County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

DATE: January 3, 2025

TO: Department of Public Works and Planning, Attn: Steven E. White, Director
Department of Public Works and Planning, Attn: Bernard Jimenez, Planning and Resource Management Officer
Development Services and Capital Projects, Attn: William M. Kettler, Deputy Director of Planning
Development Services and Capital Projects, Attn: Chris W. Motta, Division Manager
Development Services and Capital Projects, Attn: Tawanda Mtunga, Principal Planner
Development Services and Capital Projects, Attn: James Anders, Principal Planner
Development Services and Capital Projects, Current/Environmental Planning, Attn: David Randall, Senior Planner
Development Services and Capital Projects, Policy Planning, Attn: Mohammad Khorsand, Senior Planner
Development Services and Capital Projects, Zoning & Permit Review, Attn: Daniel Gutierrez, Senior Planner
Development Services and Capital Projects, Building and Safety/Plan Check, Attn: Mike Granat, Chief Building Inspector/ Arnulfo Valdivia, Supervising Building Inspector
Development Services and Capital Projects, Development Engineering, Attn: Laurie Kennedy, Office Assistant III
Water and Natural Resources Division, Attn: Augustine Ramirez, Division Manager
Water and Natural Resources Division, Attn: Roy Jimenez, Senior Planner
Water and Natural Resources Division, Transportation Planning, Attn: Hector Luna, Senior Planner, Brody Hines, Darren Findley
Design Division, Attn: Mohammad Alimi, Division Manager; Erin Haagenson, Principal Staff Analyst
Resources Division, Attn: Daniel Amann, Division Manger
Road Maintenance and Operations Division, Attn: Wendy Nakagawa, Supervising Engineer
Department of Public Health, Environmental Health Division, Attn: Deep Sidhu, Supervising Environmental Health Specialist; Kevin Tsuda, Environmental Health Specialist;
Department of Public Health, Environmental Health Division, Attn: Deep Sidhu/ Steven Rhodes
Agricultural Commissioner, Attn: Melissa Cregan
Sheriff's Office, Attn: Ryan Hushaw, Assistant Sheriff, David Pugliesse, Ryan Gilbert, Lt. Kathy Curtice, Lt. Adam Maldonado
Pacific Gas and Electric, Centralized Plan Review Team, Attn: pgeplanreview@pge.com
U.S. Fish and Wildlife Service, San Joaquin Valley Division, Attn: Matthew Nelson, Biologist
CA Department of Water Resources, Attn: Kevin Faulkenberry

CA Regional Water Quality Control Board, Attn:
centralvalleyfresno@waterboards.ca.gov
CALTRANS, Attn: Dave Padilla, Division Chief, Nicholas Isla Transportation Planner
California Highway Patrol, Attn: Captain Austin Matulonis, Sergeant Miguel Andrade
CA Department of Fish and Wildlife, Attn: Craig Bailey, Environmental Scientist &
R4CEQA@wildlife.ca.gov
State Water Resources Control Board, Division of Drinking Water, Fresno District,
Attn: Jose Robledo, Cinthia Reyes
Westlands Water District, Attn: Jose Gutierrez, Russ Freemen
San Joaquin Valley Unified Air Pollution Control District (PIC-CEQA Division),
Attn: PIC Supervisor
Fresno County Fire Protection District, Attn: FKU.Prevention-Planning@fire.ca.gov

FROM: Alexander Pretzer, Planner
Development Services and Capital Projects Division

SUBJECT: Environmental Impact Report No. 8542 and Unclassified Conditional Use Permit Application No. 3781

APPLICANT: San Luis West Solar, LLC

DUE DATE: January 20, 2025

San Luis West Solar, LLC proposes to construct and operate the San Luis West Solar Project (Project). The Project will consist of a 125-megawatt (mW) solar photovoltaic (PV) electric generation facility coupled with an estimated 30 mW battery energy storage system (BESS). The PV portion of the facility will produce electricity by way of the photovoltaic effect, which uses a semi-conductor material to convert photons from the Sun into electrons, for injection into the electrical grid operated by PG&E. The BESS portion of the facility will store electricity either generated by the PV arrays or absorbed from the PG&E grid. In either case, the BESS will make the stored energy available for discharge during periods of peak electrical load.

The Project facility includes approximately 770 acres of solar panels and associated infrastructure, including the Project substation, BESS, operations and maintenance (O&M) building, and other associated equipment such as overhead and underground medium voltage collection lines. Project infrastructure will also include approximately 10 additional acres of transmission easement areas for underground and overhead medium voltage collection lines situated along and within existing farm roads. The Project Area, which encompasses all areas of temporary and permanent impacts, is approximately 1,100 acres.

The Project Area is located in a rural area of Fresno County approximately 3 miles south of Huron, California. The Project Area is south of West Tractor Avenue, west of the California Aqueduct, and east of Interstate 5 (I-5), with agricultural land and a network of unnamed agricultural roads to the south. The Project Area extends to the south and approximately 3 miles due east of the Pacific Gas & Electric (PG&E) Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue. (APNs: 075-070-54S, 078-060-85S, 078-080-55, 085-050-01S, 085-050-47S, 085-050-48S, 085-050-84S) (Sup. Dist. 4).

The Department is also reviewing for environmental effects, as mandated by the California Environmental Quality Act (CEQA) and for conformity with plans and policies of the County.

An Environmental Impact Report (EIR) is being prepared to determine the likely environmental impacts associated with the project. If you would like to receive that notice, please reach out to me and we will include you in the routing for the formal EIR Scoping Process.

Based upon this review, a determination will be made regarding conditions to be imposed on the project, including necessary on-site and off-site improvements.

We must have your comments by **January 20, 2024.** Any comments received after this date may not be used.

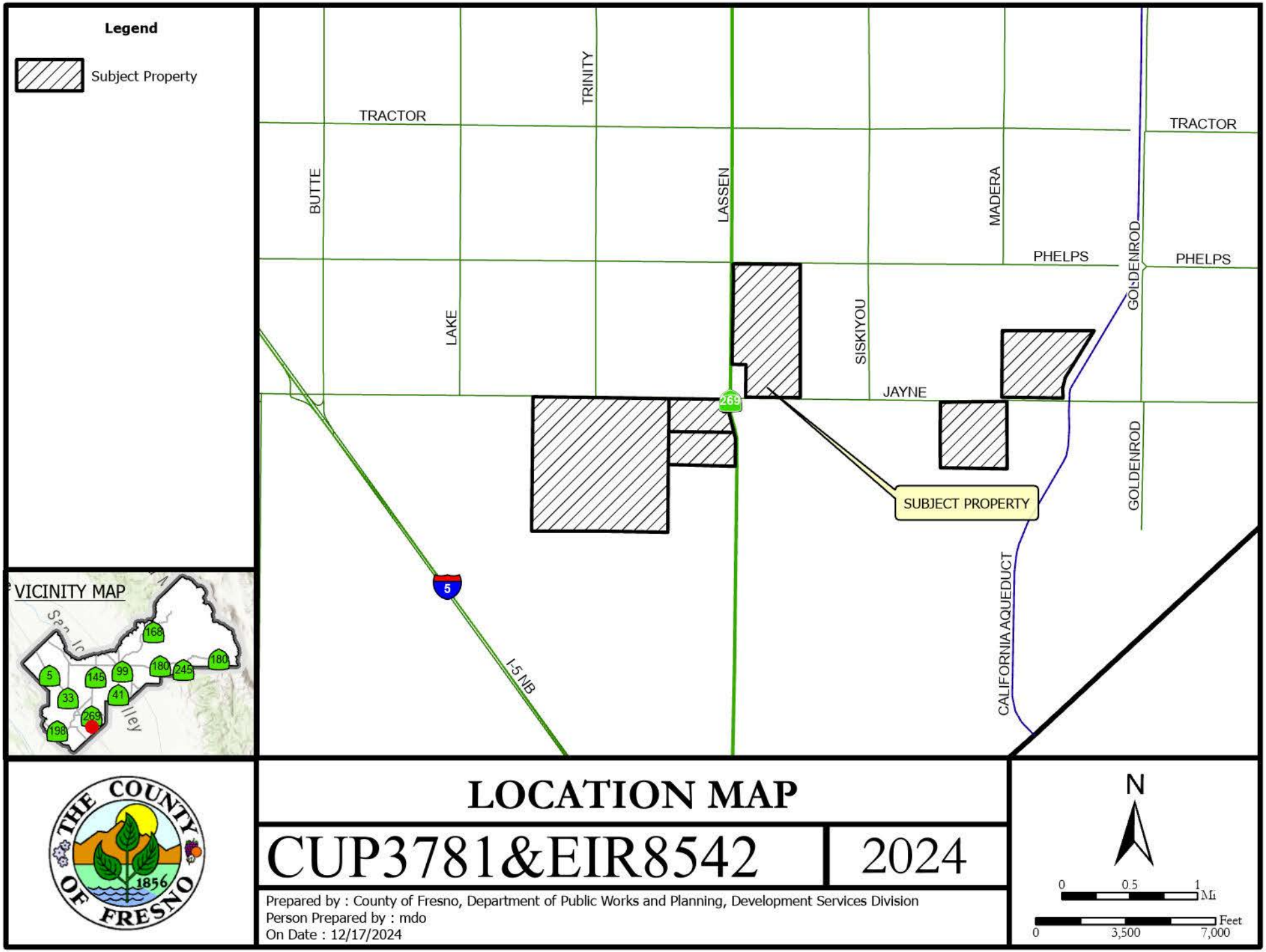
If you do not have comments, please provide a "NO COMMENT" response to our office by the above deadline (e-mail is also acceptable; see email address below).

Please address any correspondence or questions related to environmental and/or policy/design issues to me, Alexander Pretzer, Planner, Development Services and Capital Projects Division, Fresno County Department of Public Works and Planning, 2220 Tulare Street, Sixth Floor, Fresno, CA 93721, or call (559) 600-4205 or email apretzer@fresnocountyca.gov.

AP
G:\4360Devs&Pln\PROJSEC\PROJDOCS\CUP\3700-3799\3781\Routing\CUP 3781 Routing Ltr.doc

Activity Code (Internal Review):2384

Enclosures



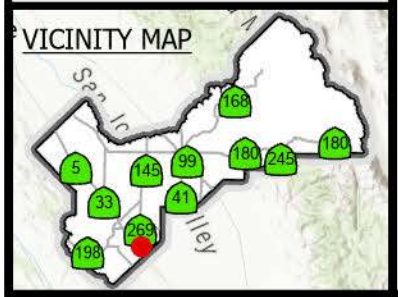
Path: G:\4360Devs&Pln\GIS\Completed GIS Maps\Landuse\cup3781&eir8542\cup3781&eir8542.aprx

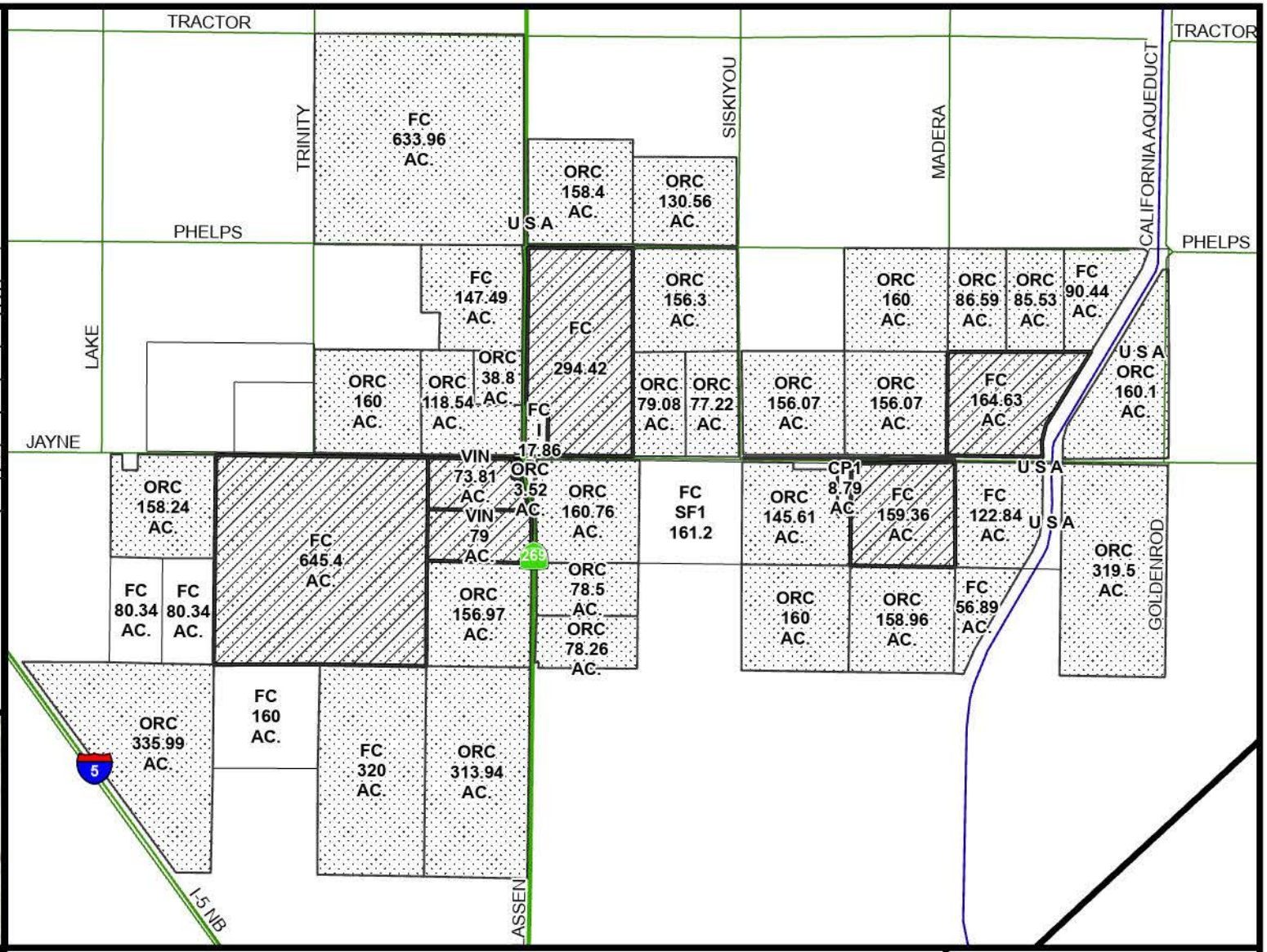
LEGEND:

Subject Property

Ag Contract Land

LEGEND
SF#- SINGLE FAMILY RES
FC - FIELD CROP
ORC - ORCHARD
VIN - VINEYARD
V - VACANT
CP# - OFFICE COMM./PR
I - INDUSTRIAL





Existing Land Use Map

CUP3781&EIR8542 | 2024

Prepared by : County of Fresno, Department of Public Works and Planning, Development Services Division
Person Prepared by : mdo
On Date : 12/17/2024

N

0 0.47 0.95 Mi

0 2,500 5,000 Feet

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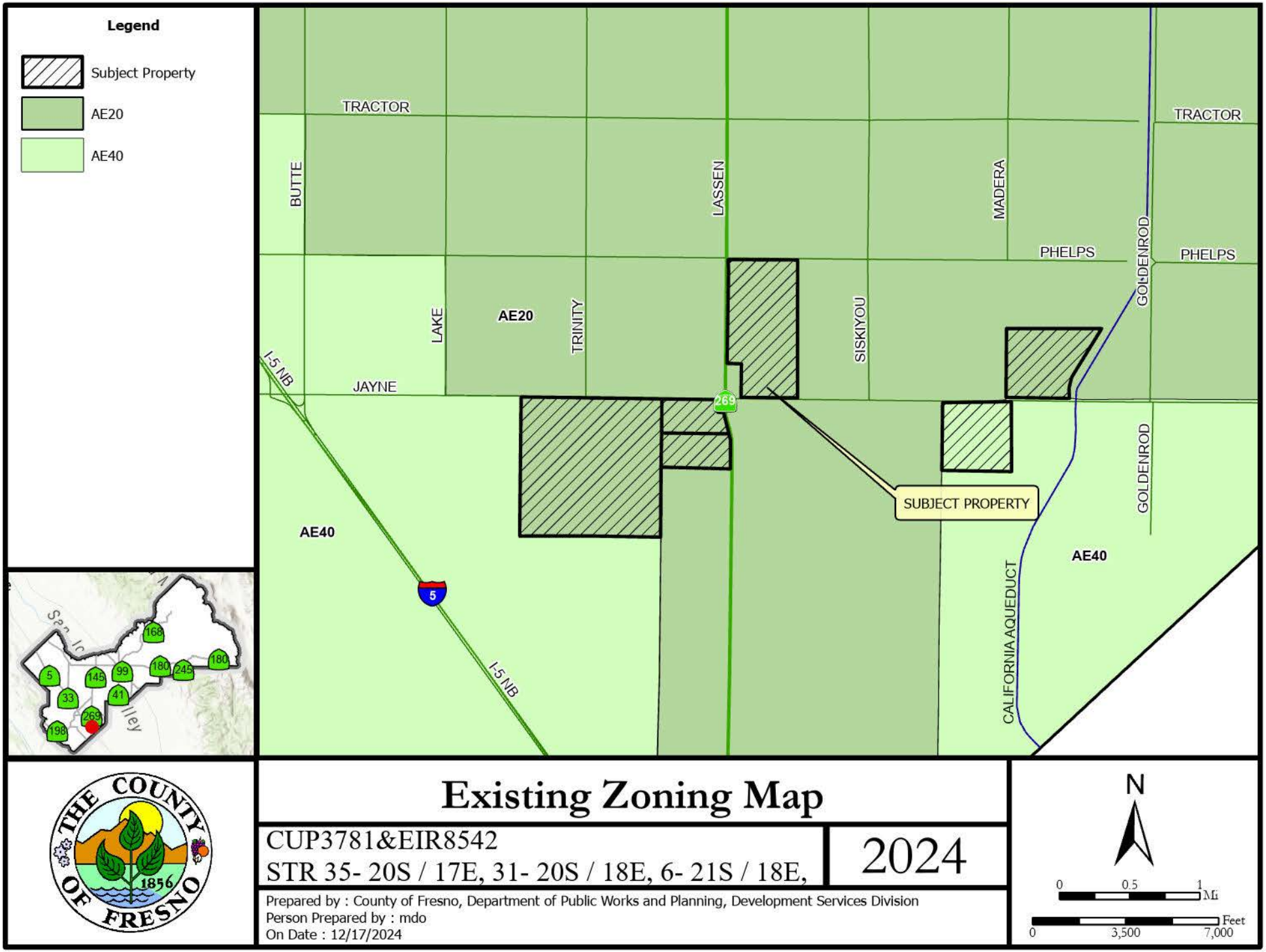


Existing Zoning Map

CUP3781&EIR8542
STR 35- 20S / 17E, 31- 20S / 18E, 6- 21S / 18E,

2024

Prepared by : County of Fresno, Department of Public Works and Planning, Development Services Division
Person Prepared by : mdo
On Date : 12/17/2024

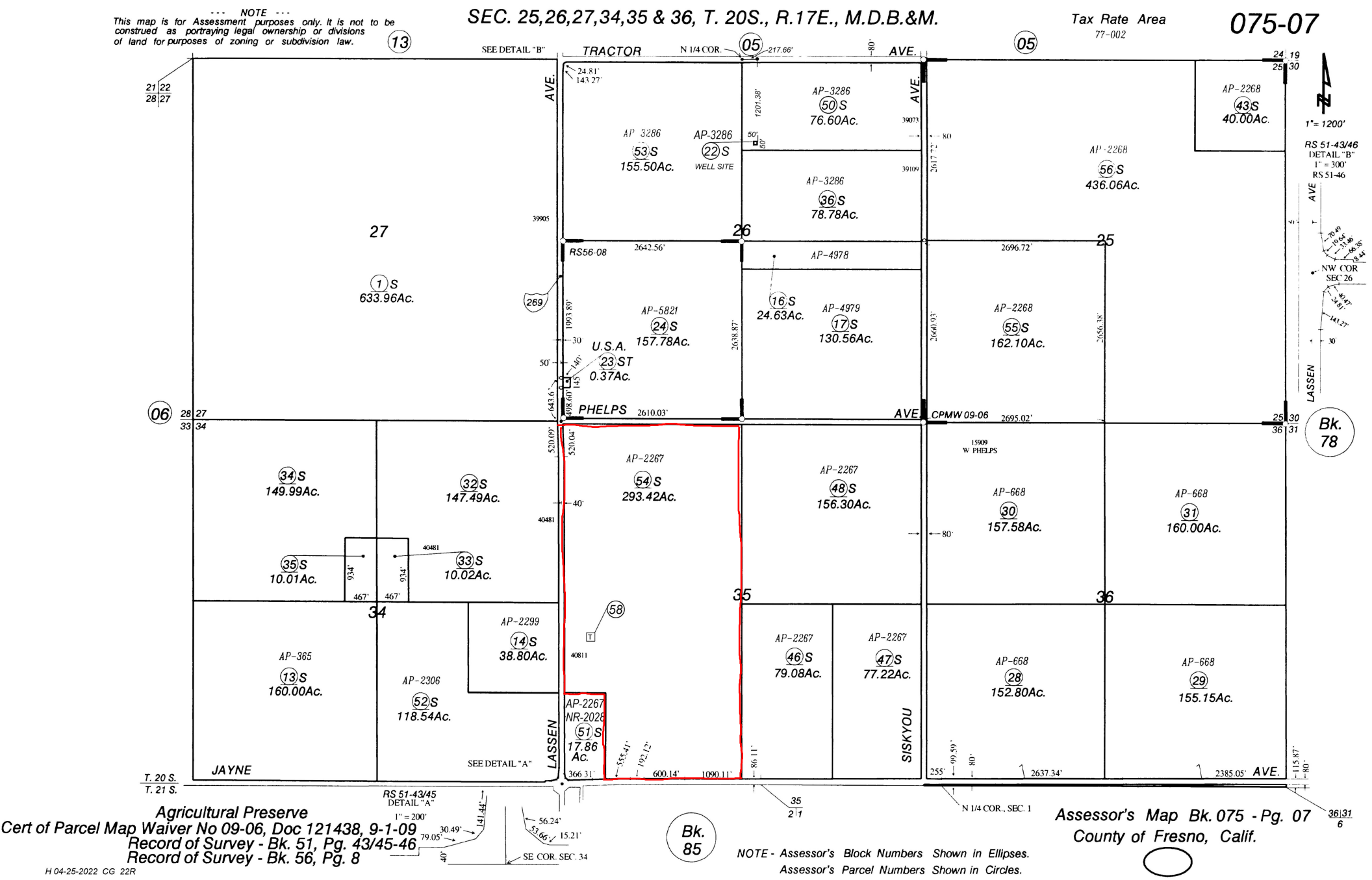
Path: G:\4360Devs&Pln\GIS\Completed GIS Maps\Landuse\cup3781&eir8542\cup3781&eir8542.aprx

--- NOTE ---
This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.

SEC. 25,26,27,34,35 & 36, T. 20S., R.17E., M.D.B.&M.

Tax Rate Area
77-002

075-07



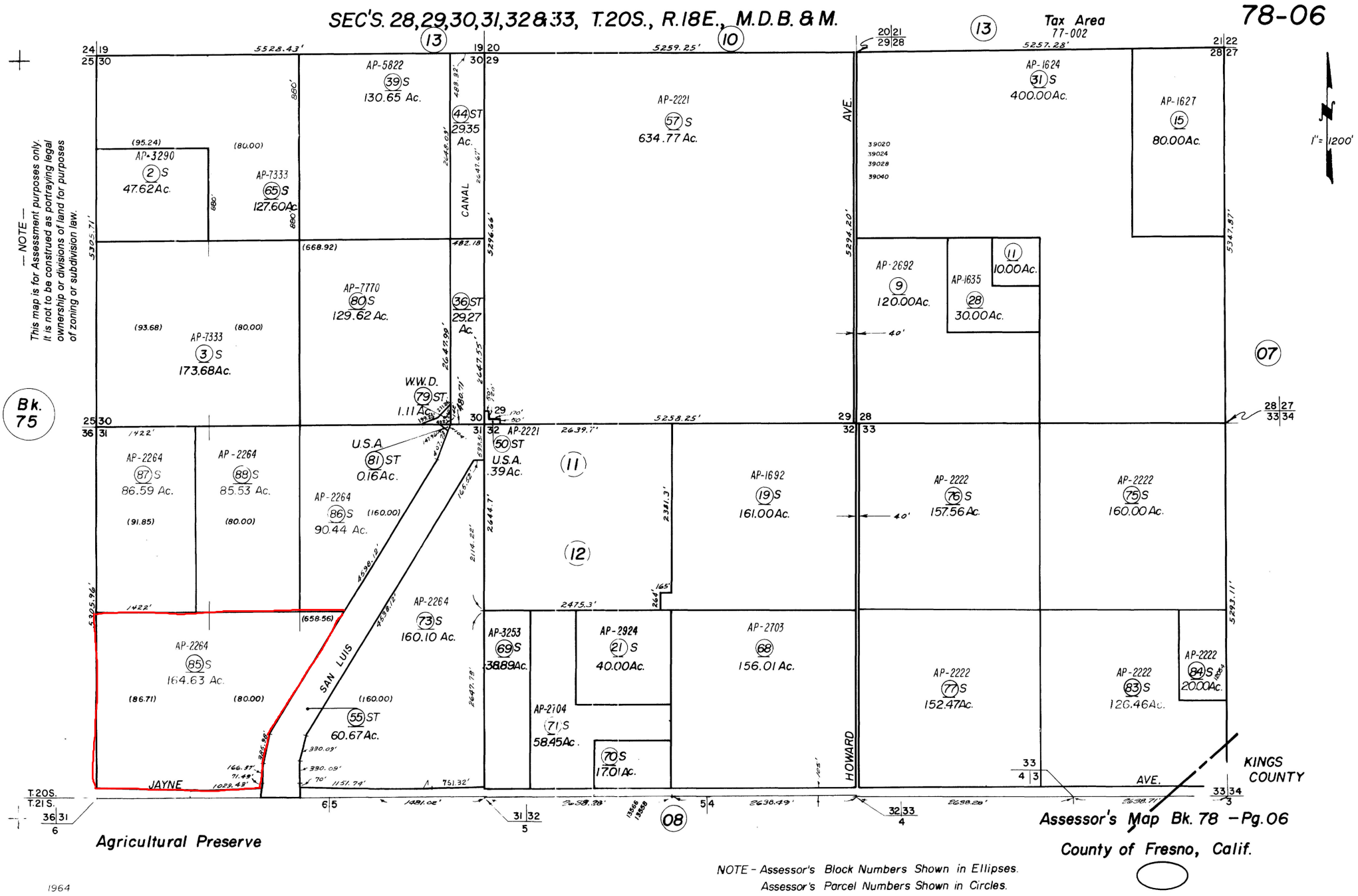
Agricultural Preserve
Cert of Parcel Map Waiver No 09-06, Doc 121438, 9-1-09
Record of Survey - Bk. 51, Pg. 43/45-46
Record of Survey - Bk. 56, Pg. 8

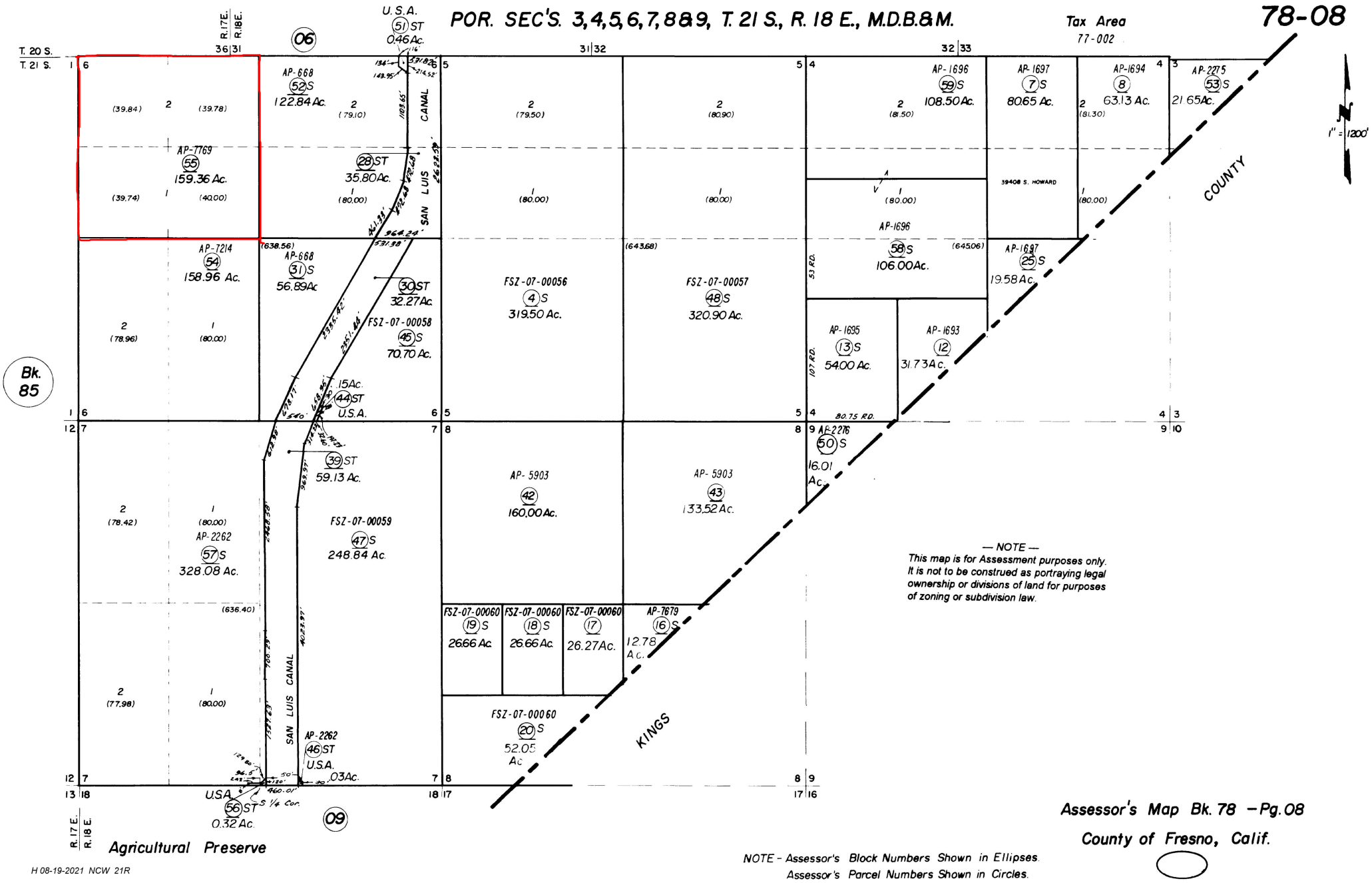
Bk. 85

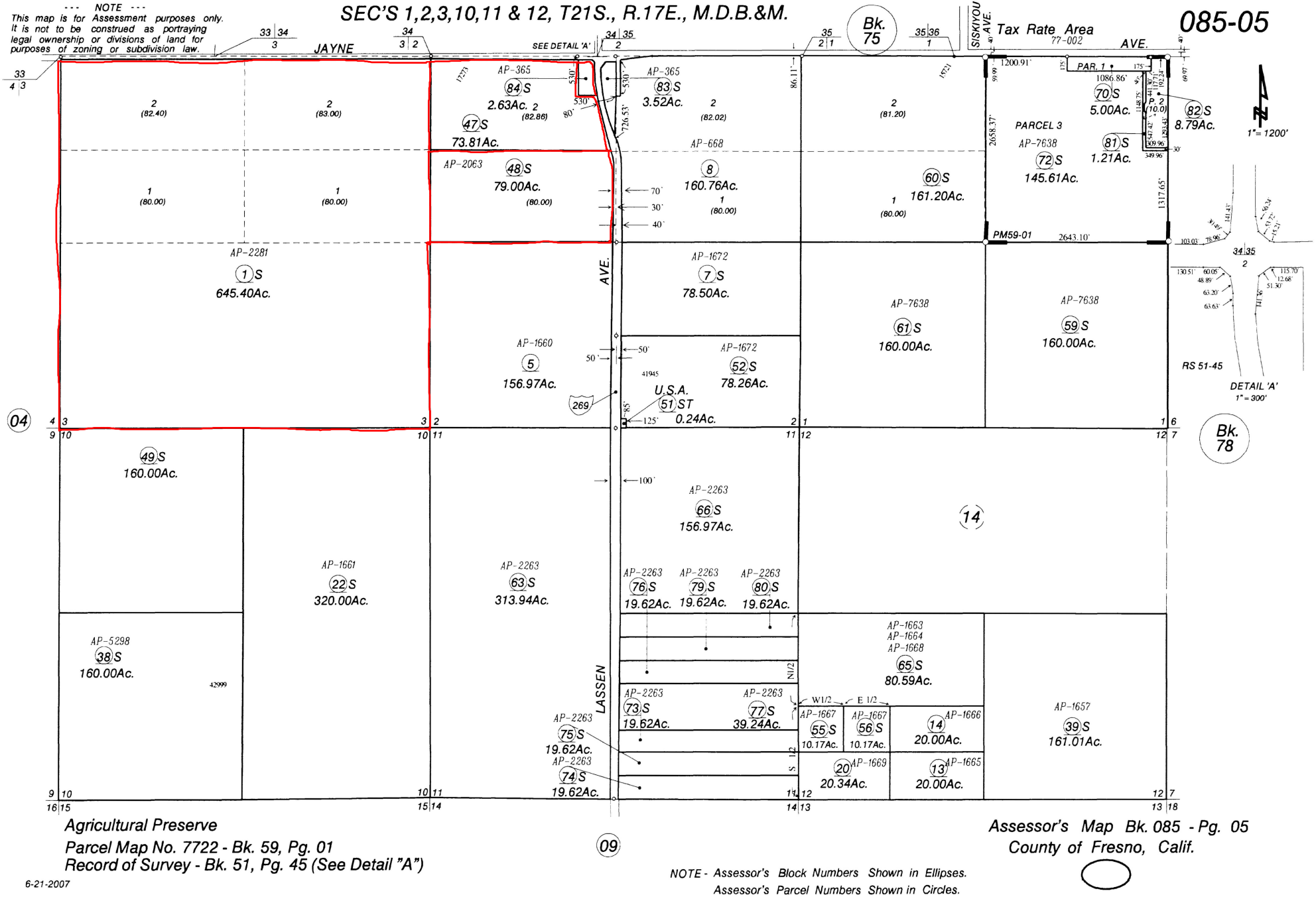
NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 075 - Pg. 07
County of Fresno, Calif.

H 04-25-2022 CG 22R


SEC'S. 28,29,30,31,32&33, T.20S., R.18E., M.D.B. & M.
78-06
Tax Area
77-002
— NOTE —
This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.
1"= 1200'
Bk. 75
AP-5822 39 S 130.65 Ac.
AP-2221 57 S 634.77 Ac.
AP-1624 31 S 400.00Ac.
AP-1627 15 80.00Ac.
AP-3290 2 S 47.62Ac.
AP-7333 65 S 127.60Ac.
AP-7333 3 S 173.68Ac.
AP-7770 80 S 129.62 Ac.
44 ST 29.35 Ac.
36 ST 29.27 Ac.
79 ST 1.11 Ac.
CANAL
AVE.
AP-2692 9 120.00Ac.
AP-1635 28 30.00Ac.
11 10.00Ac.
39020
39024
39028
39040
U.S.A 81 ST 0.16Ac.
U.S.A. 50 ST .39Ac.
AP-2264 87 S 86.59 Ac.
AP-2264 88 S 85.53 Ac.
AP-2264 86 S 90.44 Ac.
AP-1692 19 S 161.00Ac.
AP-2222 76 S 157.56Ac.
AP-2222 75 S 160.00 Ac.
AP-2264 73 S 160.10 Ac.
AP-2264 85 S 164.63 Ac.
SAN LUIS
55 ST 60.67Ac.
AP-3253 69 S 38.89Ac.
AP-2924 21 S 40.00Ac.
AP-2703 68 156.01 Ac.
AP-2104 71 S 58.45Ac.
70 S 17.01Ac.
HOWARD
AP-2222 77 S 152.47Ac.
AP-2222 83 S 126.46Ac.
AP-2222 84 S 20.00Ac.
JAYNE
KINGS COUNTY
AVE.
T.20S.
T.21S.
Agricultural Preserve
1964
Assessor's Map Bk. 78 – Pg. 06
County of Fresno, Calif.
NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.


POR. SEC'S. 3,4,5,6,7,8&9, T. 21 S., R. 18 E., M.D.B.&M.
78-08
Tax Area 77-002
T. 20 S.
T. 21 S.
R. 17 E.
R. 18 E.
06
09
Bk. 85
1" = 1200'
U.S.A. (51) ST 0.46 Ac.
AP-668 (52) S 122.84 Ac.
AP-7769 (55) 159.36 Ac.
(28) ST 35.80 Ac.
AP-7214 (54) 158.96 Ac.
AP-668 (31) S 56.89 Ac.
(30) ST 32.27 Ac.
FSZ-07-00058 (45) S 70.70 Ac.
.15 Ac.
(44) ST U.S.A.
FSZ-07-00056 (4) S 319.50 Ac.
FSZ-07-00057 (48) S 320.90 Ac.
AP-1696 (59) S 108.50 Ac.
AP-1697 (7) S 80.65 Ac.
AP-1694 (8) 63.13 Ac.
AP-2275 (53) S 21.65 Ac.
AP-1696 (58) S 106.00 Ac.
AP-1697 (25) S 19.58 Ac.
AP-1695 (13) S 54.00 Ac.
AP-1693 (12) 31.73 Ac.
AP-2276 (50) S 16.01 Ac.
(39) ST 59.13 Ac.
AP-5903 (42) 160.00 Ac.
AP-5903 (43) 133.52 Ac.
FSZ-07-00059 (47) S 248.84 Ac.
AP-2262 (57) S 328.08 Ac.
FSZ-07-00060 (19) S 26.66 Ac.
FSZ-07-00060 (18) S 26.66 Ac.
FSZ-07-00060 (17) 26.27 Ac.
AP-7679 (16) S 12.78 Ac.
FSZ-07-00060 (20) S 52.05 Ac
AP-2262 (46) ST U.S.A. .03 Ac.
U.S.A. (56) ST 0.32 Ac.
S 1/4 Cor.
SAN LUIS CANAL
COUNTY
KINGS
53 RD.
107 RD.
80.75 RD.
39408 S. HOWARD
— NOTE —
This map is for Assessment purposes only. It is not to be construed as portraying legal ownership or divisions of land for purposes of zoning or subdivision law.
Agricultural Preserve
H 08-19-2021 NCW 21R
NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.
Assessor's Map Bk. 78 — Pg. 08
County of Fresno, Calif.



Agricultural Preserve

Parcel Map No. 7722 - Bk. 59, Pg. 01

Record of Survey - Bk. 51, Pg. 45 (See Detail "A")

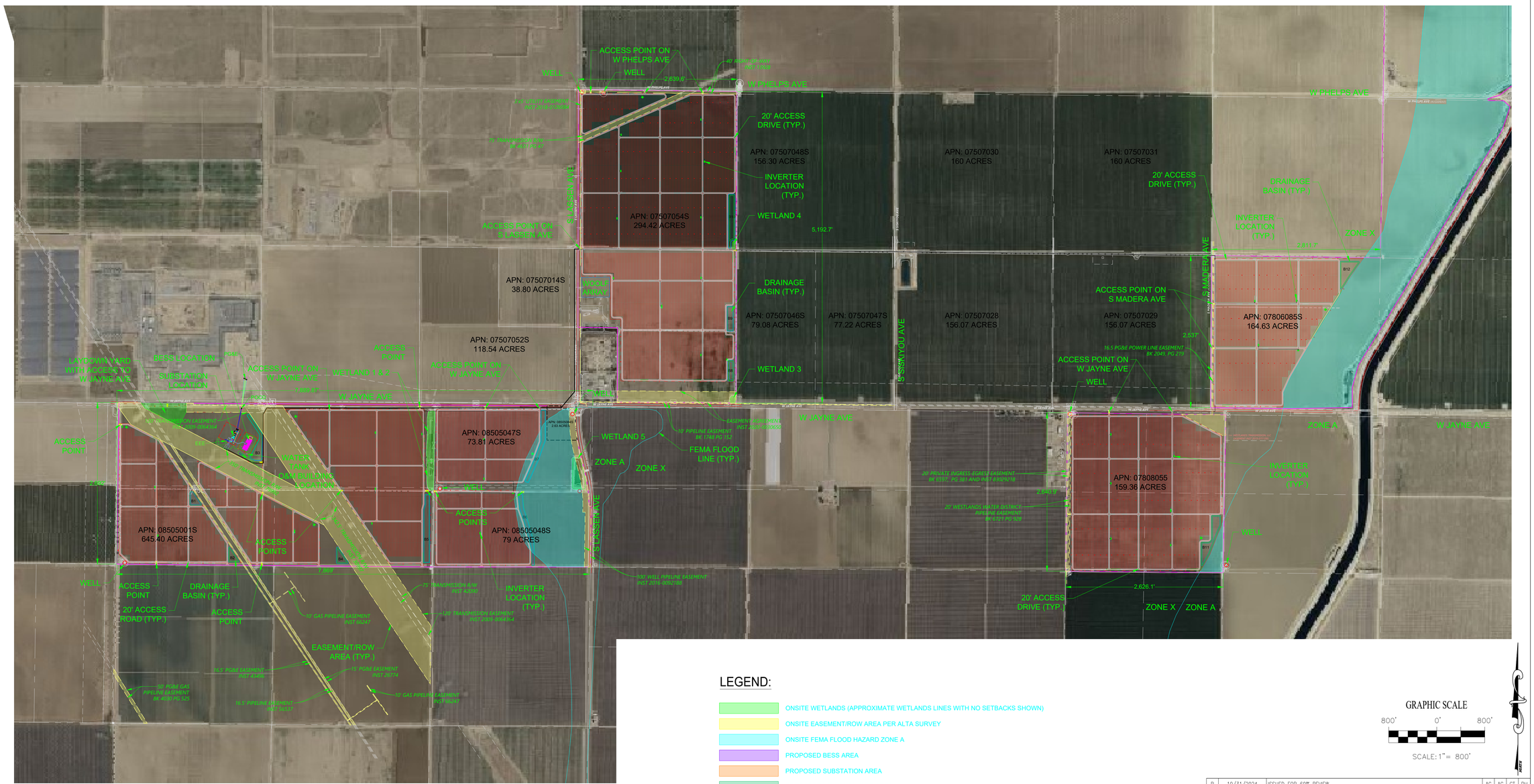
6-21-2007

Assessor's Map Bk. 085 - Pg. 05

County of Fresno, Calif.

NOTE - Assessor's Block Numbers Shown in Ellipses.

Assessor's Parcel Numbers Shown in Circles.



LEGEND:

- ONSITE WETLANDS (APPROXIMATE WETLANDS LINES WITH NO SETBACKS SHOWN)
- ONSITE EASEMENT/ROW AREA PER ALTA SURVEY
- ONSITE FEMA FLOOD HAZARD ZONE A
- PROPOSED BESS AREA
- PROPOSED SUBSTATION AREA
- PROPOSED LAYDOWN YARD AREA
- PROPERTY BOUNDARY
- SOLAR MODULES
- 20' ACCESS DRIVES (25' INTERNAL & 50' EXTERNAL RADIUS)
- DRAINAGE BASINS
- MV ROUTING
- FENCE

GRAPHIC SCALE

800' 0' 800'

SCALE: 1"= 800'

NORTH

REV	DATE	REVISION DESCRIPTION	DWN	DSN	ENG	CHK
B	10/31/2024	ISSUED FOR 60% REVIEW	AG	AG	CT	PH

ISSUED FOR: **PRELIMINARY**

ASEC ENGINEERS — Solutions in Power the World — 300 UNION BLVD, SUITE 300, LAKEWOOD, CO 80228, asec-engineers.com

nei — ELECTRIC POWER ENGINEERING, INC. — 12600 W. COLFAX AVE, STE. C500, LAKEWOOD, CO 80215, (303) 431-7895, www.neieng.com

Origis Energy

CSI ELECTRICAL CONTRACTORS, INC.

DESIGNER APPROVAL: SM DATE: 12/19/2024

ENGINEER APPROVAL: SA DATE: 12/19/2024

REVIEWER APPROVAL: PH DATE: 12/19/2024

SAN LUIS WEST PV ARRAY

OVERALL SITE PLAN

SITE PLAN

PROJECT No.	SIZE	DWG. No.	REV.
	D	SLW-PV-CV-1001	D

SCALE 1"=60" | FILE NAME OVERALL SITE LAYOUT.DWG | SHEET No. 1 OF 1

Thu, Dec 26 2024– 11:42am – LUZ.HARO

Date Received:

(Application No.)

Fresno County Department of Public Works and Planning

MAILING ADDRESS:
Department of Public Works and Planning
Development Services and Capital Projects Division
2220 Tulare St., 6th Floor
Fresno, Ca. 93721

LOCATION:
Southwest corner of Tulare & "M" Streets, Suite A
Street Level
Fresno Phone: (559) 600-4497

APPLICATION FOR:

- ☐ Pre-Application (Type) _____
- ☐ Amendment Application
- ☐ Amendment to Text
- ☒ Conditional Use Permit
- ☐ Variance (Class)/Minor Variance
- ☐ Site Plan Review/Occupancy Permit
- ☐ No Shoot/Dog Leash Law Boundary
- ☐ General Plan Amendment/Specific Plan/SP Amendment)
- ☐ Time Extension for _____
- ☐ Director Review and Approval
- ☐ for 2nd Residence
- ☐ Determination of Merger
- ☐ Agreements
- ☐ ALCC/RLCC
- ☐ Other _____

DESCRIPTION OF PROPOSED USE OR REQUEST:

Construct and operate a 125 megawatt solar photovoltaic electric generation facility and an estimated 30 megawatt battery energy storage system.

CEQA DOCUMENTATION: ☒ *Initial Study* ☐ *PER* ☐ *N/A*

PLEASE USE FILL-IN FORM OR PRINT IN BLACK INK. Answer all questions completely. Attach required site plans, forms, statements, and deeds as specified on the Pre-Application Review. **Attach Copy of Deed, including Legal Description.**

LOCATION OF PROPERTY: South side of West Tractor Avenue
between Interstate 5 and the California Aqueduct
Street address: 40811 S Lassen Avenue, Huron, CA 93234

APN: Multiple (See attached Parcel Table [1b]) Parcel size: See attached Table 1b. Section(s)-Twp/Rg: S 35 - T 20 S/R 17 E

ADDITIONAL APN(s): See attached Table 1b.

I, _____ (*signature*), declare that I am the owner, or authorized representative of the owner, of the above described property and that the application and attached documents are in all respects true and correct to the best of my knowledge. The foregoing declaration is made under penalty of perjury.

See Table 1b.	-	-	-	-
Owner (Print or Type)	Address	City	Zip	Phone
San Luis West, LLC	4747 Executive Dr, Ste 1340	San Diego	92121	(805) 403-8916
Applicant (Print or Type)	Address	City	Zip	Phone
Mike Pappalardo	4747 Executive Dr, Ste 1340	San Diego	92121	(805) 403-8916
Representative (Print or Type)	Address	City	Zip	Phone

CONTACT EMAIL:

OFFICE USE ONLY (*PRINT FORM ON GREEN PAPER*)

Application Type / No.: Fee: $
Application Type / No.: Fee: $
Application Type / No.: Fee: $
Application Type / No.: Fee: $
PER/Initial Study No.: Fee: $
Ag Department Review: Fee: $
Health Department Review: Fee: $
Received By: _____ Invoice No.: TOTAL: $

UTILITIES AVAILABLE:

WATER: Yes ☐ / No ☒
Agency: _____

SEWER: Yes ☐ / No ☒
Agency: _____

STAFF DETERMINATION: This permit is sought under Ordinance Section:

_____

Related Application(s): _____

Zone District: _____

Parcel Size: _____

Sect-Twp/Rg: _____ - T_____ S /R_____ E

APN # ___ - ___ - ____
APN # ___ - ___ - ____
APN # ___ - ___ - ____
APN # ___ - ___ - ____

over.....

Pre-Application Review

Development Services and Capital Projects Division

Department of Public Works and Planning

NUMBER: 23-015268
APPLICANT: SAN LUIS WEST SOLAR, LLC
PHONE: (786) 693-2624

PROPERTY LOCATION: APN'S 078-060-39S, 078-060-80S, 078-060-85S, 078-060-86S & 078-080-55
APN(s): SEE ABOVE LISTED APN'S ALCC: No ____ Yes # YES VIOLATION NO. NO
CNEL: No X Yes ____ (level) LOW WATER: No X Yes ____ WITHIN ½ MILE OF CITY: No X Yes ____
ZONE DISTRICT: AE-20 &AE-40 ; SRA: No X Yes ____ HOMESITE DECLARATION REQ'D.: No ____ X Yes ____
LOT STATUS:
Zoning: (X) Conforms; ( ) Legal Non-Conforming lot; ( ) Deed Review Req'd (see Form #236)
Merger: May be subject to merger: No X Yes ____ ZM# ____ Initiated ____ In process ____
Map Act: ( ) Lot of Rec. Map; ( ) On '72 rolls; (X) Other ____; ( ) Deeds Req'd (see Form #236)
SCHOOL FEES: No X Yes ____ DISTRICT: COALINGA/ HURON UNIFIED PERMIT JACKET: No X Yes ____
FMFCD FEE AREA: (X) Outside ( ) District No.: ____ FLOOD PRONE: No X Yes ____
PROPOSAL UCUP TO ALLOW A 125 MW SOLAR FACILITY W/ A 30 MW BATTERY ENERGY STORAGE SYSTEM. THE FACILITY WILL BE LOCATED ON 7 PARCELS WITHIN THE AE-20 & AE-40 ZONE DISTRICT.

COMMENTS:
ORD. SECTION(S): 853.B.14 BY: ALBERT AGUILAR DATE: 8/25/23

GENERAL PLAN POLICIES:

LAND USE DESIGNATION: Agriculture
COMMUNITY PLAN:
REGIONAL PLAN:
SPECIFIC PLAN:
SPECIAL POLICIES:
SPHERE OF INFLUENCE:
ANNEX REFERRAL (LU-G17/MOU):

PROCEDURES AND FEES:

( )GPA: ____ ( )MINOR VA: ____
( )AA: ____ (X)HD: $ 992.00
(X)CUP: $ 9,123.00 (X)AG COMM: $76.00
( )DRA: ____ ( )ALCC: ____
( )VA: ____ ( )IS/PER*: ____
( )AT: ____ ( )Viol. (35%): ____
( )TT: ____ ( )Other: ____

Filing Fee: $ 10,191.00
Pre-Application Fee: - $247.00
Total County Filing Fee: $ 9,944.00

COMMENTS:

FILING REQUIREMENTS:

(X) Land Use Applications and Fees
(X) This Pre-Application Review form
(X) Copy of Deed / Legal Description
(X) Photographs
( ) Letter Verifying Deed Review
(X) IS Application ~~and Fees~~* * Upon review of project materials, an Initial Study (IS) with fees may be required.
(X) Site Plans - 4 copies (folded to 8.5"X11") + 1 - 8.5"x11" reduction
(X) Floor Plan & Elevations - 4 copies (folded to 8.5"X11") + 1 - 8.5"x11" reduction
(X) Project Description / Operational Statement (Typed)
( ) Statement of Variance Findings
( ) Statement of Intended Use (ALCC)
( ) Dependency Relationship Statement
( ) Resolution/Letter of Release from City of ____
( ) Nitrogen Loading Analysis or RWQCB supplemental treatment

OTHER FILING FEES:

( ) Archaeological Inventory Fee: $75 at time of filing
(Separate check to Southern San Joaquin Valley Info. Center)
( ) CA Dept. of Fish & Wildlife (CDFW): ($50+$2,480.25)
(Separate check to Fresno County Clerk for pass-thru to CDFW.
Must be paid prior to IS closure and prior to setting hearing date.)

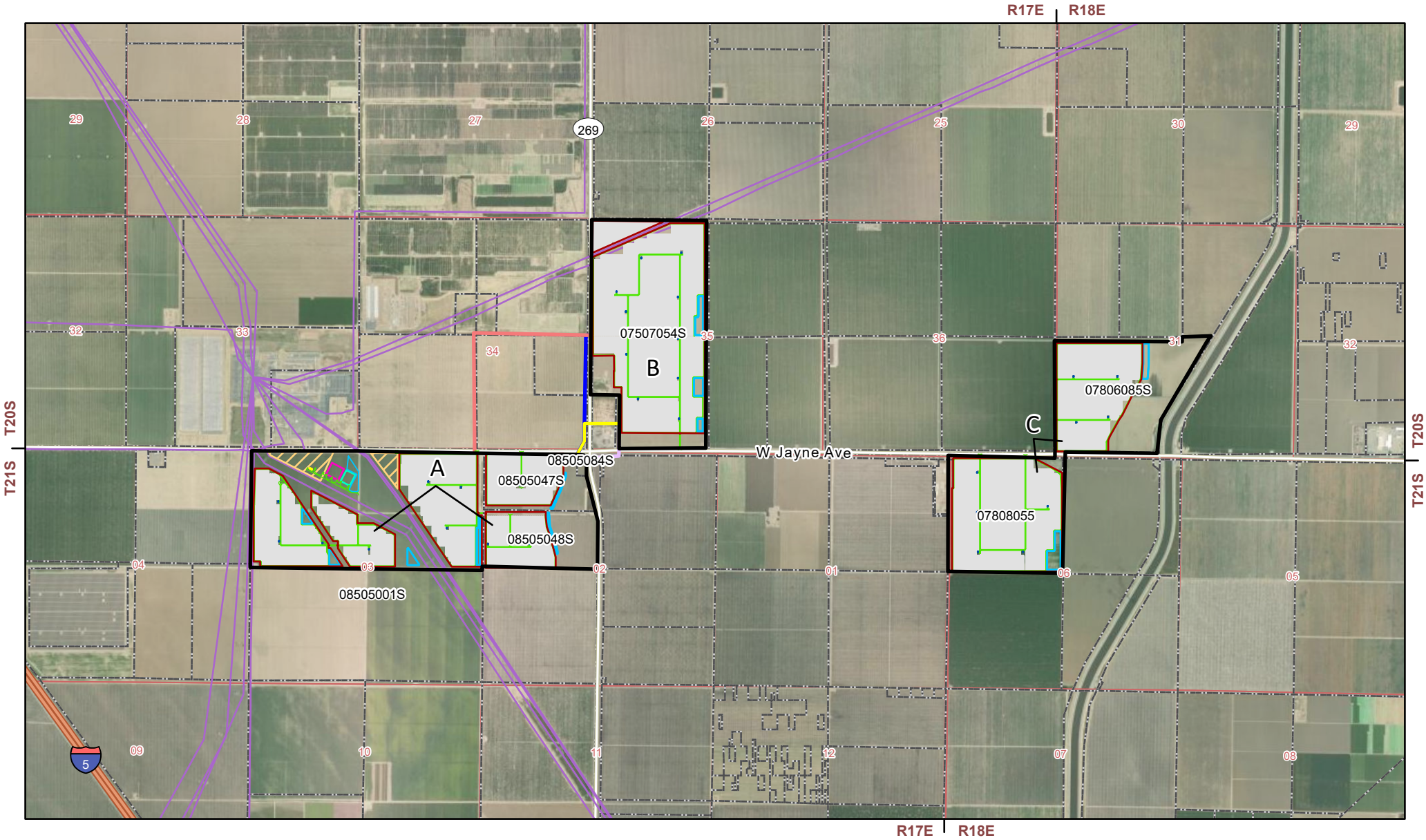
BY: JEREMY SHAW DATE: 11-7-23
PHONE NUMBER: (559) 600 - 4207

NOTE: THE FOLLOWING REQUIREMENTS MAY ALSO APPLY:

( ) COVENANT
( ) MAP CERTIFICATE
( ) PARCEL MAP
( ) FINAL MAP
( ) FMFCD FEES
(X) ALUC or ALCC
(X) SITE PLAN REVIEW
(X) BUILDING PLANS
(X) BUILDING PERMITS
( ) WASTE FACILITIES PERMIT
( ) SCHOOL FEES
(X) OTHER (see reverse side)

PLU # 113 Fee: $247.00
Note: This fee will apply to the application fee if the application is submitted within six (6) months of the date on this receipt.

OVER.....



Project Site
Array
Inverters
O&M Building
Substation
BESS
Site Fence
Site Road
Basin
mV Option 1
mV Option 2
mV Option 3
mV Option 4
Laydown
Existing Transmission Line
Township/Range
Section
Parcels

N

0 0.25 0.5
Miles

Source: ESRI (2024)

NOT FOR CONSTRUCTION

TETRA TECH

Reduced Footprint Alternative October 2024

San Luis West Solar Project

Fresno County, California

\\Cess706gisfs1\CES\Projects\BOT\G\PROJECTS\SAN_LUIS_WEST_1115-0009\CUP\SLW_CUP_Alt1_Layout_20241011.aprx

Project Description: Reduced Footprint Alternative

San Luis West Solar Project

October 2024

Prepared for

Origis Energy®

800 Brickell Avenue, Suite 1000
Miami, FL 33131

Prepared by

TETRA TECH

390 Union Boulevard, Suite 400
Lakewood, CO 80228

GENERAL DISCLAIMER FOR SCIENTIFIC WORK PRODUCTS

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Acronyms and Abbreviations

AC	alternating current
AE	exclusive agriculture
APN	assessor's parcel number
Applicant	San Luis West Solar, LLC
BESS	battery energy storage system
CAISO	California Independent System Operator
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
County	County of Fresno
DC	direct current
gen-tie	generation tie line
HVAC	heating, ventilation, and air conditioning
IFC	International Fire Code
kV	kilovolt
Li-ion	lithium ion
LFP	lithium iron phosphate
LMO	lithium manganese oxide
LTO	lithium titanate oxide
mW	megawatt
NCA	nickel cobalt aluminum
NCM	nickel cobalt manganese oxide
NFPA	National Fire Protection Association
O&M	operations and maintenance
PCS	power conditioning station
PG&E	Pacific Gas and Electric
POI	point of interconnection
Project	San Luis West Solar Project
PV	photovoltaic
RA	resource adequacy
RPS	renewable portfolio standard
SCADA	supervisory control and data acquisition

SLW	San Luis West
SME	subject matter expert
SR	state route
UCUP	Unclassified Conditional Use Permit

1.0 OVERVIEW

San Luis West Solar, LLC (Applicant) proposes to construct and operate the San Luis West (SLW) Solar Project (Facility, Project). The proposed Project will consist of a 125-megawatt (mW) solar photovoltaic (PV) electric generation facility coupled with an estimated 30 mW battery energy storage system (BESS). The PV portion of the Facility will produce electricity by way of the photovoltaic effect, which uses a semi-conductor material to convert photons from the Sun into electrons, for injection into the electrical grid operated by Pacific Gas & Electric (PG&E). The BESS portion of the Facility will store electricity either generated by the PV arrays or absorbed from the PG&E grid. In either case, the BESS will make the stored energy available for discharge during periods of peak electrical load.

Key Project components consist of the following:

- PV modules (panels)
- Collection and interconnection line systems
- BESS components
- Project substation
- Gen-tie line
- Access roads
- Other minor components, including fencing and lighting

The Project description discussed herein details a Project alternative that reduces the proposed Project footprint, referred to as the "Reduced Footprint Alternative" (Alternative). The Alternative would reduce the proposed Project footprint by approximately 300 acres.

The Alternative comprises approximately 770 acres (compared to the previous 920 acres) of solar panels and associated infrastructure, including the Project substation, battery energy storage system (BESS), operations and maintenance (O&M) building, and other associated equipment such as overhead and underground medium voltage collection lines.

The Alternative will be located on seven parcels totaling approximately 1,400 acres (the proposed Project would be located on 10 parcels totaling approximately 1,700 acres) within the "AE-20" and "AE-40" (Exclusive Agriculture) zoning districts of unincorporated Fresno County (County). Consistent with the originally submitted proposed Project layout, the Alternative infrastructure will also include approximately 10 additional acres of transmission easement areas for underground and overhead medium voltage collection lines situated along and within existing farm roads. The Alternative Project site, which encompasses all areas of temporary and permanent impacts, is approximately 1,100 acres (as compared to the proposed Project of approximately 1,400 acres).

The County permits utility-scale solar energy uses with an Unclassified Conditional-Use Permit (UCUP) within Exclusive Agriculture zoning districts. The UCUP pre-application process was initiated for the Project in October 2023, and a signed pre-application form was provided to the Applicant on November 6, 2023. Since this submittal, the Applicant has been exploring alternative layouts in order to reduce the Project footprint with the goal of decreasing the environmental impact of the Project while maintaining Project viability. This document is intended to serve as a general Project Description for this Alternative

and contains all information requested by the County in the Operational Statement Checklist provided in the pre-application package.

2.0 PROJECT OBJECTIVES

The Project's primary objective remains unchanged in the Alternative: to generate and deliver low-cost, clean renewable energy to the electrical grid operated by PG&E for regional consumption. California is in the midst of generational-scale transformation in the way it produces energy, with coal, nuclear, and other forms of thermal generation increasingly being retired in favor of low-cost, non-emitting wind and solar. While much of this transformation is being driven by economics, with solar increasingly showing up in utility procurements as the lowest-cost resource, policy is also playing a significant role. In particular, former Governor Jerry Brown signed Senate Bill 100 into law on September 10, 2018, which codified the state's intent to decarbonize its electrical grid by mandating that 100% of the state's retail electricity sales be derived from zero-carbon and eligible renewable resources by 2045.

In addition to low-cost renewable energy, the Project will help support California's resource adequacy needs. Resource adequacy or simply "RA" means having enough generation capability to supply the grid at all hours of the year, which includes having sufficient reserves on-hand to account for unanticipated changes in electrical demand, weather conditions, and generator outages. In recent years, achieving RA during the early evening hours as the sun is setting and the state's solar resources go offline has become increasingly challenging for California's grid operator, the California Independent System Operator (CAISO). By incorporating robust amounts of battery storage, the Project will help contribute to RA by storing excess solar generation and making it available for use during peak hours when resources are strained.

The Project will also help support economic and workforce development – which is particularly important as the state seeks to recover from the devastating economic impacts of the shutdowns in the face of the novel coronavirus. The Applicant selected the Project site based on its previously disturbed nature and proximity to existing electrical infrastructure. The Project has been designed in accordance with state and Fresno County regulations.

3.0 PROJECT LOCATION AND SITE HISTORY

3.1 Location

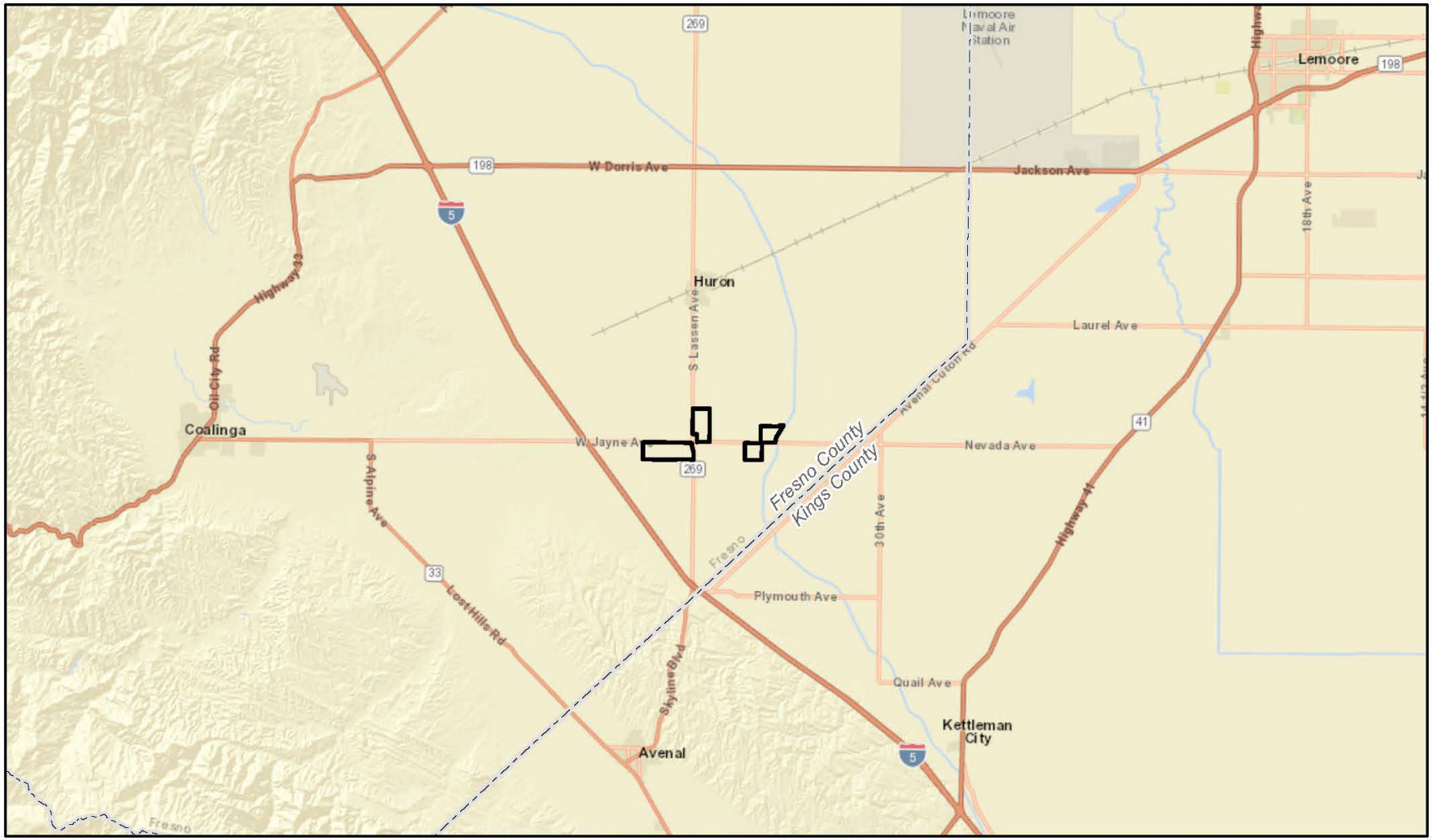
The Project site is located approximately 3 miles due south of Huron, CA, on the following assessor's parcel numbers (APN). General details of the Project site location remain unchanged, however APNs 078-060-39S, 078-060-80S, and 078-060-86S are excluded from the Alternative:

- 075-070-54S
- 078-060-85S
- 078-080-55
- 085-050-01S

- 085-050-47S
- 085-050-48S
- 085-050-84S

The Project site is located south of West Tractor Avenue, west of the California Aqueduct, and east of Interstate 5, with agricultural land and a network of unnamed agricultural roads to the south (Figure 1). The Project site extends to the south and approximately 3 miles due east of PG&E's Gates Substation, which is located at the intersection of South Trinity Avenue and West Jayne Avenue.

It is anticipated that primary access to the Project site will originate via Interstate 5 to exit 325, West Jayne Avenue; a paved Fresno County Road featuring one lane of traffic in each direction (east and west). From there, traffic will travel eastbound along West Jayne the proposed Facility site. Access may also be provided from State Route (SR) 269, which runs north-south near the center of the Project site. A network of currently existing agricultural roads within the Project site will be utilized for ingress and egress throughout construction. No road improvements are currently proposed as a part of the Project, unless required by the County.



Project Site

N

0 2 4
Miles

Source: ESRI (2024)

NOT FOR CONSTRUCTION

TETRA TECH

Figure 1
Project Vicinity

San Luis West Solar Project
Fresno County, California

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The general configuration of the Project site remains unchanged in the Alternative. The Project site consists of three separate Subareas, herein referred to as Subareas A, B, and C (Figure 2):

- **Subarea A** would include approximately 280 acres (reduced from approximately 340 acres) of solar arrays and associated infrastructure (i.e., internal roads, medium voltage collection lines, substation, BESS and project O&M building) located on four parcels totaling approximately 800 acres, of which approximately 650 acres are currently leased by the Project and approximately 150 acres are owned by the Project. Subarea A is located southeast of the existing PG&E Gates Substation, immediately south of West Jayne Avenue and approximately 0.5-mile due west of SR-269. The Substation will also be located within Subarea A and it is anticipated that the BESS will be co-located with the Substation in Subarea A. Two temporary laydown areas totaling approximately 10 acres would be located in Subarea A, along West Jayne Avenue.
- **Subarea B** would include approximately 250 acres (reduced from approximately 270 acres) of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on one parcel, consisting of approximately 300 acres of fully leased land. Subarea B is bordered by SR-269 to the west, West Jayne Avenue to the south, and active row crops to the east.
- **Subarea C** would include approximately 240 acres (reduced from approximately 315 acres) of solar arrays and associated infrastructure (i.e., internal roads and medium voltage collection lines) on approximately 325 acres of land (reduced from approximately 675 acres) leased by the Project. Subarea C consists of two parcels located just west of the California Aqueduct. West Jayne Avenue bisects Subarea C.

Energy from the solar arrays is transmitted to the Substation via a series of 34.5 kilovolt (kV) "collection lines". Several new options for collection lines have been added as part of the Alternative. The collection line system connects to the BESS and Substation in Subarea A, then a 230 kV gen-tie line will connect from Subarea A to the Point of Interconnection (POI) at the PG&E Gates substation. Four collection line options have been included in this alternative, as depicted in Figure 2 and outlined below.

- Option 1 begins in the middle section of Subarea B and runs west along an existing agricultural road for approximately .5 mile. It then angels south for approximately .5 mile along another existing agricultural road, where it undergrounds at West Jayne Avenue to connect with Subarea A.
- Option 2 begins at the southwestern portion of Subarea B, approximately 0.25 mile north of West Jayne Avenue. It runs directly west for approximately 0.25 mile, then angles south/southwest to underground at West Jayne Avenue to connect with Subarea A.
- Option 3 begins at the same point as Option 1, in the middle of Subarea B. It then runs directly south along an existing agricultural road for approximately 0.75-mile, before angling slightly west and undergrounding at West Jayne Avenue to connect with Subarea A. This option shares the same connection route across West Jayne Avenue as Option 2.

- Option 4 begins at the same point as Option 2, approximately 0.25 mile north of West Jayne Avenue in southwestern Subarea B. It runs directly south for approximately 0.25 mile, crossing West Jayne Avenue before angling west/southwest to connect to the northeast corner of Subarea A.

The Project site is located within the Huron and Guijarral Hills U.S. Geological Survey 7.5-minute topographic quadrangles. The center point of the Project site has shifted slightly in the Alternative, located approximately at the following coordinates: 36.138425, -120.09634.

3.2 Site History

The Project is located on privately-owned lands historically used for agriculture. The Project site is designated as Agriculture in the Fresno County General Plan. The California Department of Conservation's California Important Farmland Map lists most of the Project site as Prime Farmland, with some smaller areas designated as Nonprime Agriculture Land (Figure 3).

The majority of the Project parcels are currently subject to the Williamson Act. According to the County of Fresno Federal Emergency Management Agency (FEMA) GIS map, all project infrastructure is located outside of FEMA flood hazard zones.

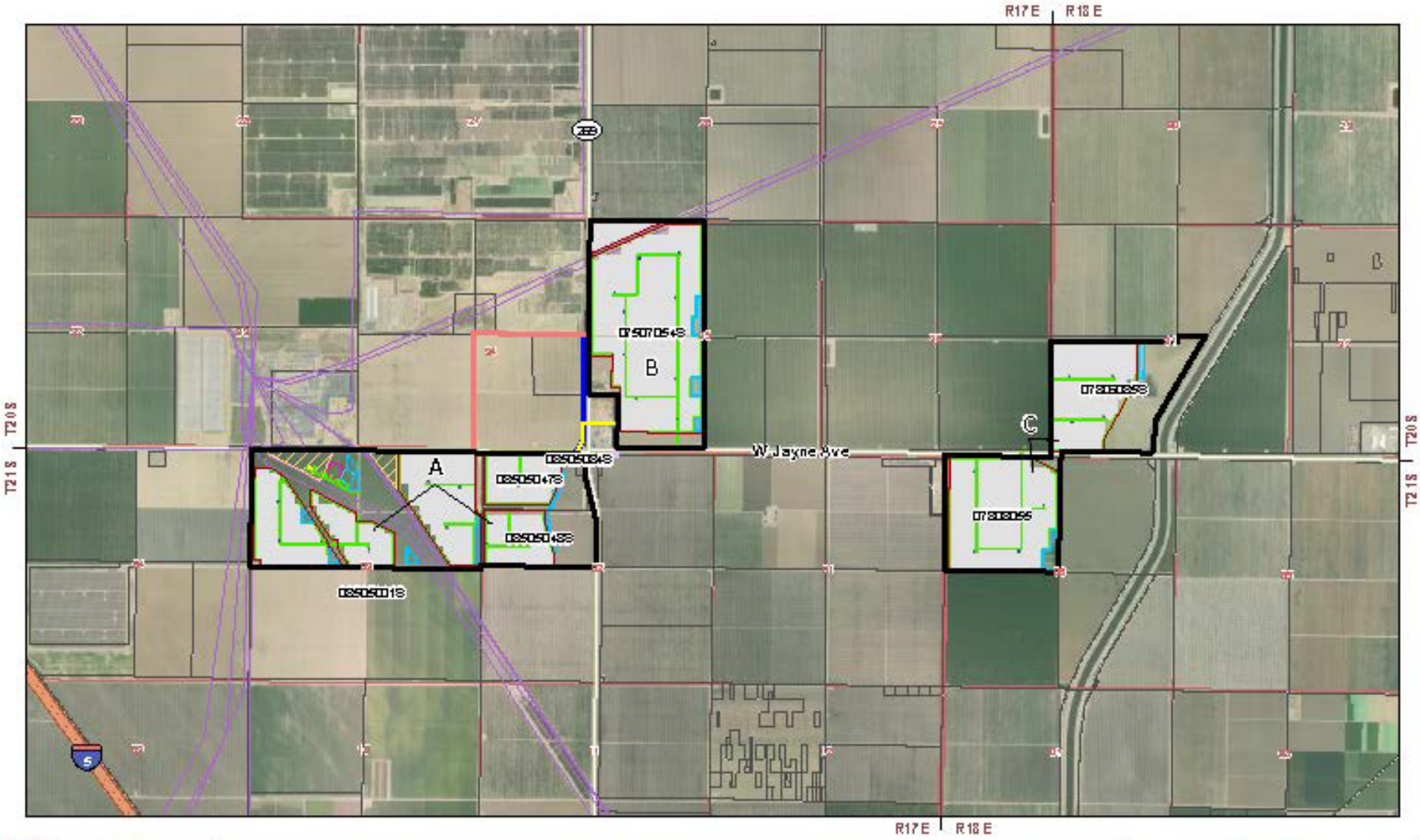
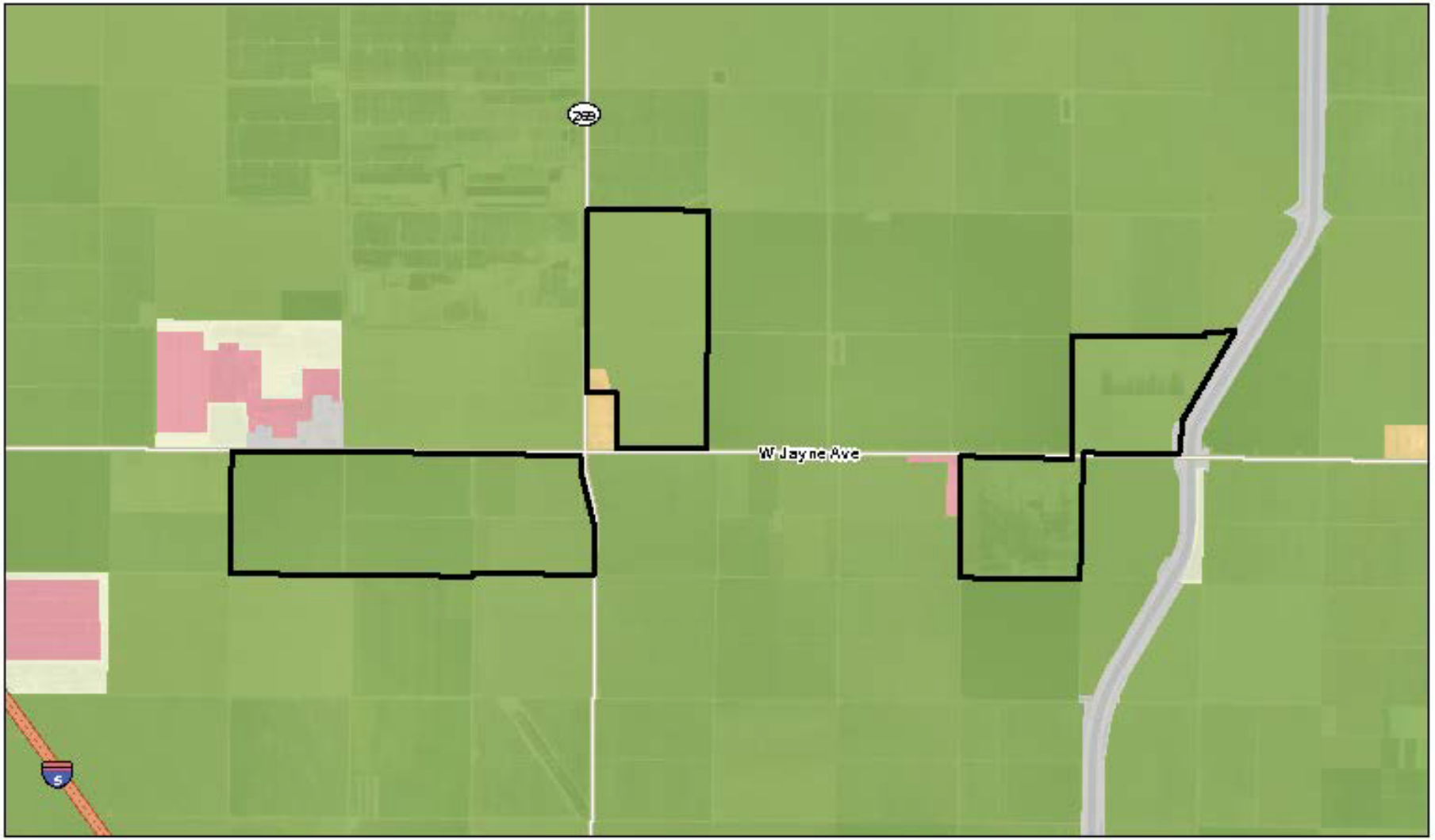


Figure 2
Project Layout

San Luis West Solar Project
Fresno County, California


W Jayne Ave
San Francisco
Project Location
Los Angeles
Project Site
Prime Farmland
Farmland of Local Importance
Vacant or Disturbed Land
Semi-agricultural and Rural Commercial Land
Urban and Built-Up Land
N
0
0.5
1
Miles
Source: ESRI (2024), CADLRP (2023)
NOT FOR CONSTRUCTION
TETRA TECH
Figure 3
Surrounding Land Use
San Luis West Solar Project
Fresno County, California

4.0 SCHEDULE

General schedule details remain unchanged in the Alternative. The desired Commercial Operation Date for the Facility is December 31, 2025, with construction anticipated to commence in early 2025. The anticipated operational lifespan of the Facility is a minimum of 35 years.

5.0 SURROUNDING LAND USES AND CONDITIONS

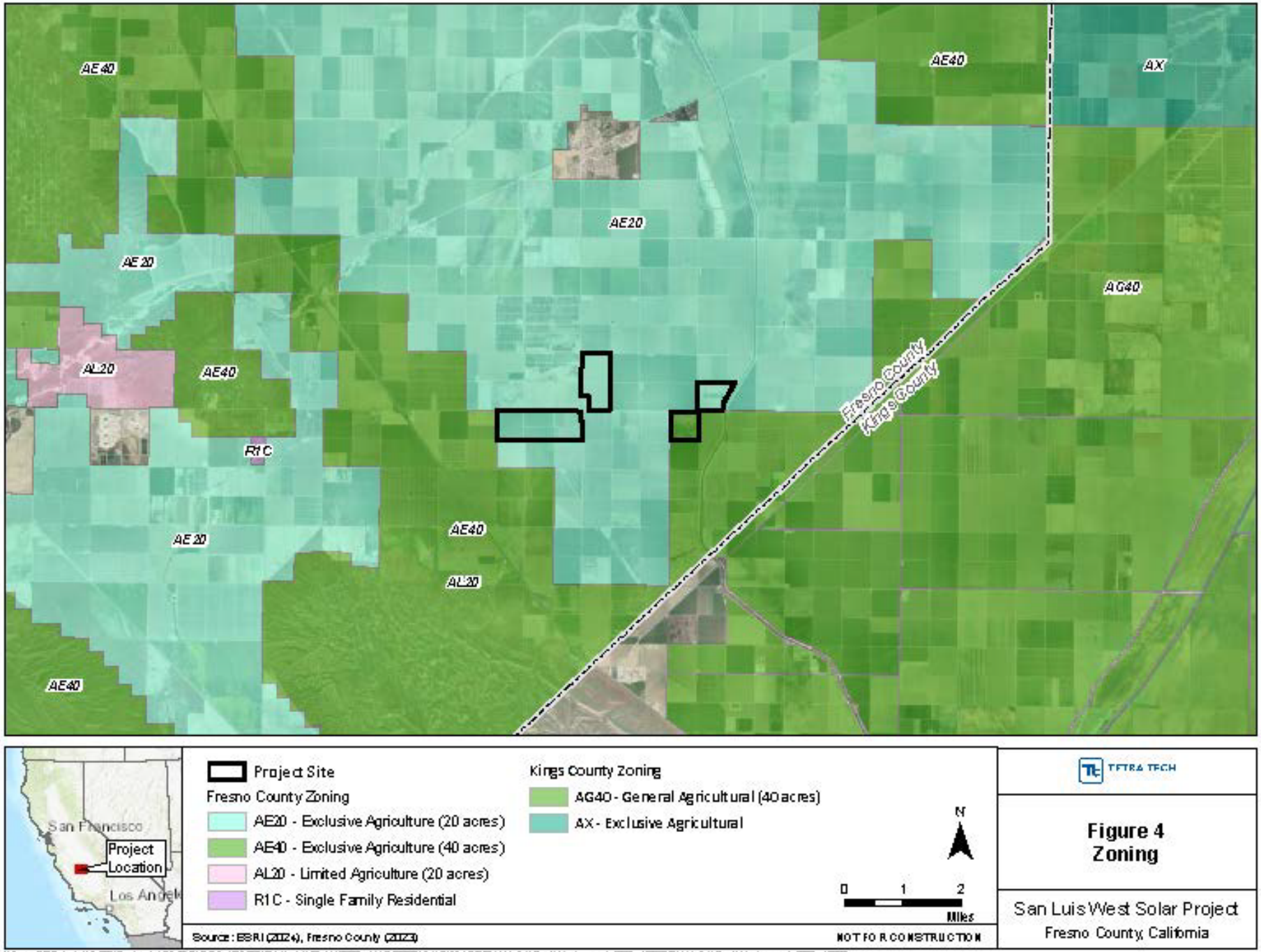
Details of surrounding lands remain unchanged in the Alternative. The 5-mile area surrounding the Project consists of a mixture of AE-20 and AE-40 zoning designations (Figure 4). Solar PV facilities are inherently compatible with agricultural uses of all types, as evidenced by the successful co-location of solar and agriculture in Fresno County and throughout the United States. Whereas residential or commercial uses may find certain agricultural uses (or their byproducts, such as dust and odor) to be a nuisance, solar does not. Dust from neighboring farms can impair the efficiency of solar modules, but the potential for degradation in output due to "soiling" (as it's referred to in industry parlance) is accounted for in the Project's design. Periodic washings sufficient to mitigate the impact of soiling are included in the Project's pro forma financial model under operations and maintenance (O&M) expenses. Similarly, solar has no negative impact on adjoining agricultural uses.

In addition, the Project is bordered to the east by the California Aqueduct and a federally owned, undeveloped parcel to the north. The Project is bordered to the west entirely by lands owned by the same landowners who currently own the Project parcels, from whom the Applicant will be purchasing the parcels, should the Project proceed into construction. These owners, by virtue of deciding to sell the Project parcels for solar, have concluded that solar will not negatively impact their agricultural operations.

5.1 Local Setting

Local setting details remain unchanged in the Alternative. The Project site is located in the southern part of Fresno County, adjacent to the Governor Edmund G. Brown California Aqueduct (California Aqueduct), and at its closest point, about 3 miles northwest of the boundary with Kings County. The Project site is in a rural area of Fresno County about 1.5 miles east of Interstate Highway 5, approximately 3 miles south of the community of Huron, and about 40 miles south-southwest of the City of Fresno. The Project occupies portions of Sections 3, 6, 30, 31, and 35 (Townships 20 and 21 south, Ranges 17 and 18 east of the Mt. Diablo Base and Meridian). The surrounding land uses consist primarily of agricultural uses.

The Project site is located within the Central Valley region of Fresno County. The region consists of a single broad, flat valley, drained by the San Joaquin River and its tributaries, bound by the Sierra Nevada to the east and the Coast Range to the west. The elevation ranges from about 150 to 450 feet above sea level. Historically, the dominant habitat types were arid grasslands and shrub lands with expansive Valley Oak riparian woodlands and freshwater emergent wetlands in the proximity of water sources. Today, most of the land has been converted for agricultural uses.



TETRA TECH

Figure 4
Zoning

San Luis West Solar Project
Fresno County, California

The Project site is within the Fresno County Fire Protection District. The nearest fire station is in the community of Huron, approximately 3.5 miles to the north.

According to data from the California Department of Conservation's Farmland Mapping and Monitoring Program, the Project site includes lands identified as Prime Farmland, with some smaller areas designated as Nonprime Agricultural Land.

According to the Natural Resources Conservation Service's Web Soil Survey, the Project site includes five types of soil, nearly all of which are considered Prime Farmland if Irrigated. See Table 1 for a full list of soils, their farmland classification, and percentages of the Project site.

Due to the reduction of the Project site, one soil type was removed from this table and acreages and percentages have changed slightly in the Alternative.

Table 1. Soils

Soil Unit	Soil Name	Farmland Classification	Capability Class	Acres in Project Site	Percentage of Project Site
425	Kimberlina sandy loam, 0 to 2 percent slopes	Not prime farmland	Irrigated: 7c Non-Irrigated: 1	149.40	14%
445	Excelsior sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated	Irrigated: 7c Non-Irrigated: 1	29.78	3%
447	Excelsior sandy loam, sandy substratum, 0 to 2 percent slopes	Prime farmland if irrigated	Irrigated: 7s Non-Irrigated: 2s	143.91	13%
474	Westhaven loam, 0 to 2 percent slopes	Prime farmland if irrigated	Irrigated: 7c Non-Irrigated: 1	763.18	70%

Interstate 5 is the only major transportation route near the site. The Interstate runs north to south connecting southern California to northern California and the Pacific Northwest. Other interstates within the vicinity of the Project include SR-269, which runs north-south, connecting the City of Avenal to north to the community of Huron, and West Jayne Road, which spans the central valley east-west. Most roadways in the immediate Project site vicinity consist of unpaved agricultural roads.

The nearest airport to the Project site is the New Coalinga Municipal Airport, located approximately 9.5 miles to the west. The nearest major airport is the Fresno Yosemite International Airport, which is over 40 miles from the Project site.

The nearest military facility is Naval Air Station Lemoore, approximately 11 miles to the northeast.

6.0 COUNTY ZONING DISTRICT AND SOLAR GUIDELINES

6.1 General Plan and Zoning

General Plan and Zoning details remain unchanged in the Alternative. The Project parcels and all easement parcels are zoned Exclusive Agriculture (AE) in accordance with Fresno County's Zoning Classification (Figure 4). Solar is allowed as a conditional use within AE zoning designations; therefore, a zoning change is not required in order to permit the Project. The Project site is located within the Fresno County Fire Protection District and thus Project plans will be reviewed accordingly.

6.2 Solar Facility Guidelines

Fresno County's Solar Facility Guidelines (as revised by the Board of Supervisors on May 21, 2013) set forth the County's policies for solar project development. The purpose of the guidelines is to help balance the development of solar projects with the need to "protect important farmlands and minimize impacts to existing agricultural operations."

The Project is designed with a buffer between the solar facility and adjacent agricultural fields. In compliance with the Guidelines, the Applicant will acknowledge the County's Right to Farm Ordinance and will record a Right to Farm Notice. To facilitate a possible return to agricultural uses after the life span of the Project, a reclamation plan has been prepared detailing the removal of Project improvements and specific measures to return the site to its condition prior to construction.

7.0 DETAILED PROJECT DESCRIPTION

7.1 Overview of Solar Technology

Key Project components remain the same in the Alternative, aside from the minor relocation and reduction in footprint of some components. The one exception to this is the Project substation, which has increased slightly in footprint, as described below.

The Project would include a solar energy generating facility, direct current (DC) electricity to AC electricity power inverters and transformers or power conditioning stations, a Project on-site substation, BESS, and a connection to the PG&E-owned Gates substation. Major Project features are described below and displayed on the submitted Site Plan.

Key Project components consist of the following:

- PV modules (panels)
- Collection line system
- BESS components
- Project substation
- Gen-tie line
- Interconnection
- Access roads
- Fencing
- Parking
- Lighting
- Stormwater facilities
- Telecommunications
- Meteorological data collection system
- Other infrastructure

These components are discussed in detail below.

7.2 PV Modules (Panels)

PV panel details remain unchanged in the Alternative. The primary components of a solar PV generation facility include solar modules (panels); a metal racking system with east-west tracking capabilities; electrical inverters; electrical transformers; medium-voltage cabling; and fencing.

The PV modules (also known as panels) will be grouped into arrays and mounted on metal racks affixed to the ground using either driven posts or helical screws. The racks will rotate the panels from east to west during the day. The direct current (DC) output from the PV modules will be combined in parallel in combiner boxes and, from the combiner boxes, converted into alternating current (AC) via the inverters, the output of which will be fed into transformers that step up from voltage to match that of the grid. Excess energy not discharged into the grid, or energy absorbed directly from the grid, will then be converted back to DC by a separate inverter for battery storage, then converted to AC again when called upon to discharge into the grid.

The modules may be constructed of glass encasing crystalline silicon, poly crystalline silicon, or thin film technology. The PV modules would be dark blue or black color, with minimal light reflection. A plastic binding material and metal frame provides structural rigidity. The solar modules would be self-contained, durably constructed units designed to withstand exposure to the elements for a period of 35 years or greater. The solar modules deployed for use in the Project would be certified to comply with industry standard quality testing. Modules would be electrically connected and grounded. The plant will be designed in accordance with local and state codes and regulations. The final panel selection would be determined at the detailed Project-engineering phase.

To support the trackers, the Project would utilize a single-axis tracking system designed to optimize power production of the modules by ensuring proper orientation to the sun both daily and seasonally. Metal piers driven into the ground by a pile-driving machine support the single-axis tracking systems. Pier placement begins with a precise surveyed layout, ensuring proper positioning of remaining tracker assembly parts. Affixed to the top of each pier is a pier cap and bearing assembly that supports and allows proper movement of the torque tube assembly. Single-axis tracking systems require a drive system that provides directional force to the torque tube. This can be accomplished with either a mechanical or hydraulic drive arm and tube assembly that “pushes and pulls” the torque arm through its range of motion or by a geared assembly that redirects rotational force to the tubes. Both approaches require a small geared motor or hydraulic system mounted on a pile support or pad strong enough to move the system through its daily range of motions.

The trackers would be separated by distances of about 18 feet to accommodate maintenance personnel and design parameters that meet applicable Fresno County fire safety requirements. Modules would be approximately eight feet tall and organized in rows in a uniform grid pattern, with each row separated by approximately 22 feet (from post to post). The module and tracker features allow for a natural light regime between and under the modules, supporting the co-management of solar energy generation, agriculture, and wildlife.

7.3 Collection Line System

The output of the Facility's solar arrays will be conveyed to the Project substation via a series of underground 34.5 kV collection lines that will be located in narrow trenches and buried approximately three feet below grade along a collection line corridor (Figure 2). Depending on site characteristics (soils, road constraints, etc.,) there may be limited areas where collection lines would also daylight to conductors that would be situated on a mono-pole system.

As noted above, several new options for collection lines have been added as part of the Alternative and are depicted in Figure 2. The collection line system connects to the BESS and Substation in Subarea A, then a 230 kV gen-tie line will connect from Subarea A to the Point of Interconnection (POI) at the PG&E Gates substation. Four collection line options have been included in the Alternative, as depicted in Figure 2 and outlined below.

- Option 1 begins in the middle section of Subarea B and runs west along an existing agricultural road for approximately .5 mile. It then angels south for approximately .5 mile along another existing agricultural road, where it undergrounds at West Jayne Avenue to connect with Subarea A.
- Option 2 begins at the southwestern portion of Subarea B, approximately 0.25 mile north of West Jayne Avenue. It runs directly west for approximately 0.25 mile, then angles south/southwest to underground at West Jayne Avenue to connect with Subarea A.
- Option 3 begins at the same point as Option 1, in the middle of Subarea B. It then runs directly south along an existing agricultural road for approximately 0.75-mile, before angling slightly west and undergrounding at West Jayne Avenue to connect with Subarea A. This option shares the same connection route across West Jayne Avenue as Option 2.
- Option 4 begins at the same point as Option 2, approximately 0.25 mile north of West Jayne Avenue in southwestern Subarea B. It runs directly south for approximately 0.25 mile, crossing West Jayne Avenue before angling west/southwest to connect to the northeast corner of Subarea A.

7.4 Battery Energy Storage System Components

BESS details remain unchanged in the Alternative. Primary components of the BESS include lithium-ion batteries which are typically housed in shipping containers featuring integrated heating, cooling, ventilation, and safety systems. The BESS components will be co-located with the Project substation in Area A, across West Jayne Avenue from PG&E's Gates Substation.

The BESS will feature a secondary set of inverters that can charge and discharge the batteries independent of the PV arrays, thus allowing the batteries to be charged directly from the grid. Excess energy not discharged into the grid, or energy absorbed directly from the grid, can be converted back to DC for battery storage, and then converted to AC yet again when called upon to discharge into the grid.

The BESS is anticipated to be 10 feet in height, with a layout of approximately 300 x 300 feet. Precise measurements will be determined at the Project engineering and building permit phase. The key components of the BESS are described below.

- **Batteries**. Although the batteries have not yet been selected for this project, Lithium ion (Li-ion) batteries are the most common batteries by installation, accounting for more than 90% of energy storage installations. Li-ion batteries use the exchange of lithium ions between electrodes to charge and discharge the battery. Li-ion batteries are typically characterized as power devices capable of short durations or stacked to form longer durations of power. This Project would be considered a long duration system. Li-ion energy storage systems are generally appropriate for serving energy applications, moderate power applications, and applications requiring a short response time (i.e. back-up power or supporting a black start). The three most common Li-ion chemistries are Lithium Nickel Cobalt Manganese Oxide (NCM), Lithium Iron Phosphate (LFP), and Lithium Titanate Oxide (LTO). It should be noted that the battery component of the BESS has not yet been finalized and the developer is also considering battery technology other than Li-ion batteries.
- **BESS Fire Protection System**. As the exact system for the design of the fire suppression system is not yet finalized, the following topics outline the general guidelines and industry best practices for outdoor Li-ion installations and will be adjusted based on the specific system selected in the final design. For ease of review, a breakdown into several categories of the expected fire/hazard protection expectations includes:
    - Hazard Mitigation Analysis
    - System Certifications and Tests
    - Thermal Management and Controls
    - Monitoring and Alarms
    - Fire Protection
    - Siting

  The goal of such expectations is first to provide barriers to potential issues, and then, in the event that a hazardous condition occurs, mitigate the impact. In general, the hazards posed by energy storage systems are mitigable given appropriate design considerations. In support of industry best practices, the expected protection measures will adhere to National Fire Protection Association (NFPA) 855 and International Fire Code (IFC)-2018, or the most recent in-force California Fire Code.
- **System Certifications and Tests:** All Li-ion systems to include sub-components listed to UL 1642, UL 1973, and UL 1741 at least, with tests from a recognized laboratory demonstrating resilience to electrical, mechanical, and environmental stressors, as well as cascading protections against thermal runaway, and automatic shut off capabilities. Additionally, listing the BESS to UL 9540, or preparing a site-specific Hazard Mitigation Analysis (HMA) paired with a Failure Mode and Effects Analysis (FMEA), will meet industry best practices.
- **Thermal Management and Controls**: A thermal management system or HVAC system is expected be utilized, appropriate for local environmental conditions, that maintains the

system within the demonstrated (per test data of battery) appropriate ranges of the battery cells. The thermal management system is intended to: 1) control temperature at a battery module level, with circulation providing consistent temperature within each container and within the safe operating temperature ranges of the battery; and 2) control humidity within the safe operating ranges of the battery. The controls system is expected to include both the BMS and higher-level controllers including balance of system (BoS) controllers and/or programmable logic controllers (PLCs). The BMS should be capable of balancing the state of charge (SOC) between cells and modules and monitoring current and voltage between cells and modules, shutting the system or sub-components down automatically in the case of abnormal conditions. The controller should be capable of receiving information from the BMS and should be proven to operate the battery for only the applications and conditions the battery is capable of.

- **Monitoring and Alarms:** The system is anticipated to have sensors allowing for the detection at a minimum of temperature, current, and voltage, at least at the battery module level. Also, battery cell monitoring is expected to include voltage and as many temperature measurements as practical in the battery module. In addition, the system should have ambient temperature sensors, as applicable to larger containers, and smoke and thermal detectors for fire detection in compliance with NFPA 72. In all cases, this information will be monitored remotely, 24/7, to ensure values remain within acceptable ranges (Ranges are manufacturer determined. Test data previously noted can confirm that these ranges are appropriate. In the event of abnormal conditions, an alarm will be sent to the monitoring facility, and systems or sub-systems will be automatically shut down. Additionally, system status will be clearly visible on the outside of unit, indicating status via indicator light or screen (e.g., Off, Idle/Standby, Active/on, Faulted).
- **Fire Protection:** Each BESS container will be constructed of non-combustible material, with consideration given for direction of gas or fire release away from first responders in the case of a catastrophic failure. The system manufacturer is expected to provide an emergency management plan, including subject matter expert (SME) contact information and instructions to first responders. In case of an emergency, first responders should be in contact with the SME and ensure the system is electrically disconnected prior to initiating an emergency response. First responders should not enter containers. Based on extensive destructive battery testing data, water should be the primary suppression agent used. Water will be available within standard distances, as approved by the County. The design of the fire suppression system is not yet finalized, but will be designed in accordance with federal, state and local regulations.
- **Siting:** The system shall be protected from access by non-approved personnel, with either locked containers or fencing, as approved by the County to ensure access in case of emergency. If multiple containers are used and each exceeds 250 kWh, containers will be placed at least 3 feet apart from other battery containers, unless testing demonstrates otherwise. If multiple battery cabinets or racks are used within a single container, there are no requirements for internal spacing as long as the battery rack locations allow for acceptable thermal management. Emergency electrical disconnects are expected to be accessible in case

of emergency, in compliance with all applicable safety regulations, and located on the outside of each container. If electrical disconnect is not within sight of the system, a sign should indicate its location.

7.5 Project Substation

Project substation details remain largely unchanged in the Alternative, aside from a slight increase in estimated square footage. Energy generated within the Facility and transmitted along the collection line system will be sent to the Project's on-site, dedicated substation located in Subarea A (Figure 1). Energy that is collected and aggregated at the substation will be "stepped up" in voltage to 230 kV before being transmitted along a high voltage gen-tie line to the POI.

The typical components of the on-site Project substation include the following:

- Incoming 34.5 kV feeder breakers
- Main step-up transformer (from 34.5 kV to 230 kV)
- Control enclosure
- Dead-end and shield pole
- Support steel
- Auxiliary station service transformer
- Circuit breaker
- Motor-operated disconnect switch

The overall footprint of the Project substation is anticipated to be no more than 350 feet by 300 feet (formerly 135 feet by 235 feet) with structures such as lightning protection poles and cables reaching approximately 80 feet in height. An emergency generator may be installed for use in the event that the regional transmission system fails. If deemed necessary, the generator would likely be installed at the substation. This emergency generator would provide emergency power until the regional transmission system restores operations. The generator would be powered by propane or diesel and is estimated to be 49 kilowatts or less in size. An approximately 220-gallon fuel tank would be immediately adjacent to the generator. If installed, the generator system will comply with applicable air quality and spill prevention and control requirements.

7.6 Gen-Tie Line

Gen-tie details remain unchanged in the Alternative. The Project will feature a single, approximately 230 kV gen-tie line running between the Substation in Subarea A and the PG&E Gates Substation (Figure 1). The route will feature steel or wooden transmission towers, wires, guys, conductors, and other components.

7.7 Interconnection

Interconnection details remain unchanged in the Alternative. The POI is the physical point at which power from the Project is delivered into the PG&E system. In this case, the POI is a 230 kV bus at

PG&E's Gates Substation. The Project is in the interconnection study process currently and is being studied for the full 125 MW nameplate capacity of the Project. An interconnection agreement for the Project, which is a contractual agreement between the Project, CAISO, and PG&E governing the upgrades required in order to interconnect the Project and associated cost responsibilities and timelines, was executed in December 2021. Interconnection upgrades are anticipated to be completed by the end of 2025.

The typical components of a POI switching station include the following:

- Circuit breaker
- Metering, communication, protection, and control devices
- Circuit switcher
- Protection and control panel
- Supervisory control and data acquisition (SCADA) and metering equipment
- Battery inverters

7.8 Access Roads

Project access remains unchanged in the Alternative. Access from public roads to the Project site would be via main entrances along West Jayne Avenue and SR-269. The Applicant plans to utilize existing interior access roads, however these roads may be improved with the addition of an aggregate base or other native material with a soil stabilization material, if necessary. Interior and perimeter access routes would be designed to meet applicable operations and maintenance and public safety access requirements. No public road improvements are currently proposed as a part of the Project. However, driveways connecting public roads to the interior road system may be installed or improvements may be made for existing public road access points.

7.9 Fencing

Fencing details remain unchanged in the Alternative. A perimeter fence will be installed along the edge of all Project parcels with an approximately 50-foot setback from property lines. Fencing will conform to County requirements but typically consist of either a 6-foot-tall chain link fence with barbed wire or an 8-foot ranch style fence with no barbed wire. Landscaping will not be proposed unless required. Access gates would be provided at each site entry road.

7.10 Parking

Parking details remain unchanged in the Alternative. Parking is not currently being proposed as part of the Facility. While there will be ample space within the Facility to provide access for employees, service, and delivery vehicles, formal parking spaces will not be included unless required by local or state regulations. No goods are proposed to be sold on-site, and no public access will be permitted.

7.11 Security Lighting

Lighting details remain unchanged in the Alternative. Security lighting may be installed to allow for ongoing maintenance and security, including at entry and egress gates and at other strategic locations around the facility. Manually controlled lights would be installed at equipment pads and substations. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships. If installed, all lighting would conform to applicable Fresno County outdoor lighting codes.

7.12 Stormwater Facilities

Stormwater details remain unchanged in the Alternative. The Project would comply with applicable stormwater regulation and requirements. However, the site drainage is designed to follow the natural drainage pattern, and none of the on-site facilities, including fences and panel posts, should prevent stormwater flow. Therefore, the Applicant anticipates that the Project would have very limited impact on site drainage. No on-site detention facilities are planned.

7.13 Signage

Signage details remain unchanged in the Alternative. Project signage is proposed to allow for the identification of the Project owner and for safety and security purposes. Signage is proposed to be installed on the fence or ground mounted in the vicinity of the main entry gates. Signage would identify the Project operator and owner and would provide emergency contact information. Small-scale signage would also be posted at the main entry gates and intermittently along the perimeter fencing on all exterior parcel boundaries, to indicate “No Trespassing” and “Private Property” for security purposes. All signage would conform to Fresno County signage requirements.

7.14 Telecommunications

Telecommunications details remain unchanged in the Alternative. The Project would require connection with the existing local telecommunication service. A telecommunication line is typically comprised of fiber optic cable and/or 25-pair telephone line, which would be installed above and below ground, either attached to existing distribution lines or installed immediately adjacent to the Project substation. The telecommunication routes would use a combination of existing poles or new poles and below ground installations. Lines would be placed within utility franchise easements to the extent feasible. The POI to the existing telecom facilities would be in a small telephone/fiber optic vault. Interconnection to the Project would be within the Project substation. Below ground installations are usually installed 24-48 inches below grade. Aboveground lines would be placed in accordance with applicable code requirements and are typically placed 6 feet below existing distribution lines or on new, adjacent wooden poles. Telecommunications may also be transmitted by a small wireless antenna, which would be placed at the Project substation.

7.15 Meteorological Data Collection System

Meteorological Data Collection System details remain unchanged in the Alternative. The Project may require meteorological data collection system(s). The system(s) would include a variety of instruments to collect meteorological data, which would be mounted at various locations throughout the facility. The meteorological data would be collected at the level of the solar panels or approximately 10 feet above the ground.

7.16 Other Infrastructure

O&M details remain unchanged in the Alternative. O&M activities would take place in a new O&M building located in Subarea A, as shown on the submitted Site Plan. This building would be approximately 100 by 20 feet, with a height of approximately 15 feet. The Project will follow applicable County requirements for sanitary service and septic systems. However, at this time, the Project does not anticipate installing a sanitary water or septic system. It is anticipated that the O&M facility would utilize portable toilets and bottled water for potable water purposes. Water requirements during operations would be negligible (that is, for occasional cleaning of solar panels), and are anticipated to be less than 1 acre-foot per year.

7.17 Construction

7.17.1 Construction Access Routes and Laydown Areas

Construction access routes (from West Jayne Avenue or SR-269) remain the same in the Alternative. Laydown areas have been relocated to exist within the confines of Subarea A with reduced acreages.

During construction, materials would be placed within the Project boundaries, and specifically within two separate laydown and staging areas (formerly four separate areas) in Subarea A (formerly located in Subareas A and C). These areas are outlined in the Site Plan and consist of two locations in Subarea A, totaling approximately 10 acres. To prevent theft and vandalism, materials would be secured within fenced areas at all times. Small storage containers may be used to house tools and other construction equipment. In addition, security guards would regularly monitor the site. Portable toilet facilities would be installed for use by construction workers. Waste disposal would occur in a permitted off-site facility. Domestic water for use by employees would be provided by the construction contractor through deliveries to the site.

7.18 Construction Activities and Equipment

Construction activity and equipment details remain unchanged in the Alternative. Additional water use details have been added below. The Applicant anticipates that construction would occur during a period of approximately 9 months and is anticipated to occur early 2025.

The following construction activities would proceed as follows:

1. **Site Preparation**: Excavation and grading would be minimal and staged to minimize dust, maintain existing drainage patterns, and ensure stability of the equipment installations.

2. **Installation of Fencing**: The permanent security fence would be installed around the perimeter of the Project site. The eastern and western halves of the site would be separately fenced. Fencing would be designed to allow movement of sensitive wildlife.
3. **Access Corridors**: The access corridors would be built of compacted native material to provide access to the panels for maintenance.
4. **Installation of the Solar Arrays and Inverters**: The solar trackers would be assembled and installed, and the solar panels attached to them. Concrete slabs would be poured at the inverter locations, and the inverter components would be put in place. Alternatively, prefabricated equipment would be installed on the slab.
5. **Electrical Work**: Installation of the underground electric lines to connect the solar arrays with the inverters and the inverters to the substation.
6. **Installation of the Substation and Transmission Interconnection**: The onsite substation would be fenced and covered in gravel and the substation equipment would be installed. The substation would then be connected directly to the gen-tie line leading to the PG&E Gates Substation.

Schedule and Workforce. Construction would primarily occur during daylight hours, Monday through Friday between 7:00 a.m. and 6:00 p.m. as required to meet the construction schedule. Additional hours/days may be necessary to facilitate the schedule. Any construction work performed outside of the normal work schedule would be coordinated with the appropriate agencies and would conform to Fresno County Noise regulations.

The onsite construction workforce is expected to peak at 300 individuals who will be onsite at any given time. It is anticipated that the construction workforce would commute to the Project site each day from local communities and report to the designated construction staging yards prior to the beginning of each workday. Parking for construction personnel would be provided onsite. Portable toilets would be used and would be maintained by a private offsite company during the construction period.

Most workers would commute to the site from nearby communities such as Huron, Coalinga, Lemoore, Visalia and other locales within commuting distance to the project site Construction would occur primarily during daylight hours. Workers would reach the site using existing roads.

Site Preparation. The Project site is located on privately-owned lands that have been historically used for agriculture since at least 1955. The areas to be developed as access corridors would be smoothed and compacted. Grading and compaction would also be required at the onsite substation and BESS locations to provide stable bases for the installation of equipment. The primary method of vegetation removal would be to mow existing vegetation, leaving root structures in place. The concept is to maintain existing drainage to the greatest extent practicable. Spot grading would remove small berms using a diesel motor grader. Stormwater retention basins would be prepared using a combination of diesel scrapers, bulldozers, and end loaders. Diversion swales and berms would be prepared at the project perimeter using similar heavy equipment. A series of rip-rap cutoff trenches would be constructed perpendicular to natural drainage directions to control erosion within major drainage corridors. Interior access corridors would consist of compacted native soil.

Concrete footings and pads would be required for the inverters, substation transformers, and other equipment. Final concrete specifications would be determined during detailed design engineering. Concrete would be poured throughout the site by truck, purchased from an offsite supplier and trucked into the Project site.

Construction would begin with the installation of fencing around the perimeter of the Project site. The perimeter fence would also include signs providing directions to primary site access. Road corridors, buried electrical lines, PV array locations, and the locations of other facilities may be flagged and staked in order to guide construction activities.

Water Use. During construction of the proposed project, water would be required for common construction-related purposes, including (but not necessarily limited to) dust suppression, soil compaction, and grading. Dust-control water may be used for ingress and egress of onsite construction vehicle equipment traffic and for the construction of the solar equipment. A sanitary water supply would not be required during construction, because restroom facilities would be provided by portable units to be serviced by licensed providers.

During construction and decommissioning, approximately 120 acre-feet of water are estimated to be used for dust control. The Project plans to use an existing, onsite pond (with a 3,250,000-gallon capacity) for water storage during the construction phase and leave it in place during Project operations primarily as a source of water for emergency fire suppression. The pond will need to be replenished periodically, estimated at about 2.92 acre-feet per year. Other than replenishing the pond, after construction, no water would be used during the operation of the project, except for annual panel washing, which is estimated to be less than 1 acre-foot per year. Water demand during construction is expected to be the same if the project is constructed during a year with normal precipitation, a year with less-than-average precipitation, or a multiyear period of less-than-average precipitation.

Disposal of Construction Materials. During construction, the building contractor will arrange to have trash, construction material recycling, and regular recycling bins delivered to the site in accordance with Fresno County Building Code requirements and guidelines. During construction, every effort will be made to minimize the use and disposal of packing materials and construction material waste. Construction recycling, regular recycling, and non-recyclable trash will be picked up regularly during the construction period. All project components will arrive by truck on pallets and will be removed from the Project site by the same truck.

Hazards and Hazardous Materials Compliance. To limit the exposure of construction workers to hazardous materials (e.g., construction related fuels and paints), construction activities will comply with applicable worker protection laws and regulations. This includes the Occupational Safety and Health Act, Title 9 of the Code of Federal Regulations, and Title 8 of the California Code of Regulations. The construction contractor selected for the project will be responsible for ensuring that construction workers are trained in accordance with local, state, and federal requirements for handling hazardous materials. Workers also will be trained to properly identify and handle all hazardous materials. Hazardous waste would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility. All hazardous waste that is shipped offsite for recycling or disposal will be

transported by a licensed and permitted hazardous waste hauler and disposed of at an approved location.

7.19 Operations

Operations details remain unchanged in the Alternative. Once constructed, the Project would be operated remotely, seven days per week and 365 days per year. The Project will be outfitted with a suite of sensors, monitoring equipment, and communications gear as part of the Project's SCADA system. This allows the facility to be monitored in real time remotely by Origis Energy's remote operations center in Austin, Texas, which is a new, state-of-art remote monitoring center designed to provide round-the-clock operations support in accordance with National Electric Reliability Corporation standards. The remote operators will be continually aware of plant output, voltage, and local weather conditions and will receive real-time alerts in the event of abnormal operating conditions, allowing the operators to dispatch technicians as needed.

On-site O&M activities will consist of responding to abnormal operating conditions, routine maintenance and repairs, periodic panel washing, and grounds maintenance (i.e., vegetation control). These activities are anticipated to require site visits on the order of once to twice per month, consisting of a small ground crew.

While the solar panel part of the Facility operates during daylight hours, it is anticipated that the Facility as a whole will operate 24 hours a day, 7 days a week, as certain electrical connections withing the Facility may remain charged and the BESS portion of the facility, when charged, can discharge at any time during the day or night.

7.20 Decommissioning

Decommissioning details remain unchanged in the Alternative. Decommissioning occurs at the end of a facility's useful life. This could be well beyond the initial 35–40 year operational period, as primary Project components can be upgraded and replaced as needed in order to extend the operational lifespan of the facility by several decades. Nonetheless, at the point when the Project does reach the conclusion of its useful life, decommissioning will take place in a similar fashion to construction, but simply in reverse. A Project-specific Reclamation Plan has been developed for the Project in accordance with County requirements.

8.0 PERMITS AND CONSULTATIONS

8.1 Potential Permit Requirements and Consultations

Permit requirement and consultation details remain unchanged in the Alternative. The following is a list of local, state, and federal discretionary permits and consultations that may be required for the construction and operation of the Project:

- Conditional Use Permit (Fresno County)
- Encroachment Permit (Fresno County)

- National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Fresno County)
- Building/electrical permit (Fresno County)
- California Department of Transportation Permit for Transportation of Oversized Loads (California DOT)
- California Department of Transportation Permit for Transportation of Oversized Loads (Caltrans)
- Caltrans Encroachment Permit
- Section 851 Permit or Notice of Construction (California Public Utilities Commission)
- Permit to Construct/Operation (San Joaquin Air Pollution Control District)
- Coordination with California Department of Fish and Wildlife (CDFW) Regarding Swainson's hawk (Buteo swainsoni)
    - The Applicant is aware that Swainson's hawk, a state listed species, is known to occur within the vicinity of the Project site. The Applicant is committed to coordinating with CDFW to ensure that the Project meets all applicable standards and guidelines for pre-construction, construction, and post-construction phases of the Project.

8.2 CEQA Compliance

CEQA compliance details remain unchanged in the Alternative. It is expected that the Project will require the preparation of CEQA documentation. The level of documentation is not known at this time; however, the process is expected to include the preparation of an Environmental Impact Report (EIR). The EIR will follow the CEQA Checklist and be prepared according to CEQA requirements and the State CEQA Guidelines (Appendix G: Environmental Checklist Form). Issues for which no significant impacts are expected will be identified, as well as any topics requiring further evaluation.

Preliminary analysis of the Project's potential for impacts to the CEQA resource issues indicates that the Project is not expected to result in significant impacts (Table 2). However, as noted above, completion of an EIR will likely be necessary to document impact findings and provide supporting data and information.

Table 2. Anticipated CEQA Resource Issues

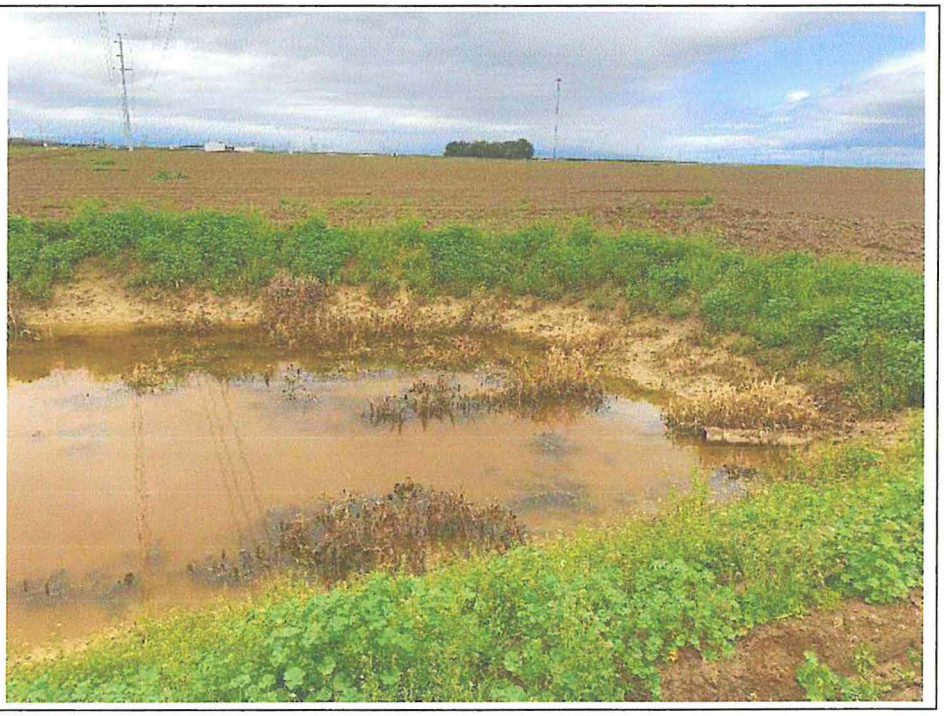
Resource	Applicability to the Project	Expected Finding
Aesthetics	The Project site is dominated by cultivated agricultural fields. The Project is likely to change the visual character of the Project site. A visual analysis and corresponding reporting are anticipated to be necessary for the Project.	Less Than Significant

Resource	Applicability to the Project	Expected Finding
Agricultural Resources	The Project site is designated as Prime Farmland and most parcels within the Project site are under a Williamson Act contract. An analysis utilizing the California Agricultural Land Evaluation and Site Assessment Model (LESA) is anticipated to be necessary for the Project.	Less Than Significant or Less Than Significant with Mitigation
Air Quality	Air quality impacts would result from construction and minor operation air quality emissions. An air quality/greenhouse gas assessment is anticipated to be necessary for the Project.	Less Than Significant or Less Than Significant with Mitigation
Biological Resources	The Project site consists entirely of agricultural land. Due to the highly disturbed and recent agricultural usage of the site, sensitive species are unlikely to be present, with the exception of Swainson's hawk. A biological resources survey has been performed and a corresponding technical report is in progress. The report will include recommended mitigation measures to be implemented during pre-construction, construction, and post-construction phases of the Project.	Less Than Significant with Mitigation
Cultural Resources	The Project site has a low to moderate sensitivity for the presence of cultural resources. A cultural resources survey has been performed and a corresponding technical report is in progress. If necessary, any recommended mitigation measures will be implemented.	Less Than Significant or Less Than Significant with Mitigation
Energy	Minor consumption of energy is anticipated during construction and operation, otherwise the Project will benefit energy supplies.	Less Than Significant
Geology and Soils	Minor disturbance of soils is anticipated during construction.	Less Than Significant or Less Than Significant with Mitigation
Hazards and Hazardous Wastes	Hazards associated with battery storage are possible. Except for potential historic use of pesticides and potential waste from construction that will be hauled out by contractors during the construction phase, no hazardous wastes are anticipated at this site. A Phase 1 Environmental Site Assessment (ESA) and corresponding technical report will be performed for the Project site. If necessary, any recommended mitigation measures will be implemented.	Less Than Significant or Less Than Significant with Mitigation
Hydrology and Water Quality	Minor changes to site drainage are anticipated to occur. Aside from Stormwater erosion, no water quality issues are anticipated. The Project will apply for a NPDES Construction General Permit with the County and will comply with all associated water quality measures.	Less Than Significant or Less Than Significant with Mitigation
Land Use and Planning	Project site is zoned AE-20 and AE-40, exclusive agricultural land. Solar is a conditionally permitted use for these zones.	Less Than Significant

Resource	Applicability to the Project	Expected Finding
Mineral Resources	Project site is not located in an identified mineral or petroleum area.	Less Than Significant
Noise	The Project site is surrounded primarily by agricultural lands and is not anticipated to emit significant noise. A noise study is anticipated to be required by the County. If necessary, any recommended mitigation measures will be implemented.	Less Than Significant or Less Than Significant with Mitigation
Population and Housing	Project does not include housing or population generating uses.	No impact
Public Services	The Project is located within the Fresno County Fire Protection District and thus will require review and approval from the Fresno County Fire Department.	Less Than Significant
Recreation	Project does not include population generating uses.	No impact
Transportation	Short-term construction traffic is expected, in addition to infrequent, minor operational traffic. A traffic analysis is anticipated to be required by the County. If necessary, any recommended mitigation measures will be implemented.	Less Than Significant
Utilities and Service Systems	Minor utilities and service systems demands. A water demand report is anticipated to be required by the County.	Less Than Significant
Wildfire	Not located in fire hazard zone.	Less Than Significant

Photograph 1
Location: Site A
Notes: Active wheat harvest. The PG&E Gates substation can be seen in the background. Aspect northwest.

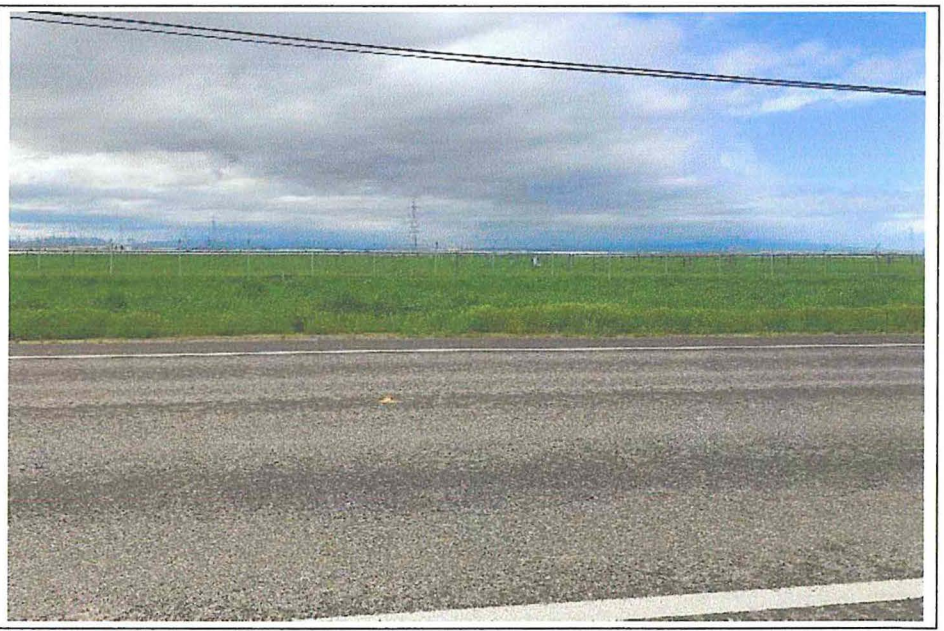
Photograph 2
Location: Site A
Notes: Representative photo of agricultural (disturbed) fields colonized by non-native plant species. Aspect north.

Photograph 3	
Location: Site B	
Notes: Representative photo of agricultural retention basins onsite. Aspect east.	

Photograph 4	
Location: Site B	
Notes: Representative photo of drainage ditches running along crop fields. Ditches have irrigation pipes and culverts. Aspect north.	

Photograph 5
Location: Site C
Notes: Representative photo of recently disced (disturbed) fields within the Project site. Aspect south.

Photograph 6
Location: 150-meter buffer
Notes: Representative photo of disturbed ruderal roadside and a developed solar facility. Aspect west.



Photograph 7	
Location: 150-meter buffer	
Notes: Representative photo of cultivated tree orchard. Aspect south.	

Photograph 8	
Location: 150-meter buffer	
Notes: Representative photo of cultivated vineyard. Aspect east.	