

DESIGN VALUES		DESIGN VALUES <sup>1</sup>
<b>DEAD AND LIVE LOADS</b>		
ROOF LIVE LOAD		20 PSF
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME) <sup>2</sup>		LOAD SCENARIO= (1, 2) DL = (3.5 PSF, 2.0 PSF)
<b>ALLOWABLE SOIL PRESSURE <sup>3, 5</sup></b>		
SPREAD PAD		
VERTICAL BEARING: DL + Lr + SEISMIC (CONCRETE FOOTING)		1500 PSF
LATERAL COHESION: DL + Lr + SEISMIC (CONCRETE FOOTING)		130 PSF
DRILLED PIER		
SKIN FRICTION DOWN : DL + Lr + SEISMIC (CONCRETE FOOTING) PER 1810A.3.3.1.4		167 PSF
SKIN FRICTION (UPLIFT): DL + LR SEISMIC ( CONCRETE FOOTING) PER 1810A.3.1.5		83 PSF
LATERAL BEARING: DL + Lr + SEISMIC (CONCRETE FOOTING) PER 1810A.3.3.2		100 PSF/FT
<b>ROOF SNOW LOAD <sup>4</sup></b>		
GROUND SNOW LOAD, Pg		10 PSF
RISK CATEGORY		II
ROOF SNOW LOAD: [ ] FLAT, Pf OR [ ] LOW SLOPE, Pm OR [X] SLOPED, Ps		10 PSF
SNOW ROOF SLOPE FACTOR, Cs		1
SNOW EXPOSURE FACTOR, Ce		1.2
SNOW LOAD IMPORTANCE FACTOR, Is		1.0
THERMAL FACTOR, Ct		1.2
DRIFT SURCHARGE LOAD, Pd		0 PSF
DISTANCE FROM ADJACENT STRUCTURE, Pg = 0 PSF		4 IN
DISTANCE FROM ADJACENT STRUCTURE, Pg > 0 PSF		20 FT
ICE LOAD		0 PSF
<b>FLOOD DESIGN</b>		
FLOOD HAZARD AREA		NO
<b>WIND DESIGN <sup>4</sup></b>		
BASIC WIND SPEED (3 SECOND GUST), Vult		110 MPH
EXPOSURE CATEGORY		C
TOPOGRAPHIC FACTOR, Kzt (1 MINIMUM)		1
INTERNAL PRESSURE COEFFICIENT, GCpI (IF APPLICABLE)		0.0
CLEAR WIND FLOW		YES
OBSTRUCTED WIND FLOW		YES
<b>SEISMIC DESIGN <sup>4</sup></b>		
LATERAL FORCE-RESISTING SYSTEM		STEEL ORDINARY CANTILEVER COLUMN SYSTEM
ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY (SDC)		E
SEISMIC IMPORTANCE FACTOR, Ie		1.0
DESIGN BASE SHEAR, V		Cs x W
SEISMIC RESPONSE COEFFICIENT, Cs		LOAD SCENARIO = (1, 2) Cs = (0.90, 1.32)
RESPONSE MODIFICATION FACTOR, R		1.25
SITE CLASS <sup>7</sup>		E
REDUNDANCY FACTOR, p		1.3
MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Ss - USED TO DETERMINE Cs		LOAD SCENARIO = (1, 2) Ss = (1.406, 2.063)
SHORT-PERIOD SITE COEFFICIENT, Fa		1.2
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Sds (MAX) = (1, 1.25, 1.650)		LOAD SCENARIO = (1, 2) Sds (MAX) = (1, 1.25, 1.650)
MAPPED SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, S1		LOAD SCENARIO = (1, 2) S1 = (0.844, 1.07)
LONG-PERIOD SITE COEFFICIENT, Fv		2.0
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, Sd1		LOAD SCENARIO = (1, 2) Sd1 = (1.125, 1.427)
HORIZONTAL OR VERTICAL IRREGULARITIES TYPE(S)		NONE

- IF SITE-SPECIFIC DESIGN CRITERIA ARE OUTSIDE THE LIMITS OF THESE PC DRAWINGS, CONTACT POLIGON ENGINEERING TO SEE IF AN ENGINEERING LETTER, SUPPLEMENTAL DRAWINGS, AND/OR CALCULATIONS COULD BE SUBMITTED FOR A SITE-SPECIFIC SOLUTION. ANY SITE-SPECIFIC DEVIATION FROM THIS PC MAY NOT BE SUBMITTING TO DSA AS AN OVER-THE-COUNTER.
- STRUCTURE IS NOT DESIGNED TO SUPPORT SOLAR PANELS. STRUCTURE IS NOT DESIGNED TO SUPPORT SPRINKLER SYSTEMS IN LOAD SCENARIO 2 REGIONS.
- GEHAZARD REPORTS ARE REQUIRED IF THE AREA COVERED UNDER THE ROOF EXCEEDS 4000 SQ FT OR IS LOCATED WITHIN STATE OR LOCAL GEOLOGIC HAZARD ZONE. VERIFY SUBMITAL AND APPROVAL OF A GEOHAZARD REPORT BY CGS PRIOR TO DSA SITE APPLICATION.
- STRUCTURAL SEPARATION BETWEEN ADJACENT STRUCTURES: RAM 20= 5.0', RAM 30= 3.0'  
STRUCTURAL SEPARATION BETWEEN EXISTING STRUCTURES: RAM 20= 5.5', RAM 30= 4.0'
- WHEN PLACING MULTIPLE CANOPIES WITH PIER FOOTINGS ADJACENT TO ONE ANOTHER, THE DESIGN MAY REQUIRE AN ANALYSIS OF GROUP EFFECTS ON THE FOUNDATIONS. THE MINIMUM CLEARANCE BETWEEN CENTER OF PIERS IS EIGHT TIMES PIER DIAMETER WITHOUT AN ACCOMPANYING ENGINEERING LETTER
- SITE APPLICATION DESIGN PROFESSIONAL AND DSA REVIEWER SHALL VERIFY THE STRUCTURE TO BE LOCATED AT LEAST 20 FEET FROM ANY HIGHER ADJACENT STRUCTURE IF GROUND SNOW IS GREATER THAN ZERO.
- DESIGN COMPLIES WITH THE CONDITIONS OF EXCEPTION 1 OF ASCE 7-16 SECTION 11.4.8, ITEM 2.
- APPROVED FIRE APPARATUS ACCESS ROADS SHALL EXTEND TO WITHIN 150 FEET OF ALL PORTIONS OF THE PERIMETER OF THE STRUCTURE PER CFC 503.1.1.

### ARCHITECTURAL REQUIREMENTS:

DESCRIPTION	DESIGN VALUES
TYPE OF CONSTRUCTION	II B
NUMBER OF STORIES	1
FIRE SPRINKLER SYSTEM	NOT BY POLIGON

### RELATED BUILDING CODES AND STANDARDS:

- TITLE 24 CODES:**
- 2022 California Administrative Code (CAC) .....(Part 1, Title 24, CCR)
  - 2022 California Building Code (CBC), Volumes 1 and 2 (Part 2, Title 24, CCR)
  - 2022 California Electrical Code (CEC) .....(Part 3, Title 24, CCR)
  - 2022 California Mechanical Code (CMC) .....(Part 4, Title 24, CCR)
  - 2022 California Plumbing Code (CPC) .....(Part 5, Title 24, CCR)
  - 2022 California Energy Code (CEC) .....(Part 6, Title 24, CCR)
  - 2022 California Fire Code (CFC) .....(Part 9, Title 24, CCR)
  - 2022 California Existing Building Code (CEBC) .....(Part 10, Title 24, CCR)
  - 2022 California Green Building Standards Code .....(Part 11, Title 24, CCR)
  - 2022 California Referenced Standards Code .....(Part 12, Title 24, CCR)
  - Title 19 CCR, Public Safety, State Marshal Regulations

- REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:**
- NFPA 13 - 2016
  - NFPA 72 - 2016
  - 2022 CBC, CHAPTER 35
  - 2022 CFC, CHAPTER 80

### SCOPE OF WORK NARRATIVE:

THESE DRAWINGS ILLUSTRATE THE FABRICATION AND INSTALLATION REQUIREMENTS FOR A FREE-STANDING PREFABRICATED STEEL SHADE STRUCTURE. THE ENTIRE STRUCTURAL SYSTEM IS COMPRISED OF TUBULAR STEEL MEMBERS SUPPORTED ON CONCRETE FOUNDATIONS. THE FLEXIBILITY HEREIN ALLOWS THIS STRUCTURE TO COMPLY WITH A WIDE VARIETY OF PROJECT SITES AND LOADING REQUIREMENTS.

## INSTRUCTIONS FOR ARCHITECTS PLANNING TO SUBMIT THESE PRE-CHECKED DRAWINGS TO DSA:

STEP 1 PROJECT INFORMATION	
PROJECT NAME	
SCHOOL DISTRICT	
USE AND OCCUPANCY CLASSIFICATION	(PROPOSED OCCUPANCY: A1, A2, A3, A4, A5, B, E)
OCCUPANT LOAD FACTOR	(15 SQFT/PERSON MAX, 5 SQFT/PERSON MIN FOR ANY A OCCUPANCY FOR B OCCUPANCY, AND 5000 SQFT FOR B OR E OCCUPANCY)
TOTAL ROOF AREA	(MAXIMUM 4500 SQFT FOR ANY A OCCUPANCY, 10,000 SQFT FOR B OCCUPANCY, AND 5000 SQFT FOR E OCCUPANCY)
NUMBER OF OCCUPANTS	(MAXIMUM 300 FOR ANY A OCCUPANCY, 500 FOR B OCCUPANCY, AND 250 FOR E OCCUPANCY)

STEP 2 DESIGN OPTIONS		
ROOF DECK	<input type="checkbox"/> MULTI-RIB (MR)	DEFAULT, WEIGHT 1.2 PSF
	<input type="checkbox"/> STANDING SEAM (SS)	WEIGHT 1.8 PSF
GUTTERS	<input type="checkbox"/> NO	DEFAULT
	<input type="checkbox"/> YES	SEE RAM7.0 FOR DETAILS
ELECTRICAL ACCESS	<input type="checkbox"/> NO	DEFAULT
	<input type="checkbox"/> YES	SEE RAM7.1 FOR DETAILS
CLEAR HEIGHT	<input type="checkbox"/> 8'	DEFAULT
	<input type="checkbox"/> _____ OTHER	10' MAX

STEP 3 SEISMIC ACCELERATION		
Ss		(g)
S1		(g)

STEP 4 SEISMIC REGIONS		
0.000 < Ss <= 1.406	S1 <= 0.844	[ ] WHITE 3.5 PSF MAX DEA LOAD
1.406 < Ss <= 2.063	S1 <= 1.070	[ ] GREEN 2.0 PSF MAX DEAD LOAD

STEP 5 TOTAL ROOF DEAD LOAD		
ROOF DECK	_____ PSF	SEE STEP 2 'ROOF DECK FOR WEIGHTS
COLLATERAL	_____ PSF	LIGHTING , FIRE SUPPRESSION, ETC.
TOTAL	_____ PSF	ADD 'ROOF DECK' AND 'COLLATERAL'

STEP 6 LOAD SCENARIO		
WHITE	TOTAL ROOF DEAD LAOD <= 3.5 PSF	[ ] LOAD SCENARIO 1
GREEN	TOTAL ROOF DEAD LOAD < 2.0 PSF	[ ] LOAD SCENARIO 2

STEP 7 PC STRUCTURE		
ROOF WIDTH <= 20		[ ] RAM 20
20 < ROOF WIDTH <= 30		[ ] RAM 30

STEP 8 STRUCTURE SIZE			
	RAM 20		RAM 30
ROOF WIDTH	[ ] 20'	DEFAULT	[ ] 30'
	[ ] _____ OTHER 9' MIN; 20'		[ ] _____ OTHER 20'-6" MIN; 30' MAX
ROOF LENGTH	[ ] 44'	2 BAYS	[ ] 44'
	[ ] 64'	3 BAYS	[ ] 64'
	[ ] 84'	4 BAYS	[ ] 84'
	[ ] _____ OTHER		[ ] _____ OTHER

STEP 9 FOUNDATION TYPE			
FOUNDATION TYPE	RAM 20		RAM 30
	[ ] SPREAD PAD	[ ] DRILLED PIER	[ ] SPREAD PAD [ ] DRILLED PIER

STEP 10 FOUNDATION SUMMARY			
	RAM 20		RAM 30
[ ] LOAD SCENARIO 1 SPREAD PAD	[ ] LOAD SCENARIO 1 DRILLED PIER	[ ] LOAD SCENARIO 1 SPREAD PAD	[ ] LOAD SCENARIO 1 DRILLED PIER
[ ] LOAD SCENARIO 2 SPREAD PAD	[ ] LOAD SCENARIO 2 DRILLED PIER	[ ] LOAD SCENARIO 2 SPREAD PAD	[ ] LOAD SCENARIO 2 DRILLED PIER

STEP 11 SHEET INDEX								
BASE FRAME	RAM 20 SHEET INDEX				RAM 30 SHEET INDEX			
	MR	SS	MR	SS	MR	SS	MR	SS
FOUNDATION TYPE	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER
SELECT ONE	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
ORDER FORM	RAM1.0	RAM1.0	RAM1.0	RAM1.0	RAM1.0	RAM1.0	RAM1.0	RAM1.0
NOTES AND SPECIAL INSPECTIONS	RAM1.1	RAM1.1	RAM1.1	RAM1.1	RAM1.1	RAM1.1	RAM1.1	RAM1.1
FOUNDATION PLAN	RAM2.0	RAM2.1	RAM2.0	RAM2.1	RAM2.2	RAM2.3	RAM2.2	RAM2.3
FRAMING PLAN	RAM3.0	RAM3.0	RAM3.0	RAM3.0	RAM3.1	RAM3.1	RAM3.1	RAM3.1
FRAME CONNECTION DETAILS	RAM4.0	RAM4.0	RAM4.0	RAM4.0	RAM4.2	RAM4.2	RAM4.2	RAM4.2
SECTION DETAILS	RAM4.1	RAM4.1	RAM4.1	RAM4.1	RAM4.3	RAM4.3	RAM4.3	RAM4.3
ARCHITECTURAL VIEWS	RAM5.0	RAM5.0	RAM5.0	RAM5.0	RAM5.1	RAM5.1	RAM5.1	RAM5.1
ROOF CONNECTION DETAILS	RAM6.0	RAM6.0	RAM6.1	RAM6.1	RAM6.0	RAM6.1	RAM6.1	RAM6.1
MISC DESIGN OPTIONS	RAM7.0	RAM7.0	RAM7.0	RAM7.0	RAM7.0	RAM7.0	RAM7.0	RAM7.0
ELETRICAL CUTOUTS	RAM7.1	RAM7.1	RAM7.1	RAM7.1	RAM7.1	RAM7.1	RAM7.1	RAM7.1

STEP 12 MULTIPLE STRUCTURES		
	ROOF WIDTH X LENGTH	QTY
MULTIPLE STRUCTURES		

- STEP 1: GENERAL PROJECT INFORMATION**
- IDENTIFY PROJECT NAME AND SCHOOL DISTRICT
  - IDENTIFY USE AND OCCUPANCY CLASSIFICATION
  - THE USE AND OCCUPANCY DETERMINE THE MAXIMUM SQUARE FOOTAGE OF THE STRUCTURE
  - THE MAXIMUM SQUARE FOOTAGE IS ALSO LIMITED BY THE NUMBER OF OCCUPANTS
  - IDENTIFY THE OCCUPANT LOAD PER TABLE 1004.5 IN THE CBC
  - IDENTIFY TOTAL ROOF AREA WHICH SHALL NOT EXCEED ALLOWABLE AREA PER TABLE 506.2 IN THE CBC.
  - IDENTIFY EXPECTED NUMBER OF OCCUPANTS BASED ON THE ESTIMATED OCCUPANT LOAD
  - TOTAL ROOF AREA DIVIDED BY OCCUPANT LOAD CAN DETERMINE NUMBER OF OCCUPANTS

- STEP 2: DESIGN OPTIONS**
- SELECT ROOF DECK FOR YOUR PROJECT
    - "MR" REPRESENTS MCELROY METAL "MULTI-RIB" ROOF DECK
    - "SS" REPRESENTS MCELROY METAL "MEDALLION-LOK" 16" STANDING SEAM ROOF DECK
  - SELECT WHETHER GUTTERS AND DOWNSPOUTS FROM POLIGON IS NEEDED FOR YOUR PROJECT
  - IF "YES", THEN INCLUDE SHEET RAM7.0 IN THE DRAWING SET
  - SELECT WHETHER ELECTRICAL CUTOUTS ARE NEEDED FOR YOUR PROJECT
  - SHEET RAM7.0 SHOWS ELECTRICAL CUTOUT SIZE AND LOCATION CUTOUTS IN COLUMNS
  - SHEET RAM7.1 HAS INSTRUCTIONS AND SHEET TO IDENTIFY WHICH COLUMNS
  - SHEET RAM7.1 MUST BE FILLED OUT IN THE SUBMITAL SET APPROVED BY DSA
  - IF NOTHING IS FILLED IN ON RAM7.1, POLIGON WILL ASSUME CUTOUS ARE ONLY IN COLUMN A1 (SEE 'FRAMING PLAN' FOR REFERENCE)
  - SELECT CLEAR HEIGHT (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)
    - MIN: 7'-0"; MAX: 10'-0"
  - IF NOTHING IS SELECTED, POLIGON WILL ASSUME THE DEFAULT FOR EACH DESIGN OPTION

- STEP 3: IDENTIFY THE Ss & S1 ACCELERATION (g) FOR YOUR PROJECT AND GEOTECHNICAL INFORMATION**
- Ss & S1 VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
  - Ss & S1 VALUE DEPENDS ON PROJECT'S GEOGRAPHICAL LOCATION
  - FIND Ss & S1 VALUES FOR YOUR PROJECT IN THE SITE SPECIFIC GEOTECHNICAL REPORT
  - FIND Ss & S1 VALUES FOR YOUR PROJECT USING (https://asce7.hazardtool.online/)
  - THIS PC IS NOT APPROVED FOR Ss VALUES GREATER THAN 2.063 (CONTACT POLIGON FOR ADDITIONAL OPTIONS)

- STEP 4: IDENTIFY THE SEISMIC REGION FOR YOUR PROJECT**
- THE REGIONS ARE DEPENDANT ON THE Ss & S1 VALUE DETERMINED IN STEP 3
  - THE SEISMIC REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED (SEE TABLE TO THE LEFT)

- STEP 5: IDENTIFY THE ROOF DEAD LOAD FOR YOUR PROJECT**
- THE ROOF DECK DEAD LOAD WILL ALWAYS BE INCLUDED
  - THE COLLATERAL LOAD REPRESENTS ADDITIONAL LOAD THAT CAN BE SUPPORTED BY THE FRAME
  - TOTAL ROOF DEAD LOAD MUST BE LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4
  - CUT SHEETS OF ANY BOARDS, BOXES AND EQUIPMENT TO BE MOUNTED ON THE STRUCTURE, INCLUDING AND DIMENSIONS ARE REQUIRED

- STEP 6: IDENTIFY THE LOAD SCENARIO**
- REFERENCE THE STEP 4 COLOR AND SELECT THE APPLICABLE LOAD SCENARIO
  - LOAD SCENARIOS HAVE NO IMPACT ON FRAME DESIGN OR COST, BUT DO AFFECT FOUNDATION SIZE

- STEP 7: IDENTIFY PC STRUCTURE**
- ROOF WIDTHS UP TO 20' WIDE USE THE "RAM 20"
  - ROOF WIDTHS UP TO 30' WIDE USE THE "RAM 30"
  - THE 20' AND 30' WIDTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST ECONOMICAL
  - MAXIMUM WIDTH IS 30'; (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)

- STEP 8: IDENTIFY SITE SPECIFIC ROOF WIDTH AND LENGTH**
- DO NOT EXCEED THE TOTAL ROOF AREA FROM STEP 1 (ROOF WIDTH MULTIPLIED BY ROOF LENGTH)

- STEP 9: FOUNDATION TYPE**
- SELECT A FOUNDATION BASED THE DESIRED FOUNDATION TYPE
  - SELECT EITHER SPREAD PAD OR DRILLED PIER FOUNDATION PRIOR TO APPROVAL
  - FOUNDATION TYPE IMPACTS CONSTRUCTION TIMING, SEQUENCE, COST, ETC.)
  - FOUNDATION TYPE IMPACTS ANCHOR BOLT LENGTH (NOT PROVIDED BY POLIGON)
  - REVIEW OF SITE-SPECIFIC SOILS REPORT TO EVALUATE APPLICABILITY OF FOUNDATION OPTIONS AVAILABLE

- STEP 10: FOUNDATION SUMMARY**
- USE THE SELECTIONS FROM STEP 6 AND STEP 9 TO SELECT THE APPROPRIATE FOUNDATION

- STEP 11: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT**
- IDENTIFY THE APPLICABLE SHEET INDEX
  - INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITAL
  - EXCLUDE "MISC DESIGN OPTIONS" SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS
  - EXCLUDE "ELECTRICAL CUTOUTS" SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS

- STEP 12: MULTIPLE STRUCTURES WITH THE SAME PC#**
- FILL IN ROOF LENGTH AND WIDTH OF STRUCTURES AS WELL AS QUANTITY
  - UNO ON THE POLIGON DRAWINGS. POLIGON WILL ASSUME ALL DESIGN CRITERIA FOR EACH STRUCTURE IS THE SAME
  - CONTACT POLIGON FOR FURTHER INFORMATION

SHEET INDEX					
1	RAM1.0	ORDER FORM	11	RAM4.2	FRAME CONNECTION DETAILS - RAM 30
2	RAM1.1	NOTES AND SPECIAL INSPECTIONS	12	RAM4.3	SECTION DETAILS - RAM 30
3	RAM2.0	FOUNDATION PLAN SPREAD PAD - RAM 20	13	RAM5.0	ARCHITECTURAL VIEWS - RAM 20
4	RAM2.1	FOUNDATION PLAN DRILLED PIER - RAM 20	14	RAM5.1	ARCHITECTURAL VIEWS - RAM 30
5	RAM2.2	FOUNDATION PLAN SPREAD PAD - RAM 30	15	RAM6.0	ROOF CONNECTION DETAILS
6	RAM2.3	FOUNDATION PLAN DRILLED PIER - RAM 30	16	RAM6.1	ROOF CONNECTION DETAILS
7	RAM3.0	FRAMING PLAN - RAM 20	17	RAM7.0	MISC DESIGN OPTIONS
8	RAM3.1	FRAMING PLAN - RAM 30	18	RAM7.1	ELECTRICAL CUTOUTS
9	RAM4.0	FRAME CONNECTION DETAILS - RAM 20			
10	RAM4.1	SECTION DETAILS - RAM 20			
TOTAL SHEETS = 18					

ABBREVIATIONS:			
ACI	AMERICAN CONCRETE INSTITUTE	MR	MULTI-RIB ROOF PANEL (MCELROY)
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	NTS	NOT TO SCALE
ASM	ASSEMBLY (INTERNAL REFERENCE)	NO	NUMBER
ASTM	AMERICAN SOCIETY FOR TESTING AND MATLS	OC	ON CENTER
AWS	AMERICAN WELDING SOCIETY	OSHA	OCCUPATIONAL HEALTH AND SAFETY ADM.
CBC	CALIFORNIA BUILDING CODE	PCF	POUNDS PER CUBIC FOOT
CJP	COMPLETE JOINT PENETRATION	PD	POLIGON DRAWING
CLR	CLEAR	PJ	PRETENSIONED JOINT
DEG	DEGREE	PLCS	PLACES
DIA	DIAMETER	PLT	PLATE
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DSA	DIVISION OF THE STATE ARCHITECT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	QTY	QUANTITY
FT	FEET	REF	REFERENCE
GA	GAGE	SQ	SQUARE
IN	INCHES	SS	STANDING SEAM ROOF PANEL (MCELROY)
KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	WJ	WITH
MPH	MILES PER HOUR		

SPECIFICATIONS		STATE APPROVALS-SITE
<b>PART 1 - GENERAL</b>		
<b>1.1 STRUCTURE DESCRIPTION</b>		
A. STRUCTURE(S) BASED ON THE FOLLOWING PC DESIGN(S):		
1. HIP ROOF (RAM)		
<b>1.2 DESIGN REQUIREMENTS</b>		
A. MEET THE DESIGN INTENT SHOWN ON THE PC DRAWINGS APPROVED FOR THIS PROJECT.		
1. DESIGN CRITERIA		
2. MEMBERS SIZES		
3. HIDDEN BOLTED CONNECTIONS BETWEEN STRUCTURAL MEMBERS		
4. COLUMN ANCHORAGE SHALL INCLUDE FOUR (4) BOLTS IN COMPLIANCE WITH OSHA 1926.755(J)(1).		
5. NO FIELD WELDING PERMITTED		
6. NO FIELD PAINTING PERMITTED		
7. ROOF DIMENSIONS AND SLOPES		
8. EXPOSED STEEL ROOF FASTENERS (IF APPLICABLE) POWDER COATED BY MANUFACTURER		
9. ROOF DECK SPANS FROM PEAK TO EAVE AND PERMIT PROPER DRAINAGE WITHOUT DEBRIS BUILD-UP.		
<b>1.3 SUBMITTALS</b>		
A. DRAWINGS AND CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE APPROPRIATE STATE.		
B. ONLY MANUFACTURERS THAT SUBMIT DRAWINGS AND CALCULATIONS PRIOR TO BID SHALL BE CONSIDERED.		
C. MANUFACTURER MUST BE ABLE TO SUBMIT APPROPRIATE LABORATORY TESTS FOR THE FOLLOWING:		
1. FRAME FINISH REQUIREMENTS LISTED IN PART 1 OF THIS SPECIFICATION.		
2. CERTIFIED MILL TEST REPORTS FOR STRUCTURAL STEEL (DESCRIBING THE CHEMICAL AND PHYSICAL PROPERTIES).		
3. CERTIFIED MILL TEST REPORTS FOR STRUCTURAL BOLTS.		
<b>1.4 TECHNICAL SUPPORT</b>		
A. MANUFACTURER MUST HAVE IN-HOUSE ENGINEERING DEPARTMENT AND A PROFESSIONAL ENGINEER LICENSED IN THE APPROPRIATE STATE TO ANSWER TECHNICAL QUESTIONS.		
<b>1.5 QUALITY ASSURANCE</b>		

**GENERAL:**

- 1. GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE THEY MAY CONFLICT WITH DETAILS ON OTHER SHEETS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER FOR THIS PROJECT.
2. WORK SHALL CONFORM TO THE REQUIREMENTS, AS AMENDED TO DATE, OF THE LATEST ADOPTED EDITION OF THE CBC, C.A.C. TITLE 24, AND ALL OTHER LOCAL, STATE AND FEDERAL REGULATIONS.
3. OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO, BRACING, TEMPORARY SUPPORTS, AND SHORING. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONSTRUCTION AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, ARE FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONSTRUCTION.
6. ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
7. CONFORM TO APPLICABLE CAL/OSHA CONSTRUCTION SAFETY REGULATIONS FOR ALL WORK PERFORMED DURING CONSTRUCTION. JOB SITE SAFETY IS STRICTLY THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE ARCHITECT/ENGINEER OR OWNER.
8. THE ENGINEER AND THEIR CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED TO, ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
9. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR IF A CHANGE IN THE SCOPE OF WORK IS PROPOSED, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
10. THE SCHOOL DISTRICT'S INSPECTOR OF RECORD SHALL INSPECT AND APPROVE THE ERECTED FRAME PRIOR TO ROOF INSTALLATION.
11. SEE REQUIREMENTS FOR LOCATION IN ANY FIRE HAZARD SEVERITY ZONE FOR WILDLAND URBAN INTERFACE AREAS (WUI) AS SPECIFIED IN THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE. PROVIDE PROTECTION AND DETAILS OF ALL AREAS COMPLYING WITH THE WUI REQUIREMENTS.
12. LOCATING THIS STRUCTURE CLOSER THAN 20 FEET TO OTHER STRUCTURES MAY AFFECT THE ALLOWABLE AREA FOR THE EXISTING CONSTRUCTION PER THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE.
13. VIEWS AND DETAILS ARE NOT DRAWN TO SCALE (UNLESS NOTED OTHERWISE). DO NOT SCALE THESE DRAWINGS.
14. OTHER SITE SPECIFIC ITEMS MAY BE REQUIRED.

**STRUCTURAL AND MISCELLANEOUS STEEL:**

- 1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERRECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360 - 16 AND 303-16 MANUAL REFERENCED BY THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.
2. PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 ksi, GRADE B UNLESS NOTED OTHERWISE.
3. STRUCTURAL TUBING (HSS SHAPES) SHALL CONFORM TO ASTM A500, GRADE B (OR HIGHER), Fy = 46 KSI.
4. IF MATERIAL AVAILABILITY IS LIMITED, MEMBER THICKNESSES CAN BE INCREASED BEYOND WHAT IS SHOWN IN THESE DRAWINGS (MAXIMUM INCREASE OF 1/8").
5. ALL CHANNELS, ANGLES, PLATES AND MISC. STEEL SHALL CONFORM TO ASTM A36, Fy = 36 KSI.
6. ALL COLD FORM STEEL SHALL CONFORM TO ASTM A653, CS = TYPE B, Fy = 50 KSI.
7. STRUCTURAL STEEL AND DECK SHALL BE IDENTIFIED FOR CONFORMITY PER CBC 2202A.1.
8. ROOF DECK SHALL HAVE KYNAR 5000 METAL COATING.
9. ROOF DECK SHALL CONFORM TO ATSM A792, Fy = 50 KSI.
10. MR ROOF SCREWS MEET ASTM A510 WITH A HEAD DIMENSION OF 0.31" (FLAT-TO-FLAT) AND INTEGRAL WASHER DIMENSION OF 0.58" (OUTSIDE DIAMETER).
11. SS ROOF SCREWS MEET ASTM A510 WITH A HEAD DIMENSION OF 0.437" (OUTSIDE DIAMETER).

**WELDING:**

- 1. ALL WELDING SHALL COMPLY WITH AWS D1.1 SPECIFICATIONS AND SHALL BE DONE BY AWS QUALIFIED WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED.
2. ALL WELDING SHALL BE DONE BY GAS METAL ARC PROCESS WITH E70XX ELECTRODES. FLUX CORE ARC WELD SHALL CONFORM TO CHARPY NOTCH TOUGHNESS RATING OF 20 ft-lb @ (0°F).
3. ALL WELDING SHALL BE DONE IN THE SHOP WITH REQUIRED INSPECTION, PRE-APPROVED BY DSA, TO ENSURE PROPER MATERIAL ID AND WELDING.
4. WELD FILLER METAL MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION OF COMPLIANCE WITH CODE AND SPECIFICATIONS.

**BOLTING:**

- 1. ALL BOLTS SHOWN ON THESE DRAWINGS ARE ASTM F3125 (A325 TYPE 1) HIGH STRENGTH BOLTS (UNO) AND SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329.
2. HIGH STRENGTH BOLTS SHALL BE SAMPLED AND TESTED IN COMPLIANCE WITH CBC 2213A.1.
3. BEFORE ERRECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS - INCLUDING THE HARDWARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING SOME OF THE BOLTS AND NUTS MAY BE REQUIRED.
4. ANCHOR BOLTS (HEAVY HEX HEAD, ASTM F1554, GRADE 5) SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329. ANCHOR BOLTS MAY BE HEADED OR THREADED WITH A NUT THAT IS PREVENTED FROM ROTATING.
5. HIGH STRENGTH NUTS SHALL CONFORM TO ASTM A563 AND SHALL BE GALVANIZED PER ASTM F2329.
6. HIGH STRENGTH WASHERS SHALL CONFORM TO ASTM F436 AND SHALL BE GALVANIZED PER ASTM F2329.
7. THE BOLTING INSTALLATION REQUIREMENTS OUTLINED BELOW ARE CRITICAL TO THE STRUCTURE'S DESIGN AND PERFORMANCE. THE INSTALLER IS REQUIRED TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD PRIOR TO THE ERECTION OF THE FRAME. ALL BOLTS SHALL BE INSTALLED AND INSPECTED PER THE APPLICABLE VERSION OF AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", CBC 1705A.2.1; AISC 341-16 J7; AISC 360-16 N5.6.
A. PRETENSIONED JOINTS (IDENTIFIED ON THE FRAME CONNECTION DETAILS WITH A "PJ REQUIRED") MUST BE INSTALLED AND INSPECTED TO MEET ONE OF FOLLOWING REQUIREMENTS:
1. TURN-OF-NUT PRETENSIONING
2. CALIBRATED WRENCH PRETENSIONING
3. DIRECT-TENSION-INDICATOR PRETENSIONING (CONTRACTOR RESPONSIBLE FOR PURCHASE OF REQUIRED WASHERS)
B. ALL OTHER JOINTS MUST BE INSTALLED AND INSPECTED TO MEET THE REQUIREMENTS OF SNUG-TIGHTENED JOINTS. NOTE TO INSTALLER AND INSPECTOR(S): THE SNUG-TIGHT CONDITION EXISTS, IN PART, WHEN ALL THE BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT THE REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH.

THE CONTRACTOR, SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD MUST ALL AGREE ON WHICH APPROACH WILL BE USED TO PRETENSION THE BOLTS. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE APPROACH AGREED TO BY ALL PARTIES LISTED ABOVE.

**FOUNDATIONS:**

- 1. ALLOWABLE SOIL PRESSURES ASSUME CLASS 5 SOIL CLASSIFICATION PER 2022 CBC TABLE 1806A.2.
2. FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D1557. FLOODING NOT PERMITTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, ETC. NECESSARY TO SUPPORT CUT AND/OR FILL BANKS DURING EXCAVATION, AND FORMING AND PLACEMENT OF CONCRETE.
4. STRUCTURES SHALL BE SETBACK FROM ADJACENT SLOPES TO PROVIDE FIRM MATERIAL FOR EMBEDMENT AND FOR PROTECTION FROM SLOPE DRAINAGE, EROSION, AND SHALLOW FAILURES.
A. BOTTOM OF ASCENDING SLOPE: THE SMALLER OF HALF THE HEIGHT OF THE SLOPE AND 15FT MEASURED FROM THE FACE OF THE STRUCTURE TO THE TOE OF THE SLOPE
B. TOP OF DESCENDING SLOPE: THE SMALLER OF A THIRD OF THE HEIGHT OF THE SLOPE AND 40 FT MEASURED FROM THE FACE OF THE FOOTING TO THE TOP OF THE SLOPE
ALTERNATE SETBACKS ARE PERMITTED, SUBJECT FOR APPROVAL. A GEOTECHNICAL INVESTIGATION MAY BE REQUIRED.
5. STRUCTURES PLACED ON LIQUIFIABLE SOILS OR SITE CLASS F MAY NOT BE SUBMITTED FOR AN OVER THE COUNTER REVIEW.

**CONCRETE:**

- 1. MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)
MINIMUM STRENGTH Fc (28 DAYS) EXPOSURE CATEGORY W/C RATIO (MAXIMUM) SLUMP (± 1") UNIT WEIGHT (NORMAL WEIGHT)
5000 PSI F3, S3, W2, C2 0.4 4" 150 PCF
2. CHANGES TO THE MIX DESIGN MUST BE APPROVED BY THE ENGINEER OR ARCHITECT OF RECORD AND DSA
3. AGGREGATES SHALL CONFORM TO ASTM C33, MAX AGGREGATE SIZE = 1".
4. CEMENT SHALL CONFORM TO ASTM C150 (TYPE V) WITH A MAXIMUM EXPANSION OF 0.040%, FOR SULFATE RESISTANCE.
5. ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE PROHIBITED.
6. CONCRETE EXPOSED TO FREEZING-AND-THAWING CYCLES SHALL BE AIR ENTRAINED PER ACI 318-19 SECTION 19.3.3.
7. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
8. CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET.
9. CONCRETE SHALL BE PROPORTIONED PER ACI 318-19 26.4.
10. CONCRETE SHALL BE TESTED PER CBC 1910A.1, 1705A.3, AND ACI 318-19 26.13. BATCH PLANT INSPECTION NOT REQUIRED. CONTRACTOR SHALL IMPLEMENT WEIGHTMASTER AND BATCH TICKET REQUIREMENTS OF CBC 1705A.3.3.1.

**REINFORCING STEEL:**

- 1. REINFORCING STEEL SHALL BE DEFORMED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A615. (DEFORMATIONS SHALL BE IN ACCORDANCE WITH ASTM A305) AS FOLLOWS:
GR 60: (#4 BARS AND LARGER)
GR 40: (#3 BARS)
2. DETAILED, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILED REINFORCING CONCRETE STRUCTURES."
3. MIN. COVER FOR CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
A. CAST AGAINST EARTH..... 3"
B. CAST AGAINST FORM BELOW GRADE..... 2"
C. FORMED SLABS (#11 BAR & SMALLER)..... 3/4"
D. SLABS ON GRADE (FROM TOP OF SLAB)..... 1"
E. COLUMNS AND BEAMS (MAIN BARS)..... 2"
F. WALLS EXPOSED TO WEATHER (#6-#18 BARS)..... 2"
G. NOT EXPOSED TO WEATHER (#11 & SMALLER)..... 3/4"
4. BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE MADE COLD.
5. FOR #6 BARS AND SMALLER, REINFORCING SHALL BE LAP SPLICED 45 BAR DIA. MINIMUM IN CONCRETE. FOR #7 BARS AND LARGER, REINFORCING SHALL BE LAP SPLICED 55 BAR DIAMETERS MINIMUM IN CONCRETE. ALL LAP SPLICES MUST COMPLY WITH ACI 318-19.
6. PRIOR TO PLACING OF CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
7. WELDING OF REINFORCING IS NOT ALLOWED
8. REINFORCING STEEL SHALL BE SAMPLED AND TESTED PER CBC 1910A.2.

**POWDER COATED AND EPOXY PRIMED FINISH:**

- 1. ENTIRE POWDER COATING PROCESS COMPLETED IN SAME FACILITY AS STEEL FABRICATION.
2. ALL CARBON STEEL MEMBERS (COLUMNS, BEAMS, PLATES, ETC.) PAINTED WITH PRIME COAT PER THE "AISC CODE OF STANDARD PRACTICE" AND THE "AISC SPECIFICATION SECTION M3" (UNLESS NOTED OTHERWISE).
3. PARTS PRETREATED IN A 3 STAGE IRON PHOSPHATE WASHER (OR EQUAL).
4. EPOXY PRIMER POWDER COAT APPLIED TO PARTS FOR SUPERIOR CORROSION PROTECTION.
5. TOP POWDER COAT OF SUPER DURABLE TGIC (COLOR SELECTED FROM MANUFACTURER'S STANDARD OPTIONS OR CUSTOM COLOR).
6. SAMPLE PRODUCTION PARTS TESTED TO MEET THE FOLLOWING CRITERIA:
A. SALT SPRAY RESISTANCE PER ASTM B 117/ ASTM D 1654
1. 1000 HOURS WITH NO CREEP FROM SCRIBE LINE AND RATING OF 10
B. HUMIDITY RESISTANCE PER ASTM D2247-02
1. 500 HOURS WITH NO LOSS OF ADHESION OR BLISTERING
C. COLOR/UV RESISTANCE PER ASTM G154-04
1. 2000 HOURS EXPOSURE ALTERNATE CYCLES WITH NO CHALKING, 75% COLOR RETENTION, AND COLOR VARIATION MAXIMUM 3.0 E VARIATION CIE FORMULA (BEFORE AND AFTER 2000 HOURS EXPOSURE

**CONSTRUCTION NOTES**

- 1. A DSA-CERTIFIED CLASS 2 INSPECTOR IS REQUIRED FOR THIS PROJECT.
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR AND DSA IR A-6.
3. A "DSA-CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE OWNER (E.G. DISTRICT, ETC.) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR
4. A DSA APPROVED TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER (E.G. DISTRICT, ETC.) SHALL CONDUCT ALL THE REQUIRED TEST AND INSPECTIONS FOR THE PROJECT.
**NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEER RESPONSIBILITY**
1. FOR THE SITE-SPECIFIC PROJECT, NEITHER POLIGON OR GHD ARE THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
2. FOR THE SITE-SPECIFIC PROJECT, GHD AND POLIGON'S RESPONSIBILITY IS LIMITED TO THE PREPARATION OF THE PLANS AND SPECIFICATIONS FOR THE STRUCTURES OF THIS PC ONLY.
3. STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM GHD AND POLIGON'S RESPONSIBILITY FOR THE SITE-SPECIFIC PROJECT.
4. ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING MAY BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS, STRUCTURAL OBSERVATIONS OF CONSTRUCTION, REVIEW OF INSPECTIONS REPORTS, AND SIGNING OFF ON THE VERIFIED REPORT FOR COMPLETED WORK.
5. POLIGON WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE STRUCTURES OF THIS PC WHICH ARISE DURING PLAN REVIEW AND CONSTRUCTION.

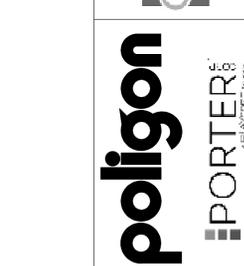
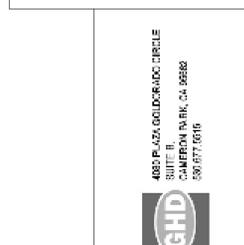
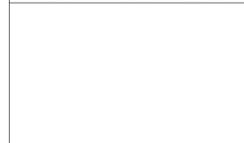
**SPECIAL INSPECTION NOTES:**

- 1. THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE SELECTED BY THE SCHOOL DISTRICT AND APPROVED BY DSA AND THE ARCHITECT OF RECORD.
2. COSTS OF THE PROJECT INSPECTOR AND THE TESTING AGENCY SHALL BE BORN BY THE SCHOOL DISTRICT.
3. THE PROJECT INSPECTOR, AND ENTIRE CONSTRUCTION OVERSIGHT PROCESS, SHALL COMPLY WITH DSA PR 13-01.
4. ON APPROVED PC DRAWINGS, THE STATEMENT OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS (FORM DSA-103) BELOW IS ONLY AN EXAMPLE. ON APPROVED PC DRAWINGS, THE EXAMPLE FORM DSA-103 MUST BE CROSSED OUT BEFORE THE PC DRAWINGS CAN BE APPROVED AS PART OF A SITE-SPECIFIC (OR STOCKPILE) PROJECT SO THEY WILL NOT CONFLICT WITH THE OFFICIAL FORM DSA-103 FOR THE PROJECT.

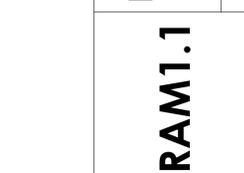
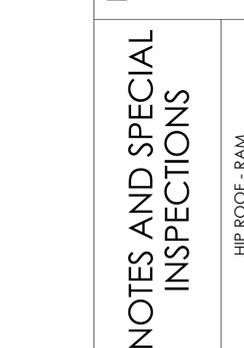
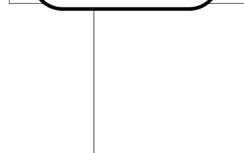
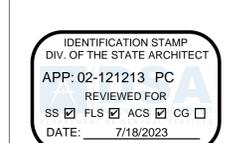
DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC
Application Number: School Name: School District:
DSA File Number: Increment Number: Date Submitted:
2022 CBC
IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project.
Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).
\*\*NOTE: Undefined section and table references found in this document are from the CBC, or California Building Code.
KEY TO COLUMNS
1. TYPE
2. PERFORMED BY
Continuous - Indicates that a continuous special inspection is required
Periodic - Indicates that a periodic special inspection is required
Test - Indicates that a test is required
GE - Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
LOR - Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.
PI - Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.
SI - Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.
S1. GENERAL:
Test or Special Inspection Type Performed By Code References and Notes
S2. SOIL COMPACTION AND FILL:
Test or Special Inspection Type Performed By Code References and Notes
S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):
Test or Special Inspection Type Performed By Code References and Notes
C1. CAST-IN-PLACE CONCRETE
Test or Special Inspection Type Performed By Code References and Notes
S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES
Test or Special Inspection Type Performed By Code References and Notes
S/A2. HIGH-STRENGTH BOLTS:
Test or Special Inspection Type Performed By Code References and Notes
S/A3. WELDING:
Test or Special Inspection Type Performed By Code References and Notes
S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):
Test or Special Inspection Type Performed By Code References and Notes
S/A9. ANCHOR BOLTS AND ANCHOR RODS:
Test or Special Inspection Type Performed By Code References and Notes
Name of Architect or Engineer in general responsible charge:
Name of Structural Engineer (When structural design has been delegated):
Signature of Architect or Structural Engineer: Date:
Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.
DSA STAMP

- DSA 103-22: LIST OF REQUIRED VERIFIED REPORTS, CBC 2022
1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293
2. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291
3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

STATE APPROVALS-SITE



STATE APPROVALS-PC



**FOUNDATION PLAN NOTES:**

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLYGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLYGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.

4033 P. AZA, GOLDEN GATE DISTRICT  
SUITE 11  
CAMERON PARK BLVD., CA 94582  
510.877.1016



**poligon**  
PORTER  
STRUCTURAL ENGINEERS



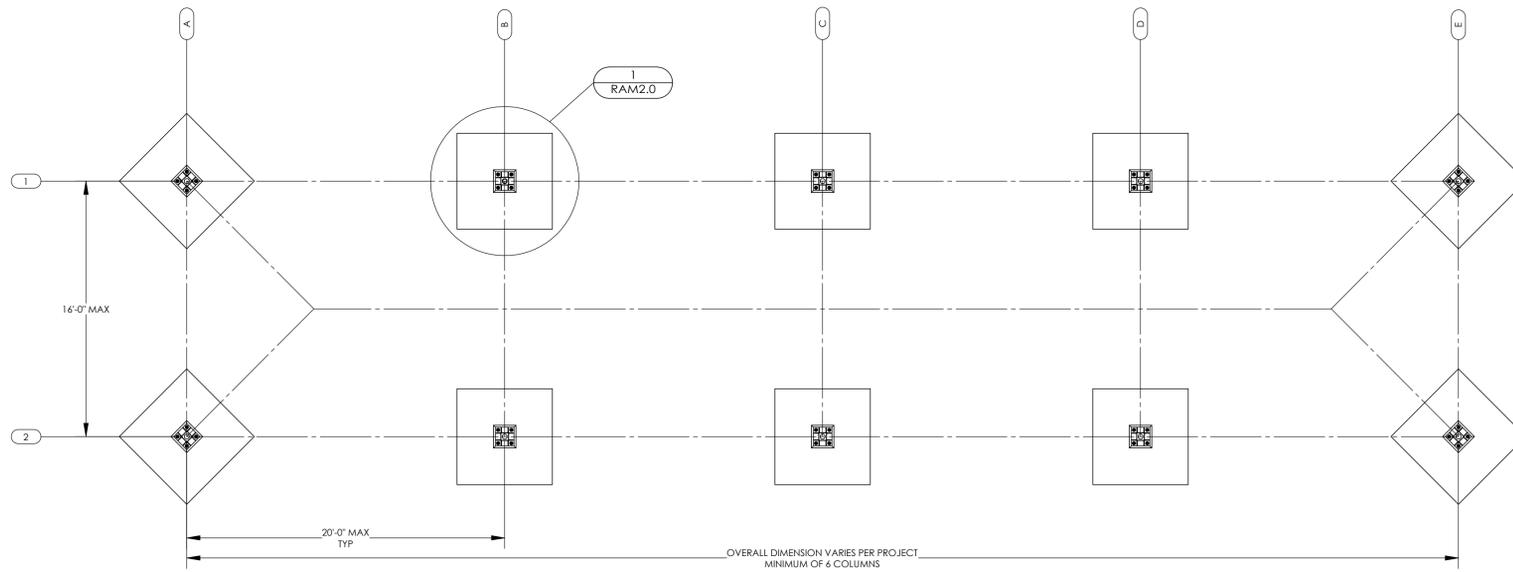
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

**PRE-CHECK (PC)  
DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

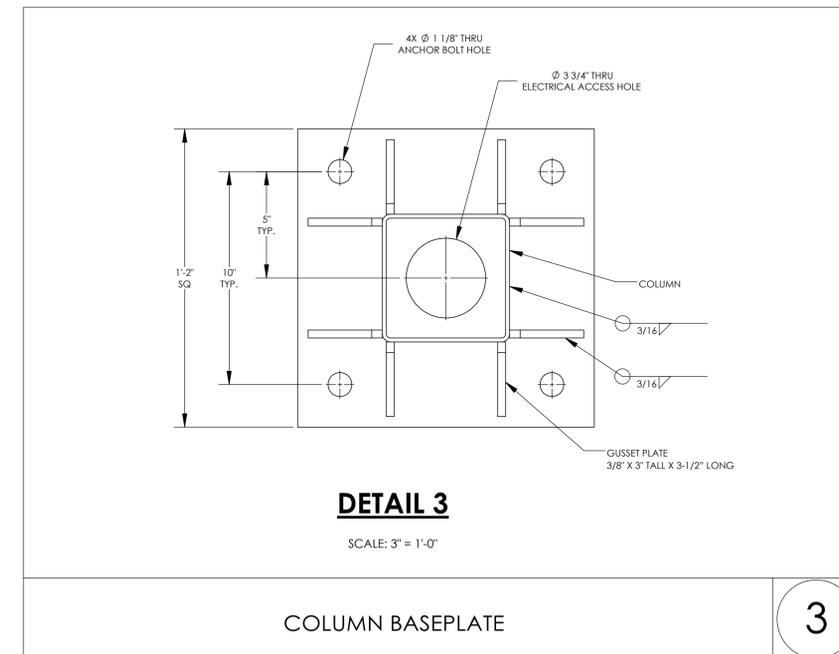
**FOUNDATION PLAN  
SPREAD PAD**

HIP ROOF - RAM 20

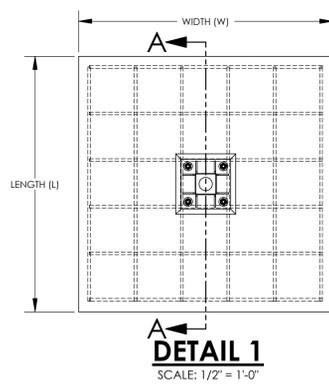
**RAM2.0**



**FOUNDATION PLAN (SPREAD PAD)**  
SCALE: 3/16" = 1'-0"



3



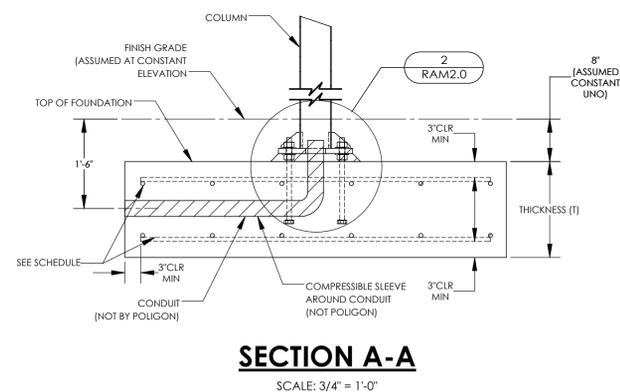
SPREAD PAD FOUNDATION

1

FOUNDATION REQUIREMENTS VARY PER PROJECT  
SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')  
ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

LOAD SCENARIO	SPREAD PAD SIZE AND REINFORCING REQUIREMENTS				HORIZONTAL REINFORCING <sup>1</sup>	
	WIDTH (W)	LENGTH (L)	THICKNESS (T)	QTY	SIZE	
	1	7'-6"	7'-6"	1'-6"	7	#6
2	8'-0"	8'-0"	1'-6"	8	#6	

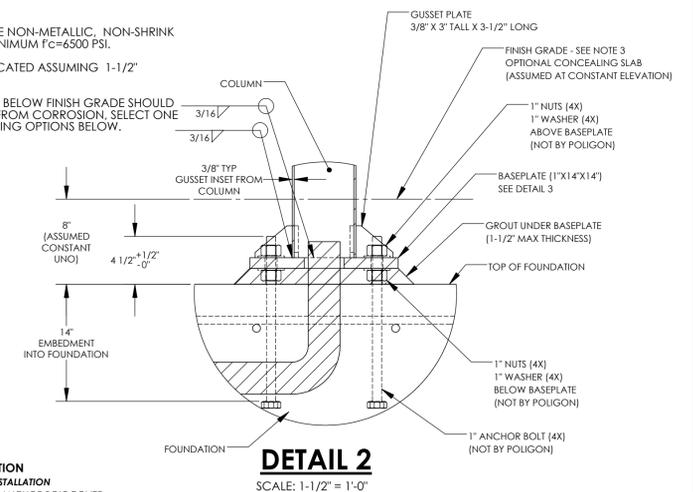
<sup>1</sup> EQUALLY SPACED EACH WAY, TOP AND BOTTOM



**NOTES:**

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM F<sub>c</sub> = 6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW.

**COLUMN BASE PROTECTION BELOW SURFACE COLUMN INSTALLATION**  
[1] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER  
[2] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE



COLUMN BASEPLATE AND ANCHOR BOLTS

2

**FOUNDATION PLAN NOTES:**

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLYGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLYGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.
7. FOR DRILLED PIER FOUNDATIONS, PREVENT SOIL FROM ENTERING EXCAVATED HOLE (FORM, ETC).

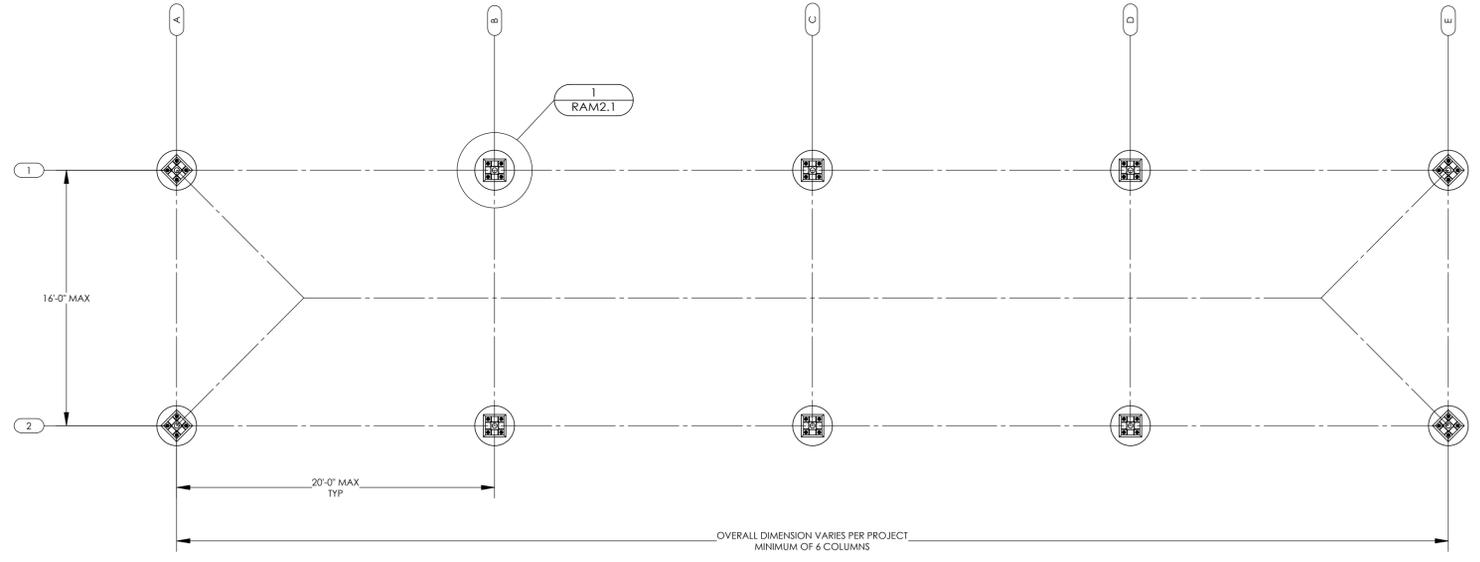


**PRE-CHECK (PC) DOCUMENT**  
**CODE: 2022 CBC**  
 A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

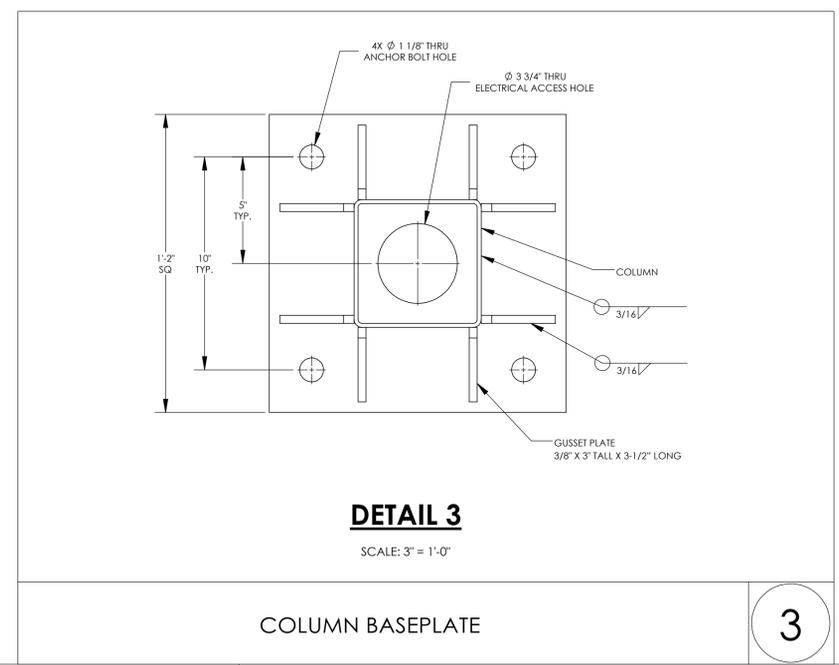
**FOUNDATION PLAN**  
**DRILLED PIER**

HIP ROOF - RAM 20

**RAM2.1**



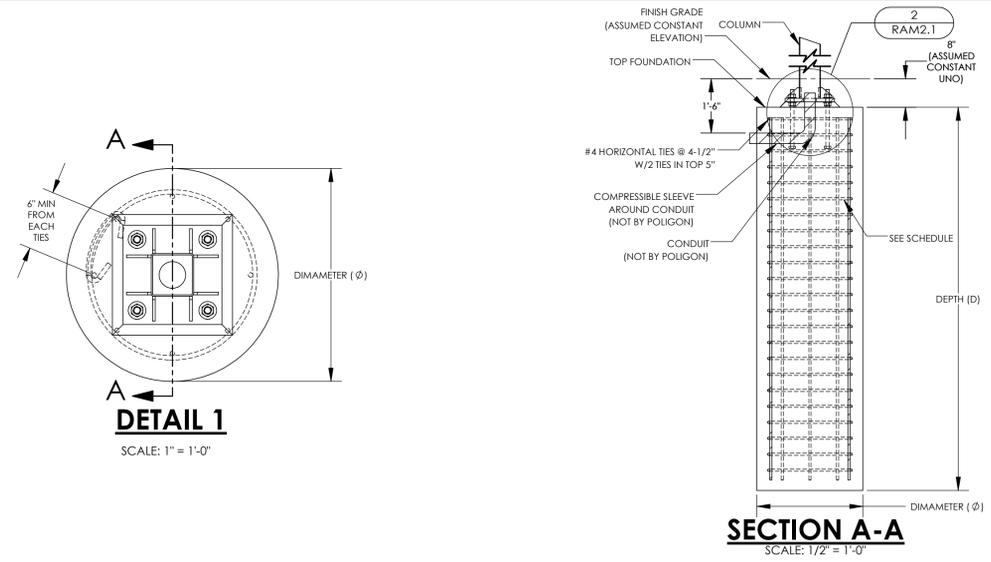
**FOUNDATION PLAN (DRILLED PIER)**  
 SCALE: 3/16" = 1'-0"



**DETAIL 3**  
 SCALE: 3" = 1'-0"

COLUMN BASEPLATE

3



**SECTION A-A**  
 SCALE: 1/2" = 1'-0"

DRILLED PIER FOUNDATION

FOUNDATION REQUIREMENTS VARY PER PROJECT  
**SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')**  
 ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

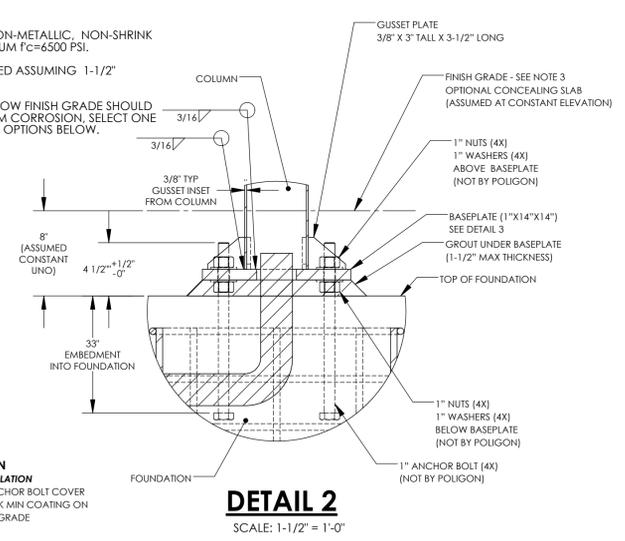
LOAD SCENARIO	DIAMETER (Ø)	DEPTH (D)	VERTICAL REINFORCING <sup>1</sup>	
			QTY	SIZE
1	2'-6"	11'-0"	8	#6
2	2'-6"	11'-6"	8	#6

<sup>1</sup> EQUALLY SPACED AROUND DRILLED PIER

**NOTES:**

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM F<sub>c</sub>=6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW.

**COLUMN BASE PROTECTION**  
**BELOW SURFACE COLUMN INSTALLATION**  
 [1] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER  
 [2] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE



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

COLUMN BASEPLATE AND ANCHOR BOLTS

2

1



STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

PRE-CHECK (PC)  
DOCUMENT  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

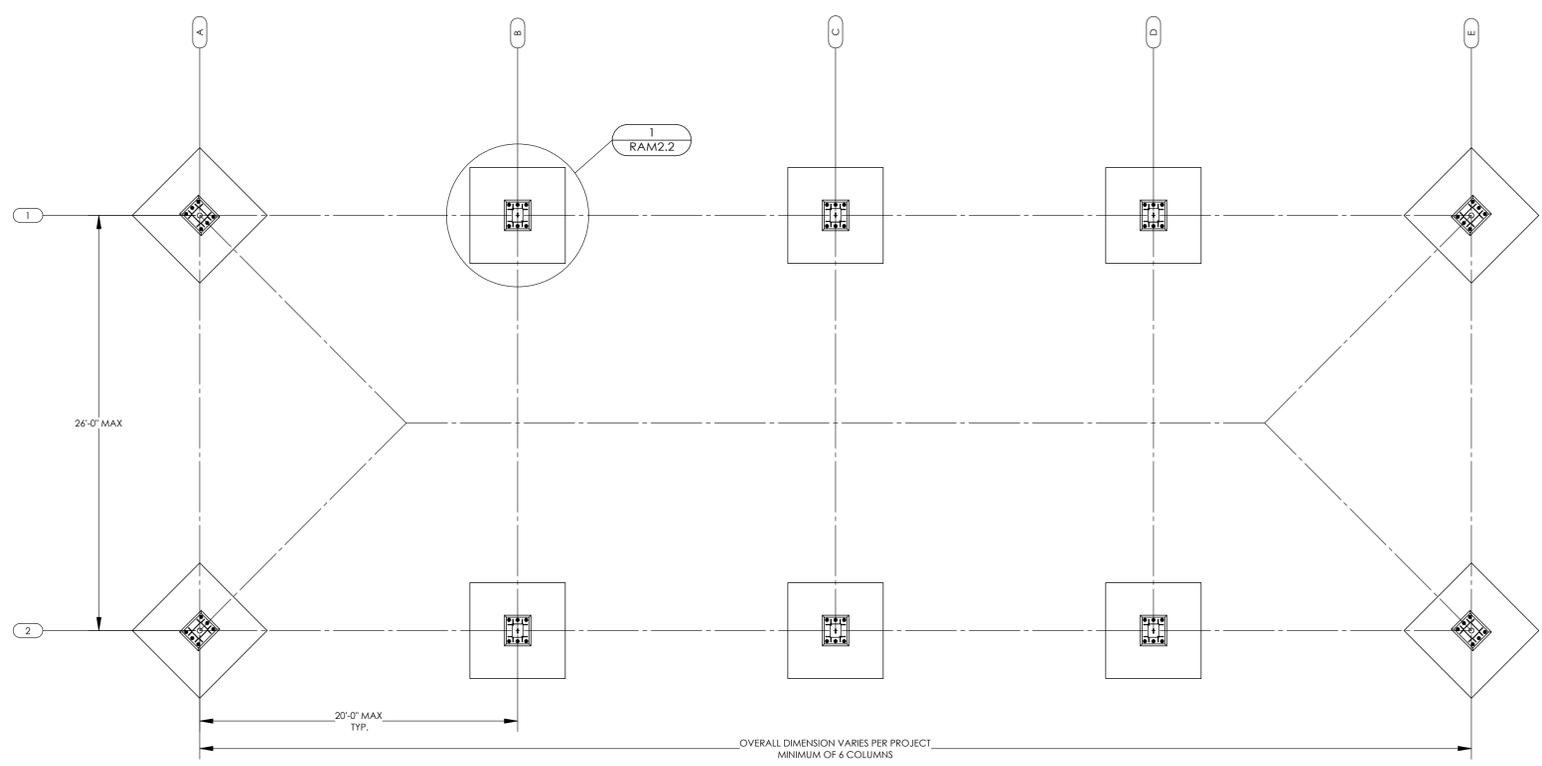
FOUNDATION PLAN  
SPREAD PAD

HIP ROOF - RAM 30

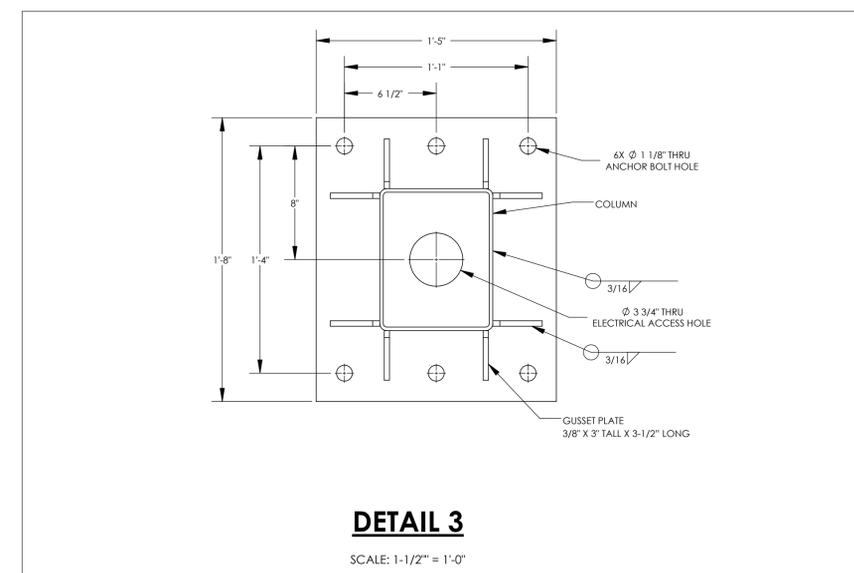
RAM2.2

**FOUNDATION PLAN NOTES:**

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLYGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLYGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.



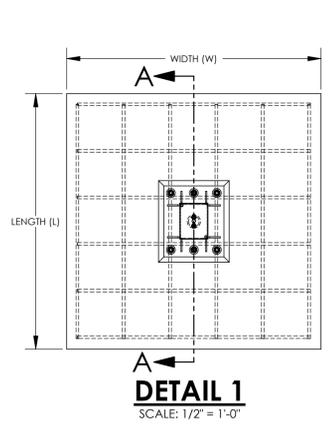
**FOUNDATION PLAN (SPREAD PAD)**  
SCALE: 3/16" = 1'-0"



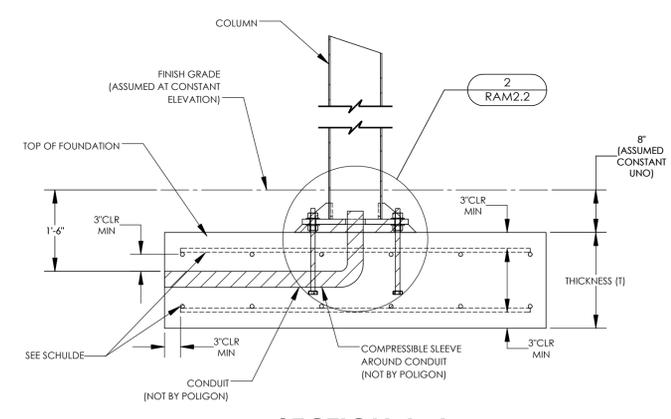
**DETAIL 3**  
SCALE: 1-1/2" = 1'-0"

COLUMN BASEPLATE

3



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



**SECTION A-A**  
SCALE: 3/4" = 1'-0"

SPREAD PAD FOUNDATION

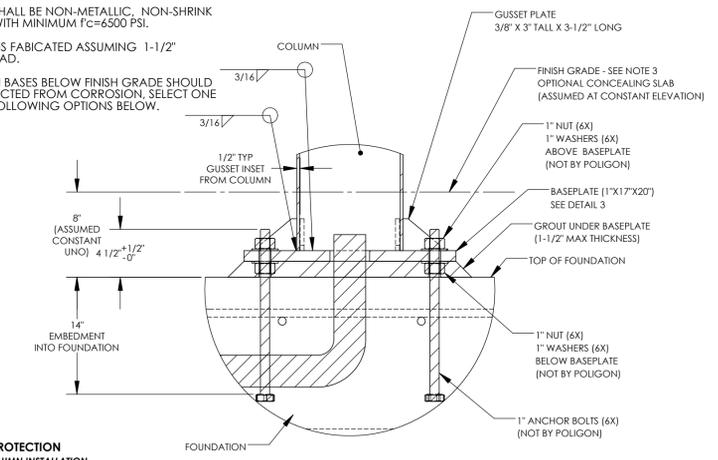
FOUNDATION REQUIREMENTS VARY PER PROJECT  
SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')  
ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

LOAD SCENARIO	WIDTH (W)	LENGTH (L)	THICKNESS (T)	HORIZONTAL REINFORCING <sup>1</sup>	
				QTY	SIZE
1	9'-0"	9'-0"	1'-6"	8	#6
2	10'-0"	10'-0"	1'-6"	9	#6

<sup>1</sup> EQUALLY SPACED EACH WAY, TOP AND BOTTOM

**NOTES:**

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM Fc=6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION, SELECT ONE OF THE FOLLOWING OPTIONS BELOW.



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

**COLUMN BASE PROTECTION BELOW SURFACE COLUMN INSTALLATION**  
[1] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER  
[1] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE

COLUMN BASEPLATE AND ANCHOR BOLTS

1

2

**FOUNDATION PLAN NOTES:**

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLYGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLYGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.
7. FOR DRILLED PIER FOUNDATIONS, PREVENT SOIL FROM ENTERING EXCAVATED HOLE (FORM, ETC).

STATE APPROVALS-SITE

4035 P. AZA, GOLDEN GATE DISTRICT  
SUITE 11  
CAMERON PARK, CA 95002  
530.877.1016

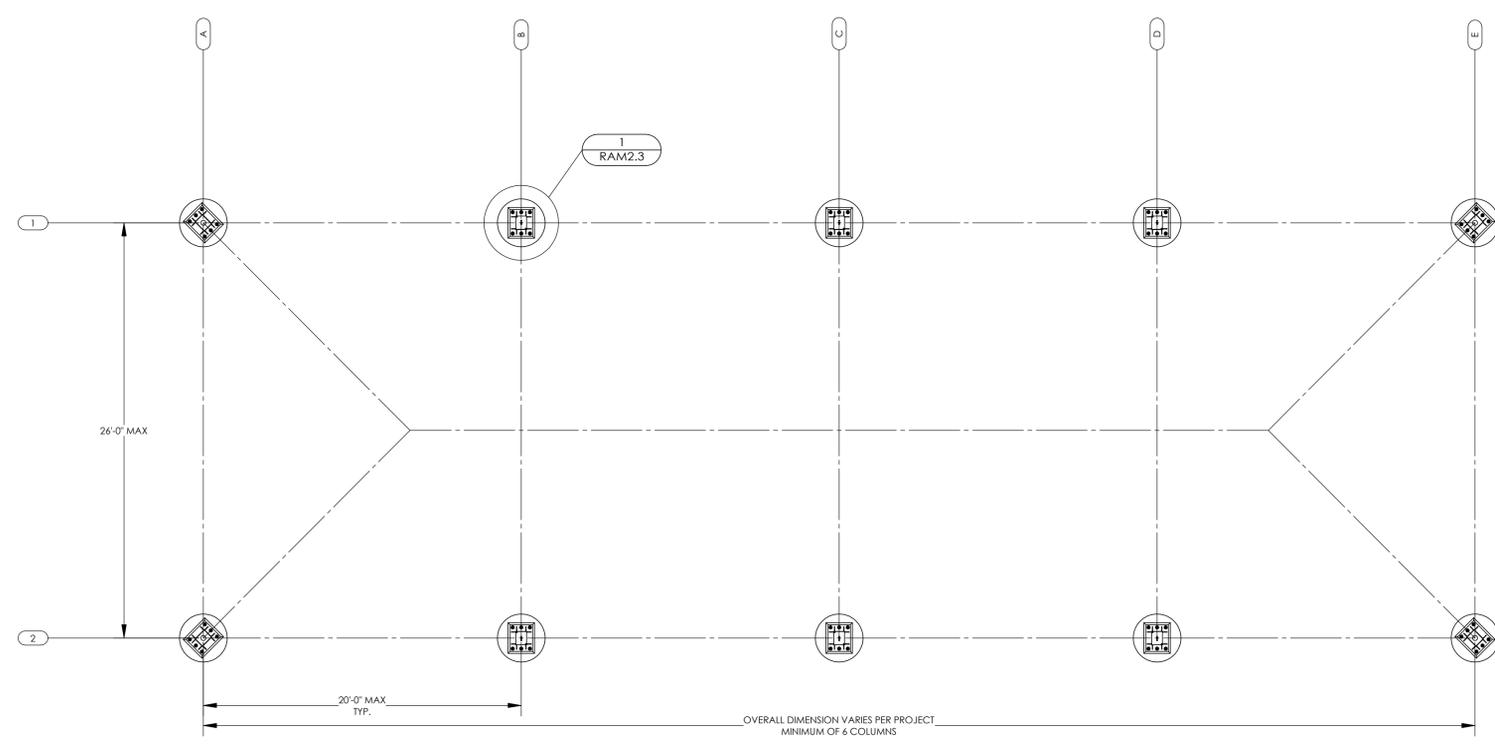


**poligon**  
PORTER  
STRUCTURAL ENGINEERS

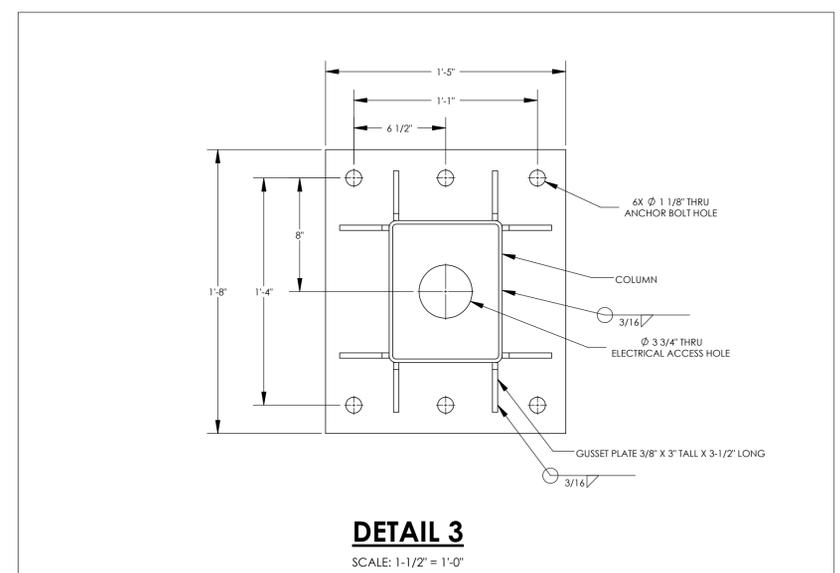


STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023



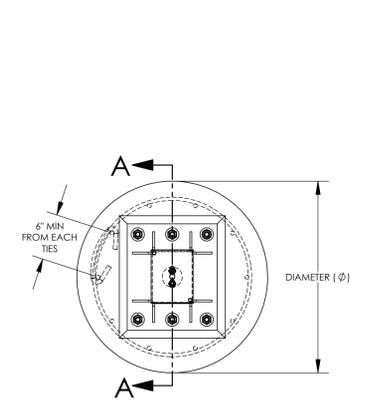
**FOUNDATION PLAN (DRILLED PIER)**  
SCALE: 3/16" = 1'-0"



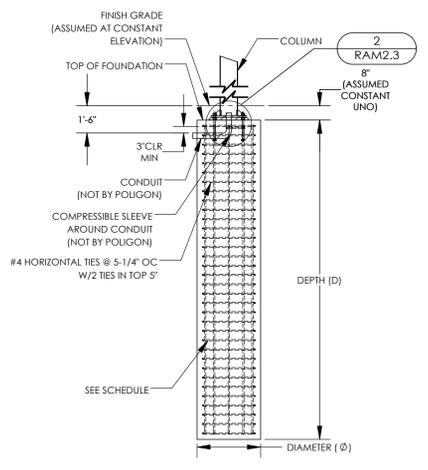
**DETAIL 3**  
SCALE: 1-1/2" = 1'-0"

COLUMN BASEPLATE

3



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



**SECTION A-A**  
SCALE: 1/4" = 1'-0"

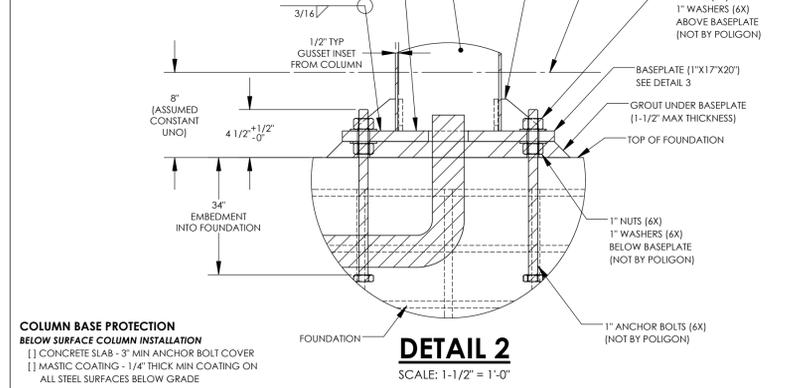
FOUNDATION REQUIREMENTS VARY PER PROJECT  
SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF INSTRUCTIONS)  
ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

LOAD SCENARIO	DIAMETER (Ø)	DEPTH (D)	VERTICAL REINFORCING <sup>1</sup>	
			QTY	SIZE
1	3'-0"	13'-0"	10	#7
2	3'-0"	15'-0"	10	#7

<sup>1</sup>EQUALLY SPACED AROUND DRILLED PIER

**NOTES:**

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM FC=6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION, SELECT ONE OF THE FOLLOWING OPTIONS BELOW.



**COLUMN BASE PROTECTION BELOW SURFACE COLUMN INSTALLATION**  
 [ ] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER  
 [ ] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE

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

COLUMN BASEPLATE AND ANCHOR BOLTS

2

DRILLED PIER FOUNDATION

1

PRE-CHECK (PC) DOCUMENT  
CODE: 2022 CBC  
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FOUNDATION PLAN DRILLED PIER  
HIP ROOF - RAM 30  
**RAM2.3**

4055 P. AZA, GOLDEN RIDGE, DUBLIN, CA 94568  
 SUITE 101  
 CHAMBERLAIN TOWN CENTER  
 925.877.0010



**poligon**  
 PORTER  
 ARCHITECTS



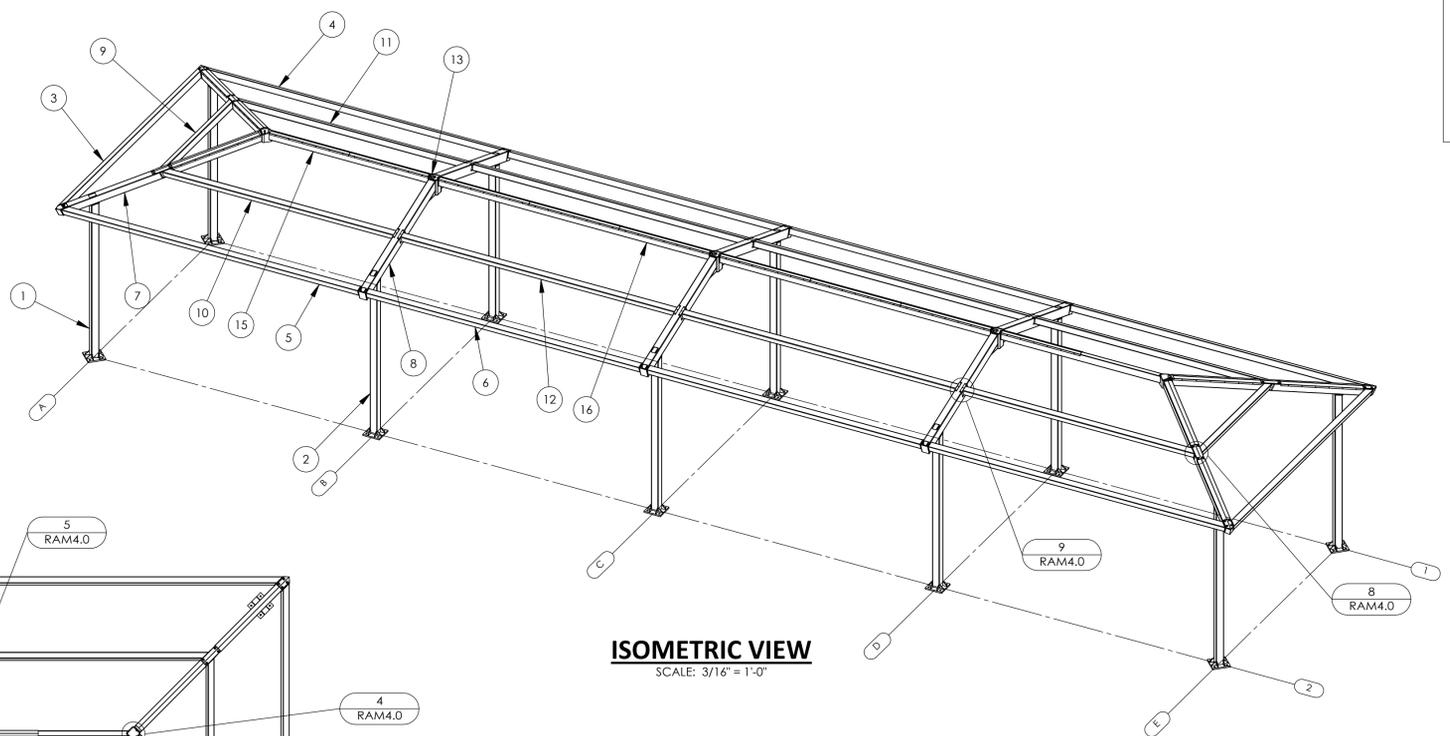
IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121213 PC  
 REVIEWED FOR  
 SS  FLS  ACS  CG   
 DATE: 7/18/2023

**PRE-CHECK (PC)  
 DOCUMENT**  
 CODE: 2022 CBC  
 A SEPARATE PROJECT  
 APPLICATION FOR  
 CONSTRUCTION IS REQUIRED.

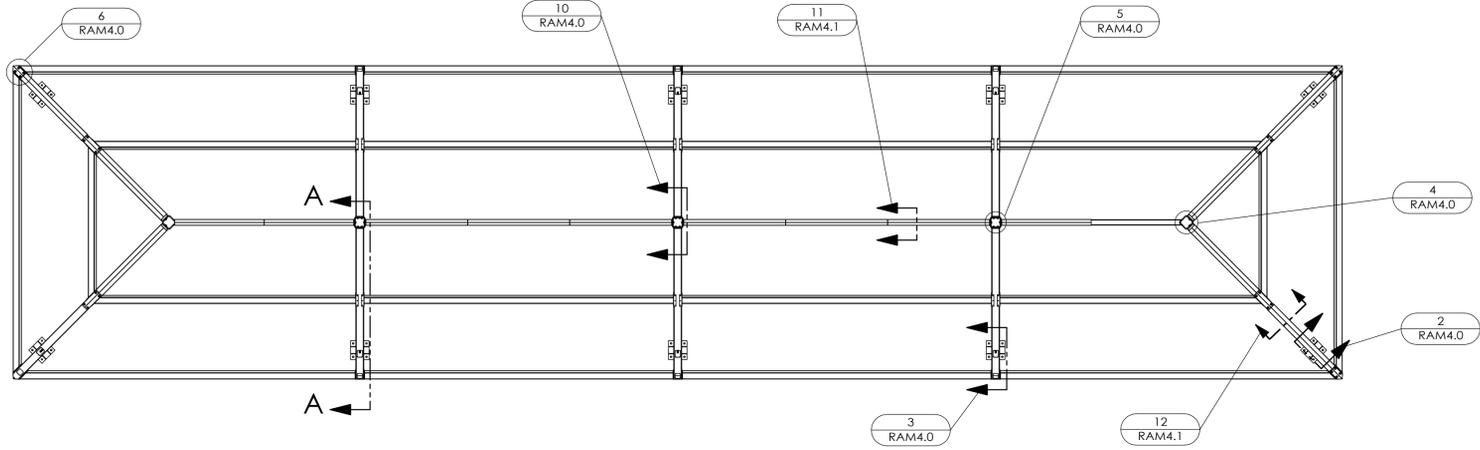
**FRAMING PLAN**

**RAM3.0**

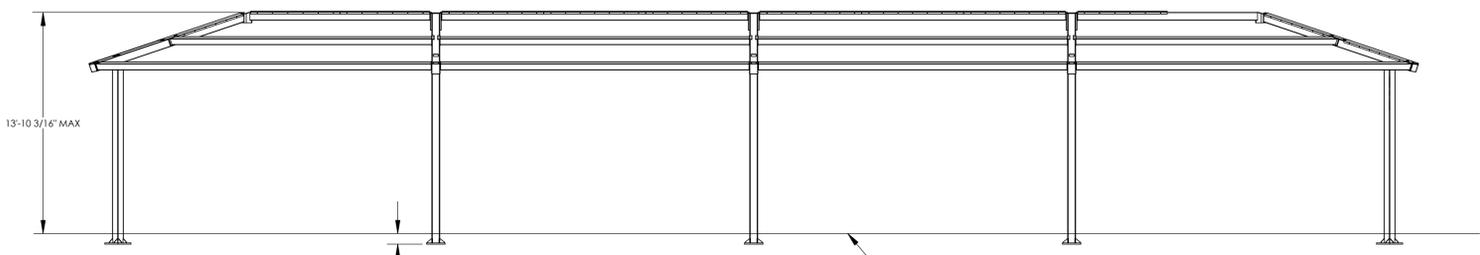
HIP ROOF - RAM 20



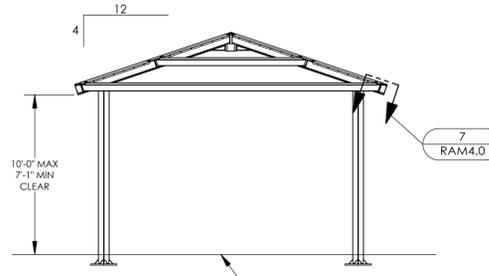
**ISOMETRIC VIEW**  
 SCALE: 3/16" = 1'-0"



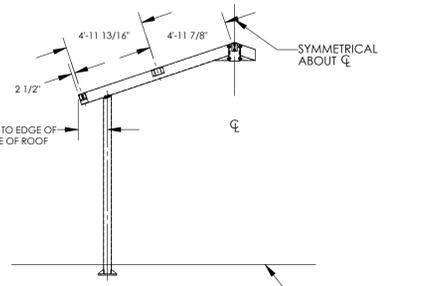
**PLAN VIEW**  
 SCALE: 3/16" = 1'-0"



**FRONT ELEVATION**  
 SCALE: 3/16" = 1'-0"



**SIDE ELEVATION**  
 SCALE: 3/16" = 1'-0"



**SECTION A-A**  
 SCALE: 3/16" = 1'-0"

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	WEIGHT
16	2	-	R-BEAM ASM	HSS6X4X1/8	162.55
15	2	-	END R-BEAM ASM	HSS6X4X1/8	129.92
13	6	-	C-TUBE ASM	HSS8X8X5/8	62.53
12	4	-	SIDE PURLIN ASM	HSS5X5X3/16	236.20
11	2	-	CORNER PURLIN ASM	HSS5X5X3/16	197.28
10	2	-	CORNER PURLIN ASM	HSS5X5X3/16	197.43
9	2	-	END PURLIN ASM	HSS5X5X3/16	110.65
8	6	-	GABLE BEAM ASM	HSS8X6X3/16	193.39
7	4	-	HIP BEAM ASM	HSS6X6X3/16	211.24
6	4	-	SIDE EAVE BEAM ASM	HSS5X5X1/8	162.31
5	2	-	CORNER EAVE BEAM ASM	HSS5X5X1/8	175.09
4	2	-	CORNER EAVE BEAM ASM	HSS5X5X1/8	175.09
3	2	-	END EAVE BEAM ASM	HSS5X5X1/8	155.31
2	6	-	SIDE COLUMN ASM	HSS6X6X1/4	220.08
1	4	-	CORNER COLUMN ASM	HSS6X6X1/4	221.88

SEE DETAIL 2  
 SHEET RAM2.0/RAM2.1

FINISH GRADE  
 (ASSUMED AT CONSTANT  
 ELEVATION UNLESS  
 OTHERWISE NOTED)

FINISH GRADE  
 (ASSUMED AT CONSTANT  
 ELEVATION UNLESS  
 OTHERWISE NOTED)

FINISH GRADE  
 (ASSUMED AT CONSTANT  
 ELEVATION UNLESS  
 OTHERWISE NOTED)

1'-9 15/16" TYP.  
 NOTE: COLUMN CENTERLINE TO EDGE OF  
 TAIL. SEE RAMS.0 FOR EDGE OF ROOF

SYMMETRICAL  
 ABOUT  $\phi$

10'-0" MAX  
 7'-1" MIN  
 CLEAR

13'-10 3/16" MAX

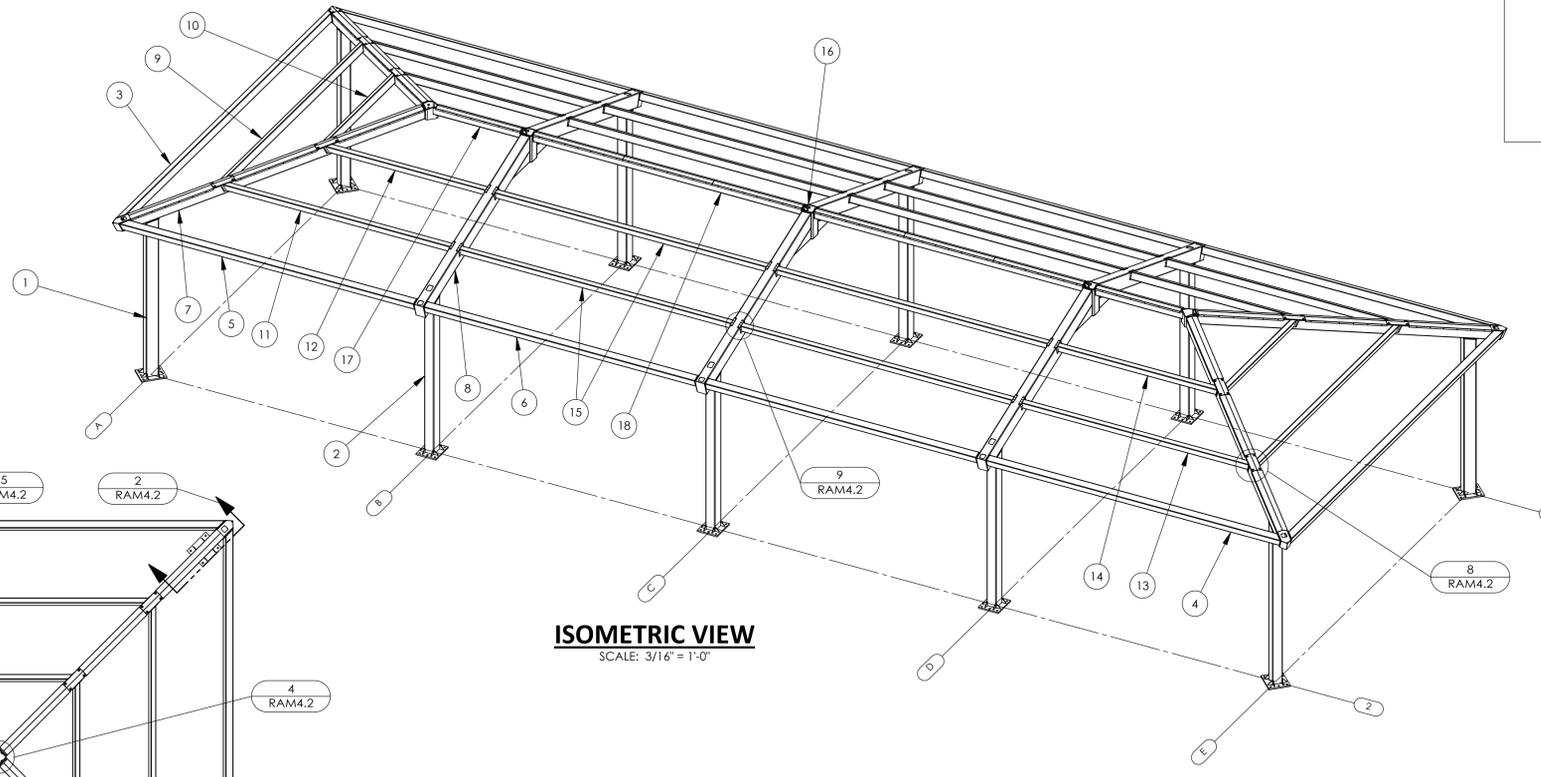
4055 P. AZA, GOLDEN RIDGE, DUBLIN, CA 94588  
 SUITE 100  
 CHAMBERLAIN TOWER, CA 94588  
 925.877.6016



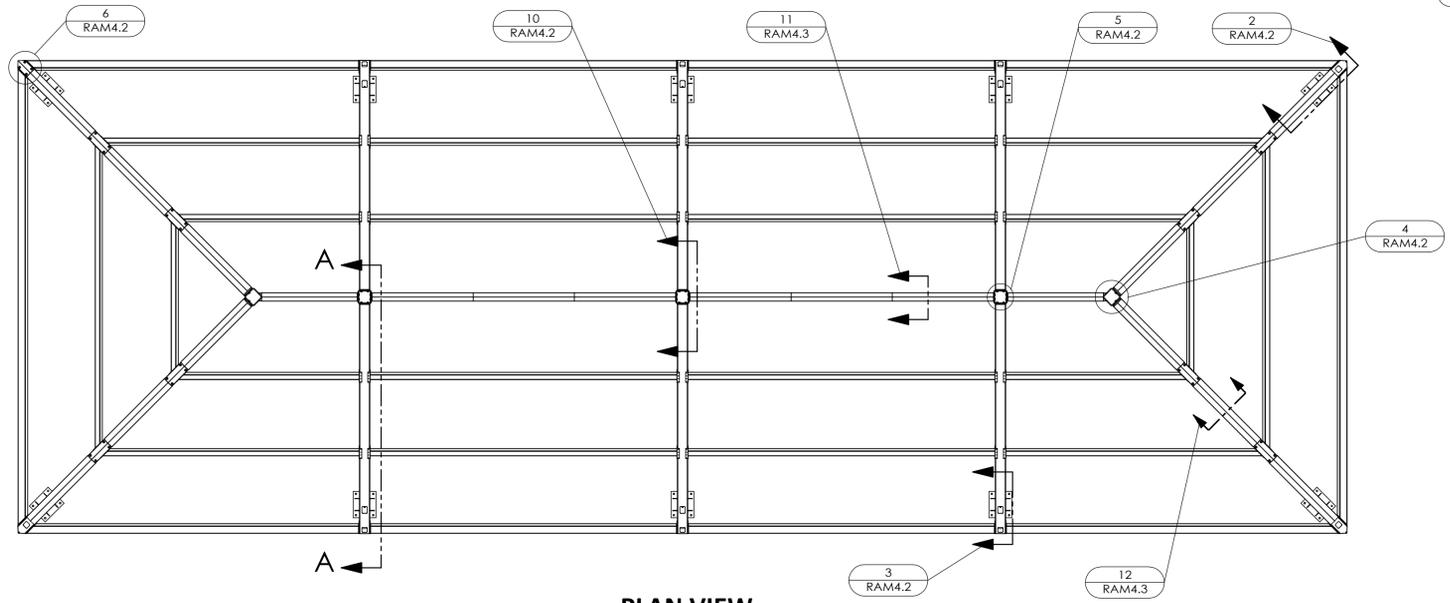
**poligon**  
 PORTER  
 ARCHITECTS INC.



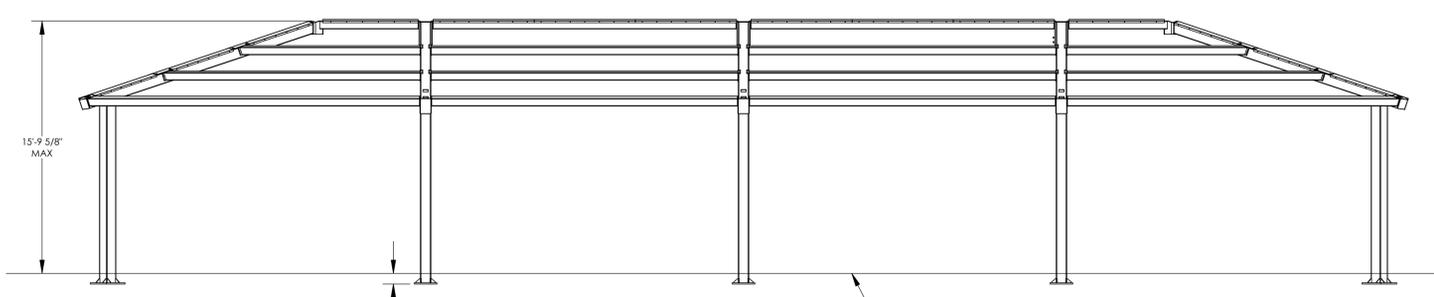
IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121213 PC  
 REVIEWED FOR  
 SS  FLS  ACS  CG   
 DATE: 7/18/2023



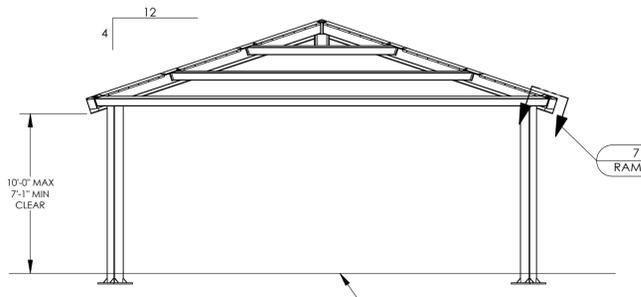
**ISOMETRIC VIEW**  
 SCALE: 3/16" = 1'-0"



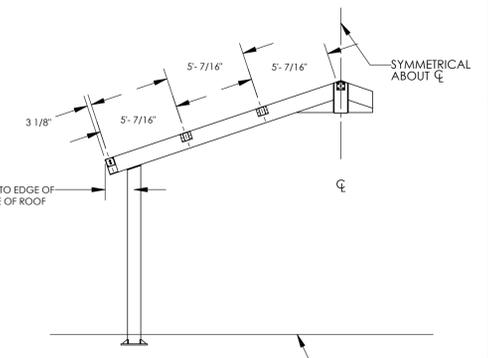
**PLAN VIEW**  
 SCALE: 3/16" = 1'-0"



**FRONT ELEVATION**  
 SCALE: 3/16" = 1'-0"



**SIDE ELEVATION**  
 SCALE: 3/16" = 1'-0"



**SECTION A-A**  
 SCALE: 3/16" = 1'-0"

NOTE: COLUMN CENTERLINE TO EDGE OF TAIL. SEE RAMS.1 FOR EDGE OF ROOF

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	WEIGHT
18	2	-	R-BEAM ASM	HSS6X6X3/16	287.26
17	2	-	END R-BEAM ASM	HSS6X6X3/16	154.14
16	6	-	C-TUBE ASM	HSS10X10X5/8	143.92
15	8	-	SIDE PURLIN ASM	HSS6X4X3/16	234.29
14	2	-	CORNER PURLIN ASM	HSS6X4X3/16	136.79
13	2	-	CORNER PURLIN ASM	HSS6X4X3/16	193.62
12	2	-	CORNER PURLIN ASM	HSS6X4X3/16	136.94
11	2	-	CORNER PURLIN ASM	HSS6X4X3/16	193.78
10	2	-	END PURLIN ASM	HSS6X4X3/16	110.56
9	2	-	END PURLIN ASM	HSS6X4X3/16	224.23
8	6	-	GABLE BEAM ASM	HSS12X8X1/4	559.76
7	4	-	HIP BEAM ASM	HSS8X8X3/16	431.12
6	4	-	SIDE EAVE BEAM ASM	HSS6X6X3/16	284.96
5	2	-	CORNER EAVE BEAM ASM	HSS6X6X3/16	306.07
4	2	-	CORNER EAVE BEAM ASM	HSS6X6X3/16	306.00
3	2	-	END EAVE BEAM ASM	HSS6X6X3/16	413.48
2	6	-	SIDE COLUMN ASM	HSS10X8X1/4	425.36
1	4	-	CORNER COLUMN ASM	HSS10X8X1/4	433.63

**PRE-CHECK (PC) DOCUMENT**  
 CODE: 2022 CBC  
 A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

**FRAMING PLAN**

**RAM3.1**

HIP ROOF - RAM 30



STATE APPROVALS-SITE

4033 PLAZA GOLDEN GATE CIRCLE  
SUITE 11  
CAMERON PARK, CA 95822  
530.877.0616



**poligon**  
PORTER  
STRUCTURAL ENGINEERS



STATE APPROVALS-PC

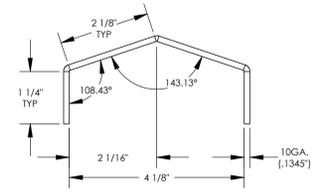
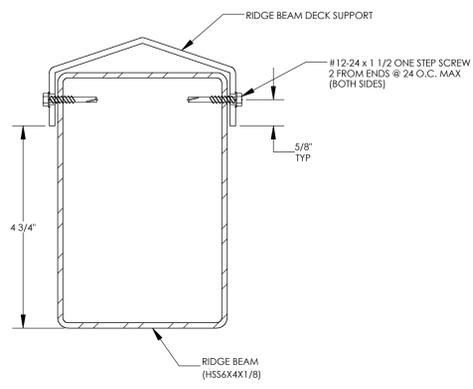
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

**PRE-CHECK (PC)**  
**DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

SECTION DETAILS

HIP ROOF - RAM 20

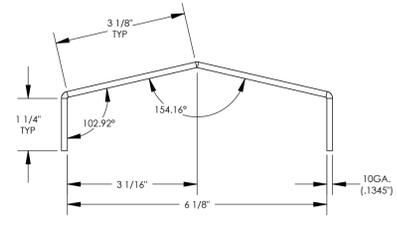
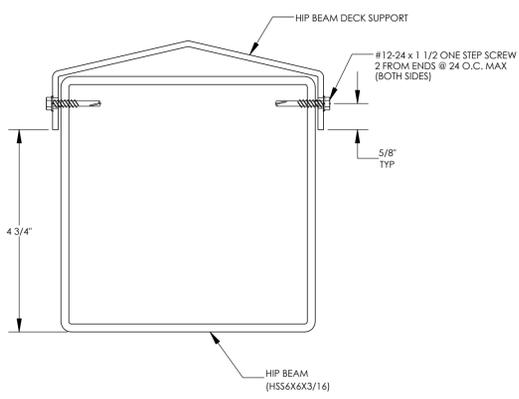
**RAM4.1**



RAM 20 - RIDGE  
Fy = 36 KSI  
A = 0.948 IN<sup>2</sup>  
Ix = 0.570 IN<sup>4</sup>  
Iy = 2.476 IN<sup>4</sup>  
Sx = 0.444 IN<sup>3</sup>  
Sy = 1.127 IN<sup>3</sup>

RIDGE BEAM DECK SUPPORT DETAIL

11



RAM 20 - HIP  
Fy = 36 KSI  
A = 1.208 IN<sup>2</sup>  
Ix = 0.809 IN<sup>4</sup>  
Iy = 6.194 IN<sup>4</sup>  
Sx = 0.590 IN<sup>3</sup>  
Sy = 1.938 IN<sup>3</sup>

HIP BEAM DECK SUPPORT DETAIL

12



STATE APPROVALS-SITE

4033 P. AZA, GOLDEN RIDGE, DUBLIN, CA 94568  
 SUITE #1  
 CHAMBERLAIN BLVD., CA 95822  
 916.777.1016

**poligon**  
 PORTER  
 ARCHITECTS INC.

REGISTERED PROFESSIONAL ENGINEER  
 JESSICA E. HANPER  
 No. S54786  
 STRUCTURAL  
 STATE OF CALIFORNIA

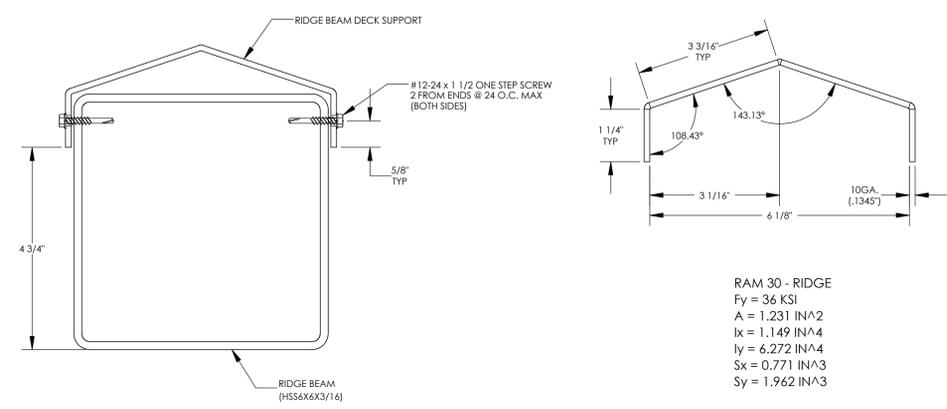
STATE APPROVALS-PC

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121213 PC  
 REVIEWED FOR  
 SS  FLS  ACS  CG   
 DATE: 7/18/2023

**PRE-CHECK (PC)**  
**DOCUMENT**  
 CODE: 2022 CBC  
 A SEPARATE PROJECT  
 APPLICATION FOR  
 CONSTRUCTION IS REQUIRED.

SECTION DETAILS  
 HIP ROOF - RAM 30

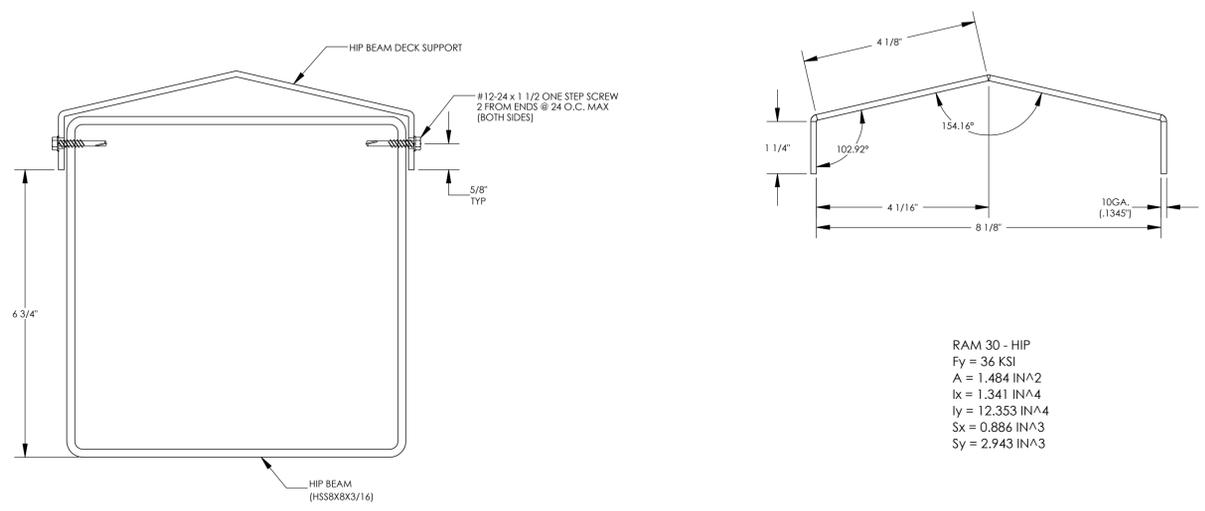
**RAM4.3**



RAM 30 - RIDGE  
 Fy = 36 KSI  
 A = 1.231 IN^2  
 Ix = 1.149 IN^4  
 Iy = 6.272 IN^4  
 Sx = 0.771 IN^3  
 Sy = 1.962 IN^3

RIDGE BEAM DECK SUPPORT DETAIL

11



RAM 30 - HIP  
 Fy = 36 KSI  
 A = 1.484 IN^2  
 Ix = 1.341 IN^4  
 Iy = 12.353 IN^4  
 Sx = 0.886 IN^3  
 Sy = 2.943 IN^3

HIP BEAM DECK SUPPORT DETAIL

12

STATE APPROVALS-SITE

4033 P. AZA, GOLDEN GATE CIRCLE  
SUITE 11  
CAMERON PARK, CA 95822  
530.877.0016



**poligon**  
PORTER  
PLANNERS INC.



STATE APPROVALS-PC

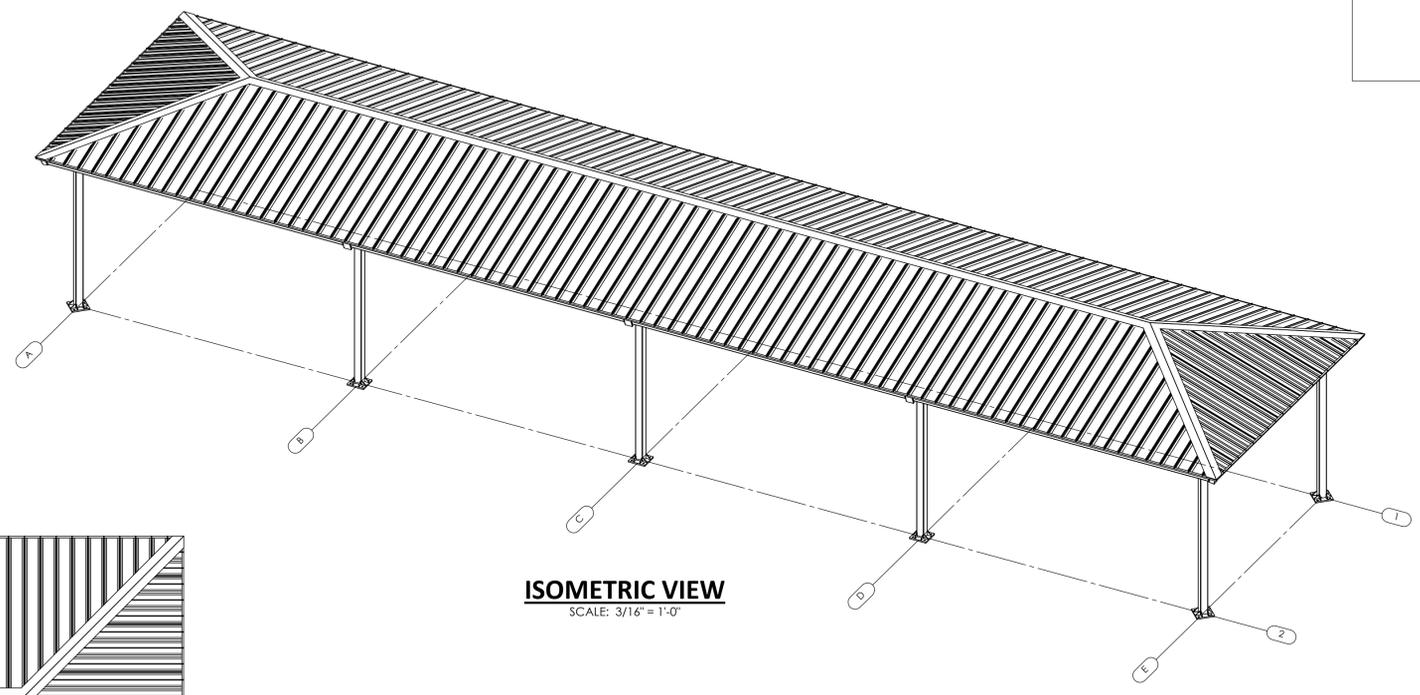
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

**PRE-CHECK (PC)**  
**DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

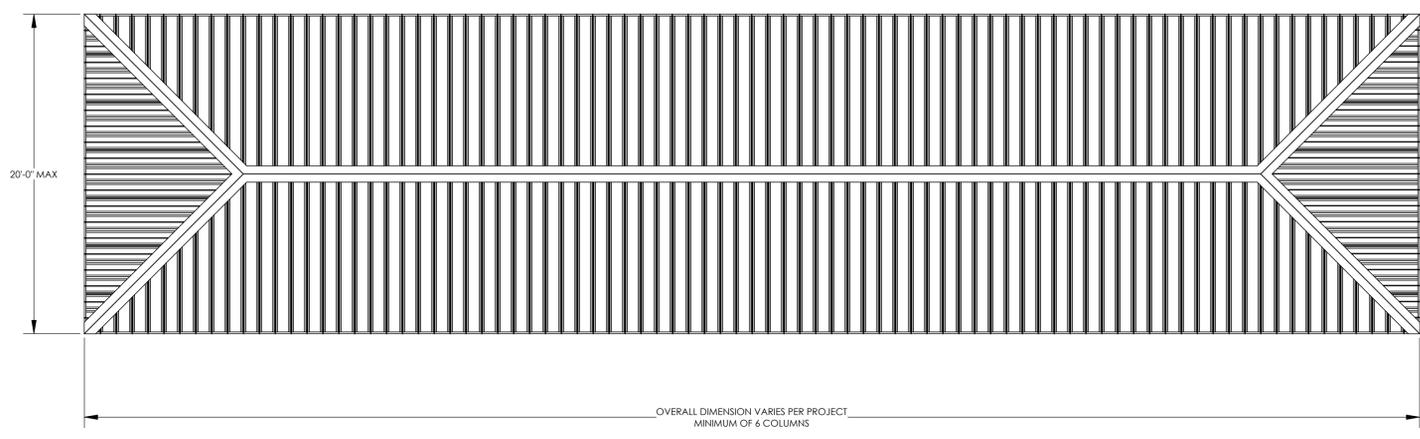
**ARCHITECTURAL**  
**VIEWS**

HIP ROOF - RAM 20

**RAM5.0**

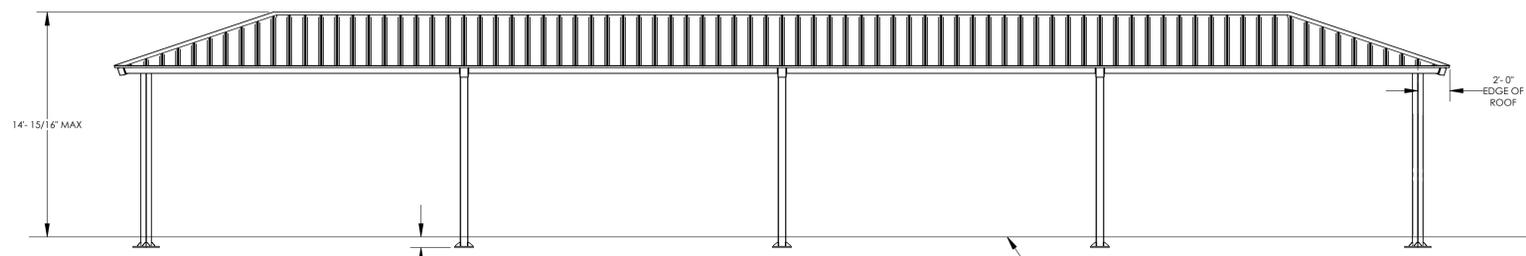


**ISOMETRIC VIEW**  
SCALE: 3/16" = 1'-0"

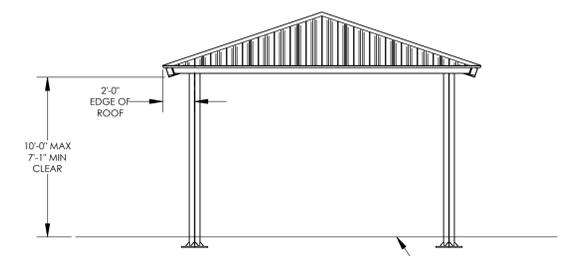


**PLAN VIEW**  
SCALE: 3/16" = 1'-0"

OVERALL DIMENSION VARIES PER PROJECT  
MINIMUM OF 6 COLUMNS



**FRONT ELEVATION**  
SCALE: 3/16" = 1'-0"



**SIDE ELEVATION**  
SCALE: 3/16" = 1'-0"

STATE APPROVALS-SITE

4833 P. AZA, GOLDEN GATE DISTRICT  
SUITE 11  
CAMERON PARK, CA 95822  
530.877.0016



**poligon**  
**PORTER**  
ARCHITECTS



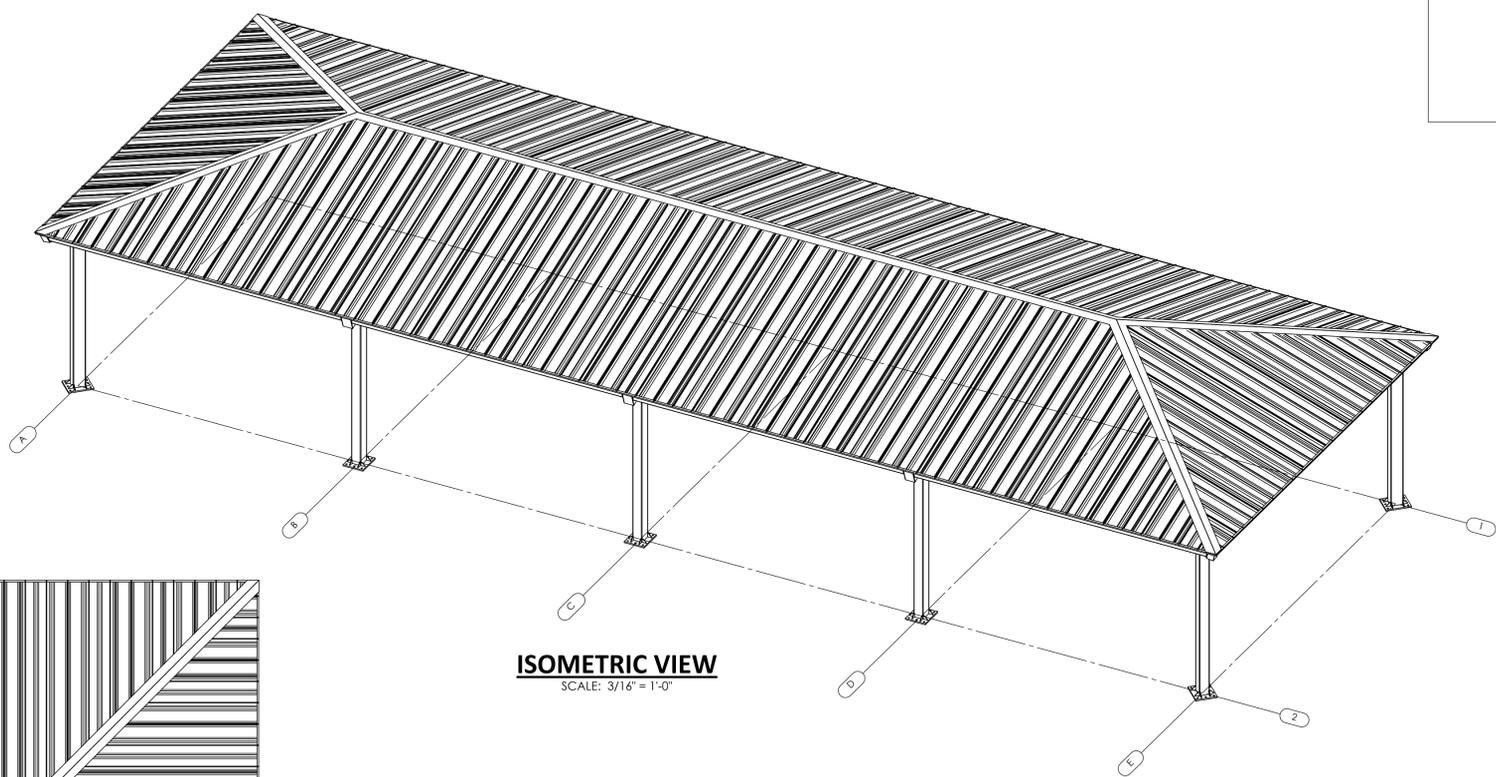
STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

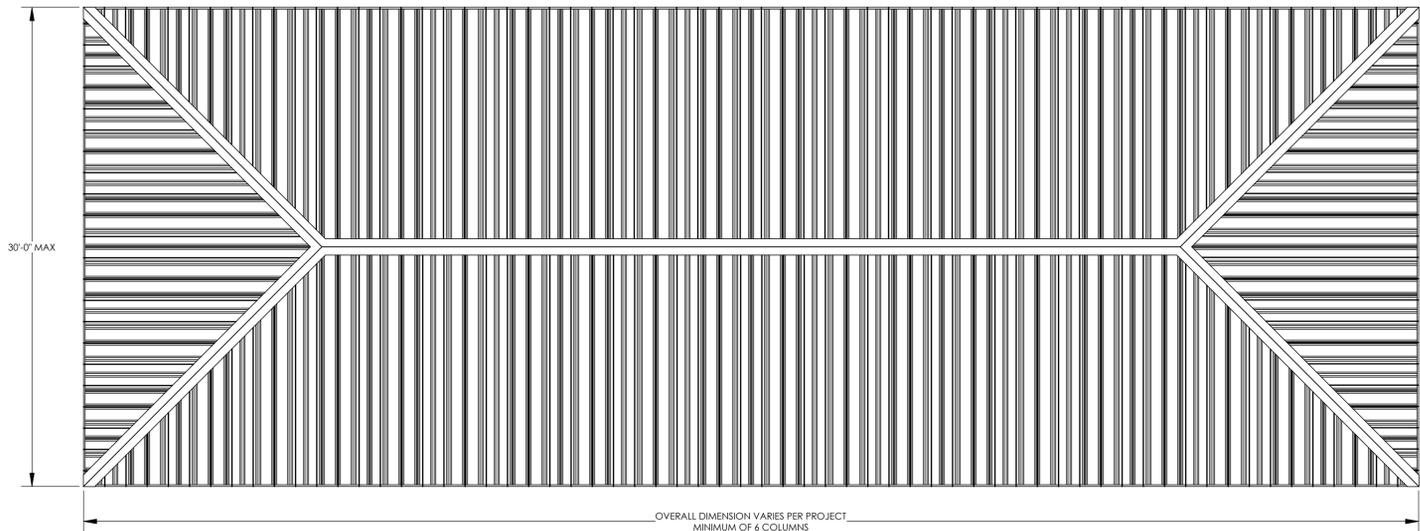
**PRE-CHECK (PC)  
DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

**ARCHITECTURAL  
VIEWS**  
HIP ROOF - RAM 30

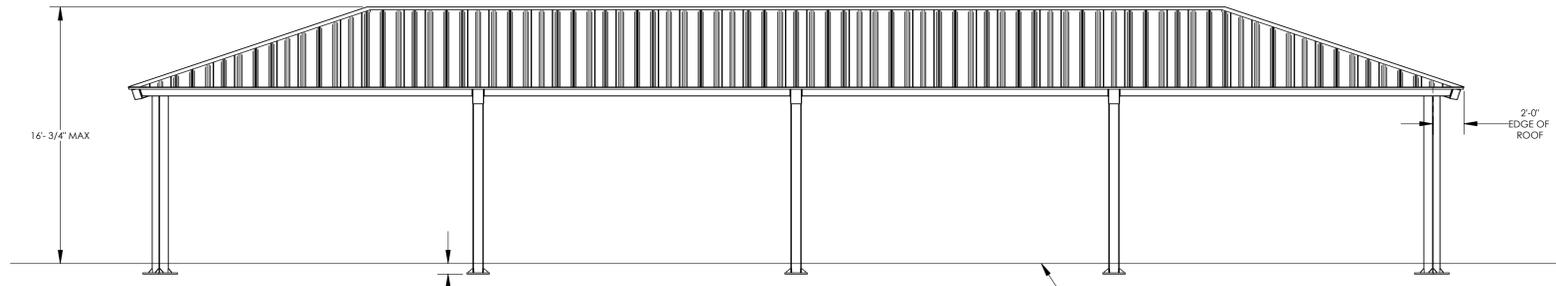
**RAM5.1**



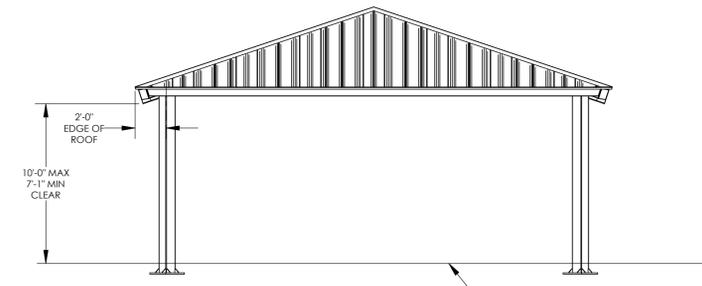
**ISOMETRIC VIEW**  
SCALE: 3/16" = 1'-0"



**PLAN VIEW**  
SCALE: 3/16" = 1'-0"



**FRONT ELEVATION**  
SCALE: 3/16" = 1'-0"



**SIDE ELEVATION**  
SCALE: 3/16" = 1'-0"

**MULTI-RIB NOTES:**

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE SYSTEMS. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. THE DETAILS MAY REQUIRE CHANGES OR REVISIONS DUE TO FIELD CONDITIONS.

IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH ALL ERECTION INSTRUCTIONS BEFORE STARTING WORK.

THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

FLASHING AND TRIM SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ANY EXPOSED FASTENERS EQUALLY SPACED FOR THE BEST APPEARANCE.

SEALANT SHALL BE FIELD APPLIED ON DRY, CLEAN SURFACES. SOME FIELD CUTTING AND FITTING OF PANELS AND FLASHING IS TO BE EXPECTED BY THE ERECTOR AND MINOR FIELD CORRECTIONS ARE A PART OF NORMAL ERECTION WORK.

WORKMANSHIP SHALL BE OF THE BEST INDUSTRY STANDARDS AND INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN.

METAL SHAVINGS FROM DRILLING OR INSTALLATION OF ROOF FASTENERS MUST BE CAREFULLY REMOVED FROM THE ROOF BY BRUSHING OR SWEEPING AT THE END OF EACH DAY DURING INSTALLATION. SHAVINGS LEFT ON THE ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH.

COVER ACCESS HOLES WITH GRACE ICE AND WATER SHIELD BEFORE ATTACHING ROOF DECKING.

METAL ROOFING PRODUCT AND INSTALLATION SHALL MEET ALL REQUIREMENTS OF UL 580.

STATE APPROVALS-SITE

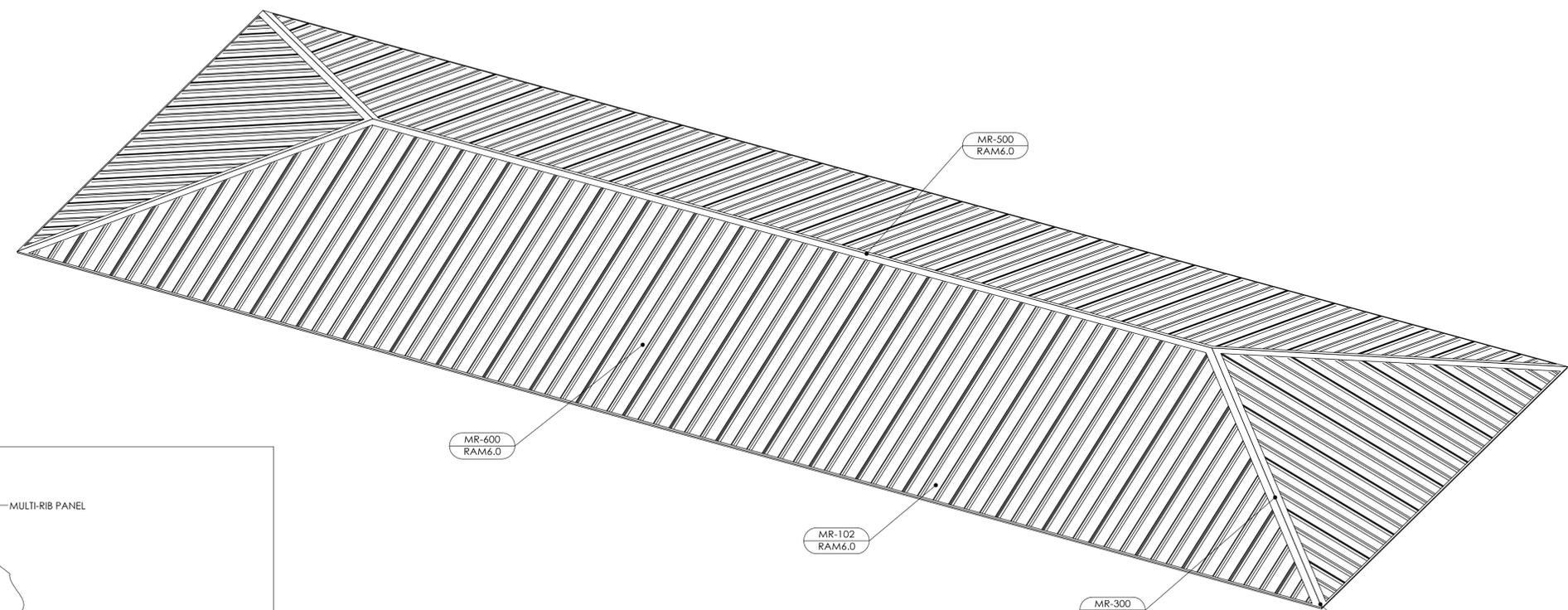
4035 P. AZA, GOLDEN RIDGE, DUBLIN, CA 94568  
 SUITE 111  
 CHAMBERLIN RD. #K, CA 94582  
 (925) 877-1016

**GHD**

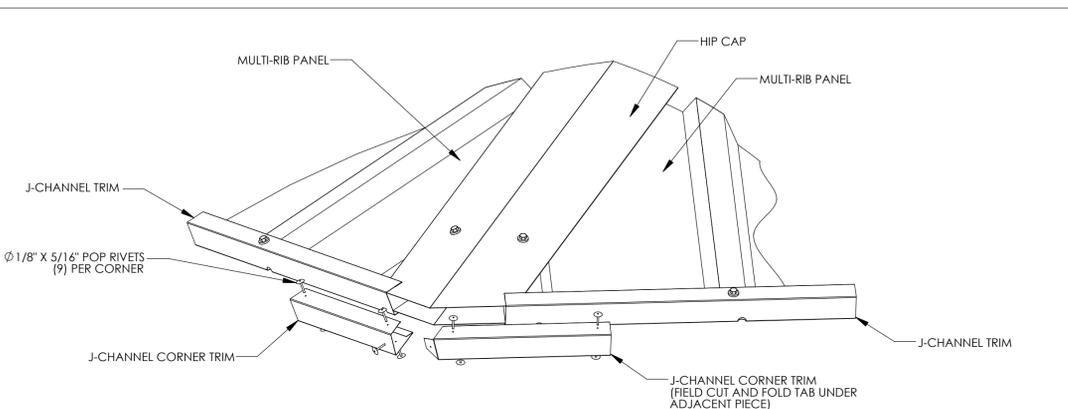
**poligon**

**PORTER**  
 PORTER & PORTER  
 ARCHITECTS

REGISTERED PROFESSIONAL ENGINEER  
 NO. 55478  
 STRUCTURAL  
 STATE OF CALIFORNIA

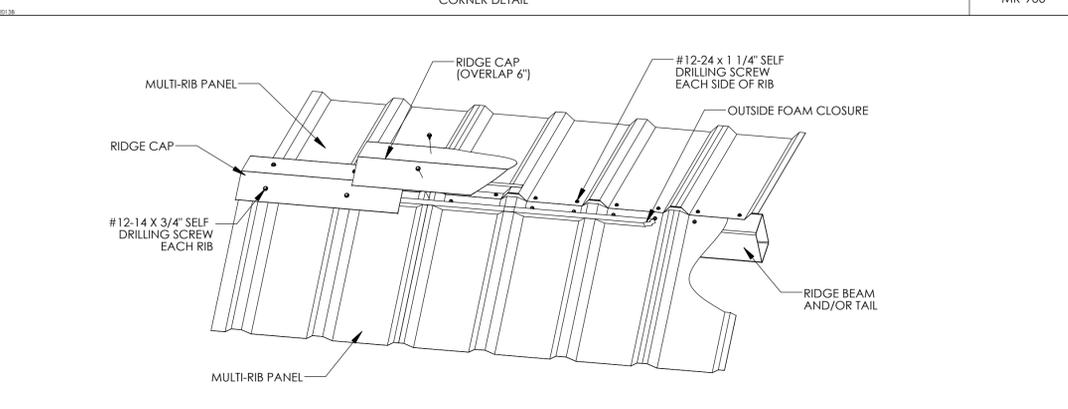


**ISOMETRIC VIEW**  
 SCALE: 3/16" = 1'-0"



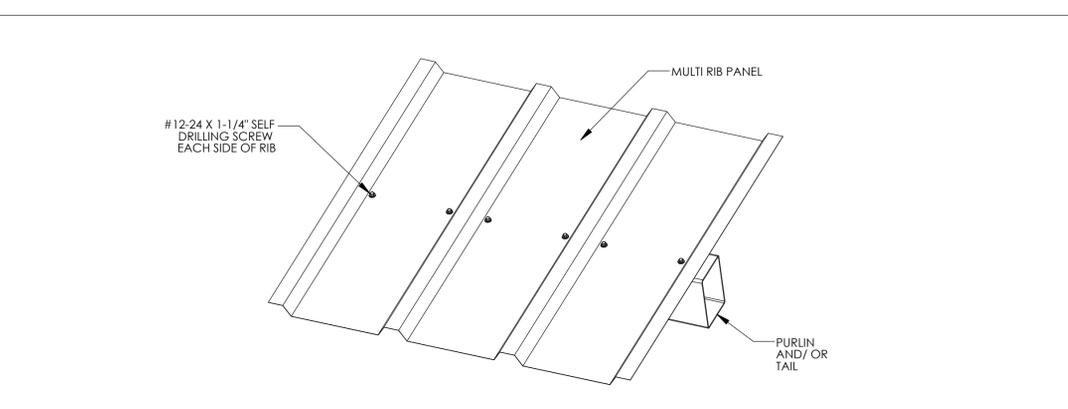
CORNER DETAIL

MR-900



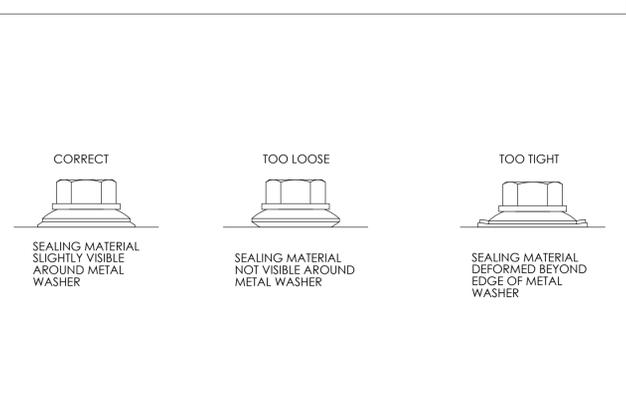
RIDGE DETAIL

MR-500



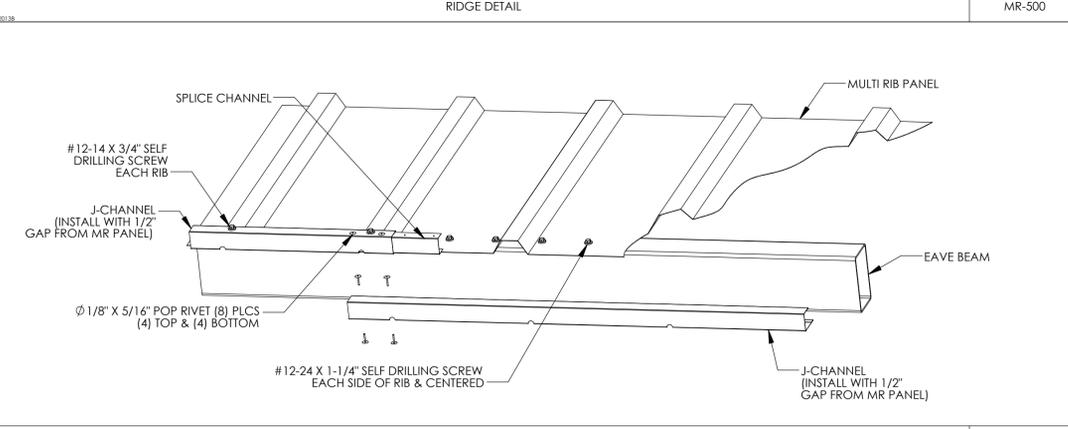
PURLIN DETAIL

MR-600



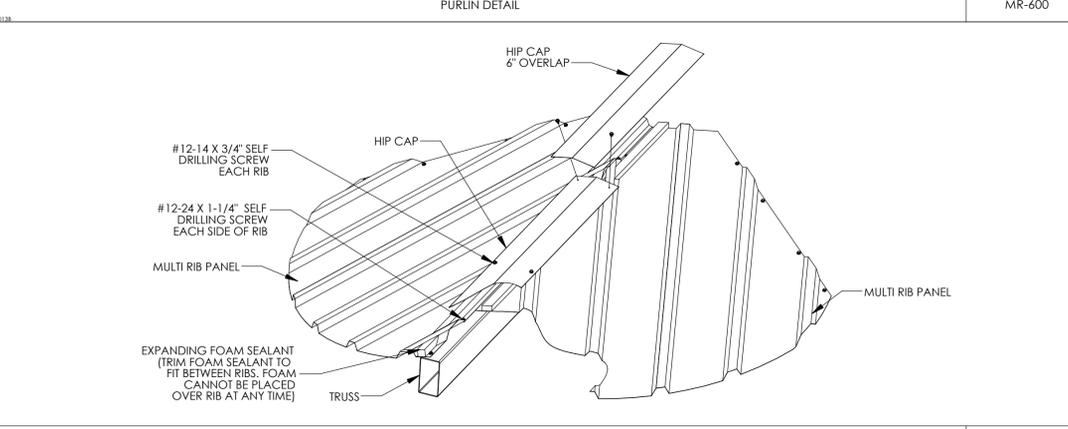
ROOF FASTENER TIGHTENING

MR-950



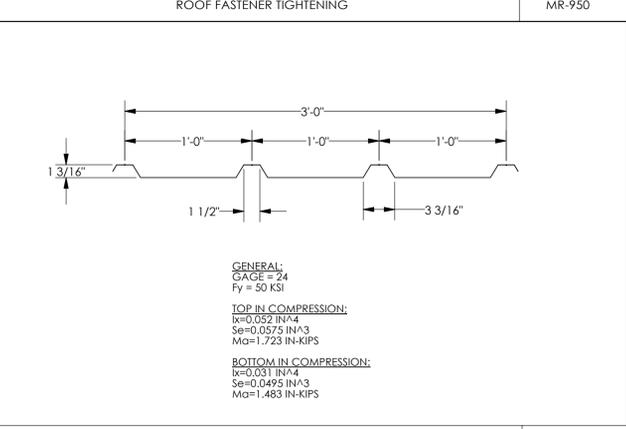
EAVE DETAIL

MR-102



TRUSS DETAIL

MR-300



MR ROOF DECK SECTION PROPERTIES

MR-951

STATE APPROVALS-PC

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 02-121213 PC  
 REVIEWED FOR  
 SS  FLS  ACS  CG   
 DATE: 7/18/2023

**PRE-CHECK (PC)**  
**DOCUMENT**  
 CODE: 2022 CBC  
 A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

**ROOF CONNECTION DETAILS**  
 HIP ROOF - RAM

**RAM6.0**

**STANDING SEAM INSTALLATION NOTES:**

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE SYSTEMS. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. THE DETAILS MAY REQUIRE CHANGES OR REVISIONS DUE TO FIELD CONDITIONS.

IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH ALL ERECTION INSTRUCTIONS BEFORE STARTING WORK.

THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

FLASHING AND TRIM SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ANY EXPOSED FASTENERS EQUALLY SPACED FOR THE BEST APPEARANCE.

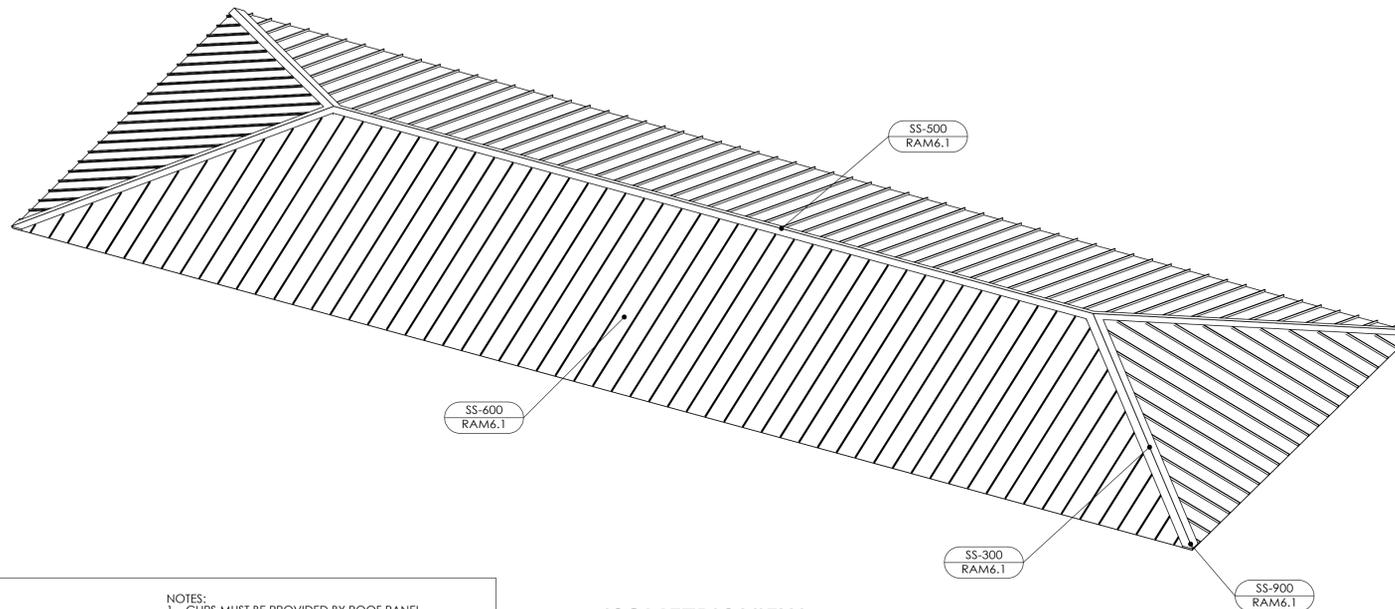
SEALANT SHALL BE FIELD APPLIED ON DRY, CLEAN SURFACES. SOME FIELD CUTTING AND FITTING OF PANELS AND FLASHING IS TO BE EXPECTED BY THE ERECTOR AND MINOR FIELD CORRECTIONS ARE A PART OF NORMAL ERECTION WORK.

WORKMANSHIP SHALL BE OF THE BEST INDUSTRY STANDARDS AND INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN.

METAL SHAVINGS FROM DRILLING OR INSTALLATION OF ROOF FASTENERS MUST BE CAREFULLY REMOVED FROM THE ROOF BY BRUSHING OR SWEEPING AT THE END OF EACH DAY DURING INSTALLATION. SHAVINGS LEFT ON THE ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH.

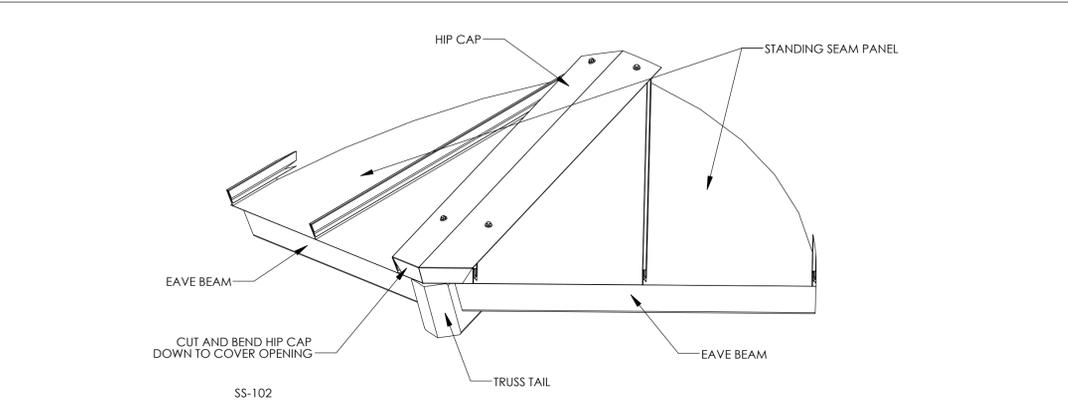
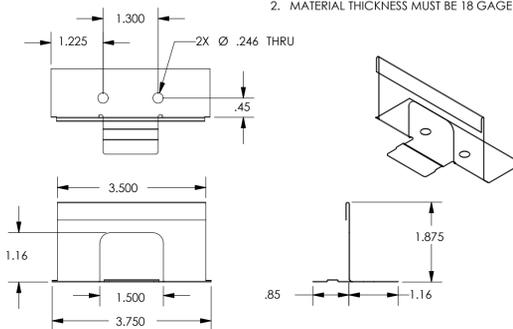
COVER ACCESS HOLES WITH GRACE ICE AND WATER SHIELD BEFORE ATTACHING ROOF DECKING

METAL ROOFING PRODUCT AND INSTALLATION SHALL MEET ALL REQUIREMENTS OF ICC-ES REPORT ESL-1082.

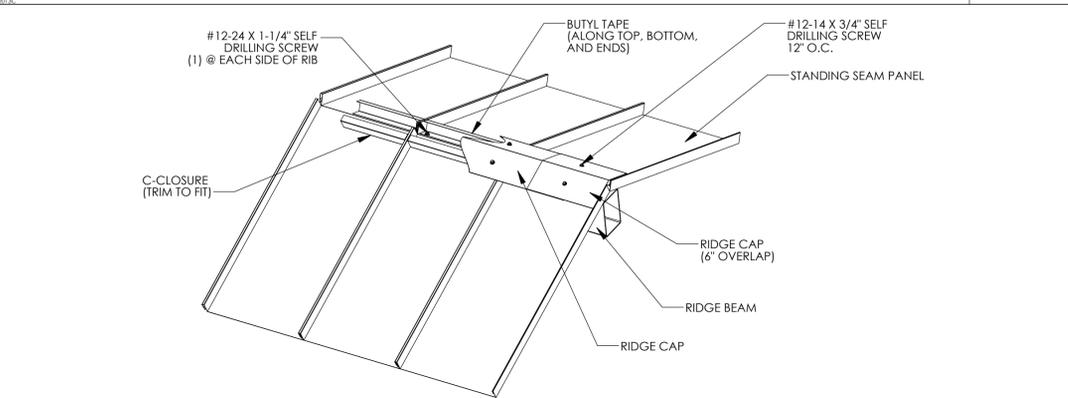


**ISOMETRIC VIEW**  
SCALE: 3/16" = 1'-0"

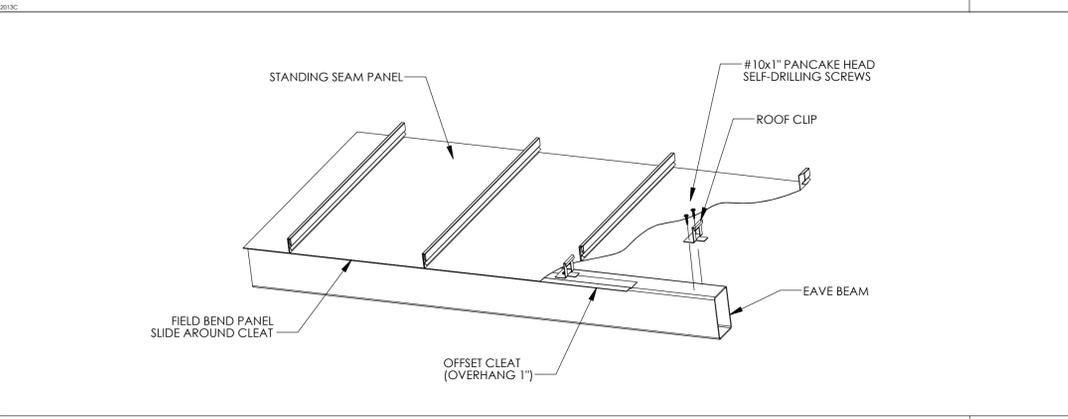
NOTES:  
1. CLIPS MUST BE PROVIDED BY ROOF PANEL MANUFACTURER AS PART OF ROOF SYSTEM.  
2. MATERIAL THICKNESS MUST BE 18 GAGE (0.048"-0.053")



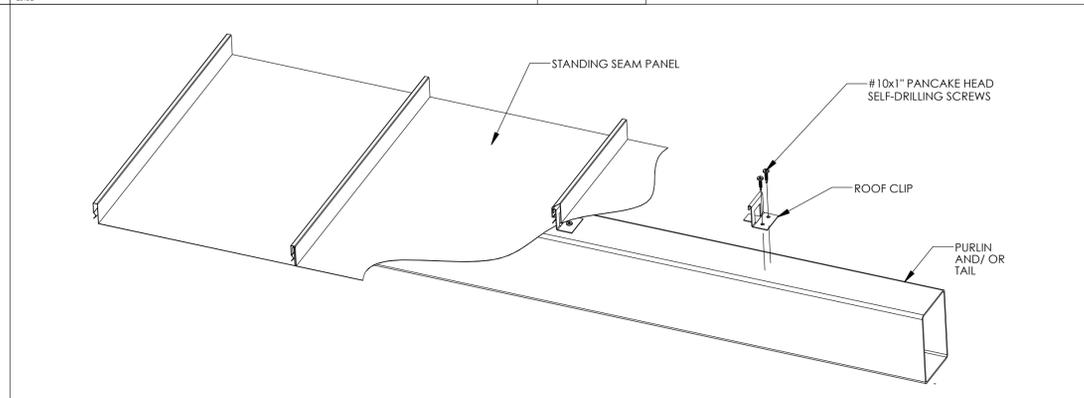
CORNER DETAIL SS-900



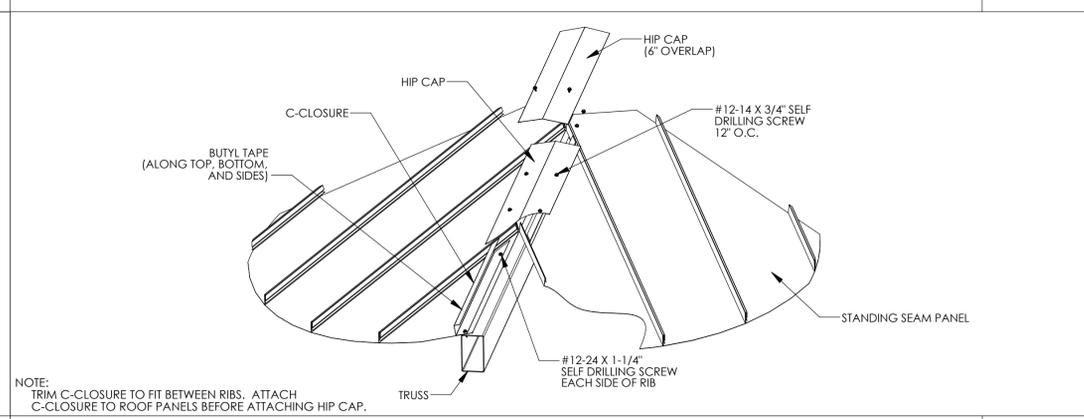
RIDGE DETAIL SS-500



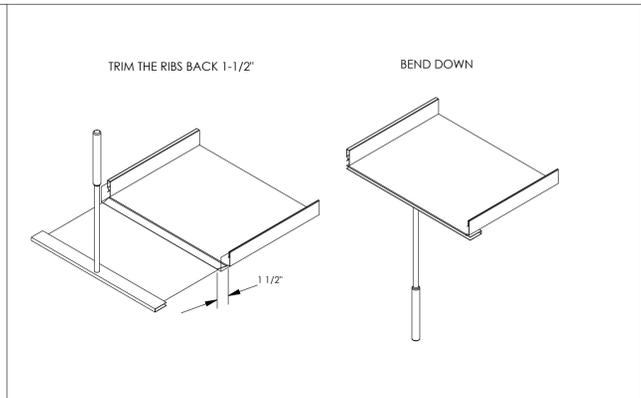
EAVE DETAIL SS-200



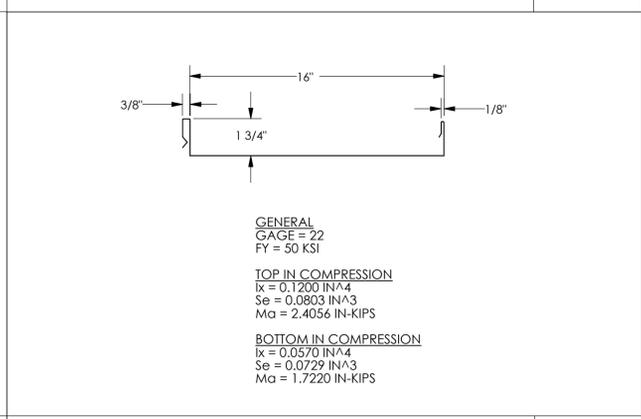
PURLIN DETAIL SS-600



TRUSS DETAIL SS-300



HEMMING DETAIL SS-HEM



ROOF DECK SECTION PROPERTIES SS-950

STATE APPROVALS-SITE

STATE APPROVALS-SITE

4835 P. AZA, GOLDEN RIDGE DRIVE  
SUITE 111  
CHAPARRAL TOWN, CA 91782  
(951) 877-0016

**poligon**  
**PORTER**  
A HANOVER COMPANY

REGISTERED PROFESSIONAL ENGINEER  
JESSICA E. HANER  
No. SS478  
STRUCTURAL  
STATE OF CALIFORNIA

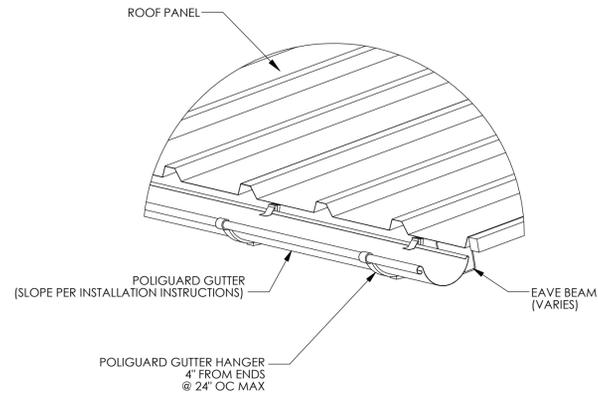
STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

PRE-CHECK (PC)  
DOCUMENT  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

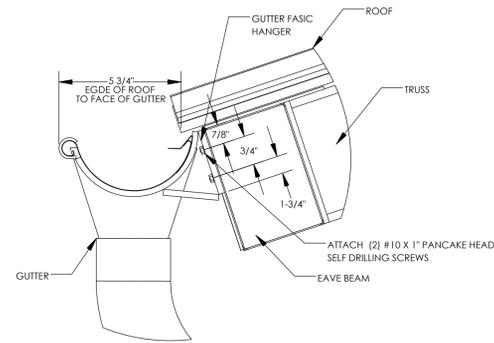
ROOF CONNECTION  
DETAILS  
HIP ROOF - RAM

**RAM6.1**



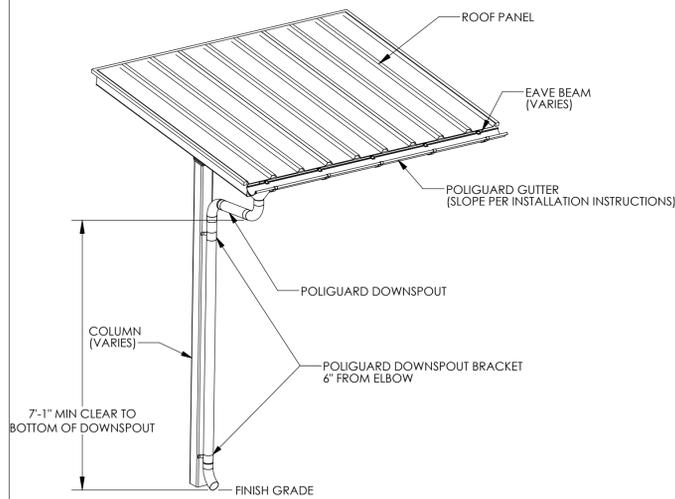
GUTTER DETAIL

GS-100



GUTTER DETAIL

GS-200

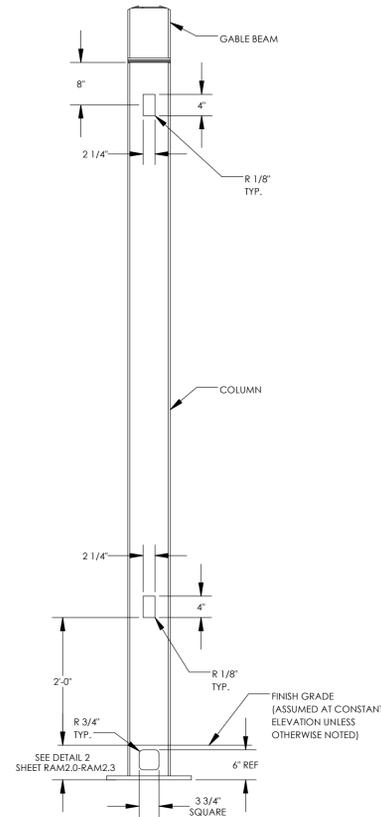


DOWNSPOUT DETAIL

GS-300

**POLIGUARD GUTTER SYSTEM NOTES:**

1. PREFABRICATED GUTTER SYSTEM IS ATTACHED TO THE STRUCTURE AFTER ROOF IS INSTALLED.
2. DETAILED INSTALLATION INSTRUCTIONS ARE SHIPPED WITH THE STRUCTURE.
3. DOWNSPOUTS REQUIRED AT EACH COLUMN.



ELECTRICAL CUTOUT IN COLUMNS

EC-100

**ELECTRICAL CUTOUT NOTES:**

1. MAXIMUM ONE CUTOUT PERMITTED IN EACH MEMBER.
2. CUTOUTS CAN BE PLACED ON ANY SIDE OF A MEMBER.
3. CUTOUTS CAN BE PLACED ALONG MEMBERS AS INDICATED IN THE DETAILS.
4. ARCHITECTS REQUESTING CUTOUTS MUST MARKUP APPROVED PC DRAWINGS TO LOCATE CUTOUTS FOR APPROVAL AND FABRICATION.

STATE APPROVALS-SITE

4086 PULAZA, OCEA, OCEANA, CALIFORNIA  
SUITE 101  
CAMERON PARK, CA 94982  
530.677.2515



**poligon**  
**PORTER**  
ARCHITECTS



STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

**PRE-CHECK (PC)  
DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

MISC DESIGN  
OPTIONS

HIP ROOF - RAM

**RAM7.0**

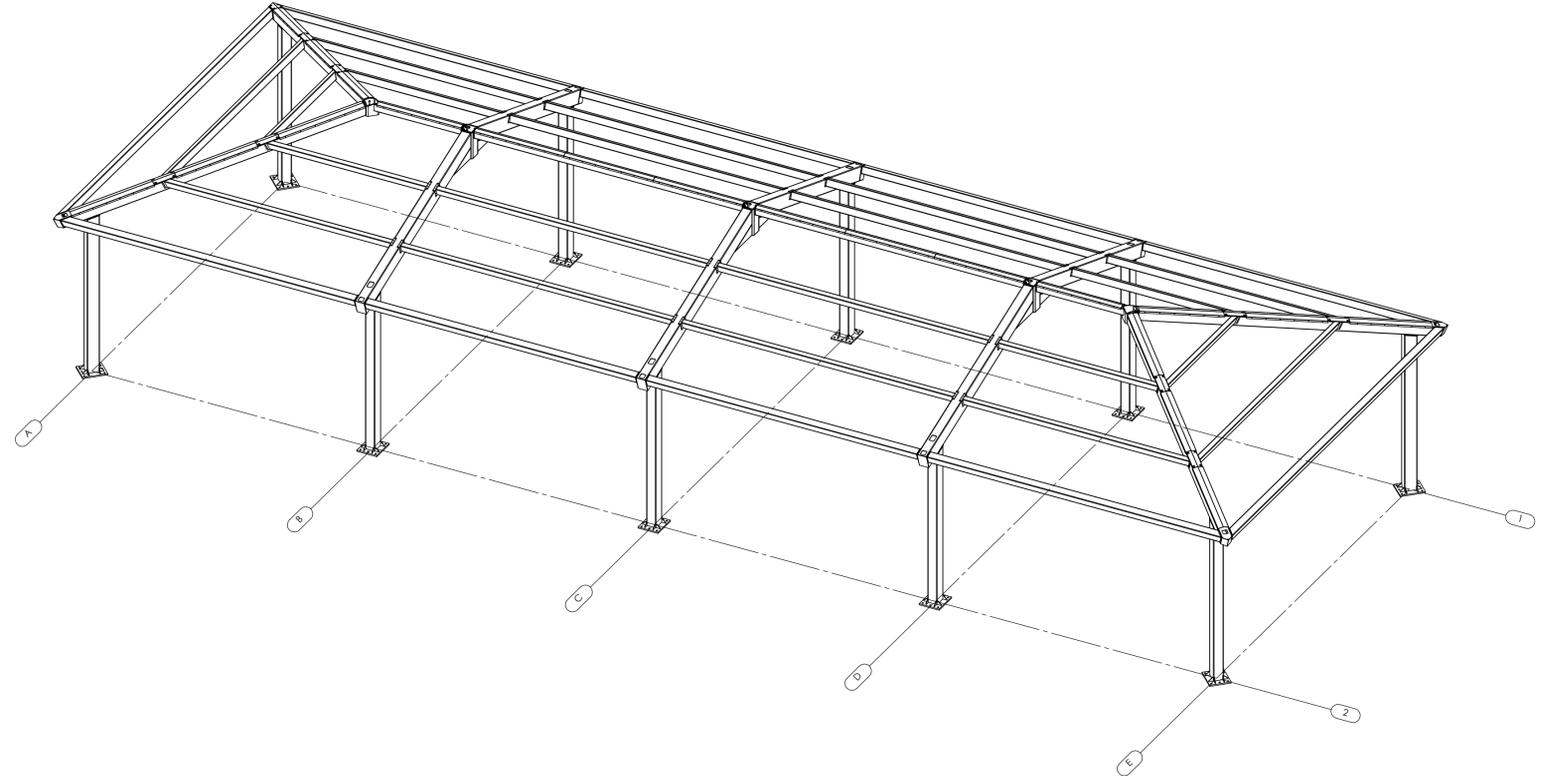
**ELECTRICAL CUTOUT AND ACCESS INSTRUCTIONS**

- IF 'YES' IS NOT SELECTED IN STEP 2 ON ORDER FORM, THEN THIS SHEET NEED NOT BE INCLUDED IN SITE-SPECIFIC DRAWINGS
- ONLY COLUMNS ARE PERMITTED TO HAVE ELECTRICAL ACCESS
- THE COLUMN CUTOUTS ARE STATIC AND SHOWN IN THE 'MISC DESIGN OPTIONS SHEET'
- IDENTIFY THE COLUMNS WITH ELECTRICAL CUTOUTS BELOW (REFERENCE GRID LINES IN ISOMETRIC FRAME VIEW TO THE RIGHT)
- STRUCTURES MAY BE LONGER OR SHORTER THAN THE ISOMETRIC FRAME VIEW SHOWN
- IF SITE-SPECIFIC STRUCTURE HAS A DIFFERENT NUMBER OF COLUMNS THAN ISOMETRIC SHOWN, REFERENCE COLUMN A1 IN THE ISOMETRIC VIEW AND CONTINUE PATTERN TO FIT SITE-SPECIFIC LAYOUT
- IF NO COLUMNS ARE IDENTIFIED, POLIGON WILL ASSUME CUTOUTS ONLY IN COLUMN A1
- CONTACT POLIGON ENGINEERING FOR SPECIAL PROJECT SPECIFIC REQUIREMENTS

<b>ELECTRICAL CUTOUT IDENTIFICATION IN COLUMNS</b>
SPECIFIC MEMBERS _____

**EXAMPLE:**

<b>ELECTRICAL CUTOUT IDENTIFICATION IN COLUMNS</b>
SPECIFIC MEMBERS _____ A1 , B1, F1 _____



STATE APPROVALS-SITE

4033 PLAZA GOLDEN GATE CIRCLE  
SUITE 11  
CAMERON PARK, CA 95822  
530.877.0016

**poligon**  
PORTER  
POLYMER

STATE APPROVALS-PC

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 02-121213 PC  
REVIEWED FOR  
SS  FLS  ACS  CG   
DATE: 7/18/2023

**PRE-CHECK (PC)**  
**DOCUMENT**  
CODE: 2022 CBC  
A SEPARATE PROJECT  
APPLICATION FOR  
CONSTRUCTION IS REQUIRED.

**ELECTRICAL  
CUTOUTS**  
HIP ROOF - RAM

**RAM7.1**