Land Use Compatibility Analysis

DESERT GREEN SOLAR FARM

Modification to Major Use Permit 3300-09-012 (P09-012W[1]);

ER No. 09-05-001A

Prepared for:
County of San Diego
Planning and Development Services
5510 Overland Avenue #110
San Diego, CA 92123-1666
Contact: Ashley Gungle, Project Manager

Applicant:
Desert Green Solar Farm LLC
16650 Via Esprillo
San Diego, CA 92127
Contact: Patrick Brown
Phone: 619.733.2649

Prepared by:
RBF Consulting
9755 Clairemont Mesa Boulevard, Suite 100
San Diego, California 92124
Contact: Steve Wragg
Phone: 858.614.5059
Fax: 858.614.5001

February 2013

TABLE OF CONTENTS

List of Tables

List of Figures

Executive Summary

The Project proposes construction of a concentrated photovoltaic (CPV) solar energy electrical generation facility to provide electricity for public consumption. The land areas that comprise the Project site are located just east/northeast of the community of Borrego Springs, California, within northeastern San Diego County.

The Project proposes development of a CPV solar farm to support the transmission of power generated to the existing Borrego Substation, presently owned and operated by San Diego Gas and Electric (SDG&E). The proposed facilities would have an overall capacity of up to 6.5 megawatts (MW). The facility would consist of an array of CPV solar panels, with other supporting components including inverter stations/ transformers, switch gear, ultra capacitor storage unit, a storage building and associated storage yard, a supervisory control and data acquisition (SCADA) system enclosure, transmission facilities (onsite Gen-tie line and 12 kilovolt, or kV, line extension to Borrego Substation), and other improvements to allow for the transfer of energy to the Borrego Substation for distribution.

A number of existing and proposed plans and regulations apply to the lands affected by the Project. As determined in the following Land Use Compatibility Analysis, the Project is considered to be consistent with all applicable goals, policies, and objectives contained within such documents, as well as with other applicable regulations, such as the County's Wildland Urban Interface Ordinance. The Project does not propose a change to the existing General Plan land use or zoning designations, and is an allowed use under the existing designations with approval of a Major Use Permit (MUP) (or modification of an MUP as proposed herein), thereby demonstrating consistency with the land use intended by the County for the affected properties. In addition, due to the nature of the Project location and existing character of other uses and undeveloped lands in the Project area, short-term construction and long-term operation of the Project are considered to be compatible with surrounding land uses.

1.0 Introduction

1.1 Project Location and Setting

The main parcel that comprises the Project site is located just east of the community of Borrego Springs, California, within northeastern San Diego County; refer to Figure 1, Regional/Local Vicinity Map, and Figure 2, Aerial Photograph. The land to be developed with the solar CPV systems is comprised of one main parcel, with additional lands affected to support the transmission of power generated to the existing Borrego Substation, and for purposes of access and utility installation (water line). The County Assessor Parcel Number (APN) for the main facilities is APN 141-230-26 (288.29 acres, or approximately 288 acres). Additional parcels potentially affected by Project improvements may include APNs 141-210-04, -05, -06, -25, and -26 [site access, generation-tie (Gen-tie) line, and/or water line easement]; APNs 141-230-33 and -38 (private water line easement); and/or, APN 141-060-08 (12kV Borrego Valley Road Gen-tie Route).

The Project site is located approximately 0.45 mile north of Palm Canyon Drive and approximately one mile east Borrego Valley Road. The Borrego Valley Airport is located approximately 0.3 mile south of the southern boundary of the Project site.

To the north and east is undeveloped land; to the west are a commercial palm nursery and a small-scale commercial sand and gravel yard. A microwave tower is also adjacent to the southwest corner of the parcel. Land uses to the south across Palm Canyon Drive generally include undeveloped lands interspersed with industrial type and residential uses.

The 288-acre parcel is presently undeveloped. Vegetation on the area affected by the proposed Project largely consists of desert saltbush scrub and stabilized and partially stabilized desert dunes, with sparse groundcover consisting of a mixture of Mediterranean grass and mustard. Soil types found on the parcel also generally support bur-sage, saltbush, and annual grasses and forbs. Some native wildflower species occur intermittently, with a number of dead mesquite trees also present in various locations on the parcel.

1.2 Project Description

The Project would involve the construction of an approximately 45-acre solar energy electrical generation facility to provide electricity for public consumption. The proposed facilities would have an overall capacity of approximately 6.5 megawatts (MW), serving the Borrego Valley area. Of the approximately 288 acres, the proposed development area where the trackers would be installed, including the portion of the 12kV Gen-tie line/access route and temporary laydown yard (five acres), would total approximately 50.63 acres. An additional 2.61 acres on the 288-acre parcel would accommodate a 15-foot wide trail easement along the northern and western property boundaries (no improvements proposed at this time); however, the trail easement is not included within the Major Use Permit boundary. Approximately 125 acres of the 288-acre parcel would be dedicated as undisturbed open space for biological mitigation purposes (to remain unfenced with intermittent small-scale signage installed along the perimeter); refer to Figure 2, Aerial Photograph; Figures 3A to 3C, Major Use Permit Plot Plan; and, Figure 3D, Assessor Parcel Map/Potentially Affected Lands, for illustration of the proposed Project layout and design. The remainder of the parcel (approximately 110 acres) would remain undeveloped and in its current natural state (unfenced).

Proposed Project improvements would consist of an all-weather access easement serving the Project site from either Palm Canyon Drive or Borrego Valley Road. Additionally, a Gen-tie line would be installed from the Project site to the Borrego Substation via either the SDG&E 12kV Line Extension Route or the Borrego Valley Road Gen-tie Route. Additionally, water would be supplied to the Project site via one of two optional routes (West Water Line or East Water Line) via a 4-inch private water line to be extended from Palm Canyon Drive, as shown on the MUP Plot Plan; refer to Figure 3D, Assessor Parcel Map/Potentially Affected Lands.

A total of 308 CPV solar trackers are proposed; refer to Figure 3E, CPV System/Lens Plate. The CPV solar trackers would be manufactured at an offsite location and transported to the Project site.

The solar arrays would track the sun and would rotate from east to west to ensure maximum absorption of sunlight. The face of each panel would measure 48 feet in length by 25 feet in height, for a total surface area of 1,200 square feet. The total height of the panels measured from ground surface to the top of the panel would be

approximately 30 feet when the panels are in the vertical position, and 15 feet from ground surface to the top of panel when horizontal. All panels would be elevated one foot above the base flood elevation (bfe), which is one foot above ground level, for a total of two feet. The arrays would be spaced approximately 69 feet apart along the north-south axis (center to center) and 82 feet apart along the east-west axis (center to center), and would be installed using a concrete drilled pier or metal driven pile system. The ultimate arrangement/number of CPV solar panels, spacing of supporting racks, and rack pilings are subject to modification at final engineering design. Grading would require an estimated 93,300 cubic yards (c.y.) of balanced cut and fill.

Additional Project components would include up to five small-scale, metal structures (on a 10 foot by 40 foot pad) to house dual or triple inverters and transformers. Each inverter station would include a medium voltage transformer to step-up the voltage from the inverter to a nominal 12 kilovolts (kV), which is compatible with the local San Diego Gas & Electric (SDG&E) distribution system. Additionally, the Project would include one unmanned 300 square foot metal storage building located within a 1,000 s.f. breakaway fenced and screened storage yard (chain link of 6-foot height with interwoven slats); one generator pad (12 feet by 20 feet) to each house one 100kW generator for emergency purposes; a supervisory control and data acquisition (SCADA) equipment enclosure (10 feet by 30 feet) on a concrete building pad; 12kV switchgear (constructed on a 10-foot by 10-foot pad) to protect the Project equipment from any short-circuits occurring on the Gen-tie line; ultra capacitor storage unit; a 10,000 gallon (15-foot diameter) water tank for fire and panel washing, plus an optional 10,000 gallon tank; and, a 12kV low voltage gen tie line. All structures would be constructed on piers and elevated one foot above the bfe.

The CPV facilities would be unmanned and operated remotely. The proposed facilities would be remotely monitored during operating (daylight) hours, even though the Project facilities would be capable of automatic start up, shutdown, self-diagnosis, and fault detection. Appropriate levels of shielded security lighting would be installed at the storage building. The site would be secured via remote security services with motion detection cameras. For security purposes, the boundary of the Major Use Permit area would be fenced with a 6-foot high chain-link fence (breakaway fencing to allow for flood flows), topped with one foot of three-strand barbed wire. Routine maintenance would include periodic inspection and repairs on an as-needed basis, as well as washing of the CPV panels once every six to eight weeks.

1.3 Access and Circulation

Primary Access: Operation, maintenance, and construction activities for the Project would take access from either the proposed Palm Canyon Drive access route or the proposed Borrego Valley Road access route, as shown on the MUP Plot Plan; refer to Figures 3A and 3B. Both access routes are included as part of the Major Use Permit boundary.

The Palm Canyon Drive access route would include construction of a 24-foot wide all-weather paved access drive within a 28-foot wide graded width, located within existing 30-foot wide private utility and access easements. This route would connect to the facility at the southwesterly corner of the solar field.

route would include construction of a 24-foot wide all-weather paved access drive within a 28-foot wide graded width, located within a 50-foot wide private utility and access easement. The Borrego Valley Road access route would connect Borrego Valley Road to the northwesterly corner of the solar field. This access route would follow along a portion of an existing dirt road north of the existing 20-foot wide SDG&E utility easement, cross the SDG&E easement near the northwest corner of the site, continue thru the Cocopah nursery, and then head south to the solar facility. The Borrego Valley Road access route would also include the (underground) 12kV Borrego Valley Road Gen-tie Route.

The primary access road would be improved to a graded width of 28 feet with 24 feet of all-weather surface in accordance with County of San Diego Fire Standards. A fire department turnaround would be provided at the end of the primary access road at the entrance to the Project. The road would be designed and maintained to support the imposed loads of fire apparatus (not less than 50,000 lbs.) and would have an approved surface so as to provide all-weather driving capabilities.

Interior Access Roads (Fire): A series of north/south interior fire access and perimeter loop roads would be constructed to a width of 24 feet (fire access road widths may be administratively reduced with the approval of the County Fire Marshal and Borrego Springs Fire Protection District) in accordance with County of San Diego Fire Standards. The interior access roads would be designed and maintained to support the imposed loads of fire service apparatus (not less than 50,000 lbs) and would have an approved surface so as to provide all-weather driving capabilities. These interior fire access roads would be constructed between every fourth row of north-south trackers to

facilitate a maximum fire hose pull of 160 feet. In addition, the Project design includes east/west running fire access roads for connectivity and circulation. The purpose of the interior fire access roads is to allow for access of fire service apparatus throughout the Project site and in order to reach the inverter/transformer units.

Service Roads: On the north/south rows where the interior fire access roads are not proposed, service roads would be constructed to a width of 18 feet and would be constructed and maintained to support the imposed loads of not less than 15,000 lbs and support panel washing equipment vehicles. Service roads would run in a north-south direction along the west side of the columns of the CPV systems except where there would be a fire access road that would facilitate access to the CPV systems and inverter stations.

1.4 Gen-tie Line

In order to transfer the power generated from the solar facility to the Borrego Valley Substation, the Project would utilize either the 12kV Borrego Valley Road Gen-tie Route or the SDG&E 12kV Line Extension Route, as shown on the MUP Plot Plan; refer to Figures 3A and 3B.

The POI for the Borrego Valley Road Gen-tie Route would be at the Borrego Valley Substation. The 12kV line would be undergrounded within an existing 50-foot wide access and utility easement on private lands (APN 141-060-08). The Borrego Valley Road Gen-tie Route would start at the Borrego Substation and follow the Borrego Valley Road Access Route east to a point near the northwesterly corner of the Project site, cross the existing SDG&E easement, run through a portion of the neighboring Cocopah nursery, and then trend southward to the Project boundary via the 30-foot wide Gen-tie Route. The Gen-tie Route would be part of the Major Use Permit boundary.

The 12kV SDG&E Line Extension Route would be located within the existing 20-foot wide SDG&E easement (Record #72-3377663) that extends from the Borrego Substation easterly to the POI near the northwesterly corner of the Project site. From the POI, the 12kV underground Gen-tie line would trend southerly across the adjacent Cocopah nursery, and then trend southward to the Project boundary via the 30-foot wide Gen-tie Route. All improvements to the 12kV line extension would be completed by SDG&E and are under the land use authority of the CPUC, pursuant to General

Order 131D. Although the 12kV line extension is under jurisdiction of the CPUC, the analysis of the line extension is included in the Mitigated Negative Declaration (MND) for the Project for purposes of consistency with the California Environmental Quality Act (CEQA). The 12kV line extension is not included in the Major Use Permit because it is not within the County's land use jurisdiction. Therefore, improvements within the SDG&E easement would not be a part of the Major Use Permit boundary.

1.5 Water Line Extension

Water supplies for maintenance of the Project would be delivered to the site via either the West Water Line or the East Water Line, as shown on the MUP Plot Plan; refer to Figures 3A and 3B. The water line would connect to the proposed onsite water tank(s).

The West Water Line would be located within the proposed Palm Canyon Drive access route. The water line would be extended from its point of connection (POC) with an existing water line that lies within Palm Canyon Drive. The West Water Line would be included as part of the Major Use Permit boundary.

The East Water Line would be located within an existing dirt road traversing the Borrego Valley Airport property. The water line would be extended from its POC with an existing water line that lies within Palm Canyon Drive. The East Water Line would not be included as part of the Major Use Permit boundary and is considered an offsite improvement under the authority of the Federal Aviation Administration (FAA).

1.6 Project Schedule and Phasing

Project construction is expected to commence in second quarter 2013. Construction of the Project is anticipated to occur over a seven month period, from initial site development through energization and testing. All construction would be completed at one time and would not be phased.

1.7 General Plan Land Use Designation and Zoning

The Project site has a County of San Diego General Plan land use designation of Rural Lands with a permitted density of one dwelling unit per 40 acres (RL 40). The Project site lies within the Borrego Springs Community Plan Area of the County's General

Plan. Existing zoning is General Rural (S92). No changes to either the existing General Plan land use or zoning are proposed with the Project. Refer to Figure 4A, Existing General Plan Land Use, and Figure 4B, Existing Zoning.

1.8 Surrounding Land Use

The Project site is located in the Borrego Valley, which is in the desert region of northeastern San Diego County. The Anza-Borrego Desert area is part of the larger Colorado Desert. The Borrego Sink is located approximately four miles southeast of the Project site, and the Borrego Badlands are approximately five miles to the east.

To the north and east of the 288-acre parcel is undeveloped land; to the south is the Borrego Valley Airport; to the west are a commercial palm nursery, and a small-scale commercial sand and gravel yard. A microwave tower is also adjacent to the southwest corner of the 288-acre parcel.

Land uses to the south across Palm Canyon Drive generally include undeveloped lands interspersed with industrial type and residential uses. Refer also to Figure 2, Aerial Photograph.

The Borrego Substation is bordered to the west by Borrego Valley Road. Immediately adjacent to the north, east, and south are undeveloped lands. Further to the southeast and south are several single-family homes with intervening undeveloped/unimproved lands. Further west, across Borrego Valley Road, are agricultural-related facilities, and to the northwest are active agricultural lands. Refer to Figure 5, Surrounding Land Use, and Figures 6 and 7, Existing Views of Surrounding Land Uses.

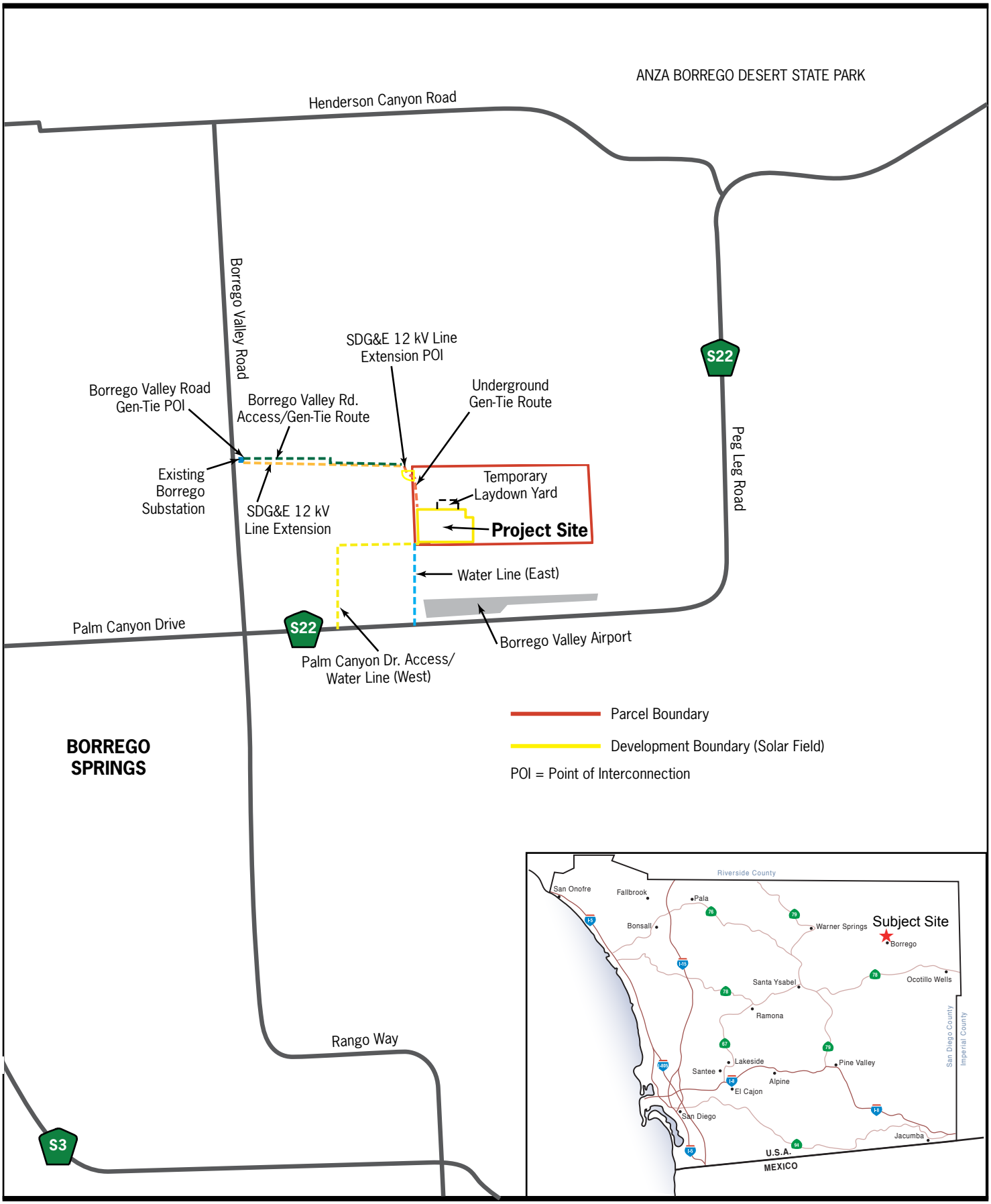
1.9 Matrix of Project Approvals/Permits

Table 1 identifies the approvals/permits that are expected to be obtained during the decision-making process for the Project. Table 1 is organized by agency/jurisdiction. In the case where multiple approvals are necessary from a single agency, the approvals are listed in the order they are believed to occur.

TABLE 1APPROVALS AND PERMITS ANTICIPATED

Government Agency	Action/Permit
County of San Diego	• MUP – Compliance with Sections 1350, 2705 and 2926 of the County Zoning Ordinance • Compliance Finding - Resource Protection Ordinance • Plot Plans – Compliance with the County's Form #90 • Preliminary Grading Plan – Compliance with County grading limitations • Utilizing the previously-adopted Mitigated Negative Declaration (MND), 15162 Findings • Grading Permit - Department of Public Works • Improvement Plans and Permits - Department of Public Works
State of California Water Resources Control Board	N/A

THIS PAGE LEFT BLANK INTENTIONALLY.



RBF CONSULTING

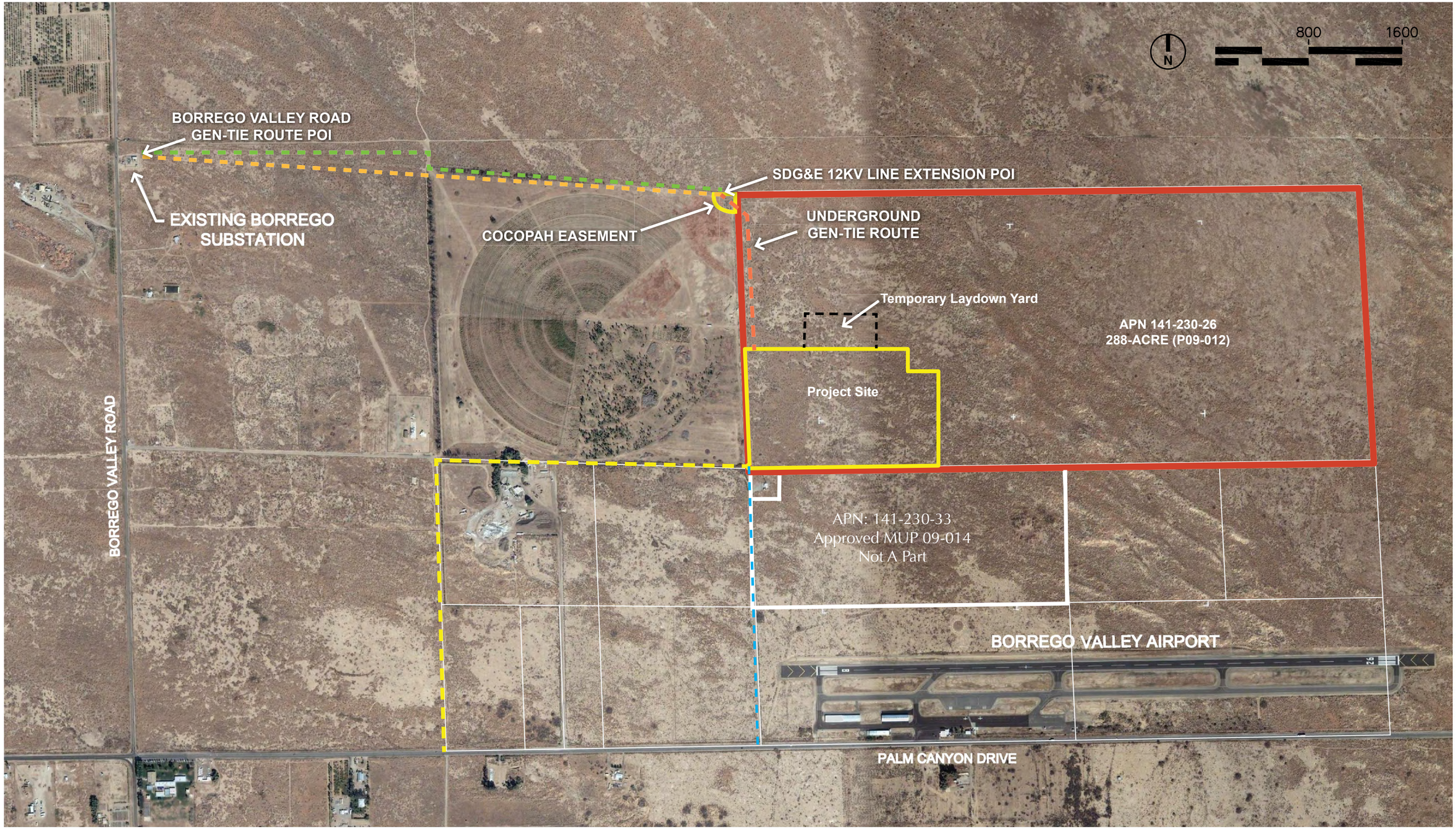
SDMac:5388fig1.ai

Not to Scale

Regional / Local Vicinity Map

Desert Green Solar Farm

Figure 1



Source: Eagle Aerial, 2008.

RBF CONSULTING

SDMac:5388_tabloid_landscape-00.indd

- Parcel Boundary
- Development Boundary (Solar Field)
- Borrego Valley Road Access/Gen-Tie Route
- SDG&E 12kV Line Extension to Existing Borrego Substation
- Underground Gen-Tie Route
- Temporary Laydown Yard
- Palm Canyon Drive Access Route/West Water Line
- East Water Line
- POI = Point of Interconnection

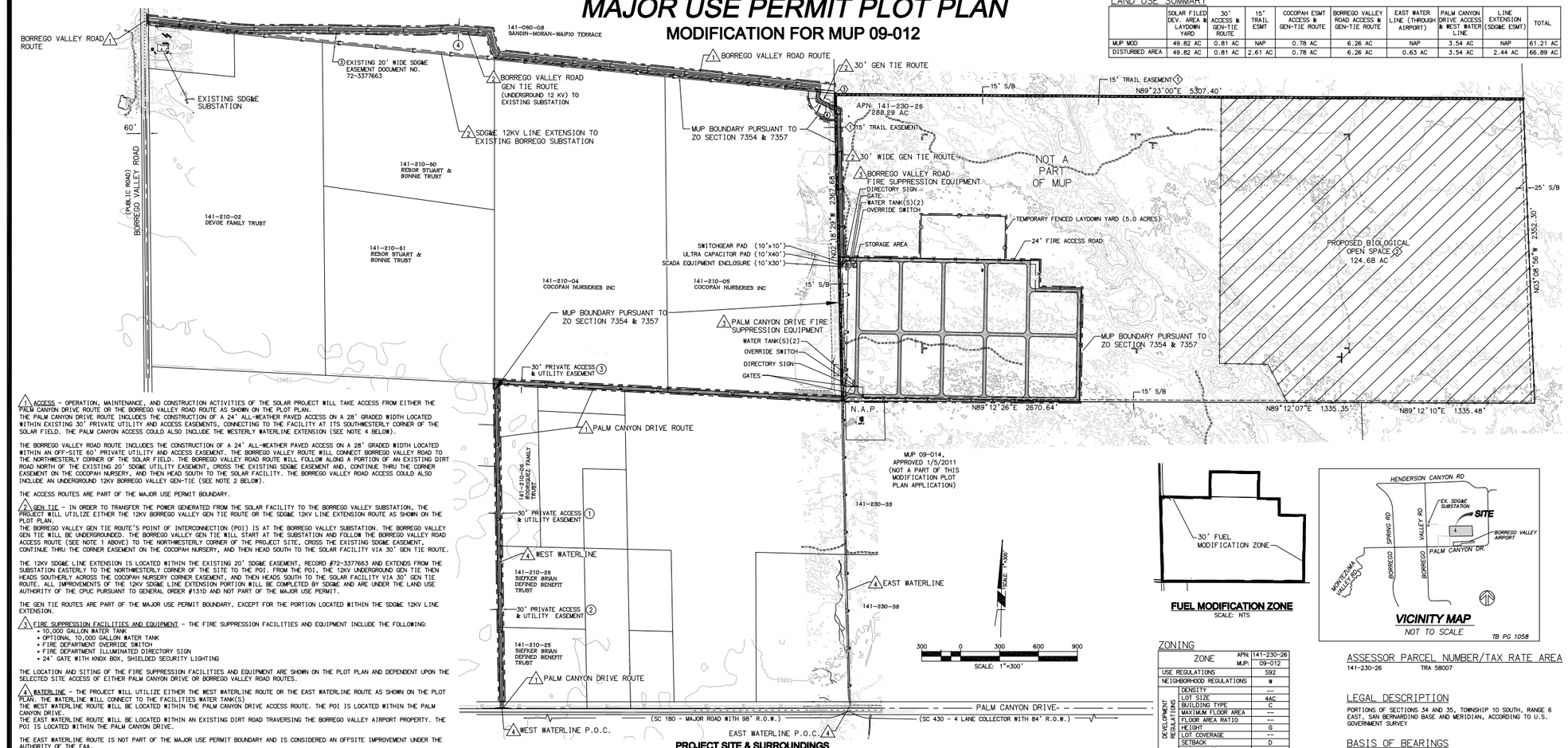
Aerial Photograph

Desert Green Solar Farm

Figure 2

MAJOR USE PERMIT PLOT PLAN

MODIFICATION FOR MUP 09-012



LAND USE SUMMARY

	SOLAR FILED DEV. AREA & LAYDOWN YARD	30' ACCESS & GEN-TIE ROUTE	15' TRAIL ESMT	COCOPAH ESMT ACCESS & GEN-TIE ROUTE	BORREGO VALLEY ROAD ACCESS & GEN-TIE ROUTE	EAST WATER LINE (THROUGH AIRPORT)	PALM CANYON DRIVE ACCESS & WEST WATER LINE	LINE EXTENSION (SDG&E ESMT)	TOTAL
MUP MOD	49.82 AC	0.81 AC	NAP	0.78 AC	6.26 AC	NAP	3.54 AC	NAP	61.21 AC
DISTURBED AREA	49.82 AC	0.81 AC	2.61 AC	0.78 AC	6.26 AC	0.63 AC	3.54 AC	2.44 AC	66.89 AC

1 ACCESS - OPERATION, MAINTENANCE, AND CONSTRUCTION ACTIVITIES OF THE SOLAR PROJECT WILL TAKE ACCESS FROM EITHER THE PALM CANYON DRIVE ROUTE OR THE BORREGO VALLEY ROAD ROUTE AS SHOWN ON THE PLOT PLAN.
THE PALM CANYON DRIVE ROUTE INCLUDES THE CONSTRUCTION OF A 24' ALL-WEATHER PAVED ACCESS ON A 28' GRADED WIDTH LOCATED WITHIN EXISTING 30' PRIVATE UTILITY AND ACCESS EASEMENTS, CONNECTING TO THE FACILITY AT ITS SOUTHWESTERLY CORNER OF THE SOLAR FIELD. THE PALM CANYON ACCESS COULD ALSO INCLUDE THE WESTERLY WATERLINE EXTENSION (SEE NOTE 4 BELOW).

THE BORREGO VALLEY ROAD ROUTE INCLUDES THE CONSTRUCTION OF A 24' ALL-WEATHER PAVED ACCESS ON A 28' GRADED WIDTH LOCATED WITHIN AN OFF-SITE 60' PRIVATE UTILITY AND ACCESS EASEMENT. THE BORREGO VALLEY ROUTE WILL CONNECT BORREGO VALLEY ROAD TO THE NORTHWESTERLY CORNER OF THE SOLAR FIELD. THE BORREGO VALLEY ROAD ROUTE WILL FOLLOW ALONG A PORTION OF AN EXISTING DIRT ROAD NORTH OF THE EXISTING 20' SDG&E UTILITY EASEMENT, CROSS THE EXISTING SDG&E EASEMENT AND, CONTINUE THRU THE CORNER EASEMENT ON THE COCOPAH NURSERY, AND THEN HEAD SOUTH TO THE SOLAR FACILITY. THE BORREGO VALLEY ROAD ACCESS COULD ALSO INCLUDE AN UNDERGROUND 12KV BORREGO VALLEY GEN-TIE (SEE NOTE 2 BELOW).

THE ACCESS ROUTES ARE PART OF THE MAJOR USE PERMIT BOUNDARY.

2 GEN TIE - IN ORDER TO TRANSFER THE POWER GENERATED FROM THE SOLAR FACILITY TO THE BORREGO VALLEY SUBSTATION, THE PROJECT WILL UTILIZE EITHER THE 12KV BORREGO VALLEY GEN TIE ROUTE OR THE SDG&E 12KV LINE EXTENSION ROUTE AS SHOWN ON THE PLOT PLAN.
THE BORREGO VALLEY GEN TIE ROUTE'S POINT OF INTERCONNECTION (POI) IS AT THE BORREGO VALLEY SUBSTATION. THE BORREGO VALLEY GEN TIE WILL BE UNDERGROUNDED. THE BORREGO VALLEY GEN TIE WILL START AT THE SUBSTATION AND FOLLOW THE BORREGO VALLEY ROAD ACCESS ROUTE (SEE NOTE 1 ABOVE) TO THE NORTHWESTERLY CORNER OF THE PROJECT SITE, CROSS THE EXISTING SDG&E EASEMENT, CONTINUE THRU THE CORNER EASEMENT ON THE COCOPAH NURSERY, AND THEN HEAD SOUTH TO THE SOLAR FACILITY VIA 30' GEN TIE ROUTE.

THE 12KV SDG&E LINE EXTENSION IS LOCATED WITHIN THE EXISTING 20' SDG&E EASEMENT, RECORD #72-3377663 AND EXTENDS FROM THE SUBSTATION EASTERLY TO THE NORTHWESTERLY CORNER OF THE SITE TO THE POI. FROM THE POI, THE 12KV UNDERGROUND GEN TIE THEN HEADS SOUTHERLY ACROSS THE COCOPAH NURSERY CORNER EASEMENT, AND THEN HEADS SOUTH TO THE SOLAR FACILITY VIA 30' GEN TIE ROUTE. ALL IMPROVEMENTS OF THE 12KV SDG&E LINE EXTENSION PORTION WILL BE COMPLETED BY SDG&E AND ARE UNDER THE LAND USE AUTHORITY OF THE CPUC PURSUANT TO GENERAL ORDER #131D AND NOT PART OF THE MAJOR USE PERMIT.

THE GEN TIE ROUTES ARE PART OF THE MAJOR USE PERMIT BOUNDARY, EXCEPT FOR THE PORTION LOCATED WITHIN THE SDG&E 12KV LINE EXTENSION.

3 FIRE SUPPRESSION FACILITIES AND EQUIPMENT - THE FIRE SUPPRESSION FACILITIES AND EQUIPMENT INCLUDE THE FOLLOWING:
- 10,000 GALLON WATER TANK
- OPTIONAL 10,000 GALLON WATER TANK
- FIRE DEPARTMENT OVERRIDE SWITCH
- FIRE DEPARTMENT ILLUMINATED DIRECTORY SIGN
- 24' GATE WITH KNOX BOX, SHIELDED SECURITY LIGHTING

THE LOCATION AND SITING OF THE FIRE SUPPRESSION FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLOT PLAN AND DEPENDENT UPON THE SELECTED SITE ACCESS OF EITHER PALM CANYON DRIVE OR BORREGO VALLEY ROAD ROUTES.

4 WATERLINE - THE PROJECT WILL UTILIZE EITHER THE WEST WATERLINE ROUTE OR THE EAST WATERLINE ROUTE AS SHOWN ON THE PLOT PLAN. THE WATERLINE WILL CONNECT TO THE FACILITIES WATER TANK(S)
THE WEST WATERLINE ROUTE WILL BE LOCATED WITHIN THE PALM CANYON DRIVE ACCESS ROUTE. THE POI IS LOCATED WITHIN THE PALM CANYON DRIVE.
THE EAST WATERLINE ROUTE WILL BE LOCATED WITHIN AN EXISTING DIRT ROAD TRAVERSING THE BORREGO VALLEY AIRPORT PROPERTY. THE POI IS LOCATED WITHIN THE PALM CANYON DRIVE.

THE EAST WATERLINE ROUTE IS NOT PART OF THE MAJOR USE PERMIT BOUNDARY AND IS CONSIDERED AN OFFSITE IMPROVEMENT UNDER THE AUTHORITY OF THE FAA.

NOTES

1. GROSS AREA: 288.29 ACRES (APN 141-230-26)
2. NET AREA: 288.29 ACRES (APN 141-230-26)
3. TOPOGRAPHIC SOURCE: VERTICAL MAPPING, FLOWN 5/8/09 & & INTERMAP FLOWN 2005
4. ASSOCIATED REQUESTS: NONE
5. THE APPROVAL OF THIS MAJOR USE PERMIT MODIFICATION (MUP) AUTHORIZES THE FOLLOWING: CONSTRUCTION, OPERATION, AND MAINTENANCE OF A CPV SOLAR FARM PURSUIT TO SECTION 6952 OF THE SAN DIEGO COUNTY ZONING ORDINANCE.
6. THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO PERFORM ANY GRADING SHOWN HEREON, AND AGREES TO OBTAIN VALID GRADING PERMISSIONS BEFORE COMMENCING SUCH ACTIVITY.
7. ALL STRUCTURES TO BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS (CONCRETE, BLOCK, METAL) OR SIMILAR.
8. NO LANDSCAPING PROPOSED.
9. LIGHTING FOR MAINTENANCE AND SECURITY PROPOSES ONLY. SHIELDED LIGHTING LOCATED AT GATES AND SHALL CONFORM TO COUNTY OF SAN DIEGO OUTDOOR LIGHTING REQUIREMENTS. SEE DETAIL ON SHEET 3.
10. PHASING - PROJECT WILL BE IMPLEMENTED IN SEVERAL PHASES WITHOUT REGARD TO SEQUENCE WITHIN DEVELOPMENT AREA.
11. ALL DISTURBED AREAS WOULD BE COVERED WITH GRAVEL OR A BINDING AGENT TO REDUCE DUST.
12. SEE PRELIMINARY GRADING PLAN FOR PROPOSED GRADING.
13. ONLY DIRECTIONAL, LIMITS OF OPEN SPACE AND SAFETY SIGNAGE ARE PROPOSED.
14. NO DEVELOPMENT WILL OCCUR IN THE AREAS IDENTIFIED ON THE PLOT PLAN AS "OPEN SPACE".
15. SEE SHEET 2 FOR LEGEND.
16. THE ENTIRE SITE IS SUBJECT TO INUNDATION BY THE 100-YEAR FLOOD AND IS WITHIN FEMA MAP NO. 06073C0675F. THE LIMITS OF THE 100-YEAR FLOOD ALONG THE WATERCOURSE WHICH FLOWS THROUGH THE PROPERTY.
17. SITE ACCESS GATE(S) TO BE EQUIPPED WITH FIRE DEPARTMENT APPROVED KNOX KEY-OPERATED SWITCH.
18. SOLAR RELATED FACILITIES (PANELS, ELECTRICAL CONNECTIONS, TRANSFORMER/ INVERTER PLATFORM, STORAGE BUILDING, EMERGENCY GENERATOR, FENCING, INTERNAL ACCESS AND SWITCHGEAR PLATFORM, ETC.) SHOWN ON THE PLOT PLAN MAY BE RELOCATED, RECONFIGURED, AND/OR RESIZED WITHIN THE SOLAR FACILITY DEVELOPMENT AREA (EXCLUSIVE OF THE OPEN SPACE AREAS) WITH THE ADMINISTRATIVE APPROVAL OF THE DIRECTOR OF PDS WHEN FOUND IN CONFORMANCE WITH THE INTENT AND CONDITIONS OF PERMIT'S APPROVAL. TRANSFORMER/INVERTER/GENERATOR SIZE, LOCATIONS, BRAND, ELECTRICAL SIZE CAN BE RELOCATED, REPLACED OR RECONFIGURED WITHOUT REQUIREMENT OF MINOR DEVIATION. THE TRANSFORMER/INVERTER/GENERATOR MUST COMPLY WITH NOISE ORDINANCE AND MUST BE ELEVATED 1' ABOVE BASE FLOOD ELEVATION. THE 24' WIDE FIRE ACCESS ROAD WIDTHS MAY BE REDUCED ADMINISTRATELY WITH THE APPROVAL OF THE COUNTY FIRE AUTHORITY AND THE BORREGO SPRINGS FIRE PROTECTION DISTRICT.
19. THE ENTIRETY OF THE PARCEL ENCUMBERED BY MUP 09-012 (APN 141-230-26-00) IS SUBJECT TO THE RESTRICTIONS AND TERMS OF A COUNTY AVIATION EASEMENT.
20. TOTAL SOLAR TRACKER HEIGHT WILL NOT EXCEED 30 FEET.
21. WATER DISTRICT: BORREGO WATER DISTRICT.
22. ALL STRUCTURES, TRANSFORMER/INVERTER PLATFORM AND ELECTRICAL PADS TO BE ON PIERS.
23. 10,000 GAL. WATER TANK(S) WITH FIRE DEPARTMENT CONNECTION.
24. NO DEVELOPMENT IS ALLOWED WITHIN THE NOT A PART AREA WITHOUT A SUBSEQUENT PERMIT AND/OR DISCRETIONARY REVIEW.
25. PROVIDE OVERRIDE SWITCH CONTROL NEAR MAIN ENTRY TO ALLOW FIRE DEPARTMENT TO MOVE TRACKERS INTO STOW POSITION.
26. TRAIL EASEMENT TO ALLOW UTILITY LINES UNDERGROUND.

FUEL MODIFICATION ZONE
SCALE: NTS

VICINITY MAP
NOT TO SCALE
TB PG 1058

ZONING

ZONE		APN: MUP:	141-230-26 09-012
USE REGULATIONS			S92
NEIGHBORHOOD REGULATIONS			W
DEVELOPMENT REGULATIONS	DENSITY		---
	LOT SIZE		4AC
	BUILDING TYPE		C
	MAXIMUM FLOOR AREA		---
	FLOOR AREA RATIO		---
	HEIGHT		G
	LOT COVERAGE		---
	SETBACK		D
	OPEN SPACE		---
SPECIAL AREA REGULATIONS			C

PROPOSED EASEMENTS

	DESCRIPTION
1	15' TRAIL EASEMENT
2	OPEN BIOLOGICAL SPACE EASEMENT (SHT. 1)

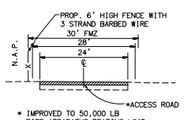
EXISTING EASEMENTS*

	DESCRIPTION	DISPOSITION
1	SDG&E EASEMENT	TO REMAIN
2	ACCESS & UTILITY EASEMENT (200' RADIUS)	TO REMAIN

○ BASED ON DATA FROM PRELIMINARY TITLE REPORT BY FIDELITY NATIONAL TITLE COMPANY, ORDER NO. 11-725137943-D-PP, DATED MAY 16, 2012.

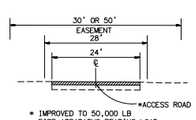
RECORDED EASEMENTS

	DESCRIPTION
1	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-0235574
2	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-235573
3	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-0282029
4	50' PRIVATE ACCESS & UTILITY EASEMENT



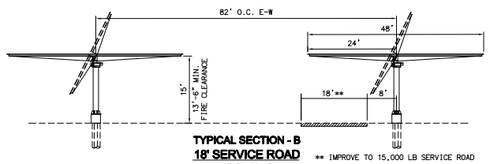
* IMPROVED TO 50,000 LB FIRE APPARATUS BEARING LOAD

TYPICAL SECTION
24' PERIMETER ACCESS ROAD
NOT TO SCALE
TYPICAL LOCATION UNLESS SHOWN OTHERWISE ON SITE PLAN

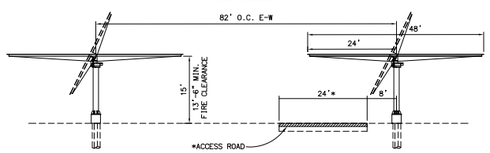


* IMPROVED TO 50,000 LB FIRE APPARATUS BEARING LOAD

TYPICAL SECTION
(PALM CANYON / BORREGO VALLEY ROAD)
PRIMARY ACCESS ROAD / EASEMENT
NOT TO SCALE



TYPICAL SECTION - B
18' SERVICE ROAD
NOT TO SCALE
** IMPROVE TO 15,000 LB SERVICE ROAD



TYPICAL SECTION - A
24' INTERIOR ACCESS ROAD (FIRE)
NOT TO SCALE
* IMPROVED TO 50,000 LB FIRE APPARATUS BEARING LOAD

ASSESSOR PARCEL NUMBER/TAX RATE AREA
141-230-26 TRA 58007

LEGAL DESCRIPTION
PORTIONS OF SECTIONS 34 AND 35, TOWNSHIP 10 SOUTH, RANGE 6 EAST, SAN BERNARDING BASE AND MERIDIAN, ACCORDING TO U.S. GOVERNMENT SURVEY

BASIS OF BEARINGS
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM (NAD83) ZONE 6,AS DETERMINED BY THE LINE BETWEEN NATIONAL GEODETIC SURVEY (NGS) STATIONS "13 AR ECC" AND "BOR 12" WITH A BEARING OF N42°35'10"W.

BENCHMARK
NGS STATION BOR 9, A 4" BRASS DISK IN 6" CONCRETE BASE 4.5' SOUTHEAST OF POWER POLE #319 AND 30' NORTHEAST OF THE EDGE OF BORREGO VALLEY
ROAD. ELEVATION = 521.86 DATUM: NAVD88

APPLICANT
DESERT GREEN SOLAR FARM LLC
c/o CLARK CRAWFORD,
ATTORNEY-IN-FACT
16650 VIA ESPRILLO
SAN DIEGO, CA 92127
CONTACT: PATRICK BROWN
(619) 733-2649

SHEET INDEX

DESERT GREEN SOLAR FARM
BORREGO SPRINGS, CA
MODIFICATION FOR MUP 09-012
(NO CHANGE TO MUP 09-014)
ER NO. 09-05-001A
TITLE SHEET

FEBRUARY 22, 2013
SHEET 1 OF 3

RBF CONSULTING

I:\PDATA\2510538\CADD\PLANNING\WORK\5388-MUP01-25P.DWG BUTTS, KIMBERLY 2/14/2013 5:20 PM

SDMac:5388_tabloid_landscape-00.indd

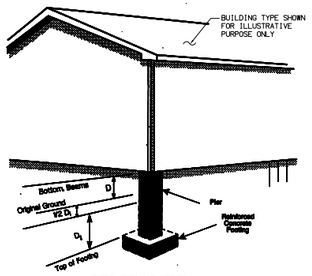
Major Use Permit Plot Plan

Desert Green Solar Farm

Figure 3A

MAJOR USE PERMIT PLOT PLAN

MODIFICATION FOR MUP 09-012



PIER FOUNDATION

Depth of Erosion Protection

Footings for slab foundations must be constructed to a depth below the prevailing ground level as shown in Figure II-1.Sht. 1 The necessary depth of construction for these footings is based on the Borrego Valley Alluvial Fan Map.

The flood depth (D) shown for the particular location is converted to a construction depth (D_1) based on the velocity shown on the map, using the following table:

Velocity (V)	Construction Depth (D_1)
4 Feet/Second	D_1 = D
6 Feet/Second	D_1 = D
8 Feet/Second	D_1 = 1.0 X D
Over 8 Feet/Second	Study Required

Where: D_1 = Depth Below Ground (Feet)
D = Depth Shown on Alluvial Fan Map (Feet)
V = Velocity Shown on Alluvial Fan Map (Feet/Second)

Erosion protection made of rock, gabions, or rip-rap must be installed to the depth D_1.

TYPICAL SECTION FOUNDATION FOOTING OPTIONS TRANSFORMER / INVERTER PLATFORM STORAGE, CABINETS, O&M STRUCTURE

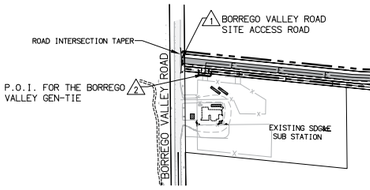
N.T.S.

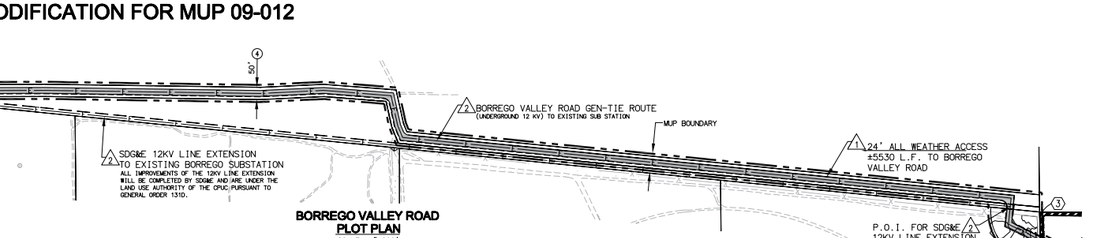
SOURCE: BORREGO VALLEY FLOOD MANAGEMENT REPORT DATED OCT. 1989

NOTE: A PIER FOUNDATION DESIGN IS SELECTED TO RAISE THE BUILDINGS SO THEY ARE AT LEAST 1' ABOVE THE BASE FLOOD ELEVATION, THEN A CLOMR/LOMR PROCESS IS NOT NEEDED.

D_1 Pier Scour Depth of Scour (feet)

Velocity (fps)	Vertical Member Diameter (inches)				
	4	6	8	10	12
1	.70	1.05	1.25	1.55	1.75
2	1.05	1.35	1.85	1.75	2.05
4	1.35	1.75	2.05	2.25	2.75
6	1.75	2.05	2.55	2.75	3.25
8	2.05	2.25	2.75	3.25	3.75
10	2.25	2.55	3.05	3.55	4.05
12	2.55	2.85	3.35	4.05	4.35

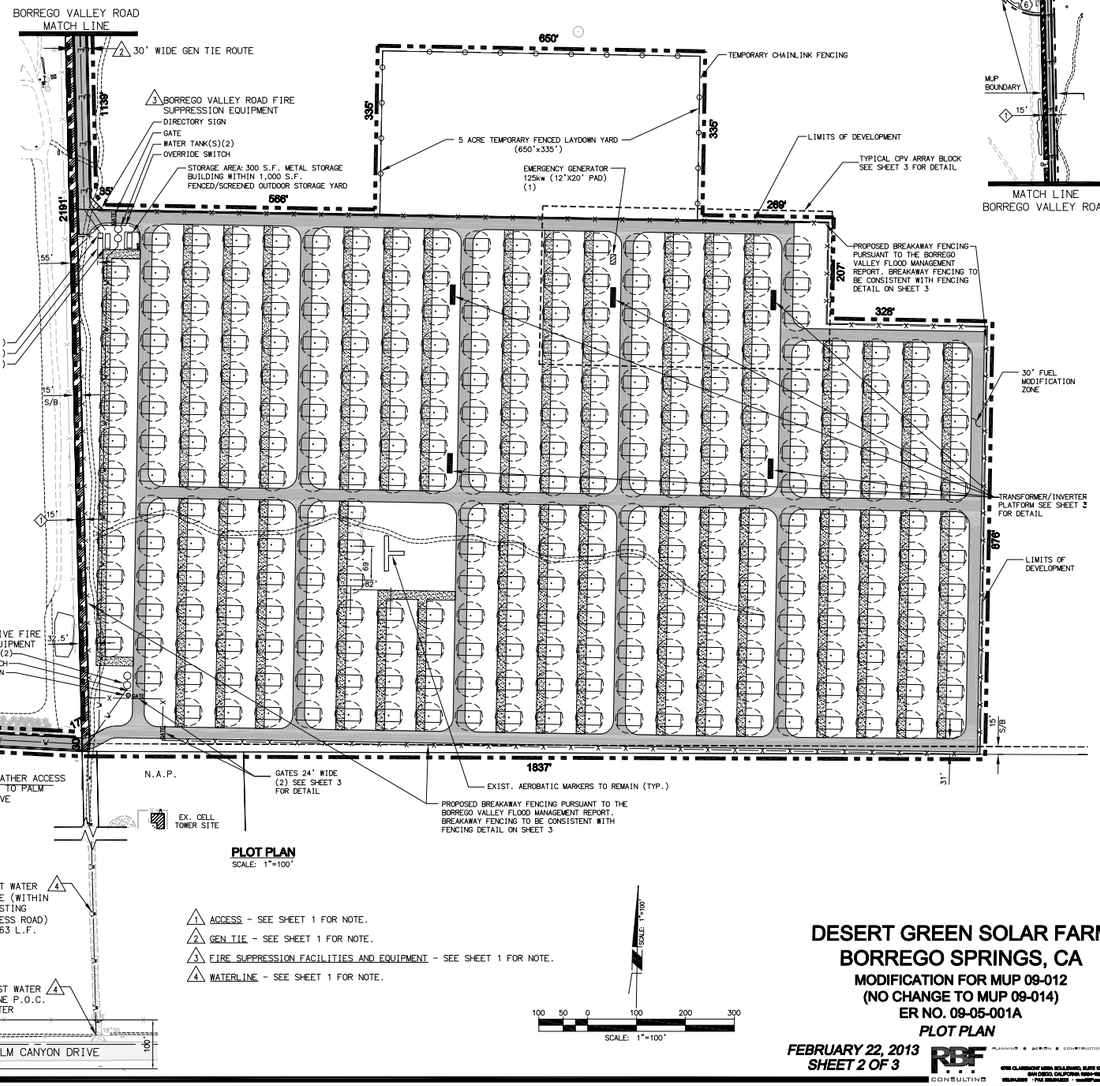




BORREGO VALLEY ROAD PLOT PLAN
SCALE: 1"=200'

LEGEND:

- MAJOR USE PERMIT BOUNDARY
- TAX ASSESSOR BOUNDARY
- LIMITED BUILDING ZONE LINE
- EX. 6' CHAINLINK FENCE
- PROP. 6' CHAINLINK BREAKAWAY FENCE WITH 3 STRAND BARBED WIRE
- TEMPORARY FENCING
- PROP. 24' FIRE ACCESS ROAD-ALL WEATHER (10% GRADIENT MAX) 50,000 LB.
- PROP. 18' SERVICE ROAD 15,000 LB.
- PROP. TRAIL EASEMENT ◇
- BUILDING SETBACK LINE (S/B)
- PROP. WATER LINE
- PROP. UNDERGROUND POWER LINE
- TRANSFORMER/INVERTER PLATFORM (4 - DUAL 630kw & 1 - DUAL 720kw INVERTER PLATFORM)
- EMERGENCY GENERATOR PLATFORM
- CPV ARRAY (308)
- PROP. BIOLOGICAL OPEN ◇ SPACE (124.68 AC.) WITH OPEN SPACE SIGNAGE SEE DETAIL ON SHEET 3



PALM CANYON DRIVE PLOT PLAN
SCALE: 1"=200'

PROJECT STRUCTURES COVERAGE TABLE

ITEM DESCRIPTION	AREA	UNIT	QUANTITY	TOTAL AREA	UNIT
INVERTER PLATFORM (10'X40')	400	SF	5	2,000	SF
STORAGE STRUCTURE (10'X30')	300	SF	1	300	SF
10,000 GAL. WATER TANK	177	SF	2	354	SF
EMERGENCY GENERATOR (12'X20')	240	SF	1	240	SF
SWITCHGEAR PAD (10'X10')	100	SF	1	100	SF
ULTRA CAPACITOR PAD (10'X40')	400	SF	1	400	SF
SCADA EQUIPMENT (10'X30')	300	SF	1	300	SF
			SUB TOTAL	3,694	SF
			EQUIV=	0.08	AC
SOLAR PANEL (25'X48')	1,200	SF	308	8.48	AC
			TOTAL	8.56	AC
			3.0% OF PARCEL COVERAGE		

PROPOSED EASEMENTS

	DESCRIPTION
◇	15' TRAIL EASEMENT
◇	OPEN BIOLOGICAL SPACE EASEMENT (SHT. 1)

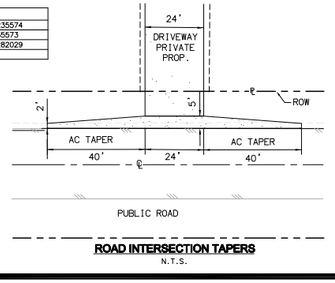
EXISTING EASEMENTS*

	DESCRIPTION	DISPOSITION
①	SDG&E EASEMENT	TO REMAIN
②	ACCESS & UTILITY EASEMENT (200' RADIUS)	TO REMAIN

○ BASED ON DATA FROM PRELIMINARY TITLE REPORT BY FIDELITY NATIONAL TITLE COMPANY, ORDER NO. 11-725137943-D-PP, DATED MAY 16, 2012.

RECORDED EASEMENTS

	DESCRIPTION
①	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-0235574
②	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-235573
③	30' PRIVATE ACCESS & UTILITY EASEMENT 2012-0282029
④	50' PRIVATE ACCESS & UTILITY EASEMENT



ROAD INTERSECTION TAPERS
N.T.S.

PLOT PLAN
SCALE: 1"=100'

1 ACCESS - SEE SHEET 1 FOR NOTE.
2 GEN TIE - SEE SHEET 1 FOR NOTE.
3 FIRE SUPPRESSION FACILITIES AND EQUIPMENT - SEE SHEET 1 FOR NOTE.
4 WATERLINE - SEE SHEET 1 FOR NOTE.

SCALE: 1"=100'
100 50 0 100 200 300
SCALE: 1"=100'

DESERT GREEN SOLAR FARM
BORREGO SPRINGS, CA
MODIFICATION FOR MUP 09-012
(NO CHANGE TO MUP 09-014)
ER NO. 09-05-001A
PLOT PLAN
FEBRUARY 22, 2013
SHEET 2 OF 3

RBF CONSULTING

H:\PDATA\25105388\CADD\PLANNING\WORK\5388-MUP02-25P.DWG BUTTS, KIMBERLY 2/14/2013 4:37 PM

SDMac:5388_tabloid_landscape-00.indd

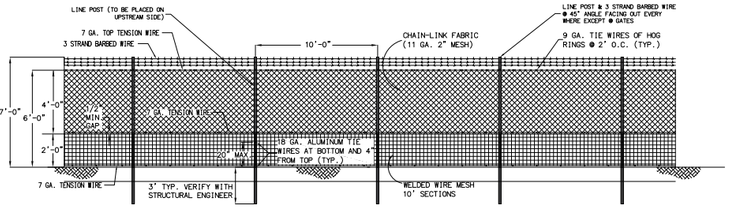
Major Use Permit Plot Plan

Desert Green Solar Farm

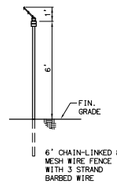
Figure 3B

MAJOR USE PERMIT PLOT PLAN

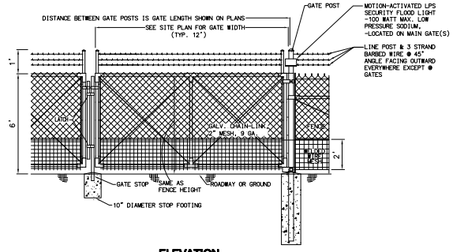
MODIFICATION FOR MUP 09-012



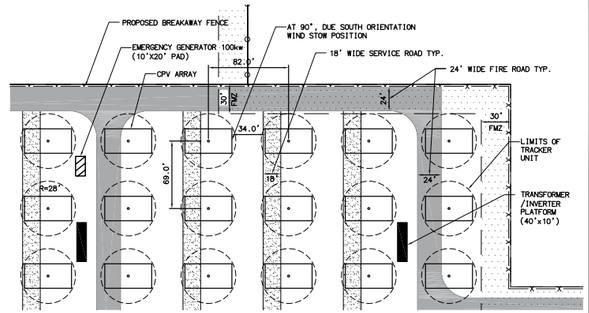
ELEVATION
BREAKAWAY FENCING DETAIL
N.T.S.



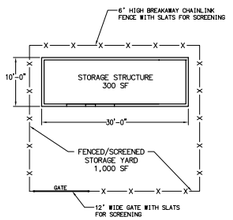
SECTION
TYPICAL FENCE
N.T.S.



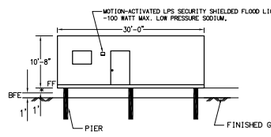
ELEVATION
HALF / DOUBLE DRIVE GATE
N.T.S.



PLAN VIEW
TYPICAL CPV ARRAY BLOCK LAYOUT
N.T.S.

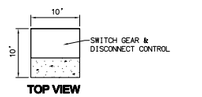


FLOOR PLAN
STORAGE STRUCTURE
N.T.S.

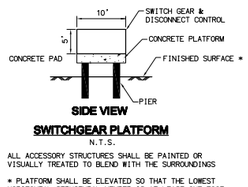


ELEVATION
STORAGE STRUCTURE
N.T.S.

- * FINISH FLOOR SHALL BE ELEVATED AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.



TOP VIEW

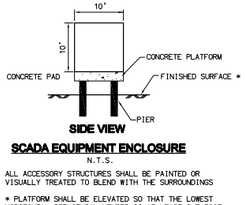


SIDE VIEW

SWITCHGEAR PLATFORM
N.T.S.

- ALL ACCESSORY STRUCTURES SHALL BE PAINTED OR VISUALLY TREATED TO BLEND WITH THE SURROUNDINGS
- * PLATFORM SHALL BE ELEVATED SO THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.

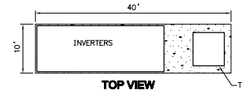
TOP VIEW



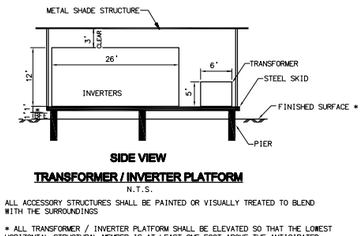
SIDE VIEW

SCADA EQUIPMENT ENCLOSURE
N.T.S.

- ALL ACCESSORY STRUCTURES SHALL BE PAINTED OR VISUALLY TREATED TO BLEND WITH THE SURROUNDINGS
- * PLATFORM SHALL BE ELEVATED SO THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.



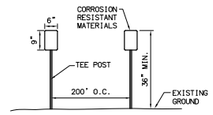
TOP VIEW



SIDE VIEW

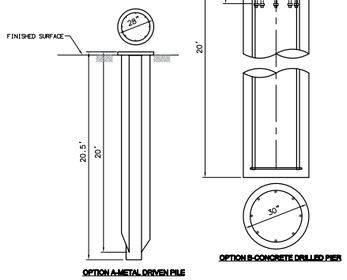
TRANSFORMER / INVERTER PLATFORM
N.T.S.

- ALL ACCESSORY STRUCTURES SHALL BE PAINTED OR VISUALLY TREATED TO BLEND WITH THE SURROUNDINGS
- * ALL TRANSFORMER / INVERTER PLATFORM SHALL BE ELEVATED SO THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.
- NUMBER OF PLATFORMS: 4 - DUAL 630kw & 1 - DUAL 720kv INVERTER PLATFORM
- THE TRANSFORMER / INVERTERS WILL BE PLACED WITHIN A METAL ENCLOSURE OR COVERED BY A METAL SHADE STRUCTURE TO PROTECT THE EQUIPMENT FROM THE ELEMENTS.



NOTE:
PLACE SIGN ON 200' INTERVALS TO DENOTE OPEN SPACE. SIGNS CAN ALSO BE ATTACHED TO PROPOSED FENCE OR ON TEE POST

TYPICAL
OPEN SPACE SIGNAGE
N.T.S.

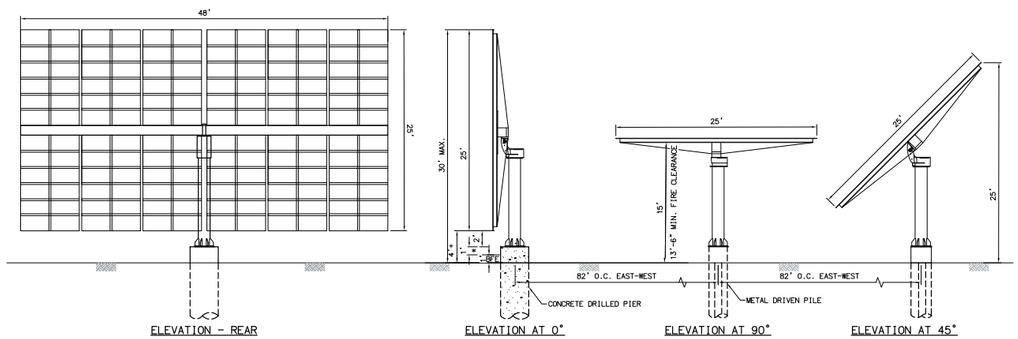


OPTION A-METAL DRIVEN PILE

OPTION B-CONCRETE DRILLED PIER

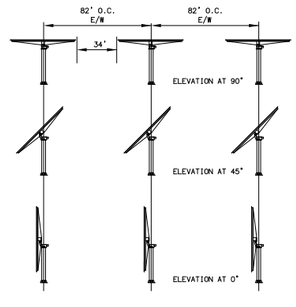
PRELIMINARY FOUNDATION DETAILS
N.T.S.

- DEPTH / TYPE OF FOOTING TO BE DETERMINED BY STRUCTURAL ENGINEER
- ALL SOLAR PANELS (AT MAXIMUM TILT) AND TRANSFORMER/INVERTER PLATFORM, SWITCH GEAR PAD, GENERATOR AND WATER TANK SHALL BE ELEVATED SO THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.

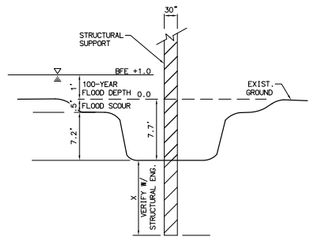


ELEVATIONS
ARRAY TRACKER
N.T.S.

- DEPTH / TYPE OF FOOTING TO BE DETERMINED BY STRUCTURAL ENGINEER
- * ALL SOLAR PANELS (AT MAXIMUM TILT) AND TRANSFORMER / INVERTER PLATFORM SHALL BE ELEVATED SO THAT THE LOWEST HORIZONTAL STRUCTURAL MEMBER IS AT LEAST ONE FOOT ABOVE THE ANTICIPATED INUNDATION DEPTH ESTABLISHED WITHIN THE HYDROLOGY AND HYDRAULIC BASIS OF DESIGN STUDY.



CPV ARRAY
SPACING DETAIL
N.T.S.



TYPICAL
SECTION
SCOURING DETAIL
N.T.S.

SOURCE: BORREGO VALLEY FLOOD MANAGEMENT REPORT DATED OCT. 1989

DESERT GREEN SOLAR FARM
BORREGO SPRINGS, CA
MODIFICATION FOR MUP 09-012
(NO CHANGE TO MUP 09-014)
ER NO. 09-05-001A

PROPOSED ELEVATIONS/DETAILS

FEBRUARY 22, 2013
SHEET 3 OF 3

RBF CONSULTING

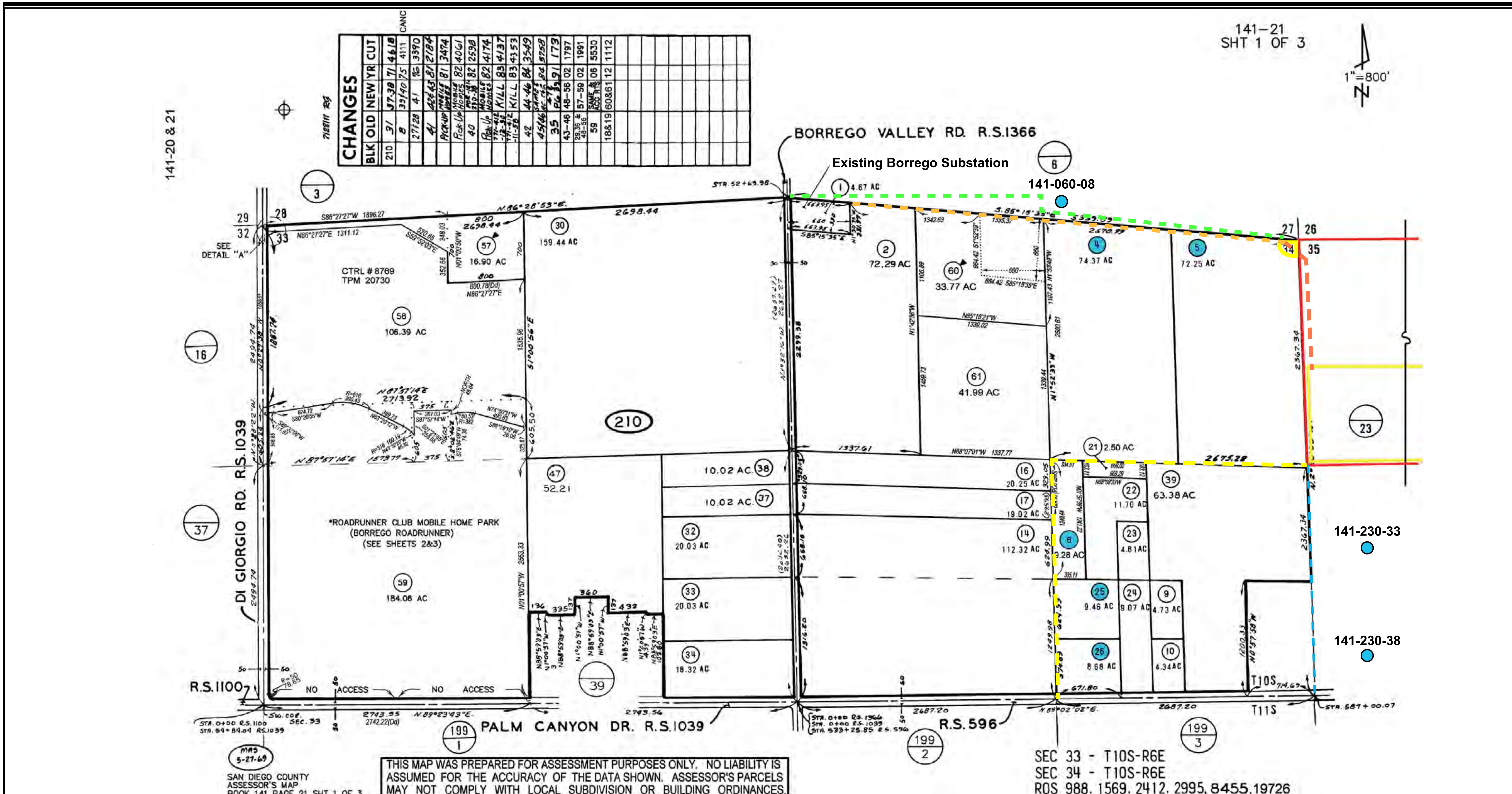
H:\PDATA\2510\5388\CADD\PLANNING\WORK\5388-MUP03-2SP.DWG BUTTS, KIMBERLY 2/14/2013 4:36 PM

SDMac:5388_tabloid_landscape-00.indd

Major Use Permit Plot Plan - Elevations / Details

Desert Green Solar Farm

Figure 3C


141–21
SHT 1 OF 3
1"=800'
N
141-20 & 21
CHANGES
BORREGO VALLEY RD. R.S.1366
Existing Borrego Substation
141-060-08
141-230-33
141-230-38
210
CTRL # 8769
TPM 20730
*ROADRUNNER CLUB MOBILE HOME PARK
(BORREGO ROADRUNNER)
(SEE SHEETS 2&3)
DI GIORGIO RD. R.S.1039
PALM CANYON DR. R.S.1039
R.S.1100
R.S. 596
NO ACCESS
NO ACCESS
SEE DETAIL "A"
MAS 5-27-69
SAN DIEGO COUNTY
ASSESSOR'S MAP
BOOK 141 PAGE 21 SHT 1 OF 3
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.
SEC 33 - T10S-R6E
SEC 34 - T10S-R6E
ROS 988, 1569, 2412, 2995, 8455,19726

Parcel Boundary
Development Boundary (Solar Field)
Borrego Valley Road Access/Gen-Tie Route
SDG&E 12kV Line Extension to Existing Borrego Substation
Underground Gen-Tie Route
Palm Canyon Drive Access Route/West Water Line
East Water Line
Potentially Affected Parcels

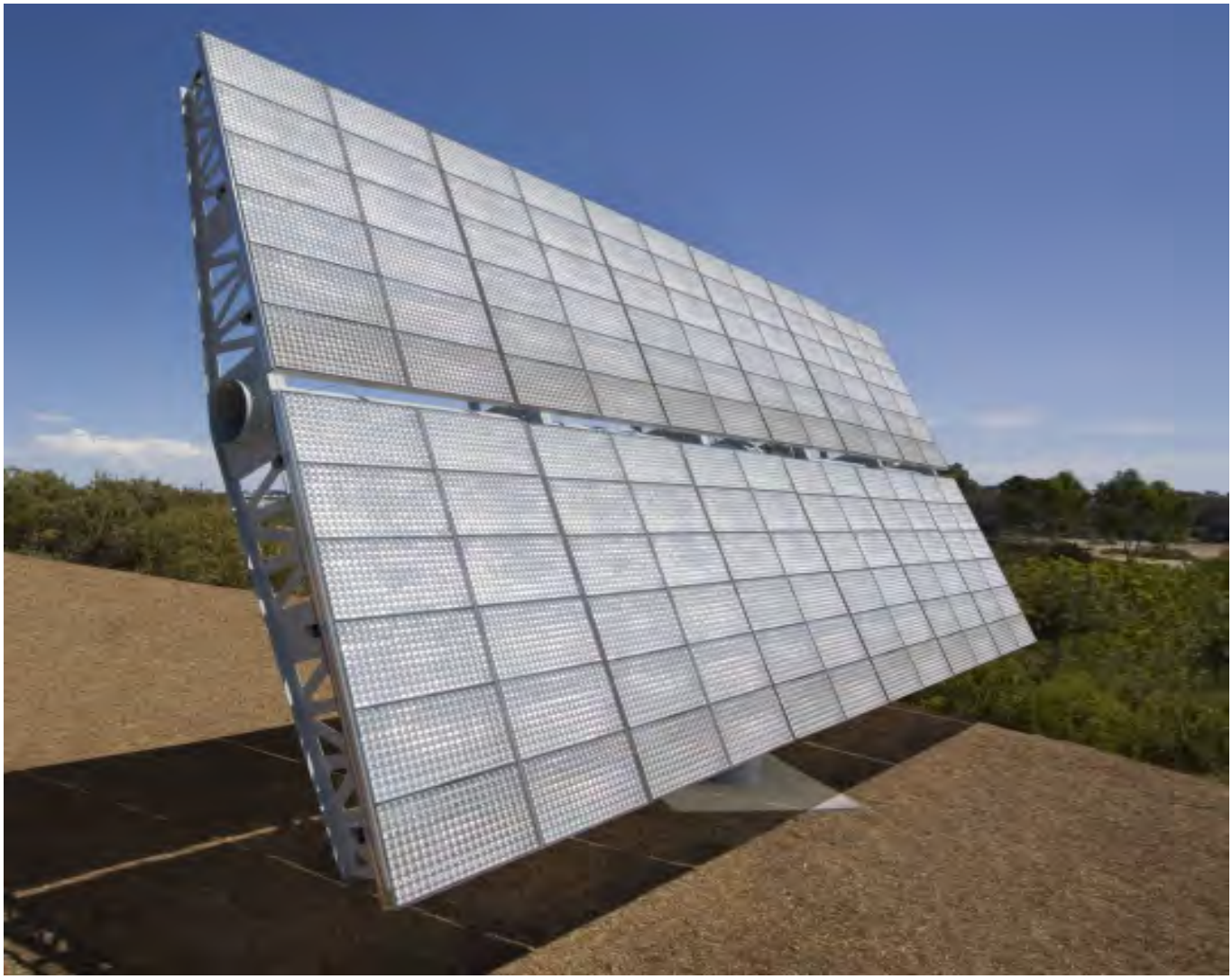
RBF CONSULTING

SDMac:5388_tabloid_landscape-00.indd

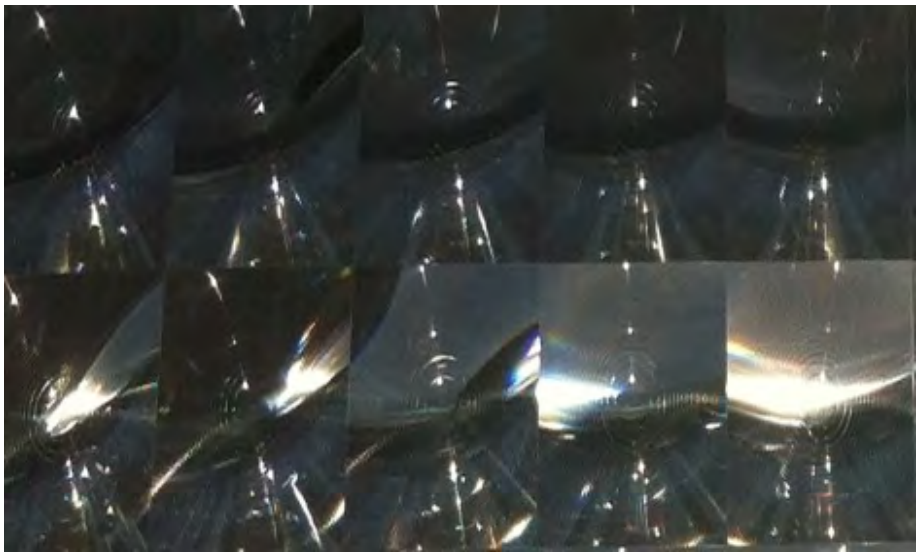
Assessor's Parcel Map / Potentially Affected Lands

Desert Green Solar Farm

Figure 3D



Conentrated photovoltaic (CPV) dual-axis tracking system



Concentrix modules lens plate (Fresnel lens)

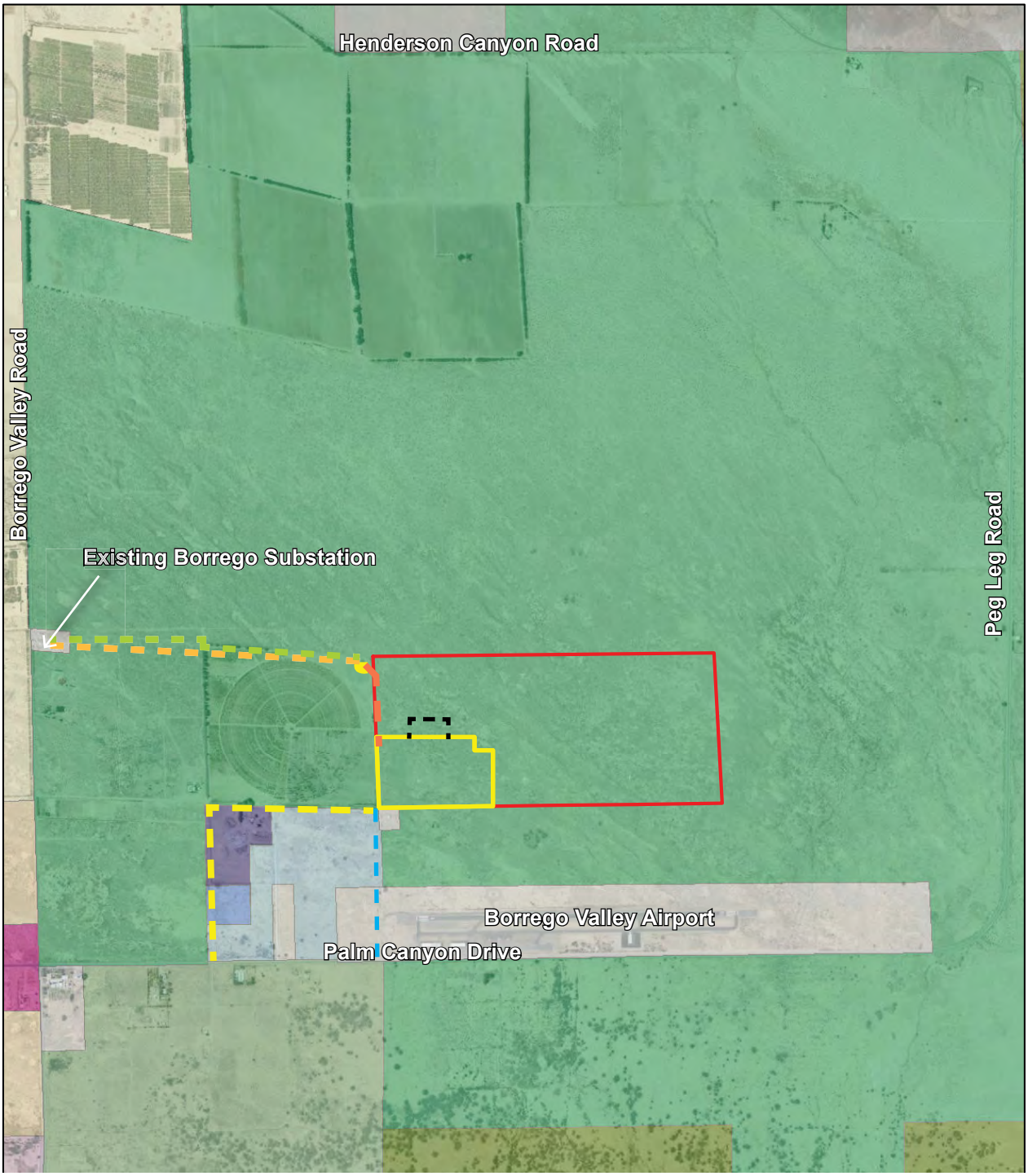
RBF CONSULTING

SDMac:5388_tabloid_landscape-00.indd

CPV System / Lens Plate

Desert Green Solar Farm

Figure 3E



Parcel Boundary
Development Boundary (Solar Field)
Palm Canyon Drive Access Route/ West Water Line
East Water Line
Underground Gen-Tie Route
SDG&E 12kV Line Extension to Existing Borrego Substation
Borrego Valley Road Access/ Gen-Tie Route
Temporary Laydown Yard

HIGH IMPACT INDUSTRIAL
LIMITED IMPACT INDUSTRIAL
MEDIUM IMPACT INDUSTRIAL
PUBLIC AGENCY LANDS
PUBLIC/SEMI-PUBLIC FACILITIES
RURAL COMMERCIAL

RURAL LANDS (RL-40)
RURAL LANDS (RL-80)
SEMI-RURAL RESIDENTIAL (SR-10)
SEMI-RURAL RESIDENTIAL (SR-4)
SPECIFIC PLAN AREA
VILLAGE RESIDENTIAL (VR-2)

RBF CONSULTING

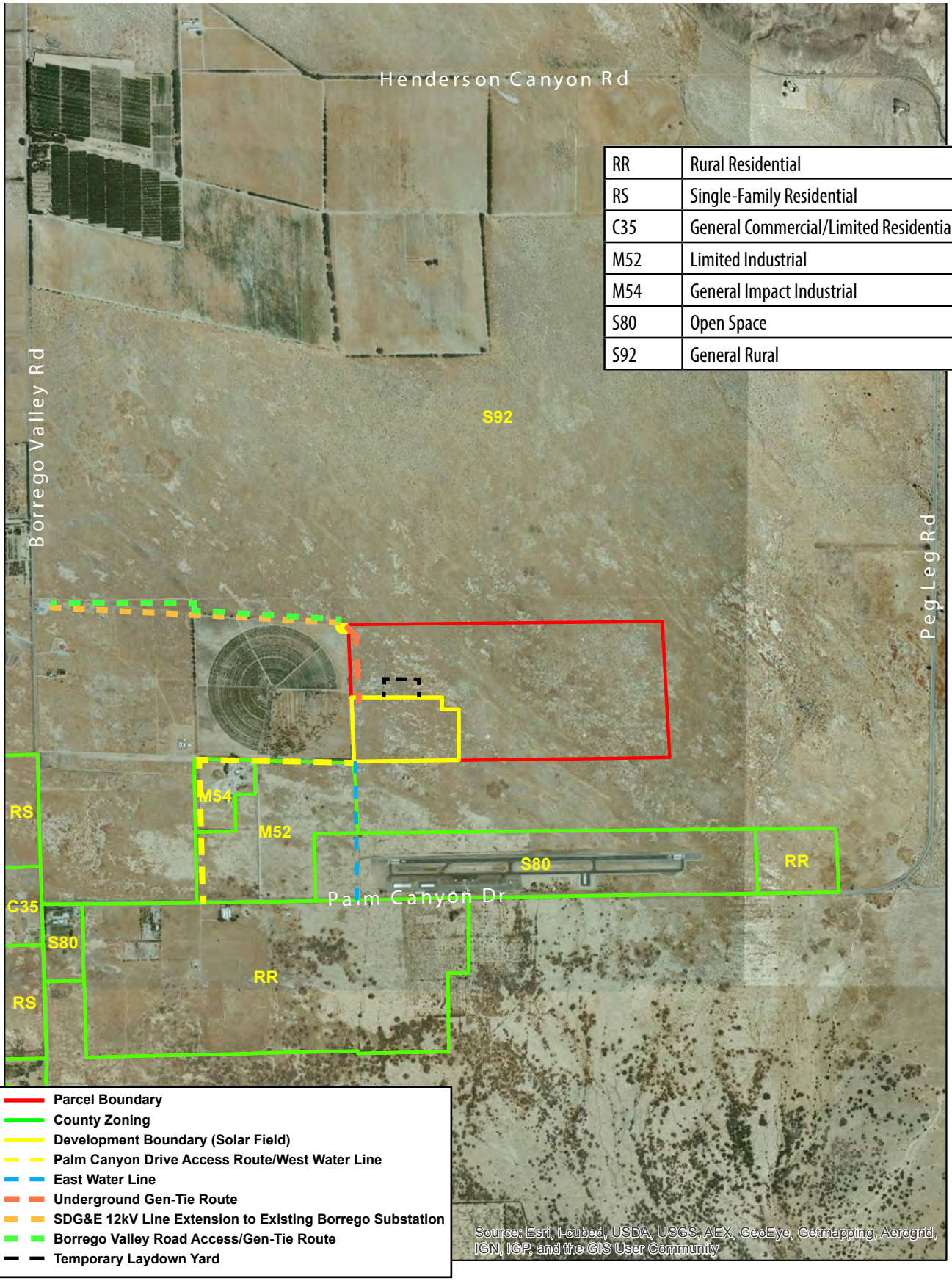
N
Not to Scale

Source: SANGIS 2010.

Existing General Plan Land Use

Desert Green Solar Farm

Figure 4A



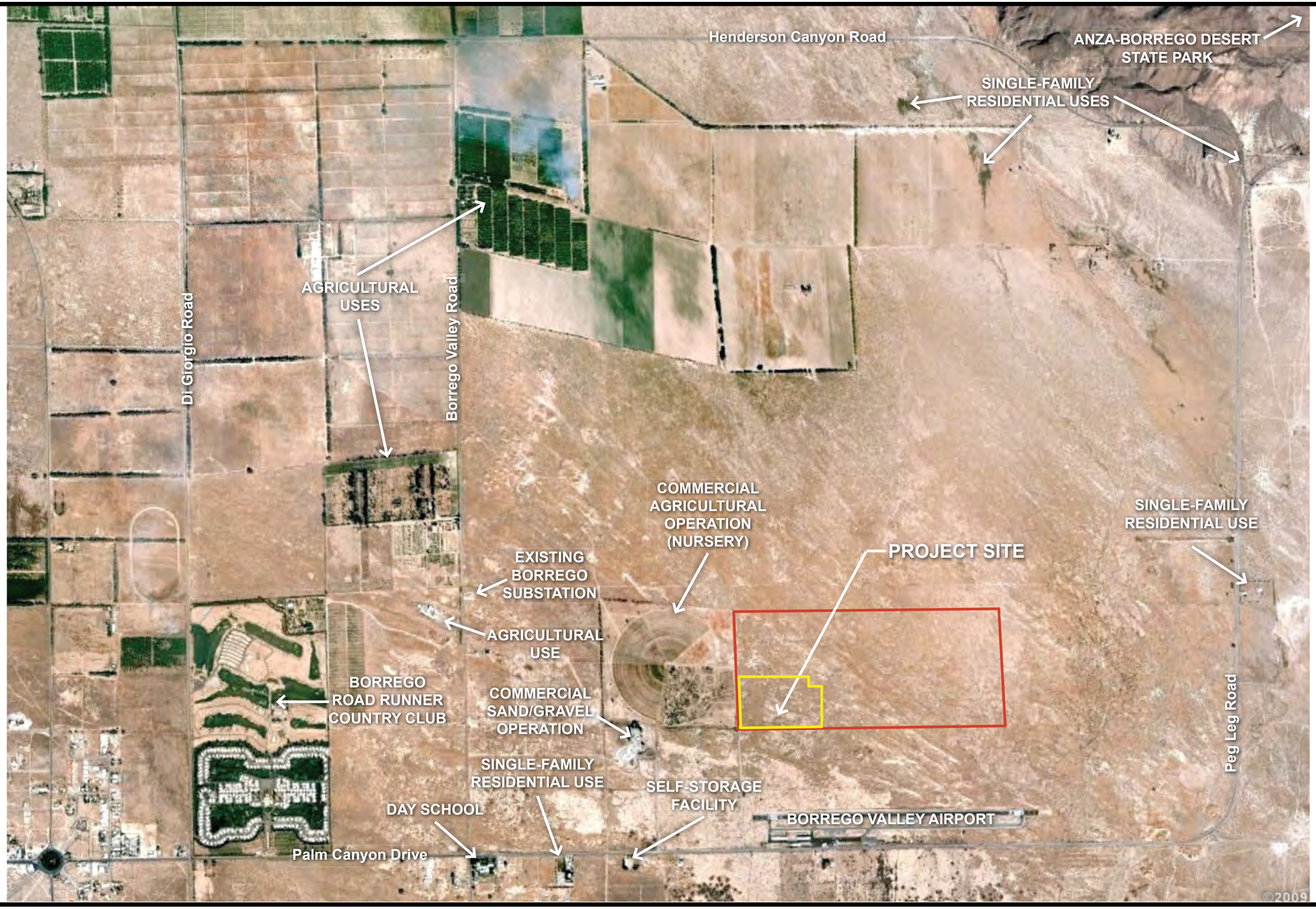
RBF CONSULTING

N Not to Scale

Existing Zoning

Desert Green Solar Farm

Figure 4B



Source: Google Earth, 2009.

RBF CONSULTING

SDMac:5388_tabloid_landscape-LU.indd

Parcel Boundary

Development Boundary (Solar Field)

N

Not to Scale

Surrounding Land Uses

Desert Green Solar Farm

Figure 5

View A: View of existing commercial sand and gravel operation west of Borrego Valley Road.

View B: View looking west to existing communications facilities with adjacent commercial nursery.

View C: View of existing residential use looking south from Palm Canyon Drive.

View D: View of existing storage facility looking south from Palm Canyon Drive.

RBF CONSULTING

SDMac:5388_tabloid_landscape-LU.indd

Existing Views of Surrounding Land Uses

Desert Green Solar Farm

Figure 6

View E: View looking south from Palm Canyon Drive to existing school (Santa Rosa Community Day School).

View F: View looking northeast across Palm Canyon Drive to Borrego Valley Airport.

View G: View looking west to existing single-family residential use along Peg Leg Road.

View H: View looking east to existing single-family residential use along Peg Leg Road.

RBF CONSULTING

SDMac:5388_tabloid_landscape-LU.indd

Existing Views of Surrounding Land Uses

Desert Green Solar Farm

Figure 7

2.0 Plan Consistency Analysis

The Project is compatible with neighboring land uses at its proposed location and is consistent with applicable County General Plan and Community Plan policies and County Zoning Ordinance provisions. Following is a discussion of the Project's consistency with such plans, as well as a summary of findings required under the Zoning Ordinance.

2.1 General and Community Plan Consistency

Several adopted plan policies support and promote the development of the Project at its proposed location. The Project is found to be consistent with the following adopted or proposed plans: the existing County General Plan; the Borrego Springs Community Plan; and, the Borrego Valley Airport Land Use Compatibility Plan (BVALUCP).

2.1.1 San Diego County General Plan (Adopted August 3, 2011)

The County of San Diego General Plan is intended to provide guidance for the long-term development of San Diego County. The General Plan includes various Elements that address different aspects of growth, including accommodating population growth and housing needs, while influencing the distribution of development in order to protect scarce resources wisely; preserving the natural environment; providing adequate public facilities and services efficiently and equitably; assisting the private sector in the provision of adequate, affordable housing; and, promoting the economic and social welfare of the region. Goals, policies and objectives are provided within each of the Elements to guide future land development and ensure consistency with the County's intended vision for the future of San Diego County.

The County of San Diego General Plan Land Use Plan designates the subject parcel as Rural Lands (RL 40), with a allowed density of one dwelling unit per 40 acres. Under this designation, other than a single-family home on an existing lot, it is not intended that any development occur unless the proposed development has been carefully examined to ensure that there would be no significant adverse environmental impacts. The proposed use is consistent with the existing land use designation and would not

require an amendment to the General Plan. An evaluation of the Project's consistency with applicable goals and policies of the General Plan is provided in Appendix A-1 of this document.

2.1.2 Borrego Springs Community Plan (Adopted August 3, 2011)

The Borrego Springs Community Plan is supplemental to the County General Plan and provides goals and policies to guide development of this area of northeastern San Diego County. Applicable goals and policies of the Borrego Springs Community Plan, along with a discussion of Project consistency, are identified in Appendix A-2 of this document.

2.1.3 Borrego Valley Airport Land Use Compatibility Plan (BVLUCP) (Adopted December 2006)

The Project would be consistent with the Borrego Valley Airport Land Use Compatibility Plan (BVALUCP). As the main Project parcel is located just north of the Borrego Valley Airport, it is subject to relevant County airport land use policies as set forth in the Borrego Valley Airport Land Use Compatibility Plan, adopted December 2006. On November 30, 2009, the proponent of the previously-approved project on the site (EE Borrego Land, LLC, Borrego Springs PV Solar Farm – P09-012 and P09-014) received a determination of "No Hazard to Air Navigation" from the Federal Aviation Administration (FAA) (Form 7460-1, Notice of Proposed Construction or Alteration), thereby indicating that the project would not conflict with operations at the Airport. The current Project applicant submitted a revised Form 7460-1, specific to the revised Project as currently proposed, and has received a determination of "No Hazard to Air Navigation" from the FAA. Additionally, an Airport Land Use Consistency Determination was issued by the San Diego County Regional Airport Authority for the Project site on January 6, 2011. Per confirmation from the San Diego County Regional Airport Authority, a new determination is not required for the proposed Project, as the original determination referenced a height of 35 feet which would not be exceeded by the proposed modification to P09-012.

The Project site is located within Airport Safety Zone 5 and Review Area #1 of the BVALUCP; refer to Figure 8, Existing General Plan Land Use Designations/

BVALUCP Review Areas. Review Area #1 applies to those locations where noise and/or safety concerns may require limitations on the type of land uses allowed.

Pursuant to the BVALUCP, Airport Safety Zones are "based upon general aviation aircraft accident location data…along with data regarding the runway configuration and aircraft operational procedures at Borrego Valley Airport."

The BVALUCP contains policies aimed at the regulation of land uses within the various Safety Zones and Review Areas identified. Policy BOR 1.6.2, Other Land Use Actions Subject to Airport Land Use Review Commission (ALUC) Review, states that "In addition to the…land use actions for which ALUC review is mandatory, other types of land use actions are subject to review under the following circumstances: 1) Within Review Area 1, all such actions, regulations, and permits affecting land shall be submitted for review."

As stated above, the Project site is located Review Area #1.The Project has been reviewed for consistency with the BVALUCP by the RAA and a determination made. As Project structures would not exceed 30 feet in height, and based on the operational characteristics of the proposed land use, no conflicts would occur. Therefore, the Project is consistent with this policy. Policy BOR.2.4(a), Non-Residential Development Criteria, states that "the maximum acceptable intensity of proposed development within the environs of Borrego Valley Airport is:

- Within Safety Zone 1: 10 people per acre.
- Within Safety Zone 2: 60 people per acre.
- Within Safety Zone 3: 120 people per acre.
- Within Safety Zone 4: 150 people per acre.
- Within Safety Zone 5: 150 people per acre.
- Within Safety Zone 6: No Limit."

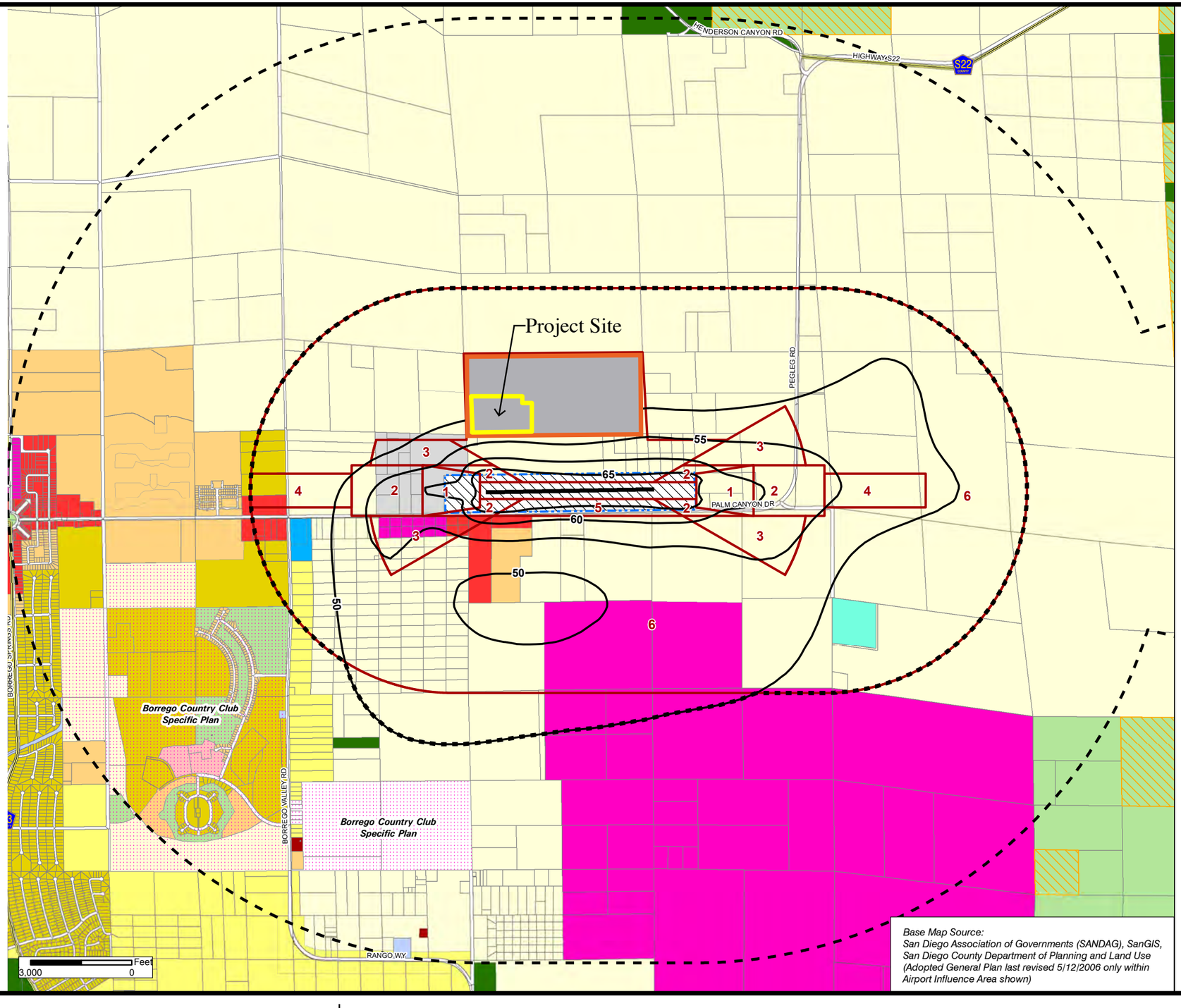
The Project would be unmanned and would require weekly maintenance activities involving two to five employees visiting the site once per week. This substantially minimizes the numbers of persons per acre using the Project site. Hence, the Project would promote policies aimed at ensuring public safety with regard to proposed land uses within proximity of the Airport.

In addition, Policy BOR.2.5 identifies Land Uses of Special Concern, which include schools, day care centers, hospitals and health care centers, inmate facilities, hazardous materials storage, and critical community infrastructure. The Project proposes a solar

energy facility and associated transmission facilities and does not represent a sensitive land use with regard to public safety. In addition, as the facilities would be self-operating, the daily onsite presence of substantial numbers of employees is not required, and therefore, Project-associated employees would not be subject to long-term exposure to potential Airport operational hazards.

Section 3.2, General Plan Consistency with Compatibility Plan (Subsection 3.2.1(a), Elimination of Conflicts), of the BVALUCP states that "Direct conflicts primarily involve General Plan land use designations that do not meet the density of intensity criteria (of the BVALUCP). In addition, conflicts with regard to other policies – height limitations in particular – may exist." The proposed CPV solar farm and associated transmission facilities would be consistent with land uses allowed by the existing County General Plan on the affected property, as noted above.

The proposed facilities would not exceed (approximately) 30 feet in height, and therefore, would not represent a structural height within the vicinity of the Airport that would interfere with existing Airport operations, consistent with Policy BOR.3.4(b). In addition, the Borrego Substation site is located within Review Area #2 of the BVALUCP. The applicant has coordinated with the San Diego County Department of Public Works (Airports) to discuss the design of the Project and its potential effects on existing operations at the Borrego Valley Airport. Consistent with Policy BOR.3.3, Requirements for Federal Aviation Administration Notification of Proposed Construction, the Project has received an approved FAA Form 7460-1 (Notice of Proposed Construction or Alteration) with a determination of "No Hazard to Air Navigation" and has received a determination of consistency with the BVALUCP.



Source: San Diego County Airport Land Use Commission, Borrego Valley Airport Land Use Compatibility Plan (Adopted December 2006)

Base Map Source:
San Diego Association of Governments (SANDAG), SanGIS, San Diego County Department of Planning and Land Use (Adopted General Plan last revised 5/12/2006 only within Airport Influence Area shown)

- Review Area 1
- Review Area 2
- Noise CNEL (with dB #)
- Safety Zone
- Airport Property
- Federal Property
- Anza-Borrego Desert State Park

General Plan Land Use Designations:

- Estate - SF (0.1 - 0.4 d.u./ac.)
- Very Low Density Residential - SF (0.41 - 1.0 d.u./ac.)
- Low Density Residential - SF (1.1 - 3.0 d.u./ac.)
- Low-Medium Density Residential - SF (3.1 - 8.0 d.u./ac.)
- Medium Density Residential - MF/MHP (8.1 - 12.0 d.u./ac.)
- Medium-High Density Residential - MF (12.1 - 20.0 d.u./ac.)
- High Density Residential - MF (20.1 - 40.0 d.u./ac.)
- Very High Density Residential - MF (>40.0 d.u./ac.)
- Mixed Use - Low Intensity (1.0 - 20 d.u./ac.)
- Mixed Use - High Intensity (>20 d.u./ac.)
- Commercial Recreation
- Neighborhood/Low Intensity Commercial
- Regional/High Intensity Commercial
- Office - Low Intensity
- Office - High Intensity
- Institutions/Public/Semi-Public
- Education (K - 12)
- Hospital/Health Care
- Light Industry/Business Park
- Extractive Industry
- Heavy Industry
- Open Space/Parks/Golf Course/Vacant
- Tribal Lands
- Agriculture (>10 ac. parcels)
- Junkyard/Dumps/Landfills
- Transportation and Utilities
- Specific Plan Area
- Water
- Parcel Boundary
- Development Boundary (Solar Field)

RBF CONSULTING

SDMac:5388_tabloid_landscape-LU.indd

Existing Land Use / BVALUCP Review Areas

Desert Green Solar Farm

Figure 8

In addition, Policy BOR.3.5, Other Flight Hazards, of the BVALUCP states that "Land uses that may cause visual, electronic, or wildlife hazards…to aircraft in flight or taking off or landing at the airport shall be allowed within the airport influence area only if the uses are consistent with FAA rules and regulations." The Project does not propose any features that would result in electronic hazards or hazards to wildlife; however, with regard to visual hazards, the CPV solar panels that would be installed with the Project would be highly-absorptive to minimize the potential for reflection and retain as much of the solar spectrum as possible. Based in part on the research provided below (see Relative Study of Potential Glare Effects), Project implementation is not expected to result in hazards relative to glare.

As solar generation facilities are not identified as a specific land use evaluated in the BVALUCP for compatibility purposes with regard to the identified Safety Zones, the San Diego County RAA is responsible for making the determination as to the appropriateness of the CPV solar facility at the proposed location. An avigation easement would be required of the Project applicant as a condition of approval for the Project. The easement would prohibit reflective surfaces that produce high glare as indicated by the RAA and DPW Airports. As noted above, the RAA determined that the previously-approved Borrego Springs PV Solar Project (EE Borrego Land, LLC) was consistent with the BVALUCP, indicating that, due to the nature of the facilities, project operation would not interfere with ongoing activities associated with the Airport. Per confirmation from the San Diego County Regional Airport Authority, a new determination is not required for the proposed Project, as the original determination referenced a height of 35 feet which would not be exceeded by the proposed modification to P09-012.

Relative Study of Potential Glare Effects

According to the *Technical Guidance for Evaluating Selected Solar Technologies on Airports*, the FAA has "broad authority to approve the placement of specific structures and activities relative to their potential impact on aviation."[1] The FAA publishes its *Airport Design* AC guidelines which are intended to guide the evaluation of siting certain land uses and activities on airport lands or within proximity to airport operations.

[1] *Technical Guidance for Evaluating Selected Solar Technologies on Airports*. Federal Aviation Administration. November 2010.

Given the constraints of some solar energy systems, PV tends to be the solar technology that is most compatible with airport operations. In comparison with other solar technology systems, PV solar is considered to be more compatible with airport land uses because it: 1) has a low profile and modular design, which is compatible with low-demand airport property such as rooftops and airfields; and, 2) is designed to absorb sunlight (rather than reflect it), thereby minimizing potential impacts of glare.[2]

In determining whether a proposed solar project is compatible with aeronautical activities, applicants are required to demonstrate that glare will not impact airspace safety. All solar projects installed at airports (or within designated review zones) must submit to the FAA a Notice of Proposed Construction Form 7460 under Part 77 to ensure that the project does not penetrate the imaginary surfaces around the airport or cause radar interference or glare.

Solar installations are currently operating at a number of airports throughout the U.S. and worldwide. The FAA recently consulted project managers from six airports where solar facilities have been operational for one to three years in order to evaluate any glare complaints. Additionally, air traffic controllers were contacted from three of these airports to identify any effects that glare had on their daily operations. The consultation determined that no serious complaints from pilots or air traffic controllers have been made regarding glare impacts from existing solar PV installations at these airports. Any potential problems have apparently been resolved prior to construction by assessing existing sources of glare, testing in the field, and through geometric analysis to minimize the potential for glare/reflection to occur. This evidence suggests that either significant glare is not occurring during times of operation or, if glare is occurring, that it is not a negative effect and is instead a minor part of the landscape that is observed or experienced by both pilots and tower personnel.[3]

Effects of solar panel glare were also analyzed by the FAA for the installation of a 4-megawatt PV solar power generation array adjacent to Denver International Airport (DIA) in Colorado in 2006. A number of tests were performed to analyze glare effects, such as placing sample PV panels at different installation locations and at variable angles. No glare was noted by observers in any of the panel orientations. An aerial observation was also conducted. Reflectivity of the panels was measured four times per day, concluding that 96 percent of the sun's light was absorbed by the panels, and that the

[2] Ibid.
[3] Ibid.

light reflected was dispersed. Since the panels were installed in August 2008, no complaints have been filed with DIA with regard to glare effects from the panels. A similar solar PV panel project was installed on the Express Hub at the Fresno Airport in Fresno, California. The project involved installation of flat plate PV modules and PV modules that capture and concentrate sunlight onto a solar cell which allow only reflected light from heat. No adverse effects from glare on airport operations have been reported.

Examples of other similar solar panel projects throughout the U.S. and globally have been installed near airports with no impacts on flight operations. Such locations include the Munich Airport in Germany; the Love Field Airport in Prescott, Arizona; and, the San Francisco, California Airport.

Furthermore, two additional studies of solar facilities were considered with regard to glare which concluded similar findings of no adverse effect. These include the Panoche Valley Solar Farm Project Glint and Glare Study (Panoche Report)[4] and a Technical Memorandum prepared by SunPower Corporation, (SunPower Report)[5]. The SunPower report summarized the minimal reflectivity in PV solar panels as follows: "In general, since the whole concept of efficient solar power is to absorb as much light as possible while reflecting as little light as possible, standard solar module produces less glare and reflectance than standard window glass. This is pointed out very well in U.S. Patent #6359212, which explains the differences in the refraction and reflection of solar module glass versus standard window glass. Solar modules use "high-transmission, low iron glass" which absorbs more light, producing small amounts of glare and reflectance than normal glass."[6] In addition, the SunPower report concluded that solar glass reflects far less than steel, standard glass, and smooth water. The report indicated that solar glass with an anti-reflective (AR) coating would reflect less than 10% of the sunlight energy at a 90-degree incident angle.[7]

In addition, a report was prepared for the Panoche Draft Environmental Impact Report (DEIR) for a 6,000-acre solar farm located in San Benito County, California. The report evaluated PV panel positions at different angles to test potential changes in the amount

[4] Panoche Valley Solar Farm Project Glint and Glare Report, prepared by Power Engineers, May 10,
[5] SunPower Corporation Technical Notification #T09014, Solar Module Glare and Reflectance, dated September 29, 2009.
[6] SunPower Corporation Technical Notification #T09014, Solar Module Glare and Reflectance, dated September 29, 2009.
[7] SunPower Corporation, Product Awareness Notification #008.02.10, Possible Glare and Reflectance in OV Systems Document #001-46074 Rev *B, April 4, 2008.

of reflectivity, evaluating the panel positions from four different key viewpoints. The report concluded in part that, "By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity. Reflectivity levels of solar panels are "decisively lower" than standard glass and should not pose a reflectance hazard to viewers."

Proposed Project

The CPV Soitec Concentrix™ technology proposed for use with the Project consists of one or more tracking units, wherein many single CPV modules are installed and all modules are oriented in the same direction, aligned in one common plane. The front and back surface of the module consists of flat glass plates. The glass plate on the front side of the module is structured on the inner surface so that only the first, outer surface of the front glass plate can cause a specular reflection that may cause glare; however, the intensity of such a light is lower than a reflex from a glass façade or large window.

Specific to the proposed technology for the Project, the tracking of Soitec Concentrix™ Technology CPV installations allows light reflected from the modules mounted on the trackers to be retro-reflected into the direction of the sun in the regular mode of operation. All modules are tracked precisely to be oriented perpendicular to the incident solar direct beam radiation. Therefore, the plane front surface of the modules reflects a small portion of the incident light exactly back into the direction of the sun. With exception of times when it is close to sunrise and sunset, the occurrence of glare at or close to the ground is therefore impossible under regular operation. When the sun is close to the horizon, the intensity of sunlight is greatly reduced, as compared to other times during the day, by the atmosphere. Therefore, the risk of glare is reduced at these times.

At high wind speeds, (e.g. during weather storms), the trackers would move automatically to a horizontal stall position. A switch would also be installed inside the entrance gate to the site to allow authorized Project personnel and emergency service providers to automatically place the CPV systems in a wind stow position. This position is uncritical with respect to glare, as any reflection of light would be directed towards the sky. In addition, high wind speeds seldom occur at times with high solar irradiance.

A *Glint and Glare Study* was prepared for the previously-approved Borrego Springs PV Solar Project (MUPs 09-012 and 09-014) by Power Engineers in January 2011.[8] The study was prepared to address potential glint/glare effects on the Borrego Valley Airport and/or similar effects on the local community. The study evaluated potential glint/glare effects from six observation points, including three from Palm Canyon Drive, and from Christmas Circle, State Route 22, and Anza Borrego Desert State Park. It was determined that vantage points north of the site would not experience glint or glare effects, as the panels proposed with the project would be fixed and south-facing. Through 3D computer modeling used to create an accurate visual representation of the project and surrounding areas, all six vantage points analyzed were determined to experience either low visibility and low duration of glint and glare, or no glint and glare effects from the proposed solar energy facilities. Those locations expected to experience low visibility and low duration of glint and glare included from Palm Canyon Drive and the Anza Borrego Desert State Park; however, potential glint and glare impacts resulting with the previously-approved Borrego Springs PV Solar Project were determined to be low due to distance and short view duration; refer to the Borrego Springs PV Solar Project - *Glint and Glare Study* (EE Borrego Land, LLC), available under separate cover. The proposed Project would be similar in nature to the above-described solar projects in overall design characteristics. It is therefore anticipated that potential glare effects resulting from the proposed Project would be similar and less than significant.

The Project applicant submitted FAA Form 7460-1, Notice of Proposed Construction or Alteration, and received determination from the FAA as to a determination of "No Hazard to Air Navigation" for installation of the proposed facilities. Based on the above discussion and findings for glare effects of similar solar PV installations, potential Project-related glare effects for all viewers from surrounding vantage points are anticipated to be none to minimal.

In summary, the proposed Project was reviewed to determine if the construction and decommissioning of the Project would have increased impacts on glare. The Project would result in a temporary increase in truck traffic and the transport of the solar trackers and construction materials to the Project site. This may temporarily increase

[8] According to the *Technical Guidance for Evaluating Selected Solar Technologies on Airports*, prepared by the FAA, "Glint is a momentary flash of bright light, whereas glare is a continuous source of bright light." Published November 2010.

glare conditions during construction; however, this increase in glare would be minimal and temporary. Therefore, construction of the proposed Project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant.

Based on the technical evidence evaluating the reflectivity of solar PV solar panels, the proposed CPV solar Project would not install highly reflective building materials that would result in a substantial increase in light or glare that would affect the surrounding area, including surrounding houses and public viewpoints. The CPV solar panels would not produce reflective light that would create adverse disability or discomfort glare. The proposed Project is in accordance with the County's Guidelines of Determining Significance for Lighting and Glare. In addition, the reflectivity of the CPV solar panels would not adversely affect day or nighttime views in the area. The slight increase in glare resulting from the Project would be a less than significant impact.

In addition, to ensure that potential glare impacts are minimized with regard to operations at the Borrego Airport, the County would enforce certain design and operational standards. These standards would require that all light fixtures and light sources be installed so as to comply with the rules and regulations of the FAA or other appropriate successor or government agencies governing height, type, and placement of lights that may affect the safety of aircraft operations into, from, and around the Airport.

2.1.4 Wildland Urban Interface Ordinance

The Project is located within an area affected by the County's Wildland Urban Interface Ordinance. The Ordinance applies to lands with a high potential for the risk of wildfire, and therefore, such lands are subject to additional preventative design measures to reduce the occurrence or spread of wildfire. To reduce the potential for wildfire to occur and to allow for adequate access and circulation of emergency vehicles, Project design includes a 30-foot brush clearing zone (measured inward from the property boundary).

A Fire Protection Plan (FPP) Letter Report (February 2013) has also been prepared by the Project applicant, consistent with County requirements, to address such issues as water supply, access, building ignition and fire resistance, fire protection systems and equipment, and vegetation management. The County Fire Marshal and Borrego Springs Fire Protection District (BSFPD) will review the Project as designed to determine if the

Project would meet applicable fire protection requirements and that adequate facilities and personnel are available to serve the Project site.

2.2 Major Use Permit Findings (County Zoning Ordinance)

The County Zoning Ordinance allows photovoltaic solar farms to be located on the Project site, subject to approval of a Major Use Permit modification (P09-012). The following required findings support the issuance of a MUP (modification) for the Project.

Finding 7358a. ***"The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:***

1. harmony in scale, bulk, and coverage."

The Project is in harmony in relative development scale, bulk, and lot coverage with surrounding properties and is therefore compatible with adjacent land uses.

This finding can be addressed in two parts. The first part, "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures…" addresses how the proposed development would relate to the existing environment.

Location / Lot Size

The Project site is located in the Borrego Valley, which is in the desert region of northeastern San Diego County. In the Project vicinity, parcels are generally large-acre parcels with low-density uses. The majority of surrounding parcels are designated as Rural Lands (RL 40) and Semi-Rural Residential, which allow for low-density residential development. A number of smaller parcels are located to the south of the Project site, across Palm Canyon Drive, and are generally small-scale commercial and residential uses. Smaller lot sizes are evident within the more developed areas of Borrego Springs. The Project does not propose to subdivide or change the existing size of any of the parcels affected by the proposed improvements, and therefore, would not create lot sizes that were inconsistent with the existing visual character of lands in the surrounding area.

Commercial uses and industrial uses with characteristics similar to that proposed with the Project occur in the surrounding area. To the north and east of the main parcel is undeveloped land; to the south is the Borrego Valley Airport; and, to the west are a commercial palm nursery and a sand and gravel plant. A microwave tower is also adjacent to the southwest corner of the 288-acre parcel; refer to Figure 2, Aerial Photograph. A commercial sand and gravel yard is located to the north; refer to Figure 7, Surrounding Land Uses. Land uses to the south across Palm Canyon Drive generally include undeveloped lands interspersed with industrial type and residential uses. As such, industrial and commercial uses with characteristics similar to that proposed with the Project occur in the surrounding area. Refer also to Table 2, Development Characteristics of the Project and Surrounding Uses, for additional information.

Architectural Design

Architectural design of structures within the land areas surrounding the Project is varied, due to a mixture of use types. Residential uses in the area typically exhibit ranch-style features with wooden exteriors and roofing, and generally non-decorative elements. Several visible residential uses are constructed in the Spanish style, with stucco exteriors, tile roofing, and arched features. Surrounding commercial and industrial uses generally exhibit more utilitarian features with minimal architectural design (i.e., concrete and gravel plant, sand and gravel yard, Borrego Substation, Borrego Valley Airport, self-storage facility).

The Project would involve installation of the CPV solar panels on the 288-acre parcel with supporting infrastructure that includes small-scale structures to house the inverter/transformers and switching gear, and associated transmission equipment. As the Project represents a utility use, Project components would be utilitarian in nature and would not represent structural features such as residential or commercial buildings that would require detailed architectural design or design features intended for visual enhancement. Architectural design of the proposed facilities is not anticipated to significantly contrast with the visual character of other uses found in the surrounding area. The bulk and mass of the proposed structural elements would reflect similar existing components within the visual landscape. The architectural design of Project elements would not result in features that are visually dominant within the visual landscape, or that represent a scale that would significantly contrast with the existing visual character.

Materials and Colors

Surrounding land uses exhibit a variety of materials and colors, depending on the land use considered. Materials generally range from wood, stucco, and concrete block for residential and commercial uses. Metal and/or stucco structures are typical of surrounding industrial and agricultural uses and the Borrego Valley Airport. Exterior colors of surrounding structures are typically earthtoned in nature.

Solar Panels

The CPV solar systems would be manufactured at an offsite location and transported to the Project site for installation. The systems would be made up of a lens plate (Fresnel lens) and a base plate on which the high-performance solar cells are mounted. The materials used to construct the panels are designed to minimize the potential for reflection and retain as much of the solar spectrum as possible, thereby reducing glare.

Inverter/transformer Enclosures

Up to five small-scale, aboveground structures would be constructed within the solar panel fields to weatherize inverter/transformers. The structures would be constructed of non-flammable materials (i.e., steel) with an earthtone finish. Roofing for these structures would also be metal and of an earthtone finish to reflect the visual character of the surrounding natural environment.

Switch Gear/Ultra Capacitor Storage Unit

Two small-scale, aboveground structures would be constructed at the northwestern portion of the tracker field. The structures would be constructed of non-flammable materials (i.e., steel) with an earthtone finish to reflect the visual character of the surrounding natural environment.

Storage Building

One storage building would be constructed onsite to support maintenance activities. The building would be constructed of either concrete block or metal with an earthtone exterior, similar to the exterior of the inverter enclosures.

Overall, the Project would result in the construction of elements within the landscape that would be respective of the existing visual character and visual quality with regard to materials and color. No features are proposed that would sharply visually contrast with surrounding elements, or that would create a visually dominant feature.

Supervisory Control and Data Acquisition System Building

Operation of the Project would require monitoring through a supervisory control and data acquisition (SCADA) system. One 10-foot by 30-foot (300 s.f.) structure would be constructed on a pad to house the SCADA equipment. Similar to other proposed structures, the building would be constructed of either concrete block or metal with an earthtone exterior.

Height / Square Footage

Surrounding residential and commercial uses typically range between one to two stories in height. Industrial-type and/or agricultural uses on surrounding lands support structural elements that generally range from 10 to 30 feet in height, with various elements of greater height, depending on their function. In addition, the communications tower located to the west of the Project site is greater than 100 feet in height. It should also be noted that the Borrego Valley Airport supports several hangars for the storage and protection of airplanes. It is estimated that these facilities range between approximately 100 feet by 350 feet to 550 feet (35,000 s.f. to 55,000 s.f.) in size, with an approximate height of 30 feet. These hangars are located in the western portion of the Airport property and are visible from Palm Canyon Drive.

Square footage of buildings in the area varies, due to the type of use, with residential uses generally of smaller scale (generally one-story) and commercial and industrial uses supporting structures of greater square footage. Refer also to Table 2, Development Characteristics of the Project and Surrounding Uses, for additional information.

Solar Panels

Each CPV system module would measure approximately 48 feet across by 25 feet high (1,200 s.f. of surface area); refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details. Each CPV system unit would be mounted on a 28-inch diameter steel mast (steel pole). In its most vertical position, and depending on foundation design, the top of each tracker would not exceed 30 feet above grade, and the lower edge would not be less than one foot above the base flood elevation (bfe), which is one foot above ground surface. It its horizontal "stow" mode (for high winds), each tracker would have a minimum ground clearance of 13 feet 6 inches. Each steel pole would be mounted on either a 28-inch diameter metal-driven pile or a 30-inch diameter concrete

drilled pier, thereby minimizing the amount of ground surface affected by installation of the CPV solar components.

Due to the limited height of the solar panels and the topography of the proposed development area (minimal Project grading required), visibility of the panels within the landscape would be reduced. As sensitive land uses (i.e., residential uses) are not located in the immediate area surrounding the affected parcels, and views to the site would instead generally occur at a distance from developed properties and/or roadways, views of the panels would be limited.

Inverter/Transformer Stations

Up to five inverter stations would be required with the Project. The inverter stations would be 12 feet in height. The inverter stations would be located with the lower edge of the foundation skid being no less than one foot above the base flood elevation (which is one foot above ground surface level). Each inverter/transformer platform would be 10 feet by 40 feet, or 400 square feet.

As such, these structures would be relatively small in nature, and would not represent a size or height that would significantly contrast to existing land uses in the surrounding area (i.e., residential, industrial, small-scale commercial uses, etc.).

Switch Gear/Ultra Capacitor Storage Unit

Two small-scale, aboveground structures would be constructed at the northwestern portion of the tracker field. The platform housing the Switch Gear would be 10 feet by 10 feet. The platform housing the Ultra Capacitor would be 10 feet by 40 feet. Platforms would be located with the lower edge of the foundation skid being no less than one foot above the base flood elevation (which is one foot above ground surface level).

As such, these structures would be relatively small in nature, and would not represent a size or height that would significantly contrast to existing land uses in the surrounding area (i.e., residential, industrial, small-scale commercial uses, etc.).

Storage Building

The proposed onsite storage building would consist of a 300 s.f. metal building (within a 1,000 s.f. breakaway fenced and screened storage yard). The structure would be approximately 10 feet 8 inches in height, constructed on top of piers at one foot above base flood elevation.

SCADA Building

The structure proposed to house the SCADA equipment would be 300 s.f. in size. The structure would be approximately 10 feet in height, constructed on top of piers at one foot above base elevation.

Gen-tie/Transmission Facilities

In order to transfer the power generated from the solar facility to the Borrego Valley Substation, the Project would utilize either the 12kV Borrego Valley Road Gen-tie Route or the SDG&E 12kV Line Extension Route, as shown on the MUP Plot Plan; refer to Figures 3A and 3B.

The POI for the Borrego Valley Road Gen-tie Route would be at the Borrego Valley Substation. The 12kV line would be undergrounded within an existing 50-foot wide access and utility easement on private lands (APN 141-060-08). The Borrego Valley Road Gen-tie Route would start at the Borrego Substation and follow the Borrego Valley Road Access Route east to a point near the northwesterly corner of the Project site, cross the existing SDG&E easement, run through a portion of the neighboring Cocopah nursery, and then trend southward to the Project boundary via the 30-foot wide Gen-tie Route.

The 12kV SDG&E Line Extension Route would be located within the existing 20-foot wide SDG&E easement (Record #72-3377663) that extends from the Borrego Substation easterly to the POI near the northwesterly corner of the Project site. From the POI, the 12kV underground Gen-tie line would trend southerly across the adjacent Cocopah nursery, and then trend southward to the Project boundary via the 30-foot wide Gen-tie Route. All improvements to the 12kV line extension would be completed by SDG&E and are under the land use authority of the CPUC, pursuant to General Order 131D.

As such, the Project would not result in the introduction of features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area, or by being inconsistent with applicable design guidelines. Impacts would be less than significant, and no mitigation is required.

Grading

Grading of properties on lands surrounding the Project site generally appears to be minimal, as such lands are relatively flat and lacking in varied topography, due to their location within the valley floor. Grading may occur on a site to accommodate various structures, depending on the underlying topography and size of the required building footprint; however, no significant manufactured cut and/or fill slopes are readily visible on properties within the area surrounding the Project site or affected lands where associated infrastructure improvements would occur.

Although the majority of land surface on the affected parcel is generally flat, limited portions of the proposed development area would be graded to provide a ground surface that can adequately accommodate the CPV solar modules and associated facilities. Additional minor grading would be required for improvements for access/utilities. Project grading would require an estimated 93,300 c.y. of balanced cut and fill. The remainder of the parcel would be cleared and grubbed to allow for installation of the panels and associated facilities.

As limited grading would be required to allow for installation of the proposed facilities, the existing onsite topography of the Project site would remain largely in its natural state. Due to the nature of Project grading requirements, the Project would not result in unnatural landforms or significant manufactured cut or fill slopes. Grading proposed with the Project would therefore be consistent with that found on developed properties within the Project area.

TABLE 2
DEVELOPMENT CHARACTERISTICS OF THE PROJECT AND SURROUNDING USES

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
Project Site (solar field; construction laydown area)	141-230-26	--	45-acre Proposed Development Area (on 288-acre Parcel)	--	--	Vacant
2315 Henderson Canyon Rd.	140-320-29	Northeast	5	1,682	n/a	Multi-family Dwelling
1374 Peg Leg Rd.	140-320-23	Northeast	102	--	--	Miscellaneous
1518 Peg Leg Rd.	140-320-08	Northeast	131	--	--	Miscellaneous
1520 Peg Leg Rd.	140-320-06	Northeast	135	780	n/a	Commercial Condominium
Peg Leg Rd.	141-070-11	Northeast	21	--	--	Vacant Land
2085- N Peg Leg Rd.	141-070-09	Northeast	6	2,106	n/a	Mobile Home Lot
1820 Palm Canyon Dr.	141-230-38	South	191	151,000*	n/a	Borrego Valley Airport
Palm Canyon Dr.	199-060-04	South	9	--	--	Vacant Land
Palm Canyon Dr.	199-060-05	South	30	--	--	Vacant Land
Palm Canyon Dr.	199-060-11	South	61	--	--	Vacant Land
Palm Canyon Dr.	199-060-13	South	58	--	--	Commercial Acreage
Palm Canyon Dr.	199-060-01	South	39	--	--	Vacant Land

TABLE 2, CONTINUED

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
Palm Canyon Dr.	199-030-06	Southwest	2	--	--	Vacant Land
1615 Palm Canyon Dr.	199-030-05	Southwest	2	1,053	n/a	Single Family Residence
Palm Canyon Dr.	199-030-04	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-030-03	Southwest	2	--	--	Vacant Land
1527 Palm Canyon Dr.	199-030-02	Southwest	2	9,000	n/a	Vacant Land
Palm Canyon Dr.	199-030-01	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-020-06	Southwest	5	--	--	Vacant Land
Palm Canyon Dr.	199-020-05	Southwest	5	--	--	Vacant Land
1437 Palm Canyon Dr.	199-020-04	Southwest	5	n/a	n/a	Single Family Residence
Palm Canyon Dr.	199-020-03	Southwest	4	--	--	Vacant Land
Palm Canyon Dr.	199-020-02	Southwest	4	--	--	Vacant Land
Palm Canyon Dr.	199-020-01	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-020-31	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	141-210-05	West	72	--	--	Agricultural Land
Palm Canyon Dr.	141-210-04	West	74	--	--	Agricultural Land
Palm Canyon Dr.	141-210-21	West	3	--	--	Industrial Acreage (Sand and Gravel Operation)
Palm Canyon Dr.	141-210-22	West	12	--	--	Industrial Acreage (Sand and

TABLE 2, CONTINUED

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
						Gravel Operation)
Palm Canyon Dr.	141-210-06	West	9	--	--	Industrial Acreage (Sand and Gravel Operation)
2299 Borrego Valley Rd.	141-210-19	West	67	1,688	n/a	Mobile Home Lot
2161-2191 Borrego Valley Rd.	141-210-02	West	72	693	n/a	Single Family Residence
Borrego Valley Rd.	141-210-30	West	159	--	--	Vacant Land
Borrego Valley Rd.	141-030-28	Northwest	41	--	--	Vacant Land
1992 Borrego Valley Rd.	141-030-27	Northwest	42	--	--	Miscellaneous
Borrego Valley Rd.	141-060-08	Northwest	310	--	--	Vacant Land
Borrego Valley Rd.	141-060-07	Northwest	310	--	--	Vacant Land
Borrego Valley Rd.	140-290-10	Northwest	214	--	--	Vacant Land
1329 Borrego Valley Rd.	140-290-08	Northwest	77	1,248	n/a	Greenhouse
Henderson Canyon Rd.	140-290-06	Northwest	152	--	--	Vineyard
Borrego Valley Rd.	140-290-04	Northwest	87	--	--	Agricultural Land

n/a: not available
* Total estimated at 151,000 (includes airplane hangars)

Landscape Design

Landscaping in the area surrounding the Project site generally consists of both natural, native landscaping and formal and informal plantings. A variety of landscaping materials are visible, including a range of plants and trees varying in appearance, color, and height. Landscaping on private residential use properties generally appears to be of a well-manicured nature, as compared to non-residential uses, with a common desert theme reflective of the surrounding native landscape. Surrounding lands that support industrial or commercial uses generally display areas of natural vegetation or minimal landscaping. Well-manicured landscaping, typically supporting palm trees combined with a variety of plantings, are present in the more developed areas of the Borrego Springs community.

Project design does not include the planting of any landscaping materials on any of the affected parcels. Due to the nature of the CPV solar facilities, the topography of site, and the relative distances to surrounding developed lands or significant public vantage points, landscape screening is not required or proposed. In addition, Project design includes a 30-foot-wide vegetative clearing (measured inward from the perimeter of the parcel) to minimize the potential for wildfire to occur and to allow for circulation of emergency vehicles. As such, installation of landscaping along the perimeter of the parcel for screening purposes would not be appropriate; however, considering the visual nature of adjoining developed and undeveloped lands, the absence of perimeter landscaping with the Project would not be inconsistent with the existing visual character.

Operation and Maintenance

Operation and maintenance activities associated with surrounding industrial and commercial uses are assumed to occur during typical daily business hours. Activities occurring at surrounding residences would be typical of single-family residential uses.

The Borrego Valley Airport to the south of the Project site allows inbound and outbound flights to occur 24 hours per day. The Airport's business office operates Monday through Friday from 8:00 a.m. to 4:00 p.m. In addition, the public restaurant located within the Airport complex operates Tuesday through Friday from 11:00 a.m.

to 9:30 p.m. and Saturday/Sunday from 9:00 a.m. to 9:30 p.m. The restaurant is closed during the months of July and August.[9]

The CPV solar facilities would operate 24 hours per day, seven days per week, 365 days per year. The facilities would be monitored remotely. Security would be maintained through installation of a 6-foot high chain-link fence that would include one foot of three-strand barbed wire along the perimeter of the development area. Infrared security cameras, motion detectors, and/or other similar technology, would also be installed to allow for monitoring of the site through review of live 24/7 footage. Should the security system detect the presence of unauthorized persons, a security representative would be dispatched to the facility, and appropriate local authorities would be notified.

It is anticipated that weekly maintenance of the facilities would require the presence of two to five workers to perform visual inspections and minor repairs. Overall, minimal maintenance requirements are anticipated, as the facilities would operate on their own with little human involvement required.

On intermittent occasions, the presence of several workers may be required if major repairs or replacement of equipment is required; however, due to the nature of the facilities, such actions are anticipated to be infrequent. Occasional equipment replacement or refurbishing may be conducted.

To allow for ongoing maintenance of the CPV solar modules, connection to the public water system is proposed. The Project proposes a 4-inch water line from Palm Canyon Drive (via either the West Water Line route or the East Water Line Route) and would extend the private line to the southwest corner of the 288-acre parcel; refer to Figures 3A and 3B, Major Use Permit Plot Plan.

It is anticipated that in-place panel washing would occur every six weeks or nine times/year by mobile crews who would also be available for dispatch whenever onsite repairs or other maintenance are required. Panel washing would be undertaken using a tanker truck and smaller "satellite" panel washing trucks. Each panel washing truck would carry water treatment equipment and truck-mounted panel washing booms. Water would be treated to ensure a hardness level of seven or less and to remove impurities. Wastewater not used for panel washing would be captured and disposed of offsite. As a conservative (i.e., high) estimate, approximately 24 gallons of water would

[9] San Diego County website. http://www.sdcounty.ca.gov/dpw/airports/borrego.html. Accessed June 2012.

be required to wash each set of tracker modules, thus requiring approximately 66,528 gallons or 0.2 acre-feet per year.

It is anticipated that the soil stabilizer chosen for the Project would need to be reapplied bi-annually. The Project would utilize a soil binding stabilization agent that is non-toxic and permeable. The purpose of the soil stabilizer is to prevent erosion and to reduce fugitive dust. To reapply the soil stabilizer agent would require approximately 3,330 gallons of water per acre. The net Project area that would require soil stabilization is approximately 66.89 acres. The total amount of water needed to reapply the soil stabilization agent is 220,737 gallons/year.

Overall, adding a 30% contingency to the above numbers, a total of 373,445 gallons, or 1.15 acre-feet of water would be required for dust suppression and panel washing per year (66,528 gallons plus 220,737 gallons = 287,265 gallons x 0.30 = 373,445 gallons or 1.15 acre-feet).

As maintenance of the CPV solar facilities would generally be infrequent, such activities are not anticipated to disturb surrounding land uses in the area. Maintenance would largely occur on the 288-acre parcel within the proposed 45-acre development area, thereby minimizing any disruption to adjacent landowners. As such, the operation and maintenance of the Project is considered to be compatible with surrounding land uses.

Occupancy Rates

In 2009, there were an estimated 2,283 housing units within the community of Borrego Springs. Of the 2,283 units, an estimated 1,163 were occupied, with 867 owner-occupied and 296 renter-occupied.[10] It should be noted that the Borrego Springs area supports many recreational opportunities and natural amenities that attract large numbers of tourists on an annual basis. Many visitors to Borrego Springs own second homes in the community, particularly where housing is tailored to this population (i.e., the Roadrunner Club).

The Project would not result in residential construction, and therefore, would not make available new housing opportunities within the community of Borrego Springs or surrounding areas. Therefore, no new housing would be constructed with the Project that could potentially contribute to an overstock of housing or a related decrease in area

[10] City-Data.com website. http://www.city-data.com/housing/houses-Borrego-Springs-California.html. Accessed June 2012.

occupancy rates, thereby affecting the local housing market. Future occupancy rates would be influenced by a number of factors, including population growth within the community, demand for housing, available housing supply, and economic conditions, among other potential factors; however, the Project would not have an adverse effect on housing occupancy rates, or adversely alter the local housing market, due to the nature of the proposed use.

The second part of the finding, "…harmony in scale, bulk, and coverage" addresses how the Project would visually relate to the surrounding built environment.

Bulk and Scale

An evaluation of bulk and scale includes an analysis of the visual appearance of structures, relative to other existing development in the surrounding area. Visual bulk and scale of surrounding structures varies depending on the type of use. Residential and commercial uses tend to be of smaller scale (generally one to two stories in height) and visually horizontal in nature, while agricultural and industrial-type uses generally support structural elements of greater bulk and scale within the visual landscape. The Borrego Valley Airport property supports a number of large-scale airplane hangars, with associated maintenance facilities, and an administrative building with offices and a restaurant. These structural features have visible bulk and scale within the landscape, particularly as adjoining lands are undeveloped.

It is anticipated that the apparent visual bulk and scale of the proposed Project facilities would generally be consistent with that of surrounding uses, due to the design requirements of the solar facilities and associated infrastructure, structural/equipment heights, and required development regulations of the applicable zones.

As noted above, each CPV system module assembly dimensions would measure approximately 48 feet across by 25 feet high (1,200 s.f. of surface area); refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details. In its most vertical position, and depending on foundation design, the top of each tracker would not exceed 30 feet above grade.

As such, the solar panels would be low-lying and would not be of significant scale or bulk. Due to the limited height and size of the solar panels and the topography of the site (e.g. generally flat viewing plane), visibility of the panels within the landscape would be further reduced.

In addition, the structural elements (inverter stations, SCADA enclosure, switch gear, ultra capacitor, storage building, equipment pad) would be located within the boundaries of the proposed 45-acre development area. None of the proposed Project components would exceed a height of 30 feet as measured from the ground surface. As the proposed facilities would be relatively low-lying within the landscape and limited in height, they are not considered to be of significant scale that would be inconsistent with surrounding land uses or community character. In addition, these elements would not be of significant visual bulk, due to their function and utilitarian design.

No new or replacement utility poles are proposed with the Project. The Gen-tie line within the 288-acre parcel would be undergrounded, and would either run above ground (12 kV Borrego Valley Road Gen-tie Route) or aboveground or below ground (SDG&E 12kV Line Extension). Therefore, the Gen-tie line would not result in an element of significant visible bulk or scale.

The proposed components would not represent elements that would detract from the existing visual character or quality of the site or that would significantly dominate or differ in size from existing components within the landscape.

Building Coverage

Building coverage is generally expressed as a percentage and represents the area of land covered by the footprint of a building. Building coverage is calculated as the building area divided by total lot area. The building footprint does not include paved areas, such as driveways or parking areas or walkways around structures, as defined by Section 1110 of the County Zoning Ordinance.

Many undeveloped lands are present in the area surrounding the Project site, and therefore, do not support buildings; refer to Figure 2, Aerial Photograph. The majority of surrounding developed lands are large-acre parcels with structures of varied square footage, depending on the use (i.e., single-family residential versus industrial). As lot sizes generally decrease south of Palm Canyon Drive and in the more developed areas of Borrego Springs, building coverage increases.

Of particular consideration is the Borrego Valley Airport. The property totals approximately 191 acres with existing onsite structures totaling an estimated 151,500 s.f. (includes airplane hangars). As such, building coverage is estimated to be approximately 1.8 percent (151,500 s.f./8,329,100 s.f.).

As stated earlier, up to five inverter/transformer enclosures would be constructed on the 288-acre parcel. Therefore, the maximum total square footage of the inverter stations would be approximately 2,000 s.f. (two 680 kW design, or 400 s.f. x five inverter stations). In addition, two 10,000 gallon water tanks (15' dia.) would be 354 s.f.; the storage building would total approximately 300 s.f.; the switch gear equipment pad would be approximately 10 feet by 10 feet, or 100 s.f.; the SCADA enclosure would be 10 feet by 30 feet, or 300 s.f.; and, the ultra capacitor pad would be 10 feet by 40 feet or 400 s.f. As the total land area affected by the Project on the 288-acre parcel would be approximately 45 acres, overall building coverage within the development area would be an estimated 0.17 percent (3,454 s.f./2,003,760 s.f.). As such, Project building coverage would represent only a fractional portion of the development area, consistent with the generally rural character of surrounding lands.

Spacing between each row of CPV system modules along the horizontal axis would be approximately 82 feet (center of pier/pile to center of pier/pile); spacing along the horizontal axis would be approximately 59 feet (center to center). Although from an aerial perspective, the modules would appear to cover a substantial surface land area, they would be mounted on driven piles or drilled piers, thereby minimizing the footprint, or coverage, of each CPV system module.

The appearance of the above-described Project elements within the landscape is not anticipated to significantly detract from or contrast with the existing visual character and/or quality of the surrounding neighborhood, community, or localized area. The location, size, design, and operating characteristics of the proposed use would be compatible with adjacent uses, residents, buildings, and structures with consideration given to harmony in scale, bulk, and coverage.

For the reasons above, the Project is considered to be consistent with this finding.

The following discussion summarizes the Project's conformance to the remaining findings required for approval of a Major Use Permit (or MUP modification proposed herein), pursuant to Section 7358a of the County Zoning Ordinance.

Finding 7358a. ***"The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:***

2. The availability of public facilities, services, and utilities;

The Project would be compatible with adjacent uses because it would not impose major demands on public facilities, services, or utilities.

Schools

The Project would result in the installation and operation of a CPV solar farm for the generation and transmission of solar-generated energy. The Project would not result in the construction of housing or other uses that would generate additional population increasing the demand for educational services. As such, the Project would not affect the availability or provision of educational services within the Borrego Springs community.

Fire Protection Services

The areas affected by the Project would be served by the Borrego Springs Fire Protection District (BSFPD). The District covers approximately 305 square miles and is served from one station, located at 2324 Stirrup Road in Borrego Springs, approximately 2.5 miles northwest of the southwest corner of the site. The Project is not expected to increase the need for fire protection services or staff in the area served by the BFSPD. Adequate facilities and personnel are available to serve the Project.

Lands affected by the Project are located within the County's Wildland Urban Interface area. As such, Project design provides for a 30-foot wide perimeter brush clearing zone along the perimeter of the proposed development area to reduce the potential for wildfire to occur and/or spread.

The Project has been designed to further mitigate for potential impacts to the safety of persons and property. A FPP Letter Report has been prepared to address water supply, access, building ignition and fire resistance, fire protection systems, and equipment and vegetation management with regard to fire code requirements.

Police Protection Services

The lands affected by the Project would be served by the County of San Diego Sheriff's Department from its station located at 571 Palm Canyon Drive in Borrego Springs, approximately 3.1 miles to the southwest of the southwest corner of the site. As previously stated, the affected property would be monitored remotely, thereby reducing the potential for trespassers or vandals to access the site and decreasing the overall need for intervention by law enforcement officers.

Water Service

The use of potable water is not required for long-term operation of the proposed facilities. To allow for annual maintenance of the solar modules (washing up to nine times per year), connection to the public water system is proposed. To provide water for washing the panels, the Project would connect to a proposed 4-inch water line to be extended from Palm Canyon Drive to the Project site via one of two proposed routes: the West Water Line or the East Water Line; refer to Figures 3A and 3B, Major Use Permit Plot Plan. Water would be provided by the Borrego Water District, and an adequate water supply is available to meet Project water demand.

Wastewater Service

Due to the nature of the Project, no wastewater disposal facilities or connection to the public system for such services is required or proposed. The Project would not generate any wastewater that would require the need for treatment or disposal, and therefore, would not affect existing or future wastewater treatment services or facilities within the Borrego Springs community.

Solid Waste Disposal

Due to the nature of the Project, the need for solid waste disposal service is not anticipated, with the exception of disposal of minimal amounts of debris during construction. Allied Waste Services is the community's franchise hauler for refuse, recycling, and green waste materials. Any construction debris would be transported to the Borrego Springs Landfill, located at 2449 Palm Canyon Drive, approximately 1.1 miles to the southeast of the site. The Landfill has adequate capacity to accept the limited solid waste that may be generated by construction and/or operation and maintenance of the Project facilities.

Other Utilities and Services

Due to the nature of the Project, operation of the proposed facilities is not expected to result in a significant increase in demand for other public utilities or services such as electricity, sewer service, schools, recreational facilities, or other services (i.e., libraries, social services, etc.). No residential, commercial, industrial, or other land uses that would potentially generate a demand for additional water or wastewater treatment services are proposed as part of the Project.

For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

3. The harmful effect, if any, upon desirable neighbor character;

The Project would not have a harmful effect on desirable neighborhood character, and therefore, would be compatible with adjacent uses. The Project proposes construction of a CPV solar energy electrical generation facility to provide electricity for public consumption. The solar modules would be installed on land that is generally located in an area that supports undeveloped/disturbed lands or low-density uses, with no residential uses immediately adjacent to the affected property. A number of other industrial-type uses are also present in the surrounding area, including a microwave tower, located adjacent to the southwest corner of the 288-acre parcel, and a commercial sand and gravel yard, located further west of the parcel. A large-scale commercial nursery is currently in operation directly to the west of the Project site. In addition, an existing utility easement runs just north of the site and supports the operation of such facilities in the area (e.g. Borrego Substation).

The CPV solar systems and associated support facilities would be generally distanced from major roadways and would be low-lying features within the landscape. Limited grading and grubbing/clearing would be required to accommodate the CPV solar modules and the transmission facilities, thereby allowing existing topography to remain largely in its natural state, rather than resulting in a highly manufactured landscape that would be inconsistent with the existing visual character of the surrounding area.

Short-term noise impacts would be associated with construction activities required for the Project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the Project area, but would cease once Project construction is completed. All construction would be required to comply with applicable restrictions on hours and standards for such activities, per established County of San Diego noise level thresholds, to reduce the potential for significant noise impacts to occur. In addition, sensitive receptors (i.e., residential uses, schools, etc.) are not located within close proximity to the Project, and therefore, would be distanced from any construction-related noise.

Long-term operation of the solar CPV systems and associated facilities is not anticipated to generate significant noise levels that would exceed local noise level thresholds. Refer

also to the Noise Analysis prepared in February 2013 for the Project (available under separate cover).

In addition, as Project-generated traffic would be generally limited to two to five employees visiting on a weekly basis for maintenance purposes, the Project is not anticipated to contribute to a significant increase in noise levels along area roadways above existing conditions. The proposed facilities would also be constructed within an environment where noise is presently generated by daily operation of the Borrego Valley Airport, as well as by traffic traveling along Palm Canyon Drive and Borrego Valley Road. As such, no significant noise effects that would adversely affect neighborhood character are anticipated.

In addition, exterior lighting for the Project would be limited to that required for maintenance and security purposes to minimize effects on surrounding land uses. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and/or open space lands. All lighting would conform to County of San Diego outdoor lighting requirements.

The Project is not considered to otherwise result in the harmful effect upon desirable neighbor character. For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

4. The generation of traffic and the capacity and physical character of surrounding streets;

The Project's generation of traffic in the context of surrounding streets is compatible with surrounding uses. Due to the nature of the Project, the public roads generally affected by the Project include Palm Canyon Drive and Borrego Valley Road. Characteristics of these roadways are briefly described below.

Palm Canyon Drive (SA 180)/(SC430) is currently a two-lane road and is oriented in an east/west direction in the vicinity of the Project site. Borrego Valley Road (SC 470) is currently a two-lane road and is oriented in a north/south direction in the vicinity of the Project site.

Traffic along Palm Canyon Drive varies and supports heavier traffic volumes during typical peak hours and during months when tourist traffic increases (i.e., winter and

spring, and the blooming period of desert wildflowers). Borrego Valley Road supports moderate volumes of traffic, due to the generally large-acre parcels with lower-density development that the road provides access to.

With Project implementation, a temporary minor increase in traffic may occur along area roadways during the construction phase, as workers and materials are transported to and from the affected site. The Project would be constructed over a period of approximately six months. Trip generation for employees and delivery trucks would vary depending on the phase of construction. Based on an estimated seven round trips per tracker (308 total trackers) for both delivery trucks and workers, the total construction trip generation for completion of all work at the Project site would be 2,156 round trips, or approximately 14 round trips per workday (total construction trip generation [2,156 round trips] divided by construction timeframe [156 workdays]). It is assumed that all employees would arrive within the morning peak hour and depart within the evening peak hour, and delivery truck trips would be distributed evenly throughout a typical 8-hour-shift/day. Since the surrounding area is rural, traffic volumes are low on the local roads surrounding the Project site. Implementation of the Project would result in a temporary increase in traffic along these roads, but not to the level of the road carrying capacity. No road closures are anticipated during Project construction. The construction contractor would develop a Traffic Control Plan to ensure safety and efficient traffic flow in the area and on the Project site. The Traffic Control Plan would be prepared in consultation with the County of San Diego and would contain Project-specific measures for noticing, signage, policy guidelines, and the limitation of lane closures to off-peak hours (although it is noted that no requirement for lane closures has been identified).

In addition, long-term operation of the facilities would not generate a substantial number of vehicle trips. It is estimated that two to five employees would visit the site on a weekly basis for inspection and maintenance purposes, or as otherwise needed. As such, traffic generated by long-term operation of the facilities is not anticipated to exceed, either individually or cumulatively, a level of service standard established by the County of San Diego. In addition, on intermittent occasions, the presence of several workers may be required if major repairs or replacement of equipment is required; however, due to the nature of the facilities, such actions are anticipated to be infrequent.

Project traffic would not result in a change in air traffic patterns at the Borrego Valley Airport or cause substantial safety risks. All Project-related access and operational procedures would comply with applicable FAA safety regulations and County airport operation requirements. In addition, the entirety of the parcel encumbered by MUP 09-012 (APN 141-230-26) would be subject to the restrictions and terms of a County navigation easement.

It is not anticipated that the Project would generate increased levels of traffic that would result in a change in existing community character or that would be incompatible with existing land uses. For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

5. The suitability of the site for the type of and intensity of use or development which is proposed; and, physical characteristics of the site (i.e., level with adequate drainage) and suitability of the proposal for the site;

The Project, as proposed, would be suitable to the site with regard for the type of and intensity of use and development, and therefore compatible with adjacent uses. The Project represents a land use that would be consistent with the existing regulatory and physical characteristics of the affected properties and surrounding uses. The facilities would be constructed within a generally rural environment and would affect lands that are previously disturbed and/or undeveloped. Existing land uses in the surrounding area are generally either undeveloped/disturbed or support limited industrial or commercial land uses. No residential uses are present on lands immediately adjacent to the Project site. Directly west of the Airport, lands are designated as Limited Impact Industrial on the County General Plan Land Use Map. In addition to the Airport, a number of other industrial-type uses are also present in the surrounding area, including a microwave tower, located adjacent to the southwest corner of the 288-acre parcel, and a commercial sand and gravel yard, located west of the Project site. A large-scale commercial nursery is currently in operation directly to the west of the site.

The proposed facilities are not anticipated to conflict with any land use plan or policy adopted for the purpose of avoiding or mitigating an environmental effect, and would

be compatible with surrounding existing uses with regard to typical operating characteristics, the scale of the facilities, and the general character of the surrounding environment. In addition, the Project is considered to be a compatible use with the BVALUCP and would not require a change to the existing underlying General Plan land use or zoning designations of any of the parcels affected by the Project. The San Diego County Regional Airport Authority has previously determined that the proposed use is considered to be compatible with the BVALUCP and activities conducted at the Airport.

Drainage Characteristics

The Flood Hazard Map for Borrego Valley Alluvial Fans shows that the Project site lies along the valley floor of the Coyote Canyon alluvial fan within the Borrego Valley. Alluvial fans typically occur in arid environments where steep mountains encounter a flat valley floor. These areas typically experience infrequent but intense storms. This particular combination of topography and climate tends to produce flash floods yielding high sediment loads along the steep mountainside, while channel braiding and sediment deposition occur along the gentle slopes of the valley floor.

There are no existing storm drain facilities on or within the immediate vicinity of the Project site, except for two drainage culverts along Palm Canyon Drive. No drainage structures are proposed with the Project, due to the rural nature of the area and the lack of existing storm drain facilities or open channels within the immediate Project vicinity.

No streams or rivers are present on the Project site. Any grading required for installation of the solar modules would not significantly alter the existing drainage pattern of any of the sites in a manner that would result in substantial erosion or siltation. Similarly, installation of the required transmission line would not create the potential to significantly alter existing drainage patterns.

In addition, the Project location offers optimal conditions for the type of use proposed. As a desert environment, the typical atmospheric conditions in Borrego Springs allow for an abundant source of sunshine on an annual basis, thereby representing a sustainable, renewable, and reliable source for solar energy production.

For the reasons above, the Project is considered to be consistent with this finding.

6. Any other relevant impact of the proposed use;

The potential for subsequent changes to the existing regional environmental setting resulting from similar development requests encouraged by the Project is not considered to be significant. Limitations that would prevent other area property owners from following suit might include zoning or land use designations that do not allow for similar uses; a potential lack of community support for similar development; or, the lack of an adequate demand or additional population on a local or regional basis to support the additional need for increased energy supplies. If proposed, similar development proposals within the Project area would be required to go through the County's review process to determine consistency with the General Plan, Zoning Ordinance, and other applicable plans and policies, and would be subject to the goals and policies established by the Borrego Springs Community Plan.

For the reasons above, the Project is consistent with this finding under Section 7358(a) that the Project be compatible with adjacent land uses.

Finding 7358b. That the impacts, as directed in paragraph "a" (of this section), and the location of the proposed use would be consistent with the San Diego County General Plan.

As discussed above, the Project is consistent with and supports the goals, objectives, and policies given in the current General Plan and the Borrego Springs Community Plan.

Finding 7358c. That the requirements of the California Environmental Quality Act (CEQA) have been complied with.

The Project is in the process of meeting the requirements of CEQA. For the reasons discussed in this Land Use Compatibility Analysis, the proposed use and Project design would be compatible with existing adjacent uses. Pursuant to Section 7358a of the County Zoning Ordinance, certain required findings have been made to demonstrate the Project's consistency with approved land use regulations and compatibility with existing land uses. All impacts identified as significant (e.g. biological resources) would be reduced to less than significant with implementation of the proposed mitigation measures. As such, the Project as proposed would comply with the requirements of CEQA.

2.3 Potential to Induce Similar Land Uses

According to research conducted with the County of San Diego Department of Planning and Land Use, the main parcel affected by the Project is zoned S92, General Rural. The

County Zoning Ordinance allows for the proposed use within the S92 zone (Section 2926(b)) with approval of a MUP (or MUP modification as proposed herein). Development of the Project on the identified parcel would therefore be consistent with uses intended by the existing zoning.

All future development proposals on lands in the Project vicinity would be reviewed by the County (and the Community Planning Group) for consistency with the General Plan, Zoning Ordinance, and other applicable policies and regulations. Future projects for similar solar facilities within the Borrego Springs area would be required to either demonstrate that such a use is allowed by right, or to obtain approval by providing justification for such a request. As such, it is anticipated that future requests for the development of similar clean energy, solar generation projects, unless otherwise allowed under existing regulatory land use conditions or as indicated by the General Plan, would not be readily approved by the County without consideration and review for land use compatibility

The Project would occur on privately-held lands and would be allowed with approval of a MUP modification. As such, the Project is not anticipated to directly induce the request for similar solar energy projects in the Borrego Springs community or in surrounding areas beyond that which is allowed under existing conditions.

3.0 Conclusions

Project design would result in the installation of a CPV solar farm in the Borrego Springs area. Project elements required for the proposed generation and transmission of energy would not be large-scale in nature, and are not considered inconsistent with the general size, massing, building coverage, scale, color, or building materials of other land uses found in the vicinity of where the Project would be located. The Project would also not significantly increase levels of traffic along area roadways that would result in a significant change in existing community character. Although the proposed development would alter the existing visual character of the landscape from that which presently exists, the Project would not physically divide the community or significantly alter existing or anticipated land use patterns from that intended by the County for the Project sites or other properties within the Borrego Springs area.

With regard to land use consistency, it was determined that the Project as designed would not result in an inconsistency with any goals, standards, or policies as given in the County General Plan, or Borrego Springs Community Plan, as well as other applicable land use regulations and/or policies. In addition, the Project would meet the findings for a Major Use Permit (or MUP modification as proposed herein) required by the County Zoning Ordinance.

As determined by this Land Use Compatibility Analysis, the Project is considered to be compatible with the existing character and land uses of the surrounding area and the Borrego Springs community.

4.0 References

Borrego Springs Community Plan. Adopted August 3, 2011.

Borrego Valley Airport Land Use Compatibility Plan. Adopted December 2006.

Boyle Engineering Corporation. Borrego Valley Flood Management Report. October, 1989.

City-Data.com website.http://www.city-data.com/housing/houses-Borrego-Springs-California.html. Accessed June 2012.

County of San Diego Public Works (Airports). http://www.sdcounty.ca.gov/dpw/airports/borrego.html. Accessed June 2012.

County of San Diego General Plan. Adopted August 3, 2011.

County of San Diego Zoning Ordinance. Updated with Ordinance Update No. 80, October 2009.

County of San Diego Wildland Urban Interface Ordinance. Ordinance No. 9670.

EURUS Energy – Borrego Springs Solar Project Glint and Glare Study. Prepared by Power Engineers. January 11, 2011.

Glare Assessment of Soitec Concentrix Technology CPV Installations. Prepared by Franhofer, ISE. June 30, 2011.

Technical Guidance for Evaluating Selected Solar Technologies on Airports. Federal Aviation Administration. November 2010.

5.0 Report Preparers

RBF Consulting

Alex H. Jewell, AICP, LEED AP

Environmental Project Manager

Nicole Marotz, AICP, LEED AP

Environmental Planner

Lead Report Preparer