Exhibit A



DRAFT RESOLUTION

Before the Housing and Community Development Chief of Planning in and for the County of Monterey, State of California

In the matter of the application of:

PEBBLE BEACH COMPANY (PLN240062) RESOLUTION NO. 24--

Resolution by the Monterey County HCD Chief of Planning:

- 1) Finding that the project qualifies for a Class 3 Categorical Exemption pursuant to CEQA Guidelines section 15303, and no exceptions apply pursuant to Section 15300.2; and
- 2) Approving a Coastal Administrative Permit and Design Approval to allow construction of ten solar canopies totaling 44,964 square feet and the removal of 21 parking lot light poles and security cameras.

[PLN240062 Pebble Beach Company, 2701 Congress Road, Pebble Beach, Del Monte Forest Land Use Plan (APN: 007-101-044-000)]

The PEBBLE BEACH COMPANY application (PLN240062) came on for an administrative decision hearing before the County of Monterey HCD Chief of Planning on December 4, 2024. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, including the conditions of approval and project plans, the County of Monterey HCD Chief of Planning finds and decides as follows:

FINDINGS

1. **FINDING: CONSISTENCY** – The Project, as conditioned, is consistent with the applicable plans and policies which designate this area as appropriate

for development.

EVIDENCE: a) During the course of review of this application, the project has been reviewed for consistency with the text, policies, and regulations in:

- the 1982 Monterey County General Plan;
- Del Monte Forest Land Use Plan (DMF LUP);
- Del Monte Forest Coastal Implementation Plan (CIP; Part 5)
- County of Monterey Zoning Ordinance (Title 20).

No conflicts were found to exist. No communications were received during the course of review of the project indicating any inconsistencies with the text, policies, and regulations in these documents.

b) The proposed project involves the construction of 10 solar canopies over an existing parking lot near The Inn at Spanish Bay. This parking lot is owned and operated by the Pebble Beach Company and is generally used by employees and the guests of Pebble Beach visiting The Inn at Spanish Bay. The canopies will total 44,960 square feet or

- 1545 panels (888.4 kilo watts). Installation of the solar canopies would require removal of the parking lot's 21 light poles and security cameras, and nearby non-native trees. Replacement down-lit lighting would be incorporated into the solar canopies. All generated energy will be consumed on-site; no battery storage is necessary.
- Allowed Use. The property is located at 2701 Congress Road, Pebble Beach, within the Del Monte Forest Land Use Plan (APN: 007-101-044-000). The parcel is dual-zoned Open Space Recreation with a Design Control overlay ("OR-D(CZ)"), and Visitor Serving Commercial with a Design Control Overlay "VSC-D(CZ)". The existing parking lot area is zoned VSC-D(CZ), while the adjacent forested areas along Congress Road and 17 Mile Drive are zoned OR-D(CZ). All proposed development will be within the VSC zoning district which allows for construction of accessory structures to any principally allowed use, provided there is no intensification of the permitted use. The parking lot and the solar canopies will serve as accessory to Spanish Bay Inn, the principal use. Therefore, the project is an allowed land use for this site.
- d) <u>Lot Legality</u>. The subject parcel (3.5 acres, APN:007-101-044-000) is illustrated in its current configuration as "Lot 1" on a Parcel Map recorded in December 2016 (Volume 23, Cities and Towns, Page 59). Therefore, the County recognizes the subject parcels as legal lots of record.
 - Design/Neighborhood/Community Character and Visual Resources. Pursuant to Title 20 Chapter 20.44, the project site and surrounding area are designated as being within a Design Control District or "D" overlay, which provides regulations of the location, size, configuration, materials, and color of structures to assure protection of the public viewshed and the neighborhood character. DMF LUP Figure 3 "Visual Resources" identifies the various areas in the Del Monte Forest that are considered visually sensitive. The subject parking lot is in an area designated as being partially visible from 17-Mile drive and Vista Points, near Spanish Bay. As designed, the proposed solar canopies will consist of stainless-steel framing and black and gray solar panels. The solar canopies will be sited behind mature Monterey Pines that line the intersection of Congress Road and 17 Mile Drive. Along 17 Mile Drive, the proposed development will be visible for a limited timeframe while traveling past the entrance to the parking lot. Past this entrance, the mature trees fronting 17 Mile Drive will screen the entirety of the development. The proposed development will not block visual access of the shoreline. Consistent with DMF LUP Policies 52 and 84, the proposed solar canopies will be sited over 100 feet from the centerline of 17 Mile Drive. Additionally, the surrounding trees will heavily screen the proposed development when traveling along Congress Road, except when passing the parking lot's entrance along this road. Installation of the solar canopies will not be visually obtrusive as they in keeping with the parking lot's existing minimal intensity and will not change its character. The proposed development is not visible from Highway 68 or any other nearby scenic corridor, vista point, or public access area. The existing lighting poles are being removed as part of the project, and replaced after construction of the solar canopies. Replacement lighting

- will be installed underneath the solar panels, and aimed downwards. Condition 4 has been added to the project's conditions of approval to ensure that the replacement lighting will be consistent with the County's exterior lighting guidelines. Therefore, as designed and sited, the project assures protection of the public viewshed, is consistent with neighborhood character, assures visual integrity, and complies with the applicable visual resource policies of the DMF LUP.
- Development Standards. The proposed project is within the Visitor Serving Commercial zoning district and is subject to development standards established in Title 20 section 20.22.070.A. For main and accessory structures, the required minimum setbacks are established through the approval of a General Development Plan. The General Development Plan adopted for the Inn at Spanish Bay (PLN100138), which covers the subject property, establishes setbacks in section 4.10 (Setbacks). Per this GDP, the structural setbacks for the Inn at Spanish Bay (includes but is not limited to the 269-room hotel, restaurant, office space, retail space, golf course, and pro shop, and related parking and circulation improvement) shall be consistent with Del Monte Forest Coastal Implementation Plan section 20.147.095 (Pebble Beach Company Concept Plan). Per DMF CIP section 20.147.095.C.2, the setbacks and buffers for Pebble Beach Concept Plan Area B (parking lot and preservation areas) are shown on DMF LUP Figure 9a. Though specific setback distances are not delineated on Figure 9a, the illustrated "Parking" area is surrounded by open space buffers to the north, south, and west, which serve as functional setbacks from 17-Mile Drive and Congress Road). To the east, a larger Monterey Pine preservation area is illustrated on Figure 9a. The proposed solar canopies will be sited entirely within the area identified on Figure 9a as "Parking". Therefore, the proposed development complies with the adjacent open space buffers/setbacks and is sited within the contemplated parking improvement area of the Pebble Beach Concept Plan (Area B). As delineated on the attached project plans, the solar canopies are below the 35 maximum height limit, with a proposed height of 18 feet 9 inches. Title 20 section 20.22.070.b. states that the maximum allowable building site coverage in the Visitor Serving Commercial zoning is 50 percent, excluding parking and landscaping. As proposed, the solar canopies total 44,964 square feet which is below the maximum allowable building site coverage. Therefore, the proposed project complies with applicable site development standards.
- g) <u>Cultural Resources</u>. The project site is in an area identified in County records as having a high archaeological sensitivity and being within 750 feet of known archaeological resources. The subject parcel is developed with an existing parking lot. A Phase 1 archaeological report (LIB240255) was prepared for the project. According to the report, there is no evidence that any resources are present on the parcel or within 750 feet of known archaeological resources and that no potentially significant cultural materials are located in the project area. The closest resource was identified over 1,100 feet away. There is no evidence that any cultural resources would be disturbed and the potential for inadvertent impacts on cultural resources is limited, which

- will be controlled by the application of the County's standard project condition (Condition No. 3) requiring the contractor to stop work if previously unidentified resources are discovered during construction.
- h) Forest Resources. The forested areas surrounding the parking lot (shown on DMF LUP Figure 9a) are protected by an Open Space Conservation Easement, dedicated to the Del Monte Forest Foundation (DMF CIP section 20.147.095.E). The proposed project involves the removal of non-native ornamental trees and shrubs within the existing parking lot boundaries. These trees are not located within the adjacent easement areas and do not require the granting of a Coastal Development Permit. No impacts to the nearby Monterey Pine Forest will occur with implementation of the project.
- i) The project planner conducted a site inspection on August 26, 2024 to verify that the project on the subject parcel conforms to the plans listed above.
- j) The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.
- 2. **FINDING:** SITE SUITABILITY The site is physically suitable for the proposed development and/or use.
 - EVIDENCE: a) The project has been reviewed for site suitability by the following departments and agencies: HCD-Planning, HCD-Engineering Services, HCD-Environmental Services, Environmental Health Bureau, and Pebble Beach Community Services District. County staff reviewed the application materials and plans to verify that the project on the subject site conforms to the applicable plans and regulations, and there has been no indication from these departments/agencies that the site is not suitable for the proposed development. Conditions recommended have been incorporated.
 - b) Staff identified potential impacts on cultural resources and geotechnical hazards. The following reports have been prepared:
 - "Phase 1 Cultural Resource Inventory" (County of Monterey Library No. LIB240255) prepared by Reilly Murphy with Albion Environmental, San Luis Obispo, CA, August 1, 2024.
 - "Geotechnical Investigation Report for the Development at the Parking Lot located at Intersection of 17 Mile Drive and Congress Road Pebble Beach, California 93953 APN#007101044000" (County of Monterey Library No. LIB240256) prepared by Achievement Engineering Corp, San Jose, CA, October 27, 2023.

County staff independently reviewed these reports and concurs with their conclusions. There are no physical or environmental constraints that would indicate that the site is not suitable for the use. All development shall be in accordance with these reports.

- c) Staff conducted a site inspection on August 26, 2024 to verify that the site is suitable for this use.
- d) The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.

3. FINDING:

HEALTH AND SAFETY – The establishment, maintenance, or operation of the project applied for will not under the circumstances of this particular case be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of such proposed use, or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

EVIDENCE:

- The project was reviewed by HCD-Planning, HCD-Engineering Services, HCD-Environmental Services, Environmental Health Bureau, and Pebble Beach Community Services District. The respective agencies have recommended conditions, where appropriate, to ensure that the project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.
- b) The subject parcel is served by the Pebble Beach Community Services District for both sewage disposal and potable water services, however, the project does not involve water or sewer connections as it is for solar canopies in an existing parking lot.
- c) Staff conducted a site inspection on August 26, 2024 to verify that the site is suitable for this use.
- d) The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.

4. FINDING:

NO VIOLATIONS – The subject property is in compliance with all rules and regulations pertaining to zoning uses, subdivision, and any other applicable provisions of the County's zoning ordinance. No violations exist on the property.

EVIDENCE:

- a) Staff reviewed County of Monterey HCD-Planning and HCD-Building Services records and is not aware of any violations existing on subject property.
- b) Staff conducted a site inspection on August 26, 2024 and researched County records to assess if any violation exists on the subject property.
- c) The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.

5. FINDING:

CEQA (Exempt) – The project is categorically exempt from environmental review and no unusual circumstances were identified to exist for the proposed project.

EVIDENCE:

- a) California Environmental Quality Act (CEQA) Guidelines section 15303 categorically exempts new construction of accessory structures, such as carports, garages, and porches.
- b) The project involves the construction of solar canopies, which will provide renewable energy for the parking lot's replacement lighting and security cameras. The existing use or intensity of the parking lot will not change. As a structure accessory to the parking lot, the project qualifies for the Class 3 exemption.
- c) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. The project does not involve a designated historical resource, a hazardous waste site, unusual circumstances that would

result in a significant effect, or development that would result in a cumulative significant impact. The parking lot is surrounded by mature Monterey Pines, and the proposed solar canopies will be visible only as you pass the entrance into the parking lot from either 17-Mile Drive or Congress Road. Installation of the solar canopies will not result in significant adverse visual impacts. There is no substantial evidence that would support a fair argument that the project has a reasonable possibility of having a significant effect on the environment or that it would result in a cumulative significant impact.

- d) No adverse environmental effects were identified during staff review of the development application during a site visit on August 26, 2024.
- e) See supporting Finding Nos. 1 and 2. The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.
- 6. FINDING:

PUBLIC ACCESS – The project is in conformance with the public access and recreation policies of the Coastal Act (specifically Chapter 3 of the Coastal Act of 1976, commencing with Section 30200 of the Public Resources Code) and applicable Local Coastal Program, and does not interfere with any form of historic public use or trust rights.

EVIDENCE:

- No public access is required as part of the project as no substantial adverse impact on access, either individually or cumulatively, as described in Section 20.147.130 of the Del Monte Forest Coastal Implementation Plan can be demonstrated.
- b) No evidence or documentation has been submitted or found showing the existence of historic public use or trust rights over this property.
- Program may require visual or physical public access (Figure 3, Visual Resources, and Figure 8, Major Public Access and Recreational Facilities, in the Del Monte Forest Land Use Plan). The Del Monte Forest LUP requires that visual and physical public access to and along the shoreline and the enjoyment of public recreational values throughout the Del Monte Forest shall be maximized. As described in Finding No. 1, Evidence "e", the proposed development will not block shoreline views or significantly alter public views from 17 Mile Drive. Though public access roads and trails exist nearby, neither pass through the subject property. Further, the project will not conflict with existing public access roads or nearby trails as it does not involve any expansion outside of the existing footprint of the parking lot and it better meets the intent of the State's renewable energy initiatives.
- d) The application, project plans, and related support materials submitted by the project applicant to County of Monterey HCD-Planning found in Project File PLN240062.
- 7. FINDING:

APPEALABILITY – The decision on this project may be appealed to the Board of Supervisors and California Coastal Commission.

EVIDENCE: a)

<u>Board of Supervisors</u>. Pursuant to Title 20 section 20.86.030, an appeal may be made to the Board of Supervisors by any public agency or person aggrieved by a decision of an Appropriate Authority other than the Board of Supervisors.

b) <u>California Coastal Commission.</u> Pursuant to Title 20 section 20.86.080.A, the project is subject to appeal by/to the California Coastal Commission because the site is between the sea and the first public road.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the HCD Chief of Planning does hereby:

- 1. Find that the project qualifies for a Class 3 Categorical Exemption pursuant to CEQA Guidelines section 15303, and no exceptions apply pursuant to Section 15300.2; and
- 2. Approve a Coastal Administrative Permit and Design Approval to allow construction of ten solar canopies totaling 44,964 square feet and the removal of 21 parking lot light poles and security cameras.

All of which are in general conformance with the attached sketch and subject to the attached conditions, all being attached hereto and incorporated herein by reference.

PASSED AND ADOPTED this 4th day of December, 2024.

Melanie Beretti, AICP
HCD, Chief of Planning

COPY OF THIS DECISION MAILED TO APPLICANT ON DATE

THIS APPLICATION IS APPEALABLE TO THE BOARD OF SUPERVISORS. IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE CLERK TO THE BOARD ALONG WITH THE APPROPRIATE FILING FEE ON OR BEFORE

THIS PROJECT IS LOCATED IN THE COASTAL ZONE AND IS APPEALABLE TO THE COASTAL COMMISSION. UPON RECEIPT OF NOTIFICATION OF THE FINAL LOCAL ACTION NOTICE (FLAN) STATING THE DECISION BY THE FINAL DECISION MAKING BODY, THE COMMISSION ESTABLISHES A 10 WORKING DAY APPEAL PERIOD. AN APPEAL FORM MUST BE FILED WITH THE COASTAL COMMISSION. FOR FURTHER INFORMATION, CONTACT THE COASTAL COMMISSION AT (831) 427-4863 OR AT 725 FRONT STREET, SUITE 300, SANTA CRUZ, CA.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

NOTES

1. You will need a building permit and must comply with the Monterey County Building Ordinance in every respect.

Additionally, the Zoning Ordinance provides that no building permit shall be issued, nor any use conducted, otherwise than in accordance with the conditions and terms of the permit granted or until ten days after the mailing of notice of the granting of the permit by the appropriate authority, or after granting of the permit by the Board of Supervisors in the event of appeal.

Do not start any construction or occupy any building until you have obtained the necessary permits and use clearances from Monterey County HCD-Planning and HCD-Building Services Department office in Salinas.

2. This permit expires 3 years after the above date of granting thereof unless construction or use is started within this period.

Form Rev. 1-27-2021

County of Monterey HCD Planning

DRAFT Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN240062

1. PD001 - SPECIFIC USES ONLY

Responsible Department:

Planning

Condition/Mitigation Monitoring Measure: This Coastal Administrative Permit and Design Approval (PLN240062) allows construction of ten solar canopies totaling 44,964 square feet and removal of 21 parking lot light poles and security cameras. The property is located at 2701 Congress Road (Assessor's Parcel Number 007-101-044-000) Del Monte Forest Land Use Plan. This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of HCD -Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (HCD - Planning)

Compliance or Monitoring Action to be Performed:

The Owner/Applicant shall adhere to conditions and uses specified in the permit on an ongoing basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department:

Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:

"A Coastal Administrative Permit and Design Approval (Resolution Number ______) was approved by the Chief of Planning for Assessor's Parcel Number 007-101-044-000 on December 4, 2024. The permit was granted subject to 5 conditions of approval which run with the land. A copy of the permit is on file with Monterey County HCD - Planning."

Proof of recordation of this notice shall be furnished to the Director of HCD - Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (HCD - Planning)

Compliance or Monitoring Action to be Performed:

Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the HCD - Planning.

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3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department:

Planning

Condition/Mitigation Monitoring Measure:

during course of construction, cultural, archaeological, paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County HCD - Planning and a archaeologist (i.e., archaeologist registered Register qualified an with the immediately Professional Archaeologists) shall be contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.

(HCD - Planning)

Compliance or Monitoring Action to be Performed:

The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact Monterey County HCD - Planning and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered."

When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

4. PD014(A) - LIGHTING - EXTERIOR LIGHTING PLAN

Responsible Department:

Planning

Condition/Mitigation Monitoring Measure:

All exterior lighting shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting source shall be shielded and recessed into the fixture. The applicant shall submit three (3) copies of an exterior lighting plan which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The lighting shall comply with the requirements of the California Energy Code set forth in California Code of Regulations Title 24 Part 6. The exterior lighting plan shall be subject to approval by the Director of HCD - Planning, prior to the issuance of building permits. (HCD - Planning)

Compliance or Monitoring Action to be Performed:

Prior to the issuance of building permits, the Owner/Applicant shall submit three copies of the lighting plans to HCD - Planning for review and approval. Approved lighting plans shall be incorporated into final building plans.

Prior to final/occupancy, the Owner/Applicant/Contractor shall submit written and photographic evidence demonstrating that the lighting has been installed according to the approved plan.

On an on-going basis, the Owner/Applicant shall ensure that the lighting is installed and maintained in accordance with the approved plan.

PLN240062

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5. PD011 - TREE AND ROOT PROTECTION

Responsible Department:

Planning

Condition/Mitigation Monitoring Measure:

Trees which are located close to construction site(s) shall be protected from inadvertent damage from construction equipment by fencing off the canopy driplines and/or critical root zones (whichever is greater) with protective materials, wrapping trunks with protective materials, avoiding fill of any type against the base of the trunks and avoiding an increase in soil depth at the feeding zone or drip-line of the retained trees. Said protection, approved by certified arborist, shall be demonstrated prior to issuance of building permits subject to the approval of HCD - Director of Planning. If there is any potential for damage, all work must stop in the area and a report, with mitigation measures, shall be submitted by certified arborist. Should any additional trees not included in this permit be harmed, during grading or construction activities, in such a way where removal is required, the owner/applicant shall obtain required permits. (HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to issuance of grading and/or building permits, the Owner/Applicant shall submit evidence of tree protection to HCD - Planning for review and approval.

During construction, the Owner/Applicant/Arborist shall submit on-going evidence that tree protection measures are in place through out grading and construction phases. If damage is possible, submit an interim report prepared by a certified arborist.

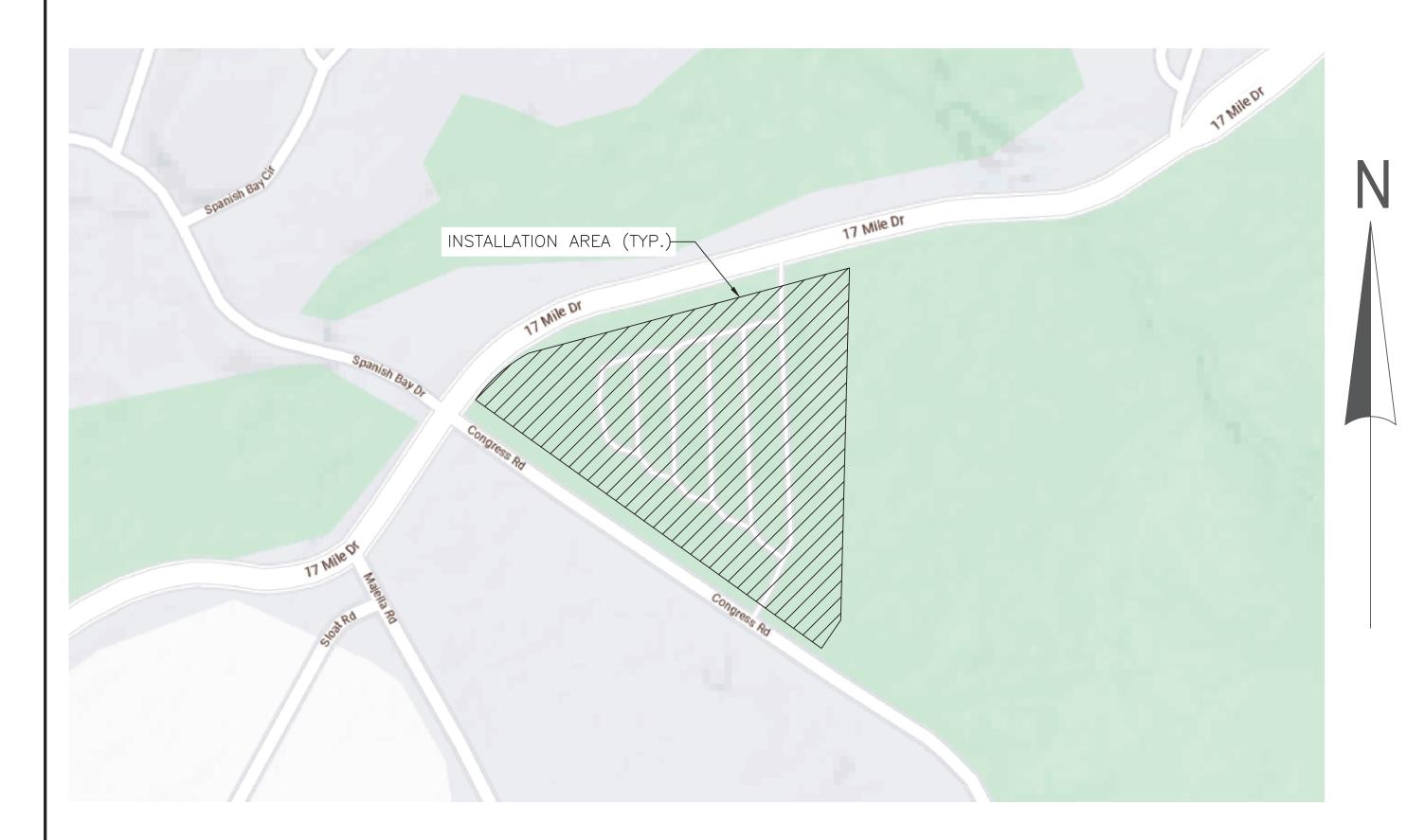
Prior to final inspection, the Owner/Applicant shall submit photos of the trees on the property to HCD-Planning after construction to document that tree protection has been successful or if follow-up remediation or additional permits are required.

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PHOTOVOLTAIC SYSTEM - PEBBLE BEACH - STAFF PARKING LOT 2701 CONGRESS RD, MONTEREY, CA 93940

Vicinity Map:



Contact Info:

SOLAR CONTRACTOR:

SOLAR TECHNOLOGIES SUITE 106, 23 LAS COLINAS LN. SAN JOSE, CA 95119

ELECTRICAL ENGINEER:

NATRON RESOURCES INC. 1222 VINE STREET, SUITE 301 PASO ROBLES, CA 93446

PEBBLE BEACH COMPANY 2790 17-MILE DRIVE

PEBBLE BEACH.CA 93953

- CODE REFERENCES: 1. 2022 CALIFORNIA ELECTRICAL CODE (CEC).
- 2. 2022 CALIFORNIA FIRE CODE (CFC).
- 3. 2022 CALIFORNIA BUILDING CODE (CBC). 4. 2022 CALIFORNIA GREEN BUILDING CODE (GBC).

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SCOPE OF WORK:

ALL ELECTRICITY GENERATED IS FOR CONSUMPTION ON SITE.

SYSTEM ELECTRICAL CONNECTION TO MAIN ELECTRICAL SERVICE IS AT 480Y/277V SWITCHGEAR.

PERMIT SHALL INCLUDE LABOR OF INSTALLING PANELS, RUNNING OF ELECTRICAL CONDUITS, INSTALLATION OF NEW ELECTRICAL EQUIPMENT AND ELECTRICAL CONNECTION TO EXISTING BUILDING SERVICE.

NO BATTERIES REQUIRED AS PART OF THIS PROJECT SCOPE.

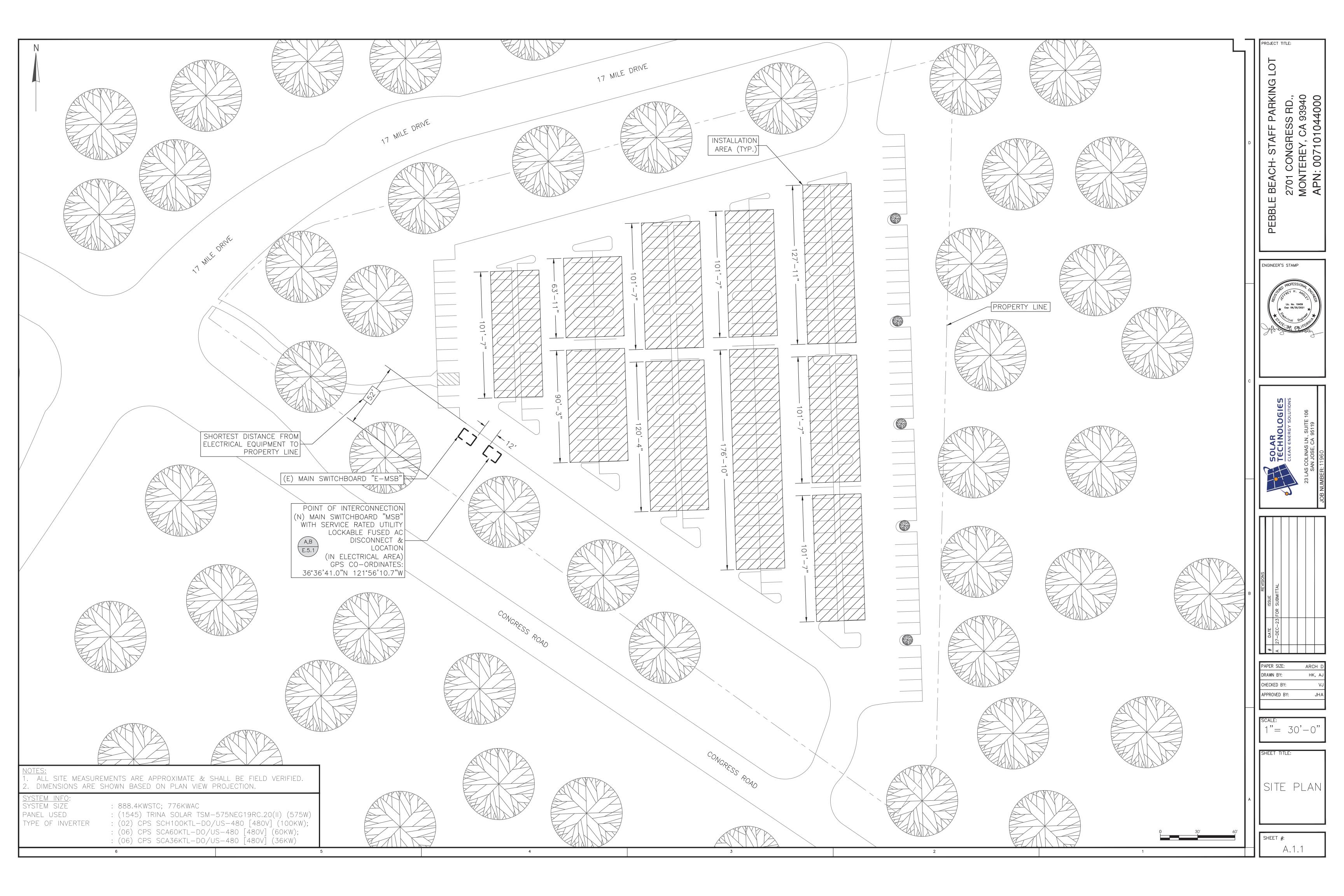
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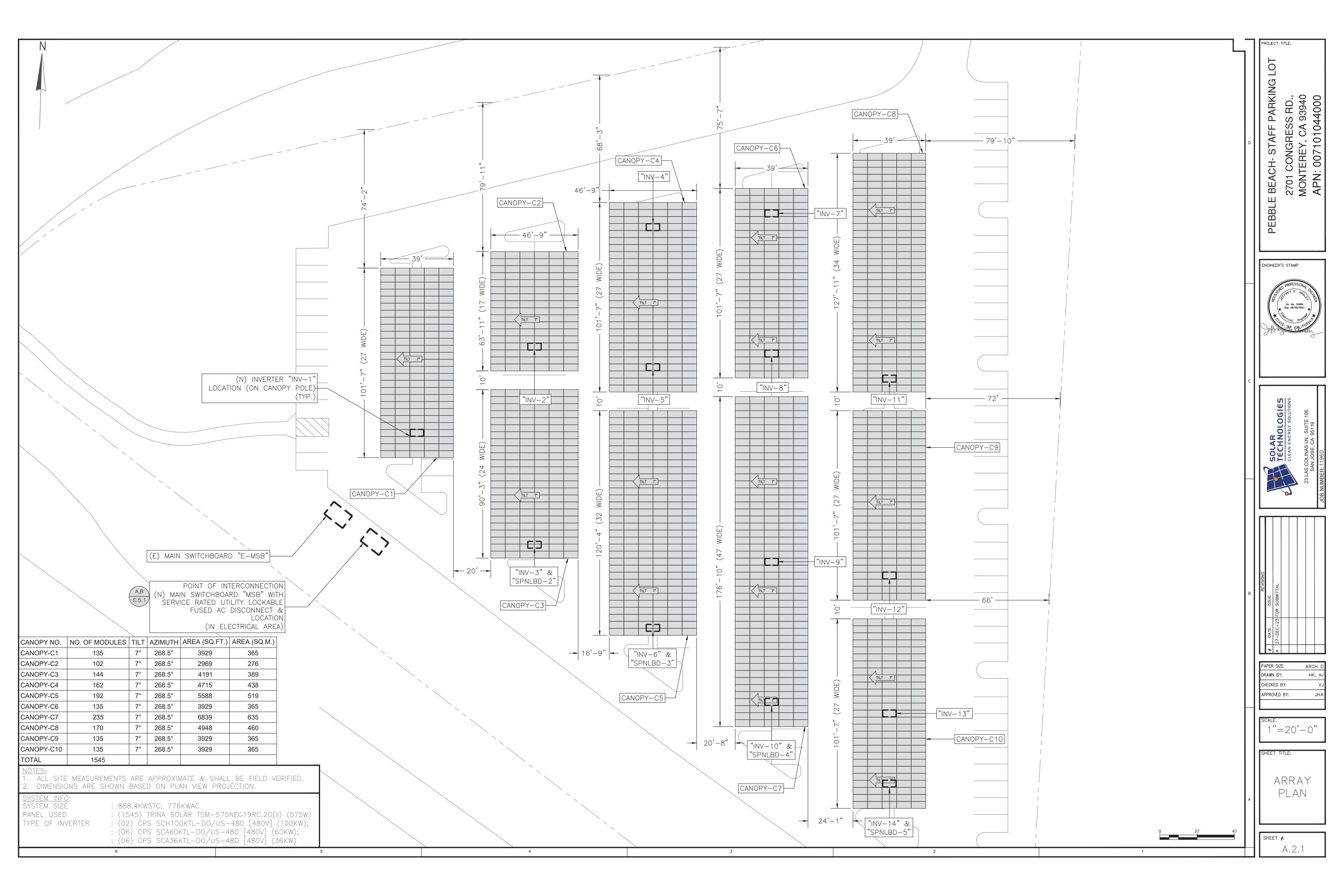
SYSTEM SIZE:	888.4 KWDC, 776 KWAC
MODULES DETAILS:	(1545) TRINA SOLAR Vertex N TSM-575NEG19RC.20 (575 W
INVERTER DETAILS:	(2) CHINT POWER CPS SCH100KTL-DO/US-480 [480V (6) CHINT POWER CPS SCA60KTL-DO/US-480 [480V (6) CHINT POWER CPS SCA36KTL-DO/US-480 [480V
ARRAY SQUARE FOOTAGE	44,964.30
ARRAY WEIGHT (LBS)	114,793.50
CONSTRUCTION TYPE	COMMERCIAL
ASHRAE STATION	MONTEREY PENINSULA
ASHRAE 2% HIGH DESIGN TEMP. DB	22
ASHRAE MIN MEAN EXTREME ANNUAL DB	1

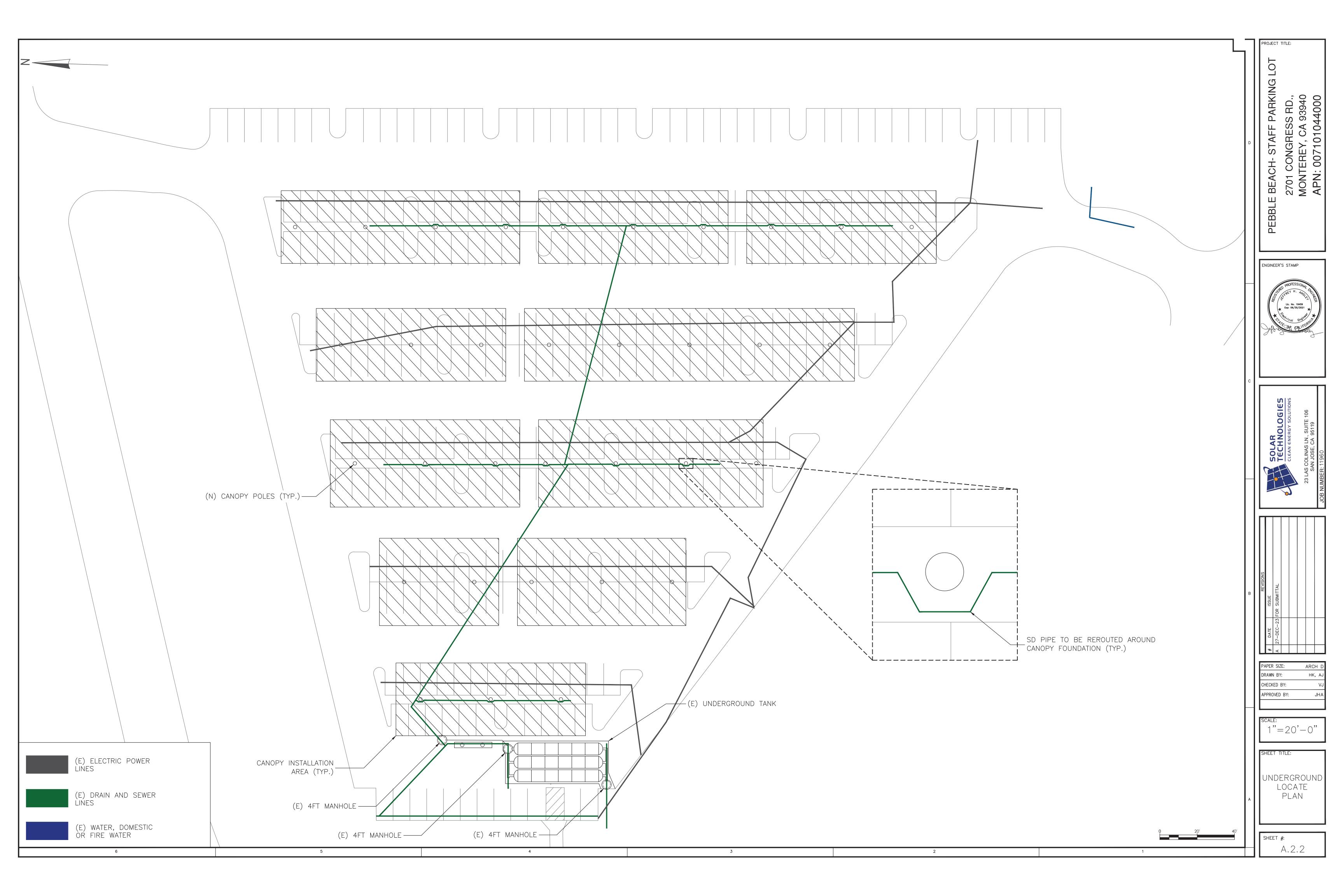
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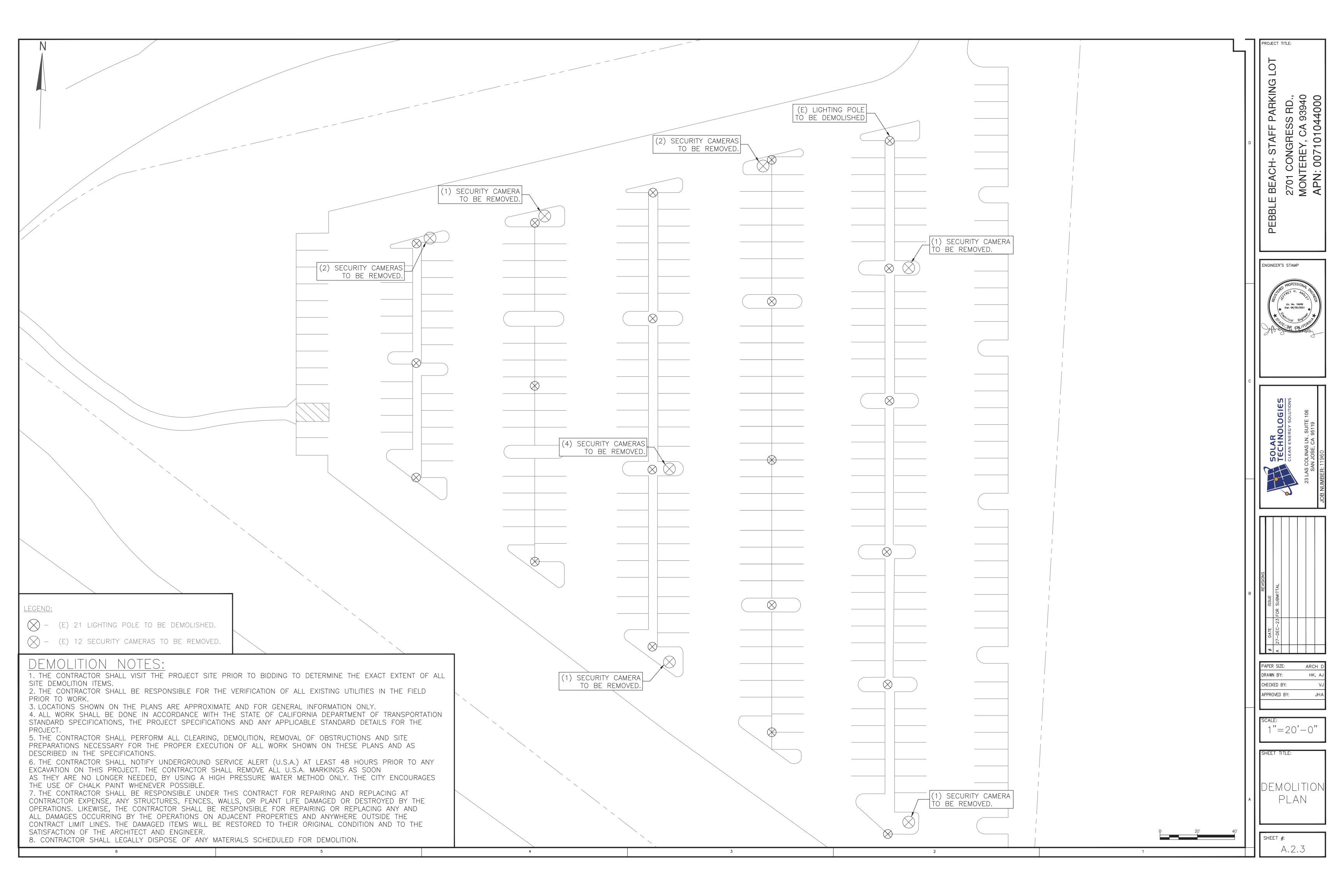
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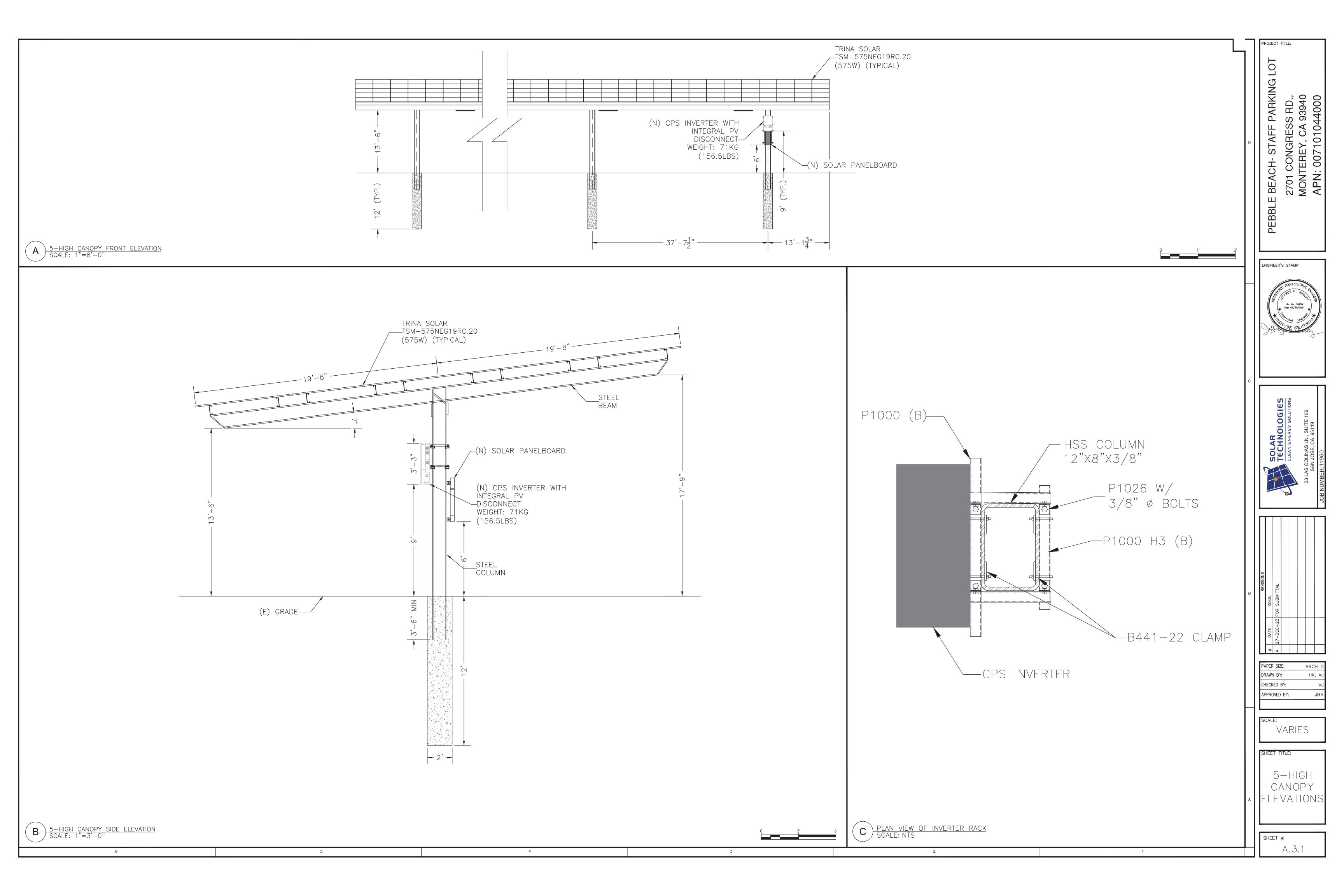
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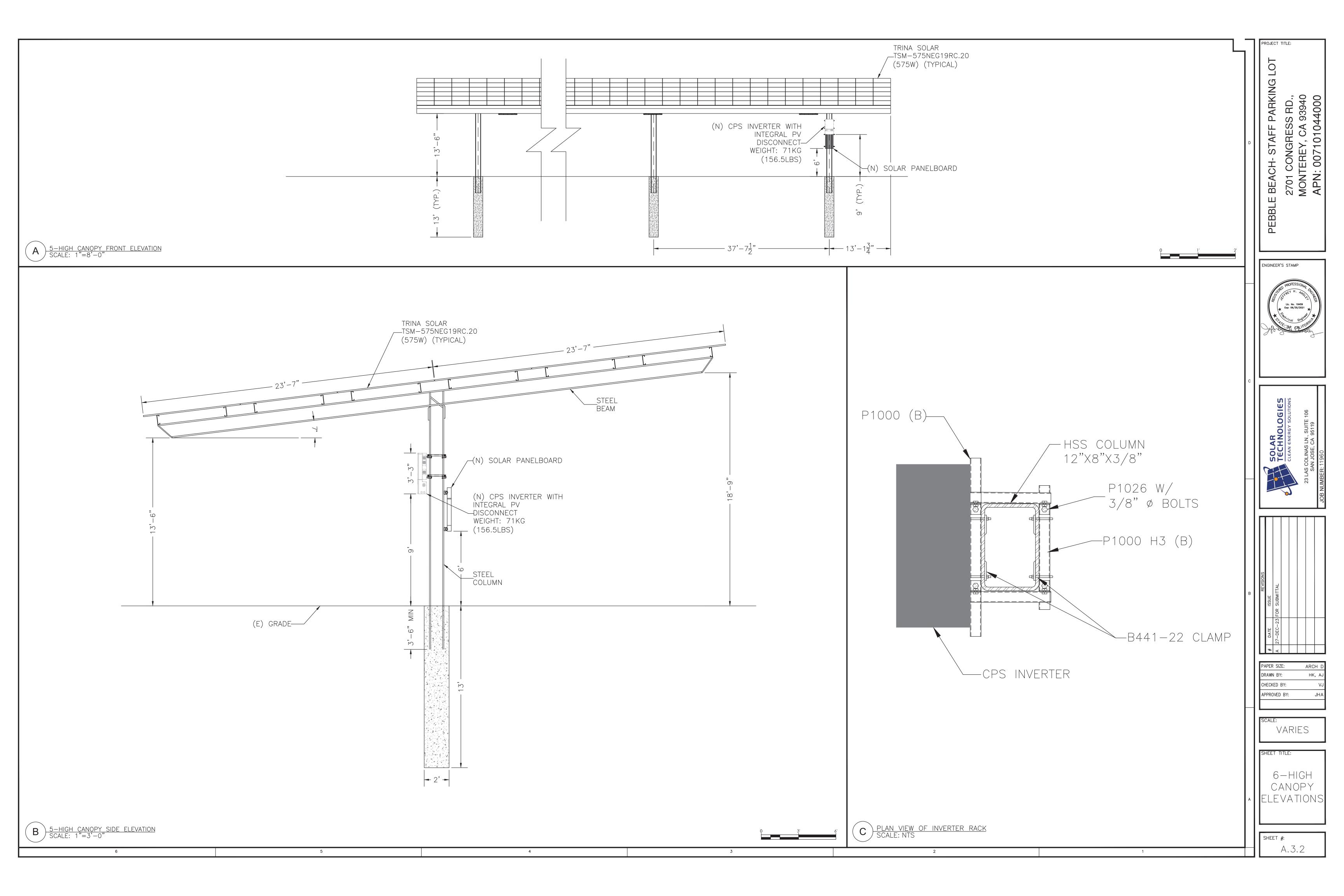












THIS PHOTOVOLTAIC INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND LOCAL ELECTRICAL CODES CURRENTLY BEING ENFORCED BY THE AUTHORITY HAVING JURISDICTION (AHJ), PARTICULARLY ARTICLE 690, SOLAR PHOTOVOLTAIC (DC) SYSTEMS.

SOLAR CONTRACTOR

2. EQUIPMENT LOCATIONS

- 1.1. THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- 1.2. PV MODULE MUST BE UL1703 CERTIFIED.
- 1.3. INVERTERS, MOTOR GENERATORS, PV MODULES, PV PANELS, AC MODULES, DC COMBINERS, DC-TO-DC CONVERTERS, AND CHARGE CONTROLLERS
- INTENDED FOR USE IN PV SYSTEMS SHALL BE LISTED OR FIELD LABELED FOR THE PV APPLICATION. (CEC 690.4 (B)) 1.4. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY
- 1.5. MAX DC VOLTAGE IS CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC, UNLESS NOT AVAILABLE.
- 1.6. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. 1.7. CONDUIT POINT OF PENETRATION FROM EXTERIOR TO INTERIOR TO BE INSTALLED AND SEALED WITH A SUITABLE SEALING COMPOUND.

- 2.1. CONDUCTORS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY CEC 690.31 (A) AND CEC
- 2.2. ADDITIONAL AC DISCONNECTS SHALL BE PROVIDED WHERE THE INVERTER IS NOT ADJACENT TO THE UTILITY AC DISCONNECT, OR NOT WITHIN SIGHT
- OF THE UTILITY AC DISCONNECT. 2.3. ALL INSTALLED EQUIPMENT SHALL BE ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.
- 2.4. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT SHALL BE PROVIDED AS PER SECTION NEC NEC 110.26, NEC 110.31 AND NEC110.34.
- 2.5. ALL COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE AND SHALL BE RATED FOR OUTDOOR USAGE WHERE REQUIRED.

- 3. DC SYSTEM VOLTAGE PER 690.7 3.1. PV SYSTEM DC CIRCUITS ON OR IN ONE- AND TWO-FAMILY DWELLINGS SHALL BE PERMITTED TO HAVE A MAXIMUM VOLTAGE OF 600 VOLTS OR LESS.
- 3.2. PV SYSTEM DC CIRCUITS ON OR IN OTHER TYPES OF BUILDINGS SHALL BE PERMITTED TO HAVE A MAXIMUM VOLTAGE OF 1000 VOLTS OR LESS.
- 3.3. WHERE NOT LOCATED ON OR IN BUILDINGS, MAXIMUM VOLTAGE OF 1500 VOLTS IS PERMITTED.

WIRING METHODS

- 4.1. NONMETALLIC-SHEATHED CABLE SHALL BE SECURED BY STAPLES, CABLE TIES, STRAPS, HANGERS OR SIMILAR FITTINGS AT INTERVALS THAT DO NOT EXCEED 4.5 FEET. (NEC 334.30)
- 4.2. CABLES SHALL BE SECURED WITHIN 12 INCHES OF EVERY CABLE ENTRY INTO ENCLOSURES SUCH AS OUTLET BOXES, JUNCTION BOXES, CABINETS, OR
- 4.3. EXPOSED SINGLE CONDUCTORS, WHERE SUBJECT TO PHYSICAL DAMAGE, MUST BE PROTECTED. (NEC 300.4 & NEC 690.31(A))
- 4.4. CONDUCTORS INSTALLED NEAR MODULES SHALL BE RATED FOR 90°C . (NEC 310.15(A))
- 4.5. PV CIRCUIT AND PREMISES WIRING SHALL BE SEPARATED.
- 4.6. PV SYSTEM CONDUCTORS SHALL BE SEPARATED, IDENTIFIED AND GROUPED PER NEC 690.31(B).
- 4.7. DC CONDUCTORS INSIDE A BUILDING SHALL BE IN A METAL RACEWAY OR MC METAL-CLAD CABLE THAT COMPLIES WITH 250.118(10), OR METAL
- ENCLOSURES. (NEC 690.31(D)) 4.8. WHERE RACEWAYS OR CABLES ARE EXPOSED TO DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS, RACEWAYS OR CABLES SHALL BE AT MINIMUM HEIGHT
- OF 7/8 IN. (NEC 310.15(B)(2). 4.9. ALL CONDUIT SIZES AND TYPES, SHALL BE LISTED FOR ITS PURPOSE AND APPROVED FOR THE SITE APPLICATIONS.
- 4.10. RIGID CONDUIT (AND/OR NIPPLES) MUST HAVE A PULL BUSHING TO PROTECT WIRES.
- 4.11. FOR DC SINGLE-CONDUCTOR CABLE TYPE USE-2 AND SINGLE CONDUCTOR CABLE LISTED AND IDENTIFIED AS PHOTOVOLTAIC (PV) WIRE SHALL BE PERMITTED IN EXPOSED OUTDOOR LOCATIONS IN PV SOURCE CIRCUITS WITHIN THE PV ARRAY. PV WIRE SHALL BE INSTALLED IN ACCORDANCE WITH NEC 338.10(B)(4)(b) AND NEC 334.30. (NEC 690.31(C)(1))
- 4.12. USE-2 IS NOT INDOOR RATED PER NEC 338.12(B)(1).
- 4.13. ALL CONDUCTORS ARE SIZED PER NEC 690.8 AND OCPDs ARE SIZED PER NEC 690.9.
- 4.14. PV SYSTEM DC CIRCUIT AND INVERTER OUTPUT CONDUCTORS AND EQUIPMENT SHALL BE PROTECTED AGAINST OVERCURRENT. EXCEPT WHEN THE SHORT-CIRCUIT CURRENTS FROM ALL SOURCES DO NOT EXCEED THE AMPACITY OF THE CONDUCTORS AND THE MAXIMUM OCPD SIZE RATING SPECIFIED FOR THE PV MODULE OR DC-TO-DC CONVERTER. (NEC 690.9(A))
- 4.15. FOR UNDERGROUND CONDUCTOR INSTALLATIONS, THE BURIAL DEPTH SHALL BE SELECTED PER NEC TABLE 300.5. WARNING TAPE SHALL BE PLACED ABOVE UNDERGROUND CONDUIT AND CONDUCTORS IN TRENCH.
- 4.16. UNGROUNDED PV SYSTEM SHOULD NOT HAVE WHITE OR GRAY COLORED DC PV CONDUCTORS. ONLY SOLIDLY GROUNDED PV SYSTEM CIRCUIT CONDUCTORS, IN ACCORDANCE WITH 690.41(A)(5), SHALL BE MARKED IN ACCORDANCE WITH NEC 200.6 & NEC 690.31(B)(1).
- 4.17. ALUMINUM AND COPPER-CLAD ALUMINUM CONDUCTORS SHOULD NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE OR EARTH.
- (NEC 250.120(B))
- 4.18. TOP CONDUIT ENTRY FOR OUTDOOR ENCLOSURES MUST BE AVOIDED. IF NECESSARY, CONNECTION ABOVE LIVE PARTS MUST BE MADE WATERTIGHT

5. BONDING AND GROUNDING

- 5.1. SYSTEMS WITH A GROUND-FAULT PROTECTIVE DEVICE IN ACCORDANCE WITH NEC 690.41(B) SHALL HAVE ANY CURRENT-CARRYING CONDUCTOR-TO-GROUND CONNECTION MADE BY THE GROUND-FAULT PROTECTIVE DEVICE. FOR SOLIDLY GROUNDED PV SYSTEMS, THE DC CIRCUIT GROUNDING CONNECTION SHALL BE MADE AT ANY SINGLE POINT ON THE PV OUTPUT CIRCUIT. (NEC 690.42)
- 5.2. RACKING SYSTEMS SHALL BE LISTED FOR THE PURPOSE. BONDING AND GROUNDING MUST BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, THAT ARE LISTED AND APPROVED, USING THE SUPPLIED HARDWARE OR LISTED EQUIPMENT SPECIFIED IN THE INSTRUCTIONS AND IDENTIFIED FOR THE ENVIRONMENT. (NEC 690.43 & NEC 110.3(B))
- 5.3. EQUIPMENT GROUNDING CONDUCTORS FOR PV SOURCE CIRCUITS SHALL BE SIZED ACCORDING TO TABLE 250.122 AND SHALL NOT BE SMALLER THAN #14 AWG WHEN NOT EXPOSED TO PHYSICAL DAMAGE. IF EXPOSED TO PHYSICAL DAMAGE THEN EGC SHALL NOT BE SMALLER THAN #6 AWG. (NEC 690.45 & NEC 250.120(C))
- 5.4. AC AND DC GROUNDING ELECTRODE CONDUCTORS SHALL BE PROPERLY CONNECTED AS REQUIRED BY CODE. SEPARATE ELECTRODES, IF USED, SHALL BE BONDED TOGETHER. (NEC 690.47, NEC 250.50 & NEC 250.58)
- 5.5. A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690.47, NEC 250.52 AND NEC 250.166 SHALL BE PROVIDED.
- 5.6. PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR SHALL BE ROUTED WITH THE CIRCUIT CONDUCTORS. (NEC 690.45, NEC 250.134(2) & NEC 300.3(B))
- 5.7. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (OR INVERTER) IF SMALLER THAN #6 AWG COPPER WIRE PER NEC 250.64(B).
- 5.8. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS PER NEC 250.64(C).
- 5.9. BONDING FITTINGS SHALL BE USED ON CONCENTRIC/ECCENTRIC KNOCKOUTS WITH METAL CONDUITS FOR CIRCUITS OVER 250 VOLTS. (NEC 250.97) (SEE ALSO EXCEPTIONS 1 THROUGH 4)

5.12. GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THE PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR

- 5.10. BONDING FITTINGS SHALL BE USED FOR FERROUS METAL CONDUITS ENCLOSING GROUNDING ELECTRODE CONDUCTORS. (NEC 250.64(E))
- 5.11. ENCLOSURES SHALL BE PROPERLY PREPARED WITH REMOVAL OF PAINT/FINISH AS APPROPRIATE WHEN GROUNDING EQUIPMENT WITH
- TERMINATION GROUNDING LUGS.
- 5.13. ALL CONDUIT BETWEEN THE UTILITY AC DISCONNECT AND THE POINT OF CONNECTION SHALL HAVE GROUNDED BUSHINGS AT BOTH ENDS.
- 5.14. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENTS, AND CONDUCTOR ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH 250.134 OR 250.136(A) REGARDLESS OF VOLTAGE. (NEC 690.43)
- 5.15. MODULES SHALL BE LISTED FOR THE PURPOSE. BONDING AND GROUNDING MUST BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, USING THE SUPPLIED HARDWARE OR LISTED EQUIPMENT SPECIFIED IN THE INSTRUCTIONS AND IDENTIFIED FOR THE ENVIRONMENT.
- 5.16. THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDED CONDUCTOR TO ANOTHER MODULE.

OVERCURRENT PROTECTION

- 6.1. OVERCURRENT PROTECTION DEVICES (OCPD) IN THE DC CIRCUITS SHALL BE LISTED FOR DC OPERATION. (NEC 110.3(A), (B) & 690.9(C))
- 6.2. UNGROUNDED PV SYSTEM REQUIRES OCPD ON ONLY ONE POLARITY. OCPD TO BE USED ON EITHER POSITIVE TERMINALS OR NEGATIVE TERMINALS PER NEC 690.9(C).
- 6.3. WHEN INSTALLING A NEW BREAKER AND MATCH EXISTING PANEL CIRCUIT BREAKER, MAKE, MODEL, STYLE AND AIC RATING.

ELECTRICAL CONNECTIONS

- 7.1. CRIMP TERMINALS SHALL BE LISTED AND INSTALLED USING A LISTED TOOL SPECIFIED FOR USE IN CRIMPING THOSE SPECIFIC CRIMPS. (NEC 110.3(B) &
- 7.2. PRESSURE TERMINALS SHALL BE LISTED FOR THE ENVIRONMENT AND TIGHTENED TO MANUFACTURER RECOMMENDED TORQUE SPECIFICATIONS. (NEC 110.11, 110.3(B) & 110.14)
- 7.3. CONNECTORS MUST BE LISTED FOR THE VOLTAGE OF THE SYSTEM AND HAVE APPROPRIATE TEMPERATURE AND AMPACITY. (NEC 110.3(B) & 110.14)
- 7.4. POWER DISTRIBUTION BLOCKS SHALL BE LISTED. (NEC 690.4(B) & NEC 314.28(E)) 7.5. TERMINALS CONTAINING MORE THAN ONE CONDUCTOR SHALL BE LISTED FOR MULTIPLE CONDUCTORS. (NEC 110.14(A) & 110.3(B))
- 7.6. CONNECTORS AND TERMINALS USED OTHER THAN CLASS B AND C STRANDED CONDUCTORS (FINE STRANDED CONDUCTORS) SHALL BE LISTED AND IDENTIFIED FOR USE WITH SPECIFIC CONDUCTOR CLASS OR CLASSES. (NEC 110.14(A) & 110.3(B))
- 7.7. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30 VOLTS REQUIRE A TOOL FOR OPENING. (NEC 690.33(C))

8. INVERTERS

- 8.1. INVERTERS SHALL BE LISTED TO UL 1741. (NEC 690.4(B)) NOTE: GRID-TIED SYSTEM INVERTERS NEED TO BE IDENTIFIED FOR USE IN INTERACTIVE
- 8.2. PHOTOVOLTAIC INVERTERS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION AND ARC FAULT CIRCUIT PROTECTION TO REDUCE FIRE
- HAZARDS. (NEC 690.41, NEC 690.11) 8.3. GRID INTERACTIVE INVERTERS SHALL BE EQUIPPED WITH ANTI-ISLANDING CIRCUITRY. (NEC 705.40)

- 9.1. ALL INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS SHALL BE MARKED ACCORDING TO NEC 690.31(G)(3), & 690.53.
- 9.2. THE MARKINGS ON THE CONDUITS, RACEWAYS AND CABLE ASSEMBLIES SHALL BE AT EVERY 10 FEET, WITHIN ONE FOOT OF ALL TURNS OR BENDS AND WITHIN ONE FOOT ABOVE AND BELOW ALL PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS AND BARRIERS. (NEC 690.31(G)(4))
- 9.3. THE MARKINGS SAY "WARNING: PHOTOVOLTAIC POWER SOURCE" AND HAVE 3/8-INCH (9.5 MM) MINIMUM-SIZED WHITE LETTERS ON A RED
- BACKGROUND. THE SIGNS SHALL BE MADE OF REFLECTIVE WEATHER RESISTANT MATERIAL. (NEC 690.31 (G)(3) & (NEC 690.31(G)(4)) 9.4. WHERE PV CIRCUITS ARE EMBEDDED IN BUILT-UP, LAMINATE OR MEMBRANE ROOFING MATERIALS IN ROOF AREAS NOT COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT, THE LOCATION OF CIRCUITS SHALL BE CLEARLY MARKED. (NEC 690.31(G)(1))
- 9.5. ALTERNATE POWER SOURCE PLACARD SHALL BE PLASTIC, ENGRAVED IN A CONTRASTING COLOR TO THE PLAQUE. THIS PLAQUE WILL BE ATTACHED USING AN APPROVED METHOD. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC.

- 10.1. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.
- 10.2. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).
- 10.3. THE PV SYSTEM DISCONNECTING MEANS SHALL BE INSTALLED AT A READILY ACCESSIBLE LOCATION PER (NEC 690.13(A)).
- 10.4. FOR DC SIDE OF UNGROUNDED PV SYSTEM, DISCONNECTING MEANS ARE REQUIRED ON BOTH LEGS OF PV CIRCUIT FOR UNGROUNDED SYSTEM PER
- 10.5. DISCONNECTS USED IN DC CIRCUITS SHALL BE LISTED FOR DC OPERATION AND LOCATED AS ALLOWED BY THE AHJ. (NEC 110.3)

11. TERMINAL NOTES

- 11.1. ALL TERMINALS SHALL BE RATED FOR AT LEAST 75C.
- 11.2. ALL TERMINALS SHALL BE DUAL RATED FOR USE WITH COPPER AND ALUMINUM.

12. MODULE CONNECTORS NOTES:

12.1. IDENTICAL CONNECTORS FROM THE SAME MANUFACTURER AND OF THE SAME TYPE MUST BE USED ON MODULE AND ON THE OTHER SIDE OF THE CONNECTION. CROSS-MATING ANY CONNECTOR MUST BE A UL APPROVED CONNECTION.

13. PROTECTION NOTES

- 13.1. GROUND FAULT PROTECTION IN ACCORDANCE WITH NEC 230.95 AND NEC 705.32 13.2. ALL EQUIPMENT TO BE RATED FOR BACKFEEDING. CIRCUIT BREAKERS WHICH ARE CLEARLY MARKED "LINE" AND "LOAD" ARE NOT SUITABLE FOR
- 13.3. INSTALLER SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL BREAKERS ARE SUITABLE FOR BACKFEED AND THAT IF GFP IS PRESENT ON MAIN SERVICE DISCONNECT THAN ALL SOLAR FEEDERS, CONNECTED TO MAIN BUS, SHALL HAVE GFP PER NEC 215.10 & NEC 705.32 EXCEPTION. 13.4. ARC-FAULT CIRCUIT PROTECTION:PHOTOVOLTAIC SYSTEMS OPERATING AT 80 VOLTS DC OR GREATER BETWEEN ANY TWO CONDUCTORS SHALL BE
- PROTECTED BY A LISTED PV ARC-FAULT CIRCUIT INTERRUPTER OR OTHER SYSTEM COMPONENTS LISTED TO PROVIDE EQUIVALENT PROTECTION. FOR PV SYSTEMS NOT INSTALLED ON OR IN BUILDINGS, PV OUTPUT CIRCUITS AND DC-TO-DC CONVERTER OUTPUT CIRCUITS THAT ARE DIRECT BURIED OR INSTALLED IN METALLIC RACEWAYS ARE PERMITTED WITHOUT ARC-FAULT CIRCUIT PROTECTION. (NEC 690.11)
- 13.5. RAPID SHUTDOWN:PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).
- 13.6. WHERE THE SOLAR SERVICE SWITCH OVERCURRENT PROTECTION IS LOCATED MORE THAN 10 FT FROM THE POINT OF UTILITY SERVICE CONNECTION, CABLE LIMITERS FOR EACH UNGROUNDED CONDUCTOR SHALL BE INSTALLED AT THE POINT OF SERVICE INTERCONNECTION.
- 13.7. FOR ARC ENERGY REDUCTION FOR BREAKERS WITH TRIPS OF 1200A OR HIGHER, ONE OF THE METHODS MENTIONED IN NEC 240.87(B) SHALL BE USED.

14.1. INVERTERS MAY HAVE DATA ACQUISITION SYSTEM BUILT INTO THEM OR IT CAN BE ADDED VIA OPTIONAL COMPONENTS. PLEASE CHECK WHILE ORDERING IF OPTIONAL DAS COMPONENTS NEEDS TO BE ORDERED SEPARATELY.

FIRE SAFETY REQUIREMENTS

IBC 1505.9 ROOFTOP MOUNTED PHOTOVOLTAIC PANEL SYSTEMS.

ROOFTOP RACK-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS SHALL BE TESTED, LISTED AND IDENTIFIED WITH A FIRE CLASSIFICATION IN ACCORDANCE WITH UL 2703. LISTED SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THEIR LISTING. THE FIRE CLASSIFICATION SHALL COMPLY WITH TABLE 1505.1 BASED ON THE TYPE OF CONSTRUCTION OF THE BUILDING.

IFC 1205.2 ACCESS AND PATHWAYS.

ROOF ACCESS, PATHWAYS, AND SPACING REQUIREMENTS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS IFC 1205.2.1 THROUGH IFC 1205.3.3. PATHWAYS SHALL BE OVER AREAS CAPABLE OF SUPPORTING FIRE FIGHTERS ACCESSING THE ROOF. PATHWAYS SHALL BE LOCATED IN AREAS WITH MINIMAL OBSTRUCTIONS, SUCH AS VENT PIPES, CONDUIT OR MECHANICAL EQUIPMENT.

IFC 1205.3 OTHER THAN GROUP R-3 BUILDINGS.

ACCESS TO SYSTEMS FOR BUILDINGS, OTHER THAN THOSE CONTAINING GROUP R-3 OCCUPANCIES, SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS IFC 1205.3.1 THROUGH IFC 1205.3.3.

IFC 1205.3.1 PERIMETER PATHWAYS.

THERE SHALL BE A MINIMUM 6-FOOT-WIDE (1829 MM) CLEAR PERIMETER AROUND THE EDGES OF THE ROOF.

EXCEPTION: WHERE EITHER AXIS OF THE BUILDING IS 250 FEET (76 200 MM) OR LESS, THE CLEAR PERIMETER AROUND THE EDGES OF THE ROOF SHALL BE PERMITTED TO BE REDUCED TO A MINIMUM WIDTH OF 4 FEET (1219 MM).

IFC 1205.3.2 INTERIOR PATHWAYS.

INTERIOR PATHWAYS SHALL BE PROVIDED BETWEEN ARRAY SECTIONS TO MEET THE FOLLOWING REQUIREMENTS

- 1. PATHWAYS SHALL BE PROVIDED AT INTERVALS NOT GREATER THAN 150 FEET (45 720 MM) THROUGHOUT THE LENGTH AND WIDTH OF THE ROOF.
- 2. A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE IN A STRAIGHT LINE TO ROOF STANDPIPES OR VENTILATION HATCHES.
- 3. A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE AROUND ROOF ACCESS HATCHES, WITH NOT FEWER THAN ONE SUCH PATHWAY TO A PARAPET OR ROOF EDGE.

IFC 1205.3.3 SMOKE VENTILATION.

- THE SOLAR INSTALLATION SHALL BE DESIGNED TO MEET THE FOLLOWING REQUIREMENTS: 1. WHERE NONGRAVITY-OPERATED SMOKE AND HEAT VENTS OCCUR, A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE SHALL BE PROVIDED
- 2. WHERE GRAVITY-OPERATED DROPOUT SMOKE AND HEAT VENTS OCCUR, A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE ON NOT FEWER THAN
- 3. SMOKE VENTILATION OPTIONS BETWEEN ARRAY SECTIONS SHALL BE ONE OF THE FOLLOWING:

 - 3.1. A PATHWAY NOT LESS THAN 8 FEET (2438 MM) WIDE. 3.2. WHERE GRAVITY-OPERATED DROPOUT SMOKE AND HEAT VENTS OCCUR, A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE ON NOT
 - 3.3. A PATHWAY NOT LESS THAN 4 FEET (1219 MM) WIDE BORDERING 4-FOOT BY 8-FOOT (1219 MM BY 2438 MM) VENTING CUTOUTS EVERY 20 FEET (6096 MM) ON ALTERNATING SIDES OF THE PATHWAY.

IFC 1205.4 BUILDINGS WITH RAPID SHUTDOWN.

BUILDINGS WITH RAPID SHUTDOWN SOLAR PHOTOVOLTAIC SYSTEMS SHALL HAVE PERMANENT LABELS IN ACCORDANCE WITH SECTIONS IFC 1205.4.1 THROUGH IFC 1205.4.3.

PROVIDING FIREPROOFING OF INTERIOR PENETRATIONS TO MAINTAIN EXISITING FIRE RATING OF SPACES AND ROOMS.

705.12 POINT OF INTERCONNECTION

(A) SUPPLY SIDE

AN ELECTRIC POWER PRODUCTION SOURCE SHALL BE PERMITTED TO BE CONNECTED TO THE SUPPLY SIDE OF THE SERVICE DISCONNECTING MEANS IF THE SUM OF THE RATINGS OF ALL OCPDS CONNECTED TO POWER PRODUCTION SOURCES DOES NOT EXCEED THE RATING OF THE SERVICE AS SERVICE CONDUCTORS ARE RATED FOR CERTAIN AMPACITY WHICH IS USUALLY SAME AS THE SERVICE RATING.

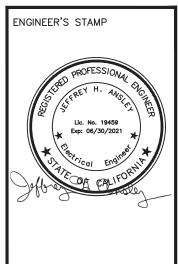
- 1. CHECK THAT YOU HAVE SPACE BETWEEN MAIN BREAKER AND UTILITY METER TO MAKE LINE SIDE TAP. CABLE LIMITERS MAY BE REQUIRED PER NOTE 13.6 OF PROTECTION NOTES.

NOTE TO CONTRACTOR CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ANY WORK STARTED BEFORE CONSULTATION AND ACCEPTANCE BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY THEM WITHOUT ADDITIONAL COMPENSATION

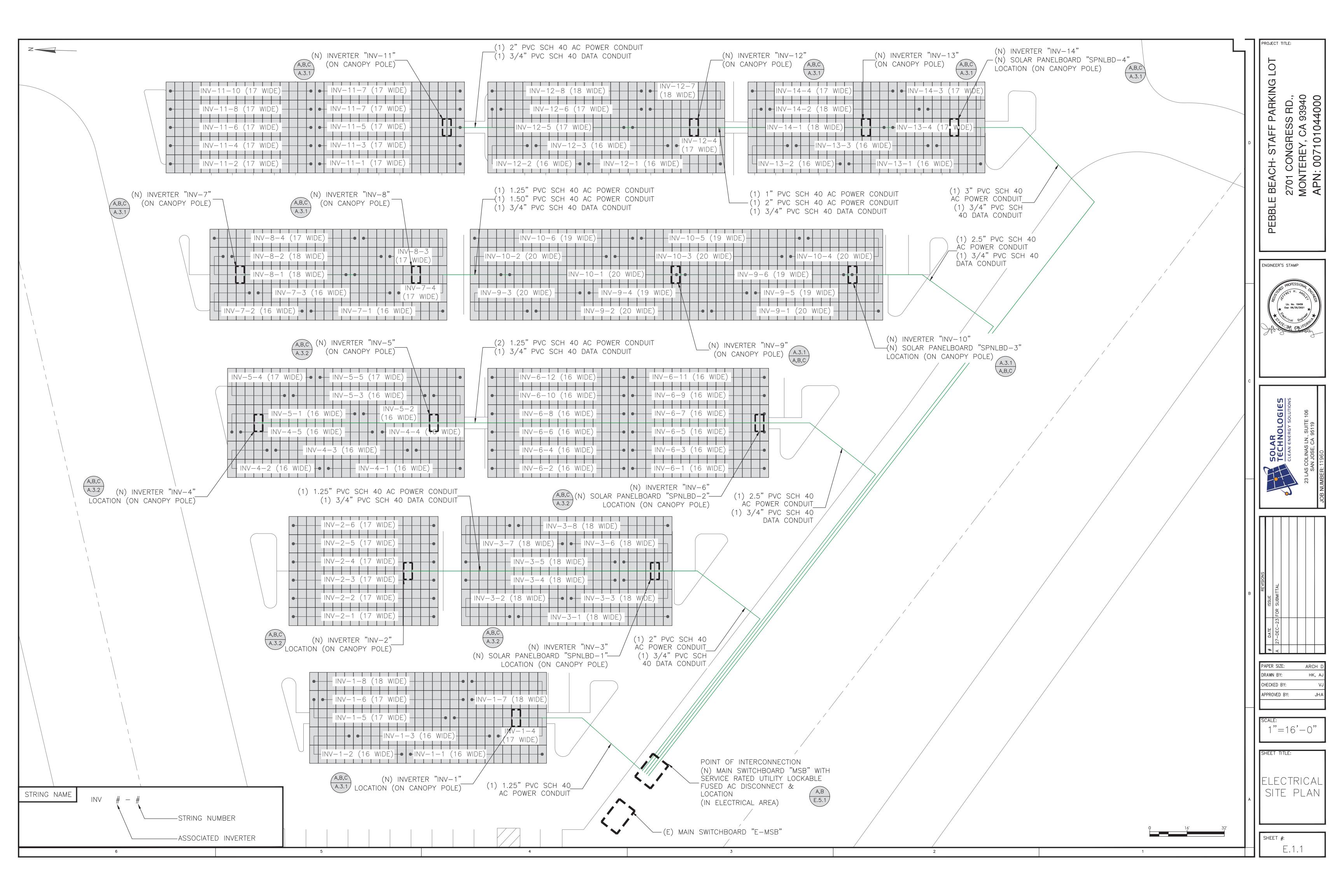
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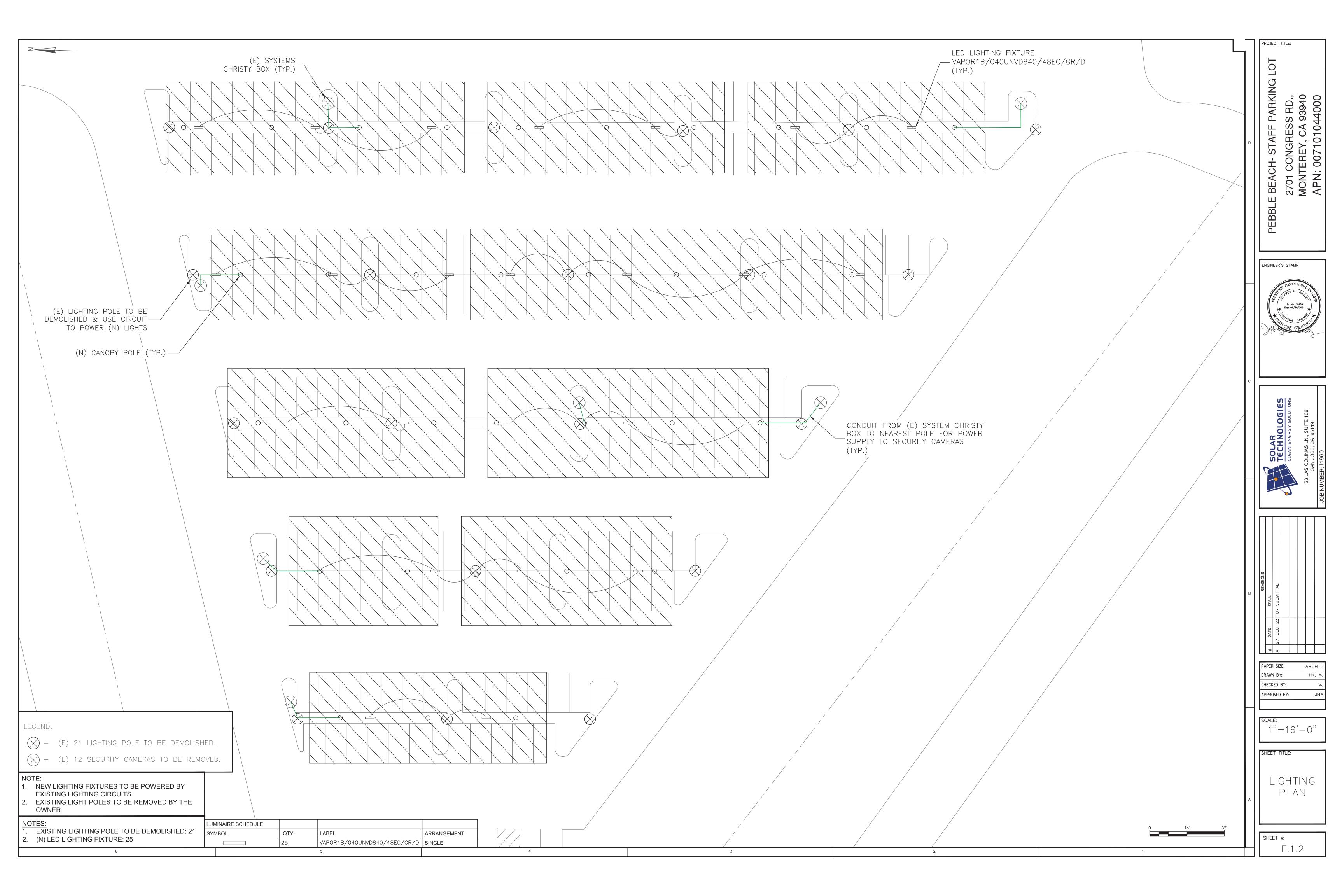
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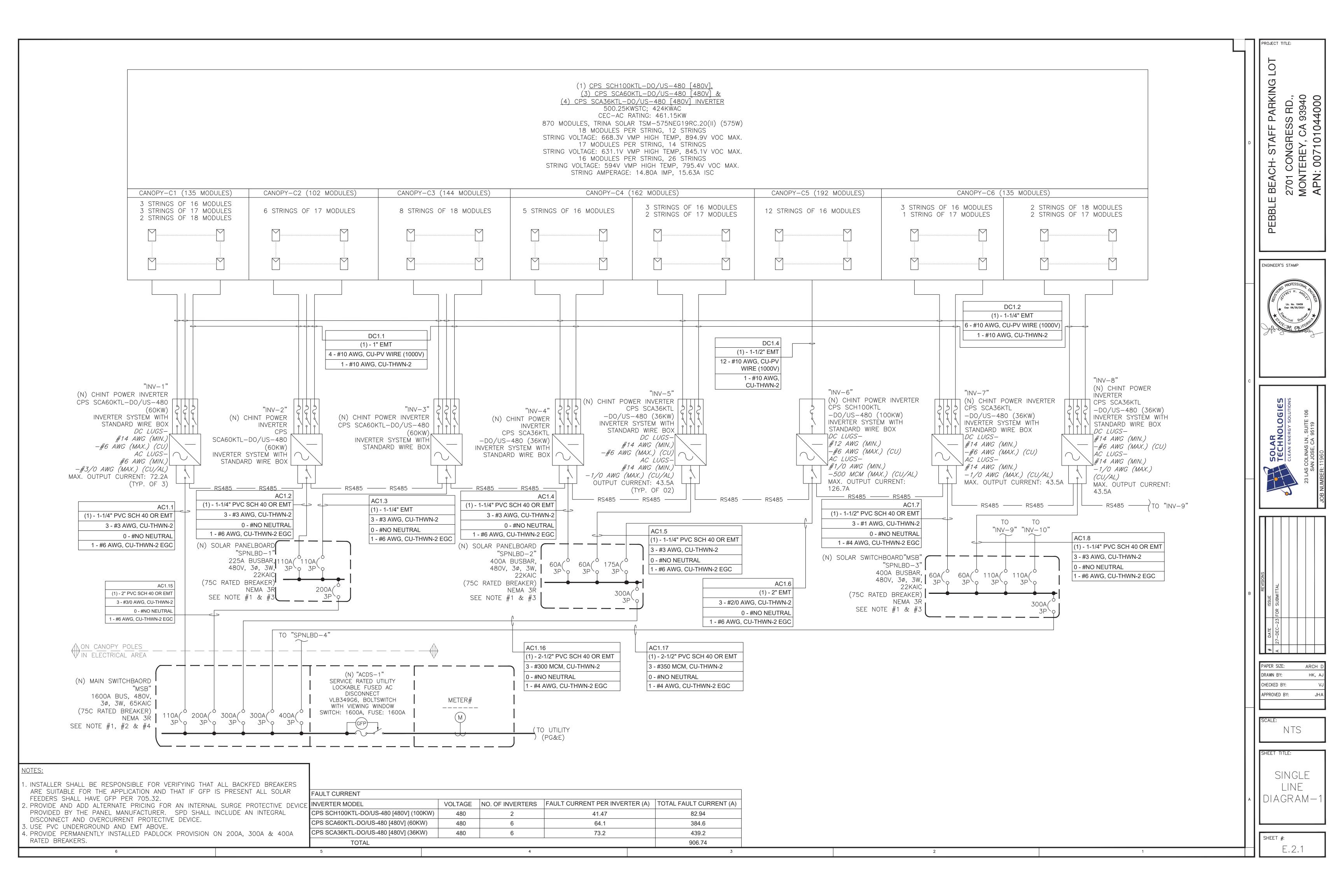
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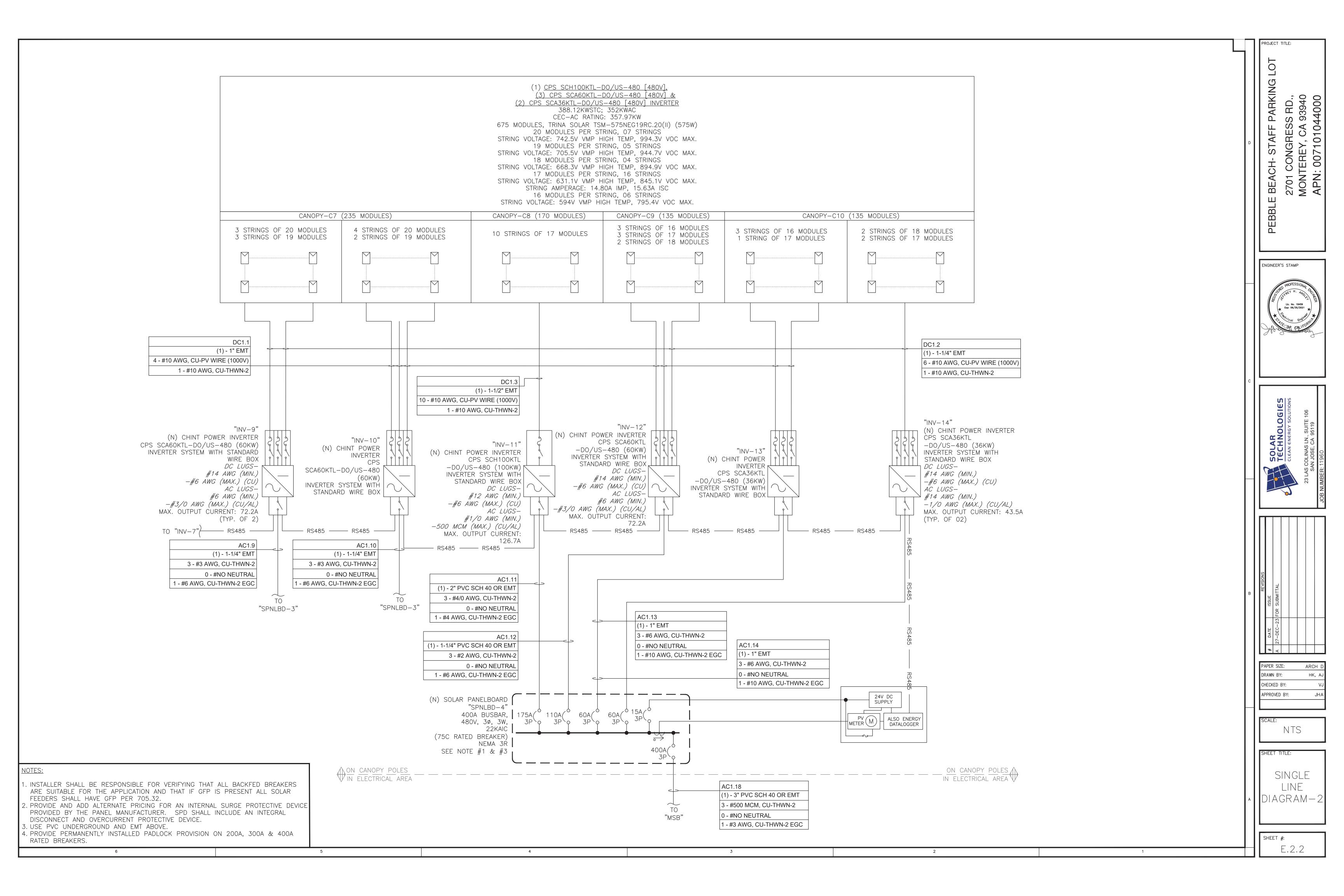


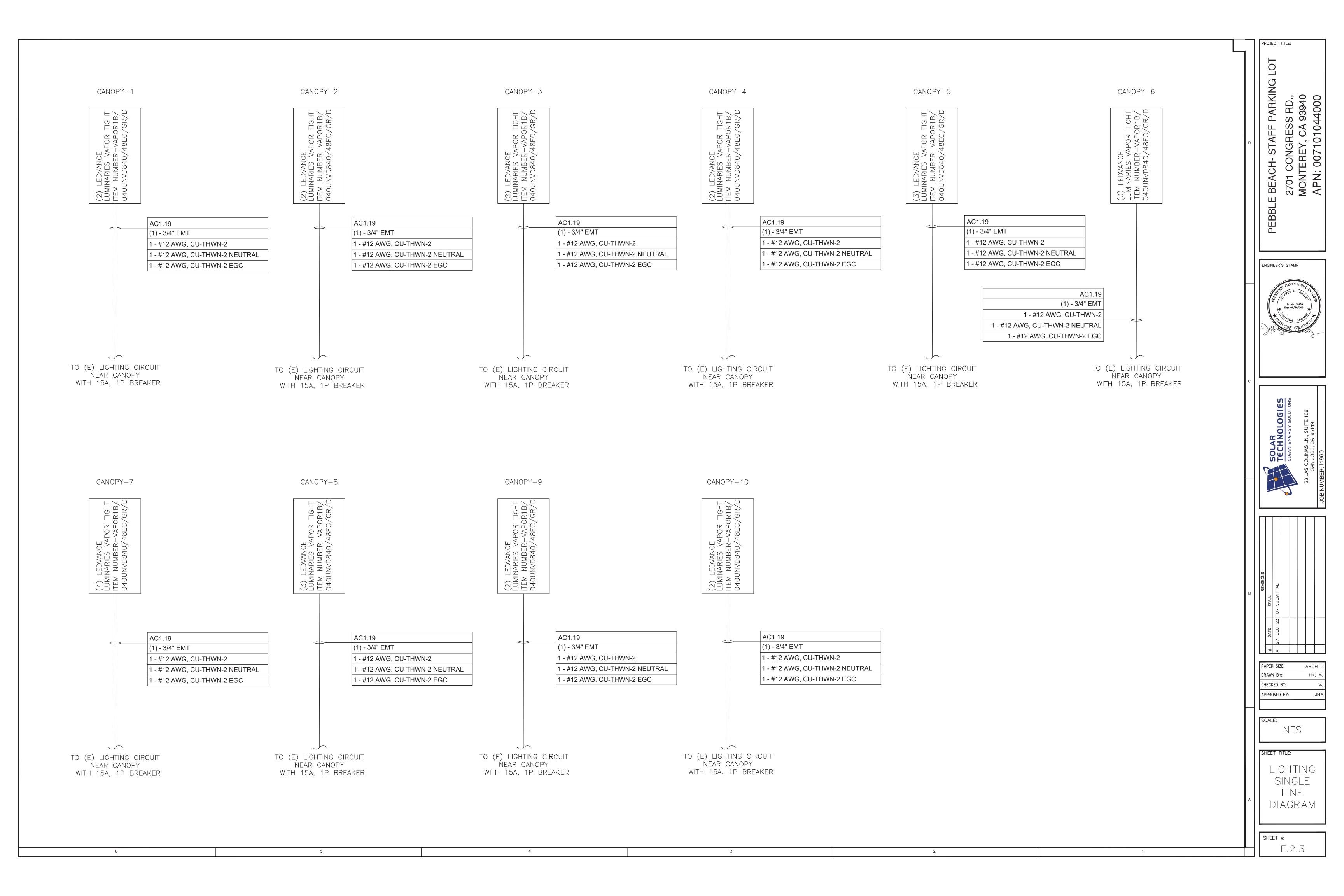
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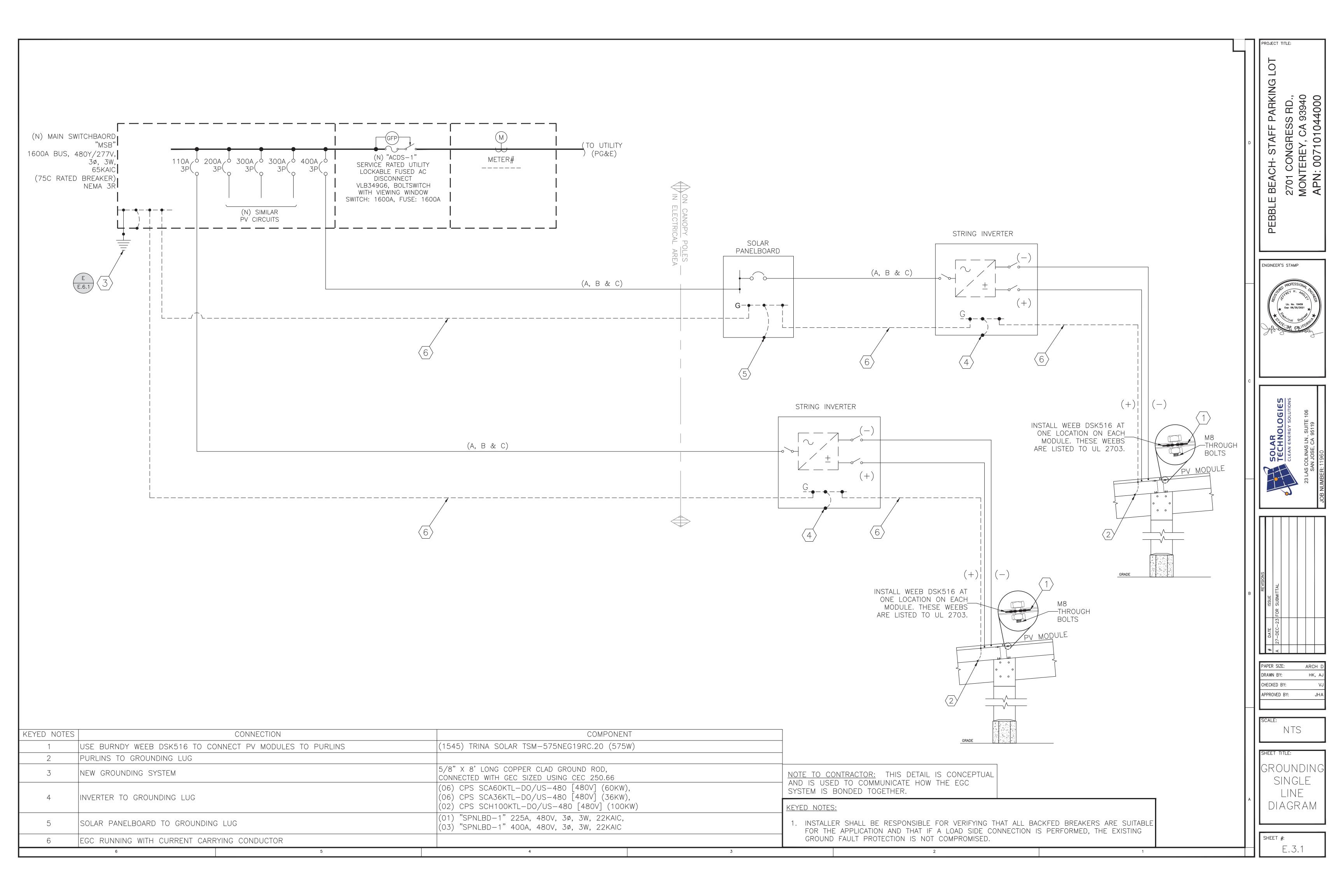


TABLE B1: DC	OUTPUT CIRC	CUIT CONDUCTO	OR AND CON	DUIT IDENTIFICA	ATION					1	1											
INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	# STRINGS IN COMBINER BOX IN PARALLEL	1			CIDCLIITS	# OF ONDUCTORS IN RACEWAY OR URIAL BUNDLE	% OF MAX CONDUIT FILL	310.15(B)(1) Temp Correction Factor	310.15(C)(1) Fill Adjustment Factor	690.8 (A)(1)(a) and (B)(1) Adjustment Factors	DESIGN Isc LINE CURREN	TENINAL	TEMP LIMIT AMPACITY 300 AMB	OCPD C	CORRECTED		NGTH (FT)		R EQUIPMENT GROUD CONDUCTOR SIZE (TED FROM
ST-X	INV-X	1	504.4	DC1.1-1	411 EN 4T	4		600/	4.04	0.00	4.50	16 24	0000	40	25 20	0 3	33	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V) 4 #40 AVAC CLUT	1 11/4/11 2	
ST-X	INV-X	1	DC1.1	DC1.1-2	1" EMT	1 5		68%	1.04	0.80	1.56	16 24	Cu-90C	40	25 20	0 3	33	210 1.30%	2 - #10 AWG, CU-PV WIRE (1000)	1 - #10 AWG, CU-TI	HVVN-2	
ST-X	INV-X	1		DC1.2-1								16 24		40	25 20	0 3	33	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
ST-X	INV-X	1	DC1.2	DC1.2-2	1-1/4" EMT	1	7	57%	1.04	0.80	1.56	16 24	Cu-90C	40	25 20	0 3	33	210 1.30%	2 - #10 AWG, CU-PV WIRE (1000)	√) 1 - #10 AWG, CU-Tŀ	HWN-2	
ST-X	INV-X	1		DC1.2-3								16 24		40	25 20	0 3	33	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	<u>V)</u>		
T-X	INV-X	1		DC1.3-1								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
T-X	INV-X	1		DC1.3-2								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	<u>/)</u>		
T-X	INV-X	1	DC1.3		1-1/2" EMT	1	11	68%	1.04	0.50	1.56	16 24	Cu-90C	40	25 20	0 2	21	210 1.30%	2 - #10 AWG, CU-PV WIRE (1000)	/) 1 - #10 AWG, CU-TI	HWN-2	
ST-X	INV-X	1		DC1.3-4								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
T-X	INV-X	1		DC1.3-5								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
T-X	INV-X	1		DC1.4-1								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
T-X	INV-X	1		DC1.4-2								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	<u>/)</u>		
T-X	INV-X	1		DC1 4-3	4.4.60 5.47		40	0.40/	4.04	0.50	4.50	16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)	1.114/4.1.0	
X	INV-X	1	DC1.4	DC1.4-4	1-1/2" EMT	1	13	81%	1.04	0.50	1.56	16 24	Cu-90C	40	25 20	0 2	21	210 1.30%	2 - #10 AWG, CU-PV WIRE (1000)	√) 1 - #10 AWG, CU-Ti	HVVN-2	
	1																					
T-X	INV-X	1		DC1.4-5								16 24		40	25 20	0 2	21	1.30%	2 - #10 AWG, CU-PV WIRE (1000)	V)		
ST-X	INV-X INV-X OUTPUT CIRC	1 1 CUIT CONDUCTO	OR AND CONI	DC1.4-5 DC1.4-6 DUIT IDENTIFICA	ATION							16 24 16 24		40	25 20 25 20		21	1.30%	2 - #10 AWG, CU-PV WIRE (1000) 2 - #10 AWG, CU-PV WIRE (1000)	<u></u>		
T-X ABLE C1: AC INITIAL	INV-X	PACEWAY		DC1.4-6	# OF	# OF CONDUCTOR IN RACEWA OR BURIAL BUNDLE	Y % OF MAX	Inmularia	ection Adjustmen	(A)(1)(e)		16 24	TEMF LIMIT MP	OCPD		0 2 M CONDUCED CORRECT	CTOR ONE WA	1.30% Y VOLTAGE	,	V)	GROUNDING CONDUCTOR SIZE (AWG)	NOT
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION	OUTPUT CIRC	RACEWAY NAME	CIRCUIT ID R	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE O	R # OF PARALLEL CIRCUITS	CONDUCTOR IN RACEWA OR BURIAL	Y % OF MAX	Temp Corre	ection Fill Adjustmer	(A)(1)(e) nt Adjustment	LINE	16 24 ESIGN LINE TERM TERM TERM TERM TERM TERM TERM TERM	TEMF LIMIT AMPAC 30C AN	OCPD	MINIMUN CORRECTE	0 2 M CONDUCED CORRECT	CTOR ONE WA	1.30%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR	NEUTRAL WIRE TYPE	SIZE (AWG)	NOT EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION V-1	OUTPUT CIRCI FINAL CONDUCTOR LOCATION	RACEWAY NAME C	CIRCUIT ID R AC1.1-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE O DIRECT BURIAL	R # OF PARALLEL CIRCUITS	CONDUCTOR IN RACEWA OR BURIAL	CONDUIT FI	Temp Corre	ection Fill Adjustmer Factor	(A)(1)(e) nt Adjustment Factor	LINE	16 24 ESIGN LINE TENT CURRENT Current Current Current	TEMF LIMIT AMPAC 30C AN	OCPD 1TY 1B	MINIMUN CORRECTE	M CONDUCED CORRECTY AMPAGE	CTOR ONE WA CTED LENGTH CITY (FT)	Y VOLTAGE DROP %	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE	NEUTRAL WIRE TYPE AND SIZE	SIZE (AWG)	EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION IV-1 IV-2	OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB	RACEWAY NAME CONTRACT ACT.1 ACT.2 ACT.2	CIRCUIT ID R AC1.1-1 1-1 AC1.2-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE O DIRECT BURIAL 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS	CONDUCTOR IN RACEWA OR BURIAL	CONDUIT FII	Temp Correction Factor	ection Fill Adjustmer Factor	(A)(1)(e) Adjustment Factor 1.25	LINE CURRENT 90	16 24 ESIGN LINE TENT TEILING Cu-75	TEMF LIMIT AMPAC 30C AM CC 100	OCPD 110	MINIMUN CORRECTE	M CONDUCED CORRECT AMPAGE	CTOR ONE WA CTED LENGTH CITY (FT)	1.30% Y VOLTAGE DROP % 0.64% 0.64%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #6 AWG, CU-THWN-2	EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3	FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1	AC1.1 AC1.2 AC1.3 AC1.3	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	CONDUIT FII	Temp Correction 1.04 1.04	Ection Fill Adjustmer Factor 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25	LINE CURRENT 90	16 24 ESIGN LINE TENT TEILIN Cu-75 Cu-75	TEMF LIMIT AMPAC 30C AM CO 100 CO 100 CO 100	OCPD 110 110	MINIMUN CORRECTE	M CONDUCTORRECTY AMPAGE	CTOR ONE WAS LENGTH (FT)	1.30% Y VOLTAGE DROP % 0.64% 0.64%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #6 AWG, CU-THWN-2	EGC EGC
INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4	FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1	AC1.1 AC1.2 AC1.3 AC1.4 AC1.4	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" EMT	R # OF PARALLEL CIRCUITS 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 57%	Temp Correction 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25	T2 90 72 90 72 90 90 90 90 90 90 90 90 90 90 90 90 90	ESIGN LINE CURRENT Cu-75 Cu-75 Cu-75	TEMF LIMIT AMPAC 30C AM C 100 C 100 C 100 C 100	OCPD 110 110	MINIMUN CORRECTE	0 2 M CONDUCTORRECTY AMPAGE 120 120 120	CTOR ONE WAS LENGTH (FT) 100 100 100	1.30% Y VOLTAGE DROP % 0.64% 0.64% 0.06%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL 0 - #NO NEUTRAL 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5	FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.5	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" EMT 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59%	1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25	TINE CURRENT 72 90 72 90 72 90 44 54	16 24 ESIGN LINE TENT TENT TENT TENT TENT TENT TENT TE	TEMF LIMIT AMPAC 30C AM CO 100 CO 100 CO 100 CO 100 CO 100 CO 100	OCPD 110 110	MINIMUN CORRECTE	0 2 M CONDUCTORRECT AMPACE 120 120 120 120	CTOR ONE WAS LENGTH (FT) 100 100 10 240	1.30% Y VOLTAGE DROP % 0.64% 0.64% 0.06% 0.92% 0.65%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL 0 - #NO NEUTRAL 0 - #NO NEUTRAL 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5 IV-6	FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.6 AC1.6	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" EMT 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1 1 1 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25	TINE CURRENT 72 90 72 90 72 90 44 54	16 24 ESIGN LINE TENT TENT TENT TENT TENT TENT TENT TE	TEMF LIMIT AMPAC 30C AM 30C AM	OCPD 110 110 110 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54	0 2 M CONDUCTORRECT AMPAGE 120 120 120 120 120 120	CTOR ONE WAS LENGTH (FT) 100 100 10 240 170	1.30% Y VOLTAGE DROP % 0.64% 0.64% 0.06% 0.92% 0.65%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC
T-X ABLE C1: AC INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5 IV-6 IV-7	FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.6 AC1.7	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" EMT 1/4" PVC SCH 40 1/4" PVC SCH 40 1/4" PVC SCH 40 EMT	R # OF PARALLEL CIRCUITS 1 1 1 1 1 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25	TINE CURRENT 72 90 72 90 72 90 44 54 44 127 15	16 24 ESIGN LINE TENT TENT TENT TENT TENT TENT TENT TE	TEMF LIMIT AMPAC 30C AM 30C AM	OCPD 110 110 110 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54	0 2 M CONDUCTORRECT AMPAGE 120 120 120 120 120 120	CTOR ONE WAS LENGTH (FT) 100 100 10 240 170 10	1.30% Y VOLTAGE DROP % 0.64% 0.64% 0.06% 0.92% 0.65% 0.04%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC EGC
INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5 IV-6 IV-7 IV-8	INV-X OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.6 AC1.7 AC1.8	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 EMT 1/2" PVC SCH 40	R # OF PARALLEL CIRCUITS 1 1 1 1 1 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 69%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	TINE CURRENT 72 90 72 90 72 90 44 54 44 127 15	16 24 ESIGN LINE CURRENT Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C AM 30C AM 30C AM 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100	OCPD 110 110 110 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54	0 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 203 151	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320 230	1.30% Y VOLTAGE DROP % 0.64% 0.64% 0.06% 0.92% 0.65% 0.04% 0.77%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #4 AWG, CU-THWN-2 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC EGC
INITIAL CONDUCTOR LOCATION V-1 V-2 V-3 V-4 V-5 V-6 V-7 V-8 V-9	INV-X OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.6 AC1.7 AC1.8 AC1.9 AC1.9	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 EMT 1/2" PVC SCH 40 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1 1 1 1 1 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	TINE CURRENT 72 90 72 90 72 90 44 54 44 54 44 54 44 54	16 24 ESIGN LINE CURRENT Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C AM 30C AM 30C AM 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100	OCPD 110 110 110 60 60 175 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54	0 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 203 151 120	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC EGC EGC
INITIAL CONDUCTOR LOCATION V-1 V-2 V-3 V-4 V-5 V-6 V-7 V-8 V-9 V-10	INV-X OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3	AC1.1 AC1.2 AC1.3 AC1.4 AC1.5 AC1.6 AC1.7 AC1.8 AC1.9 AC1.10 AC1.10	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.9-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" EMT 1/4" EMT	R # OF PARALLEL CIRCUITS 1 1 1 1 1 1 1 1 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 54 72 90 72 90 72 90 72 90 72	16 24 ESIGN LINE CURRENT Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C AM 30C AM 30C AM 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100	OCPD 110 110 110 110 60 60 175 60 60 110	MINIMUN CORRECTE AMPACIT 90 90 90 54 54	O 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320 230 100	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC EGC EGC EGC EGC
INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5 IV-6 IV-7 IV-8 IV-9 IV-10 IV-11	INV-X OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3	AC1.1 AAC1.2 AAC1.3 AAC1.4 AC1.5 AAC1.6 AAC1.7 AAC1.8 AAC1.9 AAC1.10 AAC1.11 AAC1.11 AAC1.11 AAC1.11	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.9-1 1-1 AC1.10-1 1-1 AC1.11-1 2"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" EMT 1/4" EMT 1/4" EMT PVC SCH 40	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 54 72 90 72 90 72 90 72 90 72	16 24 ESIGN LINE CURRENT Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C 100 30C 100	OCPD 110 110 110 110 60 60 175 60 60 110 110 110 1175	90 90 90 54 54 158 54 54 90	O 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC EGC EGC EGC EGC EGC EGC EGC
INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-4 IV-5 IV-6 IV-7 IV-8 IV-9 IV-10 IV-11 IV-12	INV-X OUTPUT CIRCI FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-4 SPNLBD-4	AC1.1 AC1.2 AC1.4 AC1.5 AC1.6 AC1.7 AC1.8 AC1.9 AC1.10 AC1.11 AC1.12 AC1.12 AC1.12 AC1.12 AC1.12	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.4-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.9-1 1-1 AC1.10-1 1-1 AC1.11-1 2" AC1.12-1 1-1	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" EMT 1/4" EMT 1/4" EMT PVC SCH 40 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 54 72 90 72 90 72 90 72 90 72	16 24 ESIGN LINE CURRENT Cu-75 Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C AM 30C AM 30C AM 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C 100 30C AM	OCPD 110 110 110 110 60 60 175 60 60 110 110 110 110 110 110	90 90 90 54 54 158 54 54 90	O 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280 160	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06% 0.78% 0.81%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #2 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC
INITIAL CONDUCTOR LOCATION IV-1 IV-2 IV-3 IV-5 IV-6 IV-7 IV-8 IV-9 IV-10 IV-11 IV-12 IV-13	INV-X OUTPUT CIRC FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-4 SPNLBD-4 SPNLBD-4	AC1.1 AC1.2 AC1.6 AC1.7 AC1.8 AC1.9 AC1.10 AC1.11 AC1.12 AC1.13 AC1.14 AC1.15 AC1.11 AC1.12 AC1.13 AC1.13 AC1.13	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.9-1 1-1 AC1.11-1 2" AC1.11-1 2" AC1.12-1 1-1 AC1.13-1 1"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" PVC SCH 40	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 54 72 90 72 90 72 90 72 90 72	16 24 ESIGN LINE CURRENT Cu-75	TEMF LIMIT AMPAC 30C AM 30C AM 30C AM 30C 100 30C 100	OCPD 110 110 110 110 60 60 175 60 60 110 110 110 1175	90 90 90 54 54 158 54 54 90	O 2 M CONDUCTORRECT AMPACE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WAS LENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06% 0.78% 0.81%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #2 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2	EGC
INITIAL CONDUCTOR LOCATION NV-1 NV-2 NV-3 NV-4 NV-5 NV-6 NV-7 NV-8 NV-9 NV-10 NV-11 NV-12 NV-13 NV-14	INV-X OUTPUT CIRC FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4	AC1.1 AC1.5 AC1.6 AC1.7 AC1.8 AC1.10 AC1.11 AC1.12 AC1.13 AC1.14 AC1.13 AC1.14 AC1.14 AC1.14 AC1.14 AC1.14 AC1.14	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.10-1 1-1 AC1.11-1 2" AC1.11-1 1" AC1.13-1 1" AC1.14-1 1"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 EMT EMT	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 52 72 90 74 74 75 76 77 76 77 77 78 78 78 78 78	16 24 ESIGN LINE CURRENT CU-75	TEMP LIMIT AMPAC 30C AM	OCPD 110 110 110 110 60 60 175 60 60 110 110 175 110 60 60 60 60 60 60 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54 54 54 90 90 90 54 54 54 54 54 54 54 54 54 5	CONDUCTORRECT AMPAGE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WALENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280 160 60 10	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06% 0.78% 0.81% 0.46% 0.08%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2	EGC
INITIAL CONDUCTOR LOCATION NV-1 NV-2 NV-3 NV-4 NV-5 NV-6 NV-7 NV-8 NV-9 NV-10 NV-11 NV-12 NV-13 NV-14 SPNLBD-1	INV-X OUTPUT CIRC FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4 MSB	AC1.1 AC1.5 AC1.6 AC1.7 AC1.8 AC1.10 AC1.11 AC1.12 AC1.13 AC1.14 AC1.15 AC1.14 AC1.15 AC1.15 AC1.15 AC1.15 AC1.16 AC1.17 AC1.18 AC1.11 AC1.12 AC1.13 AC1.14 AC1.15 AC1.15 AC1.15	AC1.1-1 1-1 AC1.2-1 1-1 AC1.3-1 1-1 AC1.5-1 1-1 AC1.6-1 2" AC1.7-1 1-1 AC1.8-1 1-1 AC1.10-1 1-1 AC1.11-1 2" AC1.11-1 2" AC1.12-1 1-1 AC1.13-1 1" AC1.14-1 1" AC1.15-1 2"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 1/4" EMT 1/4" EMT PVC SCH 40 1/4" PVC SCH 40 EMT PVC SCH 40 EMT PVC SCH 40 EMT EMT PVC SCH 40	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 57% 59% 57% 57% 80% 68% 50% 65%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 52 72 90 72 90 72 90 72 90 72 90 72 90 72 15 72 90 72 15 72 90 74 75 76 77 77 78 78 78 78 78 78 78 78	16 24	TEMP LIMIT AMPAC 30C AM	OCPD 110 110 110 110 60 60 175 60 60 110 110 175 110 60 60 200	MINIMUN CORRECTE AMPACIT 90 90 90 54 54 54 158 54 54 90 90 90 158 90 54 54	M CONDUC CORRECT AMPAGE 120 120 120 120 120 120 120 203 151 120 120 120 120 120 120 120 120 120 12	CTOR CTED CITY ONE WALENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280 160 60 10 170	1.30% Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06% 0.78% 0.81% 0.46% 0.08% 0.08%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #1 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2	EGC
INITIAL CONDUCTOR	INV-X OUTPUT CIRC FINAL CONDUCTOR LOCATION MSB SPNLBD-1 SPNLBD-1 SPNLBD-2 SPNLBD-2 SPNLBD-2 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-3 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4 SPNLBD-4	AC1.1 AC1.5 AC1.10 AC1.11 AC1.12 AC1.13 AC1.14 AC1.15 AC1.14 AC1.15 AC1.16	AC1.1-1 1-1 AC1.2-1 1-1 AC1.5-1 1-1 AC1.8-1 1-1 AC1.10-1 1-1 AC1.11-1 2" AC1.12-1 1-1 AC1.13-1 1" AC1.14-1 1" AC1.15-1 2" AC1.15-1 2" AC1.15-1 2" AC1.15-1 2" AC1.15-1 2"	DC1.4-6 DUIT IDENTIFICA RACEWAY SIZE OF DIRECT BURIAL 1/4" PVC SCH 40 EMT EMT	R # OF PARALLEL CIRCUITS 1	CONDUCTOR IN RACEWA OR BURIAL	59% 59% 59% 59% 59% 59% 59% 59% 59% 59%	1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04	Fill Adjustmer Factor 1.00	(A)(1)(e) Adjustment Factor 1.25 1.25 1.25 1.25 1.25 1.25 1.25 1.2	LINE CURRENT 72 90 72 90 72 44 54 44 54 44 54 72 90 72 90 72 15 44 54 44 54 45 44 54 44 54 44 54 44 54 44 54 44 54 44 54 44 54 44 54 44 54 44 54	16 24	TEMP LIMIT AMPAC 30C AM	OCPD 110 110 110 110 60 60 175 60 60 110 110 175 110 60 60 60 60 60 60 60 60	MINIMUN CORRECTE AMPACIT 90 90 90 54 54 54 54 90 90 90 54 54 54 54 54 54 54 54 54 5	CONDUCTORRECT AMPAGE 120 120 120 120 120 120 120 120 120 120	CTOR CTED CITY ONE WALENGTH (FT) 100 100 10 240 170 10 320 230 100 10 280 160 60 10	Y VOLTAGE DROP % 0.64% 0.06% 0.92% 0.65% 0.04% 0.77% 0.88% 0.64% 0.06% 0.78% 0.81% 0.46% 0.08% 0.68% 0.89%	2 - #10 AWG, CU-PV WIRE (1000) CURRENT CARRYING CONDUCTOR TYPE AND SIZE 3 - #3 AWG, CU-THWN-2 3 - #2/0 AWG, CU-THWN-2 3 - #3 AWG, CU-THWN-2 3 - #4/0 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2 3 - #6 AWG, CU-THWN-2	NEUTRAL WIRE TYPE AND SIZE 0 - #NO NEUTRAL	SIZE (AWG) 1 - #6 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2 1 - #10 AWG, CU-THWN-2	EGC

STRING VOC CALCULATION	N - Vertex N TSM-575NEG19RC.20
PANEL VOC, 25C	46.9
NUMBER IN SERIES	16
STRING VOC STC	750.4
DESIGN LOW, (ASHRAE) C	1
TEMP COEFFICIENT, %/C	-0.24%
	SERIES * (1 - (25 - DESIGN LOW ICIENT) = MAX VOC AT DESIGN LOW

(46.9 * 16 * (1-(25-(1)* (-0.0024)) = 795.42

STRING VOC CALCULATION	N - Vertex N TSM-575NEG19RC.20
PANEL VOC, 25C	46.9
NUMBER IN SERIES	17
STRING VOC STC	797.3
DESIGN LOW, (ASHRAE) C	1
TEMP COEFFICIENT, %/C	-0.24%
1	SERIES * (1 - (25 - DESIGN LOW ICIENT) = MAX VOC AT DESIGN LOW
(46.9 * 17 * (1-(25-(1)* (-0	0.0024)) = 845.14

STRING VOC CALCULATION - Vertex N TSM-575NEG19RC.20						
PANEL VOC, 25C	46.9					
NUMBER IN SERIES	18					
STRING VOC STC	844.2					
DESIGN LOW, (ASHRAE) C	1					
TEMP COEFFICIENT, %/C	-0.24%					
PANEL VOC * NUMBER IN SERIES * (1 - (25 - DESIGN LOW TEMP)* VOC TEMP COEFFICIENT) = MAX VOC AT DESIGN LOW						
(46.9 * 18 * (1-(25-(1)* (-0	0.0024)) = 894.85					

STRING VOC CALCULATION	N - Vertex N TSM-575NEG19RC.20								
PANEL VOC, 25C	46.9								
NUMBER IN SERIES	19								
STRING VOC STC	891.1								
DESIGN LOW, (ASHRAE) C	1								
TEMP COEFFICIENT, %/C	-0.24%								
	PANEL VOC * NUMBER IN SERIES * (1 - (25 - DESIGN LOW TEMP)* VOC TEMP COEFFICIENT) = MAX VOC AT DESIGN LOW								
(46.9 * 19 * (1-(25-(1)* (-0	0.0024)) = 944.57								

	STRING VOC CALCULATION - Vertex N TSM-575NEG19RC.20								
)	PANEL VOC, 25C	46.9							
)	NUMBER IN SERIES	20							
L	STRING VOC STC	938							
L	DESIGN LOW, (ASHRAE) C	1							
0	TEMP COEFFICIENT, %/C	-0.24%							
		SERIES * (1 - (25 - DESIGN LOW							
'	TEMP)* VOC TEMP COEFF	ICIENT) = MAX VOC AT DESIGN LOW							
	(46.9 * 20 * (1-(25-(1)* (-0	0.0024)) = 994.28							

AC CONDUITS (For 3-Phase system)	3 PHASE AC VOLTAGE DROP	DESIGN LINE CURRENT	MINIMUM CORRECTED AMPACITY	CONDUIT FILL	CONDUCTOR CORRECTED AMPACITY
CONDUIT NAME		OPERATING CURRENT*1.25	OPERATING CURRENT*1.25	AREA)*(PERCENT ALLOWED FILL)) = PERCENT	CONDUCTOR AMPACITY AT 30C * CONDUCTOR PER PHASE * TEMP. CORRECTION FACTOR * FILL ADJUSTMENT FACTOR = CONDUCTOR CORRECTED AMPACITY
AC1.1	(1.732*100 * 0.245 * 72 / 1000FT / 480 / 1)=0.64%	(72.2 * 1.25) = 90.25	(72.2 * 1.25) = 90.25	100 * 0.34 / (1.45 * 0.4) = 59%	(115*1*1.04*1) = 119.6

	INV-1	INV-2	INV-3	INV-4	INV-5	INV-6	INV-7	INV-8	INV-9	INV-10	INV-11	INV-12	INV-13	INV-14
TOTAL AC VOLTAGE DROP	0.64%	1.32%	0.74%	1.81%	1.55%	0.94%	1.87%	1.99%	1.74%	1.17%	1.95%	1.98%	1.63%	1.25%
TOTAL DC VOLTAGE DROP								2.60%						
TOTAL VOLTAGE DROP	3.23%	3.91%	3.34%	4.41%	4.14%	3.53%	4.47%	4.58%	4.34%	3.76%	4.54%	4.57%	4.23%	3.84%

1	DC CONDUITS	DC VOLTAGE DROP	DESIGN LINE CURRENT	MINIMUM CORRECTED AMPACITY	CONDUIT FILL	CONDUCTOR CORRECTED AMPACITY
		(2*ONE WAY LENGTH*RESISTANCE PER 1000FT*PHASE CURRENT Imp/1000 FT/STRING VOLTAGE/# WIRES PER PHASE)= VOLTAGE DROP IN CONDUIT	ISC*1.56	ISC*1.25	AREA)*(PERCENT ALLOWED FILL)) =	CONDUCTOR AMPACITY AT 30C * CONDUCTOR PER PHASE * TEMP. CORRECTION FACTOR * FILL ADJUSTMENT FACTOR = CONDUCTOR CORRECTED AMPACITY
	DC0.X	(2 * 210 * 1.24 * 14.8024656/ 1000FT /594.02 / 1) = 1.3%	(15.63 * 1.56) = 24.42	(15.63 * 1.25) = 19.54	100 * 0.13 / (0.53 * 0.4) = 60%	(40 * 1 * 1.04 * 1) = 41.6

WIRING METHOD INVERTER WIRING (AC1.1)

OUTPUT OF CPS SCA60KTL-DO/US-480 [480V] INVERTER

125% X 72.2A (INVERTER OUTPUT CURRENT FROM SPEC SHEET) = 1.25 X 72.2A = 90.25A (CONTINUOUS CURRENT) 125% X 72.2A = 1.25 X 72.2A = 90.25A \leq 110A (OVERCURRENT DEVICE)

AMBIENT SITE TEMPERATURE = 22°C

CONDUCTORS ON THE ROOF THAT ARE INSTALLED IN RACEWAYS EXPOSED TO DIRECT SUNLIGHT ARE DERATED IN ACCORDANCE WITH CEC 310.15(B)(3)(c) AND TABLE 310.15(B)(3)(c) BASED ON THE HEIGHT OF THE CONDUIT ABOVE THE ROOF (N/A)

DESIGN CONDÚIT TEMPERATURE = 30°C

ADJUSTMENT FACTOR FOR CONDUIT FILL (CEC TABLE 310.15(C)(1)) = 1.0

AMBIENT TEMPERATURE CORRECTION FACTOR BASED ON 30° (310.15(C)(3)(1)) = 21°C-25°C @ 90°C TEMPERATURE RATING OF CONDUCTOR IS 1

WITH 110A MINIMUM BREAKER, SELECT #3 AWG, CU-THWN-2 (90°C COLUMN)

FROM TABLE 310.16, AMPACITY OF CONDUCTOR AT 90° IS 120A \times 1 TEMP. DERATE FACTOR = 120A

THIS IS GREATER THAN CONTINUOUS CURRENT OF 90.25A - OK

CAN BE PROTECTED BY A 110A BREAKER - OK

PEBBLE BEACH- STAFF PARKING LOSTONGRESS RD.,
MONTEREY, CA 93940
APN: 007101044000

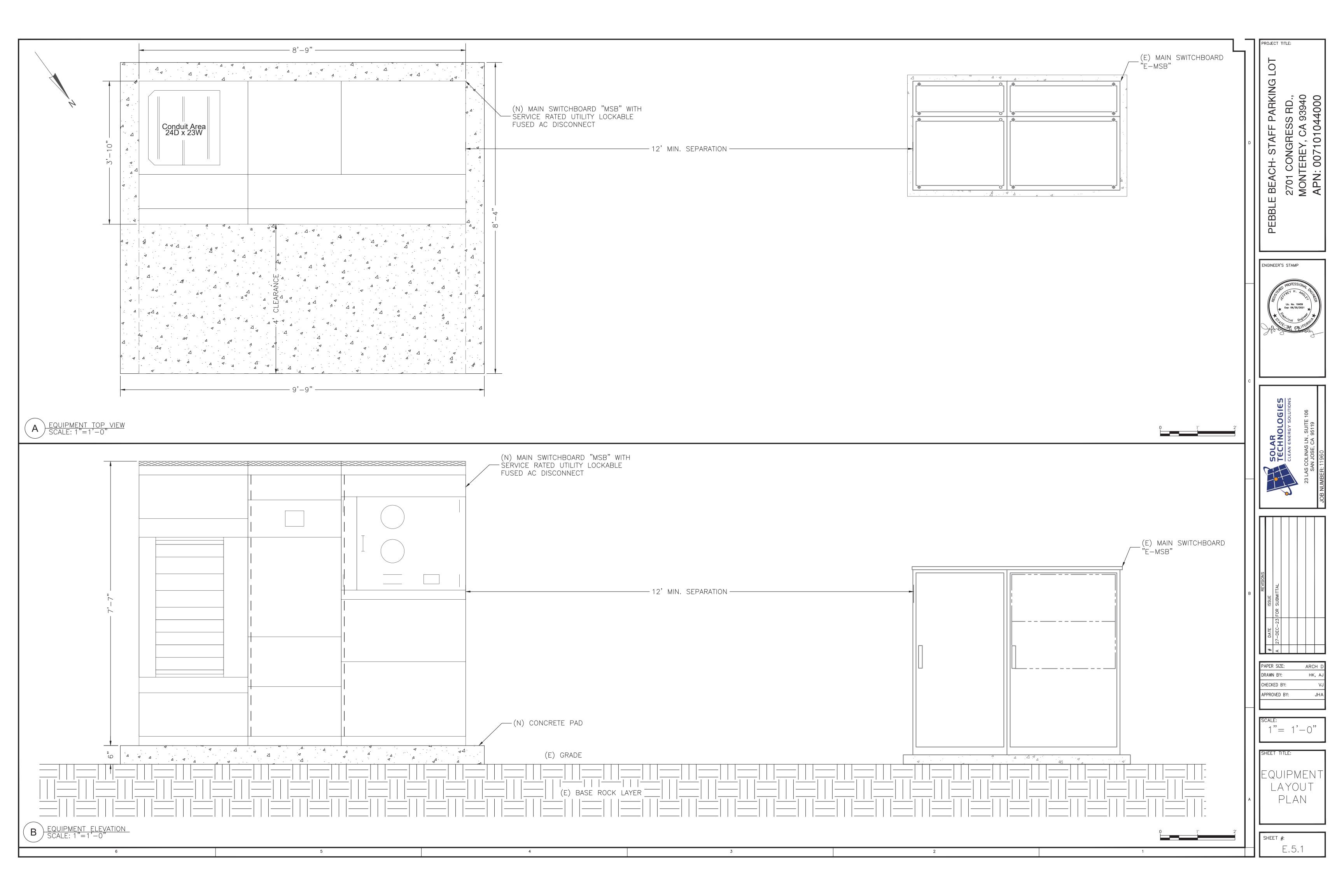
SOLAR TECHNOLOGIES
CLEAN ENERGY SOLUTIONS

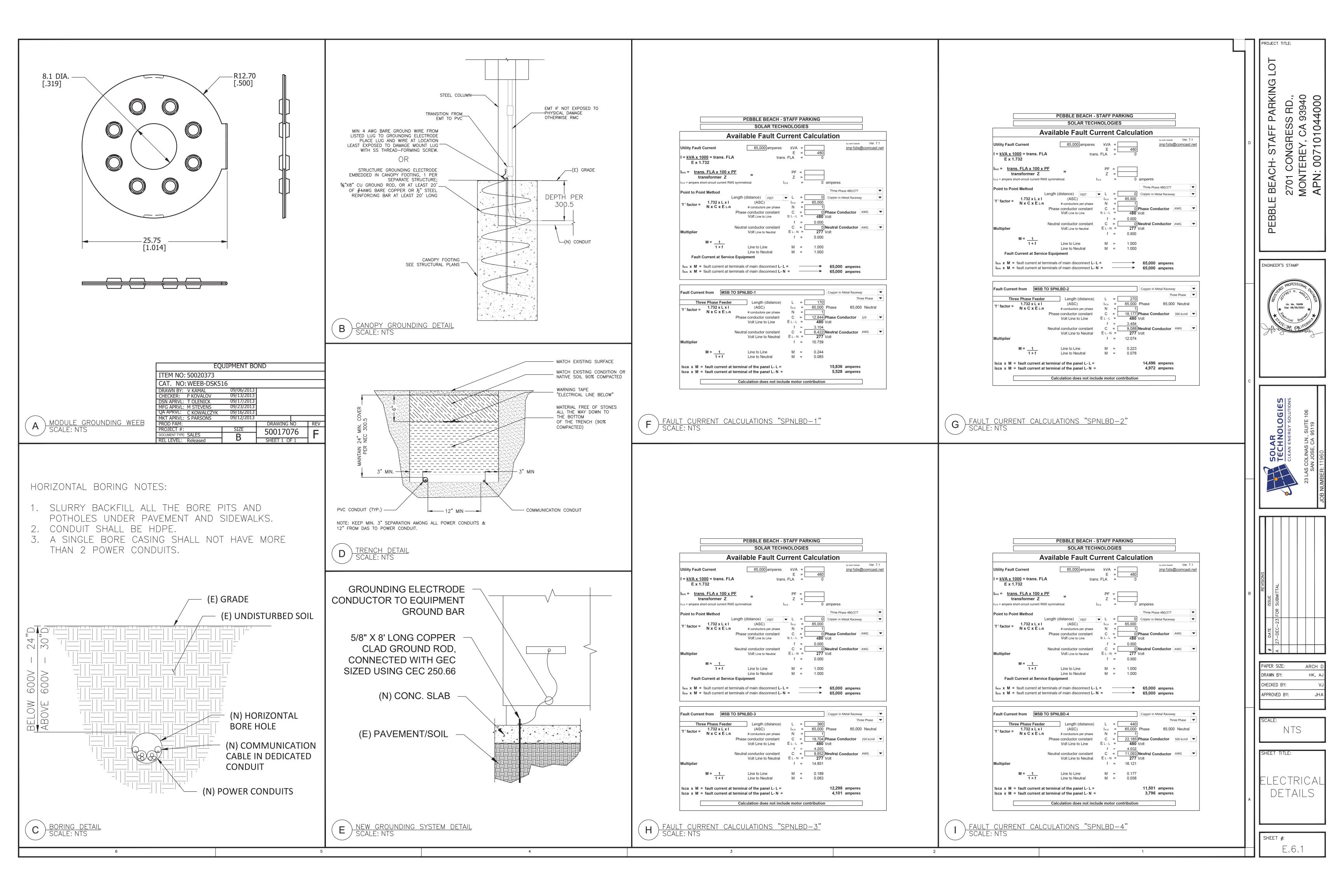
В		REVISIONS	# DATE ISSUE	A 27-DEC-23 FOR SUBMITTAL			
	_						

PAPER SIZE:	ARCH D
DRAWN BY:	HK, AJ
CHECKED BY:	VJ
APPROVED BY:	JHA

NTS

WIRING SCHEDULE AMPACITY CALCULATIONS





WARNING: PHOTOVOLTAIC POWER SOURCE

PER NEC 690.31(G)(3) & (4)



FOVOLTAIC POWER SOURCE DO NOT REMOVE UNLESS REPLACED IN EXACT LOCATION -PV POWER CIRCUIT DIRECTLY BELOW

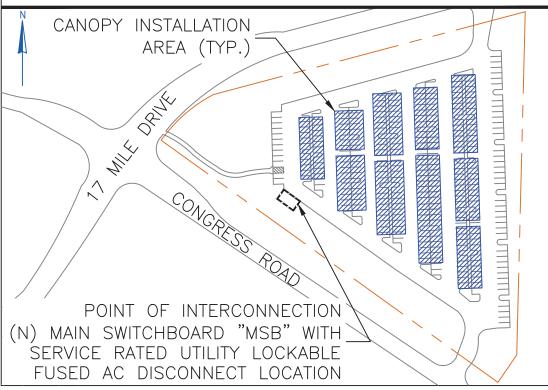
PER NEC 690.31(G)(1) - WHERE CIRCUITS ARE EMBEDDED IN BUILT-UP, LAMINATE, OR MEMBRANE ROOFING MATERIALS IN ROOF AREAS NOT COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT.



BUILDING / STRUCTURE

CAUTION

POWER TO THIS SERVICE IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN 2701 CONGRESS RD, MONTEREY, CA 93940



PER NEC 690.56(B) & 705.10

SIGNAGE NOTES:

PERMANENT ADHESIVE.

(3) PHOTOVOLTAIC SYSTEM AC DISCONNECT

MAIN PHOTOVOLTAIC SYSTEM AC DISCONNECT

PER NEC 690.13(B)

AWARNING

ELECTRICAL SHOCK HAZARD TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED

IN THE OPEN POSITION

PER NEC 690.13(B)

PHOTOVOLTAIC AC DISCONNECT

948A

RATED AC OUTPUT CURRENT: NOMINAL OPERATING AC VOLTAGE:

PER NEC 690.54

AWARNING

POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE.

PER NEC 705.12(B)(2)(3)(b)

AWARNING

DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

PER NEC 705.12(B)(3)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

PER NEC 690.56(C)(3)



SOLAR PANELBOARD/SWITCHBOARD

AWARNING

THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.

PER CEC 705.12(B)(2)(3)(c)

DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL NO LOAD SHALL BE ADDED TO THIS PANEL

PER CEC 705.12(B)(2)(3)(c)

MAIN SERVICE DISCONNECT

AWARNING

ARC-FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED

PER NEC ARTICLE 110.16(A) AND NFPA 70E ARTICLE 130.5(C)(1),(2),(3)

LABELING REQUIREMENTS FOR ARTICLE 110.16, 690 & 705.12

NEC 110.21 B) Field-Applied Hazard Markings.

Where caution, warning, or danger signs or labels are required by this Code, the labels shall meet the following requirements:

- 1) The marking shall warn of the hazards using effective words, colors, symbols, or any combination thereof. Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for suitable font sizes, words, colors, symbols, and location requirements for labels.
- 2) The label shall be permanently affixed to the equipment or wiring method and shall not be handwritten. Exception to (2): Portions of labels or markings that are variable, or that could be subject to changes, shall be permitted to be handwritten and shall be legible.
- 3) The label shall be of sufficient durability to withstand the environment involved. Informational Note: ANSI Z535.4-2011, Product Safety Signs and Labels, provides guidelines for the design and durability of safety signs and labels for application to electrical equipment

NEC 110.16 Arc Flash:

(A) General -

Electrical equipment, such as switchboards, switchgear, panelboards, industrial control panels, meter socket enclosures, and motor control centers, that is in other than dwelling units, and is likely to require examination, adjustment, servicing, or maintenance while energized, shall be field or factory marked to warn qualified persons of potential electric arc flash hazards. The marking shall meet the requirements in 110.21(B) and shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.

(B) Service Equipment

In other than dwelling units, in addition to the requirements in (A), a permanent label shall be field or factory applied to service equipment rated 1200 amps or more. The label shall meet the requirements of 110.21(B) and contain the following information.

- 1. Nominal system voltage
- 2. Available fault current at the service overcurrent protective devices.
- 3. The clearing time of service overcurrent protective devices based on the available fault current at the service equipment.
- 4. The date the label was applied.

Exception: Service equipment labeling shall not be required if an arc flash label is applied in accordance with acceptable industry

NEC 690.13(B)

Each PV system disconnecting means shall plainly indicate whether in the open (off) or closed (on) position and be permanently marked "PV SYSTEM DISCONNECT" or equivalent. Additional markings shall be permitted based upon the specific system configuration. For PV system disconnecting means where the line and load terminals may be energized in the open position, the device shall be marked with the following words or equivalent.

NEC 690.31(G)(1)

Where circuits are embedded in build up, laminate or membrane roofing materials not covered by PV modules and associated equipment, the location of the circuits shall be clearly marked.

PV dc system circuit labels shall appear on every section of the wiring system that is separated by enclosures, walls, partitions, ceilings, or floors. Spacing between labels or markings, or between a label and a marking, shall not be more than 3 m (10 ft). Labels required in this section shall be suitable for the

NEC 690.53

A permanent label for the dc PV power source indicating items (1) through (3) shall be provided by the installer at dc PV system disconnecting means and at each dc equipment disconnecting means required by 690.15. Where a disconnecting means has more than one dc PV power source, the values in 690.53 (1) through (3) shall be specified for each source.

All interactive system(s) points of interconnection with other sources shall be marked as an accessible location at the disconnecting means as a power source and with the rated ac output current and the nominal operating ac voltage.

Plagues or directories shall be installed in accordance with

NEC 690.56(C)(1)(a

For PV systems that shut down the array and conductors leaving

NEC 690.56(C)(3)

A rapid shutdown switch shall have a label located on or no more than 1 meter (3 ft) from the switch that includes the following

A permanent plaque or directory, denoting the location of all electric power source disconnecting means on or in the premises,

NEC 705.12(B)(2)(3)(b)

Where two sources, one a primary power source and the other

NEC 705.12(B)(2)(3)(c)

The sum of the ampere ratings of all overcurrent devices on panelboards, both load and supply devices, excluding the rating of the overcurrent device protecting the busbar, shall not exceed the ampacity of the busbar. The rating of the overcurrent device protecting the busbar shall not exceed the rating of the busbar. Permanent warning labels shall be applied to distribution equipment displaying the following or equivalent wording.

NEC 705.12(B)(3)

Equipment containing overcurrent devices in circuits supplying power to a busbar or conductor supplied from multiple sources shall be marked to indicate the presence of all sources. Circuits if backfed shall be suitable for such operations.

NEC 690.31(G)(3) & (4)

environment where they are installed.

NEC 690.56(B)

the array shall be labeled accordingly.

wording.

shall be installed at each service equipment location and at the location(s) of the system disconnect(s) for all electric power production sources capable of being interconnected. Also see 690.4(d) One sign required for each PV system.

another power source, are located at opposite ends of a busbar that contains loads, the sum of 125 percent of the power source(s) output circuit current and the rating of the overcurrent device protecting the busbar shall not exceed

120 percent of the ampacity of the busbar. A permanent warning label shall be applied to the distribution equipment adjacent to the back-fed breaker from the power source that displays the following or equivalent wording.

A N

PARKIN

BEACH-

ENGINEER'S STAMP

ESS RD., 3A 93940 044000

701 CONGRESIONTEREY, CANPN: 0071010

PAPER SIZE:	ARCH D
DRAWN BY:	HK, AJ
CHECKED BY:	VJ
APPROVED BY:	JHA

NTS

LABELS & MARKINGS

SHEET #:

SIGNAGE SHALL BE WEATHER RESISTANT. UL 969 SHALL BE

2. ALL SIGNAGE SHALL HAVE ALL CAPITAL LETTERS WITH MINIMUM 3/8" LETTER HEIGHT FOR HEADERS & 1/4" FOR REST OF THE TEXT. TEXT WITH RED BACKGROUND TO BE OF 3/8" HEIGHT 3. DO NOT USE SCREWS FOR SIGNAGE ATTACHMENT, USE ONLY

USED AS A STANDARD FOR WEATHER RATING

PRODUCT: TSM-NEG19RC.20 PRODUCT RANGE: 570-590W

Mono Multi Solutions

MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.8% **MAXIMUM EFFICIENCY**

• Lower LCOE, reduced BOS cost, faster ROI Lowest guaranteed first year and annual degradation • Designed for compatibility with existing mainstream system components

• Higher return on investment High Power up to 590W

Increased Customer Value

• Up to 21.8% module efficiency with high density interconnect • Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

Improved Reliability

• Minimized micro-cracks with innovative non-destructive cutting • Ensured PID resistance through cell process and module material

• Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas • Mechanical performance up to 5400 Pa positive load and 2400 Pa

Better Energy Yield

• Excellent IAM and low irradiation performance, validated by 3rd party

• The unique design provides optimized energy production under inter-row shading conditions • Lower temperature coefficient (-0.30%) and operating temperature

• Up to 30% additional power gain from back side depending on albedo

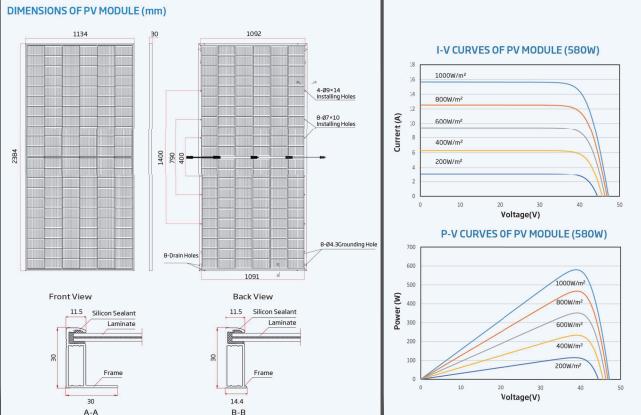
Trina Solar's Vertex Bifacial Dual Glass Performance Warranty

Years 5 10 15 20 25 30

Comprehensive Products and System Certificates

ISO 9001: Quality Management System ISO14064: Greenhouse Gases Emissions verification is 15045001: Occupational Health and Safety Management System

IEC61215/IEC61730/IEC61701/IEC62716/UL61730



ELECTRICAL DATA (STC) Power Tolerance-PMAX (W) 39.2 39.5 39.7 Maximum Power Voltage-VMPP (V) 14.79 14.82 14.86 Maximum Power Current-IMPP (A) 47.2 47.5 47.8 Open Circuit Voltage-Voc (V) 5.65 15.68 15.72 Short Circuit Current-Isc (A) 1.5 21.6 21.8

Module Efficiency n m (%) Power Bifaciality:80±5%. ELECTRICAL DATA (NOCT

Maximum Power-PMAX (Wp) 44.2 44.5 44.7 45.0 45.3 Open Circuit Voltage-Voc (V) Short Circuit Current-Isc (A)

2.0 mm (0.08 in), Heat Strengthened Glass (White Grid Glass) 30mm (1.18 in) Anodized Aluminium Alloy IP 68 rated Photovoltaic Technology Cable 4.0mm² (0.006 in²) Landscape: 1400 mm (55.12 in)*

Temperature Coefficient of Voc - 0.24%/°C

30 year Power Warranty 0.40% Annual Power Attenuation

Modules per box: 36 pieces Modules per 40' container: 504 pieces Pallets per 40' container: 14

Trinasolar

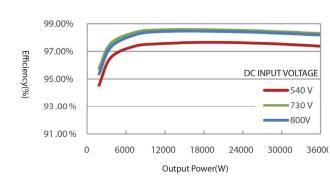
CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT. © 2022 Trina Solar Co., Ltd. All rights reserved. Specifications included in this datasheet are subject to change without notice. Version number: TSM_NEG19RC.20_NA_EN_2022_A



36kW, 1000Vdc String Inverters for North America

The 36kW medium-power CPS three-phase inverter has been designed for small commercial rooftop, ground mount, and carport applications. Featuring dual MPPTs, 98.5% peak efficiency, and a wide operating window, the CPS 36kW performs well across a variety of applications. This inverter includes a separable wire-box with generous wiring space to reduce installation time; flexible mounting options ranging from 15-90 degrees from horizontal; and integrated AC and DC disconnects as standard features. The CPS FlexOM Gateway enables monitoring and controls necessary in today's PV systems.

Efficiency Curve



High Efficiency

Maximum efficiency of 98.5%, CEC efficiency of 98% ■ Three-level technology and enhanced control mechanism to achieve high efficiency over a wide load range

2 MPPTs to achieve higher system efficiency Transformerless design

High Reliability

- Standard warranty: 10 years, extension up to 20 years Advanced thermal design with variable speed fans
- Ground-fault detection and interruption circuit
- AFCI Integrated (per UL1699B) ■ UL 1741-SA certified to CA Rule 21

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1380 Presidential Drive, Suite 100, Richardson, TX 75081 Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintp

■ NEMA 4X (IP65) rated for outdoor applications

Separable wire-box design for fast service

Wide MPPT range for flexible string sizing

Integrated DC & AC disconnect switches

Utility interactive controls: active power derating,

■ 1000V max. DC input voltage for flexible configuration

15 - 90 degree from horizontal installation angle

AC output terminal compatible with AL/CU wire

Broad Adaptability

reactive power control

CPS SCA36KTL-DO/US-480

CPS

Model Name CPS SCA36KTL-DO/US-480 DC Input Max. PV power 54kW (27kW per MPPT) Max. DC input voltage Operating DC input voltage range 240-950Vdc Start-up DC input voltage / power 320V / 80W Number of MPP trackers MPPT voltage range 540-800Vdc Max. PV short-circuit current (Isc x 1.25 125A (62.5A per MPPT) 10 inputs, 5 per MPPT Number of DC inputs DC disconnection type Load rated DC switch Type II MOV, 2000V_C,10kA I_{TM} (8/20µS) DC surge protection AC Output 36kW Rated AC output power Max. AC apparent powe 36kVA 480 Vac Rated output voltage 422 - 528Vac Output voltage range¹ 3Φ/PE/N (neutral optional) Grid connection type Max. AC output current @ 480Vac 43.5A Rated output frequency 57 - 63Hz

Output frequency range >0.99 (±0.8 adjustable) Power factor Current THD @ rated load 73.2A (1.68 PU) Max. fault current contribution (1 cycle RMS) AC disconnection type Load rated AC switch Type II MOV, $1500V_{C}$, $10kA I_{TM}$ (8/20 μ S) AC surge protection System and Perfor Topology Max. efficiency 98.5% 98.0% **CEC** efficiency Stand-by / night consumption <1W

Environment NEMA Type 4X Enclosure protection degree Cooling method Variable speed cooling fans -22° F to $+140^{\circ}$ F / -30° C to $+60^{\circ}$ C (derating from $+113^{\circ}$ F / $+45^{\circ}$ C) Operating temperature range No low temp minimum to +158°F / +70°C maximum Non-operating temperature range² Operating humidity 0 to 100% Operating altitude 13,123.4ft / 4000m (derating from 6561.7ft / 2000m) Audible noise <50dBA @ 1m and 25°C Display and Communi

LCD+LED User interface and display Inverter monitoring Modbus RS485 CPS FlexOM Gateway (1 per 32 inverters) Site-level monitoring Modbus data mapping Standard / (with FlexOM Gateway) Remote diagnostics / firmware upgrade function Mechanical

Inverter: 121lbs/55kg; wire-box: 24lbs/11kg Mounting / installation angle³ 15 to 90 degrees from horizontal (vertical or angled)³ AC termination Screw clamp terminal block (wire range: #14 - 1/0AWG CU/AL) DC termination Screw clamp fuse holder (wire range: #14 - #6AWG CU) Fused string inputs (5 per MPPT) 20A fuses provided (fuse values up to 30A acceptable)⁴ UL1741SA-2016, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15 Certifications and standard Selectable grid standard IEEE 1547-2003, CA Rule 21, ISO-NE

Standard Extended terms 15 and 20 years

The "output voltage range" and "output frequency range" may differ according to the specific grid standard.
 See user manual for further requirements regarding non-operating conditions.
 Shade Cover accessory required for installation angles of 75 degrees or less.

Technical Data

Inverter: 26 x 23.6 x 9.1 in. (660 x 600 x 230 mm); wire-box 13.4 x 23.6 x 9.1 in. (340 x 600 x 230 mm)

Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-VAR, Frequency-Watt, Volt-Watt

3-Phase / PE / N (neutral optional)

Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)

Transformerless

50/60kW, 1000Vdc String Inverters for North America

The 50 & 60kW (55 & 66kVA) medium-power CPS three-phase string inverters are designed for ground mount, large rooftop and carport applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 98.8% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 50/60KTL products ship with either the Standard wirebox or the Rapid Shutdown wire-box, each fully integrated and separable with touch safe fusing, monitoring, and AC and DC disconnect switches. The integrated PLC transmitter in the Rapid Shutdown wire-box enables PVRSS certified modulelevel rapid shutdown when used with the Tigo TS4-F/TS4-A-F/TS4-A-2F products, APS RSD-S-PLC/RSD-D products, and NEP PVG-2 products. The CPS FlexOM Gateway enables monitoring, controls and remote product upgrades.

Key Features

- NEC 2017/2020 PVRSS certified for rapid shutdown
- 55 & 66kVA rating allows max rated active power @±0.91PF
- Selectable max AC apparent power of 50/55kVA and 60/66kVA NEC-compliant & UL listed Arc-Fault circuit protection
- 15-90° Mounting orientation for low profile roof installs
- Optional FlexOM Gateway enables remote firmware upgrades Integrated AC & DC disconnect switches
- 3 MPPTs with 5 inputs each for maximum flexibility
- NEMA Type 4X outdoor rated enclosure
- UL 1741-SA certified to CA Rule 21, including SA8 SA18 UL 1741-SB and IEEE 1547-2018 certified
- Separable wire-box design for fast service



Standard 10-year warranty with extensions up to 20 years

50/60KTL Standard Wire-box















50/60KTL Rapid Shutdown Wire-box

Chint Power Systems America 1380 Presidential Drive, Suite 100, Richardson, TX 75081 Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpo

CPS SCA50KTL-DO/US-480

CPS SCA60KTL-DO/US-480

Warranty

Extended terms

4) See user manual for further requirements regarding non-operating conditions.
5) Shade cover accessory required for installation angles of 75 degrees or less.

6) RSD wire-box only includes fuses/fuseholders on the positive polarity, compliant with NEC 2017/2020.

7) Fuse values above 20A have additional spacing requirements or require the use of the Y-Comb Terminal Block. See user manual for details. 8) Firmware version 17.0 or later required.

CPS Technical Data

Model Name	CPS SCA50KTL-DO/US-480 CPS SCA60KTL-DO/US-480				
DC Input	ANIW (2011)				
Max. PV power	90kW (33kW per MPPT)				
Max. DC input voltage	1000Vdc				
Operating DC input voltage range	200-950Vdc				
Start-up DC input voltage / power	330V / 80W				
Number of MPP trackers	3				
MPPT voltage range @ PF>0.99	480-850Vdc 540-850Vdc				
Max. PV short-circuit current (Isc x 1.25)	204A (68A per MPPT)				
Number of DC inputs	15 inputs, 5 per MPPT				
DC disconnection type	Load-rated DC switch				
DC surge protection	Type II MOV, 2800V $_{\mathbb{C}}$, 20kA I $_{TM}$ (8/20 μ S)				
AC Output					
Rated AC output power @ PF>0.99 to ±0.91 ¹	50kW 60kW				
Max. AC apparent power (selectable)	50/55kVA 60/66kVA				
Rated output voltage	480Vac				
Output voltage range ²	422 - 528Vac				
Grid connection type	3Φ / PE / N (neutral optional)				
Max. AC output current @ 480Vac	60.2/66.2A 72.2/79.4A				
Rated output frequency	60Hz				
Output frequency range ²	57 - 63Hz				
Power factor	>0.99 (±0.8 adjustable)				
Current THD @ rated load	<3%				
Max. fault current contribution (1 cycle RMS)	64.1A (1.06/0.88 PU)				
Max. OCPD rating	110A 125A				
AC disconnection type	Load-break rated AC switch				
AC surge protection	Type II MOV, $1240V_{\rm C}$, $15kA$ I _{TM} ($8/20\mu$ S)				
System and Performance	γγ- · · · · · · · · · · · · · · · · · ·				
Topology	Transformerless				
Max. efficiency	98.8%				
CEC efficiency	98.5%				
Stand-by / night consumption	<1W				
Environment					
Enclosure protection degree	NEMA Type 4X				
Cooling method	Variable speed cooling fans				
Operating temperature range ³	-22°F to +140°F / - 30°C to +60°C				
Non-operating temperature range ⁴	No low temp minimum to +158°F / +70°C maximum				
Operating humidity	0 to 100%				
Operating altitude	13,123.4ft / 4000m (derating from 9842.5ft / 3000m)				
	<60dBA @ 1m and 25°C				
Audible noise Display and Communication					
User interface and display	LCD + LED				
	SunSpec, Modbus RS485				
Inverter monitoring	CPS FlexOM Gateway (1 per 32 inverters)				
Site-level monitoring	* * * * * * * * * * * * * * * * * * * *				
Modbus data mapping	CPS Standard / (with FlavOM Catavay)				
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)				
Mechanical	20.4 v 22.6 v 10.24in (4000 v 600 v 260)				
Dimensions (H x W x D)	39.4 x 23.6 x 10.24in. (1000 x 600 x 260mm)				
Weight	Inverter: 123.5lbs/56kg; Wire-box: 33lbs/15kg				
Mounting / installation angle ⁵	15 to 90 degrees from horizontal (vertical or angled)				
AC termination	M8 stud type terminal block (wire range: #6 - 3/0AWG CU/AL; lugs not supplied)				
DC termination ⁶	Screw clamp, neg. busbar (RSD version ⁶); wire range: #14 - #6AWG CU				
Fused string inputs (5 per MPPT) ⁷	RSD ⁶ and Standard Wire-box: 20A fuses provided (fuse values up to 30A acceptable)				
Safety					
Certifications and standards	UL1741-SA/SB Ed. 3, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547-2018; FCC PART15				
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018 ⁸ , CA Rule 21, ISO-NE				
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt				

CPS 100kW, 1500Vdc/480Vac String Inverters for North America

rating DC input voltage range	200-950Vdc						
t-up DC input voltage / power	330V / 80W						
nber of MPP trackers	3						
PT voltage range @ PF>0.99	480-850Vdc	540-850Vdc					
. PV short-circuit current (lsc x 1.25)	204A (68A per MPPT)						
nber of DC inputs	15 inputs, 5 per MPPT						
disconnection type	Load-ra	ated DC switch					
surge protection	Type II MOV, $2800V_C$, $20kA I_{TM} (8/20\mu S)$						
Output							
ed AC output power @ PF>0.99 to ±0.91 ¹	50kW	60kW					
. AC apparent power (selectable)	50/55kVA	60/66kVA					
ed output voltage		480Vac					
out voltage range ²	422	2 - 528Vac					
connection type	3Φ / PE / N	l (neutral optional)					
. AC output current @ 480Vac	60.2/66.2A	72.2/79.4A					
ed output frequency		60Hz					
out frequency range ²	5	7 - 63Hz					
er factor	>0.99 (±	:0.8 adjustable)					
ent THD @ rated load		<3%					
. fault current contribution (1 cycle RMS)	64.1A (1.06/0.88 PU)						
. OCPD rating	110A 125A						
disconnection type	Load-break rated AC switch						
surge protection	Type II MOV, 124	40V _C , 15kA I _{TM} (8/20 <i>μ</i> S)					
tem and Performance							
ology	Tran	sformerless					
. efficiency	98.8%						
efficiency	98.5%						
d-by / night consumption		<1W					
ironment							
osure protection degree	NEN	MA Type 4X					
ling method		peed cooling fans					
rating temperature range ³	-22°F to +140	9°F / - 30°C to +60°C					
-operating temperature range ⁴	·	to +158°F / +70°C maximum					
rating humidity	0	to 100%					
rating altitude	13,123.4ft / 4000m (de	rating from 9842.5ft / 3000m)					
ble noise	<60dBA	@ 1m and 25°C					
olay and Communication							
r interface and display		CD + LED					
rter monitoring	SunSpec, Modbus RS485						
-level monitoring	CPS FlexOM Gat	eway (1 per 32 inverters)					
bus data mapping		CPS					
note diagnostics / firmware upgrade functions	Standard / (wi	ith FlexOM Gateway)					
hanical							
ensions (H x W x D)		lin. (1000 x 600 x 260mm)					
ght		6kg; Wire-box: 33lbs/15kg					
nting / installation angle ⁵	*	horizontal (vertical or angled)					
ermination	M8 stud type terminal block (wire range: #6 - 3/0AWG CU/AL; lugs not supplied)						

100KTL Standard Wire-box 15 and 20 years 1) Active power derating begins at PF=±0.91 to ±0.8 when max AC apparent power is set to 55 or 66kVA. 2) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.
3) Active power derating begins at 40°C when PF=±0.9 and MPPT ≥Vmin; at 45°C when PF=1 and MPPT ≥Vmin; and at 50°C when PF=1 and MPPT ∨ ≥ 700Vdc.



Touch-safe DC fuse holders adds convenience and safety

CPS FlexOM Gateway enables remote firmware upgrades

This device complies with part 15 of the FCC Rules

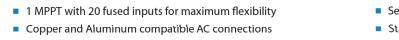
Key Features

NFPA 70 and NEC compliant

Integrated AC & DC disconnect switches







CPS SCH100KTL-DO/US-480

20 strings. The CPS FlexOM solution enables communication, controls and remote product upgrades.



100KTL Centralized Wire-box

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Dimensions (H x W x D)

Smart-grid features

DC Input Max. DC input voltage Operating DC input voltage range Start-up DC input voltage / power Number of MPP trackers MPPT voltage range @ PF>0.991 Max. PV input current (lsc x1.25)

Number of DC inputs DC disconnection type DC surge protection **AC Output** Rated AC output power @ PF>0.99 Max. AC apparent power? Rated output voltage Output voltage range Grid connection type⁴ Max. AC output current @ 480Vac Rated output frequency

4) Fuse values above 20A have additional spacing requirements. See user manual for further details.

The 100kW high power CPS three-phase string inverters are designed for ground-mount applications with 480Vac service voltage. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiencies, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch-safe fusing for up to

- NEMA Type 4X outdoor rated, tough tested enclosure Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100kW @ 0.95PF

SCH Series

- Generous DC/AC inverter load ratios Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years



Chint Power Systems Americ 1380 Presidential Drive, Suite 100, Richardson, TX 7508 Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpow

CPS SCHI00KTL-DO/US-480 750-1450Vdc 900Vdc / 200W 760-1300Vdc

20 PV source circuits, pos. & neg. fused with Standard Wire-box 1 input circuit, 1-2 terminations per pole, non-fused with Centralized Wire-box Load-rated DC switch Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS) 100kVA (105.3kVA @ PF>0.95) 423-528Vac

120.3A / 126.7A 57 - 63Hz Output frequency range >0.99 (±0.8 adjustable) Power factor Current THD @ rated load Max. fault current contribution (1 cycle RMS) 41.47A Max. OCPD rating AC disconnection type Load-rated AC switch

Max. efficiency 98.9% **CEC** efficiency 98.0% Stand-by / night consumption Enclosure protection degree NEMA Type 4X Variable speed cooling fans Cooling method -22°F to +140°F / -30°C to +60°C (derating from +108°F / +42°C) Operating temperature range Non-operating temperature range No low temp minimum to +158°F / +70°C maximum

Operating humidity 8202ft / 2500m (no derating) Operating altitude Audible noise <65dBA @ 1m and 25°C Display and Com User interface and display LED indicators, WiFi + APP

AC surge protection

System and Performan

Modbus RS485 Inverter monitoring CPS FlexOM (1 per 32 inverters) Site level monitoring Modbus data mapping SunSpec / CPS Remote diagnostics / firmware upgrade functions Standard / (with FlexOM Gateway) 45.28 x 24.25 x 9.84in (1150 x 616 x 250mm) with Standard Wire-box Dimensions (W x H x D) 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box

Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (Standard Wire-box); 33lbs / 15kg (Centralized Wire-box) Mounting / installation angle 15 - 90 degrees from horizontal (vertical or angled) M10 stud type terminal [30] (wire range:1/0AWG - 500kcmil CU/AL, lugs not supplied) AC termination Screw clamp terminal block [N] (#12 - 1/0AWG CU/AL) Screw clamp fuse holder (wire range: #12 - #6AWG CU) with Standard Wire-box DC termination Busbar, M10 Bolts (wire range: #1AWG - 500kcmil CU/AL [1 termination per pole], #1 AWG - 300kcmil CU/AL [2 terminations per pole], lugs not supplied) with Centralized Wire-box 20A fuses provided (fuse values up to 30A acceptable) Fused string input

Safety Certifications and standards UL1741-SA/SB Ed. 3, CSA-22.2 NO.107.1-01, IEEE1547-2018, FCC PART15 IEEE 1547a-2014, IEEE 1547-2018⁶, CA Rule 21, ISO-NE, HECO Rule 14H Selectable grid standard Smart-grid features Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt Warranty

Extended terms 10, 15, and 20 Years 1) See user manual for information regarding MPPT voltage range when operating at non-unity PF.
2) "Max AC apparent power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-3) The "output voltage range" and "output frequency range" may differ according to the specific grid standard. 4) Wye neutral-grounded; Delta may not be corner-grounded. 5) See user manual for further requirements regarding non-operating conditions 6) Firmware version 12.0 or later required.

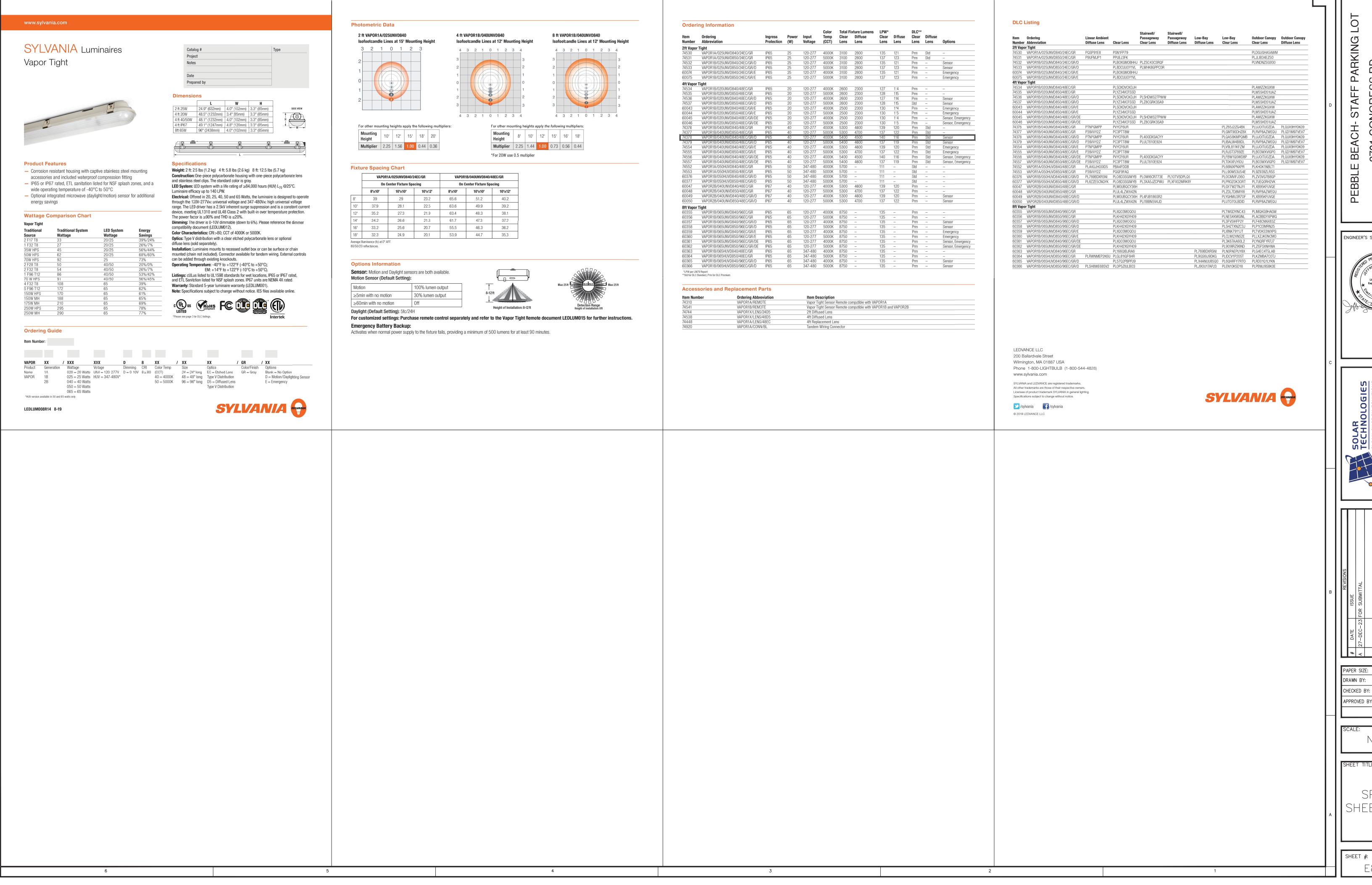
ENGINEER'S STAMP

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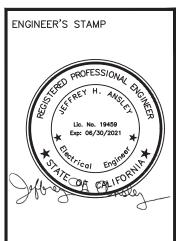
Technical Data

PAPER SIZE: DRAWN BY: CHECKED BY: APPROVED BY:



PROJECT TITLE:

E BEACH- STAFF PARKIN 2701 CONGRESS RD., MONTEREY, CA 93940 APN: 007101044000



APPROVED BY:

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

BUILDING CODE: 2022 CALIFORNIA BUILDING CODE, REFERRED TO AS "THE CODE" OVERNING JURISDICTION: CITY OF PEBBLE BEACH, CA OCCUPANCY TYPE: S-2

POINT LOAD = 300 LBS **

* NON-CONCURRENT W/ PV PANEL DEAD LOAD & WIND LOAD ** CONCURRENT W/ PV PANEL DEAD

MAXIMUM GROUND SNOW LOAD = 0 PSF

INTERNAL PRESSURE COEFFICIENT, GCpi = ±0

WIND ANALYSIS: DIRECTIONAL PROCEDURE PER ASCE 7, CHAPTER 27 BASIC WIND SPEED, V = 91 MPHWIND EXPOSURE = CATEGORY C RISK CATEGORY = II GUST EFFECT FACTOR, G = 0.85

SITE CLASSIFICATION = D RISK CATEGORY = II SEISMIC DESIGN CATEGORY = D

SEISMIC ANALYSIS: ASCE 7-16, CHAPTER 15 SEISMIC FORCE-RESISTING SYSTEM = INVERTED PENDULUM RESPONSE MODIFICATION COEFFICIENT, R = 2.0 SYSTEM OVERSTRENGTH FACTOR, $\Omega_0 = 2.0$ DEFLECTION AMPLIFICATION FACTOR, Cd = 2.0 SEISMIC IMPORTANCE FACTOR, IE = 1.0 REDUNDANCY FACTOR, ρ = 1.0 longitudinal (3+ COLUMN ARRAY) REDUNDANCY FACTOR, ρ = 1.3 longitudinal (2 COLUMN ARRAY) REDUNDANCY FACTOR, $\rho = 1.3$ transverse Ss= 1.316g, Sds = 1.056g S1 = 0.495g

GENERAL

SEISMIC BASE SHEAR..

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DO NOT SCALE THE DRAWINGS. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.

..Cs = 0.528W

- 2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY DEVIATION FROM THE APPROVED SET OF CONTRACT DOCUMENTS SHALL ONLY BE MADE AFTER WRITTEN APPROVAL BY THE ENGINEER OF RECORD. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR
- THE STRUCTURES IN THESE CONTRACT DOCUMENTS ARE PROPRIETARY TO TEICHERT ENERGY & UTILITIES GROUP, IINC. DBA TEICHERT SOLAR. THESE STRUCTURES MAY NOT GO OUT TO BID AND MUST BE BUILT BY TEICHERT
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. UNLESS NOTED OTHERWISE, DETAILS IN STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING LOCAL BUILDING CODE, AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE. BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- ALL REFERENCED STANDARDS (i.e. ACI, AISC, ASTM, ETC.) SHOWN IN THESE DOCUMENTS SHALL BE PER THE LATEST ADOPTED EDITION AS LISTED IN CHAPTER 35 OF THE CODE.
- CONTRACTOR TO PROVIDE A LIST OF ALL PROPOSED SUBSTITUTIONS, WITH APPLICABLE MANUFACTURER'S ICC/IAPMO REPORTS, TO ARCHITECT, ENGINEER OF RECORD AND GOVERNING JURISDICTION FOR REVIEW AND APPROVAL BEFORE FABRICATION.

POST-INSTALLED CONCRETE ANCHORS

- 1. POST-INSTALLED ANCHORAGE SHALL BE AS DETAILED ON THE PLANS. SUBSTITUTION OF PRODUCTS SPECIFICALLY DETAILED IN THESE DRAWINGS SHALL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
- 2. SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORS,
- WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED, THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST:

EXPANSION ANCHORS

- a. HILTI KWIK BOLT TZ (ICC ESR-1917) b. SIMPSON STRONG-BOLT-2 (ICC ESR-3037)
- c. POWERS POWER-STUD +SD2 (ICC ESR-2502)

d. ALTERNATE APPROVED BY THE SEOR

4. ALL CONCRETE ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIP GALVANIZED.

FOUNDATIONS

- 1. FOUNDATION DESIGN BASED ON THE FOLLOWING GEOTECHNICAL REPORT: COMPANY: ACHIEVEMENT ENGINEERING CORP. DATE: OCTOBER 27, 2023 **REPORT NUMBER: 5640**
- DRILLED PIERS ARE DESIGNED BASED ON THE FOLLOWING INFORMATION: ALLOWABLE SKIN FRICTION = 417 PSF (2 - 9 FEET BELOW GRADE)
- = 583 PSF (>9 FEET BELOW GRADE) ALLOWABLE LATERAL BEARING PRESSURE = 170 PCF* (2 - 9 FEET BELOW GRADE) 4. = 200 PCF* (>9 FEET BELOW GRADE)
- *1/3 INCREASE FOR TEMPORARY LOADS SUCH AS SEISMIC AND WIND FORCE.
- 3. DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE SHOULD BE PERFORMED, IF REQUIRED. FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS WILL BE ALTERED.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT OR BACKFILLED WITH 2-SACK SAND CEMENT SLURRY AND APPROVED BY THE SPECIAL INSPECTOR. SOILS REPORT SHALL TAKE PRECEDENT WHEN
- RECOMMENDATION GIVEN. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- SOIL REMOVAL AND RECOMPACTION SHALL BE PER THE SOILS REPORT AND APPROVED CONTRACT DOCUMENTS. THE DRILLED PIERS MUST BE INSPECTED BY THE SOILS ENGINEER PRIOR TO
- PLACING CONCRETE AND REINFORCING STEEL. ADJUST SHAFT LENGTHS UNDER DIRECTION OF THE SOILS ENGINEER AND THE OWNER'S REPRESENTATIVE BASED ON SOIL CONDITIONS AT TIME OF DRILLING.
- PRECAUTIONS SHOULD BE TAKEN DURING THE INSTALLATION OF PIERS TO MINIMIZE THE POSSIBILITY OF CAVING. PIERS SPACED CLOSER 3 PIER DIAMETERS SHOULD BE DRILLED AND FILLED ALTERNATELY, ALLOWING THE CONCRETE TO SET AT LEAST EIGHT HOURS BEFORE DRILLING AN ADJACENT HOLE. 10. PIER EXCAVATIONS SHOULD BE FILLED WITH CONCRETE WITHIN 72 HOURS OR AS
- NOTED IN THE SOILS REPORT AFTER DRILLING AND INSPECTION, WHICHEVER IS SOONER 11. KEEP EXCAVATIONS FREE OF WATER BEFORE PLACING CONCRETE UNLESS OTHERWISE APPROVED BY THE SOILS ENGINEER. IF UNABLE TO SEAL OFF WATER
- FLOW, PER THE APPROVAL OF THE SOILS ENGINEER, ALLOW WATER LEVEL TO ATTAIN ITS NORMAL LEVEL AND PLACE CONCRETE BY THE TREMIE METHOD OR OTHER APPROVED METHOD. 12. PLACE REINFORCING STEEL IN ONE CONTINUOUS UNIT AND ACCURATELY HOLD
- SECURELY IN FINAL POSITION USING CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.
- 13. AN UNREINFORCED HEIGHT OF 18 INCHES AT THE BOTTOM OF THE SHAFT IS **ACCEPTABLE**
- 14. CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF ACI 336.3R, LATEST

- 1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH THE CODE AND
- WITH THE PROVISIONS OF ACI 318 AND ACI 301. 2. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
 - a. MIX DESIGN METHODS (TEST HISTORY OR TRIAL BATCH METHOD) PER THE CODE SHALL BE USED TO PROPORTION CONCRETE. SUBMIT MIX DESIGN METHOD DATA
 - b. MIX DESIGNS SHALL SATISFY EITHER THE SHRINKAGE CRITERIA OR THE W/C RATIO AND TOTAL WATER CRITERIA.
- 3. SCHEDULE OF STRUCTURAL CONCRETE PERFORMANCE REQUIREMENTS:

SCHEDULE OF STRU	MINIMUM CONCRETE PROPERTIES							
ELEMENT fc @ 28 DAYS [PSI] MAX W/C MAX DENSITY [PCF]								
PIER FOUNDATIONS	3,000	0.50	150					
EQUIPMENT PADS & MISC.	3,000	0.50	150					

- 4. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE II 5. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
- CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C94. 7. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 301 AND PROJECT SPECIFICATIONS, CLEAN AND ROUGHEN TO MIN, ½" AMPLITUDE ALL
- CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED. 8. ALL REINFORCING BARS, ANCHOR BOLTS, AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- 9. PIPES OR CONDUITS LARGER THAN 4" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY PERMITTED OR APPROVED BY STRUCTURAL ENGINEER. PIPES OR CONDUITS SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS. SPACE THE PIPES OR CONDUITS SUCH THAT PROPER CONCRETE PLACEMENT AND CONSOLIDATION IS ACHIEVED.
- 10. PROVIDE MIN. ¼" CHAMFER ON ALL EXPOSED CORNERS. THE STEEL STRUCTURES MAY BE INSTALLED 48 HOURS AFTER THE FOUNDATIONS HAVE BEEN CAST OR AFTER CONCRETE REACHES A MINIMUM COMPRESSIVE STRENGTH OF 1,500-PSI,WHICHEVER COMES FIRST BREAK TESTS NOT REQUIRED IF WAITING UNTIL 48 HOURS TO ERECT STEEL

REINFORCING STEEL

- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE, ASTM A615 (A706 WHERE NOTED ON PLANS), GRADE 60
- BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD. REINFORCING BAR SPLICES SHALL, IN CONCRETE, CONFORM TO THE PROVISIONS OF ACI 318. LAP ALL HORIZONTAL BARS AT CORNERS AND
- INTERSECTIONS. BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315. COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION IN ACCORDANCE WITH SPECIFICATIONS AND APPLICABLE CODES. THE APPROVED DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE.
- REBAR SPACINGS GIVEN ARE MAXIMUM ON CENTER WHETHER STATED AS "O.C." OR NOT. UNLESS A SPECIFIED LENGTH IS GIVEN, ALL REBAR IS CONTINUOUS WHETHER STATED AS "CONT." OR NOT.

MECHANICAL BAR SPLICES (COUPLERS) SHALL BE USED WHERE SPECIFIED

- ON PLANS. THEY MAY ALSO BE USED AT THE CONTRACTOR'S OPTION IN LIEU OF LAP SPLICES AND WHERE REINFORCING IS SHOWN CONTINUOUS THROUGH CONSTRUCTION JOINTS. UNLESS NOTED OTHERWISE, ALL MECHANICAL BAR SPLICES SHALL BE "TYPE 2" AS DEFINED BY ACI 318 COUPLERS SHALL BE AND BE LENTON A2 SERIES MECHANICAL SPLICES
- (IAPMO ER-0129), OR EQUIVALENT, AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT,
- SLEEVES, AND EMBEDDED ITEMS, MAY BE CORRECTED PRIOR TO THE SCHEDULED POUR 10. CONCRETE PROTECTION FOR REINFORCEMENT: a. CAST-IN-PLACE CONCRETE. THE FOLLOWING MINIMUM CONCRETE

COVER SHALL BE PROVIDED FOR REINFORCEMENT:

MINIMUM CONC	RETE COVER	
ELEMENT	COVER	TOLERANCE (+/-)
PERMANENTLY CAST AGAINST OR PERMANENTLY EXPOSED TO EARTH	3"	¾"
EXPOSED TO EARTH OR WEATHER		
a) #6 THROUGH #18 BAR	2"	3/8"
b) #5 BAR OR SMALLER	1½"	3∕8"
NOT EXPOSED TO WEATHER OR CAST AGAINST GROUND	3/4"	1/4"

SUBMITTALS

- THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY THE DESIGN CONCEPT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK THEIR OWN SHOP DRAWINGS.
- THE STRUCTURAL SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN
- FOUND BY THE CONTRACTOR'S CHECKING. THE FOLLOWING SHOP DRAWINGS ARE NOT REQUIRED FOR SUBMITTAL FOR STRUCTURAL REVIEW: a. SHORING AND BRACING.
 - b. UNSPLICED REBAR AT SLAB-ON-GRADE AND SPREAD FOOTINGS. c. FORMWORK.
- d. STRUCTURAL STEEL MILL REPORTS. THE FOLLOWING SHOP DRAWINGS (AND CALCULATIONS WHEN APPLICABLE)
- ARE REQUIRED FOR SUBMITTAL FOR STRUCTURAL REVIEW: a. CONCRETE MIX DESIGNS. INCLUDING STRENGTH TEST RESULTS b. REINFORCING STEEL (EXCEPT WHERE NOTED BY NOTE 3 ABOVE)
- c. STRUCTURAL STEEL d. ANCHOR ROD CUT SHEET WITH DIAMETER, LENGTH, AND MATERIAL
- e. WELDING PROCEDURE SPECIFICATIONS ANY SUBMITTAL OF A DETAIL SHEET WITH ADDED INFORMATION NOT SHOWN ON PLANS SHALL BE ACCOMPANIED BY LOCATION PLAN IDENTIFYING THE MEMBERS INVOLVED AND CLOUDING AROUND ADDED
- INFORMATION. THE SHOP DRAWINGS SHALL REFERENCE THE DATA OF THE DESIGN USED TO PRODUCE THE SUBMITTAL.
- CONTRACTOR/SUBCONTRACTOR TO PROVIDE DIGITAL SET OF SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER. DIGITAL SET WILL BE RETURNED TO THE CONTRACTOR FOR DISTRIBUTION.

COLD FORMED STEEL

54 MIL / 16 GA AND HEAVIER

- ALL COLD-FORMED METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI \$100 "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"
- ALL COLD-FORMED STEEL SHALL CONFORM TO THE FOLLOWING (U.N.O): 43 MIL / 18GA AND LIGHTER | ASTM A1003, GR 33 OR ASTM 653, GR 33 ASTM A1003, GR 55 OR ASTM 653. GR 55
- 3. ALL COLD-FORMED STEEL SHALL HAVE A MINIMUM COATING PROTECTION

MIN. Fy = 55 ksi, MIN. Fu = 70 ksi

4. WELDING IS NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY THE

RODS SHALL CONFORM TO THE FOLLOWING:

ALL APPROVED WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR ALL APPROPRIATE DIRECTIONS COMPLYING WITH AWS D1.3. WELDING

43 MIL / 18GA AND LIGHTER	E60XX
54 MIL / 16 GA AND HEVIER	E70XX OR E6013
COLD FORMED TO STRUCTURAL STEEL	E70XX LOW HYDROGEN

- WIRE TYING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED. TEMPORARY BRACING REQUIREMENTS ARE THE RESPONSIBILITY OF THE
- ALL SCREWS SHALL BE FULLY DRIVEN AND PROTRUDE THE LARGER OF 3
- THREADS OR 1/4" THROUGH THE LAST MATERIAL JOINED. THERE SHALL BE NO SPACE BETWEEN JOINING MEMBERS AT THE SCREW LOCATION. ALL FIELD CUTTING OF MEMBERS SHALL BE BY SAWING OR SHEARING.
- TORCH OR PLASMA CUTTING OF MEMBERS SHALL NOT BE PERMITTED. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED ON AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL
- PROPERLY FASTENED. 11. SPLICING OF PURLINS OR OTHER LOAD CARRYING MEMBERS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF
- RECORD 12. WHEN CLIP ANGLES WITH SCREW CONNECTIONS ARE USED TO ATTACH A COMPONENT TO THE PRIMARY STRUCTURE, THE CLIP ANGLE SHALL BE FASTENED TO THE PRIMARY STRUCTURE FIRST; THEN THE COMPONENT SHALL BE BROUGHT TO BEAR ON THE STRUCTURE AND FASTENED TO THE
- CLIP ANGLE 13. MEMBERS SHALL BE IDENTIFIED PER SECTION 2202A.1 OF 2022 CBC PART 2,
- ALL EXTERIOR SCREWS SHALL BE ELCO DRIL-FLEX (ICC ESR-3332) OR ITW BUILDEX TEKS SELECT (ICC ESR-3223) UNLESS APPROVED BY THE SEOR.

STRUCTURAL INSPECTION AND TESTING

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER CHAPTER 17 OF THE CODE. U.N.O.

SPECIAL INSPECTIONS AND TESTING SHALL BE PROVIDED BY AN INSPECTION AGENCY, EMPLOYED BY THE OWNER, AND QUALIFIED BY THE BUILDING OFFICIAL TO INSPECT THE PARTICULAR TYPE OF CONSTRUCTION. TESTS AND INSPECTIONS, AS REQUIRED BY SECTIONS 110.3 & 1705A OF THE 2022 CBC W/ CALIFORNIA AMENDMENTS, SHALL BE PERFORMED DURING CONSTRUCTION ON THE TYPES OF WORK LISTED BELOW:

TESTING AND INSPECTION								
	INSPECTIONS TESTING							
STEEL CONSTRUCTION	1705A.2	1705A.13						
CONCRETE CONSTRUCTION	1705A.3	1705A.3						
SOILS	1705A.6	1705A.6						
CAST IN-PLACE DEEP FOUNDATIONS	1705A.8	1705A.8						

- THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE GOVERNING JURISDICTION. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF AN INSPECTOR FROM THE GOVERNING JURISDICTION IS SUBJECT TO REMOVAL OR EXPOSURE.
- FOR CONTINUOUS INSPECTION, WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED IN ACCORDANCE WITH THE PROVISIONS OF THE CODE, IT IS THE AGENT'S RESPONSIBILITY TO EMPLOY A SUFFICIENT NUMBER OF INSPECTORS TO ASSURE THAT ALL WORK IS INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.
- THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION. EXCEPTIONS:
 - a. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD OR PROJECT **INSPECTOR**
- b. WHEN WAIVED BY THE GOVERNING JURISDICTION 5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST TWO WORKING DAYS PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL
- INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL. PROVIDE SPECIAL INSPECTION FOR CONNECTIONS BOLTED WITH A325 AND A490 BOLTS. INSPECTIONS SHALL BE DONE PER APPROVED NATIONALLY RECOGNIZED STANDARDS AND THE REQUIREMENTS OF THE CODE AND THE GOVERNING JURISDICTION. WHILE THE WORK IS IN PROGRESS, THE SPECIAL INSPECTOR SHALL
- DETERMINE THE BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS; AND INSTALLATION AND TIGHTENING MEET THE STANDARDS REQUIREMENTS. THE SPECIAL INSPECTOR FOR HIGH STRENGTH BOLTED CONNECTIONS SHALL: a. OBSERVE THE CALIBRATION PROCEDURES WHEN SUCH PROCEDURES
 - ARE REQUIRED BY THE PLANS OR SPECIFICATIONS. b. MONITOR THE INSTALLATION OF BOLTS TO DETERMINE THAT ALL PLIES OF CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER.

c. MONITOR THAT THE SELECTED PROCEDURE IS PROPERLY USED TO

TIGHTEN ALL BOLTS. 8. IF DEEMED NECESSARY, THE SPECIAL INSPECTOR SHALL PROVIDE PROGRESS

REPORTS AND A FINAL REPORT TO THE STRUCTURAL ENGINEER.

- THE SPECIAL INSPECTOR SHALL ENSURE THAT ALL DEFICIENCIES NOTED BY THE STRUCTURAL ENGINEER IN STRUCTURAL OBSERVATION REPORTS ARE CORRECTED. SUCH COMPLIANCE SHALL BE REFERENCED IN SPECIAL INSPECTOR
- 10. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE GOVERNING JURISDICTION, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND, EQUIPMENTS.
- 11. PERIODIC INSPECTION SHALL OCCUR FREQUENTLY ENOUGH TO INSPECT ALL OF THE INSTALLED ITEMS AND TO PERIODICALLY WITNESS THE INSTALLATION OF THE

STRUCTURAL STEEL

- 1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC 360 AND AISC 303.
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (U.N.O.):

MINIMUM MATERIAL PROPERTIES					
ELEMENT	ASTM				
BASE PLATES & CAP PLATES	A572, GR 50				
ALL OTHER PLATES	A36, GR 36 OR DUAL GRADE				
WF MATERIAL	A992, GR 50				
HSS MATERIAL	A500, GR C, 50 KSI				
STRUCTURAL PIPES	A53, GR B				
HIGH STRENGTH BOLTS	A325				
MACHINE BOLTS	A307				
ANCHOR BOLTS	F1554, GR 105				

- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.
- 4. HOLES IN STEEL SHALL BE 1/16" LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED. COLUMN BASE PLATE HOLES MAY BE
- OVERSIZED PER AISC MANUAL OR AS NOTED. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, MASONRY, OR SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.
- 6. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED OR PAINTED AFTER
- FABRICATION, U.N.O. 7. GALVANIZING AT FIELD WELDS AND DAMAGE SHALL BE REPAIRED WITH A
- GALVANIZING REPAIR PAINT ACCORDING TO ASTM A780. TIGHTEN HIGH STRENGTH BOLTS TO "SNUG-TIGHT" CONDITION PER AISC SPECIFICATION FOR STRUCTURAL JOINTS, U.N.O.
- 9. PROVIDE BEVELED WASHERS PER ANSI B18.23.1 AS REQUIRED ON SLOPED SURFACES
- 21. GROUT OTHER SHALL BE NON-SHRINK, NON-METALLIC GROUT, MEETING ASTM C-1107, MIXED AND INSTALLED PER MANUFACTURER'S
- 22. TIGHTEN ANCHOR BOLTS TO "SNUG TIGHT" CONDITION PER AISC
- SPECIFICATIONS, U.N.O. 23. WELDING: 24. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS
- AND AWS D1.1, SEE SPECIAL INSPECTION SECTION FOR WELDING INSPECTION REQUIREMENTS. a. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX
- ELECTRODES (U.N.O.). b. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE
- WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360. c. WELDS TERMINATING AT ENDS OR SIDES, WHERE PRACTICAL, SHALL BE RETURNED CONTINUOUSLY AROUND CORNERS A

LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN

DISTANCE 2 TIMES THE NOMINAL SIZE OF THE WELD PER AISC 360 SECTION J2.2B, U.N.O. d. ALL FULL-PENETRATION FIELD WELDS SHALL BE ULTRASONICALLY

REQUIREMENTS FOR BACK-UP PLATES AND WELD TRANSITIONS

- TESTED.
- e. ALL TWO-SIDED FILLET WELDS SHOWN SHALL BE WELDED WITH THE SAME (GIVEN) WELD SIZE ON BOTH SIDES.
- f. ALL UNSIZED GROOVE OR BUTT WELDS SHOWN SHALL BE COMPLETE PENETRATION. a. ALL PROVISIONS OF AWS SHALL BE OBSERVED INCLUDING
- WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN h. A WRITTEN WELDING PROCEDURE SPECIFICATION SHALL BE SUBMITTED TO THE TESTING LABORATORY, IT SHALL INCLUDE ALL WELDING PROCEDURES TO BE USED AS DESCRIBED IN AWS.
- CHAPTER 4. i. WHERE FIELD WELDING IS INDICATED, THE FIELD DESIGNATION IS GIVEN AS A RECOMMENDATION ONLY.

SHEET INDEX

S200

S210

S300

S310

S400

S500

GENERAL STRUCTURAL NOTES

FRAMING PLAN & SCHEDULE

FRAMING PLAN & SCHEDULE

SECTION - 5X

SECTION - 6X FOUNDATION & ANCHORAGE DETAILS

STEEL DETAILS

SYSTEM DEVELOPER



SAN JOSE, CA 95119





10620 Treena Street, Suite 140, San Diego, CA 92131

STRUCTURAL ENGINEERING AND STEEL CONSTRUCT

ELECTRICAL CONSTRUCTORS AND ENGINEERS

ARCHITECT / ENGINEER OF RECORD



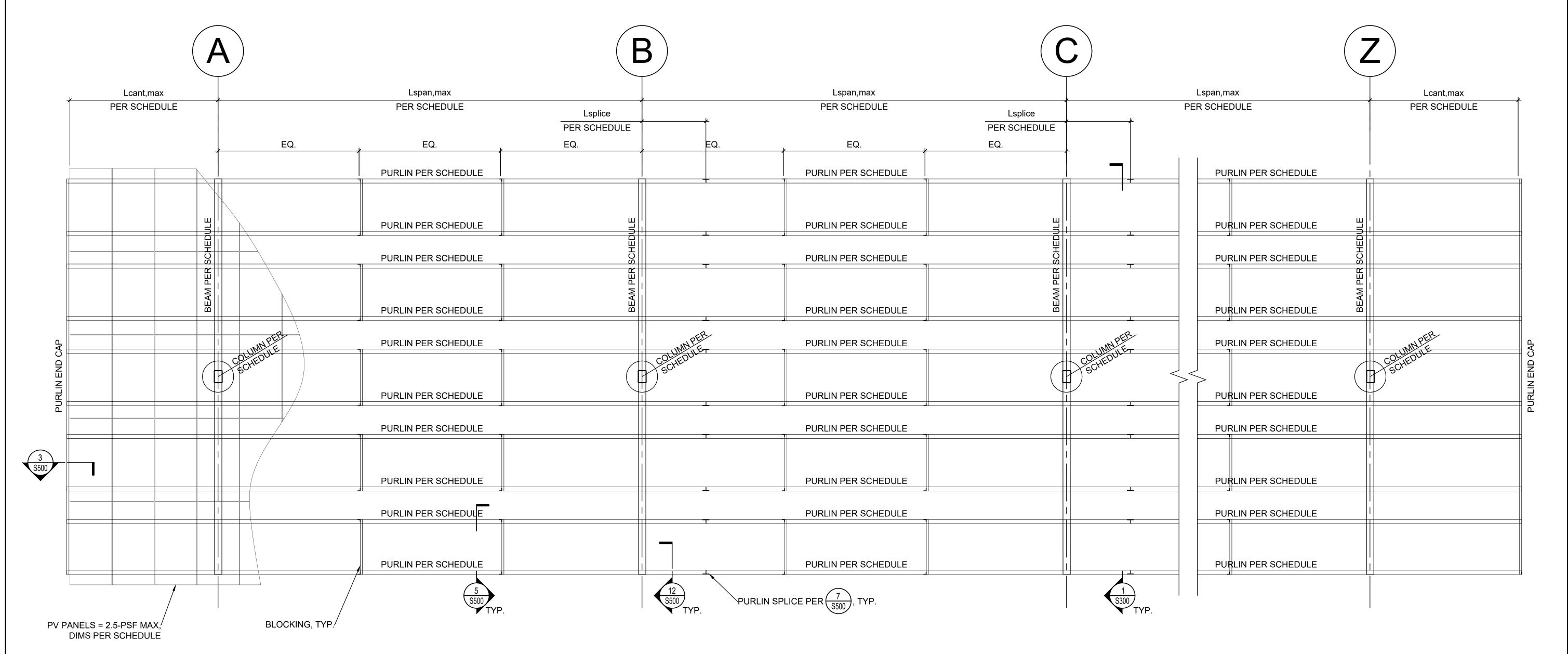
PEBBLE BEACH **COMPANY - EMPLOYEE PARKING LOT**

2700 17 MILE DR. PEBBLE BEACH, CA 93953

NO.	REVISION	DATE

GENERAL STRUCTURAL

06.21.23



1	FRAMING PLAN	
	SCALE: ½" = 1'-0"	

						MEMBER & DIME	NSIONAL SCHEDULE	<u> </u>				<u> </u>	
ARRAY	ARRAY SIZE	# OF COLUMNS	COLUMN	BEAM	PURLIN	PANEL LENGTH	PANEL WIDTH	MAX SPAN LENGTH, Lspan	MAX CANT. LENGTH, Lcant	SPLICE LENGTH, Lsplice	MAX. COLUMN LENGTH	MIN. CLEARANCE	TILT
1, 6, 9, 10	5x27	3	HSS12x8x ⁵ ⁄ ₁₆	W14x30	10X4X14GA	93.9"	44.6"	37'-7½"	13'-1¾"	5'-7¾"	17'-0"	13'-6"	7°
7	5x47	5	HSS12x8x ⁵ ⁄ ₁₆	W14x30	10X4X14GA	93.9"	44.6"	37'-7½"	13'-1¾"	5'-7¾"	17'-0"	13'-6"	7°
8	5x34	4	HSS12x8x ⁵ ⁄ ₁₆	W14x30	10X4X14GA	93.9"	44.6"	37'-7½"	9'-45%"	5'-7¾"	17'-0"	13'-6"	7°

2 SCHEDULE NO SCALE SYSTEM HOST

SYSTEM DEVELOPER



23 LAS COLINAS LN.
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PROJEC

PEBBLE BEACH COMPANY - EMPLOYEE PARKING LOT

2700 17 MILE DR. PEBBLE BEACH, CA 93953

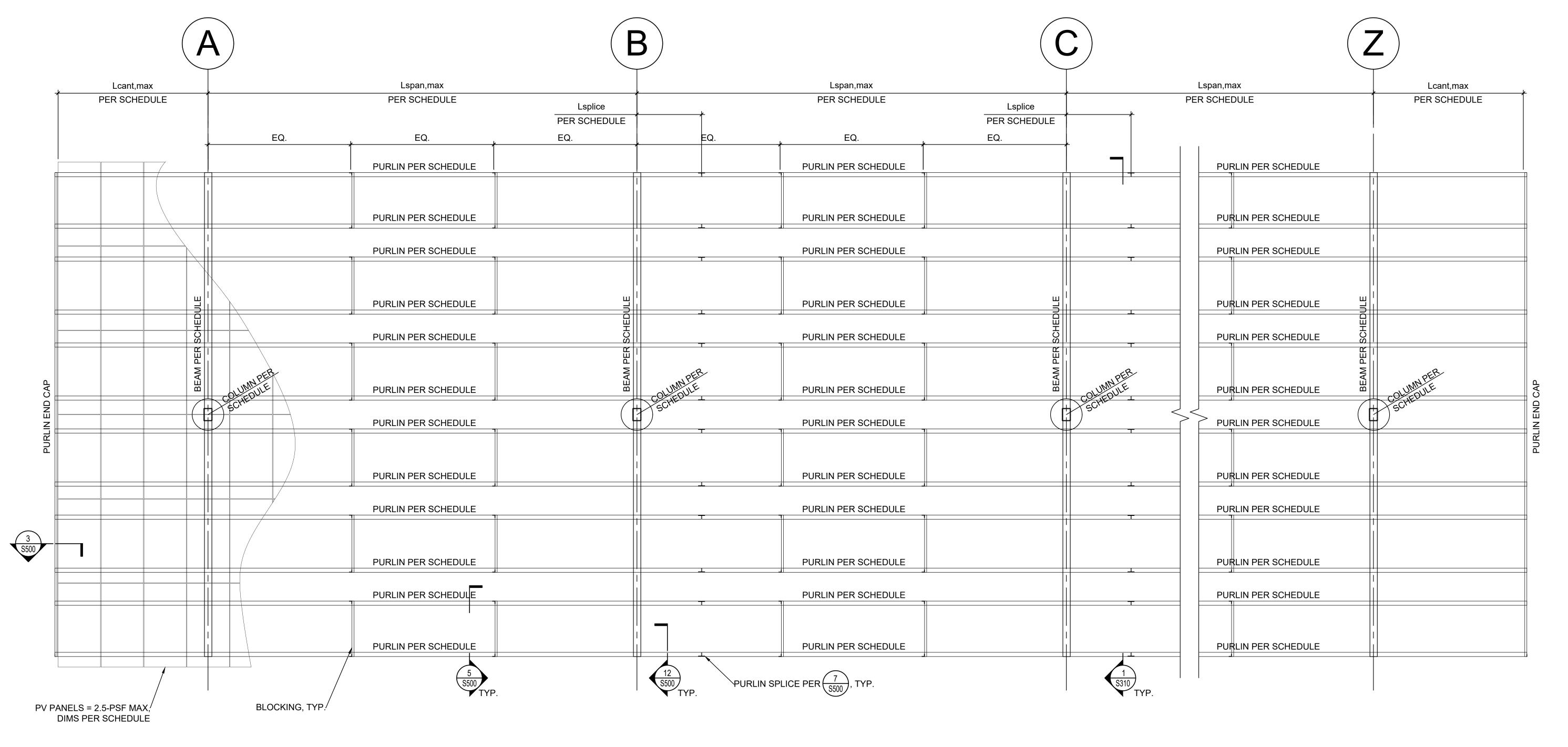
NO.	REVISION	DATE	

06.21.23

SHEET TITLE

FRAMING PLAN & SCHEDULE

SHEET NO.:



1	FRAMING PLAN SCALE: 1/4" = 1'-0"
	SCALE: ½" = 1'-0"

	MEMBER & DIMENSIONAL SCHEDULE												
ARRAY	ARRAY SIZE	# OF COLUMNS	COLUMN	BEAM	PURLIN	PANEL LENGTH	PANEL WIDTH	MAX SPAN LENGTH, Lspan	MAX CANT. LENGTH, Lcant	SPLICE LENGTH, Lsplice	MAX. COLUMN LENGTH	MIN. CLEARANCE	TILT
2	6x17	2	HSS12x8x ³ / ₈	W14x38	10X4X14GA	93.9"	44.6"	37'-7½"	13'-1¾"	-	17'-0"	13'-6"	7°
3	6x24	3	HSS12x8x ³ / ₈	W14x43	10X4X14GA	93.9"	44.6"	37'-7½"	9'-4 ⁵ / ₈ "	5'-7¾"	17'-0"	13'-6"	7°
4	6x27	3	HSS12x8x ³ / ₈	W14x43	10X4X14GA	93.9"	44.6"	37'-7½"	13'-1¾"	5'-7¾"	17'-0"	13'-6"	7°
5	6x32	4	HSS12x8x ³ / ₈	W14x43	10X4X14GA	93.9"	44.6"	37'-7½"	9'-45/8"	5'-7¾"	17'-0"	13'-6"	7°



SYSTEM HOS

SYSTEM DEVELOPER



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PEBBLE BEACH COMPANY - EMPLOYEE PARKING LOT

2700 17 MILE DR. PEBBLE BEACH, CA 93953

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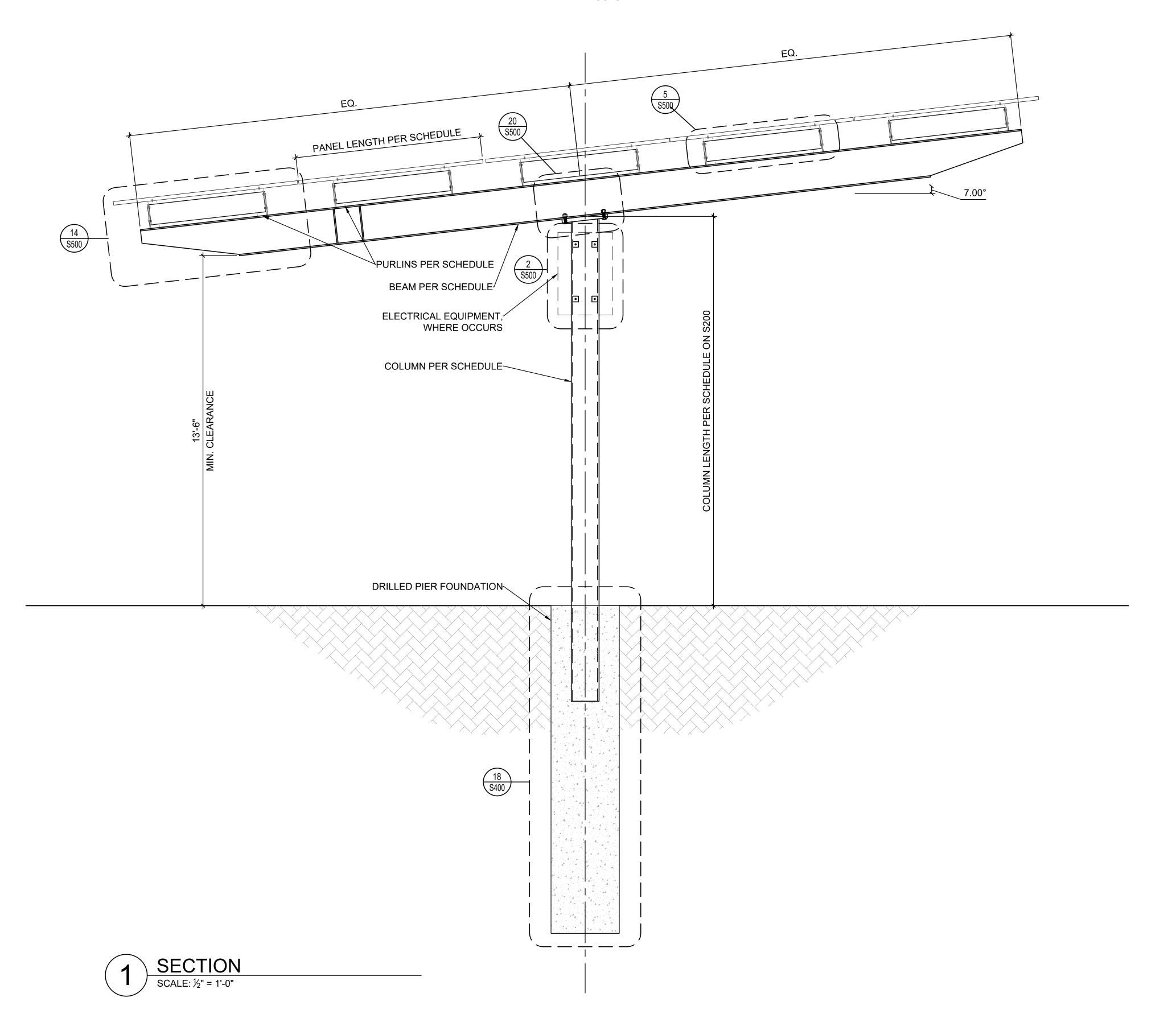
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SHEET TITLE

FRAMING PLAN & SCHEDULE

SHEET NO.:

€ COLUMN



STEM HOST

SYSTEM DEVELOPER



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PEBBLE BEACH COMPANY - EMPLOYEE PARKING LOT

2700 17 MILE DR. PEBBLE BEACH, CA 93953

NO.	REVISION	DATE

TE: 06.21.23

SHEET TI

SECTION

SHEET

€ COLUMN PANEL LENGTH PER SCHEDULE PURLINS PER SCHEDULE BEAM PER SCHEDULE ELECTRICAL EQUIPMENT, WHERE OCCURS COLUMN PER SCHEDULE— DRILLED PIER FOUNDATION SECTION
SCALE: ½" = 1'-0"

SYSTEM HOST

SYSTEM DEVELOPER



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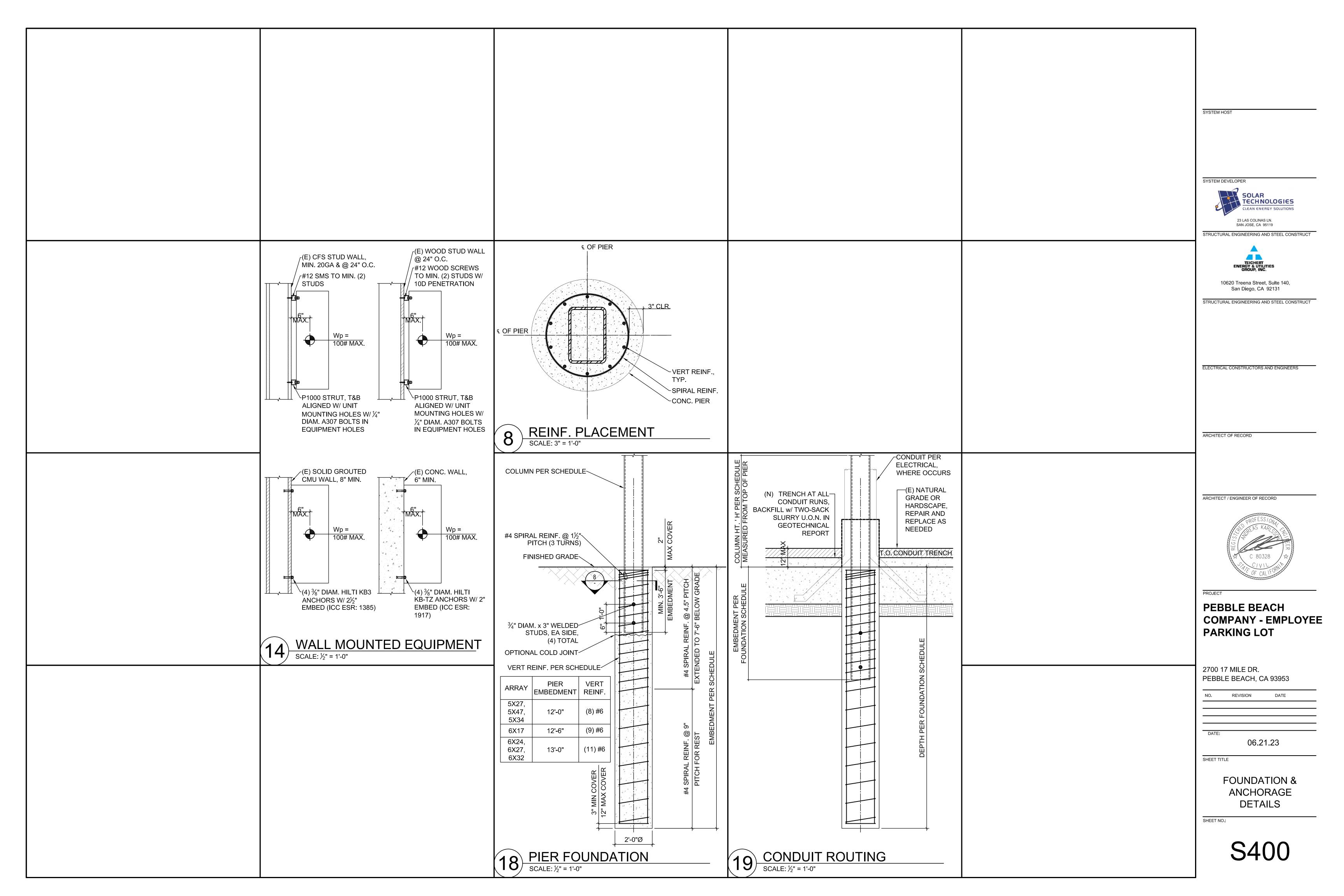
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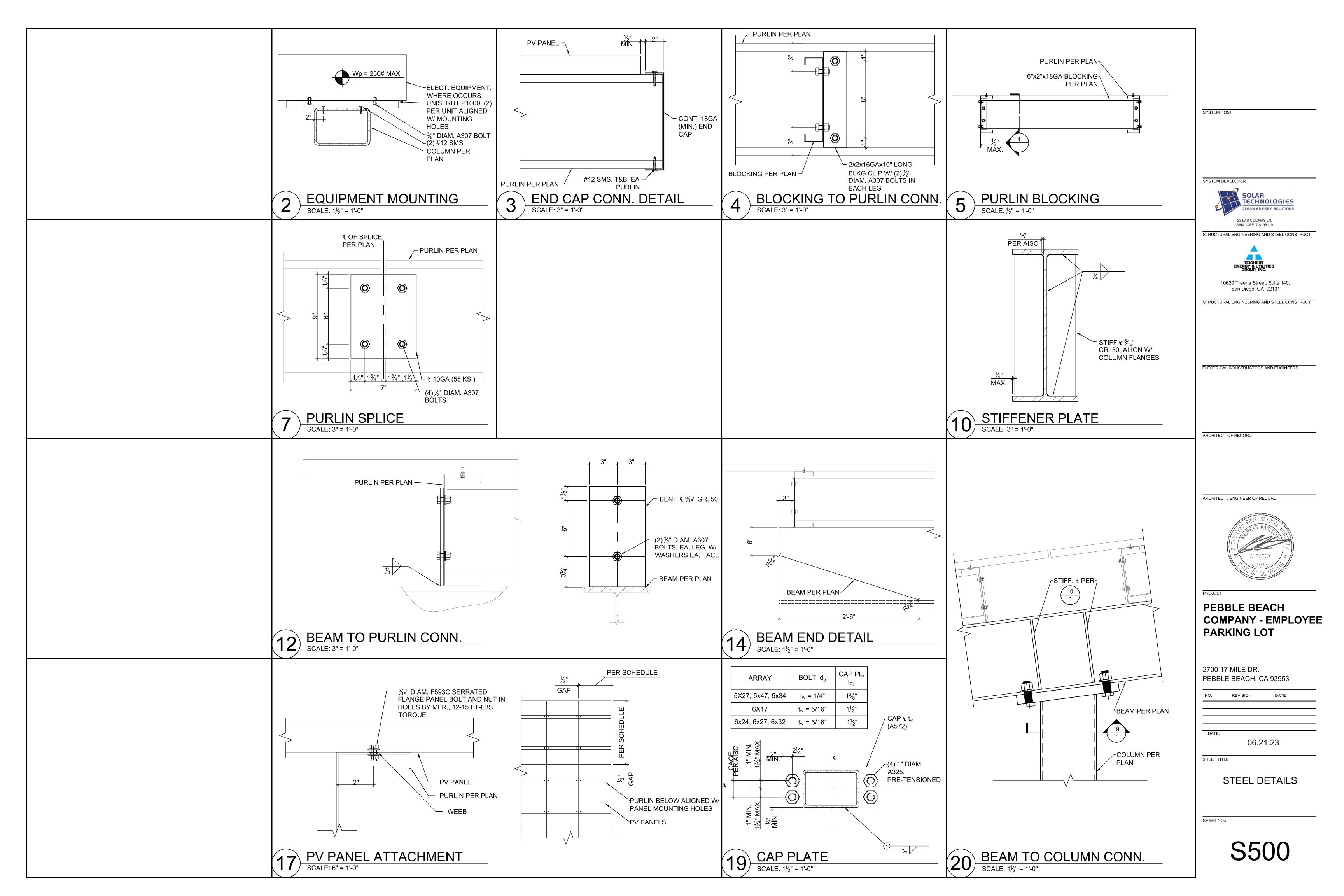
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SHEET TITLE

SECTION

SHEET

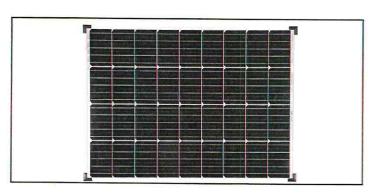




PLN240062 COLOR SAMPLES FOR PROJECT FILE NO.

Purlins have Solar panel frame are galvanized finish aluminum material with and end caps silver finish All PV wire will be black in color Columns and beams painted Baby Seal Gray Colors: See above

Materials: See above Description: Solar Canopy



Materials:	Silicon solar cells, metal frame, and glass.	Colors: Black and Gray
Description:	Solar Panels	
	2.	
Mataulala		
Materials: Description:		Colors: