CHAPTER 2.0
PROJECT DESCRIPTION

The term Project refers to construction, operation, and decommissioning of the solar field and energy storage site parcels, two Gen-Tie lines, improvements at the existing Drew Switchyard and other on-site and off-site ancillary features as described in the Project Description under either the Phased CUP Scenario or Full Build-out Scenario with up to approximately 855 gross and 762.8 net farmable acres of disturbance. The term CUPs refers to an individual CUP (i.e. CUP#17-0031), multiple CUPs (i.e. CUP#17-0031, CUP#17-0032 and CUP#17-0033) or all CUPs (CUP#17-0031 thru CUP#17-0035 and CUP#18-0001) as appropriate. The term Solar Energy Center refers to the area developed within each CUP with PV panels, collector lines, inverters and pad mounted transformers, substation(s) and switchyard(s), energy storage, O&M building, etc. The term Solar Field Site Parcels refers to the six parcels (APNs 052-170-039-000, 052-170-067-000, 052-170-031-000, 052-170-032-000, 052-170-056-000, and 052-170-037-000) which are currently flat crop farm fields where the PV panels and associated solar and energy storage equipment are proposed for development as CUP#17-0031 thru CUP#17-0035 and CUP#18-0001.

2.1 INTRODUCTION

This chapter of the Environmental Impact Report (EIR) describes the Drew Solar Project ("Project" or "Proposed Project") proposed by Drew Solar, LLC. The Project is a proposal to build an approximately 100-mega-watt (MW) alternating current (AC) solar generation facility using photovoltaic (PV) technology. The entire Project is located on land owned by the Imperial Irrigation District (IID) except for the Project's two generation interconnection transmission lines (Gen-Tie Lines or Gen-Ties) which are proposed to extend from the south end of the Project site approximately 400 feet south across Drew Road and State Route (SR) 98 connecting into the existing Drew Switchyard located on APN 052-190-039-000. One gen-tie is for solar generation and one is for energy storage. Both gen-tie lines may be underground or one may be underground and one above-ground. The term "Project Site" refers individually or collectively to the six parcels (052-170-039-000, 052-170-067-000, 052-170-031-000, 052-170-032-000, 052-170-056-000, and 052-170-037-000) on which the Project is proposed. The term Project Area refers to the area encompassed by all six CUPs as well as the two Gen-Tie lines and other off-site ancillary facilities.

The Proposed Project consists of a photovoltaic (PV) solar facility capable of producing approximately 100 MWAC to be sited on approximately 855 gross and 762.8 net farmable acres. The ultimate energy output is dependent on several variables, including off-take arrangements and the evolving efficiency of PV panels, so it is possible that the Project could generate more or less than 100 MW. As discussed in Section D, below, the Project may be constructed at one time over approximately 18 months, or it may be built out over an approximately 10-year period. The Applicant is requesting that a Conditional Use Permit (CUP) be issued for each of the five phases of the Project as well as an additional sixth CUP for energy storage in the southwesterly portion of the Project Area. The development of the Project in phases allows greater flexibility in marketing renewable energy to meet ratepayer needs by allowing utilities to procure smaller energy quantities phased over time.

The Applicant has filed an application for a General Plan Amendment (GPA) for amendment of the Renewable Energy & Transmission Element to create an Island Overlay for the Project site; a Zone Change to add the RE Overlay to the Project site; a request for a Development Agreement; a request for up to five Lot Tie Agreements; a Variance application for power pole height; six CUP applications; and a Parcel Map application. Please refer to subsection C (Project Components) below for a discussion of all Project components.

2.1.1 PROJECT BACKGROUND

For the last two decades, California has emerged as a leader in promoting policies designed to grow the State's portfolio of renewable energy generation and use. Most recently, California passed two bills further increasing the State's commitment to reductions in greenhouse gas emissions through reductions in fossil fuels and increases in renewable energy: Senate Bill (SB) 350 requiring retail sellers and publicly owned utilities to procure half of their electricity from renewable sources by 2030. This requirement is known as the Renewable Portfolio Standard

or "RPS." In 2016, the Legislature passed SB 32, which codifies a 2030 greenhouse gas emissions reduction target of 40 percent below 1990 levels. According to Greentech Media, reaching such high amounts of variable renewable generation all but requires a wider build-out of storage capacity to give the grid more control over when wind and solar power is consumed.

The California legislature has passed several bills recently to help expand and expedite the amount of energy storage that is connected to California's electric grid. Newly signed AB 2861 authorizes the CPUC to create an independent dispute-resolution panel, staffed by electrical systems experts. Their job is to evaluate a disputed interconnection fee, gathering input from both sides and ruling on the case within 60 days. AB 2868 is aimed at increasing the overall size of the storage market by directing utilities to deploy up to 500 megawatts (MW) of additional storage capacity, of which no more than a quarter can be behind-the-meter. AB 33 declares the legislature's wish that the CPUC pay extra attention to long-duration storage for the grid. "The commission, in coordination with the Energy Commission, shall, as part of a new or existing proceeding, evaluate and analyze the potential for all types of long-duration bulk energy storage resources to help integrate renewable generation into the electrical grid," the law says. The CPUC's ruling comes after years of work jump-started by a 2010 state law, Assembly Bill 2514, which originally called for the statewide energy storage mandate of 1.3 GW to enable a "market transformation" for these new technologies. On June 10, 2013, CPUC Commissioner Peterman's Assigned Commissioner's Ruling stated "Energy storage has the potential to transform how the California electric system is conceived, designed, and operated. In so doing, energy storage has the potential to offer services needed as California seeks to maximize the value of its generation and transmission investments: optimizing the grid to avoid or defer investments in new fossil-power plants, integrating renewable power, and minimizing greenhouse emissions."

The Applicant is proposing to construct, operate and decommission a solar generation and energy storage facility on approximately 855 gross and 762.8 net farmable acres (inclusive of solar field, energy storage, project substation(s), roads, retention basins, etc.) located in southern Imperial County, California. A fundamental challenge posed by solar energy is that peak supply does not consistently coincide with peak demand times (e.g., 5:00 – 9:00 p.m.). Energy storage is a rapidly developing technology that can help balance supply and demand by capturing and storing renewable energy generated during daylight hours for peak evening demand. Energy storage, where available, reduces reliance on fossil fuels and furthers California's RPS policies by providing for better integration of locally-sourced solar and wind generation and RPS requirements.

The ICPDS Department received the following applications submitted by the Applicant dated December 28, 2017, January 8, 2018, July 5, 2018, July 31, 2018, August 28, 2018, January 22, 2019.

- Amendment (GPA#17-0006) to the Imperial County General Plan for amendment of the Renewable Energy & Transmission Element to create an Island Overlay for the Project Site;
- Zone Change (ZC#17-0007) to add the RE Overlay Zone to the Project Site;
- Parcel Map (PM#02478) to fix the existing inconsistency with the legal and physical boundary of the SW ¼ Section of the Project Site (APNs: 052-170-039-000 and 052-170-067-000), including APN 052-170-030 to the north of the Project Site as part of the Parcel Map;
- Five CUPs (CUP#17-0031, CUP#17-0032, CUP#17-0033, CUP#17-0034 and CUP#17-0035) to develop solar energy generating systems including potential energy storage on lands zoned A-2, A-2-R, and A-3 per Title 9, Division 5: Zoning Areas Established, Chapter 8, Sections 90508.02 and 90509.02;
- One CUP (CUP#18-0001) to develop energy storage as a component of solar on lands zoned A-2 and A-3 per Title 9, Division 5: Zoning Areas Established, Chapter 8, Sections 90508.02 and 90509.02 (A-2 & A-3). Said energy storage would be removed at the time of removal of associated solar facility;

- Variance (V#17-0003) for power pole structures that are over 120 feet in height in the Project Area including the existing Drew Switchyard. With approval of the Variance, the proposed structures could be up to 180 feet in height; and
- Up to five Lot Tie Agreements to hold some or all of the parcels that are part of the Project together as a single parcel in order to reduce/eliminate the setbacks for interior property lines of parcels that are part of the Project and adjacent to one another.
- A Development Agreement between the County and the Applicant to enable and control a phased build-out of the Project that is capable of meeting changing market demands by authorizing initiation of the CUP or CUPs anytime within a 10-year period. Pursuant to the terms of the Development Agreement, thereafter, the CUPs would be valid for the remaining period of 40 years from the date of the CUP approval. The requested Development Agreement would provide flexibility to allow the start of construction to commence for up to 10 years after the CUPs are approved.

The Project will use PV technology to convert sunlight directly into direct current (DC) electricity. The process starts with photovoltaic cells that make up photovoltaic modules (environmentally sealed collections of photovoltaic cells). PV modules are generally non-reflective. Groups of photovoltaic modules are wired together to form a PV array. The DC produced by the array is collected at inverters (power conversion devices) where the DC is converted to AC. The voltage of the electricity is increased by a transformer at each power conversion station to a medium voltage level (typically 34.5 kilovolts (kV)). Medium voltage electric lines (underground and/or overhead) are used to collect the electricity from each medium voltage transformer and transmit it to the facility substation(s), where the voltage is further increased by a high voltage transformer to match the electric grid for export to the point of interconnection at the Drew Road Switchyard. Disconnect switches, fuses, circuit breakers, and other miscellaneous equipment will be installed throughout the system for electrical protection and operations and maintenance purposes.

This EIR is being prepared to analyze the potential environmental impacts of the Project and fulfill the requirements of the California Environmental Quality Act (CEQA).

The following is a list of key public benefits that are fundamental to the Project's objectives:

- To create significant lease revenue for Imperial Irrigation District ("IID") as the property owner, a public agency, which will benefit the citizens of Imperial County.
- To support the Imperial County General Plan renewable energy policies and objectives.
- To locate the Project at a location along the existing transmission system which has available capacity to deliver electricity to major load centers in California.
- To meet the terms and requirements of any Power Purchase Agreement (PPA) and Large Generator Interconnection Agreement ("LGIA") that the Applicant has or may enter into and that require it to be interconnected directly to the CAISO grid at the existing Drew Switchyard.
- To deploy a technology that is safe, readily available, efficient, and environmentally responsible.
- To generate power, and store energy in an efficient manner and at a cost that is competitive in the renewable market on sites controlled by the applicant.
- To provide an additional source of renewable energy to assist the State of California in achieving and exceeding the RPS.
- To maximize local construction jobs for a variety of trades thereby helping maximize the reduction of unemployment in the construction sector.

- To locate the Project in an area that ranks among the highest in solar resource potential in the nation, as measured by the CEC.
- To minimize potential impacts to aesthetics, health and safety and other potential environmental impacts:
  - o Locating the Project on disturbed land.
  - o Grouping or collocating the Project's proposed electrical interconnection facilities with existing or proposed electrical interconnection facilities (consistent with County conditions on similar solar generation projects), to the extent that such grouping/collocation can be accommodated.
  - o Utilizing existing infrastructure (switchyards, transmission lines, roads, and water sources) where feasible to locate the project proximate to existing electric interconnection and transmission systems in Imperial County with capacity to deliver electricity to major load centers in California.
- To diversify Imperial County's economic base.
- To provide tax revenue through sales, use and property taxes generated by development within Imperial County.

2.1.2 SITE LOCATION

The proposed Project site is located on six parcels (APNs 052-170-039-000, 052-170-067-000, 052-170-031-000, 052-170-032-000, 052-170-056-000, and 052-170-037-000) approximately 6.5 miles southwest of the City of El Centro, California and 7.5 miles directly west of Calexico, California. The geographic center of the Project roughly corresponds with 32° 41' 13" North and 115° 40' 8" West, at an elevation of 19 feet below sea level. The Project site is generally located south of Kubler Road, east of the Westside Main Canal, north of SR 98, and west of Pulliam Road.

Figure 2.0-1 depicts the regional location of the Project. **Figure 2.0-2** shows the Project site and surrounding area. **Figure 2.0-3** is a conceptual phasing configuration of the Project. **Figure 2.0-4** is a site plan showing the layout of the Project and its various components.

2.1.3 OWNERSHIP

The property is owned by the IID. Drew Solar, LLC will lease the property for the construction, operation and decommissioning of the facility.

2.1.4 PROJECT CHARACTERISTICS

A. EXISTING ON-SITE USES AND SURROUNDING USES

Figure 2.0-3 shows the boundary of the Project site and the six parcels which total approximately 855 gross and 762.8 net farmable acres of lands that have been used for agriculture. **Table 2.0-1** provides the Assessor's Parcel Numbers (APNs), approximate acreage, zoning and current use of each parcel that comprise the Project site.

The Project site is located in the southwestern portion of Imperial County. There are several other approved/built solar projects in the immediate vicinity surrounding the Project site. The other projects include Centinela Solar, the Mount Signal and Calexico Solar projects, Campo Verde Solar, Wistaria Ranch Solar and Imperial Solar Energy Center South. The Project is surrounded on two sides by the existing Centinela Solar project and is adjacent to the existing Drew Switchyard, which the majority of the projects in the area interconnect to. Besides the existing solar farms in the area, the rest of the Project vicinity is agricultural with very few residences and agricultural buildings.

B. GENERAL PLAN AND ZONING DESIGNATIONS

The Imperial County General Plan Land Use Element designates the Project site as "Agriculture" (refer to Figure 4.2-1 in Section 4.2, Land Use). As shown in **Table 2.0-1**, lands on which the Drew Solar Project is

proposed are currently zoned A-2 (General Agricultural Zone), A-2-R (General Agricultural Zone/Rural Zone), and A-3 (Heavy Agricultural) (refer to Figure 4.2-2 in Section 4.2, Land Use). Solar energy electrical generators, electrical power generating plants, substation(s), and facilities for the transmission of electrical energy are allowed as conditional uses in Agricultural zones (Land Use Ordinance, Title 9, Division 5, Sections 90508.02 and 90509.02).

TABLE 2.0-1
SOLAR FIELD SITE PARCELS BY CUP

APN#	CUP#	Phase	Net Acres	Gross Acres	Zoning	Current Use
052-170-039-000	17-0035	5	69.8	80.93	A-2 & A-3	Farmed for flat crops
052-170-067-000	18-0001	5	67.2	72.04	A-2	Farmed for flat crops
052-170-031-000	17-0034	4	157.1	168.61	A-2 & A-2-R	Farmed for flat crops
052-170-032-000	17-0033	3	152.2	178.07	A-2-R	Farmed for flat crops
052-170-056-000	17-0031	1	157.9	168.31	A-2	Farmed for flat crops
052-170-037-000	17-0032	2	158.6	176.24	A-2 & A-2-R	Farmed for flat crops

Sources: Drew Solar 2018a.
Notes: A-2 = Agricultural; General A-2-R = General Agricultural Rural Zone; A-3 = Agricultural, Heavy

The Project is processing a Parcel Map to fix the existing inconsistency with the legal and physical boundary of the SW ¼ Section of the Project site (APNs: 052-170-039-000 and 052-170-067-000), including APN 052-170-030-000 to the north of the Project site as part of the Parcel Map. In doing so the net farmable acreage of the Project site will remain the same (762.8 net acres), and the gross acreage will increase from 844.2 gross acres to approximately 855 gross acres once the Parcel Map is recorded.

The Development Agreement would enable the CUPs to be valid for a total of 40 years with commencement of construction starting any time within 10 years of CUP approval. At the end of the useful life of the Project, the solar facility would be decommissioned and reclaimed to its original condition.

C. PROJECT COMPONENTS

Each of the components of the proposed Project is described in detail below and illustrated in **Figure 2.0-4**. The components would be installed as part of construction, in use during operation, and removed and decommissioned as part of reclamation.

The net electrical output of the proposed Project is anticipated to be approximately 100 megawatts alternating current (MWAC). The actual net electrical output of the Project will depend upon the technology selected and final design and layout. The design and construction of the buildings, solar arrays (panels, etc.), energy storage facilities, and auxiliary facilities will be consistent with County building standards.

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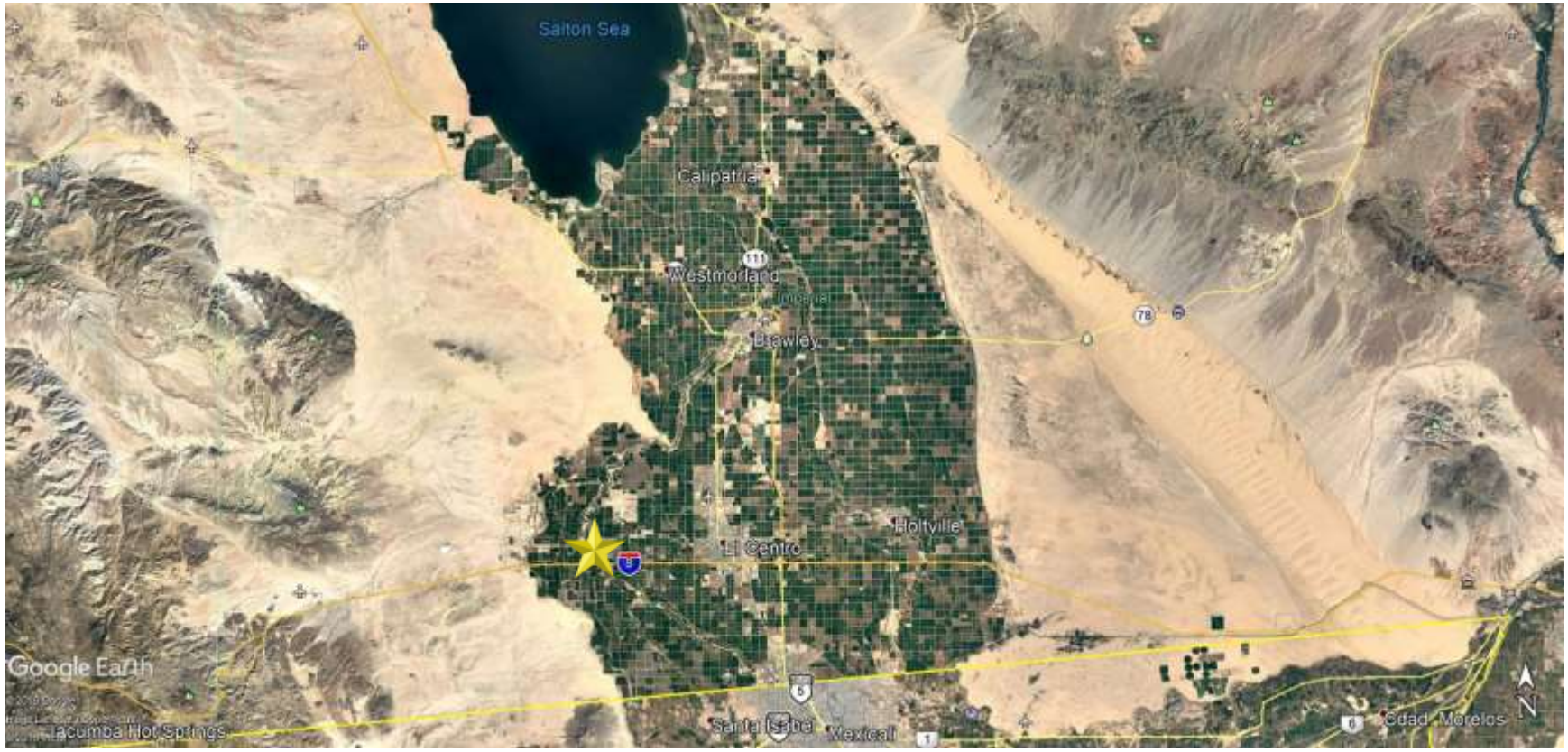
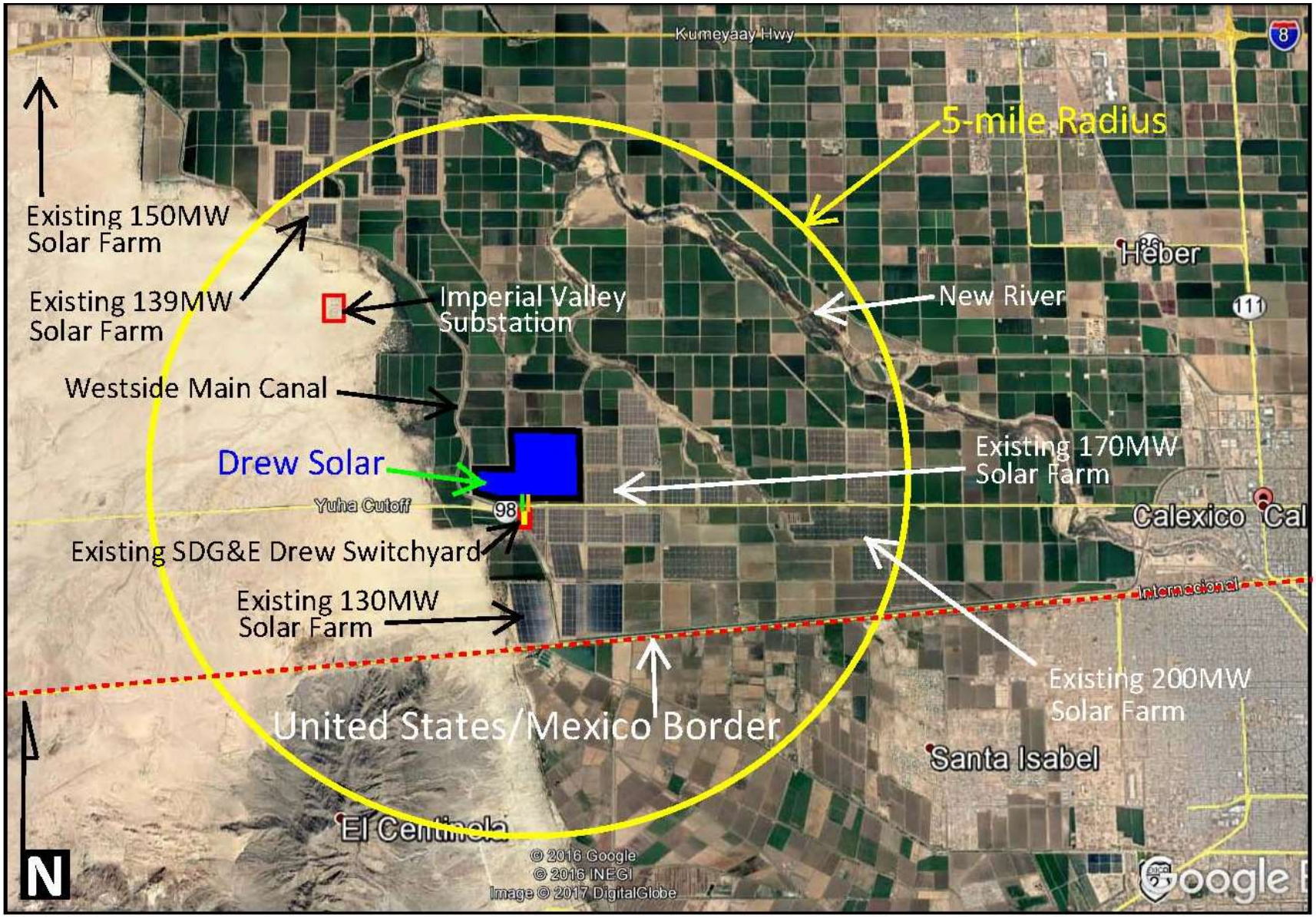


Source: Google Earth 2018.

FIGURE 2.0-1
REGIONAL LOCATION MAP



Source: Drew Solar 2018a.

FIGURE 2.0-2
PROJECT VICINITY MAP

FIGURE 2.0-3
PROJECT PHASING MAP

Source: Drew Solar 2018a.

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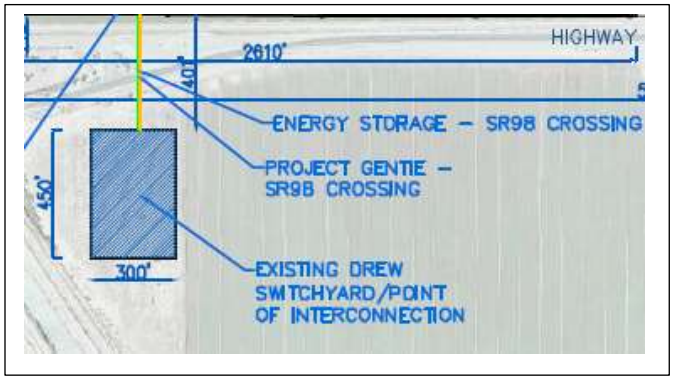
Source: Drew Solar 2018a.

FIGURE 2.0-4
PROJECT SITE PLAN

Solar Energy Generation Component. This component includes the construction, operation, and decommissioning of the five proposed solar energy generation parcels generation phases including the solar generating and collecting equipment, Operation and Maintenance building(s) and associated parking, on-site roads, driveways on County roads and SR 98, improvements to County roads, project electrical facilities crossing IID canal/drain rights-of-way, connections to IID canals for raw water service, raw water/fire water storage, water filtration buildings and equipment, treated water storage, storm water retention basins and connection to IID drains, equipment control buildings, septic systems, perimeter fencing, connections to IID electrical distribution system, connections to dry utility distribution facilities, substation(s), and supporting transmission and Gen-Tie facilities. This component could be built out under either the Full Build-out Scenario or Phased Build-out Scenario.

Energy Storage Component. This component includes the proposed construction, operation, and decommissioning/reclamation of energy storage as a component of solar on lands zoned A-2 and A-3. Per County requirements, energy storage could be constructed at a ratio of 2 MW of storage for every one MW of solar generation capacity.

Drew Switchyard and Gen-Tie Lines Component. This component includes the construction, operation and decommissioning of required improvements at the existing Drew Switchyard facility and supporting transmission and the two Gen-Tie lines extending from the south end of the Project site across SR 98 into the Drew Switchyard located on APN 052-190-039-000-000 in order to accommodate the Project's proposed utilization of the facility. The two Gen-Tie lines are proposed to extend approximately 400 feet south from the Project site across Drew Road and SR 98. One gen-tie is for solar generation and one is for energy storage. Both gen-tie lines may be underground or one may be underground and one above-ground. The Project may bore under SR 98 to connect to the Drew Switchyard or a new pole may be constructed on the existing Centinela Solar Project on APN 052-190-041-000 and its line cutover into the new bay constructed by Drew Solar in the existing Drew Switchyard in order to minimize power line crossings. This component could be built out under either the Full Build-out Scenario or the Phased Build-out Scenario. Therefore, phased-buildout is not analyzed separately for this component.



Solar Technology

The Project may include only one PV technology or a combination of various PV technologies, including but not limited to crystalline silicon-based systems, thin-film systems, and perovskites. Concentrated photovoltaic (CPV) technology is not proposed.

When sunlight strikes a PV module, the energy absorbed is transferred to electrons in the atoms of the semiconductor causing them to escape from their normal positions and become part of the current in an electrical circuit. The PV modules convert the sunlight directly into low-voltage Direct current (DC) electricity that is subsequently transformed to alternative current (AC) electricity through an inverter. The system only operates when the sun is shining during daylight hours. The system operates at peak output when the sunlight is most intense, though it also produces power in low light conditions.

Fixed-Tilt and Tracker Structures

Depending on the selected manufacturer for the PV modules, the modules will be mounted on fixed-tilt or single-axis tracking structures. The modules will be grouped in nominal 1 to 4 MWAC arrays. Fixed tilt arrays will be oriented in east-west rows and will face in a generally southern orientation with a tilt angle between 10 and 35 degrees to maximize the amount of incidental solar radiation absorbed over the year. Single-axis trackers typically

rotate ±60 degrees (degree zero is horizontal) along a nominally north-south axis to track the sun's movement throughout the day. Structural support elements will be constructed of corrosion-resistant steel, aluminum, or equivalent members that are attached to circular piers or I-beam posts that will be driven into the prepared base grade of the Project site. The solar array field is arranged in groups called "blocks."

Figure 2.0-5 depicts a typical array layout. **Figure 2.0-6** is a graphic showing tracker details. The entire array block is connected to an inverter and transformer station to convert the current from DC to AC and step up the voltage to a higher voltage which is more efficient for transmitting power to the project substation(s).

Inverters and Pad-mounted Transformers

At the center of each array is a power conversion station where inverters take the DC power output from the PV modules and convert it to AC power. **Figure 2.0-7** provides an elevation of a typical inverter station. The adjacent pad-mounted transformer steps the voltage up to a medium voltage level. The medium voltage outputs from each of the pad-mounted transformers are collected together in combining switchgear located at discrete locations on the Project site. The medium voltage output from the combining switchgear will be connected to the Project substation(s) where it will then be stepped up to 230-kV for export to the grid. The Project's two Gen-Tie lines will interconnect to the existing Drew Switchyard. Both gen-tie lines may be underground or one may be underground and one above-ground.

Substations and Switchyard

An on-site substation will step-up the voltage from the collection level voltage to 230-kV for each phase of the Project. Breakers, buswork, protective relaying, Supervisory Control and Data Acquisition (SCADA), and associated substation equipment will be constructed on the Project site. The communication system may include above or below ground fiber optic cable or microwave tower. The Project will be interconnected to the regional transmission system via the Drew Switchyard from the on-site substation(s)/switchyard(s) via the two Gen-Tie lines described in this project description. **Figure 2.0-8** depicts a typical substation configuration.

Transmission Interconnection Facilities

The Project plans to connect to San Diego Gas & Electric's (SDG&E) Imperial Valley Substation by way of the existing Drew Switchyard. In order to minimize impacts to the environment, the Project will utilize the existing Drew Switchyard as its point of interconnection. As illustrated in **Figures 2.0 -2, 2.0-3, 2.0-4** and **2.0-9**, the Project's two Gen-Tie lines are proposed to extend approximately 400 feet south from the south end of the Project site across Drew Road and SR 98 into the existing Drew Switchyard located on APN 052-190-039-000. Both gen-tie lines may be underground or one may be underground and one above-ground. If undergrounded, the Project may have twin borings under SR 98 to connect to the Drew Switchyard. Borings would be advanced using directional drilling at varying depths in a curved shape from entry point to exit point (Dessert pers. comm., 2019).

For the Solar Generation Gen-Tie line, a new pole may be constructed on the existing Centinela Solar Project on APN 052-190-041-000 and its line cutover into the new bay constructed by Drew Solar in the existing Drew Switchyard in order to minimize power line crossings.

For the Energy Storage Gen-Tie line, several on-site poles may be constructed to extend the Gen-Tie to the Southwest ¼ Section of the Project Area. This will require vehicles and equipment to work at each tower location as well as to utilize pull sites along the two Gen-Tie lines.

The structures for the two 230-kV Gen-Tie lines are expected to be similar to those shown in **Figure 2.0-10**. If the Project is able to collocate with other facilities in the area, the Project may construct a new pole to the east of the existing pole that is on the northerly side of the existing Drew Switchyard in order to reduce Gen-Tie line crossings.

Whether or not the Project is built in phases or at one time, the use of collector lines to collect electricity from the array fields to the Project substation(s) would remain similar. Skid mounted enclosed switchgear would be used within panel fields/phases to collect and transmit the electricity from the panel array fields to the Project substation(s).

Operations and Maintenance (O&M) Building Complex

The Operations and Maintenance (O&M) Building Complexes may contain administrative offices, parts storage, a maintenance shop, plant security systems, a site control center (**Figure 2.0-11**), and plant monitoring equipment. A specific design for the building(s) has not yet been selected as the technology utilized in utility scale solar energy production continues to improve dramatically at a rapid pace. The final layout will be based on the technology selected. The building(s) may have exterior lighting on motion sensors and will have fire and security alarms. The building(s) will be located on a graded area(s) with adjacent worker parking. The parking lot will be surfaced with per Imperial County Department of Public Works (ICDPW) Engineering Design standards and have a handicapped parking space. Additionally, the access road/driveway to the parking lot would be surfaced per ICDPW Engineering Design standards.

The Project will collect wastewater from sanitary facilities such as sinks and toilets in the O&M building(s). This waste stream will be sent to an on-site sanitary waste septic system and leach field to be installed in compliance with standards established by Imperial County Environmental Health Services. Alternatively, the Project may be designed to direct these waste streams to an underground tank for storage until it is pumped out, on a periodic or as-needed basis, and transported for disposal at a licensed waste treatment facility.

During periodic major maintenance events, portable restroom facilities may be provided to accommodate additional maintenance workers. An on-site water treatment facility may be constructed. Each phase may have its own O&M Building Complex, and Phase 5 may have two O&M Building Complexes.

Energy Storage

The Project as proposed includes an energy storage component and each phase may have its own energy storage component. The field of energy storage is rapidly advancing; thus, a single technology or provider has not been selected for the energy storage portion of the Project. The storage components of the Project will utilize storage technologies that operate based upon the principles of potential including but not limited to compressed air or pumped storage, lithium (ion, oxygen, polymer, phosphate, sulphur), Nickel Metal Hydride, Nickel Cadmium, Lead Acid, antiperovskites or other batteries, including but not limited to solid state batteries that may be approved for commercial use within the United States of America, and flywheels. The storage components may be centralized and located adjacent to the substation or switchgear, or alternatively, the energy storage components may be distributed throughout the facility adjacent to individual power conversion centers. The storage components would be housed in a warehouse type building (**Figure 2.0-12**) or alternatively in smaller modular structures such as cargo shipping containers (**Figure 2.0-13**). The Project may store energy generated onsite as well as energy from the CAISO grid. Whether storage components are centralized or distributed throughout the site, the Project's overall construction and operational impacts will remain the same because duration of construction and the construction activities would be the same under each development scenario, and all activities would occur within the Project disturbance area. The Renewable Energy and Transmission Element identifies public benefits associated with renewable energy. As demonstrated in **Table 2.0-2**, the Project with energy storage incorporated contributes to and enhances each of the eight public benefits associated with renewable energy generation.

TABLE 2.0-2
ENERGY STORAGE AND THE PUBLIC BENEFITS ASSOCIATED WITH RENEWABLE ENERGY AND TRANSMISSION

Public Benefits of Renewable Energy and Transmission	How Energy Storage Achieves the Benefit
Fiscal benefit of sales tax revenues from the purchase of equipment, goods and services.	Equipment purchases related to the design, construction, and operations of energy storage facilities will generate additional sales tax revenues.
Lease benefits to IID, a public agency.	The Project will be built on land owned by the local public utility, IID.
Social and fiscal benefits from increased economic activity and local employment opportunities that do not threaten the economic viability of other industries	The construction and operational phases of the Project will generate increased economic activity by bringing new jobs to the local community.
Improvements in technology to reduce costs of electrical generation	• Energy storage enables better energy balancing and great grid reliability by solving the discrepancy between solar energy's peak demand and peak supply times, benefitting both the region and the state in achieving critically needed energy balancing. • Energy balancing, in turn, levels the cost of energy. By storing excess energy generated during daylight hours, energy storage would increase the supply of energy available during peak demand, thereby offsetting some of the higher costs of energy consumption generally associated with peak nighttime demand.
Reduction in potential greenhouse gases by displacing fossil-fuel-generated electricity with renewable energy power which does not add to the greenhouse effect	Energy storage will help the region and the State achieve greenhouse gas reduction targets by allowing the CAISO to procure electricity from renewable resources held in storage rather than from fossil-fuel sources.
Contribution towards meeting the State of California's RPS	Aid California in meeting its RPS requirements by contributing to the supply of renewable electricity for CAISO's procurement.
Minimization of impacts to local communities, agriculture and sensitive environmental resources	Energy storage leverages existing renewable energy resources and reduces the need for fossil fuel-derived sources of electricity, thus reducing potential air quality and GHG emissions. The Project is sited on previously disturbed agricultural land to minimize impacts to sensitive environmental species. The Project site will be restored to farmable conditions at the end of the life of the Project.

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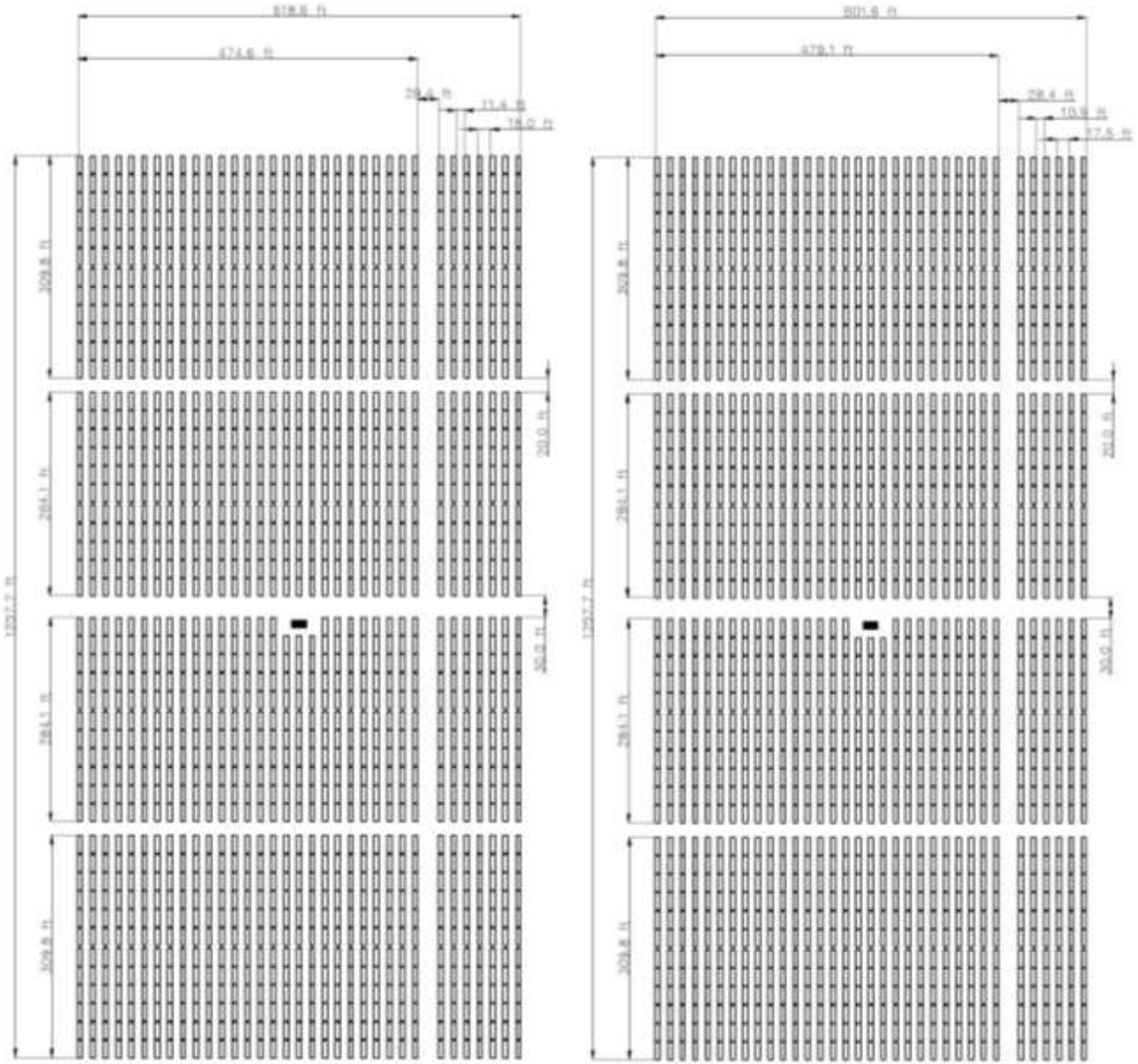
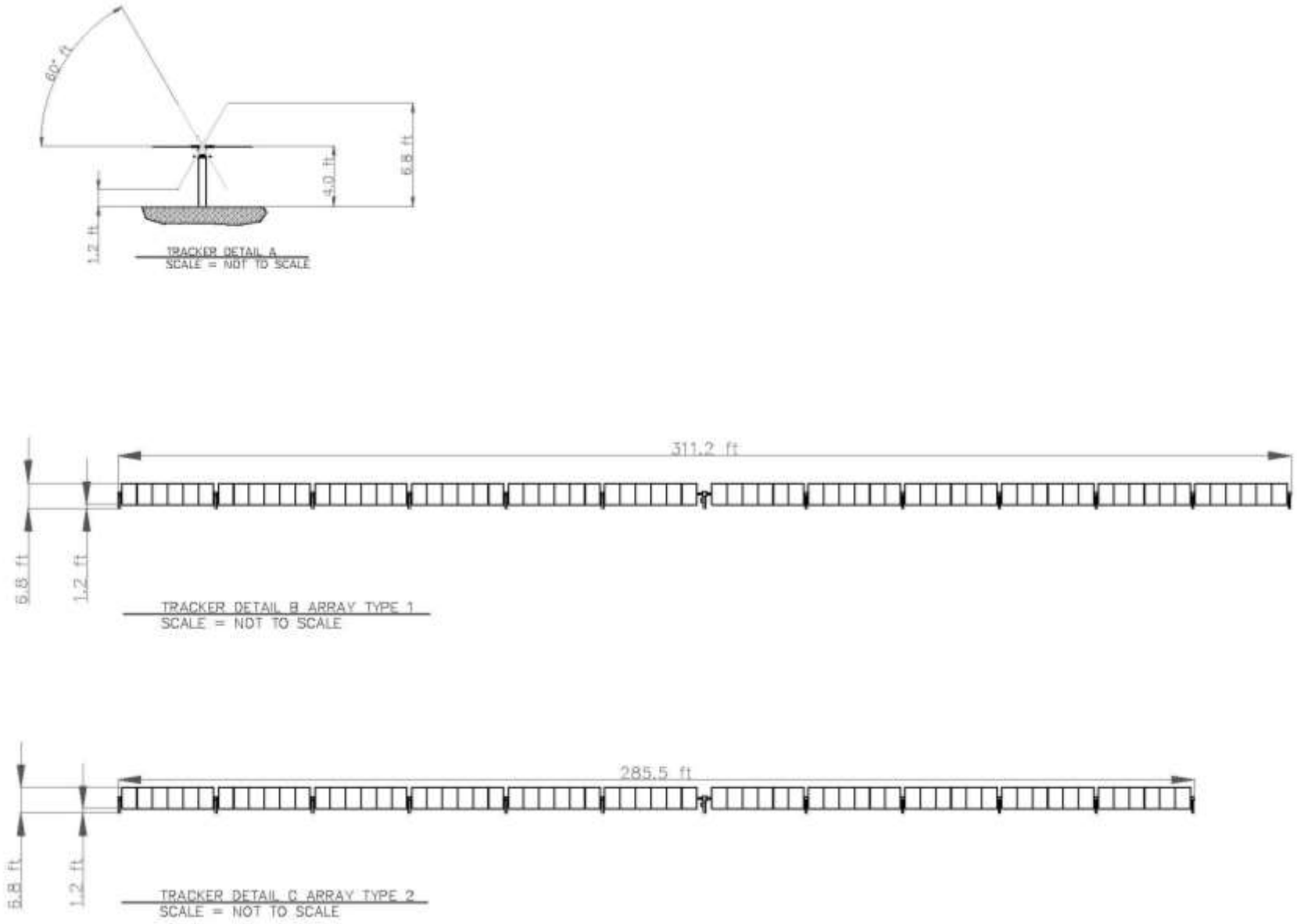


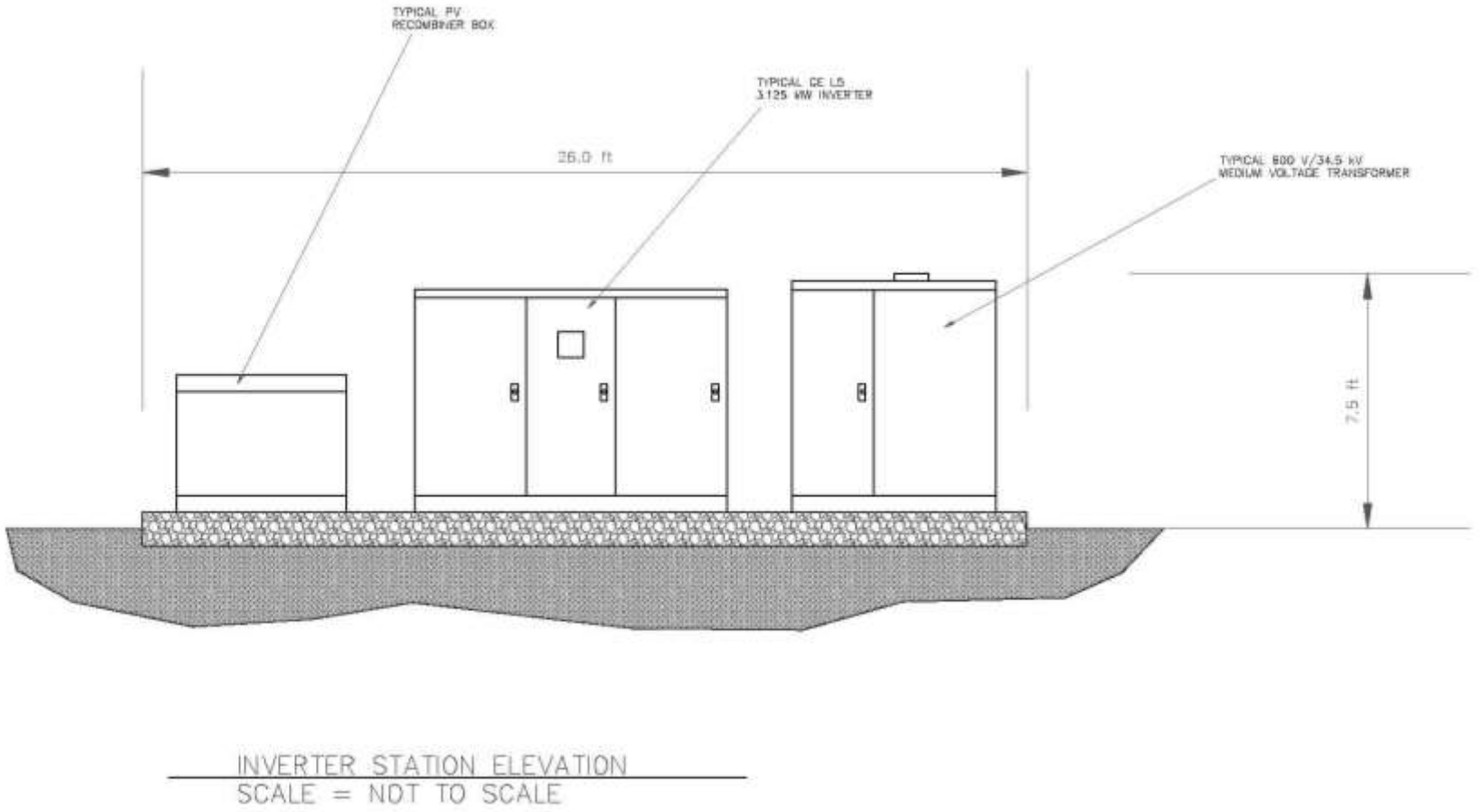
Source: Revolution Labs 2017.

FIGURE 2.0-5
TRACKER BLOCK DETAILS



Source: Revolution Labs 2017.

FIGURE 2.0-6
TRACKER DETAILS



Source: Revolution Labs 2017.

FIGURE 2.0-7
INVERTER STATION ELEVATION

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Source: Drew Solar 2018a.

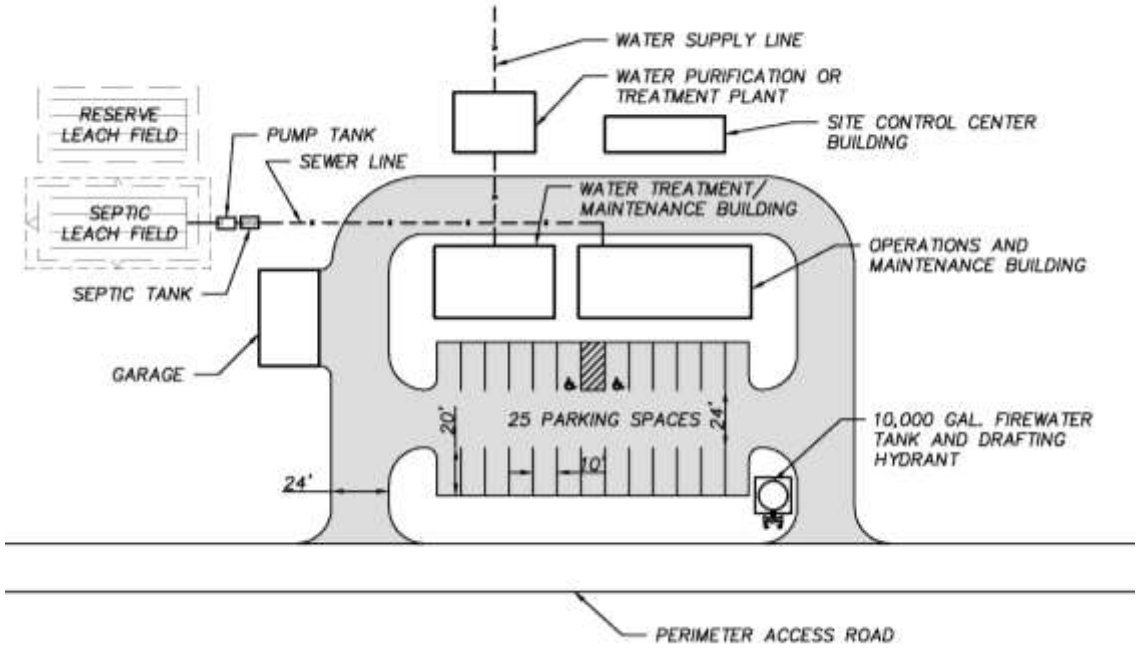
FIGURE 2.0-8
TYPICAL PROJECT SUBSTATION

Source: Drew Solar 2018a.

FIGURE 2.0-9
ABOVE-GROUND GEN-TIE LINE TO EXISTING DREW SWITCHYARD

Source: Drew Solar 2018a.

FIGURE 2.0-10
TYPICAL MONOPOLE STRUCTURE



Source: Fuscoe 2017.

FIGURE 2.0-11
OPERATIONS AND MAINTENANCE COMPLEX

Source: Drew Solar 2018a.

FIGURE 2.0-12
BATTERY ENERGY STORAGE SYSTEM BUILDING

Source: Drew Solar 2018a.

FIGURE 2.0-13
BATTERY ENERGY STORAGE SYSTEM CONTAINERS

Additional benefits of energy storage include the following:

Energy storage will likely reduce blackouts and contribute to grid reliability. Customer demand on the grid is highest typically during the summer months, when energy regulators are most concerned about the possibility of brownouts and blackouts. Energy storage will increase the region's energy storage capacity by establishing energy reserves that can be used during this high demand period. Energy storage is a cost-effective and environmentally friendly technology to address ramp, regulation, capacity, ancillary services, system reliability and power quality because smoothing the power supply and providing a spinning reserve are functions usually performed by costly burning of fossil fuels. Further, energy storage can respond rapidly to increased demand / decreased supply (e.g., when clouds block the sun), whereas a conventional steam or gas-fired generator takes much longer and can result in supply deficits during the ramp-up period or when excess energy is kept on the grid and facilities are kept on standby to avoid excessive ramping times. This can make a significant difference when trying to correct frequency issues or meet reliability standards established by the North American Electric Reliability Corporation.

The large amount of intermittent renewable energy located at the Imperial Valley Substation has the potential to create challenges for CAISO and IID due to fluctuating weather conditions. For example, clear skies will generate significant solar resources (more than 1,000 MW) to the Imperial Valley Substation, but, cloud cover could significantly and suddenly reduce that generation to 100 MW. These variations have the potential to disrupt grid reliability. The Project's energy storage component would be capable of storing enough energy to discharge and maintain the 1,000MW output even during extended cloud cover.

The Applicant is proposing to install the energy storage facilities on with the Project site given its close proximity to the existing Drew Switchyard. This location is ideal to help accommodate the high levels of intermittent solar energy flowing through the existing Drew Switchyard and thus minimizing the risks of grid instability and outages.

Energy storage promotes stable electricity prices. Energy storage will enhance the Project's solar generation facility by providing for storage of energy generated during peak supply for use during peak demand periods, thus reducing the need to call up more expensive gas peaker plants to meet peak demand. Energy storage coupled with solar will allow the Project to supply stable electricity prices over the long term by eliminating potential fuel price volatility associated with use of fossil fuels, thus promoting stable electricity prices.

Energy Storage maximizes regional investments in transmission infrastructure. Energy storage will help manage transmission congestion, which in turn will help increase overall load carrying capacity. Further, by reducing the demand on transmission and distribution infrastructure during peak generation hours, energy storage will help extend the life of existing transmission infrastructure and defer repair and replacement costs that are often passed on to the public through increased rates.

Site Access / Traffic and Circulation

There are County maintained roads providing access throughout the Project site. Access to the Project site will be from Kubler Road, Drew Road, Pulliam Road, and SR 98. Access to components of the solar generation and energy storage facility will be controlled through security gates at several entrances. Multiple gate restricted access points will be used during construction, operation and decommissioning. Final driveway locations will be based on the access points in the final and approved grading and improvement plans for the Project.

Roadway and IID Crossings

The Project will include electric and vehicular crossings of State facilities, IID facilities and County facilities. Due to the nature of the Project and the rapidly changing technology, the exact locations of the crossings

are not known at this time. For the purpose of the environmental analysis, the EIR and underlying documentation assume wherever an Imperial Irrigation District (IID) facility (drain, irrigation canal, electric line, etc.) or County or State facility (road, etc.) intersect the Project, an electric or vehicular access crossing will occur. The Project crossings will not interfere with the purpose or continued use of these Agencies' facilities. For instance, where a drain flows, the Project crossing or access point will still allow the drain to flow. As required by IID, the Project may be required to make minor improvements to on-site drains. IID requires solar projects to improve existing drain outflow pipes. This typically involves installation of new drain outflow pipes to reduce erosion within the drains (Dessert pers. comm., 2018).

Electric Service

Operational electric service may be obtained from IID for the O&M building(s) and auxiliary loads. Temporary electric service will be obtained for primary construction logistical areas. Generator power may be utilized for temporary portable construction trailer(s), construction and/or for decommissioning.

Fire Control

The PV modules and ancillary equipment are constructed of fire-resistant material. Additionally, routine weed abatement and landscape maintenance will occur. As such, the Project represents a negligible increase in fire potential.

However, a Fire Management Plan will be prepared in accordance with Fire Department requirements for access and will not impact the ability to provide emergency access to the Project site. Access to nearby properties will not be hindered or restricted by the Project.

D. PROJECT CONSTRUCTION

Construction Workers

The Project would generate construction jobs. The number of workers on the Project site is expected to vary over the construction period. However, the number of construction workers onsite is expected to average up to 250 workers daily.

Typical construction work hours are expected to be from 7:00 am to 7:00 pm Monday through Friday, and 9:00 am to 5:00 pm on Saturdays. The schedule may change based on a need to comply with various biological mitigation measures, overall construction timing, or worker safety such as avoidance of excessive midday heat. Any deviation from construction work hours allowed in the General Plan Noise Element would require Planning Director approval.

Construction Duration

Under the Full-Build-out Scenario, which assumes the simultaneous construction of all proposed generation and storage facilities, construction is expected to continue for approximately 18 months. The Phased CUP Scenario is discussed in the following section. The construction equipment, materials, and labor involved in building the Project remain similar whether the project is constructed in phases over time or built out over an 18-month period. The 18-month buildout of the entire Project at once results in greater intensity of labor and equipment during the construction period.

Phasing

The Phased CUP Scenario refers to the development scenario where the Project is constructed in phases by individual CUP (i.e. CUP#17-0031) or a group of CUPs (i.e. CUP#17-0031, CUP#17-0035 and CUP#18-0001) as appropriate to accommodate market demand. This scenario also refers to the two Gen-Tie lines, electrical collector lines and other on-site and off-site ancillary facilities proposed for development as part

of the Project. The generation facilities may be operated independently and the generation from each facility may be marketed to different purchasers. The phases shown on the phasing plan (**Figure 2.0-3**) are conceptual. The phases may be aggregated during construction and operations/maintenance so that multiple phases could be built at one time. All phases are anticipated to utilize the two proposed Gen-Tie lines that extend from the south end of the Project site across Drew Road and SR 98 into the existing Drew Switchyard located on APN 052-190-039-000. Both gen-tie lines may be underground or one may be underground and one above-ground. The Project may bore under SR 98 to connect to the Drew Switchyard or a new pole may be constructed on the existing Centinela Solar Project on APN 052-190-041-000 and its line cutover into the new bay constructed by Drew Solar in the existing Drew Switchyard in order to minimize power line crossings. The phases are anticipated to use the main Project switchyard; however, each phase may independently construct its own up to 230-kv step-up transformer and switchyard. The construction of individual step-up transformers and substations would not change the Project's overall environmental impacts, as compared to use of a main Project substation because each scenario would require the use of similar construction equipment and activities and occur within the Project disturbance area. **Table 2.0-3** provides a list of the conceptual phases along with the APNs and approximate acreage.

TABLE 2.0-3
PROJECT PHASING - NET AND GROSS ACRES

APN	Net Acreage	Gross Acreage
Phase 1		
052-170-056-000	157.9 Acres	168.31
Phase 2		
052-170-037-000	158.6 Acres	176.24
Phase 3		
052-170-031-000	152.2 Acres	168.61
Phase 4		
052-170-032-000	157.1 Acres	178.07
Phase 5		
052-170-039-000	69.8 Acres	80.93
052-170-067-000	67.2 Acres	72.04

Source: Drew Solar 2018a.

Note: The Project is processing a Parcel Map to fix the existing inconsistency with the legal and physical boundary of the SW ¼ Section of the Project site (APNs: 052-170-039-000 & 052-170-067-000), including APN 052-170-030-000 to the north of the Project site as part of the Parcel Map. In doing so the net farmable acreage of the Project site will remain the same (762.8 net acres), and the gross acreage will increase from 844.2 gross acres to approximately 855 gross acres once the Parcel Map is recorded.

Temporary Construction Facilities

During construction, temporary facilities will be developed on-site to facilitate the construction process. These facilities may include construction trailers, temporary septic systems or holding tanks, connections to adjacent IID raw water canals, parking areas, material receiving / storage areas, water storage ponds, construction power service, recycling / waste handling areas, and others. These facilities will be located at the construction areas designated on the final site plan(s).

Laydown Areas

At full build-out, most of the Project site will be disturbed by construction of the Project. Temporary construction lay down, construction trailers, and parking areas will be provided within the Project site. Due to the size of the Project site, the solar field lay down areas may be relocated periodically within the solar field acreage as the project is built out in phases.

Disturbance

TABLE 2.0-4
CONSERVATIVELY CALCULATED PROJECT DISTURBED ACRES

Property/Project Component	Disturbed Acres (gross)
Project Site	855
Project Gen-Ties	0.8
Access Roads	N/A
Drew Switchyard	0.5
Total Project Disturbance	856.3

Source: Drew Solar 2018a.

Grading and Drainage

Site preparation will be planned and designed to minimize the amount of earth movement required for the Project to the extent feasible. The hydrology design will be given first priority in order to protect the Project's facilities and adjacent facilities including any IID/County facilities from large storm events. It is the intent of the Project to support the panels on driven piles. Additional compaction of the soil in order to support the building and traffic loads as well as the PV module supports may be required and is dependent on final project engineering design.

The existing on-site drainage patterns will be maintained to the greatest extent feasible. It may be necessary to remove, relocate and/or fill in portions of the existing drainage ditches or delivery canals to accommodate the final panel layout for the Project. The final engineering design for these facilities will be reviewed by IID and the County to be sure that the purpose for the facilities (if still needed) will still be met.

Dust Control

Dust generated during construction would be controlled by watering and, as necessary, the use of other dust suppression methods and materials accepted by the Imperial County Air Pollution Control District (ICAPCD) or California Air Resources Board (CARB). During grading, actively disturbed on-site areas and unpaved roads would be watered at least three times a day as necessary to reduce fugitive dust emissions. In addition, speeds would be limited to 15-mile per hour (mph) speed during construction.

Water Use

During construction of the Project, water will be required for a variety of construction activities, including dust suppression, earth compaction, the creation of engineered fill, and concrete preparation. Construction-phase water demand will be greatest during site grading which will consist of disc and roll compaction over the site. An estimated total of 1,200 acre-feet of water will be used for the Project dust control and other construction activities during Project construction. An estimated 1,200 acre-feet of water will be used for decommissioning.

Construction Traffic

Daily trip generation during the construction of the Project would be from delivery of equipment and supplies and the commuting of the construction workforce. Deliveries of equipment and supplies to the Project site would also vary over the construction period but have the potential to range from 5 to 40 daily trips, averaging approximately 10 daily trips. Parking for Project-related vehicles will be provided onsite during construction. **Table 2.0-5** summarizes project construction trip generation.

TABLE 2.0-5
DREW SOLAR PROJECT- CONSTRUCTION TRIP GENERATION

Proposed Construction Related Traffic	ADT	6-7 AM		7-8 AM		4-5 PM		5-6 PM	
		IN	OUT	IN	OUT	IN	OUT	IN	OUT
Construction Workers on 4-10 Shift (75% of 250)[1]	282	141	0	0	0	0	0	0	141
Construction Workers on 5-8 Shift (25% of 250)[2]	94	0	0	47	0	0	47	0	0
Equipment and Construction Trucks (with PCE)[3]	60	3	3	3	3	3	3	3	3
Total Traffic During Peak Construction Period	436	144	3	50	3	3	50	3	144
Daily and Higher Peak Hour Used for Analysis	436	144	3					3	144

Source: LOS 2018. Notes: 1) Applicant estimates the 4 days at 10 hrs/day (4-10s) shift to include about 188 workers (75% of the total 250 peak work force) with about 25% carpooling (47) and riding with the 75% (141), thus the inbound is 141 trips and the ADT is 282. 2) Applicant estimates the 5 days at 8 hrs/day (5-8) shift to include about 62 workers (25% of the total 250 peak work force) with about 25% carpooling (15) and riding with the 75% (47), thus the inbound is 47 and the ADT is 94. 3) Approx. 10 daily trucks with a Passenger Car Equivalent (PCE) factor of 3 applied to each truck equals 60 ADT (10 trucks x 2 x 3 PCE = 60 ADT) that are anticipated to have a frequency of about 1 in and 1 out per hour for a peak period volume of 6 (with PCE).

The 4-10 shift workers typically arrive between 6 a.m. and 7 a.m. for meetings before construction activities start at 7 a.m., and depart sometime between 5pm and 6pm while the 8-5 shift workers typically arrive between 7am and 8am and depart between 4pm and 5pm.

Based on the expected trips generated, traffic on the local roads would increase during construction but impacts to current traffic patterns are anticipated to be minimal. With a phased Project, the total number of trips generated during construction would be about the same, but the number of daily trips would be reduced and the number of days to complete construction would be extended resulting in a decrease in intensity.

Storm Water

The Proposed Project would retain to the greatest extent feasible the existing drainage characteristics of the Project site. Existing low-lying areas which receive runoff will continue to do so in the proposed conditions. Shallow on-site retention basins will be utilized. Where on-site soils have the potential to infiltrate runoff, runoff will be infiltrated. Where infiltration is not feasible, runoff may be detained and slowly released to the IID Drain system such that the peak flowrate of runoff from the 100-year storm event in the proposed condition is equal to or less than it is in the existing condition.

Staging Areas

If the Project is constructed in phases, it is anticipated to be constructed in a counterclockwise manner starting with the parcel that is across the street from the existing Drew Switchyard. It is anticipated that any staging would take place within the parcel that is under construction.

Waste

Small amounts of trash would be generated during construction from packaging materials delivered to the Project site. Construction related waste would be transported to a local landfill authorized to accept this waste for disposal or an appropriate recycling center authorized to accept recyclable materials.

Hazardous Materials

Very little hazardous waste (waste oil and lubricants, spill clean-ups, etc.) is expected to be generated from the Project during construction and decommissioning. Fuel that may be used on site during construction and decommissioning would be stored in secondary containment. The Project will also be required to comply with State laws and County Ordinance restrictions which regulate and control hazardous materials. All hazardous materials onsite will be disposed of in accordance with the law, which may include recycling.

Possible energy storage systems include, but are not limited to: compressed air or pumped storage, lithium (ion, oxygen, polymer, phosphate, sulphur), Nickel Metal Hydride, Nickel Cadmium, Lead Acid, antiperovskites or other batteries. These technologies include materials that run the risk of overheating and catching fire if equipment is not operated properly. Potential hazardous material/fire issues are discussed further in Section 4.13.1, Fire Protection.

Sanitation

Portable toilets would be located on site during construction and sanitary waste would be removed by a local contractor.

Off-Site Construction Activities

The portion of the two Gen-Tie lines crossing the Caltrans right-of-way under or over SR 98 into the existing Drew Switchyard parcel would be approximately 400 feet in length. Both gen-tie lines may be underground or one may be underground and one above-ground. The Project may bore under SR 98 to connect to the Drew Switchyard or a new pole may be constructed on the existing Centinela Solar Project on APN 052-190-041-000 and its line cutover into the new bay constructed by Drew Solar in the existing Drew Switchyard in order to minimize power line crossings. A new bay will be constructed inside the existing Drew Switchyard as part of the Project Gen-Ties. Collector lines will cross Drew Road and IID drains and canals. Drive approaches will be constructed on Drew, Kubler, and Pulliam Roads as well as SR 98.

E. Operations and Maintenance

Once construction is completed, the Drew Solar Project will begin its operational phase.

Employees

Approximately two to six full-time workers will be employed to operate the solar generating facility. These personnel will perform maintenance and security functions.

Traffic

No change to current traffic patterns would result during Project operation. The Project site is expected to generate approximately 4 to 10 trips per day from maintenance and security personnel.

Security

To ensure the safety of the public and the facility, the property will be fenced, security lighting may be installed, and signs will be posted. Access to the Project site will be controlled, and gates will be installed at the roads entering the property. The fence will be monitored periodically to detect any intrusion into the property. The Project proposes an up to 7-foot chain link fence with 3-strand barb wire placed at the top, extending to a total of up to 8 feet. Landscaping and entry monumentation will be maintained at the entrance to the O&M building(s).

Lighting System

The lighting system will provide operation and maintenance personnel with illumination in both normal and emergency conditions. Lighting will be designed to provide the minimum illumination needed to achieve safety and security objectives and will be shielded and oriented to focus illumination on the desired areas, minimizing light spillover.

Water Use

The Project plans to secure water rights from the IID under the IID's Interim Water Supply Policy for Non- Agricultural Projects. In the event this isn't feasible, the Project will truck water to the Project site for operational purposes or procure water from IID's applicable water policy/program at that time.

Typical system configuration with two 10,000-gallon tanks and plant in building

The water used during operations will be used for domestic use and fire protection. Water is typically procured from IID via a long-term Water Supply Agreement with a service pipe connection to an adjacent IID raw water canal. The Project may also use water to wash the solar modules should it be determined to be beneficial to the Project. The Project anticipates a requirement of approximately 60 acre-feet per year during plant operation. Water for fire protection will be stored in a 10,000-gallon tank onsite (similar to that shown in the image above). Project operational water use will be significantly less than the estimated total of 1,200 acre-feet of water to be used during construction, and also significantly less than the estimated total of 1,200 acre-feet of water to be used for decommissioning.

Noise

The primary noise sources during operation of the Project are anticipated to be from inverter tracking motors and blowers (that are used to remove condensation from solar panels), which would be distributed throughout the facility.

Additional noise may be generated by equipment within the substation; typically, this includes switches, protection and control equipment, transformers, and the incoming transmission lines. The noise generated by transmission lines and switches has previously been analyzed to be 25 dBA at 50 feet. Transformers within the substation would generate noise levels similar to those at the inverters. Substation switches do not generate an audible noise, and circuit breakers (70 dBA at 65 feet) would not be a common noise source, as they would only operate for short periods of time during an emergency event in order to protect the switches and transformers within the substation.

Communications Systems

The Project will utilize telephone and internet services that will be provided via overhead or underground lines, microwave tower or via cellular service obtained from a local provider.

Waste

Some waste material would be generated during normal operations and would be hauled off-site. Sanitary waste generated during operations would go to project septic systems and/or periodically be pumped and hauled off site and disposed of by a licensed contractor.

The Applicant will provide appropriate training and supervision of on-site personnel throughout construction of all CUPs and regularly during operation of the project regarding management of materials and wastes and responding to hazardous releases or spills or other Project site emergencies. This training will include the procedures to follow during any Project site emergency, and appropriate reporting of spills, releases, or other emergencies to Imperial County, and local emergency service providers. Either directly or through its contractors, the Applicant will hire several personnel to oversee all aspects of a hazardous materials management plan and follow Best Management Practices (BMPs).

Panel Washing & Project Water Use

Solar panels may be washed on a periodic basis if it determined to be beneficial to the Project. Solar panels would be washed up to four times per year. Approximately 14 acre-feet of water per year of the 60 acre-feet of water per year required for Project operations and maintenance will be used for panel washing. Fire protection is estimated to be 1 acre-foot of water per year, sanitary water is estimated to be 5 acre-feet of water per year, dust suppression is estimated to be 35 acre-feet of water per year, and potable water is estimated to be 5 acre-feet of water per year.

Weed and Vegetation Management

Invasive / weedy species would be controlled and any non-invasive vegetation that re-establishes within the Project site would be controlled within the solar field. Vegetation growing within the boundaries of the Project site would be periodically removed manually and/or treated with herbicides. The Applicant would be required to prepare a Pest Management Plan for submission to the Imperial County Agricultural Commission.

Miscellaneous

Other maintenance activities that would be conducted include periodic testing of equipment, inspection and repair of project components, and maintenance of on-site roads and drainage systems (i.e. retention basin[s]).

Electricity Consumption

The Proposed Project may consume an estimated 4.4 MW-hours (Station Service, Trackers, and back-feed) of electrical energy daily from the IID power system. This energy would be used to operate the solar panel trackers, the on-site security system and the solar facility monitoring and control system when the solar panels are not generating power.

Air Quality

Normal operations of the Project would not result in any direct air emissions from the electricity production process as the PV solar panels convert sunlight directly into DC electricity. No fossil fuels are consumed in the process and no pollutants are emitted during normal operations. Daily air pollutant emission sources are anticipated to be limited to vehicular traffic and small engines associated with operations and maintenance activities.

Hazardous Material Handling and Storage

The Project would not use or store large quantities of hazardous chemicals within the Project site during normal operations. Any hazardous materials brought to the Project site would be required to comply with all applicable local, state and federal regulations.

F. DECOMMISSIONING AND RECLAMATION PLANS

The Project is processing a Development Agreement with Imperial County to enable and control a phased build-out of the Project that is capable of meeting changing market demands by authorizing initiation of

the CUP or CUPs anytime within a 10-year period. Thereafter, the CUPs are valid for the remaining period of 40 years from the date of the CUP approval. The requested Development Agreement would provide flexibility to allow the start of construction to commence for up to 10 years after the CUPs are approved. The proposed Project is expected to operate for up to 40 years. At the end of its useful life, the Applicant proposes to decommission the Project and reclaim the area associated with surface disturbance. Given that decommissioning occurs at the end of the Project life and construction occurs at the beginning of the Project and must occur within the first 10 years, no project-related construction is anticipated to occur at the same time as decommissioning. Roads that benefit agricultural activities would be left in place.

The planned operational life of the facility is approximately 40 years. However, if the facility continues to be economically viable, it could be operated for a longer period subject to County approval and applicable CEQA review. The Project Reclamation Plan that will be implemented at the end of the Project's life, and will adhere to Imperial County's decommissioning/reclamation requirements, including, but not limited to:

- Description of the proposed decommissioning measures for the facility and for all appurtenances constructed as part of the facility.
- Description of the activities necessary to restore the Project site to its previous condition. Such activities include removing and recycling solar equipment, storage equipment, medium voltage collector line, substation, and the two Gen-Tie lines. The soils would then be de-compacted and restored to agricultural purposes.
- Presentation of the costs associated with the proposed decommissioning/reclamation measures. Discussion of conformance with applicable regulations and with local and regional plans.

In the phased buildout, the phases will be decommissioned/reclaimed independently of one another.

I. Design Features and Best Management Practices

Table 2.0-6 identifies draft Applicant-proposed measures that would be incorporated into the proposed Project to reduce impacts to resources.

TABLE 2.0-6
APPLICANT PROPOSED MEASURES INCLUDED AS PART OF THE DREW SOLAR PROJECT

AESTHETICS
Visibility
• The Project will provide landscaping at Project entrances and the operations and maintenance buildings.
• **AIR QUALITY**
• Comply with APCD Rule 800 during construction, including but not limited to the following: • Stabilize all disturbed areas with water, tarps, dust suppressants, or soil binders. • Most construction equipment will be equipped with EPA Tier 2 or better engine designation. • Bulk Materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of Bulk Material. In addition, the cargo compartment of all Haul Trucks is to be cleaned and/or washed at delivery site after removal of Bulk Material. • Clean all Track-Out or Carry-Out at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an Urban area. • Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.

TABLE 2.0-6
APPLICANT PROPOSED MEASURES INCLUDED AS PART OF THE DREW SOLAR PROJECT

HAZARDS AND HAZARDOUS MATERIALS
Prior to commencement of construction of a CUP, all trash and debris will be removed from the CUP parcels of the Project and properly disposed.
HYDROLOGY AND WATER QUALITY
Construction Activities
Prior to the issuance of the first grading permit, the developer shall prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) and receive coverage under the General Construction National Pollutant Discharge Elimination System Permit from the California State Water Resources Control Board. The SWPPP shall include source control and treatment control BMPs. Possible source control BMPs include, but are not limited to: • trash storage; • integrated pest management; • efficient irrigation and landscape design; and, • property owner educational materials regarding source control management. Treatment control BMPs will be comprised of detention basins to remove trash and pollutants such as sediment, nutrients, metals, bacteria, oil and grease, and organics.
GEOLOGY AND SOILS
Prior to approval of final engineering and grading plans for the Project, the County shall verify that all recommendations contained in the Geotechnical Investigation Report have been incorporated into all final engineering and grading plans. This report identifies specific measures for mitigating geotechnical conditions on the Project site, and addresses site preparation, foundations and settlements, slabs-on-grade, concrete mixes and corrosivity, seismic design, and pavement design. The County's Public Works Department shall review grading plans prior to finalization, to verify plan compliance with the recommendations of the Geotechnical Investigation Report. All development on the Project site shall be in accordance with Title 24, California Code of Regulations.
TRANSPORTATION AND CIRCULATION
Construction traffic will minimize use of unpaved roads to the extent feasible. Roads will be photographed prior to construction and Project related impacts to County roads will be repaired. Before construction a Traffic Control Plan will be prepared for the Imperial County Department of Public Works, and a Traffic Management Plan will be prepared for Caltrans for SR 98 encroachments.
PUBLIC HEALTH AND SAFETY
Fire Prevention
A Fire Prevention and Response Plan (FPRP) will be developed and implemented during construction, operation, and maintenance of the Project.
Security
• The Project will contract with a security company to protect the facility. • A six-foot tall fence with 3 strands of barbed wire will be placed along the Project perimeter to keep people out of the facility.

TABLE 2.0-6
APPLICANT PROPOSED MEASURES INCLUDED AS PART OF THE DREW SOLAR PROJECT

NOISE
The use of noise-generating and vibration-generating construction equipment will not begin before 7:00 a.m. during weekdays or 9:00 a.m. on Saturday per the County General Plan Noise Element.
Source: Drew Solar 2018a.

2.2 ALTERNATIVES

A detailed discussion of the Project Alternatives is provided in Chapter 5.0, Alternatives.

2.2.1 ALTERNATIVE 1 - REDUCED PRIME FARMLAND ALTERNATIVE

This alternative would exclude the portion of the proposed Project west of Drew Road where Prime Farmland occurs within CUP#17-0035 and CUP#18-0001, and would reduce potential impacts to Prime Farmland.

2.2.2 ALTERNATIVE 2 - NO PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(1) requires that a No Project Alternative be analyzed in order to allow the decision-makers to compare the impacts of approving a proposed Project with the impacts of not approving the proposed Project. Under the No Project Alternative, the proposed Drew Solar Project would not be developed. No GPA, Zone Change, Variance, CUP applications, Parcel Map, Lot Tie Agreements or other Project entitlement or permit would be approved. The Project site could remain in its existing condition as agricultural land owned by the IID.

2.3 INTENDED USES OF THE EIR/AUTHORIZING ACTIONS

The EIR is intended to provide documentation pursuant to CEQA to cover all local, regional, and state permits and approvals which may be needed or are desirable in order to implement the proposed project. Discretionary actions and approvals by the Imperial County Planning Commission and/or Board of Supervisors for the proposed Project or its alternatives may include, but are not limited to:

2.3.1 DISCRETIONARY ACTIONS AND APPROVALS

A. COUNTY OF IMPERIAL

In conformance with Sections 15050 and 15367 of the CEQA Guidelines, the County of Imperial has been designated the "lead agency," defined as, "the public agency which has the principal responsibility for carrying out or approving a project." Discretionary actions and approvals by the Imperial County Planning Commission and/or Board of Supervisors for the proposed Project or its alternative(s) may include, but are not limited to:

Certification of the Final EIR

After the required public review for the Draft EIR, Imperial County will respond to written comments, edit the document, and produce a Final EIR to be considered for certification by the Board of Supervisors prior to making a decision on the Project.

Findings

Following certification of the EIR, the Board of Supervisors would consider approval of the Findings pursuant to CEQA Guidelines Section 15091.

Mitigation Monitoring and Reporting Program

A Mitigation Monitoring and Reporting Program (MMRP) will be adopted as required by CEQA Guidelines Section 15097 to ensure that mitigation measures identified in the EIR are implemented as appropriate.

General Plan Amendment

The proposed Project will require approval of a General Plan Amendment (GPA) (17-0006) to the Imperial County General Plan for amendment of the Renewable Energy & Transmission Element to create an Island Overlay for the Project Site. The Project shares a common boundary to an existing transmission source (i.e. the existing Drew Switchyard) and is adjacent to the existing Centinela Solar Project.

Zone Change

Zone Change (ZC#17-0007) to add the RE Overlay Zone to the Project site.

Parcel Map

The Project is processing a Parcel Map (PM#02478) to fix the existing inconsistency with the legal and physical boundary of the SW ¼ Section of the Project site (APNs: 052-170-039 and 052-170-067), including APN 052-170-030 to the north of the Project site as part of the Parcel Map. In doing so the net farmable acreage of the Project site will remain the same (762.8 net acres), and the gross acreage will increase from 844.2 gross acres to approximately 855 gross acres once the Parcel Map is recorded.

Conditional Use Permits

The proposed Project will require a total of six CUPs (CUP#17-0031, CUP#17-0032, CUP#17-0033, CUP#17-0034, CUP#17-0035 and CUP#18-0001). Five CUPs will be required to develop solar energy generating systems including potential energy storage on lands zoned A-2, A-2-R, and A-3 per Title 9, Division 5: Zoning Areas Established, Chapter 8, Section 90508.02 and 90509.02; and one CUP (CUP#18-0001) to develop energy storage as a component of solar on lands currently zoned A-2 and A-3, per Title 9, Division 5: Zoning Areas Established, Chapter 8, Sections 90508.02 and 90509.02 (A-2 and A-3).

Variance

Variance (V#17-0003) for the entire proposed Project Area, including the existing Drew Switchyard, for power pole structures that are over 120 feet in height. With approval of the Variance, the proposed structures could be up to 180 feet in height.

Lot Tie Agreements

Lot Tie Agreement(s) to hold some or all of the parcels that are part of the Project together as a single parcel in order to reduce/eliminate the setbacks for interior property lines of parcels that are part of the Project and adjacent to one another.

Development Agreement

The Project is processing a Development Agreement with Imperial County to enable and control a phased build-out of the Project that is capable of meeting changing market demands by authorizing initiation of the CUP or CUPs anytime within a 10-year period. Thereafter, the CUPs are valid for the remaining period of 40 years from the date of the CUP approval. The requested Development Agreement would provide flexibility to allow the start of construction to commence for up to 10 years after the CUPs are approved.

B. Discretionary Actions and Approvals by Other Agencies

Responsible Agencies are those agencies that have discretionary approval over one or more actions involved with development of the proposed Project. Trustee Agencies are state agencies that have discretionary approval or jurisdiction by law over natural resources affected by a project. These agencies may include, but are not limited to the following:

- California Public Utility Commission (Authority to Enter into Power Purchase Agreement)
- California Department of Fish and Wildlife (Streambed Alteration Agreement)
- United States Fish and Wildlife Service (Section 7 Consultation)
- California Regional Water Quality Control Board (401 Water Quality Certification)
- United States Army Corps of Engineers (404 permit)
- Imperial County Air Pollution Control District
    - o Authority to Construct Permit for emergency backup generators

2.3.2 Subsequent/Concurrent Entitlements to Implement the Proposed Project

A variety of ministerial actions and permits may be required by Imperial County to implement the components of the Proposed Project, including, but not limited to:

- Grading Permit(s) for the solar field and energy storage site parcels: ICPDSD and ICDPW
- Construction Traffic Control Plan: ICDPW
- Building Permits: ICPDSD and other County Departments
- Dust Control Plan: ICAPCD
- Rule 310 Exemption: ICAPCD
- Site Plan and Architectural Review: ICPDSD
- Construction Traffic Control Plan: ICDPW
- Encroachment Permits for access to the project parcels from County roads, and for any proposed Country road crossings: ICDPW
- Occupancy Permits: ICPDSD
- On-site Water Treatment Permit: ICPDSD /Imperial County Environmental Health Services (ICEHS)
- Private Sewage Disposal Permit to construct and operate a septic system and leach field for the O&M building(s), if proposed: ICEHS
- Reclamation Plan/Decommissioning Plan: ICPDSD/ICDPW
- Minor-modifications to CUP to implement changes responsive to market conditions or changes imposed by other agencies with jurisdiction over the Proposed Project: ICPDSD
- Vacation of easements: ICDPW
- Abandonment of rights-of-way: ICDPW
- Pest Management Plan: Imperial County Agricultural Commissioner's Office
- Review of Plans/Access and Fire Water Requirements: Imperial County Fire Department

2.3.3 ACTIONS AND APPROVALS BY OTHER AGENCIES

Responsible Agencies are those agencies that have approval over one or more actions involved with development of the Proposed Project. Trustee Agencies are state agencies that have approval or jurisdiction by law over natural resources affected by a project. These agencies may include, but are not limited to the following:

A. IMPERIAL IRRIGATION DISTRICT (IID)

Various approvals may be required from IID in conjunction with implementation of the proposed Project.

For the purposes of CEQA, wherever an IID facility (drain, irrigation canal, electric line, etc.) intersects the Project, an encroachment will occur as the Proposed Project would cross IID facilities with access points and project electrical crossings. The Proposed Project may also drain into IID drain facilities. Due to the preliminary nature of the Project and the rapidly changing technology, the exact locations of proposed access and drainage encroachments, and project electrical crossings, are not known at this time; however approximate access points and crossing locations have been provided in **Figure 2.0-3**.

The Project encroachments/crossings will not interfere with the purpose of IID's facilities. The following IID approvals, although not discretionary approvals, include, but are not limited to:

- Encroachment Permits/Agreements
- Electrical Crossings
- Water Supply Agreements
- Backfeed Service Agreement
- Electric Service Agreement

B. CALIFORNIA DEPARTMENT OF TRANSPORTATION

The two Gen-Tie lines will cross SR 98 either above or below ground. Project access points are also proposed along SR 98. Although not a discretionary approval, these crossings will require encroachment permits from the California Department of Transportation (Caltrans), as well as approval of a water pollution control program and transportation management plan by Caltrans.

C. CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

General Construction Storm Water Permit Notice of lntent/Storm Water Pollution Prevention Plan.