

BAKERSFIELD CITY SCHOOL DISTRICT SOLAR:
BESSIE OWENS ELEMENTARY
815 Potomac Ave, Bakersfield, CA 93307

GOVERNING CODES:

CALIFORNIA CODE OF REGULATIONS:
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC) (PART 1, TITLE 24, CCR)
2022 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1, AND 2 (PART 2, TITLE 24, CCR)
(2021 EDITION INTERNATIONAL BUILDING CODE WITH 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24, CCR)
(2020 NFPA 70)
2022 CALIFORNIA MECHANICAL CODE (CMC) (PART 4, TITLE 24, CCR)
(2021 EDITION IAPMO UNIFORM MECHANICAL CODE WITH 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA PLUMBING CODE (CPC) (PART 5, TITLE 24, CCR)
(2021 EDITION IAPMO UNIFORM PLUMBING CODE WITH 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)
2022 CALIFORNIA FIRE CODE (CFC) (PART 9, TITLE 24, CCR)
(2021 EDITION OF INTERNATIONAL FIRE CODE WITH 2022 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA GREEN CODE (PART 11, TITLE 24, CCR)
2022 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24, CCR)
NFPA 13 - 2022
NFPA 72 - 2022

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:

2022 CBC, CHAPTER 35
2022 CFC, CHAPTER 80

INSPECTIONS:

SAFETY DURING CONSTRUCTION TO COMPLY WITH 2022 CFC CHAPTER 33

ACCESSIBILITY NOTES:

1. ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL OF CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX, AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". ARCHITECT OF RECORD SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

2. SEE SITE PLAN FOR MORE INFORMATION ON PATH OF TRAVEL.

GENERAL NOTES:

ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATION SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR & DSA IR A-6.

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

A DSA CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)

A DSA CERTIFIED INSPECTOR WITH CLASS 2 CERTIFICATION IS REQUIRED FOR THIS PROJECT.

A DSA CERTIFIED INSPECTOR WHO IS SPECIFICALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THIS PROJECT.

PROJECT DIRECTORY

SYSTEM HOST:
BAKERSFIELD CITY SD
1300 BAKER STREET
BAKERSFIELD, CA 93305
661.631.4699

ARCHITECT & DPRGC
MMPV DESIGN, INC.
718 W ARBOR DR
SAN DIEGO, CA 92103
AOR: KRISTA LAMONDIN
KRISTA@MMPVDESIGN.COM
LICENSE: C-37790
PM: CLARISSA HOSKISON
CLARISSA@MMPVDESIGN.COM

DEVELOPER/GENERAL
CONTRACTOR
FOREFRONT POWER
100 MONTGOMERY ST #725
SAN FRANCISCO, CA 94101
PM: LYSA PAINE
805-610-7359

STRUCTURAL ENGINEER:
TKJ STRUCTURAL ENGINEERING
9820 WILLOW CREEK RD, SUITE 490
SAN DIEGO, CA 92131
SEOR: TIMOTHY (BO) JAQUESS
BO@TKJSE.COM
LICENSE: S-4845
PM: BROOKE TRACY
BROOKE@TKJSE.COM

ELECTRICAL ENGINEER:
HARDIN-DAVIDSON
356 POLLASKY AVE
STE 200
CLOVIS, CA 93612
LOREN HARDIN
LICENSE: E-24039
559.323.4995
LH@HARDIN-DAVIDSON.COM

GEOTECHNICAL ENGINEER:
Geo-Engineering Solutions
2570 SAN RAMON VALLEY BLVD
SAN RAMON, CA 94583
GOR: ERIC SWENSON
ESWENSON@GEO-ENG.NET
LICENSE: GE2473

GENERAL CONTRACTOR
COLLINS ELECTRICAL
COMPANY, INC
1902 CHANNEL DR
WEST SACRAMENTO, CA 95691
916.567.1100
MARK WILLIAMS

SCOPE OF WORK:

WORK CONSISTS OF INSTALLING (4) PHOTOVOLTAIC (PV) SOLAR POWER ARRAYS OVER AN EXISTING PARKING LOT AND (2) PHOTOVOLTAIC (PV) SOLAR POWER ARRAY OVER SEPARATE EXISTING SPORTCOURT (PER DSA IR11B-9, SECTION 4B - NO CHANGE IN USE). SOLAR POWER SYSTEM CONSISTS OF EQUIPMENT, LIGHTING, PV MONITORING AND METERING COMMUNICATIONS AND POWER INTERCONNECT TO THE UTILITY GRID.

TOTAL MODULE COUNT: 832
KILOWATTS DC: 436.8 kW
TOTAL ARRAYS: 6

DEFERRED SUBMITTALS: NONE

NEW PHOTOVOLTAIC ARRAY CODE ANALYSIS: BESSIE OWENS ELEMENTARY

SYSTEM DESCRIPTION: Module Type HSPE-144HC-M10-525W (2279mm x 1134mm x 40mm) 29.2 kg

Array Name	Array	Total Modules	kW DC	No. of Cols	Minimum Clear Height	Azimuth	Tilt	Occupancy	Const. Type	Area	Allowable Area
A	4 x 35	140	73.50	4	11'-0"	180 °	5 °	E NS	II-B	3,939 SF	-
TOTAL AREA ARRAY 'A':										3,939 SF	14500
B	4 x 35	140	73.50	4	11'-0"	180 °	5 °	E NS	II-B	3,939 SF	-
TOTAL AREA ARRAY 'B':										3,939 SF	14500
C	6 x 23	138	72.45	3	13'-6"	270 °	7 °	S-2 NS	II-B	3,884 SF	
TOTAL AREA ARRAY 'C':										3,884 SF	UNLIMITED
D1	6 x 23	138	72.45	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
D1	6 x 23	138	72.45	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
D1	6 x 23	138	72.45	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
TOTAL AREA ARRAY 'D':										11,652 SF	UNLIMITED
TOTALS:										832	436.8
TOTALS:										20	
TOTAL PROJECT AREA:										23,414 SF	

PER CBC 406.5.5 AREA AND HEIGHT INCREASES: OPEN PARKING GARAGES OF TYPE II CONSTRUCTION, WITH ALL SIDES OPEN, SHALL BE UNLIMITED IN ALLOWABLE AREA WHERE THE BUILDING HEIGHT DOES NOT EXCEED 75'.

STATEMENT OF GENERAL CONFORMANCE

APPLICATION NO.: 03-124359

FILE NO.: 15-6

THE DRAWINGS IDENTIFIED AS FOLLOWS:

- ☐ THIS DEFERRED SUBMITTAL DRAWING SET (INCLUSIVE OF ALL SHEETS).
- ☒ DELEGATED STRUCTURAL COMPONENT DRAWING SHEETS LISTED HERE: W/ AN ASTERISK IN THE SHEET INDEX.

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS WHO ARE LICENSED AND AUTHORIZED TO PREPARE SUCH DRAWINGS (PLANS) IN THIS STATE. THEY HAVE BEEN EXAMINED BY ME FOR:

- 1) DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
- 2) COORDINATION WITH MY DRAWINGS (PLANS) AND SPECIFICATIONS AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

SIGNATURE

KRISTA JEANNETTE LAMONDIN
PRINTED NAME (ARCHITECT OF RECORD)

03/10/2025
DATE

C37790
LICENSE NUMBER

DRAWING INDEX

SHEET # SHEET TITLE

ARCHITECTURAL DRAWINGS

A0.0 TITLE SHEET
A1.0 SITE PLAN
A1.1 FIRE ACCESS PLAN
A1.2 ENLARGED SITE PLAN
A1.3 ACCESSIBLE PARKING STANDARDS
A1.4 ACCESSIBLE PARKING STANDARDS - EV

6 SHEETS

ELECTRICAL DRAWINGS

E1.0 PV SYSTEM ELECTRICAL SITE PLAN
E1.1 PV SYSTEM ENLARGED ELECTRICAL SITE PLAN
E1.2 EV CHARGING SYSTEM ELECTRICAL SITE PLAN
E2.0 PV SYSTEM ELECTRICAL SINGLE LINE DIAGRAM
E2.1 PV SYSTEM ELECTRICAL SINGLE LINE DIAGRAM
E3.0 PV SYSTEM TYPICAL ELECTRICAL THREE LINE DIAGRAM
E4.0 ELECTRICAL DETAILS
E4.1 ELECTRICAL DETAILS
E5.0 PV SYSTEM TYPICAL ELECTRICAL WARNING LABELS
E5.1 PV SYSTEM TYPICAL ELECTRICAL WARNING LABELS
E6.0 ELECTRICAL EQUIPMENT CUT SHEETS
E7.0 OUTDOOR LIGHTING T24 COMPLIANCE REPORT
E8.0 PV SYSTEM ARRAY ELECTRICAL STRING CABLING PLAN

13 SHEETS

STRUCTURAL DRAWINGS*

S000 SITE SPECIFIC NOTES, PLAN & SECTION
1 SHEET

STRUCTURAL DRAWINGS PC#04-121993*

S100 TITLE SHEET
S101 GENERAL STRUCTURAL NOTES
S102 GENERAL STRUCTURAL NOTES
S103 TESTING AND INSPECTION FORM
S200 6 PANEL T-STRUCTURE FRAMING PLAN AND SCHEDULE
S201 6 AND 5 PANEL T-STRUCTURE SECTIONS
S202 4 PANEL L-STRUCTURE FRAMING PLAN AND SCHEDULE
S203 4 PANEL L-STRUCTURE SECTION
S300 PIER DETAILS - EMBEDDED COLUMN
S400 STEEL DETAILS
S501 COLD-FORMED DETAILS
S502 PURLIN BRACING DETAILS
S600 EQUIPMENT ANCHORAGE AND BARRICADE DETAILS
S602 CONDUITS ROUTING & BOLLARDS

14 SHEETS

TOTAL: 34 SHEETS

SYSTEM HOST

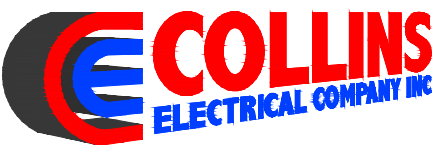


SYSTEM DEVELOPER



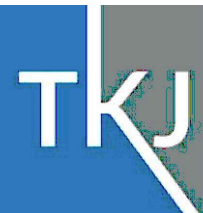
100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
916-567-1100

STRUCTURAL ENGINEERING AND STEEL CONSTRUCT



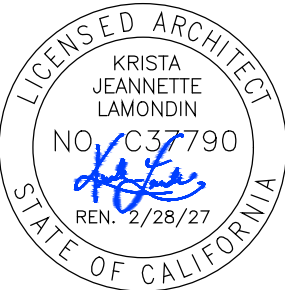
9820 Willow Creek Road, Suite 490
San Diego, CA 92131
858-649-1702

ARCHITECT OF RECORD

M M P V d e s i g n

Mariana Moncada, Architect
718 West Arbor Drive
San Diego, CA 92103
619.632.2883

ARCHITECT / ENGINEER OF RECORD



NO.

REVISION

DATE

DATE:

03.11.2025

PROJECT

BARKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Avenue
Bakersfield, CA 93307

FFP PROJECT #

CA-19-0206

SHEET TITLE

TITLE SHEET

SHEET NO.:

A0.0

PARKING ANALYSIS: BESSIE OWENS

LOT	TOTAL STALLS	REQ'D ACCESSIBLE STALLS	PROVIDED ACCESSIBLE STALLS	COVERED STANDARD STALLS	RATIO: COVERED TO UNCOVERED	REQ'D COVERED ACCESSIBLE STALLS	PROVIDED COVERED ACCESSIBLE STALLS
1	36	2	2	0	0%	0	0
2	36	2	2	0	0%	0	0

EVCS ANALYSIS: BESSIE OWENS

LOT	TOTAL STALLS	REQ'D EVCS STALLS	REQ'D VAN ACCESSIBLE EVCS STALLS	REQ'D STD ACCESSIBLE EVCS STALLS	PROVIDED EVCS STALLS	PROVIDED VAN ACCESSIBLE EVCS STALLS	PROVIDED STD ACCESSIBLE EVCS STALLS
1	36	2	1	0	4	1	0
2	36	2	1	0	0	0	0

NEW PHOTOVOLTAIC ARRAY CODE ANALYSIS: BESSIE OWENS ELEMENTARY

SYSTEM DESCRIPTION: Module Type JAM72D30 550/MB (2278mm x 1134mm x 35mm) 31.8 kg

Array Name	Array	Total Modules	kW DC	No. of Cols	Minimum Clear Height	Azimuth	Tilt	Occupancy	Const. Type	Area	Allowable Area
A	4 x 35	140	77.00	4	11'-0"	180 °	5 °	E NS	II-B	3,939 SF	14500
TOTAL AREA ARRAY 'A':										3,939 SF	-
B	4 x 35	140	77.00	4	11'-0"	180 °	5 °	E NS	II-B	3,939 SF	-
TOTAL AREA ARRAY 'B':										3,939 SF	14500
C	6 x 23	138	75.90	3	13'-6"	270 °	7 °	S-2 NS	II-B	3,884 SF	UNLIMITED
TOTAL AREA ARRAY 'C':										3,884 SF	UNLIMITED
D1	6 x 23	138	75.90	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
D1	6 x 23	138	75.90	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
D1	6 x 23	138	75.90	3	13'-6"	180 °	7 °	S-2 NS	II-B	3,884 SF	
TOTAL AREA ARRAY 'D':										11,652 SF	UNLIMITED
TOTALS:										832	457.6
TOTAL PROJECT AREA:										23,414 SF	

PER CBC 406.5.5 AREA AND HEIGHT INCREASES: OPEN PARKING GARAGES OF TYPE II CONSTRUCTION, WITH ALL SIDES OPEN, SHALL BE UNLIMITED IN ALLOWABLE AREA WHERE THE BUILDING HEIGHT DOES NOT EXCEED 75'.

SHEET NOTES

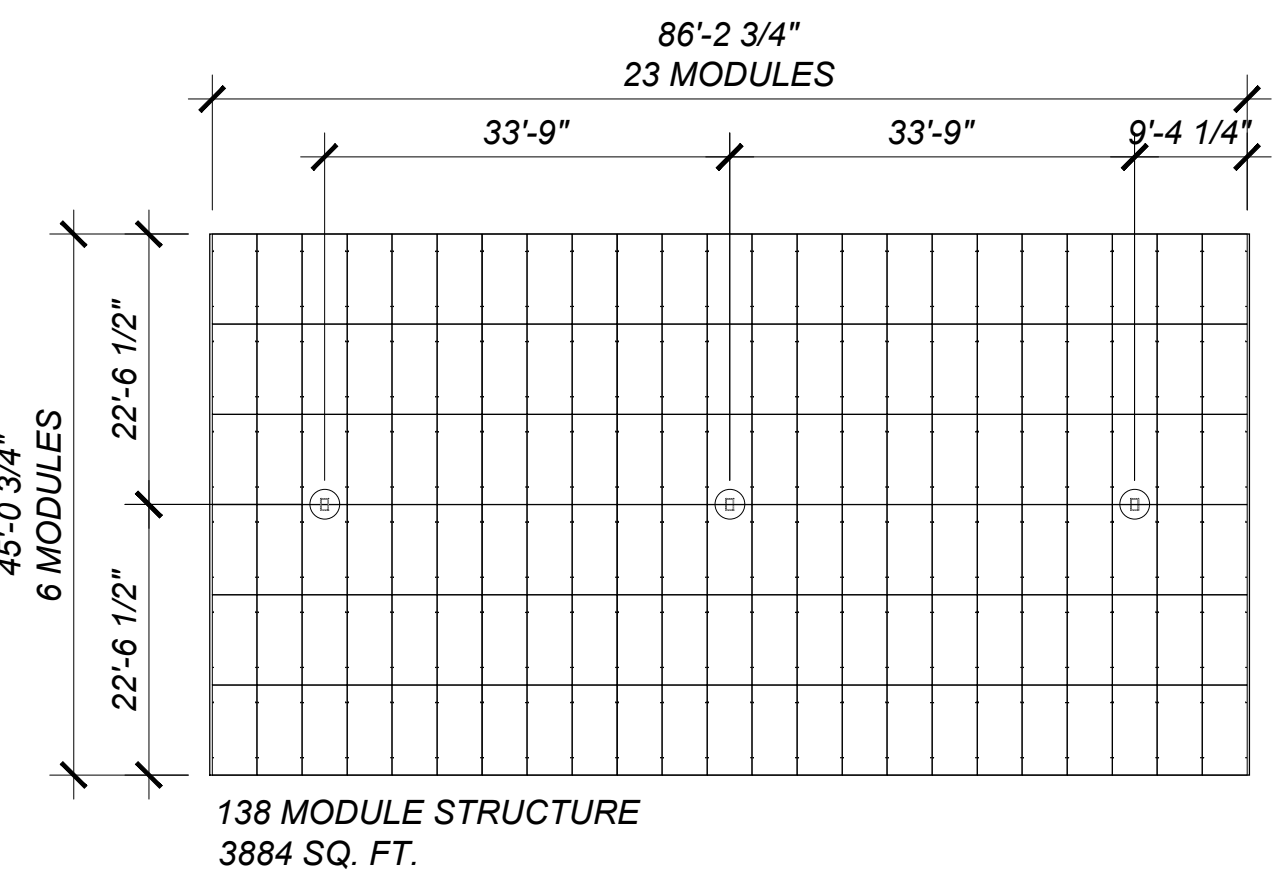
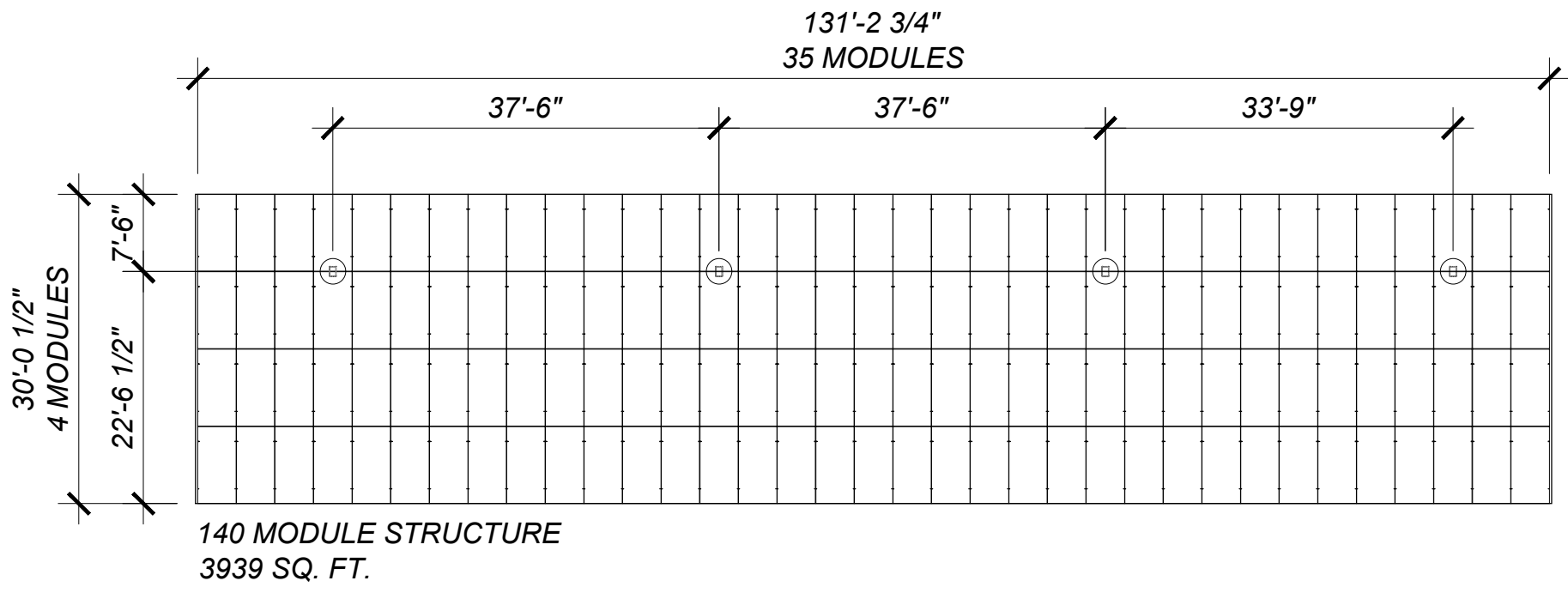
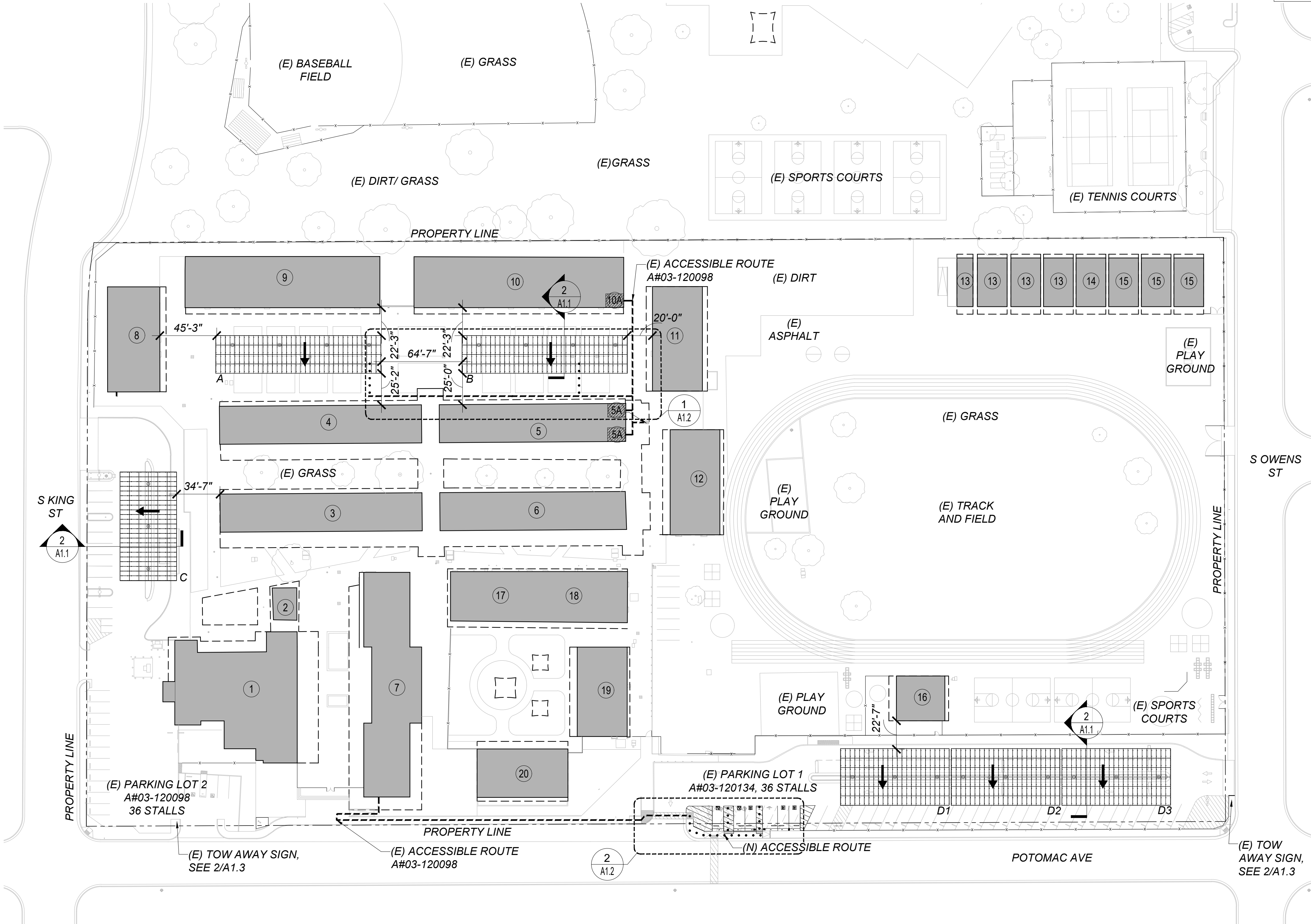
- SEE SHEET A1.0 FOR ARRAY DIMENSIONS
- SEE SHEET A1.2 FOR ACCESSIBILITY PLAN SHOWING NEW AND EXISTING ACCESSIBLE CONDITIONS
- SEE ELECTRICAL SITE PLAN FOR POC INFORMATION AND LOCATION
- ARROWS ON PLAN POINT TO LOW SIDE OF CANOPY

BUILDING LEGEND

- (E) BLDG A - MPR/KITCHEN - A# 51488, 03-120134
- (E) BLDG B - ELECTRICAL - A# 51488, 03-120098
- (E) BLDG C - CLASSROOM- A# 51488, 03-120098
- (E) BLDG D - CLASSROOM- A# 51488, 03-120098
- (E) BLDG E - CLASSROOM- A# 51488, 03-120098
- (E) ACC. BOYS & GIRLS RESTROOMS- A# 51488, 03-120098
- (E) BLDG F - CLASSROOM- A# 51488, 03-120098
- (E) BLDG G - ADMINISTRATION- A# 03-120098
- (E) BLDG H - CLASSROOM- A# 03-120098
- (E) BLDG J (J1/J2) - CLASSROOM- A# 03-120098
- (E) BLDG K (K1/K2) - CLASSROOM- A# 03-120098
- (E) ACCESSIBLE STAFF TOILETS- A# 03-120098
- (E) BLDG L - CLASSROOM- A# 03-120098
- (E) BLDG M - CLASSROOM- A# 03-120098
- (E) RESTROOM RR & CLASSROOMS R42-R44- A# 03-115432
- (E) R45 - CLASSROOM- A# 03-116953
- (E) R46-R48 - CLASSROOM- A# 03-117157
- (E) R57 - ADMINISTRATION- A# 03-120134
- (E) BLDG K1 - KINDERGARTEN- A# 03-120240
- (E) BLDG K2 - KINDERGARTEN- A# 03-120240
- (E) BLDG K3 - KINDERGARTEN- A# 03-120240
- (E) BLDG K4 - KINDERGARTEN- A# 03-120240

PROPOSED ARRAYS ARE OVERHEAD PV SYSTEMS WITH UNRESTRICTED ACCESS AND NO CHANGE OF USE BENEATH. EXISTING ACCESSIBILITY PROVIDED IS CONSISTENT WITH THE CURRENT USE (SPORT COURT). A NEW ACCESSIBLE ROUTE ON EXISTING AC PAVING IS BEING PROVIDED FROM ARRAY A & B TO EXISTING ACCESSIBLE RESTROOMS AND AN ACCESSIBLE DRINKING FOUNTAIN. NO PATH OF TRAVEL IMPROVEMENTS ARE REQUIRED PER DSA IR 11B-9 ITEM 4B.

- ACCESSIBLE PATH OF TRAVEL
- (E) ACCESSIBLE ROUTE INDICATED BY DASHED LINE
 - (N) ACCESSIBLE ROUTE INDICATED BY DOTS



1 SITE PLAN
Scale: 1" = 50' (FOR 24X36 SHEETS)

2 ARRAY LAYOUTS
Scale: 1/16" = 1'-0" (FOR 24X36 SHEETS)



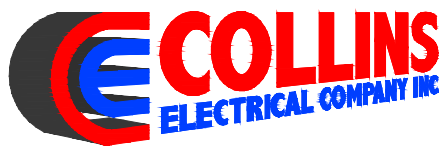
SYSTEM HOST

SYSTEM DEVELOPER



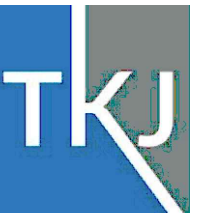
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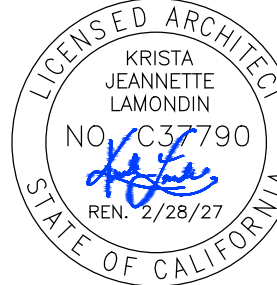
9820 Willow Creek Road, Suite 490
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ARCHITECT OF RECORD

M M P V d e s i g n

Mariana Moncada, Architect
718 West Arbor Drive
San Diego, CA 92103
619.632.2883

ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.11.2025

PROJECT
BARKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Avenue
Bakersfield, CA 93307

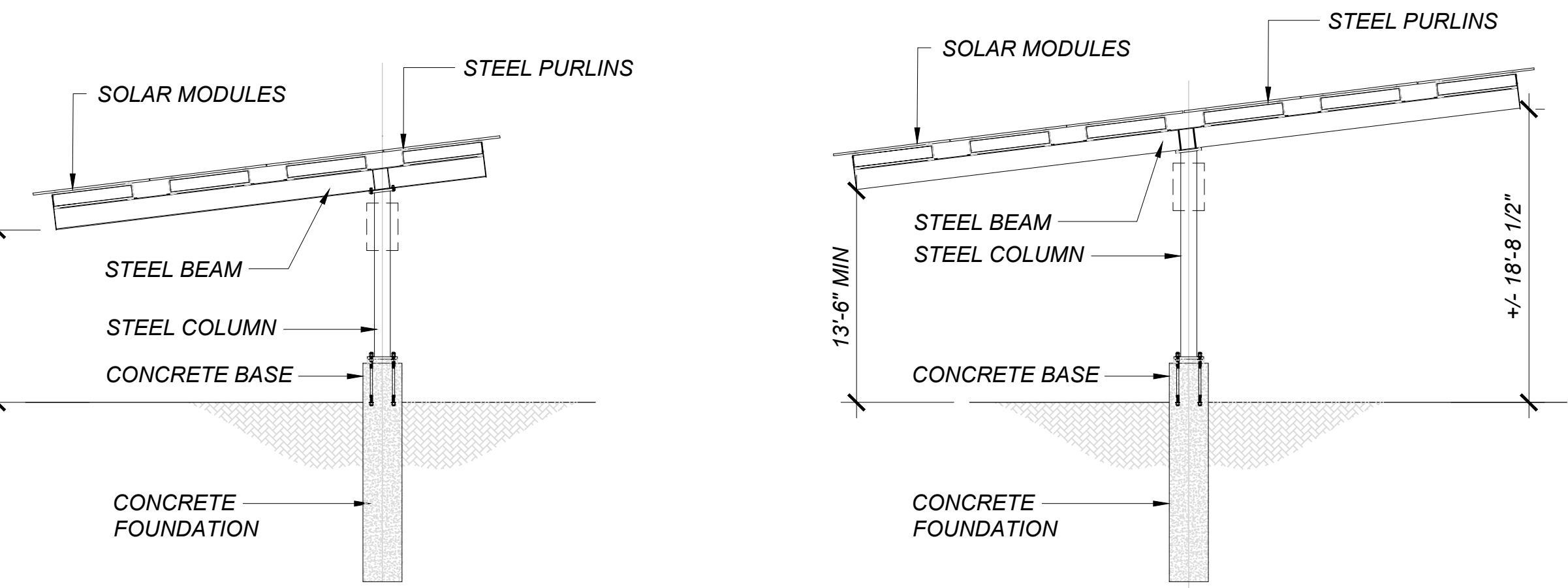
FFP PROJECT #
CA-19-0206

SHEET TITLE

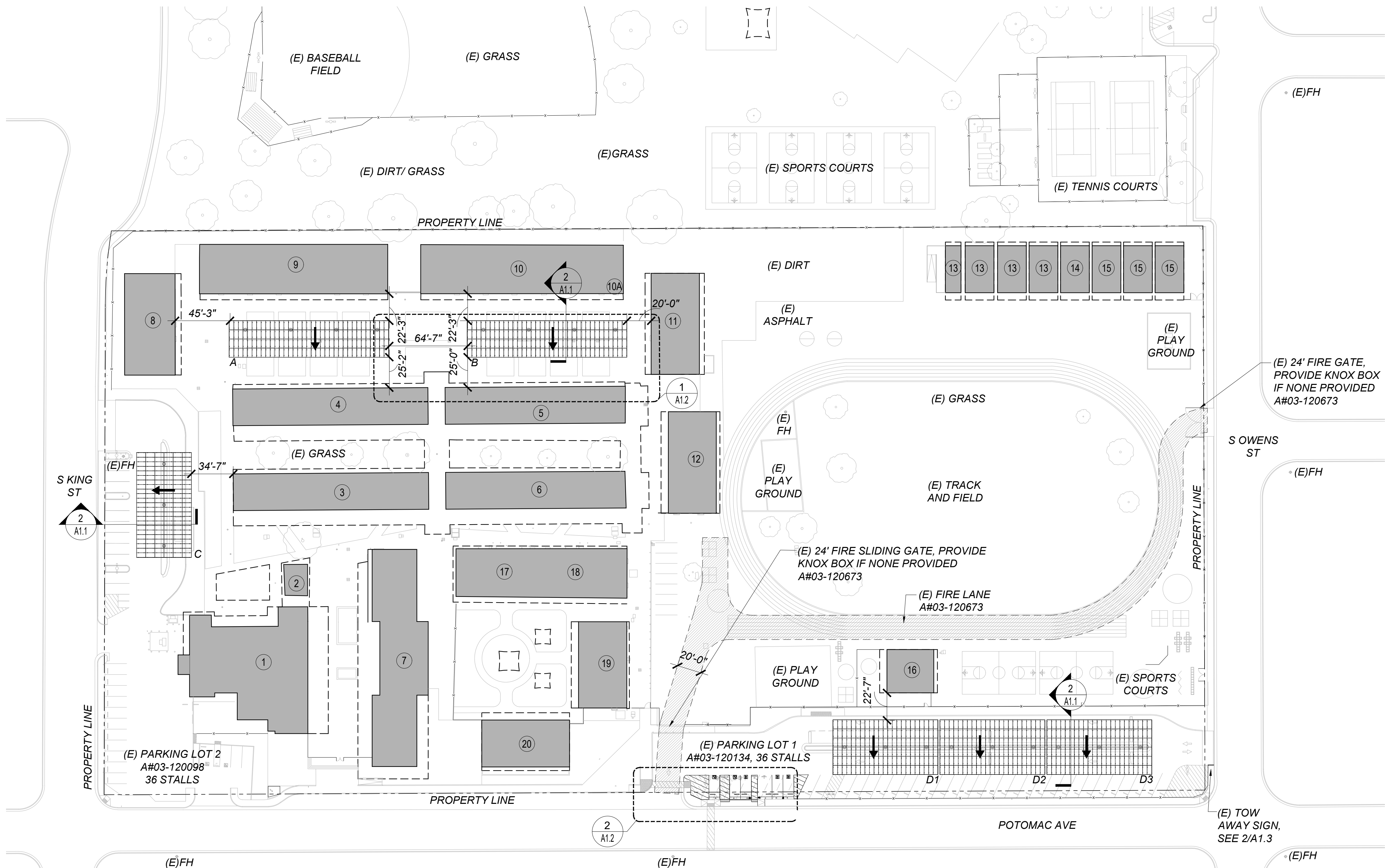
SITE PLAN

SHEET NO.:

A1.0



2 TYPICAL ARRAY SECTION
Scale: 1/8" = 1'-0" (FOR 24X36 SHEETS)



1 FIRE ACCESS PLAN
Scale: 1" = 50' (FOR 24X36 SHEETS)

NEW PHOTOVOLTAIC ARRAY CODE ANALYSIS: BESSIE OWENS ELEMENTARY											
SYSTEM DESCRIPTION: Module Type JAM72D30 550/MB (2278mm x 1134mm x 35mm) 31.8 kg											
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TOTAL AREA ARRAY 'B':										3,939 SF	14500
C	6 x 23	138	75.90	3	13'-6"	270 °	7 °	S-2 NS	I-B	3,884 SF	-
TOTAL AREA ARRAY 'C':										3,884 SF	UNLIMITED
D1	6 x 23	138	75.90	3	13'-6"	180 °	7 °	S-2 NS	I-B	3,884 SF	-
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SHEET NOTES											
1. SEE SHEET A1.0 FOR ARRAY DIMENSIONS											
2. SEE SHEET A1.2 FOR ACCESSIBILITY PLAN SHOWING NEW AND EXISTING ACCESSIBLE CONDITIONS											
3. SEE ELECTRICAL SITE PLAN FOR POC INFORMATION AND LOCATION											
4. ARROWS ON PLAN POINT TO LOW SIDE OF CANOPY											

OCCUPANCY CALCULATIONS	
A - 3,939 SF	(E = 3,939 SF / 20 NET = 197 OCCUPANTS)
B - 3,939 SF	(E = 3,939 SF / 20 NET = 197 OCCUPANTS)
C - 3,884 SF	(S-2 = 3,954 SF / 200 NET = 20 OCCUPANTS)
D1 - 3,884 SF	(S-2 = 3,954 SF / 200 NET = 20 OCCUPANTS)
D2 - 3,884 SF	(S-2 = 3,954 SF / 200 NET = 20 OCCUPANTS)
D3 - 3,884 SF	(S-2 = 3,954 SF / 200 NET = 20 OCCUPANTS)

BUILDING LEGEND	
1	(E) BLDG A - MPR/KITCHEN - A# 51488, 03-120134
2	(E) BLDG B - ELECTRICAL - A# 51488, 03-120098
3	(E) BLDG C - CLASSROOM- A# 51488, 03-120098
4	(E) BLDG D - CLASSROOM- A# 51488, 03-120098
5	(E) BLDG E - CLASSROOM- A# 51488, 03-120098
5A	(E) ACC. BOYS & GIRLS RESTROOMS- A# 51488, 03-120098
6	(E) BLDG F - CLASSROOM- A# 51488, 03-120098
7	(E) BLDG G - ADMINISTRATION- A# 03-120098
8	(E) BLDG H - CLASSROOM- A# 03-120098
9	(E) BLDG J (J1/J2) - CLASSROOM- A# 03-120098
10	(E) BLDG K (K1/K2) - CLASSROOM- A# 03-120098
10A	(E) ACCESSIBLE STAFF TOILETS- A# 03-120098
11	(E) BLDG L - CLASSROOM- A# 03-120098
12	(E) BLDG M - CLASSROOM- A# 03-120098
13	(E) RESTROOM RR & CLASSROOMS R42-R44- A# 03-115432
14	(E) R45 - CLASSROOM- A# 03-116953
15	(E) R46-R48 - CLASSROOM- A# 03-117157
16	(E) R57 - ADMINISTRATION- A# 03-120134
17	(E) BLDG K1 - KINDERGARTEN- A# 03-120240
18	(E) BLDG K2 - KINDERGARTEN- A# 03-120240
19	(E) BLDG K3 - KINDERGARTEN- A# 03-120240
20	(E) BLDG K4 - KINDERGARTEN- A# 03-120240

810

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for Buildings.

PROJECT INFORMATION		
School District/Owner:	Bakersfield City School District	
Project Name/School:	Bessie Owens Elementary School	
Project Address:	815 Potomac Avenue, Bakersfield, CA 93307	
FIRE & LIFE SAFETY INFORMATION		
1. Has a fire hydrant flow test been performed within the past 12 months? (If yes, provide a copy of the test data.)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
2. Was the fire hydrant water flow test performed as part of this LFA review?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
3. Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? (If yes, indicate FHSZ classification below.)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Refer to the following website for FHSZ locations: http://seis.fire.ca.gov/FHSZ/	Moderate <input type="checkbox"/>	High <input type="checkbox"/> Very High <input type="checkbox"/>
Wildland Interface Area (WIFA) (If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)	WIFA <input type="checkbox"/>	

SYSTEM HOST

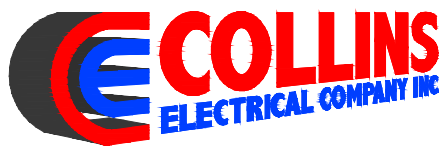


SYSTEM DEVELOPER



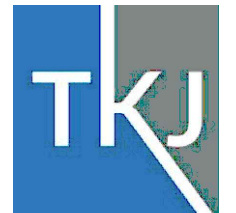
100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
916-567-1100

STRUCTURAL ENGINEERING AND STEEL CONSTRUCT



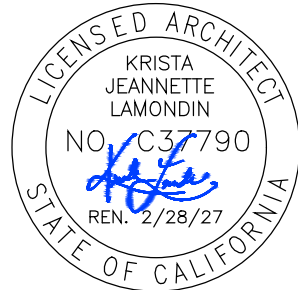
9820 Willow Creek Road, Suite 490
San Diego, CA 92131
858-649-1702

ARCHITECT OF RECORD

M M P V d e s i g n

Mariana Moncada, Architect
718 West Arbor Drive
San Diego, CA 92103
619.632.2883

ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.11.2025

PROJECT

BARKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Avenue
Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

FIRE ACCESS
PLAN

SHEET NO.:

A1.1

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:

“Design Professional in General Responsible Charge Statement: The POT identified in these construction documents meets the requirements of the current applicable California Building Code (CBC) accessibility provisions for path of travel requirements for alterations, additions and structural repairs. As part of the design of this project, the POT was examined and any elements, components or portions of the POT that were determined to be noncompliant with the CBC have been identified and the corrective work necessary to bring them into compliance has been included within the scope of this project’s work through details, drawings and specifications incorporated into these construction documents. Any noncompliant elements, components or portions of the POT that will not be corrected by this project based on valuation threshold limitations or a finding of unreasonable hardship are indicated in these construction documents. ”

During construction, if POT items within the scope of the project represented as code compliant are found to be nonconforming beyond reasonable construction tolerances, they shall be brought into compliance with the CBC as a part of this project by mean of a construction change document.

ACCESSIBILITY NOTES:

1. ACCESSIBLE ROUTE AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL OF CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX, AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE ROUTE SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". ARCHITECT OF RECORD SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

2. SEE SITE PLAN FOR MORE INFORMATION ON ACCESSIBLE ROUTE.

ACCESSIBLE PARKING AND ACCESSIBLE ROUTE REQUIREMENTS:

1.

(N) ACCESSIBLE ROUTE INDICATED BY DOTS:
2.

(E) ACCESSIBLE ROUTE INDICATED BY DASHED LINE:

(N) & (E) ACCESSIBLE ROUTE REQUIRES:

5% DIRECTIONAL SLOPE MAX.
2% CROSS SLOPE MAXIMUM
4.

STALLS AND ACCESS AISLES REQUIRE:

2% DIRECTIONAL SLOPE
2% CROSS SLOPE MAX
5.

FOR ACCESSIBLE PARKING STRIPING, COLOR, WHEEL STOP, AND ALL OTHER DIMENSIONS, REFER TO SHEET A1.3
6.

FOR EV DETAILS AND ALL OTHER DIMENSIONS, REFER TO SHEET A1.4
7.

EV ACCESSIBLE STALLS AND ACCESS AISLES REQUIRE:

2% DIRECTIONAL SLOPE
2% CROSS SLOPE MAX

ACCESSIBLE KEYNOTES:

- 1

ACCESSIBLE PARKING SIGN PER 1/A1.3
- 2

NOT USED
- 3

WHEELSTOP PER 3/A1.3
- 4

TYPICAL ACCESSIBLE PARKING STRIPING AND ISA SPECIFICATIONS PER 4/A1.3
- 5

TYPICAL ACCESS AISLE STRIPING SPECIFICATIONS PER 5/A1.3
- 6

ACCESSIBLE CURB RAMP PER 6/A1.3
- 7

TRUNCATED DOMES PER 7/A1.3

EV PARKING KEYNOTES:

- 11

EV PARKING SIGN PER 1/A1.4
- 12

NOT USED
- 13

TYPICAL EV ACCESSIBLE PARKING STRIPING SPECIFICATIONS PER 3/A1.4
- 14

TYPICAL EV PARKING STRIPING SPECIFICATIONS PER 4/A1.4
- 15

TYPICAL EV ACCESS AISLE STRIPING SPECIFICATIONS PER 5/A1.4
- 16

TYPICAL ACCESSIBLE EV CHARGER DETAIL PER 6/A1.4

PARKING ANALYSIS: BESSIE OWENS

LOT	TOTAL STALLS	REQ'D ACCESSIBLE STALLS	PROVIDED ACCESSIBLE STALLS	COVERED STANDARD STALLS	RATIO: COVERED TO UNCOVERED	REQ'D COVERED ACCESSIBLE STALLS	PROVIDED COVERED ACCESSIBLE STALLS
1	36	2	2	0	0%	0	0
2	36	2	2	0	0%	0	0

1 VAN STALL REQUIRED PER LOT: 1 VAN STALL PROVIDED PER LOT

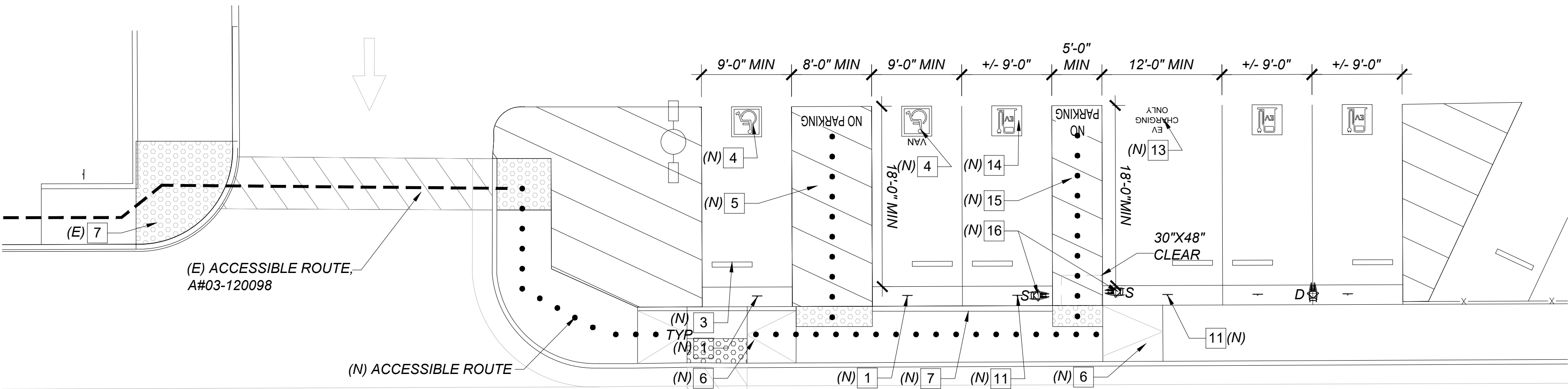
EVCS ANALYSIS: BESSIE OWENS

LOT	TOTAL STALLS	REQ'D EVCS STALLS	REQ'D VAN ACCESSIBLE EVCS STALLS	REQ'D STD ACCESSIBLE EVCS STALLS	PROVIDED EVCS STALLS	PROVIDED VAN ACCESSIBLE EVCS STALLS	PROVIDED STD ACCESSIBLE EVCS STALLS
1	36	2	1	0	4	1	0
2	36	2	1	0	0	0	0

- EV NOTES:
1.

EV STALLS ARE CALCULATED INDEPENDENTLY OF STANDARD NON-EV STALLS
2.

EV REQUIRED STALLS CONSOLIDATED TO LOT 1 PER DSA IR CG-1 SECTION 2.2



1 ACCESSIBLE PARKING PLAN - LOT 1
Scale: 1/8" = 1' (FOR 24X36 SHEETS)



1 ENLARGED SITE PLAN
Scale: 1/8" = 1' (FOR 24X36 SHEETS)

SYSTEM HOST



SYSTEM DEVELOPER



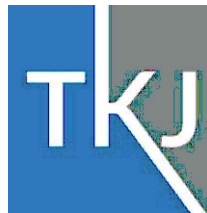
100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
916-567-1100

STRUCTURAL ENGINEERING AND STEEL CONSTRUCT



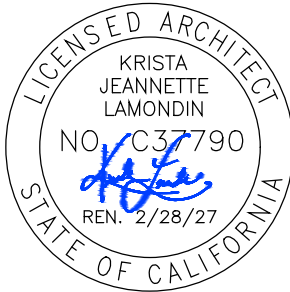
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ARCHITECT OF RECORD

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ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.11.2025

PROJECT

BARKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Avenue
Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

ENLARGED SITE
PLAN

SHEET NO.:

A1.2



PER 11B-308.3.2 OBSTRUCTED HIGH SIDE REACH
WHERE THE REACH DEPTH EXCEEDS 10 INCHES, THE HIGH SIDE REACH SHALL BE 46 INCHES MAX. FOR A REACH DEPTH OF 24 INCHES MAX.

PER 11B-812.4
VEHICLE SPACES, ACCESS AISLES SERVING THEM, AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 98 INCHES (2489 MM) MIN. WHERE PROVIDED, OVERHEAD CABLE MANAGEMENT SYSTEMS SHALL NOT OBSTRUCT REQUIRED VERTICAL CLEARANCE.

***POINT-OF-SALE SYSTEMS - SEE BELOW**

PER 11B-707.7.2
CHARACTERS DISPLAYED ON THE SCREEN SHALL BE IN A SANS SERIF FONT. CHARACTERS SHALL BE 3/ 16 INCH (4.8 MM) HIGH MIN. BASED ON THE UPPERCASE LETTER "I". CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

*** POINT-OF-SALE SYSTEMS**

PER 11B-707.9.1.1

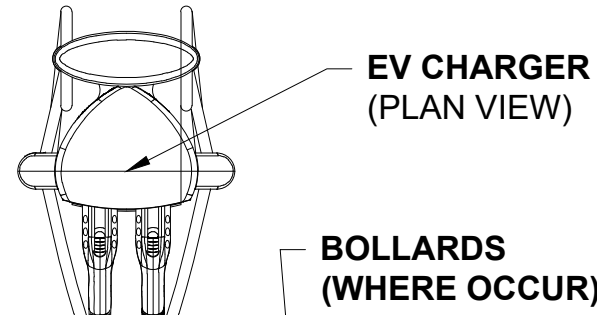
A TACTILELY DISCERNIBLE NUMERICAL KEYPAD SIMILAR TO A TELEPHONE KEYPAD CONTAINING A RAISED DOT WITH A DOT BASE DIAMETER BETWEEN 1.5 MM AND 1.6 MM AND A HEIGHT BETWEEN 0.6 MM AND 0.9 MM ON THE NUMBER 5 KEY THAT ENABLES A VISUALLY IMPAIRED PERSON TO ENTER HIS OR HER OWN PERSONAL IDENTIFICATION NUMBER OR ANY OTHER PERSONAL INFORMATION NECESSARY TO PROCESS THE TRANSACTION IN A MANNER THAT PROVIDES THE OPPORTUNITY FOR THE SAME DEGREE OF PRIVACY INPUT AND OUTPUT AVAILABLE TO ALL INDIVIDUALS.

PER 11B-707.9.1.2 OTHER TECHNOLOGY

OTHER TECHNOLOGY, SUCH AS A RADIO FREQUENCY IDENTIFICATION DEVICE, FINGERPRINT BIOMETRICS OR SOME OTHER MECHANISM THAT ENABLES A VISUALLY IMPAIRED PERSON TO ACCESS THE VIDEO TOUCH SCREEN DEVICE WITH HIS OR HER PERSONAL IDENTIFIER AND TO PROCESS HIS OR HER TRANSACTION IN A MANNER THAT PROVIDES THE OPPORTUNITY FOR THE SAME DEGREE OF PRIVACY INPUT AND OUTPUT AVAILABLE TO ALL INDIVIDUALS. WHERE A VIDEO SCREEN OVERLAY IS PROVIDED IT SHALL BE EQUIPPED WITH A TACTILELY DISCERNIBLE NUMERICAL KEYPAD COMPLYING WITH SECTION 11B-707.9.1.1.

6 ACCESSIBLE EV CHARGER DETAIL

Scale: 1" = 1'



EV CHARGER
(PLAN VIEW)

BOLLARDS
(WHERE OCCUR)

1. **PER 11B-302.1**
FLOOR AND GROUND SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.

2. **PER 11B-308.3.1**
PROVIDE A CLEAR GROUND SPACE THAT ALLOWS A PARALLEL APPROACH TO THE EV CHARGER WITH THE SIDE REACH IS UNOBSTRUCTED..

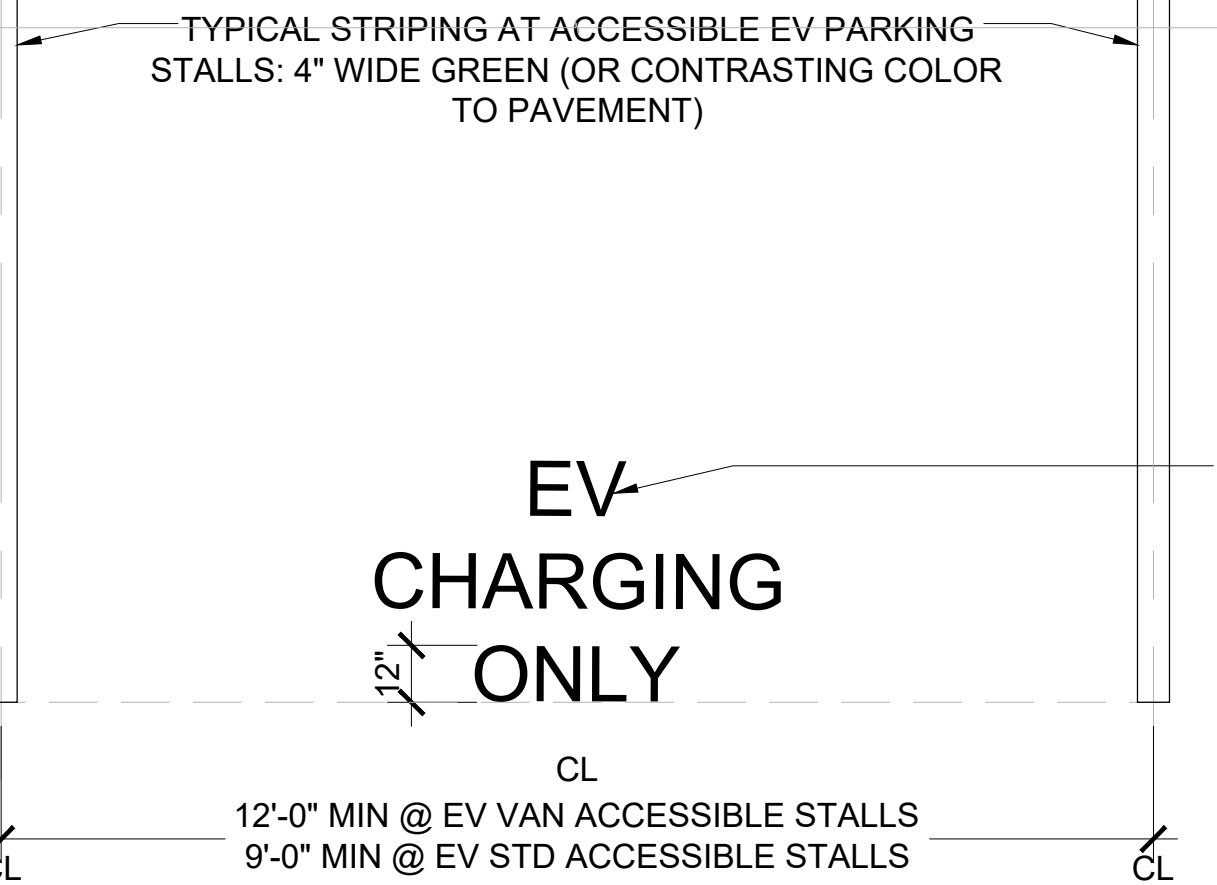
PER 11B-309.4 OPERATION
OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.

EXCEPTION: ELECTRIC VEHICLE CONNECTORS SHALL NOT BE REQUIRED TO PROVIDE OPERABLE PARTS THAT HAVE AN ACTIVATING FORCE OF 5 POUNDS (22.2 N) MAXIMUM.

BOLLARDS (WHERE OCCUR)

PLAN

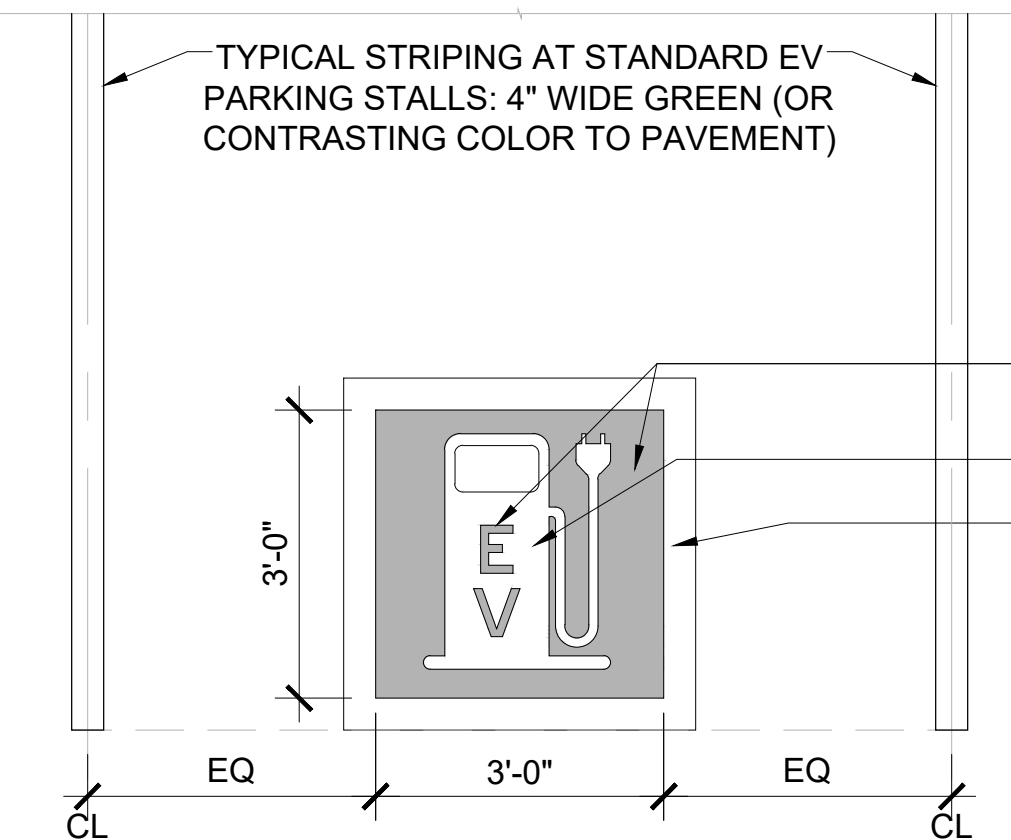
ELEVATION



LETTERS: 12" HIGH MIN
HELvetica (GREEN OR
CONTRASTING COLOR
TO PAVEMENT)

3 ACCESSIBLE PARKING STRIPING - EV

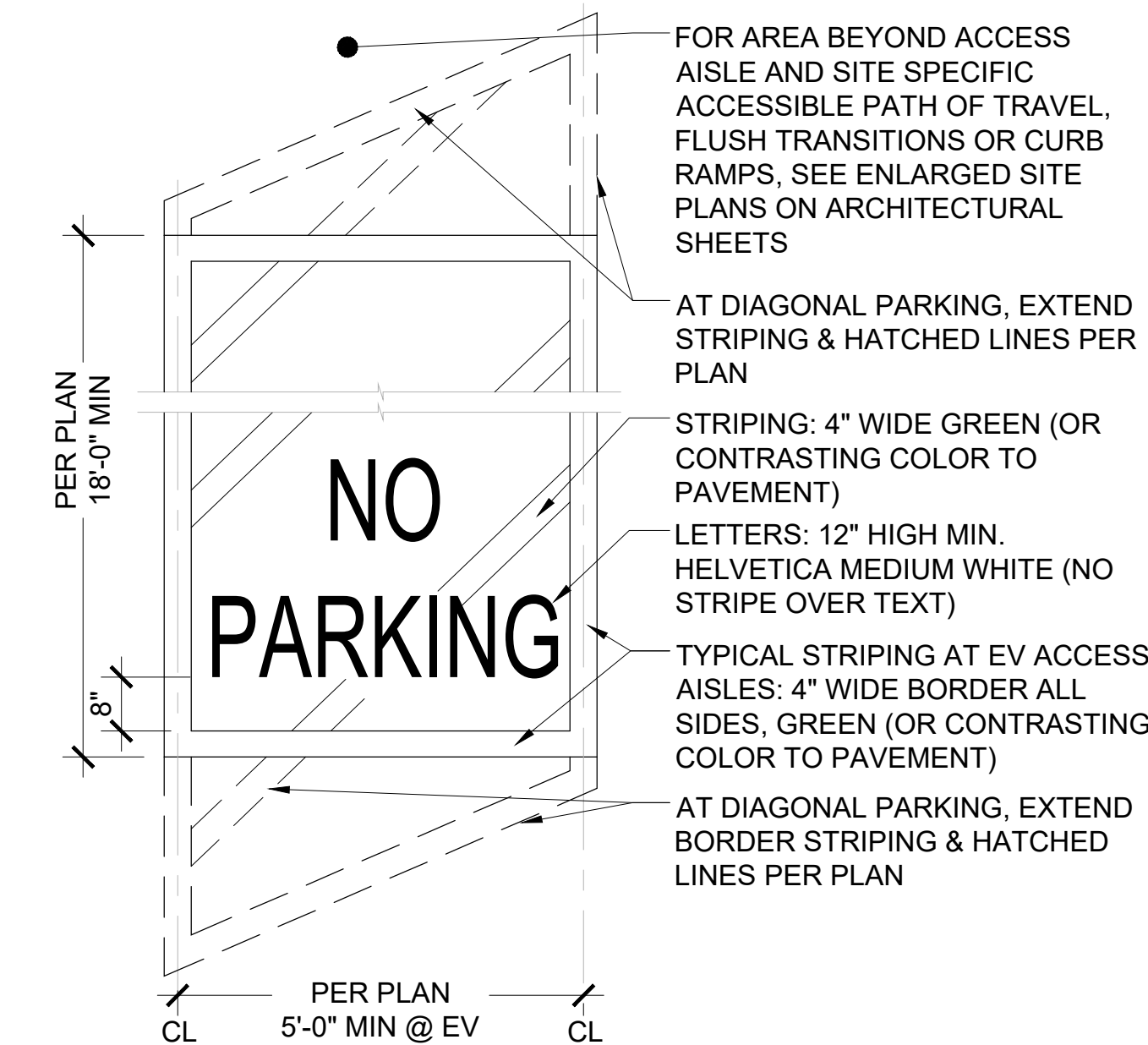
Scale: 1/2" = 1'



BACKGROUND AND
LETTERING: GREEN PAINT
SYMBOL: WHITE PAINT
BORDER: 4" WIDE WHITE
PAINT

4 STANDARD (NON-ACCESS) PARKING STRIPING - EV

Scale: 1/2" = 1'



FOR AREA BEYOND ACCESS
AISLE AND SITE SPECIFIC
ACCESSIBLE PATH OF TRAVEL,
FLUSH TRANSITIONS OR CURB
RAMPS, SEE ENLARGED SITE
PLANS ON ARCHITECTURAL
SHEETS

AT DIAGONAL PARKING, EXTEND
STRIPING & HATCHED LINES PER
PLAN

STRIPING: 4" WIDE GREEN (OR
CONTRASTING COLOR TO
PAVEMENT)

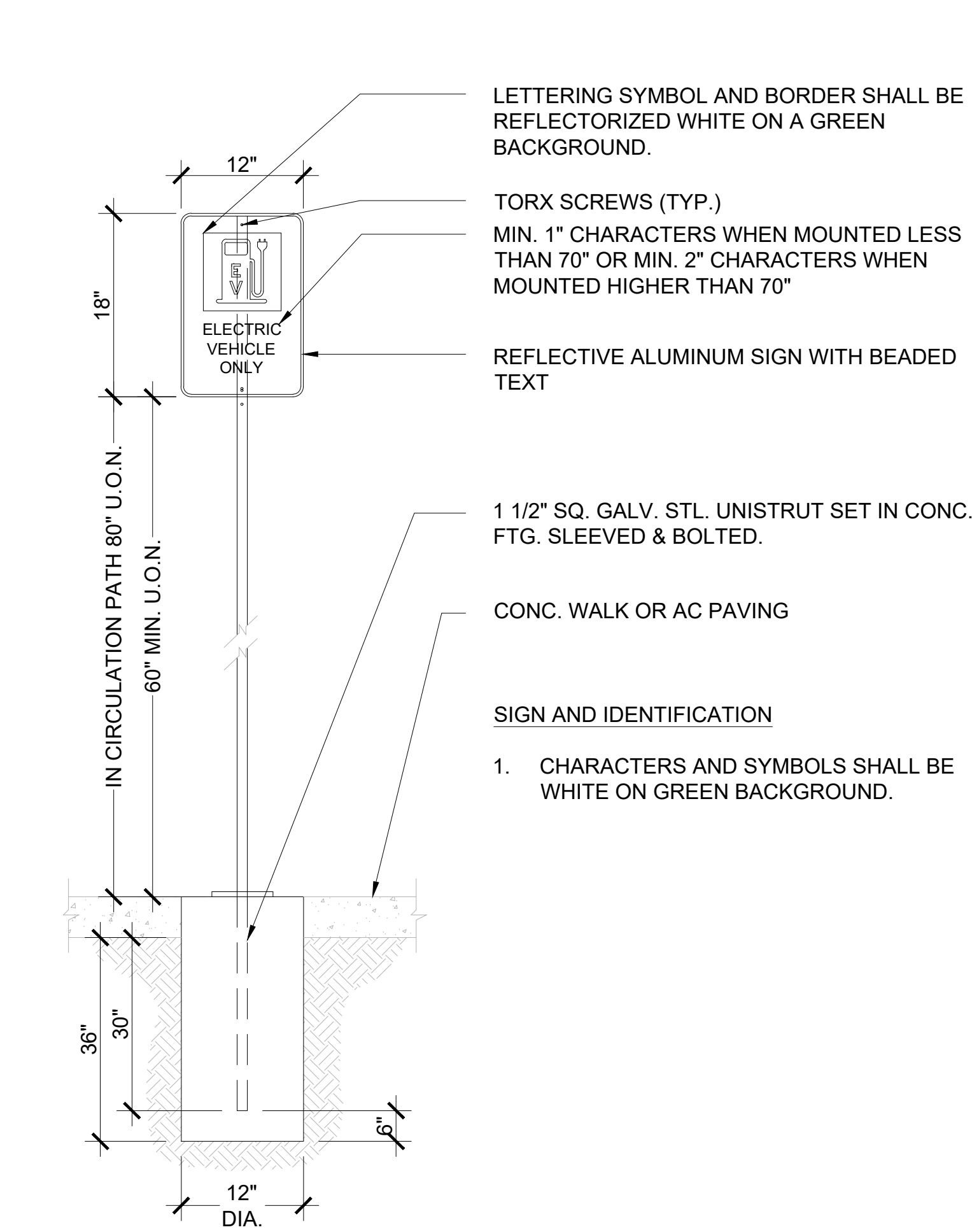
LETTERS: 12" HIGH MIN.
HELvetica MEDIUM WHITE (NO
STRIPE OVER TEXT)

TYPICAL STRIPING AT EV ACCESS
AISLES: 4" WIDE BORDER ALL
SIDES, GREEN (OR CONTRASTING
COLOR TO PAVEMENT)

AT DIAGONAL PARKING, EXTEND
BORDER STRIPING & HATCHED
LINES PER PLAN

5 ACCESSIBLE ACCESS AISLE STRIPING - EV

Scale: 1/2" = 1'



LETTERING SYMBOL AND BORDER SHALL BE
REFLECTORIZED WHITE ON A GREEN
BACKGROUND.

TORX SCREWS (TYP.)
MIN. 1" CHARACTERS WHEN MOUNTED LESS
THAN 70" OR MIN. 2" CHARACTERS WHEN
MOUNTED HIGHER THAN 70"

REFLECTIVE ALUMINUM SIGN WITH BEADED
TEXT

1 1/2" SQ. GALV. STL. UNISTRUT SET IN CONC.
FTG. SLEEVED & BOLTED.

CONC. WALK OR AC PAVING

SIGN AND IDENTIFICATION

1. CHARACTERS AND SYMBOLS SHALL BE
WHITE ON GREEN BACKGROUND.

NOTES:
1. FTG. CONCRETE - F'c = 2,500 PSI

1 PARKING SIGN - EV

Scale: 1" = 1'

SYSTEM HOST



SYSTEM DEVELOPER



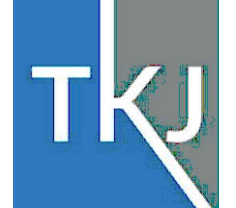
100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
916-567-1100

STRUCTURAL ENGINEERING AND STEEL CONSTRUCT



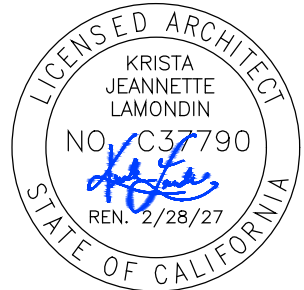
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ARCHITECT OF RECORD

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ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE:
03.11.2025

PROJECT

**BARKERSFIELD CITY
SCHOOL DISTRICT**
Bessie Owens

815 Potomac Avenue
Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

**ACCESSIBLE
PARKING
STANDARDS - EV**

SHEET NO.:

A1.4

2 NOT USED

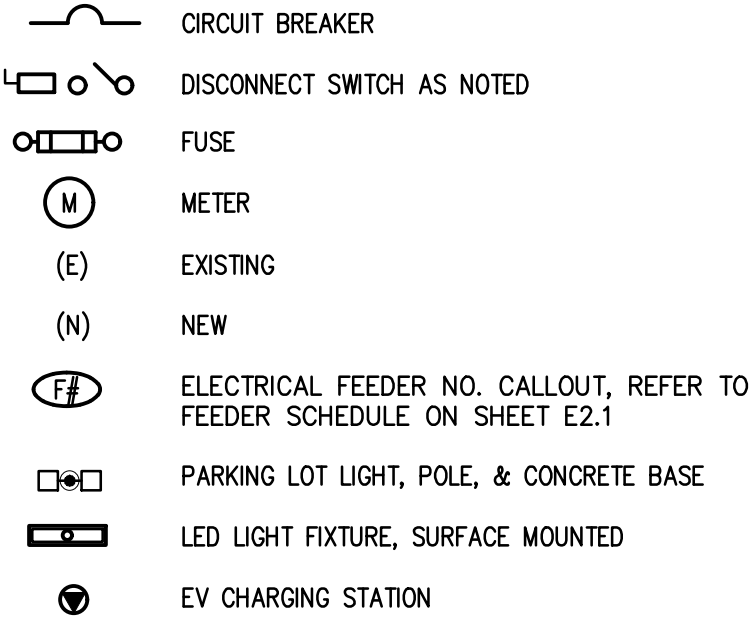
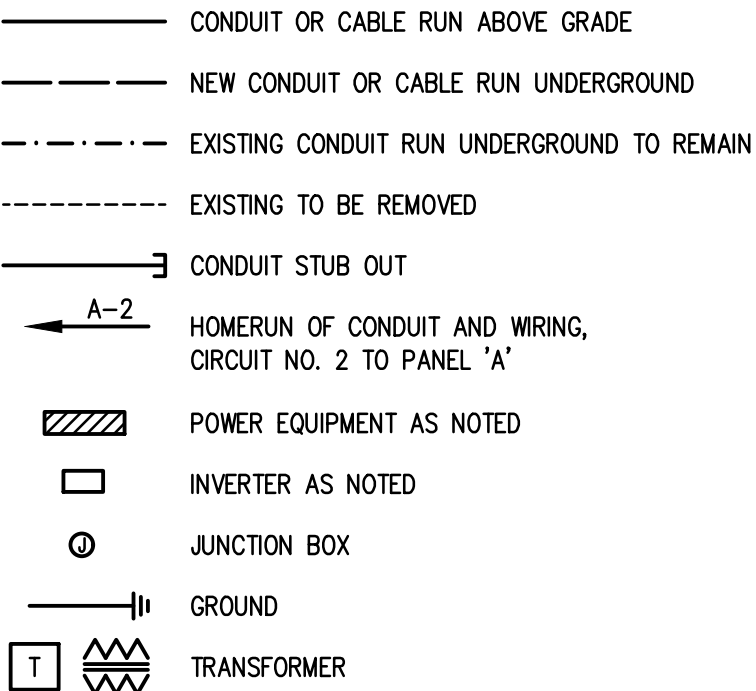
Scale: -

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	MODEL NO.	SOURCE	WATTS	VOLT	MOUNTING
A	ILP	WTZ4-4L-U-40-RAFL-C6/3W-BD50 (OR EQUAL)	LED	29	120-277	SURFACE, CARPORT STEEL

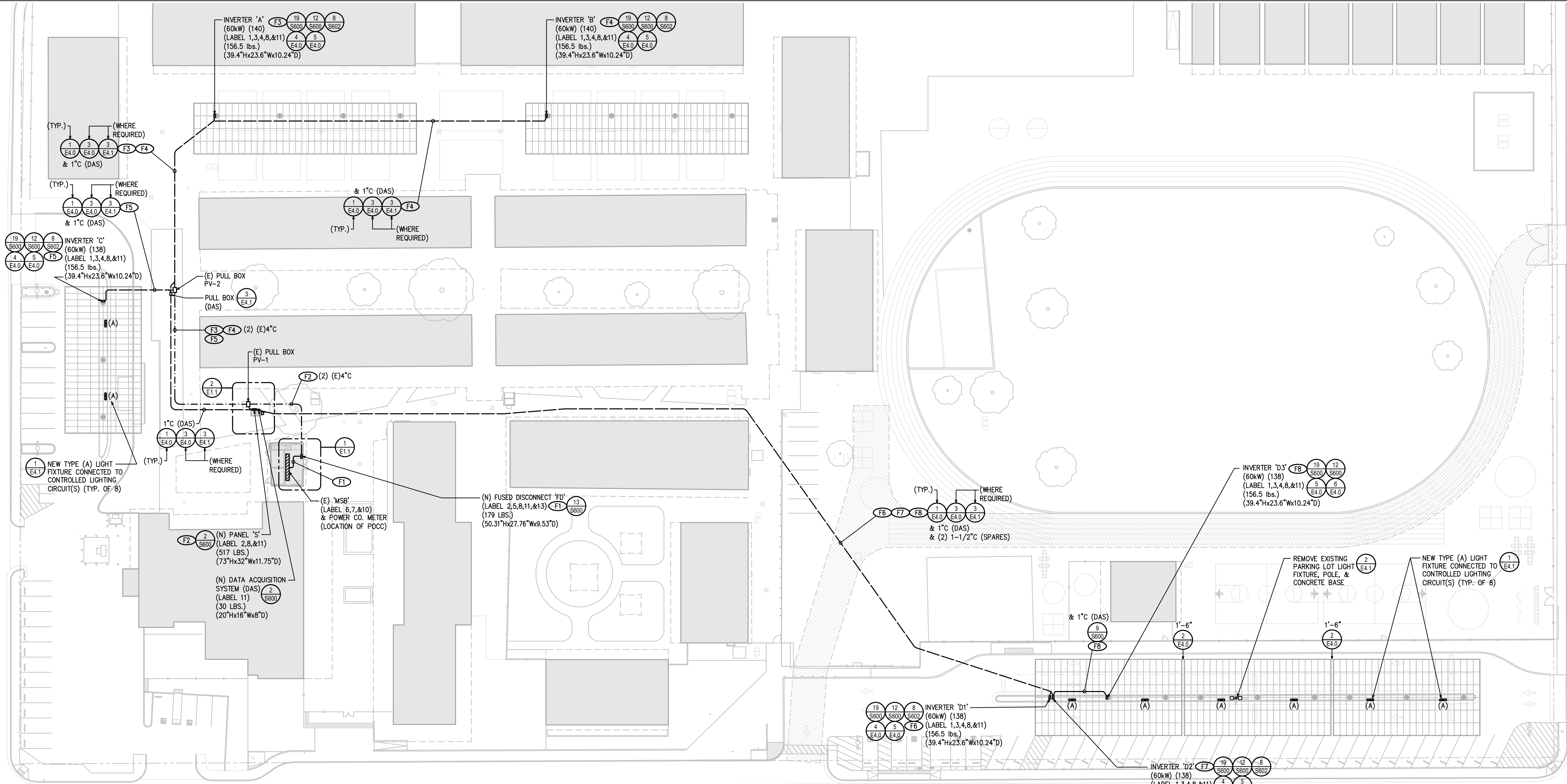
NOTE:
DISCONNECT & REMOVE (2) EXISTING PARKING LOT LIGHTS, (1) POLE, & (1) CONCRETE BASE. PROVIDE (8) NEW TYPE (A) LIGHT FIXTURES & CONNECT TO EXISTING CONTROLLED EXTERIOR LIGHTING CIRCUIT(S). VERIFY VOLTAGE, FOR 480V OPERATION ORDER WITH 480V OPTION. OCCUPANCY SENSOR TO DIM LIGHT FIXTURE TO 50% DURING UN-OCCUPIED TIMES.

ELECTRICAL SYMBOLS:



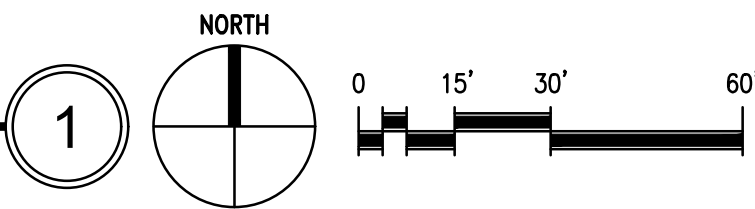
GENERAL ELECTRICAL NOTES:

- ALL WORK AND MATERIAL SHALL CONFORM TO 2022 CBC, DSA IR 16-8, 2022 CEC ARTICLE 690 & OTHER APPLICABLE ARTICLES, CODES AND ORDINANCES. IT IS THE INTENTION OF THESE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO PROVIDE COMPLETE AND OPERATIVE SYSTEMS.
- ALL EQUIPMENT TO HAVE TESTING LABORATORY LABEL ATTACHED.
- CONDUCTORS SHALL BE THWN COPPER (CU) UNLESS INDICATED AS ALUMINUM (AL).
- ELECTRICAL ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING & PHYSICAL CONDITION MAY VARY. CONTRACTOR TO DETERMINE ACTUAL ROUTING AND PROVIDE ALL RECONNECTIONS & ITEMS NECESSARY FOR COMPLETE & OPERATING SYSTEMS.
- ALL SOLAR ELECTRICAL EQUIPMENT TO BE UL 1741 LISTED, IEEE 1547 RATED, & APPROVED BY THE CALIFORNIA ENERGY COMMISSION.
- ELECTRICAL EQUIPMENT (BRANDS "OR EQUAL" NOTE REQUIRED). OR EQUAL MATERIALS NEED TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE. LAYOUT LOCATIONS ARE REPRESENTATIVE AND ARE SUBJECT TO CHANGE WITH APPROVAL OF OWNER AND PERMITTING AUTHORITY, ETC.
- PROVIDE "WARNING: PHOTOVOLTAIC POWER SOURCE" AFFIXED LABEL ON PV CONDUIT RUNS, BOXES, & CONDUIT BODIES INSIDE BUILDING.
- STRING 1000V DC UL4703 (PV-WIRE) CABLING SHALL BE SUPPORTED TO MODULE & ARRAY STRUCTURE WITH WILEY ACME CABLE CLIPS.
- ALL INVERTER DC STRING FUSES ARE 25 AMP UNLESS NOTED OTHERWISE.
- HORIZONTAL DIRECTIONAL BORING OR TRENCHING FOR UNDERGROUND CONDUIT RUNS.
- WHERE FEEDER CONDUCTORS ARE OVERSIZED FOR VOLTAGE DROP, PROVIDE CONDUCTOR REDUCING MEANS TO ACCOMMODATE INVERTER, PANEL, & DISCONNECT LUGS, SIZED PER CEC AMPACITY REQUIREMENTS. THE MINIMUM CONDUCTOR SIZE, FOR CIRCUIT BREAKERS LISTED FOR 75°C TERMINATING, SHALL BE:
60kW INVERTER #1, #5 GND. (AL)
- REFER TO SHEETS E5.0 & E5.1 FOR REQUIRED SOLAR EQUIPMENT WARNING LABELING. REFER TO SHEET E1.0 FOR SOLAR EQUIPMENT LABELING LOCATIONS.



PV SYSTEM ELECTRICAL SITE PLAN

SCALE: 1" = 30'-0"



SYSTEM HOST



SYSTEM DEVELOPER



100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
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STRUCTURAL ENGINEERING



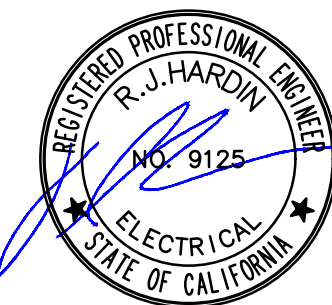
3131 CAMINO DEL RIO NORTH, SUITE 1080
SAN DIEGO, CA 92108
619.521.8500

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ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.05.25

PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

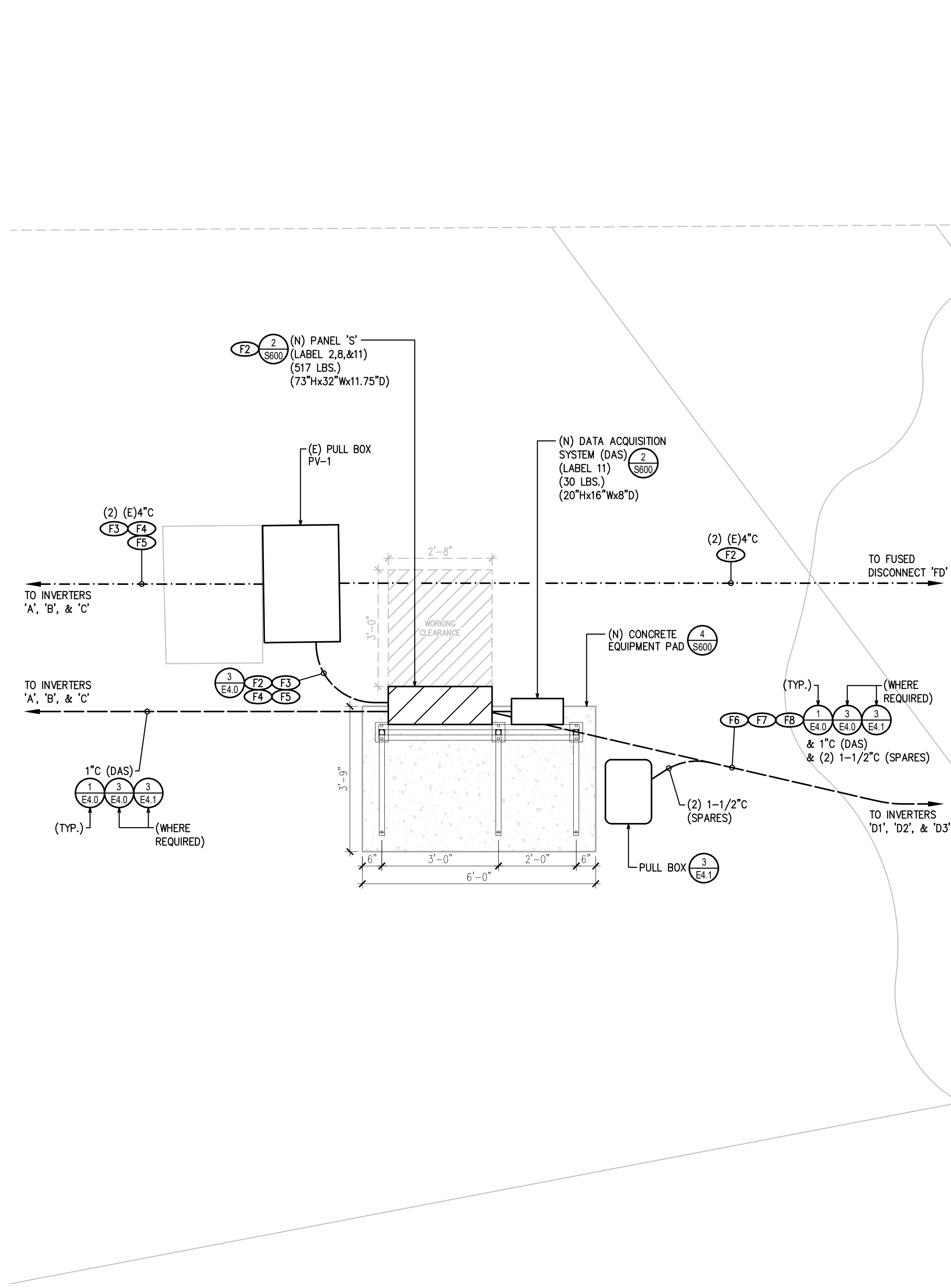
FFP PROJECT #
CA-19-0206

SHEET TITLE

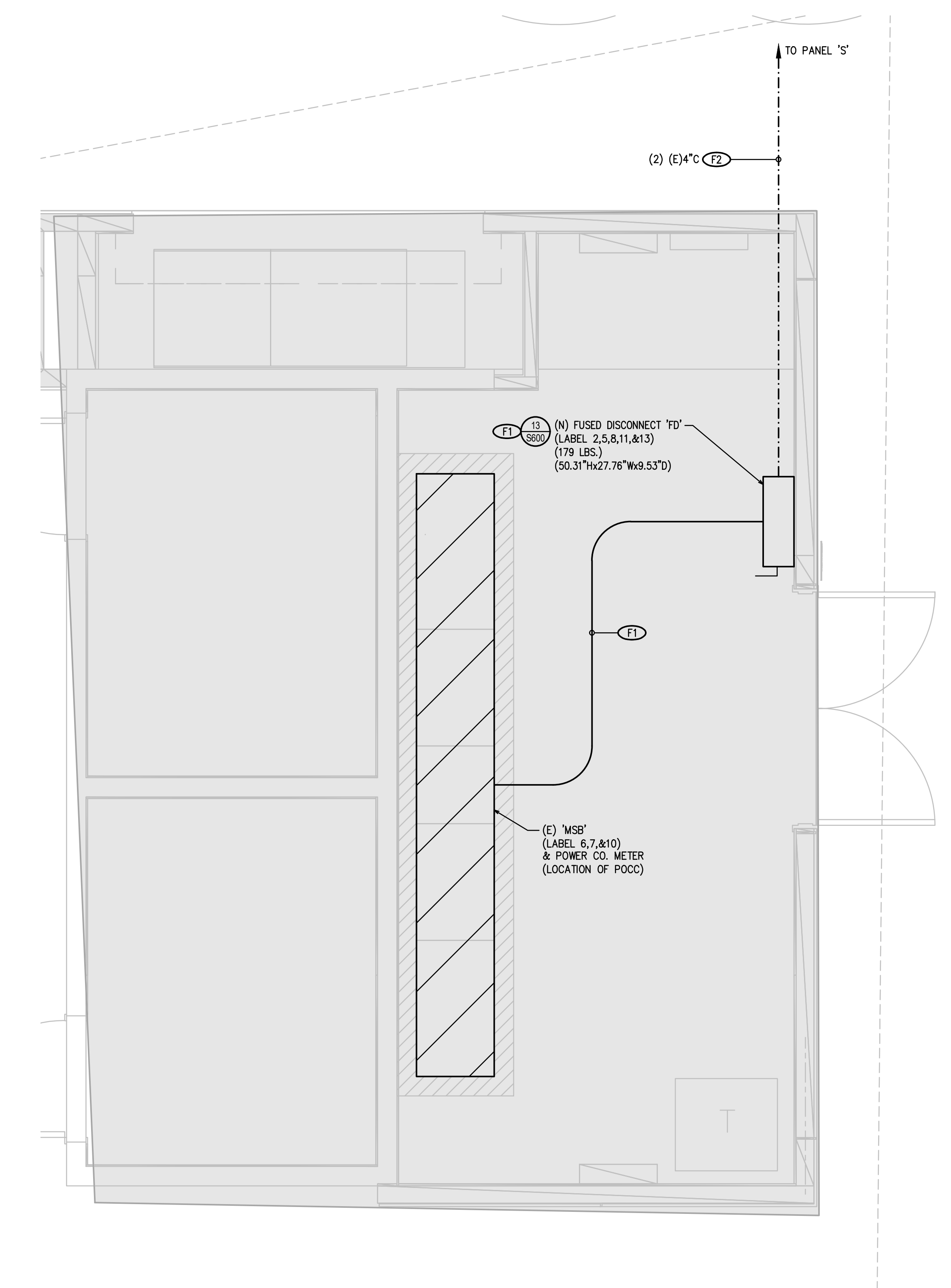
PV SYSTEM
ELECTRICAL SITE
PLAN

SHEET NO.:

E1.0



ENLARGED PANEL 'S' ELECTRICAL PLAN
SCALE: 1/2" = 1'-0"



ENLARGED MAIN ELECTRICAL SERVICE PLAN
SCALE: 1/2" = 1'-0"

SYSTEM HOST



SYSTEM DEVELOPER



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STRUCTURAL ENGINEERING



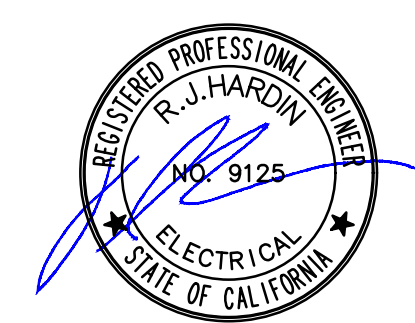
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ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.05.25

PROJECT

**BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens**

815 Potomac Ave
Bakersfield, CA 93307

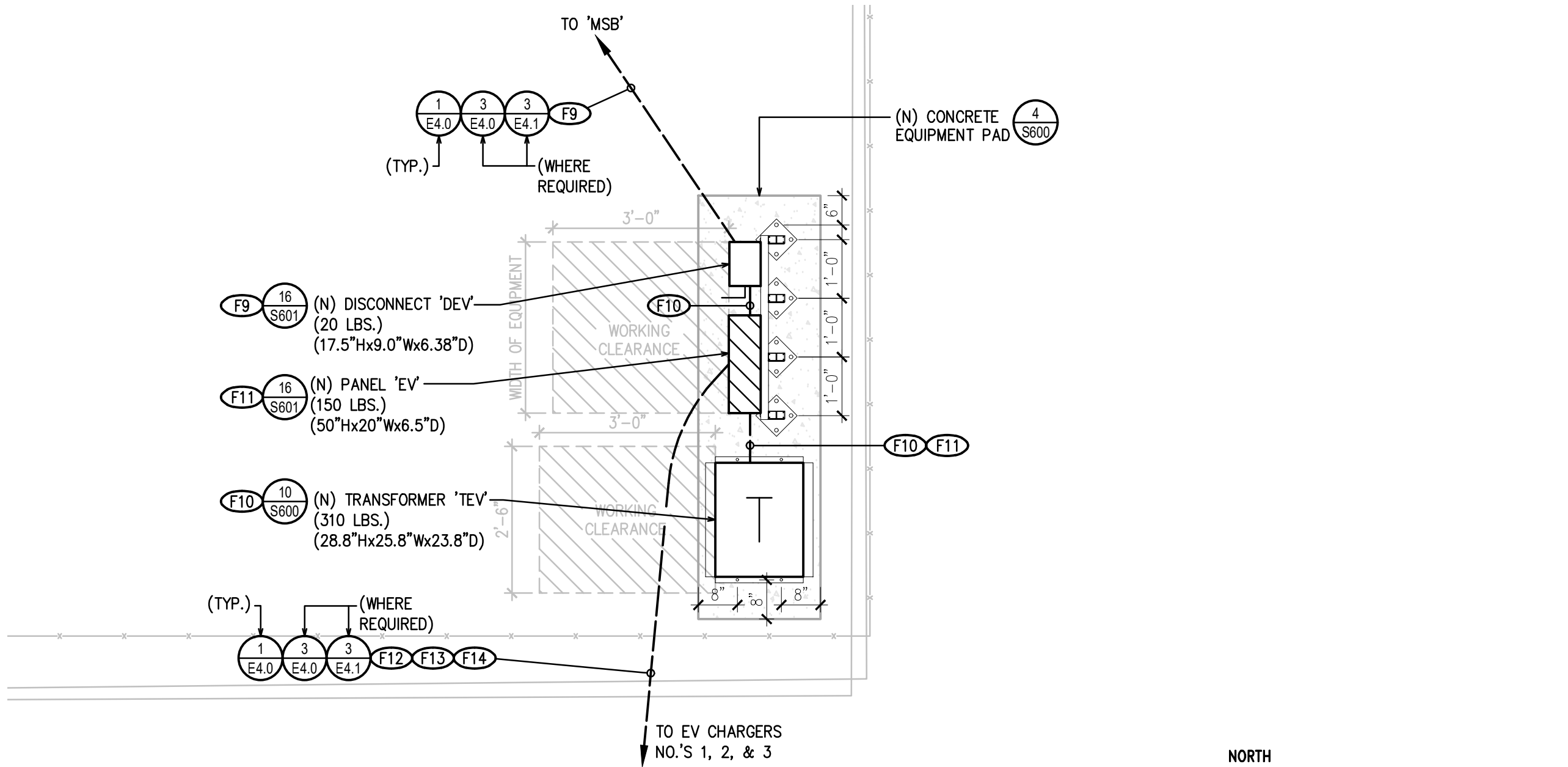
FFP PROJECT #
CA-19-0206

SHEET TITLE
**PV SYSTEM
ENLARGED
ELECTRICAL SITE
PLANS**

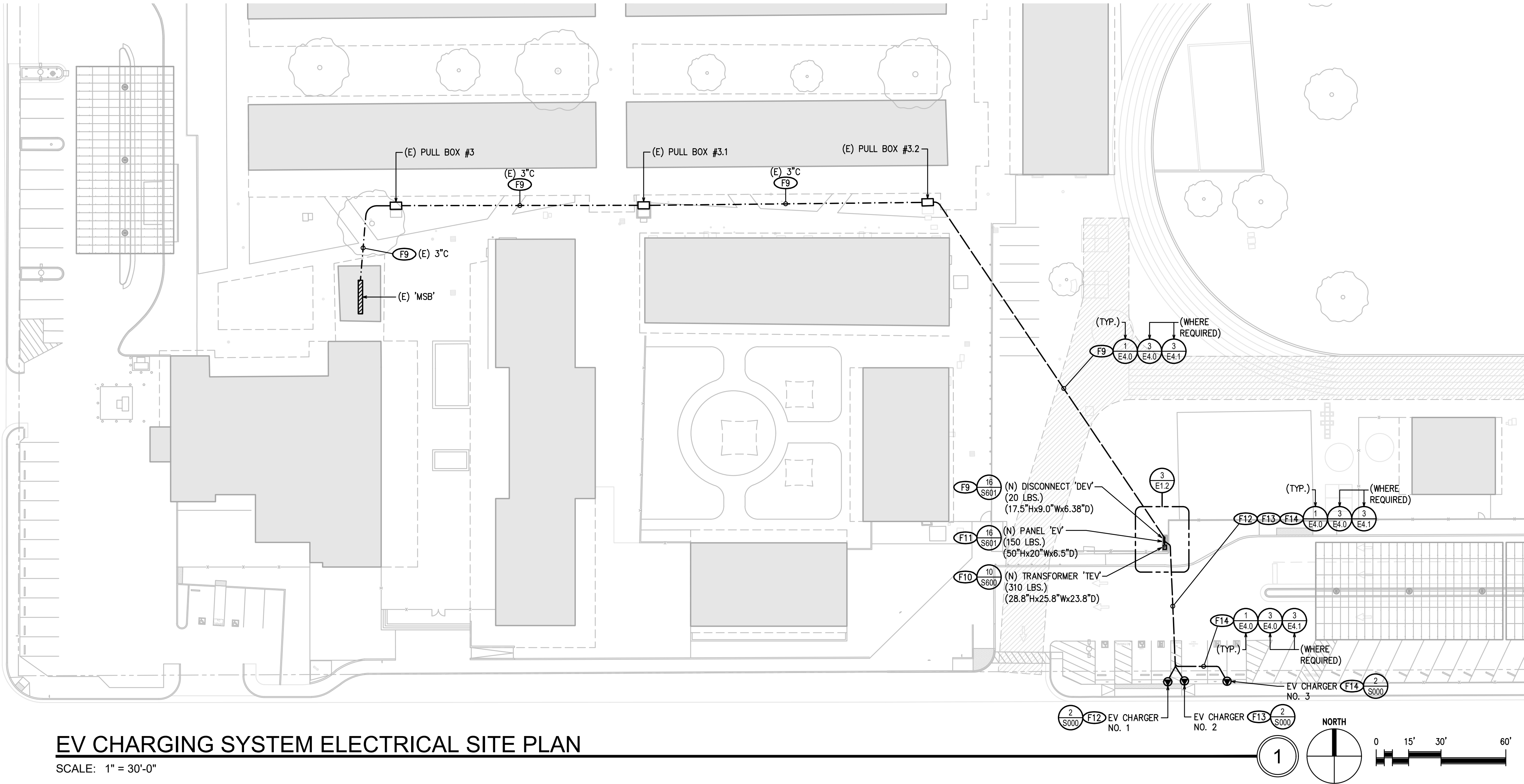
SHEET NO.:

EV CHARGING SYSTEM FEEDER SCHEDULE (F)

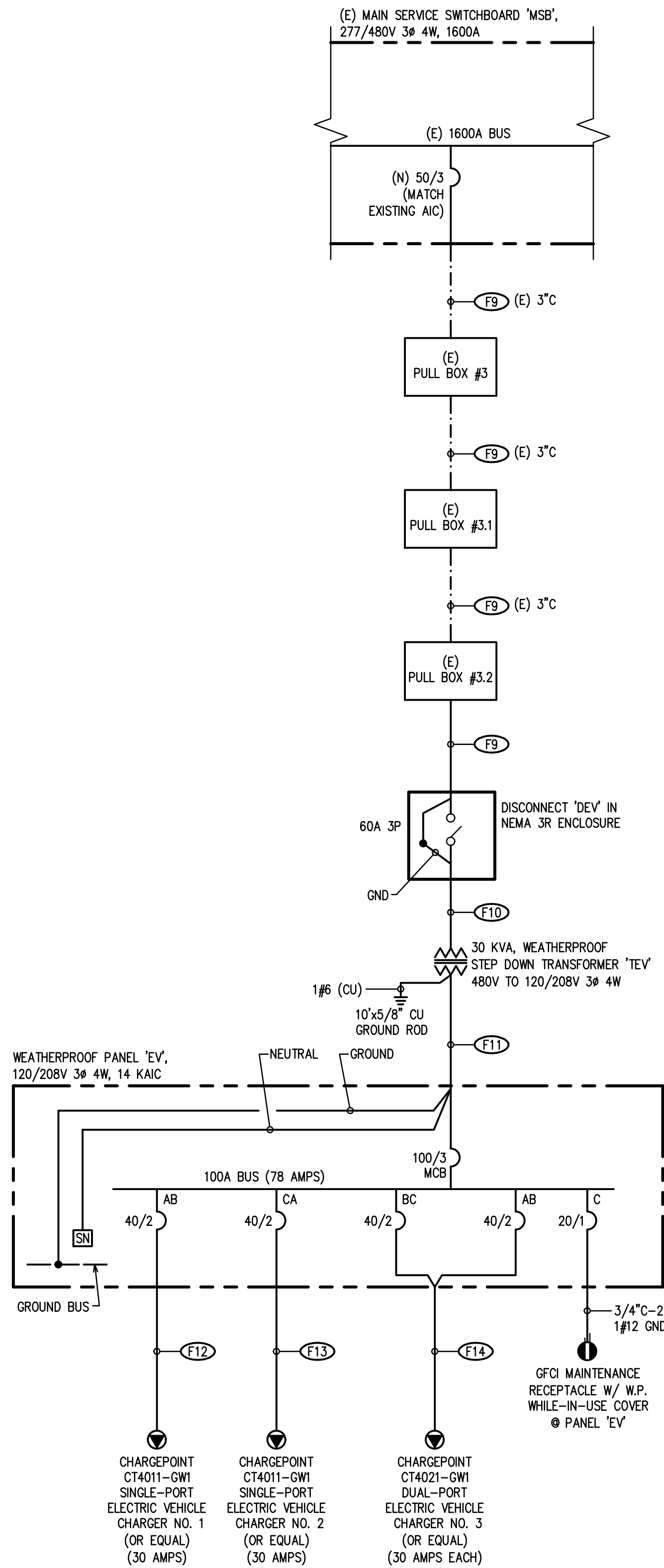
No.	Potential at Origin (PI) (Volts)	System	Design Current (Amps)	Raceway Type	Sets of Cond.	Conductor Trade Size	Conductor Cross-Sectional Area (CM)	Conductor Material	DC Conductor Material Constant (K)	Q	Distance (ft)	Voltage Drop (VD) (Volts)	Potential at Load (PI) (Volts)	Percent Voltage Drop (%VD)	Total Voltage Drop (%Vd AC)	Conduit & Conductors	No.	Feeder Origin	Feeder Destination
F9	480	AC 3-Phase	33.8	PVC	1	2	66360	AL	21.2	1.0000	510	9.54	470.46	1.99	1.99	1-1/2"C-3#2, 1#6 GND. (AL) (23.26% FILL)	F9	'MSB'	AC Disconnect 'DEV'
F10	480	AC 3-Phase	33.8	Steel	1	4	41740	AL	21.2	1.0000	10	0.30	479.70	0.06	2.05	1-1/4"C-3#4, 1#6 GND. (AL) (19.85% FILL)	F10	AC Disconnect 'DEV'	Transformer 'TEV'
F11	208	AC 3-Phase	78	Steel	1	1/0	105600	AL	21.2	1.0000	10	0.27	207.73	0.13	2.18	1-1/2"C-3#1/0, 1#6 GND. (AL) (29.82% FILL)	F11	Transformer 'TEV'	Panel 'EV'
F12	208	AC 3-Phase	30	PVC	1	8	16510	CU	12.9	1.0000	80	3.25	204.75	1.56	3.61	1"C-2#8, 1#10 GND. (CU) (13.67% FILL)	F12	Panel 'EV'	EV Charger No. 1
F13	208	AC 3-Phase	30	PVC	1	8	16510	CU	12.9	1.0000	80	3.25	204.75	1.56	3.61	1"C-2#8, 1#10 GND. (CU) (13.67% FILL)	F13	Panel 'EV'	EV Charger No. 2
F14	208	AC 3-Phase	30	PVC	1	8	16510	CU	12.9	1.0000	100	4.06	203.94	1.95	4.13	1"C-4#8, 1#10 GND. (CU) (24.28% FILL)	F14	Panel 'EV'	EV Charger No. 3



ENLARGED EV CHARGING SYSTEM ELECTRICAL PLAN 3
SCALE: 1/2" = 1'-0"



EV CHARGING SYSTEM ELECTRICAL SITE PLAN
SCALE: 1" = 30'-0"



EVCS SINGLE LINE DIAGRAM 2
SCALE: NONE

SYSTEM HOST



SYSTEM DEVELOPER



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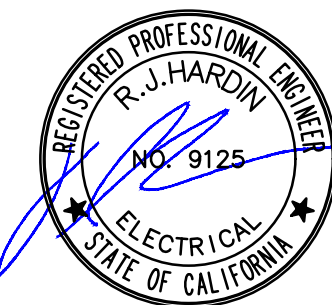
3131 CAMINO DEL RIO NORTH, SUITE 1080
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NO. REVISION DATE

DATE: 03.05.25

PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

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Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

EV CHARGING
SYSTEM ELECTRICAL
SITE PLAN

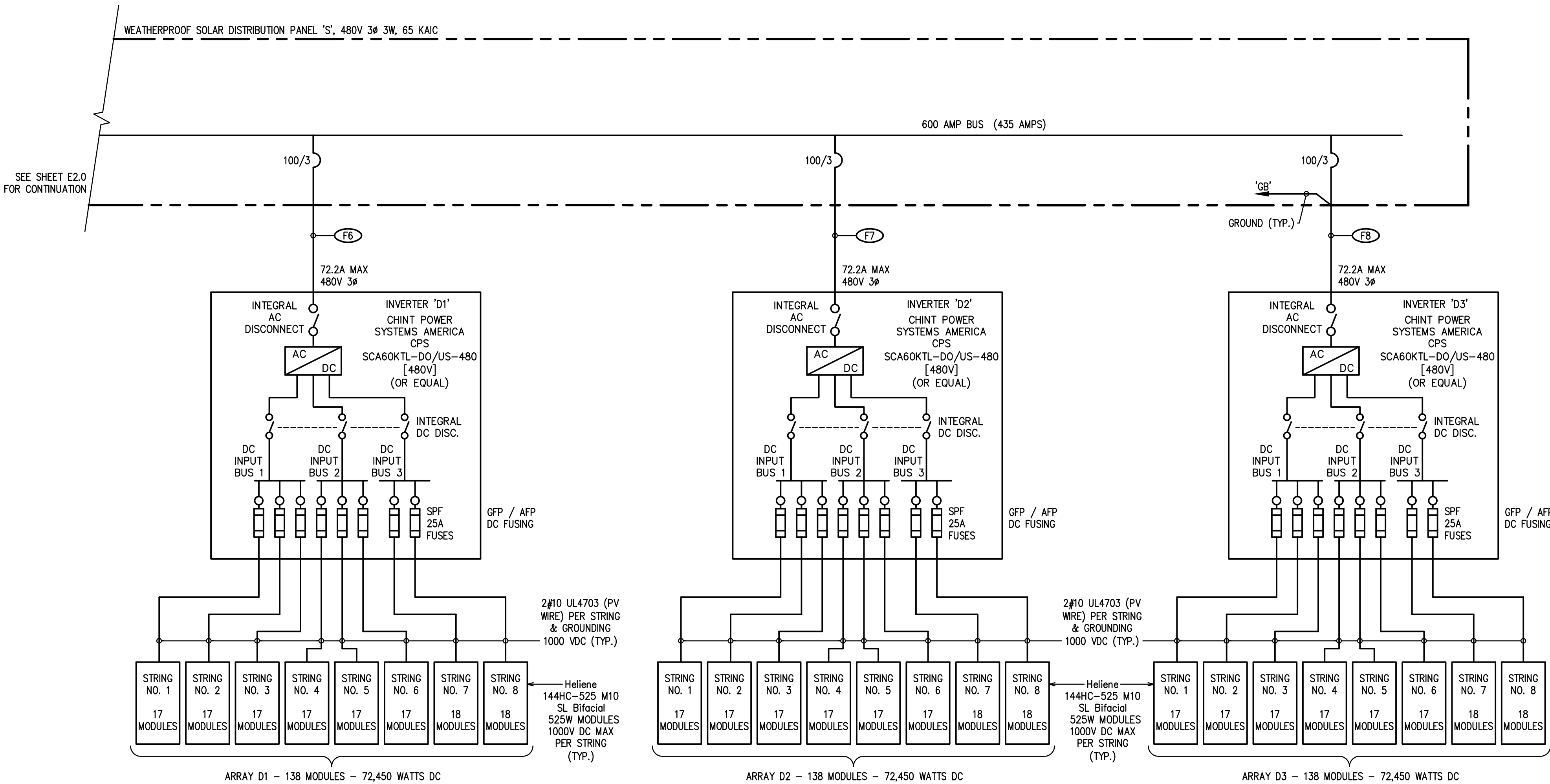
SHEET NO.:

E1.2

PV SYSTEM FEEDER SCHEDULE

No.	Potential at Origin (Pi) (Volts)	System	Design Current (Amps)	Raceway Type	Sets of Cond.	Conductor Trade Size	Conductor Cross-Sectional Area (CM)	Conductor Material	DC Conductor Material Constant (K)	Q	Distance (ft)	Voltage Drop (VD) (Volts)	Potential at Load (Pl) (Volts)	Percent Voltage Drop (%VD)	Total Voltage Drop (%Vd AC)	Total Voltage Drop (%Vd AC + DC)	Conduit & Conductors	No.	Feeder Origin	Feeder Destination
F1	480	AC 3-Phase	433.2	Steel	2	350 kCMIL	700000	CU	12.9	1.0627	30	0.44	479.56	0.09	0.09	N/A	TWO 3"C-3#350 KCMIL, 1#2/0 NEUT. (CU) (22.83% FILL)	F1	'MSB'	AC Disconnect 'FD'
F2	480	AC 3-Phase	433.2	PVC	2	500 kCMIL	1000000	AL	21.2	1.0142	80	1.29	478.71	0.27	0.36	N/A	TWO: (E) 4"C-3#500 KCMIL, 1#2/0 GND. (AL) (20.81% FILL)	F2	AC Disconnect 'FD'	Panel 'S'
F3	480	AC 3-Phase	72.2	PVC	1	1/0	105600	AL	21.2	1.0000	245	6.15	473.85	1.28	1.64	2.15	2"C-3#1/0, 1#4 GND. (AL) (30.35% FILL) (4"C=12.32% FILL)	F3	Panel 'S'	Inverter 'A'
F4	480	AC 3-Phase	72.2	PVC	1	2/0	133100	AL	21.2	1.0063	445	8.92	471.08	1.86	2.22	2.72	2"C-3#2/0, 1#4 GND. (AL) (26.06% FILL) (4"C=12.32% FILL)	F4	Panel 'S'	Inverter 'B'
F5	480	AC 3-Phase	72.2	PVC	1	1	83690	AL	21.2	1.0000	185	5.86	474.14	1.22	1.58	1.92	1-1/2"C-3#1, 1#6 GND. (AL) (30.35" FILL) (4"C=4.61% FILL)	F5	Panel 'S'	Inverter 'C'
F6	480	AC 3-Phase	72.2	PVC	1	4/0	211600	AL	21.2	1.0000	570	7.14	472.86	1.49	1.85	2.19	2"C-3#4/0, 1#2 GND. (AL) (37.8% FILL)	F6	Panel 'S'	Inverter 'D1'
F7	480	AC 3-Phase	72.2	PVC	1	4/0	211600	AL	21.2	1.0000	570	7.14	472.86	1.49	1.85	2.60	2"C-3#4/0, 1#2 GND. (AL) (37.8% FILL)	F7	Panel 'S'	Inverter 'D2'
F8	480	AC 3-Phase	72.2	PVC	1	4/0	211600	AL	21.2	1.0000	610	7.64	472.36	1.59	1.95	2.99	2"C-3#4/0, 1#2 GND. (AL) (37.8% FILL)	F8	Panel 'S'	Inverter 'D3'
A-8	751.5	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	110	3.78	747.72	0.50	N/A	N/A	2#10 (CU)	A-8	Inverter 'A'	Worst Case DC String
B-8	751.5	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	110	3.78	747.72	0.50	N/A	N/A	2#10 (CU)	B-8	Inverter 'B'	Worst Case DC String
C-6	709.75	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	70	2.41	707.34	0.34	N/A	N/A	2#10 (CU)	C-6	Inverter 'C'	Worst Case DC String
D1-6	709.75	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	70	2.41	707.34	0.34	N/A	N/A	2#10 (CU)	D1-6	Inverter 'D1'	Worst Case DC String
D2-6	709.75	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	155	5.33	704.42	0.75	N/A	N/A	2#10 (CU)	D2-6	Inverter 'D2'	Worst Case DC String
D3-6	709.75	DC	13.84	n/a-DC	1	10	10380	CU	12.9	n/a	215	7.40	702.35	1.04	N/A	N/A	2#10 (CU)	D3-6	Inverter 'D3'	Worst Case DC String

CANOPY DC STRING HOME RUNS			
MAXIMUM NUMBER OF CU #10 PV WIRES (PV WIRE + GROUND)			
CONDUIT TRADE SIZE	CONDUIT LENGTH 24" OR LESS (60% FILL)	CONDUIT LENGTH OVER 24" (40% FILL)	
	LFMC	LFMC	EMT
3/4"	5	3	3
1"	9	6	6
1-1/4"	16	9	9
1-1/2"	22	9	9
2"	36	9	9
TABLE ASSUMING CU #10 PV WIRE WITH .26" O.D.			



PV SYSTEM SINGLE LINE DIAGRAM 436.80 KW TOTAL

SCALE: NONE

SYSTEM HOST



SYSTEM DEVELOPER



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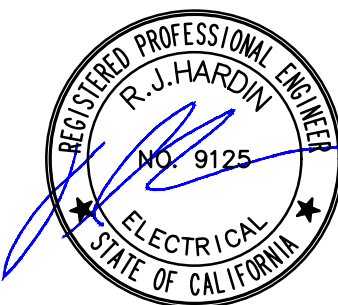
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PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT

Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

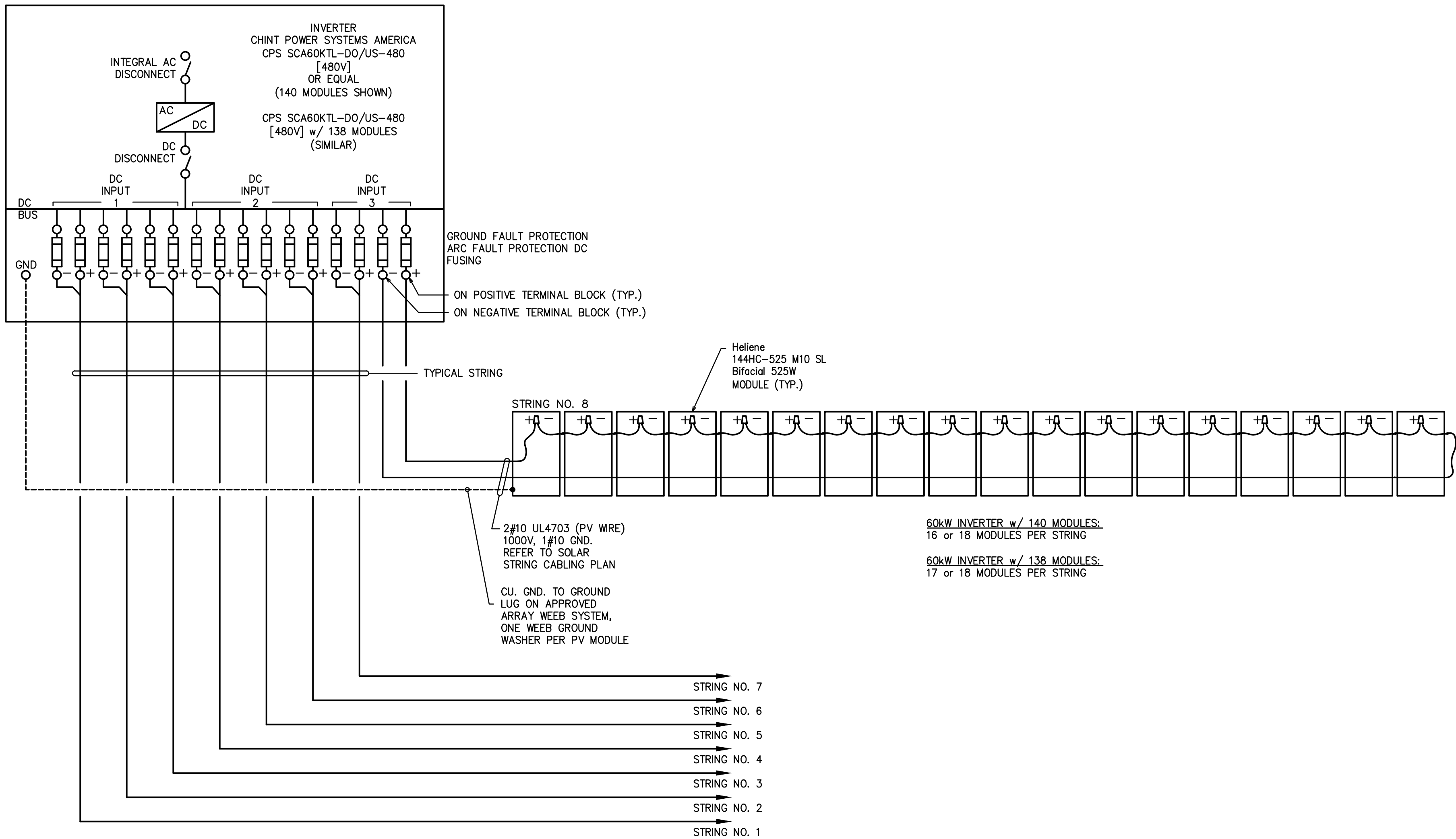
FFP PROJECT #
CA-19-0206

SHEET TITLE

PV SYSTEM
ELECTRICAL SINGLE
LINE DIAGRAM

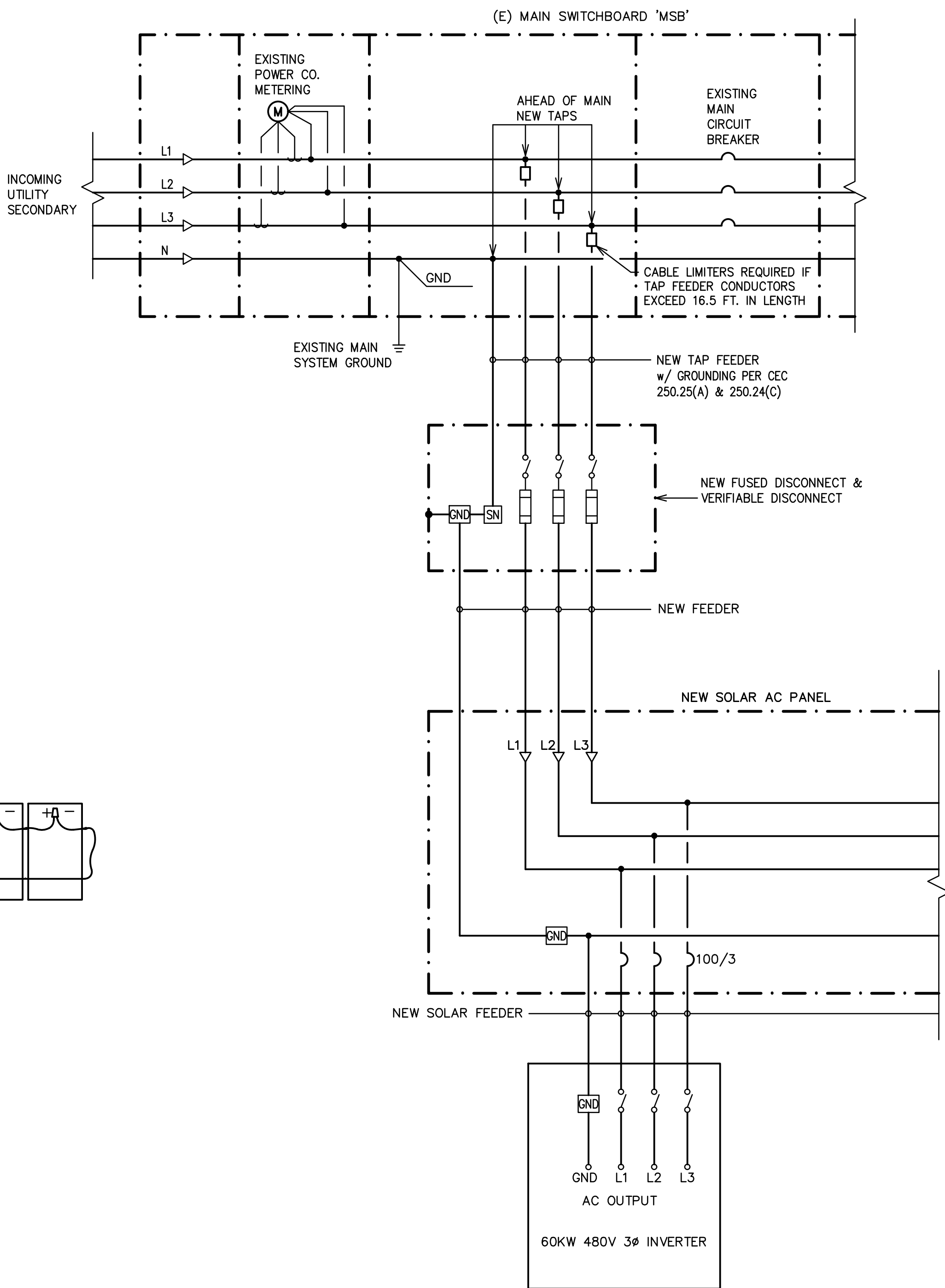
SHEET NO.:

E2.1



PV SYSTEM TYPICAL DC LINE DIAGRAM

SCALE: NONE



PV SYSTEM TYPICAL THREE LINE DIAGRAM

SCALE: NONE

SYSTEM HOST



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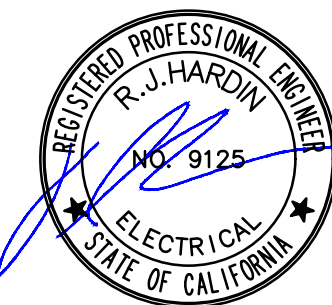
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Bessie Owens

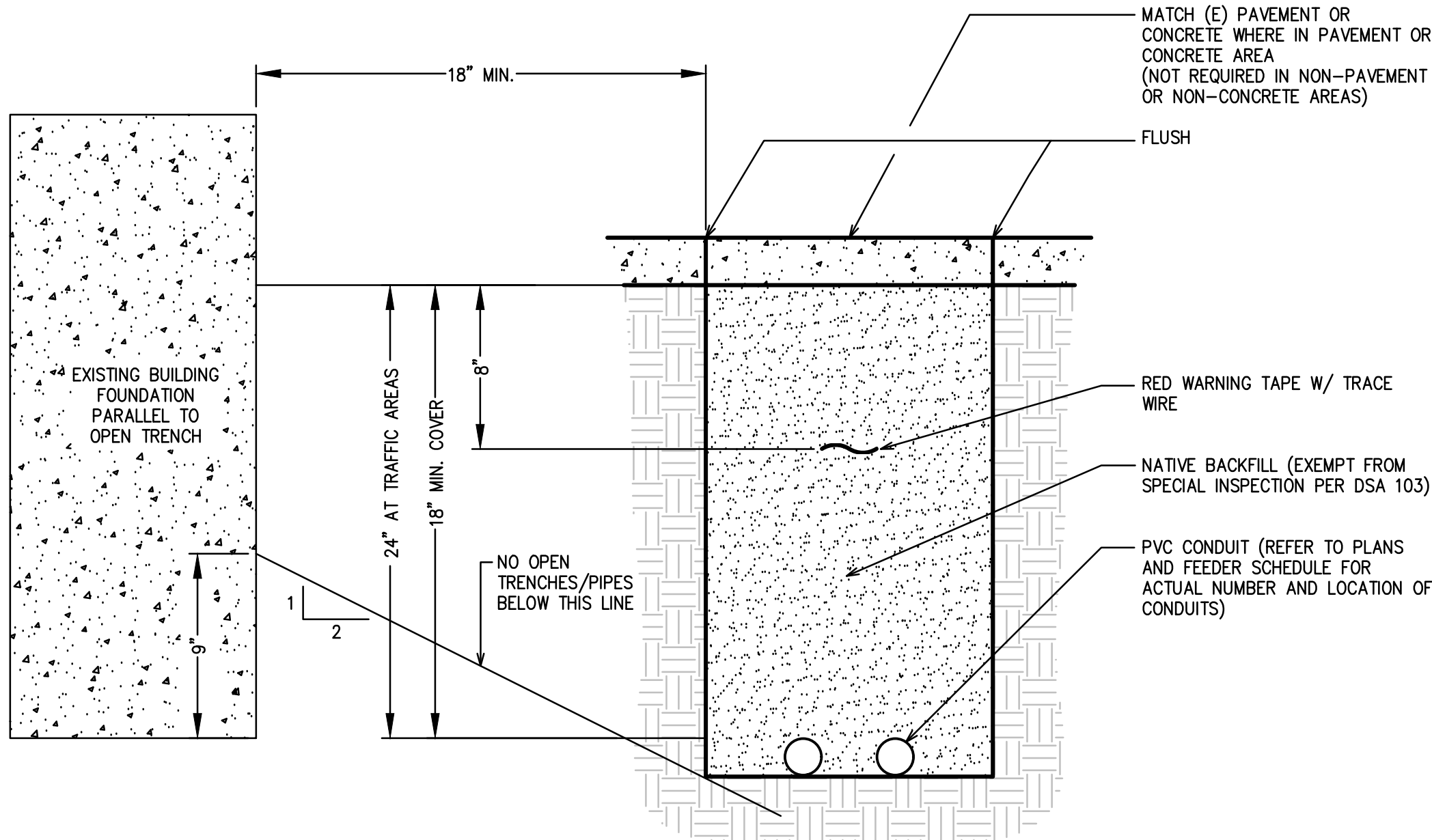
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Bakersfield, CA 93307

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CA-19-0206

SHEET TITLE

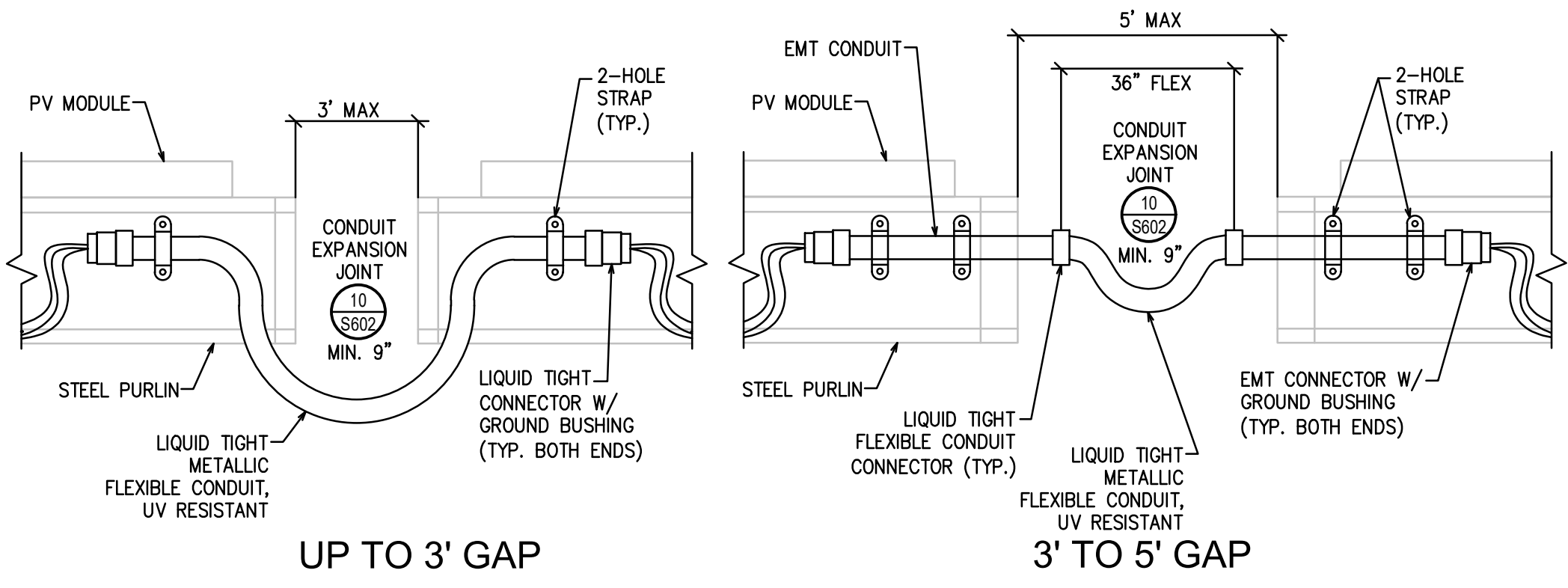
PV SYSTEM TYPICAL
ELECTRICAL THREE
LINE DIAGRAM

SHEET NO.:

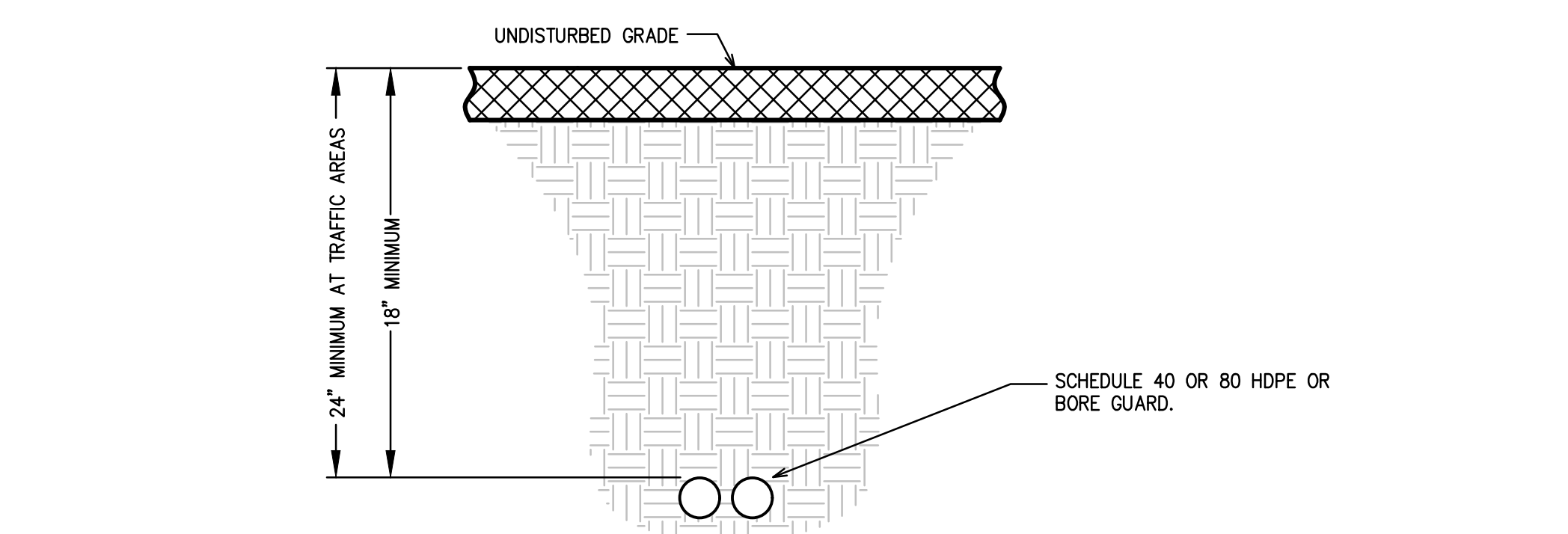


TRENCH THROUGH PAVEMENT TRAFFIC DETAIL
NO SCALE

- NOTES:
1. TRENCHING ONLY WHERE REQUIRED
 2. SOIL BACKFILL EXEMPT FROM SPECIAL INSPECTION PER DSA 103

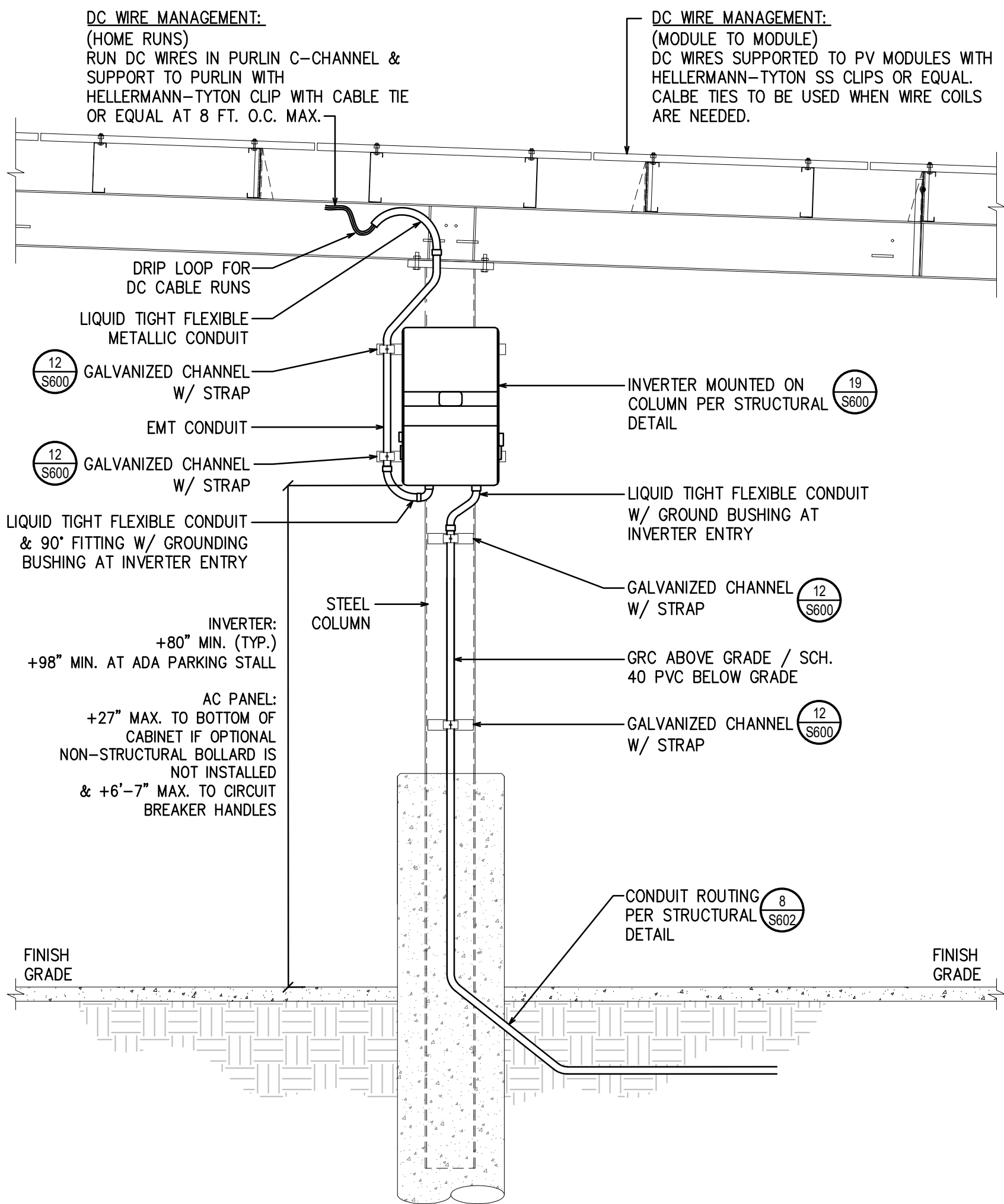


UP TO 3' GAP
WIRING BRIDGE DETAIL
NO SCALE



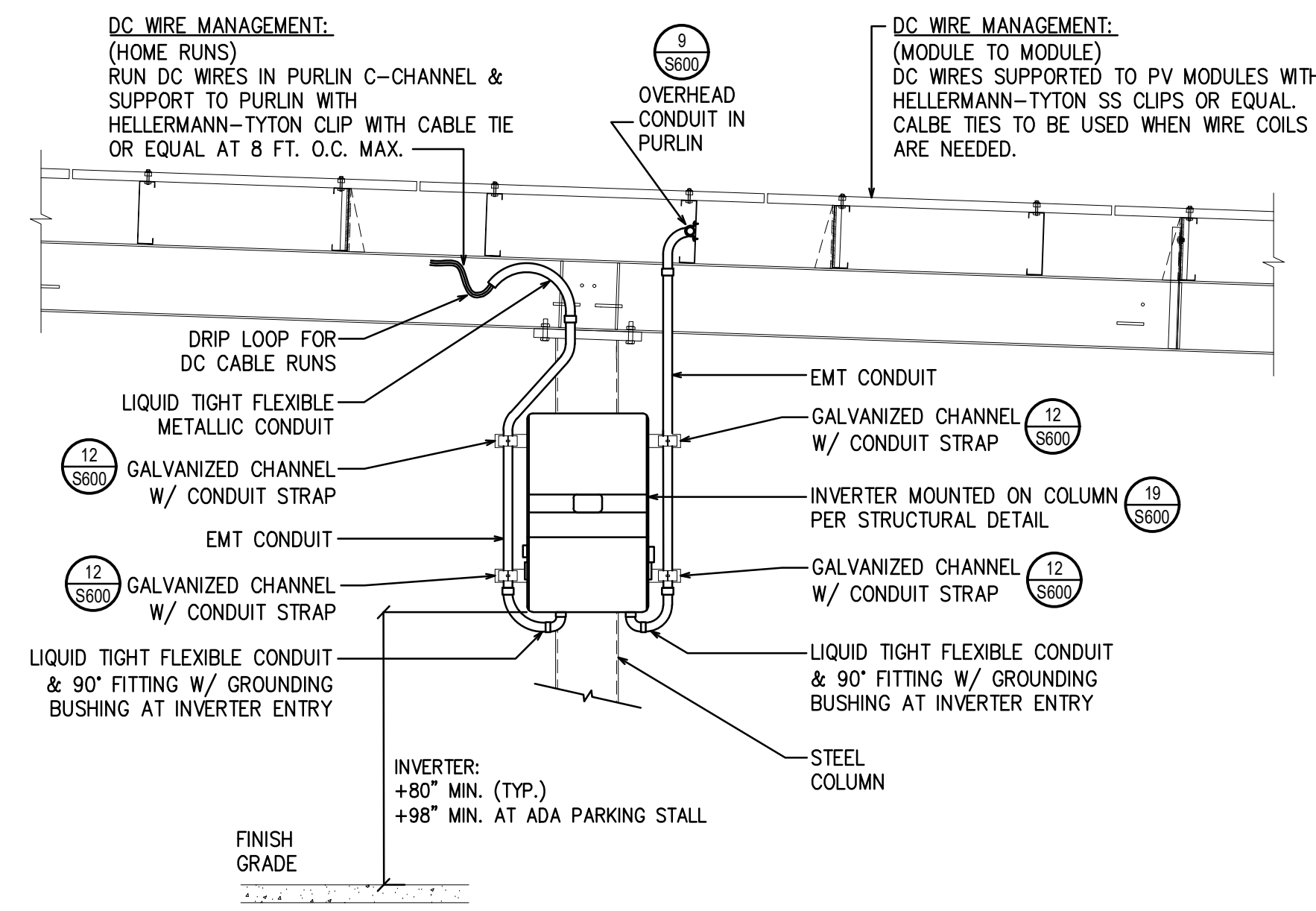
HORIZONTAL BORE DETAIL
NO SCALE

NOTE: BORING TYPICAL INSTALLATION METHOD

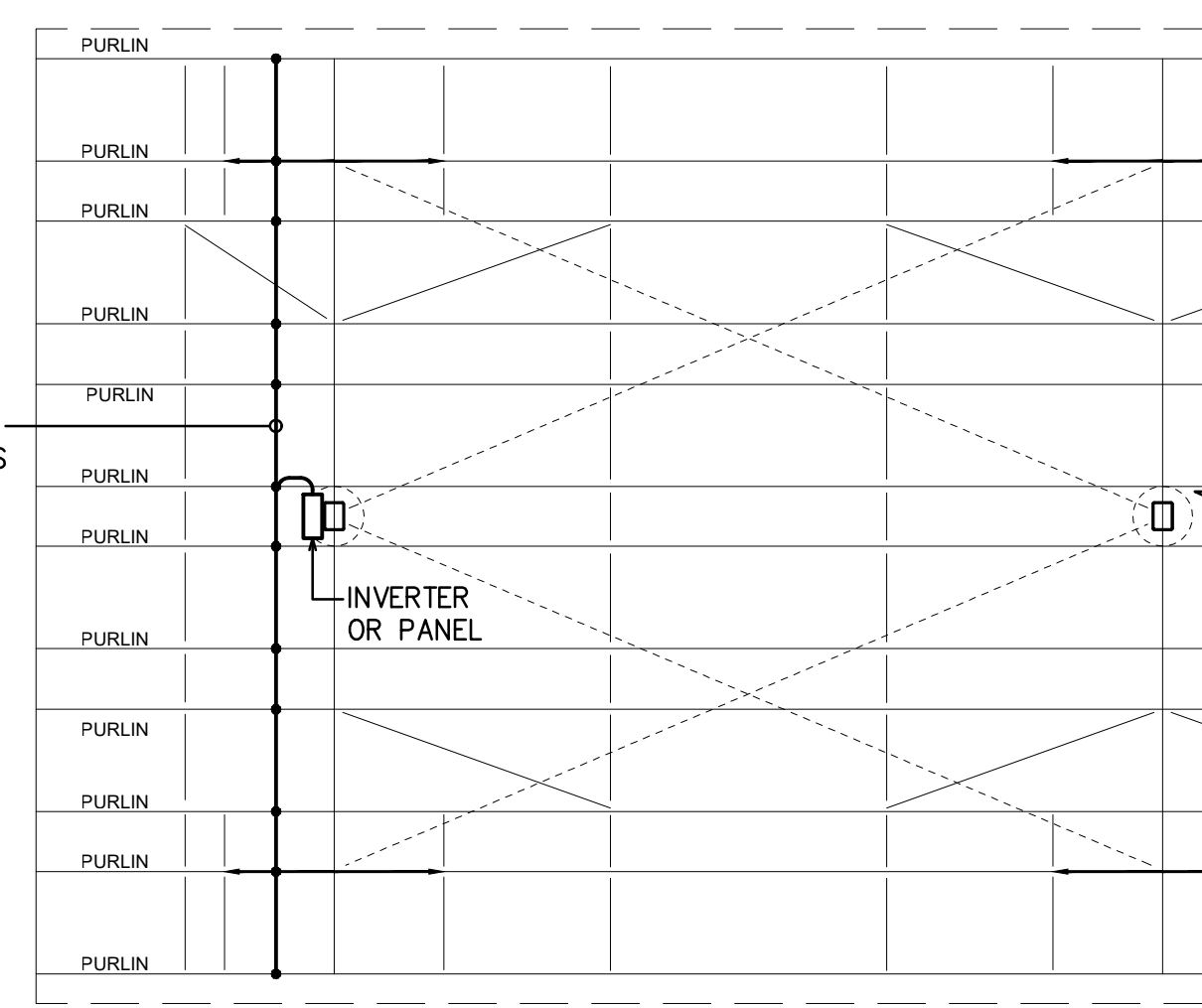


TYPICAL PV CANOPY UNDERGROUND
CONDUIT RISER DETAIL
NO SCALE

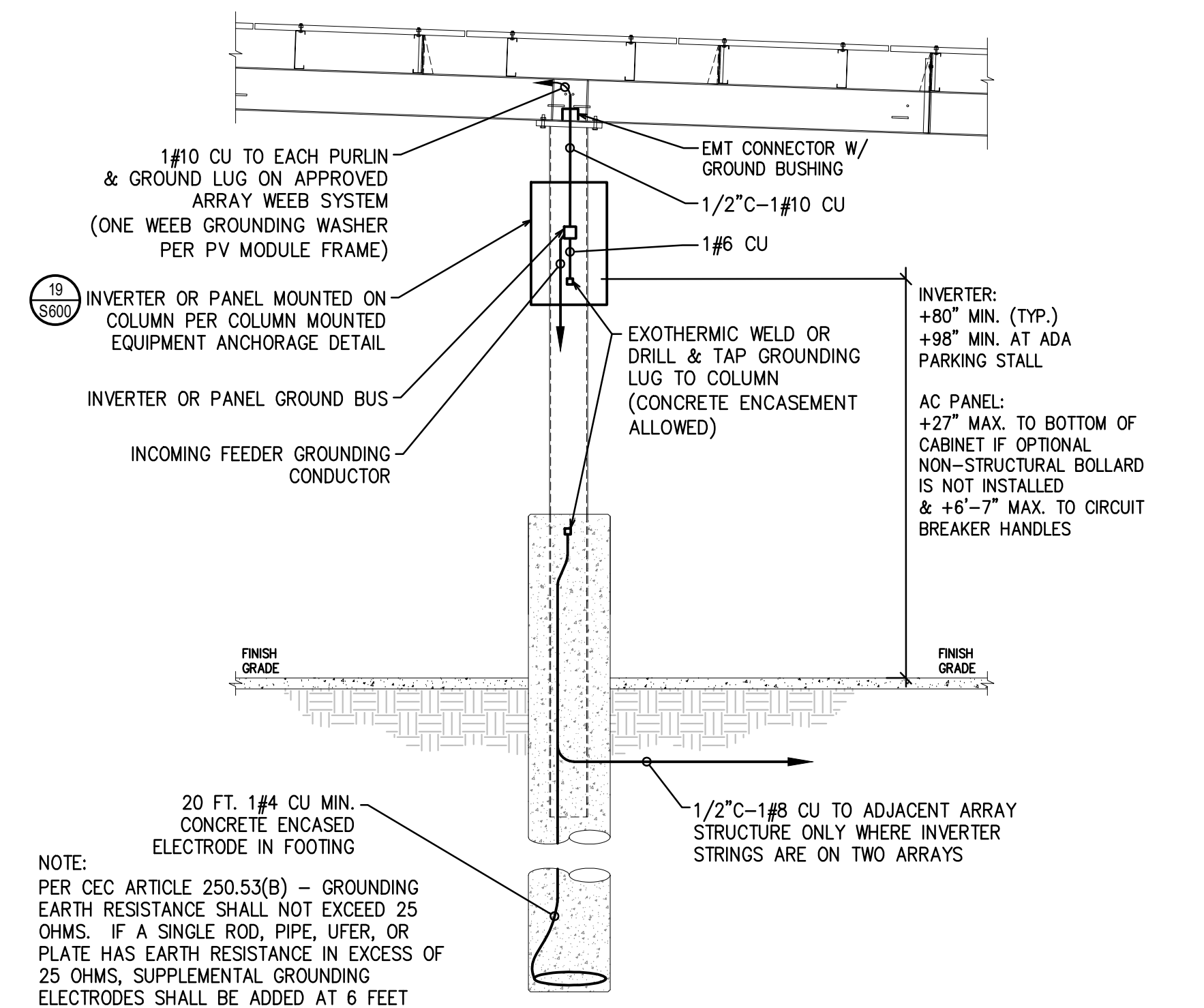
NOTE: ONE REQUIRED PER ARRAY STRUCTURE



TYPICAL PV CANOPY OVERHEAD
CONDUIT RISER DETAIL
NO SCALE



PLAN VIEW



SECTION VIEW

PV CANOPY GROUNDING DETAIL
NO SCALE

NOTE: ONE REQUIRED PER ARRAY STRUCTURE

SYSTEM HOST

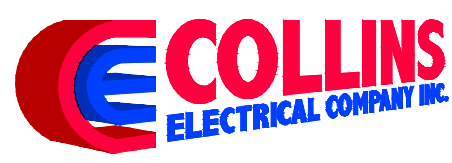


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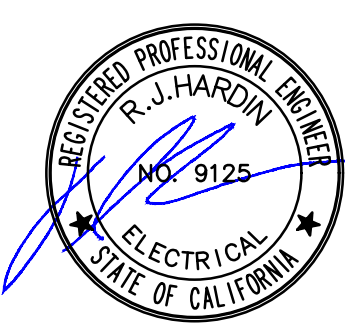
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DATE: 03.05.25

PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

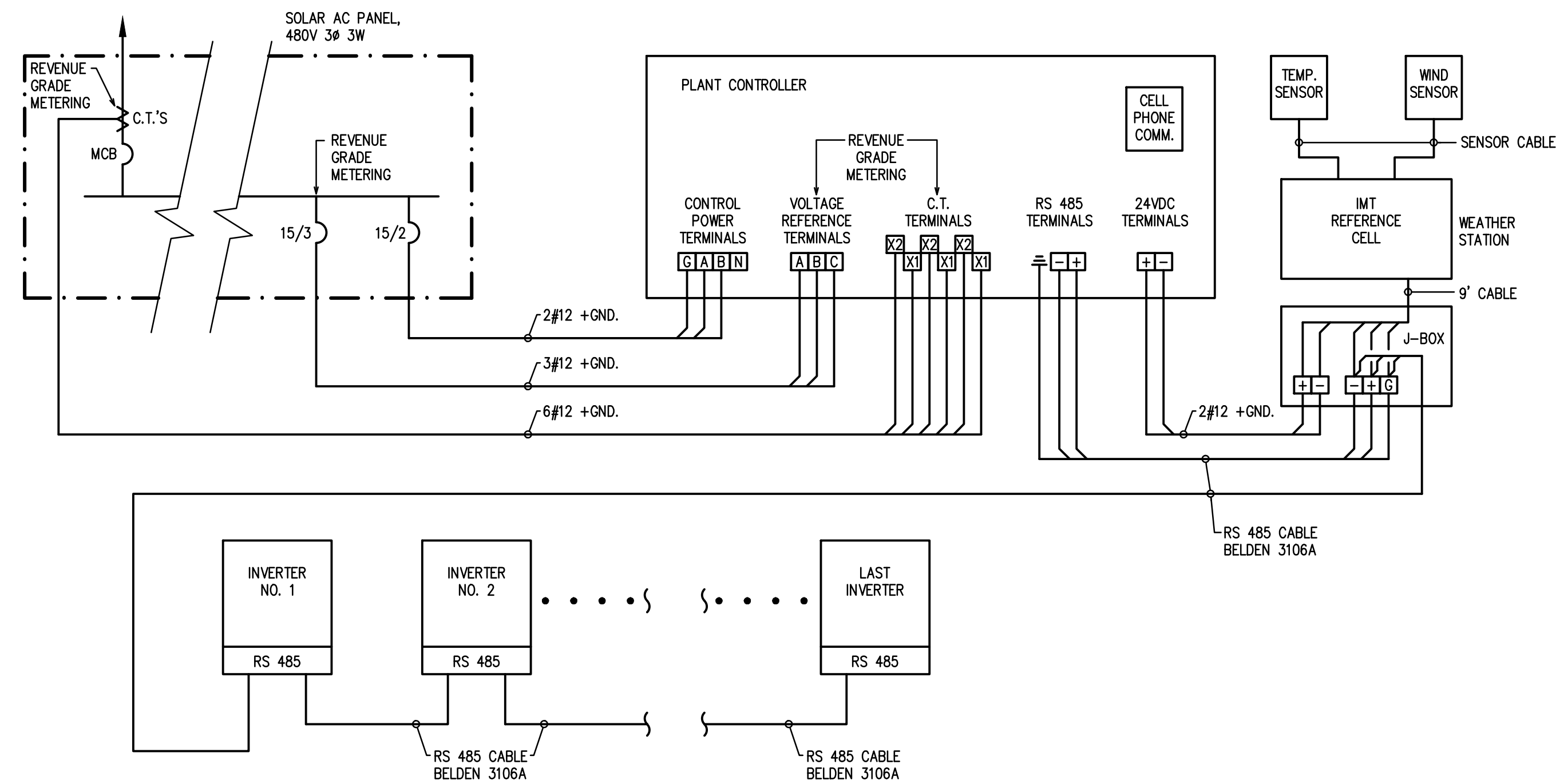
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SHEET TITLE

ELECTRICAL DETAILS

SHEET NO.:

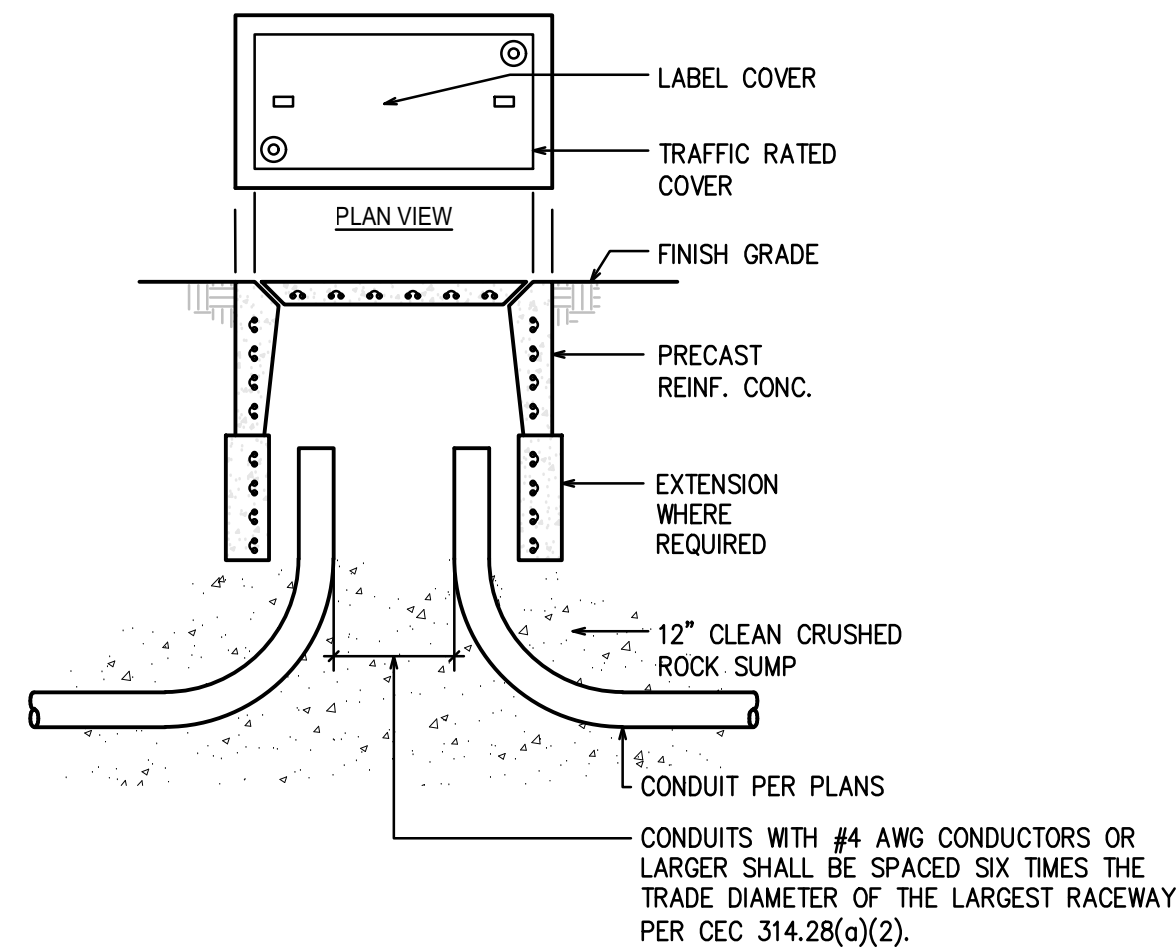
E4.0



TYPICAL DATA ACQUISITION SYSTEM WIRING DIAGRAM

SCALE: NONE

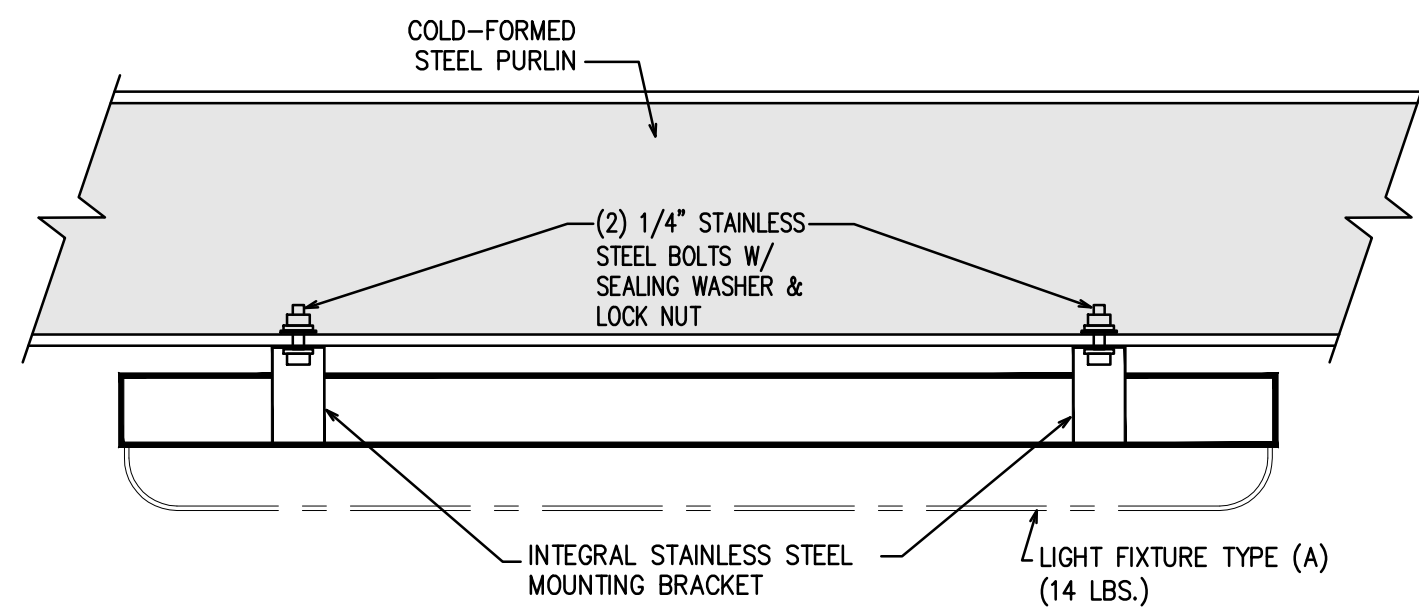
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TYPICAL PULL BOX DETAIL

SCALE: NONE

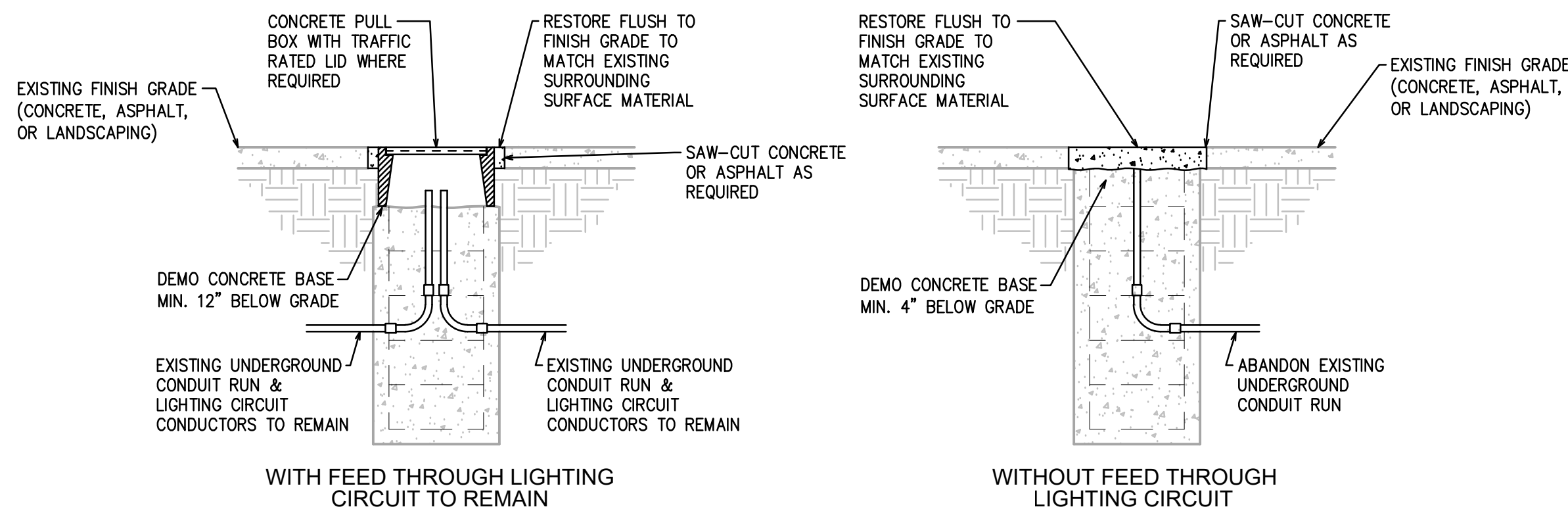
3



LIGHT FIXTURE MOUNTING DETAIL

SCALE: NONE

1



LIGHT POLE CONCRETE BASE DEMOLITION DETAIL

SCALE: NONE

2

SYSTEM HOST



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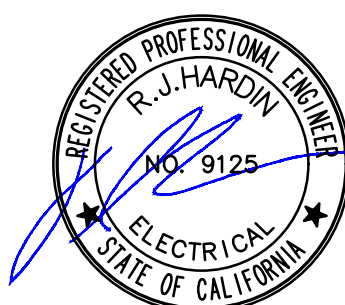
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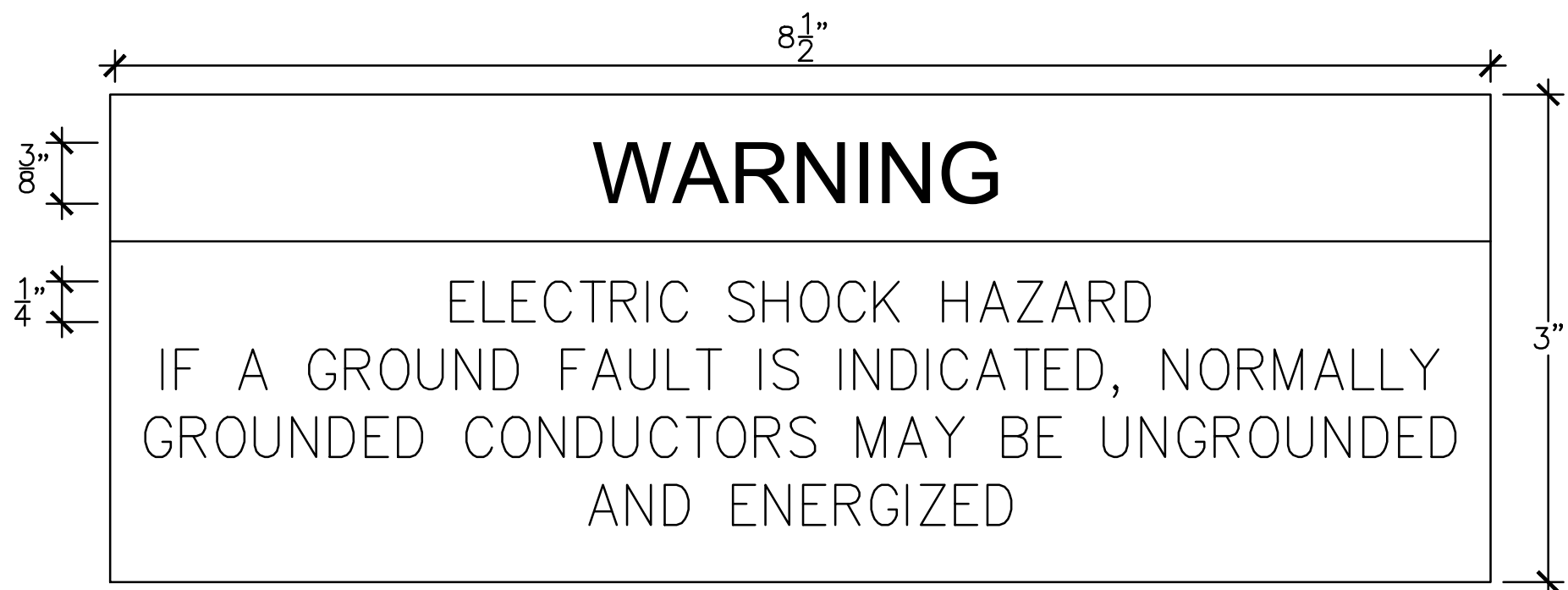
FFP PROJECT #
CA-19-0206

SHEET TITLE

ELECTRICAL DETAILS

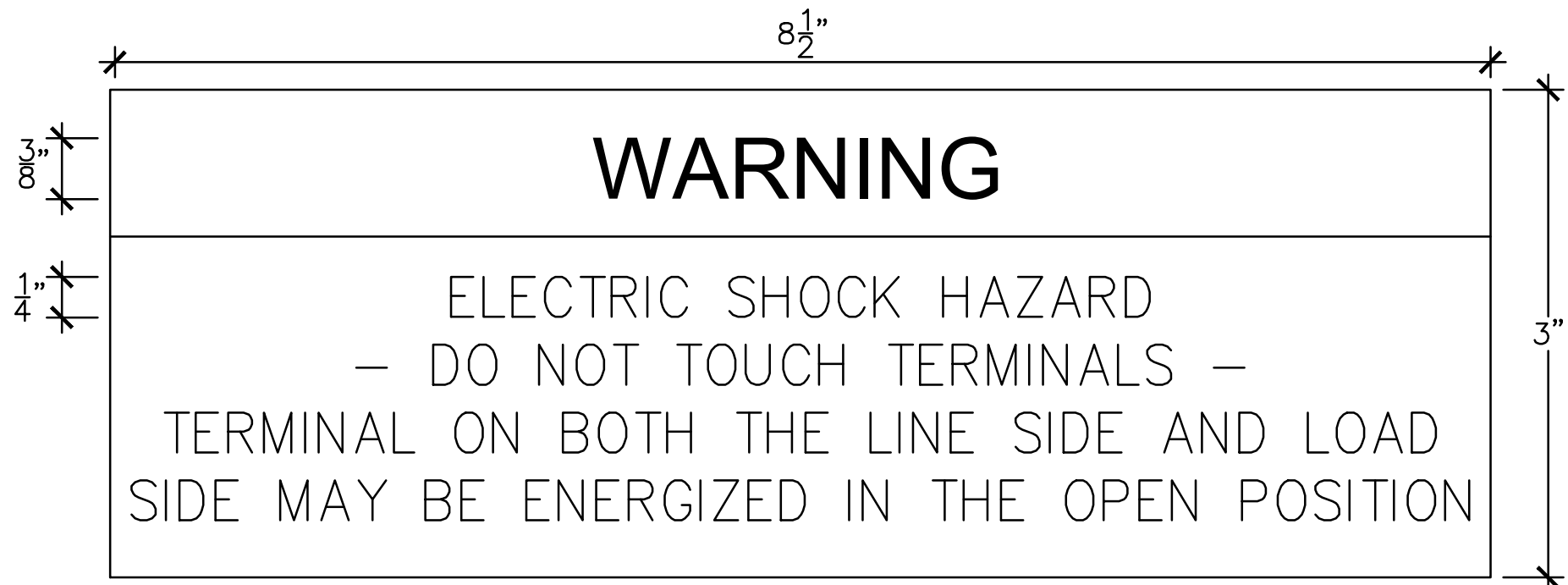
SHEET NO.:

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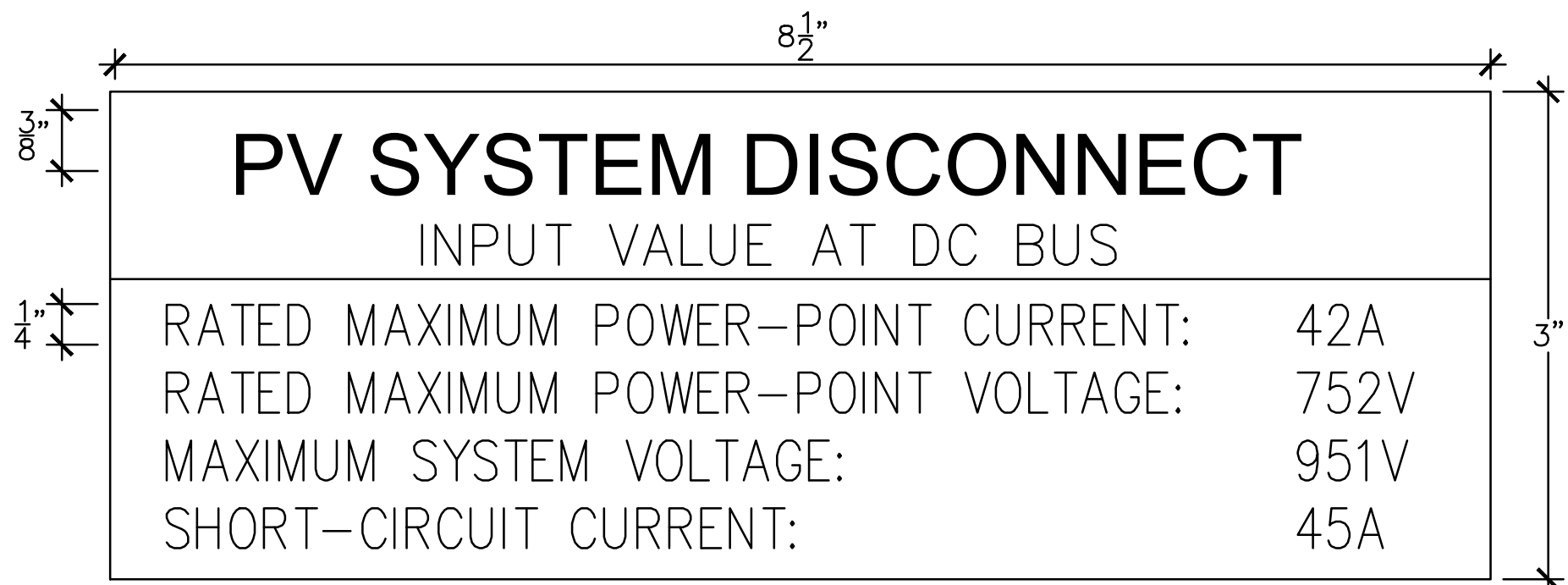
LABEL - 1
SCALE: NONE

LOCATION:	INVERTERS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



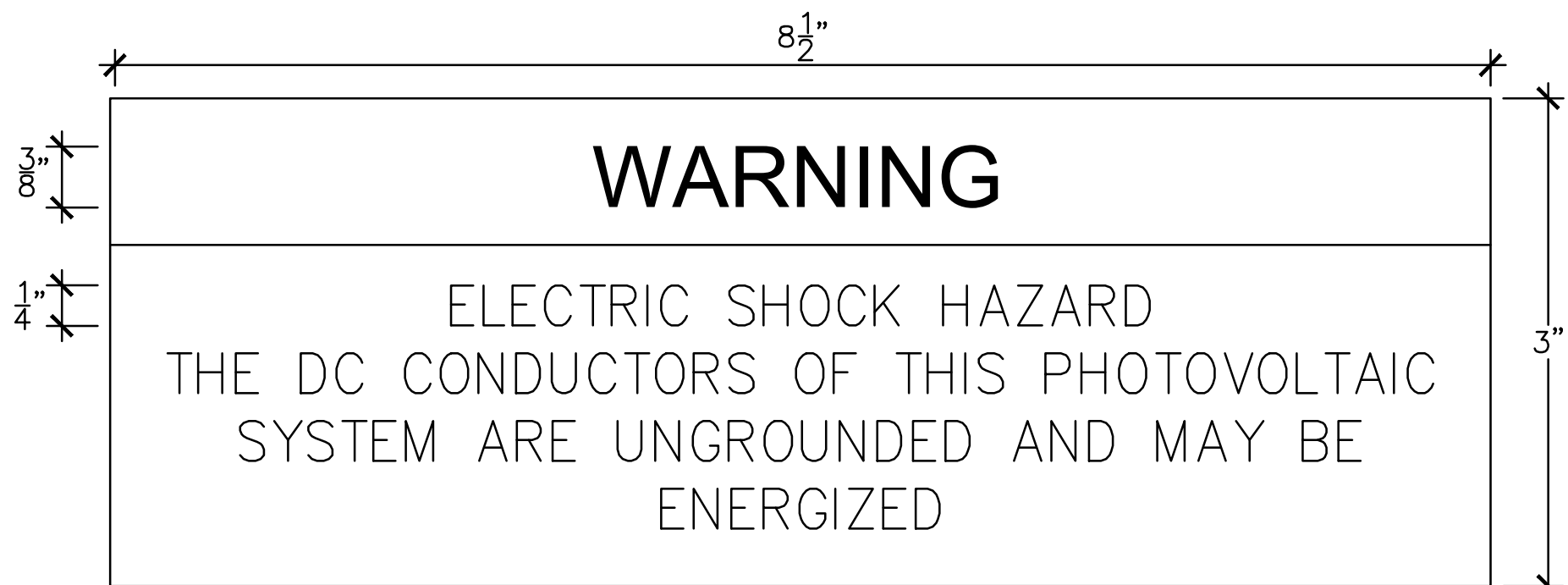
LABEL - 2
SCALE: NONE

LOCATION:	AC DISCONNECTS & PANELBOARDS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



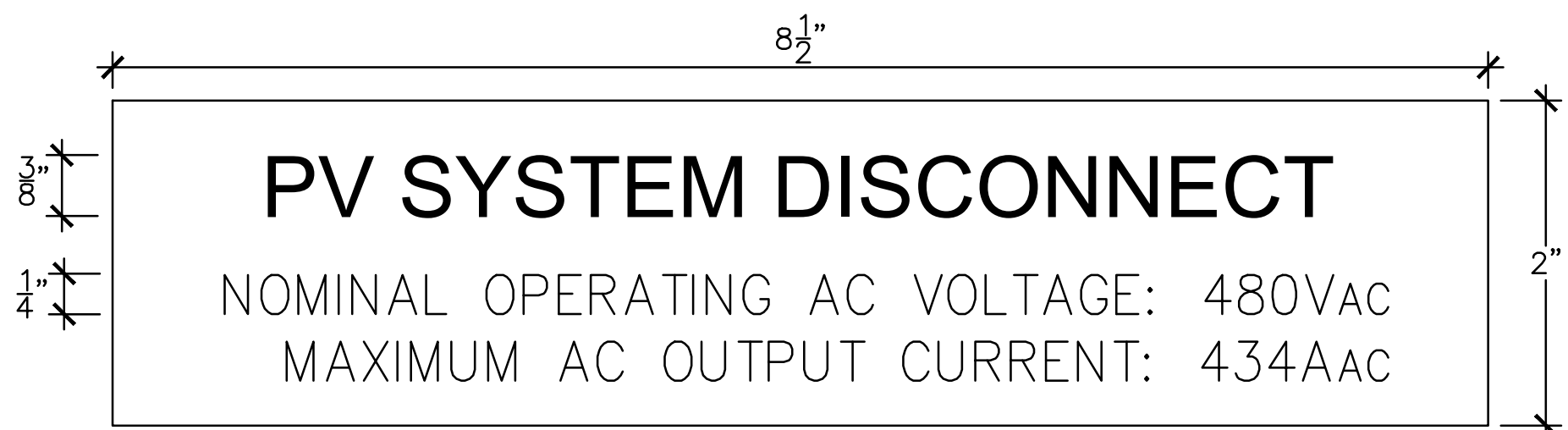
LABEL - 3
SCALE: NONE

LOCATION:	60kW INVERTERS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



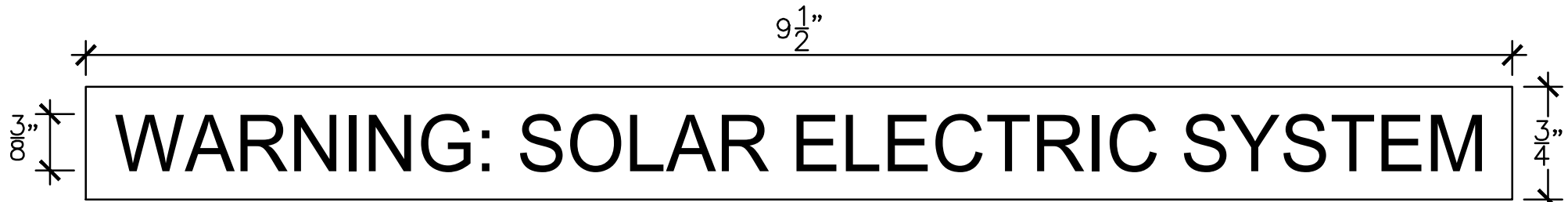
LABEL - 4
SCALE: NONE

LOCATION:	INVERTERS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



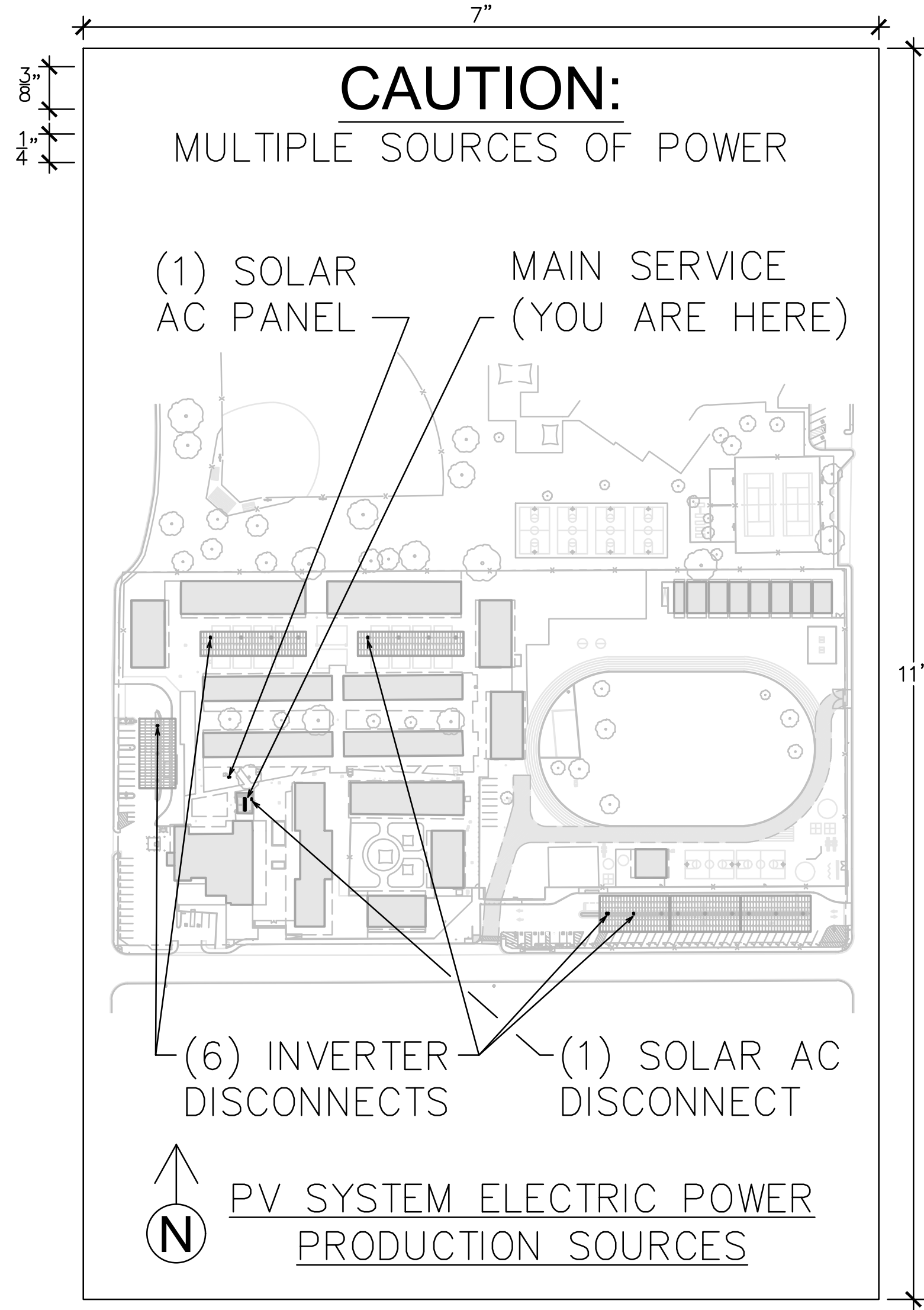
LABEL - 5
SCALE: NONE

LOCATION:	AC DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



LABEL - 6
SCALE: NONE

LOCATION:	MAIN SERVICE DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

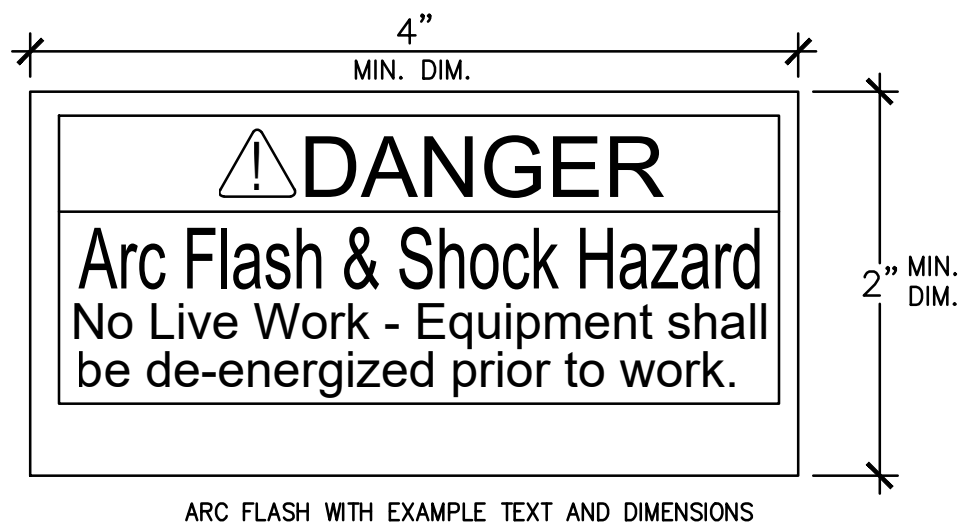


LABEL - 7
SCALE: NONE

WARNING LABELS & MARKING NOTES:

- MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DIRECT-CURRENT (DC) CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS.
- THE MATERIALS USED FOR MARKING SHALL COMPLY WITH CEC 110.21(B), WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT. MARKING AS REQUIRED IN SECTIONS 690 & 705 SHALL HAVE ALL LETTERS CAPITAL SIZED WITH A MINIMUM HEIGHT OF 3/8 INCH (9.5 MM) WHITE ON RED BACKGROUND OR AS NOTED.
- THE MARKING SHALL CONTAIN THE WORDS "WARNING: PHOTOVOLTAIC POWER SOURCE."
- THE MARKING SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.
- MARKING SHALL BE PLACED ON INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES EVERY 10 FEET (3048 MM), WITHIN 1 FOOT (305 MM) OF TURNS OR BENDS AND WITHIN 1 FOOT (305 MM) ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS.

LOCATION:	MAIN SERVICE DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	1 SIGN AT (E) SERVICE METER. PLACE ADDITIONAL SIGN AT SOLAR AC SYSTEM DISCONNECT WHERE NOT LOCATED WITHIN 25' & IN VIEW OF (E) SERVICE METER.



LABEL - 8
SCALE: NONE

LOCATION:	INVERTER DISCONNECTS, AC DISCONNECT, PANEL
BACKGROUND	WHITE, RED OR YELLOW
LETTERING	BLACK AND/OR RED
NOTES:	

SYSTEM HOST



SYSTEM DEVELOPER



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PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

PV SYSTEM TYPICAL
ELECTRICAL
WARNING LABELS

SHEET NO.:

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)(2) for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)(6), 180.1(a) and 180.2(b)(4B) for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 1 of 7)

Project Address: 815 Potomac Ave

Date Prepared: 5/2/2024

A. GENERAL INFORMATION

01 Project Location (city)

Bakersfield

04 Total Illuminated Hardscape Area (ft²)

15536

02 Climate Zone

13

03 Outdoor Lighting Zone per Title 24 Part 1.10.114 or as designated by Authority Having Jurisdiction (AHJ):

☐ LZ-0: Very Low - Undeveloped Parkland

☐ LZ-2: Moderate - Urban Clusters

☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval

☐ LZ-1: Low - Rural Areas

☒ LZ-3: Moderately High - Urban Areas

05 Occupancy Types within Project

01 Other Occupancies

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)(6) or 141.0(b)(2) / 180.2(b)(4B) for alterations.

My Project Consists of:

01

☒ New Lighting System

Must Comply with Allowances from 140.7 / 170.2(e)(6)

02

☐ Altered Lighting System

Is your alteration increasing the connected lighting load (Watts)?

☒ Yes

☐ No

03

04

05

% of Existing Luminaires Being Altered¹

Sum Total of Luminaires Being Added or Altered

Calculation Method

☐ < 10%

☐ >= 10% and < 50%

☐ >= 50%

Please proceed to Table F: Outdoor Lighting Fixture Schedule to define the project's luminaires.

¹ FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 4 of 7)

Project Address:

Date Prepared: 5/2/2024

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.

Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01

02

03

04

05

Area Description

Shut-Off 130.2(c)(1) / 160.5(c)

Auto-Schedule 130.2(c)(2) / 160.5(c)

Motion Sensor 130.2(c)(3) / 160.5(c)

Field Inspector

Exterior Lights

Astronomical Timer

Provided

Provided

☐

☐

¹ FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.

² Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.

³ Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 7 of 7)

Project Address: 815 Potomac Ave

Date Prepared: 5/2/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:

Richard J. Hardin

Documentation Author Signature:

Signature Date: 2024-05-02

Company:

Hardin-Davidson Engineering

Address:

356 Pollasky Ave

City/State/Zip:

Clovis CA 93612

Address:

356 Pollasky Ave, Suite 200

City/State/Zip:

Clovis CA 93612

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:

Richard J. Hardin

Responsible Designer Signature:

Date Signed: 2024-05-02

Company:

Hardin Davidson Engineering

Address:

356 Pollasky Ave, Suite 200

City/State/Zip:

Clovis CA 93612

License:

E9125

Phone:

559.323.4995

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 2 of 7)

Date Prepared: 5/2/2024

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)(6) or 141.0(b)(2) / 180.2(b)(4B)

01

02

03

04

05

06

07

08

09

General Hardscape Allowance 140.7(d)(1) / 170.2(e)(6) (See Table I)

+

Per Application 140.7(d)(2) / 170.2(e)(6) (See Table J)

+

Sales Frontage 140.7(d)(2) / 170.2(e)(6) (See Table K)

+

Ornamental 140.7(d)(2) / 170.2(e)(6) (See Table L)

+

Per Specific Area 140.7(d)(2) / 170.2(e)(6) (See Table M)

OR

Existing Power Allowance 141.0(b)(2) / 180.2(b)(4B) (See Table N)

=

Total Allowed (Watts)

≥

Total Actual (Watts)

07 must be >= 08

576

+

+

+

+

OR

=

576

≥

232

COMPLIES

Shielding Compliance (See Table G for Details)

N/A

Controls Compliance (See Table H for Details)

COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 5 of 7)

Date Prepared: 5/2/2024

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/ Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B/ Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

01

☒ General Hardscape Allowance Table I (below)

☐ Per Application Table J

☐ Sales Frontage Table K

☐ Ornamental Table L

☐ Per Specific Area Table M

02

03

04

05

06

07

08

09

Area Description

Illuminated Area (ft²)

Allowed Density (W/ft²)

Area Allowance (Watts)

Perimeter Length (ft)

Allowed Density (W/ft)

Linear Allowance (Watts)

Total General AWA + LWA (Watts)

Solar Canopies

15536

0.021

326.3

0

0.2

0

326

Initial Wattage Allowance for Entire Site (Watts):

250

Instances of Initial Wattage Allowance (LZ 0 only)¹

Total General Hardscape Allowance (Watts):

576

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 3 of 7)

Date Prepared: 5/2/2024

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)(6) all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)(2) only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01

02

03

04

05

06

07

08

09

10

Name or Item Tag

Complete Luminaire Description

Watts per luminaire^{1, 2}

How is Wattage determined

Total Number Luminaires²

Luminaire Status³

Excluded per 140.7(a) / 170.2(e)(6A)

Design Watts

Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)(1)⁴

Field Inspector

Pass

Fail

A

29W LED

☐ Linear

29

Mfr. Spec

8

New

☐

232

NA: < 6200 lumens

☐

☐

Total Design Watts:

232

¹ NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
Ex: Luminaire is lighting a statue. EXCEPTION 2 to 130.2(b)
² FOOTNOTES: Authority Having Jurisdiction may ask for luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)
³ For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
⁴ Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
⁵ Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b) / 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

STATE OF CALIFORNIA

Outdoor Lighting

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE

NRCC-LTO-E

Project Name: Bakersfield City Shool District - Bessie Owens Elementary School

Report Page: (Page 6 of 7)

Date Prepared: 5/2/2024

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title

NRCC-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

Form/Title

Systems/Spaces To Be Field Verified

NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 200 luminaires.

Exterior Lights;

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Compliance ID: EnergyPro-7514-0524-0737

Schema Version: rev 20220101

Report Generated: 2024-05-02 09:16:36

SYSTEM HOST



SYSTEM DEVELOPER



100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083

ELECTRICAL CONSTRUCTORS AND ENGINEERS



1902 Channel Drive
West Sacramento, CA 95691
916-567-1100

STRUCTURAL ENGINEERING



3131 CAMINO DEL RIO NORTH, SUITE 1080
SAN DIEGO, CA 92108
619.521.8500

ARCHITECT OF RECORD

M M P V d e s i g n

Mariana Moncada, Architect
718 West Arbor Drive
San Diego, CA 92103
619.632.2883

ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.05.25

PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

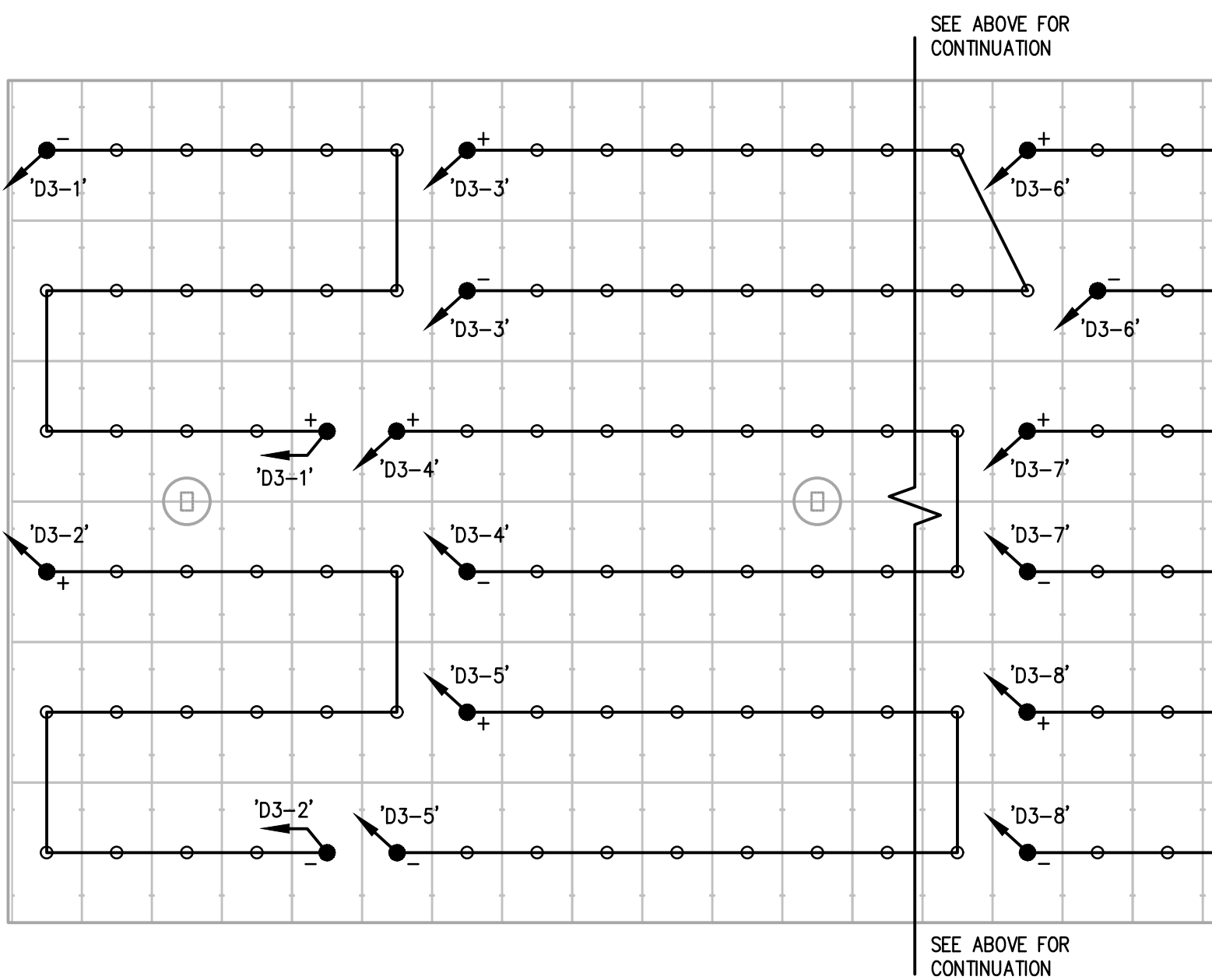
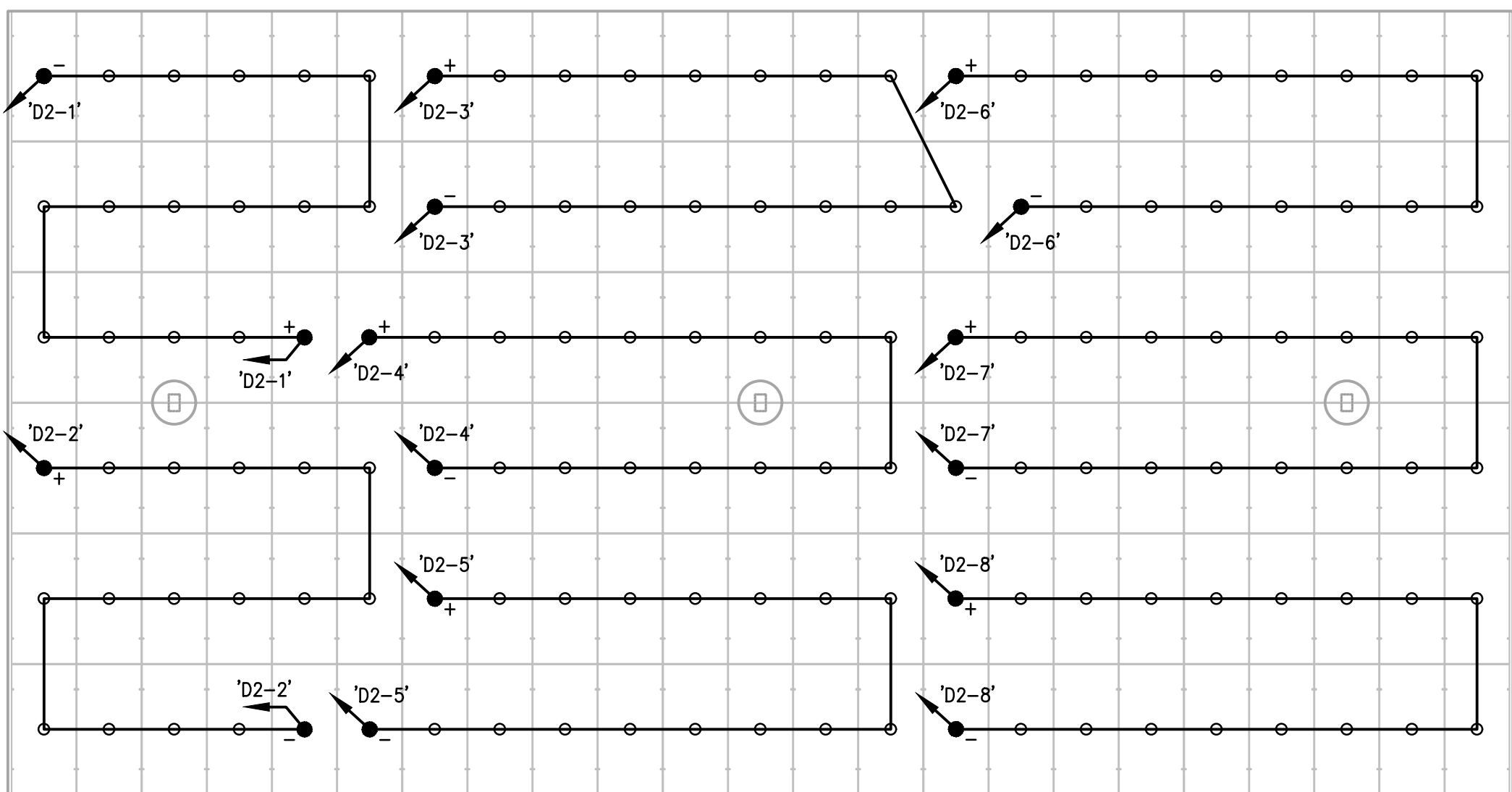
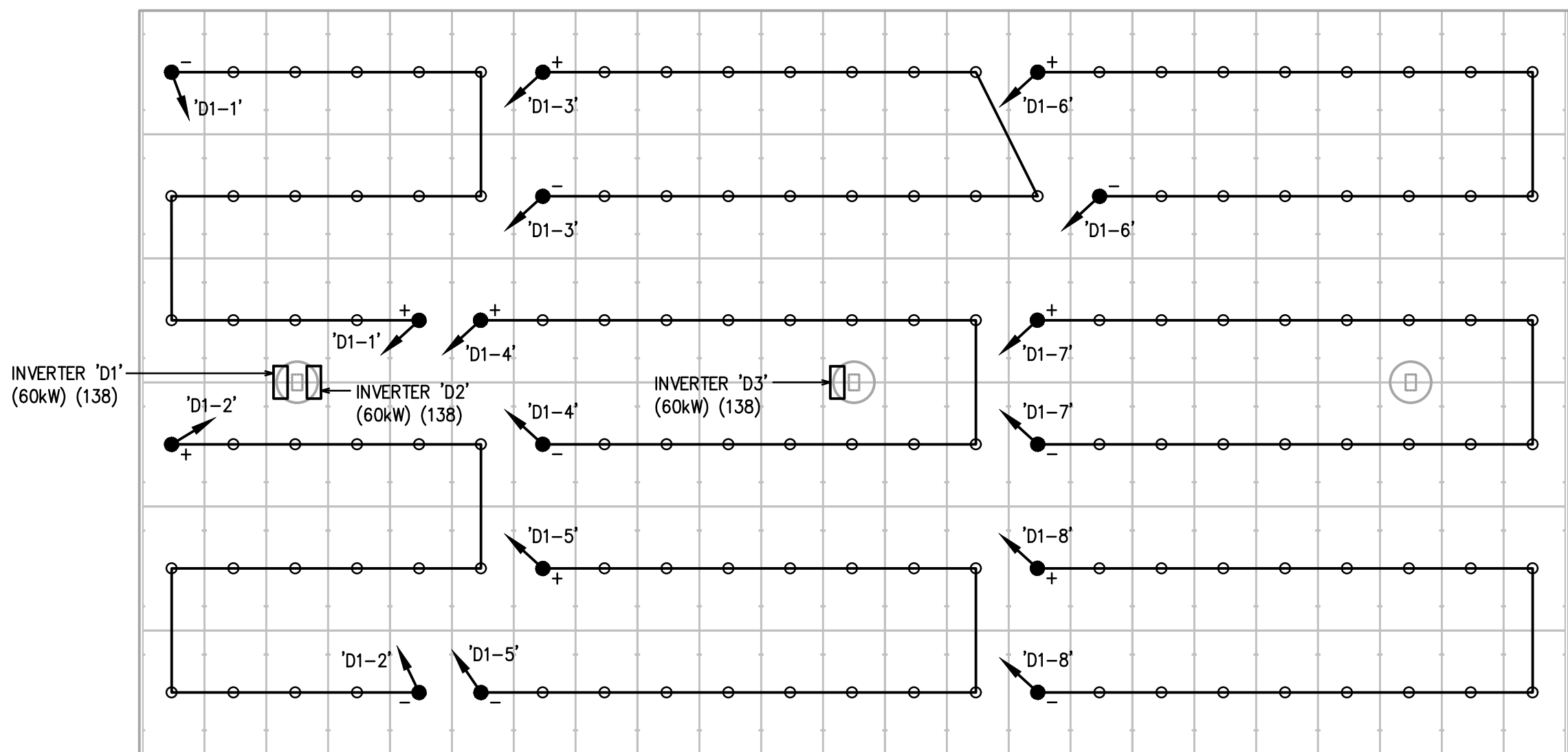
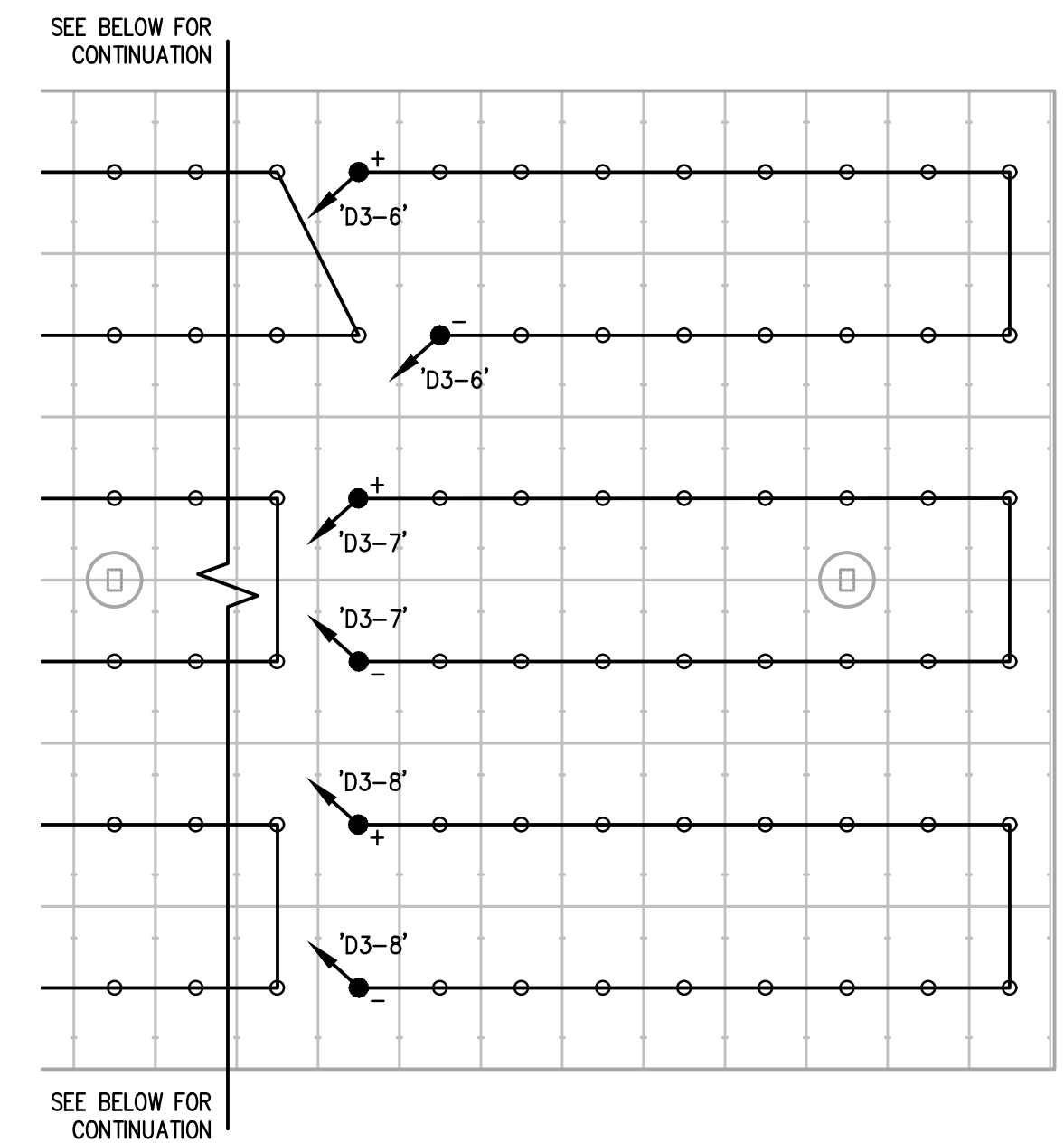
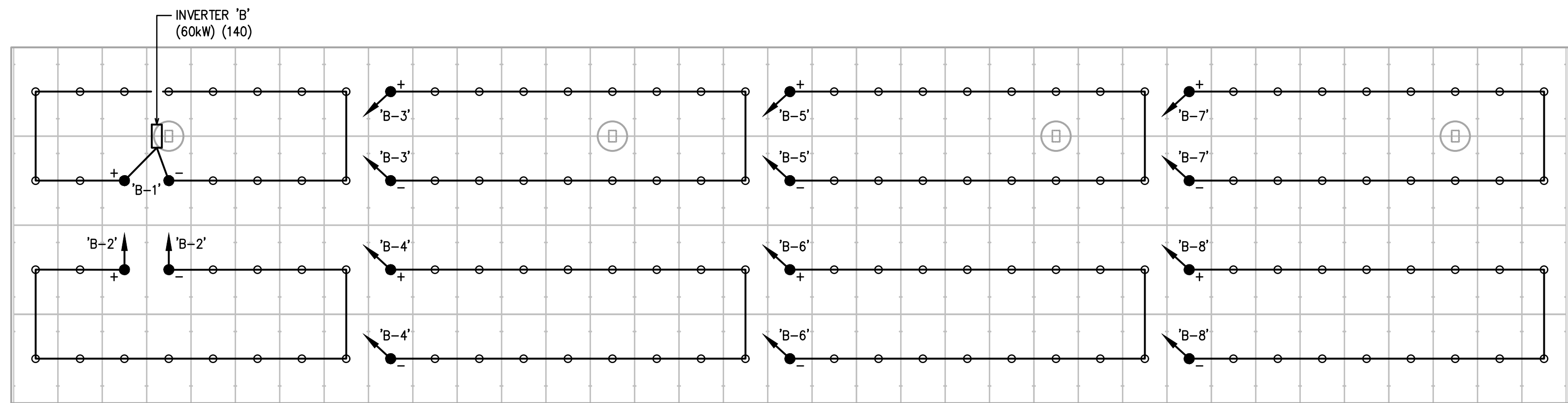
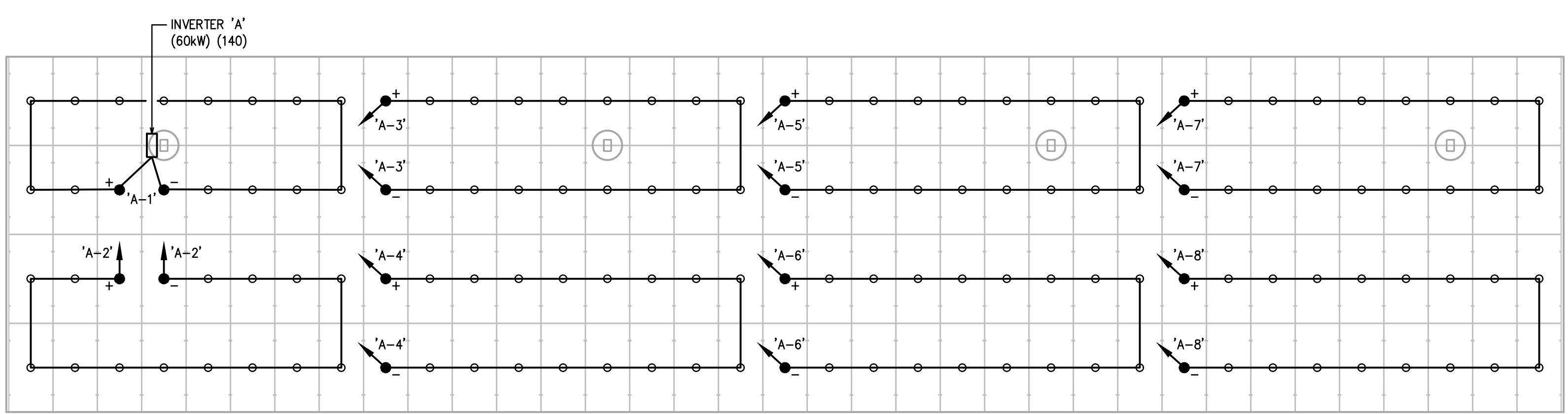
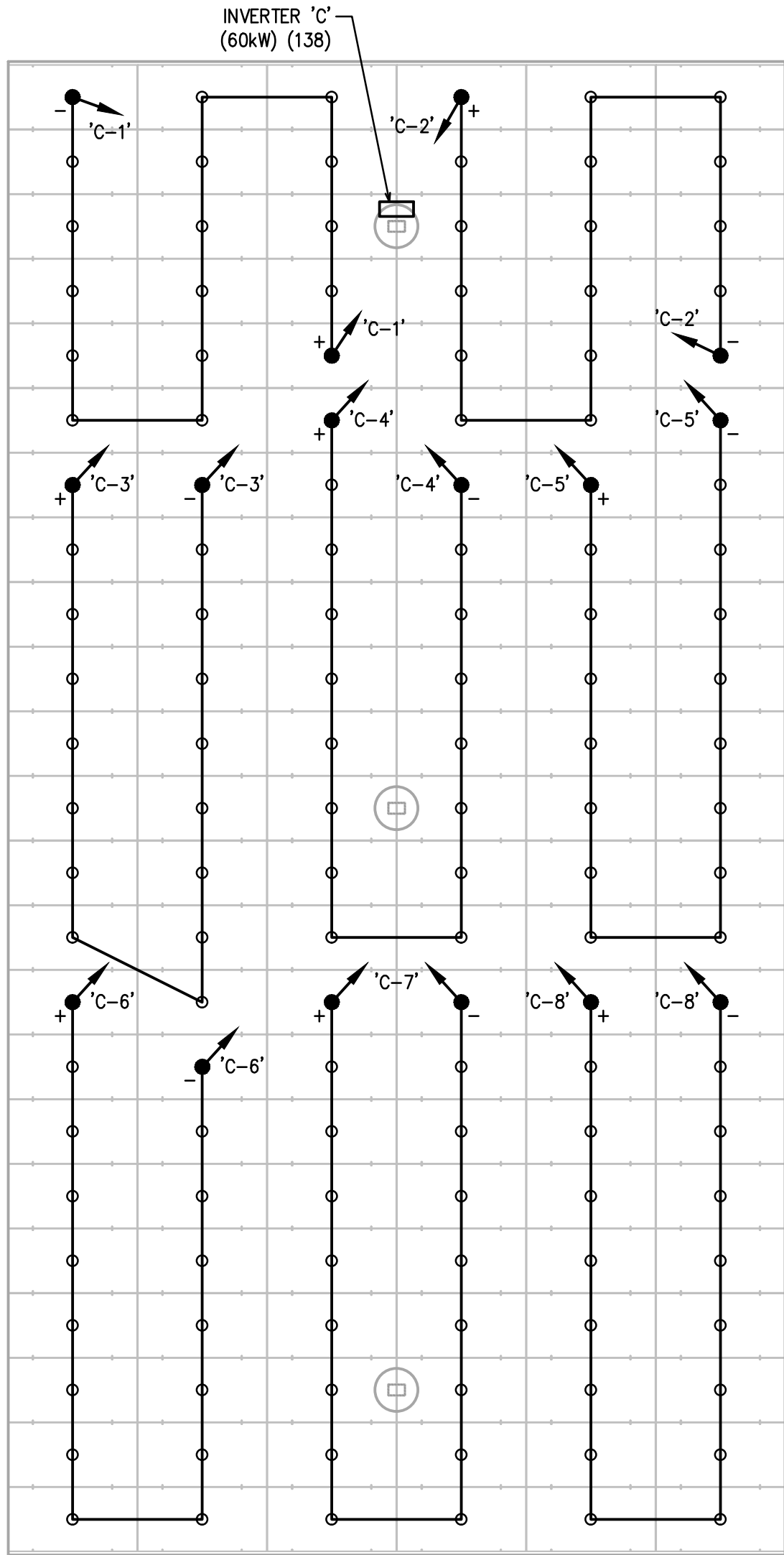
FFP PROJECT #
CA-19-0206

SHEET TITLE

OUTDOOR LIGHTING
T24 COMPLIANCE
REPORT

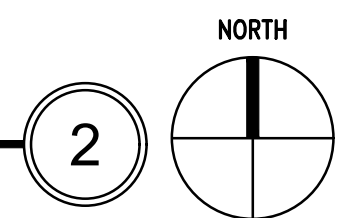
SHEET NO.:

E7.0



PV SYSTEM ARRAY STRING CABLING PLAN

SCALE: 1/8"=1'-0"



SYSTEM HOST



SYSTEM DEVELOPER



ELECTRICAL CONSTRUCTORS AND ENGINEERS



STRUCTURAL ENGINEERING



3131 CAMINO DEL RIO NORTH, SUITE 1080
SAN DIEGO, CA 92108
619.521.8500

ARCHITECT OF RECORD

M M P V d e s i g n

Mariana Moncada, Architect
718 West Arbor Drive
San Diego, CA 92103
619.632.2883

ARCHITECT / ENGINEER OF RECORD



NO. REVISION DATE

DATE: 03.05.25

PROJECT

BAKERSFIELD CITY
SCHOOL DISTRICT
Bessie Owens

815 Potomac Ave
Bakersfield, CA 93307

FFP PROJECT #
CA-19-0206

SHEET TITLE

PV SYSTEM ARRAY
ELECTRICAL STRING
CABLING PLAN

SHEET NO.:

E8.0

PROJECT NOTES

- REFER TO DC PC # 04-121993 FOR SHEET REFERENCES, GENERAL STRUCTURAL DESIGN, AND INFORMATION NOT NOTED HEREIN.
- REFERENCES TO 'PC DWGS' REFER TO DSA PC.
- REFERENCES TO 'SS DWGS' REFER TO THIS SITE-SPECIFIC SET OF DRAWINGS.
- FOR GENERAL PLAN, SECTION, AND ELEVATION VIEWS REFER TO PC DRAWINGS.
- ALL DIMENSIONS ON PLAN VIEWS ARE PROJECTED FLAT; STEEL SHALL BE ORDERED FABRICATED AND INSTALLED BASED ON SLOPED DIMENSION AND NOT THE FLAT DIMENSIONS.
- FOUNDATION DESIGN BASED ON THE FOLLOWING SOILS REPORT:

COMPANY: Geo-Engineering Solutions, Inc.
DATE: June 30, 2023
JOB NUMBER: 144-1510

DRILLED PIER FOUNDATIONS ARE DESIGNED BASED ON THE GEOTECHNICAL DESIGN PARAMETERS GIVEN IN THE REPORT NAMED ABOVE:

IGNORED DEPTH FOR LATERAL BEARING AND SKIN FRICTION = 1'-0"
ALLOWABLE SKIN FRICTION = 285 PSF
ALLOWABLE UPLIFT SKIN FRICTION = 143 PSF
ALLOWABLE LATERAL BEARING PRESSURE = 600 PSF/FT

- FOUNDATION DESIGN MAY UTILIZE SOIL CLASS YPER SCHEDULE ON SHEET S101 (PC DWGS).
- FOUNDATION CONCRETE SHALL BE PER CONCRETE GENERAL STRUCTURAL NOTES ON PC DRAWING SHEET S101.
- FOR TYPICAL CONDUIT ROUTING, REFER TO SHEET S602 (PC DWGS) OR ELECTRICAL DRAWINGS.
- FOR TYPICAL CONDUIT MOUNTING TO STRUCTURE, REFER TO SHEET S600 (PC DWGS) OR ELECTRICAL DRAWINGS.
- ATTACH PV PANELS TO STRUCTURE PER SHEET S501 (PC DWGS).
- MAINTAIN A MINIMUM CLEARANCE BETWEEN FINISHED GRADE AND BOTTOM OF STEEL BEAM ON LOW SIDE AS NOTED IN SS DWGS AND ARCHITECTURAL SHEETS.
- REFER TO THE PROJECT SPECIFIC DSA-103 FORM FOR SPECIAL INSPECTION.

SEISMIC CRITERIA:

SITE CLASSIFICATION = D
OCCUPANCY CATEGORY = II
SEISMIC DESIGN CATEGORY = D
IMPORTANCE FACTOR = 1.0

SEISMIC ANALYSIS: ASCE 7-16 CHAPTER 12

$S_D = 0.936$
 $S_1 = 0.338$
 $S_{D1} = 0.702$
 $S_{D1} = 0.663$

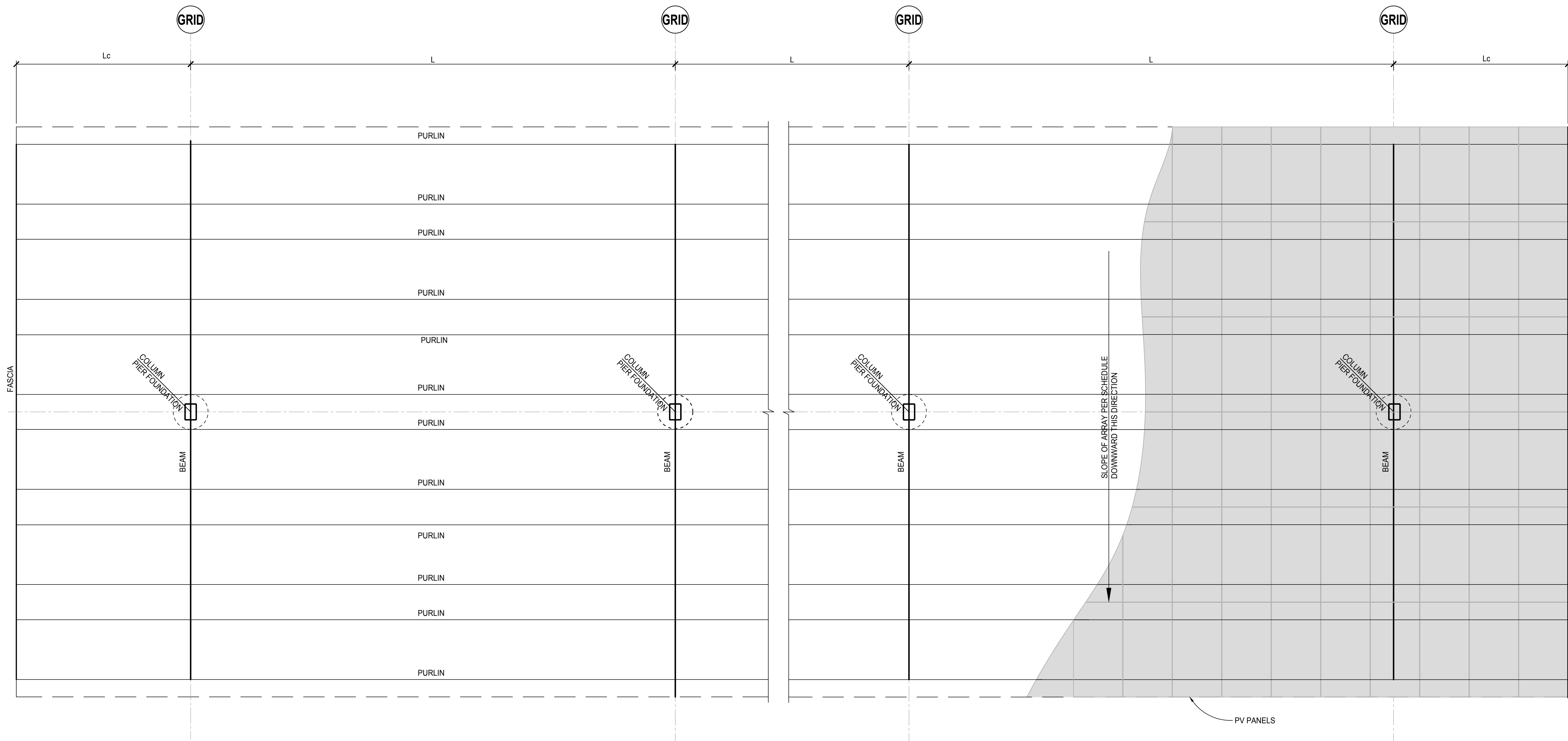
NON-BUILDING STRUCTURE TYPE = SFRS = ORDINARY CANTILEVER COLUMN
RESPONSE MODIFICATION COEFFICIENT = R = 1.25
SYSTEM OVERSTRENGTH FACTOR = $\Omega = 1.25$
REDUNDANCY FACTOR = $\rho = 1.3$
DEFLECTION AMPLIFICATION FACTOR = $C_d = 1.25$
SEISMIC DESIGN COEFFICIENT = $C_s = 0.562$
SEISMIC BASE SHEAR = $V_s = 0.562W$

WIND ANALYSIS: DIRECTIONAL PROCEDURE PER ASCE 7, CHAPTER 27

BASIC WIND SPEED = 94 MPH
IMPORTANCE FACTOR = $I_w = 1.0$
WIND EXPOSURE = C
OCCUPANCY CATEGORY = II
GUST EFFECT FACTOR = $G = 0.85$
ENCLOSURE CATEGORY = OPEN
COMPONENTS & CLADDING (CO)
DESIGN WIND PRESSURES (ASD) = 20 (DOWN)/21.21 PSF (UP)

PANEL INFORMATION:

PANEL TYPE = JAM72D30 550/MB
PANEL LENGTH = 89.7"
PANEL GAP = 1/2"

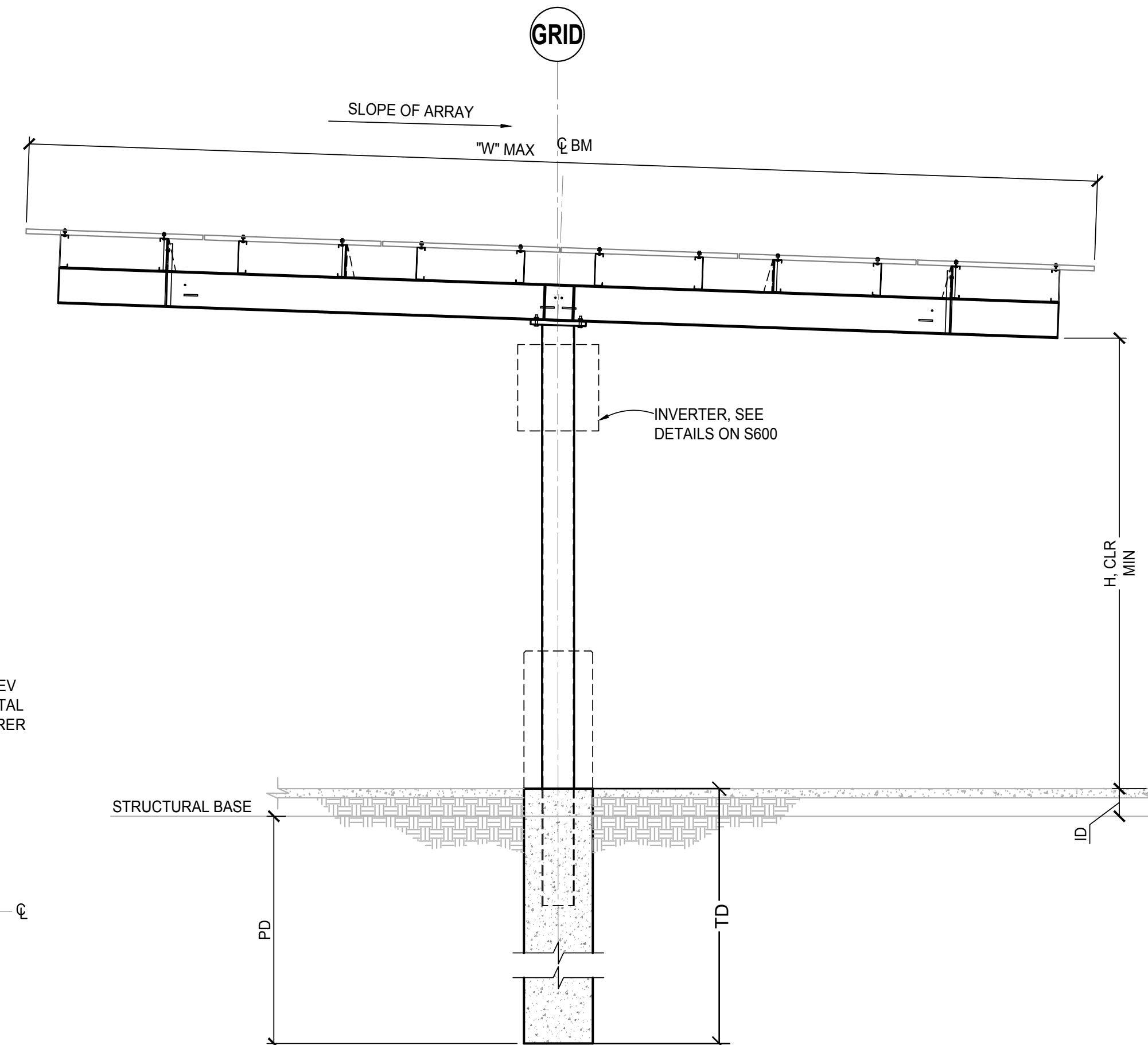


NOTE:
THE PLAN ABOVE IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FOR DETAILED PLAN SHEETS SEE THE PC DRAWINGS PER PROJECT NOTE 4.

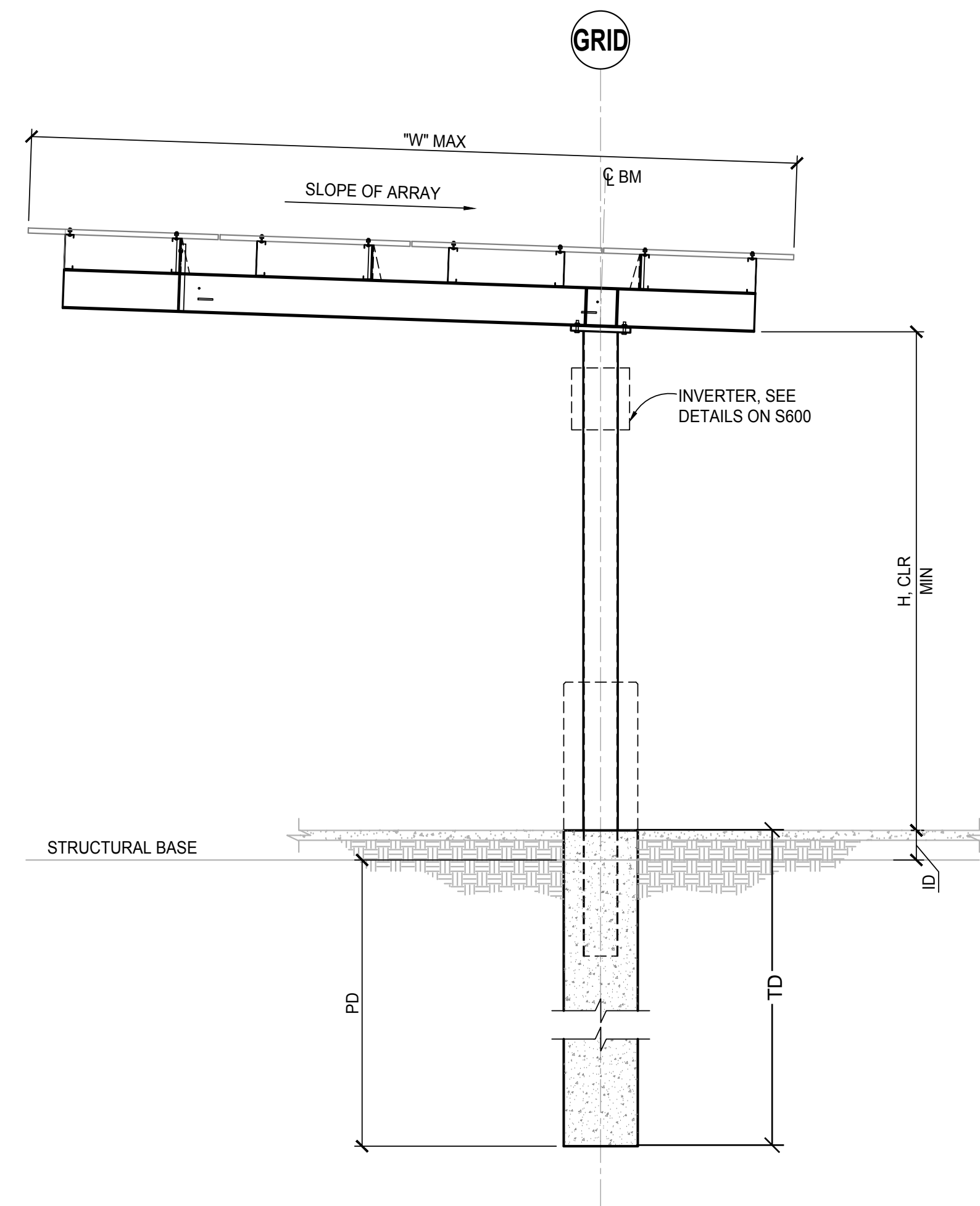
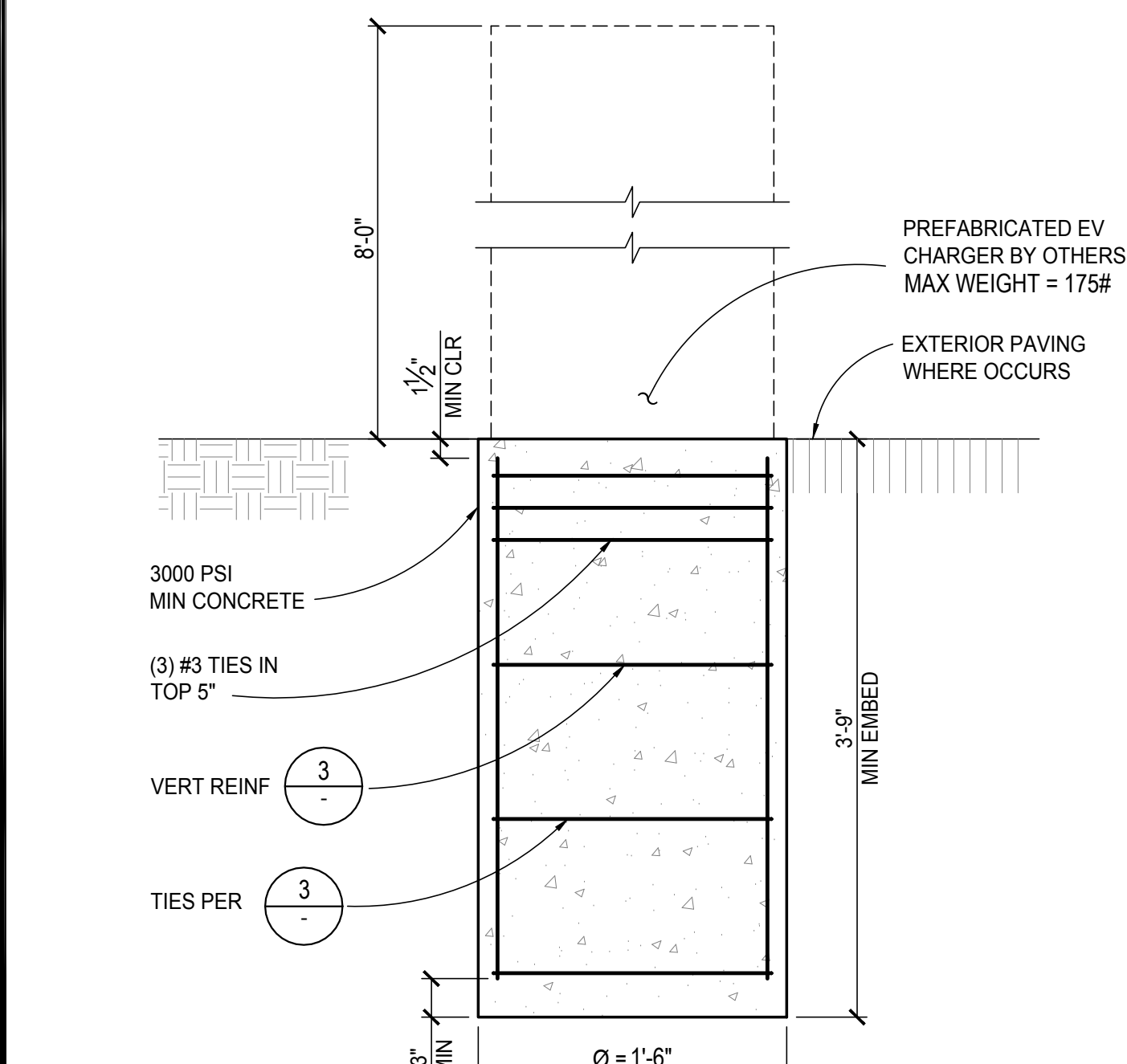
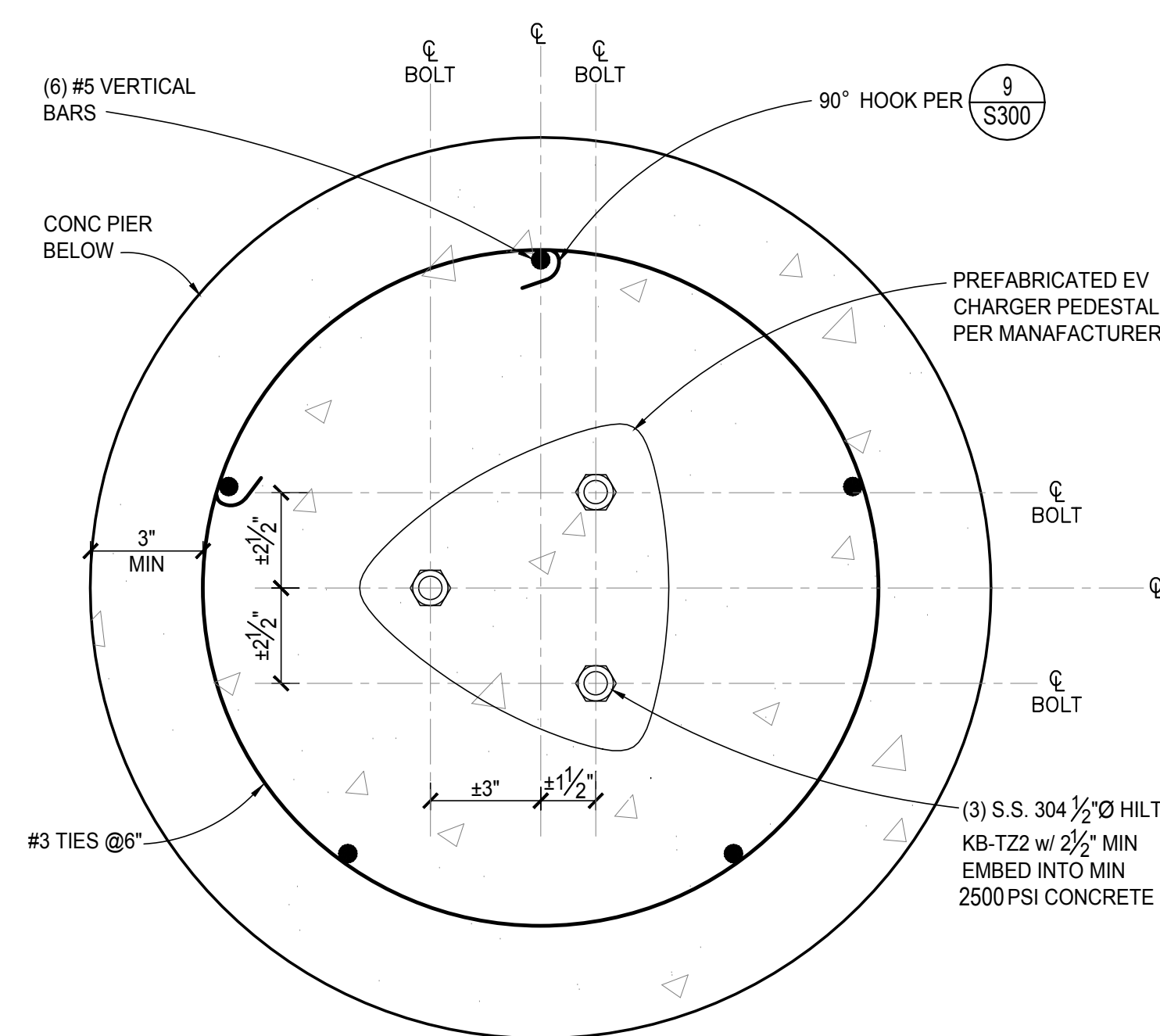
1 TYPICAL FRAMING PLAN
SCALE: 1/4"=1'-0"

CANOPY SCHEDULE												
ARRAY	ARRAY SIZE	PC ID#	# OF COLUMN	BASE CONNECTION	TILT	L, SPAN MAX	L, CANT MAX	W, MAX	H, CLR	MIN PIER DEPTH 'PD'	ID*	TOTAL PIER DEPTH 'TD'
A, B	4x35	L4D-AT-1.0	4	ABOVE GRADE	5°	37'-6"	10'-11"	30'-0 1/2"	11'-0"	10'-6"	1'-0"	11'-6"
C, D1	6x23	T6-BT-1.0	3	ABOVE GRADE	7°	33'-9"	9'-4 1/4"	45'-0 3/4"	13'-6"	12'-9"	1'-0"	13'-9"

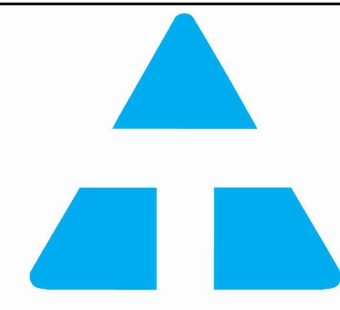
* 'ID' ONLY APPLIES WHEN FOUNDATIONS ARE IN LANDSCAPE OR UNPAVED AREAS



NOTE:
THESE SECTION ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FOR DETAILED PLAN SHEETS SEE THE PC DRAWINGS PER PROJECT NOTE 4.

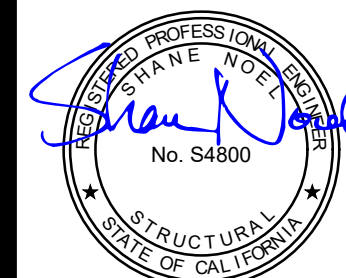
2 TYPICAL SECTION - T CANOPIES
SCALE: 1/4"=1'-0"3 TYPICAL SECTION - L CANOPIES
SCALE: 1/4"=1'-0"2 CHARGER ELEVATION
SCALE: 1"=1'-0"3 ANCHORAGE DETAIL
SCALE: 3"=1'-0"

100 Montgomery Street #725
San Francisco, CA 94104
855-204-5083



10620 TREENA STREET SUITE 140
SAN DIEGO, CA 92131

SEAL & SIGNATURE



KPFF PRJ
NO. 2400203

kpff

PROJECT NAME:
BCSD SOLAR
BESSIE OWENS ES

CHECKED BY:
JV

DRAWN BY:
DD

REVISION DESCRIPTION
90P

DATE:
2/11/2025

NO.
1

REVISION DESCRIPTION
100P DSA SUBMISSION

DATE:
03/09/2025

NO.
2

SITE SPECIFIC NOTES,
PLAN & SECTION

SHEET NO.

S000

S_{DS}=1.5 (MAX), WIND SPEED 98 MPH, EXPOSURE C, ROOF SNOW LOAD=0PSF (NOT ALLOWED)

TEICHERT DSA-PC PV STRUCTURE SYSTEM

	SHEET	DESCRIPTION
<input checked="" type="checkbox"/>	S100	TITLE SHEET
<input checked="" type="checkbox"/>	S101	GENERAL STRUCTURAL NOTES
<input checked="" type="checkbox"/>	S102	GENERAL STRUCTURAL NOTES
<input checked="" type="checkbox"/>	S103	TESTING AND INSPECTION FORM
<input checked="" type="checkbox"/>	S200	6 PANEL T-STRUCTURE FRAMING PLAN AND SCHEDULE
<input type="checkbox"/>	S200A	5 PANEL T-STRUCTURE FRAMING PLAN
<input checked="" type="checkbox"/>	S201	6 AND 5 PANEL T-STRUCTURE SECTIONS
<input checked="" type="checkbox"/>	S202	4 PANEL L-STRUCTURE FRAMING PLAN AND SCHEDULE
<input checked="" type="checkbox"/>	S203	4 PANEL L-STRUCTURE SECTION
<input type="checkbox"/>	S204	3 PANEL L-STRUCTURE FRAMING PLAN AND SCHEDULE
<input type="checkbox"/>	S205	3 PANEL L-STRUCTURE SECTION
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<input checked="" type="checkbox"/>	S400	STEEL DETAILS
<input checked="" type="checkbox"/>	S501	COLD-FORMED DETAILS
<input checked="" type="checkbox"/>	S502	PURLIN BRACING DETAILS
<input checked="" type="checkbox"/>	S600	EQUIPMENT ANCHORAGE AND BARRICADE DETAILS
<input type="checkbox"/>	S601	MISC AND FENCE DETAILS
<input checked="" type="checkbox"/>	S602	CONDUITS ROUTING & BOLLARDS
TOTAL SHEET COUNT:		14

NOTES:

- PC APPLICANT TO DENOTE WHICH OPTIONAL SHEETS TO INCLUDE IN THE SITE-SPECIFIC PROJECT BY PLACING A MARK IN THE CHECK BOX NEXT TO THE APPROPRIATE SHEETS

SCOPE OF WORK

THE SCOPE OF WORK INCLUDES THE INSTALLATION OF NEW SOLAR PHOTOVOLTAIC CARPORTS, (INCLUDING STRUCTURAL STEEL FRAMING, CONCRETE FOUNDATIONS, AND COLD-FORMED PURLINS), AS WELL AS A FENCED INVERTER EQUIPMENT PAD (INCLUDING INVERTER PAD, FENCING, BOLLARDS, AND EQUIPMENT MOUNTING DETAILS).

PROJECT DIRECTORY

STRUCTURAL ENGINEER
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SAN DIEGO, CA 92108
PHONE: (619) 521-8500

VENдор
TEICHERT SOLAR
3500 AMERICAN RIVER DR
SACRAMENTO, CA 95864
T 916 484 3011

PRINCIPAL: SHANE NOEL, SE
PROJECT MANAGER: JAMES MALLARD, PE

NOTES TO PLAN REVIEWER AND DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE:

- THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE IS RESPONSIBLE FOR SELECTING AND UTILIZING THE CORRECT MEMBER SHEETS FOR THE SITE-SPECIFIC CONDITION SUCH THAT THE SITE-SPECIFIC S_s AND S1 ARE LESS THAN THOSE NOTED IN THE DESIGN PARAMETER CHECKLIST.
- THE SEISMIC FORCE-RESISTING SYSTEM HAS BEEN DESIGNED TO TWO SEISMIC CRITERIA, BASED ON THE PARAMETERS IN THE DESIGN PARAMETER CHECKLIST. THIS PC MAY BE USED IN ANY LOCATION WHERE "Cs", CALCULATED USING R = 1.25, DOES NOT EXCEED UPPER LIMIT Cs= 1.20. THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE IS RESPONSIBLE FOR ENSURING THAT THE SITE-SPECIFIC "Cs" VALUE, CALCULATED APPROPRIATELY, IS LESS THAN OR EQUAL TO Cs = 1.20.
- THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE IS RESPONSIBLE FOR VERIFYING SITE-SPECIFIC WIND PARAMETERS AT ANY AND ALL SITES WHERE THIS PC IS USED. WIND PRESSURES BASED ON SITE-SPECIFIC PARAMETERS SHALL BE LESS THAN OR EQUAL TO WIND PRESSURES CALCULATED FROM THE PARAMETERS GIVEN IN THE DESIGN PARAMETER CHECKLIST.
- SITE SPECIFIC PLANS TO SHOW SITE SPECIFIC SOLAR PANEL LAYOUT.
- SITE SPECIFIC SOLAR PANEL LAYOUT SHALL SPECIFY THE MAXIMUM DIMENSION TO THE OUTSIDE EDGES OF SOLAR PANELS OR STRUCTURAL STEEL -WHICHEVER IS GREATER. THIS DIMENSION SHALL BE LESS THAN THE MAXIMUM ALLOWABLE DIMENSION OF THE STRUCTURE SHOWN ON THE PC PLANS (OR SCHEDULES).
- A SITE SPECIFIC GEOTECHNICAL REPORT SHALL BE SUBMITTED JUSTIFYING THE SOILS VALUES SELECTED. A SITE SPECIFIC GEOTECHNICAL IS REQUIRED TO USE THIS PC.
- SITE SPECIFIC DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE TO SELECT SOIL CLASS FOR SITE SPECIFIC NOTES.
- THE RESPONSIBILITY OF REVIEW AND APPROVAL OF ALL PROJECT-RELATED SUBMITTALS LIES WITH THE SITE-SPECIFIC STRUCTURAL ENGINEER OF RECORD (SEOR.) KPFF WILL NOT BE REQUIRED TO SIGN DSA FORMS OR REVIEW SUBMITTALS FOR SITE-SPECIFIC PROJECTS UNLESS ACTING AS THE SITE-SPECIFIC SEOR.
- WHEN SITE SPECIFIED PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED BY THE GEOTECHNICAL ENGINEER OF RECORD IS REQUIRED TO VALIDATE THAT THE ALLOWABLE SOIL VALUES SPECIFIED IN THIS PC ARE STILL APPLICABLE. LOCATION OF ELECTRICAL ELEMENTS SHALL CONFORM TO ASCE 24, SECTION 7.2 PER DSA PR 14-01 SECTION 1.2.1.
- INTENDED USE AND OCCUPANCY, OCCUPANT LOAD FACTOR AND RISK CATEGORY SHALL BE NOTED ON THE SITE-SPECIFIC PLANS.
- WET STAMPED & SIGNED COPIES OF PC PLANS ARE NOT REQUIRED FOR SITE SPECIFIC PC USE.

BUILDING DATA

- CLASSIFICATION OF CONSTRUCTION IS TYPE IIB.
- OCCUPANCY CLASSIFICATION:
 - U:
MAX. AREA = 3,000 FT²
 - A-2:
MAX. AREA = 9,500 FT²
 - E:
MAX. AREA = 14,500 FT²
 - S-2:
MAX. AREA = UNLIMITED
- RISK CATEGORY IS II
- THE STRUCTURE IS A SINGLE-STORY OPEN CARPORT STRUCTURE.
- FOR GENERAL STRUCTURAL NOTES SEE SHEETS S100.

CODES AND STANDARDS

ALL WORK SHALL CONFORM TO:

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2021 INTERNATIONAL BUILDING CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2020 NATIONAL ELECTRIC CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
(2021 UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2021 UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
- 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.
(2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R.
- 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- ASCE 7-16 (SUPPLEMENT 3)
- FOR A LIST OF APPLICABLE STANDARDS INCLUDING CALIFORNIA AMENDMENT TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80

PV PANEL NOTES:

- SOLAR PANELS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL1703 OR WITH BOTH UL 61730-1 AND UL 61730-2 PER CBC SECTION 1511.9 FOR THE PANEL ORIENTATIONS SHOWN ON PC PLANS.
- THE LOAD RATINGS FOR THE SOLAR PANELS SELECTED BY THE CONTRACTOR MUST MEET OR EXCEED THE ACTUAL DESIGN WIND PRESSURES SHOWN BELOW. ONLY 4 POINTS OF CONNECTION ON THE SOLAR PANEL ARE ALLOWED TO MEET THE LOAD RATING.
MINIMUM DOWNWARD WIND LOAD [ASD]: 24.3 PSF (BASED ON MINIMUM PANEL SIZE PER NOTE 4)
MINIMUM UPWARD WIND LOAD [ASD]: 26.3 PSF (BASED ON MINIMUM PANEL SIZE PER NOTE 4)
- THE OWNER'S SITE PROFESSIONAL SHALL PROVIDE PRODUCT DOCUMENTATION FROM THE SOLAR PANEL SUPPLIER, INCLUDING PANEL DIMENSIONS AND LOAD RATINGS, TO THE PC DESIGN PROFESSIONAL FOR REVIEW PRIOR TO SUBMITTAL TO DSA FOR PLAN REVIEW. DOCUMENTATION SHALL IDENTIFY PANEL LOAD RATING AS ALLOWABLE OR STRENGTH LEVEL AND SPECIFY WHETHER THE LOADS LISTED ARE DESIGN OR TEST VALUES FROM THE UL 1703 TESTS. UPON ACCEPTANCE, THE PC DESIGN PROFESSIONAL SHALL PROVIDE A STATEMENT TO OWNER'S SITE PROFESSIONAL THAT THE SOLAR PANELS ARE IN COMPLIANCE WITH THE APPROVED PC PLANS. THE OWNER'S SITE PROFESSIONAL SHALL SUBMIT THE STATEMENT AND PANEL DOCUMENTATION TO DSA WITH THE PLAN REVIEW PACKAGE.
- MINIMUM PV PANEL AREA: 78'13" x 39" (21.16 SQUARE FEET)
MAXIMUM PV PANEL SIZE: 98" LONG x 46" WIDE
☒ ACTUAL PANEL SIZE: 89.7" x 44.6"
- ALL SOLAR PANELS MUST BE INSTALLED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL. PROPERLY TRAINED PERSONNEL SHALL BE:
 - FAMILIAR WITH THE DIFFERENCE BETWEEN A DRILL GUN AND AN IMPACT GUN
 - FAMILIAR WITH HOW TO MEASURE THE TORQUE ON THE INSTALLED BOLT
 - TRAINED IN INSTALLATION OF STRUCTURAL STEEL BOLTING.
- SPECIAL INSPECTION AND TORQUE TESTING OF PRETENSIONED PANEL FASTENER INSTALLATION SHALL BE PERFORMED BY A QUALIFIED REPRESENTATIVE OF THE LABORATORY OF RECORD (LOR) IN ACCORDANCE WITH SECTION 2.1.8 OF *IR PC-P PC DESIGN CRITERIA FOR CANTILEVERED COLUMN CANOPY STRUCTURES*.
- SOLAR PANEL ATTACHMENT BOLTS SHALL BE TESTED AND INSPECTED PER DSA IR 17-8.16 FOR HIGH STRENGTH BOLTS OR AS INSTRUCTED IN CURRENT DSA SPECIFICATIONS.
- THE INSTALLATION TORQUE SHALL BE INSPECTED TO BE IN CONFORMANCE WITH $\left(\frac{6}{5501}\right)$ THE FREQUENCY OF INSPECTION SHALL BE CONTINUOUS.
- SOLAR PANELS MUST BE SECURED TO THE STRUCTURE WITH A MINIMUM OF 4 DIRECT BOLTS. ALL 4 BOLTS MUST BE PROPERLY INSTALLED, TORQUED, AND INSPECTED FOR ALL PANELS INSTALLED ON A STRUCTURE BY THE END OF THE WORK DAY. NO PANEL MAY BE LEFT ON THE STRUCTURE WITHOUT ALL 4 BOLTS INSTALLED OR PROPERLY TORQUED.
- CONTRACTOR RESPONSIBLE FOR SOLAR PANEL INSTALLATION AND ATTACHMENT SHALL PROVIDE A SUBMITTAL TO THE SITE SPECIFIC STRUCTURAL ENGINEER OF RECORD FOR THEIR REVIEW CONTAINING: THE PANEL INSTALLATION PROCEDURES, METHOD TO ENSURE ALL PANELS HAVE ALL 4 BOLTS INSTALLED AND PROPERLY TORQUED BEFORE THE END OF EVERY WORK DAY, ALL TOOLS USED TO SECURE THE SOLAR PANEL (INCLUDING BUT NOT LIMITED TO: POWER TOOLS REMS, TOOLS MAX TORQUE ABILITY, METHOD OF ENSURING TORQUE VALUES ARE NOT EXCEEDED, ETC.), AND ALL BOLTS AND HARDWARE USED TO SECURE THE PANEL TO THE STRUCTURE.

DESIGN PARAMETERS CHECKLIST

CODE: 2022 CALIFORNIA BUILDING CODE, REFERRED TO AS "THE CODE"

GOVERNING JURISDICTION: DIVISION OF THE STATE ARCHITECT (DSA)

CONSTRUCTION TYPE: IIB

OCCUPANCY CLASSIFICATION ☐ A-2 ☒ E ☒ S-2 ☐ U

OCCUPANT LOAD FACTOR (CBC TABLE 1004.5):
LOAD FACTOR:.....20 & 200

USE AND OCCUPANCY NOTE:

USE AN OCCUPANCY CLASSIFICATION PER CBC CHAPTER 3, OCCUPANT LOAD FACTOR (OLF) PER CBC TABLE 1004.1.2 AND DETERMINATION OF RISK CATEGORY PER CBC TABLE 1604A.5, TO BE COMPLETED BY DESIGN PROFESSIONAL AT TIME OF OTC OR PROJECT SUBMITTAL.

REGARDLESS OF SIZE, IF A STRUCTURE THAT WOULD OTHERWISE QUALIFY AS RISK CATEGORY II PROVIDES SHELTER FOR EMERGENCY VEHICLES OR EQUIPMENT; OR PROVIDES REQUIRED ACCESS TO, REQUIRED EGRESS FROM OR SHARES LIFE SAFETY COMPONENTS WITH A RISK CATEGORY III OR IV BUILDING, THE MORE RESTRICTIVE RISK CATEGORY MUST BE APPLIED. SEE CBC 1604A.5.1

RISK CATEGORY: II

ROOF DEAD LOADS:
PV PANEL + MISC.....275 PSF MAX.

ROOF LIVE LOADS:
DISTRIBUTED.....12 PSF NON-CONCURRENT w/ PV PANEL DEAD LOAD
POINT LOAD.....300 LBS CONCURRENT w/ PV PANEL DEAD LOAD

NOTE:

NO FUTURE ROOF DECKING OR SHEATHING MAY BE INSTALLED ON THE OPEN GRID FRAMING

WIND ANALYSIS: DIRECTIONAL PROCEDURE PER ASCE 7-16, CHAPTER 27
BASIC WIND SPEED.....V = 98 MPH
WIND EXPOSURE..... = CATEGORY C
GUST EFFECT FACTOR.....G = 0.87
INTERNAL PRESSURE COEFFICIENT.....C_{pi} = ±0
☒ TOPOGRAPHIC FACTOR.....K_{zt} = 1.0
DIRECTIONALITY FACTOR.....K_d = 0.85
WIND FLOW: CLEAR AND OBSTRUCTED

SEISMIC CRITERIA:

SITE CLASS..... ☐ A ☐ B ☐ C ☒ D ☐ E*
* LIQUEFIABLE SOIL AND/OR SITE CLASS F ARE NOT ALLOWED
SEISMIC DESIGN CATEGORY..... ☐ A ☐ B ☐ C ☒ D ☐ E

SEISMIC ANALYSIS: ASCE 7-16 CHAPTER 12 "BUILDING STRUCTURES"
STRUCTURE TYPE: STEEL ORDINARY CANTILEVER COLUMN SYSTEM (OCCS)
RESPONSE MODIFICATION COEFFICIENT.....R = 1.25
SYSTEM OVERSTRENGTH FACTOR.....I_b = 1.25
DEFLECTION AMPLIFICATION FACTOR.....C_d = 1.25
IMPORTANCE FACTOR.....I = 1.00
REDUNDANCY FACTOR.....ρ = 1.3
SEISMIC SEPARATION OF ADJACENT CANOPIES = 9.0' MIN
LOCATION OF BASE = SEE "GEOTECH RECOMMENDATIONS" SECTION

SEISMIC BASE SHEAR COEFFICIENT

C_s = S_{DS}/(R/I_b) = 0.562 ≤ ☒ 0.8 ☐ 1.2 (STRENGTH w/o ρ)
WHERE S_{DS} IS DETERMINED PER BELOW:

DESIGN SPECTRAL ACCELERATION PARAMETER AT SHORT PERIODS [S_{DS}]
SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7-16 SECTION 11.4.4 AND 11.4.5.

☐ A SITE-SPECIFIC GROUND MOTION HAZARD ANALYSIS IN ACCORDANCE WITH ASCE 7-16 SECTION 21.2 SHALL BE USED TO DETERMINE S_{DS}. DSA OTC SUBMISSION DOES NOT APPLY. CGS APPROVAL REQUIRED.
S_{DS} = _____ g ≤ ☐ 1.0 g ☐ 1.5 g

☒ WHERE SUCH ANALYSIS IS NOT PROVIDED, S_{DS} MAY BE DETERMINED AS FOLLOWS:
S_{DS} = 0.936 g
S_{DS} = $\frac{2}{3}$ F_a/S_s = 0.702 g ≤ ☒ 1.0 g ☐ 1.5 g [EQUATIONS 11.4-1 & 11.4-3]
F_a = 1.125 S_s SHORT PERIOD SITE COEFFICIENT PER TABLE BELOW

SHORT-PERIOD SITE COEFFICIENT, F _a						
MAPPED RISK-TARGETED MAXIMUM CONSIDERED EARTHQUAKE (MCE _e) SPECTRAL RESPONSE ACCELERATION PARAMETER AT SHORT PERIOD						
SITE CLASS	S _s ≤0.25	S _s =0.5	S _s =0.75	S _s =1.0	S _s =1.25	S _s ≤1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	1.2	1.2	1.2

FOOTNOTES:

- VALUES DETERMINED PER ASCE 7-16 TABLE 11.4-1, SECTION 11.4.4, AND SECTION 11.4.8
- LINEAR INTERPOLATION MAY BE USED FOR INTERMEDIATE VALUES OF S_s

GEOHAZARD NOTE:

☒ GEOHAZARD REPORT IS NOT REQUIRED, GIVEN THAT THE STRUCTURES ARE CANTILEVERED COLUMN OPEN STRUCTURES CONSTRUCTED OF METAL, DO NOT EXCEED 4000 SF IN PLAN AREA AND ARE NOT LOCATED WITHIN A STATE OR LOCAL GEOHAZARD ZONE. STRUCTURES MAY BE SPLIT INTO MULTIPLE SEISMICALLY SEPARATED STRUCTURES TO STAY BELOW THE 4000 SF TRIGGER

☐ CRITERIA ABOVE IS NOT MET, GEOHAZARD REPORT IS REQUIRED.

SNOW OR ICE LOADS:
GROUND SNOW LOAD OR ICE LOAD.....Pg = 0 PSF

GEOTECH RECOMMENDATIONS:

- ☒ GEOTECHNICAL ENGINEER TO PROVIDE A STATEMENT THAT THE $\frac{1}{8}$ " DEFLECTION HAS NOT BEEN EXCEEDED BASED ON 'FINAL DESIGN VALUES' AT THE BASE TO MEET THE PC DESIGN CRITERIA.
- ☒ THE IGNORED DEPTH ("D") FOR LATERAL BEARING PRESSURE AND SKIN FRICTION IS EQUAL TO 1'-0" (1'-0" MAX). THIS ESTABLISHES THE LOCATION OF THE STRUCTURAL BASE.

SELECT ONE	<input checked="" type="checkbox"/> SOIL PROFILE A: SITE CLASS A – D (WITH NO SOFT SOIL–STIFF SOIL INTERFACE WITHIN THE FULL PIER DEPTH).
	<input type="checkbox"/> SOIL PROFILE B: SITE CLASS A – D (WITH A SOFT SOIL–STIFF SOIL INTERFACE) OR SITE CLASS E (NOT IN LIQUEFIABLE SOIL AND/OR SITE CLASS F).
SELECT ONE	<input type="checkbox"/> MINIMUM DRILLED PIER SPACING (INCLUDING BETWEEN CANOPIES) TO IGNORE GROUP EFFECTS SHALL BE 22'-0" WHERE 33" PIERS ARE USED AND 20'-0" WHERE 30" PIERS ARE USED UNLESS NOTED OTHERWISE BY THE GEOTECHNICAL ENGINEER BELOW.
	<input checked="" type="checkbox"/> PER GEOTECH REPORT THE MINIMUM DRILLED PIER SPACING (INCLUDING BETWEEN CANOPIES) TO IGNORE GROUP EFFECTS (FOR BOTH SKIN FRICTION AND LATERAL BEARING) MAY BE TAKEN AS 8'-3" FOR 33" PIERS AND 7'-6" FOR 30" PIERS

NOTES FOR PC USE:

- KPFF SHALL ALWAYS BE GIVEN THE OPPORTUNITY TO SUBMIT A PROPOSAL FOR ACTING AS THE DELEGATED STRUCTURAL ENGINEERING FIRM FOR ANY APPLICATION FOR CONSTRUCTION USING THIS PC DOCUMENT.
- LOCATION OF ELECTRICAL ELEMENTS SHALL CONFORM TO ASCE 24, SECTION 7.2 PER DSA PR 14-01 SECTION 1.2.1
- DESIGN AND DETAILING FOR THE GROUNDING OF THE CANOPY STRUCTURE SHALL BE PROVIDED ON THE SITE-SPECIFIC ELECTRICAL DRAWINGS
- PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL. IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD
- CONTRACTOR MUST SUBMIT THEIR PROPOSED INSTALLATION PROCEDURE TO ENSURE MAXIMUM AND MINIMUM TORQUE TO THE RESPONSIBLE DESIGN ENGINEER AND DSA PRIOR TO BEGINNING INSTALLATION.

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

A "DSA CERTIFIED" CLASS 2 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

DSA SITE SPECIFIC APPROVAL



kpff

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www.kpff.com kpff project #2200358



DSA PC APPROVAL

APPROVED

DIV. OF THE STATE ARCHITECT

APP: 04-124993 PC

REVIEWED FOR

SS ☒ FLS ☒ ACS ☒ CG ☐

DATE: 07/26/2023

TEICHERT / KPFF
DSA - PC PV STRUCTURE SYSTEM

TITLE SHEET

REVISION SCHEDULE		DB	CS
Design No.	Description	Date	
PLAN REVIEW SUBMITTAL	PLAN REVIEW SUBMITTAL	02/24/2023	JM
V3 SUBMITTAL	V3 SUBMITTAL	07/11/2023	JM
V4 SUBMITTAL	V4 SUBMITTAL	07/27/2023	JM
No.			

DATE 07/21/2023

DRAWN BY JM

0" 1" 2"
ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

S100

STATEMENT OF STRUCTURAL INSPECTION AND TESTING

1. THE STEEL STRUCTURES IN THIS PC ARE PROPRIETARY TO TEICHTERT ENERGY & UTILITIES GROUP, INC. DBA TEICHTERT SOLAR. THE STEEL PORTION OF ANY CONSTRUCTION PROJECT UTILIZING THIS PC DOCUMENT MAY NOT GO OUT TO BID. FOR CONSTRUCTION COST INFORMATION, CONTACT ANDREAS KARLSSON (562) 283-2970, KARLSSON@TEICHTERT.COM.
2. 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. IN CASE OF CONFLICT, MORE COSTLY REQUIREMENTS GOVERN FOR BIDDING. SUBMIT CLARIFICATION REQUEST PRIOR TO PROCEEDING WITH WORK.
3. 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 AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. STRUCTURAL DRAWINGS INDICATE INFORMATION SUFFICIENT TO CONVEY DESIGN INTENT. IF ERRORS, INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH WORK. DEVIATION FROM THE APPROVED SET OF CONTRACT DOCUMENTS SHALL ONLY BE MADE AFTER WRITTEN APPROVAL BY THE ENGINEER OF RECORD.
4. 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.
5. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES: LOCAL BUILDING CODE, AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
6. 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, PROTECTIVE CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
7. ALL REFERENCED STANDARDS (i.e. ACI, AISI, ASTM, ETC.) SHOWN IN THESE DOCUMENTS SHALL BE PER THE LATEST ADOPTED EDITION AS LISTED IN CHAPTER 35 OF THE CODE.
8. 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.
9. CONTRACTOR TO PROVIDE A LIST OF ALL PROPOSED SUBSTITUTIONS, WITH APPLICABLE MANUFACTURER'S ICC/APMO REPORTS, TO ARCHITECT, ENGINEER OF RECORD AND GOVERNING JURISDICTION FOR REVIEW AND APPROVAL BEFORE FABRICATION.

1. THE FOLLOWING IS A PARTIAL LIST OF REQUIRED STRUCTURAL SHOP DRAWINGS AND SUBMITTALS. UNLESS SPECIFICALLY INDICATED IN THE TABLE BELOW, ALL SUBMITTALS LISTED REQUIRE REVIEW BY THE ENGINEER OF RECORD.

SUBMITTAL ITEM	REQUIRED FOR SEOR REVIEW
CONCRETE	
CONCRETE MIX DESIGNS, INCLUDING STRENGTH AND SHRINKAGE TEST RESULTS	X
REINFORCING STEEL (EXCEPT WHERE NOTED BELOW)	X
REBAR AT SLAB-ON-GRADE AND SPREAD FOOTINGS	—
FORMWORK	—
SHORING AND BRACING	—
STEEL	
STRUCTURAL STEEL MILL REPORTS	—
STRUCTURAL STEEL	X
WELDING PROCEDURE SPECIFICATIONS	X
MISCELLANEOUS STEEL SHOWN ON STRUCTURAL DRAWINGS	—
COLD-FORMED STEEL	
COLD-FORMED STEEL FRAMING	X

2. GENERAL:
 - A. 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 PRIOR TO SUBMITTING TO THE ENGINEER OF RECORD.
 - B. THE STRUCTURAL SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITAL IF A CURSORY REVIEW SHOWS MAJOR ERRORS WHICH SHOULD HAVE BEEN FOUND BY THE CONTRACTOR'S CHECKING.
 - C. ANY SUBMITTAL OF A DETAIL SHEET WITH ADDED INFORMATION NOT SHOWN ON PLANS SHALL BE ACCOMPANIED BY LOCATION PLANT IDENTIFYING THE MEMBERS INVOLVED AND CLOUDING AROUND ADDED INFORMATION.
 - D. THE SHOP DRAWINGS SHALL REFERENCE THE DATE OF THE CONSTRUCTION DOCUMENTS THAT THE SHOP DRAWINGS ARE DRAWING AND THE DESIGN CRITERIA USED TO PROTECT THE SUBMITTER.
 - E. CONTRACTOR/SUBCONTRACTOR TO PROVIDE (1) ELECTRONIC COPY OF SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT AND THE ENGINEER OF RECORD.

1. THE STRUCTURAL PLANS INDICATE ONLY THE APPROXIMATE LOCATION OF MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT, AS WELL AS THE RELATED FRAMING NECESSARY TO SUPPORT SUCH EQUIPMENT. THE FINAL POSITIONING OF THESE ITEMS IS DEPENDENT UPON THE EQUIPMENT PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK BETWEEN SUBCONTRACTORS AND MANUFACTURERS.

- a. SEE DSA FORM 103 FOR REQUIRED SPECIAL INSPECTIONS (SEE 5102).
 - b. 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.
 - c. 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.
 - d. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE GOVERNING JURISDICTION IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
EXCEPTIONS:
 1. SOILS INSPECTIONS BY THE SOILS ENGINEER OF RECORD OR PROJECT INSPECTOR
 2. WHEN WAVED BY THE GOVERNING JURISDICTION
 - e. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ALL WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
 - f. PROVIDE SPECIAL INSPECTION FOR CONNECTIONS BOLT.S WITH A325 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.
 - g. THE SPECIAL INSPECTOR FOR HIGH STRENGTH BOLTED CONNECTIONS SHALL:
 1. OBSERVE THE CALIBRATION PROCEDURES WHEN SUCH PROCEDURES ARE REQUIRED BY THE PLANS OR SPECIFICATIONS.
 2. MONITOR THE INSTALLATION OF BOLTS TO DETERMINE THAT ALL PLIES OF CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER.
 3. MONITOR THAT THE SELECTED PROCEDURE IS PROPERLY USED TO TIGHTEN ALL BOLTS.
 - g. THE SPECIAL INSPECTOR FOR ADHESIVE ANCHORS SHALL VERIFY THE DRILLING OF ANY HOLES, THE CLEANLINESS OF THE HOLE, THE MOISTURE IN THE HOLE, MIXING THE ADHESIVE, THE BRAND OF ADHESIVE, AND THE PROPER MATERIAL FOR ASSEMBLY.
 - h. THE SPECIAL INSPECTOR SHALL PROVIDE WEEKLY REPORTS AND A FINAL REPORT TO THE STRUCTURAL ENGINEER.
 - i. 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 REPORT.
 - j. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE GOVERNING JURISDICTION, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND, EQUIPMENTS.
 - k. PERIODIC INSPECTION SHALL OCCUR FREQUENTLY ENOUGH TO INSPECT ALL OF THE INSTALLED ITEMS AND TO PERIODICALLY WITNESS THE INSTALLATION OF THE ITEMS.
2. BATCH PLANT INSPECTION NOT REQUIRED PER CBC1705A3.3.2. SUBJECT TO:

1. FOUNDATION DESIGN BASED ON SITE SPECIFIC SOILS REPORT. SEE TABLE BELOW FOR SOIL CLASS AND CAPACITIES SCHEDULE				
(FINAL) SOIL CLASS AND CAPACITIES SCHEDULE (NO FURTHER INCREASES ARE ALLOWED)				
	ALLOWABLE LATERAL BEARING (PSF/F)	MAX LATERAL BEARING (PSF)	ALLOWABLE SKIN FRICTION - DOWN (PSF)	ALLOWABLE SKIN FRICTION - UPLIFT (PSF)
SOIL CLASS - V	300	1500	360	126
SOIL CLASS - W	190	990	235	126
SOIL CLASS - Y	600	7600	285	143
SOIL CLASS Y	600	9000	285	143

THE STRUCTURE HAS BEEN DESIGNED TO ACCOUNT FOR 1/2" MOVEMENT AT THE BASE SO THE LATERAL BEARING PRESSURE HAS ALREADY BEEN DOUBLED PER CBC 1806A.3.4


THE PC DESIGN IS BASED ON THE BASIC ASD LOAD COMBINATIONS PER CBC 1605A.3.1. THE ALLOWABLE LATERAL BEARING PRESSURE IS NOT PERMITTED TO BE INCREASED BY ONE-THIRD FOR SHORT-TERM LOADS PER CBC 1806A.1.

PIER DEPTH REQUIRED FOR DOWNWARD AND UPLIFT LOADS SHALL BE BASED ON SKIN FRICTION ONLY.
ADDITIONAL RESISTANCE DUE TO END BEARING IS NOT ALLOWED.

2. SLABS ON GRADE SHA/BEAR ON APPROVED SUBGRADE PER THE RECOMMENDATIONS OF THE SOILS REPORT.
3. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE, IF REQUIRED, 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.
4. 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.
5. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT OR BACKFILLED WITH 2-SACK SOIL/CEMENT MIXTURE AND APPROVED BY THE SPECIAL INSPECTOR. SOILS REPORT SHALL TAKE PRECEDENT WHEN RECOMMENDATION GIVEN.
6. CONTRACTOR SHALL INVESTIGATE SITE DURING THE 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.
7. REMOVE CONTAMINATED SOILS (WHERE OCCUR) PER THE SOILS REPORT.
8. SOIL REMOVAL AND RECOMPACT SHALL BE PER THE SOILS REPORT AND APPROVED CONTRACT DOCUMENTS.
9. EACH DRILLED PIER SHALL BE INSPECTED BY THE SOILS ENGINEER PRIOR TO PLACING CONCRETE AND REINFORCING STEEL.
10. PRECAUTIONS SHOULD BE TAKEN DURING THE INSTALLATION OF PIERS TO MINIMIZE THE POSSIBILITY OF CAVING. CLOSELY SPACED PIERS SHOULD BE DRILLED AND FILLED ALTERNATELY, ALLOWING THE CONCRETE TO SET AT LEAST EIGHT HOURS BEFORE DRILLING AN ADJACENT HOLE. PIER EXCAVATIONS SHOULD BE FILLED WITH CONCRETE AS SOON AFTER DRILLING AND INSPECTION AS POSSIBLE.
11. PLACE REINFORCING STEEL IN ONE CONTINUOUS UNID AND ACCURATELY HOLD SECURELY IN FINAL POSITION USING CHAIRS OR SPACERS DURING CONCRETE PLACEMENT.
12. CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF A/C 336.3R, LATEST EDITION.
13. OVEREXCAVATING TO ALLOW FOR LOOSE MATERIAL AT THE BOTTOM IS ACCEPTABLE AS LONG AS THE DESIGN DEPTH IS MET.

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.
3. SCHEDULE OF STRUCTURAL CONCRETE PERFORMANCE REQUIREMENTS:

MEMBER	EXPOSURE CLASS: F0, S0, W0, C0		ALL OTHER CLASSES, [X] EXCLUDING: F3, S3, AND C2		MAX DENSITY (PCF)
	F' 28 DAY (PSI)	MAX W/C	F' 28 DAY (PSI)	MAX W/C	
FOUNDATIONS	5000	0.50	5000	0.45	150
EQUIPMENT PADS, AND OTHER MISC. CONCRETE	5000	0.60	5000	0.45	150

4. GEOTECHNICAL ENGINEER SHALL SELECT THE EXPOSURE CLASS FOR EACH SITE.
5. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR II FOR EXPOSURE CLASS F0, S0, P0, CO. (TYPE II FOR S1)
6. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE V FOR EXPOSURE CLASS S2 AND S3.
7. CONCRETE EXPOSED TO THAW AND FREEZE CYCLES (F1, F2, F3) SHALL BE AIR ENTRAINED PER TABLE 19.3.3.1 OF THE ACI.
8. 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.
9. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C94.
10. PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 301 AND PROJECT SPECIFICATIONS. CLEAN AND ROUGHEN TO $\frac{1}{4}$ " AMPLITUDE ALL CONCRETE SURFACES OR FLATWORK AGAINST WHICH NEW CONCRETE IS TO BE PLACED EXCEPT AT COLD JOINTS.
11. ALL REINFORCING BARS, ANCHOR BOLTS, AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
12. SEE DETAIL  FOR PIPE AND CONDUIT IN PIERS.
13. PROVIDE MIN $\frac{1}{4}$ " CHAMFER ON ALL EXPOSED CORNERS UNLESS INDICATED OTHERWISE.
14. THE STRUCTURE MAY BE INSTALLED 24 HOURS AFTER THE FOUNDATIONS HAVE BEEN CAST OR AFTER CONCRETE REACHES A MINIMUM COMPRESSIVE STRENGTH OF 1000-PSI, WHICHEVER COMES FIRST. BREAK TESTS NOT REQUIRED IF WAITING UNTIL 24 HOURS TO ERCT.
15. CONCRETE MAY BE PUMPED, POURED, TAILGATED OR OTHER SUCH METHODS INTO PLACE. CONCRETE SHALL BE ALLOWED TO FREE FALL THE ENTIRE DEPTH OF THE FOUNDATION. PLACEMENT OF ANY FREE-FALL CONCRETE SHALL BE SUCH THAT THE CONCRETE DOES NOT ALTER THE EMBEDMENT DEPTH OF THE CLEARANCE OF THE REINFORCING BAR CAGE OR OTHER EMBEDDED MATERIALS. SEE ACI 304R-99 CHAPTER 5 FOR CONCRETE PLACEMENT STANDARDS.
16. CONCRETE SHRINKAGE CRACKS UP TO $\frac{1}{8}$ " SHALL BE CONSIDERED NON-STRUCTURAL

1. REINFORCING BARS SHALL BE DEFORMED BARS AND CONFORM TO THE REQUIREMENTS OF CHAPTER 19A OF THE CODE, ASTM A615, DEFORMED GRADE 60 U.N.O.
2. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. REINFORCING BAR SPLICES SHALL, IN CONCRETE, CONFORM TO THE PROVISIONS OF ACT 318, LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. DOWEL ALL VERTICAL BARS TO TERMINATIONS. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL BY STRUCTURAL ENGINEER AND DSA.
4. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
5. WELDING (WHERE APPROVED BY THE STRUCTURAL ENGINEER AND DSA):
 - a. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND AWS D14. SEE SPECIAL INSPECTION SECTION FOR WELDING INSPECTION REQUIREMENTS.
 - b. ALL REINFORCING BARS NOT TO BE WELDED SHALL BE ASTM A706, U.N.O.
 - c. ALL WELDS SHALL BE DONE BY AWS CERTIFIED WELDERS USING THE FOLLOWING ELECTRODES, U.N.O.:

ASTM A706	E80XX
ASTM A615	E90XX

6. BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
7. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 315.
8. 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.
9. 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 PLACEMENT OF OVERLYING GROUND OR REINFORCING STEEL.
10. CONCRETE PROTECTION FOR REINFORCEMENT:
 - (i) CAST-IN-PLACE CONCRETE: THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

	MINIMUM COVER	TOLERANCES + OR -
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"	¾"
B. CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BAR NO. 5 BAR, W31 OR D31 WIRE AND SMALLER	2" 1½"	¾" ¾"
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: SLABS, WALLS, JOISTS: NO. 11 BAR AND SMALLER	¾"	¼"

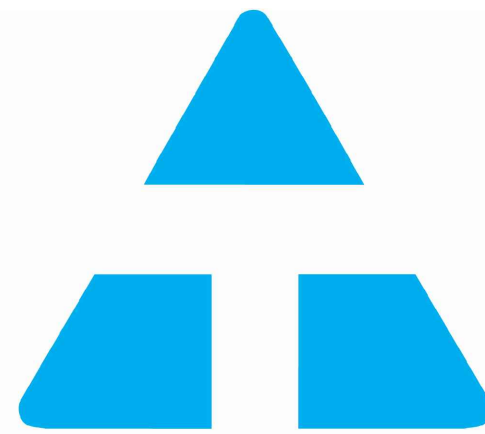
1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH AISC 360 AND AISC 303.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (U.N.O.):

DESCRIPTION	ASTM DESIGNATION
ALL PLATES	A36/A572, GRADE 50 (DUAL CERT)
ALL ANGLES, CHANNELS, AND MISC.	A36
ALL WF BEAMS	A992, GRADE 50
HSS SECTIONS	A500, GR C
HIGH STRENGTH BOLTS	A325
ROD BRACING	A36/A572, GRADE 50 (DUAL CERT)
MACHINE BOLTS	A307
STAINLESS STEEL BOLTS	304SS, ASTM 593C
PIPES	A53, GR B

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS OF ALL STEEL FOR STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.
 4. HOLES IN STEEL SHALL BE $\frac{1}{8}$ " LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED. COLUMN BASE PLATE HOLES MAY BE OVERSIZED PER AISC MANUAL OR AS NOTED.
 5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, MASONRY, OR SPRAY ON FLOORING, OR ARE EXPOSED 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. GALVANIZING AT FIELD WELDS SHALL BE REPAIRED WITH A GALVANIZING REPAIR PAINT ACCORDING TO ASTM A780.
 7. ALL GALVANIZED STEEL SHALL CONFORM TO THE MINIMUMS ESTABLISHED BY ASTM A123 OR A153, CLASS D.
 8. ALL EXPOSED STEEL FASTENERS 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 MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117.
 9. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT. (EXAMPLE PROPRIETARY COATINGS THAT COMPLY WITH THE 1000 HOUR REQUIREMENT INCLUDE BUT ARE NOT NECESSARILY LIMITED QUICK GUARD BY SIMPSON, KWIK-COTE BY HILTI, STALGARD BY ELCO, VISTA CORR BY SFS INTL, ETC)
 9. TIGHTEN HIGH STRENGTH BOLTS TO "SNUG-TIGHT" CONDITION PER AISC SPECIFICATION FOR STRUCTURAL JOINTS, U.N.O.
 10. PROVIDE BEVELED WASHERS PER ANSI B18.23.1 AS REQUIRED ON SLOPED SURFACES.
11. WELDING:
- a. ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND AWS D1.1, SEE SPECIAL INSPECTION SECTION FOR WELDING INSPECTION REQUIREMENTS.
 - b. ALL WELDING IS TO BE DONE BY CERTIFIED WELDERS USING E70XX ELECTRODES (U.N.O.).
 - c. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLER FILL SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC 360.
 - d. WELDS TERMINATING AT ENDS OR CORNERS, WHERE PRACTICAL, SHALL BE RETURNED CONTINUOUSLY AROUND CORNERS A DISTANCE 2 TIMES THE NOMINAL SIZE OF THE WELD PER AISC 360 SECTION J2.2B, U.N.O..
 - e. ALL FULL-PENETRATION FIELD WELDS SHALL BE ULTRASONICALLY TESTED.
 - f. ALL TWO-SIDED FILLER FILL WELDS SHOWN SHALL BE WELDED WITH THE SAME (GIVEN) WELD SIZE ON BOTH SIDES.
 - g. ALL UNSIZED GROOVE OR BUTT WELDS SHOWN SHALL BE COMPLETE PENETRATION. ALL PROVISIONS OF AWS SHALL BE OBSERVED INCLUDING REQUIREMENTS FOR BACK-UP PLATES AND WELD TRANSITIONS 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.

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, U.N.O. .
3. REMOVAL AND RESETING OF POST-INSTALLED ANCHORS IS PROHIBITED.
4. WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED, THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST:
 - A. EXPANSION ANCHORS: UNLESS NOTED OTHERWISE, EXPANSION ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. POST-INSTALLED EXPANSION ANCHORS MUST MEET THE ASSESSMENT CRITERIA OF ACI 308.2 FOR THE LISTED ANCHORS, THE LISTED ESR REPORTS VERIFY THESE REQUIREMENTS.
 - A.1. HILTI KWIK BOLT TZ2 (ESR-4266)
 - A.2. SIMPSON STRONG-BOLT-2 (ESR-3037)
 - A.3. DEWALT/POWERS POWER-STUD SD2 (ESR-2502)
 - B. SCREW ANCHORS: UNLESS NOTED OTHERWISE, SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. ANCHORS NEED TO BE APPROVED FOR EXTERIOR EXPOSURE.
 - B.1. HILTI KWIK HUS-TZ (ESR-3027)
 - B.2. SIMPSON TITD HD (ESR-2713)
 - B.3. DEWALT/POWERS SCREWBOLT+ (ESR-3889)
5. REBAR MUST BE LOCATED AND AVOIDED BEFORE DRILLING INTO OR FASTENING TO SLABS, EXCEPT WHEN ANCHORS ARE USED WITH A MINIMUM EMBEDMENT OF $\frac{3}{4}$ " OR LESS.
6. ALL CONCRETE ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIP GALVANIZED.
7. PROVIDE TROUBLE TESTING AT LEAST 50% OF POST-INSTALLED EXPANSION ANCHORS. TEST LOADS SHALL BE AS FOLLOWS:
 - A. $\frac{3}{8}$ " Ø HILTI KWIKBOLT-TZ2: 30FT-LB
 - B. $\frac{3}{8}$ " Ø SIMPSON STRONG-BOLT-2: 30FT-LB
 - C. $\frac{3}{8}$ " Ø DEWALT/POWERS POWER-STUD SD2: 25FT-LB
8. POST-INSTALLED ANCHORS USED FOR EXTERIOR EXPOSURE SHALL COMPLY WITH THE REQUIREMENTS OF THE EVALUATION REPORT.

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, U.N.O.
3. WHERE ANCHOR TYPE IS NOT NOTED OR AN ALTERNATE BRAND IS PREFERRED, THE FOLLOWING PRODUCTS ARE ACCEPTABLE TO BE SUBMITTED FOR A SUBSTITUTION REQUEST:
 - A. EXPANSION ANCHORS: UNLESS NOTED OTHERWISE, EXPANSION ANCHORS IN MASONRY SHALL BE ONE OF THOSE LISTED BELOW AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
 - A.1. HILTI KWIK BOLT 3 (ICC ESR-1385)
 - A.2. SIMPSON STRONG-BOLT-2 (IPMO E-240)
 - A.3. DEWALT/POWERS POWER-STUD® SD1 (ICC ESR-2966)
4. ALL MASONRY ANCHORS WHICH ARE EXPOSED TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIP GALVANIZED.



TEICHERT SOLAR

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DSA PC APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121993 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☐
DATE: 07/26/2023

TEICHERT / KPFF
DSA - PC PV STRUCTURE SYSTEM

GENERAL STRUCTURAL NOTES

[illegible]

DATE 07/21/2023

DRAWN BY JM



ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

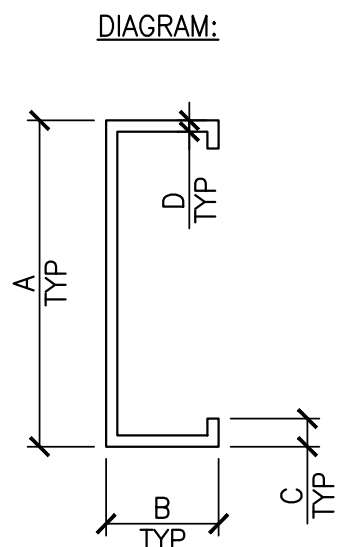
SHEET

S101

GENERAL STRUCTURAL NOTES (G.S.N.)

COLD-FORMED STEEL IDENTIFICATION

1. MEMBER IDENTIFICATION IS AS FOLLOWS:
 - A. MEMBER DEPTH (INCHES)
 - B. FLANGE WIDTH (INCHES)
 - C. LIP LENGTH (INCHES) (WHERE OCCURS)
ALL MEMBER DEPTHS ARE TAKEN IN 1/100 INCH INCREMENTS.
 - D. MATERIAL THICKNESS:
(EXAMPLE: $0.054'' = 54 \text{ MIL} = \frac{5}{1000} \text{ INCHES}$)
MATERIAL THICKNESS IS THE MINIMUM BASE METAL THICKNESS IN MILS.
MINIMUM BASE METAL THICKNESS REPRESENTS 95% OF THE DESIGN THICKNESS.



2. ALL CALCULATED MEMBER PROPERTIES PER AISI SPECIFICATIONS ARE BASED ON THE FOLLOWING THICKNESSES:

MINIMUM THICKNESS	REFERENCE GAUGE	DESIGN THICKNESS
54 MIL	16 GA	0.0566"
71 MIL	14 GA	0.075"
97 MIL	12 GA	0.1017"
118 MIL	10 GA	0.1242"

COLD-FORMED STEEL

1. GENERAL
- A. ALL COLD-FORMED METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI S100-16, "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
- B. ALL COLD-FORMED STRUCTURAL MEMBERS SHALL BE PER ICC ESR-3064P.
- C. ALL COLD-FORMED STEEL SHALL CONFORM TO THE FOLLOWING:

ASTM A 653 GR 55 OR
ASTM A 1011 GR 55

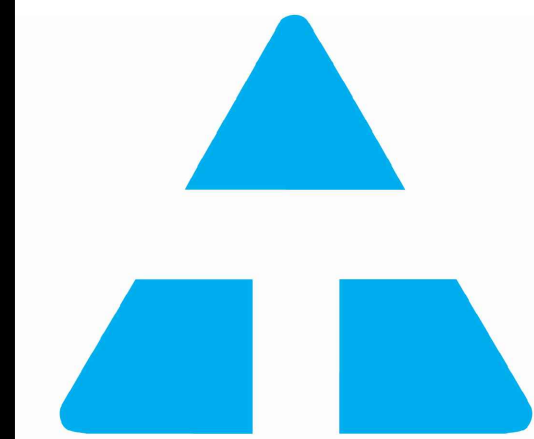
- D. WELDING IS NOT PERMITTED UNLESS SPECIFICALLY APPROVED BY ENGINEER OF RECORD.
- E. ALL APPROVED WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR ALL APPROPRIATE DIRECTIONS COMPLYING WITH AWS D1.3. WELDING RODS SHALL CONFORM TO THE FOLLOWING:

43 MIL AND LIGHTER	E60XX
54 MIL AND HEAVIER	E70XX OR E6013
COLD-FORMED TO STRUCTURAL STEEL	E70XX LOW HYDROGEN

- G. FIRE WYING OF FRAMING COMPONENTS SHALL NOT BE PERMITTED.
- H. TEMPORARY BRACING REQUIREMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- I. 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.
- J. ALL FIELD CUTTING OF MEMBERS SHALL BE BY SAWING OF SHEARING. TORCH OR PLASMA CUTTING OF MEMBERS SHALL NOT BE PERMITTED.
- K. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED ON AN ANGULAR FIT AGAINST CUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.
- L. SPACING OF PURLS OR OTHER LOAD CARRYING MEMBERS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD.
- M. MEMBERS SHALL BE IDENTIFIED PER SECTION 2203A.1 OF 2016 CBC PART 2, VOLUME 2.
- N. ALL SHEET METAL SCREWS (SMS) SHALL BE ELCO DRIL-FLEX (CC ESR-3332) OR ITW BUILDEX TEKS SELECT (CC ESR-3223) UNLESS APPROVED BY THE SEOR.

ABBREVIATIONS

Ø	ANCHOR BOLT(S)	EW	EACH WAY	OPP	OPPOSITE
AT	AT	EXIST	EXISTING	PCF	POUNDS PER CUBIC FOOT
ACI	AMERICAN CONCRETE INSTITUTE	FND	FOUNDATION	PEN	PENETRATION
ADD'L	ADDITIONAL	FS or F.S.	FAR SIDE	ℓ	PLATE OR PROPERTY LINE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FT	FOOT or FEET	PERP	PERPENDICULAR
APPROX.	APPROXIMATE	FTG	FOOTING	REINF	REINFORCED or REINFORCING
ARCH	ARCHITECT or ARCHITECTURAL DOCUMENTS	GA	GAGE or GAUGE	REQ'D	REQUIRED
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	GALV	GALVANIZED	SCHED	SCHEDULE
AWS	AMERICAN WELDING SOCIETY	GR or GRD	GRADE	SECT	SECTION
BLK'G	BLOCKING	G.S.N.	GENERAL STRUCTURAL NOTES	SFRS	SEISMIC FORCE RESISTING SYSTEM
BM	BEAM	HORIZ or HOR	HORIZONTAL	SH or SHT	SHEET
BOT OR B.	BOTTOM	HDG	HOT DIPPED GALVANIZED	SM	SIMILAR
BRG	BEARING	ICC	INTERNATIONAL CODE COUNCIL	SMS	SHEET METAL SCREWS
BTWN	BETWEEN	IN	INCH	SOC	SLAB ON GRADE
CANT	CANTILEVER	INCL	INCLUDE	SP or SPCS	SPACES
CBC	CALIFORNIA BUILDING CODE	INFO	INFORMATION	SPEC	SPECIFICATION
CFS	COLD-FORMED STEEL	LG	LONG	SQ	SQUARE
CIP	CAST IN PLACE	LOS	LIGHT GAUGE STEEL	STD	STANDARD
CL OR CLR	CLEAR	LH	LONG LEG HORIZONTAL	STIFF	STIFFENER
ℓ	CENTER LINE	LLV	LONG LEG VERTICAL	STL	STEEL
COL	COLUMN	LOC	LOCATION	T&B	TOP AND BOTTOM
CONC	CONCRETE	LWC	LIGHT WEIGHT CONCRETE	THK	THICK or THICKNESS
CONN	CONNECTION	MATL	MATERIAL	TOC	TOP OF CONCRETE
CONT	CONTINUE or CONTINUOUS	MAX	MAXIMUM	TOS	TOP OF STEEL
DIA or Ø	DIAMETER	MB	MACHINE BOLT	TYP	TYPICAL
DIM	DIMENSION	MECH	MECHANICAL	U.N.O.	UNLESS NOTED OTHERWISE
DL	DEAD LOAD	MFR or MANUF	MANUFACTURER	VERT	VERTICAL
DN	DOWN	MIN	MINIMUM	V.I.F.	VERIFY IN FIELD
DSA	DIVISION OF THE STATE ARCHITECT	MISC	MISCELLANEOUS	w/	WITH
DWG	DRAWING(S)	MTL	METAL	w/o	WITHOUT
EA	EACH	No. or #	NUMBER	WT or WGT	WEIGHT
E.F.	EACH FACE	N.T.S.	NOT TO SCALE		
EQ	EQUAL	OC or O/C	ON CENTER		
ES or E.S.	EACH SIDE	O.H.	OPPOSITE HAND		
		OPNG	OPENING		



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APP: 04-121993 PC
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SS ☒ FLS ☒ ACS ☒ CG ☐
DATE: 07/26/2023

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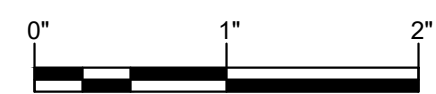
DSA - PC PV STRUCTURE SYSTEM

GENERAL STRUCTURAL NOTES

[illegible]

DATE 07/21/2023

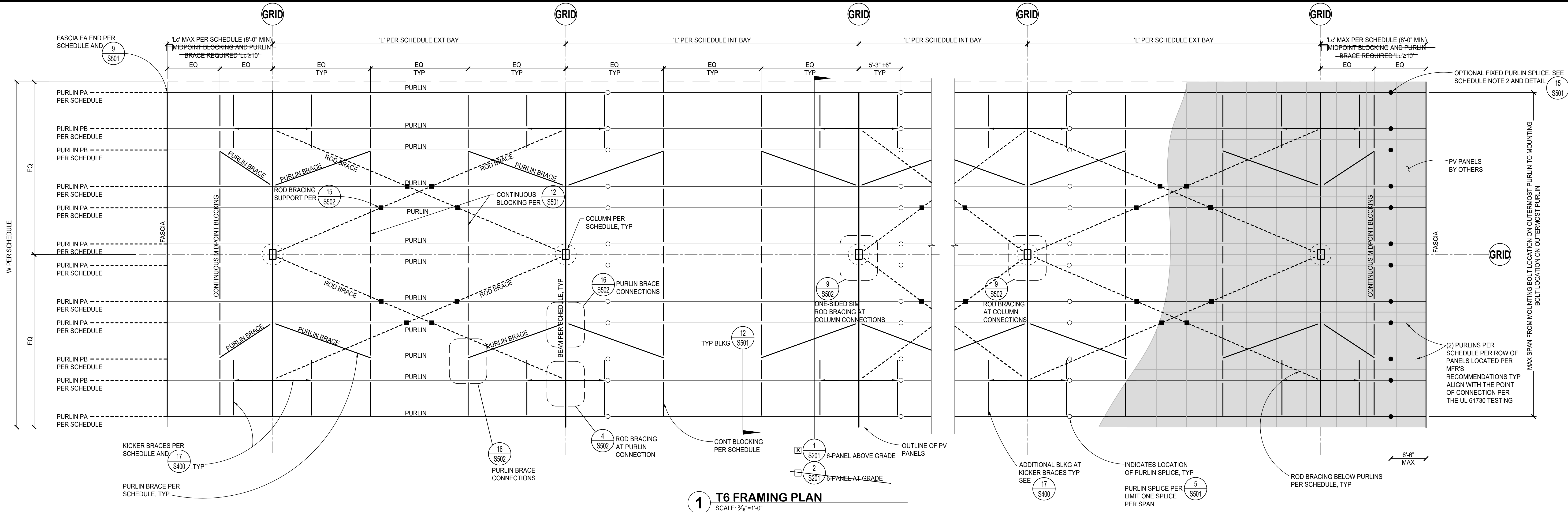
DRAWN BY JM



ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

S102



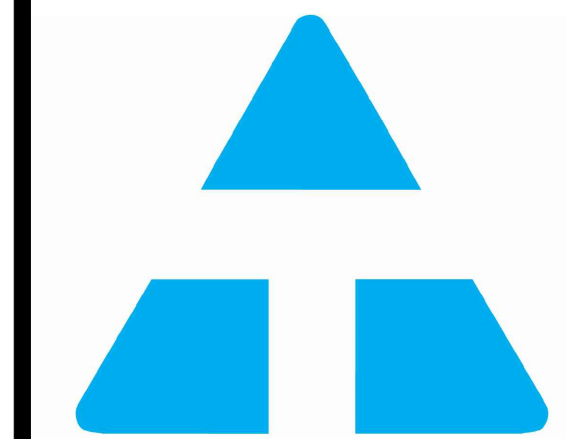
T6 DESIGN (SEE NOTE 3)	<input checked="" type="checkbox"/> $S_{PG} \leq 1.00g$													
	ARRAY ID	# OF COLUMN	MAX STRUCTURE WIDTH "W"	MAX COLUMN SPACING "L" (SEE NOTE 1)	HSS COLUMN	WF BEAM	BASE CONNECTION OPTION, HEIGHT PARAMETERS (SEE NOTE 4), AND SECTION DETAIL	PURLIN	MAX PURLIN CANTILEVER "L _c "	CONTINUOUS BLOCKING	PURLIN BRACE	ROD BRACE CONDITION	FASCIA	
	<input type="checkbox"/> T6-CS-1.0	2 COLUMN (NOTE 2)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x43	ABOVE GRADE, H3 \leq 14'-0", H1 \leq 10'-0", DETAIL <div><div>1</div><div>S201</div></div>	PURLIN PA: <input checked="" type="checkbox"/> 12x4 $\frac{1}{2}$ x1 $\frac{1}{2}$ x14GA OR <input type="checkbox"/> 12x4x1x14GA PURLIN PB: 12x4 $\frac{1}{2}$ x1 $\frac{1}{2}$ x14GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	15'-0"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
	<input type="checkbox"/> T6-CT-1.0	2 COLUMN (NOTE 2)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x43	<div><input type="checkbox"/> AT-GRADE, H3 \leq 14'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> AT-GRADE, H3 \leq 15'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> ABOVE-GRADE, H3 \leq 18'-0", H1 \leq 15'-0", DETAIL <div><div>1</div><div>S201</div></div></div>		15'-0"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
	<input type="checkbox"/> T6-BS-1.0	3+ COLUMN (3 COLUMNS MIN, NO MAX)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x48	ABOVE GRADE, H3 \leq 14'-0", H1 \leq 10'-0", DETAIL <div><div>1</div><div>S201</div></div>		13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
	<input checked="" type="checkbox"/> T6-BT-1.0	3+ COLUMN (3 COLUMNS MIN, NO MAX)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x48	<div><input type="checkbox"/> AT-GRADE, H3 \leq 14'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> AT-GRADE, H3 \leq 15'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input checked="" type="checkbox"/> ABOVE-GRADE, H3 \leq 18'-0", H1 \leq 15'-0", DETAIL <div><div>1</div><div>S201</div></div></div>		13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
	<input type="checkbox"/> $S_{PG} \leq 1.50g$													
	ARRAY ID	# OF COLUMNS	MAX STRUCTURE WIDTH "W"	MAX COLUMN SPACING "L" (SEE NOTE 1)	HSS COLUMN	WF BEAM	BASE CONNECTION OPTION, HEIGHT PARAMETERS (SEE NOTE 4), AND SECTION DETAIL	PURLIN	MAX PURLIN CANTILEVER "L _c "	CONTINUOUS BLOCKING	PURLIN BRACE	ROD BRACE CONDITION	FASCIA	
	<input type="checkbox"/> T6-CS-1.5	2 COLUMN (NOTE 2)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x43	ABOVE GRADE, H3 \leq 14'-0", H1 \leq 10'-0", DETAIL <div><div>1</div><div>S201</div></div>	PURLIN PA: <input type="checkbox"/> 12x4 $\frac{1}{2}$ x1 $\frac{1}{2}$ x14GA OR <input type="checkbox"/> 12x4x1x14GA PURLIN PB: 12x4 $\frac{1}{2}$ x1 $\frac{1}{2}$ x14GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	15'-0"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
	<input type="checkbox"/> T6-CT-1.5	2 COLUMN (NOTE 2)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x43	<div><input type="checkbox"/> AT-GRADE, H3 \leq 14'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> AT-GRADE, H3 \leq 15'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> ABOVE-GRADE, H3 \leq 18'-0", H1 \leq 15'-0", DETAIL <div><div>1</div><div>S201</div></div></div>		15'-0"	9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK	
<input type="checkbox"/> T6-BS-1.5	3+ COLUMN (3 COLUMNS MIN, NO MAX)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x48	ABOVE GRADE, H3 \leq 14'-0", H1 \leq 9'-6", DETAIL <div><div>1</div><div>S201</div></div>	13'-2"		9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK		
<input type="checkbox"/> T6-BT-1.5	3+ COLUMN (3 COLUMNS MIN, NO MAX)	46'-6"	37'-9"	HSS14x10x $\frac{16}{16}$	W14x48	<div><input type="checkbox"/> AT-GRADE, H3 \leq 14'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> AT-GRADE, H3 \leq 15'-0", DETAIL <div><div>2</div><div>S201</div></div></div> <div><input type="checkbox"/> ABOVE-GRADE, H3 \leq 18'-0", H1 \leq 15'-0", DETAIL <div><div>1</div><div>S201</div></div></div>	13'-2"		9x2.5x1x16GA	9x4x1x14 GA	EXT BAYS, AND EVERY OTHER INT BAY	12x1.5 14 GA TRACK		

- SCHEDULE NOTES:**
- COLUMN SPACING IS LESS THAN 36'-0". MID-POINT BLOCKING IS ACCEPTABLE IN LIEU OF THIRD POINT BLOCKING. MIN COL SPACING IS 22'-0". TYP. MAX CANTILEVER SPAN FOR MINIMUM COLUMN SPACING IS PER SCHEDULE.
 - WHERE (2) COLUMN CONFIGURATION FOR A SINGLE ARRAY OCCURS, PURLINS SHALL BE UNSPLUGGED AND CONTINUOUS. FOR TOTAL PURLIN LENGTHS GREATER THAN 62'-0" WITH A (2) COLUMN CONFIGURATION, A FIXED PURLIN SPLICE PER ¹⁵ S501 MAY BE USED (MAX (1) PER PURLIN).
 - THE MAXIMUM NUMBER OF PANEL ROWS IS (6), BUT FEWER PANEL ROWS MAY BE USED. THE MAXIMUM NUMBER OF PANEL ROWS IS ☒ 6 OR ☐ 5
 - SEE SECTION DETAILS LISTED FOR DEFINITIONS OF "H3" AND "H1"
 - COLUMNS BETWEEN SEPARATE CANOPIES SHALL BE SPACED TO AVOID DRILLED PIER GROUP EFFECTS (FOR BOTH SKIN FRICTION AND LATERAL BEARING). SEE SEPARATION DIMENSION PER GEOTECH RECOMMENDATIONS SECTION ON S100.

2 MEMBER SCHEDULE

SCALE: NTS

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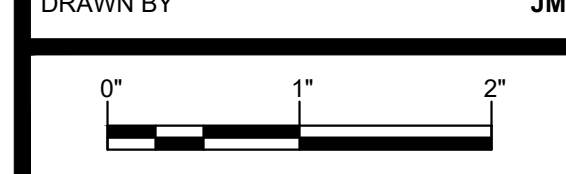
DSA - PC PV STRUCTURE SYSTEM

6-PANEL T-STRUCTURE FRAMING
PLAN AND SCHEDULE

REVISION SCHEDULE		Date	DB	CG
Design No. - Description	PLAN REVIEW SUBMITTAL	02/24/2023	JM	SN
	V3 SUBMITTAL	07/11/2023	JM	SN
	V4 SUBMITTAL	07/27/2023	JM	SN
No.				

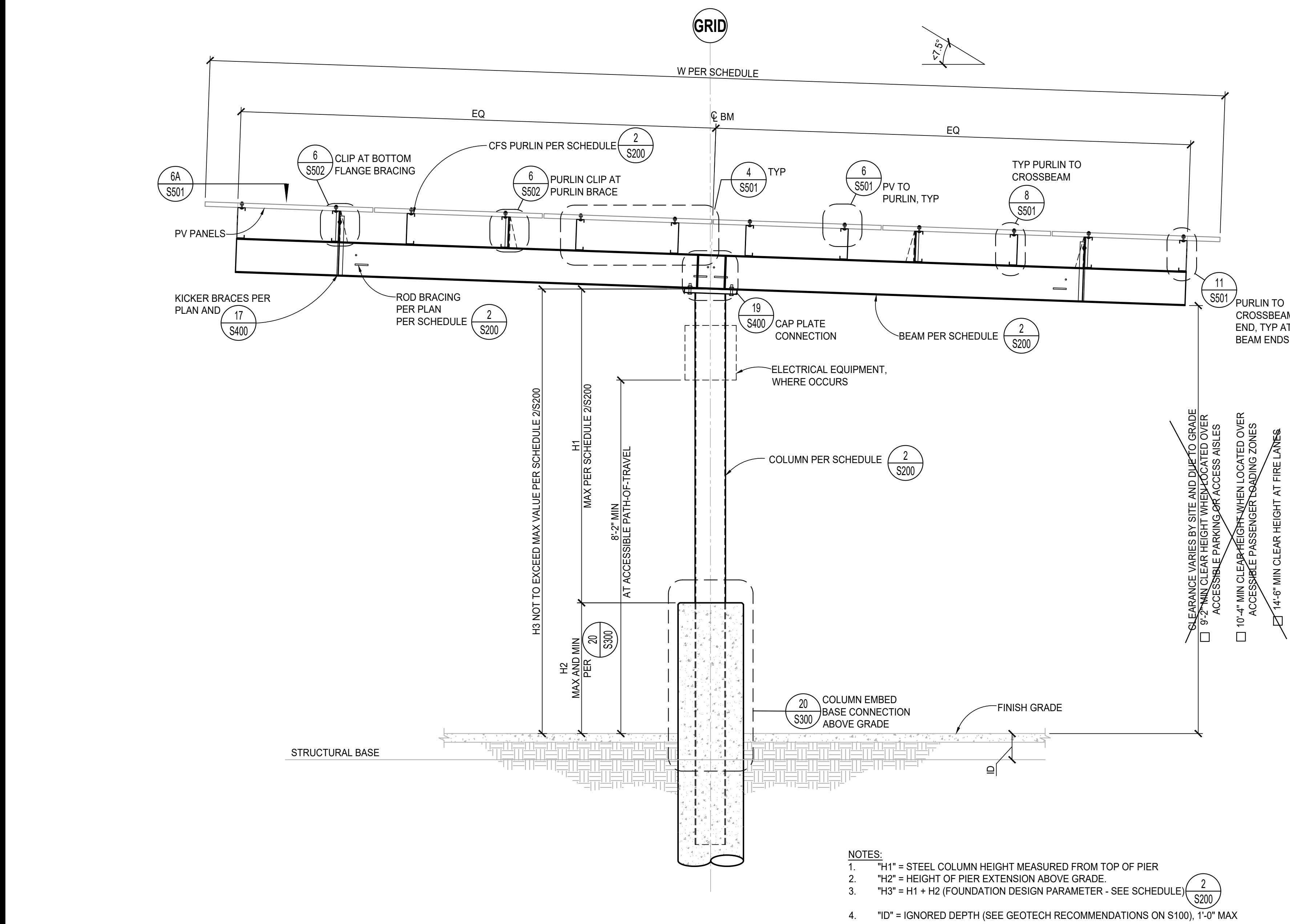
DATE 07/21/2023

DRAWN BY JM

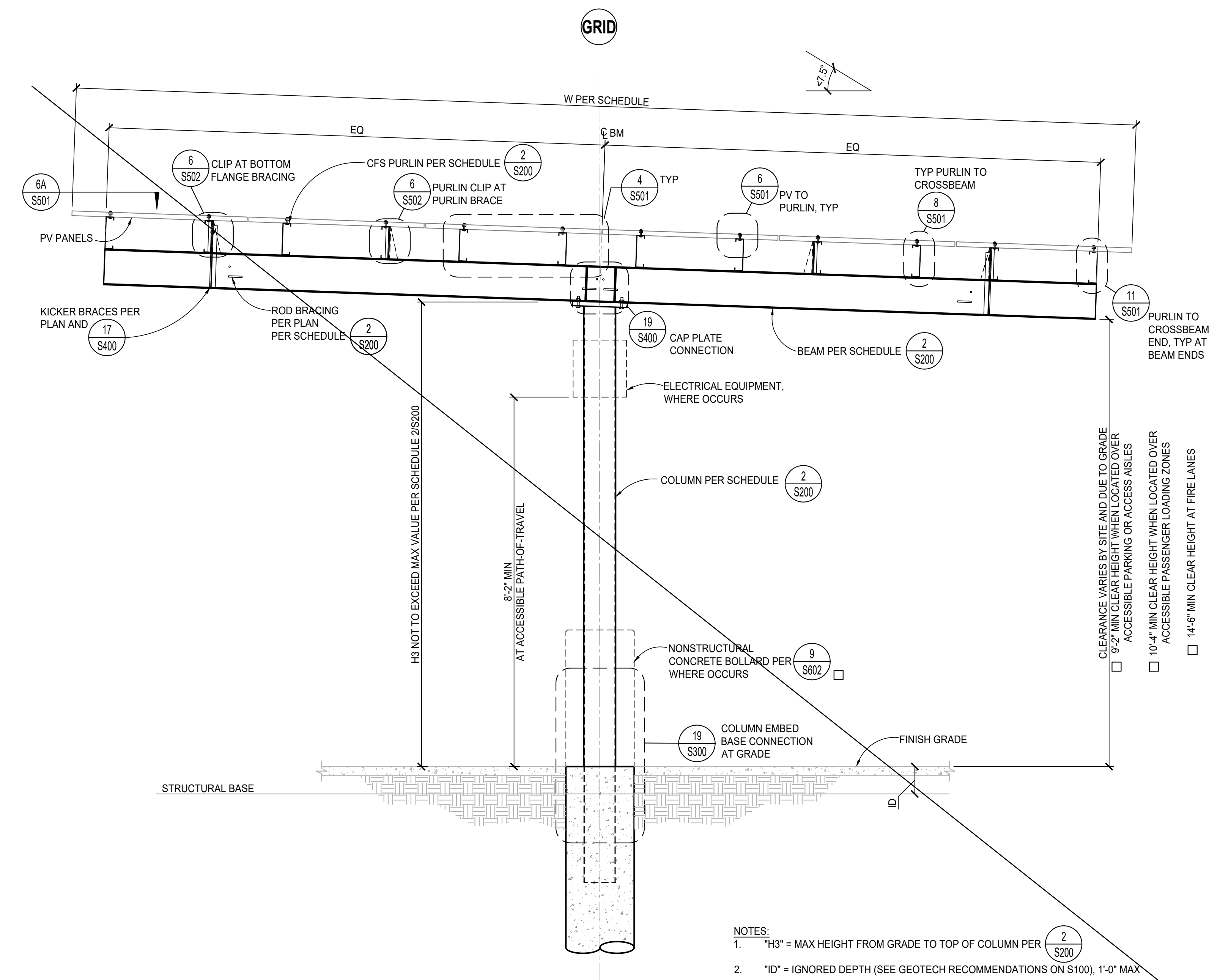


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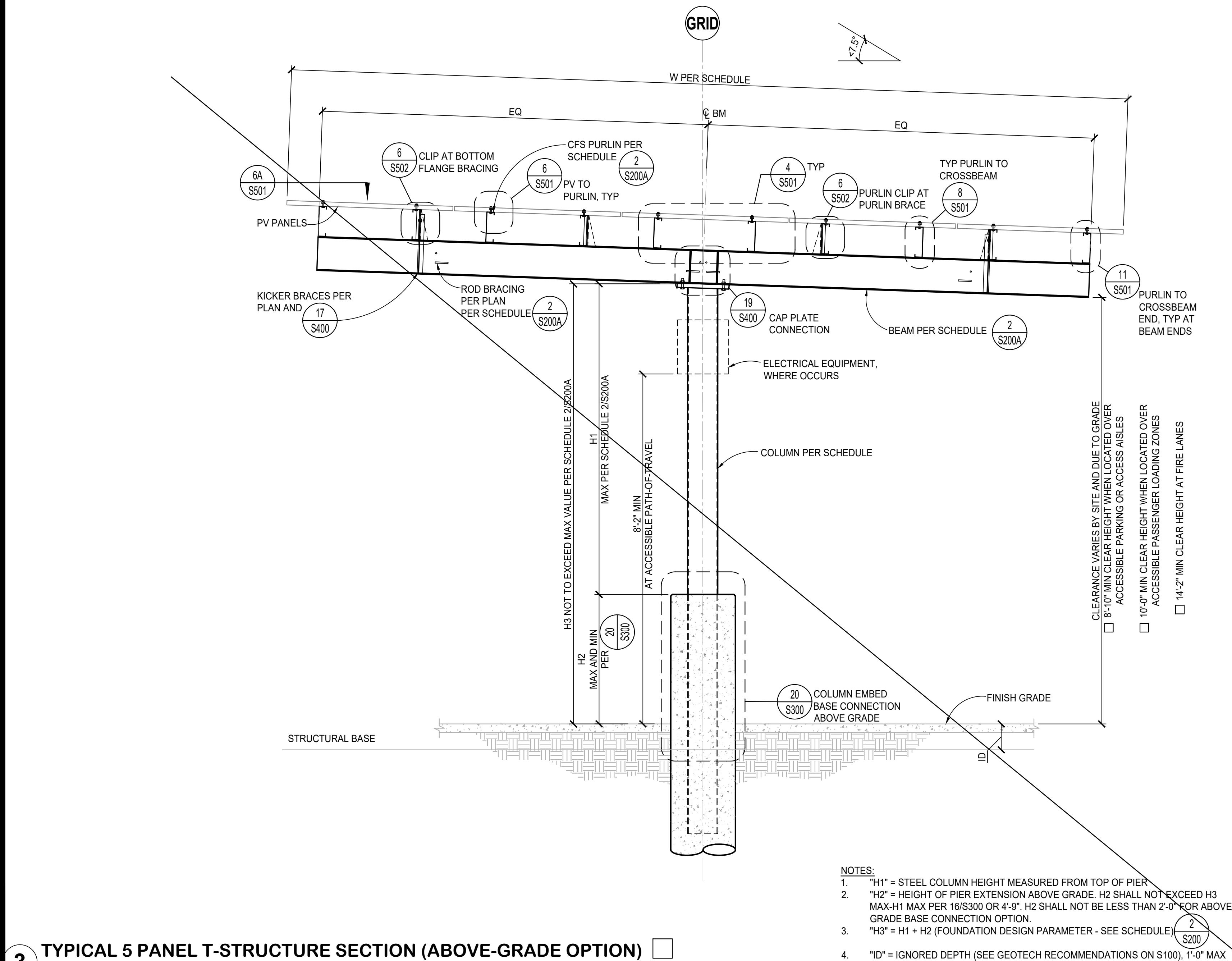
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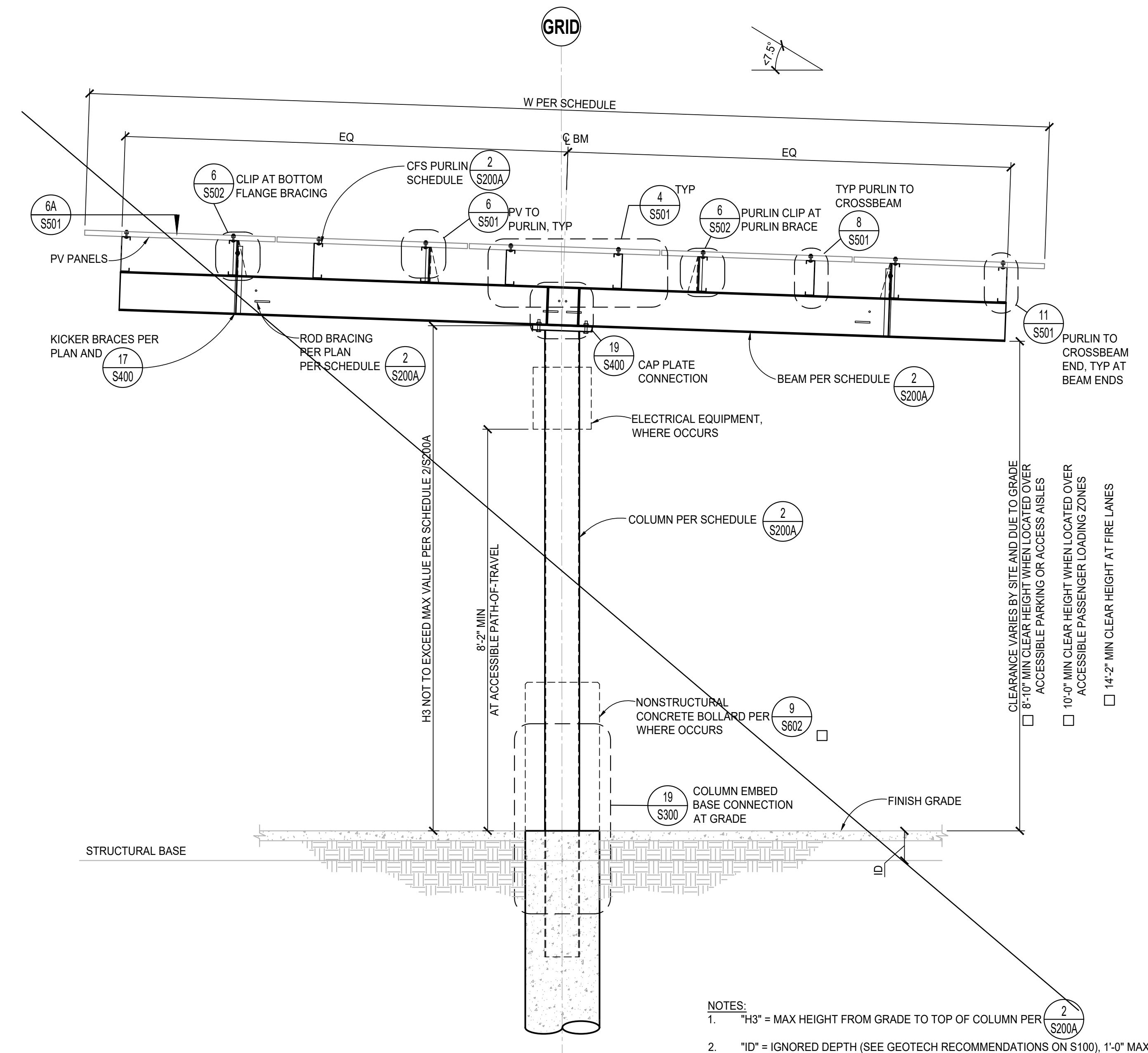
1 TYPICAL 6 PANEL T-STRUCTURE SECTION (ABOVE-GRADE OPTION) ☒ SCALE: 3/8"=1'-0"



2 TYPICAL 6 PANEL T-STRUCTURE SECTION (AT-GRADE OPTION) ☐ SCALE: 3/8"=1'-0"

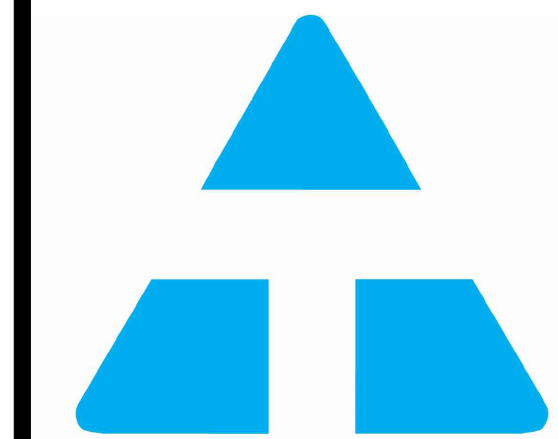


3 TYPICAL 5 PANEL T-STRUCTURE SECTION (ABOVE-GRADE OPTION) ☐ SCALE: 3/8"=1'-0"



4 TYPICAL 5 PANEL T-STRUCTURE SECTION (AT-GRADE OPTION) ☐ SCALE: 3/8"=1'-0"

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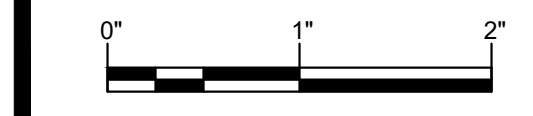
DSA - PC PV STRUCTURE SYSTEM

6 AND 5 PANEL
T-STRUCTURE SECTIONS

No.	Date	Description	DB	CG
1	07/21/2023	DESIGN	JM	SN
2	07/21/2023	PLAN REVIEW SUBMITTAL	JM	SN
3	07/21/2023	V3 SUBMITTAL	JM	SN
4	07/21/2023	V4 SUBMITTAL	JM	SN

DATE 07/21/2023

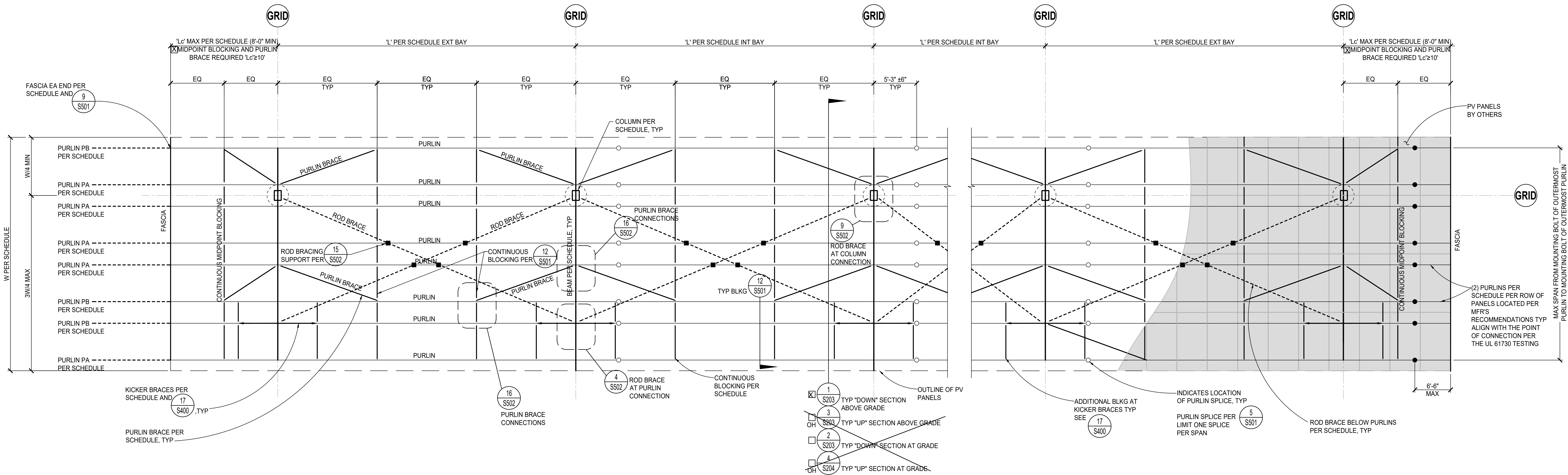
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ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

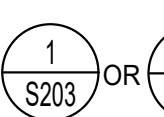
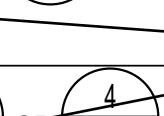
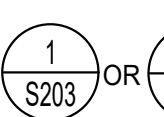
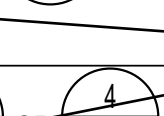
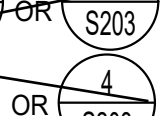
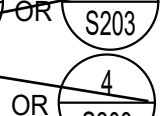

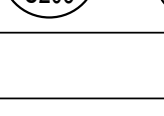
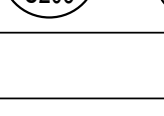



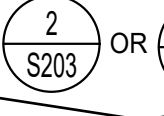

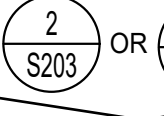
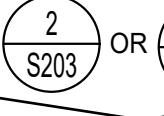
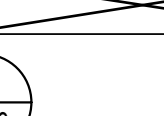
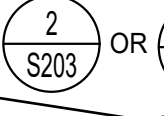
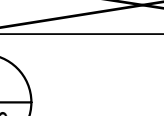
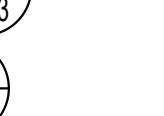
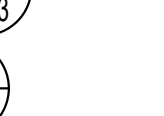
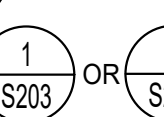


SHEET

S201

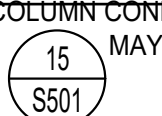
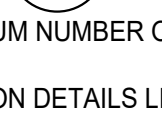
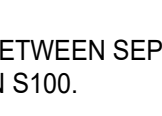


1 L4 FRAMING PLAN
SCALE: 3/8"=1'-0"

L4
DESIGN
(SEE
NOTE 3)


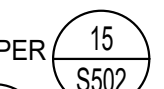
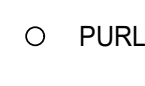



L4 DESIGN (SEE NOTE 3)												
L4 DESIGN (SEE NOTE 3)												
ARRAY ID	# OF COLUMN	MAX STRUCTURE WIDTH "W"	MAX COLUMN SPACING "L" (SEE NOTE 1)	HSS COLUMN	WF BEAM	BASE CONNECTION OPTION, HEIGHT PARAMETERS (SEE NOTE 4), AND SECTION DETAIL	PURLIN	MAX PURLIN CANTILEVER "Lc"	CONTINUOUS BLOCKING	PURLIN BRACE	ROD BRACE CONDITION	FASCIA
<input type="checkbox"/> L4U-AS-1.0 <input type="checkbox"/> L4D-AS-1.0	2+ COLUMN (NOTE 2) (2 COL MIN, NO MAX)	31'-0"	37'-9"	HSS14x10x3/4	W14x43	ABOVE GRADE, H3 ≤ 14'-0", H1 ≤ 10'-0", DETAIL  OR 	PURLIN PA:  12x4 1/2 x 1 1/2 x 14 GA OR  12x4 x 1 x 14 GA PURLIN PB: 12x4 1/2 x 1 1/2 x 14 GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EVERY BAY	12x1.5 14 GA TRACK
<input type="checkbox"/> L4U-AT-1.0 <input type="checkbox"/> L4D-AT-1.0	2+ COLUMN (NOTE 2) (2 COL MIN, NO MAX)	31'-0"	37'-9"	HSS14x10x3/4	W14x43	 AT-GRADE, H3 ≤ 14'-0", DETAIL  OR   AT-GRADE, H3 ≤ 15'-0", DETAIL  OR   ABOVE-GRADE, H3 ≤ 18'-0", H1 ≤ 15'-0", DETAIL  OR 	PURLIN PA:  12x4 1/2 x 1 1/2 x 14 GA OR  12x4 x 1 x 14 GA PURLIN PB: 12x4 1/2 x 1 1/2 x 14 GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EVERY BAY	12x1.5 14 GA TRACK
<input type="checkbox"/> L4U-AS-1.5 <input type="checkbox"/> L4D-AS-1.5	2+ COLUMN (NOTE 2) (2 COL MIN, NO MAX)	31'-0"	37'-9"	HSS14x10x3/4	W14x43	ABOVE GRADE, H3 ≤ 14'-0", H1 ≤ 10'-0", DETAIL  OR 	PURLIN PA:  12x4 1/2 x 1 1/2 x 14 GA OR  12x4 x 1 x 14 GA PURLIN PB: 12x4 1/2 x 1 1/2 x 14 GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EVERY BAY	12x1.5 14 GA TRACK
<input type="checkbox"/> L4U-AT-1.5 <input type="checkbox"/> L4D-AT-1.5	2+ COLUMN (NOTE 2) (2 COL MIN, NO MAX)	31'-0"	37'-9"	HSS14x10x3/4	W14x43	 AT-GRADE, H3 ≤ 14'-0", DETAIL  OR   AT-GRADE, H3 ≤ 15'-0", DETAIL  OR ABOVE-GRADE, H3 ≤ 18'-0", H1 ≤ 15'-0", DETAIL OR	PURLIN PA: 12x4 1/2 x 1 1/2 x 14 GA OR 12x4 x 1 x 14 GA PURLIN PB: 12x4 1/2 x 1 1/2 x 14 GA PROVIDE THIRD POINT BLOCKING (SEE NOTE 1 FOR EXCEPTION)	13'-2"	9x2.5x1x16GA	9x4x1x14 GA	EVERY BAY	12x1.5 14 GA TRACK

SCHEDULE NOTES:

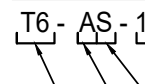






- COLUMN SPACING IS LESS THAN 25'-0". MID-POINT BLOCKING IS ACCEPTABLE IN LIEU OF THIRD POINT BLOCKING. MIN COL SPACING IS 20'-0". TYP. MAX CANTILEVER SPAN FOR MINIMUM COLUMN SPACING IS PER SCHEDULE.
- WHERE (2) COLUMN CONFIGURATION FOR A SINGLE ARRAY OCCURS, PURLINS SHALL BE UNSPLICED AND CONTINUOUS. FOR TOTAL PURLIN LENGTHS GREATER THAN 62'-0" WITH A (2) COLUMN CONFIGURATION, A FIXED PURLIN SPICE PER  MAY BE USED (MAX (1) PER PURLIN).
- THE MAXIMUM NUMBER OF PANEL ROWS IS (4), BUT FEWER PANEL ROWS MAY BE USED THE MAXIMUM NUMBER OF PANEL ROWS IS  OR 
- SEE SECTION DETAILS LISTED FOR DEFINITIONS OF "H3" AND "H1"
- COLUMNS BETWEEN SEPARATE CANOPIES SHALL BE SPACED TO AVOID DRILLED PIER GROUP EFFECTS (FOR BOTH SKIN FRICTION AND LATERAL BEARING). SEE SEPARATION DIMENSION PER GEOTECH RECOMMENDATIONS SECTION ON S100.

2 MEMBER SCHEDULE
SCALE: NTS

SYMBOLS LEGEND:

-  ROD BRACE SUPPORTS PER 
-  PURLIN SPICE PER 
-  FIXED PURLIN SPICE PER 

ARRAY ID LEGEND

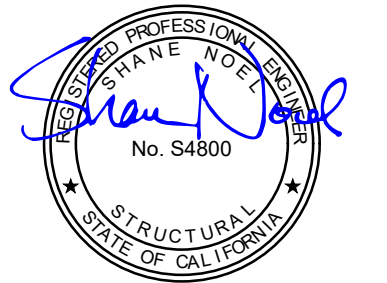
-  T6 - AS - 1.0
-  S - SHORTER OPTION
-  T - TALLER OPTION
-  A - 2 COL MIN (NO MAX)
-  B - 3 COL MIN (NO MAX)
-  C - 2 COL (FIXED)
-  CANOPY TYPE

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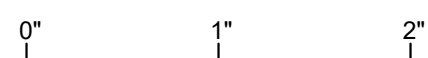
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4 PANEL L-STRUCTURE
FRAMING PLAN AND SCHEDULE

REVISION	DATE	DESCRIPTION
1	07/21/2023	DESIGN
2	07/21/2023	PLAN REVIEW SUBMITTAL
3	07/21/2023	V3 SUBMITTAL
4	07/21/2023	V4 SUBMITTAL

DATE 07/21/2023

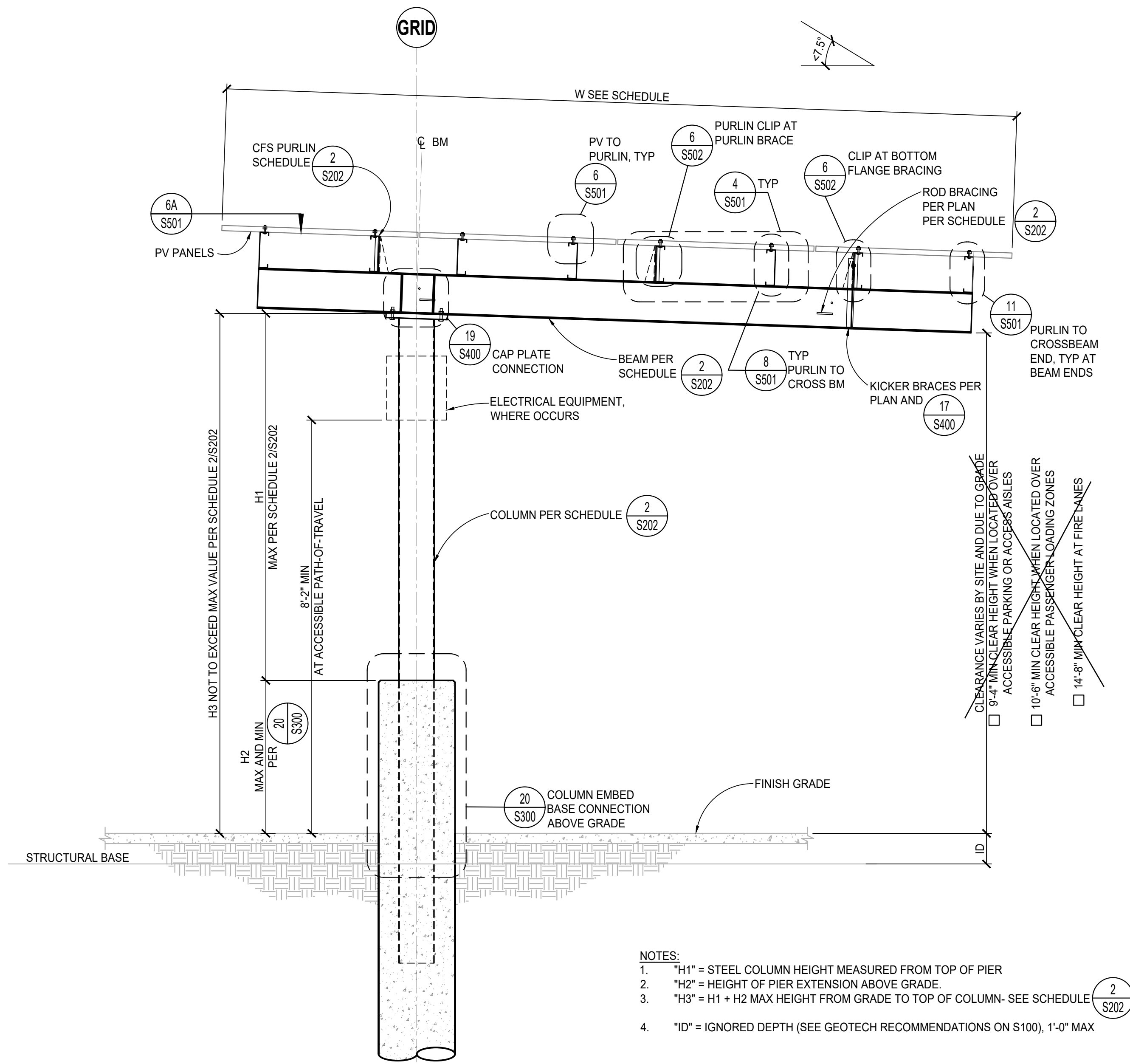
DRAWN BY JM



ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

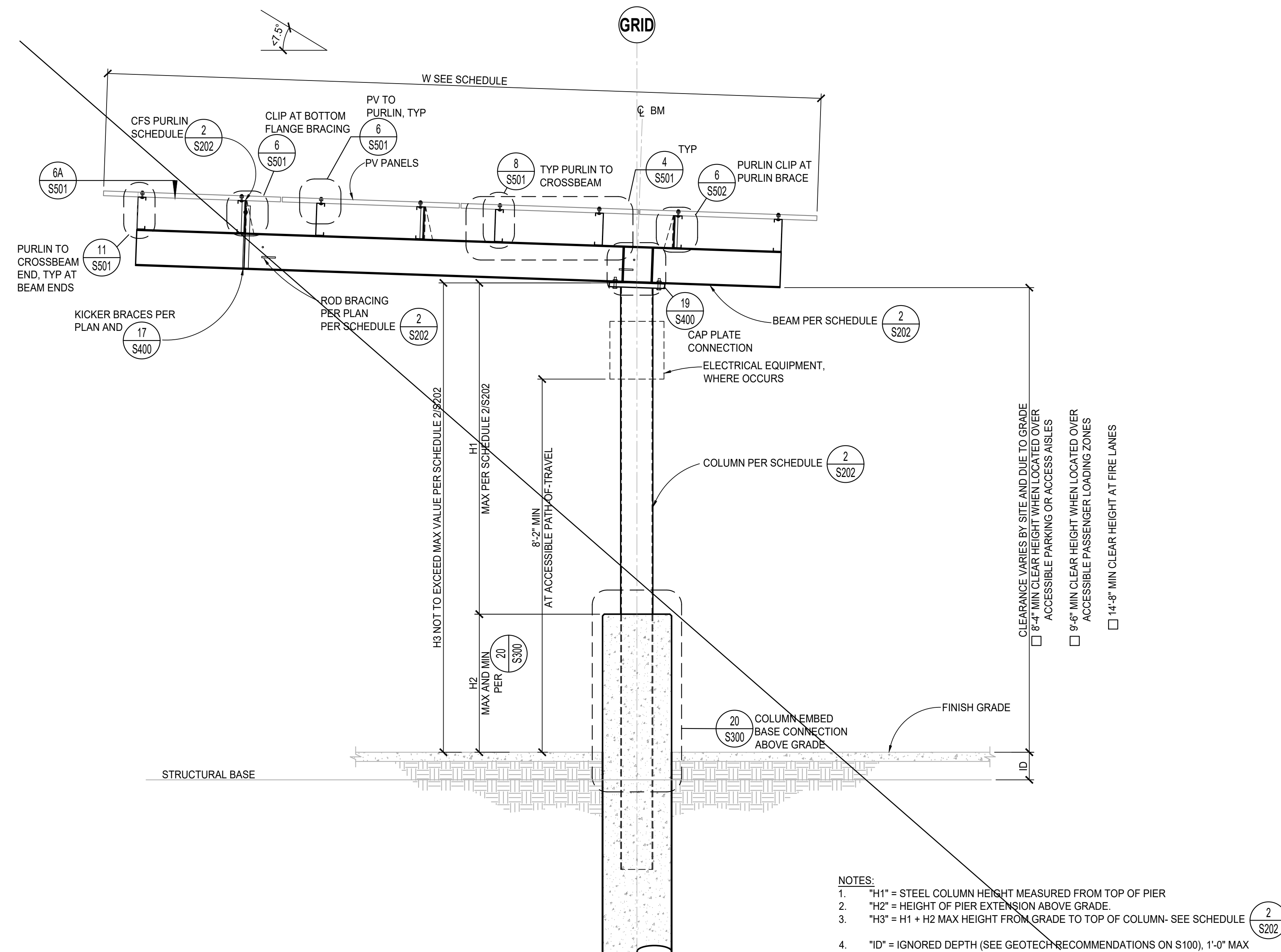
SHEET

S202



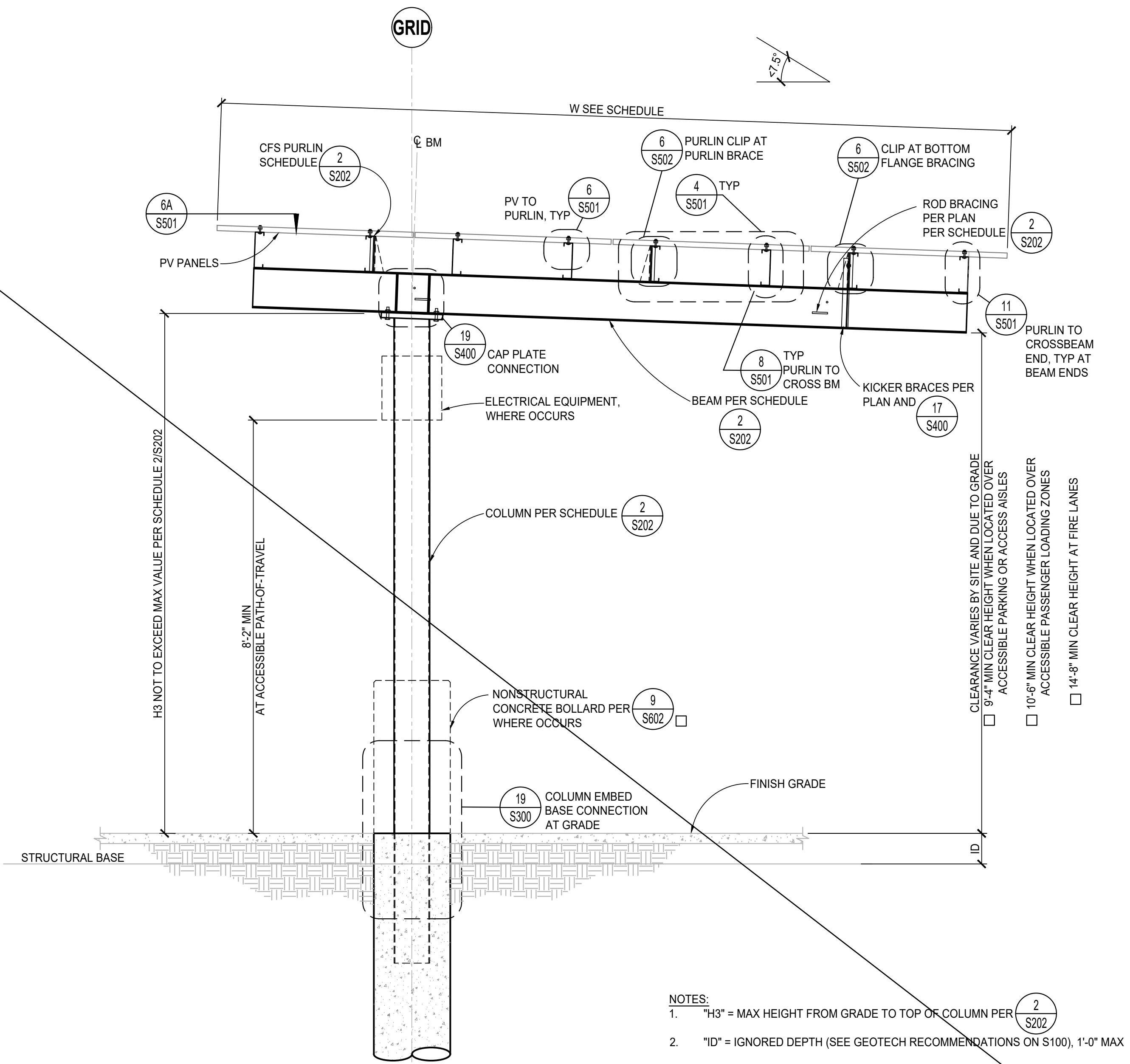
1 TYPICAL 4 PANEL L-STRUCTURE "DOWN" SECTION (ABOVE-GRADE OPTION) ☒

SCALE: 3/8"=1'-0"



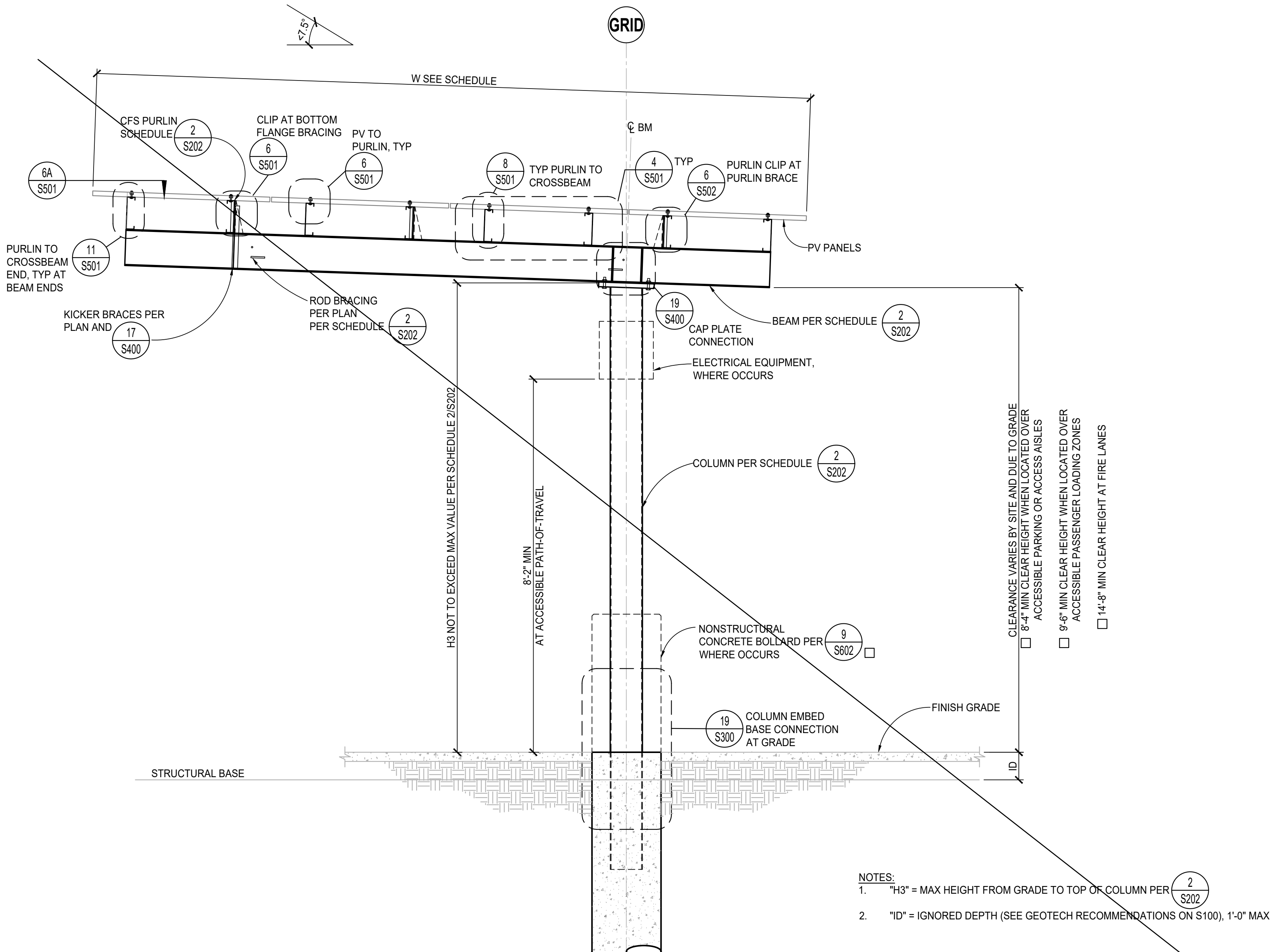
3 TYPICAL 4 PANEL L-STRUCTURE "UP" SECTION (ABOVE-GRADE OPTION) ☐

SCALE: 3/8"=1'-0"



2 TYPICAL 4 PANEL L-STRUCTURE "DOWN" SECTION (AT-GRADE OPTION) ☐

SCALE: 3/8"=1'-0"



4 TYPICAL 4 PANEL L-STRUCTURE "UP" SECTION (AT-GRADE OPTION) ☐

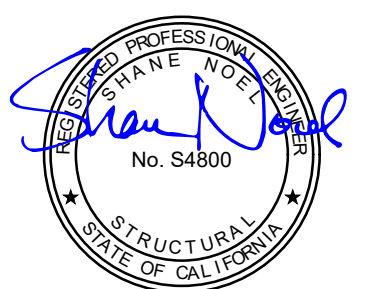
SCALE: 3/8"=1'-0"

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4 PANEL L-STRUCTURE SECTIONS

REVISION	DATE	DESCRIPTION
1	07/24/2023	DESIGN SUBMITTAL
2	07/24/2023	PLAN REVIEW SUBMITTAL
3	07/24/2023	V3 SUBMITTAL
4	07/24/2023	V4 SUBMITTAL

DATE 07/21/2023

DRAWN BY JM

0" 1" 2"

ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

S203

DIMENSION 'A'		
<input checked="" type="checkbox"/> 30° PIER	<input checked="" type="checkbox"/> 33° PIER	
<input checked="" type="checkbox"/> SOIL PROFILE A	7'-6"	8'-3"
<input type="checkbox"/> SOIL PROFILE B	17'-6" MAX ⁽¹⁾	19'-3" MAX ⁽¹⁾

NOTES:

- DIMENSION 'A' NEED NOT EXCEED THE DEPTH OF THE PIER BELOW THE STRUCTURAL BASE.
- DIMENSION 'B' = THE REMAINING PIER DEPTH BELOW DIMENSION 'A'; OR ZERO IF DIMENSION 'A' IS EQUAL TO THE DEPTH OF THE PIER BELOW THE STRUCTURAL BASE.
- SPIRAL PITCH 'S1' OCCURS IN THE DIMENSION 'A' REGION, AND SPIRAL PITCH 'S2' OCCURS IN THE DIMENSION 'B' REGION. SEE SCHEDULE 16.
- SEE SOIL PROFILE SELECTION ON S100

BAR SIZE	L _d
<input checked="" type="checkbox"/> #7	1'-11"
<input type="checkbox"/> #8	2'-2"
<input checked="" type="checkbox"/> #9	2'-5"

1 DIMENSION 'A' AND 'B' SCHEDULE

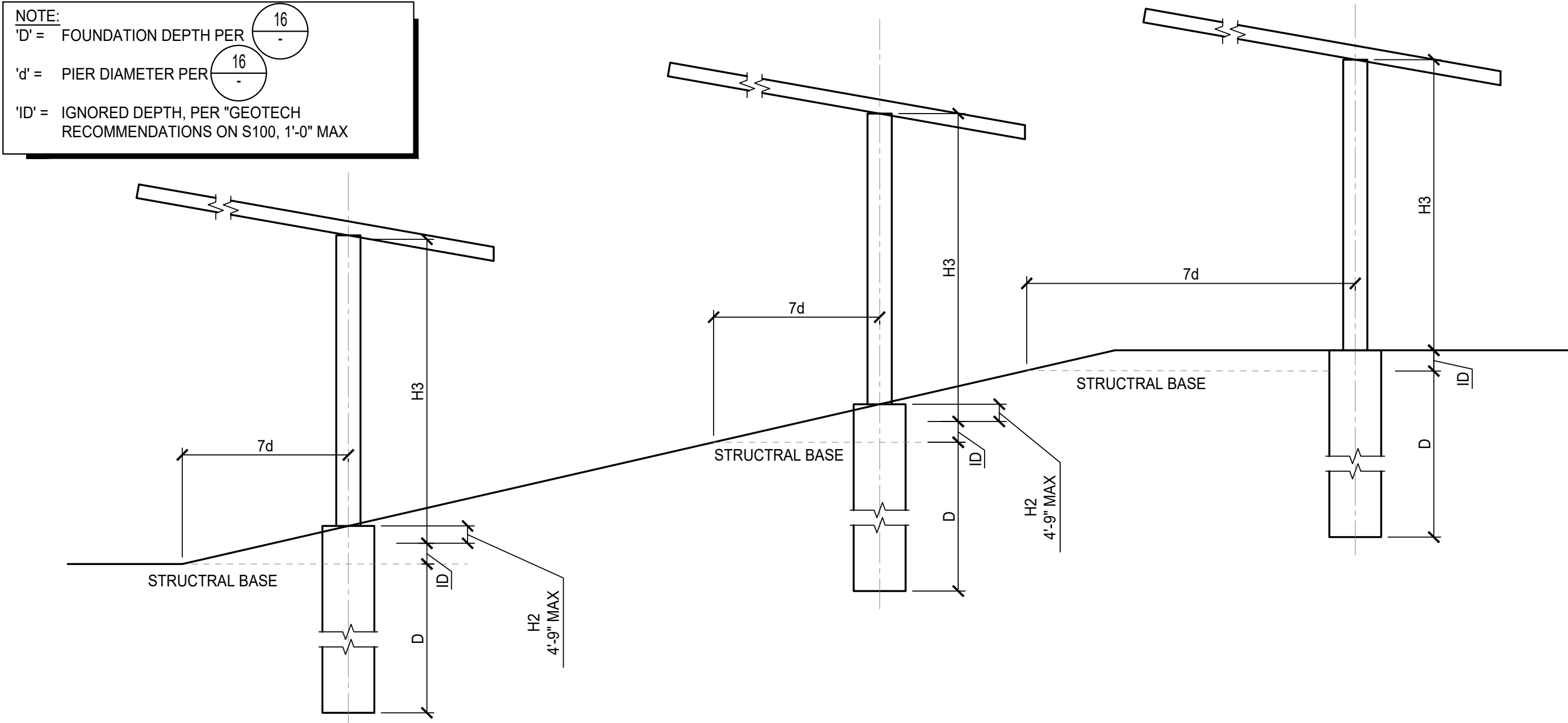
SCALE: 1"=1'-0"

2 DEVELOPMENT LENGTH SCHEDULE

NTS

3 FOUNDATIONS ON SLOPED SITES

NTS



5 CONCRETE CROSS SECTION ABOVE STRUCTURAL BASE

SCALE: NTS

NOTE:

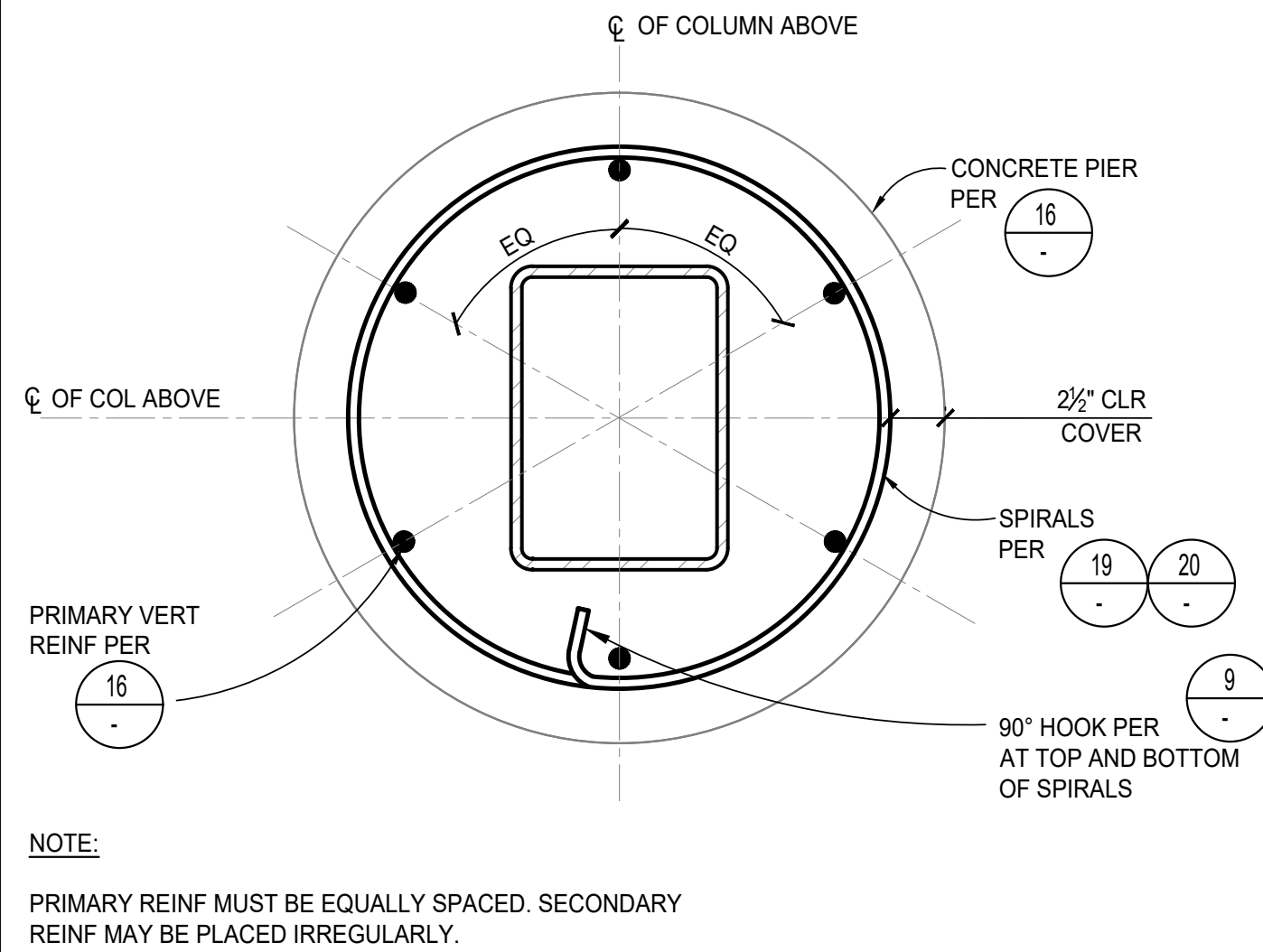
PRIMARY REINF MUST BE EQUALLY SPACED. SECONDARY REINF MAY BE PLACED IRREGULARLY WITH 3" MIN SPACING FROM OTHER VERTICAL BARS (PRIMARY OR SECONDARY).

NOTES:

- FOR #4 BAR SPIRAL, LAP SPLICE SHALL BE 2'-0" MIN (MAY NOT OCCUR AT COLD JOINT)
- SEE IGNORED DEPTH ("ID") PER GEOTECH RECOMMENDATIONS ON S100
- SEE SOIL PROFILE SELECTION ON S100

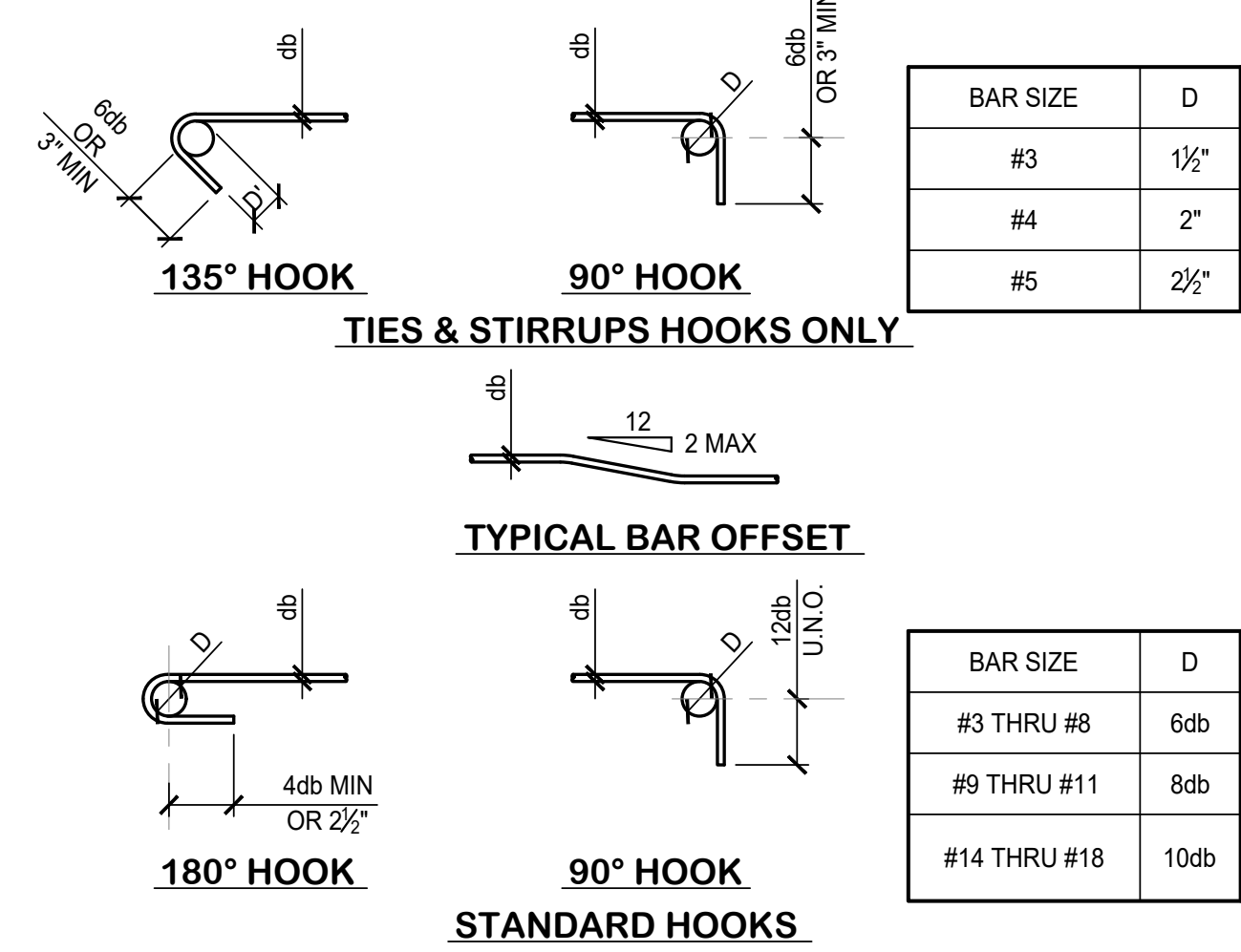
8 CONCRETE CROSS SECTION BELOW STRUCTURAL BASE

SCALE: NTS



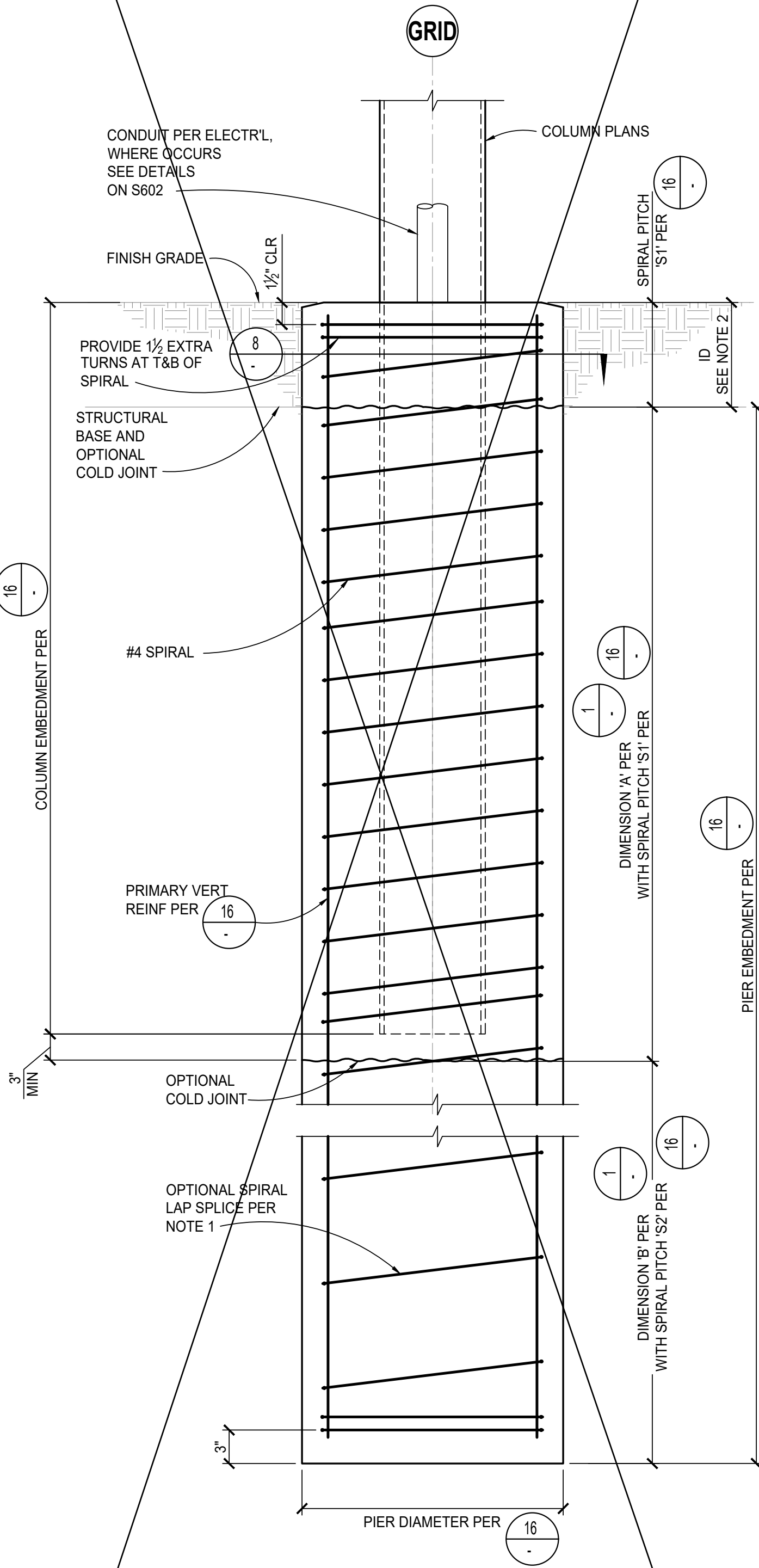
9 TYPICAL REINFORCING BAR BENDS

NTS



NOTES:

- FOR #4 BAR SPIRAL, LAP SPLICE SHALL BE 2'-0" MIN (MAY NOT OCCUR AT COLD JOINT)
- SEE IGNORED DEPTH ("ID") PER GEOTECH RECOMMENDATIONS ON S100
- SECONDARY VERTICAL BARS PER 16 NOT REQUIRED
- SEE SOIL PROFILE SELECTION ON S100



19 CONCRETE PIER DETAIL (PIER AT GRADE)

SCALE: 1"=1'-0"

20 CONCRETE PIER DETAIL

SCALE: 1"=1'-0"

CONC PIER FOUNDATION AND BASE CONNECTION SCHEDULE														
CANOPY TYPE AND SEISMICITY	H3 MAX H3 = H1+H2	<input checked="" type="checkbox"/> SOIL PROFILE A SPIRAL PITCH (MAX)	<input type="checkbox"/> SOIL PROFILE B SPIRAL PITCH (MAX)	<input checked="" type="checkbox"/> 30° PIER: MIN PIER DEPTH (NOTE 1 AND NOTE 2)				<input checked="" type="checkbox"/> 30° PIER EMBEDDED COLUMNS			<input type="checkbox"/> 33° PIER: MIN PIER DEPTH (NOTE 1 AND NOTE 3)	<input type="checkbox"/> 33° PIER EMBEDDED COLUMNS IN SOIL CLASS V		
				<input type="checkbox"/> SOIL CLASS V	<input type="checkbox"/> SOIL CLASS W	<input type="checkbox"/> SOIL CLASS X	<input checked="" type="checkbox"/> SOIL CLASS Y	MIN EMBEDMENT	PRIMARY VERT REINF	SECONDARY VERT REINF	SOIL CLASS V	MIN EMBEDMENT	PRIMARY VERT REINF	SECONDARY VERT REINF
<input type="checkbox"/> T6 SDS<=1.0g	<input type="checkbox"/> 14'-0"	S1 = 5'4" S2 = 10'2"	S1 = 5'4" S2 = 5'4"	16'-6"	14'-9"	12'-9"	12'-9"	5'-10"	(7) #7	(5) #7	NOT APPLICABLE	NOT APPLICABLE		
<input checked="" type="checkbox"/> T6 SDS<=1.0g	<input checked="" type="checkbox"/> 18'-0"	S1 = 5'4" S2 = 10'2"	S1 = 5'4" S2 = 6'2"	17'-3"	14'-9"	12'-9"	12'-9"	5'-10"	(7) #7	(5) #7				
<input type="checkbox"/> T6 SDS<=1.5g	<input type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	NP	18'-3"	15'-9"	14'-0"	5'-10"	(6) #9	(2) #9	21'-6"	5'-10"	(7) #8	(4) #8
<input type="checkbox"/> T6 SDS<=1.5g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	NP	19'-3"	16'-6"	14'-9"	5'-10"	(9) #8	N/A	22'-0"	5'-10"	(6) #9	(3) #9
<input type="checkbox"/> T5 SDS<=1.0g	<input type="checkbox"/> 14'-0"	S1 = 5'4" S2 = 10'2"	S1 = 5'4" S2 = 5'4"	16'-3"	13'-6"	11'-6"	10'-6"	5'-10"	(7) #7	(5) #7	NOT APPLICABLE	NOT APPLICABLE		
<input type="checkbox"/> T5 SDS<=1.0g	<input type="checkbox"/> 18'-0"	S1 = 5'4" S2 = 10'2"	S1 = 5'4" S2 = 5'4"	16'-9"	14'-0"	12'-0"	11'-0"	5'-10"	(7) #7	(5) #7				
<input type="checkbox"/> T5 SDS<=1.5g	<input type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	NP	17'-3"	15'-0"	13'-3"	5'-10"	(6) #9	(2) #9	20'-6"	5'-10"	(7) #8	(4) #8
<input type="checkbox"/> T5 SDS<=1.5g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	NP	18'-3"	15'-9"	13'-9"	5'-10"	(9) #8	N/A	21'-3"	5'-10"	(6) #9	(3) #9
<input checked="" type="checkbox"/> L4 SDS<=1.0g	<input checked="" type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	16'-6"	18'-6"	14'-6"	10'-6"	5'-10"	(6) #9	(2) #9	NOT APPLICABLE	NOT APPLICABLE		
<input type="checkbox"/> L4 SDS<=1.0g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	16'-9"	14'-0"	12'-3"	11'-0"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L4 SDS<=1.5g	<input type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	19'-3"	15'-9"	13'-9"	12'-3"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L4 SDS<=1.5g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	20'-0"	16'-9"	14'-6"	13'-0"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L3 SDS<=1.0g	<input type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	14'-0"	11'-9"	10'-6"	10'-6"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L3 SDS<=1.0g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	14'-6"	12'-3"	10'-9"	10'-0"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L3 SDS<=1.5g	<input type="checkbox"/> 14'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	17'-3"	14'-3"	12'-6"	11'-0"	5'-10"	(6) #9	(2) #9				
<input type="checkbox"/> L3 SDS<=1.5g	<input type="checkbox"/> 18'-0"	S1 = 6" S2 = 12"	S1 = 6" S2 = 6"	17'-9"	14'-9"	13'-0"	11'-6"	5'-10"	(6) #9	(2) #9				

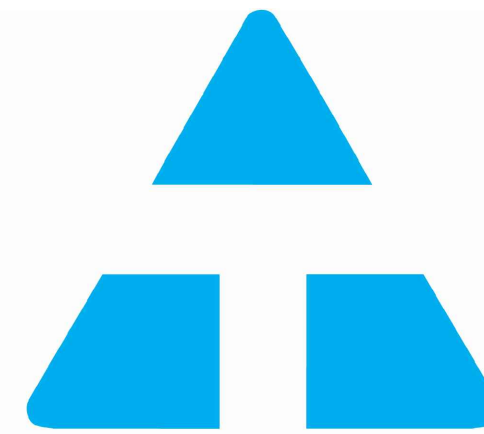
NOTES:

- PIER DEPTHS ARE MEASURED FROM STRUCTURAL BASE AND ARE BASED ON AN IGNORED DEPTH OF 1'-0" MAX. PC IS NOT ALLOWED WHEN GEOTECH REPORT REQUIRES AN IGNORED DEPTH GREATER THAN 1'-0". SEE GEOTECH RECOMMENDATIONS ON S100.
- FOR 30° PIER, THE DEPTH (MEASURED FROM STRUCTURAL BASE) MUST BE LESS THAN 20'-0"
- FOR 33° PIER, THE DEPTH (MEASURED FROM STRUCTURAL BASE) MUST BE LESS THAN 22'-0"
- NP= NOT PERMITTED, SEE 33° PIER OPTION

16 CONCRETE PIER FOUNDATION AND BASE CONNECTION SCHEDULE

SCALE: NTS

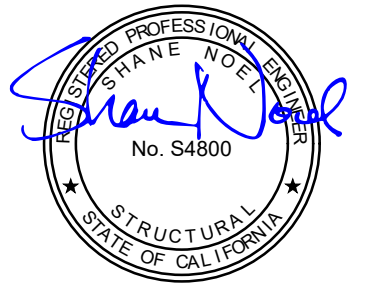
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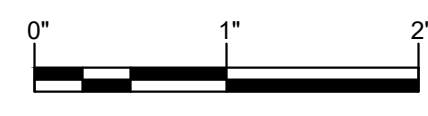
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PIER DETAILS-EMBEDDED COLUMN

REVISION SCHEDULE	DB	CG
Date	07/21/2023	JM
Design No. - Description	PLAN REVIEW SUBMITTAL	JM
V3 SUBMITTAL	07/21/2023	JM
V4 SUBMITTAL	07/21/2023	JM
No.		

DATE 07/21/2023

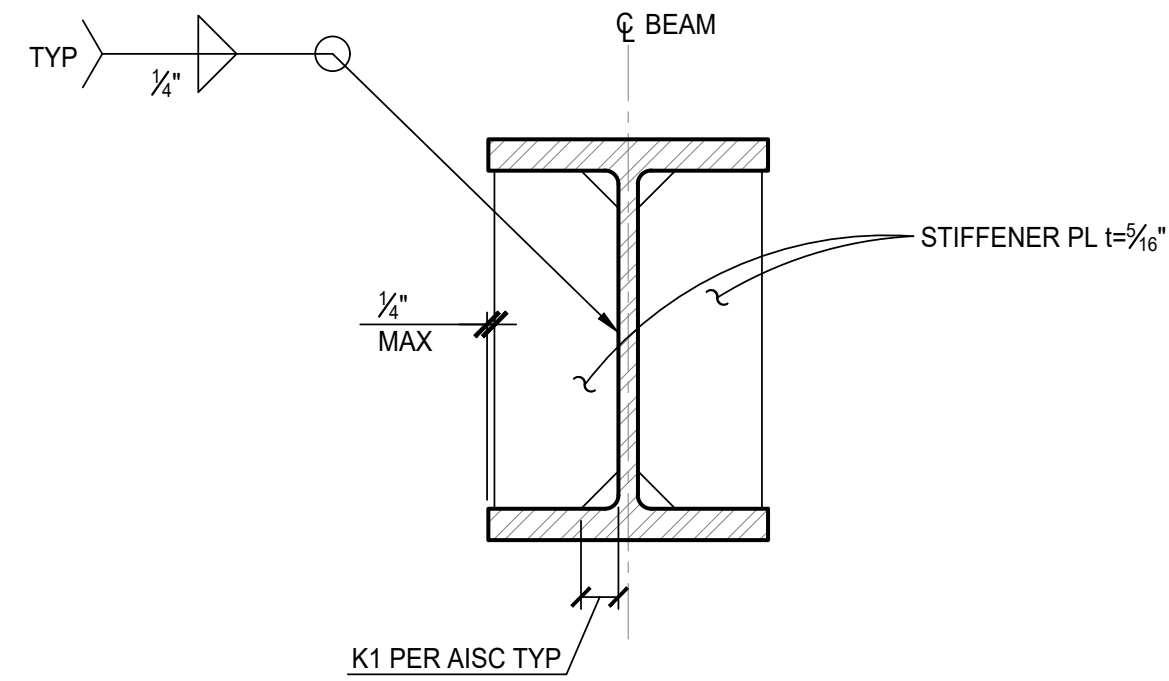
DRAWN BY JM



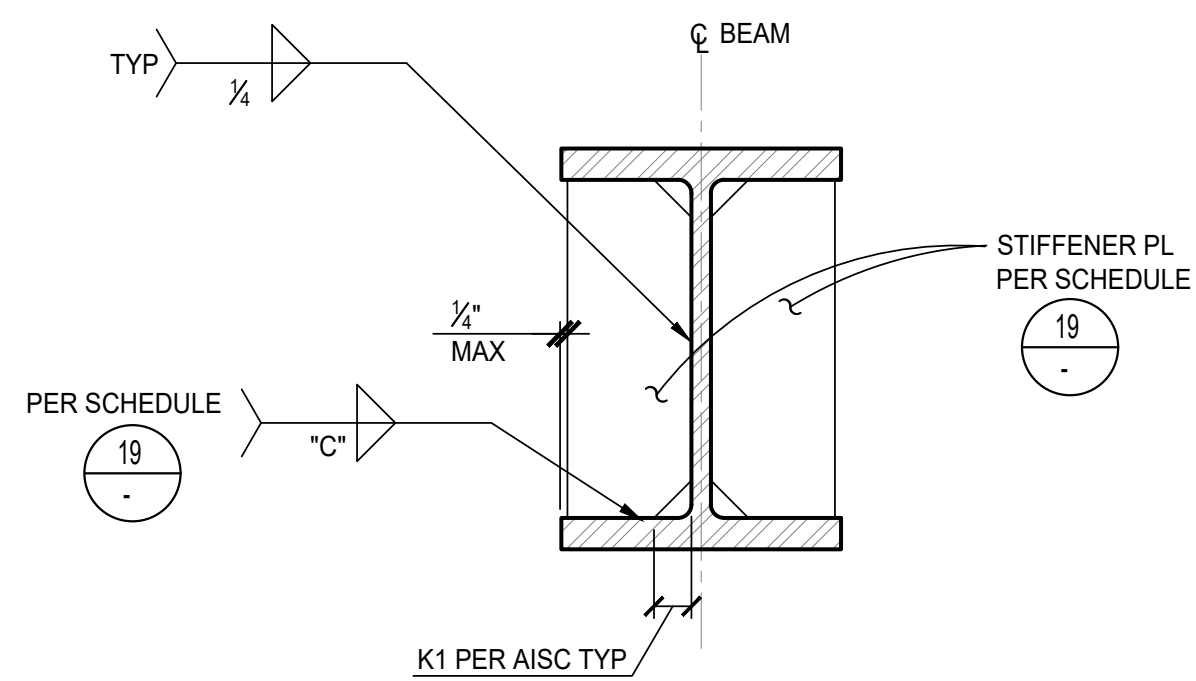
ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

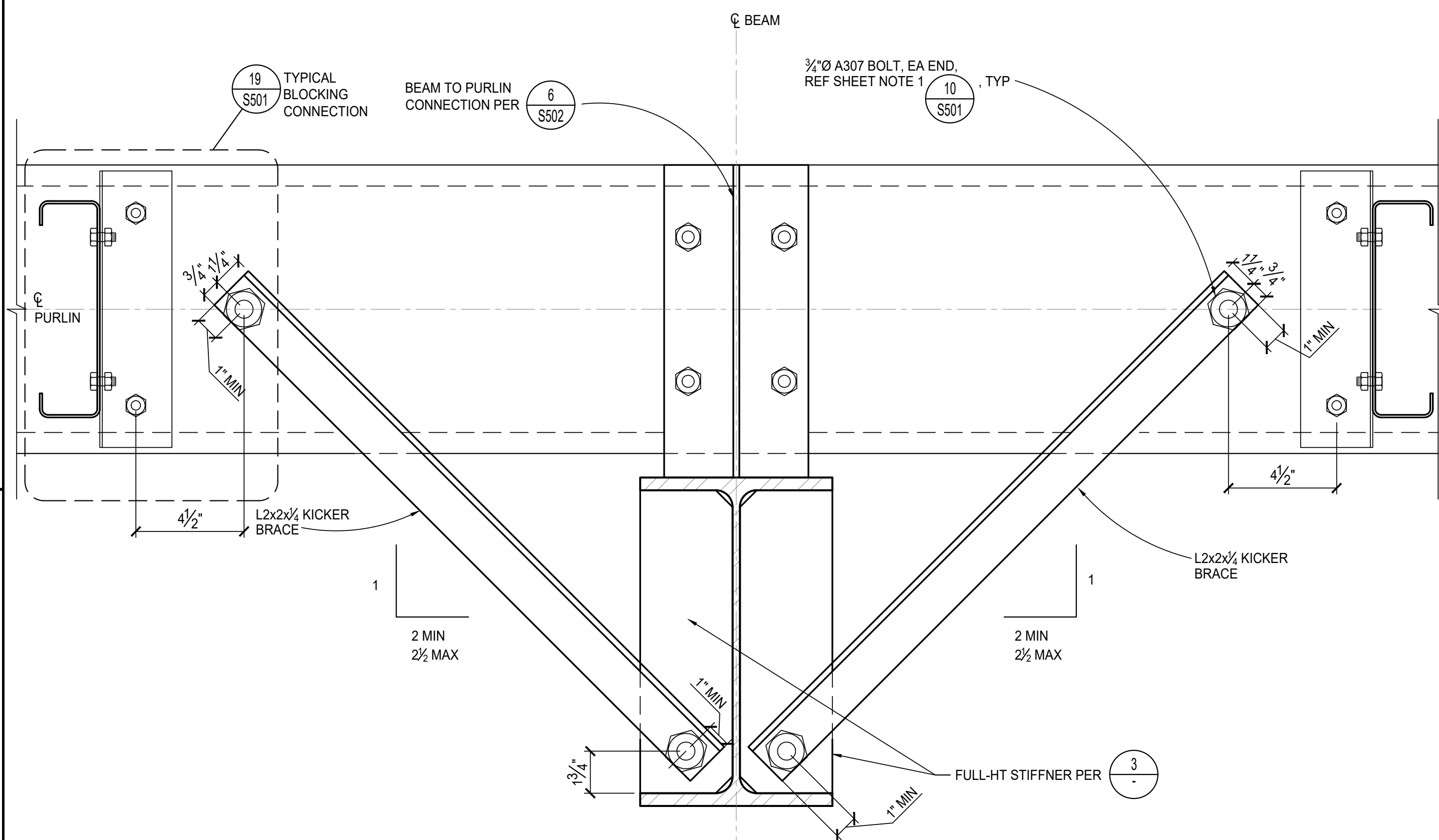
S300



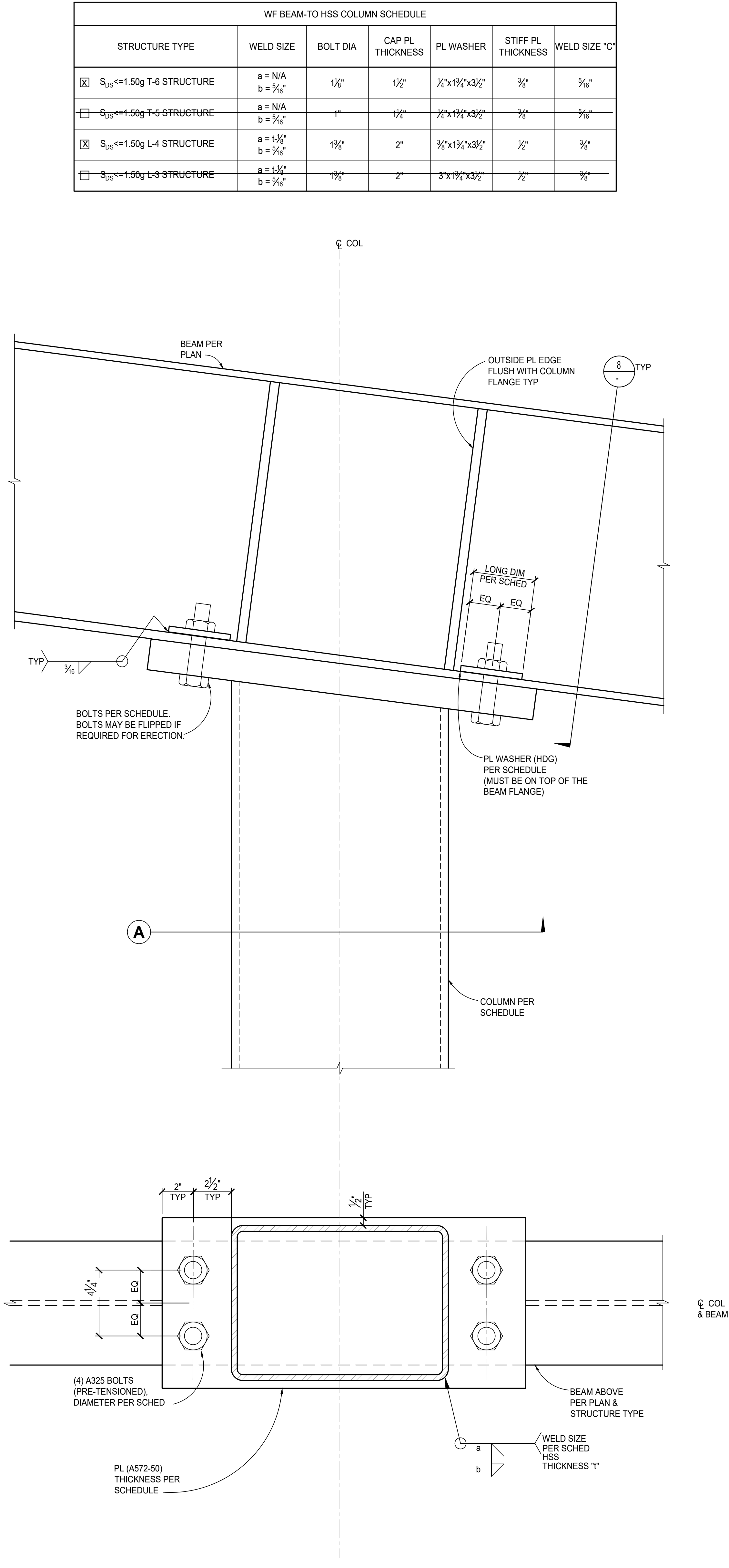
3 TYPICAL STIFFENER PLATE DETAIL
No Scale



8 STIFFENER PLATE DETAIL AT COLUMN
No Scale



17 KICKER BRACE DETAIL
SCALE: 3/4"=1'-0"



A SECTION

19 BEAM TO COLUMN CONN
SCALE: 3/4"=1'-0"

WF BEAM-TO HSS COLUMN SCHEDULE						
STRUCTURE TYPE	WELD SIZE	BOLT DIA	CAP PL THICKNESS	PL WASHER	STIFF PL THICKNESS	WELD SIZE "C"
<input checked="" type="checkbox"/> S ₁₈ ≤ 1.50g T-6 STRUCTURE	a = N/A b = 3/8"	1/2"	1/2"	1/2"x1 1/4"x3 1/2"	3/8"	3/8"
<input type="checkbox"/> S ₁₈ ≤ 1.50g T-6 STRUCTURE	a = N/A b = 3/8"	1"	1/4"	1/2"x1 1/4"x3 1/2"	3/8"	3/8"
<input checked="" type="checkbox"/> S ₁₈ ≤ 1.50g L-4 STRUCTURE	a = 1 1/8" b = 3/8"	1 3/4"	2"	3/8"x1 1/4"x3 1/2"	1/2"	3/8"
<input type="checkbox"/> S ₁₈ ≤ 1.50g L-3 STRUCTURE	a = 1 1/8" b = 3/8"	1 3/8"	2"	3"x1 1/4"x3 1/2"	1/2"	3/8"

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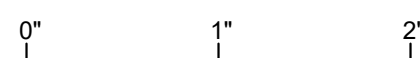
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STEEL DETAILS

REVISION SCHEDULE		DB	CG
No.	Date	SN	SN
1	02/14/2023	JM	SN
2	07/11/2023	JM	SN
3	07/21/2023	JM	SN
4	07/21/2023	JM	SN
5	07/21/2023	JM	SN
6	07/21/2023	JM	SN
7	07/21/2023	JM	SN
8	07/21/2023	JM	SN
9	07/21/2023	JM	SN
10	07/21/2023	JM	SN
11	07/21/2023	JM	SN
12	07/21/2023	JM	SN
13	07/21/2023	JM	SN
14	07/21/2023	JM	SN
15	07/21/2023	JM	SN
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23	07/21/2023	JM	SN
24	07/21/2023	JM	SN
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27	07/21/2023	JM	SN
28	07/21/2023	JM	SN
29	07/21/2023	JM	SN
30	07/21/2023	JM	SN

DATE 07/21/2023

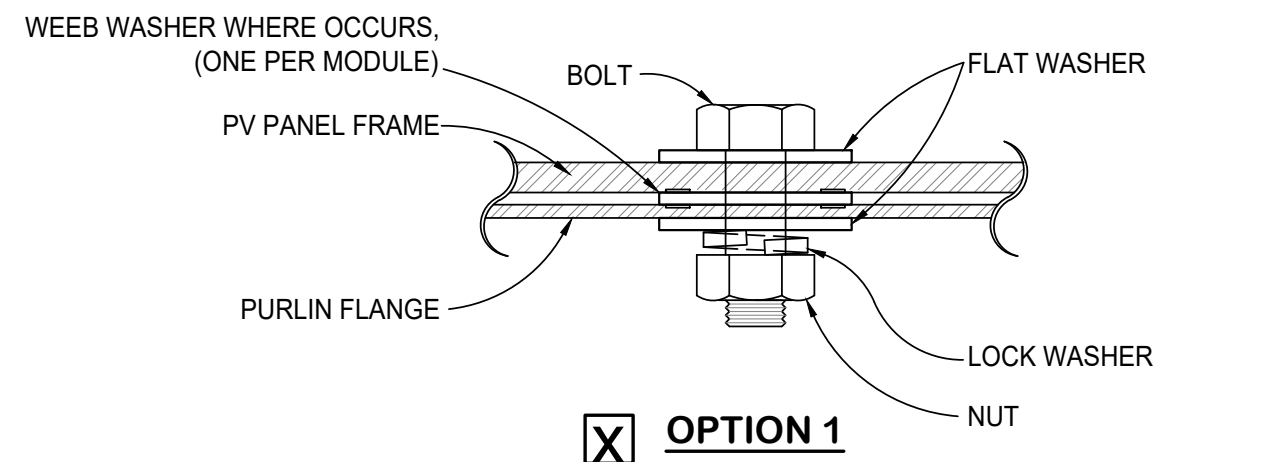
DRAWN BY JM



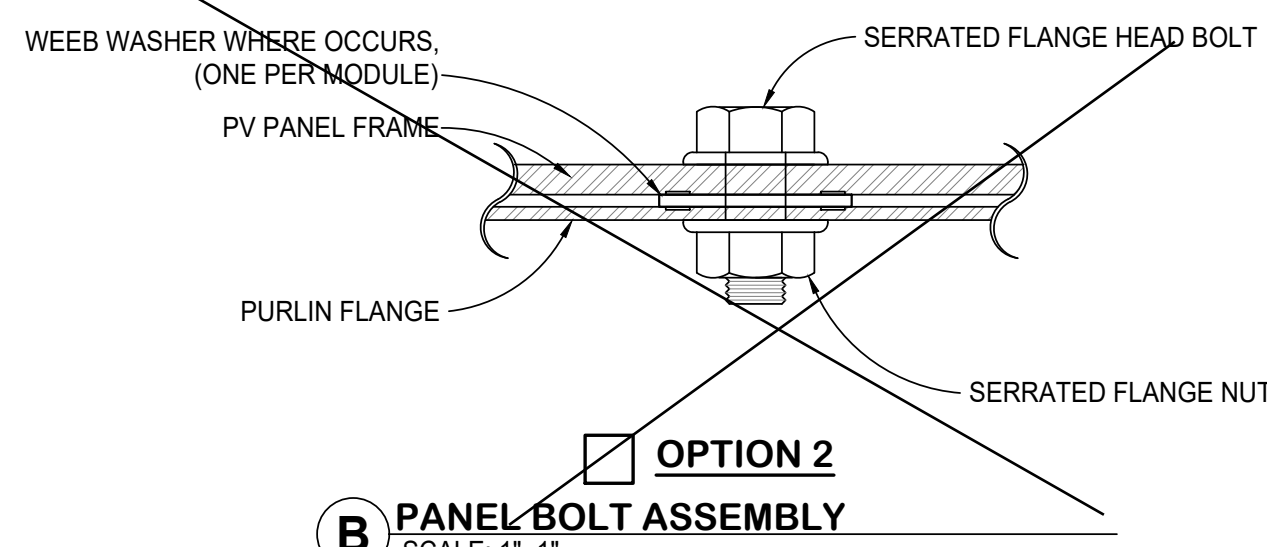
ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

S400



OPTION 1

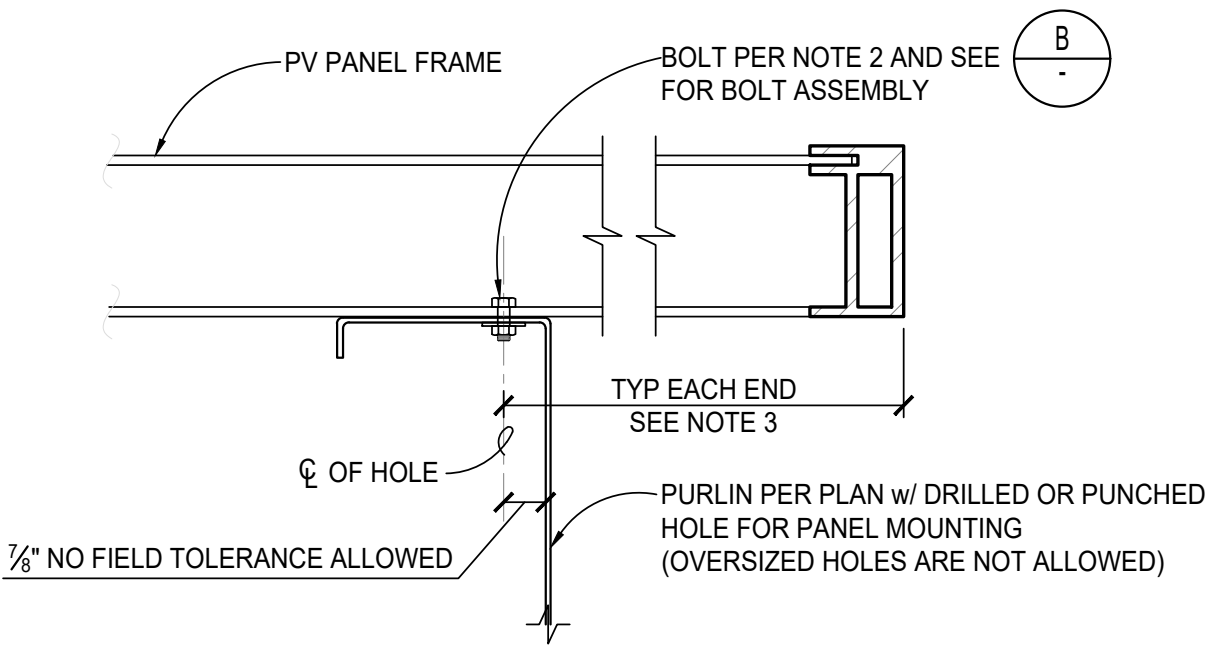


OPTION 2

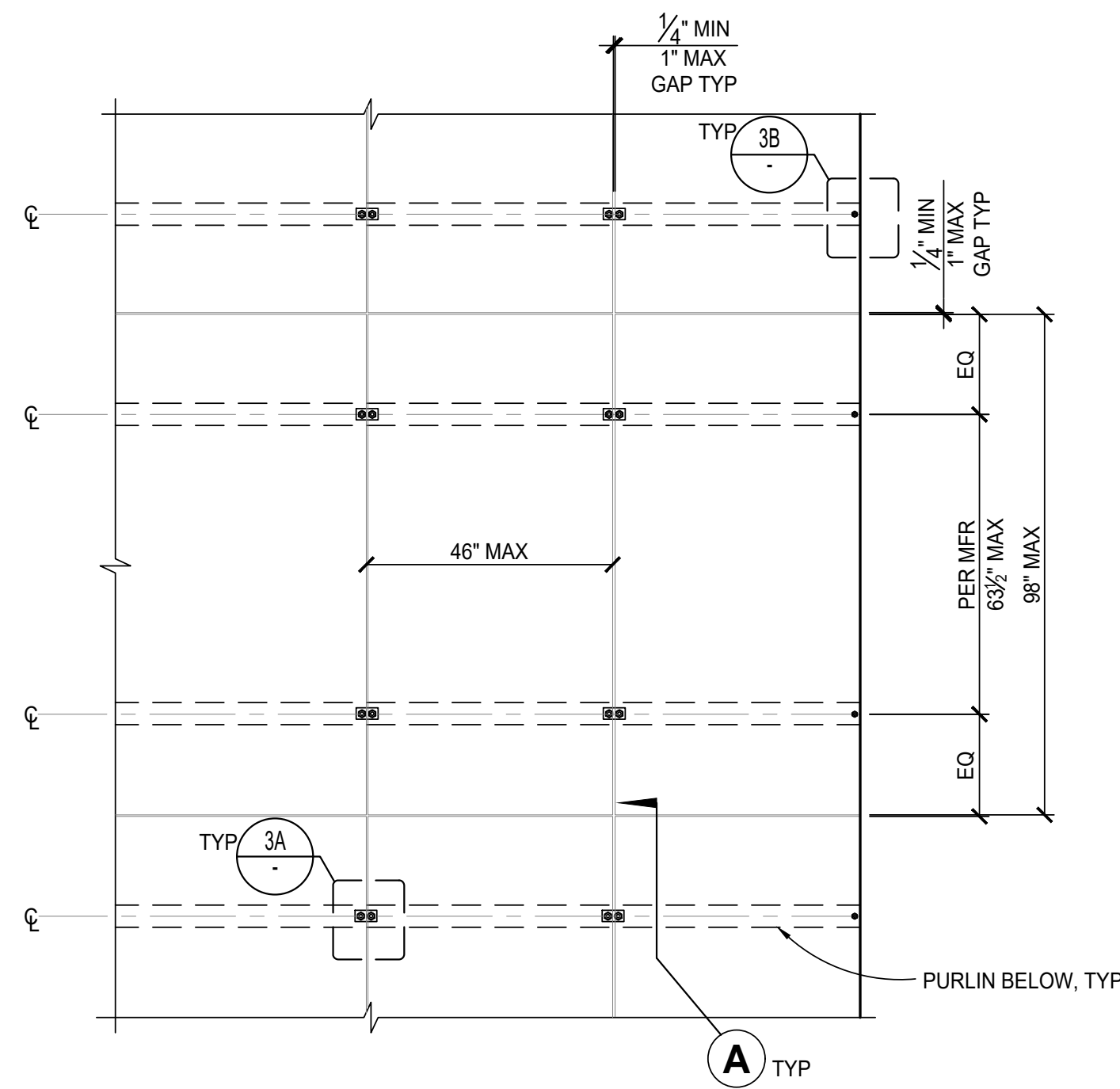
PANEL BOLT ASSEMBLY
SCALE: 1"=1"

- NOTES:
1. PRIOR TO PRETENSIONED PANEL FASTENER INSTALLATION, THE CONTRACTOR MUST SUBMIT TO THE PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND ACCEPTANCE A DETAILED PRETENSIONED PANEL FASTENER INSTALLATION PROCEDURE OUTLINING PROVISIONS TO ENSURE ALL PRETENSIONED PANEL FASTENERS ARE INSTALLED AND TORQUED WITHIN THE SPECIFIED MINIMUM AND MAXIMUM TORQUE RANGE. A COPY OF THE RESPONSIBLE DESIGN PROFESSIONAL-ACCEPTED INSTALLATION PROCEDURE SHALL BE PROVIDED TO THE SPECIAL INSPECTOR AND PROJECT INSPECTOR PRIOR TO COMMENCING PANEL FASTENER INSTALLATION.
 2. SPECIAL INSPECTION AND TORQUE TESTING OF PRETENSIONED PANEL FASTENER INSTALLATION SHALL BE PERFORMED BY A QUALIFIED REPRESENTATIVE OF THE LABORATORY OF RECORD (LOR) IN ACCORDANCE WITH SECTION 2.1.8 OF DSA IR PC-7 PC DESIGN CRITERIA FOR CANTILEVERED CANOPY STRUCTURES.
 3. BOLT SIZE PER PANEL MFR. SEE SCHEDULE BELOW. BOLT SHALL BE ASTM F593C AND NUT SHALL BE ASTM F594C.
 4. CONNECTION LOCATION TO ALIGN WITH THE POINT OF CONNECTION ON THE SITE SPECIFIC PV PANEL PER THE UL 61730 TESTING.

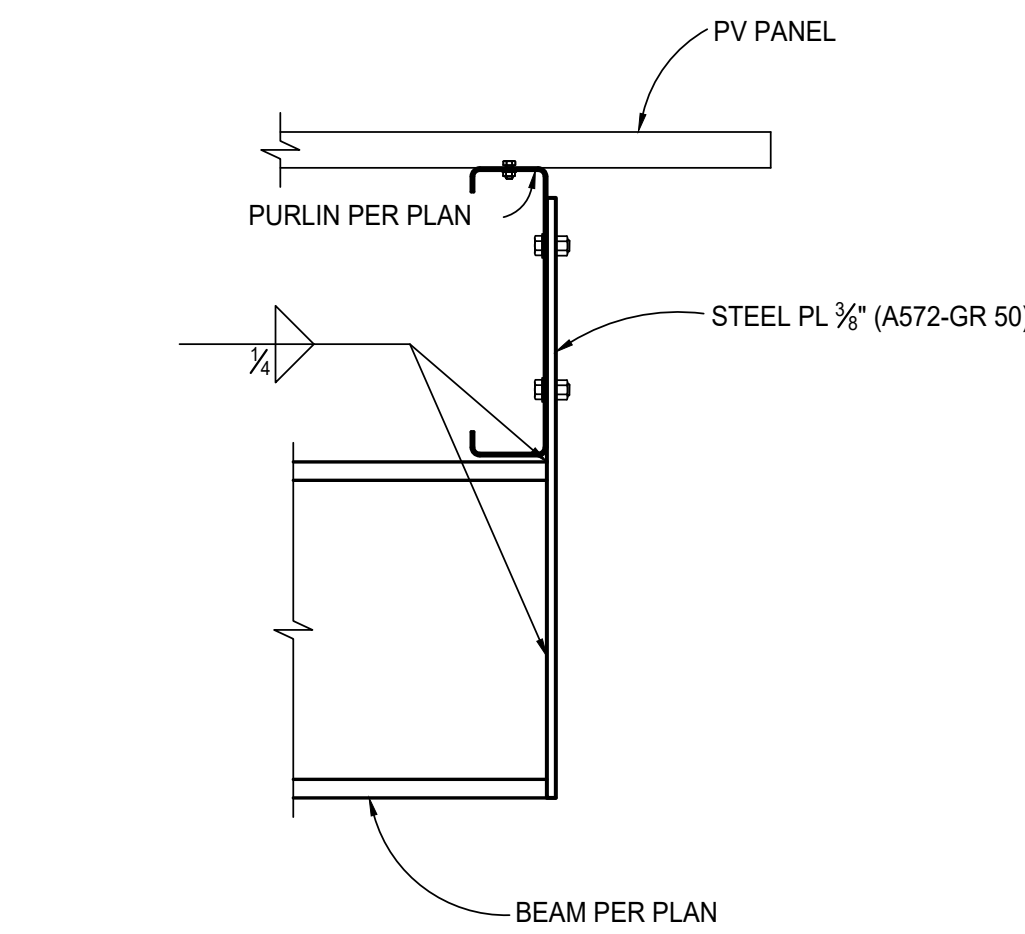
PANEL BOLT SCHEDULE	
BOLT SIZE	TORQUE RANGE
<input type="checkbox"/> 1/2"Ø	8-10 FT-LB
<input checked="" type="checkbox"/> 3/16"Ø	12-15 FT-LB



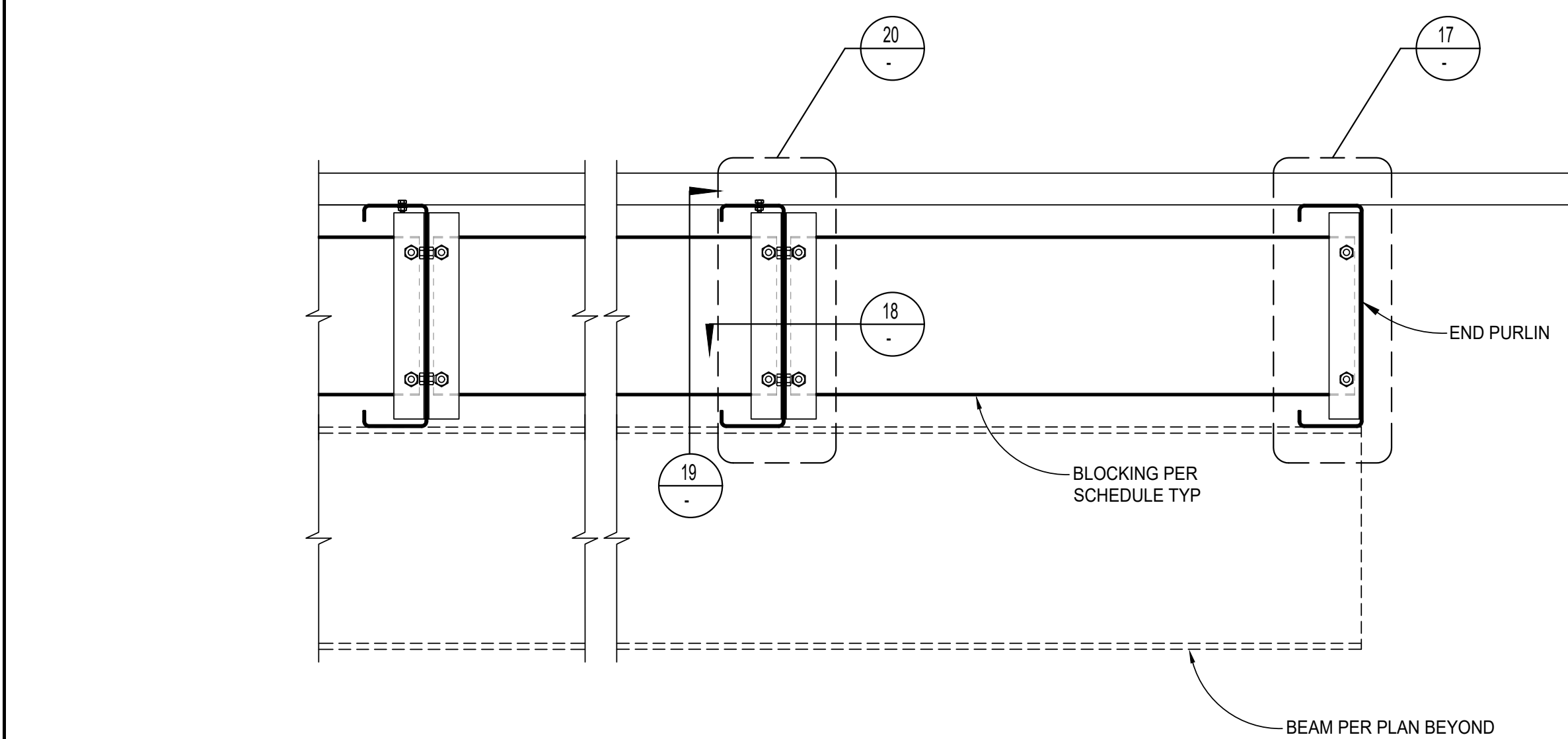
STANDARD BOLTED CONN



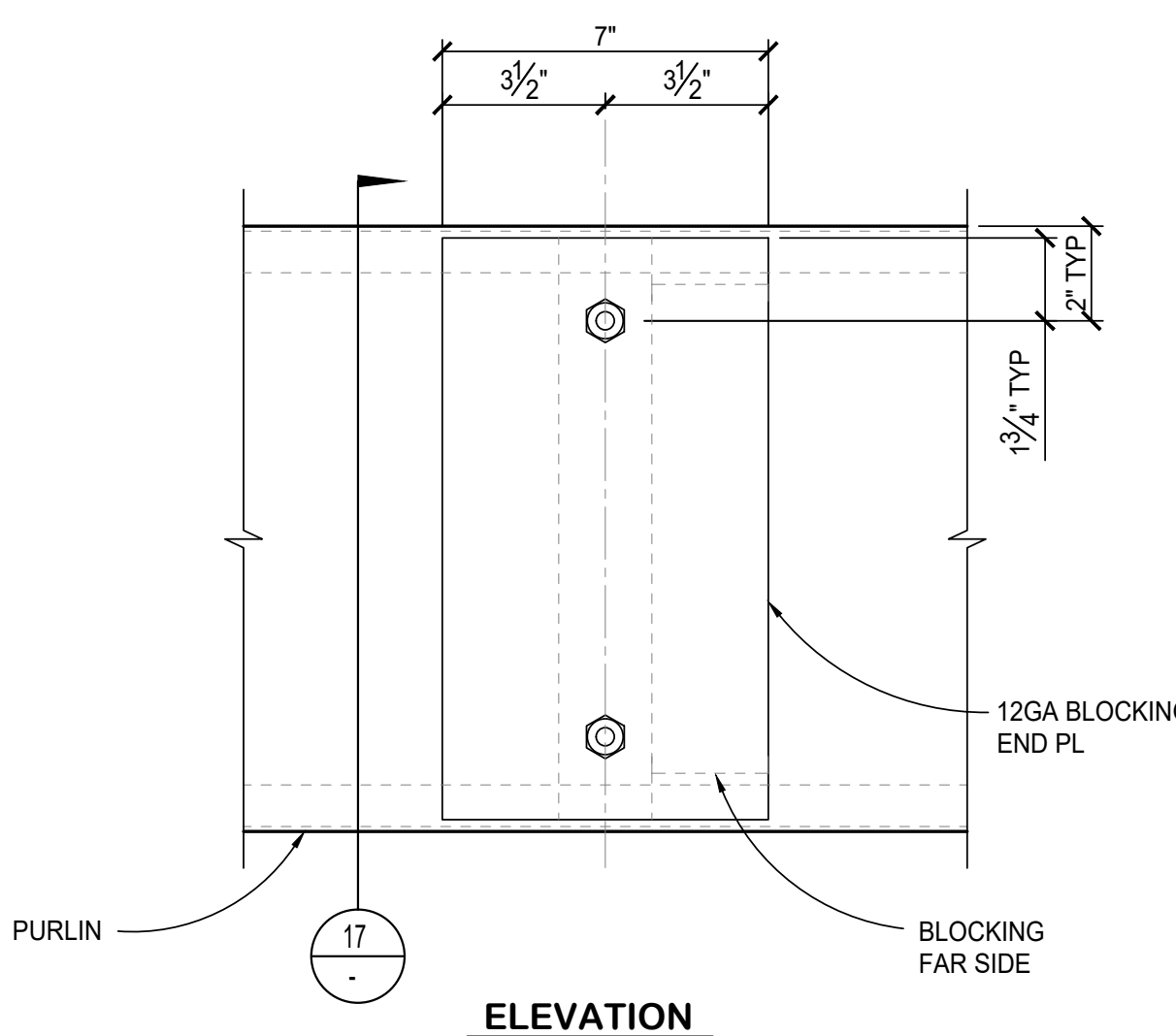
PV PANEL ATTACHMENT DETAIL
SCALE: 1/2"=1'-0"



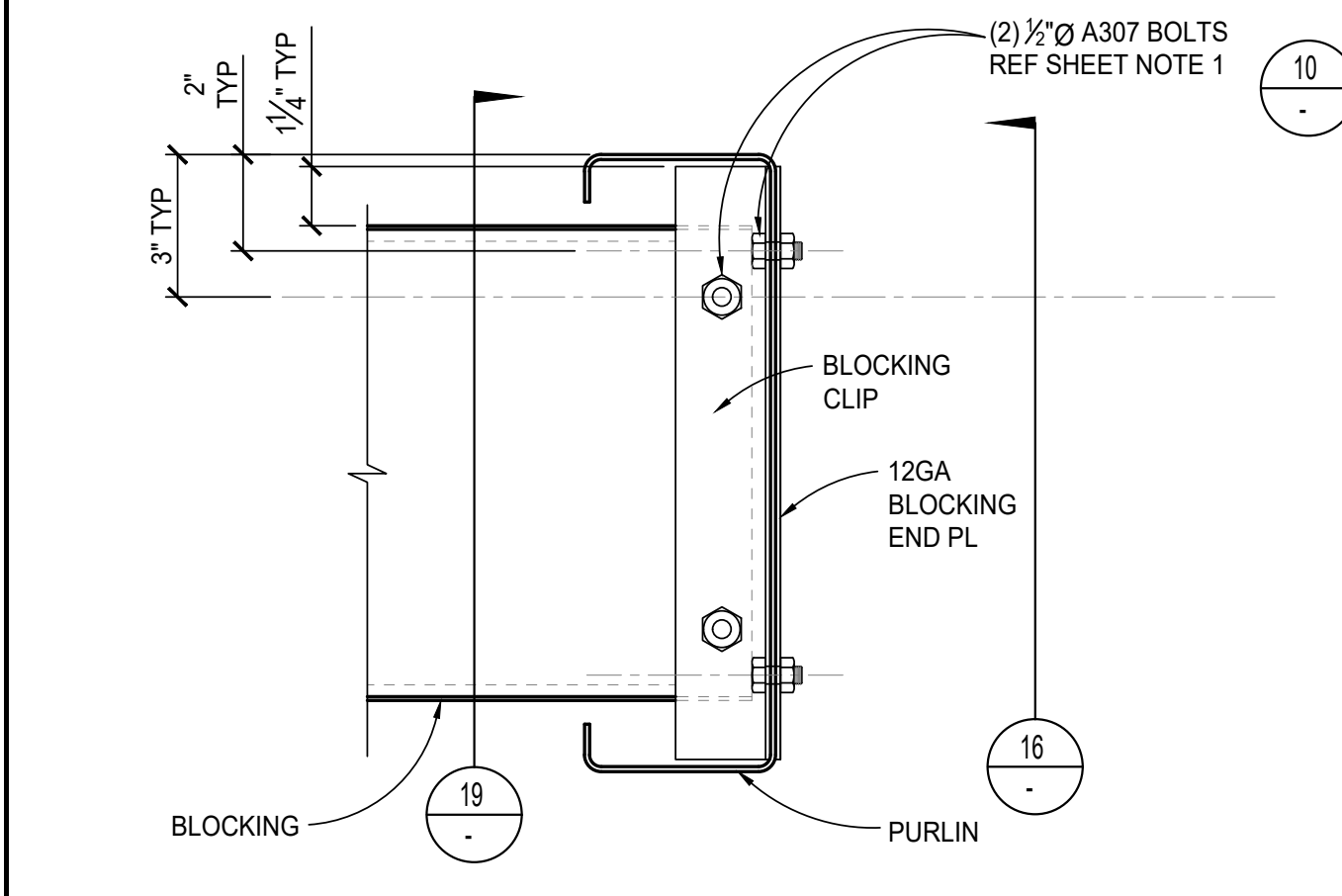
PURLIN TO BEAM CONN AT END CONDITION
SCALE: 1/2"=1'-0"



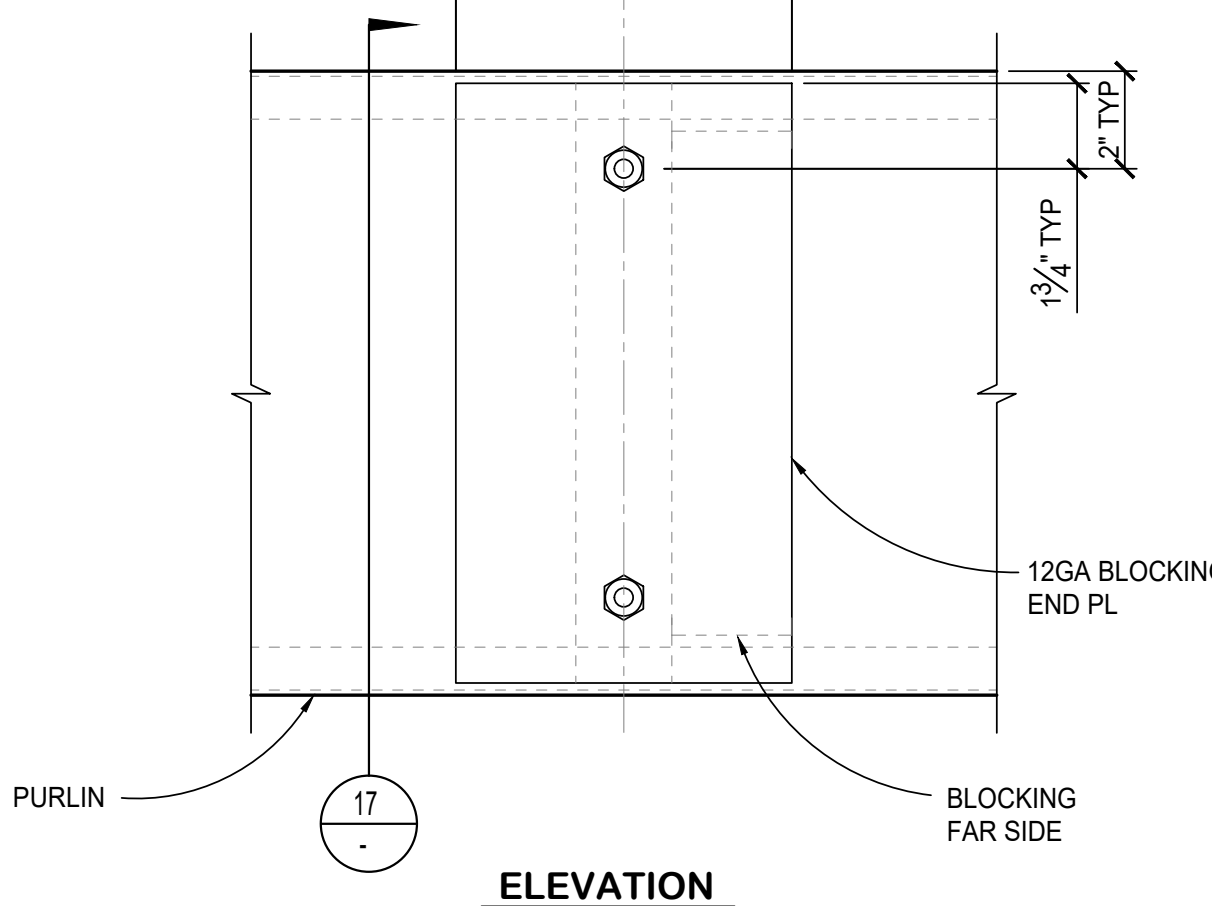
BLOCKING DETAIL
SCALE: 1/2"=1'-0"



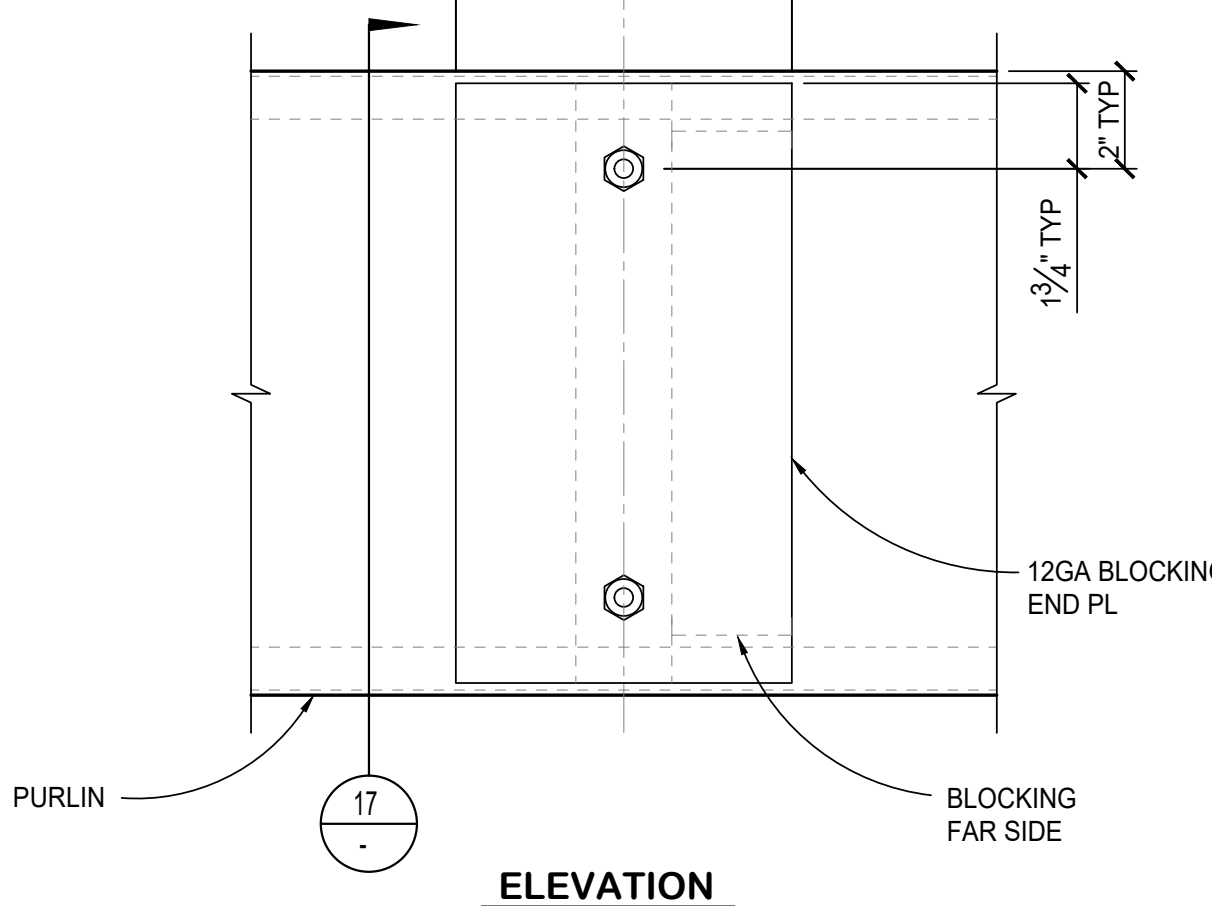
END PURLIN BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



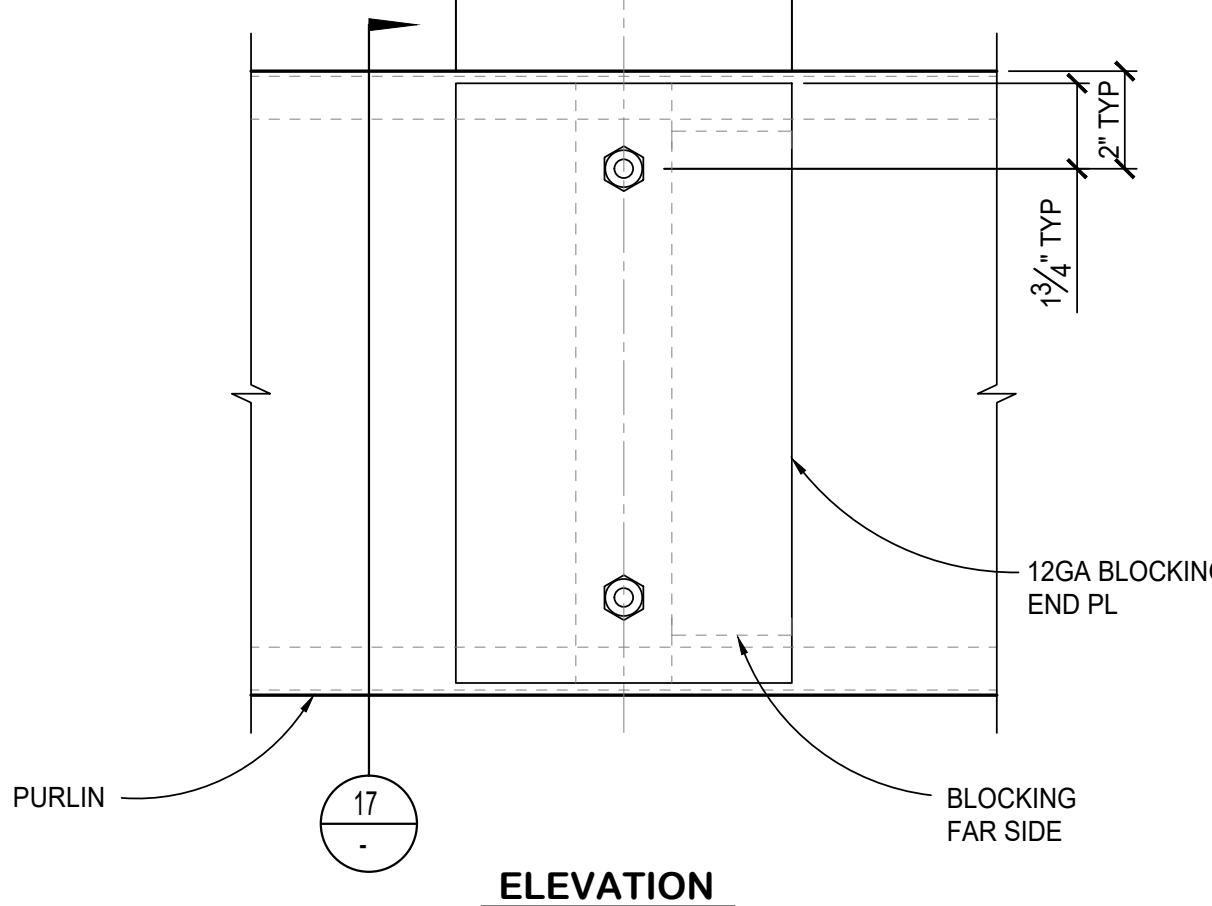
END PURLIN BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



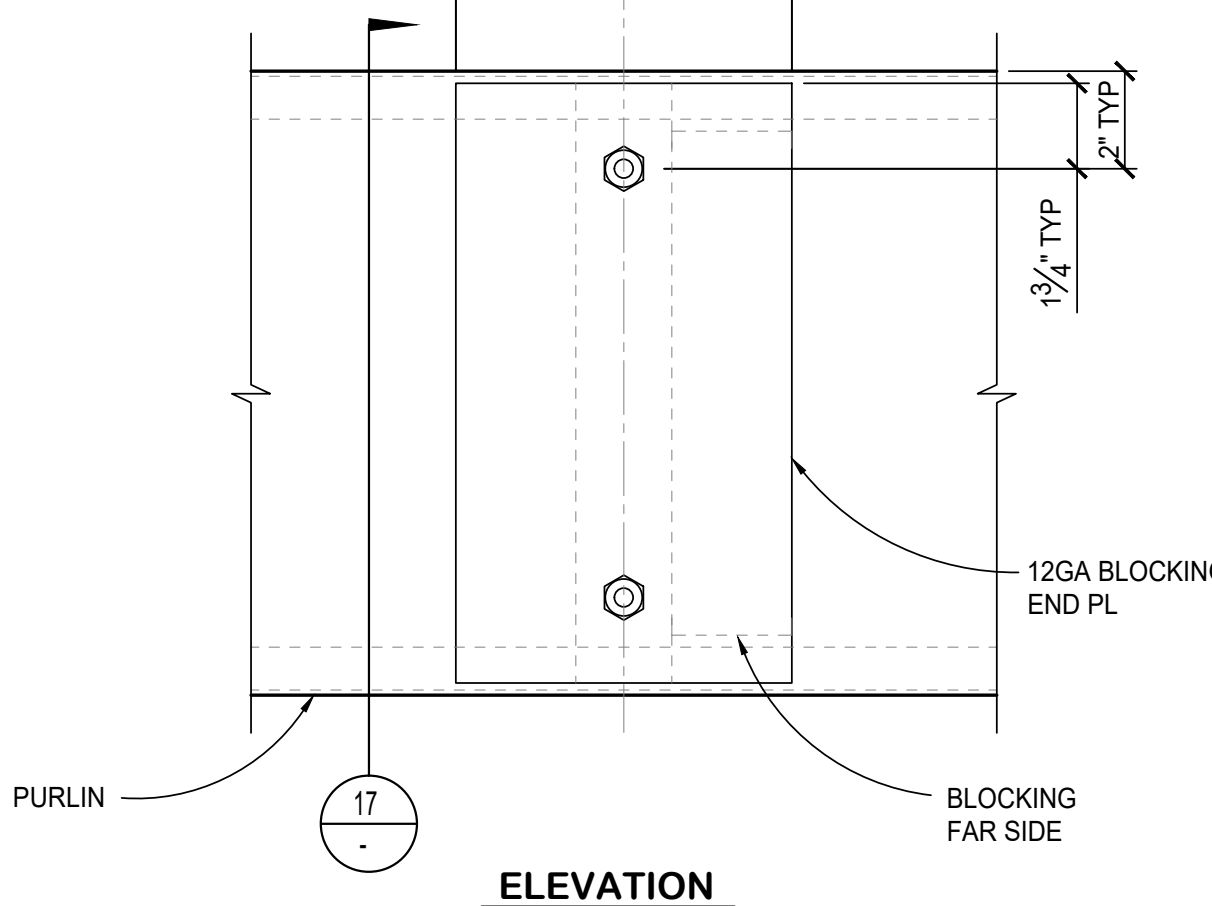
TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



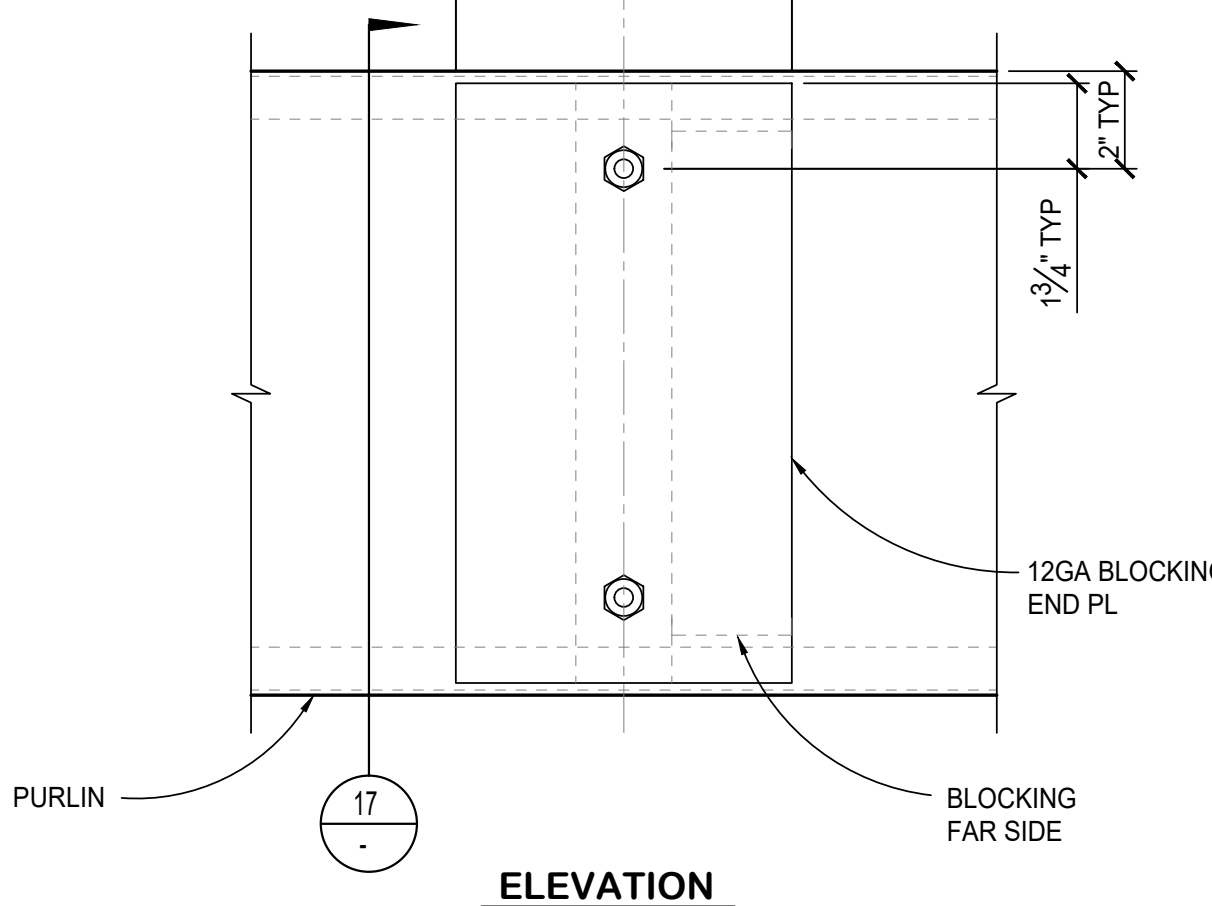
TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



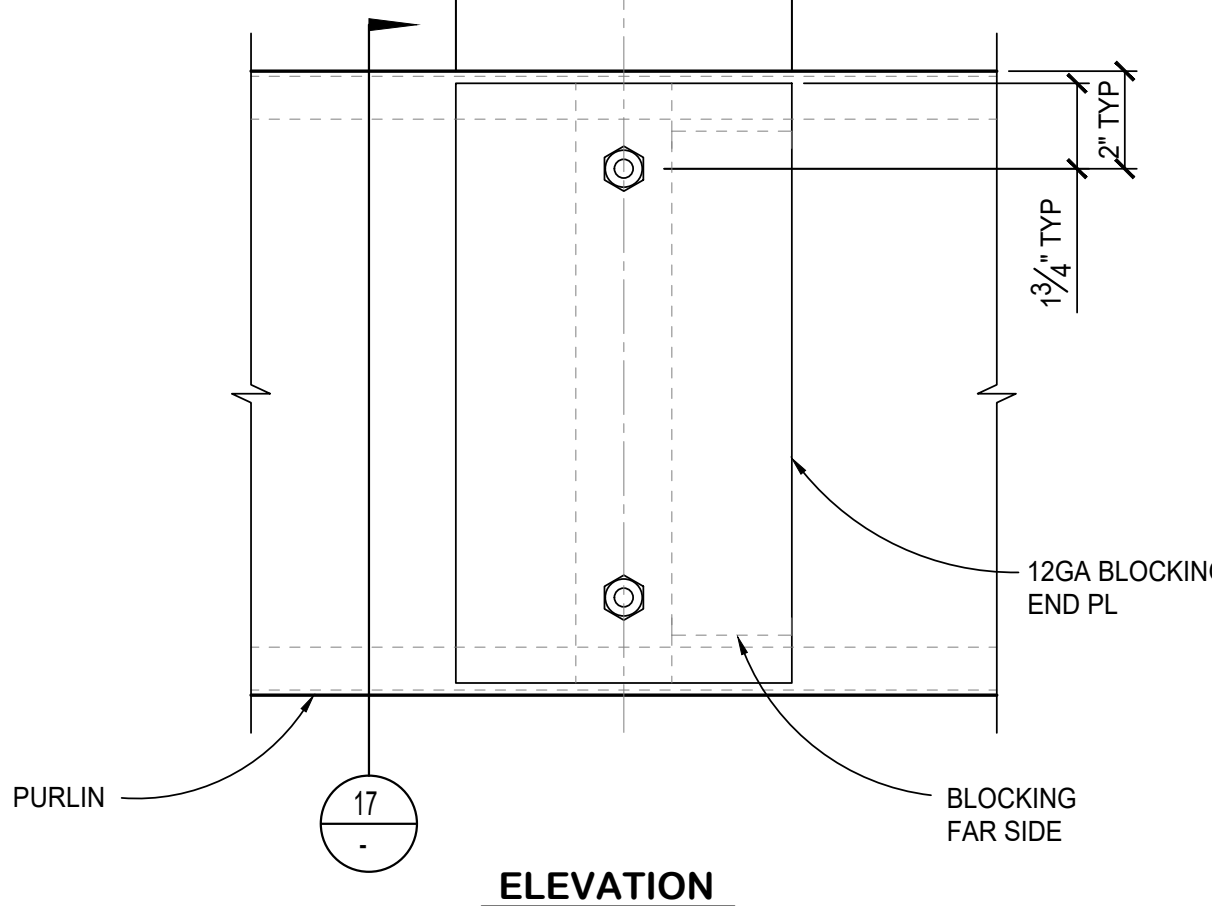
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SCALE: 3/4"=1'-0"



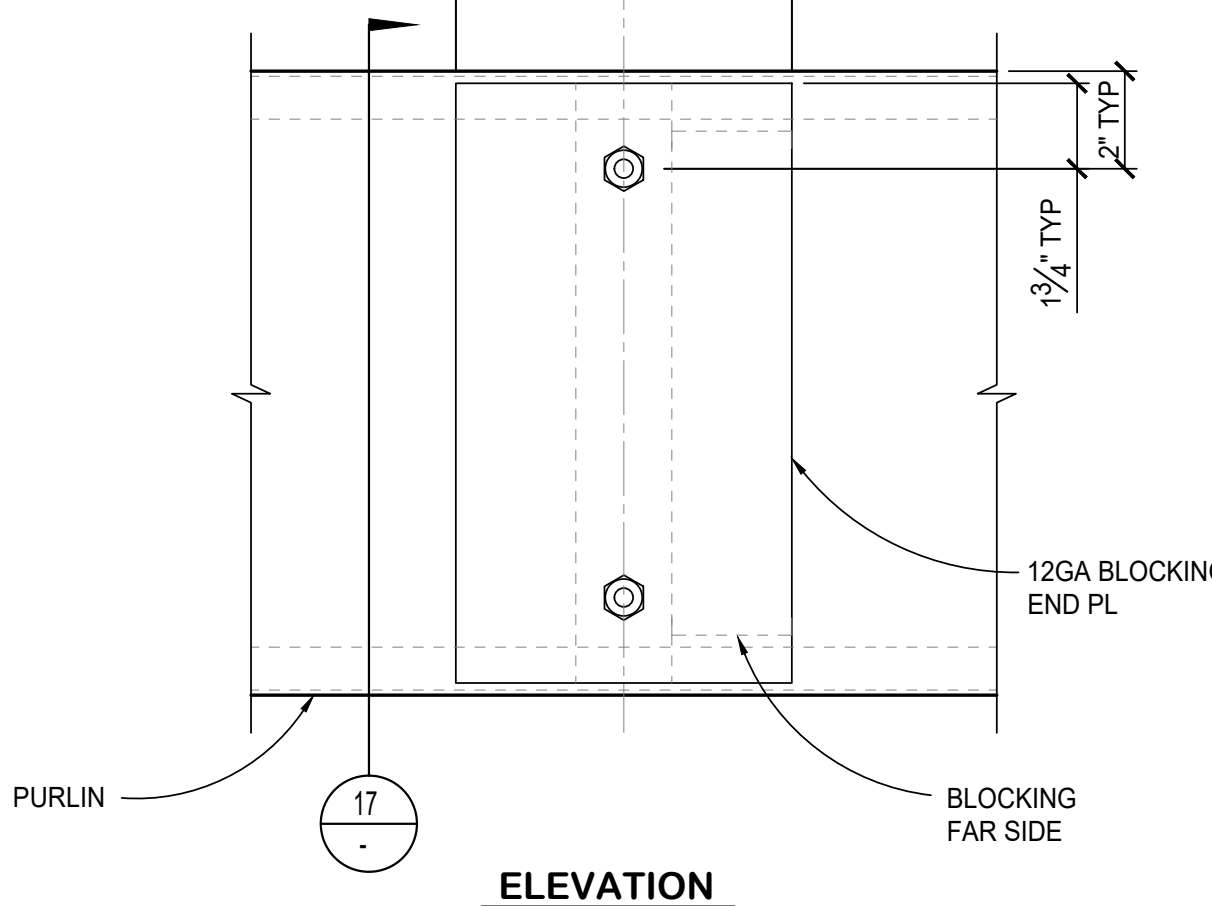
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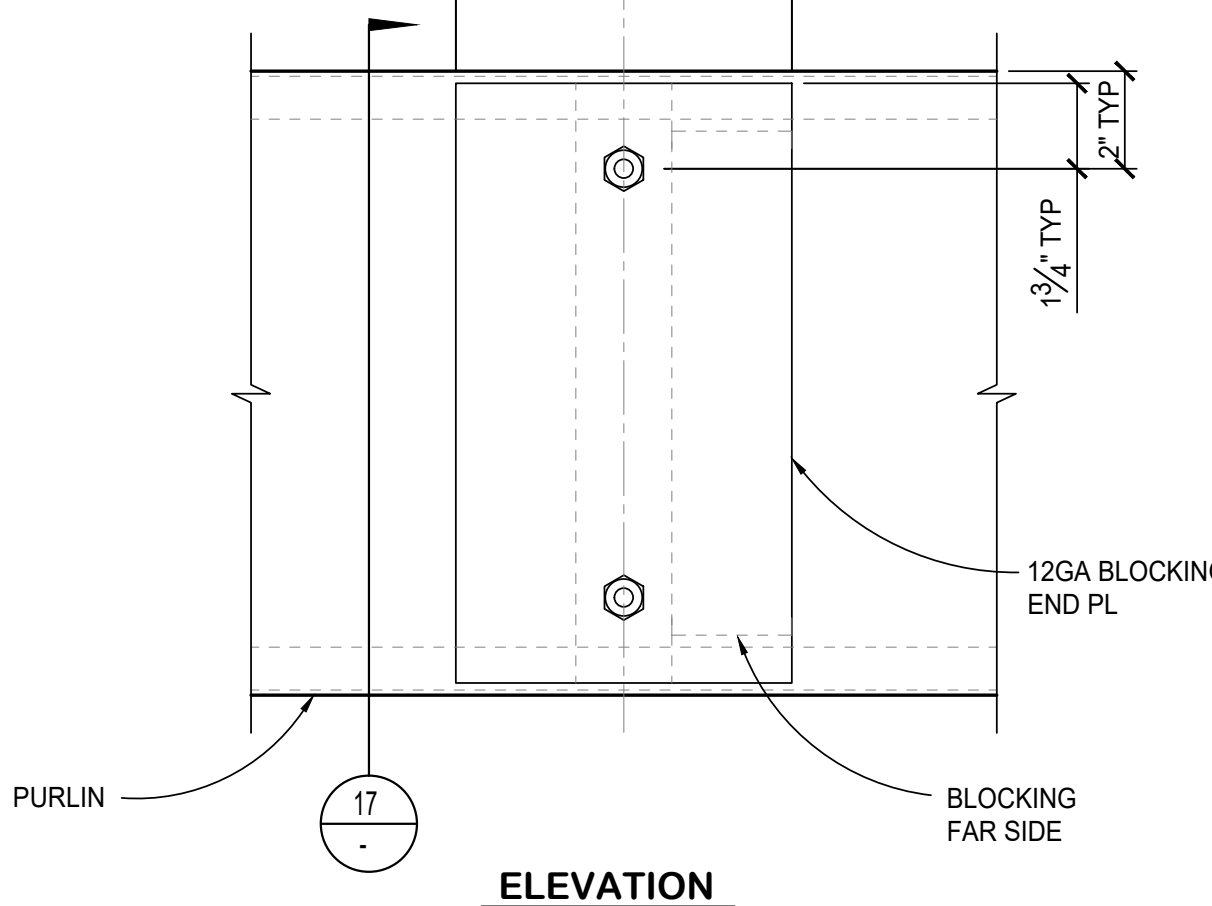
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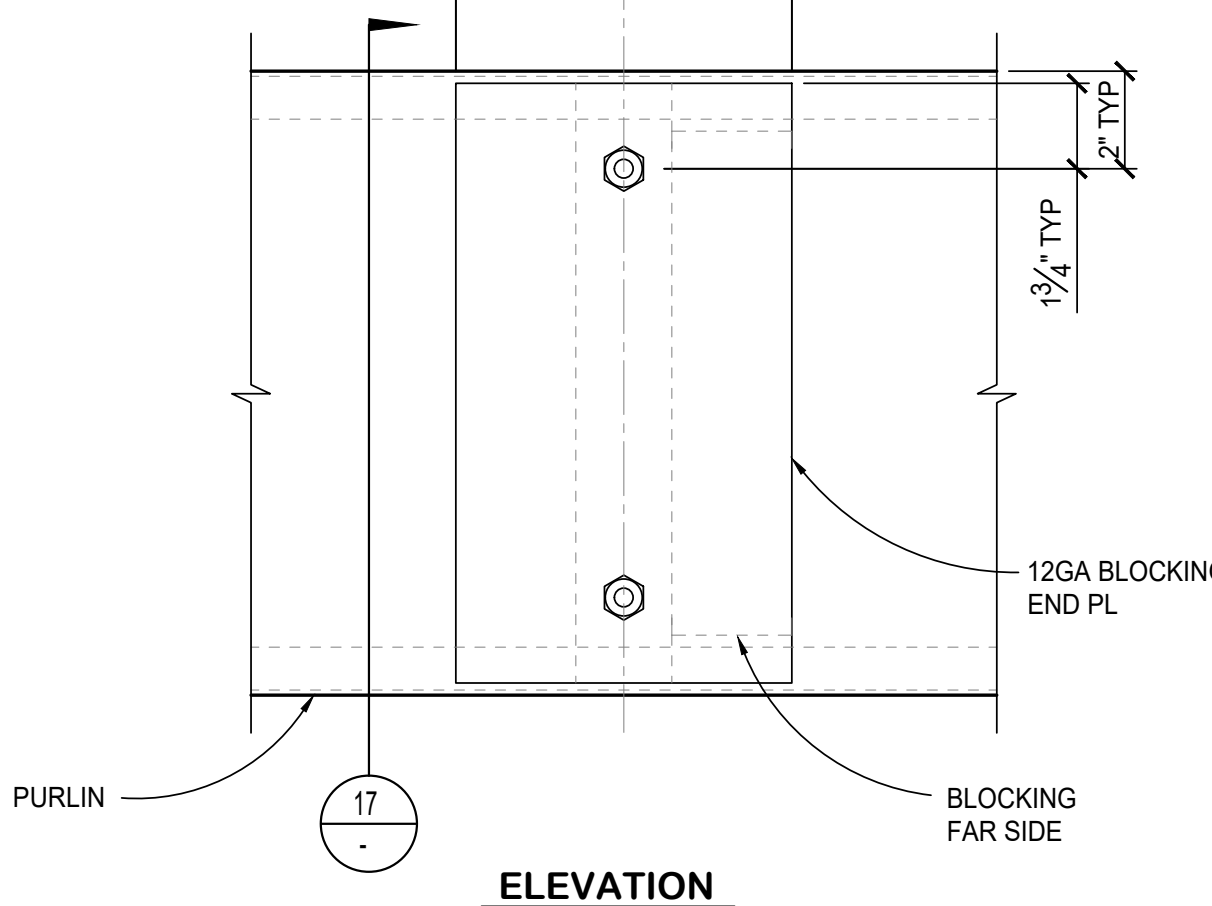
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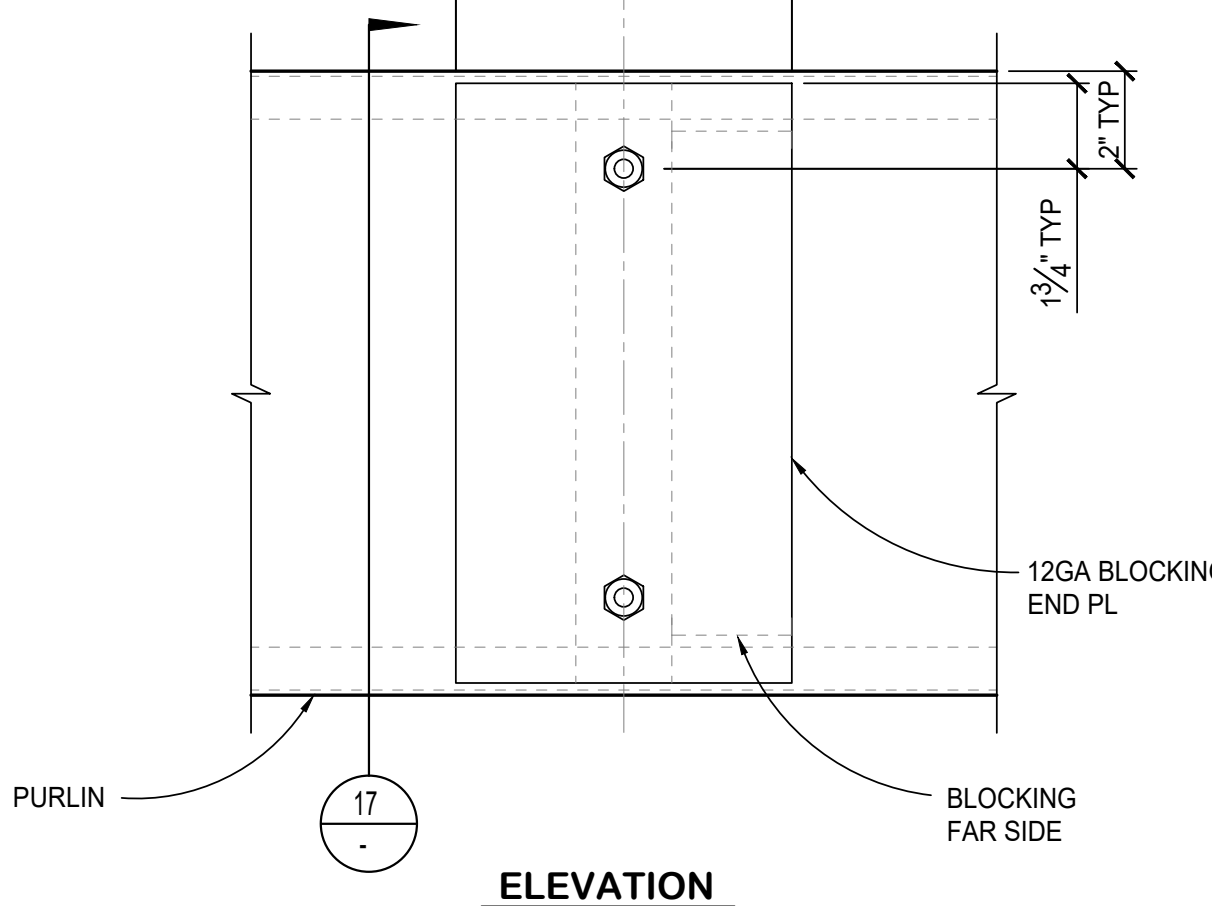
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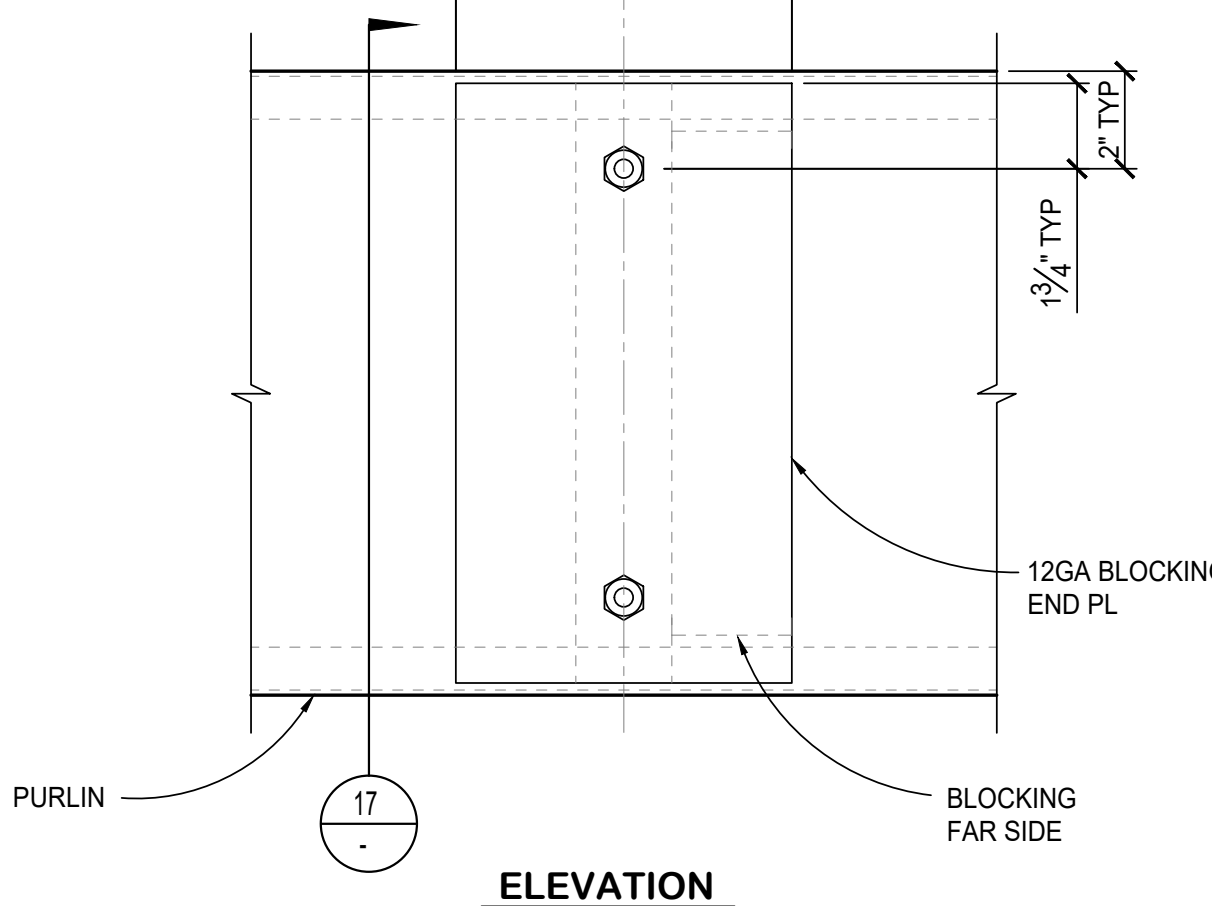
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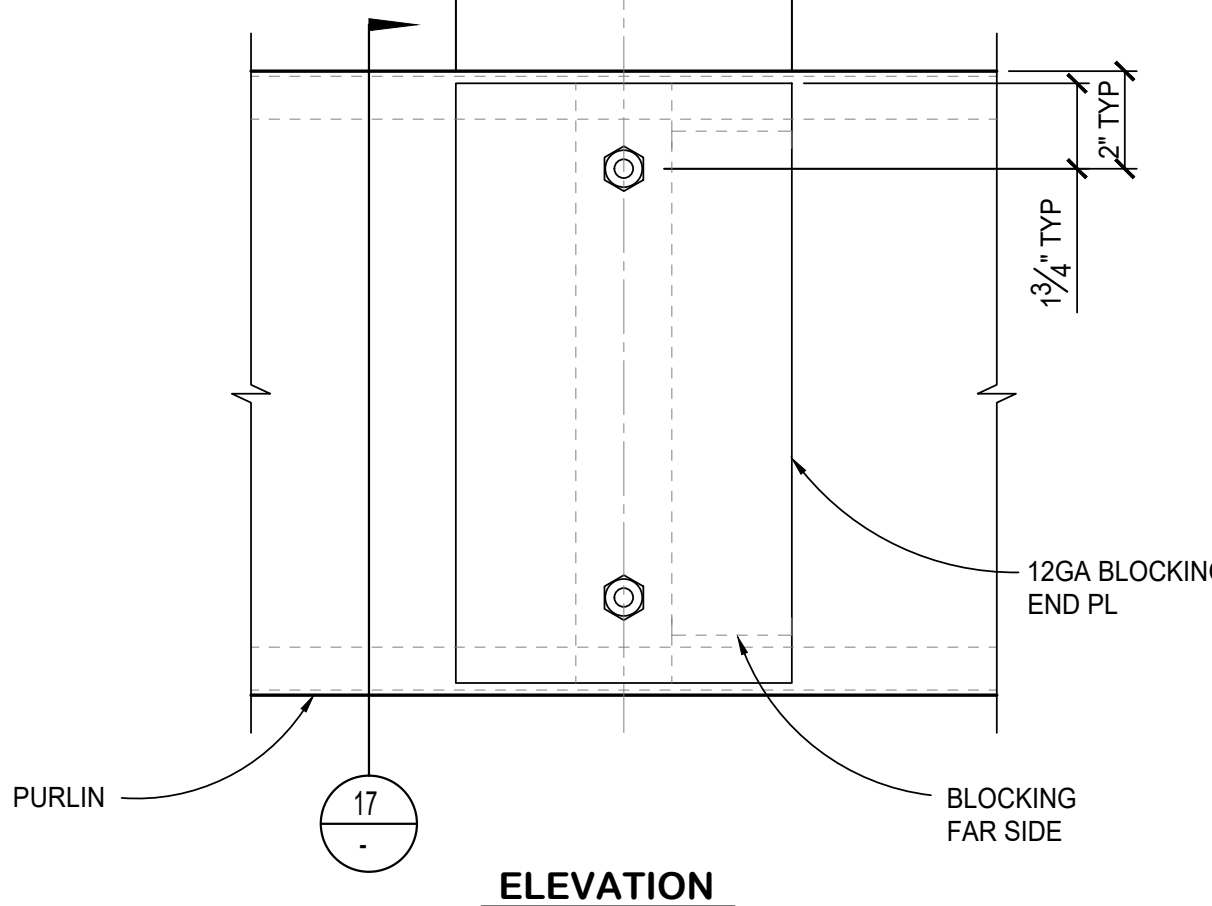
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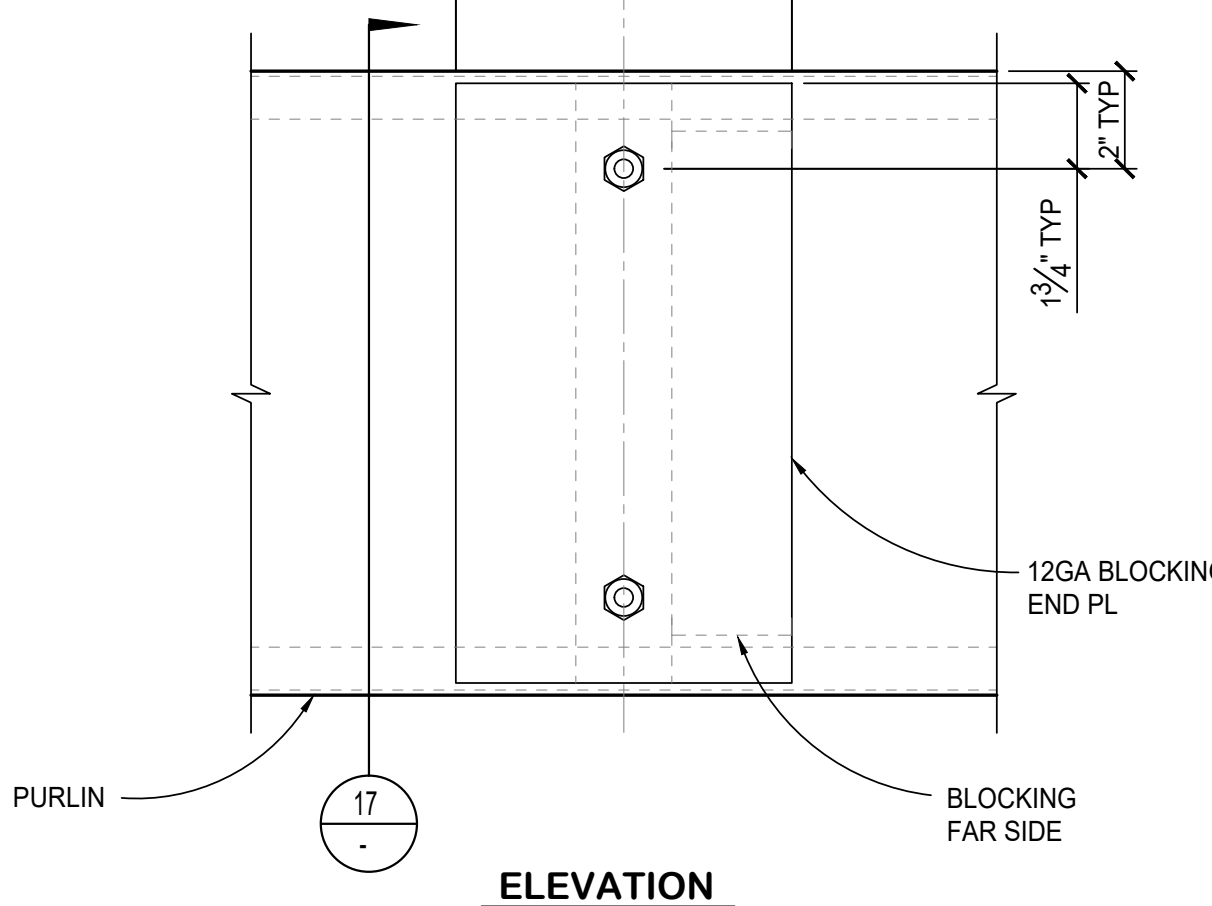
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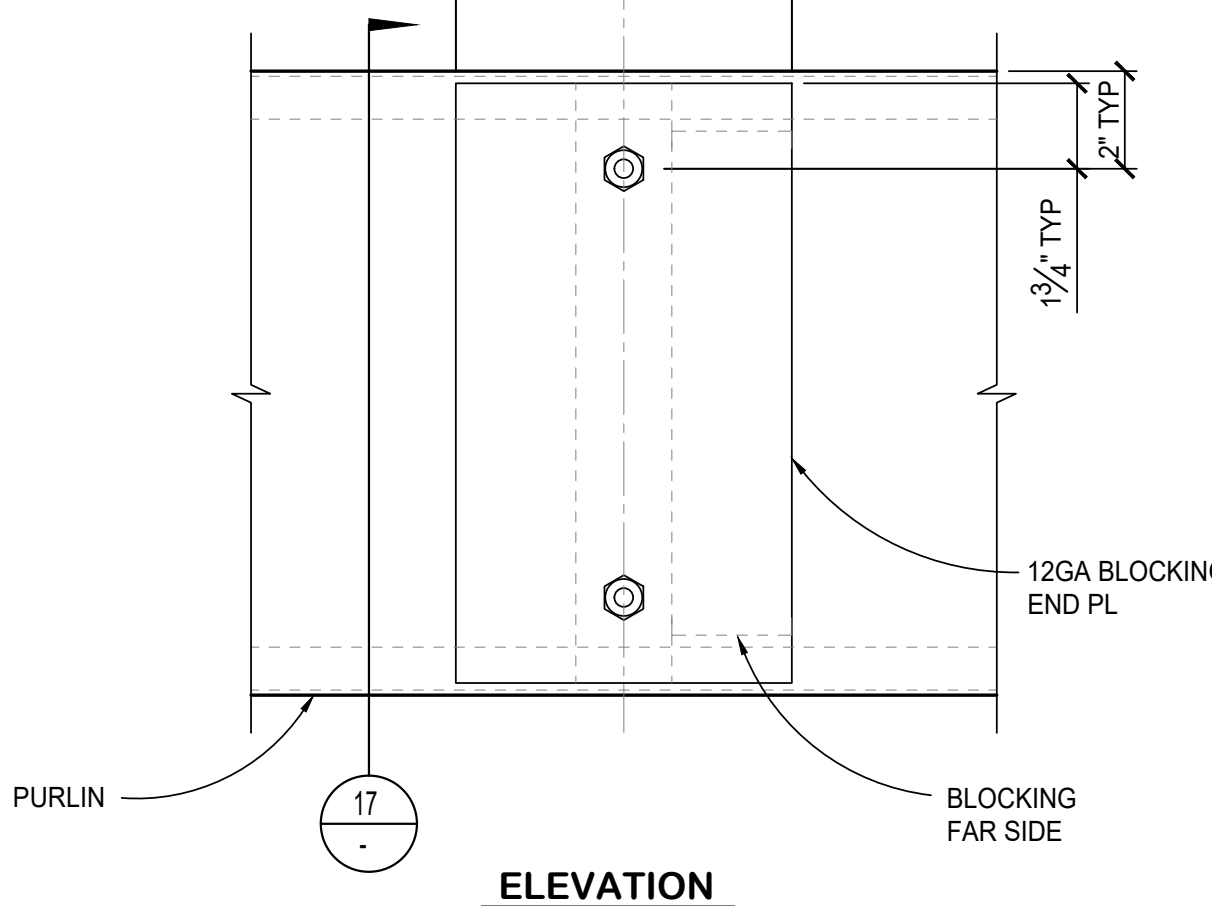
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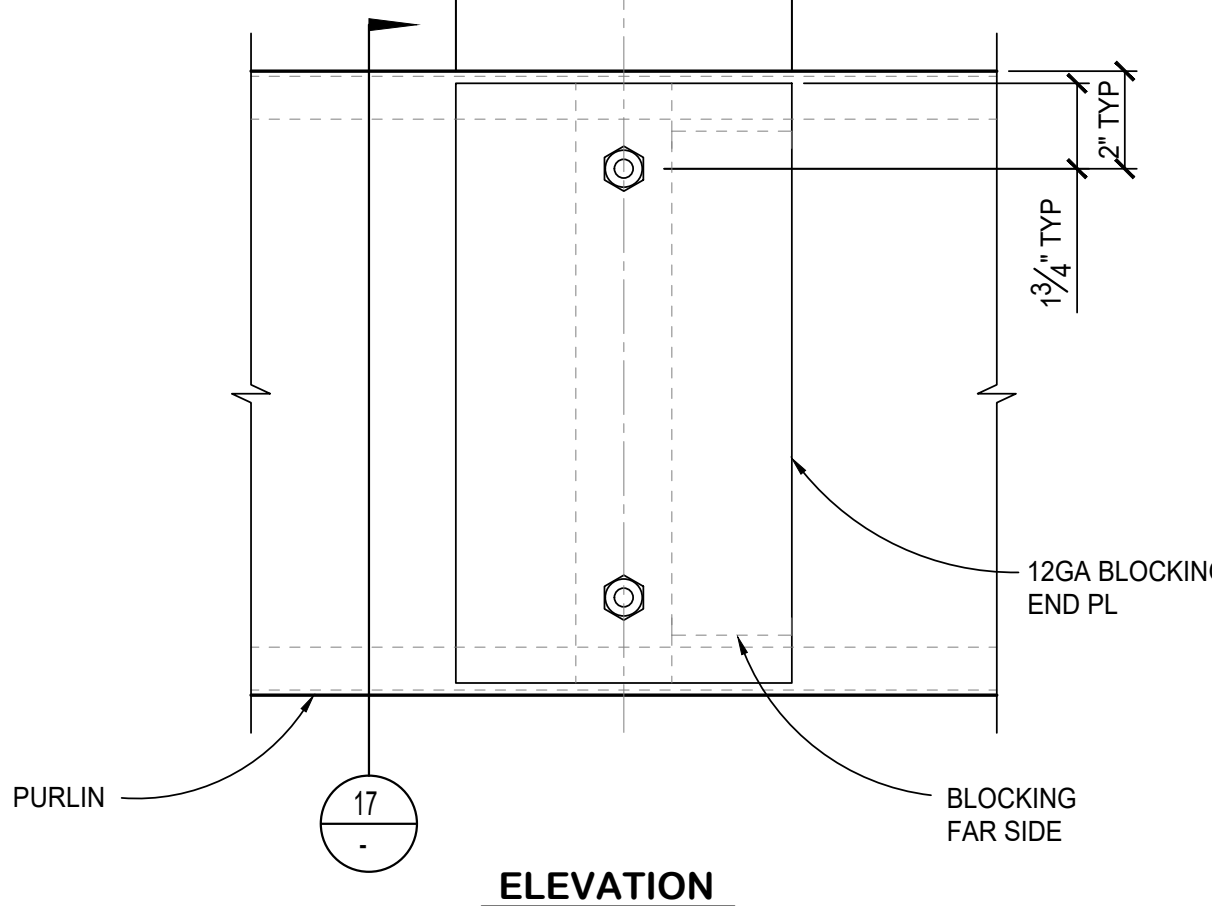
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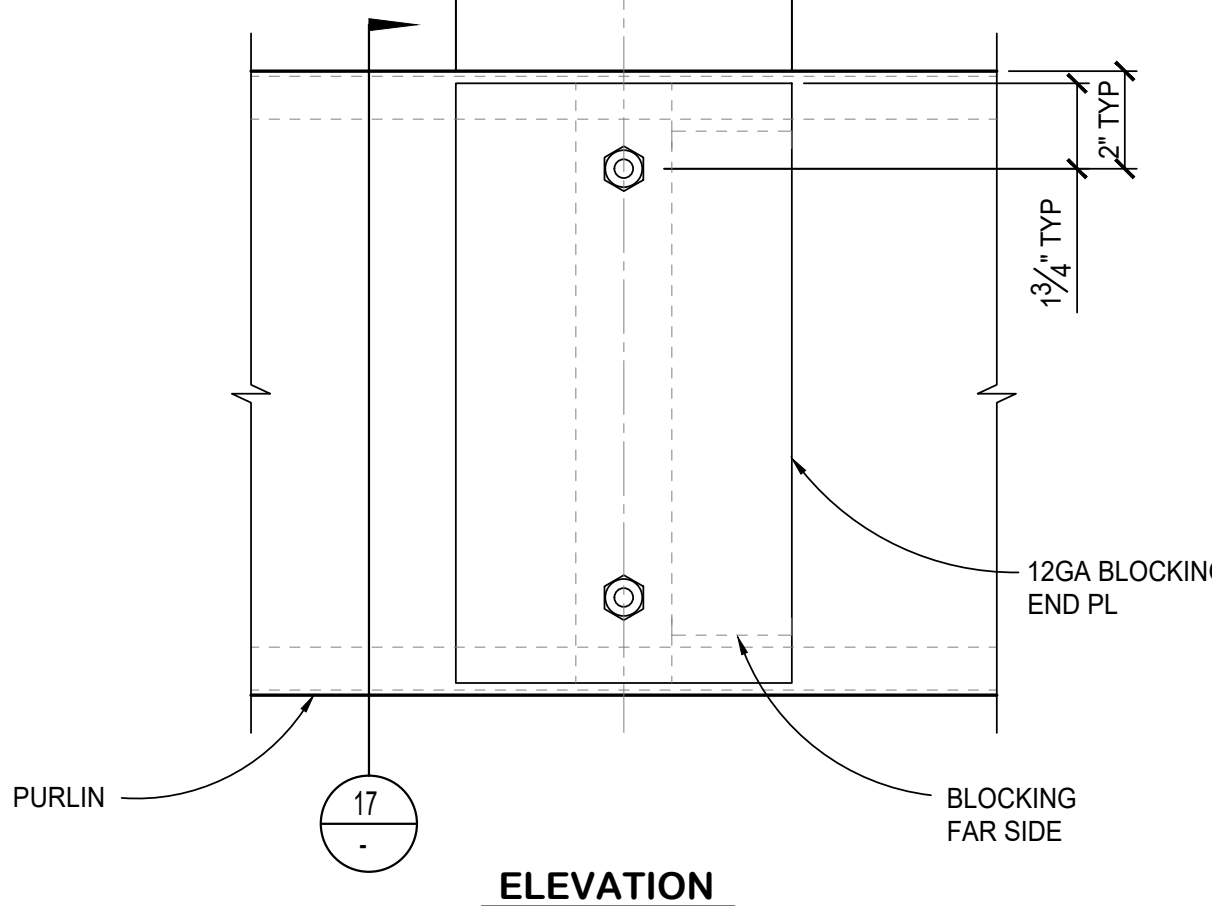
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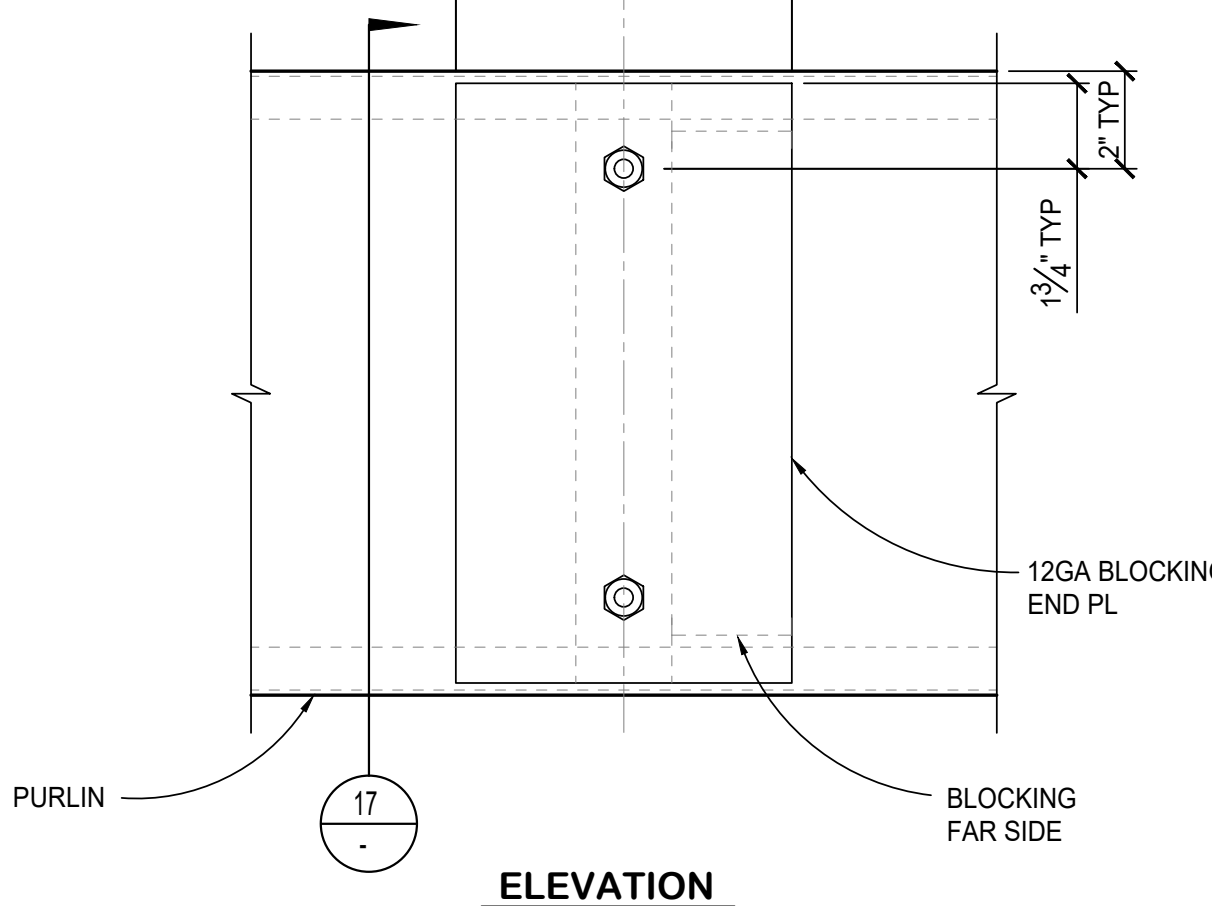
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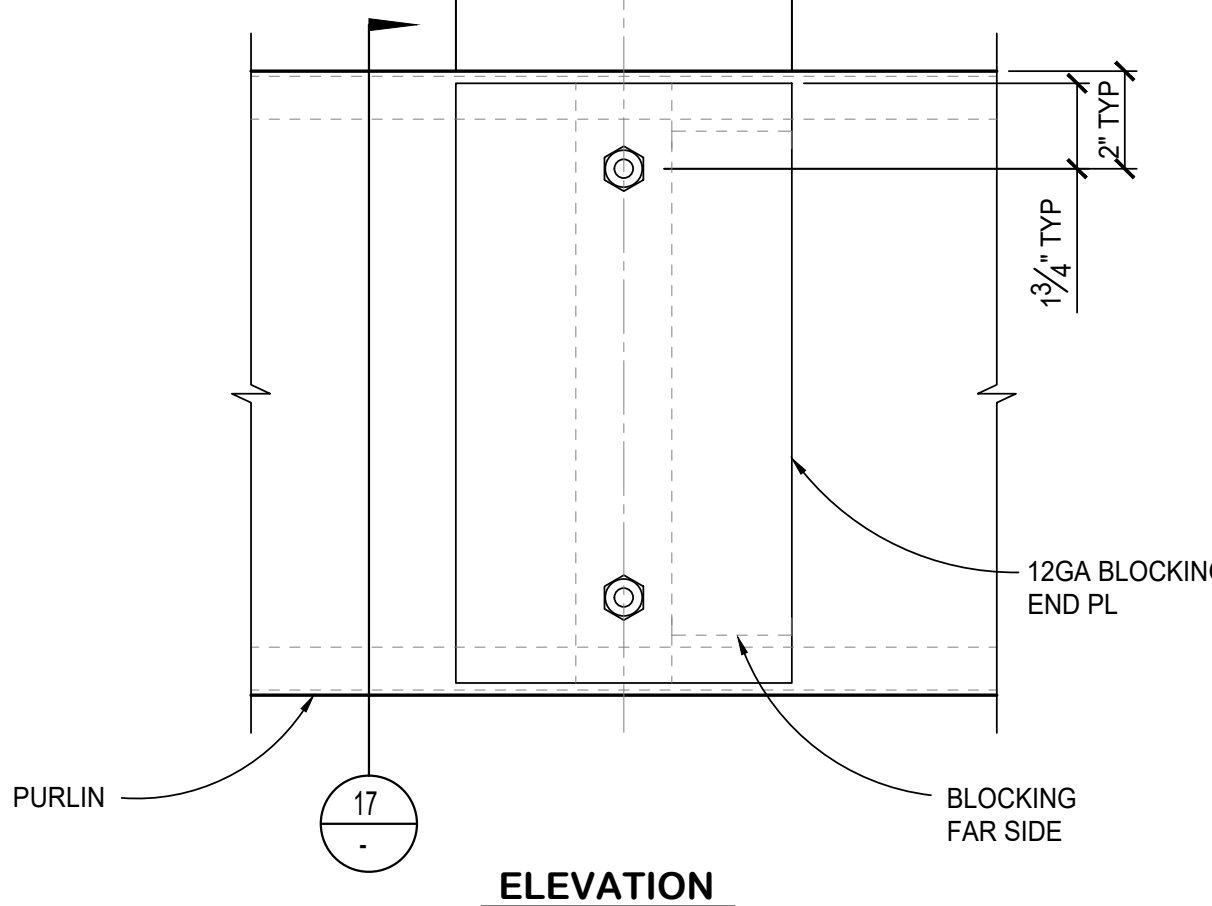
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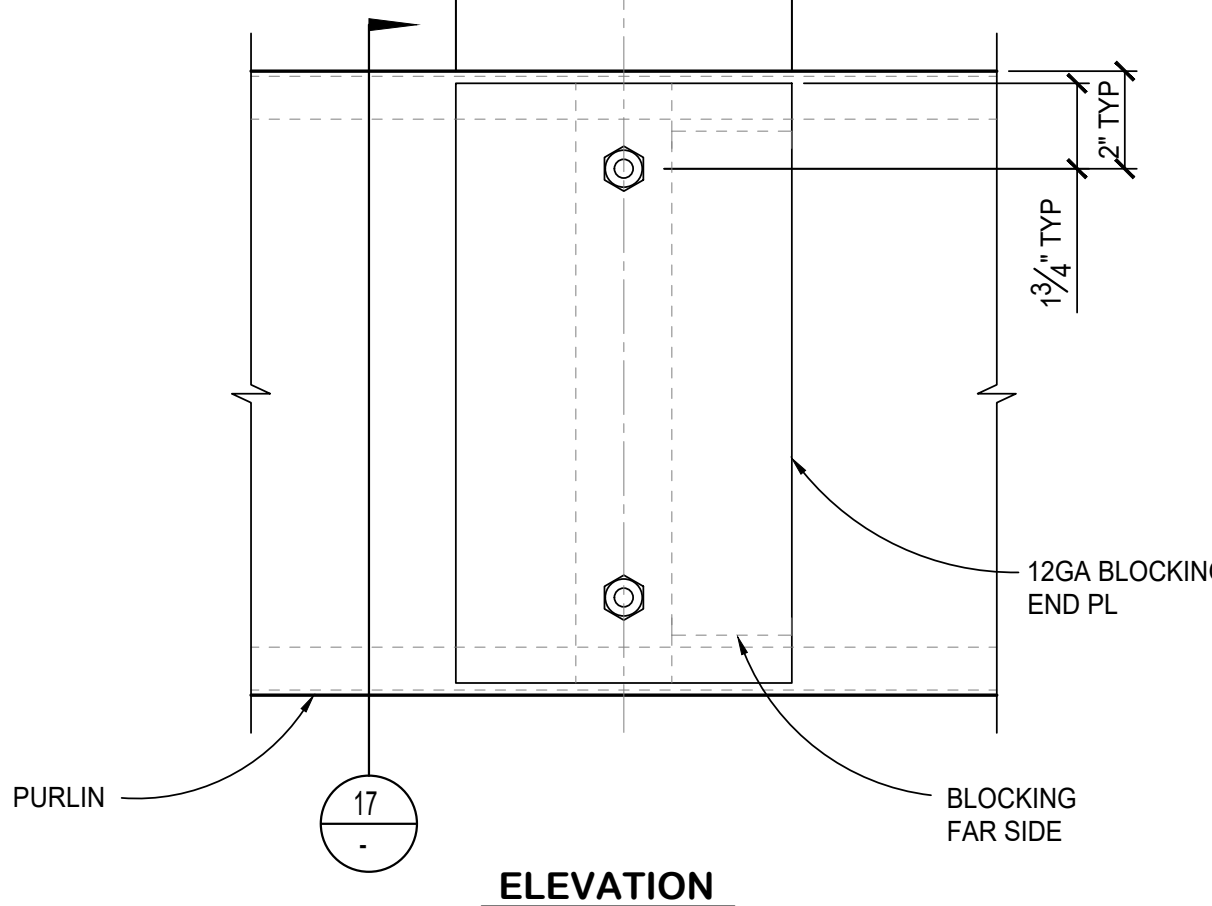
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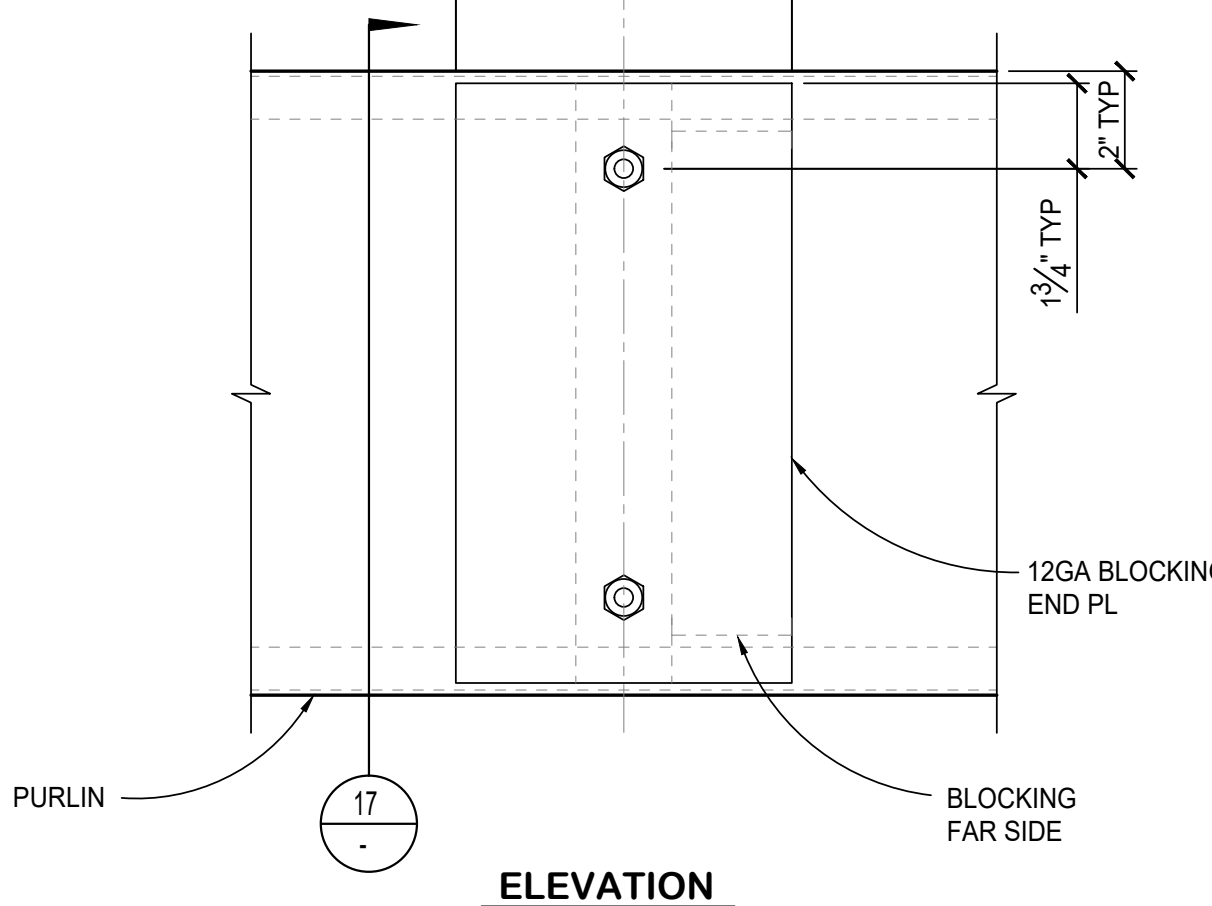
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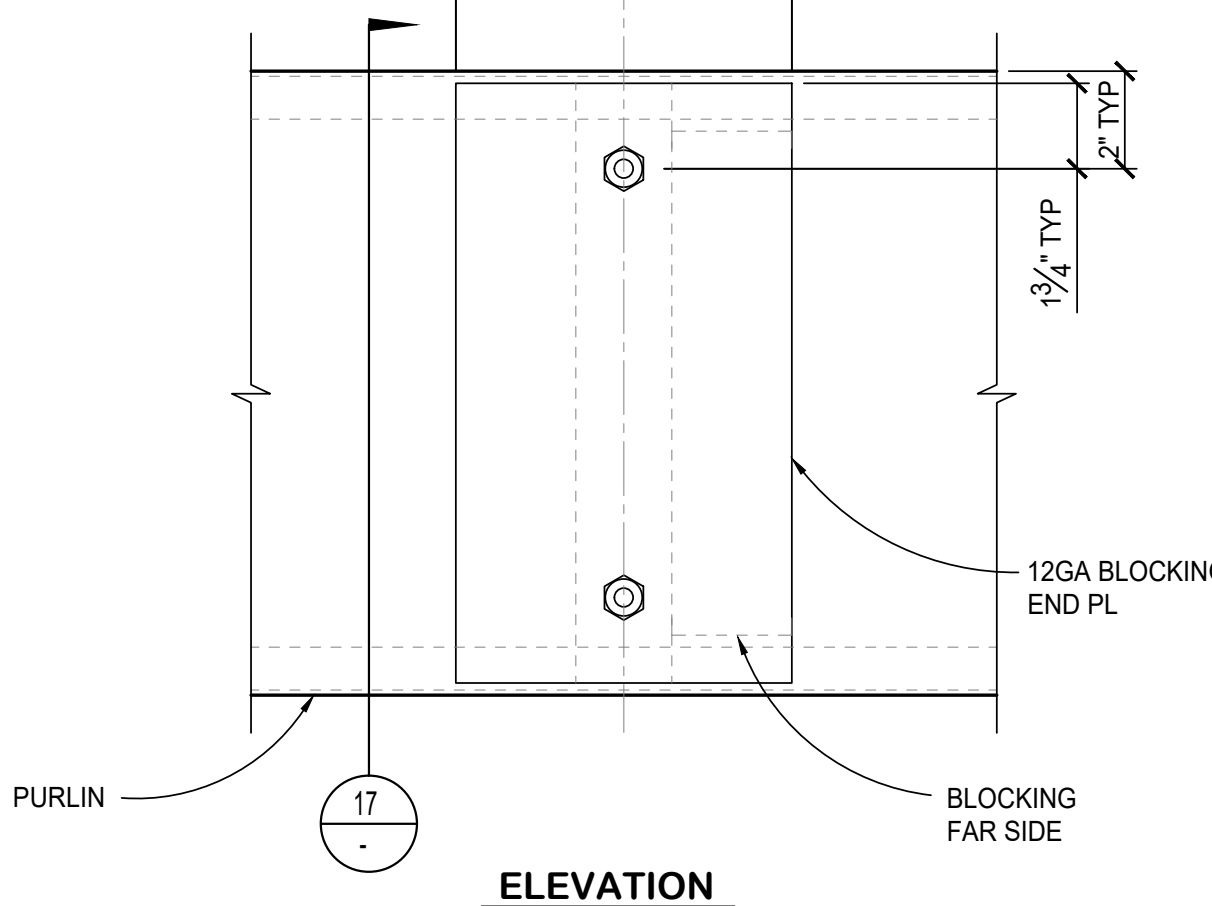
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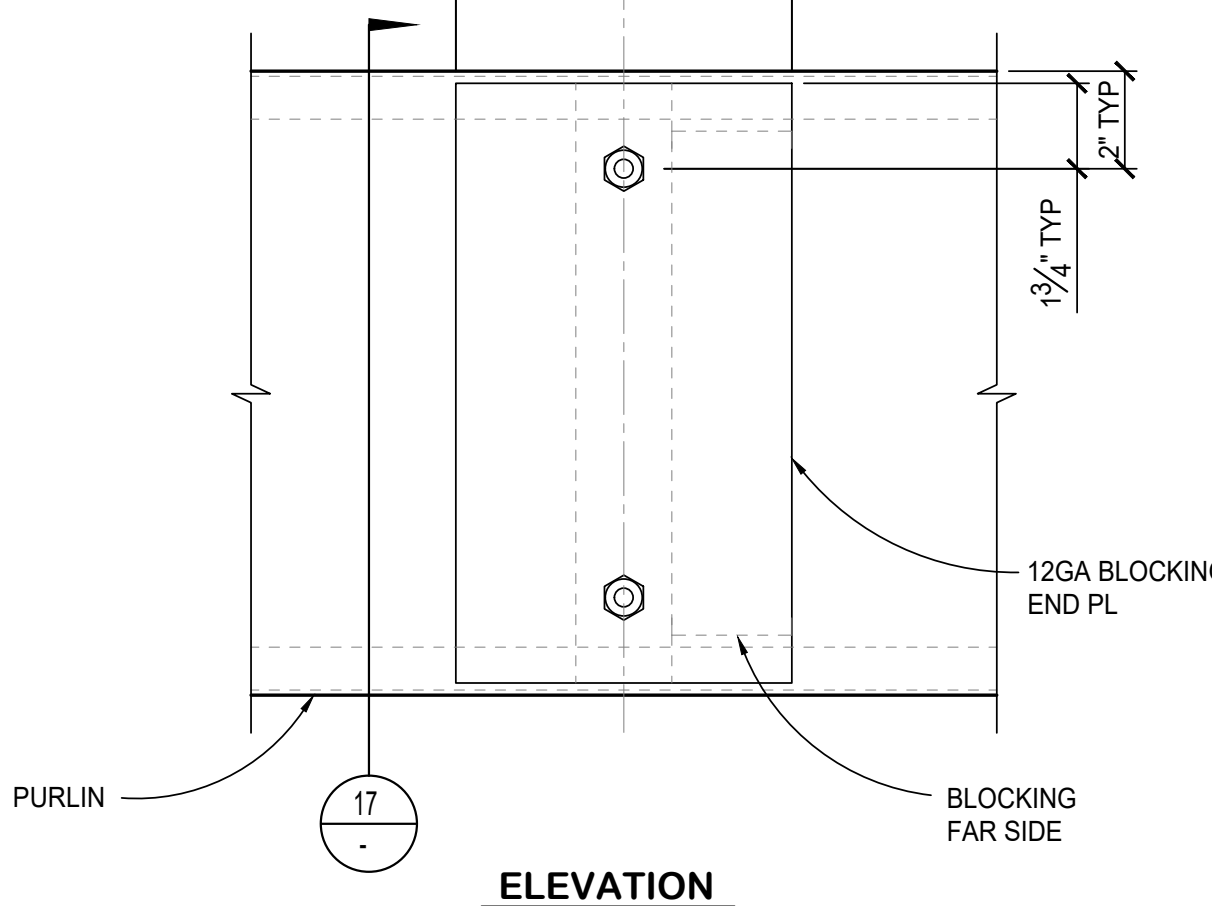
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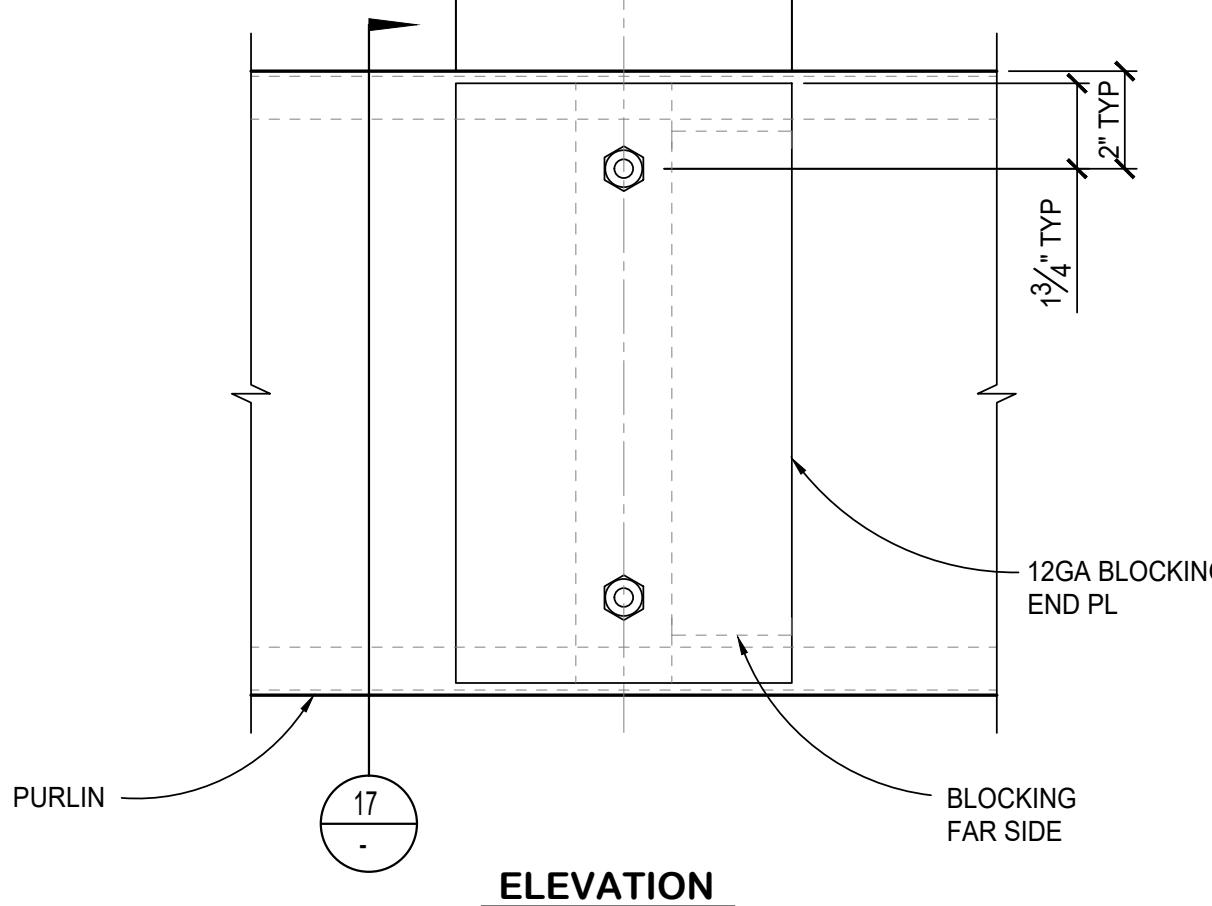
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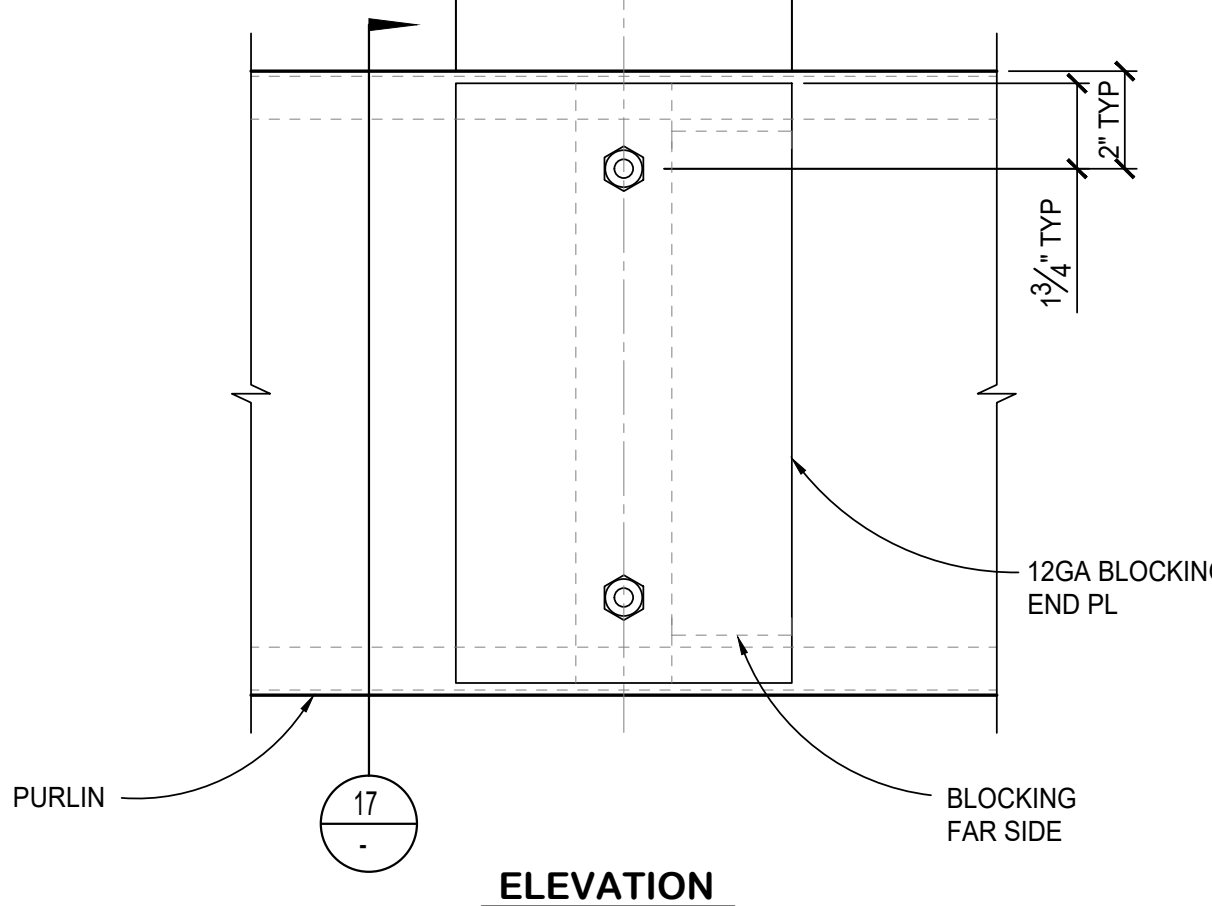
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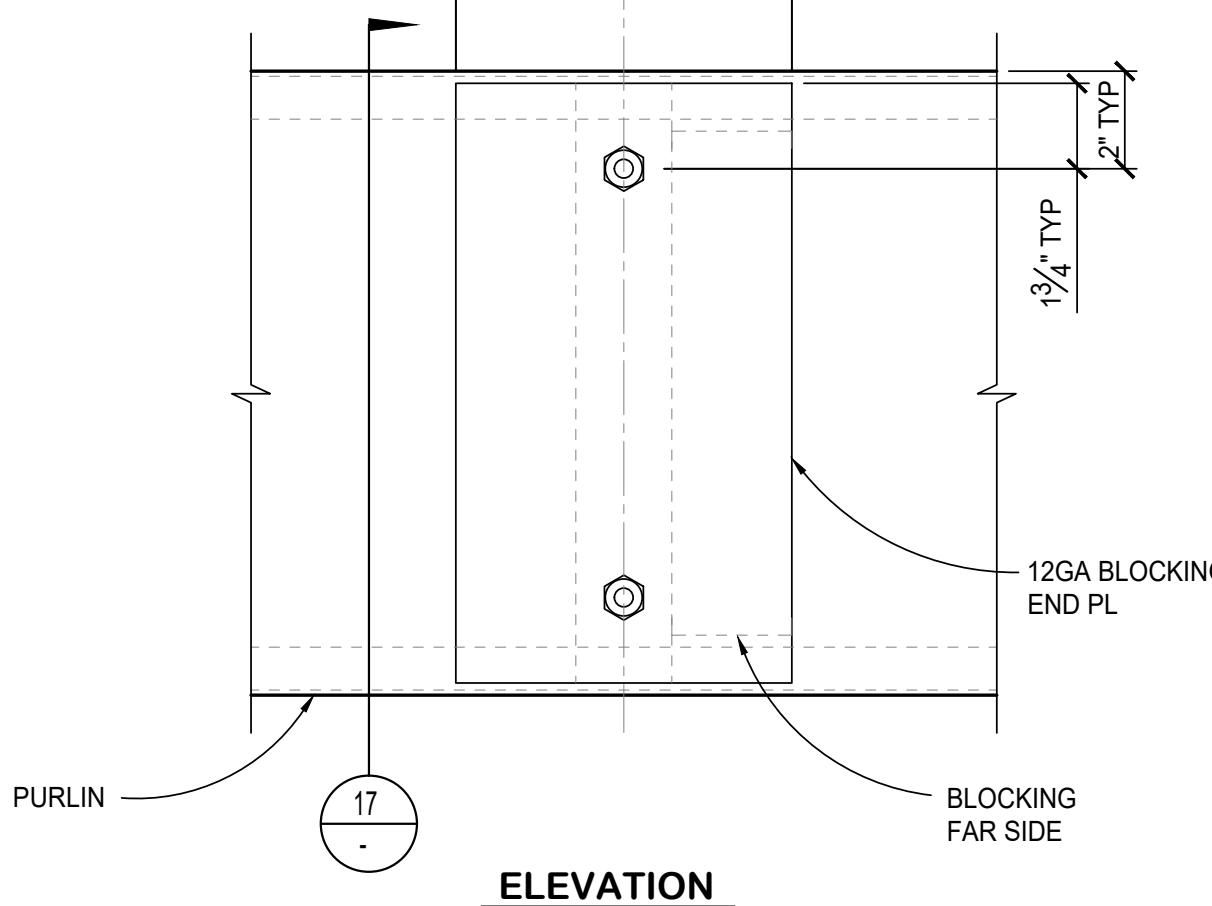
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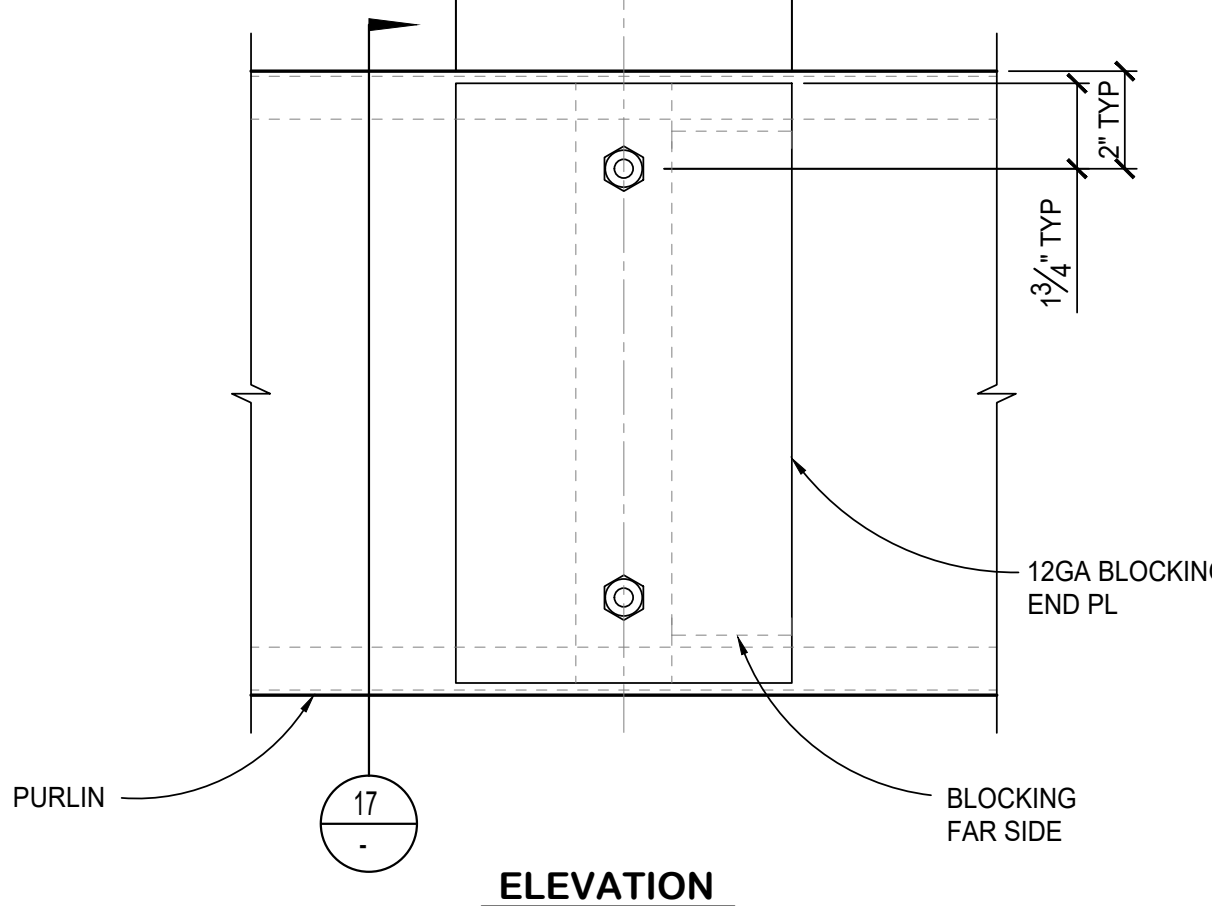
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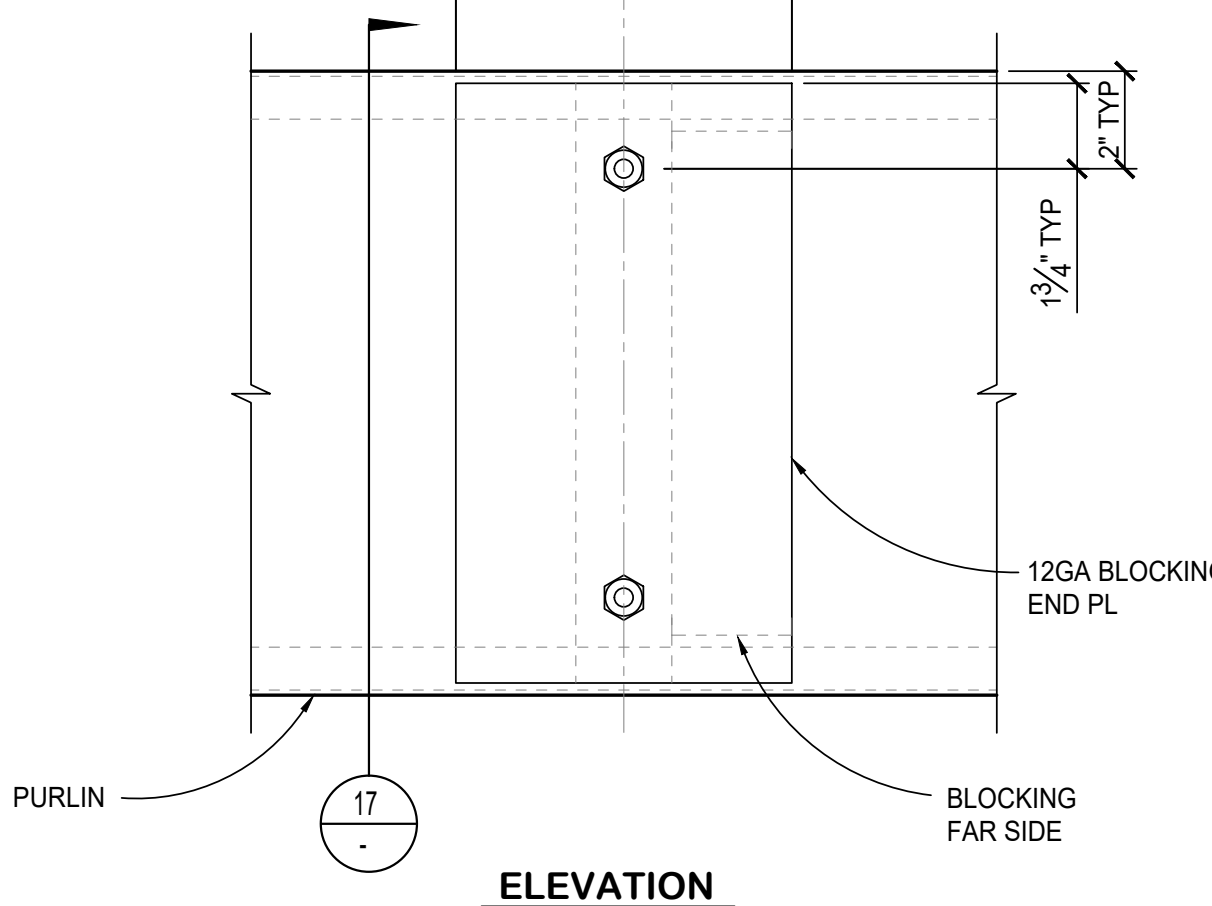
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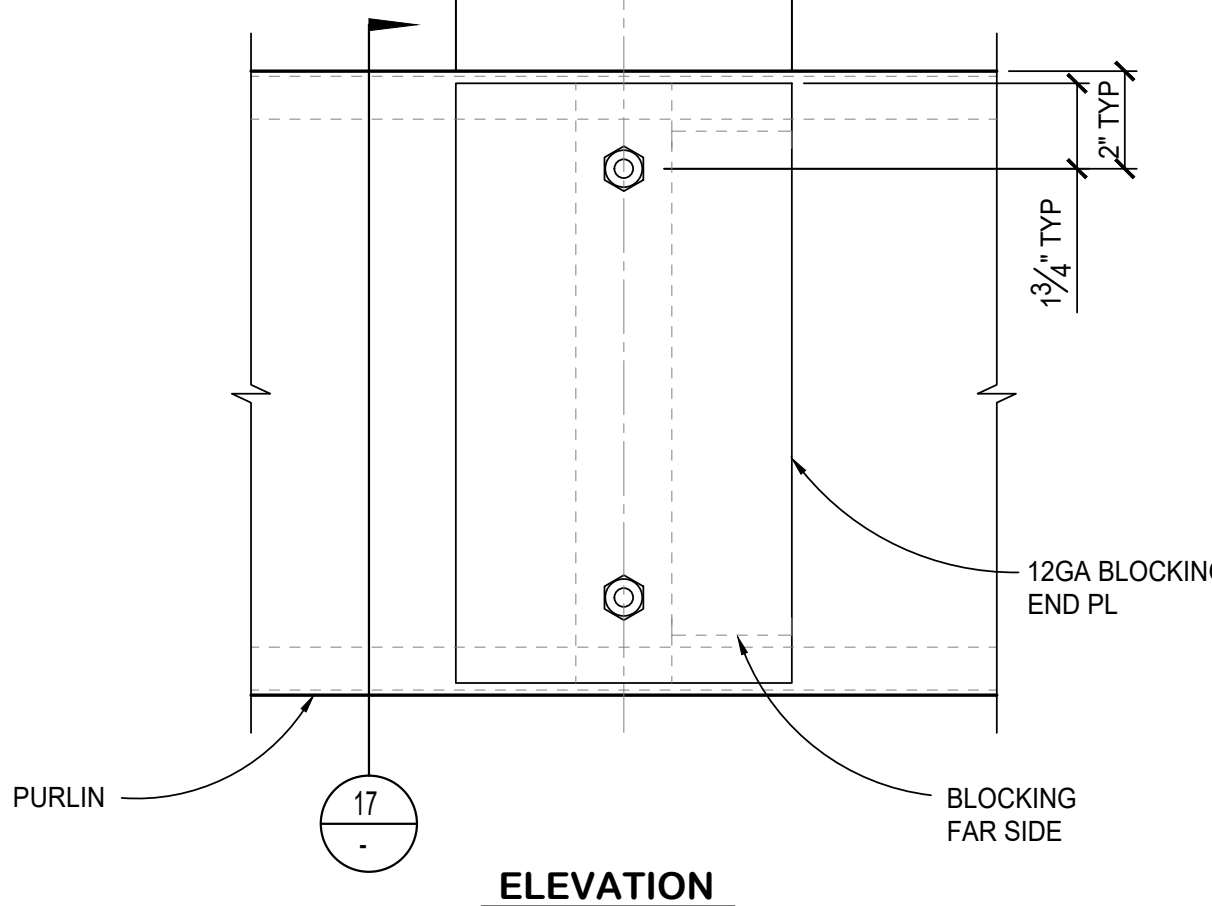
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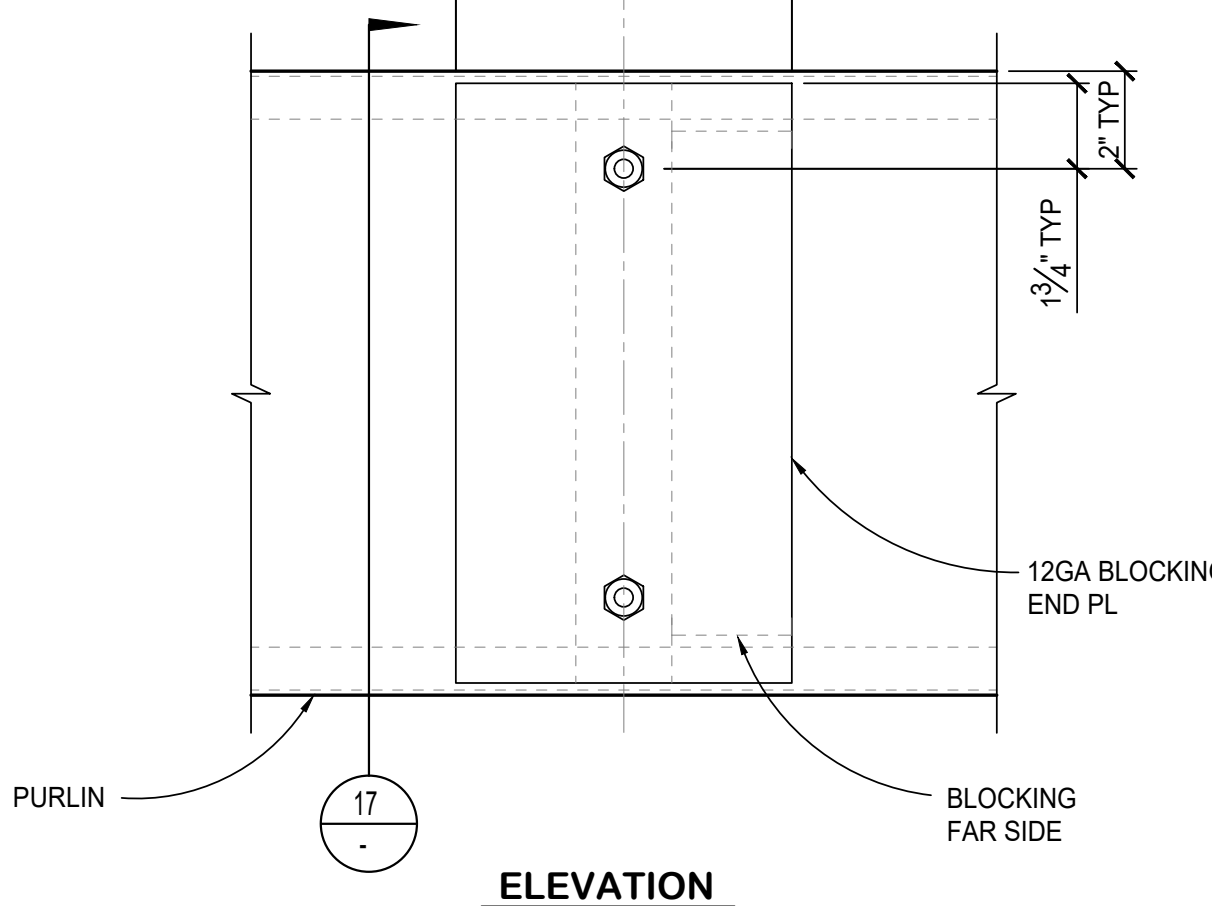
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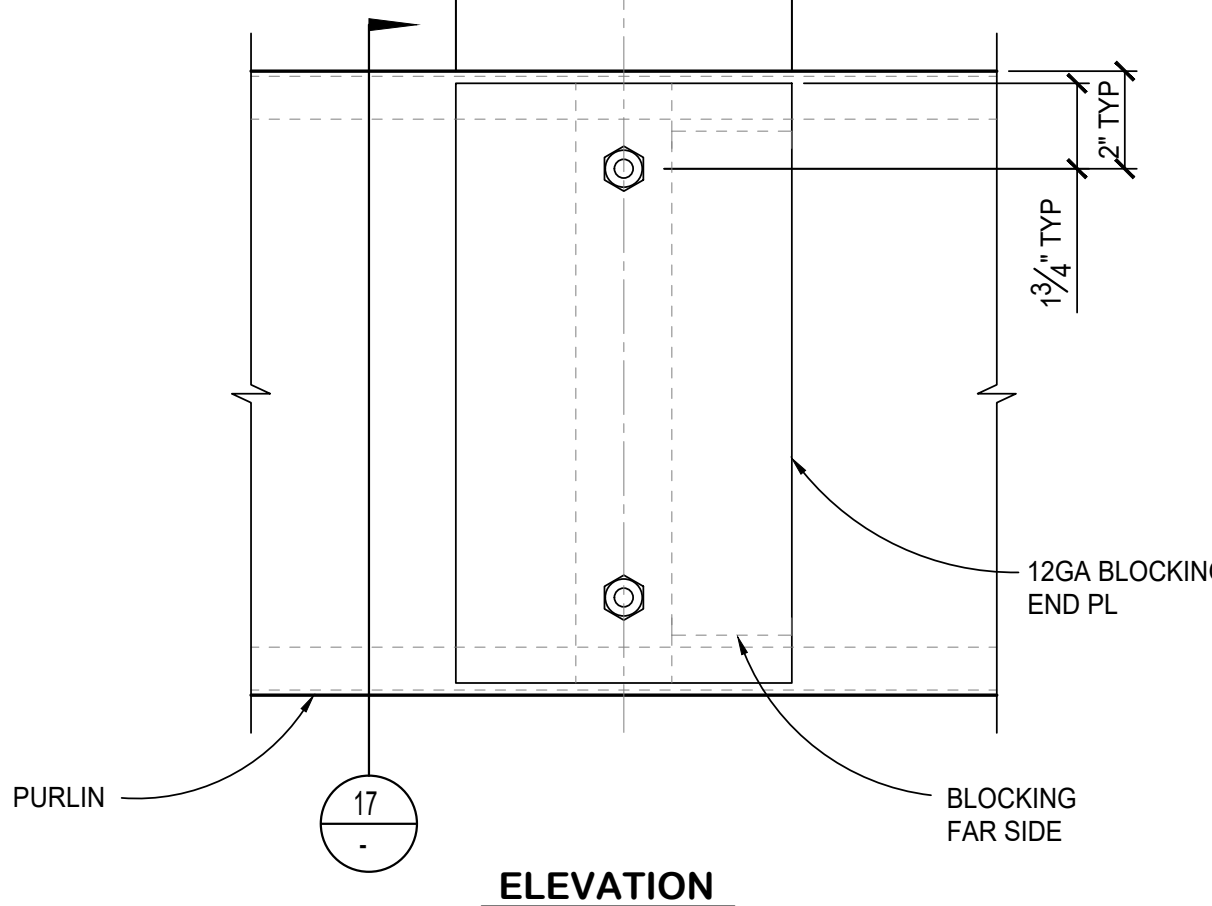
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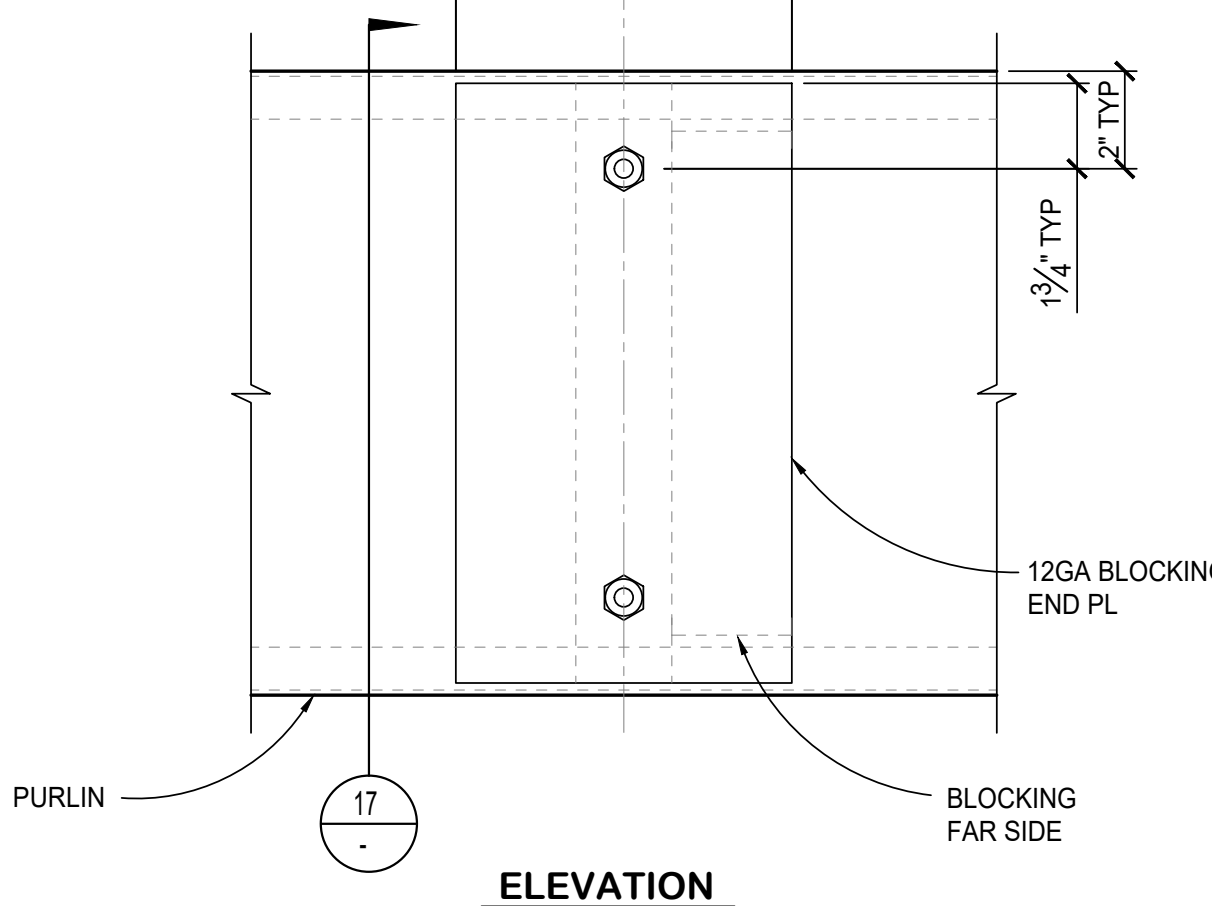
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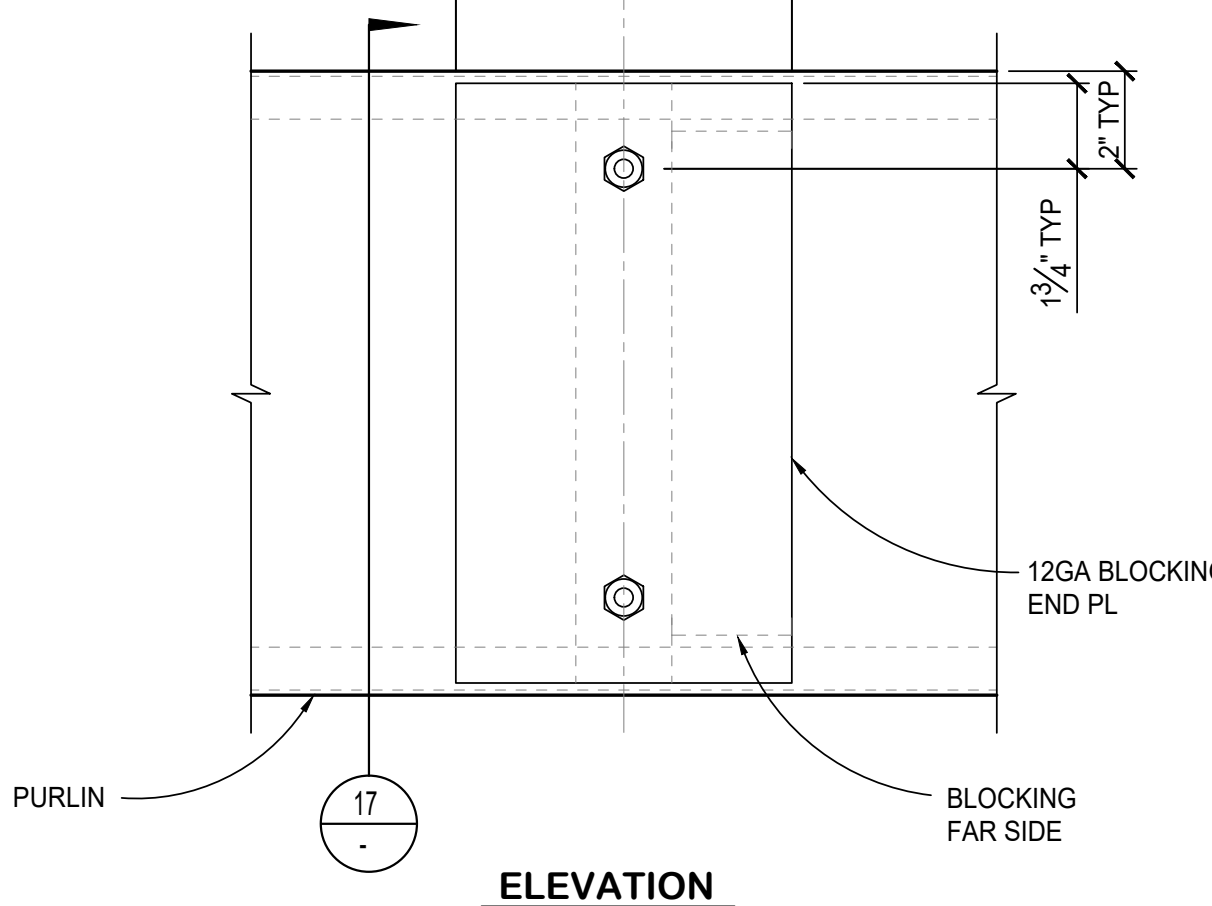
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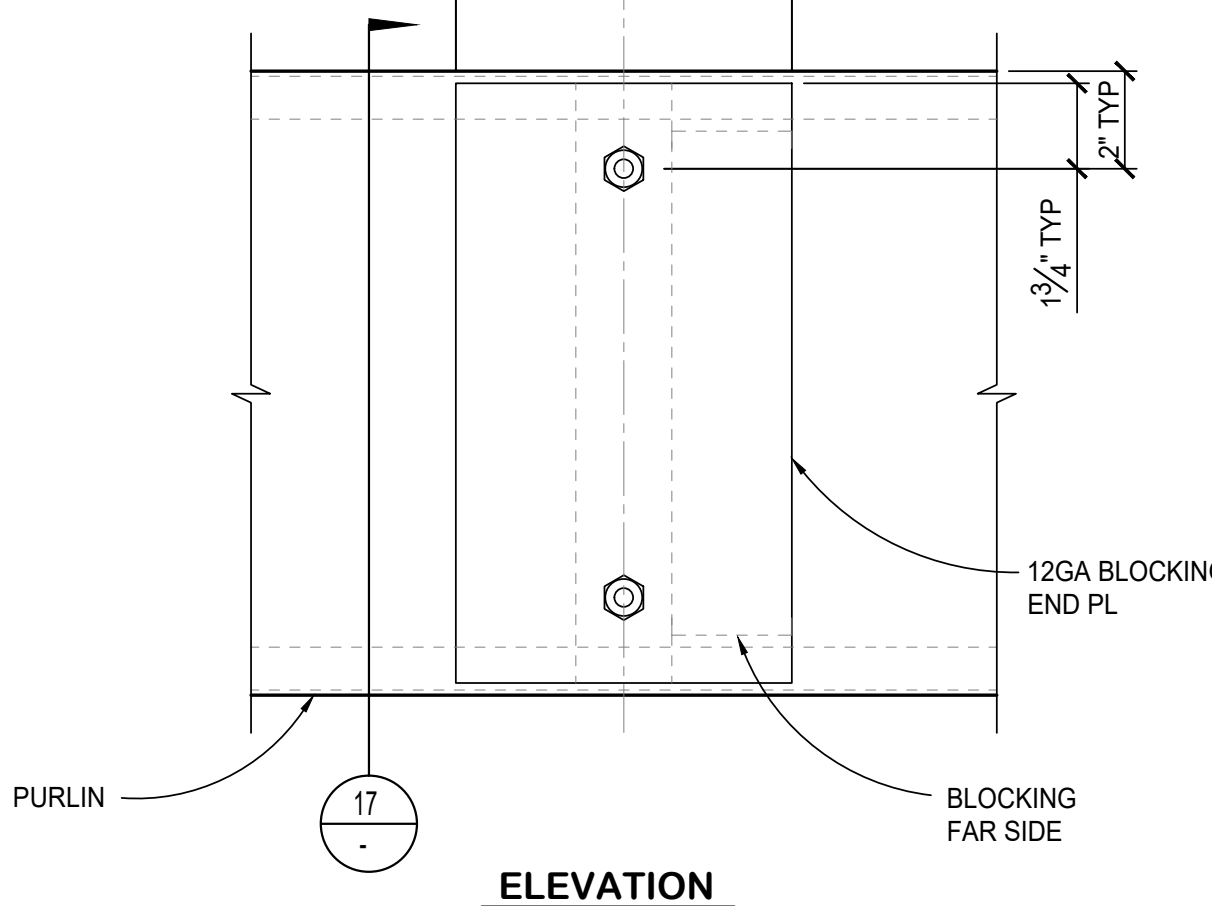
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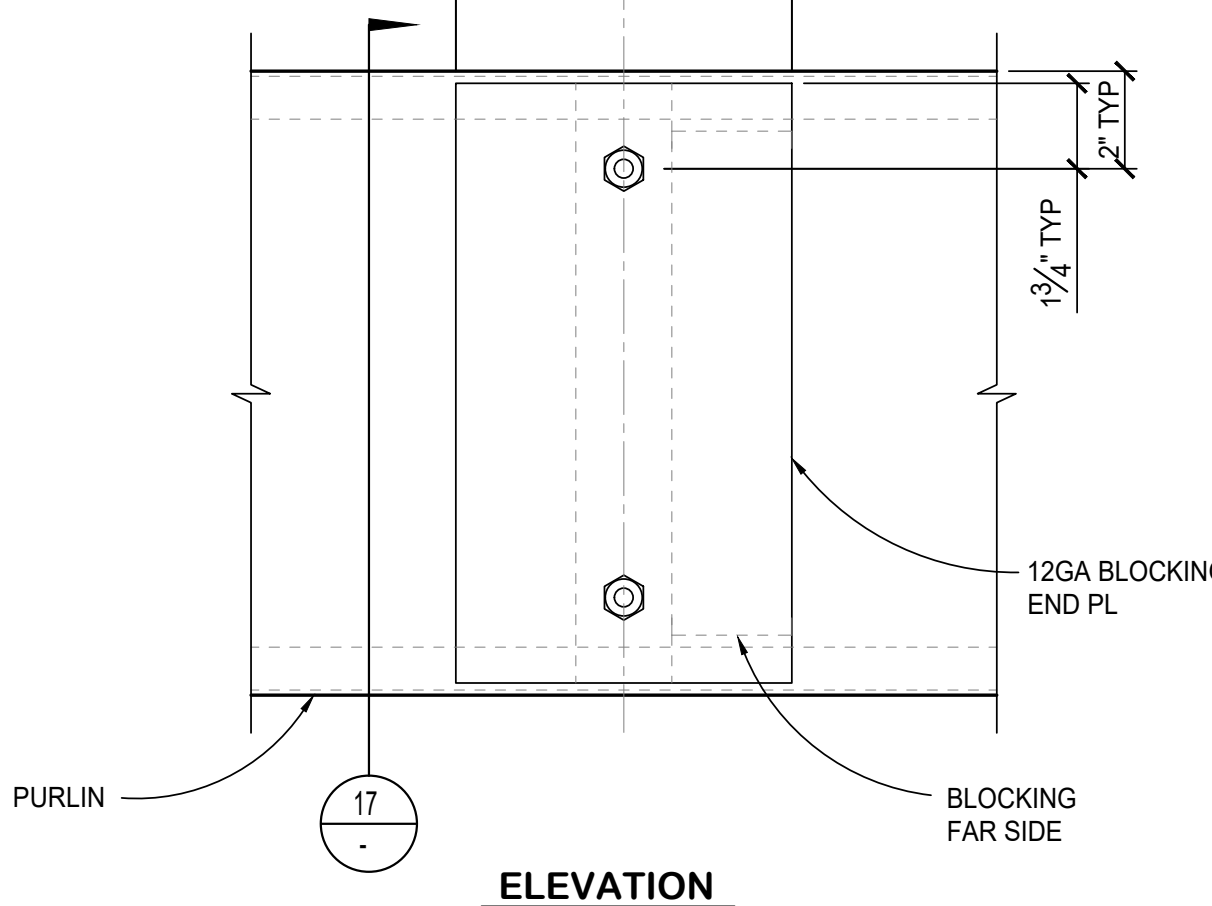
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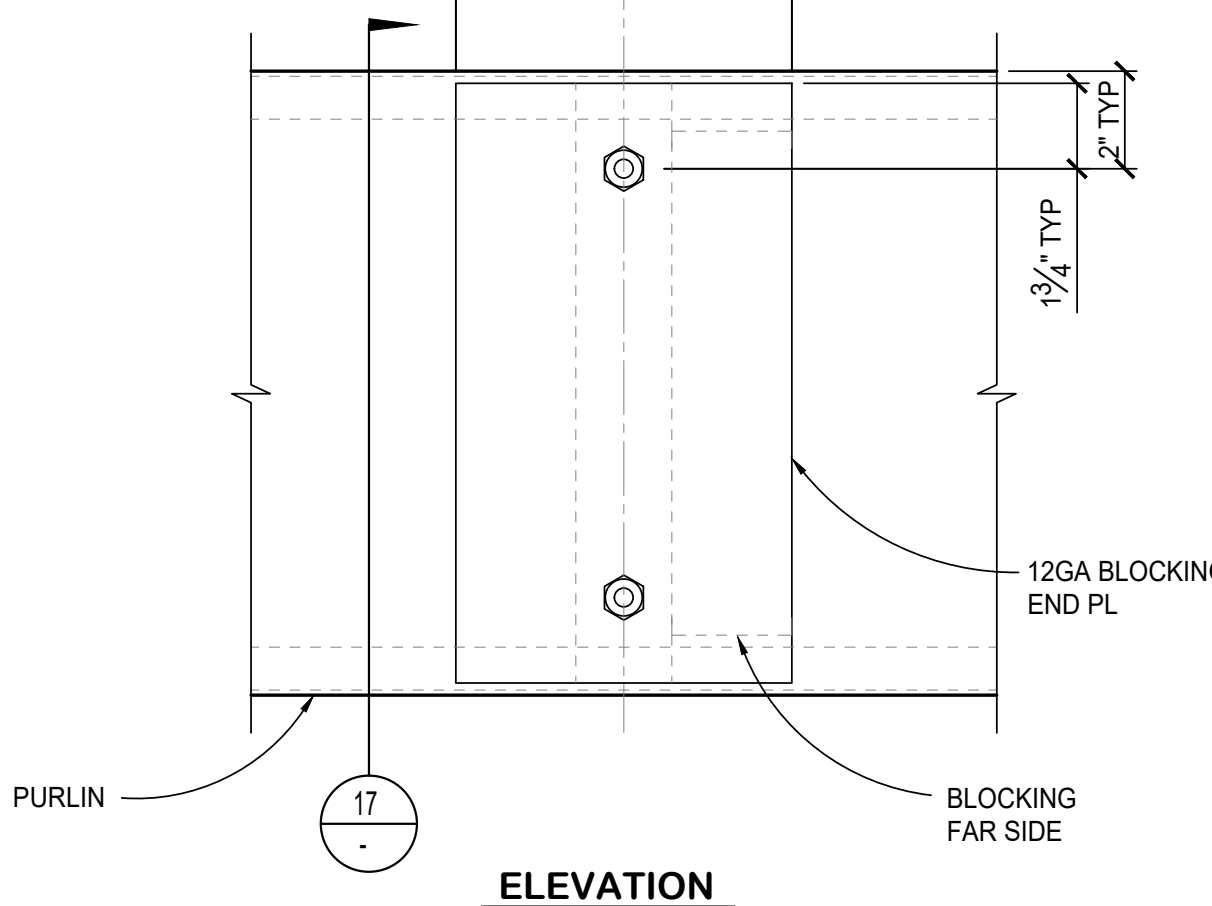
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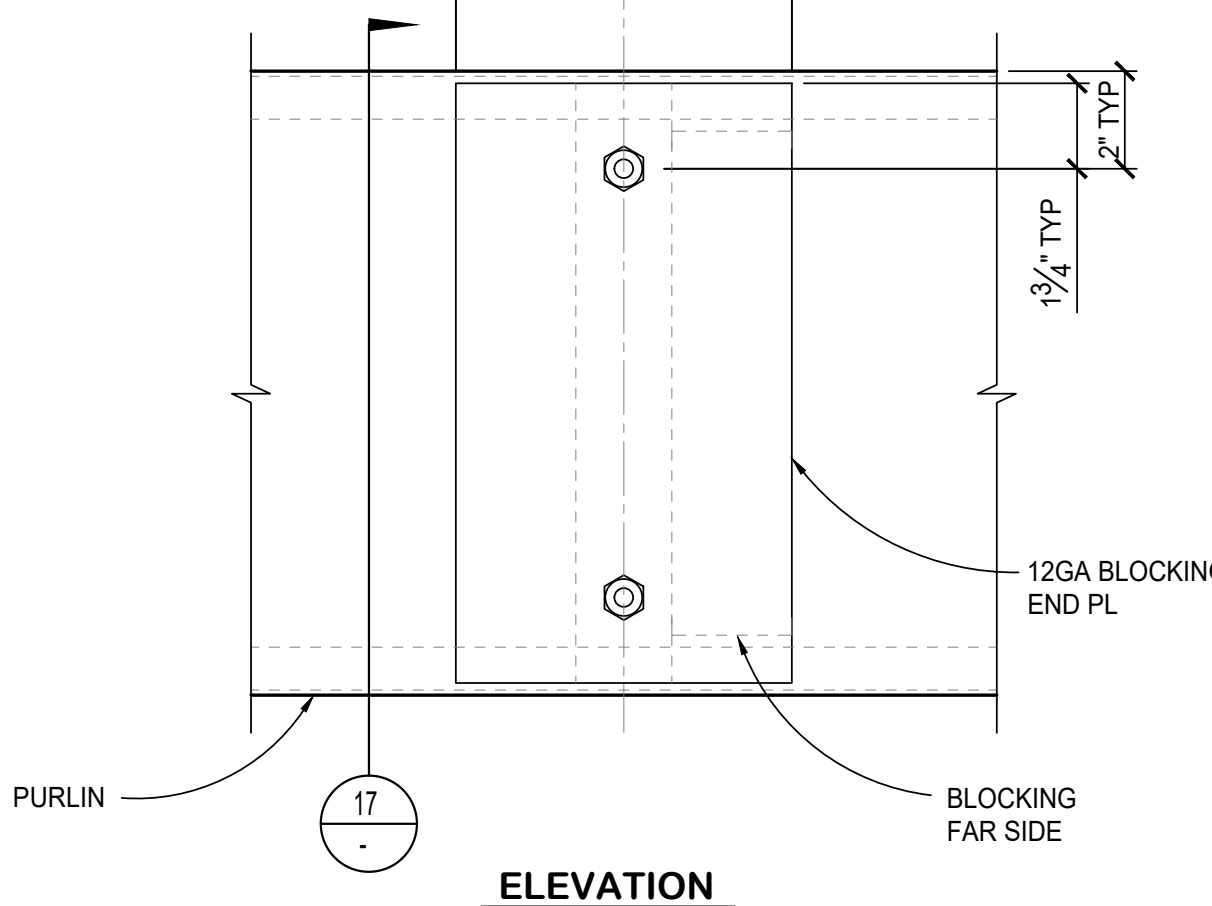
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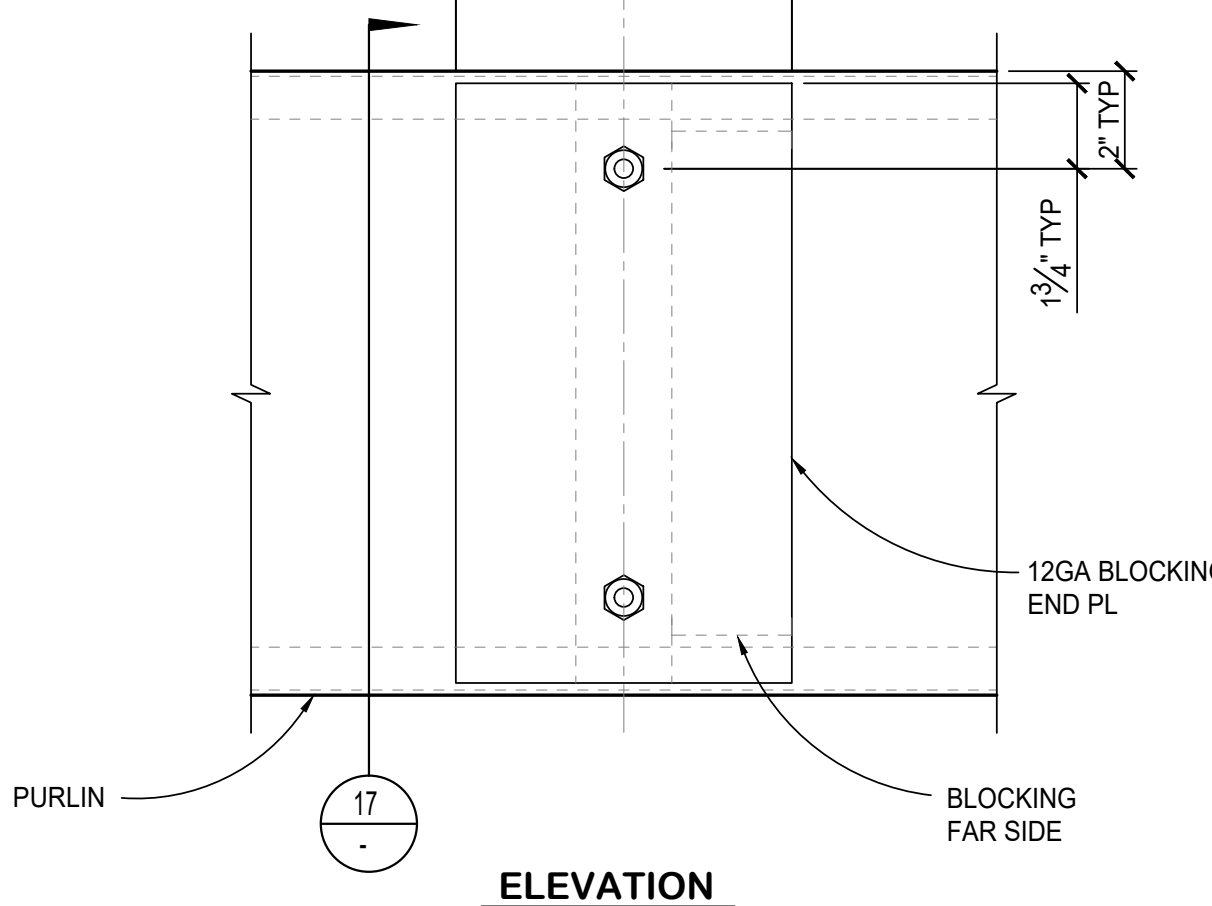
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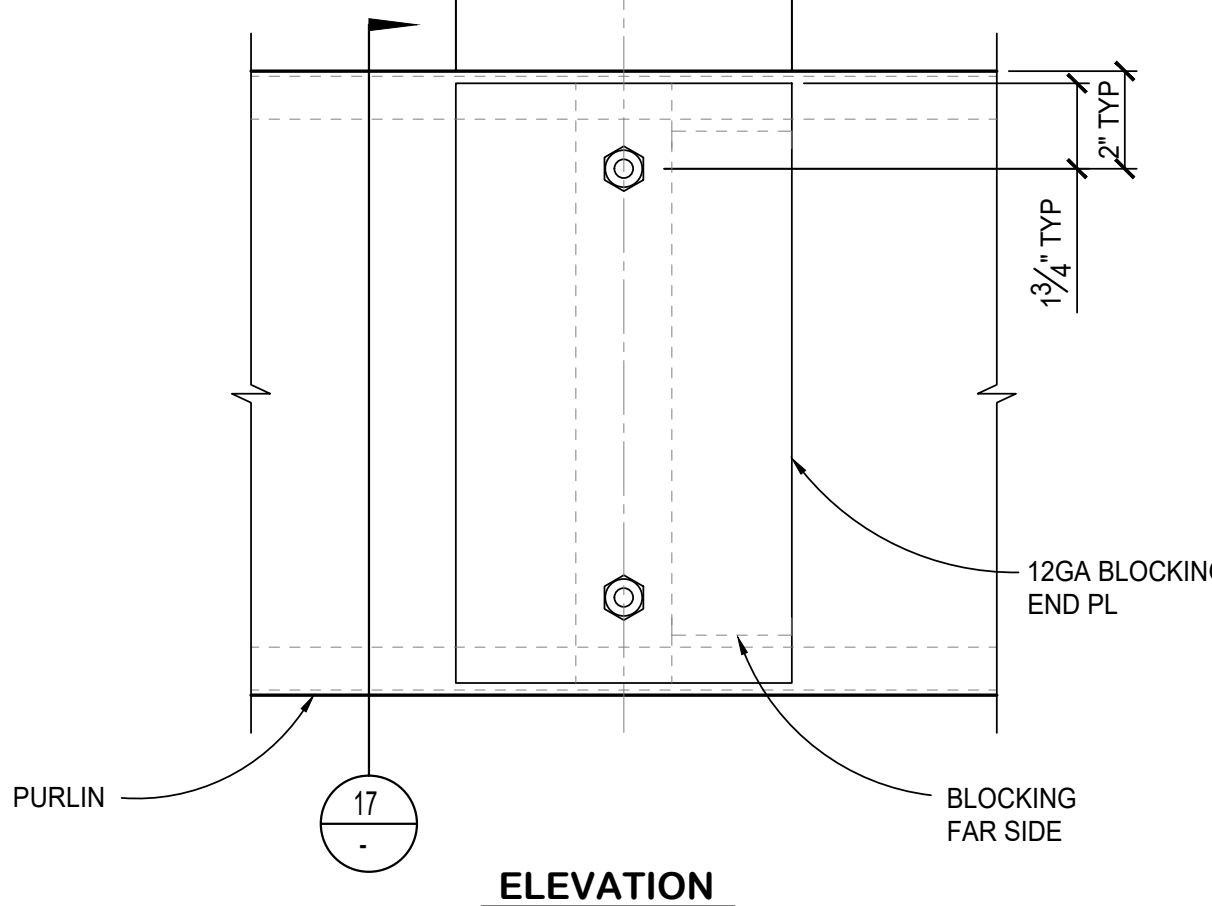
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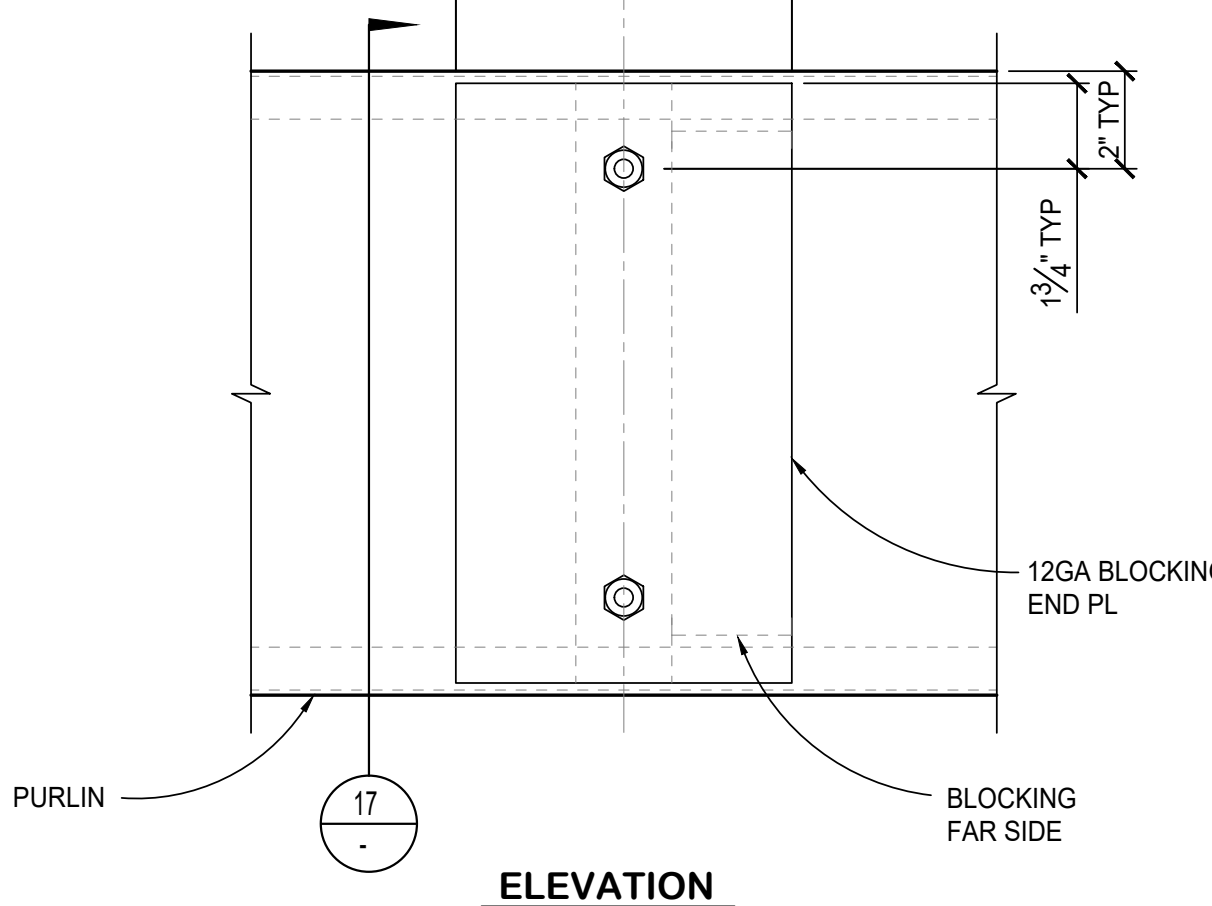
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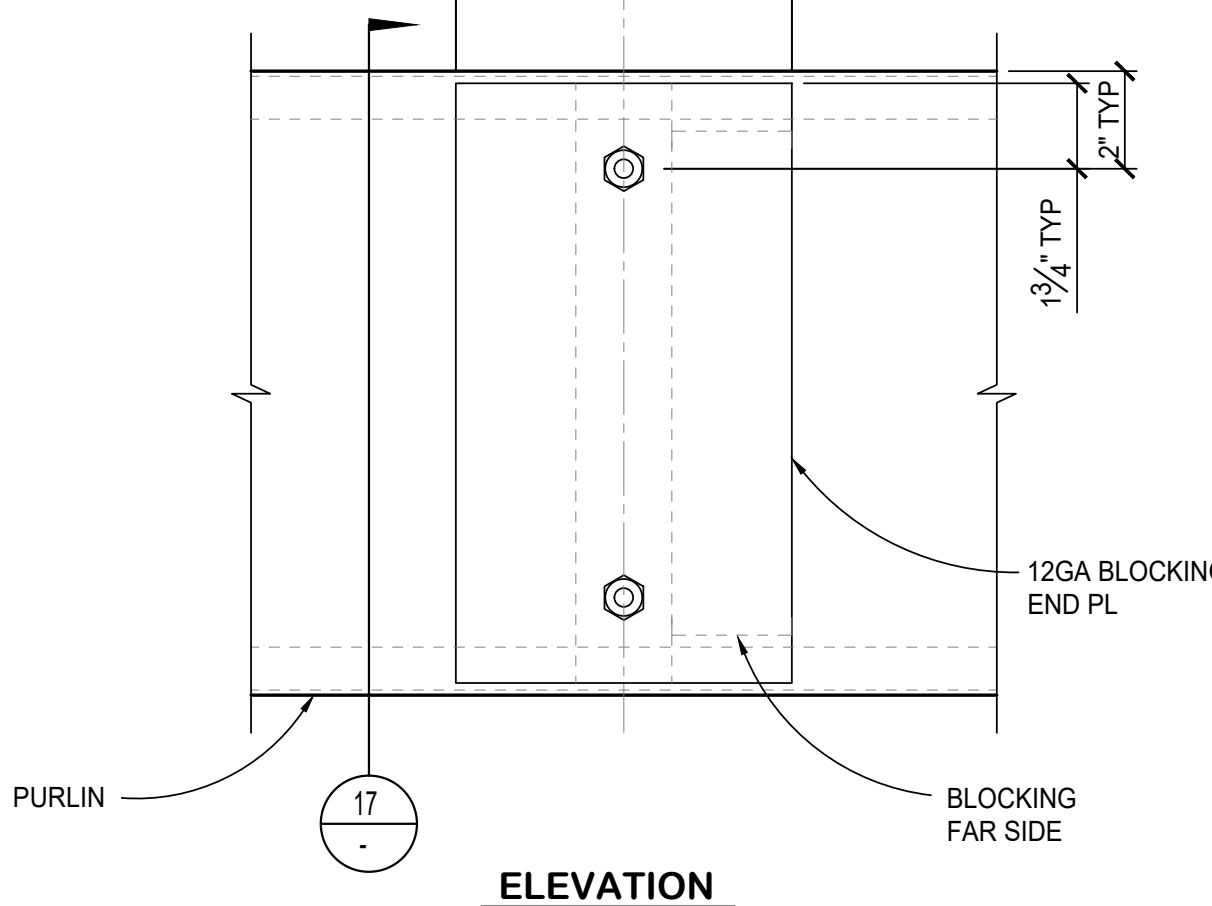
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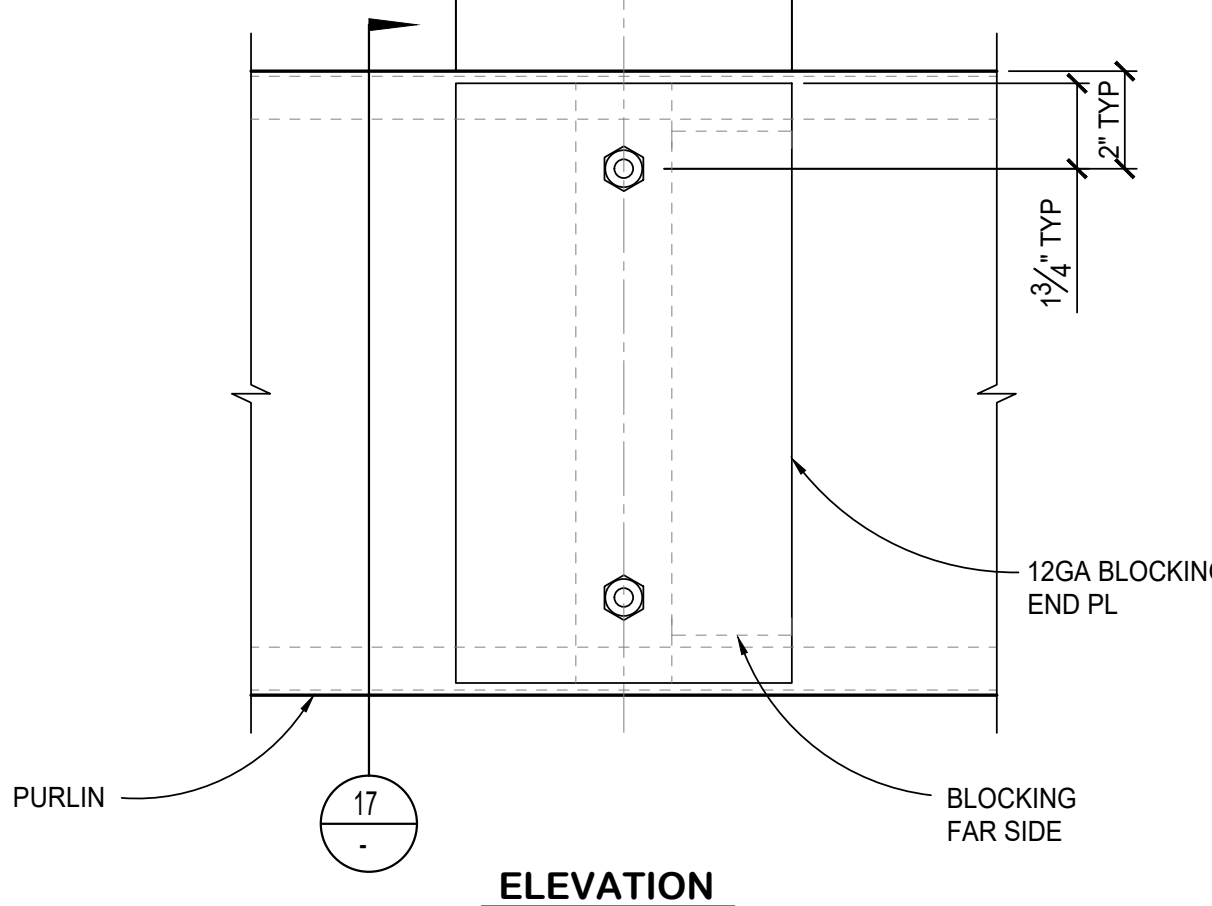
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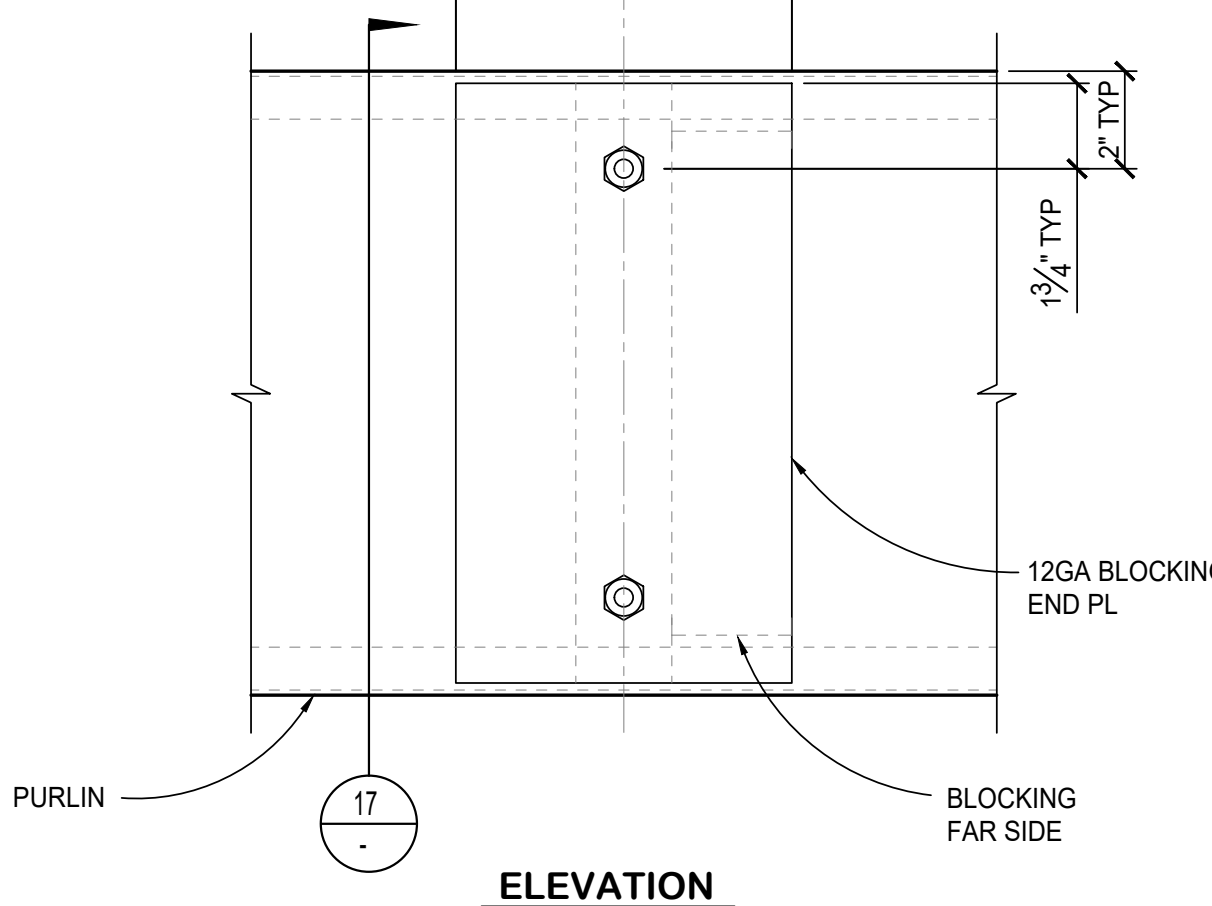
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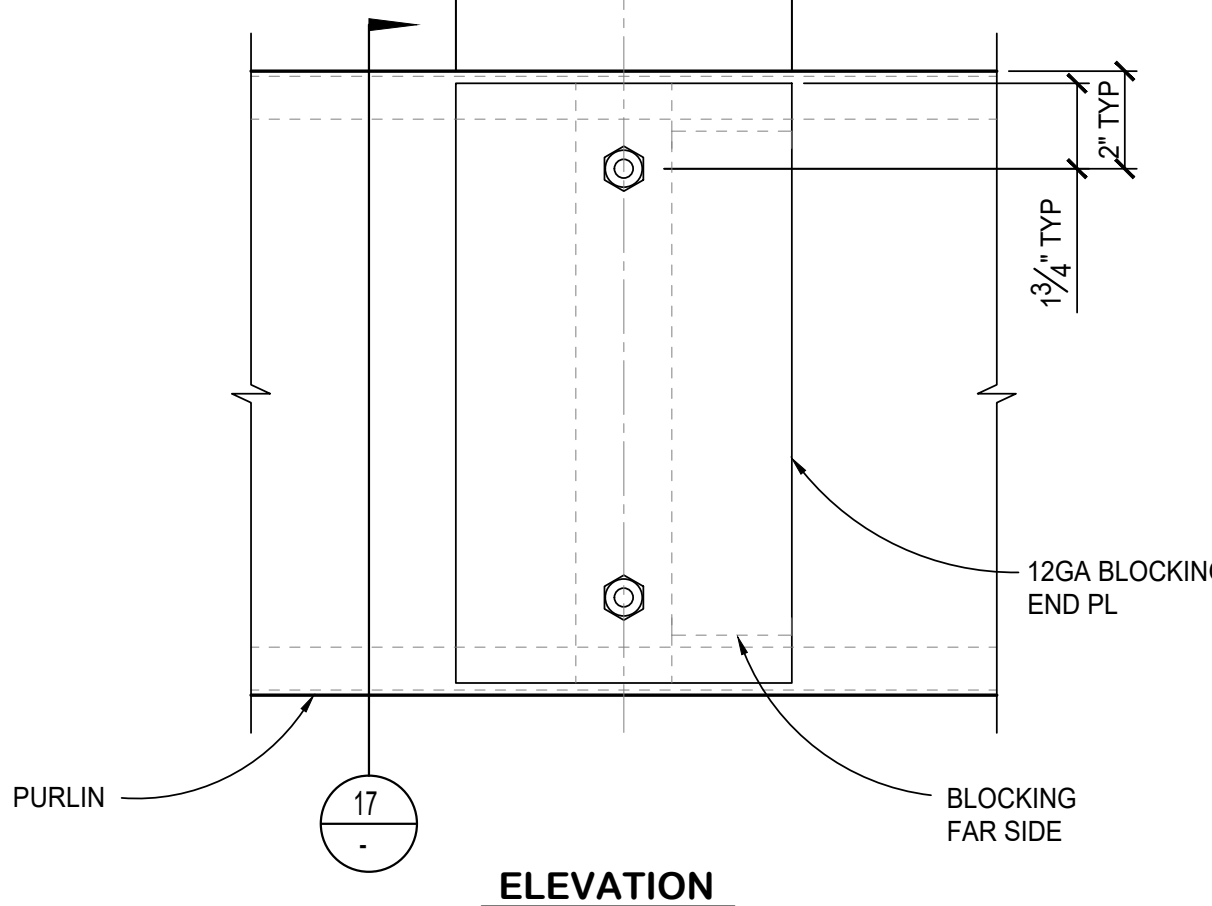
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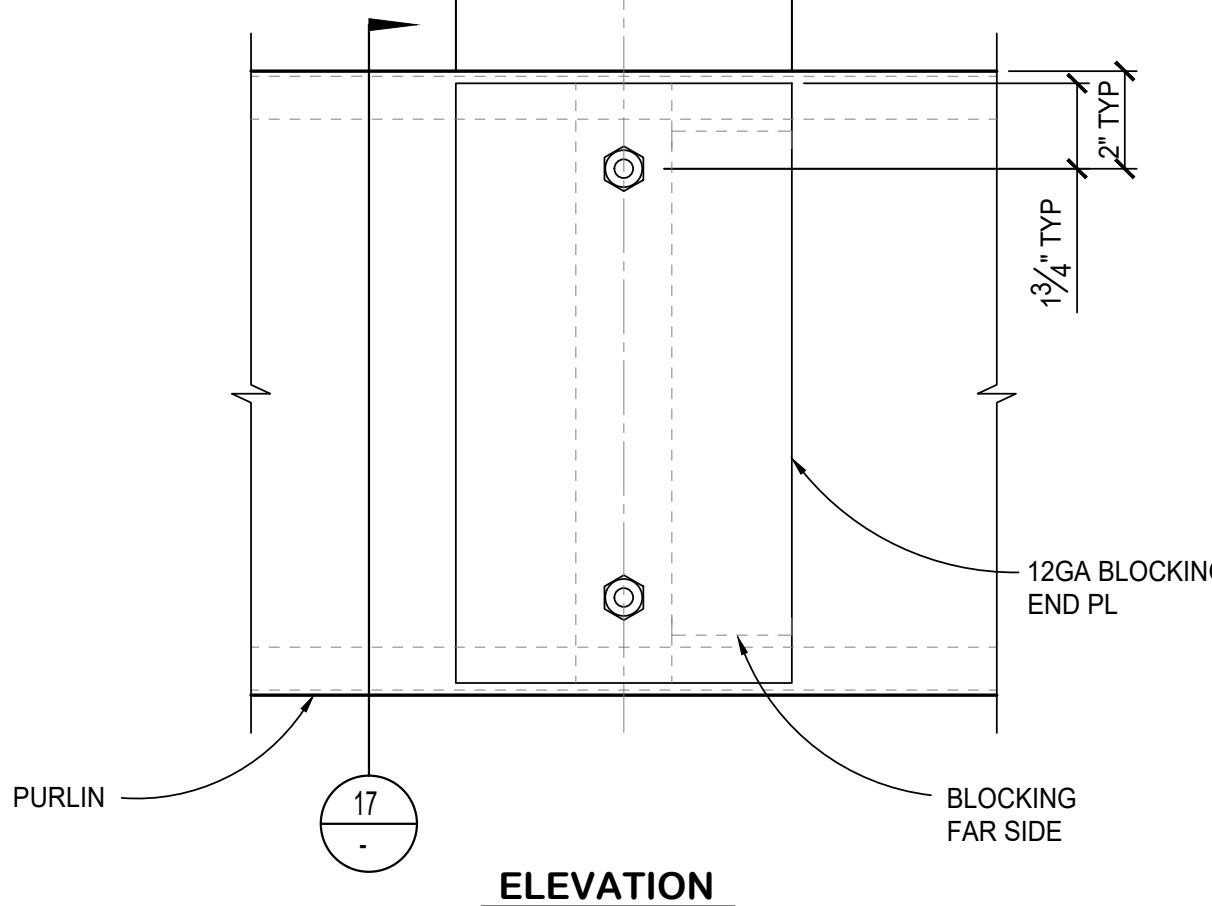
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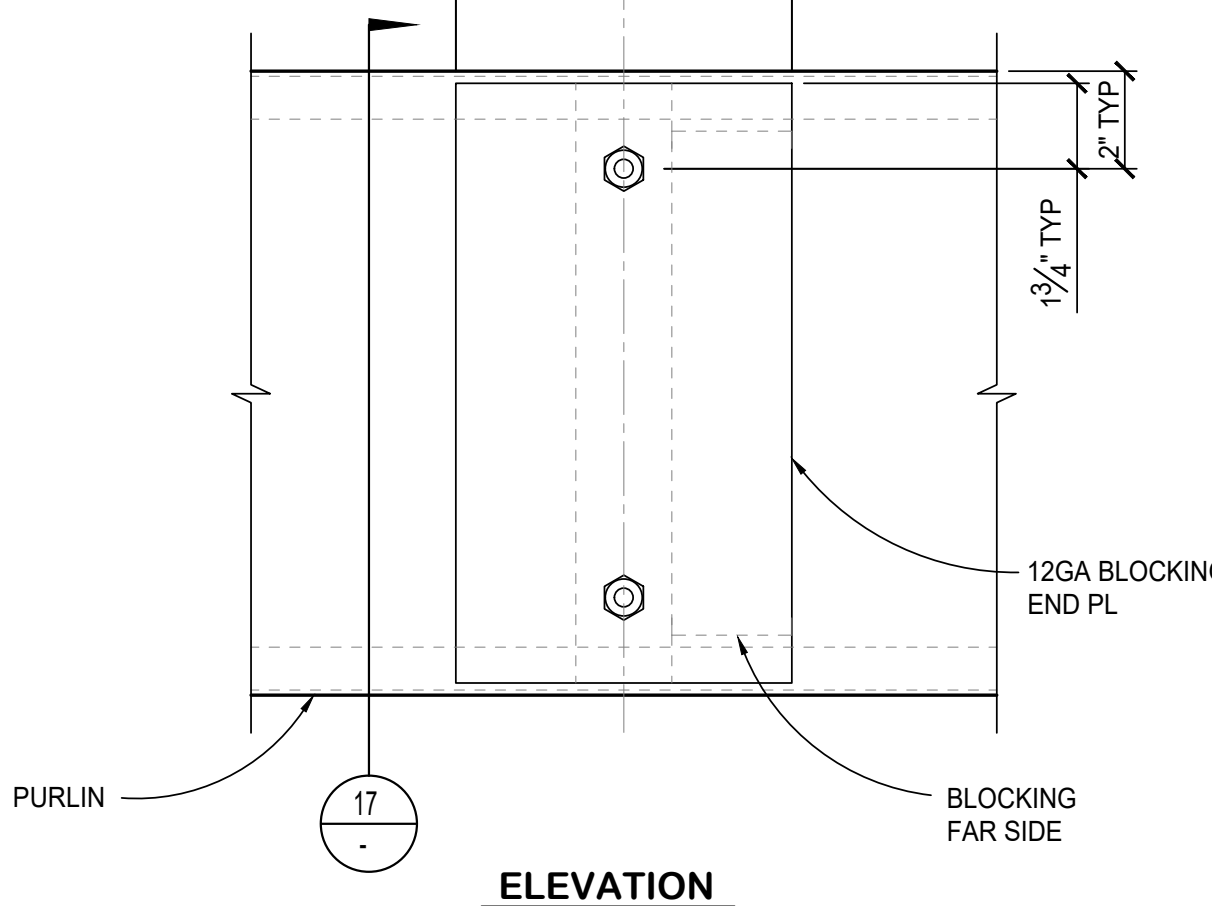
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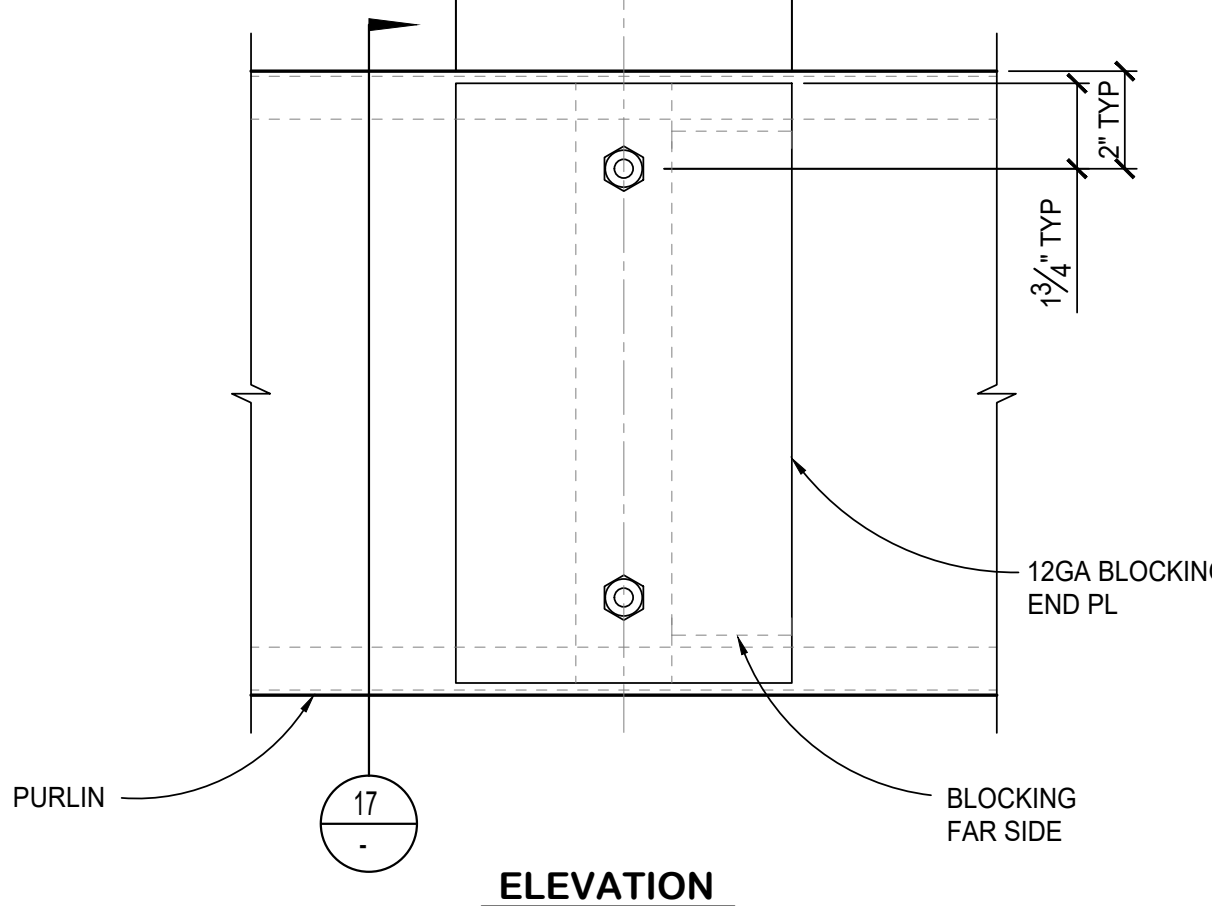
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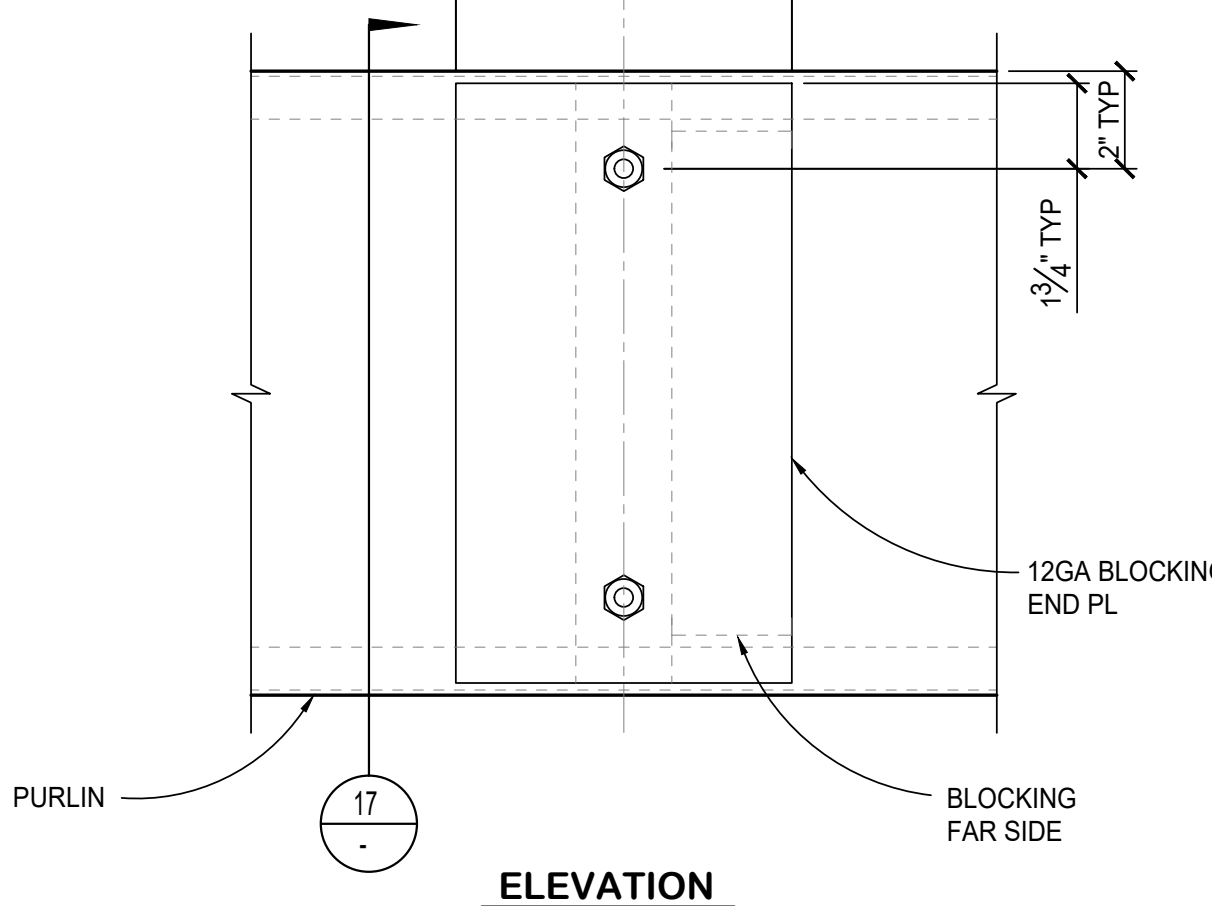
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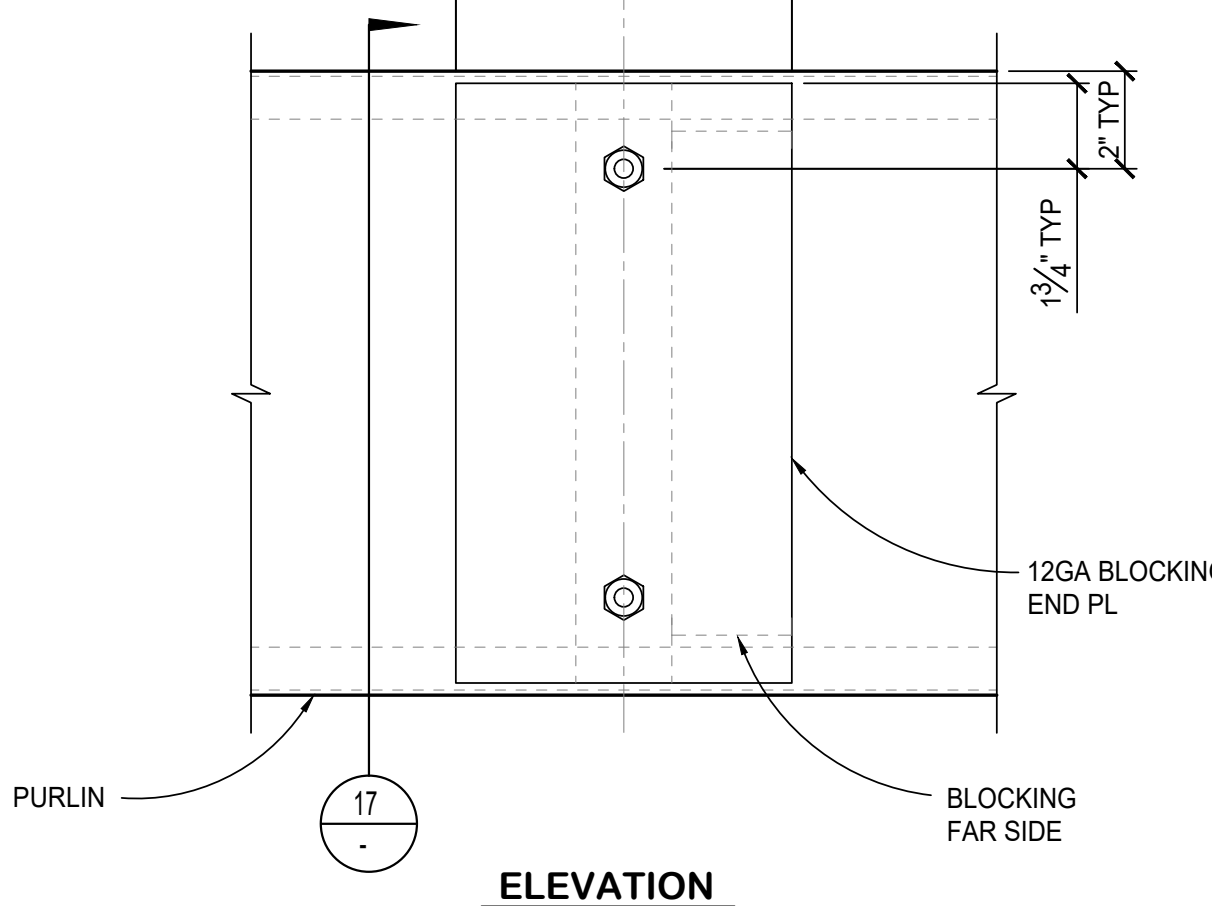
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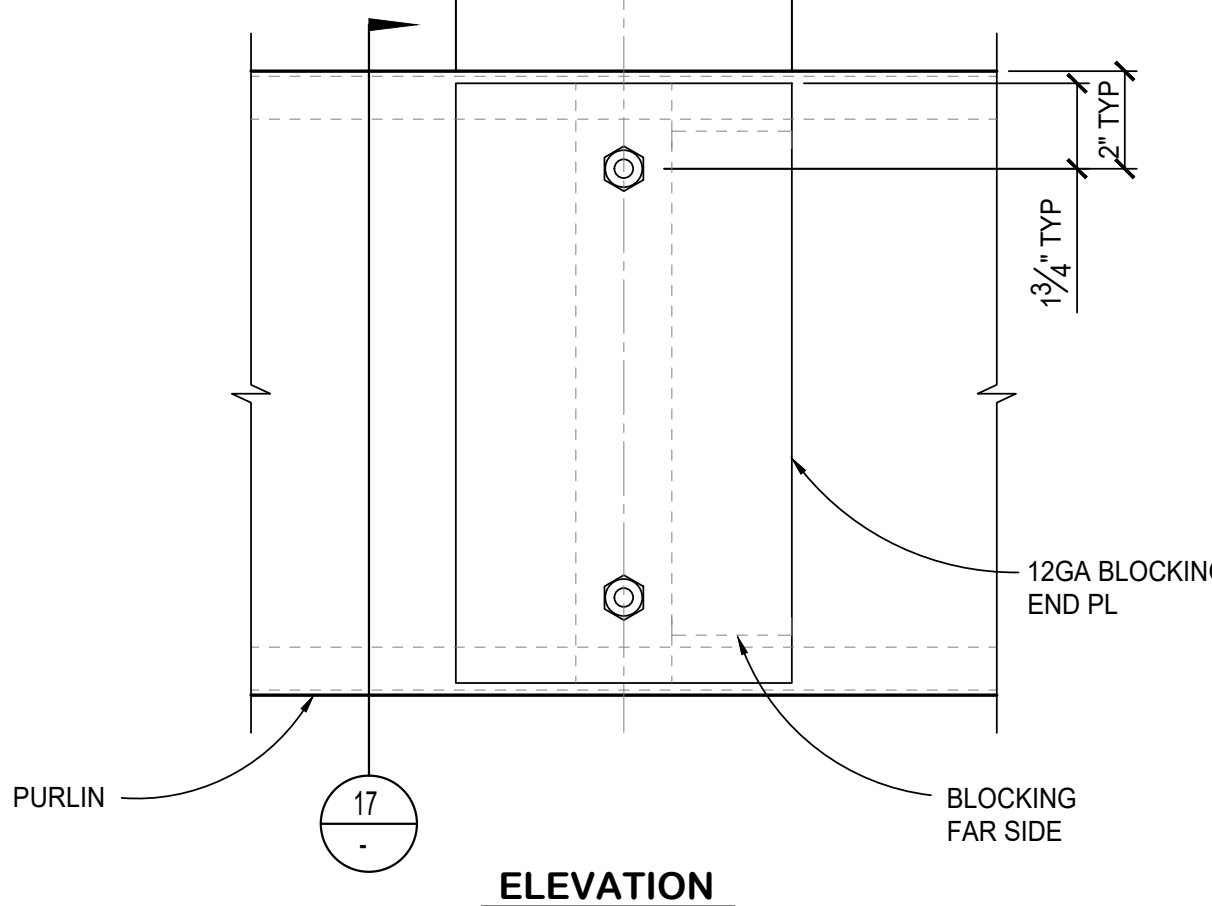
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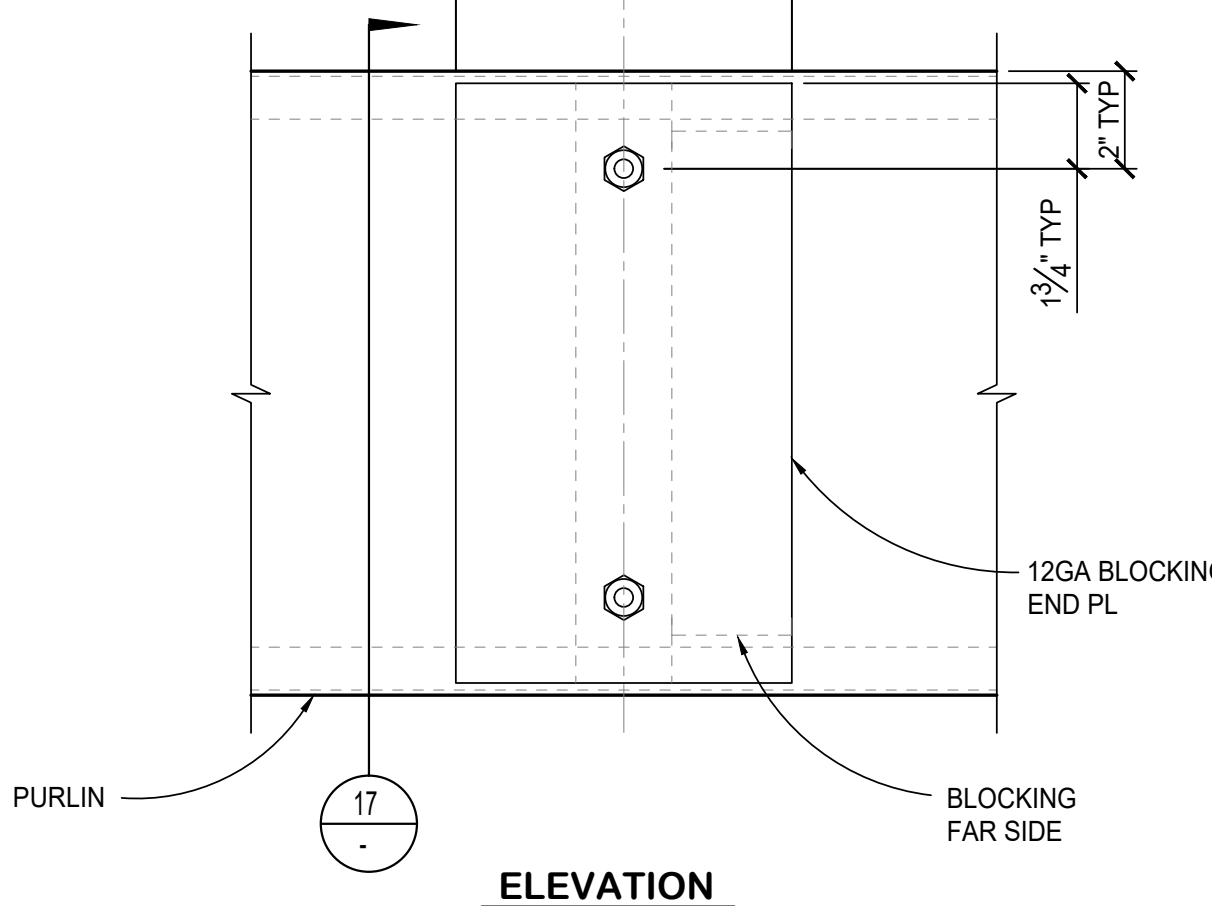
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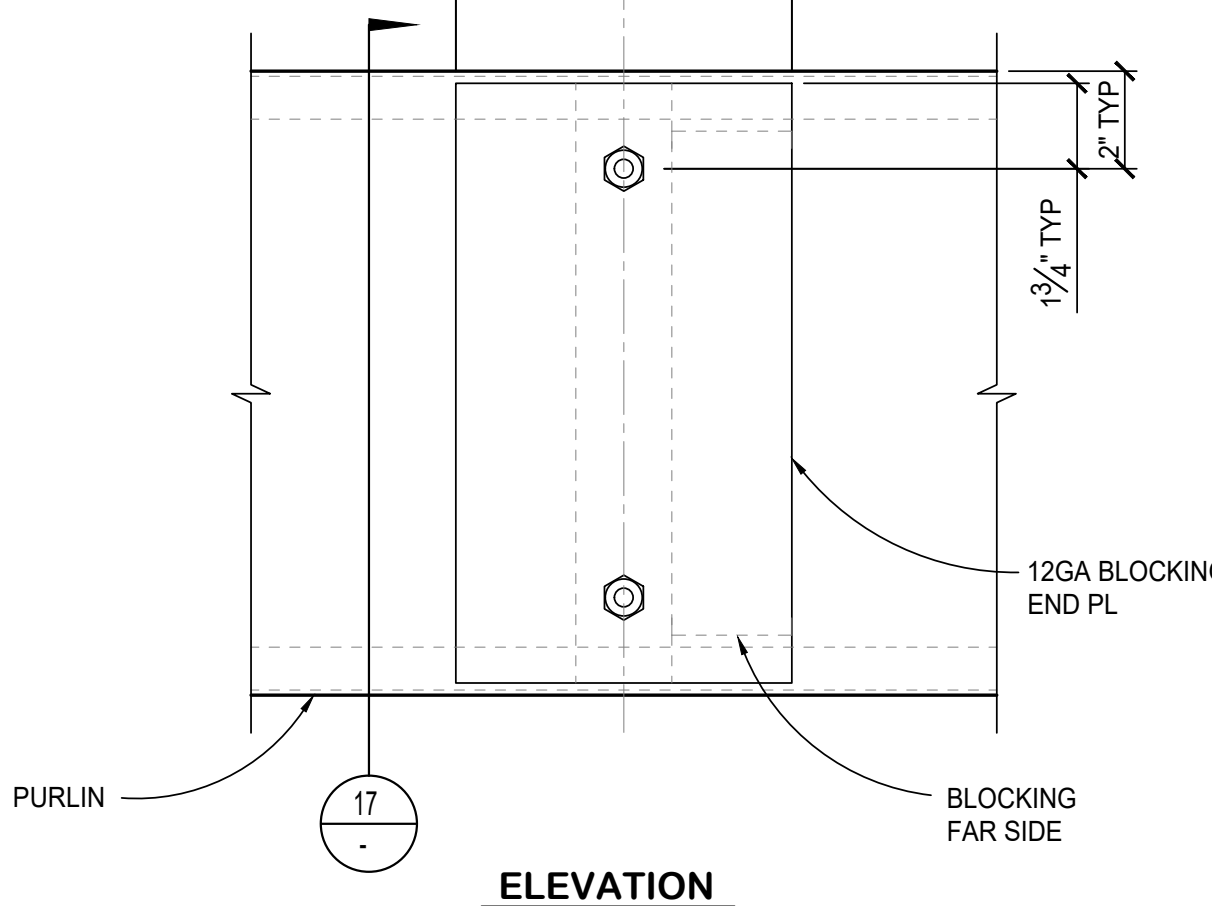
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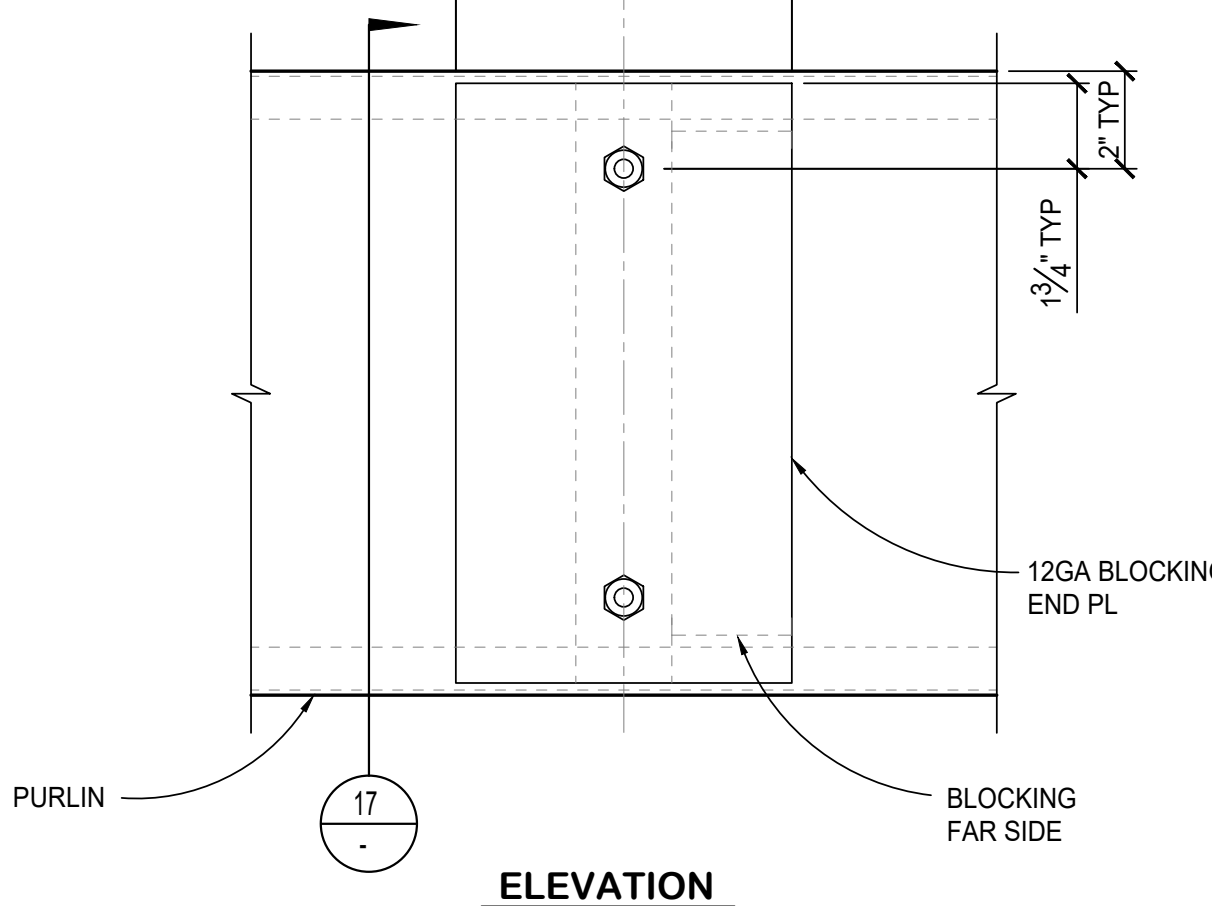
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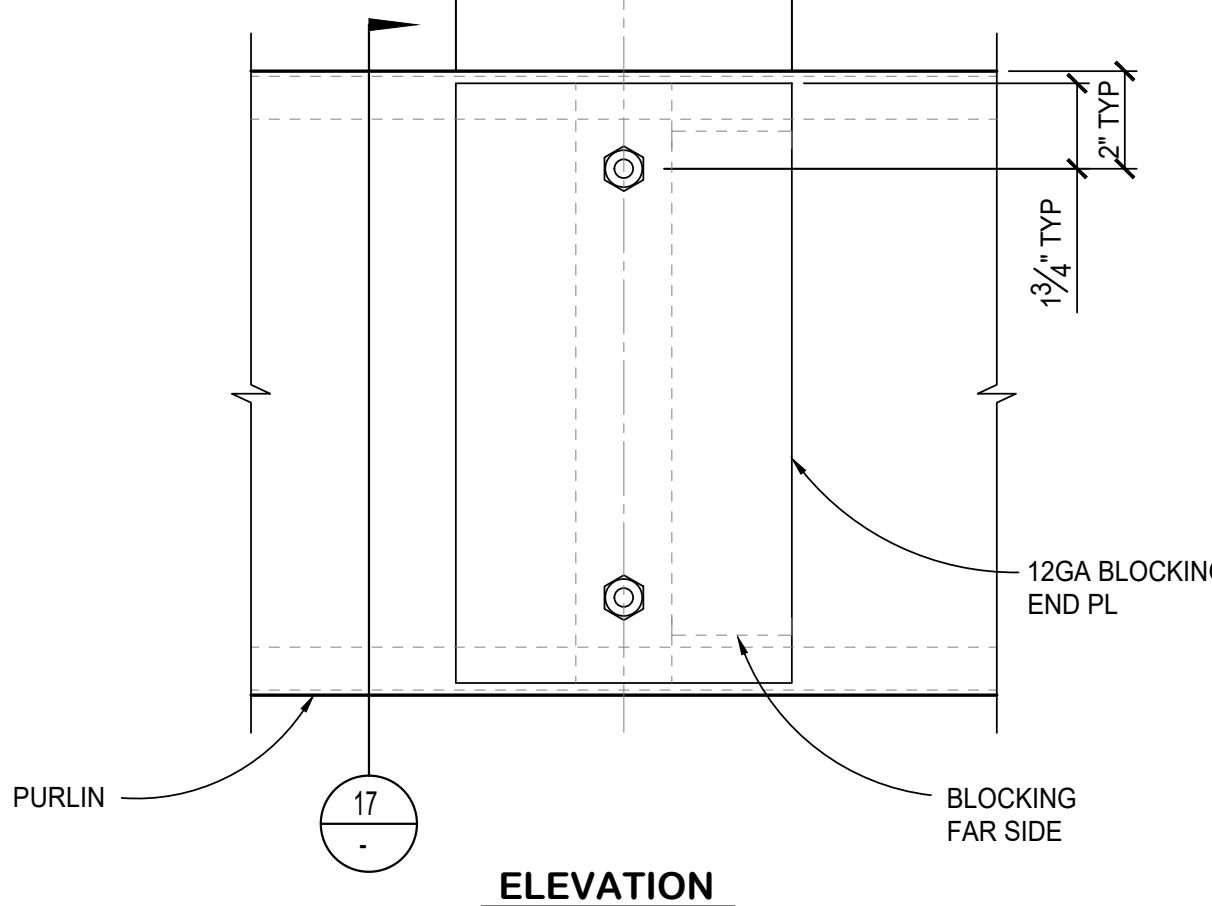
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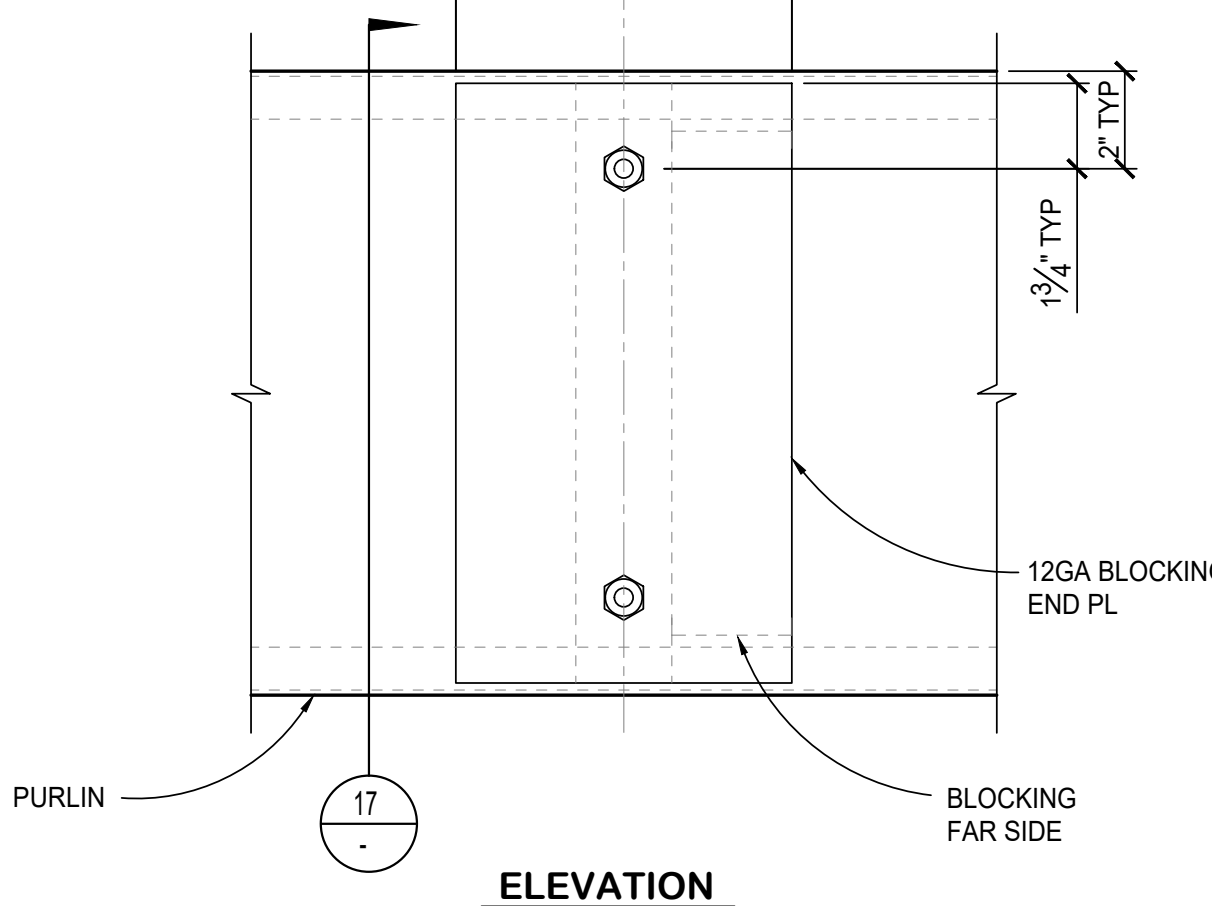
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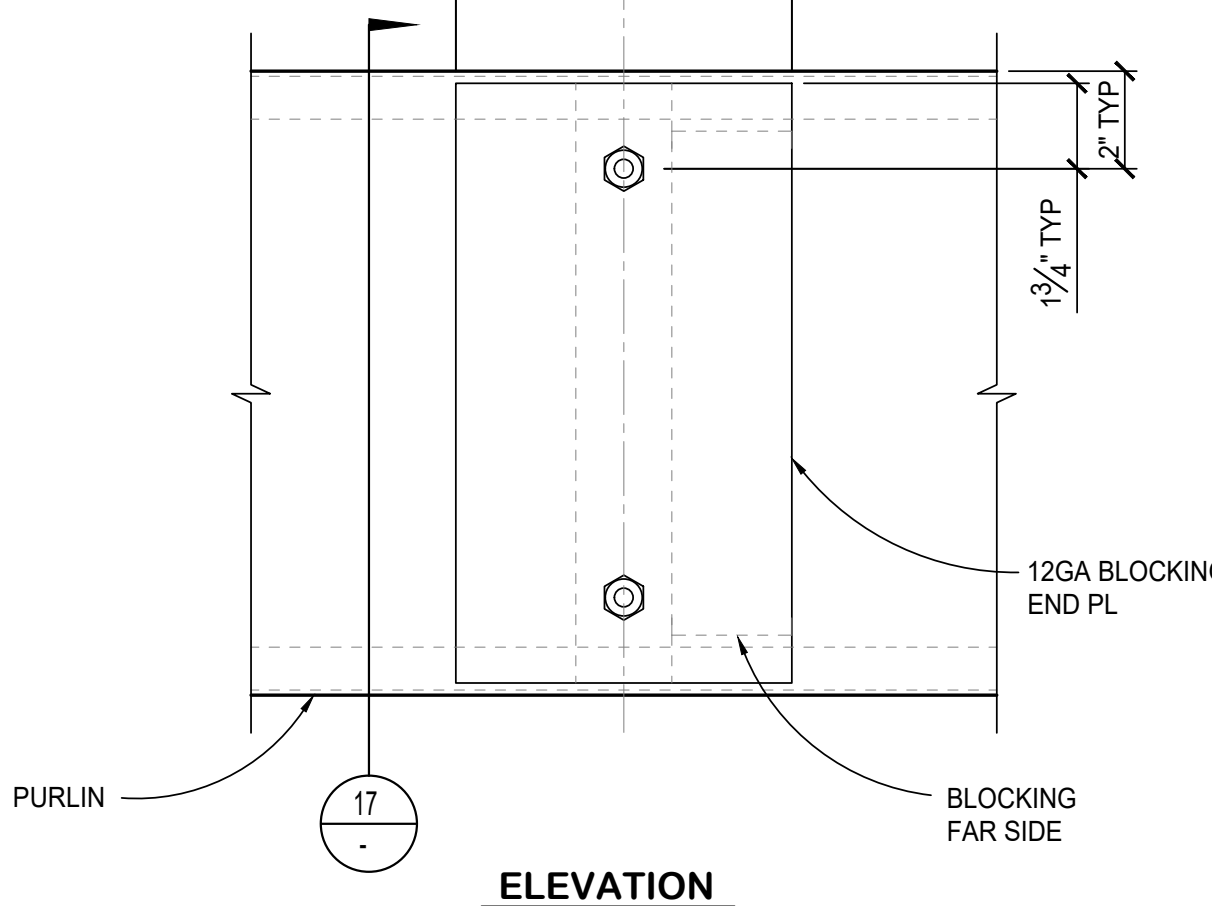
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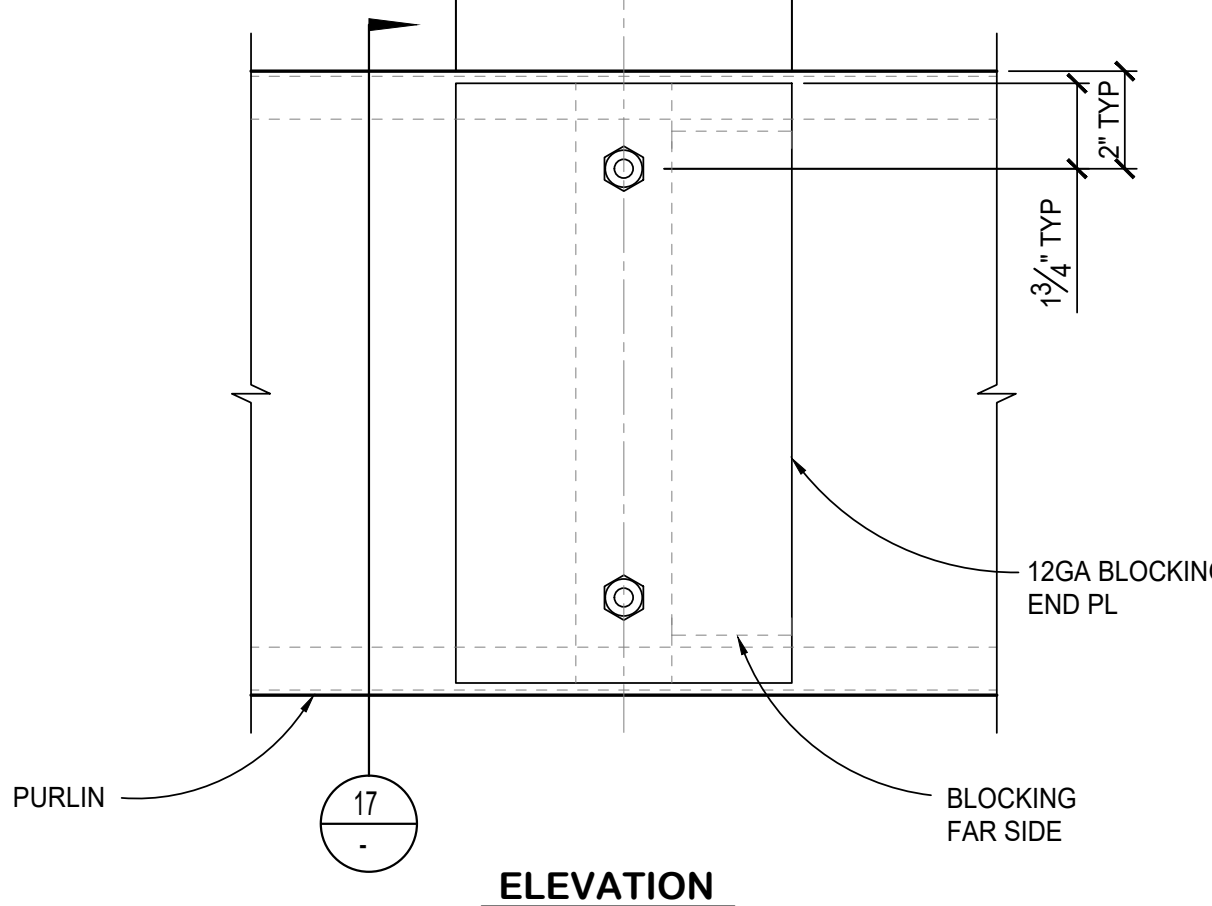
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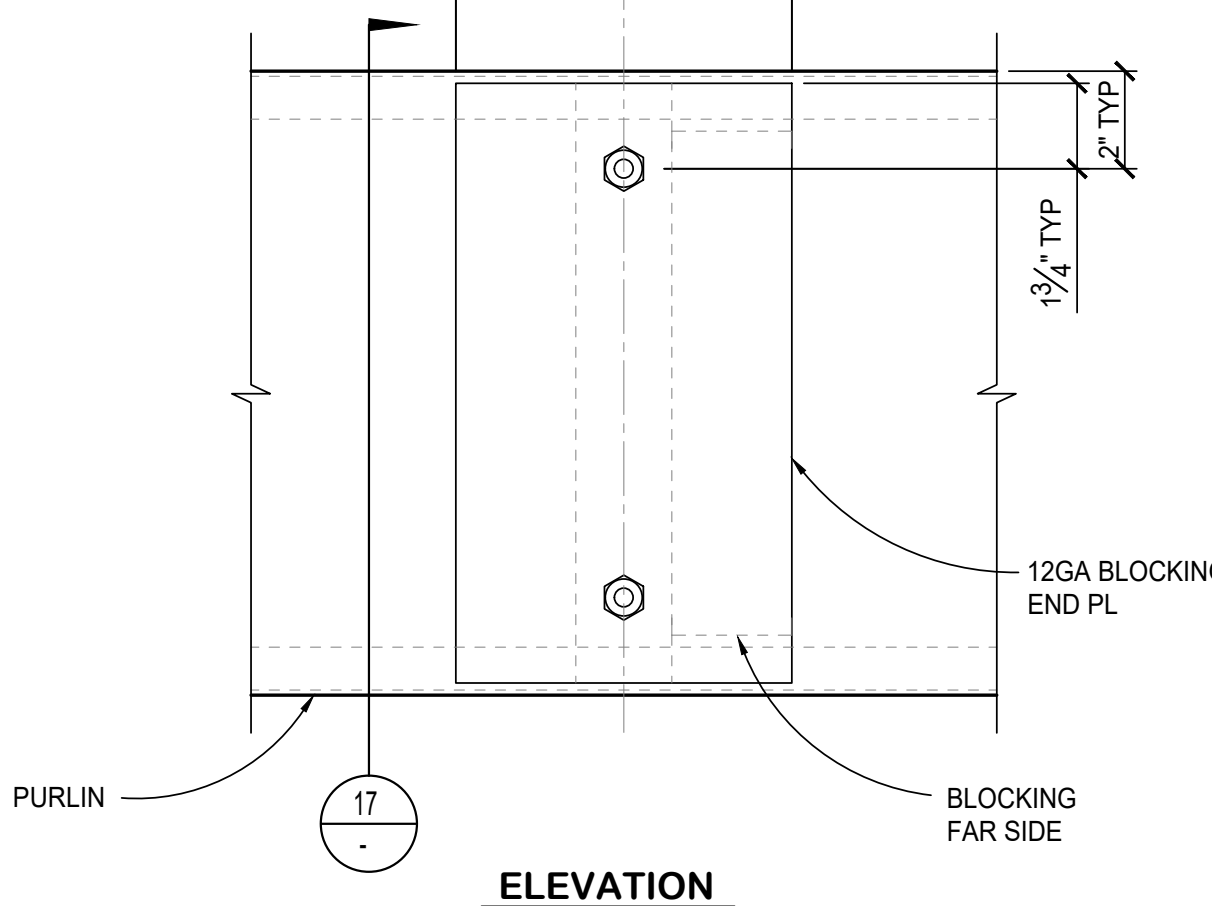
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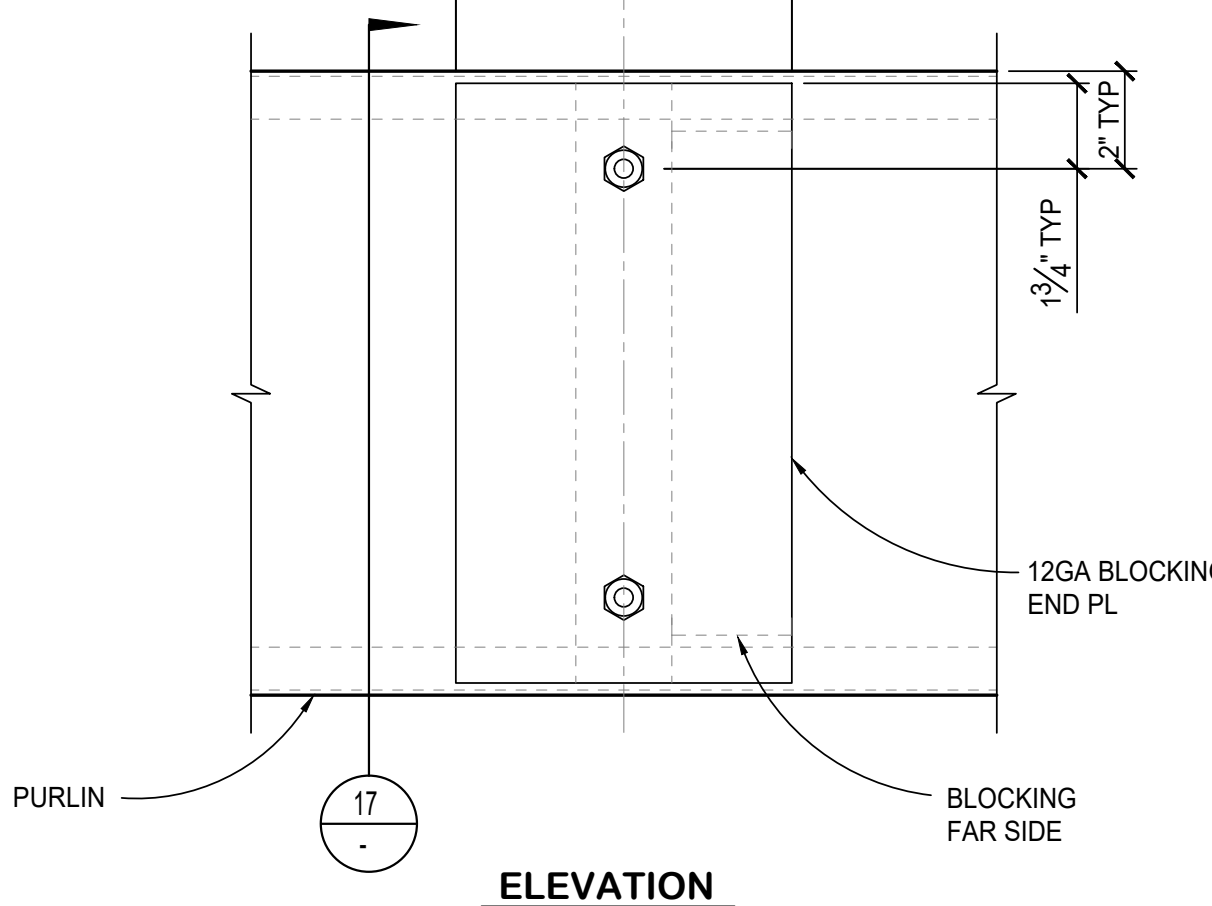
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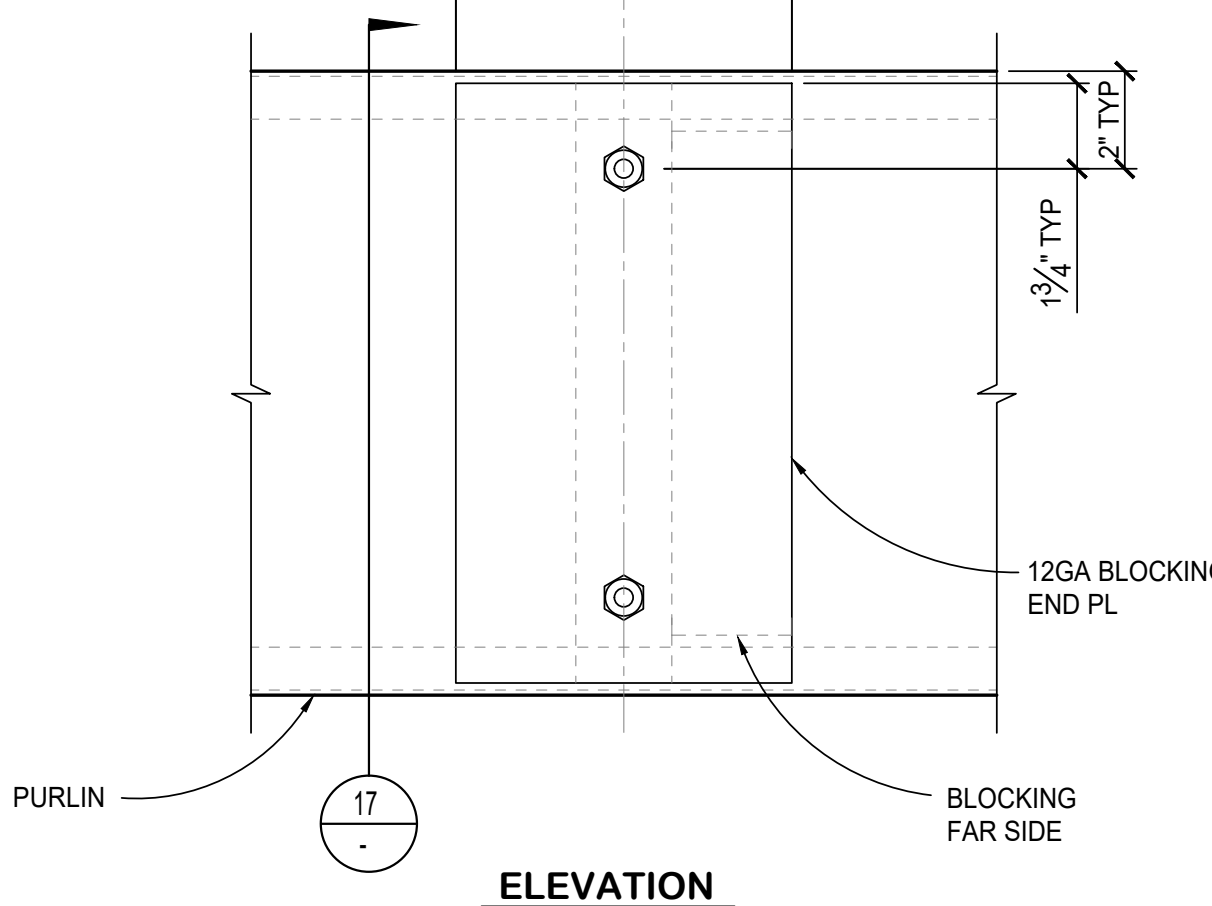
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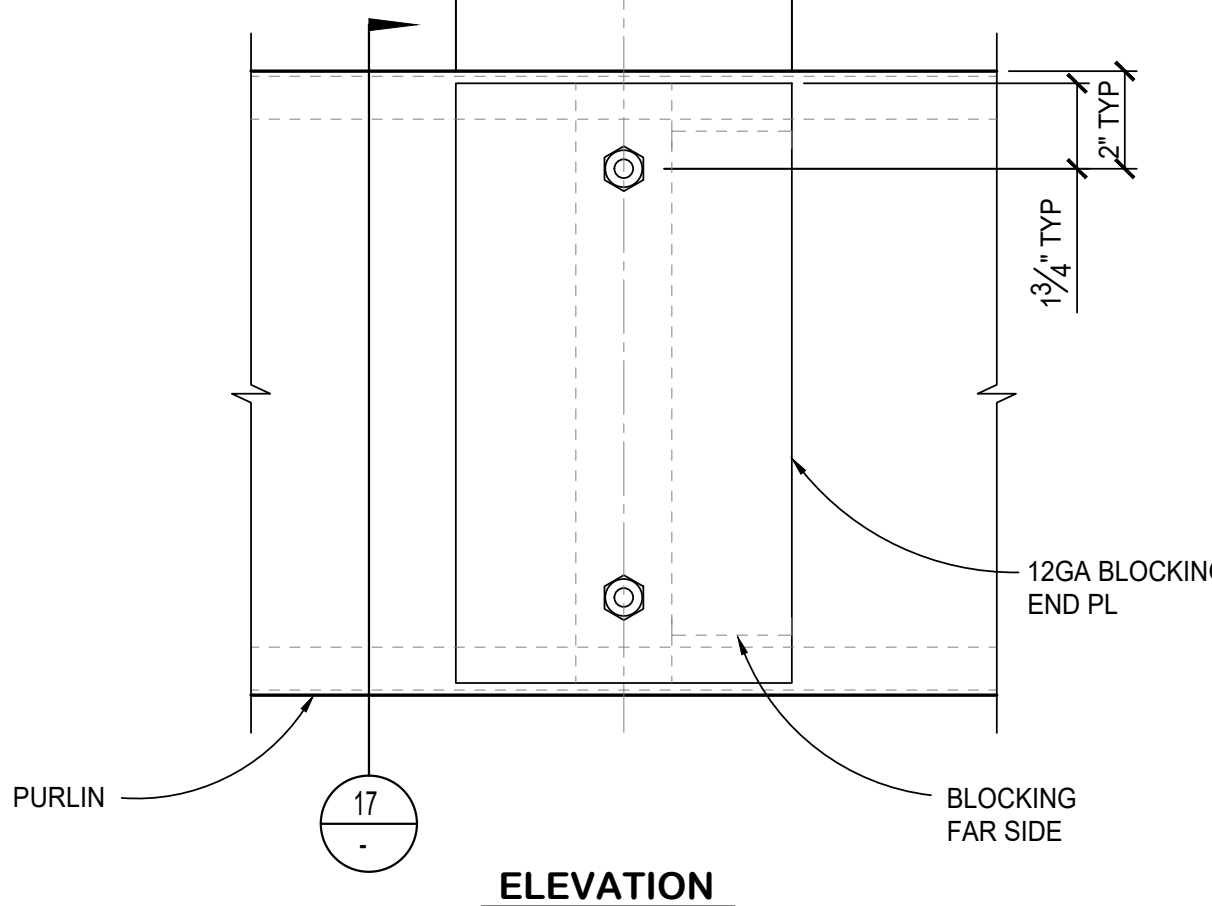
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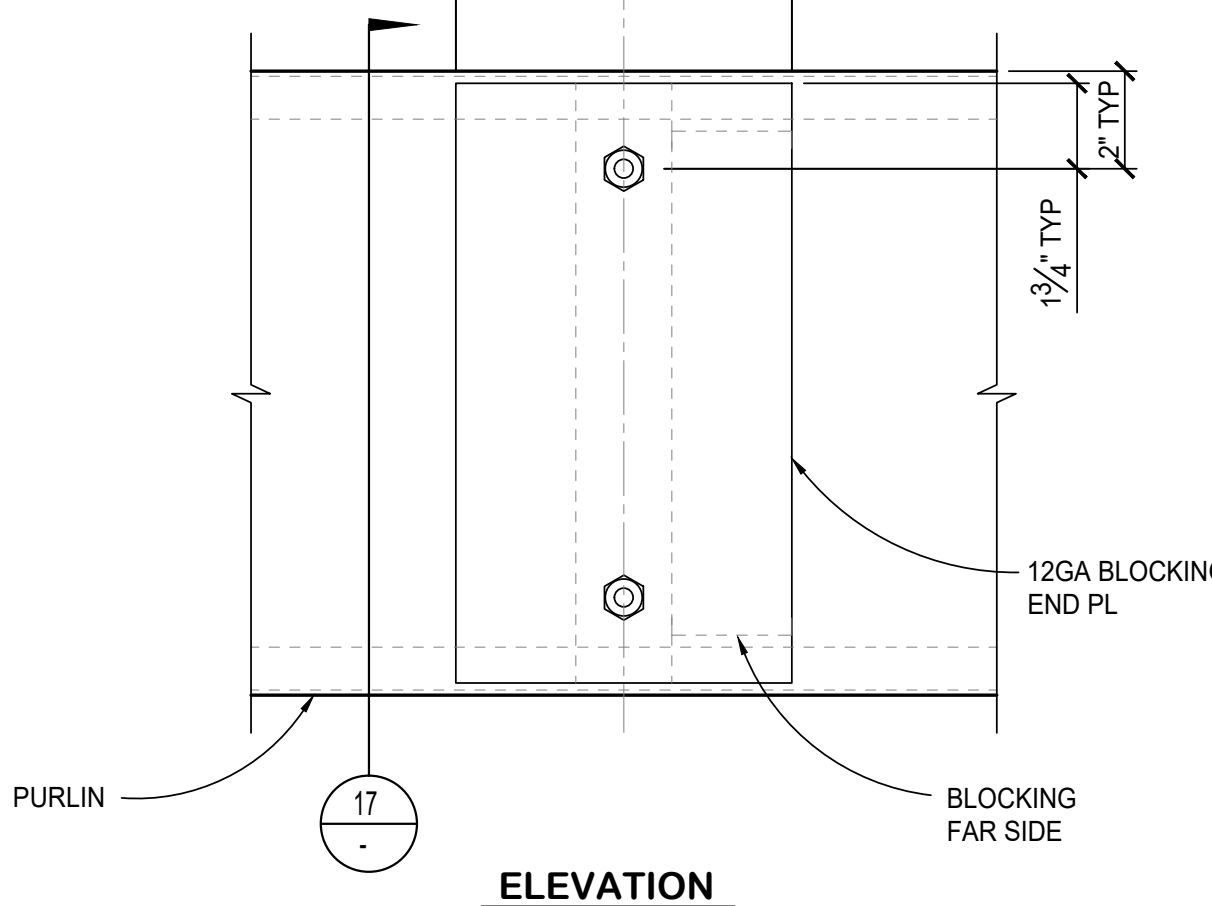
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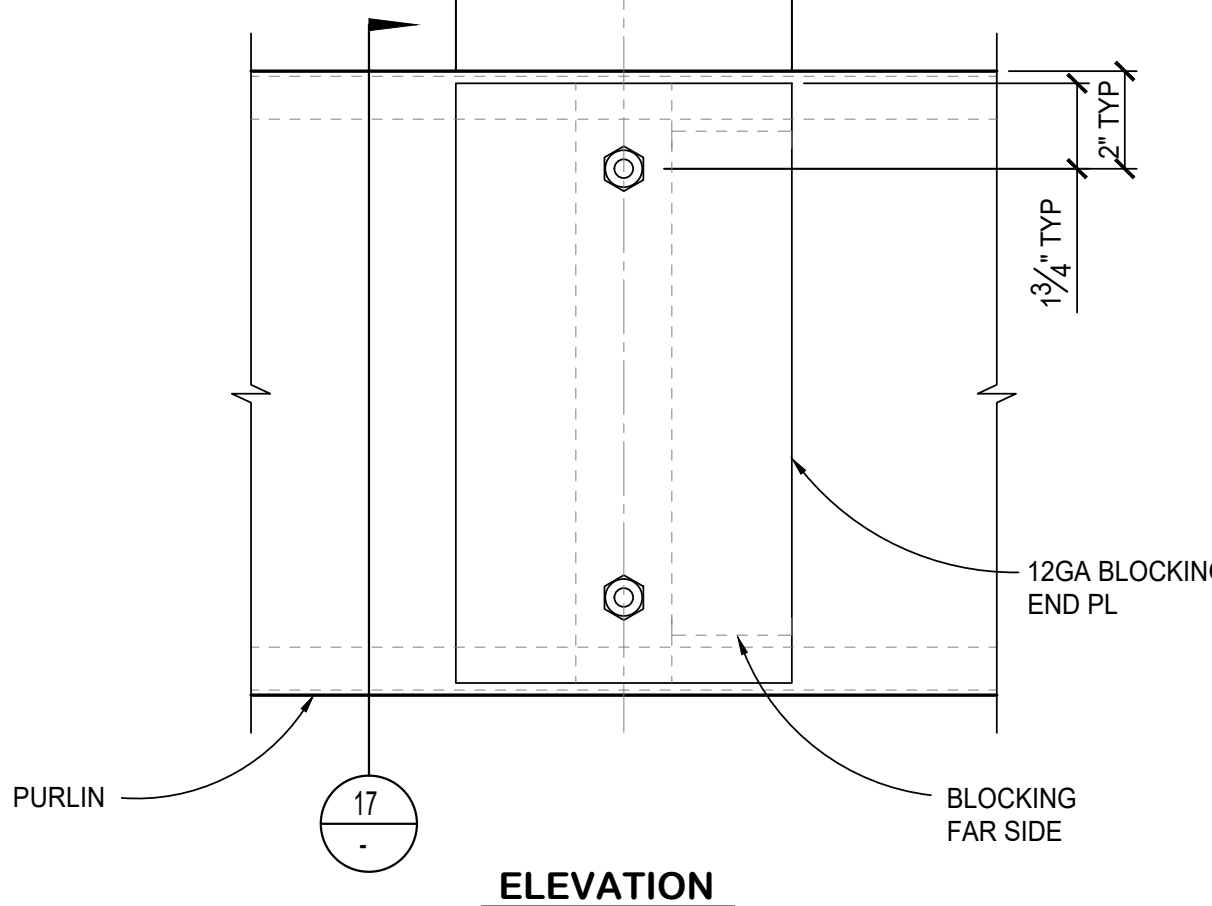
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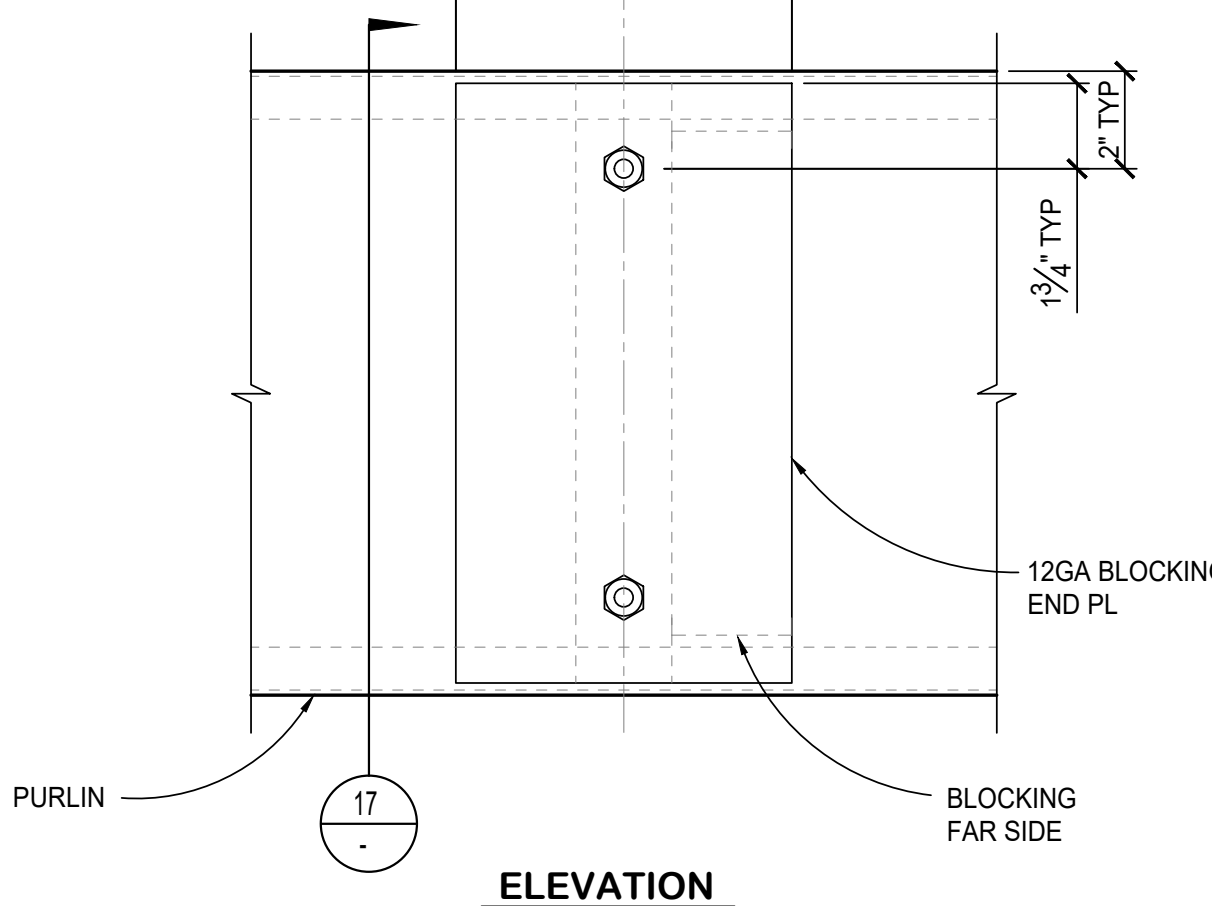
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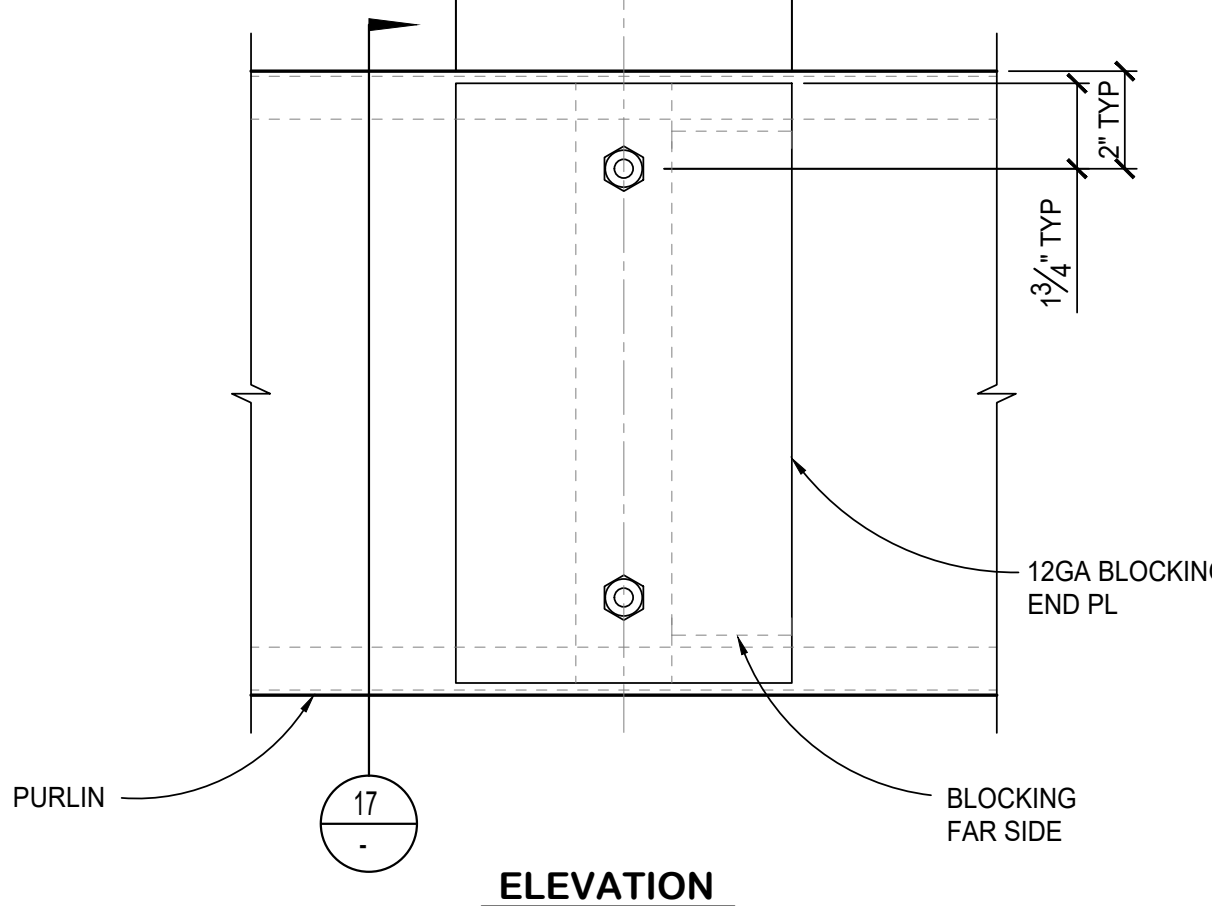
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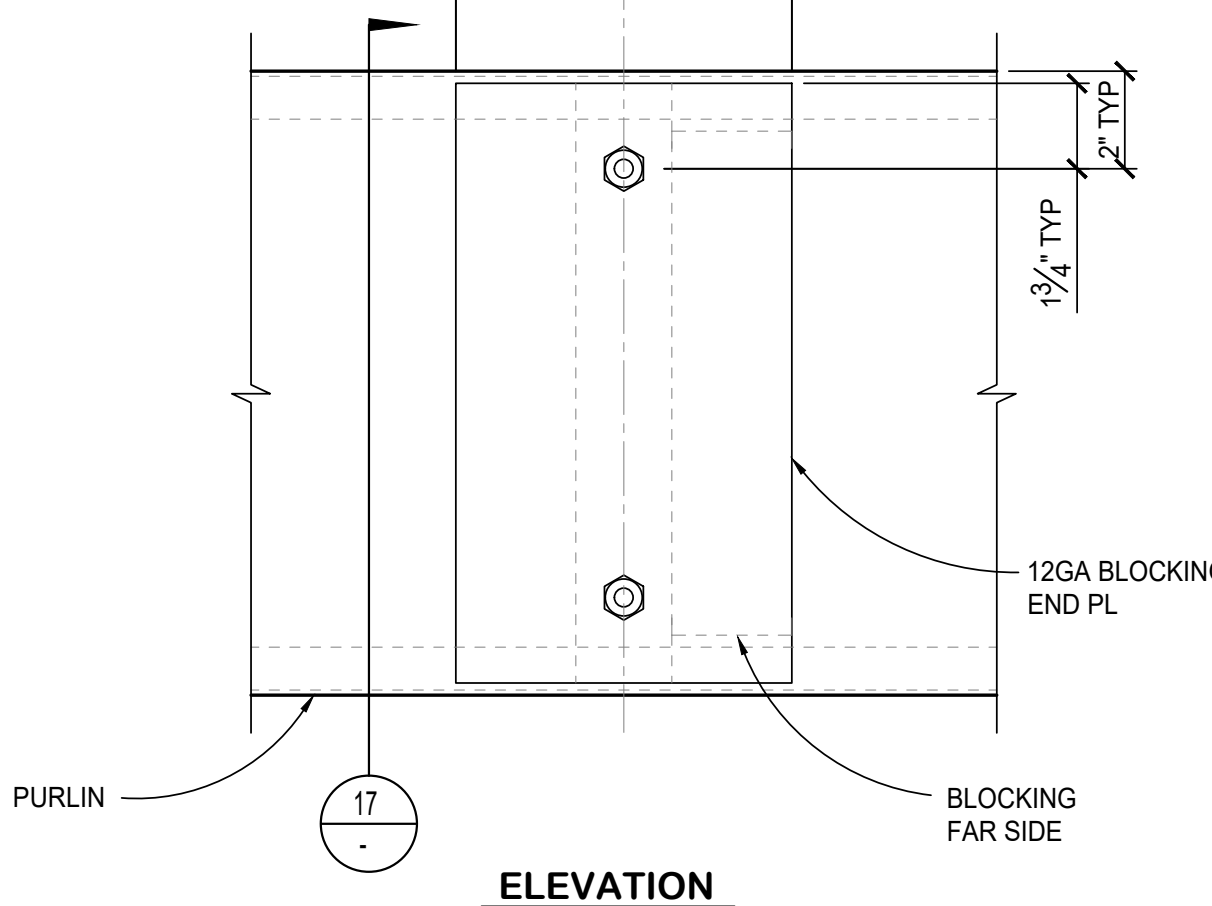
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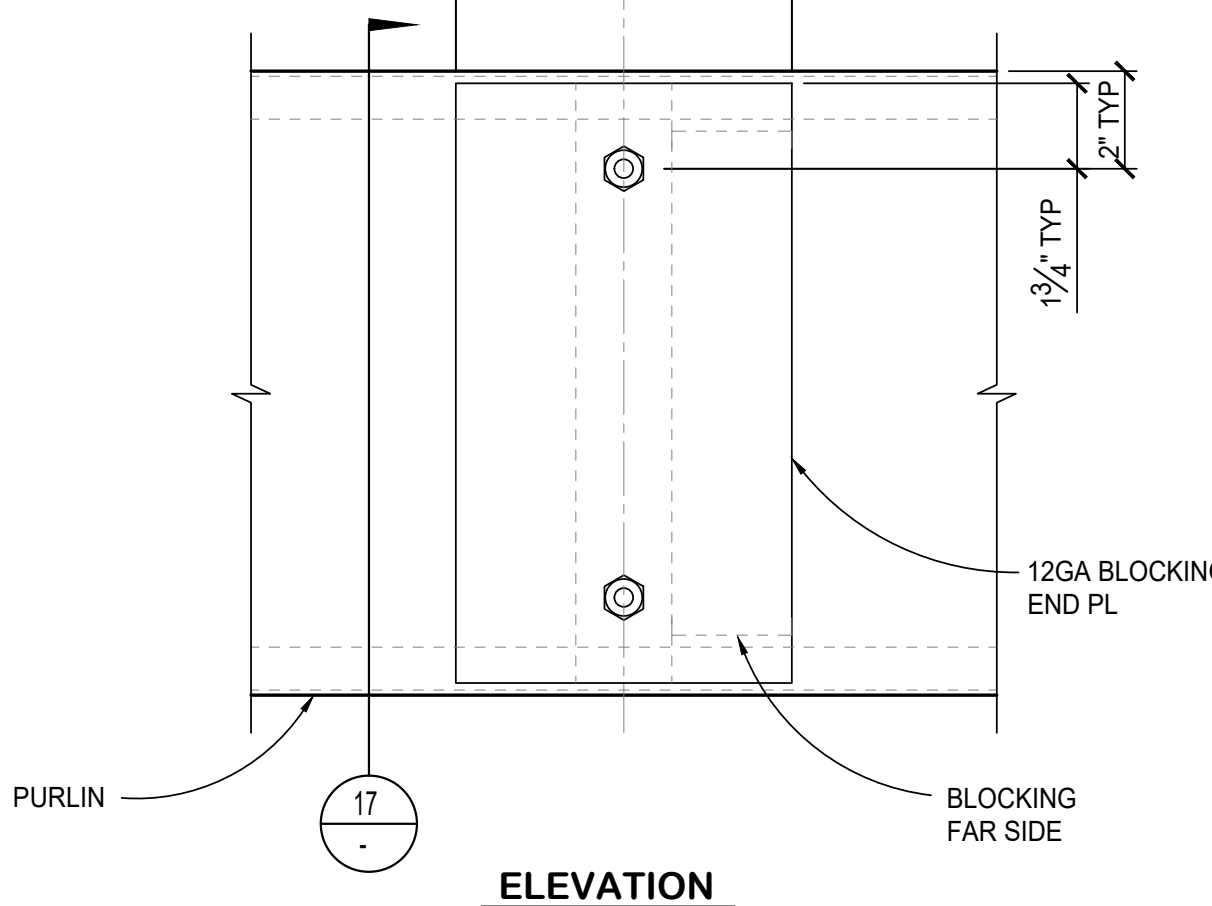
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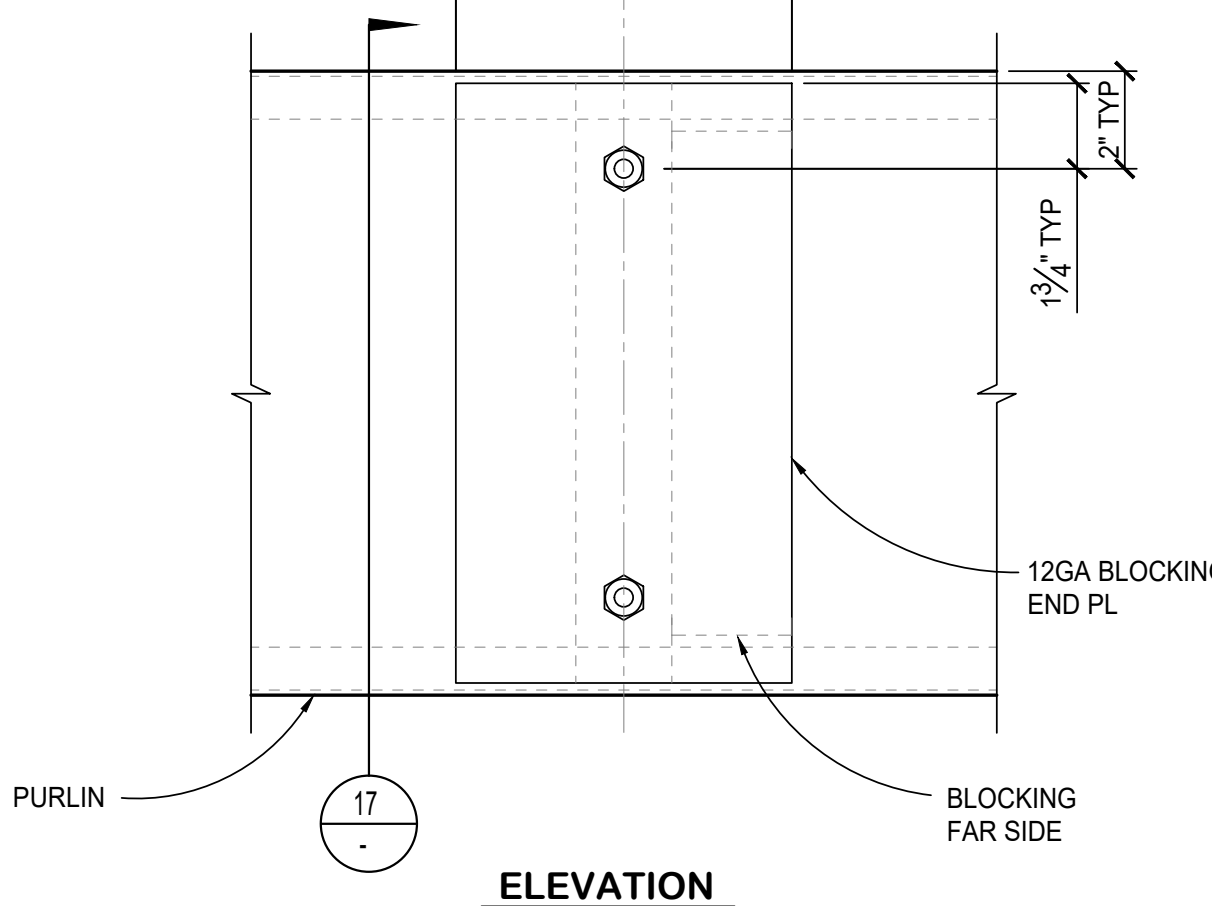
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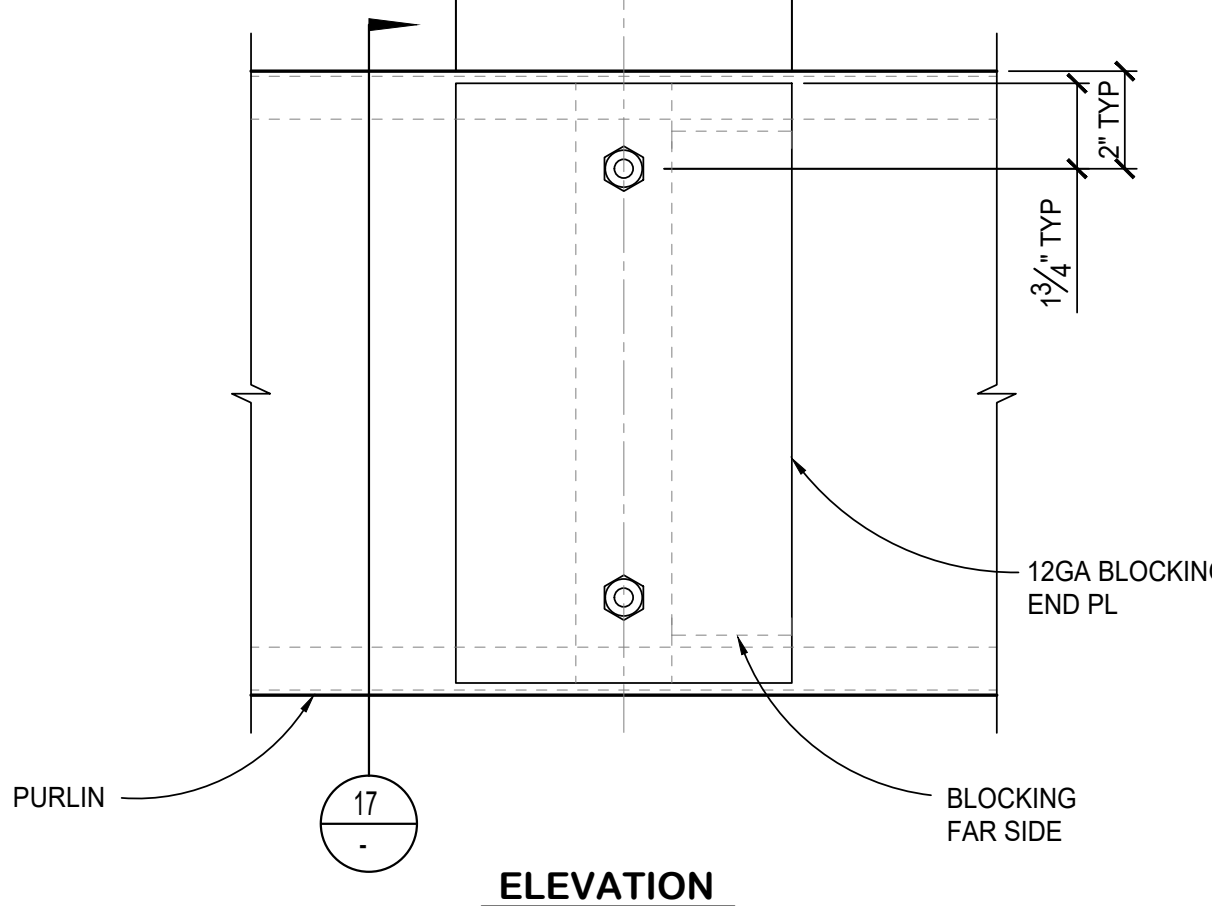
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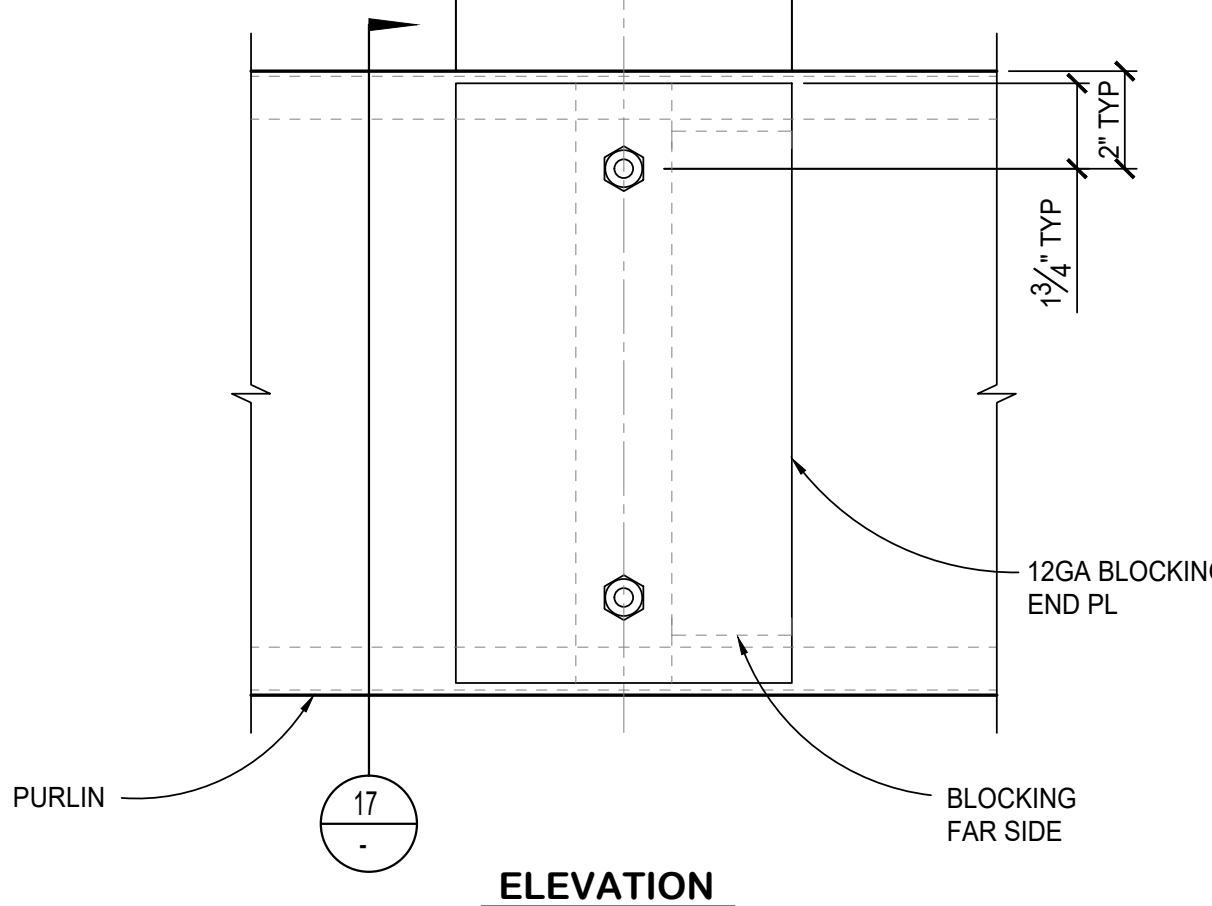
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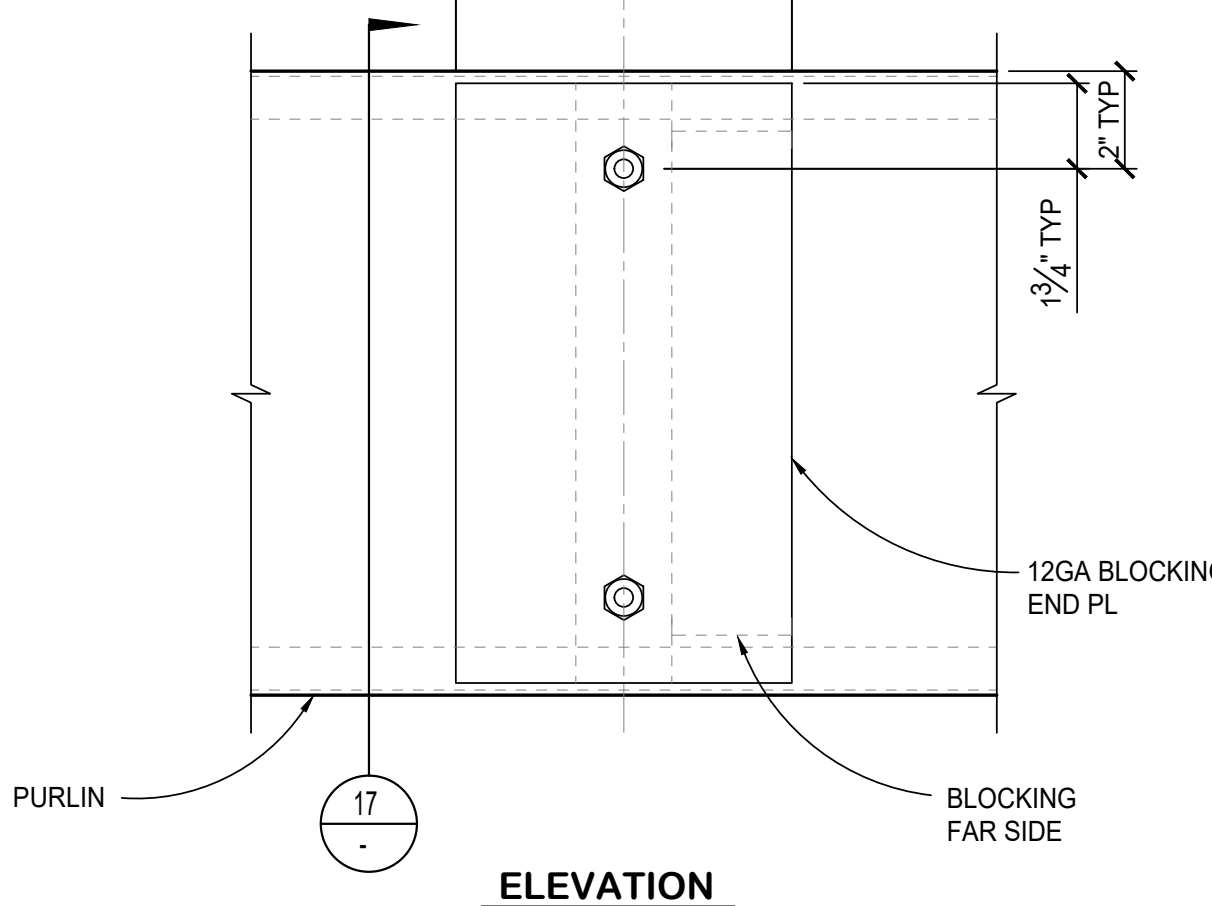
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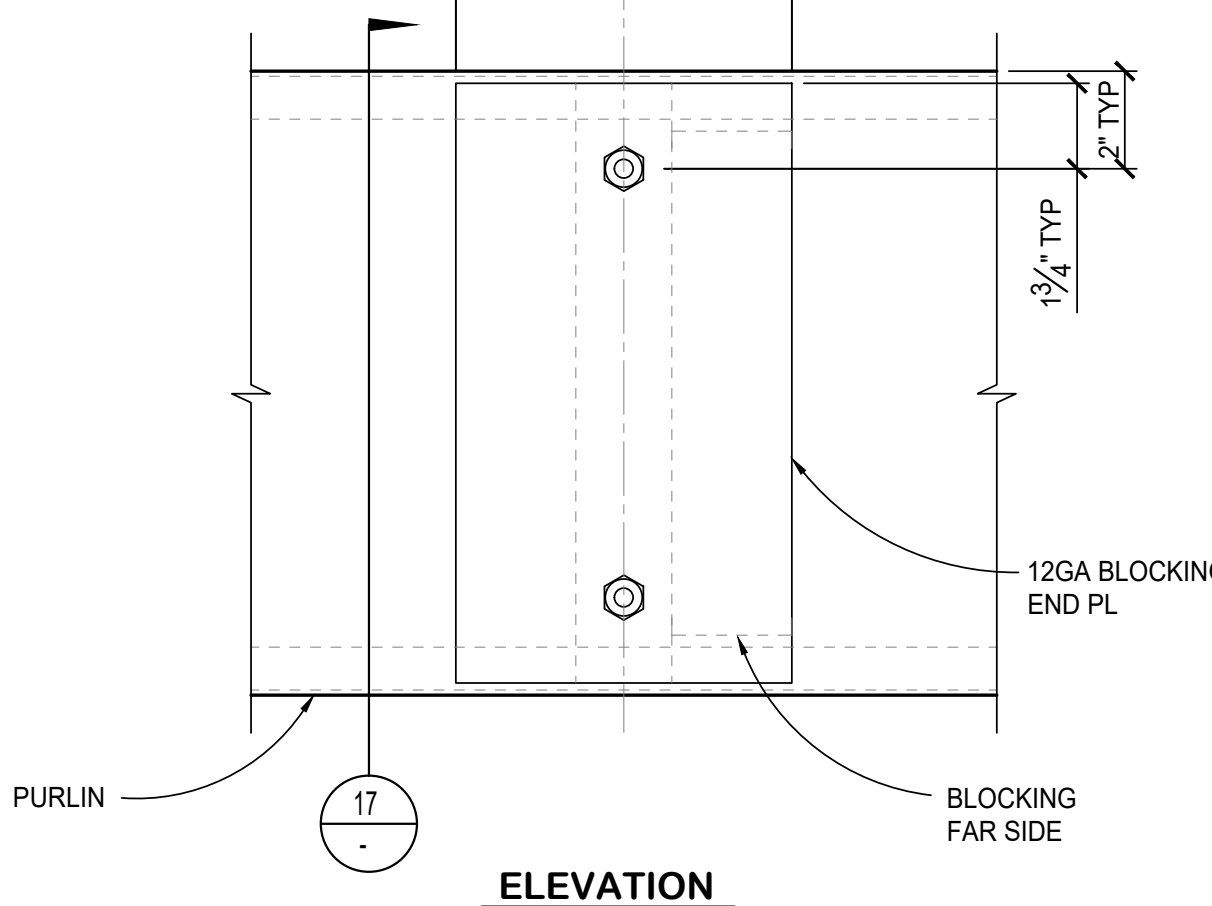
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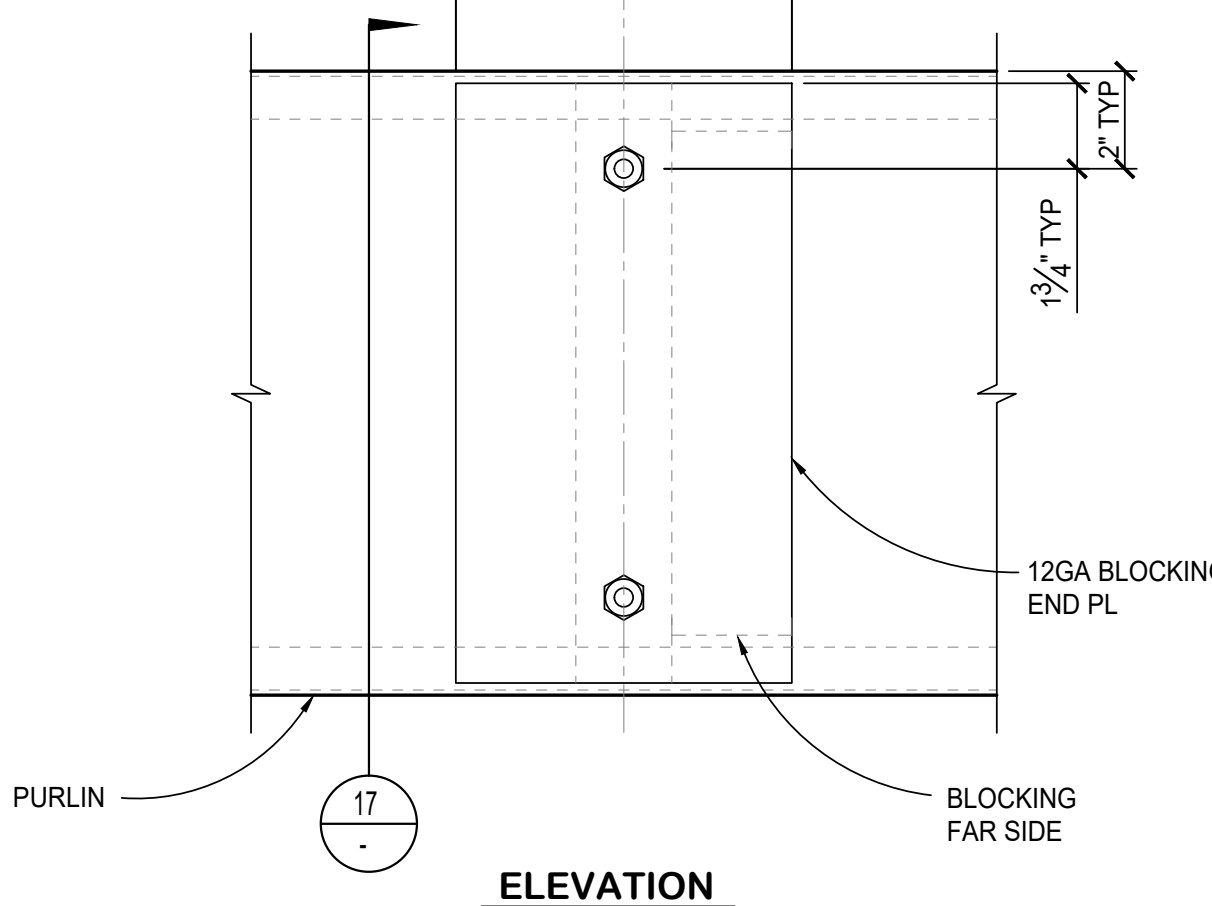
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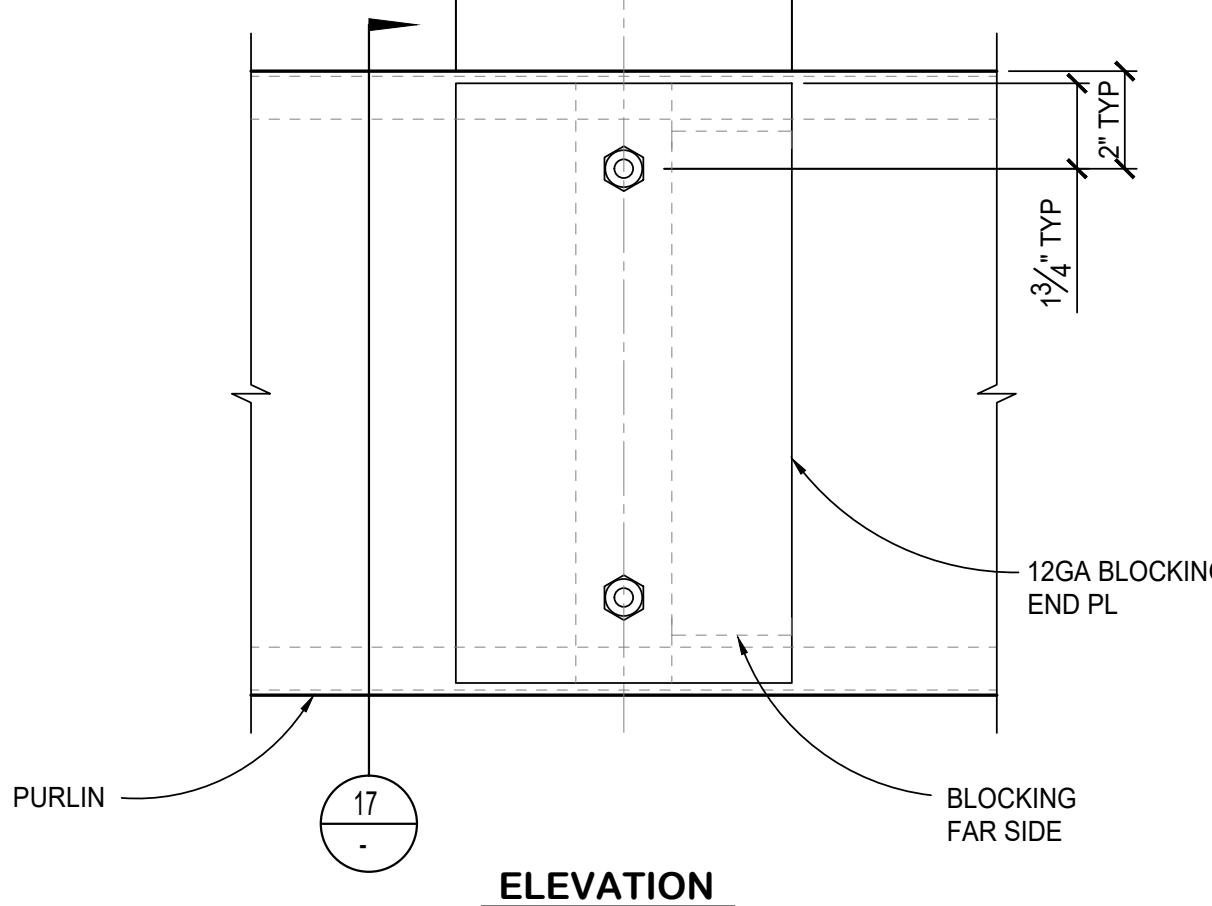
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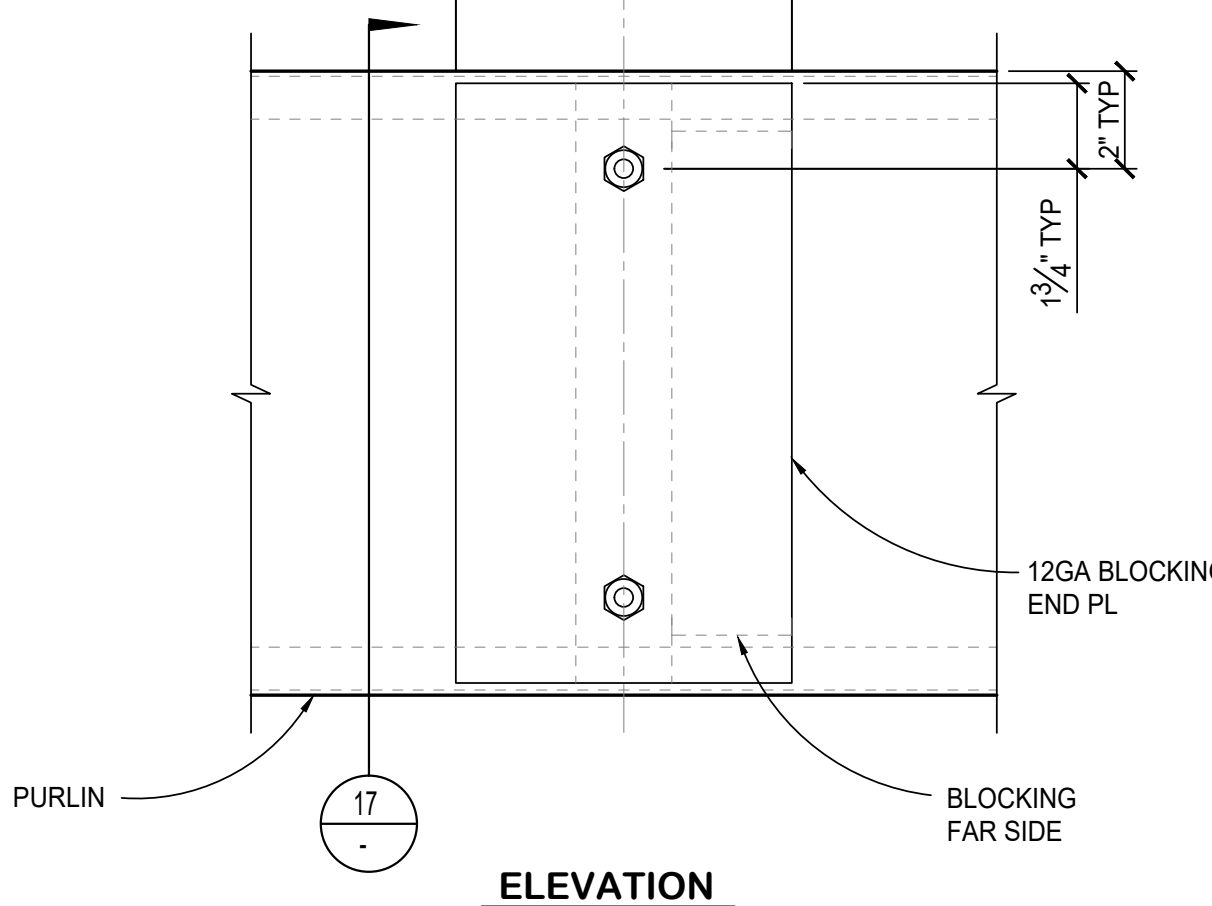
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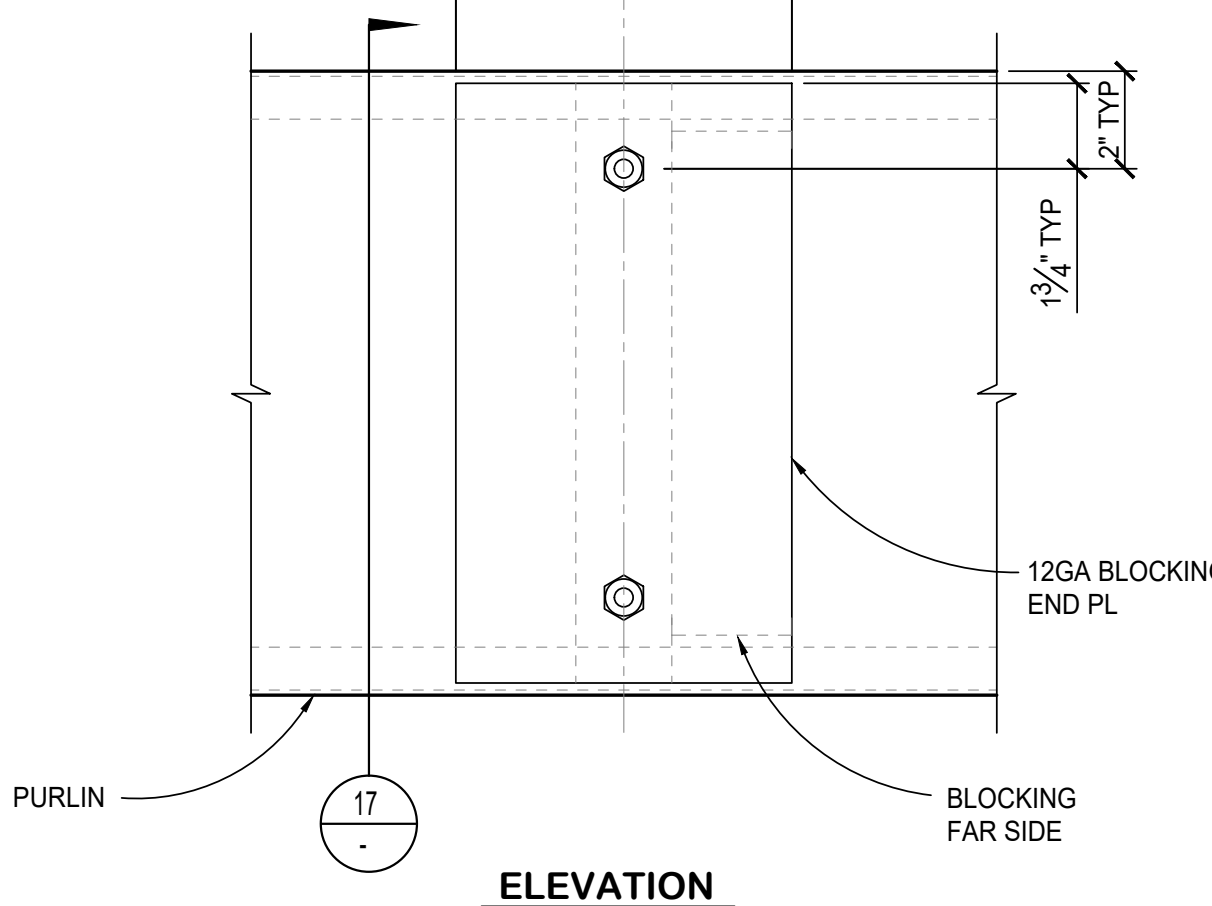
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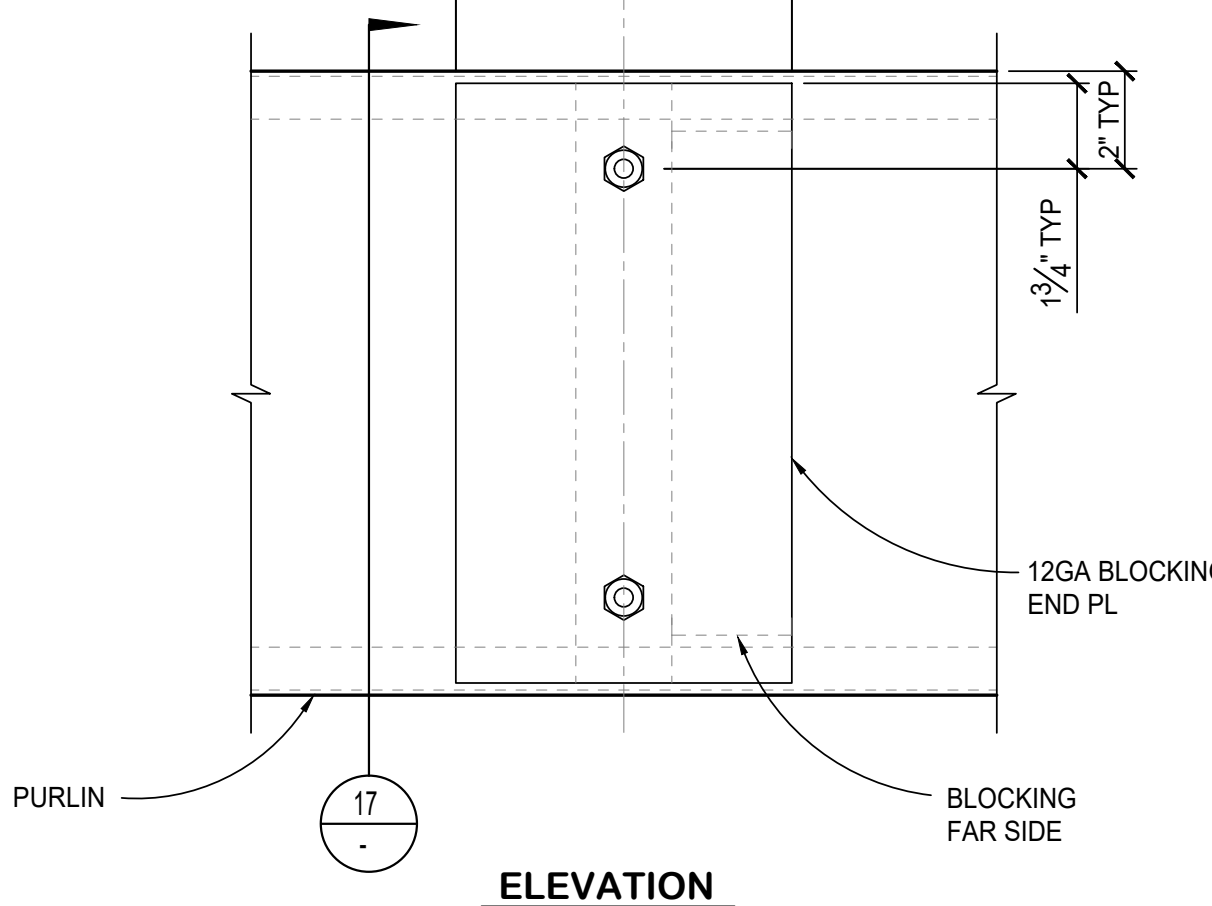
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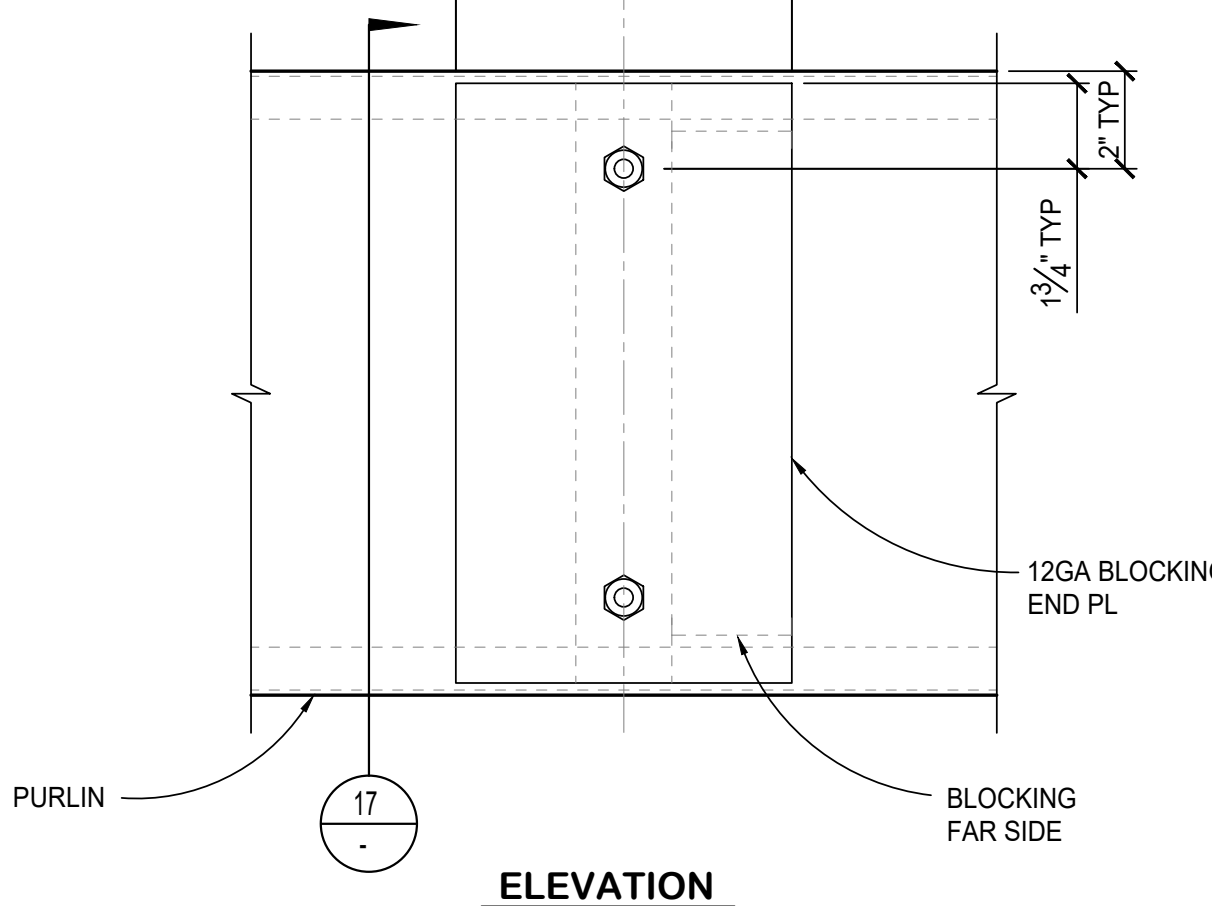
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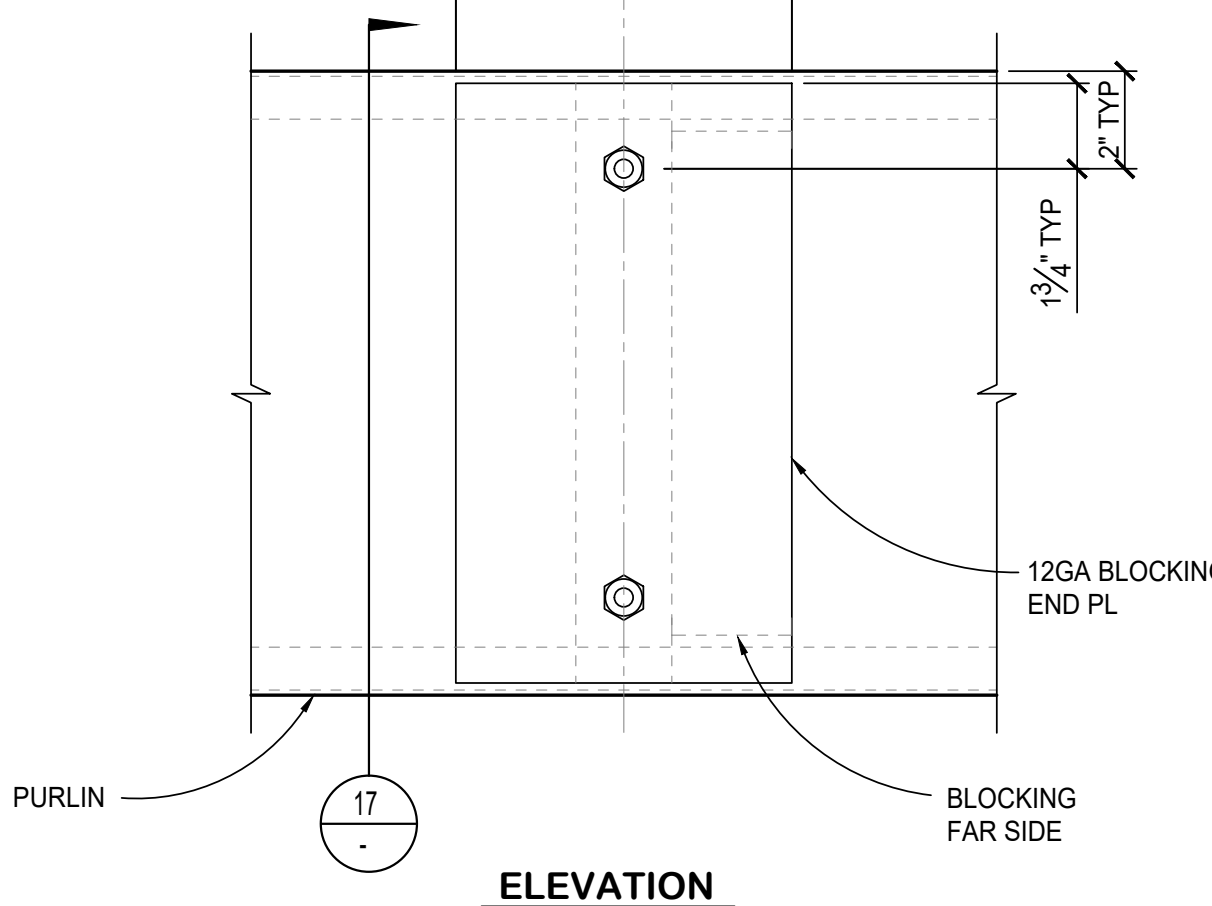
TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



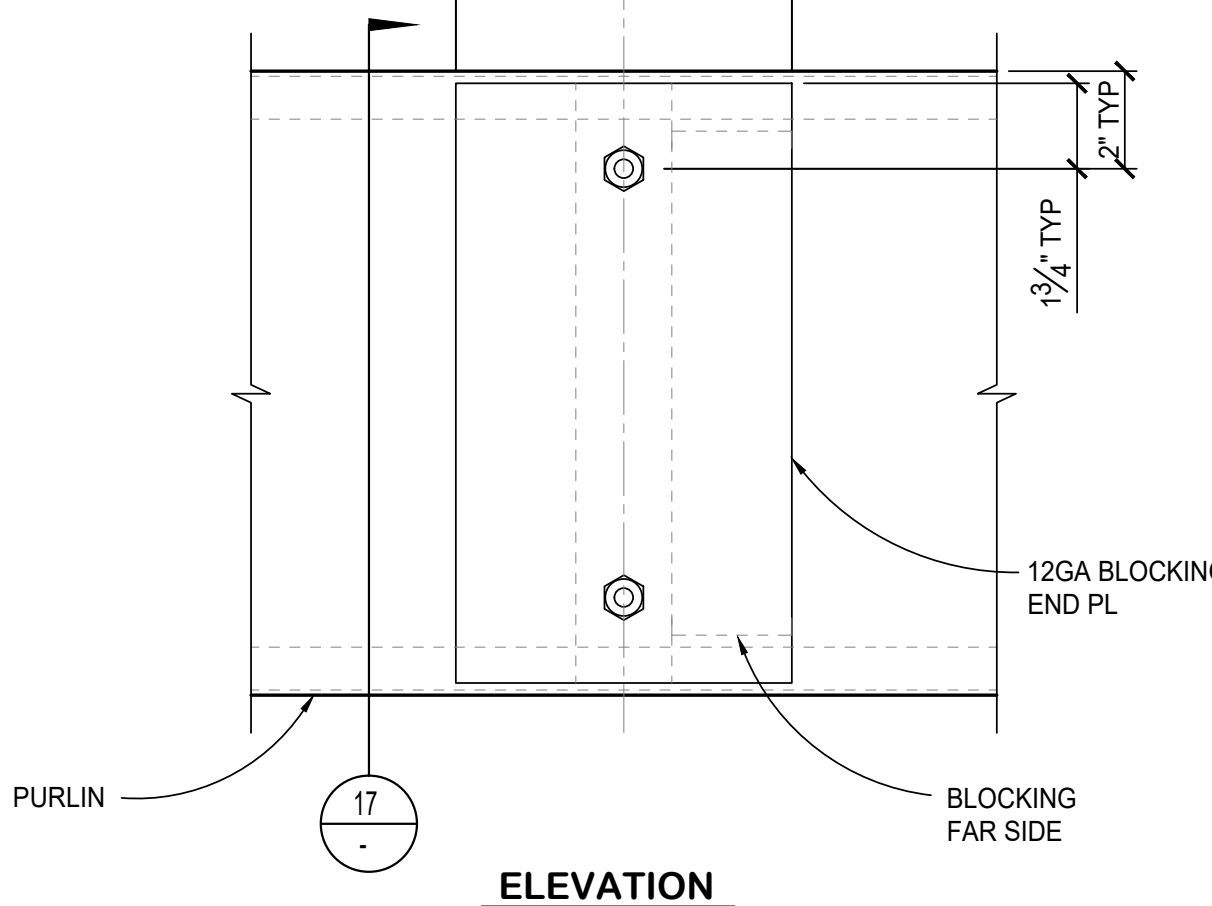
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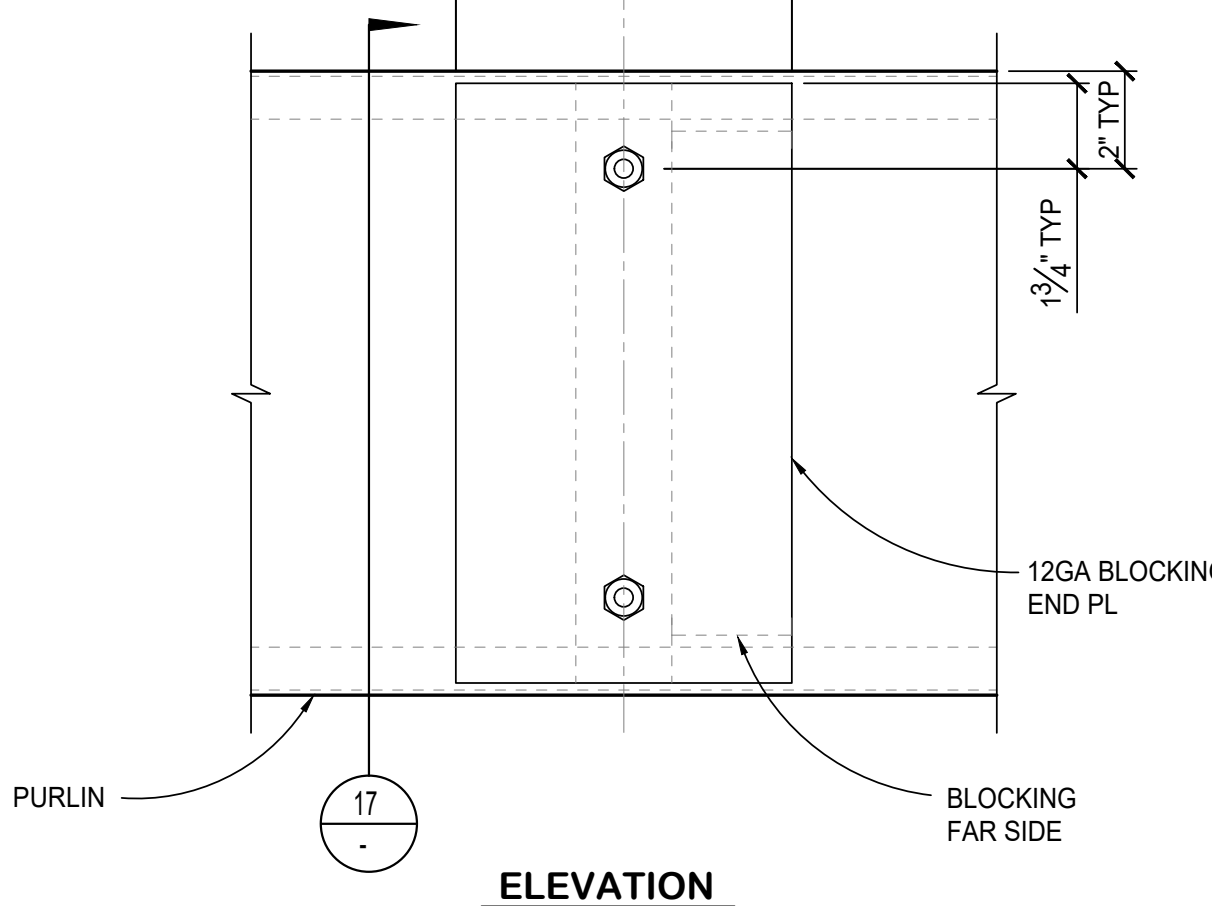
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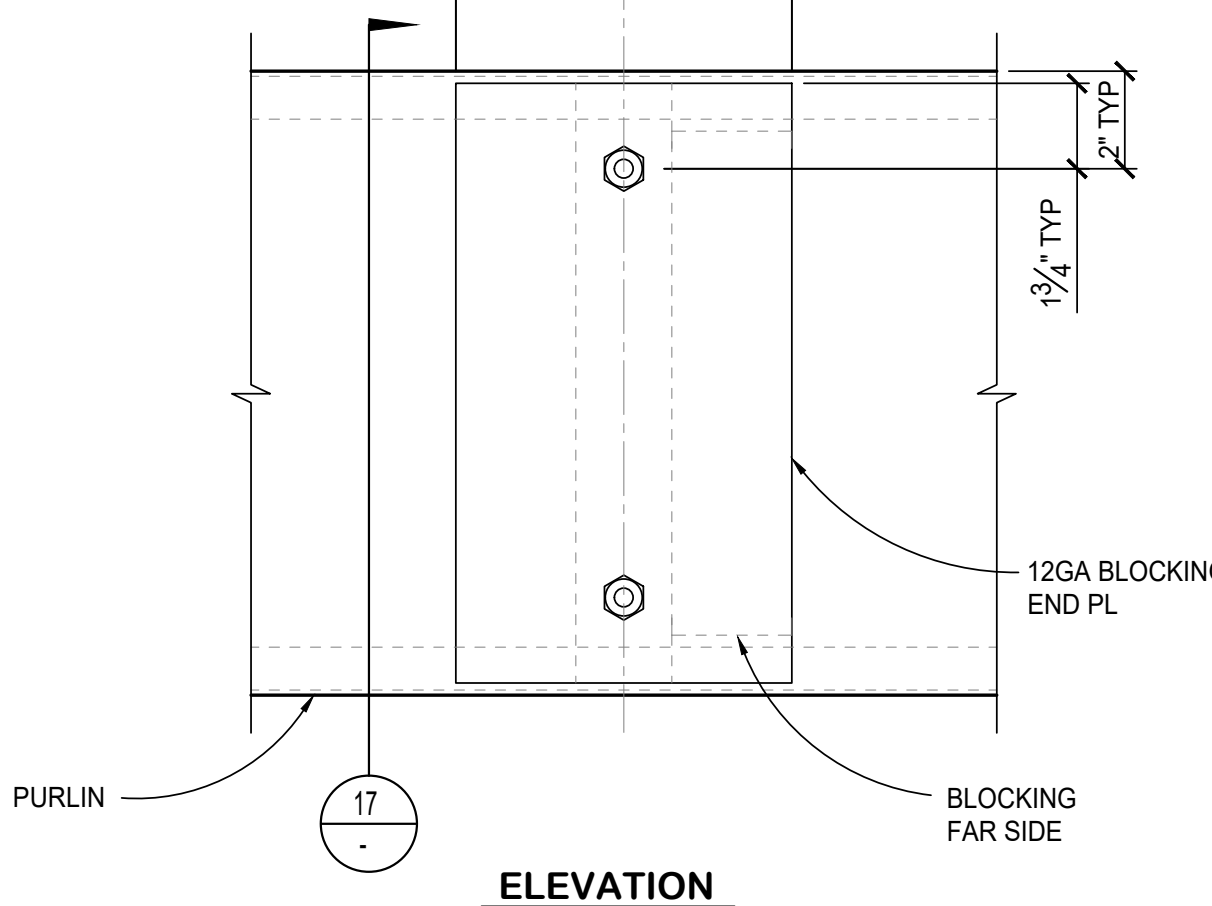
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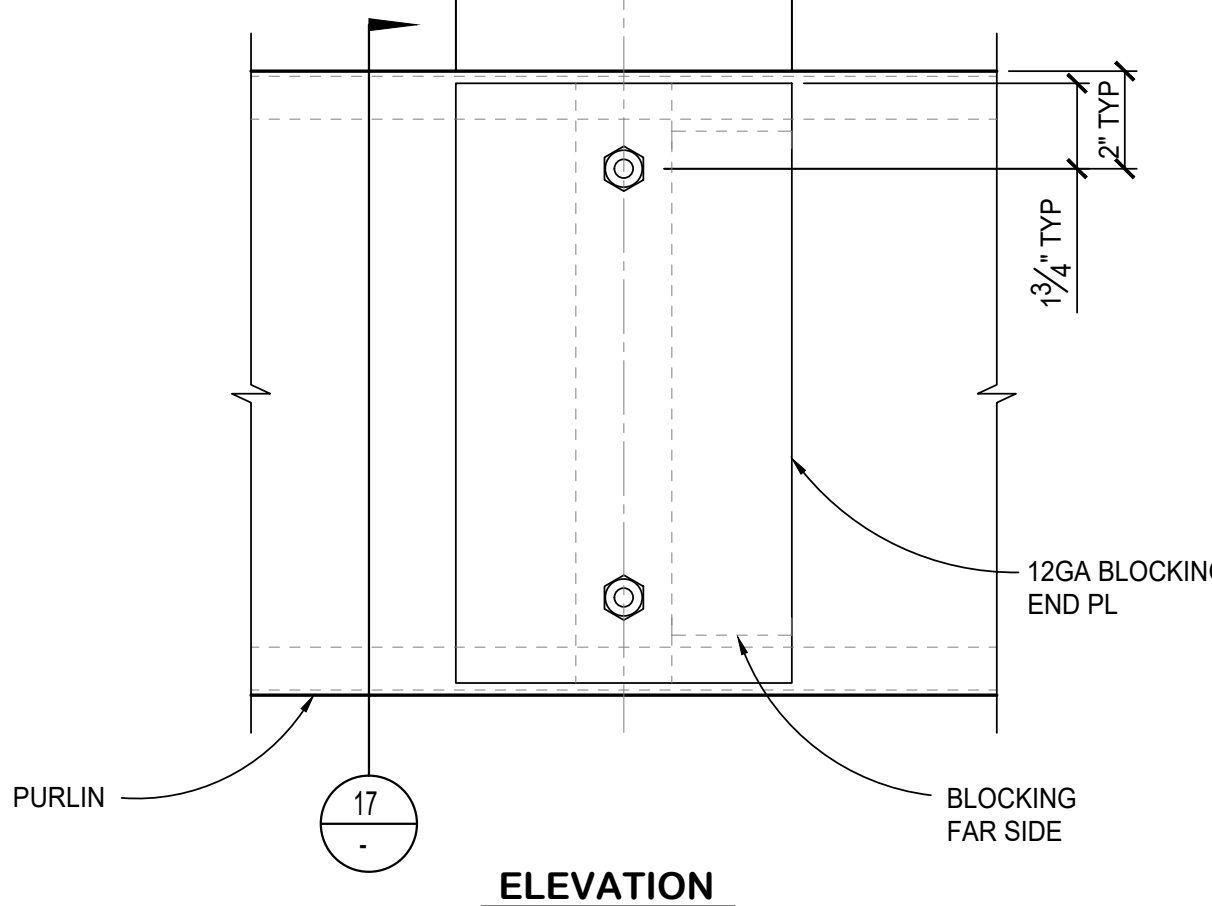
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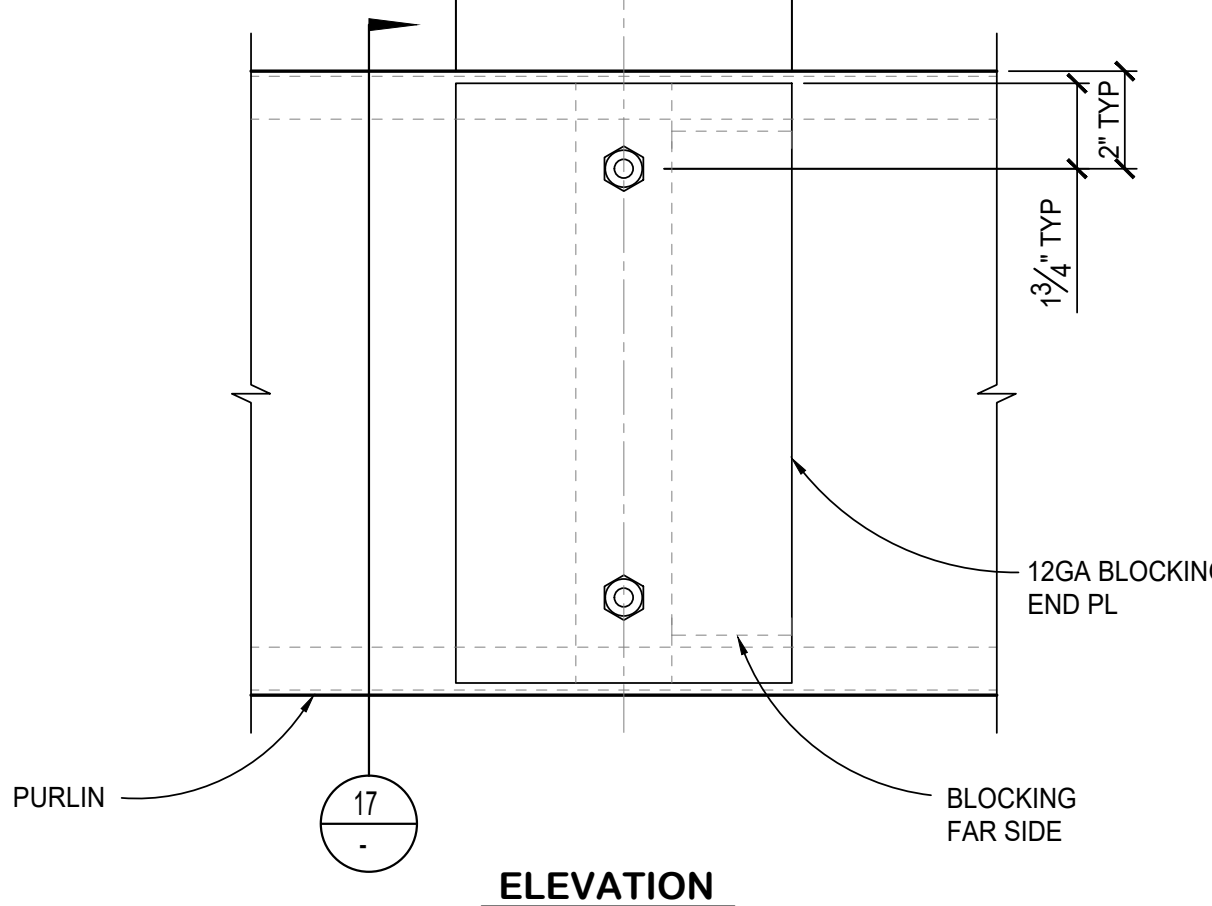
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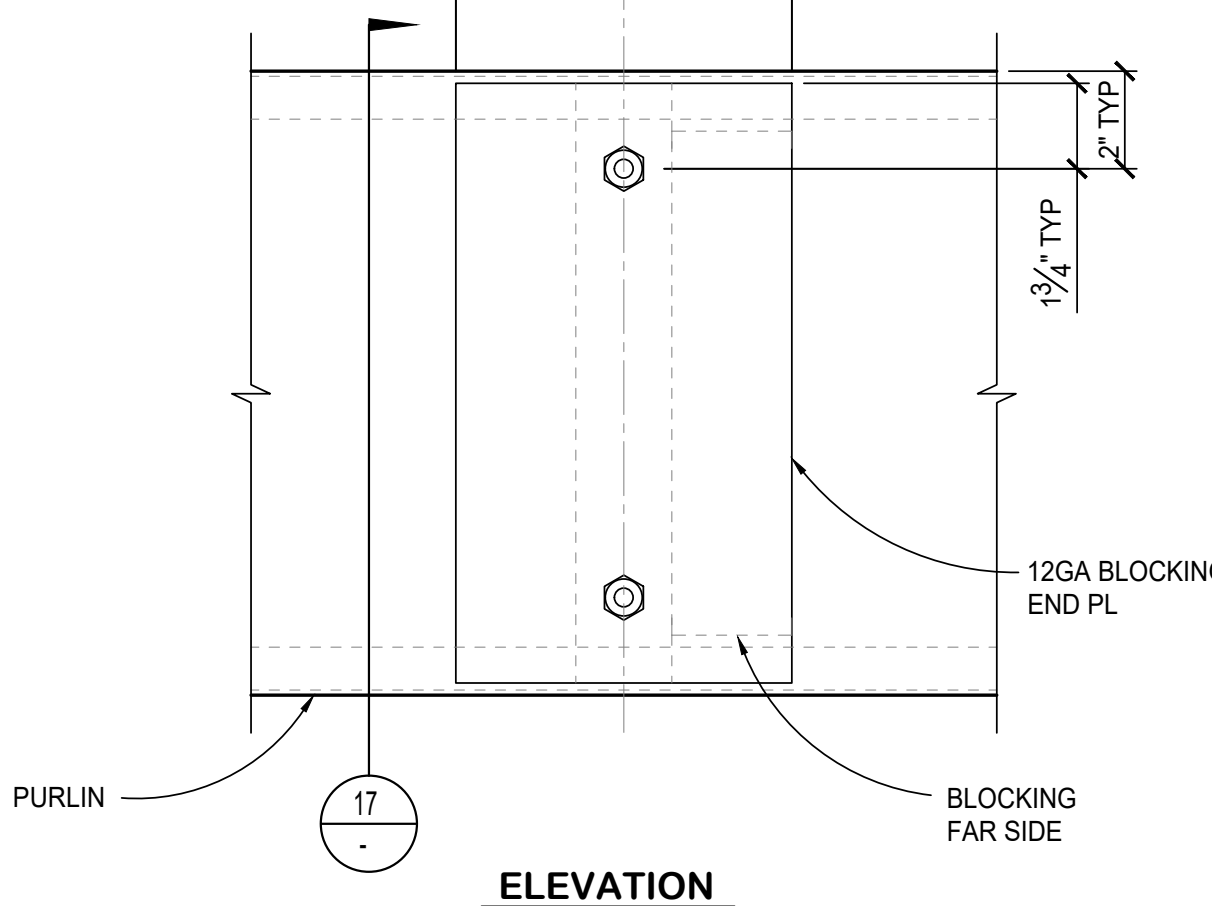
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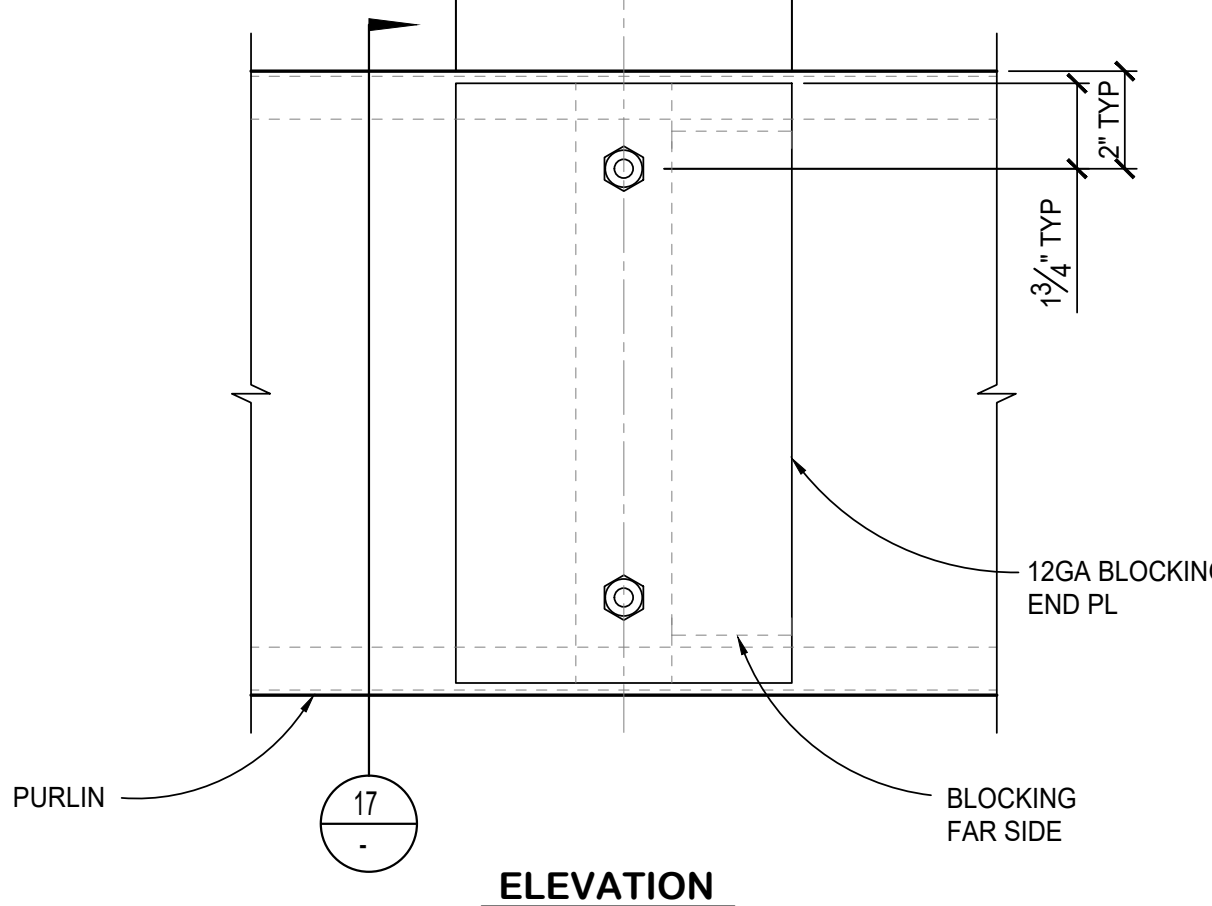
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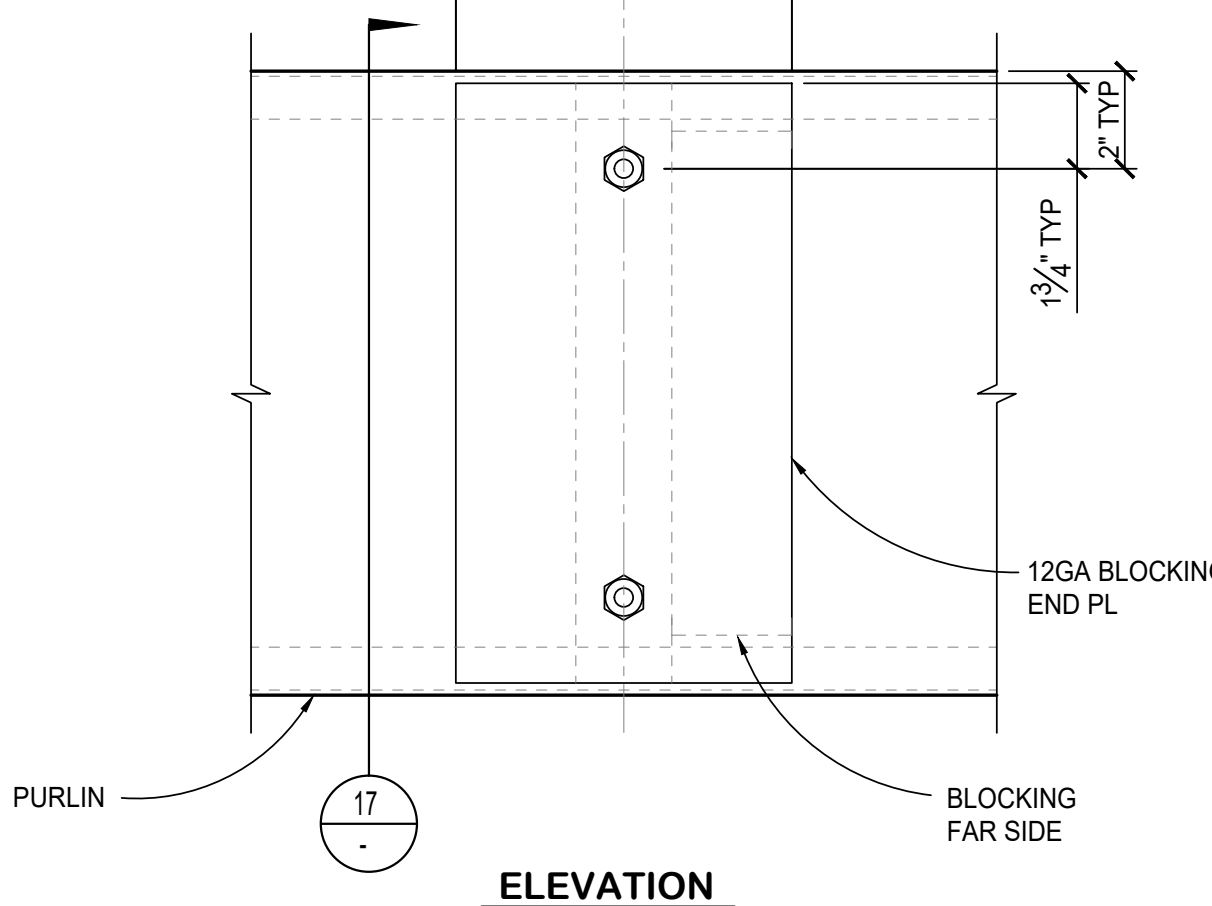
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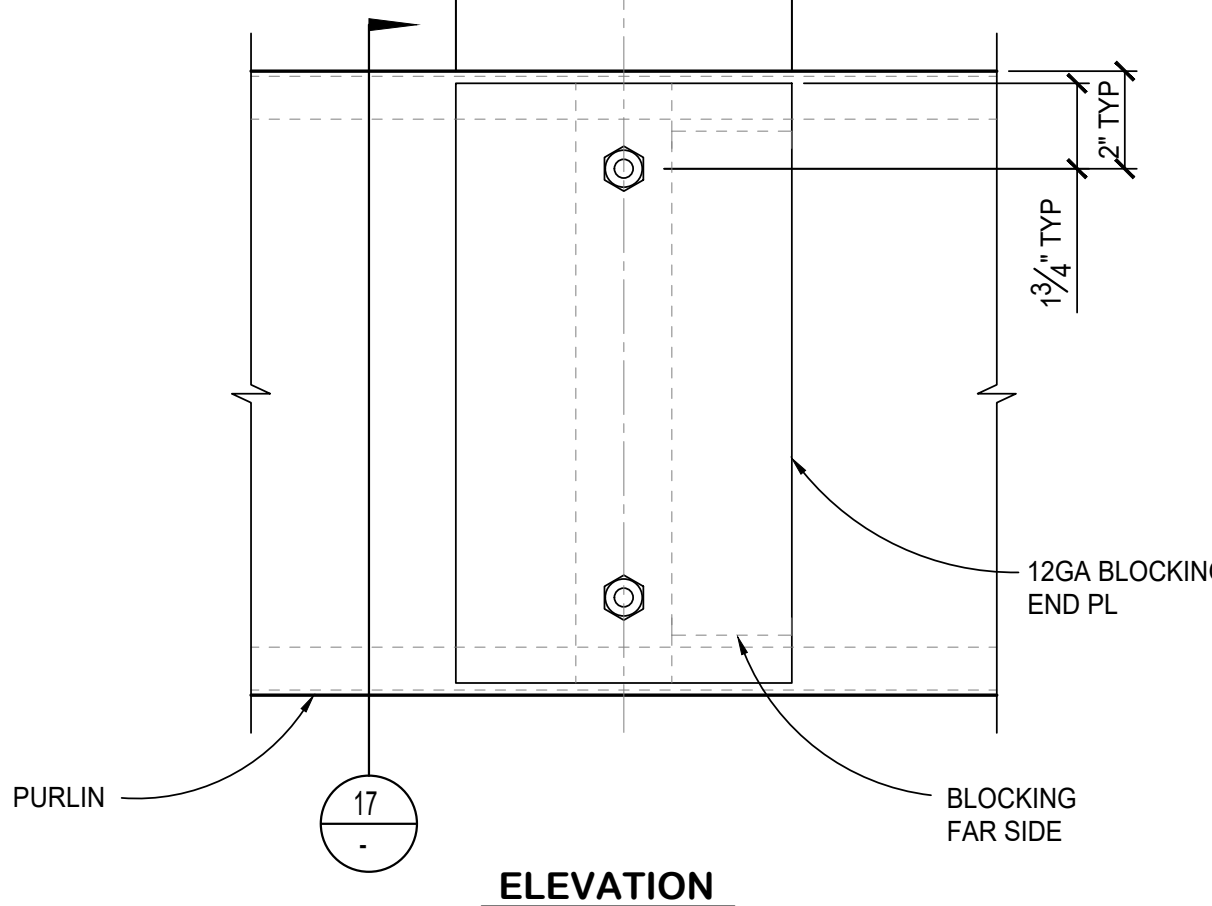
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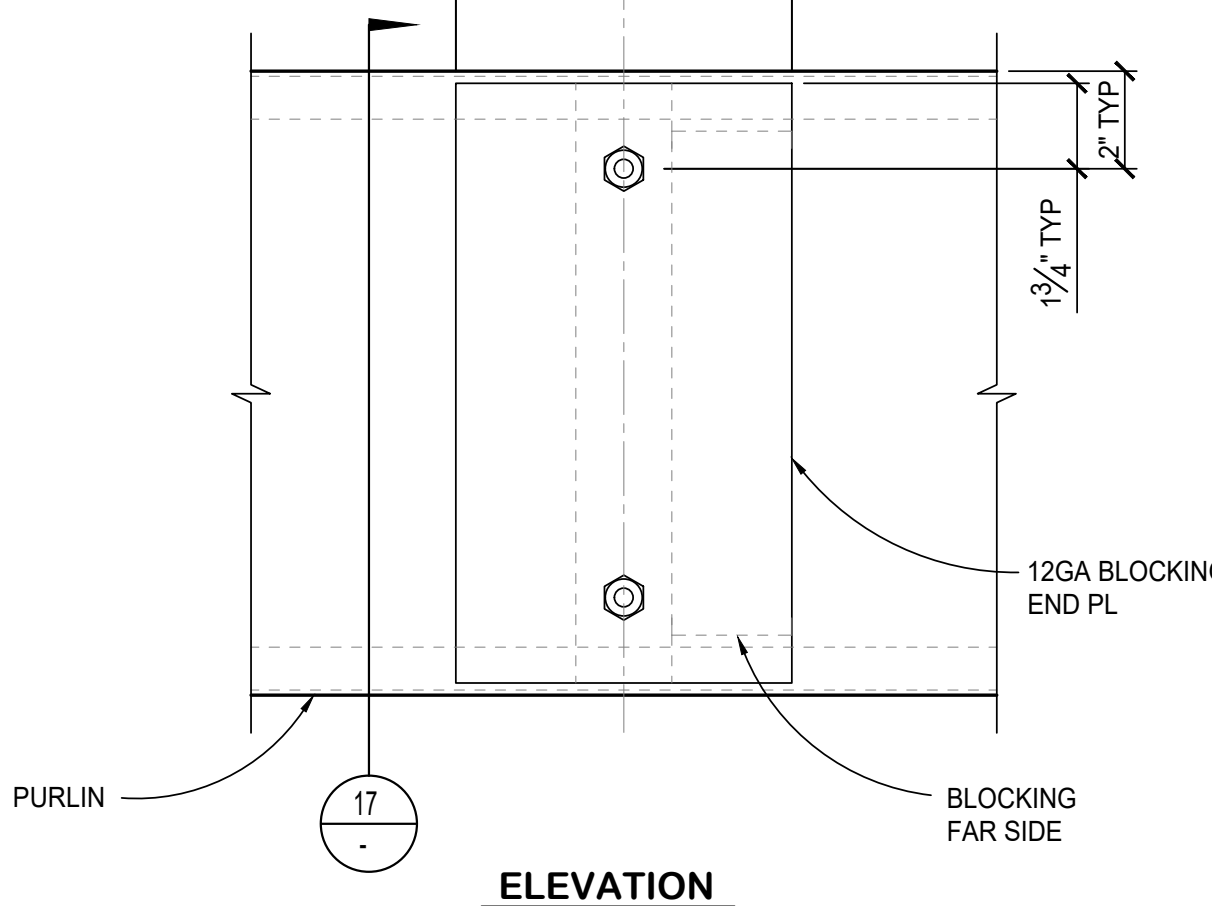
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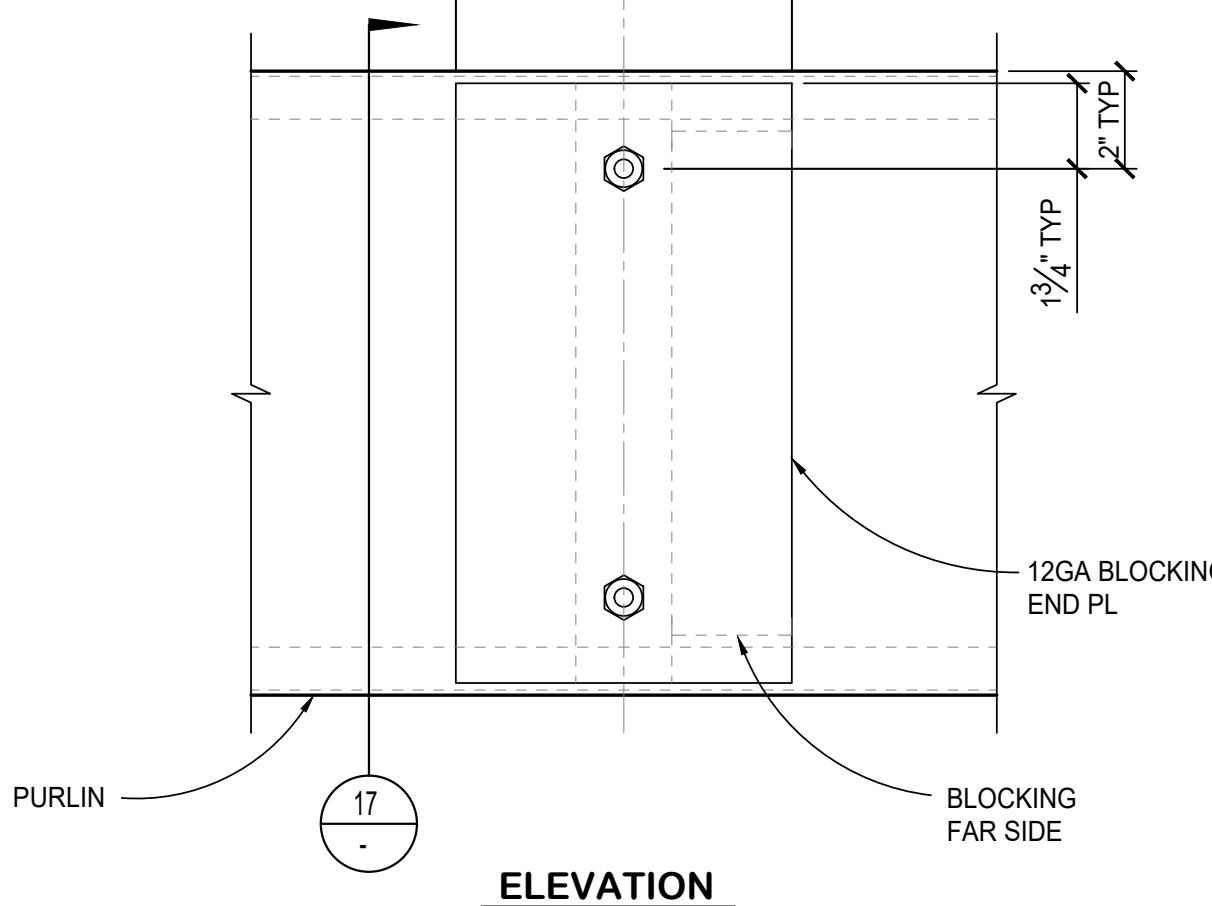
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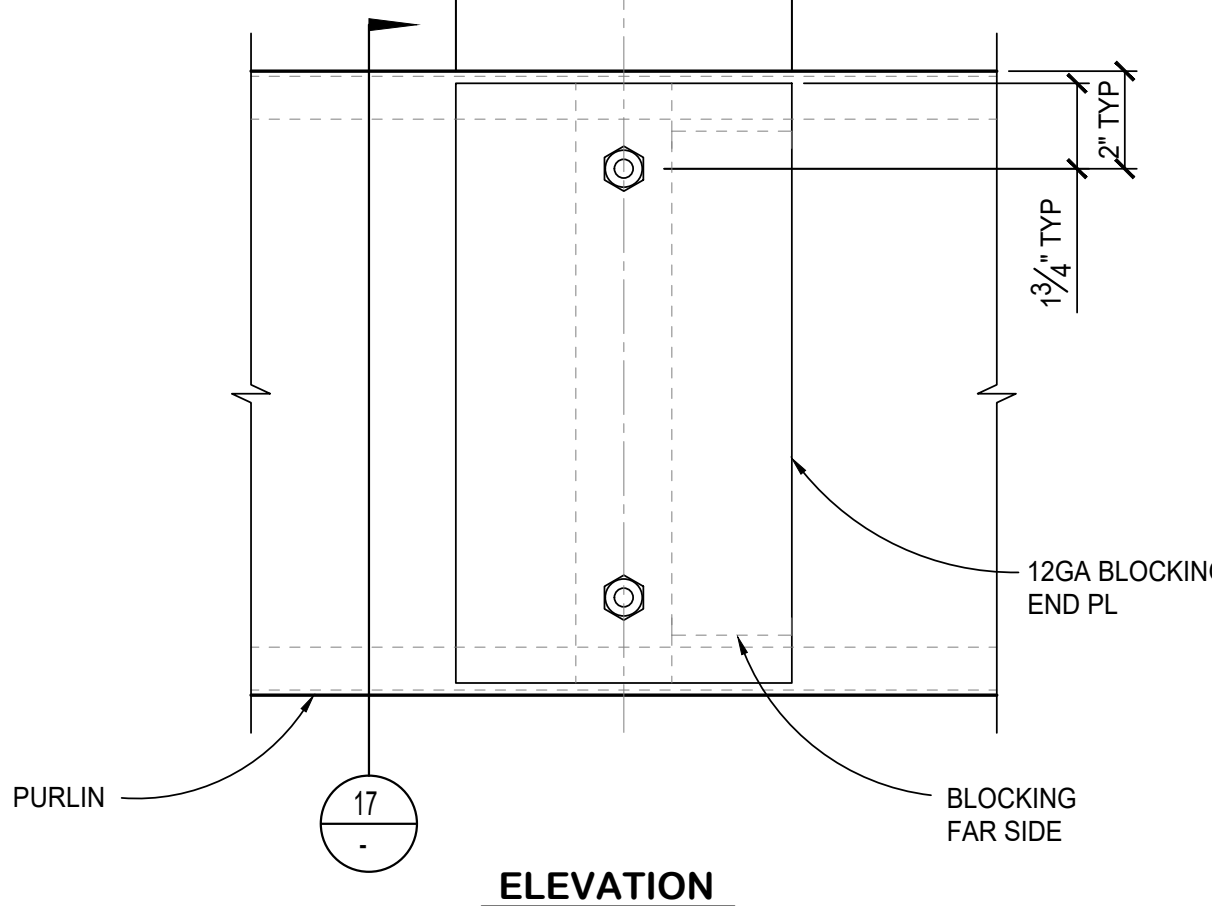
TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



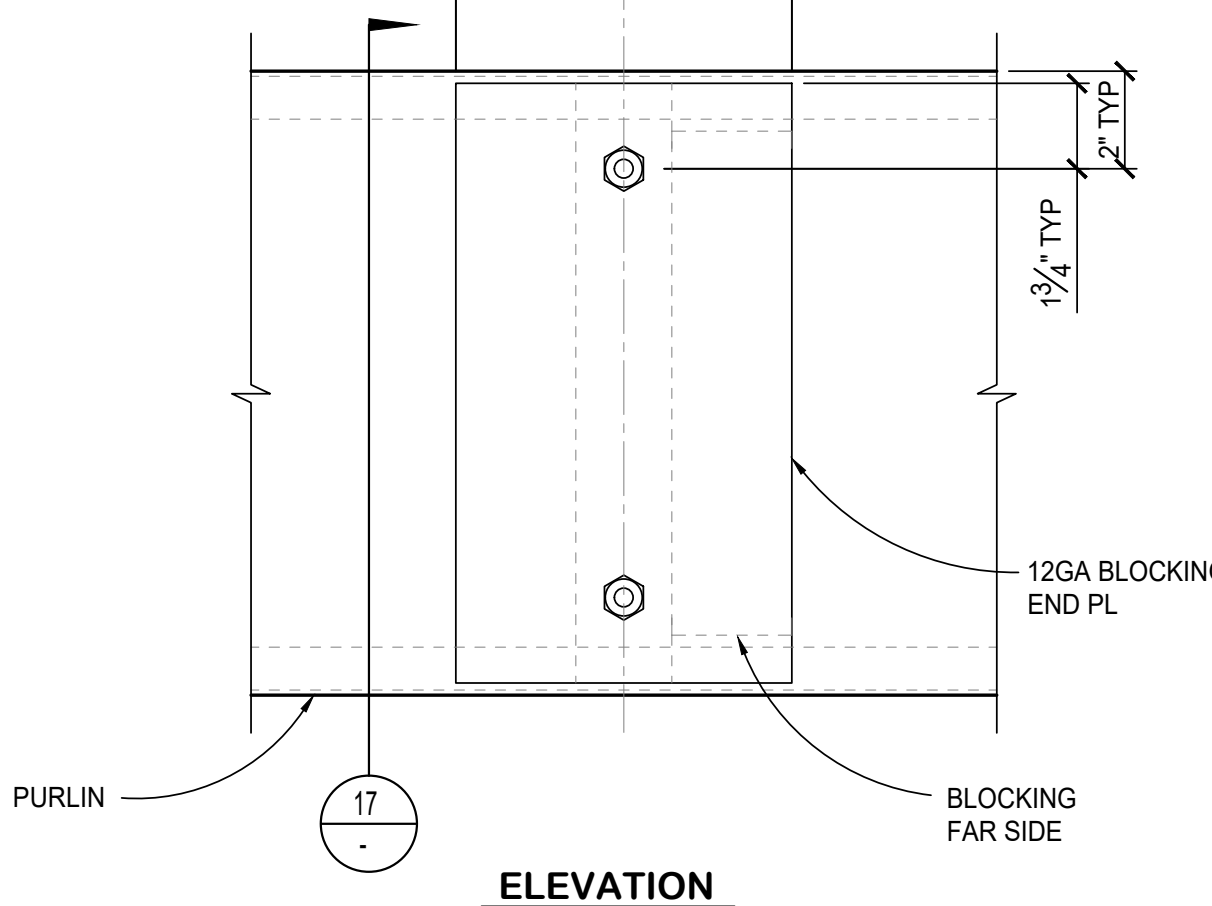
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SCALE: 3/4"=1'-0"

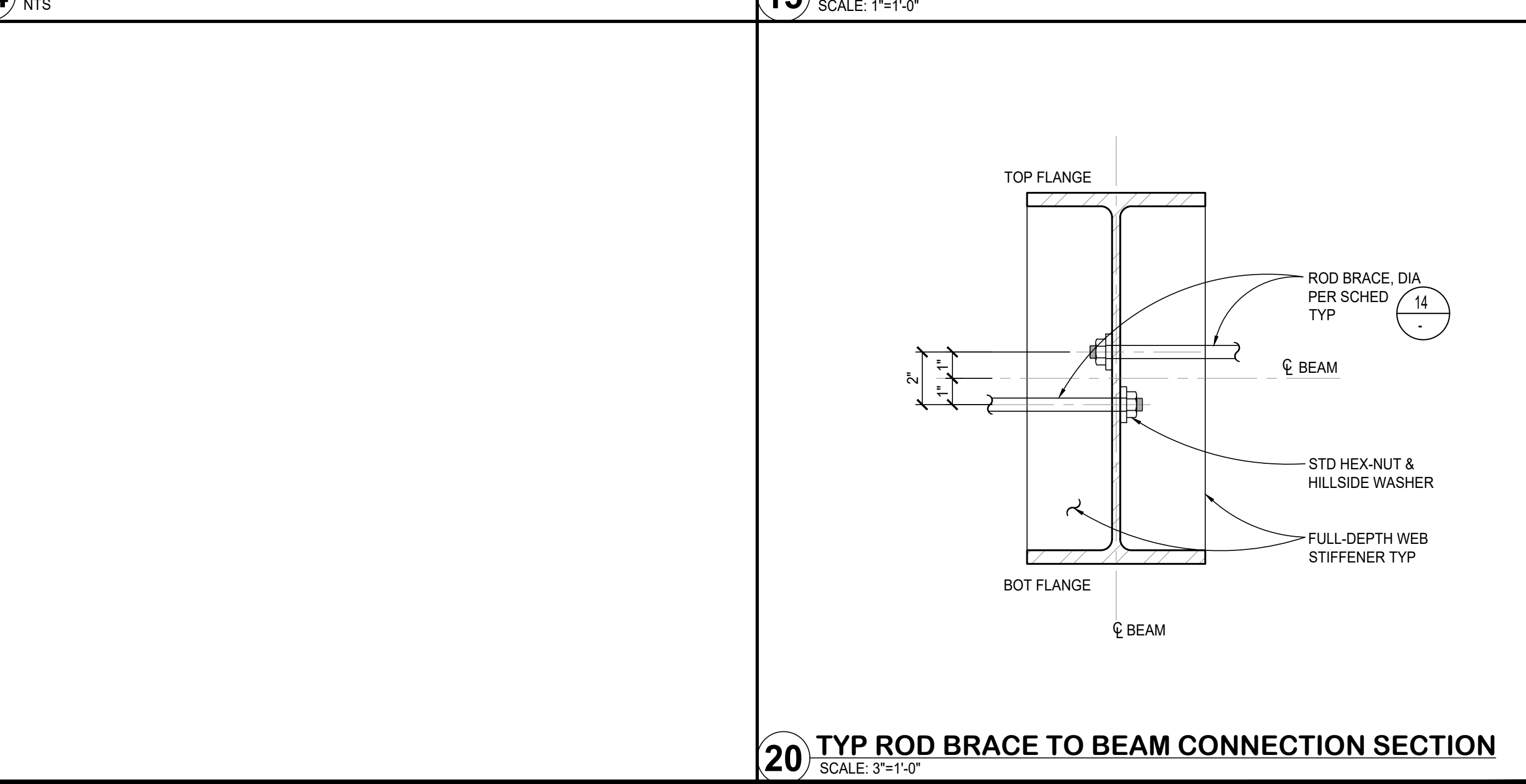
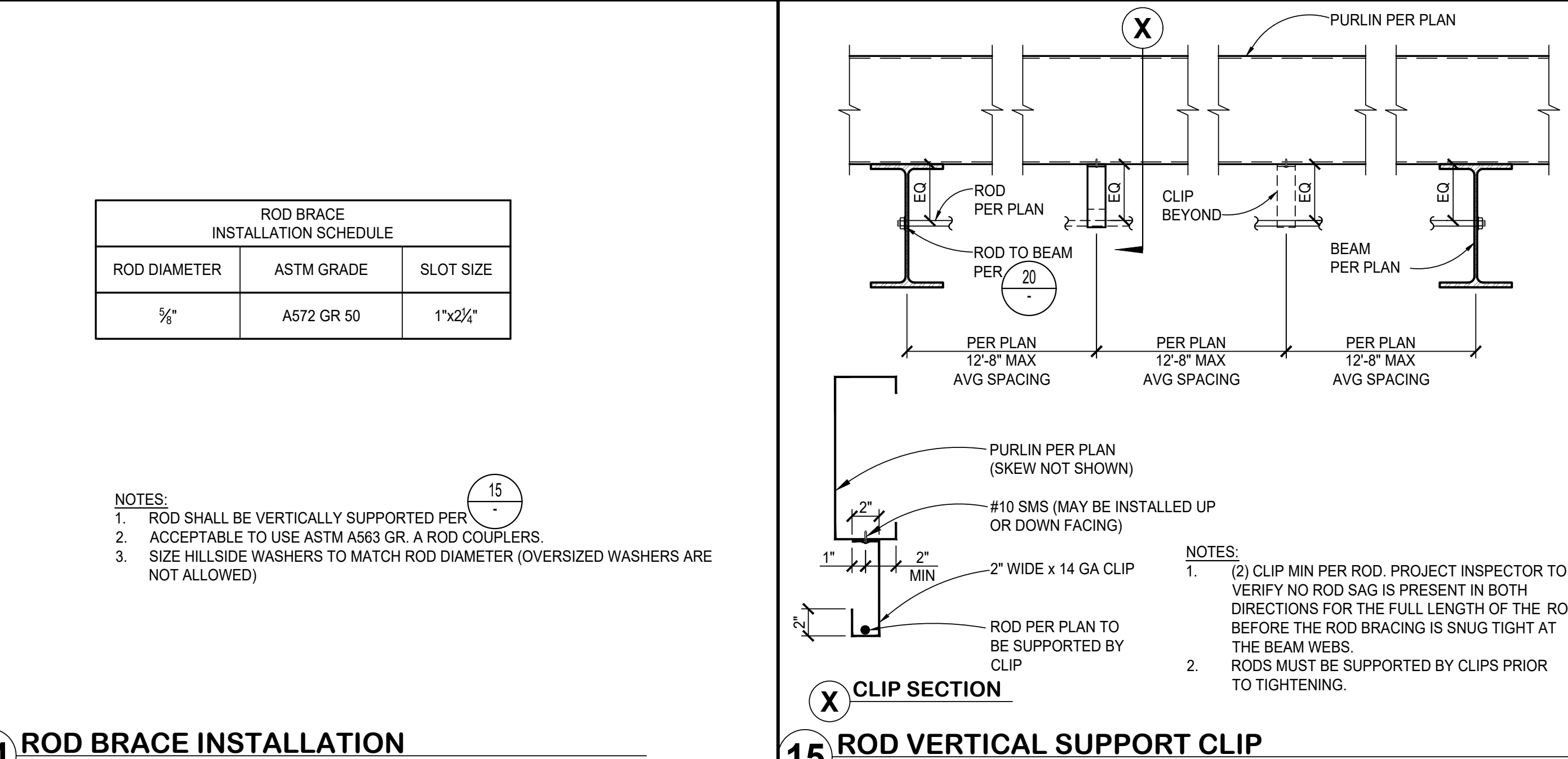
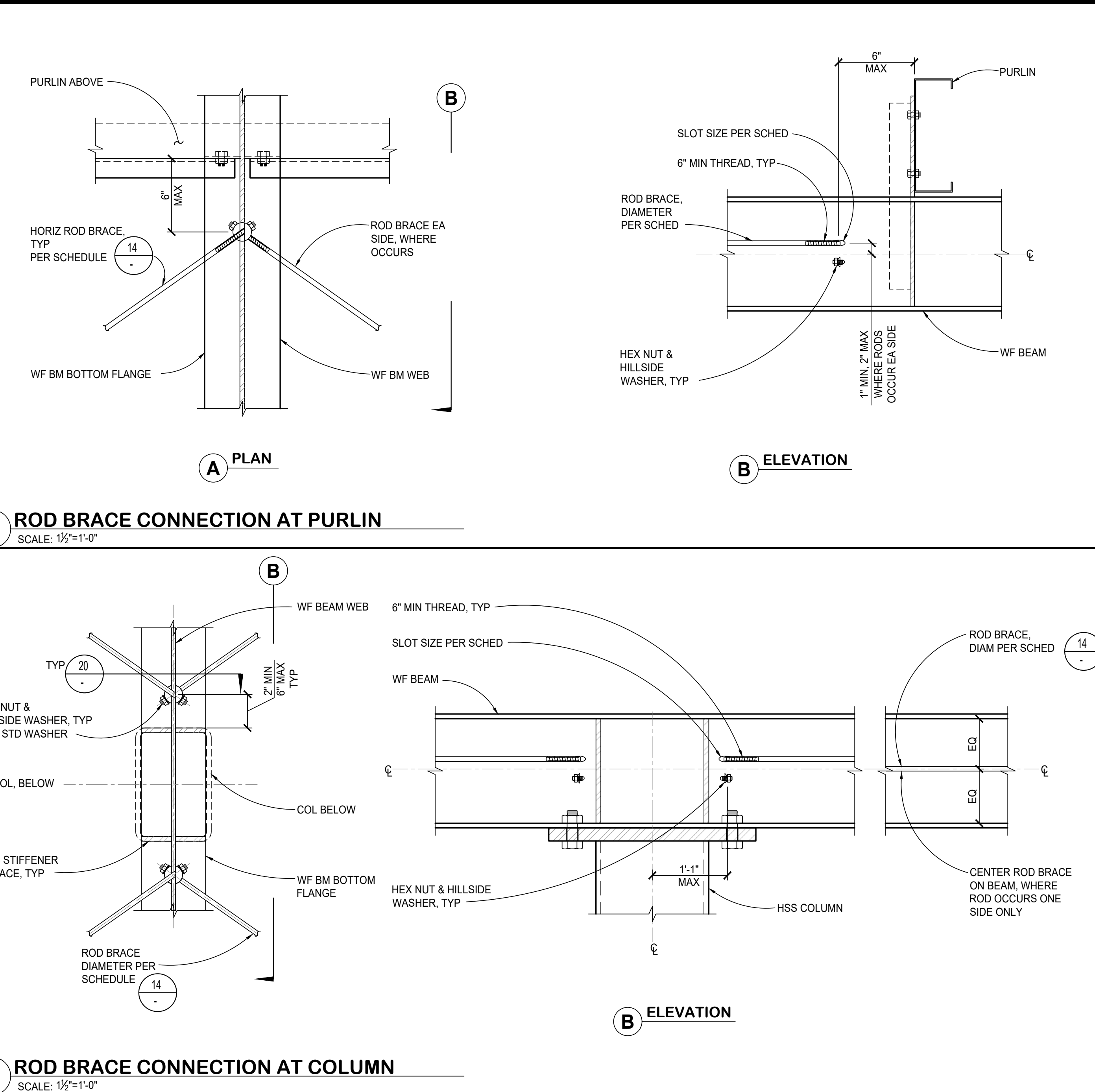
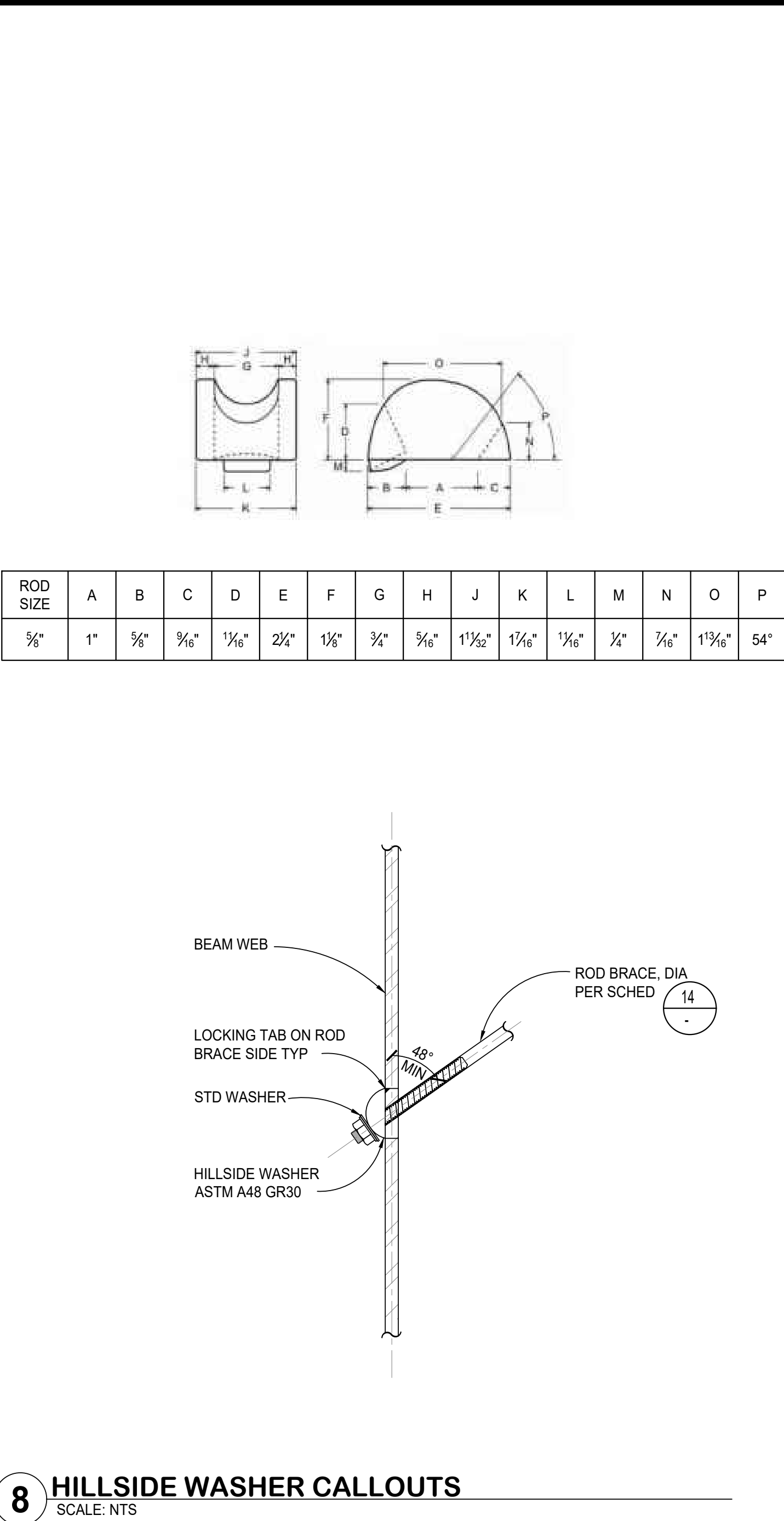
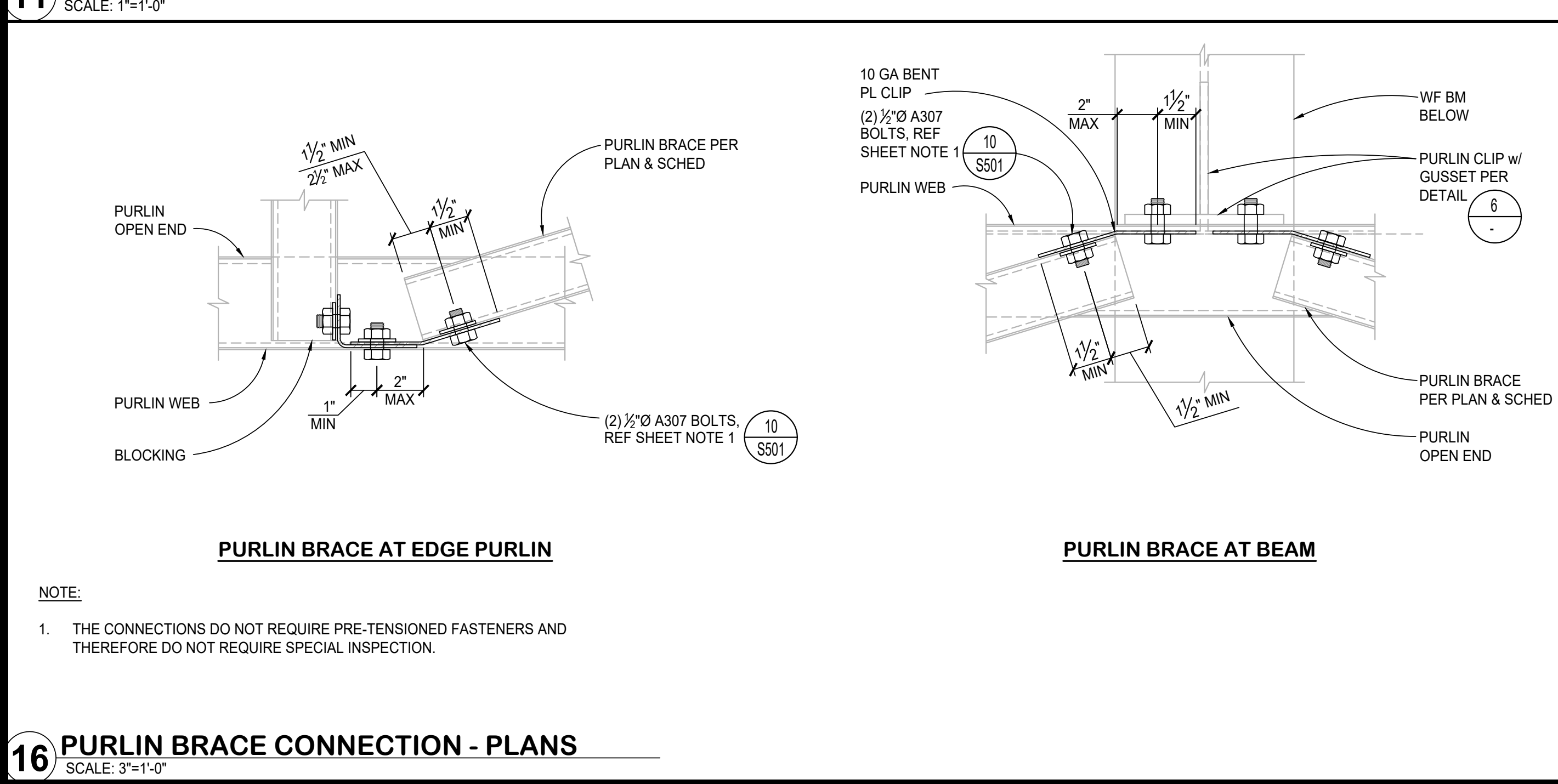
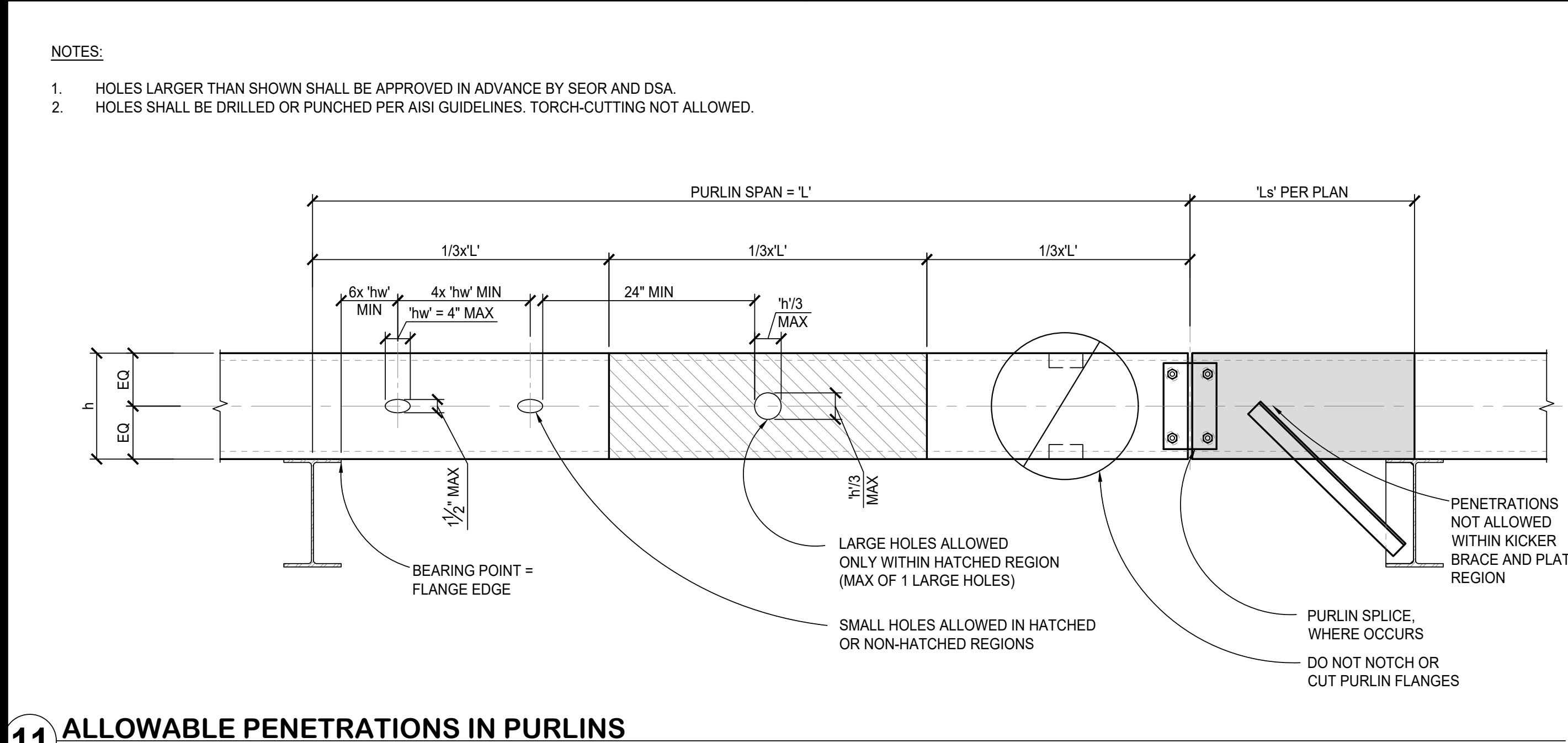
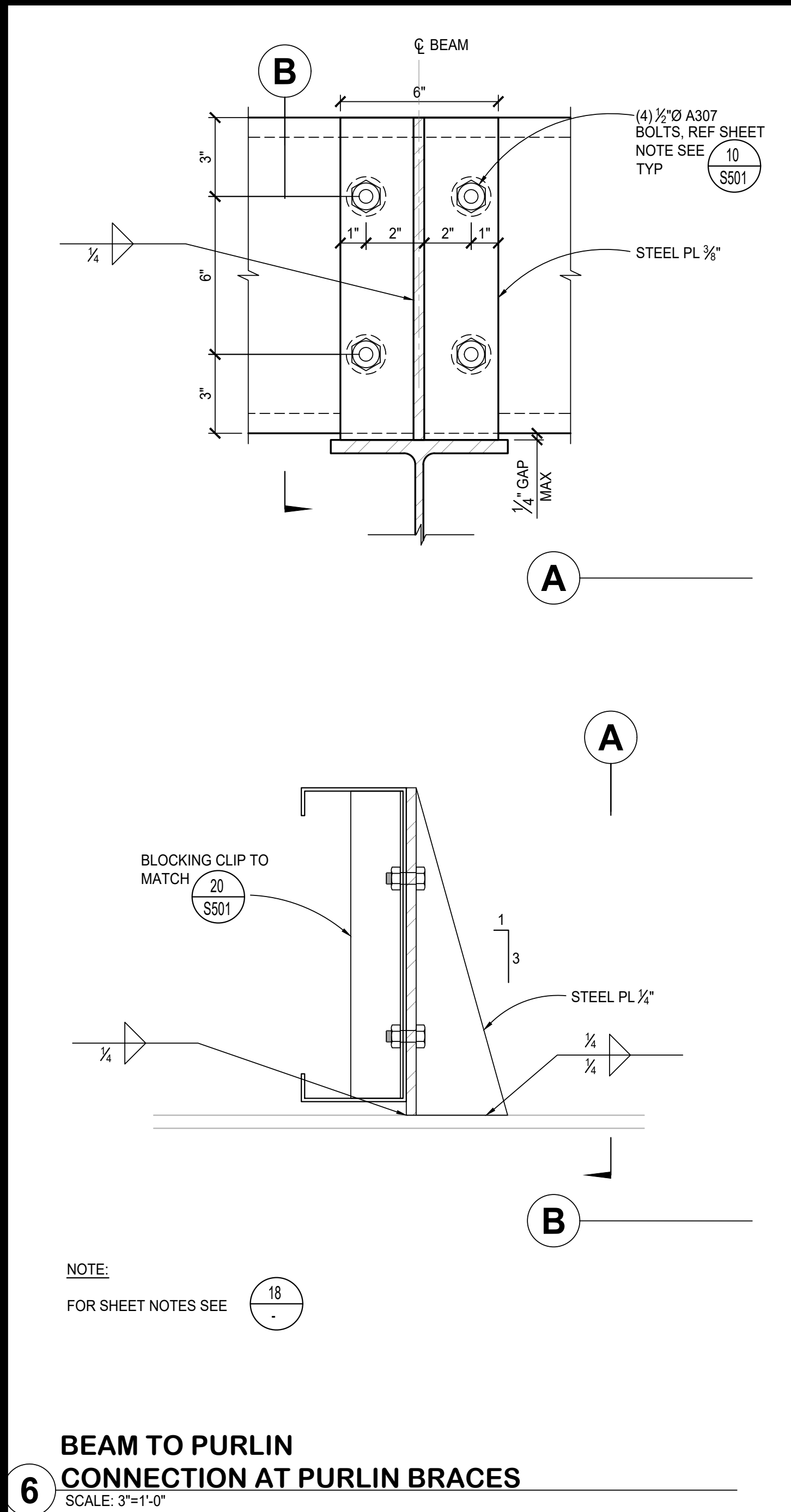


TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"



TYP BLOCKING CONNECTION
SCALE: 3/4"=1'-0"





DSA SITE SPECIFIC APPROVAL

TEICHERT SOLAR

kpff

3131 Camino Del Rio North, Suite 1080
San Diego, California 92108
(619) 521-8500 Fax (619) 521-8591
www.kpff.com kpff project #2200358

PROFESSIONAL SEAL
No. 54800
STRUCTURAL
ENGINEER
STATE OF CALIFORNIA

DSA PC APPROVAL
APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-12-1993 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ GG ☐
DATE: 07/26/2023

TEICHERT / KPFF
DSA - PC PV STRUCTURE SYSTEM

COLD-FORMED DETAILS

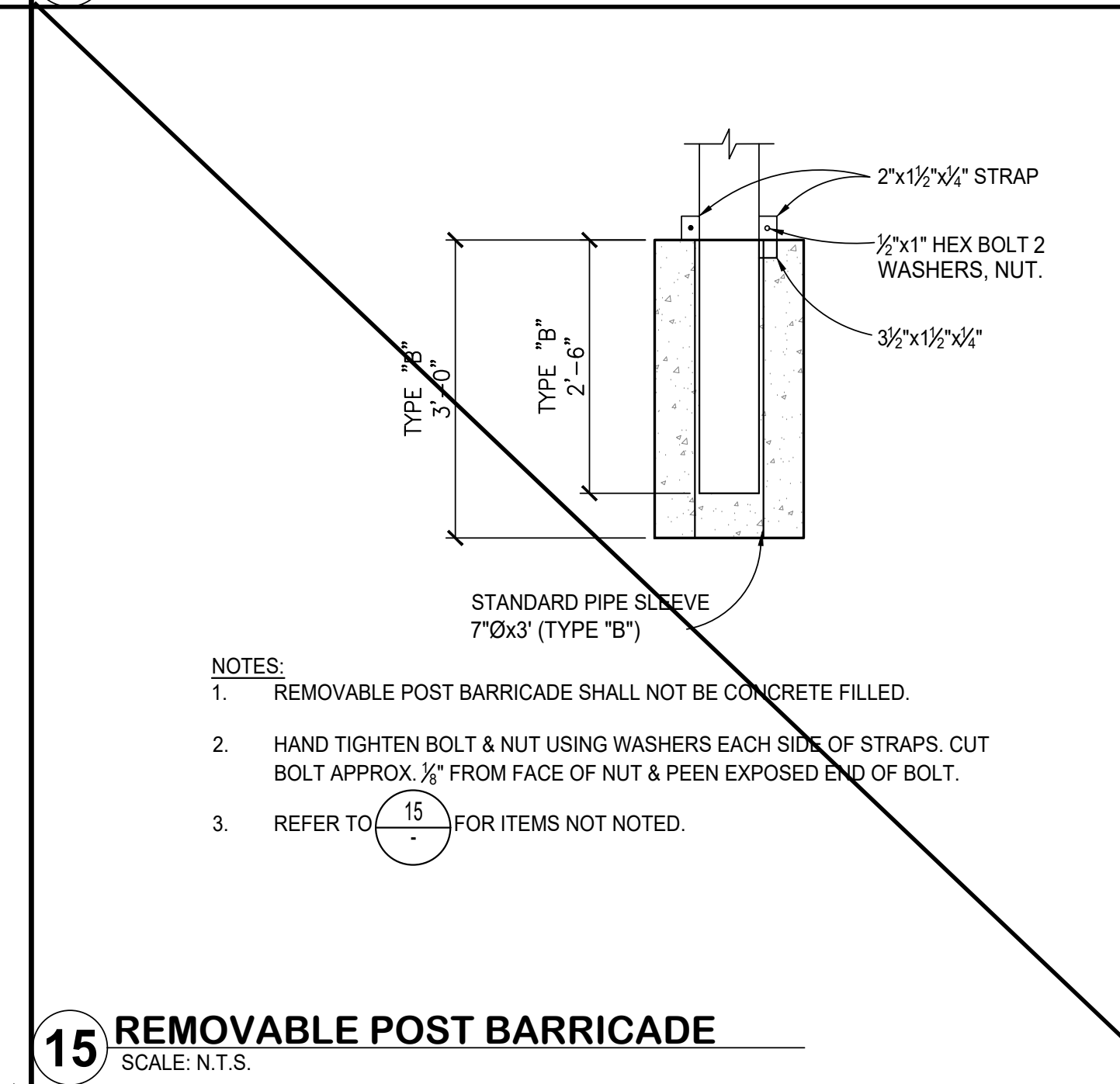
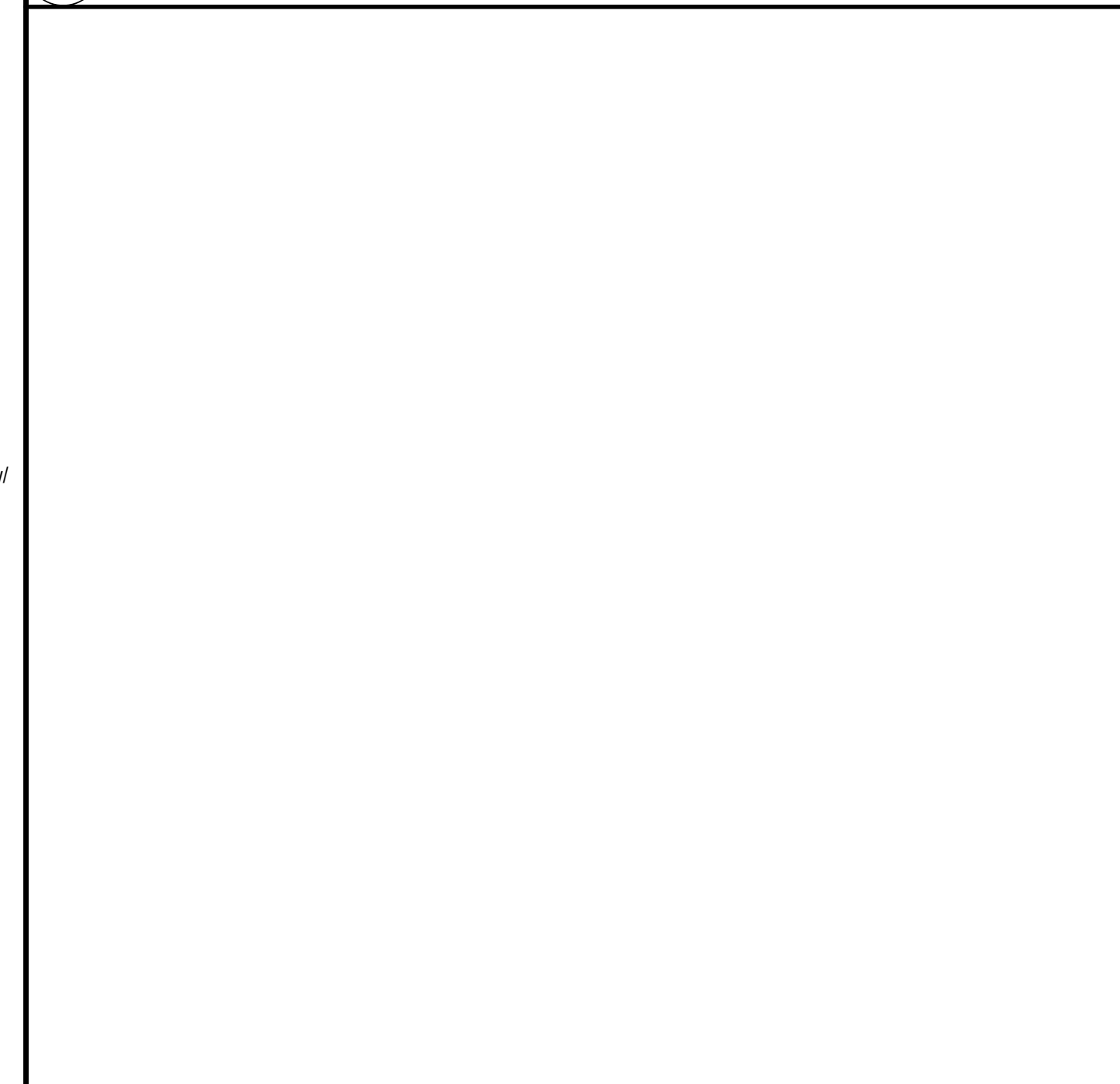
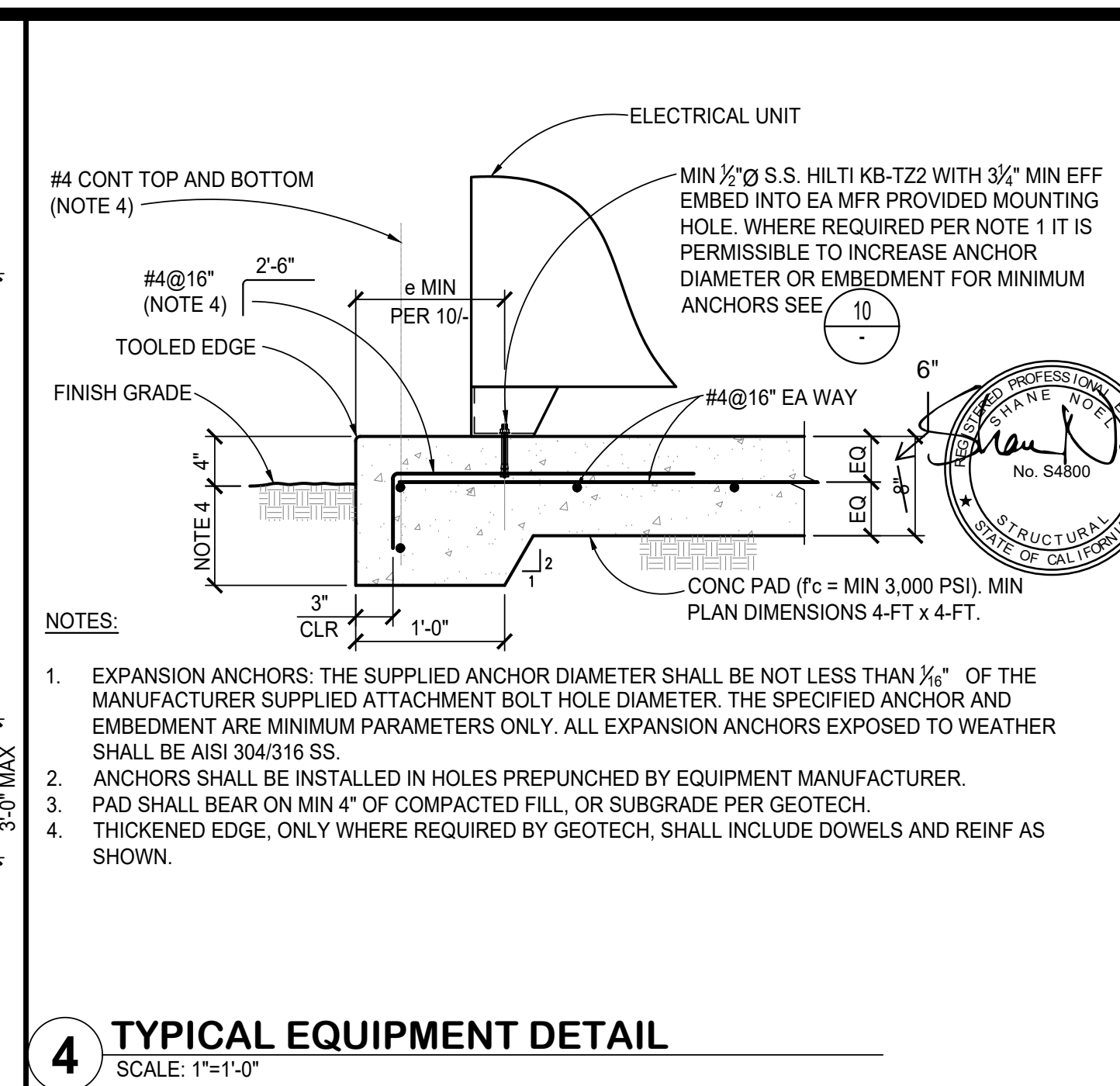
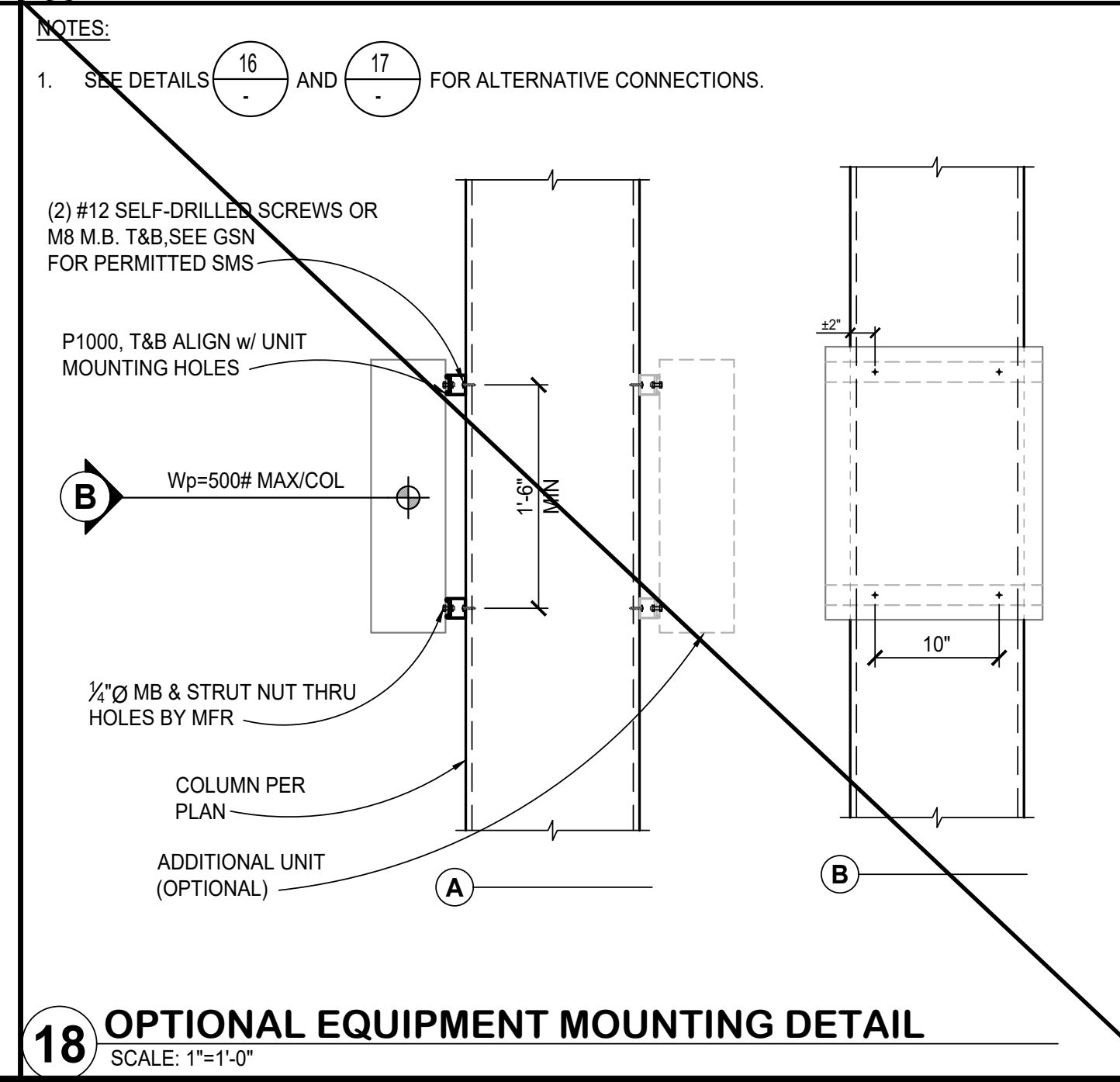
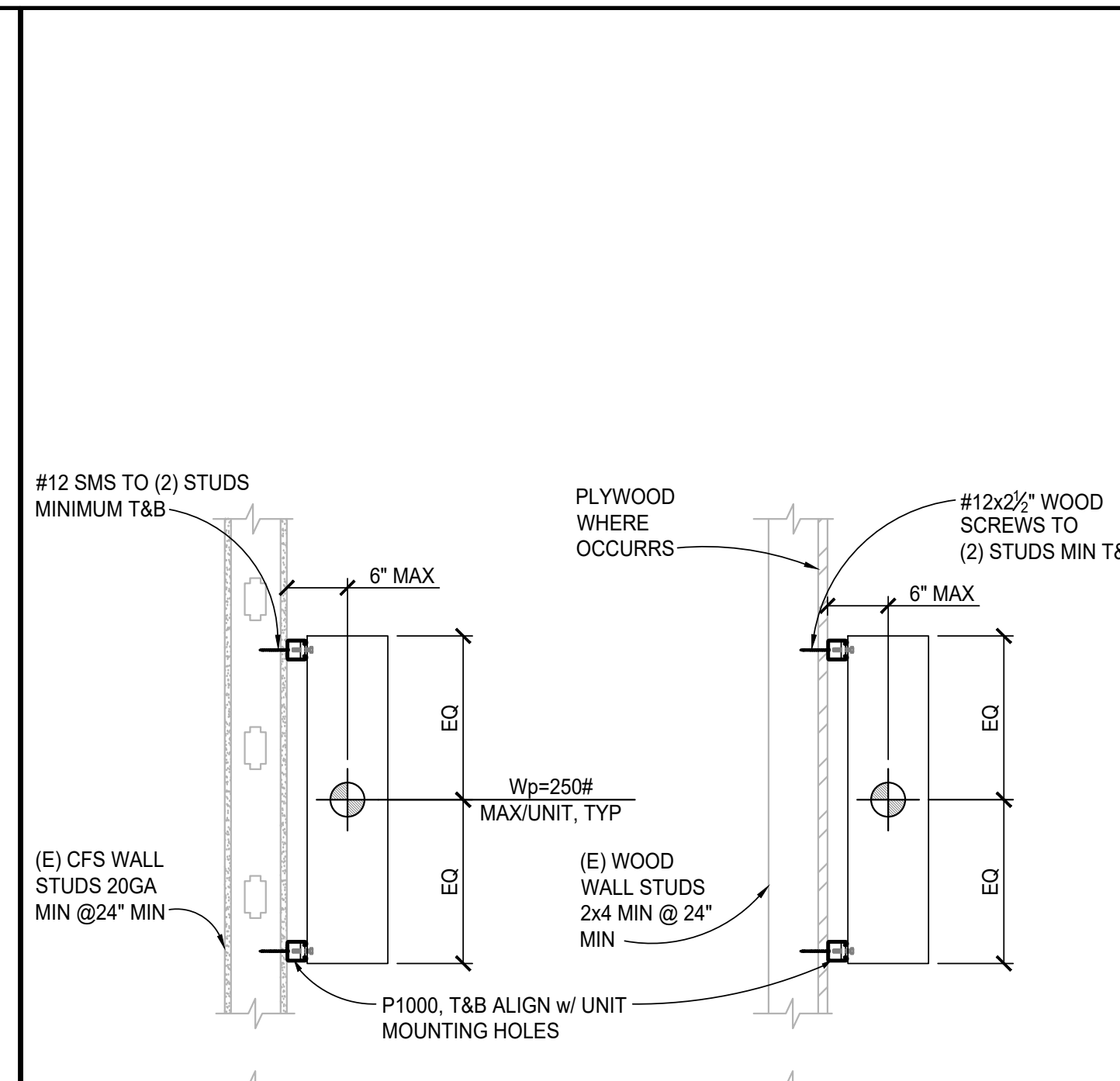
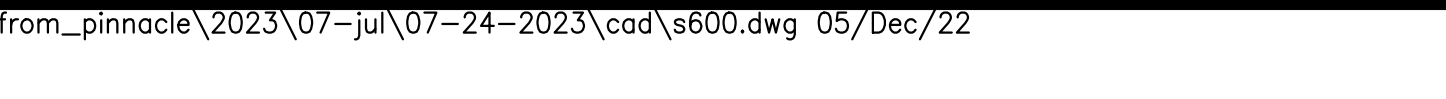
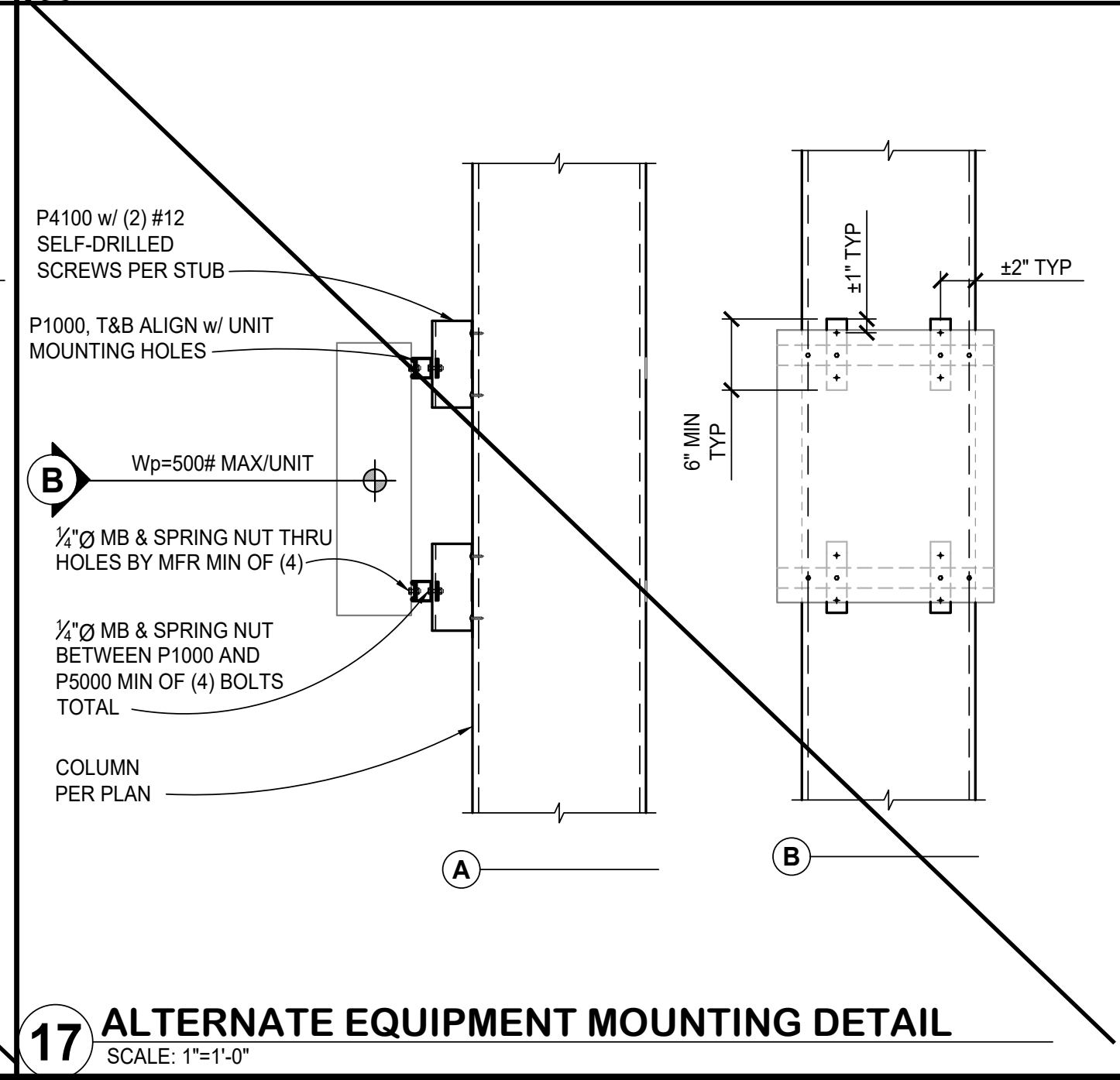
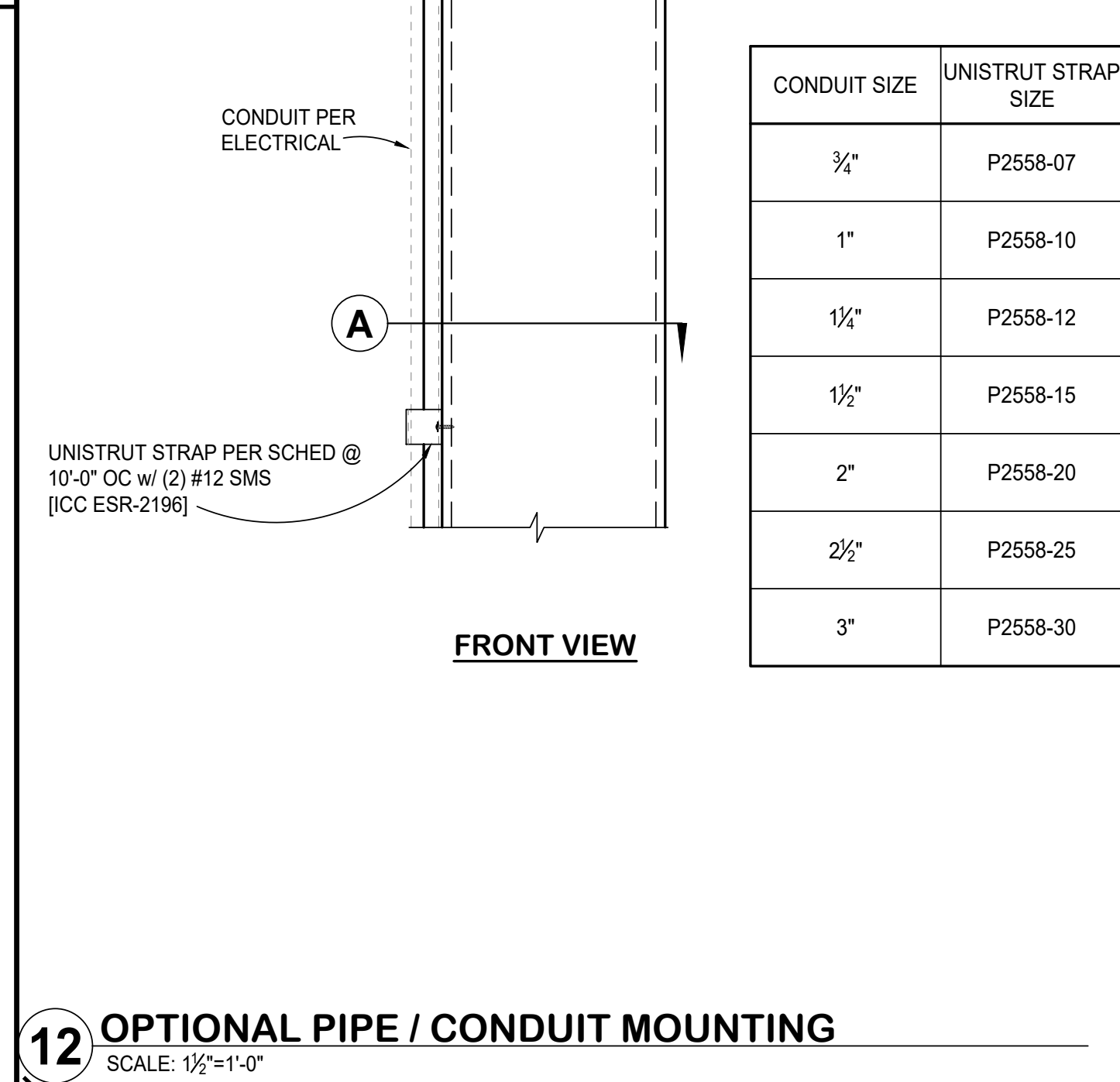
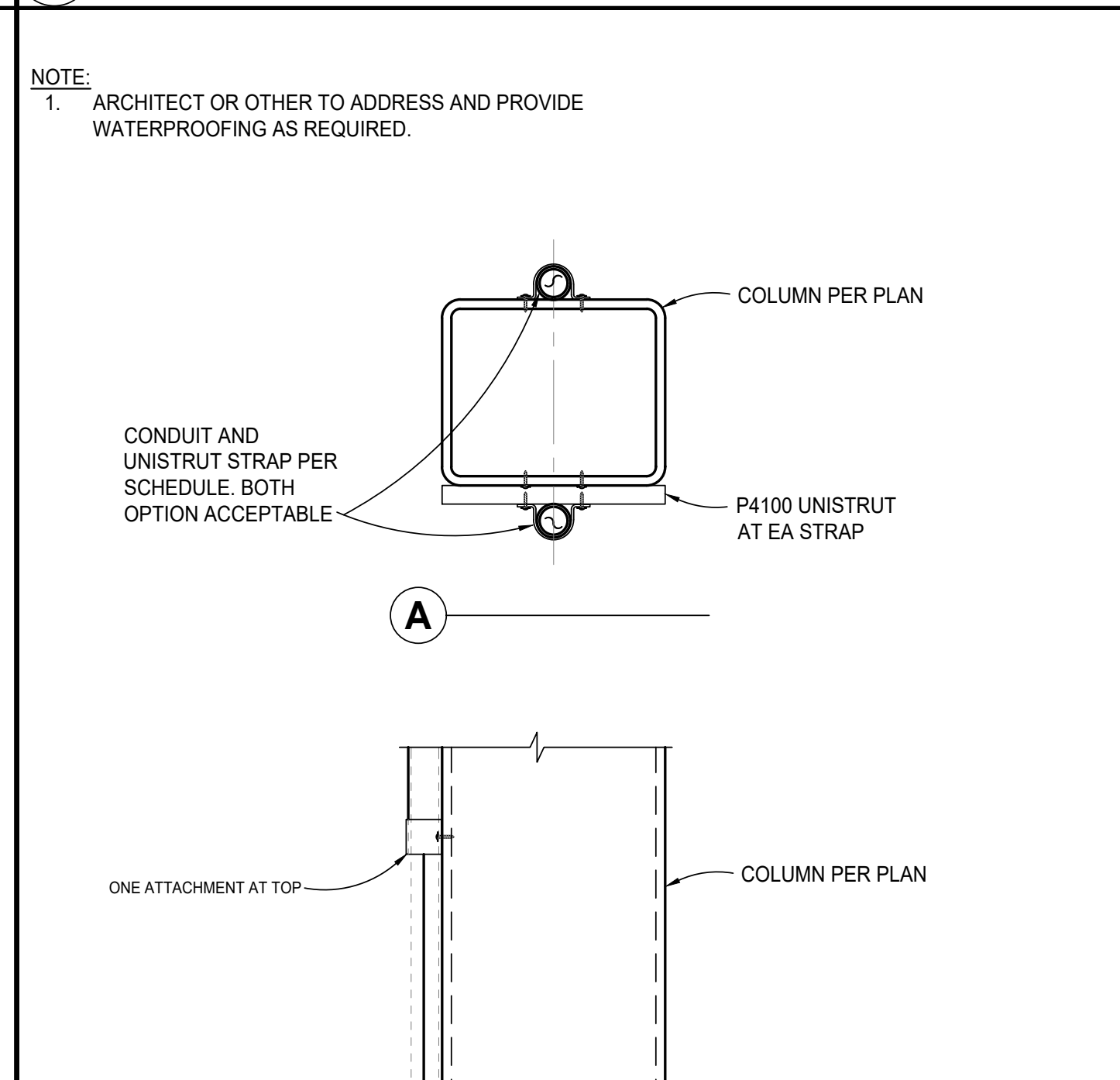
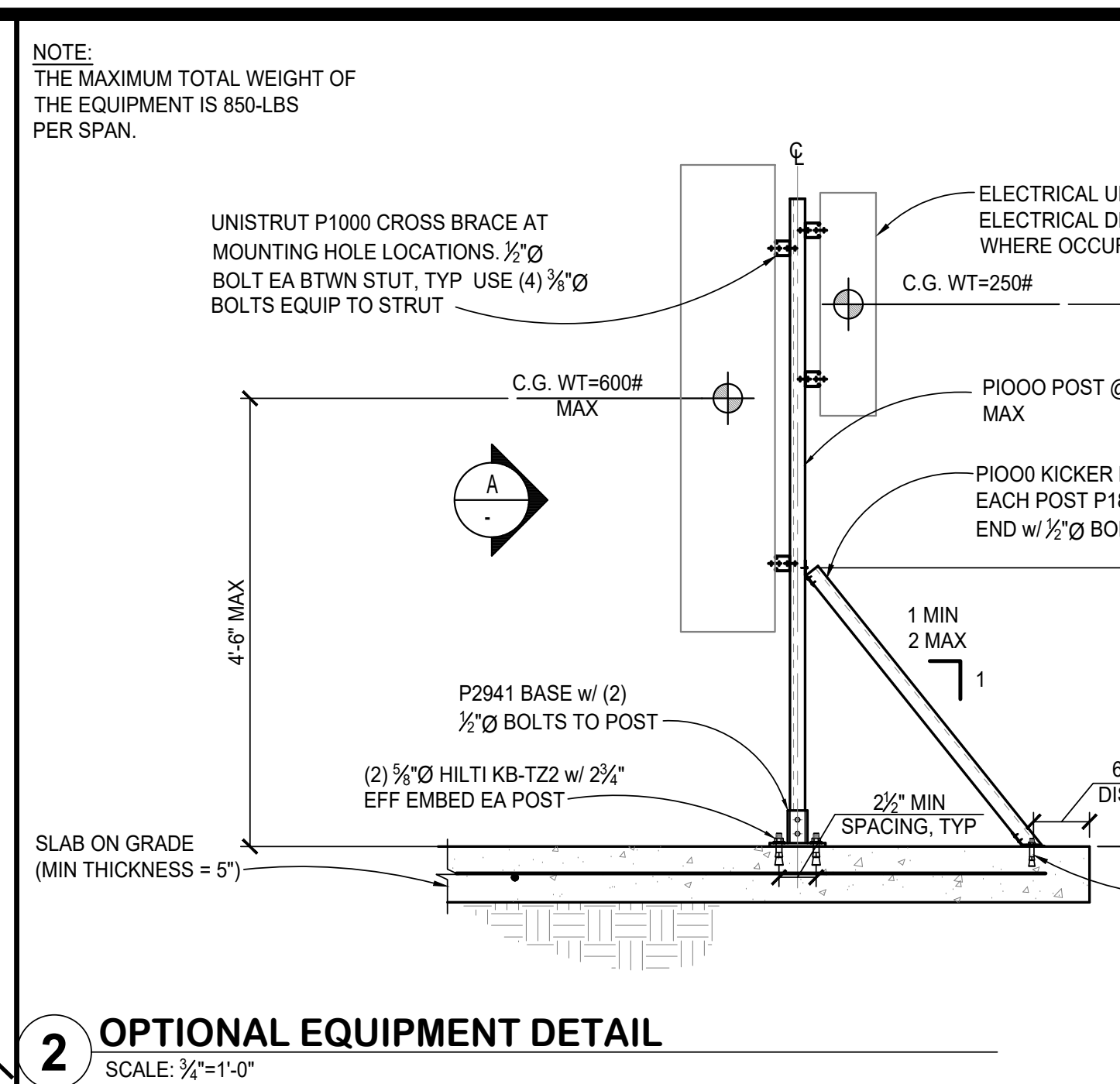
REVISION SCHEDULE

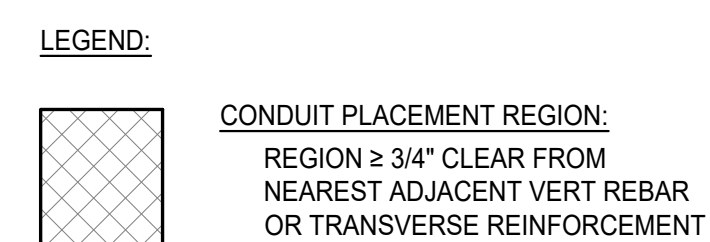
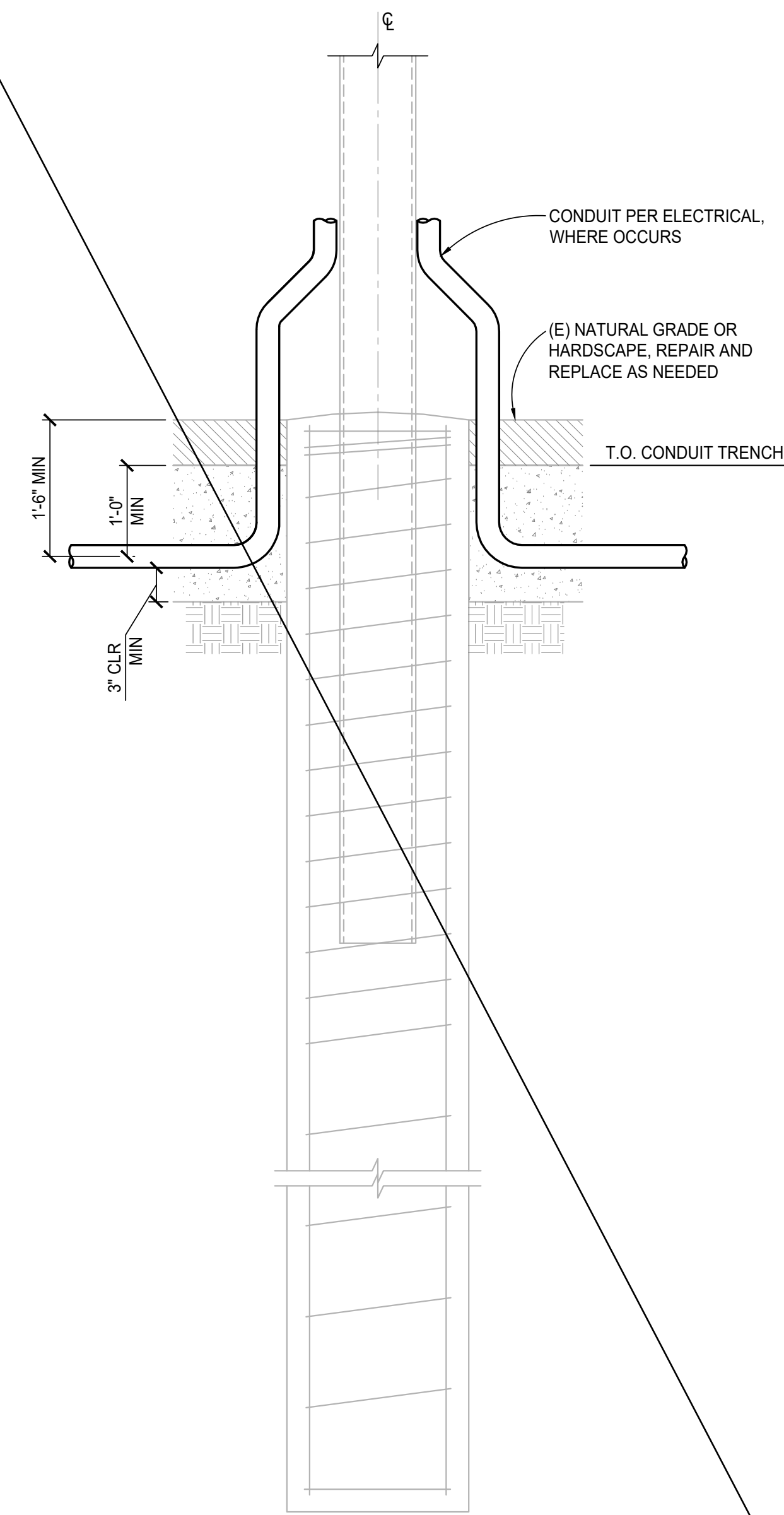
No.	Date	Description
01	07/21/2023	DESIGN
02	07/21/2023	PLAN REVIEW SUBMITTAL
03	07/21/2023	V3 SUBMITTAL
04	07/21/2023	V4 SUBMITTAL

DATE: 07/21/2023
DRAWN BY: JM

ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET **S502**

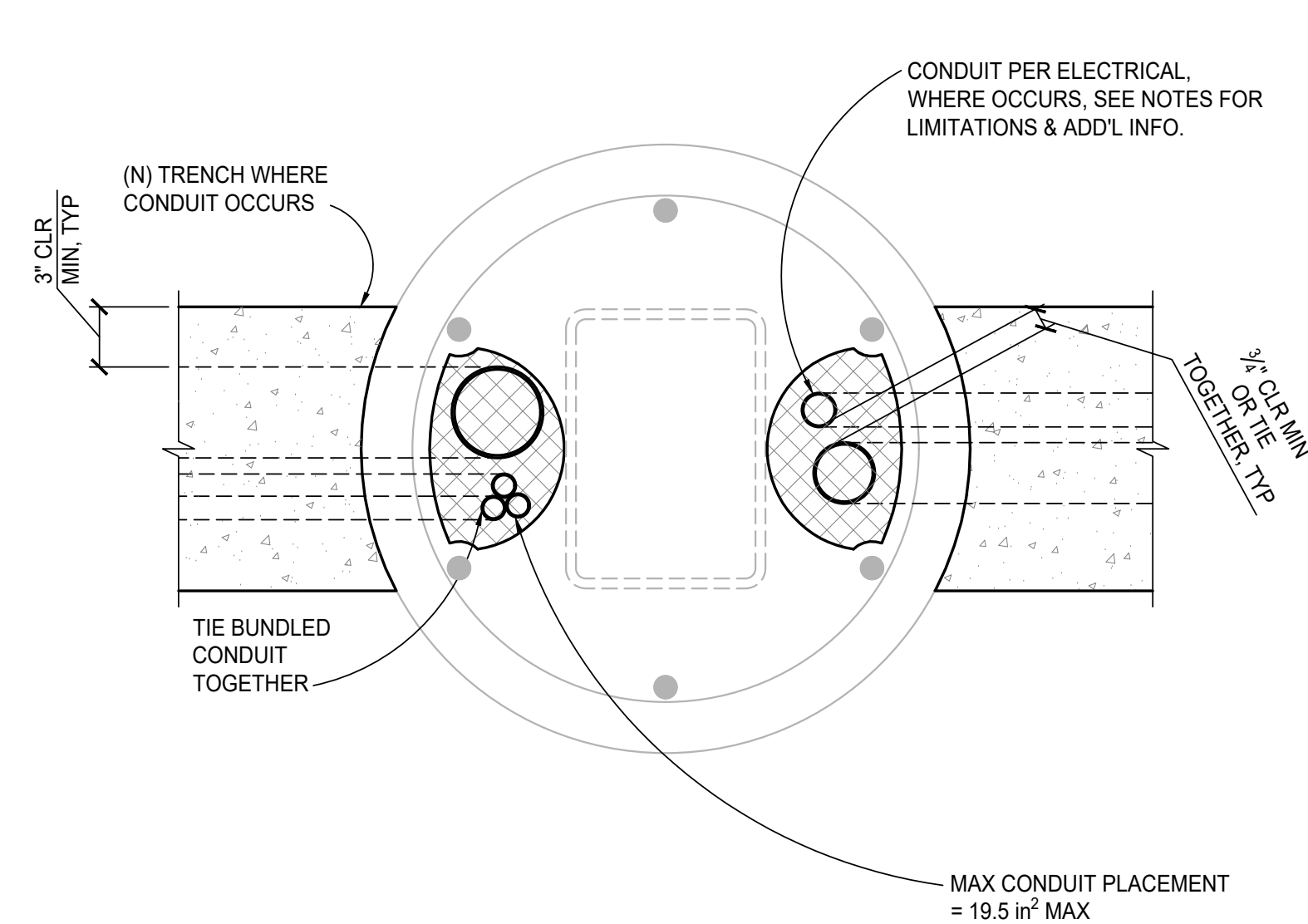




NOTES:

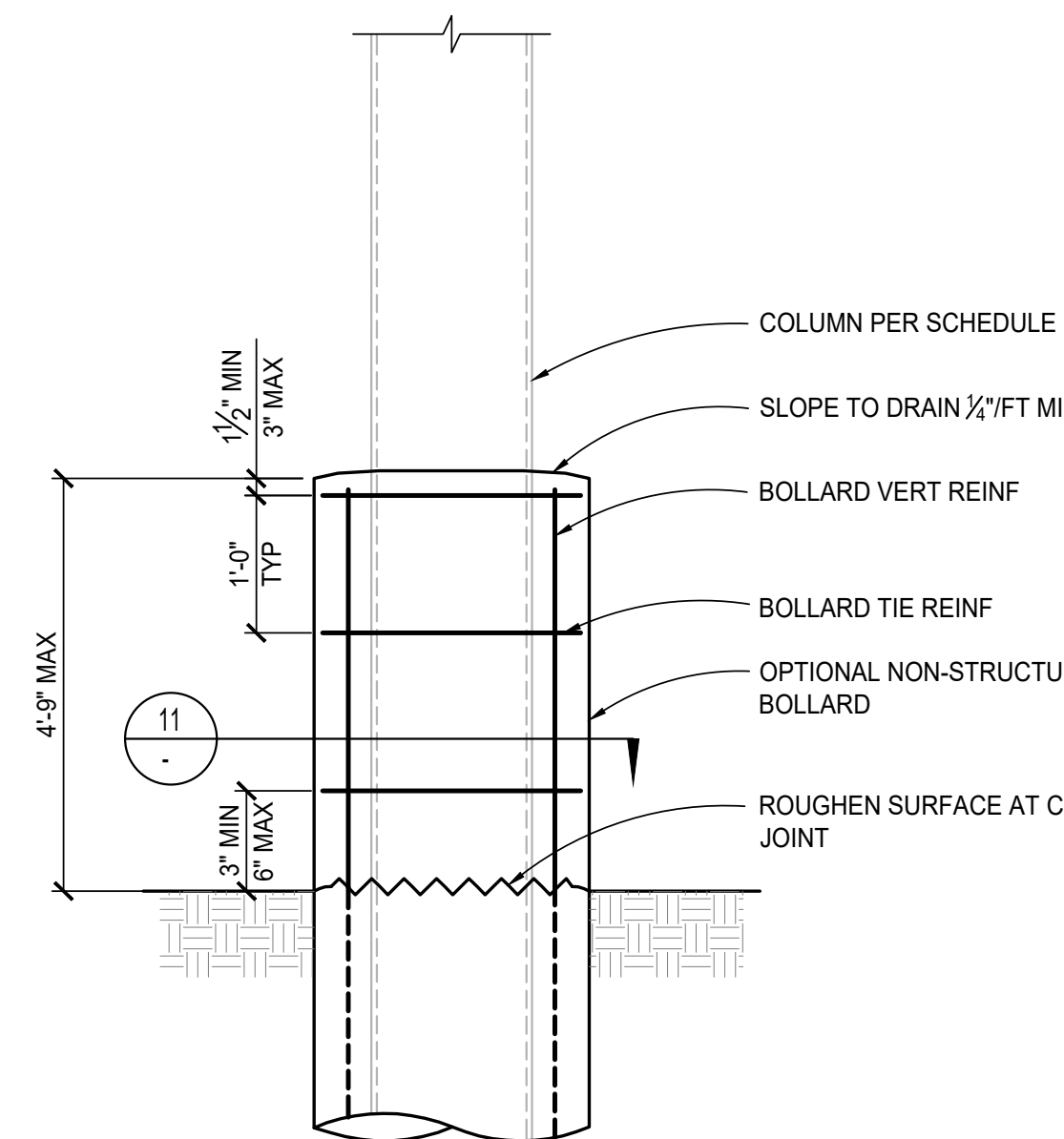
1. CONDUIT MAY BE PLACED ON ONE OR BOTH SIDES OF COLUMN
2. SPACE CONDUITS w/ $\frac{3}{4}$ " CLEAR MIN OR TIE TOGETHER WITH NO SPACE BETWEEN
3. CONDUITS MAY BE TIED TO SPIRAL REBAR CAGE

FOR REFERENCE		
CONDUIT SIZE, NOMINAL	MAX CONDUIT SIZE, ACTUAL	AREA (in ²)
4"Ø	4.5"Ø	15.9
3.5"Ø	4.0"Ø	12.6
3"Ø	3.5"Ø	9.6
2.5"Ø	2.9"Ø	6.6
2"Ø	2.2"Ø	3.8
1.5"Ø	1.74"Ø	2.38
1"Ø	1.17"Ø	1.08



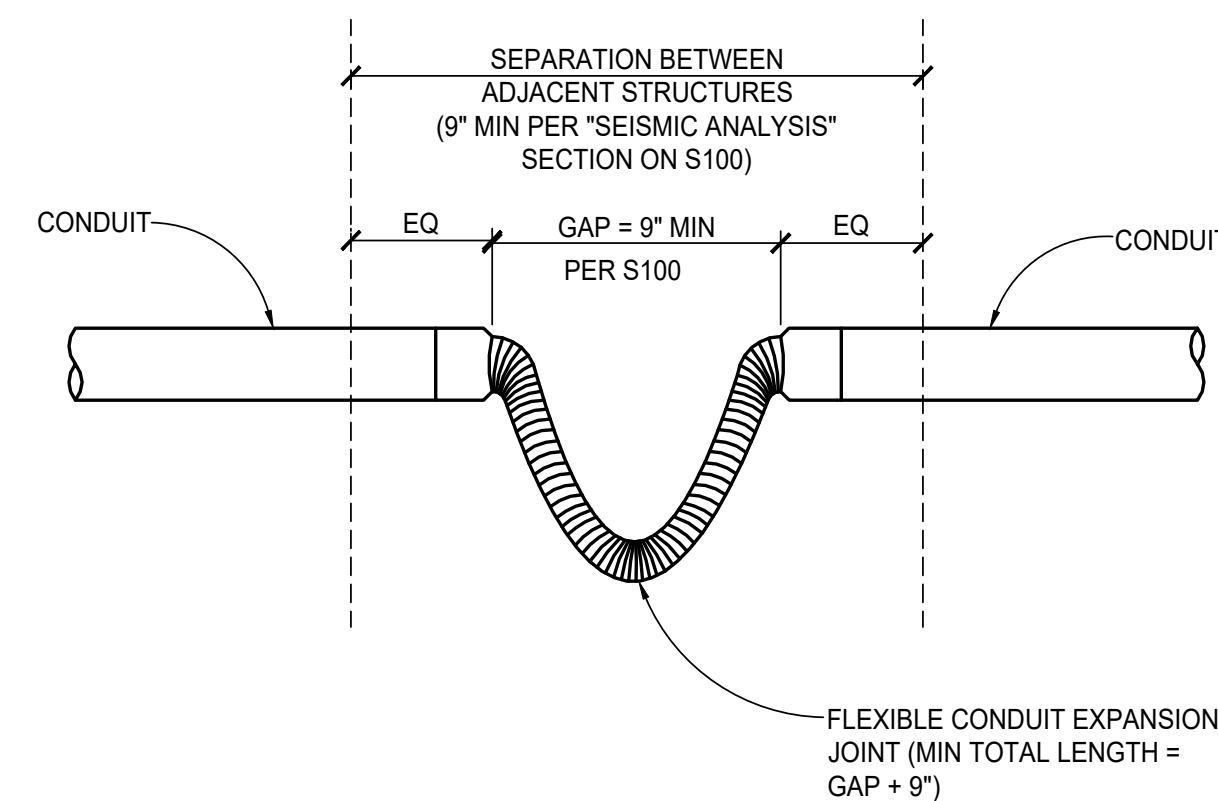
1 CONDUIT LAYOUT IN CONCRETE PIER

SCALE: $1\frac{1}{2}"=1'-0"$



9 BOLLARD - PIER / EMBEDDED COLUMN - TIES

SCALE: $\frac{3}{4}"=1'-0"$



10 CONDUIT EXPANSION JOINT BETWEEN STRUCTURES

SCALE: N.T.S.

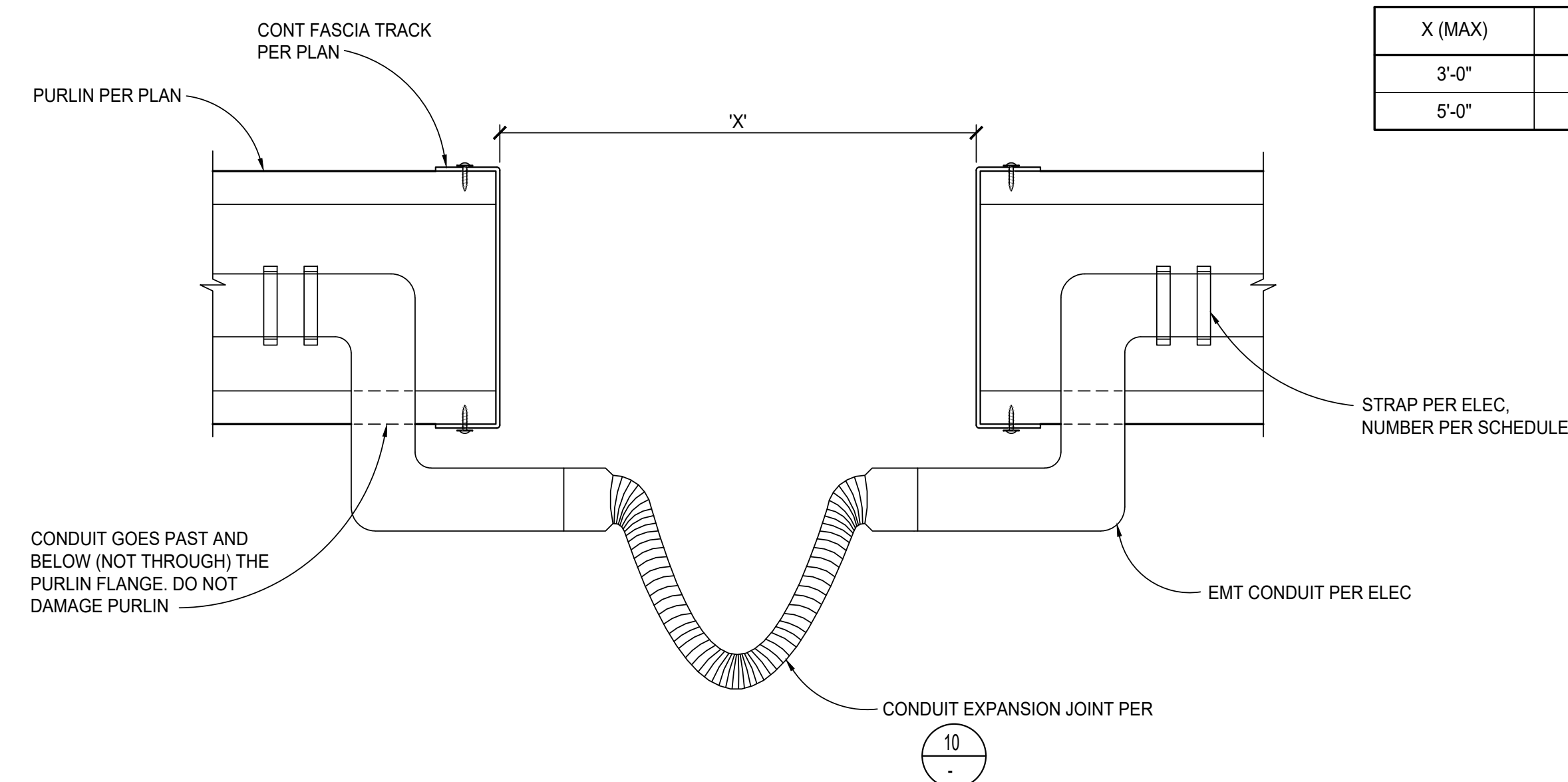


7 OPTIONAL CONDUIT ROUTING

SCALE: $\frac{3}{4}"=1'-0"$

8 ALTERNATE CONDUIT ROUTING

SCALE: $\frac{3}{4}"=1'-0"$

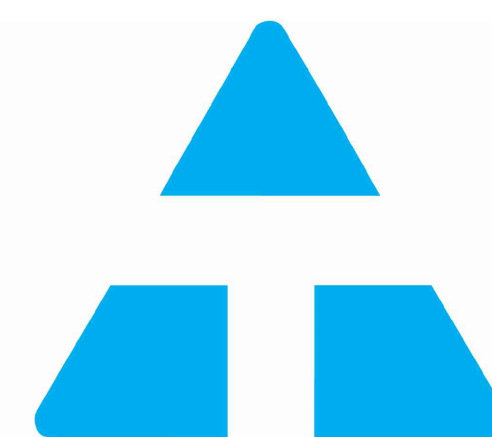


14 CONDUIT EXPANSION JOINT BELOW FASCIA

SCALE: N.T.S.

X (MAX)	# STRAPS
3'-0"	(1) EA SIDE MIN
5'-0"	(2) EA SIDE MIN

DSA SITE SPECIFIC APPROVAL



TEICHERT SOLAR

kpff

3131 Camino Del Rio North, Suite 1080
San Diego, California 92108
(619) 521-8500 Fax (619) 521-8591
www.kpff.com kpff project #2200358



DSA PC APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121993 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☐
DATE: 07/26/2023

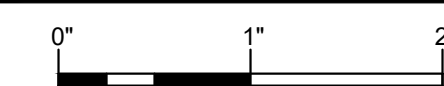
TEICHERT / KPFF
DSA - PC PV STRUCTURE SYSTEM

CONDUITS ROUTING & BOLLARDS

[illegible]

DATE 07/21/2023

DRAWN BY JM



ORIGINAL SHEET SIZE 30 x 42
IF BAR IS NOT TO SCALE - DRAWING IS NOT TO SCALE

SHEET

S602