

GENERAL NOTES

- SHELTER DESIGN**
 - THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.
- FOUNDATION**
 - THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND CAPABLE OF SUPPORTING 1500 PSF VERTICAL BEARING PRESSURE.
 - OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS.
- CONCRETE**
 - COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 3500 PSI AT 28 DAYS.
 - REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 60.
 - MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 3".
 - ANCHOR RODS SHALL BE F1554 GRADE 36 MINIMUM GALVANIZED ROD, HEADED, OR WITH HEAVY HEX NUT TACKED TO ROD.
- STRUCTURAL STEEL**
 - STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
 - HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B (F_y = 48 KSI).
 - WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED.
 - WELDING ELECTRODES SHALL BE E70XX.
 - STRUCTURAL STEEL COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATION.
- ALUMINUM**
 - EXTRUDED ALUMINUM GUTTER FASCIA AND FASCIA TRIM SHALL BE FABRICATED FROM ALUMINUM ALLOY 6061-T6 OR 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWING.
 - ALUMINUM COMPONENTS SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATION.
- WOOD**
 - ROOF SUB-DECKING SHALL BE TONGUE AND GROOVE WITH A V-GROOVE JOINT. NOMINAL BOARD SIZE SHALL BE 2" X 6".
 - WOOD SHALL BE SOUTHERN YELLOW PINE, #1 GRADE OR BETTER, KILN DRIED.
 - DECKING SHALL BE INSTALLED WITH LAYOUTS IN ACCORDANCE WITH THE TONGUE AND GROOVE ROOF DECKING SPECIFICATION BY AMERICAN WOOD COUNCIL.
- ROOF DECK**
 - INTERLOCKING SEAL ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H34 AND SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWING.
 - ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED EQUAL.
- FASTENERS**
 - HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325 OR A307 (SEE DETAILS).
 - SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD #5 POINT SELF DRILLING SCREWS WITH BOND SEAL WASHER.
 - SCREWS ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD #2 POINT SELF DRILLING SCREWS.
 - SCREWS ATTACHING WOOD TO STEEL SHALL BE 1/4"-20 FLAT HEAD WINGED #4 POINT SELF DRILLING SCREWS.
 - SCREWS ATTACHING INTO WOOD SHALL BE #10 PAN HEAD LAG SCREWS.
 - HIGH STRENGTH BOLTS SHALL BE HOT DIP GALVANIZED. ALL SCREWS SHALL BE STAINLESS STEEL OR COATED WITH ZINC.
 - ALL BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION AS DEFINED IN THE 2004 RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCS) SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
- SHOP FABRICATION AND FIELD ASSEMBLY**
 - ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.
 - ALL SHOP WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS.
 - ALL SHOP WELDS SHALL BE IN STRICT ACCORDANCE WITH THE STRUCTURAL WELDING CODE AWS D1.1 OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ALL STRUCTURAL WELDS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF "PRE-QUALIFIED" WELDED JOINTS. ALL WELDING SHALL CONFORM TO AWS A5.18: E7018-8 SERIES E70XX ELECTRODES - LOW HYDROGEN.
 - FIELD WELDING SHALL NOT BE REQUIRED.
- SPECIAL INSPECTIONS**
 - SPECIAL INSPECTIONS, IF ANY REQUIRED BY THE LOCALLY ADOPTED BUILDING CODES, ARE NOT INCLUDED IN THIS WORK AND SHALL BE DONE BY OTHERS.

BASIS OF DESIGN

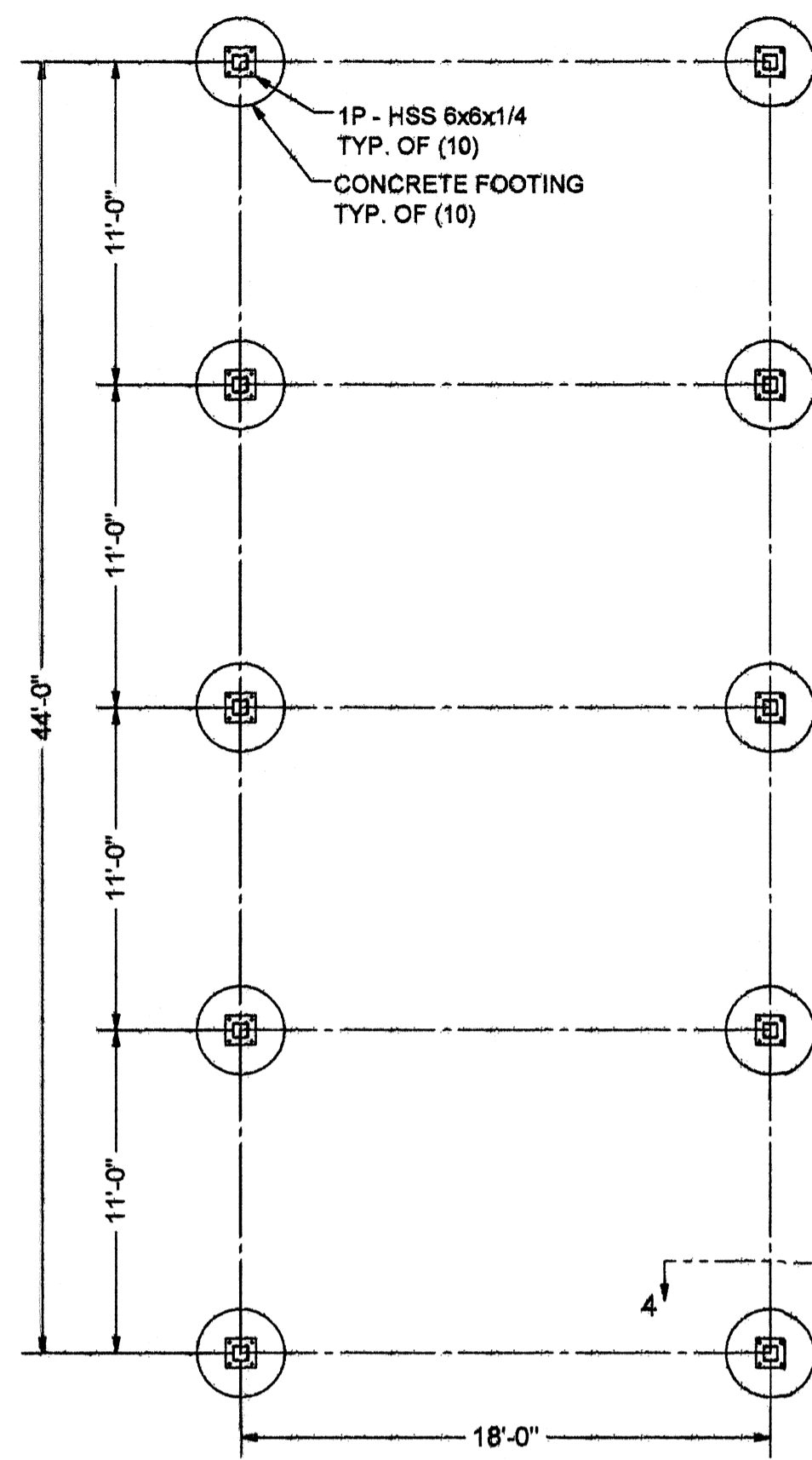
| DESIGN PARAMETERS | |
|------------------------------|--|
| ROOF LIVE LOAD | 20 PSF |
| GROUND SNOW LOAD | 60 PSF (OWNER REQUEST) |
| DESIGN ROOF DEAD LOAD | 10 PSF |
| SOIL DESIGN BEARING STRENGTH | 1500 PSF (ASSUMED) |
| CODES: | 2009 IBC ASCE 7-05 2011 IBCS PEAK REGIONAL BLDG. CODE |
| BUILDING DATA | |
| OCCUPANCY CLASSIFICATION | A-3 (NON-SEPARATED USE) |
| CONSTRUCTION TYPE | TYPE II-B |
| FLOOR AREA | 1012 SQ. FT. |
| OCCUPANCY LOAD | 7 SQ. FT. / OCCUPANT = 144 OCCUPANTS / SHELTER |

DESIGN CRITERIA

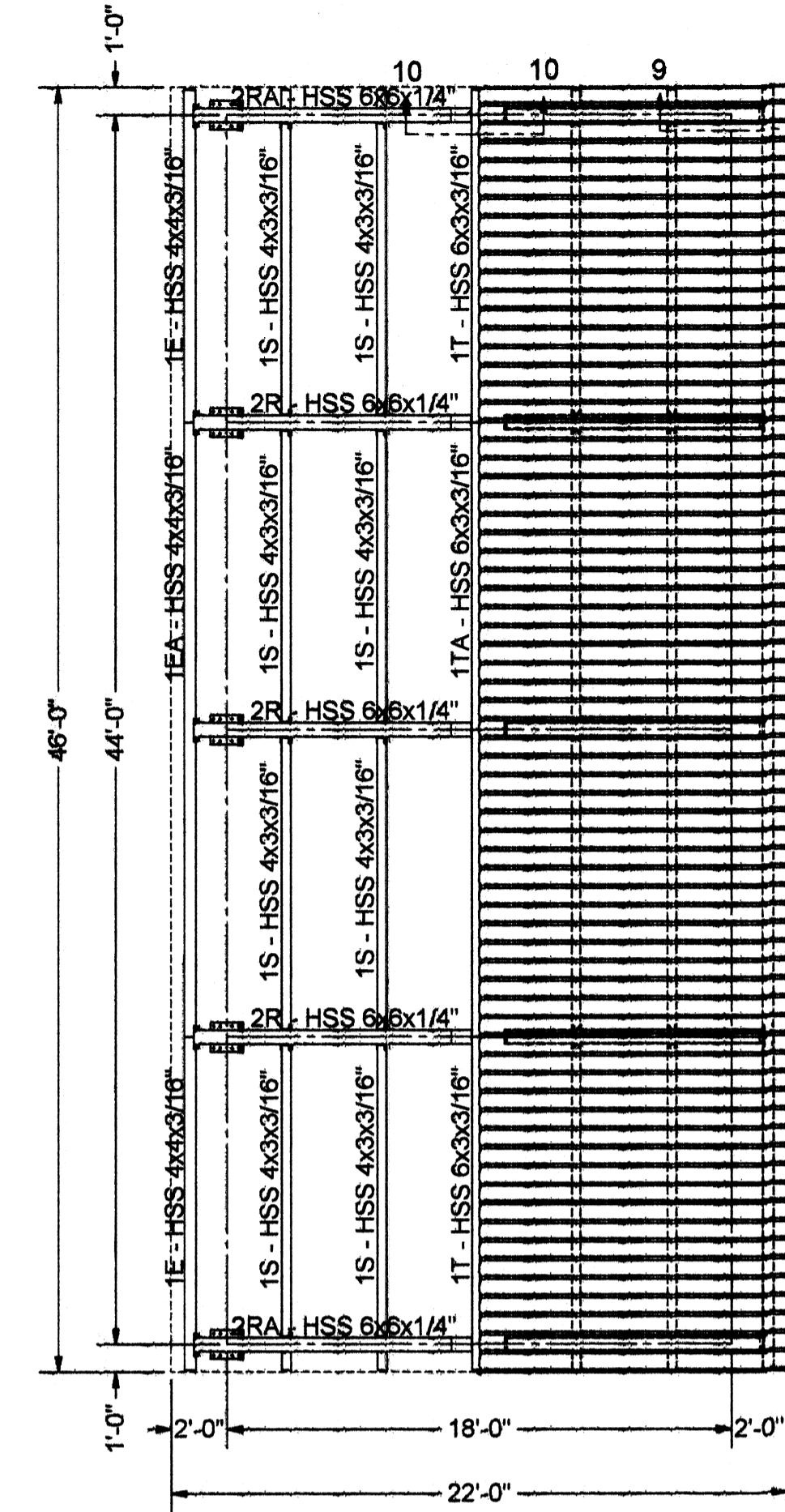
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|--|---|
| WIND DESIGN CRITERIA | |
| BASIC WIND SPEED (3 SECOND GUST) | 130 MPH (OWNER REQUEST) |
| WIND IMPORTANCE FACTOR | I _w = 1.0 |
| OCCUPANCY CATEGORY | II |
| WIND EXPOSURE | C |
| INTERNAL PRESSURE COEFFICIENT | N/A (OPEN STRUCTURE) |
| SEISMIC DESIGN CRITERIA (not governing) | |
| SEISMIC IMPORTANCE FACTOR | I _s = 1.0 |
| OCCUPANCY CATEGORY | II |
| SPECTRAL RESPONSE ACCELERATION, 0.2 SECOND | S _s = 0.211 |
| SPECTRAL RESPONSE ACCELERATION, 1.0 SECOND | S ₁ = 0.059 |
| SOIL SITE CLASS | D (ASSUMED) |
| SPECTRAL RESPONSE COEFFICIENT, S _{w1} | 0.225 |
| SPECTRAL RESPONSE COEFFICIENT, S _{w2} | 0.095 |
| SEISMIC DESIGN CATEGORY | B |
| TRANSVERSE SEISMIC FORCE RESISTING SYSTEM | STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE |
| LONGITUDINAL SEISMIC FORCE RESISTING SYSTEM | STEEL ORDINARY CANTILEVER COLUMN SYSTEM |
| TRANSVERSE RESPONSE MODIFICATION FACTOR | R = 3.00 |
| LONGITUDINAL RESPONSE MODIFICATION FACTOR | R = 1.25 |
| DESIGN BASE SHEAR | V = C _v W |
| TRANSVERSE SEISMIC RESPONSE COEFFICIENT | C _v = 0.076 |
| LONGITUDINAL SEISMIC RESPONSE COEFFICIENT | C _v = 0.182 |
| ANALYSIS PROCEDURE | EQUIVALENT LATERAL FORCE |

| ASD MAX. FOOTING REACTIONS | |
|----------------------------|-----------|
| ↓ | 9.5 KIPS |
| ↑ | 2.7 KIPS |
| → | 1.9 KIPS |
| ↶ | 1.6 K-F T |

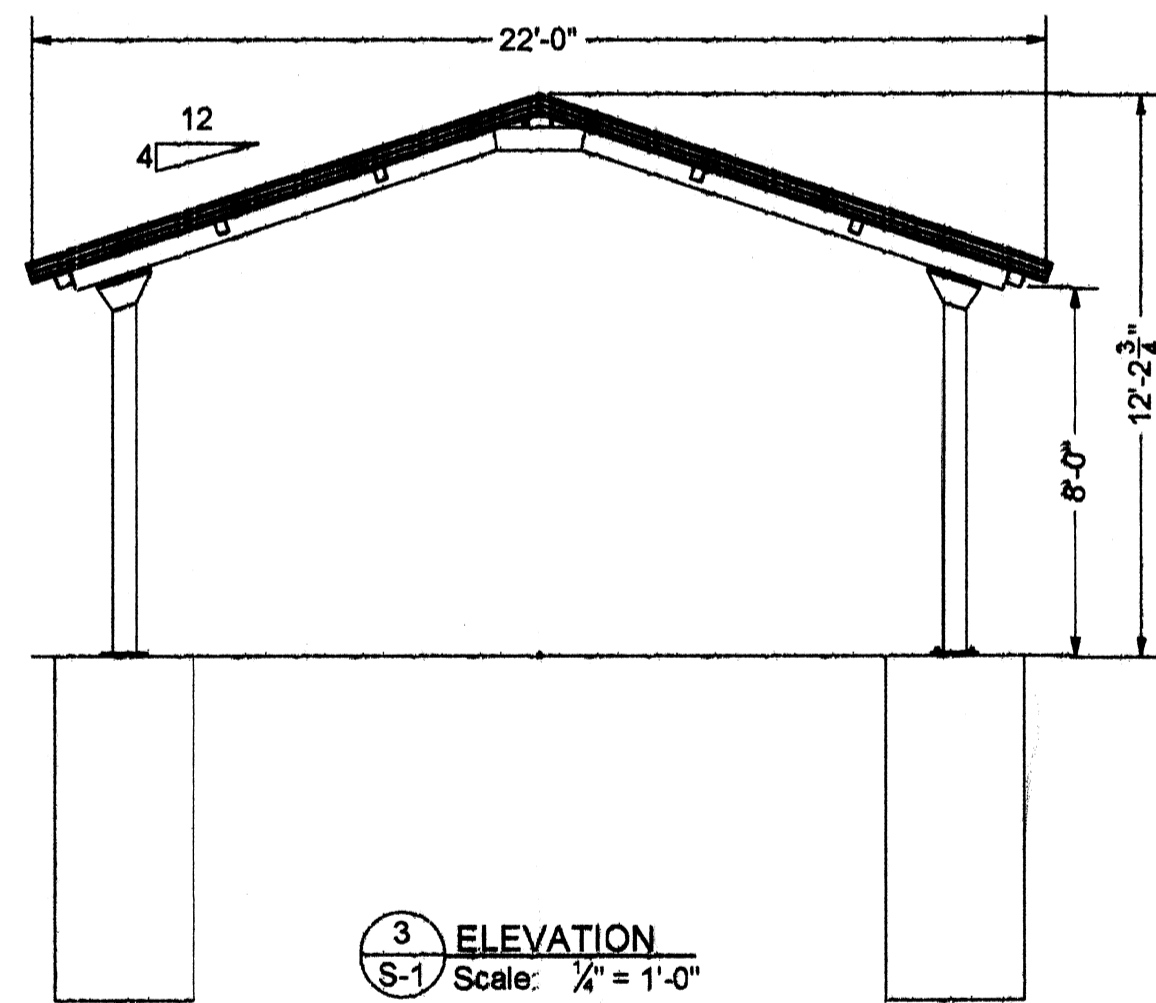
NOTE: THE FOOTING CONFIGURATION IS BASED ON IBC PRESUMPTIVE LOAD BEARING VALUES. NO GEOTECHNICAL DATA WAS AVAILABLE. ACTUAL SOIL CONDITIONS AT SHELTER LOCATION SHALL BE VERIFIED AND ANY REQUIRED ADJUSTMENTS TO THE CONFIGURATION SHALL BE DESIGNED BY OTHERS.



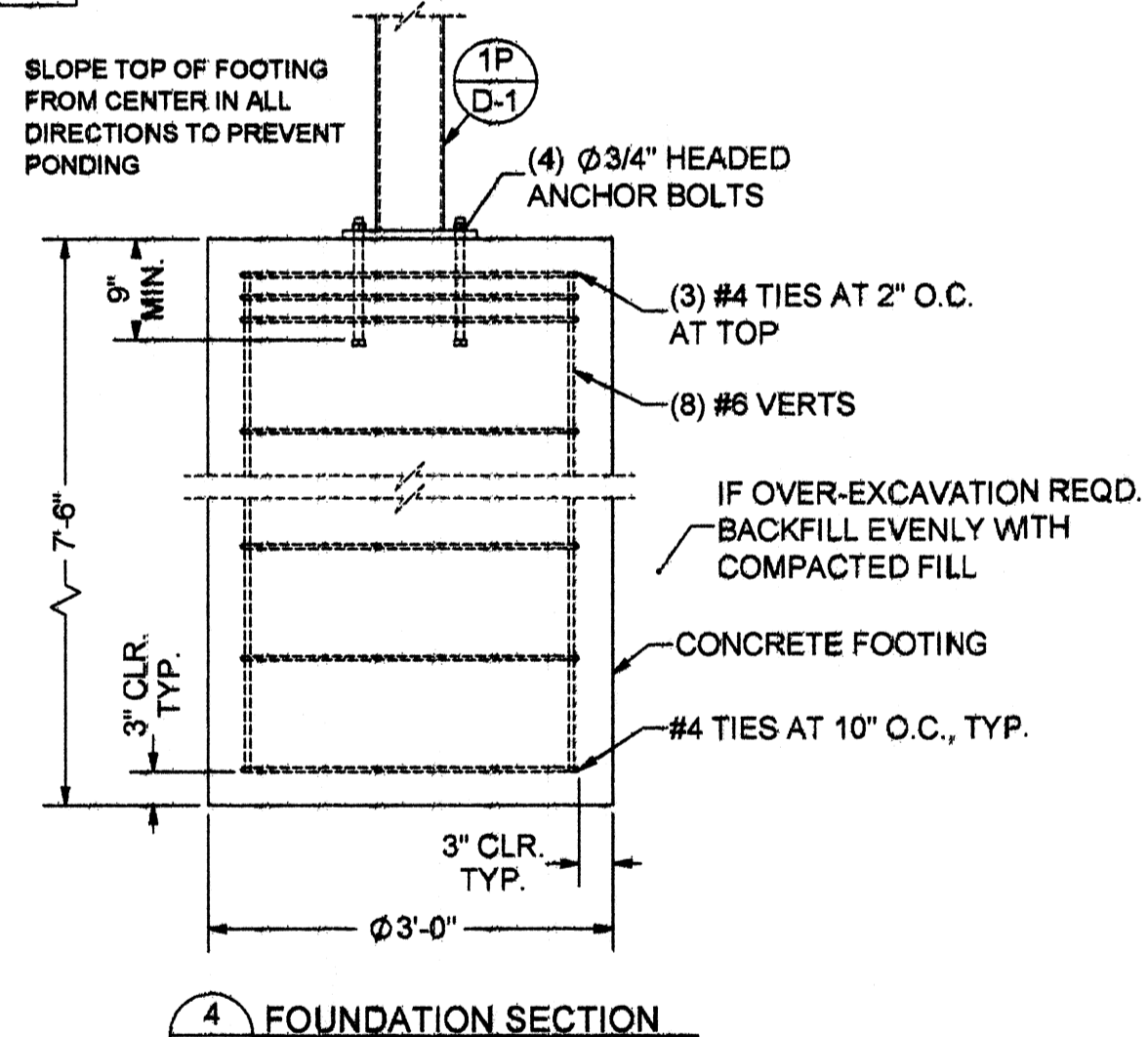
1 FOUNDATION PLAN
S-1 Scale: 3/8" = 1'-0"



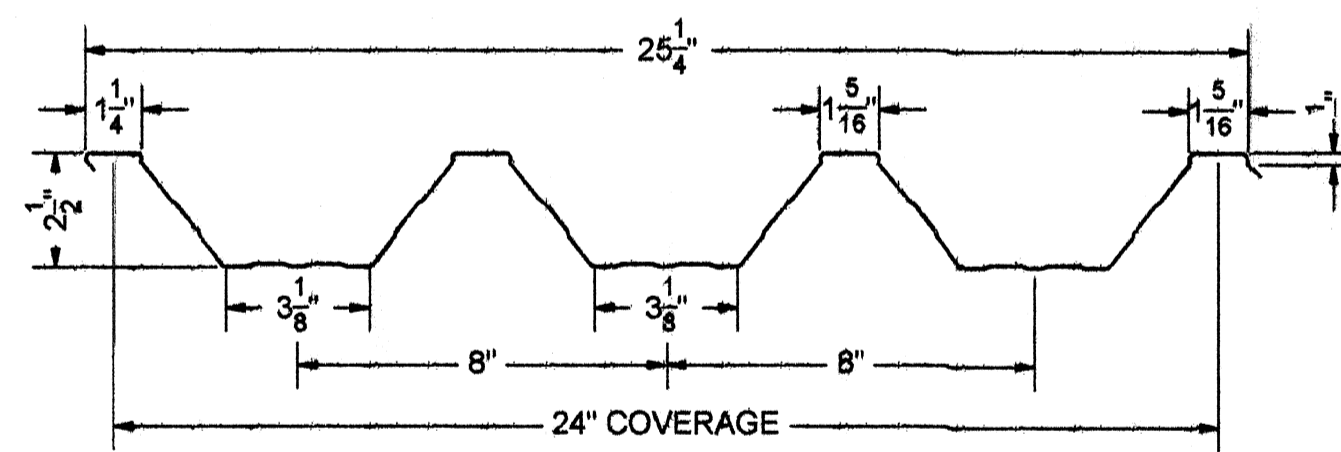
2 ROOF PLAN
S-1 Scale: 3/8" = 1'-0"



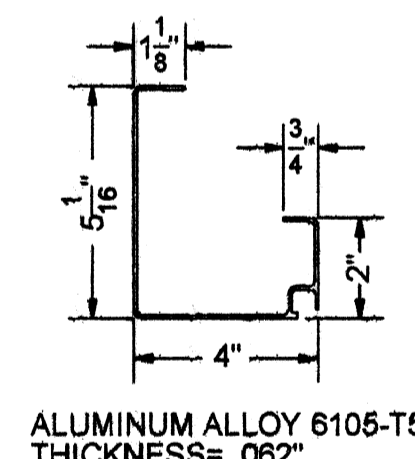
3 ELEVATION
S-1 Scale: 1/4" = 1'-0"



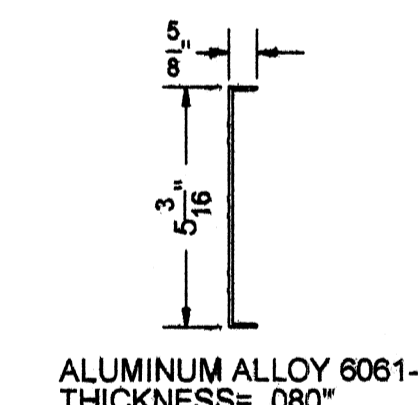
4 FOUNDATION SECTION
S-1 Scale: 3/4" = 1'-0"



5 ROOF DECK PROFILE
S-1 Scale: 3" = 1'-0"



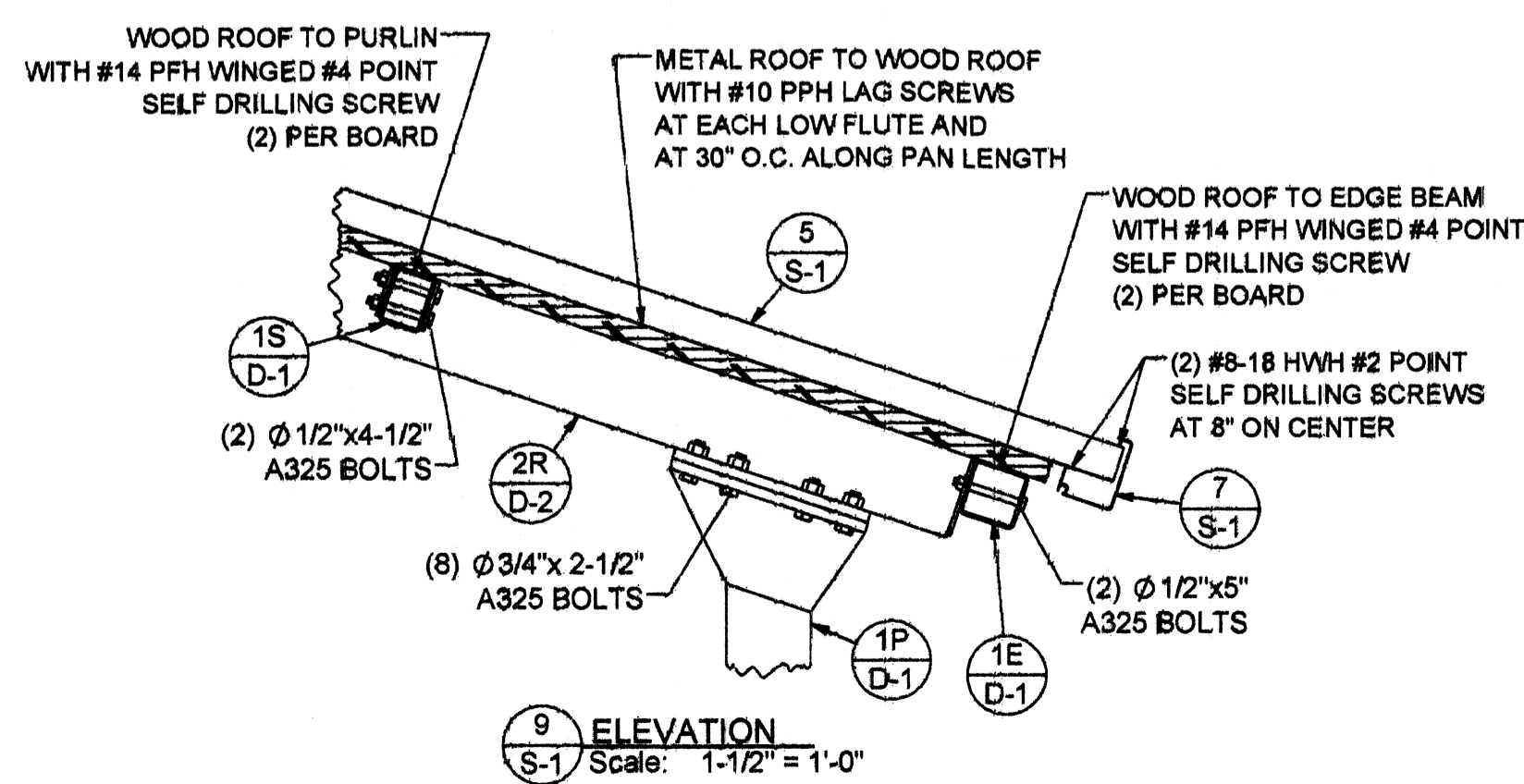
6 GUTTER PROFILE
S-1 Scale: 3" = 1'-0"



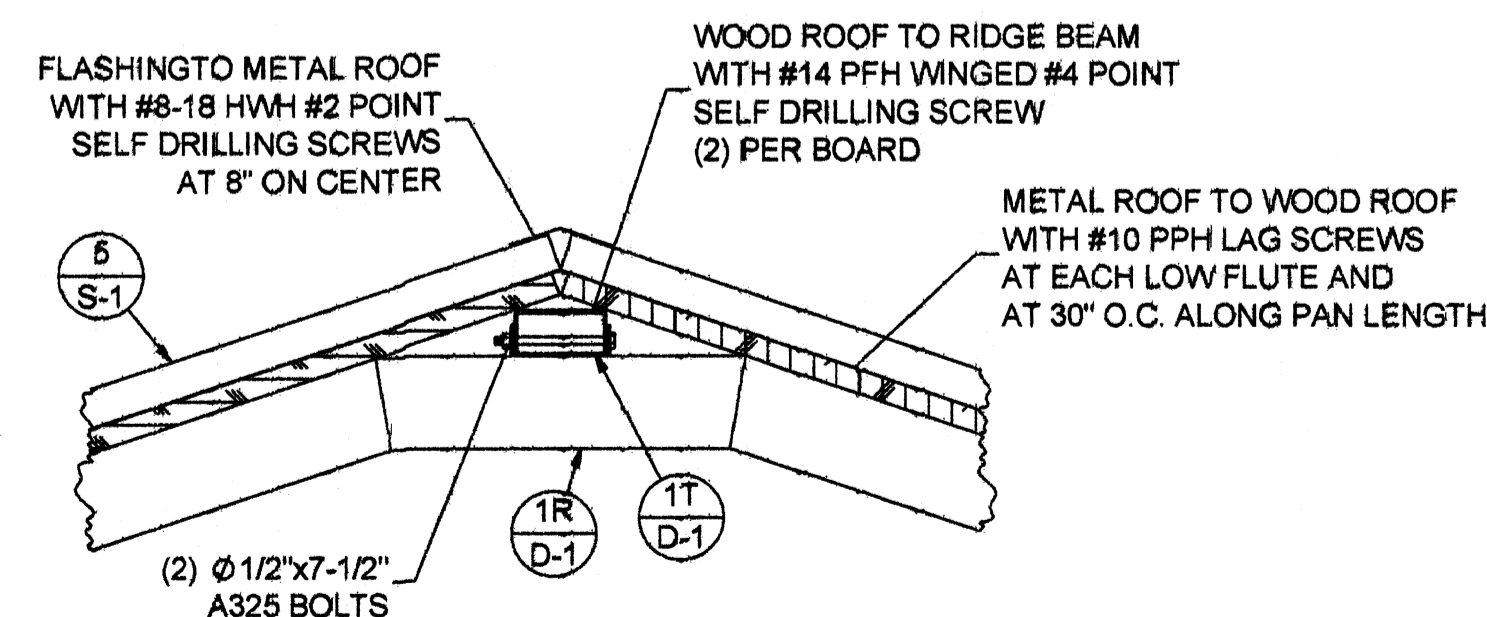
7 FASCIA PROFILE
S-1 Scale: 3" = 1'-0"



8 RIDGE CAP PROFILE
S-1 Scale: 3" = 1'-0"

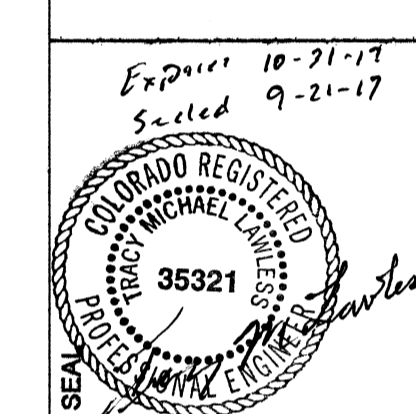


9 ELEVATION
S-1 Scale: 1-1/2" = 1'-0"



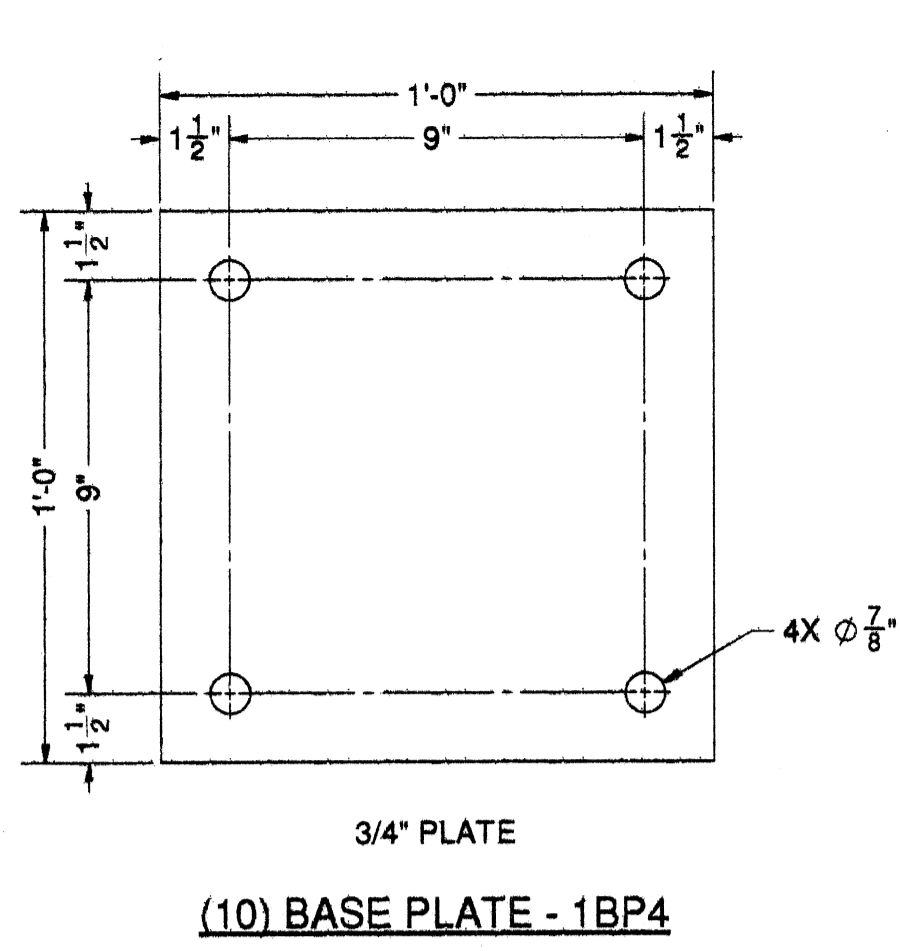
10 ELEVATION
S-1 Scale: 1-1/2" = 1'-0"

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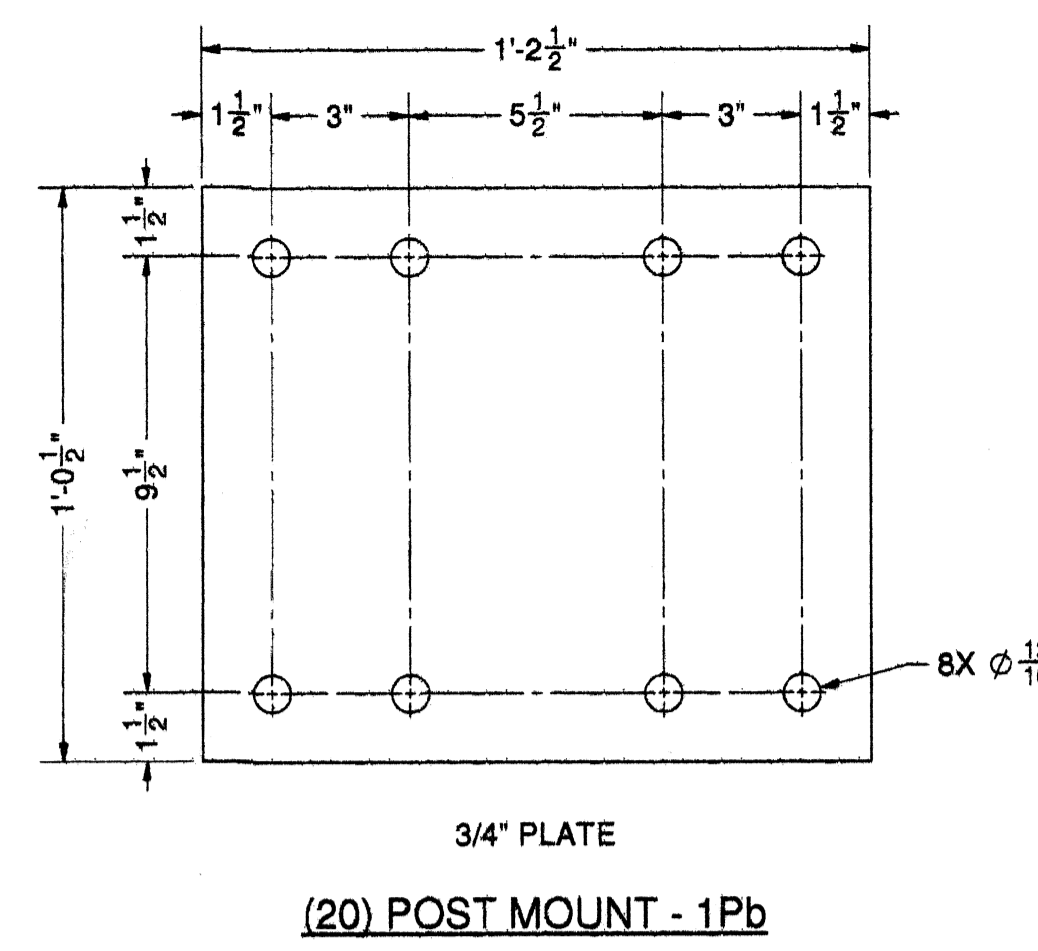


22'-0" x 46'-0" ILLINI SHELTER
AIKEN CANYON NATURE PRESERVE
COLORADO SPRINGS, CO 80926

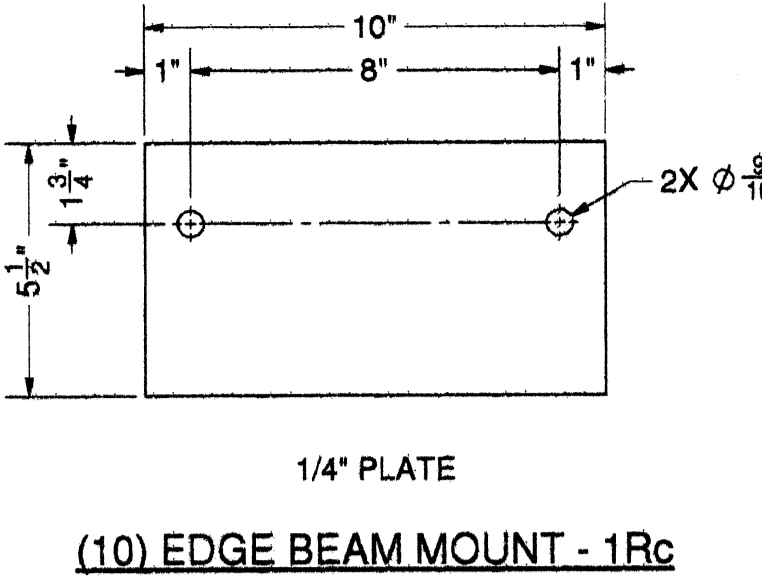
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|-------------|-------------|
| DRAWN BY | MT |
| CHECKED BY | AY |
| SCALE | SEE DETAILS |
| DATE | 9/7/2017 |
| REVISE DATE | 9/20/2017 |
| P.O. No. | 2017-151 |
| JOB No. | 185203 |
| DRAWING No. | 185203 |
| SHEET | S-1 |
| OF 3 SHEETS | |



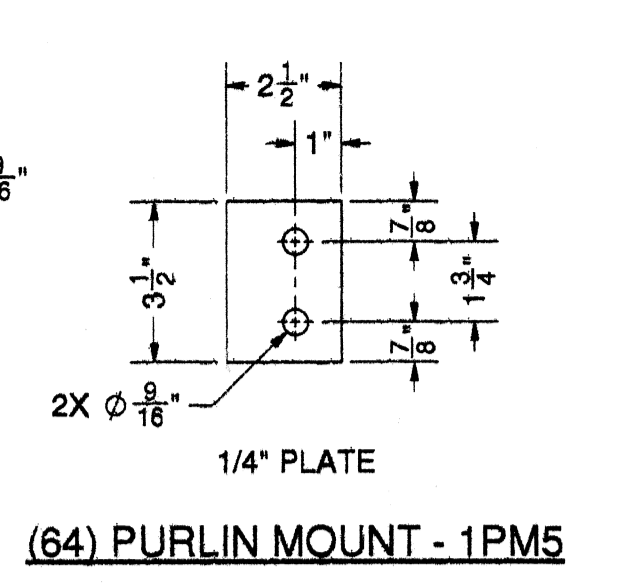
(10) BASE PLATE - 1BP4



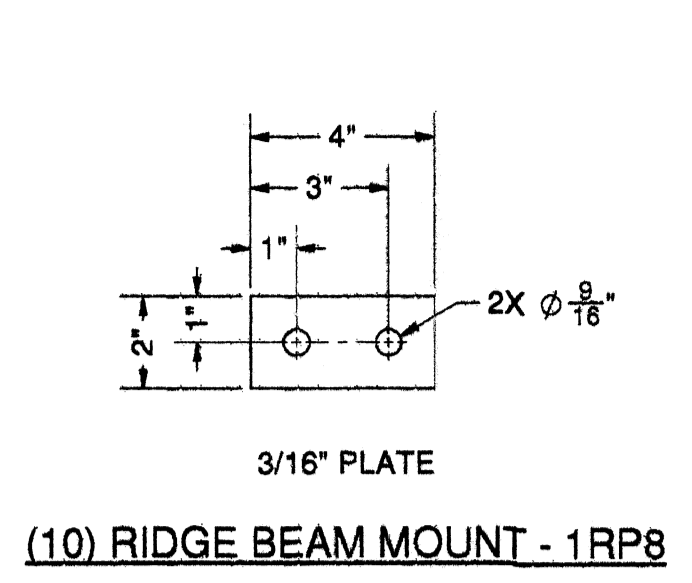
(20) POST MOUNT - 1Pb



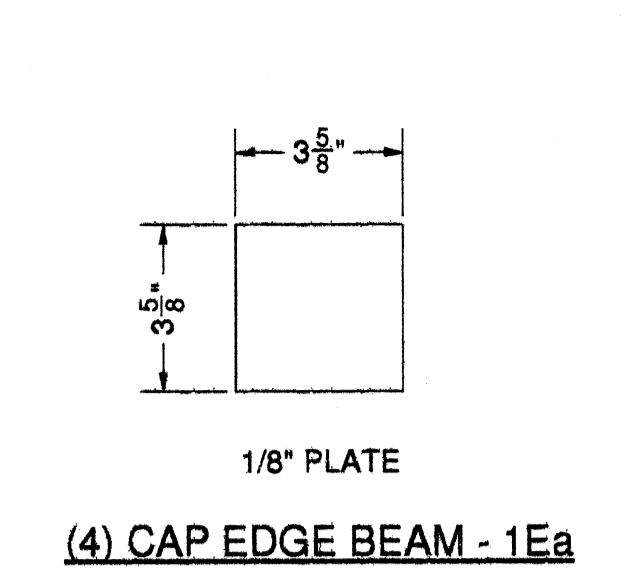
(10) EDGE BEAM MOUNT - 1Rc



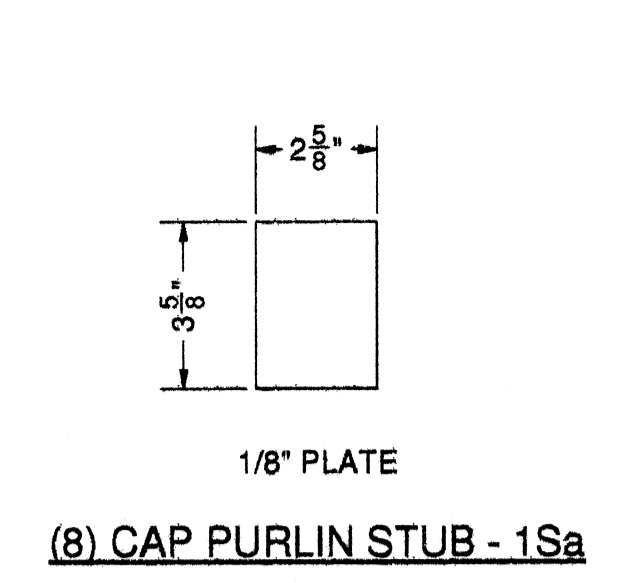
(64) PURLIN MOUNT - 1PM5



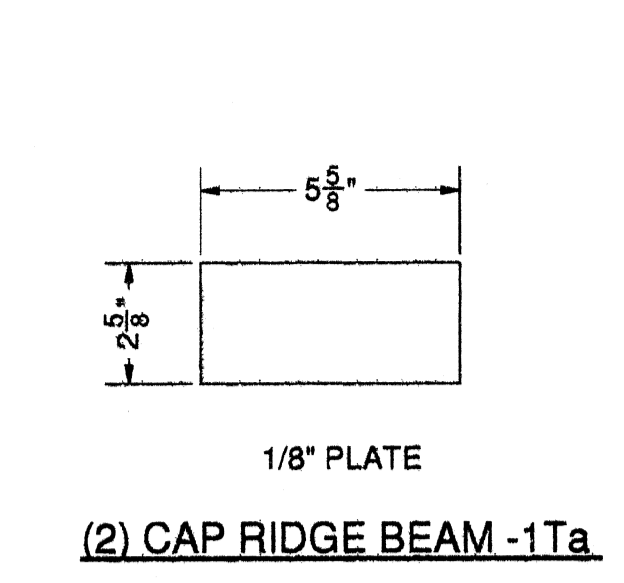
(10) RIDGE BEAM MOUNT - 1RP8



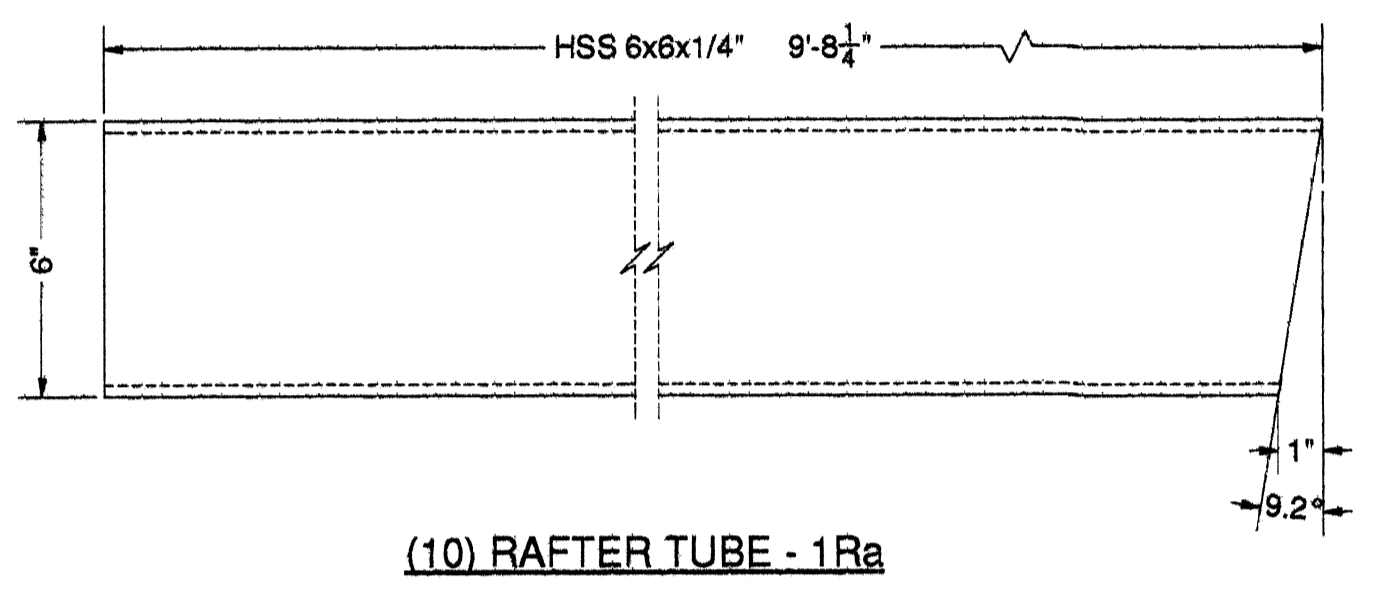
(4) CAP EDGE BEAM - 1Ea



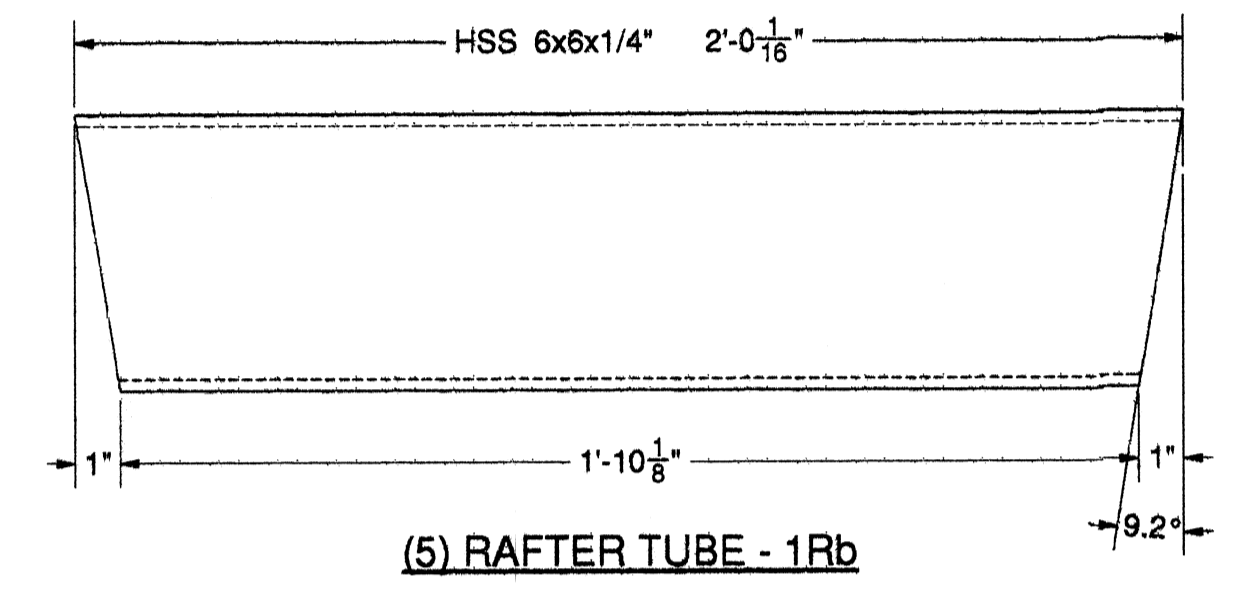
(8) CAP PURLIN STUB - 1Sa



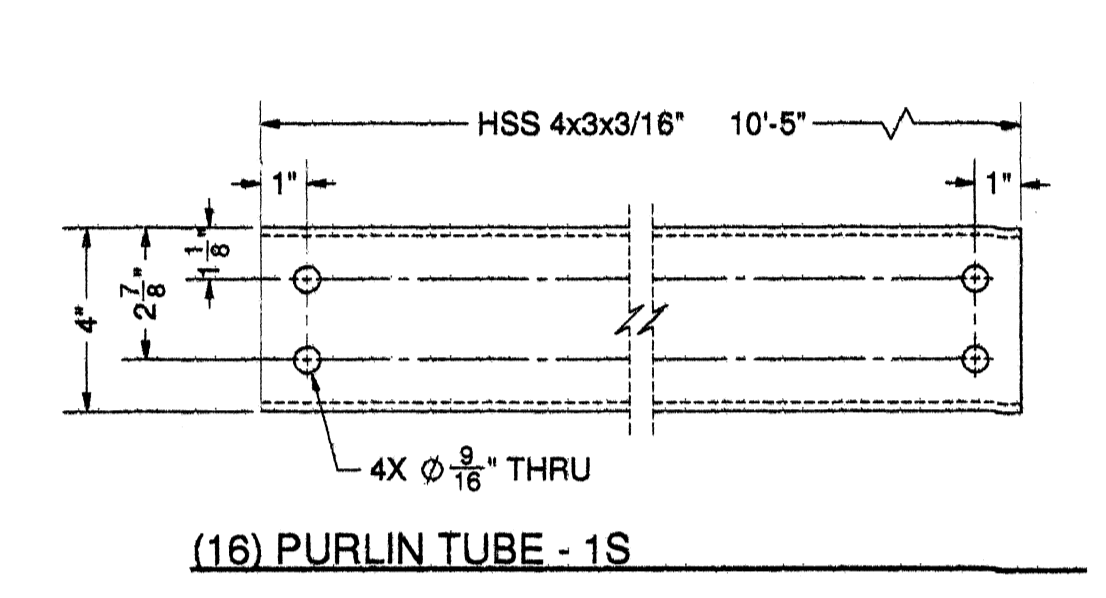
(2) CAP RIDGE BEAM - 1Ta



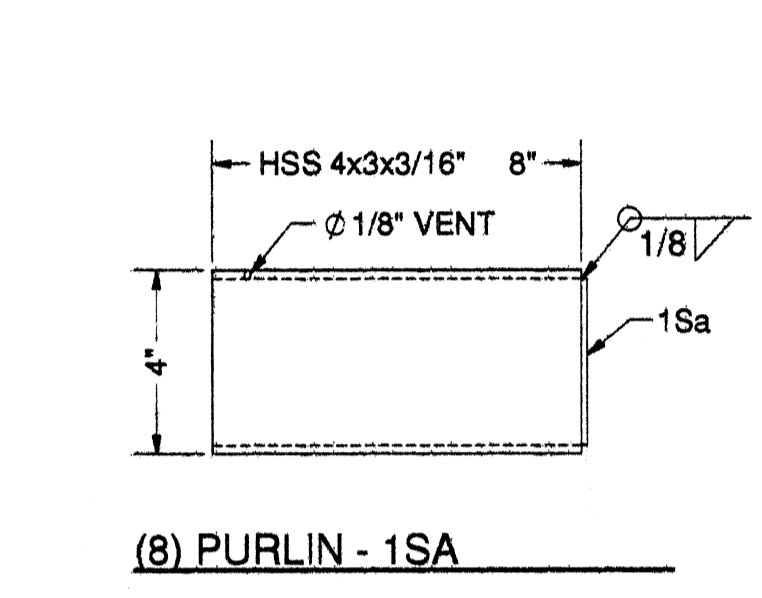
(10) RAFTER TUBE - 1Ra



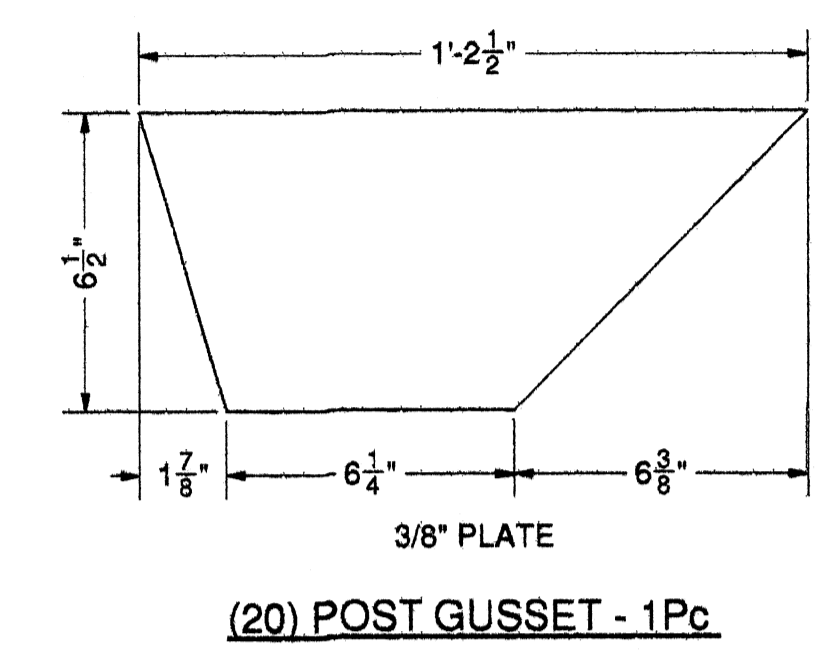
(5) RAFTER TUBE - 1Rb



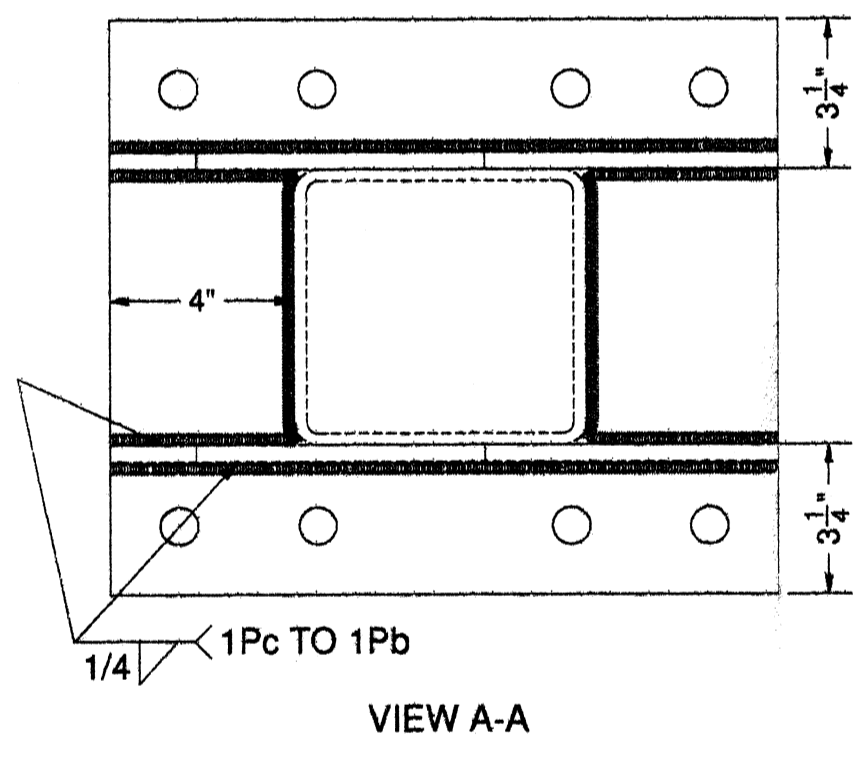
(16) PURLIN TUBE - 1S



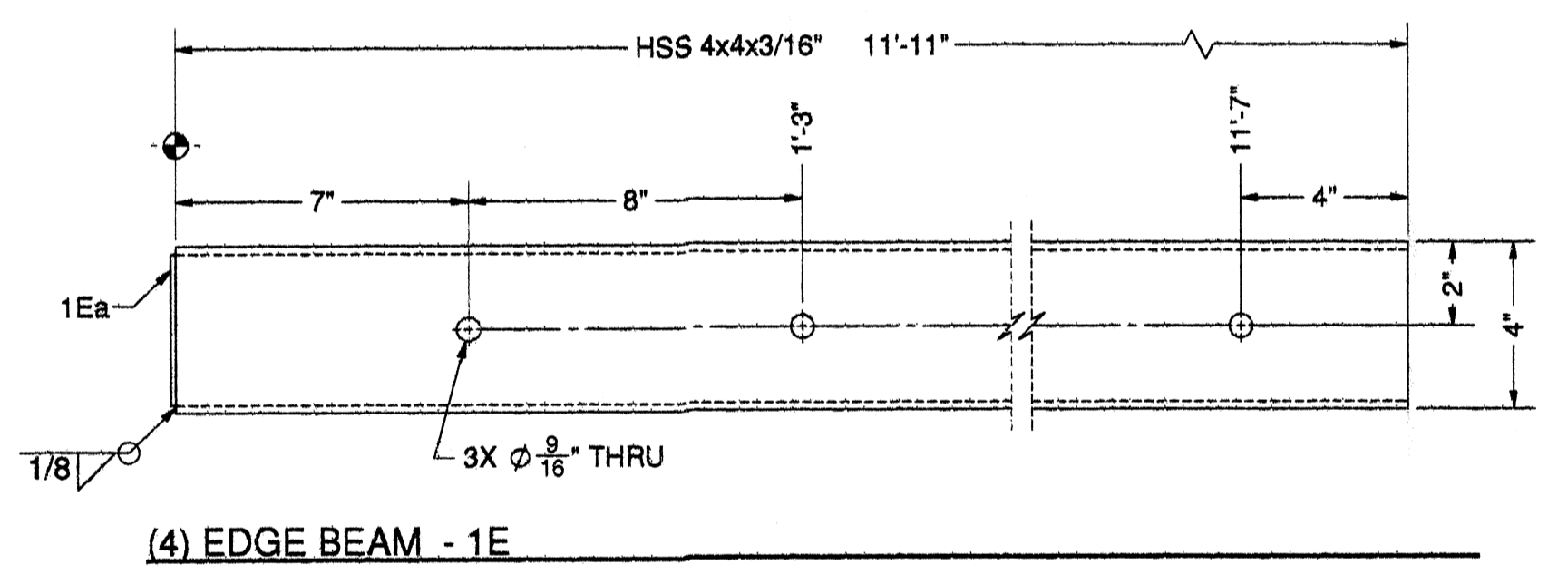
(8) PURLIN - 1SA



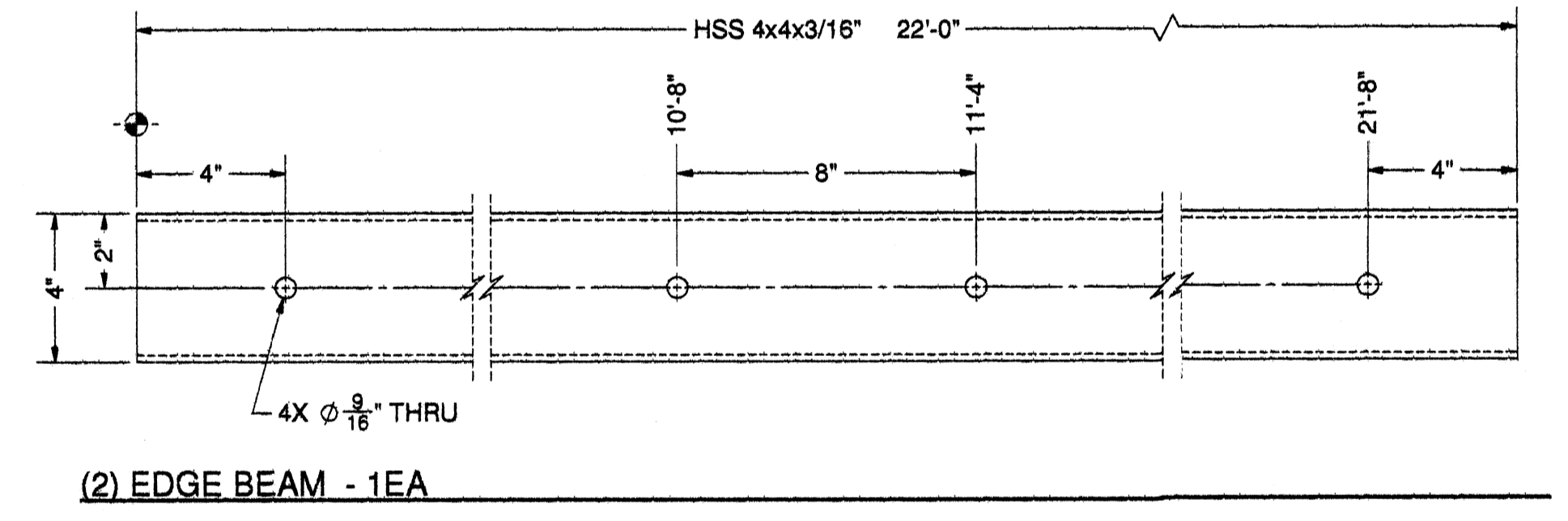
(20) POST GUSSET - 1Pc



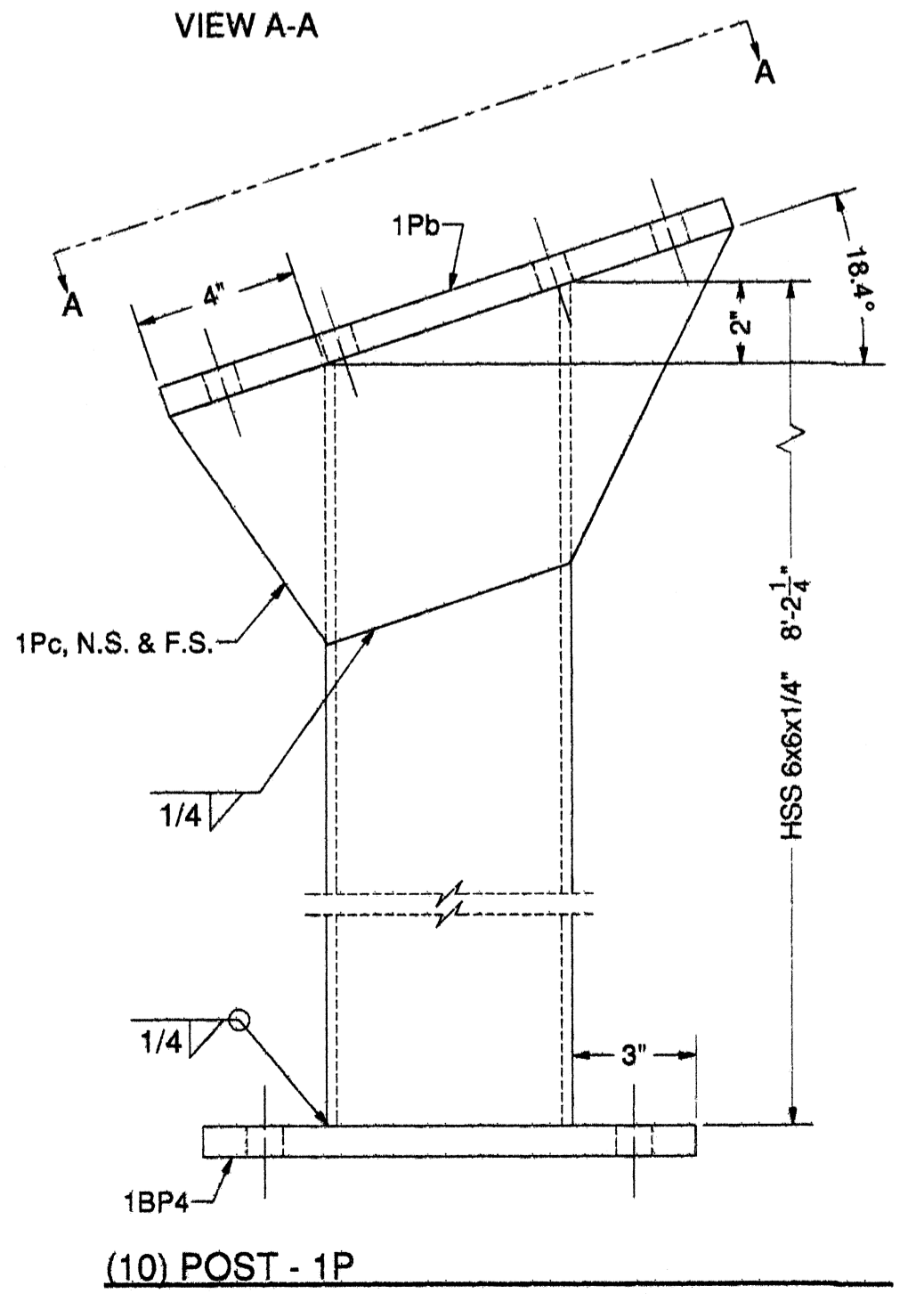
VIEW A-A



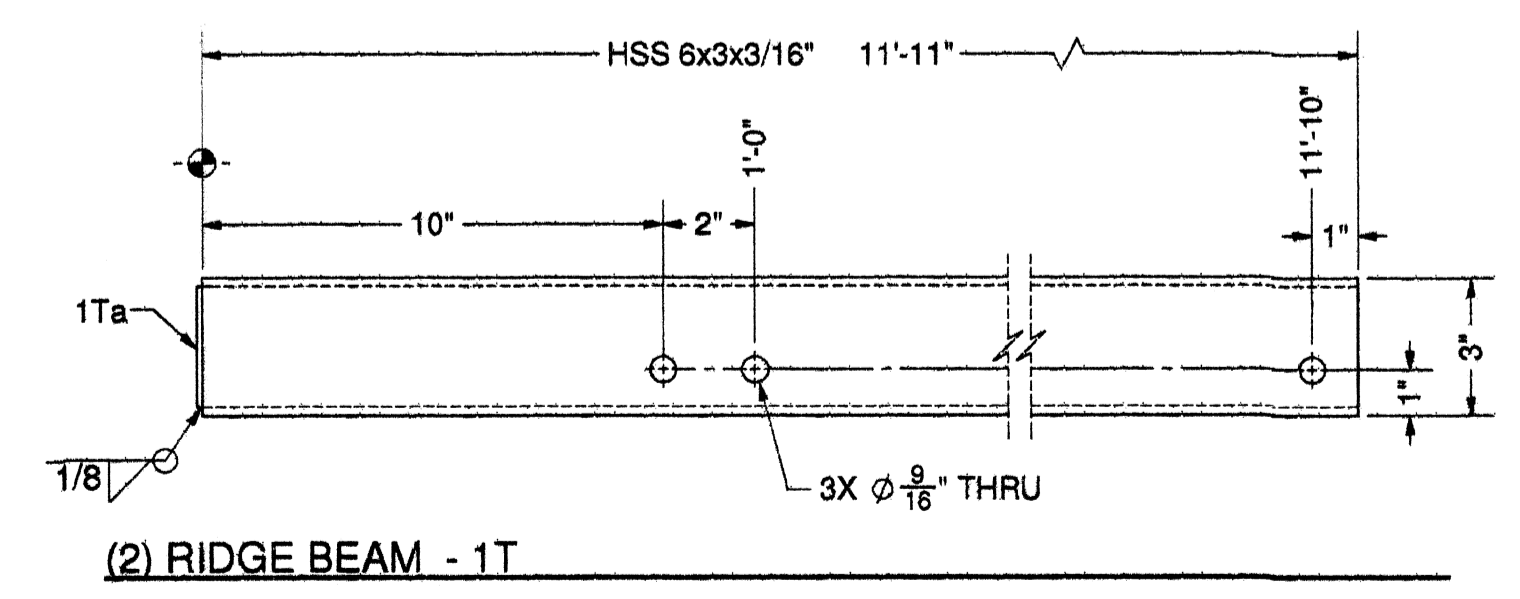
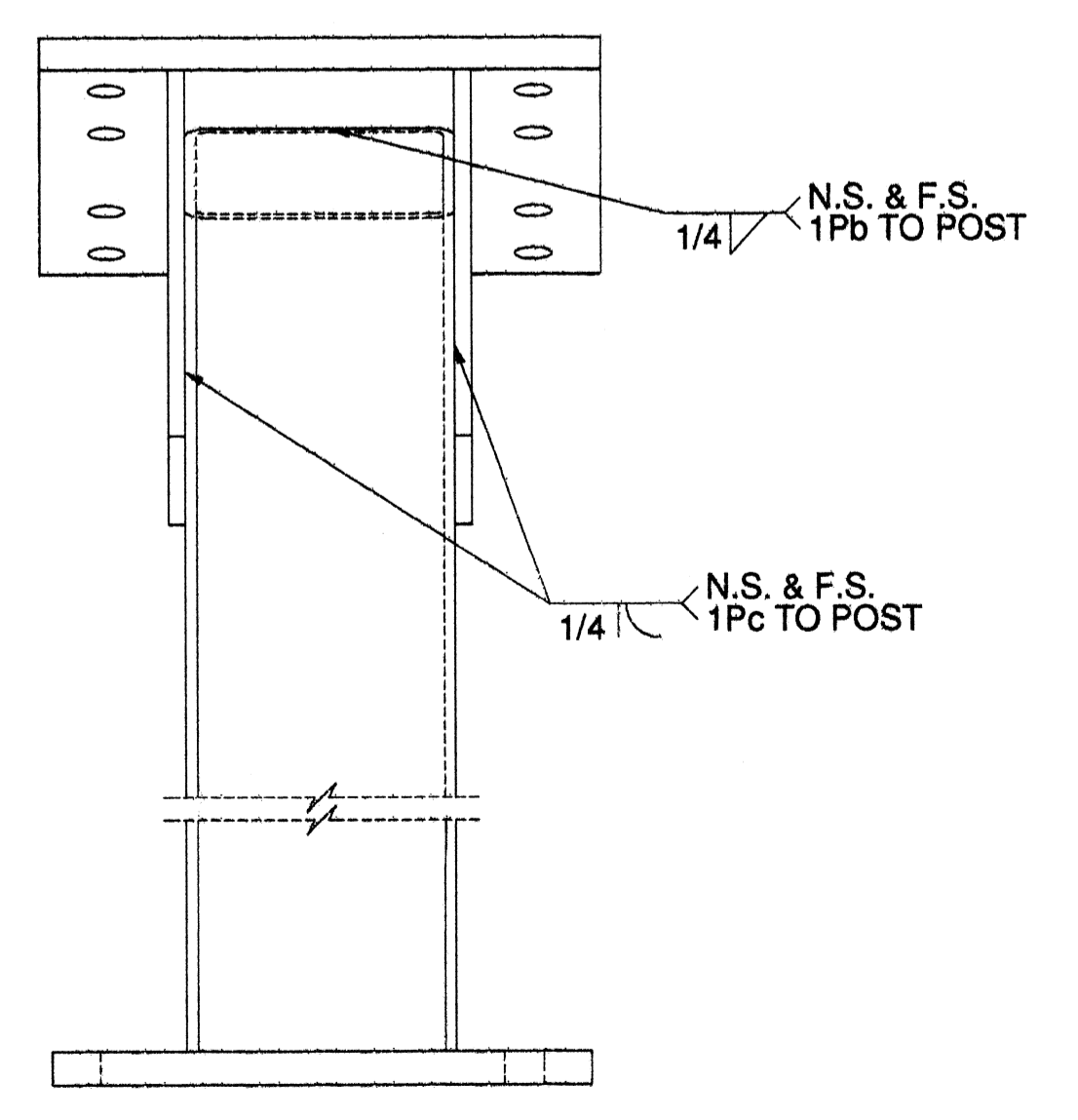
(4) EDGE BEAM - 1E



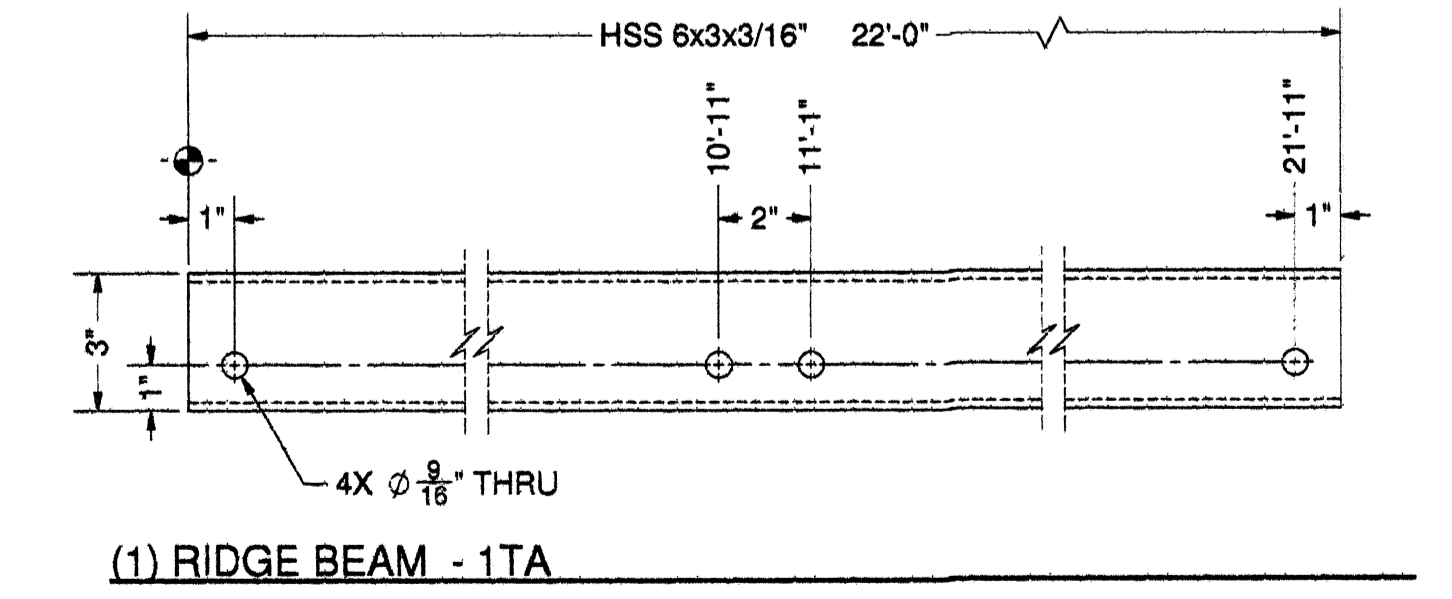
(2) EDGE BEAM - 1EA



(10) POST - 1P

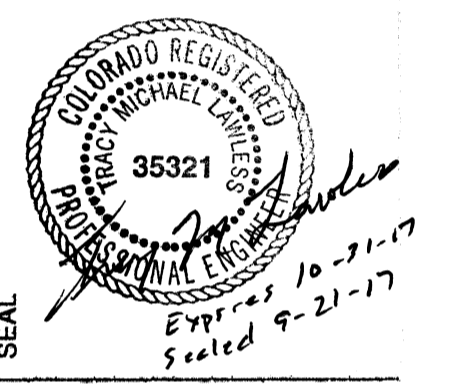


(2) RIDGE BEAM - 1T



(1) RIDGE BEAM - 1TA

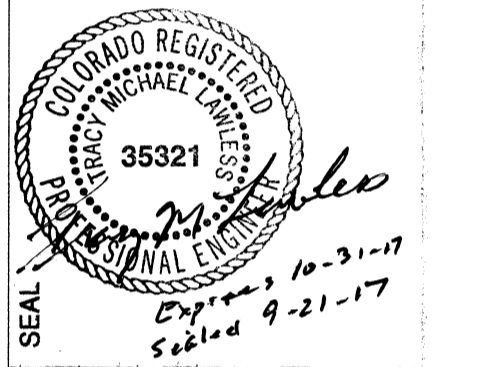
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**22'-0\"/>
 AIKEN CANYON NATURE PRESERVE
 COLORADO SPRINGS, CO 80926**

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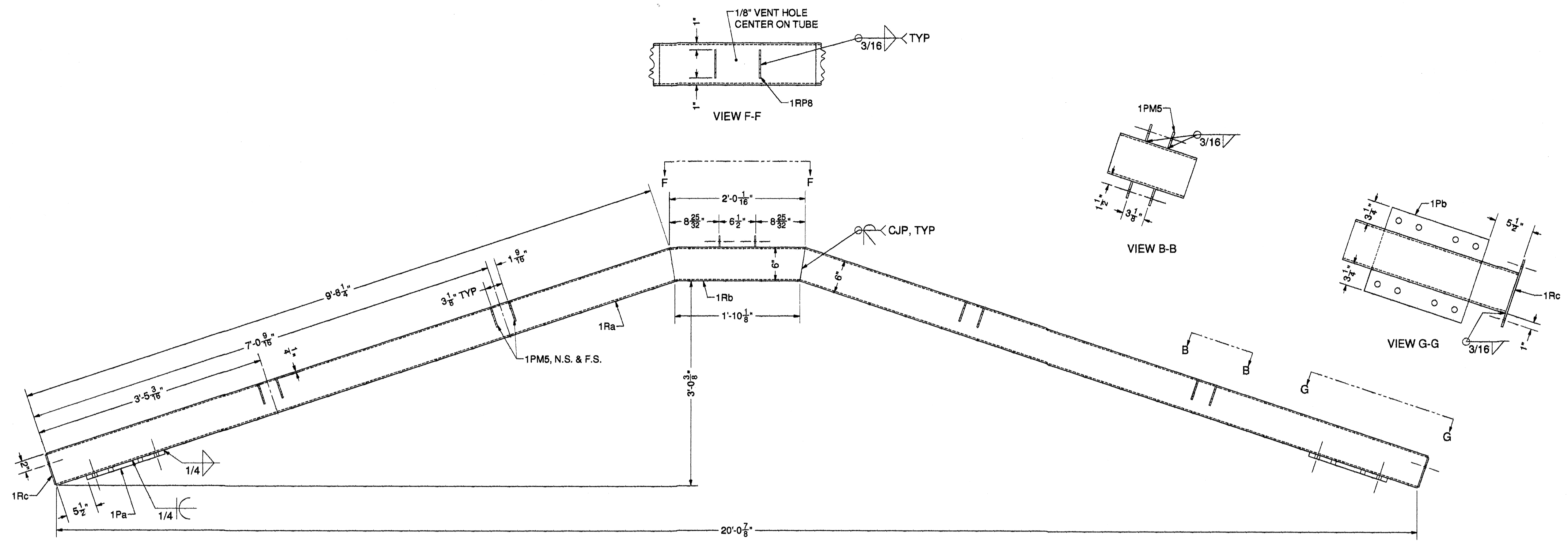


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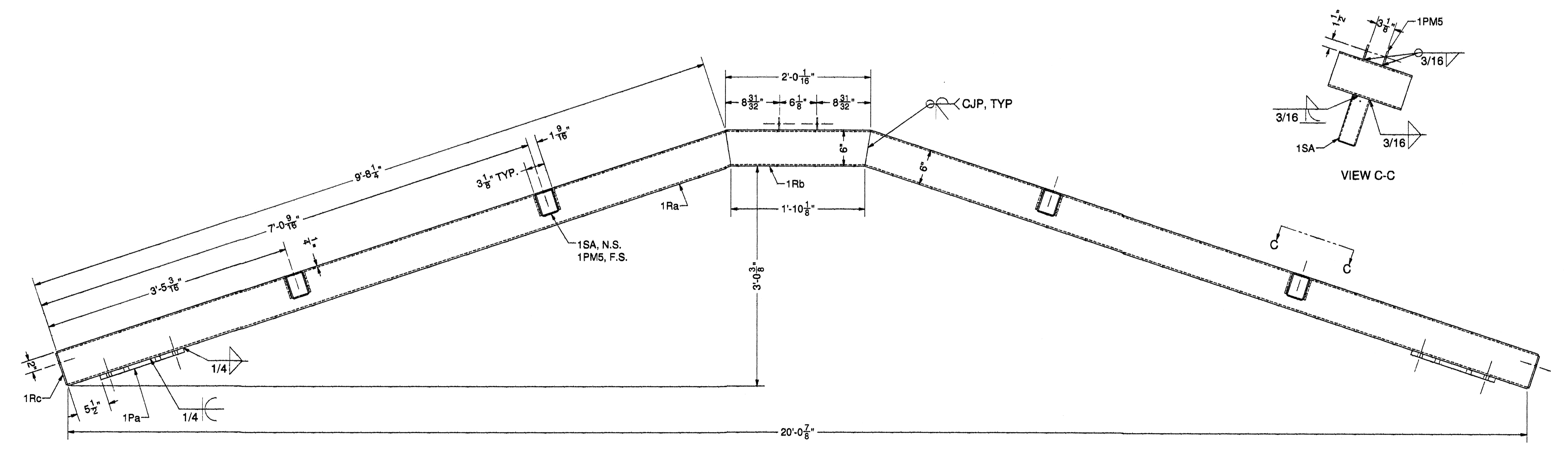
TITLE

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| SHEET | |

D-2
 OF 3 SHEETS



(3) RAFTER INSIDE - 2R



(2) RAFTER OUTSIDE - 2RA