposed Project construction emissions would not exceed the applicable SCAQMD regional significance thresholds for any pollutant. Appendix 1 presents detailed CalEEMod model outputs for construction.

[1] As shown in the CalEEMod User's Guide Version 2022.1.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 1: MAXIMUM DAILY CONSTRUCTION AIR QUALITY EMISSIONS

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
2025	0	0	0	0	0	0
2026	0	0	0	0	0	0
Winter						
2025	3.92	35.83	31.70	0.06	0.58	0.32
2026	2.70	8.24	12.72	0.02	0.06	0.03
Maximum Daily Emissions	3.92	35.83	31.70	0.06	0.58	0.32
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

lbs/day = pounds per day
VOC = Volatile Organic Compounds
NO_X = Nitrogen Oxides
CO = Carbon Monoxide
SO_2 = Sulfur Dioxide
PM_{10} = Particulate Matter 10 microns in diameter or less
$PM_{2.5}$ = Particulate Matter 2.5 microns in diameter or less

LOCALIZED CONSTRUCTION EMISSIONS

Table 2 below presents the modeled pollutant concentrations at the maximally exposed receptors during construction activities. As shown below, emissions resulting from construction of the proposed Project would not exceed the applicable localized significance thresholds established by SCAQMD, and construction of the proposed Project would not result in a significant localized impact for nearby receptors. Detailed AERMOD model outputs are presented in Appendix 2. Additionally, an exhibit detailing the locations of modeled receptors is provided in Appendix 3.

TABLE 2: LOCALIZED SIGNIFICANCE SUMMARY – PEAK CONSTRUCTION

Peak Construction	CO		NO_2	PM_{10}	$PM_{2.5}$
	Averaging Time				
	1-Hour	8-Hours	1-Hour	24-Hours	24-Hours
Peak Day Localized Emissions	1.12E-02	2.80E-03	7.95E-03	0.10	0.05
Background Concentration [A]	3.4	1.1	0.031		
Total Concentration	3.41	1.10	0.04	0.10	0.05
SCAQMD Localized Significance Threshold	20	9	0.18	10.4	10.4
Threshold Exceeded?	NO	NO	NO	NO	NO

[A] Highest concentration from the last three years of available data.
Notes: PM_{10} and $PM_{2.5}$ concentrations are expressed in $\mu g/m^3$. All others are expressed in ppm.

CONSTRUCTION GHG EMISSIONS

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then

adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3.

TABLE 3: ANNUAL CONSTRUCTION GHG EMISSIONS

Year	CO_2T	CH_4	N_2O	R	Total CO_2e
2025	121.83	4.96E-03	1.13E-03	8.42E-03	122.30
2026	35.51	1.14E-03	1.23E-03	1.39E-02	35.92
Total	157.35	6.10E-03	2.35E-03	2.23E-02	158.22
Amortized	5.24	2.03E-04	7.84E-05	7.44E-04	5.27

OPERATIONAL ACTIVITIES

Operation of the proposed Project would not generate criteria pollutant emissions. However, the installation of solar photovoltaics as proposed by the Project would result in reductions in GHG emissions. Based on an estimated 9,412.878 kWh generated by the Project per year, it is estimated that the proposed Project would result in a net reduction in GHG emissions of approximately 1,481.47 MT CO_2e per year, as shown below on Table 4. Reductions in GHG emissions were estimated based on factors utilized in CalEEMod and are presented in Appendix 4.

TABLE 4: GHG EMISSIONS SUMMARY

Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2E
Annual construction emissions amortized over 30 years	5.24	2.03E-04	7.84E-05	7.44E-04	5.27
Solar Generation	-1,478.12	-0.14	-0.02	0	-1,486.74
Net CO_2E	-1,481.47				

APPENDIX 1:

CALEEMOD CONSTRUCTION EMISSIONS OUTPUT

16717 MSWD Well 33 Solar Construction Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	16717 MSWD Well 33 Solar Construction
Construction Start Date	10/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.910340204836274, -116.52931411209644
County	Riverside-Salton Sea
City	Desert Hot Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5638
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Asphalt Surfaces	10.2	Acre	10.2	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.66	3.92	35.8	31.7	0.06	1.81	5.89	7.70	1.66	2.74	4.40	—	6,850	6,850	0.28	0.06	0.04	6,876
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.43	3.68	3.47	0.01	0.17	0.40	0.58	0.16	0.16	0.32	—	736	736	0.03	0.01	0.08	739
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.08	0.67	0.63	< 0.005	0.03	0.07	0.11	0.03	0.03	0.06	—	122	122	< 0.005	< 0.005	0.01	122

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.66	3.92	35.8	31.7	0.06	1.81	5.89	7.70	1.66	2.74	4.40	—	6,850	6,850	0.28	0.06	0.03	6,876
2026	2.88	2.70	8.24	12.7	0.02	0.35	0.24	0.58	0.33	0.06	0.38	—	2,018	2,018	0.08	0.05	0.04	2,026

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.50	0.43	3.68	3.47	0.01	0.17	0.40	0.58	0.16	0.16	0.32	—	736	736	0.03	0.01	0.05	739
2026	0.16	0.15	0.78	1.15	< 0.005	0.03	0.04	0.06	0.03	0.01	0.04	—	215	215	0.01	0.01	0.08	217
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.09	0.08	0.67	0.63	< 0.005	0.03	0.07	0.11	0.03	0.03	0.06	—	122	122	< 0.005	< 0.005	0.01	122
2026	0.03	0.03	0.14	0.21	< 0.005	0.01	0.01	0.01	< 0.005	< 0.005	0.01	—	35.5	35.5	< 0.005	< 0.005	0.01	35.9

3. Construction Emissions Details

3.1. Site Preparation (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.59	3.85	35.7	30.8	0.05	1.81	—	1.81	1.66	—	1.66	—	5,292	5,292	0.21	0.04	—	5,310
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.13	0.11	0.98	0.84	< 0.005	0.05	—	0.05	0.05	—	0.05	—	145	145	0.01	< 0.005	—	145
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.18	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.10	0.95	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	221	221	0.01	0.01	0.02	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.48	6.48	< 0.005	< 0.005	0.01	6.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.07	1.07	< 0.005	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.13	3.47	31.7	28.6	0.06	1.46	—	1.46	1.34	—	1.34	—	6,597	6,597	0.27	0.05	—	6,620
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.61	2.35	0.01	0.12	—	0.12	0.11	—	0.11	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.08	0.08	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.48	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.11	1.08	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	0.01	0.01	0.03	256
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.04	22.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.68	3.68	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.53	0.44	3.80	5.11	0.01	0.13	—	0.13	0.12	—	0.12	—	754	754	0.03	0.01	—	757
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.05	0.47	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.0	93.0	< 0.005	< 0.005	—	93.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.4	15.4	< 0.005	< 0.005	—	15.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.06	0.60	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	149	149	< 0.005	0.01	0.01	150
Vendor	0.01	0.01	0.34	0.14	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	311	311	< 0.005	0.04	0.02	324
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.6	19.6	< 0.005	< 0.005	0.03	19.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.3	38.3	< 0.005	0.01	0.04	39.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.24	3.24	< 0.005	< 0.005	< 0.005	3.28
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.34	6.34	< 0.005	< 0.005	0.01	6.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	1.78	1.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.8	14.8	< 0.005	< 0.005	—	14.8
Paving	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.45	2.45	< 0.005	< 0.005	—	2.46
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	190	190	0.01	0.01	0.02	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.98	1.98	< 0.005	< 0.005	< 0.005	2.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	1.78	1.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.3	47.3	< 0.005	< 0.005	—	47.5
Paving	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.83	7.83	< 0.005	< 0.005	—	7.86
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.08	0.75	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.02	188
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.21	6.21	< 0.005	< 0.005	0.01	6.29
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.03	1.03	< 0.005	< 0.005	< 0.005	1.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Trenching (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.10	1.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.84	2.84	< 0.005	< 0.005	—	2.85
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.47	0.47	< 0.005	< 0.005	—	0.47
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.6	31.6	< 0.005	< 0.005	< 0.005	32.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Trenching (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.03	1.91	< 0.005	0.03	—	0.03	0.03	—	0.03	—	290	290	0.01	< 0.005	—	291
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.09	9.09	< 0.005	< 0.005	—	9.12

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.51
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.9	30.9	< 0.005	< 0.005	< 0.005	31.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.17
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	11/1/2025	11/14/2025	5.00	10.0	—
Grading	Grading	11/15/2025	12/26/2025	5.00	30.0	—
Building Construction	Building Construction	1/17/2026	3/20/2026	5.00	45.0	—
Paving	Paving	12/27/2025	1/16/2026	5.00	15.0	—
Trenching	Trenching	12/27/2025	1/16/2026	5.00	15.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Trenching	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	12.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	35.0	0.00	—
Grading	—	—	120	0.00	—
Paving	0.00	0.00	0.00	0.00	10.2

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction

Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	10.2	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1

AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459
Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—
Insured adults	2.55357372
Arthritis	0.0

Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4
Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	5.7
English Speaking	42.6
Foreign-born	50.4

Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Project site is vacant, no demolition required.
Construction: Off-Road Equipment	All equipment assumed to operate 8 hours per day.
Construction: Trips and VMT	Assumes 10 vendor trips per day during building construction

APPENDIX 2:

AERMOD MODEL OUTPUTS – CONSTRUCTION LOCALIZED EMISSIONS ANALYSIS

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** Lakes Environmental AERMOD MPI
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**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 7/21/2025
** File: C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\16717 Cons CO.ADI
**
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** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\
   MODELOPT DFAULT CONC
   AVERTIME 1 8
   URBANOPT 2492442 Riverside_County
   POLLUTID CO
   FLAGPOLE 2.00
   RUNORNOT RUN
   ERRORFIL "16717 Cons CO.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     543461.330  3752414.462      232.890
   LOCATION VOL2         VOLUME     543491.079  3752370.301      232.020
   LOCATION VOL3         VOLUME     543461.327  3752369.927      232.040
   LOCATION VOL4         VOLUME     543604.621  3752712.835      238.620
   LOCATION VOL5         VOLUME     543570.062  3752712.582      238.580
   LOCATION VOL6         VOLUME     543533.195  3752712.474      238.630
   LOCATION VOL7         VOLUME     543500.897  3752712.169      238.630
   LOCATION VOL8         VOLUME     543604.209  3752667.624      237.650
   LOCATION VOL9         VOLUME     543569.650  3752667.371      237.570
   LOCATION VOL10        VOLUME     543532.784  3752667.263      237.510
   LOCATION VOL11        VOLUME     543500.485  3752666.958      237.620
   LOCATION VOL12        VOLUME     543603.295  3752623.138      236.750
   LOCATION VOL13        VOLUME     543568.736  3752622.885      236.640
   LOCATION VOL14        VOLUME     543531.870  3752622.776      236.820
   LOCATION VOL15        VOLUME     543499.571  3752622.472      236.690
   LOCATION VOL16        VOLUME     543602.991  3752578.042      235.870
   LOCATION VOL17        VOLUME     543568.431  3752577.789      235.840
   LOCATION VOL18        VOLUME     543531.565  3752577.681      236.030
   LOCATION VOL19        VOLUME     543499.267  3752577.376      235.940
   LOCATION VOL20        VOLUME     543602.381  3752535.384      235.020
   LOCATION VOL21        VOLUME     543567.822  3752535.131      235.140
   LOCATION VOL22        VOLUME     543530.955  3752535.023      235.230
   LOCATION VOL23        VOLUME     543498.657  3752534.718      235.100
** Source Parameters **
   SRCPARAM VOL1         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL2         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL3         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL4         0.0210615537     5.000    10.356     1.400
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   SRCPARAM VOL5         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL6         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL7         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL8         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL9         0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL10        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL11        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL12        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL13        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL14        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL15        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL16        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL17        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL18        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL19        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL20        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL21        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL22        0.0210615537     5.000    10.356     1.400
   SRCPARAM VOL23        0.0210615537     5.000    10.356     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "16717 Cons CO.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KPSP_V11_trimmed.sfc
   PROFFILE KPSP_V11_trimmed.PFL
   SURFDATA 93138 2018
   UAIRDATA 3190 2018
   PROFBASE 124.71 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
```

```
462  **
463  **
464  OU STARTING
465     RECTABLE ALLAVE 1ST
466     RECTABLE 1 1ST
467     RECTABLE 8 1ST
468  ** Auto-Generated Plotfiles
469     PLOTFILE 1 ALL 1ST "16717 Cons CO.AD\01H1GALL.PLT" 31
470     PLOTFILE 8 ALL 1ST "16717 Cons CO.AD\08H1GALL.PLT" 32
471     SUMMFILE "16717 Cons CO.sum"
472  OU FINISHED
473
474
475    *** Message Summary For AERMOD Model Setup ***
476
477    --------- Summary of Total Messages --------
478
479   A Total of            0 Fatal Error Message(s)
480   A Total of            2 Warning Message(s)
481   A Total of            0 Informational Message(s)
482
483
484      ******** FATAL ERROR MESSAGES ********
485                  ***  NONE  ***
486
487
488      ********   WARNING MESSAGES   ********
489   ME W186     456       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
      used           0.50
490   ME W187     456       MEOPEN: ADJ_U* Option for Stable Low Winds used in
      AERMET
491
492   ***********************************
493   *** SETUP Finishes Successfully ***
494   ***********************************
495
496   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
497    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
498
                                  PAGE   1
499    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
500
501                                              ***     MODEL SETUP OPTIONS SUMMARY       ***
502    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - -
503
504    ** Model Options Selected:
505         * Model Uses Regulatory DEFAULT Options
506         * Model Is Setup For Calculation of Average CONCentration Values.
507         * NO GAS DEPOSITION Data Provided.
508         * NO PARTICLE DEPOSITION Data Provided.
509         * Model Uses NO DRY DEPLETION. DDPLETE  =  F
510         * Model Uses NO WET DEPLETION. WETDPLT  =  F
511         * Stack-tip Downwash.
512         * Model Accounts for ELEVated Terrain Effects.
513         * Use Calms Processing Routine.
514         * Use Missing Data Processing Routine.
515         * No Exponential Decay.
516         * Model Uses URBAN Dispersion Algorithm for the SBL for    23 Source(s),
517           for Total of    1 Urban Area(s):
518       Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
519         * Urban Roughness Length of 1.0 Meter Used.
520         * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
```

```
521         * CCVR_Sub - Meteorological data includes CCVR substitutions
522         * TEMP_Sub - Meteorological data includes TEMP substitutions
523         * Model Accepts FLAGPOLE Receptor . Heights.
524         * The User Specified a Pollutant Type of: CO
525
526    **Model Calculates  2 Short Term Average(s) of:   1-HR   8-HR
527
528    **This Run Includes:     23 Source(s);       1 Source Group(s); and      31 Receptor(s)
529
530                   with:      0 POINT(s), including
531                              0 POINTCAP(s) and      0 POINTHOR(s)
532                    and:     23 VOLUME source(s)
533                    and:      0 AREA type source(s)
534                    and:      0 LINE source(s)
535                    and:      0 RLINE/RLINEXT source(s)
536                    and:      0 OPENPIT source(s)
537                    and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
538                    and:      0 SWPOINT source(s)
539
540
541    **Model Set To Continue RUNning After the Setup Testing.
542
543    **The AERMET Input Meteorological Data Version Date:  22112
544
545    **Output Options Selected:
546             Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
                Keyword)
547             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
548             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
549
550    **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
551                                                                    m for Missing Hours
552                                                                    b for Both Calm and
                                                                       Missing Hours
553
554    **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   124.71 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
555                     Emission Units = GRAMS/SEC                              ;  Emission
                        Rate Unit Factor =   0.10000E+07
556                     Output Units   = MICROGRAMS/M**3
557
558    **Approximate Storage Requirements of Model =      3.5 MB of RAM.
559
560    **Input Runstream File:
       aermod.inp

561    **Output Print File:
       aermod.out

562
563    **Detailed Error/Message File:   16717 Cons
       CO.err
564    **File for Summary of Results:   16717 Cons
       CO.sum
565    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
566    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
567
                                    PAGE   2
568    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
569
570
571                                                  *** VOLUME SOURCE DATA ***
572
```

```
                NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
                INIT.   URBAN  EMISSION RATE   AIRCRAFT
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
   SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

VOL1             0   0.21062E-01  543461.3 3752414.5   232.9     5.00    10.36
1.40     YES   HRDOW            NO
VOL2             0   0.21062E-01  543491.1 3752370.3   232.0     5.00    10.36
1.40     YES   HRDOW            NO
VOL3             0   0.21062E-01  543461.3 3752369.9   232.0     5.00    10.36
1.40     YES   HRDOW            NO
VOL4             0   0.21062E-01  543604.6 3752712.8   238.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL5             0   0.21062E-01  543570.1 3752712.6   238.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL6             0   0.21062E-01  543533.2 3752712.5   238.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL7             0   0.21062E-01  543500.9 3752712.2   238.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL8             0   0.21062E-01  543604.2 3752667.6   237.7     5.00    10.36
1.40     YES   HRDOW            NO
VOL9             0   0.21062E-01  543569.7 3752667.4   237.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL10            0   0.21062E-01  543532.8 3752667.3   237.5     5.00    10.36
1.40     YES   HRDOW            NO
VOL11            0   0.21062E-01  543500.5 3752667.0   237.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL12            0   0.21062E-01  543603.3 3752623.1   236.8     5.00    10.36
1.40     YES   HRDOW            NO
VOL13            0   0.21062E-01  543568.7 3752622.9   236.6     5.00    10.36
1.40     YES   HRDOW            NO
VOL14            0   0.21062E-01  543531.9 3752622.8   236.8     5.00    10.36
1.40     YES   HRDOW            NO
VOL15            0   0.21062E-01  543499.6 3752622.5   236.7     5.00    10.36
1.40     YES   HRDOW            NO
VOL16            0   0.21062E-01  543603.0 3752578.0   235.9     5.00    10.36
1.40     YES   HRDOW            NO
VOL17            0   0.21062E-01  543568.4 3752577.8   235.8     5.00    10.36
1.40     YES   HRDOW            NO
VOL18            0   0.21062E-01  543531.6 3752577.7   236.0     5.00    10.36
1.40     YES   HRDOW            NO
VOL19            0   0.21062E-01  543499.3 3752577.4   235.9     5.00    10.36
1.40     YES   HRDOW            NO
VOL20            0   0.21062E-01  543602.4 3752535.4   235.0     5.00    10.36
1.40     YES   HRDOW            NO
VOL21            0   0.21062E-01  543567.8 3752535.1   235.1     5.00    10.36
1.40     YES   HRDOW            NO
VOL22            0   0.21062E-01  543531.0 3752535.0   235.2     5.00    10.36
1.40     YES   HRDOW            NO
VOL23            0   0.21062E-01  543498.7 3752534.7   235.1     5.00    10.36
1.40     YES   HRDOW            NO
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:51:24

                                PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***
```

```
608
609   SRCGROUP ID                                                SOURCE IDs
610   -----------                                                ----------
611
612
613    ALL        VOL1        , VOL2        , VOL3        , VOL4        , VOL5        ,
       VOL6        , VOL7        , VOL8        ,
614
615               VOL9        , VOL10       , VOL11       , VOL12       , VOL13       ,
                  VOL14       , VOL15       , VOL16       ,
616
617               VOL17       , VOL18       , VOL19       , VOL20       , VOL21       ,
                  VOL22       , VOL23       ,
618   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
619    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
620
                                  PAGE   4
621    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
622
623
624                                          *** SOURCE IDs DEFINED AS URBAN SOURCES ***
625
626    URBAN ID   URBAN POP                                      SOURCE IDs
627    --------   ---------                                      ----------
628
629
630                2492442.   VOL1        , VOL2        , VOL3        , VOL4        ,
                   VOL5        , VOL6        , VOL7        ,
631   VOL8        ,
632
633               VOL9        , VOL10       , VOL11       , VOL12       , VOL13       ,
                  VOL14       , VOL15       , VOL16       ,
634
635               VOL17       , VOL18       , VOL19       , VOL20       , VOL21       ,
                  VOL22       , VOL23       ,
636   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
637    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
638
                                  PAGE   5
639    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
640
641                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
642
643    SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
644     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
645    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
646                                                 DAY OF WEEK = WEEKDAY
647       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
648       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
649      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
650                                                 DAY OF WEEK = SATURDAY
651       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
652       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
      .0000E+00   15  .0000E+00   16  .0000E+00
653     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
654                                          DAY OF WEEK = SUNDAY
655      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
656      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
657     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
658   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
659    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
660
                                PAGE   6
661    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
662
663                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
664
665    SOURCE ID = VOL2         ; SOURCE TYPE = VOLUME   :
666     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
667    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - - -
668                                          DAY OF WEEK = WEEKDAY
669      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
670      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
671     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
672                                          DAY OF WEEK = SATURDAY
673      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
674      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
675     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
676                                          DAY OF WEEK = SUNDAY
677      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
678      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
679     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
680   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
681    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
682
                                PAGE   7
683    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
684
685                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
686
687    SOURCE ID = VOL3         ; SOURCE TYPE = VOLUME   :
688     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
689    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - - -
690                                          DAY OF WEEK = WEEKDAY
```

```
691       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
692       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
693      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
694                                              DAY OF WEEK = SATURDAY
695       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
696       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
697      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
698                                              DAY OF WEEK = SUNDAY
699       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
700       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
701      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
702  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
703   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      16:51:24
704
                                  PAGE   8
705   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
706
707                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
708
709   SOURCE ID = VOL4          ; SOURCE TYPE = VOLUME   :
710    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
711   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - - - - - -
712                                              DAY OF WEEK = WEEKDAY
713       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
714       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
715      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
716                                              DAY OF WEEK = SATURDAY
717       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
718       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
719      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
720                                              DAY OF WEEK = SUNDAY
721       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
722       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
723      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
724  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
725   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      16:51:24
726
                                  PAGE   9
727   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
```

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728
729                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
730
731    SOURCE ID = VOL5         ; SOURCE TYPE = VOLUME   :
732     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
733    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
734                                                DAY OF WEEK = WEEKDAY
735       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
736       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
737      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
738                                                DAY OF WEEK = SATURDAY
739       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
740       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
741      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
742                                                DAY OF WEEK = SUNDAY
743       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
744       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
745      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
746    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
747     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        16:51:24
748
                                   PAGE  10
749    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
750
751                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
752
753    SOURCE ID = VOL6         ; SOURCE TYPE = VOLUME   :
754     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
755    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
756                                                DAY OF WEEK = WEEKDAY
757       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
758       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
759      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
760                                                DAY OF WEEK = SATURDAY
761       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
762       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
763      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
764                                                DAY OF WEEK = SUNDAY
765       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
766       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
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767      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
768    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
769     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        16:51:24
770
                                    PAGE  11
771     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
772
773                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
774
775     SOURCE ID = VOL7         ; SOURCE TYPE = VOLUME   :
776      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
777    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
778                                                 DAY OF WEEK = WEEKDAY
779        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
780        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
781       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
782                                                 DAY OF WEEK = SATURDAY
783        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
784        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
785       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
786                                                 DAY OF WEEK = SUNDAY
787        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
788        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
789       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
790    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
791     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        16:51:24
792
                                    PAGE  12
793     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
794
795                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
796
797     SOURCE ID = VOL8         ; SOURCE TYPE = VOLUME   :
798      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
799    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
800                                                 DAY OF WEEK = WEEKDAY
801        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
802        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
803       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
804                                                 DAY OF WEEK = SATURDAY
805        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
806    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
807   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
808                                          DAY OF WEEK = SUNDAY
809    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
810    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
811   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
812  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
813   *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      16:51:24
814
                                PAGE  13
815   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
816
817                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
818
819   SOURCE ID = VOL9          ; SOURCE TYPE = VOLUME   :
820    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
821   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
822                                          DAY OF WEEK = WEEKDAY
823    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
824    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
825   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
826                                          DAY OF WEEK = SATURDAY
827    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
828    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
829   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
830                                          DAY OF WEEK = SUNDAY
831    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
832    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
833   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
834  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
835   *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      16:51:24
836
                                PAGE  14
837   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
838
839                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
840
841   SOURCE ID = VOL10         ; SOURCE TYPE = VOLUME   :
842    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
843   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:51:24

                            PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL11        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:51:24
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

16:51:24

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL15        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                            PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL17        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
```

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

```
1073       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
1074       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
1075      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
1076   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
1077    *** AERMET - VERSION  22112 ***
        ***                                                                          ***
        16:51:24
1078
                                    PAGE  25
1079    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1080
1081                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
1082
1083    SOURCE ID = VOL21        ; SOURCE TYPE = VOLUME   :
1084     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
1085    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
1086                                                DAY OF WEEK = WEEKDAY
1087       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
1088       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
1089      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
1090                                                DAY OF WEEK = SATURDAY
1091       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
1092       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
1093      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
1094                                                DAY OF WEEK = SUNDAY
1095       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
1096       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
1097      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
1098   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
1099    *** AERMET - VERSION  22112 ***
        ***                                                                          ***
        16:51:24
1100
                                    PAGE  26
1101    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1102
1103                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
1104
1105    SOURCE ID = VOL22        ; SOURCE TYPE = VOLUME   :
1106     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
1107    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
1108                                                DAY OF WEEK = WEEKDAY
1109       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
1110       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
```

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

16:51:24

PAGE 27

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL23 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
1150
1151        ( 543540.9, 3752023.3,     225.1,    3287.5,       2.0);         ( 543584.9,
            3752056.5,     226.1,    3287.5,       2.0);
1152        ( 543614.0, 3752012.5,     225.2,    3287.5,       2.0);         ( 542425.4,
            3752282.0,     232.2,    3287.5,       2.0);
1153        ( 542742.1, 3752724.7,     239.7,    3287.5,       2.0);         ( 542730.2,
            3752745.4,     240.1,    3287.5,       2.0);
1154        ( 542669.1, 3752667.0,     239.1,    3287.5,       2.0);         ( 542323.6,
            3752005.3,     228.0,    3287.5,       2.0);
1155        ( 542335.9, 3751957.9,     227.3,    3287.5,       2.0);         ( 542260.8,
            3752038.9,     228.1,    3287.5,       2.0);
1156        ( 542402.6, 3753227.0,     251.9,    3287.5,       2.0);         ( 542218.3,
            3753133.8,     249.7,    3287.5,       2.0);
1157        ( 542419.1, 3753270.4,     253.1,    3287.5,       2.0);         ( 542425.6,
            3753374.7,     255.2,    3287.5,       2.0);
1158        ( 542418.1, 3753532.6,     258.6,    3287.5,       2.0);         ( 542522.9,
            3753530.1,     257.8,    3287.5,       2.0);
1159        ( 542573.7, 3753622.1,     259.4,    3287.5,       2.0);         ( 542685.3,
            3753730.9,     260.9,    3287.5,       2.0);
1160        ( 543101.8, 3753637.0,     257.4,    3287.5,       2.0);         ( 542978.5,
            3753731.6,     259.1,    3287.5,       2.0);
1161        ( 543025.4, 3753734.9,     258.7,    3287.5,       2.0);         ( 543251.8,
            3753827.5,     261.4,    3287.5,       2.0);
1162        ( 543667.7, 3753537.0,     253.6,    3287.5,       2.0);         ( 543808.7,
            3753537.0,     252.8,    3287.5,       2.0);
1163        ( 543863.2, 3753559.6,     253.1,    3287.5,       2.0);         ( 545584.6,
            3752018.4,     224.3,    3287.5,       2.0);
1164        ( 546556.8, 3753157.1,     237.8,    3287.5,       2.0);         ( 546874.0,
            3753156.8,     238.1,    3287.5,       2.0);
1165        ( 547679.1, 3752558.3,     239.2,    3287.5,       2.0);         ( 547675.6,
            3752681.6,     240.9,    3287.5,       2.0);
1166        ( 547671.5, 3752817.2,     242.5,    3287.5,
            2.0);
1167    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
        Solar\16717 Cons CO\ ***        07/21/25
1168     *** AERMET - VERSION  22112 ***
         ***                                                                    ***
         16:51:24
1169
                                    PAGE  29
1170     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1171
1172                                                *** METEOROLOGICAL DAYS SELECTED FOR
                                                    PROCESSING ***
1173                                                                (1=YES; 0=NO)
1174
1175                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1176                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1177                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1178                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1179                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1180                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1181                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                    1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1182                1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
1183
1184                    NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                        IS INCLUDED IN THE DATA FILE.
1185
1186
```

Surface file:
KPSP_V11_trimmed.sfc
Met Version: 22112
Profile file:
KPSP_V11_trimmed.PFL
Surface format:
FREE

Profile format:
FREE

Surface station no.: 93138 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2018 Year: 2018

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
18	01	01	1	01	-14.0	0.169	-9.000	-9.000	-999.	440.	31.3	0.20	3.95	1.00	1.76	251.	10.1	283.1	2.0
18	01	01	1	02	-29.9	0.302	-9.000	-9.000	-999.	400.	100.6	0.42	3.95	1.00	2.36	318.	10.1	283.8	2.0
18	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	283.1	2.0
18	01	01	1	04	-23.9	0.242	-9.000	-9.000	-999.	286.	64.5	0.05	3.95	1.00	3.36	343.	10.1	284.2	2.0
18	01	01	1	05	-22.2	0.222	-9.000	-9.000	-999.	251.	54.3	0.42	3.95	1.00	1.76	313.	10.1	281.4	2.0
18	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	282.0	2.0
18	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	282.0	2.0
18	01	01	1	08	-10.1	0.158	-9.000	-9.000	-999.	151.	34.8	0.15	3.95	0.51	1.76	999.	10.1	284.2	2.0
18	01	01	1	09	49.7	-9.000	-9.000	-9.000	112.	-999.	-99999.0	0.15	3.95	0.31	0.00	0.	10.1	288.1	2.0
18	01	01	1	10	126.4	-9.000	-9.000	-9.000	210.	-999.	-99999.0	0.15	3.95	0.24	0.00	0.	10.1	292.0	2.0
18	01	01	1	11	179.4	0.238	1.188	0.010	336.	279.	-6.8	0.15	3.95	0.22	1.76	999.	10.1	295.3	2.0
18	01	01	1	12	204.5	-9.000	-9.000	-9.000	506.	-999.	-99999.0	0.15	3.95	0.21	0.00	0.	10.1	297.5	2.0
18	01	01	1	13	199.1	-9.000	-9.000	-9.000	674.	-999.	-99999.0	0.15	3.95	0.21	0.00	0.	10.1	297.0	2.0
18	01	01	1	14	166.1	0.306	1.531	0.006	774.	406.	-15.4	0.05	3.95	0.23					

```
      3.36  119.   10.1  297.0    2.0
1224  18 01 01   1 15  106.1  0.177  1.363  0.006  855.  189.     -4.7  0.04   3.95   0.26
      1.76  132.   10.1  296.4    2.0
1225  18 01 01   1 16   25.4 -9.000 -9.000 -9.000  876. -999. -99999.0  0.15   3.95   0.36
      0.00    0.   10.1  295.9    2.0
1226  18 01 01   1 17 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   0.66
      0.00    0.   10.1  294.8    2.0
1227  18 01 01   1 18  -16.2  0.186 -9.000 -9.000 -999.  193.     38.1  0.27   3.95   1.00
      1.76  237.   10.1  293.1    2.0
1228  18 01 01   1 19  -14.9  0.167 -9.000 -9.000 -999.  164.     30.6  0.05   3.95   1.00
      2.36  334.   10.1  290.9    2.0
1229  18 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  288.8    2.0
1230  18 01 01   1 21  -23.6  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
      3.36  330.   10.1  288.1    2.0
1231  18 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  286.4    2.0
1232  18 01 01   1 23  -20.0  0.205 -9.000 -9.000 -999.  222.     46.0  0.05   3.95   1.00
      2.86  330.   10.1  288.1    2.0
1233  18 01 01   1 24  -49.4  0.505 -9.000 -9.000 -999.  862.    280.9  0.42   3.95   1.00
      3.86  310.   10.1  287.5    2.0
1234
1235
1236  First hour of profile data
1237  YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
1238  18 01 01 01   10.1 1  251.    1.76   283.2   99.0  -99.00  -99.00
1239
1240  F indicates top of profile (=1) or below (=0)
1241  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1242  *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      16:51:24
1243
                                PAGE  31
1244  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1245
1246                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP:  ALL      ***
1247                                  INCLUDING SOURCE(S):     VOL1        , VOL2        ,
                                      VOL3        , VOL4        , VOL5        ,
1248                  VOL6        , VOL7        , VOL8        , VOL9        , VOL10       ,
                      VOL11       , VOL12       , VOL13       ,
1249                  VOL14       , VOL15       , VOL16       , VOL17       , VOL18       ,
                      VOL19       , VOL20       , VOL21       ,
1250                  VOL22       , VOL23       ,
1251
1252                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
1253
1254                                      ** CONC OF CO       IN
                                          MICROGRAMS/M**3                          **
1255
1256        X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
            Y-COORD (M)        CONC     (YYMMDDHH)
1257  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1258          543540.94   3752023.31       12.87053  (18120616)               543584.92
              3752056.50       12.42210  (18120616)
1259          543613.99   3752012.46        9.96267  (18120616)               542425.42
              3752282.03        1.57204  (23122215)
1260          542742.12   3752724.67        7.08082  (19120416)               542730.18
              3752745.38        7.54642  (19120416)
1261          542669.10   3752667.03        4.74227  (19120416)               542323.62
              3752005.27        1.66182  (19011716)
1262          542335.92   3751957.89        1.55471  (19011716)               542260.80
              3752038.91        1.58305  (19011716)
```

```
1263          542402.64   3753227.03        3.01860  (19120416)                542218.26
              3753133.77        5.80698  (19120416)
1264          542419.09   3753270.44        1.98591  (19120416)                542425.55
              3753374.70        1.65604  (19011516)
1265          542418.10   3753532.59        1.40141  (23011009)                542522.86
              3753530.11        1.66734  (19011616)
1266          542573.68   3753622.08        1.61565  (19011616)                542685.29
              3753730.95        1.24317  (19121216)
1267          543101.83   3753636.97        1.56232  (23113016)                542978.45
              3753731.58        1.39722  (21121616)
1268          543025.37   3753734.95        1.26986  (23113016)                543251.79
              3753827.46        1.72996  (23010316)
1269          543667.69   3753537.01        2.43935  (23010916)                543808.70
              3753537.01        2.86744  (23010916)
1270          543863.24   3753559.62        2.87749  (21122316)                545584.63
              3752018.38        0.43967  (19122309)
1271          546556.84   3753157.12        0.32996  (21032609)                546874.00
              3753156.75        0.30112  (21032609)
1272          547679.08   3752558.32        0.27334  (18112912)                547675.57
              3752681.64        0.28340  (18112912)
1273          547671.48   3752817.24        0.26450
              (18112912)

1274     *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
         Solar\16717 Cons CO\ ***        07/21/25
1275      *** AERMET - VERSION  22112 ***
          ***                                                                    ***
          16:51:24
1276
                                    PAGE  32
1277      *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1278
1279                                  *** THE   1ST HIGHEST  8-HR AVERAGE CONCENTRATION   VALUES
                                      FOR SOURCE GROUP:  ALL      ***
1280                                      INCLUDING SOURCE(S):     VOL1        , VOL2        ,
                                          VOL3        , VOL4        , VOL5        ,
1281                    VOL6        , VOL7        , VOL8        , VOL9        , VOL10       ,
                        VOL11       , VOL12       , VOL13       ,
1282                    VOL14       , VOL15       , VOL16       , VOL17       , VOL18       ,
                        VOL19       , VOL20       , VOL21       ,
1283                    VOL22       , VOL23       ,
1284
1285                                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***
1286
1287                                           ** CONC OF CO       IN
                                               MICROGRAMS/M**3                          **
1288
1289           X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)             X-COORD (M)
               Y-COORD (M)        CONC     (YYMMDDHH)
1290      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - - - - - -
1291          543540.94   3752023.31        2.79938  (19123116)                543584.92
              3752056.50        3.20959  (19123116)
1292          543613.99   3752012.46        2.63746  (19123116)                542425.42
              3752282.03        0.35735  (19011716)
1293          542742.12   3752724.67        1.12707  (21012216)                542730.18
              3752745.38        1.15773  (19120416)
1294          542669.10   3752667.03        0.84733  (19120416)                542323.62
              3752005.27        0.25362  (19011716)
1295          542335.92   3751957.89        0.23039  (19011716)                542260.80
              3752038.91        0.25282  (19011716)
1296          542402.64   3753227.03        0.48508  (21120316)                542218.26
              3753133.77        0.76697  (19120416)
1297          542419.09   3753270.44        0.43816  (21120316)                542425.55
              3753374.70        0.37028  (19122016)
1298          542418.10   3753532.59        0.34162  (19011616)                542522.86
```

```
          3753530.11        0.39859  (19011616)
1299      542573.68   3753622.08        0.37993  (19011616)                542685.29
          3753730.95        0.29863  (19011616)
1300      543101.83   3753636.97        0.35228  (23113016)                542978.45
          3753731.58        0.28353  (21121616)
1301      543025.37   3753734.95        0.29154  (23113016)                543251.79
          3753827.46        0.23292  (23010316)
1302      543667.69   3753537.01        0.62488  (23010916)                543808.70
          3753537.01        0.62585  (23010916)
1303      543863.24   3753559.62        0.54792  (23010916)                545584.63
          3752018.38        0.11810  (21113016)
1304      546556.84   3753157.12        0.05035b (21112616)                546874.00
          3753156.75        0.04462b (21112616)
1305      547679.08   3752558.32        0.04261  (23112816)                547675.57
          3752681.64        0.04279  (23112816)
1306      547671.48   3752817.24        0.04129
          (23112816)

1307  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1308   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
1309
                                PAGE  33
1310   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1311
1312                                                *** THE SUMMARY OF HIGHEST  1-HR RESULTS
                                                    ***
1313
1314
1315                                    ** CONC OF CO       IN
                                        MICROGRAMS/M**3                          **
1316
1317
                                                          DATE

                                                            NETWORK
1318  GROUP ID                              AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR,
      YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
1319  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1320
1321  ALL      HIGH   1ST HIGH VALUE IS      12.87053  ON 18120616: AT (  543540.94,
      3752023.31,   225.05,  3287.53,    2.00)  DC
1322
1323
1324   *** RECEPTOR TYPES:  GC = GRIDCART
1325                        GP = GRIDPOLR
1326                        DC = DISCCART
1327                        DP = DISCPOLR
1328  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1329   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:51:24
1330
                                PAGE  34
1331   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1332
1333                                                *** THE SUMMARY OF HIGHEST  8-HR RESULTS
                                                    ***
1334
1335
1336                                    ** CONC OF CO       IN
                                        MICROGRAMS/M**3                          **
```

```
                                                                 DATE

                                                                   NETWORK
GROUP ID                              AVERAGE CONC     (YYMMDDHH)              RECEPTOR  (XR,
YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       3.20959  ON 19123116: AT (  543584.92,
3752056.50,   226.08,  3287.53,    2.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:51:24

                               PAGE  35
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of          332 Warning Message(s)
 A Total of         2103 Informational Message(s)

 A Total of        43824 Hours Were Processed

 A Total of          918 Calm Hours Identified

 A Total of         1185 Missing Hours Identified (  2.70 Percent)


    ******** FATAL ERROR MESSAGES ********
                ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     456       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     456       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET
 CN W733       8         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010108
 CN W733      16         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010116
 CN W733      24         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010124
 CN W733      40         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010216
 CN W733      64         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010316
 CN W733      72         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010324
 CN W733      88         AVER: 8-hr avg, < 6 hours of data, calms policy used.
 2018010416
 CN W733      96         AVER: 8-hr avg, < 6 hours of data, calms policy used.
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      2018010424
1384  CN W733     104         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010508
1385  CN W733     112         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010516
1386  CN W733     120         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010524
1387  CN W733     136         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010616
1388  CN W733     144         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010624
1389  CN W733     160         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010716
1390  CN W733     176         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010808
1391  CN W733     184         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010816
1392  CN W733     192         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010824
1393  CN W733     208         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018010916
1394  CN W733     224         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011008
1395  CN W733     232         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011016
1396  CN W733     240         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011024
1397  CN W733     248         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011108
1398  CN W733     256         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011116
1399  CN W733     272         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011208
1400  CN W733     280         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011216
1401  CN W733     328         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011416
1402  CN W733     352         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011516
1403  CN W733     376         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011616
1404  CN W733     384         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011624
1405  CN W733     400         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011716
1406  CN W733     408         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011724
1407  CN W733     424         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011816
1408  CN W733     440         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018011908
1409  CN W733     472         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012016
1410  CN W733     488         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012108
1411  CN W733     520         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012216
1412  CN W733     528         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012224
1413  CN W733     544         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012316
1414  CN W733     568         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012416
1415  CN W733     592         AVER: 8-hr avg, < 6 hours of data, calms policy used.
      2018012516
1416  CN W733     608         AVER: 8-hr avg, < 6 hours of data, calms policy used.
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2018012608
1417 CN W733 616 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018012616
1418 CN W733 640 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018012716
1419 CN W733 688 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018012916
1420 CN W733 712 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018013016
1421 CN W733 720 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018013024
1422 CN W733 736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018013116
1423 CN W733 744 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018013124
1424 CN W733 1312 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018022416
1425 CN W733 1336 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018022516
1426 CN W733 1600 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018030816
1427 CN W733 3640 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018060116
1428 CN W733 3704 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018060408
1429 CN W733 4928 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018072508
1430 CN W733 4936 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018072516
1431 CN W733 5192 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018080508
1432 CN W733 5584 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018082116
1433 CN W733 5720 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018082708
1434 CN W733 5728 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018082716
1435 CN W733 7048 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018102116
1436 CN W733 7192 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018102716
1437 CN W733 7632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018111424
1438 CN W733 8248 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018121016
1439 CN W733 8432 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018121808
1440 CN W733 8760 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2018123124
1441 CN W733 10152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019022724
1442 CN W733 10184 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030108
1443 CN W733 10192 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030116
1444 CN W733 10200 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030124
1445 CN W733 10208 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030208
1446 CN W733 10224 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030224
1447 CN W733 10232 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030308
1448 CN W733 10256 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030408
1449 CN W733 10264 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2019030416
1450 CN W733 10288 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030516
1451 CN W733 10304 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030608
1452 CN W733 10312 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030616
1453 CN W733 10328 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030708
1454 CN W733 10336 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030716
1455 CN W733 10352 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030808
1456 CN W733 10384 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019030916
1457 CN W733 10400 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019031008
1458 CN W733 10408 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019031016
1459 CN W733 10456 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1460 CN W733 10464 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1461 CN W733 10472 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1465 CN W733 10576 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019031716
1466 CN W733 10624 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019031916
1467 CN W733 10648 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032016
1468 CN W733 10656 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032024
1469 CN W733 10664 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032108
1470 CN W733 10672 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032116
1471 CN W733 10688 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032208
1472 CN W733 10696 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032216
1473 CN W733 10712 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032308
1474 CN W733 10728 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032324
1475 CN W733 10736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032408
1476 CN W733 10744 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032416
1477 CN W733 10768 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1478 CN W733 10792 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1479 CN W733 10808 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1480 CN W733 10816 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032716
1481 CN W733 10832 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019032808
1482 CN W733 10856 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2019032908
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2019052508
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1485 CN W733 12568 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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2019070608
1487 CN W733 13328 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019071008
1488 CN W733 14080 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019081016
1489 CN W733 14624 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019090208
1490 CN W733 14632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019090216
1491 CN W733 15632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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1492 CN W733 15640 AVER: 8-hr avg, < 6 hours of data, calms policy used.
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2019121016
1495 CN W733 17152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019121616
1496 CN W733 17272 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2019122116
1497 CN W733 17632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020010516
1498 CN W733 18616 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020021516
1499 CN W733 19264 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020031316
1500 CN W733 19288 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020031416
1501 CN W733 19312 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020031516
1502 CN W733 19336 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020031616
1503 CN W733 19744 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020040216
1504 CN W733 19768 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020040316
1505 CN W733 19808 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020040508
1506 CN W733 19864 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020040716
1507 CN W733 20176 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020042016
1508 CN W733 20248 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020042316
1509 CN W733 20520 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020050424
1510 CN W733 20528 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020050508
1511 CN W733 21552 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020061624
1512 CN W733 21560 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020061708
1513 CN W733 21632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062008
1514 CN W733 21656 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062108
1515 CN W733 21664 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2020062116
1516 CN W733 21704 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062308
1517 CN W733 21712 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062316
1518 CN W733 21736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062416
1519 CN W733 21760 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020062516
1520 CN W733 21912 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020070124
1521 CN W733 21920 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020070208
1522 CN W733 22624 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020073116
1523 CN W733 23784 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020091724
1524 CN W733 24256 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020100716
1525 CN W733 24328 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020101016
1526 CN W733 24928 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020110416
1527 CN W733 25016 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020110808
1528 CN W733 25120 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020111216
1529 CN W733 25264 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020111816
1530 CN W733 25288 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020111916
1531 CN W733 25312 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112016
1532 CN W733 25336 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112116
1533 CN W733 25360 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112216
1534 CN W733 25384 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112316
1535 CN W733 25408 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112416
1536 CN W733 25432 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020112516
1537 CN W733 25768 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020120916
1538 CN W733 25912 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020121516
1539 CN W733 26056 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2020122116
1540 CN W733 26408 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021010508
1541 CN W733 26512 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021010916
1542 CN W733 26536 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021011016
1543 CN W733 26560 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021011116
1544 CN W733 26584 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021011216
1545 CN W733 26848 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021012316
1546 CN W733 26872 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021012416
1547 CN W733 26896 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021012516
1548 CN W733 27016 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2021013016
1549 CN W733 27040 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021013116
1550 CN W733 28048 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021031416
1551 CN W733 28096 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021031616
1552 CN W733 28160 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021031908
1553 CN W733 28168 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021031916
1554 CN W733 28240 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021032216
1555 CN W733 28432 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021033016
1556 CN W733 28504 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021040216
1557 CN W733 28528 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021040316
1558 CN W733 28536 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021040324
1559 CN W733 28736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021041208
1560 CN W733 28744 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021041216
1561 CN W733 28976 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042208
1562 CN W733 29024 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042408
1563 CN W733 29032 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042416
1564 CN W733 29048 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042508
1565 CN W733 29064 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042524
1566 CN W733 29080 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042616
1567 CN W733 29096 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021042708
1568 CN W733 29984 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021060308
1569 CN W733 29992 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021060316
1570 CN W733 30528 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021062524
1571 CN W733 31128 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072024
1572 CN W733 31136 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072108
1573 CN W733 31144 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072116
1574 CN W733 31152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072124
1575 CN W733 31160 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072208
1576 CN W733 31168 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072216
1577 CN W733 31176 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072224
1578 CN W733 31184 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021072308
1579 CN W733 31616 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021081008
1580 CN W733 31784 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021081708
1581 CN W733 32152 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2021090116
1582 CN W733 32424 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021091224
1583 CN W733 33040 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021100816
1584 CN W733 33064 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021100916
1585 CN W733 33440 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021102508
1586 CN W733 34080 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021112024
1587 CN W733 34216 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2021112616
1588 MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at:
23010101
1589 MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at: 1
year gap
1590 CN W733 35720 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023012808
1591 CN W733 35744 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023012908
1592 CN W733 35752 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023012916
1593 CN W733 35760 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023012924
1594 CN W733 35768 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023013008
1595 CN W733 35776 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023013016
1596 CN W733 35992 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023020816
1597 CN W733 36112 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023021316
1598 CN W733 36184 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023021616
1599 CN W733 36472 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023022816
1600 CN W733 36712 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031016
1601 CN W733 36736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031116
1602 CN W733 36760 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031216
1603 CN W733 36840 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031524
1604 CN W733 36848 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031608
1605 CN W733 36856 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031616
1606 CN W733 36864 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031624
1607 CN W733 36880 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031716
1608 CN W733 36904 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023031816
1609 CN W733 36944 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032008
1610 CN W733 36952 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032016
1611 CN W733 36968 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032108
1612 CN W733 36976 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032116
1613 CN W733 37000 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032216
1614 CN W733 37016 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2023032308
1615 CN W733 37040 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032408
1616 CN W733 37088 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032608
1617 CN W733 37096 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032616
1618 CN W733 37120 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032716
1619 CN W733 37144 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032816
1620 CN W733 37152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032824
1621 CN W733 37160 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023032908
1622 CN W733 37184 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033008
1623 CN W733 37192 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033016
1624 CN W733 37200 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033024
1625 CN W733 37208 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033108
1626 CN W733 37216 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033116
1627 CN W733 37224 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023033124
1628 CN W733 37240 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040116
1629 CN W733 37256 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040208
1630 CN W733 37264 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040216
1631 CN W733 37280 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040308
1632 CN W733 37304 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040408
1633 CN W733 37312 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040416
1634 CN W733 37360 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040616
1635 CN W733 37376 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040708
1636 CN W733 37384 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040716
1637 CN W733 37392 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040724
1638 CN W733 37400 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040808
1639 CN W733 37408 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023040816
1640 CN W733 37928 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023043008
1641 CN W733 38392 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023051916
1642 CN W733 38984 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061308
1643 CN W733 38992 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061316
1644 CN W733 39008 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061408
1645 CN W733 39080 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061708
1646 CN W733 39088 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061716
1647 CN W733 39104 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2023061808
1648 CN W733 39128 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023061908
1649 CN W733 39152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062008
1650 CN W733 39176 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062108
1651 CN W733 39184 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062116
1652 CN W733 39200 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062208
1653 CN W733 39224 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062308
1654 CN W733 39232 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062316
1655 CN W733 39248 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062408
1656 CN W733 39256 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062416
1657 CN W733 39272 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062508
1658 CN W733 39296 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062608
1659 CN W733 39320 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062708
1660 CN W733 39344 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062808
1661 CN W733 39352 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062816
1662 CN W733 39368 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062908
1663 CN W733 39376 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023062916
1664 CN W733 39392 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023063008
1665 CN W733 39400 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023063016
1666 CN W733 39512 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070508
1667 CN W733 39576 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070724
1668 CN W733 39584 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070808
1669 CN W733 39592 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070816
1670 CN W733 39600 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070824
1671 CN W733 39608 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070908
1672 CN W733 39624 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023070924
1673 CN W733 39632 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023071008
1674 CN W733 39640 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023071016
1675 CN W733 39736 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023071416
1676 CN W733 39992 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023072508
1677 CN W733 40112 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023073008
1678 CN W733 40152 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023073124
1679 CN W733 40352 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023080908
1680 CN W733 40480 AVER: 8-hr avg, < 6 hours of data, calms policy used.

2023081416
CN W733 40496 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023081508
CN W733 40528 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023081616
CN W733 40536 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023081624
CN W733 40648 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023082116
CN W733 41416 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092216
CN W733 41432 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092308
CN W733 41440 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092316
CN W733 41456 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092408
CN W733 41464 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092416
CN W733 41576 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023092908
CN W733 41776 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023100716
CN W733 41968 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023101516
CN W733 42376 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110116
CN W733 42400 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110216
CN W733 42424 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110316
CN W733 42448 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110416
CN W733 42472 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110516
CN W733 42496 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110616
CN W733 42520 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023110716
CN W733 42592 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023111016
CN W733 42912 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023112324
CN W733 42920 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023112408
CN W733 42928 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023112416
CN W733 43240 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023120716
CN W733 43696 AVER: 8-hr avg, < 6 hours of data, calms policy used.
2023122616

****
*** AERMOD Finishes Successfully ***
****

```
** Lakes Environmental AERMOD MPI
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 7/21/2025
** File: C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons NOX\16717 Cons NOX.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\
   MODELOPT DFAULT CONC
   AVERTIME 1
   URBANOPT 2492442 Riverside_County
   POLLUTID NOX
   FLAGPOLE 2.00
   RUNORNOT RUN
   ERRORFIL "16717 Cons NOX.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     543461.330  3752414.462      232.890
   LOCATION VOL2         VOLUME     543491.079  3752370.301      232.020
   LOCATION VOL3         VOLUME     543461.327  3752369.927      232.040
   LOCATION VOL4         VOLUME     543604.621  3752712.835      238.620
   LOCATION VOL5         VOLUME     543570.062  3752712.582      238.580
   LOCATION VOL6         VOLUME     543533.195  3752712.474      238.630
   LOCATION VOL7         VOLUME     543500.897  3752712.169      238.630
   LOCATION VOL8         VOLUME     543604.209  3752667.624      237.650
   LOCATION VOL9         VOLUME     543569.650  3752667.371      237.570
   LOCATION VOL10        VOLUME     543532.784  3752667.263      237.510
   LOCATION VOL11        VOLUME     543500.485  3752666.958      237.620
   LOCATION VOL12        VOLUME     543603.295  3752623.138      236.750
   LOCATION VOL13        VOLUME     543568.736  3752622.885      236.640
   LOCATION VOL14        VOLUME     543531.870  3752622.776      236.820
   LOCATION VOL15        VOLUME     543499.571  3752622.472      236.690
   LOCATION VOL16        VOLUME     543602.991  3752578.042      235.870
   LOCATION VOL17        VOLUME     543568.431  3752577.789      235.840
   LOCATION VOL18        VOLUME     543531.565  3752577.681      236.030
   LOCATION VOL19        VOLUME     543499.267  3752577.376      235.940
   LOCATION VOL20        VOLUME     543602.381  3752535.384      235.020
   LOCATION VOL21        VOLUME     543567.822  3752535.131      235.140
   LOCATION VOL22        VOLUME     543530.955  3752535.023      235.230
   LOCATION VOL23        VOLUME     543498.657  3752534.718      235.100
** Source Parameters **
   SRCPARAM VOL1         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL2         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL3         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL4         0.0244686624     5.000    10.356     1.400
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   SRCPARAM VOL5         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL6         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL7         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL8         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL9         0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL10        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL11        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL12        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL13        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL14        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL15        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL16        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL17        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL18        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL19        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL20        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL21        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL22        0.0244686624     5.000    10.356     1.400
   SRCPARAM VOL23        0.0244686624     5.000    10.356     1.400
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "16717 Cons NOX.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KPSP_V11_trimmed.sfc
   PROFFILE KPSP_V11_trimmed.PFL
   SURFDATA 93138 2018
   UAIRDATA 3190 2018
   PROFBASE 124.71 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
```

```
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "16717 CONS NOX.AD\01H1GALL.PLT" 31
   SUMMFILE "16717 Cons NOX.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     456       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187     456       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                    ***
 16:57:52

                              PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for    23 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
```

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521         * Model Accepts FLAGPOLE Receptor . Heights.
522         * The User Specified a Pollutant Type of: NOX
523
524    **Model Calculates  1 Short Term Average(s) of:   1-HR
525
526    **This Run Includes:     23 Source(s);       1 Source Group(s); and      31 Receptor(s)
527
528                   with:      0 POINT(s), including
529                              0 POINTCAP(s) and      0 POINTHOR(s)
530                    and:     23 VOLUME source(s)
531                    and:      0 AREA type source(s)
532                    and:      0 LINE source(s)
533                    and:      0 RLINE/RLINEXT source(s)
534                    and:      0 OPENPIT source(s)
535                    and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
536                    and:      0 SWPOINT source(s)
537
538
539    **Model Set To Continue RUNning After the Setup Testing.
540
541    **The AERMET Input Meteorological Data Version Date:  22112
542
543    **Output Options Selected:
544             Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
                Keyword)
545             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
546             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
547
548    **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
549                                                                    m for Missing Hours
550                                                                    b for Both Calm and
                                                                       Missing Hours
551
552    **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   124.71 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
553                     Emission Units = GRAMS/SEC                                ;  Emission
                        Rate Unit Factor =   0.10000E+07
554                     Output Units   = MICROGRAMS/M**3
555
556    **Approximate Storage Requirements of Model =      3.5 MB of RAM.
557
558    **Input Runstream File:
       aermod.inp

559    **Output Print File:
       aermod.out

560
561    **Detailed Error/Message File:   16717 Cons
       NOX.err
562    **File for Summary of Results:   16717 Cons
       NOX.sum
563    PP *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
564    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:57:52
565
                                  PAGE   2
566    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
567
568
569                                                 *** VOLUME SOURCE DATA ***
570
571                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                    INIT.   URBAN  EMISSION RATE   AIRCRAFT
```

```
572      SOURCE       PART.  (GRAMS/SEC)     X         Y       ELEV.   HEIGHT      SY
         SZ     SOURCE  SCALAR VARY
573        ID         CATS.                (METERS)  (METERS)  (METERS)  (METERS)  (METERS)
           (METERS)              BY
574    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
575
576    VOL1              0   0.24469E-01  543461.3 3752414.5   232.9     5.00    10.36
       1.40     YES   HRDOW             NO
577    VOL2              0   0.24469E-01  543491.1 3752370.3   232.0     5.00    10.36
       1.40     YES   HRDOW             NO
578    VOL3              0   0.24469E-01  543461.3 3752369.9   232.0     5.00    10.36
       1.40     YES   HRDOW             NO
579    VOL4              0   0.24469E-01  543604.6 3752712.8   238.6     5.00    10.36
       1.40     YES   HRDOW             NO
580    VOL5              0   0.24469E-01  543570.1 3752712.6   238.6     5.00    10.36
       1.40     YES   HRDOW             NO
581    VOL6              0   0.24469E-01  543533.2 3752712.5   238.6     5.00    10.36
       1.40     YES   HRDOW             NO
582    VOL7              0   0.24469E-01  543500.9 3752712.2   238.6     5.00    10.36
       1.40     YES   HRDOW             NO
583    VOL8              0   0.24469E-01  543604.2 3752667.6   237.7     5.00    10.36
       1.40     YES   HRDOW             NO
584    VOL9              0   0.24469E-01  543569.7 3752667.4   237.6     5.00    10.36
       1.40     YES   HRDOW             NO
585    VOL10             0   0.24469E-01  543532.8 3752667.3   237.5     5.00    10.36
       1.40     YES   HRDOW             NO
586    VOL11             0   0.24469E-01  543500.5 3752667.0   237.6     5.00    10.36
       1.40     YES   HRDOW             NO
587    VOL12             0   0.24469E-01  543603.3 3752623.1   236.8     5.00    10.36
       1.40     YES   HRDOW             NO
588    VOL13             0   0.24469E-01  543568.7 3752622.9   236.6     5.00    10.36
       1.40     YES   HRDOW             NO
589    VOL14             0   0.24469E-01  543531.9 3752622.8   236.8     5.00    10.36
       1.40     YES   HRDOW             NO
590    VOL15             0   0.24469E-01  543499.6 3752622.5   236.7     5.00    10.36
       1.40     YES   HRDOW             NO
591    VOL16             0   0.24469E-01  543603.0 3752578.0   235.9     5.00    10.36
       1.40     YES   HRDOW             NO
592    VOL17             0   0.24469E-01  543568.4 3752577.8   235.8     5.00    10.36
       1.40     YES   HRDOW             NO
593    VOL18             0   0.24469E-01  543531.6 3752577.7   236.0     5.00    10.36
       1.40     YES   HRDOW             NO
594    VOL19             0   0.24469E-01  543499.3 3752577.4   235.9     5.00    10.36
       1.40     YES   HRDOW             NO
595    VOL20             0   0.24469E-01  543602.4 3752535.4   235.0     5.00    10.36
       1.40     YES   HRDOW             NO
596    VOL21             0   0.24469E-01  543567.8 3752535.1   235.1     5.00    10.36
       1.40     YES   HRDOW             NO
597    VOL22             0   0.24469E-01  543531.0 3752535.0   235.2     5.00    10.36
       1.40     YES   HRDOW             NO
598    VOL23             0   0.24469E-01  543498.7 3752534.7   235.1     5.00    10.36
       1.40     YES   HRDOW             NO
599    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
600     *** AERMET - VERSION  22112 ***
        ***                                                                          ***
        16:57:52
601
                                    PAGE   3
602     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
603
604
605                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***
606
607     SRCGROUP ID                                                SOURCE IDs
```

```
608    -----------                                                  ----------
609
610
611     ALL        VOL1       , VOL2       , VOL3       , VOL4       , VOL5       ,
        VOL6       , VOL7       , VOL8       ,
612
613                VOL9       , VOL10      , VOL11      , VOL12      , VOL13      ,
                   VOL14      , VOL15      , VOL16      ,
614
615                VOL17      , VOL18      , VOL19      , VOL20      , VOL21      ,
                   VOL22      , VOL23      ,
616    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
617     *** AERMET - VERSION  22112 ***
        ***                                                                  ***
        16:57:52
618
                                   PAGE   4
619     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
620
621
622                                          *** SOURCE IDs DEFINED AS URBAN SOURCES ***
623
624     URBAN ID   URBAN POP                                    SOURCE IDs
625     --------   ---------                                    ----------
626
627
628                 2492442.   VOL1       , VOL2       , VOL3       , VOL4       ,
                    VOL5       , VOL6       , VOL7       ,
629    VOL8       ,
630
631                VOL9       , VOL10      , VOL11      , VOL12      , VOL13      ,
                   VOL14      , VOL15      , VOL16      ,
632
633                VOL17      , VOL18      , VOL19      , VOL20      , VOL21      ,
                   VOL22      , VOL23      ,
634    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
635     *** AERMET - VERSION  22112 ***
        ***                                                                  ***
        16:57:52
636
                                   PAGE   5
637     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
638
639                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
640
641     SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
642      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
643    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
644                                                DAY OF WEEK = WEEKDAY
645       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
646       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
647      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
648                                                DAY OF WEEK = SATURDAY
649       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
650       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
651      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

```
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE   6
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL2         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE   7
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL3         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
```

```
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                                PAGE   8
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL4          ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:57:52

                                PAGE   9
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
```

```
                    WEEK (HRDOW) *
728
729   SOURCE ID = VOL5         ; SOURCE TYPE = VOLUME   :
730    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
731   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
732                                                DAY OF WEEK = WEEKDAY
733      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
734      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
735     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
736                                                DAY OF WEEK = SATURDAY
737      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
738      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
739     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
740                                                DAY OF WEEK = SUNDAY
741      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
742      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
743     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
744   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
745    *** AERMET - VERSION  22112 ***
       ***                                                                          ***
       16:57:52
746
                                  PAGE  10
747    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
748
749                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
750
751   SOURCE ID = VOL6         ; SOURCE TYPE = VOLUME   :
752    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
753   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
754                                                DAY OF WEEK = WEEKDAY
755      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
756      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
         .1000E+01   15  .1000E+01   16  .1000E+01
757     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
758                                                DAY OF WEEK = SATURDAY
759      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
760      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
761     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
762                                                DAY OF WEEK = SUNDAY
763      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
         .0000E+00    7  .0000E+00    8  .0000E+00
764      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
         .0000E+00   15  .0000E+00   16  .0000E+00
765     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14					

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      .0000E+00   15  .0000E+00   16  .0000E+00
805    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
806                                          DAY OF WEEK = SUNDAY
807     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
808     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
809    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
810 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
811  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     16:57:52
812
                                PAGE  13
813  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
814
815                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *
816
817  SOURCE ID = VOL9         ; SOURCE TYPE = VOLUME   :
818   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
819  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - -
820                                          DAY OF WEEK = WEEKDAY
821     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
822     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
823    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
824                                          DAY OF WEEK = SATURDAY
825     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
826     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
827    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
828                                          DAY OF WEEK = SUNDAY
829     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
830     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
831    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
832 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
833  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     16:57:52
834
                                PAGE  14
835  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
836
837                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *
838
839  SOURCE ID = VOL10        ; SOURCE TYPE = VOLUME   :
840   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
841  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - -
842                                          DAY OF WEEK = WEEKDAY
```

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843       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
844       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
845      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
846                                              DAY OF WEEK = SATURDAY
847       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
848       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
849      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
850                                              DAY OF WEEK = SUNDAY
851       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
852       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
853      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
854  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
855   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      16:57:52
856
                                  PAGE  15
857   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
858
859                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
860
861   SOURCE ID = VOL11        ; SOURCE TYPE = VOLUME   :
862    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
863   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - - - -
864                                              DAY OF WEEK = WEEKDAY
865       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
866       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
867      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
868                                              DAY OF WEEK = SATURDAY
869       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
870       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
871      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
872                                              DAY OF WEEK = SUNDAY
873       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
874       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
875      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
876  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
877   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      16:57:52
878
                                  PAGE  16
879   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
```

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880
881                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
882
883     SOURCE ID = VOL12        ; SOURCE TYPE = VOLUME   :
884      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
885     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
886                                                 DAY OF WEEK = WEEKDAY
887        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
888        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
889       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
890                                                 DAY OF WEEK = SATURDAY
891        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
892        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
893       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
894                                                 DAY OF WEEK = SUNDAY
895        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
896        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
897       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
898     FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
        Solar\16717 Cons CO\ ***        07/21/25
899      *** AERMET - VERSION  22112 ***
         ***                                                                    ***
         16:57:52
900
                                    PAGE  17
901     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
902
903                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
904
905     SOURCE ID = VOL13        ; SOURCE TYPE = VOLUME   :
906      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
907     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
908                                                 DAY OF WEEK = WEEKDAY
909        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
910        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
911       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
912                                                 DAY OF WEEK = SATURDAY
913        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
914        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
915       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
916                                                 DAY OF WEEK = SUNDAY
917        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
918        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
      .0000E+00    7  .0000E+00    8  .0000E+00
958    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
959   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
960                                          DAY OF WEEK = SUNDAY
961    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
962    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
963   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
964  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
965    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:57:52
966
                                PAGE  20
967    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
968
969                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
970
971    SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
972     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
973    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
974                                          DAY OF WEEK = WEEKDAY
975    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
976    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
977   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
978                                          DAY OF WEEK = SATURDAY
979    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
980    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
981   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
982                                          DAY OF WEEK = SUNDAY
983    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
984    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
985   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
986  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
987    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:57:52
988
                                PAGE  21
989    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
990
991                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
992
993    SOURCE ID = VOL17        ; SOURCE TYPE = VOLUME   :
994     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
995    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:57:52

                            PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL18        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 16:57:52
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

1078
1079 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
1080
1081 SOURCE ID = VOL21 ; SOURCE TYPE = VOLUME :
1082 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
1083 - - -

```
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                            PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL23        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                            PAGE  28
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                    (METERS)

     ( 543540.9, 3752023.3,     225.1,    3287.5,       2.0);         ( 543584.9,
```

```
      3752056.5,     226.1,    3287.5,       2.0);
1150  ( 543614.0, 3752012.5,     225.2,    3287.5,       2.0);         ( 542425.4,
      3752282.0,     232.2,    3287.5,       2.0);
1151  ( 542742.1, 3752724.7,     239.7,    3287.5,       2.0);         ( 542730.2,
      3752745.4,     240.1,    3287.5,       2.0);
1152  ( 542669.1, 3752667.0,     239.1,    3287.5,       2.0);         ( 542323.6,
      3752005.3,     228.0,    3287.5,       2.0);
1153  ( 542335.9, 3751957.9,     227.3,    3287.5,       2.0);         ( 542260.8,
      3752038.9,     228.1,    3287.5,       2.0);
1154  ( 542402.6, 3753227.0,     251.9,    3287.5,       2.0);         ( 542218.3,
      3753133.8,     249.7,    3287.5,       2.0);
1155  ( 542419.1, 3753270.4,     253.1,    3287.5,       2.0);         ( 542425.6,
      3753374.7,     255.2,    3287.5,       2.0);
1156  ( 542418.1, 3753532.6,     258.6,    3287.5,       2.0);         ( 542522.9,
      3753530.1,     257.8,    3287.5,       2.0);
1157  ( 542573.7, 3753622.1,     259.4,    3287.5,       2.0);         ( 542685.3,
      3753730.9,     260.9,    3287.5,       2.0);
1158  ( 543101.8, 3753637.0,     257.4,    3287.5,       2.0);         ( 542978.5,
      3753731.6,     259.1,    3287.5,       2.0);
1159  ( 543025.4, 3753734.9,     258.7,    3287.5,       2.0);         ( 543251.8,
      3753827.5,     261.4,    3287.5,       2.0);
1160  ( 543667.7, 3753537.0,     253.6,    3287.5,       2.0);         ( 543808.7,
      3753537.0,     252.8,    3287.5,       2.0);
1161  ( 543863.2, 3753559.6,     253.1,    3287.5,       2.0);         ( 545584.6,
      3752018.4,     224.3,    3287.5,       2.0);
1162  ( 546556.8, 3753157.1,     237.8,    3287.5,       2.0);         ( 546874.0,
      3753156.8,     238.1,    3287.5,       2.0);
1163  ( 547679.1, 3752558.3,     239.2,    3287.5,       2.0);         ( 547675.6,
      3752681.6,     240.9,    3287.5,       2.0);
1164  ( 547671.5, 3752817.2,     242.5,    3287.5,
      2.0);
1165  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1166   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       16:57:52
1167
                                  PAGE  29
1168   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1169
1170                                              *** METEOROLOGICAL DAYS SELECTED FOR
                                                  PROCESSING ***
1171                                                                (1=YES; 0=NO)
1172
1173            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1174            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1175            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1176            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1177            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1178            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1179            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1180            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
1181
1182                NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                    IS INCLUDED IN THE DATA FILE.
1183
1184
1185
1186                                    *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file:
KPSP_V11_trimmed.sfc
Met Version: 22112
Profile file:
KPSP_V11_trimmed.PFL
Surface format:
FREE

Profile format:
FREE

Surface station no.: 93138 Upper air station no.: 3190
Name: UNKNOWN Name:
UNKNOWN
Year: 2018 Year: 2018

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
18	01	01	1	01	-14.0	0.169	-9.000	-9.000	-999.	440.	31.3	0.20	3.95	1.00	1.76	251.	10.1	283.1	2.0
18	01	01	1	02	-29.9	0.302	-9.000	-9.000	-999.	400.	100.6	0.42	3.95	1.00	2.36	318.	10.1	283.8	2.0
18	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	283.1	2.0
18	01	01	1	04	-23.9	0.242	-9.000	-9.000	-999.	286.	64.5	0.05	3.95	1.00	3.36	343.	10.1	284.2	2.0
18	01	01	1	05	-22.2	0.222	-9.000	-9.000	-999.	251.	54.3	0.42	3.95	1.00	1.76	313.	10.1	281.4	2.0
18	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	282.0	2.0
18	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.15	3.95	1.00	0.00	0.	10.1	282.0	2.0
18	01	01	1	08	-10.1	0.158	-9.000	-9.000	-999.	151.	34.8	0.15	3.95	0.51	1.76	999.	10.1	284.2	2.0
18	01	01	1	09	49.7	-9.000	-9.000	-9.000	112.	-999.	-99999.0	0.15	3.95	0.31	0.00	0.	10.1	288.1	2.0
18	01	01	1	10	126.4	-9.000	-9.000	-9.000	210.	-999.	-99999.0	0.15	3.95	0.24	0.00	0.	10.1	292.0	2.0
18	01	01	1	11	179.4	0.238	1.188	0.010	336.	279.	-6.8	0.15	3.95	0.22	1.76	999.	10.1	295.3	2.0
18	01	01	1	12	204.5	-9.000	-9.000	-9.000	506.	-999.	-99999.0	0.15	3.95	0.21	0.00	0.	10.1	297.5	2.0
18	01	01	1	13	199.1	-9.000	-9.000	-9.000	674.	-999.	-99999.0	0.15	3.95	0.21	0.00	0.	10.1	297.0	2.0
18	01	01	1	14	166.1	0.306	1.531	0.006	774.	406.	-15.4	0.05	3.95	0.23	3.36	119.	10.1	297.0	2.0
18	01	01	1	15	106.1	0.177	1.363	0.006	855.	189.	-4.7	0.04	3.95	0.26					

```
      1.76  132.   10.1  296.4    2.0
1223  18 01 01   1 16   25.4 -9.000 -9.000 -9.000  876. -999. -99999.0  0.15   3.95   0.36
      0.00    0.   10.1  295.9    2.0
1224  18 01 01   1 17 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   0.66
      0.00    0.   10.1  294.8    2.0
1225  18 01 01   1 18  -16.2  0.186 -9.000 -9.000 -999.  193.     38.1  0.27   3.95   1.00
      1.76  237.   10.1  293.1    2.0
1226  18 01 01   1 19  -14.9  0.167 -9.000 -9.000 -999.  164.     30.6  0.05   3.95   1.00
      2.36  334.   10.1  290.9    2.0
1227  18 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  288.8    2.0
1228  18 01 01   1 21  -23.6  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
      3.36  330.   10.1  288.1    2.0
1229  18 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  286.4    2.0
1230  18 01 01   1 23  -20.0  0.205 -9.000 -9.000 -999.  222.     46.0  0.05   3.95   1.00
      2.86  330.   10.1  288.1    2.0
1231  18 01 01   1 24  -49.4  0.505 -9.000 -9.000 -999.  862.    280.9  0.42   3.95   1.00
      3.86  310.   10.1  287.5    2.0
1232
1233
1234  First hour of profile data
1235  YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
1236  18 01 01 01   10.1 1  251.    1.76   283.2   99.0  -99.00  -99.00
1237
1238  F indicates top of profile (=1) or below (=0)
1239  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1240  *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      16:57:52
1241
                                PAGE  31
1242  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1243
1244                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP:  ALL      ***
1245                                  INCLUDING SOURCE(S):     VOL1        , VOL2        ,
                                      VOL3        , VOL4        , VOL5        ,
1246                  VOL6        , VOL7        , VOL8        , VOL9        , VOL10       ,
                      VOL11       , VOL12       , VOL13       ,
1247                  VOL14       , VOL15       , VOL16       , VOL17       , VOL18       ,
                      VOL19       , VOL20       , VOL21       ,
1248                  VOL22       , VOL23       ,
1249
1250                                          *** DISCRETE CARTESIAN RECEPTOR POINTS ***
1251
1252                                       ** CONC OF NOX      IN
                                           MICROGRAMS/M**3                          **
1253
1254        X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
            Y-COORD (M)        CONC     (YYMMDDHH)
1255  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1256          543540.94   3752023.31       14.95258  (18120616)               543584.92
              3752056.50       14.43161  (18120616)
1257          543613.99   3752012.46       11.57432  (18120616)               542425.42
              3752282.03        1.82634  (23122215)
1258          542742.12   3752724.67        8.22628  (19120416)               542730.18
              3752745.38        8.76720  (19120416)
1259          542669.10   3752667.03        5.50942  (19120416)               542323.62
              3752005.27        1.93065  (19011716)
1260          542335.92   3751957.89        1.80622  (19011716)               542260.80
              3752038.91        1.83914  (19011716)
1261          542402.64   3753227.03        3.50692  (19120416)               542218.26
              3753133.77        6.74637  (19120416)
```

```
1262          542419.09   3753270.44        2.30717  (19120416)                542425.55
              3753374.70        1.92394  (19011516)
1263          542418.10   3753532.59        1.62811  (23011009)                542522.86
              3753530.11        1.93707  (19011616)
1264          542573.68   3753622.08        1.87701  (19011616)                542685.29
              3753730.95        1.44428  (19121216)
1265          543101.83   3753636.97        1.81506  (23113016)                542978.45
              3753731.58        1.62325  (21121616)
1266          543025.37   3753734.95        1.47529  (23113016)                543251.79
              3753827.46        2.00981  (23010316)
1267          543667.69   3753537.01        2.83396  (23010916)                543808.70
              3753537.01        3.33130  (23010916)
1268          543863.24   3753559.62        3.34298  (21122316)                545584.63
              3752018.38        0.51079  (19122309)
1269          546556.84   3753157.12        0.38333  (21032609)                546874.00
              3753156.75        0.34983  (21032609)
1270          547679.08   3752558.32        0.31756  (18112912)                547675.57
              3752681.64        0.32924  (18112912)
1271          547671.48   3752817.24        0.30729
              (18112912)

1272   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
1273    *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        16:57:52
1274
                                    PAGE  32
1275    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1276
1277                                                *** THE SUMMARY OF HIGHEST  1-HR RESULTS
                                                    ***
1278
1279
1280                                      ** CONC OF NOX      IN
                                          MICROGRAMS/M**3                          **
1281
1282
                                                         DATE

                                                           NETWORK
1283   GROUP ID                              AVERAGE CONC     (YYMMDDHH)              RECEPTOR  (XR,
       YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
1284   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
1285
1286   ALL      HIGH   1ST HIGH VALUE IS      14.95258  ON 18120616: AT (  543540.94,
       3752023.31,   225.05,  3287.53,    2.00)  DC
1287
1288
1289    *** RECEPTOR TYPES:  GC = GRIDCART
1290                         GP = GRIDPOLR
1291                         DC = DISCCART
1292                         DP = DISCPOLR
1293   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
1294    *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        16:57:52
1295
                                    PAGE  33
1296    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1297
1298    *** Message Summary : AERMOD Model Execution ***
1299
1300     --------- Summary of Total Messages --------
```

```
1301
1302    A Total of            0 Fatal Error Message(s)
1303    A Total of            4 Warning Message(s)
1304    A Total of         2103 Informational Message(s)
1305
1306    A Total of        43824 Hours Were Processed
1307
1308    A Total of          918 Calm Hours Identified
1309
1310    A Total of         1185 Missing Hours Identified (  2.70 Percent)
1311
1312
1313       ******** FATAL ERROR MESSAGES ********
1314                  ***  NONE  ***
1315
1316
1317       ********   WARNING MESSAGES   ********
1318    ME W186     456       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
        used           0.50
1319    ME W187     456       MEOPEN: ADJ_U* Option for Stable Low Winds used in
        AERMET
1320    MX W450   35065       CHKDAT: Record Out of Sequence in Meteorological File at:
        23010101
1321    MX W450   35065       CHKDAT: Record Out of Sequence in Meteorological File at:    1
        year gap
1322
1323       ************************************
1324       *** AERMOD Finishes Successfully ***
1325       ************************************
1326
1327
```

```
** Lakes Environmental AERMOD MPI
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 7/21/2025
** File: C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons PM10\16717
Cons PM10.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\
   MODELOPT DFAULT CONC
   AVERTIME 24
   URBANOPT 2492442 Riverside_County
   POLLUTID PM_10
   FLAGPOLE 2.00
   RUNORNOT RUN
   ERRORFIL "16717 Cons PM10.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     543461.330  3752414.462      232.890
   LOCATION VOL2         VOLUME     543491.079  3752370.301      232.020
   LOCATION VOL3         VOLUME     543461.327  3752369.927      232.040
   LOCATION VOL4         VOLUME     543604.621  3752712.835      238.620
   LOCATION VOL5         VOLUME     543570.062  3752712.582      238.580
   LOCATION VOL6         VOLUME     543533.195  3752712.474      238.630
   LOCATION VOL7         VOLUME     543500.897  3752712.169      238.630
   LOCATION VOL8         VOLUME     543604.209  3752667.624      237.650
   LOCATION VOL9         VOLUME     543569.650  3752667.371      237.570
   LOCATION VOL10        VOLUME     543532.784  3752667.263      237.510
   LOCATION VOL11        VOLUME     543500.485  3752666.958      237.620
   LOCATION VOL12        VOLUME     543603.295  3752623.138      236.750
   LOCATION VOL13        VOLUME     543568.736  3752622.885      236.640
   LOCATION VOL14        VOLUME     543531.870  3752622.776      236.820
   LOCATION VOL15        VOLUME     543499.571  3752622.472      236.690
   LOCATION VOL16        VOLUME     543602.991  3752578.042      235.870
   LOCATION VOL17        VOLUME     543568.431  3752577.789      235.840
   LOCATION VOL18        VOLUME     543531.565  3752577.681      236.030
   LOCATION VOL19        VOLUME     543499.267  3752577.376      235.940
   LOCATION VOL20        VOLUME     543602.381  3752535.384      235.020
   LOCATION VOL21        VOLUME     543567.822  3752535.131      235.140
   LOCATION VOL22        VOLUME     543530.955  3752535.023      235.230
   LOCATION VOL23        VOLUME     543498.657  3752534.718      235.100
   LOCATION PAREA1       AREAPOLY   543438.872  3752437.498      233.420
   LOCATION PAREA2       AREAPOLY   543478.213  3752733.897      239.180
** Source Parameters **
   SRCPARAM VOL1         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL2         0.0012370793     5.000    10.356     1.400
```

```
   SRCPARAM VOL3         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL4         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL5         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL6         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL7         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL8         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL9         0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL10        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL11        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL12        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL13        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL14        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL15        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL16        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL17        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL18        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL19        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL20        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL21        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL22        0.0012370793     5.000    10.356     1.400
   SRCPARAM VOL23        0.0012370793     5.000    10.356     1.400
   SRCPARAM PAREA1       2.3114E-06     0.000         6     1.000
   AREAVERT PAREA1       543438.872 3752437.498 543483.131 3752437.498
   AREAVERT PAREA1       543484.025 3752391.451 543513.084 3752392.792
   AREAVERT PAREA1       543513.084 3752347.639 543437.978 3752348.086
   SRCPARAM PAREA2       2.3124E-06     0.000         4     1.000
   AREAVERT PAREA2       543478.213 3752733.897 543626.636 3752734.791
   AREAVERT PAREA2       543625.295 3752510.368 543475.978 3752512.156
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
```

```
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1       HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA2       HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "16717 Cons PM10.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE KPSP_V11_trimmed.sfc
   PROFFILE KPSP_V11_trimmed.PFL
   SURFDATA 93138 2018
   UAIRDATA 3190 2018
   PROFBASE 124.71 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST "16717 CONS PM10.AD\24H1GALL.PLT" 31
   SUMMFILE "16717 Cons PM10.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     495       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
```

```
 ME W187     495       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                    ***
 17:09:05

                              PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for    25 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Accepts FLAGPOLE Receptor . Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:     25 Source(s);       1 Source Group(s); and      31 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:     23 VOLUME source(s)
                 and:      2 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  22112

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
          Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
```

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) =   124.71 ; Decay Coef. =   0.000   ; Rot. Angle =   0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =   0.10000E+07
Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =   3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out

**Detailed Error/Message File: 16717 Cons PM10.err
**File for Summary of Results: 16717 Cons PM10.sum

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ	SOURCE SCALAR VARY BY
VOL1	0	0.12371E-02	543461.3	3752414.5	232.9	5.00	10.36	1.40	YES HRDOW
VOL2	0	0.12371E-02	543491.1	3752370.3	232.0	5.00	10.36	1.40	YES HRDOW
VOL3	0	0.12371E-02	543461.3	3752369.9	232.0	5.00	10.36	1.40	YES HRDOW
VOL4	0	0.12371E-02	543604.6	3752712.8	238.6	5.00	10.36	1.40	YES HRDOW
VOL5	0	0.12371E-02	543570.1	3752712.6	238.6	5.00	10.36	1.40	YES HRDOW
VOL6	0	0.12371E-02	543533.2	3752712.5	238.6	5.00	10.36	1.40	YES HRDOW
VOL7	0	0.12371E-02	543500.9	3752712.2	238.6	5.00	10.36	1.40	YES HRDOW
VOL8	0	0.12371E-02	543604.2	3752667.6	237.7	5.00	10.36	1.40	YES HRDOW
VOL9	0	0.12371E-02	543569.7	3752667.4	237.6	5.00	10.36	1.40	YES HRDOW
VOL10	0	0.12371E-02	543532.8	3752667.3	237.5	5.00	10.36	1.40	YES HRDOW

```
625   VOL11            0   0.12371E-02  543500.5 3752667.0   237.6     5.00    10.36
      1.40     YES   HRDOW            NO
626   VOL12            0   0.12371E-02  543603.3 3752623.1   236.8     5.00    10.36
      1.40     YES   HRDOW            NO
627   VOL13            0   0.12371E-02  543568.7 3752622.9   236.6     5.00    10.36
      1.40     YES   HRDOW            NO
628   VOL14            0   0.12371E-02  543531.9 3752622.8   236.8     5.00    10.36
      1.40     YES   HRDOW            NO
629   VOL15            0   0.12371E-02  543499.6 3752622.5   236.7     5.00    10.36
      1.40     YES   HRDOW            NO
630   VOL16            0   0.12371E-02  543603.0 3752578.0   235.9     5.00    10.36
      1.40     YES   HRDOW            NO
631   VOL17            0   0.12371E-02  543568.4 3752577.8   235.8     5.00    10.36
      1.40     YES   HRDOW            NO
632   VOL18            0   0.12371E-02  543531.6 3752577.7   236.0     5.00    10.36
      1.40     YES   HRDOW            NO
633   VOL19            0   0.12371E-02  543499.3 3752577.4   235.9     5.00    10.36
      1.40     YES   HRDOW            NO
634   VOL20            0   0.12371E-02  543602.4 3752535.4   235.0     5.00    10.36
      1.40     YES   HRDOW            NO
635   VOL21            0   0.12371E-02  543567.8 3752535.1   235.1     5.00    10.36
      1.40     YES   HRDOW            NO
636   VOL22            0   0.12371E-02  543531.0 3752535.0   235.2     5.00    10.36
      1.40     YES   HRDOW            NO
637   VOL23            0   0.12371E-02  543498.7 3752534.7   235.1     5.00    10.36
      1.40     YES   HRDOW            NO
638   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
639    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:09:05
640
                                  PAGE   3
641    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
642
643
644                                                *** AREAPOLY SOURCE DATA ***
645
646                  NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER
                     INIT.   URBAN  EMISSION RATE    AIRCRAFT
647      SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.
         SZ     SOURCE  SCALAR VARY
648        ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)
           (METERS)              BY
649   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - -
650
651    PAREA1           0   0.23114E-05  543438.9 3752437.5   233.4     0.00       6
       1.00     YES   HRDOW            NO
652    PAREA2           0   0.23124E-05  543478.2 3752733.9   239.2     0.00       4
       1.00     YES   HRDOW            NO
653   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
654    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:09:05
655
                                  PAGE   4
656    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
657
658
659                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***
660
661    SRCGROUP ID                                          SOURCE IDs
662    -----------                                          ----------
663
```

```
664
665      ALL         VOL1         , VOL2         , VOL3         , VOL4         , VOL5         ,
         VOL6         , VOL7         , VOL8         ,
666
667                  VOL9         , VOL10        , VOL11        , VOL12        , VOL13        ,
                     VOL14        , VOL15        , VOL16        ,
668
669                  VOL17        , VOL18        , VOL19        , VOL20        , VOL21        ,
                     VOL22        , VOL23        , PAREA1       ,
670
671                  PAREA2       ,
672   ** *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***         07/21/25
673      *** AERMET - VERSION  22112 ***
         ***                                                                    ***
         17:09:05
674
                                    PAGE   5
675      *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
676
677
678                                          *** SOURCE IDs DEFINED AS URBAN SOURCES ***
679
680      URBAN ID   URBAN POP                                    SOURCE IDs
681      --------   ---------                                    ----------
682
683
684                  2492442.   VOL1         , VOL2         , VOL3         , VOL4         ,
                     VOL5         , VOL6         , VOL7         ,
685      VOL8        ,
686
687                  VOL9         , VOL10        , VOL11        , VOL12        , VOL13        ,
                     VOL14        , VOL15        , VOL16        ,
688
689                  VOL17        , VOL18        , VOL19        , VOL20        , VOL21        ,
                     VOL22        , VOL23        , PAREA1       ,
690
691                  PAREA2       ,
692   ** *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***         07/21/25
693      *** AERMET - VERSION  22112 ***
         ***                                                                    ***
         17:09:05
694
                                    PAGE   6
695      *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
696
697                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
698
699      SOURCE ID = VOL1          ; SOURCE TYPE = VOLUME   :
700       HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
701      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
702                                                 DAY OF WEEK = WEEKDAY
703         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
704         9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
705        17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
706                                                 DAY OF WEEK = SATURDAY
707         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
708         9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
      .0000E+00   15  .0000E+00   16  .0000E+00
709     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
710                                          DAY OF WEEK = SUNDAY
711      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
712      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
713     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
714  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
715   *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      17:09:05
716
                                PAGE   7
717   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
718
719                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
720
721   SOURCE ID = VOL2          ; SOURCE TYPE = VOLUME   :
722    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
723   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - - -
724                                          DAY OF WEEK = WEEKDAY
725      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
726      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
727     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
728                                          DAY OF WEEK = SATURDAY
729      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
730      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
731     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
732                                          DAY OF WEEK = SUNDAY
733      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
734      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
735     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
736  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
737   *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      17:09:05
738
                                PAGE   8
739   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
740
741                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
742
743   SOURCE ID = VOL3          ; SOURCE TYPE = VOLUME   :
744    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
745   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - - -
746                                          DAY OF WEEK = WEEKDAY
```

```
747       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
748       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
749      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
750                                              DAY OF WEEK = SATURDAY
751       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
752       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
753      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
754                                              DAY OF WEEK = SUNDAY
755       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
756       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
757      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
758  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
759   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      17:09:05
760
                                  PAGE   9
761   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
762
763                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
764
765   SOURCE ID = VOL4          ; SOURCE TYPE = VOLUME   :
766    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
767   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - - - - - -
768                                              DAY OF WEEK = WEEKDAY
769       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
770       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
771      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
772                                              DAY OF WEEK = SATURDAY
773       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
774       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
775      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
776                                              DAY OF WEEK = SUNDAY
777       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
778       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
779      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
780  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
781   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      17:09:05
782
                                  PAGE  10
783   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
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784
785                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
786
787    SOURCE ID = VOL5         ; SOURCE TYPE = VOLUME   :
788     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
789    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
790                                                DAY OF WEEK = WEEKDAY
791       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
792       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
793      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
794                                                DAY OF WEEK = SATURDAY
795       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
796       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
797      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
798                                                DAY OF WEEK = SUNDAY
799       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
800       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
801      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
802    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
803     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        17:09:05
804
                                   PAGE  11
805    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
806
807                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
808
809    SOURCE ID = VOL6         ; SOURCE TYPE = VOLUME   :
810     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
811    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
812                                                DAY OF WEEK = WEEKDAY
813       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
814       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
815      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
816                                                DAY OF WEEK = SATURDAY
817       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
818       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
819      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
820                                                DAY OF WEEK = SUNDAY
821       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
822       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25
*** AERMET - VERSION 22112 ***
*** ***
17:09:05

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
      .0000E+00    7  .0000E+00    8  .0000E+00
862    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
863   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
864                                          DAY OF WEEK = SUNDAY
865    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
866    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
867   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
868 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
869  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:09:05
870
                                PAGE  14
871  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
872
873                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
874
875  SOURCE ID = VOL9          ; SOURCE TYPE = VOLUME   :
876   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
877  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
878                                          DAY OF WEEK = WEEKDAY
879    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
880    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
881   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
882                                          DAY OF WEEK = SATURDAY
883    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
884    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
885   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
886                                          DAY OF WEEK = SUNDAY
887    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
888    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
889   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
890 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
891  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:09:05
892
                                PAGE  15
893  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
894
895                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
896
897  SOURCE ID = VOL10         ; SOURCE TYPE = VOLUME   :
898   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
899  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                            PAGE  16
*** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                  WEEK (HRDOW) *

 SOURCE ID = VOL11        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:09:05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

17:09:05

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:09:05

                              PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL15        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL17        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
```

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

17:09:05

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

```
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL21        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL22        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
```

```
1167      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1168                                                DAY OF WEEK = SATURDAY
1169       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1170       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1171      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1172                                                DAY OF WEEK = SUNDAY
1173       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1174       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1175      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1176  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1177   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:09:05
1178
                                  PAGE  28
1179   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1180
1181                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
1182
1183   SOURCE ID = VOL23        ; SOURCE TYPE = VOLUME   :
1184    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
1185  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1186                                                DAY OF WEEK = WEEKDAY
1187       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1188       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
1189      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1190                                                DAY OF WEEK = SATURDAY
1191       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1192       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1193      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1194                                                DAY OF WEEK = SUNDAY
1195       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1196       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1197      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1198  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1199   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:09:05
1200
                                  PAGE  29
1201   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1202
1203                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
1204
```

```
 SOURCE ID = PAREA1       ; SOURCE TYPE = AREAPOLY :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:09:05

                              PAGE  30
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = PAREA2       ; SOURCE TYPE = AREAPOLY :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
```

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(543540.9, 3752023.3, 225.1, 3287.5, 2.0); (543584.9, 3752056.5, 226.1, 3287.5, 2.0);
(543614.0, 3752012.5, 225.2, 3287.5, 2.0); (542425.4, 3752282.0, 232.2, 3287.5, 2.0);
(542742.1, 3752724.7, 239.7, 3287.5, 2.0); (542730.2, 3752745.4, 240.1, 3287.5, 2.0);
(542669.1, 3752667.0, 239.1, 3287.5, 2.0); (542323.6, 3752005.3, 228.0, 3287.5, 2.0);
(542335.9, 3751957.9, 227.3, 3287.5, 2.0); (542260.8, 3752038.9, 228.1, 3287.5, 2.0);
(542402.6, 3753227.0, 251.9, 3287.5, 2.0); (542218.3, 3753133.8, 249.7, 3287.5, 2.0);
(542419.1, 3753270.4, 253.1, 3287.5, 2.0); (542425.6, 3753374.7, 255.2, 3287.5, 2.0);
(542418.1, 3753532.6, 258.6, 3287.5, 2.0); (542522.9, 3753530.1, 257.8, 3287.5, 2.0);
(542573.7, 3753622.1, 259.4, 3287.5, 2.0); (542685.3, 3753730.9, 260.9, 3287.5, 2.0);
(543101.8, 3753637.0, 257.4, 3287.5, 2.0); (542978.5, 3753731.6, 259.1, 3287.5, 2.0);
(543025.4, 3753734.9, 258.7, 3287.5, 2.0); (543251.8, 3753827.5, 261.4, 3287.5, 2.0);
(543667.7, 3753537.0, 253.6, 3287.5, 2.0); (543808.7, 3753537.0, 252.8, 3287.5, 2.0);
(543863.2, 3753559.6, 253.1, 3287.5, 2.0); (545584.6, 3752018.4, 224.3, 3287.5, 2.0);
(546556.8, 3753157.1, 237.8, 3287.5, 2.0); (546874.0, 3753156.8, 238.1, 3287.5, 2.0);
(547679.1, 3752558.3, 239.2, 3287.5, 2.0); (547675.6, 3752681.6, 240.9, 3287.5, 2.0);
(547671.5, 3752817.2, 242.5, 3287.5, 2.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

```
1280              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1281              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1282              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
1283
1284                  NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                      IS INCLUDED IN THE DATA FILE.
1285
1286
1287
1288                                      *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                          CATEGORIES ***
1289                                                          (METERS/SEC)
1290
1291                                                     1.54,   3.09,   5.14,   8.23,  10.80,
1292  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1293   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:09:05
1294
                                    PAGE  33
1295   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1296
1297                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                          ***
1298
1299       Surface file:
           KPSP_V11_trimmed.sfc
           Met Version:  22112
1300       Profile file:
           KPSP_V11_trimmed.PFL
1301       Surface format:
           FREE

1302       Profile format:
           FREE

1303       Surface station no.:    93138                 Upper air station no.:     3190
1304                       Name: UNKNOWN                                 Name:
                           UNKNOWN
1305                       Year:   2018                                  Year:   2018
1306
1307   First 24 hours of scalar data
1308   YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO
       REF WS   WD     HT  REF TA     HT
1309  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
1310   18 01 01   1 01  -14.0  0.169 -9.000 -9.000 -999.  440.     31.3  0.20   3.95   1.00
       1.76  251.   10.1  283.1    2.0
1311   18 01 01   1 02  -29.9  0.302 -9.000 -9.000 -999.  400.    100.6  0.42   3.95   1.00
       2.36  318.   10.1  283.8    2.0
1312   18 01 01   1 03 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  283.1    2.0
1313   18 01 01   1 04  -23.9  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
       3.36  343.   10.1  284.2    2.0
1314   18 01 01   1 05  -22.2  0.222 -9.000 -9.000 -999.  251.     54.3  0.42   3.95   1.00
       1.76  313.   10.1  281.4    2.0
1315   18 01 01   1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  282.0    2.0
1316   18 01 01   1 07 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  282.0    2.0
1317   18 01 01   1 08  -10.1  0.158 -9.000 -9.000 -999.  151.     34.8  0.15   3.95   0.51
       1.76  999.   10.1  284.2    2.0
1318   18 01 01   1 09   49.7 -9.000 -9.000 -9.000  112. -999. -99999.0  0.15   3.95   0.31
```

```
 0.00    0.   10.1  288.1    2.0
18 01 01   1 10  126.4 -9.000 -9.000 -9.000  210. -999. -99999.0  0.15   3.95   0.24
 0.00    0.   10.1  292.0    2.0
18 01 01   1 11  179.4  0.238  1.188  0.010  336.  279.     -6.8  0.15   3.95   0.22
 1.76  999.   10.1  295.3    2.0
18 01 01   1 12  204.5 -9.000 -9.000 -9.000  506. -999. -99999.0  0.15   3.95   0.21
 0.00    0.   10.1  297.5    2.0
18 01 01   1 13  199.1 -9.000 -9.000 -9.000  674. -999. -99999.0  0.15   3.95   0.21
 0.00    0.   10.1  297.0    2.0
18 01 01   1 14  166.1  0.306  1.531  0.006  774.  406.    -15.4  0.05   3.95   0.23
 3.36  119.   10.1  297.0    2.0
18 01 01   1 15  106.1  0.177  1.363  0.006  855.  189.     -4.7  0.04   3.95   0.26
 1.76  132.   10.1  296.4    2.0
18 01 01   1 16   25.4 -9.000 -9.000 -9.000  876. -999. -99999.0  0.15   3.95   0.36
 0.00    0.   10.1  295.9    2.0
18 01 01   1 17 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   0.66
 0.00    0.   10.1  294.8    2.0
18 01 01   1 18  -16.2  0.186 -9.000 -9.000 -999.  193.     38.1  0.27   3.95   1.00
 1.76  237.   10.1  293.1    2.0
18 01 01   1 19  -14.9  0.167 -9.000 -9.000 -999.  164.     30.6  0.05   3.95   1.00
 2.36  334.   10.1  290.9    2.0
18 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
 0.00    0.   10.1  288.8    2.0
18 01 01   1 21  -23.6  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
 3.36  330.   10.1  288.1    2.0
18 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
 0.00    0.   10.1  286.4    2.0
18 01 01   1 23  -20.0  0.205 -9.000 -9.000 -999.  222.     46.0  0.05   3.95   1.00
 2.86  330.   10.1  288.1    2.0
18 01 01   1 24  -49.4  0.505 -9.000 -9.000 -999.  862.    280.9  0.42   3.95   1.00
 3.86  310.   10.1  287.5    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 18 01 01 01   10.1 1  251.    1.76   283.2   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES
                                FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     VOL1        , VOL2        ,
                                    VOL3        , VOL4        , VOL5        ,
                  VOL6        , VOL7        , VOL8        , VOL9        , VOL10       ,
                  VOL11       , VOL12       , VOL13       ,
                  VOL14       , VOL15       , VOL16       , VOL17       , VOL18       ,
                  VOL19       , VOL20       , VOL21       ,
                  VOL22       , VOL23       , PAREA1      , PAREA2      ,

                                          *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                       ** CONC OF PM_10    IN
                                       MICROGRAMS/M**3                          **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
      Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
```

```
          543540.94   3752023.31        0.31123  (19020524)                543584.92
          3752056.50        0.33171  (19123124)
          543613.99   3752012.46        0.27278  (19123124)                542425.42
          3752282.03        0.03450  (19120424)
          542742.12   3752724.67        0.10435  (19120424)                542730.18
          3752745.38        0.11360  (19120424)
          542669.10   3752667.03        0.08465  (23122924)                542323.62
          3752005.27        0.02683  (19011724)
          542335.92   3751957.89        0.02294  (19011724)                542260.80
          3752038.91        0.02710  (19011724)
          542402.64   3753227.03        0.05390  (21120324)                542218.26
          3753133.77        0.09691  (19120424)
          542419.09   3753270.44        0.04679  (19122024)                542425.55
          3753374.70        0.04119  (19122024)
          542418.10   3753532.59        0.03624  (18121924)                542522.86
          3753530.11        0.03799  (18121924)
          542573.68   3753622.08        0.03468  (19011624)                542685.29
          3753730.95        0.03186  (21121624)
          543101.83   3753636.97        0.04080  (23113024)                542978.45
          3753731.58        0.03137  (23113024)
          543025.37   3753734.95        0.03380  (23113024)                543251.79
          3753827.46        0.02640  (20012224)
          543667.69   3753537.01        0.06575  (19122724)                543808.70
          3753537.01        0.08285  (23010924)
          543863.24   3753559.62        0.07084  (23010924)                545584.63
          3752018.38        0.01842  (21113024)
          546556.84   3753157.12        0.01501  (18120424)                546874.00
          3753156.75        0.01439  (18120424)
          547679.08   3752558.32        0.00850c (18111424)                547675.57
          3752681.64        0.00894  (23092724)
          547671.48   3752817.24        0.00965
          (23092724)

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                                PAGE  35
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                                 *** THE SUMMARY OF HIGHEST 24-HR RESULTS
                                                 ***


                                      ** CONC OF PM_10    IN
                                      MICROGRAMS/M**3                          **


                                                          DATE

                                                            NETWORK
GROUP ID                              AVERAGE CONC     (YYMMDDHH)              RECEPTOR  (XR,
YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.33171  ON 19123124: AT (  543584.92,
3752056.50,   226.08,  3287.53,    2.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 157 Warning Message(s)
A Total of 2103 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 918 Calm Hours Identified

A Total of 1185 Missing Hours Identified (2.70 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 495 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 495 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
CN W732 24 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010124
CN W732 48 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010224
CN W732 72 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010324
CN W732 96 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010424
CN W732 120 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010524
CN W732 144 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010624
CN W732 168 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010724
CN W732 192 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010824
CN W732 216 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010924
CN W732 240 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011024
CN W732 264 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011124
CN W732 288 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011224
CN W732 360 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011524
CN W732 384 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011624
CN W732 408 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011724
CN W732 528 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018012224
CN W732 576 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2018012424
1439 CN W732 600 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018012524
1440 CN W732 624 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018012624
1441 CN W732 720 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018013024
1442 CN W732 744 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018013124
1443 CN W732 1344 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018022524
1444 CN W732 1608 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018030824
1445 CN W732 3648 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018060124
1446 CN W732 4944 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018072524
1447 CN W732 5208 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018080524
1448 CN W732 5736 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018082724
1449 CN W732 7056 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018102124
1450 CN W732 10200 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030124
1451 CN W732 10224 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030224
1452 CN W732 10272 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030424
1453 CN W732 10296 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030524
1454 CN W732 10320 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030624
1455 CN W732 10392 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030924
1456 CN W732 10416 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019031024
1457 CN W732 10464 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019031224
1458 CN W732 10512 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019031424
1459 CN W732 10656 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032024
1460 CN W732 10680 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032124
1461 CN W732 10704 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032224
1462 CN W732 10728 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032324
1463 CN W732 10752 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032424
1464 CN W732 10824 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019032724
1465 CN W732 13248 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019070624
1466 CN W732 14088 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019081024
1467 CN W732 14640 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019090224
1468 CN W732 15648 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019101424
1469 CN W732 16992 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019120924
1470 CN W732 17280 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019122124
1471 CN W732 19272 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2020031324
1472 CN W732 19296 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031424
1473 CN W732 19320 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031524
1474 CN W732 19344 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031624
1475 CN W732 19752 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040224
1476 CN W732 19776 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040324
1477 CN W732 19872 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040724
1478 CN W732 20184 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020042024
1479 CN W732 21672 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020062124
1480 CN W732 21720 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020062324
1481 CN W732 21912 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020070124
1482 CN W732 21936 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020070224
1483 CN W732 24264 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020100724
1484 CN W732 24336 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020101024
1485 CN W732 25032 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020110824
1486 CN W732 25128 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020111224
1487 CN W732 25272 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020111824
1488 CN W732 25320 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112024
1489 CN W732 25344 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112124
1490 CN W732 25368 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112224
1491 CN W732 25392 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112324
1492 CN W732 25416 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112424
1493 CN W732 25440 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112524
1494 CN W732 25920 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020121524
1495 CN W732 26064 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020122124
1496 CN W732 26520 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021010924
1497 CN W732 26544 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011024
1498 CN W732 26568 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011124
1499 CN W732 26592 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011224
1500 CN W732 26856 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012324
1501 CN W732 26880 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012424
1502 CN W732 26904 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012524
1503 CN W732 27024 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021013024
1504 CN W732 27048 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2021013124
1505 CN W732 28056 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021031424
1506 CN W732 28104 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021031624
1507 CN W732 28176 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021031924
1508 CN W732 28440 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021033024
1509 CN W732 28536 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021040324
1510 CN W732 28752 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021041224
1511 CN W732 29040 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021042424
1512 CN W732 29064 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021042524
1513 CN W732 29088 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021042624
1514 CN W732 30000 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021060324
1515 CN W732 31152 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021072124
1516 CN W732 31176 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021072224
1517 CN W732 32160 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021090124
1518 CN W732 33048 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021100824
1519 CN W732 33072 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021100924
1520 MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at:
23010101
1521 MX W450 35065 CHKDAT: Record Out of Sequence in Meteorological File at: 1
year gap
1522 CN W732 35760 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023012924
1523 CN W732 35784 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023013024
1524 CN W732 36120 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023021324
1525 CN W732 36192 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023021624
1526 CN W732 36720 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031024
1527 CN W732 36744 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031124
1528 CN W732 36768 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031224
1529 CN W732 36840 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031524
1530 CN W732 36864 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031624
1531 CN W732 36888 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031724
1532 CN W732 36960 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023032024
1533 CN W732 36984 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023032124
1534 CN W732 37032 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023032324
1535 CN W732 37104 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023032624
1536 CN W732 37152 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023032824
1537 CN W732 37176 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2023032924
1538 CN W732 37200 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023033024
1539 CN W732 37224 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023033124
1540 CN W732 37272 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040224
1541 CN W732 37296 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040324
1542 CN W732 37320 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040424
1543 CN W732 37392 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040724
1544 CN W732 37416 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040824
1545 CN W732 38400 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023051924
1546 CN W732 39096 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023061724
1547 CN W732 39120 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023061824
1548 CN W732 39192 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062124
1549 CN W732 39216 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062224
1550 CN W732 39240 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062324
1551 CN W732 39264 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062424
1552 CN W732 39288 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062524
1553 CN W732 39312 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062624
1554 CN W732 39336 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062724
1555 CN W732 39360 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062824
1556 CN W732 39384 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023062924
1557 CN W732 39600 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023070824
1558 CN W732 39624 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023070924
1559 CN W732 39648 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023071024
1560 CN W732 39744 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023071424
1561 CN W732 40152 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023073124
1562 CN W732 41424 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023092224
1563 CN W732 41448 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023092324
1564 CN W732 41472 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023092424
1565 CN W732 41592 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023092924
1566 CN W732 41976 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023101524
1567 CN W732 42384 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110124
1568 CN W732 42408 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110224
1569 CN W732 42432 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110324
1570 CN W732 42456 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2023110424
CN W732   42480   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110524
CN W732   42504   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110624
CN W732   42528   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110724
CN W732   42936   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023112424
CN W732   43248   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023120724
CN W732   43704   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023122624

   ****
   *** AERMOD Finishes Successfully ***
   ****

```
** Lakes Environmental AERMOD MPI
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 7/21/2025
** File: C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons PM25\16717
Cons PM25.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\
   MODELOPT DFAULT CONC
   AVERTIME 24
   URBANOPT 2492442 Riverside_County
   POLLUTID PM_2.5
   FLAGPOLE 2.00
   RUNORNOT RUN
   ERRORFIL "16717 Cons PM25.err"
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1         VOLUME     543461.330  3752414.462      232.890
   LOCATION VOL2         VOLUME     543491.079  3752370.301      232.020
   LOCATION VOL3         VOLUME     543461.327  3752369.927      232.040
   LOCATION VOL4         VOLUME     543604.621  3752712.835      238.620
   LOCATION VOL5         VOLUME     543570.062  3752712.582      238.580
   LOCATION VOL6         VOLUME     543533.195  3752712.474      238.630
   LOCATION VOL7         VOLUME     543500.897  3752712.169      238.630
   LOCATION VOL8         VOLUME     543604.209  3752667.624      237.650
   LOCATION VOL9         VOLUME     543569.650  3752667.371      237.570
   LOCATION VOL10        VOLUME     543532.784  3752667.263      237.510
   LOCATION VOL11        VOLUME     543500.485  3752666.958      237.620
   LOCATION VOL12        VOLUME     543603.295  3752623.138      236.750
   LOCATION VOL13        VOLUME     543568.736  3752622.885      236.640
   LOCATION VOL14        VOLUME     543531.870  3752622.776      236.820
   LOCATION VOL15        VOLUME     543499.571  3752622.472      236.690
   LOCATION VOL16        VOLUME     543602.991  3752578.042      235.870
   LOCATION VOL17        VOLUME     543568.431  3752577.789      235.840
   LOCATION VOL18        VOLUME     543531.565  3752577.681      236.030
   LOCATION VOL19        VOLUME     543499.267  3752577.376      235.940
   LOCATION VOL20        VOLUME     543602.381  3752535.384      235.020
   LOCATION VOL21        VOLUME     543567.822  3752535.131      235.140
   LOCATION VOL22        VOLUME     543530.955  3752535.023      235.230
   LOCATION VOL23        VOLUME     543498.657  3752534.718      235.100
   LOCATION PAREA1       AREAPOLY   543438.872  3752437.498      233.420
   LOCATION PAREA2       AREAPOLY   543478.213  3752733.897      239.180
** Source Parameters **
   SRCPARAM VOL1         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL2         0.0011381129     5.000    10.356     1.400
```

```
   SRCPARAM VOL3         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL4         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL5         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL6         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL7         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL8         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL9         0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL10        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL11        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL12        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL13        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL14        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL15        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL16        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL17        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL18        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL19        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL20        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL21        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL22        0.0011381129     5.000    10.356     1.400
   SRCPARAM VOL23        0.0011381129     5.000    10.356     1.400
   SRCPARAM PAREA1       1.0969E-06     0.000         6     1.000
   AREAVERT PAREA1       543438.872 3752437.498 543483.131 3752437.498
   AREAVERT PAREA1       543484.025 3752391.451 543513.084 3752392.792
   AREAVERT PAREA1       543513.084 3752347.639 543437.978 3752348.086
   SRCPARAM PAREA2       1.0972E-06     0.000         4     1.000
   AREAVERT PAREA2       543478.213 3752733.897 543626.636 3752734.791
   AREAVERT PAREA2       543625.295 3752510.368 543475.978 3752512.156
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
```

```
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA1       HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA1       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT PAREA2       HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT PAREA2       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "16717 Cons PM25.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE KPSP_V11_trimmed.sfc
   PROFFILE KPSP_V11_trimmed.PFL
   SURFDATA 93138 2018
   UAIRDATA 3190 2018
   PROFBASE 124.71 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST "16717 CONS PM25.AD\24H1GALL.PLT" 31
   SUMMFILE "16717 Cons PM25.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     495       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
```

```
 ME W187     495       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                    ***
 17:21:07

                              PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for    25 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   2492442.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Accepts FLAGPOLE Receptor . Heights.
      * The User Specified a Pollutant Type of: PM_2.5

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:     25 Source(s);       1 Source Group(s); and      31 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:     23 VOLUME source(s)
                 and:      2 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  22112

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
          Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
```

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 124.71 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Input Runstream File:
aermod.inp

**Output Print File:
aermod.out

**Detailed Error/Message File: 16717 Cons PM25.err
**File for Summary of Results: 16717 Cons PM25.sum
FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25
*** AERMET - VERSION 22112 ***
*** ***
17:21:07

PAGE 2
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE INIT. PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ	SOURCE SCALAR VARY BY
VOL1	0	0.11381E-02	543461.3	3752414.5	232.9	5.00	10.36	1.40	YES HRDOW	NO
VOL2	0	0.11381E-02	543491.1	3752370.3	232.0	5.00	10.36	1.40	YES HRDOW	NO
VOL3	0	0.11381E-02	543461.3	3752369.9	232.0	5.00	10.36	1.40	YES HRDOW	NO
VOL4	0	0.11381E-02	543604.6	3752712.8	238.6	5.00	10.36	1.40	YES HRDOW	NO
VOL5	0	0.11381E-02	543570.1	3752712.6	238.6	5.00	10.36	1.40	YES HRDOW	NO
VOL6	0	0.11381E-02	543533.2	3752712.5	238.6	5.00	10.36	1.40	YES HRDOW	NO
VOL7	0	0.11381E-02	543500.9	3752712.2	238.6	5.00	10.36	1.40	YES HRDOW	NO
VOL8	0	0.11381E-02	543604.2	3752667.6	237.7	5.00	10.36	1.40	YES HRDOW	NO
VOL9	0	0.11381E-02	543569.7	3752667.4	237.6	5.00	10.36	1.40	YES HRDOW	NO
VOL10	0	0.11381E-02	543532.8	3752667.3	237.5	5.00	10.36	1.40	YES HRDOW	NO

```
625   VOL11            0   0.11381E-02  543500.5 3752667.0   237.6     5.00    10.36
      1.40     YES   HRDOW            NO
626   VOL12            0   0.11381E-02  543603.3 3752623.1   236.8     5.00    10.36
      1.40     YES   HRDOW            NO
627   VOL13            0   0.11381E-02  543568.7 3752622.9   236.6     5.00    10.36
      1.40     YES   HRDOW            NO
628   VOL14            0   0.11381E-02  543531.9 3752622.8   236.8     5.00    10.36
      1.40     YES   HRDOW            NO
629   VOL15            0   0.11381E-02  543499.6 3752622.5   236.7     5.00    10.36
      1.40     YES   HRDOW            NO
630   VOL16            0   0.11381E-02  543603.0 3752578.0   235.9     5.00    10.36
      1.40     YES   HRDOW            NO
631   VOL17            0   0.11381E-02  543568.4 3752577.8   235.8     5.00    10.36
      1.40     YES   HRDOW            NO
632   VOL18            0   0.11381E-02  543531.6 3752577.7   236.0     5.00    10.36
      1.40     YES   HRDOW            NO
633   VOL19            0   0.11381E-02  543499.3 3752577.4   235.9     5.00    10.36
      1.40     YES   HRDOW            NO
634   VOL20            0   0.11381E-02  543602.4 3752535.4   235.0     5.00    10.36
      1.40     YES   HRDOW            NO
635   VOL21            0   0.11381E-02  543567.8 3752535.1   235.1     5.00    10.36
      1.40     YES   HRDOW            NO
636   VOL22            0   0.11381E-02  543531.0 3752535.0   235.2     5.00    10.36
      1.40     YES   HRDOW            NO
637   VOL23            0   0.11381E-02  543498.7 3752534.7   235.1     5.00    10.36
      1.40     YES   HRDOW            NO
638   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
639    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
640
                                    PAGE   3
641    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
642
643
644                                                  *** AREAPOLY SOURCE DATA ***
645
646                  NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER
                     INIT.   URBAN  EMISSION RATE    AIRCRAFT
647      SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.
         SZ     SOURCE  SCALAR VARY
648        ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)
           (METERS)              BY
649   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - -
650
651    PAREA1           0   0.10969E-05  543438.9 3752437.5   233.4     0.00       6
       1.00     YES   HRDOW            NO
652    PAREA2           0   0.10972E-05  543478.2 3752733.9   239.2     0.00       4
       1.00     YES   HRDOW            NO
653   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
654    *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
655
                                    PAGE   4
656    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
657
658
659                                              *** SOURCE IDs DEFINING SOURCE GROUPS ***
660
661    SRCGROUP ID                                          SOURCE IDs
662    -----------                                          ----------
663
```

```
664
665     ALL         VOL1         , VOL2         , VOL3         , VOL4         , VOL5         ,
        VOL6         , VOL7         , VOL8         ,
666
667                 VOL9         , VOL10        , VOL11        , VOL12        , VOL13        ,
                    VOL14        , VOL15        , VOL16        ,
668
669                 VOL17        , VOL18        , VOL19        , VOL20        , VOL21        ,
                    VOL22        , VOL23        , PAREA1       ,
670
671                 PAREA2       ,
672   ** *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***         07/21/25
673     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        17:21:07
674
                                    PAGE   5
675     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
676
677
678                                          *** SOURCE IDs DEFINED AS URBAN SOURCES ***
679
680     URBAN ID   URBAN POP                                      SOURCE IDs
681     --------   ---------                                      ----------
682
683
684                 2492442.   VOL1         , VOL2         , VOL3         , VOL4         ,
                    VOL5         , VOL6         , VOL7         ,
685     VOL8         ,
686
687                 VOL9         , VOL10        , VOL11        , VOL12        , VOL13        ,
                    VOL14        , VOL15        , VOL16        ,
688
689                 VOL17        , VOL18        , VOL19        , VOL20        , VOL21        ,
                    VOL22        , VOL23        , PAREA1       ,
690
691                 PAREA2       ,
692   ** *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***         07/21/25
693     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        17:21:07
694
                                    PAGE   6
695     *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
696
697                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
698
699     SOURCE ID = VOL1          ; SOURCE TYPE = VOLUME   :
700      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
701     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
702                                                 DAY OF WEEK = WEEKDAY
703        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
704        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
705       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
706                                                 DAY OF WEEK = SATURDAY
707        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
708        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
      .0000E+00   15  .0000E+00   16  .0000E+00
709    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
710                                          DAY OF WEEK = SUNDAY
711     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
712     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
713    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
714 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
715  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:21:07
716
                               PAGE   7
717  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
718
719                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *
720
721  SOURCE ID = VOL2         ; SOURCE TYPE = VOLUME   :
722   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
723  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - -
724                                          DAY OF WEEK = WEEKDAY
725     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
726     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
727    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
728                                          DAY OF WEEK = SATURDAY
729     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
730     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
731    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
732                                          DAY OF WEEK = SUNDAY
733     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
734     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
735    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
736 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
737  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:21:07
738
                               PAGE   8
739  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
740
741                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *
742
743  SOURCE ID = VOL3         ; SOURCE TYPE = VOLUME   :
744   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
     SCALAR   HOUR   SCALAR   HOUR   SCALAR
745  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
    - - - - - - - - - - - - - - - - - - - -
746                                          DAY OF WEEK = WEEKDAY
```

```
747       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
748       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
749      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
750                                              DAY OF WEEK = SATURDAY
751       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
752       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
753      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
754                                              DAY OF WEEK = SUNDAY
755       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
756       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
757      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
758  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
759   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      17:21:07
760
                                  PAGE   9
761   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
762
763                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
764
765   SOURCE ID = VOL4          ; SOURCE TYPE = VOLUME   :
766    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
767   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - - - - - -
768                                              DAY OF WEEK = WEEKDAY
769       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
770       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
771      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
772                                              DAY OF WEEK = SATURDAY
773       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
774       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
775      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
776                                              DAY OF WEEK = SUNDAY
777       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
778       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
779      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
780  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
     Solar\16717 Cons CO\ ***        07/21/25
781   *** AERMET - VERSION  22112 ***
      ***                                                                          ***
      17:21:07
782
                                  PAGE  10
783   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
```

```
784
785                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
786
787    SOURCE ID = VOL5         ; SOURCE TYPE = VOLUME   :
788     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
789    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
790                                                 DAY OF WEEK = WEEKDAY
791       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
792       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
793      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
794                                                 DAY OF WEEK = SATURDAY
795       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
796       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
797      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
798                                                 DAY OF WEEK = SUNDAY
799       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
800       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
801      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
802    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
       Solar\16717 Cons CO\ ***        07/21/25
803     *** AERMET - VERSION  22112 ***
        ***                                                                    ***
        17:21:07
804
                                    PAGE  11
805    *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
806
807                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
808
809    SOURCE ID = VOL6         ; SOURCE TYPE = VOLUME   :
810     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
811    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
812                                                 DAY OF WEEK = WEEKDAY
813       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
814       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
815      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
816                                                 DAY OF WEEK = SATURDAY
817       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
818       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
819      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
820                                                 DAY OF WEEK = SUNDAY
821       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
822       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
```

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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                    ***
 17:21:07

                              PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL7         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                    ***
 17:21:07

                              PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL8         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
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```
      .0000E+00    7  .0000E+00    8  .0000E+00
862    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
863   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
864                                          DAY OF WEEK = SUNDAY
865    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
866    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
867   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
868 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
869  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:21:07
870
                                PAGE  14
871  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
872
873                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
874
875  SOURCE ID = VOL9          ; SOURCE TYPE = VOLUME   :
876   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
877  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
878                                          DAY OF WEEK = WEEKDAY
879    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
880    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
881   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
882                                          DAY OF WEEK = SATURDAY
883    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
884    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
885   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
886                                          DAY OF WEEK = SUNDAY
887    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
888    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
889   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
       .0000E+00   23  .0000E+00   24  .0000E+00
890 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
    Solar\16717 Cons CO\ ***        07/21/25
891  *** AERMET - VERSION  22112 ***
     ***                                                                    ***
     17:21:07
892
                                PAGE  15
893  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
894
895                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
896
897  SOURCE ID = VOL10         ; SOURCE TYPE = VOLUME   :
898   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
899  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:21:07

                            PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL11        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:21:07
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

17:21:07

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:21:07

                              PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL15        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:21:07

                              PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL17        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
```

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD Solar\16717 Cons CO\ *** 07/21/25

*** AERMET - VERSION 22112 ***

*** ***

17:21:07

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

```
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL21        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
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                              PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL22        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
```

```
1167      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1168                                              DAY OF WEEK = SATURDAY
1169       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1170       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1171      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1172                                              DAY OF WEEK = SUNDAY
1173       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1174       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1175      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1176  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1177   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
1178
                                  PAGE  28
1179   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1180
1181                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
1182
1183   SOURCE ID = VOL23        ; SOURCE TYPE = VOLUME   :
1184    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
1185  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1186                                              DAY OF WEEK = WEEKDAY
1187       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1188       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
1189      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1190                                              DAY OF WEEK = SATURDAY
1191       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1192       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1193      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1194                                              DAY OF WEEK = SUNDAY
1195       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
1196       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
1197      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
1198  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1199   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
1200
                                  PAGE  29
1201   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1202
1203                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
1204
```

```
 SOURCE ID = PAREA1       ; SOURCE TYPE = AREAPOLY :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
 *** AERMET - VERSION  22112 ***
 ***                                                                          ***
 17:21:07

                              PAGE  30
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = PAREA2       ; SOURCE TYPE = AREAPOLY :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
Solar\16717 Cons CO\ ***        07/21/25
```

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(543540.9, 3752023.3, 225.1, 3287.5, 2.0); (543584.9, 3752056.5, 226.1, 3287.5, 2.0);
(543614.0, 3752012.5, 225.2, 3287.5, 2.0); (542425.4, 3752282.0, 232.2, 3287.5, 2.0);
(542742.1, 3752724.7, 239.7, 3287.5, 2.0); (542730.2, 3752745.4, 240.1, 3287.5, 2.0);
(542669.1, 3752667.0, 239.1, 3287.5, 2.0); (542323.6, 3752005.3, 228.0, 3287.5, 2.0);
(542335.9, 3751957.9, 227.3, 3287.5, 2.0); (542260.8, 3752038.9, 228.1, 3287.5, 2.0);
(542402.6, 3753227.0, 251.9, 3287.5, 2.0); (542218.3, 3753133.8, 249.7, 3287.5, 2.0);
(542419.1, 3753270.4, 253.1, 3287.5, 2.0); (542425.6, 3753374.7, 255.2, 3287.5, 2.0);
(542418.1, 3753532.6, 258.6, 3287.5, 2.0); (542522.9, 3753530.1, 257.8, 3287.5, 2.0);
(542573.7, 3753622.1, 259.4, 3287.5, 2.0); (542685.3, 3753730.9, 260.9, 3287.5, 2.0);
(543101.8, 3753637.0, 257.4, 3287.5, 2.0); (542978.5, 3753731.6, 259.1, 3287.5, 2.0);
(543025.4, 3753734.9, 258.7, 3287.5, 2.0); (543251.8, 3753827.5, 261.4, 3287.5, 2.0);
(543667.7, 3753537.0, 253.6, 3287.5, 2.0); (543808.7, 3753537.0, 252.8, 3287.5, 2.0);
(543863.2, 3753559.6, 253.1, 3287.5, 2.0); (545584.6, 3752018.4, 224.3, 3287.5, 2.0);
(546556.8, 3753157.1, 237.8, 3287.5, 2.0); (546874.0, 3753156.8, 238.1, 3287.5, 2.0);
(547679.1, 3752558.3, 239.2, 3287.5, 2.0); (547675.6, 3752681.6, 240.9, 3287.5, 2.0);
(547671.5, 3752817.2, 242.5, 3287.5, 2.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1

```
1280              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1281              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1282              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
1283
1284                  NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                      IS INCLUDED IN THE DATA FILE.
1285
1286
1287
1288                                      *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                          CATEGORIES ***
1289                                                          (METERS/SEC)
1290
1291                                                     1.54,   3.09,   5.14,   8.23,  10.80,
1292  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1293   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
1294
                                    PAGE  33
1295   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1296
1297                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                          ***
1298
1299       Surface file:
           KPSP_V11_trimmed.sfc
           Met Version:  22112
1300       Profile file:
           KPSP_V11_trimmed.PFL
1301       Surface format:
           FREE

1302       Profile format:
           FREE

1303       Surface station no.:    93138                 Upper air station no.:     3190
1304                       Name: UNKNOWN                                 Name:
                           UNKNOWN
1305                       Year:   2018                                  Year:   2018
1306
1307   First 24 hours of scalar data
1308   YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO
       REF WS   WD     HT  REF TA     HT
1309  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
1310   18 01 01   1 01  -14.0  0.169 -9.000 -9.000 -999.  440.     31.3  0.20   3.95   1.00
       1.76  251.   10.1  283.1    2.0
1311   18 01 01   1 02  -29.9  0.302 -9.000 -9.000 -999.  400.    100.6  0.42   3.95   1.00
       2.36  318.   10.1  283.8    2.0
1312   18 01 01   1 03 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  283.1    2.0
1313   18 01 01   1 04  -23.9  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
       3.36  343.   10.1  284.2    2.0
1314   18 01 01   1 05  -22.2  0.222 -9.000 -9.000 -999.  251.     54.3  0.42   3.95   1.00
       1.76  313.   10.1  281.4    2.0
1315   18 01 01   1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  282.0    2.0
1316   18 01 01   1 07 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
       0.00    0.   10.1  282.0    2.0
1317   18 01 01   1 08  -10.1  0.158 -9.000 -9.000 -999.  151.     34.8  0.15   3.95   0.51
       1.76  999.   10.1  284.2    2.0
1318   18 01 01   1 09   49.7 -9.000 -9.000 -9.000  112. -999. -99999.0  0.15   3.95   0.31
```

```
      0.00    0.   10.1  288.1    2.0
1319  18 01 01   1 10  126.4 -9.000 -9.000 -9.000  210. -999. -99999.0  0.15   3.95   0.24
      0.00    0.   10.1  292.0    2.0
1320  18 01 01   1 11  179.4  0.238  1.188  0.010  336.  279.     -6.8  0.15   3.95   0.22
      1.76  999.   10.1  295.3    2.0
1321  18 01 01   1 12  204.5 -9.000 -9.000 -9.000  506. -999. -99999.0  0.15   3.95   0.21
      0.00    0.   10.1  297.5    2.0
1322  18 01 01   1 13  199.1 -9.000 -9.000 -9.000  674. -999. -99999.0  0.15   3.95   0.21
      0.00    0.   10.1  297.0    2.0
1323  18 01 01   1 14  166.1  0.306  1.531  0.006  774.  406.    -15.4  0.05   3.95   0.23
      3.36  119.   10.1  297.0    2.0
1324  18 01 01   1 15  106.1  0.177  1.363  0.006  855.  189.     -4.7  0.04   3.95   0.26
      1.76  132.   10.1  296.4    2.0
1325  18 01 01   1 16   25.4 -9.000 -9.000 -9.000  876. -999. -99999.0  0.15   3.95   0.36
      0.00    0.   10.1  295.9    2.0
1326  18 01 01   1 17 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   0.66
      0.00    0.   10.1  294.8    2.0
1327  18 01 01   1 18  -16.2  0.186 -9.000 -9.000 -999.  193.     38.1  0.27   3.95   1.00
      1.76  237.   10.1  293.1    2.0
1328  18 01 01   1 19  -14.9  0.167 -9.000 -9.000 -999.  164.     30.6  0.05   3.95   1.00
      2.36  334.   10.1  290.9    2.0
1329  18 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  288.8    2.0
1330  18 01 01   1 21  -23.6  0.242 -9.000 -9.000 -999.  286.     64.5  0.05   3.95   1.00
      3.36  330.   10.1  288.1    2.0
1331  18 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.15   3.95   1.00
      0.00    0.   10.1  286.4    2.0
1332  18 01 01   1 23  -20.0  0.205 -9.000 -9.000 -999.  222.     46.0  0.05   3.95   1.00
      2.86  330.   10.1  288.1    2.0
1333  18 01 01   1 24  -49.4  0.505 -9.000 -9.000 -999.  862.    280.9  0.42   3.95   1.00
      3.86  310.   10.1  287.5    2.0
1334
1335
1336  First hour of profile data
1337  YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
1338  18 01 01 01   10.1 1  251.    1.76   283.2   99.0  -99.00  -99.00
1339
1340  F indicates top of profile (=1) or below (=0)
1341  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1342  *** AERMET - VERSION  22112 ***
      ***                                                                    ***
      17:21:07
1343
                                PAGE  34
1344  *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1345
1346                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES
                                  FOR SOURCE GROUP:  ALL      ***
1347                                  INCLUDING SOURCE(S):     VOL1        , VOL2        ,
                                      VOL3        , VOL4        , VOL5        ,
1348                  VOL6        , VOL7        , VOL8        , VOL9        , VOL10       ,
                      VOL11       , VOL12       , VOL13       ,
1349                  VOL14       , VOL15       , VOL16       , VOL17       , VOL18       ,
                      VOL19       , VOL20       , VOL21       ,
1350                  VOL22       , VOL23       , PAREA1      , PAREA2      ,
1351
1352                                    *** DISCRETE CARTESIAN RECEPTOR POINTS ***
1353
1354                                  ** CONC OF PM_2.5   IN
                                      MICROGRAMS/M**3                          **
1355
1356       X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
           Y-COORD (M)        CONC     (YYMMDDHH)
1357  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
```

```
1358          543540.94   3752023.31        0.17200  (19020524)                543584.92
              3752056.50        0.18539  (19123124)
1359          543613.99   3752012.46        0.15244  (19123124)                542425.42
              3752282.03        0.01920  (19120424)
1360          542742.12   3752724.67        0.05932  (19120424)                542730.18
              3752745.38        0.06400  (19120424)
1361          542669.10   3752667.03        0.04540  (23122924)                542323.62
              3752005.27        0.01494  (19011724)
1362          542335.92   3751957.89        0.01290  (19011724)                542260.80
              3752038.91        0.01507  (19011724)
1363          542402.64   3753227.03        0.02981  (21120324)                542218.26
              3753133.77        0.05267  (19120424)
1364          542419.09   3753270.44        0.02587  (19122024)                542425.55
              3753374.70        0.02277  (19122024)
1365          542418.10   3753532.59        0.01942  (19112524)                542522.86
              3753530.11        0.02065  (19011624)
1366          542573.68   3753622.08        0.01977  (19011624)                542685.29
              3753730.95        0.01765  (21121624)
1367          543101.83   3753636.97        0.02243  (23113024)                542978.45
              3753731.58        0.01733  (23113024)
1368          543025.37   3753734.95        0.01858  (23113024)                543251.79
              3753827.46        0.01372  (23010324)
1369          543667.69   3753537.01        0.03516  (23010924)                543808.70
              3753537.01        0.04477  (23010924)
1370          543863.24   3753559.62        0.03839  (23010924)                545584.63
              3752018.38        0.00977  (21113024)
1371          546556.84   3753157.12        0.00753  (18120424)                546874.00
              3753156.75        0.00721  (18120424)
1372          547679.08   3752558.32        0.00429c (23112824)                547675.57
              3752681.64        0.00444  (23092724)
1373          547671.48   3752817.24        0.00479
              (23092724)

1374  *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\16717 MSWD
      Solar\16717 Cons CO\ ***        07/21/25
1375   *** AERMET - VERSION  22112 ***
       ***                                                                    ***
       17:21:07
1376
                                  PAGE  35
1377   *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
1378
1379                                                *** THE SUMMARY OF HIGHEST 24-HR RESULTS
                                                    ***
1380
1381
1382                                      ** CONC OF PM_2.5   IN
                                          MICROGRAMS/M**3                          **
1383
1384
                                                          DATE

                                                            NETWORK
1385  GROUP ID                            AVERAGE CONC     (YYMMDDHH)             RECEPTOR  (XR,
      YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
1386  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
1387
1388  ALL      HIGH   1ST HIGH VALUE IS       0.18539  ON 19123124: AT (  543584.92,
      3752056.50,   226.08,  3287.53,    2.00)  DC
1389
1390
1391   *** RECEPTOR TYPES:  GC = GRIDCART
1392                        GP = GRIDPOLR
1393                        DC = DISCCART
1394                        DP = DISCPOLR
```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 157 Warning Message(s)
A Total of 2103 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 918 Calm Hours Identified

A Total of 1185 Missing Hours Identified (2.70 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 495 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 495 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
CN W732 24 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010124
CN W732 48 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010224
CN W732 72 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010324
CN W732 96 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010424
CN W732 120 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010524
CN W732 144 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010624
CN W732 168 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010724
CN W732 192 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010824
CN W732 216 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018010924
CN W732 240 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011024
CN W732 264 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011124
CN W732 288 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011224
CN W732 360 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011524
CN W732 384 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011624
CN W732 408 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018011724
CN W732 528 AVER: 24-hr avg, < 18 hours of data, calms policy used. 2018012224
CN W732 576 AVER: 24-hr avg, < 18 hours of data, calms policy used.

2018012424
1439 CN W732 600 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018012524
1440 CN W732 624 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018012624
1441 CN W732 720 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018013024
1442 CN W732 744 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018013124
1443 CN W732 1344 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018022524
1444 CN W732 1608 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018030824
1445 CN W732 3648 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018060124
1446 CN W732 4944 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018072524
1447 CN W732 5208 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018080524
1448 CN W732 5736 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018082724
1449 CN W732 7056 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2018102124
1450 CN W732 10200 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030124
1451 CN W732 10224 AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019030224
1452 CN W732 10272 AVER: 24-hr avg, < 18 hours of data, calms policy used.
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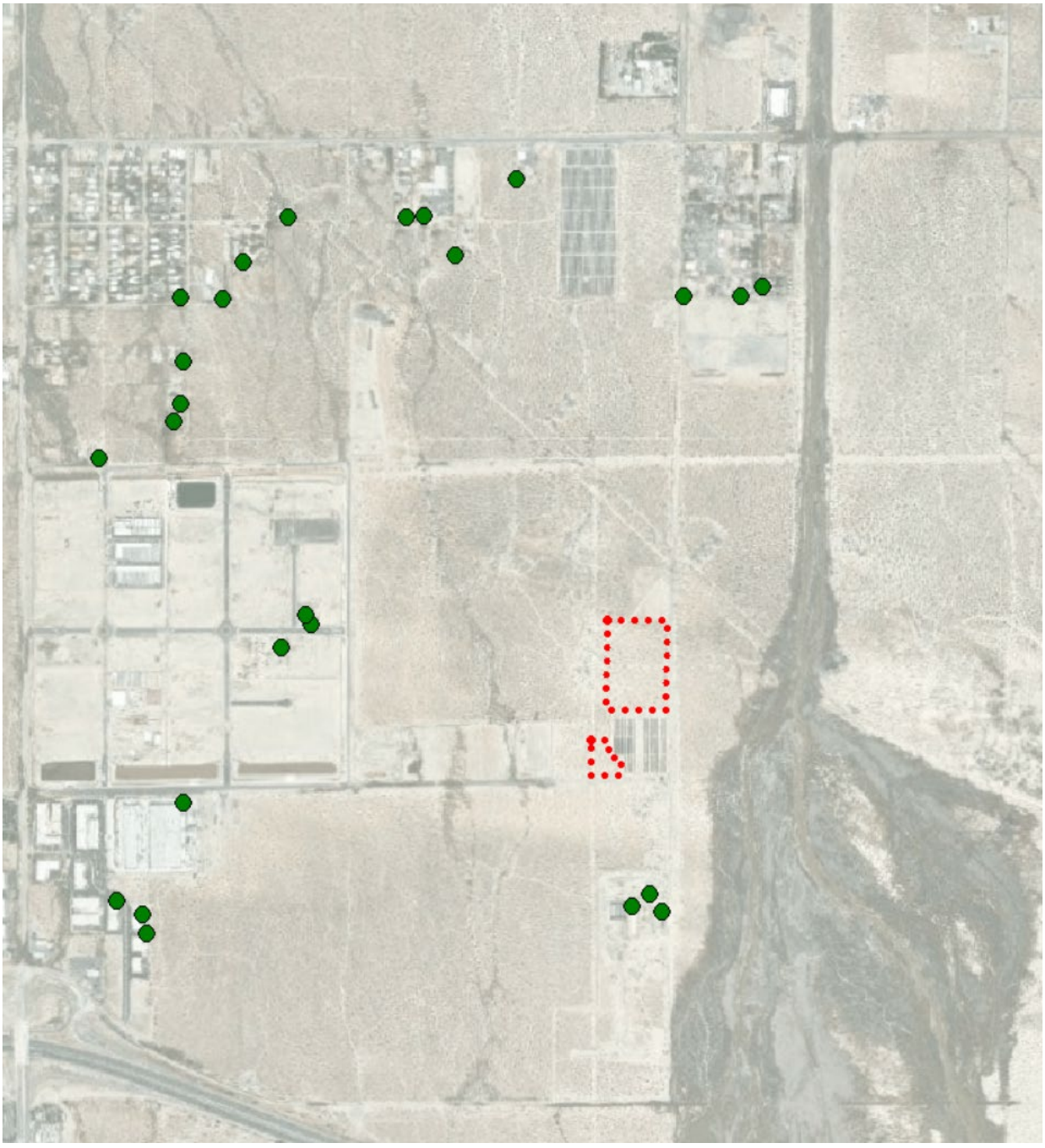
   ****
   *** AERMOD Finishes Successfully ***
   ****

APPENDIX 3:

AERMOD RECEPTOR LOCATIONS



APPENDIX 4:

CALEEMOD OPERATIONAL EMISSIONS OUTPUT

16717 MSWD Well 33 Solar Operation Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	16717 MSWD Well 33 Solar Operation
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.30
Precipitation (days)	11.2
Location	33.910340204836274, -116.52931411209644
County	Riverside-Salton Sea
City	Desert Hot Springs
Air District	South Coast AQMD
Air Basin	Salton Sea
TAZ	5638
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,478	1,478	0.14	0.02	0.00	1,487

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	8,928	8,928	0.85	0.10	—	8,980
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	8,928	8,928	0.85	0.10	—	8,980
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	8,928	8,928	0.85	0.10	—	8,980
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,928	8,928	0.85	0.10	0.00	8,980
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,478	1,478	0.14	0.02	—	1,487
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,478	1,478	0.14	0.02	0.00	1,487

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	8,928	8,928	0.85	0.10	—	8,980
Total	—	—	—	—	—	—	—	—	—	—	—	—	8,928	8,928	0.85	0.10	—	8,980
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	8,928	8,928	0.85	0.10	—	8,980
Total	—	—	—	—	—	—	—	—	—	—	—	—	8,928	8,928	0.85	0.10	—	8,980
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	1,478	1,478	0.14	0.02	—	1,487
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,478	1,478	0.14	0.02	—	1,487

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
User Defined Industrial	9,412,878	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.8	annual days of extreme heat
Extreme Precipitation	0.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	3.09	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A

Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	4.06
AQ-DPM	14.0
Drinking Water	25.8
Lead Risk Housing	39.6
Pesticides	14.3
Toxic Releases	3.98
Traffic	59.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00

Haz Waste Facilities/Generators	26.7
Impaired Water Bodies	0.00
Solid Waste	54.8
Sensitive Population	—
Asthma	50.6
Cardio-vascular	58.7
Low Birth Weights	13.9
Socioeconomic Factor Indicators	—
Education	73.8
Housing	59.7
Linguistic	48.7
Poverty	95.2
Unemployment	55.0

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	25.81804183
Employed	23.88040549
Median HI	16.89978186
Education	—
Bachelor's or higher	26.08751444
High school enrollment	2.489413576
Preschool enrollment	1.873476197
Transportation	—
Auto Access	42.71782369
Active commuting	10.08597459

Social	—
2-parent households	35.96817657
Voting	48.09444373
Neighborhood	—
Alcohol availability	80.90594123
Park access	8.340818683
Retail density	1.745155909
Supermarket access	5.864237136
Tree canopy	1.308866932
Housing	—
Homeownership	80.90594123
Housing habitability	65.12254587
Low-inc homeowner severe housing cost burden	43.62889773
Low-inc renter severe housing cost burden	64.41678429
Uncrowded housing	45.28422944
Health Outcomes	—
Insured adults	2.55357372
Arthritis	0.0
Asthma ER Admissions	54.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	24.6
Cognitively Disabled	43.0
Physically Disabled	5.4

Heart Attack ER Admissions	51.2
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	91.1
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	5.7
English Speaking	42.6
Foreign-born	50.4
Outdoor Workers	10.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	84.9
Traffic Density	32.5
Traffic Access	23.0
Other Indices	—
Hardship	74.8
Other Decision Support	—
2016 Voting	47.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	33.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Project site is vacant, no demolition required.
Construction: Off-Road Equipment	All equipment assumed to operate 8 hours per day.
Construction: Trips and VMT	Assumes 20 vendor trips per day during building construction
Operations: Consumer Products	Project will not use consumer products.
Operations: Energy Use	Estimated annual production based on estimates provided by the Project team.

APPENDIX 3

MISSION SPRINGS WATER DISTRICT'S SOLAR PROJECT

DESERT HOT SPRINGS, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment & Coachella Valley Multiple Species Habitat Conservation Plan Consistency Analysis

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April 2025

MISSION SPRINGS WATER DISTRICT'S SOLAR PROJECT

DESERT HOT SPRINGS, LOS ANGELES COUNTY, CALIFORNIA

Biological Resources Assessment

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director/Biologist

Thomas J. McGill, Ph.D.
Managing Director

April 2025

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APPENDIX

Appendix A Site Plan
Appendix B Site Photographs
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Appendix D CVMSHCP Covered Species
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Section 1 Introduction

This report contains the findings of ELMT Consulting's (ELMT) habitat assessment and Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP) consistency analysis for the Mission Springs Water District's Solar Project sites "NWRWRF" and "RES-BCT" Well 33 (Project) which are located in the City of Desert Hot Springs in Riverside County, California. ELMT biologists Andrew N. Mestas and Megan E. Peukert conducted a field survey and evaluated the condition of the habitat within the project site on February 11, 2025.

The habitat assessment was conducted to characterize existing site conditions and assess the probability of occurrence of special-status[1] plant and wildlife species that could pose a constraint to implementation of the project. This report provides a detailed assessment of the suitability of the onsite habitat to support special-status plant and wildlife species that were identified by the California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring in the vicinity of the proposed distribution alignment. Special attention was given to the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*), species protected under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), and potential jurisdictional drainage features.

The sites were also evaluated for their potential to support natural drainage features, ponded areas, and/or water bodies that have the potential to fall under the regulatory authority of the of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or California Department of Fish and Wildlife (CDFW) pursuant to Sections 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Section 1600 *et seq.* of the Fish and Game Code.

1.1 PROJECT DESCRIPTION

The District is proposing a Solar Project (project), which will provide renewable energy to the District to reduce the reliance on traditional power sources by installing photovoltaic (PV) systems across multiple sites. The project consists of seven (7) separate project site subareas, however, only two (2) are described below as the focus of this report (refer to Appendix A, *Site Plan*):

Table 1: Project Site Subarea Descriptions

Subarea	Name	Description
1	NWRWRF ("Regional Plant")	This project involves the installation of a 387.2 kW ground-mounted PV system at 19011 Little Morongo Rd, Desert Hot Springs. The system will be interconnected to the electrical utility grid and will include inverters, transformers, AC combiner panels, disconnects, and trenching for conduit installation. The array will

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally or State listed, proposed, or candidates; CVMSHCP listed species; plant species that have been designated a CNPS Rare Plant Rank; and wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species.

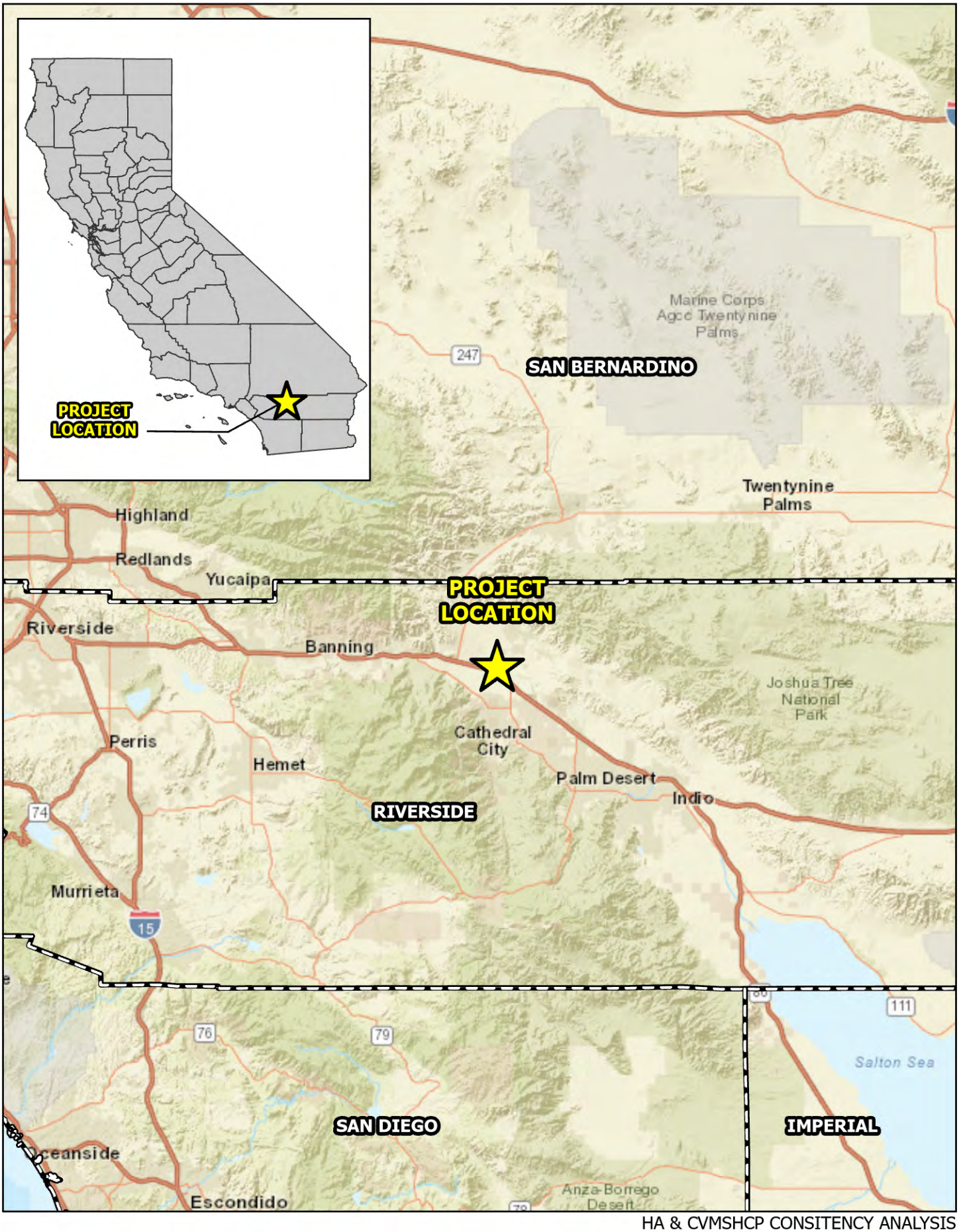
Subarea	Name	Description
		cover a 32,002 sq. ft. footprint. Grid connection will be established via a line-side tap in the main service panel (4000A, 480V).
2	New Well 33 RES-BCT Solar Site	This project involves the installation of a 2640.82 kW ground-mounted PV system at 19011 Little Morongo Rd, Desert Hot Springs. The system will be interconnected to the electrical utility grid and will include inverters, transformers, AC combiner panels, disconnects, and trenching for conduit installation. The array will cover a 302,745 sq. ft. footprint. Grid connection will be established via a line-side tap on a 12.47kV transmission line.

1.2 PROJECT LOCATION

The specific location of each project site subarea is provided below (refer to Exhibits 1-3):

Table 2: Project Site Subarea Locations

Subarea	Name	Location
1	NWRWRF ("Regional Plant")	Latitude/Longitude: 33°54'46.56"N, 116°31'43.87"W The project is located at 19011 Little Morongo Rd, Desert Hot Springs, CA 92240. The project site is generally located within Section 14, Township 3 South, Range 4 East of the USGS 7.5 Minute Desert Hot Springs, CA topographical quadrangle.
2	New Well 33 RES-BCT Solar Site	Latitude/Longitude: 33°54'38.82"N, 116°31'47.16"W The project is located at 19011 Little Morongo Rd, Desert Hot Springs, CA 92240. The project site is generally located within Section 14, Township 3 South, Range 4 East of the USGS 7.5 Minute Desert Hot Springs, CA topographical quadrangle.



ELMT CONSULTING

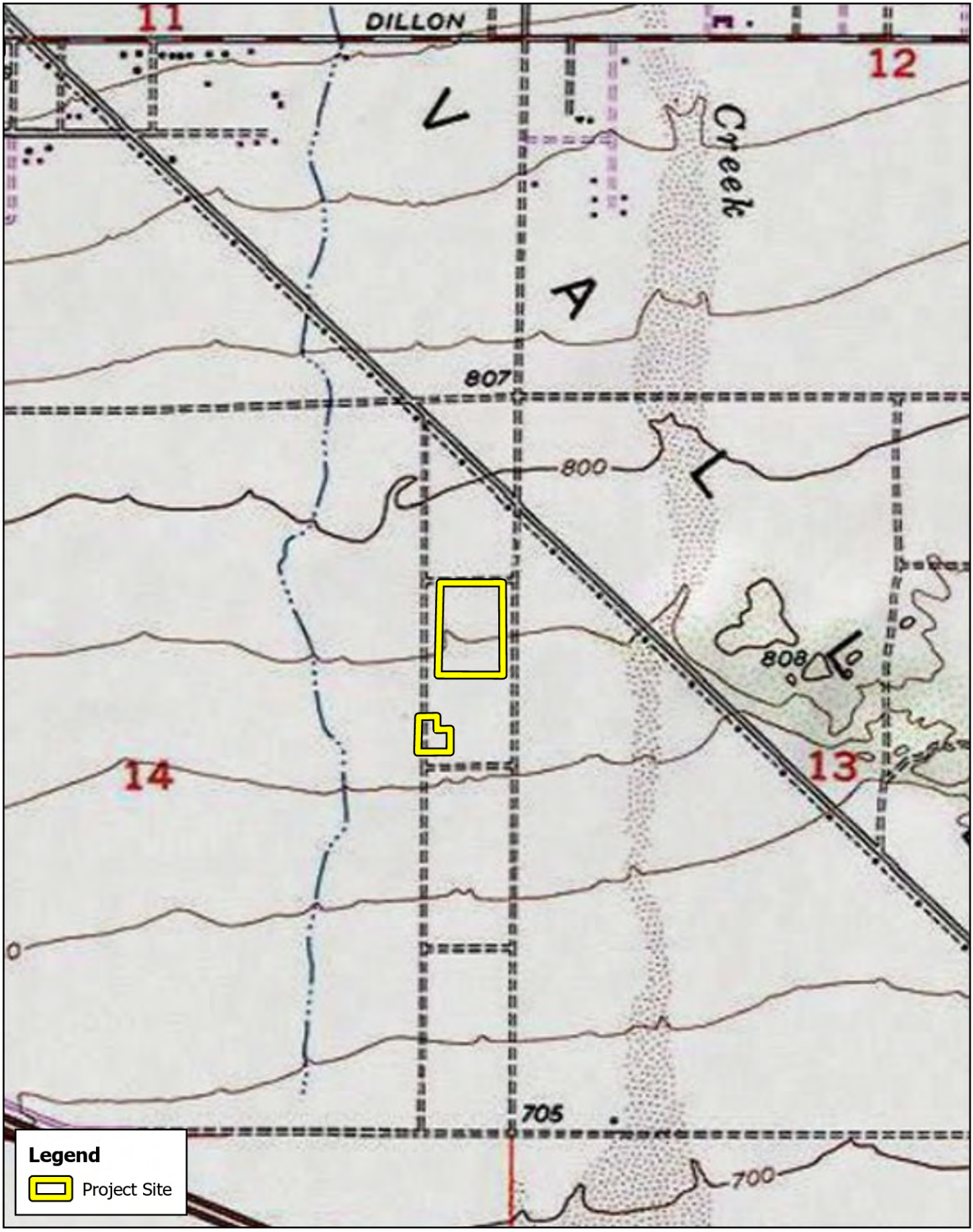
N 0 5 10 20 Miles

Source: World Street Maps; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

Regional Vicinity

Exhibit 1



ELMT CONSULTING

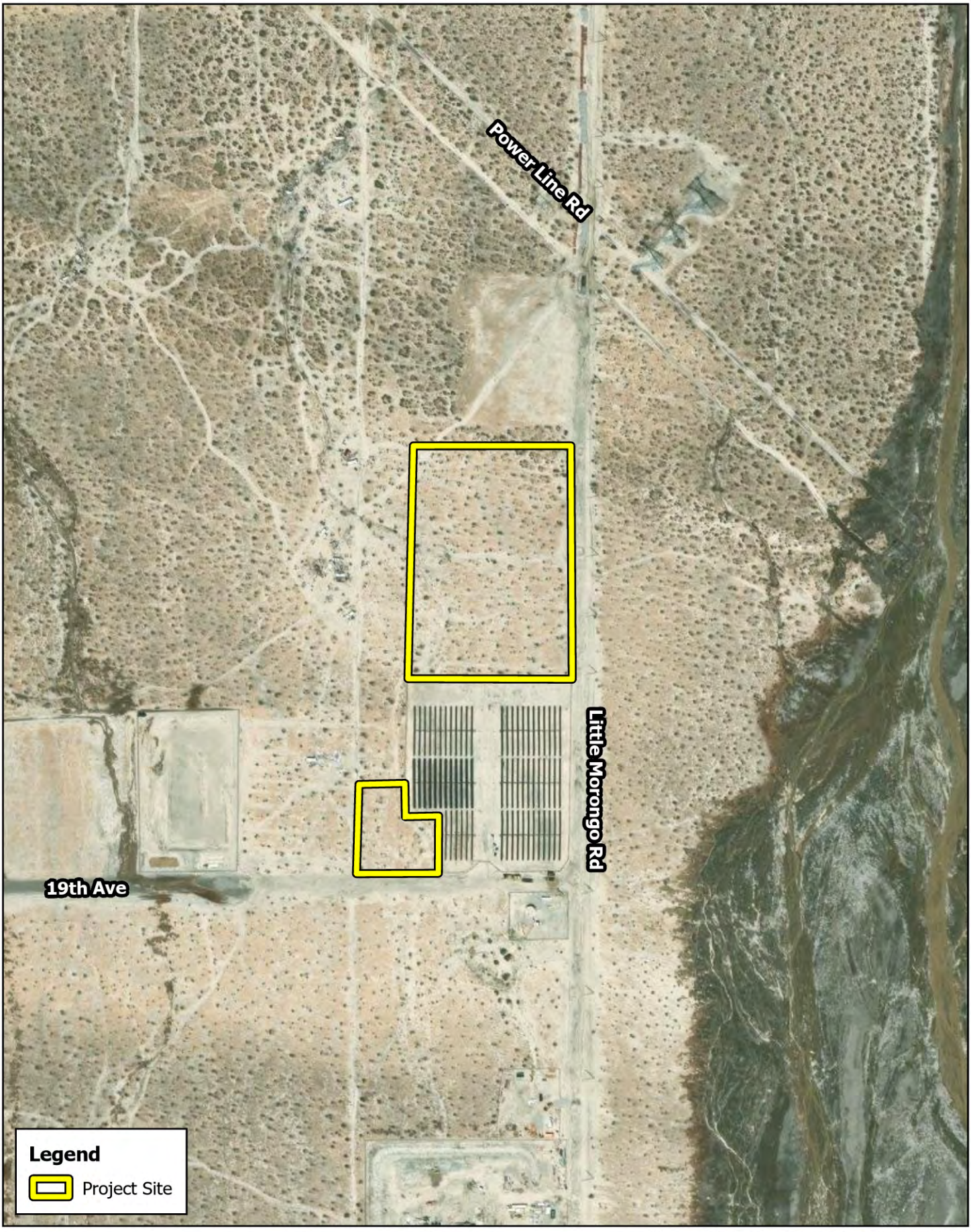
N 0 500 1,000 2,000 US Feet

Source: USGS Topographic Maps; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

Site Vicinity

Exhibit 2



ELMT CONSULTING

N

0 250 500 1,000 US Feet

Source: ESRI Aerial Imagery; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

Project Site

Exhibit 3

Section 2 Methodology

A literature review and records search were conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition to the literature review, a general habitat assessment or field investigation of the project site was conducted. The field investigation was conducted to document existing conditions within the project site and assess the potential for special-status biological resources to occur.

2.1 LITERATURE REVIEW

Prior to conducting the field study, species and habitat information was gathered from the reports related to the specific project and relevant databases for the Desert Hot Springs and Seven Palms Valley USGS 7.5-minute quadrangles to identify species and habitats known to occur locally. These quadrangles were queried due to the proximity of the project site to quadrangle boundaries, and regional topography. The literature review sources included:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Designated Critical Habitat Maps;
- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- International Union for Conservation of Naturae (IUCN);
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers;
- Google Earth Pro historic aerial imagery (1985-2024);
- USFWS Critical Habitat designations for Threatened and Endangered Species; and
- USFWS National Wetlands Inventory (NWI)

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the subject property. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

2.2 FIELD INVESTIGATION

ELMT biologists Andrew N. Mestas and Megan E. Peukert evaluated the conditions of the plant communities found within the boundaries of the project site on February 11, 2025. Plant communities identified on aerial photographs during the literature review were verified in the field. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In

addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area.

The plant communities were evaluated for their potential to support special-status plant and wildlife species. Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009) and delineated on an aerial photograph, and then digitized into ArcGIS. The ArcGIS application was used to compute the area of each plant community in acres.

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only). In addition, field staff identified any natural corridors and linkages that may support the movement of wildlife through the area.

2.3 SOIL SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field survey using the USDA NRCS Soil Survey for Riverside County. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site has undergone.

2.4 JURISDICTIONAL DRAINAGES AND WETLANDS

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the Corps, Regional Board, and/or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS NWI and Environmental Protection Agency (EPA) Water Program “My Waters” data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the Project site.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained for the City of Desert Hot Springs indicates the annual precipitation averages 5.4 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any occurring between the months of April and September. The wettest months are January and February, with monthly average total precipitations of 1.5 inches. The average yearly maximum and minimum temperatures for the City of Desert Hot Springs are 88- and 49-degrees Fahrenheit (F) respectively with July being the hottest month (monthly average 87° F) and December being the coldest (monthly average 50° F). The temperature during the site visit was in the low 60s °F with winds averaging 25 miles per hour.

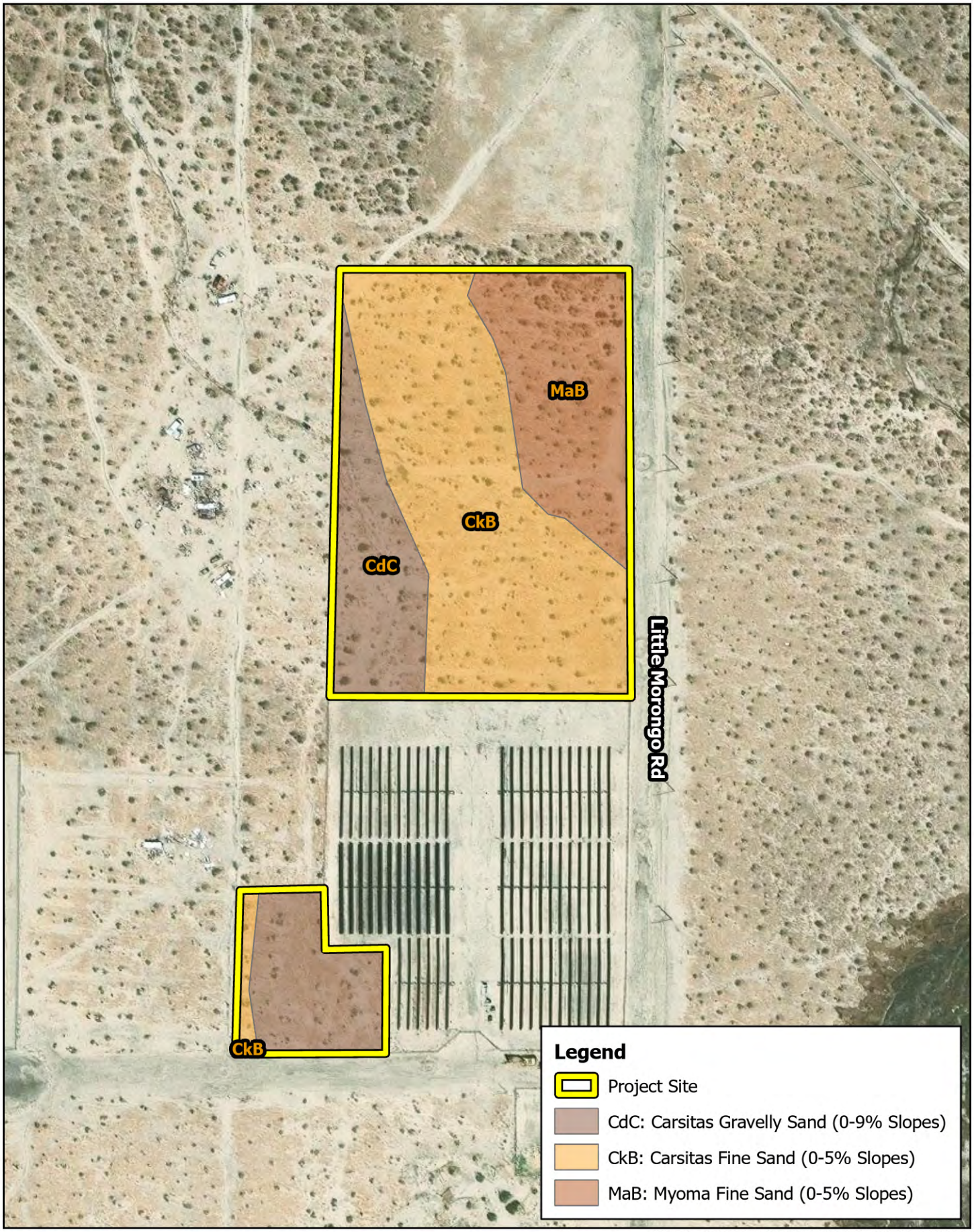
3.2 TOPOGRAPHY AND SOILS

On-site topography in the region supporting the project sites is generally flat with no significant areas of topographic relief. Elevation ranges between 757 and 780 feet above mean sea level.

The project sites are historically underlain by Carsitas fine sand (0 to 5 percent slopes) and Carsitas gravelly sand (0 to 9 percent slopes). Additionally, the project site for Well 33 is underlain by Myoma fine sand (0 to 5 percent slopes). Refer to Exhibit 4, *Soils*. Soils within the project sites are relatively undisturbed.

3.3 SURROUNDING LAND USES AND SITE CONDITIONS

The project sites are located in an area that has generally undergone a conversion from natural habitats to a mosaic of residential, recreational, commercial, and industrial developments with heavily disturbed/isolated undeveloped parcels, and undisturbed native areas. The sites are bounded to the north by undeveloped, vacant land with commercial and residential developments beyond; to the east by the Willow Hole Conservation Area with residential and vacant land beyond; to the south by commercial land and undeveloped, vacant land with Interstate 10 beyond; and to the west by commercial development with undeveloped, vacant land beyond.



HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

ELMT CONSULTING

N 0 125 250 500 US Feet

Source: ESRI Aerial Imagery; County of Riverside

Soils

Exhibit 4

Section 4 Discussion

4.1 LITERATURE REVIEW AND RESULTS

The literature search identified sixteen (16) special-status plant species and fifty-six (56) special-status wildlife species, and two (2) special-status plant communities as having the potential to occur within the Desert Hot Springs and Seven Palms Valley quadrangles. Species determined to have the potential to occur within the general vicinity are presented in *Table C-1: Potentially Occurring Special-Status Biological Resources*, provided in Appendix C.

4.2 VEGETATION AND LAND COVER

Both project sites support undeveloped land that has been subject to anthropogenic disturbances. The plant community and land cover types found onsite are described in further detail below (refer to Exhibit 5, *Vegetation*).

4.2.1 Disturbed Creosote Bush Scrub

The project sites support a disturbed creosote bush scrub plant community that varies in density based on proximity to frequent disturbances. This plant community is dominated by creosote (*Larrea tridentata*) and supports an often dense to sparse shrub layer and an herbaceous understory. Common plant species observed in this plant community include burrobush (*Ambrosia dumosa*), cheesebrush (*Ambrosia salsola*), teddy-bear cholla (*Cylindropuntia bigelovii*), California croton (*Croton californicus*), brittlebush (*Encelia farinosa*), desert dandelion (*Malacothrix glabrata*), fourwing saltbrush (*Atriplex canescens*), Saharan mustard (*Brassica tournefortii*), and Mediterranean grass (*Schismus barbatus*).

4.2.2 Disturbed

Disturbed land is present throughout the site where frequent disturbances (i.e., foot and vehicle traffic, illicit dumping) prevent the establishment of a plant community. Vegetative density in these areas varies from often barren to minimally vegetated, usually with weedy/early successional species. Common plants observed in the disturbed areas of the site include California croton, Saharan mustard and Mediterranean grass.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed during the field survey or that are expected to occur within the project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

4.3.1 Fish

No fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on the project. Therefore, no fish are expected to occur and are presumed absent.

4.3.2 Amphibians

No amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on the project. Therefore, no amphibians are expected to occur and are presumed to be absent.

4.3.3 Reptiles

The project site provides limited foraging and cover habitat for local reptile species adapted to regular disturbance and developed conditions. No reptilian species were observed onsite. Reptile species that could be expected to occur on-site include Great Basin fence lizard (*Sceloporus occidentalis longipes*), western fence lizard (*Sceloporus occidentalis*), San Diego gopher snake (*Pituophis catenifer annectens*), desert iguana (*Dipsosaurus dorsalis*), sidewinder (*Crotalus cerastes*), and coachwhip (*Coluber flagellum piceus*), and western side-blotched lizard (*Uta stansburiana elegans*).

4.3.4 Birds

The project site provides suitable foraging and nesting habitat for a variety of bird species adapted to urban environments. Bird species detected onsite during the investigation include American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), California towhee (*Melozone crissalis*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other common species that can be expected to occur on-site include house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), red-tailed hawk (*Buteo jamaicensis*), song sparrow (*Melospiza melodia*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Nuttall's woodpecker (*Picoides nuttallii*), house sparrow (*Passer domesticus*), and northern mocking bird (*Mimus polyglottos*).

4.3.5 Mammals

The project site provides suitable foraging and denning habitat for mammalian species adapted to routine human disturbance and desert environments. However, most mammal species are nocturnal and are difficult to observe during a diurnal field visit. The only mammalian species detected and/or sign observed during the field investigation was desert cottontail (*Sylvilagus audubonii*). Another common mammalian species that has the potential to occur on the project site is California ground squirrel (*Otospemophilus beecheyi*). No bat species are expected to roost on-site due to a lack of suitable roosting habitat (i.e., trees, crevices, abandoned structures) within and surrounding the project site.

4.4 NESTING BIRDS

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted during the breeding season. Although heavily disturbed, the project site and surrounding area have the potential to provide minimal foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to disturbed areas and urban environments. Additionally, the site has potential to support ground-nesting birds such as killdeer (*Charadrius vociferus*).

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted prior to the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

4.5 WILDLIFE CORRIDORS AND LINKAGES

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

According to the CVMSHCP, the project site does not occur within any identified wildlife migratory corridors or linkages. However, the project site lies approximately 65 feet west of the Willow Hole Conservation Area. Since project activities are not expected to extend beyond site boundaries, implementation of the proposed project is not expected to have any direct or indirect impacts to the Willow Hole Conservation Area. As a result, implementation of the proposed project will not disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area. Refer to Exhibit 7, *CVMSHCP Conservation Areas*.

4.6 STATE AND FEDERAL JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code.

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediate surrounding the project sites. Based on this review, one blueline streams is mapped as occurring within the project sites. However, upon review of historic aerial footage and during the field investigation, it was determined that the mapped blue-line stream no longer exists due to extensive disturbances upstream. Further, no features were observed on the project sites that would qualify as jurisdictional under the Corps, Regional Board, or CDFW.

No jurisdictional drainage and/or wetland features were observed within the project site during the field survey. Therefore, development of the proposed project will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB Rarefind 5, CNDDB Quickview Tool in BIOS and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California were queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Desert Hot Springs and Seven Palms Valley USGS 7.5-minute quadrangles. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified sixteen (16) special-status plant species, fifty-six (56) special-status wildlife species, and two (2) special-status plant communities as having the potential to occur within the Desert Hot Springs and Seven Palms Valley quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in *Table C-1: Potentially Occurring Special-Status Biological Resources*, provide in Appendix C.

4.7.1 Special-Status Plants

According to the CNDDB and CNPS, sixteen (16) special-status plant species have been recorded in the Desert Hot Springs and Seven Palms Valley quadrangles (refer to Appendix C). No special-status plant species were observed on-site during the field investigation. It was determined that the creosote bush scrub habitat in both project sites has a low potential to support Coachella Valley milkvetch (*Astagalus lentiginosus coachellae*) Based on habitat requirements for specific special-status plant species and the availability and quality of habitats on-site, it was determined the project site does not have potential to support any other special-status plant species known to occur in the area and all are presumed absent.

Due to regional significance, the potential occurrence of Coachella Valley milkvetch is discussed in further detail below.

Coachella Valley Milk-Vetch

Coachella Valley milk-vetch can be either an annual or perennial herb that blooms between February and May. It is federally listed as endangered and is designated by the CNPS with the Rare Plant Rank 1B.2,

indicating that is rare, threatened, or endangered in California and elsewhere, and is considered fairly threatened in California, with 20-80% of its known occurrences threatened. It is covered under the MSHCP. It is endemic to California and is only known from Riverside County. It occurs in sandy soils within desert dunes and Sonoran desert scrub, where it typically grows at elevations between 130 and 2,150 feet. Coachella Valley milk-vetch is known to occur in many locations throughout the Coachella Valley.

Coachella Valley milk-vetch was not observed during the field investigation. The creosote bush scrub supported by the project sites has the potential to provide marginal suitable habitat for this species; and native soils remain. Therefore, Coachella Valley milk-vetch was determined to have a low potential to occur on-site. Since Coachella Valley milk-vetch is a covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

4.7.2 Special-Status Wildlife

According to the CNDDB, fifty-six (56) special-status wildlife species have been reported in the Desert Hot Springs and Seven Palms Valley quadrangles (refer to Appendix C). No special-status species were observed on-site. Based on habitat requirements for specific species and the availability and quality of on-site and adjacent habitats, it was determined that the proposed project site has a high potential to support Coopers hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*), California horned lark (*Eremophila alpestris actia*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and loggerhead shrike (*Lanius ludovicianus*); and a low potential to support Coachella Valley fringe-toed lizard (*Uma inornata*), and flat-tailed horned lizard (*Phrynosoma mcallii*). It was further determined that the project site does not provide suitable habitat for any of the other special-status wildlife species known to occur in the area since the majority of the project site has been heavily disturbed from on-site disturbances and is surrounded by existing development.

Of the aforementioned species, Coachella Valley fringe-toed lizard is both federally listed as Threatened and state listed as Endangered. None of the other species are federally or state listed as Endangered or Threatened. In addition, Coachella Valley fringe-toed lizard and flat-tailed horned lizard are covered species under the CVMSHCP.

The only aforementioned special-status avian species expected to nest on-site is California horned lark. None of the remaining aforementioned special-status avian species are expected to nest on-site due to the lack of suitable nesting habitat/opportunities. Further, Cooper's hawk, sharp-shinned hawk, and loggerhead shrike are only expected to occur on-site incidentally while foraging in adjacent areas. In order to ensure impacts to special-status avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Since Coachella Valley fringe-toed lizard and flat-tailed horned lizard are covered species under the CVMSHCP, no further surveys or additional mitigation measures will be required for this species, if present.

Cooper's Hawk

Cooper's hawk does not have any formal protection. In desert habitats, it adapts to the sparser vegetation and open spaces and is a year-round resident in southern California. They tend to nest and hunt near desert riparian areas or places with scattered trees and shrubs, which provide essential cover and hunting opportunities. Cooper's hawk was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to Cooper's hawk to occur.

Sharp-shinned hawk

Sharp-shinned hawk does not have any formal protection. It is a winter resident in southern California, and in desert habitat it is often found near desert riparian zones or areas with some tree coverage, such as along watercourses or in oases. These environments provide essential hunting and nesting opportunities. Sharp-shinned hawk was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to Sharp-shinned hawk occur.

Costa's Hummingbird

Costa's hummingbird does not have any formal protection. It is a year-round resident in southern California and is found in desert and semi-desert, arid brushy foothills and chaparral. This species is breeds in the Sonoran and Mojave Deserts, and departs desert heat moving into chaparral, scrub, and woodland habitats. Departs desert heat moving into chaparral, scrub, and woodland habitats. Costa's hummingbird was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to Costa's hummingbird occur.

California Horned Lark

California horned lark does not have any formal protection. It is a year-round resident in southern California and is found in landscapes with minimal vegetation, such as deserts, prairies, and tundra. In these areas, they favor bare, dry ground or spaces with short, sparse vegetation to forage and nest. California horned lark was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to California horned lark occur.

Loggerhead Shrike

Loggerhead shrike is designated by the CDFW as a Species of Special Concern. It is a year-round resident of southern California. This species is typically found in open country with short vegetation, including pastures, old orchards, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. It utilizes somewhat prominent perching positions for hunting and eating. This species primarily nests in thorny shrubs and trees, but will nest in brush piles or other debris if no shrubs or trees are present. The general nesting season extends from the end of January through the end of July. Loggerhead shrike was determined to have a high potential to occur on the project site. Prior to the start of construction, a pre-construction nesting bird clearance survey shall be conducted to ensure no impacts to loggerhead shrike occur.

Coachella Valley Fringe-toed Lizard

Coachella Valley fringe-toed lizard is designated by the USFWS as Threatened under the ESA and by the CDFW as endangered under the CESA. It is covered under the MSHCP. This species is only found in the Coachella Valley, and occurs on areas containing fine, windblown sands. They are rarely, if ever, found outside of this habitat and do not occur on stabilized sands. Vegetative cover is sparse to moderate and is usually dominated by creosote bush, indigo bush, honey mesquite, and four-winged saltbush (Atriplex canescens). This species is typically active from spring through fall, especially between April and October. Up to three clutches of eggs are laid between May and September, with juveniles emerging between August and October.

No Coachella Valley fringe-toed lizards were observed during the field investigation. The creosote bush scrub community within the project sites support fine wind-blown sand required by Coachella Valley fringe-toed lizard. Therefore, this species was determined to have high potential to occur on the northwest corner of the site. Since Coachella Valley fringe-toed lizard is a covered species under the CVMSHP, no further surveys or additional mitigation measures will be required for impacts to this species, if present.

Burrowing Owl

The burrowing owl is currently listed as a Candidate endangered species under the California Endangered Species Act (CESA). It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of burrowing mammals (such as ground squirrels) whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. They also require open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators.

Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Based on the results of the field investigation, it was determined that the project site has a low potential to support burrowing owl. Even though no suitable burrows or sign, was observed onsite, burrowing owls have been documented approximately 0.5 mile west of the project site. As a result, a focused survey is recommended to ensue burrowing owl remain absent from the project site.

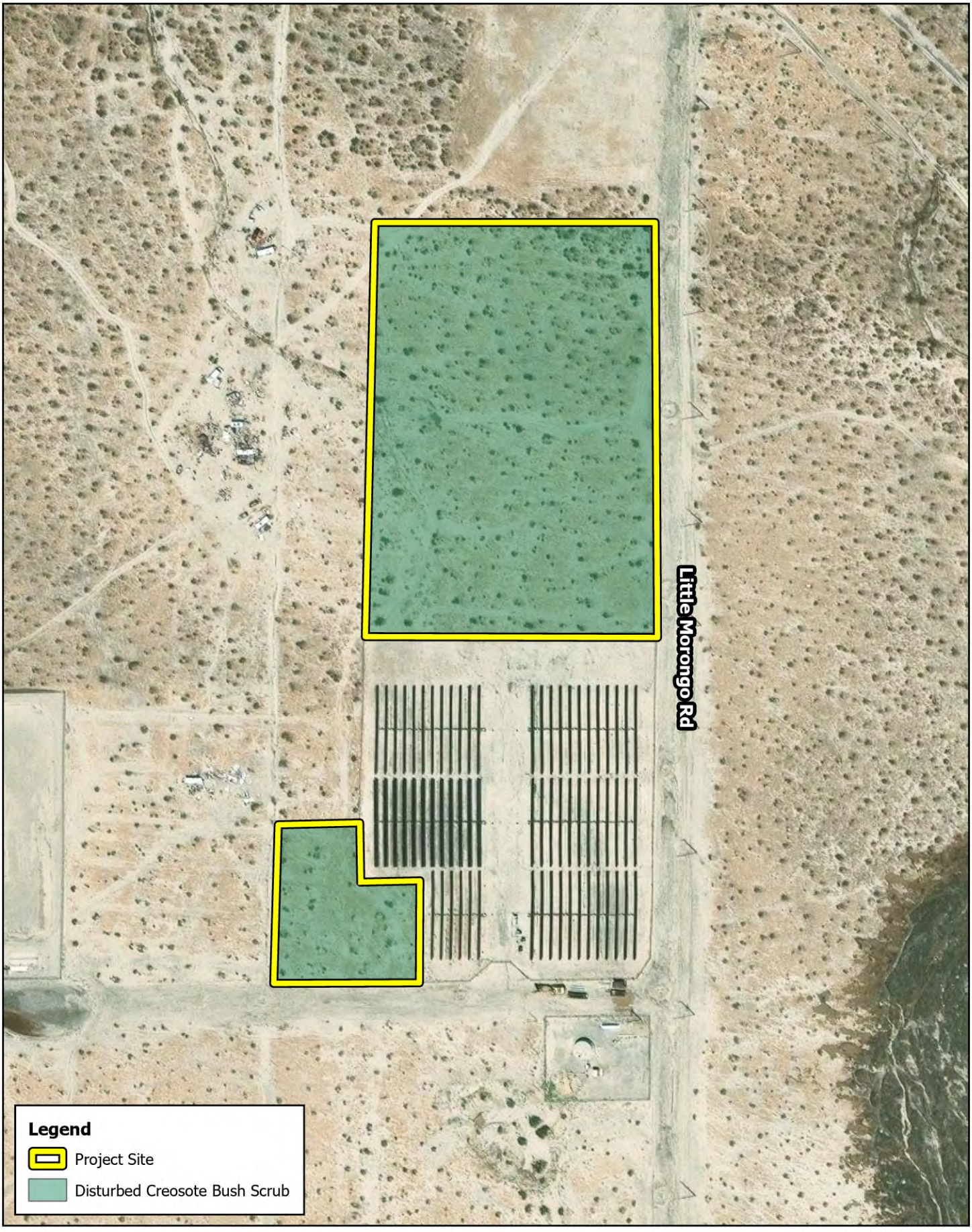
4.7.3 Special-Status Plant Communities

According to the CNDDB, two (2) special-status plant community has been reported in the Desert Hot Springs and Seven Palms Valley quadrangles: desert fan palm oasis woodland and mesquite bosque. Based on the results of the field investigation, no special-status plant communities were observed on-site.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project sites are not located within any federally designated Critical Habitat. The nearest federally designated Critical Habitat occurs 583 feet to the northeast of the project sites for Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*). As a result, no impacts to Critical Habitat will occur from project implementation. Refer to Exhibit 6, *Critical Habitat*.



ELMT CONSULTING

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0 125 250 500 US Feet

Source: ESRI Aerial Imagery; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

Vegetation

Exhibit 4

ELMT CONSULTING

N 0 250 500 1,000 US Feet

Source: ESRI Aerial Imagery; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

Critical Habitat

Exhibit 5

Section 5 Coachella Valley MSHCP Consistency Analyis

The project site is not located within any of the CVMSHCP designated conservation areas; the closest conservation area is the Willow Hole Conservation Area located immediately east of the proposed project site (Exhibit 7, *CVMSHCP Conservation Areas*).

5.1 COVERED ACTIVITIES OUTSIDE CONSERVATION AREAS

The proposed project was reviewed to determine consistency with the CVMSHCP. Geographic Information System (GIS) software was utilized to map the proposed project site in relation to the CVMSHCP including conservation areas, corridors and linkages, and sand transport areas. The CVMSHCP requires that local permittees comply with various protective measures for covered species, communities, essential ecological processes, and biological corridors. In addition, certain projects may be subject to local development mitigation fees, a Joint Project Review Process, or other conservation or implementation measures.

The proposed project is not listed as a planned "Covered Activity" under the published CVMSHCP but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. According to Section 7.1 of the CVMSHCP, take authorization will be provided for certain activities that take place outside of Conservation Areas including *"Public facility construction, operations (not including groundwater withdrawal), and maintenance and safety activities by the Permittees for existing and future facilities, including both on and off site activities. Such facilities include, but are not limited to, publicly maintained roads and rights-of-way; materials pits; maintenance yards; flood control facilities; landfills, transfer stations, and other solid waste related facilities, including those for the processing of organic materials; public buildings; water development, production, storage, treatment, and transmission facilities; sewage treatment and transmission facilities; reclaimed water storage and transmission facilities; public parks; substations and electric transmission facilities; and other public utility facilities providing services essential to the health, safety, and welfare of the public."*

As a Covered Activity located outside designated conservation areas, implementation of the proposed project is consistent with the applicable regulatory compliance measures described in Section 4.4 of the CVMSHCP (refer to Appendix D). As required under CEQA, mitigation is based on baseline conditions and impacts to sensitive biological resources associated with the project site. The CVMSHCP was developed specifically to support development projects within the Coachella Valley. The proposed project and recommended mitigation are consistent with the CVMSHCP.

5.2 CVMSHCP LAND USE ADJACENCY GUIDELINES

The purpose of Land Use Adjacency Guidelines (Section 4.5 of the CVMSHCP) is to avoid or minimize indirect effects from development adjacent to or within the Conservation Areas. Such indirect effects are commonly referred to as edge effects, and may include noise, lighting, drainage, intrusion of people, and the introduction of non-native plants and non-native predators such as dogs and cats. The proposed Solar Project is located approximately 65 feet to the west of the Willow Hole Conservation Area, and as such the following Land Use Adjacency Guidelines shall be considered and implemented where applicable.

Drainage

Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.

The proposed project would not alter the flow direction of surface water flowing into the Willow Hole Conservation Area. There would be no changes to the quantity or quality of runoff or other water discharged to the Conservation Area. Onsite stormwater will be directed to onsite basin away from the conservation area. As a result, implementation of the proposed project will not release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the Willow Hole Conservation Area.

Toxics

Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.

The proposed project would not generate toxic bioproducts or use toxic chemicals. Any spills of hazardous materials from project vehicles or equipment would be contained, cleaned up, and disposed of immediately.

The use, storage, transport, and disposal of hazardous materials would be governed by existing regulations of several agencies, including the U.S. EPA, U.S. Department of Transportation, California OSHA, and the Riverside County Fire Protection District. Compliance with applicable laws and regulations governing the use, storage, transportation, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts. All spills or leakage of petroleum products are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable regulations, such as RCRA, for the cleanup and disposal of that contaminant. Should a

spilled hazardous material reach the storm drain, it would be directed to the onsite stormwater system before being released into the individual regional channels.

Lighting

For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

The proposed project would install lighting that will be shielded and directed away from the conservation area.

Noise

Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA Leq hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

Construction-related noise will be mitigated to be consistent with the County's Noise Ordinances by limiting construction activities to daytime hours and requiring construction equipment to be tuned and equipped with mufflers. Under the CVMSHCP, wildlife within the CVMSHCP Conservation Area should not be subject to noise that would exceed 75dBA Leg.

Invasives

Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112. The plants listed in Table 4-113 shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.

The proposed project will not incorporate non-native plants adjacent to the conservation area.

Barriers

Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.

The proposed project will need to install a fence or barrier between the proposed development and the adjacent conservation area. The type and exact location of the fence/barrier is not known at this time.

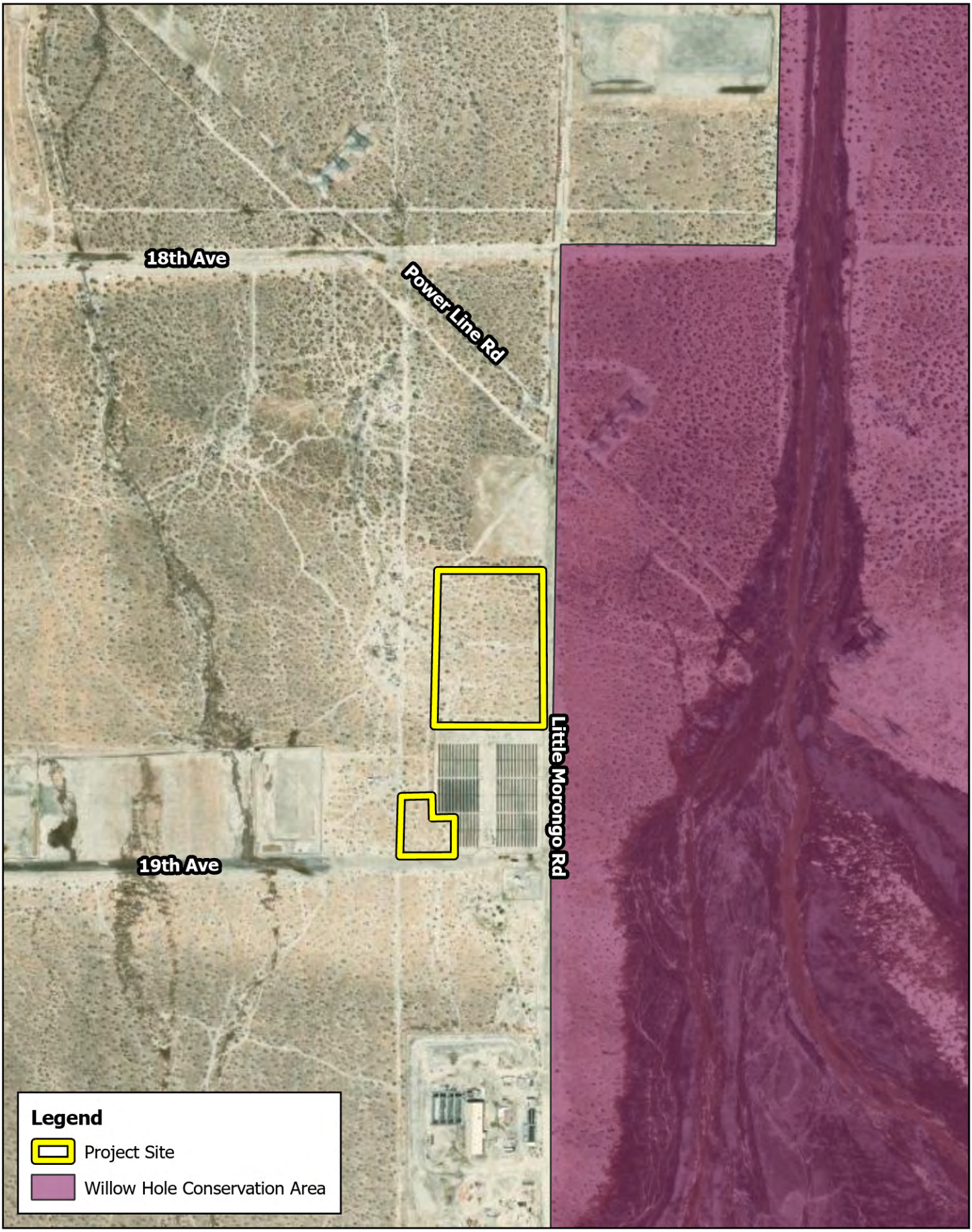
Grading/Land Development

Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

The proposed project will not have any manufactured slopes.

5.3 CVMSHCP COVERED SPECIES

The CVMSHCP does not identify modeled habitat for any species as occurring within the project site (refer to Appendix E, *CVMSHCP Covered Species*). Based on the results of the field investigation, the project site contains primarily disturbed land that has been subjected to a variety of anthropogenic disturbances. These disturbances have reduced, if not eliminated, the ability of the project site to provide suitable habitat for CVMSHCP Covered species throughout the majority of the project site. However, the creosote bush scrub plant community within the project sites provide suitable habitat for CVMSHCP Covered species. Due to the project footprint occurring within disturbed habitats, potential impacts to CVMSHCP Covered Species are expected to occur from project implementation.



ELMT CONSULTING

N 0 250 500 1,000 US Feet

Source: ESRI Aerial Imagery; County of Riverside

HA & CVMSHCP CONSITENCY ANALYSIS
MISSION SPRINGS WELL 33 & NWRWRF

CVMSHCP Conservation Areas

Exhibit 7

Section 6 Conclusion and Recommendations

The project sites support undeveloped land. The sites occur northeast of Interstate 10 and is adjacent to Little Morongo Road. The project sites support one (1) plant community which would be classified as disturbed creosote bush scrub, and one (1) land cover type that would be classified as disturbed.

Special-Status Plant Species

No special-status plant species were observed during the field investigation. Based on habitat requirements for the identified special-status species, known species distributions, and existing site conditions, it was determined that Coachella Valley milkvetch is the only special-status plant species to have low potential to occur in the creosote bush scrub located throughout the project sites. Additionally, the project sites do not have potential to support any of the other special-status plant species known to occur in the remaining area and all are presumed absent due to onsite disturbances and nearby development. Therefore, no impacts to special-status plant species are expected to occur due to project implementation.

Special-Status Wildlife Species

No special-status animal species were observed on-site during the field investigation. Based on habitat requirements for the identified special-status wildlife species, known distributions, and the and routine disturbance, it was determined that the proposed project site has a high potential to support Coopers hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*), California horned lark (*Eremophila alpestris actia*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and loggerhead shrike (*Lanius ludovicianus*); and a low potential to support Coachella Valley fringe-toed lizard (*Uma inornata*), and flat-tailed horned lizard (*Phrynosoma mcallii*). Further, it was determined that no other special-status wildlife species have the potential to occur on-site and are presumed absent. Therefore, no impacts to special-status wildlife species are expected to occur due to project implementation.

With implementation of a pre-construction nesting bird clearance survey, no impacts to Costa's hummingbird, loggerhead shrike, Cooper's hawk, sharp-shinned hawk, and California horned lark, are expected to occur.

Focused surveys are recommended for burrowing to ensure absence from project site.

Riparian Habitat and Special-Status Natural Communities

No jurisdictional drainage and/or wetland features were observed within the project site during the field survey. Therefore, development of the project site will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

No special-status natural communities were observed within the boundaries of the project site. Therefore, no special-status natural communities will be impacted by project implementation.

Wildlife Corridors and Linkages

The project site occurs adjacent to the Willow Hole Conservation Area, which supports the movement of local wildlife species with large territories. However, project activities are expected to be limited to existing disturbed areas, adjacent to existing development, and are not expected to impact areas within the refuge. As a result, implementation of the proposed project will not disrupt or have any adverse effects on any migratory corridors or linkages in the surrounding area.

Migratory Bird Treaty Act and CDFW Fish and Game Code Compliance

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For listed and raptor species, this buffer should be expanded to 500 feet. A biological monitor should be present to delineate the boundaries of the buffer area and monitor the active nest to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

CVMSHCP Compliance

As a Covered Activity located outside designated conservation areas, construction of the proposed project is expected to implement the applicable regulatory complinace measures described in Section 4.4 of the CVMSHCP (refer to Appendix C). With implementation of these measures, and land use adjacney guidelines, the proposed project would be fully consistent with the biological goals and objectives of the CVMSHCP.

Section 7 References

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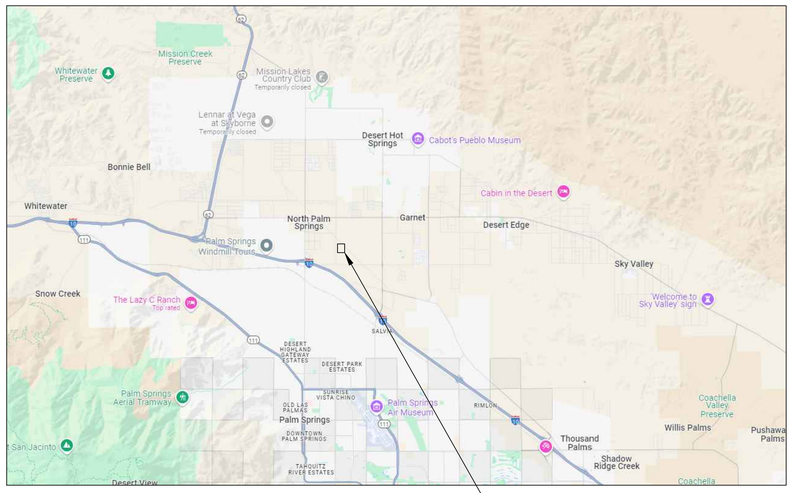
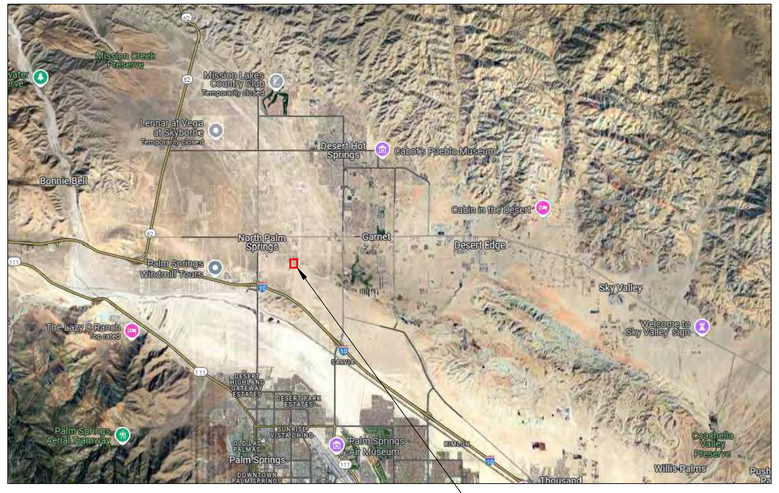
Appendix A Site Plan

387.2 kW Ground Mount Photovoltaic System
19011 Little Morongo Rd, Desert Hot Springs, CA 92240



1 VICINITY MAP

Scale: NTS



2 AERIAL VIEW

Scale: NTS

LIST OF DRAWINGS / DOCUMENTS

DRAWINGS:

1.	COVER SHEET	E-1
2.	SITE PLAN	E-2
3.	SINGLE LINE DIAGRAM	E-3
4.	ELECTRICAL CALCULATION &LABELS	E-4
5.	LEGENDS & GEN. NOTES	E-5
6.	DETAILS	E-6,6A,6B
7.	DATA SHEETS	E-7

GENERAL CONTRACTOR & ELECTRICAL ENGINEERING

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175 NORTECH PARKWAY
SAN JOSE, CA 95134
(408) 780-2889
WWW.STATENSOLAR.COM

LICENSE NO.- 984910
LICENSE CLASSIFICATION - C46

PROJECT INFORMATION

SCOPE OF WORK:

THE PROJECT IS TO INSTALL A GROUND MOUNTED PHOTOVOLTAIC SYSTEM AND ALL ASSOCIATED POWER EQUIPMENT AT A COMMERCIAL PROPERTY.

SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID PER THE REQUIREMENTS OF THE UTILITY COMPANY AND ALL APPLICABLE LOCAL AND NATIONAL CODES.

SYSTEM SPECIFICATIONS

MODULES -	TRINA 605W
TOTAL MODULE COUNT	640
NOMINAL POWER	605W
TOTAL DC SYSTEM RATING	387.2 kW DC
INVERTER -	(5) CPS 60KW (CPS-SCH 60KTL-DO/US-480)
TOTAL INVERTER COUNT	5
TOTAL INVERTER OUTPUT	300 kW AC

DESIGN CRITERIA

DC DESIGN WILL BE BASED ON A 1000V DC. ASHRAE DATA AVAILABLE FOR PALM SPRINGS INTL IS AS FOLLOWS:

- 2% AVERAGE HIGHEST TEMP = 44°C
- EXTREME MINIMUM = 3°C

APPLICABLE CODES

.

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA GREEN BUILDING CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

NOTES:

- MODULES TILT - 20°
- MOUNTING TYPE- GROUND MOUNTED
- SOLAR ARRAY FOOTPRINT: 32002 SQ. FT
- APN: 656050007

LICENSED SOLAR CONTRACTOR
Staten Solar, Inc.
Lic: 984910
Exp. 6/30/2025
State of California

NWRWF

Cover Sheet

387.2 kW Ground Mount Project
(640) TRINA 605W Modules
19011 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
0	11-15-2024	INITIAL SUBMITTAL	DA	PM	SB

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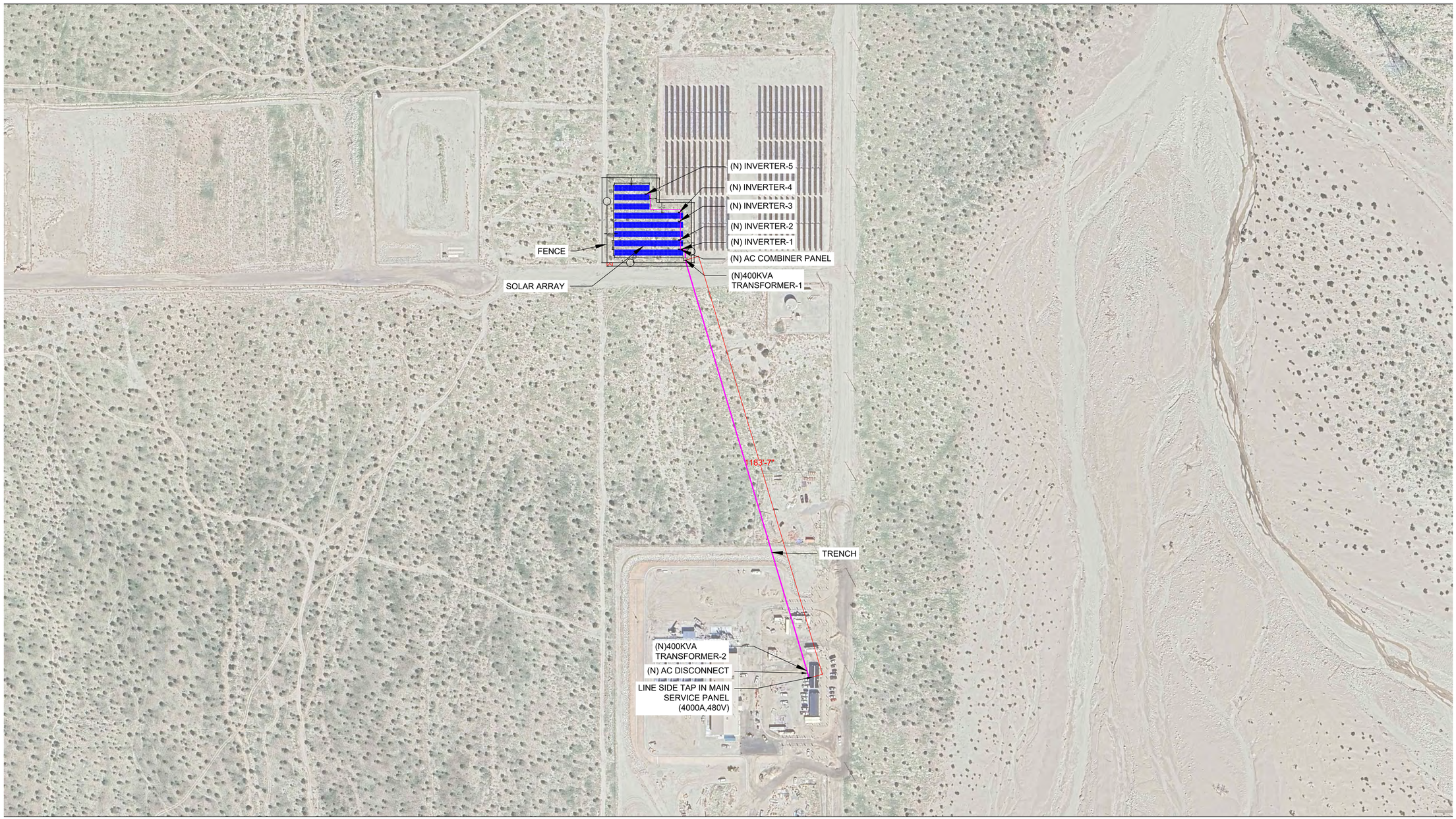
DWG NO: E-1

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/128"= 1'-0"

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Lic: 984910 C-46
Exp. 6/30/2025
State of California

NWRWF

Array Layout

387.2 kW Ground Mount Project
(640) TRINA 605W Modules
19011 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
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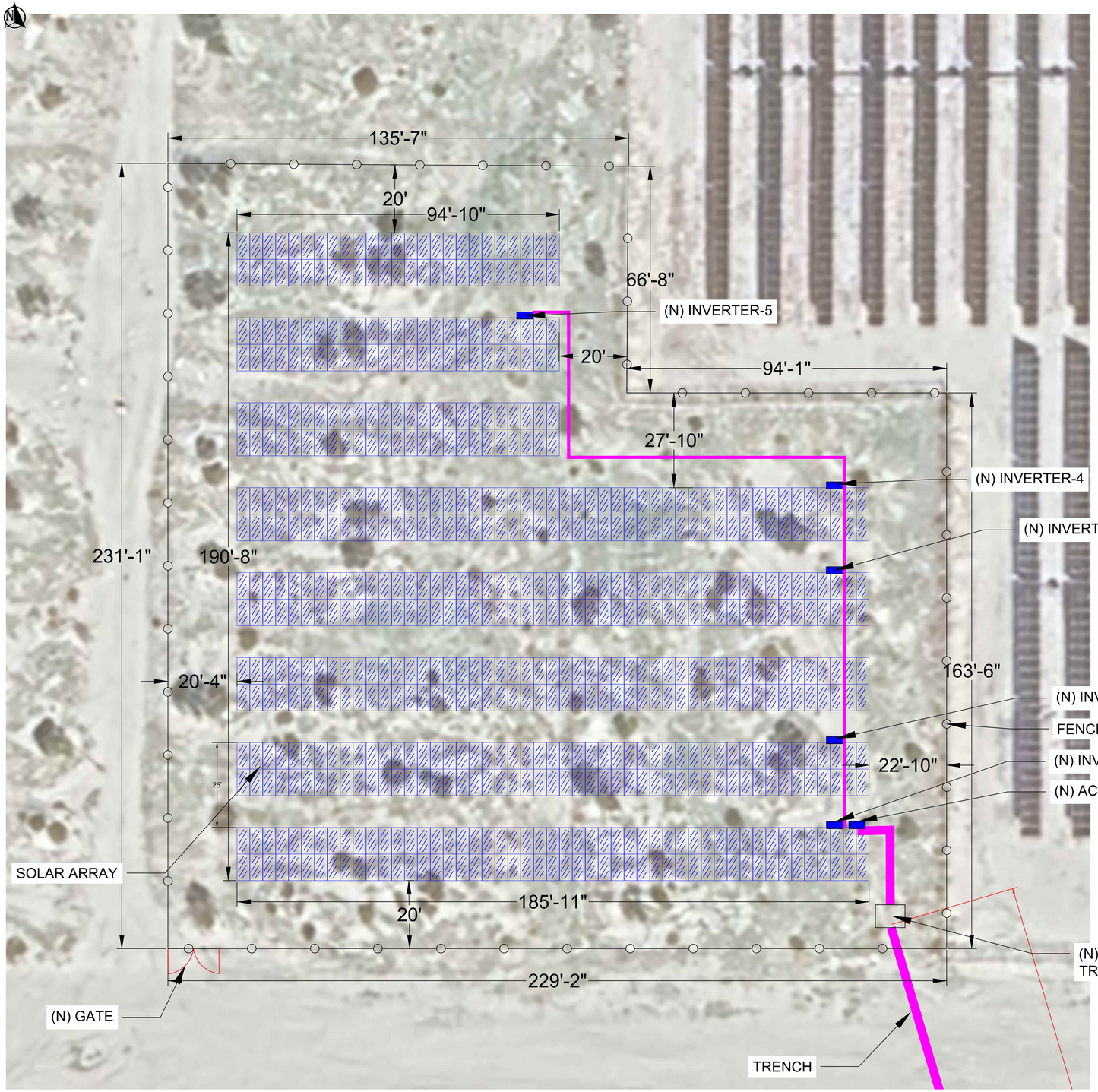
DWG NO: E-2

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/24"= 1'-0"

GENERAL NOTES

1. (640) TRINA 605W MODULES.
2. (05) 60KW CHINT POWER SYSTEMS INVERTERS
3. ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE LISTED AND APPROVED BY A TESTING AGENCY RECOGNIZED BY THE AHJ. ANY EQUIPMENT NOT LISTED SHALL BE TESTED AND CERTIFIED BY AN APPROVED TESTING AGENCY.
4. COMPLIANCE WITH 2022 CALIFORNIA FIRE CODE.
5. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM
6. PANEL DESIGNATIONS SHOWN ON THESE DRAWINGS ARE GIVEN FOR CLARIFICATION OF CIRCUITING ONLY AND MAY NOT CORRESPOND TO THE DESIGNATION FOUND IN THE FIELD.
7. ALL EXISTING CONDUIT RUNS ARE NOT SHOWN.CONTRACTOR SHALL VERIFY EXISTING CONDUIT LOCATIONS IN FIELD.
8. THE SOLAR MODULES SHALL BE TILTED 20° AT GROUND .
9. THE WORKING CLEARANCES AROUND THE EXISTING ELECTRICAL EQUIPMENT AS WELL AS THE NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.

LICENSED SOLAR CONTRACTOR
Staten Solar, Inc.
Lic: 984910
Exp. 6/30/2025
State of California

NWRWF

Array Layout

387.2 kW Ground Mount Project
(640) TRINA 605W Modules
19011 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER:
TITLE:
SUBJECT:
PROJECT LOCATION:

DESIGNED	CHECKED	APPROVED
DA	PM	SB

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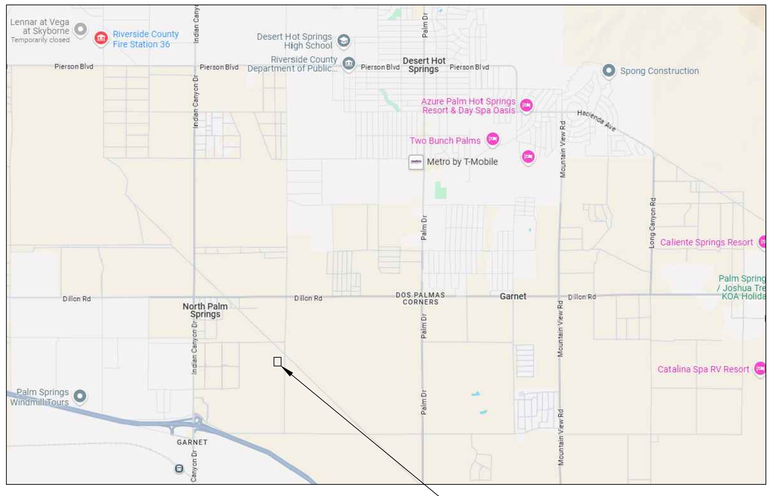
DWG NO: E-2

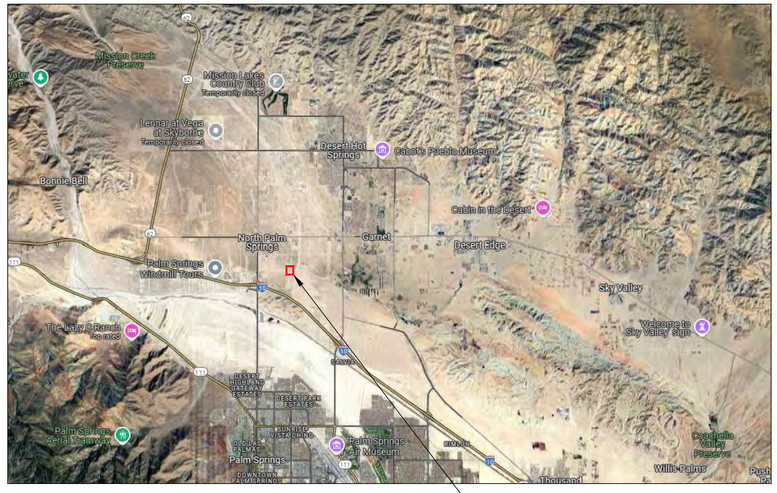
PROJ NO: LMR-190

2640.82 kW Ground Mount Photovoltaic System
19011 Little Morongo Rd, Desert Hot Springs, CA 92240



1 VICINITY MAP

Scale: NTS



2 AERIAL VIEW

Scale: NTS

LIST OF DRAWINGS / DOCUMENTS

DRAWINGS:

1.	COVER SHEET	E-1
2.	SITE PLAN	E-2
3.	SINGLE LINE DIAGRAM	E-3
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SYSTEM SPECIFICATIONS

MODULES -	TRINA 605 W
TOTAL MODULE COUNT	4365
NOMINAL POWER	605W
TOTAL DC SYSTEM RATING	2640.82 kW DC
INVERTER -	(20) CPS 100KW (CPS-SCH 100KTL-DO/US-480)
TOTAL INVERTER COUNT	20
TOTAL INVERTER OUTPUT	2000 kW AC

DESIGN CRITERIA

DC DESIGN WILL BE BASED ON A 1500V DC. ASHRAE DATA AVAILABLE FOR PALM SPRINGS INTL IS AS FOLLOWS:

- 2% AVERAGE HIGHEST TEMP = 44°C
- EXTREME MINIMUM = 3°C

APPLICABLE CODES

.

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA GREEN BUILDING CODE
- 2022 CALIFORNIA ENERGY CODE
- 2022 CALIFORNIA FIRE CODE

NOTES:

- MODULES TILT - +60°/-60° SINGLE AXIS TRACKERS
- MOUNTING TYPE- GROUND MOUNTED
- SOLAR ARRAY FOOTPRINT: 302745 SQ. FT
- APN: 666360007

LICENSED SOLAR CONTRACTOR
Staten Solar, Inc.
Lic: 984910
Exp. 6/30/2025
State of California

RES-BCT Well 33
Cover Sheet
2640.82 kW Ground Mount Project
(4365) TRINA 605W Modules
19011 Little Morongo Rd,
Desert Hot Springs, CA 92240

NAME OF CUSTOMER: | TITLE: | SUBJECT: | PROJECT LOCATION:

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
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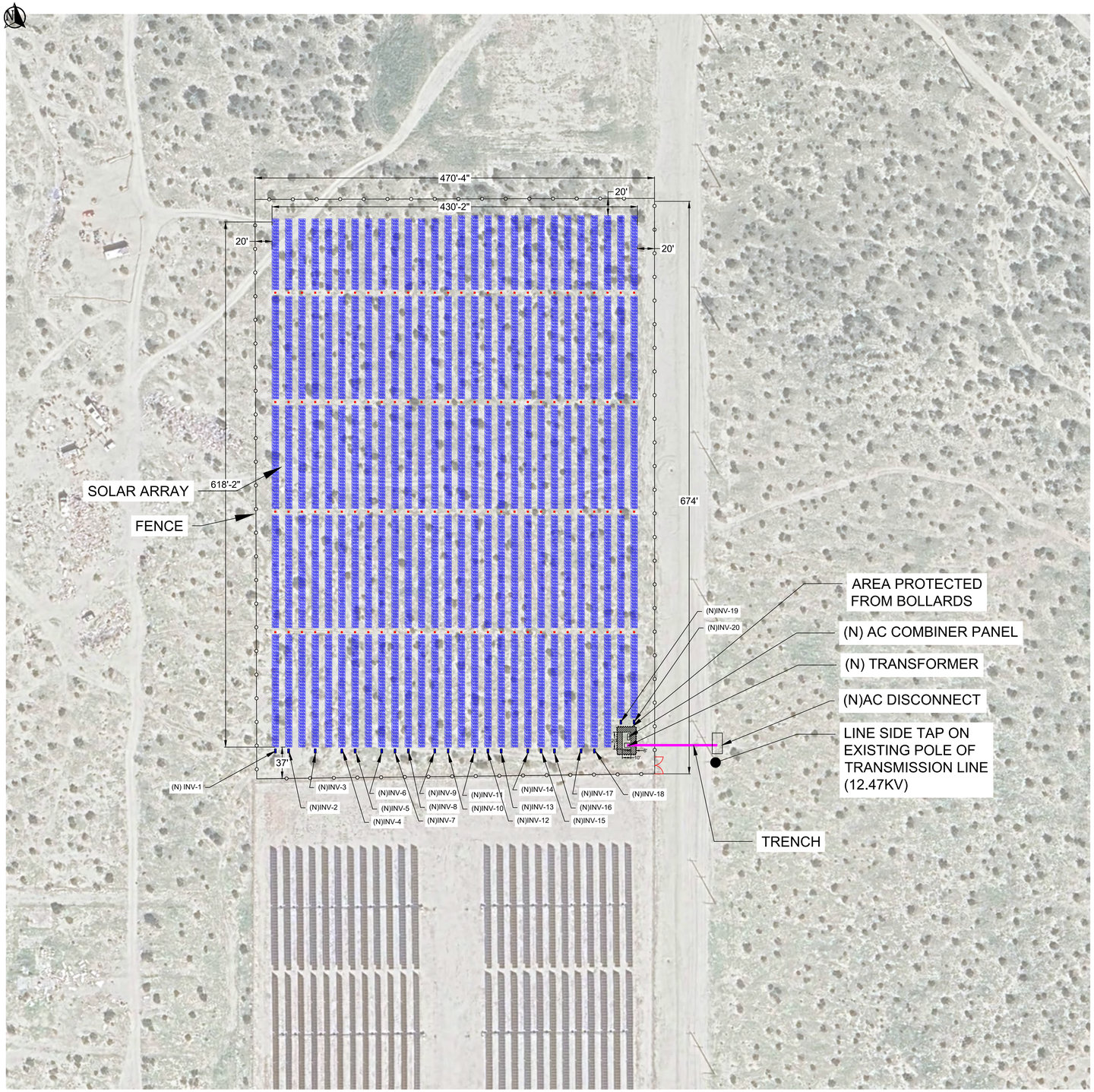
DWG NO: E-1

PROJ NO: LMR-190



1 ARRAY LAYOUT

Scale: 1/64"= 1'-0"

GENERAL NOTES

1. (4365) TRINA 605W MODULES.
2. (20) 100KW CHINT POWER SYSTEMS INVERTERS
3. ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE LISTED AND APPROVED BY A TESTING AGENCY RECOGNIZED BY THE AHJ. ANY EQUIPMENT NOT LISTED SHALL BE TESTED AND CERTIFIED BY AN APPROVED TESTING AGENCY.
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9. THE WORKING CLEARANCES AROUND THE EXISTING ELECTRICAL EQUIPMENT AS WELL AS THE NEW ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.

LICENSED SOLAR CONTRACTOR
Staten Solar
Lic: 984910 C-46
Exp. 6/30/2025
State of California

RES-BCT Well 33

Array Layout

2640.82 kW Ground Mount Project
(4365) TRINA 605W Modules
19011 Little Morongo Rd.
Desert Hot Springs, CA 92240

NAME OF CUSTOMER
TITLE:
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DWG NO: E-2

PROJ NO: LMR-190

Appendix B Site Photographs

Photograph 1: From the northeast corner of the Well 33 subarea looking south along the eastern boundary.

Photograph 2: From the northeast corner of the Well 33 subarea looking west along the northern boundary.

Photograph 3: From the southeast corner of the Well 33 subarea looking west at along the southern boundary.

Photograph 4: From the southeast corner of the Well 33 subarea looking north along the eastern boundary.

Photograph 5: From the southwest corner of the Well 33 subarea looking north along the western boundary.

Photograph 6: From the southwest corner of the Well 33 subarea looking east along the southern boundary.

Photograph 7: From the southeast corner of the NWRWF subarea looking west along the southern boundary.

Photograph 8: From the southeast corner of the NWRWF subarea looking north along the eastern boundary.

Photograph 9: From the northeast corner of the NWRWF subarea looking south along the eastern boundary.

Photograph 10: From the northeast corner of the NWRWF subarea looking west across the project site.

Appendix C Potentially Occurring Special-Status Biological Resources

Table C-1: Potentially Occurring Sensitive Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
SPECIAL – STATUS WILDLIFE SPECIES				
Accipiter cooperii Cooper's hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests, but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	No	**High** Suitable foraging habitat is present on-site, but the site lacks suitable nesting opportunities. This species is adapted to urban environments and occurs commonly.
Accipiter striatus sharp-shinned hawk	USFWS: None CDFW: WL CVMSHCP: Not Covered	Primarily occurs in coniferous forests, but is also found in boreal mixed conifer-birch-aspen forests. Less common in other woodland types, except in mountainous areas. Open areas are used for foraging, but not for nesting.	No	**High** Suitable foraging habitat is present on-site, but the site lacks suitable nesting opportunities. This species is adapted to urban environments and occurs commonly.
Aquila chrysaetos golden eagle	USFWS: None CDFW: FP; WL CVMSHCP: Not Covered	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	**Presumed Absent** The project site does not support hilly or mountainous areas. No nesting opportunities occur.
Artemisiospiza belli belli Bell's sparrow	USFWS: None CDFW: WL CVMSHCP: Not Covered	Occurs in chaparral dominated by fairly dense stands of chamise. Also found in coastal sage scrub in south of range.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Asio flammeus Short-eared owl	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Suitable habitats include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grasslands with cover 30 to 50 cm in height can support nesting pairs.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Asio otus long-eared owl	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor. Requires riparian habitat and uses live oak thickets and other dense stands of trees.	No	**Presumed Absent** The project site does not support riparian habitat, live oak thickets, or dense stands of trees.
Athene cunicularia burrowing owl	USFWS: None CDFW: **CE** CVMSHCP: Covered	Primarily a grassland species, but it persists and even thrives in some landscapes highly altered by human activity. Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The overriding characteristics of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation with only sparse shrubs and taller vegetation.	No	**Presumed Absent** The project site provides line-of-sight opportunities favored by burrowing owls. However, no suitable burrows (>4 inches) are present. No burrowing owls and/or sign were observed during the field investigation.
Aythya americana redhead	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs year round in California, though status varies regionally. Nest in freshwater emergent wetlands where dense stands of cattails and tules are interspersed with areas of deep, open water.	No	**Presumed Absent** The project site does not support freshwater emergent wetlands or open water needed for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Aythya valisineria canvasback	USFWS: None CDFW: None CVMSHCP: Not Covered	Found in marshes, ponds, lakes, rivers, and bays. Winters in deep, freshwater lakes and rivers as well as on sheltered bays and estuaries.	No	**Presumed Absent** The project site does not support aquatic areas needed to support this species.
Buteo swainsoni Swainson's hawk	USFWS: None CDFW: **THR** CVMSHCP: Not Covered	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	No	**Presumed Absent** The project site does not support large open habitats for foraging needed by this species. This species is not known to nest in this region. Further, no nesting opportunities occur.
Calypte costae Costa's hummingbird	USFWS: None CDFW: None CVMSHCP: Not Covered	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	**High** There is suitable foraging and nesting habitat within and adjacent to the project site.
Chaetodipus fallax pallidus pallid San Diego pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Common resident of sandy herbaceous areas, usually in association with rocks or course gravel in southwestern California. Occurs mainly in arid coastal and desert border areas. Habitats include coastal scrub, chamise-redshank chaparral, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland.	No	**Presumed Absent** The project site does not support the requisite habitats needed for this species.
Chaetura vauxi Vaux's swift	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs.	No	**Presumed Absent** The project site does not support redwood or Douglas fir habitats.
Circus hudsonius northern harrier	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	No	**Presumed Absent** The open habitat onsite provides minimal habitat for this species. No suitable nesting opportunities occur onsite.
Contopus cooperi olive-sided flycatcher	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Uncommon to common, summer resident in a wide variety of forest and woodland habitats below 9,000 ft. throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins. Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine.	No	**Presumed Absent** The project site does not support forest or woodland habitats.
Corynorhinus townsendii Townsend's big-eared bat	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Now considered uncommon in California. Details of its distribution are not well known. This species is found in all but subalpine and alpine habitats and may be found at any season throughout its range. Most abundant in mesic habitats.	No	**Presumed Absent** The project site does not support mesic habitats for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Crotalus ruber red-diamond rattlesnake	USFWS: None CDFW: SSC CVMSHCP: Not Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	**Presumed Absent** The project site does not support dense chaparral or sage scrub habitats.
Egretta thula snowy egret	USFWS: None CDFW: None CVMSHCP: Not Covered	Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. In southern California, common yearlong in the Imperial Valley and along the Colorado River.	No	**Presumed Absent** The project site does not support wet fields or aquatic habitats.
Empidonax traillii extimus southwestern willow flycatcher	USFWS: **END** CDFW: **END** CVMSHCP: Covered	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water, or are at least moist.	No	**Presumed Absent** The project site does not support willow thickets.
Eremarionta morongoana Morongo desert snail	USFWS: None CDFW: None CVMSHCP: Not Covered	Only known to occur in a gulch on the north side of Morongo Pass, near the Riverside County line, where it is found under rocks in Sonoran Desert scrub.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known geographic range for this species.
Eremophila alpestris actia California horned lark	USFWS: None CDFW: WL CVMSHCP: Not Covered	Occurs in meadows, grasslands, open fields, prairie, and alkali flats. This subspecies is typically found in coastal regions.	No	**High** Suitable foraging and nesting habitat is present on-site. This species is adapted to urban environments and occurs commonly.
Falco columbarius merlin	USFWS: None CDFW: WL CVMSHCP: Not Covered	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Falco mexicanus prairie falcon	USFWS: None CDFW: WL CVMSHCP: Not Covered	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	No	**Low** There is limited foraging habitat within and adjacent to the project site. No nesting opportunities occur.
Falco peregrinus anatum American peregrine falcon	USFWS: Delisted CDFW: Delisted CVMSHCP: Not Covered	Very uncommon breeding resident, and uncommon as a migrant. Active nesting sites are known along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Gavia immer common loon	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Lakes with coves and islands are preferred habitat as they provide cover from predators. In their winter range along the coasts, they occur fairly close to the shore and in bays and estuaries.	No	**Presumed Absent** The project site does not support aquatic areas needed to support this species.
Gopherus agassizii desert tortoise	USFWS: **THR** CDFW: **THR** CVMSHCP: Covered	Widely distributed in the Mojave, Sonoran, and Colorado deserts from below sea level to 7,220 feet. Most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except those on the most precipitous slopes.	No	**Presumed Absent** No desert tortoises, sign, or burrows were observed during the habitat assessment. The habitat within the project site is isolated from known occupied areas.
Habropoda pallida white-faced bee	USFWS: None CDFW: None CVMSHCP: Not Covered	Builds nests in clay-rich sandy slopes along water courses in the Mojave Desert. In California, it occurs from Into County south to Imperial County and east to the Nevada and Arizona borders. Prefers areas with a high density of creosote and dune-restricted endemic plants.	No	**Presumed Absent** The project site does not support creosote or dune restricted plants needed for this species.
Icteria virens yellow-breasted chat	USFWS: None CDFW: SSC CVMSHCP: Covered	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	No	**Presumed Absent** The project site does not support riparian habitats.
Lanius ludovicianus loggerhead shrike	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	**High** Suitable foraging and nesting habitat are found within the project site and the surrounding area.
Larus californicus California gull	USFWS: None CDFW: WL CVMSHCP: Not Covered	Require isolated islands in rivers, reservoirs and natural lakes for nesting, where predations pressures from terrestrial mammals are diminished. Uses both fresh and saline aquatic habitats at variable elevations and degrees of aridity for nesting and for opportunistic foraging.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Leiothlypis luciae Lucy's warbler	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Found in desert and riparian areas of the southwestern US and northwestern Mexico. Often found in mesquite woodlands. Also breed in cottonwood-willow riparian woodlands, sycamore-oak woods, and salt cedar stands.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Lepus californicus bennettii San Diego black-tailed jackrabbit	USFWS: None CDFW: None CVMSHCP: Not Covered	Found in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral. Known to occur on the coastal side of mountain ranges westward from Los Padres National Forest into Baja California.	No	**High** The project site provides suitable foraging and burrowing habitat for this species.
Macrobaenetes valgum Coachella giant sand treader cricket	USFWS: None CDFW: None CVMSHCP: Covered	Inhabits dune habitats in the western Coachella Valley. Nocturnal and moisture sensitive insects. Emergence occurs with winter rains and appear at maximum densities in January-February. Can be detected via their characteristic delta-shaped burrow excavations.	No	**Presumed Absent** The project site does not support dune habitats.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Nannopterum auritum double-crested cormorant	USFWS: None CDFW: WL CVMSHCP: Not Covered	Yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. August to May, fairly common to locally very common along the coast and in estuaries and salt ponds. Uncommon in marine subtidal habitats from San Luis Obispo Co. south, and very rare to the north.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Neotoma lepida intermedia San Diego desert woodrat	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	No	**Presumed Absent** The project site does not support scrub plant communities with dene canopies of vegetation cover.
Numenius americanus Long-billed curlew	USFWS: None CDFW: WL CVMSHCP: Not Covered	Preferred winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Nycticorax nycticorax black-crowned night heron	USFWS: None CDFW: None CVMSHCP: Not Covered	Common in wetlands across North America, including saltmarshes, freshwater marshes, swamps, streams, rivers, lakes, ponds, lagoons, tidal mudflats, and wet agricultural fields. They require aquatic habitat for foraging and terrestrial vegetation for cover.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Ovis canadensis nelsoni desert bighorn sheep	USFWS: None CDFW: FP CVMSHCP: Not Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health.	No	**Presumed Absent** The project site does not support mountainous terrain.
***Ovis canadensis nelsoni* pop. 2** Peninsular bighorn sheep DPS	USFWS: **END** CDFW: **THR**; FP CVMSHCP: Covered	Preferred habitat is near mountainous terrain above the desert floor that is visually open, as well as steep and rocky. Most Mojave Desert mountain ranges satisfy these requirements well. Surface water is another element that is considered important to population health. Found mainly in the Peninsular Ranges.	No	**Presumed Absent** The project site does not support mountainous terrain.
Pandion haliaetus osprey	USFWS: None CDFW: WL CVMSHCP: Not Covered	Occurs in a variety of plant communities in association with riparian habitats including shrublands, grasslands, swamps, and coniferous and deciduous forests. In California, ospreys are primarily associated with ponderosa pine (*Pine ponderosa*) and mixed-conifer types.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Passerculus sandwichensis rostratus large-billed savannah sparrow	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Breeding habitats of this species is specialized. It is limited to open, low salt marsh vegetation, including grasses (*Spartina, Distichlis*), pickleweed (*Salicornia* spp.), and iodine bush (*Allenrolfea* spp.) around the mouth of the Colorado River and adjacent coastlines of the uppermost Gulf of California. Restricted almost entirely restricted to shorelines within its California nonbreeding range.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Perognathus longimembris bangsi Palm Springs pocket mouse	USFWS: None CDFW: SSC CVMSHCP: Covered	Inhabits areas having flat to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils on slopes ranging from 0% to approximately 15%. Typically found in aeolian sand habitats, but also occur in sandy soils on benches above incised desert washes. Remaining habitat in the Coachella Valley and environs is about 142,000 acres.	No	**Presumed Absent** The project site provides minimal habitat for this species, but the development to the north and bordering roadways likely preclude this species from occurring onsite.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Phrynosoma blainvillii coast horned lizard	USFWS: None CDFW: SSC CVMSHCP: Not Covered	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e. fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	No	**Presumed Absent** The project site is not located withing the typical range for this species.
Phrynosoma mcallii flat-tailed horned lizard	USFWS: None CDFW: SSC CVMSHCP: Covered	Typical habitat is sandy desert hardpan or gravel flats with scattered sparse vegetation of low species diversity. Most common in areas with high density of harvester ants and fine windblown sand, but rarely occurs on dunes.	No	**Presumed Absent** The project site does not support the desert hardpan, gravel flats, or dune habitat typically associated with this species.
Polioptila melanura black-tailed gnatcatcher	USFWS: None CDFW: WL CVMSHCP: Not Covered	In Mojave, Great Basin, Colorado and Sonoran Desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by creosote bush and salt bush with scattered bursage, burrowed, ocotillo, saguaro, barrel cactus, nipple cactus, and prickly pear and cholla.	No	**Presumed Absent** No suitable habitat is present within or adjacent to the project site.
Selasphorus rufus rufous hummingbird	USFWS: None CDFW: None CVMSHCP: Not Covered	During breeding, they are found in forests, on seed-tree harvest units, riparian shrub, and spruce-fir habitats. During the winter, it migrates to lowland stream bottoms, foothill brush land, seacoast and high mountain meadows.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Setophaga petechia yellow warbler	USFWS: None CDFW: SSC CVMSHCP: Covered	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Spinus lawrencei Lawrence's goldfinch	USFWS: None CDFW: None CVMSHCP: Not Covered	Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Nearby herbaceous habitats often used for feeding. Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid woodland and chaparral near water.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Spizella breweri Brewer's sparrow	USFWS: None CDFW: None CVMSHCP: Not Covered	Habitats include sagebrush and brushy plains.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	USFWS: None CDFW: None CVMSHCP: Covered	Restricted to desert dune habitats.	No	**Presumed Absent** The project site does not support the dune habitats needed for this species.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Taxidea taxus American badger	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Toxostoma lecontei Le Conte's thrasher	USFWS: CDFW: CVMSHCP:	None SSC Covered	An uncommon to rare, local resident in southern California deserts from southern Mono Co. south to the Mexican border, and in western and southern San Joaquin Valley. Occurs primarily in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	No	**Presumed Absent** The project site does not support the listed habitats for this species. No nesting opportunities occur onsite.
Uma inornata Coachella Valley fringe-toed lizard	USFWS: CDFW: CVMSHCP:	**THR** **END** Covered	Sparsely vegetated arid areas with fine wind-blown sand, including dunes, washes, and flats with sandy hummocks formed around the bases of vegetation. Needs fine, loose sand for burrowing.	No	**Low** The project site provides minimal habitat for this species.
Vireo bellii pusillus least Bell's vireo	USFWS: CDFW: CVMSHCP:	**END** **END** Covered	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically, associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	No	**Presumed Absent** The project site does not support riparian habitats.
Xanthocephalus xanthocephalus yellow-headed blackbird	USFWS: CDFW: CVMSHCP:	None SSC Not Covered	Occurs in freshwater emergent wetlands, and moist, open areas along croplands and mud flats of lacustrine habitats. Prefers to nest in dense wetland vegetation characterized by tules, cattails, or other similar plant species along the border of lakes and ponds.	No	**Presumed Absent** The project site does not support the aquatic or cropland habitats near water.
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	USFWS: CDFW: CVMSHCP:	None SSC Covered	Inhabits sandy arid regions of Lower Sonoran Life Zone including mesquite and creosote-dominated sand dunes, creosote bush scrub, and saltbush/alkali scrub.	No	**Presumed Absent** The project site provides minimal habitat for this species, but the development to the north and bordering roadways likely preclude this species from occurring onsite.
SPECIAL – STATUS PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: CA: CNPS: CVMSHCP:	None None 1B.1 Not Covered	Found on the coastal side of the southern California mountains in chaparral and coastal sage scrub plant communities in areas of full sun and sandy soils. Found at elevations ranging from 262 to 5,249 feet. Blooming period is from January to September.	No	**Presumed Absent** The project site does not support the loose sandy soils typically associated with this species.
Aloysia wrightii Wright's beebrush	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Prefers rocky and carbonate soils within Joshua tree woodland, pinyon and juniper woodland. Found at elevations ranging from 2,953 to 5,249 feet. Blooming period is from April to October.	No	**Presumed Absent** The project site occurs outside of this species' known elevation range.

Scientific Name Common Name	**Status**		**Habitat**	**Observed On-site**	**Potential to Occur**
Astragalus lentiginosus* var. *coachellae Coachella Valley milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Preferred habitat includes desert dunes and sandy Sonoran Desert scrub. Found at elevations ranging from 131 to 2,149 feet in elevation. Blooming period is from February to May.	No	**Low** Limited habitat is present on the project site.
Astragalus tricarinatus triple-ribbed milk-vetch	Fed: CA: CNPS: CVMSHCP:	**END** None 1B.2 Covered	Found in sandy or gravelly soils within Joshua tree woodland and Sonoran Desert scrub habitats. Found at elevations ranging from 1,476 to 3,904 feet. Blooming period is from February to May.	No	**Presumed Absent** The project site does not support gravelly soils needed for this species.
Chorizanthe xanti* var. *leucotheca white-bracted spineflower	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Grows on sandy or gravelly soils within coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland habitats. Found at elevations ranging from 984 to 3,937 feet. Blooming period is from April to June.	No	**Presumed Absent** The project site does not support alluvial fan habitat.
Dodecahema leptoceras slender-horned spineflower	Fed: CA: CNPS: CVMSHCP:	**END** **END** 1B.1 Not Covered	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	No	**Presumed Absent** The project site does not support alluvial fan sage scrub habitats.
Eriastrum harwoodii Harwood's eriastrum	Fed: CA: CNPS: CVMSHCP:	None None 1B.2 Not Covered	Found in desert dune habitats. Found at elevations ranging from 411 to 3,002 feet. Blooming period is from March to June.	No	**Presumed Absent** The project site does not support desert dune habitats.
Eschscholzia androuxii Joshua Tree poppy	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Occurs on sandy, gravelly, and/or rocky desert washes, flats, and slopes in Joshua tree woodland and Mojavean desert scrub. Found at elevations ranging from 1,900 to 5,530 feet above msl. Blooming period is February to June.	No	**Presumed Absent** The project site does not support gravelly, and/or rocky desert washes.
Euphorbia arizonica Arizona spurge	Fed: CA: CNPS: CVMSHCP:	None None 2B.3 Not Covered	Grows within Sonoran Desert scrub (sandy) habitats. Found at elevations ranging from 165 to 985 feet. Blooming period is from March to April.	No	**Presumed Absent** The project site does not support the listed habitats for this species.
Euphorbia misera cliff spurge	Fed: CA: CNPS: CVMSHCP:	None None 2B.2 Not Covered	Found on rocky soils within coastal bluff scrub, coastal scrub, and Mojavean desert scrub habitat. Found at elevations ranging from 33 to 1,640 feet. Blooming period is from December to October.	No	**Presumed Absent** The project site does not support rocky soils.
Galium angustifolium* ssp. *gracillimum slender bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.2 Not Covered	Grows on rocky, granitic soils within Joshua tree woodland and Sonoran Desert scrub habitats. Found at elevations ranging from 427 to 5,085 feet. Blooming period is from April to June.	No	**Presumed Absent** The project site does not support rocky, granitic soils.
Galium johnstonii Johnston's bedstraw	Fed: CA: CNPS: CVMSHCP:	None None 4.3 Not Covered	Preferred habitats include chaparral, riparian woodland, lower montane coniferous forest, pinyon and juniper woodland. Found at elevations ranging from 4,003 to 7,546 feet. Blooming period is from June to July.	No	**Presumed Absent** The project site occurs outside of this species' known elevation range.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Linanthus maculatus* ssp. *maculatus Little San Bernardino Mtns. linanthus	Fed: None CA: None CNPS: 1B.2 CVMSHCP: Covered	Preferred habitats include desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran Desert scrub in sandy soils. Found at elevations ranging from 640 to 6,808 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site occurs outside of this species' known elevation range.
Mentzelia tricuspis spiny-hair blazing star	Fed: None CA: None CNPS: 2B.1 CVMSHCP: Not Covered	Habitats include Mojavean desert scrub. Prefers sandy, gravelly, slopes and washes. Found at elevations ranging from 492 to 4,199 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site does not support sandy, gravely, slopes and washes.
Nemacaulis denudata* var. *gracilis slender cottonheads	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Occurs in coastal dunes, desert dunes, and Sonoran desert scrub habitats. Found at elevations ranging from 164 to 1,312 feet. Blooming period is from March to May.	No	**Presumed Absent** The project site is out of the elevation range for this species.
Selaginella eremophila desert spike-moss	Fed: None CA: None CNPS: 2B.2 CVMSHCP: Not Covered	Found in chaparral and Sonoran desert scrub habitats within gravelly or rocky soil. Found at elevations ranging from 656 to 2,953 feet. Blooming period is from May to July.	No	**Presumed Absent** The project site occurs outside of this species' known elevation range.
SPECIAL – STATUS PLANT COMMUNITIES				
Desert Fan Palm Oasis Woodland	CDFW Sensitive Habitat	Rare plant community that is one of the most unusual biological resources located within the Coachella Valley. Found within canyons and along the San Andreas Fault Zone, where water occurs naturally. Generally characterized by open to dense groves of native desert fan palms, which are the most massive native palm in North America, growing more than 66 feet.	No	**Absent**. Does not occur onsite.
Mesquite Bosque	CDFW Sensitive Habitat	Mesquite bosques, or woodlands, occur in the Sonoran Desert and other parts of the arid southwest. Consist primarily of mesquite trees and diverse understory of vegetation that may provide habitat for a wide-variety of species.	No	**Absent**. Does not occur onsite.

U.S. Fish and Wildlife Service (USFWS) - Federal
END - Federal Endangered
THR - Federal Threatened

California Department of Fish and Wildlife (CDFW) - California
END - California Endangered
THR - California Threatened
SSC - California Species of Concern
WL - Watch List
FP - California Fully Protected
CE - Candidate Endangered

California Native Plant Society (CNPS)
California Rare Plant Rank
1A - Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
1B - Plants Rare, Threatened, or Endangered in California and Elsewhere
2B - Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
4 - Plants of Limited Distribution – A Watch List

Threat Ranks
0.1 - Seriously threatened in California
0.2 - Moderately threatened in California
0.3 - Not very threatened in California

Appendix D CVMSHCP Covered Species

3.2 Species and Natural Communities Considered

This section delineates the species and natural communities identified in the Planning Agreement and identifies those now included in the Plan. Species considered but not covered by the Plan, and natural communities not included in the Conservation Areas are also identified. Information on the Covered Species and conserved natural communities that are protected in the Conservation Areas is presented in Sections 9 and 10.

3.2.1 Review of Species Identified in the Planning Agreement

The Planning Agreement among the local, state, and federal agencies comprising the Plan Participants that initiated development of the Plan identified 52 species to be considered for inclusion in the Plan and targeted all the natural communities in the Plan Area. As information was gathered through the planning process, the planning team continuously reviewed the list. Other experts on individual species were also consulted. The Covered Species in the Plan are listed in Table 3-1. These are species for which sufficient information existed or was gathered during the planning process to enable the development of Conservation measures.

Table 3-2 lists the species from the Planning Agreement that are not proposed for coverage under the Plan. Generally, the reasons for not covering a species include lack of known locations in the Plan Area or insufficient data to facilitate Conservation planning. Section 3.8 of Appendix I provides additional information on reasons why these species are not proposed for coverage.

Table 3-1: Species Covered under the Plan

Plants
Mecca aster, *Xylorhiza cognata*[1]
Coachella Valley milkvetch, *Astragalus lentiginosus* var. *coachellae* (FE)
Triple-ribbed milkvetch, *Astragalus tricarinatus* (FE)
Orocopia sage, *Salvia greatae*[1]
Little San Bernardino Mountains linanthus, *Linanthus maculatus (*or *Gilia maculata)*[1]

Invertebrates - Insects
Coachella Valley giant sand-treader cricket, *Macrobaenetes valgum*
Coachella Valley Jerusalem cricket, *Stenopelmatus cahuilaensis*

Fish
Desert pupfish, *Cyprinodon macularius* (FE/SE)

Table 3-1: Species Covered under the Plan (cont.)

Amphibians
Arroyo toad, *Bufo californicus* (FE/CSC)

Reptiles
Desert tortoise, *Gopherus agassizii* (FT/ST)
Flat-tailed horned lizard, *Phrynosoma mcallii* (CSC)
Coachella Valley fringe-toed lizard, *Uma inornata* (FT/SE)

Birds
Yuma clapper rail, *Rallus longirostris yumanensis* (FE/ST/SFP)
California black rail, *Laterallus jamaicensis* (ST/SFP)
Burrowing owl, *Athene cunicularia* (CSC)
Southwestern willow flycatcher, *Empidonax traillii extimus* (SE/FE)
Crissal thrasher, *Toxostoma crissale* (CSC)
Le Conte's thrasher, *Toxostoma lecontei* (CSC)
Least Bell's vireo, *Vireo bellii pusillus* (FE/SE)
Gray vireo, *Vireo vicinior* (CSC)
Yellow warbler, *Dendroica petechia brewsteri* (CSC)
Yellow-breasted chat, *Icteria virens* (CSC)
Summer tanager, *Piranga rubra*[1]

Mammals
Southern yellow bat, *Lasiurus ega* or *xanthinus*[1]
Coachella Valley round-tailed ground squirrel, *Spermophilus tereticaudus chlorus* (C/CSC)
Palm Springs pocket mouse, *Perognathus longimembris bangsi* (CSC)
Peninsular bighorn sheep, *Ovis canadensis nelsoni* (FE/ST/SFP)

(Footnotes are explained below.)

The status codes used in the table are identified in the following key, as listed in the *California Natural Diversity Data Base Special Animals List and Special Plants List* from July 2000 (CNDDB 2000).

Key:	FE	=	Federal Endangered
	FT	=	Federal Threatened
	FC	=	Federal Candidate
	SE	=	State Endangered
	ST	=	State Threatened
	SC	=	State Candidate
	SFP	=	State Fully Protected
	CSC	=	Species of Special Concern (a state list of species that are at risk due to habitat modification or destruction, over-collecting, disease, or other threats)
	CNPS	=	Rare in California

[1] These species have no official status at this time; however, USFWS, CDFG, and the SAC have recommended inclusion of the species because of the likelihood of their being elevated to listing status in the coming years due to their rarity and decline. Note, also, that the Department of the Interior eliminated the category of FC2 subsequent to the adoption of the Planning Agreement.

Table 3-2: Species Considered but Not Proposed for Coverage under the Plan

Plants
California ditaxis, *Ditaxis californica*
Cliff spurge, *Euphorbia misera*
Flat-seeded spurge, *Chamaesyce platysperma*
Glandular ditaxis, *Ditaxis clariana*
Robison's monardella, *Monardella robisonii*

Invertebrates - Insects
Casey's June beetle, *Dinacoma caseyi*
Coachella Valley grasshopper, *Spaniacris deserticola*
Pratt's dark aurora blue butterfly *Euphilotes enoptes cryptorufes*

Invertebrates - Other
Morongo desert snail, *Eremarionta morongoana*
Thousand Palms desert snail, *Eremarionta millepalmarum*

Amphibians
California red-legged frog, *Rana aurora draytonii* (FT)
Desert slender salamander, *Batrachoseps aridus* (FE)
Lowland leopard frog, *Rana yavapiensis*
Mountain yellow-legged frog, *Rana muscosa* (FE)

Reptiles
California legless lizard, *Anniella pulchra pulchra*
San Diego horned lizard, *Phrynosoma coronatum blainvillei*

Mammals
California leaf-nosed bat, *Macrotus californicus*
California (Western) mastiff bat, *Eumops perotis californicus*
Fringed myotis, *Myotis thysanodes*
Long-eared myotis, *Myotis evotis*
Long-legged myotis, *Myotis volans*
Pallid bat, *Antrozous pallidus*
Pocketed free-tailed bat, *Nyctinomops femorosaccus*
Townsend's (Western) big-eared bat, *Corynorhinus townsendii pallescens*
Western small-footed myotis, *Myotis ciliolabrum*
Yuma myotis, *Myotis yumanensis*

3.2.2 Review of Natural Communities Identified in the Planning Agreement

The Planning Agreement listed 23 natural communities known to occur in the Plan Area. Through the planning process a total of 46 natural communities were identified in the Plan Area. Of these, 27 natural communities provide Habitat for the Covered Species and are the focal point for the establishment of Conservation Areas. The conserved natural communities included in the

Plan's Conservation Areas are listed in Table 3-3, as named and described in *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), with the addition of five new natural community types developed by the SAC to distinguish better among the blowsand communities in the Plan Area. Figure 3-1 depicts the natural communities within the Plan Area, as well as developed areas.

Table 3-3: Natural Communities Included in the Plan

Active desert dunes
Stabilized and partially stabilized desert dunes
Active desert sand fields
Ephemeral desert sand fields
Stabilized and partially stabilized desert sand fields
Stabilized shielded desert sand fields
Mesquite hummocks
Sonoran creosote bush scrub
Sonoran mixed woody and succulent scrub
Mojave mixed woody scrub
Desert saltbush scrub
Desert sink scrub
Chamise chaparral
Red shank chaparral
Semi-desert chaparral
Interior live oak chaparral
Cismontane alkali marsh
Coastal and valley freshwater marsh
Southern arroyo willow riparian forest
Sonoran cottonwood-willow riparian forest
Mesquite bosque
Desert dry wash woodland
Desert fan palm oasis woodland
Southern sycamore-alder riparian woodland
Arrowweed scrub
Mojavean pinyon and juniper woodland
Peninsular juniper woodland and scrub

The other natural communities are already adequately protected in the Plan Area on public lands outside the Conservation Areas, except for tamarisk scrub, active shielded desert dunes, and Riversidean desert scrub. This existing protection adds to the overall Conservation value of the Plan in protecting watersheds, providing Habitat for large predators, protecting overall biological diversity in the Plan Area, providing buffers for Conservation Areas established under this Plan, and providing areas that could become important to Covered Species under conditions of potential future climatic change. With regard to tamarisk scrub, it is not a "natural" community in that it is dominated by an exotic plant species, i.e. tamarisk. In areas where some tamarisk scrub is included in the Conservation Areas, the intent is to restore it to the appropriate natural community to the maximum extent possible. The natural communities that are not included in the Plan are listed in Table 3-4. Additional information about these natural communities and why they were not included in the Plan is found in Section 3.9 of Appendix I.

Table 3-4: Natural Communities Considered but Not Included in the Plan

Tamarisk scrub
Active shielded desert dunes
Riversidean desert scrub
Mojave mixed steppe
Blackbush scrub
Upper Sonoran mixed chaparral
Upper Sonoran manzanita chaparral
Mixed montane chaparral
Northern mixed chaparral
Scrub oak chaparral
Canyon live oak forest
Black oak forest
Coulter pine forest
Bigcone spruce-canyon oak forest
Westside ponderosa pine forest
Sierran mixed coniferous forest
Jeffrey pine forest
Jeffrey pine-fir forest
Southern California subalpine forest

Appendix E Section 4.4 of the CVMSHCP

4.4 Required Avoidance, Minimization, and Mitigation Measures

This section describes certain avoidance, minimization, and mitigation requirements for Covered Activities within the Conservation Area, in addition to Conservation Area specific measures described in the Conservation Area subsections in Section 4.3. The measures described in this section do not apply to single-family homes, emergency response activities, and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. To assist Permittees with implementation of these measures, CVCC will maintain maps of modeled Habitat and a natural communities map and will provide them to each of the Permittees. CVCC will also maintain a list of Acceptable Biologists who may be used to conduct surveys for specified Covered Species identified in this section. Any Permittee may submit the names of biologists for inclusion in the initial list of Acceptable Biologists. The list shall be updated at least annually. CVCC will develop procedures for individual biologists to submit their name for inclusion on the list. Individuals conducting survey activities for listed endangered or threatened species or species for which a state or federal protocol exists must have the appropriate permit (i.e., in accordance with the federal Endangered Species Act, Section 10(a)(1)(A), or state Endangered Species Act, California Fish and Game Code, Section 2081(a)) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the Wildlife Agencies for review. The Wildlife Agencies shall have thirty (30) days to provide input on the qualifications of any biologists on the list. If the Wildlife Agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

In the event that a survey of a parcel is required pursuant to the MSHCP, it will be conducted by an Acceptable Biologist. The survey shall be conducted in the appropriate season, in accordance with established accepted protocols if they exist. Within one (1) year of Permit issuance, the Wildlife Agencies and the MPA, in consultation with CVCC, shall develop survey protocols for those species for which a protocol is required. CVCC will maintain a list of accepted survey protocols. For those species for which protocols do not exist at the time surveys are needed, the Acceptable Biologist shall use a survey protocol generally accepted by biologists familiar with the species. Survey results shall be documented in both mapped and text form and shall be presented for review by the appropriate Permittee and CVCC. Wildlife Agencies' concurrence or acceptance of the surveys and/or the results contained therein is not required by the MSHCP.

Biological Corridors. Specific roads in Conservation Areas, where culverts or undercrossings are required to maintain Biological Corridors, are delineated in the Section 4.3 subsections on individual Conservation Areas.

Burrowing Owl. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities other than levees, berms, dikes, and similar features that are known to contain burrowing owl burrows. O&M of

roads is not subject to this requirement. For other projects that are subject to CEQA, the Permittees will require burrowing owl surveys in the Conservation Areas using an accepted protocol (as determined by the CVCC in coordination with the Permittees and the Wildlife Agencies). Prior to Development, the construction area and adjacent areas within 500 feet of the Development site, or to the edge of the property if less than 500 feet, will be surveyed by an Acceptable Biologist for burrows that could be used by burrowing owl. If a burrow is located, the biologist will determine if an owl is present in the burrow. If the burrow is determined to be occupied, the burrow will be flagged and a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the burrow. The buffer will be staked and flagged. No Development or O&M activities will be permitted within the buffer until the young are no longer dependent on the burrow.

If the burrow is unoccupied, the burrow will be made inaccessible to owls, and the Covered Activity may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

Within one (1) year of Permit issuance, CVCC will cooperate with County Flood Control, CVWD and IID to conduct an inventory of levees, berms, dikes, and similar features in the Plan Area maintained by those Permittees. Burrowing owl burrow locations will be mapped and each of these Permittees will incorporate the information into its O&M practices to avoid impacts to the burrowing owl to the maximum extent Feasible. CVCC in cooperation with County Flood Control, CVWD, and IID will prepare a manual for maintenance staff, educating them about the burrowing owl and appropriate actions to take when owls are encountered to avoid impacts to the maximum extent Feasible. The manual will be submitted to the Wildlife Agencies for review and comment within two (2) years of Permit issuance. In conjunction with the Monitoring Program, the maps of the burrowing owl locations along the above-described levees, berms, dikes, and similar features will be periodically updated.

Covered Riparian Bird Species. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. Riparian Habitat here refers to the following natural communities: southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, and southern sycamore-alder riparian woodland in the Cabazon, Stubbe and Cottonwood Canyons,

Whitewater Canyon, Upper Mission Creek/Big Morongo Canyon, Thousand Palms, Indio Hills Palms, Joshua Tree National Park, Mecca Hills and Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas. Covered Activities, including O&M of facilities and construction of permitted new projects, in riparian Habitat will be conducted to the maximum extent Feasible outside of the March 15 – September 15 nesting season for least Bell's vireo, and the May 1 – September 15 nesting season for southwestern willow flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests are present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird Species are not present, the Covered Activity may proceed.

Crissal Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled crissal thrasher Habitat in the Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, and Coachella Valley Stormwater Channel and Delta Conservation Areas, surveys will be conducted by an Acceptable Biologist prior to the start of construction activities during the nesting season, January 15 – June 15, to determine if active nest sites for this species occur on the construction site and/or within 500 feet of the construction site, or to the edge of the property boundary if less than 500 feet. If nesting crissal thrashers are found, a 500-foot buffer, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction activities will be permitted within the buffer during the breeding season of January 15 – June 15 or until the young have fledged.

Desert tortoise. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to

June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the *Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises* and *Guidelines for Handling Desert Tortoises During Construction Projects*, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right-of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

Inactive Season Protocol. This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.
2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the

plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.

3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of-way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of-way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the pre-construction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.

4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.

5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.

6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.

7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.

8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

The following terms are established to protect the desert tortoise during utility-related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.
- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist
- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.
- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.
- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.
- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open ended pipeline segments that are welded in place shall be capped during periods of

construction inactivity to prevent entry by desert tortoises.

- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.
- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.
- Powerlines associated with water development, such as to provide power for pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds, and shall adhere to the electrical distribution protocol which follows.
- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.
- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.
- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.
- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.
- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.
- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities

shall not be permitted between dusk and dawn in areas not previously graded.

Active Season Protocol. This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction activities, as long as a final check for desert tortoises is conducted at the time of construction.
- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep-sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.
- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.
- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

Disposition of Sick, Injured, or Dead Specimens. Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained

veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

Fluvial Sand Transport. Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

Le Conte's Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled Le Conte's thrasher Habitat in all the Conservation Areas, during the nesting season, January 15 - June 15, prior to the start of construction activities, surveys will be conducted by an Acceptable Biologist on the construction site and within 500 feet of the construction site, or to the property boundary if less than 500 feet. If nesting Le Conte's thrashers are found, a 500 foot buffer, or to the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction will be permitted within the buffer during the breeding season of January 15 - June 15 or until the young have fledged.

Mesquite Hummocks and Mesquite Bosque Natural Communities. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. Construction activities in the Cabazon, Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas will avoid mesquite hummocks and mesquite bosque to the maximum extent Feasible.

Peninsular Bighorn Sheep Habitat. Completion of Covered Activities in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas will be conducted outside of the January 1 - June 30 lambing season unless otherwise authorized through a Minor Amendment to the Plan with concurrence from the Wildlife Agencies. O&M of Covered Activities, including but not limited to refinishing the inside of water storage tanks, shall be scheduled to avoid the lambing season, but may extend into the January 1 – June 30 period if necessary to complete the activity, upon concurrence with the Wildlife Agencies.

For new projects in the above listed Conservation Areas, no toxic or invasive plant species may be used for landscaping. For existing public infrastructure facilities which have landscaping in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas, the

Permittees who have such facilities will, with respect to those facilities, develop and implement a plan and schedule to remove or prevent access to oleander and any other plants known to be toxic to Peninsular bighorn sheep. The plan and schedule will be prepared within one (1) year of Permit issuance.

Triple-ribbed milkvetch. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. It is understood that O&M for infrastructure developed as part of a private development approved in compliance with the MSHCP that is later transferred to a public entity is included as a Covered Activity. For Covered Activities within modeled triple-ribbed milkvetch Habitat in the Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, and Santa Rosa and San Jacinto Mountains Conservation Areas, surveys by an Acceptable Biologist will be required for activities during the growing and flowering period from February 1 - May 15. Any occurrences of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent Feasible. In particular, known occurrences on a map maintained by CVCC shall not be disturbed.

Palm Springs Pocket Mouse. To avoid impacts to the Palm Springs pocket mouse and its habitat in the Upper Mission Creek/Big Morongo Canyon and Willow Hole Conservation Areas, Flood Control-related construction activities will comply with the following avoidance and minimization measures.

- **Clearing**: For construction that would involve disturbance to Palm Springs pocket mouse habitat, activity should be phased to the extent feasible and practicable so that suitable habitat islands are no farther than 300 feet apart at any given time to allow pocket mice to disperse between habitat patches across non-suitable habitat (i.e., unvegetated and/or compacted soils). Prior to project construction, a biological monitor familiar with this species should assist construction crews in planning access routes to avoid impacts to occupied habitat as much as feasible (i.e., placement of preferred routes on project plans and incorporation of methods to avoid as much suitable habitat/soil disturbance as possible). Furthermore, during construction activities, the biological monitor will ensure that connected, naturally vegetated areas with sandy soils and typical native vegetation remain intact to the extent feasible and practicable. Finally, construction that involves clearing of habitat should be avoided during the peak breeding season (approximately March to May), and activity should be limited as much as possible during the rest of the breeding season (January to February and June to August).
- **Revegetation**: Clearing of native vegetation (e.g., creosote, rabbitbrush, burrobush, cheesebush) should be followed by revegetation, including natural reestablishment and other means, resulting in habitat types of equal or superior biological value for Palm Springs pocket mouse.
- **Trapping/Holding**: All trapping activity should be conducted in accordance with accepted protocols and by a qualified biologist who possesses a Memorandum of

Understanding with CDFG for live-trapping of heteromyid species in Southern California.

- **Translocation**: Should translocation between distinct population groups be necessary, as determined through the Adaptive Management and Monitoring Program, activity should be conducted by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California. Trapping and subsequent translocation activity should be conducted in accordance with accepted protocols. Translocation programs should be coordinated by or conducted by the CVCC and/or RMOC to determine the appropriate trapping, holding, marking, and handling methods and potential translocation sites.

Little San Bernardino Mountains Linanthus. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. To avoid and minimize impacts to this species as much as possible, the following avoidance and minimization effort shall occur:

- **Salvage**: Salvage of top soil and/or seeds should occur prior to ground disturbance in accordance with Section 6.6.1. Salvage should be conducted by or in cooperation with the CVCC.

Appendix F Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Coachella Valley MSHCP

A Multiple Species Habitat Conservation Plan (Plan) was prepared for the entire Coachella Valley and surrounding mountains to address current and potential future state and federal Endangered Species Act issues in the Plan Area. A Memorandum of Understanding ("Planning Agreement") was developed to govern the preparation of the Plan. In late 1995 and early 1996, under the auspices of CVAG, the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage; County of Riverside (County); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Game (CDFG); Bureau of Land Management (BLM); U.S. Forest Service (USFS); and National Park Service (NPS) signed the Planning Agreement to initiate the planning effort. Subsequently, Caltrans, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), California Department of Parks and Recreation (State Parks), and CVMC decided to participate in the Plan.

The Plan balances environmental protection and economic development objectives in the Plan Area and simplifies compliance with endangered species related laws. The Plan is intended to satisfy the legal requirements for the issuance of Permits that will allow the Take of species covered by the Plan in the course of otherwise lawful activities. The Plan will, to the maximum extent practicable, minimize and mitigate the impacts of the Taking and provide for Conservation of the Covered Species.

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Monitoring Program, and Adaptive Management. The MSHCP Reserve System will be established from lands within

21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.,* gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

APPENDIX 4

September 05, 2025

Kaitlyn Dodson-Hamilton
Tom Dodson & Associates
2150 N. Arrowhead Ave
San Bernardino, CA 92405

Subject: Cultural Resources Assessment for the Mission Springs Water District RES-BCT and Regional Water Reclamation Facility Solar Project, Desert Hot Springs, Riverside County California

Dear Ms. Kaitlyn Dodson-Hamilton,

At your request, Mojave Archaeological Consulting, LLC has prepared a cultural resources assessment for the Mission Springs Water District's RES-BCT and Regional Water Reclamation Facility Solar Project. The project is situated northwest of the intersection of 19th Avenue and Little Morongo Road, in Desert Hot Springs, Riverside County. It is located within Section 14 of Township 3 South, Range 4 East, on the Desert Hot Springs, California USGS 7.5-minute quadrangle (see Attachment A, Map 2).

The project is, in part, part of the continued development of the Nancy Wright Regional Wastewater Reclamation Facility (Wright RWRF), as a portion of the proposed solar development project would support the electricity needs of the Wright RWRF. The project would also support MSWD's overall growing energy demand within its service area through the new RES-BCT solar development. In 2019, the Mission Springs Water District (MSWD), certified an Environmental Impact Report (EIR) for the West Valley Water Reclamation Program for the construction of municipal wastewater collection and treatment systems that would facilitate the individual septic systems that overlie the Mission Creek aquifer. The planned program consisted of three components: construction of the Wright RWRF, construction of a conveyance system connecting existing sewered areas to the Wright RWRF, and construction of a collection system in an area MSWD refers to as M2. A prior cultural resources assessment (Tang and Hogan 2018) was completed for the planned components of the West Valley Water Reclamation Program at that time, including the Wright RWRF.

In order to expand solar generation to the Wright RWRF, the current project would install a ground mounted photovoltaic solar system to the north and west of an existing photovoltaic system located at 19th Avenue and Little Morongo Road. A second photovoltaic system would be installed to the west of the existing photovoltaic system along 19th Avenue. Other components of the project will include the installation of associated equipment and service lines/utility connections. The combined project site totals roughly 11 acres and ground disturbance is anticipated to include clearing, grubbing, subgrade preparation, and trenching (see Attachment A, Map 3). As these activities expand the area covered and addressed by the prior 2018 cultural resources assessment, this letter report is intended to identify and address any impacts to cultural resources associated with the newly planned solar project. MSWD is the California Environmental Quality Act (CEQA) lead agency for the project.

In order to identify any "historical resources" as defined by CEQA, for the proposed project, as defined by CEQA, which includes the RES-BCT and Wright RWRF site, Mojave Archaeological Consulting completed research that included an updated cultural resources records search at the South Coastal Information Center (SCIC), a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF), tribal outreach, and a pedestrian field survey.

Research

Previous Reports and Previous Resources

A records search of the California Historical Resources Information System (CHRIS) was conducted at the South Coastal Information Center (SCIC) at San Diego State University on July 24, 2025. During the search, maps and records on file were reviewed to identify any previously recorded cultural resources or reports for prior cultural resource investigations within a 0.5-mile radius of the project. The records search results indicate that at least 37 cultural resource investigations have been previously conducted within 0.5-miles of the project (Table 1). Of the prior investigations, six included surveys which covered portions of the current project--Wilke 1972, Love and Tang 1995, Tang et al. 2003, Dice and Vianna 2003, Tang and Hogan 2018, and Hart 2024. None of the prior surveys identified any cultural resources within or adjacent to the project.

Based on the results of the SCIC records search, 24 cultural resources have been previously recorded within 0.5-miles of the project. The resources include historic roads, historic refuse scatters, isolated historic artifacts including metal cans and glass bottle fragments, and a few isolated prehistoric artifacts consisting of lithics, groundstone (i.e. manos and metates), and ceramics. None of the previously recorded resources lie within or adjacent to the current project.

Table 1: Previous Investigations within 0.5-Miles of the Project

Number	Year	Author(s)	Title	Within Project?
RI-00071	1972	Phillip J. Wilke	Flood Control on Lower Mission Creek: Expected Impact on Archaeological Resources	Yes
RI-00651	1978	Robert Laidlaw	Dos Palmas Ethnographic Impacts	No
RI-00765	1980	Mary A. Brown	Cultural Resource Assessment Evaluation of 2396-E, On Dillon Road, Near Desert Hot Springs, Riverside County, California	No
RI-00901	1980	Jean A. Salpas	An Archaeological Assessment of Tract 15688	No
RI-00937	1980	James Swenson	An Archaeological Evaluation of a 48.23 Acre Parcel Near North Palm Springs, Riverside County, California	No
RI-01058	1980	James Swenson	Environmental Impact Evaluation: An Archaeological Assessment of a Twenty-Two Acre Parcel Near North Palm Springs, Riverside County, California	No
RI-01753	1984	Daniel McCarthy	An Archaeological Assessment of 40 Acres of Land Near Desert Hot Springs, Riverside County, California (Conditional Use Permit #2661-E)	No
RI-02679	1989	Robert White	Archaeological Survey Report: Palm Springs Raceway Project, Riverside County, California	No
RI-03536	1992	Michael Hogan	Cultural Resources Assessment, 26+ Mile Segment of the AT&T Fiber-Optics Line Replacement Project, Whitewater to Coachella, Riverside County, California	No
RI-03908	1995	Bruce Love and Bai Tom Tang	Cultural Resources Report: Mission Creek Wastewater Treatment Plant Near the City of Desert Hot Springs, Riverside County, California	Yes

Number	Year	Author(s)	Title	Within Project?
RI-05190	2005	Roger D. Mason	Phase I Archaeological Survey Report for a Property Located on the Southeast Corner of Indian Avenue and 18th Avenue, APN 66-340-004, North Palm Springs, Riverside County, California	No
RI-05706	2005	Erika Thal	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/Number CA-7282B/Painted Hills	No
RI-05976	2003	Bai Tang, Michael Hogan, Casey Tibbet, and Daniel Ballester	Historical/Archaeological Resources Survey Report, Mission Springs Water District, Garnet Basin Test Well Project, Near the City of Palm Springs, Riverside County, CA	Yes
RI-06110	2003	Michael Dice and Marnie Vianna	Phase I Cultural Resources Assessment and Paleontological Records Search: Mission Springs Water District Pipeline Project, North Palm Springs, County of Riverside, CA	Yes
RI-06977	2007	Philip de Barros	Phase 1 Archaeological Assessment of a 4.4-Acre Parcel, Along Indian Avenue South of North Palm Springs, Riverside County, California	No
RI-07272	2006	Robert S. White and Laura S. White	Cultural Resource Assessment of Plot Plan 22086, A 9.48-Acre Parcel Located Adjacent to Dillon Road Midway Between Indian Avenue and Little Morongo Road, North Palm Springs, Unincorporated Riverside County	No
RI-07737	2008	Clarence Bodmer, Daniel Ballester, and Laura Shaker	Phase I Archaeological Assessment: RCI Industrial Park, North Palm Springs Area, Riverside County, California	No
RI-07760	2008	Clarence Bodmer, Daniel Ballester, and Laura Shaker	Phase I Archaeological Assessment, Tentative Parcel Map 35962, I-10 Distribution Center Project, North Palm Springs Area, Riverside County, California	No
RI-08208	2009	Bai “Tom” Tang	Letter Report: Addendum to Phase I Archaeological Resources Assessment and Paleontological Resources Assessment Reports, Tentative Parcel Map No. 35962, I010 Distribution Center Project, North Palm Springs Area, Riverside County, California	No
RI-08410	2004	William T. Eckhardt, Kristen E. Walker, and Richard L. Carrico	Draft Cultural Resources Inventory of the Proposed Devers to Palo Verde II 500 kV Transmission Line, Riverside County, California.	No
RI-08977	2011	Matthew M. DeCarlo and William T. Eckhardt	Cultural Resources Inventory of Three Construction Yards and the Desert Center DC-2 Yard Distribution Alignment of the Southern California Edison (SCE) Devers-Palo Verde 2 (DPV2) Project, Riverside County, California	No

Number	Year	Author(s)	Title	Within Project?
RI-09036	2012	Bai "Tom" Tang and Michael Hogan	Historical/Archaeological Resources Survey Report, Wild Sands I Project (Jones/Sirota Properties and Transmission Line Right-of-Way), City of Palm Springs, Riverside County, California	No
RI-9037	2013	Desireé Reneé Martinez	Report and Evaluation of Hoon wit ten ca va “Hills of the Roasted Bear” as a Traditional Cultural Property	No
RI-09451	2015	Christine Ward and Scott H. Kremkau	Class III Cultural Resources Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2000C Hydrotest Project, Riverside County, California	No
RI-09461	2015	Bai "Tom" Tang and Michael Hogan	Historical/Archaeological Resources Survey Report Assessor's Parcel No. 665-110-004 City of Desert Hot Springs Riverside County, California	No
RI-09491	2015	Christine Ward and Scott H. Kremkau	Class III Cultural Resource Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2001W-C Hydrotest Project, Riverside County, California	No
RI-09837	2017	Douglas W. Mengers and Shannon E. Foglia	Class III Cultural Resources Inventory Report for the Proposed Southern California Edison Company's Devers- Colorado River NO. 1 Transmission Line Rating Remediation Project Riverside County, California	No
RI-09853	2016	Ryan Tubbs and Wendy Blumel	Cultural Resources Investigation of A 27-Acre Parcel in the City of Desert Hot Springs Riverside County, California	No
RI-09871	2016	Bai "Tom" Tang	Update to Historical/Archaeological Resources Survey for the Coachillin Holdings Project; Tentative Parcel Map No. 37158 Assessor's Parcel Numbers (APN) 666-340-004 and -006 City of Palm Springs, Riverside County, California CRM TECH Contract 3074	No
RI-09959	2017	Zach Wilson	Cultural Resources Assessment for Southern California Edisons Garnet Submission Expansion Project Riverside County CA	No
RI-10299	2015	Bai "Tom" Tang, Michael Hogan, Ben Kerridge, Daniel Ballester, and Nina Gallardo	Identification and Evaluation of Historic Properties Chromium-6 Water Treatment Facilities Project, Coachella Valley, Riverside County, California	No
RI-10361	2016	Fred Lange, Matthew Stever, and Benjamin Scherzer	Cultural and Palaeontological Resources Assessment Blackstar DHS Project City of Desert Hot Springs, Riverside County, California	No
RI-10470	2017	Robert Cunningham and Wendy Blumel	Cultural Resources Investigation 13-Acre Parcel in the City of Desert Hot Springs	No

Number	Year	Author(s)	Title	Within Project?
RI-10977	2018	Bai Tang and Michael Hogan	Historical/Archaeological Resources Survey Report of the West Valley Water Reclamation Program, In and Near the City of Desert Hot Springs, Riverside County, California	Yes
RI-11185	2013	Molly Valasik	Archaeological Survey Report for the Alhoha (GFIDS 5612 & 5613) Interconnection Projects (IOS 329028 & 329029) Riverside County, California	No
RI-11193	2012	Melinda C. Horne	Historic Property Survey Report for the Springs Signal Synchronization Project in the City of Palm Springs, Riverside County, California	No
N/A (Pending)	2024	Michelle Hart	Cultural Resources Assessment for Street Improvements for the Mission Springs Water District Regional Wastewater Reclamation Facility Project, Desert Hot Springs, Riverside County California.	Yes

Historic Maps and Aerial Imagery

Maps and aerial imagery were also reviewed to determine the historic land uses in area. Available sources included a General Land Office (GLO) survey plat map dating to 1856, USGS topographic quadrangle maps dating from 1901 through the 1960's, and aerial imagery dating from the 1940's to modern periods. On the 1850's GLO plat, surveyors noted an "Indian Trail" trending generally east-to-west near the current project within Section 14 and terminating at an unnamed spring approximately one mile to the east of the project site. After the early 1900's, the trail is not depicted on maps, nor does it appear visible within any available subsequent aerial imagery of the area.

In the 1870's, the Southern Pacific Railroad was constructed through the Coachella Valley and by 1901 the railroad and the Palm Springs Station are depicted on USGS topographic maps within one mile of the project site. By 1940, as the residential community of Desert Hot Springs was developed to the northeast and a grid of roads was laid out in the general area. By the 1950's other roads are present, including Little Morongo Road and an unnamed short road segment that corresponds with 19th Avenue. Apart from the roads, no development occurred in the immediate vicinity of the project until modern periods.

Sacred Lands File Search and Native American Outreach

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on July 10, 2025. The NAHC responded on July 23rd and stated the SLF search results were negative for Native American cultural resources in the general area of the project but advised that Native American tribes traditionally and culturally affiliated with the area may have additional information. As the project site lies within the Traditional Use Area of the Agua Caliente Band of Cahuilla Indians (ACBCI), emails and an outreach letter was sent to the ACBCI THPO to invite tribal participation in the field survey and to elicit any additional information or concerns relevant to the project. ACBCI responded on August 12th and stated there are various sites near the project. They requested the project area be inventoried by a qualified archaeologist prior to development activities. Additionally, they request copies of any cultural resource documentation generated in connection with this project (i.e. a copy of this report). Attachment C includes copies of all communications with ACBCI, their response letter, the SLF response letter, and a list of Native American contacts for MSWD's reference/to assist with any applicable government-to-government consultation if needed.

Field Survey

On August 27, 2025, a pedestrian survey of the project site was completed. The survey included the entirety of both photovoltaic solar system locations. Two linear disturbance corridors indicated on the project plan sets were also surveyed (as depicted in Attachment A, Map 3), with exception of any linear areas lying within the fenced perimeter of the Wright RWRF (the fenced locations are already heavily disturbed by previous mechanical excavation/grading and were covered by a prior survey by CRM TECH/Tang and Hogan 2018)

The survey was completed using linear transects spaced no more than 15 meters apart. All ground surfaces were closely inspected for any indications of cultural resources. To assess the potential for buried cultural deposits, soil profiles were examined at locations of animal burrows, drainages, disturbed areas, and other exposures. Ground visibility was generally excellent (greater than 90 percent). A large amount of modern trash was observed scattered throughout the survey area. In addition to the modern dumped garbage, several scattered isolated historic cans dating to ca. 1950's to the late 1970's were noted including aluminum top pull-tab beverage, church-key-opened steel body beverage, and one rectangular fuel can. Representative photographs were taken of the historic cans (included in Attachment B) but they were not otherwise formally recorded in consideration that such isolated refuse items are extremely common in roadside settings, offer little information potential, and would not constitute "historical resources" for the purposes of CEQA.

Conclusions

Mojave Archaeological Consulting assessed the proposed project site for potentially significant cultural resources under CEQA. Specifically, CEQA guidelines state "historical resources" include resources listed in or determined to be eligible for listing in the California Register of Historical resources (or determined to be historically significant by the lead agency—generally, in cases where the resource would meet any of the criteria for listing on the California Register of Historical Resources). As discussed above, artifacts located during the survey were limited to a few dispersed cans dating from the mid-century through the late-1970's; these items are not considered to be "historical resources" for the purposes of CEQA. No other cultural resources, either prehistoric, or historic, were found within the project. Mojave Archaeological Consulting recommends to the Mission Springs Water District that the project will have no impact to historical or archaeological resources.

No further cultural resources work is recommended necessary for the proposed project activities. However, if buried cultural materials are encountered during construction, all work should be halted in the vicinity of the discovery until a qualified archaeologist can assess the significance and integrity of the find. If intact and significant archaeological remains are encountered, the impacts of the project should be mitigated appropriately. Additionally, Health and Safety Code Section 7050.5, CEQA Statute & Guidelines Section 15064.5(e), and PRC Section 5097.98 mandate the process to be followed in the event of the discovery of human remains. Finally, if the project is expanded to include areas not covered by this survey or other recent cultural resource surveys, additional cultural resource investigations may be required.

If you have any questions or comments regarding these findings and recommendations, please contact me at (760) 821-7061 or michelle@mojavearchaeology.com.

Sincerely,

M. Hart

Michelle Hart, M.A.
Principal Investigator/ Cultural Resources Consultant

Attachments

A: Project Maps
B: Survey Photographs
C: Response from NAHC and Native American Correspondence

References

Hart, Michelle

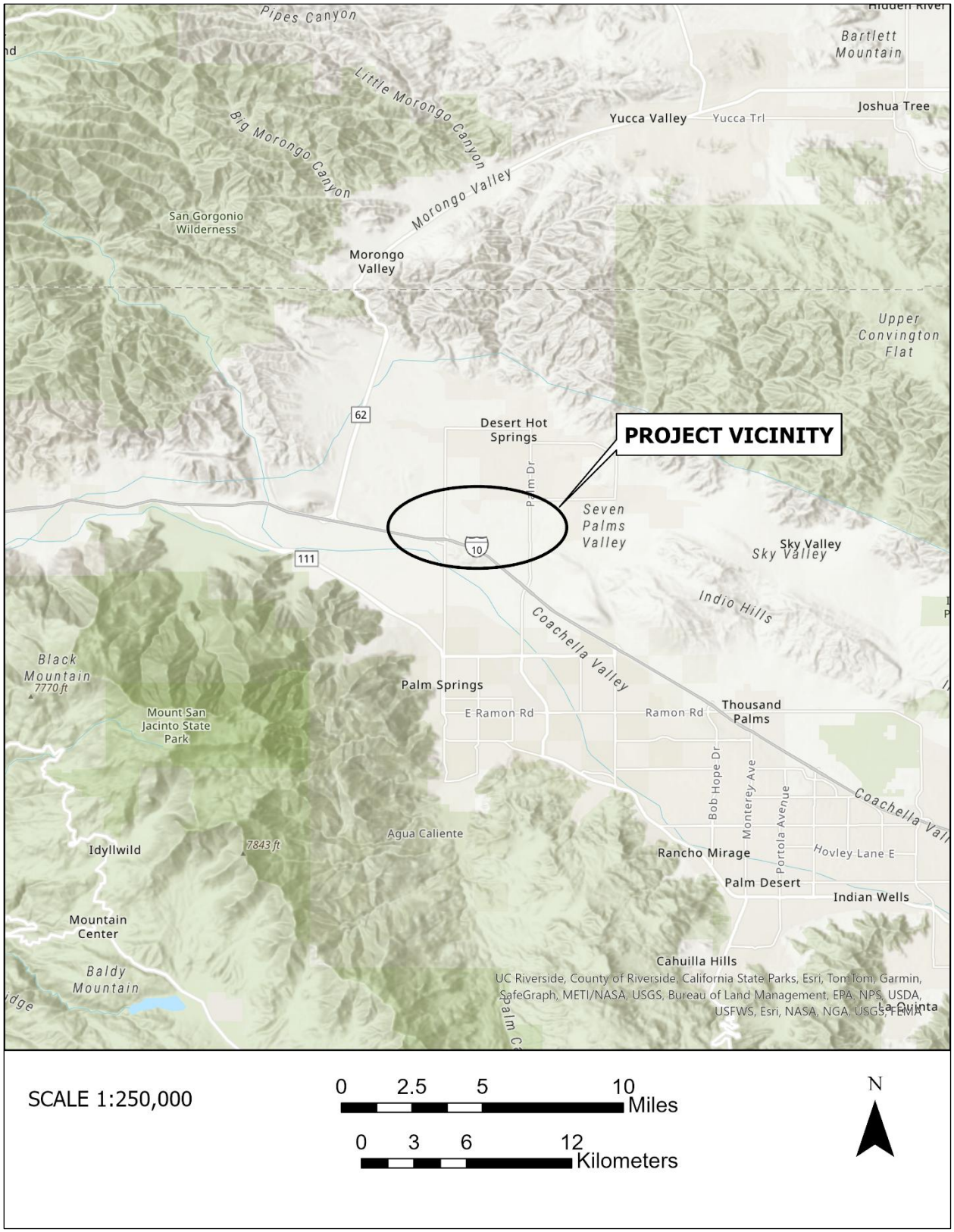
2024 *Cultural Resources Assessment for Street Improvements for the Mission Springs Water District Regional Wastewater Reclamation Facility Project, Desert Hot Springs, Riverside County California*. On file with Mission Springs Water District.

Tang, Bai and Michael Hogan

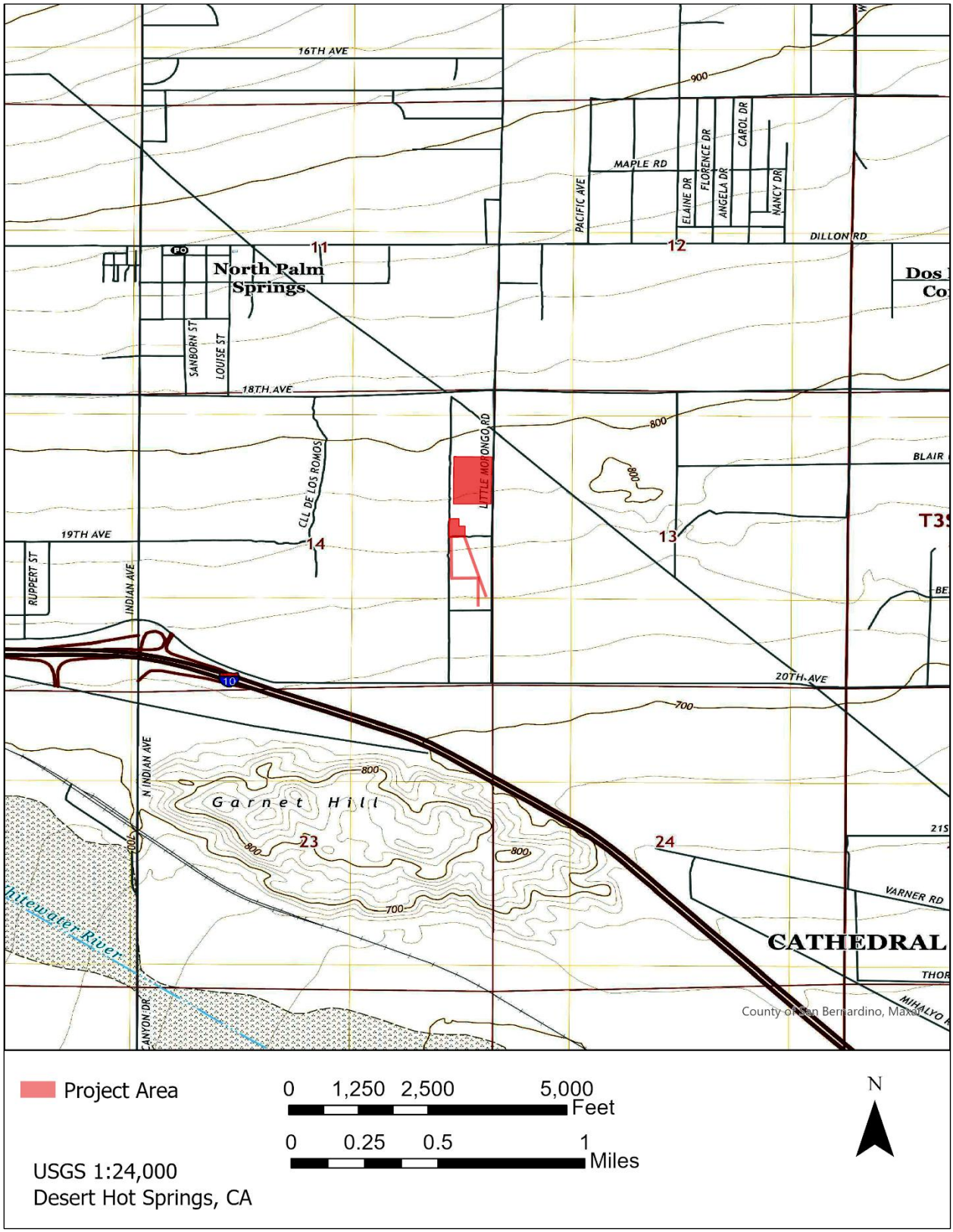
2018 *Historical/Archaeological Resources Survey Report: West Valley Water Reclamation Program, in and Near the City of Desert Hot Springs, Riverside County, California.* On file with the South Coastal Information Center.

Attachment A

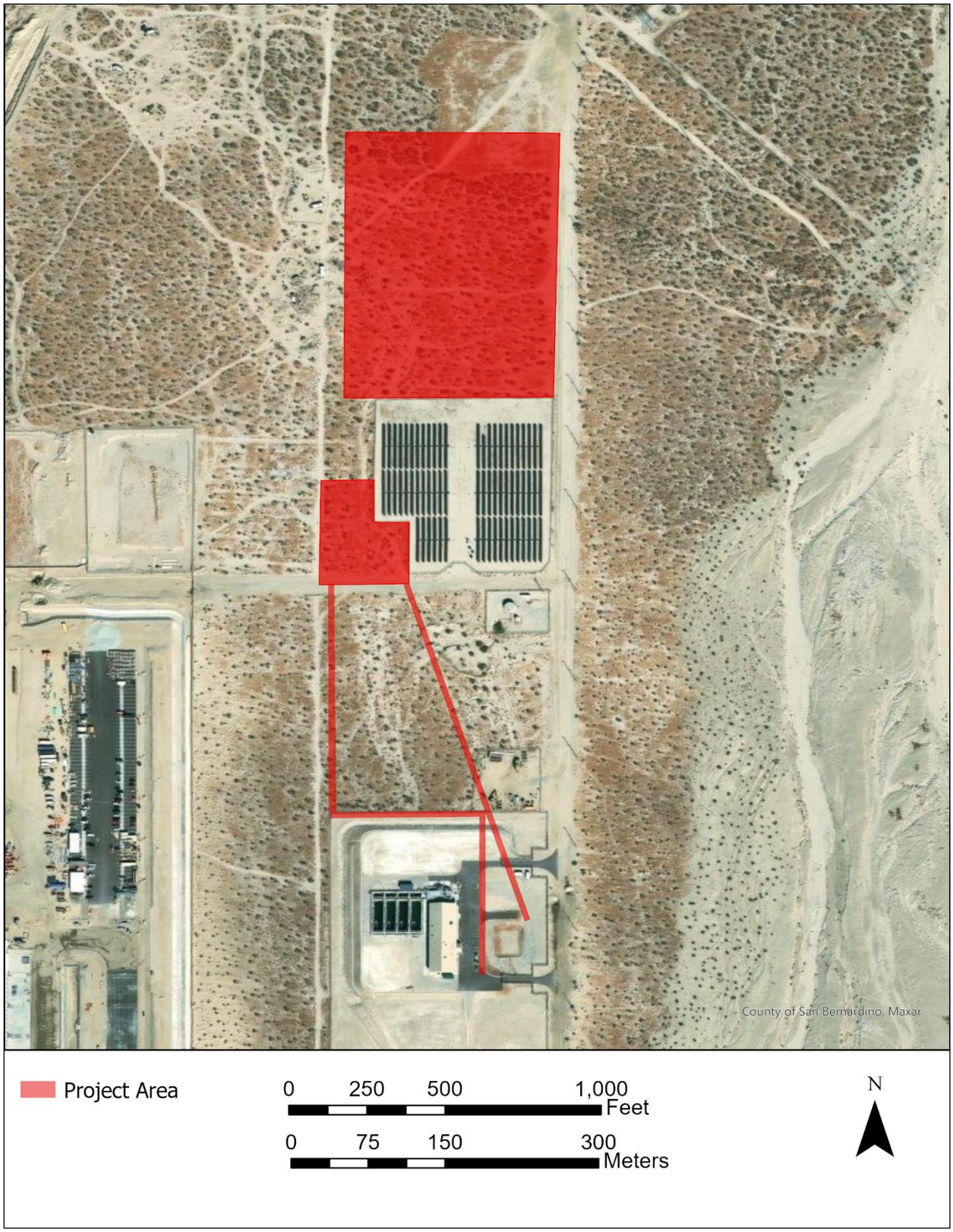
Project Maps



Map 1: Overview of Project Vicinity



Map 2: Project Location



Map 3: Detail of Project Area

Attachment B

Survey Photographs

Project/survey area overview/view facing west.

Project/survey area overview/view facing southeast.

Representative photo of ca. 1950's to late 1970's pull tab can found during survey, detail/plan view.

Overview of project/survey area, facing north.

Overview of historic cans found during survey, existing solar facility in background, facing north.

Representative photo of historic cans found during survey (pull tab beverage, steel body beverage, sanitary), detail/plan view

Overview of historic gas can near 19th Avenue, facing north

Overview of project/survey area, proposed linear trench location, facing southeast

Attachment C

Response from NAHC and Native American Outreach

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
Michelle Carr

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

July 23, 2025

Michelle A. Hart
Mojave Archaeological Consulting, LLC

Via Email to: michelle@mojavearchaeology.com

Re: MSWD Well 33 and Regional Water Reclamation Facility Solar Development Project, Riverside County

To Whom It May Concern:

As requested, a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed based on information submitted for the above referenced project. The results were negative. Be aware that tribes do not always record their sacred sites in the SLF, nor are they required to do so. As such, an SLF search is not a substitute for consultation with all tribes that are traditionally and culturally affiliated with a project's geographic area.

Attached is a list of Native American tribes that are traditionally and culturally affiliated with the project's geographic area. Please contact all of the listed tribes as they may have information about sacred sites within the project area that is not listed with the NAHC.

If within two weeks of notification, a response has not been received, the Commission requests that you follow up with a telephone call or email to ensure that the project information was received.

If you receive notification of a change of address or phone number from a tribe, please inform the NAHC so that we can assure that our lists contain current information.

In addition to engaging in tribal consultation, you should consult the appropriate regional California Historical Research Information System (CHRIS) information center to determine whether it has information regarding the presence of recorded archaeological sites within the project area.

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

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
7/23/2025

Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation
Agua Caliente Band of Cahuilla Indians	F	Lacy Padilla, Director of Historic Preservation/THPO	5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 333-5222	(760) 699-6919	ACBCI-THPO@aguacaliente.net	Cahuilla
Augustine Band of Cahuilla Indians	F	Tribal Operations,	84-001 Avenue 54 Coachella, CA, 92236	(760) 398-4722		info@augustinetribe-nsn.gov	Cahuilla
Cabazon Band of Cahuilla Indians	F	Doug Welmas, Chairperson	84-245 Indio Springs Parkway Indio, CA, 92203	(760) 342-2593	(760) 347-7880	jstapp@cabazonindians-nsn.gov	Cahuilla
Cahuilla Band of Indians	F	Erica Schenk, Chairperson	52701 CA Highway 371 Anza, CA, 92539	(951) 590-0942	(951) 763-2808	chair@cahuilla-nsn.gov	Cahuilla
Cahuilla Band of Indians	F	Anthony Madrigal, Tribal Historic Preservation Officer	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		anthonymad2002@gmail.com	Cahuilla
Cahuilla Band of Indians	F	BobbyRay Esparza, Cultural Director	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549		besparza@cahuilla-nsn.gov	Cahuilla
Los Coyotes Band of Cahuilla and Cupeño Indians	F	Ray Chapparosa, Chairperson	P.O. Box 189 Warner Springs, CA, 92086-0189	(760) 782-0711	(760) 782-0712		Cahuilla Cupeno
Morongo Band of Mission Indians	F	Ann Brierty, THPO	12700 Pumarra Road Banning, CA, 92220	(951) 755-5259	(951) 572-6004	abrierty@morongo-nsn.gov	Cahuilla Serrano
Morongo Band of Mission Indians	F	Robert Martin, Chairperson	12700 Pumarra Road Banning, CA, 92220	(951) 755-5110	(951) 755-5177	abrierty@morongo-nsn.gov	Cahuilla Serrano
Quechan Indian Tribe of the Fort Yuma Reservation	F	Jonathan Koteen, President, Quechan Tribal Council	P.O.Box 1899 Yuma, AZ, 85366-1899	(760) 919-3600		executivesecretary@quechantribe.com	Quechan
Quechan Indian Tribe of the Fort Yuma Reservation	F	Jill McCormick, Historic Preservation Officer	P.O. Box 1899 Yuma, AZ, 85366-1899	(928) 261-0254		historicpreservation@quechantribe.com	Quechan

Native American Heritage Commission
Native American Contact List
Riverside County
7/23/2025

Ramona Band of Cahuilla	F	John Gomez, Environmental Coordinator	P. O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	jgomez@ramona-nsn.gov	Cahuilla
Ramona Band of Cahuilla	F	Joseph Hamilton, Chairperson	P.O. Box 391670 Anza, CA, 92539	(951) 763-4105	(951) 763-4325	admin@ramona-nsn.gov	Cahuilla
Santa Rosa Band of Cahuilla Indians	F	Mercedes Estrada, Cultural Director	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	mestrada@santarosa-nsn.gov	Cahuilla
Santa Rosa Band of Cahuilla Indians	F	Vanessa Minott, Tribal Administrator	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	vminott@santarosa-nsn.gov	Cahuilla
Santa Rosa Band of Cahuilla Indians	F	Steven Estrada, Tribal Chairman	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	(951) 659-2228	sestrada@santarosa-nsn.gov	Cahuilla
Serrano Nation of Mission Indians	N	Wayne Walker, Co-Chairperson	P. O. Box 343 Patton, CA, 92369	(253) 370-0167		serranonation1@gmail.com	Serrano
Serrano Nation of Mission Indians	N	Mark Cochrane, Co-Chairperson	P. O. Box 343 Patton, CA, 92369	(909) 578-2598		serranonation1@gmail.com	Serrano
Soboba Band of Luiseno Indians	F	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	(951) 654-4198	jontiveros@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	F	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	(951) 654-4198	jvaldez@soboba-nsn.gov	Cahuilla Luiseno
Torres-Martinez Desert Cahuilla Indians	F	Alesia Reed, Cultural Committee Chairwoman	P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		lisareed990@gmail.com	Cahuilla
Torres-Martinez Desert Cahuilla Indians	F	Abraham Becerra, Cultural Coordinator	P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		abecerra@tmdci.org	Cahuilla
Torres-Martinez Desert Cahuilla Indians	F	Thomas Tortez, Chairperson	P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300	(760) 397-8146	thomas.tortez@tmdci.org	Cahuilla

Torres-Martinez Desert Cahuilla Indians	F	Gary Resvaloso, TM MLD	P.O. Box 1160 Thermal, CA, 92274	(760) 777-0365		grestmtm@gmail.com	Cahuilla
Torres-Martinez Desert Cahuilla Indians	F	Mary Belardo, Cultural Committee Vice Chair	P.O. Box 1160 Thermal, CA, 92274	(760) 397-0300		belardom@gmail.com	Cahuilla
Twenty-Nine Palms Band of Mission ndians	F	Nicolas Garza, Cultural Resources Specialist	46-200 Harrison Place Coachella, CA, 92236	(760) 863-2486		nicolas.garza@29palmsbomi-nsn.gov	Chemehuevi
Twenty-Nine Palms Band of Mission ndians	F	Sarah O'Brien, Tribal Archivist	46-200 Harrison Place Coachella, CA, 92236	(760) 863-2460		sobrien@29palmsbomi-nsn.gov	Chemehuevi
Twenty-Nine Palms Band of Mission ndians	F	Christopher Nicosia, Cultural Resources Manager/THPO Manager	46-200 Harrison Place Coachella, CA, 92236	(760) 863-3972		christopher.nicosia@29palmsbomi-nsn.gov	Chemehuevi
Yuhaaviatam of San Manuel Nation	F	Alexandra McCleary, Director of Cultural Resources	26569 Community Center Drive Highland, CA, 92346	(909) 633-0054		alexandra.mccleary@sanmanuel-nsn.gov	Serrano

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 Resource the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed MSWD Well 33 and Regional Water Reclamation Facility Solar Development Project, Ri

August 11, 2025

Lacy Padilla, Director of Historic Preservation/THPO
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA, 92264
Transmitted via email to ACBCI-THPO@aguacaliente.net

RE: RES-BCT and Regional Water Reclamation Facility Solar Development Project, Desert Hot Springs, Riverside County

Dear Ms. Padilla,

Mojave Archaeological Consulting LLC is conducting a cultural resources assessment on behalf of Tom Dodson and Associates for the above-referenced project for the Mission Springs Water District (MSWD). The project will occur on several parcels owned by MSWD along Little Morongo Road and just north of the Nancy Wright Regional Water Reclamation Facility (RWRF). The address for the general location is 19011 Little Morongo Road, in Desert Hot Springs. The project is situated on the USGS Topo 7.5-minute map for Desert Hot Springs, CA, in Section 14 T3S, R4E.

The project will include the installation of a photovoltaic solar system to the north and west of an existing solar plant located at the northwest intersection of 19th Avenue and Little Morongo Road. A second photovoltaic system would be installed west of the existing photovoltaic system along 19th Avenue. Other components of the project will include the installation of associated equipment and service lines/utility connections. The combined project site totals roughly 11 acres and ground disturbance is anticipated to include clearing, grubbing, subgrade preparation, and trenching (see attached map and figures).

As part of the cultural resources investigation of the project area a search of the Native American Heritage Commission's Sacred Lands Files was requested. The NAHC's responded on July 23, 2025, and stated the SLF search findings were negative but recommended contacting Native American Tribes for additional information. We also understand that the project falls within the Traditional Use Area of the Agua Caliente Band of Cahuilla Indians.

As such, I am reaching out to you to seek any information you may wish to provide regarding potential Native American cultural resources in or near the project area and would welcome any input to consider during the cultural resources investigation. Please respond at your earliest convenience with any information or knowledge you may wish to share to inform the cultural resources assessment report. Any requests for documentation or information I cannot provide will be forwarded to our client or the lead agency (MSWD). Please note that as the cultural resources consultant for the project, Mojave Archaeological Consulting is not involved in government-to-government consultation or AB 52 compliance; rather, this letter is intended to seek your input concerning cultural resources in or near the project area to help assess the cultural resource sensitivity of the project. I look forward to your input and appreciate your time

and effort to review this request. Any comments or recommendations you may wish to share will be included in the cultural resources assessment report.

I am planning to conduct a survey of the entirety of the project site during a day next week (August 18 to 22) or the following week (August 25 to 29) and would welcome tribal participation. If anyone from your office is available and wishes to accompany me on the survey, please let me know and I will follow up to coordinate the fieldwork date. I can be reached at michelle@mojavearchaeology.com or 760-821-7061.

Best Wishes,

M.Hart

Michelle Hart, M.A.
Cultural Resources Consultant/Principal Investigator
Mojave Archaeological Consulting, LLC
Email: michelle@mojavearchaeology.com

Attachments:
Native American Heritage Commission Response Letter
Project Location Map and Figures

Survey invitation and tribal outreach for RES-BCT and Regional Water Reclamation Facility Solar Development Project

Mojave Archaeological Consulting <michelle@mojavearchaeology.com> Mon, Aug 11, 2025 at 5:36 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Cc: ACBCI-THPO@aguacaliente-nsn.gov

Good Afternoon,

Please see the attached outreach letter concerning the cultural resources assessment for a solar development project for the Mission Springs Water District in Desert Hot Springs (RES-BCT and Regional Water Reclamation Facility Solar Development Project).

We are currently conducting the cultural resources assessment for this project and are planning to complete a **field survey of the project site during a day next week (8/18 to 8/22) or the following week (8/25 to 8/29).** If ACBCI wishes to participate in the survey of the project site, please let me know and I will follow up to coordinate the fieldwork date.

Thank you!

Best Wishes,

Michelle

Michelle A. Hart, M.A.
Owner & Cultural Resources Consultant
Mojave Archaeological Consulting
(760) 821-7061

3 attachments

SLF No MSWD Regional Water Reclamation Facility Solar Development Project 7.23.2025.pdf
226K

RES-BCT and Regional Water Reclamation Facility Solar_Tribal_Outreach_ACBCI.pdf
99K

Location Map & Figures.pdf
8368K

RES-BCT and Regional Water Reclamation Facility Solar Development

5 messages

THPO Consulting <ACBCI-THPO@aguacaliente.net> Tue, Aug 12, 2025 at 9:50 AM
To: "mojave_consulting@outlook.com" <mojave_consulting@outlook.com>
Cc: Mojave Archaeological Consulting <michelle@mojavearchaeology.com>

Good morning,

If you have any questions about the attached letter, please feel free to contact me.
I have flexible availability for the survey. Please let me know when you would like to go out.

Thank you,

Xitlaly Madrigal
Cultural Resources Analyst
xmadrigal@aguacaliente.net
(760) 423-3485
5401 Dinah Shore Drive, Palm Springs, CA 92264

03-067-2015-001ACBCI8_12_2025.pdf
84K

Mojave Archaeological Consulting <michelle@mojavearchaeology.com> Tue, Aug 12, 2025 at 5:42 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>

Hello Xitlaly,

Letter recieved and very much appreciated. Great! I will follow up with you before the end of the week to set up the date and time for the survey. Likewise, I am also flexible. It looks like we should have slightly less hot temps next week!

Thank you,

Michelle
[Quoted text hidden]

--
Michelle A. Hart, M.A.
Owner & Cultural Resources Consultant
Mojave Archaeological Consulting
(760) 821-7061

Mojave Archaeological Consulting <michelle@mojavearchaeology.com> Fri, Aug 15, 2025 at 3:04 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>

Hi Xitlaly,

Just checking in to give you a heads up I will not be doing this survey until the week after next (8/25 to 8/29). I will follow up later next week to confirm a date/time for the fieldwork. Have a wonderful weekend!

Best Wishes,

Michelle

Michelle A. Hart, M.A.
Owner & Cultural Resources Consultant
Mojave Archaeological Consulting
(760) 821-7061

[Quoted text hidden]

Mojave Archaeological Consulting <michelle@mojavearchaeology.com> Fri, Aug 22, 2025 at 3:07 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>

Good Afternoon,

I am following up to let you know I am tentatively planning to be in the field for the survey for this project next Wednesday 08/27 at 9:00am. I will be surveying the larger northern block parcel first (Well 33 Solar System Site) and will be parked on Little Morongo Road at that location, I have a dark silver Toyota Tacoma with a shell on it (please reach out next week if you would like any additional map, pin, or directions for meet up location, you can also call or text me anytime on my cell at 760-821-7061. If you are not available Wednesday I am flexible to arrange an alternate survey date so that ACBCI may be present for the survey.

Have a nice weekend!

Best Wishes,

Michelle

Michelle A. Hart, M.A.
Owner & Cultural Resources Consultant
Mojave Archaeological Consulting
(760) 821-7061

[Quoted text hidden]

Mojave Archaeological Consulting <michelle@mojavearchaeology.com> Tue, Aug 26, 2025 at 4:07 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>

Hello, following up to confirm I will be doing this survey tomorrow/wednesday. If ACBCI would like to be present for the survey and if you need any further site directions to the location on Little Morongp Rd, please let me know. I will be out there around 9 am, my cell is 760-821-7061.

Best Wishes,

Michelle Hart
[Quoted text hidden]
[Quoted text hidden]

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

03-067-2015-001

August 12, 2025

[VIA EMAIL TO:mojave_consulting@outlook.com]
Mojave Archaeological Consulting
Ms. Michelle Hart
PO Box 271
Joshua Tree, California 92252

Re: RES-BCT and Regional Water Reclamation Facility Solar Development

Dear Ms. Michelle Hart,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the District Well 33 Solar Photovoltaic Facility project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe's Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*A copy of the records search with associated survey reports and site records from the information center.

*There are various sites near the project site.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760) 423-3485. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Xitlaly Madrigal
Cultural Resources Analyst
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

APPENDIX 5a

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED 388.3 KW FIXED GROUND MOUNT SOLAR ARRAY
SITE NAME: NANCY WRIGHT REGIONAL WATER RECLAMATION
NEAR COORDINATES: 33.9107, -116.5295
19011 LITTLE MORONGO ROAD
DESERT HOT SPRINGS, CALIFORNIA

SALEM PROJECT NO. 3-224-1144
JANUARY 8, 2025

PREPARED FOR:

MR. PUNEET MISHRA
STATEN SOLAR CORP, INC.
175 NORTECH PARKWAY
SAN JOSE, CALIFORNIA

PREPARED BY:

SALEM ENGINEERING GROUP, INC.
4729 W. JACQUELYN AVENUE
FRESNO, CA 93722
P: (559) 271-9700
F: (559) 275-0827

SALEM engineering group, inc.

4729 W. Jacquelyn Avenue
Fresno, CA 93722
Phone (559) 271-9700
Fax (559) 275-0827

January 8, 2025 Project No. 3-224-1144

Mr. Puneet Mishra
Staten Solar, Inc.
175 Nortech Parkway
San Jose, California

Subject: GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED FIXED GROUND MOUNT SOLAR ARRAY
SITE NAME: NANCY WRIGHT REGIONAL WATER RECLAMATION
19011 LITTLE MORONGO ROAD
NEAR COORDINATES: 33.9107, -116.5295
DESERT HOT SPRINGS, CALIFORNIA

Dear Mr. Mishra:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this geotechnical engineering investigation report for the site of the proposed fixed ground mount solar array to be located at near address 19011 Little Morongo Road, near the coordinates 33.9107, -116.5295, Desert Hot Springs, California. The project consists of the installation of a solar array with single axis tracker solar panel system.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (559) 271-9700.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Ahmad Dalqamouni, PG, Ph.D., M.CE
Geotechnical Project Engineer
PG 10146

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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED 388.3 KW FIXED GROUND MOUNT SOLAR ARRAY
NEAR LATITUDE AND LONGITUDE OF 33.9107, -116.5295
19011 LITTLE MORONGO ROAD
DESERT HOT SPRINGS, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our geotechnical engineering investigation for the site of the proposed fixed ground mount solar array to be located approximately 1380 feet northwest of address 19011 Little Morongo Road, near latitude and longitude of 33.9107, -116.5295, in Desert Hot Springs, California as depicted on Figure 1, Vicinity Map.

SALEM Engineering Group, Inc. (SALEM) has completed this geotechnical engineering investigation with the purpose to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed. The recommendations presented herein are based on analysis of the data obtained during the investigation and our local experience with similar soil and geologic conditions.

If project details vary significantly from those described herein, SALEM Engineering Group, Inc. (SALEM) should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. SITE LOCATION AND DESCRIPTION

The project site is site is located in a rectangular shape, near latitude and longitude of 33.9107, -116.5295 in Desert Hot Springs, California. The immediate array site lies approximately 1380 feet northwest of address 19011 Little Morongo Road, within partially vacant lot that is lie southwest of existing fenced solar array. The proposed solar array area is planned mainly within the southwest portion of vacant areas. The project area is relatively flat, appeared to have not been previously leveled or developed, and the site area covered with gravel, sandy soils, with desert bushes and scattered native plants.

The overall solar array site area is bounded partially to the north side by chain link fence, and fenced existing solar array area, and vacant undeveloped desert land beyond, bounded from the west and south by access gravel road, and desert land, bounded from the east by fence, existing solar array and little Morongo Road beyond. It should be noted, electric power poles were observed within the eastern surrounding areas and along the Little Morongo road.

Based on review of available aerial imagery, the area of the existing solar array appears to be graded for the existing solar array after July 2016. The area of proposed solar has not developed before. The overall

site elevation can vary between about 756 and 759 feet above mean sea level (AMSL), based on Google Earth Imagery.

3. PROJECT DESCRIPTION

We understand that the project include: the installation of a 388.3 kW-DC Single Axis Tracker solar array near southwestern portion of developed lot for solar panel plant. The solar array will cover an area of about 1.0 acre, based on google earth measurements. Structural load information and other final details pertaining to the structures are unavailable. The total number of solar panels is unknown at this time. Construction will include equipment pads for inverters and associated equipment.

Based on previous similar projects, it is understood that the PV system structure will be supported on driven piles extending to approximate depths of about 6 feet below existing grade. Foundation dead loads (DL) are light to moderate. A maximum deflection of 1 inch at ground level is considered in pile design.

A site grading plan was not available at the time of preparation of this report. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified.

The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings B-1 thru B-3, were drilled on December 26, 2024, within the project area of the proposed solar array at the approximate locations shown on Figure No. 2, Site Plan. The test borings were advanced with truck- mounted CME 55 drill rig equipped with 6 5/8 inch hollow stem augers.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer at that time. Visual classification of the materials encountered in the test borings was generally made in accordance with the Unified Soil Classification System (ASTM D2487). The boring locations can be found on the Site Plan, attached at the end of this report.

A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The Test Boring Log is presented in Appendix "A." The Boring Log includes the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test boring was determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Log in Appendix "A" should be consulted. Subsurface soil samples were obtained by driving a Modified California sampler (MCS) and a Standard Penetration Test (SPT) sampler. Penetration resistance blow counts were obtained by dropping an automated 140-pound trip hammer through a 30-inch free fall to drive the sampler to a maximum depth of 18 inches. The number of blows required to drive the last 12 inches is recorded as Penetration Resistance (blows/foot) on the logs of the boring. In case very high penetration resistance is encountered, the number of blows recorded may be for less than 12 inches.

Soil samples were obtained from the test boring at the depths shown on the boring logs. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, expansion index, plasticity index, and gradation of the materials encountered. In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. SOIL AND GROUNDWATER CONDITIONS

6.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the near surface soils encountered comprised of medium dense to very dense poorly graded sand with silt with various amounts of gravel to the maximum depths explored of 16.5 feet BSG. It should be noted that dense materials encountered below 5 feet BSG. In addition, auger refusal was encountered between depths of 8 and 9 feet BSG at borings B-2, and B-3, respectively. Auger refusal was estimated to occur due to cobble/boulder material.

Two (2) direct shear tests resulted in an internal angle of frictions of 38 and 46 degrees, with cohesion values of 320 and 0 pound square foot, respectively. Two (2) Atterberg limits tests performed on two (2) near surface samples resulted in plasticity indexes of non-plastic each, with liquid limits values of no-value, respectively. An expansion index test performed on a near surface soil sample resulted in an expansion index of 0 (very low expansion potential).

Soil conditions described in the previous paragraphs are generalized. Therefore, the reader should consult exploratory boring logs included in Appendix A for soil type, color, moisture, consistency, and USCS classification of the materials encountered at specific locations and elevations.

6.2 Groundwater

The test borings were checked for the presence of groundwater during and after the excavation operations. Free groundwater was not encountered during the time of our subsurface investigation.

Based on review of well data provided on the Department of Water Resources Water Data Library website (http://www.wdl.water.ca.gov/), State Well Number (03S04E14J001S) located about 0.1 miles southeast of the project site, reported a historical high groundwater depth of 223.3 feet BSG in August 4, 2015.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

6.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2019 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water. A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be around 150 mg/kg.

ACI 318 Tables 19.3.1.1 and 19.3.2.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 6.3 below.

TABLE 6.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Dissolved Sulfate (SO_4) in Soil % by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Minimum Concrete Compressive Strength	Cementitious Materials Type
0.0150	N/A	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 27 mg/kg. In addition, testing performed on a near surface soil resulted in a minimum resistivity value of 5,497 ohm-centimeters. Based on the results, these soils would be considered to have a "Mildly Corrosive" potential to buried metal objects (per National Association of Corrosion Engineers, Corrosion Severity Ratings).

It is recommended that, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed. Corrosion is dependent upon a complex variety of conditions, which are beyond the Geotechnical practice. Consequently, a qualified corrosion engineer should be consulted if the owner desires more specific recommendations. It is recommended that, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

7. GEOLOGIC SETTING

Regionally the proposed site is situated at the base of the San Jacinto and Santa Rosa Mountains within the northwest portion of the Coachella Valley of Southern California. Near-surface material consists of alluvial fan deposits of sand, silt, gravel, and cobbles derived from erosion of the Mesozoic granitic and metamorphic rocks of the adjacent San Jacinto Mountains. A significant feature within this geomorphic province is the Salton Trough. The Salton Trough is a large northwest-trending structural depression that extends from the San Gorgonio Pass to the Gulf of California. A large portion of this depression in the vicinity of the Salton Sea is below sea level. The Coachella Valley forms the northerly portion of the Salton Trough and contains a thick sequence of sedimentary deposits that are Miocene to Recent in age. Mountains surrounding the Coachella Valley include the Little San Bernardino Mountains to the northeast, foothills of the San Bernardino Mountains to the northwest, and the San Jacinto and Santa Rosa Mountains to the southwest. These mountains expose primarily Precambrian metamorphic and Mesozoic granitic rocks.

Tectonism of the region is dominated by the interaction of the East Pacific Plate and the North American Plate along a transform boundary. The Coachella Valley has been filled with a variable thickness of relatively young, heterogeneous alluvial deposits.

The subject site is mapped by the Geologic Map of the Desert Hot Springs quadrangle, Riverside County, California[1], as underlain by Quaternary age (Holocene Sediments) alluvial deposits mainly comprised of Alluvial sand, and gravelly sand of valley (Qa). The sediments in the project area exposed during the subsurface exploration are generally similar to those mapped in the vicinity of the site, indicate the surface soils consist of various admixtures of sand and silts with various gravel percentages, the Holocene deposits underlain by unconformity of older Pleistocene alluvial fan gravels, sand, cobbles and boulders.

8. GEOLOGIC HAZARDS

8.1 Faulting and Seismicity

Based on the proximity of several dominant active faults and seismogenic structures, as well as the historic seismic record, the area of the subject site is considered subject to relatively high seismicity. The seismic hazard most likely to impact the site is ground-shaking due to a large earthquake on one of the major active regional faults. Moderate to large earthquakes have affected the area of the subject site within historic time.

There are no known active fault traces in the project vicinity. The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D (Default) in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category E.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 33.9107° north; site longitude is -116.5295° west. The closest active faults are summarized below in Table 8.1.

TABLE 8.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
S. San Andreas; NSB+SSB+BG+CO	1.42	7.6
Burnt Mtn	8.11	6.8
Eureka Peak	11.26	6.7
Pinto Mtn	12.00	7.3
S. San Andreas; NSB+SSB	17.05	7.2
S. San Andreas; CO	18.30	7.0
Landers	18.79	7.4
San Jacinto; SBV+SJV+A+CC+B+SM	22.71	7.8
San Jacinto; SBV+SJV	24.04	7.4

[1] Dibblee, T.W., and Minch, J.A., 2004, Geologic Map of the Desert Hot Springs quadrangle, Riverside County,, California, Dibblee Foundation Map DF-121, Scale: 1:24,000.

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
So Emerson-Copper Mtn	25.85	7.1

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

8.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Based on the proximity to mapped fault traces, fault rupture hazard is not a concern for the subject site.

8.3 Ground Shaking

Seismic coefficients and spectral response acceleration values were developed based on the 2022 California Building Code (CBC). The CBC methodology for determining design ground motion values incorporates both probabilistic and deterministic seismic ground motion.

Based on the 2022 CBC, a Site Class D (Default) represents the on-site soil conditions. A table providing the recommended design acceleration parameters for the project site, based on a Site Class D (Default) designation, is included in Section 9.6.1 of this report. Table 9.6.1 includes design seismic coefficients and spectral response parameters, based on the 2022 California Building Code (CBC) for the project foundation design.

Based on the Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps, the estimated design peak ground acceleration adjusted for site class effects (PGA_M) was determined to be 1.250g (based on both probabilistic and deterministic seismic ground motion).

8.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile.

In general, the soils encountered within the depth of 16.5 feet on the project site consisted predominately of medium dense to very dense poorly graded sand with silt with various amounts of gravel to the maximum depths explored of 16.5 feet BSG.

Free groundwater was not encountered in our borings during this investigation. The historically highest groundwater is estimated to be at a depth of greater than 100 feet below ground surface according to regional groundwater data.

Based on review of the California Earthquake Hazard Zone Application (EQ Zapp: California Earthquake Hazards Zone Application) and Hazard Maps, the project site is not located within an area mapped for liquefaction hazards. However, based on the Riverside County GIS (https://gisopendata-countyofriverside.opendata.arcgis.com/datasets/CountyofRiverside) online tool, the site is located within county zone 109, indicating moderate susceptibility to liquefaction potential area. However, the County hazard map states "no groundwater data but, sediments susceptible to liquefaction".

Due to the lack of groundwater in the upper 50 feet the potential for liquefaction to occur is low. However, dry seismic settlement may occur due to a design level earthquake event.

8.5 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relative flat site topography, we judge the likelihood of lateral spreading to be low.

8.6 Landslides

The site is not mapped by CGS in an area of known landslide hazard zone. There are no known landslides located at the site, nor is the site in the path of any known or potential landslides. Landslide deposits were noted to be mapped east of the site, however the site does not appear to be within a former landslide deposit area. Based on the relatively flat nature of the site, we do not consider the potential for a landslide to be a hazard to this project.

8.7 Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a potentially significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

The following recommendations were prepared based on the geotechnical engineering data obtained from the borings and laboratory testing conducted as part of this investigation. It is our understanding that pile load test data may be used to assess the capacities of the soil and the effects of soil-pile interaction. From a geotechnical engineering perspective, in-situ pile testing may be conducted and used as a basis for design for the ground mount solar array, provided that the testing,

design analysis and selection of safety factors are conducted in a rational method determined by the design engineer for the lightly loaded shallow piles supporting the PV systems.

9.1.2 The near surface soils encountered comprised of medium dense to very dense poorly graded sand with silt with various amounts of gravel to the maximum depths explored of 16.5 feet BSG. It should be noted that dense materials encountered below 5 feet BSG. In addition, auger refusal was encountered between depths of 8 and 9 feet BSG at borings B-2, and B-3, respectively. Auger refusal was estimated to occur due to cobble/boulder material.

9.1.3 The site is suitable for support of the proposed improvements utilizing small diameter driven pile foundations, provided the recommendations included in this report are followed. The contractor should note subsurface conditions included very dense materials and possible cobble materials. These soils may result in an increased risk for driving resistance and possible damage to piles during installation. Due to the presence of very dense cobble/boulder material, the Contractor should utilize drilling small diameter pilot holes prior to driving piles.

9.1.4 The near surface soils encountered have a very low expansive potential (EI=0).

9.1.5 Laboratory tests indicate the near surface soils are "mildly corrosive" to buried metal and have a "negligible" corrosive potential of sulfate attack on concrete. It is recommended that, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

9.1.6 Based on the subsurface conditions at the site and the anticipated structural loading, the proposed solar array and associated equipment slabs may be supported using foundations presented in this report.

9.1.7 Provided the recommendations included in this report are followed, we estimate that total settlement due to static loads utilizing shallow spread foundations will be about 1 inch and corresponding differential settlement will about ½ inch between piers/ in 30 feet.

9.1.8 All references to relative compaction and optimum moisture content in this report are based on ASTM D1557 (latest edition).

9.1.9 SALEM Engineering Group, Inc. should be retained to review the project plans as they develop further, provide engineering consultation as-needed, and perform geotechnical observation and testing services during construction.

9.2 Surface Drainage

9.2.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.

9.2.2 All site drainage should be collected and transferred away from improvements in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not

against any foundations or retaining walls. Drainage should not be allowed to flow uncontrolled over any descending slope. The proposed structures should be provided with roof gutters. Discharge from downspouts, roof drains and scuppers are not permitted onto unprotected soils within five feet of the structure perimeter. Planters which are located adjacent to foundations should be sealed or properly drained to prevent moisture intrusion into the materials providing foundation support. Landscape irrigation within 5 feet of the new footings should be kept to a minimum to just support vegetative life.

9.2.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The construction pads should be fine graded such that water is not allowed to pond. Final soil grade should slope a minimum of 2 percent away from structures.

9.3 Site Grading

9.3.1 A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.3.2 A pre-construction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.3.3 Site grading activities shall include removal of all vegetation and demolition of surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. After removal and demolition activities and orchard removal, it is recommended that disturbed soils be over-excavated and the resulted excavation backfilled with on-site or approved imported material compacted as engineered fill.

9.3.4 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.3.5 Surface vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 4 to 6 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, will not be suitable for use as Engineered Fill or within 5 feet of construction pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.3.6 Areas of proposed equipment pads should be prepared by over-excavation to a minimum of 12 inches below the bottom of the equipment pad, or 12 inches below preconstruction site grades, whichever is greater. The over-excavation limits of equipment pad areas should extend to a minimum of 3 feet beyond the equipment pad. The resulting bottom of excavation should be scarified an additional 12 inches, worked until uniform and free from large clods, moisture conditioned to slightly above optimum moisture, and compacted to 92 percent relative compaction.

Equipment pads should be supported on a minimum of 4 inches of class 2 aggregate base over moisture conditioned engineered fill soils prepared in accordance with the recommendations above.

9.3.7 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.3.8 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.3.9 If earthwork occurs during wet season, we anticipate saturated subgrade conditions to adversely affect construction. Grading will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site stabilization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If construction occurs during wet season, it is anticipated the excavated soils and bottom of excavation will be overly saturated. The bottoms of excavation may be stabilized by additional over-excavation of 18 to 30 inches followed by placement of 1½ Class 2 aggregate base or open graded rock fully encapsulated with a geotextile fabric. The top of the stabilization rock should be firm and non-yielding and deeper than at least the depth of engineered fill recommended below foundations. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.3.10 Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation. To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 12 to 30 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 12 to 30 inches of crushed rock

material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. All open graded crushed rock/gravel should be fully encapsulated with a geotextile fabric (such as Mirafi 140N) to minimize migration of soil particles into the voids of the crushed rock. Although it is not required, the use of geogrid (e.g. Tensar BX 1100, BX 1200 or TX 160) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.4 Soil and Excavation Characteristics

9.4.1 Based on the soil conditions encountered in our soil boring, the onsite soils can be excavated with moderate effort using conventional excavation equipment. Very dense materials with possible cobble or boulder sized materials should be anticipated at depths greater than about 4 feet BSG. The Contractor should anticipate the need for a pilot hole to be drilled with a diameter that is 25% less than that of the piles used to support the solar panels.

9.4.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements. Temporary excavations are further discussed in a later Section of this report.

9.4.3 The upper soils encountered in their present condition possess low risk to the proposed construction in terms of possible post-construction settlement if no mitigation measures are employed. No soil removal and re-compaction is required for driven pile foundations. The geotechnical engineer should be consulted if deeper embedment of piles is necessary.

9.5 Materials for Fill

9.5.1 The on-site soils were noted to have relatively low fines content (less than 15 percent). Due to the lack of fines, these soils may be difficult to compact as engineered fill. In the event that compaction of on-site soils is difficult during grading/compaction, on-site soils planned for use as engineered fill may need to be replaced or blended with an approved imported engineered fill. If used as engineered fill, on-site soils should not contain deleterious matter, organic material, or material larger than 3 inches in maximum dimension.

9.5.2 Import soil intended for use as Engineered Fill soil, shall be well-graded, slightly cohesive silty sand or sandy silt. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.5.2.

TABLE 9.5.2 - IMPORT FILL REQUIREMENTS

Percent Passing 3-inch Sieve	100
Percent Passing No.4 Sieve	75-100
Percent Passing No 200 Sieve	15-40
Maximum Plasticity Index	15

Organic Content, Percent by Weight	Less than 3%
Maximum Expansion Index (ASTM D4829)	15

Prior to importing the Contractor should demonstrate to the Owner that the proposed import meets the requirements for import fill specified in this report. In addition, the material should be verified by the Contractor that the soils do not contain any environmental contaminates as regulated by local, state, or federal agencies, as applicable

9.5.3 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in lifts no thicker than will allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.4 Suitable On-Site Soils (minimum 15% fines) used as engineered fill soils should be moisture conditioned to slightly above optimum moisture content, and compacted to at least 92 percent relative compaction.

9.5.5 Import Engineered Fill, should be placed, moisture conditioned to slightly above optimum moisture content, and compacted to at least 92 percent relative compaction.

9.5.6 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.5.7 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.5.8 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5.9 Aggregate base material should meet the requirements of a Caltrans Class 2 Aggregate Base. The aggregate base material should conform to the requirements of Section 26 of the Standard Specifications for Class 2 material, ¾-inch or 1½-inches maximum size. The aggregate base material should be compacted to a minimum relative compaction of 95 percent based ASTM D1557. The aggregate base material should be spread in layers not exceeding 6 inches and each layer of aggregate material course should be tested and approved by the Soils Engineer prior to the placement of successive layers.

9.6 Seismic Design Criteria

9.6.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2022 CBC, our recommended parameters are shown below. These parameters were determined using Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps by location website (https://seismicmaps.org/), in accordance with the 2022 CBC. The Site Class was determined based on the seismic provisions of the 2022 CBC.

TABLE 9.6.1
2022 CBC SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	2016 ASCE 7 or 2022 CBC Reference
Site Coordinates (Datum = NAD 83)		33.9107 Lat -116.5295 Lon	
Site Class	--	D	ASCE 7-16 Table 20.3
Soil Profile Name	--	"Default"	ASCE 7-16 Table 20.3
Risk Category	--	I	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.2	ASCE 7-16 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	1.250g	ASCE 7-16 Equation 11.8-1
Seismic Design Category	SDC	E	ASCE 7-16 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	2.507 g	CBC Figure 1613.2.1(1)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	1.028 g	CBC Figure 1613.2.1(3)
Site Class Modified Site Coefficient	F_a	1.2	CBC Table 1613.2.3(1)
Site Class Modified Site Coefficient	F_v	**1.700 ***	CBC Table 1613.2.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	3.009 g	CBC Equation 16-20
MCE Spectral Response Acceleration (1.0 sec. period) $1.5*S_{M1} = 1.5*(F_v S_1)$	$1.5*S_{M1}$	**2.619** g*	ASCE 7-16 11.4-2/ Supplement 3
Design Spectral Response Acceleration $S_{DS}=⅔S_{MS}$ (short period - 0.2 sec)	S_{DS}	2.006 g	CBC Equation 16-22
Design Spectral Response Acceleration $S_{D1}=⅔S_{M1}$ (1.0 sec. period)	S_{D1}	**1.746 g***	CBC Equation 16-23
Short Period Transition Period (S_{D1}/S_{DS}), Seconds	T_S	0.870	ASCE 7-16, Section 11.4.6
Long Period Transition period (seconds)	T_L	8	ASCE 7-16, Figures 22-14 through 22-17

Note: *** Values Fv, SM1, and SD1 determined per ASCE Table 11.4.2 for use in calculating TS only. Site Specific Ground Motion Analysis was not included in the scope of this investigation. Per ASCE 11.4.8, Structures on Site Class D, with S_1 greater than or equal to 0.2 may require Site Specific Ground Motion Analysis. The value reported for S_{M1} includes a 50% increase in accordance with exceptions listed in ASCE 7-16 - Supplement 3. In the event a site specific ground motion analysis is required, SALEM should be contacted for these services.**

9.6.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

9.7 Small Diameter Driven Pile Foundations (For Solar Array)

9.7.1 Solar arrays may be supported using driven steel piles (small diameter H-piles, C-Shape Piles, etc.). **Driven piles should have a minimum embedment depth of 6 feet BSG. The upper 1 foot should be neglected in design**.

Resistant soils and possible cobbles and/or boulders should be anticipated below depths greater than 4 feet BSG. If damage due to driving piles is encountered, a pilot hole may be drilled with a diameter that is 25% less than that of the piles used to support the solar panels.

9.7.2 The allowable downward load capacity of the driven piles (below 1 foot BSG), may be designed based on an allowable skin friction value of 125 pounds per square foot. An allowable end bearing of 2,500 pounds per square foot may be considered for design. The effective area in calculating the pile capacity should be the outer perimeter dimensions of the pile section (e.g, for a W6 x 6 x 15, the effective side friction area should be 4 sides multiplied by 6" per foot of pile length embedded into the soil). An increase of one-third may be applied when using the alternate load combination in Section 1605.3.2 of the 2022 CBC that includes wind or earthquake loads.

9.7.3 Uplift loads can be resisted by piles using 50 percent of the allowable downward side friction plus the weight of the pile.

9.7.4 The total settlement of the pile is not expected to exceed 1 inch. Differential settlement between adjacent piles should be less than ½ inch.

9.7.5 Passive resistance in the upper portion of the driven piles, to a depth of 1 foot, should be neglected in design. The driven piles may be designed for an allowable lateral capacity of 350 pounds per square foot per foot of depth below the lowest adjacent grade to a maximum of 3,500 pounds per square foot. The passive pressure for driven piles spaced at a minimum of three (3) pile diameters may be applied over a width equal to two (2) pile diameters. No other increases should be applied to the allowable passive pressure. An increase of one-third may be applied when using the alternate load combination in Section 1605.3.2 of the 2022 CBC that includes wind or earthquake loads.

9.7.6 If desired, the driven piles may be designed using LPILE and the parameters presented in Table 9.7.6.

TABLE 9.7.6
LPILE PARAMETERS

Depths, Feet BSG	L-Pile Soil Type	Effective Unit Weight (pcf)	Friction Angle, Phi	Static Modulus of Subgrade Reaction, K (pci)
1-16.5	Sand (Reese)	125	38	90

The upper 1 foot should be neglected in design

9.8 Concrete Equipment Slabs-on-Grade

9.8.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading.

9.8.2 Equipment slabs supported on a minimum of 4 inches of aggregate base over subgrade soils prepared in accordance with the recommendations included in section 9.3 of this report may be designed based on an allowable bearing capacity of 1,500 pounds per square foot. A structural engineer should recommend the thickness and reinforcement details based on a total static settlement of 1 inch and ½ inch in 30 feet or across the diameter of the slab, whichever is less.

9.8.3 Equipment slabs should include a thickened edge extending to the bottom of the recommended aggregate base section.

9.8.4 The lateral resistance for equipment slab may be designed based on an allowable fluid passive pressure of 350 pounds per cubic foot. This value may be increased by 1/3 for wind and seismic loading. The bottom surface of concrete slabs may be designed based on an allowable coefficient of friction of 0.36.

9.8.5 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.8.6 The moisture content of the subgrade soils should be verified to be between 1 and 4 percent above optimum prior to placement of the non-expansive engineered fill section.

9.9 Temporary Excavations

9.9.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA "Type C" soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.9.2 It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

9.9.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.9.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in Table 9.9.4 below.

TABLE 9.9.4
RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	1½:1
10-15	2:1

9.9.5 If, due to space limitation, excavations near existing structures are performed in a vertical position, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.9.6 Braced shorings should be designed for a maximum uniform pressure distribution of 25H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.9.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.10 Underground Utilities

9.10.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 90 percent relative compaction at or above optimum moisture content. The upper 12 inches of trench backfill within asphalt or concrete paved areas shall be moisture conditioned to at or above optimum moisture content and compacted to at least 95 percent relative compaction.

9.10.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 12 inches above the crown of the pipe. Pipe bedding, haunches and initial fill extending to 1 foot above the pipe should consist of a clean well graded sand with 100 percent passing the #4 sieve, a maximum of 15 percent passing the #200 sieve, and a minimum sand equivalent of 20.

9.10.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the new structures to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.10.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material. SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement.

10.2.3 SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the borings excavated at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear during construction, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

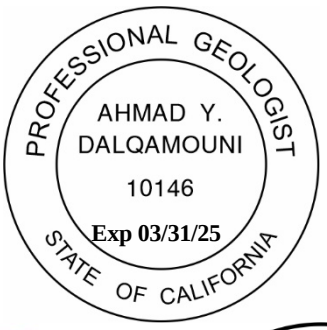
If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 271-9700.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.



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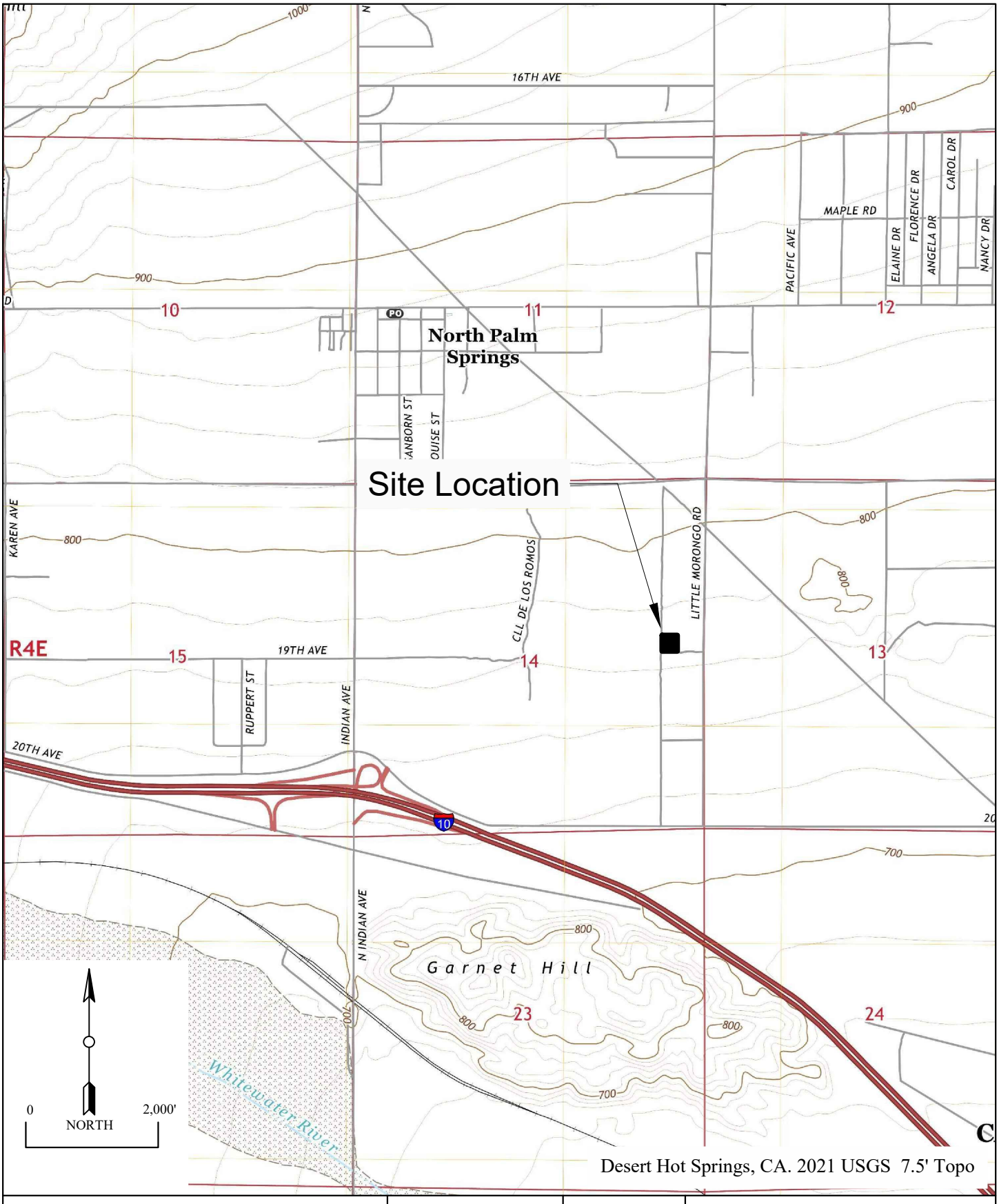
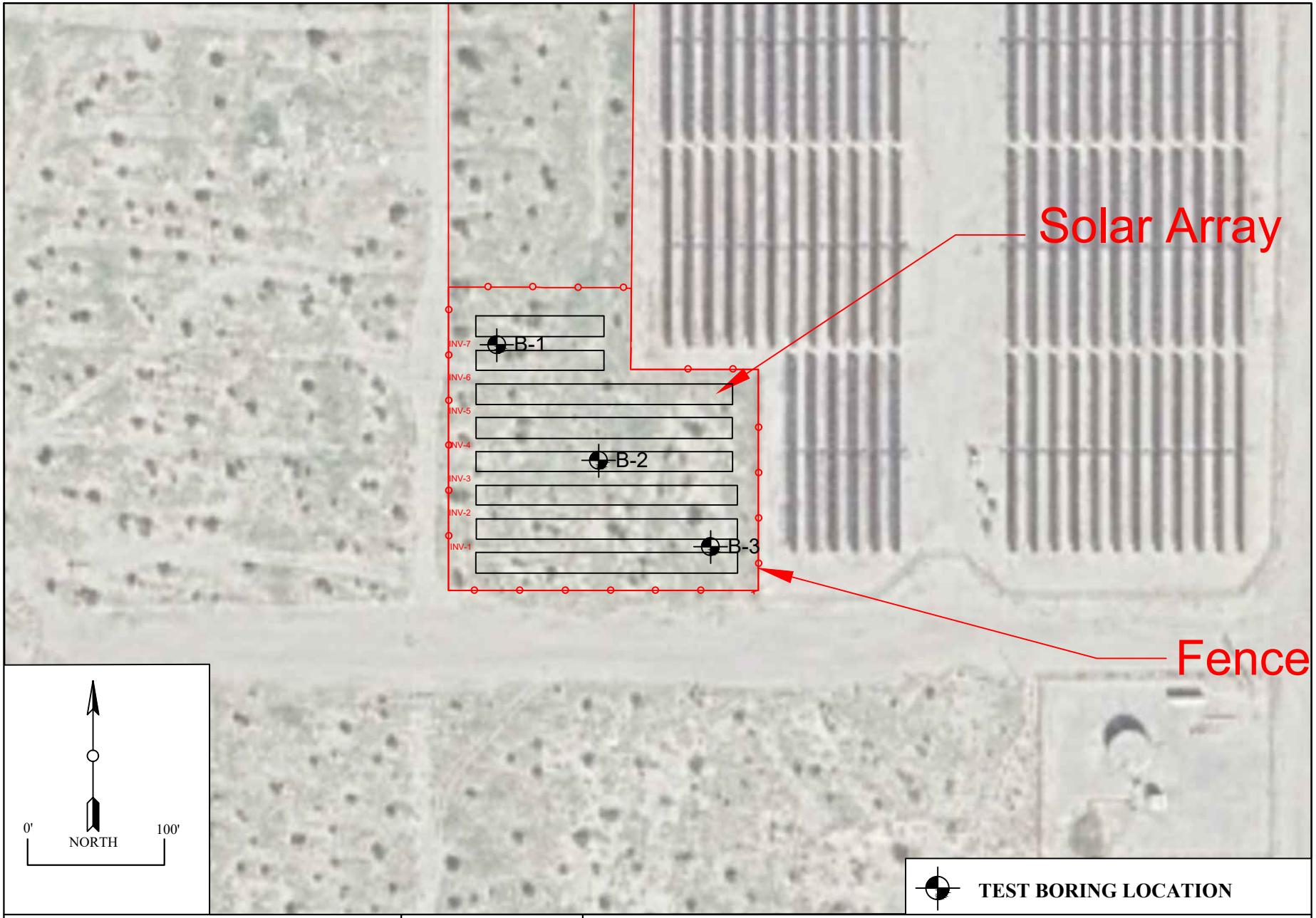


Desert Hot Springs, CA. 2021 USGS 7.5' Topo

VICINITY MAP	SCALE: 1 : 2000'	DATE: Dec. 2024	SALEM engineering group, inc.
PROPOSED GROUND MOUNT SOLAR SITE - NANCY WRIGHT RWR 0.52 MILES NW OF INTERSECTION OF LITTLE MORONGO ROAD & 20TH AVENUE DESERT HOT SPRINGS, CALIFORNIA	DRAWN BY: VT	APPROVED BY: DL	
	PROJECT NO. 3-224-1144	FIGURE NO. 1	



SITE PLAN

PROPOSED GROUND MOUNT SOLAR SITE - NANCY WRIGHT RWR
0.52 MILES NW OF INTERSECTION OF LITTLE MORONGO ROAD & 20TH AVENUE
DESERT HOT SPRINGS, CALIFORNIA

SCALE: 1" = 100'	DATE: Dec. 2024	
DRAWN BY: VT	APPROVED BY: DL	
PROJECT NO. 3-224-1144	FIGURE NO. 2	

SALEM engineering group, inc.

APPENDIX

A

APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation was conducted on December 26, 2024 and included a site visit, subsurface exploration, and soil sampling. The locations of the exploratory borings are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

Our borings were drilled using a truck-mounted CME-55 drilling rig. Sampling was accomplished by driving a 2-inch Standard Penetration Test (SPT) sampler and/or a 3-inch outside diameter Modified California Sampler (MCS) 18 inches into the soil. Penetration and/or Resistance tests were performed at selected depths. The resistance/N-Value obtained from driving was recorded based on the number of blows required to penetrate the last 12 inches. The driving energy was provided by an auto-trip hammer weighing 140 pounds, falling 30 inches. Relatively undisturbed MCS soil samples were obtained while performing this test. Bag samples of the disturbed soil were obtained from the SPT samples and auger cuttings. All samples were returned to our Fresno laboratory for evaluation. The test borings were backfilled with excavated soil upon completion of drilling and sampling.

Subsurface conditions encountered in the test borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

Test Boring: B-1 **Page** 1 **Of:** 1

Project Number: 3-244-1144

Date: 12/26/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array Site ID: - Nancy Wright RWR

Location: 1380 feet NW of 19011 Little Morongo Road, Desert Hot Springs, CA.

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 757ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
0 / 756	3/6 7/6 10/6	SP-SM	Poorly Graded SAND with Silt; medium dense, light brown, dry to damp, fine to coarse grained.	17	2.3		ø = 38° c' = 320 psf SAND = 87% -#200 = 12%
3 / 753							
6	4/6 5/6 6/6			11	0.6		
750	14/6 18/6 16/6		dense, with gravel and rock fragments.	34	0.5		SAND = 70% -#200 = 12% +#4 = 18% PI = non-plastic
9 / 747	45/6 23/6 20/6			43	0.5		
12 / 744							
15 / 741	8/6 12/6 15/6		medium dense, trace gravel and silt.	27	0.8		SAND = 89% -#200 = 8% +#4 = 3%
			End of boring at 16.5ft. BSG				

Notes:

Figure Number A-1

SALEM engineering group, inc.

Test Boring: B-2 **Page** 1 **Of:** 1

Project Number: 3-244-1144

Date: 12/26/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array Site ID: - Nancy Wright RWR

Location: 1380 feet NW of 19011 Little Morongo Road, Desert Hot Springs, CA.

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 757ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
0 / 756	3/6 6/6 6/6	SP-SM	Poorly Graded SAND with Silt; medium dense, light brown, slightly damp, fine to coarse grained.	12	0.5	-- --	
3 / 753	12/6 15/6 15/6		Grades as above; fine to coarse grained.	30	0.6	--	
6 / 750	34/6 33/6 23/6		Grades as above; very dense, with gravel and rock fragments.	56	0.5	--	
9 / 747			Auger refusal at 9 feet BSG, due to boulders and dense materials.				
12 / 744							
15 / 741							

Notes:

Figure Number A-2

Test Boring: B-3 **Page** 1 **Of:** 1

Project Number: 3-244-1144

Date: 12/26/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array Site ID: - Nancy Wright RWR

Location: 1380 feet NW of 19011 Little Morongo Road, Desert Hot Springs, CA.

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 757ft. AMSL

Auger Type: 6 5/8 in. Hollow Stem **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
0 / 756	6/6 7/6 10/6	SP-SM	Poorly Graded SAND with Silt; medium dense, light brown, dry to damp, fine to coarse	17	--	--	ø = 46° c' = 0 EI = 0 PI = non-plastic
3 / 753							
6 / 750	13/6 14/6 15/6		Grades as above;	29	0.9	112.7	
9 / 747			Auger refusal at 8 feet BSG, due to boulders and dense materials.				
12 / 744							
15 / 741							

Notes:

Figure Number A-3

KEY TO SYMBOLS

Symbol Description

Strata symbols

Poorly graded sand with silt

Soil Samplers

California sampler

Standard penetration test

Notes:

Granular Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very loose	<5	<4
Loose	5-15	4-10
Medium dense	16-40	11-30
Dense	41-65	31-50
Very dense	>65	>50

Cohesive Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very soft	<3	<2
Soft	3-5	2-4
Firm	6-10	5-8
Stiff	11-20	9-15
Very Stiff	21-40	16-30
Hard	>40	>30

MCS = Modified California Sampler
SPT = Standard Penetration Test Sampler

APPENDIX

B

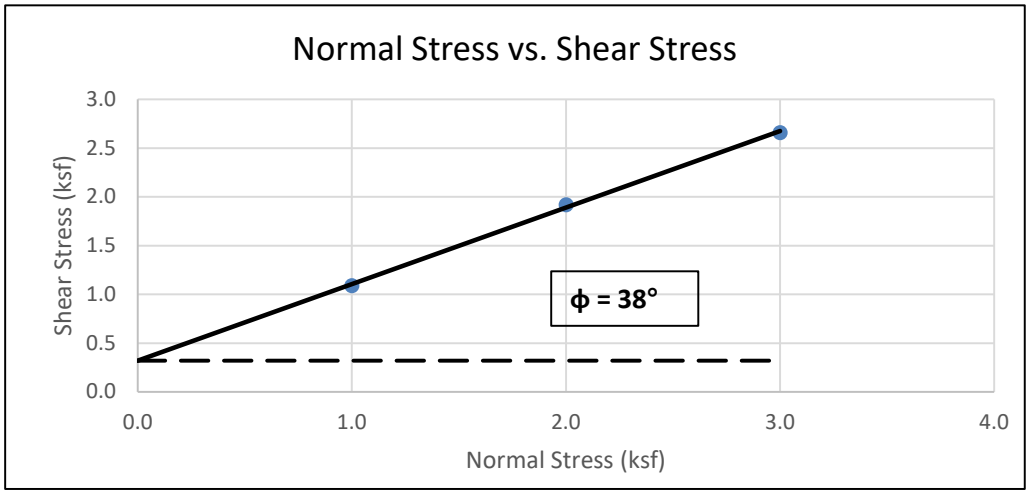
APPENDIX B
LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ moisture content, corrosivity, consolidation, shear strength, expansion index, soil resistivity, plasticity index, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

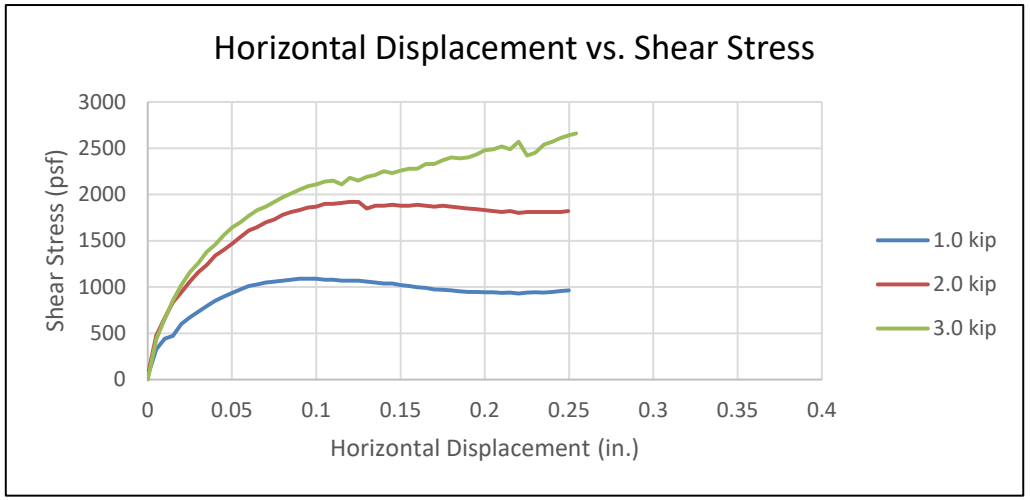
Direct Shear Test (ASTM D3080)

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Client:
Boring: B-1 @ 0 - 3'
Soil Type: Poorly Graded SAND wi
Sample Type: Undisturbed Ring
Tested By: MC
Reviewed By:
Date of Test: 1/6/25
Test Equipment: GeoComp ShearTrac II

	Loading		
	1.0 kip	**2.0 kip**	**3.0 kip**
Normal Stress (ksf)	1.00	2.00	3.00
Shear Rate (in/min)	0.0040	0.0040	0.0040
Peak Shear Stress (ksf)	1.09	1.92	2.66



Initial Height of Sample (in)	1.000	1.000	1.000
Post-Consol. Sample Height (in.)	0.985	0.972	0.958
Post-Shear Sample Height (in.)	0.990	0.969	0.941
Diameter of Sample (in)	2.4	2.4	2.4
Initial (pre-shear) Values			
Moisture Content (%)		8.7	
Dry Density (pcf)	114.8	110.8	108.1
Saturation %	51.7	46.3	43.1
Void Ratio	0.45	0.50	0.54
Consolidated Void Ratio	0.43	0.46	0.48
Final (post-shear) Values			
Final Moisture Content (%)	18.0	18.9	19.4
Dry Density (pcf)	112.5	110.1	110.1
Saturation %	86.0	85.1	87.4
Void Ratio	0.56	0.59	0.59



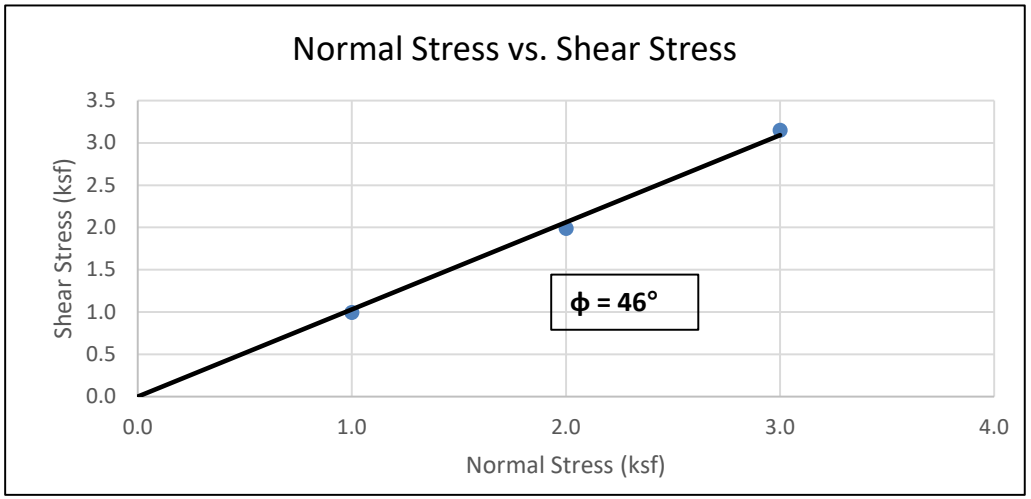
Peak Shear Strength Values	
Slope	0.79
Friction Angle	38
Cohesion (psf)	320

SALEM engineering group, inc.
4729 W. Jacquelyn Ave.
Fresno, CA 93722

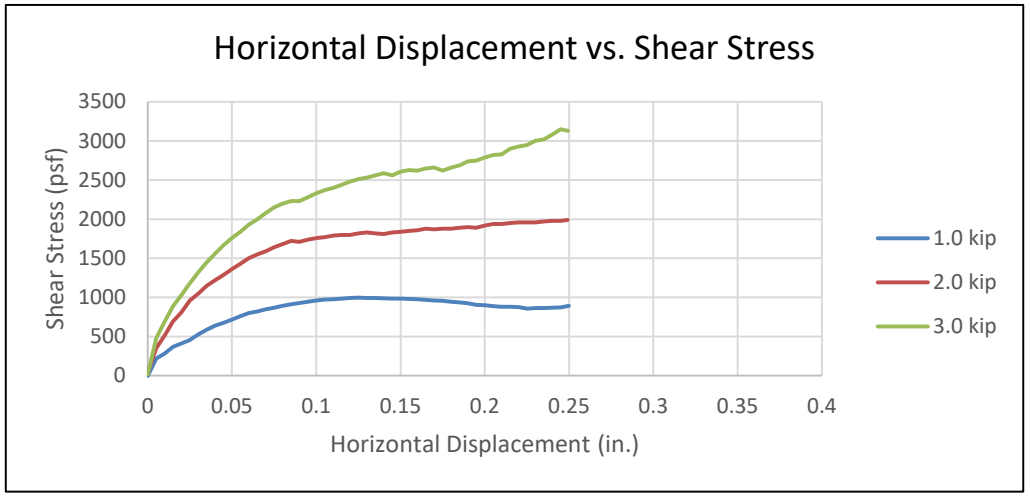
Direct Shear Test (ASTM D3080)

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Client:
Boring: B-3 @ 5'
Soil Type: Poorly Graded SAND wi
Sample Type: Undisturbed Ring
Tested By: MC / NL
Reviewed By:
Date of Test: 1/6/25
Test Equipment: GeoComp ShearTrac II

	Loading		
	1.0 kip	**2.0 kip**	**3.0 kip**
Normal Stress (ksf)	1.00	2.00	3.00
Shear Rate (in/min)	0.0040	0.0040	0.0040
Peak Shear Stress (ksf)	1.00	1.99	3.15



Initial Height of Sample (in)	1.000	1.000	1.000
Post-Consol. Sample Height (in.)	0.970	0.968	0.961
Post-Shear Sample Height (in.)	0.974	0.953	0.951
Diameter of Sample (in)	2.4	2.4	2.4
Initial (pre-shear) Values			
Moisture Content (%)		7.2	
Dry Density (pcf)	107.8	108.3	109.1
Saturation %	35.1	35.6	36.3
Void Ratio	0.55	0.54	0.53
Consolidated Void Ratio	0.50	0.49	0.47
Final (post-shear) Values			
Final Moisture Content (%)	20.0	18.0	17.6
Dry Density (pcf)	106.6	109.0	111.3
Saturation %	77.8	78.2	79.0
Void Ratio	0.69	0.61	0.59



Peak Shear Strength Values	
Slope	1.03
Friction Angle	46
Cohesion (psf)	0

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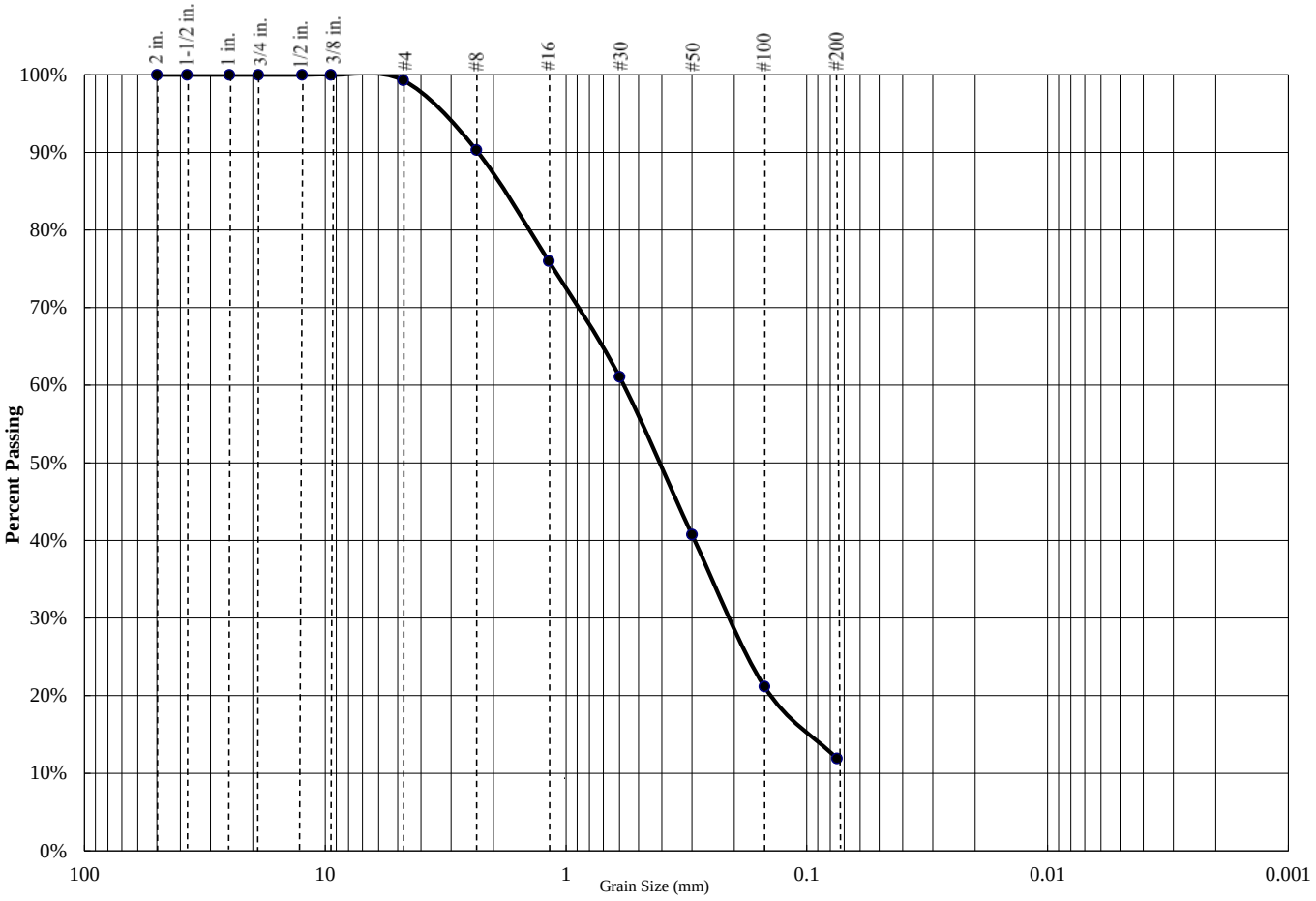
Fresno, CA 93722

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	87%	12%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	99.3%
#8	90.3%
#16	76.0%
#30	61.1%
#50	40.8%
#100	21.2%
#200	11.9%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt (SP-SM)

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA

Project Number: 3-224-1144

Boring: B-1 @ 0 - 3'

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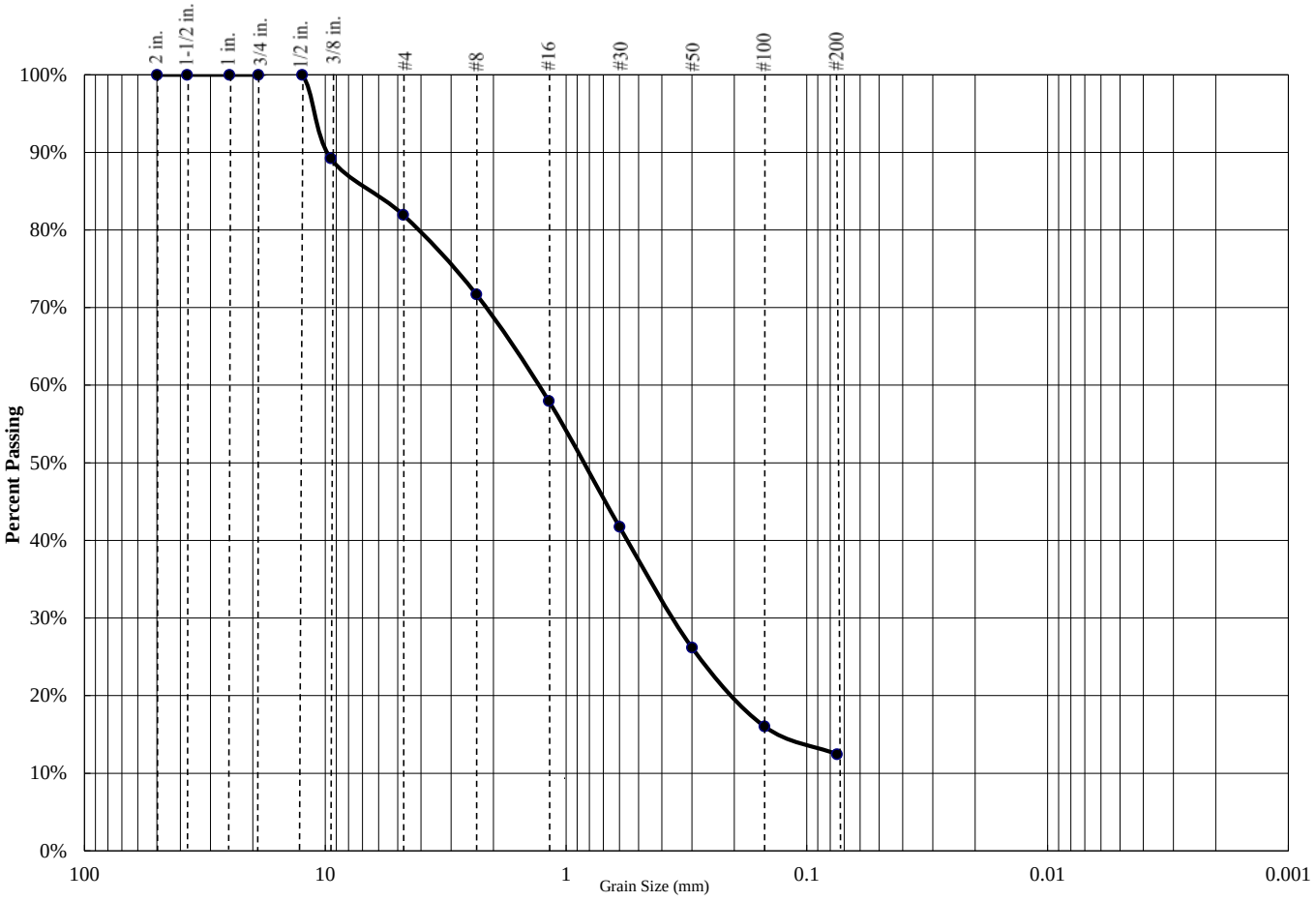
PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
18%	70%	12%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	89.2%
#4	82.0%
#8	71.7%
#16	58.0%
#30	41.8%
#50	26.2%
#100	16.0%
#200	12.5%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt (SP-SM)

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA

Project Number: 3-224-1144

Boring: B-1 @ 7'

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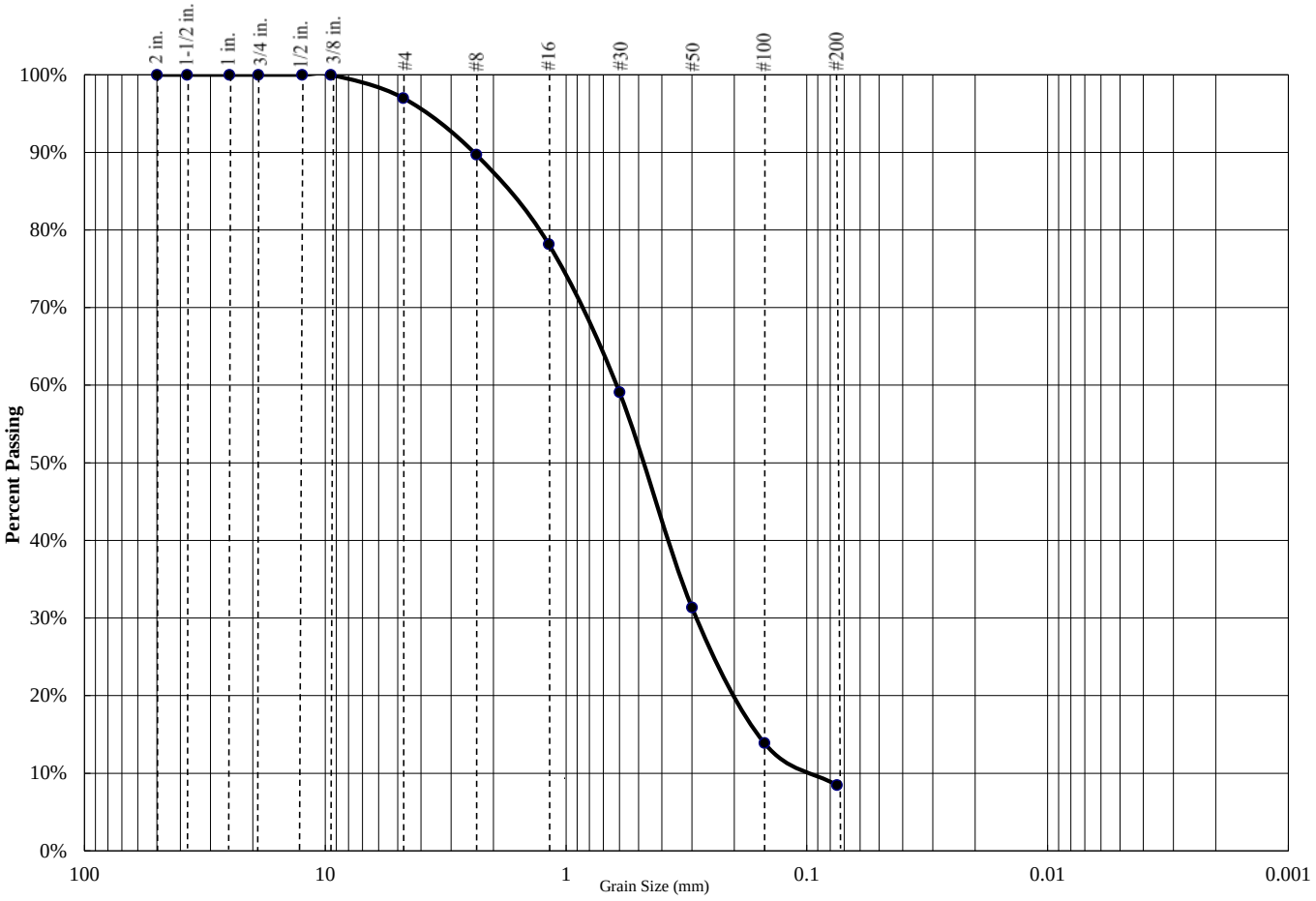
PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
3%	89%	8%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	97.0%
#8	89.7%
#16	78.2%
#30	59.1%
#50	31.4%
#100	13.9%
#200	8.5%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt (SP-SM)

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA

Project Number: 3-224-1144

Boring: B-1 @ 15'

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Atterberg Limits Determination

ASTM D4318

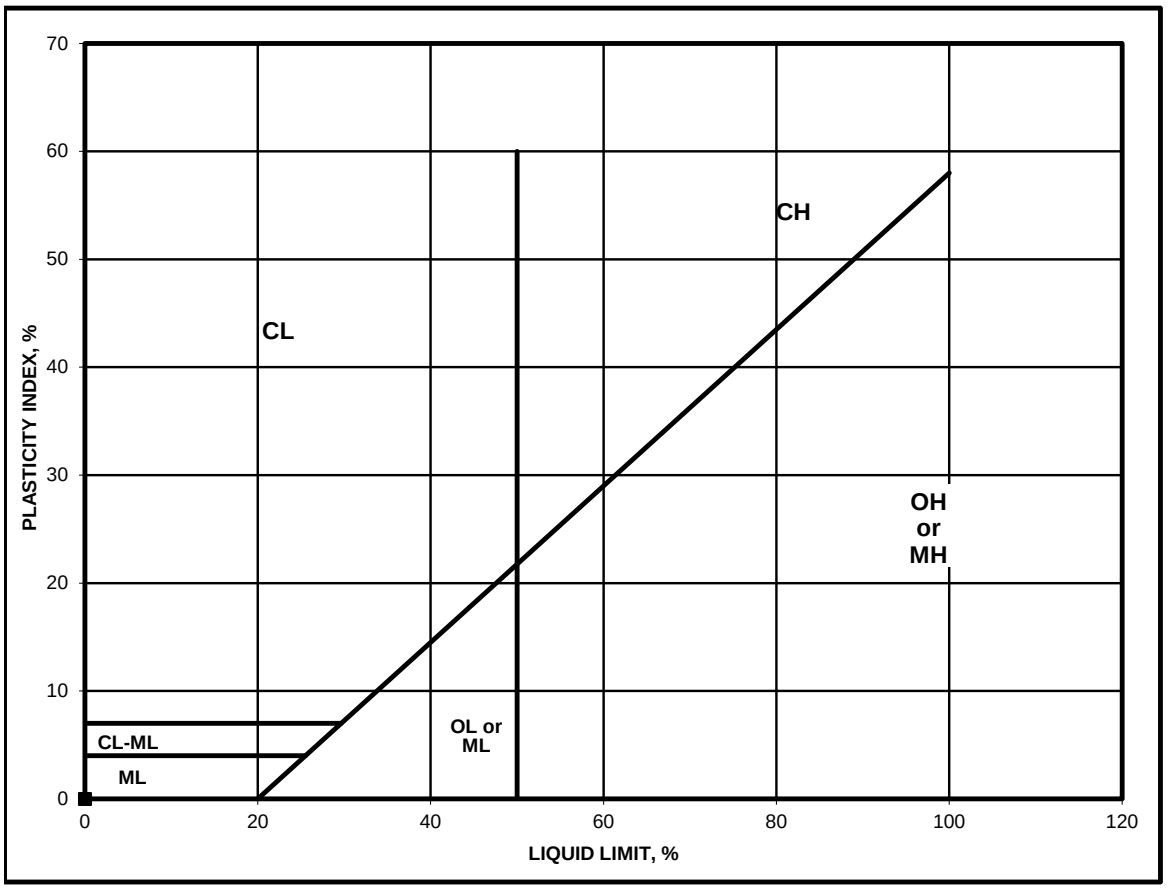
Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Date Sampled: 12/26/24 Date Tested: 1/6/25
Sampled By: SEG Tested By: MC
Sample Location: B-1 @ 0 - 3'

Run Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare						
Weight of Dry Soil & Tare						
Weight of Water						
Weight of Tare	Does Not Roll			Slides on Cup		
Weight of Dry Soil						
Water Content						
Number of Blows						

Plastic Limit : **Liquid Limit :**

Plasticity Index : Non - Plastic

Unified Soil Classification :



SALEM engineering group, inc.

Atterberg Limits Determination

ASTM D4318

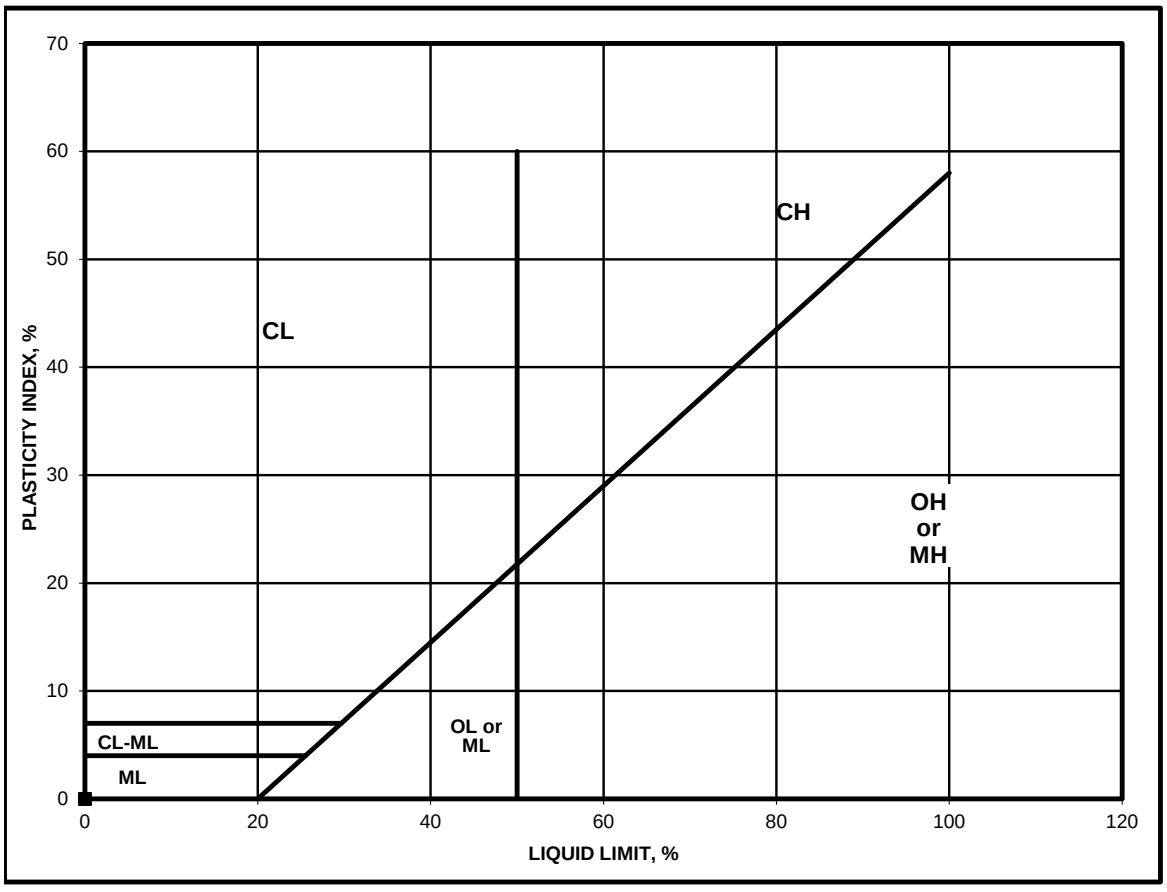
Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Date Sampled: 12/26/24 Date Tested: 1/6/25
Sampled By: SEG Tested By: MC
Sample Location: B-1 @ 7'

Run Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare						
Weight of Dry Soil & Tare						
Weight of Water						
Weight of Tare	Does Not Roll			Slides on Cup		
Weight of Dry Soil						
Water Content						
Number of Blows						

Plastic Limit : **Liquid Limit :**

Plasticity Index : Non - Plastic

Unified Soil Classification :



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EXPANSION INDEX TEST
ASTM D4829

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Date Sampled: 12/26/24 Date Tested: 1/3/25
Sampled By: SEG Tested By: DD
Sample Location: B-3 @ 0 - 3'
Soil Description: Poorly Graded SAND with Silt (SP-SM)

Trial #	1	2	3
Weight of Soil & Mold, g.	588.2		
Weight of Mold, g.	187.8		
Weight of Soil, g.	400.4		
Wet Density, pcf	120.8		
Weight of Moisture Sample (Wet), g.	870.0		
Weight of Moisture Sample (Dry), g.	795.1		
Moisture Content, %	9.4		
Dry Density, pcf	110.4		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	48.3		

Time	Inital	30 min	1 hr	6 hrs	12 hrs	24 hrs
Dial Reading	0	-0.0027	-0.0029	--	--	-0.0036

Expansion Index $_{measured}$ = 0
Expansion Index $_{50}$ = 0.0

Expansion Index = 0

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

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CHEMICAL ANALYSIS

SO_4 - Modified CTM 417 & Cl - Modified CTM 417/422

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144
Date Sampled: 12/26/24 Date Tested: 1/3/25
Sampled By: SEG Tested By: DD
Soil Description: Poorly Graded SAND with Silt (SP-SM)

Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-3 @ 0 - 3'	160 mg/kg	25 mg/kg	7.9
1b.	B-3 @ 0 - 3'	150 mg/kg	32 mg/kg	7.9
1c.	B-3 @ 0 - 3'	140 mg/kg	23 mg/kg	7.9
Average:		**150 mg/kg**	**27 mg/kg**	**7.9**

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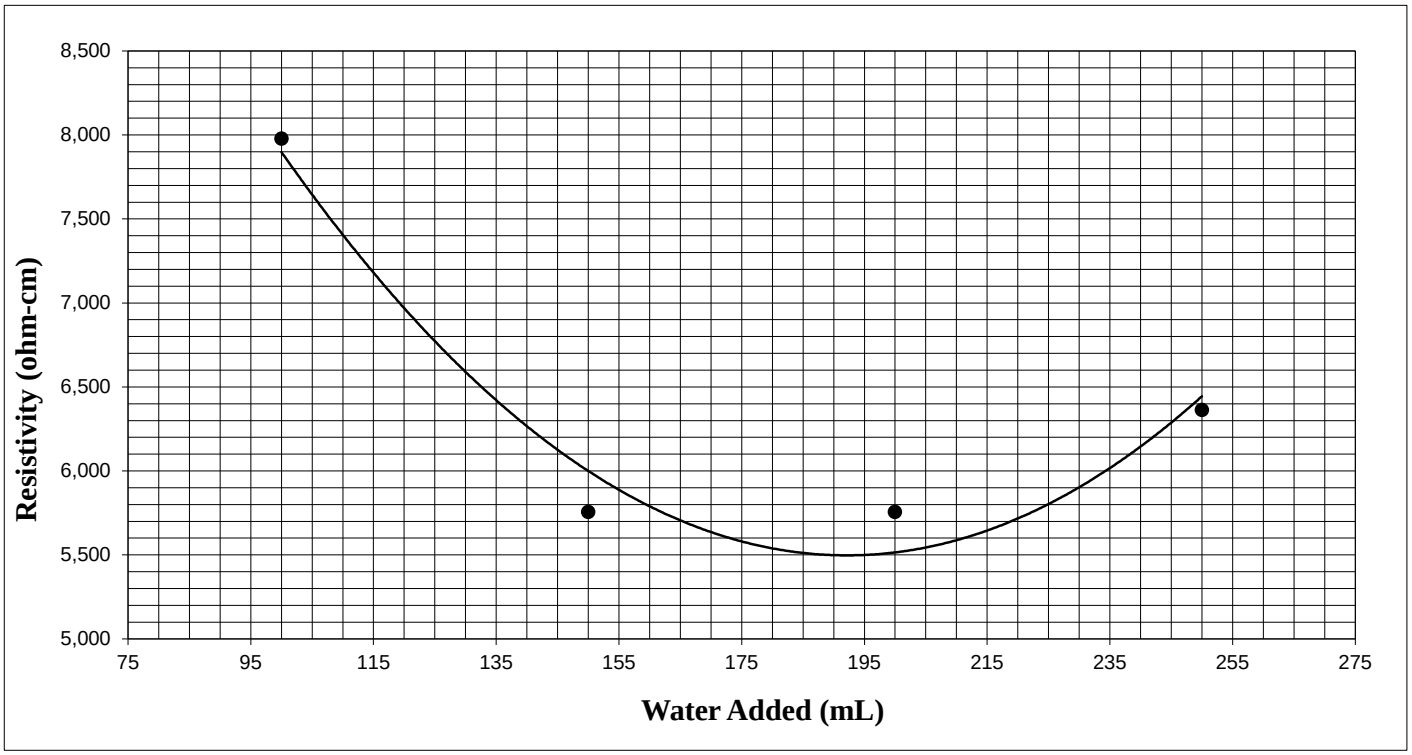
SOIL RESISTIVITY
CTM 643

Project Name: GM Solar Site Nancy Wright RWR - Desert Hot Springs, CA
Project Number: 3-224-1144 Date Sampled: 12/26/24
Sample Location: B-3 @ 0 - 3' Sampled By: SEG
Soil Description: Poorly Graded SAND with Silt (SP Date Tested: 1/7/25 Tested By: MC

Chloride Content:	27	mg/Kg	Initial Sample Weight:	700	gms
Sulfate Content:	150	mg/Kg	Test Box Constant:	1.010	cm
Soil pH:	7.9				

Test Data:

Trial #	Water Added (mL)	Meter Dial Reading	Multiplier Setting	Resistance (ohms)	Resistivity (ohm-cm)
1	100	7.9	1,000	7,900	7,979
2	150	5.7	1,000	5,700	5,757
3	200	5.7	1,000	5,700	5,757
4	250	6.3	1,000	6,300	6,363



Minimum Resistivity:	**5,497** ohm-cm

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APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term “Standard Specifications”: hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

APPENDIX 5b

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED 2640.0 KW TRACKING GROUND MOUNT SOLAR ARRAY
SITE NAME: LITTLE MORONGO RES-BCT
NEAR COORDINATES: 33.9128, -116.5288
19011 LITTLE MORONGO ROAD
DESERT HOT SPRINGS, CALIFORNIA

SALEM PROJECT NO. 3-224-1145
JANUARY 10, 2025

PREPARED FOR:

MR. PUNEET MISHRA
STATEN SOLAR CORP, INC.
175 NORTECH PARKWAY
SAN JOSE, CALIFORNIA

PREPARED BY:

SALEM ENGINEERING GROUP, INC.
4729 W. JACQUELYN AVENUE
FRESNO, CA 93722
P: (559) 271-9700
F: (559) 275-0827

SALEM engineering group, inc.

4729 W. Jacquelyn Avenue
Fresno, CA 93722
Phone (559) 271-9700
Fax (559) 275-0827

January 10, 2025 Project No. 3-224-1145

Mr. Puneet Mishra
Staten Solar, Inc.
175 Nortech Parkway
San Jose, California

Subject: GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED TRACKING GROUND MOUNT SOLAR ARRAY
SITE NAME: LITTLE MORONGO RES-BCT
19011 LITTLE MORONGO ROAD
NEAR COORDINATES: 33.9128, -116.5288
DESERT HOT SPRINGS, CALIFORNIA

Dear Mr. Mishra:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this geotechnical engineering investigation report for the site of the proposed tracking ground mount solar array to be located around 1850 feet north of address 19011 Little Morongo Road, near the coordinates 33.9128, -116.5288, Desert Hot Springs, California. The project consists of the installation of a solar array with single axis tracker solar panel system.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (559) 271-9700.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Ahmad Dalqamouni, PG, Ph.D., M.CE
Geotechnical Project Engineer
PG 10146

Dean B. Ledgerwood II, PE, PG, CEG
Geotechnical Manager
PE 94395 / PG 8725 / CEG 2613

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APPENDIX C – EARTHWORK AND PAVEMENT SPECIFICATIONS

SALEM engineering group, inc.

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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED 2640.0 KW TRACKING GROUND MOUNT SOLAR ARRAY
NEAR LATITUDE AND LONGITUDE OF 33.9128, -116.5288
19011 LITTLE MORONGO ROAD
DESERT HOT SPRINGS, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our geotechnical engineering investigation for the site of the proposed tracking ground mount solar array to be located approximately 1850 feet north of address 19011 Little Morongo Road, near latitude and longitude of 33.9128, -116.5288, in Desert Hot Springs, California as depicted on Figure 1, Vicinity Map.

SALEM Engineering Group, Inc. (SALEM) has completed this geotechnical engineering investigation with the purpose to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed. The recommendations presented herein are based on analysis of the data obtained during the investigation and our local experience with similar soil and geologic conditions.

If project details vary significantly from those described herein, SALEM Engineering Group, Inc. (SALEM) should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. SITE LOCATION AND DESCRIPTION

The project site is site is located in a rectangular shape undeveloped land, near latitude and longitude of 33.9128, -116.5288 in Desert Hot Springs, California. The immediate array site lies approximately 1,850 feet north of address 19011 Little Morongo Road, and lies north of existing fenced solar panel power plant. The project area is relatively flat, appeared to have not been previously leveled or developed, and the site area covered with gravel, cobble size rocks, sandy soils, with desert bushes and scattered desert native plants.

The overall solar array site area is bounded to the south side by chain link fence, and an existing solar array area, and, bounded from the west and south by vacant undeveloped desert land. Bounded from the east by gravel/dirt extension of Little Morongo road, and desert land beyond. It should be noted, electric power poles were observed within the eastern surrounding areas and along the Little Morongo Road.

Based on review of available aerial imagery, the area of the existing solar array appears to be graded for the existing solar array after July 2016. The area of proposed solar has not developed before. The overall

site elevation can vary between about 774 and 778 feet above mean sea level (AMSL), based on Google Earth Imagery.

3. PROJECT DESCRIPTION

We understand that the project include: the installation of a 2640.0 kW-DC Single Axis Tracking solar array at vacant lot northern of existing solar panel plant. The solar array will cover an area of about 6.9 acres lot area, based on google earth measurements. Structural load information and other final details pertaining to the structures are unavailable. The total number of solar panels is unknown at this time. Construction will include equipment pads for inverters and associated equipment.

Based on previous similar projects, it is understood that the PV system structure will be supported on driven piles extending to approximate depths of about 6 feet below existing grade. Foundation dead loads (DL) are light to moderate. A maximum deflection of 1 inch at ground level is considered in pile design.

A site grading plan was not available at the time of preparation of this report. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified.

The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings B-1 thru B-8, were drilled on December 27, 2024, within the project area of the proposed solar array at the approximate locations shown on Figure No. 2, Site Plan. The test borings were advanced with truck- mounted CME 55 drill rig equipped with 6 5/8 inch hollow stem augers.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer at that time. Visual classification of the materials encountered in the test borings was generally made in accordance with the Unified Soil Classification System (ASTM D2487). The boring locations can be found on the Site Plan, attached at the end of this report.

A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The Test Boring Log is presented in Appendix "A." The Boring Log includes the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test boring was determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Log in Appendix "A" should be consulted. Subsurface soil samples were obtained by driving a Modified California sampler (MCS) and a Standard Penetration Test (SPT) sampler. Penetration resistance blow counts were obtained by dropping an automated 140-pound trip hammer through a 30-inch free fall to drive the sampler to a maximum depth of 18 inches. The number of blows required to drive the last 12 inches is recorded as Penetration Resistance (blows/foot) on the logs of the boring. In case very high penetration resistance is encountered, the number of blows recorded may be for less than 12 inches.

Soil samples were obtained from the test boring at the depths shown on the boring logs. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, expansion index, plasticity index, and gradation of the materials encountered. In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. SOIL AND GROUNDWATER CONDITIONS

6.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the near surface soils encountered comprised of loose to very dense poorly graded sand with silt or silty sand with various amounts of gravel to the maximum depths explored of 15 feet BSG. It should be noted that dense materials encountered below 2 feet BSG. In addition, auger refusal was encountered at various depths including 8.5, 7.5, 14.25, 9 and 7.25 feet BSG at borings B-2, B-3, B-4, B-5 and B-7, respectively.

Two (2) direct shear tests resulted in an internal angle of frictions of 40 and 43 degrees, with cohesion values of 0 and 11 pound square foot, respectively. Two (2) Atterberg limits tests performed on two (2) near surface samples resulted in plasticity indexes of non-plastic each, with liquid limits values of no-value, respectively. An expansion index test performed on a near surface soil sample resulted in an expansion index of 0 (very low expansion potential).

Soil conditions described in the previous paragraphs are generalized. Therefore, the reader should consult exploratory boring logs included in Appendix A for soil type, color, moisture, consistency, and USCS classification of the materials encountered at specific locations and elevations.

6.2 Groundwater

The test borings were checked for the presence of groundwater during and after the excavation operations. Free groundwater was not encountered during the time of our subsurface investigation.

Based on review of well data provided on the Department of Water Resources Water Data Library website (http://www.wdl.water.ca.gov/), State Well Number (03S04E14J001S) located about 0.17 miles south of the project site, reported a historical high groundwater depth of 223.3 feet BSG in August 4, 2015.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

6.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2019 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water. A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be around 103 mg/kg.

ACI 318 Tables 19.3.1.1 and 19.3.2.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 6.3 below.

TABLE 6.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Dissolved Sulfate (SO_4) in Soil % by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Minimum Concrete Compressive Strength	Cementitious Materials Type
0.0103	N/A	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 15 mg/kg. In addition, testing performed on a near surface soil resulted in a minimum resistivity value of 16,160 ohm-centimeters. Based on the results, these soils would be considered to have a “Negligible” corrosive potential to buried metal objects (per National Association of Corrosion Engineers, Corrosion Severity Ratings).

It is recommended that, at a minimum, applicable manufacturer’s recommendations for corrosion protection of buried metal pipe be closely followed. Corrosion is dependent upon a complex variety of conditions, which are beyond the Geotechnical practice. Consequently, a qualified corrosion engineer should be consulted if the owner desires more specific recommendations. It is recommended that, at a minimum, applicable manufacturer’s recommendations for corrosion protection of buried metal pipe be closely followed.

7. GEOLOGIC SETTING

Regionally the proposed site is situated at the base of the San Jacinto and Santa Rosa Mountains within the northwest portion of the Coachella Valley of Southern California. Near-surface material consists of alluvial fan deposits of sand, silt, gravel, and cobbles derived from erosion of the Mesozoic granitic and metamorphic rocks of the adjacent San Jacinto Mountains. A significant feature within this geomorphic province is the Salton Trough. The Salton Trough is a large northwest-trending structural depression that extends from the San Gorgonio Pass to the Gulf of California. A large portion of this depression in the vicinity of the Salton Sea is below sea level. The Coachella Valley forms the northerly portion of the Salton Trough and contains a thick sequence of sedimentary deposits that are Miocene to Recent in age. Mountains surrounding the Coachella Valley include the Little San Bernardino Mountains to the northeast, foothills of the San Bernardino Mountains to the northwest, and the San Jacinto and Santa Rosa Mountains to the southwest. These mountains expose primarily Precambrian metamorphic and Mesozoic granitic rocks.

Tectonism of the region is dominated by the interaction of the East Pacific Plate and the North American Plate along a transform boundary. The Coachella Valley has been filled with a variable thickness of relatively young, heterogeneous alluvial deposits.

The subject site is mapped by the Geologic Map of the Desert Hot Springs quadrangle, Riverside County, California[1], as underlain by Quaternary age (Holocene Sediments) alluvial deposits mainly comprised of Alluvial sand, and gravelly sand of valley (Qa). The sediments in the project area exposed during the subsurface exploration are generally similar to those mapped in the vicinity of the site, indicate the surface soils consist of various admixtures of sand and silts with various gravel percentages, the Holocene deposits underlain by unconformity of older Pleistocene alluvial fan gravels, sand, cobbles and boulders.

8. GEOLOGIC HAZARDS

8.1 Faulting and Seismicity

Based on the proximity of several dominant active faults and seismogenic structures, as well as the historic seismic record, the area of the subject site is considered subject to relatively high seismicity. Based on review of the California Earthquake Hazard Zone application (EQ Zapp: California Earthquake Hazards Zone Application), the project site is located within the San Andreas Fault earthquake hazard zone, San Bernardino Mountains section (South Branch SAF) designated by the State of California. A site specific fault rupture study was not included within the scope of this investigation. The potential for fault rupture hazard is discussed further in section 8.2 of this report.

Soils on site are classified as Site Class D (Default) in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category E.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 33.9128° north; site longitude is -116.5288° west. The closest active faults are summarized below in Table 8.1.

TABLE 8.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
S. San Andreas; NSB+SSB+BG+CO	1.56	7.6
Burnt Mtn	8.05	6.8
Eureka Peak	11.18	6.7
Pinto Mtn	11.87	7.3
S. San Andreas; NSB+SSB	17.06	7.2
S. San Andreas; CO	18.33	7.0
Landers	18.65	7.4
San Jacinto; SBV+SJV+A+CC+B+SM	22.85	7.8
San Jacinto; SBV+SJV	24.13	7.4

[1] Dibblee, T.W., and Minch, J.A., 2004, Geologic Map of the Desert Hot Springs quadrangle, Riverside County,, California, Dibblee Foundation Map DF-121, Scale: 1:24,000.

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
So Emerson-Copper Mtn	25.73	7.1

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

8.2 Surface Fault Rupture

The site is mapped within a currently established State of California Earthquake Fault Zone (Garlock Fault Zone) for surface fault rupture hazards. The nearest mapped trace of the San Andreas SA –South Branch (San Bernardino Mountains) Fault is mapped and cross the northeast portion of the site. Based on the proximity to mapped fault traces, fault rupture hazard could be a concern for the subject site. Any geologic/fault rupture hazard reports associated with the proposed development should be provided to SALEM for review.

Based on our understanding of the AP Zoning Act [PRC 2621.5(b) and 2321.6 (a)], regulation of fault hazards is intended for improvements intended for human occupancy or where loss of human life should be considered. Furthermore, based on our understanding of the 2022 CBC, Chapter 3, Section 312, solar systems and carport structures are considered to have an accessory characterization and would fall under occupancy category Group U, "Utility and Miscellaneous", where the potential for life hazard is considered incidental to their occupancy. Therefore, based on our understanding of the Solar Arrays Systems occupancy rating, and the AP Zoning Act, evaluation of fault rupture hazards is not required by the 2022 California Building Code or Public Resource Code.

8.3 Ground Shaking

Seismic coefficients and spectral response acceleration values were developed based on the 2022 California Building Code (CBC). The CBC methodology for determining design ground motion values incorporates both probabilistic and deterministic seismic ground motion.

Based on the 2022 CBC, a Site Class D (Default) represents the on-site soil conditions. A table providing the recommended design acceleration parameters for the project site, based on a Site Class D (Default) designation, is included in Section 9.6.1 of this report. Table 9.6.1 includes design seismic coefficients and spectral response parameters, based on the 2022 California Building Code (CBC) for the project foundation design.

Based on the Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps, the estimated design peak ground acceleration adjusted for site class effects (PGA_M) was determined to be 1.247g (based on both probabilistic and deterministic seismic ground motion).

8.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. Due

to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile.

In general, the soils encountered within the depth of 15 feet on the project site consisted predominately of loose to very dense poorly graded sand with silt or silty sand with various amounts of gravel to the maximum depths explored of 15 feet BSG. It should be noted that dense materials encountered below 2 feet BSG. In addition, auger refusal was encountered at various depths including 8.5, 7.5, 14.25, 9 and 7.25 feet BSG at borings B-2, B-3, B-4, B-5 and B-7, respectively.

Free groundwater was not encountered in our borings during this investigation. The historically highest groundwater is estimated to be at a depth of greater than 100 feet below ground surface according to regional groundwater data.

Based on review of the California Earthquake Hazard Zone Application (EQ Zapp: California Earthquake Hazards Zone Application) and Hazard Maps, the project site is not located within an area mapped for liquefaction hazards. However, based on the Riverside County GIS (https://gisopendata-countyofriverside.opendata.arcgis.com/datasets/CountyofRiverside) online tool, the site is located within county zone 109, indicating moderate susceptibility to liquefaction potential area. However, the County hazard map states “no groundwater data but, sediments susceptible to liquefaction”. Due to the lack of groundwater in the upper 50 feet the potential for liquefaction to occur is low. However, dry seismic settlement may occur due to a design level earthquake event.

8.5 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relative flat site topography, we judge the likelihood of lateral spreading to be low.

8.6 Landslides

The site is not mapped by CGS in an area of known landslide hazard zone. There are no known landslides located at the site, nor is the site in the path of any known or potential landslides. Landslide deposits were noted to be mapped east of the site, however the site does not appear to be within a former landslide deposit area. Based on the relatively flat nature of the site, we do not consider the potential for a landslide to be a hazard to this project.

8.7 Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a potentially significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

The following recommendations were prepared based on the geotechnical engineering data obtained from the borings and laboratory testing conducted as part of this investigation. It is our understanding that pile load test data may be used to assess the capacities of the soil and the effects of soil-pile interaction. From a geotechnical engineering perspective, in-situ pile testing may be conducted and used as a basis for design for the ground mount solar array, provided that the testing, design analysis and selection of safety factors are conducted in a rational method determined by the design engineer for the lightly loaded shallow piles supporting the PV systems.

9.1.2 The near surface soils encountered comprised of loose to very dense poorly graded sand with silt or silty sand with various amounts of gravel to the maximum depths explored of 15 feet BSG. It should be noted that dense materials encountered below 2 feet BSG. In addition, auger refusal was encountered at various depths including 8.5, 7.5, 14.25, 9 and 7.25 feet BSG at borings B-2, B-3, B-4, B-5 and B-7, respectively. Groundwater was not encountered at the time of our investigation.

9.1.3 The site is suitable for support of the proposed improvements utilizing small diameter driven pile foundations, provided the recommendations included in this report are followed. The contractor should note subsurface conditions included very dense materials and possible cobble materials. These soils may result in an increased risk for driving resistance and possible damage to piles during installation. Due to the presence of very dense cobble/boulder material, the Contractor should anticipate damage to piles may occur during installation. The Contractor my utilize drilling small diameter pilot holes prior to driving piles.

9.1.4 The near surface soils encountered have a very low expansive potential (EI=0).

9.1.5 Laboratory tests indicate the near surface soils are having “Negligible” corrosivity to buried metal and have a “negligible” corrosive potential of sulfate attack on concrete. It is recommended that, at a minimum, applicable manufacturer’s recommendations for corrosion protection of buried metal pipe be closely followed.

9.1.6 Based on the subsurface conditions at the site and the anticipated structural loading, the proposed solar array and associated equipment slabs may be supported using foundations presented in this report.

9.1.7 Provided the recommendations included in this report are followed, we estimate that total settlement due to static loads utilizing shallow spread foundations will be about 1 inch and corresponding differential settlement will about ½ inch between piers/ in 30 feet.

9.1.8 All references to relative compaction and optimum moisture content in this report are based on ASTM D1557 (latest edition).

9.1.9 SALEM Engineering Group, Inc. should be retained to review the project plans as they develop further, provide engineering consultation as-needed, and perform geotechnical observation and testing services during construction.

9.2 Surface Drainage

9.2.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.

9.2.2 All site drainage should be collected and transferred away from improvements in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundations or retaining walls. Drainage should not be allowed to flow uncontrolled over any descending slope. The proposed structures should be provided with roof gutters. Discharge from downspouts, roof drains and scuppers are not permitted onto unprotected soils within five feet of the structure perimeter. Planters which are located adjacent to foundations should be sealed or properly drained to prevent moisture intrusion into the materials providing foundation support. Landscape irrigation within 5 feet of the new footings should be kept to a minimum to just support vegetative life.

9.2.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The construction pads should be fine graded such that water is not allowed to pond. Final soil grade should slope a minimum of 2 percent away from structures.

9.3 Site Grading

9.3.1 A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.3.2 A pre-construction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.3.3 Site grading activities shall include removal of all vegetation and demolition of surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. After removal and demolition activities

and orchard removal, it is recommended that disturbed soils be over-excavated and the resulted excavation backfilled with on-site or approved imported material compacted as engineered fill.

9.3.4 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.3.5 Surface vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 4 to 6 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, will not be suitable for use as Engineered Fill or within 5 feet of construction pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.3.6 Areas of proposed equipment pads should be prepared by over-excavation to a minimum of 12 inches below the bottom of the equipment pad, or 12 inches below preconstruction site grades, whichever is greater. The over-excavation limits of equipment pad areas should extend to a minimum of 3 feet beyond the equipment pad. The resulting bottom of excavation should be scarified an additional 12 inches, worked until uniform and free from large clods, moisture conditioned to slightly above optimum moisture, and compacted to 92 percent relative compaction.

Equipment pads should be supported on a minimum of 4 inches of class 2 aggregate base over moisture conditioned engineered fill soils prepared in accordance with the recommendations above.

9.3.7 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.3.8 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.3.9 If earthwork occurs during wet season, we anticipate saturated subgrade conditions to adversely affect construction. Grading will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site stabilization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If construction occurs during wet season, it is anticipated the excavated soils and bottom of excavation will be overly saturated. The bottoms of excavation may be stabilized by additional over-excavation of 18 to 30 inches followed by placement of 1½ Class 2 aggregate base or open graded rock fully encapsulated with a geotextile fabric. The top of the stabilization rock should be firm and non-yielding and deeper than at least the depth of engineered fill recommended below foundations. If the construction

schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.3.10 Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation. To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 12 to 30 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 12 to 30 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. All open graded crushed rock/gravel should be fully encapsulated with a geotextile fabric (such as Mirafi 140N) to minimize migration of soil particles into the voids of the crushed rock. Although it is not required, the use of geogrid (e.g. Tensar BX 1100, BX 1200 or TX 160) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.4 Soil and Excavation Characteristics

9.4.1 Based on the soil conditions encountered in our soil boring, the onsite soils can be excavated with moderate effort using conventional excavation equipment. Very dense materials should be anticipated at depths greater than about 2 feet BSG. The Contractor should anticipate the need for a pilot hole to be drilled with a diameter that is 25% less than that of the piles used to support the solar panels.

9.4.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements. Temporary excavations are further discussed in a later Section of this report.

9.4.3 The upper soils within the project site are identified primarily as clayey sands. Encountered soils in their present condition possess low to moderate risk to the proposed construction in terms of possible post-construction settlement if no mitigation measures are employed. No soil removal and re-compaction is required for driven pile foundations. The geotechnical engineer should be consulted if deeper embedment of piles is necessary.

9.5 Materials for Fill

9.5.1 The on-site soils were noted to have relatively low fines content (less than 15 percent). Due to the lack of fines, these soils may be difficult to compact as engineered fill. In the event that compaction of on-site soils is difficult during grading/compaction, on-site soils planned for use as engineered fill may need to be replaced or blended with an approved imported engineered fill. If used as engineered fill, on-site soils should not contain deleterious matter, organic material, or material larger than 3 inches in maximum dimension.

9.5.2 Import soil intended for use as Engineered Fill soil, shall be well-graded, slightly cohesive silty sand or sandy silt. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.5.2.

TABLE 9.5.2 - IMPORT FILL REQUIREMENTS

Percent Passing 3-inch Sieve	100
Percent Passing No.4 Sieve	75-100
Percent Passing No 200 Sieve	15-40
Maximum Plasticity Index	15
Organic Content, Percent by Weight	Less than 3%
Maximum Expansion Index (ASTM D4829)	15

Prior to importing the Contractor should demonstrate to the Owner that the proposed import meets the requirements for import fill specified in this report. In addition, the material should be verified by the Contractor that the soils do not contain any environmental contaminates as regulated by local, state, or federal agencies, as applicable

9.5.3 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in lifts no thicker than will allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.4 Suitable On-Site Soils (minimum 15% fines) used as engineered fill soils should be moisture conditioned to slightly above optimum moisture content, and compacted to at least 92 percent relative compaction.

9.5.5 Import Engineered Fill, should be placed, moisture conditioned to slightly above optimum moisture content, and compacted to at least 92 percent relative compaction.

9.5.6 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.5.7 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.5.8 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5.9 Aggregate base material should meet the requirements of a Caltrans Class 2 Aggregate Base. The aggregate base material should conform to the requirements of Section 26 of the Standard Specifications for Class 2 material, ¾-inch or 1½-inches maximum size. The aggregate base material should be compacted to a minimum relative compaction of 95 percent based ASTM D1557. The aggregate base material should be spread in layers not exceeding 6 inches and each layer of aggregate material course should be tested and approved by the Soils Engineer prior to the placement of successive layers.

9.6 Seismic Design Criteria

9.6.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2022 CBC, our recommended parameters are shown below. These parameters were determined using Office of Statewide Health Planning and Development (OSHPD) Seismic Design Maps by location website (https://seismicmaps.org/), in accordance with the 2022 CBC. The Site Class was determined based on the seismic provisions of the 2022 CBC.

TABLE 9.6.1
2022 CBC SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	2016 ASCE 7 or 2022 CBC Reference
Site Coordinates (Datum = NAD 83)		33.9128 Lat -116.5288 Lon	
Site Class	--	D	ASCE 7-16 Table 20.3
Soil Profile Name	--	"Default"	ASCE 7-16 Table 20.3
Risk Category	--	I	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.2	ASCE 7-16 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	1.247g	ASCE 7-16 Equation 11.8-1
Seismic Design Category	SDC	E	ASCE 7-16 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	2.507 g	CBC Figure 1613.2.1(1)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	1.02 g	CBC Figure 1613.2.1(3)
Site Class Modified Site Coefficient	F_a	1.2	CBC Table 1613.2.3(1)
Site Class Modified Site Coefficient	F_v	**1.700 ***	CBC Table 1613.2.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	3.008 g	CBC Equation 16-20
MCE Spectral Response Acceleration (1.0 sec. period) $1.5*S_{M1} = 1.5*(F_v S_1)$	$1.5*S_{M1}$	**2.601** g*	ASCE 7-16 11.4-2/ Supplement 3
Design Spectral Response Acceleration $S_{DS}=⅔S_{MS}$ (short period - 0.2 sec)	S_{DS}	2.005 g	CBC Equation 16-22

Seismic Item	Symbol	Value	2016 ASCE 7 or 2022 CBC Reference
Design Spectral Response Acceleration S_{D1}=⅔S_{M1} (1.0 sec. period)	S_{D1}	**1.734 g***	CBC Equation 16-23
Short Period Transition Period (S_{D1}/S_{DS}), Seconds	T_S	0.865	ASCE 7-16, Section 11.4.6
Long Period Transition period (seconds)	T_L	8	ASCE 7-16, Figures 22-14 through 22-17

Note: *** Values Fv, SM1, and SD1 determined per ASCE Table 11.4.2 for use in calculating TS only. Site Specific Ground Motion Analysis was not included in the scope of this investigation. Per ASCE 11.4.8, Structures on Site Class D, with S_1 greater than or equal to 0.2 may require Site Specific Ground Motion Analysis. The value reported for S_{M1} includes a 50% increase in accordance with exceptions listed in ASCE 7-16 - Supplement 3. In the event a site specific ground motion analysis is required, SALEM should be contacted for these services.**

9.6.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

9.7 Small Diameter Driven Pile Foundations (For Solar Array)

9.7.1 Solar arrays may be supported using driven steel piles (small diameter H-piles, C-Shape Piles, etc.). **Driven piles should have a minimum embedment depth of 6 feet BSG. The upper 1 foot should be neglected in design**.

Resistant soils and possible cobbles should be anticipated below depths greater than 3 feet BSG. If damage due to driving piles is encountered, a pilot hole may be drilled with a diameter that is 25% less than that of the piles used to support the solar panels.

9.7.2 The allowable downward load capacity of the driven piles (below 1 foot BSG), may be designed based on an allowable skin friction value of 125 pounds per square foot. An allowable end bearing of 2,500 pounds per square foot may be considered for design. The effective area in calculating the pile capacity should be the outer perimeter dimensions of the pile section (e.g, for a W6 x 6 x 15, the effective side friction area should be 4 sides multiplied by 6" per foot of pile length embedded into the soil). An increase of one-third may be applied when using the alternate load combination in Section 1605.3.2 of the 2022 CBC that includes wind or earthquake loads.

9.7.3 Uplift loads can be resisted by piles using 50 percent of the allowable downward side friction plus the weight of the pile.

9.7.4 The total settlement of the pile is not expected to exceed 1 inch. Differential settlement between adjacent piles should be less than ½ inch.

9.7.5 Passive resistance in the upper portion of the driven piles, to a depth of 1 foot, should be neglected in design. The driven piles may be designed for an allowable lateral capacity of 350 pounds per square foot per foot of depth below the lowest adjacent grade to a maximum of 3,500 pounds per square foot. The passive pressure for driven piles spaced at a minimum of three (3) pile diameters may be applied over a width equal to two (2) pile diameters. No other increases should be applied to the allowable passive pressure. An increase of one-third may be applied when using the alternate load combination in Section 1605.3.2 of the 2022 CBC that includes wind or earthquake loads.

9.7.6 If desired, the driven piles may be designed using LPILE and the parameters presented in Table 9.7.6.

TABLE 9.7.6
LPILE PARAMETERS

Depths, Feet BSG	L-Pile Soil Type	Effective Unit Weight (pcf)	Friction Angle, Phi	Static Modulus of Subgrade Reaction, K (pci)
1-15	Sand (Reese)	125	40	90

The upper 1 foot should be neglected in design

9.8 Concrete Equipment Slabs-on-Grade

9.8.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading.

9.8.2 Equipment slabs supported on a minimum of 4 inches of aggregate base over subgrade soils prepared in accordance with the recommendations included in section 9.3 of this report may be designed based on an allowable bearing capacity of 1,500 pounds per square foot. A structural engineer should recommend the thickness and reinforcement details based on a total static settlement of 1 inch and ½ inch in 30 feet or across the diameter of the slab, whichever is less.

9.8.3 Equipment slabs should include a thickened edge extending to the bottom of the recommended aggregate base section.

9.8.4 The lateral resistance for equipment slab may be designed based on an allowable fluid passive pressure of 350 pounds per cubic foot. This value may be increased by 1/3 for wind and seismic loading. The bottom surface of concrete slabs may be designed based on an allowable coefficient of friction of 0.40.

9.8.5 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.8.6 The moisture content of the subgrade soils should be verified to be between 1 and 4 percent above optimum prior to placement of the non-expansive engineered fill section.

9.9 Temporary Excavations

9.9.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA “Type C” soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved “competent person” onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.9.2 It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

9.9.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.9.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in Table 9.9.4 below.

TABLE 9.9.4
RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	1½:1
10-15	2:1

9.9.5 If, due to space limitation, excavations near existing structures are performed in a vertical position, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.9.6 Braced shorings should be designed for a maximum uniform pressure distribution of 20H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.9.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.10 Underground Utilities

9.10.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 90 percent relative compaction at or above optimum moisture content. The upper 12 inches of trench backfill within asphalt or concrete paved areas shall be moisture conditioned to at or above optimum moisture content and compacted to at least 95 percent relative compaction.

9.10.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 12 inches above the crown of the pipe. Pipe bedding, haunches and initial fill extending to 1 foot above the pipe should consist of a clean well graded sand with 100 percent passing the #4 sieve, a maximum of 15 percent passing the #200 sieve, and a minimum sand equivalent of 20.

9.10.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the new structures to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.10.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material. SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement.

10.2.3 SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the borings excavated at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated. If variations then appear during construction, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

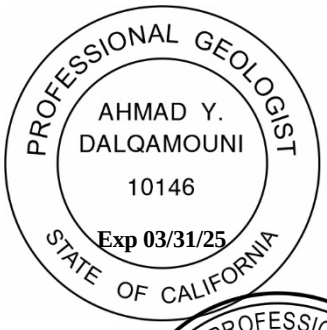
If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

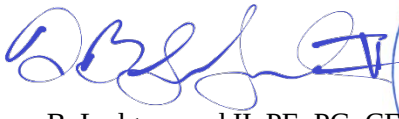
If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 271-9700.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

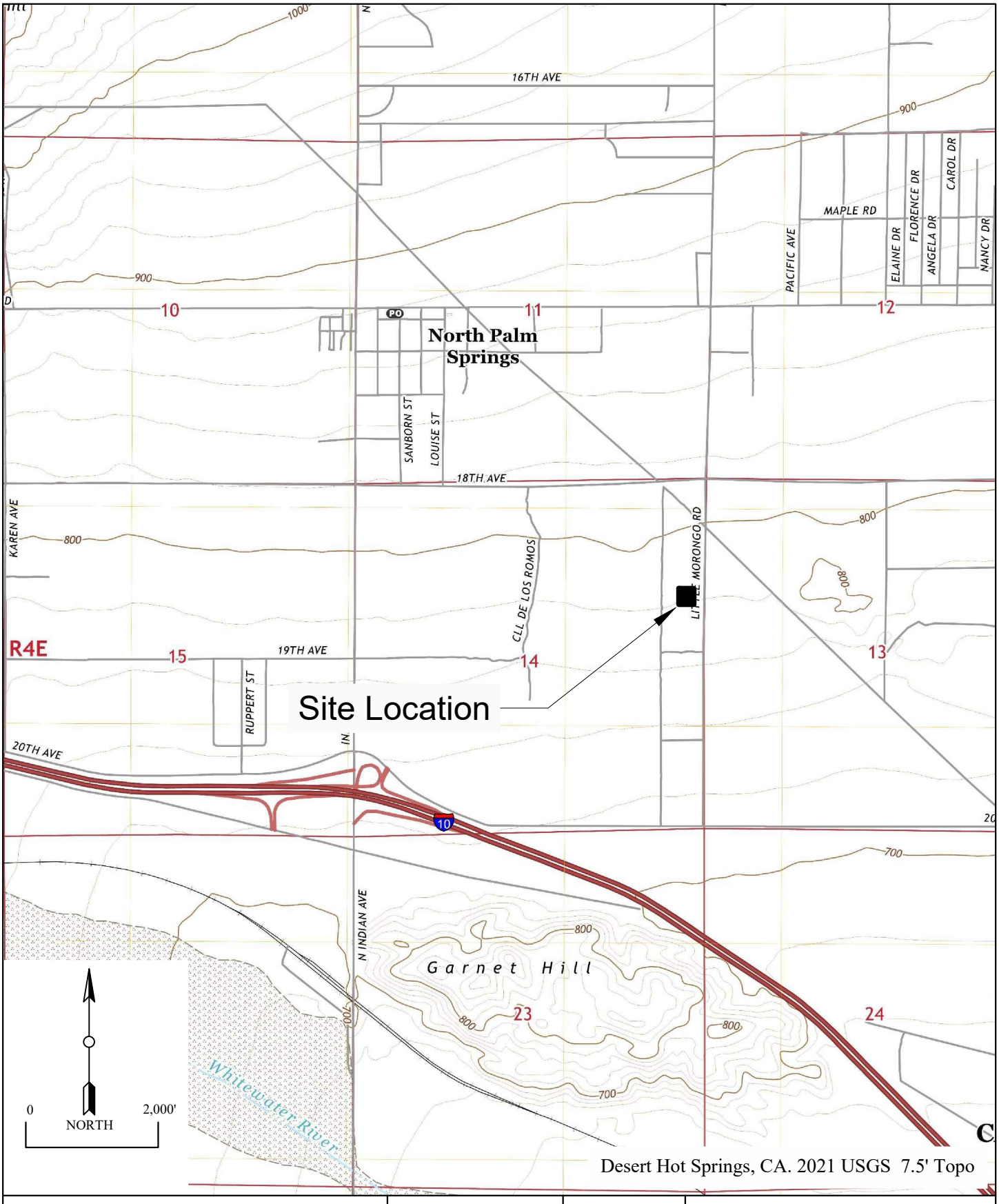


Ahmad Dalqamouni, PG, Ph.D., M.CE.
Geotechnical Project Manager
PG 10146



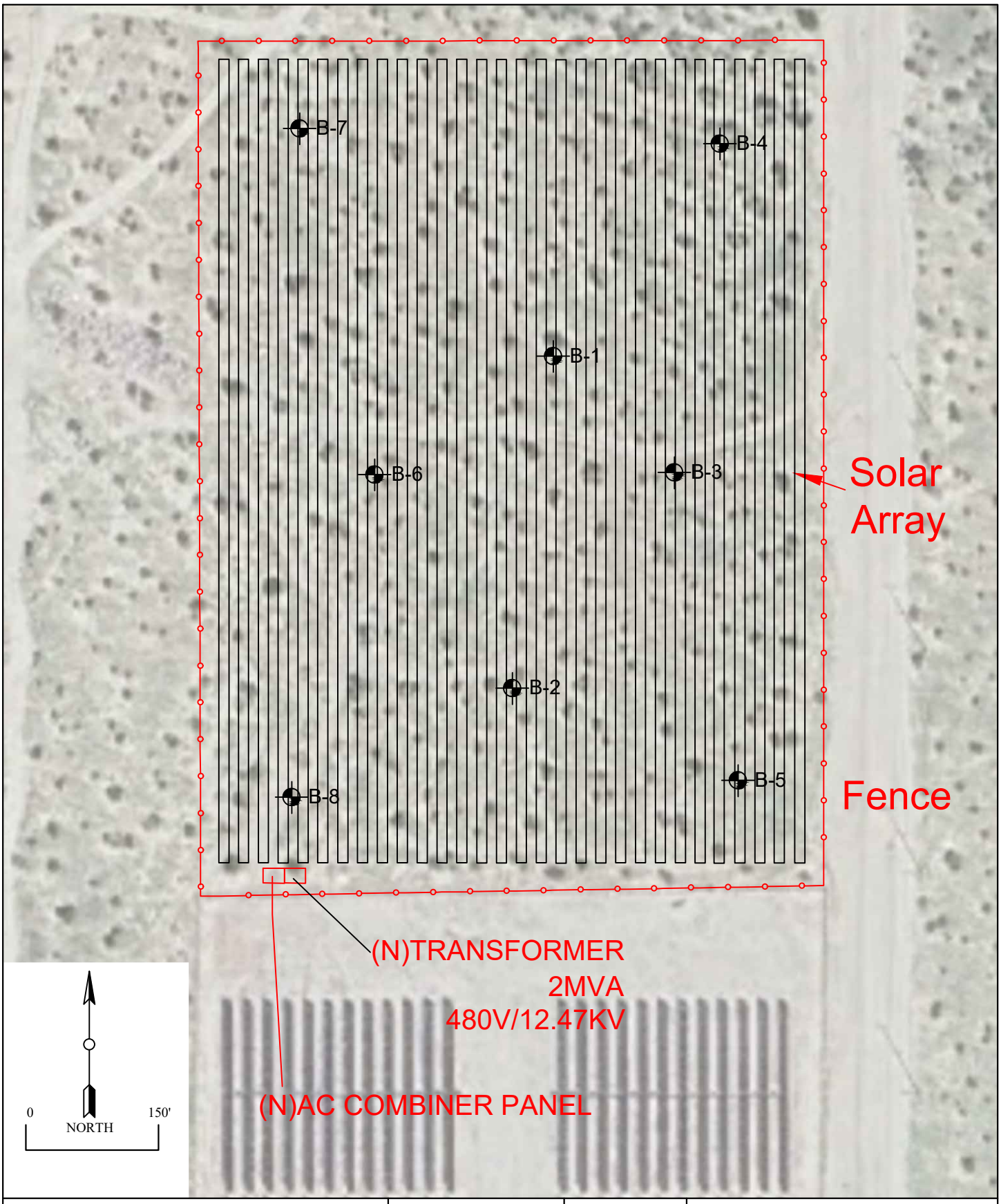
Dean B. Ledgerwood II, PE, PG, CEG
Geotechnical Manager
PE 94395 / PG 8725 / CEG 2613

R. Sammy Salem, PE, GE
Principal Managing Engineer
RCE 52762 / RGE 2549



Desert Hot Springs, CA. 2021 USGS 7.5' Topo

VICINITY MAP	SCALE: 1 : 2000'	DATE: Dec. 2024	SALEM engineering group, inc.
PROPOSED GROUND MOUNT SOLAR SITE - LITTLE MORONGO RES-BCT 0.21 MILES SW OF INTERSECTION OF POWER LINES ROAD & LITTLE MORONGO ROAD DESERT HOT SPRINGS, CALIFORNIA	DRAWN BY: VT	APPROVED BY: DL	
	PROJECT NO. 3-224-1145	FIGURE NO. 1	



SITE MAP	SCALE: 1 : 150'	DATE: Dec. 2024	SALEM engineering group, inc.
PROPOSED GROUND MOUNT SOLAR SITE - LITTLE MORONGO RES-BCT 0.21 MILES SW OF INTERSECTION OF POWER LINES ROAD & LITTLE MORONGO ROAD DESERT HOT SPRINGS, CALIFORNIA	DRAWN BY: VT	APPROVED BY: DL	
	PROJECT NO. 3-224-1145	FIGURE NO. 1	

APPENDIX

A

APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation was conducted on December 27, 2024 and included a site visit, subsurface exploration, and soil sampling. The locations of the exploratory borings are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

Our borings were drilled using a truck-mounted CME-55 drilling rig. Sampling was accomplished by driving a 2-inch Standard Penetration Test (SPT) sampler and/or a 3-inch outside diameter Modified California Sampler (MCS) 18 inches into the soil. Penetration and/or Resistance tests were performed at selected depths. The resistance/N-Value obtained from driving was recorded based on the number of blows required to penetrate the last 12 inches. The driving energy was provided by an auto-trip hammer weighing 140 pounds, falling 30 inches. Relatively undisturbed MCS soil samples were obtained while performing this test. Bag samples of the disturbed soil were obtained from the SPT samples and auger cuttings. All samples were returned to our Fresno laboratory for evaluation. The test borings were backfilled with excavated soil upon completion of drilling and sampling.

Subsurface conditions encountered in the test borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

SALEM engineering group, inc.

Test Boring: B-1 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

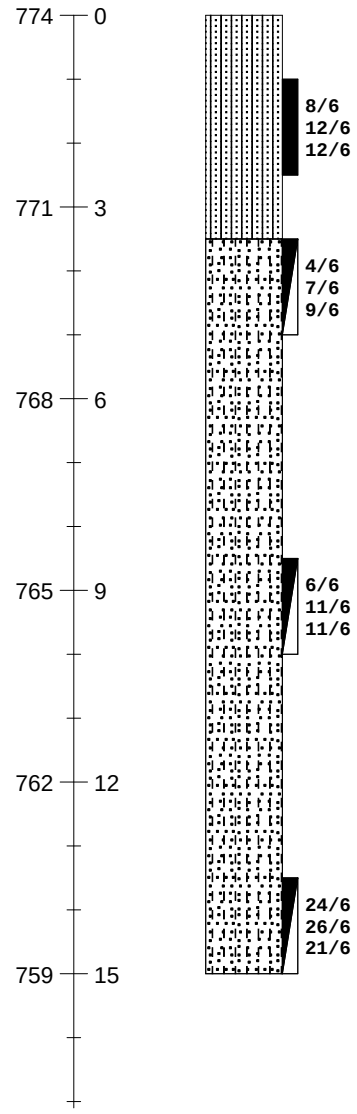
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		SM	Silty SAND; medium dense, light brown, dry, fine to coarse grained.				
			Grades as above	24	0.6	--	SAND = 71% -#200 = 28% +#4 = 1%
		SP-SM	Poorly Graded SAND with Silt; medium dense light brown, dry, fine to coarse grained.	16	0.4	--	
			Grades as above; with rock pieces.	22	0.5	--	
			Grades as above; dense, dry, with gravel.	47	0.5	--	SAND = 67% -#200 = 11% +#4 = 22%
			End of boring at 15ft. BSG				

Notes:

Figure Number A-1

SALEM engineering group, inc.

Test Boring: B-2 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

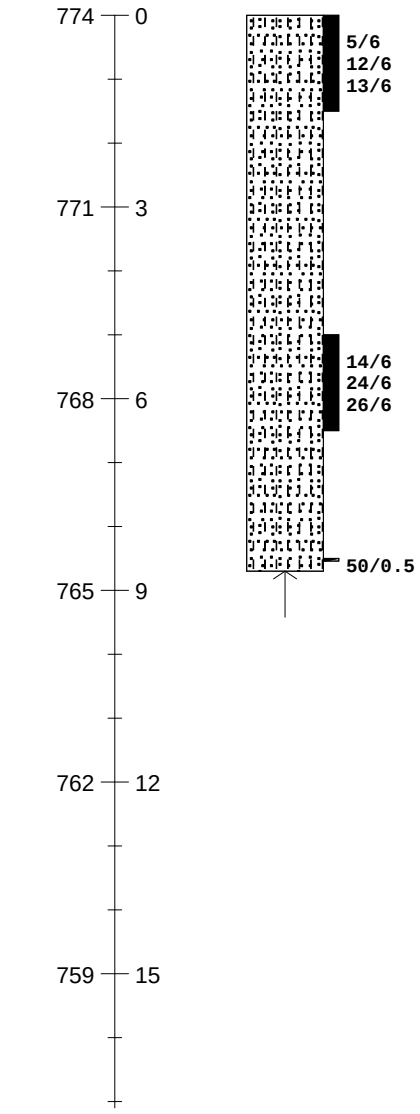
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
774 / 0	5/6 12/6 13/6	SP-SM	Poorly Graded SAND with Silt; medium dense, light brown, dry, fine to coarse grained.	25	0.3	--	
771 / 3							
768 / 6	14/6 24/6 26/6		Grades as above; dense.	50	0.6	--	
765 / 9	50/0.5		No recovery, Very dense gravel and rock fragments	>50			
			Refusal by auger and sampler at 8.5ft. BSG, due to very dense soils and rock cobbles.				
762 / 12							
759 / 15							

Notes:

Figure Number A-2

Test Boring: B-3 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

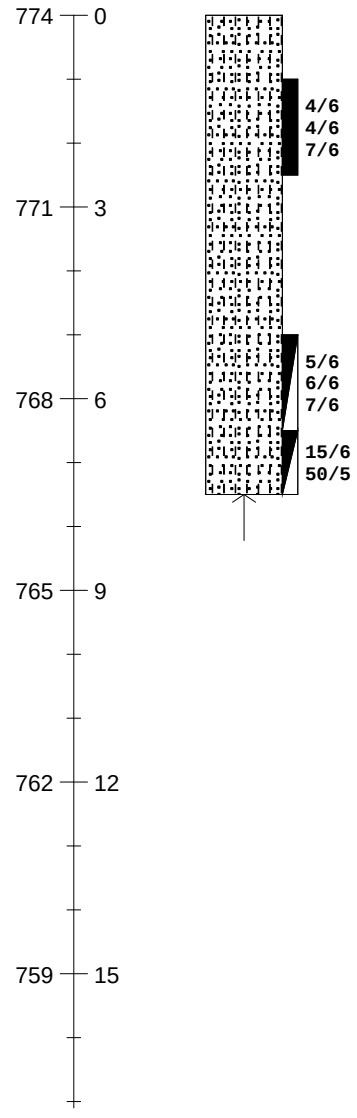
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		SP-SM	Poorly Graded SAND with Silt; looselight brown, dry, fine to coarse grained, with little gravel.	11	0.4	--	EI = 0
			Grades as above; medium dense, fine to coarse grained, with some gravel.	13	0.5	--	SAND = 69% -#200 = 12% +#4 = 9% PI = non-plastic
			Grades as above; with some Gravel.		--	--	No Recovery
			Refusal by auger at 7.5ft. BSG , due to very dense soils and rock cobbles.				

Notes:

Figure Number A-3

Test Boring: B-4 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

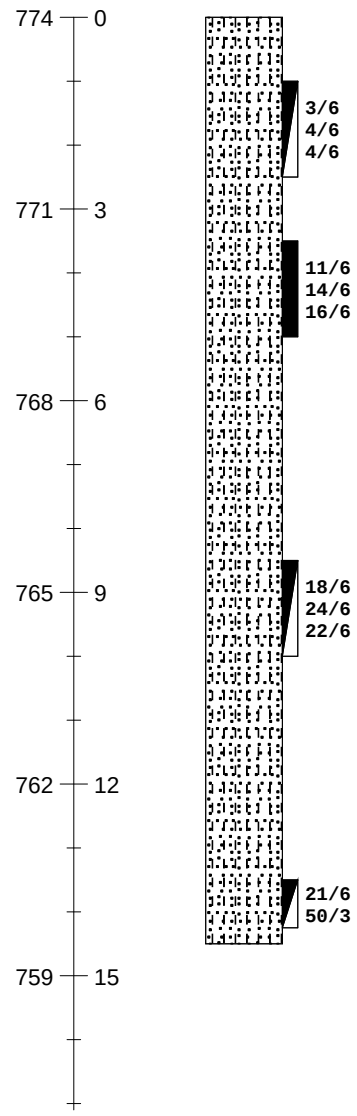
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
774 — 0		SP-SM	Poorly Graded SAND with Silt; Loose, light brown, dry, fine to coarse grained.	8	0.3	--	
771 — 3			Grades as above; medium dense.	30	0.6	--	
768 — 6							
765 — 9			Grades as above; dense, trace rock fragments.	46	0.4	--	
762 — 12							
			Grades as above; very dense, with gravel and rock fragments.	>50	0.4	--	low recovery
759 — 15			Auger Refusal at 14.25ft. BSG, due to very dense soils and rock cobbles.				

Notes:

Figure Number A-4

SALEM engineering group, inc.

Test Boring: B-5 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

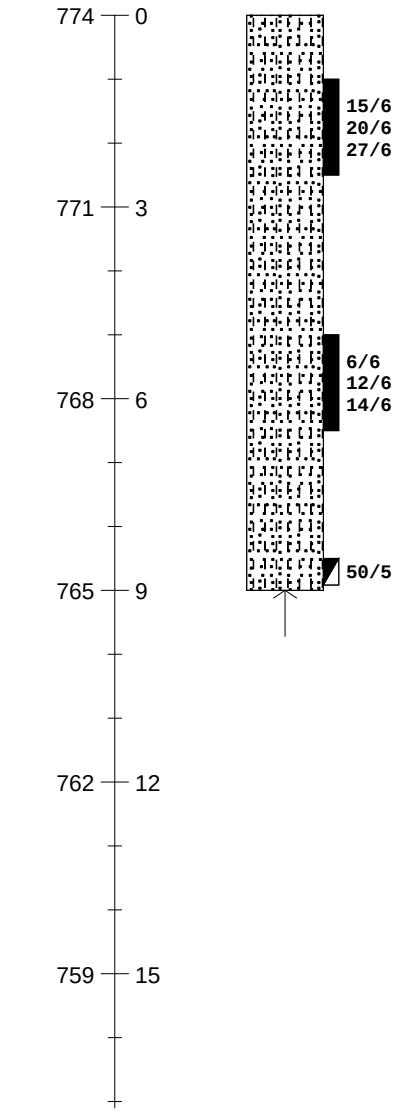
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
774 — 0		SP-SM	Poorly Graded SAND with Silt; dense, light brown, dry, fine to coarse grained.	47	0.3	--	SAND = 91% -#200 = 8% +#4 = 1% PI = non-plastic
771 — 3			Grades as above; medium dense, fine to coarse grained.	26	--	--	
768 — 6			Grades as above; very dense, gray, with gravel rock fragments.	>50	0.4	--	low recovery
765 — 9			Refusal by auger at 9ft. BSG, due to very dense soils and rock cobbles.				
762 — 12							
759 — 15							

Notes:

Figure Number A-5

Test Boring: B-6 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

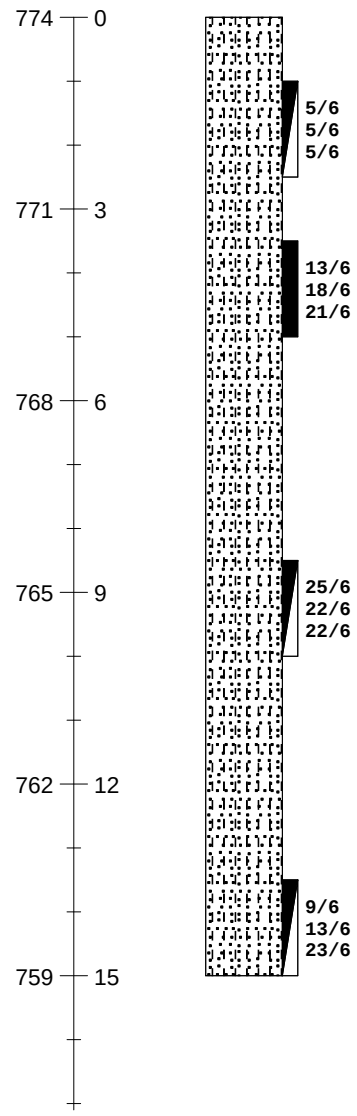
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
774 / 0		SP-SM	Poorly Graded SAND with Silt; loose, light brown, dry, fine to coarse grained.	10	0.5	--	
771 / 3			Grades as above; medium dense.	39	--	--	
768 / 6							
765 / 9			Grades as above; dense.	44	--	--	
762 / 12							
759 / 15			Grades as above; with gravel and rock fragments.	36	0.5	--	
			End of boring at 15ft. BSG				

Notes:

Figure Number A-6

SALEM engineering group, inc.

Test Boring: B-7 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

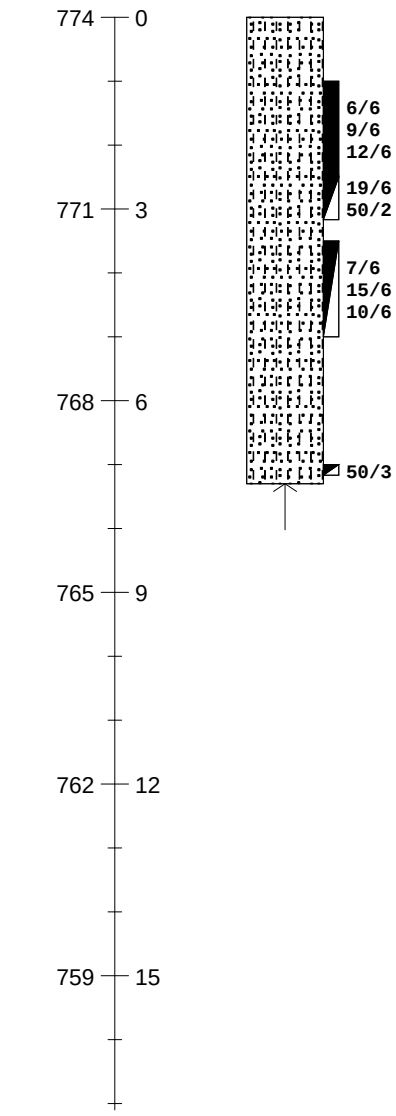
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
774 / 0		SP-SM	Poorly Graded SAND with Silt; medium dense, light brown, dry, fine to coarse grained.	21	0.4	--	
771 / 3			Grades as above; very dense, fine to medium grained, with rock fragments.	>50	0.5	--	
				25	0.4	--	
768 / 6			Grades as above; medium dense, fine to coarse grained.				
			Grades as above; very dense, with cobbles and rock fragments .	>50	0.4	--	
765 / 9			Refusal by auger 7.25ft. BSG, due to very dense soils and rock cobbles.				
762 / 12							
759 / 15							

Notes:

Figure Number A-7

Test Boring: B-8 **Page** 1 **Of:** 1

Project Number: 3-224-1145

Date: 12/27/2024

Client: Staten Solar, Inc.

Project: Ground Mount Solar Array, Site Name: - Little Morongo RES-BCT

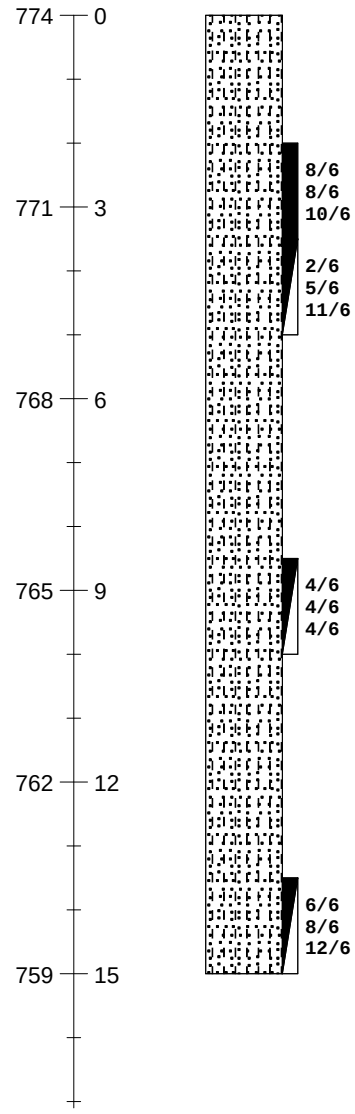
Location: 1850 Feet North of Address 19011 Little Morongo Road, Desert Hot Springs, CA

Drilled By: Salem Engineering Group, Inc. **Logged By:** RS

Drill Type: CME 55 **Elevation:** 774 ft. AMSL

Auger Type: 6-5/8in. Hollow Stem Auger **Initial Depth to Groundwater:** N/E

Hammer Type: Automatic Trip - 140lbs./30in. **Final Depth to Groundwater:** N/E



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	N-Values blows/ft.	Moisture Content %	Dry Density, PCF	Remarks
		SP-SM	Poorly Graded SAND with Silt; light brown, dry, fine to coarse grained.				
			Grades as above; medium dense.	18	0.6	--	
			Grades as above; fine to medium grained.	16	0.9	--	
			Grades as above; loose, trace of gravel and rock fragments.	8	0.7	--	
			Grades as above; medium dense, fine to medium grained. no rock fragments.	20	0.7	--	
			End of boring at 15ft. BSG				

Notes:

Figure Number A-8

KEY TO SYMBOLS

Symbol Description

Strata symbols

Silty Sand

Poorly graded sand with silt

Misc. Symbols

Drill rejection

Soil Samplers

California sampler

Standard penetration test

Notes:

Granular Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very loose	<5	<4
Loose	5-15	4-10
Medium dense	16-40	11-30
Dense	41-65	31-50
Very dense	>65	>50

Cohesive Soils
Blows Per Foot (Uncorrected)

	MCS	SPT
Very soft	<3	<2
Soft	3-5	2-4
Firm	6-10	5-8
Stiff	11-20	9-15
Very Stiff	21-40	16-30
Hard	>40	>30

MCS = Modified California Sampler
SPT = Standard Penetration Test Sampler

APPENDIX

B

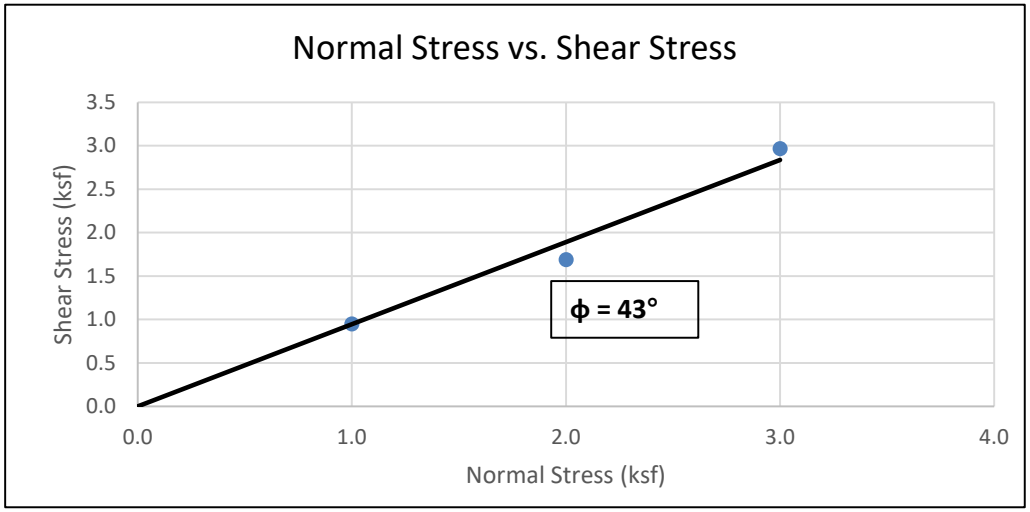
APPENDIX B
LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ moisture content, corrosivity, consolidation, shear strength, expansion index, soil resistivity, plasticity index, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

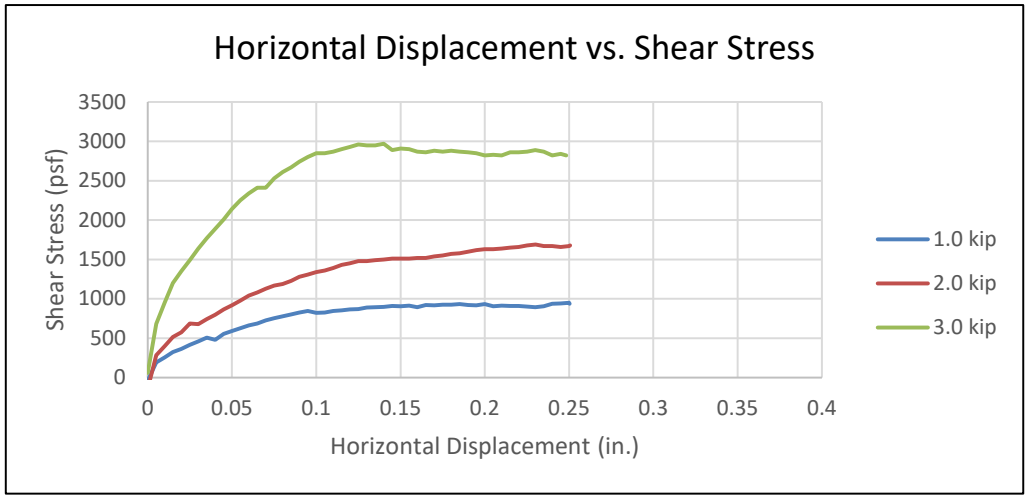
Direct Shear Test (ASTM D3080)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Client:
Boring: B-5 @ 0 - 3'
Soil Type: Poorly Graded SAND wi
Sample Type: Undisturbed Ring
Tested By: NL / MC
Reviewed By:
Date of Test: 1/7/25 & 1/8/25
Test Equipment: GeoComp ShearTrac II

	Loading		
	1.0 kip	**2.0 kip**	**3.0 kip**
Normal Stress (ksf)	1.00	2.00	3.00
Shear Rate (in/min)	0.0040	0.0040	0.0040
Peak Shear Stress (ksf)	0.95	1.69	2.97



Initial Height of Sample (in)	1.000	1.000	1.000
Post-Consol. Sample Height (in.)	0.987	0.969	0.971
Post-Shear Sample Height (in.)	0.988	0.956	0.969
Diameter of Sample (in)	2.4	2.4	2.4
Initial (pre-shear) Values			
Moisture Content (%)		4.3	
Dry Density (pcf)	99.0	101.3	104.8
Saturation %	17.3	18.3	20.0
Void Ratio	0.66	0.63	0.57
Consolidated Void Ratio	0.64	0.57	0.53
Final (post-shear) Values			
Final Moisture Content (%)	18.0	19.3	18.2
Dry Density (pcf)	102.9	99.4	108.5
Saturation %	55.4	65.6	66.2
Void Ratio	0.86	0.78	0.72



Peak Shear Strength Values	
Slope	0.95
Friction Angle	43
Cohesion (psf)	0

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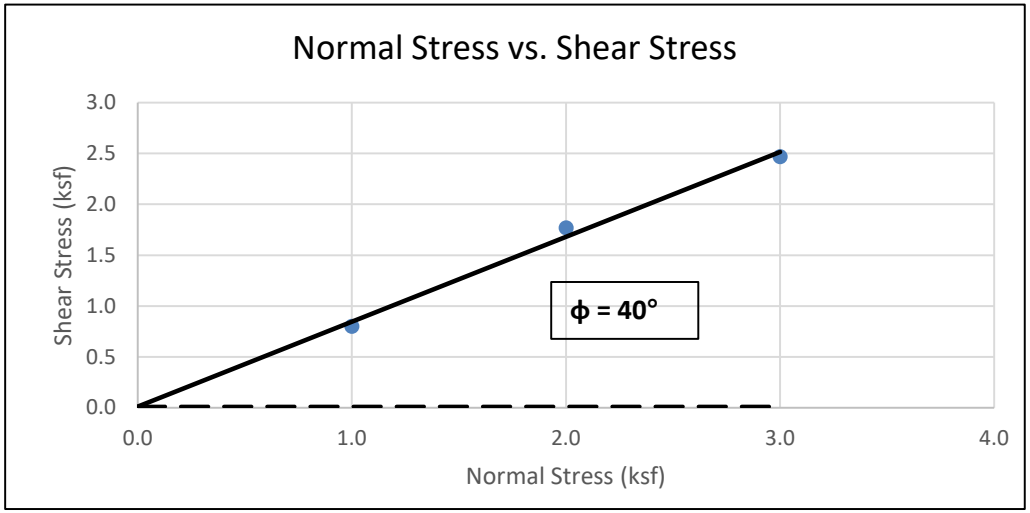
Fresno, CA 93722

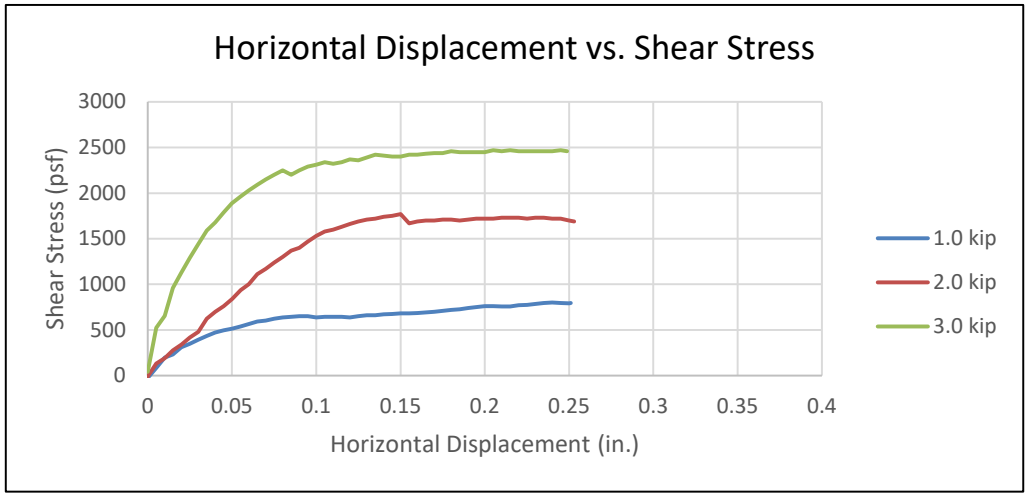
Direct Shear Test (ASTM D3080)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Client:
Boring: B-8 @ 0 - 3'
Soil Type: Poorly Graded SAND wi
Sample Type: Undisturbed Ring
Tested By: MC / NL
Reviewed By:
Date of Test: 1/8/25
Test Equipment: GeoComp ShearTrac II

	Loading		
	1.0 kip	**2.0 kip**	**3.0 kip**
Normal Stress (ksf)	1.00	2.00	3.00
Shear Rate (in/min)	0.0040	0.0040	0.0040
Peak Shear Stress (ksf)	0.80	1.77	2.47



Initial Height of Sample (in)	1.000	1.000	1.000
Post-Consol. Sample Height (in.)	0.974	0.968	0.958
Post-Shear Sample Height (in.)	0.964	0.955	0.948
Diameter of Sample (in)	2.4	2.4	2.4
Initial (pre-shear) Values			
Moisture Content (%)		1.9	
Dry Density (pcf)	112.7	106.6	112.6
Saturation %	10.8	9.2	10.8
Void Ratio	0.48	0.56	0.48
Consolidated Void Ratio	0.44	0.51	0.42
Final (post-shear) Values			
Final Moisture Content (%)	18.4	19.4	17.8
Dry Density (pcf)	104.2	96.1	107.2
Saturation %	75.0	69.2	76.4
Void Ratio	0.66	0.75	0.62



Peak Shear Strength Values	
Slope	0.83
Friction Angle	40
Cohesion (psf)	11

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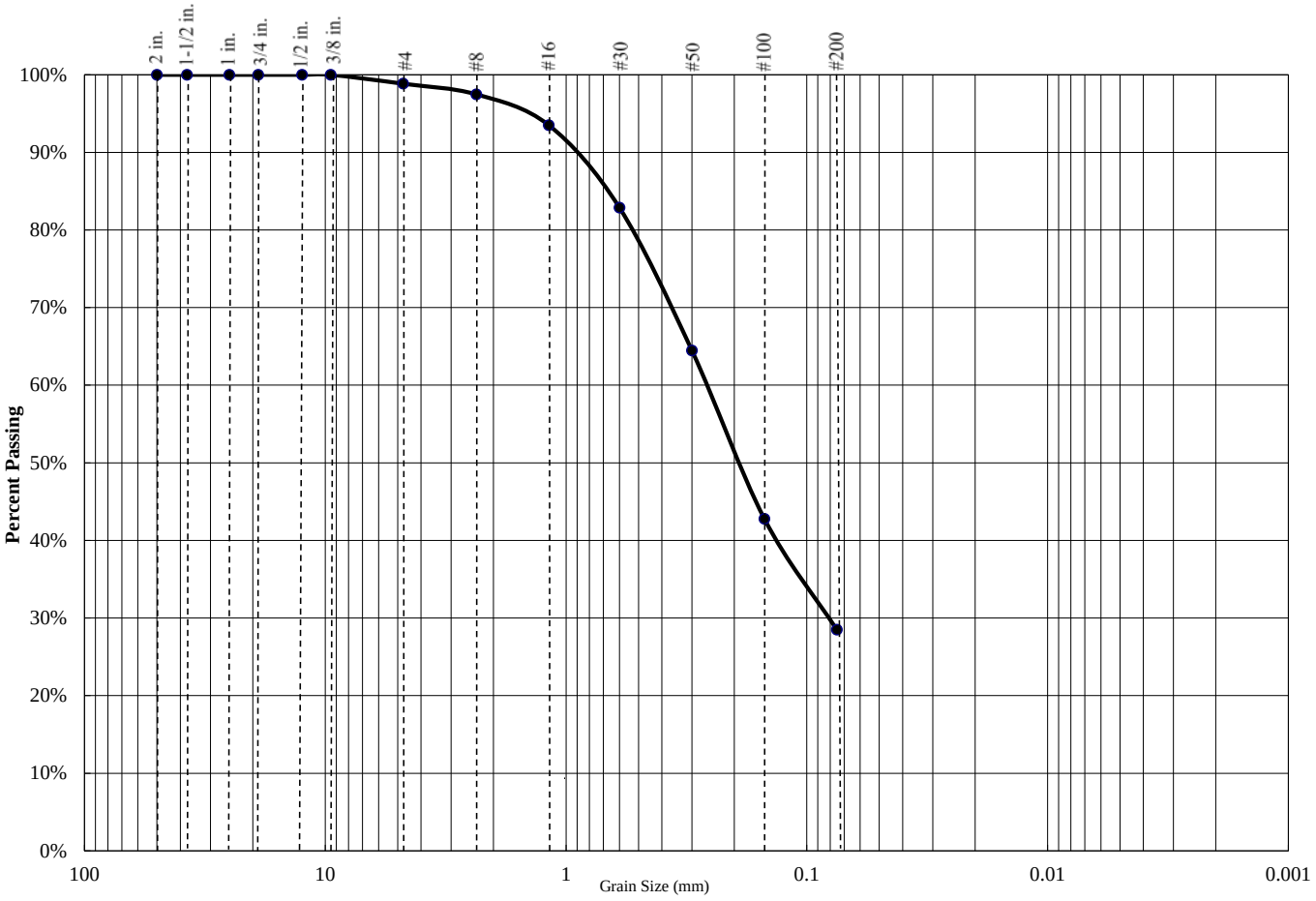
PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	71%	28%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	98.8%
#8	97.5%
#16	93.5%
#30	82.9%
#50	64.5%
#100	42.8%
#200	28.5%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA

Project Number: 3-224-1145

Boring: B-1 @ 1'

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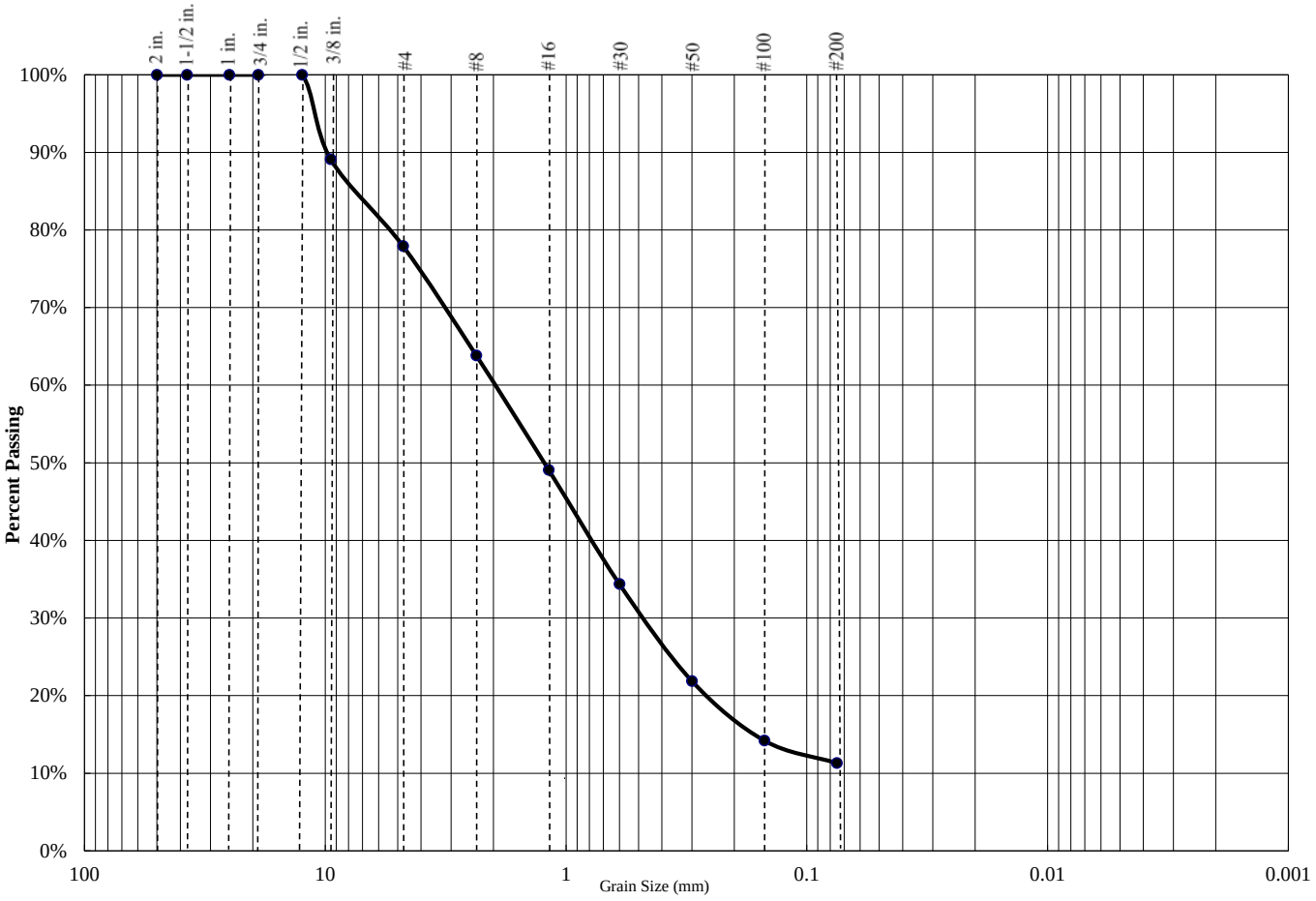
PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
22%	67%	11%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	89.1%
#4	77.9%
#8	63.8%
#16	49.1%
#30	34.4%
#50	21.9%
#100	14.2%
#200	11.3%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt and gravel (SP-SM)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA

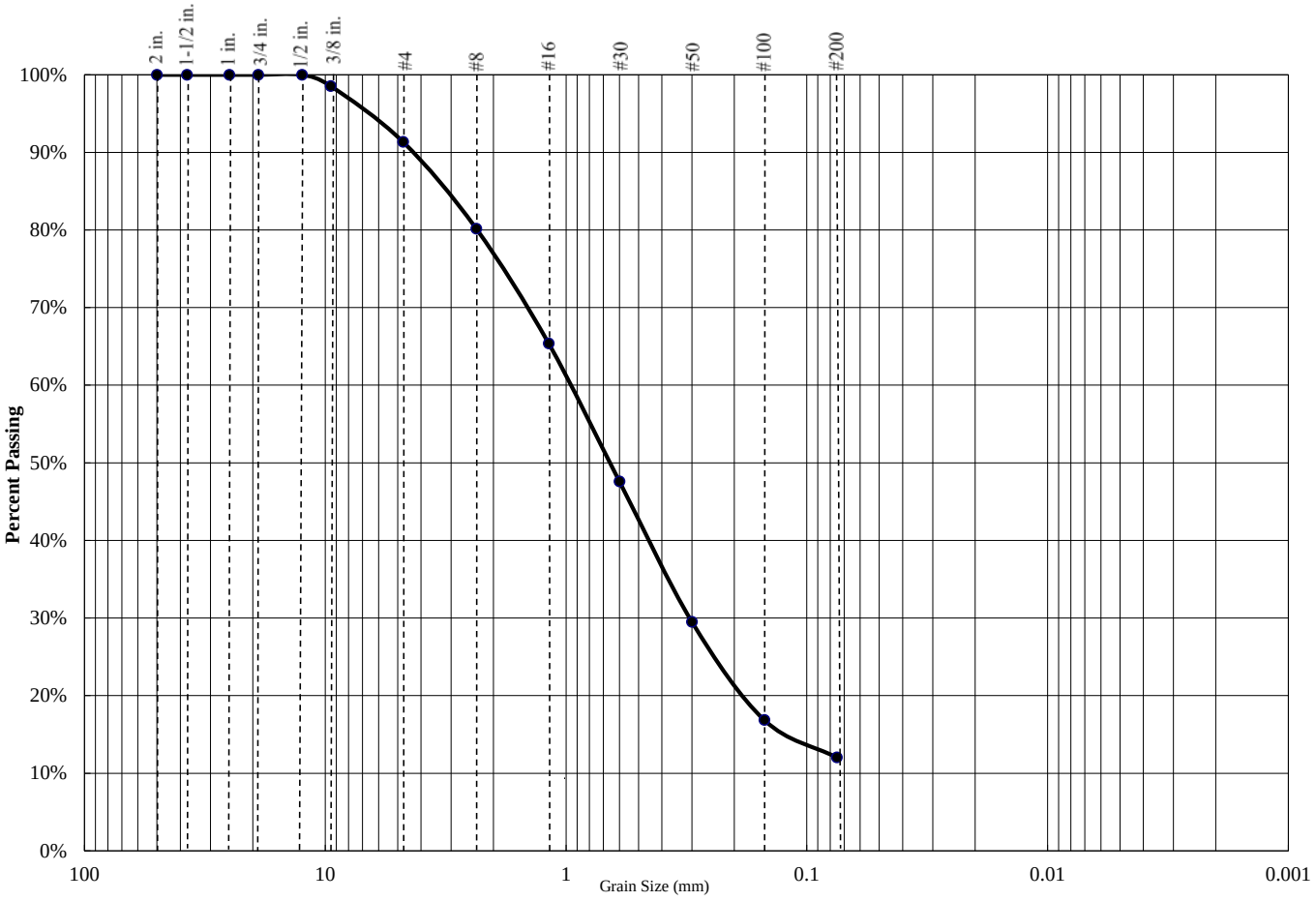
Project Number: 3-224-1145

Boring: B-1 @ 13.5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
9%	79%	12%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	98.6%
#4	91.3%
#8	80.2%
#16	65.4%
#30	47.6%
#50	29.5%
#100	16.8%
#200	12.0%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt (SP-SM)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA

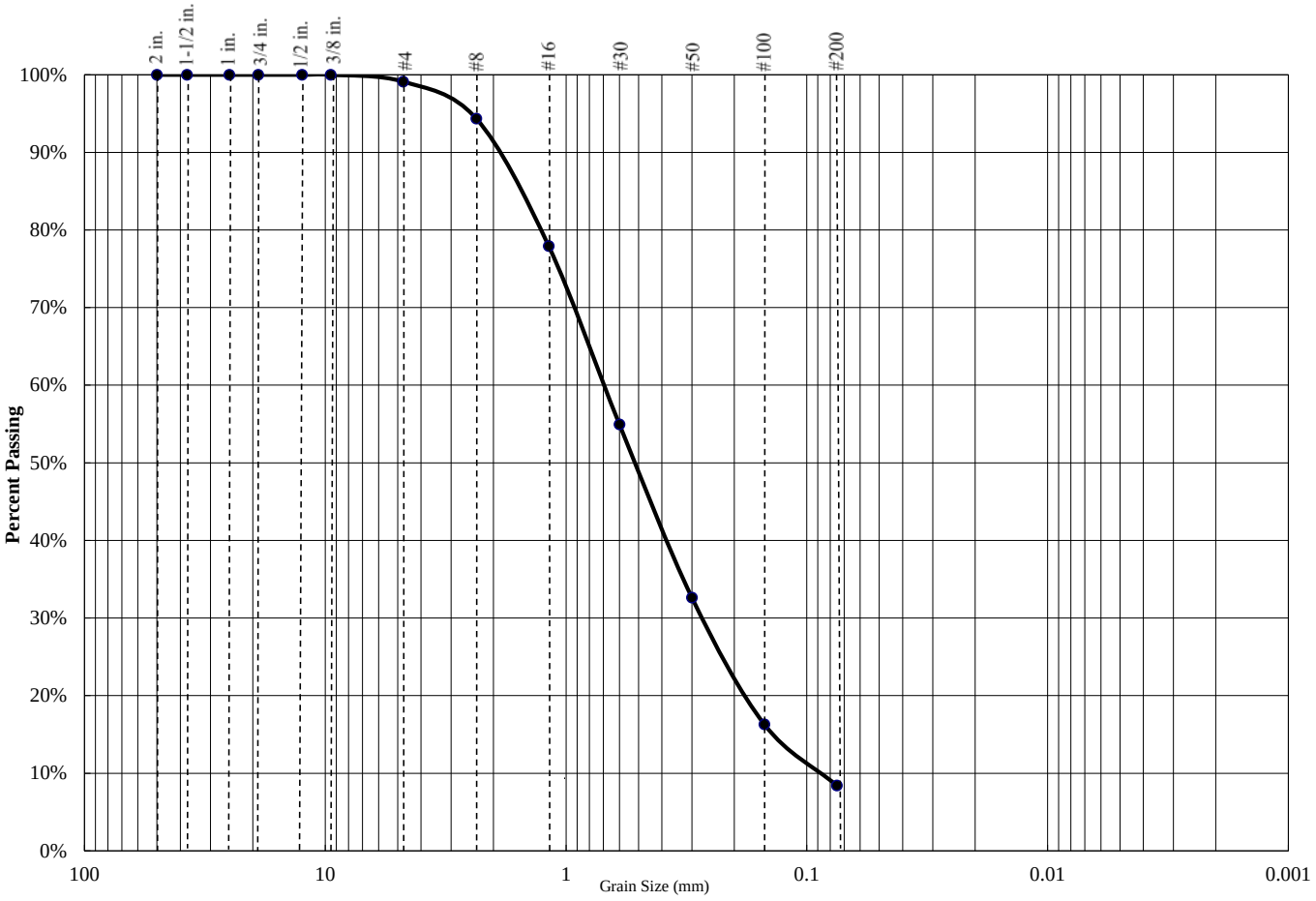
Project Number: 3-224-1145

Boring: B-3 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	91%	8%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	99.1%
#8	94.4%
#16	77.9%
#30	54.9%
#50	32.6%
#100	16.3%
#200	8.4%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Poorly Graded SAND with Silt (SP-SM)

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA

Project Number: 3-224-1145

Boring: B-5 @ 0 - 3'

SALEM engineering group, inc.

Atterberg Limits Determination

ASTM D4318

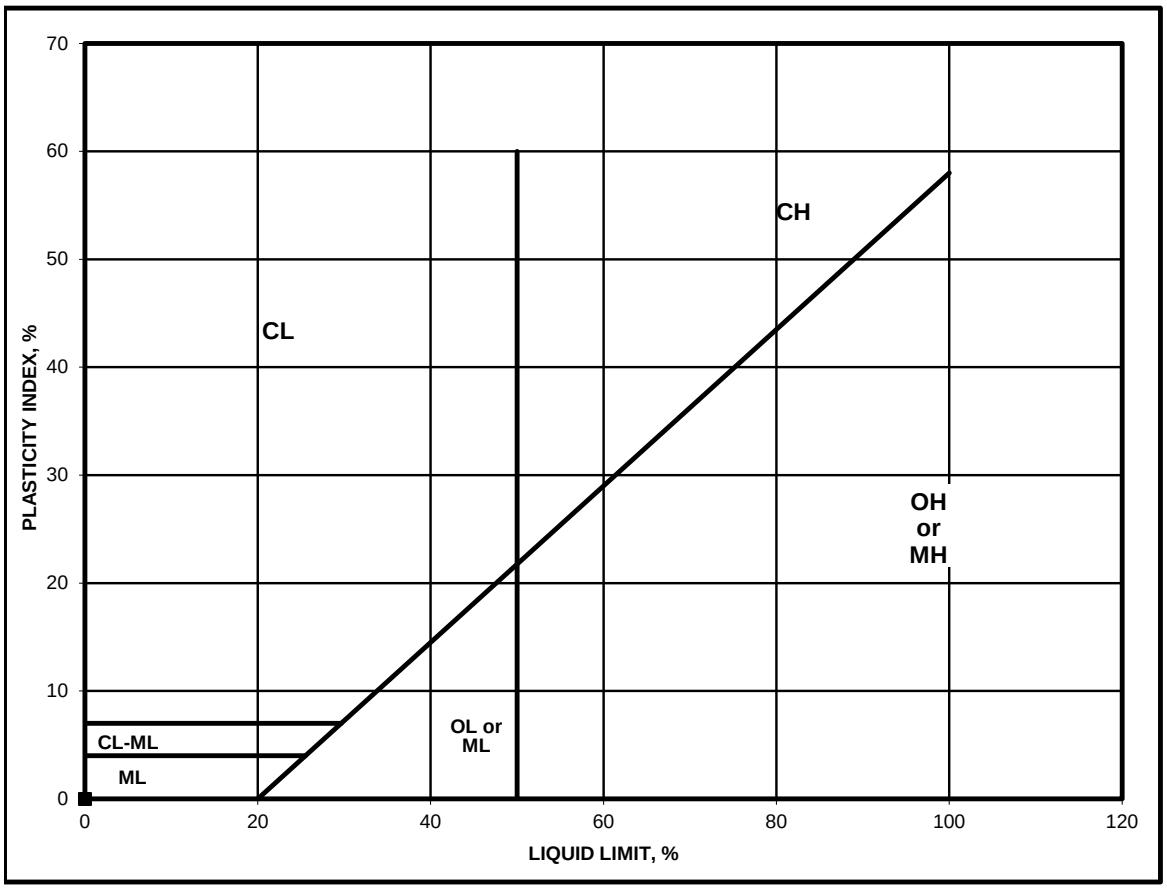
Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Date Sampled: 12/27/24 Date Tested: 1/6/25
Sampled By: SEG Tested By: MC
Sample Location: B-3 @ 5'

Run Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare						
Weight of Dry Soil & Tare						
Weight of Water						
Weight of Tare	Does Not Roll			Slides on Cup		
Weight of Dry Soil						
Water Content						
Number of Blows						

Plastic Limit : **Liquid Limit :**

Plasticity Index : Non- Plastic

Unified Soil Classification :



SALEM engineering group, inc.

Atterberg Limits Determination

ASTM D4318

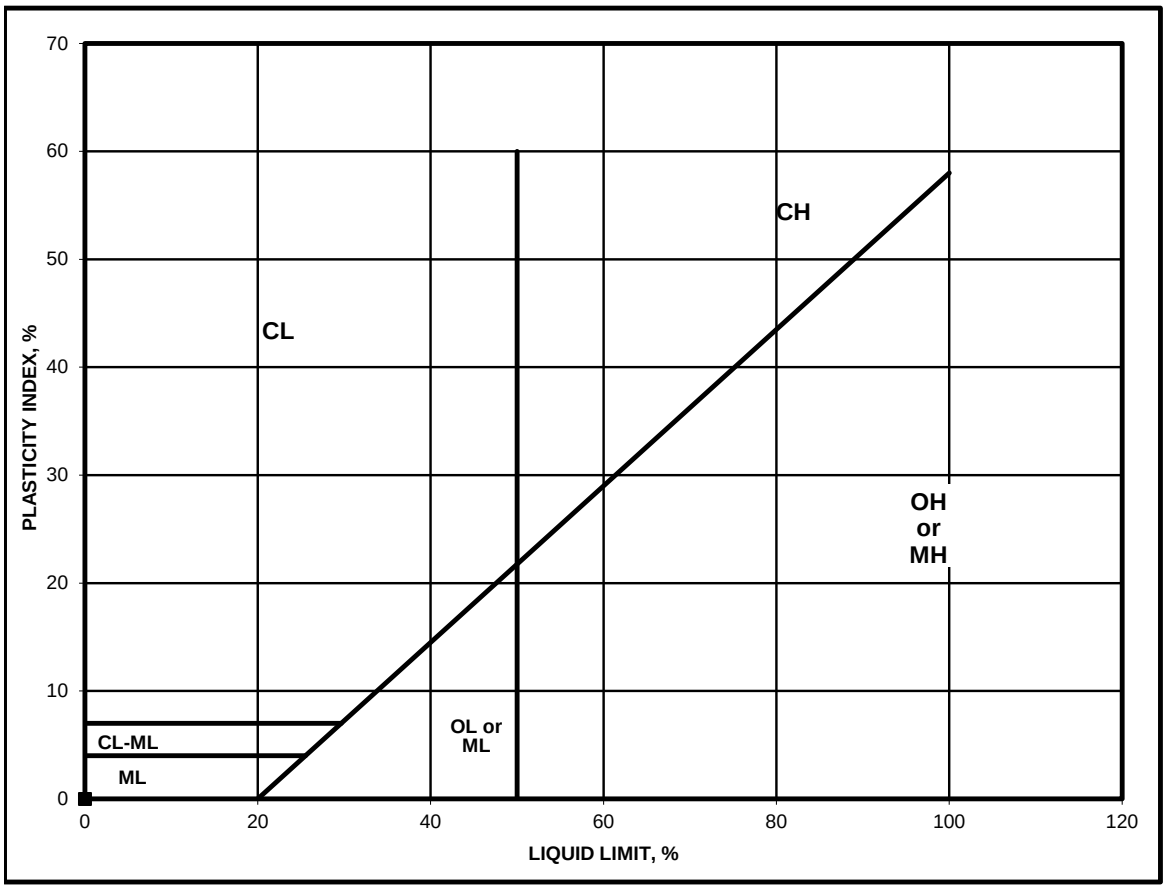
Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Date Sampled: 12/27/24 Date Tested: 1/6/25
Sampled By: SEG Tested By: MC
Sample Location: B-5 @ 0 - 3'

Run Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare						
Weight of Dry Soil & Tare						
Weight of Water						
Weight of Tare	Does Not Roll			Slides on Cup		
Weight of Dry Soil						
Water Content						
Number of Blows						

Plastic Limit : **Liquid Limit :**

Plasticity Index : Non - Plastic

Unified Soil Classification :



SALEM engineering group, inc.

EXPANSION INDEX TEST
ASTM D4829

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Date Sampled: 12/27/24 Date Tested: 1/3/25
Sampled By: SEG Tested By: DD
Sample Location: B-3 @ 0 - 3'
Soil Description: Poorly Graded SAND with Silt (SP-SM)

Trial #	1	2	3
Weight of Soil & Mold, g.	586.0		
Weight of Mold, g.	187.8		
Weight of Soil, g.	398.2		
Wet Density, pcf	120.1		
Weight of Moisture Sample (Wet), g.	875.0		
Weight of Moisture Sample (Dry), g.	797.3		
Moisture Content, %	9.7		
Dry Density, pcf	109.4		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	48.8		

Time	Inital	30 min	1 hr	6 hrs	12 hrs	24 hrs
Dial Reading	0	-0.0033	-0.0035	--	--	-0.0044

Expansion Index $_{measured}$ = 0
Expansion Index $_{50}$ = 0.0

Expansion Index = 0

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

SALEM engineering group, inc.

CHEMICAL ANALYSIS

SO_4 - Modified CTM 417 & Cl - Modified CTM 417/422

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145
Date Sampled: 12/27/24 Date Tested: 1/3/25
Sampled By: SEG Tested By: DD
Soil Description: Poorly Graded SAND with Silt (SP-SM)

Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-3 @ 0 - 3'	100 mg/kg	13 mg/kg	7.6
1b.	B-3 @ 0 - 3'	110 mg/kg	15 mg/kg	7.6
1c.	B-3 @ 0 - 3'	100 mg/kg	16 mg/kg	7.6
Average:		**103 mg/kg**	**15 mg/kg**	**7.6**

SALEM
engineering group, inc.

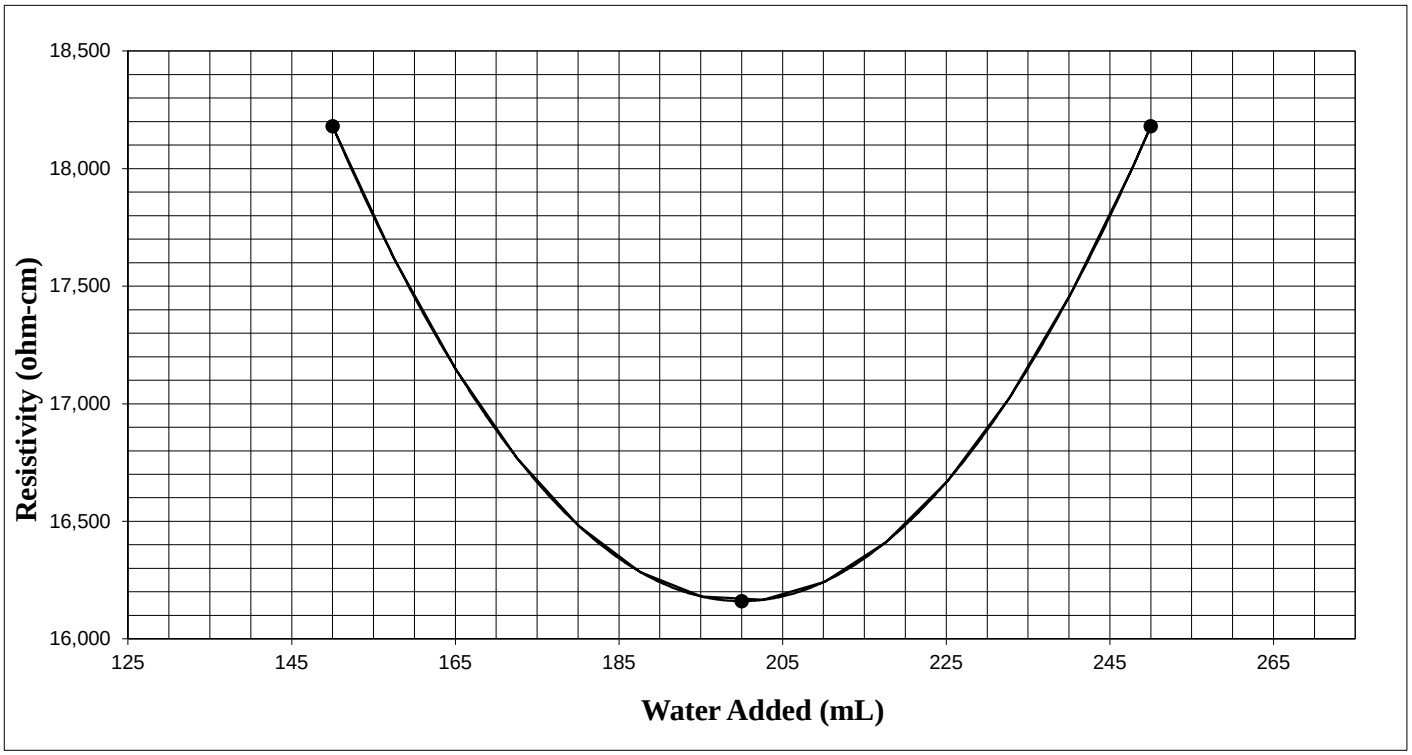
SOIL RESISTIVITY
CTM 643

Project Name: Ground Mount Solar Site Little Morongo RES BCT - Desert Hot Springs, CA
Project Number: 3-224-1145 Date Sampled: 12/27/24 Date Tested: 1/7/25
Sample Location: B-3 @ 0 - 3' Sampled By: SEG Tested By: MC
Soil Description: Poorly Graded SAND with Silt (SP-SM)

Chloride Content:	15	mg/Kg	Initial Sample Weight:	700	gms
Sulfate Content:	103	mg/Kg	Test Box Constant:	1.010	cm
Soil pH:	7.6				

Test Data:

Trial #	Water Added (mL)	Meter Dial Reading	Multiplier Setting	Resistance (ohms)	Resistivity (ohm-cm)
1	150	1.8	10,000	18,000	18,181
2	200	1.6	10,000	16,000	16,161
3	250	1.8	10,000	18,000	18,181



Minimum Resistivity:	**16,160** ohm-cm

SALEM engineering group, inc.

APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term “Standard Specifications”: hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.