



Referral Early Consultation

Date: February 22, 2022

To: Distribution List (See Attachment A)

From: Kristen Anaya, Assistant Planner, Planning and Community Development

Subject: USE PERMIT APPLICATION NO. PLN2021-0111 – BELTRAN SOLAR ENERGY CENTER

Respond By: March 9, 2022

******PLEASE REVIEW REFERRAL PROCESS POLICY******

The Stanislaus County Department of Planning and Community Development is soliciting comments from responsible agencies under the Early Consultation process to determine: a) whether or not the project is subject to CEQA and b) if specific conditions should be placed upon project approval.

Therefore, please contact this office by the response date if you have any comments pertaining to the proposal. Comments made identifying potential impacts should be as specific as possible and should be based on supporting data (e.g., traffic counts, expected pollutant levels, etc.). Your comments should emphasize potential impacts in areas which your agency has expertise and/or jurisdictional responsibilities.

These comments will assist our Department in preparing a staff report to present to the Planning Commission. Those reports will contain our recommendations for approval or denial. They will also contain recommended conditions to be required should the project be approved. Therefore, please list any conditions that you wish to have included for presentation to the Commission as well as any other comments you may have. Please return all comments and/or conditions as soon as possible or no later than the response date referenced above.

Thank you for your cooperation. Please call (209) 525-6330 if you have any questions.

Applicant: Beltran Solar, LLC

Project Location: Davis Road, west of I-5, southwest of the Fink Road Landfill, in the Newman/Crows Landing area

APNs: 025-017-013, -015, -017, -019, and -020; 026-012-003; 027-017-063, -080, -082, -090, -091; and 025-012-015

Williamson Act Contract: N/A

General Plan: Agriculture

Current Zoning: General Agriculture (A-2-40): 025-017-015; 027-017-063, -080, -082, -090, & -091; 025-012-015
General Agriculture (A-2-160): 025-017-013, -017, -019, & -020; 026-012-003

Project Description: Request to amend Use Permit No. 2011-11 – Beltran Ranch Solar Farm, which was approved by the Stanislaus County Planning Commission on April 18, 2013 to construct a utility-grade 140 megawatt (MW) solar facility in three phases on 606± acres of a 1,720± acre project site. A Mitigated Negative Declaration (MND) was prepared and adopted in conjunction with the approved project. A Time Extension, granting the applicant an additional five years to construct the project, was approved by the Planning Commission on February 15, 2018.

The parcels associated with this project contain two adjacent but separate solar farms permitted under separate Use Permits:

1. Paulsell Solar Energy Center (formerly “Scatec Westside Solar Ranch”) which was approved under Use Permit 2010-09 and Staff Approval Permit PLN2021-0043; Phase 1 comprises 173 acres generating 20 MW and is installed and operational. Phase 2 is approved for 232 acres of development which has yet to be constructed. This project is located on the interior of the parcels associated with the project site. This project is approved and will not be impacted by the current request.
[Link to Staff Approval Permit: [2021 Paulsell Solar Energy Center Staff Approval Permit](#)]
2. Beltran Solar Energy Center (formerly “Beltran Ranch Solar Farm”), was originally approved under Use Permit No. 2011-11 and comprises the areas surrounding the Paulsell Solar Energy Center footprint. This new Use Permit application is a request to modify the approved Beltran Ranch Solar Farm project and associated development areas only.
[Link to Staff Report: [2011 Beltran Ranch Solar Farm Use Permit](#)]

The proposed modifications will remain within the project site boundaries approved in 2013 with the exception of a proposed 400-foot-wide 24.5 kilovolt (kV) collector line, which will connect the project to an off-site substation located north of the project site, within the Proxima Solar Energy Center (APNs 025-012-016, -017, -031, -033, & 027-033-012), which was approved under Staff Approval Permit No. PLN2020-0061.

The proposed revisions to the project include: increasing the development footprint of the project from 606 acres to up to 817.3 acres, as well as increasing flexibility of the project by allowing the option of utilizing either a fixed racking or single-axis instead of just a single-axis tracking system, as was approved. The photovoltaic panels will connect to a battery energy storage system (BESS), which was approved as part of the Proxima Solar Energy Center project. The battery units are collocated at the 100-acre BESS facility, which is located approximately 1 mile to the north of the project site at the Proxima Solar Energy Center project site. The proposed project will also abandon the previously approved on-site substation; instead, the project proposes to utilize the approved Proxima collector substation located on APN: 025-012-033. The connection to the off-site substation will take place via a 34.5 kV collector line, that will extend from the Beltran project site to the Proxima project site, which is approximately 1 mile north of the Beltran site. The collector line will follow one of two potential alignment options, which are identified on the attached project maps (see *Attachment A: Dudek Project Description*).

A 2,500 square-foot operations and management (O&M) building, approved by the Proxima Solar Energy Center Staff Approval Permit and located within that respective project site, will be staffed by up to three permanent employees for facility monitoring, equipment storage, and repairs. The proposed project includes a request to amend the placement of a 6-foot-tall fence to match the boundaries of the proposed expanded facility request. The approved project anticipated a peak aggregate power capacity of 140 megawatts (MW). This proposal includes increasing the peak aggregate power capacity to 300 MW. The anticipated construction schedule will also be shortened from 3 years to approximately 18 months after project approval and is proposed to generate approximately 284 daily vehicle trips during construction. Up to 3 daily vehicle trips will occur as needed for panel inspection and repairs, on-site panel washing, and dust suppression. The proposed revisions to the 2013 Use Permit are described in greater detail in the attached project description (see *Attachment A – Dudek Project Description*).

The project site contains four wells for irrigation and domestic water purposes. The project anticipates being served by Oak Flat Water District for construction and operational water, for solar panel washing, and dust suppression. In addition, groundwater by on-site wells may be used; however, should it be necessary, the applicant has also proposed to truck in water as a third source. The operations and maintenance building will provide a permanent restroom and utilize an on-site wastewater treatment system (OWTS). The project will provide bottled water, trucked-in water, or well water for domestic water purposes to employees. The applicant anticipates using approximately 182 acre-feet of water over the course of the project’s 18-month construction period, and approximately 20-acre feet per year during operations. 272 acres of irrigated farmland, which currently uses an estimated 932.7-acre-feet of water per year, will be removed as a result of



DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

development of the proposed project. Water use associated with the orchard would cease resulting in an estimated net savings of 932.7-acre-feet of water per year during operation.

The proposed project will extend and take access off an existing graveled access road, which varies from 20' to 30' feet wide, and extends from privately-maintained Davis Road. The extended portion of the access road would serve the area immediately north of the Crow Creek substation located at APN 025-017-019, within the Paulsell Solar Energy Center approved project site. An additional 16-foot-wide secondary access road would be installed throughout the project site to serve the solar arrays, as needed.

Both the approved project and this expansion request propose to decommission the project at the end of the life cycle, approximately 30 to 50 years, including the removal and recycling of all related appurtenances and reversion of the on-site soil condition to a state that can support agricultural use.

Attachments:

- Attachment A: *Dudek Project Description*

Full document with attachments available for viewing at:

<http://www.stancounty.com/planning/pl/act-projects.shtm>



USE PERMIT APPLICATION NO. PLN2021-0111 – BELTRAN SOLAR ENERGY CENTER
Attachment A

Distribution List

X	CA DEPT OF CONSERVATION Land Resources	X	STAN CO ALUC (REFERRAL AREA 2)
X	CA DEPT OF FISH & WILDLIFE		STAN CO ANIMAL SERVICES
X	CA DEPT OF FORESTRY (CAL FIRE)	X	STAN CO BUILDING PERMITS DIVISION
X	CA DEPT OF TRANSPORTATION DIST 10	X	STAN CO CEO
X	CA OPR STATE CLEARINGHOUSE		STAN CO CSA
X	CA RWQCB CENTRAL VALLEY REGION	X	STAN CO DER
	CA STATE LANDS COMMISSION	X	STAN CO ERC
X	CEMETERY DISTRICT: HILLS FERRY	X	STAN CO FARM BUREAU
X	CENTRAL VALLEY FLOOD PROTECTION	X	STAN CO HAZARDOUS MATERIALS
	CITY OF:		STAN CO PARKS & RECREATION
	COMMUNITY SERVICES DIST:	X	STAN CO PUBLIC WORKS
X	COOPERATIVE EXTENSION		STAN CO RISK MANAGEMENT
	COUNTY OF:	X	STAN CO SHERIFF
X	DER GROUNDWATER RESOURCES DIVISION	X	STAN CO SUPERVISOR DIST 5: CHANNCE CONDIT
X	FIRE PROTECTION DIST: WEST STAN.	X	STAN COUNTY COUNSEL
X	GSA: DM-II GSA		StanCOG
X	HOSPITAL DIST: DEL PUERTO	X	STANISLAUS FIRE PREVENTION BUREAU
X	IRRIGATION DIST: OAK FLAT		STANISLAUS LAFCO
X	MOSQUITO DIST: TURLOCK	X	STATE OF CA SWRCB DIVISION OF DRINKING WATER DIST. 10
X	MOUNTAIN VALLEY EMERGENCY MEDICAL SERVICES		SURROUNDING LAND OWNERS
	MUNICIPAL ADVISORY COUNCIL:	X	TELEPHONE COMPANY: AT&T
X	PACIFIC GAS & ELECTRIC		TRIBAL CONTACTS (CA Government Code §65352.3)
	POSTMASTER:	X	US ARMY CORPS OF ENGINEERS
	RAILROAD:		US FISH & WILDLIFE
X	SAN JOAQUIN VALLEY APCD		US MILITARY (SB 1462) (7 agencies)
X	SCHOOL DIST 1: NEWMAN-CROWS LANDING UNIFIED	X	USDA NRCS
	SCHOOL DIST 2:	X	WATER DIST: OAK FLAT & DEL PUERTO
	WORKFORCE DEVELOPMENT		
X	STAN CO AG COMMISSIONER		
	TUOLUMNE RIVER TRUST		

STANISLAUS COUNTY CEQA REFERRAL RESPONSE FORM

TO: Stanislaus County Planning & Community Development
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: _____

SUBJECT: USE PERMIT APPLICATION NO. PLN2021-0111 – BELTRAN SOLAR ENERGY CENTER

Based on this agency's particular field(s) of expertise, it is our position the above described project:

- _____ Will not have a significant effect on the environment.
_____ May have a significant effect on the environment.
_____ No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheet if necessary)

- 1.
- 2.
- 3.
- 4.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.
- 2.
- 3.
- 4.

In addition, our agency has the following comments (attach additional sheets if necessary).

Response prepared by:






Name	Title	Date
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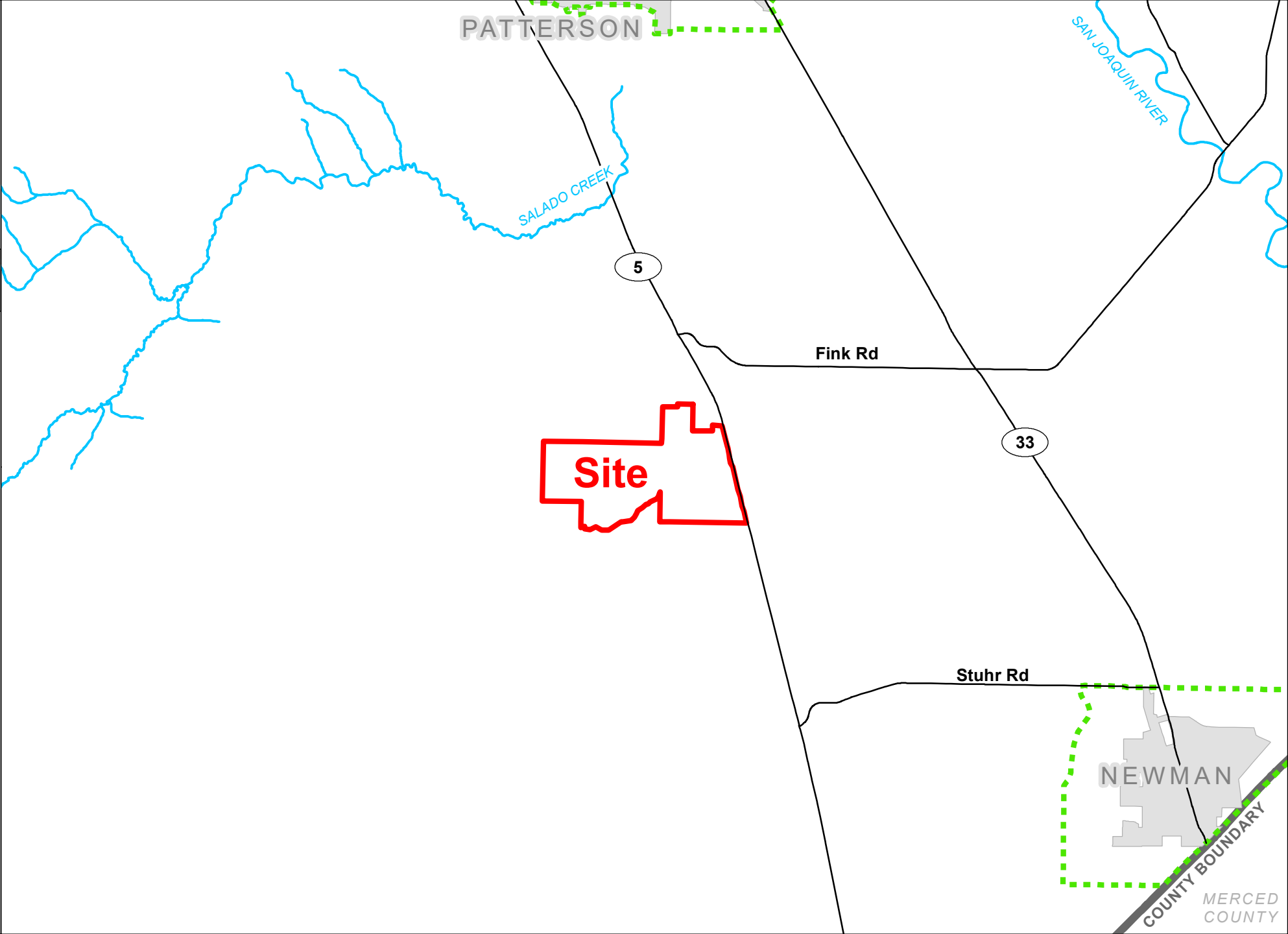
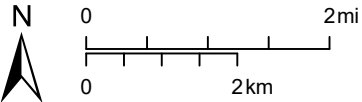
BELTRAN SOLAR ENERGY CENTER

UP
PLN2021-0111

AREA MAP

LEGEND

-  Project Site
-  Sphere of Influence
-  City
-  Road
-  River







BELTRAN SOLAR ENERGY CENTER

UP
PLN2021-0111

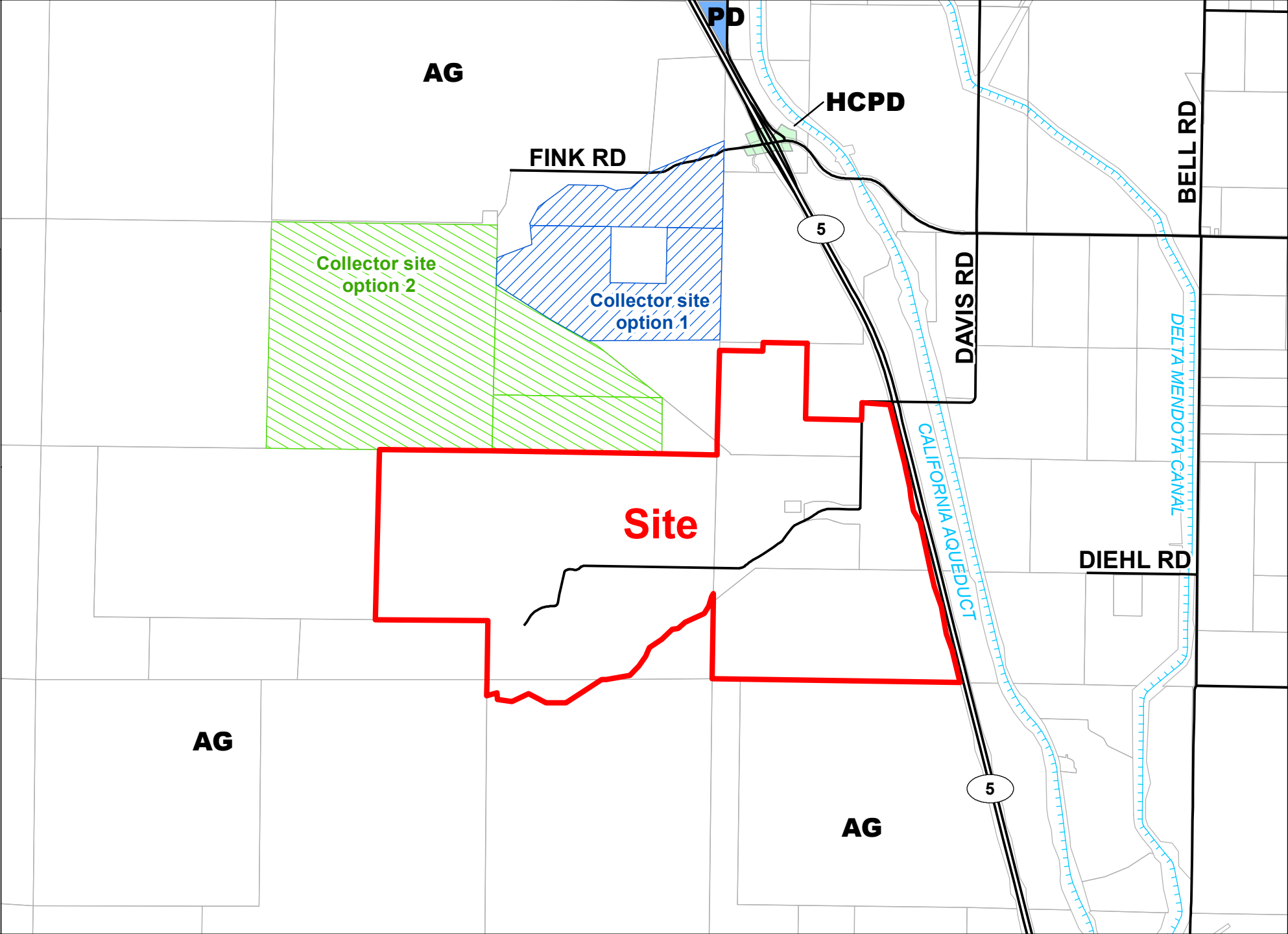
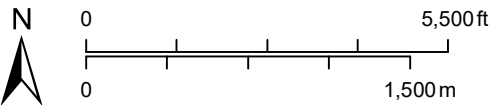
GENERAL PLAN MAP

LEGEND

-  Project Site
-  Collector Site Option 1
-  Collector Site Option 2
-  Parcel
-  Road
-  Canal

General Plan

-  Agriculture
-  Highway Commercial / Planned Development
-  Planned Development









BELTRAN SOLAR ENERGY CENTER

UP PLN2021-0111

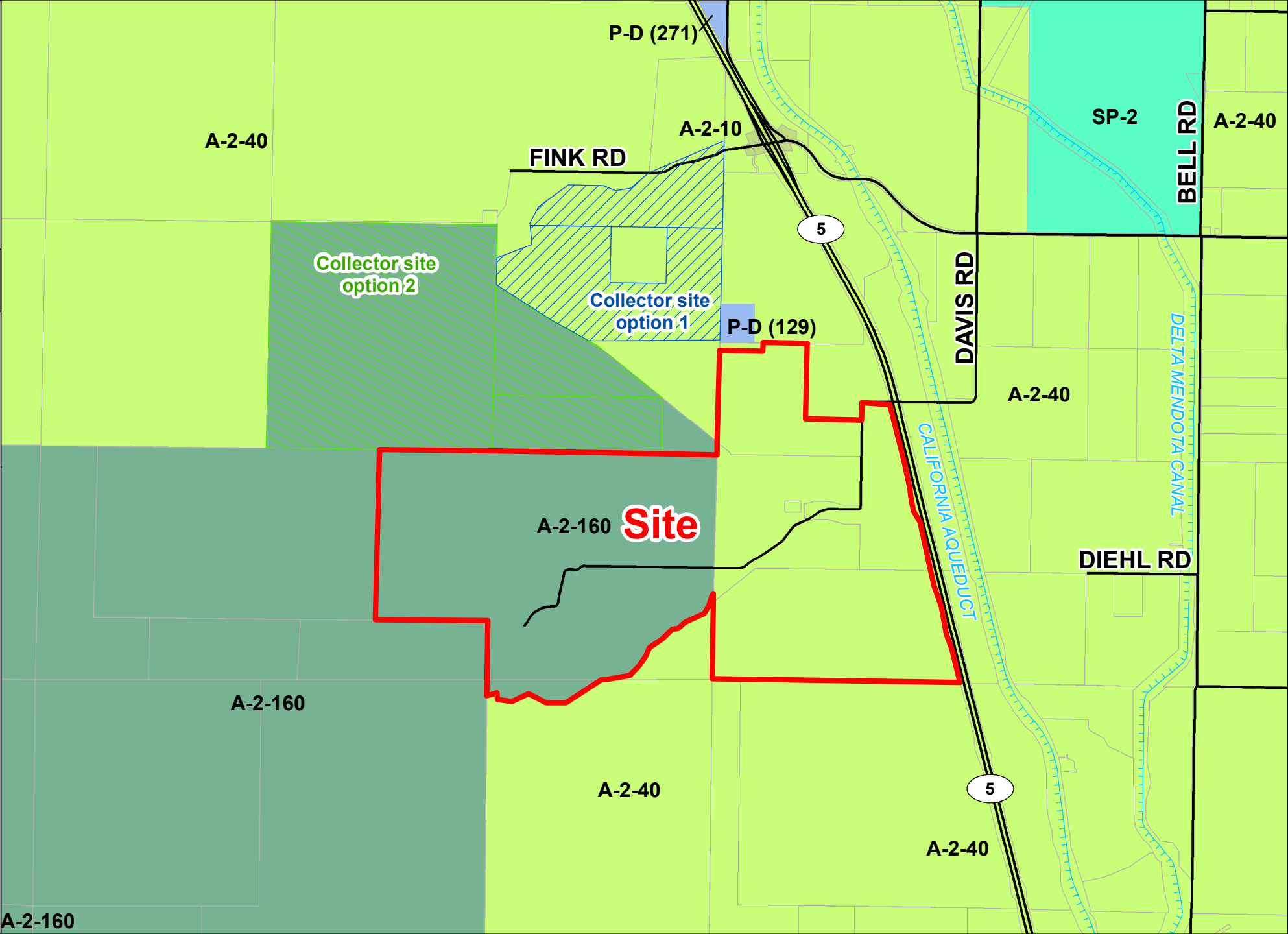
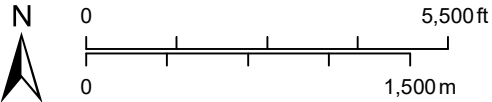
ZONING MAP

LEGEND

-  Project Site
-  Collector Site Option 1
-  Collector Site Option 2
-  Parcel
-  Road
-  Canal

Zoning Designation

-  General Agriculture 10 Acre
-  General Agriculture 40 Acre
-  General Agriculture 160 Acre
-  Planned Development
-  Specific Plan








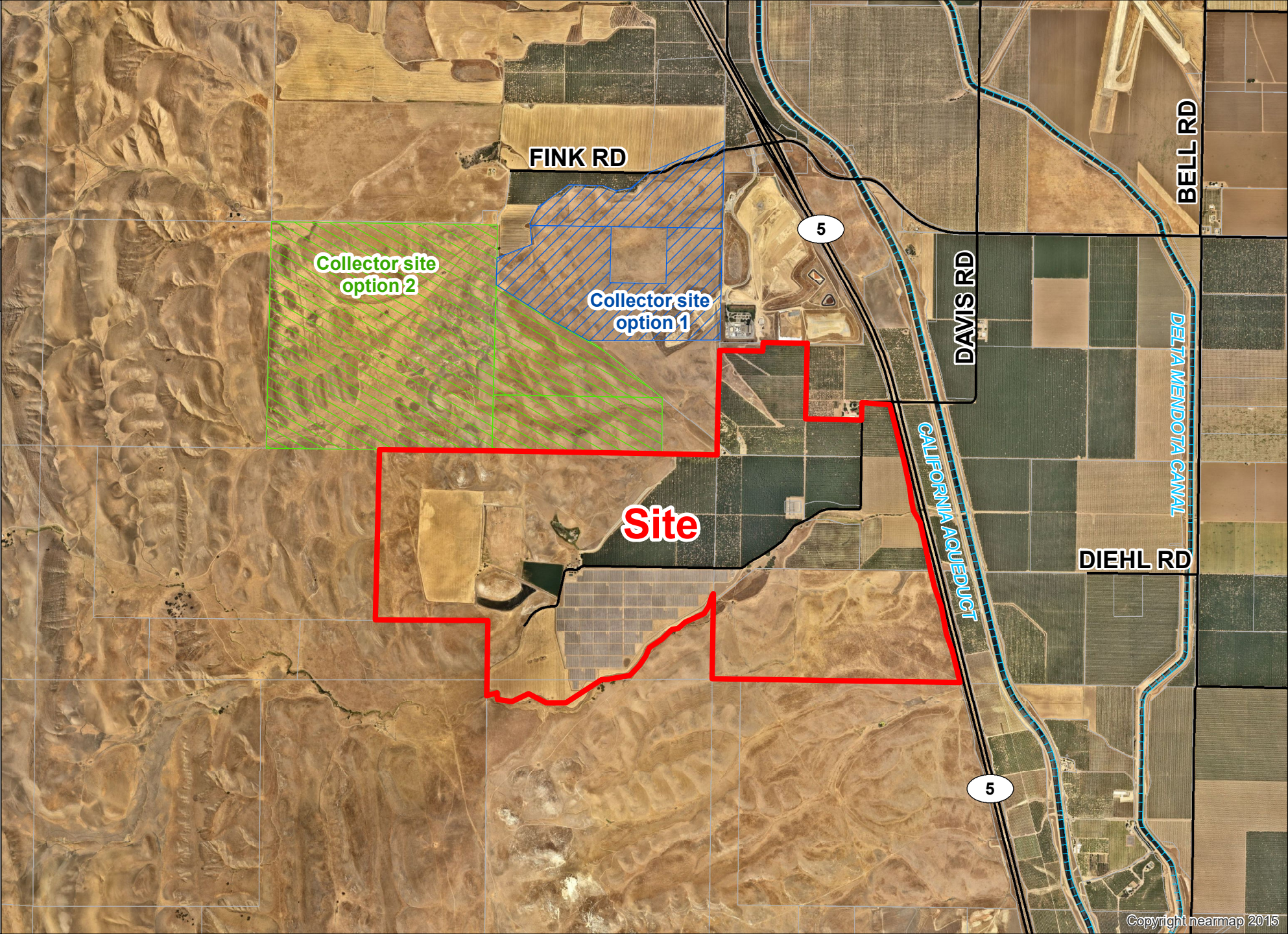
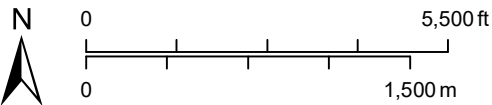
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2021 AERIAL AREA MAP

LEGEND

-  Project Site
-  Collector Site Option 1
-  Collector Site Option 2
-  Road
-  Canal








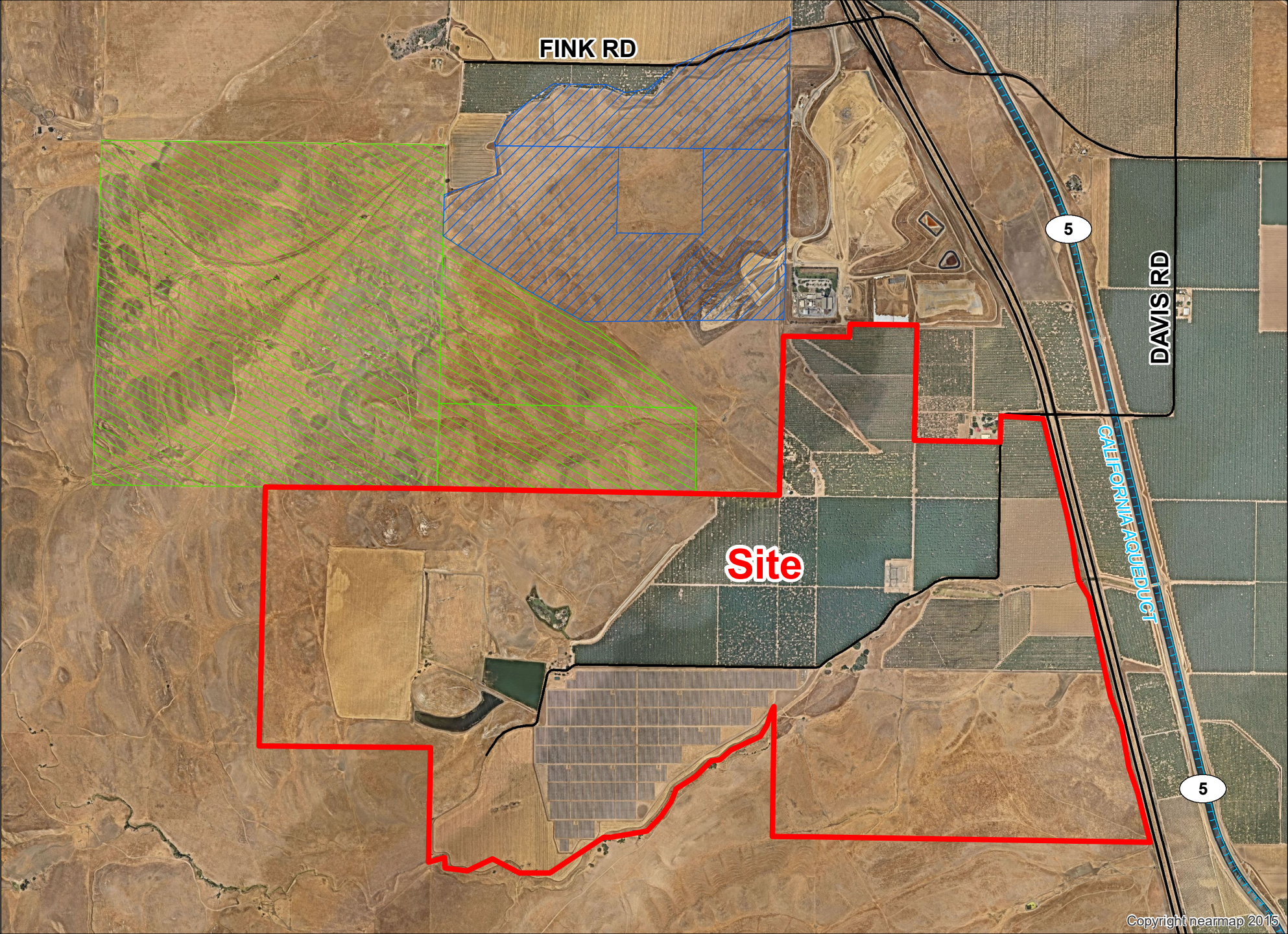
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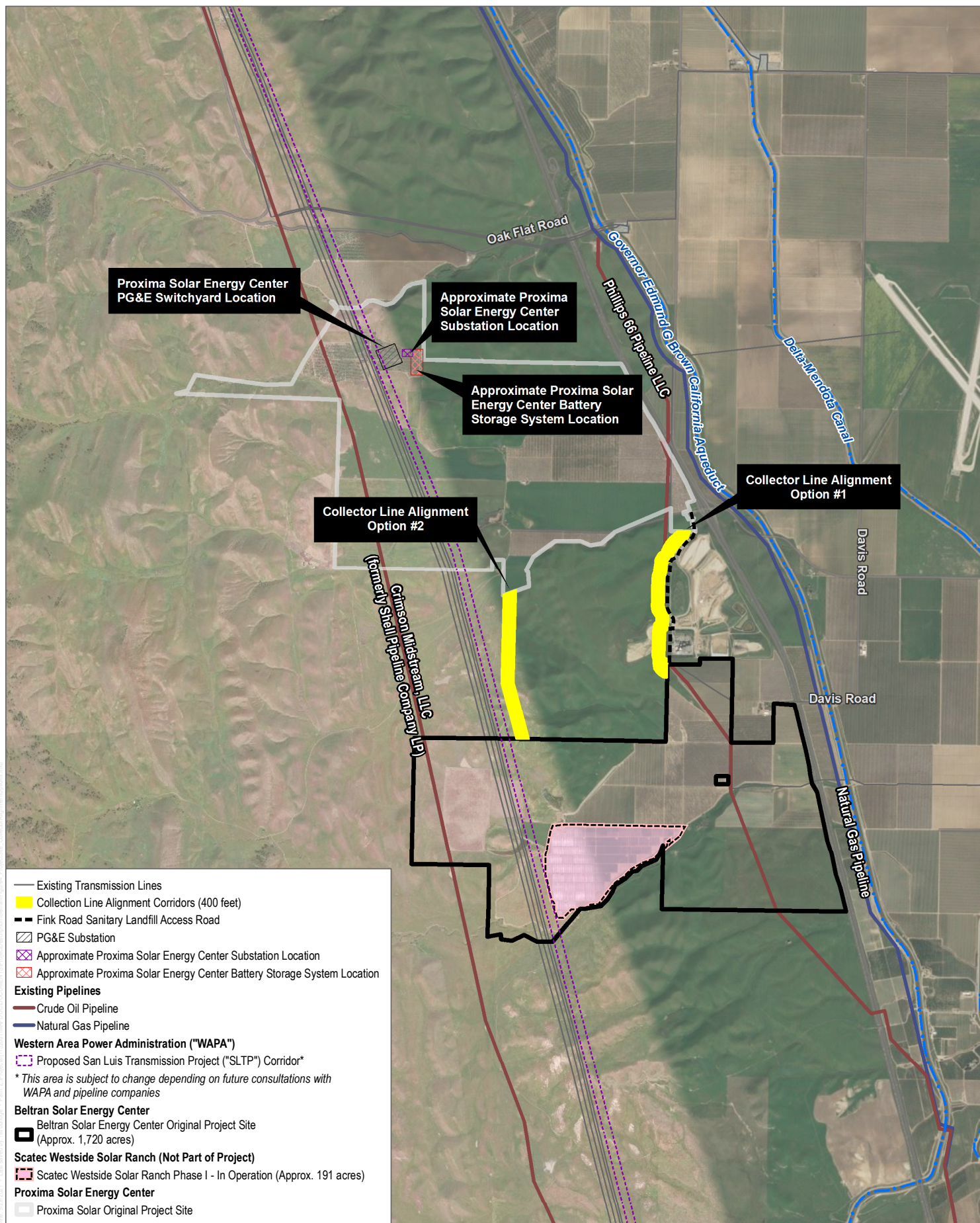
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2021 AERIAL SITE MAP

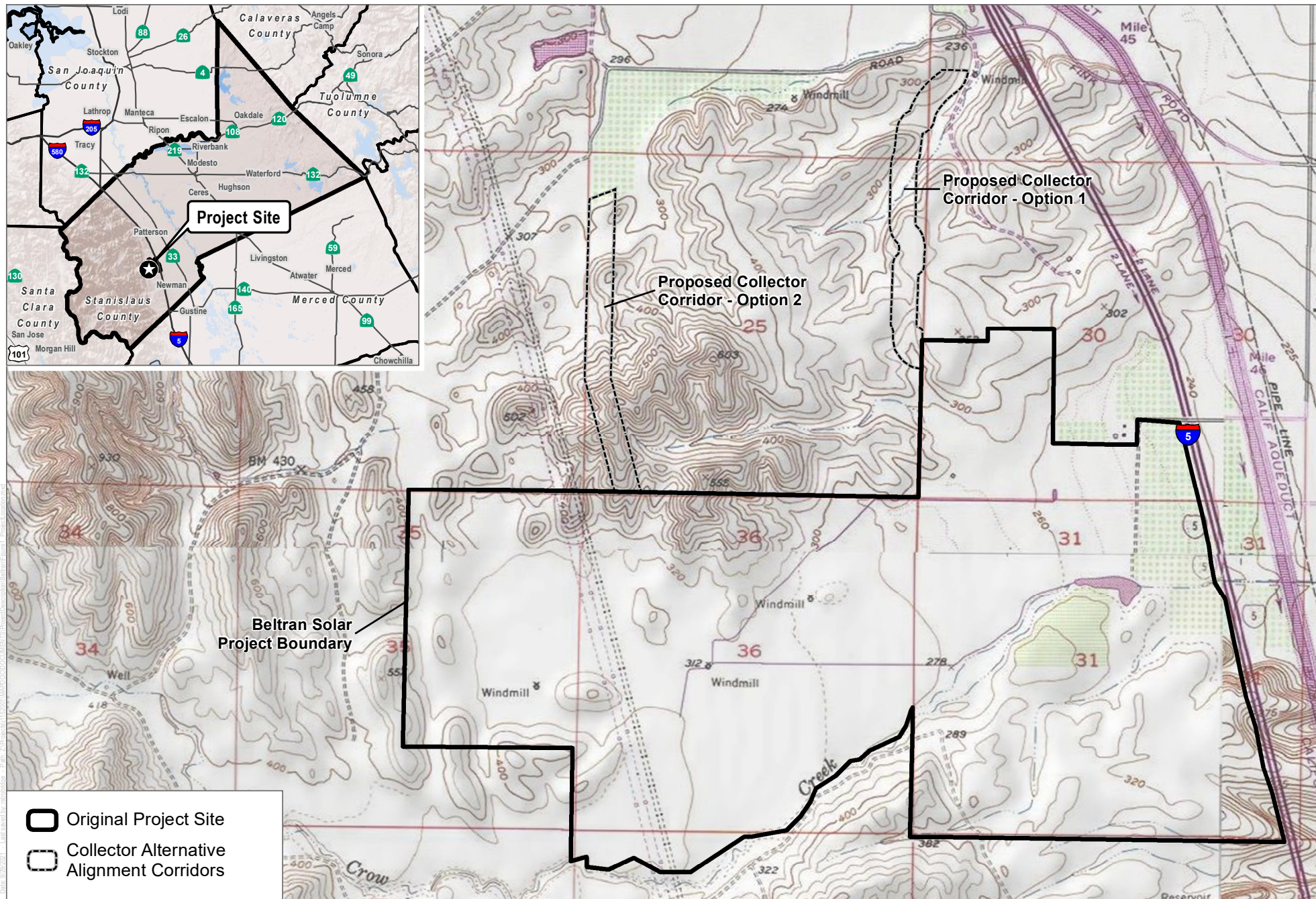
LEGEND

-  Project Site
-  Collector Site Option 1
-  Collector Site Option 2
-  Road
-  Canal





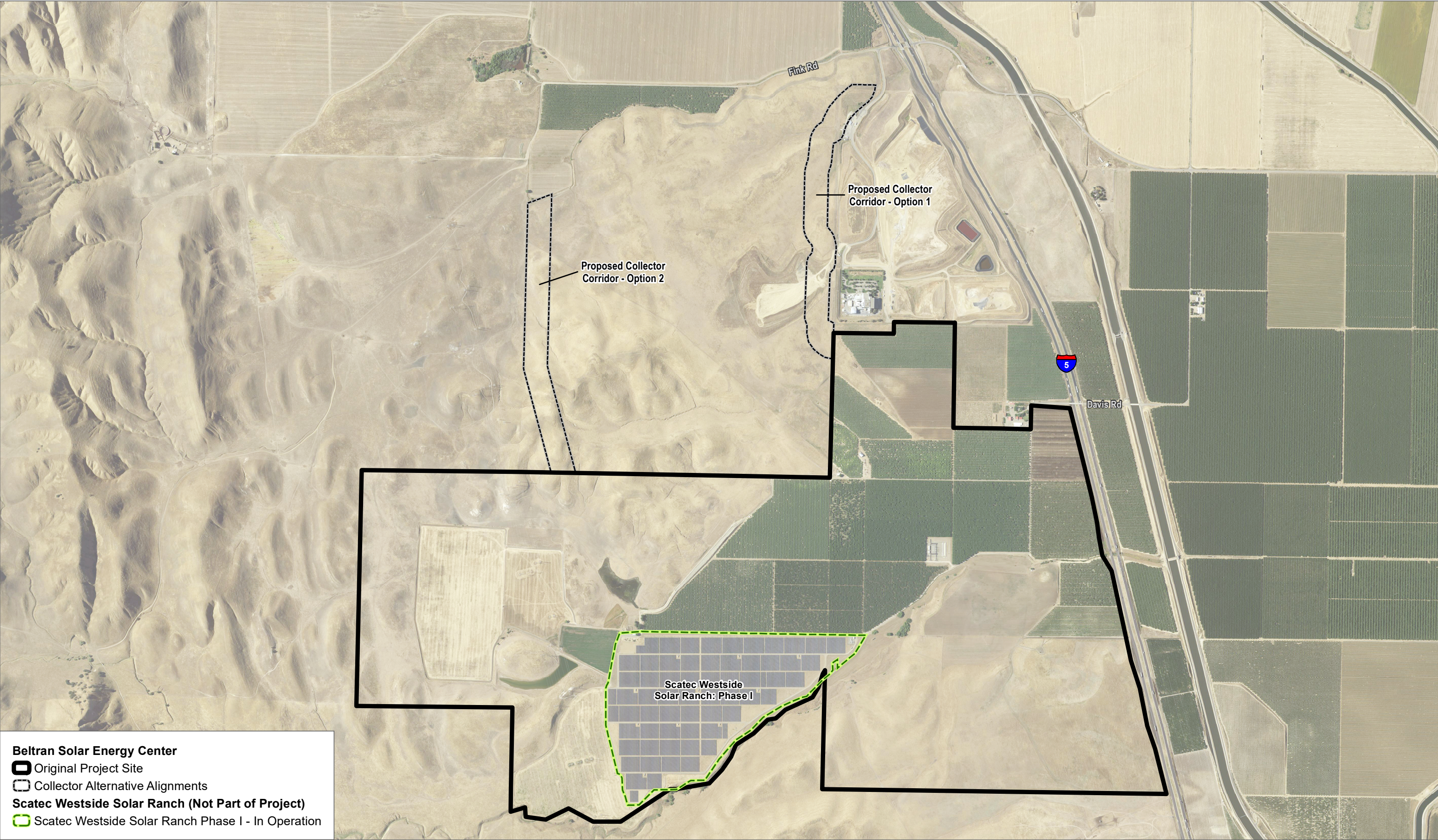
SOURCE: Bing Maps 2019



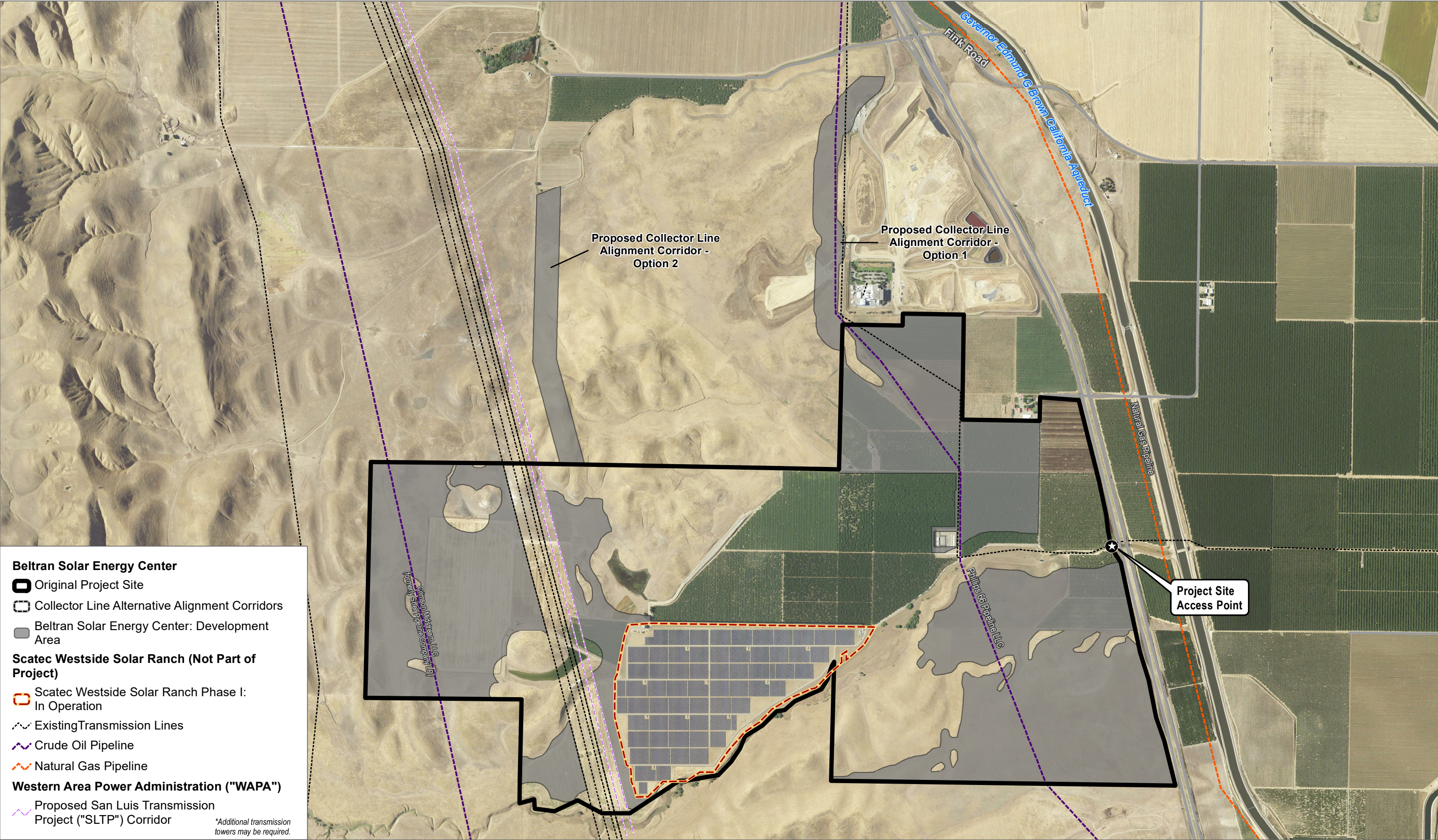
SOURCE: USGS 7.5-Minute Series Patterson, Orestimba Peak and Newman Quadrangles

FIGURE 1

Project Location
Beltran Solar Energy Center



SOURCE: USDA 2016, Stanislaus County 2018



SOURCE: USDA 2016, NEER 2019

FIGURE 5
Plot Plan
Beltran Solar Energy Center

**Project Description
Beltran Solar Energy Center
Stanislaus County, California**

Prepared for:

Beltran Solar, LLC

Prepared by:

DUDEK

1630 San Pablo Avenue, Suite 300
Oakland, California 94612

DECEMBER 2021

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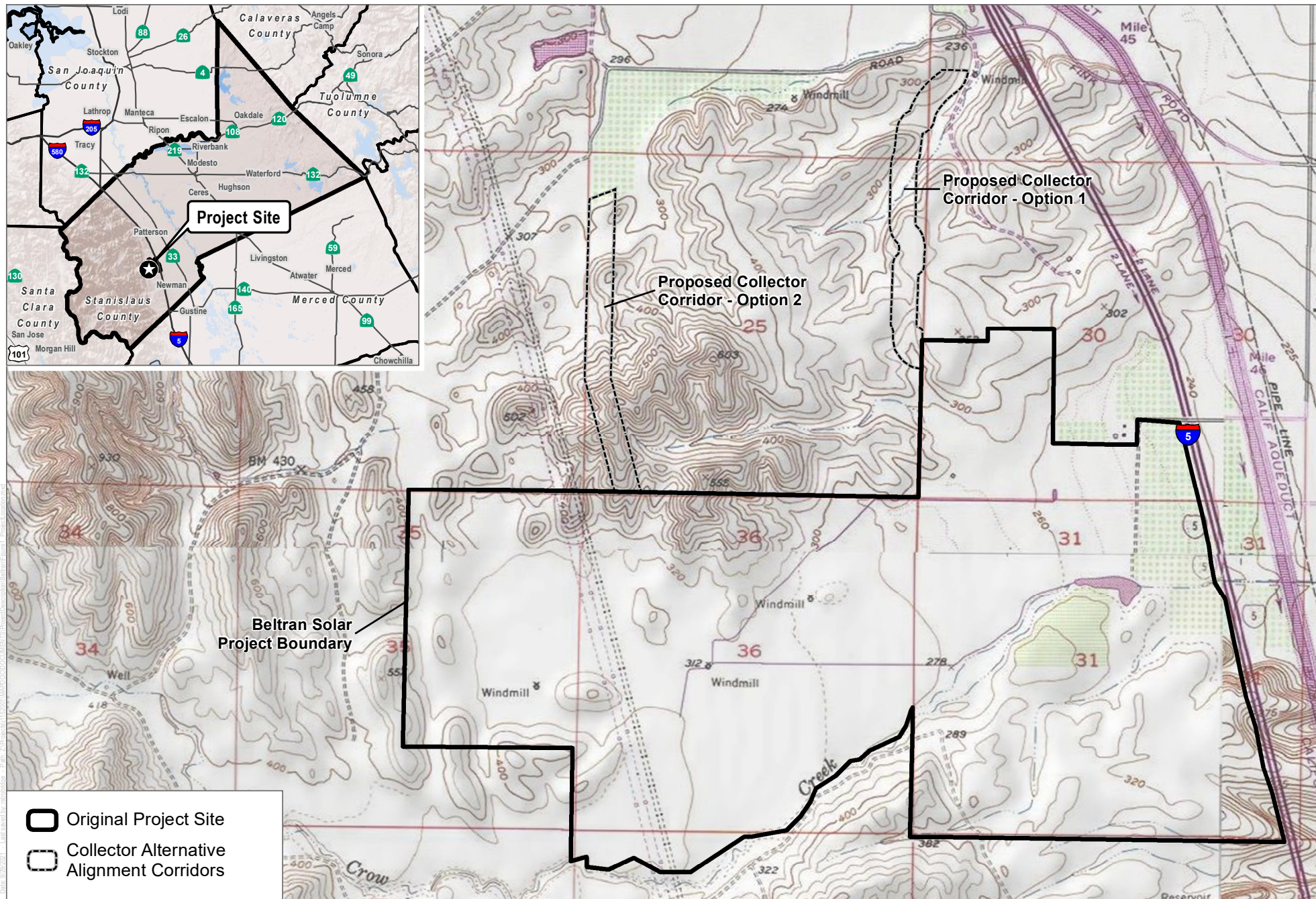
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1 Summary

Beltran Solar, LLC (“Beltran Solar”) proposes to amend the existing conditional use permit (“CUP”) for the Beltran Ranch Solar Facility (“Approved Project”), approved by Stanislaus County (“County”) in April 2013 and supported by an adopted mitigated negative declaration (“MND”) through a County Staff Approval Permit. The MND was titled UP 2011-11 - Beltran Ranch Solar Facility, Mitigated Negative Declaration [“2013 Beltran Ranch Solar Facility IS/MND” or “2013 IS/MND”]. The CUP for the Approved Project (No. 2011-11) allows for the construction, operation, and decommissioning of a solar photovoltaic (“Solar PV”) project with a development footprint of approximately 606 acres (“Original Footprint”), located on an approximately 1,720-acre site, which was part of the original Beltran Ranch Solar Facility CUP (“Original Project Site”). Beltran also proposes to change the name of the project previously known as Beltran Ranch Solar Facility to Beltran Solar Energy Center (“Beltran Project”). The Beltran Project will be constructed within the Original Project Site covered by the 2013 Beltran Ranch Solar Facility CUP and evaluated in the 2013 MND. The Original Project Site is shown on Figure 1, Project Location, and Figure 2, Project Site.

The Beltran Project includes a solar energy facility similar to the Approved Project with an increased development footprint, which will be contained entirely within the area analyzed for the Original Project Site in the 2013 IS/MND, with the exception of a proposed 34.5 kilovolt (“kV”) collector line, which would be located outside of the Original Project Site. The Beltran Project includes the potential development of additional support facilities including the 34.5-kV collector line from the Beltran Project to the Proxima Solar Energy Center substation and other ancillary facilities or equipment. These ancillary facilities were not evaluated in the 2013 IS/MND, nor approved in the 2013 CUP. The additional development area would accommodate these additional support facilities and are consistent with the potential effects analyzed in the CUP and MND.

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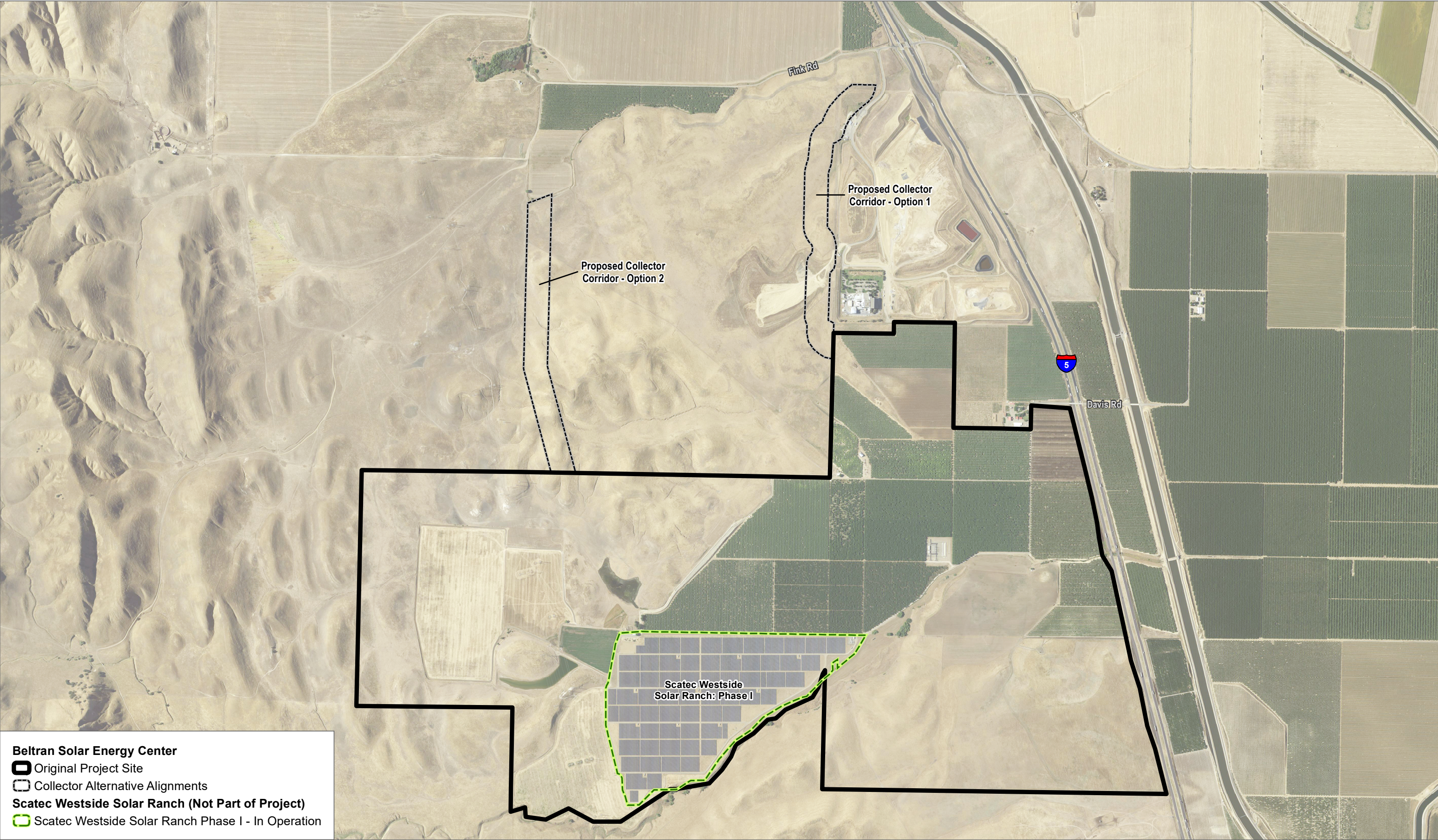


SOURCE: USGS 7.5-Minute Series Patterson, Orestimba Peak and Newman Quadrangles

FIGURE 1

Project Location
Beltran Solar Energy Center

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SOURCE: USDA 2016, Stanislaus County 2018

FIGURE 2
Project Site
Beltran Solar Energy Center

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2 Location

The Beltran Project is located at 22601 Davis Road in unincorporated Stanislaus County, southwest of the Fink Road Sanitary Landfill operated by Stanislaus County, west of Interstate 5 (“I-5”) and the California Aqueduct, in the Newman/Crows Landing area. Figure 1, Project Location, shows the regional location of the Project Site. The Beltran Project would be located on the Original Project Site, with the exception of the 34.5-kV collector line. The Original Project Site encompasses seven Assessor’s parcels with a combined acreage of approximately 1,720 acres. Each of the Assessor’s parcels are privately owned and listed in Table 1.

Table 1. Assessor’s Parcel Numbers (“APNs”)

APNs	
Original Project Site	
027-017-063	027-017-090
027-017-082	025-017-019
027-017-080	027-017-091
026-012-003	–
Collector Line Alignment Option #1	
025-017-015	025-012-015
Collector Line Alignment Option #2	
APN 025-017-017	APNs 025-017-020
025-017-013	–

2.1 Summary of the Approved Project – Beltran Ranch Solar Facility

The existing CUP for the Approved Project (No. 2011-11) was approved by the County in April 2013 and supported by an Initial Study and MND to allow for the construction, operation, maintenance, and decommissioning of a Solar PV energy facility known as the Beltran Ranch Solar Facility. On February 21, 2018, the County approved a 5-year extension to the start of construction to April 18, 2023. The CUP allows for the construction, operation, and decommissioning of a Solar PV project.

The 2013 IS/MND identifies three geographically distinct phases for the Approved Project, all of which will be used for construction. It was estimated that all three phases would take e 3 to 4 years to build, thus averaging 1 year to construct each phase. Figure 3 delineates the Original Project Site and shows each of the three phases included as part of the Original Footprint. A summary of the Approved Project phasing areas is provided below in Table 2.

Table 2. 2013 Beltran Ranch Solar Facility IS/MND Proposed Phasing

Phase	Acreage
1	113
2	167
3	326
Total	606

Source: Stanislaus County 2013.

As shown on Table 2, the Approved Project included a total disturbance area of 606 acres.

The Approved Project included construction of one 248-foot by 188-foot on-site collection substation to convert and transmit power generated by the Solar PV panels to the on-site connection point with the existing Pacific Gas and Electric ("PG&E") transmission line. In addition, the Approved Project included construction of a 30-foot-high overhead power line to connect the solar facility to the on-site collection substation.

The Approved Project also included construction of accessory structures such as an office trailer, storage sheds, and other Project-related facilities.

2.2 Project Setting

Land Use

The Original Project Site is located on the western edge of the San Joaquin Valley, where croplands of the valley floor transition to the rangelands of the inner Coast Ranges to the west. Land use in the Original Project Site is primarily agricultural, including areas cultivated for nuts and field crops. The current agricultural uses within the Original Project Site include alfalfa, almonds, walnuts, oats, and soil discing (or fallow lands).

The natural communities that were historically present have been substantially altered as a result of agricultural production activities. The northern-adjacent property consists of the Fink Road County Landfill, a Class II/III landfill for nonhazardous municipal solid waste. Dry, open, undeveloped land is present to the west. Crow Creek and other Nature Conservancy lands which the Approved Project have been designed to fully avoid are located to the south. I-5 and land used for agriculture are located to the east of the Original Project Site. Scattered rural residences occur east of I-5.

Climate

The climate of the Project region is typical of the Central Valley of California, with hot dry summers and cool, mild winters. Daytime temperatures in the summer are often in the upper 90° Fahrenheit, and some highs extend into the low 100s. Nighttime lows are typically in the 60s. In winter, daytime temperatures are usually in low 40s. Precipitation averages approximately 12 inches, and rainfall occurs mostly in the months of December and January.

Topography

The Original Project Site is located in the eastern foothills of the Diablo mountain range. The majority of the Original Project Site lies within a small valley between foothills to the north and south. The topography is characterized by an overall slope to the east with scattered hills rising up around the northern and southern edges. Elevations range from approximately 245 feet above mean sea level to approximately 410 feet above mean sea level.

Soils

According to the U.S. Department of Agriculture Natural Resources Conservation Service (USDA 2020), there are 13 different soil units mapped within the Project region: Alo-Vaquero Complex: 30 to 50 percent slopes; Calla-Carbona Complex: 30 to 50 percent slopes; Capay Clay (Loamy Substratum): 0 to 2 percent slopes; Chaqua-Arburua Complex: 8 to 15 percent slopes; Damluis Gravelly Loam Clay: 2 to 8 percent slopes; Damluis Gravelly Loam Clay: 8 to 15 percent slopes; Elsaldo Loam (Rarely Flooded): 0 to 2 percent slopes; Vernalis Loam: 0 to 2 percent slopes; Vernalis Clay Loam: 0 to 2 percent slopes; Vernalis Clay Loam (Wet): 0 to 2 percent slopes; Vernalis-Zacharias Complex: 0 to 2 percent slopes; Wisflat-Arburua-San Timoteo Complex: 30 to 50 percent slopes; and Zacharias Clay Loam: 2 to 5 percent slopes.

The majority of the Original Project Site consists of three of the above-referenced soil units as follows: Damluis Gravelly Loam Clay, which consists of well-drained soils formed in alluvium from mixed sources; Chaqua-Arburua Complex, which is well drained calcareous alluvium derived from sedimentary rock over calcareous sandstone; and Vernalis-Zacharias Complex, which is well drained soils formed in alluvium from mixed rock sources (USDA 2020).

Hydrologic Features

The hydrology within the Original Project Site has been substantially altered by agricultural land uses and associated activities, such as leveling and ditching. Surface runoff from the site generally drains northeast/east through overland flow and constructed agricultural ditches. The Beltran Project does not include changes to the existing drainage pattern. Drainage carried by these ditches is conveyed under I-5, east of the site, through two culverts that connect to a series of channels and ditches, which are tributary to the San Joaquin River, and ultimately, San Francisco Bay, a traditional navigable water of the United States.

Generally, there are no wetlands or significant waterways within the boundaries of the Beltran Ranch Solar Facility. The seasonal Crow Creek traverses the Beltran Farm (through Assessor's Parcel Number ["APN"] 027-017-063 and APN 027-017-077); however, this portion of the Beltran property is not a part of the solar facility but will remain in agricultural use as it is today. No runoff beyond the historic flow will leave the site, and no drainage structures are necessary to collect, control, or divert any stormwater; additionally, no storage basins are proposed.

Beltran Farm is currently within the Oak Flat Water District, which has a contract with the California State Department of Water Resources to purchase water from the California Aqueduct.

Water used for agriculture is obtained from the California Aqueduct, which is located east of I-5. During a 2018 site reconnaissance which was conducted as part of a Phase I Environmental Site Assessment (ESA), at least four well and pump houses were observed, three of which are located on the Original Project Site. The farm's well numbering system suggested there are more. John E. Beltran, site owner, confirmed during the ESA that the subject property is serviced by a private well or non-public water source (Dudek 2018).

Water Demand

As previously discussed, one portion of the Approved Project are currently planted with walnut and almond trees. It is estimated that walnut and almond trees require an average of 3.5 acre-feet of water applied per acre per year (Congressional Research Service 2015).

Existing Constraints

Four existing PG&E pole line easements, two crude oil pipeline easements owned by Crimson Midstream, LLC and Phillips 66 Pipeline, LLC, and four overhead transmission lines traverse the Original Project Site. Three of the PG&E pole line easements are adjacent to each other and are approximately 342.5 feet wide, 75 feet wide, and 30 feet wide, respectively, and traverse the west side of the Original Project Site in a northwest–southeast direction. The remaining PG&E pole line easement is approximately 40 feet wide and traverses the east side of the Original Project Site in a northwest–southeast direction. The Crimson Midstream, LLC pipeline easement is located along the west side of the Original Project Site and traverses the Original Project Site in a northwest–southeast direction. The Phillips 66 Pipeline, LLC pipeline easement is located along the east side of the Original Project Site and traverses the Original Project Site in a northwest–southeast direction. Each crude oil pipeline includes an approximately 50-foot-wide easement. Four overhead transmission lines traverse the Original Project Site. The overhead transmission lines and towers are located adjacent to each other and run along the west side of the Original Project Site together. The location of each of the existing constraints are shown on Figure 4, Project Site and Collector Alignment Options, and Figure 5, Plot Plan.

Other Known Projects in the Project Area

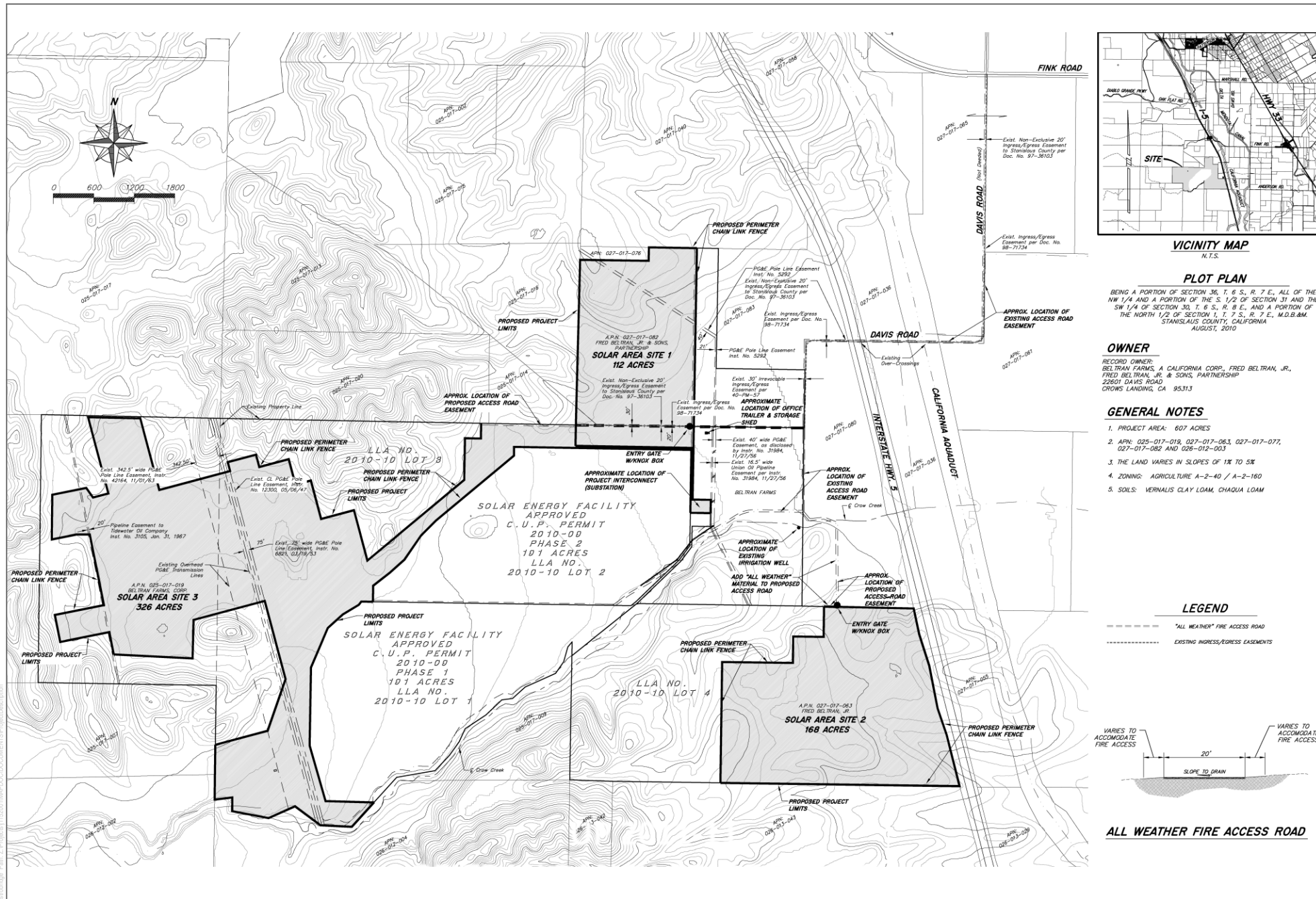
San Luis Transmission Project. The Western Area Power Administration (“WAPA”) is proposing to construct a new 230-kV transmission project known as the San Luis Transmission Project that will run adjacent to the east side of the existing PG&E 230-kV transmission lines, which currently traverse the Original Project Site. WAPA issued its record of decision for the San Luis Transmission Project, however the timing for construction is unknown.

Proxima Solar Energy Center. The Proxima Solar Energy Center (previously named “Fink Road Solar Farm”) CUP No. 2010-03 (April 2012) permits the development of a Solar PV project within an approximately 940.8-acre development footprint on an approximately 1,687-acre project site. The Proxima Solar Energy Center is located approximately 1 mile north of the Original Project Site.

Scatec Westside Solar Ranch. The Scatec Westside Solar Ranch project (CUP No. 2010-09) permits the development of up to 50 megawatts (“MWs”) within an approximately 382-acre development footprint located interior to the Beltran Solar Energy Center Original Project Site. The first phase of the Scatec Westside Solar Ranch is currently in operation and consists of approximately 20 MWs on 191 acres.

Paulsell Solar Energy Center. The Paulsell Solar Energy Center project proposes to amend the existing CUP for the Scatec Westside Solar Ranch to increase the development footprint of the second phase from 191 acres to 261.25 acres and include additional support facilities.

Crows Landing Airport. In 2018, the Crows Landing Naval Air Station was approved to be converted to a public use airport, the Crows Landing Airport. Based on an amendment to the Airport Land Use Compatibility Plan in 2018, the Crows Landing Airport is within Review Area 2. Review Area 2 includes location where airspace protection and/or overflight are compatibility concerns, but not noise or safety (Stanislaus County 2018). The Crows Landing Airport is located on the east side of I-5, approximately 2 miles from the Original Project Site.



SOURCE: MVE, Inc. 2011

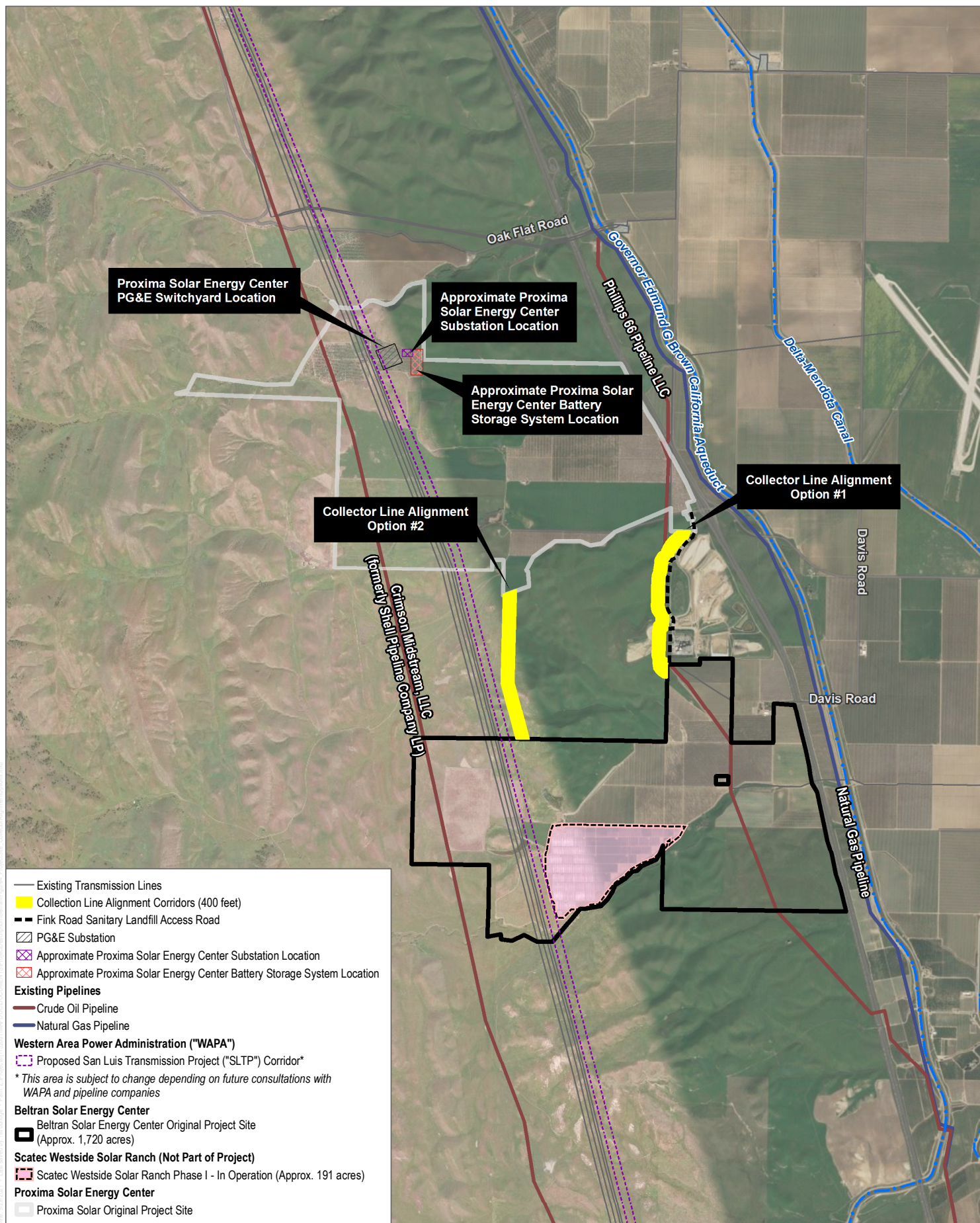
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FIGURE 3

Original 2013 Beltran Ranch Solar Facility Site Plan

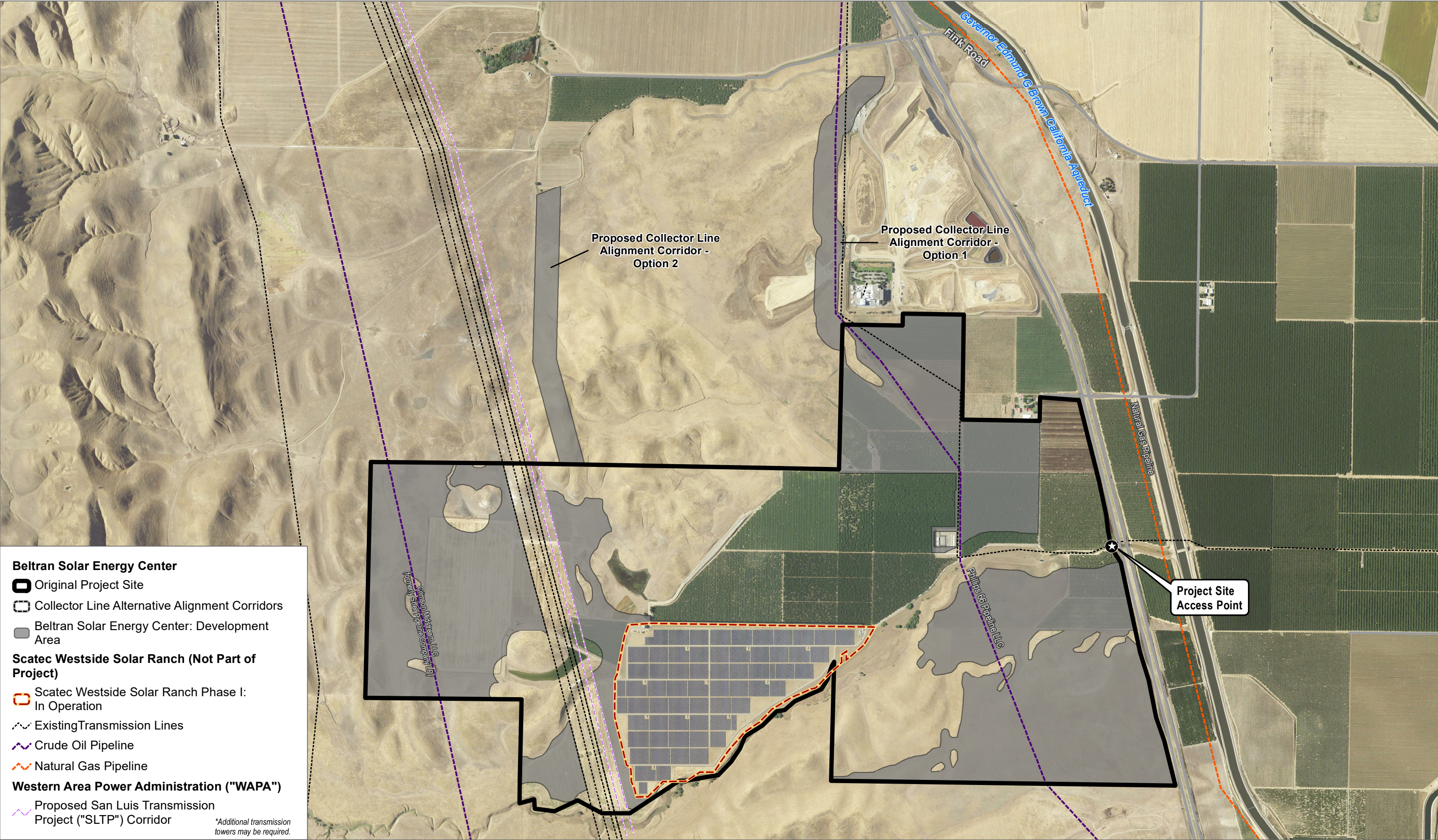
Beltran Solar Energy Center

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SOURCE: Bing Maps 2019

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SOURCE: USDA 2016, NEER 2019

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3 Beltran Solar Energy Center - Project Characteristics

The Beltran Project will include an increase in size from the Original Footprint, up to approximately 794.3 acres under collector line Option 1 or 817.3 acres under collector line Option 2. This increase will be contained entirely within the area analyzed for the Original Project Site or Approved Project, with the exception of the proposed 34.5-kV collector line, which will interconnect with the Proxima Solar Energy Center collector substation located approximately 1 mile north of the Original Project Site. This increase is intended to allow for developmental and operational flexibility. For example, certain areas that were approved as part of the Original Footprint are unsuitable for development due to unexpected site constraints, including proposed and existing utilities, an existing PG&E transmission line corridor, a proposed WAPA San Luis Transmission Project easement, existing crude oil pipeline easements, future access roads to service the WAPA San Luis Transmission Project, and other unforeseen encumbrances (“Approved Constraint Areas”). Beltran anticipates to substitute out these Approved Constraint Areas from the Beltran Project footprint for other lands within the Original Footprint on a 1:1 ratio. These acreages will be subject to change as the development of the Beltran Project progresses.

The Beltran Project is designed to generate up to 300 MW of electricity and will require additional support facilities consisting of access roads, fencing, medium-voltage (“MV”) stations, a project 34.5-kV collector line, a battery energy storage system (“BESS”) collocated with the BESS at the Proxima Solar Energy Center, operations and management (“O&M”) building, supervisory control and data acquisition (“SCADA”) system, and other ancillary facilities or equipment. The development area would accommodate these additional support facilities and are consistent with the uses and potential effects analyzed in the CUP and 2013 MND. The final nameplate capacity of the Beltran Project will be established at the detailed engineering stages. A description of the Beltran Project is included below.

3.1 Solar Energy Facility

Solar energy would be captured by an array of Solar PV panels mounted to fixed racking or to a single-axis tracking system. The total number of panels used would depend on the final selection of the actual panels to be used. The panels would be arranged in series to effectively increase output voltage to approximately 1,500 volts. These series of panels are called “strings” and provide the basic building block of power conversion in the solar array. The strings are combined in the solar field through an aboveground or belowground direct current (“DC”) collection system. Then, they are collected together at the MV stations, where the energy is converted to alternating current (“AC”) and then stepped to an intermediate voltage, typically 34.5 kV. The specific Solar PV panel technology will be selected at the detailed engineering stages as the Project progresses.

The panels will be aligned in rows to be spaced based on specific design criteria and will be mounted on the racking systems. The type of anchoring system and/or foundation supports for the racking structures will be determined based on a preliminary geotechnical assessment, but it is anticipated that the racks will be supported by screw or driven piles into the ground. A fixed racking system would be stationary, with panels mounted to tilt to the south. If used, the tracking system would rotate slowly throughout the day at a range of +/- 60 degrees facing east to west to stay perpendicular to the incoming solar rays so production can be optimized. The number of panels per tracker will depend on final configuration and, at its highest rotated edge, would have a maximum height which will be defined by the topography of

the terrain and the dimensions of the chosen panels. The minimum clearance from the lower edge of the panel to ground level is approximately 18 to 24 inches, but will be subject to change pending final design.

The MV stations will house multiple components to perform the following three critical functions for the solar plant: (1) collect DC power in a central location, (2) inverters convert the DC power into AC power, and (3) MV transformer converts low-voltage AC power created by the inverters to MV AC power. The output power from the MV stations is then fed to the AC collection system through an aboveground or belowground collection system. This AC collection system would deliver the electricity to the Proxima Solar Energy Center substation via the proposed 34.5-kV collector line, where the voltage would be stepped up to the interconnection voltage of 230 kV. The number of MV stations to be used will be determined at the detailed engineering stages.

3.2 Project Collector Line and Combining Switchgear

The Approved Project included an on-site collector substation within a fenced 248-foot by 188-foot area to transform system output voltage to grid connection voltage. However, the proposed Beltran Project would no longer require an on-site collector substation and would instead connect to a 34.5-kV collector line via combining switchgear. Beltran Solar is proposing a new 34.5-kV collector line that will extend from the Beltran Project to a collector substation at the Proxima Solar Energy Center approximately 1 mile north of the Original Project Site.

On March 29, 2020 Stanislaus County approved a Staff Approval Permit to allow for the construction and operation of a collector substation, BESS, a PG&E switchyard, and other ancillary facilities or equipment at the Proxima Solar Energy Center. The Proxima Solar Energy Center is anticipated to construct the approved collector substation to serve the Proxima Solar Energy Center regardless of whether the Beltran Project is built.

The proposed Beltran Project 34.5-kV collector line was not analyzed or permitted as part of the 2013 IS/MND and CUP. The location and design of the collector line is being refined, but is anticipated to follow one of two potential alignments (see Figure 4). Each alignment is anticipated to be up to 400 feet wide.

1. **Adjacent to the proposed Fink Road Sanitary Landfill access road.** Stanislaus County previously adopted a MND to relocate the existing Fink Road Sanitary Landfill access road. The access road realignment is being considered to accommodate additional capacity at the landfill. The MND, dated September 2009, analyzed a single option of relocating the access road immediately to the west of the Fink Road Sanitary Landfill, on adjoining County-owned property. In this scenario, the Beltran Solar Energy Center collector line would be collocated with the realigned access road and constructed either above or below ground. This proposed alignment is anticipated to be located within APNs 025-017-015 and 025-012-015, which are each wholly owned by Stanislaus County.
2. **Adjacent to the existing PG&E and proposed WAPA transmission line corridor (east side).** WAPA is proposing to construct a new 230-kV transmission project known as the San Luis Transmission Project that will run adjacent to the east side of the existing PG&E 230-kV transmission lines. WAPA issued its Record of Decision for the San Luis Transmission Project; however, the timing for construction is unknown.

The collector line would run semi-parallel to the east side of the existing PG&E and proposed WAPA transmission line corridor that traverses the Beltran Project. This proposed alignment is primarily within APN 025-017-017 with a small portion that bisects portions of APNs 025-017-020 and 025-017-013.

3.3 Battery Energy Storage System

As previously discussed, Stanislaus County approved a Staff Approval Permit to allow for the development of a BESS at the Proxima Solar Energy Center. The Proxima Solar Energy Center BESS includes a footprint up to 100 acres with batteries housed either in a walk-in style enclosure or enclosed in an outdoor-rated container with minimal dimensions to house the batteries, racks, liquid cooling, DC disconnect, small step-down transformer, communications rack, fire panel, and other ancillary equipment. Energy generated from the Beltran Project will have the potential to be stored in batteries at the Proxima Solar Energy Center prior to being stepped-up at the Proxima Solar Energy Center collector substation and transferred to a new PG&E switchyard that was approved as part of the aforementioned Proxima Solar Energy Center Staff Approval Permit. A stand-alone BESS is not anticipated to be developed within the Original Project Site.

3.4 Access Roads

An existing gravel access road, which extends from Davis Road to the existing Crow Creek substation, would be extended to serve the area immediately north of the Crow Creek substation. The existing access road is composed of gravel and is ranges from 20 to 30 feet wide, and the proposed extension of the road would be composed of the same gravel material and maintain the same width as the existing road. This existing access road, including the proposed extension, would be utilized as the primary access road during construction and operations of the Beltran Project. Additional secondary access roads to serve the solar arrays would be designed to provide circulation in and around the site, and would be approximately 16 feet wide.

3.5 Operation and Maintenance

The Beltran Project operations would also be monitored remotely through the SCADA system, and periodic inspections and maintenance activities would occur. No on-site O&M building is proposed.

3.6 Perimeter Fence, Signage, and Lighting

The perimeter of the Beltran Project would be enclosed by a 6-foot-high perimeter security fence. Access into the Beltran Project would be provided through a drive-through gate along Davis Road. The main purpose of the fence is to prevent unauthorized access to the site. Primary access to the Beltran Project would be provided through an access gate along Davis Road. Emergency access will be provided through gates secured by a Knox Box along the Fink Road Sanitary Landfill access road.

In accordance with the approved Mitigation Measure BIO-9, the security fence will be installed with a minimum 6-inch clearance at the base to allow the movement of the San Joaquin kit fox (*Vulpes macrotis*).

In accordance with Condition of Approval 8 of the 2013 Beltran Ranch Solar Facility CUP, a sign plan for all proposed on-site signs indicating the location, height, area of the signs, and message would be approved by the planning director or his appointed designee.

A small sign would be installed at the site main entry. The sign would include language similar to the following: "Beltran Solar Energy Center, 22601 Davis Road." In addition, required safety signs would be installed on the fence near the site entrance to identify high voltage and provide information for emergency services within the facility.

In accordance with Condition of Approval 5 of the 2013 Beltran Ranch Solar Facility CUP, all exterior lighting is required to be designed (aimed down and toward the site) to provide adequate illumination without a glare effect. Lighting would be only in areas where it is required for safety, security, or operations and would be directed on site and include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

3.7 Construction

Beltran Solar anticipates construction activities for the Beltran Project to occur over an approximately 18-month period, a reduction of 1.5 years when compared to the Approved Project. Construction would be primarily composed of the following activities:

- **Site Preparation:** The site would be prepared for construction. For example, rough grading may be performed where required to accommodate the support structures and access roads. Retention basins, if required, would be created for hydrologic control. Access roads would be gravel or aggregate base depending on the final site geotechnical report. A temporary staging area would be constructed to hold materials and construction equipment.
- **Fencing:** A 6-foot-tall perimeter security fence would be installed. Trash would be removed from the fencing as required.
- **Solar Field:** The solar arrays would be installed in three steps: (1) installation of foundations, (2) construction of the racking and tracking systems, and (3) attachment of modules.
- **Electrical Work:** A pad for the combining switchgear would be poured, followed by the installation of the MV stations, wiring of the modules through combiner boxes, and grid interconnection. The MV stations would sit on concrete foundations or driven piles, pending final design.

The Beltran Project is anticipated to be built over an approximately 18-month period from the onset of site preparation activities through testing and commissioning of the facility. It is anticipated that construction crews will work 8 or 10 hours per day, with work occurring Monday through Friday. Overtime and weekend work would be used only as necessary to meet scheduled milestones or accelerate schedule and would comply with applicable California labor laws. The activities in Table 3 would overlap in certain phases.

Table 3. Proposed Project Construction Duration, Equipment, and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
Perimeter fence installation	2 months	Skid loader with auger attachment	2+	Maximum = 121 Average = 90
		Pickup truck	1	
		Flatbed truck	1	
		4x4 fork lift	1	
Site preparation and clearing/grading	1.5 months	Water truck (three axles)	3	
		Grader	2	
		Bulldozer	1	
		10-ton roller	1	
		Sheepsfoot roller	1	
		Tractor (with mower attachment)	1	
Demolition of existing structures	2 weeks	Backhoe	1	
		Bulldozer	1	
		10-cubic-yard dump truck	4	
		Front-end loader	1	

Table 3. Proposed Project Construction Duration, Equipment, and Workers by Activity

Activity	Duration	Equipment	Pieces	Workers
Underground work (trenching)	3 months	Excavator	2	
		Sheepsfoot roller	1	
		Water truck (three axles)	1	
		Aussie padder (screening machine)	1	
		4x4 forklift	1	
System installation	4 months	4x4 forklift	8	
		Small crane (80 ton)	1	
		ATV	20	
		Pile driver	4	
		Pickup truck	4	
Collector line installation	1 month	Line truck (with spool trailer)	1	
		Boom truck (with bucket)	1	
		80-ton crane	1	
		LoDril (foundation drill)	1	
Testing and commissioning	3 months	Pickup truck	4	
Site cleanup and restoration	1 month	Grader	1	
		Skid loader	1	

Note: ATV = all-terrain vehicle.

The Beltran Project would be designed to minimize earthwork. Minor grading would occur as needed. Grading would occur throughout the site for the construction of access roads, and other ancillary facilities. Grading would be accomplished with scrapers, motor graders, water trucks, bulldozers, and compaction equipment. The Solar PV modules would be off-loaded and installed using small cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small- to medium-sized construction equipment as needed. Construction equipment would be delivered to the site on “low-bed” trucks unless the equipment can be driven to the site (e.g., boom trucks). It is estimated that there would be approximately 35 pieces of construction equipment on site each month.

As discussed in Section 2.2, Project Setting, the Project Site consists of alfalfa, oats, almond and walnut orchards, as well as bare ground subject to frequent discing. Prior to commencing construction activities, there will be clearing and grubbing of the trees where orchards are present to allow for PV panel installation.

Vegetation would be removed where gravel roads would be constructed, fill would be placed from grading operations, structures would be constructed, and transmission pole and tracker foundations would be installed (if necessary). At locations where tracker foundations would be installed, minor cuts may be required where the foundations will be driven. Minor earth work would also occur to install access roads and transmission line maintenance roads. The surface of the roads would be at grade in order to allow any water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level and to assist in erosion control. During construction of the facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary but otherwise undisturbed so reestablishment is possible.

3.8 Traffic

The peak daily construction employee count would be approximately 121, during the peak phase of construction. In addition to the 121 maximum daily workers traveling to the site, there would be up to 18 round truck trips per day (36 one-way trips) for vendor deliveries at peak construction activity, and approximately 3 round haul truck trips per day. A total of up to 284 trips per day are anticipated during peak construction activities. Delivery of material and supplies would reach the site through on-road truck delivery through I-5, Fink Road, and Davis Road. These truck trips would be intentionally scheduled throughout the construction day to optimize construction efficiency as is practical by scheduling deliveries at predetermined times.

The heaviest delivery loads to the site would consist of the tracker structures, rock truck deliveries, concrete trucks, and the generator step-up transformer. Typically, the rock is delivered in bottom-dump trucks or transfer trucks with six axles, and the tracker structures would be delivered on traditional flatbed trucks with a minimum of five axles. Low-bed trucks would transport the construction equipment to the site as needed. The size of the low-bed truck (axles for weight distribution) would depend on the equipment transported.

3.9 Water Use

The water demand for the Beltran Project is based on the anticipated disturbance footprint, because the primary water demand associated with construction is dust control. The average construction water demand for similar projects is 0.24 acre-feet per year. This is a conservative planning-level estimate that would accommodate for additional details as the Project design is finalized. Based on the water demand factor of 0.24 acre-feet per acre and the Beltran Project footprint of 794.3 acres under collector line Option 1 or 817.3 acres under collector line Option 2, the construction water demand is estimated to be approximately 182 acre-feet over an approximately 18-month period.

During Project operations, solar panel washing is expected to occur one to four times per year. While it is expected that Solar PV panels would only be washed once per year, the panels may need to be washed more frequently (up to four times per year) based on site conditions. Conditions that may necessitate increased wash requirements include unusual weather occurrences, fires, local air pollutants, and other similar conditions.

A small ongoing water demand of 0.6 acre-feet per year for miscellaneous needs (e.g., periodic site maintenance, fire suppression) is also anticipated for the O&M water demand. The total O&M water demand is estimated at 20 acre-feet per year.

Table 4 below compares provides the estimated water demand for construction and O&M of the Beltran Project.

Table 4. Beltran Project Water Demand

Phase/Activity	Estimated Water Demand	Total Estimated Water Demand (acre-feet)
Construction (rounded up to the nearest 10 acre-feet)		
Grading and dust control	0.24 acre-feet/acre	182
Operation and Maintenance (rounded to the nearest acre-foot)		
Panel washing, miscellaneous facility maintenance, and sanitary facilities (operations and maintenance building)	Panel washing to occur up to 4 times per year	20

Construction and operational water is anticipated to be provided by the Oak Flat Water District. In addition, on-site groundwater may be used. Each of the proposed water sources is being evaluated in the water supply assessment.

An on-site diesel generator may be used to power pumps for well water use during construction and O&M. In addition, during construction, water may be pumped directly into 2,000 to 4,000-gallon tanked water trucks or stored in overhead, temporary, approximately 12,000-gallon water storage towers/tanks (up to 16 feet tall) to assist in the availability of water for trucks and expedient filling. The existing wells on site that would not be used for the Beltran Project would be capped in place in accordance with County requirements.

Additionally, the Original Project Site consists of an orchard (almond and walnut trees). It is estimated that almond/walnut trees require an average of 3.5 acre-feet of water applied per acre per year (Congressional Research Service 2015). There are currently approximately 272.2 acres of orchard on the Project Site. The remaining Project area consists of bare ground that is frequently disced and does not require water. With development of the Project, water use associated with the orchard would cease, resulting in an estimated net savings of 932.7 acre-feet per year of water during O&M.

3.10 Decommissioning

Upon expiration of the equipment life, the approximately 1,763-acre (collector line Option 1) or 1,786-acre (collector line Option 2) Beltran Project will be decommissioned and the ground surface returned to a condition that can support agricultural uses. In general, the Solar PV system would be recycled at the expiration of the Beltran Project's life. Most parts of the proposed system are recyclable in accordance with Condition of Approval 13 of the 2013 Beltran Ranch Solar Facility CUP. Panels typically consist of silicon, glass, and a metal frame. Tracking systems (not including the motors and control systems) typically consist of aluminum and steel. Batteries include lithium-ion, which degrades but can be recycled or repurposed. Site structures would include steel or wood and concrete. All of these materials can be recycled. Concrete from deconstruction would be recycled. Local recyclers are available. Metal and scrap equipment and parts that do not have free flowing oil may be sent for salvage.

Fuel, hydraulic fluids, and oils would be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks and vessels would be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller container lubricants, paints, thinners, solvents, cleaners, batteries, and sealants would be kept in a locked utility structure with integral secondary containment that meets Certified Unified Program Agencies and Resource Conservation and Recovery Act requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries would be recycled at an appropriate facility. Site personnel involved in handling these materials would be trained to properly handle them. Containers used to store hazardous materials would be inspected regularly for any signs of failure or leakage. Additional procedures would be specified in the Hazardous Materials Business Plan Closure Plan submitted to the Certified Unified Program Agencies. Transportation of the removed hazardous materials would comply with regulations for transporting hazardous materials, including those set by the Department of Transportation, the U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal.

3.11 Proposed Project and Approved Project Comparison

Table 5 below compares Project features associated with the Beltran Project with those approved as part of the Approved Project.

Table 5. Proposed Changes to 2013 Beltran Ranch Solar Facility CUP

Description	Beltran Solar Energy Center (Proposed Project) – Proposed Change	Beltran Ranch Solar Facility (Approved Project) Previous Project Description
Project Name	Beltran Solar Energy Center	Beltran Ranch Solar Facility
Project Site	Approximately 1,763-acre Project Site under collector line Option 1 or 1,786-acre Project Site under collector line Option 2.	Approximately 1,720-acre Original Project Site.
Development Footprint	Approximately 794.3 acres under collector line Option 1 or 817.3 acres under collector line Option 2.	Approximately 606 acres
Solar Energy Facility	Fixed racking or a single-axis tracking system.	Single-axis tracking system.
Energy Storage	The Beltran Solar Energy Center BESS would be collocated with the Proxima Solar Energy Center BESS.	No energy storage systems were analyzed/permitted at part of the Beltran Ranch Solar facility.
On-site Collector Substation	No new substation. Energy will be connected to the 34.5-kV collector line via combining switchgear.	On-site substation within a fenced 248-foot by 188-foot area.
Interconnection to PG&E	34.5-kV collector line from the Beltran Solar Energy Center to the Proxima Solar Energy Center substation. Two proposed alignments have been analyzed as part of the environmental review.	30-foot high overhead power line to connect the Beltran Ranch Solar Facility substation to the existing PG&E Salado-Newman transmission line.
Perimeter Fence	Perimeter Fence: Approximately 6 feet high along entire perimeter. (Unchanged)	Perimeter Fence: Approximately 6 feet high along entire perimeter.
Construction Schedule	Approximately 18 months	Approximately 3 years
Traffic	Peak Daily Construction Trips: 284	Peak Daily Construction Trips: Not specified
Water Use	Construction: 182 acre-feet Operations and maintenance: 20 acre-feet per year	Construction: Not specified Operations and maintenance: Not specified
Operations and Maintenance	Operations and maintenance building	No operations and maintenance building specified

Notes: kV = kilovolt; PG&E = Pacific Gas & Electric.

4 References

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