

CLAREMONT COLLEGE SERVICES SOLAR PHOTOVOLTAIC SYSTEM 101 N. MILLS AVE. CLAREMONT, CA 91711

ATTACHMENT B



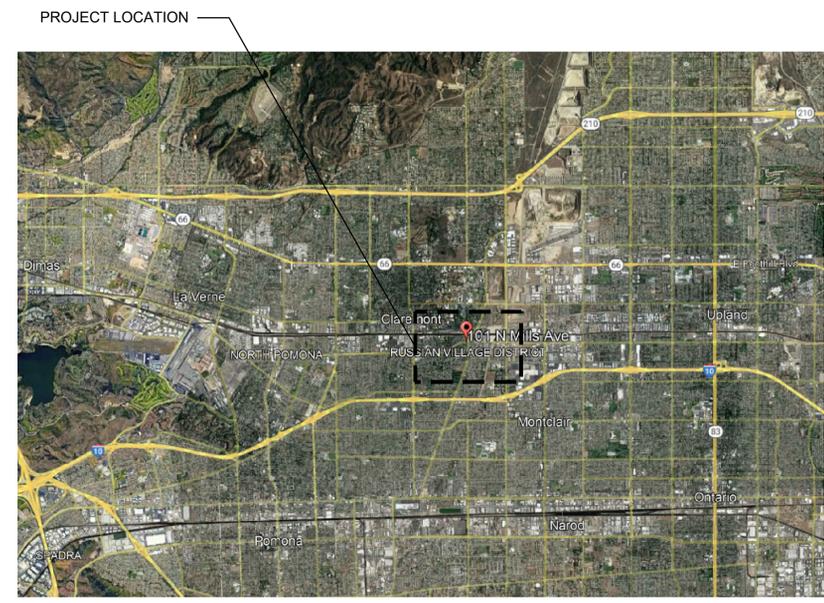
1888 PROCTOR AVE. SUITE 401 SAN JOSE, CA 95128
P: (408) 861-4411 F: (408) 861-8440
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REV	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	10/01/2024
2	RESPONSE TO COMMENTS	04/10/2025
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PROJECT SCOPE:

- SCOPE INCLUDES INSTALLATION OF SOLAR PHOTOVOLTAIC ARRAYS WITH RELATED HARDWARE AND ELECTRICAL EQUIPMENT FOR SOLAR SUPPORT STRUCTURES.
- AREA OF EACH ARRAY SHOWN IN "AREA OF WORK" TABLE ON G1.0
 - INSTALLATION AND WIRING OF ELECTRICAL EQUIPMENT RELATED TO PV SYSTEMS.
 - REMOVE EXISTING LIGHT POLES AND REPLACE WITH LIGHT FIXTURES UNDER NEW SOLAR SUPPORT STRUCTURE
 - REMOVE IMPEDING TREES.

VICINITY MAP:



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SYSTEM SPECIFICATIONS

SOLAR MODULE	TRINA VERTEX N TSM-NEG19RC.20 605W
NUMBER OF MODULES	1,323
SYSTEM SIZE	800.4 (kW DC), 636 (kW AC)
SQ FOOTAGE	39,054
APPLICABLE CODES	2022 CBC 2022 CEC 2022 CFC CLAREMONT MUNICIPAL CODE UL STANDARDS OSHA CFR 1910.269
OCCUPANCY	S2
TYPE OF CONSTRUCTION	IIB
DESCRIPTION OF USE	SOLAR SUPPORT STRUCTURES
COLOR FINISH	HSS BEAMS & COLUMNS TO BE KENDALL CHARCOAL, BM HC-166 KELLY MOORE FORMULA: 20-1067-080

SITE MAP:



PROJECT TEAM:

CONTRACTOR MBL ENERGY 954 HAMPSWOOD WAY SAN JOSE, CA 95120 TEL: (408) 467-0150	OWNER CLAREMONT COLLEGES SERVICES 101 S. MILLS AVE CLAREMONT, CA 91711 TEL: (209) 825-0288
ELECTRICAL ENGINEER NATRON RESOURCES 1480 MORAGA RD. SUITE C #229 MORAGA, CA 94556 TEL: (510) 868-0701	STRUCTURAL ENGINEER PV CANOPY AND EQUIPMENT PADS ALEX (ALI) HAJIHASHEMI, SE, PE AHZ CONSULTING ENGINEERING, INC. TEL: (949) 466-1544
GEOTECHNICAL ENGINEER TGR GEOTECHNICAL, INC. 3037 S. HARBOR BLVD. SANTA ANA, CA 92704	

PROJECT NOTES:

CONSTRUCTION DOCUMENTS SHALL BE DIMENSIONED AND DRAWN UPON SUITABLE MATERIAL. ELECTRONIC MEDIA DOCUMENTS ARE PERMITTED TO BE SUBMITTED WHEN APPROVED BY THE BUILDING OFFICIAL. CONSTRUCTION DOCUMENTS SHALL BE OF SUFFICIENT CLARITY TO INDICATE THE LOCATION, NATURE AND EXTENT OF THE WORK PROPOSED AND SHOW IN DETAIL THAT IT WILL CONFORM TO THE PROVISIONS OF THIS CODE AND RELEVANT LAWS, ORDINANCES, RULES AND REGULATIONS, AS DETERMINED BY THE BUILDING OFFICIAL. PER (CBC [A] 107.2.1)

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TITLE	
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APPROVED BY:	RO
SHEET	T

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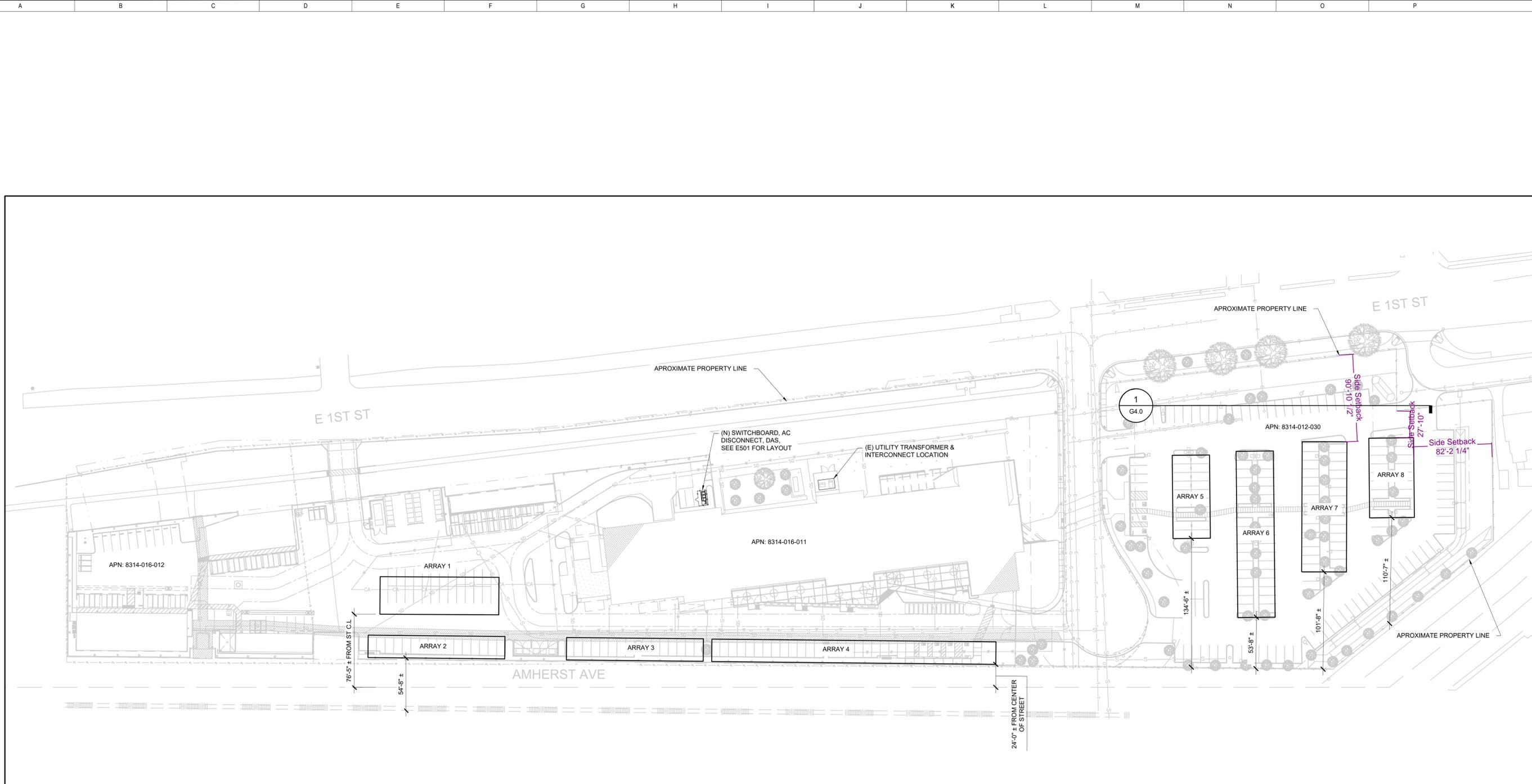
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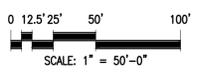
PV SITE PLAN

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SHEET
G1.0



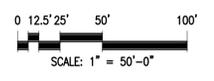
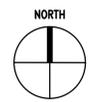
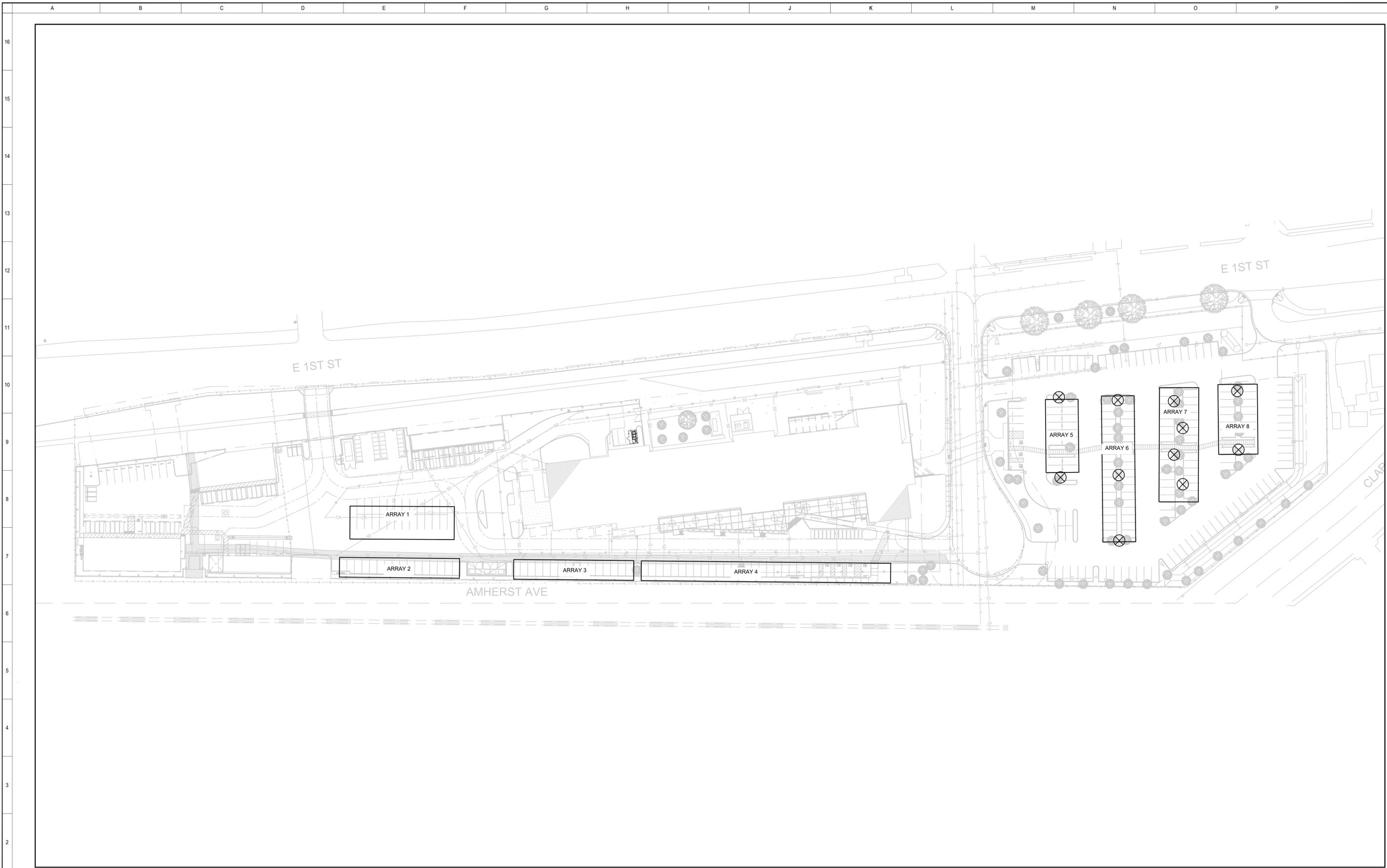
ARRAYS		
ARRAY#	MODULES	ARRAY AREA (FT ²)
ARRAY1	165	4,873
ARRAY2	114	3,363
ARRAY3	114	3,363
ARRAY4	237	6,985
ARRAY5	115	3,400
ARRAY6	230	6,788
ARRAY7	216	6,379
ARRAY8	132	3,903
TOTAL	1323	39,054



PV SITE PLAN
SCALE: 1" = 50'

LEGEND

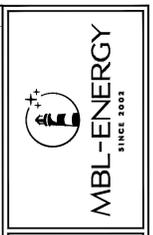
-  AREA OF WORK
-  PROPERTY LINE



LIGHT POLE DEMOLITION PLAN
SCALE: 1" = 50'

LEGEND

⊗ REMOVE (11) LIGHT POLES



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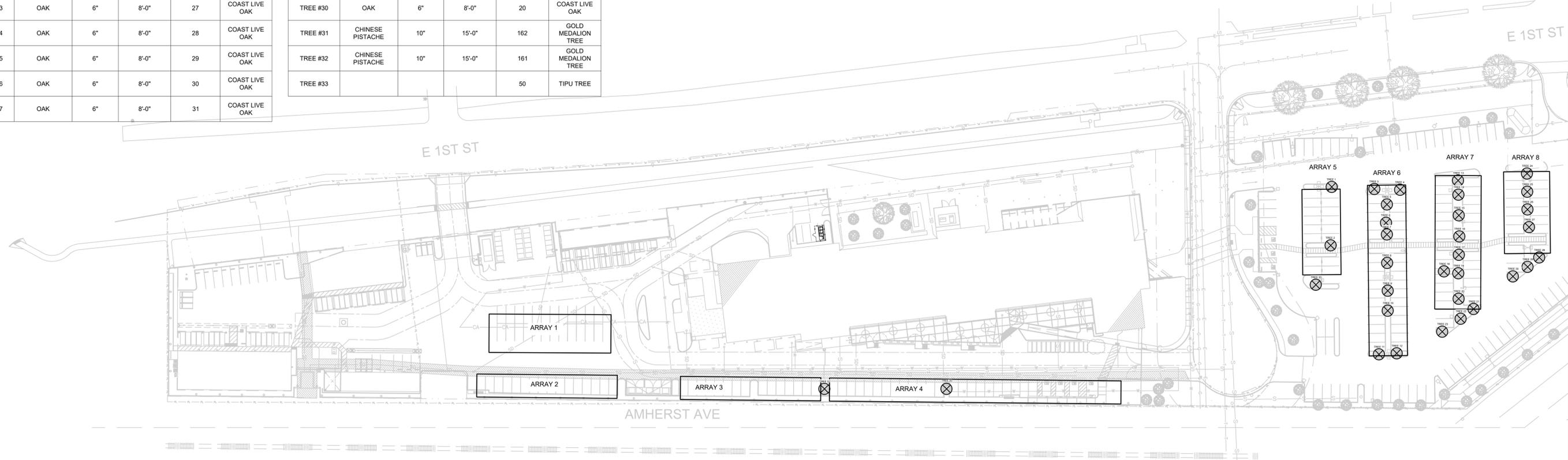
LIGHT POLE DEMOLITION PLAN

DRAWN BY: NE
APPROVED BY: RO
SHEET

G2.0

TREE REMOVAL TABLE					
TREE#	SPECIES	TRUNK DIAMETER (MAX APPROX.)	CANOPY DIAMETER (MAX APPROX.)	ARBORIST TREE #	ARBORIST COMMON NAME
TREE #1	SWEET BAY LAUREL	10"	18'-0"	48	COAST LIVE OAK
TREE #2	CHINESE PISTACHE	10"	18'-0"	49	COAST LIVE OAK
TREE #3	OAK	6"	8'-0"	47	COAST LIVE OAK
TREE #4	CHINESE PISTACHE	12"	20'-0"	46	TIPU TREE
TREE #5	OAK	6"	8'-0"	45	COAST LIVE OAK
TREE #6	OAK	6"	8'-0"	44	COAST LIVE OAK
TREE #7	OAK	6"	8'-0"	43	COAST LIVE OAK
TREE #8	OAK	6"	8'-0"	42	COAST LIVE OAK
TREE #9	CHINESE PISTACHE	6"	12'-0"	41	COAST LIVE OAK
TREE #10	OAK	6"	8'-0"	40	COAST LIVE OAK
TREE #11	OAK	6"	8'-0"	38	COAST LIVE OAK
TREE #12	OAK	10"	18'-0"	39	COAST LIVE OAK
TREE #13	OAK	6"	8'-0"	27	COAST LIVE OAK
TREE #14	OAK	6"	8'-0"	28	COAST LIVE OAK
TREE #15	OAK	6"	8'-0"	29	COAST LIVE OAK
TREE #16	OAK	6"	8'-0"	30	COAST LIVE OAK
TREE #17	OAK	6"	8'-0"	31	COAST LIVE OAK

TREE REMOVAL TABLE					
TREE#	SPECIES	TRUNK DIAMETER (MAX APPROX.)	CANOPY DIAMETER (MAX APPROX.)	ARBORIST TREE #	ARBORIST COMMON NAME
TREE #18	OAK	6"	8'-0"	32	GOLD MEDALION TREE
TREE #19	OAK	6"	8'-0"	33	COAST LIVE OAK
TREE #20	OAK	6"	8'-0"	34	COAST LIVE OAK
TREE #21	OAK	6"	8'-0"	35	COAST LIVE OAK
TREE #22	OAK	6"	8'-0"	36	COAST LIVE OAK
TREE #23	OAK	6"	8'-0"	37	COAST LIVE OAK
TREE #24	OAK	6"	8'-0"	26	COAST LIVE OAK
TREE #25	OAK	6"	8'-0"	25	COAST LIVE OAK
TREE #26	OAK	6"	8'-0"	24	COAST LIVE OAK
TREE #27	OAK	6"	8'-0"	23	COAST LIVE OAK
TREE #28	OAK	6"	8'-0"	22	COAST LIVE OAK
TREE #29	OAK	6"	8'-0"	21	COAST LIVE OAK
TREE #30	OAK	6"	8'-0"	20	COAST LIVE OAK
TREE #31	CHINESE PISTACHE	10"	15'-0"	162	GOLD MEDALION TREE
TREE #32	CHINESE PISTACHE	10"	15'-0"	161	GOLD MEDALION TREE
TREE #33				50	TIPU TREE



NOTES:
 ANY TREE REMOVED WILL BE REPLACED WITH ANOTHER TREE AT ANOTHER DESIGNATED LOCATION ON CAMPUS - TBD BY CUSTOMER.

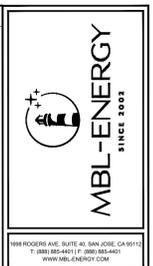


TREE REMOVAL PLAN

SCALE: 1" = 50'

LEGEND

REMOVE (32) TREES, REPLACE TO (E) SURROUNDING LANDSCAPE CONDITION



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TREE REMOVAL PLAN
 DRAWN BY: DG
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G3.0

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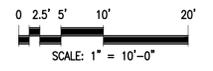
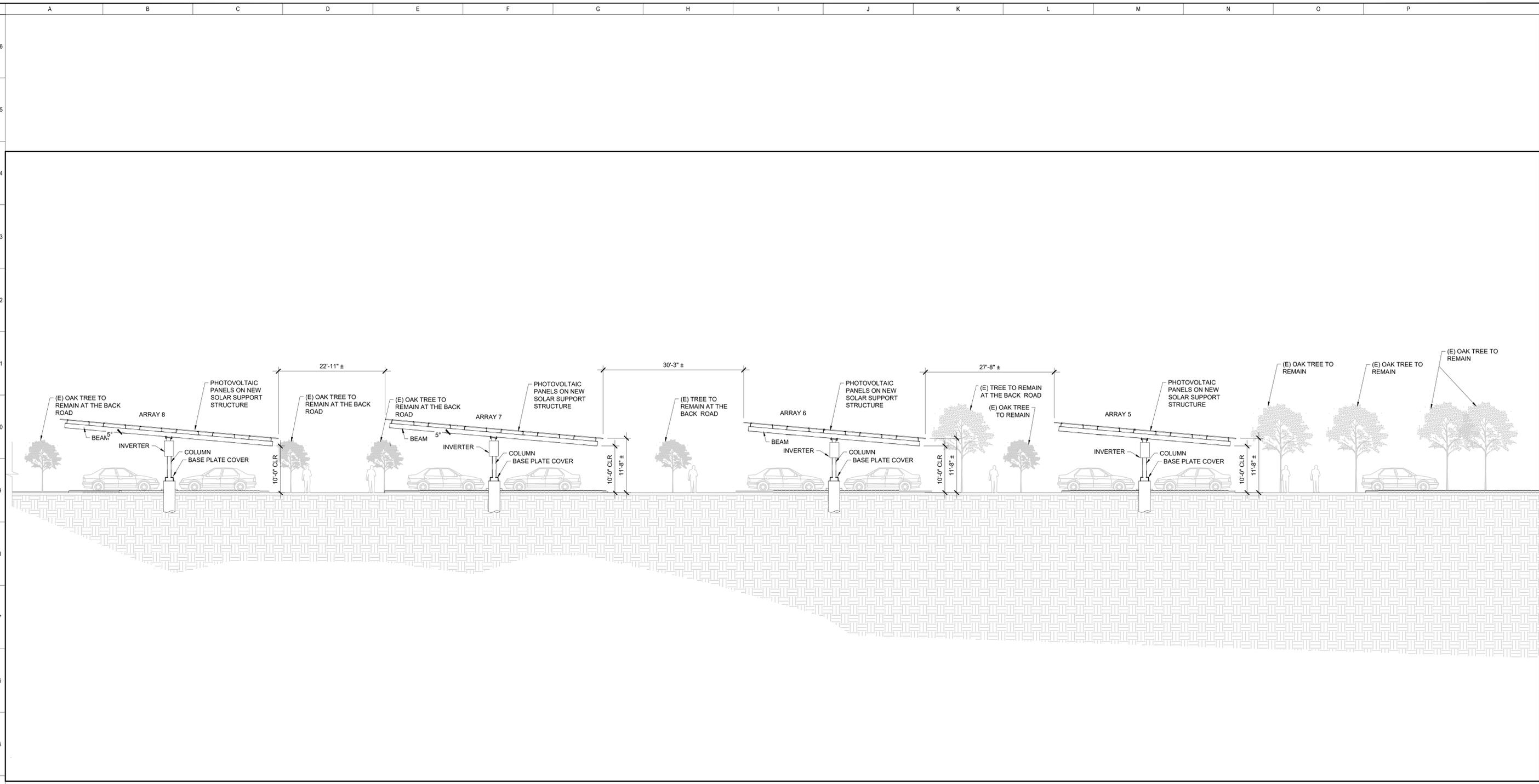
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SITE ELEVATION PLAN

DRAWN BY: RO
APPROVED BY: J

SHEET
G4.0



SITE ELEVATION PLAN
SCALE: 1" = 10'

NOTE: SEE SC3.0 - SC3.2 FOR SOLAR STRUCTURE DETAILS



SITE & SAMPLE ARRAY PHOTOS

SCALE: NTS



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SITE & SAMPLE ARRAY PHOTOS

DRAWN BY: RO

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SHEET

G5.0

GENERAL

- 1. THE JOB SITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER, SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT AND SHALL BE CLEANED AT THE END OF EACH WORKING DAY.
2. CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND AS REQUIRED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND LOCALLY ENFORCED CODES AND AUTHORITIES.
3. IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN, THEIR CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR FEATURES.
4. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.
5. MATERIALS STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION UNTIL USE.

EARTHWORK

- 1. CONTRACTOR SHALL CAREFULLY EXCAVATE ALL MATERIALS NECESSARY FOR CONSTRUCTION OF THE WORK. ANY MATERIAL OF AN UNSUITABLE OR DELETERIOUS NATURE DISCOVERED BELOW THE BOTTOMS OF THE FOUNDATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE GEOTECHNICAL ENGINEER.
2. CONTRACTOR SHALL READ FULL APPROVED GEOTECHNICAL REPORT PRIOR TO STARTING ANY WORK.

CAST-IN-PLACE CONCRETE PIERS

- 1. DRILLED HOLES FOR CAST-IN-PLACE CONCRETE PIERS SHALL BE DRILLED TO THE DIAMETERS AND DEPTHS SHOWN ON THE PLANS.
2. DRILLED HOLES SHALL BE EXAMINED FOR STRAIGHTNESS AND ANY HOLE SHOWING AN OUT OF PLUMB TOLERANCE IN EXCESS OF 2% OF THE TOTAL HOLE DEPTH SHALL BE REJECTED.
3. LOOSE MATERIAL EXISTING AT THE BOTTOM OF THE HOLE AFTER DRILLING OPERATIONS HAVE BEEN COMPLETED SHALL BE REMOVED BEFORE PLACING REINFORCING STEEL OR CONCRETE IN THE HOLE.
4. CASING, IF USED IN DRILLING OPERATIONS, SHALL BE REMOVED FROM THE HOLE AS CONCRETE IS PLACED THEREIN.
5. CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO 'MUSHROOMING' EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
6. REMOVAL OF SHORING SHALL COMPLY WITH ACI, ACI 301, AND RECOMMENDATIONS IN ACI 347R.
7. STEEL COLUMNS, BEAMS, AND PURLINS MAY BE ERECTED 24 HOURS AFTER FOUNDATION PLACEMENT OR AFTER CONCRETE REACHES A COMPRESSIVE STRENGTH OF 1000 PSI, WHICHEVER COMES FIRST.

CONCRETE

- 1. WORK DONE UNDER THIS SECTION SHALL CONFORM WITH THE APPLICABLE PORTIONS OF ACI 318, LATEST EDITION.
2. POURED IN PLACE CONCRETE WORK SHALL BE CONSTRUCTED OF NORMAL WEIGHT, PORTLAND CEMENT CONCRETE, HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
3. AGGREGATES: COARSE AGGREGATES SHALL CONFORM TO ASTM C 33 SIZE 57 (1" MAX).
4. NEWLY PLACED CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE PROVISIONS IN ACI 308, "STANDARD PRACTICE FOR CURING CONCRETE," LATEST EDITION.
5. METAL ANCHORAGE DEVICES, ANCHOR RODS, ETC. SHALL BE SECURED IN PLACE AND INSPECTED PRIOR TO PLACING CONCRETE.
6. CONCRETE COVERAGE AROUND ALL APPURTENANCES (IE CONDUIT, REBAR, ANCHORS) SHALL HAVE A MINIMUM OF 3" CLEARANCE WHERE EXPOSED TO EARTH, AND 2" AT ALL OTHER AREAS UNLESS NOTED OTHERWISE.
7. REFER TO ACI 318 TABLES 4.2.1 AND 4.3.1 FOR CONCRETE SPECIFICATIONS TO ADDRESS DIFFERENT EXPOSURE CLASSES INDICATED IN SITE SPECIFIC GEOTECHNICAL REPORT.

EMBEDMENTS IN CONCRETE

- 1. CONDUITS AND PIPES, WITH THEIR FITTINGS, EMBEDDED WITHIN A COLUMN SHALL NOT DISPLACE MORE THAN 4 PERCENT OF THE AREA OF CROSS SECTION ON WHICH STRENGTH IS CALCULATED OR WHICH IS REQUIRED FOR FIRE PROTECTION.
2. CONDUITS AND PIPES SHALL HAVE AN OUTSIDE DIAMETER NO GREATER THAN 3 3/8" AND SPACED NO LESS THAN 1" CLEAR FROM EACH OTHER OR THE REINFORCEMENT.
3. CONDUITS AND PIPES SHALL BE SPACED A MINIMUM OF 3 BAR DIAMETERS OR 2 3/8" ON CENTER FROM REBAR.
4. SPECIFIED CONCRETE COVER FOR PIPES, CONDUITS, AND FITTINGS SHALL NOT BE LESS THAN 1 1/2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER, NOR LESS THAN 3/4" INCH FOR CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND.
5. PIPING AND CONDUIT SHALL BE FABRICATED AND INSTALLED THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS PROPER LOCATION WILL NOT BE REQUIRED.
6. THE WORKABILITY AND METHODS OF CONSOLIDATION OF THE CONCRETE SHALL BE SUCH THAT THE CONCRETE CAN BE PLACED WITHOUT HONEYCOMBS OR VOIDS.
7. SEE DETAIL 6/S4.0 FOR EMBEDMENT CONFIGURATIONS
8. STEEL COLUMNS, BEAMS, AND PURLINS MAY BE ERECTED 24 HOURS AFTER FOUNDATION PLACEMENT OR AFTER CONCRETE REACHES A COMPRESSIVE STRENGTH OF 1000 PSI, WHICHEVER COMES FIRST.

REINFORCEMENT

- 1. USE GRADE 40 DEFORMED REINFORCING FOR #4 AND SMALLER BARS AND GRADE 60 FOR #5 AND LARGER BARS CONFORMING TO THE REQUIREMENTS OF ASTM A615.
2. ALL REINFORCING, AND OTHER EMBEDMENTS SHALL BE SECURED IN PLACE AND INSPECTED PRIOR TO PLACING ANY CONCRETE.
3. WORK DONE UNDER THIS SECTION SHALL CONFORM WITH THE APPLICABLE PORTIONS OF ACI 318, LATEST EDITION, AND CBC CHAPTER 18, LATEST EDITION.

NON-SHRINK GROUT

- 1. NON-SHRINK, NON-METALLIC (NSNM) GROUT SHALL BE COMPOSED OF PORTLAND CEMENT, SAND, AND WATER.
2. CONCRETE AREAS TO BE IN CONTACT WITH THE NSNM GROUT SHALL BE CLEANED OF ALL LOOSE OR FOREIGN MATERIAL THAT WOULD IN ANY WAY PREVENT BOND BETWEEN THE NSNM GROUT AND THE CONCRETE AND STEEL SURFACES AND SHALL BE FLUSHED WITH WATER AND ALLOWED TO DRY TO A SURFACE DRY CONDITION IMMEDIATELY PRIOR TO PLACING THE NSNM GROUT.

STRUCTURAL STEEL & MISCELLANEOUS IRON

- 1. WORK DONE UNDER THIS SECTION SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE, LATEST EDITION.
2. ALL STEEL MATERIAL AND ASSEMBLIES EXPOSED TO EARTH IN THE COMPLETED STRUCTURE SHALL BE GALVANIZED OR SHOP PAINTED.
3. WELDING SHALL BE DONE BY WELDERS CERTIFIED FOR THE WELDS TO BE MADE USING E70XX ELECTRODES IN CONFORMANCE WITH THE REQUIREMENTS OF AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE OR AWS "STRUCTURAL WELDING CODE."
4. WHEN FABRICATING BEAMS, PLACE NATURAL CAMBER UP.
5. WELDING SHALL BE DONE BY WELDERS CERTIFIED FOR THE WELDS TO BE MADE USING E70XX ELECTRODES IN CONFORMANCE WITH THE REQUIREMENTS OF AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE OR AWS "STRUCTURAL WELDING CODE."
6. COMPLETE JOINT PENETRATION GROOVE WELDS SHALL HAVE FILLER METAL WITH A V-NOTCH TOUGHNESS OF 20-FT/LBS. AVERAGE AT 70 DEGREES FAHRENHEIT.
7. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, THE USE OF A HAND HELD CALIBRATED AMP AND VOLTMETER SHALL BE USED.
8. WHERE MINIMUM AISC FILLET WELD THICKNESS REQUIREMENT EXCEEDS WELDS SHOWN ON DETAILS, PROVIDE MINIMUM AISC WELD.
9. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED FREE OF RUST, LOOSE MILL, SCALE AND OIL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS AND WELD SHRINKAGE.
11. ALL BOLTS THAT ARE PART OF THE MOMENT RESISTING BEAM TO COLUMN CONNECTION SHALL BE PRETENSION HIGH STRENGTH BOLTS AND SHALL MEET THE REQUIREMENT FOR AISC 341 SECTION D2.2 SLIP CRITICAL FAYING SURFACES WITH A CLASS A SURFACE OR HIGHER.
12. A STANDARD SCREW GUN WITH A DEPTH SENSITIVE NOSE PIECE SHALL BE USED TO INSTALL TEK SCREWS.
13. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO THE FABRICATION OF ANY PARTS OR ASSEMBLIES.

SPECIAL INSPECTION

- 1. SPECIAL INSPECTOR IN THE REQUIRED CATEGORY OF WORK MUST BE CERTIFIED BY CITY OF CLAREMONT.
2. SPECIAL INSPECTION PER CHAPTER 17 OF THE CALIFORNIA BUILDING CODE WILL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY LOCAL JURISDICTION AND PAID BY THE OWNER.
3. ALL MATERIALS SHALL CONFORM TO CBC CHAPTER 17 INSPECTION REQUIREMENTS

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION. Table with columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC. Rows include: MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS AND WASHERS; IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS; MANUFACTURER'S CERTIFICATE OF COMPLIANCE; INSPECTION OF HIGH STRENGTH BOLTING; PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-THE-NUT WITH MATCHMARKINGS; INSPECTION OF WELD FILLER MATERIALS; INSPECTION OF WELDING; STRUCTURAL STEEL; COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS; MULTIPASS FILLET WELDS; SINGLE-PASS FILLET WELDS > 3/16"; SINGLE-PASS FILLET WELDS <= 3/16"; SINGLE-PASS FILLET WELDS <= 3/8".

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION. Table with columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC. Rows include: INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT; INSPECT ANCHORS CAST IN CONCRETE; VERIFYING USE OF REQUIRED MIX DESIGN; PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS; INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.

REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS. Table with columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC. Rows include: VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS. Table with columns: VERIFICATION AND INSPECTION, CONTINUOUS, PERIODIC. Rows include: INSPECT DRILLING, OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT; VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE), AND ADEQUATE END BEARING STRATA CAPACITY; FOR CONCRETE ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3.

STRUCTURAL DESIGN CRITERIA

ALL WORK SHALL COMPLY WITH THE 2022 CALIFORNIA BUILDING CODE (CBC)

RISK CATEGORY II
GRAVITY LOADS: PHOTOVOLTAIC MODULES LIVE LOAD 2.56 PSF 300 LBS (CONCENTRATED)

WIND LOADS: BASIC WIND SPEED (3 SECOND GUST, V) 95 MPH; WIND EXPOSURE CATEGORY, C 0.85; WIND DIRECTIONAL FACTOR, Kd 0.717; TOPOGRAPHIC FACTOR, Kzt 1.0; WIND VELOCITY PRESSURE EXPOSURE, Kh, Kz 0.85

SEISMIC LOADS: MAPPED SPECTRAL RESPONSE ACCELERATION, Ss 1.692; MAPPED SPECTRAL RESPONSE ACCELERATION, S1 0.633; DESIGN SPECTRAL RESPONSE ACCELERATION, SDS 1.128; DESIGN SPECTRAL RESPONSE ACCELERATION, SD1 0.717; SEISMIC DESIGN CATEGORY, D; SITE CLASS, D; RESPONSE MODIFICATION FACTOR, R 1.25 (CANTILEVERED COLUMN); OVER STRENGTH FACTOR 1.25; REDUNDANCY FACTOR, p 1.3; SEISMIC BASE SHEAR, Cs 0.902 (STRENGTH LEVEL); pCs 1.17 (STRENGTH LEVEL)

GEOTECHNICAL REPORT: TGR GEOTECHNICAL PROJECT NO: 23-7742 JUNE 18, 2024

SOIL PARAMETERS: ALLOWABLE DOWNWARD SKIN FRICTION 350 PSF; ALLOWABLE UPLIFT SKIN FRICTION 175 PSF; ALLOWABLE LATERAL BEARING PRESSURE 300 PSF/FT; MINIMUM PIER DEPTH 10 FEET; SOIL NEGLECT 1 FOOT

THE SKIN FRICTION VALUES MAY BE INCREASED BY ONE-THIRD WHEN CONSIDERING SHORT DURATION SEISMIC OR WIND LOADS. FOR LATERAL SUPPORT, THE LATERAL BEARING PRESSURE CAN BE DOUBLED FOR ALLOWABLE DEFLECTION OF UP TO 1/2 INCH.

MATERIAL SPECIFICATIONS

1. ALL MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

- HOLLOW STRUCTURAL STEEL: ASTM A500 GRADE B, MIN Fy = 46 KSI
LIGHT GAUGE STEEL: ASTM A653, MIN Fy= 50 KSI
WELD TAB AND END CAP: ASTM A36, MIN Fy = 36 KSI
PLATES: ASTM A572, MIN Fy = 50 KSI
BOLTS: ASTM A325
ANCHOR RODS: ASTM F1554 GRADE 55
WELDING ELECTRODES: E70XX
CONCRETE: Type II, Fc=3,000 PSI MIN
NON-SHRINK GROUT: Fc=5,000 PSI
REBAR: ASTM A615 GRADE 60
FASTENERS: ITW BUILDEX, ESR 1976
DEWALT DRIL-FLEX, ESR 4367 (MODULE CONNECTION)

2. STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED (MINIMUM ASTM A123 OR A153, CLASS D) OR PAINTED WITH ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT; OR EQUIVALENT PAINT SYSTEM.

3. ALL BOLTS USED FOR BEAM TO COLUMN CONNECTIONS AND PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS) SHALL BE PRETENSION HIGH-STRENGTH BOLTS WITHOUT CLASS A FAYING SURFACE REQUIREMENT.

4. COLD-FORMED STEEL MEMBERS SHALL BE 55% ALUMINUM-ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE TO AISI S200 TABLE A4-1, CP 90 COATING DESIGNATION.

5. ALL EXPOSED STEEL FASTENERS, INCLUDING CAST-IN-PLACE ANCHOR BOLTS/ RODS, SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT-DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329), OR PROTECTED WITH CORROSION-PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM OF 1,000 HOURS OF EXPOSURE IN SALTY SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

6. ANCHOR RODS AND ASSEMBLY SHALL BE WEATHER PROTECTED USING SAP SEAL BOLT CAPS.



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Table with columns: DATE, BY, DESCRIPTION, REV. Rows include: 1/01/2024, AH, PERMIT SUBMITTAL; 04/10/2025, AH, RESPONSE TO COMMENTS.

Table with columns: REV, DESCRIPTION, COMMENTS. Rows include: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

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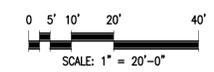
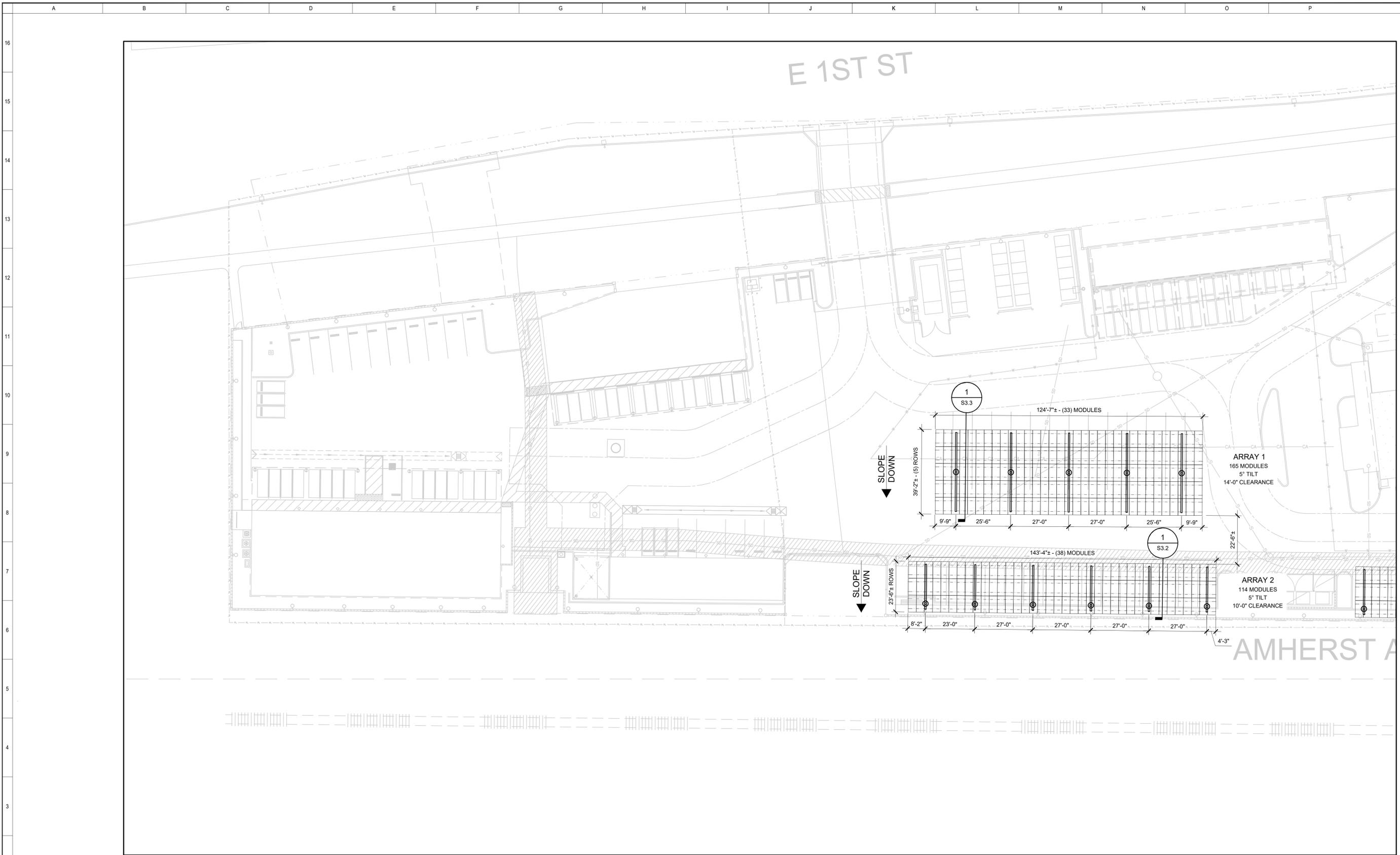


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CANOPY STRUCTURAL DESIGN NOTES

DRAWN BY: NE
APPROVED BY: RO
SHEET

S0.1

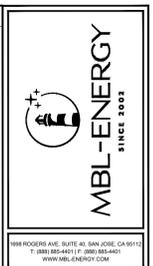


PV CANOPY LAYOUT PLAN

SCALE: 1"=20'

LEGEND

- TRINA VERTEX TSM-NEG19RC.20 (605W), (279) TOTAL
- ZEE PURLIN
- 3 HIGH HALF TEE TILT UP SOLAR STRUCTURES AT 27'-0" MAX, (6) TOTAL SEE DETAIL 1/S3.2
- 5 HIGH FULL SOLAR STRUCTURES AT 27'-0" MAX, (5) TOTAL SEE DETAIL 1/S3.3



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2	RESPONSE TO COMMENTS	AH	04/10/2025

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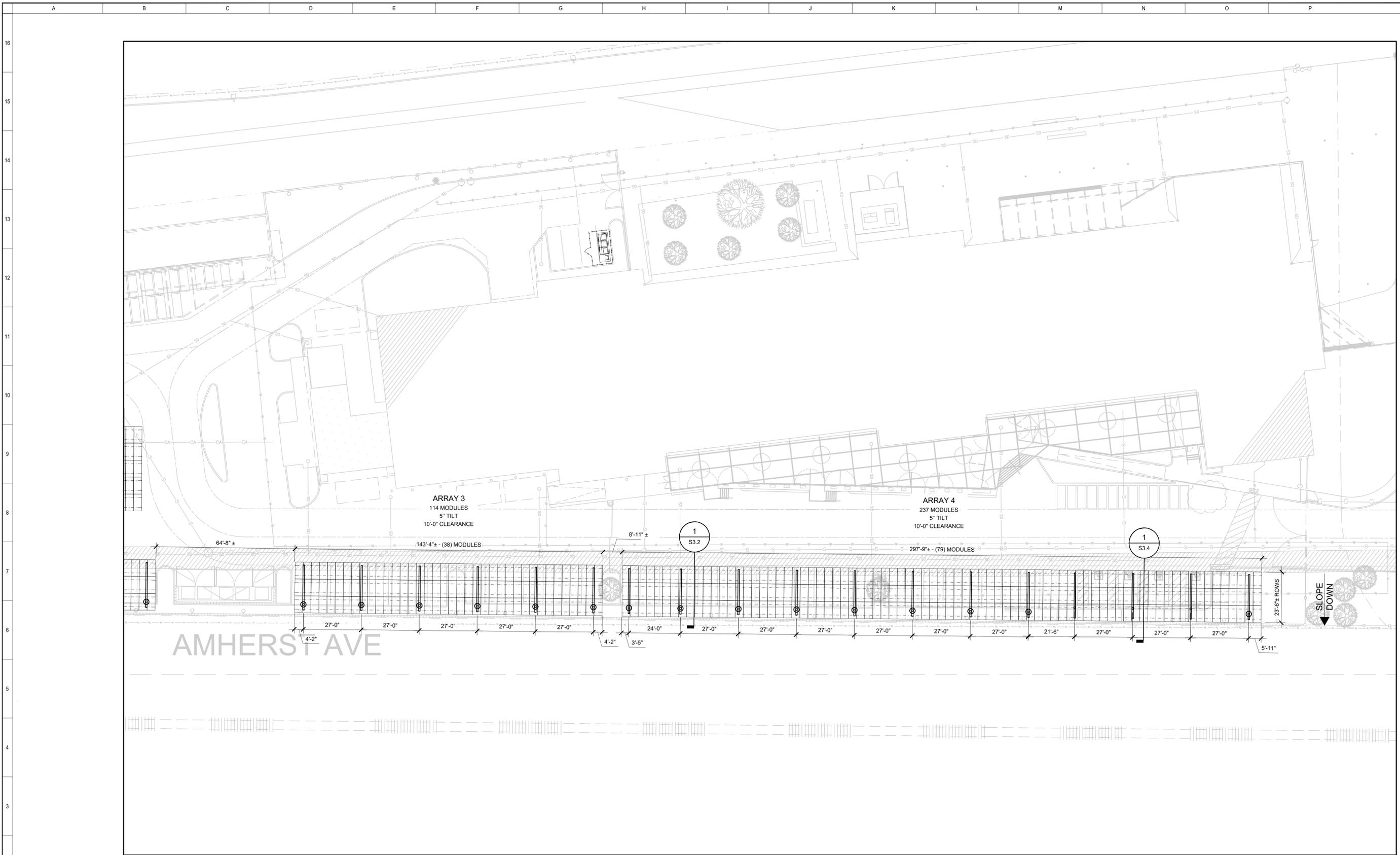


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PV CANOPY LAYOUT PLAN

DRAWN BY: NE
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 SHEET

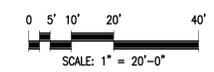
S1.0



AMHERST AVE

ARRAY 3
114 MODULES
5° TILT
10'-0" CLEARANCE

ARRAY 4
237 MODULES
5° TILT
10'-0" CLEARANCE



PV CANOPY LAYOUT PLAN

SCALE: 1"=20'

LEGEND

- TRINA VERTEX TSM-NEG19RC.20 (605W), (351) TOTAL
- ZEE PURLIN
- 3 HIGH HALF TEE TILT UP SOLAR STRUCTURES AT 27'-0" MAX, (15) TOTAL SEE DETAIL 1/S3.2
- 3 HIGH HALF TEE TILT UP SOLAR STRUCTURES AT 27'-0" MAX, (3) TOTAL SEE DETAIL 1/S3.4



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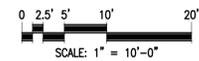
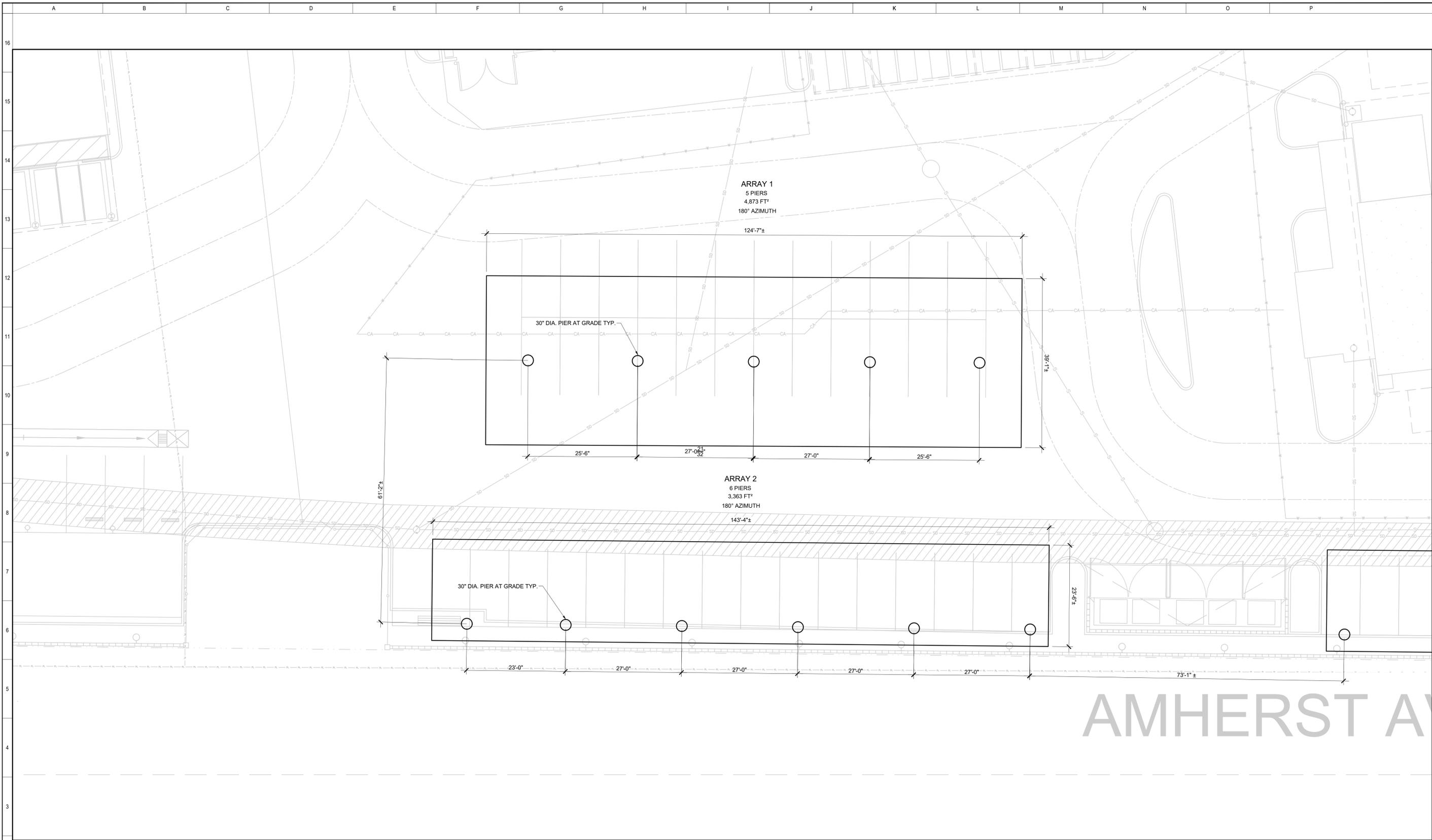


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PV CANOPY LAYOUT PLAN

DRAWN BY: NE
APPROVED BY: RO
SHEET

S1.1



**PV CANOPY
FOUNDATION PLAN**
SCALE: 1"=10'

LEGEND

- 30" DIA CIDH CONCRETE PIER, TYP.
SEE S3.0 FOR PIER DETAILS.



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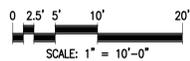
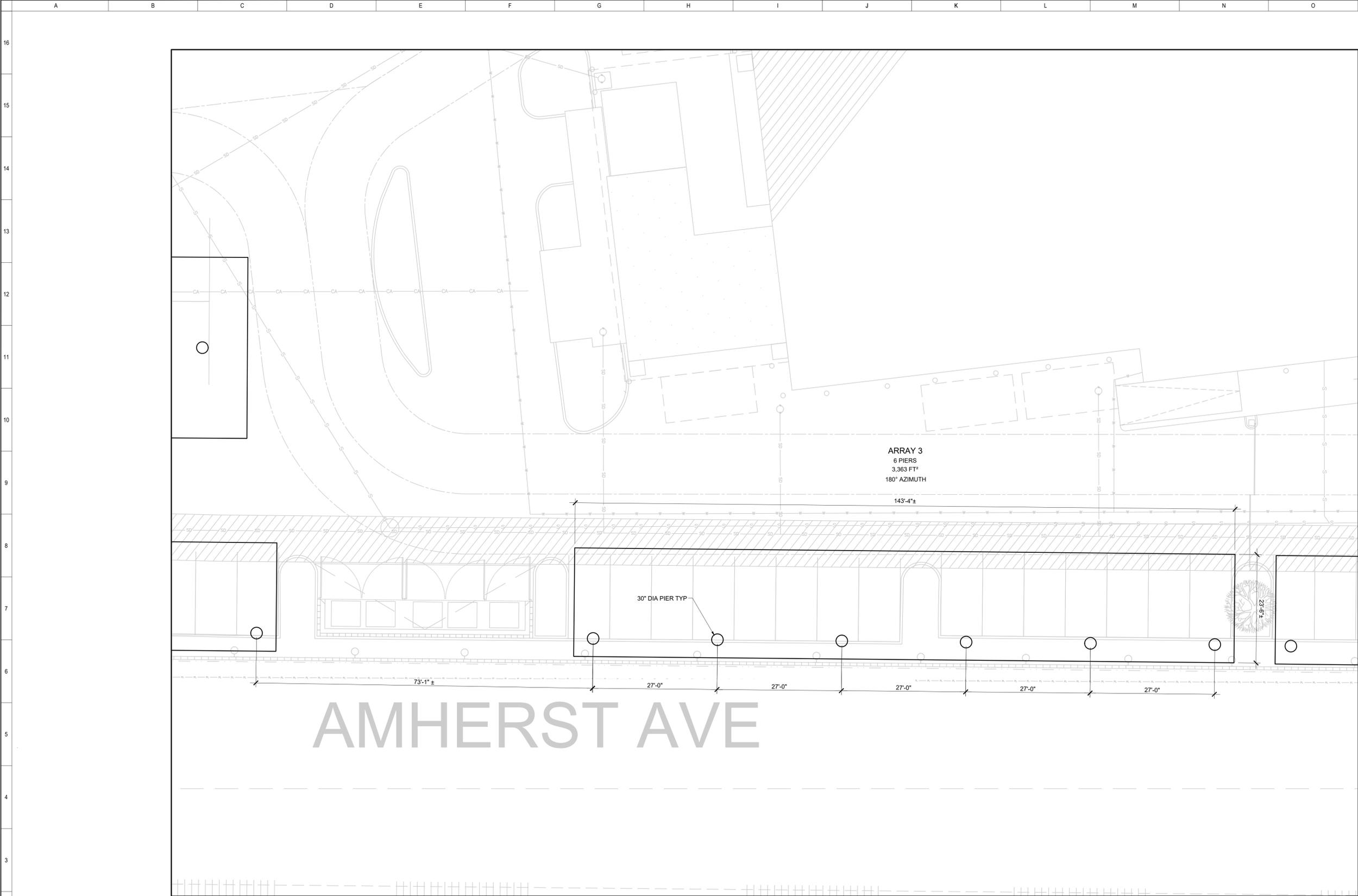


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PV CANOPY FOUNDATION PLAN

DRAWN BY: NE
APPROVED BY: RO
SHEET

S2.0



**PV CANOPY
FOUNDATION PLAN**

SCALE: 1"=10'

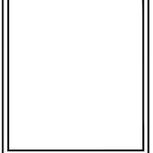
LEGEND

- 30" DIA CIDH CONCRETE PIER, TYP.
SEE S3.2 FOR PIER DETAILS.



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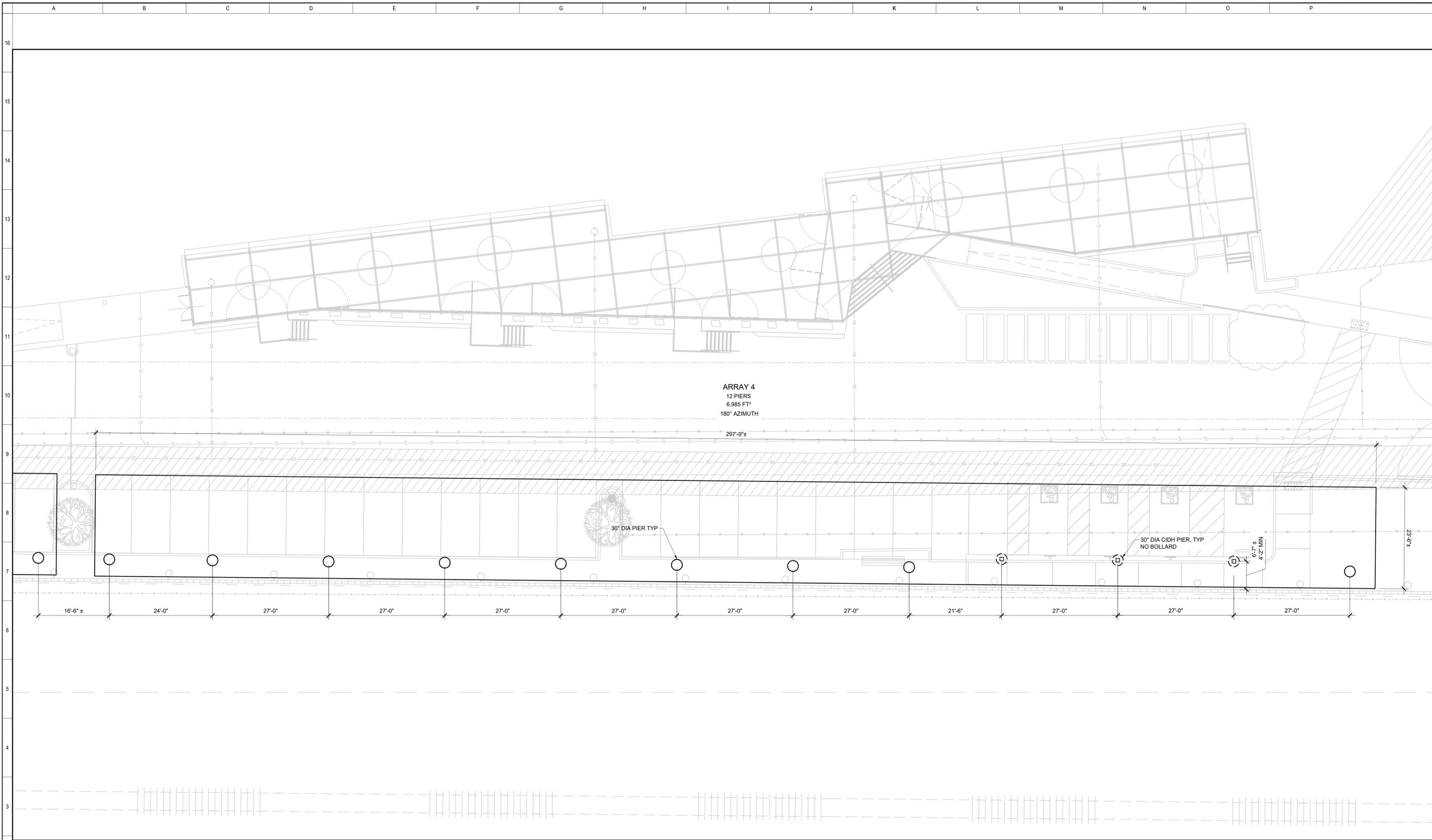
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PV CANOPY FOUNDATION PLAN
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SHEET

S2.1



ARRAY 4
12 PIERS
6,985 FT²
180° AZIMUTH

297'-9"±

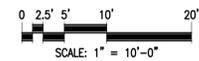
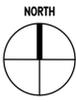
30" DIA PIER TYP

30" DIA CIDH PIER, TYP
NO BOLLARD

± 0.0'-0"
4'-2" MIN

23'-0"±

16'-6"± 24'-0" 27'-0" 27'-0" 27'-0" 27'-0" 27'-0" 27'-0" 27'-0" 21'-6" 27'-0" 27'-0" 27'-0"



**PV CANOPY
FOUNDATION PLAN**
SCALE: 1"=10'

LEGEND

- 30" DIA CIDH CONCRETE PIER, TYP.
SEE S3.2 FOR PIER DETAILS.
- ⊗ 30" DIA DRIVEN PILE W/
NO BOLLARD, SEE S3.4 FOR PIER DETAILS.



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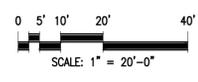
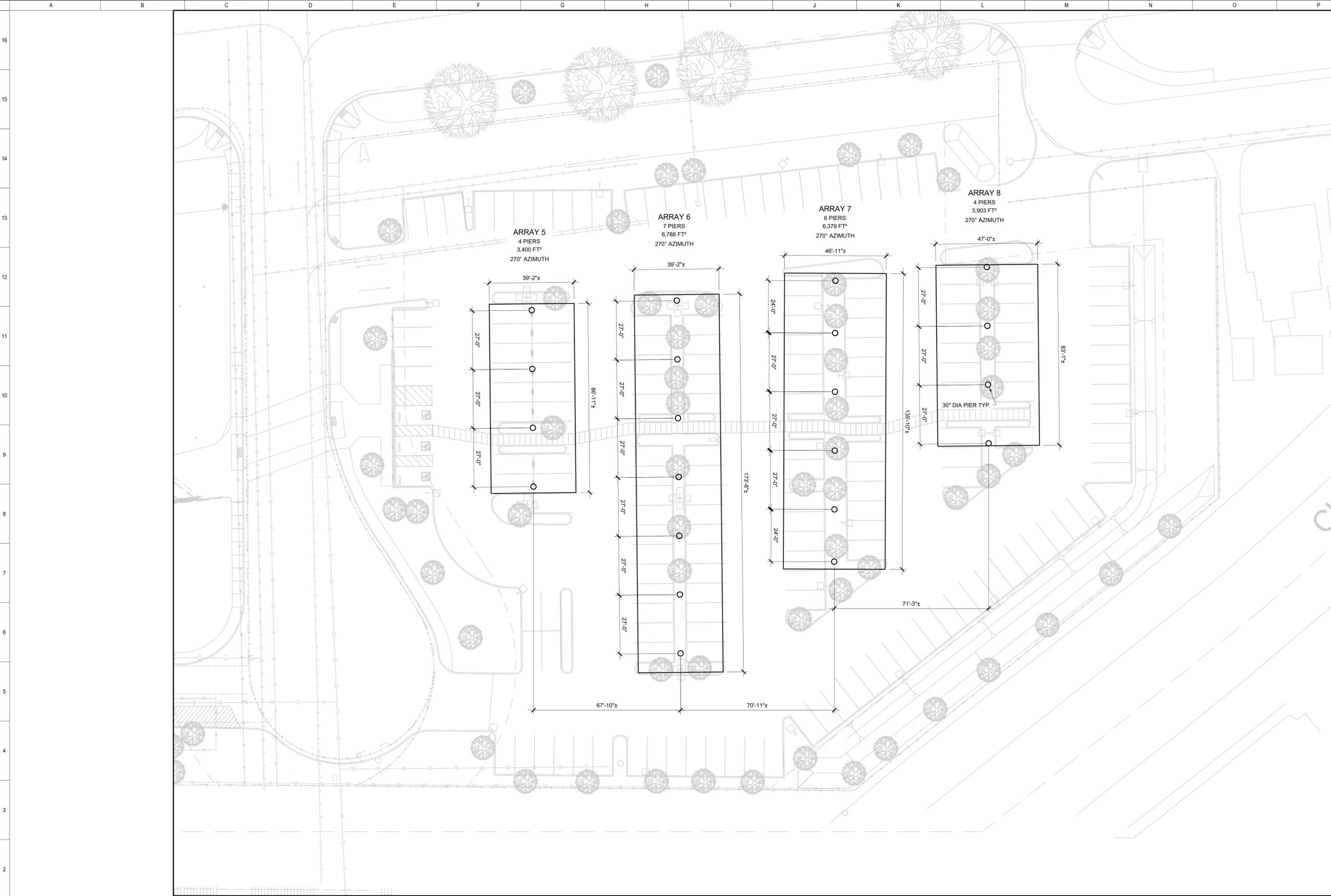


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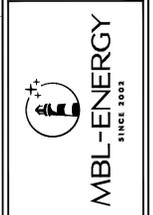
S2.2



**PV CANOPY
FOUNDATION PLAN**
SCALE: 1"=20'

LEGEND

○ 30" DIA CIDH CONCRETE PIER, TYP.
SEE S3.0 FOR PIER DETAILS.



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PV CANOPY FOUNDATION PLAN

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S2.3

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3		
4		

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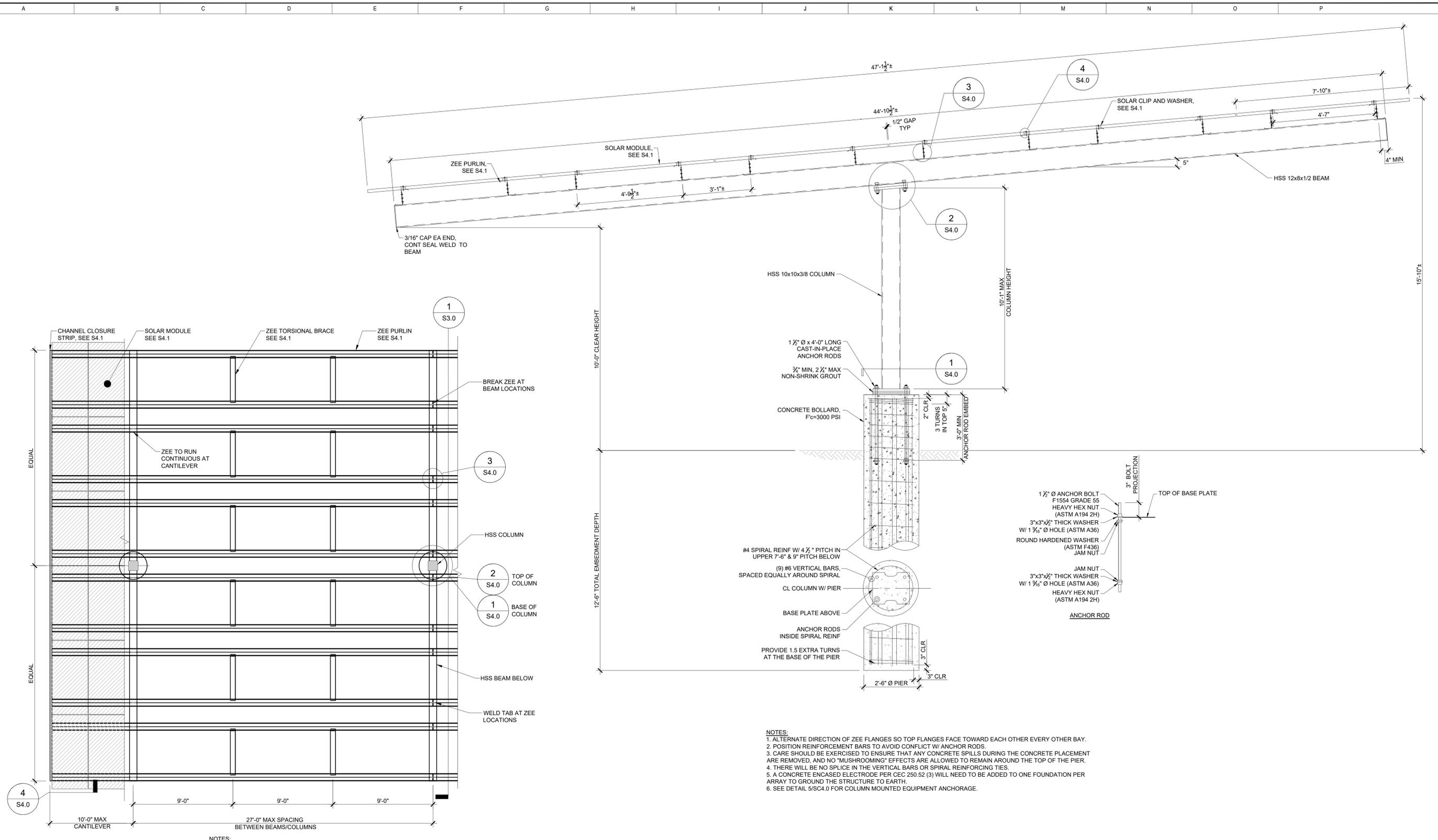
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PV CANOPY ELEVATION

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SHEET

S3.0



6 HIGH FULL STRUCTURE PARTIAL LAYOUT (2)
SCALE: 1/4" = 1'-0"

6 HIGH FULL SOLAR STRUCTURE ELEVATION (1)
SCALE: 1/2" = 1'-0"

HSS BEAMS & COLUMNS TO BE KENDALL CHARCOAL, BM HC-166 KELLY MOORE FORMULA: 20-1067-080
ZEE PURLINS, BLOCKING, & CLOSURE STRIP G-90 FINISH



- NOTES:**
- 10'-0" CANTILEVER IS MAXIMUM PURLIN CANTILEVER FOR ALL STRUCTURES.
 - PROVIDE BLOCKING AT 9'-0" OC MAX AT ALL SPANS.
 - USE END CLOSURE AT BOTH SIDES OF STRUCTURES FOR ALL STRUCTURES
 - ATTACH END CLOSURE W/ #12-14X1" TEK' SCREW TOP & BOT. (2) TOTAL
 - 3"x6"x12 GA BRIDGE PLATE WHEN SCREW IS LESS THAN 1" FROM END OF ZEE
 - SPACING MAY VARY DEPENDING ON LOCATION OF PARKING AND UNDERGROUND UTILITIES AND OTHER ON SITE OBSTRUCTIONS.

- NOTES:**
- ALTERNATE DIRECTION OF ZEE FLANGES SO TOP FLANGES FACE TOWARD EACH OTHER EVERY OTHER BAY.
 - POSITION REINFORCEMENT BARS TO AVOID CONFLICT W/ ANCHOR RODS.
 - CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO "MUSHROOMING" EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
 - THERE WILL BE NO SPLICE IN THE VERTICAL BARS OR SPIRAL REINFORCING TIES.
 - A CONCRETE ENCASED ELECTRODE PER CEC 250.52 (3) WILL NEED TO BE ADDED TO ONE FOUNDATION PER ARRAY TO GROUND THE STRUCTURE TO EARTH.
 - SEE DETAIL S/SC4.0 FOR COLUMN MOUNTED EQUIPMENT ANCHORAGE.

REV	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	10/01/2024
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3		
4		

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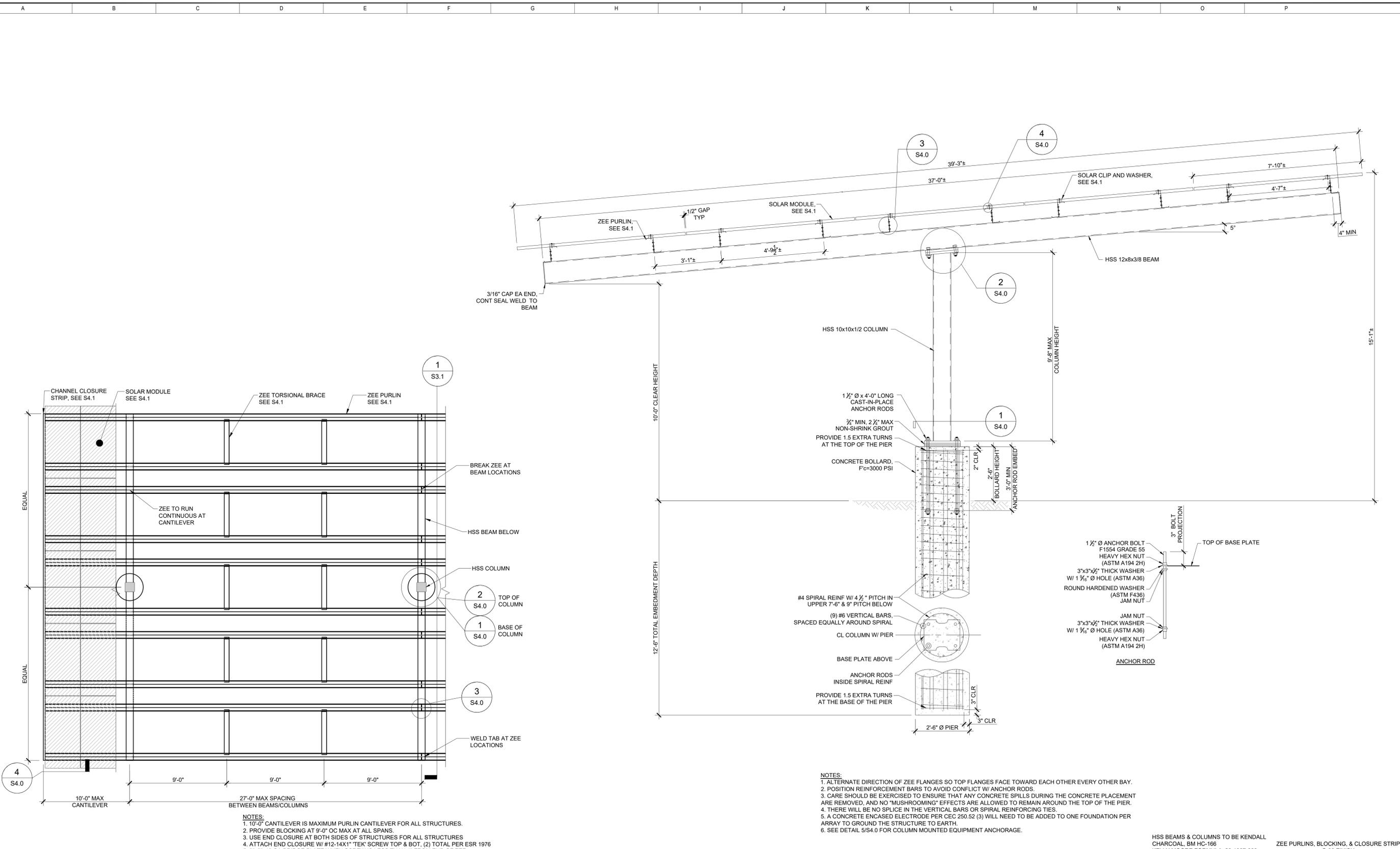
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PV CANOPY ELEVATION

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SHEET

S3.1



- NOTES:**
- 10'-0" CANTILEVER IS MAXIMUM PURLIN CANTILEVER FOR ALL STRUCTURES.
 - PROVIDE BLOCKING AT 9'-0" OC MAX AT ALL SPANS.
 - USE END CLOSURE AT BOTH SIDES OF STRUCTURES FOR ALL STRUCTURES
 - ATTACH END CLOSURE W/ #12-14X1" 'TEK' SCREW TOP & BOT, (2) TOTAL PER ESR 1976
 - 3"x8"x12 GA BRIDGE PLATE WHEN SCREW IS LESS THAN 1" FROM END OF ZEE
 - SPACING MAY VARY DEPENDING ON LOCATION OF PARKING AND UNDERGROUND UTILITIES AND OTHER ON SITE OBSTRUCTIONS.

- NOTES:**
- ALTERNATE DIRECTION OF ZEE FLANGES SO TOP FLANGES FACE TOWARD EACH OTHER EVERY OTHER BAY.
 - POSITION REINFORCEMENT BARS TO AVOID CONFLICT W/ ANCHOR RODS.
 - CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO "MUSHROOMING" EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
 - THERE WILL BE NO SPLICE IN THE VERTICAL BARS OR SPIRAL REINFORCING TIES.
 - A CONCRETE ENCASED ELECTRODE PER CEC 250.52 (3) WILL NEED TO BE ADDED TO ONE FOUNDATION PER ARRAY TO GROUND THE STRUCTURE TO EARTH.
 - SEE DETAIL S/S4.0 FOR COLUMN MOUNTED EQUIPMENT ANCHORAGE.

HSS BEAMS & COLUMNS TO BE KENDALL CHARCOAL, BM HC-166
KELLY MOORE FORMULA: 20-1067-080

ZEE PURLINS, BLOCKING, & CLOSURE STRIP
G-90 FINISH

5 HIGH FULL STRUCTURE PARTIAL LAYOUT

SCALE: 1/4" = 1'-0"

2

5 HIGH TALL SOLAR STRUCTURE ELEVATION

SCALE: 1/2" = 1'-0"

1

REV	DESCRIPTION	DATE
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3		
4		

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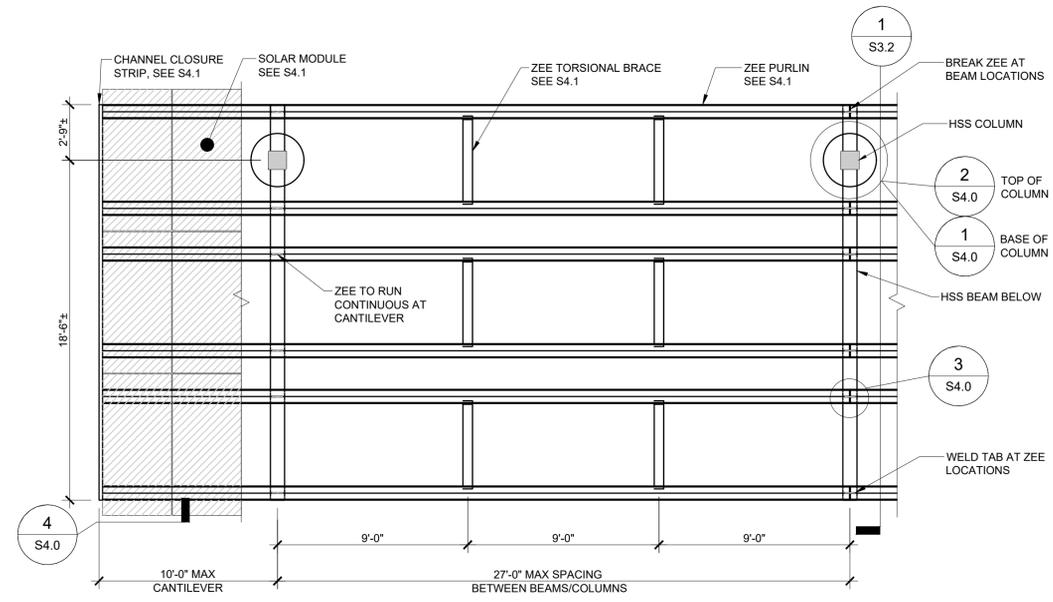
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PV CANOPY ELEVATION

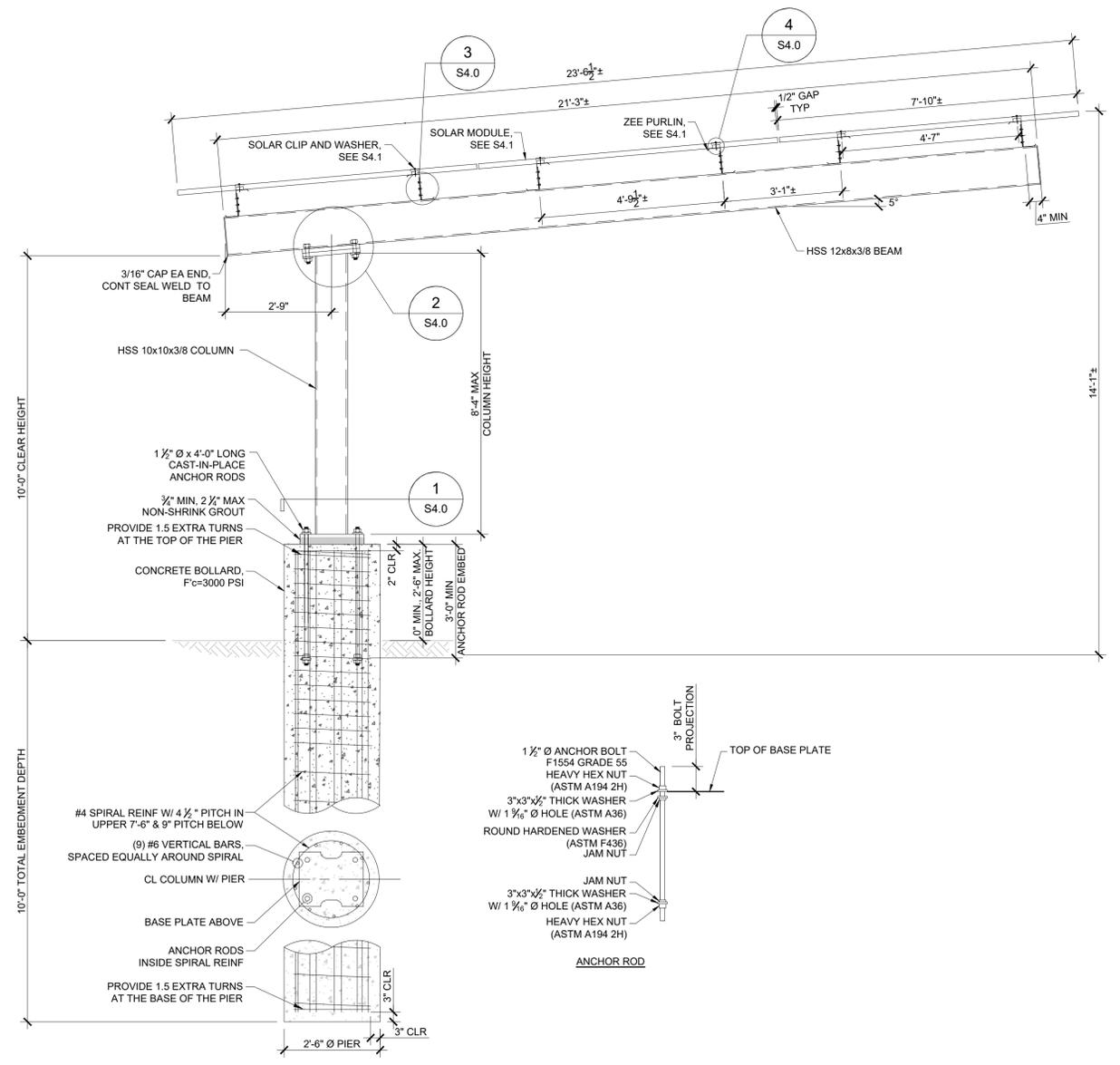
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SHEET

S3.2



3 HIGH STRUCTURE PARTIAL LAYOUT
SCALE: 1/4" = 1'-0"
2

- NOTES:**
- 10'-0" CANTILEVER IS MAXIMUM PURLIN CANTILEVER FOR ALL STRUCTURES.
 - PROVIDE BLOCKING AT 9'-0" OC MAX AT ALL SPANS.
 - USE END CLOSURE AT BOTH SIDES OF STRUCTURES FOR ALL STRUCTURES
 - ATTACH END CLOSURE W/ #12-14X1" TEK SCREW TOP & BOT, (2) TOTAL PER ESR 1976
 - 3"x6"x12 GA BRIDGE PLATE WHEN SCREW IS LESS THAN 1" FROM END OF ZEE
 - SPACING MAY VARY DEPENDING ON LOCATION OF PARKING AND UNDERGROUND UTILITIES AND OTHER ON SITE OBSTRUCTIONS.



3 HIGH TILT UP SOLAR STRUCTURE ELEVATION
SCALE: 1/2" = 1'-0"
1

- NOTES:**
1. ALTERNATE DIRECTION OF ZEE FLANGES SO TOP FLANGES FACE TOWARD EACH OTHER EVERY OTHER BAY.
 2. POSITION REINFORCEMENT BARS TO AVOID CONFLICT W/ ANCHOR RODS.
 - CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO "MUSHROOMING" EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
 - THERE WILL BE NO SPLICE IN THE VERTICAL BARS OR SPIRAL REINFORCING TIES.
 - A CONCRETE ENCASED ELECTRODE PER CEC 250.52 (3) WILL NEED TO BE ADDED TO ONE FOUNDATION PER ARRAY TO GROUND THE STRUCTURE TO EARTH.
 - SEE DETAIL S/S4.0 FOR COLUMN MOUNTED EQUIPMENT ANCHORAGE.

HSS BEAMS & COLUMNS TO BE KENDALL CHARCOAL, BM HC-166
KELLY MOORE FORMULA: 20-1067-080
ZEE PURLINS, BLOCKING, & CLOSURE STRIP G-90 FINISH



REV	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	10/01/2024
2	RESPONSE TO COMMENTS	04/10/2025
3		
4		

THE CLAREMONT COLLEGES SERVICES
101 N. MILLS AVE
CLAREMONT, CA 91711

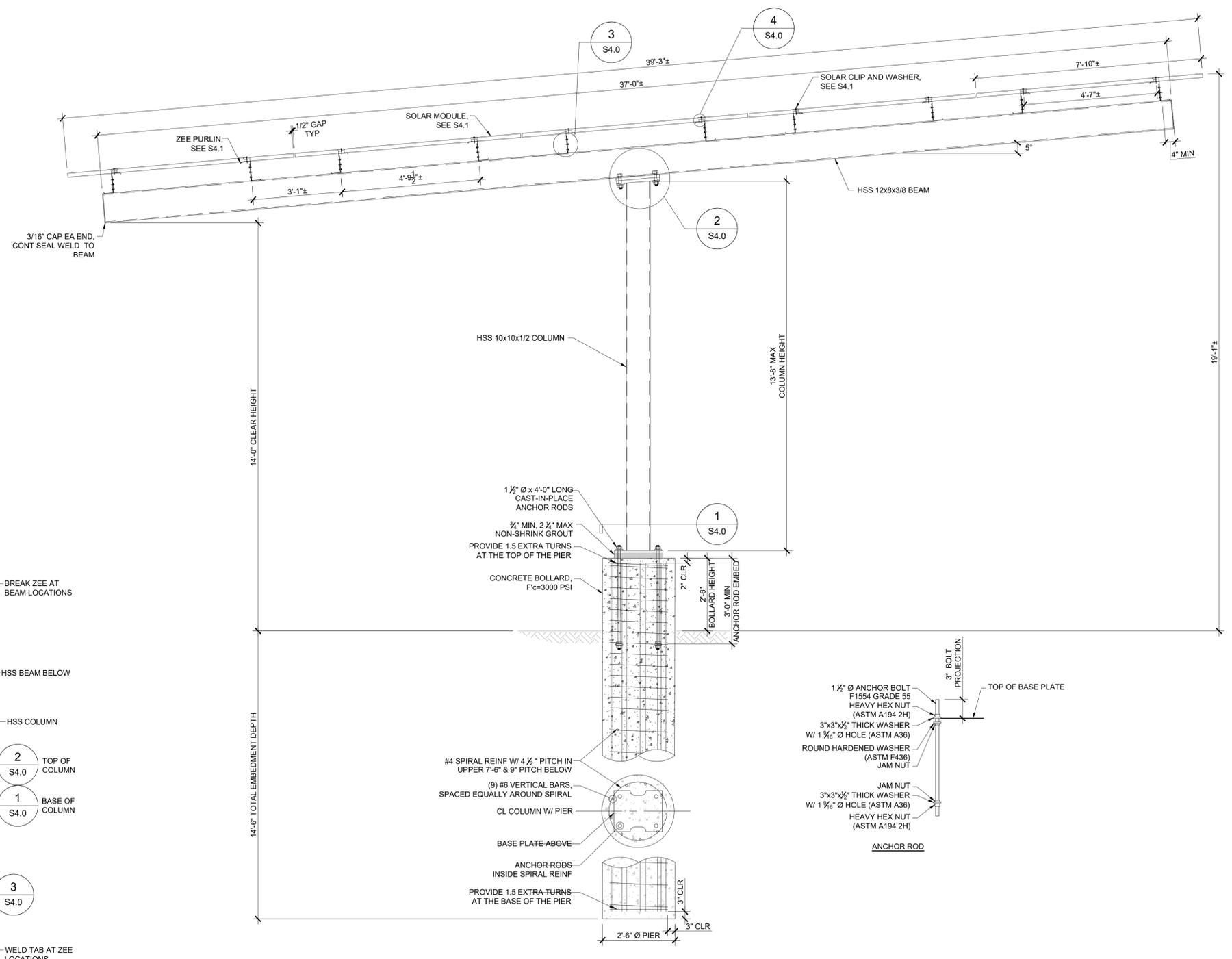
BEACON TECHNOLOGIES

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PV CANOPY ELEVATION

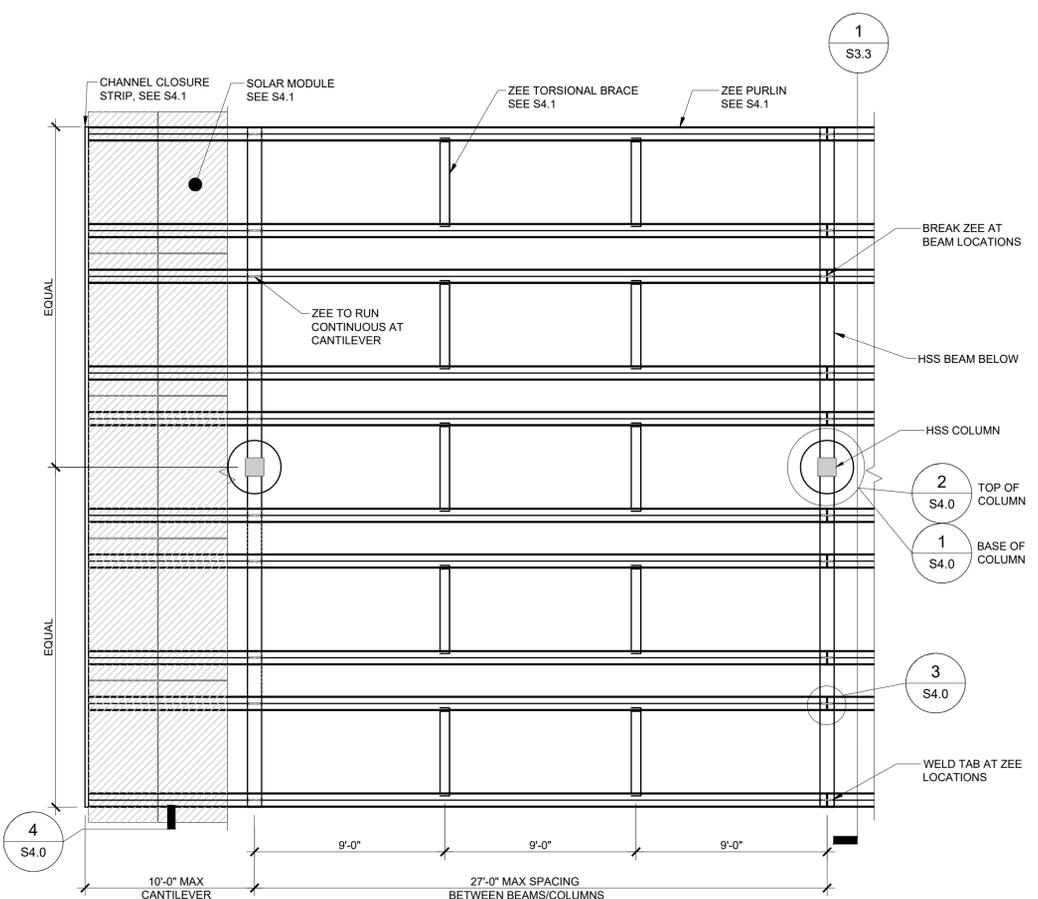
DRAWN BY: NE
APPROVED BY: RO
SHEET

S3.3



- NOTES:**
1. ALTERNATE DIRECTION OF ZEE FLANGES SO TOP FLANGES FACE TOWARD EACH OTHER EVERY OTHER BAY.
 2. POSITION REINFORCEMENT BARS TO AVOID CONFLICT W/ ANCHOR RODS.
 3. CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO "MUSHROOMING" EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
 4. THERE WILL BE NO SPLICE IN THE VERTICAL BARS OR SPIRAL REINFORCING TIES.
 5. A CONCRETE ENCASED ELECTRODE PER CEC 250.52 (3) WILL NEED TO BE ADDED TO ONE FOUNDATION PER ARRAY TO GROUND THE STRUCTURE TO EARTH.
 6. SEE DETAIL S/S4.0 FOR COLUMN MOUNTED EQUIPMENT ANCHORAGE.

HSS BEAMS & COLUMNS TO BE KENDALL CHARCOAL, BM HC-166 KELLY MOORE FORMULA: 20-1067-080
ZEE PURLINS, BLOCKING, & CLOSURE STRIP G-90 FINISH



- NOTES:**
1. 10'-0" CANTILEVER IS MAXIMUM PURLIN CANTILEVER FOR ALL STRUCTURES.
 2. PROVIDE BLOCKING AT 9'-0" OC MAX AT ALL SPANS.
 3. USE END CLOSURE AT BOTH SIDES OF STRUCTURES FOR ALL STRUCTURES
 4. ATTACH END CLOSURE W/ #12-14X1" 'TEK' SCREW TOP & BOT, (2) TOTAL PER ESR 1976
 5. 3"x8"x12 GA BRIDGE PLATE WHEN SCREW IS LESS THAN 1" FROM END OF ZEE
 6. SPACING MAY VARY DEPENDING ON LOCATION OF PARKING AND UNDERGROUND UTILITIES AND OTHER ON SITE OBSTRUCTIONS.

5 HIGH FULL STRUCTURE PARTIAL LAYOUT

SCALE: 1/4" = 1'-0"

2

5 HIGH FULL SOLAR STRUCTURE ELEVATION

SCALE: 1/2" = 1'-0"

1

REV	DESCRIPTION	DATE
1	PERMIT SUBMITTAL	10/01/2024
2	RESPONSE TO COMMENTS	04/10/2025
3		
4		

THE CLAREMONT COLLEGES SERVICES
101 N. MILLS AVE
CLAREMONT, CA 91711

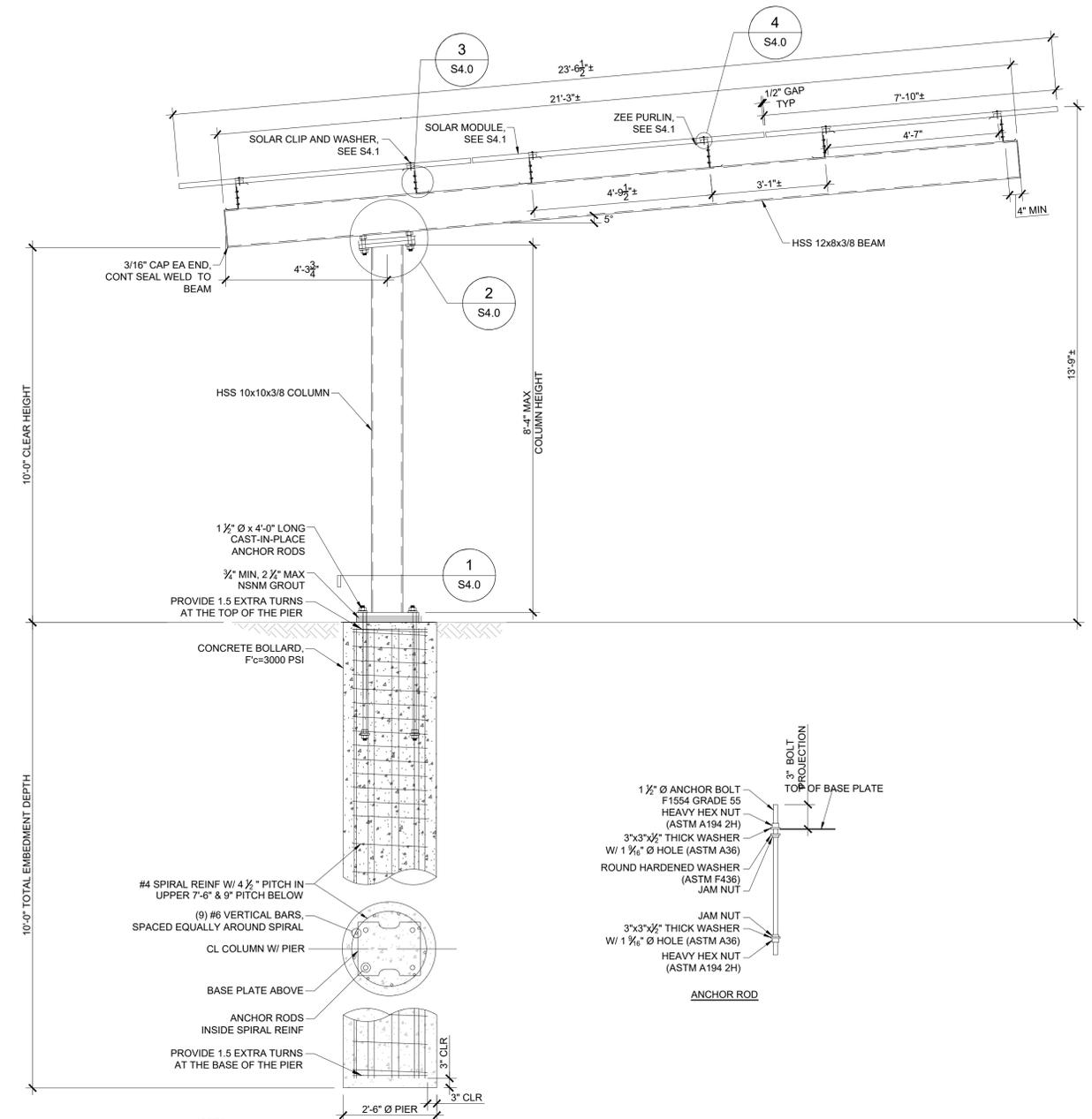
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PV CANOPY ELEVATION

DRAWN BY: NE
APPROVED BY: RO
SHEET

S3.4



- NOTES:**
1. ALTERNATE DIRECTION OF ZEE FLANGES SO TOP FLANGES FACE TOWARD EACH OTHER EVERY OTHER BAY.
 2. POSITION REINFORCEMENT BARS TO AVOID CONFLICT W/ ANCHOR RODS.
 3. CARE SHOULD BE EXERCISED TO ENSURE THAT ANY CONCRETE SPILLS DURING THE CONCRETE PLACEMENT ARE REMOVED, AND NO "MUSHROOMING" EFFECTS ARE ALLOWED TO REMAIN AROUND THE TOP OF THE PIER.
 4. THERE WILL BE NO SPLICE IN THE VERTICAL BARS OR SPIRAL REINFORCING TIES.
 5. A CONCRETE ENCASED ELECTRODE PER CEC 250.52 (3) WILL NEED TO BE ADDED TO ONE FOUNDATION PER ARRAY TO GROUND THE STRUCTURE TO EARTH.
 6. SEE DETAIL 5/S4.0 FOR COLUMN MOUNTED EQUIPMENT ANCHORAGE.

**3 HIGH TILT UP NO BOLLARD CONDITION
SOLAR STRUCTURE ELEVATION**

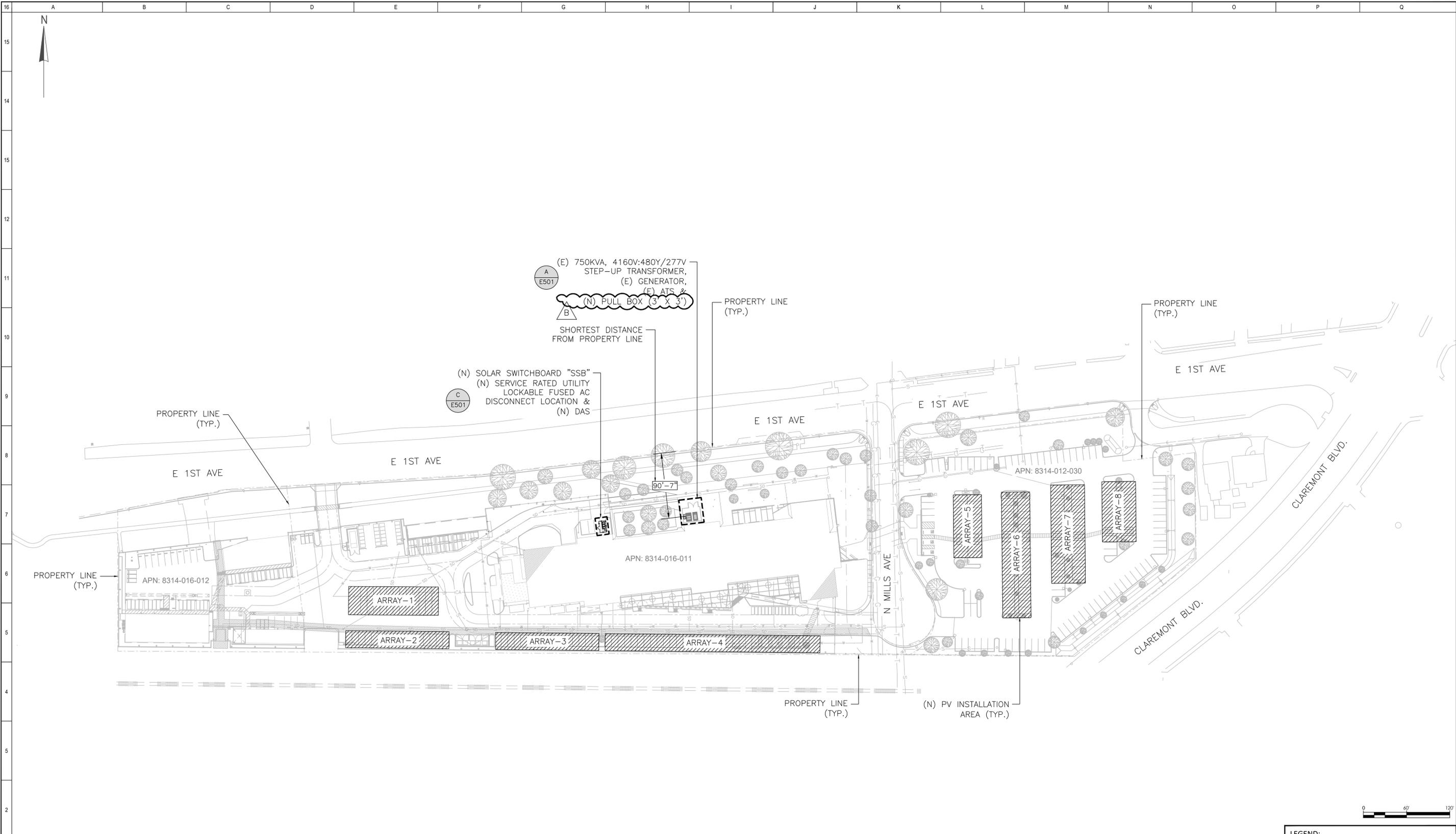
SCALE: 1/2" = 1'-0"

1

HSS BEAMS & COLUMNS TO BE KENDALL
CHARCOAL, BM HC-166
KELLY MOORE FORMULA: 20-1067-080

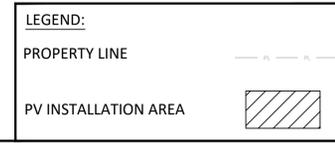
ZEE PURLINS, BLOCKING, & CLOSURE STRIP
G-90 FINISH





ARRAY ID	NO. OF INVERTERS	NO. OF MODULES	AREA (SQ. FT.)	AZIMUTH	TILT
1	2	165	4801.46	180.3°	5°
ARRAY-1	2	165	4801.46	180.3°	5°
ARRAY-2	1	114	3317.37	180.6°	5°
ARRAY-3	1	114	3317.37	180.6°	5°
ARRAY-4	3	237	6896.64	180.6°	5°
ARRAY-5	1	115	3346.47	269.42°	5°
ARRAY-6	2	230	6692.94	270°	5°
ARRAY-7	2	216	6285.55	269.42°	5°
ARRAY-8	2	132	3841.17	269.42°	5°
TOTAL	14	1323			

SYSTEM INFO (PV):
 TOTAL SYSTEM SIZE: 800.4 KWSTC, 636 KWAC;
 (1323) TRINA SOLAR TSM-605NEG19RC.20 (605 W)
 MODULES DETAILS:
 (2) YASKAWA SOLECTRIA PVI25TL-480-R [480V][SI1-SB]
 (1) YASKAWA SOLECTRIA PVI 36TL-480-V2 [480V][SI1-SB]
 (11) YASKAWA SOLECTRIA PVI 50TL-480 [480V][SI1-SB]
 INVERTER DETAILS:



- NOTES:
- ALL SITE MEASUREMENTS ARE APPROXIMATE & SHALL BE FIELD VERIFIED.
 - DIMENSIONS ARE SHOWN BASED ON PLAN VIEW PROJECTION.
 - CLIENT CONFIRMED WITH CITY ENGINEERING DEPARTMENT, BUILDING DEPARTMENT AND INSPECTION DEPARTMENT THAT AS LONG AS THE SD IS ON PRIVATE PROPERTY AND IS USED BY THAT PRIVATE PROPERTY, RUNNING CONDUIT THROUGH THE EASEMENT AND OVER TOP OF THE SD IS PERMITTED.
 - NRTL RECERTIFICATION IS REQUIRED FOR UL LISTING OF (E) TRANSFORMER.



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 WWW.MBL-ENERGY.COM

REV	DESCRIPTION	BY	DATE
1	ISSUED FOR PERMIT	PR	10/04/2024
2	UPDATED CLIENT COMMENTS REGARDING EV SPARE CONDUITS	PR	12/10/2024
3	UPDATED MODULES FROM 580W TO 605W AS PER CLIENT	PR	02/20/2025



FORWARD WOLFEY
 E 23102
 ELECTRICAL
 STATE OF CALIFORNIA
 No. 987528

CLAREMONT COLLEGE
 101 S. MILLS AVENUE
 CLAREMONT, CA 91711



ELECTRICAL SITE PLAN

DRAWN BY: PR
 APPROVED BY: JHA
 SHEET
E100

REV	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	10/04/2024
2	UPDATED CLIENT COMMENTS REGARDING EV SPARE CONDUITS	12/10/2024
3	UPDATED MODULES FROM 900W TO 600WAS PER CLIENT	02/20/2025



CLAREMONT COLLEGE
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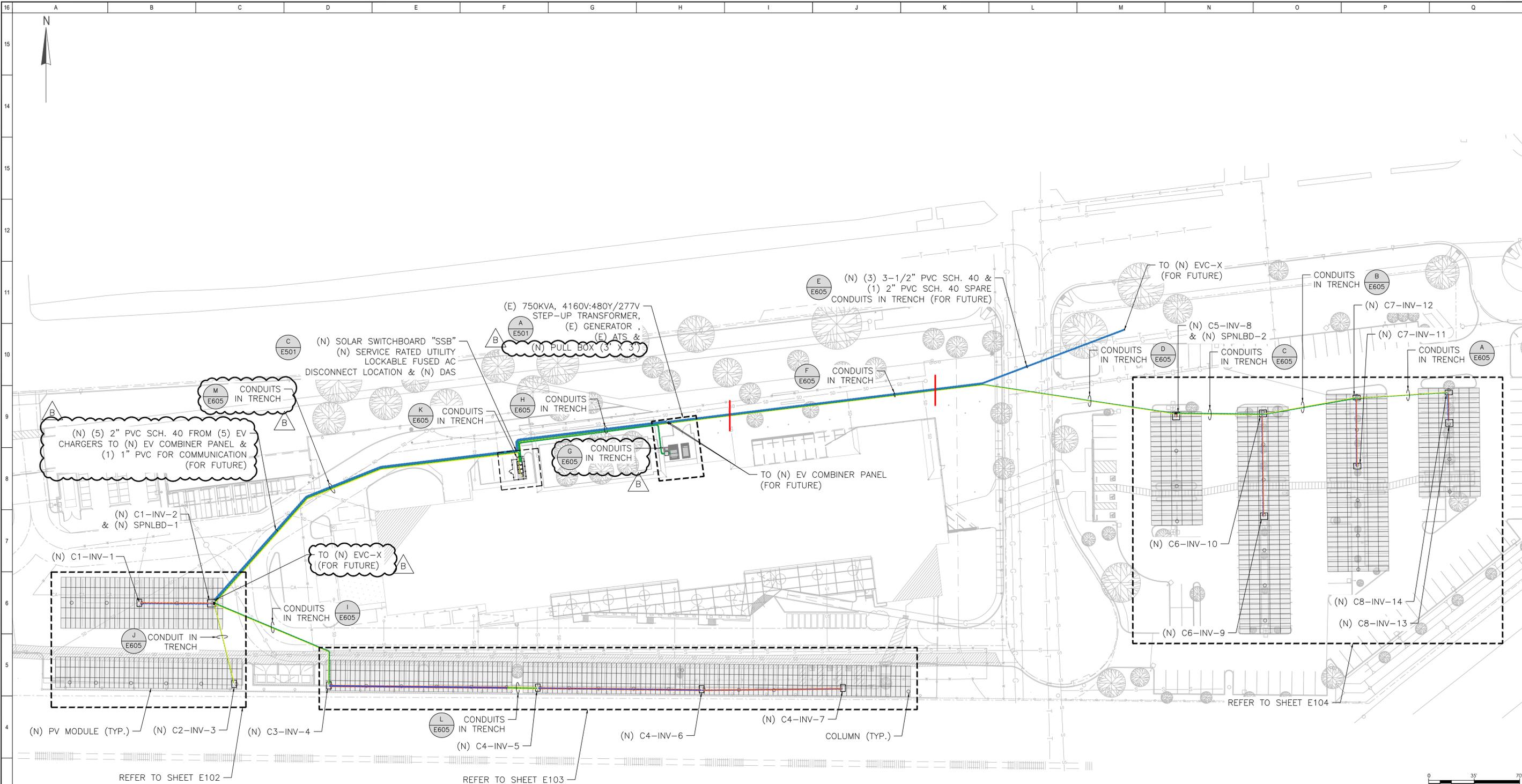
TRENCHING PLAN

DRAWN BY: PR

APPROVED BY: JHA

SHEET

E101



ARRAY ID	NO. OF INVERTERS	NO. OF MODULES	AREA (SQ. FT.)	AZIMUTH	TILT
1	2	165	4801.46	180.3°	5°
2	1	114	3317.37	180.6°	5°
3	1	114	3317.37	180.6°	5°
4	3	237	6896.64	180.6°	5°
5	1	115	3346.47	269.42°	5°
6	2	230	6692.94	270°	5°
7	2	216	6285.55	269.42°	5°
8	2	132	3841.17	269.42°	5°
TOTAL	14	1323			

SYSTEM INFO (PV):
TOTAL SYSTEM SIZE: 800.4 KWSTC, 636 KWAC;
(1323) TRINA SOLAR TSM-605NEG19RC.20 (605 W)

MODULES DETAILS:
(2) YASKAWA SOLECTRIA PVI25TL-480-R [480V][S11-SB]
(1) YASKAWA SOLECTRIA PVI 36TL-480-V2 [480V][S11-SB]
(11) YASKAWA SOLECTRIA PVI 50TL-480 [480V][S11-SB]

INVERTER DETAILS:

LEGEND:

AC CONDUITS IN TRENCH	-----
EMT CONDUIT ALONG CANOPY	-----
SPARE CONDUITS IN TRENCH (FOR FUTURE USE)	-----
CONDUITS IN TRENCH FOR COMMUNICATION	-----
EMT CONDUIT ALONG CANOPY FOR COMMUNICATION	-----

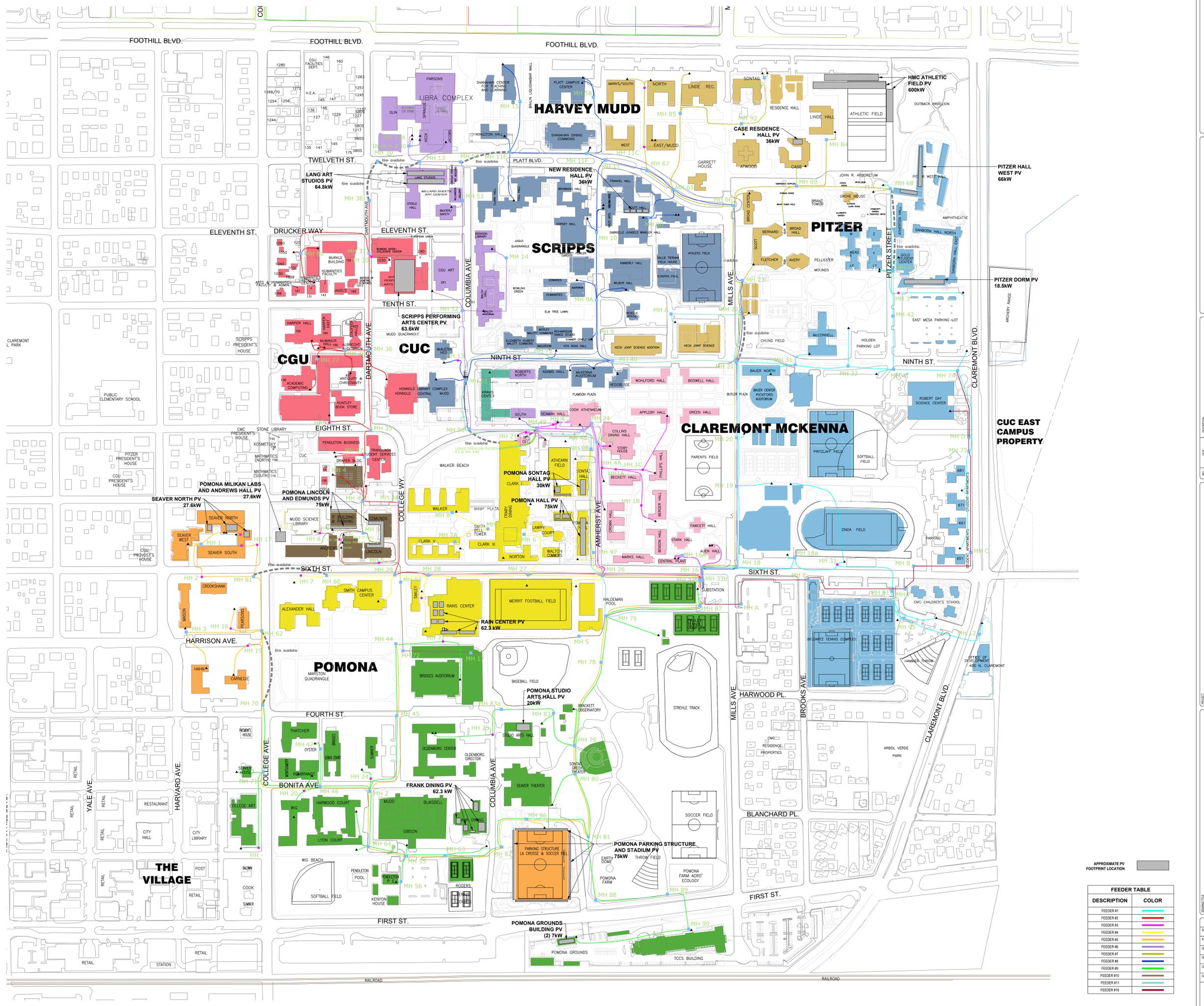
- NOTES:**
- ALL SITE MEASUREMENTS ARE APPROXIMATE & SHALL BE FIELD VERIFIED.
 - DIMENSIONS ARE SHOWN BASED ON PLAN VIEW PROJECTION.
 - CLIENT CONFIRMED WITH CITY ENGINEERING DEPARTMENT, BUILDING DEPARTMENT AND INSPECTION DEPARTMENT THAT AS LONG AS THE SD IS ON PRIVATE PROPERTY AND IS USED BY THAT PRIVATE PROPERTY, RUNNING CONDUIT THROUGH THE EASEMENT AND OVER TOP OF THE SD IS PERMITTED.
 - NRTL RECERTIFICATION IS REQUIRED FOR UL LISTING OF (E) TRANSFORMER.

NO.	DATE	DESCRIPTION
1	08/09/2024	ISSUED FOR PERMIT
2	09/09/2024	REVISED FOR COMMENTS
3	09/09/2024	REVISED FOR COMMENTS
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100	09/09/2024	REVISED FOR COMMENTS

THE CLAREMONT COLLEGE SERVICE
101 SOUTH MILLS AVE. CLAREMONT, CALIFORNIA 91711

CAMPUS WIDE 5KV PV SITE PLAN

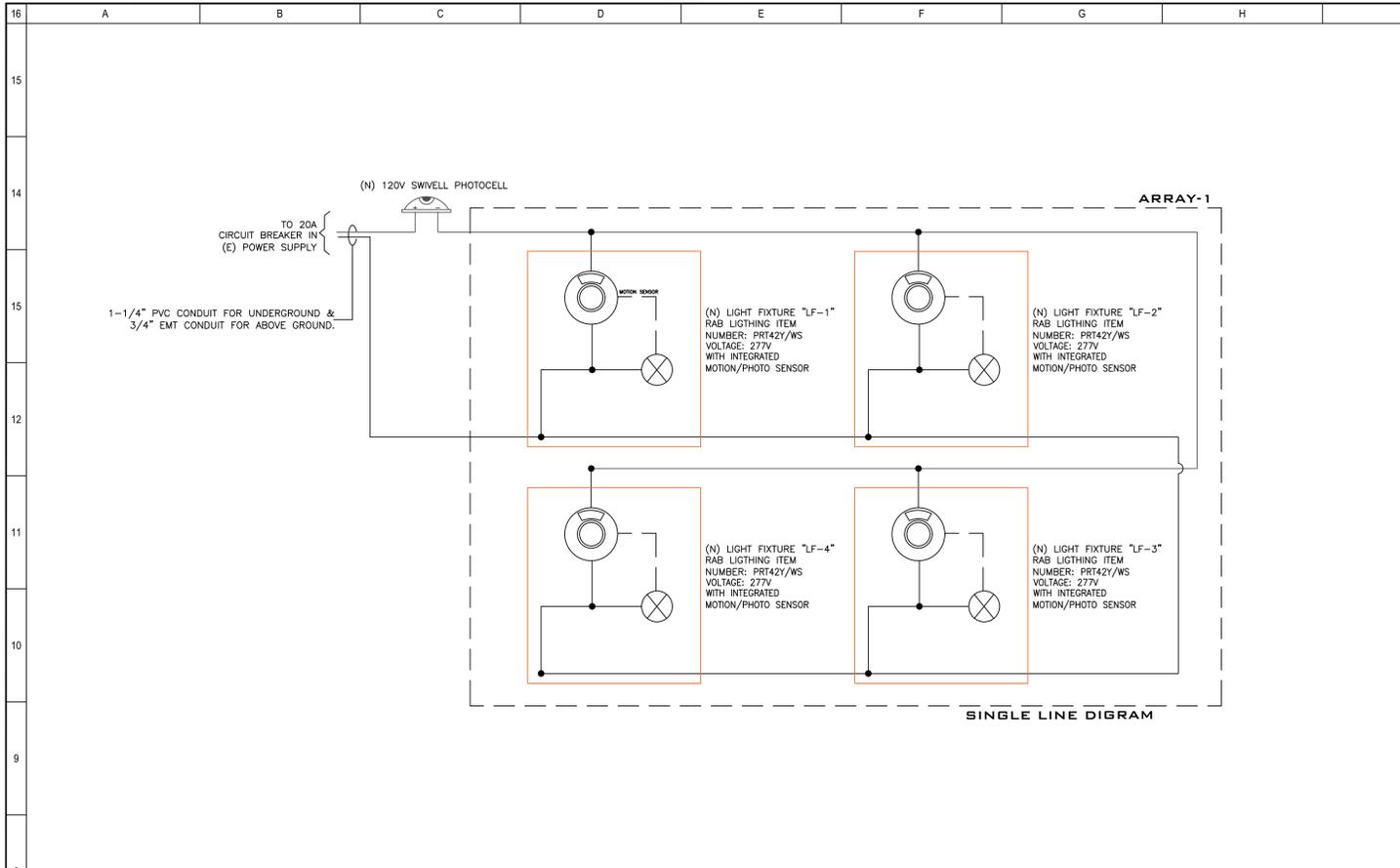
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DESIGNED BY: KSG
DRAWN BY: KSG
CHECKED BY: KSG
DATE: 09/09/2024



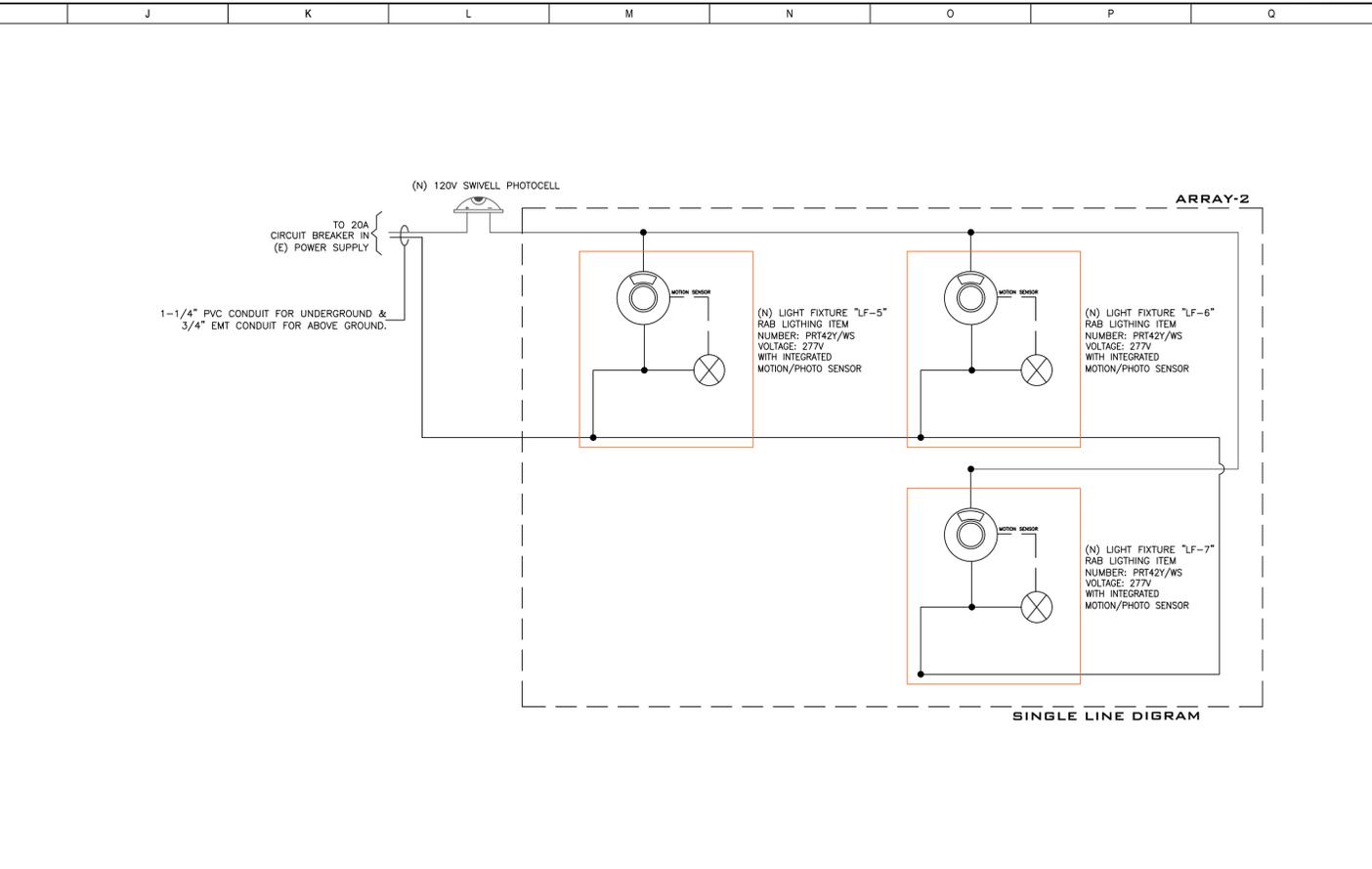
APPROXIMATE PV FOOTPRINT LOCATION

FEEDER TABLE	DESCRIPTION	COLOR
FEEDER #1		Blue
FEEDER #2		Orange
FEEDER #3		Green
FEEDER #4		Yellow
FEEDER #5		Purple
FEEDER #6		Red
FEEDER #7		Light Blue
FEEDER #8		Light Green
FEEDER #9		Light Orange
FEEDER #10		Light Purple
FEEDER #11		Light Red
FEEDER #16		Light Blue

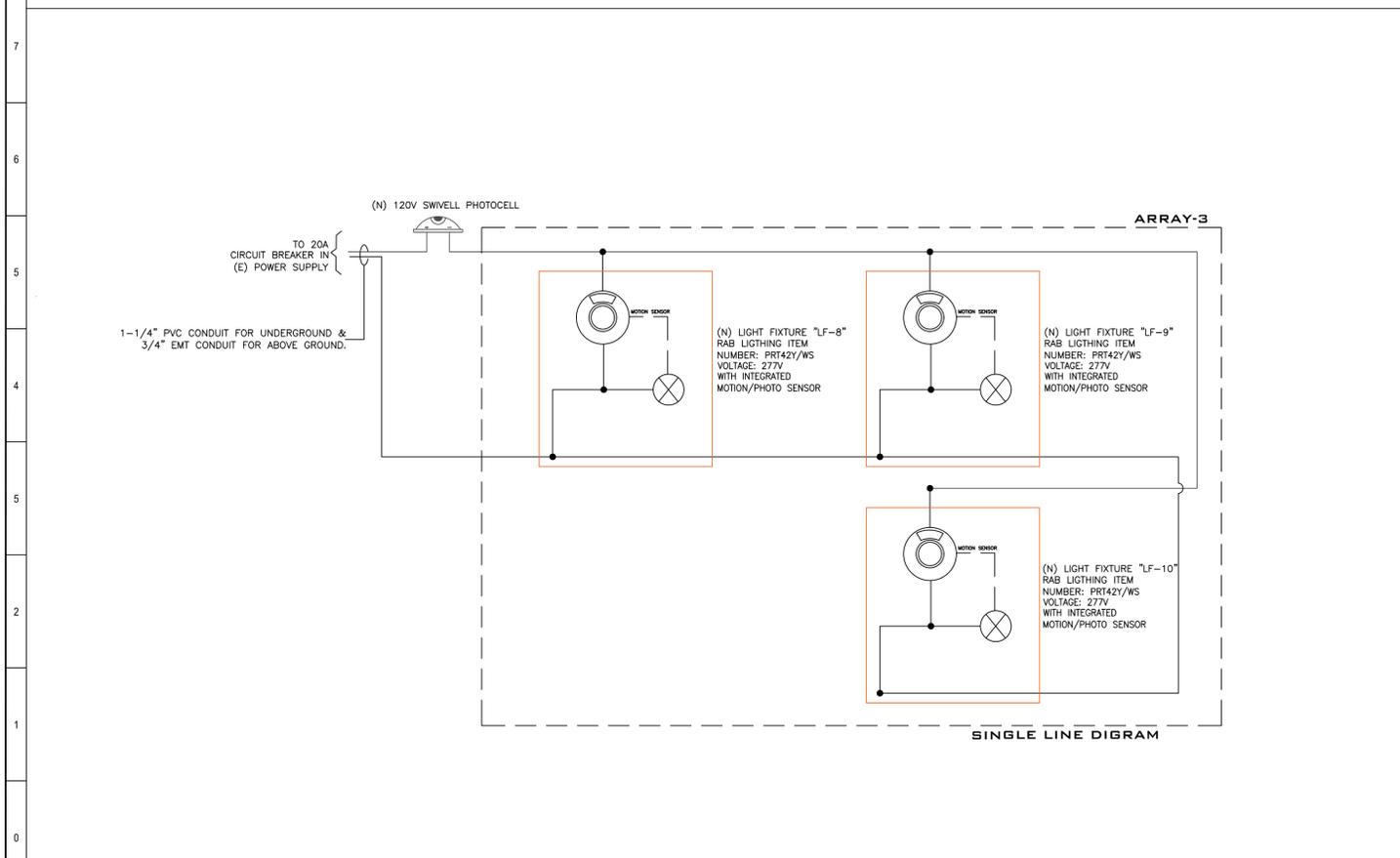
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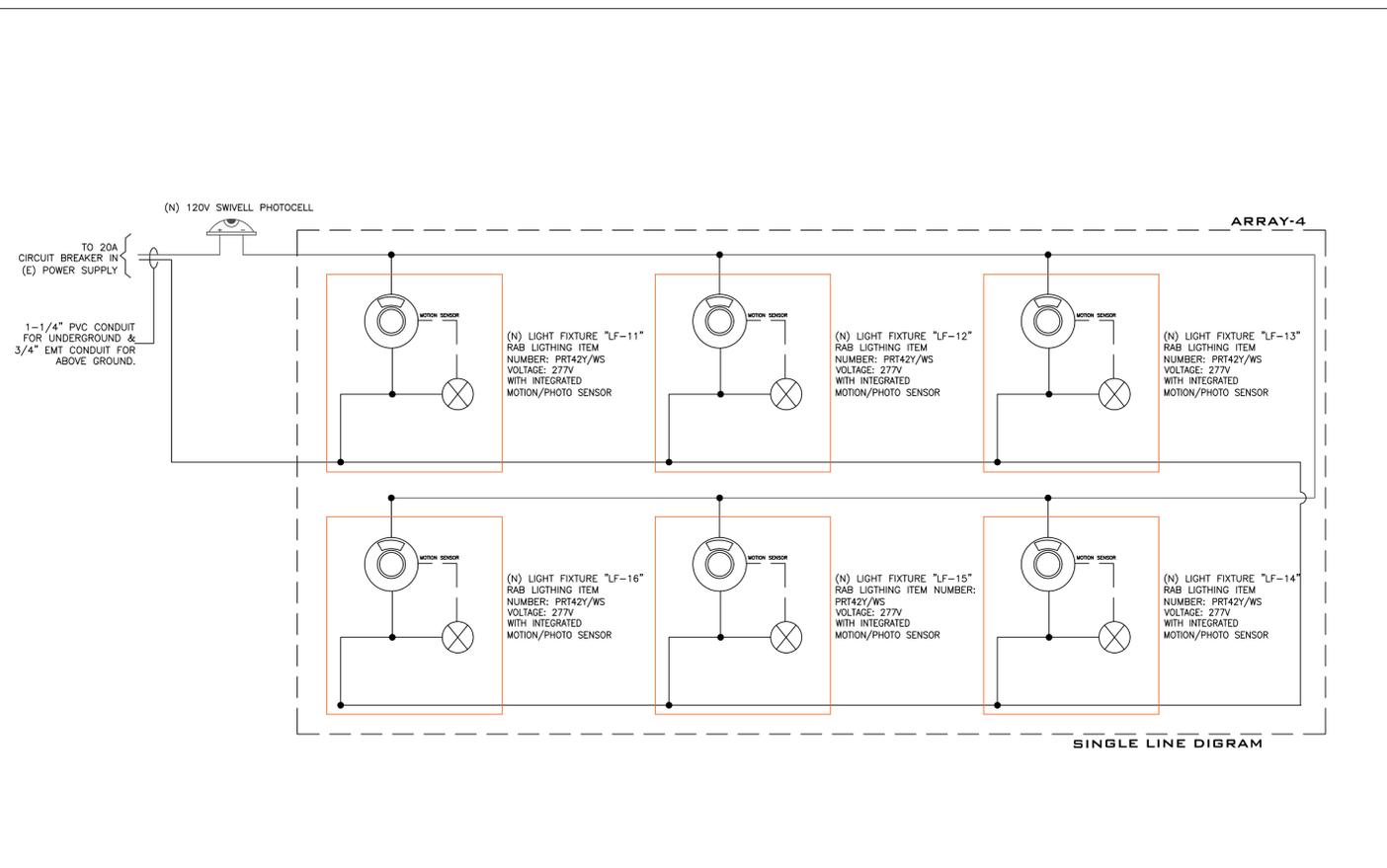
A SINGLE LINE DIAGRAM ARRAY-1
SCALE: NTS



B SINGLE LINE DIAGRAM ARRAY-2
SCALE: NTS



C SINGLE LINE DIAGRAM ARRAY-3
SCALE: NTS



D SINGLE LINE DIAGRAM ARRAY-4
SCALE: NTS



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REV	DATE	DESCRIPTION
1	10/04/2024	ISSUED FOR PERMIT
2	12/10/2024	UPDATED CLIENT COMMENTS REGARDING E.V. SPARE CONDUITS
3	02/20/2025	UPDATED MODULES FROM 860V TO 600V AS PER CLIENT



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CLAREMONT, CA 91711

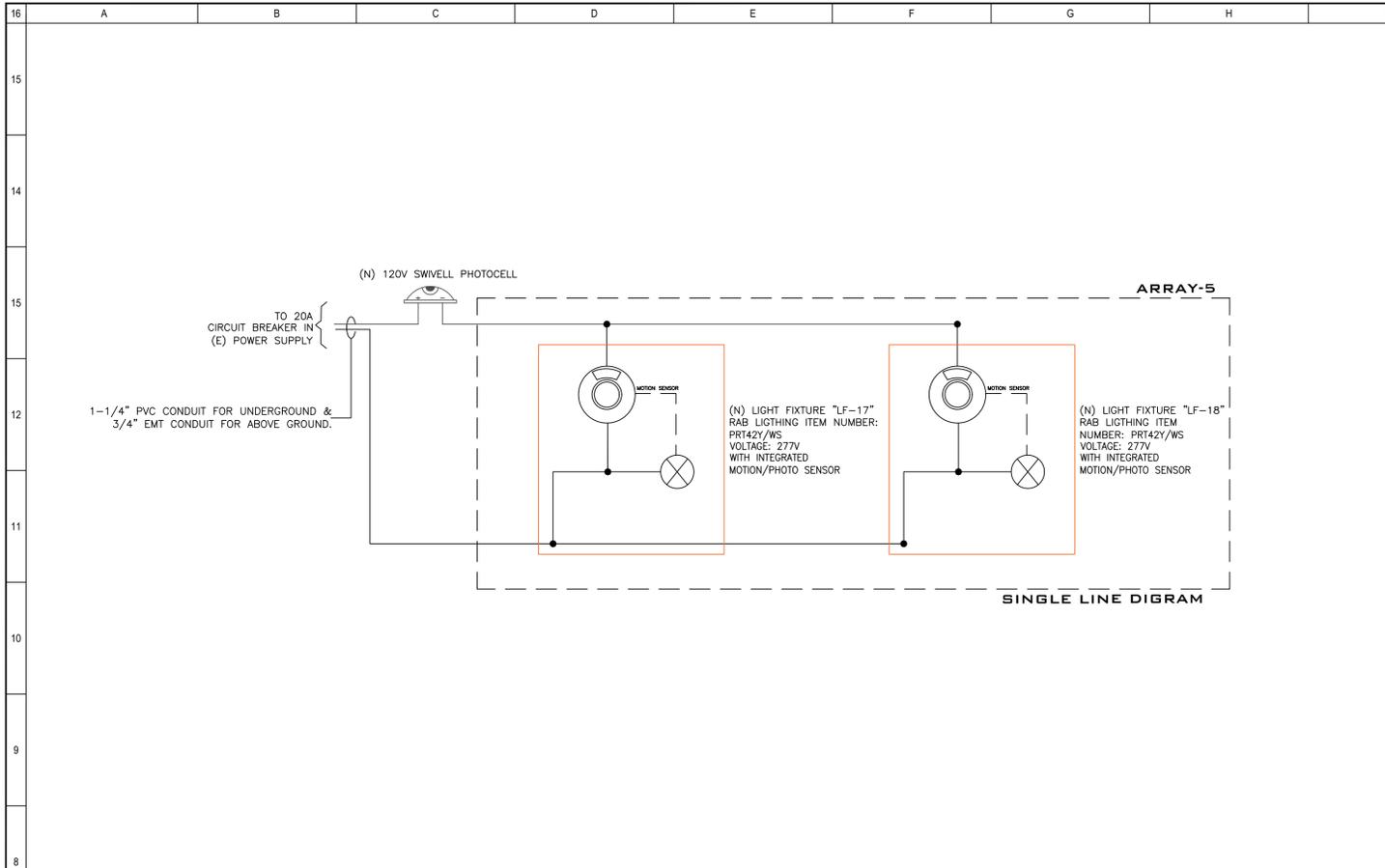


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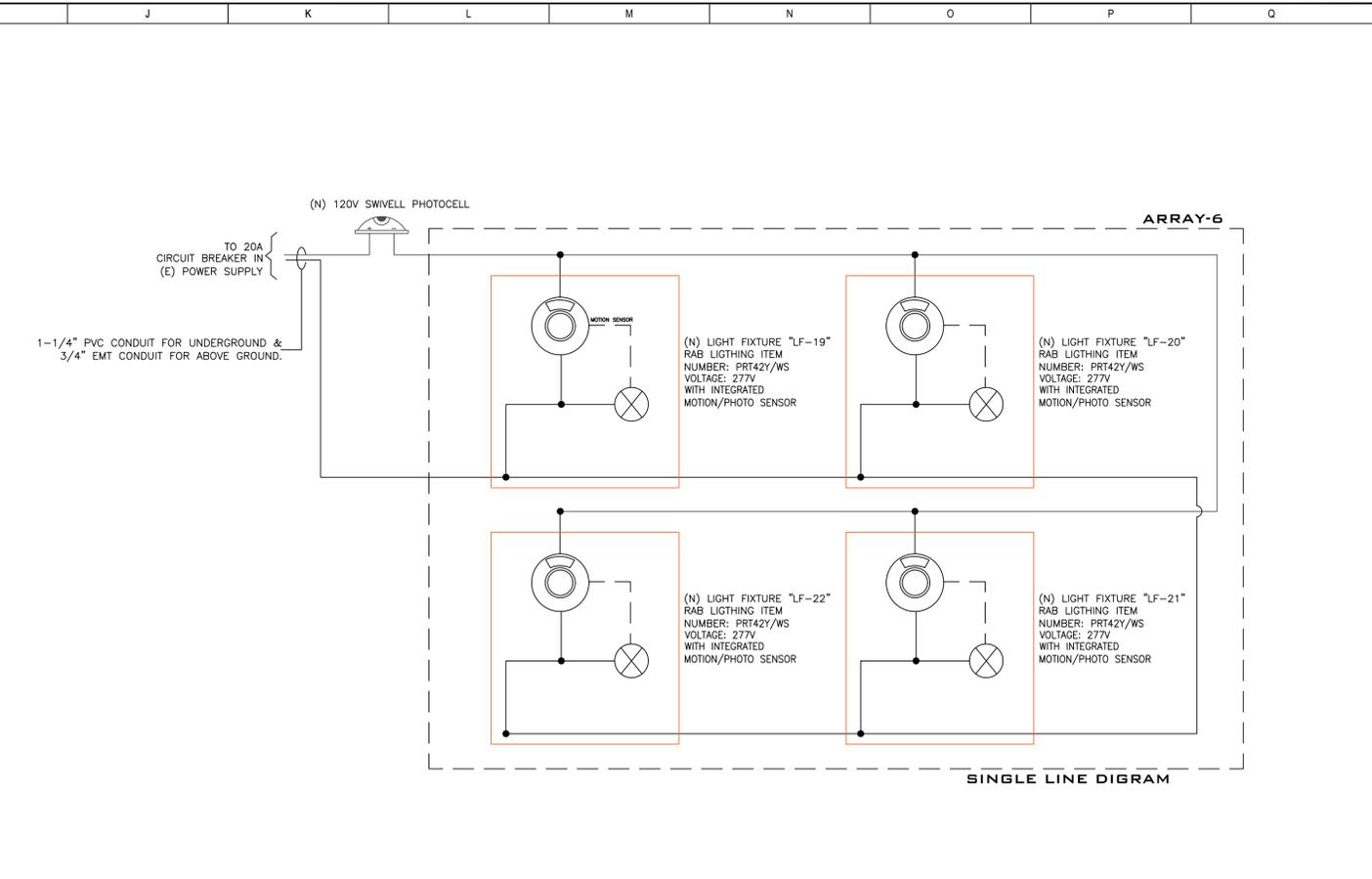
**LIGHTING SINGLE
LINE DIAGRAM-1**

DRAWN BY: PR
APPROVED BY: JHA
SHEET

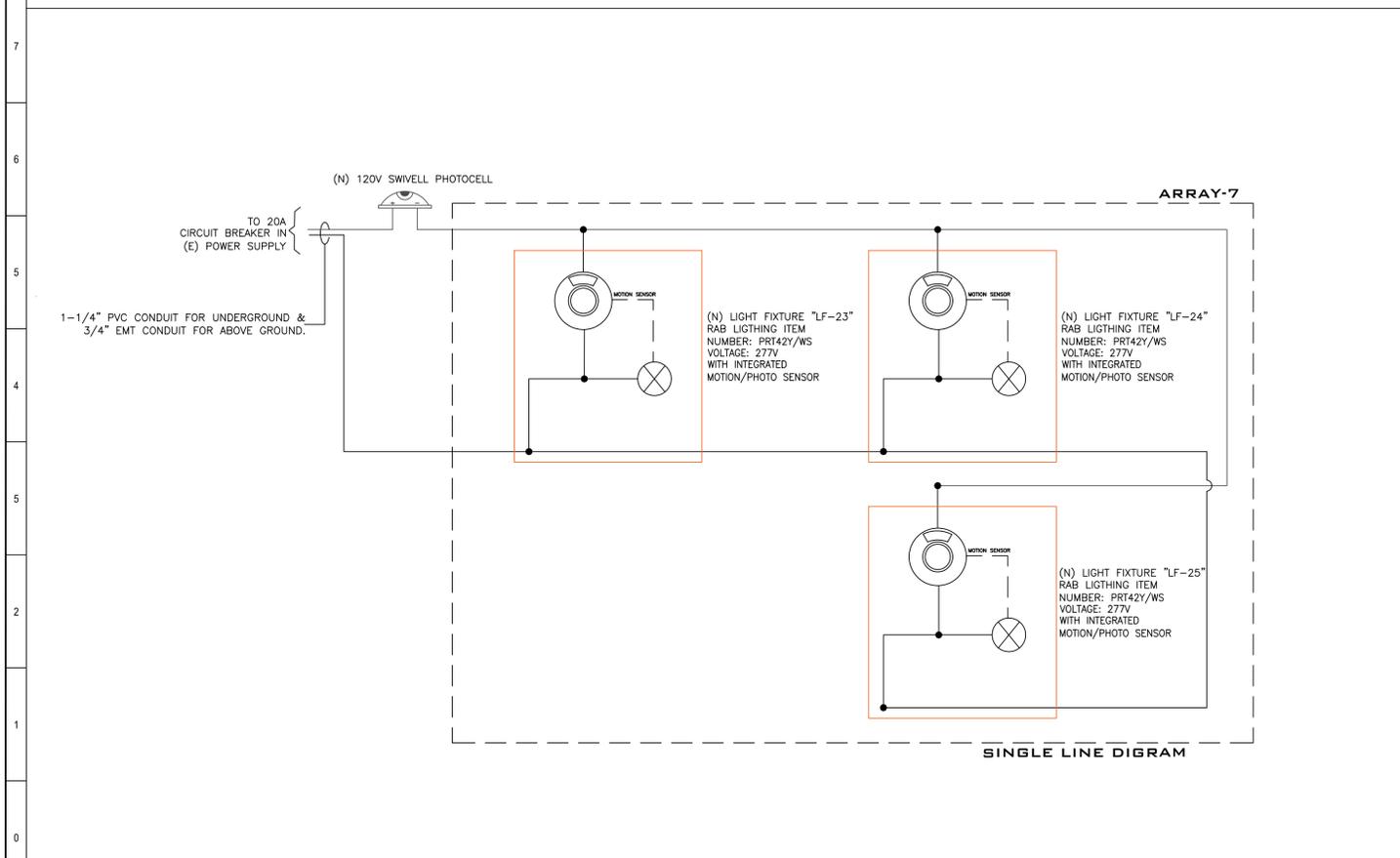
E203



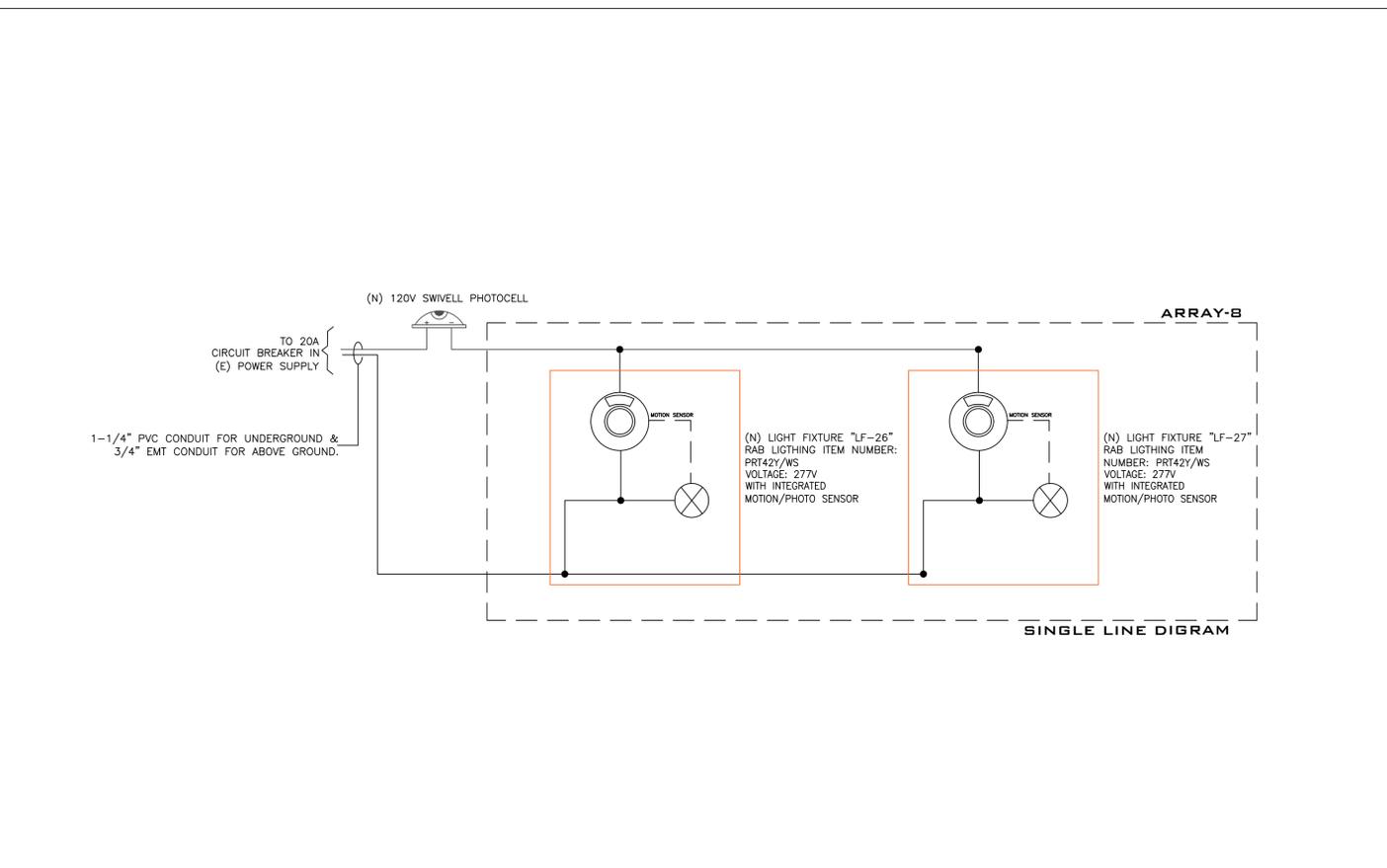
A SINGLE LINE DIAGRAM ARRAY-5
SCALE: NTS



B SINGLE LINE DIAGRAM ARRAY-6
SCALE: NTS



C SINGLE LINE DIAGRAM ARRAY-7
SCALE: NTS



D SINGLE LINE DIAGRAM ARRAY-8
SCALE: NTS

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REV	DATE	DESCRIPTION
1	10/04/2024	ISSUED FOR PERMIT
2	12/10/2024	UPDATED CLIENT COMMENTS REGARDING E.V. SPARE CONDUITS
3	02/20/2025	UPDATED MODULES FROM 800V TO 600V AS PER CLIENT

EDWARD WOLPERT
E 23102
ELECTRICAL
STATE OF CALIFORNIA
Exp. 05/31/2026

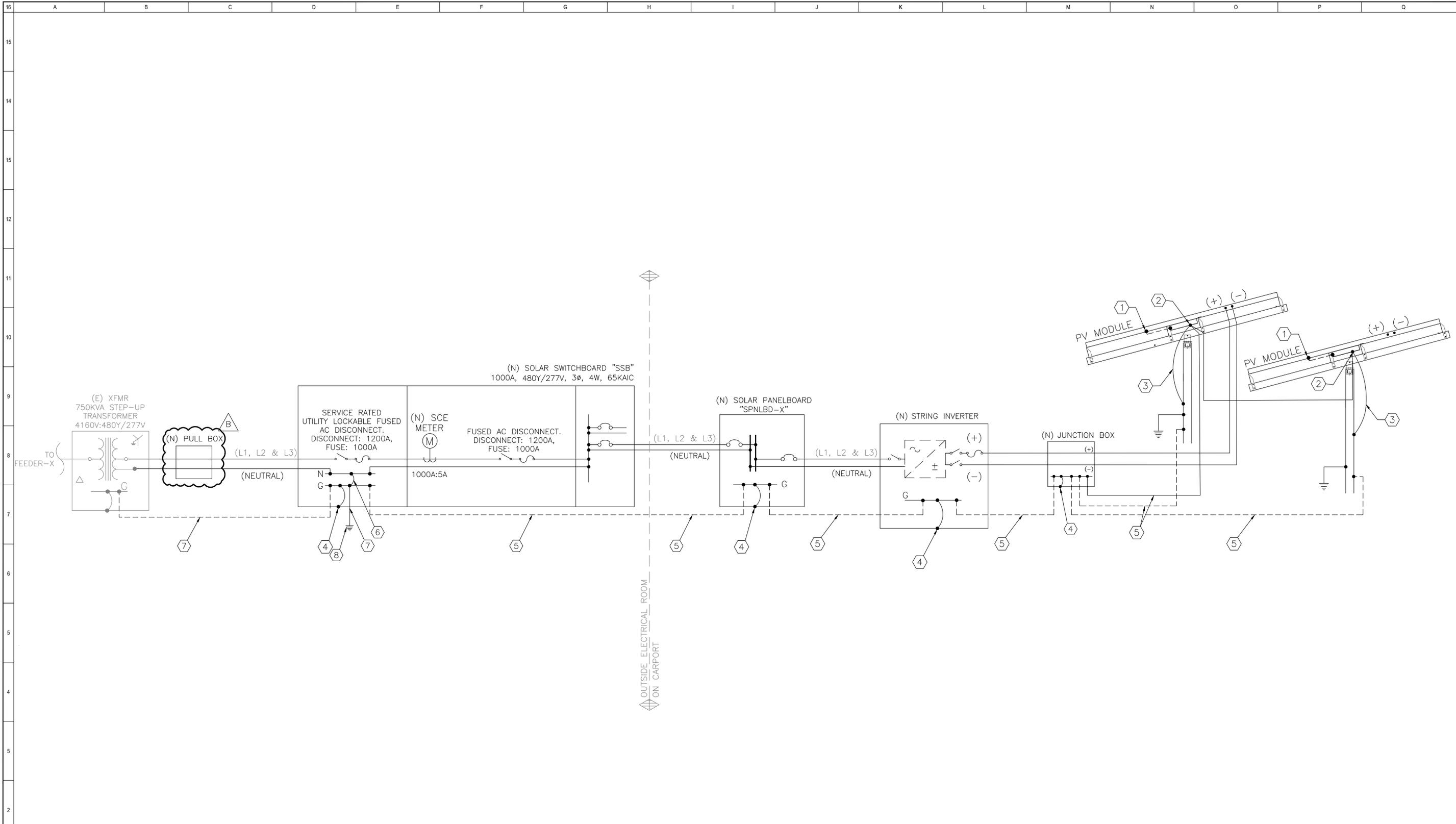
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BEACON
TECHNOLOGIES

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**LIGHTING SINGLE
LINE DIAGRAM-2**

DRAWN BY: PR
APPROVED BY: JHA
SHEET
E204



KEYED NOTES	CONNECTION	COMPONENT
1	PV MODULE TO RACKING STRUCTURE	ALL COMPONENTS WITHIN AN ARRAY ARE ELECTRICALLY BONDED THROUGH STEEL SUPER PURLIN AND MINI CLIP RACKING STRUCTURE.
2	RACKING STRUCTURE TO CANOPY BEAM	CONNECTION MADE THROUGH GROUNDING BRAIDS
3	CANOPY BEAM TO CANOPY COLUMN	CONNECTION MADE THROUGH GROUNDING BRAIDS
4	EQUIPMENT TO GROUND BUS	CONNECTION MADE BY MANUFACTURER.
5	EGC RUNNING WITH CURRENT CARRYING CONDUCTOR	EGC IN SAME CONDUIT/RACEWAY AS THE CURRENT CARRYING CONDUCTORS, TERMINATING AT GROUND BUS AT EACH END. FOR SIZE SEE E400 SHEET. GROUNDING CONNECTIONS MADE VIA CADWELD IN BETWEEN THE CANOPY COLUMN AND THE EQUIPMENT GROUND BUS.
6	MAIN BONDING JUMPER BETWEEN GROUND & NEUTRAL BAR	SIZED PER 250.102(C)(1) OR GROUNDING SCREW
7	GROUNDING ELECTRODE CONDUCTOR	#3/0 AWG CU BARE GEC
8	NEW GROUND ROD	5/8" X 8' LONG COPPER CLAD GROUND ROD, CONNECTED WITH #3/0 AWG CU-BARE GEC



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REV	DESCRIPTION	BY	DATE
1	ISSUED FOR PERMIT	PR	10/04/2024
2	UPDATED CLIENT COMMENTS REGARDING EHV SPARE CONDUITS	PR	12/10/2024
3	UPDATED MODULES FROM 680W TO 680W AS PER CLIENT	PR	02/20/2025



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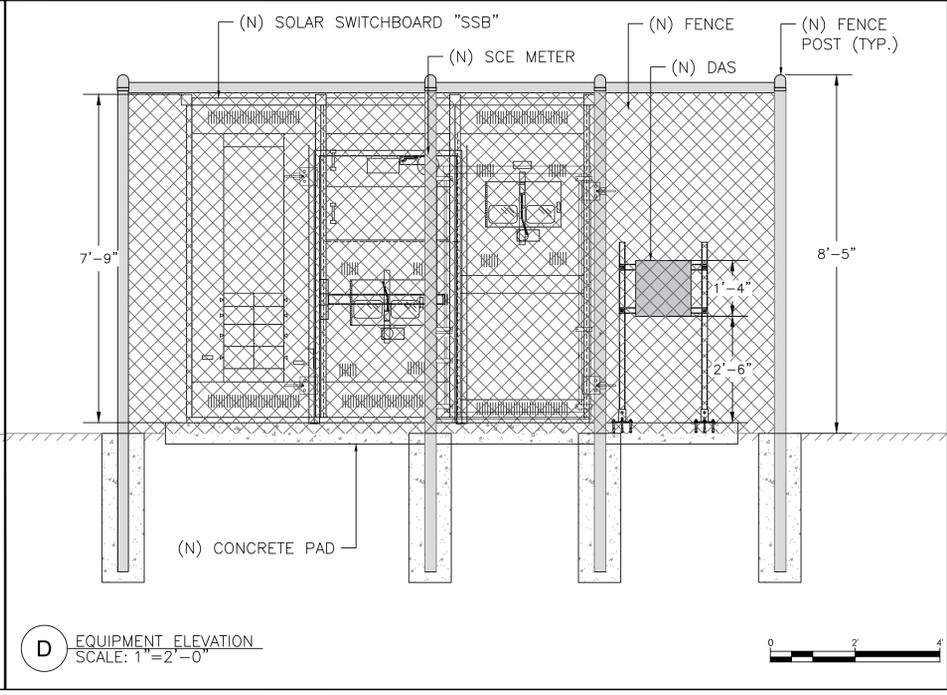
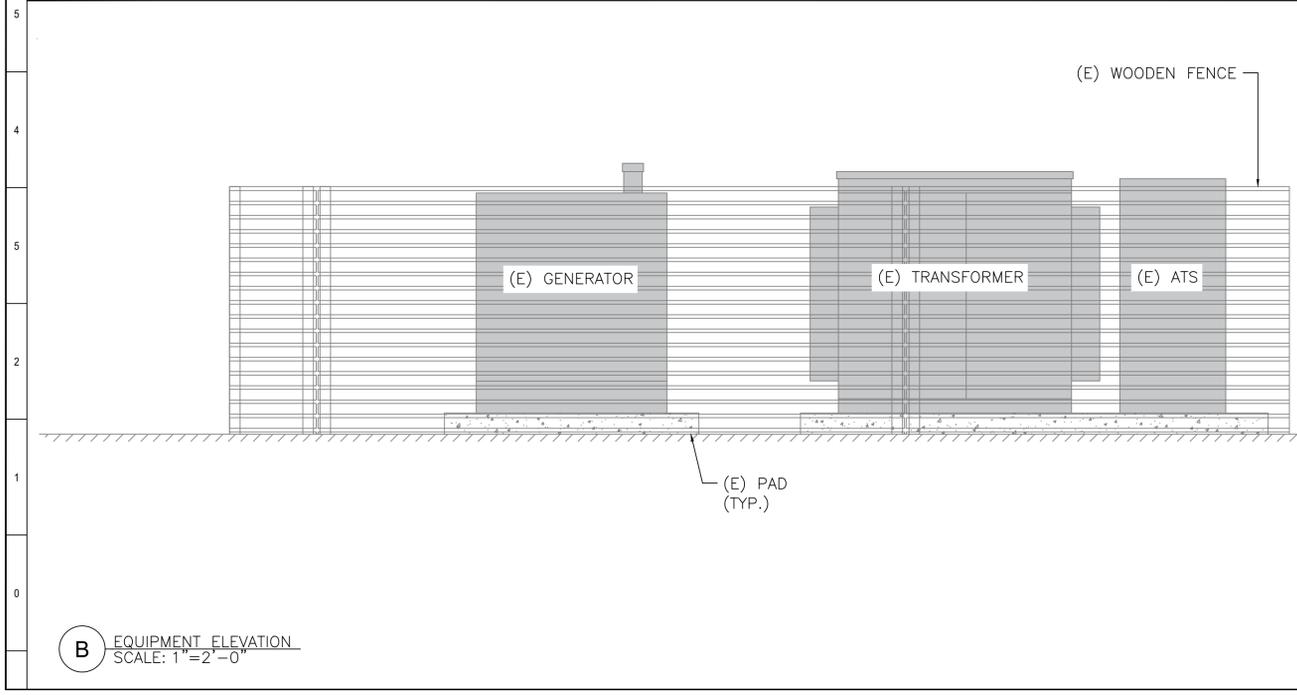
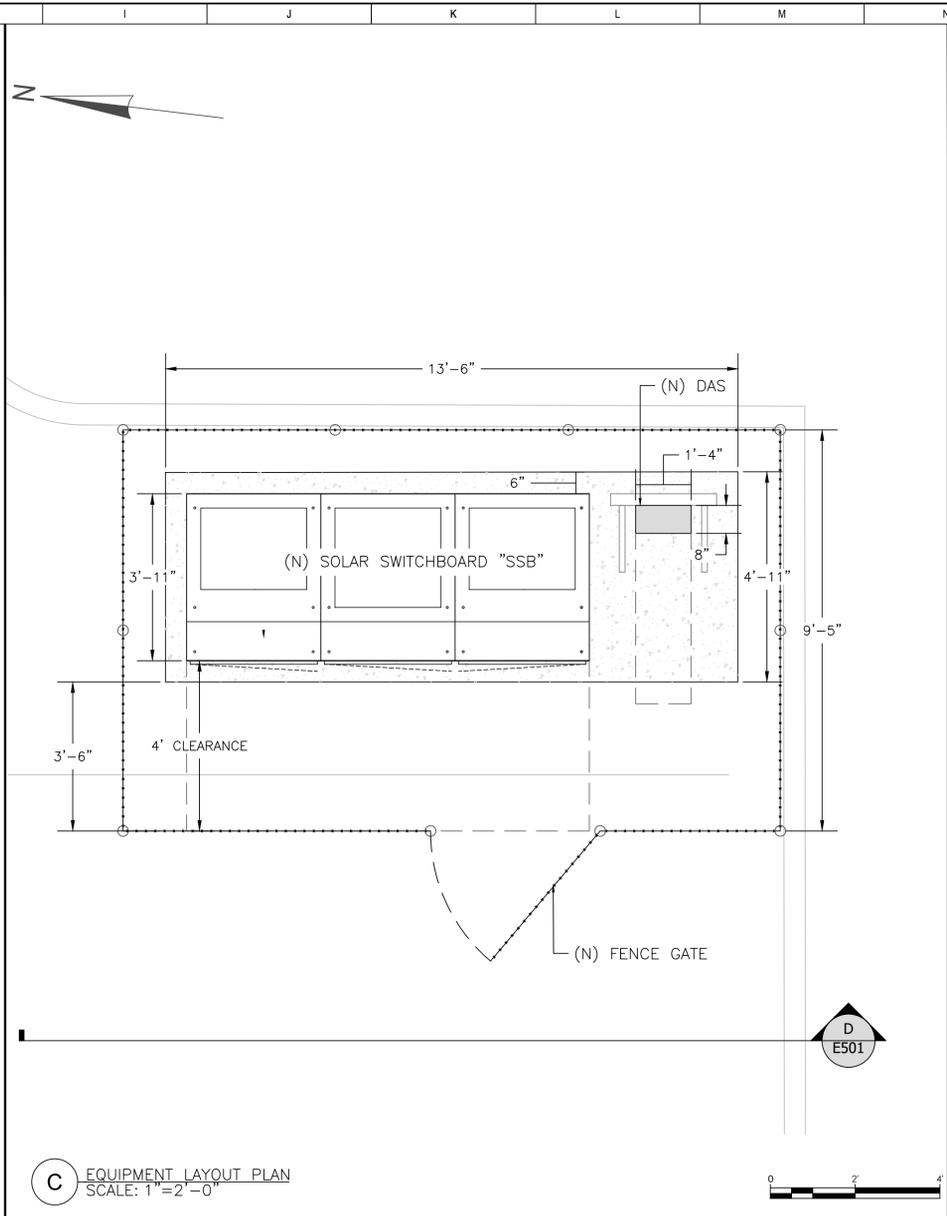
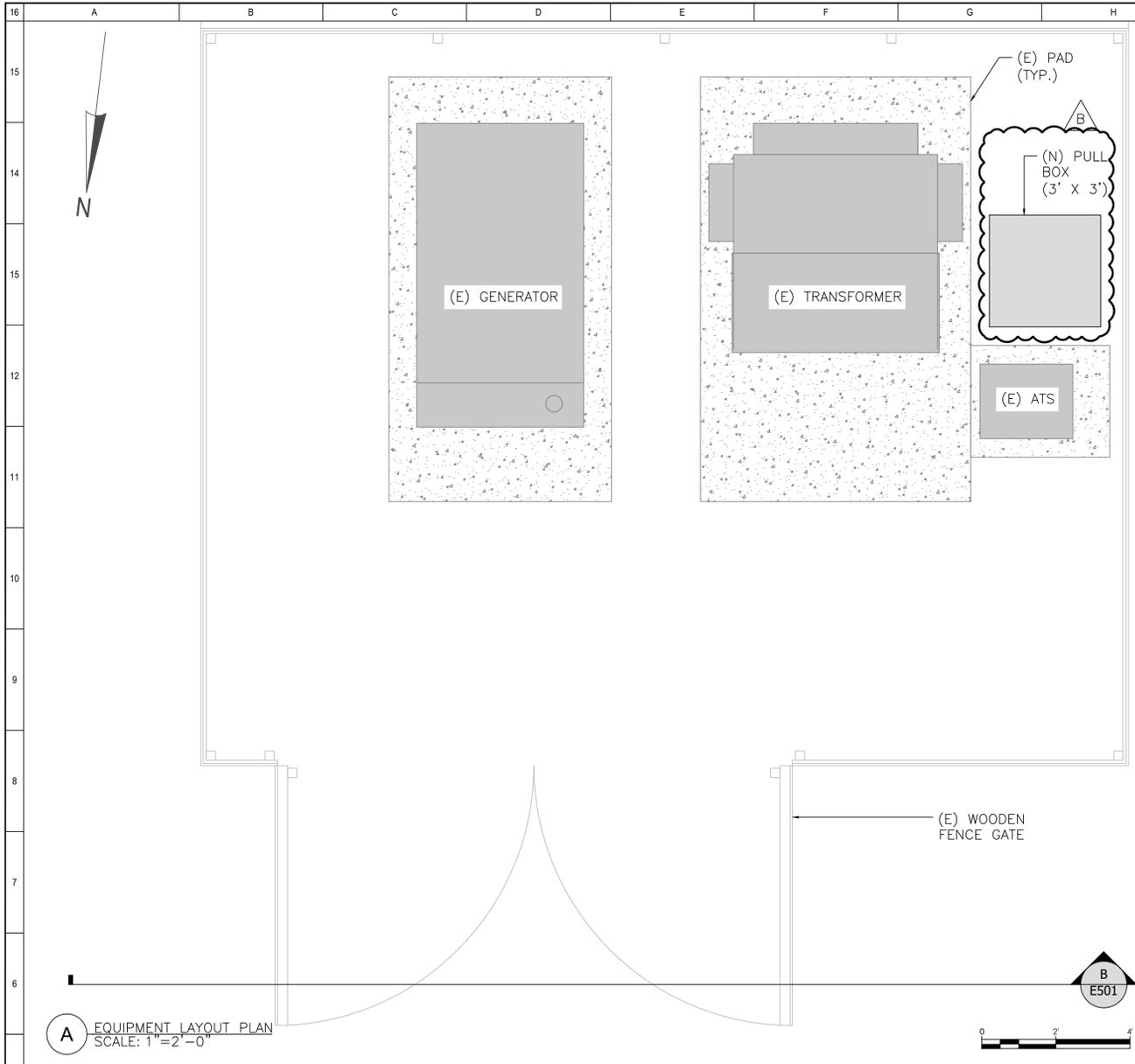


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GROUNDING LINE DIAGRAM

DRAWN BY: PR
 APPROVED BY: JHA
 SHEET

E300



Part	Material	Color / Finish	Sample
Posts	Galvanized Steel Tubing	G-90 Finish	
Chain link	Galvanized Steel Wire	G-90 finish w/ zinc coating	
Privacy Slats	Polyethylene	White	

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REV	DATE	DESCRIPTION
1	10/04/2024	ISSUED FOR PERMIT
2	12/10/2024	UPDATED CLIENT COMMENTS REGARDING EV SPARE CONDUITS
3	02/20/2025	UPDATED MODULES FROM 800V TO 600V AS PER CLIENT

LICENSED PROFESSIONAL ENGINEER
EDWARD WOLPERT
E 23102
ELECTRICAL
STATE OF CALIFORNIA

CLAREMONT COLLEGE
101 S. MILLS AVENUE
CLAREMONT, CA 91711

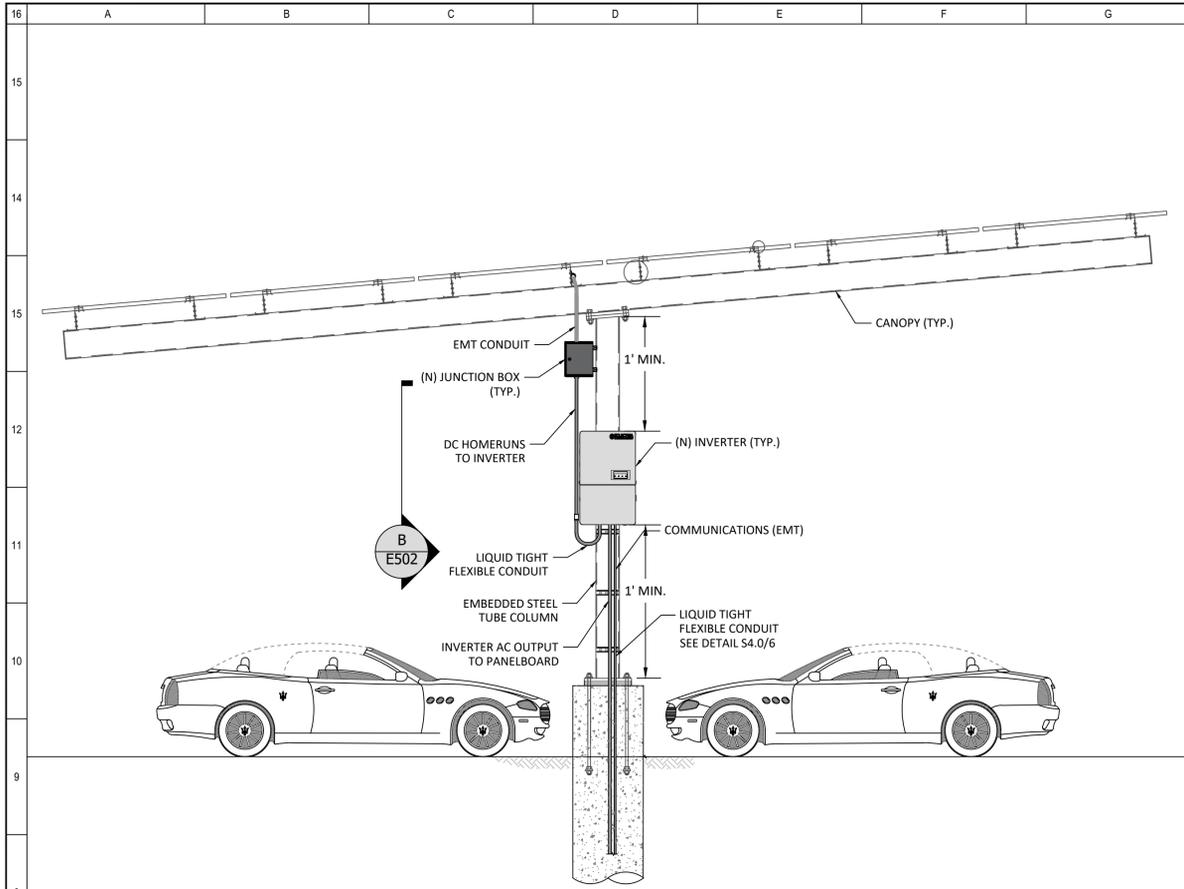
BEACON TECHNOLOGIES

BY HERBERT LAURENCE OF MBL-ENERGY AND OWNER RETAINING ALL RIGHT AND TITLE, NO PART MAY BE REPRODUCED IN ANY FORM OR MEDIUM WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER.

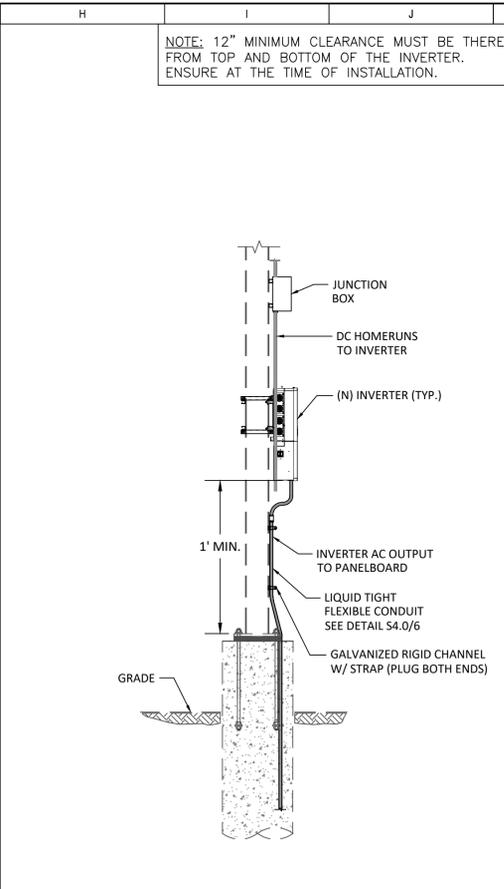
EQUIPMENT LAYOUT PLAN-1

DRAWN BY: PR
APPROVED BY: JHA

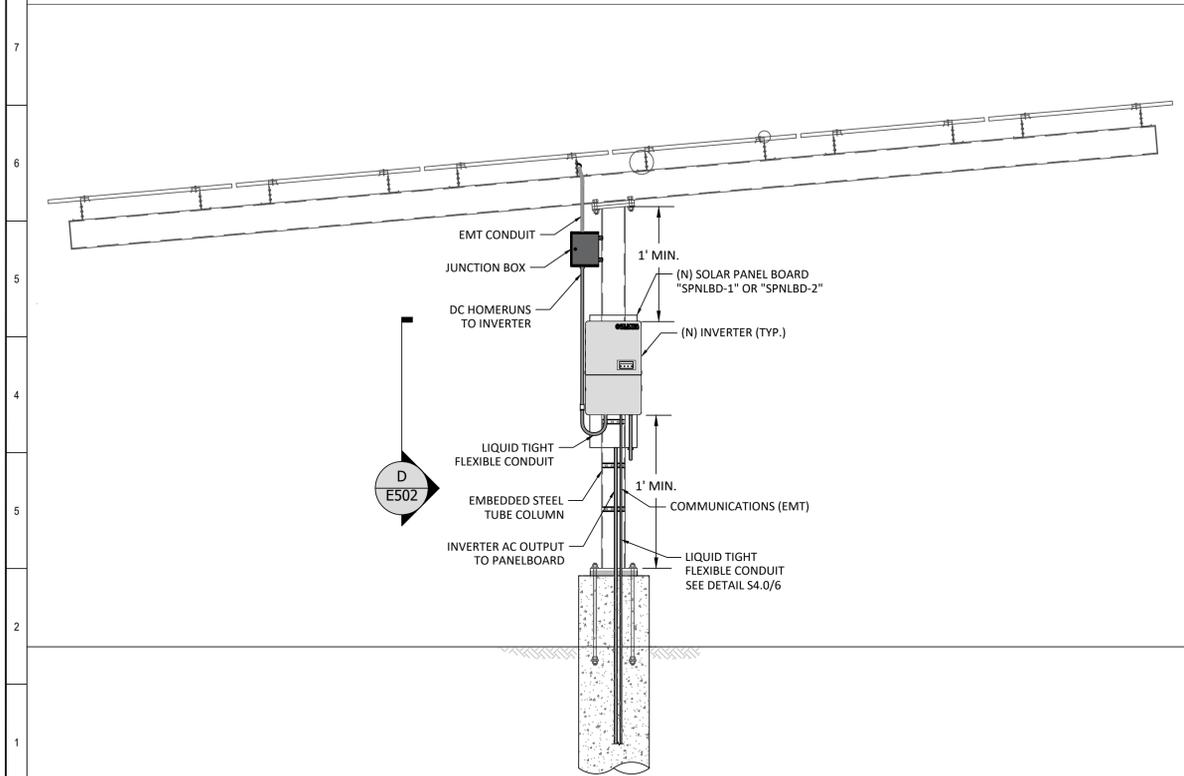
SHEET
E501



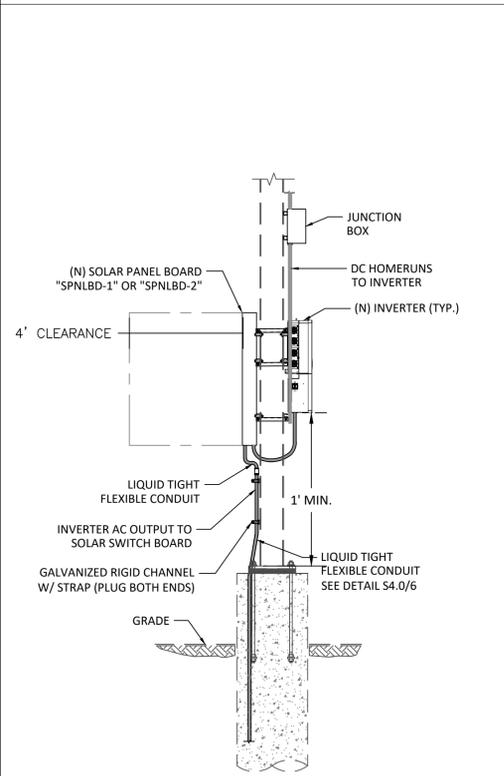
A COLUMN_MOUNTED INVERTER FRONT ELEVATION (TYP.)
SCALE: 1"=3'-0"



B COLUMN_MOUNTED INVERTER SIDE ELEVATION (TYP.)
SCALE: 1"=3'-0"



C COLUMN_MOUNTED INVERTER FRONT ELEVATION (TYP.)
SCALE: 1"=3'-0"



D COLUMN_MOUNTED INVERTER SIDE ELEVATION (TYP.)
SCALE: 1"=3'-0"

NOTE: 12" MINIMUM CLEARANCE MUST BE THERE FROM TOP AND BOTTOM OF THE INVERTER. ENSURE AT THE TIME OF INSTALLATION.

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DATE	BY	PR	DESCRIPTION
10/04/2024	PR	PR	ISSUED FOR PERMIT
12/10/2024	PR	PR	UPDATED CLIENT COMMENTS REGARDING EV SPARE CONDUITS
02/20/2025	PR	PR	UPDATED MODULES FROM 800W TO 800W AS PER CLIENT

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EDWARD WOLPERT
E 23102
ELECTRICAL
STATE OF CALIFORNIA
Exp. 08/31/2026

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CLAREMONT, CA 91711

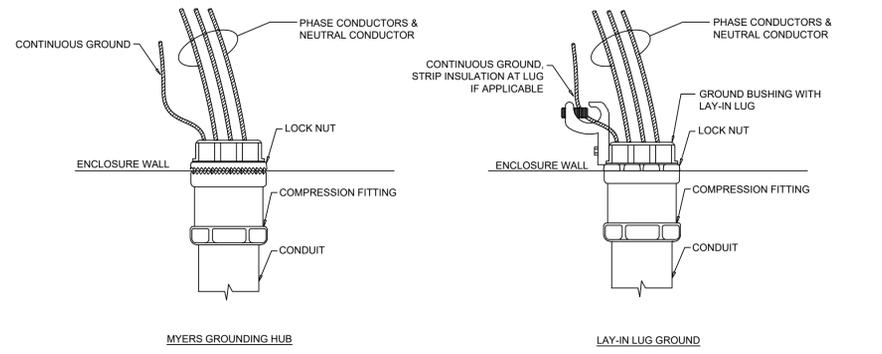
BEACON
TECHNOLOGIES

BY AGREEMENT LAUNCH OF MBL-ENERGY AND OWNER RETAINING ALL RIGHT AND TITLE. NO PART CAN BE REPRODUCED IN ANY MEDIUM OR MEDIUM WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER.

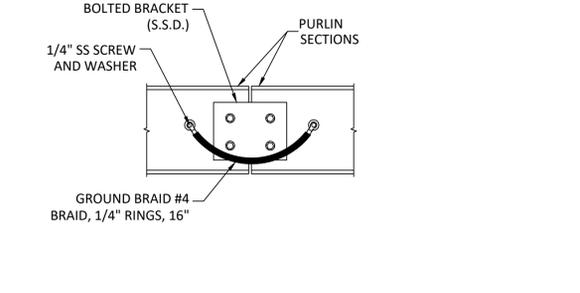
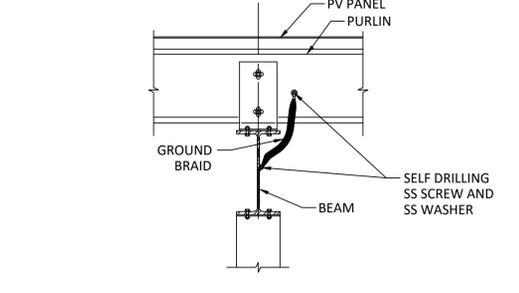
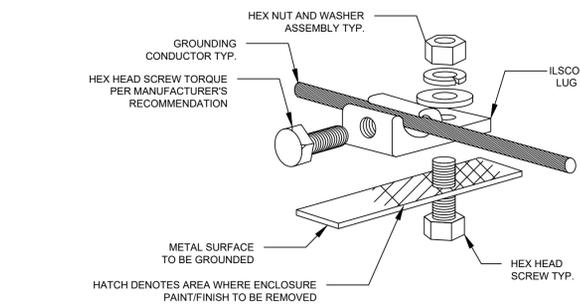
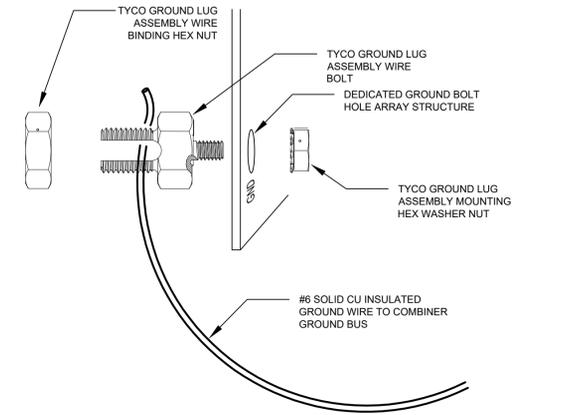
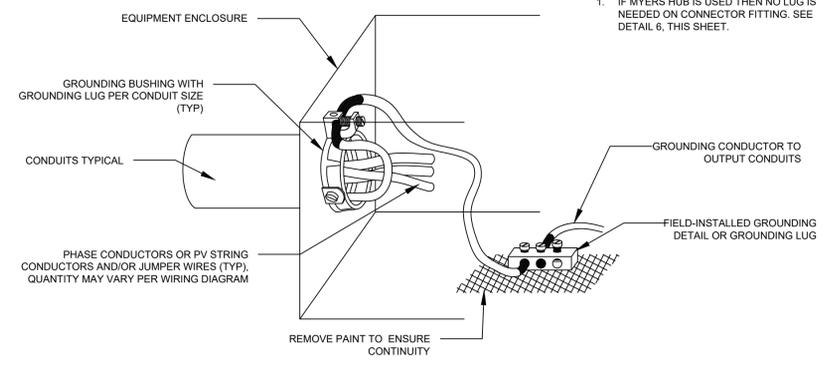
EQUIPMENT LAYOUT PLAN-2

DRAWN BY:	PR
APPROVED BY:	JHA

SHEET
E502



ENCLOSURE/EQUIPMENT GROUNDING NOTES:
1. IF MYERS HUB IS USED THEN NO LUG IS NEEDED ON CONNECTOR FITTING. SEE DETAIL 6, THIS SHEET.

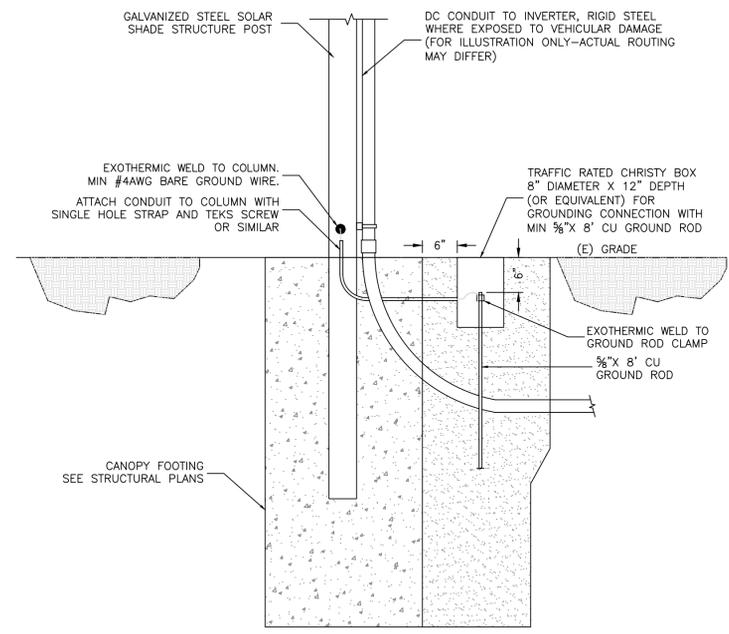


A CONDUIT FITTING GROUNDING DETAIL
SCALE: NTS

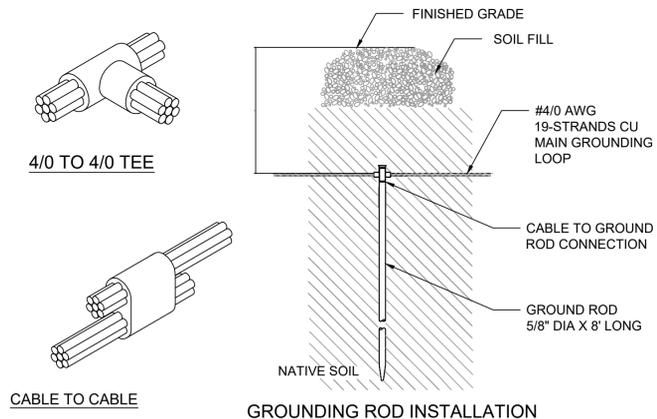
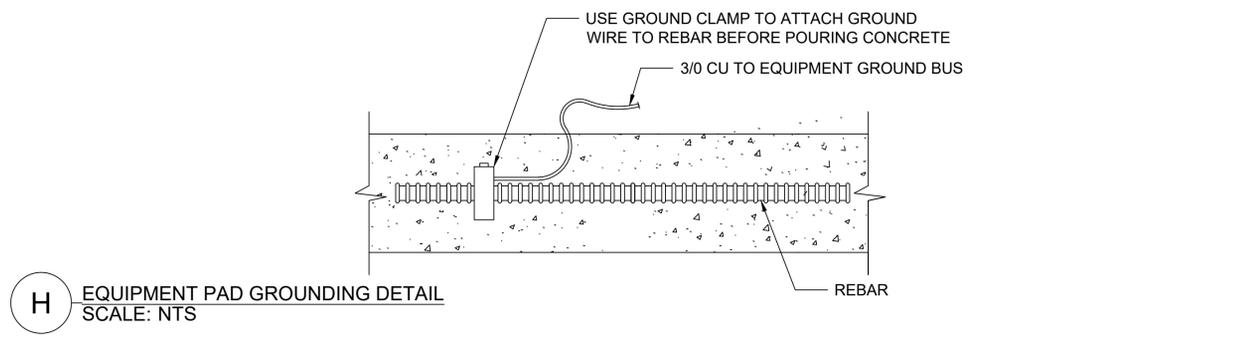
B ARRAY RACK GROUND LUG DETAIL
SCALE: NTS

E PV PANEL GROUNDING DETAIL
SCALE: NTS

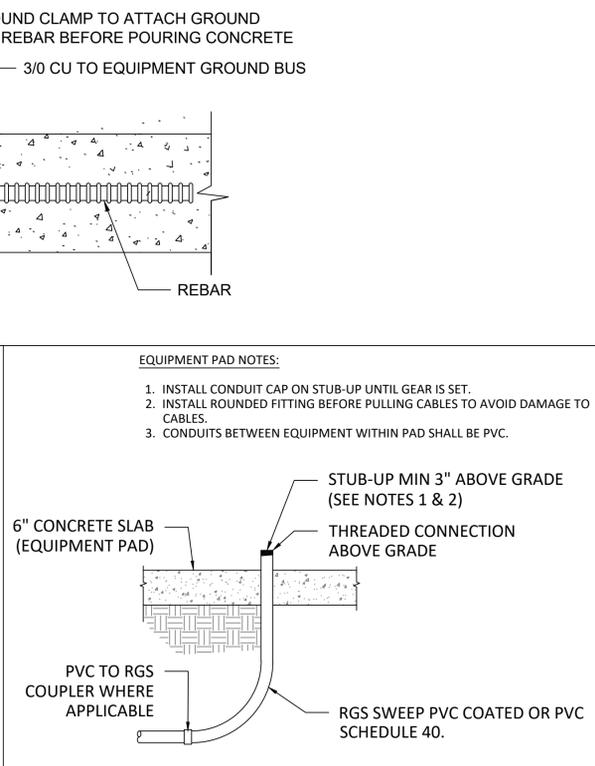
F BEAM TO COLUMN GROUNDING DETAIL
SCALE: NTS



G CANOPY COLUMN GROUNDING DETAIL
SCALE: NTS



I GROUND ROD INSTALLATION DETAIL
SCALE: NTS



J STUB-UP DETAIL
SCALE: NTS

C PURLIN TO BEAM GROUNDING DETAIL
SCALE: NTS

D PURLIN TO PURLIN GROUNDING DETAIL
SCALE: NTS

NOTE:
BEAM TO COLUMN GROUNDING TO BE PROVIDED AT COLUMN LOCATIONS WITH PANELBOARDS & INVERTERS ONLY



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DATE	BY	DESCRIPTION
10/04/2024	PR	ISSUED FOR PERMIT
12/10/2024	PR	UPDATED CLIENT COMMENTS REGARDING EV SPARE CONDUITS
02/20/2025	PR	UPDATED MODULES FROM 800V TO 600V AS PER CLIENT



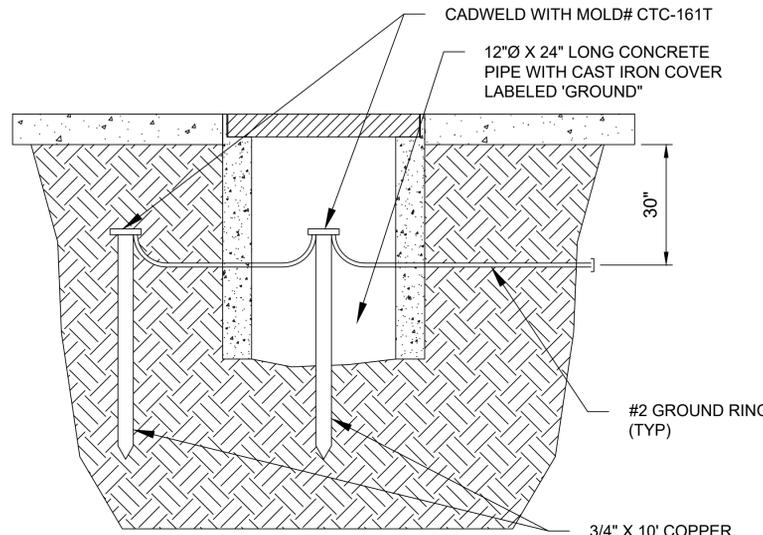
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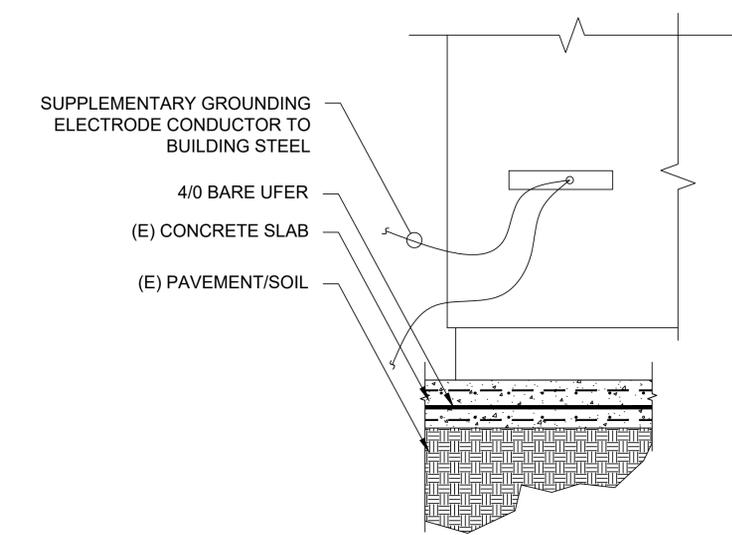
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ELECTRICAL DETAILS-3

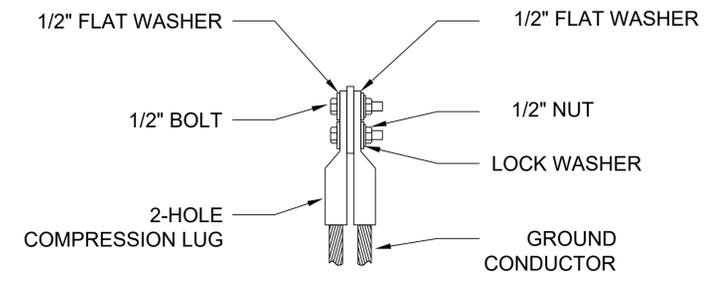
DRAWN BY: PR
APPROVED BY: JHA
SHEET
E603



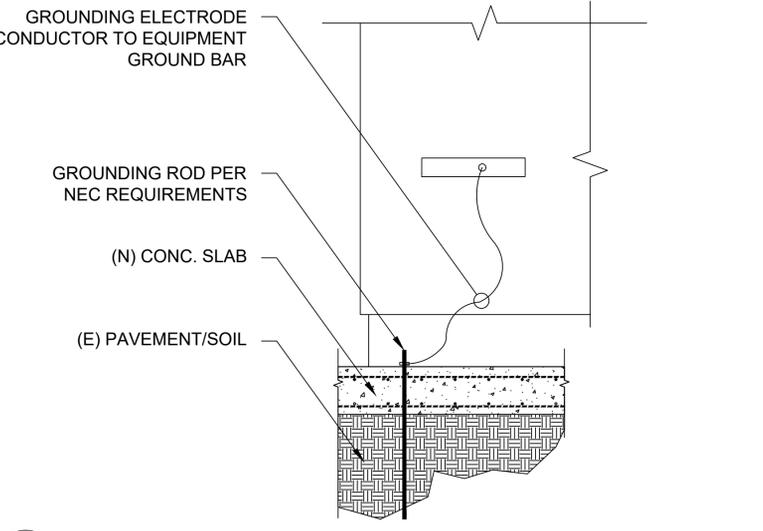
A EQUIPMENT PAD GROUNDING ELECTRODE DETAIL
SCALE: NTS



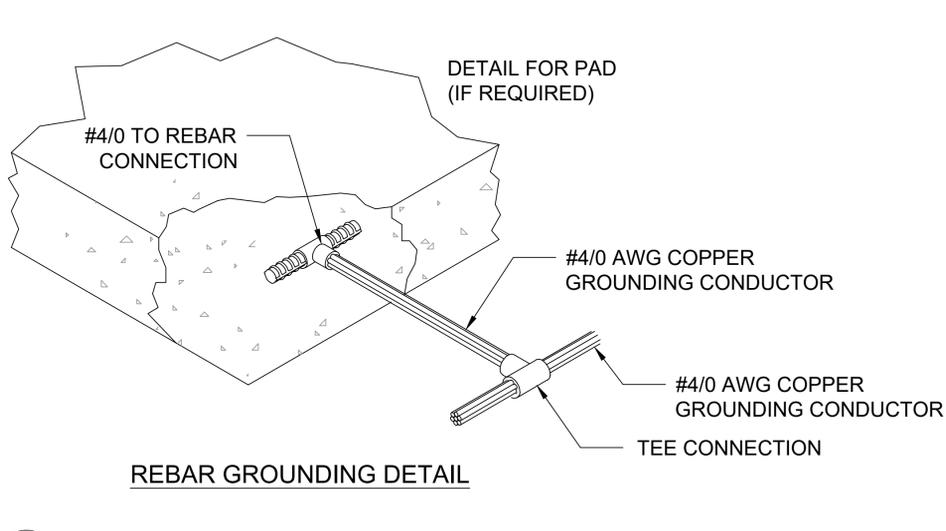
B EQUIPMENT PAD GROUNDING ELECTRODE DETAIL
SCALE: NTS



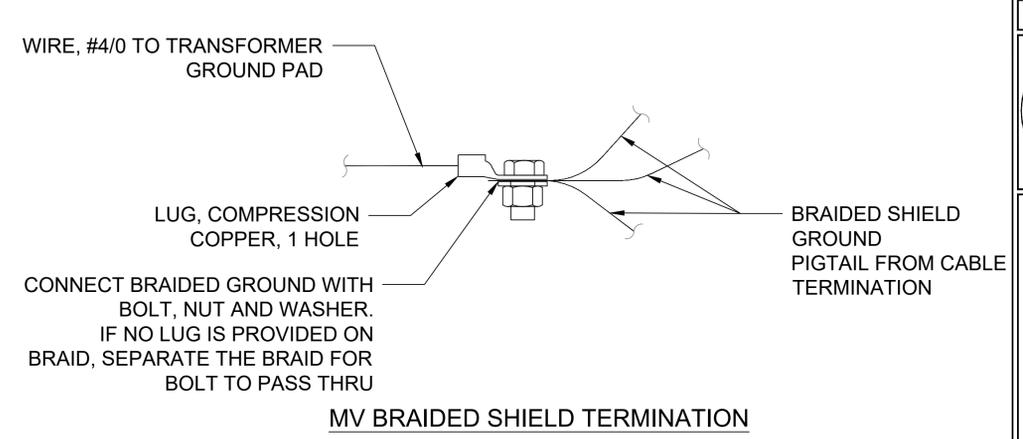
C ELECTRICAL EQUIPMENT GROUNDING DETAIL
SCALE: NTS



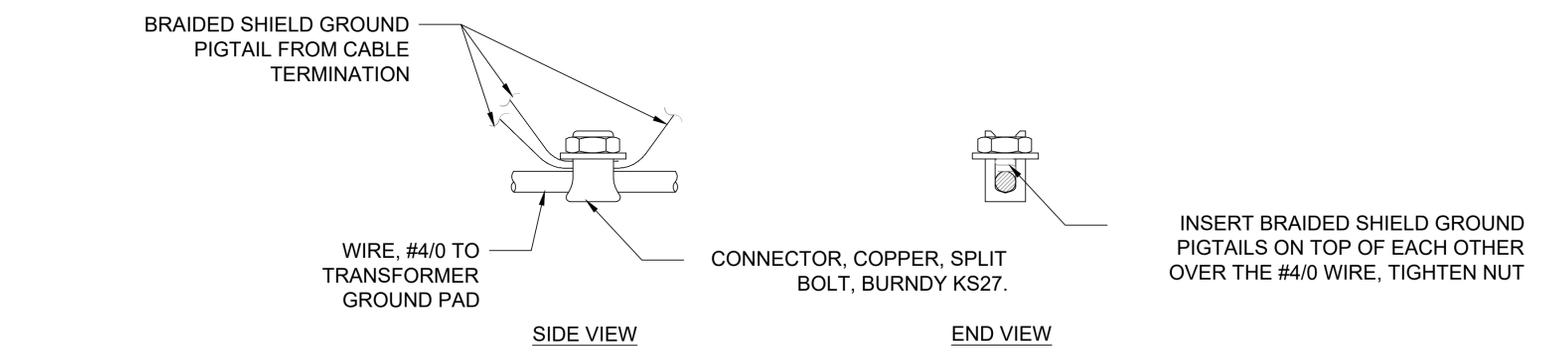
D EQUIPMENT PAD GROUNDING ELECTRODE DETAIL
SCALE: NTS



E ELECTRICAL EQUIPMENT GROUNDING DETAIL
SCALE: NTS



F ELECTRICAL EQUIPMENT GROUNDING DETAIL
SCALE: NTS

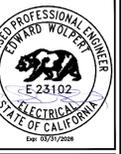


G ELECTRICAL EQUIPMENT GROUNDING DETAIL
SCALE: NTS



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REV	DATE	DESCRIPTION
1	10/04/2024	ISSUED FOR PERMIT
2	12/10/2024	UPDATED CLIENT COMMENTS REGARDING E.V. SPARE CONDUITS
3	02/20/2025	UPDATED MODULES FROM 880V TO 690V AS PER CLIENT



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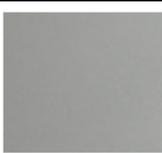
BY: MARIANA LAURENCO OF MBL-ENERGY AND OWNER RETAINING ALL RIGHT AND TITLE. NO PART MAY BE REPRODUCED IN ANY MANNER OR MEDIUM WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER.

ELECTRICAL
DETAILS-4

DRAWN BY: PR
APPROVED BY: JHA

SHEET
E604

Materials Board
The Claremont Colleges Services

Product	Part	Material	Color / Finish	Sample
Fencing	Posts	Galvanized Steel Tubing – 4” sched. 40	G-90 Finish	
	Chain link	Galvanized Steel 9 GA Wire	G-90 finish w/ zinc coating	
	Privacy Slats	Polyethylene	White	White 
Arrays	Columns	HSS 10x10x3/8	Kendall Charcoal, BM HC-166; Kelly Moore Formula: 20-1067-080	
	Beams	HSS 12x8x1/2	Kendall Charcoal, BM HC-166; Kelly Moore Formula: 20-1067-080	
	Zee Purlin	12 GA ASTM A653	G-90 Finish	



Product	Part	Material	Color / Finish	Sample
Lighting	Housing	Die-Cast Aluminum	Bronze	
	Lens	Polycarbonate	Frosted	
	Bulbs	LED	42W 3000K (Warm)	