

DECOMMISSIONING PLAN

**TRONA 3 SOLAR PROJECT
ASSESSOR'S PARCEL NUMBERS 038-330-47 & -48
INYO COUNTY, CALIFORNIA
Renewable Energy Permit No. 2018-01/Barker**

March 2021

Decommissioning Plan

Trona 3 Solar Project Assessor's Parcel Numbers 038-330-47 & -48 Inyo County, California

Prepared for:

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March 2021

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1.0 - INTRODUCTION

A combined 2-megawatt (MW) photovoltaic solar project on a 10-acre site (Renewable Energy Permit No. 2018-01/Barker; APNs 038-330-47 & -48) (Project), was approved by the Inyo County Planning Commission on July 25, 2018. It is anticipated that the solar facility has an approximately 35-year project lifespan for solar energy production, less the facility is repowered using updated equipment. This Decommissioning Plan describes the methodology to remove Project infrastructure and restore the site to a condition similar to that found prior to facility construction.

2.0 - DESCRIPTION OF CURRENT LAND USE OF SITE

The Project site consists of two 5-acre parcels of highly disturbed soils with no natural vegetation or structures on site. Weed control has been performed to maintain the site. There are no scenic vistas or Caltrans-designated scenic highways adjacent to or near the Project site. The site is generally flat with very low slopes, if any. The Project site is located approximately 3-miles north of the unincorporated community of Trona in Inyo County within a County-identified Solar Energy Development Area.

3.0 - PROPOSED USE OF THE PROJECT SITE (SOLAR FACILITY)

ValleyWide Construction (Project Operator) proposes to develop a photovoltaic energy (PV) facility (up to 2 megawatt) on approximately 10-acres of vacant land. The power generated by the Project will be delivered via existing distribution line to an existing Searles 115/33 kV substation located in the community of Trona. A site plan is included as Appendix A of this document.

The Project will construct approximately 5,404 single-axis photovoltaic panels on mounting frameworks in rows in the north-south direction. The panels will be constructed in the east-west direction. The maximum height of the single axis tracker solar panels would be up to 12-feet above grade at the beginning and end of each day. Each solar panel would be attached to embedded piers using a support structure. Module layout and spacing is typically optimized to balance energy production versus peak capacity and depends on the sun angles and shading due to the surrounding horizon of the site. If a tracking system is used, the modules would typically be mounted with the longer side-oriented east to west across the tracker system's north-south axis. Individual arrays of modules would be combined to generate the total plant capacity. The panels will convert sunlight into electricity once operational.



Typical single-axis tracking solar panels



Typical Solar PV Mounting Structure

Each mounting structure for the PV modules is expected to be comprised of a mount flange, cross beam, support beam and mounting profile. PV modules will be installed on the mounting profiles, which are supported by the cross beams. These cross beams are in turn fixed on support beams, which are installed on the mount flange. The foundations for the mounting frames will be installed about 20-feet on center along each panel row. Each foundation is expected to consist of an impact beam/driven pier or beams with concrete footings extending about four (4) to eight (8) feet below ground surface, depending on soil conditions and wind loads.

3.1 - INVERTER STATIONS

Electricity produced by the photovoltaic panel is delivered to the inverter station via above-ground cables run from the PV blocks. Inverter stations are typically comprised of one or two inverter modules with a rated power of approximately 1,650 kVA each, a unit transformer, and medium voltage switch gear. Unit transformer and medium voltage switch gear are housed in steel enclosures with the inverter modules housed in cabinets. The inverter station would likely lie

3.4 - ON-SITE STRUCTURES

The Project will include the construction of a centrally located supervisory control skid and it will be constructed to required building code and local agency standards.

Primary access to the site is located at the southeast end of the Project site at Trona Wildrose Road. The Project will require the grading of internal dirt access roads for the Operator to maintain performance and security of the Project. The internal access roads will be constructed to appropriate standards to support construction traffic and reduce impacts to air quality.

3.5 - SITE SECURITY AND FENCING

Prudent security measures would be taken to ensure the safety of the public and the facility. The proposed Project would be fenced along all borders with locking gates at the specified points of ingress and egress. As proposed, the fence is anticipated to be seven feet in height. Off-site security personnel may be dispatched during nighttime hours or be on-site depending on security risks and operating needs. Controlled access gates will be maintained at the main entrance to the site at the southeast corner of the property. Site access will be provided to off-site emergency response teams that respond in the event of an after-hours emergency. If the gates are manual, a key for the gate will be provided in a key box at the gate location.

3.6 - SITE LIGHTING

Site lighting will be utilized for security purposes on-site. These light fixtures will be built to industry standards and provide illumination for both normal and emergency conditions. Lighting would be designed to provide the minimum illumination needed to achieve safety and security and would be downward-facing and shielded to focus illumination on the desired areas only.

3.7 – ON SITE ROADS

On-site roads will be constructed to provide vehicle and emergency access during facility operations. The on-site roads will be located around the perimeter and will traverse through the arrays for maintenance purposes. The on-site roads will be compacted native soil.

4.0 - DURATION OF THE PROJECT

The life of the facility is proposed to be 35 years but may be extended by the Project Operator following application for and receipt of all required County and agency approvals. The decommissioning plan will be implemented upon closure of the facility, which is scheduled to occur as soon as the year 2056 if the Project is implemented in 2021. Removal of the equipment is anticipated to occur over a two-month period. This timeline will be followed to the greatest extent practicable to allow work to be completed outside the rainy season (typically October to March).

5.0 – PROPERTY OWNERSHIP

Robbie Barker – ValleyWide Construction.

6.0 – DECOMMISSIONING OF THE PROJECT

6.1 – TIMELINE FOR PROJECT DECOMMISSIONING PLAN

The life of the proposed facility is presently proposed to be 35 years. The decommissioning plan will be implemented upon the Project's end of operations and following biological surveys to determine if site conditions have changed.

Following the biological surveys and implementation of appropriate mitigation, removal of the equipment is anticipated to occur over a one-month period, with the decommissioning activities to immediately follow. Decommissioning activities include removal of chemicals; removal of equipment, grading, contouring, erosion and sediment control; and resuming prior activities and conservation activities. The decommissioning activities would attempt to maximize the recycling of facility components to the extent feasible. Specific opportunities for recycling are discussed below.

6.2 – REMOVAL OF ALL CHEMICALS

Once the solar facility is no longer operational, the property operator will ensure the removal of all chemicals, fuels, oils, transformer oils, and other potential hazardous chemicals and wastes from the site. These will be disposed of in accordance with local, State and federal laws.

6.3 – REMOVAL OF EQUIPMENT (CLOSURE STRATEGY)

In advance of the decommissioning, a temporary storage area or laydown area will be established within the Project boundaries. The laydown area will include an impermeable section to protect the soils from the removed construction materials.

The property owner will coordinate with vendors and contractors to procure services for the purchase and removal of the various construction components, materials and waste. Many components of the decommissioned Project will have salvage value. Where applicable, the salvage value of recyclable materials will be secured through sales to a recycling plant or salvage yard.

Upon closure of the Project and completion of the appropriate biological surveys and mitigation implementation, the Project operator will ensure that Project-related equipment will be removed from the site in order to return undeveloped land that reflects pre-construction conditions. The above-ground equipment that would be removed would include module posts and support structures, on-site transmission poles that are not shared with third parties and the overhead collection system within the Project site, inverters, transformers, electrical wiring, equipment on the inverter pads, concrete pads/piers. Below ground portions of the supports, cables and wires, etc., will be fully removed. It is assumed that the solar equipment will hold substantial salvage value.

Decommissioned materials will be stored in laydown areas prior to removal from the Project site. The top layer of soil may be removed and stockpiled prior to excavating electrical conduit from trenches. Any materials that have salvage value but that may be corrosive or otherwise hazardous will be placed in a protected section of the laydown area to prevent soil contamination or completely removed from the site altogether. Perimeter fencing may be removed unless it may be utilized for future use of the site. Concrete foundations/piers will be broken up, removed and recycled.

The pole-top electrical interconnection will be disassembled and moved with the other associated equipment into the lay-down area for contractor removal if it is owned by the Project, however if a public or private utility assumes ownership of the substation, the substation may remain on-site to be used as part of the utility service to supply other applications. Project pile foundations for the inverter housings and the substation would be pulled up with a backhoe. The salvageable material will be sorted and recycled as appropriate. The internal Project roads will be removed unless the landowner elects to retain the improved roads for access throughout the landowner's property.

6.4 – GRADING, CONTOURING, EROSION, AND SEDIMENT CONTROL

Site grading will be performed using standard construction grading equipment to return the land to the pre-construction surface conditions. Only minor site grading will occur for construction and for decommissioning. Additionally, any identified site drainage features will be restored as close as possible to the pre-construction condition. Temporary erosion and sediment control measures such as sediment fences, hay bales, mulch and soil stabilizers will be used as needed.

6.5 – WEED CONTROL AND SOIL STABILIZATION

Weed control has been performed routinely on the site in the past and once the solar facility is decommissioned, the site will be brought back to its current condition. Weed control is expected to continue to occur throughout the lifetime of the Project. Upon decommissioning of the Project, weed management would be performed to prevent the site from becoming overgrown with invasive grasses and weeds. The type of physical control method employed will depend on the size and extent of weed species targeted for removal as well as the root structures of these plants. Physical control methods range from manual hand pulling of weeds to the use of hand tools to provide enough leverage to remove the entire plant and associated root systems. Hand or power tools can also be employed to uproot, girdle, or cut plants. If necessary, wildlife approved herbicides may be applied by a qualified technician to help reduce invasive weed growth.

It is anticipated that soil stabilizer would be applied to the site in order to minimize fugitive dust. In addition, after decommissioning, the Project site will be revegetated according to the methods outlined below in Section 6.7, which will aid in long-term, permanent soil stabilization.

6.6 – RESUMING PRIOR ACTIVITIES

After removal of chemicals, removal of equipment, grading, contouring, and erosion and sediment control, the land will be converted to the previous land use, vacant and undeveloped land. These

lands do not have an existing on-site, reliable water source and decommissioning would not require the acquisition of such a source in order to return the land to its prior activity.

6.7 – SITE RESTORATION AND REVEGETATION

Once the Project site is decommissioned in accordance to the plan, the empty land will be converted back to the previous land use and revegetated to help with erosion and dust control. Compacted portions of the site will be decompacted and any excavations backfilled with native soil to restore the site for future use. The security fencing will be removed once all the equipment and infrastructure is removed from the site.

For revegetation, the seed mix will reflect the native species associated with existing habitat and be acquired from a seed company located as close to the Project site as is practical. A prescribed seed mix recommend by Stover Seed Company (March 2021) is found in Table 1 below. The seed mix recommended by Stover Seed is based on the knowledge and expertise of native species and communities within the vicinity of the Project that are known to germinate successfully in the known climate of the region. The revegetation seed mix has been designed to be non-irrigated, relying on natural rainfall for germination. The appropriate time for seeding is late fall/early winter to take advantage of natural rainfall conditions. The seed mix will be applied using one of two methods, seed drilling or hydroseeding.

**Table 1
Prescribed Revegetation Seed Mix by Stover Seed Company**

Species	Common Name	Pounds PLS ¹ per Acre
<i>Achnatherum hymenoides</i>	Indian rice grass	4.00
<i>Achnatherum speciosum</i>	desert needlegrass	6.00
<i>Ambrosia dumosa</i>	white bursage	5.00
<i>Ambrosia salsola</i>	cheesebush	5.00
<i>Amsinckia menziesii var intermedia</i>	fiddleneck	3.00
<i>Atriplex canescens</i>	four wing saltbush	6.00
<i>Ericameria naus</i>	rabbitbrush	0.25
<i>Lasthenia gracilis</i>	needle goldfield	0.50
<i>Monolopia lenceolata</i>	common monolopia	0.25
<i>Sphaeralcea ambigua</i>	desert mallow	0.50
<i>Vulpia microstachys</i>	three-week fescue	3.00
Total		33.50

¹ PLS = Pure live seed

² Species substitutions must be approved by a Revegetation Specialist.

Seed Drilling

Seed drilling involves application of seed by way of a mechanical seed sowing device that precisely positions and covers seed in the ground. Seed drilling units are self-contained and can be towed behind a tractor or pick-up truck. A seed drill unit contains one or more mixing tanks fitted with distribution paddles to mix and distribute seed to the ground. Once seed is distributed to the ground, double-disk openers cut shallow, narrow furrows in the soil to “place” the seed and press wheels follow behind to compact the soil over the seed ensuring good seed-soil contact. Seeds of native plants are often smaller than domestic crop seeds resulting in complications with normal operation of a seed drill. Corn cob husk mulch or other mulch mix is sometimes mixed with the seed to facilitate seed passage through the seed drill.

Hydroseeding

Hydroseeding is a seeding process that uses water, mulch, and seeds that are mixed in a large tank. The mulch is typically a cellulose-based material mixed with water and seeds to form a slurry that can be distributed to a prepared revegetation area via a spray hose. The slurry forms a layer on top of the soil and helps to protect soil from erosion and acts as a temporary substrate for seed germination. This type of seeding is useful where there are large, disturbed cuts that remove the upper soil layers. The mulch acts to hold the seeds and moisture. This method can be most useful along roadways and in urban areas. EarthGuard® tackifier, or an approved equal, shall be used to bind the hydroseed mixture in place and/or to reduce dust emissions. Tackifier shall be applied per product specifications, typically 100 to 150 pounds per acre.

Irrigation

Revegetated areas may be provided with supplemental watering during the first six months to promote establishment, if determined to be necessary by the revegetation specialist. However, the use of drought-tolerant native plants should reduce the amount and frequency of supplemental irrigation required. No permanent irrigation infrastructure will be necessary.

Revegetation Monitoring

Following the application of the seed mix, the Project site will be monitored for a minimum of five years to evaluate revegetation success. The site shall be inspected three times annually by a qualified biologist during this period, in early spring (March), late spring (May), and mid-summer (July).

Monitoring will consist of noting general observations such as fitness and health of planted species, pest problems, any evidence of erosion, weed establishment, mortality, drought stress, and recruitment of native plants. Each monitoring inspection should also document the coverage of exposed soil and areas of compacted soil, areas where revegetation appears to have failed and estimated cause of failure, the presence of noxious weeds, and erosion features that require immediate remedial measures.

Site photographs will be taken at the same locations each year to document the progress of the revegetation effort. The number and location of these photograph points will be determined by the revegetation specialist and shall be sufficient to adequately document the re-seeded areas.

If, after the first two years of monitoring, it is determined that the revegetated area has reached 20-30% vegetative cover in comparison to the surrounding habitat, 50% of which should be native perennials, then re-establishment will be considered successful. Revegetation monitoring will continue for the entirety of the five-year monitoring period.

Revegetation Contingency Plan

If, after the first two years of annual monitoring, it is determined that the revegetated areas have not met the minimum re-establishment requirements described above, an alternative method of revegetation or other remedial measures will be employed. These actions may include re-applying seed to areas of bare ground, implementing a different method of seed application, using a different seed mix, manual removal of noxious weeds, increased irrigation, or other measures as determined by the revegetation specialist.

Revegetation Monitoring Reports

Annual reports summarizing the revegetation monitoring results shall be submitted to the County beginning the year after re-seeding. The format of each annual report shall discuss the maintenance activities performed that year including; revegetation and exotic species removal, the results of the monitoring, an assessment of the progress made towards achievement of the success criteria, and recommendations of any remedial or adaptive management measure that may necessary or prudent.

6.8 – FUTURE LAND USE

The Project site, once decommissioned in accordance with this plan, could return to its vacant state or be developed in accordance with permitted land uses included in applicable zoning designations.

7.0 – DEMOLITION AND RECLAMATION COSTS & BONDING

An itemized cost estimate for the removal of all structures and equipment in accordance with this plan and County requirements has been prepared, see Appendix B.

Renewable Energy Permit No. 2018-01/Barker Condition of Approval #3

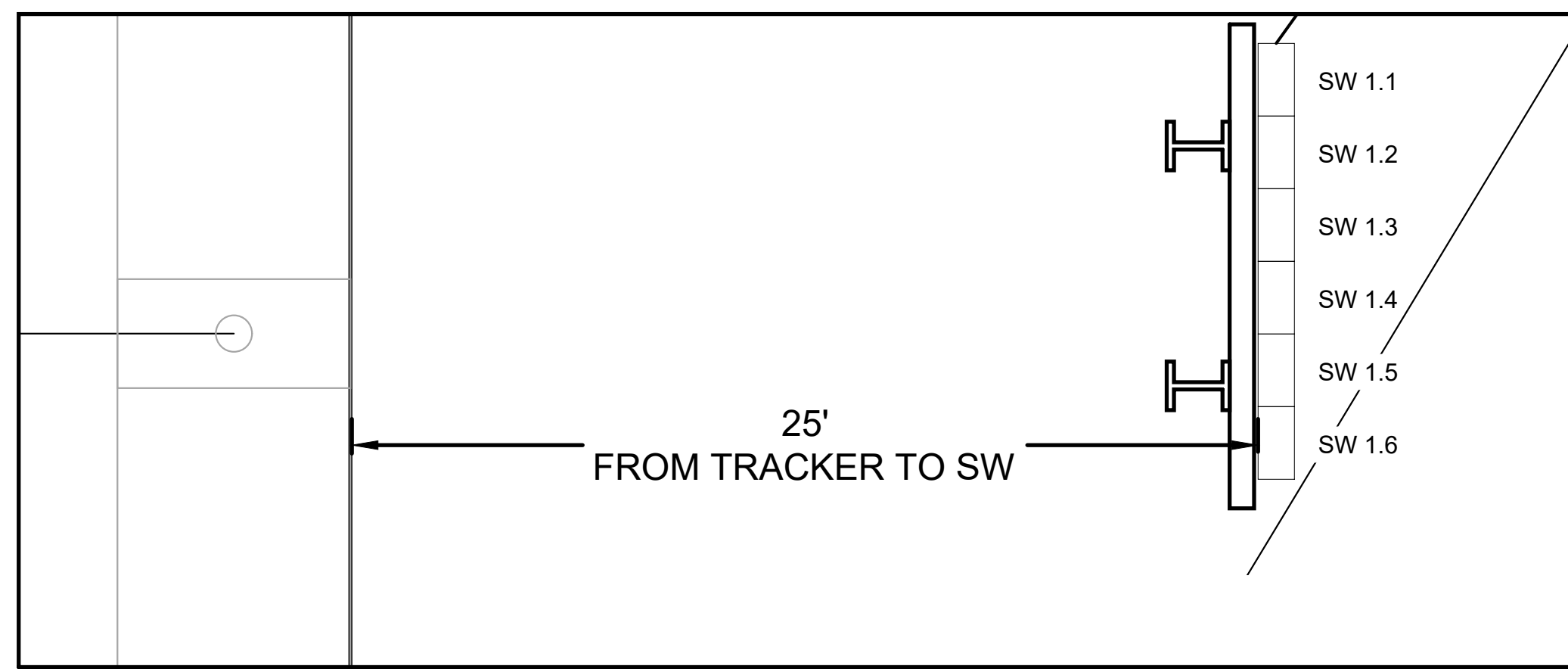
Condition of Approval #3 Insurance and Reclamation Plan

As per section 21.20.040 of ICC, the applicant shall have secured financial assurance/surety bond prior to the issuance of grading or building permits. As per section 21.20.030, the applicant shall have produced a decommissioning/reclamation plan prior to the issuance of grading or building permits.

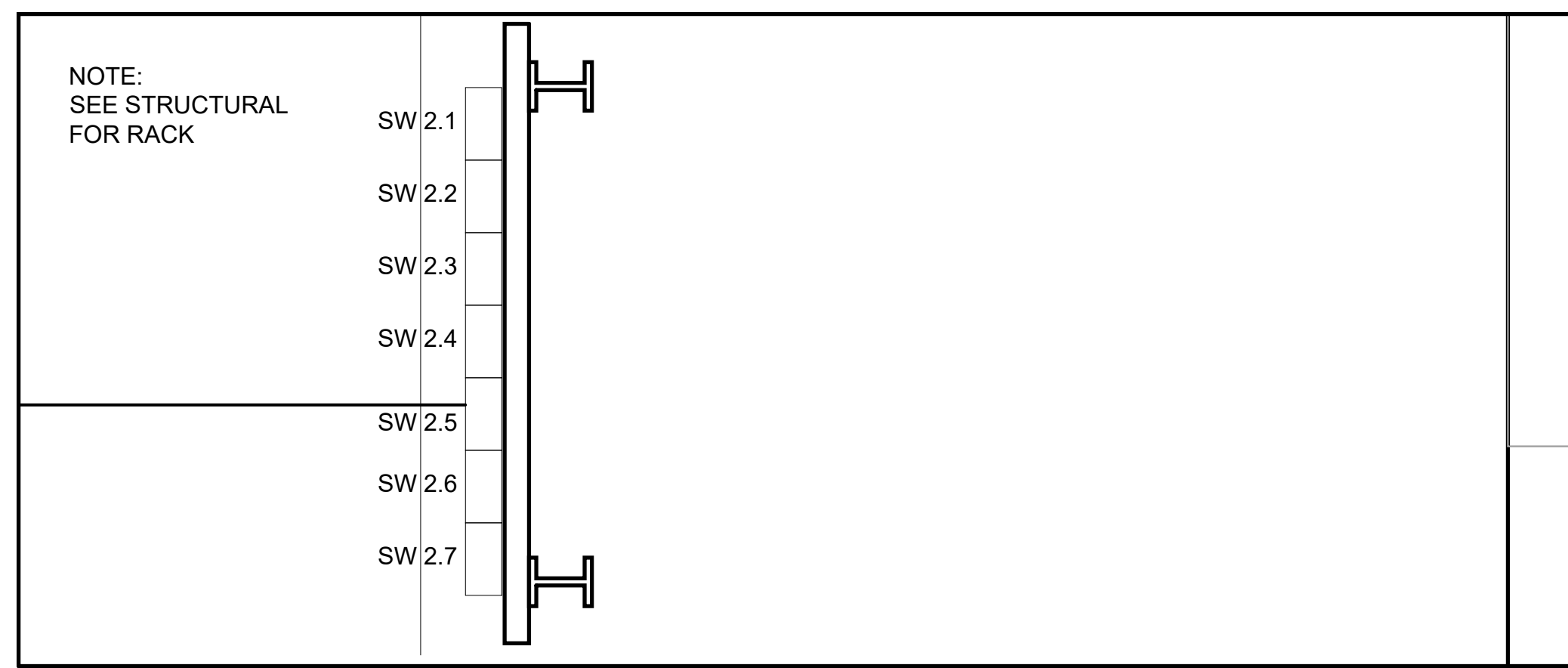
APPENDICES

APPENDIX A

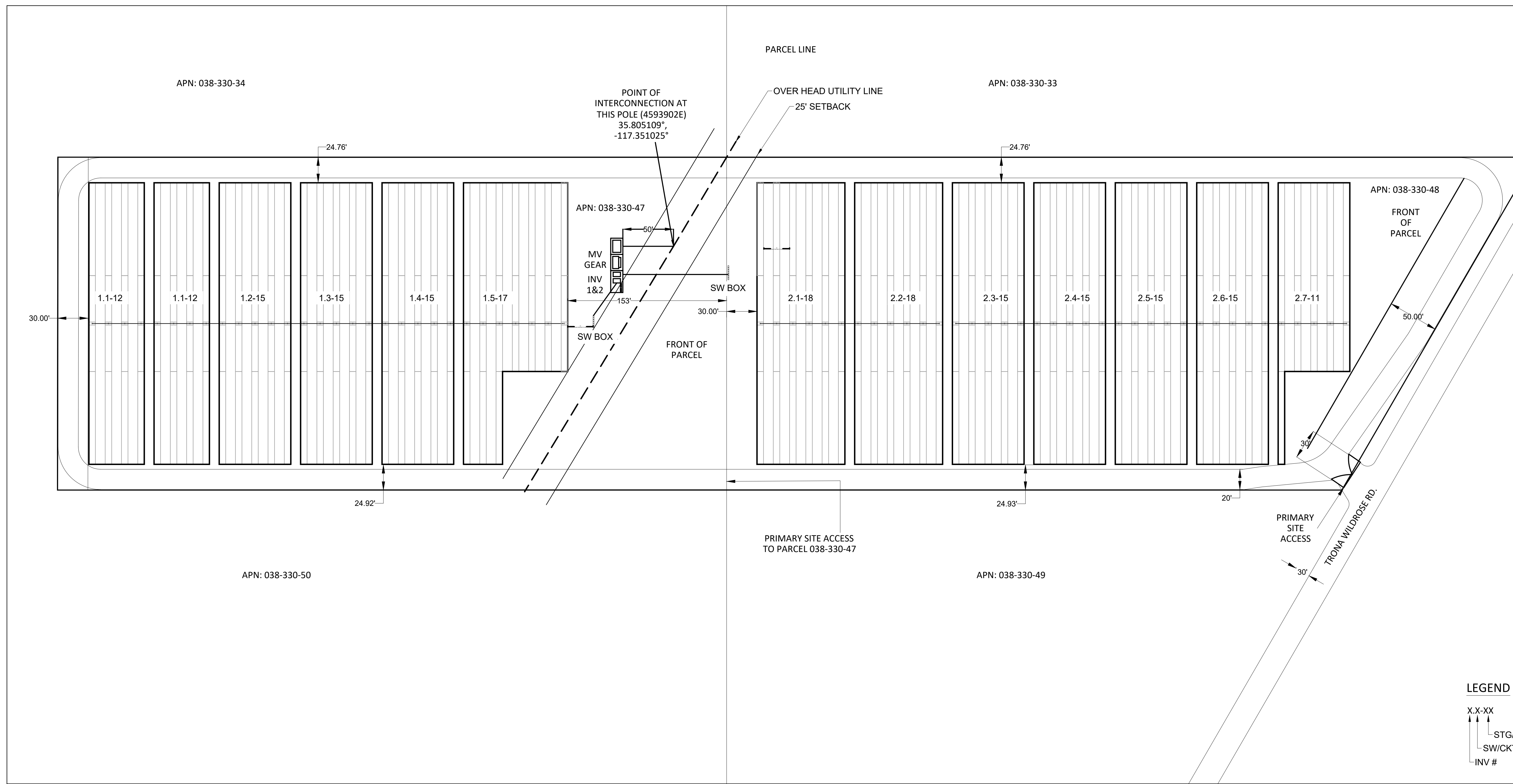
SITE PLAN



2 SWITCH BOX WEST
1/4"=1'-0"



3 SWITCH BOX EAST
1/4"=1'-0"



1 ELECTRICAL SITE PLAN
1"=50'-0"



LEGEND

- X.X-XX
- ↑ STG/CKT
- ↑ SW/CKT #
- ↑ INV #

CONTRACTOR:
ROBBIE BARKER
19346 D ST. TRONA, CA 93562
(760) 982-4111

ELECTRICAL ENGINEER:
PVAMPS
5716 FOLSOM BLVD. #309
SACRAMENTO, CA 95819
(916) 425-4056 | PVAMPS.COM
LICENSE # CA E 19655



PROJECT NAME:
TRONA SOLAR III, LLC

PROJECT ADDRESS:
S 1/2 NW 1/4 SE 1/4 NE 1/4 SEC
32 TP 24S R43E
INYO COUNTY, TRONA, CA
35.804578°, -117.351415°

FOR PERMIT

PROJECT SUMMARY:
SYSTEM SIZE [KW DC]: 1,999
SYSTEM SIZE [KW AC]: 2,000
SYSTEM SIZE [KVA]: 2,200
DC/AC RATIO: 1.0

INVERTER:
MFG: POWER ELECTRONICS
MODEL: FS1100CU15
POWER [KW AC]: 1,000

MODULE:
MFG & MODEL: LONGI LR6-72PH-370M
WATTS / MODULE: 370
MODULE / STRING: 28
MODULE QTY: 5,404
STRING QTY: 193
STRING / INVERTER: (1) 107, (1) 86

RACKING 1: ARRAY TECHNOLOGIES V3.0
MFG: ARRAY TECHNOLOGIES
TYPE: SINGLE AXIS TRACKER
PITCH & GCR: 4.902 M & 40.0% GCR
TILT / ROTATION: 0 / 52°
AZIMUTH ANGLE: 0°

REVISION:	DATE
- FOR PERMIT	04/03/2019
- FOR NAME CHANGE	08/01/2019

DRAWN BY: LUCIA BIUNDO
CHECKED BY: ANASTASIOS HIONIS
PROJECT #:
PV AMPS #: 140-1702-002 TRONA 3
SHEET TITLE
ELECTRICAL SITE PLAN

SHEET NO.
E-3.0

APPENDIX B
ENGINEERING COST ESTIMATE

Trona 3 - Removal Cost Estimate (APN 038-330-47 & -48)		
Project Management and Coordination - 2.0 Months		\$ 2,200
Construction Support		\$ 5,850
Site Restoration		\$ 11,000
Abandonment of Water Service		\$ -
Hazardous Waste Recovery Processes		\$ 5,000
Solar Field Component Removal		\$ 77,242
Foundation and Building Removal		\$ -
On-site Substation Site Restoration		\$ -
On-site Roads Removal		\$ -
Fence Removal		\$ 2,640
Sub-Total of Reclamation Costs		\$ 103,932
Salvage		\$ (118,040)
NET COSTS		
	SUBTOTAL OF RECLAMATION COSTS	\$ 103,932
	10% Contingency	10,393
	SUBTOTAL OF SALVAGE	(118,040)
	TOTAL RECLAMATION COSTS	\$ (3,714)
County Administrative Costs Related to Decommissioning (\$2,500/MW)		\$ 5,000

APPENDIX C
FINANCIAL ASSURANCES

FINANCIAL ASSURANCE

Financial assurance equal to the cost of reclaiming the land to its previous condition as estimated in **Appendix B**, shall be submitted to the County of Inyo upon approval of entitlements. Said financial assurance shall ensure the reclamation is performed according to the approved plan. Financial assurances shall be made payable to the County of Inyo and shall be in the form of:

- a. An irrevocable letter of credit;
- b. A surety bond;
- c. A trust in accordance with the approved financial assurances to guarantee the deconstruction shall be completed in accordance with the approved decommission plan.
- d. Other financial assurances as reviewed and approved by the County Administrative Office in consultation with the Inyo County Planning Department

