CHAPTER 1.0 PROJECT DESCRIPTION, LOCATION, AND ENVIRONMENTAL SETTING

This chapter describes the proposed Starlight Solar Project (project), which would be a solar facility with battery storage that would generate and store solar energy. For purposes of this Environmental Impact Report (EIR), the project will be referred to as the "proposed project" or "project". The project site is located south of the community of Boulevard in southern unincorporated San Diego County.

Starlight Solar LLC (Applicant) is requesting a Major Use Permit (MUP) from the County of San Diego (County) to develop, finance, construct, and operate an unoccupied renewable energy solar and battery storage project in southeastern San Diego County. The County's General Plan (County of San Diego 2011) designates the project site as Rural Lands with an 80-acre minimum size (RL-80), and the County Zoning Ordinance (County of San Diego 2025a) identifies the site as General Rural (S92). Section 6954 of the County Zoning Ordinance states that solar power plant projects are considered a Major Impact Service and Utility in all zones and thus require the approval of a MUP.

The project would use photovoltaic (PV) electric generation system technology to produce approximately 100 megawatts (MW) of alternating current (AC) of solar energy at the utility scale. The project would also include an 868 megawatt-hour (MWh) (approximately 217 MW, 4-hour batteries) battery energy storage system (BESS). The project site encompasses a total of approximately 588 acres within the Mountain Empire Subregion in unincorporated San Diego County (Figure 1-1). The project would be constructed in two phases: the first phase would consist of 20 MW solar energy generation and 17.4 MW of battery storage, and the second would consist of 80 MW solar energy generation and 200 MW of battery storage. A biological open space easement would be granted over an approximately 448-acre area that includes sensitive vegetation communities, special-status plant species, and habitat for special-status species.

1.1 Project Objectives

The fundamental purpose of the project is to permit, construct, and operate utility-scale solar energy and battery storage as near as possible to existing infrastructure in eastern San Diego County. Specific objectives for the project are as follows:

1. Develop a solar energy project that maximizes energy generation and battery storage potential with a rated capacity of approximately 100 MW and an approximately 217-MW BESS facility that can supply electricity to indirectly reduce the need to emit greenhouse gases (GHGs) caused by the generation of similar quantities of electricity from either existing or future nonrenewable sources to meet existing and future electricity demands, including during on-peak power periods.
2. Develop a renewable solar energy project that can meet the criteria to achieve the maximum state and federal solar investment tax credits, which are intended to decrease the cost of renewable energy generation and delivery, promote the diversity of energy supply, and decrease the dependence of the United States on foreign energy supplies.
3. Assist in achieving the state's Renewables Portfolio Standard (RPS), as mandated under the 100 Percent Clean Energy Act of 2018 (Senate Bill 100), by developing and constructing California RPS-qualified solar generation from eligible renewable energy resources by December 31, 2045.
4. Develop a utility-scale solar energy project that improves electrical reliability for the San Diego region by providing a source of local generation as near as possible to existing San Diego Gas and Electric (SDG&E) transmission infrastructure.

5. Provide a new source of energy storage that assists the state in achieving or exceeding its energy storage targets, consistent with the terms of Assembly Bill 2514, and its GHG reduction targets, consistent with Assembly Bill 32, Senate Bill 32, and Assembly Bill 1279.
6. Site a solar energy project in an area within San Diego County that has excellent solar attributes, including but not limited to high direct normal irradiance, in order to maximize productivity.
7. Develop a utility-scale solar energy facility within San Diego County that supports the economy by investing in the region and creating construction jobs.

1.2 Project Location

The project site encompasses approximately 588 acres in unincorporated San Diego County, south of the community of Boulevard and approximately 0.93 mile north of the United States border (

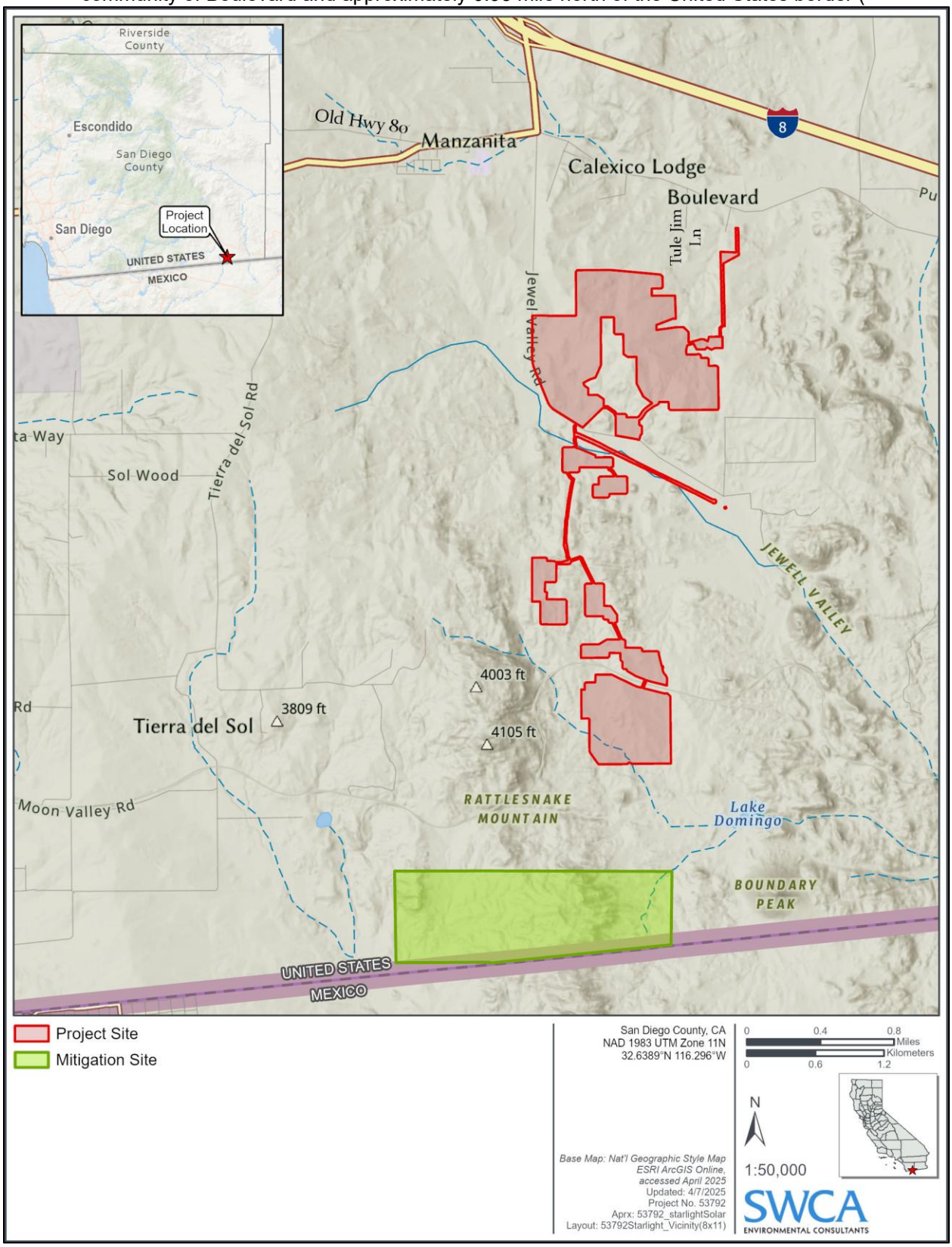


Figure 1-2). The community of Boulevard encompasses approximately 4 square miles and includes the communities of Manzanita, Tierra del Sol, and Live Oak Springs. Boulevard is a census-designated place with a population of approximately 410 people (U.S. Census Bureau 2023).

The project site is approximately 1 mile south of Interstate 8 (I-8) and Old Highway 80, and east of Tierra Del Sol Road. Regional access to the project site would be provided by State Route 94 and I-8. Access to the project site would be provided by Jewel Valley Road, which runs north to south and connects to Old Highway 80 in Boulevard. Additional emergency fire access would be provided via Tule Jim Lane which connects to Old Highway 80.

The MUP area would be 581 acres. An underground generation-tie (gen-tie) line would be located on the east side of Tule Jim Lane and connect to the southeastern corner of the SDG&E Boulevard substation. Although the majority would be underground, the gen-tie line would have one overhead portion consisting of two poles to cross Tule Jim Road and would encompass 7 acres. An off-site vehicle turnaround area on Jewel Valley Road would be 0.06 acre in size. The environmental analysis contained within this EIR will analyze the entire 588-acre project site.

Table 1-1 lists the Assessor's Parcel Numbers (APNs) within the project site, the gen-tie route, the Boulevard substation, and the biological open space easement. These APNs are also shown in Figure 1-3.

Table 1-1. Project Site APNs

Project Site	Gen-Tie Route	Conservation Easement	SDG&E Boulevard Substation
612-082-12	612-090-59	659-130-03	612-092-13
612-110-02	612-090-68	659-140-01	
612-110-04		659-140-02	
612-110-17			
612-110-18			
612-110-19			
612-120-01			
659-020-01			
659-020-02			
659-020-05			
659-020-08			
659-080-02			
659-080-09			

1.2.1 Land Use and Zoning

The MUP project site is designated by the County's General Plan (County of San Diego 2011) as Rural Lands (RL-80); part of the gen-tie route and SDG&E Boulevard substation are designated as Semi-Rural Residential (SR-10; Figure 1-4). The County Zoning Ordinance identifies the site as General Rural (S-92) (Figure 1-5). Zoning and land use designations per parcel are listed in Table 1-2. The County Zoning Ordinance Section 6954 states that solar energy systems for off-site use are considered a Major Impact Service and Utility in all zones and thus require the approval of a MUP.

The project site is within the Mountain Empire Subregion, which contains five subregional group areas. The project site is located in the Boulevard Subregional Planning Area.

In San Diego County, several resource conservation planning efforts have been completed or are in progress with the goal of establishing a regional preserve system that will protect sensitive habitats and the species that depend on them. The ultimate goal is the establishment of biological preserve areas in conformance with the California Natural Community Conservation Planning Act and federal Endangered Species Act, contributing to the preserve system already established by the approved subregional Multiple Species Conservation Program (MSCP). The project site is within the East County MSCP area, which is still in the planning process. Parts of the project site are defined as "Agricultural or Natural Upland" within a Focused Conservation Area of the draft MSCP (County of San Diego 2024a).

Table 1-2. Project Site Zoning and Land Use Designations

APN	Zoning Designation	Land Use Designation
MUP Project Site		
612-082-12	S-92 – General Rural	RL-80 – Rural Lands
612-110-02	S-92 – General Rural	RL-80 – Rural Lands
612-110-04	S-92 – General Rural	RL-80 – Rural Lands
612-110-17	S-92 – General Rural	RL-80 – Rural Lands
612-110-18	S-92 – General Rural	RL-80 – Rural Lands
612-110-19	S-92 – General Rural	RL-80 – Rural Lands
612-120-01	S-92 – General Rural	RL-80 – Rural Lands
659-020-01	S-92 – General Rural	RL-80 – Rural Lands
659-020-02	S-92 – General Rural	RL-80 – Rural Lands
659-020-05	S-92 – General Rural	RL-80 – Rural Lands
659-020-08	S-92 – General Rural	RL-80 – Rural Lands
659-080-02	S-92 – General Rural	RL-80 – Rural Lands
659-080-09	S-92 – General Rural	RL-80 – Rural Lands
Gen-tie Route		
612-090-59	S-92 – General Rural	SR-10 – Semi-Rural Residential
612-090-68	S-92 – General Rural	RL-80 – Rural Lands
Biological Conservation Easement		
659-130-03	S-92 – General Rural	RL-80 – Rural Lands
659-140-01	S-92 – General Rural	RL-80 – Rural Lands
659-140-02	S-92 – General Rural	RL-80 – Rural Lands
SDG&E Boulevard Substation		
612-092-13	S-92 – General Rural	SR-10 – Semi-Rural Residential

1.3 Environmental Setting

The baseline for the project is established by the physical condition that existed when the County published the Notice of Preparation (NOP) for the EIR on March 23, 2023. The environmental setting is summarized below and described in greater detail for each environmental issue at the beginning of each section in Chapter 2.0, Significant Environmental Effects of the Proposed Project, and Chapter 3.0, Environmental Effects Found not to Be Significant, of this EIR.

1.3.1 Existing Conditions

The project site is largely undeveloped. It lies within the boundaries of the privately owned Empire Ranch, an approximately 3,795-acre ranch that stretches from south of Old Highway 80 to the United States border with Mexico. Beyond the project site boundaries, Empire Ranch currently contains a ranch compound with residential buildings, structures for livestock, private roads, and an airstrip. Empire Ranch also previously contained agricultural uses, which are now reduced in scale. A section of the San Diego & Arizona Eastern Railway that is no longer in service runs east to west through the southern portion of the project site. This railway line is now owned by the San Diego Metropolitan Transit System (MTS). Boundary Creek also flows in a southeastern direction directly south of Jewel Valley Road.

The Jewel Valley Road Pathway is proposed along Jewel Valley Road which intersects the project site (County of San Diego 2020). The pathway is estimated to be 3.20 miles once completed and would primarily act as a north/south connector for other proposed and existing trails in the area. Jewel Valley Road Pathway is proposed as a part of the County's Community Trails Master Plan. Pathways are defined as non-motorized transportation facilities located within a parkway or road right-of-way. Pathways are intended to serve both circulation and recreation purposes and are an integral part of a functional trail system (County of San Diego 2020).

The project site is surrounded by unpaved roads, other rural residential development, an electrical substation, and undeveloped land. The SDG&E Boulevard substation is located on approximately 2 acres to the northeast of the project site, directly south of Old Highway 80.

The project site is topographically diverse. In the northern portion of the site, east- and south-facing sloping hillsides are characteristic, with elevations up to 3,650 feet above mean sea level (amsl) in the northeast. In the southern portion of the site, elevation decreases to 3,450 amsl. There are 14 natural vegetation communities and land cover types and three additional cover types within the category of disturbed or developed land.

1.3.2 Airstrip

There is an existing airstrip within the project site at APN 612-110-17. The airstrip was built within the Jewel Valley Creek watercourse, which is a tributary of Boundary Creek. The airstrip was initially developed in the early 1990s and expanded to its current extent in the mid-2000s. In 2012, the then-owner of the airstrip, Lansing Companies, was notified of an open code enforcement case (DPW2010-RFS-10-0062794) relating to the airstrip. The case was opened because a permit was never received prior to the construction of an extension to the airstrip, and the airstrip was impacting an existing watercourse, in violation of Section 87.603 of the County's Watercourse Ordinance. In 2012, a grading application was submitted (PDS2012-2700-15676) to remediate the unpermitted airstrip. In October 2015, the County circulated a Mitigated Negative Declaration for public review to remediate the airstrip. After circulation of this Mitigated Negative Declaration, restoration and remediation of the airstrip did not move forward. The airstrip is currently not in operation.

The airstrip would be utilized as a construction laydown area during both phases of construction. After construction of Phase II, it would be removed and hydroseeded to resolve the code enforcement case.

1.4 Project Description

1.4.1 Project~~'s~~ Components ~~Parts~~

1.4.1.1 Solar Facility

The project would be an unoccupied solar energy generation and storage facility which would produce a total rated capacity of 100 MW of AC-generating capacity. The project would also include 217.4 MW of AC energy storage. The power produced by the proposed solar facility would interconnect into the Boulevard substation via an underground gen-tie line. The underground gen-tie would have one aboveground section crossing Tule Jim Lane.

The project would include the following primary components (Figure 1-6):

- Approximately 235,516 PV modules would be mounted on support structures (typically single-axis). The final number of modules and support structures would depend on the final design.
- A 1,500-volt direct current (DC) underground collection system would link the modules to the inverters and eight solar array systems based on current design standards.
- Inverter/transformer platforms, located throughout the solar facility, would convert the DC power generated by the modules into AC power, a compatible form for use with the transmission network.
- A 34.5-kilovolt (kV) underground AC collection system would link the inverters to the on-site collector substation.
- A 6,500-square-foot on-site collector substation, a 400-square-foot storage building, and a 450-square-foot control enclosure building would be located on the northeastern tip of the project site within an approximately 3-acre substation site.
- The gen-tie line would run from the on-site project substation to the Boulevard substation. It would consist of one route with two lines running parallel to each other—a 69-kV line and a 138-kV line—that would be strung overhead to cross Tule Jim Lane and would be located underground the rest of the way.
- A 217.4-MW BESS would be located on approximately 5.14 acres in two phases.
- The project would include a Supervisory Control and Data Acquisition (SCADA) system.
- A 24-foot-wide perimeter access and array-connecting roads and 20-foot-wide internal access roads would be used to provide operational vehicles access to the site.
- All project equipment would be surrounded by 30- to 100-foot fuel modification zones.
- Biological resource mitigation land would be conserved and managed south and west of the project site within APNs 659-130-03, 659-140-01, and 659-140-02.

As shown in Figure 1-7 through Figure 1-10, the project would be constructed in two separate phases, and operation would begin at different times. Phase I encompasses approximately 125 acres in Area A-1 and includes the development of a PV system capable of generating approximately 20 MW of solar energy and producing 17.4 MW of battery storage (**Error! Reference source not found.**). Phase II encompasses approximately 456 acres in Areas A-2 through G and includes the development of a PV system capable of generating approximately 80 MW of solar energy and producing 200 MW of battery storage (see Figure 1-8 through Figure 1-10).

PV Modules and Support Structures

PV modules generate electricity by safely converting the energy of the sun's photons into DC electrons. The project would include approximately 235,516 modules, which would be installed in rows (arrays). Arrays that are grouped together are referred to as an array field (Figure 1-11).

The modules would be mounted on support structures that allow them to be positioned to maximize the amount of the sun's solar energy captured. Each row of PV modules would be single-axis trackers oriented east-west or a fixed-tilt oriented north-south, or both. Single-axis tracking systems would employ a motor mechanism that allows the arrays to track the path of the sun (from east to west) throughout the day. Fixed-tilt arrays are placed on a fixed angle at the optimum tilt. The support structure would be elevated at least 1 foot above the base flood elevation. The PV modules and support structures would be a maximum of 12 feet in height. The PV modules are uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. Most PV modules have a guaranteed useful life of 25 years in adverse weather conditions.

The solar PV modules would be mounted on support structures supported by a pile-driven foundation that allow them to be properly positioned for maximum capture of the sun's solar energy. The support structures are typically mounted on metal pipe columns or I-beam foundations 6 inches in diameter. The beams would be driven into the soil using a pile/vibratory/rotary driving technique. Driven pier foundations are a "concrete-free" foundation solution that would result in minimal site disturbance and facilitate site reclamation during decommissioning. Most pier foundations would be driven to approximate depths of 5 to 10 feet depending upon the required embedment depth.

Electrical (DC) Underground Collection System

PV modules would be electrically connected to adjacent modules to form module "strings" using wiring attached to the support structures. PV module strings would be electrically connected to each other via underground wiring, with one aboveground location. The collection system would have a short overhead section (two 50-foot-high steel poles) across the MTS railway line. Wire depths would be in accordance with local, state, and federal codes. String wiring terminates at PV module array combiner boxes, which are lockable electrical boxes mounted on or near an array's support structure. Output wires from combiner boxes would be routed along an underground trench system approximately 3 to 4 feet deep and 1 to 3 feet wide, including trench and disturbed area, to the inverters and transformer pads. The solar arrays would be connected via an aboveground collection system.

Inverter and Medium-Voltage Transformers

The power cables from multiple module strings are consolidated via combiner boxes throughout the solar field and delivered to the inverters via underground cables. Inverters are a key component of solar PV power-generating facilities because they convert the DC power generated by the PV modules into AC power that is compatible for use with the transmission network. The inverters are connected directly to the medium-voltage transformers that step up the AC voltage to collection-level voltage (34.5 kV). The inverters would be fully enclosed and located adjacent to medium-voltage transformers, both of which would be installed on concrete foundations. These concrete foundations would be a minimum of 1 foot above base flood elevation. The inverter pad dimensions would be approximately 40 feet long, 10 feet wide, and 12 feet tall.

At each of the inverter/transformer locations, the transformer would be connected sequentially to an underground medium AC voltage collection system which would carry the power to the on-site collector substation. The underground electrical cables would be installed using standard trenching techniques, with directional boring techniques available to avoid sensitive resources, as necessary. The trenches would be

filled with base material above and below the conductors and communications lines to ensure adequate thermal conductivity and electrical insulating characteristics.

1.4.1.2 Substation

The project includes an approximately 3-acre substation that would be located near the northeastern portion of the project site. The substation equipment would use earth-toned coloring, and the tallest equipment within substation boundaries would have a maximum height of 50 feet. All underground 34.5-kV feeder circuits would be collected and combined at the substation; the voltage would then be stepped up to 69 kV or 138 kV via a transformer.

The major components of the proposed collector substation are as follows:

- Switchgear
- Transformers
- Circuit breaker
- Controls and protection
- Metering
- Footings
- Reinforced concrete foundations
- Oil containment area for the transformers

During operation of the collector substation, operation and maintenance staff would visit the substation periodically for maintenance. Maintenance trucks would be used to perform routine maintenance, including equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventive maintenance.

1.4.1.3 Generation-Tie Line

The gen-tie line route would consist of two lines connecting the project to the SDG&E Boulevard substation. The gen-tie line route would begin at the on-site substation on the eastern end of the project site along Tule Jim Lane. From the on-site substation, the gen-tie line route would cross Tule Jim Lane with a short overhead section (two 50-foot-high steel poles). Once across Tule Jim Lane, the gen-tie line route would head north underground along the east side of Tule Jim Lane for approximately 0.6 mile before interconnecting to the southeast corner of the Boulevard substation. The gen-tie line route would avoid the residence located on the east side of Tule Jim Lane and south of the Boulevard substation. The gen-tie easement would be located approximately 160 feet south and 230 feet east of the residence and would be approximately 75 feet in width.

1.4.1.4 Control System

The proposed project would be designed with a comprehensive SCADA system for remote monitoring of facility operations and remote control of critical components. The SCADA system connects the solar facility to the plant operator and the independent system operator. The SCADA system would be monitored remotely, and no daily on-site operations and maintenance facilities or personnel would be necessary. The SCADA system would be located in the substation area and would consist of rack-mounted servers and software to allow for the continuous monitoring and control of PV inverters, solar trackers, PV weather monitoring system, substation equipment, BESS, and other equipment throughout the solar facility.

The SCADA system would be used to provide critical operating information (e.g., power production, equipment status and alarms, and meteorological information) to the power purchaser, project owners and investors, grid operator, and project operations teams. The system would also facilitate production forecasting and other reporting requirements for project stakeholders.

The data collection system would also include a meteorological data collection system. The meteorological data collection system would have the following weather sensors: a pyranometer for measuring solar irradiance, a thermometer to measure air temperature, a barometric pressure sensor to measure atmospheric pressure, and two sensors to measure wind speed and direction.

1.4.1.5 Battery Energy Storage System

The proposed project includes two BESSs that would store approximately 217.4 MW (868 MWh) of electricity for dispatch into the local SDG&E grid via the same point of interconnection as the solar array. Phase I of the project would include a 17.4-MW BESS on Area A-1 covering approximately 32,000 square feet directly adjacent to the on-site substation, and Phase II would include a 200-MW BESS on Area A-2 covering approximately 192,000 square feet.

The BESS would consist of individual battery containers in cabinets which are 6 feet wide, 5.5 feet deep, and 8 feet tall. The BESS cabinets would be double-loaded along a 70-foot-long concrete foundation. In addition, a power conversion system would be constructed adjacent to the BESS which would be 20 feet long, 8 feet wide, and 9.5 feet tall. The power conversion systems would be located on a concrete foundation measuring 20 feet long and 8 feet wide. Each BESS cabinet would have a 5-foot-wide access drive aisle. The entire BESS area would be fenced for security and to restrict access.

Battery Modules, Technology and Fire Protection

As described above, each battery storage container would be located within a metal frame storage cabinet with insulation, air conditioning, and fire suppression, with separate enclosures for the electronic controls, inverters, and rectifiers. The primary storage components would consist of self-contained electrochemical battery systems using conventional storage technologies with proven safety and performance records. The battery storage cabinet is designed such that the periodic maintenance and replacement of underperforming battery components (each a single "module") can be easily performed on an as-needed basis, whereby each individual module can be replaced without needing to replace the entire system. The BESS modules and associated infrastructure (e.g., inverters, switches) would be serviced regularly via planned maintenance and on an as-needed basis by certified technicians.

DC electricity would be collected from the batteries and conveyed to the inverters. A series of battery modules form a battery "rack", and each rack is connected to a battery management system to control that specific rack and control the voltage, current, and other operations. Series circuits are combined together to form an individual parallel circuit; parallel circuits are grouped together in individual racks which are sized appropriately, and each rack contains a rack-level battery management system. The number of racks would vary according to final proposed project specifications and can be sized to accommodate electrical design. Racks combine multiple parallel circuits through a fused bus system to collect the energy into one set of DC collection cables. The fuses within the racks create another line of protection from overcurrent. These cables run from the racks to the inverters, where they would terminate in the DC side of the inverter.

The batteries would be high-density, lithium iron phosphate or other types with an equivalent or higher level of safety and rechargeable, as reviewed and determined by the County. These batteries would allow a safe and effective installation into a shipping container and are well-suited to perform beyond the planned daily operations for this facility (i.e., approximately one complete cycle each day). The proposed project would use a built-in fire protection system and would include a fire extinguishing system. The system would

be designed in accordance with, and would satisfy all requirements of, the California Fire Code, San Diego County Fire Department *Interim Fire Protection Guidelines for BESS Facilities*, and National Fire Protection Association (NFPA) safety standards, as well as meet other applicable state and local requirements.

The battery storage containers would be situated to enable emergency/fire response access. The containers would be sited with a 100-foot fuel modification zone from off-site areas as a buffer against potential wildfire ignitions. The containers would not be walk-in containers (Figure 1-12); thus, they would be non-habitable structures per the state and local fire codes in place at the time a building permit application is submitted to the County.

The proposed batteries and containers also include the following important monitoring and safety components:

- Modular battery racks designed for ease of maintenance
- Integrated heat and fire detection and suppression system
- Explosive gas monitoring
- Exhaust/ventilation systems
- Integrated air conditioning system
- Integrated battery management system

Electrical isolation monitoring devices are present on each DC battery bus to detect faults and disconnect the system before a serious problem occurs. The heat and fire detection system would be linked to an automatic inert gas suppression system within each container. The containers would also have a basic interior sprinkler system with several sprinkler heads for coverage and an external dry standpipe for firefighters to connect and pump water.

Critical information from the BESS and equipment data from the DC converters and inverters would be monitored by the battery monitoring system inside the containers, at the metering at the inverter cabinets, and at the SCADA control system described in more detail below. The battery management system within each container would track the performance, voltage and current, and state of charge of the batteries. The system would proactively search for changes in performance that could indicate impending battery cell failure, and power down and isolate those battery strings in order to avoid potential failures.

The battery management system would be purchased from vendors who are on track to have their equipment meet the following Underwriters Laboratories (UL) listings: UL 9540, 1741, 1973, 1642, and any other UL standards at the time of the application of the building permit. The NFPA has developed a new Standard for the Installation of Energy Storage Systems (NFPA 855). This standard addresses the design, construction, installation, commissioning, operation, maintenance, and decommissioning of stationary energy storage systems. As the final selection of the lithium iron phosphate-based energy storage system technology remains in process, several preliminary studies (based upon an assumed technology) that are typically required for the completion of a California Fire Code Section 1207.1.4, Hazard Mitigation Analysis, have been prepared for the proposed project and included in this EIR as the following appendices:

- Appendix O.1 Preliminary Battery Energy Storage System Fire Risk Assessment and Heat Flux Analysis (Hiller 2025a)
- Appendix O.2 Preliminary Battery Energy Storage System Failure Mode and Effects Analysis (Hiller 2025b)
- Appendix O.3 Preliminary Balance of Plant Fire Risk Assessment (Hiller 2025c)

- Appendix O.4 Preliminary Balance of Plant Failure Mode and Effects Analysis (Hiller 2025d)
- Appendix O.5 Preliminary Balance of Plant Hazard Mitigation Analysis (Hiller 2025e)
- Appendix O.6 Preliminary First Responders Guide (Hiller 2026 ~~Hiller 2025f~~)
- Appendix O.7 Battery Energy Storage System Plume Study (Hazard Dynamics 2026)

It should be noted that these preliminary analyses address the BESS, as well as the other components of the solar energy facility (referred to above as the "balance of plant"). Potential hazards associated with construction and operation of the project are evaluated in Section 2.7, Wildfire, and Section 3.1.5, Hazards and Hazardous Materials.

1.4.1.6 Ancillary Structures

Vehicle Access Roads

Access to the solar facility would be provided via Jewel Valley Road. The site entrance would feature a manual swing gate or motorized slide gate and a sign with a lighted directory map and contact information. Additionally, emergency fire access would be provided via Tule Jim Lane which would feature a 24-foot gate. All entrance gates would feature fire authority–approved strobe light activation and a 'Knox Box' key-operated switch to allow ease of access for emergency service providers. All access to the site has been designed per the County Fire Code (County of San Diego 2023). The project would include dual-purpose internal fire response access and service access roads. The all-weather perimeter access road and array-connecting roads within the fenced solar facility would be constructed to an improved width of 24 feet on 28 feet of graded area. The internal access would allow for two-way access of fire apparatus throughout the solar facility in order to access all of the inverter/transformer pads. The interior on-site vehicle access roads would be constructed to an improved width of 20 feet on 24 feet of graded area. All internal access would be designed to provide a minimum inner turning radius of 28 feet, would be graded and maintained to support the imposed loads of fire apparatus (not less than 75,000 pounds), and would be designed and maintained to provide all-weather driving capabilities. The maximum gradient of all access roads would not exceed 12%.

A vehicle turnaround location would be created along Jewel Valley Road in the center of the project site. The turnaround shall be designed in accordance with County of San Diego design standard DS-06 for a County emergency fire apparatus (County of San Diego 2012).

All internal access road surfaces would be Class II, composed of decomposed granite, and would be permeable in order to reduce fugitive dust and erosion in accordance with the County Code of Regulatory Ordinances (County Code) Section 87.428, Dust Control Measures, and with San Diego Air Pollution Control District Rule 55, which regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions.

Security Lighting, Fencing, and Signage

The eight solar arrays and 581-acre solar facility (MUP area) would be fenced along the entire facility boundary for security. The fencing would meet National Electrical Safety Code requirements for protective arrangements in electric supply stations. Fencing would be up to 7 feet in height total, with a 6-foot-high chain-link perimeter fence and 1 foot of three strands of barbed wire along the top. Areas of the project site subject to higher flood flows would use breakaway fencing perpendicular to the flow path (see Figure 1-8).

For electrical safety, the following signage would be posted on the project site in Spanish and English:

- 12 × 18–inch system identification signs would be located at the gated entrances. These would include the name of the site and contact information as provided by SDG&E.
- 10 × 14–inch Private Property/No Trespassing and High Voltage Signs would be located at gated entrances and at 100-inch intervals along fencing.
- A reflective sign at the main entrance with inverter and contact information for a 24-hour remote operations center for the project.

All lighting would have bulbs that do not exceed 100 watts or equivalent, and all lights would be shielded, directed downward, and would comply with the County Light Pollution Code (County Code Sections 51.201–51.209), also known as the Dark Sky Ordinance. Outdoor lighting circuits would incorporate dusk-to-dawn photocell controllers, occupancy sensors, and/or switches as appropriate. Additionally, lighting for the project would be designed in accordance with the County Zoning Ordinance, Sections 6320, 6322, and 6324, which guide performance standards for glare, and controls excessive or unnecessary outdoor light emissions (County of San Diego 2012).

Detention Basin and Stormwater Facilities

The project would include the construction of two detention basins, one located at the northeastern portion of the project site between the proposed substation and Phase I BESS, and one located east of the Phase II BESS.

A series of stormwater piping is proposed in the north and northeastern portion of the project site. These facilities would include but would not be limited to storage piping, conveyance piping, headwalls, cleanouts, and riprap. The detention basins and storage piping would provide stormwater detention to limit water flowing from the site due to new impervious surface resulting from the BESS facility and substation. The detention basins would be designed in accordance with the County's hydraulic design manual (County of San Diego 2014).

Water Tanks (Fire Protection)

The project would install a total of six 10,000-gallon water tanks with fire department connections available. The water tanks would be 12 feet wide and 15 feet tall. Water would be stored in aboveground tanks complying with the San Diego California Fire Agency requirements and with NFPA 22, Private Fire Protection Water Tanks. The water tanks would be located strategically across the various areas of the project site. Three water tanks would be located in Area A-1, two water tanks would be located in Area A-2, and one water tank would be in Area G at the southern extent of the project. A procedure for ongoing inspection and maintenance of tanks would be in place. The tank and fire engine connections would be located on the side of the access driveways. The width of the driveway at each water tank location would be at least 24 feet (travel width) to allow for fire engines to park and connect to the tank while leaving the road open. The tanks would be labeled "Fire Water: 10,000 gallons" using earth-toned reflective paint.

Fuel Modification Zones

A minimum 30-foot-wide fuel modification zone would be provided from the chain-link fence perimeter of the solar facility between the PV modules and the off-site wildland fuels. This area would include contiguous fuel modification from the perimeter fence inward and would include the perimeter fire access road. Additionally, a minimum 100-foot-wide fuel modification zone would surround the two BESS areas.

Open Space Easement Areas

As shown in Figure 1-6, the project contains 15 cultural open space easement areas designed to protect sensitive cultural resources within the MUP project site, totaling 24.44 acres. No development or disturbance would occur within the open space easement areas. These areas would be fenced with a 4-foot-high three-strand barbed wire fence. Each open space easement area would include a gated entrance. Phase I would include five open space easement areas totaling 7.08 acres. Phase II would include 12 open space easement areas totaling 17.36 acres.

As shown in Figure 1-2 and described in the biological resources technical report (Appendix D, Biological Resources Report), an off-site biological open space easement area would be granted over an approximately 447.93-acre area that includes sensitive vegetation communities, special-status plant species, and habitat for special-status species to protect sensitive biological resources. This biological open space easement area would be granted to the County or other approved conservation entity. Granting of this open space easement would authorize the County and its agents to periodically access the land to perform management and monitoring activities for the purposes of species and habitat conservation. This easement area is for the protection of biological resources and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. The biological open space easement area would be unfenced. As the project is proposed in two phases, two separate open space easements would be dedicated within the 447.93-acre area. The recordation of each open space easement would occur prior to the issuance of a grading permit for each phase. Refer to Section 2.2, Biological Resources, for a further description of the biological open space easements.

1.4.2 Operation and Maintenance

1.4.2.1 PV Modules and Support Systems

The PV modules and tracking systems would be inspected periodically. Electrical components would be tested routinely according to manufacturer's recommendations. In the event that remote monitoring indicates a problem, such as low performance in a section of the array field, a crew would investigate and correct the problem on an as-needed basis. It is anticipated that PV panel washing would occur two to three times per year. Washing of the PV panels would be undertaken using either a self-propelled powered mechanical system (e.g., MultiOne Solar Panel Washer or Mazaka Solar Cleaner or comparable motorized equipment) or a portable pressure washer towed by a pickup truck. Washing would occur during daylight hours, so no lighting would be required.

1.4.2.2 Operational Water Demand

Project operation would require water for dust control, panel washing, and fire protection. Panel washing of the PV panels would occur approximately once per year. Water used during project operation would be supplied by the Jacumba Community Services District (JCSD) located in Jacumba Hot Springs, California. The primary source of water from the JCSD is the Highland Center Well. If needed, the Park Well is the designated backup water source. The Padre Dam Municipal Water District is also a viable source of water to supply operational needs. Annual operational water demand would be approximately 0.81 acre-feet per year (INTERA Incorporated 2025a). Six 10,000-gallon water tanks throughout the site would provide emergency water access for fire suppression. A procedure for ongoing inspection and maintenance of tanks would be in place. These tanks would either be elevated or equipped with a pump and would not suffer appreciable evaporation losses because they would be enclosed and watertight.

1.4.2.3 Fire Protection

There are several fire stations within the project area; these include California Department of Forestry and Fire Protection (CAL FIRE), San Diego County Fire Protection District (SDCFPD), and U.S. Forest Service fire stations. The Boulevard area is serviced by CAL FIRE's Boulevard Fire Station (Station 47). Fire emergencies that may occur at the project site would be primarily responded to by CAL FIRE's Boulevard Fire Station (Station 47), which is staffed by both volunteer reserve and career firefighters. Additional responses would be available from SDCFPD's Jacumba and Lake Moreno Stations (Stations 43 and 42, respectively), and CAL FIRE's Campo Station (Station 40). Helicopter water drops may also be used as appropriate. Other fire protection would be provided from mutual aid resources from throughout San Diego County and the state, when necessary. Clearing and grubbing of approximately 561 acres would be required for construction and access to the project site. Consistent with County requirements for discretionary approvals for projects in wildland/urban interface areas, a fire protection plan has been prepared for the project (SWCA Environmental Consultants 2024) (Appendix L, Fire Protection Plan).

1.4.3 Construction

Phase I and Phase II of the project would be constructed separately. Construction of Phase I would occur over approximately 12 months, and Phase II would occur over approximately 18 months. It is anticipated there would be approximately a 1-year gap between construction of Phase I and Phase II. Except for construction of the substation, which would occur during Phase I, both phases of the project would each include the following construction activities:

- Site mobilization
- Site preparation (including access driveways and staging areas), grading, and stormwater protections
- Fence installation
- Substation installation
- Pile driving
- Blasting
- Tracker and PV module installation
- DC electrical
- Underground medium AC voltage electrical
- Inverter/transformer platform installation
- BESS installation
- Commissioning

The airstrip within the center of the project site would be utilized as a construction laydown area during both phases of construction.

1.4.3.1 Site Preparation, Grading, and Stormwater Protection

Construction of the project would involve clearing and grubbing of the existing vegetation within the project site. Approximately 561 acres throughout the site would be disturbed. Grading would also be required throughout some portions of the project site. Grading is expected to be balanced on-site, with approximately 350,000 cubic yards of cut redistributed across the site. The maximum vertical depth of excavation would

be 19 feet, and the maximum vertical height of fill would be 18 feet. Once complete, the project site would contain approximately 7 total acres of impervious surfaces.

Blasting activities may be required to facilitate siting of array and other equipment foundations plus the gen-tie. The Applicant would obtain a blasting permit from the County prior to initiating any blasting activities. Blasting activities would typically involve drilling multiple 2-inch-diameter holes into a boulder or bedrock to a depth of approximately 40 inches. Charges, typically weighing between 2.5 and 5 pounds each, would then be inserted into each drilled hole and detonated sequentially. The necessity and extent of blasting would not be known until surface clearing is completed. However, it is preliminarily estimated that approximately 5,000 cubic yards of rock would be blasted during the early stages of excavation and mass grading for Phase I and Phase II. Blasting would occur at 2- to 3-day intervals, with no more than one blast per day.

The project would implement the following measures in compliance with the Grading Ordinance (County Code Section 87.428) to minimize fugitive dust (PM_{10}) during the construction phase of the proposed project. These measures would include the following:

- Prior to construction activities, the Applicant will employ a construction relations officer who will address community concerns regarding on-site construction activity. The Applicant will provide public notification in the form of a visible sign containing the contact information of the construction relations officer who will document complaints and concerns regarding on-site construction activity. The sign will be placed in easily accessible locations and noted on grading and improvement plans.
- Grading areas will be watered, or another San Diego Air Pollution Control District–approved dust control non-toxic agent will be used, at least three times daily, to minimize fugitive dust only where chemical stabilizers are not used.
- All permanent roads and the paved access roadway improvements will be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. Foundations will be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earthmoving operations.
- Grading areas will be stabilized as quickly as possible to minimize fugitive dust.
- Wheel washers, grates, rock, or road washers will be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads.
- Visible track-out into traveled public streets will be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.
- Haul trucks will be covered or at least 2 feet of freeboard will be maintained to reduce blow-off during hauling.
- A 15-mile-per-hour speed limit on unpaved surfaces will be enforced.
- Haul truck staging areas will be provided for loading and unloading of soil and materials and will be located away from sensitive receptors at the farthest feasible distance.

1.4.3.2 Installation of Underground Medium-Voltage Collection System

Trenching is required for installation of the AC medium-voltage underground electrical collection system, gen-tie line, and telecommunication lines. Trenches would be approximately 3 to 4 feet deep and 1 to 3 feet wide and would connect all the solar array areas. The trenches would be filled with base materials above

and below the conductors and communication lines to ensure adequate thermal conductivity and electrical installation characteristics. The topsoil from trench excavation would be set aside before the trench is backfilled and would ultimately compose the uppermost layer of the trench. Excess material from the foundation and trench excavations would be used for site leveling. Where possible, trenching would be located beneath existing driveways and access roads to minimize disturbance.

1.4.3.3 Installation of Photovoltaic System

The PV system installation includes piles, racking, module assembly, and DC wiring as follows:

- **Piles:** The piles would be driven into the soil using a pile/vibratory/rotary driving technique like that used to install freeway guardrails. The piles would be driven to approximate depths of 5 to 10 feet depending upon required embedment depth. The spacing of the piles would be determined by the ultimate ground coverage ratio. Exact pile locations would be surveyed and pinned.
- **Racking:** The racking would be assembled on top of the piles manually and tightened and adjusted with handheld electric ratchet guns.
- **Module assembly:** The modules would be manually lifted and adjusted on top of the racking.
- **Aboveground DC wiring:** The modules would be strung together and manually connected with twist connectors.

1.4.3.4 Installation of Battery Energy Storage System

The BESS installation would include the following:

- **Concrete Foundation:** Concrete foundation pads would be constructed at the site.
- **Battery Storage Equipment:** The equipment would be delivered to the site by truck and lifted off the truck by a forklift or crane.
- **Wiring and Commissioning:** The fully integrated container would then be wired into the inverter/transformer platforms.

The battery storage equipment would be constructed on concrete pads, and each set of equipment would be bolted to the pads. The power conditioning system (PCS) and the medium-voltage control system (i.e., inverters and transformers) would be constructed on level concrete pads between the battery storage containers. Minor rough grading may be needed for the preparation of the proposed PCS and medium-voltage control system pads if the pads cannot be constructed using the existing slope.

1.4.3.5 Construction Workforce and Traffic

Construction would employ approximately 75 workers per day during the peak construction period for Phase I and 210 workers per day during the peak construction period for Phase II. In addition to this direct labor workforce, approximately 10 to 15 additional workers at the site would engage in supervision, contract services, administration, and other non-direct labor activities. Local hires would be encouraged and engaged where feasible.

During Phase I of construction, the project would generate 90 round-trip worker vehicle trips, 164 round-trip heavy-duty truck trips, and four round-trip water truck trips per day on average. During Phase II, the project would generate 225 round-trip worker vehicle trips, 466 round-trip heavy-duty truck trips, and eight round-trip water truck trips per day on average (Kittelson & Associates, Inc. 2024, 2025) (Appendix K.1, Transportation Impact Assessment, Appendix K.2 Supplemental Construction Traffic Memorandum). The

project would use a just-in-time delivery system with supplies and components delivered on a schedule to minimize on-site storage needs.

1.4.3.6 Construction Equipment and Materials

Standard construction equipment would be used during construction, including earthmoving equipment (e.g., bulldozers, excavators, backhoes) and road-building equipment (e.g., compactors, scrapers, graders). Construction equipment would include air compressors, all-terrain passenger vehicles, backhoes, cranes, a drill rig, flat-bed trucks, a front-end loader, pickup trucks, a pile driver, a trencher, and water trucks.

1.4.3.7 Water Use During Construction

Water use during construction would primarily consist of watering for dust control. Water for dust control would be applied by water trucks throughout the duration of construction activities. Nonpotable groundwater would be supplied by the JCSD. The Padre Dam Municipal Water District would also be a viable secondary source of water (INTERA Incorporated 2025b) (Appendix G.5, Updated Groundwater Resources Investigation Report). The total proposed extraction of nonpotable groundwater for project construction of both phases is approximately 67.9 acre-feet. Phase I would use 14.8 acre-feet or approximately 5.82 million gallons, provided by 6,000-gallon capacity water trucks. Phase II would use 53.1 acre-feet or approximately 17.3 million gallons, provided by 6,000-gallon capacity water trucks (INTERA Incorporated 2025a) (Appendix G.4, Revised Water Demand Memorandum). Activities requiring water use during construction consist of the following:

- **Dust control.** The majority of the project's construction-related water demand would be for the purpose of dust control. The initial clearing, grubbing and grinding of each array subarea would require the most intensive use of water. During this phase of construction, which is expected to occur in the first 2 to 3 months following mobilization, heavy equipment (e.g., tractors/loaders/backhoes, scrapers, skid steer loaders, graders, and dumpers/tenders) would be clearing woody vegetation, rocks, and other debris/vegetation over large contiguous areas of each site, requiring relatively large volumes of water to control dust. Watering for dust control would continue to occur throughout the construction period but would be geographically limited (to active work areas), and less intense in nature as tracker installation and assembly proceeds. This is because a permeable nontoxic soil binding agent would be applied to any bare inactive areas following initial site clearing. Construction-related water demand estimates for dust control have accounted for the entire development footprint and construction duration of each phase and have included a contingency for high wind days.
- **Mass grading.** Various levels of cut/fill are required to level sites and properly prepare foundations, including the compaction and watering necessary to achieve engineered specifications. Water requirements associated with hydration of fills are limited to surfaced roads, parking lots and facility foundation pads (e.g., warehouse building, the collector substation, and inverters), and are usually dependent on the difference between the "optimum" and actual soil moisture content on the construction site. The lowest value of soil moisture observed during geotechnical exploration of each site and the total volume of earthwork (350,000 cubic yards) anticipated was used to estimate water demands for mass grading.
- **Soil stabilization.** Following initial clearing, grubbing, and grinding of each site, a permeable nontoxic soil binding agent would be applied to the prepared surfaces of the site to stabilize soils. Because active operational areas such as fire, access, and service roads would be surfaced with disintegrated granite, application of soil binders would be limited to bare surfaces not being actively used for construction.

- **Hydroseeding.** The portions of the project site not overlain by roads, inverters, battery storage containers, the substation, and the switchyard facilities shall be reseeded with a native hydroseed mix to provide vegetation cover during project operations. The hydroseed would be applied immediately following the completion of soil disturbing activities during project construction. Water requirements for hydroseed application would be approximately 2,500-gallons per acre.
- **Fire protection**. The project would provide six permanent 10,000-gallon water storage tanks. These tanks would be installed at the start of construction and would be labeled "fire water" using reflective paint. These tanks would either be elevated or equipped with a pump and would not suffer appreciable evaporation losses because they would be enclosed and watertight.

1.4.4 Decommissioning

1.4.4.1 Dismantling

The aboveground (detachable) equipment and structures would be disassembled and removed from the site when it becomes time to remove or replace equipment. Detachable elements include all PV modules and support structures, battery storage units, inverters, transformers, and associated controllers. Removal of the fencing, substation, and aboveground conductors on the transmission facilities would also be implemented. Underground collector and transmission components would be removed. Most of these materials can be recycled or reclaimed. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of off-site, consistent with the County's Construction and Demolition Debris Recycling Ordinance (County Code Sections 68.511–68.518).

1.4.4.2 Recycling

Most of the components of the proposed solar facility are made of materials that can be readily recycled because the components of the PV modules can be broken down. Generally, if the PV panels can no longer be used in a solar facility, the aluminum can be resold, and the glass can be recycled. Any hazardous components of the PV panels would be removed and properly disposed of off-site prior to recycling. Other components of the solar facilities, such as the rack structures and mechanical assemblies, can be recycled as they are made from galvanized steel. Equipment such as inverters, transformers, and switchgear can be either reused or their components recycled.

1.4.4.3 Removal Surety

The final decommissioning plan(s) that would be provided prior to issuance of the building permits for the proposed project would comply with Section 6954.b.3 (d) of the County Zoning Ordinance for removal surety as follows:

> The operator shall provide security in the form and amount determined by the Director to ensure removal of the Solar Energy System. The security shall be provided to PDS [Planning & Development Services] prior to building permit issuance. Once the Solar Energy System has been removed from the property pursuant to a demolition permit to the satisfaction of the Director, the security may be released to the operator of the Solar Energy System.

Financial responsibility for decommissioning would be an obligation of the owner of the solar facility.

1.4.4.4 Water Use During Decommissioning

Activities associated with decommissioning would not include substantial earthmoving. It is estimated that the amount of water necessary to dismantle the solar facility would be less than that required for

construction, because there would be no need to use water to hydrate and compact on-site fills. The activities associated with decommissioning would not include grading. The only water demand during decommissioning would be for dust suppression and would be provided by 6,000-gallon capacity water trucks. Phase I would require a water demand of 2.4 acre-feet for decommissioning and Phase II would require a water demand of 4.2 acre-feet for decommissioning, for a total of 6.6 acre-feet (INTERA Incorporated 2025a) (see Appendix G.4).

1.5 Intended Uses of the EIR

This EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. This EIR has been prepared in accordance with the requirements of the *County of San Diego Environmental Impact Report Format and General Content Requirements* (County of San Diego 2006) and the statute and guidelines of the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq., and California Code of Regulations (CCR), 14 CCR 15000 et seq., respectively). The NOP and Initial Study prepared for the project were released for public review on March 23, 2023, and are included as Appendix A, NOP, Initial Study, and Public Comments, to this EIR. This EIR addresses issues identified in the Initial Study and in comments received during the public scoping process.

~~This~~ The Draft EIR was ~~will be~~ made available for review by members of the public and public agencies for 45 days to provide comments "on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" as stated in the State CEQA Guidelines, Section 15204 (14 CCR 15000 et seq.). The public review period was from July 31, 2025 to September 15, 2025. Additionally, a public meeting was held to present project information, provide information on the Draft EIR's analysis and findings regarding the project, and provide instructions on how to submit written comments on the Draft EIR. This meeting was held on August 7, 2025 at 7:00 p.m. at the Backcountry Resource Center located at 39919 Ribbonwood Road in Boulevard, CA.

The County is the designated Lead Agency and is responsible for the preparation of this document. The County Planning Commission is tasked with the decision to recommend approval or denial of the proposed project. The County Board of Supervisors will be tasked with the ultimate decision to approve or deny the proposed project. Any agreements (e.g., fire and emergency services) would also require Board approval. The County will use the information in this EIR to consider potential impacts on the physical environment associated with the project.

The County will decide whether to certify that this EIR is complete and in compliance with CEQA, using written comments received on the EIR in that process. The County will also decide whether to approve or deny the project by weighing environmental, economic, and social factors to determine the most appropriate course of action. Additionally, a Mitigation Monitoring and Reporting Program (MMRP) would be produced for the project. If the EIR is certified and the project approved, agencies with permitting authority over all or portions of the project may use the EIR and MMRP as the basis for their evaluation of environmental effects of the project and approval or denial of applicable permits.

1.5.1 Requested Action and Required Permits

Various permitting requirements would need to be met prior to implementation of the proposed project. Table 1-3 summarizes federal, state, and local permits that may be required for the project and the agencies that are expected to use the EIR in their decision-making and permitting processes. Additional agency approvals/permits not listed below may also be required.

Table 1-3. Requested Actions and Required Permits

Agency Authority	Approval/Permit Required
Federal and State Agencies	
U.S. Department of Homeland Security, U.S. Customs and Border Protection	Consistency with U.S. Customs and Border Protection safety and access policies
California Department of Transportation (Caltrans)	Transportation permits for the movement of vehicles or loads exceeding the limitations on the size and weight contained in Division 15, Chapter 5, Article 1, Section 35551, of the California Vehicle Code (1983) Encroachment and trip permits for specialized haul trucks as necessary
California Department of Fish and Wildlife (CDFW)	Lake and Streambed Alteration Agreement
Regional Water Quality Control Board (RWQCB)	Clean Water Act Waste Discharge Requirements
Local Agencies	
County of San Diego	Major Use Permit County right-of-way permits (construction permit, excavation permit, and encroachment permit) Grading permit (preliminary grading plan PDS2019-LDGRMJ-30240) Building permits Blasting permit Improvement plans Exploratory borings, direct-push samplers, and cone penetrometers permits Waiver of Board Policy I-111 Resource Management Plan
County of San Diego Fire Protection District	Fire and Emergency Protection Services Agreement
San Diego Metropolitan Transit System	Right of Entry Permit

1.5.2 Related Environmental Review and Consultation Requirements

Pursuant to the State CEQA Guidelines (Section 15365), the County prepared an Initial Study and NOP for this EIR. The NOP was publicly circulated for 30 days beginning March 23, 2023. The County held a public scoping meeting on April 12, 2023, at the Backcountry Resource Center in Boulevard, California to provide responsible agencies and members of the public with information about the CEQA process and to provide further opportunities to identify environmental issues and alternatives for consideration in the EIR. Public comments received during the NOP scoping process are provided in Appendix A and were used to inform analysis in the Draft EIR.

1.6 Project Inconsistencies with Applicable Regional and General Plans

Planning documents reviewed for the project include the County's General Plan (County of San Diego 2011), *Mountain Empire Subregional Plan, San Diego County General Plan* (County of San Diego 2016), and *Boulevard Subregional Planning Area, Mountain Empire Subregional Plan* (County of San Diego 2013). Other planning documents reviewed for the proposed project include the Climate Action Plan (County of San Diego 2024b), Regional Air Quality Strategy for the San Diego County Air Pollution Control District (County of San Diego 2022), the California Regional Water Quality Control Board (RWQCB) Basin Plan for Region 7, Colorado River (RWQCB 2019), and the County of San Diego MSCP

(County of San Diego 2025b). In addition, the County has reviewed the draft Conservation Strategy for the future East County MSCP (County of San Diego 2024a). The potential for the project to result in inconsistencies is discussed and analyzed in Section 3.1.6, Land Use and Planning, of this EIR.

1.7 List of Past, Present, and Reasonably Anticipated Future Projects in the Project Area

State CEQA Guidelines Section 15355 defines cumulative effects as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (Table 1-4 and Figure 1-13).

Table 1-4. Cumulative Scenario—Reasonably Foreseeable, Approved and Pending Projects

Map ID	Project	Type	Status	Distance from Project Site	Project-Related Impacts
1	CAMPO WIND PROJECT WITH BOULDER BRUSH FACILITIES: Generation of up to 252 MW consisting of up to 60 turbines. The project study area covers approximately 2,200 acres on the Campo Reservation and approximately 280 acres on private lands within the county.	W	A	2.8 miles northeast	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Tribal Cultural Resources, Traffic and Transportation, Wildfire
2	JACUMBA SOLAR PROJECT: 20 MW of solar energy on 108 acres of a 304-acre site	S	C	7.7 miles east	Aesthetics, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Noise, Paleontological Resources
3	JACUMBA VALLEY RANCH (JVR) ENERGY PARK: up to 90 MW of solar power and 90 MW (360 MWh) of battery storage capacity on 623 acres	S	A	5.5 miles east	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology, Soils, and Seismicity, Hazards and Hazardous Materials, Hydrology and Water Quality, Mineral Resources, Noise, Paleontological Resources, Tribal Cultural Resources, Wildfire
4	RUGGED SOLAR: 4 solar energy facilities totaling 74 MW on 764 acres	S	A	2.4 miles north	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Noise
5	TULE WIND PROJECT: Includes 5 wind turbines, 5-acre temporary concrete batch plant, 5-acre on-site collector substation, gen-tie to Boulevard Substation, and 3 wells for groundwater extraction	O	C	0.1 mile north	Hydrology and Water Quality: MUP issued August 8, 2012, which required groundwater monitoring through November 2017
6	LIVE OAK SPRINGS WATER SYSTEM IMPROVEMENTS PROJECT: Potable water distribution system improvements for community of Live Oak Springs	PF	UC	3.4 miles northwest	None – MND adopted June 29, 2022
7	JACUMBA AIRPORT PERIMETER FENCE: Installation of a perimeter fence at Jacumba Airport; part of the 5-year Airport Capital Improvement Plan	PF	C	6.1 miles east	Unknown: Conducted under a statutory exemption

Map ID	Project	Type	Status	Distance from Project Site	Project-Related Impacts
8	BOULEVARD SOLAR: Construction and operation of a 60-MW solar energy project on an approximately 420-acre site in Boulevard, adjacent to the U.S.-Mexico Border.	S	UR	2.2 miles southwest (1.1 miles west of mitigation parcels)	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Tribal Cultural Resources, Traffic and Transportation, Utilities and Service Systems, Wildfire
9	DESERT JEWEL STORAGE: Construction and operation of a 200-MW battery energy storage project on an approximately 131-acre site along Old Highway 80 near Ozz Road in Boulevard.	O	UR	0.2 mile north	Aesthetics, Air Quality, Biological Resources, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Tribal Cultural Resources, Traffic and Transportation, Utilities and Service Systems, Wildfire

Notes: PF = Public Facilities and Utilities; S = Solar; W = Wind; O = Other; ~~MUP = Major Use Permit~~; A = Approved; UC = under construction; UR = under review; C = Completed; ~~kV = kilovolt;~~ MW = megawatt; ~~ECO = East County; TM = Tentative Map~~.

1.8 Growth-Inducing Impacts

Section 15126.2(e) of the State CEQA Guidelines requires an EIR to include a detailed statement of a proposed project's anticipated growth-inducing impacts. The analysis of growth-inducing impacts must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the surrounding environment. The analysis must also address project-related actions that would remove existing obstacles to population growth, tax existing community service facilities and require construction of new facilities that cause significant environmental effects, or encourage or facilitate other activities that could, individually or cumulatively, significantly affect the environment. A project would be considered growth-inducing if it induces growth directly (through the construction of new housing or increasing population) or indirectly (such as increasing employment opportunities that would increase the population of the area or eliminating existing constraints on development that would encourage construction). Under CEQA, growth is not assumed to be beneficial, detrimental, or of little significance to the environment.

The project does not propose any residential use, including but not limited to a residential subdivision, mobile home park, or construction of a single-family residence that would cause an increase in population. The project also does not include a recreational component, such as a hotel, resort, campground, or other facility that would attract or accommodate an increase in visitors to the area that would indirectly cause temporary increases in population. The project would employ up to 210 workers during construction. Local hires will be encouraged when feasible, and it is not anticipated that any non-local hires would permanently relocate to the area with their families. The limited scale and temporary nature of solar facility construction and operation would not affect the employment base within the San Diego region. Once construction is complete, the project would not have any full-time personnel on-site, and the occasional operations and maintenance workers are not anticipated to relocate near the project site.

Additionally, the development of the project would not induce substantial population growth in the Mountain Empire Subregion. The project would not include any new homes or businesses and would not directly induce substantial population growth. The project would produce electricity which would be added to the electrical grid at the Boulevard substation and would be available to the Mountain Empire Subregion but would not extend electrical distribution service to new areas such that it would indirectly induce population growth. The project would not propose any physical or regulatory changes that would remove a restriction to, or encourage population growth in the area, including, but not limited to, large-scale

residential development or accelerated conversion of homes to commercial or multifamily use. The proposed project does not include regulatory changes such as General Plan amendments encouraging population growth, specific plan amendments, zone reclassifications, sewer or water annexations; or Local Agency Formation Commission annexation actions that would remove a restriction to population growth in the area.

As previously discussed in Section 1.1, Project Objectives, the project is intended to create utility-scale solar energy to assist in achieving the state's RPS, improve reliability in the region by providing a source of local renewable energy generation, assist the state in achieving its energy storage targets by providing a new source of energy storage, invest in the local economy, and create construction jobs. The project would supplement the region's energy supply and would not encourage housing growth.

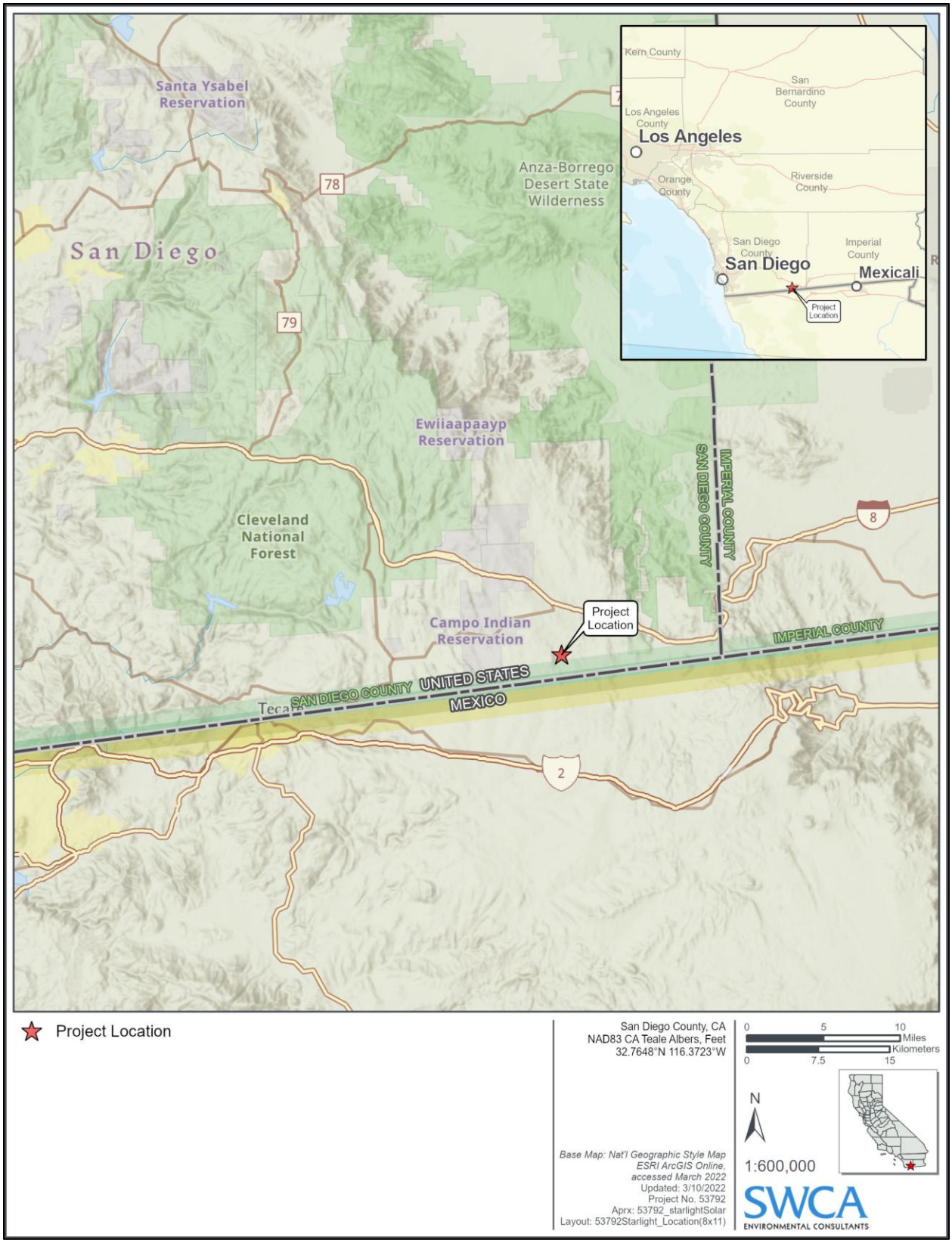


Figure 1-1. Regional Location Map

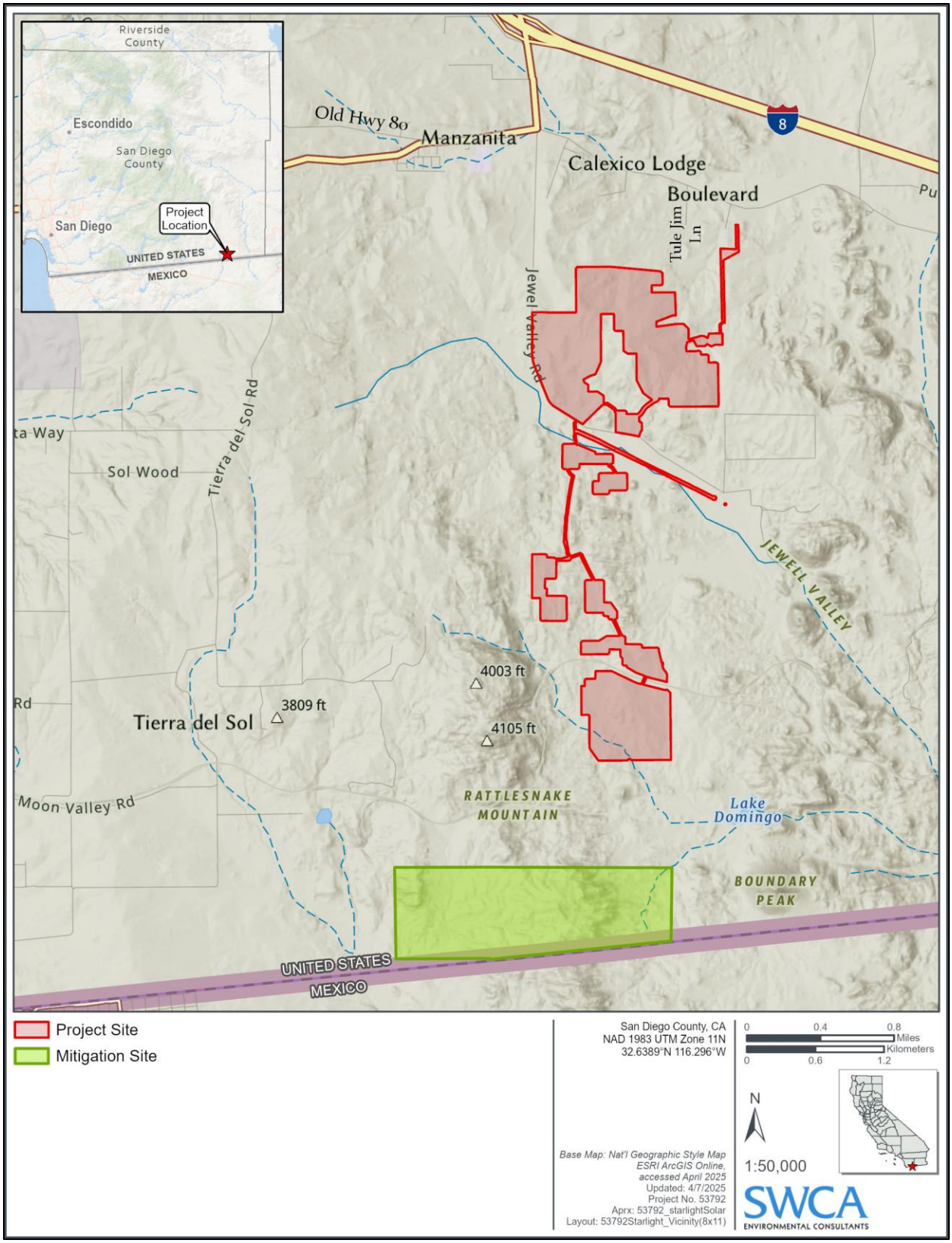


Figure 1-2. Vicinity Map

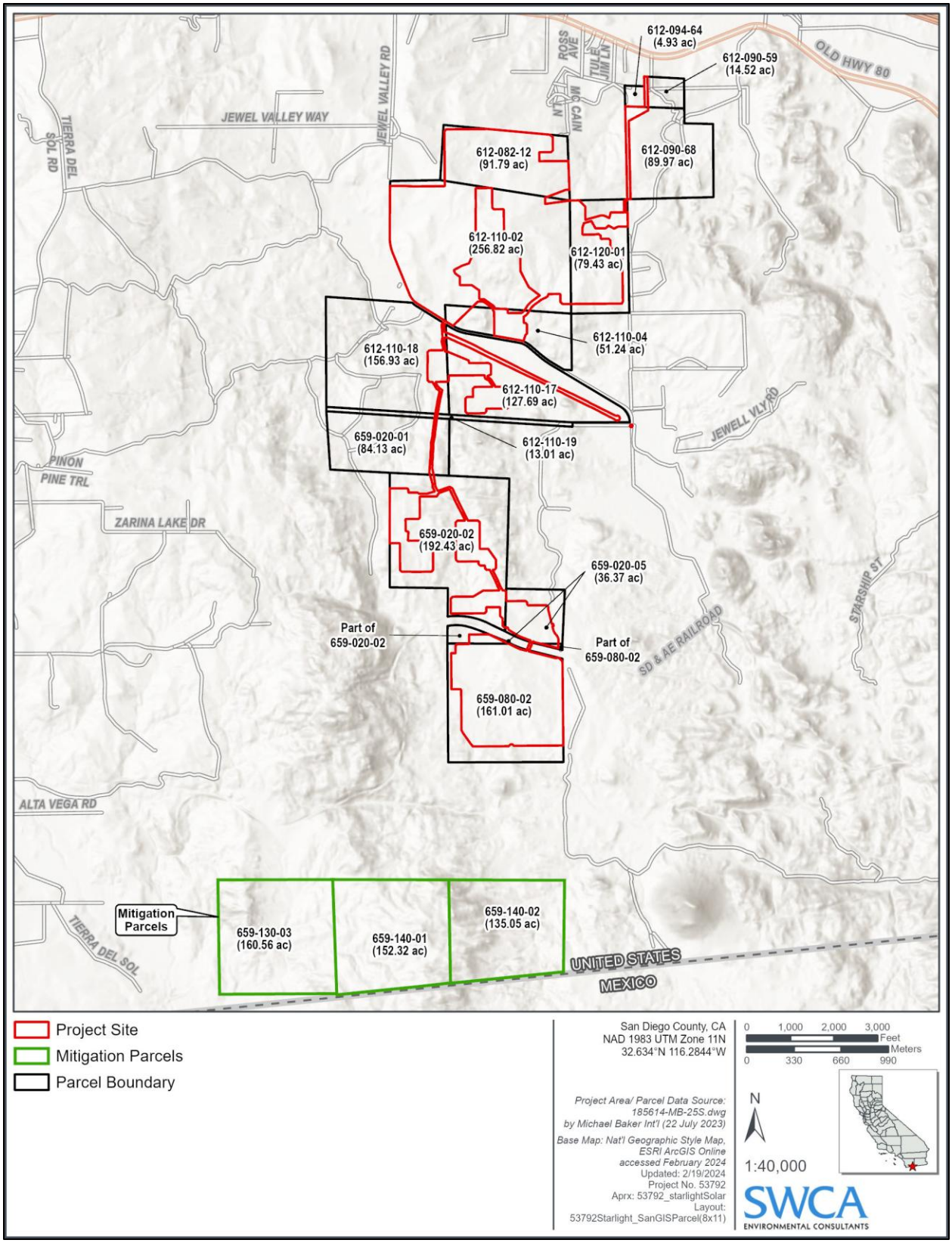


Figure 1-3. Project Site APNs

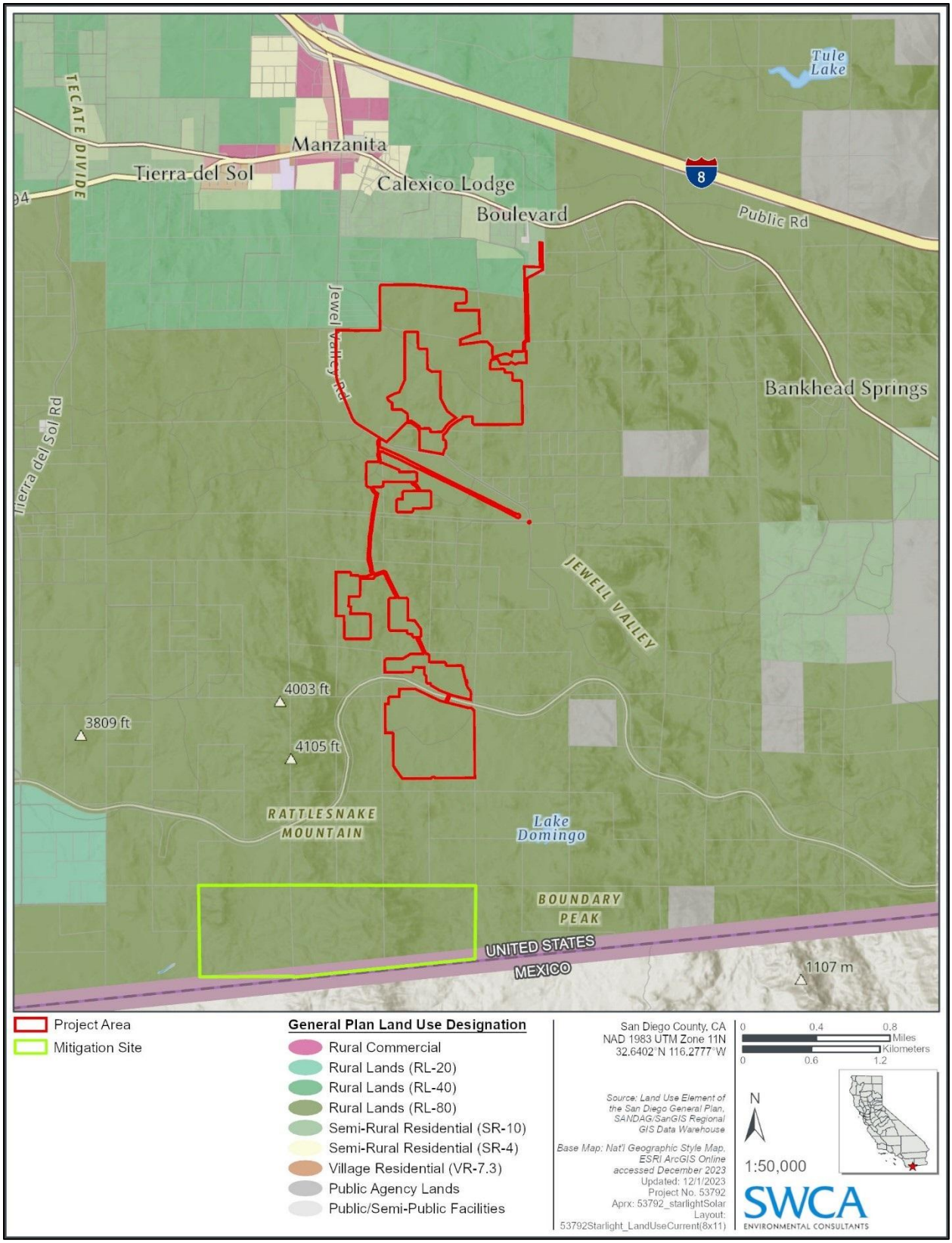


Figure 1-4. Land Use Designations Map

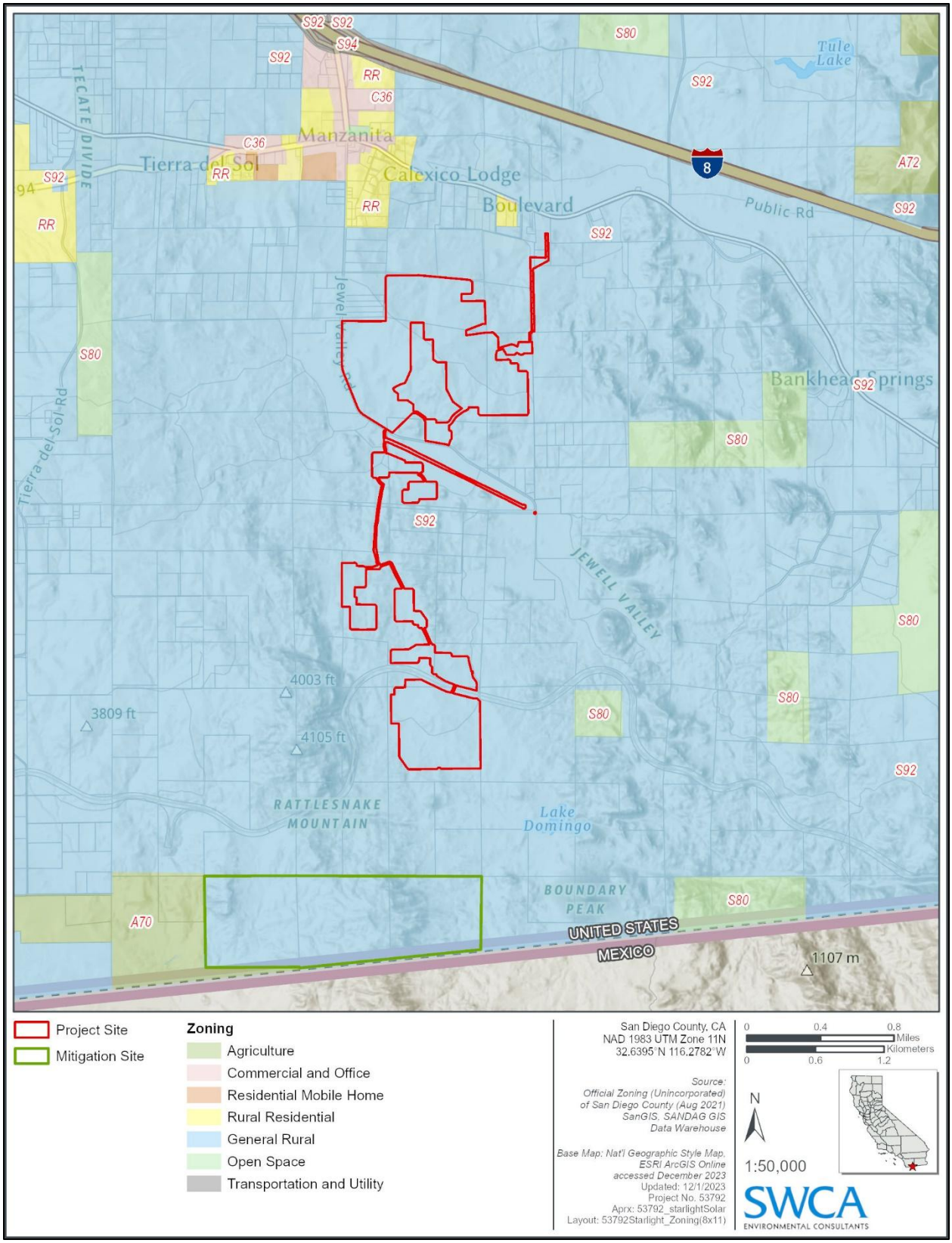


Figure 1-5. Zoning Map

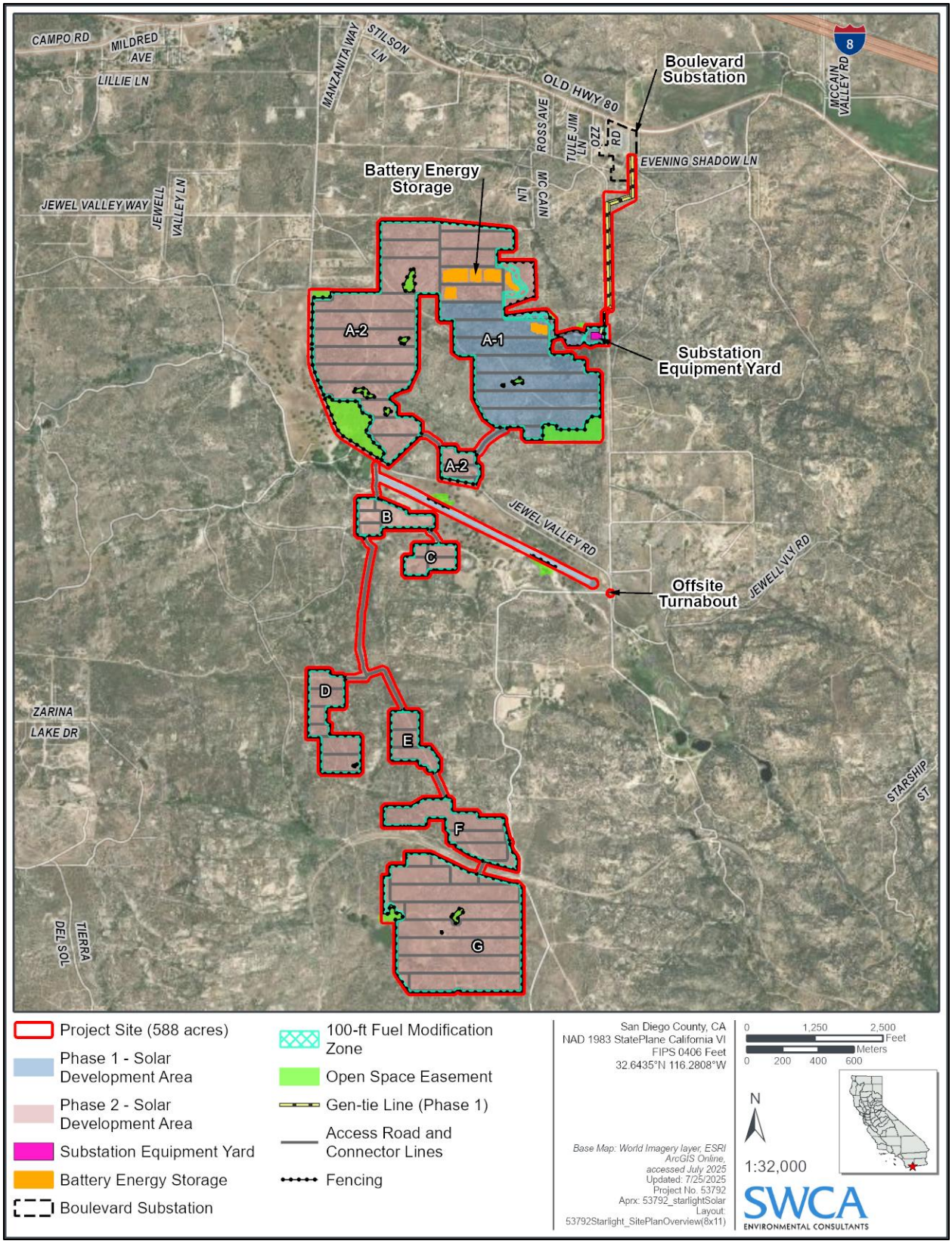


Figure 1-6. Project Site Plan

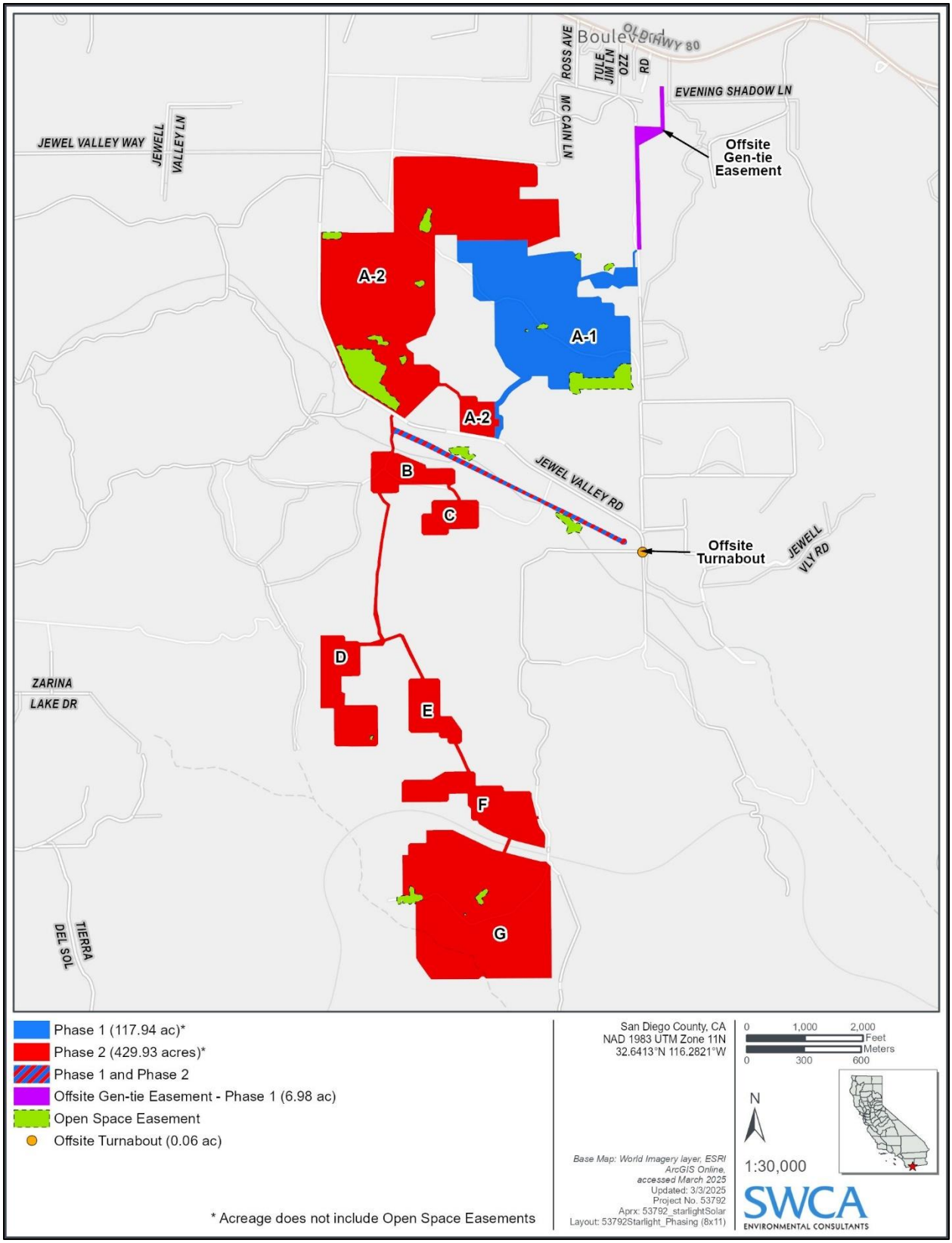


Figure 1-7. Project Phasing

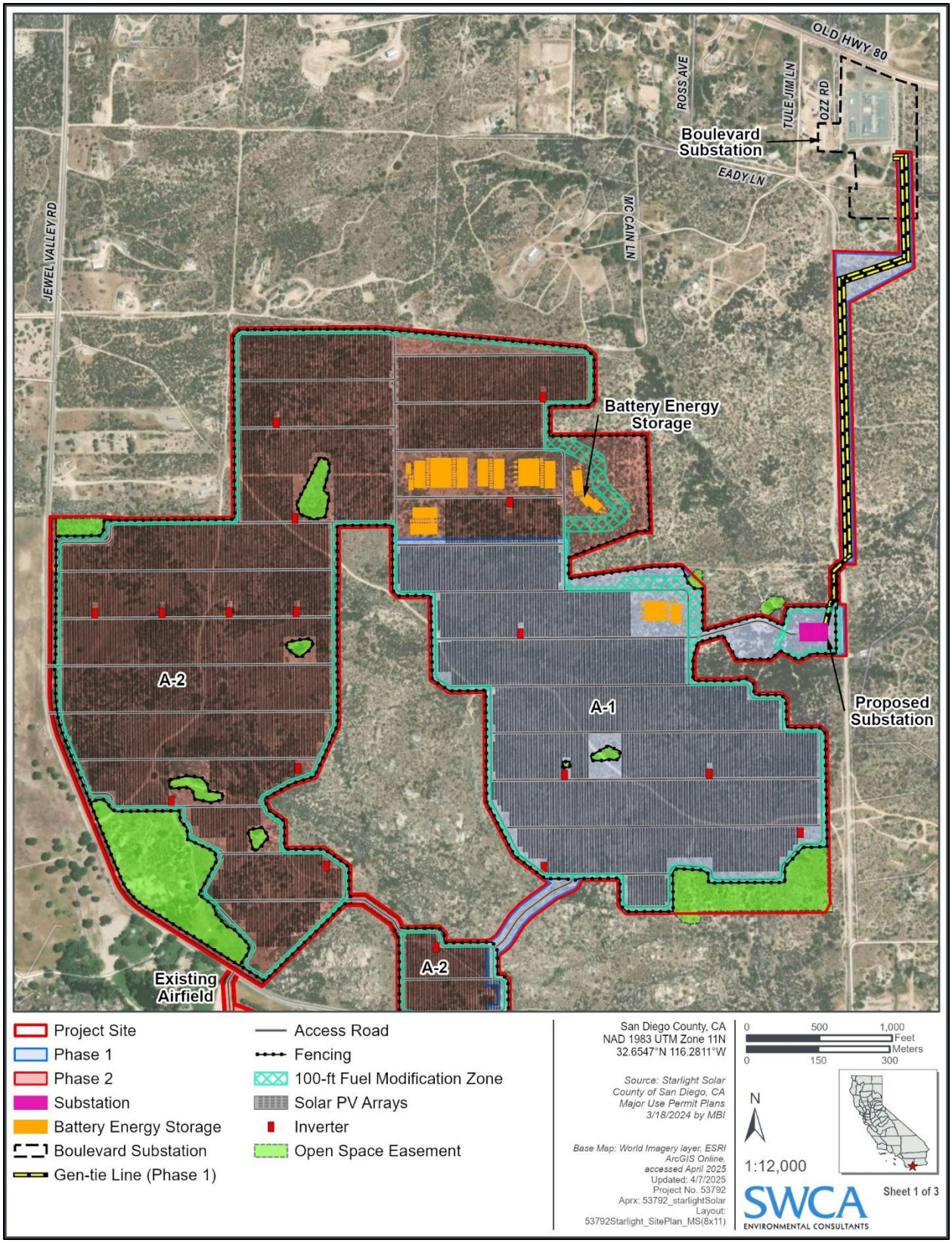


Figure 1-8. Project Site Plan with Phasing (A1–A2)

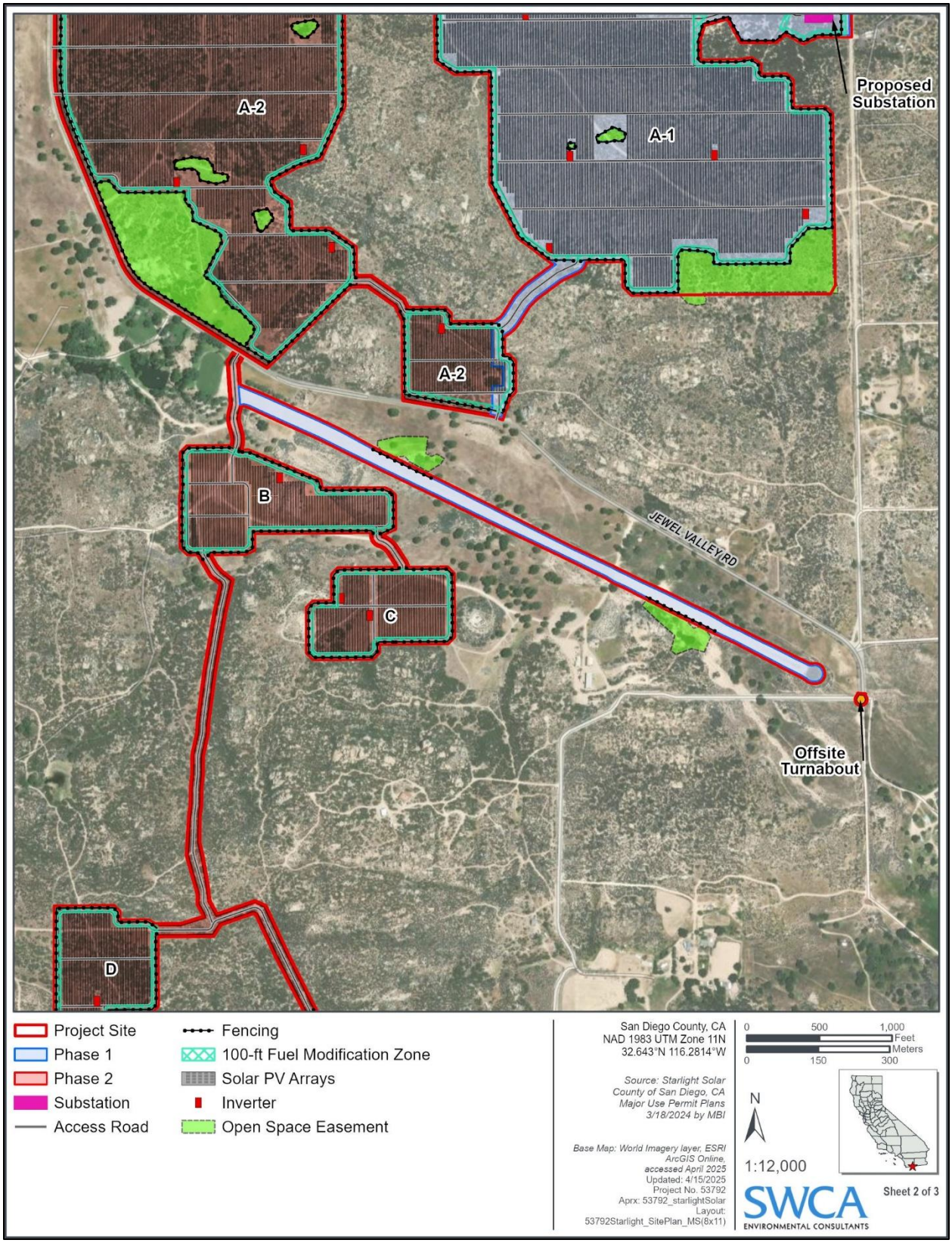


Figure 1-9. Project Site Plan with Phasing (A1–D)

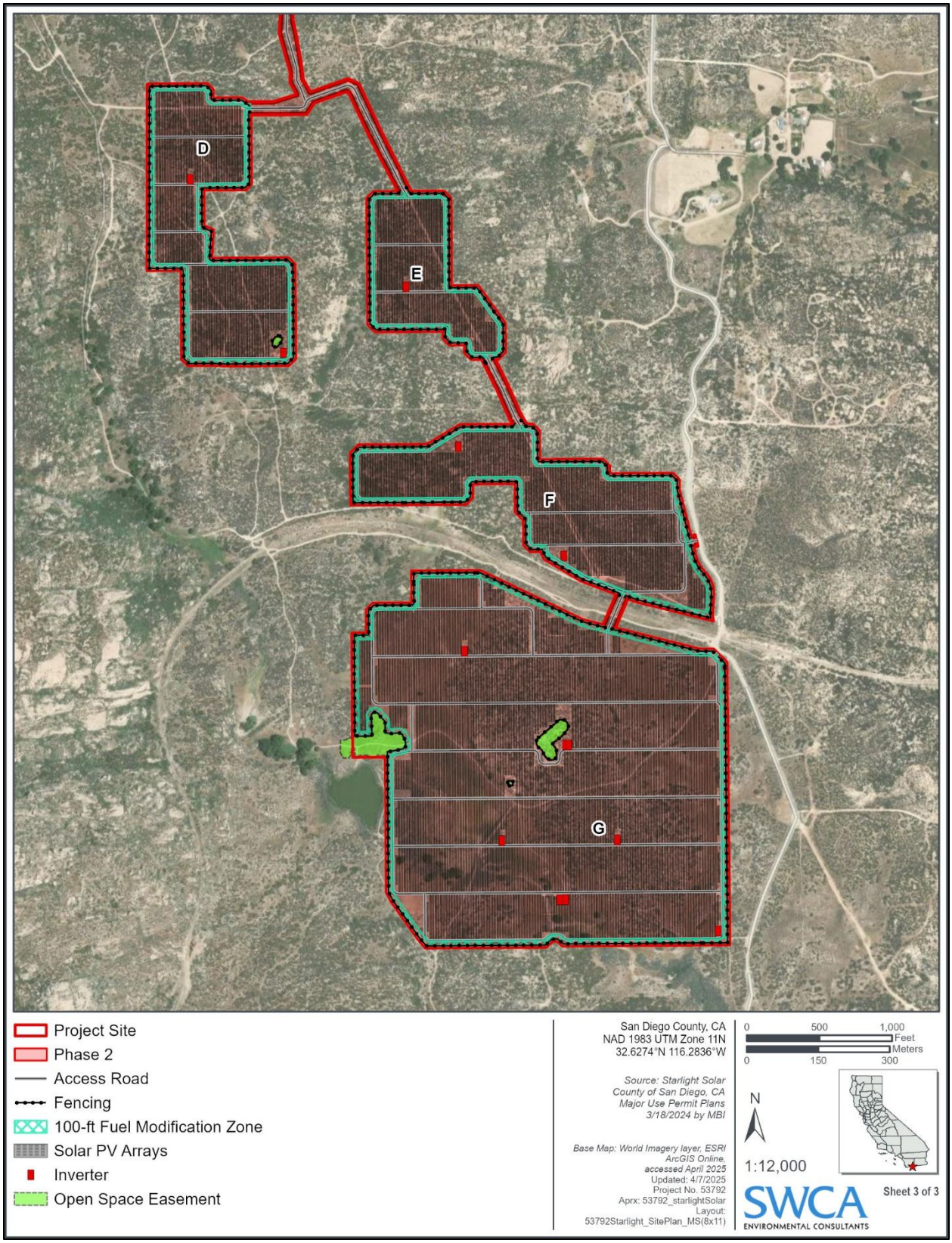


Figure 1-10. Project Site Plan with Phasing (D–G)

Figure 1-11. Solar Modules and Support Structures

Figure 1-12. Battery Storage Container

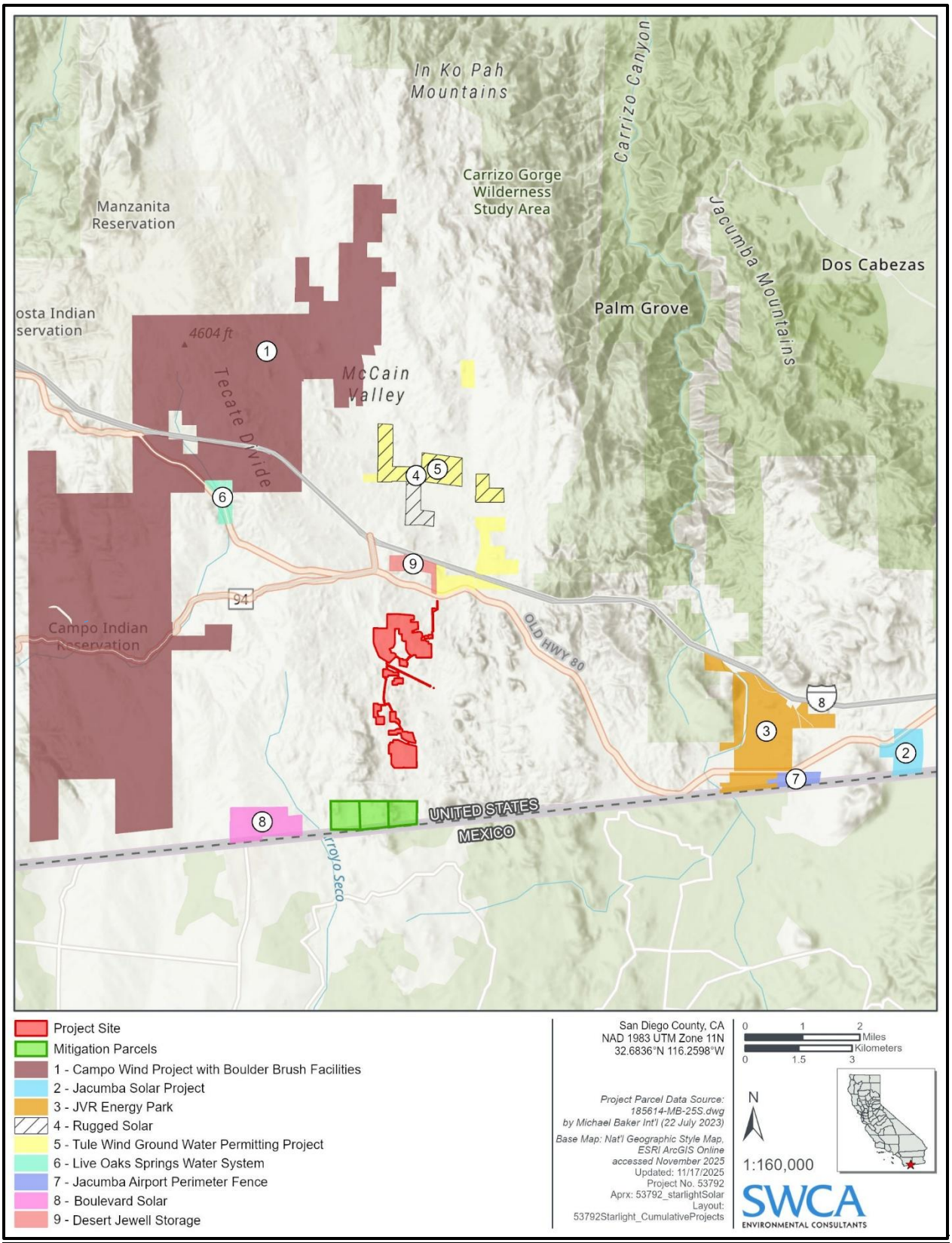
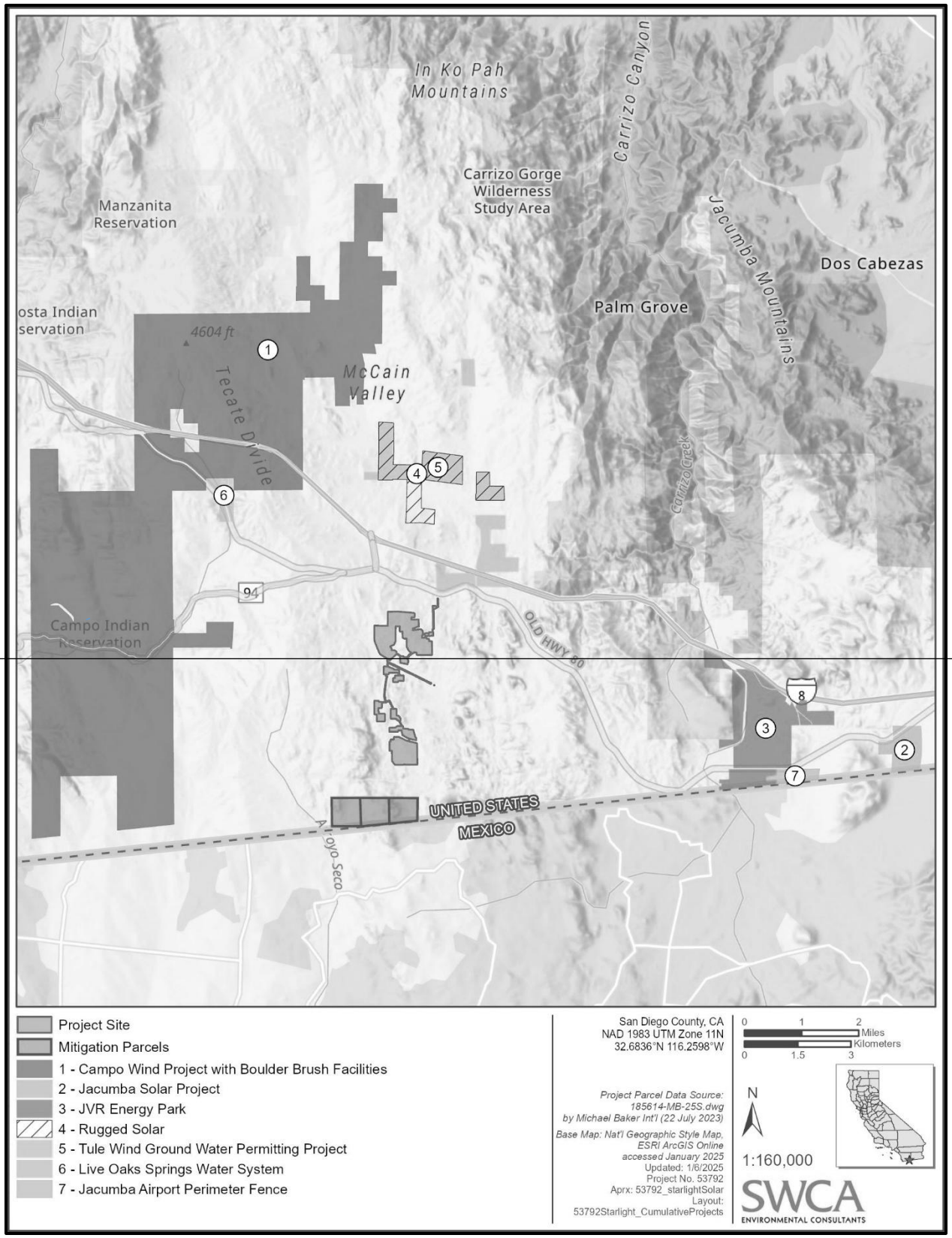


Figure 1-13. Past, Present and Reasonably Anticipated Future Projects



~~Figure 1-14. Past, Present and Reasonably Anticipated Future Projects~~

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