

July 21, 2021

Anika Larson
ZGlobal, Inc.
604 Sutter Street, Suite 250
Folsom, CA 95630

RE: Visual Impact Assessment Letter Report– Vega SES 4 Project

Dear Ms. Larson:

The purpose of this Visual Impact Assessment (VIA) letter report is to evaluate the potential visual impacts associated with the construction and implementation of the Vega SES 4 Solar Energy Storage Project located in Imperial County, California. This VIA includes an analysis and description of the existing visual setting and potential visual impacts. If the Project results in any adverse visual impacts, the purpose of the VIA is also to propose measures to minimize those impacts.

1.0 PROJECT DESCRIPTION, LOCATION, AND SETTING

The Project is located in south-central Imperial County between the California/Mexico border and the All-American Canal (Aqueduct). Figures 1 and 2 depict the Project location and vicinity (Attachment A).

Vega SES 4 is located on Imperial County Assessor's Parcel Numbers (APNs) 059-300-015-000 (approximately 301.73 acres), 059-300-017-000 (approximately 148.88 acres), and 059-290-010-000 (approximately 80.92 acres). All Project parcels are designated as "Agriculture" in the Imperial County General Plan and are zoned A-3-RE (Heavy Agriculture with a Renewable Energy Overlay).

Project Characteristics

Solar panels would use either thin film or crystalline solar photovoltaic (PV) technology modules mounted either on fixed frames or horizontal single-axis tracker (HSAT) systems. The fixed frame PV module arrays would be mounted on racks that would be supported by driven piles. The fixed-frame racks would be secured at a fixed tilt of 20 degrees to 30 degrees from horizontal facing a southerly direction. Current Project designs would have individual PV modules, mounted two high on a fixed frame, providing a two-foot ground clearance and resulting in the tops of the panels at approximately 7.5 feet above the ground. The fixed PV modules would be arranged in arrays spaced approximately 15 to 25 feet apart (pile-to-pile) to maximize performance and to allow access for panel cleaning (if necessary). These arrays would be separated from each other and the perimeter security fence by up to 30-foot wide interior roads. If HSAT technology is used, the PV modules would rotate around the north-south HSAT axis so that the PV modules would continue to face the sun as the sun moves across the sky throughout the day. The PV modules would reach their maximum height (up to nine (9) feet above the ground, depending on the final design) at both sunrise and sunset, when the HSAT is rotated to point the modules at the rising or setting sun. At noon, or when stowed during high winds, when the HSAT system is rotated so that the PV

modules are horizontal, the nominal height would be about six feet above the ground, depending on the final design. The individual PV systems would be arranged in large arrays by placing them in columns spaced approximately ten feet apart to maximize operational performance and to allow access for panel cleaning and maintenance. Current Project designs would have individual HSAT PV modules, each approximately two feet wide by four feet long (depending on the specific PV technology selected), mounted on a frame which is attached to an HSAT system. These HSAT arrays would be separated from each other and the perimeter security fence by up to 30-foot wide roads, consistent with County emergency access requirements.

Construction activities would primarily involve demolition and grubbing; grading at the Project site to establish access roads and pads for electrical equipment (inverters and step-up transformers); trenching for underground electrical collection lines; and the installation of solar equipment and security fencing. Stormwater management facilities would be constructed internally within the site and would consist of basins and infiltration areas. 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 the California Air Resources Board (CARB). A temporary, portable construction supply container would be located at the Project site at the beginning of construction and removed at the end of construction. Onsite parking would be provided for all construction workers.

Once construction is completed the Project would be remotely controlled. No employees would be based at the Project site. Primary security-related monitoring would be done remotely. Security personnel may conduct unscheduled security rounds and would be dispatched to the site in response to a fence breach or other alarm. Site maintenance workers may access the Project site periodically to clean the panels and maintain the equipment and Project area. The public would not have access to the facility. Access to the Project site would be infrequent and limited to authorized personnel.

Conceptual plans for the Vega SES4 project are provided in Attachment B.

2.0 VISUAL IMPACT ASSESSMENT METHODOLOGY

The following steps were taken in analyzing the visual impacts of the proposed Vega SES 4Solar and Battery Storage Project.

1. Describe the existing visual setting, including any sensitive viewer groups (i.e., baseline conditions);
2. Describe the visual appearance of the Project. Key viewpoints were not selected to represent the typical views from the public right-of-way because the nearest public right-of-way is located approximately 0.5 mile away;
3. Assess the visual changes that would be introduced by the Project and the viewer response based on defined attributes which are neither good nor bad. Change in visual character cannot be described as having good or bad attributes until compared with viewer responses to the change;
4. Determine the degree of visual impact;
5. Proposed methods to minimize adverse impacts

Evaluation of potential visual impacts resulting from implementation of the Proposed Project is based on the following criteria:

Change in Visual Quality. The difference in visual quality between the existing environmental setting and post-Project condition is considered visual quality change. Those changes are identified by studying site plans, which provide information on the various elements that will be removed from and incorporated into the current viewshed and the degree of change in the existing setting. The plans help to understand the potential changes in visual quality of the site after implementation of the Project. Physical changes are analyzed in relation to vividness, intactness, and unity of the proposed project conditions. Sensitivity of various viewer groups is evaluated to measure response to the visual quality changes.

Impacts to Visual Resources. Visual resources from both the natural and built environments can enhance the visual character and aesthetic quality of an area. The Project limits and vicinity were studied for visual resources. Visual resources can be associated with local events and history that represent and enhance the visual character of the local area. A project that substantially alters important visual resources can result in significant visual impacts. Mitigation is typically implemented to remove or minimize significant visual impacts.

Light, Glare, Shade, and Shadow. The existing light environment serves as a baseline to conduct light analysis and compare potential impacts caused by the introduction of the Proposed Project. Impacts relating to light, glare, shade, and shadow were examined during field observations and by the photographs to help establish light conditions during various times of the day and night and estimate the potential changes in the environment from Project implementation. New light sources and reduction or elimination of light could be considered impacts that could change the natural environmental setting of a project site. Impacts are evaluated based on how much existing conditions change, the degree of those changes, and the sensitivity of the affected environment.

Compatibility with Visual Policies. General Plans, Specific Plans, and other regulations or policies relating to visual resources and setting at the project site have been identified, reviewed, and used in the preparation of this analysis. Proposed visual changes that conflict with the adopted County guidelines could be considered a significant impact.

3.0 LOCAL VISUAL RESOURCE POLICIES

County of Imperial General Plan

Circulation and Scenic Highways Element

The Imperial County General Plan Circulation and Scenic Highways Element provides information about the transportation needs of the County and the various modes to meet these needs and provides for the movement of goods and people, including pedestrian, bicycles, transit, train, air and automobile. This Element is also intended to provide a plan to accommodate a pattern of concentrated and coordinated

growth and to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

The potential designation of Scenic Highway has been placed on specific roadways in the County and may be added to others in the future. This designation is intended to protect and enhance the County's scenic aesthetic resources which are visible from major County and State routes. As identified in the Circulation and Scenic Highways Element, four State routes within the County have the potential for designation as Scenic Highways:

- **Interstate 8 (I-8):** The initial segment for future Scenic Highway Designation status lies between the San Diego County line and its junction with State Route 98 (SR-98). This segment known as Mountain Springs Grade has a long, rapid elevation change, remarkable rock and boulder scenery, and plant life variations.
- **State Route 78 (SR-78):** The portion of SR-78 from the junction with State Route 86 (SR-86) to the San Diego County line is eligible for future Scenic Highway Designation. The area is considered scenic because of its desert characteristics and view of Salton Sea.
- **State Route 111 (SR-111):** SR-111 travels along the northeast shore of the Salton Sea and is eligible for future Scenic Highway Designation from Bombay Beach to the County line. The drive along this body of water is a study in primitive beauty and an interesting and startling anomaly. The contrast between the flat, wide Salton Sea with its sandy beach and the rugged rise of the Chocolate Mountains has many variations. The panoramic view of the opposite (southwest) shore and its backdrop of mountains is also a sight of pre-historic beauty.
- **Borrego-Salton Seaway:** County Highway S-22 is also known as the Borrego-Salton Seaway. It begins in Salton City and ends at the community of Borrego Springs in San Diego County. Along its route, is Clay Point, located a mile and half west of SR-86, which is a formation ring above a flat desert shore which shows the bed of pre-Columbian Lake Cahuilla. Three and a half miles farther west, the Anza Verde Wash parallels the Borrego-Salton Seaway with uniquely scenic desert landforms and vegetation.

The Circulation and Scenic Highways Elements contains the following objectives for the preservation of environmental and scenic amenities of the area along potential Scenic Highways.

- Objective 4.1 Establish various systems of scenic recreational travel utilizing multiple transportation modes.
- Objective 4.2 Preserve, enhance, and protect Imperial County's scenic resources by the removal of illicit billboards from scenic areas and restrictions on new off-site sign construction visible from designated scenic highways.
- Objective 4.3 Protect areas of outstanding scenic beauty along any scenic highways and protect the aesthetics of those areas.
- Objective 4.4 Acquire scenic easements from private owners when required.
- Objective 4.5 Develop standards for aesthetically valuable sites. Design review may be required so that structures, facilities, and activities are properly merged with the surrounding environment.

Conservation and Open Space Element

The Imperial County General Plan Conservation and Open Space Element is a conservation guide for the protection of regional aesthetics. This Element identifies goals and policies to ensure the managed use of environmental resources to prevent limiting the range of resources available to future generations. The Conservation and Open Space Element identifies scenic visual resources within the County which include the deserts, sand dunes, mountains, and the Salton Sea.

Desert areas include the Yuha Desert, West Mesa, lower Borrego Valley, East Mesa, and Pilot Knob Mesa. Within the desert areas, there are unique geologic features which add scenic value to the natural landscape and desert vegetation which results in springtime blooms of desert flowers in the springtime. The Algodones Dunes are the largest sand dunes in California covering approximately 160 square miles and are a well-known landmark to County residents and highway travelers. These dunes are a significant visual resource due to their unique scenic qualities, historic features, and prominent visibility to a large number of viewers.

As described in this Element, scenic mountains within the County include the eastern foothills of the Peninsular Range along the County's southwest side consisting of the In-Ko-Pah or Jacumba Mountains, Coyote Mountains, and Fish Creek Mountains. East of this area is Mount Signal located along the international border on the eastern edge of the Yuha Desert, west of Calexico. The southeast foothills of the San Rosa-San Jacinto Mountain are a prominent feature from SR-86. The Superstition Mountains and Superstition Hills, located in West Mesa southeast of the lower Borrego Valley and west of Westmorland and Brawley, are visible from I-8 west of El Centro and from SR-86 between El Centro and the Salton Sea. In the northeastern part of the County, the Chocolate Mountains stretch northwest by southeast between Riverside County and the Colorado River. Portions of these mountain areas are designated by the Bureau of Land Management (BLM) as Wilderness Areas, part of the National Wilderness Preservation System. The intention of this designation is to secure natural areas for the public purposes of recreation, scenic, scientific, educational, conservation, and historical use.

The Salton Sea is located in the northwestern portion of the County and encompasses approximately 376 square miles. This body of water has been sustained by agricultural drainage from the Imperial, Coachella, and Mexicali valleys, rainfall, storm runoff from surrounding mountains, and groundwater inflow. The Salton Sea provides migrating and winter habitat for waterfowl and other birds and is a unique visual resource because of its size, location in a desert environmental, and its value for wildlife.

Anza-Borrego Desert State Park, located on the eastern side of San Diego County with portions extending into Imperial Count, features washes, wildflowers, palm groves, cacti, sweeping vistas, and hiking trails.

The Conservation and Open Space Element also identifies scenic vista points which include the Osborne Overlook and Juan Bautista de Anza Overlook. The Osborne Overlook offers scenic views of the Imperial Sand Dunes Recreational Area, North Algodones Dunes Wilderness, and surrounding area while the Juan Bautista de Anza Overlook provides a view of the Yuha Basin and surrounding landscape.

The Conservation and Open Space Element contains the following objectives for the preservation of environmental and scenic amenities of the area along potential Scenic Highways (County of Imperial 2016).

Objective 5.1 Encourage the conservation and enhancement of the natural beauty of the desert and mountain landscape.

Objective 5.2 Utilize the Code Enforcement process to eliminate visually dilapidated buildings that impact the visual character of rural communities.

4.0 BASELINE VISUAL CONDITIONS

A view is defined by the topography, development, activity, and vegetation. The Project area was observed and mapped to identify existing visual resources in the area and viewer groups. The Project area was photodocumented during a visual field survey in September 2020 to record existing visual conditions in the Project vicinity and surrounding area. Land uses and topography were assessed to characterize the physical environment and establish the existing visual setting as described below.

Topography

Topography is relatively flat with elevations ranging between 11 meters (38 feet) and 18 meters (60 feet) above mean sea level. Adjacent land uses include agricultural and ranch land to the north and west, the U.S./Mexico border to the south, and undeveloped land to the east. The All-American Canal travels northeast to southwest, north of the Project site.

Land Use

Surrounding lands are designated as "Agriculture" by the Imperial County General Plan and are zoned A-3-RE (Heavy Agriculture with a Renewable Energy Overlay). Pursuant to Section 91703.02 (CONDITIONAL USE PERMITS), Renewable Energy Projects must be located within the Renewable Energy Overlay Zone and may be permitted only through the issuance of a Conditional Use Permit (CUP) as approved by the Approving Authority unless otherwise allowed by applicable law.

Vegetation

The majority of the Project site consists of creosote bush – white bursage scrub (disturbed), disturbed lands, and tamarisk thickets. Small portions of the Project site along the eastern perimeter and centrally within the site contain areas of creosote bush scrub. The remainder of the Project site on the western end consists of alkali weed – salt grass playas and sinks and arrow weed thickets (ECORP 2020).

Historic Resources

A records search for historic resources was conducted in September 2020 at the South Coastal Information Center (SCIC) at San Diego State University. The records search included a review of all recorded historic and prehistoric archaeological sites within a one-mile radius of the Project area, as well as a review of known cultural resource surveys and excavation report. Six previously recorded resources

were located within one mile of the Project site and one cultural resource was recorded within the Project site. Sixteen newly identified resources are located within the Project site and with the presence of one previously recorded resource, there are a total of 17 cultural resources present onsite. Seven of these cultural resources are located in the western portion of the Project site and will be avoided by the Project. (ECORP 2021). The remaining ten resources within the Project site that cannot be avoided by implementation of the Project include five sites (three historic period and two pre-contact) and five isolates. Subsurface testing and archival research determined that the five sites within the Project site are not eligible for the National Register of Historic Places (NRHP). The five isolates within the Project site were also evaluated and found not eligible for the NRHP and CRHR.

5.0 VISUAL CHANGE AND VISUAL IMPACT EVALUATION

Evaluation of potential visual impacts resulting from implementation of the proposed Vega SES 4 Project is based on the following criteria:

- **Change in Visual Quality.** The difference in visual quality between the existing environmental setting and post-Project condition is considered visual quality change. Those changes are identified by studying engineering plans, which provide information on the various elements that will be replaced and/or reconstruction into the current viewshed and the degree of change in the existing setting.
- **Impacts to Visual Resources.** Visual resources from both the natural and built environments can enhance the visual character and aesthetic quality of an area. The Project limits and vicinity were studied for visual resources. Visual resources can be associated with local events and history that represent and enhance the visual character of the local area. A project that substantially alters important visual resources can result in adverse visual impacts. Mitigation is typically implemented to remove or minimize adverse visual impacts.
- **Light, Glare, Shade, and Shadow.** The existing light environment serves as a baseline to conduct light analysis and compare potential impacts caused by introduction of one of the alternatives. Impacts relating to light, glare, shade, and shadow were examined during field observations and by the photographs to help establish light conditions during various times of the day and night and estimate the potential changes in the environment from project implementation. New light sources and reduction or elimination of light could be considered impacts that could change the natural environmental setting of a project site. Impacts are evaluated based on how much the existing conditions change, the degree of those changes, and the sensitivity of the affected environment.
- **Compatibility with Visual Policies.** General Plans, Specific Plans, and other regulations or policies relating to visual resources and setting at the project site have been identified, reviewed, and used in preparation of this assessment. Proposed visual changes that conflict with the adopted agency guidelines could be considered an adverse impact.

Available public right of way in the vicinity of the Project site includes CA State Route (SR) 98 and Vencil Road. Visibility of the site from the public right of way is obstructed from CA State Route 98 by a berm. Visibility of the project site from Vencil Road is limited due to a distance of approximately 0.5 mile. No key observation points are proposed for this analysis. Surrounding property is privately owned and viewers

would be limited to property owners, employees servicing/maintaining Imperial Irrigation District (IID) facilities (e.g., the canal), and border patrol personnel.

The overall character and experience for the viewer would change substantially with implementation of the Project. The main physical change that would occur is the complete removal of vegetation and grading of the Project site to accommodate the construction of solar apparatus and security fencing. Other facilities proposed such as roads, pads, underground utilities, and stormwater facilities would not be readily visible as these facilities would be at or below grade. There are no scenic resources located in the Project vicinity, no scenic vista points are identified in the County General Plan, and none of the roadways in the project vicinity are designated scenic highways or roadways.

The proposed PV module frames when installed on pads would be approximately 7.5 feet in height and the proposed security fencing would be approximately 6 feet in height. Currently, the existing vegetation on the project site consist of large dense bushes and trees; however, there are no existing obstructions of identified scenic resources as none are located in the Project vicinity and visible from surrounding areas.

Implementation of the proposed project would change the natural conditions of the site to a solar energy generation and battery storage facility. Onsite vegetation would be completely removed, and the site would be graded to accommodate the installation of the PV module frames in arrays. The Imperial County General Plan has designated the Project site as "Agriculture" and is zoned A-3-RE (Heavy Agriculture with a Renewable Energy Overlay). Agricultural uses within the Project are fallow and have not been actively used for agriculture for many years. Renewable energy projects must be located within the Renewable Energy Overlay Zone and may be permitted only through the issuance of a Conditional Use Permit (CUP). With a CUP, the Project would be consistent with the intended use of the land. Although Project implementation would result in the conversion of a naturally vegetated area with energy-related facilities, agricultural vegetated areas are not considered to be scenic resources by the County of Imperial.

Construction Impacts

Construction of the Proposed Project would result in temporary visual changes due to construction activities. Potential short-term construction impacts would result from the proposed Project through the presence of construction equipment and materials. Upon completion of construction, equipment and construction materials would no longer be present.

Light, Glare, Shade, and Shadow

Minimal lighting would be required for operations and would be limited to safety and security functions. All lighting will be directed downward and shielded to focus illumination on the desired areas only and to minimize light trespass in accordance with applicable County requirements. If additional lighting should be required for nighttime maintenance, portable lighting equipment would be used. The Project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the Project area.

The Project would involve the installation of PV solar arrays which have low reflectivity. Solar PV modules are specifically designed to reduce reflection as any reflected light cannot be converted into energy. Research has shown that reflectivity from PV panels are similar to reflections from water (National Renewable Energy Laboratory 2020). Therefore, the PV panels would not create a significant source of glare during sunlight hours. The Project would not use other reflective materials such as fiberglass, aluminum or vinyl/plastic siding, galvanized products, and brightly painted steel roofs that have the potential to create on- and off-site glare.

Shade and shadow effects would be introduced within the Project site due to the placement of PV modules in arrays. However, due to the height of the proposed apparatus at 7.5 feet and the perimeter fencing at 6 feet, the effects of shade and shadow would not encroach into areas offsite for extended periods of time that would result in significant shade and/or shadow impacts.

Scenic Highways

There are no designated Caltrans scenic highways in the vicinity of the Proposed Project. None of the scenic highways identified in the County's General Plan Circulation and Scenic Highways Element are located in the Project vicinity. Interstate 8 is located over 5 miles away to the north. There would be no impact to scenic resources within a State or locally designated scenic highway.

Historic Resources

As previously identified, sixteen newly identified resources are located within the Project site and with the presence of one previously recorded resource, there are a total of 17 cultural resources present onsite. The remaining ten resources within the Project site that cannot be avoided by implementation of the Project include five sites (three historic period and two pre-contact) and five isolates. Subsurface testing and archival research determined that the five sites within the Project site are not eligible for the NRHP. The five isolates within the Project site were also evaluated and found not eligible for the NRHP and CRHR. Further none of the cultural resources identified within the Project site are visible from public vantage points, there would be no visual impact to historic resources.

Visual Resource Policies

Scenic features, vistas, or landforms identified by the County of Imperial would not be significantly affected by construction and implementation of the Project. The Proposed Project would not conflict with specific policies identified in the Circulation and Scenic Highways Element or Open Space and Conservation Element of the County's General Plan. No impacts associated with incompatibility with visual resource policies would occur under the Proposed Project.

Summary of Impacts

During the construction phase, the presence of construction equipment and materials would not have a permanent, long-term impact on the visual environment. Upon completion of the Project, areas that were

cleared for construction staging would be converted to a new energy generating and storage facilities or returned to their existing condition.

No obstruction of existing scenic resources would occur with Project implementation as none existing in the Project vicinity.

Minimal lighting would be required for operations and would be limited to safety and security functions and would adhere to County lighting requirements. The Project is not anticipated to create a new source of substantial light which would adversely affect nighttime views in the Project area. Shade and shadow effects would not be a significant impact to adjacent properties due to the height of the proposed apparatus and security fencing.

No impacts to NRHP- or CRHR-eligible historic resources would occur with Project implementation.

The Project would be consistent with the County General Plan. No impacts associated with incompatibility with visual resource policies would occur under the Proposed Projects.

Sincerely,



Senior Environmental Planner
ECORP Consulting, Inc.

Attachments

Attachment A: Figures

Attachment B: Conceptual Plans



REFERENCES

County of Imperial. 2008. *County of Imperial General Plan Circulation and Scenic Highways Element*. January

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_____. 2021. *Cultural Resources Inventory, Testing, and Evaluation Report Vega SES 4 Solar Energy Project*. January

National Renewable Energy Laboratory. 2020. *Research and Analysis Demonstrate the Lack of Impacts of Glare from Photovoltaic Modules*. Website: <https://www.nrel.gov/state-local-tribal/blog/posts/research-and-analysis-demonstrate-the-lack-of-impacts-of-glare-from-photovoltaic-modules.html>, Accessed March 25, 2021.

LIST OF ATTACHMENTS

Attachment A – Figures

Attachment B – Conceptual Plans

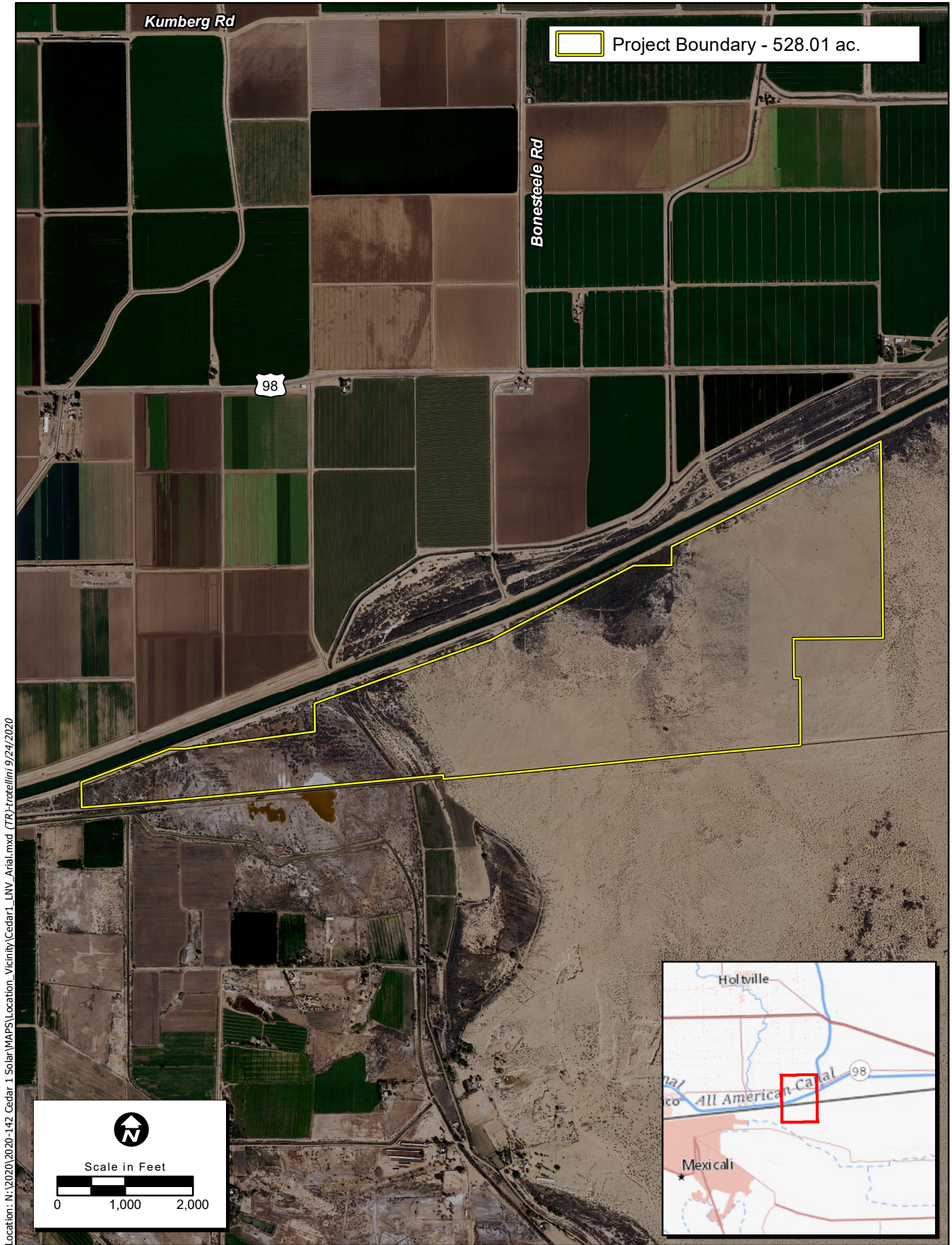
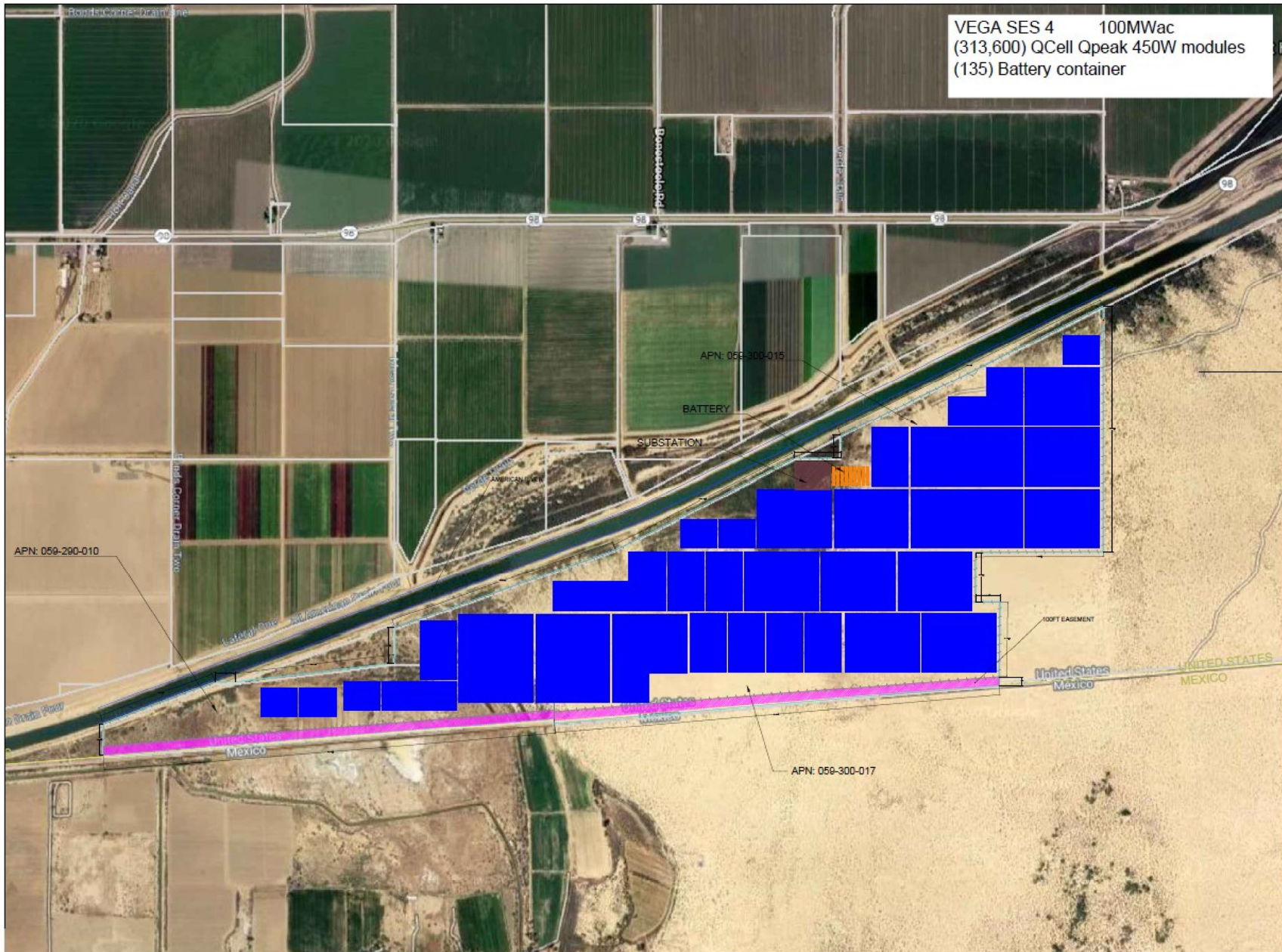


Figure 1. Project Location and Vicinity

ATTACHMENT B

Conceptual Plans



VEGA SES 4 100MWac
 (313,600) QCell Qpeak 450W modules
 (135) Battery container

VEGA SES 4

CONFIDENTIAL DOCUMENTS
 THE INFORMATION SHOWN ON THIS DRAWING IS STRICTLY CONFIDENTIAL AND IS SUPPLIED WITH THE UNDERSTANDING THAT IT WILL BE HELD CONFIDENTIAL AND NOT DISCLOSED TO THIRD PARTIES WITHOUT THE WRITTEN CONSENT OF SOLARCAL, INC.

REV	BY	DESCRIPTION	DATE	APPROVED BY
0	RD	PRELIMINARY	08/17/22	JA

1 inch
 Scale to Contain 24"x36" Plot

Apex SOLUTIONS
 604 SLUTTER ST, STE 250
 FOLSOM, CA 95630
 Phone : 916.985.9461
 Fax: 916.985.9467

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SITE PLAN

DRAWN BY:	RD	DRAWING NO.	C-000
ENGINEER:	JA		
SCALE:	1/8" = 1'-0"		
DATE:	1	REV NO.	