

**SAN BERNARDINO COUNTY
INITIAL STUDY ENVIRONMENTAL CHECKLIST FORM**

This form and the descriptive information, in the application package constitute the contents of Initial Study pursuant to County Guidelines (Ord.3040) and State CEQA Guidelines (Section 15063).

PROJECT LABEL:

APN:	0405-372-40
APPLICANT:	Sycamore Physicians Partners
COMMUNITY:	Oak Hills/Hesperia
LOCATION:	Bounded by El Centro Road and Fuente Avenue
PROJECT NO:	P201200220
STAFF:	Nelson Miller
PROPOSAL:	Conditional Use Permit to establish a 2.7 MW solar power generating facility on 20 acres.

USGS Quad: Hesperia
T, R, Section: T4N, R5W, Section 35
Thomas Bros: 4565, G-4
Planning Area: Desert Region
Zoning: OH/RL
Overlays: Biological Resources, Fire Safety (FS-2)

PROJECT CONTACT INFORMATION:

Lead Agency: County of San Bernardino
Land Use Services Department– Planning
385 N. Arrowhead Ave.
San Bernardino, CA 92415

Contact person: Nelson Miller
Phone No: 760-995-8153
E-mail: Nelson.Miller@lus.sbcounty.gov
Project Sponsor: Sycamore Physicians Partners, LLC – Christine M. Dutta
6116 Case Road
North Ridgeville, OH 44039
(303) 881-1004

PROJECT DESCRIPTION:

The project site is west of the City of Hesperia on the northeast corner of Fuente Avenue and El Centro Road in unincorporated San Bernardino County (See Figure 1 and Figure 2). All four roadways bordering the project site are currently unpaved. The site is in the First Supervisorial District. The proposed project site is also located within the Biological Resource and Fire Safety (FS-2) Overlays. The Land Use Zoning designation for the site is OH/RL (Oak Hills Community Plan/Rural Living). The OH/RL land use zoning designation allows development of solar electrical power generation on sites greater than 20 acres, subject to a Conditional Use Permit (CUP). Accordingly, the project applicant is requesting a CUP for the proposed project.

The proposed project consists of the development and operation of a 2.7 megawatt (MW) solar generating facility on a 20-acre parcel of land. Because the local area is a high load density area on the Southern California Edison (SCE) electricity distribution system with little or no Distributed Generation (DG) penetration, interconnection of this DG project was “fast tracked” by SCE.

The proposed facility will include approximately 54 arrays, each of which will have 192 photovoltaic (PV) crystalline silicon modules on a fixed-tilt system. The modules will be oriented to the south and angled at a degree that would optimize solar resource efficiency. The module supporting system provides the structure of support for the arrays. Each solar module will be fastened to the ground surface via hydraulically driven 2-inch galvanized pipe. The maximum height of the panels will range from 8-10 feet depending upon existing site topography. All solar panels will have an anti-reflective coating, which allows panels to absorb light, thereby minimizing reflection. Project improvements also include installation of a 10-foot wide landscaped area around the entire perimeter of the project site, which would help to screen the solar arrays from view. Native on-site vegetation, such as Joshua trees, would be transplanted from the developed areas of the property to the 10-foot wide landscape perimeter to the greatest extent feasible. Transplanting will be carried out so as to maintain the native aspect of individual trees/brush.

In addition to the solar modules, the project includes the installation of two concrete pads in the northwest corner of the site, which would support two transformers and electrical switchgear equipment. In addition to the two equipment pads, the project includes installation of nine (9) inverter and transformer pads throughout the site, which will be primarily, located under the arrays. These pads support one 300 kW Power-One central inverter and one 480V to 12kV transformer. The project would receive interconnection service from SCE Floodgate 12 kilovolt (kV) circuit out of the Aqueduct 115/12kV Substation via an overhead line extension on Fuente Avenue to the applicant’s 12kV, 3-phase, 3-wire switchgear. The generated power would be delivered to the SCE system at the 12kV point of interconnection. It should be noted that the overhead line extension on Fuente Avenue would not result in any off-site impacts as the extension would occur within existing developed right-of-way. Off-site improvements associated with the overhead utility line extension are anticipated to include a re-conductor and two additional poles on Fuente Avenue. Additional off-site improvements required for the project are limited to provision of a paved access road to the project site. As illustrated on the project Site Plan (Figure 3), the alignment for this off-site access road is comprised of the following roadway segments: 1) the portion of El Centro Road south of the project site from the project’s southern access driveway east to Bandicoot Trail, and 2) the segment of Bandicoot Trail from the intersection of El Centro Road and Bandicoot Trail north to Mesquite Street, the latter of which is an existing paved roadway. Construction of this off-site paved connector road to the project site is required by San Bernardino County. The connector road would consist of a graded and paved section compliant with San Bernardino County Standard 112, "Half Width Desert Road". Per County Standard 112, the road would consist of 26 feet of paved width with 5-foot wide graded shoulders on each side. Additional right-of-way (ROW) will be required along the alignment of Bandicoot Trail in order to construct the connector road to Mesquite Street (nearest

County paved and maintained road). The road section will be approximately 3,400 feet in length from the project’s southern access along El Centro Road. This alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in use by surrounding property owners.

The site design contains access roads for emergency vehicles and maintenance purposes. If required by the County, the applicant would dedicate a 100-125-foot wide San Bernardino County Drainage Easement, which would traverse the southeastern portion of the site, as tentatively reflected in Figure 3. The project does not include the construction of any buildings.

The construction of the project through commencement of operations will require a period of approximately six months. Approximately 20 workers will be required during construction. Once construction is complete, the solar plant will go online and monitoring will occur remotely. After construction, workers will perform maintenance three to four times per year, which will include the mowing of grasses and shrubs, as necessary, and PV panel and electrical upkeep. Workers will truck water in from off-site for this periodic maintenance. It is anticipated that approximately four vehicle trips would be made to the project site once every three months during the long-term operation of the project.

ENVIRONMENTAL/EXISTING SITE CONDITIONS:

Generally, the site of the proposed project lies within the Mojave Desert region, within which mountain ranges, broad alluvial fans, terraces, and playas are characteristic. With elevations on-site ranging from 3,600 to 3,585 feet above mean sea level, the site slopes gently from the southwest to the northeast. The site contains no structures. Single-family residences occur to the north and south of the site, with undeveloped parcels to the east and west.

AREA	EXISTING LAND USE	ZONING, OVERLAY DISTRICTS
Site	Vacant	OH/RL, Biological Res.;Fire Safety-2
North	Single Family	OH/RL, Biological Res.;Fire Safety-2
South	Single Family	OH/RL, Biological Res.;Fire Safety-2
East	Vacant	OH/RL, Biological Res.;Fire Safety-2
West	Vacant	OH/RL, Biological Res.;Fire Safety-2

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement.):

State of California: Regional Water Quality Control Board (Lahontan Region), Mojave Desert Air Quality Management District

County of San Bernardino: Land Use Services – Code Enforcement, Building and Safety; Public Health – Environmental Health Services; Public Works – Land Development, Solid Waste, Traffic

Figure 1
Regional Location Map

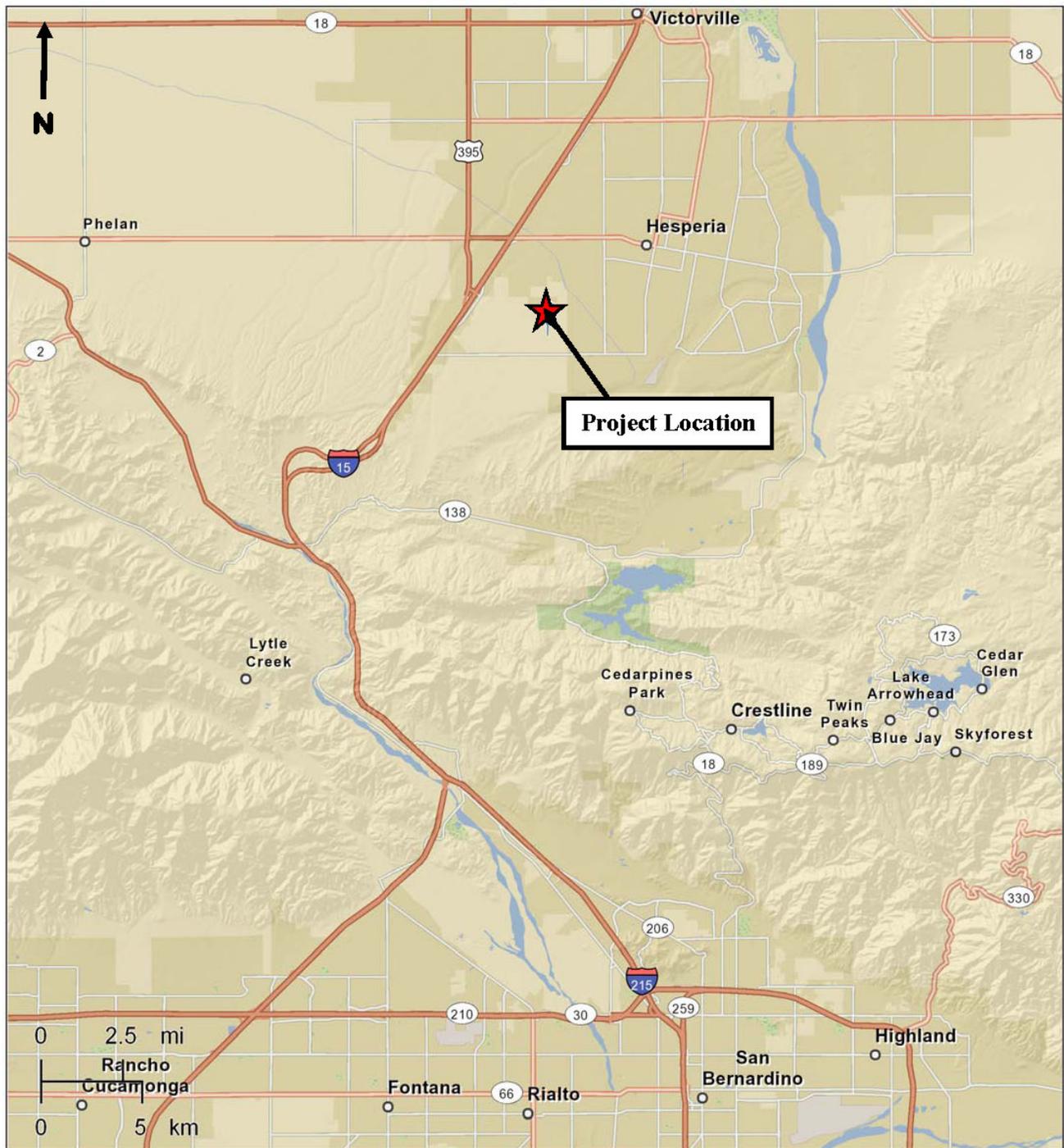


Figure 2
Project Vicinity Map

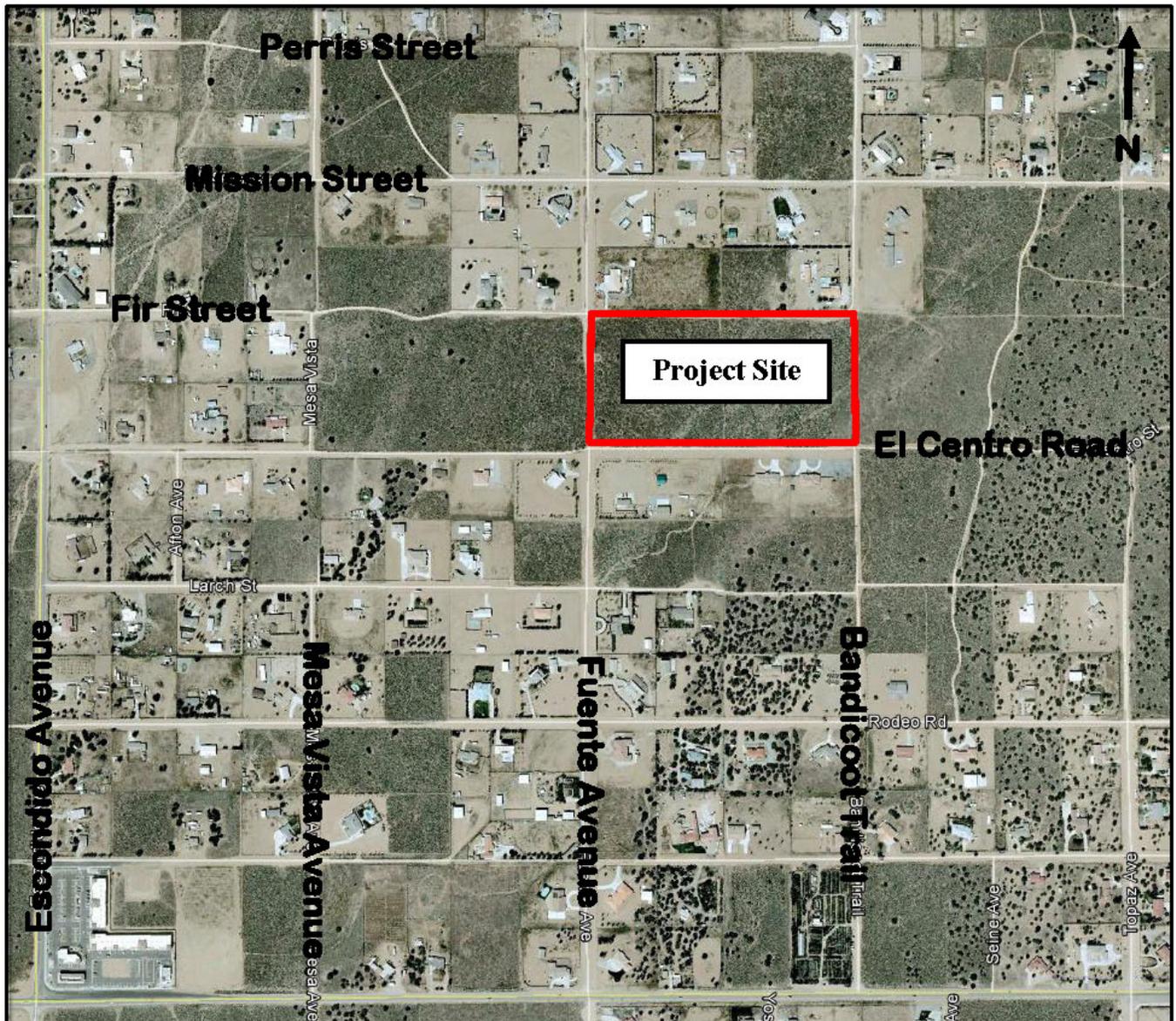
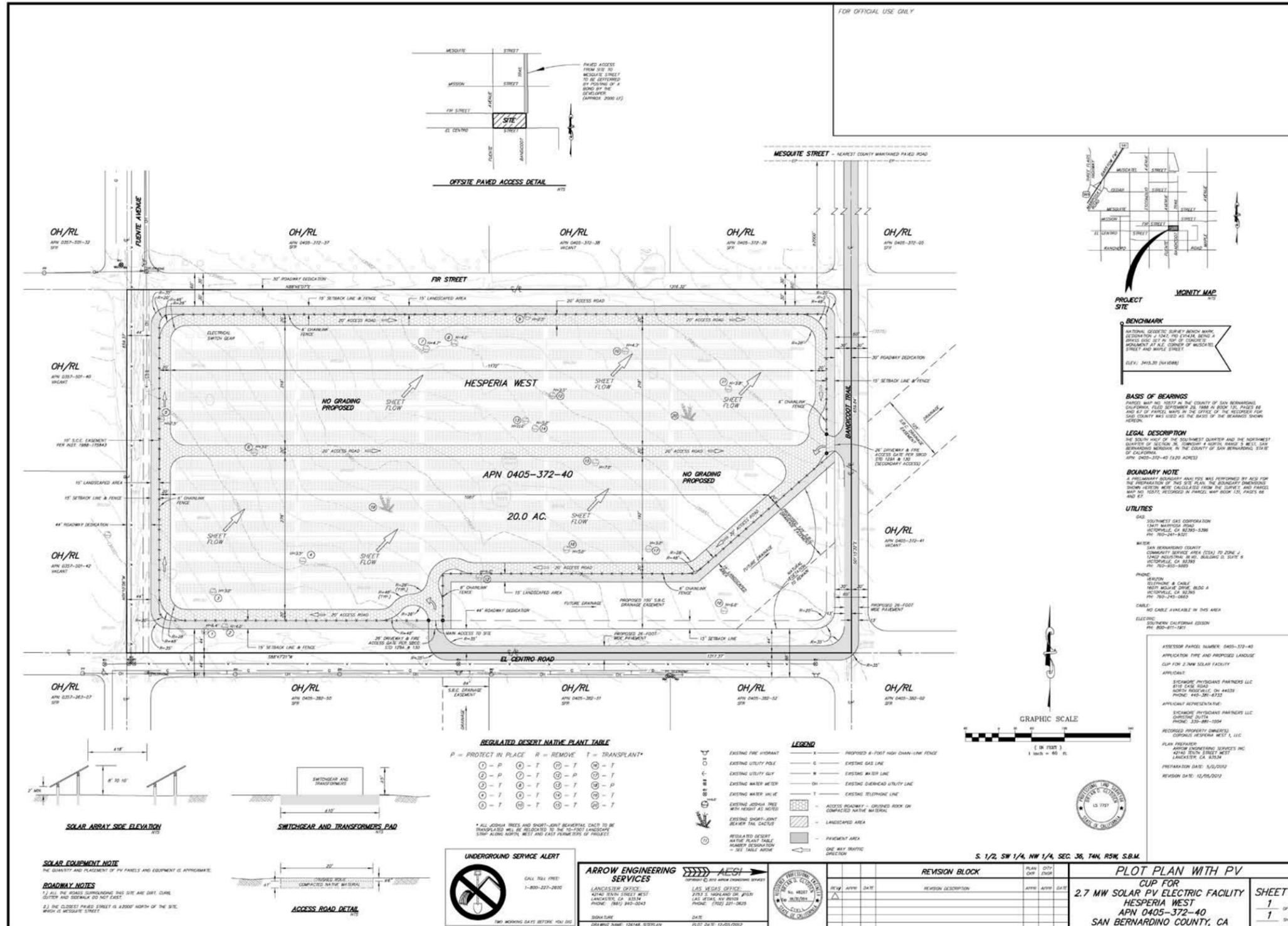


Figure 3
 Hesperia West Site Plan



EVALUATION FORMAT

This initial study is prepared in compliance with the California Environmental Quality Act (CEQA) Guidelines. This format of the study is presented as follows. The project is evaluated based upon its effect on 18 major categories of environmental factors. Each factor is reviewed by responding to a series of questions regarding the impact of the project on each element of the overall factor. The Initial Study Checklist provides a formatted analysis that provides a determination of the effect of the project on the factor and its elements. The effect of the project is categorized into one of the following four categories of possible determinations:

Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
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Substantiation is then provided to justify each determination. One of the four following conclusions is then provided as a summary of the analysis for each of the major environmental factors:

1. Significant adverse impacts have been identified or anticipated. An Environmental Impact Report (EIR) is required to evaluate these impacts, which are (List the impacts requiring analysis within the EIR).
2. Possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are: (List mitigation measures)
3. No significant adverse impacts are identified or anticipated and no mitigation measures are required. (Optional mitigation may be added by stating: “As a precautionary measure to further reduce any potential for impacts, the following requirement shall apply”):
4. No impacts are identified or anticipated and no mitigation measures are required.

At the end of the analysis the required mitigation measures are restated and categorized as being either self- monitoring or as requiring a Mitigation Monitoring and Reporting Program.

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.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology & Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation & Circulation | <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> 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 applicant. 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” 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 pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Nelson Miller, Contract Planner

Signature

Date

David Prusch, Planning Supervisor

I. AESTHETICS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

SUBSTANTIATION: (Check if project is located within the view-shed of any Scenic Route listed in the General Plan):

I a,c) **Less Than Significant Impact.** The current visual character of the site’s vicinity includes open desert lands, hills, ridges, and scattered residences. Several adjacent residences have views of distant mountains through the project site. Two separate discussions are provided below: 1) the first discussion pertains to those residences that have prominent views of distant mountains through the site beyond; 2) the second discussion pertains to the residences at the southeast corner, whose primary views through the site are not of the mountains, though some can be seen far off in the distance.

Photos 4A, 5A, and 6A below are of the views of distant mountains through an undeveloped project site from adjacent residences at or near the northeast, northwest, and southwest corners. Figures 4B, 5B, and 6B simulate the same views after development of the proposed project, including installation of the solar arrays and perimeter fence and landscaping. While the perimeter landscaping shown in the post-project photo simulations (Figures 4B, 5B, and 6B) is portrayed as mature, initially these landscape shrubs and trees would be smaller in size. With appropriate watering, however, they would grow to a size equal to or greater than that represented in the Figures. As can be seen in the post-project photo simulations, the proposed solar arrays will have a relatively low profile – the maximum height ranging from 8-10 feet, depending upon existing topography.

Figure 4A
Pre-Project view through the project site, looking northeast to southwest
(represents the view from front yard of residence at northeast corner of project site)



Figure 4B
Post-Project view through the project site, looking northeast to southwest
(represents the view from front yard of residence at northeast corner of project site)



Figure 5A
Pre-Project view through the project site, looking northwest to southeast
(represents the view from front yard of residence at northwest corner of project site)



Figure 5B
Post-Project view through the project site, looking northwest to southeast
(represents the view from front yard of residence at northwest corner of project site)



Figure 6A
Pre-Project view through the project site, looking southwest to northeast
(represents the view from front yard of residence at southwest corner of project site)



Figure 6B
Post-Project view through the project site, looking southwest to northeast
(represents the view from front yard of residence at southwest corner of project site)



While the proposed arrays would change the overall character of the site from an undeveloped, open parcel to a developed one, there would still be substantial views of the distant mountains from all adjacent residences. A 10-foot wide landscaped strip around the perimeter (fence) of the project will also help screen the arrays. All of the 16 Joshua trees and the two short-joint beavertail cacti currently growing on the parcel will be transplanted to this perimeter planting strip and help, along with additional native plantings, to obscure fences and arrays and maintain the native aspect of the desert environment. Furthermore, the materials comprising the solar arrays would consist of subtle colors that would not stand out against the surrounding environment. Given the low profile of the solar modules, which would contribute to retention of the distant mountain views from adjacent residences, and a well-landscaped perimeter that would conceal project facilities as much as possible, the project would not substantially degrade the existing visual character or quality of the site and its surroundings, or views through the site from the residences located adjacent to it.

Figure 7A shows the view through the currently undeveloped parcel towards the northwest from residences near the southeast corner of the site. While no mountains can be seen in the distance in this direction from these residences, occasional rooflines of scattered homes are common. Figure 7B simulates the view from the same homes with the project in place, including the solar arrays surrounded by a perimeter fence partially-to-completely obscured by mature landscaping. While the arrays would change the site's currently undeveloped nature to a developed one, the project would be set back between 100 and 125 feet from the property line in this area, behind a San Bernardino County drainage easement (See also Figure 3, Site Plan). Landscaping would be planted along the far edge of this easement to mask a distant perimeter fence, which would further reduce project visibility, making the arrays even less imposing than the one- or two-story homes that could otherwise be constructed on the parcel. The project, by maintaining a low profile and landscaping to mask project facilities, would not, therefore, substantially degrade the existing visual character or quality of the site and its surroundings, or views available to the southeast corner residences.

Figure 7A
Pre-Project view through the project site, looking southeast to northwest
(represents the view from front yard of residence at southeast corner of project site)



Figure 7B
Post-Project view through the project site, looking southeast to northwest
(represents the view from front yard of residence at southeast corner of project site)



- I b) **Less Than Significant Impact.** The proposed project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, because the site is not adjacent to a state scenic highway and trees, rock outcroppings, or historic buildings do not exist on the project site. In addition, the site is not located adjacent to any scenic highways designated as such in the Open Space Element of the San Bernardino County General Plan.
- I d) **Less Than Significant Impact.** The proposed solar panels will have an anti-reflective coating, which absorbs light and eliminates reflection. The project is also required to comply with San Bernardino County Ordinance No. 3900, which regulates glare, outdoor lighting, and night sky protection in the desert region. Nighttime security lighting associated with the proposed project will be subject to County approval and compliance with San Bernardino County requirements. Specifically, security lighting at the proposed facility will be installed with motion-activated sensors and shielded so that light is not directed upward or off-site onto neighboring properties. In addition, the motion sensors would be setup at a height greater than four inches to prevent small animals from triggering lights.

Because the project would include anti-reflective coating on the solar panels, and nighttime security lighting will be shielded, the proposed facility would not have a significant impact on daytime or nighttime views in the area.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

II. AGRICULTURE AND FOREST RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if project is located in the Important Farmlands Overlay):

II a,b,e) **No Impact.** The proposed project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The project site is designated “grazing” land on the maps prepared pursuant to the Farmland Mapping and Monitoring Program due to the area having mainly low-density rural development.

The project site is zoned Oak Hills Community Plan/Rural Living and therefore will not conflict with existing zoning for agricultural use. In addition, the site is not subject to a Williamson Act Contract.

II c,d) **No Impact.** The proposed project is in a high desert area and will have no impact on forest resources. In addition, the project would not conflict with existing U.S Forest Service Land Management Plans for forestland, timberland, or timberland zoned Timberland Production. The Land Use/Zoning District (i.e. zoning designation) of the proposed project is OH-RL (Oak Hills Community Plan/ Rural Living) which allows for solar projects with a Conditional Use Permit. As such, the proposed solar project use is consistent with the existing zoning

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

III. AIR QUALITY. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Discuss conformity with the Mojave Desert Air Quality Management Plan (MDAQMP), if applicable):

III a) **Less Than Significant Impact.** The proposed project site is located west of the City of Hesperia, within the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The most recent air quality plan is the MDAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area), which was adopted June 9, 2008. Other previously adopted State and federal attainment plans for the region include the MDAQMD 2004 Ozone Attainment Plan, approved by U.S. Environmental Protection Agency (USEPA) and adopted in 2004, and the 1996 Triennial Revision to the 1991 Air Quality Attainment Plan, also an adopted State plan. According to the Federal 8-Hour Ozone Attainment Plan, the MDAQMD has reviewed and updated all elements of the ozone plan, and the portion of the MDAQMD designated as a Federal 8-hour ozone non-attainment area is expected to be in attainment of the 8-hour NAAQS for ozone by 2021. The Federal 8-Hour Ozone Attainment Plan includes the latest planning assumptions regarding population, vehicle activity, and industrial activity. In addition, the plan addresses all existing and forecast ozone precursor-producing activities within the MDAQMD through the year 2020, and includes all necessary information to allow general-project and transportation-project conformity findings to be made within the MDAQMD.

A project would be considered to conflict with or obstruct implementation of the regional air quality plans if it would be inconsistent with the emissions inventories contained in the regional air quality plans. Emission inventories are developed based on projected increases in population growth and vehicle miles traveled (VMT) within the

region. The proposed project does not involve housing and would be operated remotely with only occasional maintenance visits; thus, would not increase the area’s population or the region’s VMT. And while project construction would temporarily increase emissions of ozone precursors and fugitive dust, these emissions would be a temporary release, limited only to the duration of project construction and would not conflict with or obstruct implementation of the applicable air quality plan.

III b,c) **Less Than Significant with Mitigation Incorporated.** The project is within the jurisdiction of the MDAQMD, which covers the majority of the Mojave Desert Air Basin. According to the MDAQMD CEQA Guidelines (February 2009), the District is classified non-attainment for 1-Hour and 8-Hour federal ozone, State ozone, and particulate matter less than 10 microns (PM₁₀). Development projects have the potential to emit criteria air pollutants that would contribute to the area’s nonattainment status.

Project construction and operations generate emissions of various air pollutants, including criteria pollutants such as carbon monoxide (CO), ozone precursors such as nitrous oxides (NO_x) and reactive organic gases (ROG) or Volatile Organic Compounds (VOC), PM₁₀, and particulate matter less than 2.5 microns (PM_{2.5}), as well as sulfur oxides (SO_x). For example, typical emission sources during construction include equipment exhaust, dust from wind erosion, earthmoving activities, and vehicle movements. Table 1, below, specifies MDAQMD emissions thresholds of significance for criteria air pollutants. The MDAQMD considers a development project that exceeds these thresholds to result in significant impact(s) requiring incorporated mitigation to reduce such impacts to a less-than-significant level.

Table 1				
MDAQMD Thresholds of Significance (lbs/day)				
CO	NO_x	ROG	PM₁₀	PM_{2.5}
548	137	137	82	82
<i>Source: MDAQMD CEQA Guidelines, February 2009.</i>				

Construction Emissions

Various diesel- and gasoline-powered equipment and vehicles would temporarily operate on and around the project site during construction, generating exhaust emissions and emissions of criteria pollutants from these vehicles and equipment, including site clearing and some limited earth movement, construction workers’ commute, and material hauling through the construction period. In addition, project construction activities would also create sources of vehicle re-entrained fugitive dust (which includes PM₁₀), a potential concern because the proposed project is in a non-attainment area for ozone and PM₁₀. However, construction-related increases in emissions of fugitive dust and exhaust from construction equipment and employee

commute vehicles would be temporary and limited to the relatively brief construction period of the project. These temporary emissions associated with construction would not create a substantial permanent increase in the emissions of criteria pollutants that would be cumulatively considerable.

Raney Planning & Management, Inc. (Raney) estimated the proposed project's short-term construction-related emissions using CalEEMod – a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions from land use projects. The model applies default values for various land uses, including trip generation rates, vehicle mix, trip length, average speed, etc.

Raney used the Sacramento Metropolitan Air Quality Management District (SMAQMD)'s Road Construction Emissions Model (ver. 7.1.2) to estimate emissions associated with the off-site construction activities required for the paved connector access road south of the project site along El Centro Road and Bandicoot Trail¹. The model calculates a project's emissions in pounds (lbs) per day over the entire construction period, which provides units easily comparable to the MDAQMD thresholds of significance presented in Table 1 above.

Raney estimated construction-generated emissions from construction information (e.g., construction phasing, dates, etc.) provided by project engineers and default values where such information was not available. The estimated daily construction-generated emissions attributable to the proposed project are presented in Table 2.

From the below table, unmitigated construction-related emissions of NO_x would exceed the MDAQMD's significance threshold, while all other project-related construction emissions would be below the applicable MDAQMD significance threshold. It should be noted that project construction would comply with all MDAQMD rules and regulations – including, but not limited to, Rules 403.2, 431.1, and 431.2, which would reduce emissions and help to ensure that construction-related emissions are not in violation of air quality standards.

¹ As discussed with Mr. Alan De Salvio of the Mojave Desert Air Pollution Control District, via email, December 4, 2012.

Table 2						
Project Construction-Related Emissions (lbs/day)						
	CO	NO_x	ROG	PM₁₀	PM_{2.5}	SO_x
Unmitigated Emissions						
CalEEMod Results	57.04	104.11	12.66	13.29	8.33	0.10
Road Construction Emissions Model Results	20.2	48.7	4.7	9.0	3.5	-
TOTAL Unmitigated Project Construction-Related Emissions	77.24	152.81	17.36	22.29	11.83	0.10
MDAQMD Thresholds of Significance	548	137	137	82	82	137
Exceeds Threshold?	NO	YES	NO	NO	NO	NO
Mitigated Emissions						
CalEEMod Results	58.56	81.95	38.31	11.46	6.75	0.10
Road Construction Emissions Model Results	20.2	48.7	4.7	9.0	3.5	-
TOTAL Mitigated Project Construction-Related Emissions	78.76	130.65	43.01	20.46	10.25	0.10
MDAQMD Thresholds of Significance	548	137	137	82	82	137
Exceeds Threshold?	NO	NO	NO	NO	NO	NO
<i>Source: CalEEMod and Roadway Construction Emissions Model, December 2012.</i>						

Operational Emissions

The solar plant would go online upon completion of construction and would be monitored remotely. Workers would perform routine maintenance three to four times per year during operations – including mowing of grasses and shrubs, as necessary, and PV panel and electrical upkeep. As such, only approximately four vehicle trips would be made to the project site (once every three months) during the long-term operation of the project. Thus, emissions related to typical operational fuel combustion would not occur.

The 16 vehicle trips per year required for maintenance of the proposed project would not cause NO_x, ROG, or any other criteria pollutant emissions to exceed the MDAQMD’s significance thresholds or degrade the region’s air quality. Therefore, the

proposed project's operational emissions would be negligible and not represent a significant cumulative contribution to regional air quality.

Conclusion

The proposed project would exceed the MDAQMD thresholds of significance for NO_x during construction. As such, the proposed project may violate air quality standards, contribute to the existing non-attainment status of ozone, or result in a cumulatively considerable net increase of the criteria pollutant. However, Mitigation Measure AQ-1 below requires compliance with the U.S. Environmental Protection Agency (USEPA) Tier 2 or higher off-road emission standards, which applies a numerical emission limit of grams of pollutants per mile. The Tier 2 standard is intended to require use of more advanced emission control technologies, such as catalysts and particulate filters that require cleaner fuels, in order to meet the standard. In addition, vehicles with Tier 2 emission standards are required to meet a specific average NO_x standard. Consequently, implementation of Mitigation Measure AQ-1 below would reduce the project's total construction-related NO_x emissions to 130.65 lbs/day (see Table 2 above) – below the threshold of 137 lbs/day – reducing this impact to a less-than-significant level. The amount of NO_x reduction was calculated using CalEEMod by selecting Tier 2 engines for all off-road equipment in the “construction mitigation” tab.

Development of the proposed solar project is expected to produce cumulative and regional environmental benefits.

III d) **No Impact.** According to MDAQMD CEQA Guidelines, residences, schools, daycare centers, playgrounds, and medical facilities are considered sensitive receptor land uses. MDAQMD requires that the following project types within the specified distances are required to be evaluated for exposure of sensitive receptors to substantial pollutant concentrations:

- Industrial projects within 1,000 feet of a sensitive receptor;
- Distribution centers (40 or more trucks per day) within 1,000 feet of a sensitive receptor;
- Major transportation projects (50,000 or more vehicles per day) within 1,000 feet of a sensitive receptor;
- Dry cleaners using perchloroethylene within 500 feet of a sensitive receptor; and
- Gasoline dispensing facilities within 300 feet of a sensitive receptor.

The proposed project is not one of the project types listed above; thus, evaluation of exposure of sensitive receptors to substantial pollutant concentrations is not required. In addition, although there are some residences in the project vicinity, electricity generation via the use of photovoltaic systems does not generate chemical emissions that would negatively contribute to air quality. Furthermore, as discussed above, substantial emissions of pollutants would not result from implementation of the project.

III e) **No Impact.** Typical sources of potentially objectionable odors include industrial or intensive agricultural uses. As stated above, electricity generation via the use of photovoltaic systems does not generate chemical emissions that would negatively contribute to air quality or create objectionable odors. Although some odor may occur during construction due to the use of diesel-fueled engines and equipment, construction activities would be temporary and would potentially only affect a few nearby receptors for a limited period of time. Upon completion of construction of the proposed project, potentially objectionable odors would not occur.

A possible significant adverse impact has been identified and the following mitigation measure is required as a condition of project approval to reduce this impact to a level below significant:

Mitigation Measures

AQ-1: During construction, the project contractor(s) shall ensure that all off-road, diesel-powered construction equipment be compliant with the U.S. Environmental Protection Agency Tier 2 or higher off-road emission standards. Proof of compliance with U.S. Environmental Protection Agency Tier 2 standards shall be provided to the County Building and Safety for review and approval.

IV. BIOLOGICAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	✘	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

SUBSTANTIATION: (Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database ✘):

The following discussion is based primarily on the report prepared for the project site by Barnett Environmental, entitled *General Biological Resources Assessment, Habitat Assessment, & Focused Surveys for CA Burrowing Owl (Athene cunicularia) & Desert Tortoise (Gopherus agassizii) for the Hesperia Solar Project* (May 24, 2012).

IV a) **Less Than Significant with Mitigation Incorporated.** In order to assess the habitat conditions on-site and determine if the project site has the potential to support special-status plant and wildlife species, Barnett Environmental worked with Dr. Michael

McGovern to survey and evaluate the 20-acre project site. The linear transect site survey was performed on May 18, 2012, between 6:30 AM and 5:00 PM., when the property was walked in linear transects (as per USFWS 2010 desert tortoise and CDFG 1993 burrowing owl survey protocol) at approximately 10-meter intervals – first walking prescribed transects along a north-south axis, beginning at the southeast corner, to focus on the potential use by burrowing owls – and then walking similar 10-meter transects along an east-west axis to look for use by desert tortoise. Dr. McGovern also walked transects on the adjacent properties to the east and west of the subject property to a distance of approximately 40 meters (single family homes occupied parcels to the north and south).

The survey indicated that the relatively flat, 20-acre site contains two shallow desert washes (containing no hydrophytic vegetation) that flow across the property to the northeast – one near the southeast corner and another through the center of the site. The sandy soil supports significant brushy vegetation dominated by rabbit brush (*Chrysothamnus nauseosus*) and monotonic patches of desert goldenbush (*Ericamaria cooperi*) and Mormon tea (*Ephedra nevadensis*) within these larger rabbit brush stands. Occasional small, open grassland areas occur along the site's margins that support foxtail chess (*Bromus madritensis*), filaree (*Erodium cicutarium*), and cheat grass (*Bromus tectorum*), along with field mustard (*Brassica rapa*), and tansey mustard (*Descurania Sophia*) – all typical of human disturbance. Old tires, bottles, building materials, green waste, and other trash and debris have been dumped on the property.

The site also contains a few native flowering annuals – fiddleneck (*Amsinkia tessalata*), which was poorly represented, a single cryptantha (*Cryptantha sp.*), and Fremont phycelia (*Phycelia Fremontii*), though rattlesnake weed (*Chamaesyce albomarginata*) was moderately abundant. The reason for a paucity of annuals may be the lack of precipitation over the previous winter, with rain coming only late in the season.

Few wildlife species were observed on the property. A few side-blotched lizards (*Uta stansburiana*) were observed during the survey period. Ground squirrels and rodents were not detected on-site. In terms of bird species, raven (*Corvus corax*), California quail (*Lophortyx californicus*), Brewer's blackbird (*Euphagus cyanocephalus*), and sage sparrow (*Amphispize belli*) were observed. One desert cottontail (*Sylvilagus bachmani*) and two jackrabbits (*Lepus californicus*) were observed during the survey. A single coyote scat and one owl pellet was also noted – the owl pellet contained a kangaroo rat skull.

Rare, Endangered, or Sensitive Species and Habitats

Wildlife

A query of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) Inventory of Rare

& Endangered Plants, and San Bernardino County Biotic Resources Map revealed the potential for several species of concern at this location, including the California burrowing owl (*Athene cunicularia*), desert tortoise (*Gopherus agassizi*), and plant species such as short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), Mojave paintbrush (*Castilleja plagiotoma*), and sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*).

The transect survey for the burrowing owl did not reveal burrows, whitewash, or owls. A similar transect survey for desert tortoise also did not reveal burrows, scat, carcasses (partial or whole), or tracks of this species. In addition, according to the San Bernardino County Biotic Resources Overlay Map, the project site is not within the areas designated by the USFWS as Critical Habitat for desert tortoise.

The small pockets of grassland habitat on the property do not provide burrowing owls the large, open areas of low vegetation or grassland to view their surroundings that the species prefers. Because of a lack of these features, combined with adjacent residential development and associated vehicle traffic, and frequent visitation of the site by domestic dogs, it is unlikely that the owl or tortoise use the area.

Plants

A few short-joint beavertail cacti (a CNPS List 1B species) were found on the project site; however, other potentially occurring special-status plant species were not detected (e.g. Booth's evening primrose (*Camissonia boothii* ssp. *boothii*), sagebrush loeflingia; both CNPS List 2 species). The on-site short-joint beavertail (*Opuntia* species) would be transplanted to the 10-foot wide landscaped perimeter buffer in compliance with Chapter 88.01 (Plant Protection and Management) of the San Bernardino County Development Code, though this desert native plant species is not expressly regulated by the Development Code (See 88.01.060(c)).

Booth's evening primrose is normally found in Joshua tree or Pinyon and juniper woodland and therefore would not likely occur at this location. This species was last recorded in 2010 from the vicinity of the Mojave River, east of Apple Valley and south of Victorville. Though loeflingia prefers sandy habitats such as desert dunes, Great Basin or Sonoran desert scrub and has been found nearby (near the CA aqueduct, SW of the site), habitat at the proposed project site is not optimal for the species.

The project site contains 16 Joshua trees – designated as a protected plant by San Bernardino County. All (16) Joshua trees on-site will be transplanted around the perimeter of the project site, within the designated 10-foot wide planting strip, between October and March – during the same season in which they are collected. EREMICO Biological Services has verified that the proposed Joshua tree and *Opuntia* transplanting plan for the Hesperia Project is appropriate, supportive of a healthy environment, and in

compliance with Chapter 88.01 (Plant Protection and Management) of the San Bernardino County Development Code.²

Off-site Improvements

The project includes an overhead line extension along Fuente Avenue, which would not result in any off-site impacts as the extension would occur within existing developed right-of-way, and minimal ground disturbance activities would be required (e.g., installation of two additional poles). The County also requires construction of an off-site, paved access road as part of the project. The alignment for this road is comprised of the following roadway segments: 1) the portion of El Centro Road south of the project site from the project's southern access driveway east to Bandicoot Trail, and 2) the segment of Bandicoot Trail from the intersection of El Centro Road and Bandicoot Trail north to Mesquite Street, the latter of which is an existing paved roadway. The road section will be approximately 3,400 feet in length from the project's southern access along El Centro Road to Mesquite Street. The entire alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in regular use by surrounding property owners. As a result, natural habitats supporting special-status species do not occur within the existing alignment; and as such, construction of the off-site connector road would not result in impacts to special-status species.

Conclusion

The project would not result in adverse impacts to special-status plant species. Though short-joint beavertail cacti and Joshua trees occur on-site, they would be transplanted to the 10-foot landscape buffer around the perimeter of the project site, in accordance with County's Plant Protection and Management Ordinance.

The project site does not contain suitable habitat for the majority of special-status plant or animal species that have the potential to occur in the area. However, while burrowing owl and their sign were not observed on-site, the site is considered potential burrowing owl habitat according to the San Bernardino County Biotic Resources Overlay Map. Precautionary mitigation measures are included below, in the event that burrowing owl is identified prior to construction.

- IV b) **No Impact.** The project, including the off-site connector road improvement, will have no adverse impacts on sensitive or regulated habitat because the project site and off-site connector road alignment are devoid of native riparian vegetation or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or United States Fish and Wildlife Services (USFWS). Two desert washes flow across the property to the northeast - one near the southeast corner and another through

² Denise L. LaBerteaux, EREMICO Biological Services, Letter to Matthew Slowick, County of San Bernardino Land Use Services Department, dated July 9, 2012.

the center of the site. However, these washes do not contain hydrophytic vegetation and are not protected aquatic features.

- IV c) **No Impact.** Waters or wetlands that fall under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), California Regional Water Quality Control Board (RWQCB), and/or CDFG are not found on the project site (Barnett Environmental, 2012) or the off-site connector road alignment from El Centro Road south of the project site to Mesquite Road via Bandicoot Trail. Indicators of hydrologic activity (topographical or geological), hydric soils, or hydrophytic vegetation were not observed on-site or in the off-site improvement area. In addition, blue-line streams are not found on the Hesperia U.S. Geological Survey (USGS) 7.5-minute quadrangle in the vicinity of the project area.
- IV d) **No Impact.** The proposed project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The site-specific biological assessment did not identify distinct wildlife corridors or nursery sites within or near the project site. It should be noted that the current site design includes a 100-125-foot wide San Bernardino County Drainage Easement, which would provide a movement corridor through the project site.
- IV e) **Less Than Significant Impact.** The County designates the Joshua tree as a protected plant. Removal or relocation of any on-site Joshua trees must comply with Development Code Section 88.01.060. As discussed above, the project site contains 16 Joshua trees, all of which will be relocated around the perimeter of the project site, within the designated 10-foot wide planting strip, between October and March – during the same season in which they are collected. A preconstruction inspection, tree removal plan, and permit in compliance with the County Plant Protection and Management Ordinance must occur prior to any land disturbance and/or removal of any trees or plants. It should be noted that construction of the off-site connector road will not require the removal of any Joshua trees or other biological resources protected by any local policies or ordinances.
- IV f) **Less Than Significant Impact.** This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plan has been adopted in the area of the project site. The site is within the proposed boundary of the Bureau of Land Management’s West Mojave Plan, which covers 9.3 million acres in the western portion of the Mojave Desert. However, this interagency habitat conservation plan has not yet been implemented and is being revised to address a summary judgment from the court in 2009.³

Possible significant adverse impacts have been identified and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

³ See http://www.blm.gov/ca/st/en/fo/cdd/west_mojave_wemo.html; accessed October 1, 2012.

Mitigation Measures

BIO-1: A pre-construction survey for burrowing owl is required within 30 days prior to the start of construction. If no owls are found, further mitigation is not necessary. If burrowing owl is found on-site, as compensation for the direct loss of burrowing owl nesting and foraging habitat, the project proponent shall mitigate by acquiring and permanently protecting known burrowing owl nesting and foraging habitat at the following ratio:

- a. Replacement of occupied habitat with occupied habitat at 1.5 times 6.5 acres per pair or single bird; or
- b. Replacement of occupied habitat with habitat contiguous with occupied habitat at 2 times 6.5 acres per pair or single bird; or
- c. Replacement of occupied habitat with suitable unoccupied habitat at 3 times 6.5 acres per pair or single bird.

All owls associated with occupied burrows that will be directly impacted (temporarily or permanently) by the project shall be relocated and the following measures shall be implemented to avoid take of owls:

- a. Occupied burrows shall not be disturbed during the nesting season of February 1 through August 31, unless a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.
- b. A qualified biologist must relocate owls from any occupied burrows that will be impacted by project activities. Suitable habitat must be available adjacent to or near the disturbance site or artificial burrows will need to be provided nearby. Once the biologist has confirmed that the owls have left the burrow, burrows should be excavated using hand tools and refilled to prevent reoccupation.
- c. All relocation shall be approved by the CDFG. The permitted biologist shall monitor the relocated owls a minimum of three days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring shall be submitted to the CDFG within 30 days following completion of the relocation and monitoring of the owls.

A Burrowing Owl Mitigation and Monitoring Plan (Plan) shall be submitted to the CDFG for review and approval prior to relocation of owls. The Plan shall describe proposed relocation and monitoring plans. The Plan shall include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location and type of burrows) shall also be included in the Plan. The Plan shall also describe proposed off-

site areas to preserve for compensation for impacts to burrowing owls/occupied burrows at the project site as required above.

V. CULTURAL RESOURCES. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource on site or unique geologic features?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: (Check if project is located in the Cultural or Paleontologic Resources Overlays or cite results of cultural resource review):

This section is based on the site-specific cultural resources report prepared by LSA Associates, Inc., which is entitled *Cultural Resources Assessment for the Coronus Hesperia West Project* (May 3, 2012).

IV a-d) **Less Than Significant with Mitigation Incorporated.** A records search of the project site and vicinity was conducted by staff at the San Bernardino Archaeological Information Center (SBAIC) as part of the Cultural Resources Report. The records search indicated that the project site has not been previously surveyed, although four area-specific survey reports and 10 general area overviews have been carried out within 0.5-mile of the project site. The records search reports two linear features – the National Old Trails Road (SBR-2910H) and the Hesperia Pole Line (SBR-4255H – approximately 0.5-mile to the northwest of the project site); and one historic scatter approximately 0.25-mile northwest of the project site. The records indicated that the area within and surrounding the project site has a high sensitivity for both prehistoric and historic archaeological resources, a low sensitivity for built architecture, and an unknown sensitivity for either cultural landscapes or ethnic resources. The project site is located within the boundaries of the historic silver Mountain/Oro Grande Mining District, but contributing elements are not located in or adjacent to the project boundaries.

LSA Archaeologist, Dr. Frederick Lange, surveyed the project site on April 20, 2012 and inspected erosion channels on the western and southern boundaries of the project site for possible cultural strata or displaced artifacts. Dr. Lange found three, widely scattered historic isolates (two punch top cans and one solder-top can) during his survey, but did not record them because they were so widely separated (30+m) from each other. While the solder-top can is probably associated with the National Old Trails Road that passed approximately 0.5-mile to the northwest of the project site, this can and the other two

isolates do not have buried components associated with them, nor do they have the potential to answer any questions important to the history of the area. No other evidence of cultural or historical resources or human remains was detected during the field survey, including standing structures, foundations, prehistoric archaeological resources, ethnic resources, or elements suggesting the potential for a cultural landscape. However, given the sensitivity of the area to contain prehistoric and historic archaeological resources, as noted in the records search, the possibility cannot be excluded that previously unidentified archaeological or historical resources, or human remains, could be detected on-site during construction.

In addition, the project includes construction of an off-site paved access road from the project's southern access along El Centro Road to Mesquite Street via Bandicoot Trail. The road section will be approximately 3,400 feet in length from the project's southern access along El Centro Road to Mesquite Street. The entire alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in regular use by surrounding property owners. Given that minimal grading is anticipated to be necessary for purposes of constructing the off-site road, the possibility that archaeological or historical resources will be unearthed during construction of the road is remote. Notwithstanding the above, the possibility cannot be eliminated that archaeological and/or historical resources could be discovered during construction of the off-site connector road.

Possible significant adverse impacts have been identified and the following mitigation measures are required as conditions of project approval to reduce these impacts to a level below significant:

Mitigation Measures:

CR-1: Should previously unidentified cultural resources be discovered during on- or off-site construction, the project sponsor shall cease work within 100 feet of the resources, and the County of San Bernardino shall be notified immediately. Depending on the nature of the find (i.e., archaeological or paleontological resource), the project proponent shall retain a professional archaeologist or paleontologist to assess the significance of the find and make mitigation recommendations, if warranted. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

CR-2: Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the San Bernardino County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely

descendant shall work with the applicant to develop a program for re-internment of the human remains and any associated artifacts. Additional work cannot take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.

VI. GEOLOGY AND SOILS.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Expose people or structures to 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 based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if project is located in the Geologic Hazards Overlay District):

VI a,c) **Less Than Significant Impact.** The entire San Bernardino County area is particularly susceptible to strong ground shaking and other geologic hazards. However, the project area is relatively flat terrain where landslides have not historically been an issue and the area is not within an Alquist-Priolo Special Studies Zone, meaning that the site is not within 500 feet of major active faults or within 200-300 feet of a trough created by minor faults.

Arrow Engineering Services, Inc. (AESI) prepared a Soils Engineering Report for the project, dated April 26, 2012, which includes results of eight (8), up to 30-foot deep exploratory borings. Site soils consist of silty and clayey sands, which are loose within the upper layers, but increase in density with depth. The Soils Engineering Report concludes (p. 3) that, provided report recommendations are incorporated into the site

grading and development plan, the proposed solar arrays should not be subject to settlement or slippage. It should also be noted that the project involves the construction of relatively few structures, none of which would be habitable.

Potential project impacts associated with strong seismic ground shaking and settlement (including effects from liquefaction) would be less than significant with adherence of the project to the California Building Code and incorporation of Soils Engineering Report recommendations into project design and construction. In addition, the off-site connector road would be designed in accordance with San Bernardino County Standard 112, "Half Width Desert Road," for review and approval by the Transportation Operations Division, Permits Section of the County Public Works Department prior to roadway construction. Similarly, County Building and Safety will review and approve the on-site project improvements and impose appropriate seismic standards, including but not necessarily limited to those set forth in the Soils Engineering Report prepared for the project.

- VI b) **Less Than Significant Impact.** Substantial on-site grading or vegetation removal will not occur during the installation of the proposed project. Each solar module will be fastened to the ground surface via hydraulically driven 2-inch galvanized pipe. This approach will result in minimal disturbance to topsoil and allow retention of much of the on-site vegetation, which will moderate ground-level wind speeds and, consequently, erosion. According to AESI's Preliminary Water Quality Management Plan, crushed rock will be used for construction of internal access roads, around the equipment and transformer concrete pads, and in any other areas subject to erosion.

The proposed off-site connector road is approximately 3,400 feet in length from the project's southern access along El Centro Road to Mesquite Street via Bandicoot Trail. This alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in use by surrounding property owners. Some grading operations will need to occur to construct the paved connector road, however any potential erosion resulting from construction would be addressed via the Storm Water Pollution Prevention Plan (SWPPP) that will be prepared for the overall project (for more information, see IX "a,f" below). Given the site's location within the County's Fire Safety 2 Overlay, a Soil Erosion and Sediment Control Plan will also be prepared for the project, per County Development Code Section 82.13.080.

- VI d) **Less Than Significant Impact.** Impacts to structures resulting from expansive soils can be considered less than significant, since the preliminary expansion index of on-site soils is "very low", according to the Soils Engineering Report (p. 7). Furthermore, as discussed above under VI "a,c", County Building and Safety will review and approve the project and impose appropriate geotechnical standards, including but not necessarily limited to those set forth in the Soils Engineering Report prepared for the project.

VI e) **No Impact.** The project will be an unmanned facility that will not use septic tanks or alternative wastewater disposal systems. Therefore, no impacts are anticipated.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

VII. GREENHOUSE GAS EMISSIONS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

VII a,b) **Less Than Significant Impact.** Though the MDAQMD has not yet developed a quantitative significance threshold for Greenhouse Gases (GHG), the San Bernardino County Board of Supervisors adopted a County GHG Emissions Reduction Plan on December 6, 2011. Consequently, the project must comply with all performance standards in the GHG Emissions Reduction Plan in effect at the time of development.

Raney quantified project-related GHG emissions and reductions for this IS/MND analysis and estimated short-term construction GHG emissions using the statewide CalEEMod model – designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MTCO₂e), based on the global warming potential of the individual pollutants.

Raney estimated reductions from the proposed project using the U.S. Environmental Protection Agency (EPA) Green Power Equivalency Calculator (May 2011) – a web-based calculator that provides the approximate amount of GHG emissions savings, as well as equivalency statements such as an equivalent number of passenger vehicles, homes, or coal plants. The calculator utilizes data from the EPA’s Emissions & Generation Resource Integrated Database (eGRID) utility non-baseload emissions rates. In order to determine the approximate kilowatt-hours per year (kWh/yr) generated by the project, the assumption was made that the solar energy system would provide output for about five hours per day for 365 days per year. Using this assumption and the project’s total estimated generation of 2.7 MW, Raney estimated that the project would produce 4,927,500 kWh/yr (4,927.5 MWh/yr) over its 20-year lifetime.

Implementation of the proposed project would contribute to increases of GHG emissions associated with global climate change. Estimated GHG emissions

attributable to future development would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and utility usage. As discussed in detail in Section III, Air Quality, above, the proposed project's primary contribution to air pollutant emissions, including GHG emissions, would occur during construction of the project, particularly associated with combustion of gasoline and diesel fuel from construction equipment and trucks. However, it should be noted that construction would be short-term and associated emissions would be a temporary release.

The proposed project's construction-related on-site GHG emissions were estimated using the CalEEMod software. In addition, the SMAQMD's Road Construction Emissions Model (ver. 7.1.2) was utilized to estimate GHG emissions associated with the off-site construction activities required for the paved connector road. Estimated emissions from the Road Construction Emissions Model are expressed as tons per the entire construction project, but have been converted to metric tons of CO₂ equivalent units of measure (i.e., MTCO_{2e}), which is the industry standard measurement units for GHG emissions. Table 3 below presents the proposed project's construction-related GHG emissions.

	Annual CO₂ emissions (MTCO_{2e})
CalEEMod Results	251.49
Road Construction Emissions Model Results	200.00
TOTAL GHG Emissions	451.49

Source: CalEEMod and Roadway Construction Emissions Model, December 2012.

Again, construction-related GHG emissions are a temporary release and are not expected to result in a cumulative contribution to global climate change. Amortizing the project's construction GHG emissions over the lifetime of the project, which is assumed to be 20 years for this analysis, would result in approximately 22.57 MTCO_{2e} per year.

CalEEMod estimates that the proposed project's operational activities (i.e., 16 vehicle trips per year for maintenance) would generate a negligible amount of operational GHG emissions. On the contrary, the proposed project would supply an alternative source of energy, which would result in the conservation of and overall reduction of GHG emissions related to typical energy resources such as oil, coal, and natural gas. According to the EPA's Green Power Equivalency Calculator, operation of the proposed project would save an estimated 2,336 MTCO_{2e} per year – equivalent to GHG emissions from approximately 458 passenger vehicles per year, 5,433 barrels of oil consumed, or 291 average American homes for one year.

Even with the temporary emission of GHG from construction activities amortized over the lifetime of the project, the proposed project would still result in overall net negative annual GHG emissions of approximately 2,313.43 MTCO_{2e} (i.e., 2,336 MTCO_{2e} per year - 22.57 MTCO_{2e} per year). Because GHG emissions would be negative overall, the proposed project would be considered to have a positive impact on global climate change and would be beneficial to the environment. The project is also required to comply with all of the performance standards in the GHG Emissions Reduction Plan in effect at the time of development. Development of the proposed solar project is expected to produce cumulative and regional environmental benefits. Thus, the proposed project would not conflict with any existing GHG laws, plans, policies, or regulations adopted by the California legislature, the California Air Resources Board (CARB), the California Attorney General, the California Office of Planning and Research (OPR), or the MDAQMD.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

VIII. HAZARDS AND HAZARDOUS MATERIALS.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
<i>Would the project:</i>				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

VIII a) **Less Than Significant Impact.** Implementation of the proposed project will not entail routine transport, use or disposal of hazardous materials, with the possible exception of short-term construction-related fuels, lubricants, adhesives, and solvents. The potential risk associated with the accidental discharge of construction-related hazardous materials from use and storage during project construction is considered low because the handling of any such materials will be addressed through the implementation of

Best Management Practices (BMPs), pursuant to the intent of the National Pollutant Discharge Elimination System (NPDES) General Construction Permit.

- VIII b) **Less Than Significant Impact.** The proposed project will not 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. The photovoltaic panels are environmentally sealed collections of photovoltaic cells that do not require chemicals, nor produce waste materials.
- VIII c) **Less Than Significant Impact.** Existing or proposed schools are not located within ¼ mile of the proposed project site. The nearest school, Mesquite Trails Elementary School, is located approximately 0.38-mile north of the project site in the community of Oak Hills. Additionally, operation and maintenance of the project would not emit hazardous emissions or utilize hazardous substances.
- VIII d) **No Impact.** The proposed project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
- VIII e) **Less Than Significant Impact.** The project site is not located within two miles of a public airport. The nearest public airport, Hesperia Airport, is located approximately 2.56 miles from the project site. In addition, according to the San Bernardino County Land Use Plan Hazards Overlay Map, the project site is outside of the Airport Safety Review Areas. As a result, the project would not result in a safety hazard for people residing or working in the project area.
- VIII f) **No Impact.** The project site is not within the vicinity or approach/departure flight path of a private airstrip. Therefore, the project would not have an impact related to aeronautical safety hazards for workers occupying the project site.
- VIII g) **Less Than Significant Impact.** Activities associated with the proposed project would not impede existing emergency response plans for the project site and/or other land uses in the project vicinity. During on-site construction, all vehicles and stationary equipment would be staged off public roads and would not block emergency access routes. While construction of the off-site connector road would temporarily disrupt the flow of traffic along El Centro Road, south of the project site, and Bandicoot Trail, from its intersection with El Centro Road north to Mesquite Street, alternative routes of travel in the immediate area (e.g., Fuente Avenue, Topaz Avenue) will be available for emergency response vehicles to utilize, if necessary. Accordingly, implementation of the proposed project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- VIII h) **Less Than Significant Impact.** The project site is located within Fire Safety Area 2 (FS2), which includes those lands immediately to the north and east of the mountain FS1 area in the mountain-desert interface. These areas have gentle to moderate sloping

terrain, contain light to moderate fuel loading, and are periodically subject to high wind conditions that could dramatically spread wildland fires. The project will comply with all applicable requirements of Section 82.13, Fire Safety (FS) Overlay, of the Development Code and will not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The proposed project includes installation of non-combustible power poles and solar panels. On-site soil compaction and periodic vegetation trimming will reduce available fuel. Other than from an external source, the only risk of ignition of on-site wildfires would be from electrical malfunctions resulting from poor installation. Since all electrical equipment will be installed properly and in accordance with all State and County safety codes, the risk of on-site ignition would be minimal.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

IX. HYDROLOGY AND WATER QUALITY. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. 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 (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Place within a 100-year floodplain structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j. Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

The following discussion is based primarily on AESI's *Preliminary Hydrology Study for Hesperia West Solar PV Project* (November 29, 2012) and a Preliminary Water Quality

Management Plan (May 2012).

IX a,f) **Less Than Significant Impact.** According to the Preliminary Water Quality Management Plan, the proposed project will not violate any water quality standards or waste discharge requirements. Any potential water quality impacts would be associated with short-term (construction-related) erosion or sedimentation and limited hazardous material use/discharge. Solar panels will be elevated above the existing grade for easy panel maintenance and rotated to optimize power generation. Sub-surface, vertical steel pipes that will anchor the panels require no preparatory grading. Internal, maintenance-vehicle access roads will be constructed of re-compacted native soils and crushed rock. In addition to the solar panels, the project includes the installation of two concrete equipment pads in the northwest corner of the site, as well as nine inverter and transformer pads throughout the site, under the solar arrays. Crushed rock would be placed around all of the pads to minimize any possible erosion from storm water runoff. The on-site areas not covered by the solar panel structures, equipment and inverter/transformer pads, and access roads will be left as native soil in the present condition to control surface drainage.

The proposed project would only discharge uncontaminated water used to clean the solar panels that will be quickly absorbed into the soils on-site. No toxicants, cleaning agents, or other hazardous materials will be used and erosion and/or sedimentation will be avoided or reduced below a level of significance through conformance with applicable elements of the NPDES Municipal Stormwater General Construction Permit.

Off-site improvements associated with the project that could potentially result in water quality issues are limited to the proposed 3,400-foot connector road from the project's southern access along El Centro Road to Mesquite Street via Bandicoot Trail. This alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in use by surrounding property owners. Some grading operations will need to occur in order to construct the paved connector road. In compliance with San Bernardino County Standard 112, "Half Width Desert Road", the road would consist of 26 feet of paved width, and 5-foot wide graded shoulders on each side. Rainfall on the paved section of road will sheet flow off the surface to the edge of paving. The shoulders will be graded lower than adjacent properties to protect them and will be 100% pervious to percolate a portion and then dissipate the remaining flows downstream in sheet flow pattern to the north and east, following the general slope of the area, where it will infiltrate into the soil. Where the roadway intersects cross streets the flow can or will turn east depending upon natural topography.

A Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project that will provide detailed descriptions of the various structural and nonstructural water quality management measures employed for on- and off-site improvement areas. Compliance with the applicable NPDES requirements will ensure that the entirety of the project will avoid any potential violations of water quality standards or waste discharge requirements.

IX b) **Less Than Significant Impact.** The proposed project will not entail the use of groundwater and, thus, not deplete groundwater supplies or interfere substantially with groundwater recharge to cause a net deficit in aquifer volume or lowering of the local groundwater table level. Water needed for periodic maintenance of the solar panels will be trucked in and sprayed on the panels from a water truck. Little of the ground within the project site will be covered with impermeable material, so neither water percolation nor groundwater recharge would be adversely affected by project implementation.

IX c-e) **Less Than Significant Impact.** The proposed project's hydrology study concluded that the proposed project will not have appreciable effects to the current runoff rates, drainage patterns, or quantity of runoff (Preliminary Hydrology Study, p. 4).

The site watershed is approximately 805.4 acres and extends approximately 3.8 miles southwesterly. Drainage approaches the site from the southwest and appears to cause erosion damage in Fuente Avenue on the west side of the site.

Because the upstream watershed area is sparsely populated and is designated "Rural Living", the imperviousness values are extremely low for both the pre- and post-developed conditions. The Preliminary Hydrology Study calculated only the post-developed off-site flows to look at a worst-case scenario. Only a small amount of impervious surface area would be created on the project site, primarily consisting of installation of internal access roads, two equipment pads in the northwestern corner of the site, and nine inverter/transformer pads under some of the panel arrays. The internal access roads would allow some level of infiltration through their crushed rock surfaces.

The Preliminary Hydrology Study calculated storm flows during the 100-year, 60-minute event and determined that storm flows would continue to sheet flow across the property towards the northeast. Because minimal grading is proposed on-site and minimal changes in the imperviousness are expected, the Preliminary Hydrology Study did not identify the need for any mitigation measures. In addition, the County requires that all runoff must be held to pre-development levels per Section 82.13.080 of the San Bernardino County Code.

The Preliminary Hydrology Study also recommends that photovoltaic modules be placed at least two feet above existing ground surface. The current Site Plan (See Figure 3) indicates that the modules would be placed a minimum of two feet above the ground. Consequently, the proposed project should not alter the site's existing drainage pattern and would not alter the course of any stream or river. The project also includes dedication of an on-site 100 to 125-foot drainage easement along its southeastern boundary that runs parallel to El Centro Road and then turns to the northeast towards Bandicoot Trail. The easement would provide connectivity to the existing off-site drainage easements south and northeast of the project site.

In addition to the above-discussed off-site improvements, the project includes the construction of an approximately 3,400-foot long off-site connector road, which would introduce additional impervious surfaces to the area. The off-site connector road would extend from the project's southern access along El Centro Road to Mesquite Street via Bandicoot Trail. This alignment in El Centro Road and Bandicoot Trail is within existing dirt streets that are already in use by surrounding property owners. In compliance with San Bernardino County Standard 112, "Half Width Desert Road", the road would consist of 26 feet of paved width, and five-foot wide graded shoulders on each side. Rainfall on the paved section of road will sheet flow off the surface to the edge of paving. The shoulders will be graded lower than adjacent properties to protect them and will be 100% pervious to percolate a portion and then dissipate the remaining flows downstream in sheet flow pattern to the north and east, following the general slope of the area, where it will infiltrate into the soil. Where the roadway intersects cross streets the flow can or will turn east depending upon natural topography. The project engineer has indicated that stormwater runoff from the off-site road would not alter the existing drainage pattern of the area, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- IX g-i) **Less Than Significant Impact.** The proposed project would not create or result in housing within a 100-year flood hazard area or result in the placement of structures within a 100-year flood hazard area, which would impede or redirect flood flows. On-site improvements would be limited to installation of 11 concrete pads and multiple solar modules, which would be fastened to the ground surface via hydraulically driven 2-inch galvanized pipe. Off-site improvements would include construction of the 3,400-foot connector road and an overhead utility line extension. The parcel is not located in a special flood hazard zone. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Panel Number 06071C6490H, indicates that the project site is within Zone D - an Undetermined Risk Area. Though in an undetermined risk area, the limited on- and off-site improvements would not impede or redirect flood flows.
- IX j) **No Impact.** The project will not be impacted by inundation by seiche, tsunami, or mudflow, because the project is not adjacent to any body of water that has the potential of seiche or tsunami, nor is the project site in the path of any potential mudflow.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

X. LAND USE AND PLANNING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating on environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- X a) **Less Than Significant Impact.** The proposed project will not physically divide the surrounding rural community of Oak Hills, which contains relatively few houses. Residences border the project site on only the north and south, with vacant lots adjacent to the project on the east and west. Access to existing, nearby residential areas would not be impeded by operation of the proposed solar facility, which is consistent with the site’s existing San Bernardino County land use zoning designation (See Question “b” for further discussion on this).
- X b) **Less Than Significant Impact.** The current General Plan land use zoning designation for the project site is Oak Hills Community Plan/Rural Living (OH/RL). The OH/RL land use zoning designation allows development of solar electrical power generation on sites greater than 20 acres, subject to a Conditional Use Permit (CUP). Accordingly, the project applicant is requesting a CUP for the proposed project. A General Plan amendment is not required; therefore, the project would not conflict with any applicable land use plans, policies, or regulations of an agency with jurisdiction over the project.
- X c) **No Impact.** This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plan has been adopted in the area of the project site. The site is within the proposed boundary of the West Mojave Plan, which covers 9.3 million acres in the western portion of the Mojave Desert. This interagency habitat conservation plan has not yet been implemented and is being revised to address a summary judgment from the court in 2009.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XI. MINERAL RESOURCES.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

SUBSTANTIATION: (Check if project is located within the Mineral Resource Zone Overlay)

XI a,b) **No Impact.** The project will not 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 because identified important mineral resources are not located on the project site and the site is not within a Mineral Resource Zone Overlay.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XII. NOISE. <i>Would the project result in:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: (Check if the project is located in the Noise Hazard Overlay District or is subject to severe noise levels according to the General Plan Noise Element

XII a,c) **Less Than Significant Impact.** With the exception of a number of residences within the Oak Hills Residential Community, the proposed project is also adjacent to some undeveloped and/or vacant lands. Operation of the proposed project would not generate audible levels of noise or perceptible levels of vibration in the surrounding area. As the solar arrays are a fixed-tilt system, no motor noise would occur from system tracking. Maintenance activities (including periodic cleaning, electrical connection repair, and panel replacement) would result in only minimal noise and the proposed project does not include dwellings or other development that would generate regular vehicle trips to/from the project site beyond occasional maintenance visits – approximately four vehicle trips every three months (i.e., 16 per year) during long-term operation of the project. Therefore, the project would not expose persons to or generate noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.

XII b,d) **Less Than Significant Impact.** For the existing area residents, noise generated from the proposed project would be limited to short-term construction activities, which may generate some elevated, short-term construction equipment noise. These activities, however, will be limited to daytime hours and will comply with the noise and vibration standards of the San Bernardino County Development Code. Noise generated by construction equipment/vehicle operation would be localized, temporary, and periodic. Although there will be an increase in ambient noise levels in the project vicinity above current levels during construction, such daytime hour construction noise is exempt per the San Bernardino County Development Code.

XII e,f) **No Impact.** The project site is not located within two miles of a public airport – the Hesperia Airport is approximately 2.56 miles from the project site – and the project site is outside of the Airport Safety Review Areas according to the San Bernardino County Land Use Plan Hazards Overlay Map. The project site is neither within the vicinity of, or along an approach/departure flight path of any private airstrip. Consequently, the project would not expose people residing or working in the project area to excessive aircraft noise levels.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XIII. POPULATION AND HOUSING. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

SUBSTANTIATION

XIII a-c) **No Impact.** The project site is currently vacant and located in the sparsely-populated Oak Hills Community of Hesperia in San Bernardino County. The project would not include the direct creation of new housing, nor displace any existing housing or people. It is anticipated that any workers needed for project construction and operation would come from the local employment base; therefore, the project would not result in local area population growth or lead to the creation of, or necessity for new housing. Similarly, the project would not indirectly induce substantial population growth through the extension of major infrastructure. Consequently, no impacts related to population and housing would occur.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XIV. PUBLIC SERVICES.

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

SUBSTANTIATION

XIV a) **Fire – Less Than Significant Impact.** San Bernardino County Fire provides fire protection at the site, which is within Fire Safety Area 2 (FS2). The project will therefore comply with all applicable requirements of Section 82.13, Fire Safety (FS) Overlay, of the County Development Code. Furthermore, the project includes installation of non-combustible poles and panels and on-site soil compaction and periodic vegetation trimming to reduce any available fuels. Comprehensive safety measures that comply with federal, State, and local worker safety and fire protection codes and regulations will be implemented for the life of the project to minimize fire occurrence during project construction and operation.

Police – Less Than Significant Impact. The San Bernardino County Sheriff’s Department serves the proposed project area and other unincorporated portions of the County. The Victor Valley Sheriff’s Station is located approximately 8.5 miles to the northeast of the project site. Due to the large expanse that the station covers, deputies regularly assist and are assisted by the California Highway Patrol and the BLM Rangers. The proposed project would not impact service ratios, response times, or other performance objectives related to police protection. The project’s short-term service requirements would not result in increases in the level of public service offered or affect these agencies’ response times. The project also includes installation of a six-foot chain link perimeter fence and security cameras with lighting controlled by motion detectors.

Schools, Parks, and Other Public Facilities – No Impact. Long-term operation of the proposed facilities would place no demand on schools, parks, or other public facilities because the project would not involve the construction of facilities that require such

services (e.g., residences). Based on these factors, the proposed project will not result in any long-term impacts to other public facilities.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XV. RECREATION. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘

SUSTANTIATION

XV a,b) **No Impact.** As stated previously, the proposed project does not involve the creation of new housing and would not result in population growth in the area. Similarly, new recreational facilities are not proposed as part of the project and the demand for such facilities would not increase with implementation of the project.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XVI. TRANSPORTATION/CIRCULATION. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

XVI a,b) **Less Than Significant Impact.** The proponent did not conduct a Traffic Impact Assessment (TIA) for the proposed project, because the project will not create significant traffic impacts to the surrounding roadway circulation system per the thresholds of significance specified by the San Bernardino County Congestion Management Plan (CMP). Traffic on local roadways and at local intersections would be maintained at a level of service (LOS) of C or better during the life of the project, as required by the County General Plan, because only periodic vehicle trips associated with maintenance of the solar panels are anticipated. The project would not increase daily traffic levels on vicinity roadways because it is an “unmanned” operation. Trips to the project site would be spread out over a year’s time for maintenance purposes. It is anticipated that only approximately four vehicle trips would be made to the project site once every three months, for a total of 16 trips per year, during the long-term operation of the project.

Construction of the proposed project would temporarily increase traffic on surrounding roadways with construction truck trips limited to the anticipated six-month construction period. Therefore, the project would not result in a substantial permanent increase in the

number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections.

- XVI c) **No Impact.** The proposed project would not affect air traffic patterns. The nearest airport is the Hesperia Airport, which is located approximately 2.56 miles to the southeast of the proposed project area. Additionally, the only substantial aboveground modifications will be the solar arrays that will have a maximum height of approximately 8-10 feet.

The solar reflectivity of the photovoltaic panels used for the proposed project will be low to nil, due to the anti-reflective coating applied to the panels. The project's contribution to the reflectivity within the area and the resultant potential negative effect on air traffic patterns would not be considered significant.

- XVI d) **No Impact.** The proposed project includes construction of on-site internal access roads as well as an approximately 3,400-foot paved connector road from the site's southern point of access along El Centro Road, north to Mesquite Street via Bandicoot Trail. These roadways will be designed consistent with County standards. Therefore, the proposed project would not increase hazards due to a design feature, such as a sharp curve or dangerous intersection, incompatible uses, such as farming equipment, or inadequate emergency access.

- XVI e) **Less Than Significant Impact.** The proposed project will not result in inadequate emergency access to the project area. During on-site construction, all vehicles will be parked off public roads and will not block emergency access routes. While construction of the off-site connector road would temporarily disrupt the flow of traffic along El Centro Road, south of the project site, and Bandicoot Trail, from its intersection with El Centro Road north to Mesquite Street, alternative routes of travel in the immediate area (e.g., Fuente Avenue, Topaz Avenue) will be available for emergency response vehicles to utilize, if necessary. In addition, the proposed project will provide adequate emergency access for both fire and medical emergency vehicles through construction of two access drives into the site, and a network of internal access roads through and around the project facilities.

- XVI f) **No Impact.** The proposed project would not remove, block, or otherwise interfere with existing bus turnouts or bicycle racks and would not conflict with adopted alternative transportation policies, plans, or programs.

No significant adverse impacts are identified or anticipated and no mitigation measures are required.

XVII. UTILITIES AND SERVICE SYSTEMS. <i>Would the project:</i>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
e. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✘
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	✘	<input type="checkbox"/>

SUBSTANTIATION

XVII a,e) **No Impact.** The proposed project does not involve the construction of facilities that would generate sewage. Therefore, the project would not exceed applicable wastewater treatment requirements. The proposed project's water discharge does not require treatment or permitting according to the regulations of the Lahontan RWQCB.

XVII b) **No Impact.** The project will not require new water or wastewater treatment facilities or expansion of existing facilities. As mentioned previously, periodic water to clean the panels will be brought to the site via water trucks from an off-site source. This equates to a negligible amount due to maintenance occurring periodically.

XVII c) **No Impact.** The proposed project will not require the construction or expansion of storm water drainage facilities. The proposed project will discharge uncontaminated water that is used to clean the solar panels, with no toxicants or cleaning agents used.

The insubstantial quantity of discharged water generated by cleaning will be absorbed into the soils on-site. Soils on the project area are moderately well-drained and are suitable for most type of development. Most of the ground within the proposed project area will not be covered with impermeable material.

XVII d) **Less Than Significant Impact.** San Bernardino County Service Area 70, Improvement Zone J (CSA 70 J) is a water district within the County's Special Districts Department Water/Sanitation Division (Division) that provides water services to a community of approximately 10,474 in the Oak Hills area. Since water is not needed for the project's solar power generation process, water demand for the project would be limited to the water needed for periodic maintenance (i.e., panel washing and landscape watering), which would be trucked in from an off-site source.

XVII f,g) **Less Than Significant Impact.** The proposed project will be an unmanned solar power generating facility, generating no process waste and only small quantities of solid waste that would require disposal. During construction, the proponent will provide trash and recycling dumpsters on-site. The proponent must complete the Solid Waste Management Division's Construction Waste Management Recycling Plan, Parts 1 and 2. The project is required to comply with federal, State, and local statutes and regulations related to solid waste disposal. Solid waste would not be generated during long-term operation of the project.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XVIII a) **Less than Significant Impact.** Mitigation Measures have been included in this Initial Study to address potential impacts to Air Quality, Biological Resources and Cultural Resources. With such measures, implementation of the proposed project would not degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations 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, or eliminate important examples of the major periods of California history or prehistory with adherence to the required mitigation measures discussed within this Initial Study.

XVIII b) **Less Than Significant Impact.** Cumulative impacts are defined as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period.

Other solar-generating facilities within the High Desert Region of San Bernardino County are in process or have been conditionally approved. Similar to the Hesperia West Project, each of these projects is required to implement mitigation measures to ensure that significant impacts do not occur.

The project will construct a green-energy-producing facility on a 20-acre vacant parcel. This cleaner energy will replace that produced with fossil fuels. Based on this, the project will not have individually limited, but cumulatively considerable impacts. The facility will be unmanned throughout its operation. Trips generated by periodic maintenance workers will be minimal in comparison to the overall traffic in the area. Compliance with the conditions of approval issued for the proposed development will further assure that project-level impacts would not be cumulatively considerable.

- XVIII c) **Less Than Significant Impact.** The project consists of the development of a solar energy generating facility that will require minimal disturbance to the physical environment. Upon implementation of the project, minimal vehicle trips would be generated on an ongoing basis. The only vehicle trips necessary throughout the long-term operation of the proposed project would be associated with periodic on-site maintenance activities, which are anticipated to occur three to four times per year. In addition, the operation of on-site equipment would not require combustion of any fuels. Thus, the project would not be expected to result in any new environmental effects, such as significant increases in GHG emissions, risks related to geological hazards, exposure to hazards or hazardous materials, or exposure to excessive noise levels, that would cause adverse effects on human beings. While short-term construction emissions would be considered potentially significant, mitigation required in this Initial Study would reduce the project's construction-related emissions to a less-than-significant level. Because adverse effects on human beings, either directly or indirectly, would not occur as a result of implementation of the proposed project, significant impacts would result.

MITIGATION MEASURES

(Any mitigation measures, which are not "self-monitoring," shall have a Mitigation Monitoring and Reporting Program prepared and adopted at time of project approval)

Air Quality

- AQ-1:** During construction, the project contractor(s) shall ensure that all off-road diesel-powered construction equipment be compliant with the U.S. Environmental Protection Agency Tier 2 or higher off-road emission standards. Proof of compliance with U.S. Environmental Protection Agency Tier 2 standards shall be provided to the County Building and Safety for review and approval.

Biological Resources

BIO-1: A pre-construction survey for burrowing owl is required within 30 days prior to the start of construction. If no owls are found, further mitigation is not necessary. If burrowing owl is found on-site, as compensation for the direct loss of burrowing owl nesting and foraging habitat, the project proponent shall mitigate by acquiring and permanently protecting known burrowing owl nesting and foraging habitat at the following ratio:

- a. Replacement of occupied habitat with occupied habitat at 1.5 times 6.5 acres per pair or single bird; or
- b. Replacement of occupied habitat with habitat contiguous with occupied habitat at 2 times 6.5 acres per pair or single bird; or
- c. Replacement of occupied habitat with suitable unoccupied habitat at 3 times 6.5 acres per pair or single bird.

All owls associated with occupied burrows that will be directly impacted (temporarily or permanently) by the project shall be relocated and the following measures shall be implemented to avoid take of owls:

- a. Occupied burrows shall not be disturbed during the nesting season of February 1 through August 31, unless a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.
- b. A qualified biologist must relocate owls from any occupied burrows that will be impacted by project activities. Suitable habitat must be available adjacent to or near the disturbance site or artificial burrows will need to be provided nearby. Once the biologist has confirmed that the owls have left the burrow, burrows should be excavated using hand tools and refilled to prevent reoccupation.
- c. All relocation shall be approved by the CDFG. The permitted biologist shall monitor the relocated owls a minimum of three days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring shall be submitted to the CDFG within 30 days following completion of the relocation and monitoring of the owls.

A Burrowing Owl Mitigation and Monitoring Plan (Plan) shall be submitted to the CDFG for review and approval prior to relocation of owls. The Plan shall describe proposed relocation and monitoring plans. The Plan shall include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location and type of burrows) shall also be included in the Plan. The Plan shall also describe proposed off-

site areas to preserve for compensation for impacts to burrowing owls/occupied burrows at the project site as required above.

Cultural Resources

CR-1: Should previously unidentified cultural resources be discovered during on- or off-site construction, the project sponsor shall cease work within 100 feet of the resources, and the County of San Bernardino shall be notified immediately. Depending on the nature of the find (i.e., archaeological or paleontological resource), the project proponent shall retain a professional archaeologist or paleontologist to assess the significance of the find and make mitigation recommendations, if warranted. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

CR-2: Pursuant to State Health and Safety Code §7050.5 (c) State Public Resources Code §5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the San Bernardino County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission who shall notify the person believed to be the most likely descendant. The most likely descendant shall work with the applicant to develop a program for re-internment of the human remains and any associated artifacts. Additional work cannot take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.

GENERAL REFERENCES (List author or agency, title, date)

- Arrow Engineering Services Inc. (AESI). Preliminary Hydrology Study for Hesperia West Solar PV Project. (November 29, 2012).
- Arrow Engineering Services Inc. (AESI). Preliminary Water Quality Management Plan (WQMP) for Compliance with State Water Resources Control Board General Construction Permit No. 2009-0009-DWQ WDID No. (TBD) for Hesperia West 1 and 2 Solar PV Project (May 2012).
- Arrow Engineering Services Inc. (AESI). Soils Engineering Report prepared for Coronus Hesperia West (April 26, 2012).
- Barnett Environmental. General Biological Resources Assessment, Habitat Assessment, & Focused Surveys for CA Burrowing Owl (*Athene cunicularia*) & Desert Tortoise (*Gopherus agassizii*) for the Hesperia Solar Project (R5W, T4N, Section 35 Hesperia 7.5' Quad; APN #0405-372-40 (May 24, 2012).
- Energy Matters, LLC. Solar & Wind Energy Calculations: The (very) Basics. Available at: <http://www.solar-estimate.org/?page=solar-calculations>. Accessed September 27, 2012.
- ENVIRON International Corporation. California Emissions Estimator Model User's Guide Version 2011.1. February 2011.
- Federal Emergency Management Agency Flood Insurance Rate Map and Flood Boundary Map.
- LSA Associates, Inc. Cultural Resources Assessment for the Coronus Hesperia West Project, County of San Bernardino, California (May 3, 2012).
- Mojave Desert Air Quality Management District (MDAQMD), 2009, California Environmental Quality Act (CEQA) and Federal Conformity Guidelines.
- San Bernardino County Development Code (Available online at <http://www.co.sanbernardino.ca.us/landuseservices/DevCode/Default.asp>)
- San Bernardino County General Plan (Available online at http://www.co.sanbernardino.ca.us/landuseservices/general_plan/Default.asp)
- San Bernardino County. Greenhouse Gas Emissions Reduction Plan. September 2011.
- U.S. Environmental Protection Agency. Green Power Equivalency Calculator. Available at: <http://www.epa.gov/greenpower/pubs/calculator.htm>. Accessed September 27, 2012.