

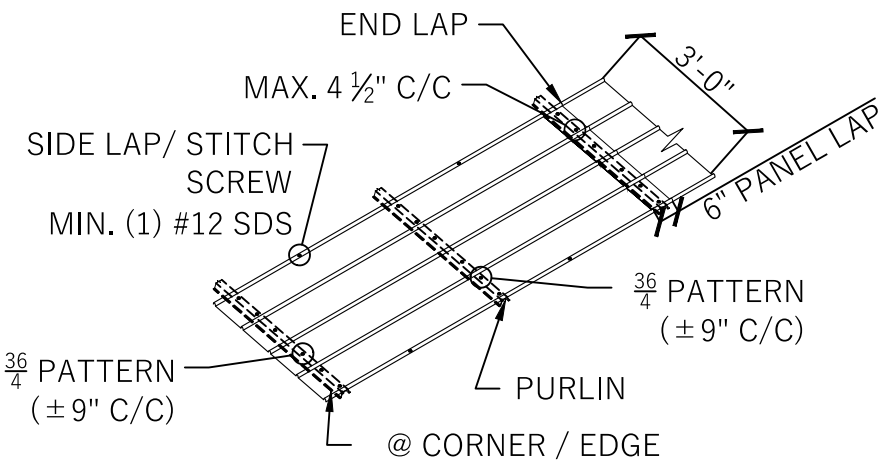
SCOPE OF WORK

1. TO PROVIDE STRUCTURAL DESIGN FOR THE PRE-FAB METAL BUILDING PER THE SPECIFIED DESIGN LOADS, AND APPLICABLE BUILDING CODES. ANY DISCREPANCIES IN DESIGN LOADS SHALL BE BROUGHT TO THE ATTN. OF THE ENGINEER OF RECORD.
2. DOES NOT PROVIDE ANY ARCHITECTURAL, SITE, ZONING, HVAC, ELEC, MECH DESIGN OR REQUIREMENTS. THESE ITEMS MUST BE ADDRESSED BY THEIR RESPECTIVE PROFESSIONALS IN CHARGE.

STRUCTURAL DESIGN CRITERIA

PREVALING CODE:	CBC 2022 (IBC 2021)
USE GROUP:	U
CONSTRUCTION TYPE:	II - B
RISK CATEGORY:	I
BUILDING FOOTAGE:	3000 SQ-FT
DEAD LOAD (D)	
COLLATERAL LOAD	2.00 PSF
ROOF LIVE LOAD	Lr = 20.00 PSF
SNOW LOAD (S)	
GROUND SNOW LOAD	Pg = 12.00 PSF
IMPORTANCE FACTOR	Is = 1.0
THERMAL FACTOR	Ct = 1.2
EXPOSURE FACTOR	Ce = 1.0
ROOF SLOPE FACTOR	Cs = 1.0
FLAT ROOF SNOW LOAD	Pf = 10.08 PSF
SLOPED ROOF SNOW LOAD	Ps = 10.08 PSF

WIND LOAD (W)	Vult = 95 MPH
DESIGN WIND SPEED	
EXPOSURE	C
SEISMIC LOAD (E)	
SS	1.500
S1	0.520
SDs	1.100
SD1	0.870
DESIGN CATEGORY	D
SITE CLASS	D (DEFAULT)
IMPORTANCE FACTOR	Ie = 1.0



SHEATHING FASTENER PATTERN

SCALE: 1/4" : 1'

STRUCTURAL DRAWING INDEX

CODE	CONTENT
S-1	-SPECIFICATIONS -END WALLS ELEVATIONS
S-2	-ELEVATIONS & DETAILS
S-3	-FOUNDATION PLAN & DETAILS
S-4	-FRAME LAYOUT PLAN -DETAILS
S-5	-FRAME SECTION
S-6	-ELEVATIONS FRAMES
S-7	-DETAILS

STRUCTURAL DESIGN NOTES

- ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH CBC 2022, IBC 2021, ASCE7-22, OSHA, AISC 360, AISI 100, AWS D1.3 CODES AND ALL APPLICABLE LOCAL REQUIREMENTS.
- BASE CONNECTIONS SHALL BE PROVIDED AS SHOWN ON FOUNDATIONS DETAILS SHEET.
- ALL MATERIALS IDENTIFIED BY A MANUFACTURER NAME MAY BE SUBSTITUTED WITH MATERIAL EQUAL OR EXCEEDING ORIGINAL.
- ALL SHOP CONNECTIONS SHALL BE WELDED CONNECTIONS. NO FIELD WELDING IS REQUIRED.
- ALL STRUCTURAL FIELD CONNECTIONS SHALL BE #12-14 x 1" SDS (ESR-2196) OR APPROVED EQUAL.
- STEEL SHEATHING SHALL BE 29GA. CORRUGATED GALV. OR PAINTED STEEL - MAIN RIB HT. 3/4" (FY=80 KSI) OR EQ.
- SHEATHING CONNECTIONS SHALL BE #12-14 x 3/4" SDS. NEOPRENE WASHERS ARE REQUIRED.
- ALL STRUCTURAL LIGHT GAUGE TUBING AND CHANNELS SHALL BE ASTM A653 (HSLA) GRADE 50 STEEL (Fy = 50 KSI, Fu = 65 KSI) OR EQUAL.
- STRUCTURAL TUBE TS 2 1/2" x 2 1/2" x 14GA (0.083") IS EQUIVALENT TO TS 2 1/4" x 2 1/4" x 12GA (0.109") AND EITHER ONE MAY BE USED IN LIEU OF THE OTHER.
- 12GA IS DEFINED AS 0.109" THICKNESS. 14GA IS DEFINED AS 0.083" THICKNESS. 26GA IS DEFINED AS 0.019" THICKNESS. 29GA IS DEFINED AS 0.015" THICKNESS.
- GYPSUM BOARD OR DRYWALL FINISH OR ANY BRITTLE BASE MATERIAL IS NOT CONSIDERED OR ACCOUNTED FOR ON THE DESIGN CRITERIA OF THIS STRUCTURE, U.N.O.

LEGEND

- (WD) WALK-IN DOORS (REF. DOOR MFG)
- (WN) WINDOWS
- (H) HEADER

NOTE: ANY DOOR OR WINDOW DESIGN INFORMATION IS NOT COVERED IN THIS PLAN SET AND SHALL BE ADDRESSED BY OTHERS.

ASD LOAD COMBINATIONS:

Strength (ASCE 2.4):

- D + (Lr or 0.7S)
- D + 0.6W
- D + 0.75 (Lr or 0.7S) + 0.75 (0.6W)
- 0.6D + 0.6W
- D + 0.7E_v + 0.7E_h
- D + 0.525E_v + 0.525E_h + 0.1S
- 0.6D - 0.7E_v + 0.7E_h

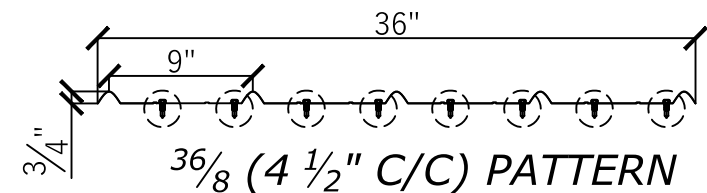
Service:

D + 0.5 (Lr or S) + W_a

SPECIAL INSPECTIONS:

- PERIODIC INSPECTION OF POST INSTALLED CONCRETE ANCHORS PER ICC-ESR OR BUILDING OFFICIAL REQUIREMENTS

NO ADDITIONAL SPECIAL INSPECTIONS ARE REQUIRED FOR THIS STRUCTURE UNLESS EXPLICITLY REQUIRED BY THE BUILDING OFFICIAL.



29GA. - 3/4 " RIB PROFILE

SCALE: 1" : 1'

DESIGN NOTES

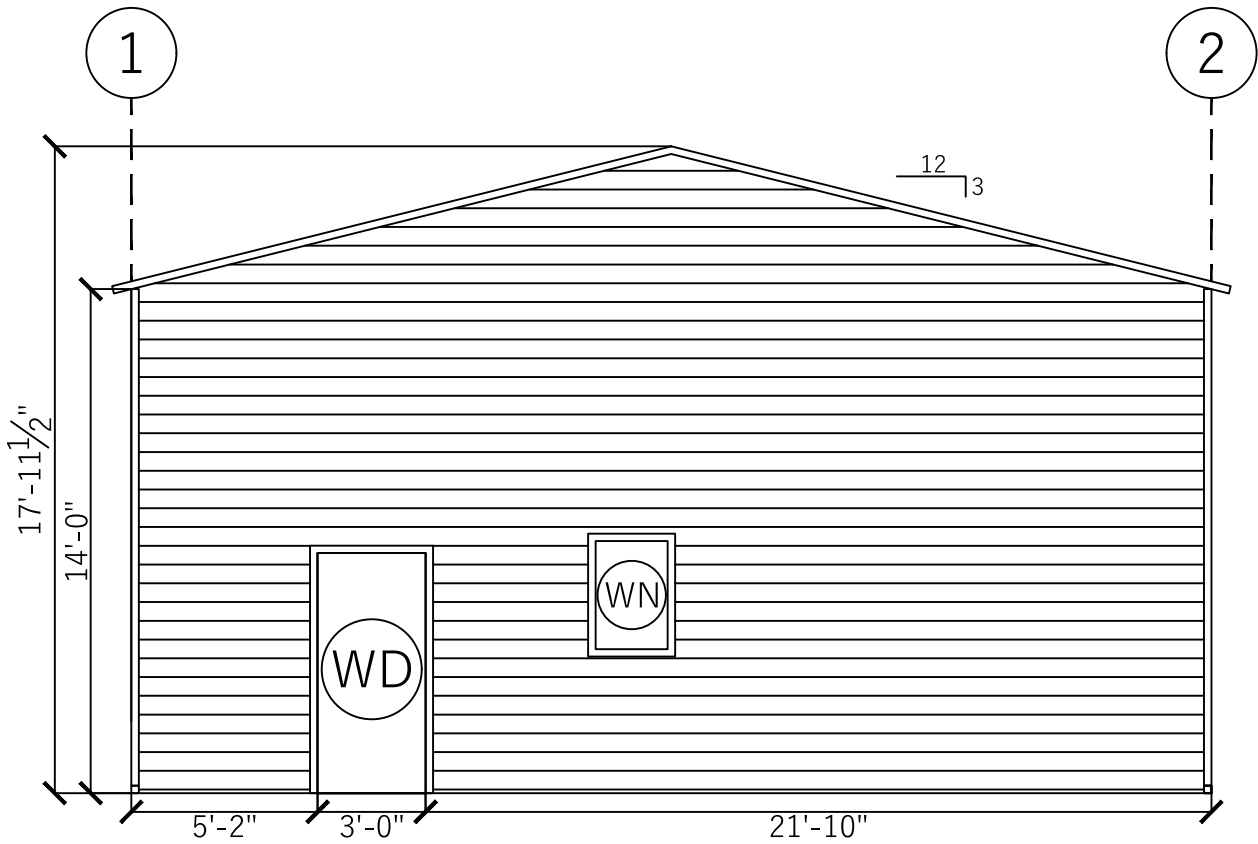
- THE INTENTION OF ELEVATIONS PROVIDED ON THIS SHEET IS TO INDICATE STRUCTURAL COMPONENTS, DIMENSIONS, AND BUILDING ORIENTATION ONLY.
- ARCHITECTURAL DESIGN REQUIREMENTS ARE NOT COVERED IN THIS PLAN SET. THESE DESIGN REQUIREMENTS SHALL BE ADDRESSED IN A SEPARATE ARCHITECTURAL SET BY RESPONSIBLE LICENSED PROFESSIONALS IN CHARGE, AS NEEDED.
- ALL EXT **WALL** SHEATHING SHALL BE: CLASS A RATED 29GA. 3/4" RIB HT - GALV OR PAINTED STEEL (FY=80 KSI) OR EQ.
- ALL EXT **ROOF** SHEATHING SHALL BE: CLASS A RATED 29GA. 3/4" RIB HT - GALV OR PAINTED STEEL (FY=80 KSI) OR EQ.
- LOC OF WALK-IN DOORS OR WINDOWS CAN BE DETERMINED ON SITE AS LONG AS THEY FALL BETWEEN BAYS (BETWEEN FULL FRAMES).
- PER IBC 1507.4.2 PROVIDE LAP SEALANTS PER MANUFACURER'S INSTRUCTION AT ROOF SHEATHING LAPS.

SHEATHING FASTENER SCHEDULE

LOCATION	CORNER PANEL	SIDE LAPS	EDGE LAPS	ELSEWHERE
SPACING	9' C/C	MIN. 1	4 1/2" C/C	9"C/C

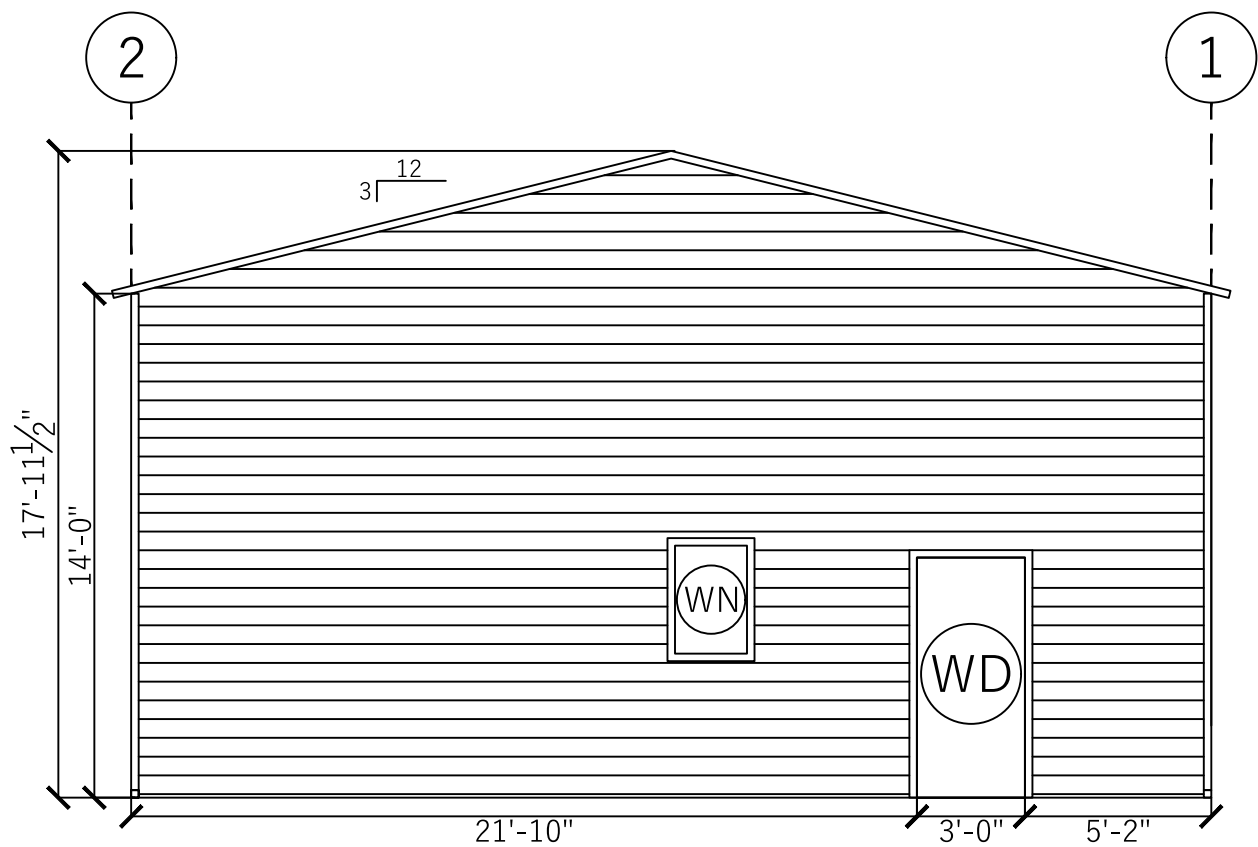
FASTENER TYPE: #12-14 X 1" SELF-DRILL SCREWS (ESR-2196) W/ NEOPRENE/STEEL WASHER

MEMBER PROPERTIES	
LOCATION	PROPERTY
COLUMN POST	(2) 2 1/2" SQ X 12GA TUBES - STITCH WELDED
WALL END POST	2 1/2" SQ X 14GA TUBE
INTERIOR WALL	(2) 2 1/2" SQ X 12GA TUBES - STITCH WELDED
ROOF MEMBER	2 1/2" SQ X 14GA TUBE
BASE RAIL	2 1/2" SQ X 14GA TUBE
KNEE BRACE	2 1/2" SQ X 12GA TUBE
PEAK BRACE	2 1/2" SQ X 14GA TUBE
DIAGONAL BRACE	2 " SQ X 12GA TUBE
HORIZONTAL BRACE	2 " SQ X 12GA TUBE
PURLINS	4" X 1" X 14GA HAT CHANNEL
CONNECTOR SLEEVE	2 1/4" SQ X 12GA TUBE



FRONT END WALL ELEVATION

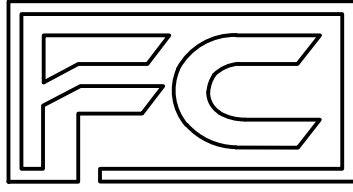
SCALE: 3/16" : 1'



REAR END WALL ELEVATION

SCALE: 3/16" : 1'

METAL BUILDING
MANUFACTURER



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SEAL BELOW



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PROJECT TITLE

PROJECT LOCATION

GENE BROTT

15884 KUGELMAN ST.,
LOWER LAKE, CA, 95457

REVISIONS

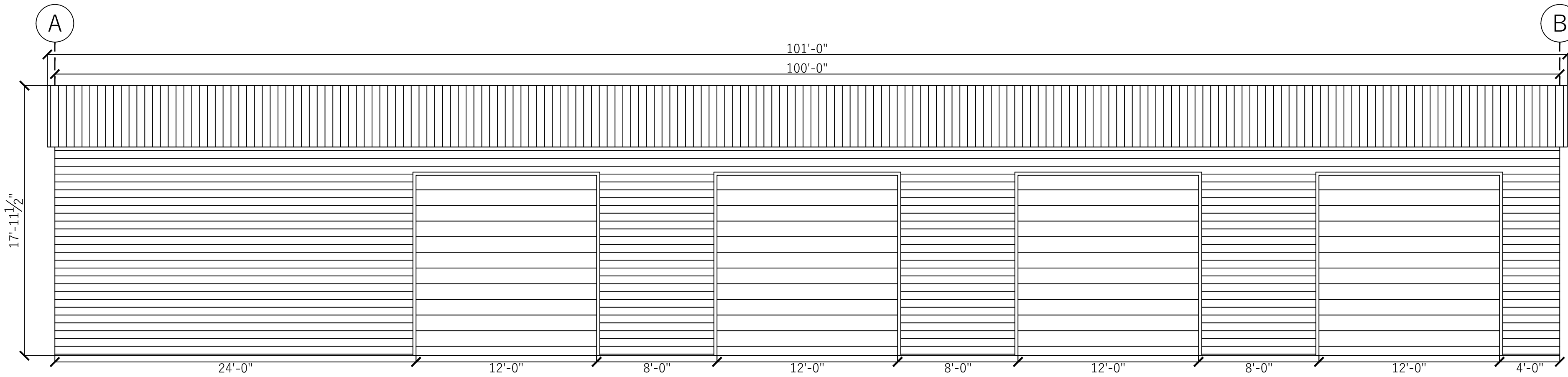
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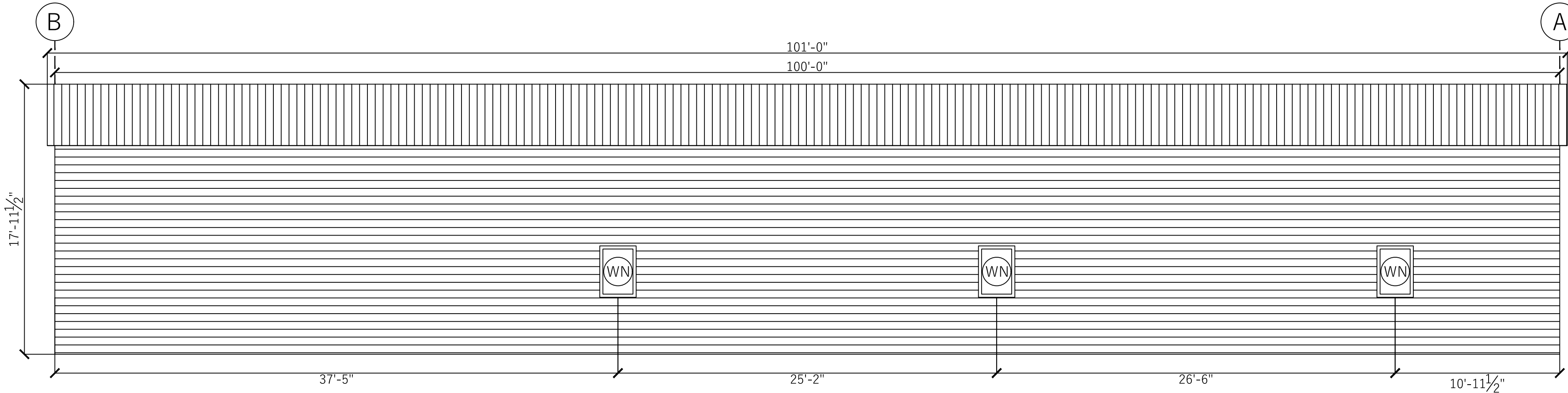
SPECIFICATIONS &
END WALLS
ELEVATIONS

NUMBER SHEET

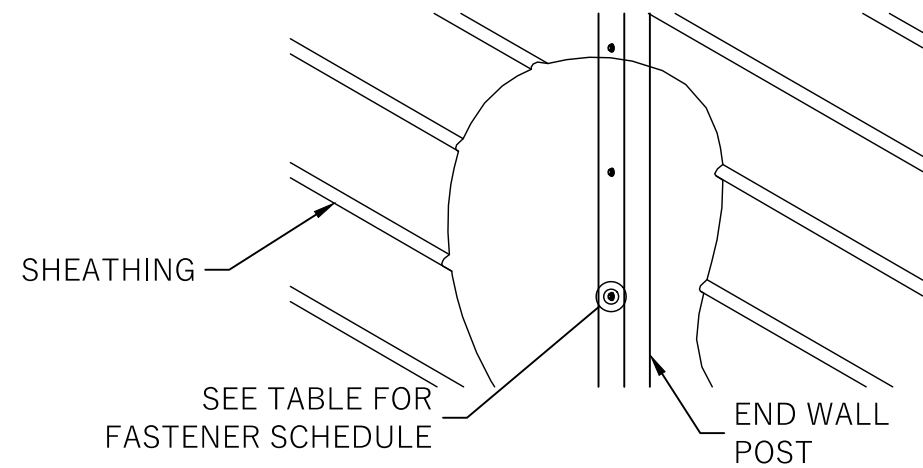
S - 1



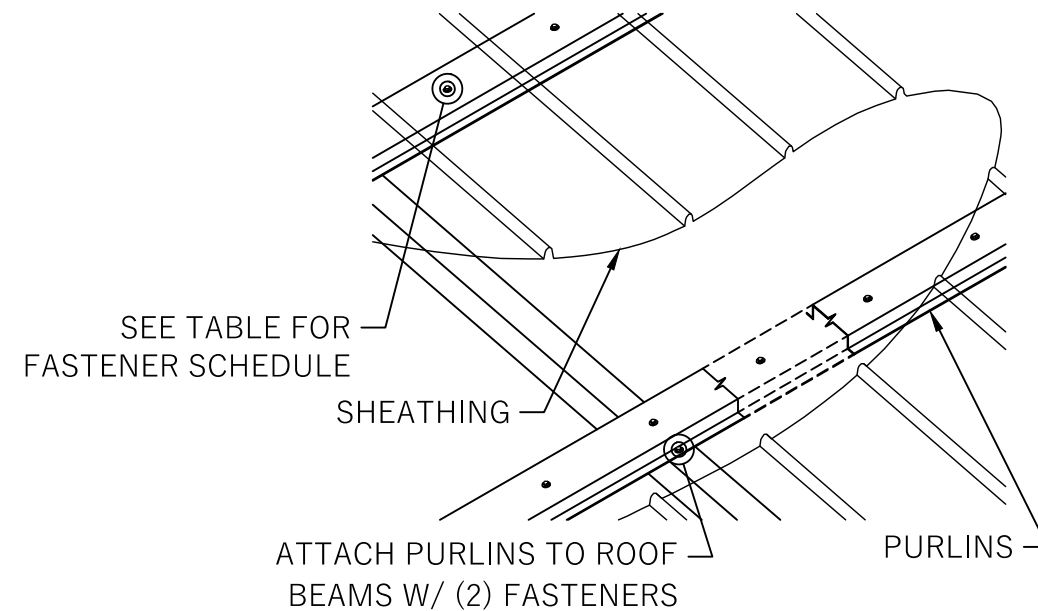
RIGHT WALL ELEVATION
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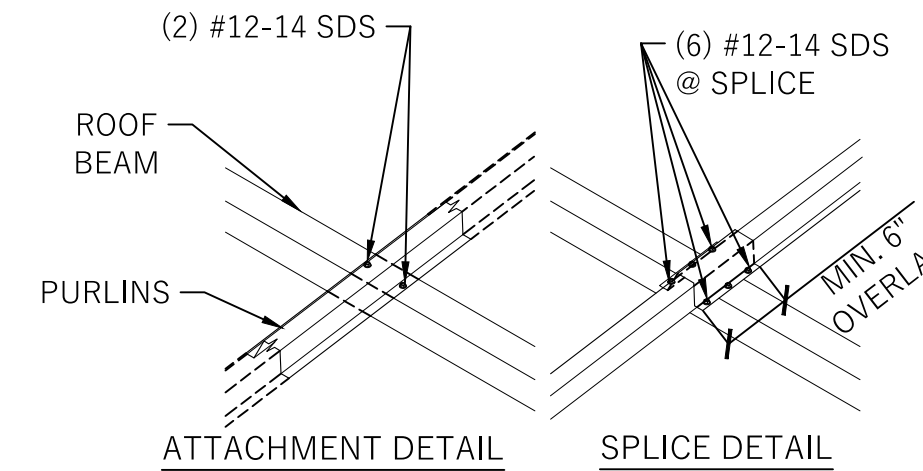
LEFT WALL ELEVATION
SCALE: 3/16" : 1'



WALL SHEATHING DETAIL
SCALE: 3/4" : 1'



ROOF SHEATHING DETAIL
SCALE: 3/4" : 1'



PURLIN DETAIL
SCALE: 3/4" : 1'

METAL BUILDING MANUFACTURER

FC
STEEL STRUCTURES

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REGISTERED PROFESSIONAL ENGINEER
SUKHDEEP NAGRA
C84908
Exp. 03-31-2026
STATE OF CALIFORNIA

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TITLE SHEET

ELEVATIONS & DETAILS

NUMBER SHEET

S - 2

FOUNDATION NOTES:

- 1. MIN. SLAB SIZE SHALL BE 100' X 30' TO ALLOW A MIN. OF 4" ANCHOR-TO-CONCRETE EDGE DISTANCE.
- 2. CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- 3. CONCRETE ANCHORS SHALL BE LOCATED AS SHOWN ON THE FOUNDATION PLAN WITH A MINIMUM OF (1) ANCHOR PER POST.
- 4. DEPTH OF SLAB TURN DOWN FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- 5. DEPTH OF FOOTINGS SHALL EXTEND INTO UNDISTURBED SOIL OR COMPACTED ENGINEERING FILL.
- 6. ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- 7. CONCRETE STRENGTH TO BE A MIN OF 3000 PSI @ 28 DAYS. SPECIAL INSPECTION IS NOT REQUIRED AS ALL CONCRETE FOUNDATION DESIGN IS BASED ON A MAX COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
- 8. CONCRETE SLAB TO SLOPE A MIN OF 1/8" FOR EVERY 12" TOWARDS LARGE OPENING(S) TO ALLOW DRAINAGE, IF INTENDED USE IS A GARAGE.
- 9. IF LEVELING CURB IS REQUIRED, CONTACT METAL BUILDING MANUFACTURER FOR DETAILS BEFORE PROCEEDING. MIN 8" WIDE CURB REQ.

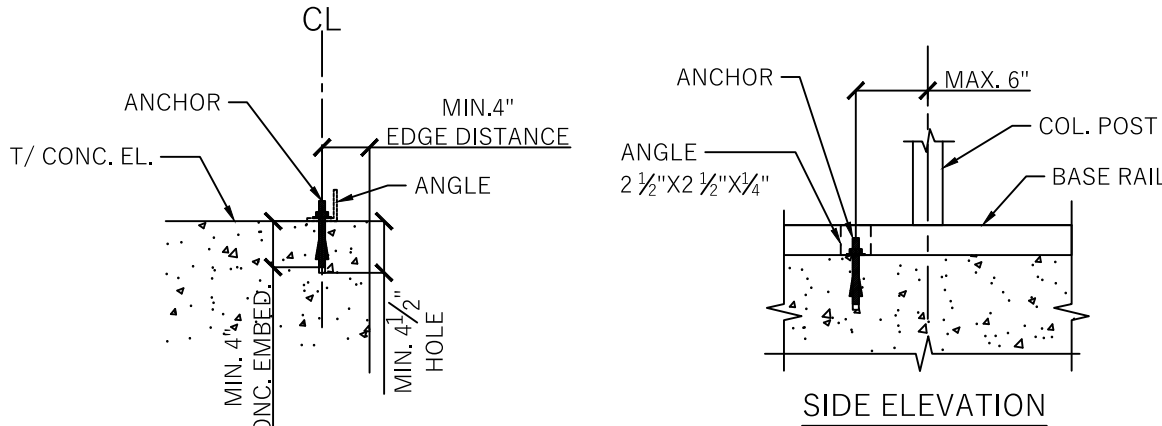
ANCHORAGE NOTES:

- 1. ANCHOR INSTALLATION REQUIREMENTS:
 - MIN. ANCHOR EDGE DISTANCE: 4"
 - MIN. ANCHOR HOLE DEPTH: 4"
 - MIN. CONCRETE EMBEDMENT DEPTH: 3 3/4"
 - MIN. EFFECTIVE EMBEDMENT: 3 1/4"
 - MIN. SPACING BETWEEN (2) ANCHORS: 5"
- 2. ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.
- 3. ALL ANCHORS TO BE A307 EQUIVALENT OR BETTER ANCHORS TO BE INSTALLED PER MANUFACTURER'S REQ.

CONCRETE ANCHORAGE	
ANCHOR (A)	1/2" Ø X 7" LG. POWER-STUD+ SD1 EXPANSION ANCHOR (PER ESR 2818)

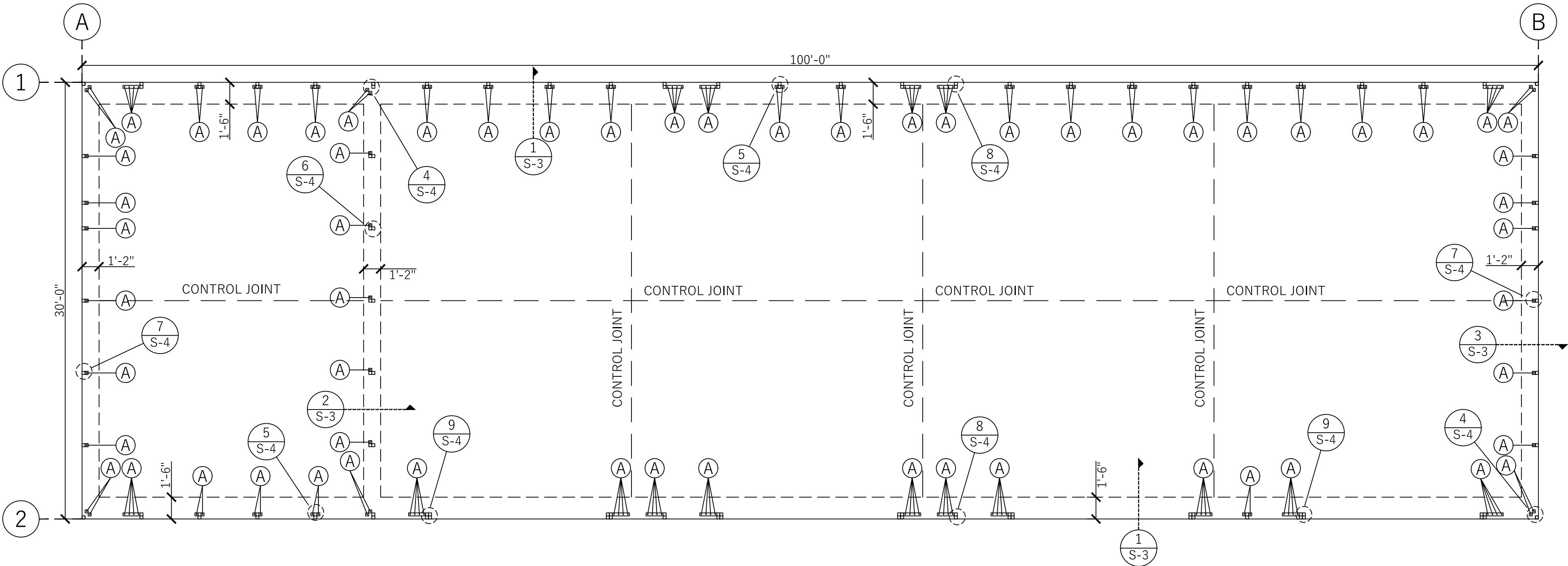
REINFORCEMENT NOTES:

- 1. REINFORCING STEEL: DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, WITH A MINIMUM YIELD OF 60 KSI FOR ALL BARS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- 2. WELDED WIRE FABRIC: ASTM A185 USING BRIGHT STEEL WIRE MEETING THE REQUIREMENTS OF ASTM A82. GAUGES AND DIMENSIONS AS NOTED ON THE DRAWINGS. PROVIDE IN FLAT SHEETS OR ROLLS.



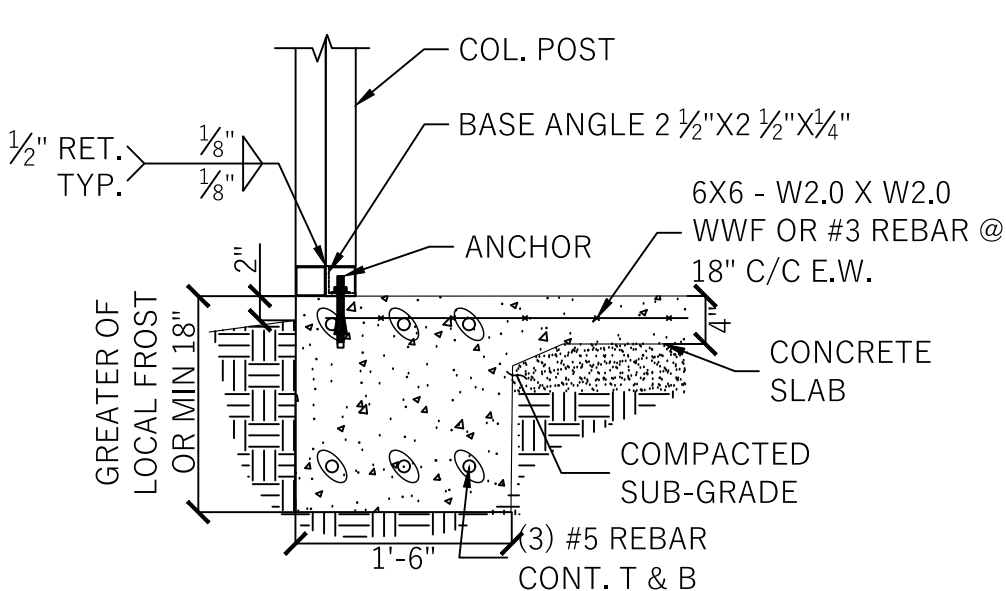
ANCHORAGE DETAIL

SCALE: 3/4" : 1'



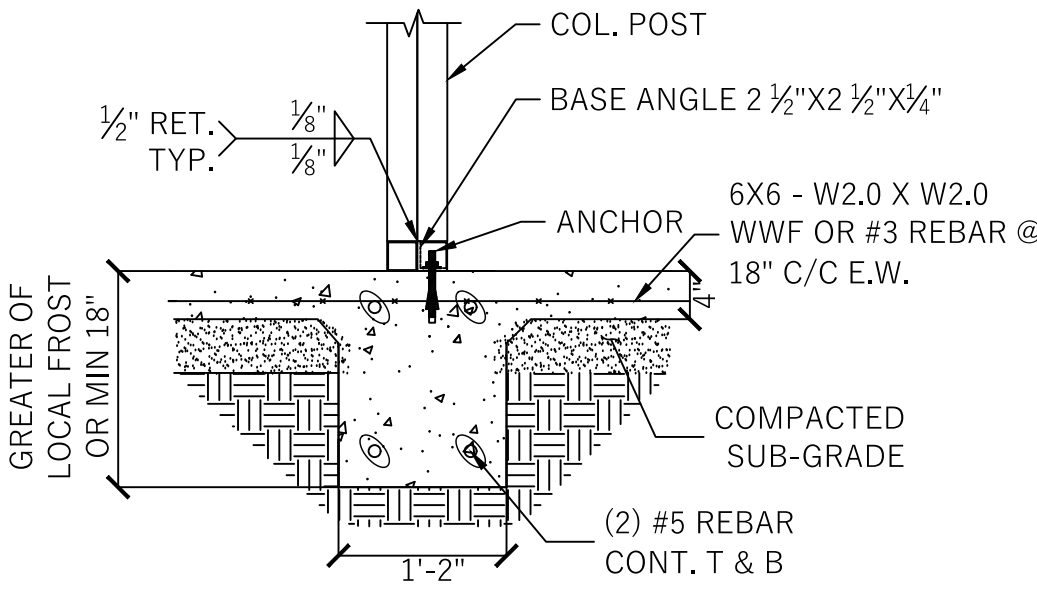
FOUNDATION PLAN

SCALE: 3/16" : 1'



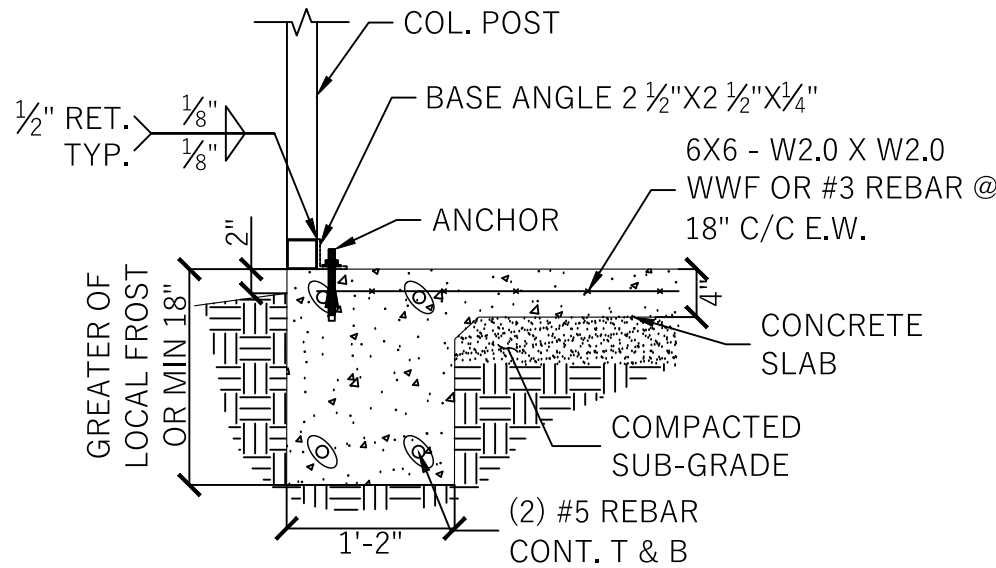
1 FOUNDATION DETAIL

SCALE: 3/4" : 1'



2 FOUNDATION DETAIL

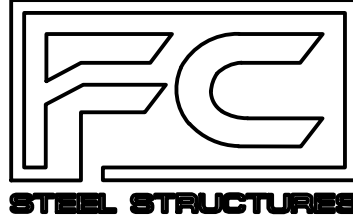
SCALE: 3/4" : 1'



3 FOUNDATION DETAIL

SCALE: 3/4" : 1'

METAL BUILDING MANUFACTURER



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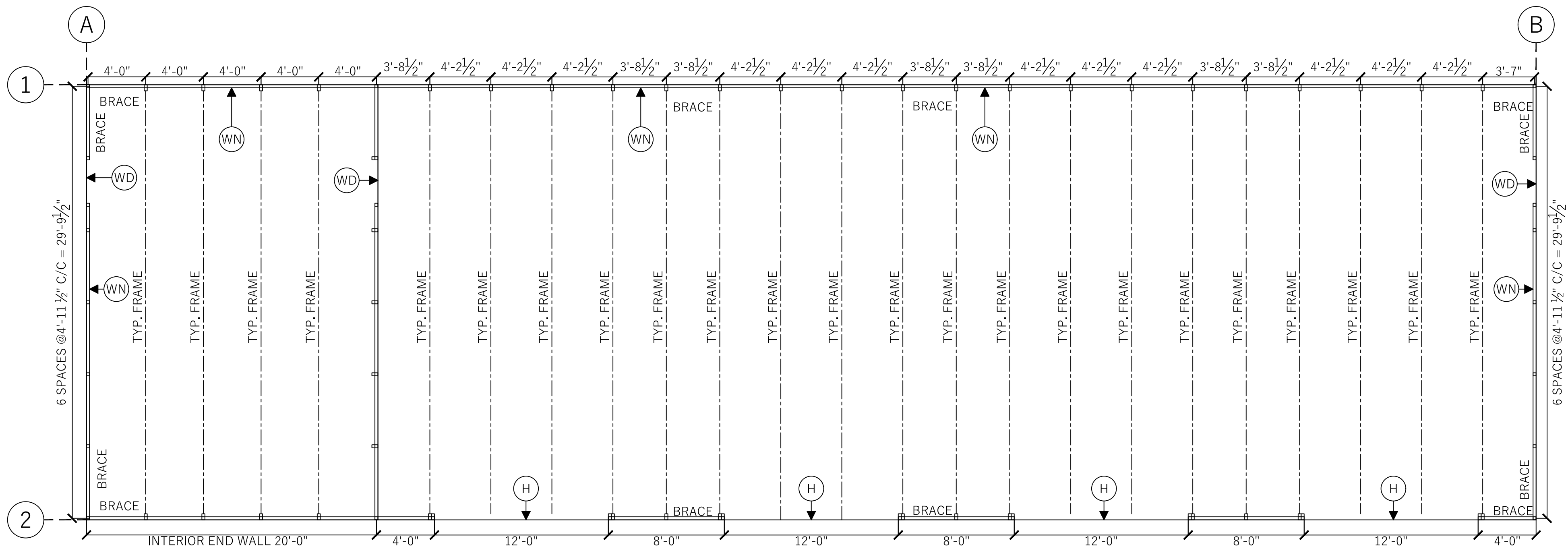
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TITLE SHEET

FOUNDATION PLAN & DETAILS

NUMBER SHEET

S - 3



LEGEND

(WD) WALK-IN DOORS (REF. DOOR MFG)

(WN) WINDOWS

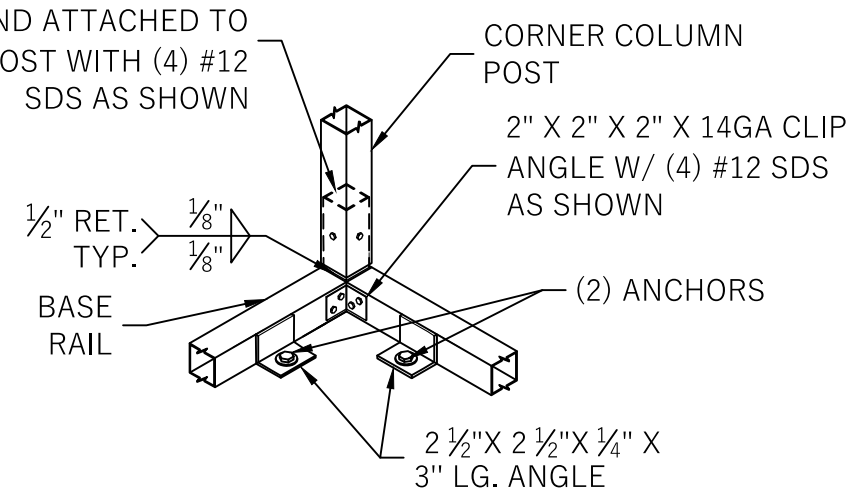
(H) HEADER

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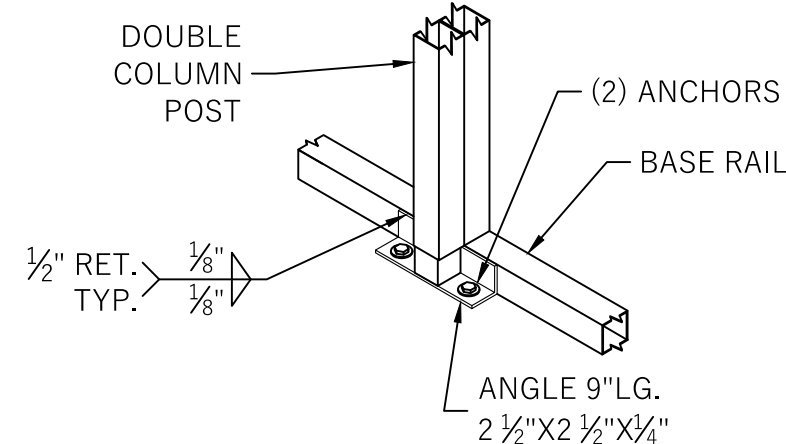
FRAME LAYOUT PLAN

SCALE: 3/16" : 1'

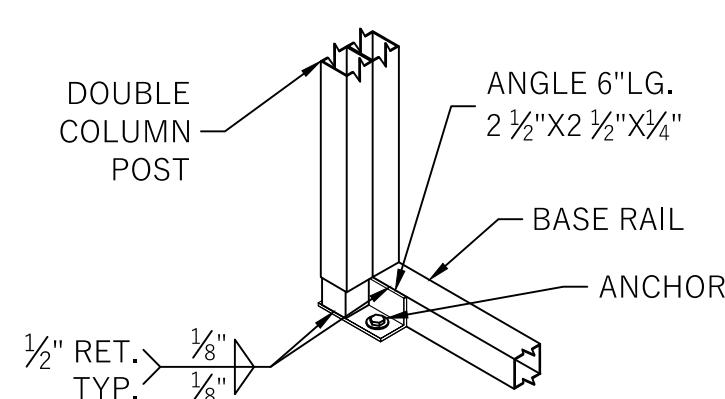
6" SLEEVE WELDED TO BASE RAIL AND ATTACHED TO COLUMN POST WITH (4) #12 SDS AS SHOWN



4 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'

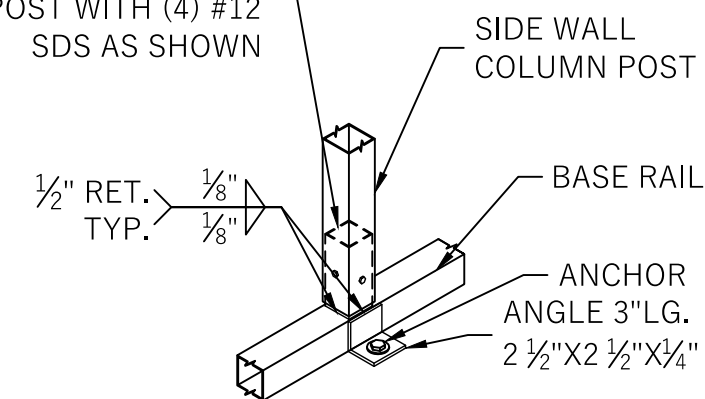


5 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'

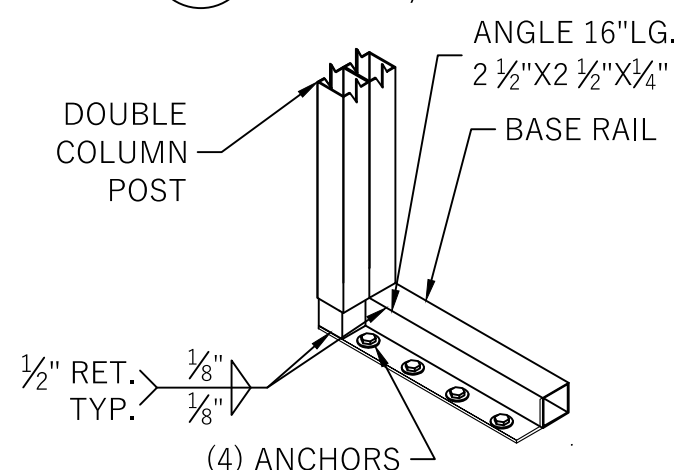


6 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'

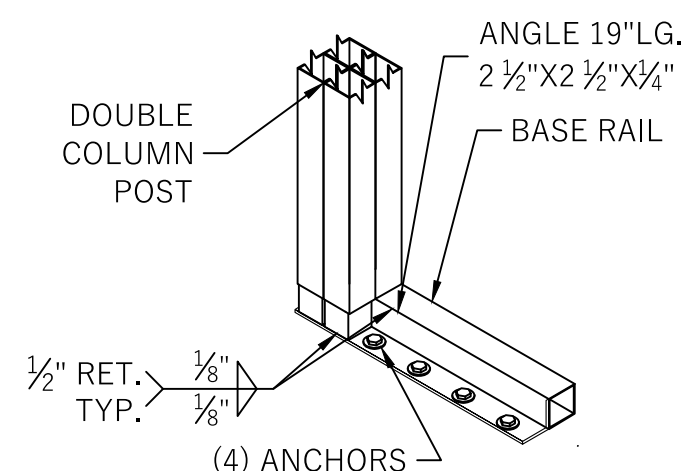
6" SLEEVE WELDED TO BASE RAIL AND ATTACHED TO COLUMN POST WITH (4) #12 SDS AS SHOWN



7 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'

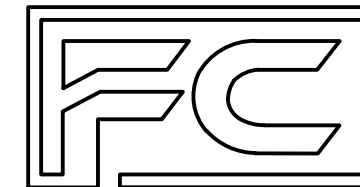


8 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'



9 BASE CONNECTION DETAIL
SCALE: 3/4" : 1'

METAL BUILDING
MANUFACTURER



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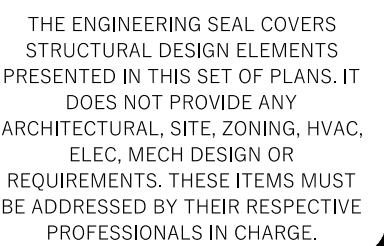
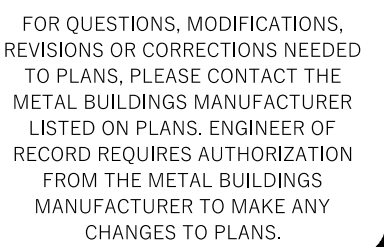
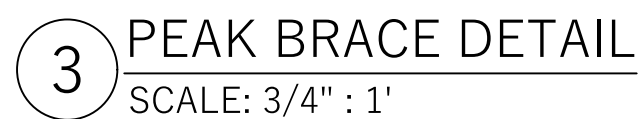
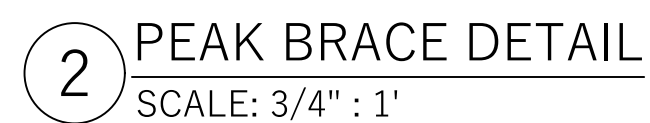
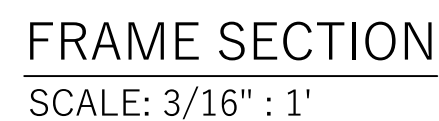
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TITLE SHEET

FRAME LAYOUT PLAN

NUMBER SHEET

S - 4



PROJECT LOCATION

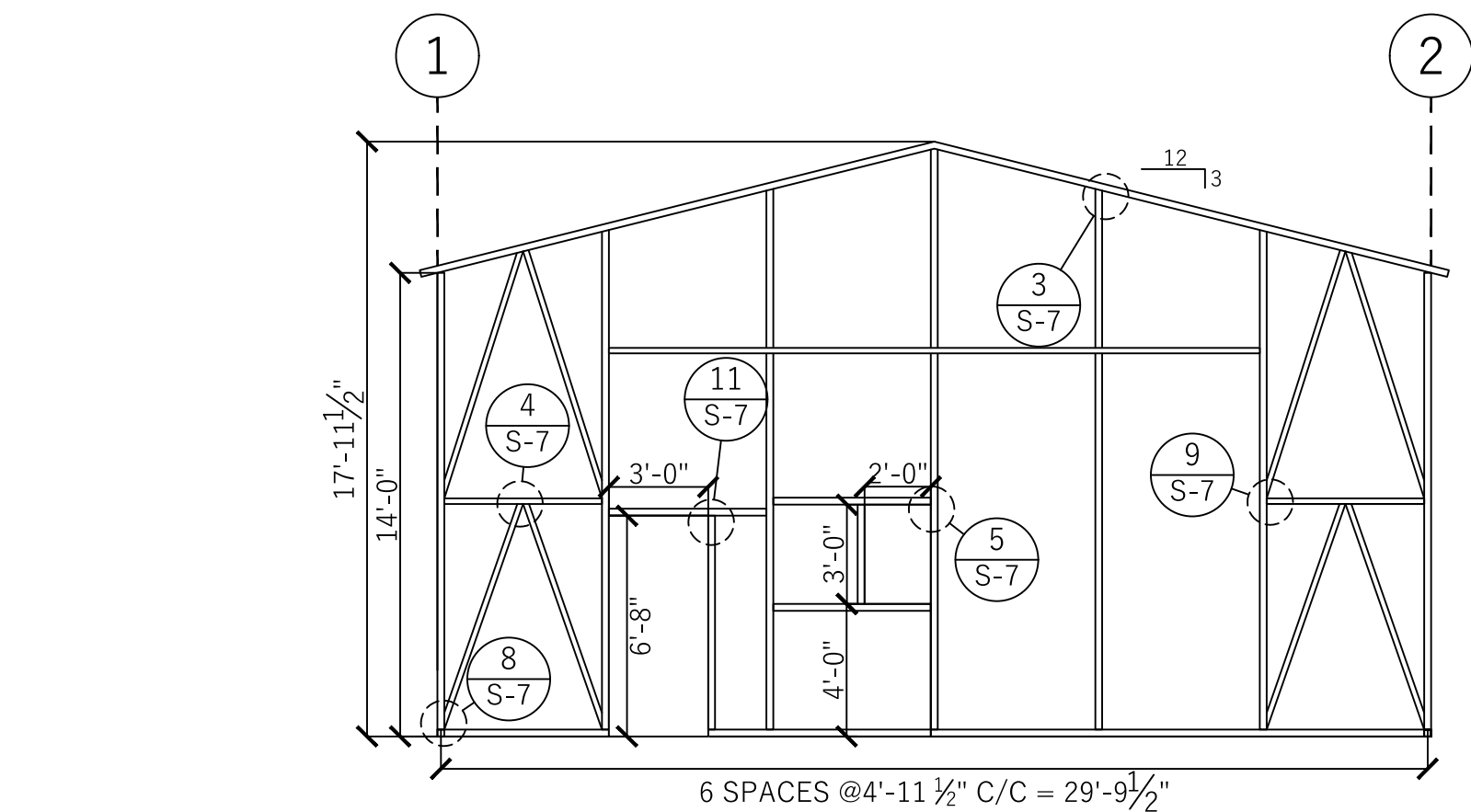
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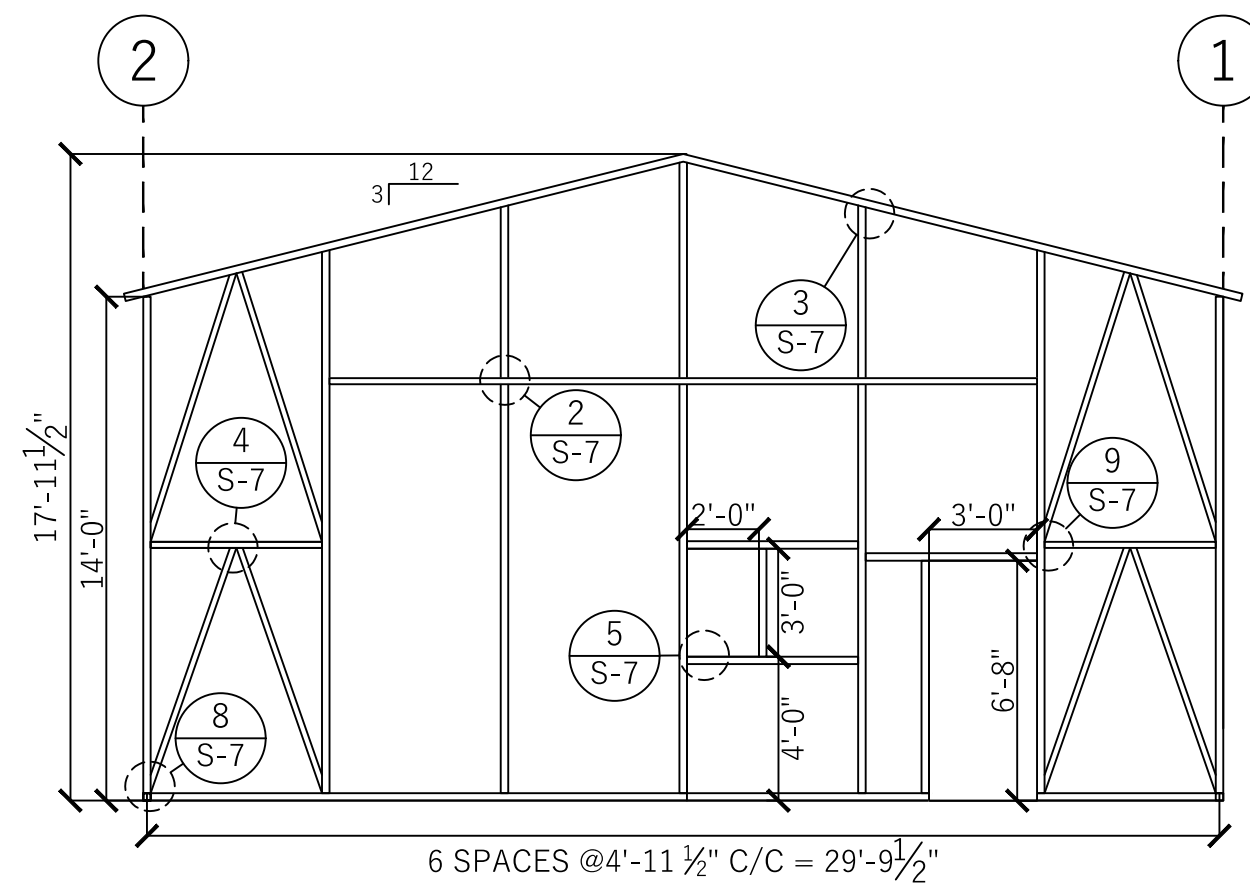
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FRAME SECTION DETAILS

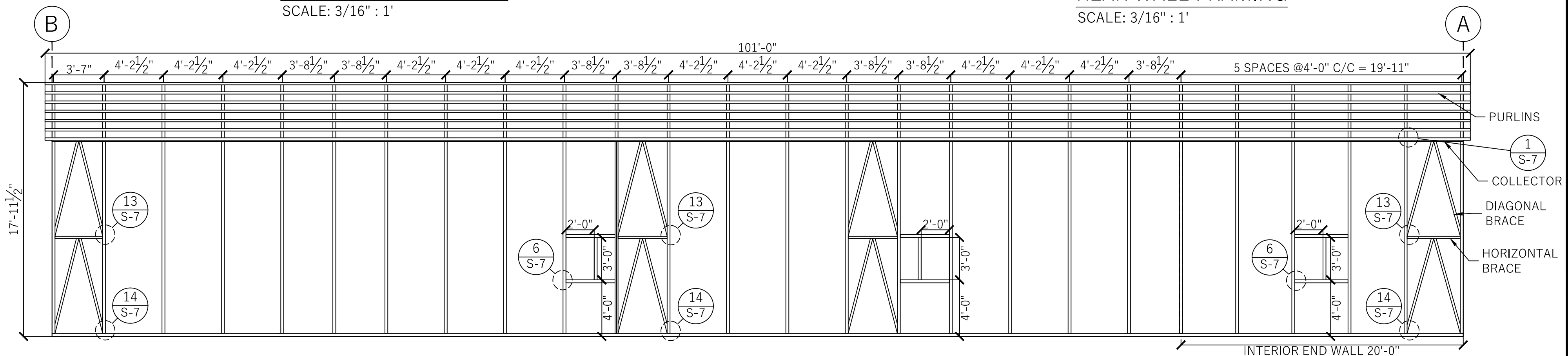
S - 5



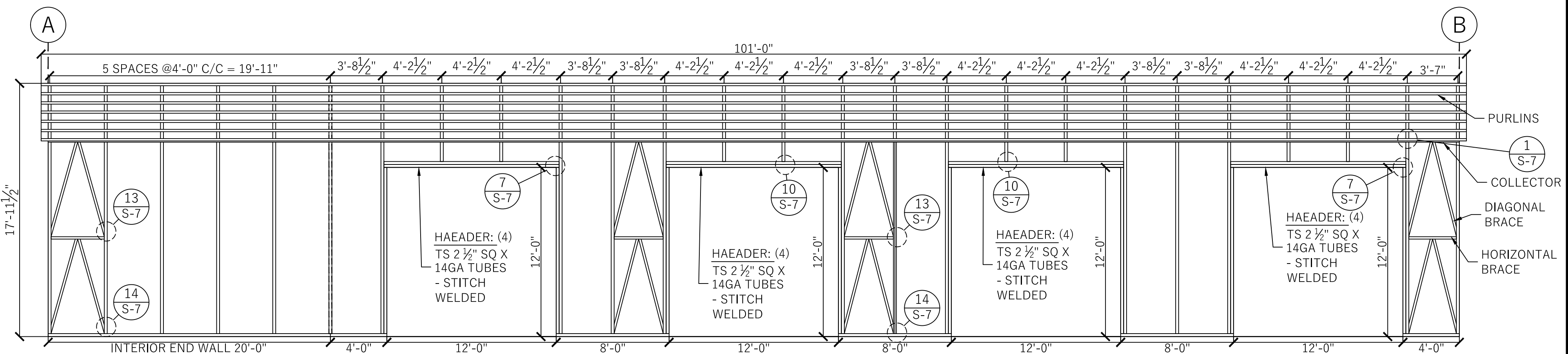
FRONT WALL FRAMING
SCALE: 3/16" : 1'



REAR WALL FRAMING
SCALE: 3/16" : 1'



MAIN BUILDING: LEFT WALL FRAMING
SCALE: 3/16" : 1'



MAIN BUILDING: RIGHT WALL FRAMING
SCALE: 3/16" : 1'

METAL BUILDING MANUFACTURER

FC
STEEL STRUCTURES

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C84908
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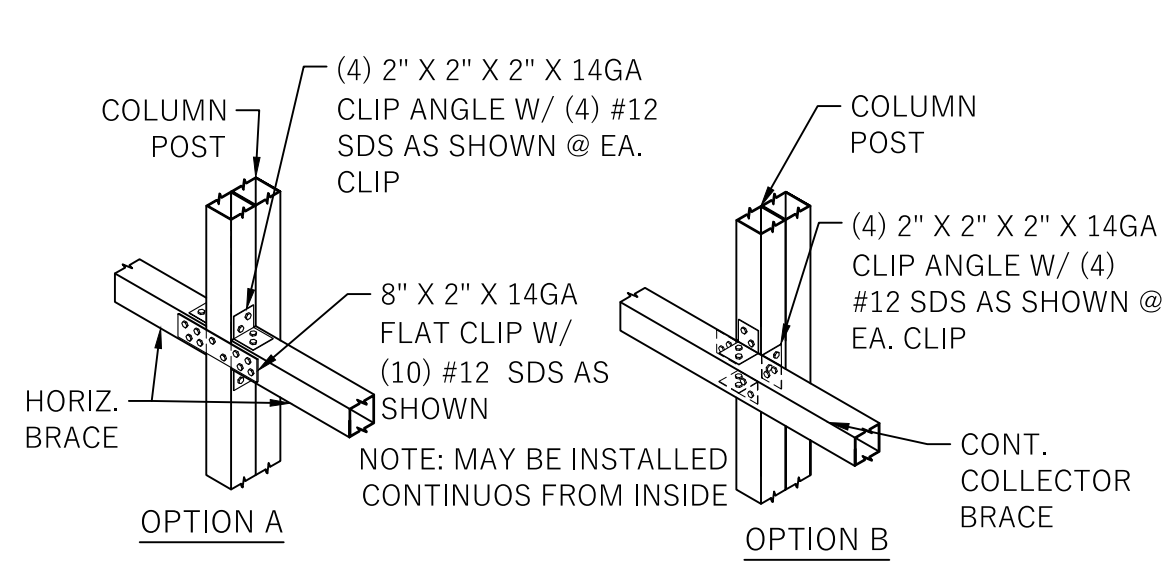
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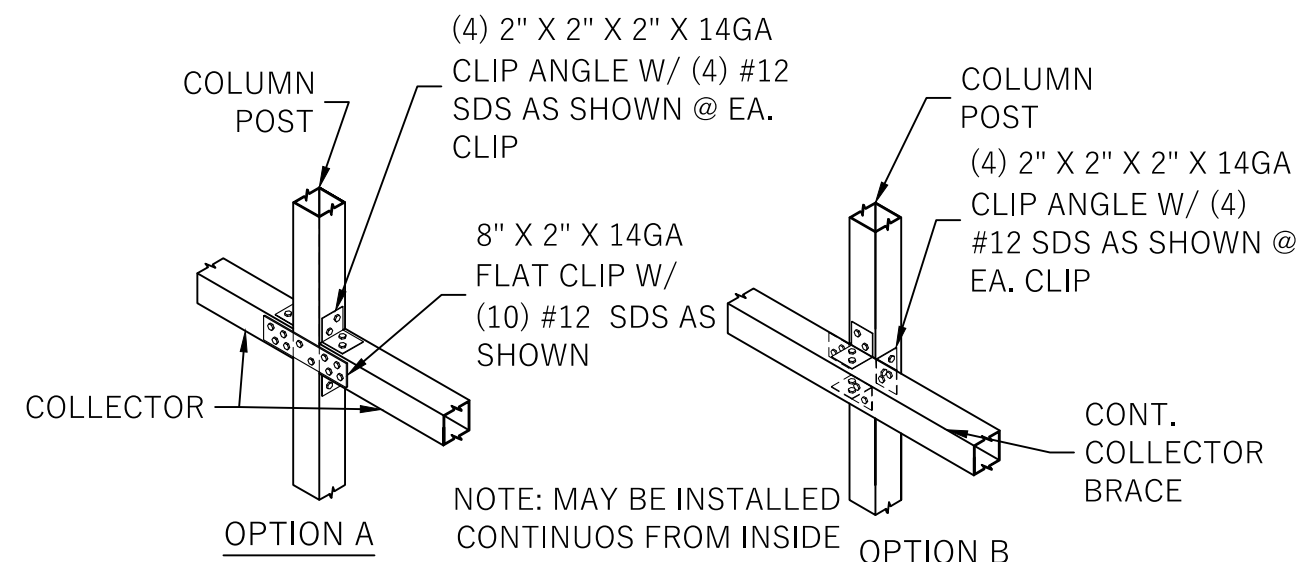
ELEVATIONS FRAMES

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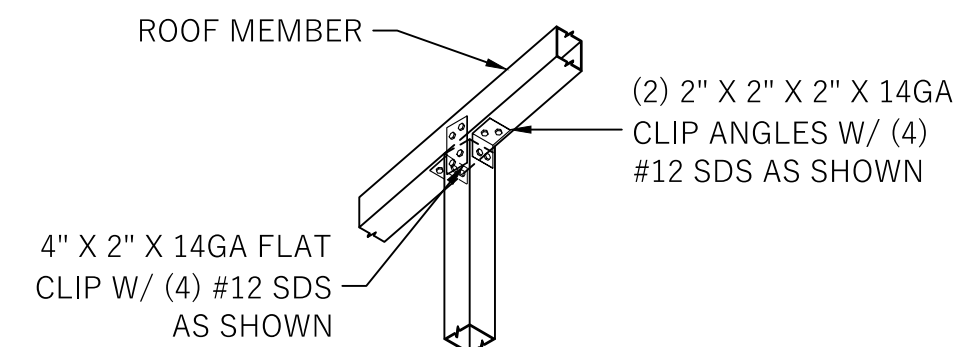
S - 6



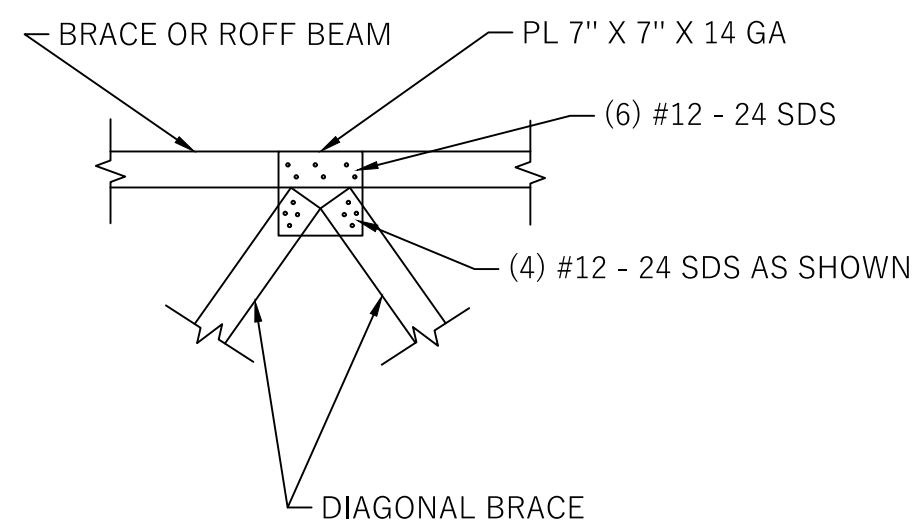
1 COLLECTOR DETAIL
SCALE: 3/4" : 1'



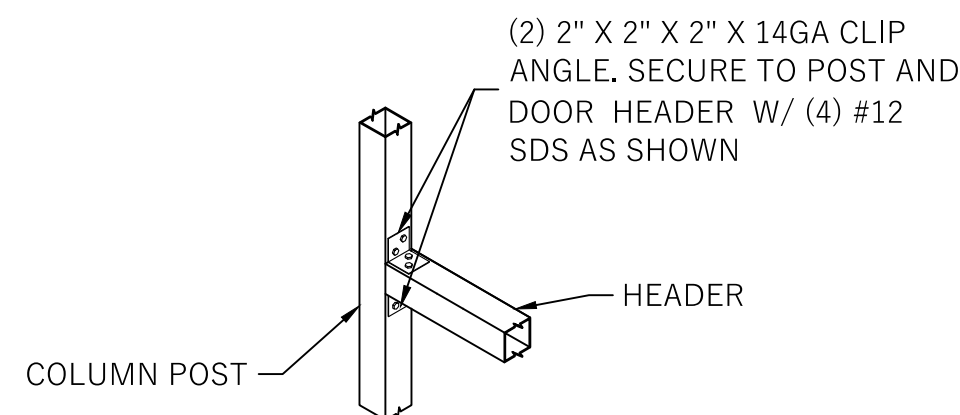
2 COLLECTOR DETAIL
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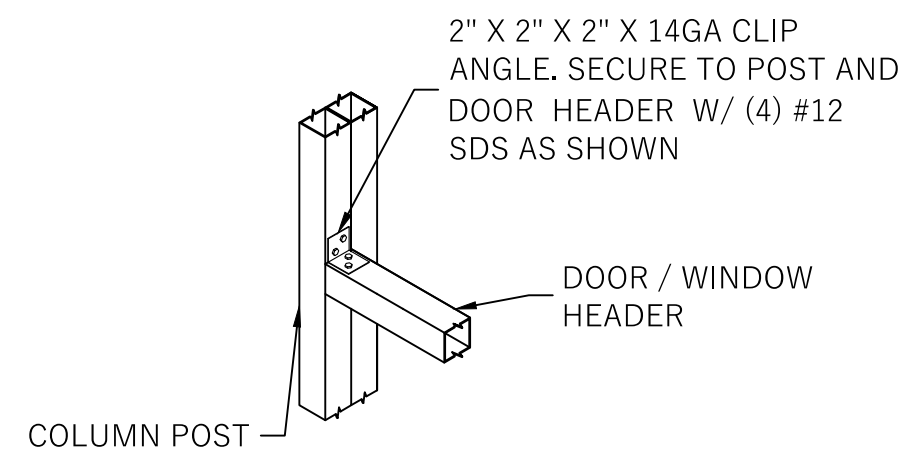
3 ROOF MEMBER DETAIL
SCALE: 3/4" : 1'



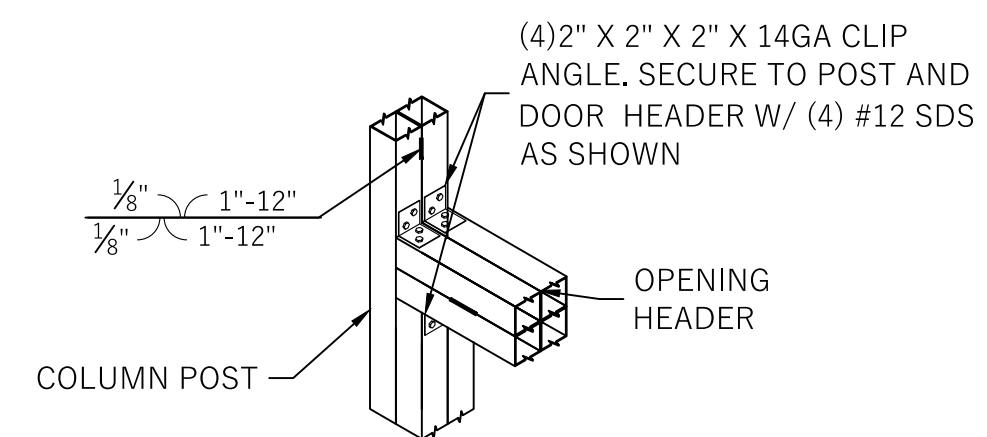
4 BRACE DETAIL
SCALE: 3/4" : 1'



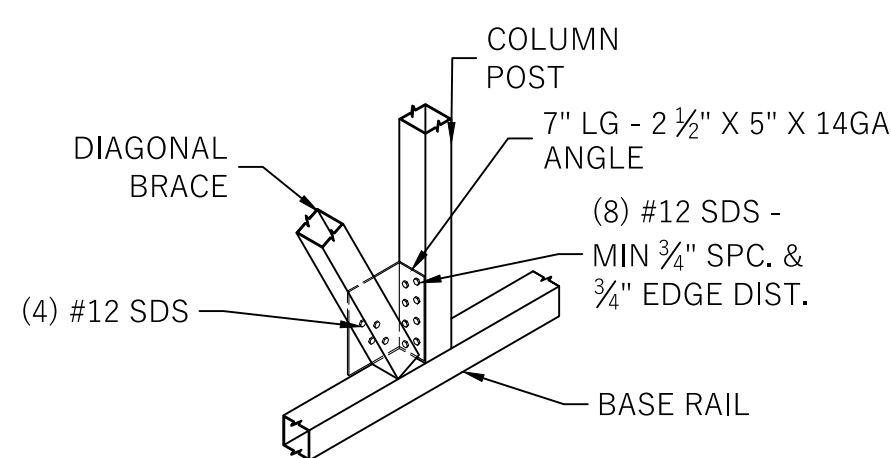
5 CONNECTION DETAIL
SCALE: 3/4" : 1'



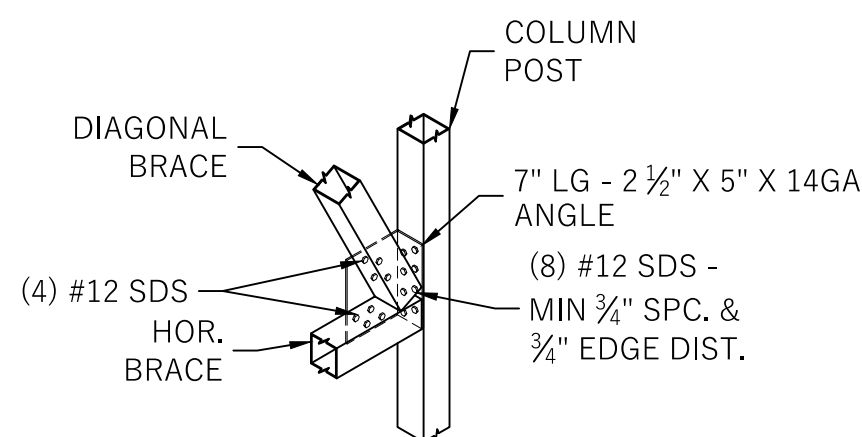
6 CONNECTION DETAIL
SCALE: 3/4" : 1'



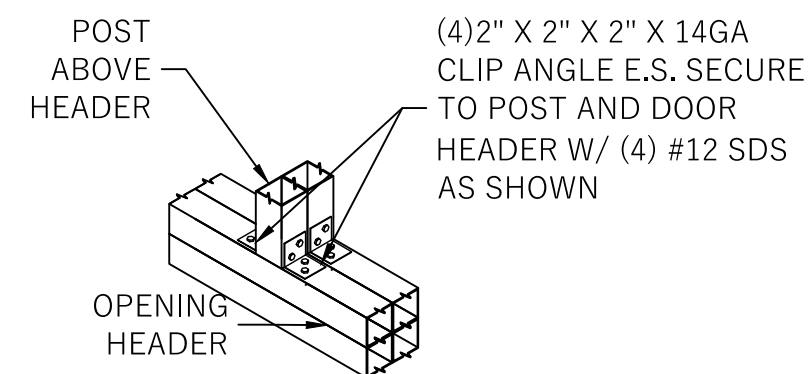
7 CONNECTION DETAIL
SCALE: 3/4" : 1'



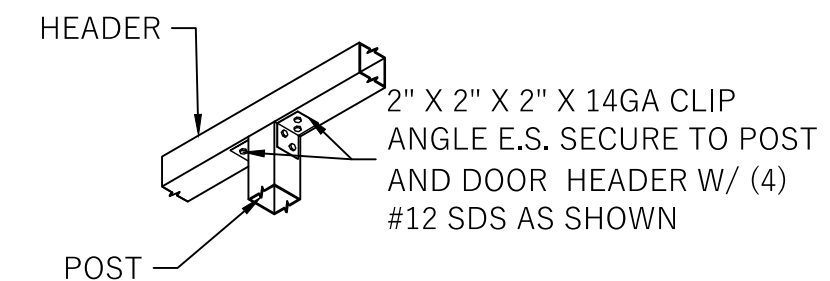
8 BRACE DETAIL
SCALE: 3/4" : 1'



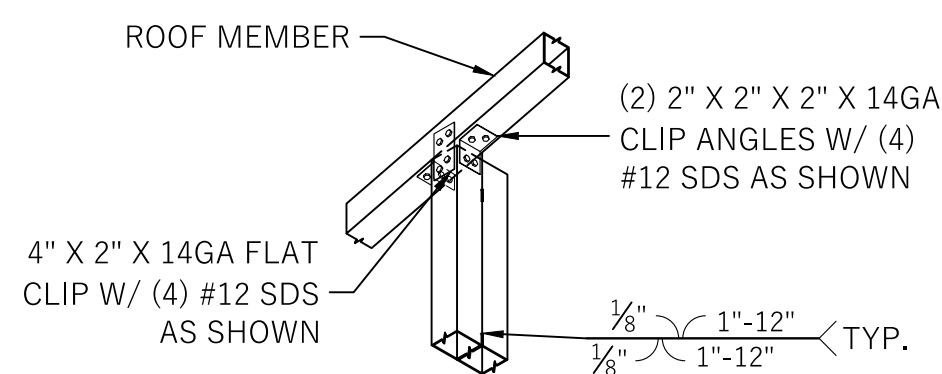
9 BRACE DETAIL
SCALE: 3/4" : 1'



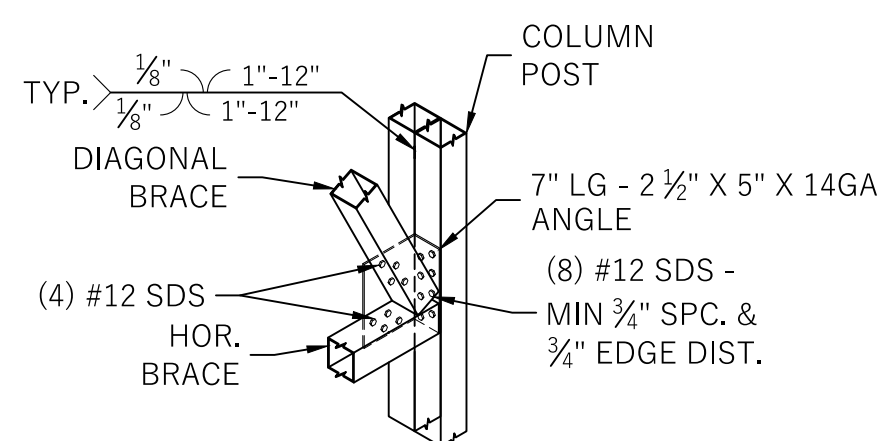
10 ABOVE HEADER DETAIL
SCALE: 3/4" : 1'



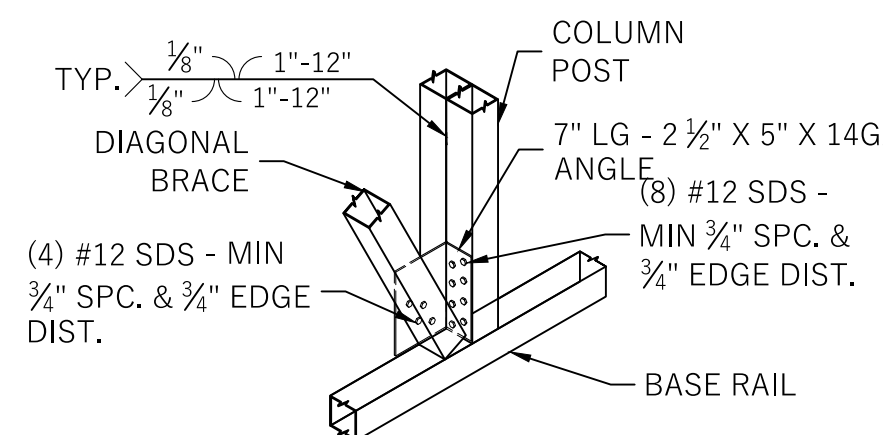
11 HEADER DETAIL
SCALE: 3/4" : 1'



12 ROOF MEMBER DETAIL
SCALE: 3/4" : 1'

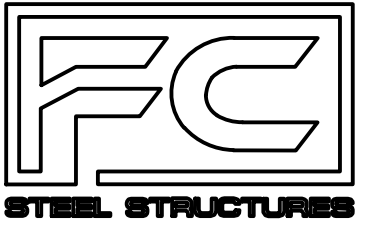


13 BRACE DETAIL
SCALE: 3/4" : 1'



14 BRACE DETAIL
SCALE: 3/4" : 1'

METAL BUILDING
MANUFACTURER



FOR QUESTIONS, MODIFICATIONS, REVISIONS OR CORRECTIONS NEEDED TO PLANS, PLEASE CONTACT THE METAL BUILDINGS MANUFACTURER LISTED ON PLANS. ENGINEER OF RECORD REQUIRES AUTHORIZATION FROM THE METAL BUILDINGS MANUFACTURER TO MAKE ANY CHANGES TO PLANS.

SEAL BELOW



THE ENGINEERING SEAL COVERS STRUCTURAL DESIGN ELEMENTS PRESENTED IN THIS SET OF PLANS. IT DOES NOT PROVIDE ANY ARCHITECTURAL, SITE, ZONING, HVAC, ELEC, MECH DESIGN OR REQUIREMENTS. THESE ITEMS MUST BE ADDRESSED BY THEIR RESPECTIVE PROFESSIONALS IN CHARGE.

PROJECT TITLE

PROJECT LOCATION

GENE BROTT

15884 KUGELMAN ST.,
LOWER LAKE, CA, 95457

REVISIONS

#	DATE	DRAWN BY	CHECKED BY
1	03/24/2025	JH	NG

TITLE SHEET

DETAILS

NUMBER SHEET

S - 7