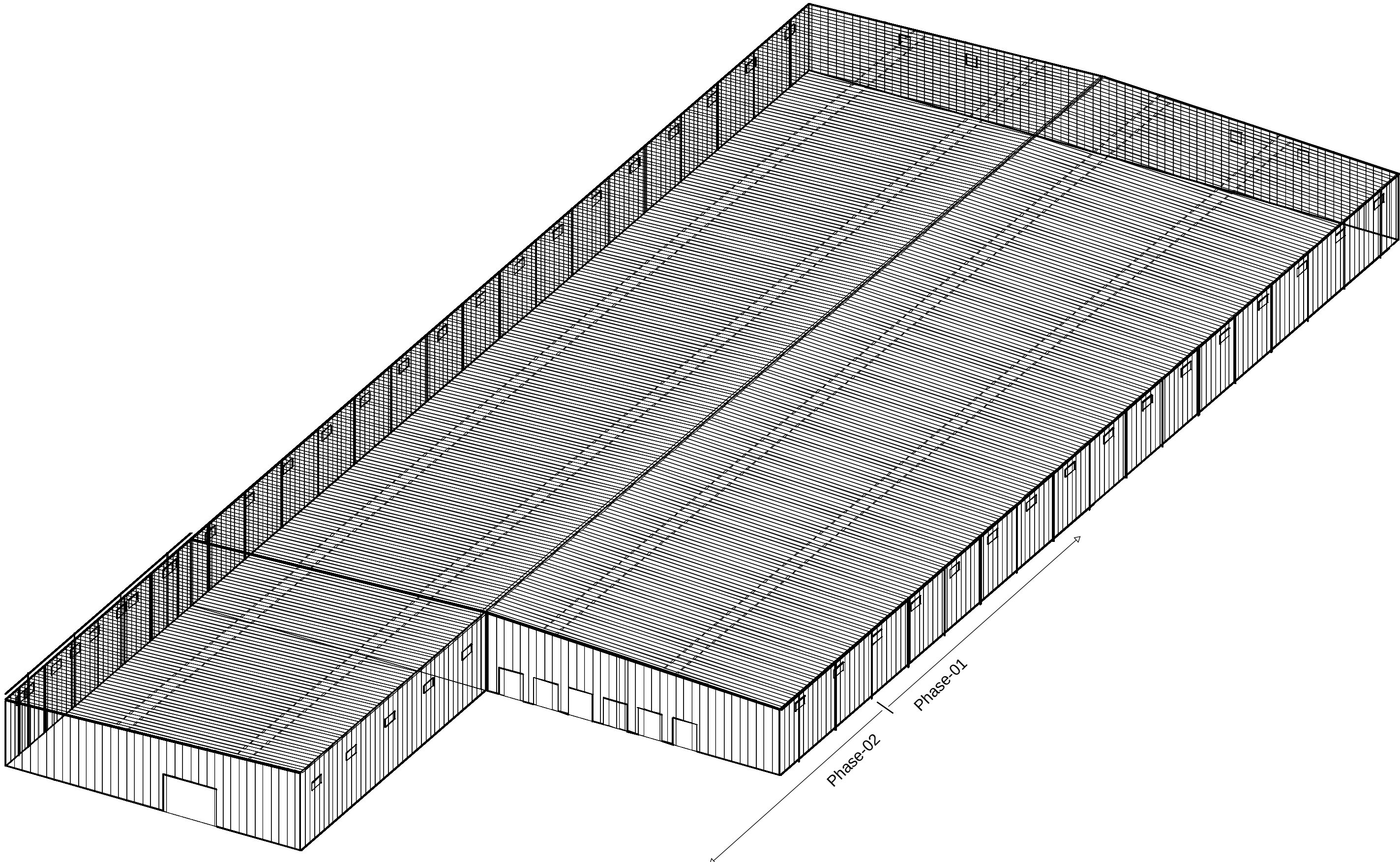


 Butler Manufacturing a division of BlueScope Buildings North America, Inc.	Drawing Index <table><thead><tr><th>Drawing Title</th><th>Pages</th></tr></thead><tbody><tr><td>Cover Sheet</td><td>1</td></tr><tr><td>Codes and Loads</td><td>2</td></tr><tr><td>Notes</td><td>3</td></tr><tr><td>Anchor Rod Plan</td><td>4-5</td></tr><tr><td>Primary Structural</td><td>6-15</td></tr><tr><td>Secondary Structural</td><td>16-23</td></tr><tr><td>Covering</td><td>24-30</td></tr><tr><td>Special Drawings</td><td></td></tr><tr><td>Standard Erection Details</td><td></td></tr><tr><td>Planograph Details</td><td></td></tr></tbody></table>		Drawing Title	Pages	Cover Sheet	1	Codes and Loads	2	Notes	3	Anchor Rod Plan	4-5	Primary Structural	6-15	Secondary Structural	16-23	Covering	24-30	Special Drawings		Standard Erection Details		Planograph Details		Drawing Release History <table><thead><tr><th>Type</th><th>Date</th><th>Description</th></tr></thead><tbody><tr><td>Anchor Rod Drawings REV 0</td><td>12/1/2025</td><td>FOR CONSTRUCTION</td></tr><tr><td>25-024725-01 Anchor Rod Drawings REV 01</td><td>12/15/2025</td><td>FOR CONSTRUCTION</td></tr><tr><td>25-024725-01 Final Erection Drawing REV 0</td><td>12/19/2025</td><td>FOR CONSTRUCTION</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></tbody></table>			Type	Date	Description	Anchor Rod Drawings REV 0	12/1/2025	FOR CONSTRUCTION	25-024725-01 Anchor Rod Drawings REV 01	12/15/2025	FOR CONSTRUCTION	25-024725-01 Final Erection Drawing REV 0	12/19/2025	FOR CONSTRUCTION																						General Notes Materials ASTM Designation High Strength Bolt Tightening Requirements		
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PHASE 01 - INCLUDES FRAMES AND BRACING FROM GRID LINES 10 to 23, SECONDARY FROM GRID LINES 9 to 23 AND COVERING/TRIM FROM GRID LINES 7 to 23 PHASE 02 - INCLUDES FRAMES AND BRACING FROM GRID LINES 1 to 8, SECONDARY FROM GRID LINES 1 to 7 AND COVERING/TRIM FROM GRID LINES 1 TO 7					Secondary members and flange brace connections are always "snug tight", unless indicated otherwise in erection drawing details.																																																										
Inspection and Testing Special inspections and testing required by Authority Having Jurisdiction (AHJ) during construction and/or steel fabrication is the responsibility of the owner or owners authorized agent. When required, the owner shall employ a Quality Assurance Agency (QAA) approved by the AHJ. The builder is responsible to coordinate between the QAA firm and BBNA Fabrication Facilities. The type and extent of special inspections and NDT weld testing must be specifically stipulated in contract documents or BBNA will assume special inspections and/or NDT testing are waived as permitted by the building code based on BBNA facilities IAS AC472 accreditation.																																																															
																																																															
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12/15/2025

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Codes and Loads

WHEN MULTIPLE BUILDINGS ARE INVOLVED, SPECIFIC LOAD FACTORS FOR DIFFERING OCCUPANCIES, BUILDING DIMENSIONS, HEIGHTS, FRAMING SYSTEMS, ROOF SLOPES, ETC., MAY RESULT IN DIFFERENT LOAD APPLICATION FACTORS THAN INDICATED BELOW. SEE CALCULATIONS FOR FURTHER DETAILS. WIND LOADS ARE APPLIED TO OVERALL BUILDING ENVELOPE. COMMON WALLS BETWEEN CONNECTED SHAPES ARE NOT SUBJECT TO EXTERNAL WIND LOADS.

City: MaconCounty: BibbState: GeorgiaCountry: United States

Building Code

Building Code: GBC2020

Based on Building Code: 2018 International Building Code

Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads

Collateral Gravity: 5.00 psf

Collateral Uplift: 0.00 psf

Wind Load

Wind Speed: Vult: 110.00 (Vasd: 85.21) mph

The 'Envelope Procedure' is Used

Primaries Wind Exposure: C - Kz: 0.941

Parts Wind Exposure Factor: 0.941

Wind Enclosure: Enclosed

Topographic Factor: Kzt: 1.0000

Ground Elevation Factor: Ke: 0.9861

NOT Windborne Debris Region

Base Elevation: 0/0/0

Site Elevation: 388.0 ft

Primary Zone Strip Width: 2a: 19/7/0

Parts / Portions Zone Strip Width:

Walls, a: 9/9/8

Roof(s), 0.6h: 14/8/4

Velocity Pressure: qz: 24.43, (C&C) 24.43 psf

Load Notes

Collateral Load Description - Lights / HVAC / Sprinklers

Material Dead Weight

Roof Covering + Second. Dead Load: Varies

Frame Weight (assumed for seismic)2.50 psf

Snow Load

Ground Snow Load: pg: 5.00 psf

Flat Roof Snow: pf: 3.50 psf

Design Snow (Sloped): ps: 3.50 psf

Rain Surcharge: 0.00 psf

Specified Minimum Roof Snow: 5.00 psf (Code)

Exposure Factor: 2 Partially Exposed - Ce: 1.00

Snow Importance: Is: 1.000

Thermal Factor: Heated - Ct: 1.00

Ground / Roof Conversion: 0.70

Unobstructed, Slippery

Seismic Load

Lateral Force Resisting Systems using Equivalent Force Procedure

Mapped MCE Acceleration: Ss: 18.00 %g

Mapped MCE Acceleration: S1: 7.70 %g

Site Class: Stiff soil (D) - Default

Seismic Importance: Ie: 1.0000

Design Acceleration Parameter: Sds: 0.1920

Design Acceleration Parameter: Sd1: 0.1232

Seismic Design Category: B

Seismic Snow Load: 0.00 psf

% Snow Used in Seismic: 0.00

Diaphragm Condition: Flexible

Fundamental Period Height Used: 26/9/4

Transverse Direction Parameters

System NOT detailed for Seismic

Redundancy Factor: Rho: 1.00

Fundamental Period: Ta: 0.3884

R-Factor: 3.00

Overstrength Factor: Omega: 2.50

Deflection Amplification Factor: Cd: 3.00

Base Shear: V: 0.0640 x W

Longitudinal Direction Parameters

System NOT detailed for Seismic

Redundancy Factor: Rho: 1.00

Fundamental Period: Ta: 0.2354

R-Factor: 3.00

Overstrength Factor: Omega: 2.50

Deflection Amplification Factor: Cd: 3.00

Base Shear: V: 0.0640 x W

Snow Buildup

Shape

Building - 220x400x2

Surface

Roof: A

Description

Unbalanced Snow Load 1, Shifted Left : Roof: A

X Location

0.0 ft

0.0 ft

400.0 ft

400.0 ft

0.0 ft

0.0 ft

400.0 ft

400.0 ft

Y Location

33.4 ft

0.0 ft

0.0 ft

33.4 ft

33.4 ft

0.0 ft

0.0 ft

33.4 ft

33.4 ft

Magnitude

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

Building - 220x400x2

Roof: B

Description

Unbalanced Snow Load 1, Shifted Right : Roof: B

X Location

0.0 ft

0.0 ft

400.0 ft

400.0 ft

0.0 ft

0.0 ft

400.0 ft

400.0 ft

Y Location

33.4 ft

0.0 ft

0.0 ft

33.4 ft

33.4 ft

0.0 ft

0.0 ft

33.4 ft

33.4 ft

Magnitude

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

7.6 psf

1. The Snow Buildup loading shown is in addition to the flat or sloped roof snow.

2. The X and Y Location dimensions are from the point of origin of each surface.

FOR CONSTRUCTION

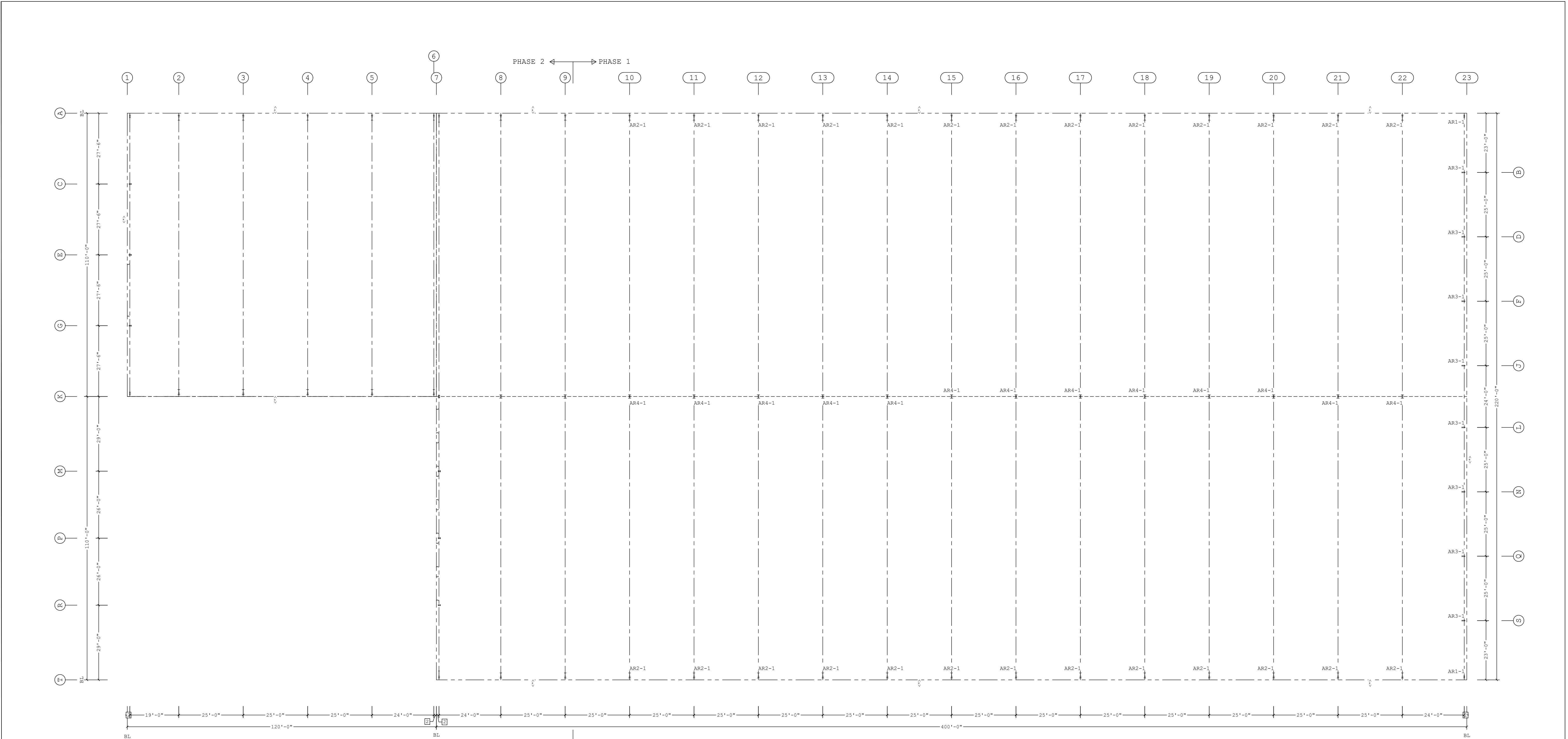
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			Rev:	Date:	By:	Description:	Builder:	STROUD AND COMPANY				
			1	12/15/25	GLM	Change In Building Geometry	Customer:					
							Location:	Macon, Georgia				
							Project:	New Warehouse - 220x400x25				
			Drawing Scale:		NTS		Builder's PO#:	VPC Version: 25.2.0				
								Page:	2			

VPC Filename: 25-024725-01

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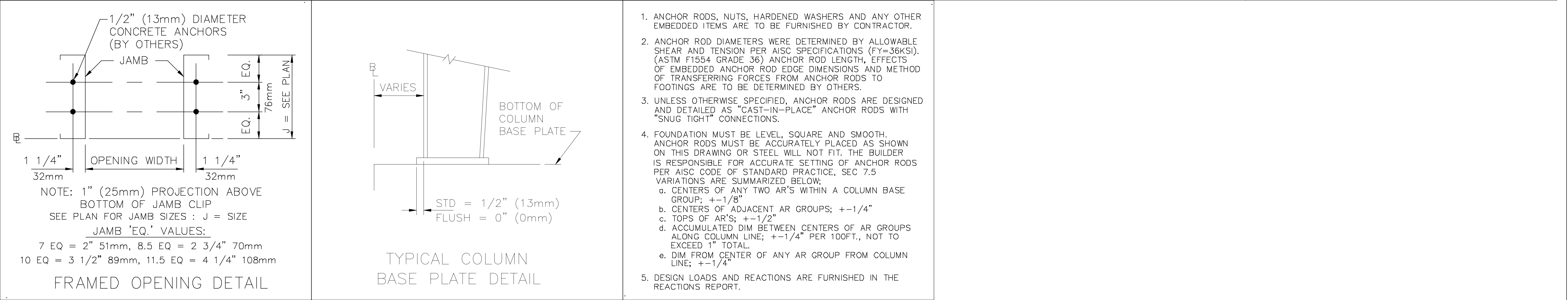
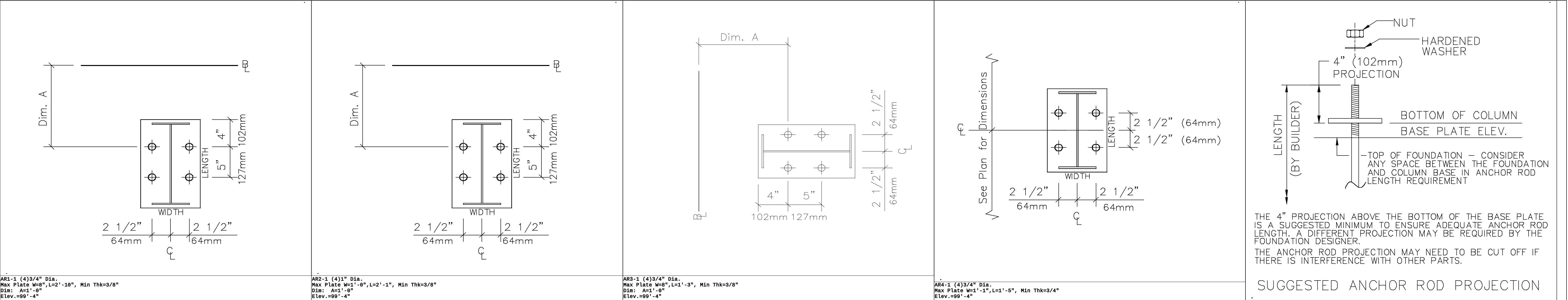
21'-0"

Dimension Key

Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

FOR CONSTRUCTION

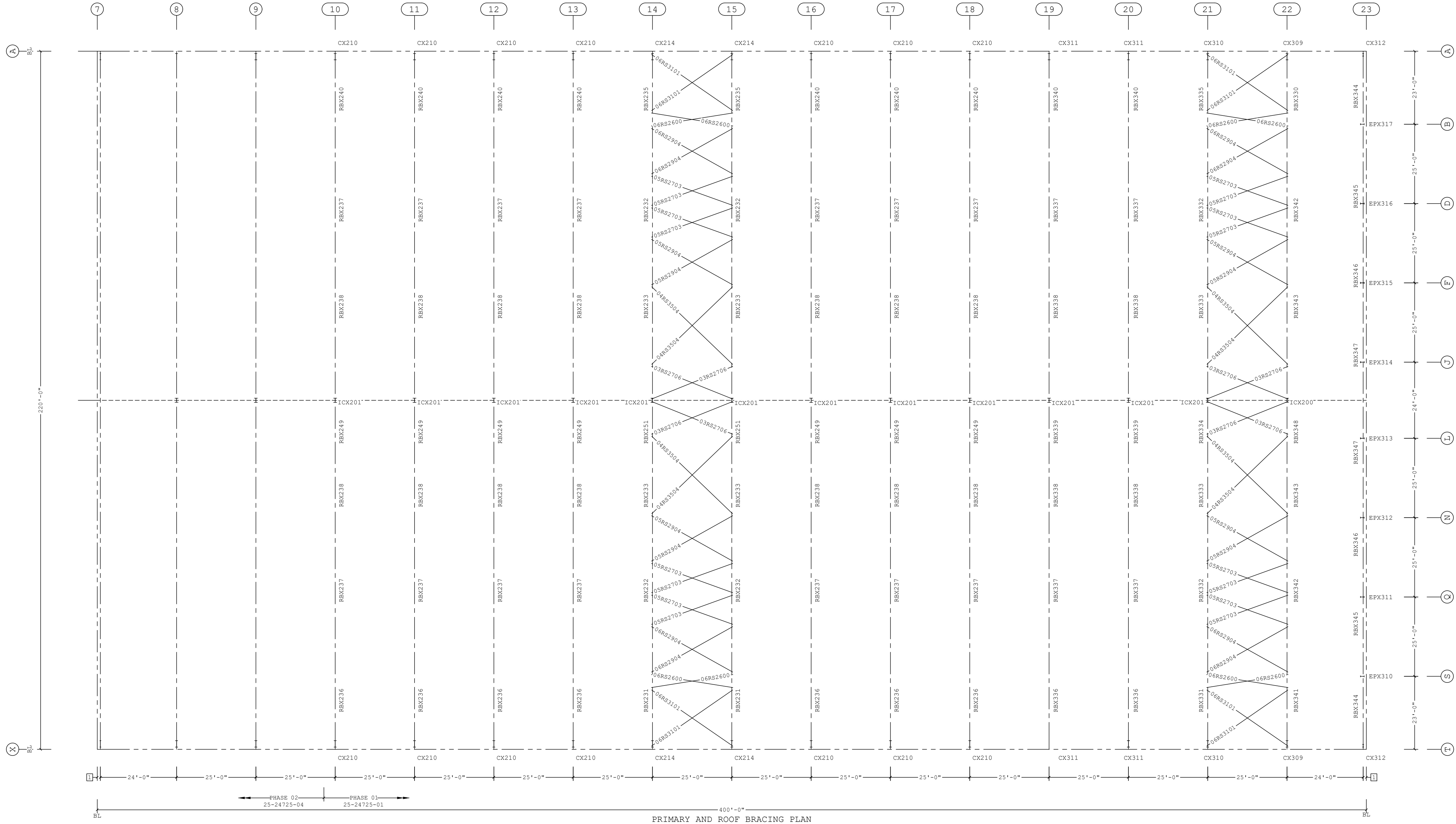
<=> The building is designed with bracing diagonals in the designated bays. Column base reactions, base plates and anchor rods are affected by this bracing and diagonals may not be relocated without consulting the building suppliers engineer.	The Butler Mfg. Engineer's seal applies only to the work product of Butler Mfg. and design and performance requirements specified by Butler. The Butler Mfg. Engineer's seal does not apply to the performance or design of any other product or component furnished by Butler except to any design or performance requirements specified by Butler.	This drawing, including the information hereon, remains the property of Butler Mfg. It is provided solely for erecting the building described in the applicable purchase order and may be reproduced only for that purpose. It shall not be modified, reproduced or used for any other purpose without prior written approval of Butler Mfg.	D	Butler Manufacturing 1540 Genessee St. Kansas City, MO 64102				ANCHOR ROD PLAN					
				Rev:	Date:	By:	Description:	Builder:	STROUD AND COMPANY			 Butler Manufacturing VPC Version: 25.2.0	Job #: 25-024725-01
				1	12/15/2025	GLM	Change in Geometry Separated into Phases	Customer:					Date: 12/15/2025
								Location:	Macon, Georgia				Drawn/Check: GLM / CJF
								Project:	New Warehouse - 220x400x25				Page: 4
				Drawing Scale: NTS				Builder's PO#:					



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				Rev:	Date:	By:	Description:	Builder:	STROUD AND COMPANY				
				1	12/15/2025	GLM	Change in Geometry Separated into Phases	Customer:					
								Location:	Macon, Georgia				
								Project:	New Warehouse - 220x400x25				
				Drawing Scale:				NTS				Builder's PO#:	
 Butler Manufacturing VPC Version: 25.2.0 Job #: 25-024725-01 Date: 12/15/2025 Drawn/Check: GLM / C.JF Page: 5													

Bracing Part Schedule			
Part	Qty	Length	Detail
03RS2706	8	27'-6"	BR01G2
04RS3504	8	35'-4"	BR01G2
05RS2904	8	29'-4"	BR01G2
05RS2703	16	27'-3"	BR01G2
06RS2904	8	29'-4"	BR01G2
06RS2600	8	26'-0"	BR01G2
06RS3101	8	31'-1"	BR01G2

FOR BRACING DETAILS, SEE DRAWING PG.# 15



1 1'-0"
Dimension Key

- Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
- Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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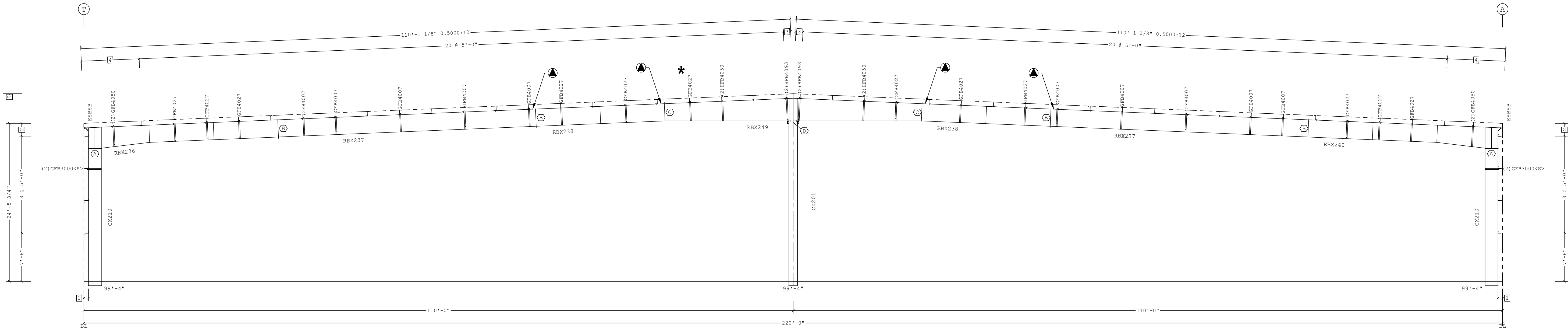
THE GENERAL CONTRACTOR AND/OR ERECTOR IS SOLELY RESPONSIBLE FOR ACCURATE GOOD QUALITY WORKMANSHIP IN ERECTING THIS BUILDING IN ACCORDANCE WITH THIS DRAWING, DETAILS REFERENCED IN THIS DRAWING, ALL APPLICABLE BUTLER MFG. ERECTION GUIDES, AND INDUSTRY STANDARDS PERTAINING TO PROPER ERECTION, INCLUDING THE CORRECT USE OF TEMPORARY BRACING.

D				BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102		PRIMARY AND ROOF BRACING PLAN			
REV:	DATE:	BY:	DESCRIPTION:		BUILDER: STROUD AND COMPANY		 Butler Manufacturing VPC VERSION: 25.2.0	JOB #: 25-024725-01	
					CUSTOMER:			DATE: 12/19/2025	
					LOCATION: Macon, Georgia			DRAWN/CHECK: DJR / DAM	
					PROJECT: New Warehouse - 220x400x25			PAGE: 6	
DRAWING SCALE: NTS				BUILDER'S PO#:					

Frame Member Schedule							
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth
CX210	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"
RBX236	2	6.0000	.3750	.1875	3'-3"	2'-8"	21'-2 15/16"
	3	6.0000	.2500	.1644	2'-8"	2'-8"	30'-0 15/16"
	4	6.0000	.3750	.1644	2'-8"	2'-8"	
	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"
RBX237	5	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
RBX238	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	713#
RBX249	8	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	40'-0"
	9	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	3115#
RBX238	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"
RBX237	12	6.0000	.6250	.1875	2'-8"	2'-8"	713#
RBX240	13	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
	14	6.0000	.2500	.1644	2'-8"	2'-8"	40'-0"
	15	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"
CX210	16	9.0000	.5000	.1875	2'-0"	2'-0"	1051#
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	1375#

Bolt Connection & Plate Schedule									
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo	
A	6	A325	1 1/4"	4"	1"	2	1	0097290	
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284	
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284	
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284	
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.									

Frame Clearances
Horiz. Clearance between members 1(CX210) and 16(CX210): 214'-7"
Vert. Clearance at member 1(CX210): 20'-6 15/16"
Vert. Clearance at member 16(CX210): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 10

GFB or HFB with * must use bearing plate JCP051140 (see Detail BR25DH)

INDICATES DIRECTIONAL MARK

- 5 29'-0 3/4" Ridge Ht.
- 4 2 @ 4'-5 7/8"
- 3 1'-1 3/8"
- 2 1'-11 3/4"
- 1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 4

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:28:10

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 10

BUILDER: STROUD AND COMPANY
CUSTOMER:
LOCATION: Macon, Georgia
PROJECT: New Warehouse - 220x400x25
BUILDER'S PO#:



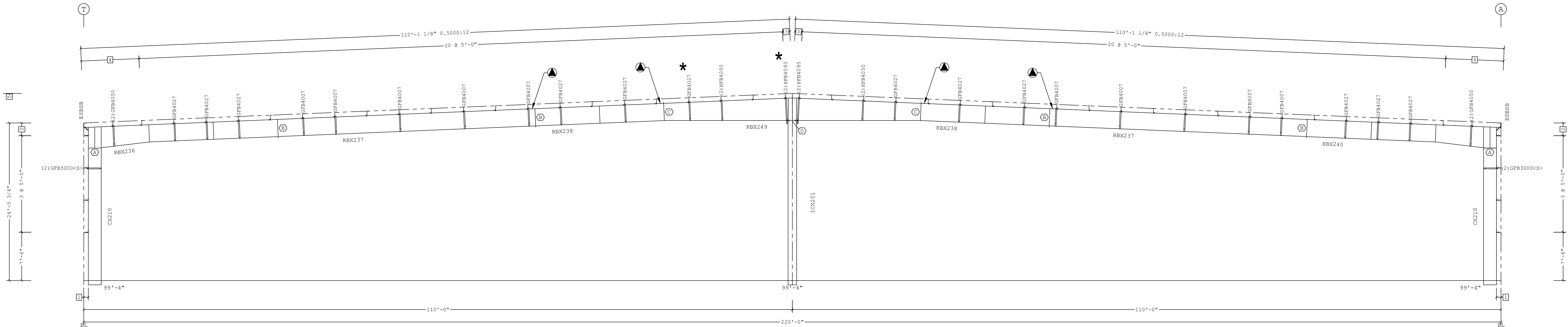
Butler Manufacturing
VPC VERSION: 25.2.0

JOB #: 25-024725-01
DATE: 12/19/2025
DRAWN/CHECK: DJR / DAM
PAGE: 7

Frame Member Schedule								
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX210	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"	1051#
RBX236	2	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"	1158#
	3	6.0000	.2500	.1644	2'-8"	2'-8"		
	4	6.0000	.3750	.1644	2'-8"	2'-8"		
	5	6.0000	.6250	.1875	2'-8"	2'-8"		
RBX237	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"	1862#
RBX238	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"	713#
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RBX238	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"	713#
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RBX240	13	6.0000	.3750	.1644	2'-8"	2'-8"	30'-0 15/16"	1158#
	14	6.0000	.2500	.1644	2'-8"	2'-8"		
	15	6.0000	.3750	.1875	3'-3"	2'-8"		
	16	9.0000	.5000	.1875	2'-0"	2'-0"		
CX210	16	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"	1051#
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	25'-6 1/4"	1375#

Bolt Connection & Plate Schedule								
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo
A	6	A325	1 1/4"	4"	1"	2	1	0097290
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.								

Frame Clearances
Horiz. Clearance between members 1(CX210) and 16(CX210): 214'-7"
Vert. Clearance at member 1(CX210): 20'-6 15/16"
Vert. Clearance at member 16(CX210): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 11,12,13

GFB or HFB with * must use bearing plate JCP051140 (see Detail BR25DH)

INDICATES DIRECTIONAL MARK

- 5 29'-0 3/4" Ridge Ht.
- 4 2 @ 4'-5 7/8"
- 3 1'-1 3/8"
- 2 1'-11 3/4"
- 1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 5

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

THE BUTLER MFG. ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF BUTLER MFG. AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER. THE BUTLER MFG. ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY BUTLER EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER.

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BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:28:08

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 11, 12 13

BUILDER:	STROUD AND COMPANY
CUSTOMER:	
LOCATION:	Macon, Georgia
PROJECT:	New Warehouse - 220x400x25
BUILDER'S PO#:	



Butler Manufacturing
VPC VERSION: 25.2.0

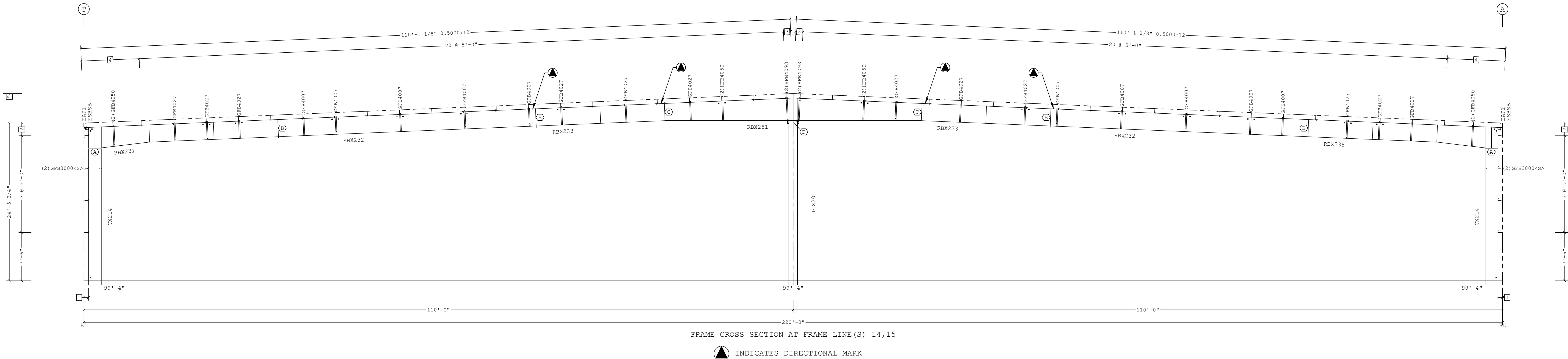
JOB #:	25-024725-01
DATE:	12/19/2025
DRAWN/CHECK:	DJR / DAM
PAGE:	8

MODIFIED IN AUTOCAD

Frame Member Schedule							
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth
CX214	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"
RBX231	2	6.0000	.3750	.1875	3'-3"	2'-8"	21'-2 15/16"
	3	6.0000	.2500	.1644	2'-8"	2'-8"	30'-0 15/16"
	4	6.0000	.3750	.1644	2'-8"	2'-8"	1051#
	5	6.0000	.6250	.1875	2'-8"	2'-8"	1157#
RBX232	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"
RBX233	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
	8	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	713#
RBX251	9	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	3115#
	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"
RBX232	12	6.0000	.6250	.1875	2'-8"	2'-8"	713#
RBX235	13	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
	14	6.0000	.2500	.1644	2'-8"	2'-8"	1157#
CX214	15	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"
	16	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	1051#
							1375#

Bolt Connection & Plate Schedule									
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo	
A	6	A325	1 1/4"	4"	1"	2	1	0097290	
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284	
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284	
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284	
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.									

Frame Clearances
Horiz. Clearance between members 1(CX214) and 16(CX214): 214'-7"
Vert. Clearance at member 1(CX214): 20'-6 15/16"
Vert. Clearance at member 16(CX214): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



- 5 29'-0 3/4" Ridge Ht.
4 2 @ 4'-5 7/8"
3 1'-1 3/8"
2 1'-11 3/4"
1 8 1/2"

Dimension Key

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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B BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:28:05

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 14, 15

BUILDER: STROUD AND COMPANY
CUSTOMER:
LOCATION: Macon, Georgia
PROJECT: New Warehouse - 220x400x25
BUILDER'S PO#:



Butler Manufacturing
VPC VERSION: 25.2.0

JOB #: 25-024725-01
DATE: 12/19/2025
DRAWN/CHECK: DJR / DAM
PAGE: 9

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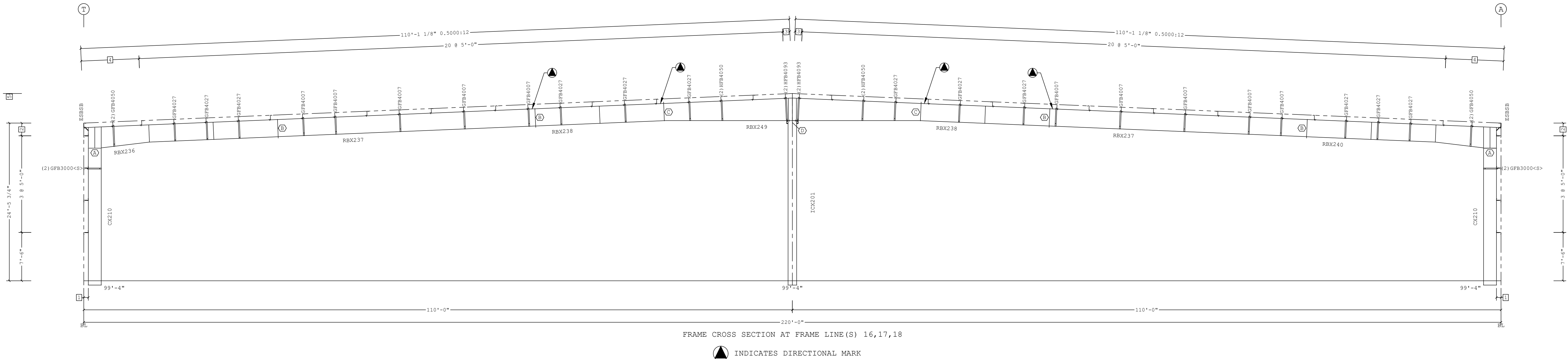
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MODIFIED IN AUTOCAD

Frame Member Schedule								
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX210	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"	1051#
RBX236	2	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"	1158#
	3	6.0000	.2500	.1644	2'-8"	2'-8"		
	4	6.0000	.3750	.1644	2'-8"	2'-8"		
	5	6.0000	.6250	.1875	2'-8"	2'-8"		
RBX237	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"	1862#
RBX238	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"	713#
RBX249	8	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	40'-0"	3115#
	9	10.0000	.6250	.2500	2'-8"	3'-5 15/16"		
RBX238	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"	713#
RBX237	12	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"	1862#
RBX240	13	6.0000	.3750	.1644	2'-8"	2'-8"	30'-0 15/16"	1158#
	14	6.0000	.2500	.1644	2'-8"	2'-8"		
	15	6.0000	.3750	.1875	3'-3"	2'-8"		
CX210	16	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"	1051#
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	25'-6 1/4"	1375#

Bolt Connection & Plate Schedule								
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo
A	6	A325	1 1/4"	4"	1"	2	1	0097290
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.								

Frame Clearances
Horiz. Clearance between members 1(CX210) and 16(CX210): 214'-7"
Vert. Clearance at member 1(CX210): 20'-6 15/16"
Vert. Clearance at member 16(CX210): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



- 5 29'-0 3/4" Ridge Ht.
4 2 @ 4'-5 7/8"
3 1'-1 3/8"
2 1'-11 3/4"
1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 10

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:28:02

BUILDER: STROUD AND COMPANY
CUSTOMER:
LOCATION: Macon, Georgia
PROJECT: New Warehouse - 220x400x25

BUILDER'S PO#:

LAST SAVED BY: DJRAPPIIT

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 16,17,18



Butler Manufacturing
VPC VERSION: 25.2.0

JOB #:
25-024725-01
DATE:
12/19/2025
DRAWN/CHECK:
DJR / DAM
PAGE:
10

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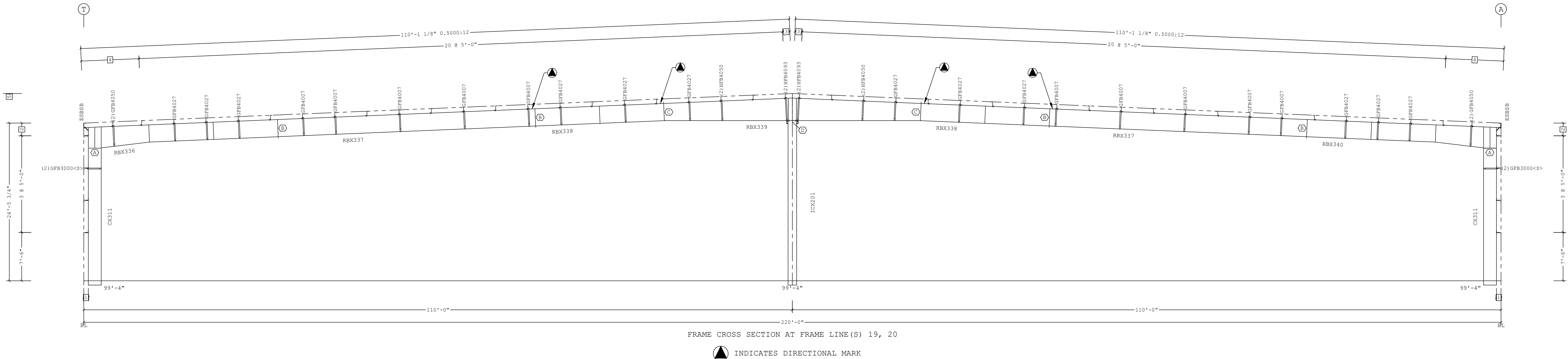
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MODIFIED IN AUTOCAD

Frame Member Schedule							
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth
CX311	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"
RBX336	2	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"
	3	6.0000	.2500	.1644	2'-8"	2'-8"	
	4	6.0000	.3750	.1644	2'-8"	2'-8"	
	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"
RBX337	5	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
RBX338	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	713#
RBX339	8	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	40'-0"
	9	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	3115#
RBX338	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"
RBX337	12	6.0000	.6250	.1875	2'-8"	2'-8"	713#
RBX340	13	6.0000	.3750	.1644	2'-8"	2'-8"	40'-0"
	14	6.0000	.2500	.1644	2'-8"	2'-8"	1862#
	15	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"
CX311	16	9.0000	.5000	.1875	2'-0"	2'-0"	1051#
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	1375#

Bolt Connection & Plate Schedule									
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo	
A	6	A325	1 1/4"	4"	1"	2	1	0097290	
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284	
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284	
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284	
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.									

Frame Clearances
Horiz. Clearance between members 1(CX311) and 16(CX311): 214'-7"
Vert. Clearance at member 1(CX311): 20'-6 15/16"
Vert. Clearance at member 16(CX311): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



- 5 29'-0 3/4" Ridge Ht.
4 2 @ 4'-5 7/8"
3 1'-1 3/8"
2 1'-11 3/4"
1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 13

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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B BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:27:59

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 19, 20

BUILDER: STROUD AND COMPANY
CUSTOMER:
LOCATION: Macon, Georgia
PROJECT: New Warehouse - 220x400x25
BUILDER'S PO#:



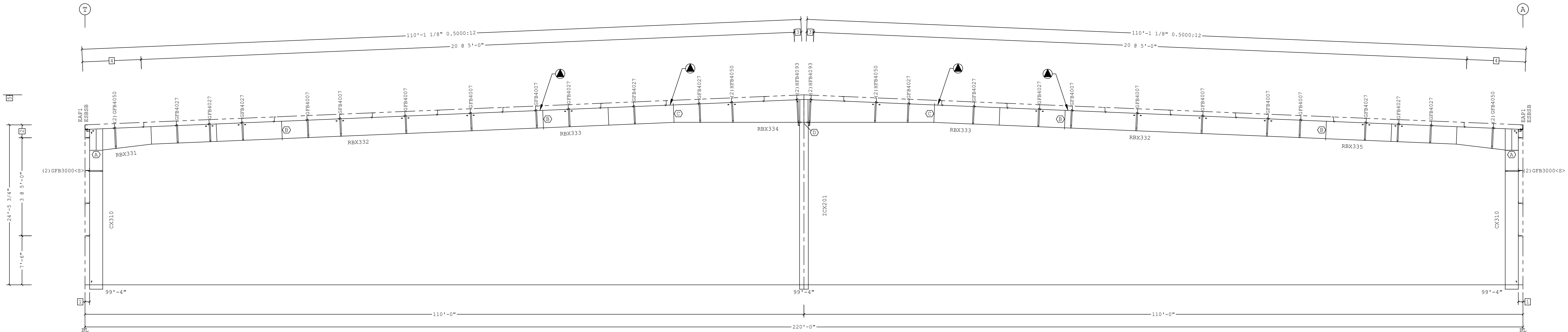
Butler Manufacturing
VPC VERSION: 25.2.0

JOB #: 25-024725-01
DATE: 12/19/2025
DRAWN/CHECK: DJR / DAM
PAGE: 11

Frame Member Schedule							
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth
CX310	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-2 15/16"
RBX331	2	6.0000	.3750	.1875	3'-3"	2'-8"	30'-0 15/16"
	3	6.0000	.2500	.1644	2'-8"	2'-8"	
	4	6.0000	.3750	.1644	2'-8"	2'-8"	
	5	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"
RBX332	5	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
RBX333	6-7	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"
	8	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	40'-0"
RBX334	9	10.0000	.6250	.2500	2'-8"	3'-5 15/16"	3115#
	10-11	6.0000	.3750	.1644	2'-8"	2'-8"	20'-0"
RBX332	12	6.0000	.6250	.1875	2'-8"	2'-8"	40'-0"
	13	6.0000	.3750	.1644	2'-8"	2'-8"	1862#
RBX335	14	6.0000	.2500	.1644	2'-8"	2'-8"	30'-0 15/16"
	15	6.0000	.3750	.1875	2'-8"	2'-8"	
	16	9.0000	.5000	.1875	2'-0"	2'-0"	1051#
ICX201	17	12.0000	.5000	.1875	1'-4"	1'-4"	1375#

Bolt Connection & Plate Schedule									
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo	
A	6	A325	1 1/4"	4"	1"	2	1	0097290	
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284	
C	12	A325	3/4"	2 1/2"	1/2"	4	2	0097284	
D	16	A325	3/4"	2 1/2"	5/8"	2	2	0097284	
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.									

Frame Clearances
Horiz. Clearance between members 1(CX310) and 16(CX310): 214'-7"
Vert. Clearance at member 1(CX310): 20'-6 15/16"
Vert. Clearance at member 16(CX310): 20'-6 15/16"
Vert. Clearance at member 17(ICX201): 24'-10 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 21

INDICATES DIRECTIONAL MARK

- 5 29'-0 3/4" Ridge Ht.
- 4 2 @ 4'-5 7/8"
- 3 1'-1 3/8"
- 2 1'-11 3/4"
- 1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 15

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:27:56

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 19

BUILDER:	STROUD AND COMPANY
CUSTOMER:	
LOCATION:	Macon, Georgia
PROJECT:	New Warehouse - 220x400x25
BUILDER'S PO#:	



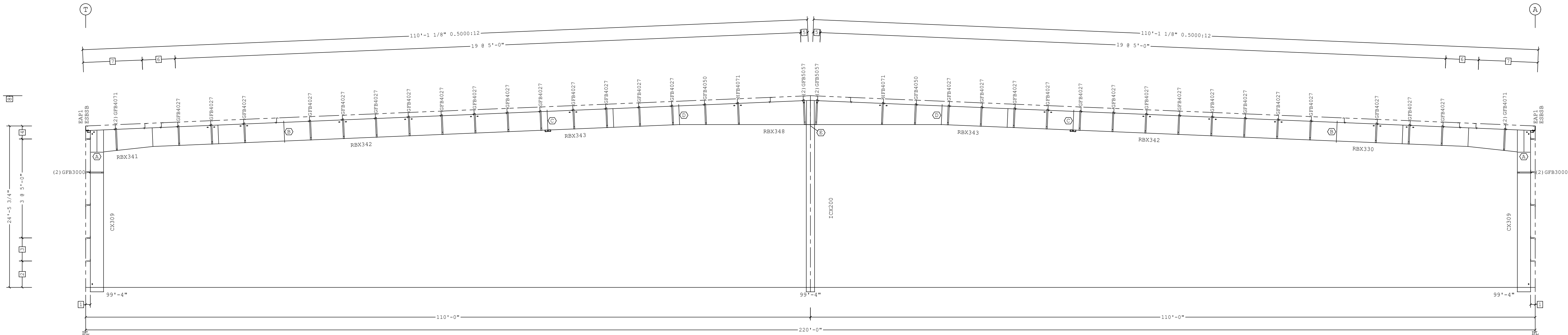
Butler Manufacturing
VPC VERSION: 25.2.0

JOB #:	25-024725-01
DATE:	12/19/2025
DRAWN/CHECK:	DJR / DAM
PAGE:	12

Frame Member Schedule								
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX309	1	9.0000	.5000	.1875	2'-0"	2'-0"	21'-1 15/16"	1048#
RBX341	2	6.0000	.3750	.1875	3'-4"	2'-10"	30'-0 15/16"	1184#
	3	6.0000	.2500	.1644	2'-10"	2'-10"		
	4	6.0000	.3750	.1644	2'-10"	2'-10"		
	5	6.0000	.6250	.1875	2'-10"	2'-10"		
RBX342	5	6.0000	.6250	.1875	2'-10"	2'-10"	40'-0"	1920#
RBX343	6	5.0000	.3750	.1875	2'-10"	2'-10"	20'-0"	716#
	7	5.0000	.3750	.1644	2'-10"	2'-10"		
RBX348	8	8.0000	.6250	.2500	2'-10"	3'-7 15/16"	40'-0"	2928#
	9	8.0000	.6250	.2500	2'-10"	3'-7 15/16"		
RBX343	10	5.0000	.3750	.1644	2'-10"	2'-10"	20'-0"	716#
	11	5.0000	.3750	.1875	2'-10"	2'-10"		
RBX342	12	6.0000	.6250	.1875	2'-10"	2'-10"	40'-0"	1920#
RBX330	13	6.0000	.3750	.1644	2'-10"	2'-10"	30'-0 15/16"	1184#
	14	6.0000	.2500	.1644	2'-10"	2'-10"		
	15	6.0000	.3750	.1875	3'-4"	2'-10"		
CX309	16	9.0000	.5000	.1875	2'-0"	2'-0"	21'-1 15/16"	1048#
ICX200	17	12.0000	.5000	.1875	1'-3"	1'-3"	25'-4 1/8"	1352#

Bolt Connection & Plate Schedule											
Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	PartNo			
A	6	A325	1 1/4"	4"	1"	2	1	0097290			
B	12	A325	3/4"	2 1/2"	1/2"	2	4	0097284			
C	10	A325	3/4"	2 1/2"	1/2"	2	3	0097284			
D	10	A325	3/4"	2 1/2"	1/2"	3	2	0097284			
E	12	A325	7/8"	3 1/2"	3/4"	3	3	0097380			

Frame Clearances
Horiz. Clearance between members 1(CX309) and 16(CX309): 214'-7"
Vert. Clearance at member 1(CX309): 20'-5 15/16"
Vert. Clearance at member 16(CX309): 20'-5 15/16"
Vert. Clearance at member 17(ICX200): 24'-8 1/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 22

- 8 29'-0 3/4" Ridge Ht.
7 2 @ 4'-5 7/8"
6 2 @ 2'-6"
5 1'-1 3/8"
4 1'-11 3/4"
3 3'-6"
2 4'-0"
1 8 1/2"

Dimension Key

Shape Name = Building - 220x400x2 Wall 4, Frame 16

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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B BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:27:54

FOR CONSTRUCTION

FRAME CROSS SECTION AT FRAME LINE(S) 22

BUILDER: STROUD AND COMPANY
CUSTOMER:
LOCATION: Macon, Georgia
PROJECT: New Warehouse - 220x400x25
BUILDER'S PO#:



Butler Manufacturing
VPC VERSION: 25.2.0

JOB #: 25-024725-01
DATE: 12/19/2025
DRAWN/CHECK: DJR / DAM
PAGE: 13

COLUMN OR BEAM WEB

ROD

HEX NUT

WASHER "A"

WASHER "B"

HILLSIDE WASHER

WEB REINFORCEMENT PLATE (IF PRESENT) MAY BE SHOP WELDED ON EITHER SIDE OF THE WEB.

DESCRIPTION/PART NO				
ROD DIAM	NUT	HARD STEEL ROUND WASHER A	HARD STEEL WASHER B	HILLSIDE WASHER
3/8"	95321	3/8" FLAT WASHER (95409)	1/2" BEVEL SQUARE WASHER (46040)	543334
1/2"	95230	1/2" FLAT WASHER (95872)	3/4" FLAT ROUND WASHER (95946)	
5/8"	95233	5/8" FLAT WASHER (95945)		
3/4"	95235	3/4" FLAT WASHER (95946)	1" FLAT ROUND WASHER (95948)	543335
7/8"	95237	7/8" FLAT WASHER (95947)		
1"	95238	1" FLAT WASHER (95948)	1 1/8" FLAT ROUND WASHER (95949)	543336
1 1/8"	95239	1 1/8" FLAT WASHER (95949)		

REV. DATE: 08/02/17REV. NO. 04

BR01G2ROD BRACE WEB SLOT ASSEMBLY

BRACE LOCATION

FRAME

BRACE LOCATION

ROOF SECONDARY MEMBER

FLANGE BRACE (GFB- OR HFB-)

CLIP REQ'D W/ THICK FLANGES

ALTERNATE CONNECTIONS

FIELD NOTE:
THE BUILDER WILL HAVE TO FIELD BEAM-OUT THE 9/16" DIAM. HOLE IN THE SECONDARY MEMBERS TO 13/16" DIAM. HOLES (FOR THE 12MB- FLANGE BRACE WITH A 3/4" X 2 1/2" A325 BOLT WHEN REQUIRED.)

FLANGE BRACE WILL TYPICALLY CONNECT TO THE WEB OF THE FRAME MEMBER.

FLANGE BRACE REQUIREMENTS:

RULE#1- ALL FLANGE BRACES ON CROSS SECTIONS MUST BE INSTALLED.

RULE#2- SINGLE FLANGE BRACES ARE REQUIRED WHEN PART MARK ON CROSS SECTION IS NOT ACCOMPANIED BY (2).

RULE#3- FLANGE BRACES ARE REQUIRED BOTH SIDES OF THE FRAME WEB WHEN PART MARK IS ACCOMPANIED BY (2).

RULE#4- WHENEVER POSSIBLE, PLACE SINGLE BRACES TOWARD THE CENTER OF THE BUILDING.

RULE#5- WHENEVER POSSIBLE, PLACE ALL SINGLE BRACES ON THE SAME SIDE OF THE FRAME WEB.

** 10" & 11 1/2" PURLINS REQUIRE 3 BOLTS AT EACH END OF PURLIN LAP.

REV. DATE: 05/08/18REV. NO. 02

BR06AE

TYPICAL FLANGE BRACE CONNECTIONS
CONT. PURLIN LAP SHOWN, CONT. GIRT & SIMPLE PURLIN

PURLIN

1/2" X 1 1/2" A325 BOLTS (49080) WITH HARDENED WASHER (095872) EACH SIDE (TYP AT PURLIN END OF BRACE)

FLANGE BRACE (GFB- OR HFB-)

ENDPOST

RAKE BEAM

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)

REV. DATE: 11/16/15REV. NO. 03

BR25CA

ENDPOST TOP BETWEEN PURLINS
NO CAP CHANNEL - BRACED TO PURLINS ONLY

PURLIN

FLANGE BRACE (GFB, HFB- OR 12MB-) MUST BOLT THROUGH JCP051140

ALTERNATE JCP- LOCATION

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)

REV. DATE: 11/14/23REV. NO. 01

BR25XH

ENDPOST TOP BRACING
PURLIN REINFORCEMENT

F = FEET
I = INCHES
E = EIGHTHS

G = GAGE
O = OPERATION
C = FIN/COLOR

CX*** = COLUMN (PLATE)
CGX*** = COLUMN (GAGE)
WCX*** = COLUMN (HOTROLL)

RBX*** = RAFTER (PLATE)
BGX*** = RAFTER (GAGE)
WRX*** = RAFTER (HOTROLL)
TRX*** = TRUSS RAFTER

ICX*** = INTERIOR COLUMN
PCX*** = PIPE COLUMN
TCX*** = TUBE COLUMN

EPX*** = ENDPOST (PLATE)
EGX*** = ENDPOST (GAGE)

CBX*** = CANOPY (PLATE)
CBX*** = PIGGYBACK CANOPY

DCC*** = 8 1/2" GAGE POST
DCE*** = 10" GAGE POST

RS = THREADS BOTH ENDS
RT = THREADS ONE END - CLEVIS ONE END
RU = CLEVIS BOTH ENDS
RP = THREAD BOTH ENDS - NO HILLSIDES

PANEL/COVERING
W 1 3 1 1 7 2 6 1 K T D
* F F I I E G G O C C C
LENGTH CODE

INSULATION
I B 1 3 0 1 0 3 6 0 3 0 W V
* * F F F I I I I I E C C
LENGTH WIDTH THK CODE

SECONDARY (STANDARD)
0 8 Z 1 9 1 1 4 1 7 - - - -
* * * F F I I E G G * * * * *

DEPTHLENGTH SHAPE GAGE ADJUST.CODES

SECONDARY (SPECIAL)
0 0 1 0 8 Z 1 9 1 1 4 1 7 - - -
* * * * * F F I I E G G * * * *

COUNTER DEPTHLENGTH SHAPE GAGE ADJUST.CODES

ROD BRACING
0 3 R S 2 5 1 0
I E * * F F I I
DIA LENGTH

REV. DATE: 08/29/12REV. NO. 01

EN50B1

MARK NUMBER KEY
COMMON GENERATED MARK NUMBERS

BASIC ERECTION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

WIDESPAN STRUCTURAL SYSTEM

2013 INSTALLATION GUIDE

REV. DATE: 01/30/14REV. NO. 00

ENB002

BASIC ERECTION GUIDE - STRUCTURAL

RAKE BEAM

1/2" x 1 1/2" A325 BOLTS (49080) FILL ALL HOLES

ENDPOST

TO B.L.

OUTSET GIRTS
1'-3" AT 10" & 11 1/2" E.W. GIRTS
1'-0" AT 7" & 8 1/2" E.W. GIRTS

6" AT ALL INSET GIRTS

REV. DATE: 07/01/09REV. NO. 00

PF10C2

RAKE BEAM CONNECTION
TO ENDPOST

ROOF BEAM

EXTERIOR COLUMN

INTERIOR COLUMN

HORIZONTAL SPLICE

VERTICAL SPLICE

COLUMN BASE PLATE

FINISHED FLOOR ELEVATION 100'-0" (TYPICAL UNLESS NOTED OTHERWISE)

NOTE: BASE OF COLUMN MAY NOT BE AT FINISHED FLOOR

REV. DATE: 08/12/16REV. NO. 00

PFR007

CLEAR HEIGHT DIMENSION WORK POINTS
AS SHOWN ON FRAME CROSS SECTION DRAWINGS

1. Use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections, secondary clip connections, and flange brace connections, unless noted otherwise.
2. Slot reinforcement plates need not be located on the same side of the web as the hillside washer.

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The general contractor and/or erector is solely responsible for accurate good quality workmanship in erecting this building in accordance with this drawing, details referenced in this drawing, all applicable Butler Mfg. erection guides, and industry standards pertaining to proper erection, including the correct use of temporary bracing.

D

Butler Manufacturing
1540 Genessee St. Kansas City, MO 64102

Rev: Date: By: Description:

Builder: STROUD AND COMPANY

Customer:

Location: Macon, Georgia

Project: New Warehouse - 220x400x25

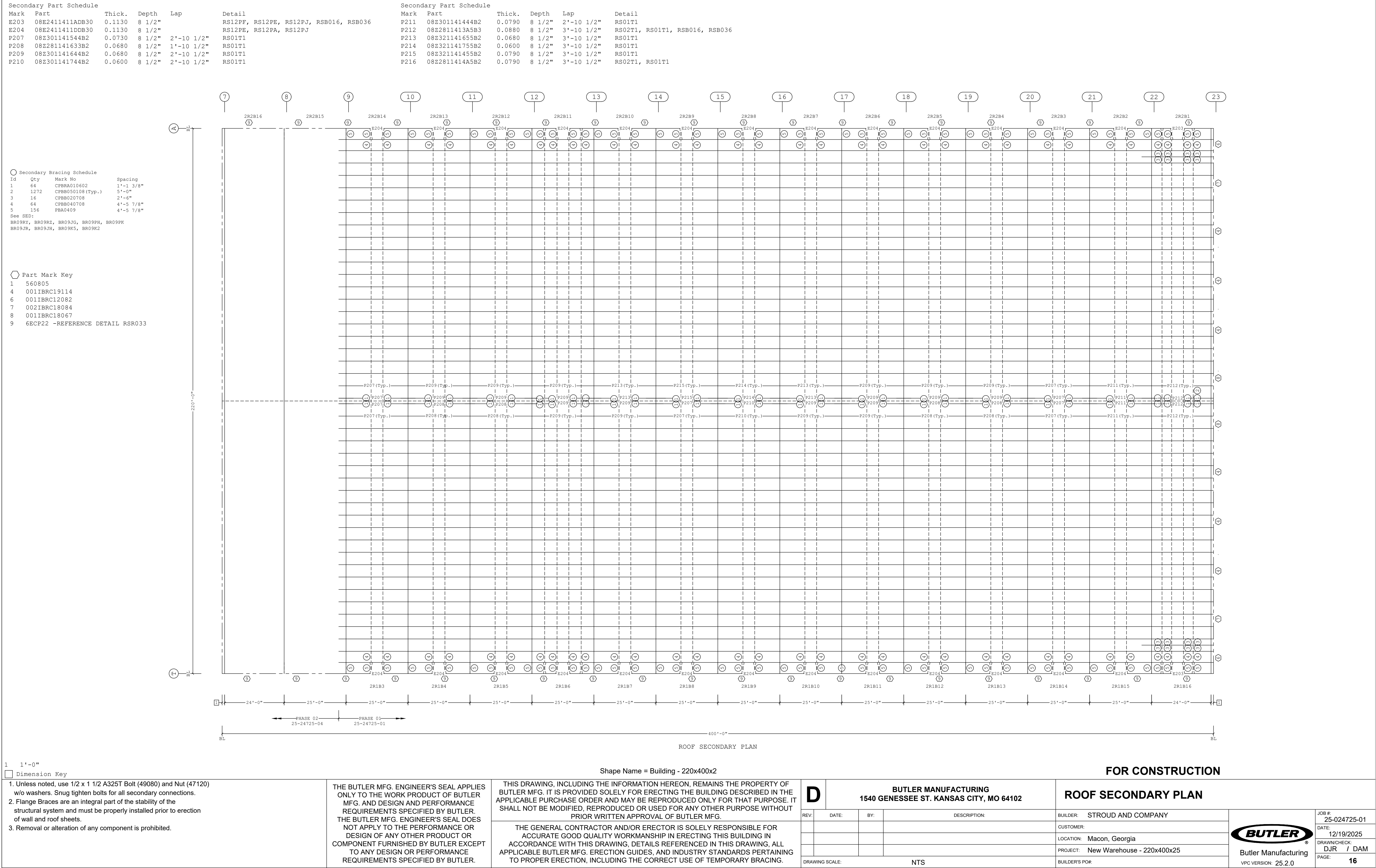
Builder's POW:

Drawing Scale: NTS

PRIMARY BRACING SED'S

Butler Manufacturing
VPC Version: 25.2.0

Job #: 25-024725-01
Date: 12/19/2025
Drawn/Check: DJR / DAM
Page: 15



ERECTION NOTE:

WHEN A CHANNEL BRACE DOES NOT LINE UP WITH ANOTHER CHANNEL BRACE OR THE SLOTS IN THE PURLIN WEB FOR A DROP PIN CONNECTION BEND THE CHANNEL TABS TOWARD THE PURLIN WEB AND USE A SELF-DRILLER (55307) TO ATTACH.

(2) 1/4-14 x 1 1/4" STRUCT. SCREWS (55307)

CHANNEL BRACE (CPB-)

PURLIN

USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE PURLIN WEB.

(2) 1/4-14 x 1 1/4" STRUCT. SCREWS (55307)

CHANNEL BRACE (CPB-)

PURLIN

USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE PURLIN WEB.

CHANNEL PURLIN BRACE (CPB-)(TYP.)

DETAIL BR09JG

PURLIN

(1) 1/4" X 6 1/4" DROP PIN (097556) (TYP. PER EACH END)

USE (1) 11/32" X 1 1/4" T-45 GRAY SCRUBOLT (097352) SCRUBOLT NUT (097267) HEAD OF SCRUBOLT TO BE ON OUTSIDE OF EAVE STRUT

USE (2) 1/2" GALV. HEX NUTS (47120) LOCATE (1) NUT ON EACH SIDE OF PURLIN USE TOP HOLE OF ANTI-ROLL CLIP IF PRESENT.

PURLIN

EAVE STRUT BRACE STRAP (ESBS_)

EAVE STRUT

EAVE PURLIN BRACE (PBA-) AT 8 1/2", 10", 11 1/2" PURLINS. (NOT REQ. AT 7" PURLIN TO 7" EAVE STRUT)

AT EAVE STRUT BEND PBA TABS AND USE (2) 11/32" X 1 1/4" T-45 GRAY SCRUBOLT (097352) AND SCRUBOLT NUT (097267) (HEAD OF SCRUBOLT TO BE ON OUTSIDE OF EAVE STRUT)

EAVE PURLIN BRACE ASSY. (PBA-)

FACE OF EAVE STRUT

**FIELD DRILL (1) 5/16" DIA. HOLE (IF REQUIRED) FOR SCRUB-BOLT CONNECTION

PURLIN

EAVE PURLIN BRACE ASSY. (PBA-)(TYP.)

SEE FACE OF EAVE STRUT VIEW FOR TAB ATTACHMENT

EAVE STRUT

NOTE: FOR LOW OR HIGH EAVE LOCATIONS.

CHANNEL PURLIN BRACE (CPB-)(TYP.)

PURLIN

(1) 1/4" X 6 1/4" DROP PIN (097556) (TYP. PER EACH END)

REV. DATE: 02/05/24 REV. NO. 02

BR09JG

CHANNEL BRACE ENDING AT PURLIN WEB SELF-DRILLER WITH BENT TABS

NOTE:

1. SEE CHART FOR RIDGE BRACE ASSEMBLY SELECTION.

2. NEST CHANNELS TO ACHIEVE 5" BETWEEN HOLES AND USE DROP PINS TO SECURE.

(2) 1/4" x 6 1/4" DROP PINS (097556)

CHANNEL RIDGE BRACE ASSEMBLY (CPBR-)

PURLIN

RIDGE

SECTION

NEST AND ROTATE CHANNELS TO ALIGN HOLES USED TO SECURE WITH DROP PINS

REV. DATE: 07/01/09 REV. NO. 00

BR09JH

SINGLE CHANNEL PURLIN BRACE ENDING AT PURLIN WEB LOCATION

END FRAME

END BAY

INT. FRAME

(1) PURLIN BRACE CHANNEL

(2) PURLIN BRACE CHANNELS

(3) PURLIN BRACE CHANNELS

(4) PURLIN BRACE CHANNELS

5"

3"

TYPICAL CLUSTER

STANDARD NOTES:

- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:

○ - DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.

⌋ - INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.

- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.

- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

REV. DATE: 07/20/16 REV. NO. 06

BR09K2

EAVE BRACE STRAP AND EAVE PURLIN BRACE LOCATED AT EAVE - CENTERLINE OF FRAME

INT. FRAME

INTERIOR BAY

INT. FRAME

(1) PURLIN BRACE CHANNEL

(2) PURLIN BRACE CHANNELS

(4) PURLIN BRACE CHANNELS

5"

3"

TYPICAL CLUSTER

STANDARD NOTES:

- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:

○ - DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.

⌋ - INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.

- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.

- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

REV. DATE: 02/23/22 REV. NO. 05

BR09K5

EAVE STRUT BRACE

ADJUST. CODES

GAGE

EIGHTHS

INCHES

LENGTH (millimeters)

FEET

SHAPE

DEPTH

DEPTH	SHAPE	GAGE
07 = 7"	Z = ZEE	11 = 0.113
08 = 8 1/2"	C = CEE	12 = 0.098
10 = 10"	E = LOW EAVE STRUT	13 = 0.088
11 = 11 1/2"	H = HIGH EAVE STRUT	14 = 0.079
		15 = 0.073
		16 = 0.068
		17 = 0.060

REV. DATE: 07/01/09 REV. NO. 00

BR09PH

SINGLE CHANNEL PURLIN BRACE INTERMEDIATE LOCATION

ADJUST. CODES

GAGE

EIGHTHS

INCHES

LENGTH (millimeters)

FEET

SHAPE

DEPTH

COUNTER

DEPTH	SHAPE	GAGE
07 = 7"	ZS = ZEE	11 = 0.113
08 = 8 1/2"	CS = CEE	12 = 0.098
10 = 10"	ES = LOW EAVE STRUT	13 = 0.088
	HS = HIGH EAVE STRUT	14 = 0.079
	BB = BACK TO BACK CEE	15 = 0.073
	FB = FACE TO BACK CEE	16 = 0.068
	FF = FACE TO FACE CEE	17 = 0.060

REV. DATE: 07/01/09 REV. NO. 00

BR09PK

CHANNEL RIDGE BRACE ASSEMBLY SINGLE BRACE AT SYMMETRICAL RIDGE

ERECTION DRAWING PART MARK

C

P

R

1

W

1

B

3

BAY NUMBER

CANOPY (C)/PARTITION(P)/ ROOF(R)/WALL(W) NUMBER

BUILDING SHAPE

THE BAY/BUNDLE CODE IDENTIFIES THE BUILDING CANOPY/PARTITION/ ROOF/WALL PLANE AND BAY

REV. DATE: 07/01/09 REV. NO. 00

BR09RY

PURLIN BRACE CLUSTER LOCATION END BAY CHANNEL LOCATION

2 1/2"

2 5/8"

8 1/2"

2 1/2"

2 5/8"

48 ° LIP

REV. DATE: 07/01/09 REV. NO. 00

BR09RZ

PURLIN BRACE CLUSTER LOCATION INTERIOR BAY CHANNEL LOCATION

PG1 CLIP

WELDED CLIP CONNECTION ALT. CONNECTION

CLIP BOLTS

VARIES

FRAME

VARIES

1 1/4"

BOLTED CLIP CONNECTION ALT. CONNECTION

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

7" & 8 1/2" PURLINS

REV. DATE: 06/17/15 REV. NO. 02

RS01T1

PURLIN CONNECTION AT INTERIOR FRAME CONTINUOUS PURLINS

PG1 CLIP

WELDED CLIP CONNECTION ALT. CONNECTION

CLIP BOLTS

VARIES

FRAME

VARIES

1 1/4"

BOLTED CLIP CONNECTION ALT. CONNECTION

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

7" & 8 1/2" PURLINS

REV. DATE: 06/17/15 REV. NO. 02

EN51B1

SECONDARY PART MARK NUMBER COMMON GENERATED MARK NUMBERS

WELDED CLIP CONNECTION ALT. CONNECTION

PG1 CLIP

BOLTED CLIP CONNECTION ALT. CONNECTION

ENDBAY ROOF PURLIN

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

ENOWALL

RAKE BEAM

1/4"

5" AT INSET GIRTS

1" 4" AT 7" & 8 1/2"

1" 3" AT 10" & 11 1/2"

OUTSET GIRTS

REV. DATE: 01/21/13 REV. NO. 01

EN51B3

SECONDARY BUNDLE LOCATION KEY ALL SECONDARY DEPTHS

1. Unless noted, use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections.

2. Flange Braces are an integral part of the stability of the structural system and must be properly installed prior to erection of wall and roof sheets.

3. Removal or alteration of any component is prohibited.

REV. DATE: 07/01/09 REV. NO. 00

EN53F1

PURLIN AND GIRT SIZES 8 1/2" 216mm

48 ° LIP

2 1/2"

2 5/8"

8 1/2"

2 1/2"

2 5/8"

REV. DATE: 06/17/15 REV. NO. 02

RS02T1

PURLIN CONNECTION TO END FRAME CONTINUOUS PURLINS

PG1 CLIP

WELDED CLIP CONNECTION ALT. CONNECTION

CLIP BOLTS

VARIES

FRAME

VARIES

1 1/4"

BOLTED CLIP CONNECTION ALT. CONNECTION

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

7" & 8 1/2" PURLINS

REV. DATE: 07/01/09 REV. NO. 00

EN51B2

SPECIAL SECONDARY PART MARK KEY COMMON GENERATED MARK NUMBERS

WELDED CLIP CONNECTION ALT. CONNECTION

PG1 CLIP

BOLTED CLIP CONNECTION ALT. CONNECTION

ENDBAY ROOF PURLIN

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

ENOWALL

RAKE BEAM

1/4"

5" AT INSET GIRTS

1" 4" AT 7" & 8 1/2"

1" 3" AT 10" & 11 1/2"

OUTSET GIRTS

REV. DATE: 07/01/09 REV. NO. 00

EN51B1

SECONDARY PART MARK NUMBER COMMON GENERATED MARK NUMBERS

WELDED CLIP CONNECTION ALT. CONNECTION

PG1 CLIP

BOLTED CLIP CONNECTION ALT. CONNECTION

ENDBAY ROOF PURLIN

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

ENOWALL

RAKE BEAM

1/4"

5" AT INSET GIRTS

1" 4" AT 7" & 8 1/2"

1" 3" AT 10" & 11 1/2"

OUTSET GIRTS

REV. DATE: 07/01/09 REV. NO. 00

EN51B2

SPECIAL SECONDARY PART MARK KEY COMMON GENERATED MARK NUMBERS

WELDED CLIP CONNECTION ALT. CONNECTION

PG1 CLIP

BOLTED CLIP CONNECTION ALT. CONNECTION

ENDBAY ROOF PURLIN

CLIPS MAY BE REQUIRED FOR PURLIN TO FRAME CONNECTIONS. REFER TO INDIVIDUAL FRAME CROSS SECTIONS FOR BOLTED CLIP PART NUMBERS AND THEIR LOCATIONS.

ENOWALL

RAKE BEAM

1/4"

5" AT INSET GIRTS

1" 4" AT 7" & 8 1/2"

1" 3" AT 10" & 11 1/2"

OUTSET GIRTS

1. Unless noted, use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections.

2. Flange Braces are an integral part of the stability of the structural system and must be properly installed prior to erection of wall and roof sheets.

3. Removal or alteration of any component is prohibited.

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D

Butler Manufacturing

1540 Genessee St. Kansas City, MO 64102

Rev:

Date:

By:

Description:

Builder:

STROUD AND COMPANY

Customer:

Location:

Macon, Georgia

Project:

New Warehouse - 220x400x25

Builder's PO#:

Drawing Scale:

NTS

ROOF SECONDARY SED'S (a)

Job #:

25-024725-01

Date:

12/19/2025

Drawn/Check:

DJR / DAM

Page:

17

Butler Manufacturing

VPC Version:

25.2.0

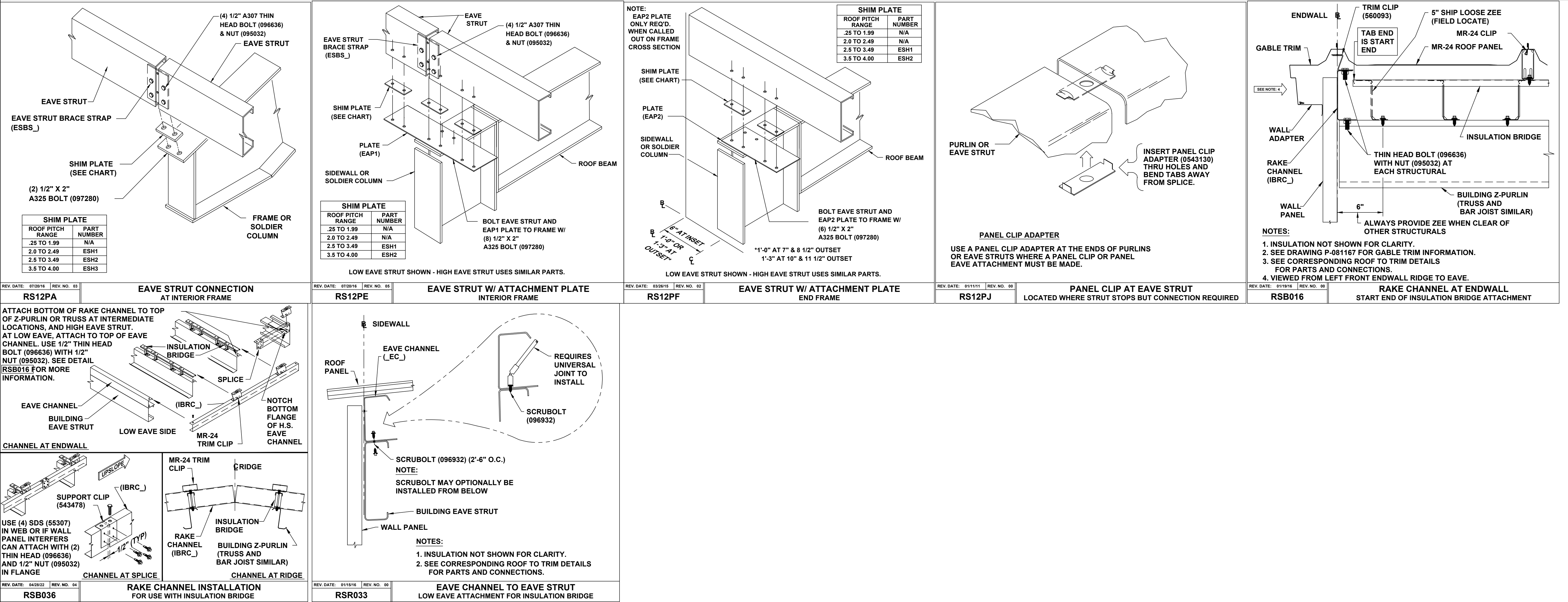
a division of BlueScope Buildings North America, Inc.

VPC Filename: 25-024725-06

12/1/2025 SEDSheet

15:22:09

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1. Unless noted, use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections.
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D

Butler Manufacturing
1540 Genessee St. Kansas City, MO 64102

Rev:	Date:	By:	Description:
Drawing Scale: NTS			

Butler Manufacturing
1540 Genessee St. Kansas City, MO 64102

Customer: Macon, Georgia

Project: New Warehouse - 220x400x25

Builder's POW:

STROUD AND COMPANY

Customer:

Butler Manufacturing
VPC Version: 25.2.0

ROOF SECONDARY SED'S (b)

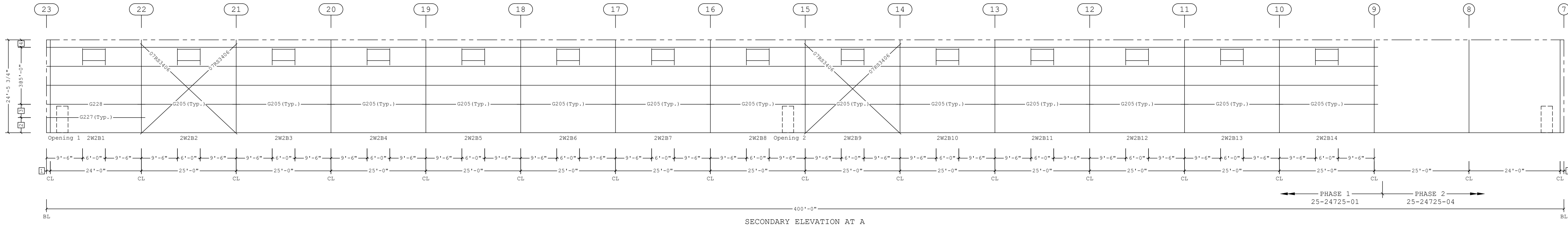
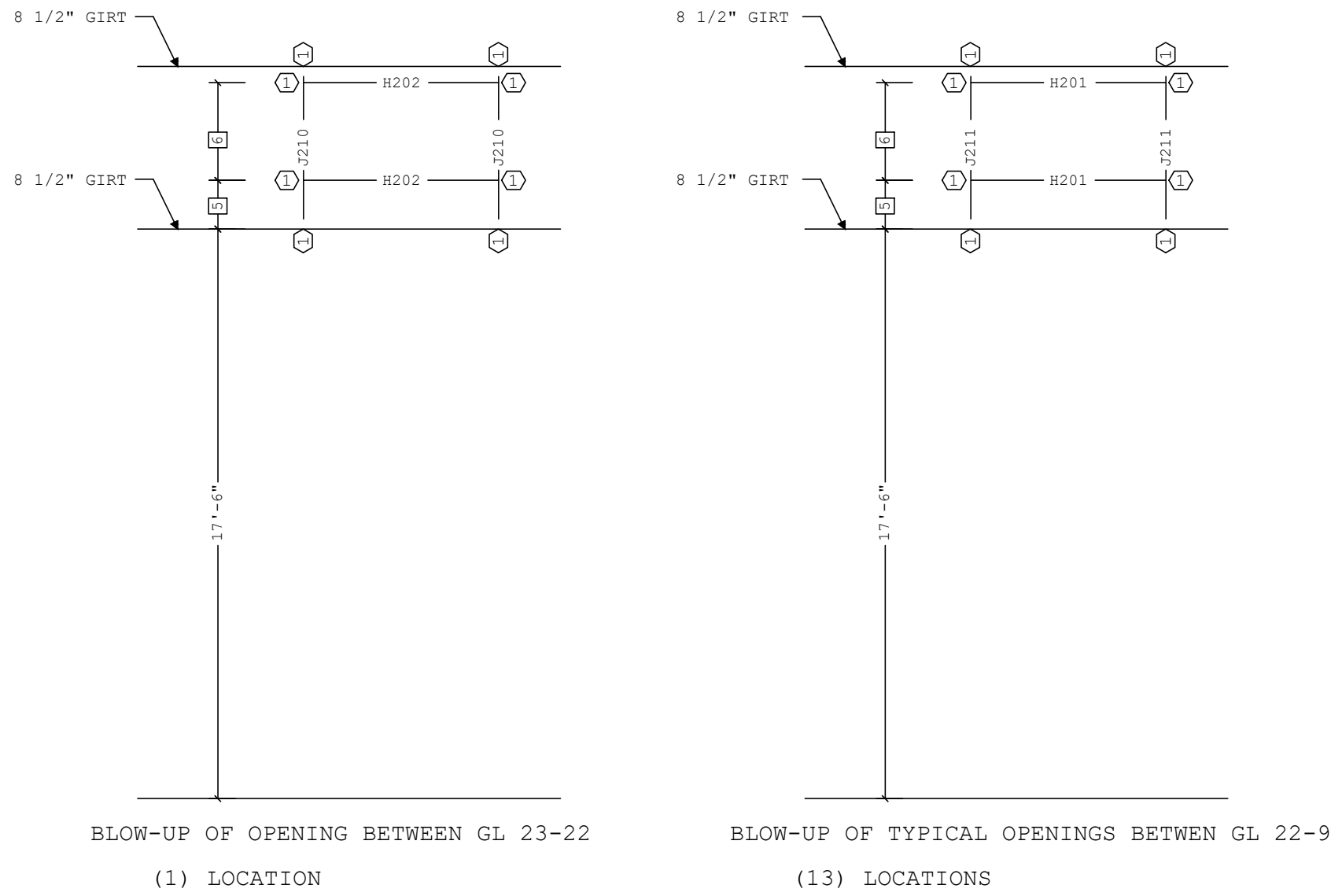
Job #: 25-024725-01
Date: 12/19/2025
Drawn/Check: DJR / DAM
Page: 18

Secondary Part Schedule					
Mark	Part	Thick.	Depth	Lap	Detail
G205	08Z26114171100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20B2, WS20H2
G227	08Z2511416A100	0.0680	8 1/2"	10 1/2"	WS12A2, WS01G3, WS20B2, WS20H2
G228	08Z2511417A100	0.0600	8 1/2"	10 1/2"	WS12A2, WS01G3
H201	20308JS0600017	0.0600	8 1/2"		WS20F9, WS20FB
H202	20808JS0600016	0.0680	8 1/2"		WS20F9, WS20FB
J210	21308JS0404416	0.0680	8 1/2"		WS20FB, WS20F9, WS20B2, WS20H2
J211	21408JS0404417	0.0600	8 1/2"		WS20FB, WS20F9, WS20B2, WS20H2

FOR WALL SECONDARY FRAMING ALIGNMENT, SEE DETAIL WSR065

Bracing Part Schedule			
Part	Qty	Length	Detail
07RS3406	4	34'-6"	BR01G2

FOR BRACING DETAILS, SEE DRAWING PG.# 15



- 6 3'-0"
- 5 1'-6"
- 4 1'-11 3/4"
- 3 3'-6"
- 2 4'-0"
- 1 1'-0"

1 PG1
Dimension Key Part Mark Key

Shape Name = Building - 220x400x2, Wall = 2

FOR CONSTRUCTION

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REV:	DATE:	BY:	DESCRIPTION:	BUILDER: STROUD AND COMPANY
				CUSTOMER:
				LOCATION: Macon, Georgia
				PROJECT: New Warehouse - 220x400x25
				BUILDER'S PO#:
DRAWING SCALE:	NTS			JOB #: 25-024725-01
SAVE DATE: 12/16/2025	SAVE TIME: 16:46:46			DATE: 12/19/2025
LAST SAVED BY: DJRAPPIITT				DRAWN/CHECK: DJR / DAM
				PAGE: 19

Secondary Part Schedule

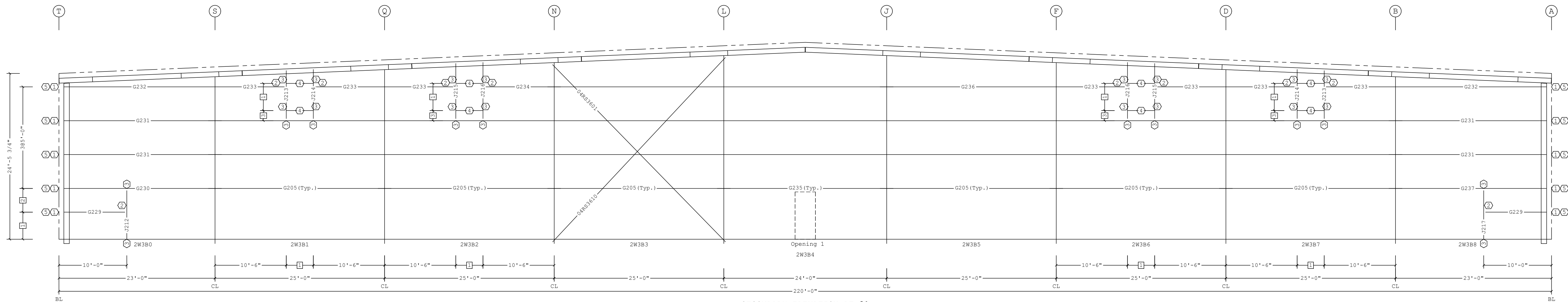
Mark	Part	Thick.	Depth	Lap	Detail
G205	08Z26114171100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20H2
G229	21108ZS081141700	0.0600	8 1/2"		WS12A2, BR10F5
G230	21208ZG230241700	0.0600	8 1/2"	10 1/2"	WS12A2, BR10F5, WS01G3
G231	08Z2302417Q100	0.0600	8 1/2"	10 1/2"	WS12A2, WS01G3
G232	08Z2202416DQ00	0.0680	8 1/2"		WS12A2, WS01G3
G233	08Z1002417DG00	0.0600	8 1/2"		WS01G2, WS20F2
G234	08Z1102417G100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20F2
G235	08Z25114171100	0.0600	8 1/2"	10 1/2"	WS01G3
G236	08Z2511417D100	0.0600	8 1/2"	10 1/2"	WS01G2, WS01G3
G237	21308ZS230241700	0.0600	8 1/2"	10 1/2"	WS12A2, BR10F5, WS01G3
H203	21608JS0400017	0.0600	8 1/2"		WS20F9, WS20FB
J212	21508JS0702217	0.0600	8 1/2"		BR10F5, WS20B2, WS20B8
J213	21708JS0701017	0.0600	8 1/2"		WS20F2, WS20FB, WS20F9, WS20B5, WS20H2
J214	21808JS0703017	0.0600	8 1/2"		WS20F2, WS20FB, WS20F9, WS20B5, WS20H2
J215	21908JS0801417	0.0600	8 1/2"		WS20F2, WS20FB, WS20F9, WS20B5, WS20H2
J216	22008JS0803417	0.0600	8 1/2"		WS20F2, WS20FB, WS20F9, WS20B5, WS20H2
J217	22108JS0702217	0.0600	8 1/2"		BR10F5, WS20B2, WS20B8

FOR WALL SECONDARY FRAMING ALIGNMENT, SEE DETAIL WSR065

Bracing Part Schedule

Part	Qty	Length	Detail
04RS3610	1	36'-10"	BR01G2
04RS3601	1	36'-1"	BR01G2

FOR BRACING DETAILS, SEE DRAWING PG.# 15



5	GFA106
4	H203
3	PG1
2	JTG1
1	VCC07003090

Dimension Key Part Mark Key

Shape Name = Building - 220x400x2, Wall = 3

FOR CONSTRUCTION

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B BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

REV.	DATE:	BY:	DESCRIPTION:

DRAWING SCALE: NTS

SAVE DATE: 12/16/2025

SAVE TIME: 16:43:29

BUILDER:	STROUD AND COMPANY
CUSTOMER:	
LOCATION:	Macon, Georgia
PROJECT:	New Warehouse - 220x400x25
BUILDER'S PO#:	



Butler Manufacturing
VPC VERSION: 25.2.0

JOB #:	25-024725-01
DATE:	12/19/2025
DRAWN/CHECK:	DJR / DAM
PAGE:	20

LAST SAVED BY: DJRAPPIIT

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FILENAME: C:\users\djrappi\ntiondrive - bluescope\desktop\2025 orders\25-024725-01 stroud\rev 1\phase 1\20-25-024725-05_SECONDARY ELEVATION AT 21.dwg

MODIFIED IN AUTOCAD

Secondary Part Schedule

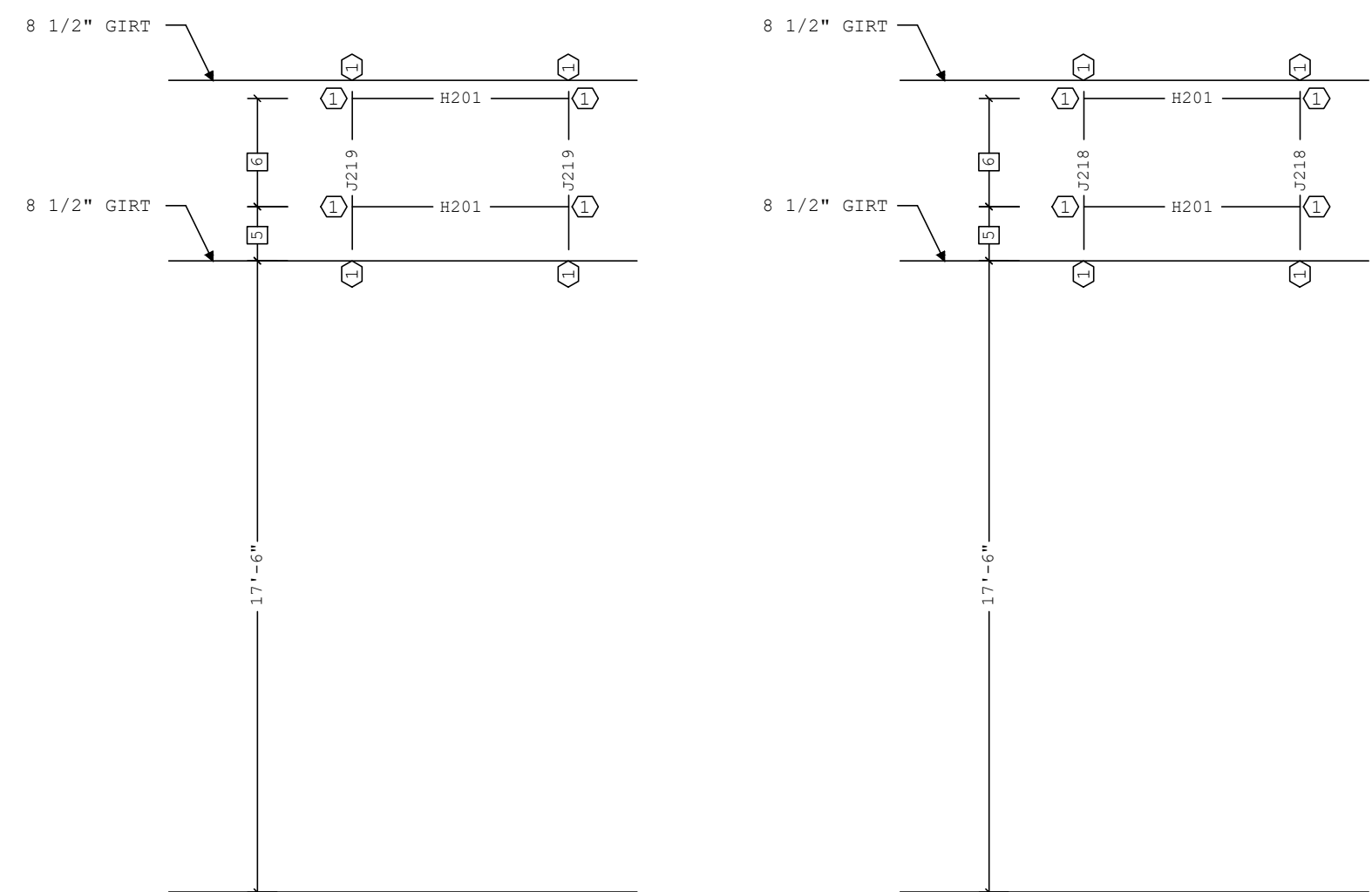
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G205	08226114171100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20B2, WS20H2
G227	0822511416A100	0.0680	8 1/2"	10 1/2"	WS12A2, WS01G3, WS20B2, WS20H2
G228	0822511417A100	0.0600	8 1/2"	10 1/2"	WS12A2, WS01G3
H201	20308J50600017	0.0600	8 1/2"	WS20F9, WS29FB	
J218	22208J50404416	0.0680	8 1/2"	WS20FB, WS20F9, WS20B2, WS20H2	
J219	22208J50404417	0.0600	8 1/2"	WS20FB, WS20F9, WS20B2, WS20H2	

FOR WALL SECONDARY FRAMING ALIGNMENT, SEE DETAIL WSR065

Bracing Part Schedule

Part	Qty	Length	Detail
07RS3406	4	34'-6"	BR01G2

FOR BRACING DETAILS, SEE DRAWING PG.# 15

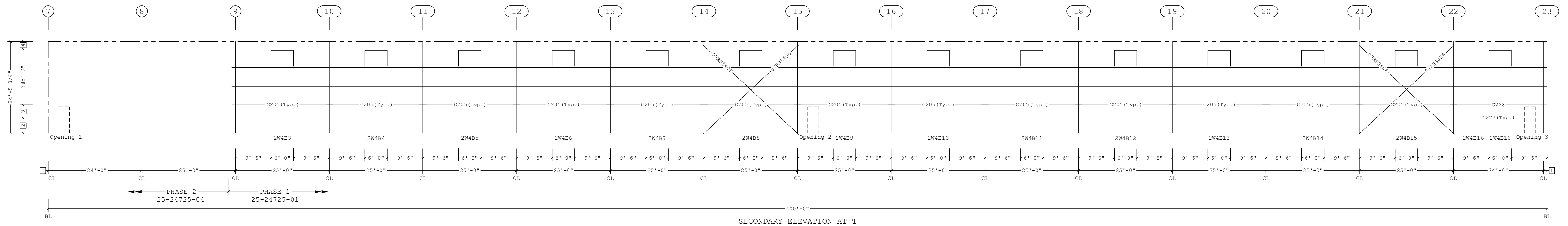


BLOW-UP OF TYPICAL OPENINGS BETWEEN GL 9-22

(13) LOCATIONS

BLOW-UP OF OPENING BETWEEN GL 22-23

(1) LOCATION



SECONDARY ELEVATION AT T

6	3'-0"	
5	1'-6"	
4	1'-11 3/4"	
3	3'-6"	
2	4'-0"	
1	1'-0"	

1	1'-0"	1	PG1
	Dimension Key		Part Mark Key

☐ Dimension Key

Part Mark Key

Shape Name = Building - 220x400x2, Wall = 4

FOR CONSTRUCTION

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D

BUTLER MANUFACTURING
1540 GENESSEE ST. KANSAS CITY, MO 64102

1540 GENESSEE ST. KANSAS CITY, MO 64102

SECONDARY ELEVATION AT T

REV:	DATE:	BY:	DESCRIPTION:

BUILDER:	STROUD AND COMPANY
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CUSTOMER:

LOCATION:	Macon, Georgia
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PROJECT:	New Warehouse - 220x400x25
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BUILDER'S PO#:



Butler Manufacturing
VPC VERSION: 25.2.0

VFC VERSION: 23.2.0

OB #:
25 024725 01

DATE:

12/19/2025

DJR / DAM

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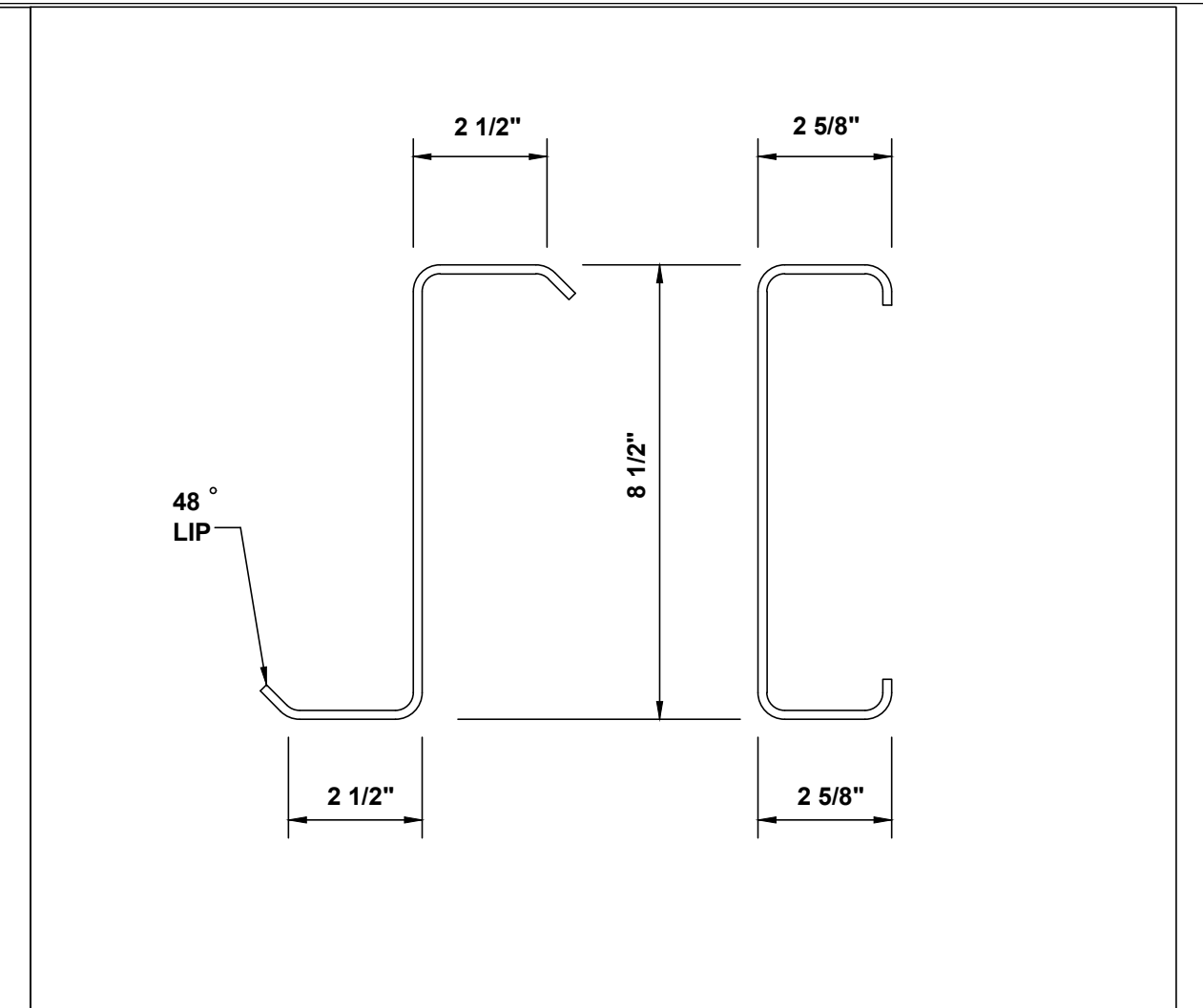
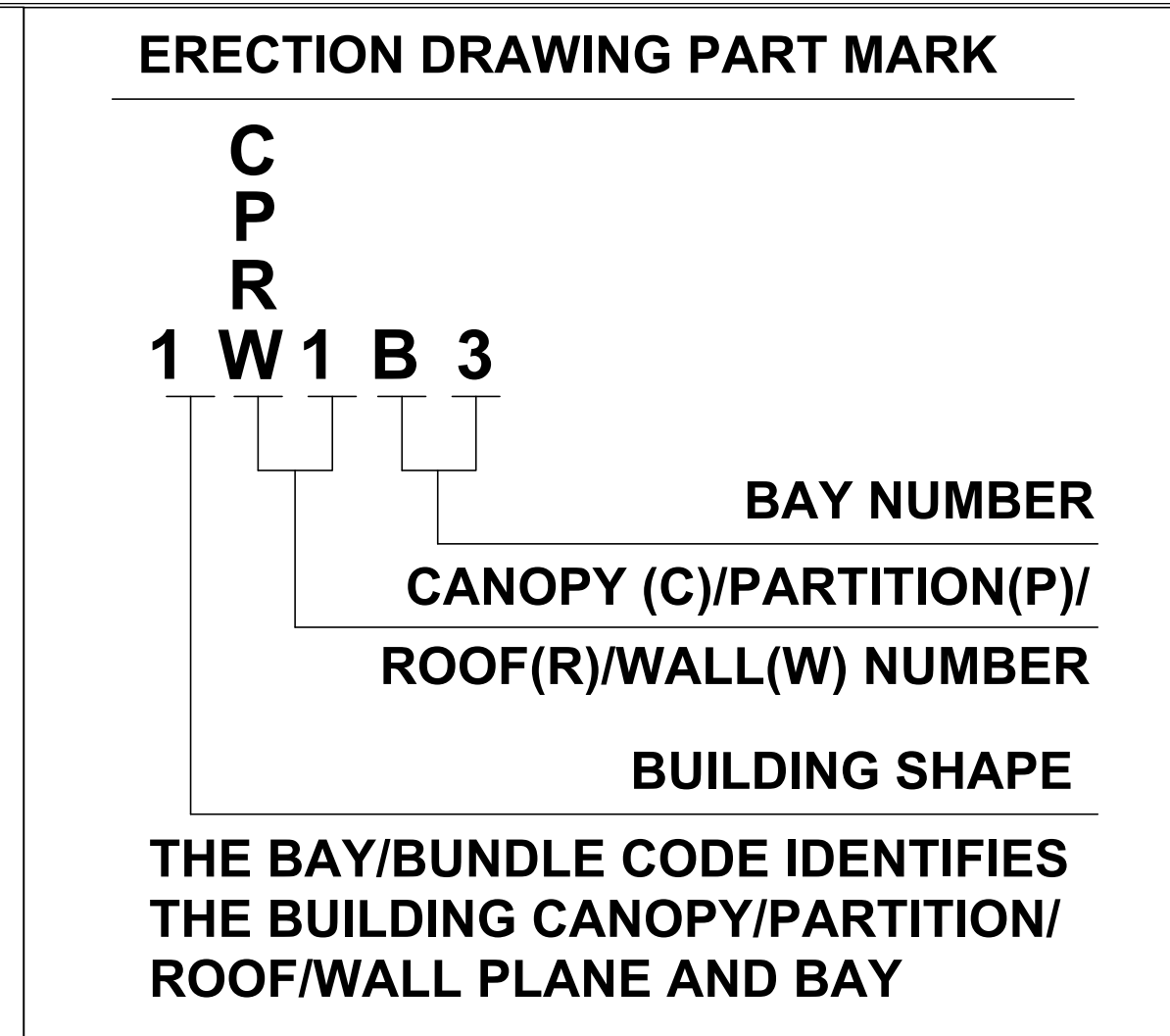
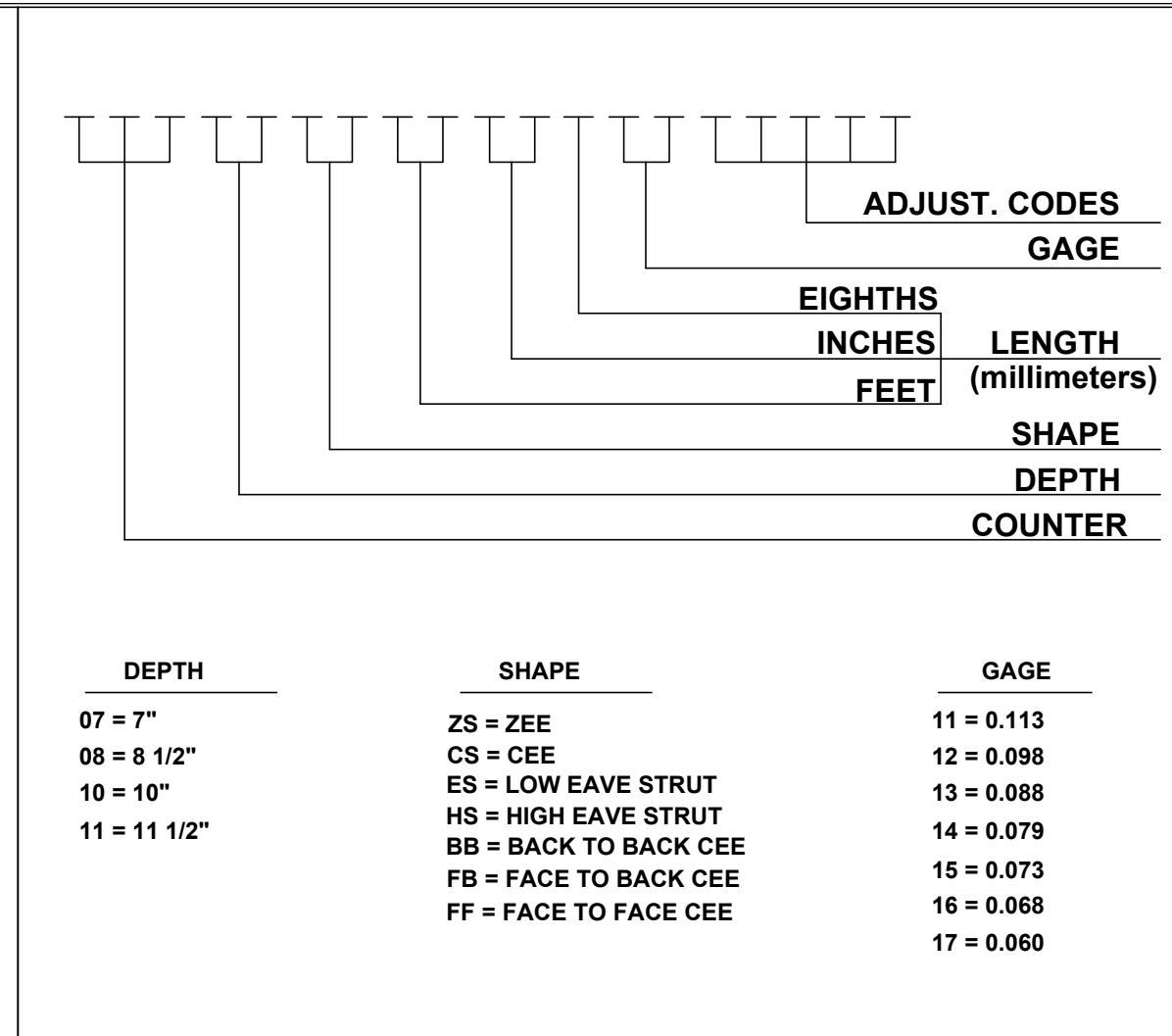
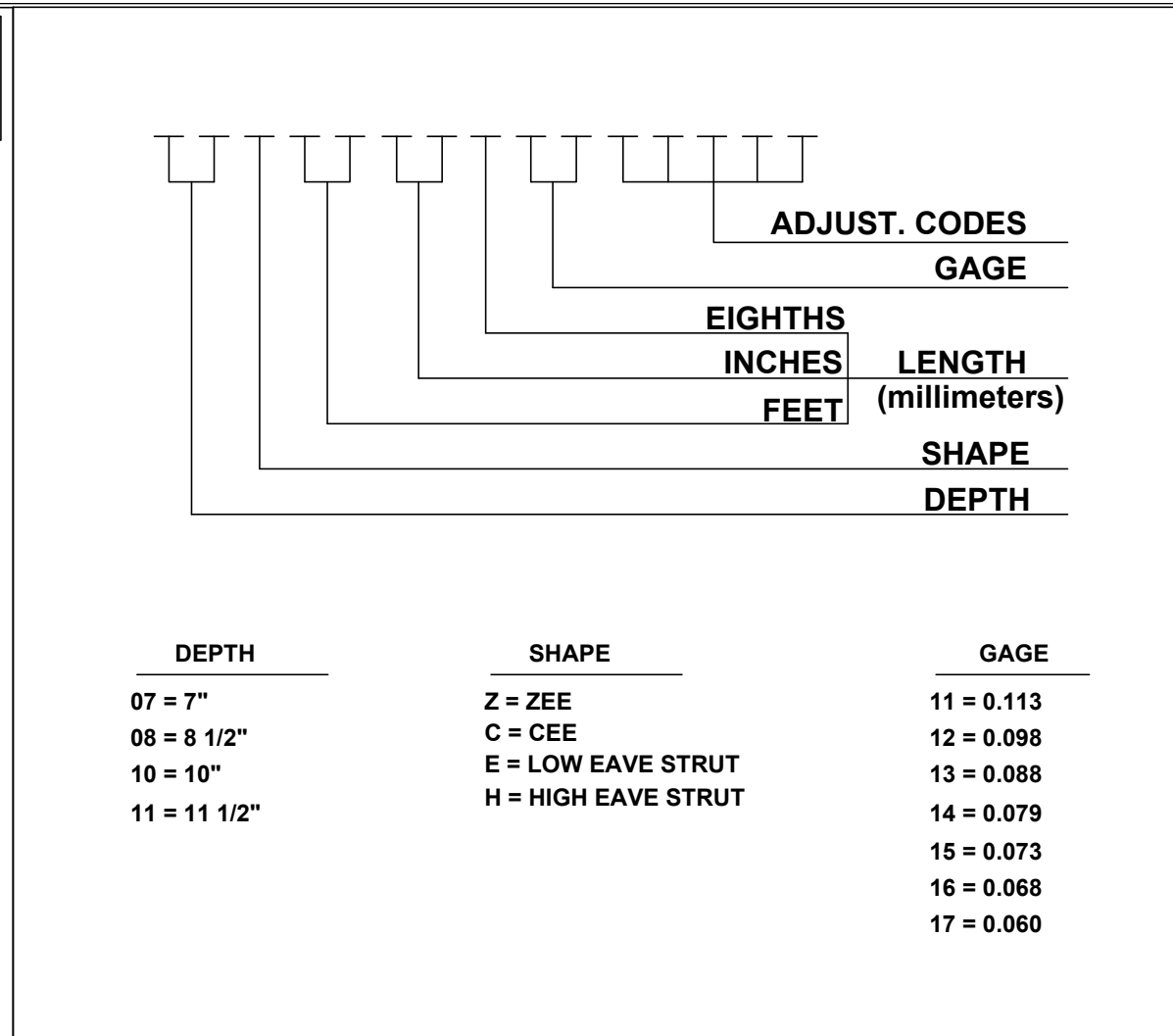
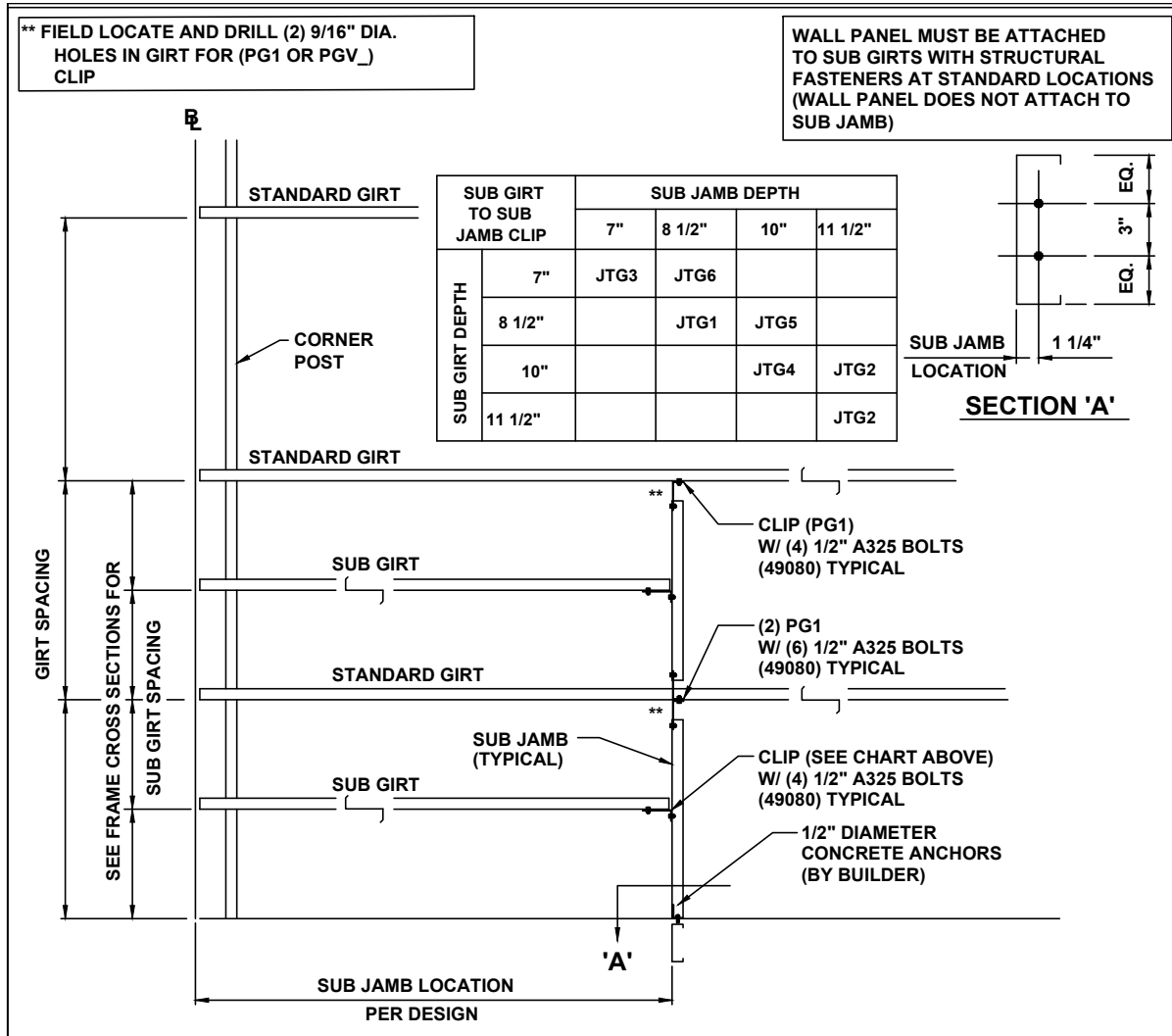
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SAVE DATE: 12/16/2025

SAVE TIME: 16:46:52

LAST SAVED BY: DJRAPPITT

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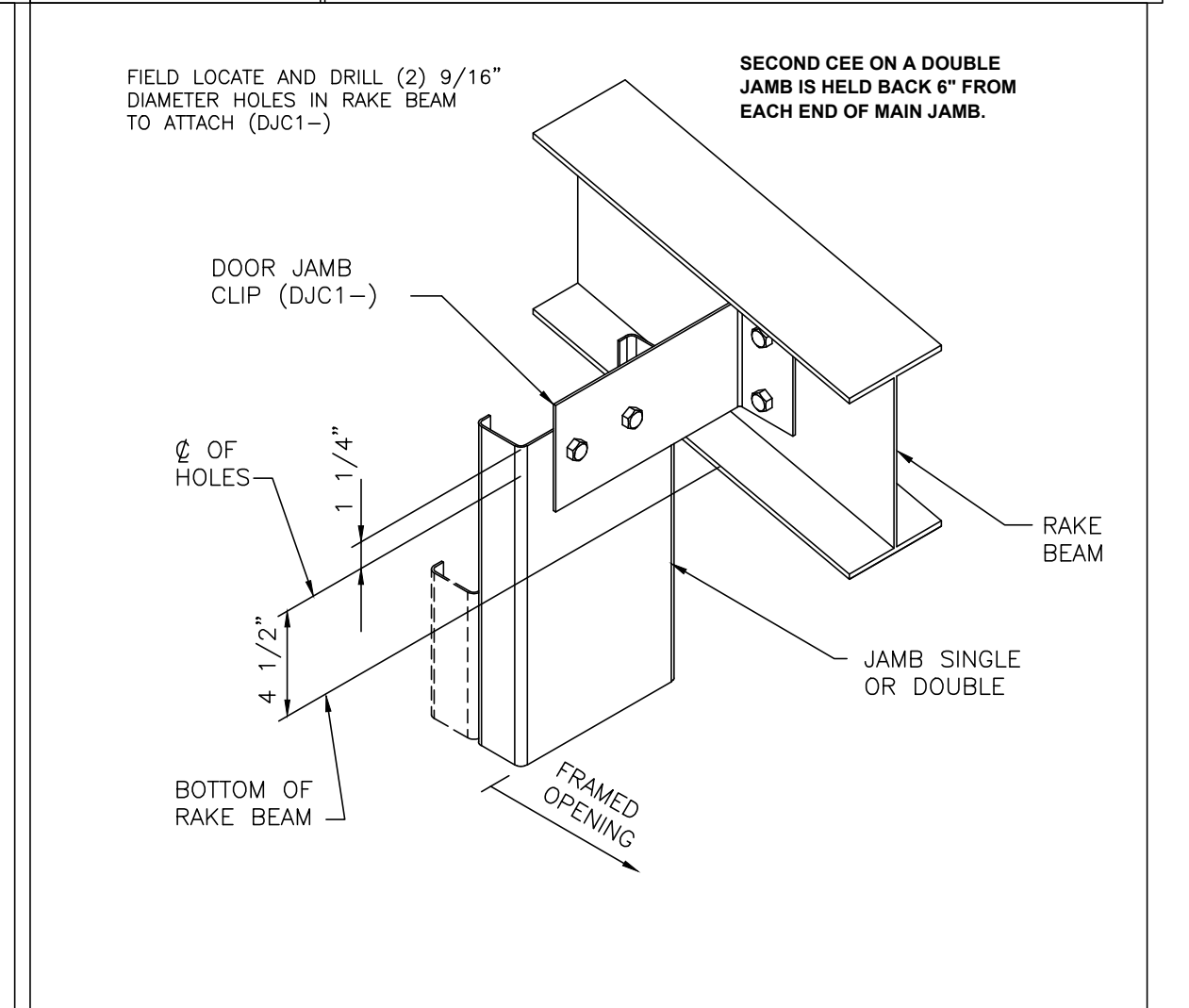
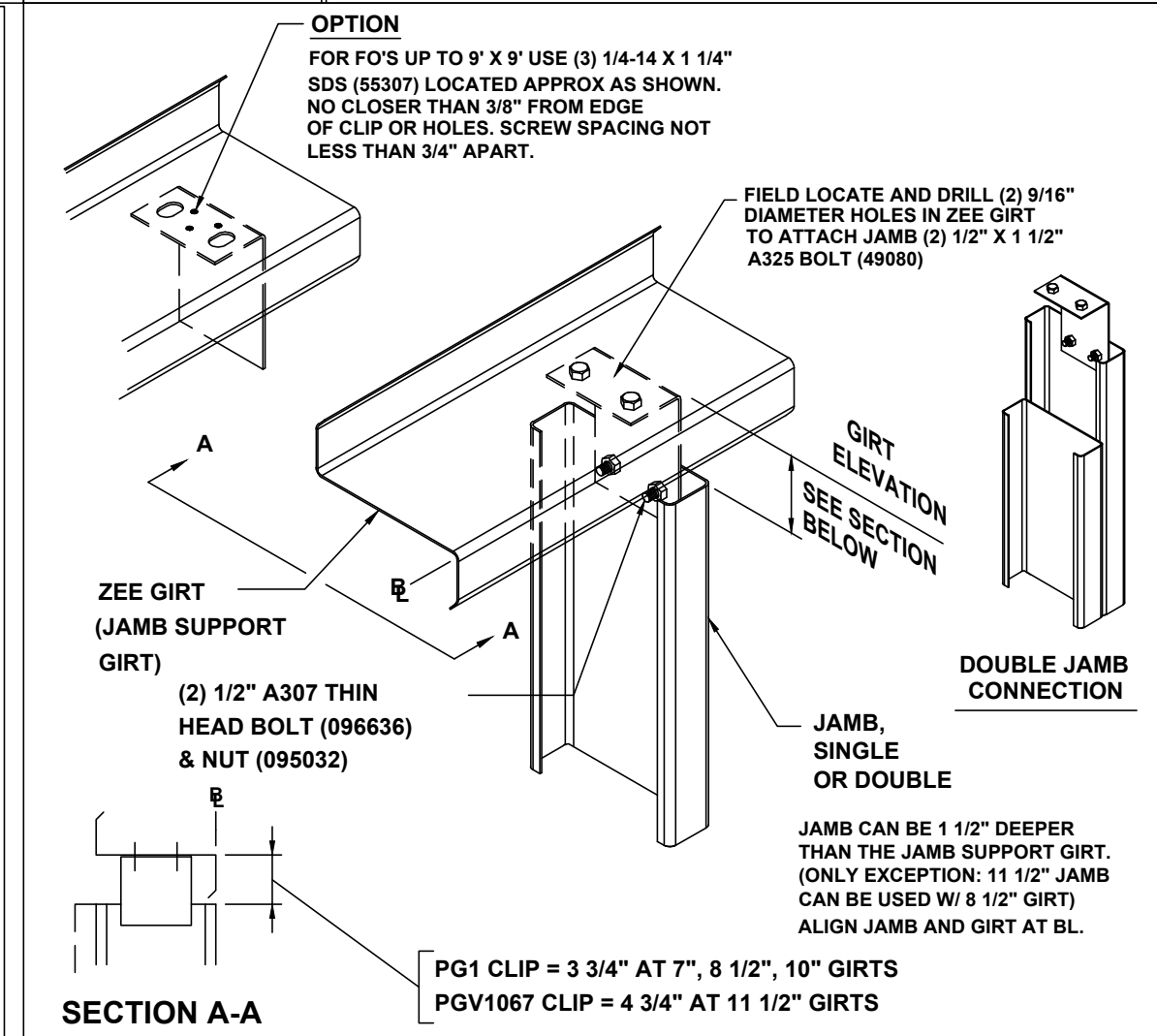
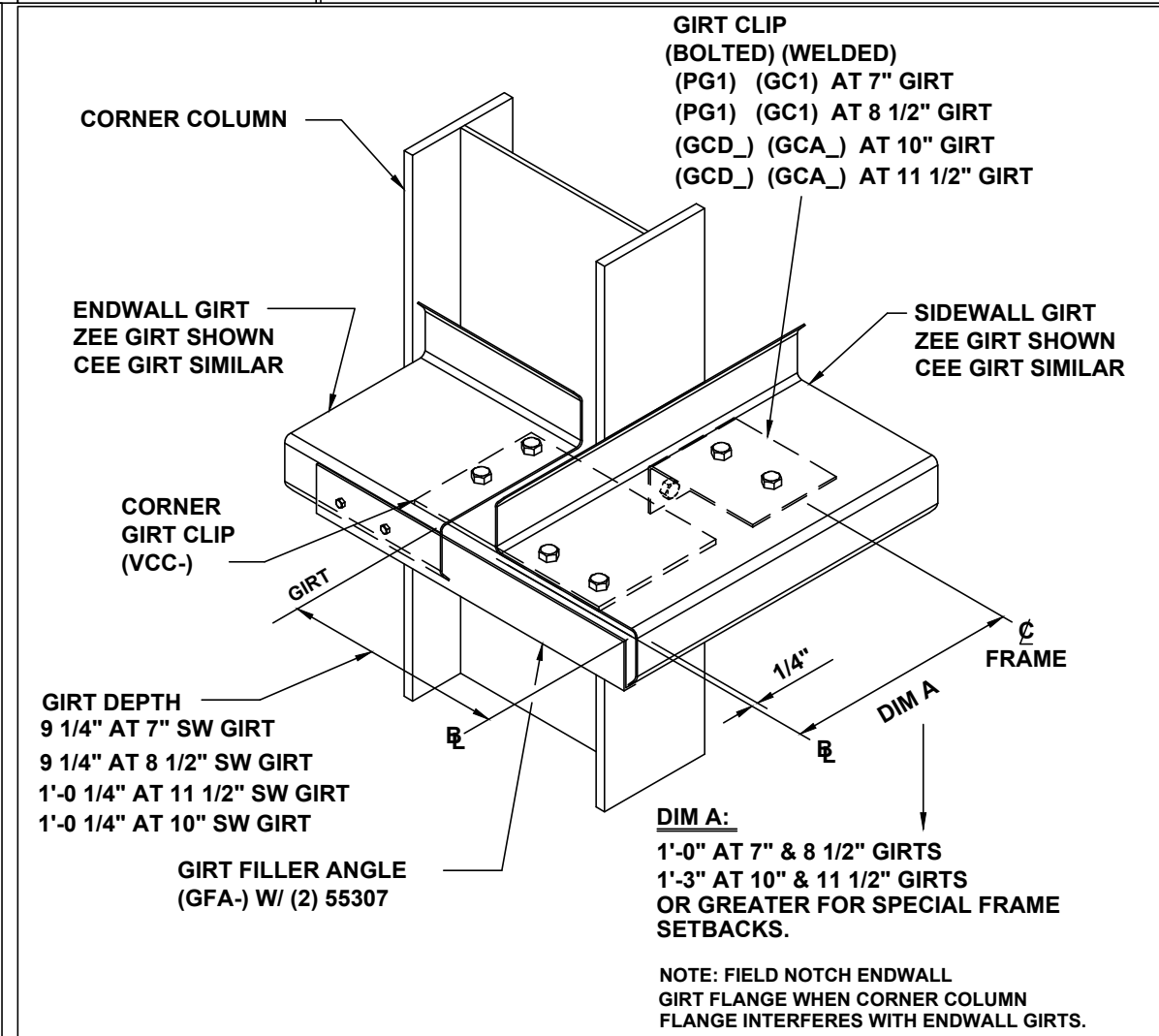
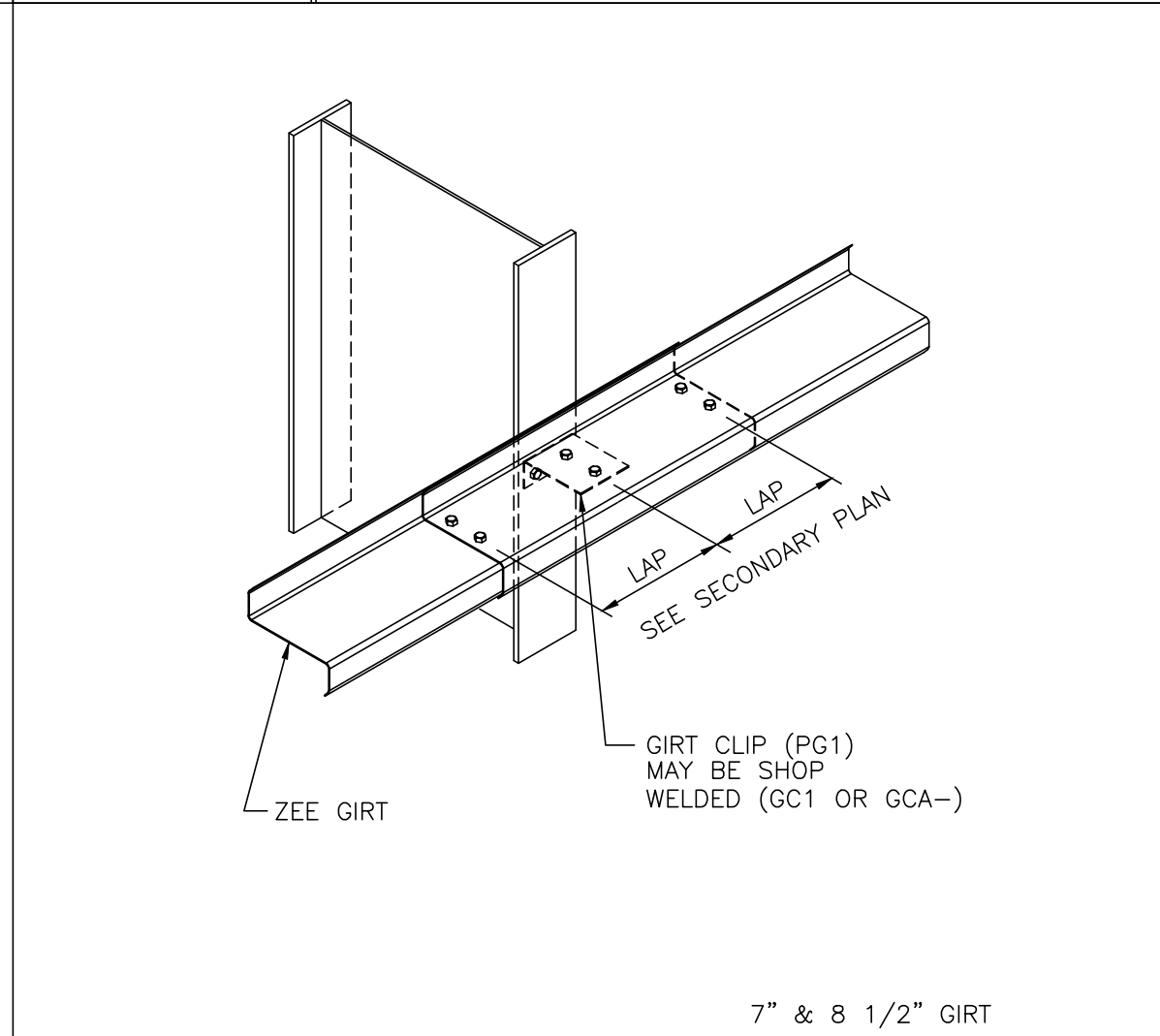
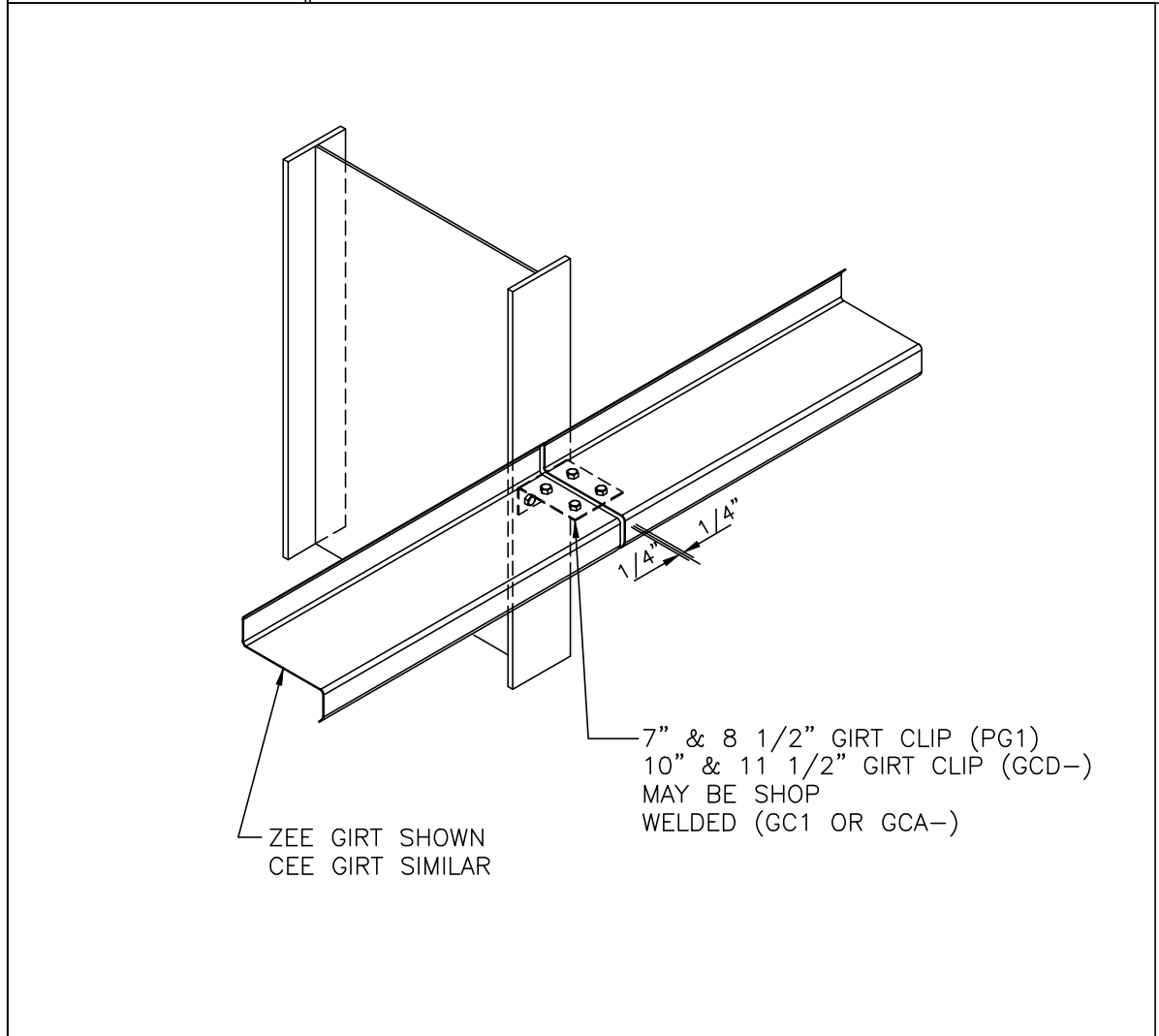
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BR10F5 **CORNER ZONE BRACING
WALL PLAN VIEW (JAMB SUPPORT)**

REV. DATE: 07/01/09 REV. NO. 00
EN51B1 **SECONDARY PART MARK NUMBER
COMMON GENERATED MARK NUMBERS**

REV. DATE: 07/01/09 REV. NO. 00
EN51B2 **SPECIAL SECONDARY PART MARK KEY
COMMON GENERATED MARK NUMBERS**

REV. DATE: 01/31/13 REV. NO. 01
EN51B3 **SECONDARY BUNDLE LOCATION KEY
ALL SECONDARY DEPTHS**

REV. DATE: 07/01/09 REV. NO. 00
EN53F1 **PURLIN AND GIRT SIZES
8 1/2" 216mm**



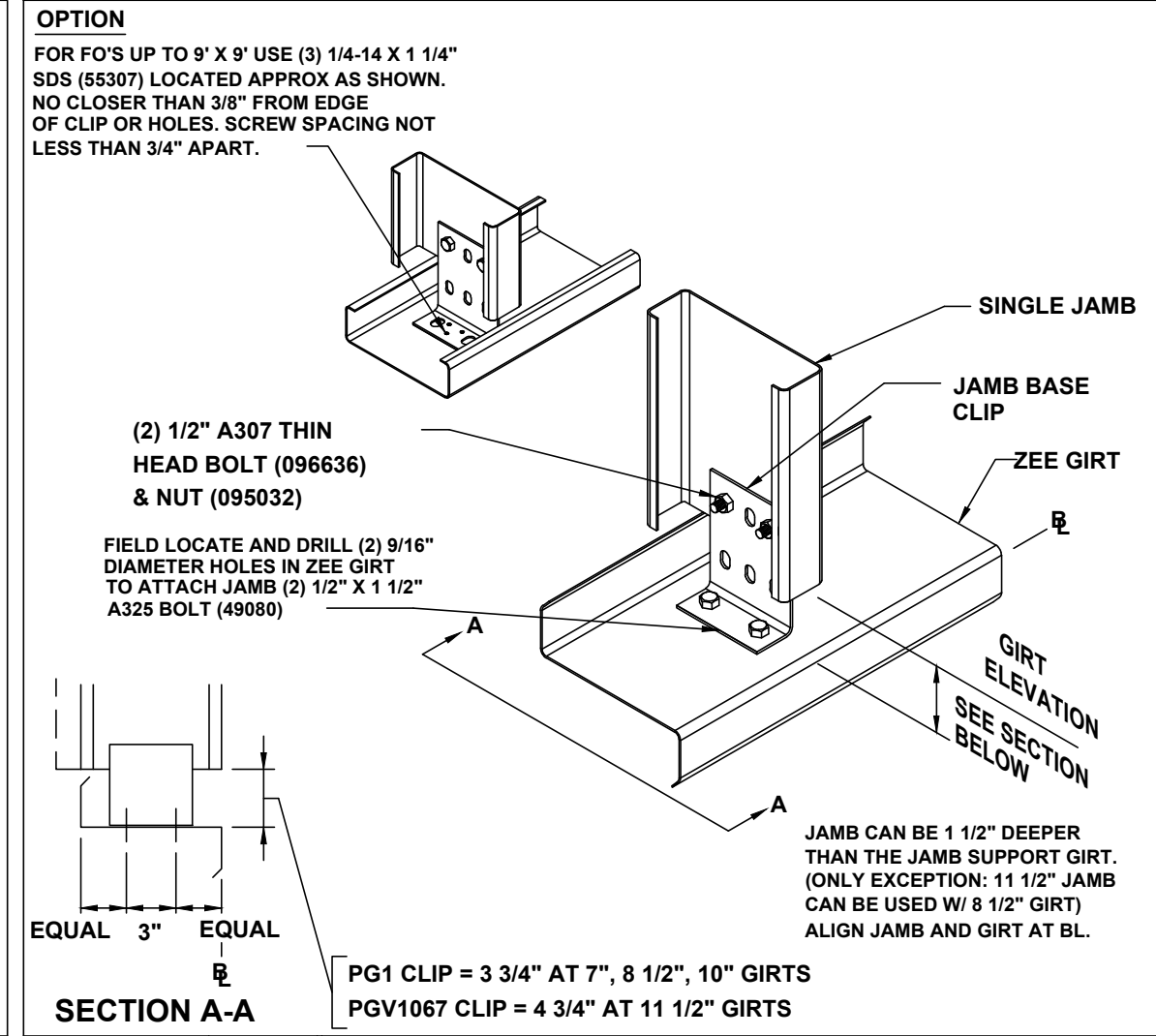
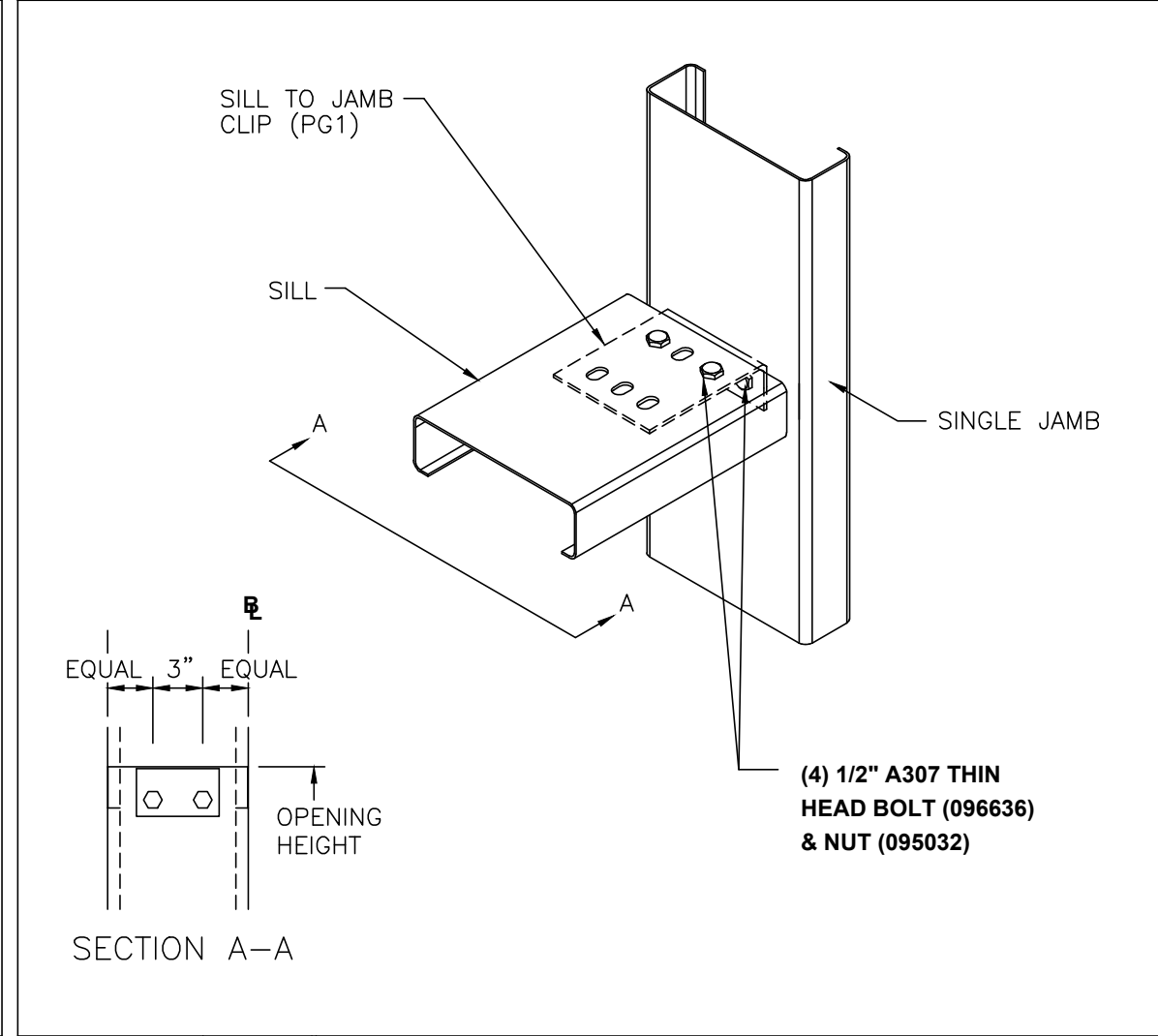
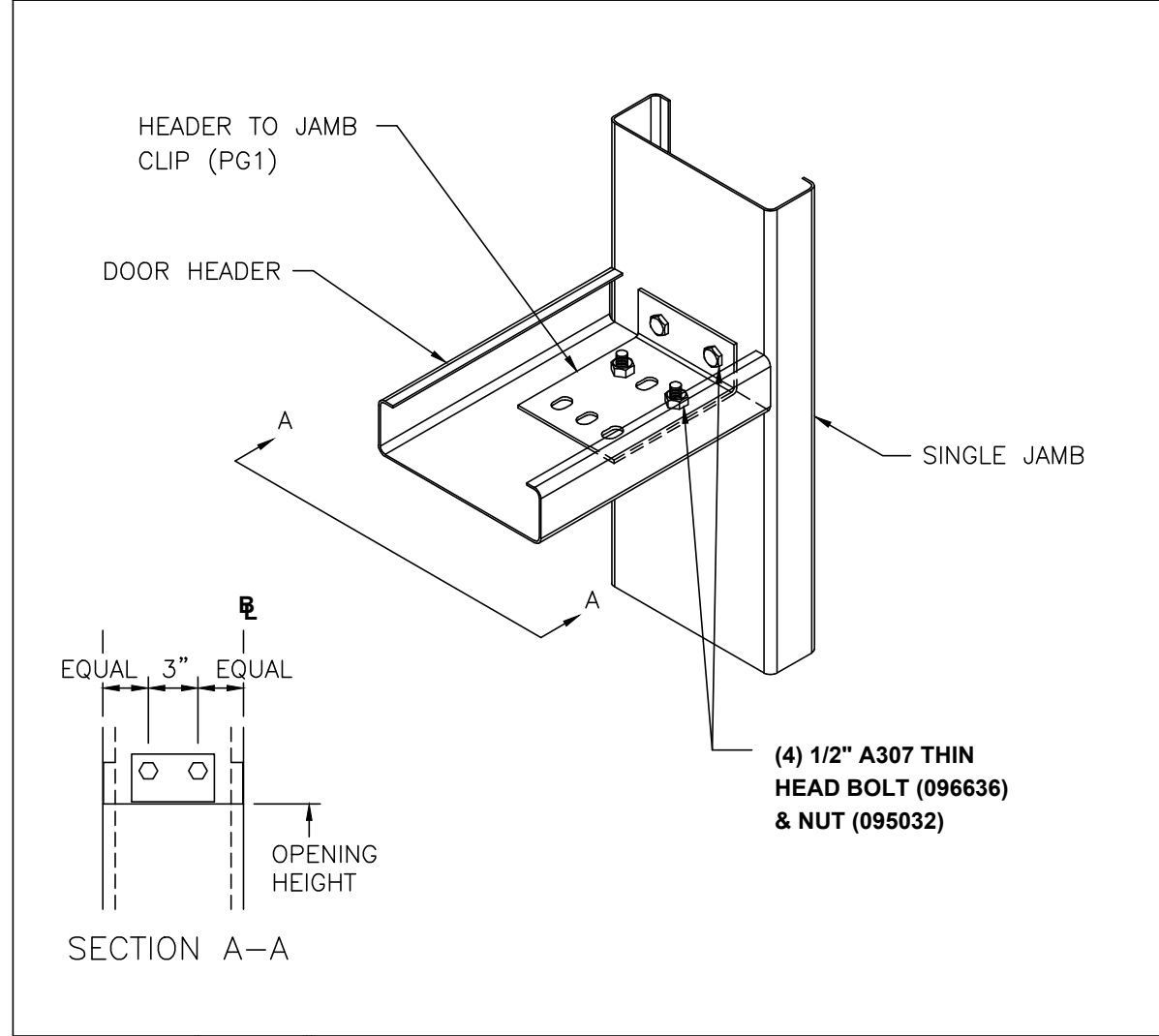
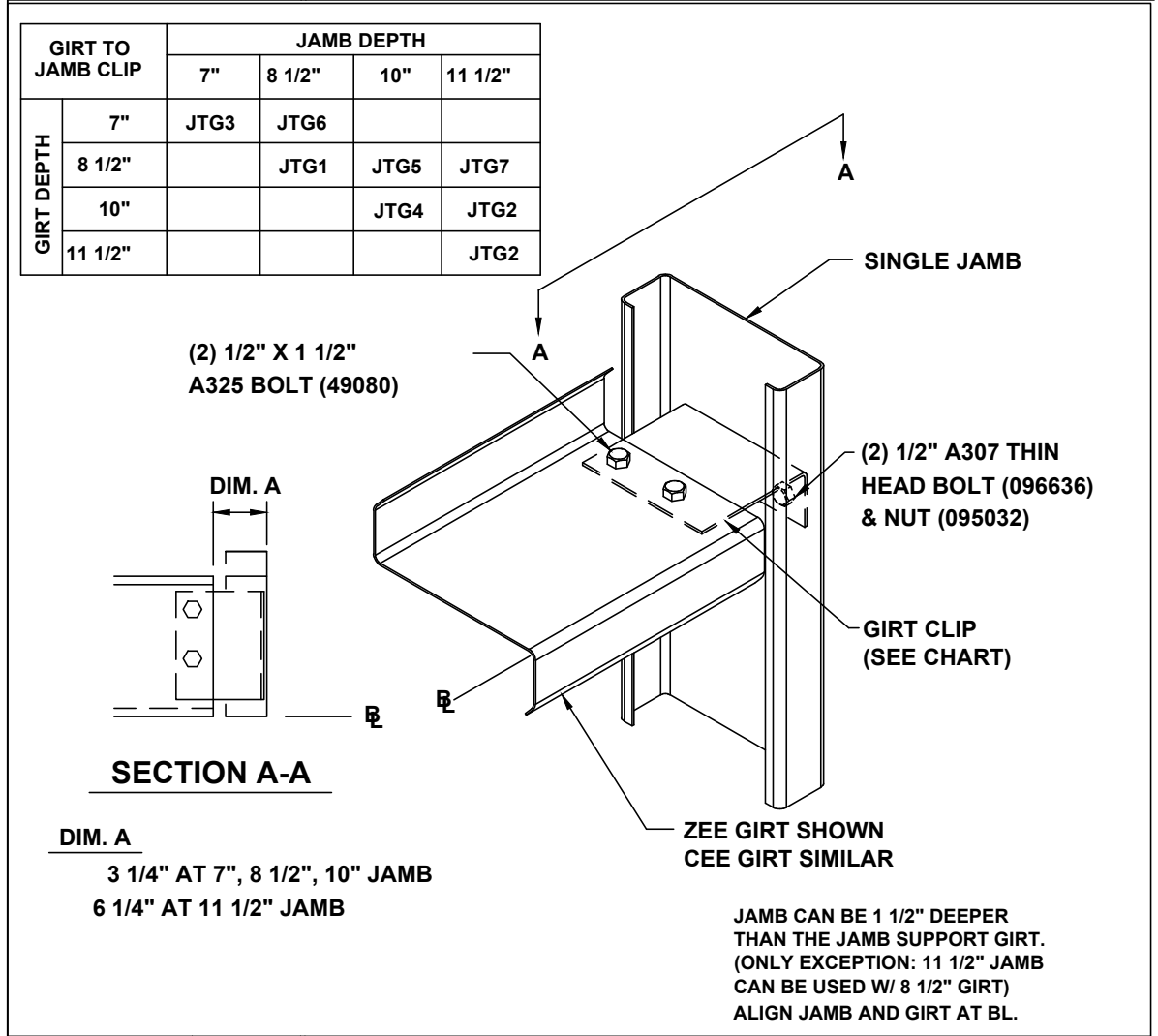
REV. DATE: 07/01/09 REV. NO. 00
WS01G2 **GIRT CONN. AT COLUMN
OUTSET SIMPLE GIRTS**

REV. DATE: 01/20/11 REV. NO. 01
WS01G3 **GIRT CONN. AT COLUMN
OUTSET CONTINUOUS GIRTS**

REV. DATE: 04/05/17 REV. NO. 03
WS12A2 **GIRT CONN. AT CORNER COLUMN
ANY OUTSET GIRTS AT EW, ANY GIRTS AT SW**

REV. DATE: 02/15/24 REV. NO. 04
WS20B2 **JAMB TO GIRTS
SINGLE OR DOUBLE JAMB, ANY ZEE GIRTS**

REV. DATE: 07/01/09 REV. NO. 00
WS20B5 **JAMB TO RAKE BEAM
ANY JAMB, OUTSET ENDWALL**



REV. DATE: 07/21/15 REV. NO. 04
WS20F2 **GIRTS TO JAMB
SINGLE JAMB**

REV. DATE: 07/01/09 REV. NO. 00
WS20F9 **HEADER TO JAMB
ANY HEADER, ANY SINGLE JAMB**

REV. DATE: 07/01/11 REV. NO. 00
WS20FB **SILL TO JAMB
ANY SILL, ANY SINGLE JAMB**

REV. DATE: 02/07/24 REV. NO. 05
WS20H2 **JAMB BASE TO GIRTS
ALL JAMB AND GIRTS DEPTHS**

FOR CONSTRUCTION

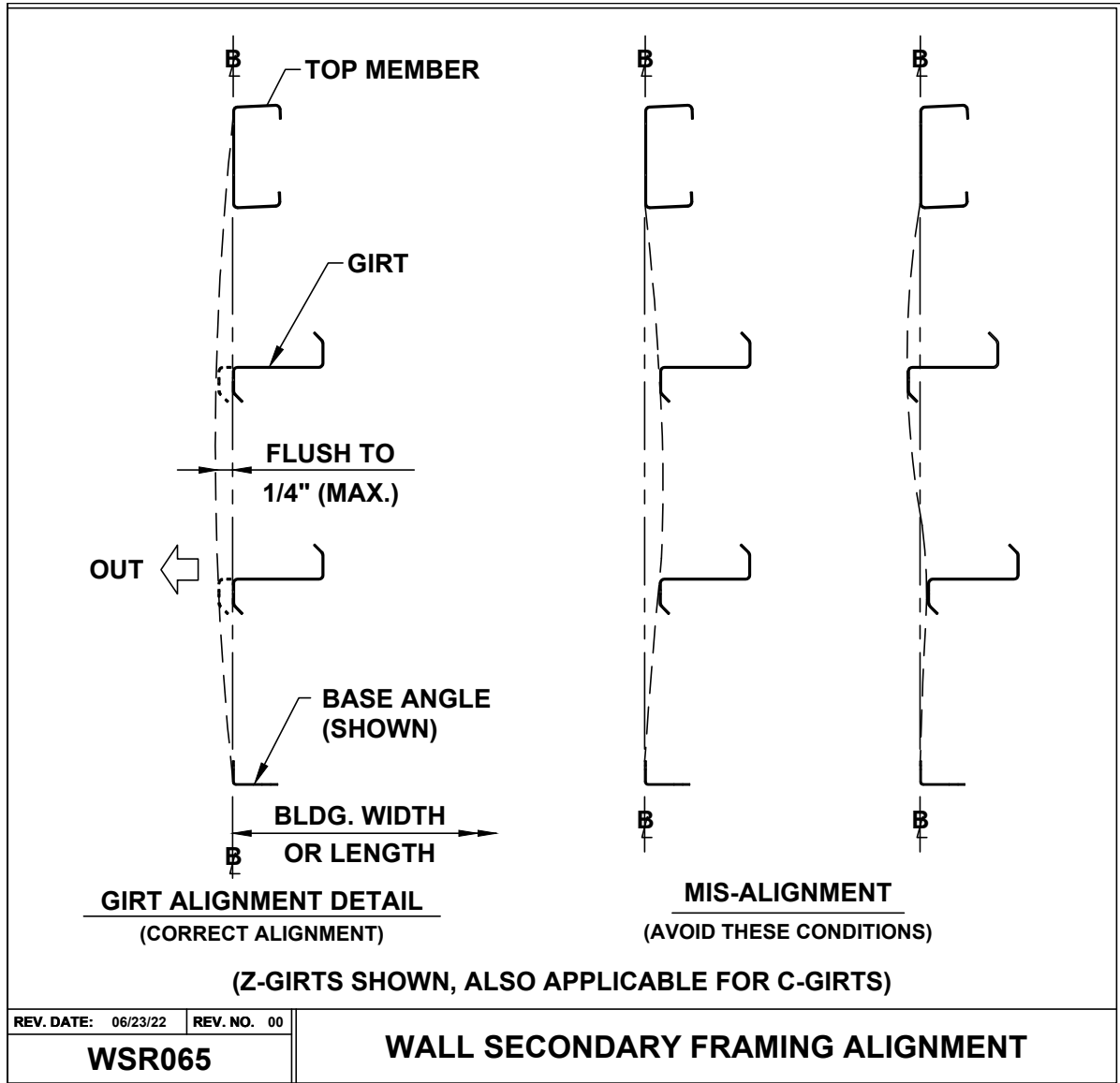
1. Unless noted, use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections.
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Butler Manufacturing 1540 Genessee St. Kansas City, MO 64102				WALL SECONDARY SED'S	
Rev:	Date:	By:	Description:	Builder:	STROUD AND COMPANY
				Customer:	
				Location:	Macon, Georgia
				Project:	New Warehouse - 220x400x25
Drawing Scale: NTS				Builder's POW:	
				Butler Manufacturing	Job #: 25-024725-01
				VPC Version: 25.2.0	Date: 12/19/2025
					Drawn/Check: DJR / DAM
					Page: 22



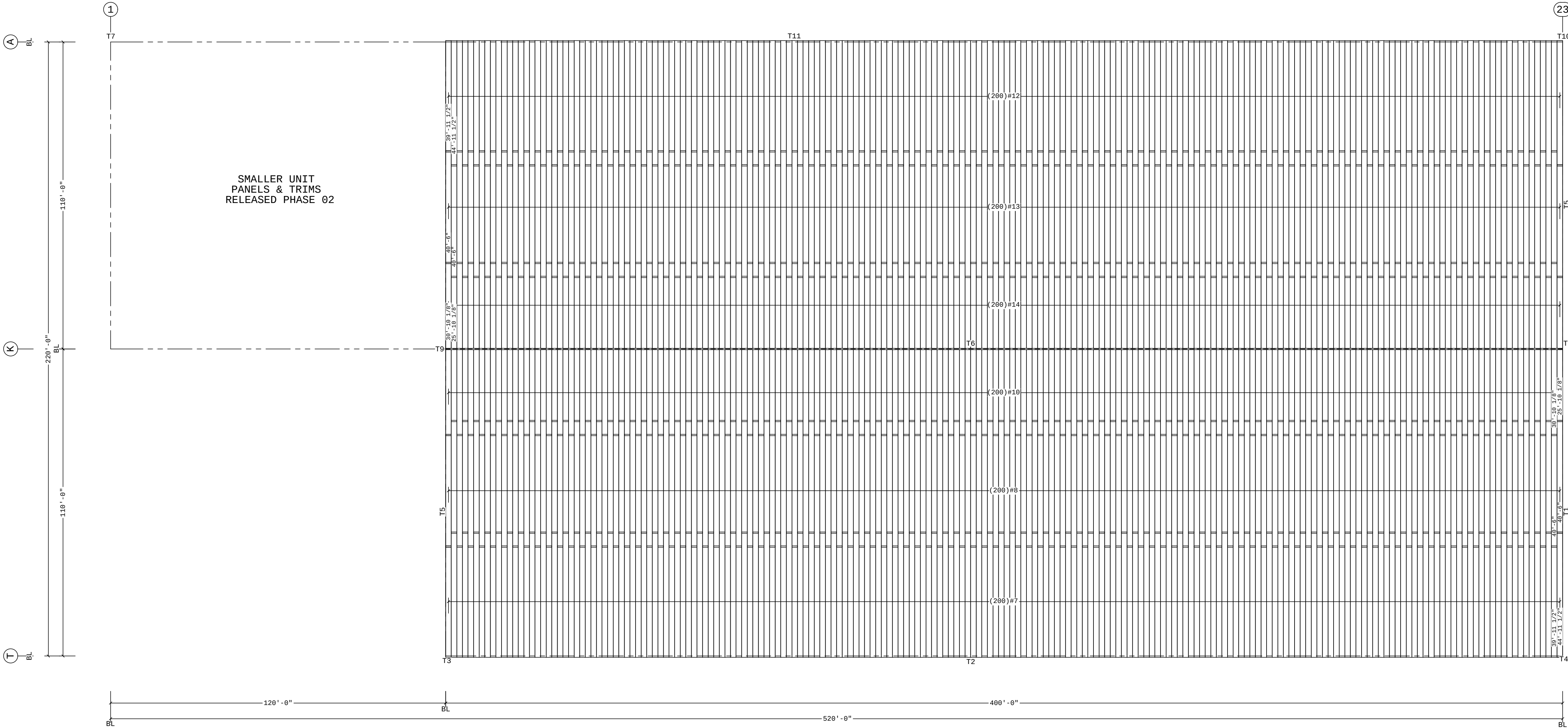
FOR CONSTRUCTION

1. Unless noted, use 1/2 x 1 1/2 A325T Bolt (49080) and Nut (47120) w/o washers. Snug tighten bolts for all secondary connections. 2. Flange Braces are an integral part of the stability of the structural system and must be properly installed prior to erection of wall and roof sheets. 3. Removal or alteration of any component is prohibited.	The Butler Mfg. Engineer's seal applies only to the work product of Butler Mfg. and design and performance requirements specified by Butler. The Butler Mfg. Engineer's seal does not apply to the performance or design of any other product or component furnished by Butler except to any design or performance requirements specified by Butler.	This drawing, including the information hereon, remains the property of Butler Mfg. It is provided solely for erecting the building described in the applicable purchase order and may be reproduced only for that purpose. It shall not be modified, reproduced or used for any other purpose without prior written approval of Butler Mfg.	D <table><tr><td>Rev:</td><td>Date:</td><td>By:</td><td>Description:</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> Drawing Scale: NTS	Rev:	Date:	By:	Description:																	Butler Manufacturing 1540 Genessee St. Kansas City, MO 64102	WALL SECONDARY SED'S	 Butler Manufacturing VPC Version: 25.2.0	Job #: 25-024725-01 Date: 12/19/2025 Drawn/Check: DJR / DAM Page: 23
		Rev:		Date:	By:	Description:																					
The general contractor and/or erector is solely responsible for accurate good quality workmanship in erecting this building in accordance with this drawing, details referenced in this drawing, all applicable Butler Mfg. erection guides, and industry standards pertaining to proper erection, including the correct use of temporary bracing.	Builder: STROUD AND COMPANY	Customer:	Location: Macon, Georgia	Project: New Warehouse - 220x400x25	Builder's PO#:																						

Covering Schedule											Trim Schedule				Planograph Schedule			
Id	Qty	Start Length	Qty	Stagger Length	Type	Gage	OP	Fin.	Color	Direction	Id	Parts	Color	Details	Id	Details		
#7	100	44'-11 1/2"	100	39'-11 1/2"	MR24	24	13	Z	AZ	Right to Left	T1	(6)MRGT20L, (9.5)SHCL12, (11)WA10A	Cool Harvest	KV403, MV822, PV167	T1	P-081167, P-081183		
#8	100	40'-6"	100	40'-6"	MR24	24	10	Z	AZ	Right to Left	T2	(34)CLE12C, (16)GTR25, (33.5)SHCL12	Cool Harvest	EN60F1, RCB361, RSR033, MV252, MV822, NV110, NV116	T2	P-103223, P-103315, P-104714		
#10	100	25'-10 1/8"	100	30'-10 1/8"	MR24	24	11	Z	AZ	Right to Left	T3	0630043, GEC1L	Cool Harvest		T3	P-080572, P-081236, P-103223, P-104542, P-104714		
#12	100	39'-11 1/2"	100	44'-11 1/2"	MR24	24	13	Z	AZ	Right to Left	T4	0630043, GEC1R	Cool Harvest		T4	P-080572, P-081236, P-103223, P-104542, P-104714		
#13	100	40'-6"	100	40'-6"	MR24	24	10	Z	AZ	Right to Left	T5	(6)MRGT20R, (9.5)SHCL12, (11)WA10A	Cool Harvest	KV404, MV822, PV167	T5	P-081167, P-081183		
#14	100	30'-10 1/8"	100	25'-10 1/8"	MR24	24	11	Z	AZ	Right to Left	T6	(40)IRTD10C, (20)RC20	Plain AlZn	ENB004, NV667, RCB331	T6	P-080573, P-080575, P-080578, P-080949, P-ZRSL0		
Oper. Code:13=SQ, NT											T7	0630043, GEC1R	Cool Harvest		T7	P-080572, P-081236, P-103223, P-104542, P-104714		
Oper. Code:10=SQ, NT											T9	0560173, MRRET, RBT2, TC1, (0.5)WA10A	Cool Harvest		T9	P-081167, P-081243		
Oper. Code:11=SQ, SQ											T10	0630043, GEC1L	Cool Harvest		T10	P-080572, P-081236, P-103223, P-104542, P-104714		
Finish:Z=AlZn											T11	(44)CLE12C, (21)GTR25, (43.5)SHCL12	Cool Harvest	EN60F1, RCB361, RSR033, MV252, MV822, NV110, NV116	T11	P-103223, P-103315, P-104714		
Color:AZ=Plain AlZn																		

Covering Mark Schedule				
Id	Qty	Start Panel	Qty	Stagger/Last Panel
#7	100	MR24441142413ZAZ	100	MR24391142413ZAZ
#8	100	MR24400602410ZAZ	100	MR24400602410ZAZ
#10	100	MR24251012411ZAZ	100	MR24301012411ZAZ
#12	100	MR24391142413ZAZ	100	MR24441142413ZAZ
#13	100	MR24400602410ZAZ	100	MR24400602410ZAZ
#14	100	MR24301012411ZAZ	100	MR24251012411ZAZ

Accessory Schedule		Description	Detail
Qty	Color		
40	Not Applicable		
5	White	Window Kit - 6030 Fixed - Clear 1" Glass Insulated - Shadowall	OPENINGS ARE FRAMED
		3070 Door - Standard	NV122, NV126, P-081201, P-081204, P-081205, P-081373



Shape Name = Building - 100x120x27, Shape = Building - 220x400x2

FOR CONSTRUCTION

may be required for heavy gage nested zee's and/or fasteners to structural beams

Steel panels are an integral part of the structural system. removal or alteration without prior authorization is prohibited.

Due to manufacturing limitations short panels may require field cutting, see the covering schedule for cut lengths.

See job details for covering and trim fastener specification.

See job details for covering and trim fastener specification.

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D

REV:	DATE:	BY:	DESCRIPTION:
DRAWING SCALE: NTS			

BUTLER MANUFACTURING

1540 GENESSEE ST. KANSAS CITY, MO 64102

ROOF COVERING PLAN

BUILDER: STROUD AND COMPANY	BUTLER Butler Manufacturing VPC VERSION: 25.2.0	JOB #: 25-024725-01 DATE: 12/23/2025 DRAWN/CHECK: DFB / DJR PAGE: 24
CUSTOMER:		
LOCATION: Macon, Georgia		
PROJECT: New Warehouse - 220x400x25		
BUILDER'S PO#:		

Covering Schedule									
Id	Qty	Type	Start	Length	Gage	OP	Fin.	Color	Direction
#34	134	SHU	25'-0	1/4"	26	3	K	GT	Left to Right
Oper. Code:3=SQ, SQ									
Finish:K=Butler-Cote									
Color:GT=Cool Gray Stone									

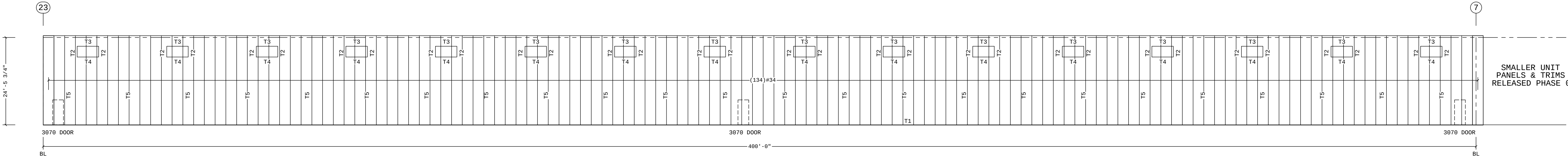
Covering Mark Schedule		
Id	Qty	Start Panel
#34	134	SHU25002263KGT

Trim Schedule	
Id	Parts
T1	(20.8)BA225, (43.5)BT12A
T2	(0.5)DSF12C, (0.3)570751
T3	(0.5)D6S12
T4	(0.5)DSF12
T5	0008738, (2)4CE45, 4CE75, (2.5)CP410

Color
Cool Gray Stone
Cool Harvest
Cool Harvest
Cool Harvest
Cool Harvest

Details
ENB006, GV386, GV442, NV115, NV120, NV128, NV664, WCB082, WCB083, WCB085, WCB086, GV622
NV568, NV124
NV566, NV125
NV567
KV846

Planograph Schedule	
Id	Details
T1	P-081180, P-081505
T2	P-081201, P-081203
T3	P-081203
T4	
T5	P-105224, P-105225, P-105228



COVERING ELEVATION AT A

Fastener Schedule		
Part	Description	
0097365-116	(T-3) #12-14 x 1 1/4", T-30 Torx Hd w/Washer	Panel-to-Panel
0097364-116	(T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer	Panel-to-Structural
0097361-116	Scrubolt 11/32 x 7/8", T-45 Torx Hd w/Washer	Panel-to-Base/Eave

Shape Name = Building - 220x400x2, Wall = 2

FOR CONSTRUCTION

- may be required for heavy gage nested zee's and/or fasteners to structural beams
2. Steel panels are an integral part of the structural system. removal or alteration without prior authorization is prohibited.
3. Due to manufacturing limitations short panels may require field cutting, see the covering schedule for cut lengths.
4. See job details for covering and trim fastener specification.
4. See job details for covering and trim fastener specification.

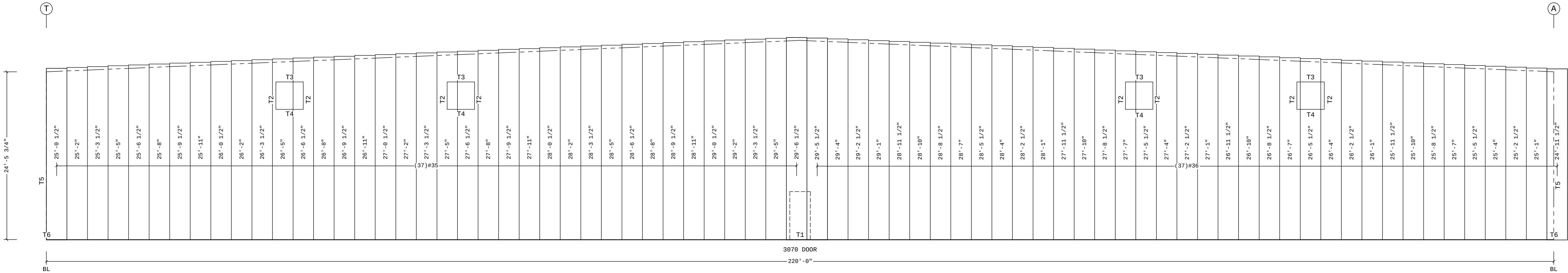
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D				BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102		COVERING ELEVATION AT A			
REV:	DATE:	BY:	DESCRIPTION:		BUILDER: STROUD AND COMPANY		 Butler Manufacturing VPC VERSION: 25.2.0	JOB #:	25-024725-01
					CUSTOMER:			DATE:	12/23/2025
					LOCATION: Macon, Georgia			DRAWN/CHECK:	DFB / DJR
					PROJECT: New Warehouse - 220x400x25			PAGE:	25
DRAWING SCALE:				NTS		BUILDER'S POW:			

Covering Schedule										Trim Schedule				Color		Details		Planograph Schedule	
Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Increment	Direction	Id	Parts			Color		Details		Id	Details
#35	37	SHU	25'-0 1/2"	26	3	K	GT	1 1/2"	Left to Right	T1	(8.8)BA225, (18.5)BT12A			Cool Gray Stone		ENB006, GV386, GV442, NV115, NV120, NV128, NV664, WCB082, WCB083, WCB085, WCB086, GV622		T1	P-081180, P-081505
#36	37	SHU	29'-5 1/2"	26	3	K	GT	-1 1/2"	Left to Right	T2	(0.5)DSF12C, (0.3)570751			Cool Harvest		NV568, NV124		T2	P-081201, P-081203
Oper. Code:3=SQ, SQ										T3	(0.5)DGS12			Cool Harvest		NV566, NV125		T3	P-081203
Finish:K=Butler-Cote										T4	(0.5)DSF12			Cool Harvest		NV567		T4	
Color:GT=Cool Gray Stone										T5	(4)0620163, (3)SHOCT12			Cool Gray Stone		NV118		T5	P-081180, P-081185
										T6	CTB2L, CTB2R			Cool Gray Stone		ENB006, NV664		T6	P-081180, P-081505
Covering Mark Schedule																			
Id	Qty	Start Panel				Last Panel													
#35	37	SHU25004263KGT				SHU29064263KGT													
#36	37	SHU29054263KGT				SHU24114263KGT													



COVERING ELEVATION AT 23

Fastener Schedule			
Part	Description		
0097365-116	(T-3) #12-14 x 1 1/4", T-30 Torx Hd w/Washer	Panel-to-Structural	
0097364-116	(T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer	Panel-to-Panel	
0097361-116	Scrubolt 11/32 x 7/8", T-45 Torx Hd w/Washer	Panel-to-Base/Gable	

Shape Name = Building - 220x400x2, Wall = 3

FOR CONSTRUCTION

- may be required for heavy gage nested zee's and/or fasteners to structural beams
2. Steel panels are an integral part of the structural system. removal or alteration without prior authorization is prohibited.
 3. Due to manufacturing limitations short panels may require field cutting, see the covering schedule for cut lengths.
 4. See job details for covering and trim fastener specification.
 4. See job details for covering and trim fastener specification.

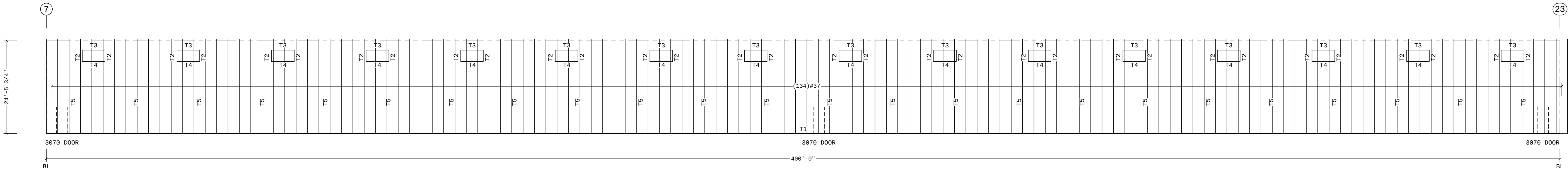
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D				BUTLER MANUFACTURING		COVERING ELEVATION AT 23			
1540 GENESSEE ST. KANSAS CITY, MO 64102									
REV:	DATE:	BY:	DESCRIPTION:		BUILDER: STROUD AND COMPANY				JOB #:
					CUSTOMER:				25-024725-01
					LOCATION: Macon, Georgia				DATE: 12/23/2025
					PROJECT: New Warehouse - 220x400x25				DRAWN/CHECK: DFB / DJR
DRAWING SCALE: NTS				BUILDER'S POI:				PAGE: 26	

Covering Schedule										Trim Schedule										Planograph Schedule									
Id	Qty	Type	Start	Length	Gage	OP	Fin.	Color	Direction	Id	Parts	Color	Details	Id	Details														
#37	134	SHU	25'-0	1/4"	26	3	K	GT	Left to Right	T1	(16)BA225, (33.5)BT12A	Cool Gray Stone	ENB006, GV386, GV442, NV115, NV120, NV128, NV664, WCB082, WCB083, WCB085, WCB086, GV622	T1	P-081180, P-081505														
Oper. Code:3=SQ, SQ										T2	(0.5)DSF12C, (0.3)570751	Cool Harvest	NV568, NV124	T2	P-081201, P-081203														
Finish:K=Butler-Cote										T3	(0.5)DGS12	Cool Harvest	NV566, NV125	T3	P-081203														
Color:GT=Cool Gray Stone										T4	(0.5)DSF12	Cool Harvest	NV567	T4															
										T5	0008738, (2)4CE45, 4CE75, (2.5)CP410	Cool Harvest	KV846	T5	P-105224, P-105225, P-105228														
Covering Mark Schedule																													
Id	Qty	Start	Panel																										
#37	134	SHU25002263KGT																											



COVERING ELEVATION AT T

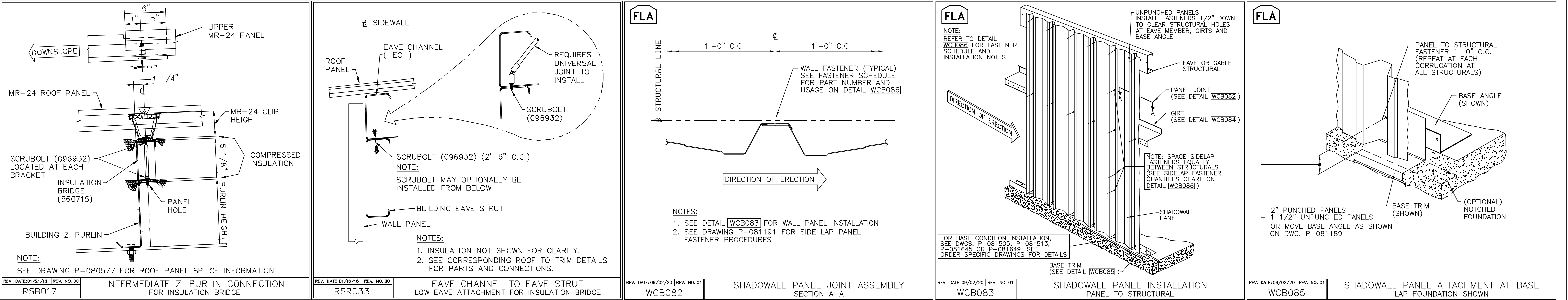
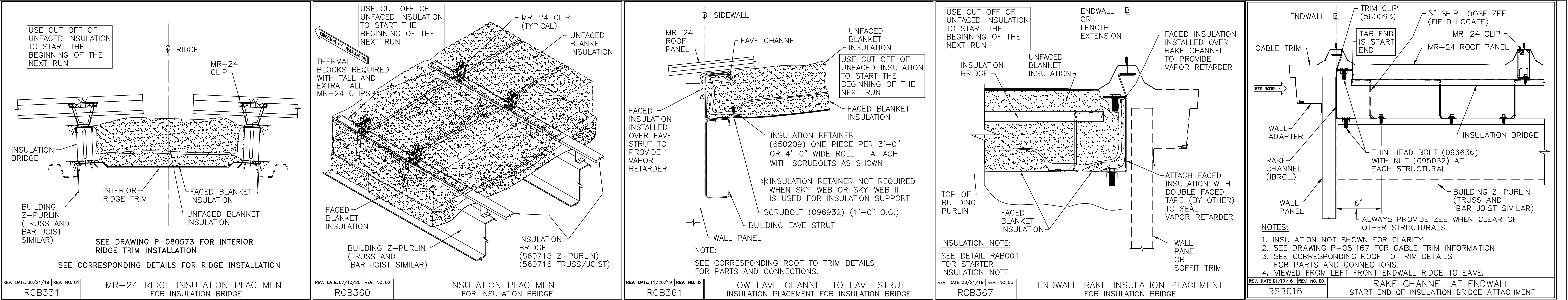
Fastener Schedule		
Part	Description	
0097365-116	(T-3) #12-14 x 1 1/4", T-30 Torx Hd w/Washer	Panel-to-Structural
0097364-116	(T-1) 1/4-14 x 3/4", T-30 Torx Hd w/Washer	Panel-to-Panel
0097361-116	Scrubolt 11/32 x 7/8", T-45 Torx Hd w/Washer	Panel-to-Base/Eave

Shape Name = Building - 220x400x2, Wall = 4

FOR CONSTRUCTION

may be required for heavy gage nested zee's and/or fasteners to structural beams		THE BUTLER MFG. ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF BUTLER MFG. AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER. THE BUTLER MFG. ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY BUTLER EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY BUTLER.		THIS DRAWING, INCLUDING THE INFORMATION HEREON, REMAINS THE PROPERTY OF BUTLER MFG. IT IS PROVIDED SOLELY FOR ERECTING THE BUILDING DESCRIBED IN THE APPLICABLE PURCHASE ORDER AND MAY BE REPRODUCED ONLY FOR THAT PURPOSE. IT SHALL NOT BE MODIFIED, REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT PRIOR WRITTEN APPROVAL OF BUTLER MFG.		D BUTLER MANUFACTURING 1540 GENESSEE ST. KANSAS CITY, MO 64102		COVERING ELEVATION AT T			
2. Steel panels are an integral part of the structural system. removal or alteration without prior authorization is prohibited.				THE GENERAL CONTRACTOR AND/OR ERECTOR IS SOLELY RESPONSIBLE FOR ACCURATE GOOD QUALITY WORKMANSHIP IN ERECTING THIS BUILDING IN ACCORDANCE WITH THIS DRAWING. DETAILS REFERENCED IN THIS DRAWING, ALL APPLICABLE BUTLER MFG. ERECTION GUIDES, AND INDUSTRY STANDARDS PERTAINING TO PROPER ERECTION, INCLUDING THE CORRECT USE OF TEMPORARY BRACING.		REV: DATE: BY: DESCRIPTION:		BUILDER: STROUD AND COMPANY		JOB #: 25-024725-01	
3. Due to manufacturing limitations short panels may require field cutting, see the covering schedule for cut lengths.								CUSTOMER:		DATE: 12/23/2025	
4. See job details for covering and trim fastener specification.								LOCATION: Macon, Georgia		DRAWN/CHECK: DFB / DJR	
4. See job details for covering and trim fastener specification.								PROJECT: New Warehouse - 220x400x25		PAGE: 27	
				DRAWING SCALE:							

MODIFIED IN AUTOCAD



FASTENER SCHEDULE			
INSULATION THICKNESS (6 #/CUFT. OR LESS)	PANEL-TO-STRUCTURAL FASTENERS		PANEL-TO-PANEL FASTENERS
	PAINTED SCRUBOLTS (PUNCHED OR UNPUNCHED PANELS)	PAINTED SELF-DRILLING SCREWS (UNPUNCHED PANELS ONLY)	PAINTED SELF-DRILLING SCREWS (PUNCHED OR UNPUNCHED PANELS)
0" THRU 4"	SB - 7/8" T-45 TORX SCRUBOLT 097361	MPS - 1 1/4" T-30 TORX MEDIUM SELF-DRILLING SCREW 097365	SDS - 3/4" T-30 TORX SHORT SELF-DRILLING SCREW 097364
OVER 4" THRU 6"	LSB - 1 1/2" T-45 TORX LONG SCRUBOLT 097362	MPS - 1 1/4" T-30 TORX MEDIUM SELF-DRILLING SCREW 097365	SDS - 3/4" T-30 TORX SHORT SELF-DRILLING SCREW 097364
OVER 6" THRU 8"	LSB - 1 1/2" T-45 TORX LONG SCRUBOLT 097362	NOT RECOMMENDED	SDS - 3/4" T-30 TORX SHORT SELF-DRILLING SCREW 097364

SIDELAP FASTENER QUANTITIES		IMPORTANT: MAXIMUM SPACING BETWEEN SIDELAP FASTENERS IS 3'-0".
DISTANCE BETWEEN WALL STRUCTURALS	FASTENER QUANTITY BETWEEN STRUCTURALS	
3'-0" OR LESS	0	
OVER 3'-0" THRU 6'-0"	1	
OVER 6'-0"	2	

FASTENER NOTES:

1. HEADS OF FASTENERS ARE PAINTED TO MATCH WALL PANEL COLOR. THE FASTENER PART NUMBERS SHOWN IN THE FASTENER SCHEDULE WILL BE FOLLOWED BY A THREE DIGIT COLOR SUFFIX CODE.

2. PANEL-TO-STRUCTURAL FASTENERS ARE INSTALLED ON 1'-0" CENTERS AT EACH PANEL CORRUGATION. PANEL-TO-PANEL FASTENERS ARE INSTALLED AT EACH PANEL JOINT AND SPACED EVENLY BETWEEN STRUCTURALS AS SHOWN IN SIDELAP FASTENER QUANTITIES CHART.

INSTALLATION NOTES:

1. SHADOWALL PANELS ARE AVAILABLE WITH OR WITHOUT PUNCHING. REFER TO PANEL IDENTIFICATION FOR PART NUMBER AND PANEL USAGE.

2. WHEN USING UNPUNCHED PANELS, CHECK MODULARITY ON EVERY PANEL TO ASSURE PROPER COVERAGE AND FIT UP OF TRIM AT ACCESSORIES.

3. FOR CORRECT INSTALLATION OF SELF-DRILLING SCREWS FOR UNPUNCHED PANELS, A VARIABLE SPEED SCREW GUN WITH CAPABILITY OF 1600 TO 2600 RPM IS RECOMMENDED. (SEE DRAWING P-081189).

4. REFERENCE SHADOWALL INDEX P-081180 FOR APPROPRIATE INSTALLATION DRAWINGS.

5. REFER TO APPROPRIATE INSULATION INSTALLATION DETAILS ON ORDER SPECIFIC DRAWINGS TO PREVENT UNSIGHTLY BILLOWING ON EXTERIOR SURFACE OF WALL PANELS.

REV. DATE:09/02/20 | REV. NO. 01

SHADOWALL PANEL GENERAL NOTES FASTENER AND INSTALLATION

WCB086

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D

Butler Manufacturing
1540 Genessee St. Kansas City, MO 64102

Rev: Date: By: Description:

Drawing Scale: NTS

COVERING & TRIM SED'S (c)

Builder: STROUD AND COMPANY

Customer:

Location: Macon, Georgia

Project: New Warehouse - 220x400x25

Builder's PO#:

Job #:
25-024725-01

Date:
12/23/2025

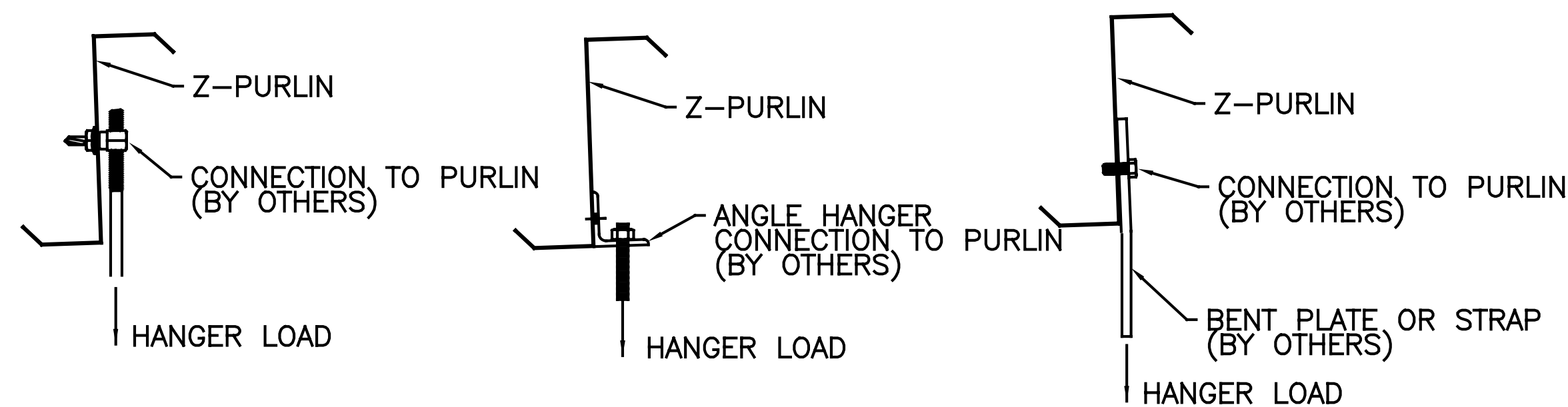
Drawn/Check:
DFB / DJR

Page:
30

BUTLER

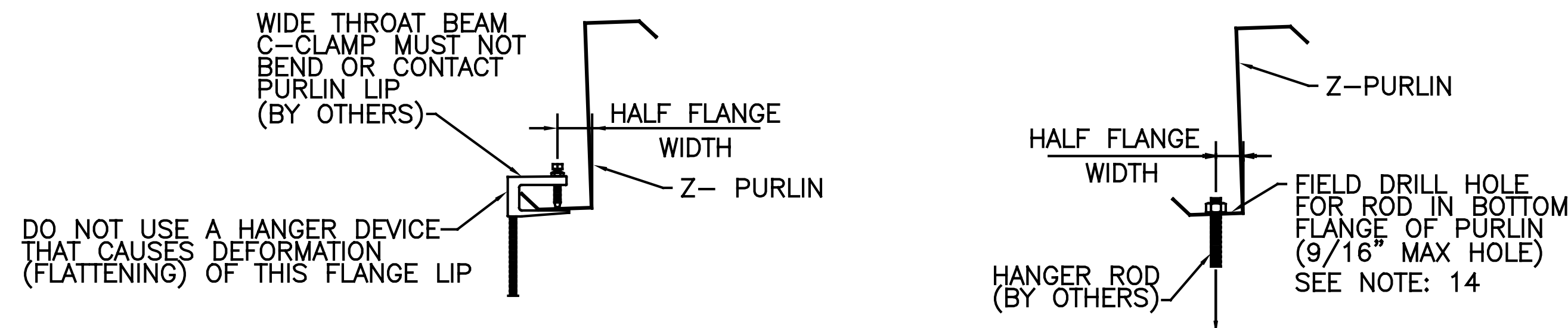
Butler Manufacturing
VPC Version: 25.2.0

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WEB HANGERS

FOR 1/2" DIAM. BOLT TO PURLIN CONNECTION-- MAX HANGER LOAD=1500lbs
PURLIN MUST BE SPECIFICALLY DESIGNED FOR LOADS GREATER THAN 500 LB. SEE NOTE: 2.



VERIFY OVERALL PURLIN DESIGN CAN TAKE APPLIED LOADS. SEE NOTE: 2

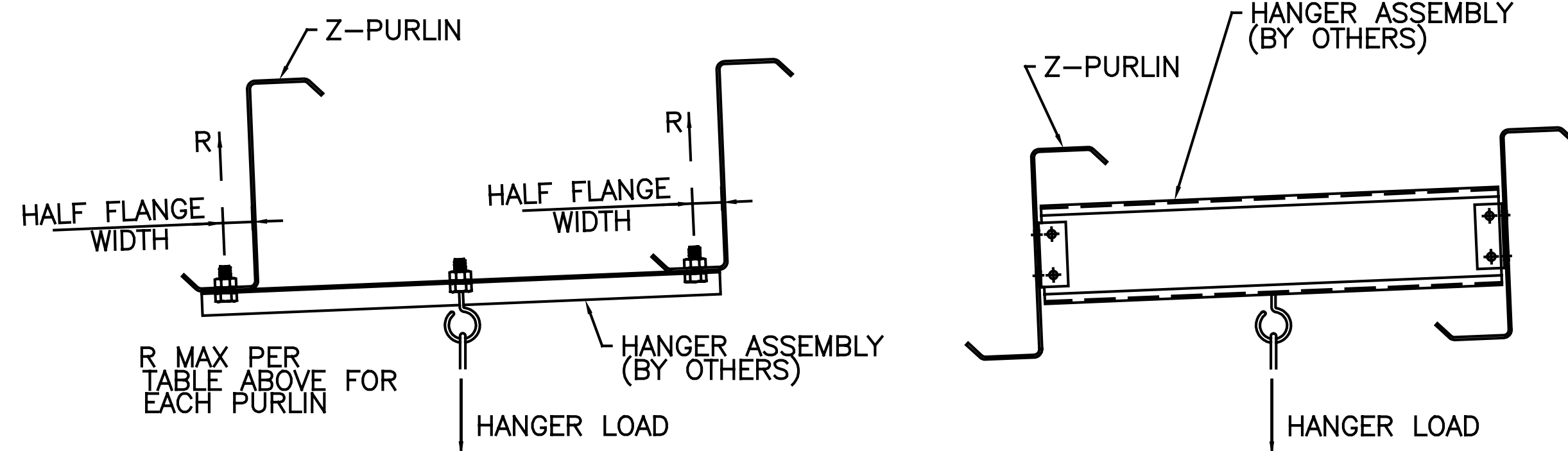
MAXIMUM LOAD SUSPENDED FROM BOTTOM FLANGE (LOCATED AT HALF-FLANGE WIDTH)			
THICKNESS	MAX LOAD	THICKNESS	MAX LOAD
0.060"	110lbs	0.088"	200lbs
0.068"	120lbs	0.098"	250lbs
0.073"	140lbs		
0.079"	180lbs	0.113"	250lbs

FOR LOADS LOCATED MORE THAN HALF FLANGE WIDTH
FROM WEB, USE HALF OF THE LOADS SHOWN ABOVE.

BOTTOM FLANGE CLAMP HANGER (TOP FLANGE SIMILAR)

BOTTOM FLANGE ROD HANGER (TOP FLANGE SIMILAR)

DO NOT USE ANY OF THE DETAILS ABOVE IF ROOF SLOPE IS GREATER THAN 4:12



DOUBLE PURLIN HANGERS

VERIFY OVERALL PURLIN DESIGN CAN SUPPORT APPLIED LOADS.

GENERAL NOTES

1. CONCENTRATED LOADS GREATER THAN 500lbs ON ANY SINGLE PURLIN MUST BE EXPLICITLY LOCATED AND DESIGNED FOR DURING DESIGN OF BUILDING SYSTEM.
2. SPECIFIED COLLATERAL LOADS MAY BE CONVERTED TO SAFE CONCENTRATED LOADS AS FOLLOWS, WHERE P = MAX CONCENTRATED LOAD(lbs); W = UNIFORM COLLATERAL LOAD (PSF) x PURLIN SPACING (ft) = lbs/ft; L = PURLIN SPAN (ft). HANGERS SHOULD BE SPACED APPROX. EQUAL.

$$\begin{array}{c} \downarrow P \\ \hline P \text{ MAX} = 0.5wl \end{array}$$

$$\begin{array}{c} \downarrow P \quad \downarrow P \\ \hline P \text{ MAX} = 0.4wl \end{array}$$

$$\begin{array}{c} \downarrow P \quad \downarrow P \quad \downarrow P \\ \hline P \text{ MAX} = 0.25wl \end{array}$$

$$\begin{array}{c} \downarrow P \quad \downarrow P \quad \downarrow P \quad \downarrow P \\ \hline P \text{ MAX} = 0.2wl \end{array}$$

$$\begin{array}{c} \downarrow P \quad \downarrow P \quad \downarrow P \quad \downarrow P \quad \downarrow P \\ \hline P \text{ MAX} = 0.15wl \end{array}$$

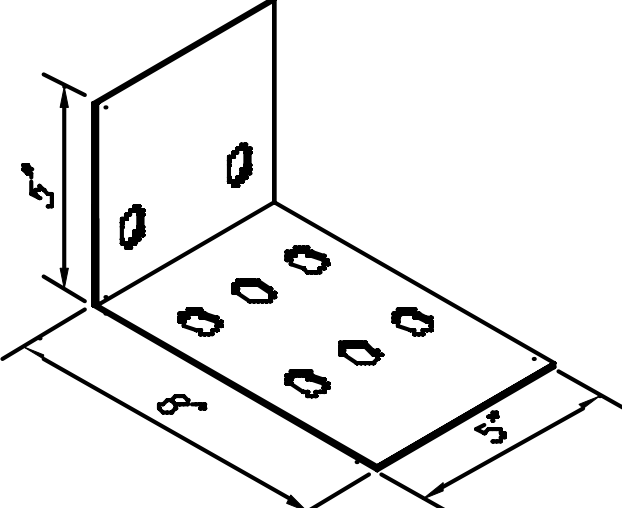
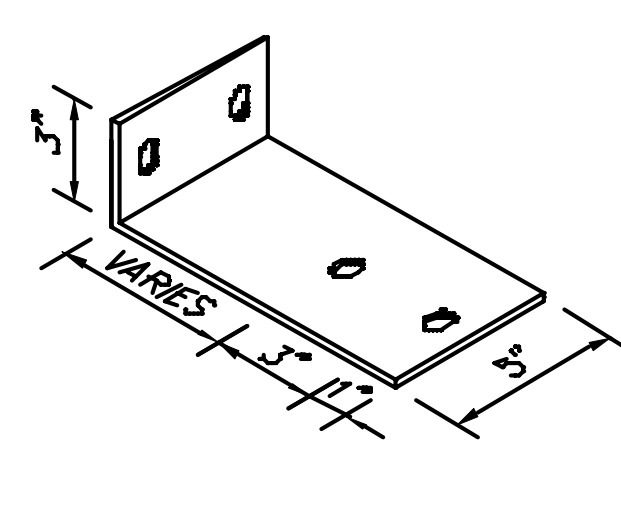
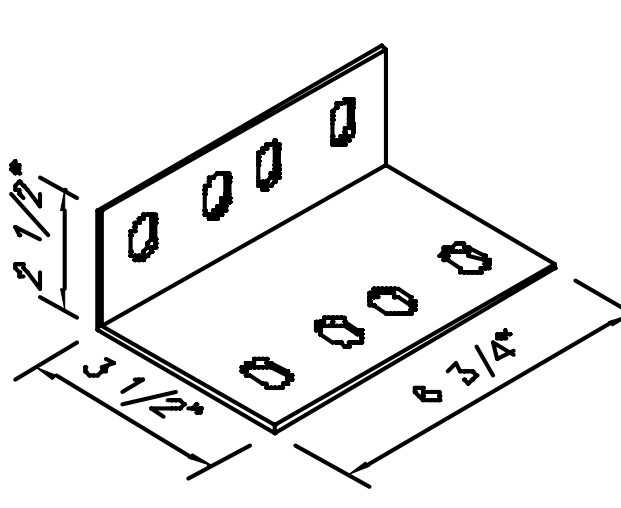
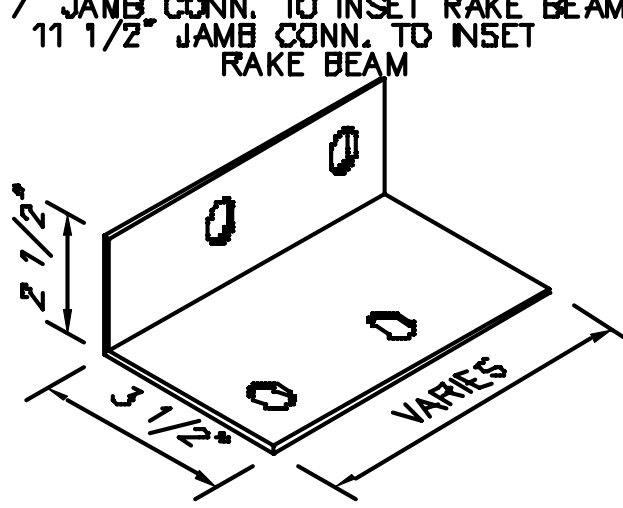
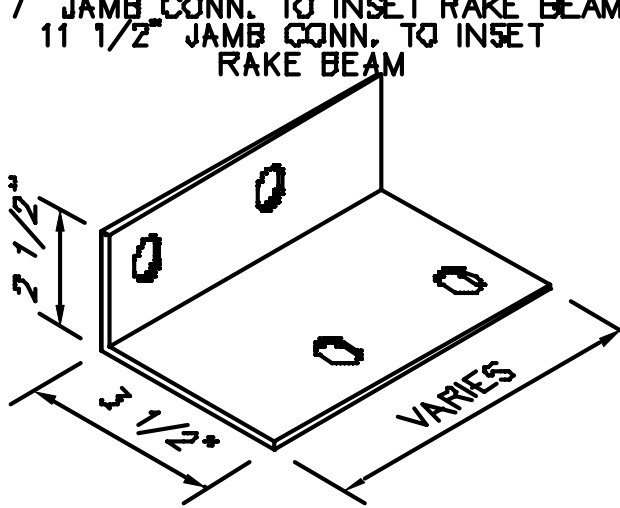
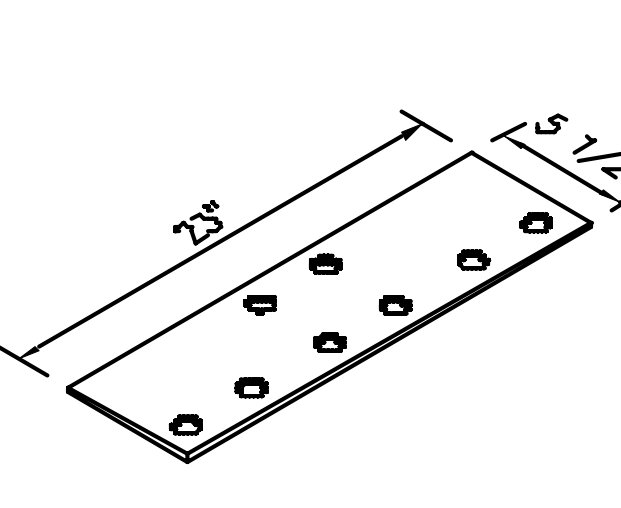
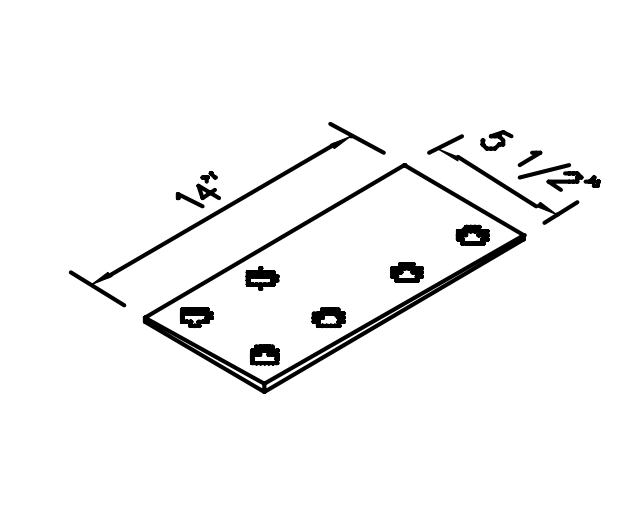
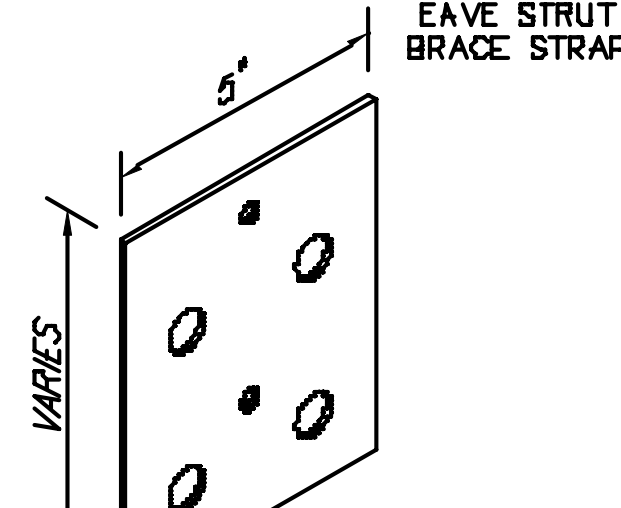
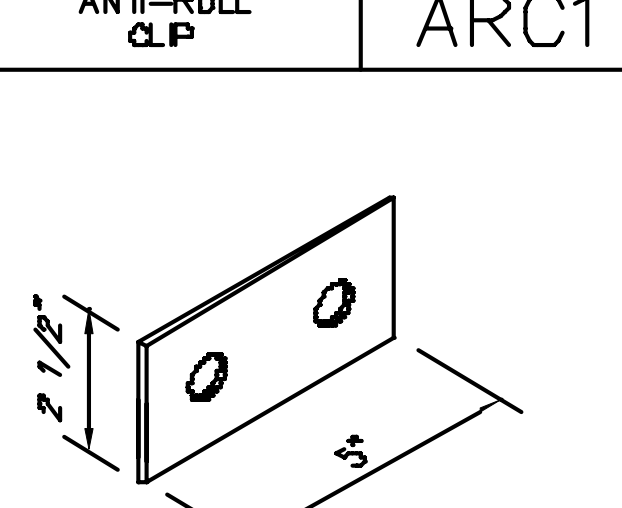
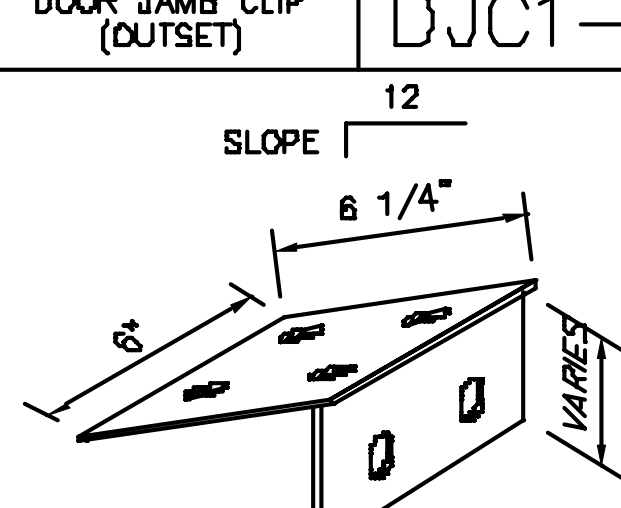
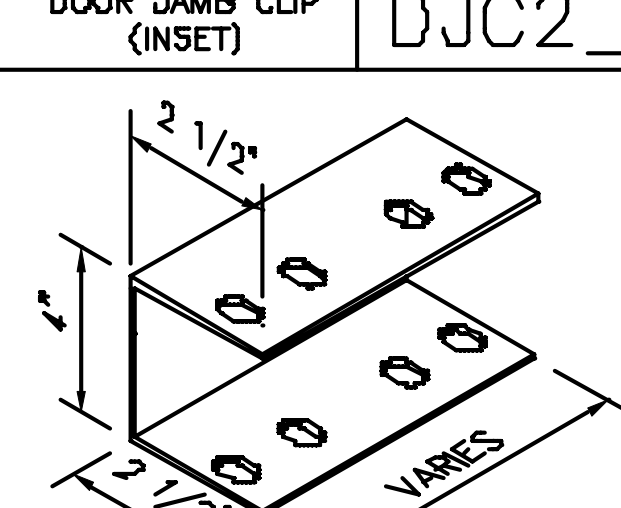
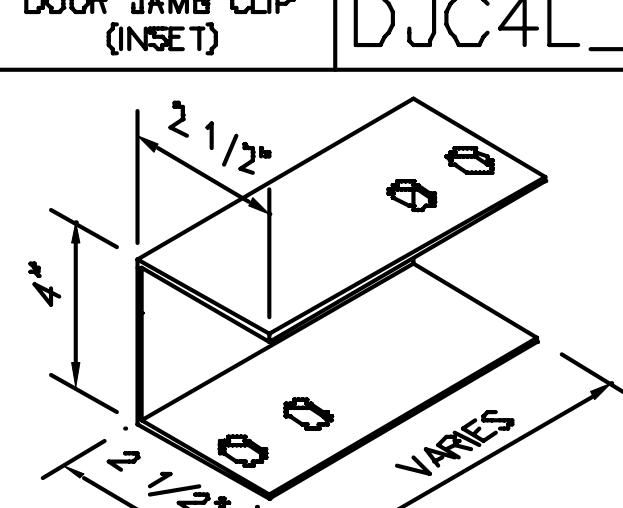
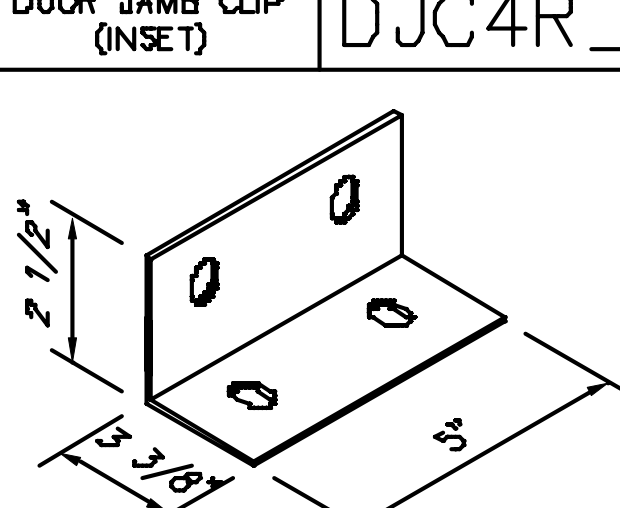
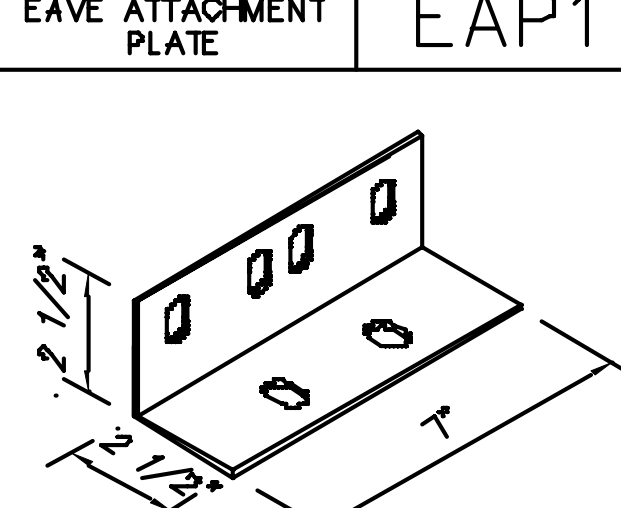
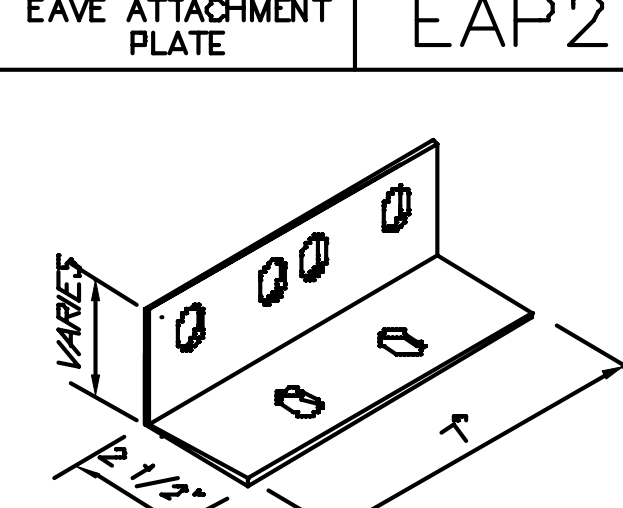
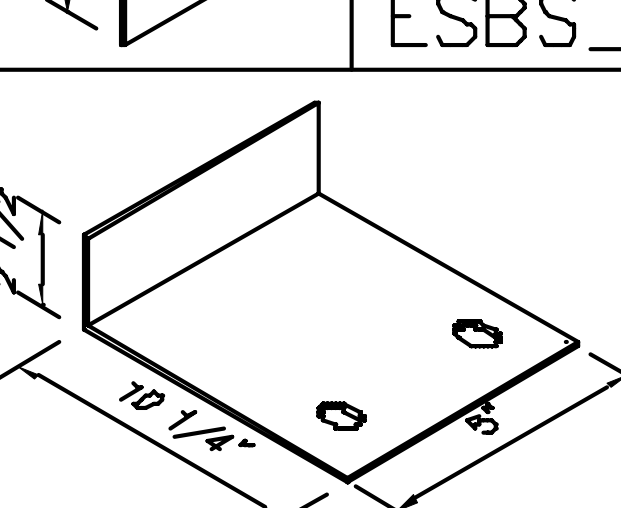
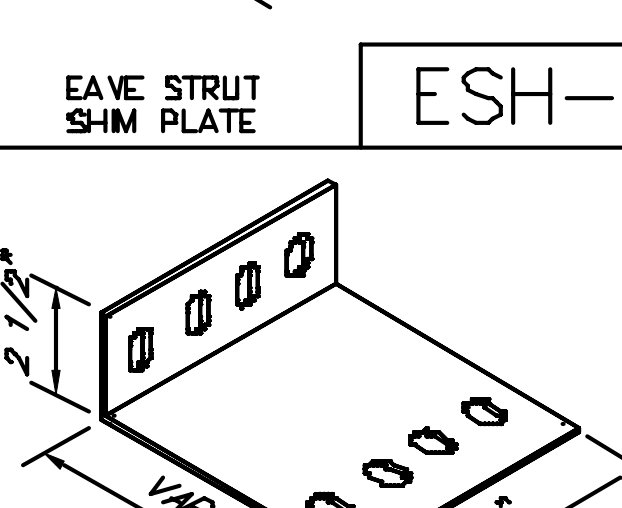
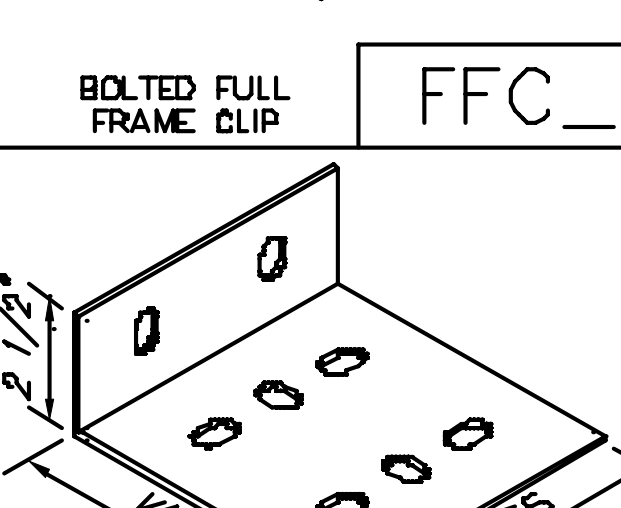
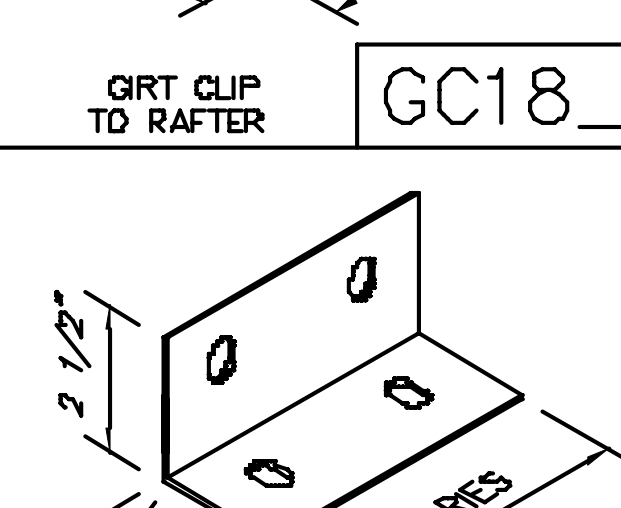
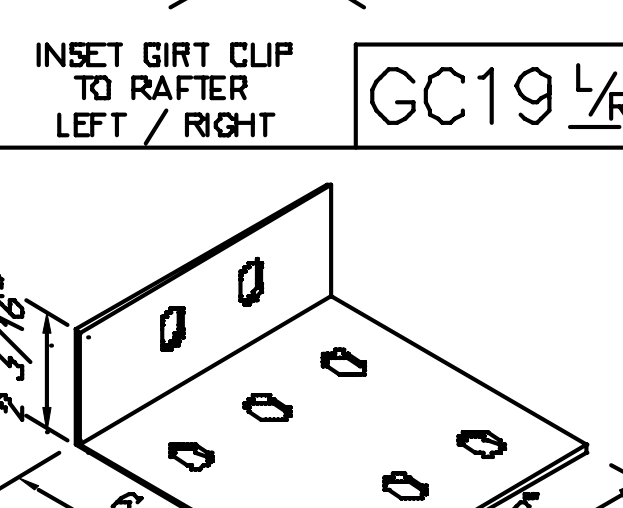
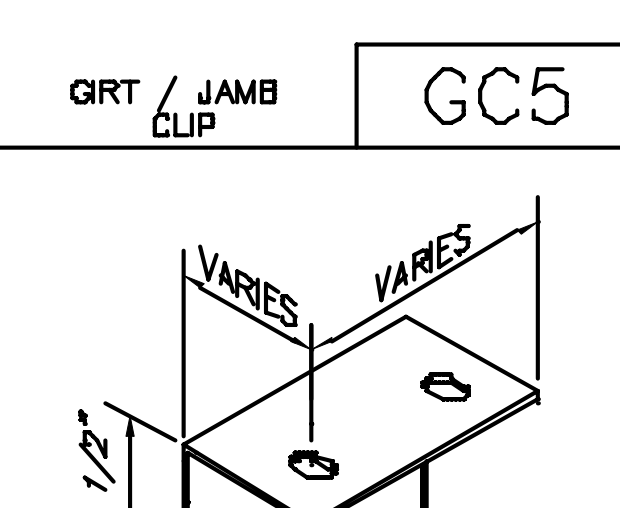
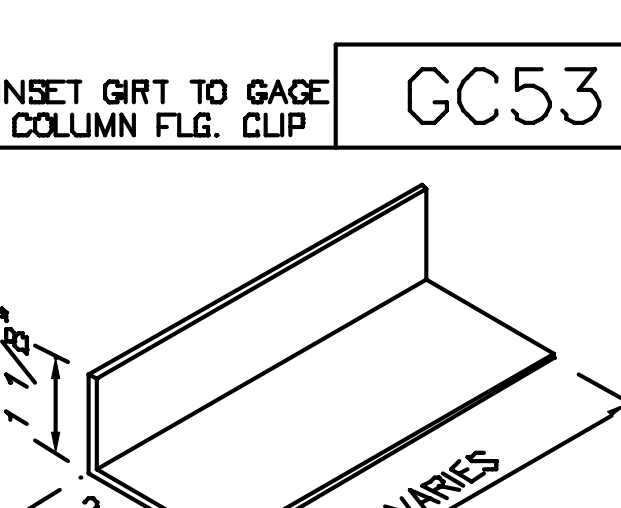
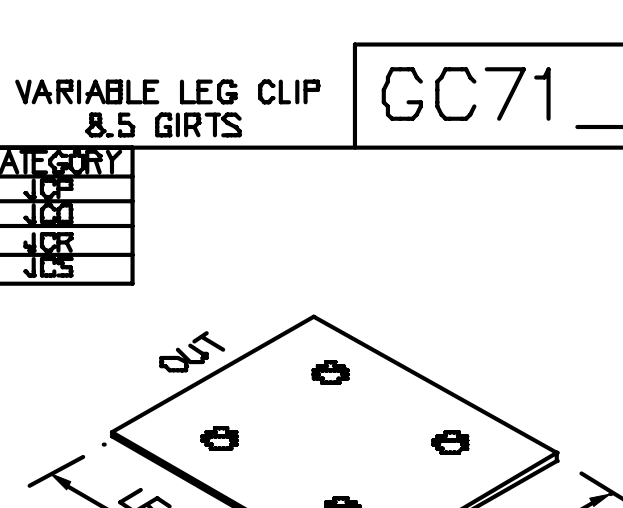
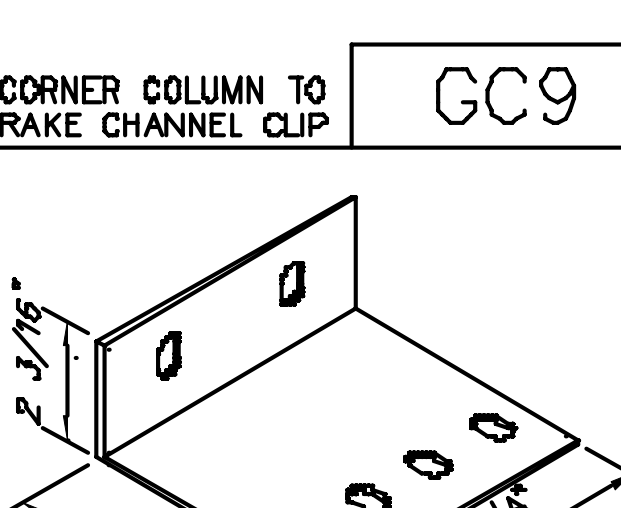
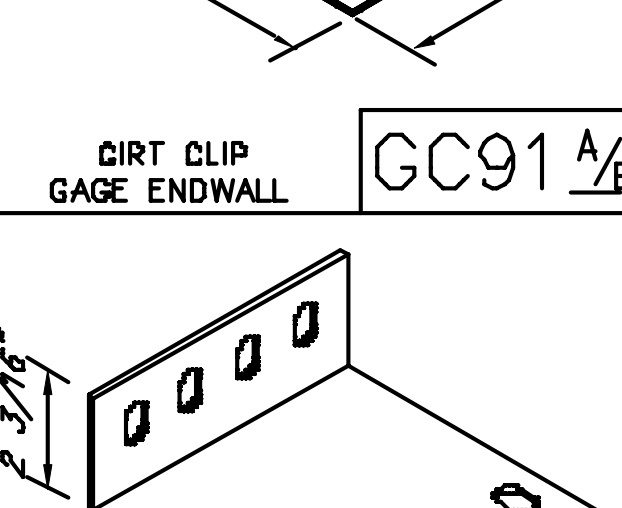
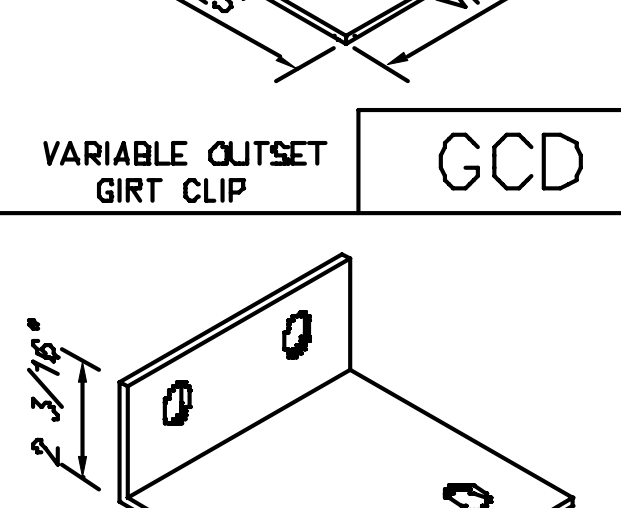
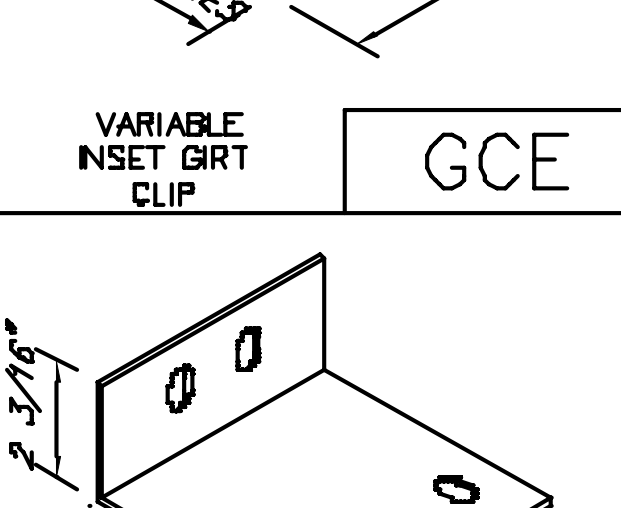
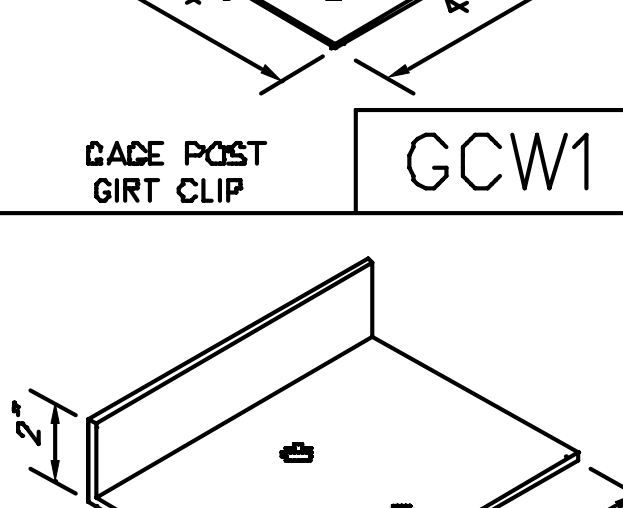
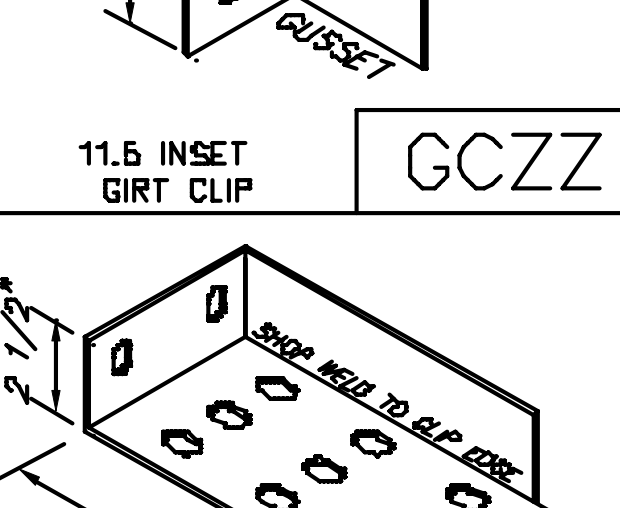
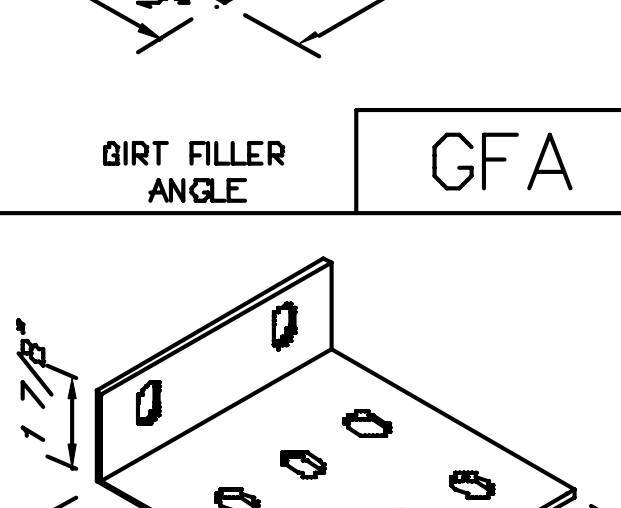
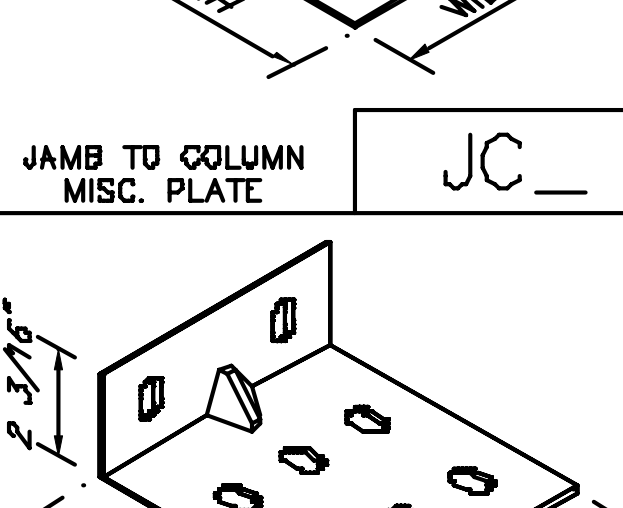
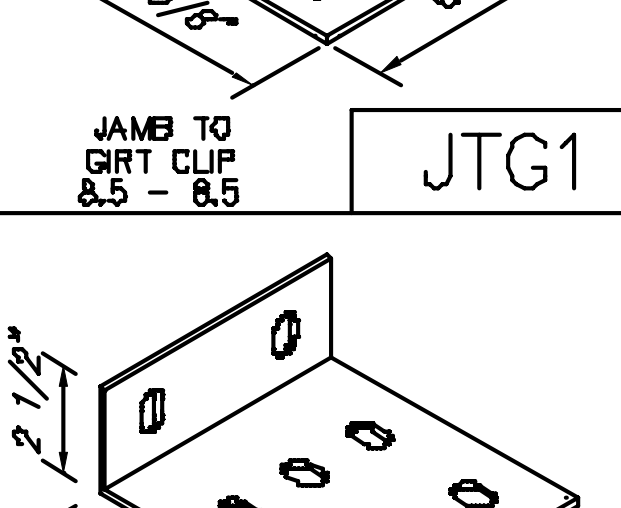
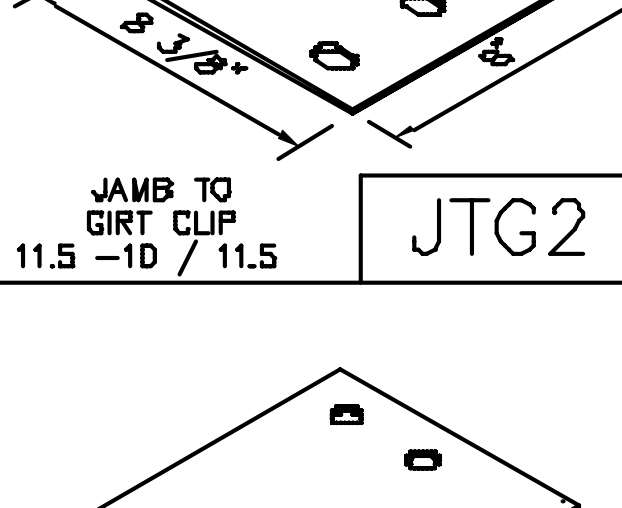
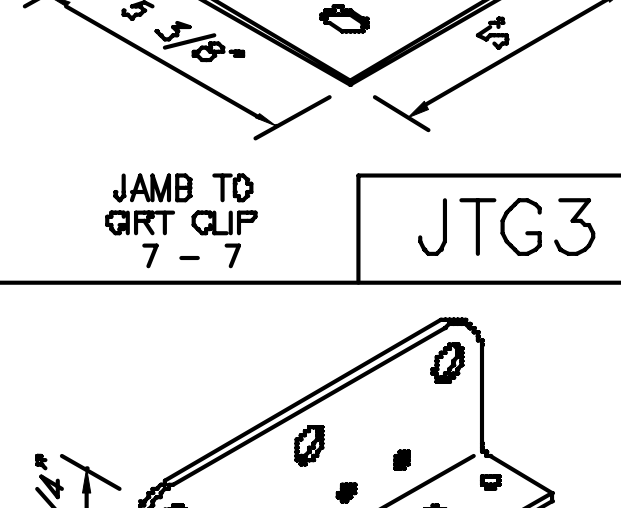
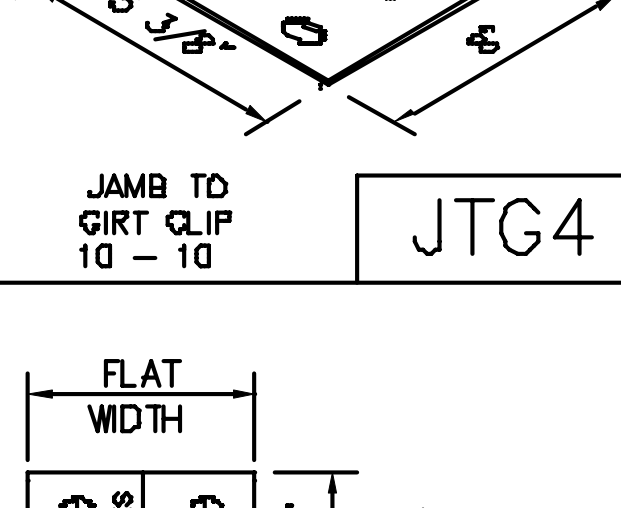
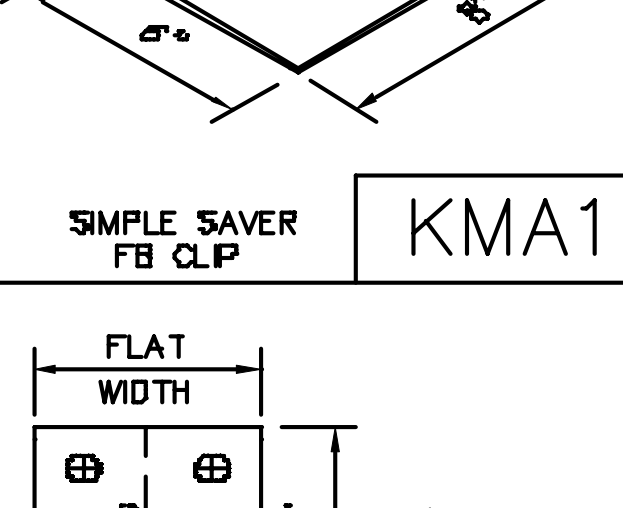
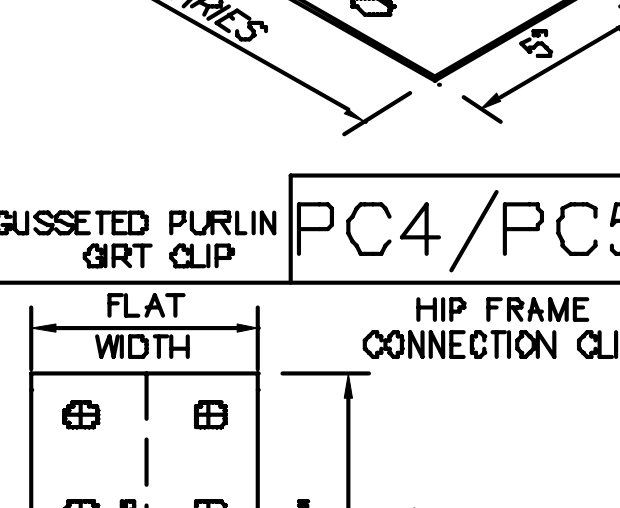
$$\begin{array}{c} 6 \text{ OR MORE HANGERS PER PURLIN} \\ P \text{ MAX} = W \times \text{HANGER SPACING} \end{array}$$

EXAMPLE: A PIPE IS SUSPENDED FROM A PURLIN AT 3 LOCATIONS EQUALLY SPACED
BAY SPACING = 24'-0"
SPECIFIED COLLATERAL LOAD = 5 PSF
W = 5 PSF x 5' = 25 PLF L = 24'-0"
P MAX = 0.25 x 25 PLF x 24'-0" = 150 LBS AT EACH LOCATION
THE PURLIN CAN SUPPORT 3 LOADS UP TO 150 LBS EACH. PICK A HANGER CONNECTION CAPABLE OF SUPPORTING ACTUAL APPLIED LOADS.

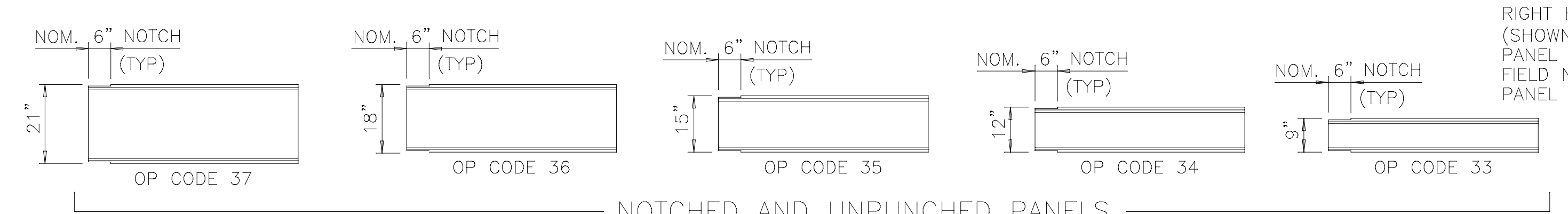
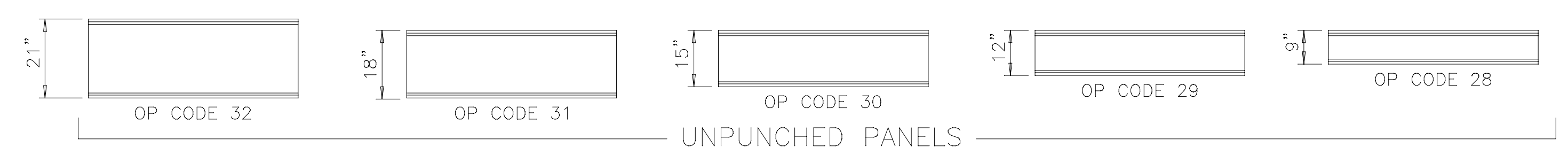
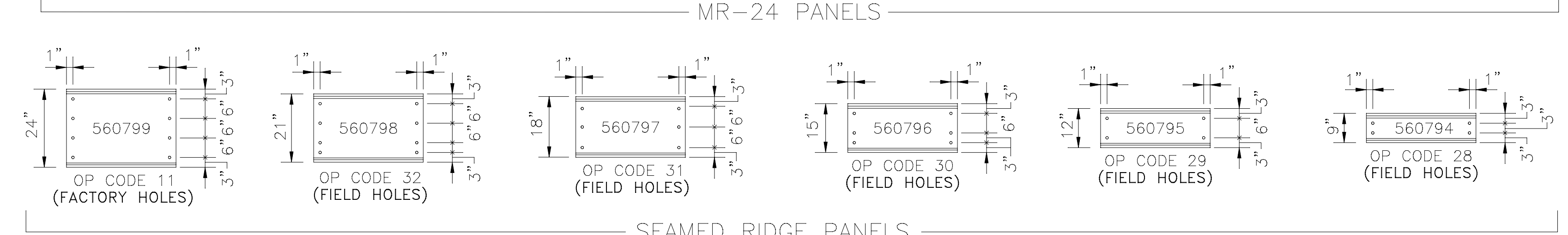
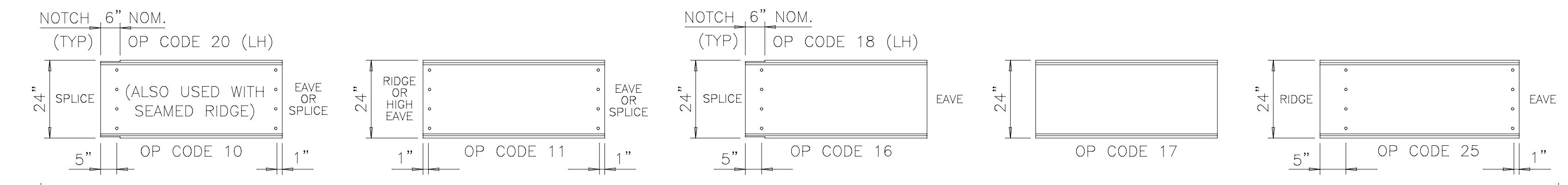
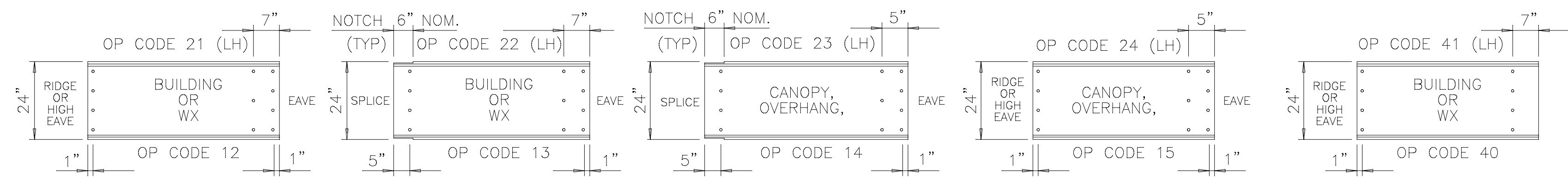
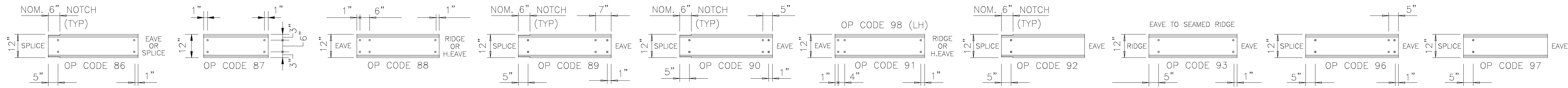
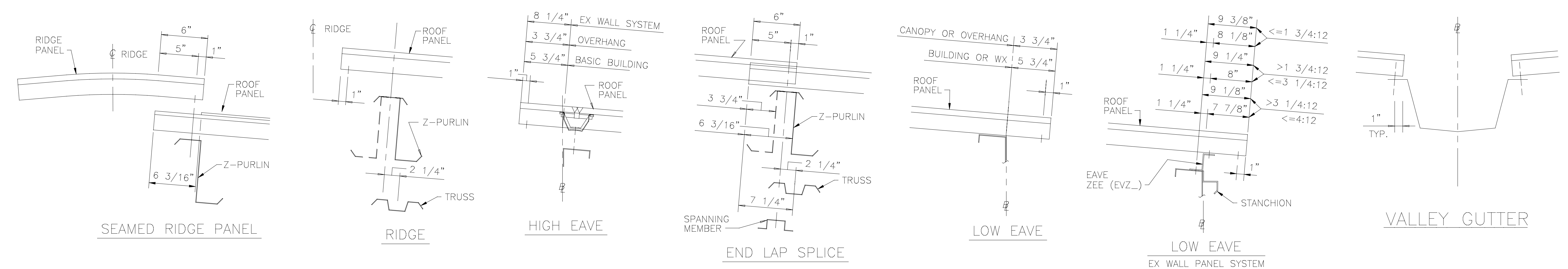
3. FOR LOADS GREATER THAN 250 lbs, PURLINS MUST BE "BLOCKED" AT LOCATION OF LOAD TO PREVENT PURLIN ROTATION.
4. EQUIPMENT LOADS SHOULD BE OBTAINED FROM CERTIFIED EQUIPMENT DRAWINGS AND MANUFACTURER'S DATA.
5. Z-PURLINS WILL DEFLECT UNDER SNOW AND WIND LOADS. ITEMS THAT MAY BE DAMAGED DUE TO DEFLECTIONS, (EX. GAS LINES), VERIFY THAT PIPES OR SUSPENDED EQUIPMENT ARE COMPATIBLE WITH EXPECTED DEFLECTION RANGES ($\pm L/180$).
6. THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) REQUIRES SPRINKLER HANGERS TO BE DESIGNED FOR A MINIMUM LOAD OF FIVE TIMES THE WEIGHT OF THE WATER-FILLED PIPE PLUS 250 POUNDS. THE HANGER ITSELF MUST BE ABLE TO SUPPORT THIS LOADING. IT IS NOT NECESSARY TO DESIGN THE SUPPORTING MEMBER FOR THIS LOAD IN COMBINATION WITH THE DESIGN LOADS.
7. SUSPENDED LOADS WILL NEED TO BE BRACED (TO THE PRIMARY FORCE RESISTING SYSTEM) FOR LATERAL STABILITY DUE TO EARTHQUAKES.
8. HANGER DESIGN IS NOT THE RESPONSIBILITY OF BLUESCOPE.
9. TOP FLANGE HANGERS SHOULD BE AVOIDED ON BUILDINGS WITHOUT INSULATION SPACER BLOCKS ON TOP OF THE TOP FLANGE. IF TOP FLANGE HANGERS ARE REQUIRED, PLACE THE HANGERS AT THE ROOF PANEL MAJOR CORRUGATION LOCATION TO AVOID DAMAGING THE ROOF PANEL WITH THE HANGER WHEN THE ROOF PANEL IS LOADED OR WALKED ON.
10. WHEN BEAM C-CLAMPS OR OTHER ROD HANGERS ARE USED ON THE TOP FLANGE, THE ROD SHOULD NOT EXTEND ABOVE THE TOP OF THE CLAMP TO AVOID DAMAGING THE ROOF PANEL WITH THE ROD WHEN THE ROOF PANEL IS LOADED OR WALKED ON.
11. DO NOT HANG ANY TYPE OF CRANE, HOIST, CONVEYOR OR ANY MOVING LOADS FROM THE Z-PURLINS.
12. DO NOT HANG ANY LOAD FROM BBNA SUPPLIED PURLIN BRACES OR BRIDGING.
13. DO NOT WELD ANY PART OF THE Z-PURLIN.
14. HOLES MUST NOT EXCEED 9/16" DIAMETER UNLESS AUTHORIZED BY BBNA ENGINEER. DRILL OR REAM HOLES WHEN REQUIRED- DO NOT FLAME CUT

CONCENTRATED LOADS ON ROOF Z-PURLIN HANGER DETAILS

DRAWN BY	CHECKED BY	GROUP NUMBER: 80-054-01	
REVERTT	RBENTON		
FIRST RELEASE DATE	REVISION DATE	B	B-081465 09
02/26/10	02/26/20		

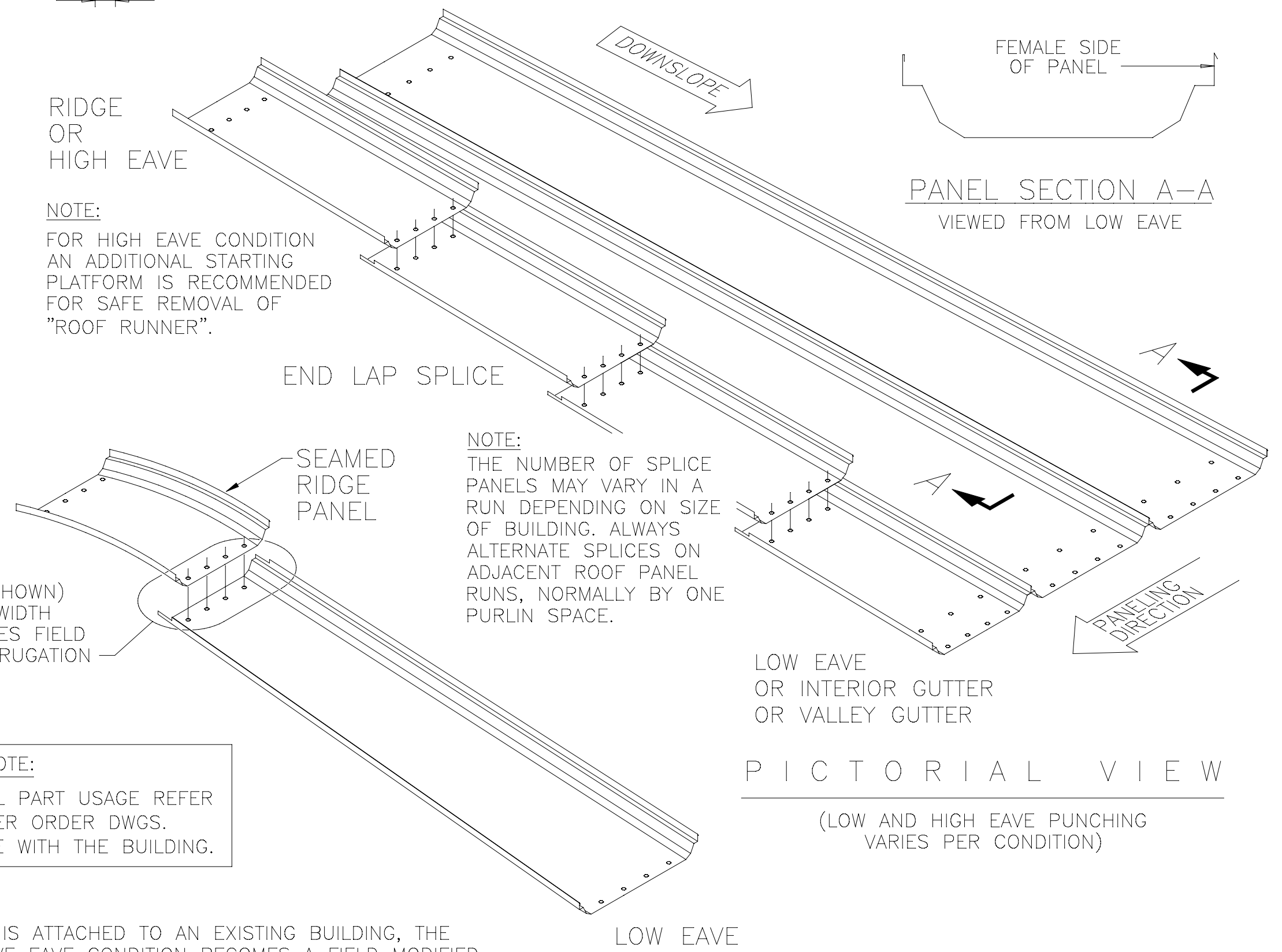
 ANTI-ROLL CLIP ARC1	 DOOR JAMB CLIP (OUTSET) DJC1-	 DOOR JAMB CLIP (INSET) DJC2	 7" JAMB CONN. TO INSET RAKE BEAM 11 1/2" JAMB CONN. TO INSET RAKE BEAM DOOR JAMB CLIP (INSET) DJC4L	 7" JAMB CONN. TO INSET RAKE BEAM 11 1/2" JAMB CONN. TO INSET RAKE BEAM DOOR JAMB CLIP (INSET) DJC4R	 EAVE ATTACHMENT PLATE EAP1	 ENDFRAME EAVE ATTACHMENT PLATE EAP2	 EAVE STRUT BRACE STRAP ESBS
 EAVE STRUT SHIM PLATE ESH-	 BOLTED FULL FRAME CLIP FFC	 GIRT CLIP TO RAFTER GC18	 INSET GIRT CLIP TO RAFTER LEFT / RIGHT GC19 1/2	 GIRT / JAMB CLIP GC5	 INSET GIRT TO GAGE COLUMN FLG. CLIP GC53	 VARIABLE LEG CLIP & 5 GIRTS GC71	 CORNER COLUMN TO RAKE CHANNEL CLIP GC9
 GIRT CLIP GAGE ENDWALL GC91 A/B	 VARIABLE OUTSET GIRT CLIP GCD	 VARIABLE INSET GIRT CLIP GCE	 GAGE POST GIRT CLIP GCW1	 11.5 INSET GIRT CLIP GCZZ	 GIRT FILLER ANGLE GFA	 JAMB TO COLUMN MISC. PLATE JC	 JAMB TO GIRT CLIP 8.5 - 8.5 JTG1
 JAMB TO GIRT CLIP 11.5 - 10 / 11.5 JTG2	 JAMB TO GIRT CLIP 7 - 7 JTG3	 JAMB TO GIRT CLIP 10 - 10 JTG4	 SIMPLE SAVER FB CLIP KMA1	 GUSSETED PURLIN GIRT CLIP PC4/PC5	 ANTI-ROLL PURLIN CLIP PC27	 PURLIN / GIRT CLIP PG1	 VARIABLE PURLIN GIRT CLIP PGV
 VARIABLE OUTSET GIRT CORNER CLIP VCC	 CLIP WBBC2	 FLAT WIDTH BEND LOC SIDE VIEW "A" HIP FRAME CONNECTION CLIP 02H	 FLAT WIDTH BEND LOC SIDE VIEW "A" HIP FRAME CONNECTION CLIP 06H	 FLAT WIDTH BEND LOC SIDE VIEW "A" HIP FRAME CONNECTION CLIP 10H			

BENT CLIPS				
DRAWN BY	CHECKED BY	GROUP NUMBER: - -		
NF	RJR			
FIRST RELEASE DATE	REVISION DATE	B	B-081765	04
01/28/13	07/21/16			



NOTE:
MR-24 VARIABLE WIDTH PANELS (EXCLUDING 12" PANELS) ARE UNPUNCHED.
SEE DWG. P-080876 FOR FIELD DRILLING REQUIREMENTS.

TO HELP PREVENT WALL STAINING CAUSED BY ROOF RUN-OFF, INSTALL EAVE EDGE OF ROOF TRIM OR GUTTER PARTS IMMEDIATELY AFTER ROOF PANELS ARE INSTALLED.



BUILDER NOTE:
FOR ACTUAL PART USAGE REFER TO THE "PER ORDER DWGS."
THAT COME WITH THE BUILDING.

NOTE:
WHEN A WX IS ATTACHED TO AN EXISTING BUILDING, THE BUILDING EAVE EAVE CONDITION BECOMES A FIELD MODIFIED END LAP SPLICE WITH UPPER END OF PANEL UNPUNCHED.

MR-24 ROOF PANEL IDENTIFICATION				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-01		
JPV	BJF			
FIRST RELEASE DATE	REVISION DATE	B	P-080570	10
01/21/10	05/02/24			

THE TRIM CLIP MUST BE INSTALLED AT THE SAME TIME AS THE GABLE ANGLE OR RAKE CHANNEL. BEFORE INSTALLING TRIM CLIPS SEE THE PROPER SECONDARY STRUCTURAL DETAIL DRAWING.

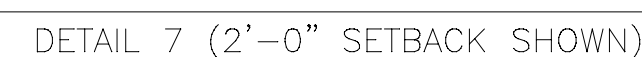
1. USE THE OUTER DOWNSLOPE HOLE OR SLOT IN THE TRIM CLIP FOR THE CONNECTION TO THE EAVE STRUT.
2. WITH MULTIPLE GUTTER AT THE EAVE, MOVE THE TRIM CLIP UPSLOPE TO CLEAR THE RUBBER CORRUGATION CLOSURE IN THE END CORRUGATION. USE THE CLIP AS A TEMPLATE TO FIELD DRILL (2) 9/16" DIA. HOLES. USE THE TWO OUTER HOLES OR SLOTS AS A TEMPLATE TO FIELD DRILL THE GABLE ANGLE AND/OR RAKE CHANNEL. ATTACH WITH (2) 1/2" x 1 1/4" THIN HEAD BOLTS AND 1/2" NUTS IN THE TWO OUTER HOLES OF THE CLIP.



IMPORTANT NOTE
LOCKSEAM TABS MUST BE TOGETHER
AND CENTERED IN SLOTS OF TRIM CLIPS.



DETAIL 4 (4'-0" OVERHANG SHOWN)



DETAIL 6



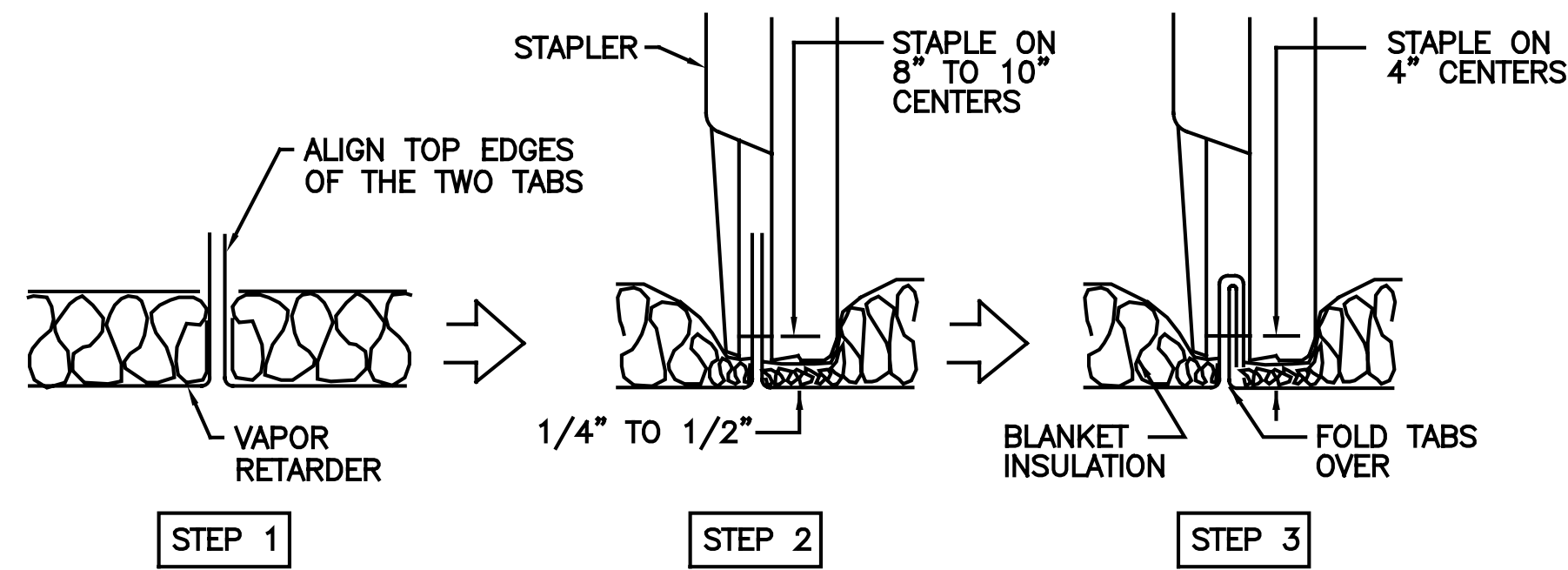
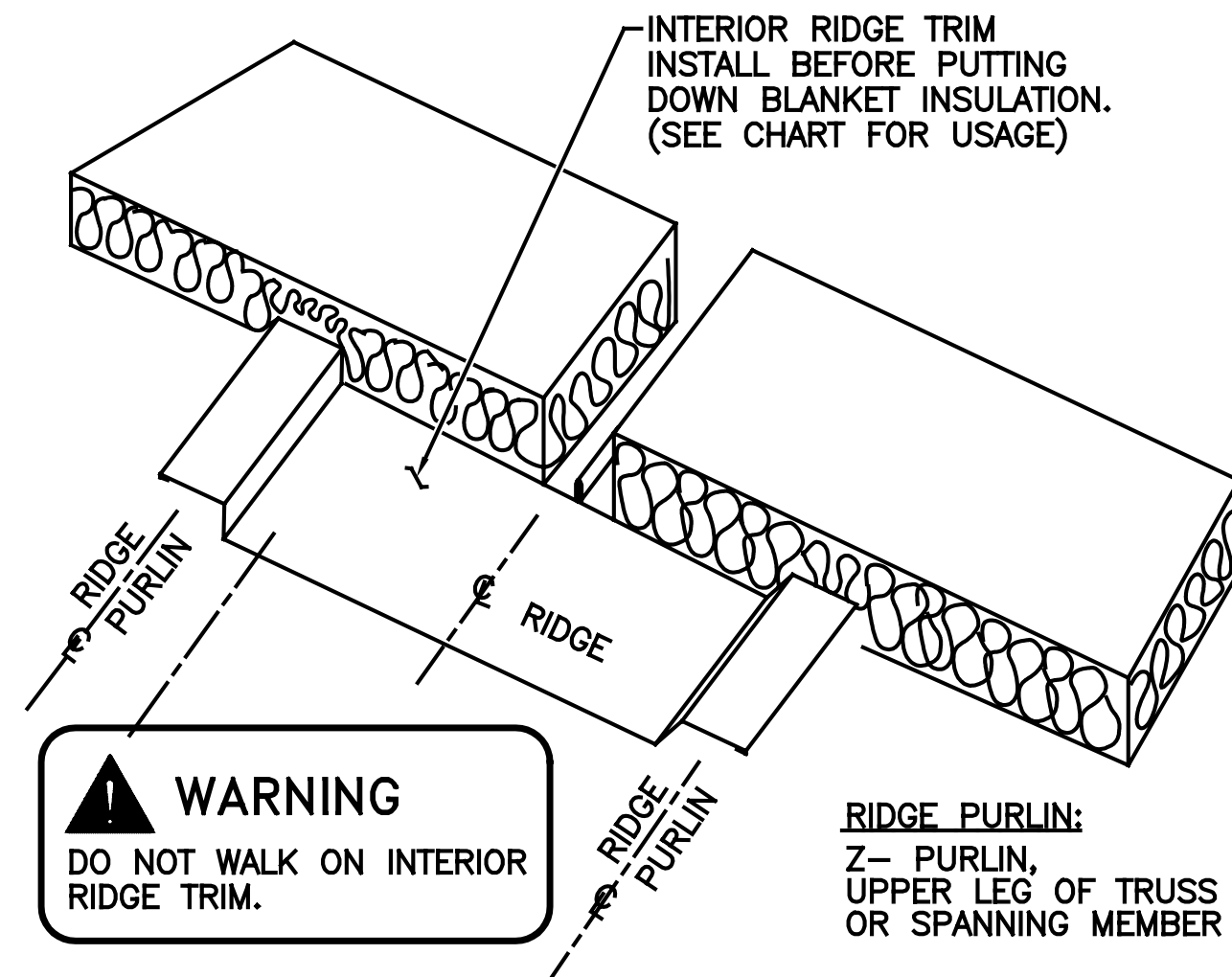
DETAIL 5

SECTION A-A



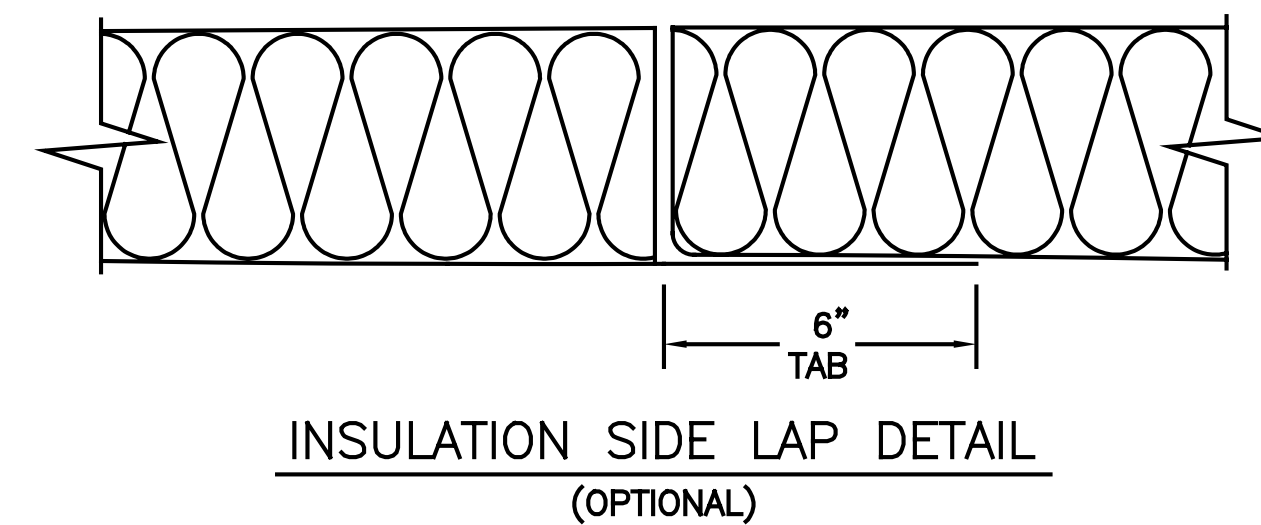
USE A PANEL CLIP ADAPTER AT THE ENDS OF PURLINS
OR EAVE STRUTS WHERE A PANEL CLIP OR PANEL
EAVE ATTACHMENT MUST BE MADE.

MR-24 TRIM CLIP			
LOCKSEAM TAB AND PANEL CLIP ADAPTER INSTL.			
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-02	
JPV	BJF		
FIRST RELEASE DATE	REVISION DATE	B	P-080572 05
01/21/10	03/07/24		



SEALING JOINTS
ALL JOINTS MUST BE STAPLED AS SHOWN TO MAINTAIN VAPOR RETARDER INTEGRITY.

DETAIL 3



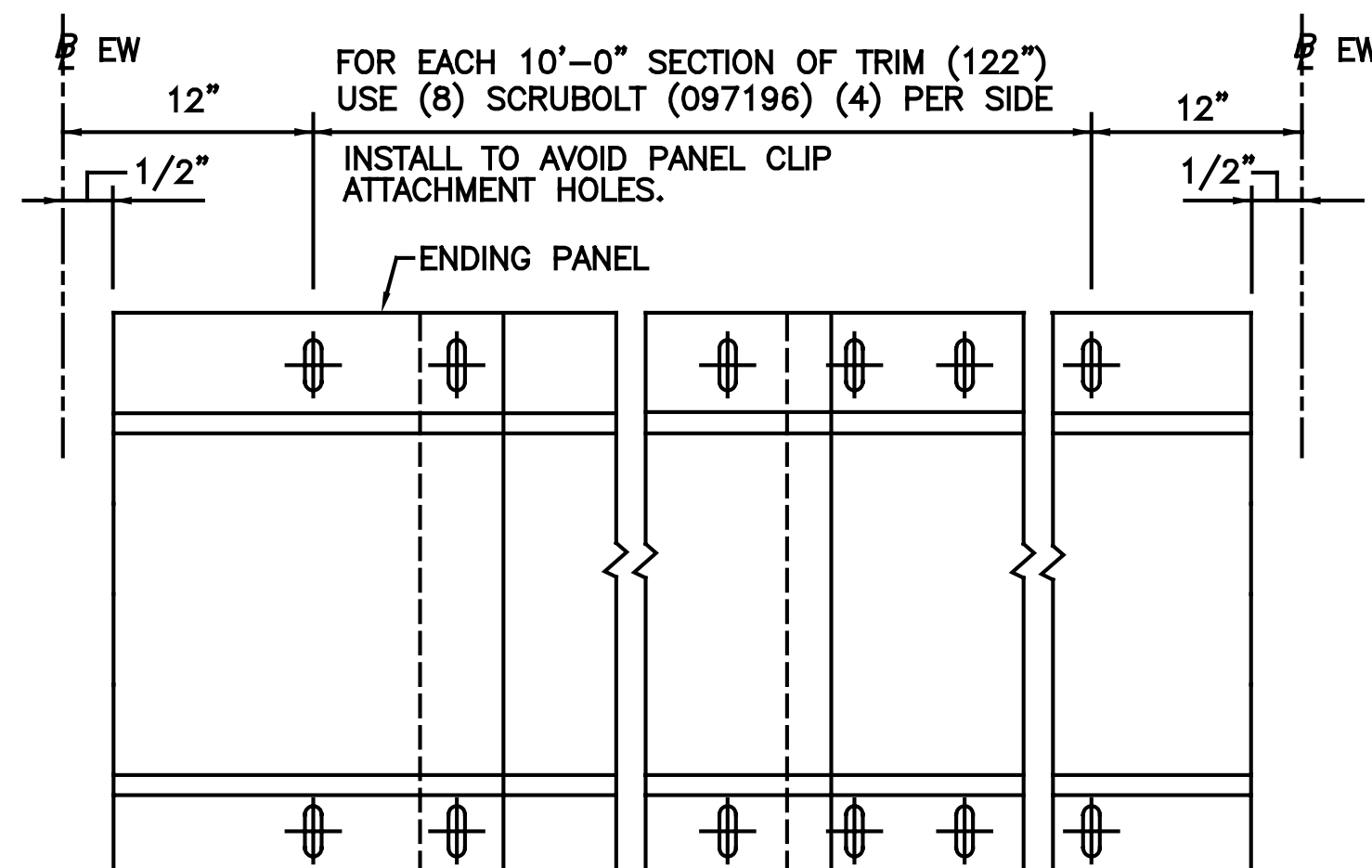
INTERIOR RIDGE TRIM PART NUMBER					
BUILDING TYPE	ROOF SLOPE	7" PURLIN	8 1/2" PURLIN	10" PURLIN	11 1/2" PURLIN
Z-PURLIN	1/4:12 TO < 3/4:12	IRT10C	IRT10C	IRT10C	IRT10C
	3/4:12 TO <= 2 3/4:12	IRT10C	IRT10C	IRT10B	IRT10B
	> 2 3/4:12 TO < 3 1/2:12	IRT10C	IRT10C	IRT10D	IRT10D
	>= 3 1/2:12 TO <= 4:12	IRT10A	IRT10A	IRT10B	IRT10B

BUILDING TYPE	ROOF SLOPE	5" END SEAT	* INSULATION BRIDGE
TRUSS	1/4:12 TO < 1:12	IRT10C	IRTD10C
	1:12 TO 2:12	IRT10D	IRTD10D

BUILDING TYPE	ROOF SLOPE	8 1/2" PURLIN	10" PURLIN	11 1/2" PURLIN
* INSULATION BRIDGE WITH 5" BASE CLIP	1/4:12 TO < 3/4:12	IRTD10C	IRTD10C	IRTD10C
	3/4:12 TO <= 2 3/4:12	IRTD10C	IRTD10B	IRTD10B
	> 2 3/4:12 TO < 3 1/2:12	IRTD10C	IRTD10D	IRTD10D
	>= 3 1/2:12 TO <= 4:12	IRTD10A	IRTD10B	IRTD10B

* INTERIOR RIDGE TRIM (IRTD10_) HAS A 2" DEEP PAN AND 3" O.C. PUNCHING.

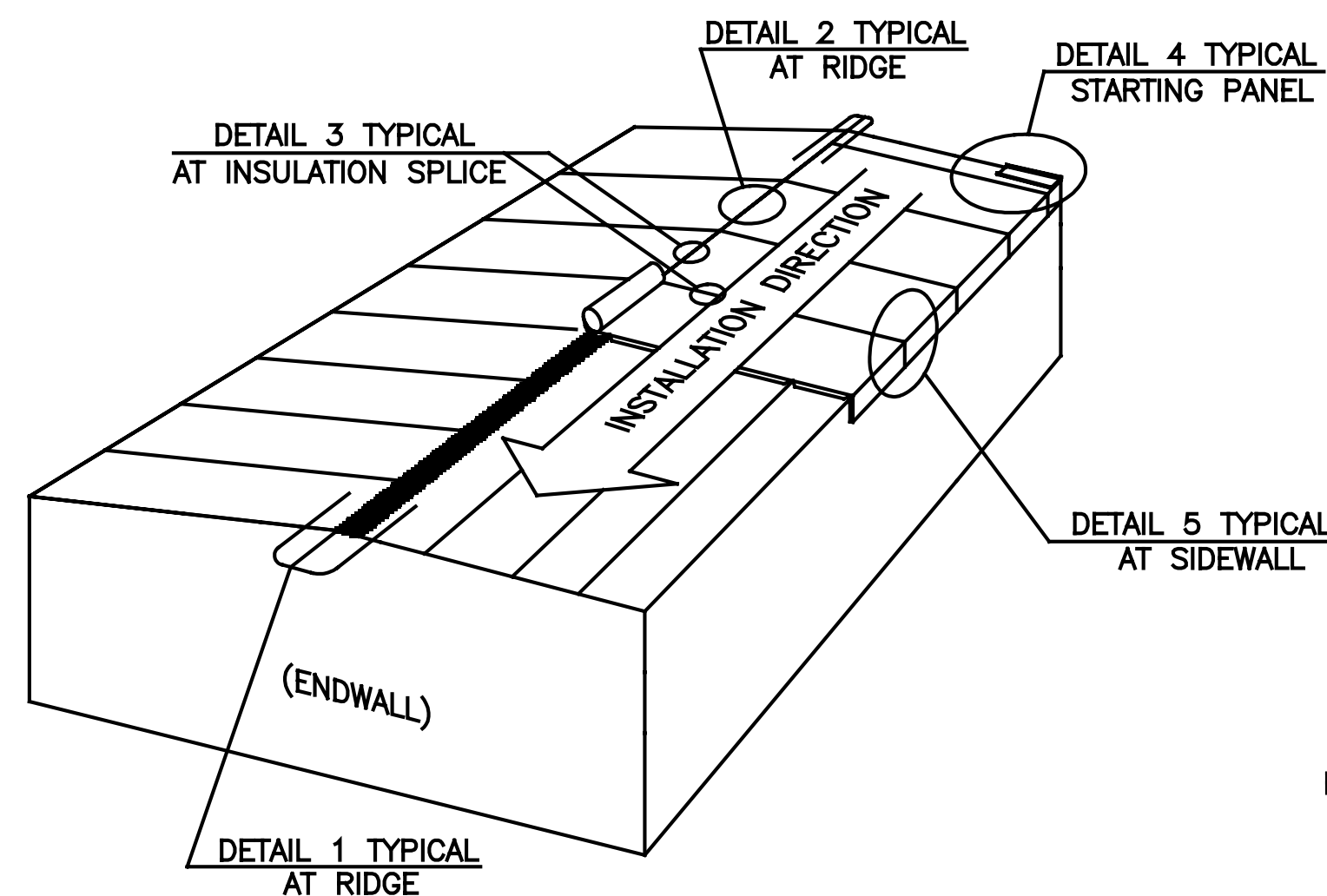
RIDGE CONDITION
DETAIL 2



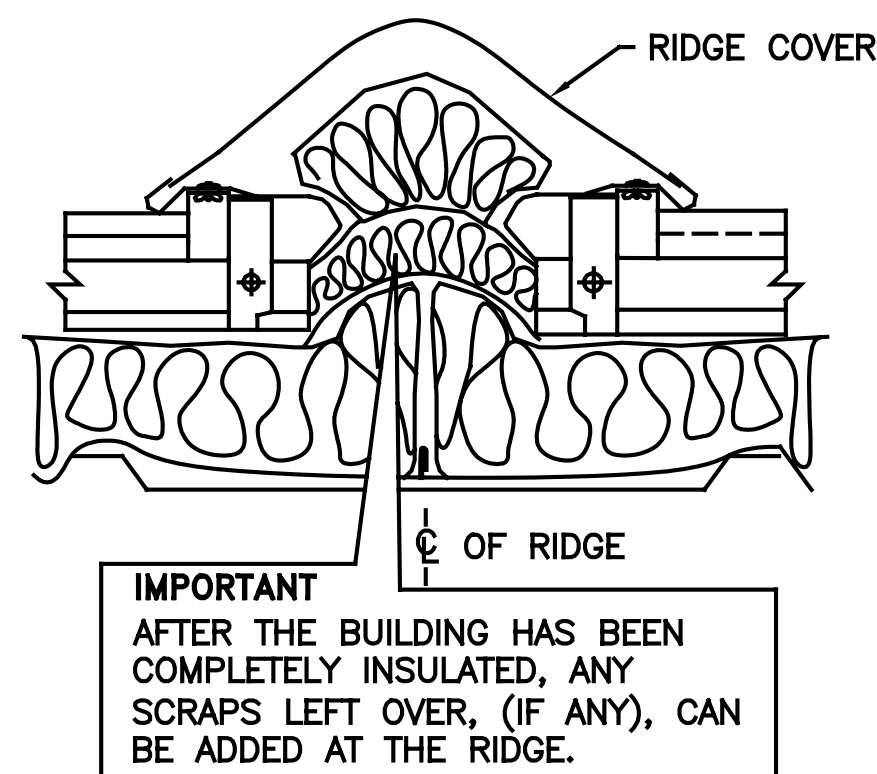
INTERIOR RIDGE TRIM INSTALLATION

NOTE: ROTATE ENDING PANEL

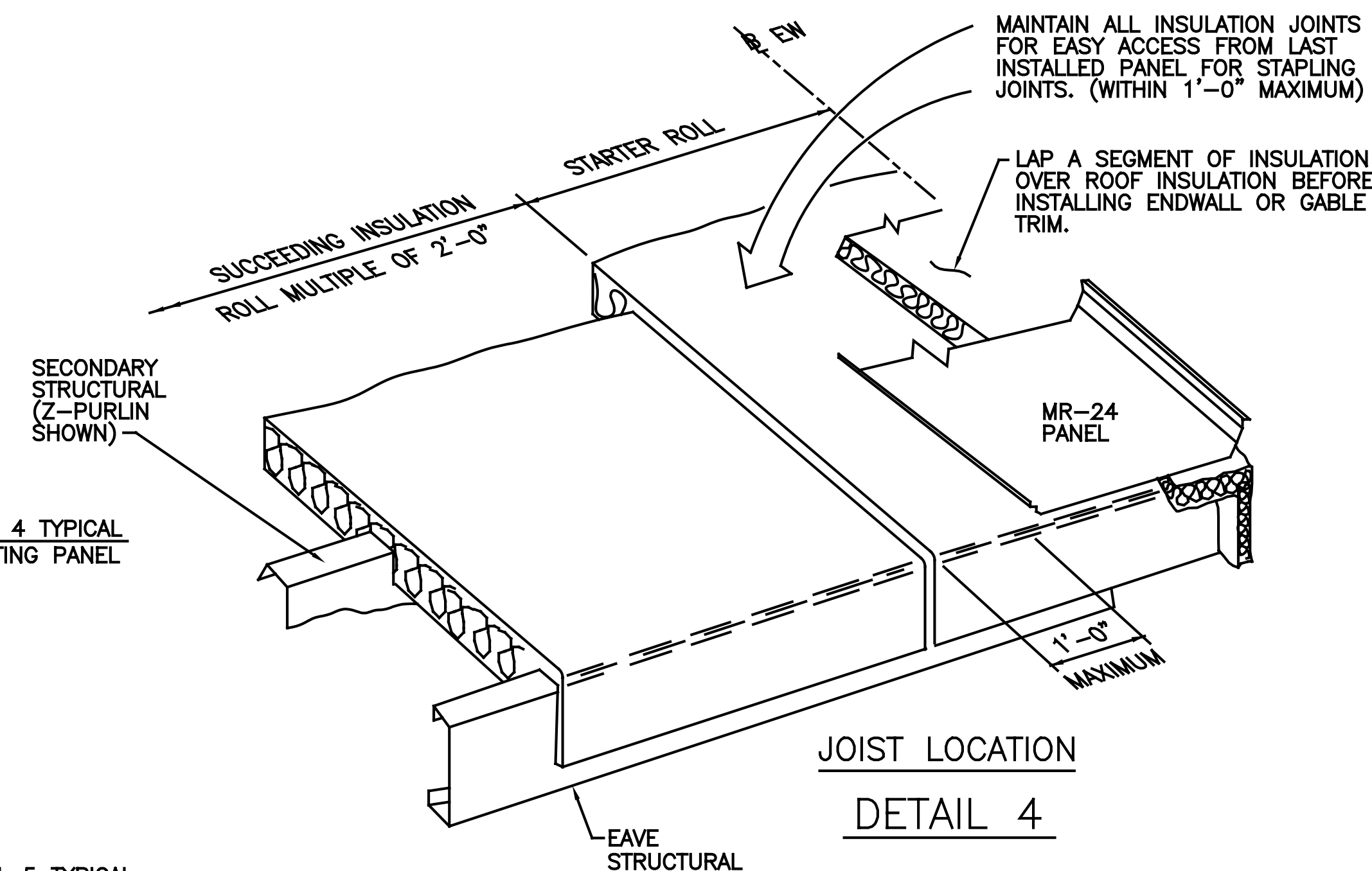
DETAIL 1



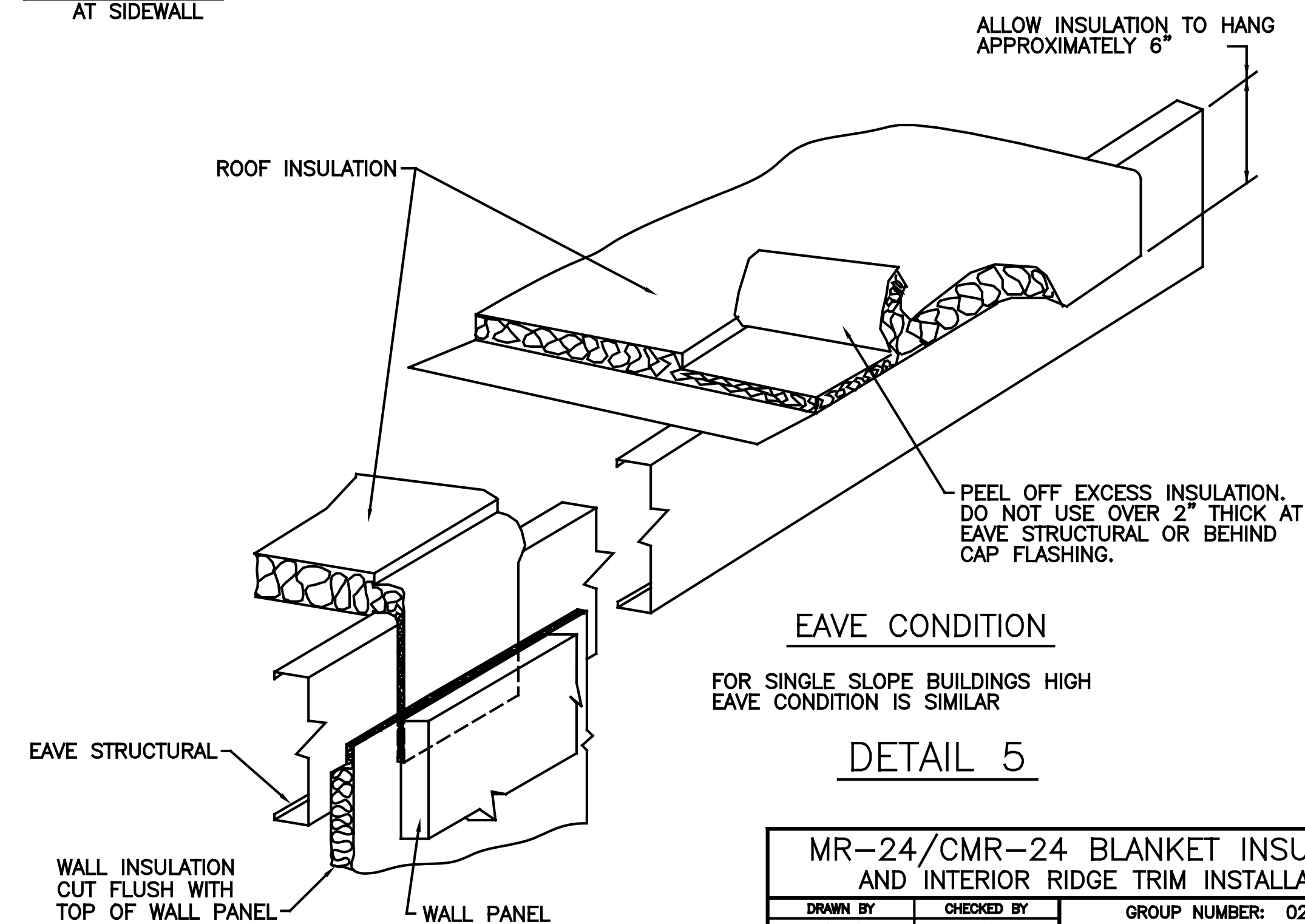
BUILDING KEY



SECTION AT (FINISHED) RIDGE
(REFERENCE ONLY)



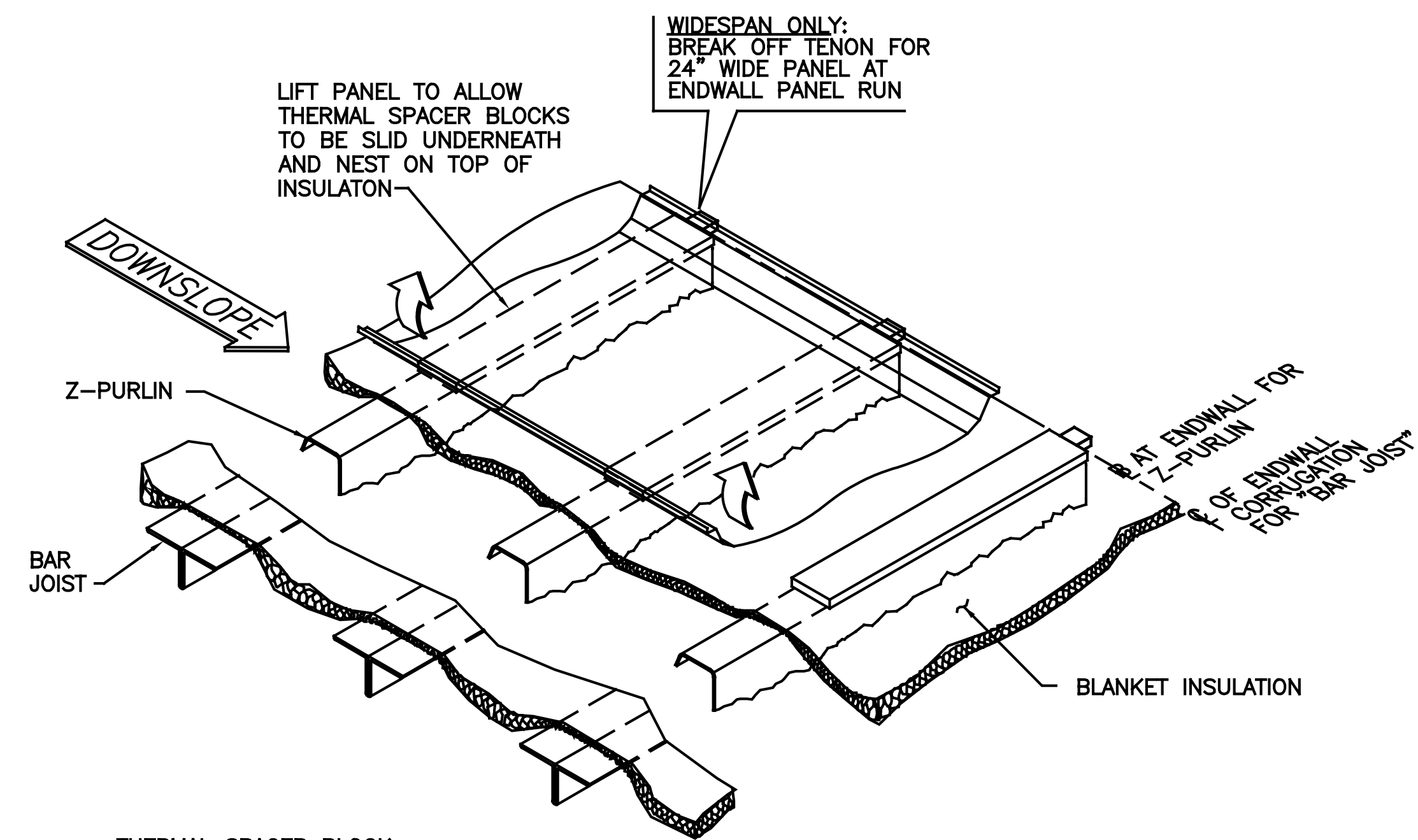
JOIST LOCATION
DETAIL 4



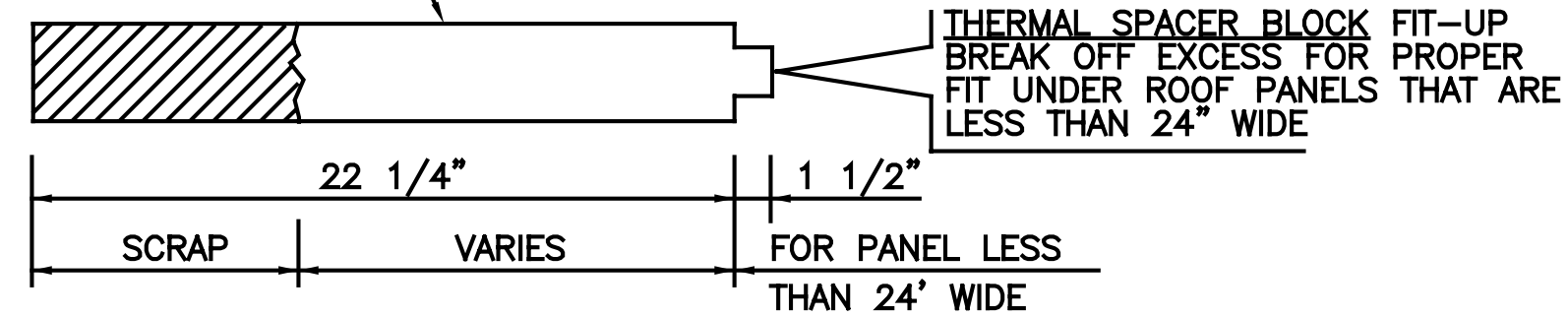
EAVE CONDITION
FOR SINGLE SLOPE BUILDINGS HIGH EAVE CONDITION IS SIMILAR

DETAIL 5

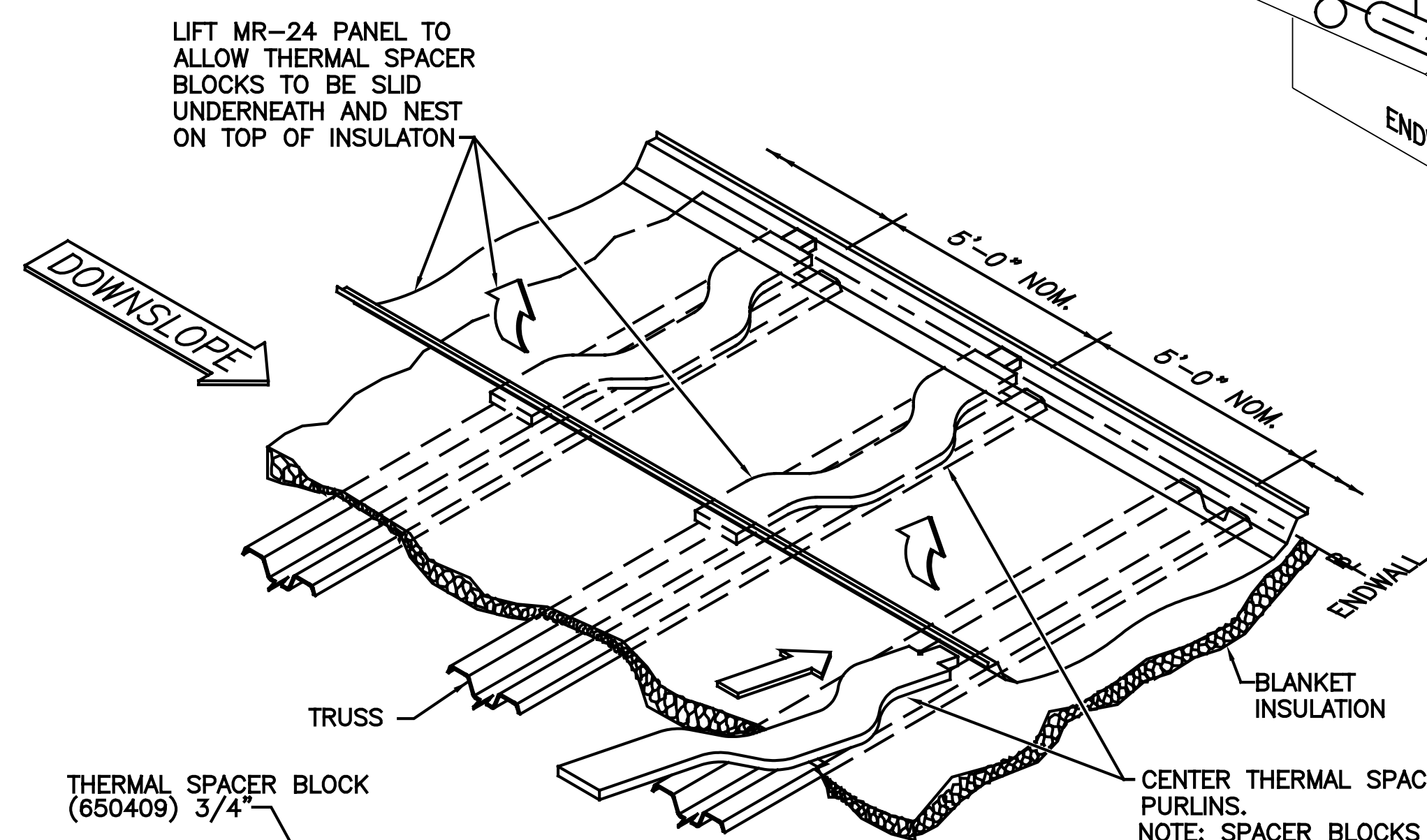
MR-24/CMR-24 BLANKET INSULATION AND INTERIOR RIDGE TRIM INSTALLATION				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-032-01		
ACM	RKH			
FIRST RELEASE DATE	REVISION DATE			
01/21/10	03/15/19	B	P-080573	05



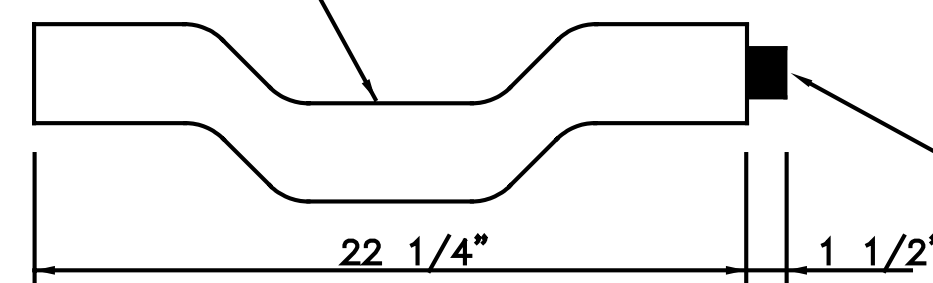
THERMAL SPACER BLOCK
(650408) 3/4"



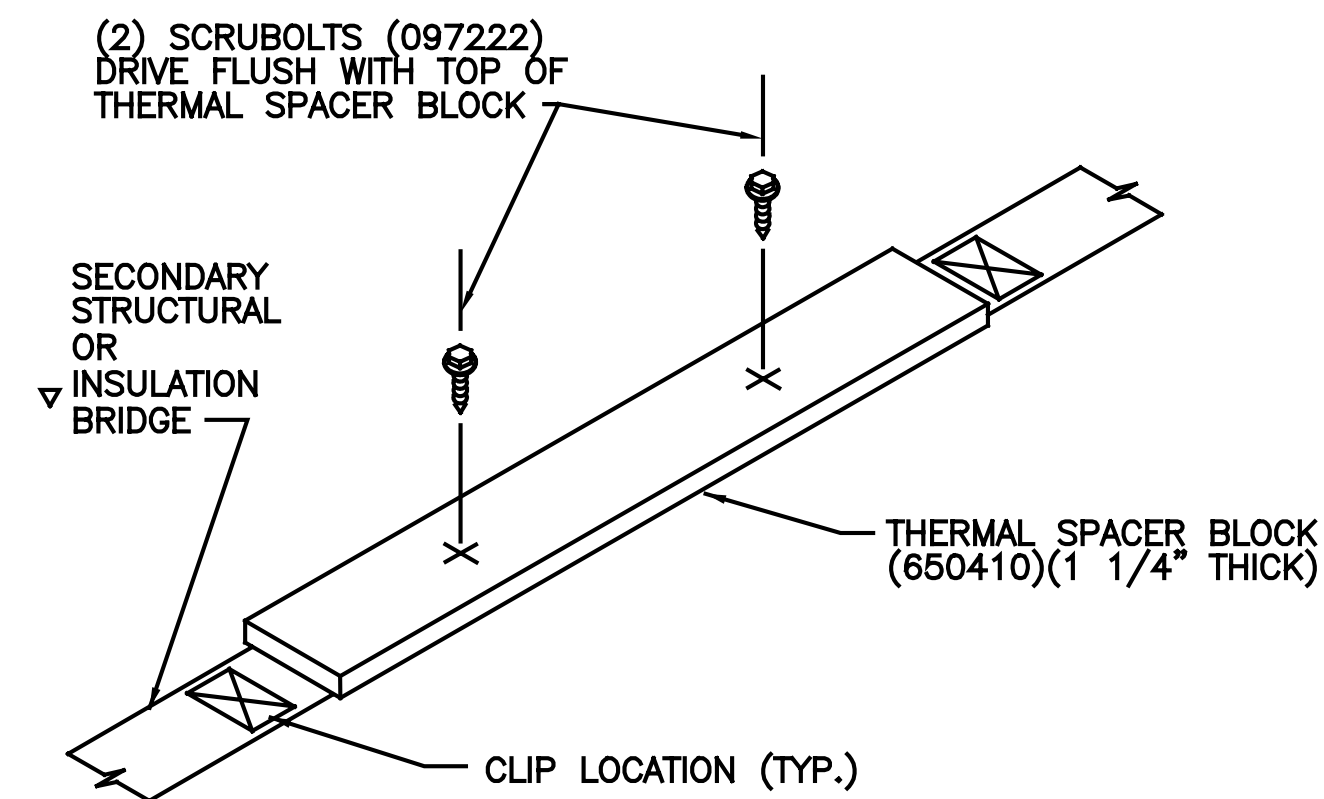
BAR JOIST OR Z-PURLIN DETAIL-1



THERMAL SPACER BLOCK
(650409) 3/4"



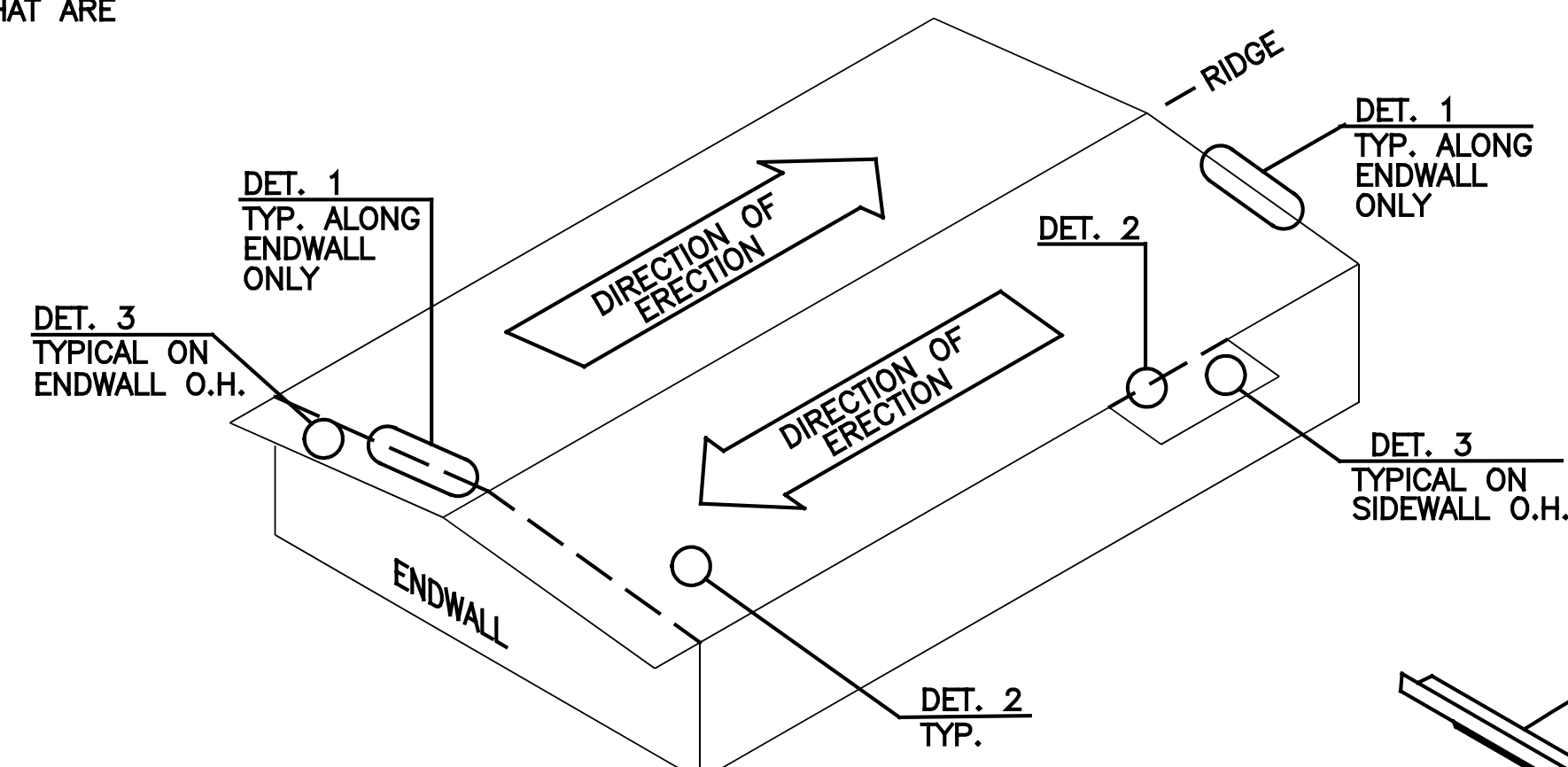
TRUSS DETAIL - 1



SIDEWALL OR ENDWALL OVERHANG DETAIL-3

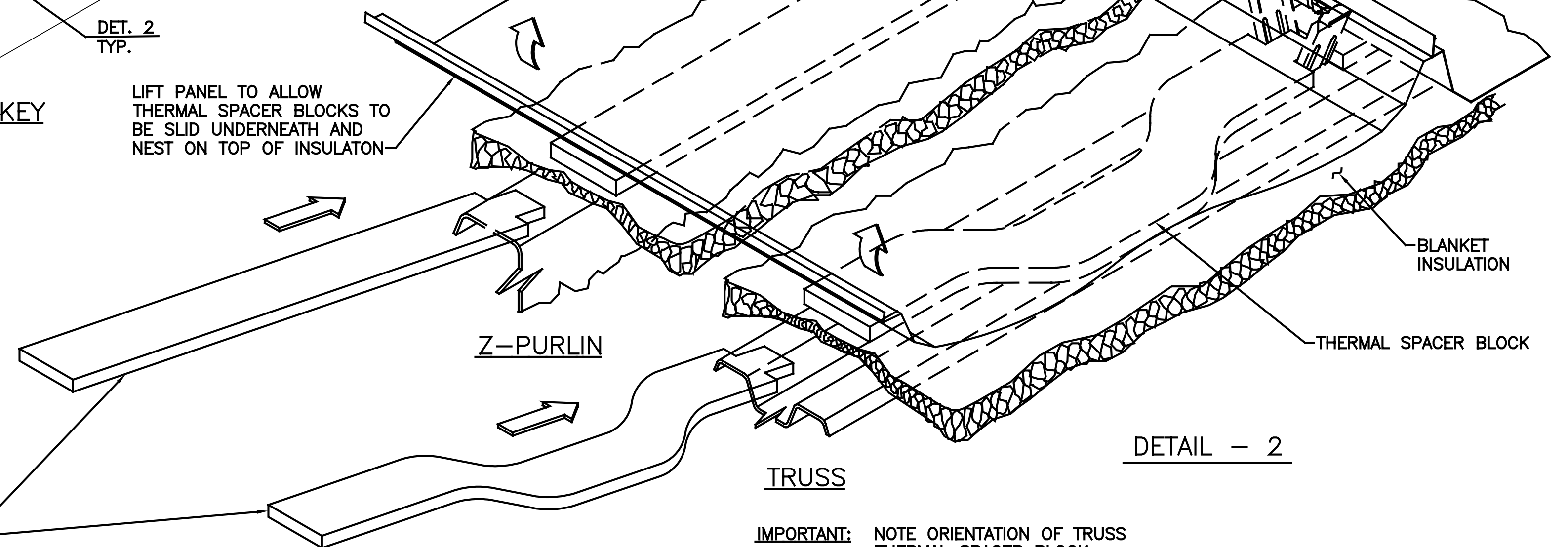
▼ SAME PRINCIPLE APPLIES WHEN INSULATION BRIDGE IS INSTALLED

IT IS RECOMMENDED THAT OVERHANGS HAVE
A MINIMUM OF 2" FACED INSULATION TO
REDUCE CONDENSATION IN THESE AREAS.

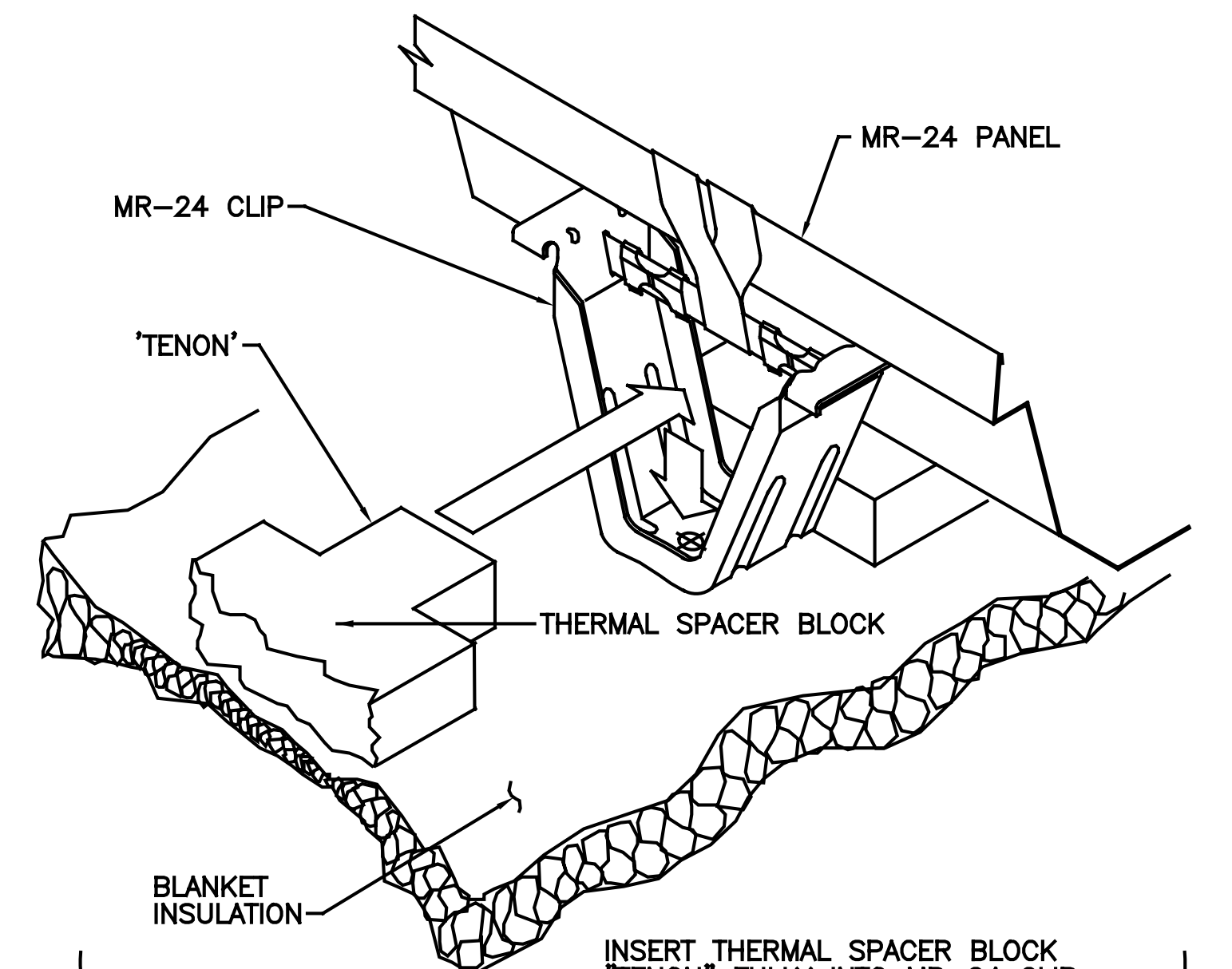


BUILDING KEY

LIFT PANEL TO ALLOW
THERMAL SPACER BLOCKS TO
BE SLID UNDERNEATH AND
NEST ON TOP OF INSULATION



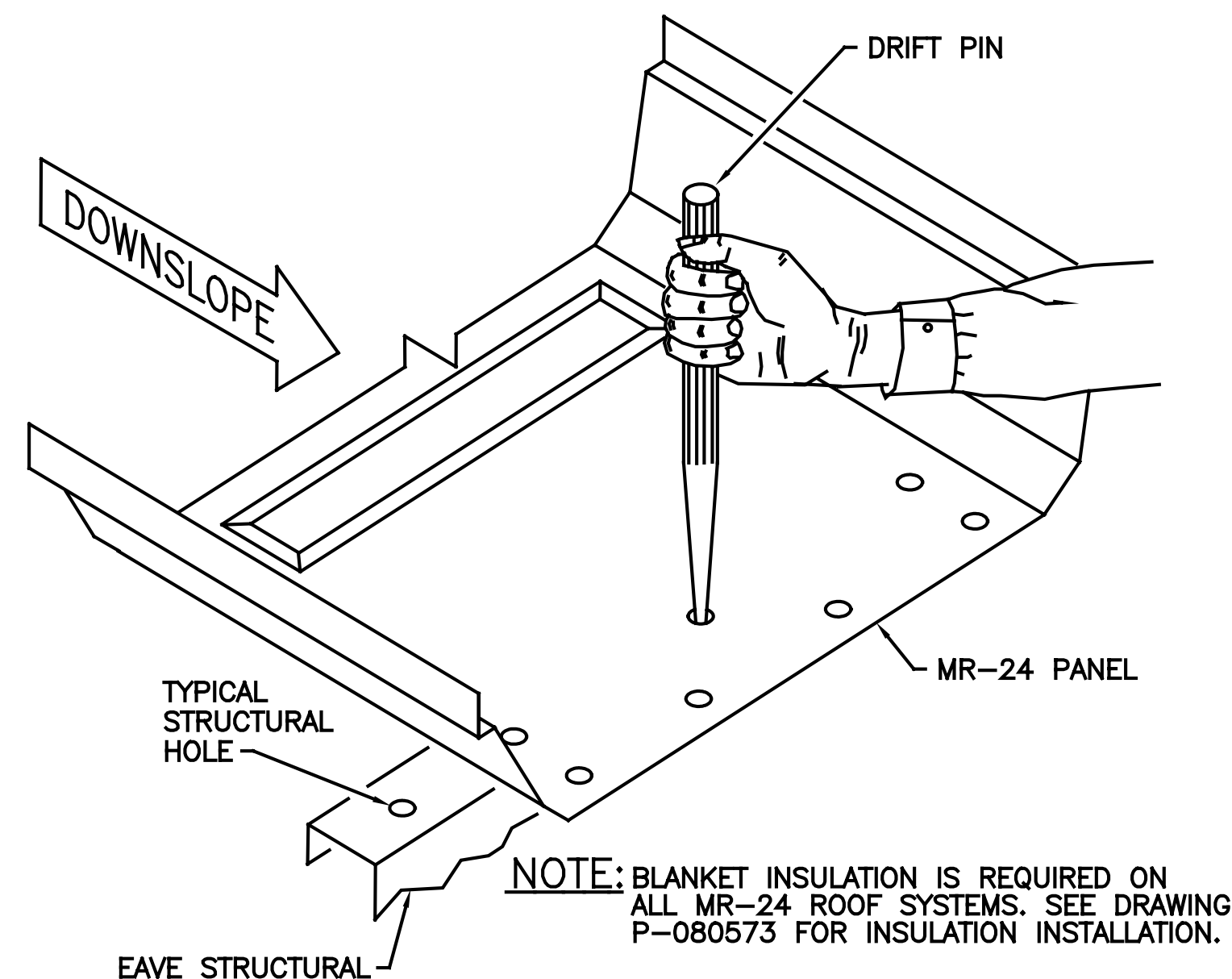
IMPORTANT: NOTE ORIENTATION OF TRUSS
THERMAL SPACER BLOCK



INSERT THERMAL SPACER BLOCK
'TENON' FULLY INTO MR-24 CLIP
AND PUSH DOWN.

DETAIL - 2

THERMAL SPACER BLOCK INSTALLATION				
MR-24 ROOF				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02 030 01		
RKH	ACM			
FIRST RELEASE DATE	REVISION DATE			
01/21/10	04/05/22			
		B	P-080574	05



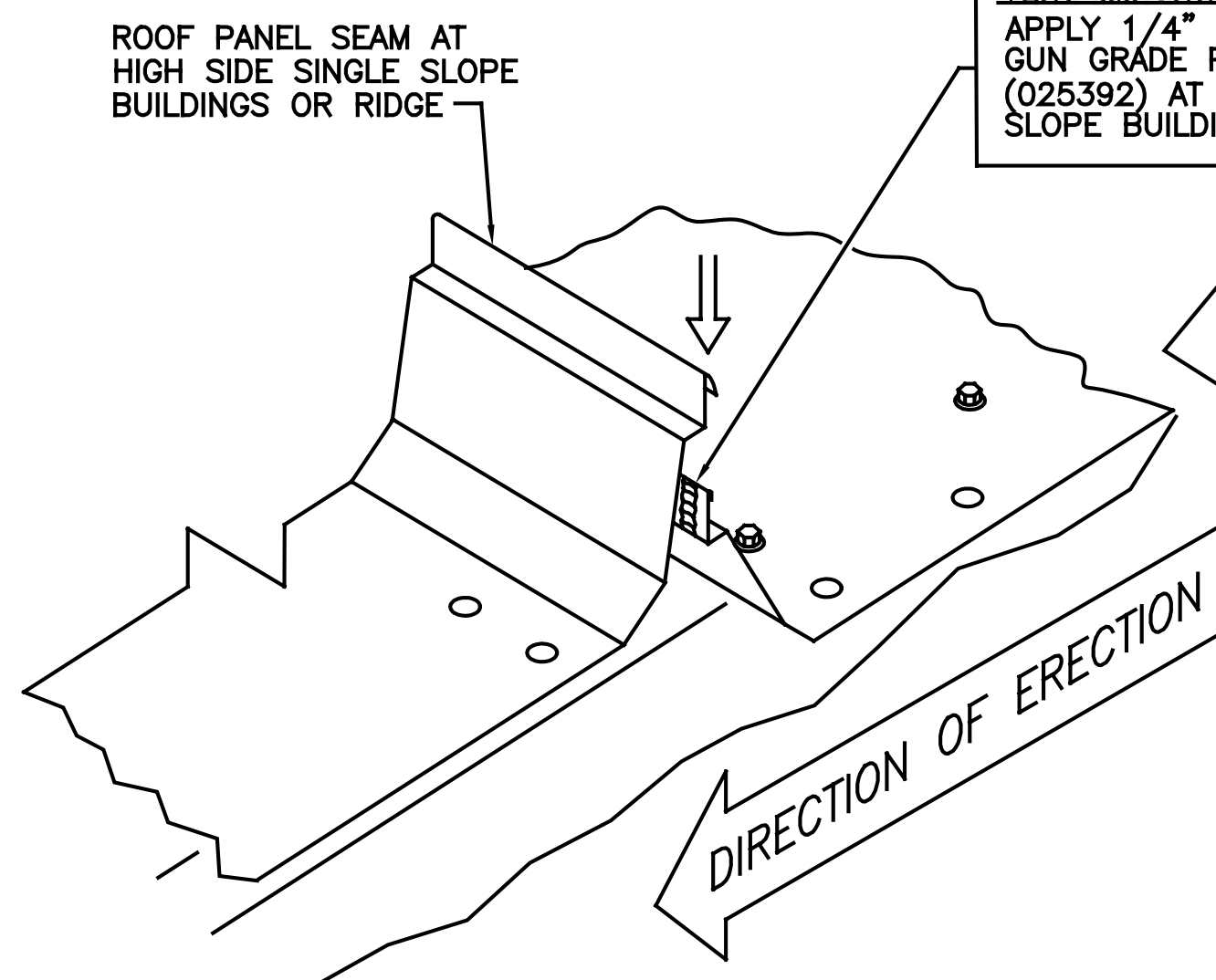
STEP 1 – LOCATE STRUCTURAL HOLE

- REFER TO ROOF PANEL LAYOUT DRAWING PROVIDED WITH EACH ORDER FOR PANEL PLACEMENT.
- PANEL CLIPS ARE NOT INSTALLED AT EAVE STRUCTURAL.



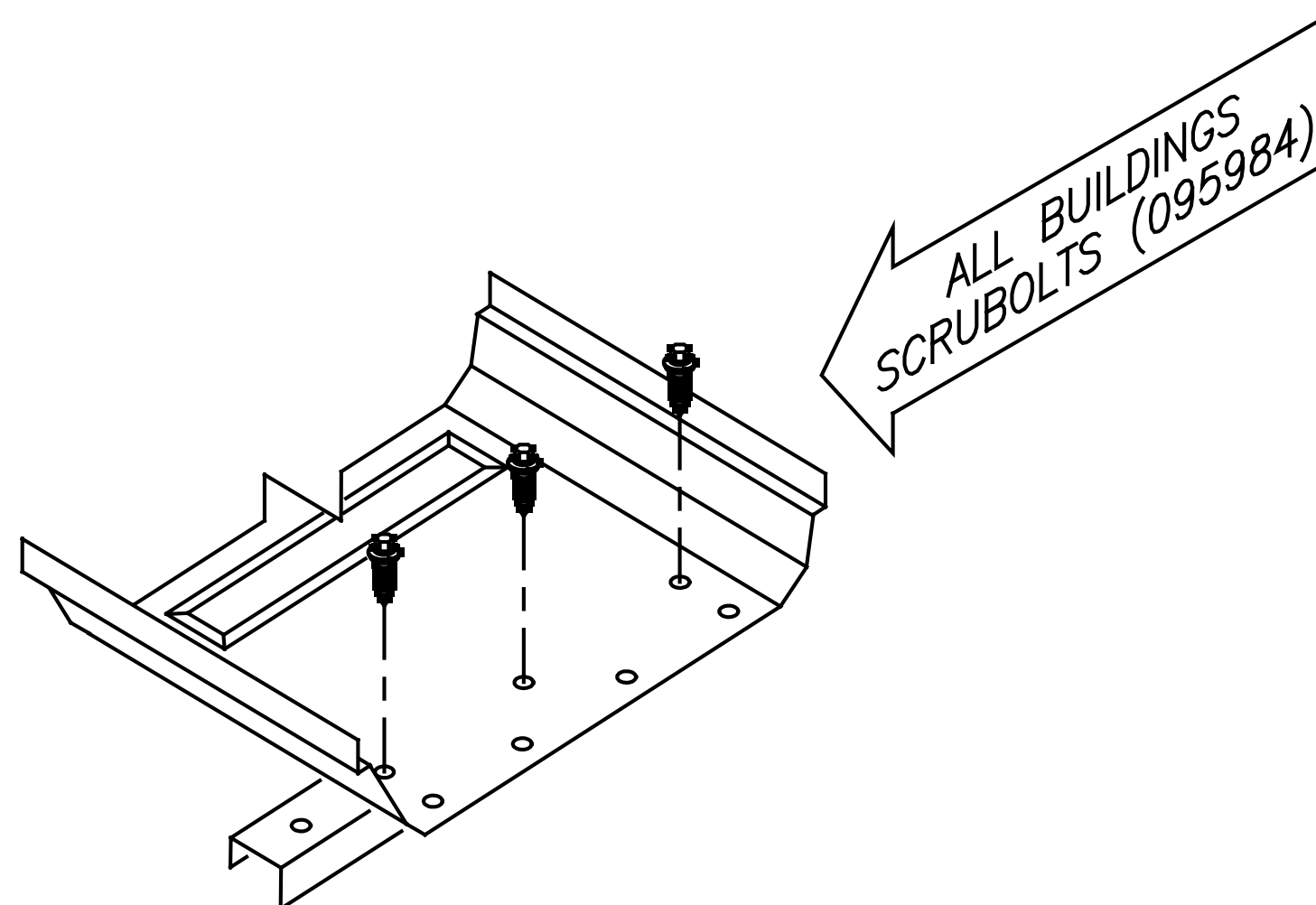
WARNING

ALWAYS USE FALL PROTECTION WHILE WORKING AROUND ROOF OPENINGS.



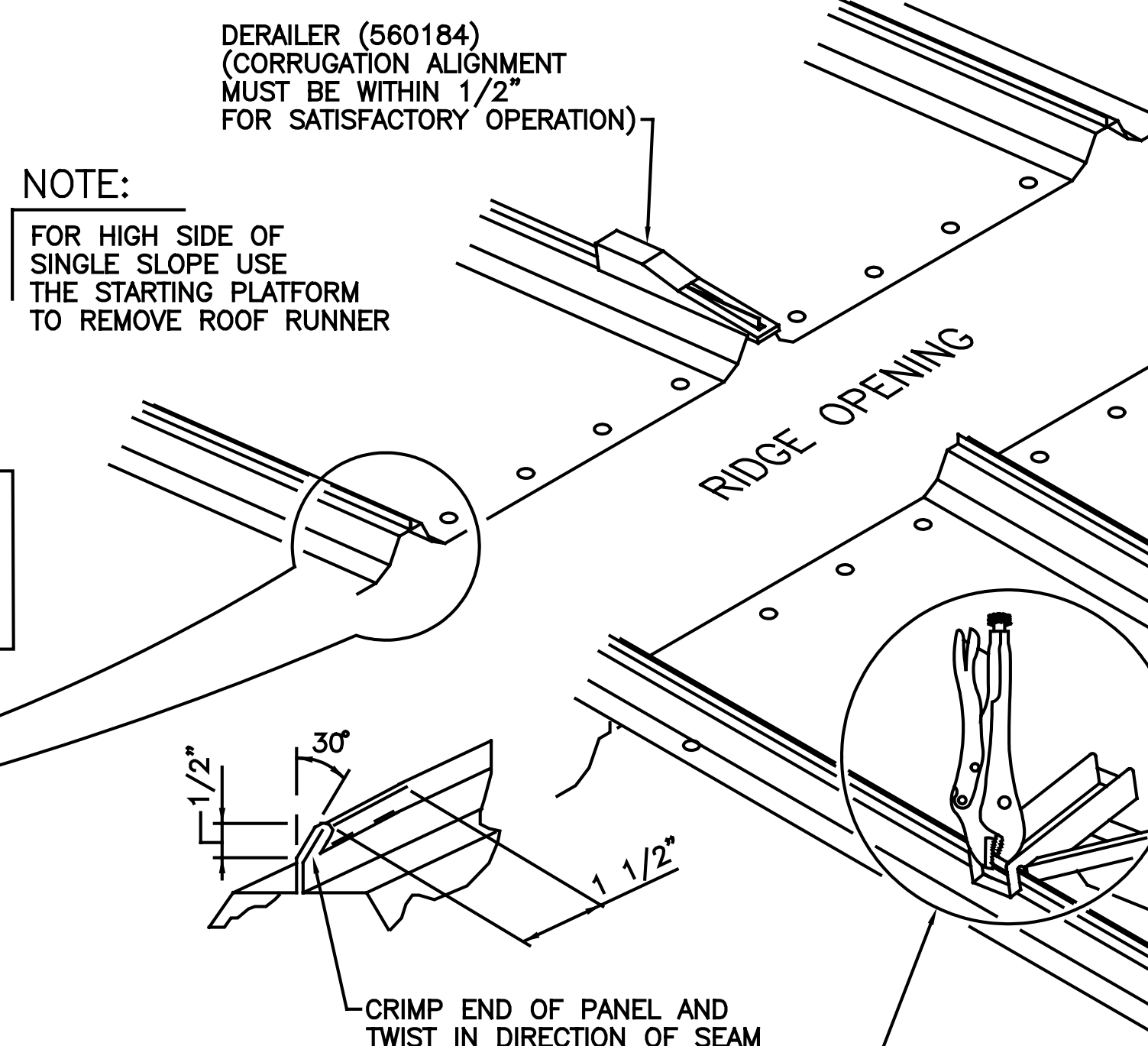
STEP 4 – NEXT PANEL

- DO NOT LAY PANELS TOO FAR AHEAD OF THE SEAMING OPERATION.



STEP 2 – INSTALL FASTENERS

- INSTALL APPROPRIATE FASTENERS BEFORE PANEL CORRUGATIONS ARE LOCK SEAMED.



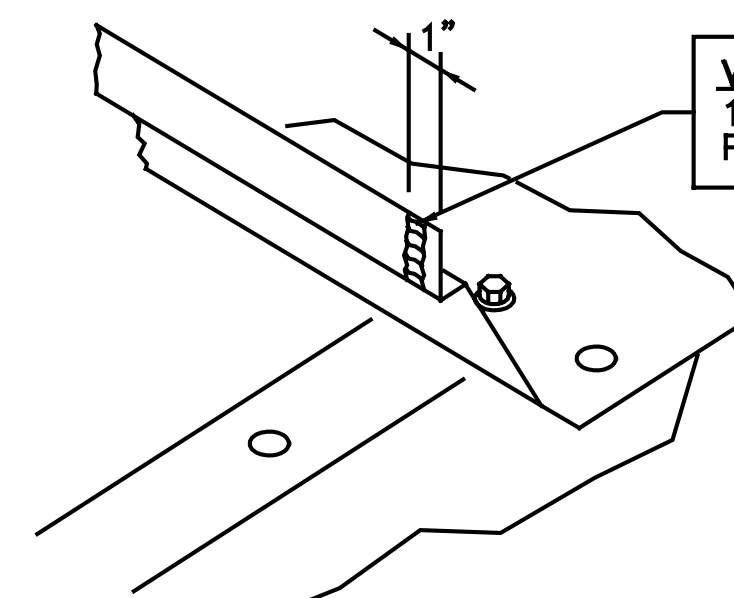
STEP 5 – CRIMP PANEL

- BEFORE STARTING SEAMING OPERATION CRIMP THE START OF SEAM FOR EASE OF ROOF RUNNER ENGAGEMENT.

IMPORTANT:

DO NOT USE C-CLAMP STYLE LOCKING PLIERS WHEN SECURING THE STARTING PLATFORM AT MR-24 CORRUGATION SEAM LOCATIONS. ONLY CURVED JAW TYPE, (9" MIN.), MAY BE USED.

IMPORTANT:
QUICK RELEASE PINS MUST ALWAYS BE IN PLACE BEFORE ATTEMPTING TO PLACE ROOF RUNNER ON STARTING PLATFORM



VERY IMPORTANT:
1/4" DIA. BEAD OF GUN GRADE PANLASTIC (025392)

NOTE:

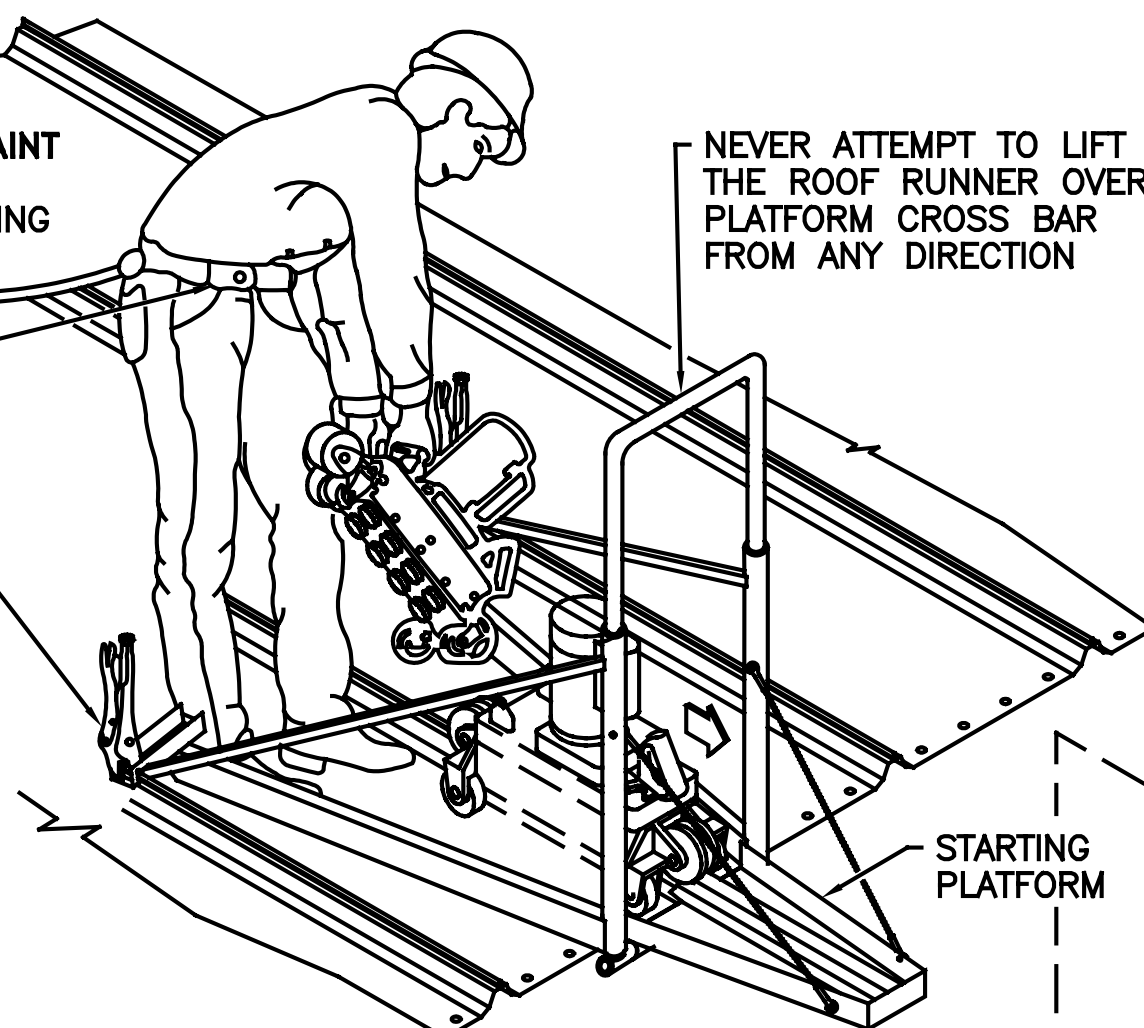
TO HELP PREVENT WALL STAINING CAUSED BY ROOF RUN-OFF, INSTALL EAVE EDGE OF ROOF TRIM OR GUTTER PARTS IMMEDIATELY AFTER ROOF PANELS ARE INSTALLED.

STEP 3 – INSTALL SEALANT

- WORKER SHOULD WEAR SAFETY RESTRAINT WHILE PLACING ROOF RUNNER ON STARTING PLATFORM AND WHILE REMOVING

SAFETY RESTRAINT

BE SURE STARTING PLATFORM IS SECURELY CLAMPED BEFORE ROOF RUNNER IS PLACED ON IT

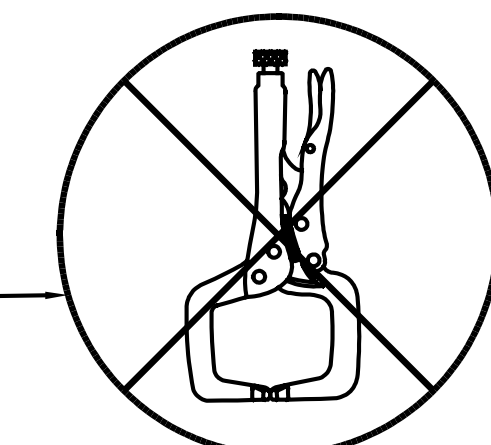


STARTING PLATFORM

(AREA BELOW) WORK EXCLUSION ZONE

IMPORTANT:

THE AREA BELOW WHERE A STARTING PLATFORM IS BEING USED MUST BE DESIGNATED A WORK EXCLUSION ZONE.



STEP 6 – SEAMING OPERATION

- BE SURE PANELS ARE PROPERLY NESTED TOGETHER PRIOR TO SEAMING.
- PANELS CAN BE TEMPORARILY HELD IN PLACE WITH VICE GRIPS BEFORE SEAMING.

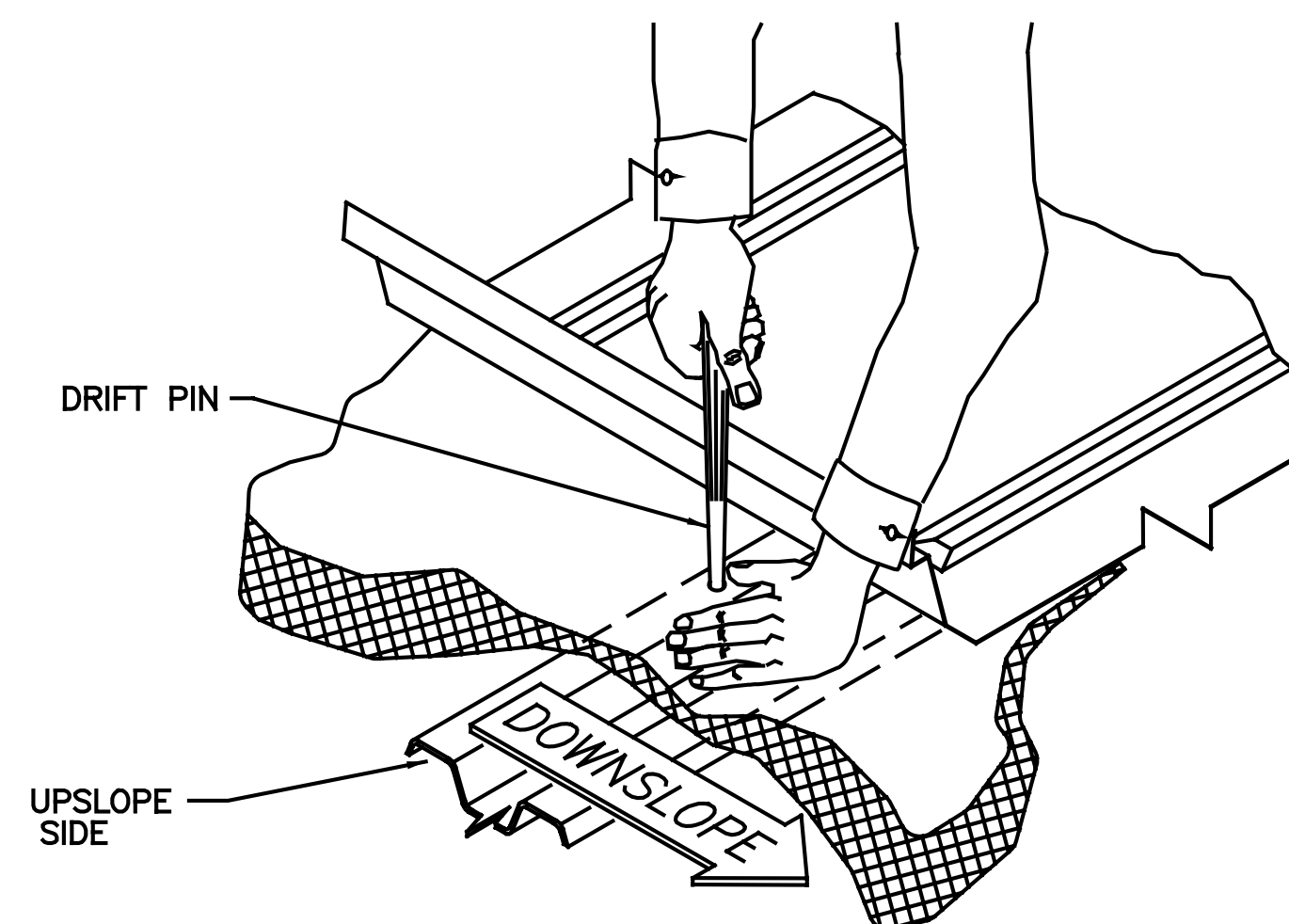
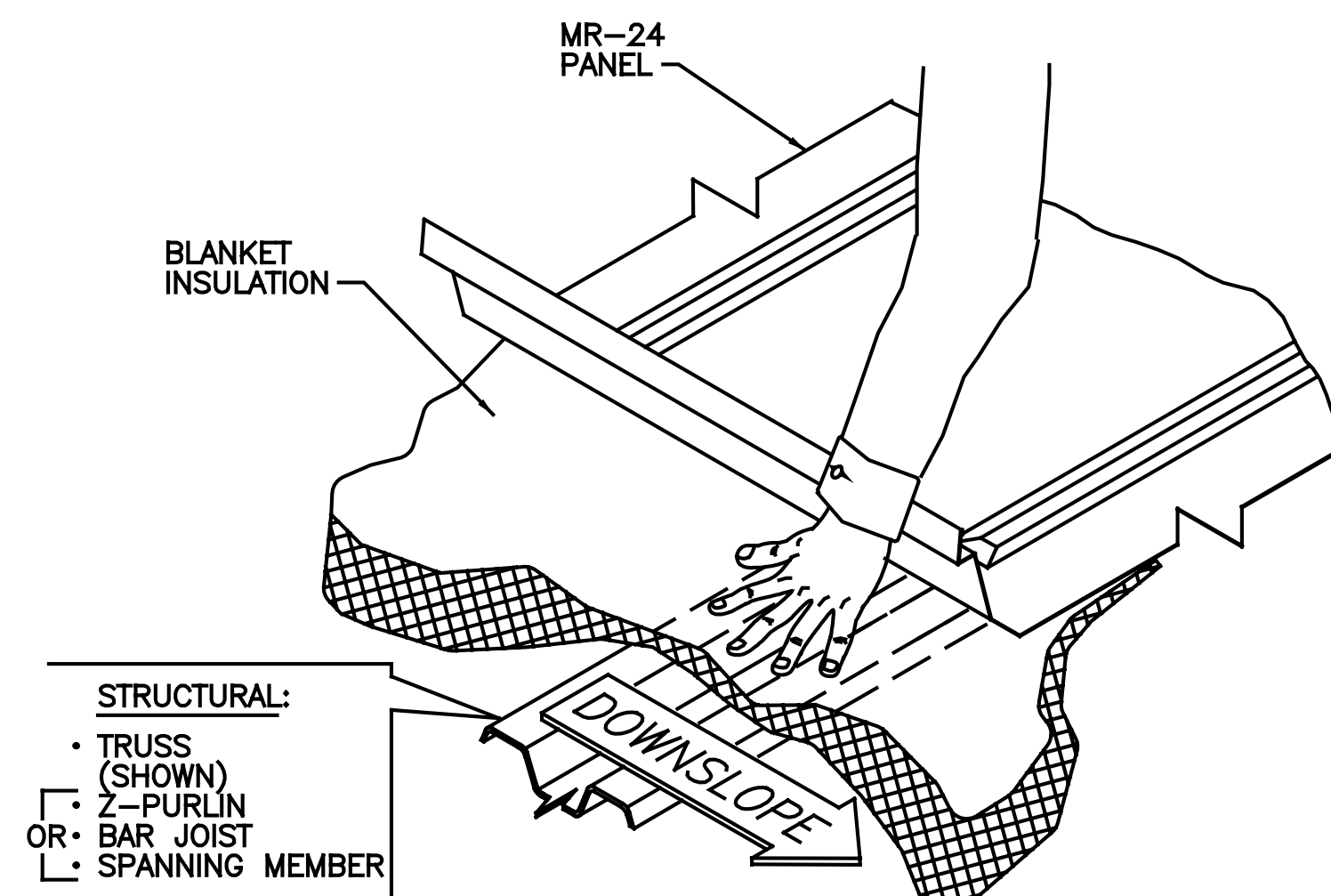
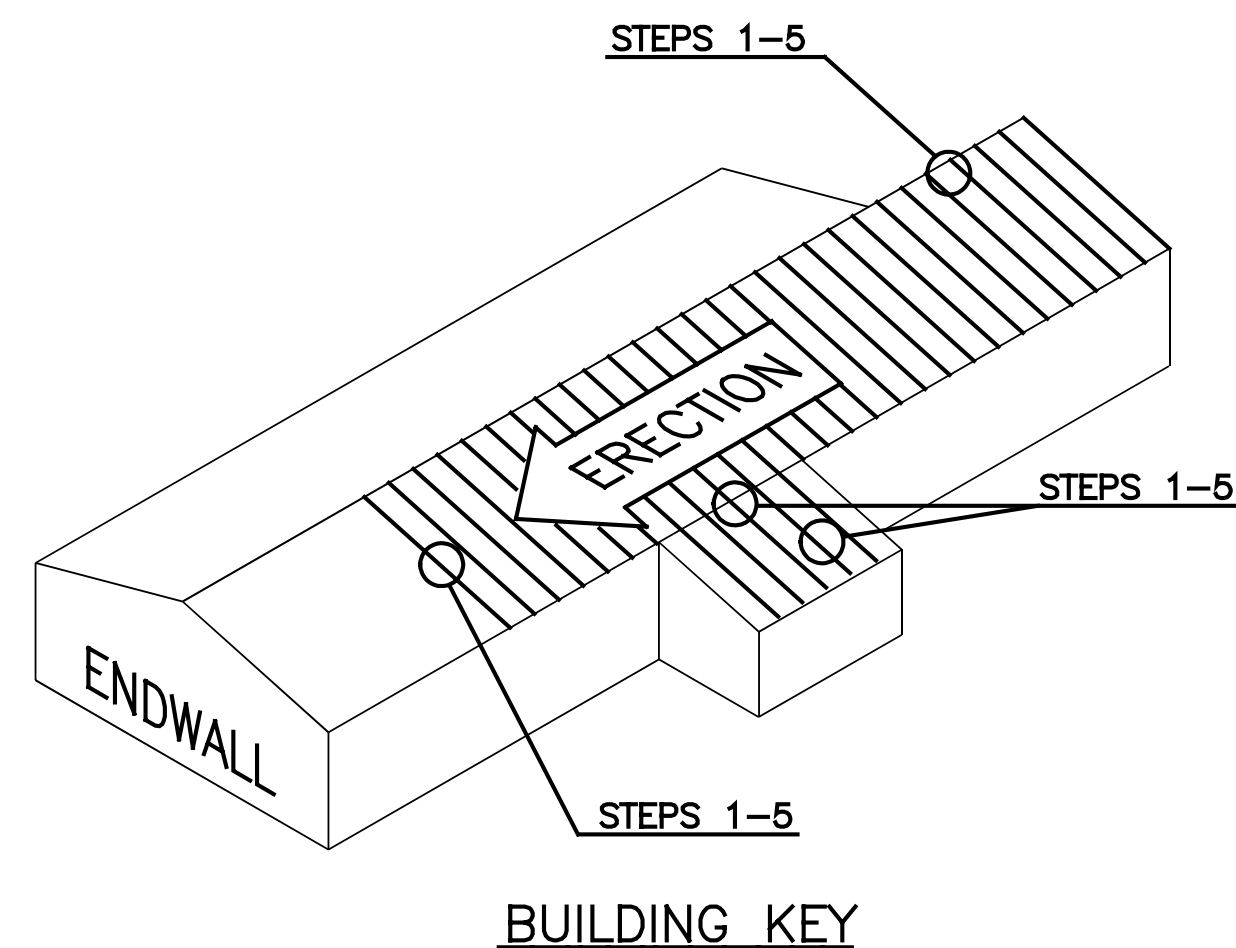


MR-24 PANEL INSTALLATION

DRAWN BY	CHECKED BY	GROUP NUMBER:	02-030-01
RKH	ACM		
FIRST RELEASE DATE	REVISION DATE		
01/21/10	09/02/20		

B P-080575 05

THIS DRAWING IS INCLUDED IN A PRODUCT APPROVAL PACKAGE
REVISIONS MUST BE APPROVED BY THE MANAGER OF PRODUCT EXCELLENCE



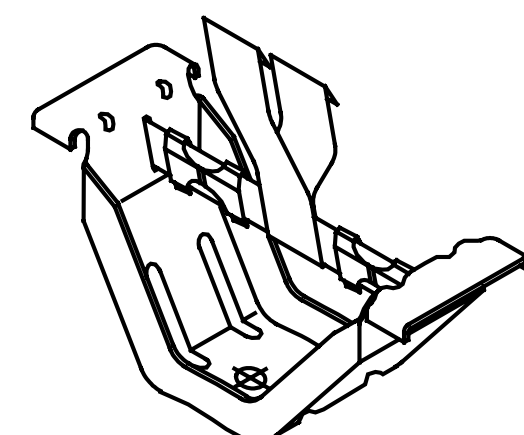
STEP 1 LOCATE STRUCTURAL

FROM THE ADJACENT MR-24 PANEL,
LOCATE THE STRUCTURAL UNDER
THE BLANKET INSULATION.

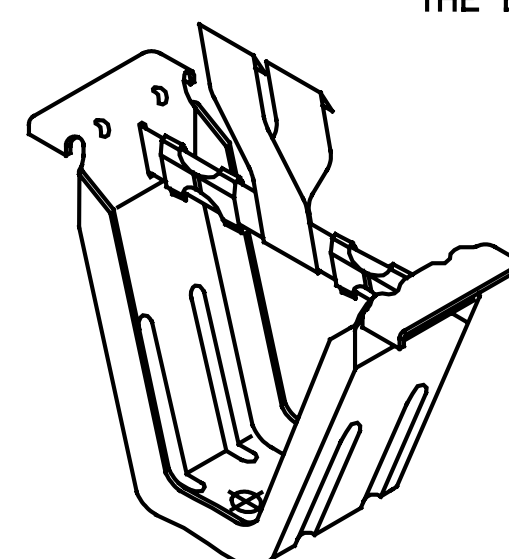
STEP 2 LOCATE HOLE IN STRUCTURAL WITH DRIFT PIN

IMPORTANT NOTE: ALWAYS LOCATE PANEL CLIPS ON THE
UPSLOPE SIDE OF TRUSS OR DELTA JOIST.
(FOR DELTA JOIST SYSTEM, AT THE HIGH SIDE OF
SINGLE SLOPE MOUNT CLIP ON ROOF SUPPORT ANGLE.)

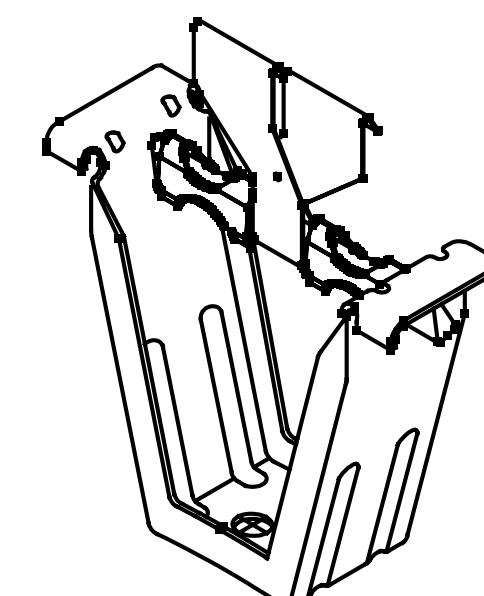
***NOTE:**
MR-24 CLIP 560743, 560744 OR 560745
MAY BE SUPPLIED WHEN FACTORY MUTUAL
CLASSIFICATION IS SPECIFIED.



SHORT PANEL CLIP (560440 OR *560743)
(WITHOUT THERMAL SPACER BLOCK)

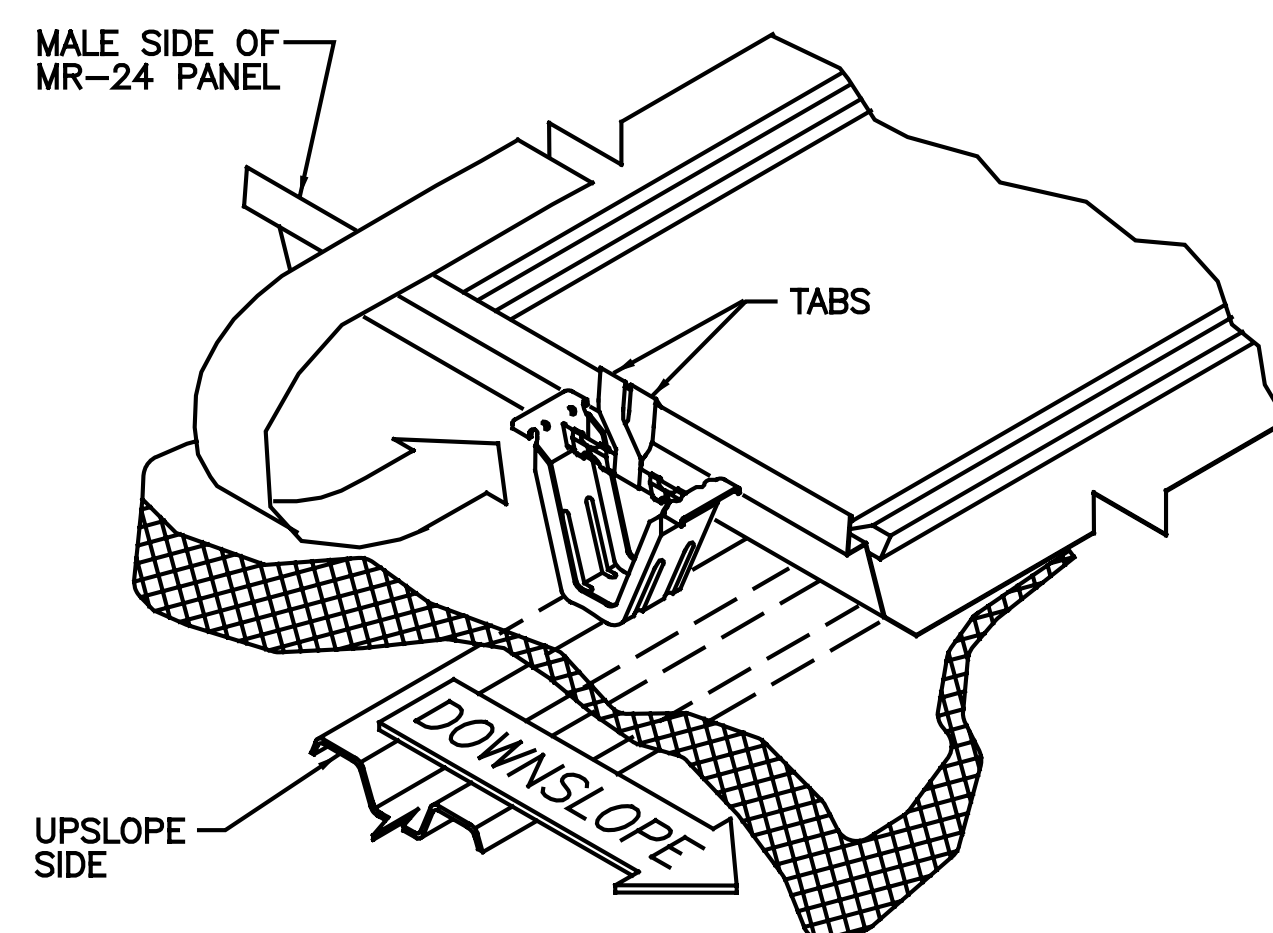


TALL PANEL CLIP (560441 OR *560744)
(WITH THERMAL SPACER BLOCK)

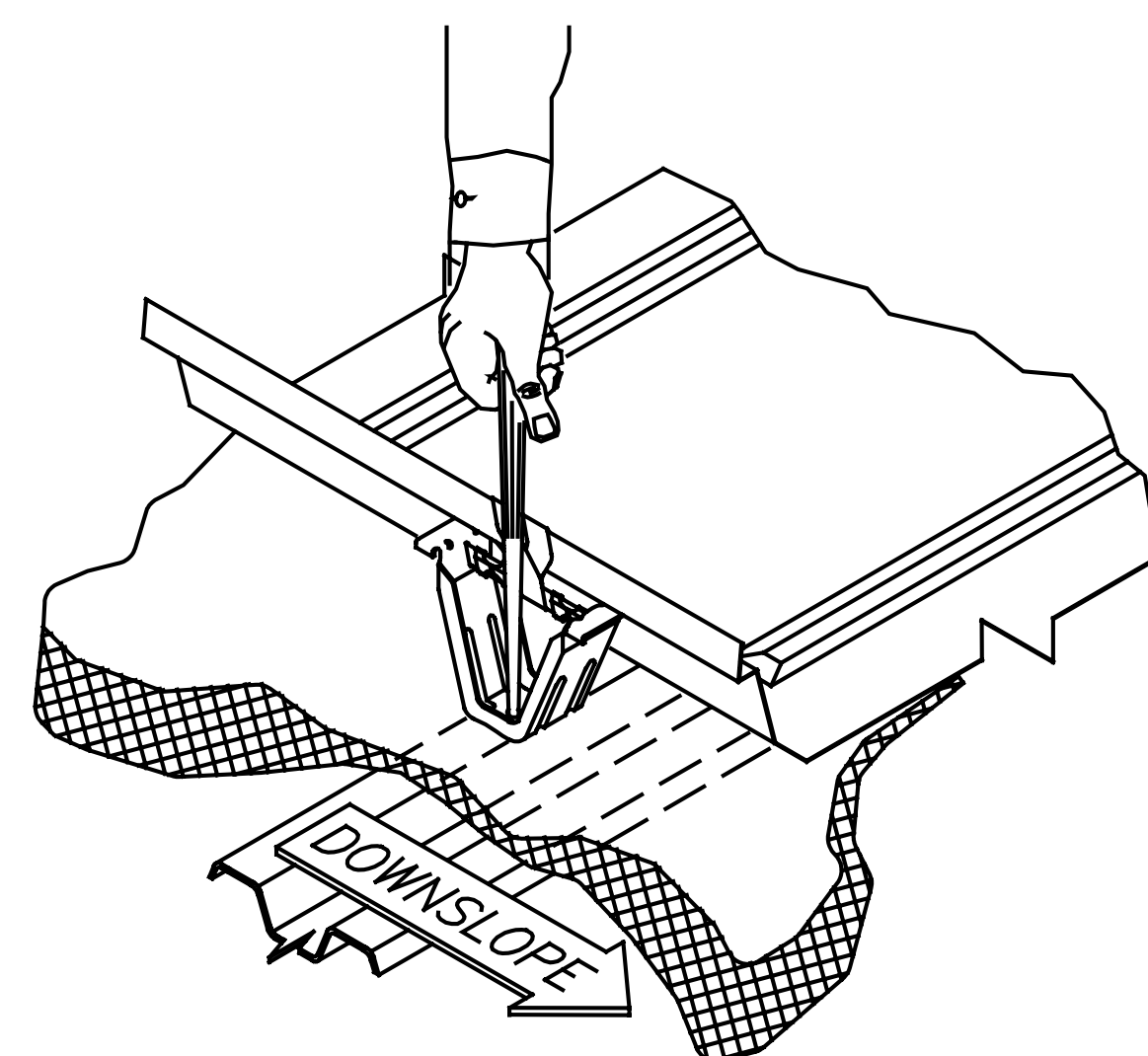


EXTRA TALL PANEL CLIP (*560745)
(WITH THERMAL SPACER BLOCK FOR >6" TO 9 1/4" INSULATION)

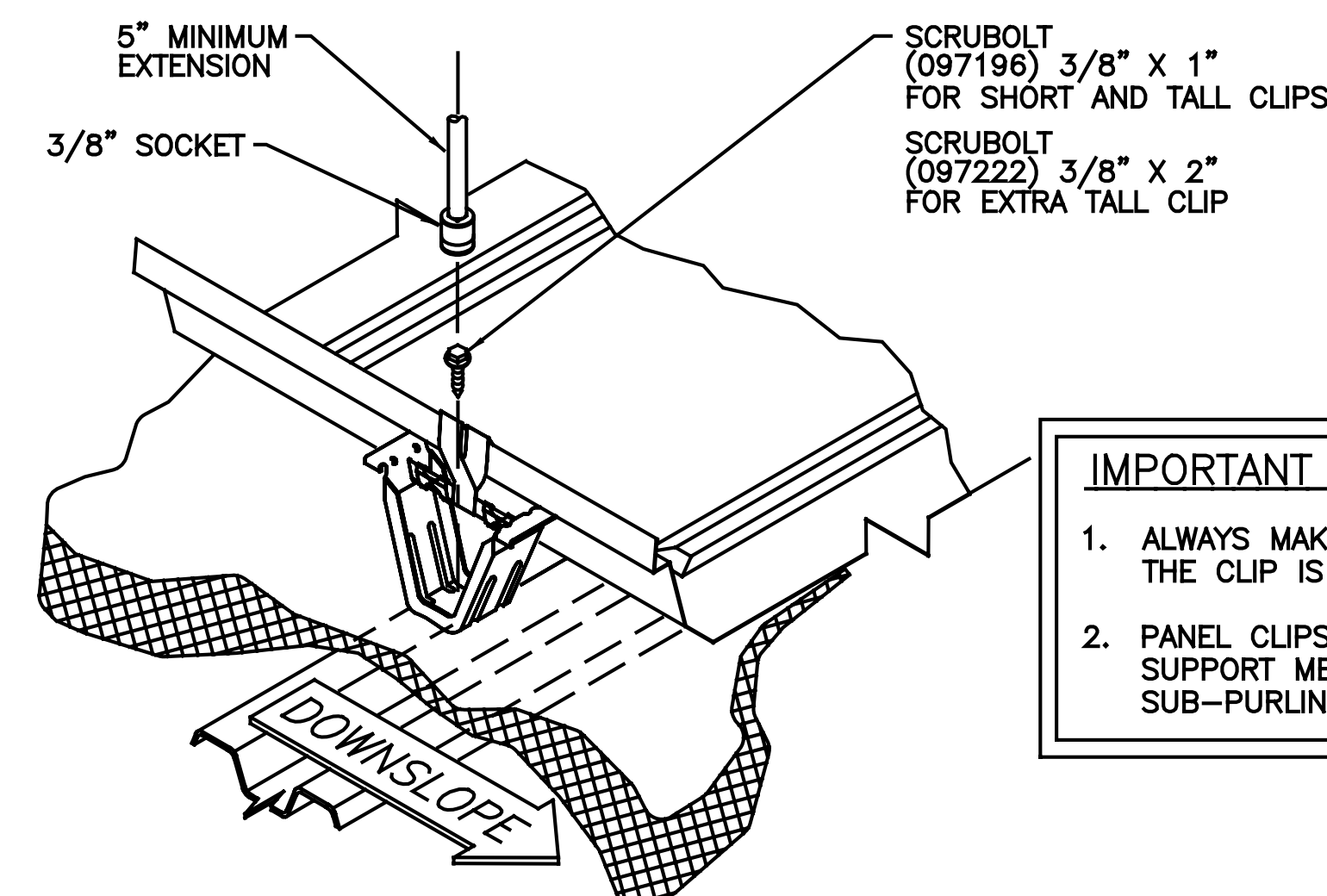
WARNING
ALWAYS USE FALL PROTECTION WHILE
WORKING AROUND ROOF OPENINGS.



STEP 3 HOOK PANEL CLIP TABS OVER PANEL AND ROTATE CLIP INTO POSITION



STEP 4 TEMPORARILY SECURE THE PANEL CLIP WITH A DRIFT PIN



STEP 5 INSTALL SCRUBOLT FASTENER

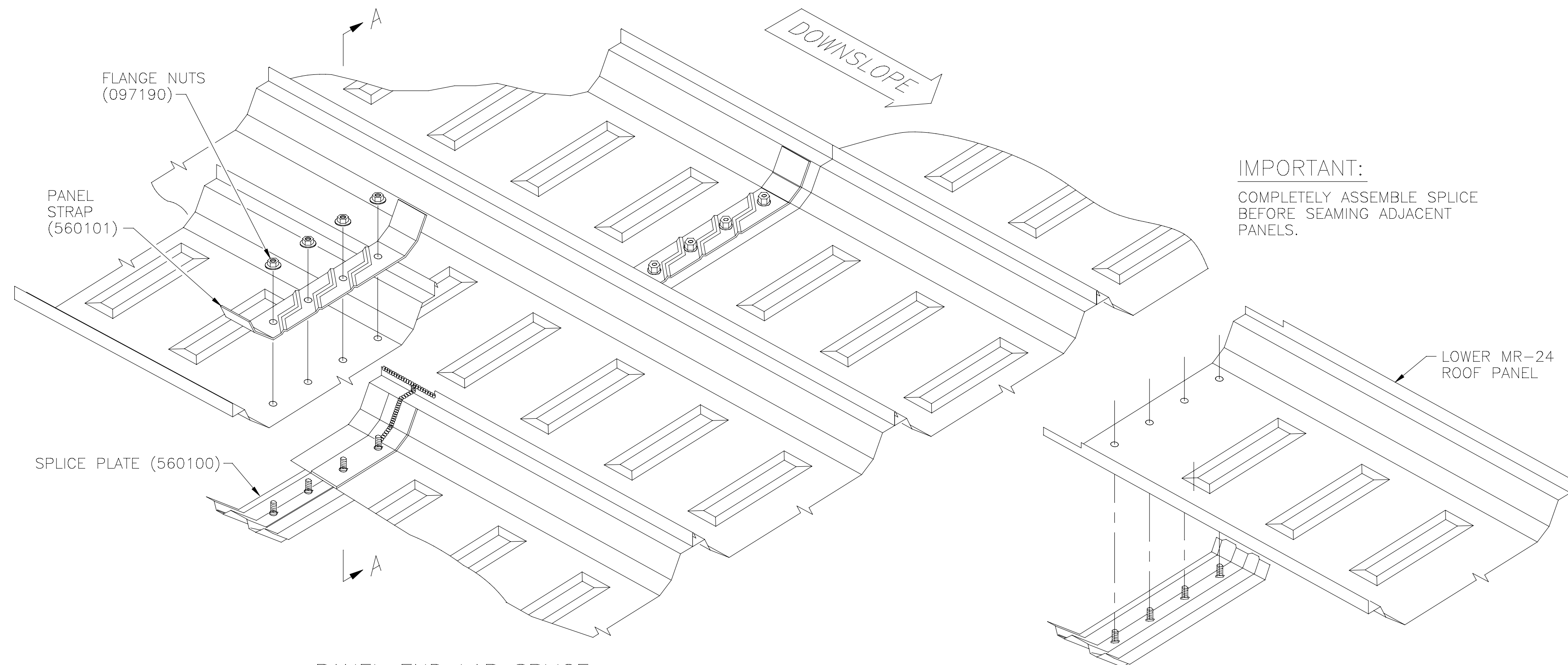
INSTALLATION OF SCRUBOLT REQUIRES A 3/8"
SOCKET AND A 5" (MINIMUM) EXTENSION.

- IMPORTANT NOTE**
1. ALWAYS MAKE SURE TABS ARE CENTERED IN THE MR-24 CLIP AFTER THE CLIP IS INSTALLED.
 2. PANEL CLIPS MUST BE ATTACHED TO ALL ROOF SECONDARY SUPPORT MEMBERS INCLUDING ALL INTERMEDIATE MEMBERS, SUB-PURLINS, ETC.

THIS DRAWING IS INCLUDED IN A PRODUCT APPROVAL PACKAGE
REVISIONS MUST BE APPROVED BY THE MANAGER OF PRODUCT EXCELLENCE

FLA

MR-24 PANEL CLIP INSTALLATION				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-01		
RKH	RMS			
FIRST RELEASE DATE	REVISION DATE	B	P-080576	07
01/21/10	11/09/21			

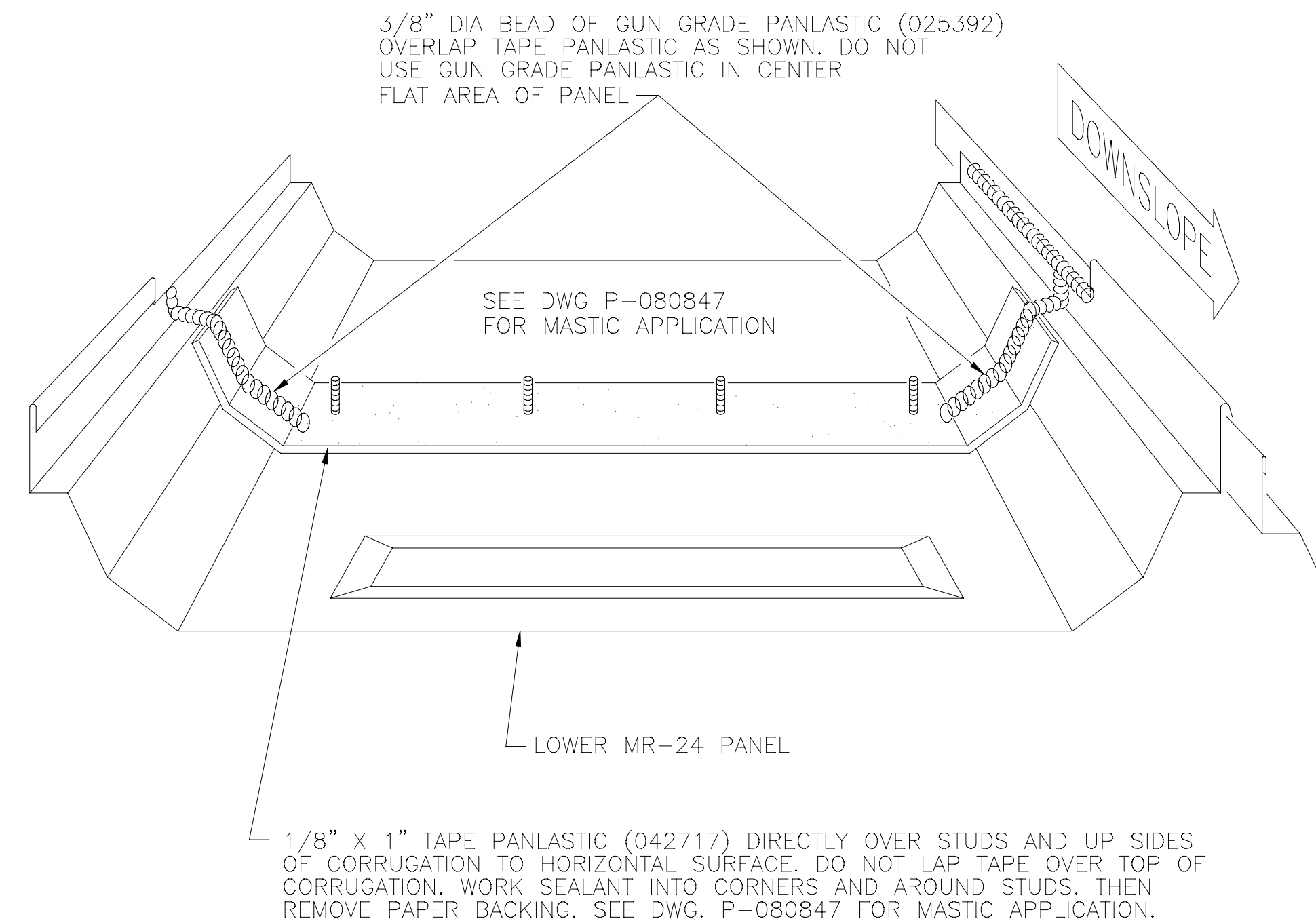


PANEL END LAP SPLICE

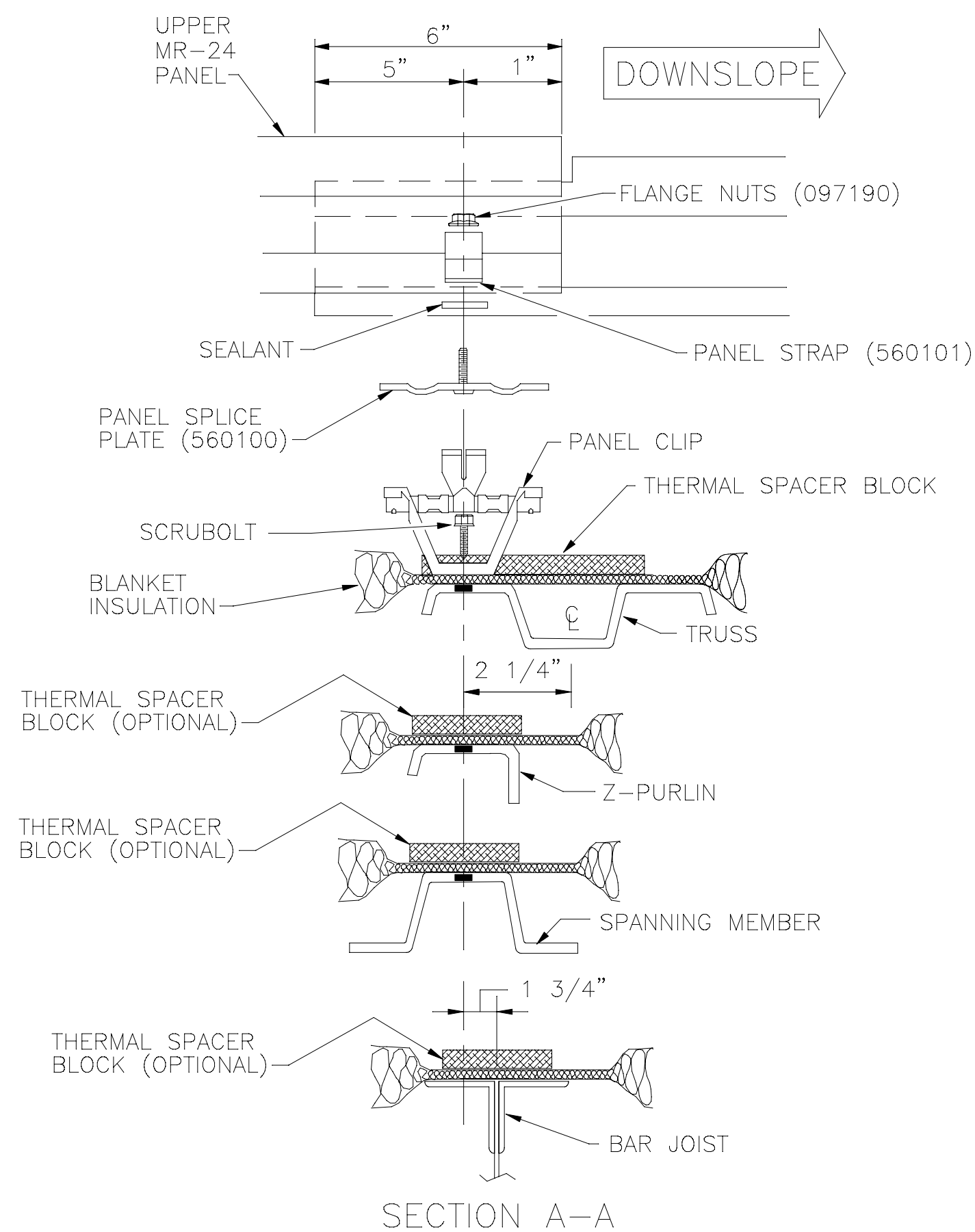
- PUNCHED AND NOTCHED PANELS ARE FURNISHED WITH LENGTHS CALCULATED FOR END LAP SPLICES TO OCCUR OVER SECONDARY STRUCTURALS.
- REFER TO ROOF PANEL LAYOUT DRAWINGS PROVIDED WITH EACH ORDER FOR PROPER PLACEMENT OF STAGGERED END LAP SPICE LOCATIONS.

STEP 1 – SPLICE PLATE INSTALLATION

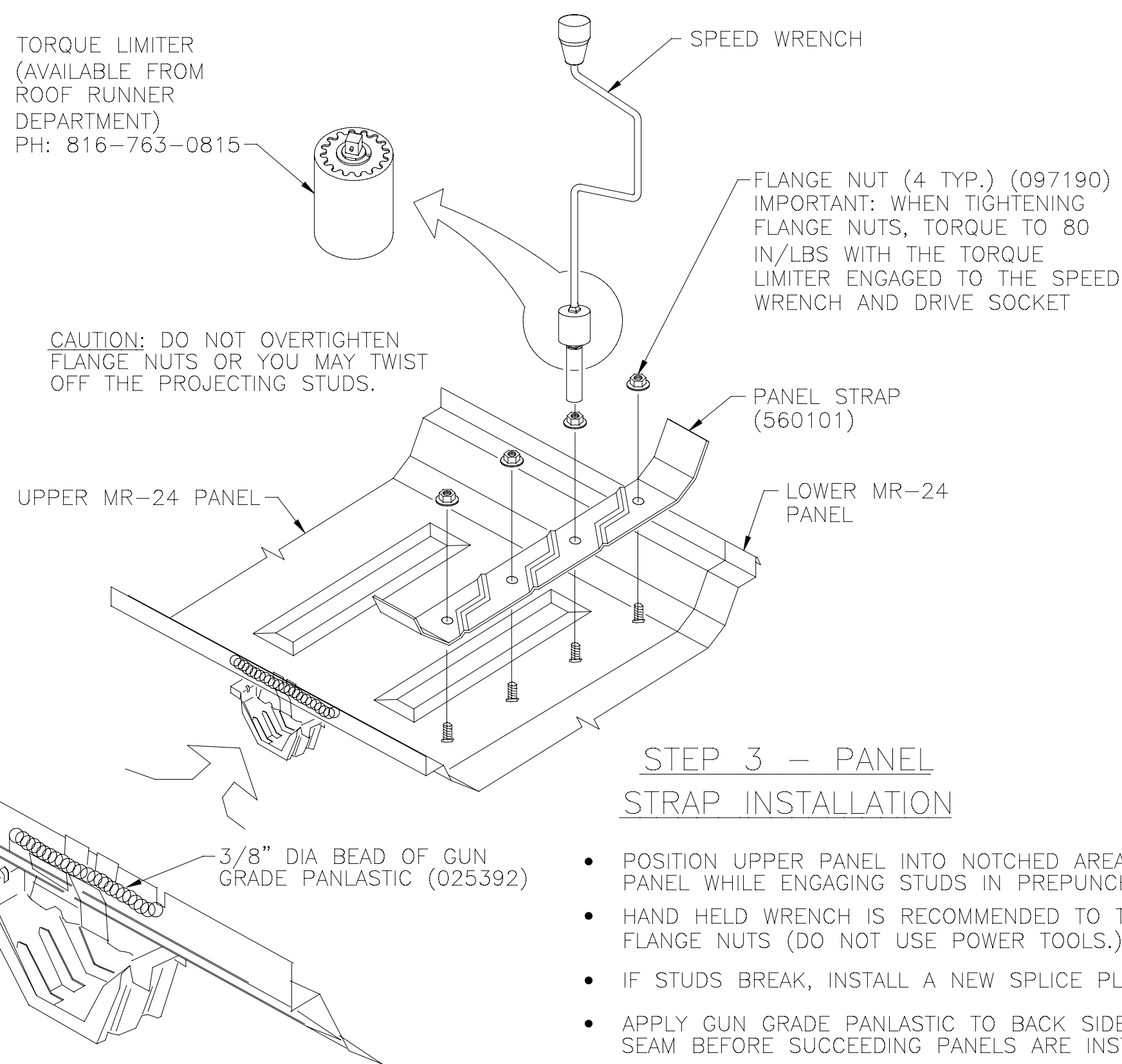
- ATTACH PANEL AT EAVE TO STRUCTURAL MEMBER.
- FOR EASE OF INSTALLATION, SPLICE PLATE (560100) CAN BE TEMPORARILY ATTACHED TO PANEL WITH (2) FLANGE NUTS BEFORE POSITIONING PANEL.



STEP 2 – SEALANT APPLICATION

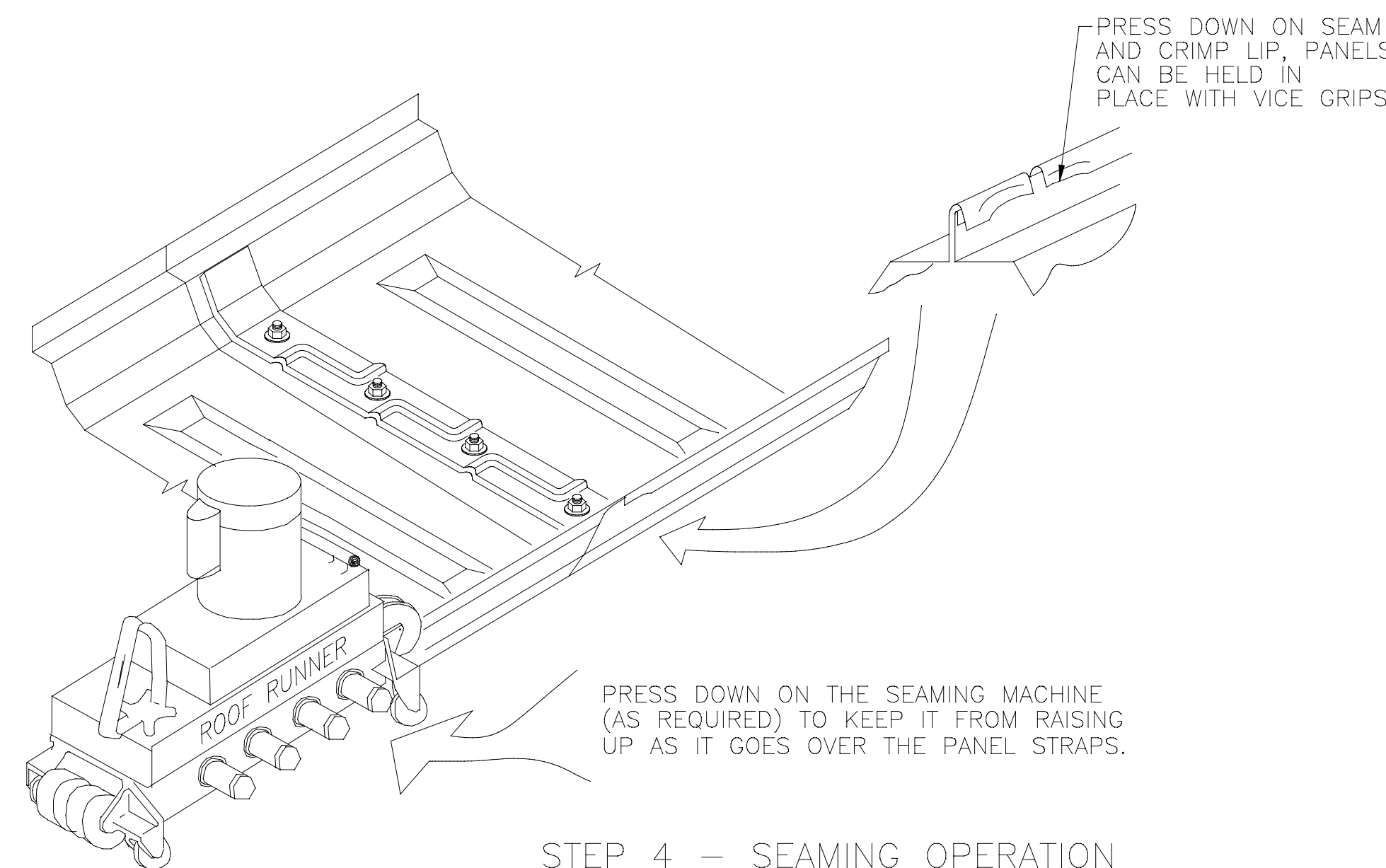


SECTION A-A



STEP 3 – PANEL STRAP INSTALLATION

- POSITION UPPER PANEL INTO NOTCHED AREA ON LOWER PANEL WHILE ENGAGING STUDS IN PREPUNCHED HOLES.
- HAND HELD WRENCH IS RECOMMENDED TO TIGHTEN FLANGE NUTS (DO NOT USE POWER TOOLS.)
- IF STUDS BREAK, INSTALL A NEW SPLICE PLATE.
- APPLY GUN GRADE PANLASTIC TO BACK SIDE OF SEAM BEFORE SUCCEEDING PANELS ARE INSTALLED.



STEP 4 – SEAMING OPERATION

- INSPECT EACH END LAP SPLICE FOR PROPER FIT AND WEATHER TIGHTNESS.
- IF REPAIR OF A STUD IS REQUIRED AFTER PANELS HAVE BEEN SEAMED, DRILL STUD OUT WITH 5/16\"/>

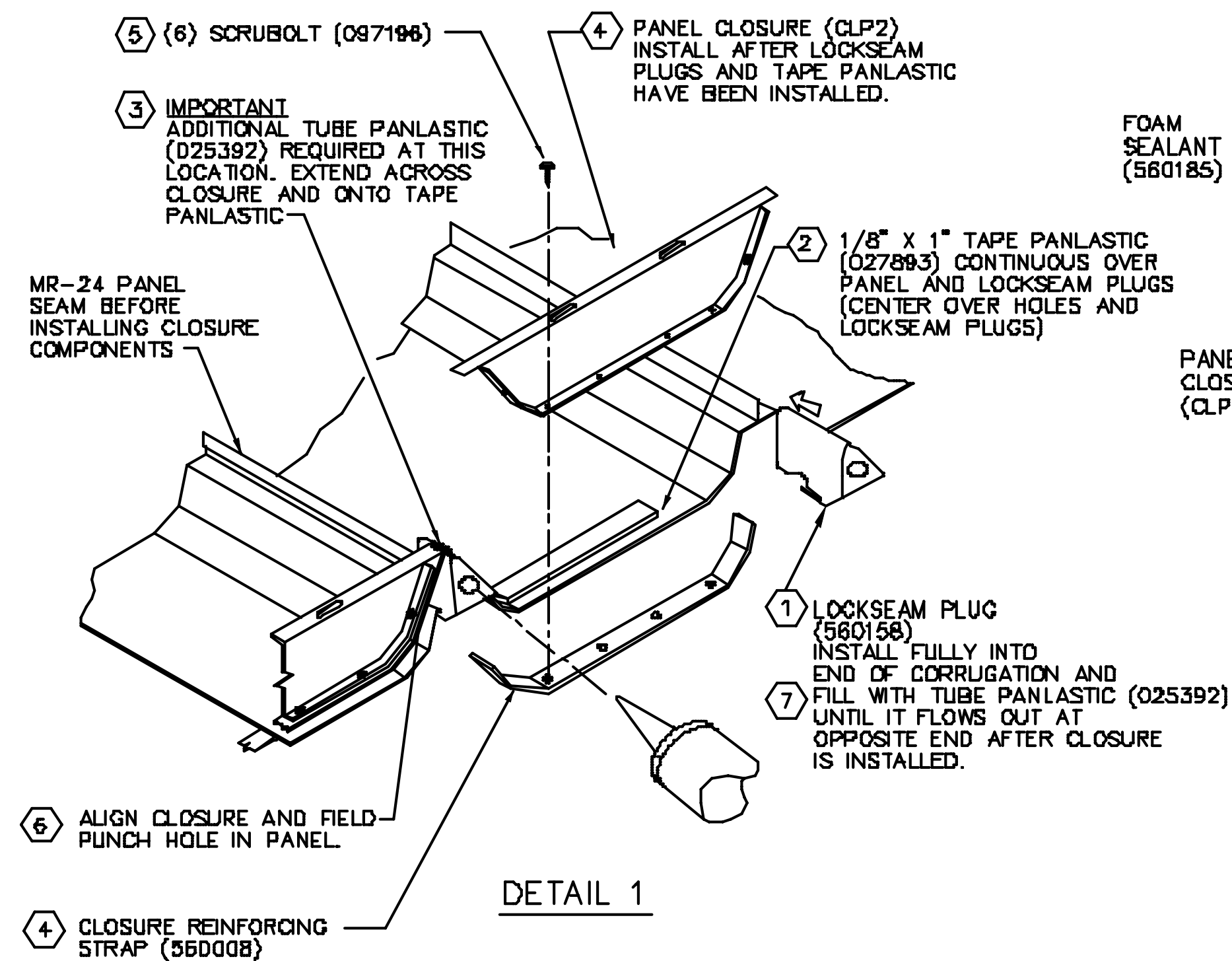
NOTE:

- SEE DRAWING P-090005 FOR 12\"/>

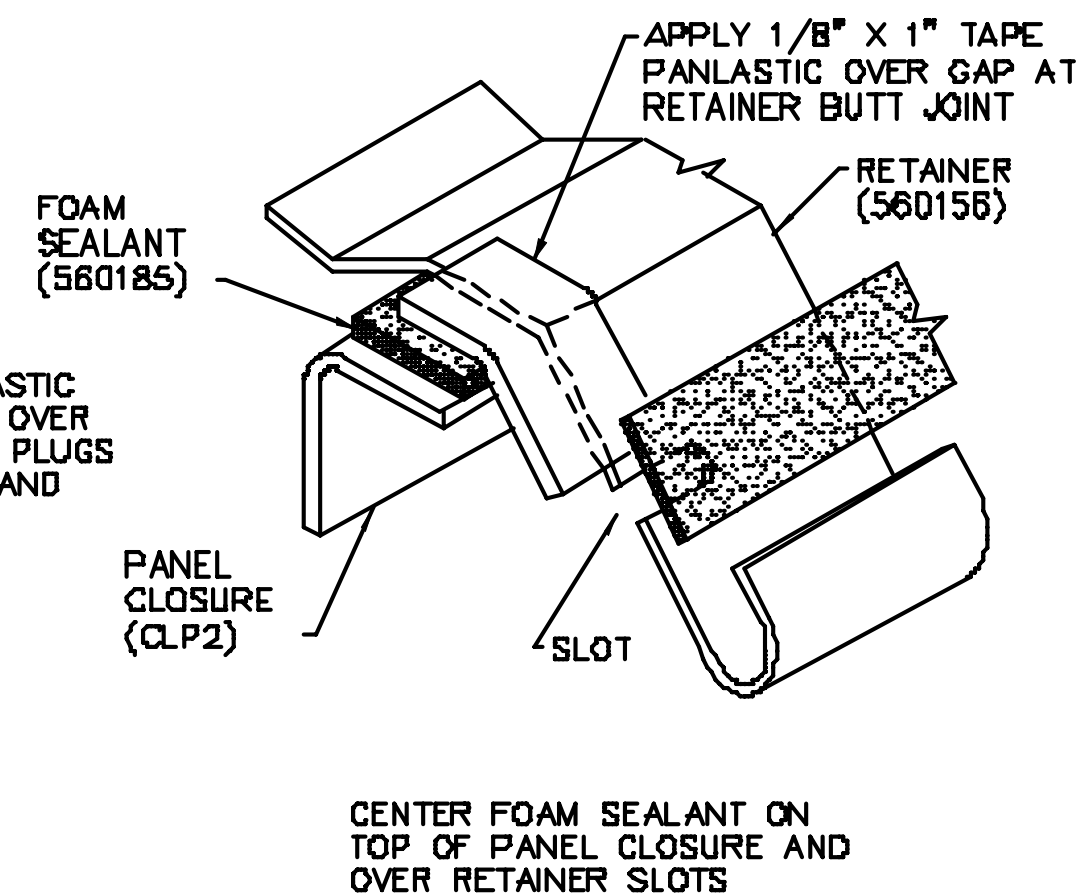
THIS DRAWING IS INCLUDED IN A PRODUCT APPROVAL PACKAGE
REVISIONS MUST BE APPROVED BY THE MANAGER OF PRODUCT EXCELLENCE



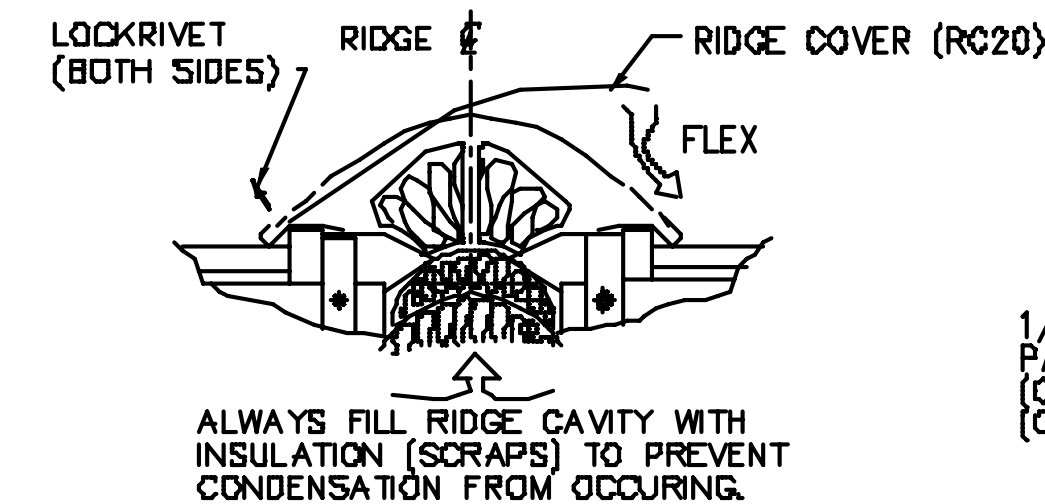
MR-24 END LAP SPLICE				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-01		
ACM	RKH			
FIRST RELEASE DATE	REVISION DATE	B	P-080577	07
01/21/10	06/16/23			



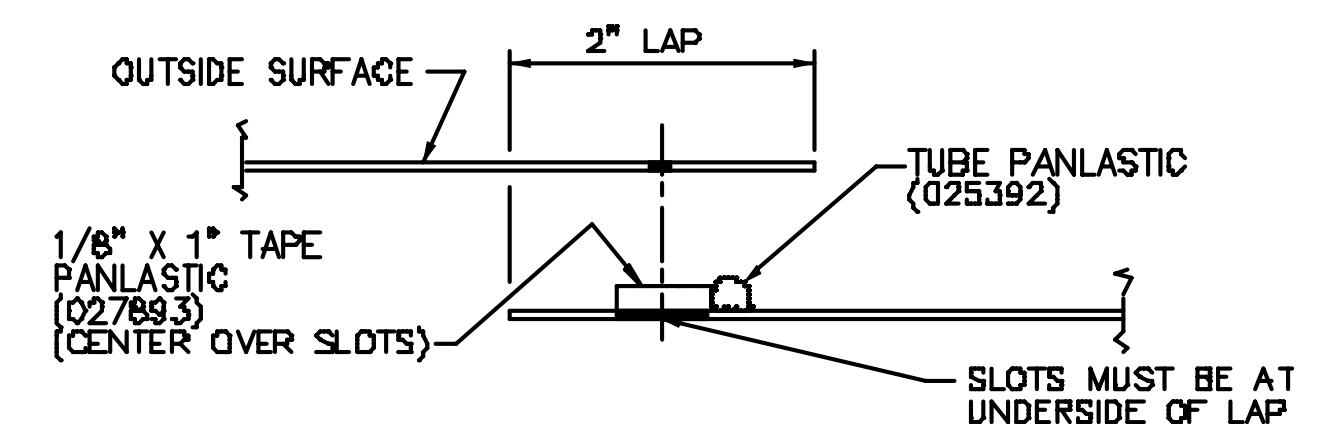
DETAIL 1



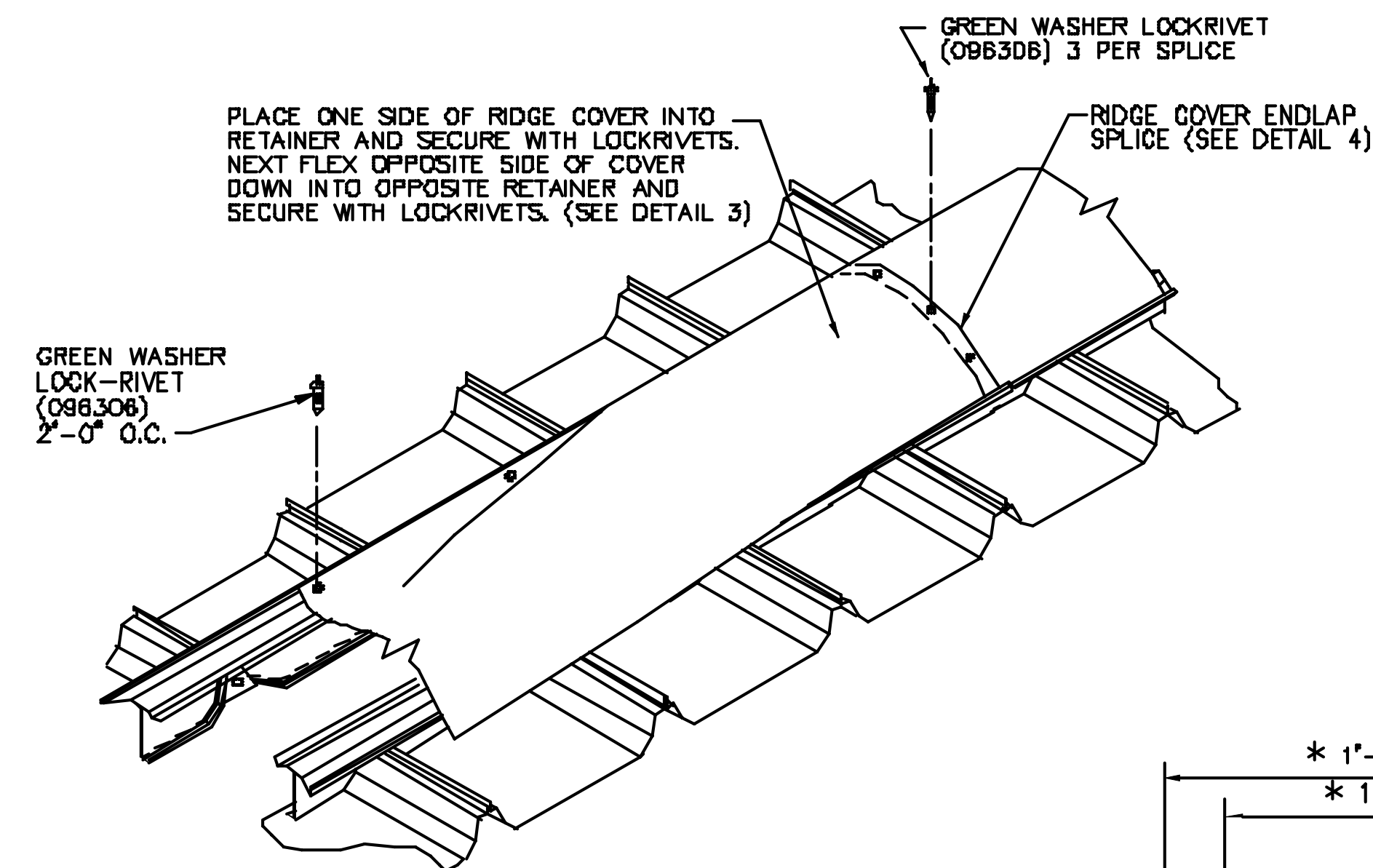
DETAIL 2



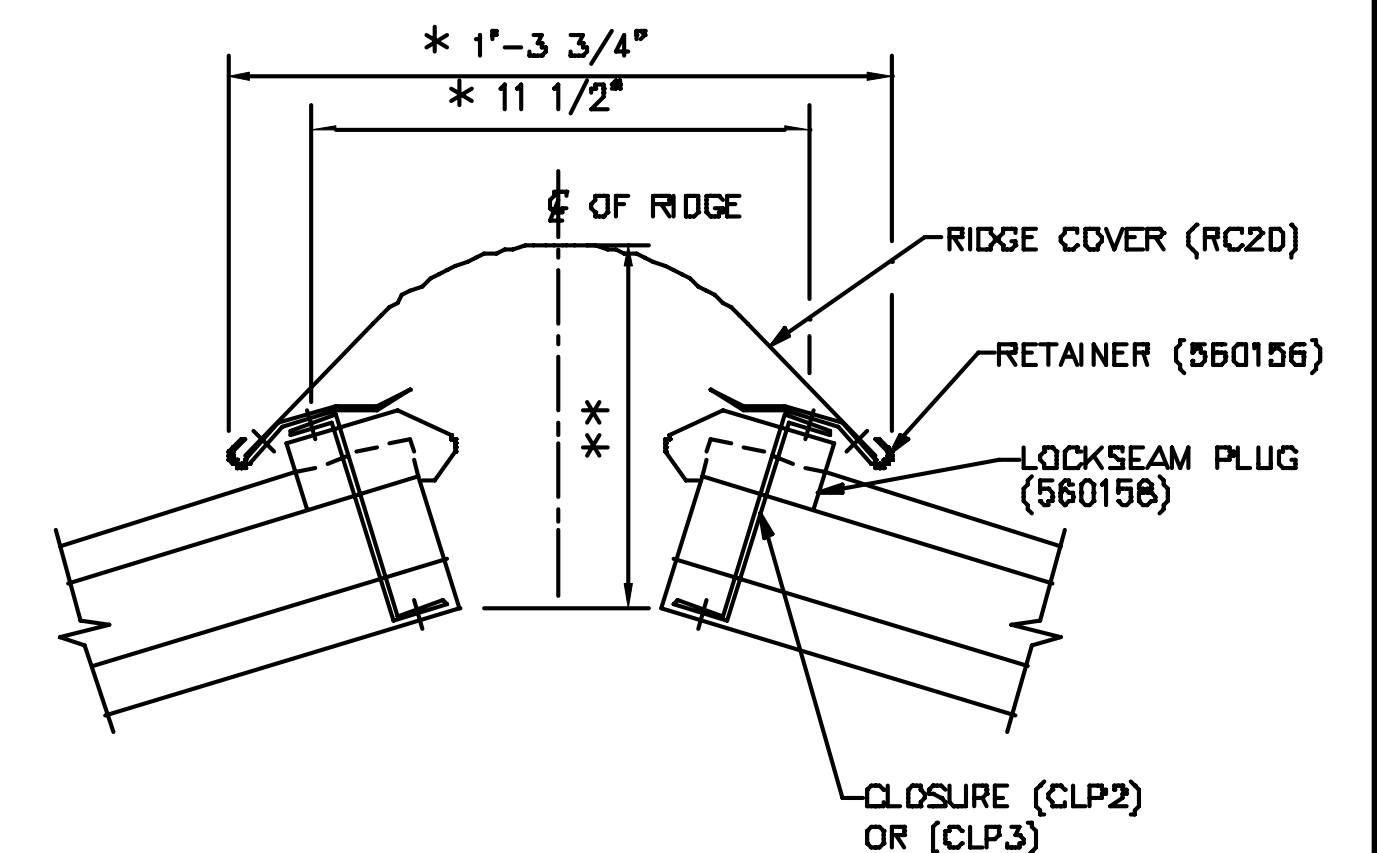
DETAIL 3



DETAIL 4

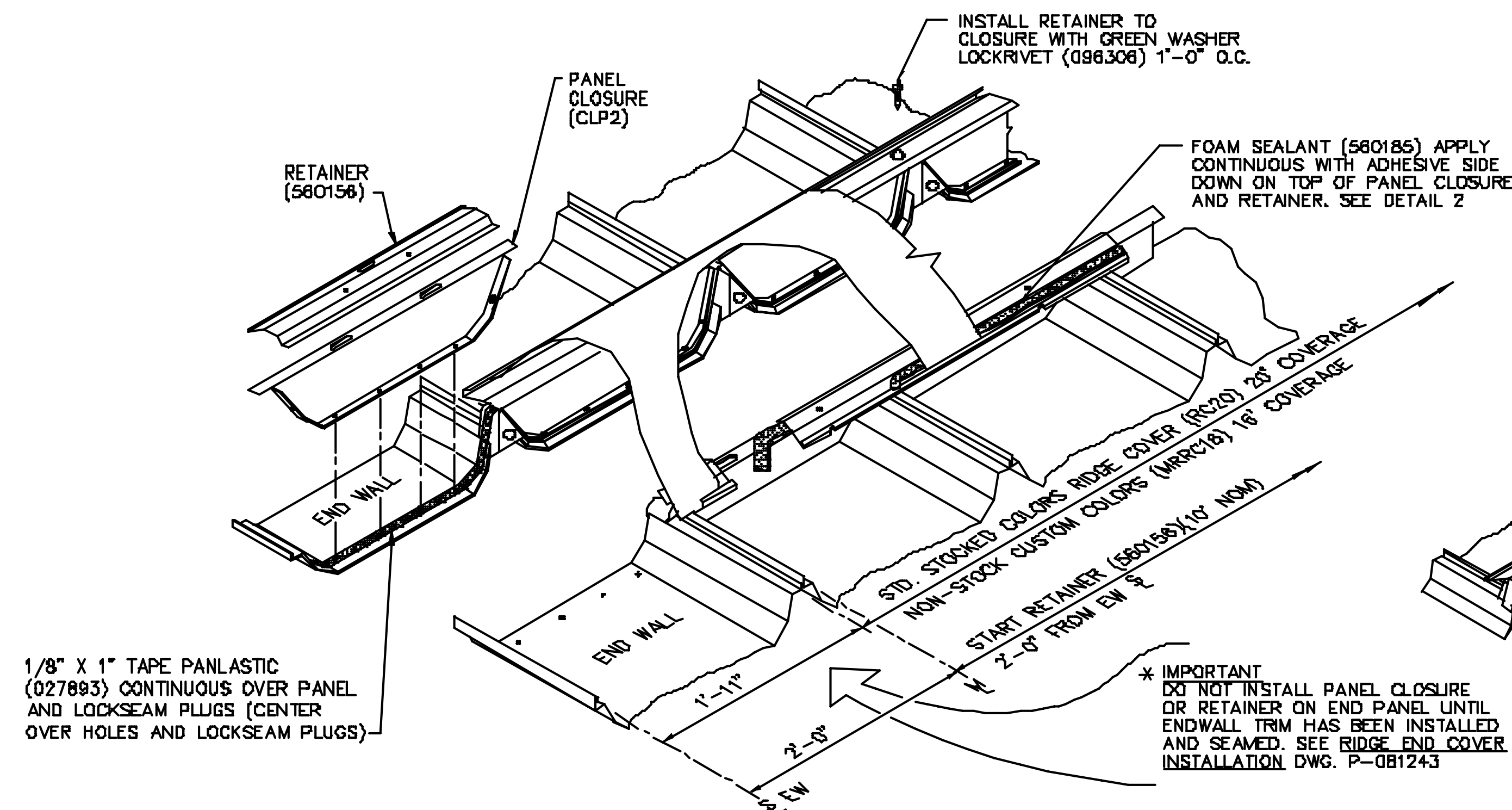


RIDGE COVER AND SPLICE INSTALLATION
WORK FROM ONE END TO THE OTHER

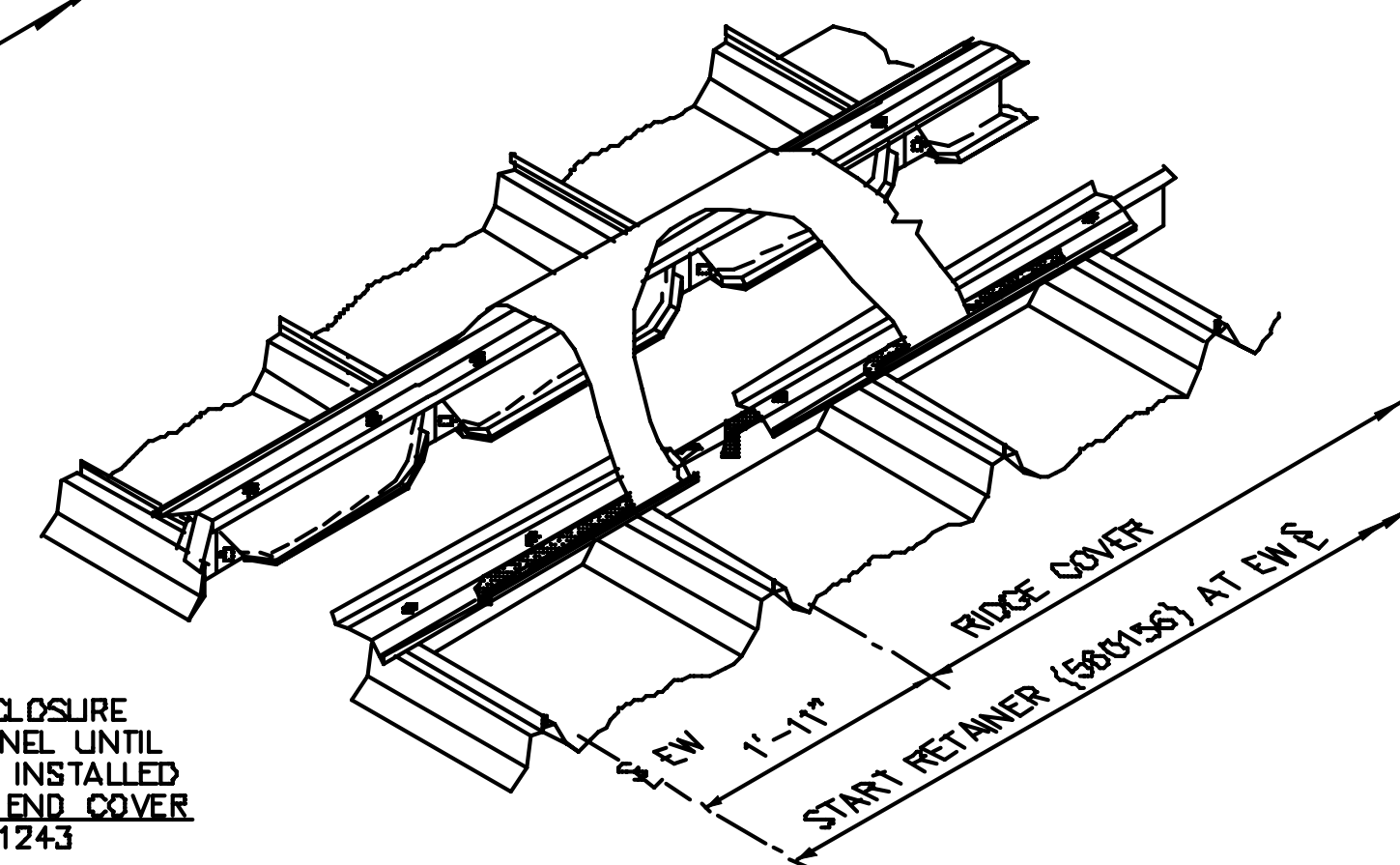


RIDGE OPENING
SECTION VIEW

* DIMENSIONS SHOWN ARE FOR FIELD VERIFICATION AND WILL VARY DUE TO TEMPERATURE.
** VARIES BETWEEN 5" AND 8 1/2"



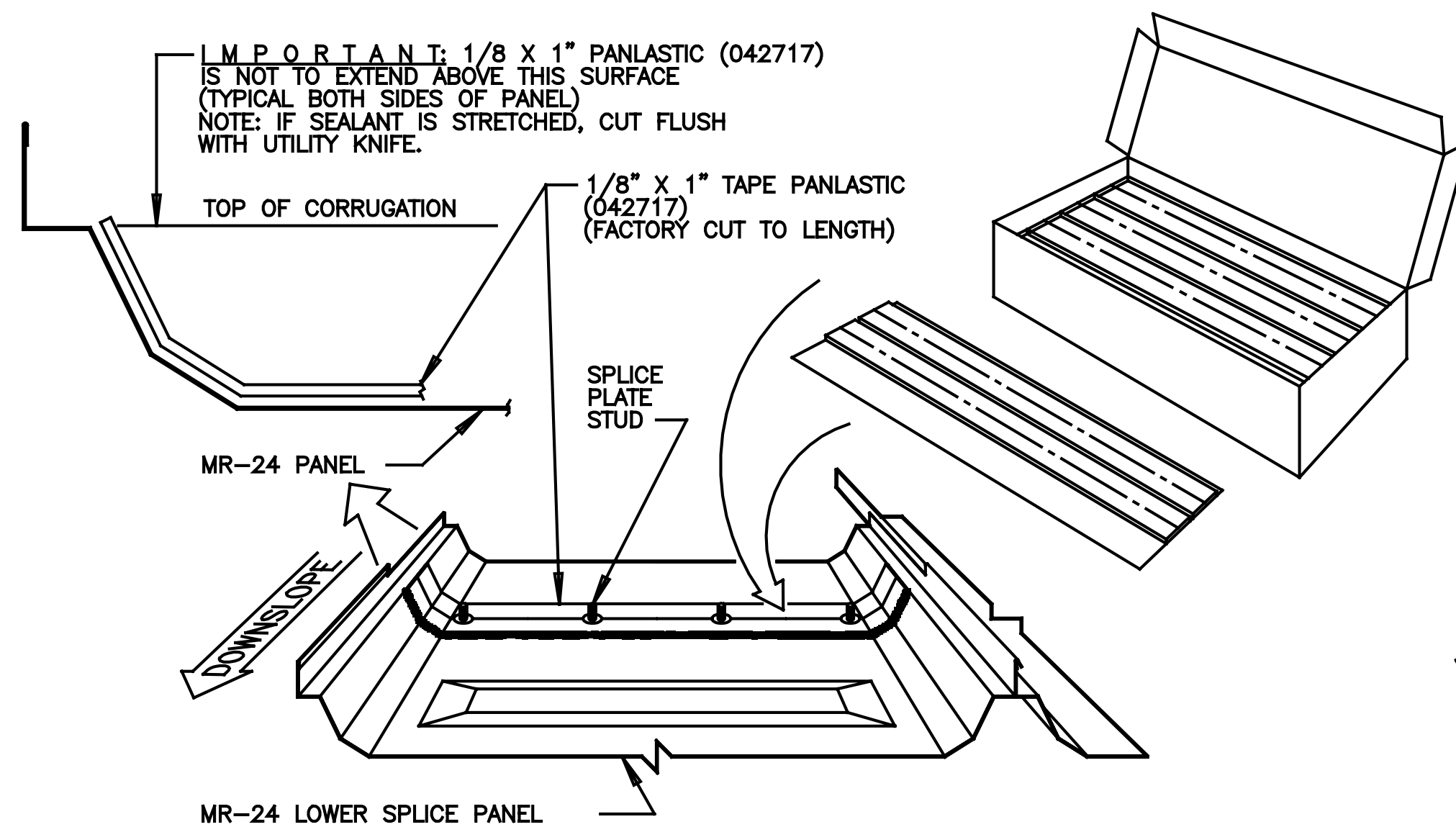
USED WHEN RIDGE IS INSTALLED BEFORE ENDWALL TRIM



USED WHEN RIDGE IS INSTALLED AFTER ENDWALL TRIM

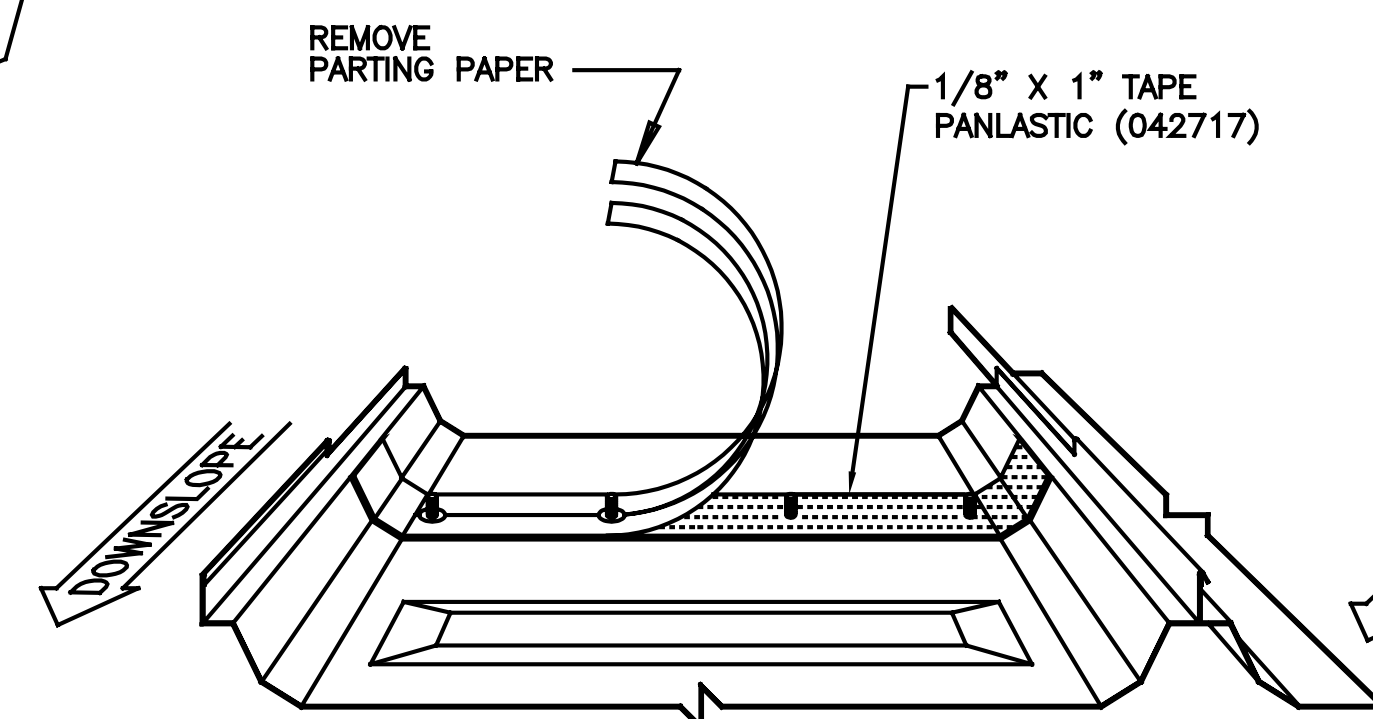
PANEL CLOSURE AND RETAINER INSTALLATION

MR-24 RIDGE INSTALLATION				
DRAWN BY:	CHECKED BY:	GROUP NUMBER: 02-032-01		
ACM	RMC			
FIRST RELEASE DATE:	REVISION DATE:	B	P-080578	04
01/21/10	03/08/16			



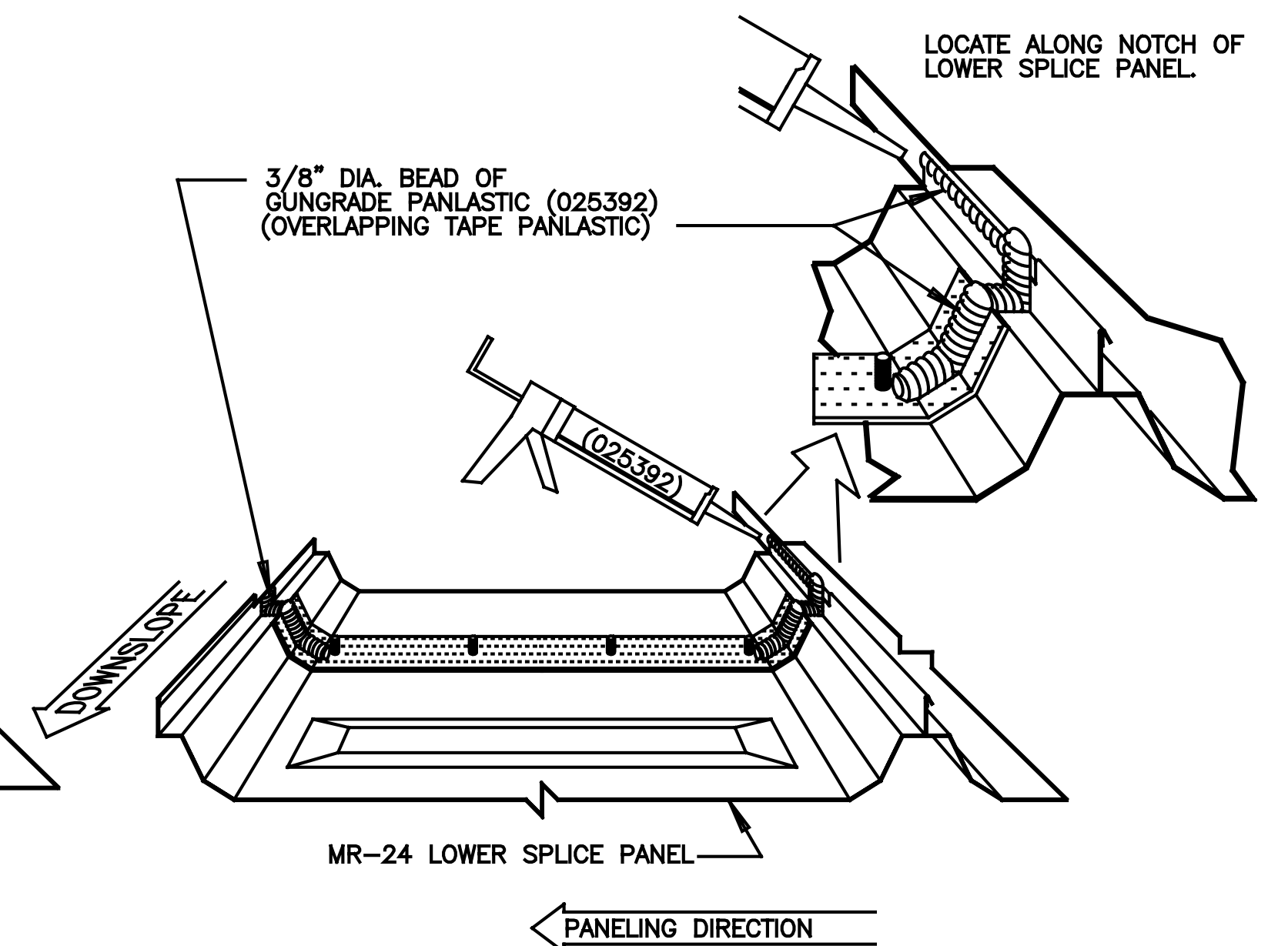
STEP 1

APPLY TAPE PANLASTIC OVER SPLICE PLATE STUDS, CENTERING TAPE DIRECTLY OVER THE STUDS. D O N O T REMOVE PARTING PAPER UNTIL TAPE IS IN PLACE ON THE PANEL (IF PAPER IS REMOVED PRIOR TO TAPE INSTALLATION, TAPE WILL STRETCH TO IMPROPER LENGTH). IMPALE THE TAPE PANLASTIC ON TO THE STUDS AND WORK THE PANLASTIC INTO THE CORNERS AND AROUND THE STUDS. I M P O R T A N T: START AND STOP TAPE PANLASTIC AT TOP OF CORRUGATION.



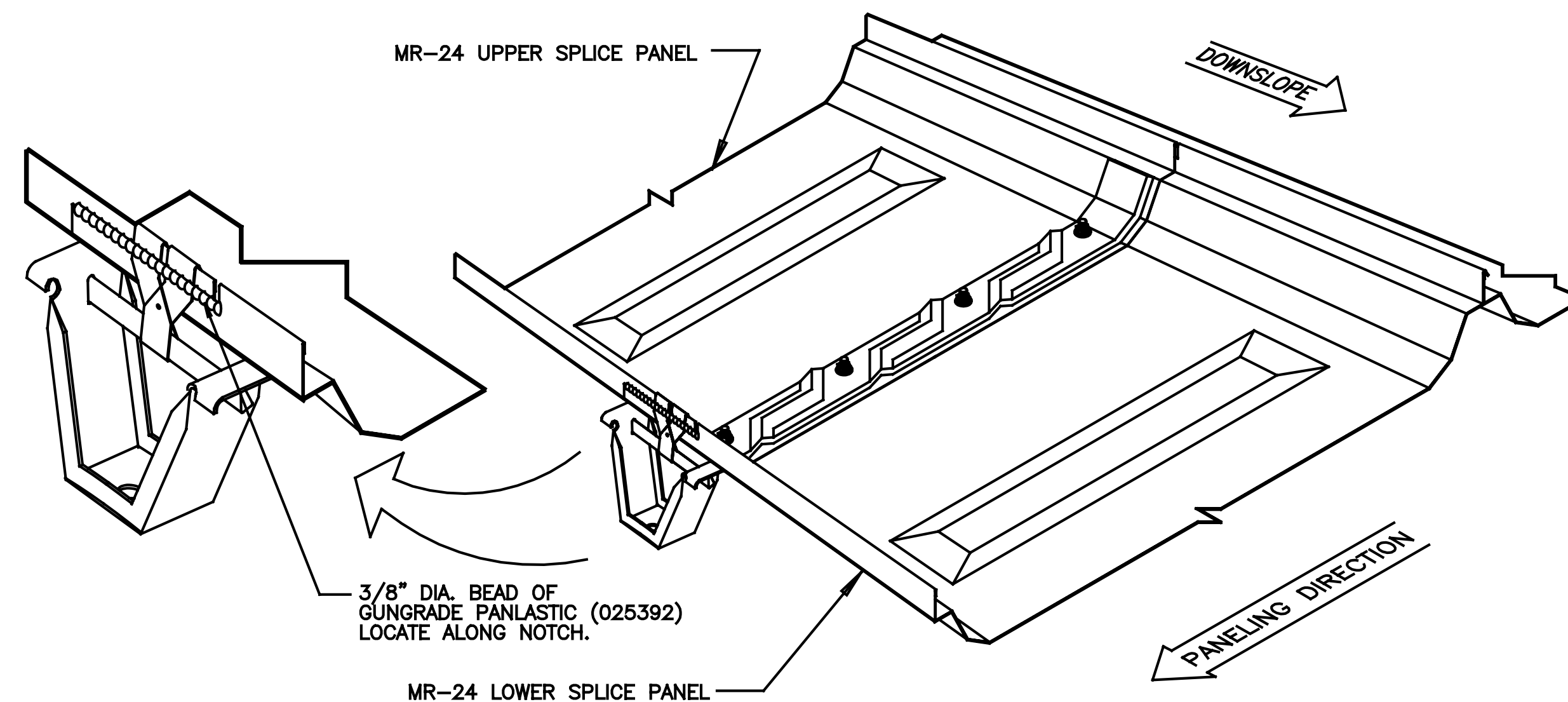
STEP 2

AFTER TAPE PANLASTIC IS PROPERLY IN PLACE PEEL BACK PARTING PAPER (TAKING CARE NOT TO DISLODGE MASTIC) AND DISCARD.



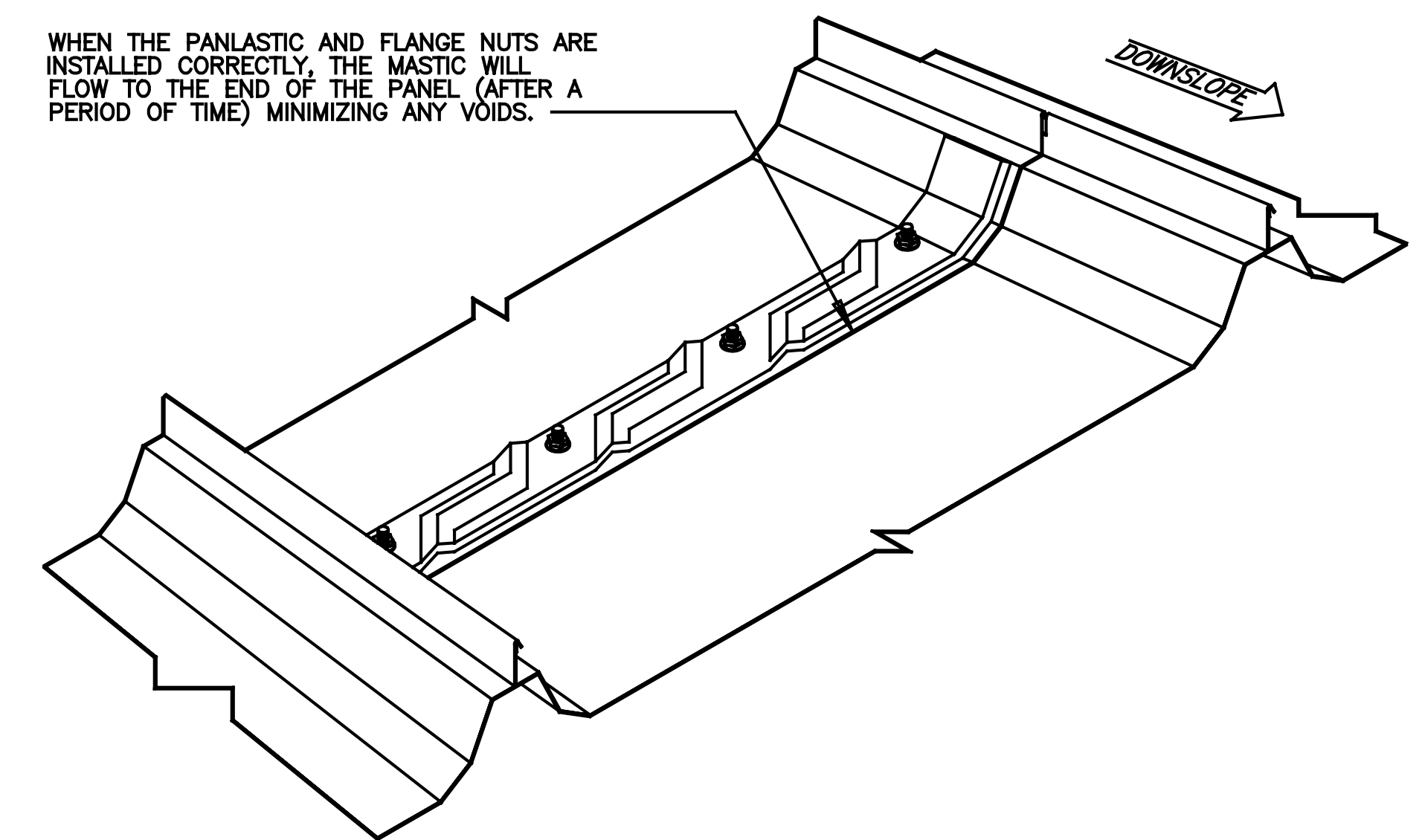
STEP 3

APPLY GUNGRADE PANLASTIC OVERLAPPING TAPE PANLASTIC, AS SHOWN. D O N O T APPLY IN CENTER FLAT OF PANEL.



STEP 4

AFTER UPPER SPLICE PANEL IS INSTALLED APPLY 3/8 inch DIA. BEAD OF GUNGRADE PANLASTIC TO THE BACK SIDE OF NOTCH AS SHOWN, BEFORE INSTALLING THE NEXT ROOF PANEL.

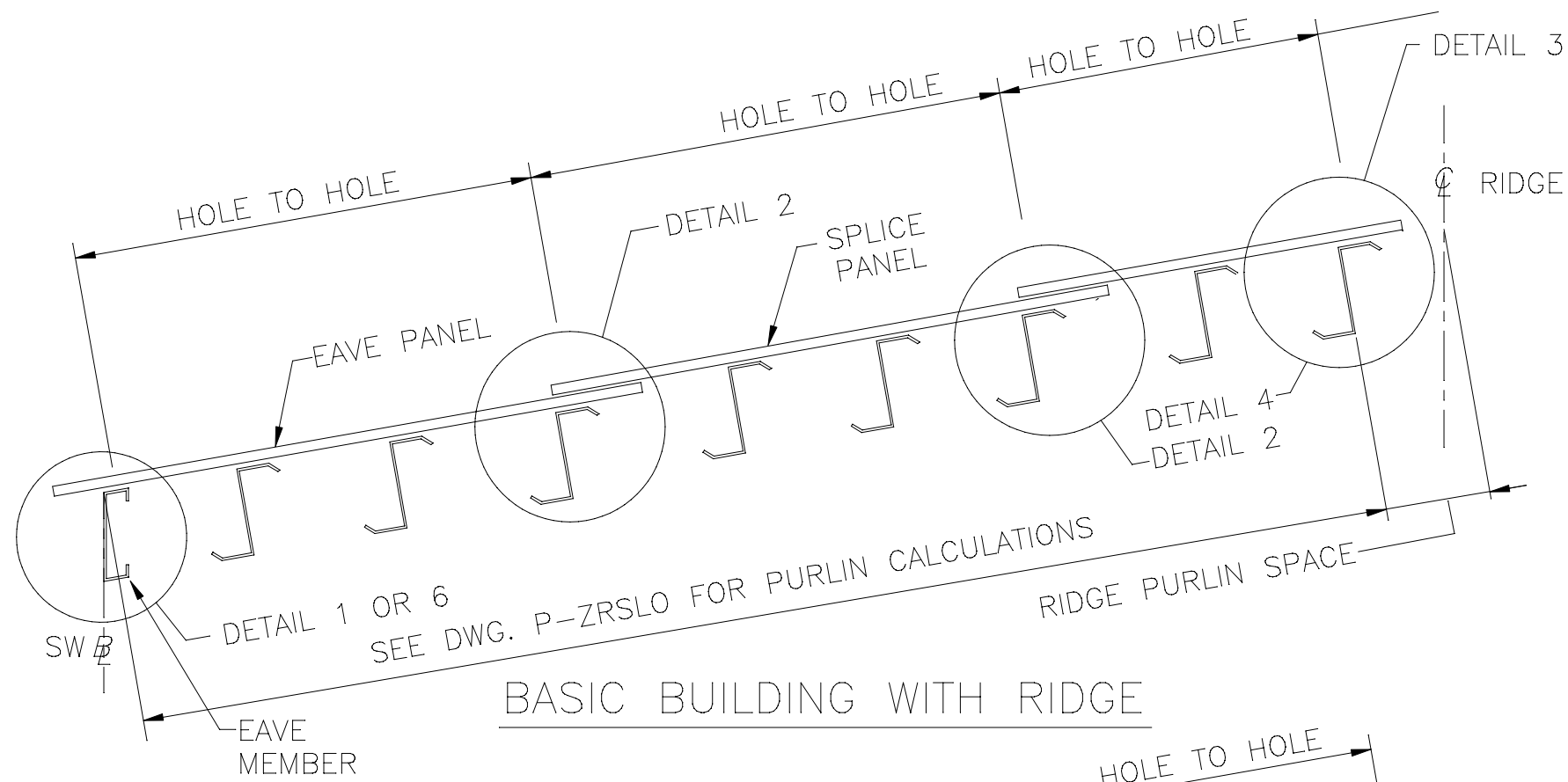


STEP 5

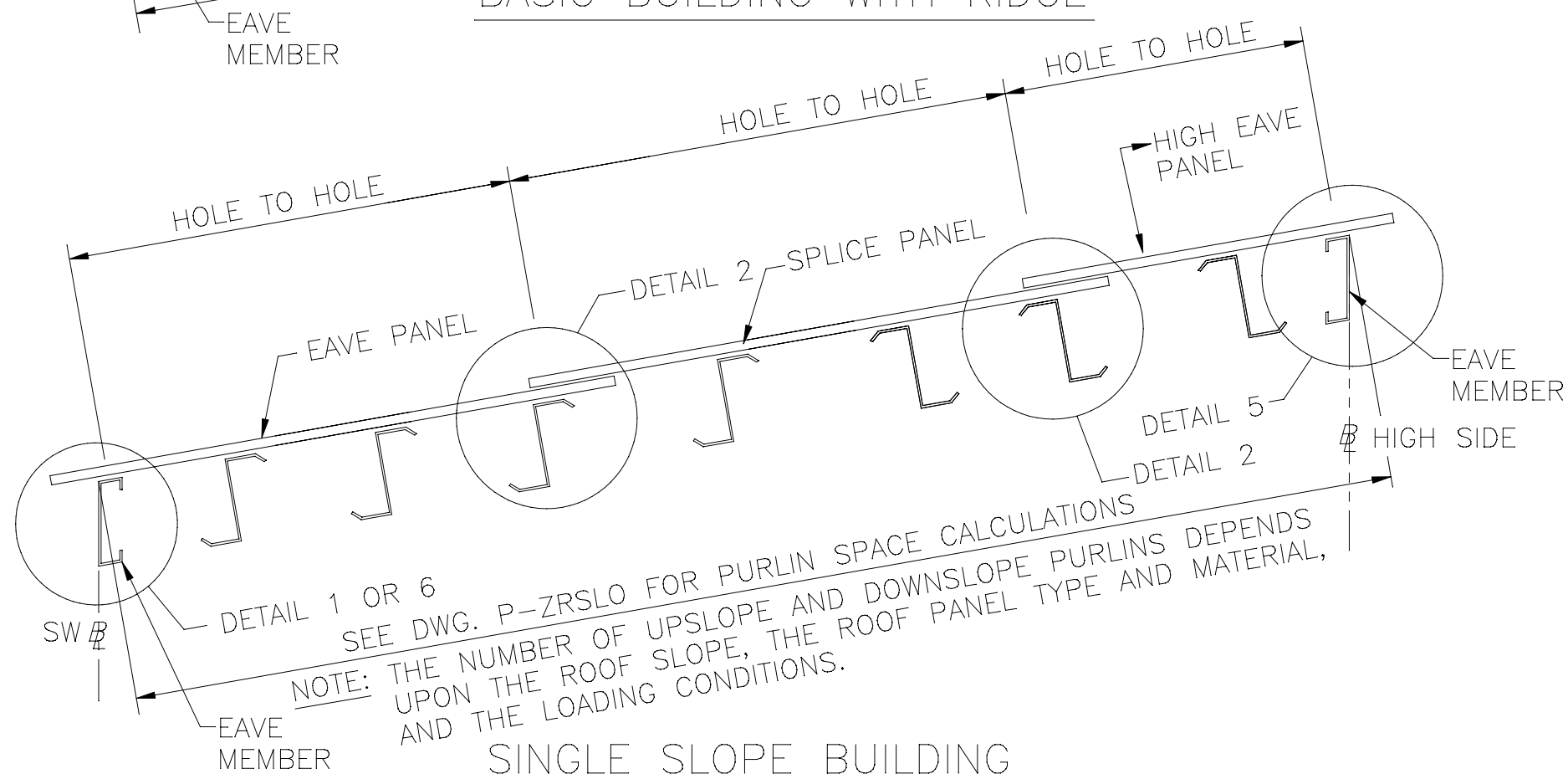
FINAL INSPECTION: MASTIC THAT IS PROPERLY INSTALLED WILL FLOW TOWARD THE PANEL END MINIMIZING ANY VOID BETWEEN THE PANELS.

MR-24/CMR-24 MASTIC APPLICATION AT PANEL SPLICE

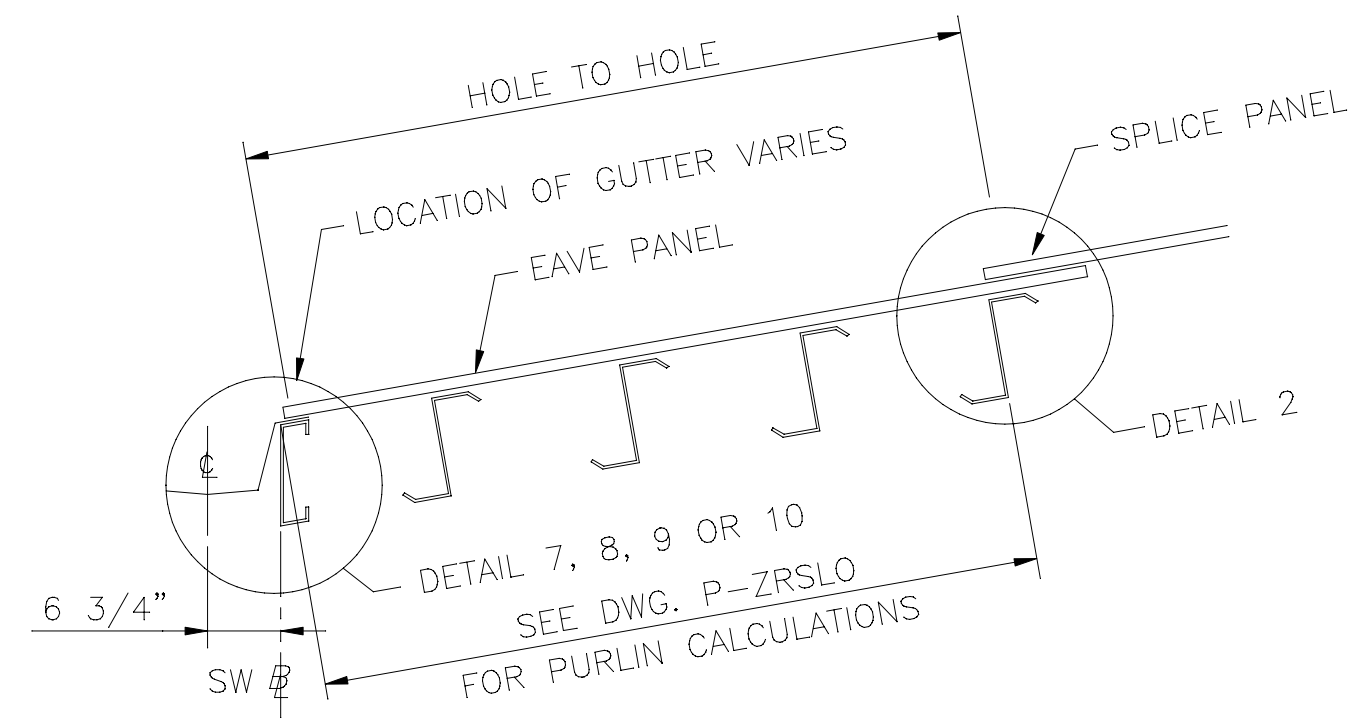
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-01	
ACM	RMC		
FIRST RELEASE DATE	REVISION DATE	B	P-080847 01
01/21/10	12/04/18		



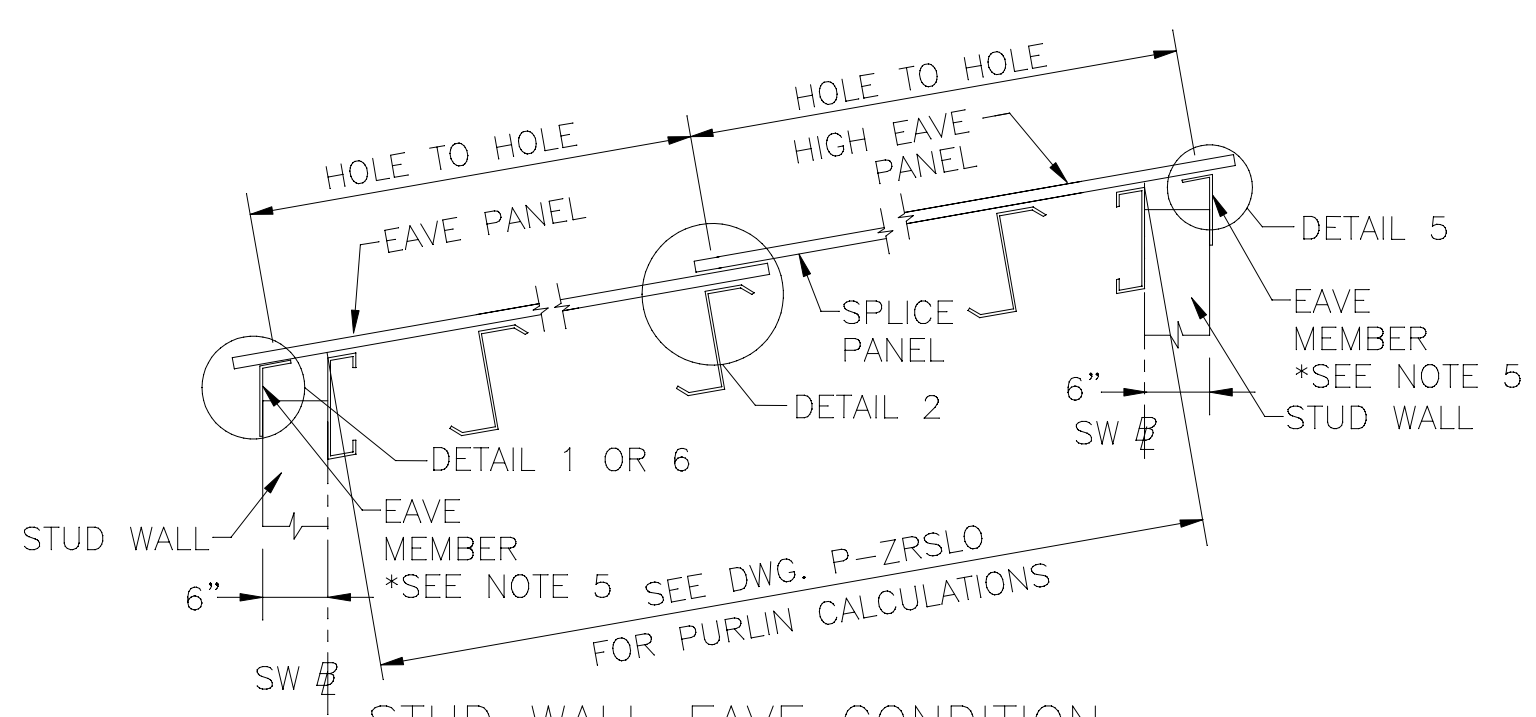
BASIC BUILDING WITH RIDGE



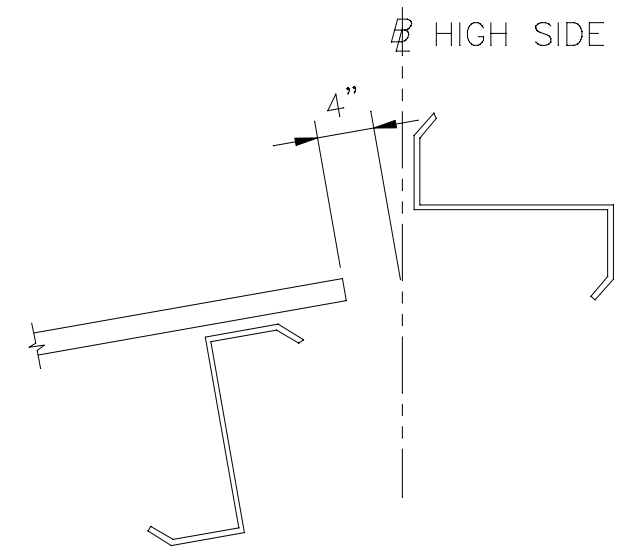
SINGLE SLOPE BUILDING



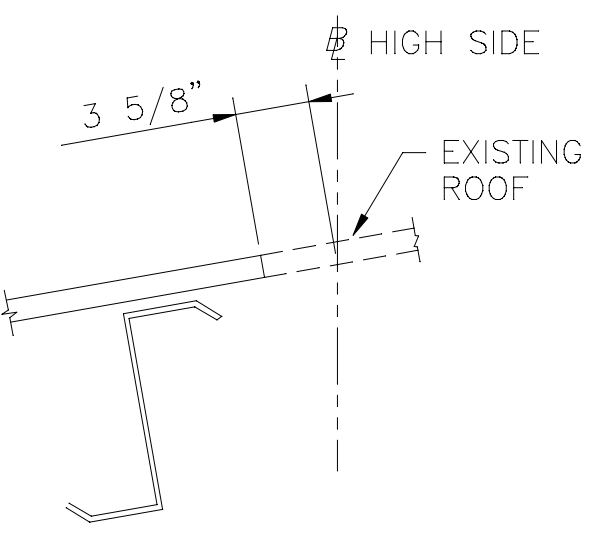
MULTIPLE GUTTER CONDITION



STUD WALL EAVE CONDITION

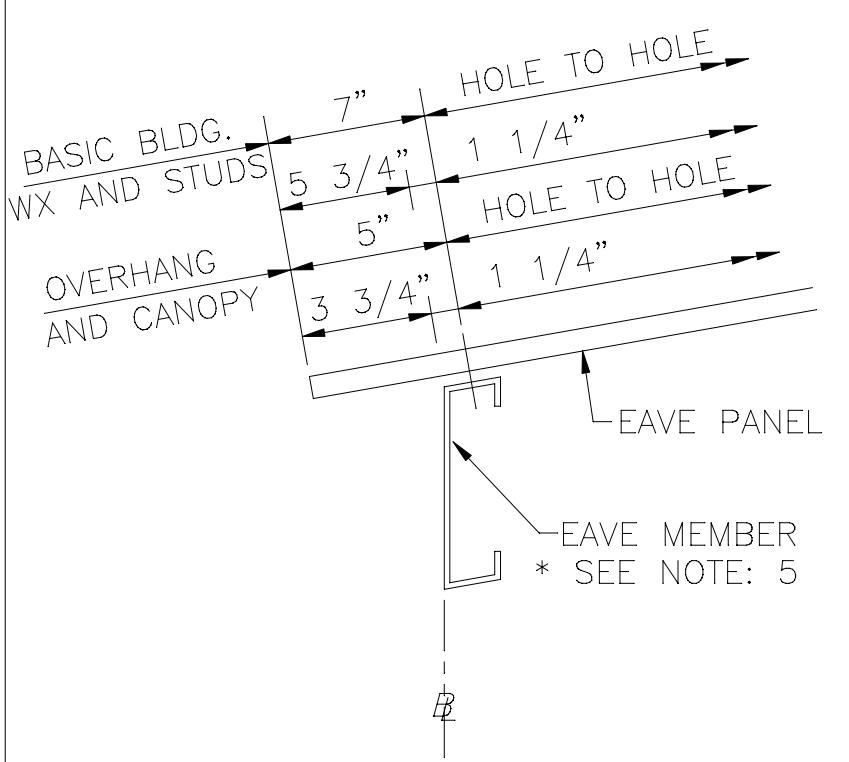


PERPENDICULAR TRANS.
AT HIGH SIDE

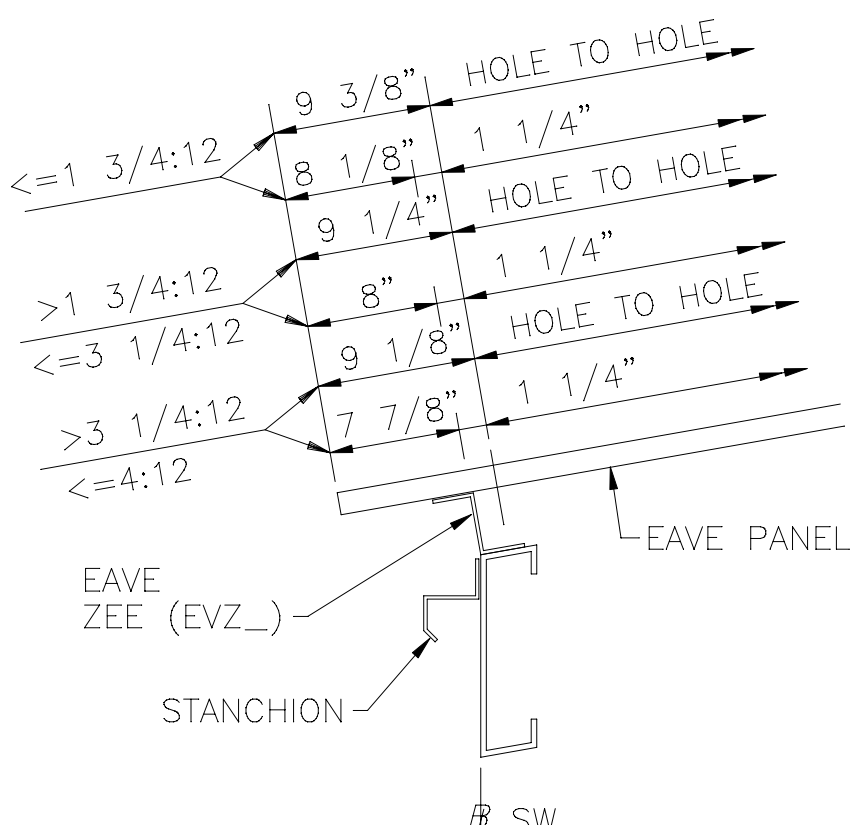


HIGH SIDE ATTACHING
TO EXISTING BLDG.
SAME SLOPE - (SEE DWG P-080188)

*FOR SLOPES $\geq 3:12$ SEE NOTE:4

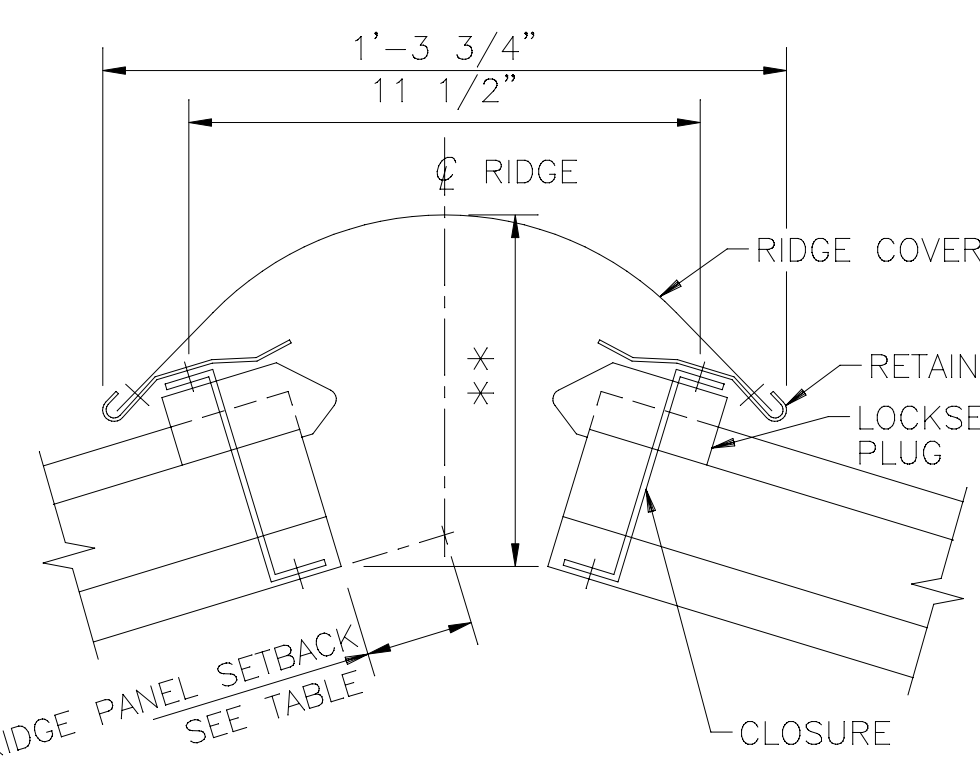


NON EX WALL SYSTEM



EX WALL SYSTEM

DETAIL 1 MR-24 LOW EAVE

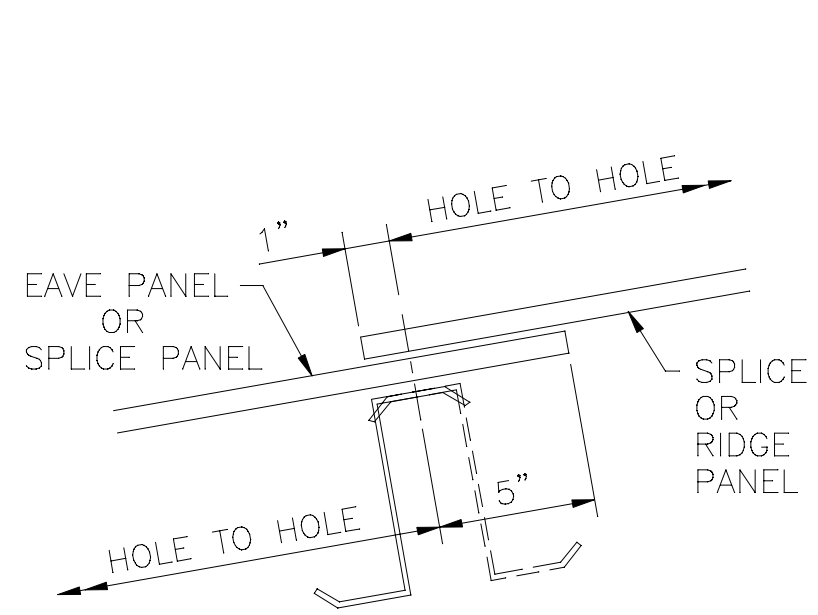


RIDGE PANEL SETBACK DIM. TABLE			
SLOPE	ROOF SURFACE WIDTH *		
	< 100'	100' < 150'	> 150'
$\leq 1/4:12$	3 7/16"	3 1/4"	3 3/16"
$> 1/4:12$ TO $\leq 1/2:12$	3 7/16"	3 1/4"	3 1/16"
$> 1/2:12$ TO $\leq 1:12$	3 3/8"	3 3/16"	3"
$> 1:12$ TO $\leq 1 1/2:12$	3 1/4"	3 1/16"	2 7/8"
$> 1 1/2:12$ TO $\leq 2:12$	3 1/16"	2 7/8"	2 11/16"
$> 2:12$ TO $\leq 2 1/2:12$	2 15/16"	2 3/4"	2 9/16"
$> 2 1/2:12$ TO $\leq 3:12$	2 3/4"	2 9/16"	2 3/8"
$> 3:12$ TO $\leq 3 1/2:12$	2 5/8"	2 7/16"	2 1/4"
$> 3 1/2:12$ TO $\leq 4:12$	2 3/8"	2 3/16"	2"
$> 4:12$	2 1/4"	2 1/16"	1 7/8"

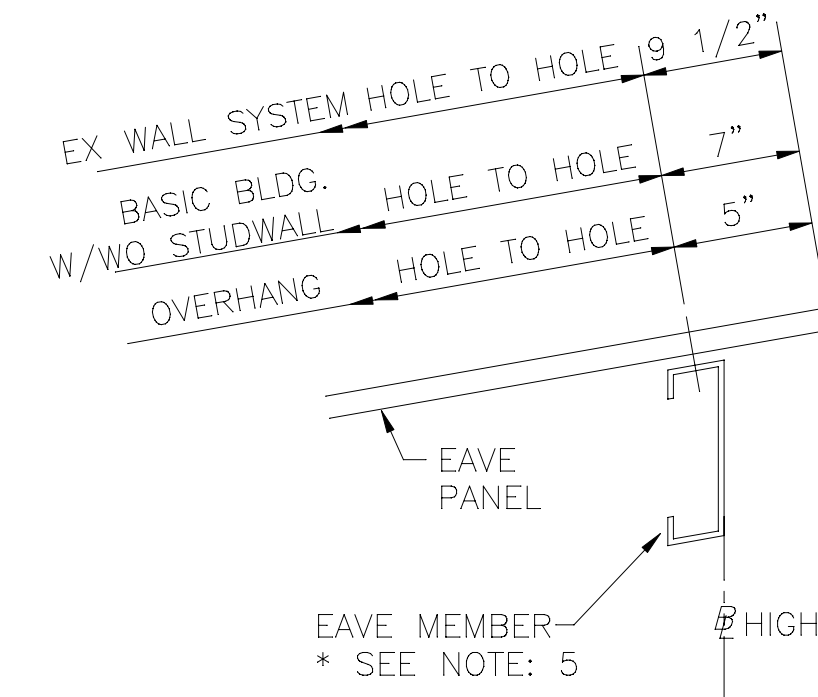
* ROOF SURFACE WIDTH IS HORIZONTAL STRUCTURAL WIDTH UNDER ONE ROOF SLOPE (INCLUDING ANY WX). THIS DIMENSION DOES NOT INCLUDE ANY CANOPY, OVERHANG OR EAVE/RIDGE ADJUSTMENT.
** VARIES BETWEEN 5" AND 8 1/2"

DETAIL 4 RIDGE OPENING

- NOTES:
1. THE HOLE TO HOLE AND $\emptyset$ TO HOLE DIMENSION SHOULD BE DETERMINED FROM THE ROOF STRUCTURAL CALCULATOR DWG. P-ZRSLO BEFORE PROCEEDING TO THIS DRAWING. ADD PANEL MATERIAL SHOWN IN APPROPRIATE DETAILS TO DIMENSIONS DETERMINED FROM P-ZRSLO TO ARRIVE AT ROOF PANEL LENGTHS.
 2. FOR MR-24 AND CMR-24 PANEL PART NUMBER SEE DWG. P-080570.
 3. FOR MR-24 AND CMR-24 LITE*PANL SEE DWG. P-081659.
 4. FOR BUILDINGS WITH ROOF SLOPES OF 3:12 AND GREATER, AND WITH SIDEWALL PANELS 4" INSULATED WALL PANEL, eSHADOWALL AND eSTYLWALL, THE EAVE PANEL MUST BE EXTENDED 1". PANEL WITH NO EAVE STRUT PUNCHING IS REQUIRED.
EAVE TO RIDGE-OPERATION CODE = 11 EAVE TO SPLICE-OPERATION CODE = RH-10/LH-20.
 5. EAVE MEMBER SHAPE VARIES PANEL OVERHANG REMAINS SAME.

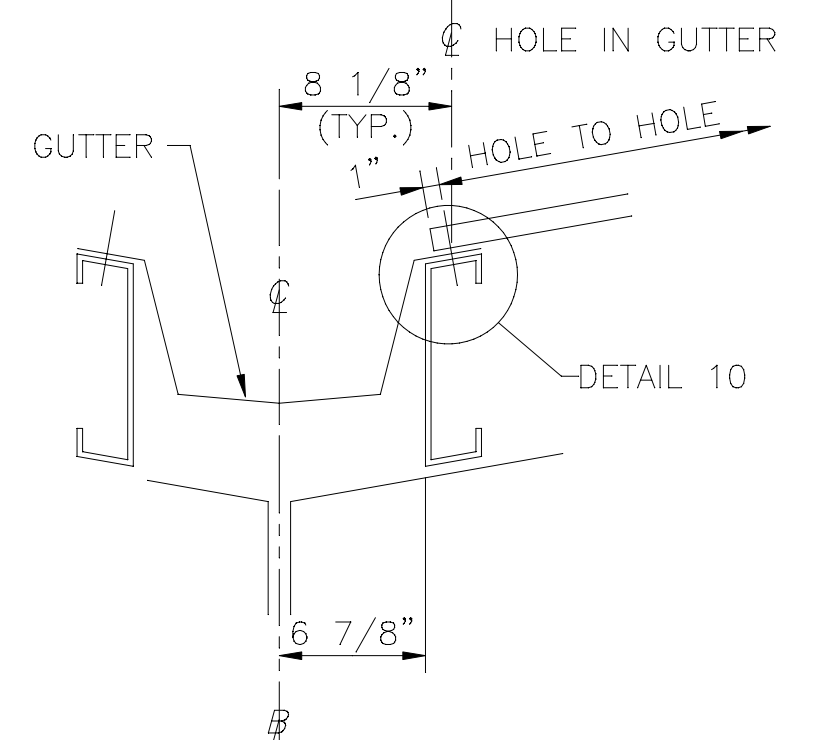


DETAIL 2 INTERMEDIATE SPLICE

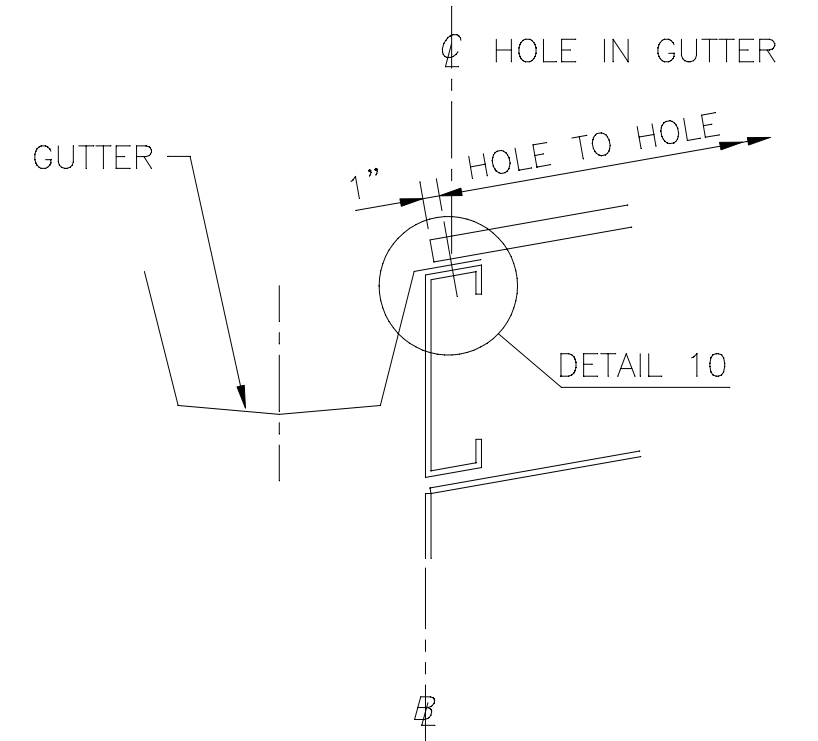


* SEE NOTE: 3

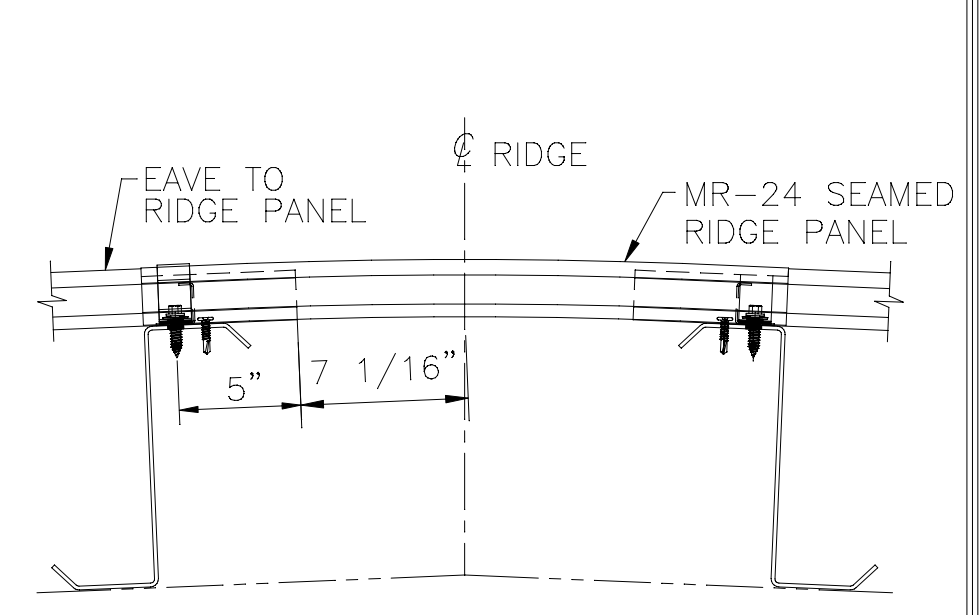
DETAIL 5 HIGH SIDE EAVE



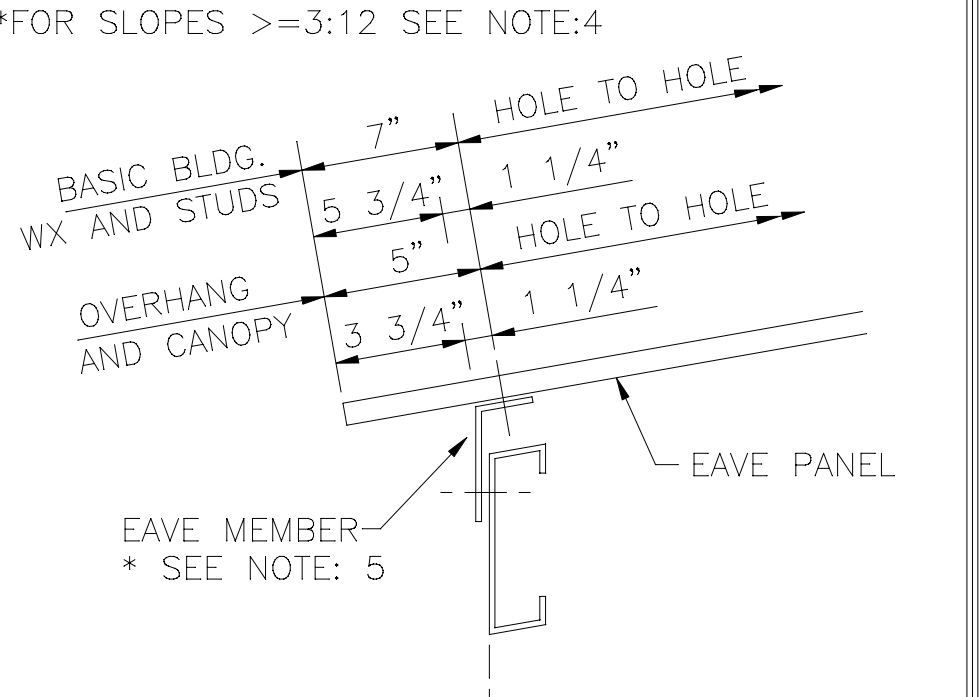
DETAIL 7 $\emptyset$ OF GUTTER IS COMMON WITH $\emptyset$ OF MULTIPLE BLDGS.



DETAIL 9 FLUSH-GUTTER OUTSIDE $\emptyset$

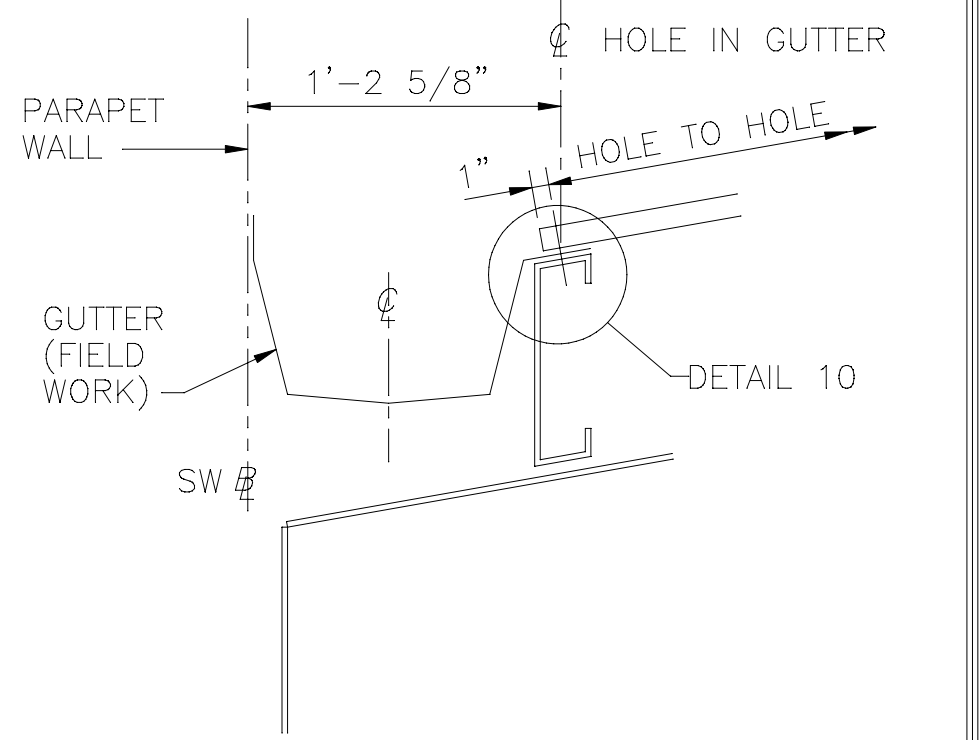


DETAIL 3 MR-24 SEAMED RIDGE ROOF SYSTEM

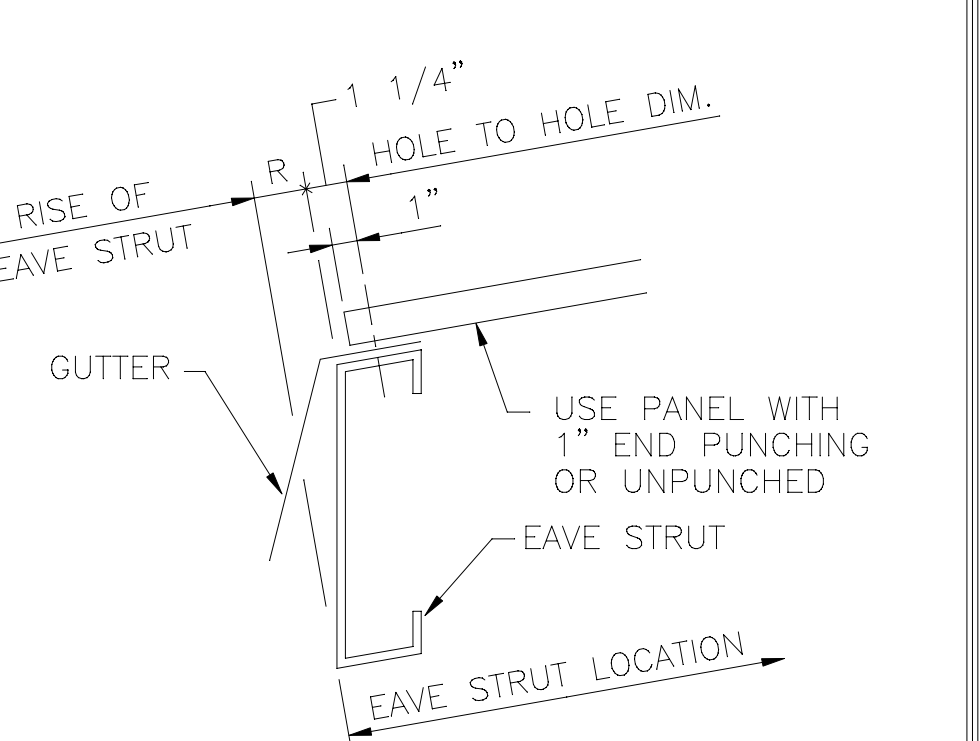


*FOR SLOPES $\geq 3:12$ SEE NOTE:4

DETAIL 6 CMR-24 LOW EAVE



DETAIL 8 RECESSED GUTTER PARAPET CONDITION



DETAIL 10 TYPICAL PANEL ATTACHMENT AT MULTIPLE GUTTER

MR-24 AND CMR-24 ROOF PANEL CALC FOR Z PURLINS			
DRAWN BY	CHECKED BY	GROUP NUMBER: 02 030 02	
JPV	BJF		
FIRST RELEASE DATE	REVISION DATE		
01/21/10	09/17/24		

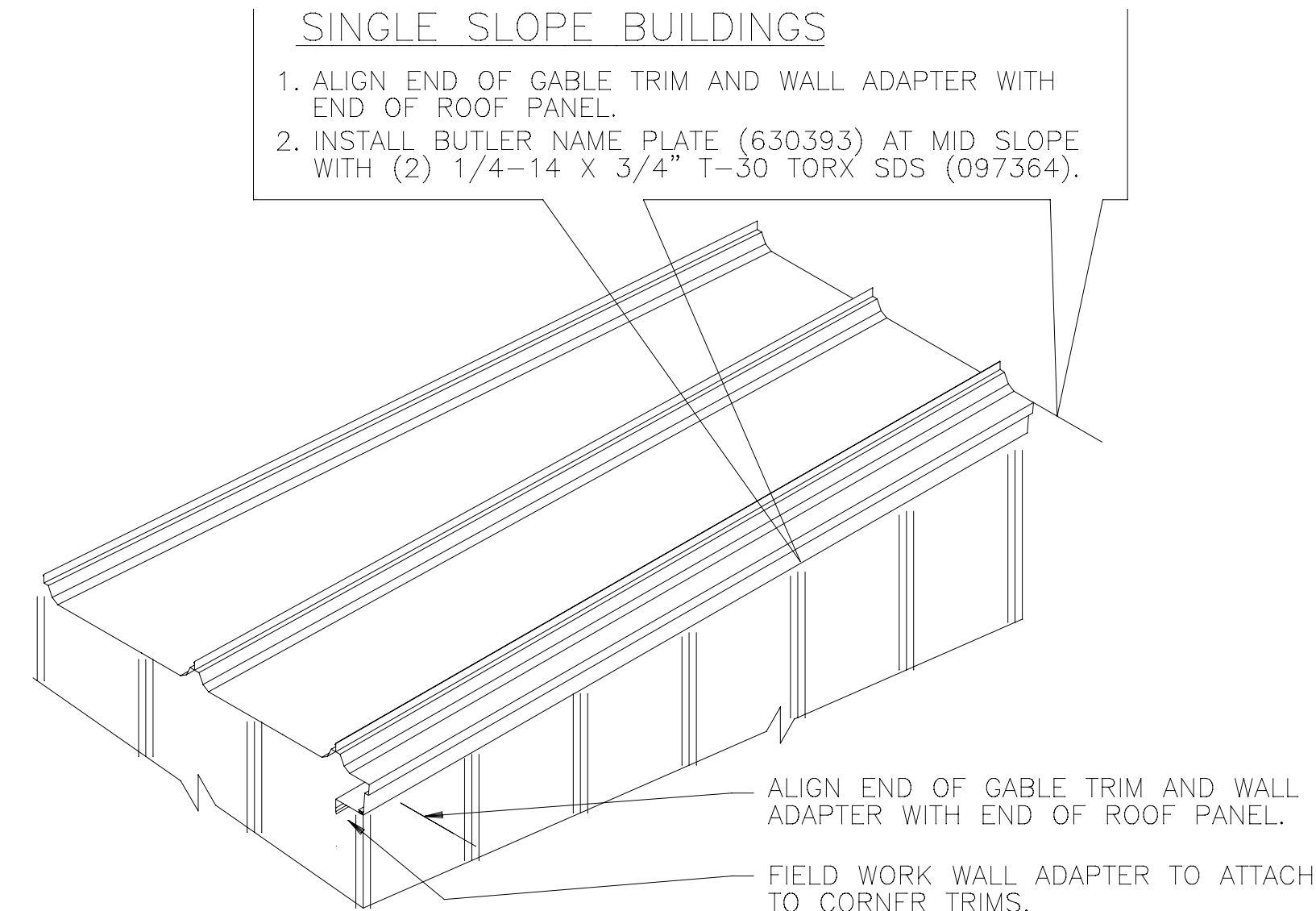
B P-080949 08

CATEGORY	DRAWING TITLE	DWG. NO.	CATEGORY	DRAWING TITLE	DWG. NO.	CATEGORY	DRAWING TITLE	DWG. NO.	CATEGORY	DRAWING TITLE	DWG. NO.
ROOF PANELING	MR-24 ROOF SYSTEM ERECTION MANUAL	P-004787	TRIM	WIDE GUTTER, ASSBLY. AND COMP'NTS.	P-080082	TRANSI- TIONS	WALL PNL. CALC. (ROOF TO WALL TRANS.)	P-080818	ROOF ACCESS- ORIES	THERMAL SPACER BLOCK INSTALLATION	P-080574
	MR-24 WIDTH ADDITION TO EXISTING BLDG. MAXIMUM 50 FT. SAME SLOPE	P-080188		WIDE GUTTER INSTALLATION WITHOUT WEATHERSEAL	P-080088		FLEXIBLE SEAL INSTALLATION STEPPED ROOF OR ROOF TO WALL TRANS.)	P-081525		SKY-WEB PRODUCT DETAILS	P-080940
	MR-24 ROOF PANEL IDENTIFICATION	P-080570		WIDE GUTTER WITH WEATHERSEAL	P-080089		SUPPORT MEMBER INSTALL (STEPPED ROOF)	P-081528		SKY-WEB INSTALL ON BLDG. STRUCT.	P-080941
	MR-24 TRIM CLIP LOC. LOCKSEAM TAB AND PNL. CLIP ADAPTER	P-080572		MR/CMR-24 WEATHERSEAL FOR LOCAL TRIM	P-080377		STEPPED ROOF FLASH'G INSTALLATION	P-081528		SKY-WEB ATTACHMENT DETAILS	P-080942
	MR-24 PANEL INSTALLATION	P-080575		MR/CMR-24 HIGH EAVE PNL. CLOSURE FOR LOCAL TRIM	P-080378		END COVER INSTALLATION PERP. ROOF TRANSITION	P-081530		SKY-WEB ASSEMBLY DAMAGE	P-080950
	MR-24 PANEL CLIP INSTALLATION	P-080576		MR/CMR-24 RIDGE TRANSITION AND EXTENSION	P-080583		PARALLEL TRANS SUPT ANGLE INSTALL (CMR-24 AND UN-INSUL. PURLIN W/ MR-24)	P-081531		IFCUIRB INSTALLATION PROCEDURES PANEL PREPARATION	P-081153
	MR-24 END LAP SPLICE	P-080577		MR/CMR-24 DRIP ANGLE INSTALL.	P-080720		SHORT PARALLEL TRANSITION PANEL INSTALLATION	P-081532		IFCUIRB INSTALLATION PROCEDURES DIVERTER PLATE AND CURB	P-081154
	MR-24 RIDGE INSTALLATION	P-080578		MR/CMR-24 WEATHERSEAL FOR LOCAL TRIM	P-080802		PARALLEL TRANS. SUPT ANGLE INSTALL (INSULATED PURLIN)	P-081534		IFCUIRB INSTALLATION ELEVATED FRAME AT CARRY BEAMS	P-081854
	MR/CMR-24 HAND SEAMER INSTRUCTIONS	P-080600		CABLE TRIM AND WALL ADAPTER INSTALLATION (WITH RIDGE ASSEMBLY)	P-081167		TALL PARALLEL TRANSITION PANEL INSTALLATION	P-081535		IFCUIRB INSTALLATION DOUBLE WALL - PURLIN CUTTING REQ'D	P-081855
	MR/CMR-24 VALLEY FLASH. PNL. PREP.	P-080783		INSIDE CORNER TRIM INSTALLATION- NARROW GUTTER TO CABLE TRIM	P-081235		PARA / PERP TRANS. (SHORT AND TALL) COUNTER FLASHING INSTALLATION	P-081537		IFCUIRB INSTALLATION DOUBLE WALL - NO PURLIN CUTTING REQ'D	P-081856
	MR/CMR-24 VALLEY FLASH. PARTS INSTALL.	P-080784		NARROW GUTTER CORNER CAP INSTALL. INSTALLATION BUTLERB II, MR-24/CMR-24	P-081236		PARALLEL TO PERP. TRANSITION INSIDE CORNER WITHOUT CORRUGATION	P-081539		IFCUIRB INSTALLATION CARRY BEAMS - PURLIN CUTTING REQ'D	P-081857
	MR/CMR-24 VALLEY FLASH. DETAILS	P-080785		EAVE TRIM INSTALLATION	P-081239		PARALLEL TO PERP. TRANSITION INSIDE CORNER WITH CORRUGATION	P-081541		IFCUIRB INSTALLATION CARRY BEAMS - NO PURLIN CUTTING REQ'D	P-081858
	MR/CMR-24 HIP RIDGE PNL. PREP.	P-080786		WIDE GUTTER, CORNER TRIM AND COLLECTOR BOX INSTALL.	P-081240		RIDGE TO WALL SHORT TRANS. (W/O CORR.)	P-081548		LITE*PANL PLACEMENT	P-081859
	MR/CMR-24 HIP RIDGE PARTS INSTALL.	P-080787		WIDE GUTTER SEALANT AND SUPPORT CHANNEL INSTALLATION	P-081241		RIDGE TO WALL SHORT TRANS. (W/CORR.)	P-081547		UNINSULATED LITE*PANL-UNINSULATED PURLIN	P-081860
	MR/CMR-24 HIP RIDGE DETAILS	P-080788		RIDGE END COVER INSTALLATION (WITH RIDGE ASSEMBLY)	P-081243		RIDGE TO WALL TALL TRANS. (W/O CORR.)	P-081548		INSULATED LITE*PANL-UNINSULATED PURLIN	P-081861
	MR-24 HS EAVE CLIP AND PNL. CLIP REQMT.	P-080789		INSIDE CORNER TRIM INSTALLATION EAVE TRIM TO CABLE TRIM	P-081244		RIDGE TO WALL TALL TRANS. (W/CORR.)	P-081549		UNINSULATED LITE*PANL-INSULATED PURLIN	P-081862
	MR/CMR-24 MASTIC APPLICATION	P-080847		WIDE GUTTER INSIDE CORNERS	P-081246		PARALLEL TO PERP. TRANSITION INSIDE/OUTSIDE CORNER WITH CORR.	P-081552		INSULATED LITE*PANL-INSULATED PURLIN	P-081863
	MR/CMR-24 VARIABLE WIDTH PANELS	P-080876		VARIABLE WALL ADAPTER INSTALLATION	P-081259		PARALLEL TO PERP. TRANSITION INSIDE/OUTSIDE CORNER WITHOUT CORR.	P-081553		UL 90 UNINSULATED LITE*PANL FOR UNINSULATED PURLINS	P-081864
	MR/CMR-24 CORR. END DEFLECTOR	P-080918		EW TRIM REINFORCING CLIP (HIGH WIND LOAD APPLICATION)	P-081635		END COVER INSTALLATION STEPPED ROOF (WITH SUPPORT MBR.)	P-081554		UL 90 INSULATED LITE*PANL FOR UNINSULATED PURLIN	P-081865
	MR/CMR-24 SEAM REINFORCING CLIP ASSBLY.	P-080951		NARROW GUTTER ASSEMBLY	P-103223		PERPENDICULAR R TO W TRANSITION WITH SOLID WALL	P-081564		UL 90 UNINSULATED LITE*PANL FOR INSULATED PURLIN	P-081866
	MR-CMR-24 ROOF WITHOUT RIDGE	P-081257		MR/CMR-24 GUTTER EXPANSION JOINT	P-103315		PERPENDICULAR R TO W TRANSITION	P-081568		UL 90 INSULATED LITE*PANL FOR INSULATED PURLIN	P-081867
	MR-24 SUB PURLIN INSTALLATION	P-081598		BIRD STOP INSTALL. - CABLE TRIM	P-104542		PERPENDICULAR TRANSITION SHORT PERP. FLASHING INSTALLATION	P-081572		LITE*PANL REPLACEMENT - DRAWING 1 OF 1	P-081881
	MR-24 SEAMER PLATFORM ASS'Y AND USAGE	P-081618		SOFFIT TRIM DETAILS	P-104544		PERPENDICULAR TRANSITION WITH OPEN WALL TALL PERP. FLASHING INSTALLATION	P-081573		RIDGE VENTILATOR DETAILS	P-107551
	MR-24 REPAIR CLIP INSTALLATION	P-081680		CORNER CAP INSTALLATION EAVE TRIM	P-104549		PARALLEL TRANSITION INSTALLATION TO EXISTING BLDG - NO WIDTH ADD.	P-081613		RIDGE VENTILATOR PREPARATION DETAILS	P-107552
	MR-24/CMR-24 PANEL CLOSURE INSTALL.	P-103247		NARROW GUTTER INSTALL W/O WEATHERSEAL	P-104713		PARALLEL TRANSITION INSTALLATION TO EXISTING BLDG - FOR WIDTH ADD.	P-081614		RIDGE VENTILATOR INSTALLATION	P-107553
	MR-24 ENDWALL EXT./ROOF REPLACEMENT	P-105528		NARROW GUTTER INSTALL W/WEATHERSEAL	P-104714		CORRUGATION TRANSITION INSTALLATION GENERAL INFO AND CLIP INSTALL 1 OF 5	P-081675		CONTINUOUS RIDGE VENTILATOR INSTALL.	P-107559
	MR-24/CMR-24 PANEL CLOSURE INSTALL.	P-105634					CORRUGATION TRANSITION INSTALLATION SEAMING OPERATION 2 OF 5	P-081678			
	MR-24 SINGLE PANEL REPAIR	P-107656					CORRUGATION TRANSITION INSTALLATION SILICONE MEMBRANE AND COVER 3 OF 5	P-081677			
	MR-24/CMR-24 PANEL REPAIR CAP INSTALL.	P-107657					CORRUGATION TRANSITION INSTALLATION SPECIFIC DETAILS 4 OF 5	P-081678			
	MR-24/CMR-24 MULT. PANEL REPAIR AND DET.	P-107743					CORRUGATION TRANSITION INSTALLATION RIDGE AND PERP. TRANS. 5 OF 5	P-081679			
	MR-24 MULTIPLE PANEL REPAIR	P-107744					MR-24 SEAMED RIDGE ROOF SYSTEM RIDGE PANEL AT PARALLEL TRANSITION	P-090009			
	MR-24 MULTIPLE PANEL REPAIR	P-107745					PERPENDICULAR TRANSITION MEMBRANE ROOF TO METAL ROOF	P-081574			
	MR-24 SEAMED RIDGE ROOF SYSTEM GENERAL INSTALLATION	P-090008					PARALLEL TRANSITION MEMBRANE ROOF TO METAL ROOF	P-081575			
	MR-24 SEAMED RIDGE ROOF SYSTEM PANEL INSTALLATION	P-090007					INTERIOR GUTTER CORNER INSTALLATION ROOF TO WALL	P-080189			
	MR-24 SEAMED RIDGE ROOF SYSTEM ROOF PANEL FIELD NOTCHING DETAILS	P-090011					INTERIOR GUTTER PAR. TO INSIDE CORNER FLASHING WITHOUT CORRUGATION	P-081543			
	MR-24 SEAMED RIDGE ROOF SYSTEM SPLICE DETAIL AND RIDGE PANEL FIELD HOLES	P-090012					INTERIOR GUTTER PAR. TO INSIDE CORNER FLASHING WITH CORRUGATION	P-081545			
BLGS. WITH TRUSS	MR/CMR-24 ROOF PANEL CALCULATOR	P-081113	CONDUCT- TOR PIPE	CONDUCTOR PIPE INSTALLATION AND DETAILS	P-080091	MEMBRANE	PARALLEL TO PARAPET GUTTER WITH AND WITHOUT CORRUGATION	P-081550	INTERIOR GUTTERS		
	ROOF STRUCTURALS FOR ROOF PNL. CALC.	M-148099		COLLECTOR BOX INSTALL.-NARROW GUTTER	P-103225		PARALLEL TRANS. TO VALLEY GUTTER WITH AND WITHOUT CORRUGATION	P-081551			
BLGS. WITH Z-PURLIN	MR/CMR ROOF PANEL CALCULATOR	P-080949		CONDUCTOR PIPE INSTALLATION	P-105224		MULT. GUTTER STOP FLASHING	P-105525			
	ROOF STRUCTURALS FOR ROOF PANEL CALCULATIONS	P-ZRSL0		CONDUCTOR PIPE DETAILS	P-105225		MULT. GUTTER GABLE TRIM	P-105526			
				CONDUCTOR PIPE DETAILS	P-105226		MULT. GUTTER EXPANSION JOINT	P-105533			
							MULT. GUTTER SPECIAL APPLICATIONS	P-105534			
							WELD PROCEDURES FOR SS GUTTERS	P-105846			
							SUGGESTED FIELD FABRICATION COLLECTOR BOX AND SCREEN	P-107134			

NOTES:

- THE ABOVE DRAWINGS PERTAIN TO WIDESPAN BUILDINGS WITH Z-PURLIN AND/OR TRUSS FOR THE ROOF SECONDARY. THESE BUILDING HAVE EAVE STRUTS (OR AN EQUIVALENT MEMBER), GABLE ANGLES OR RAKE CHANNELS AT THE BUILDING STRUCTURE LINE, AT STANDARD LOCATIONS, FOR PANEL AND TRIM SUPPORT. THIS INDEX DRAWING IDENTIFIES THE ROOF PANEL, TRIM AND ACCESSORY DRAWINGS ASSOCIATED WITH THIS BUILDING.
- ONLY THOSE DRAWINGS REQUIRED ON A SPECIFIC BUILDING

MR-24 ERECTION DRAWING INDEX				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-030-02		
RFM	RSS			
FIRST RELEASE DATE	REVISION DATE	B	P-081111	07
01/21/10	06/09/17			

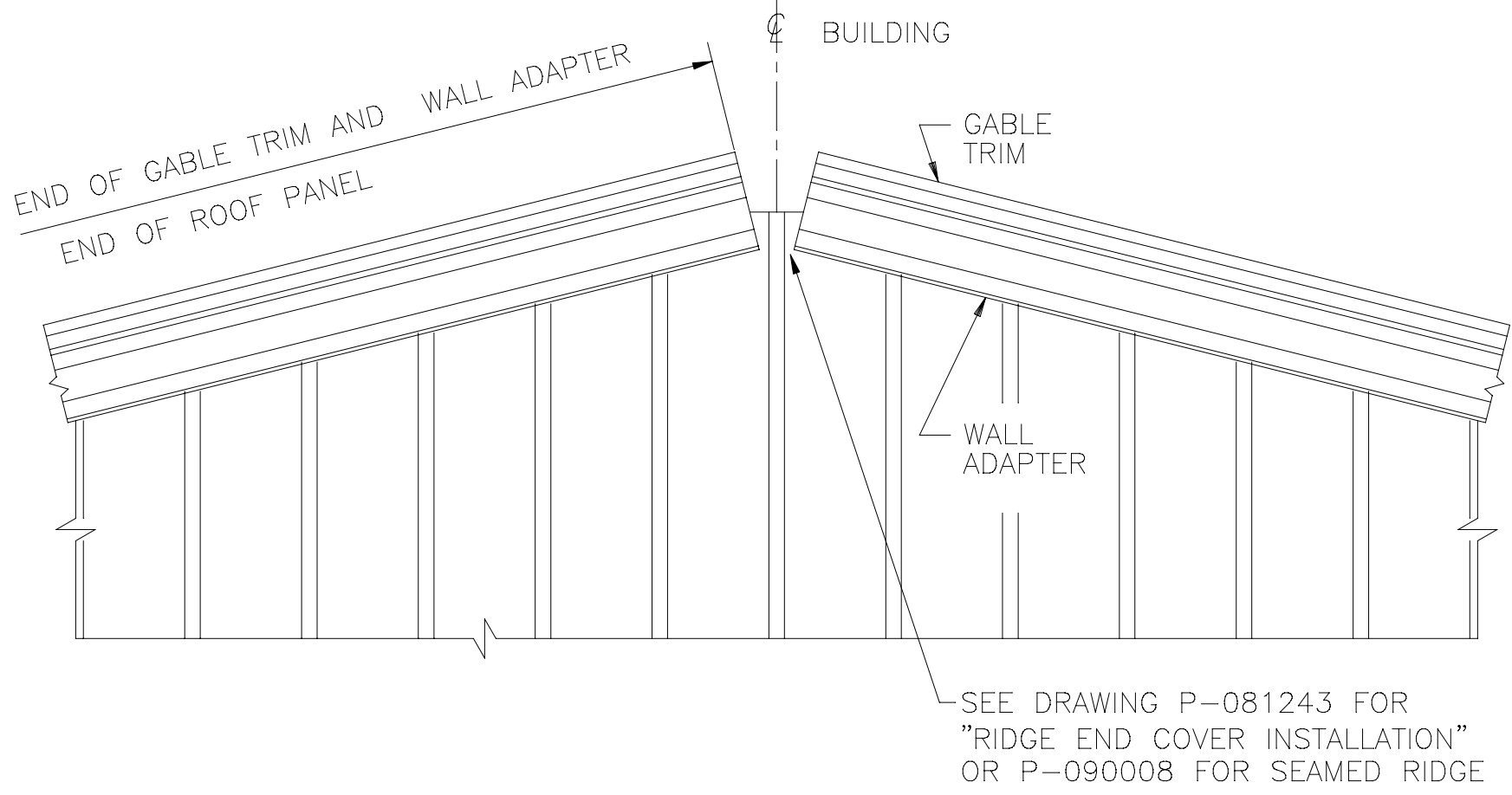


GABLE TRIM AND WALL ADAPTER-GENERAL

WALL ADAPTER PART SCHEDULE		
WALL PANEL	PART NUMBER	LENGTH
NON-BMC WALL (SEE DWG. P-081259)	VWA10	10'-0"
BUTLERIB II, SHADOWALL, STYLWALL II FLAT AND FLUTED, ALL (2") TEXTURED AND INSULATED WALL PANEL	WA10A	10'-4 1/2"
ALL (2 1/2") TEXTURED AND INSULATED WALL PANEL ALL (3") TEXTURED AND INSULATED WALL PANEL OPEN ENDWALL OVERHANG AND CANOPY	WA10B	
ALL (4") TEXTURED AND INSULATED WALL PANEL	WA10C	

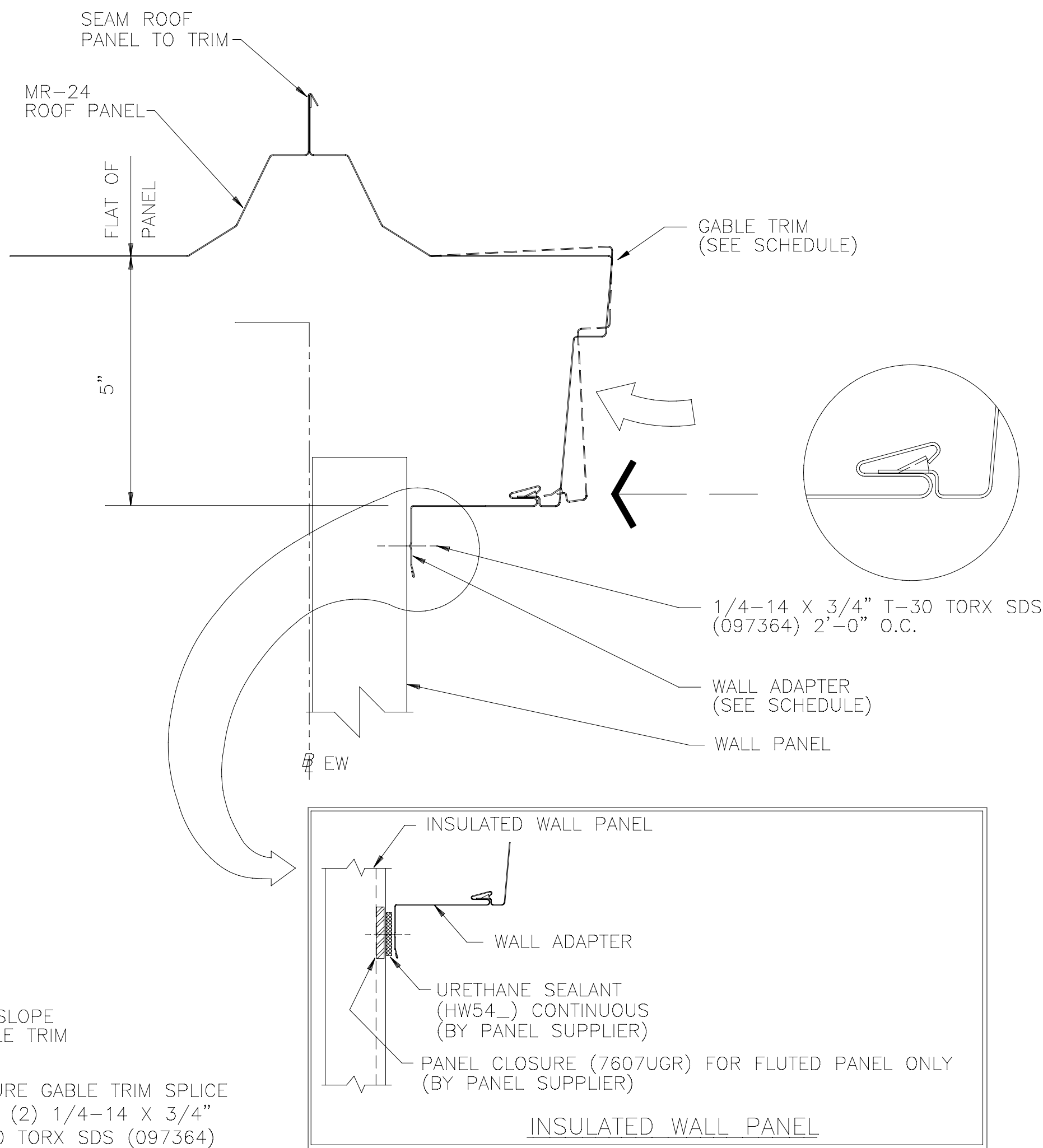
GABLE TRIM AND WALL ADAPTERS FURNISHED TO LENGTH SHOWN IN PARTS SCHEDULE. FIELD CUT TO LENGTH REQUIRED.

GABLE TRIM PART SCHEDULE				
LEFT HANDED PANELS		RIGHT HANDED PANELS		LENGTH
LEFT SLOPE	RIGHT SLOPE	LEFT SLOPE	RIGHT SLOPE	20'-6 7/8"
PART NO.	PART NO.	PART NO.	PART NO.	
MRGTL20L	MRGTL20R	MRGT20L	MRGT20R	

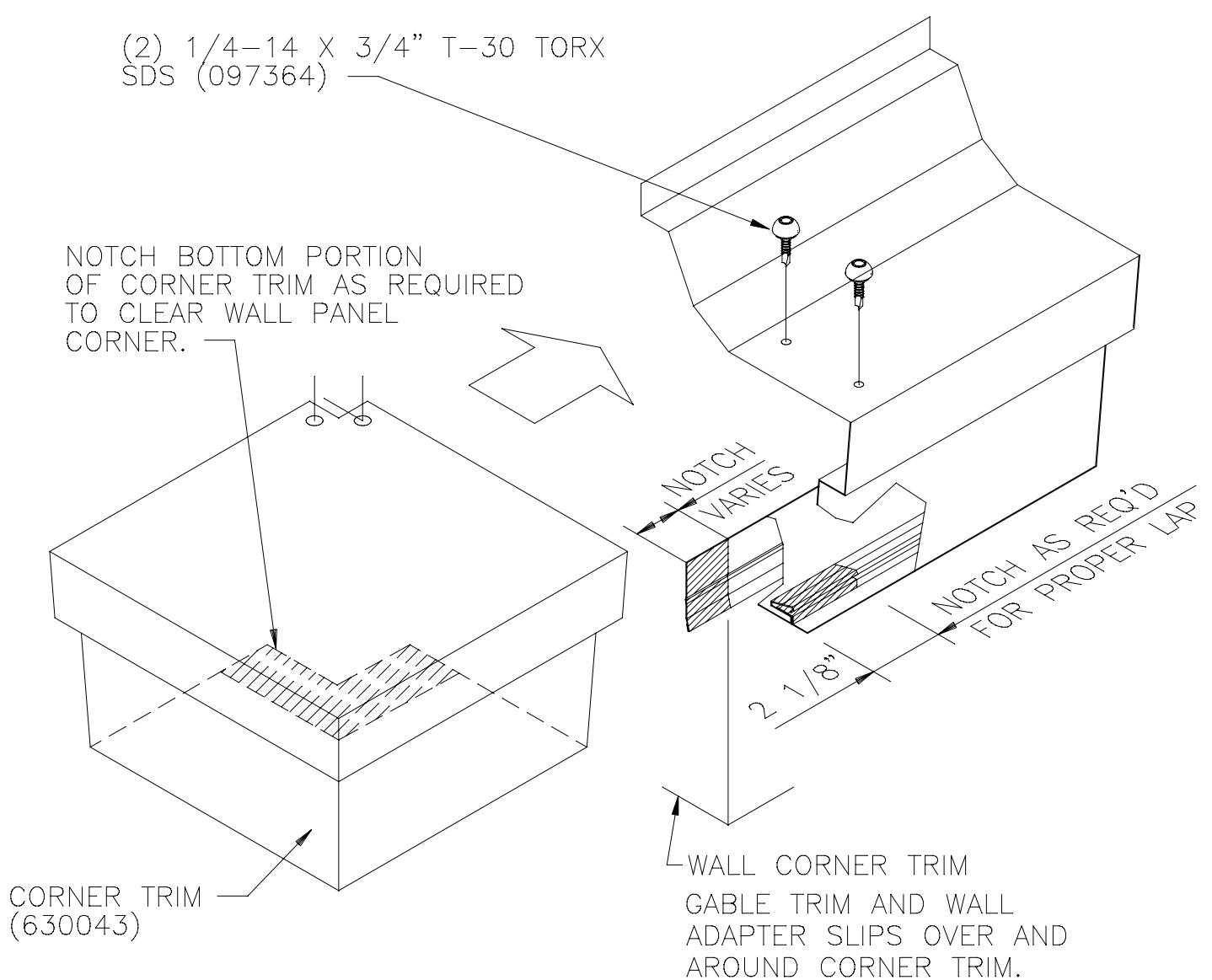


GABLE TRIM AND WALL ADAPTER AT RIDGE

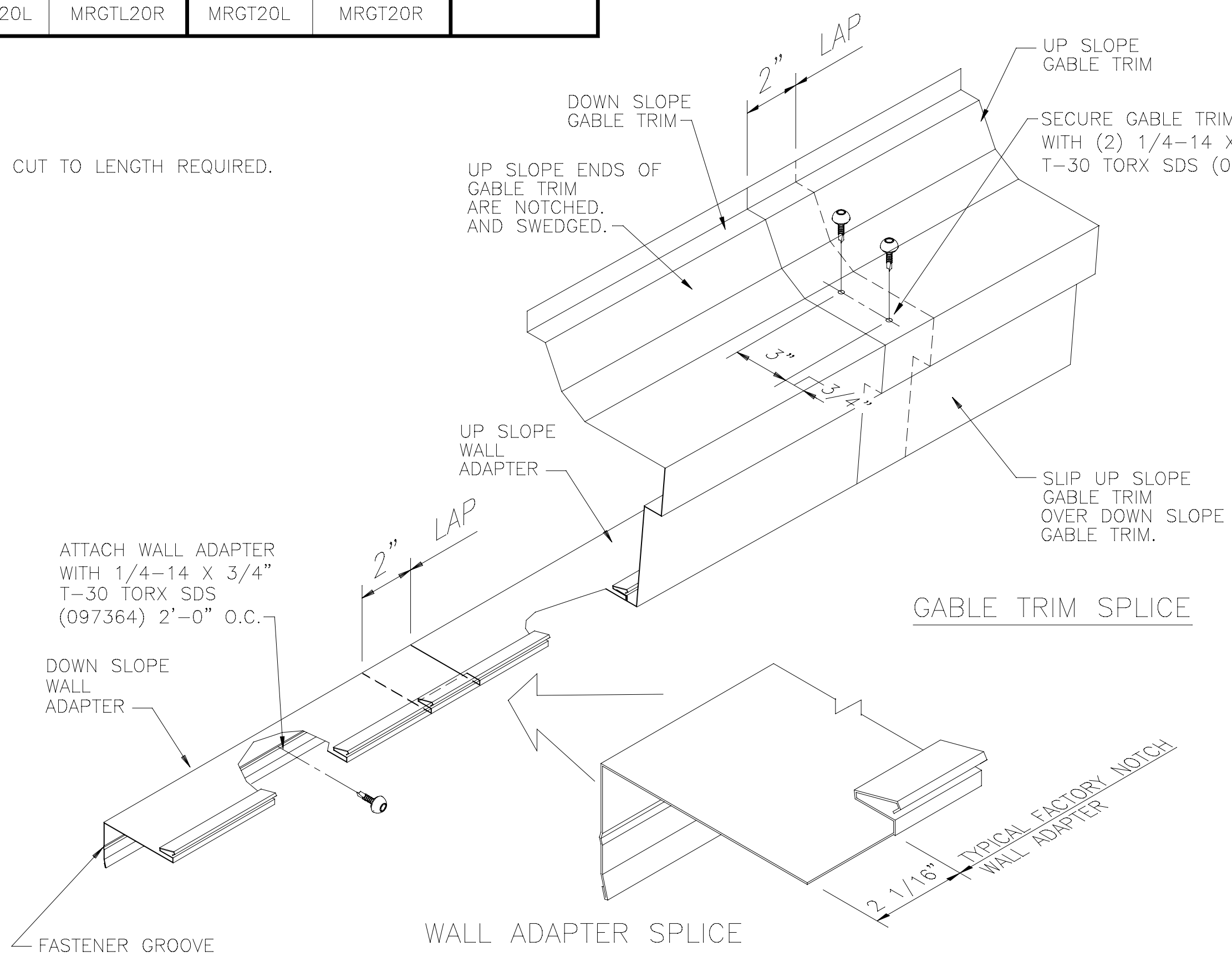
DOUBLE SLOPE BUILDINGS



GABLE TRIM AND WALL ADAPTER ASSEMBLY



GABLE TRIM TO CORNER TRIM



GABLE TRIM AND WALL ADAPTER SPLICE

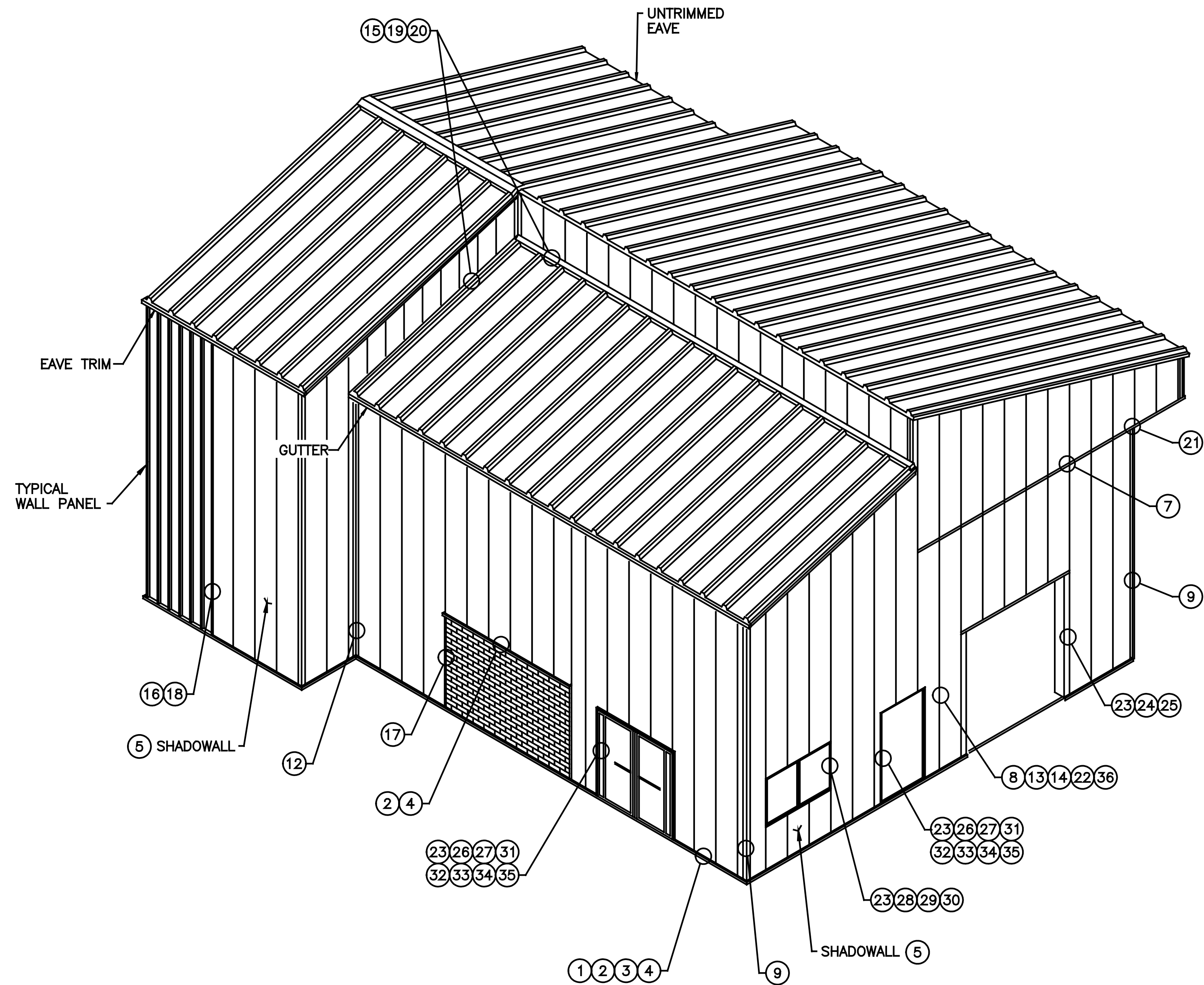
ERECTION SEQUENCE:

1. SNAP CHALK LINE ON FACE OF WALL PANEL AT 5" DIMENSION SHOWN ABOVE.
2. ATTACH WALL ADAPTER TO WALL PANEL, ALIGNING HORIZONTAL LEG WITH CHALK LINE. LOCATE TORX FASTENERS AT FASTENER GROOVE IN WALL ADAPTER.
3. ENGAGE GABLE TRIM CORRUGATION TO ROOF PANEL CORRUGATION. ENGAGE LOWER LEG OF GABLE TRIM INTO WALL ADAPTER. USING HAND PRESSURE, SNAP GABLE TRIM INTO WALL ADAPTER. VISUALLY CHECK TO ASSURE GABLE TRIM IS FULLY ENGAGED INTO WALL ADAPTER.
4. SEAM GABLE TRIM TO ROOF PANEL.

NOTES:

1. SEE ERECTION DRAWING P-081635 IF HIGH WIND GABLE TRIM CLIPS ARE REQUIRED.
2. BUILDINGS WITH WIDTH EXTENSION AND CANOPY TRANSITION THAT IMPOSES SLOPE CHANGE, FIELD MITER GABLE TRIM AND ADAPTER FOR SMOOTH FIT UP.
3. SEE DRAWING P-081243 FOR END RIDGE COVER INSTALLATION.

MR-24/CMR-24 GABLE TRIM AND WALL ADAPTOR INSTALL. WITH RIDGE ASSEMBLY				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-001-02		
ACM	RHE			
FIRST RELEASE DATE	REVISION DATE	B	P-081167	07
01/21/10	10/22/24			

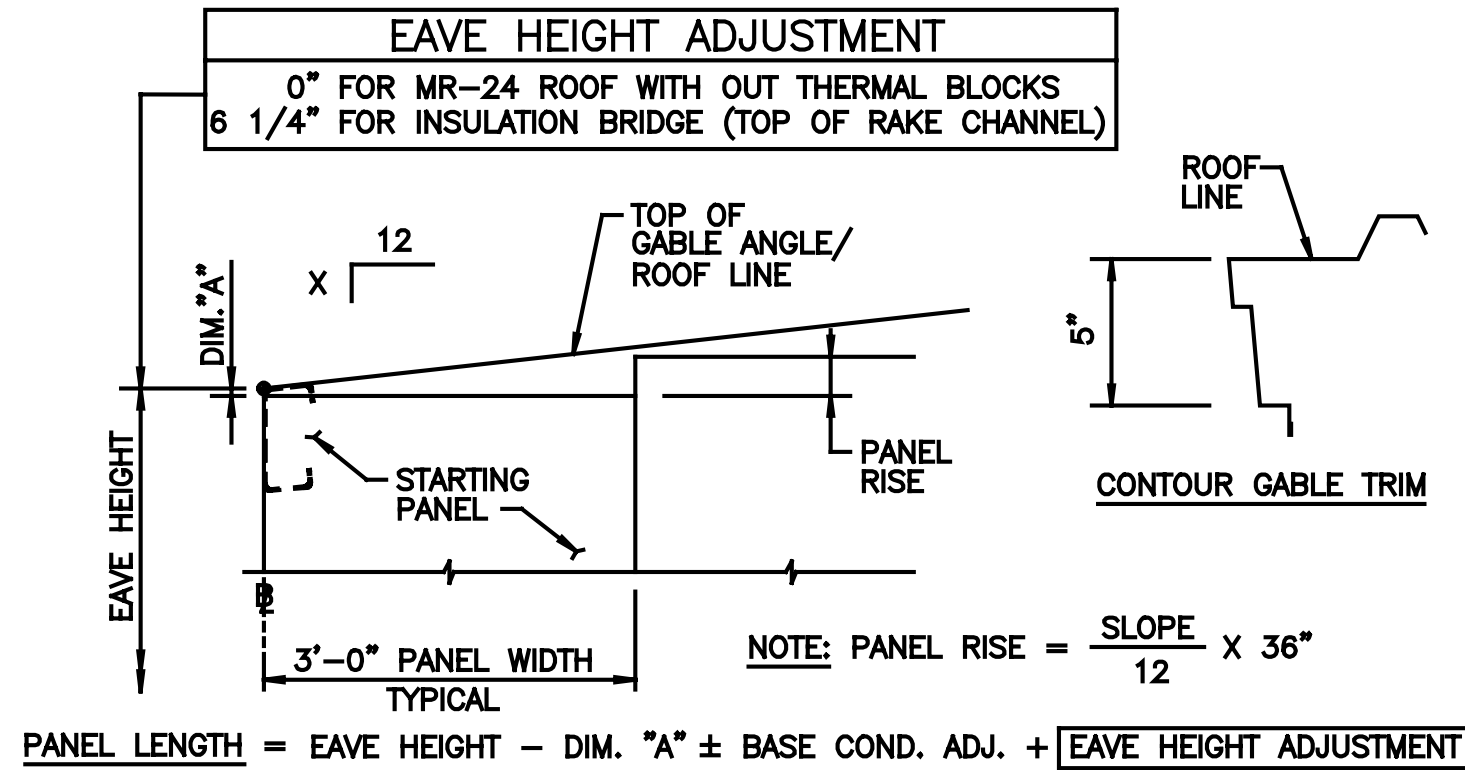


ITEM	DRAWING NUMBER	DRAWING TITLE
BASE ANGLE / BASE TRIM		
1	P-081505	BASE TRIM INSTALLATION - LAPPED AND/OR NOTCHED AT FOUNDATION
2	P-081513	BASE TRIM INSTALLATION - FLUSH FOUNDATION TOP OF WALL
3	P-081645	DBL WALL BASE TRIM INSTALL - LAPPED AND/OR NOTCHED AT FOUNDATION
4	P-081649	DBL WALL BASE TRIM INSTALLATION - FLUSH FOUNDATION TOP OF WALL
GENERAL INSTALLATION		
5	P-005176	SHADOWALL WALL SYSTEM INSTALLATION MANUAL
7	P-080519	WALL PANEL SPLICE DETAILS
8	P-081183	WALL PANEL LENGTH CALCULATIONS
9	P-081185	CORNER PANEL AND TRIM INSTALLATION
11	P-081188	INSIDE CORNER PANEL AND TRIM INSTALLATION
13	P-081189	GENERAL INSTALLATION SELF-DRILLING FASTENERS
14	P-081191	PANEL SIDELAP FASTENER INSTALLATION RECOMMENDED PROCEDURES
TRANSITIONS		
15	P-080818	ALL WALLS - WALL PANEL CALCULATOR - ROOF TO WALL TRANSITION
16	P-081195	SHADOWALL - BUTLERIB II WALL TRANSITIONS
17	P-081196	SHADOWALL - MASONRY AND STORE FRONT TRANSITIONS
18	P-081197	SHADOWALL - STYLWALL II TRANSITIONS
19	P-081200	SHADOWALL - PANEL INSTALLATION ABOVE BUTLERIB II ROOF (ONLY)
20	P-081590	SHADOWALL - PANEL INSTALLATION ABOVE MR-24/CMR-24 ROOF (ONLY)
WALL ACCESSORIES		
21	P-104557	SOFFIT SUPPORT INSTALLATION
22	P-080889	WALL LITE*PANL
23	P-081201	SHADOWALL ACCESSORY LOCATION LAYOUT
24	P-081202	OVERHEAD DOOR PANEL AND TRIM INSTALLATION - ON MODULE
25	P-081203	OVERHEAD DOOR PANEL AND TRIM INSTALLATION - OFF MODULE
26	P-081204	SHADOWALL KNOCK-DOWN HM DOOR - FRAME AND TRIM INSTALLATION
27	P-081205	SHADOWALL KNOCK-DOWN HM DOOR - TRIM DETAILS
28	P-081206	FRAMED OPENING WINDOW CUTOUTS AND CHANNEL INSTALLATION
29	P-081207	WINDOW INSTALLATION
30	P-081208	WINDOW INSTALLATION - INSULATION TRIM AND CLOSURE APPLICATION
31	P-081373	SHADOWALL PRE ASSEMBLED HM DOOR - PANEL AND TRIM
32	B-081380	KNOCK-DOWN OR PRE ASSEM. HM DOOR - W/ 6'-0" OR LESS GIRT/ALL WALLS
33	B-081495	KNOCK-DOWN HM DOOR FRAME INSTALL. - AT 7'-6" GIRT LOCATION/ALL WALLS
34	B-081496	KNOCK-DOWN HM DOOR FRAME INSTALL. - WITHOUT 7'-6" GIRT/ALL WALLS
35	B-081497	KNOCK-DOWN HM DOOR FRAME AND LEAF - ASSEMBLY/ALL WALLS
INSIDE FINISH AND INSULATION		
36	P-081234	LITE* PANL WALL INSTALLATION

NOTE:
ONLY THOSE DRAWINGS REQUIRED SPECIFICALLY ON A GIVEN BUILDING ORDER WILL BE FURNISHED WITH THE ORDER.

SHADOWALL DRAWING INDEX				
DRAWN BY	CHECKED BY	GROUP NUMBER: 37-031-02		
RHE	CWS			
FIRST RELEASE DATE	REVISION DATE	B	P-081180	05
01/21/10	10/14/19			

"ROOF LINE" IS THE BOTTOM SURFACE OF ROOF PANELS.
EAVE HEIGHT = FLOOR LINE TO TOP OF PURLIN/GABLE ANGLE.
IF WALL PANEL SPLICE IS REQUIRED, REFER TO DRAWING P-080519.
DEDUCT 5/8" WHEN LAP AT FOUNDATION IS NOT USED. DEDUCT AS REQUIRED FOR MASONRY WALL HEIGHTS THAT REPLACE WALL PANELS.



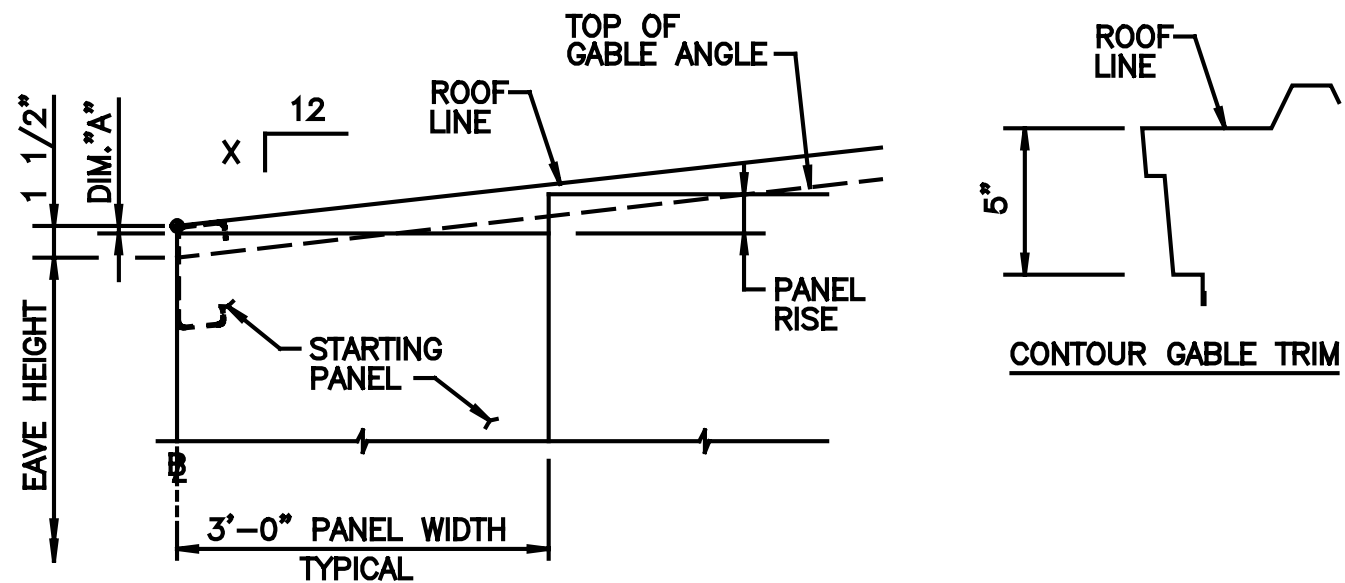
ROOF SLOPE X:12	DIM. "A"
.00:12 THRU .750:12	1/8"
.751:12 THRU 1.250:12	3/8"

NOTE:

ON STANDARD ROOF SLOPES (1/4, 1/2 AND 1) AT LEAST ONE PUNCHED PANEL HOLE PER PANEL WILL ALIGN WITH A HOLE IN THE GABLE ANGLE. OTHER SLOPES (NON-STANDARD) WILL REQUIRE FIELD DRILLING FOR PANEL CONNECTION TO GABLE ANGLE.

ENDWALL STARTER PANEL

SQUARE CUT FOR SLOPES TO 1 1/4:12



ROOF SLOPE X:12	DIM. "A"
.00:12 THRU .750:12	1/8"
.751:12 THRU 1.250:12	3/8"

NOTE:

NO HOLES IN THE GABLE ANGLE WILL ALIGN WITH THE EW PANEL PUNCHING. WILL REQUIRE FIELD DRILLING FOR PANEL CONNECTION TO GABLE ANGLE IF SCRUBOLT IS USED.

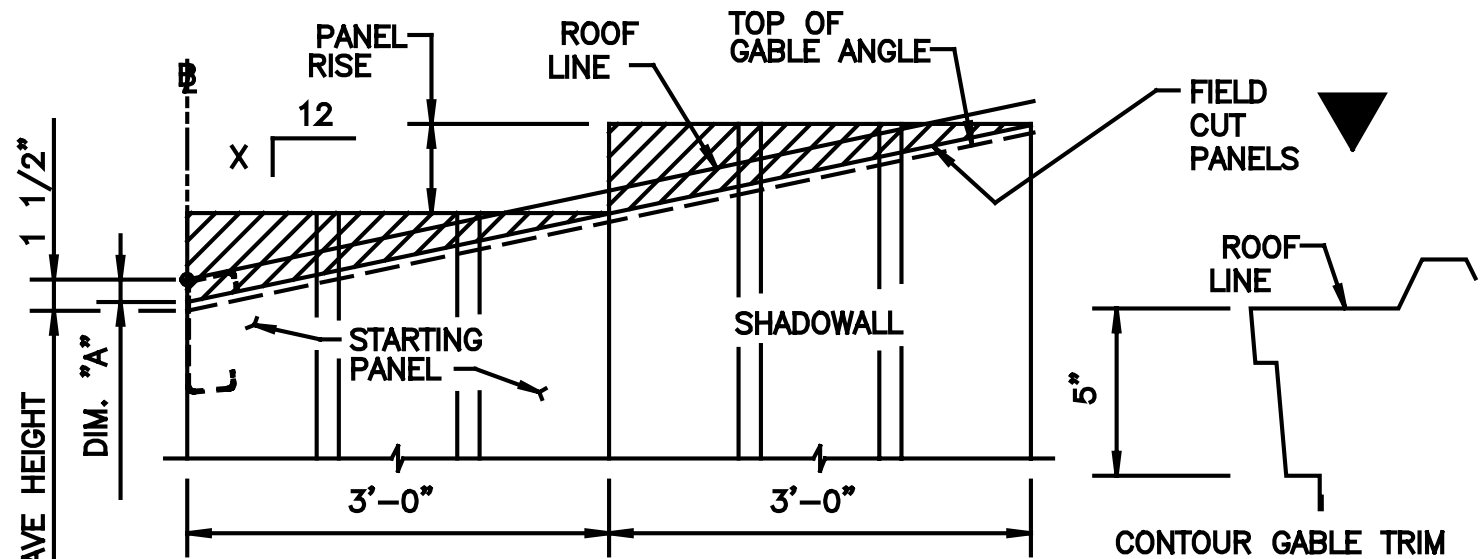
ENDWALL STARTER PANEL

SQUARE CUT FOR SLOPES UP TO 1 1/4:12 (WITH THERMAL BLOCKS)

ROOF SLOPE X:12	DIM. "A"
1.251:12 THRU 2.75:12	3"
2.751:12 THRU 6:12	2"

PANEL LENGTH = EAVE HEIGHT + 1 1/2" - DIM. "A" + PANEL RISE ± BASE CONDITION ADJUSTMENT

EXAMPLE: 2:12 = $\frac{2}{12} \times 36" = 6"$ RISE



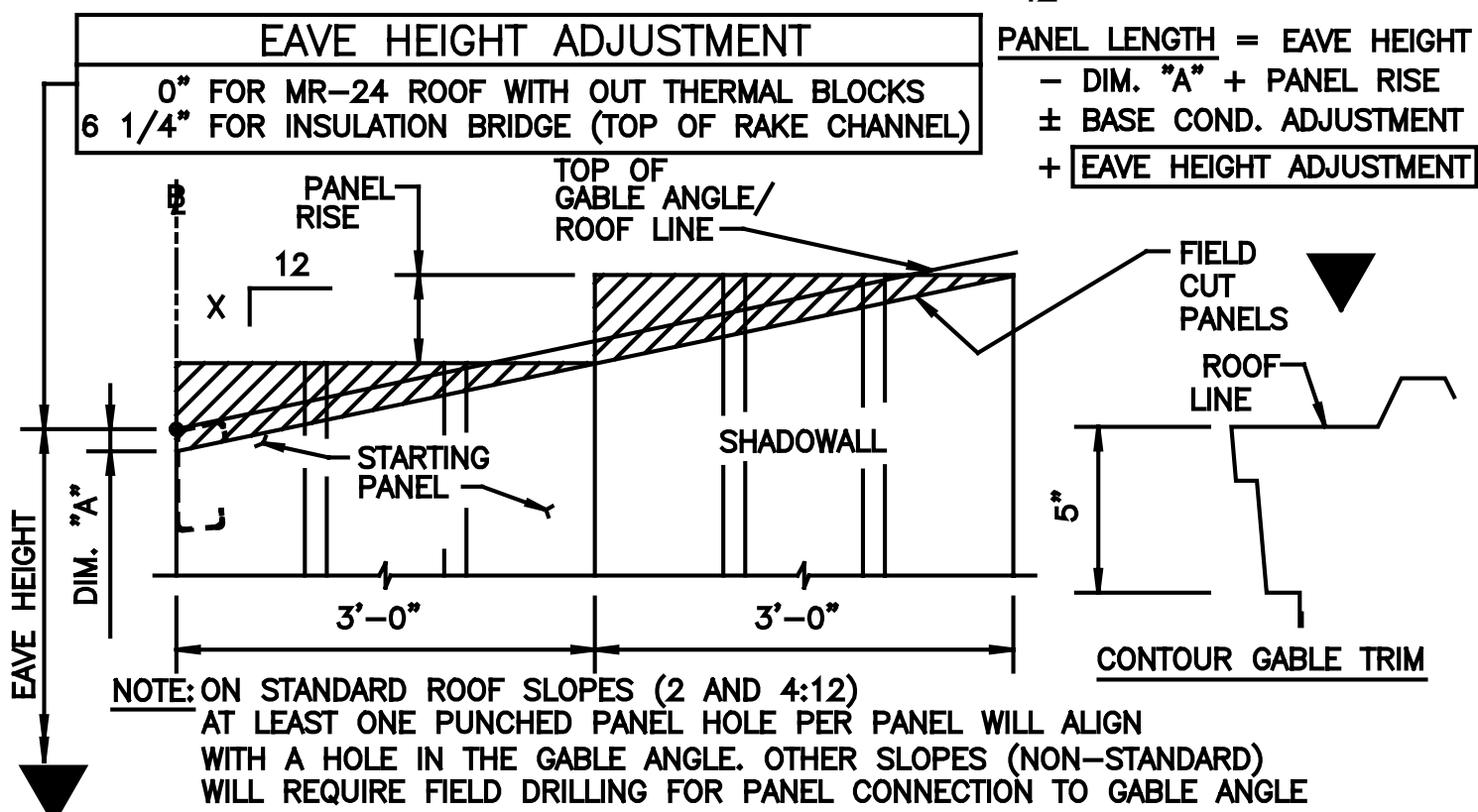
ENDWALL STARTER PANEL

FIELD CUT FOR SLOPES > 1 1/4:12 THRU 6:12 (WITH THERMAL BLOCKS)

ROOF SLOPE X:12	DIM. "A"
1.251:12 THRU 2.75:12	3"
2.751:12 THRU 6:12	2"

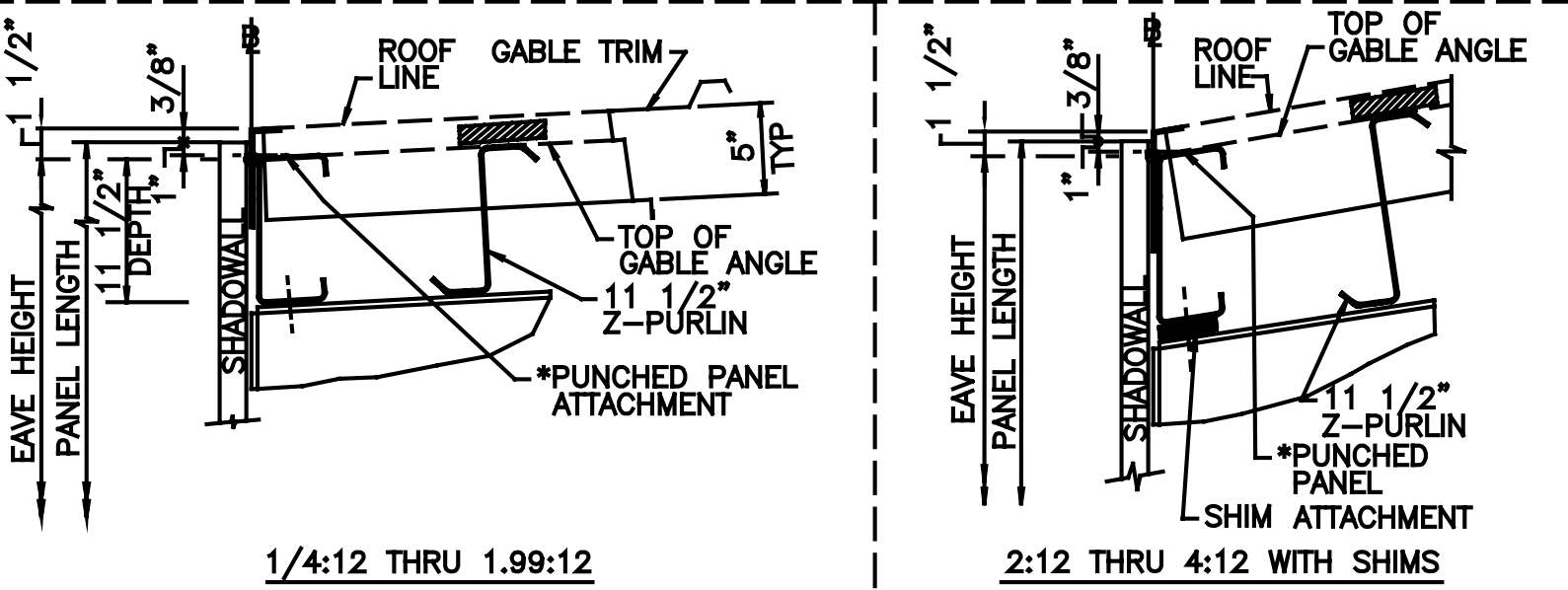
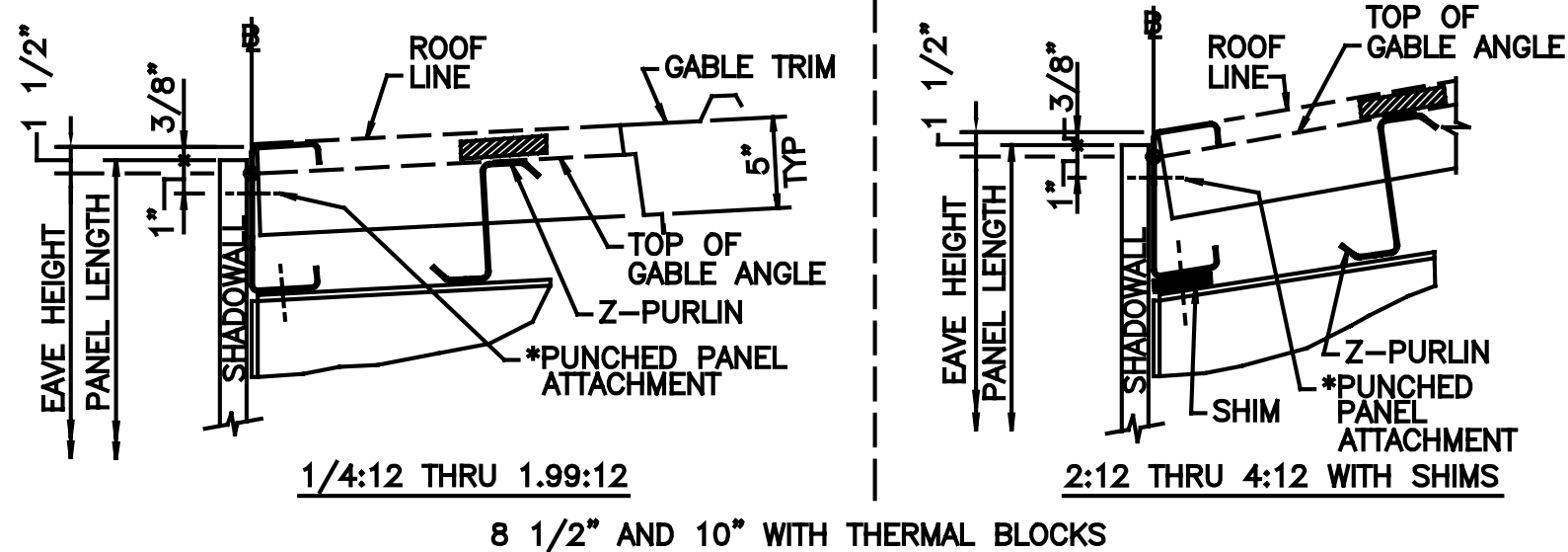
*** FOR PANEL LENGTHS WITH CMR-24 ROOF USE:
EAVE HEIGHT - DIM. "A"
+/- BASE CONDITION
+ RIGID INSL. THK. + .8125" (LINER PNL)
÷ COS OF ROOF SLOPE

EXAMPLE: 2:12 = $\frac{2}{12} \times 36" = 6"$ RISE



ENDWALL STARTER PANEL

FIELD CUT FOR SLOPES > 1 1/4 THRU 6:12



PANEL LENGTH = EAVE HEIGHT +/- BASE CONDITION ADJUSTMENT + 1 1/8"

CONDITION 3 - SQUARE CUT SIDEWALL PANELS

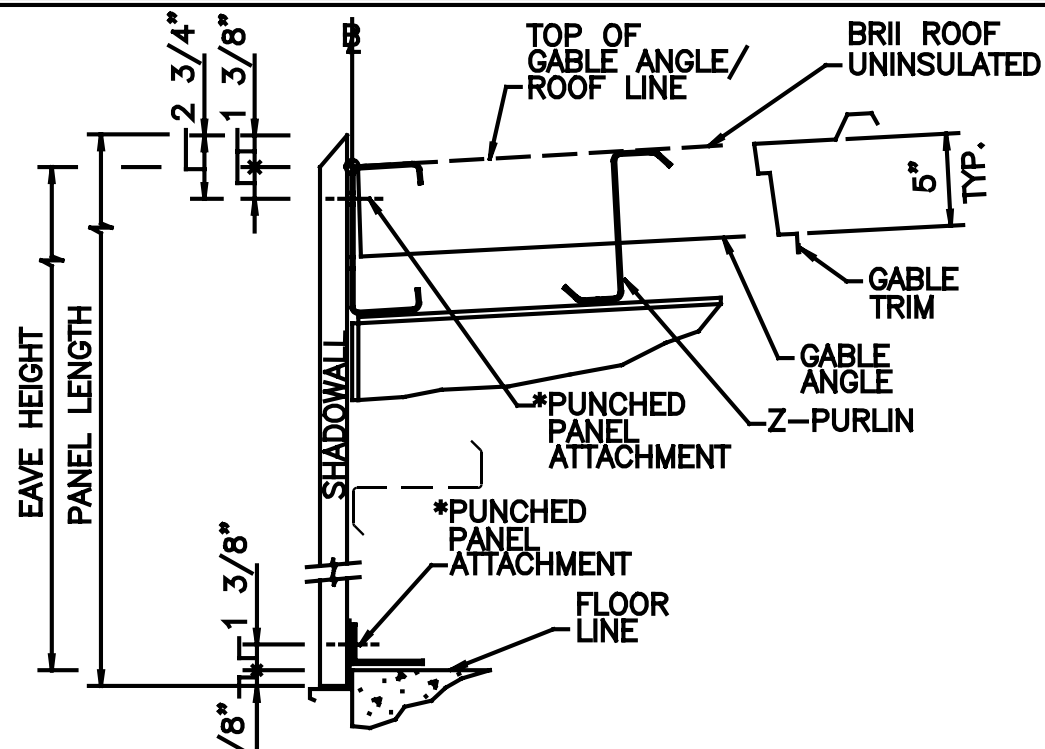
(MR-24 WITH THERMAL BLOCKS)

PANEL LOCATION	ROOF SYSTEM / SLOPE	PART NUMBER			
		PUNCHED	OP-CODE	UNPUNCHED	OP-CODE
SIDEWALL	BR11 THRU 1/2:12	570736 (MITERED)	A	570737 (MITERED)	B
	BR11 GREATER THAN 1/2:12 THRU 6:12	570732	1	570734	3
SIDEWALL AND ENDWALL	MR-24 AND CMR-24 ALL SLOPES	570732	1	570734	3
ENDWALL	BR11, MR-24 AND CMR-24 / ALL SLOPES	570732	1	570734	3
(HEADER) SIDEWALL	BR11 THRU 1/2:12	570738 (MITERED)	C	570737 (MITERED)	B
(HEADER) SIDEWALL AND ENDWALL	BR11 GREATER THAN 1/2:12 THRU 6:12 AND MR-24 AND CMR-24 ALL SLOPES	570743	2	570734	3

NOTES:

- 570748 PANEL IS UNPUNCHED AT TOP AND PUNCHED AT BOTTOM. (SEE DRAWING P-080519).
- ADD 5/8" WHEN PANEL IS LAPPED BELOW FLOOR LINE FOR NOTCHED AND LAPPED BASE CONDITIONS.
- DEDUCT 1/8" WHEN PANEL BASE CONDITION IS FLUSH WITH TOP OF WALL (SEE DRAWING P-081513).
- MR-24 ROOF PANELS: IF NO ROOF INSULATION IS USED, FOAM TAPE (560753) MUST BE APPLIED TO ALL ROOF STRUCTURALS SEE DRAWING P-081449. FOR SLOPES GREATER THAN 3:12 WITHOUT INSULATION, FOAM TAPE (560753) MUST ALSO BE APPLIED TO THE TOP OF THE EAVE STRUT TO ALLOW FOR CLEARANCE BETWEEN THE MR-24 ROOF PANELS AND SHADOWALL PANELS.

TO DETERMINE "EAVE HEIGHT"
SEE DRAWING P-080819



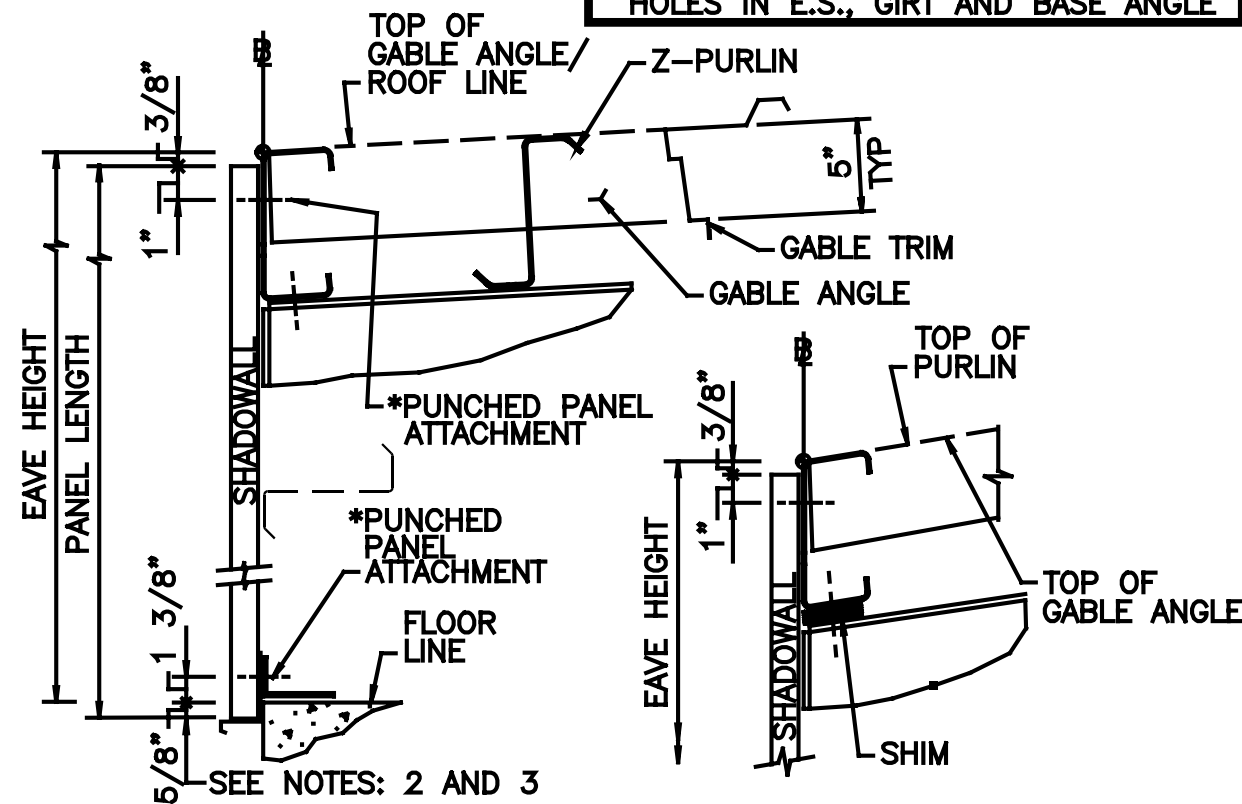
1/4:12 THRU 1/2:12 (MITERED PANELS)

CONDITION 1 - MITERED SIDEWALL PANELS

(BUTLERIB II ROOF)

PANEL LENGTH = EAVE HEIGHT +/- BASE CONDITION ADJUSTMENT + 1 3/8"

* FOR SELF-DRILLING SCREWS, INSTALL 1/2" DOWN TO CLEAR STRUCTURAL HOLES IN E.S., GIRT AND BASE ANGLE



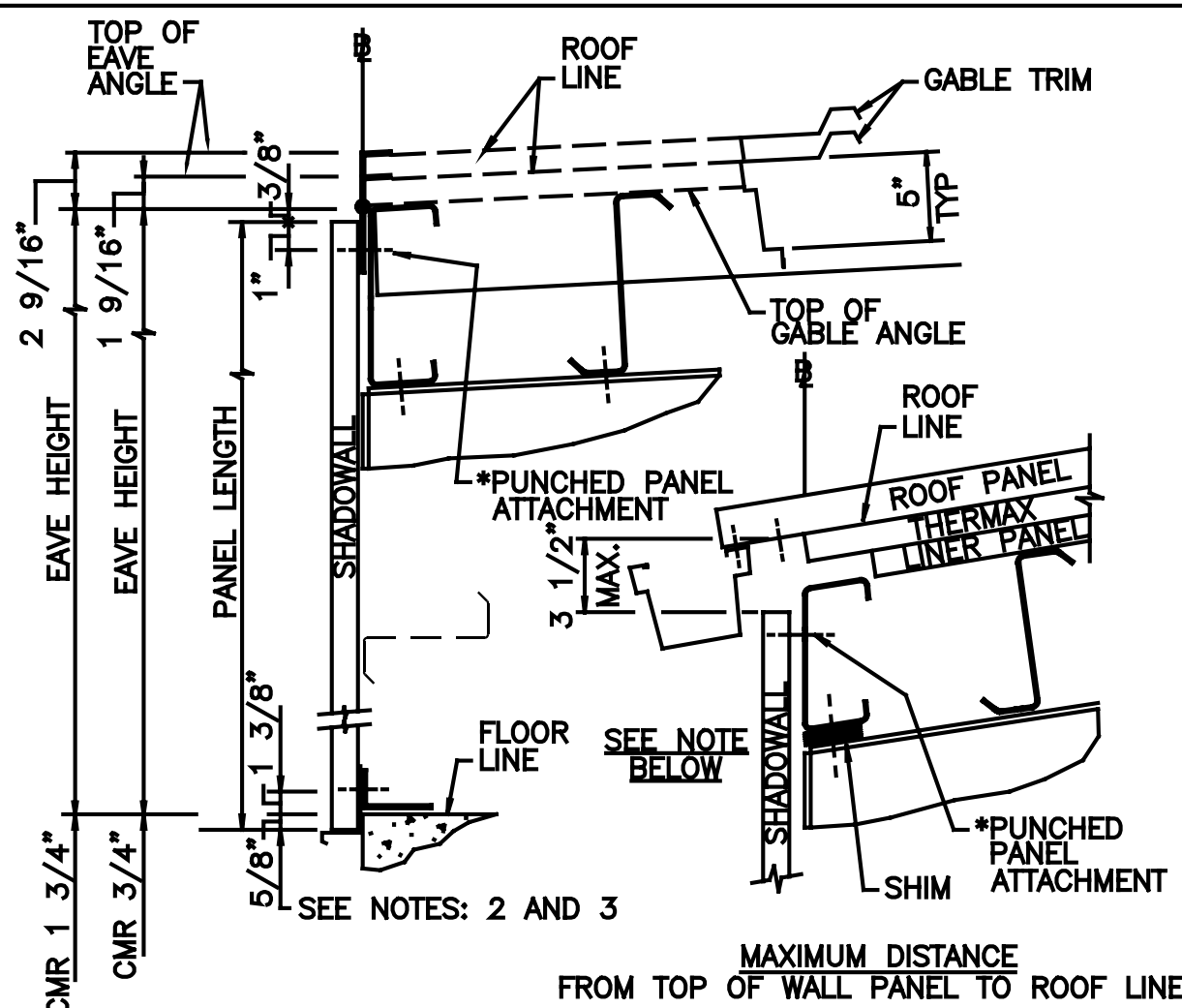
1/4:12 THRU 1.99:12 2:12 - 4:12 WITH SHIMS

CONDITION 2 - SQUARE CUT SIDEWALL PANELS

(BUTLERIB II AND MR-24 WITHOUT THERMAL BLOCKS)

(SEE NOTE: 4 FOR MR-24 ROOF PANEL REQUIREMENTS)

PANEL LENGTH = EAVE HEIGHT +/- BASE CONDITION ADJUSTMENT - 3/8"



CONDITION 4 - SQUARE CUT SIDEWALL PANELS

(CMR-24)

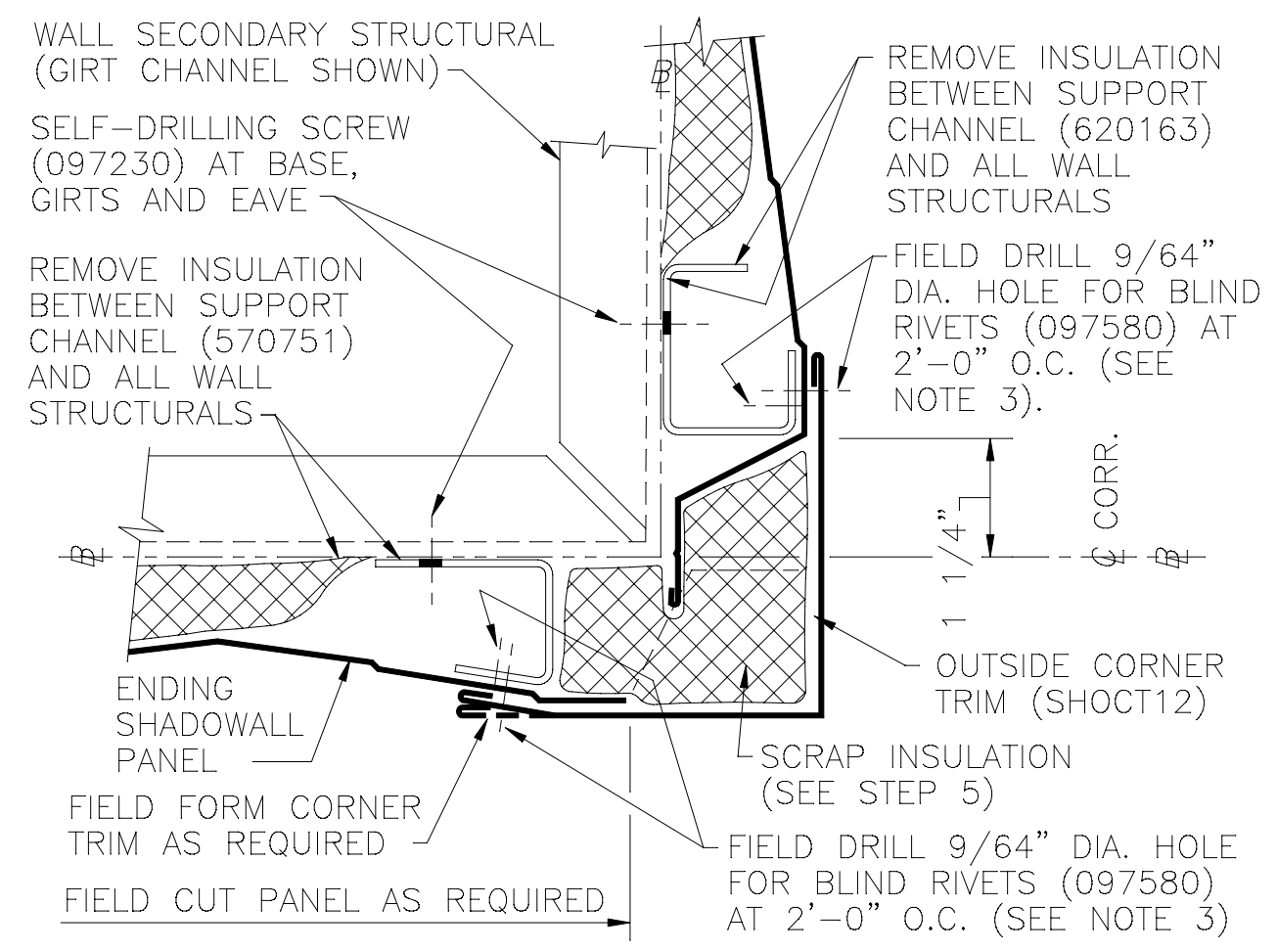
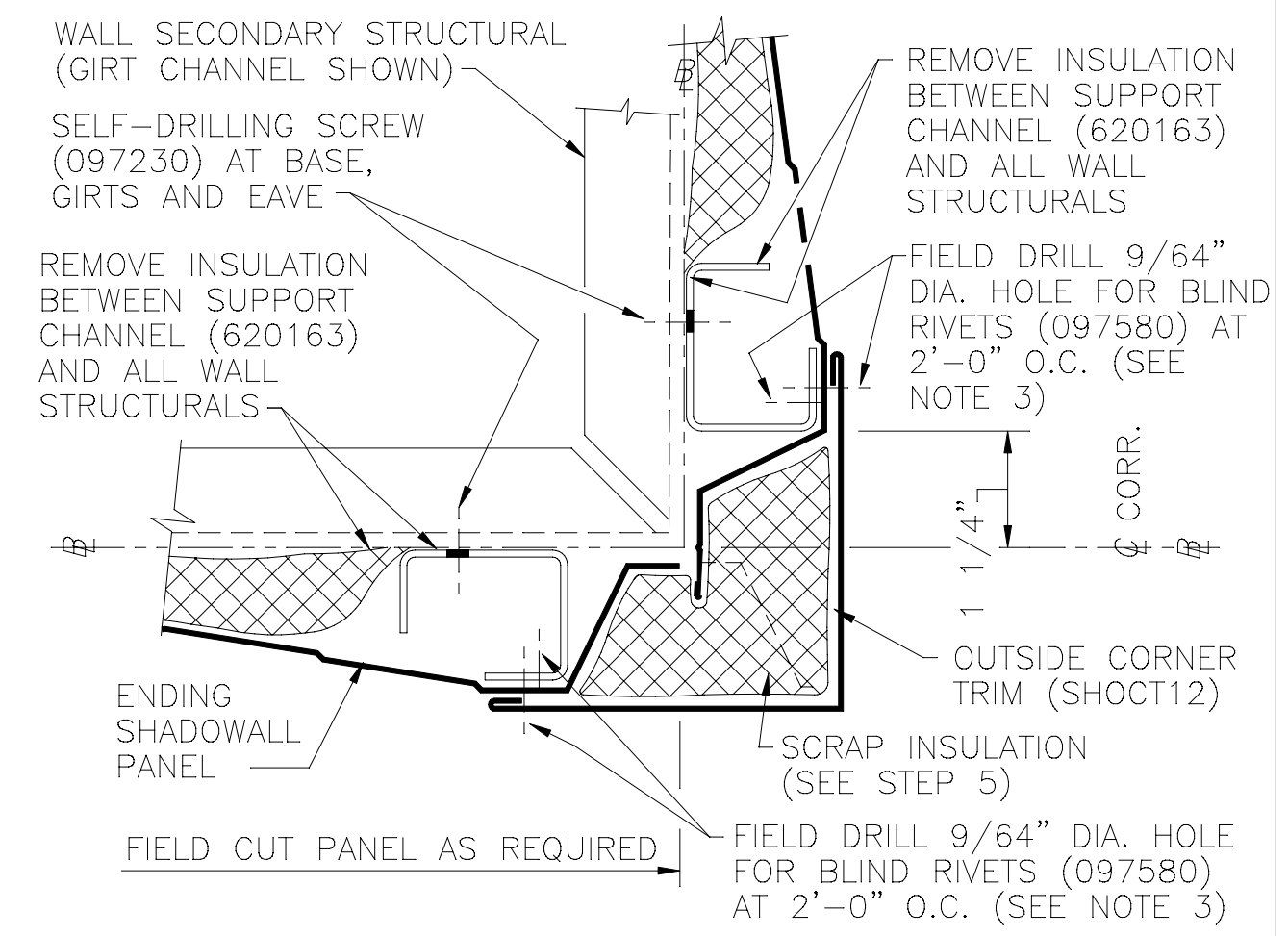
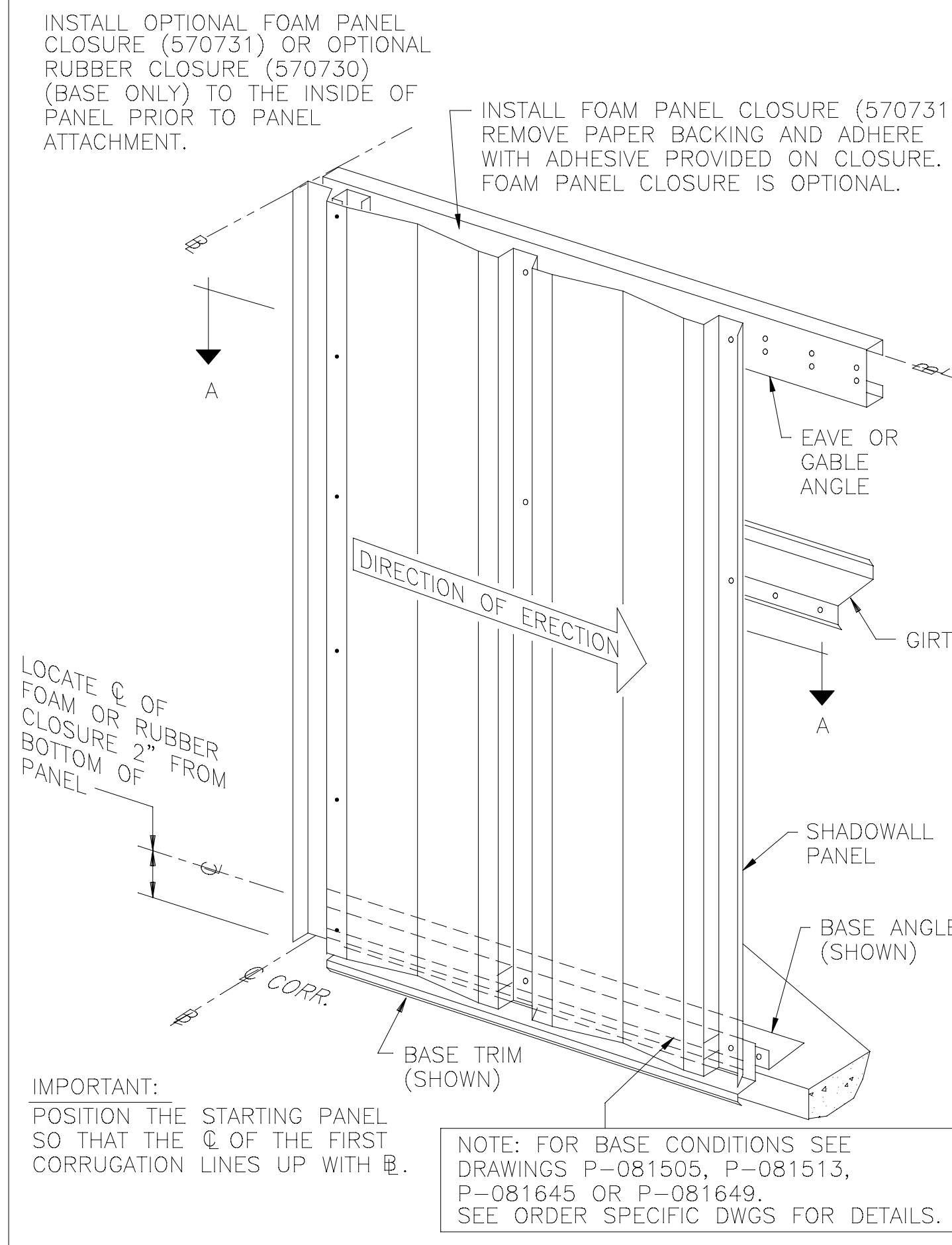
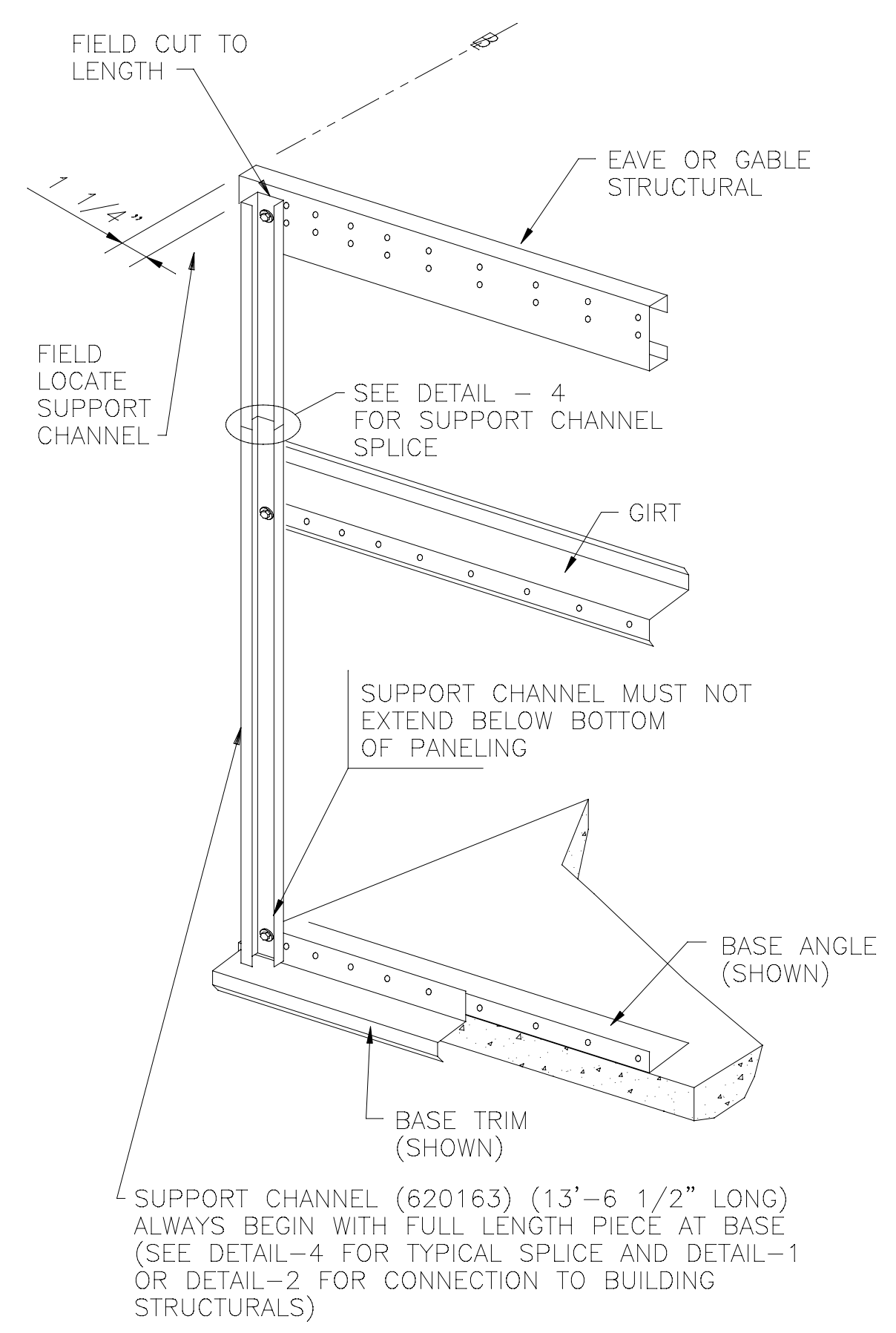
FOR 3/4" THERMAX: PANEL LENGTH = EAVE HT. +/- BASE COND. ADJ. - 3/8"

FOR 1 3/4" THERMAX: PANEL LENGTH = EAVE HT. +/- BASE COND. ADJ. - 3/8"

NOTE: DO NOT EXCEED 3 1/2" BETWEEN ROOF LINE AND TOP OF PANEL.

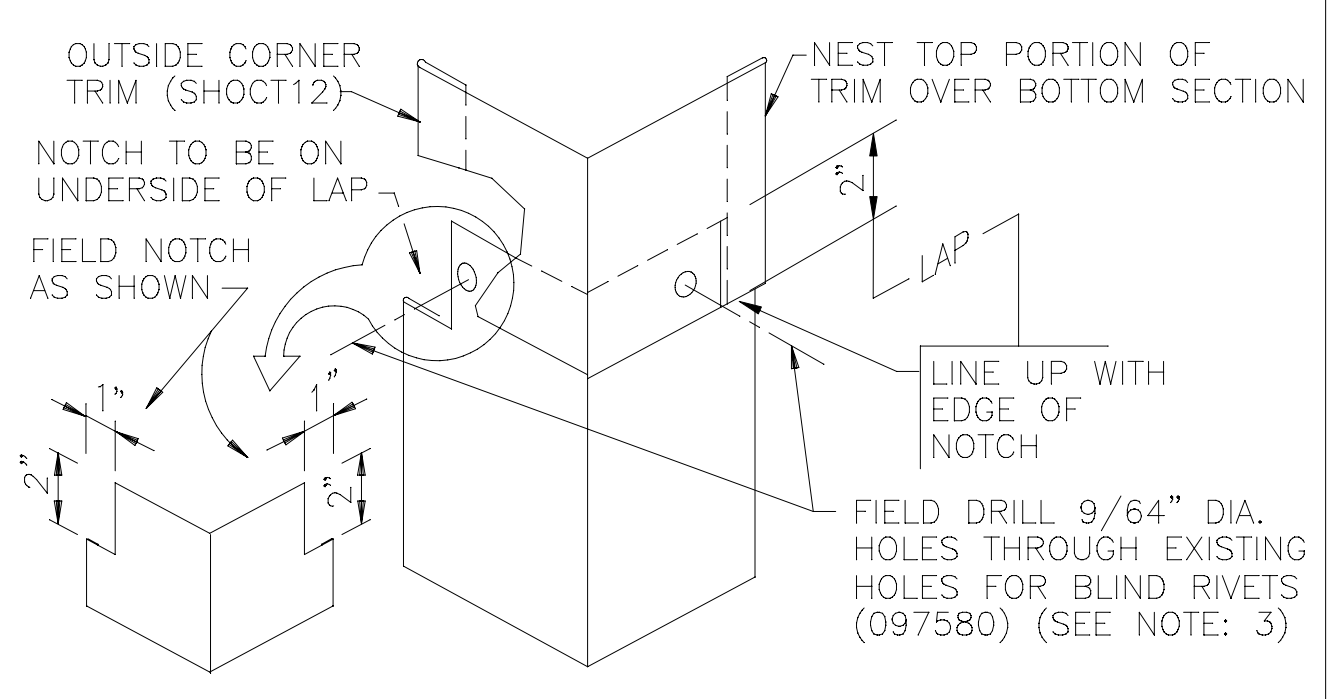
SHADOWALL PANEL LENGTH CALCULATIONS
(BUTLERIB II, MR-24, CMR-24 ROOF PANEL)

DRAWN BY	CHECKED BY	GROUP NUMBER	
JPV	BKF		
FIRST RELEASE DATE	REVISION DATE	C	P-081183 09
01/21/10	01/31/23		

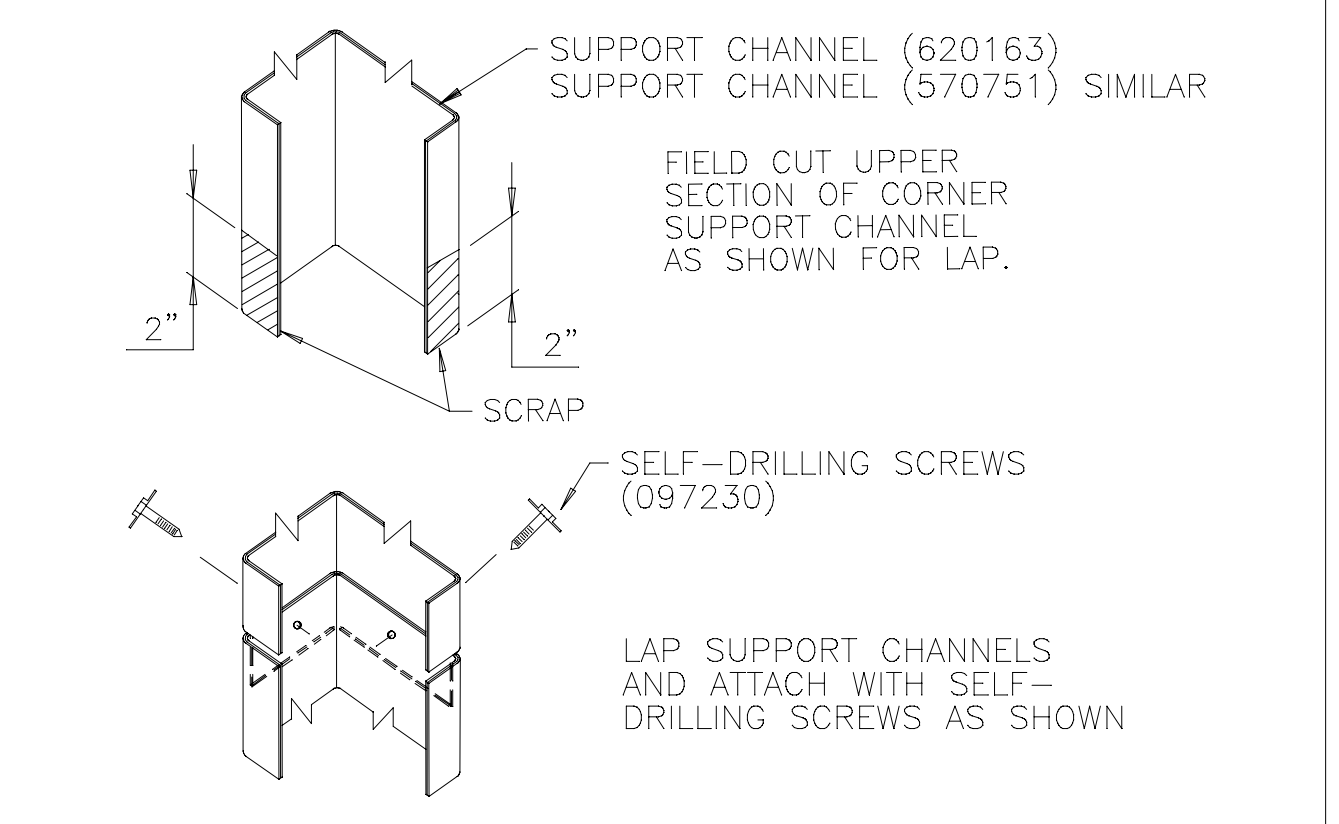


DETAIL-1	TYPICAL OUTSIDE CORNER	ON MODULE ENDING
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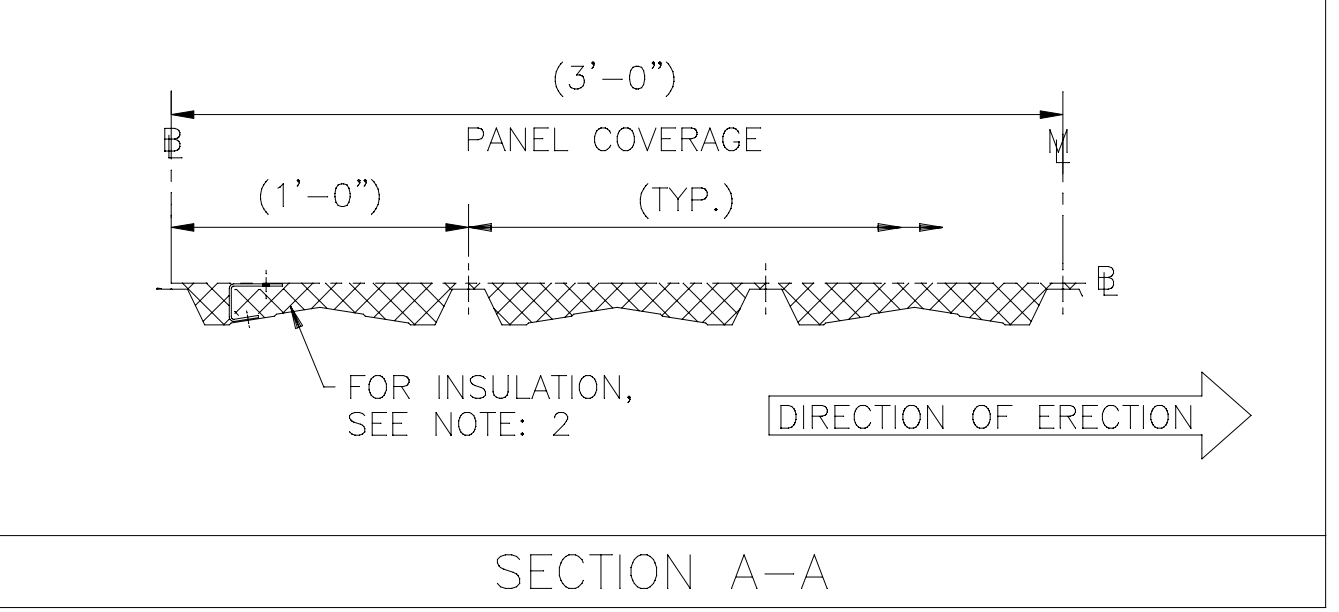
DETAIL-2	TYPICAL OUTSIDE CORNER	OFF MODULE ENDING
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DETAIL-3	CORNER TRIM SPLICE AND FIELD WORK DETAIL
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DETAIL-4	SUPPORT CHANNEL SPLICE AND FIELD WORK DETAIL
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SECTION A-A

GENERAL PANEL INSTALLATION ERECTION SEQUENCE
(DRAWINGS P-081505, P-081513, P-081645, AND/OR P-081649.)
BEFORE STARTING TO INSTALL PANELS, BE SURE BUILDING IS SQUARE AND PLUMB. ALL BASE ANGLE, BASE TRIM, GIRTS AND EAVE STRUCTURALS OR ENDWALL GABLE STRUCTURALS MUST BE IN PLACE, IF STRUCTURALS ARE NOT SQUARE AND PLUMB, OIL CANNING MAY BE INDUCED IN PANELS.

STEP 1. INSTALL SUPPORT CHANNEL TO BUILDING AS SHOWN IN STEP 1 AND BY ATTACHING TO STRUCTURAL MEMBERS WITH SELF-DRILLING SCREW, USING ONE SCREW AT EACH STRUCUTRAL ATTACHMENT, IF EAVE HEIGHT EXCEEDS A NOMINAL 14'-0", BEGIN WITH A FULL LENGTH SUPPORT CHANNEL AND INSTALL SPLICE BETWEEN SECTIONS OF SUPPORT CHANNELS AS SHOWN IN DETAIL-4. SUPPORT CHANNEL IS FURNISHED 13'-6 1/2" LONG. IF PANEL LENGTH IS LESS THAN 13' 6 1/2", FIELD CUT CHANNEL AND SAVE DROP-OFF FOR POSSIBLE USE ELSEWHERE ON BUILDING. DO NOT DISCARD OR DAMAGE THIS DROP-OFF UNTIL ALL SHADOWWALL HAS BEEN INSTALLED. FOR SHORT LENGTHS REQUIRED WITH PANEL LENGTHS GREATER THAN 13'-6 1/2", USE DROP-OFF WHEREVER POSSIBLE.

STEP 2. INSTALL STARTING PANEL BY PLACING LEFT EDGE FLUSH WITH SUPPORT CHANNEL LEG AS SHOWN IN DETAIL-1 OR DETAIL-2 AND FASTEN PANEL TO SUPPORT CHANNEL USING BLIND RIVETS (097580), AND FASTEN TO REMAINDER OF BUILDING STRUCTURALS WITH APPROPRIATE PANEL TO STRUCTURAL FASTENERS AT 1'-0" HORIZONTAL SPACING.

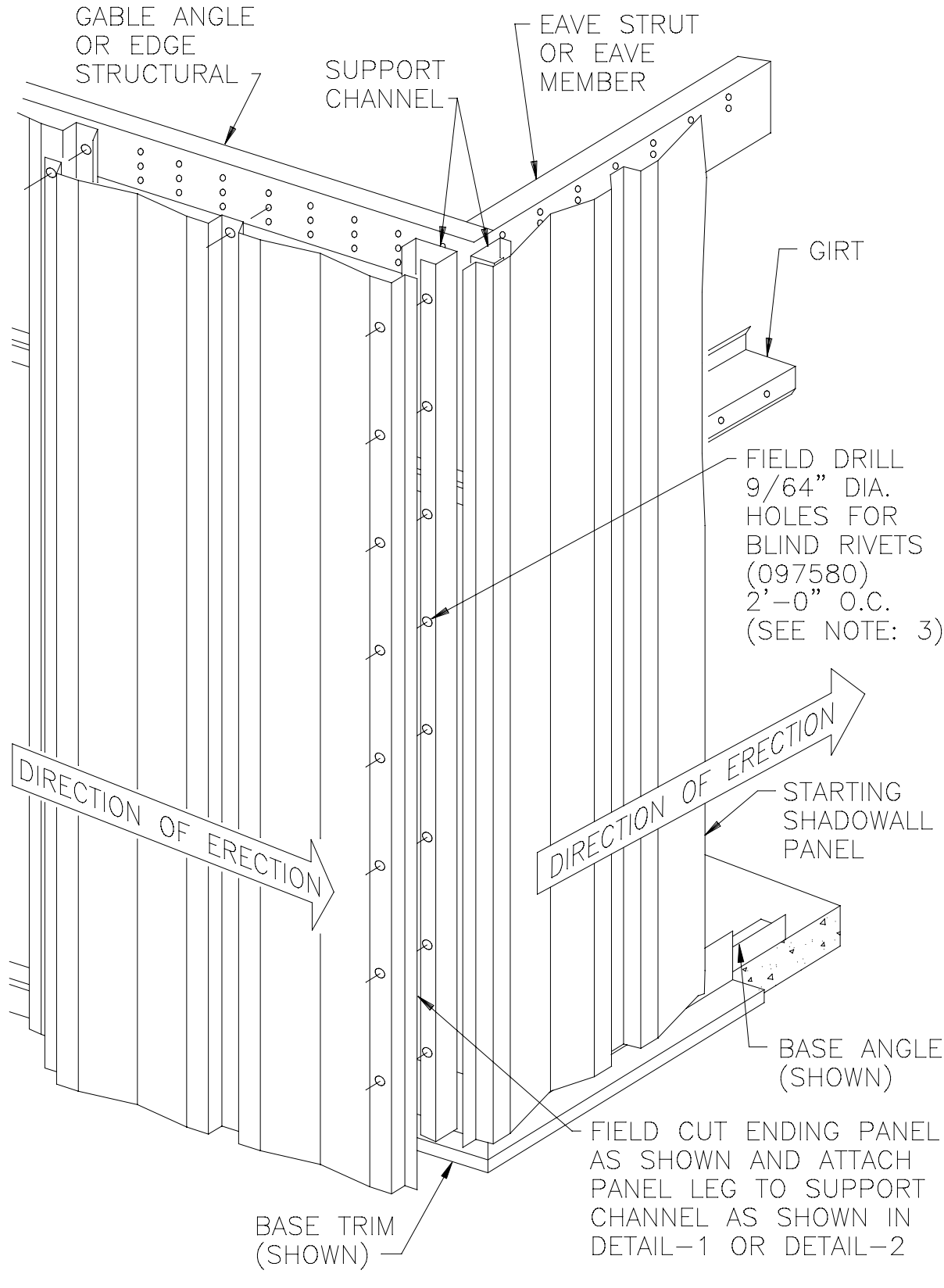
INSTALL INTERMEDIATE PANELS AS SHOWN ON DETAIL WCB083, HOLLOW METAL DOORS AND WINDOWS ARE DESIGNED TO BE INSTALLED AFTER WALL IS COMPLETELY SHEETED, HOWEVER WINDOW SUPPORT CHANNELS MUST BE INSTALLED. REFER TO DWGS. P-081201 AND P-081206.

STEP 4. INSTALL PANEL AS SHOWN IN STEP 4, DETAIL-1 OR DETAIL-2. ENSURE THAT SUPPORT CHANNEL AND STARTING PANEL OF NEXT RUN ARE INSTALLED PRIOR TO INSTALLING ENDING PANEL. IF WALL ENDS AT AN INSIDE CORNER, SEE DRAWING P-081188 FOR STRUCTURAL AND PANELING DETAILS.

STEP 5. INSTALL OUTSIDE CORNER TRIM AS SHOWN IN STEP 5, DETAIL-1 OR DETAIL-2. FILL VOID AT CORNER SUPPORT WITH SCRAP INSULATION AS REQUIRED FOR CORNER CONDITION. IF WALL ENDS AT AN INSIDE CORNER, SEE DRAWING P-081188 FOR INSIDE CORNER TRIM DETAILS. INSTALL APPROPRIATE EDGE OF ROOF TRIM. SEE DRAWING P-080720 FOR INSTALLATION DETAILS.

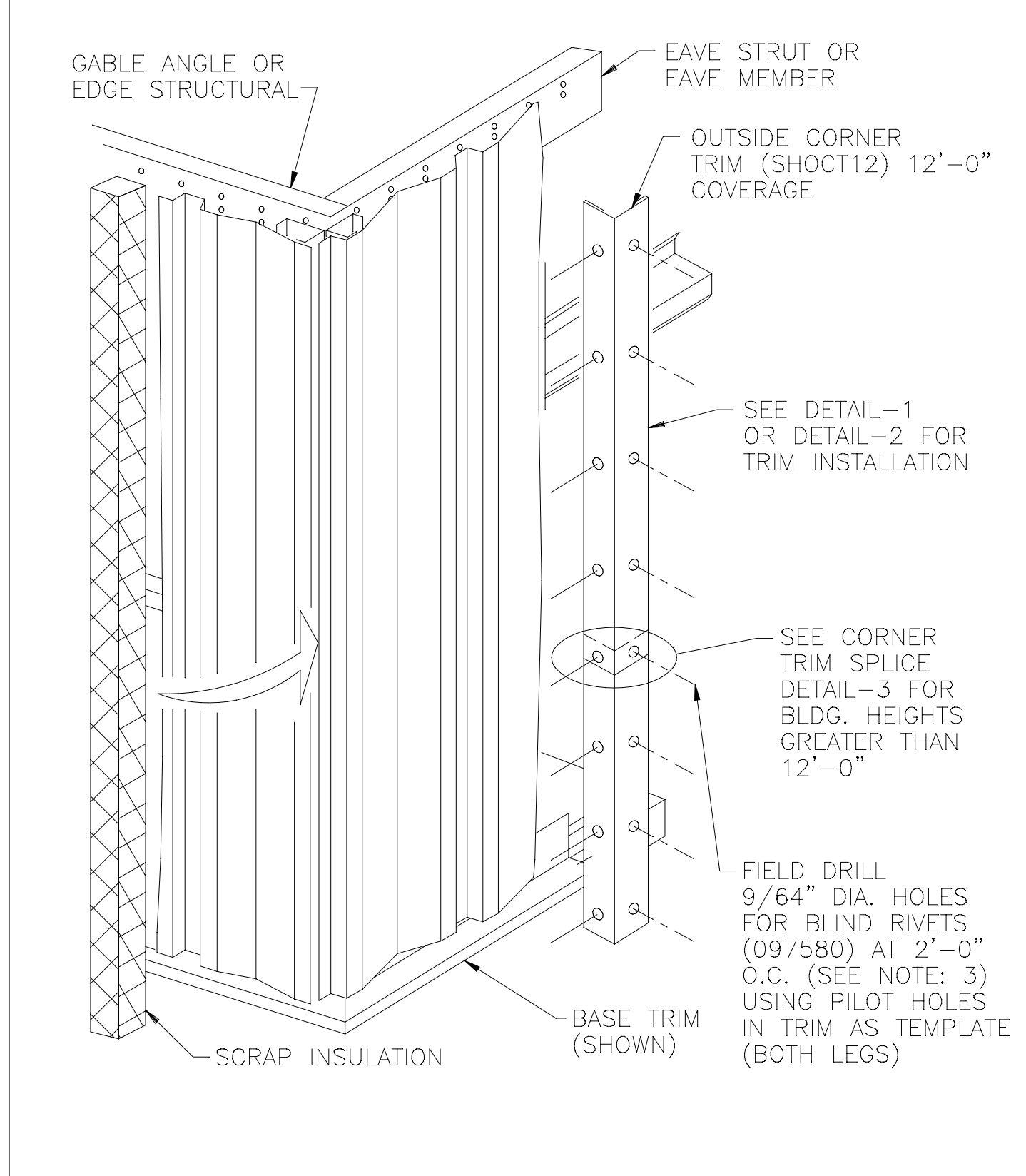
NOTES:
1. REFERENCE SHADOWWALL DRAWING INDEX P-081180 FOR APPROPRIATE INSULATION DRAWING.
2. INSULATION THICKNESS MAY REQUIRE TRIMMING AT CORNERS AND ACCESSORIES.
3. SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.

STEP 1	INSTALL CORNER SUPPORT
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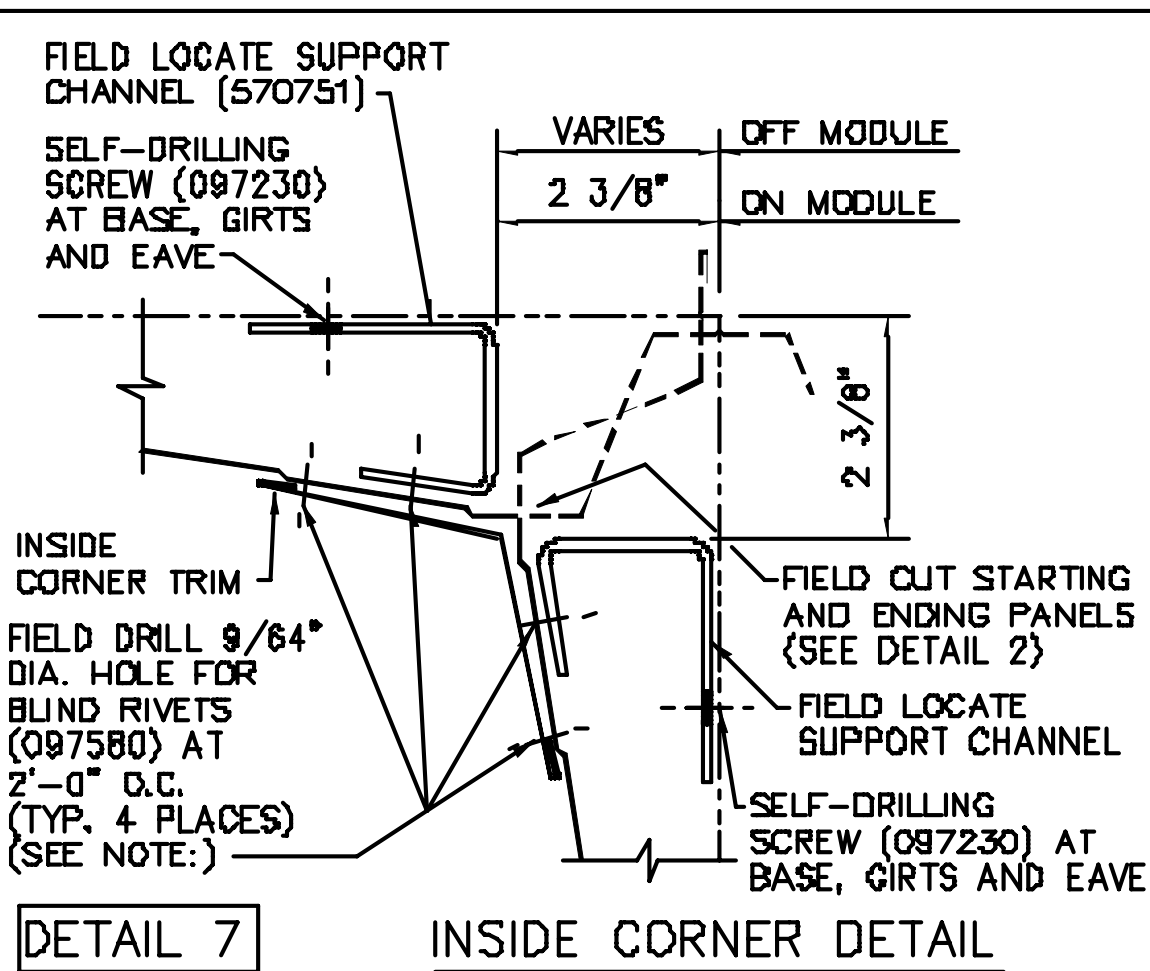
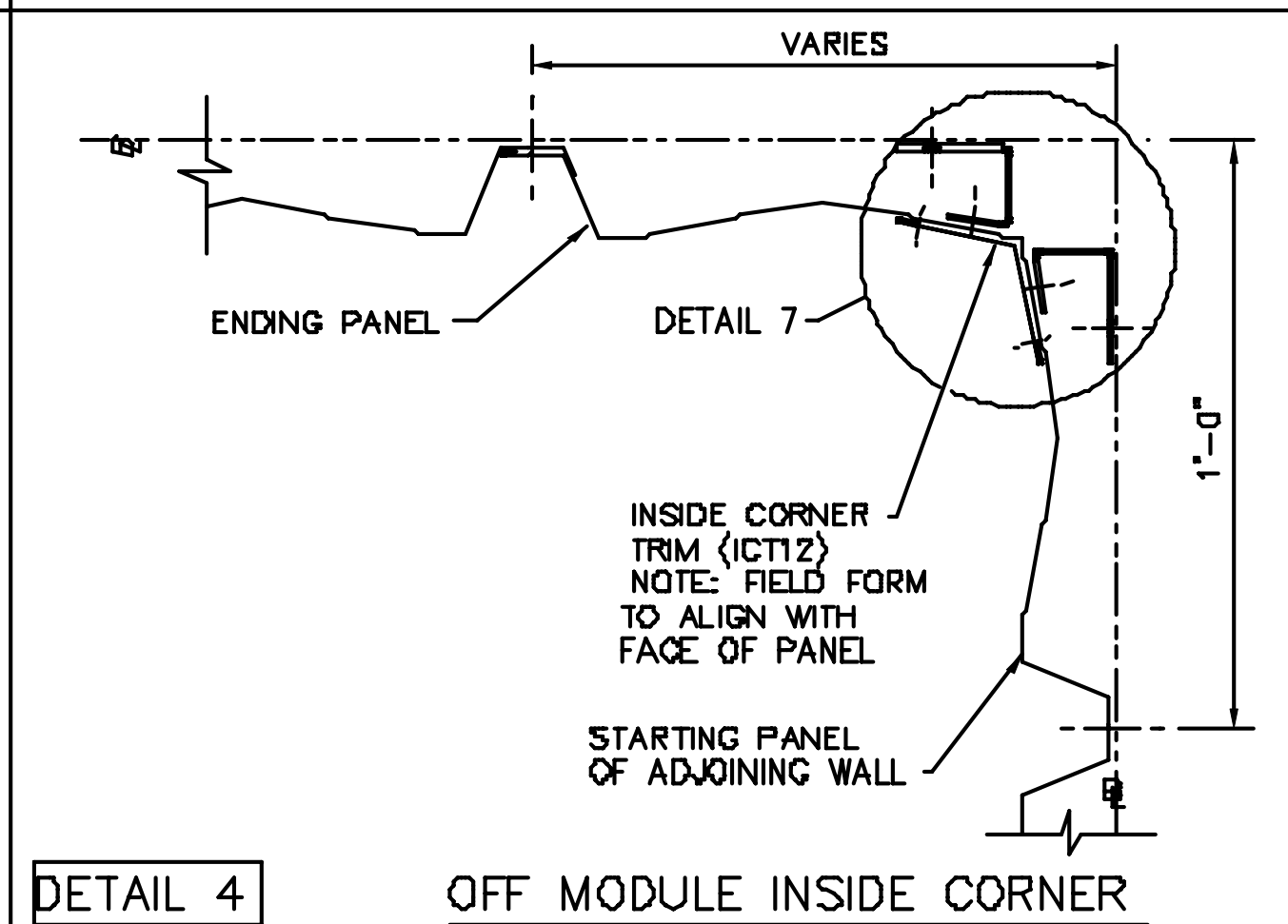
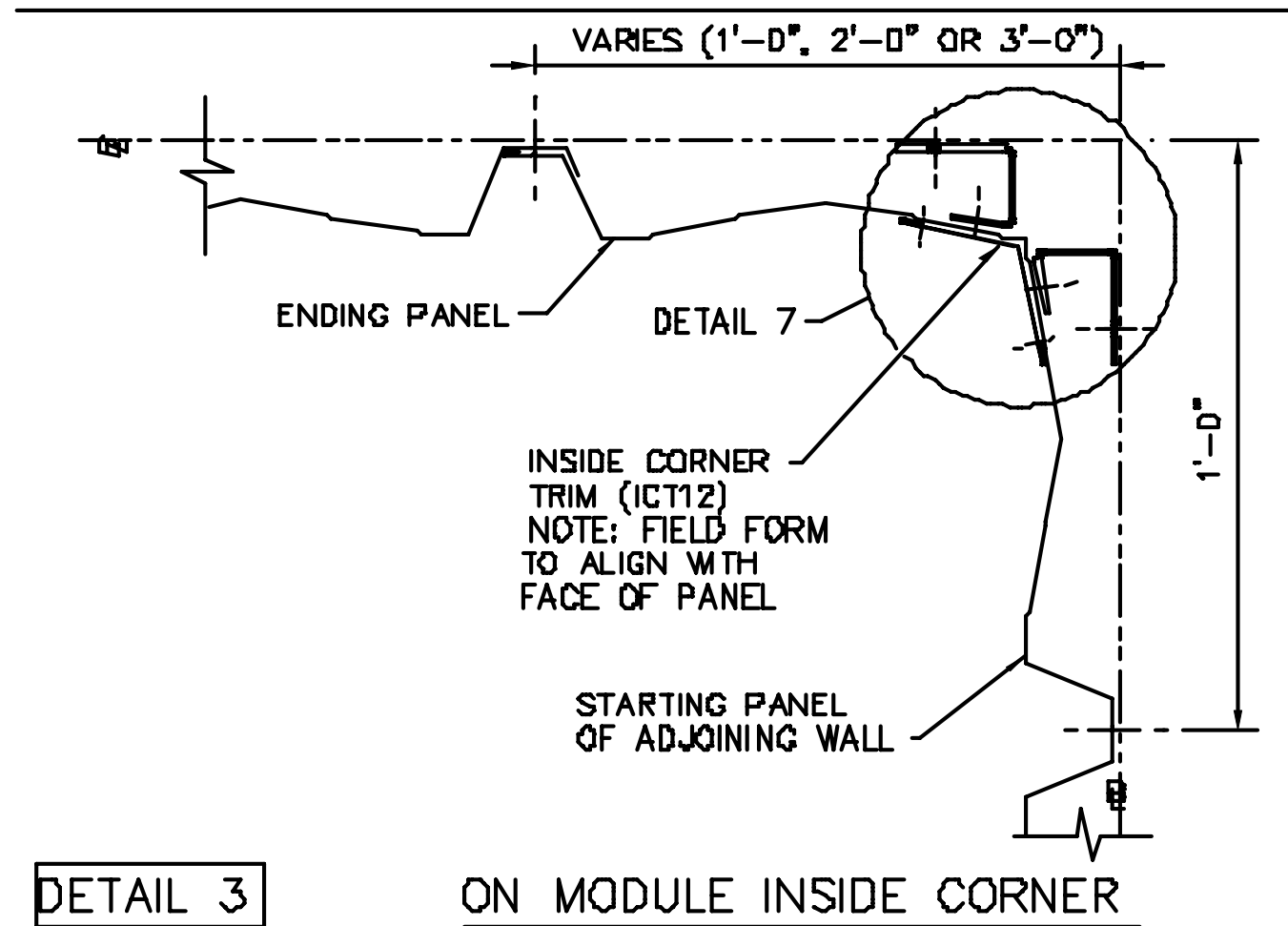
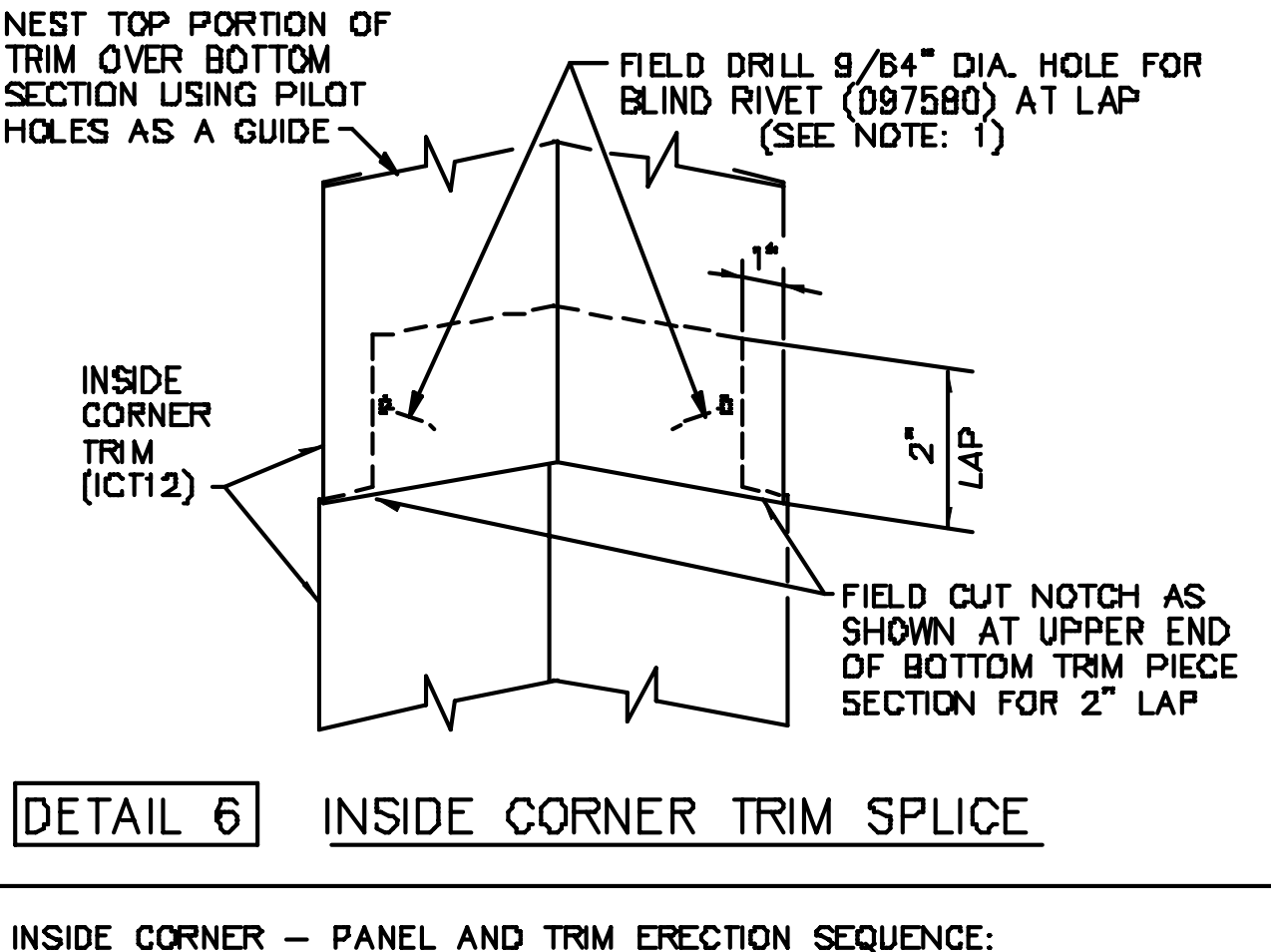
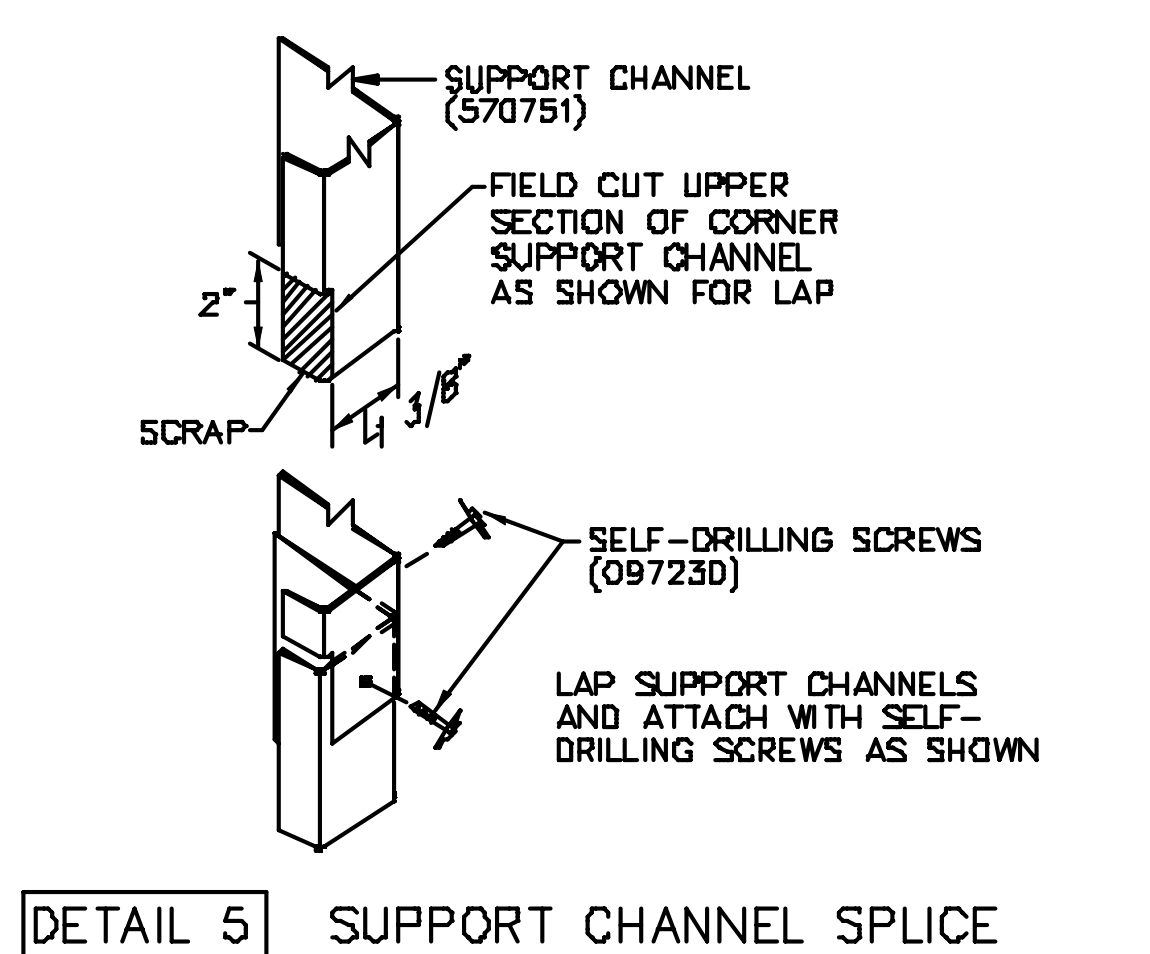
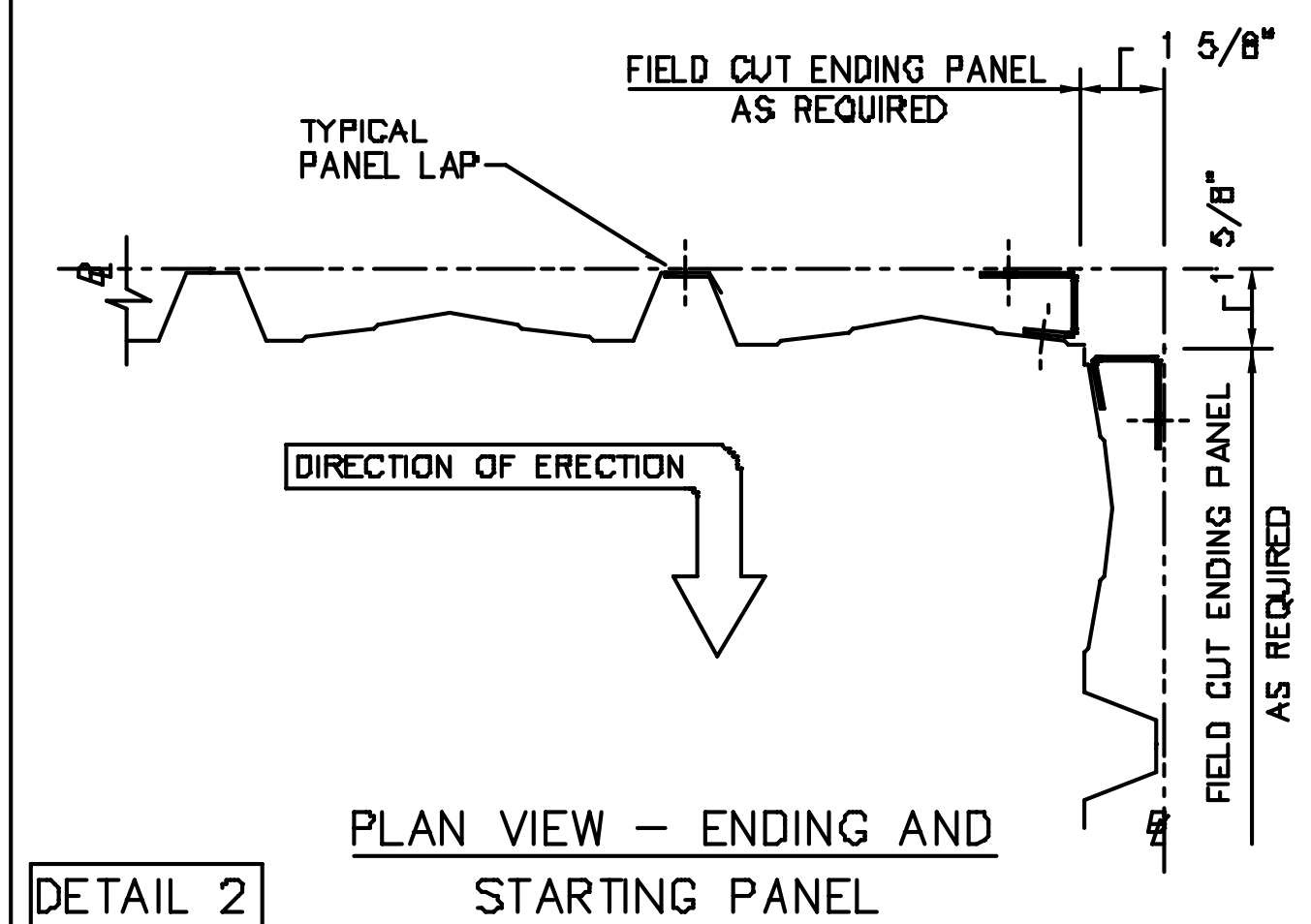
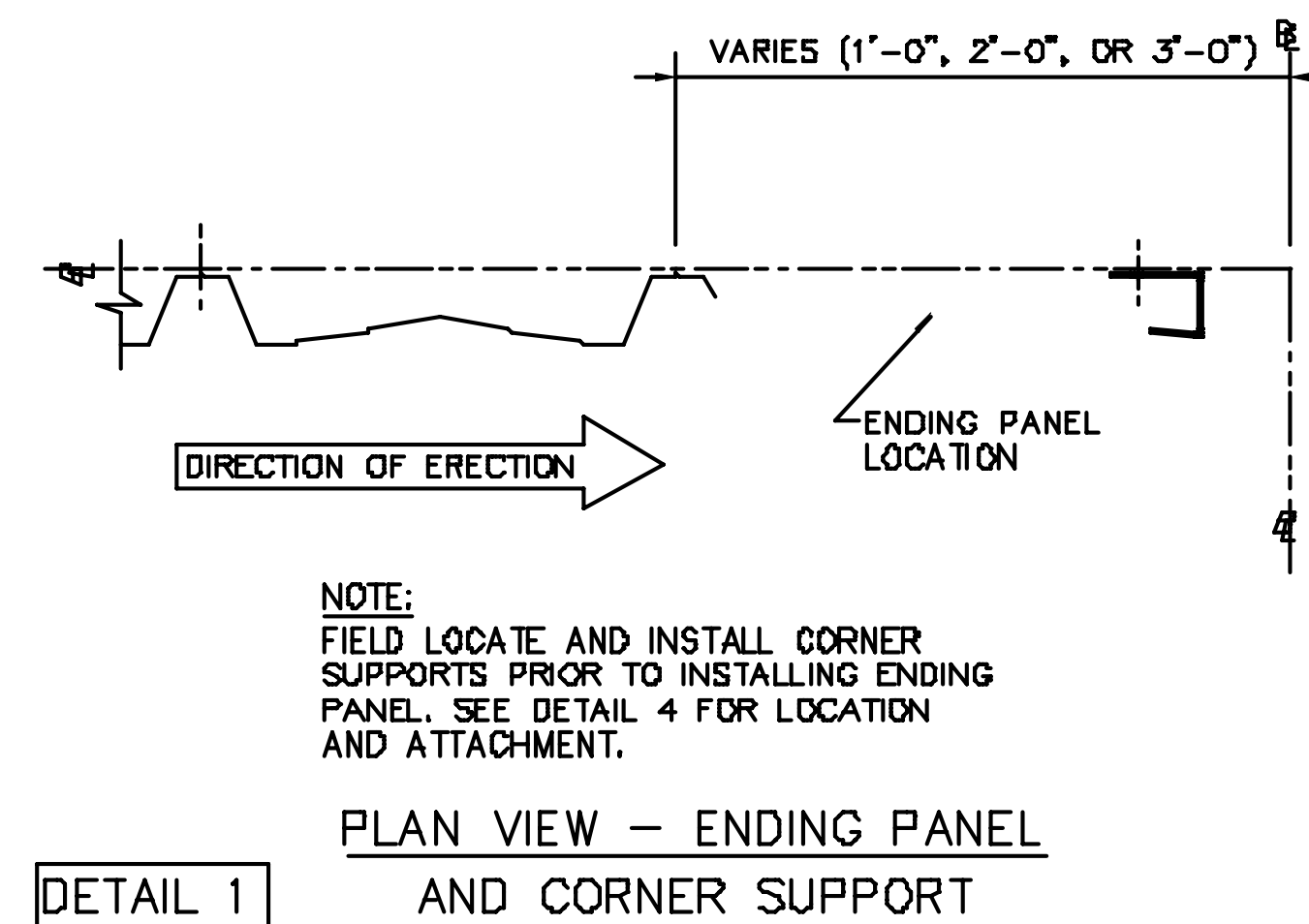
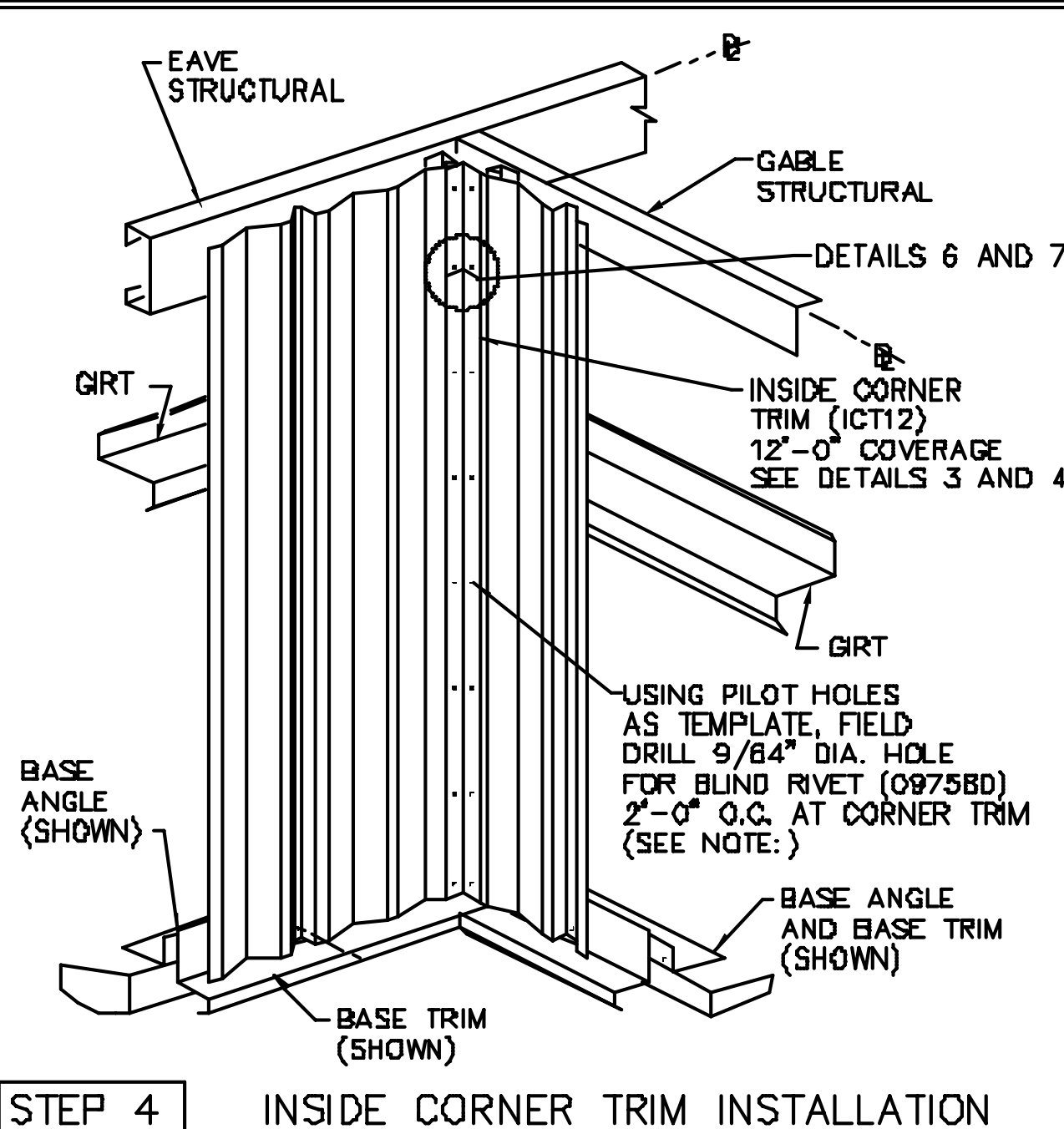
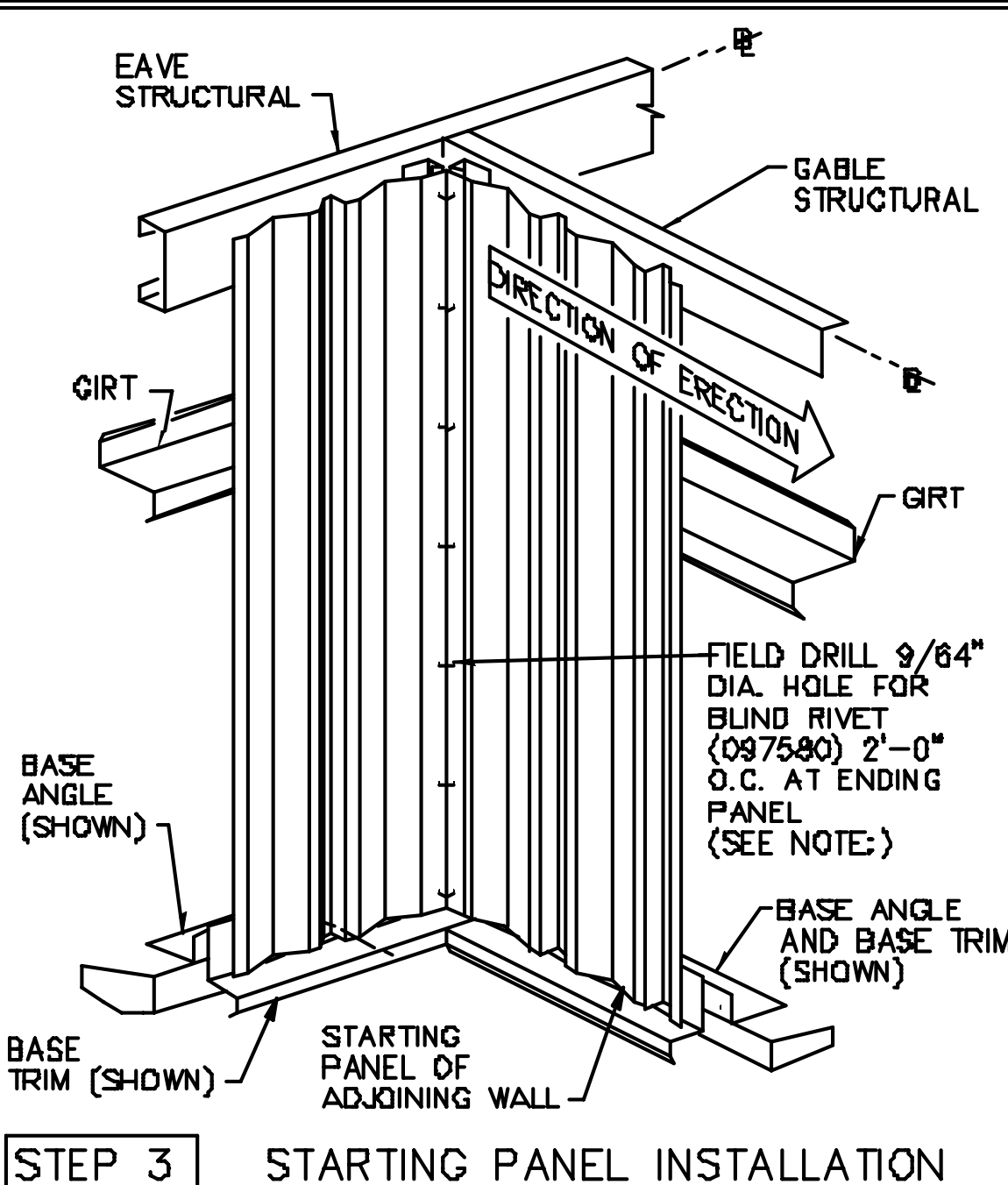
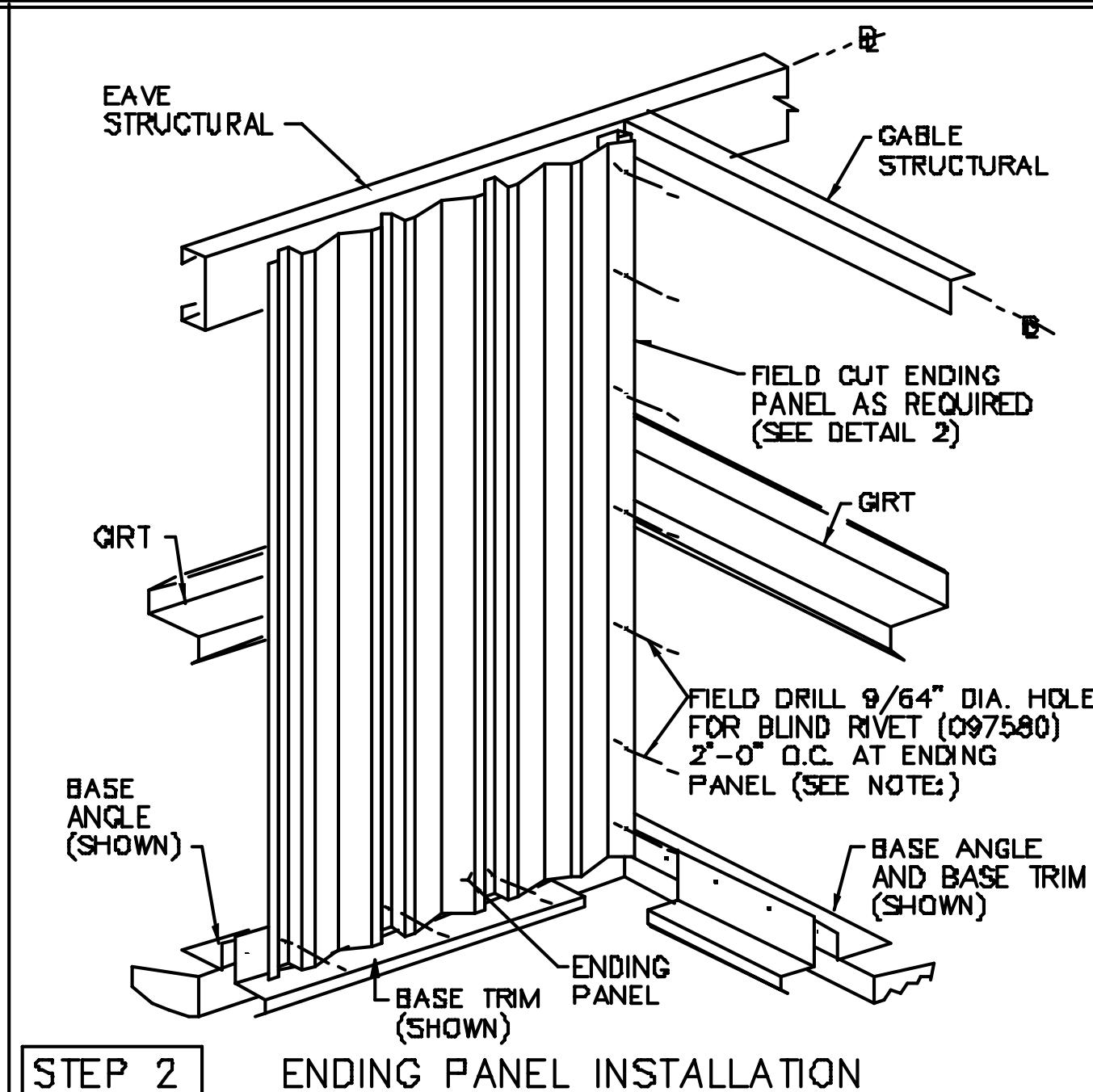
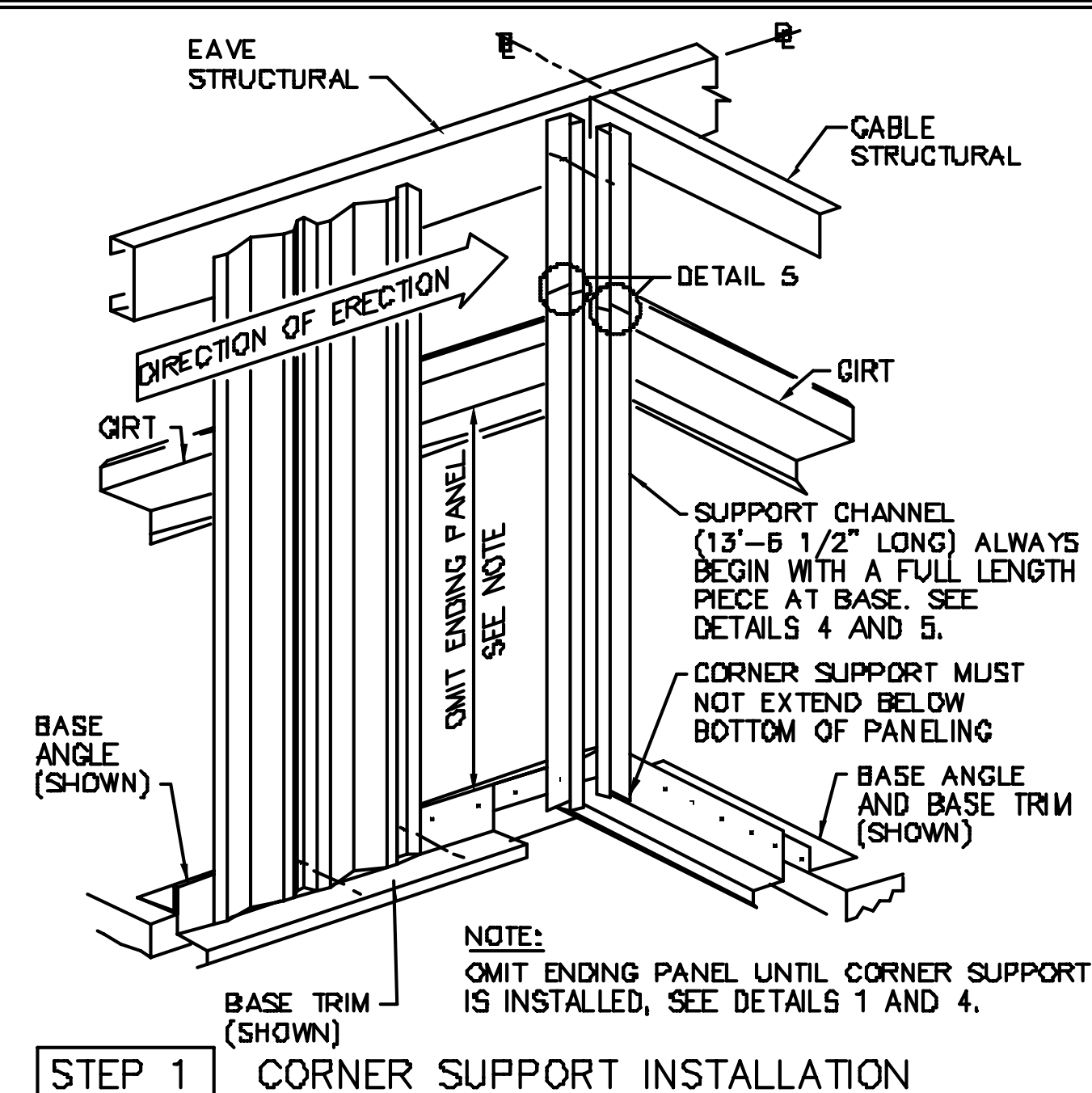
STEP 4	INSTALL CORNER SUPPORT
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STEP 2	INSTALL STARTING PANEL
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STEP 5	INSTALL OUTSIDE CORNER TRIM
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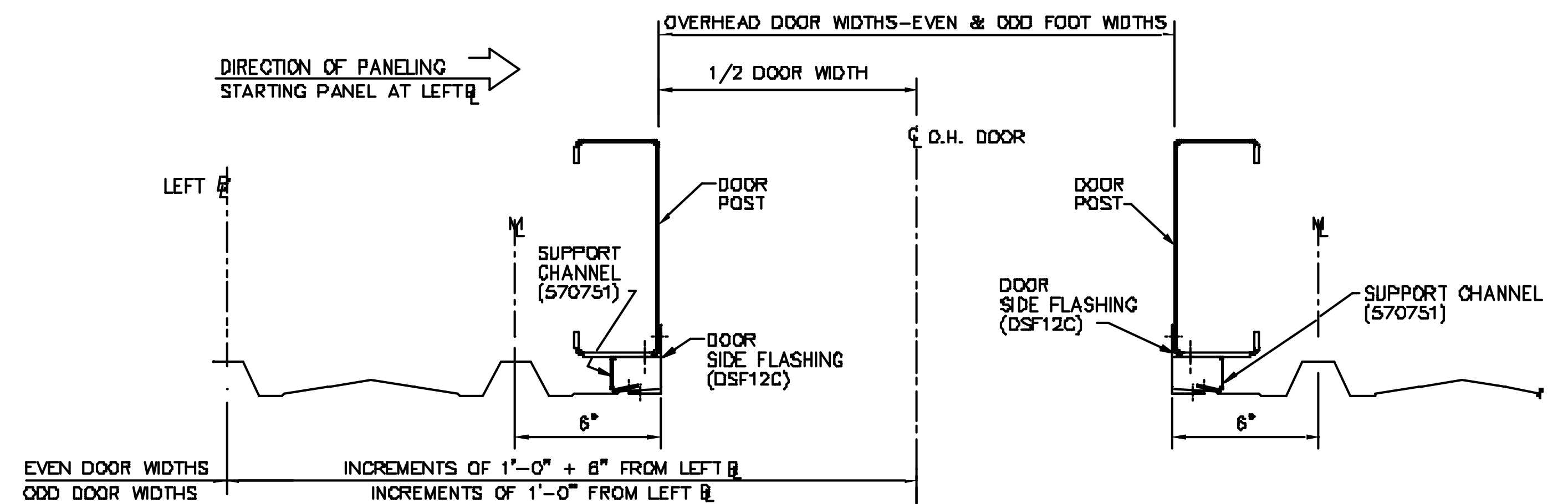
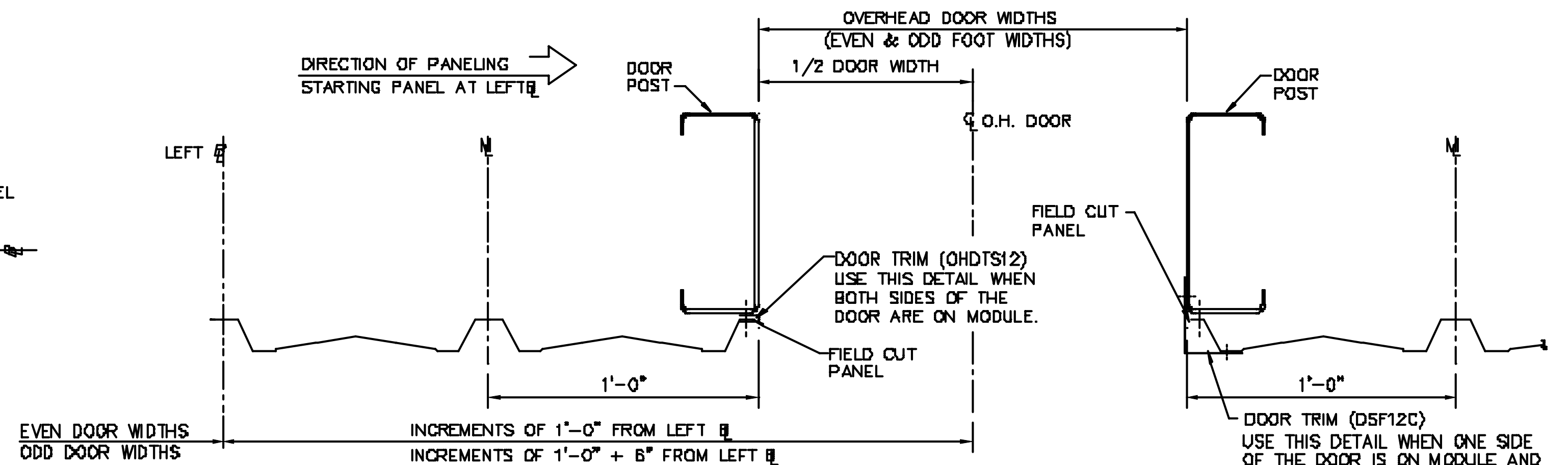
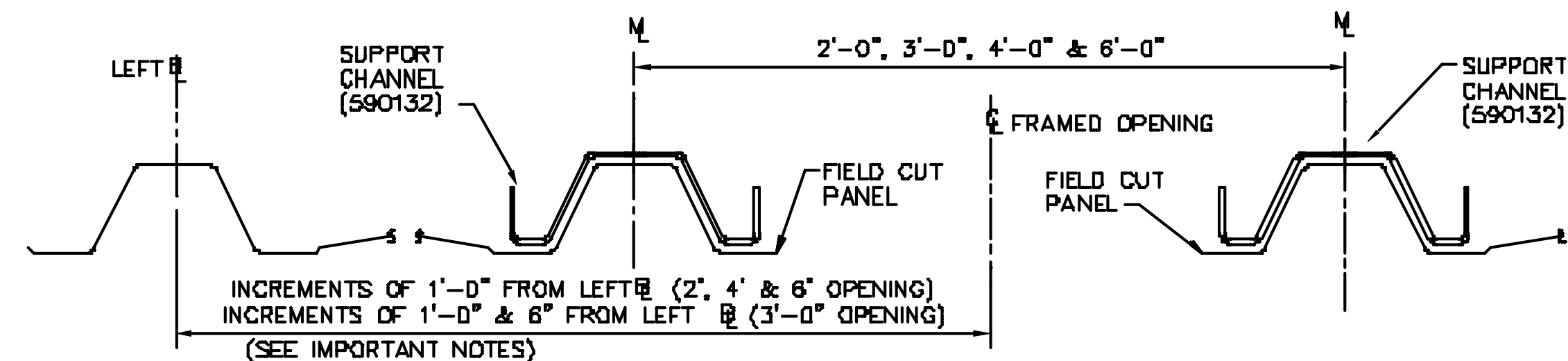
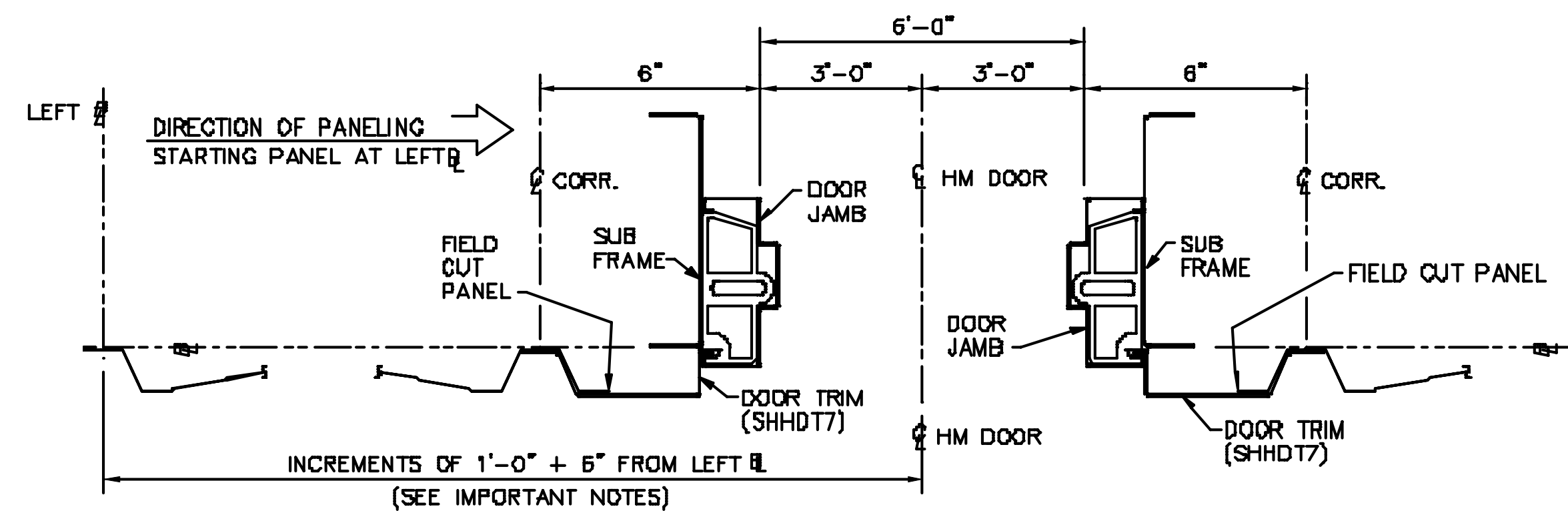
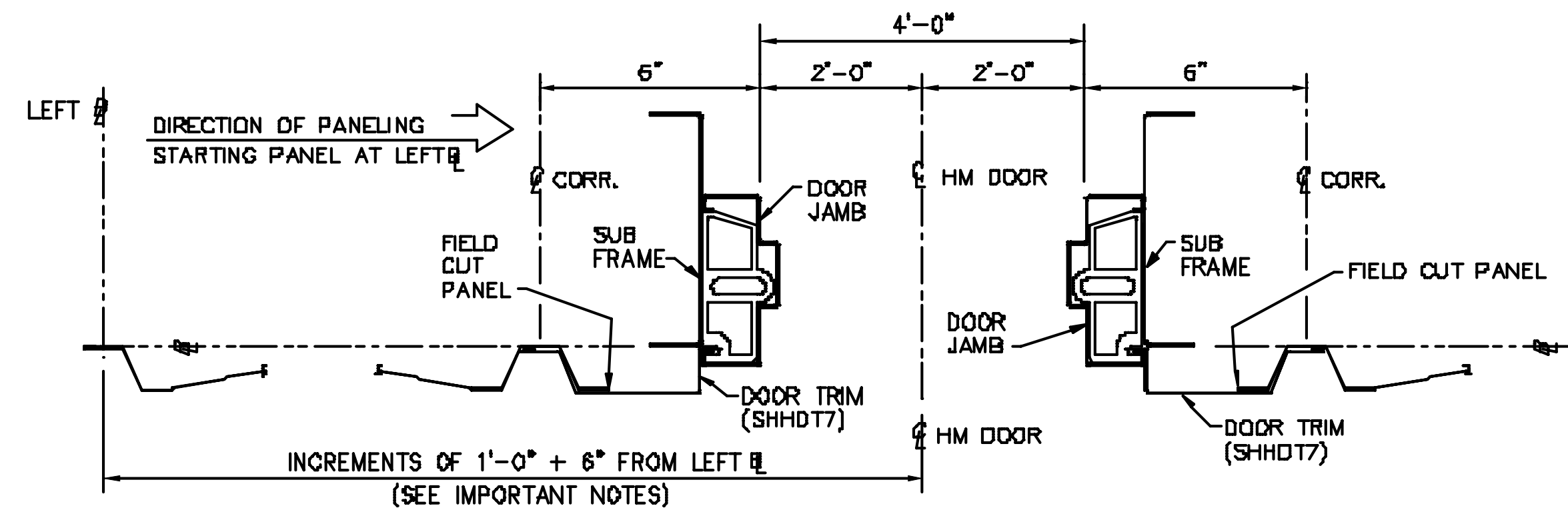
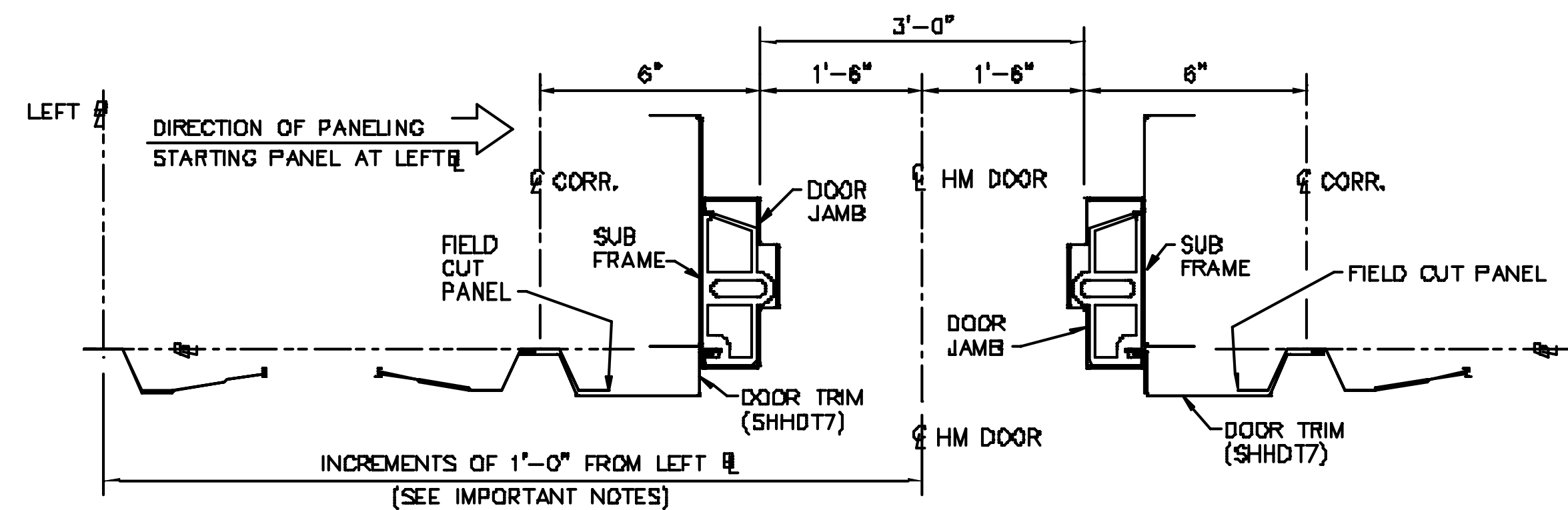
SHADOWWALL CORNER PANEL AND TRIM INSTALLATION				
DRAWN BY	CHECKED BY	GROUP NUMBER: 37-031-01		
RHE	CWS	B	P-081185	05
FIRST RELEASE DATE	REVISION DATE			
01/21/10	09/28/23			



INSIDE CORNER - PANEL AND TRIM ERECTION SEQUENCE:

- STEP 1 INSTALL PANELS (EXCEPT ENDING PANEL AT INSIDE CORNER) AS SHOWN ON DETAIL WCB083 TITLED "SHADOWWALL PANEL INSTALLATION - PANEL TO STRUCTURALS". FIELD LOCATE AND INSTALL CORNER SUPPORT AS SHOWN IN DETAIL 4. (SEE DETAIL FOR SPLICE ON EAVE HEIGHTS GREATER THAN 14'-0").
- STEP 2 FIELD CUT ENDING PANEL FOR REQUIRED WIDTH AT END OF PANEL RUN FOR PREVIOUS WALL AS SHOWN IN DETAILS 2 AND 4.
- STEP 3 FIELD CUT STARTING PANEL OF ADJOINING WALL AND INSTALL AS SHOWN IN DETAILS 2 AND 4.
- STEP 4 INSTALL INSIDE CORNER TRIM WITH BLIND RIVET AS SHOWN. LAP AND FIELD CUT TRIM FOR EAVE HEIGHTS GREATER THAN 12'-0". SEE DETAILS 4, 6 AND 7.
- NOTE: SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.

SHADOWWALL INSIDE CORNER PANEL AND TRIM INSTALLATION				
DRAWN BY:	CHECKED BY:	GROUP NUMBER: 37- 031- 01		
RHE	CWS			
FIRST RELEASE DATE:	REVISION DATE:	B	P-081188	04
01/21/10	06/27/17			

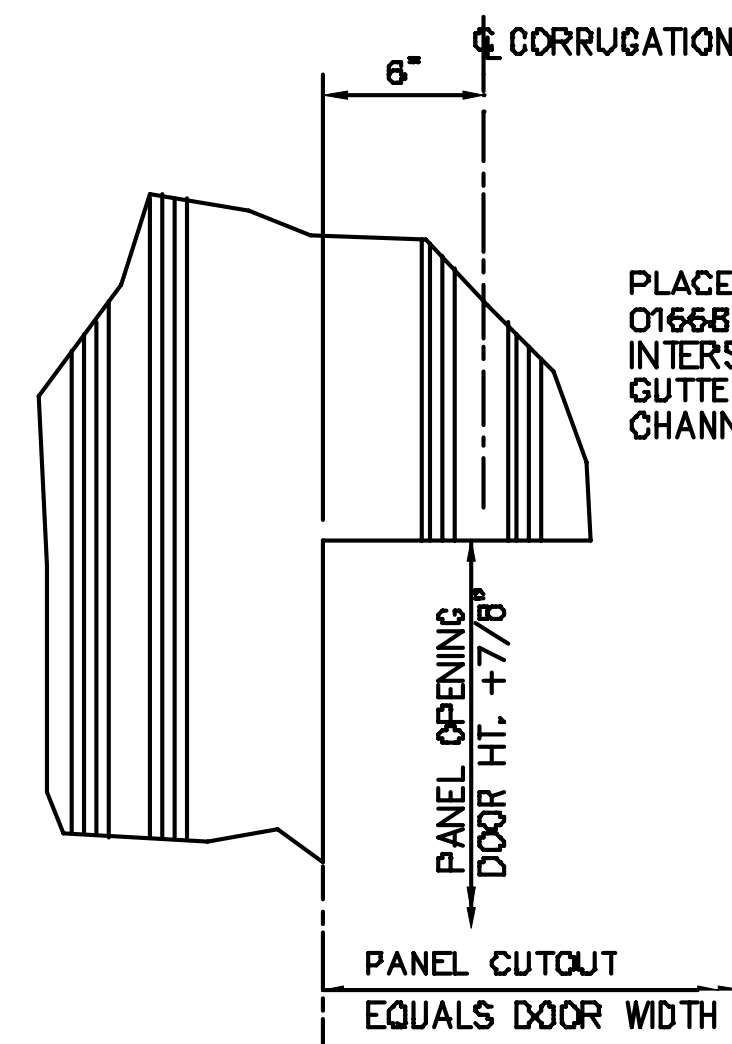


IMPORTANT NOTES:

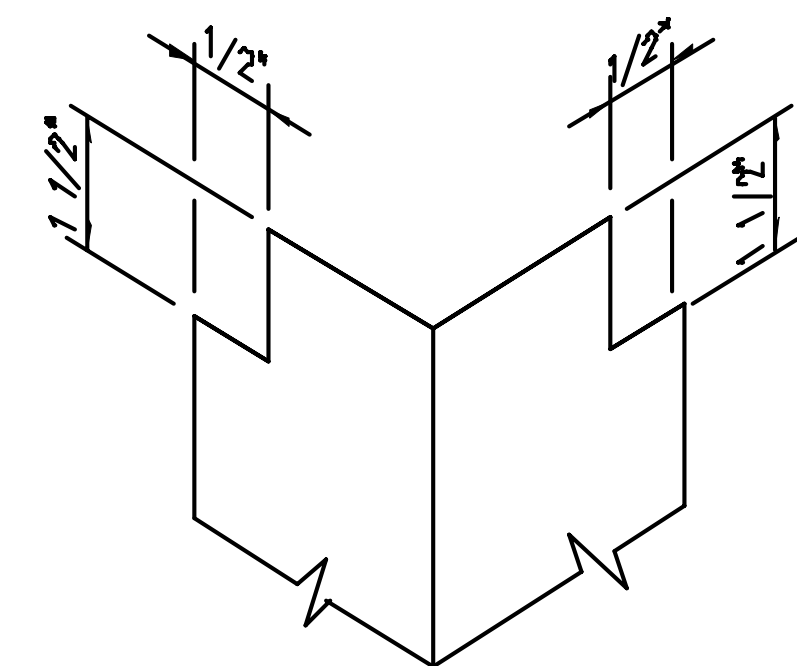
- THE FOLLOWING ACCESSORY LOCATION INFORMATION IS GENERAL. (DEVIATIONS MAY BE REQUIRED DEPENDING ON LOCATION & SIZES OF THE BUILDING STRUCTURALS, OVERHEAD DOOR OPERATING SYSTEMS, ETC.).
 - WHEN LOCATING ACCESSORIES, CHECK FOR STRUCTURAL AND BRACING CLEARANCE.
 - A MINIMUM OF 1'-0" TO BE USED BETWEEN EDGE OF A HOLLOW METAL DOOR OR OVERHEAD DOOR AND ANY OTHER 1'-0" WALL ACCESSORY.
 - CAUTION:** ALLOW FOR AT LEAST 1'-0" BETWEEN BUILDING STRUCTURAL MEMBERS (COLUMN, ENDWALL POST) FOR INSTALLATION OF SUPPORT CHANNEL.
- ACCESSORIES ARE ALWAYS LOCATED BY VIEWING THE WALL SYSTEM FROM THE EXTERIOR (OUTSIDE) OF THE BUILDING AND MEASURING FROM THE LEFT ϕ (BUILDING LINE) OR M (PANEL MODULE LINE) TO THE ϕ (CENTERLINE) OF THE ACCESSORIES.

SHADOWALL ACCESSORY LOCATION LAYOUT

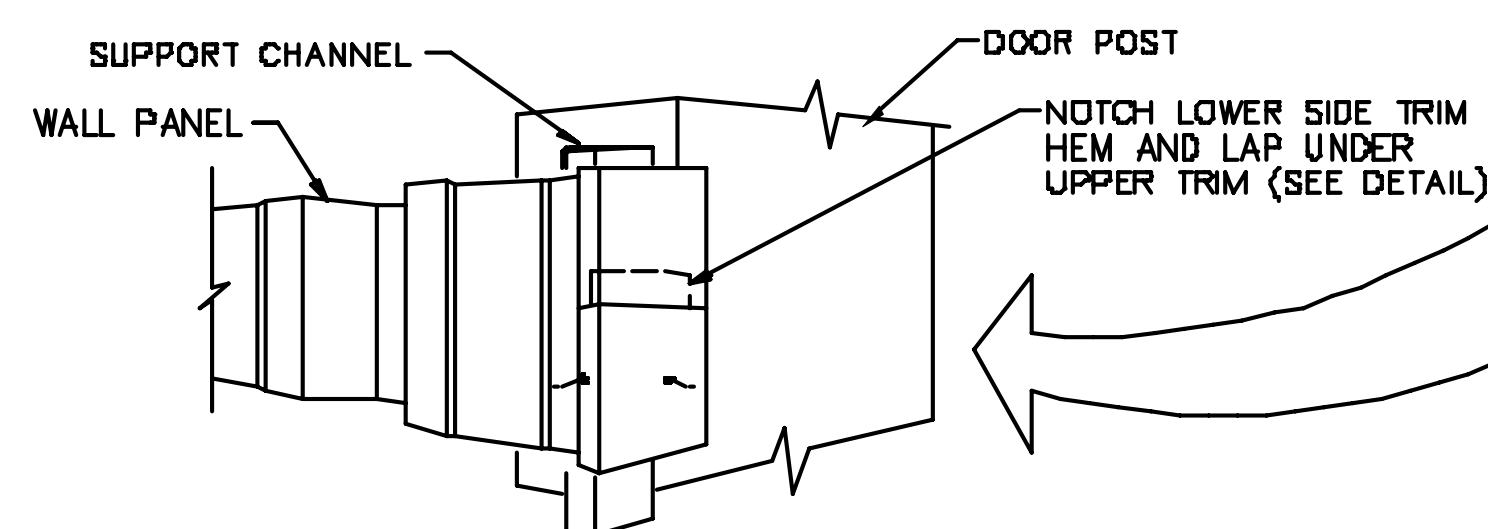
DRAWN BY	CHECKED BY	GROUP NUMBER	37-024-01
RHE	ESN		
FIRST RELEASE DATE	REVISION DATE	B	P-081201 03
01/21/10	02/02/17		



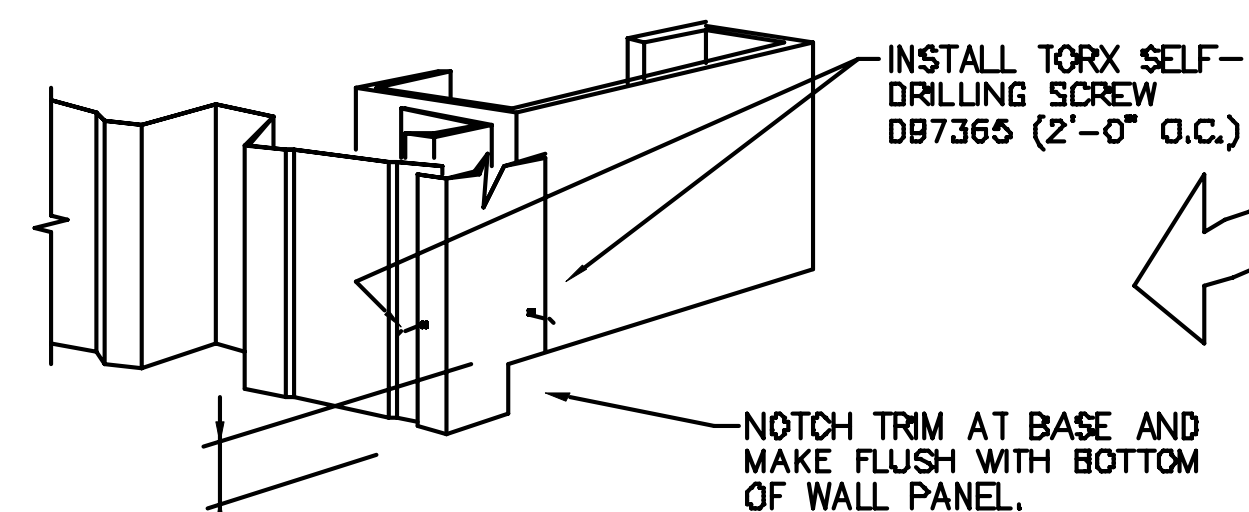
DETAIL - 1
PANEL CUTOUT



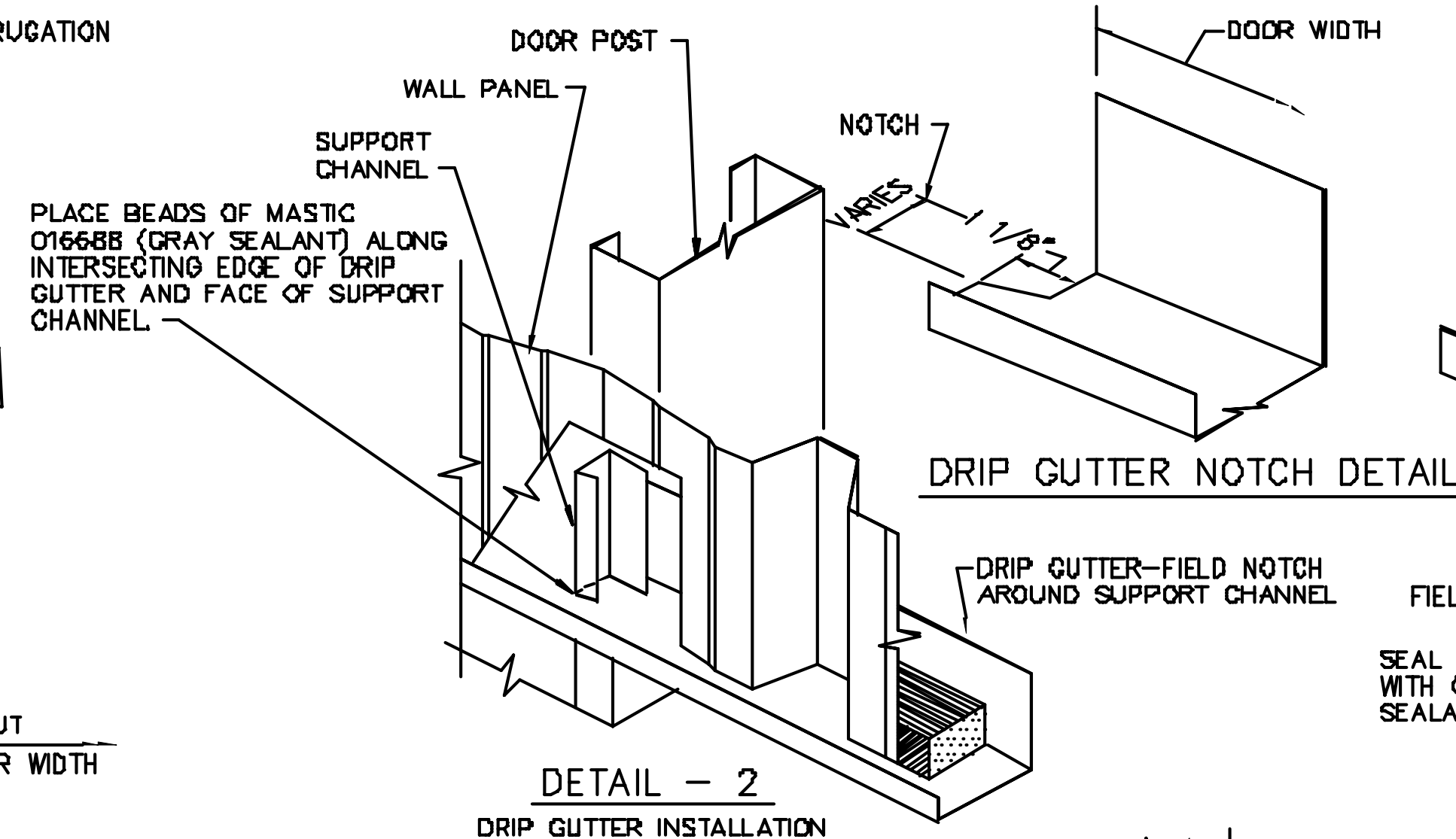
LOWER SIDE TRIM NOTCH DETAIL



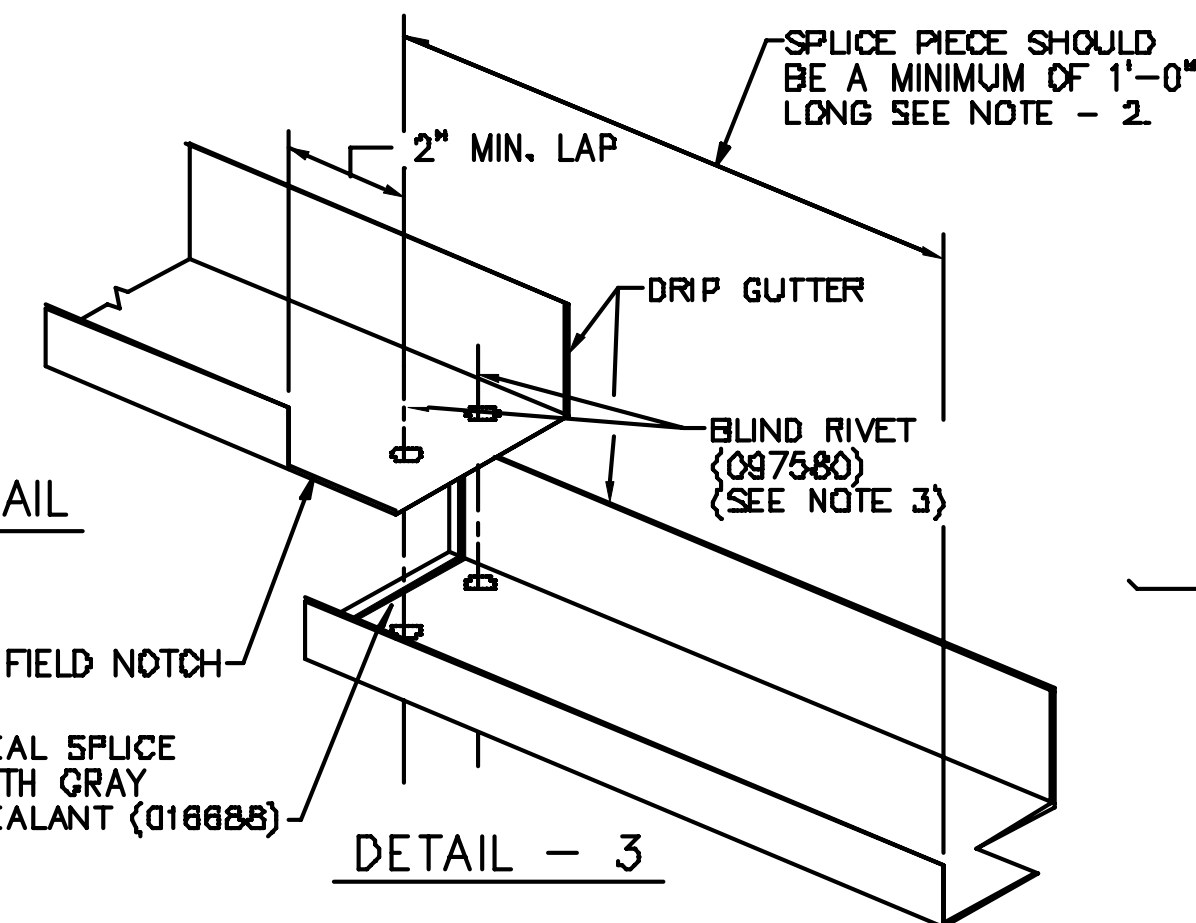
DETAIL - 4
SIDE TRIM LAP



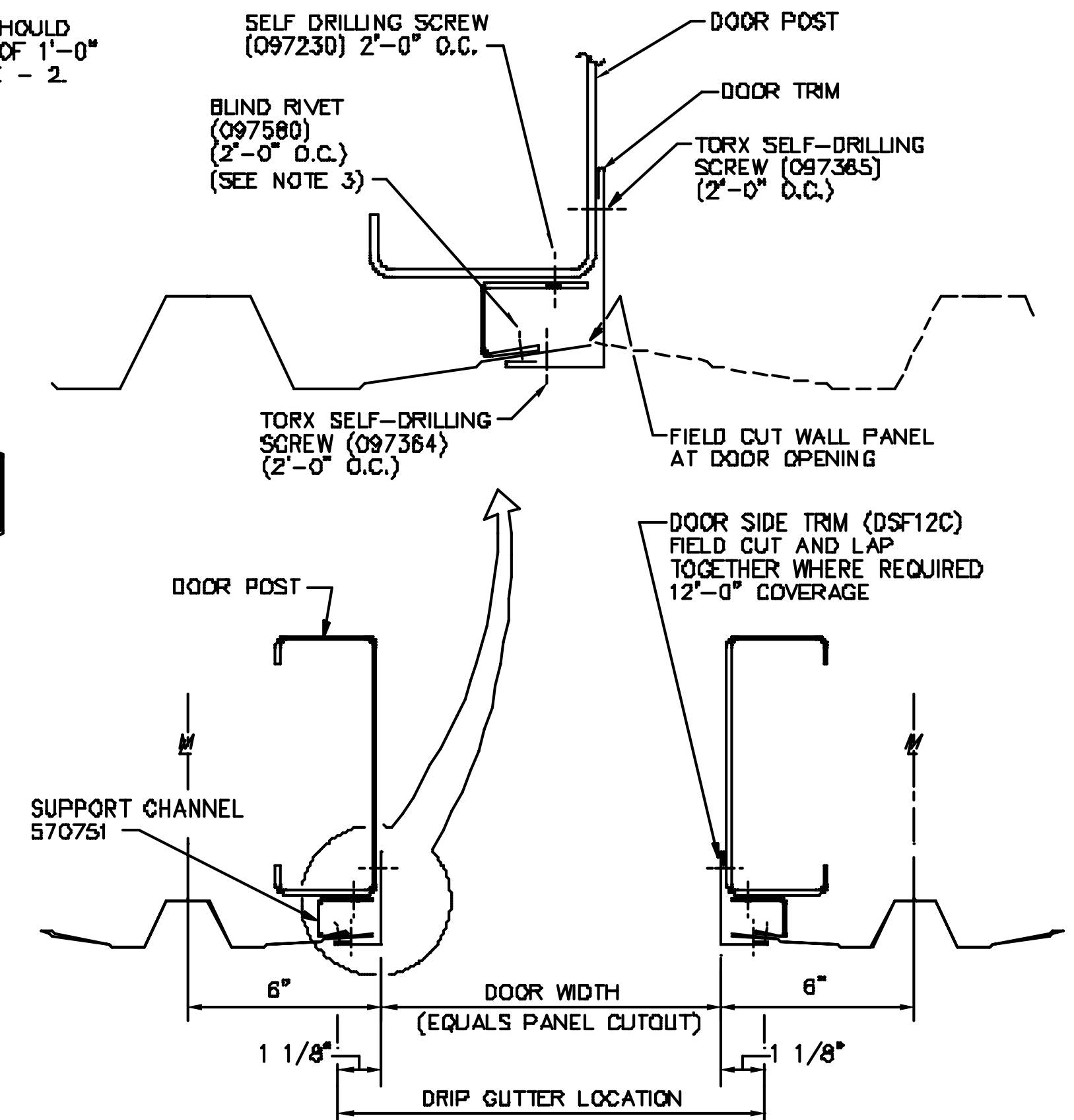
DETAIL - 5
DOOR POST AND DOOR SIDE TRIM AT BASE



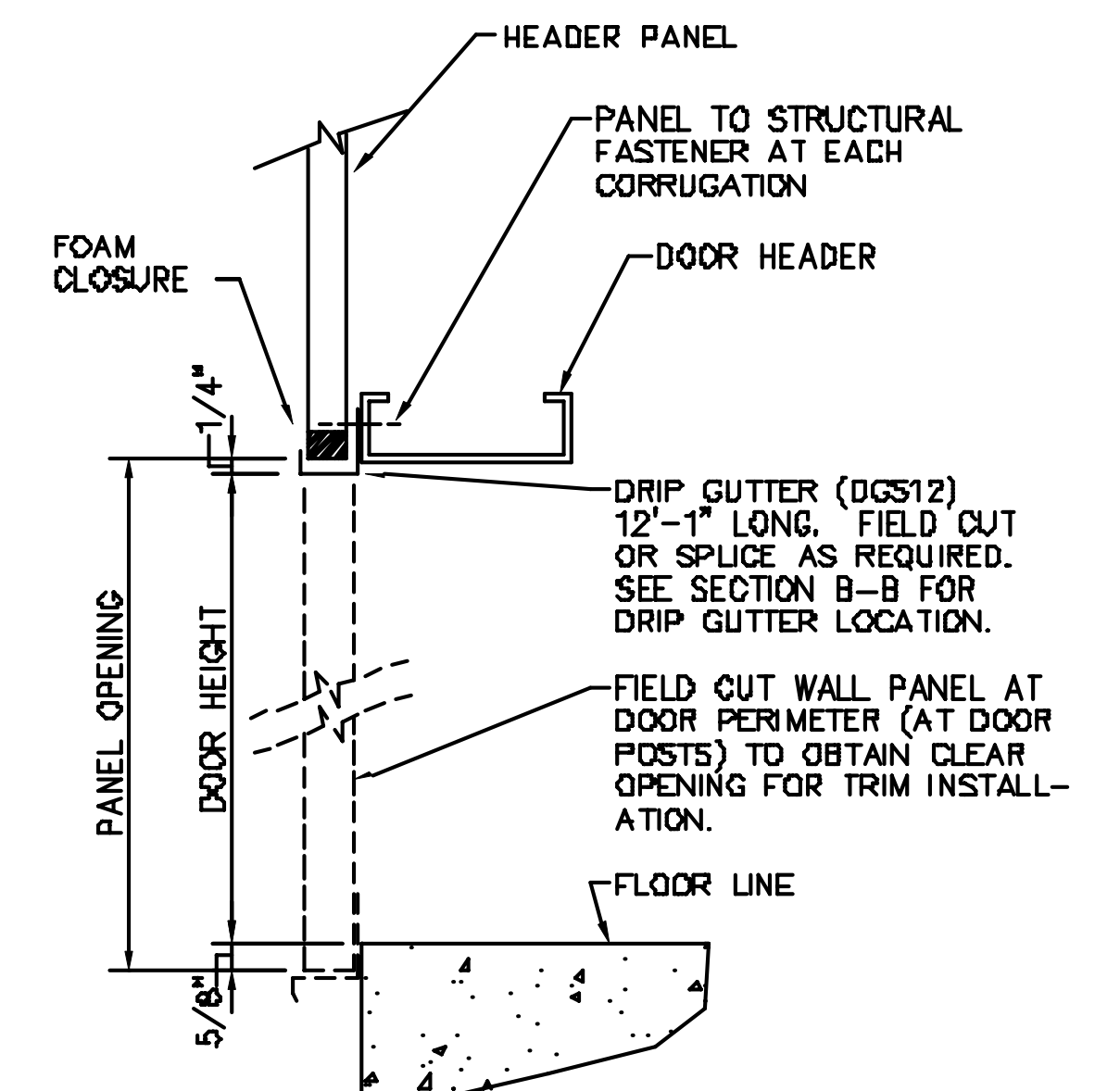
DETAIL - 2
DRIP GUTTER INSTALLATION



DETAIL - 3



SECTION B-B



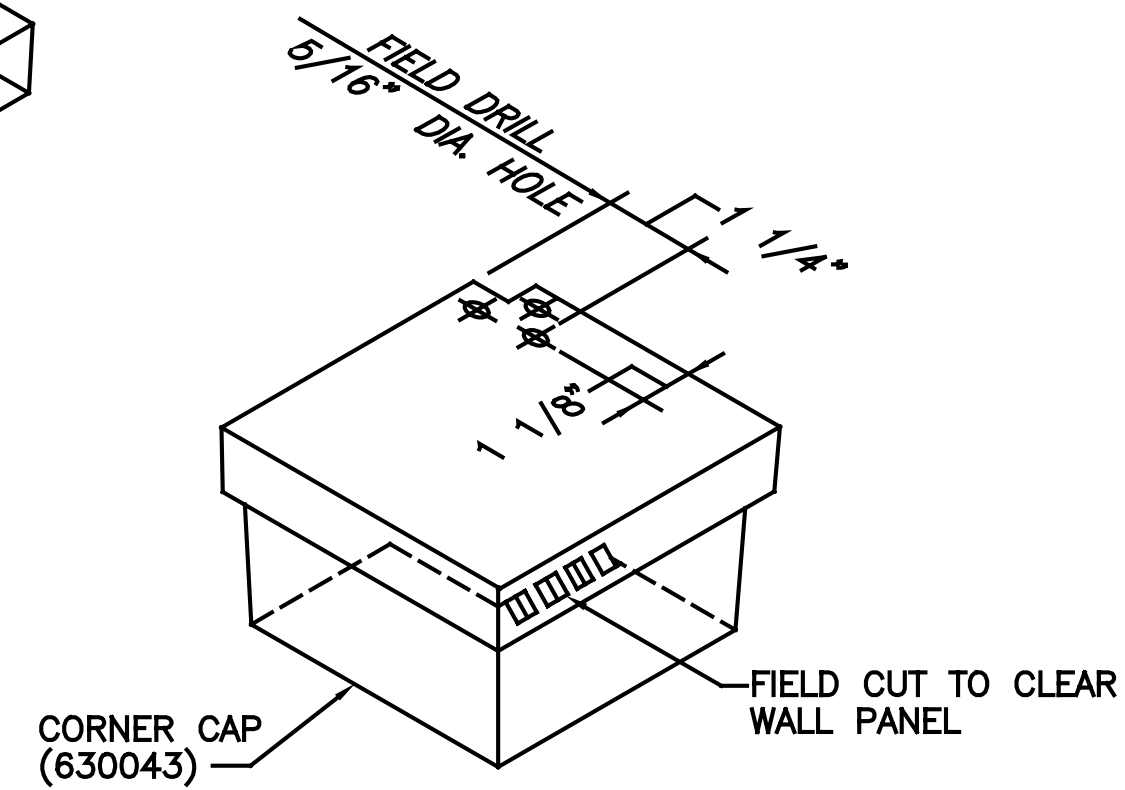
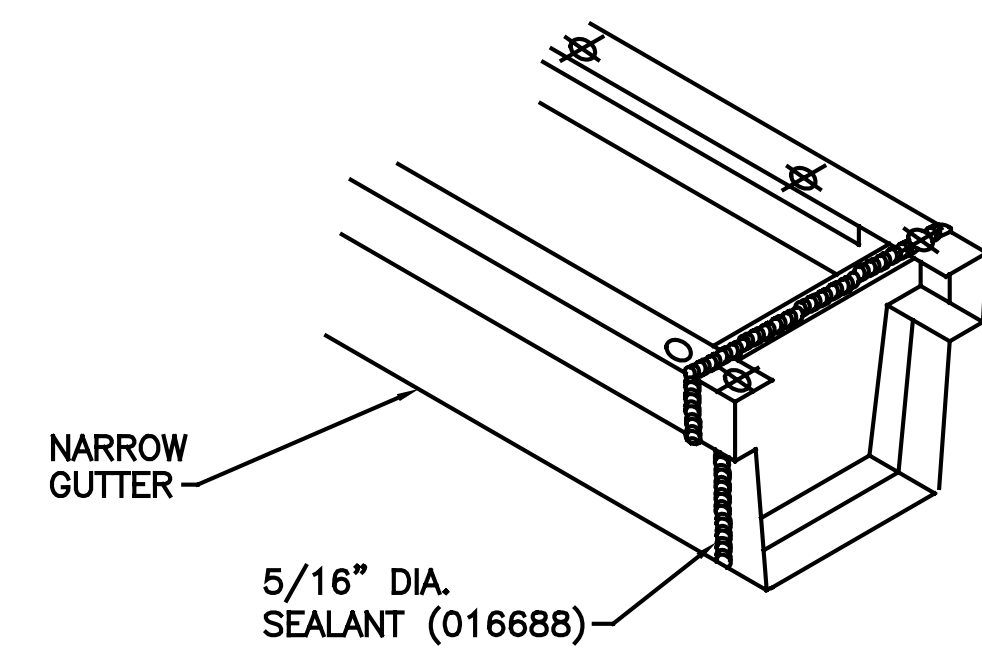
DETAIL A-A

VIEW OF PANEL OPENING

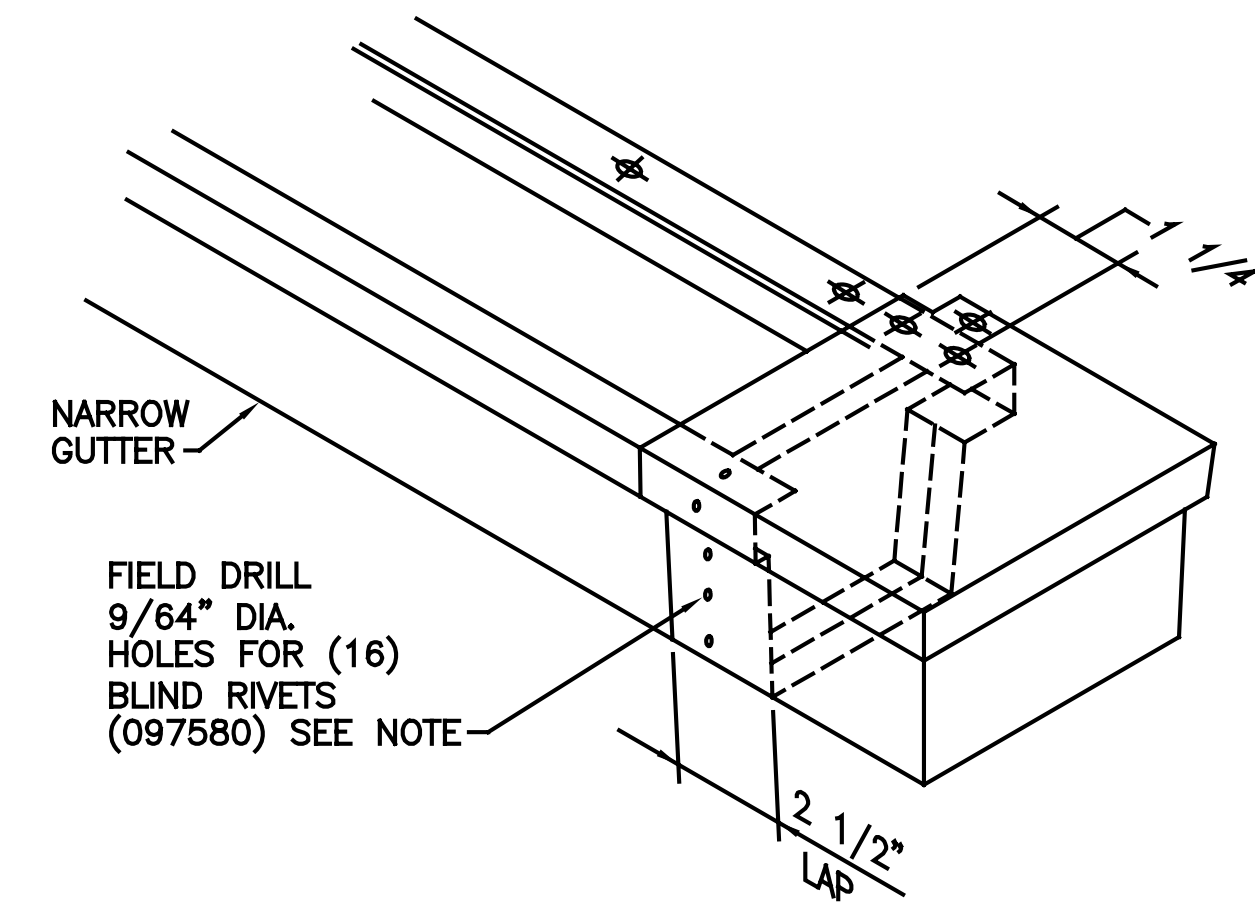
NOTES:

1. SEE DWG P-081201 FOR DOOR LOCATION LAYOUT
2. DOORS 12'-0" WIDE AND WIDER REQUIRE SPLICING OF THE DRIP GUTTER. CUT THE DRIP GUTTER SO THAT THE SPLICE PIECE IS AT LEAST 1'-0" LONG.
3. SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.

SHADOWALL OFF MODULE OVERHEAD DOOR			
PANEL AND TRIM INSTALLATION			
DRAWN BY	CHECKED BY	GROUP NUMBER: 37-025-01	
RHE	BSN		
FIRST RELEASE DATE	REVISION DATE	B	P-081203 04
01/21/10	03/22/17		



NARROW GUTTER

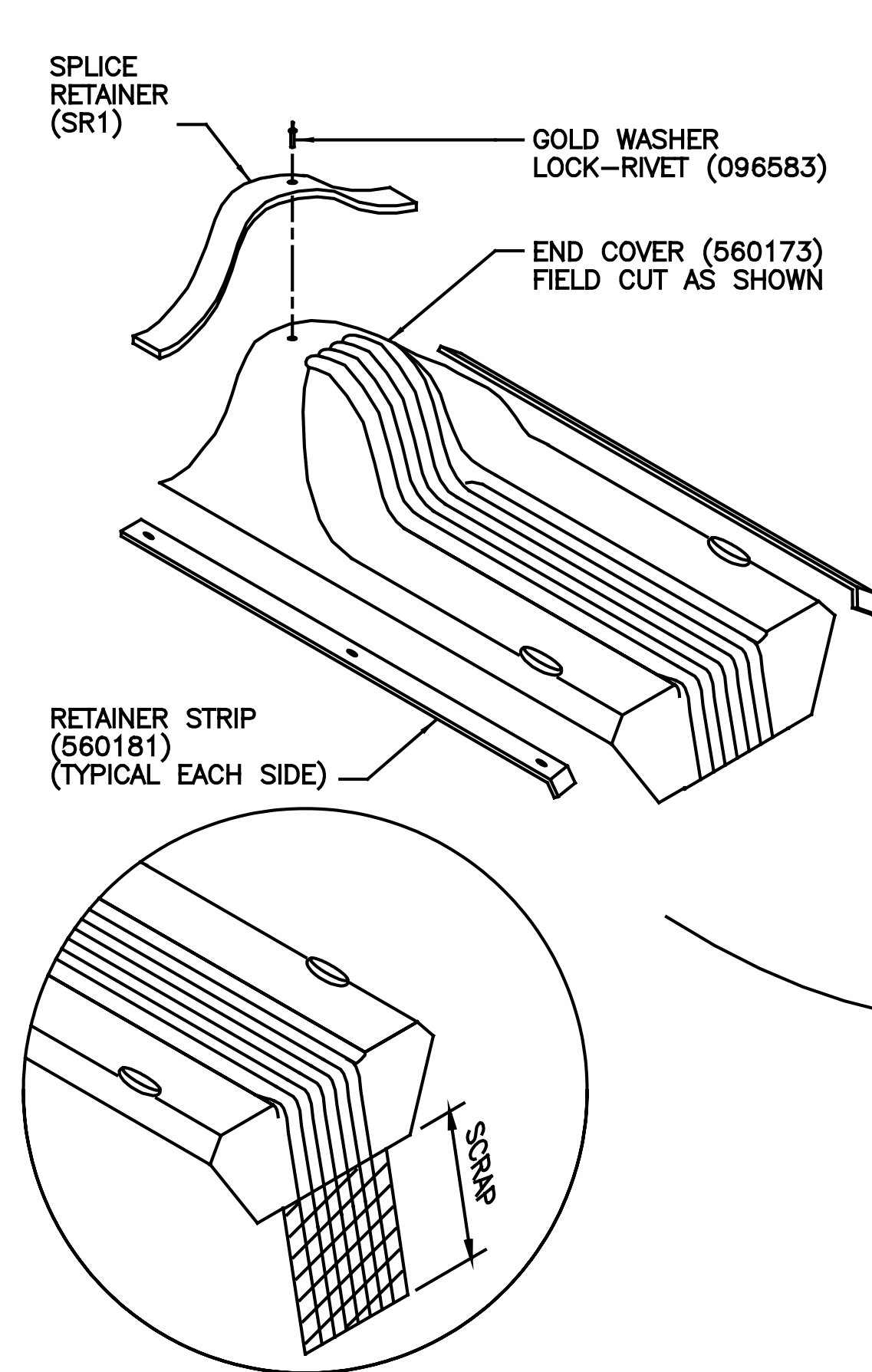


NOTE:

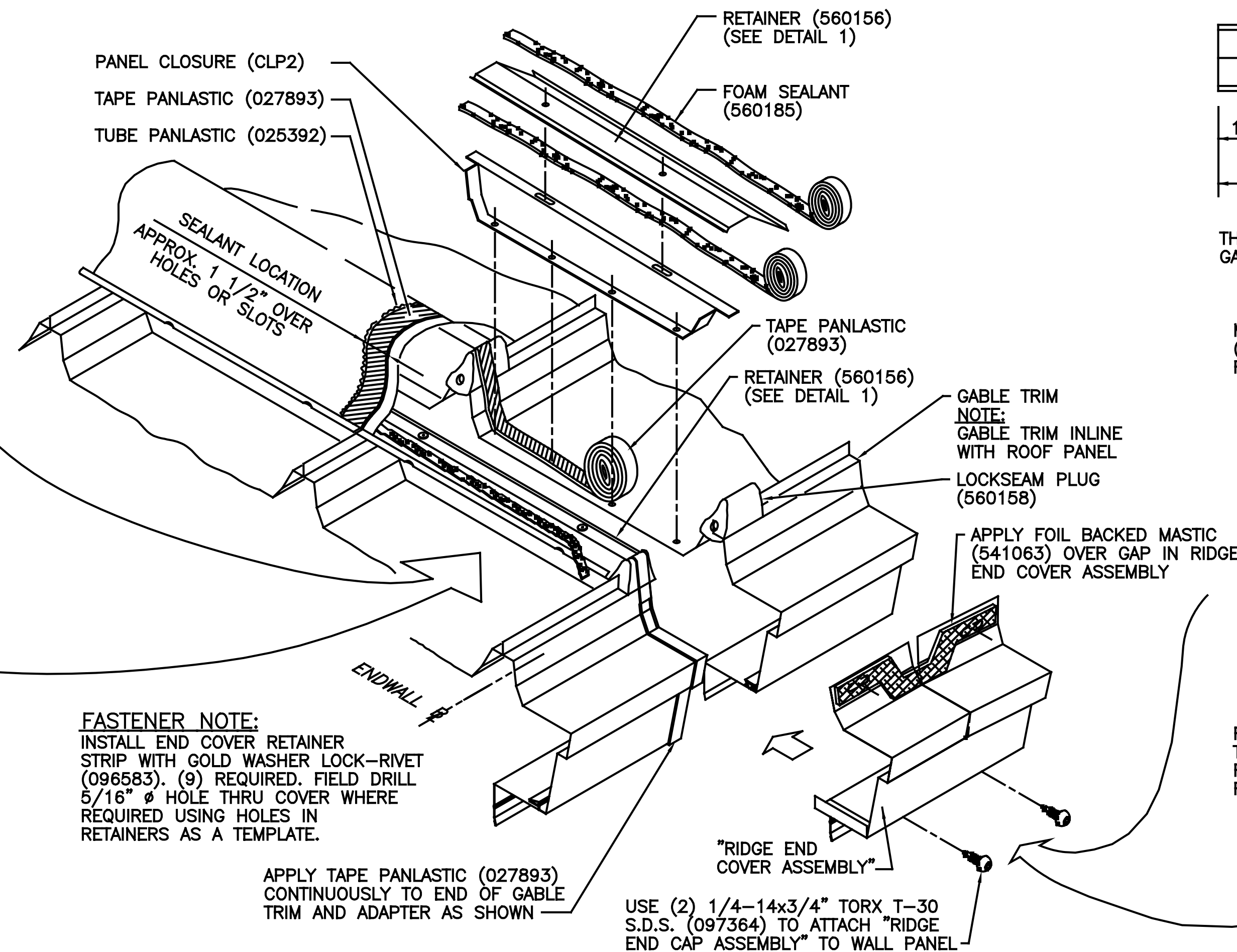
SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.

NARROW GUTTER CORNER CAP
INSTALLATION - ALL ROOFS

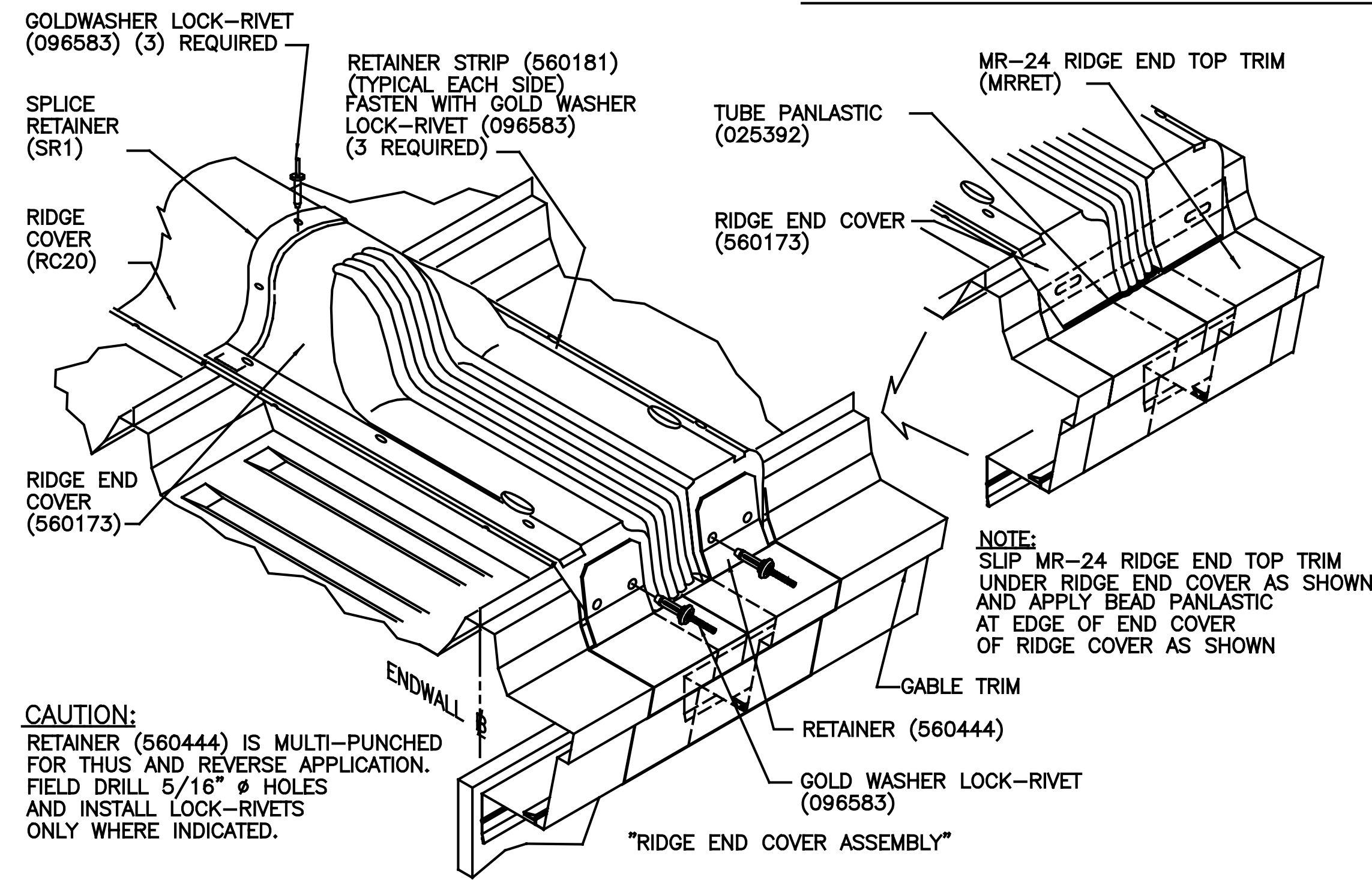
DRAWN BY	CHECKED BY	GROUP NUMBER: 01-004-01	
CAG	MEC		
FIRST RELEASE DATE	REVISION DATE	B	P-081236 04
01/21/10	12/04/18		



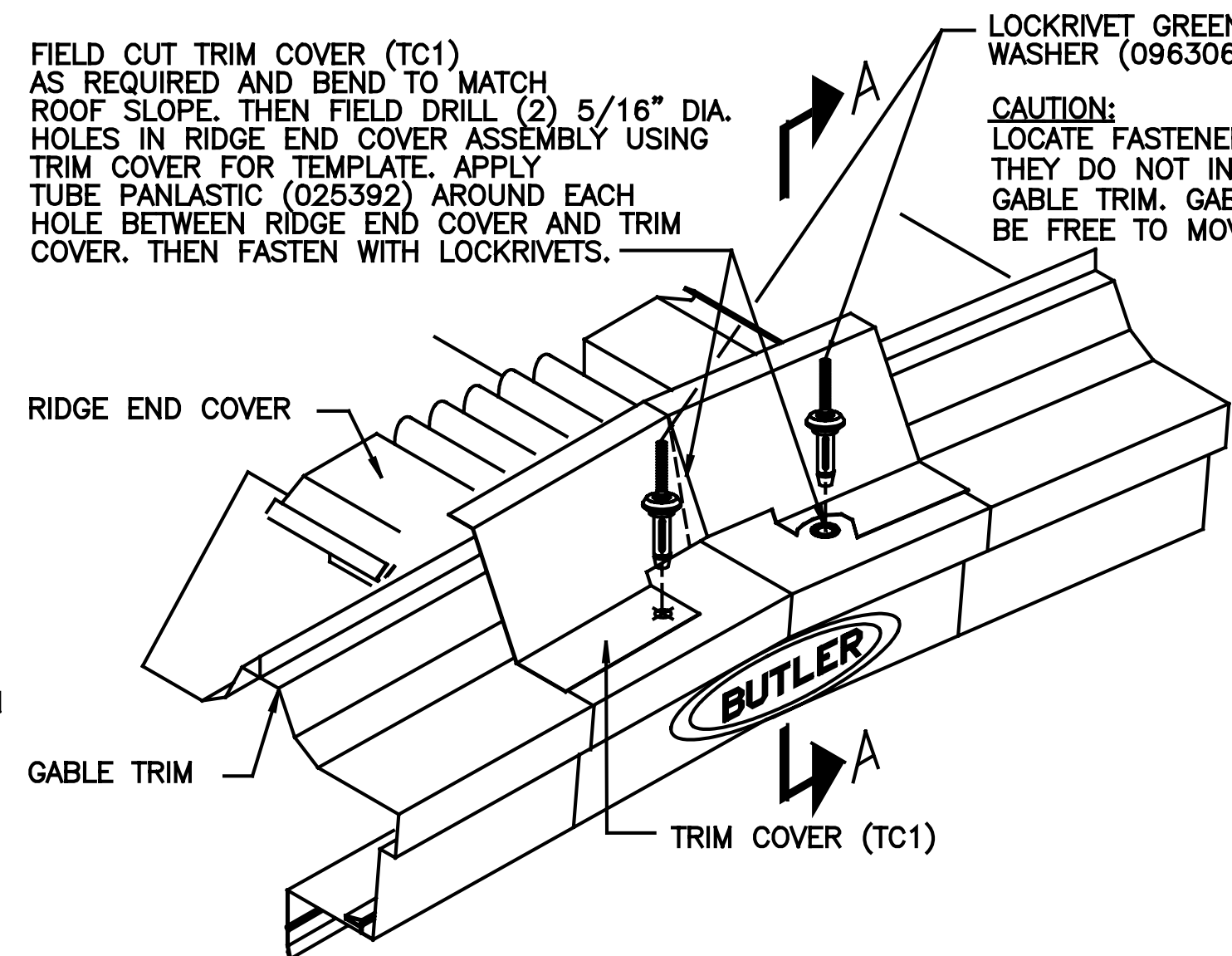
END COVER MODIFICATION



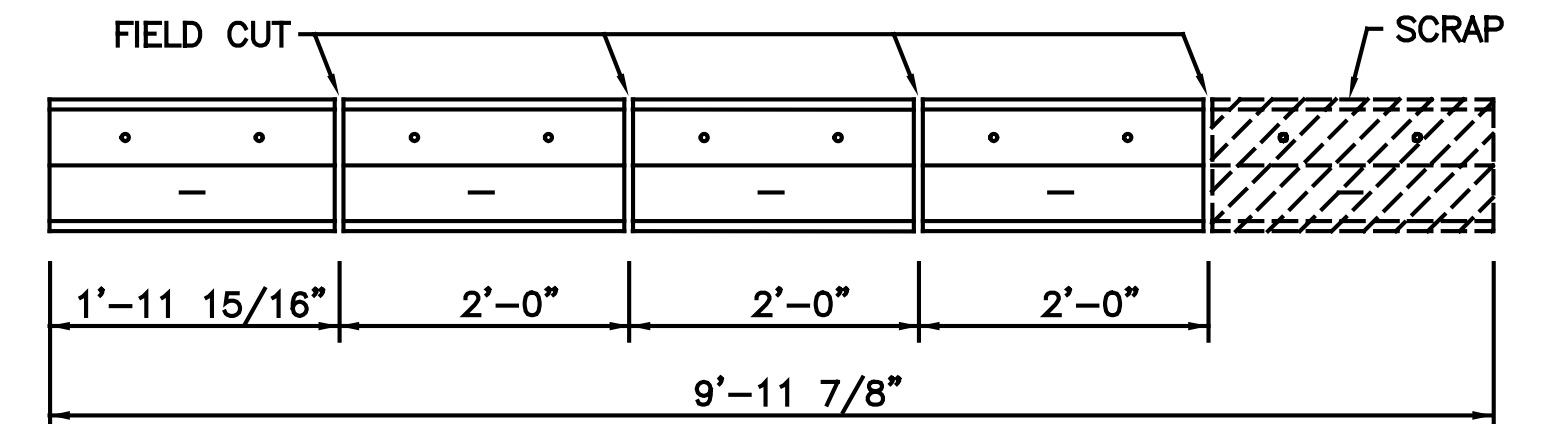
RIDGE END COVER COMPONENTS



RIDGE END COVER INSTALLATION



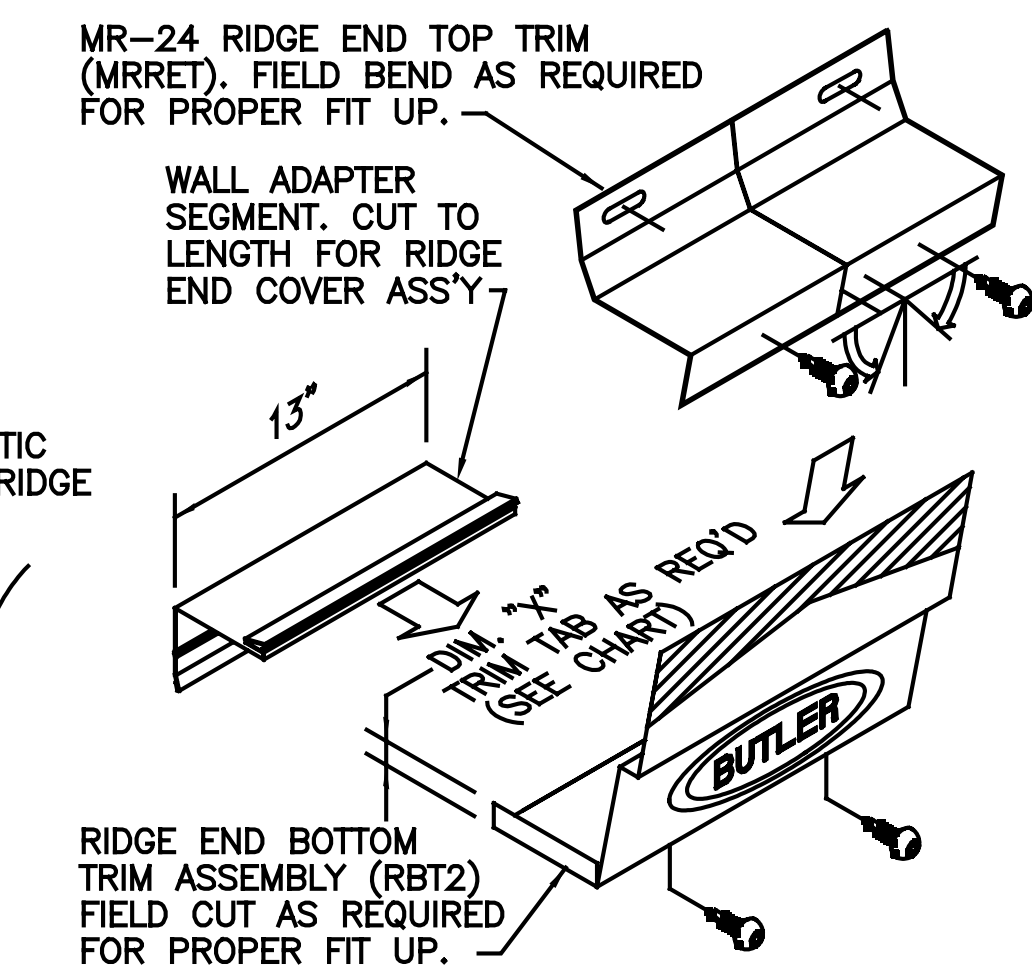
END COVER RETAINER INSTALLATION



RETAINER (560156) CUTTING DIAGRAM

THIS CUTTING DIAGRAM IS A PROCEDURE USED WHEN RIDGE IS INSTALLED BEFORE GABLE TRIM. (SEE "RIDGE INSTALLATION" DWG. P-080578).

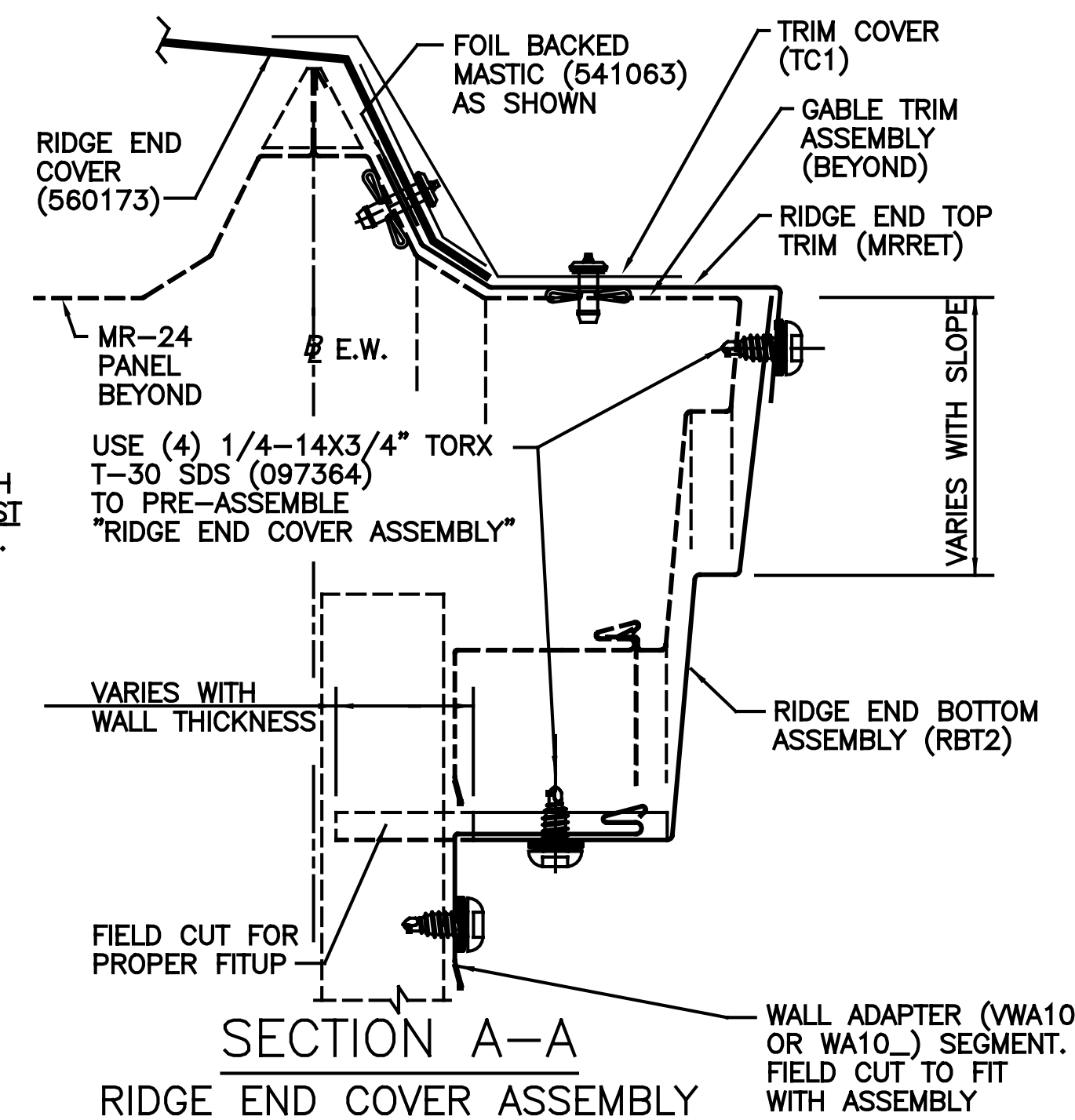
DETAIL 1



TAB TRIMMING CHART	
ROOF SLOPE	DIM. "X"
1:12	3/8"
2:12	11/32"
3:12	9/32"
4:12	7/32"
5:12	1/8"
6:12	0"

USE (4) 1/4-14x3/4 inch TORX T-30 SDS (097364) TO PRE-ASSEMBLE "RIDGE END CAP ASSEMBLY"
CAUTION: LOCATE FASTENERS SO THAT THEY DO NOT INTERFERE WITH GABLE TRIM.

RIDGE END COVER ASSEMBLY



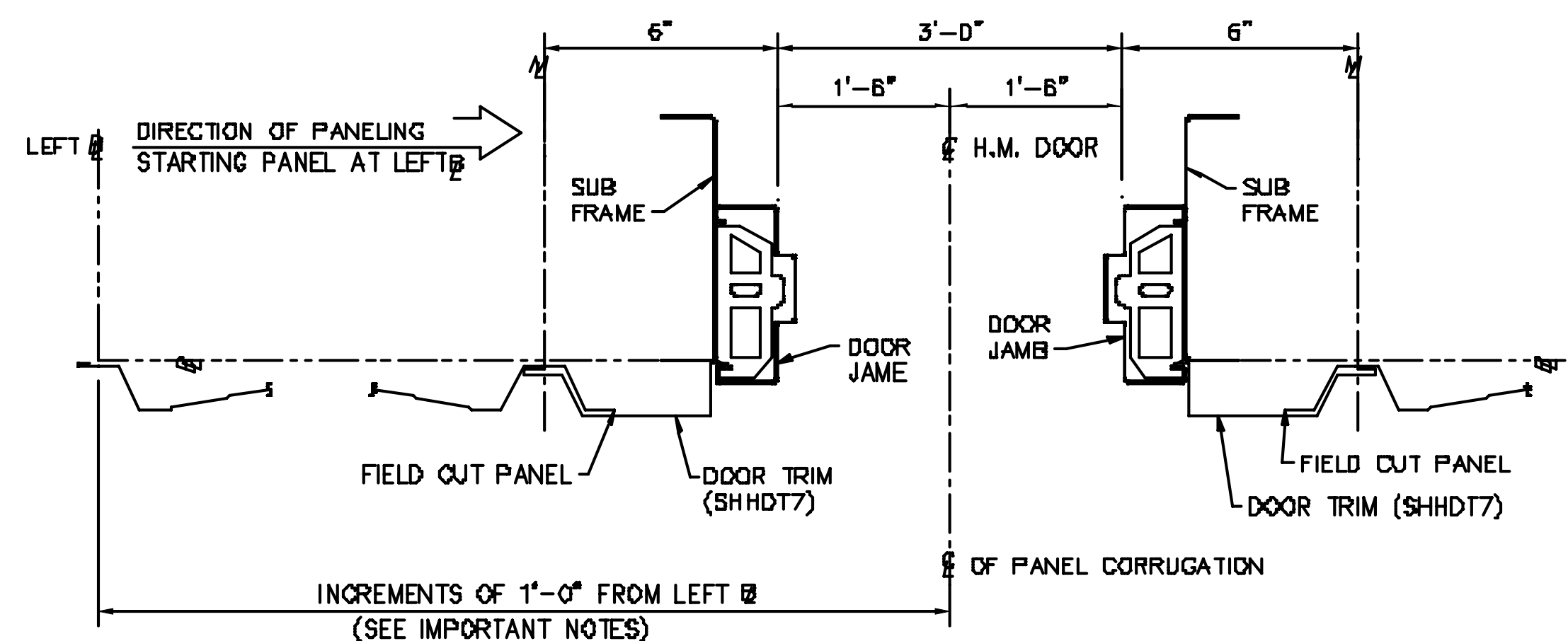
SECTION A-A

RIDGE END COVER ASSEMBLY

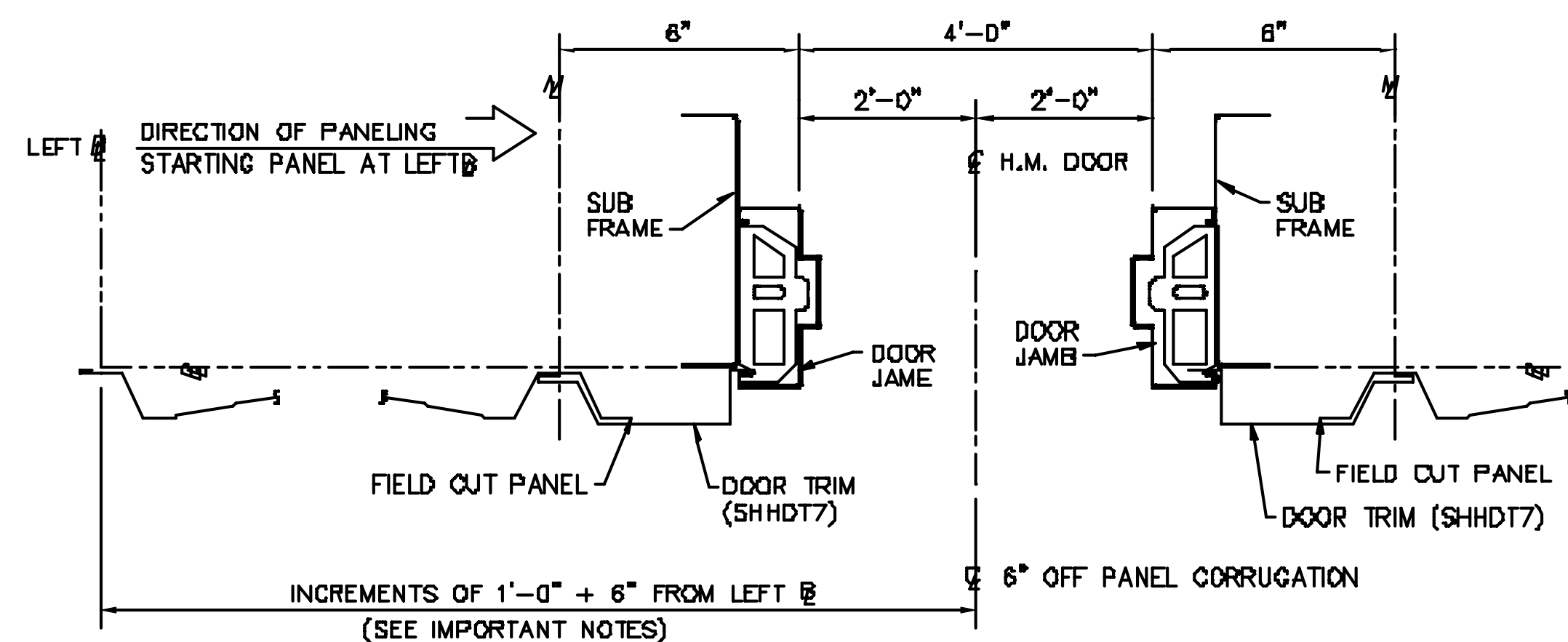
NOTES:

1. "RIDGE END COVER ASSEMBLY" CAPS OVER GABLE TRIM AND WALL ADAPTER.

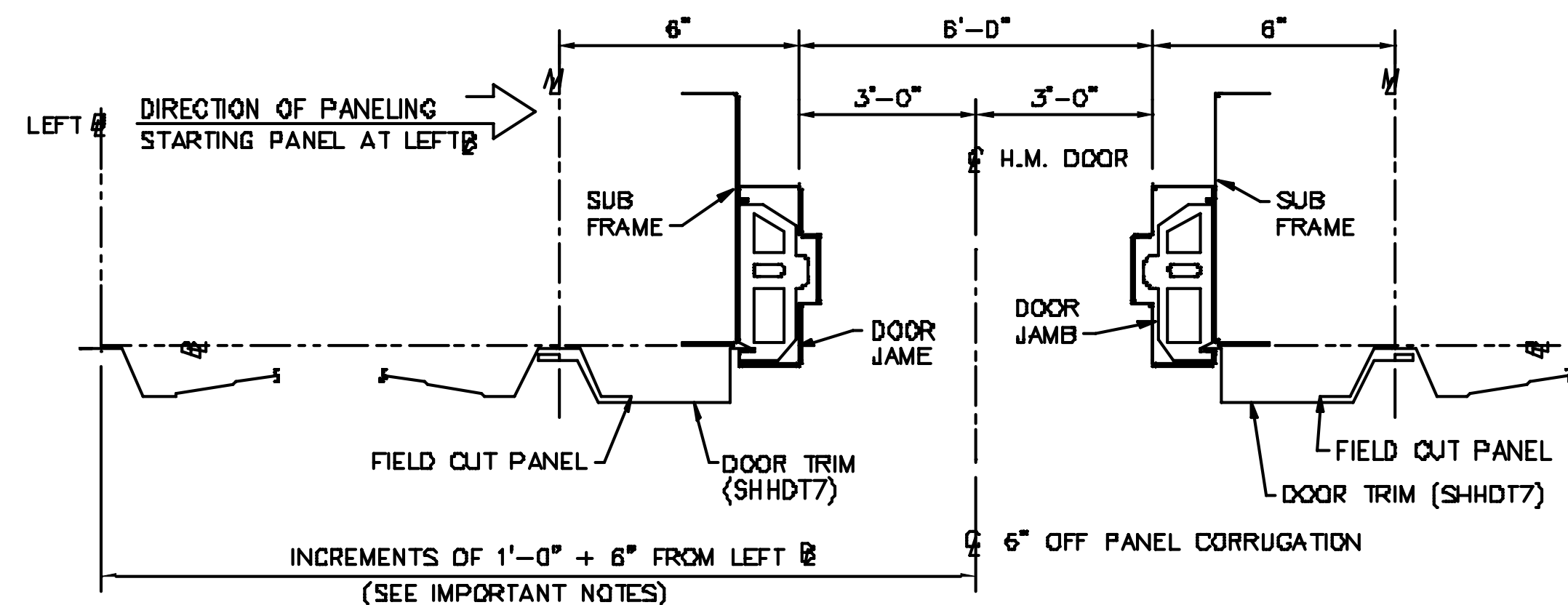
MR-24/CMR-24 RIDGE END COVER INSTALLATION WITH RIDGE ASSEMBLY (METAL WALL)				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-001-02		
ACM	RHE			
FIRST RELEASE DATE	REVISION DATE	B	P-081243	03
01/21/10	12/16/19			



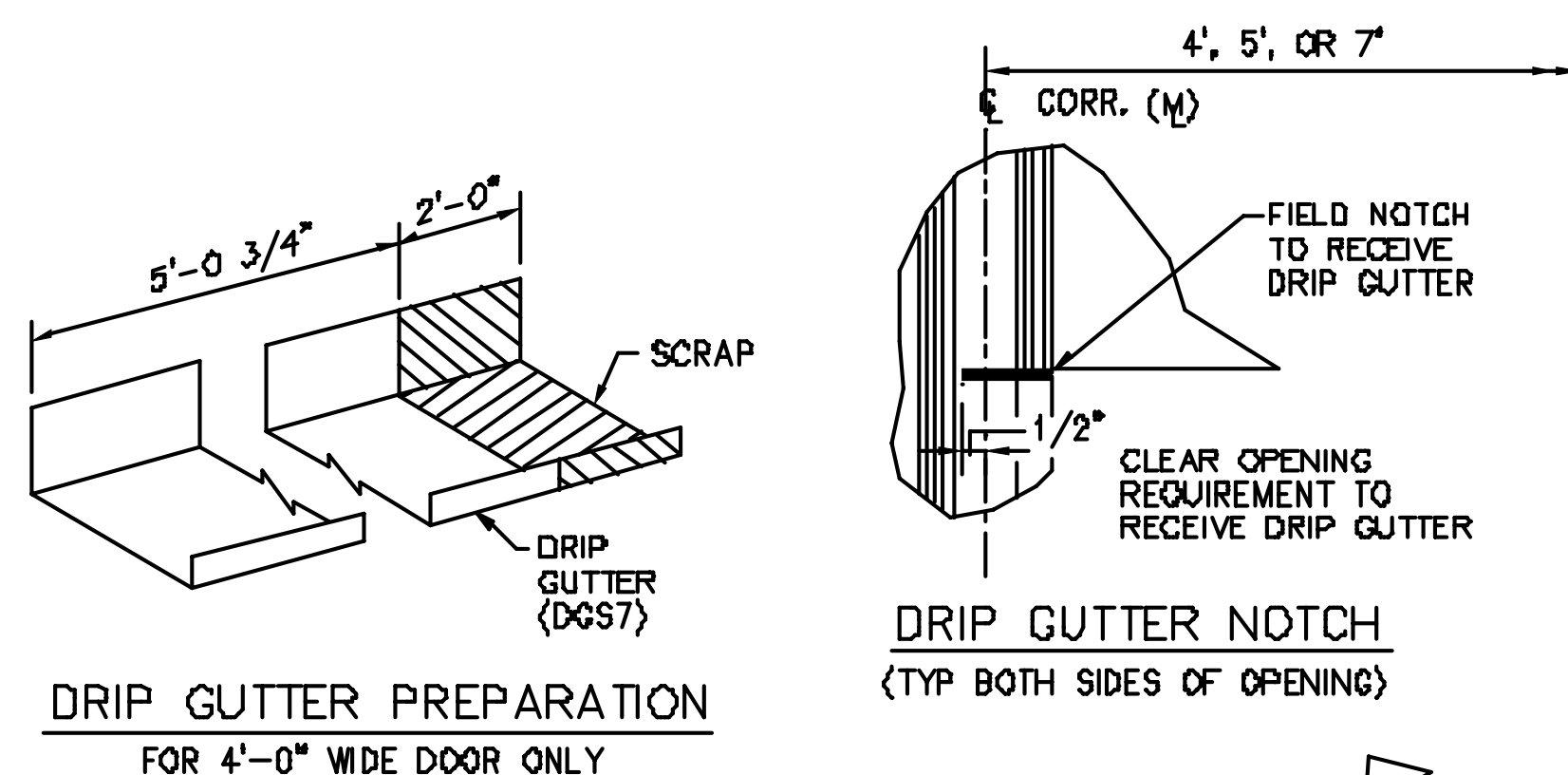
3'-0" x 7'-0" HOLLOW METAL DOOR LOCATION



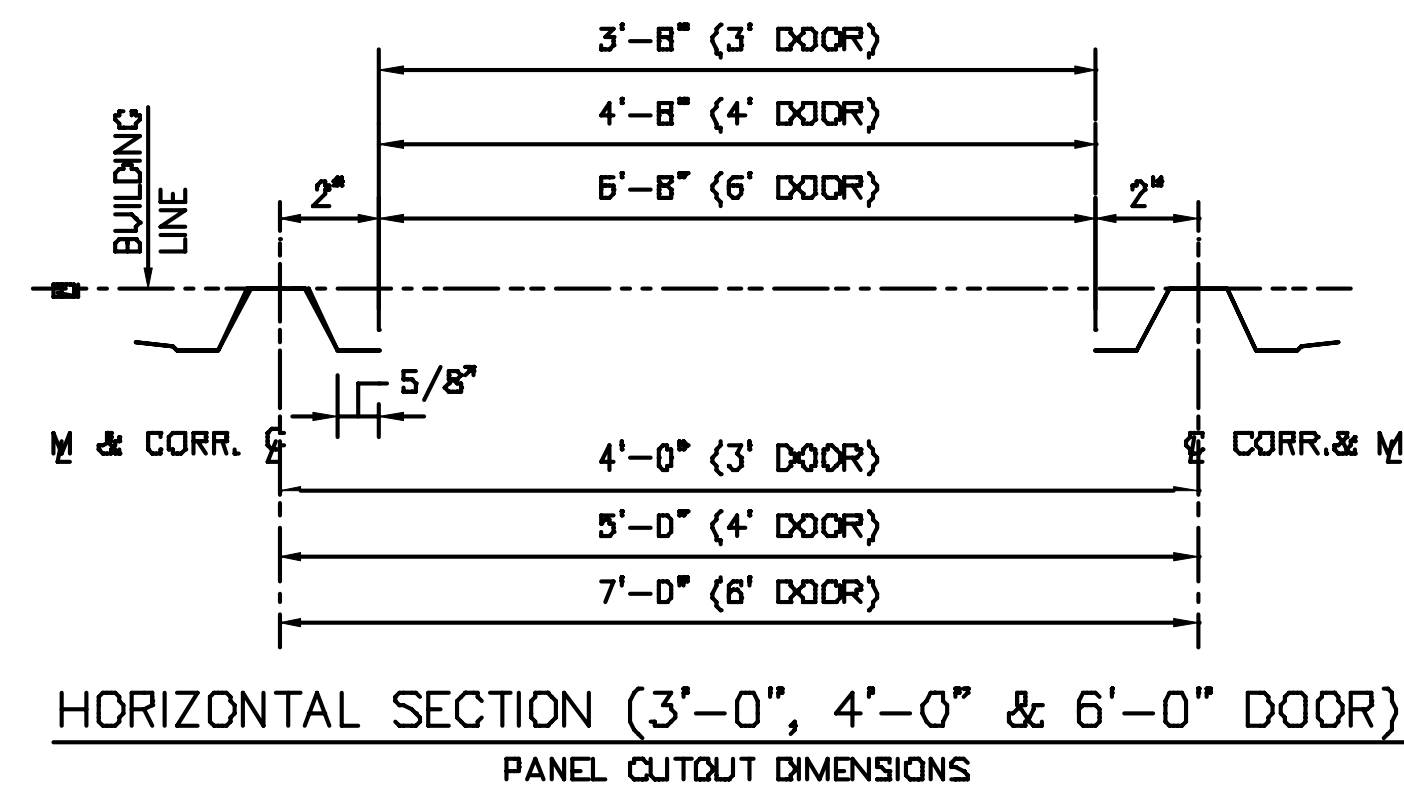
4'-0" x 7'-0" HOLLOW METAL DOOR LOCATION



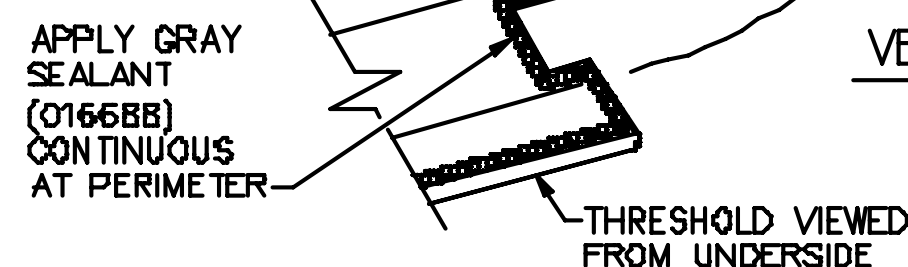
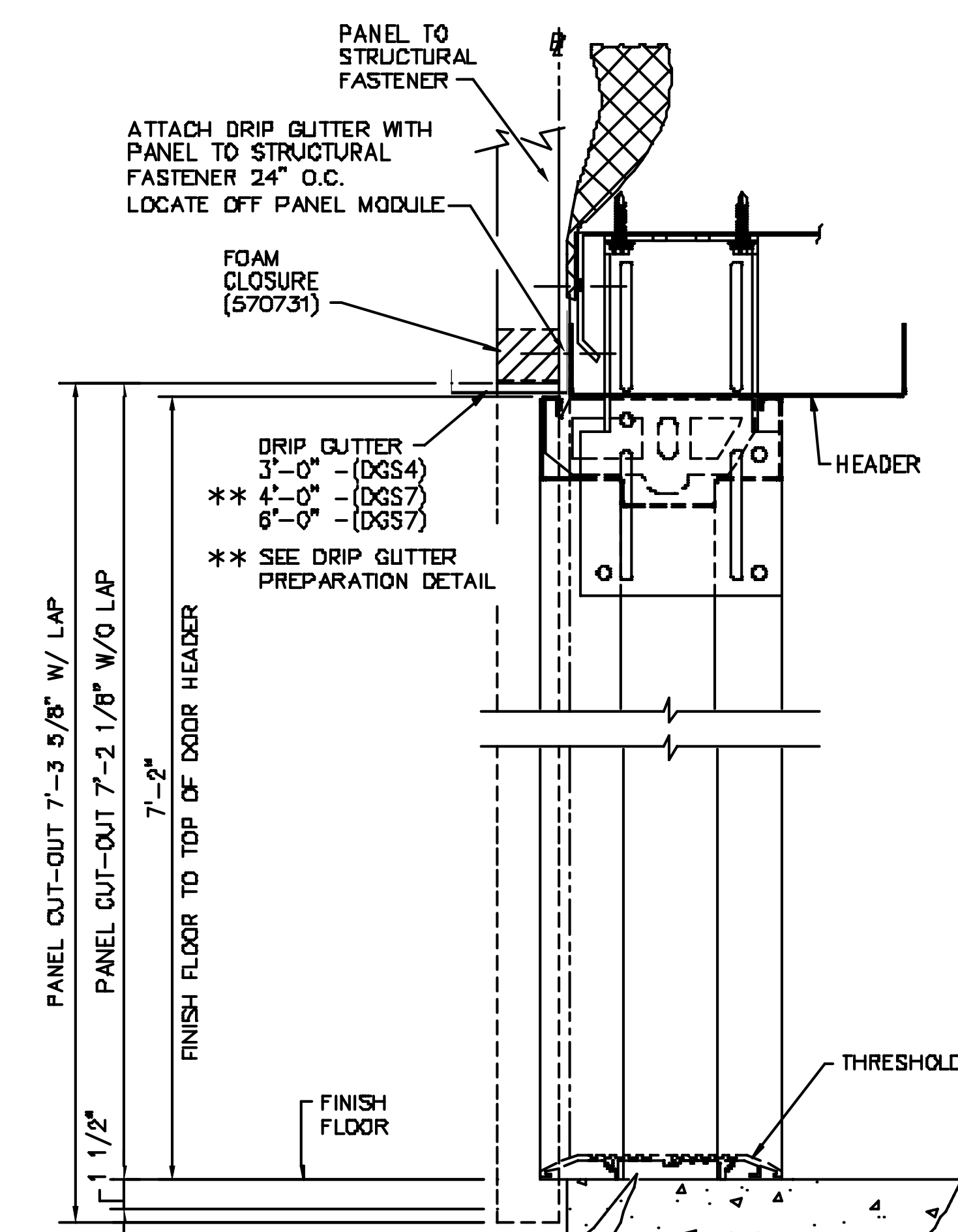
6'-0" x 7'-0" HOLLOW METAL DOOR LOCATION



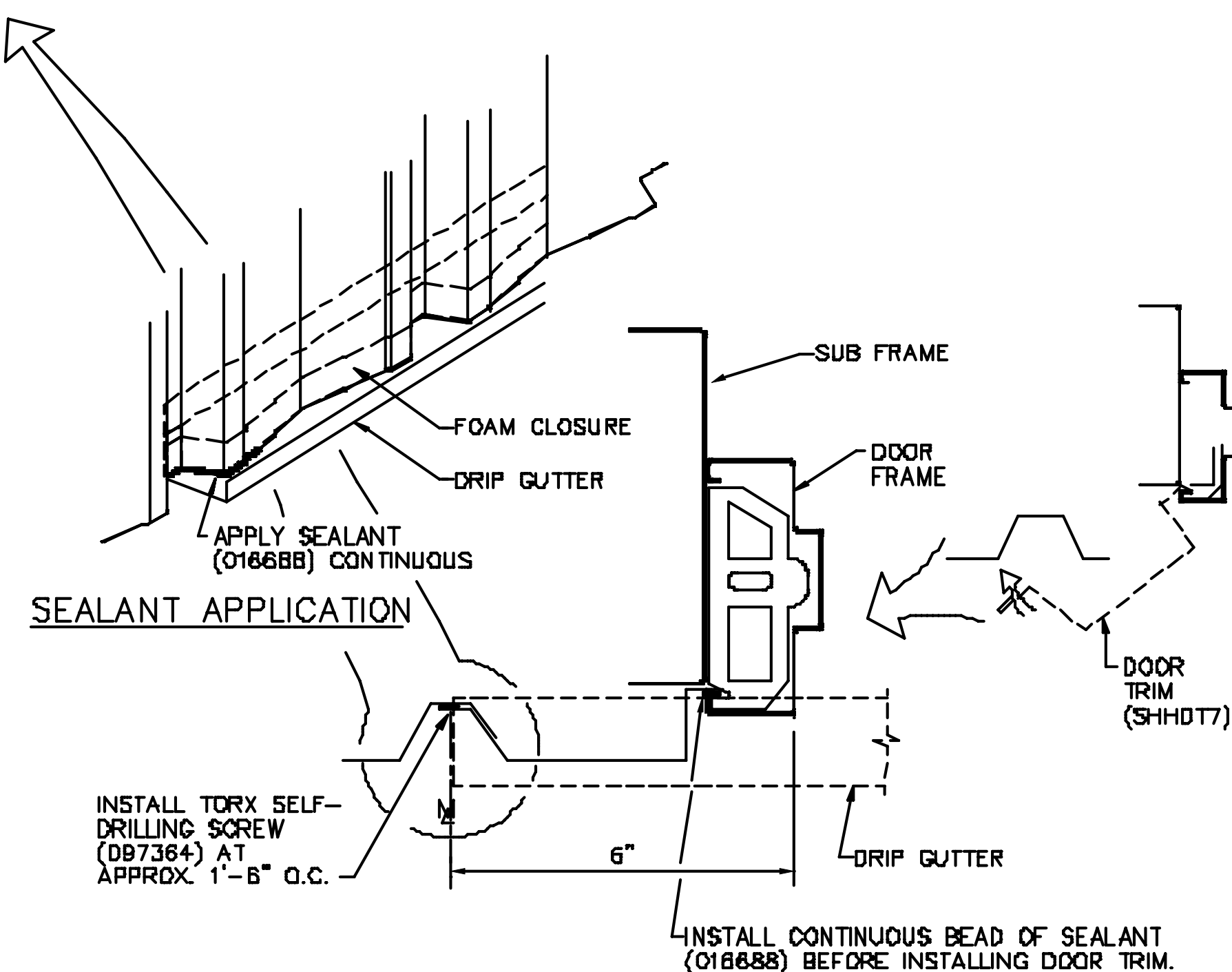
DRIP GUTTER PREPARATION
FOR 4'-0" WIDE DOOR ONLY



HORIZONTAL SECTION (3'-0", 4'-0" & 6'-0" DOOR)
PANEL CUTOUT DIMENSIONS



VERTICAL SECTION

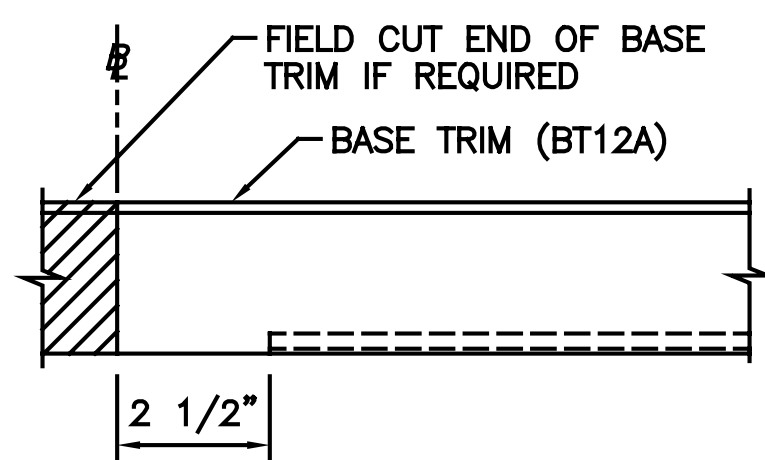
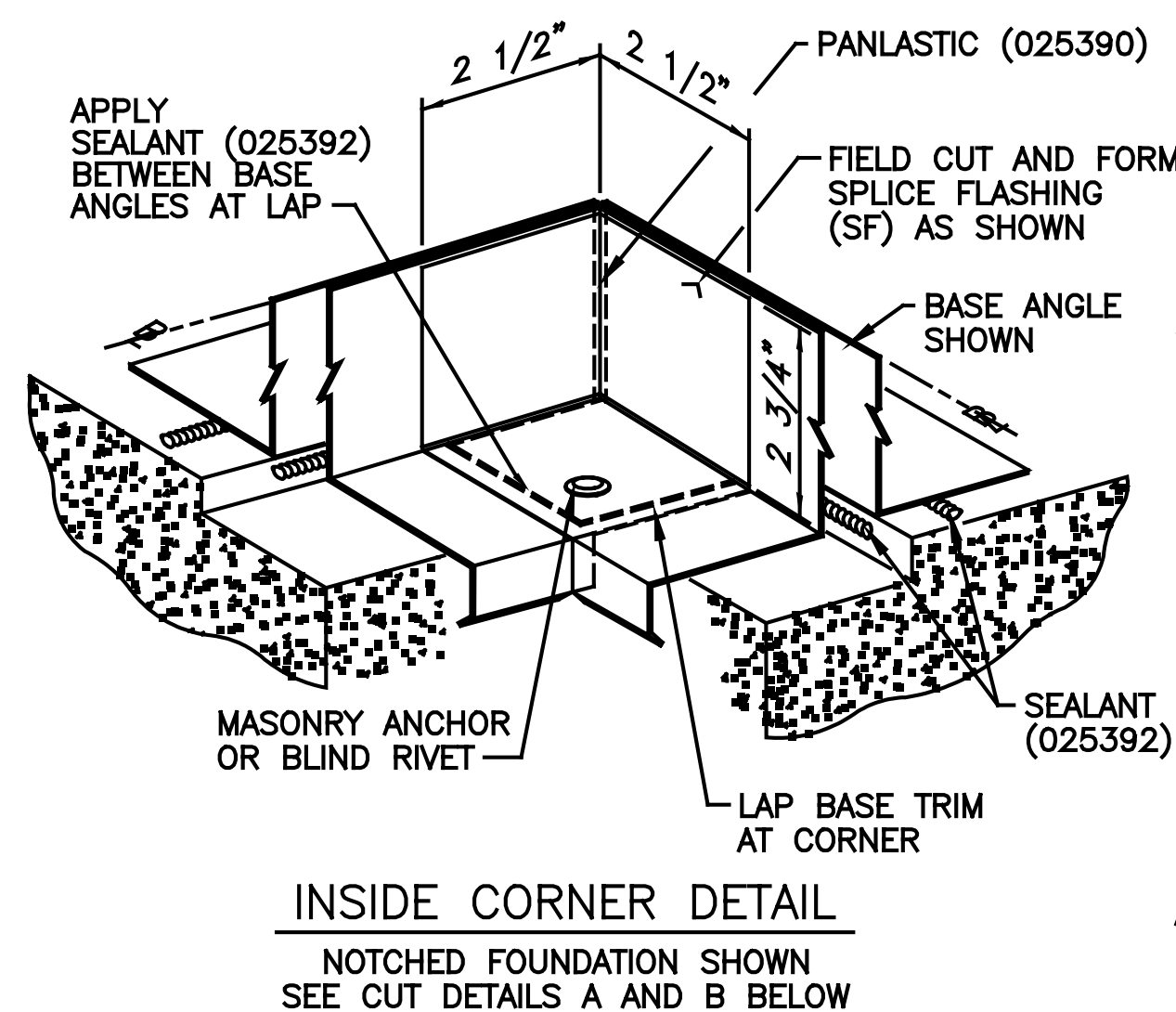
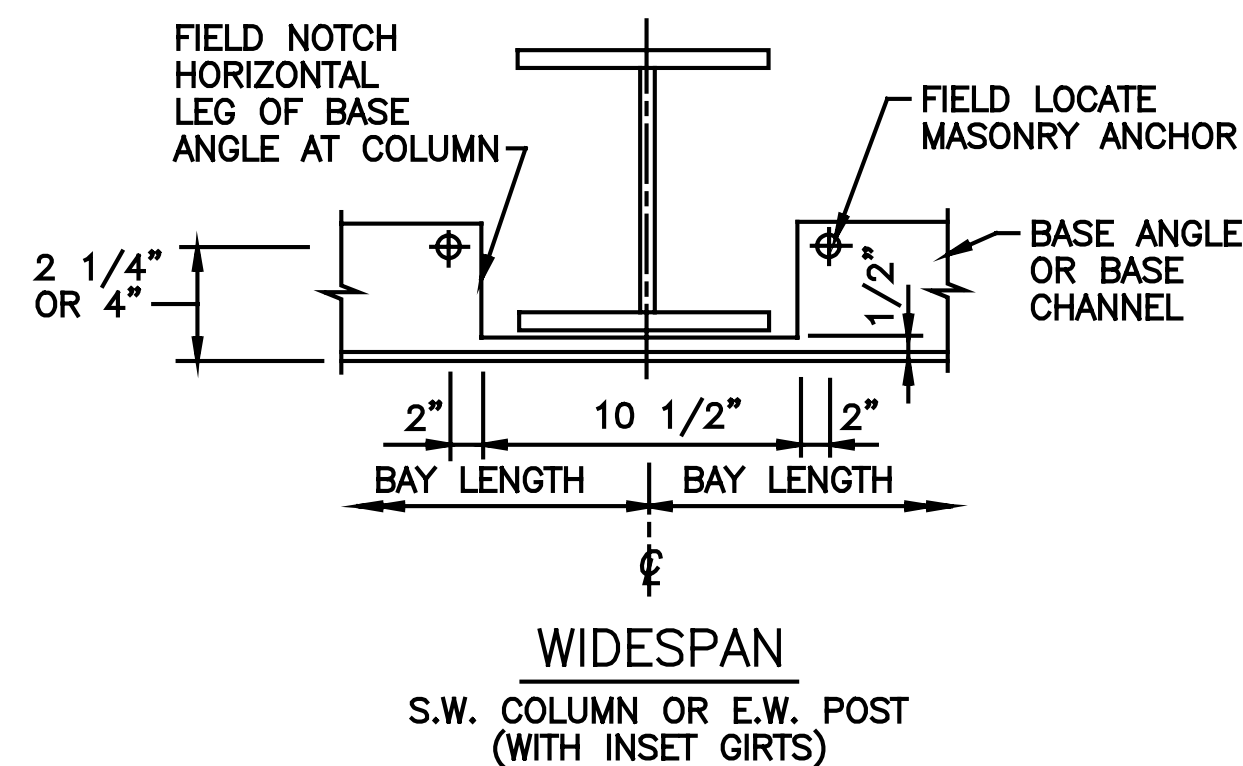
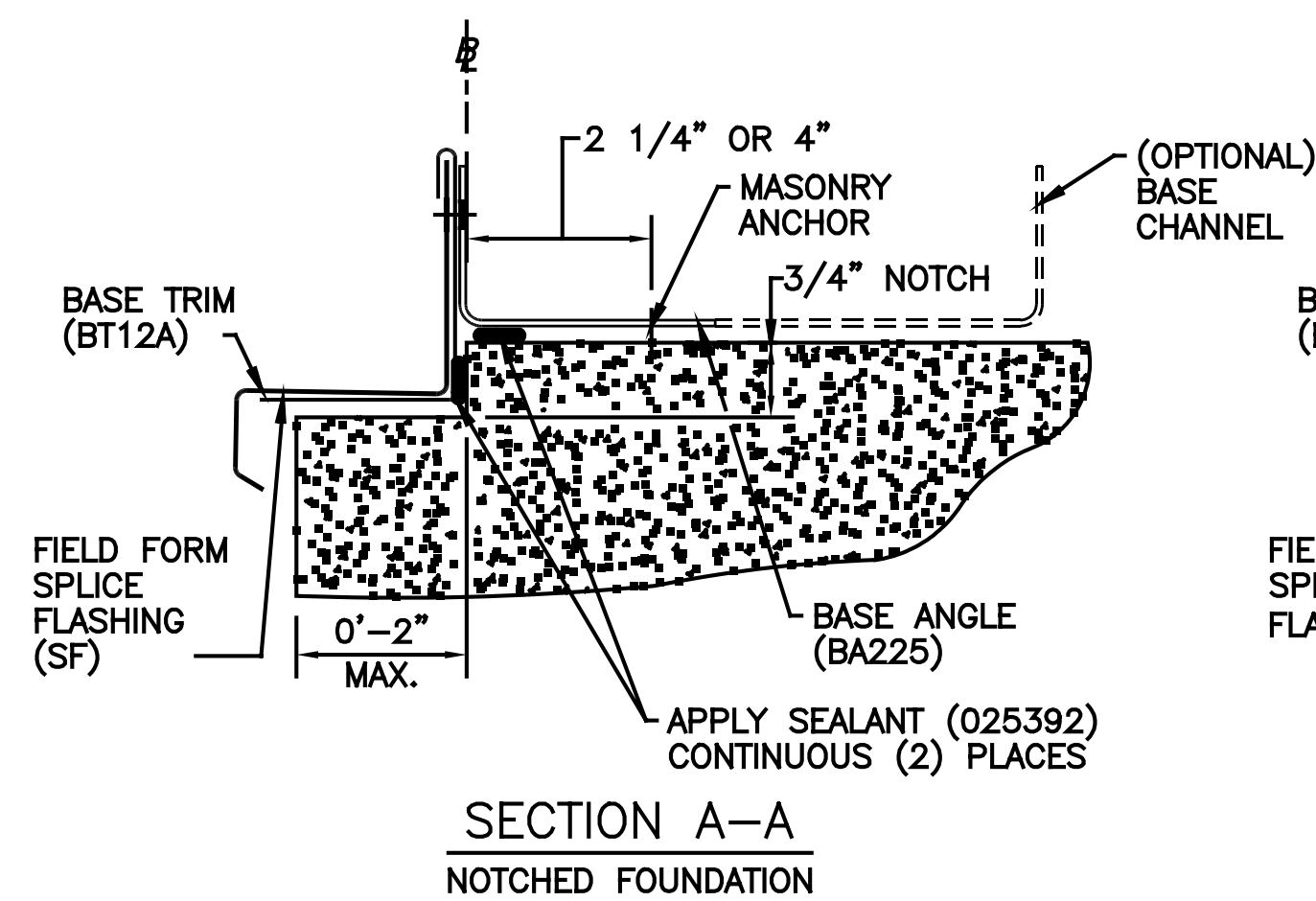


INSTALLING DOOR JAMB TRIM

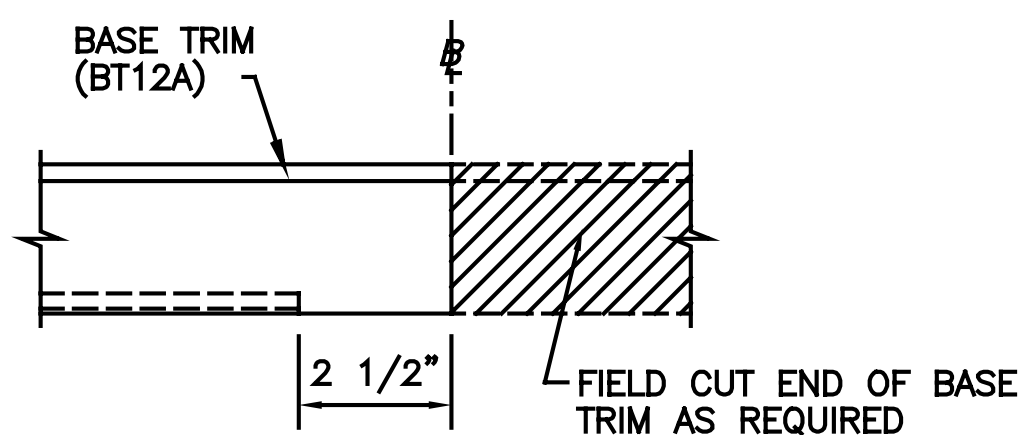
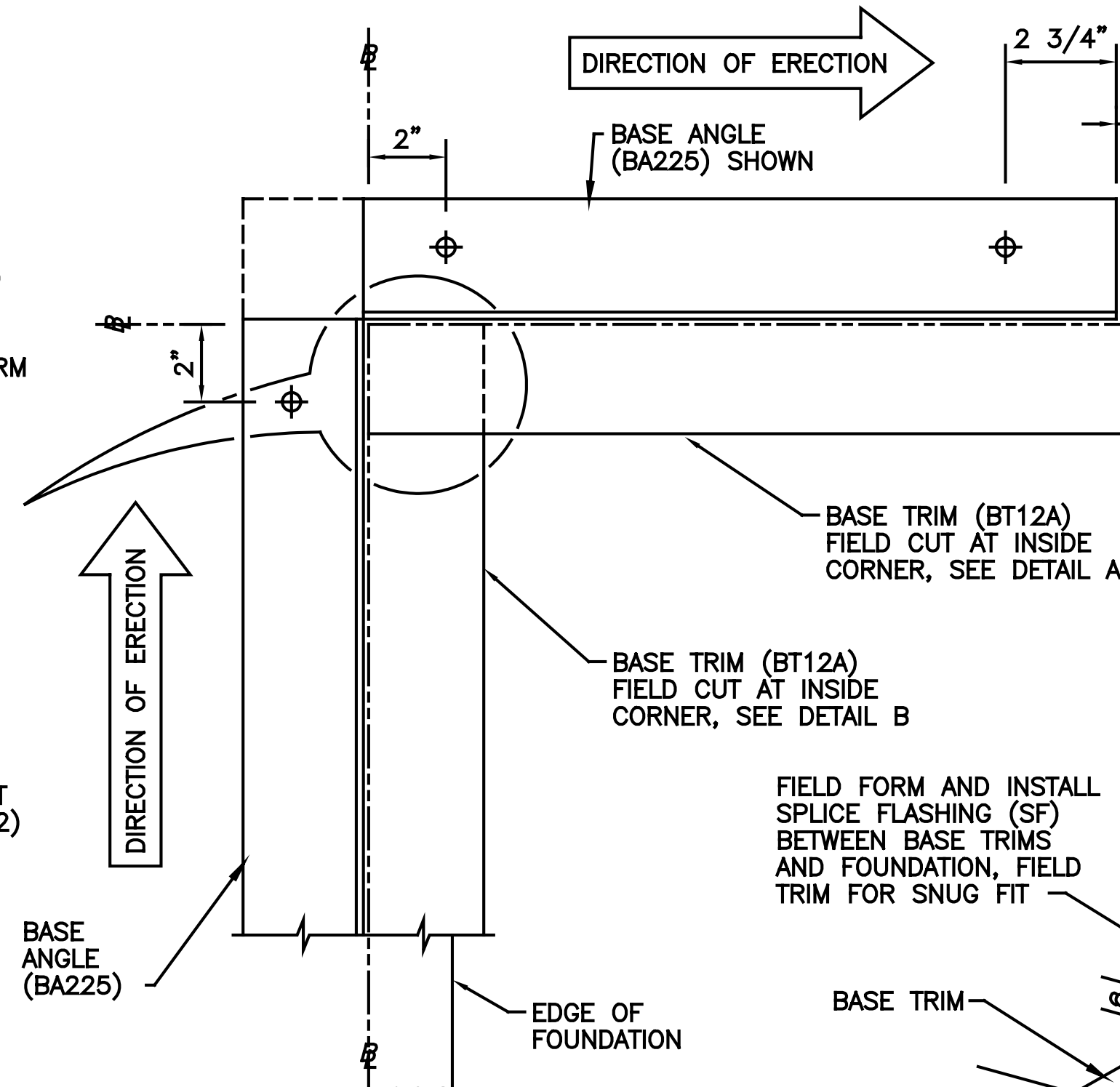
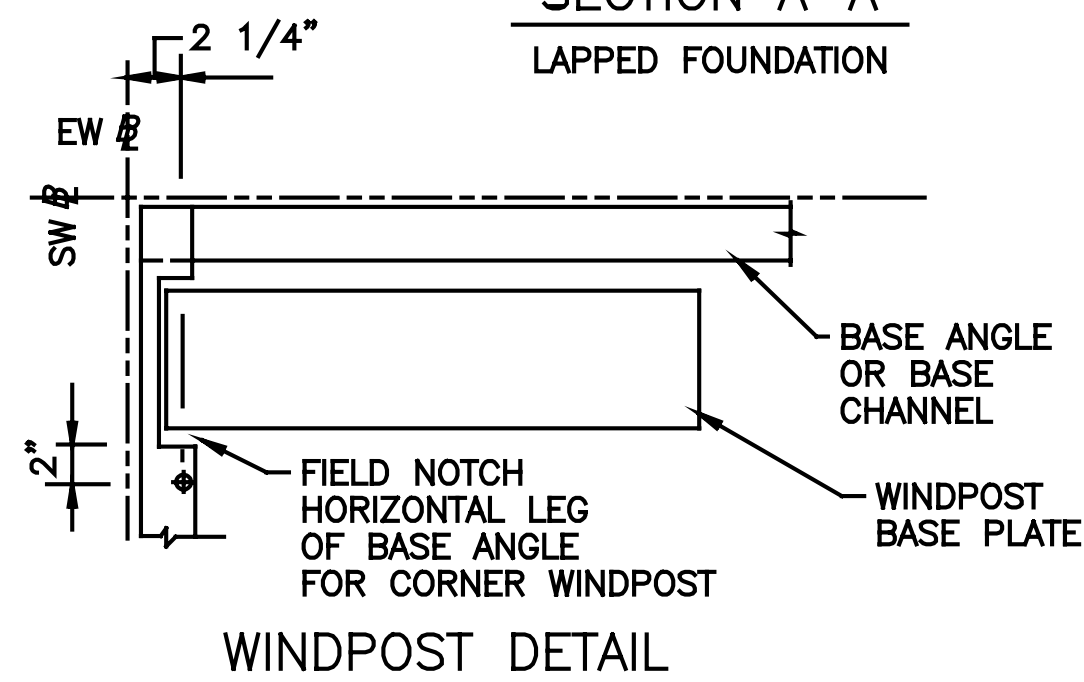
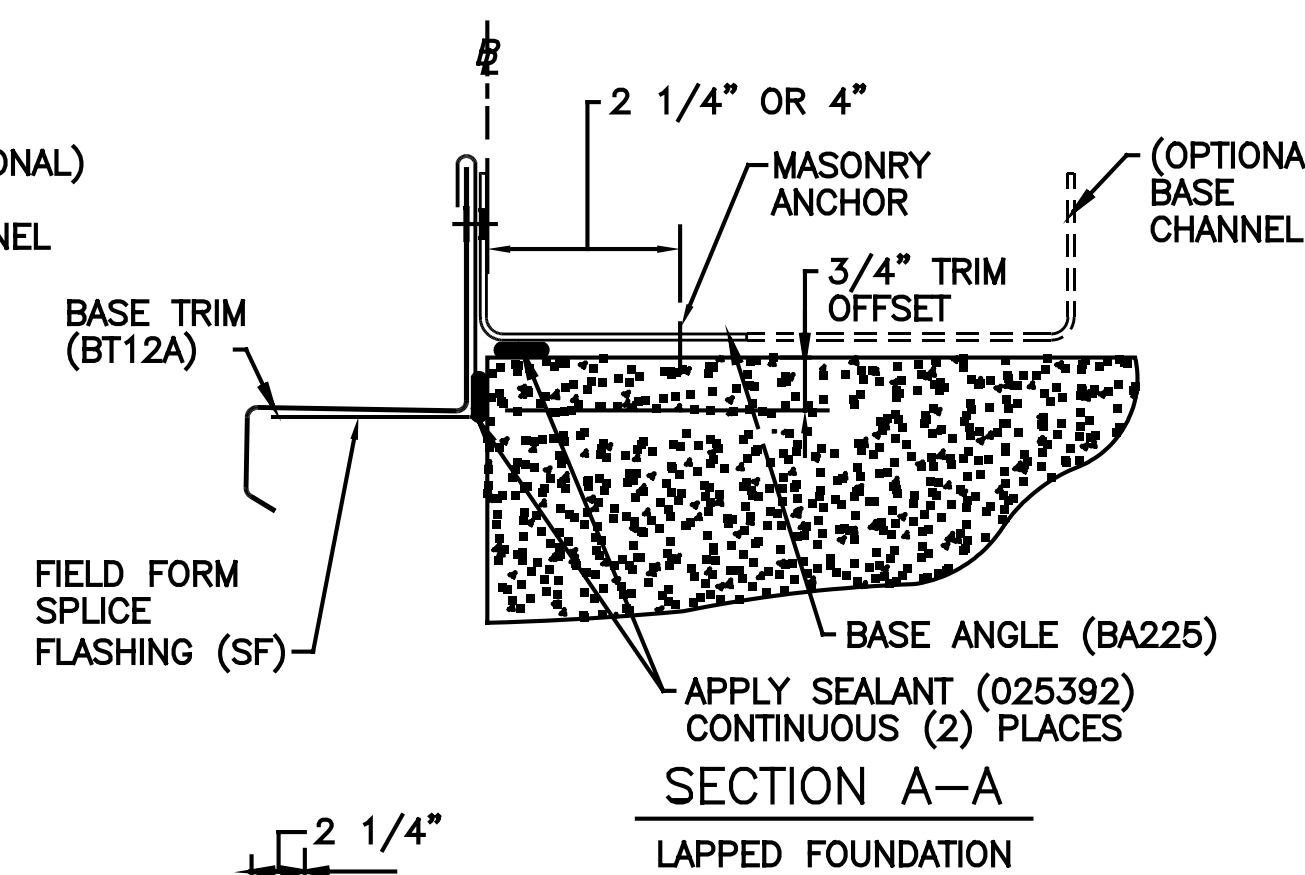
IMPORTANT NOTES:

- THE FOLLOWING ACCESSORY LOCATION INFORMATION IS GENERAL (DEVIATIONS MAY BE REQUIRED DEPENDING ON LOCATION & SIZES OF THE BUILDING STRUCTURALS).
 - WHEN LOCATING ACCESSORIES, CHECK FOR STRUCTURAL AND BRACING CLEARANCE.
 - A MINIMUM OF 1'-0" TO BE USED BETWEEN EDGE OF A HOLLOW METAL DOOR AND ANY OTHER 1'-0" WALL ACCESSORY.
 - CAUTION:** ALLOW FOR AT LEAST 1'-0" BETWEEN BUILDING STRUCTURAL MEMBERS (COLUMN, ENDWALL POST) FOR INSTALLATION OF SUPPORT CHANNEL.
- ACCESSORIES ARE ALWAYS LOCATED BY VIEWING THE WALL SYSTEM FROM THE EXTERIOR (OUTSIDE) OF THE BUILDING AND MEASURING FROM THE LEFT (BUILDING LINE) OR (PANEL MODULE LINE) TO THE (CENTERLINE) OF THE ACCESSORIES.
- SEE DRAWING B-081380 FOR GIRT CONNECTION AT 6'-0" OR LESS.

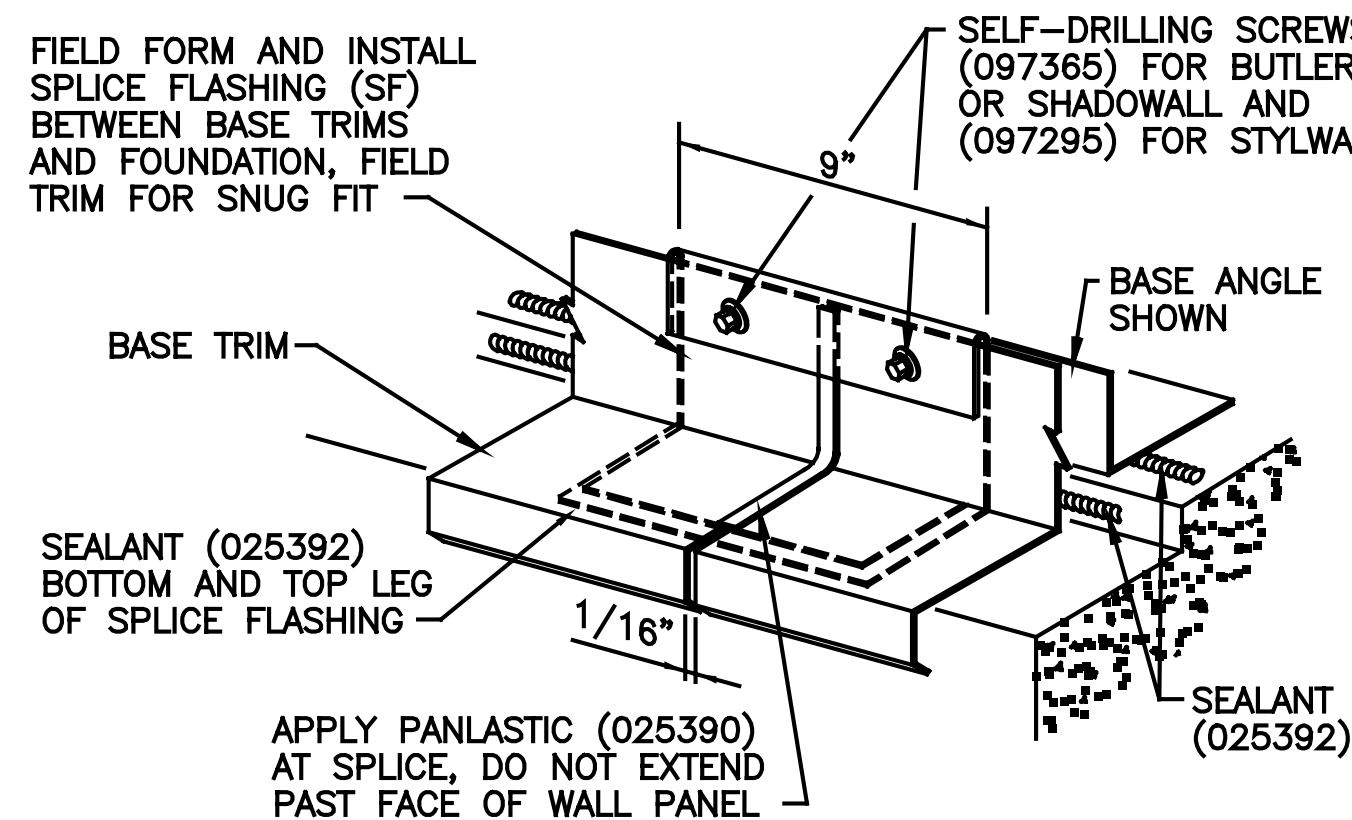
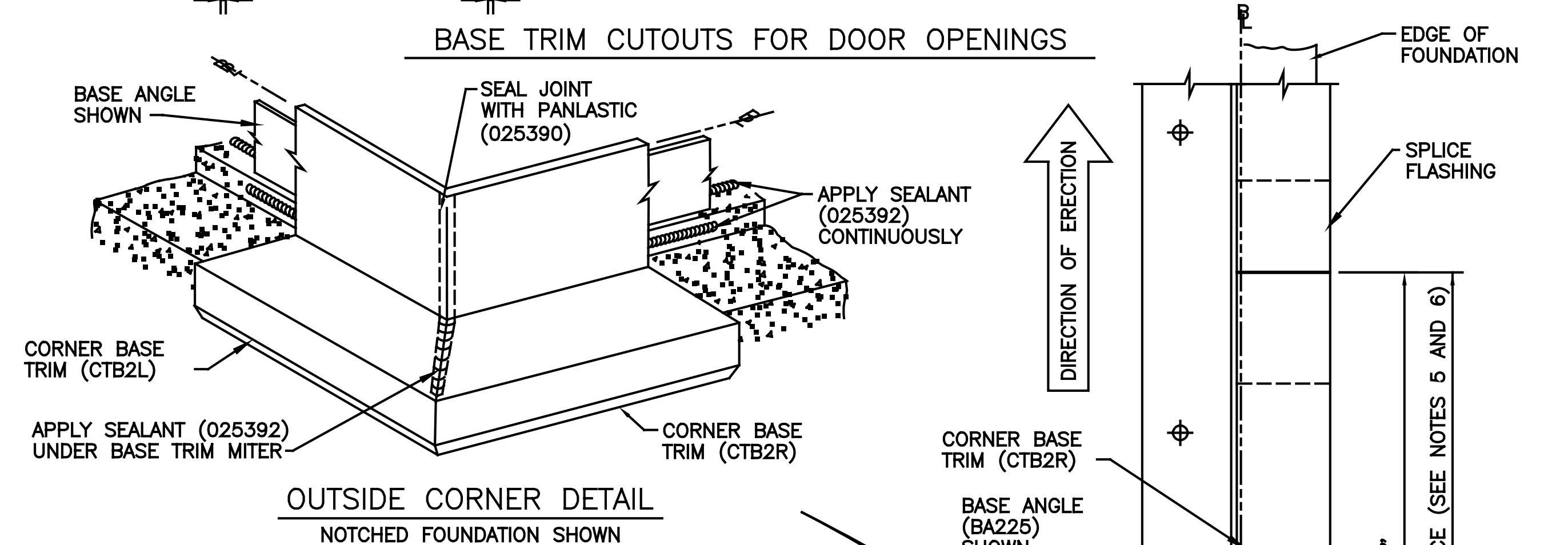
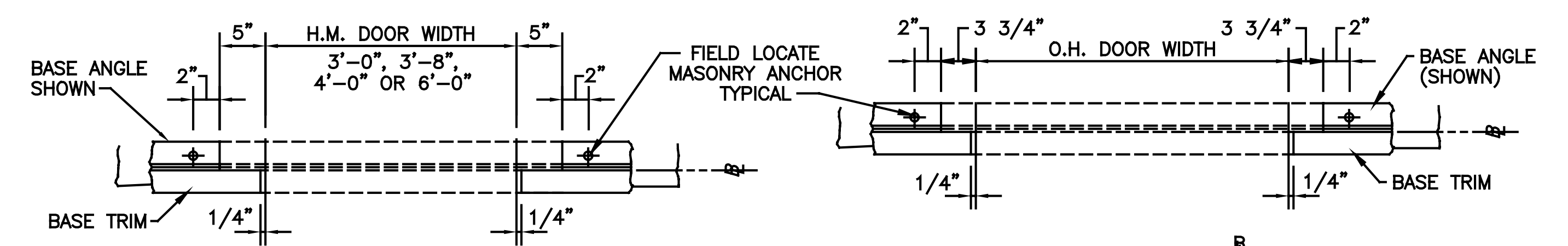
SHADOWALL PRE ASSEMBLED HM DOOR OFFSET DOOR - PANEL AND TRIM INSTALLATION			
DRAWN BY	CHECKED BY	GROUP NUMBER: 37-024-D1	
JRS	JRS		
FIRST RELEASE DATE	REVISION DATE	B	P-081373 03
01/21/10	08/16/17		



DETAIL A
BASE TRIM FIELD WORK—
RIGHT SIDE OF INSIDE CORNER



DETAIL B
BASE TRIM FIELD WORK—
LEFT SIDE OF INSIDE CORNER



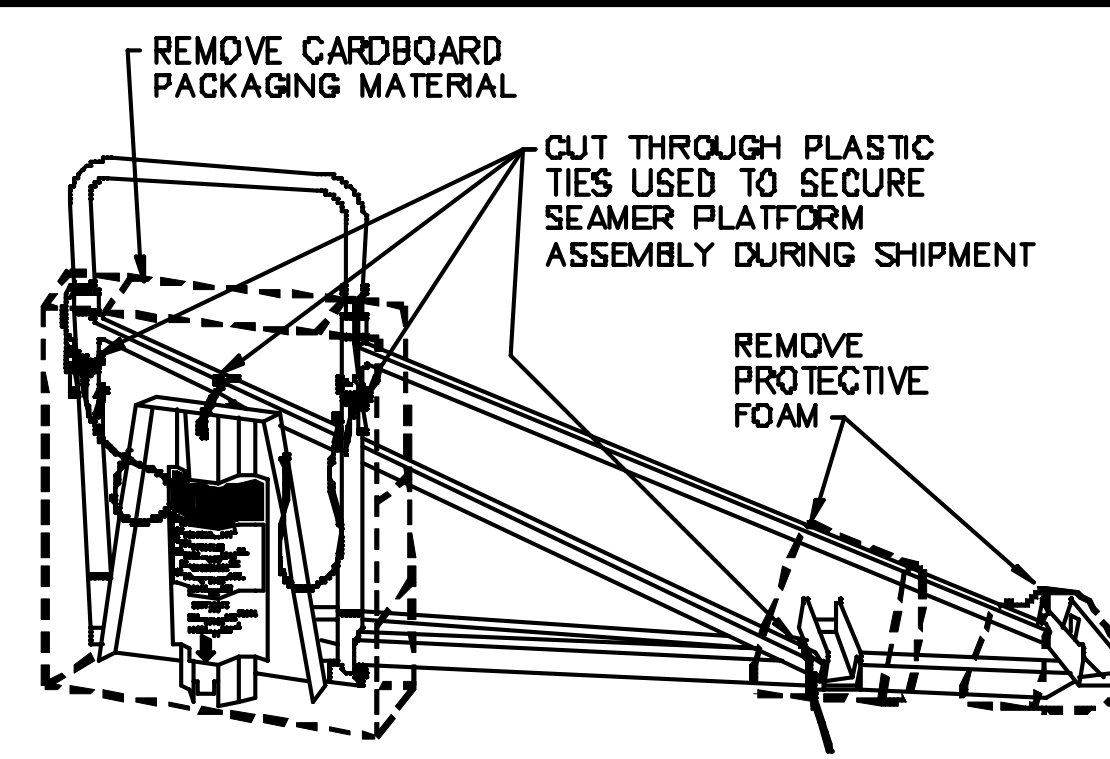
TYPICAL SPLICE DETAIL

NOTES:

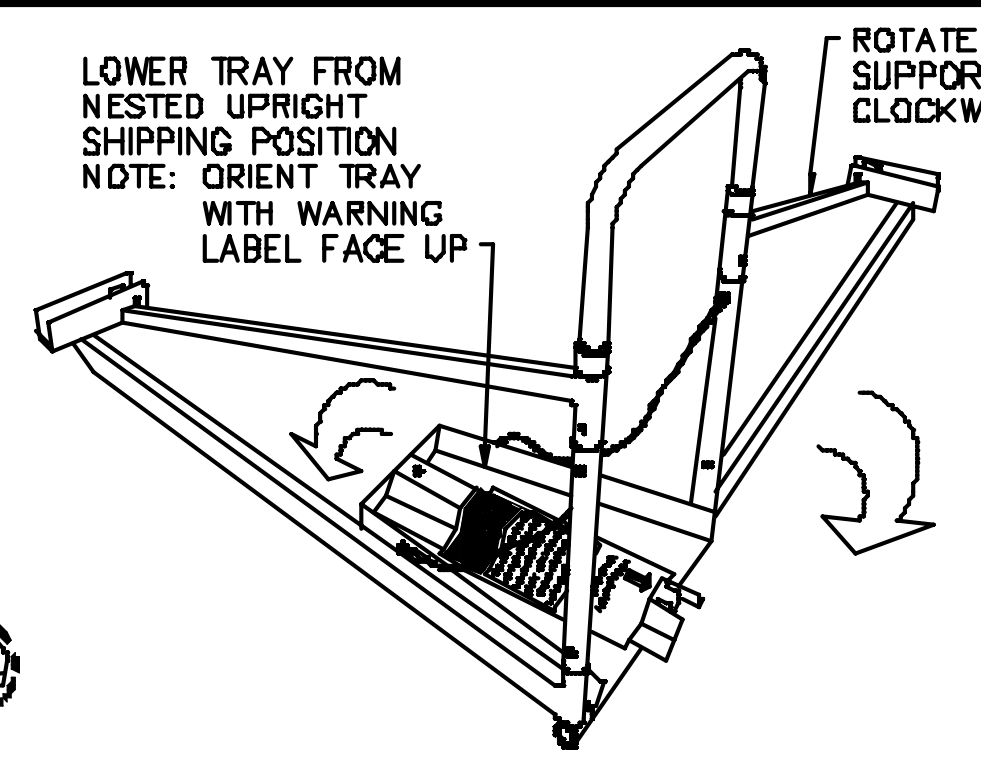
1. BUILDING STRUCTURALS MUST BE SQUARE AND PLUMB AT BOTH ENDS OF E.W. AND S.W. GIRTS.
2. INSTALL BASE ANGLE FIRST: BASE ANGLE (BA225) HAS A NOMINAL 25'-0" COVERAGE (24'-11 1/2" ACTUAL LENGTH). FIELD CUT ALL BASE ANGLES AS REQUIRED. EXTREME CARE MUST BE EXERCISED TO INSURE PROPER ALIGNMENT AT SPLICES AND CORNERS. SHIFT BASE ANGLE OR BASE GIRT HOLES 1 1/2" OFF MODULE FOR UNPUNCHED BUTLERIB II OR SHADOWALL PANELS.
3. BASE ANGLE ATTACHMENT: A MINIMUM SHEAR STRENGTH OF 210 POUNDS PER LINEAL FOOT MUST BE MAINTAINED. THE RECOMMENDED ATTACHMENT OF THE BASE ANGLE TO THE FOUNDATION IS BY USE OF DRILL-IN TYPE MASONRY ANCHORS, SUCH AS TAPCON 1/4" DIA. X 1 1/4" LONG OR EQUAL. NOTE: MASONRY ANCHORS ARE BY OTHERS AND THE SPACING OF THE ANCHORS MUST NOT EXCEED 2'-0".
4. BASE TRIM (BT12A) PROVIDES 12'-0" COVERAGE.
5. CORNER BASE TRIMS (CTB2L) AND (CTB2R) MUST BE FIELD SPLICED AT OUTSIDE CORNER. CORNER BASE TRIMS PROVIDE 2'-0" COVERAGE.
6. INSTALL CORNER BASE TRIMS FIRST AND PROCEED IN DIRECTION INDICATED WITH ARROWS. LAST BASE TRIM MAY REQUIRE FIELD CUT TO BUTT WITH CORNER BASE TRIM.
7. EXTREME CARE SHOULD BE USED TO INSURE PROPER ALIGNMENT OF BASE TRIM, ESPECIALLY AT CORNERS. SEE SPLICE DETAIL.
8. TEMPORARILY PROVIDE SUPPORT FOR BOTTOM OF BASE TRIM TO AVOID CRUSHING OR DAMAGING IT UNTIL PANEL TO STRUCTURAL FASTENERS ARE INSTALLED DURING INSTALLATION.

BRII, SHDWL AND STYLWALL II BASE TRIM INSTALL. LAPPED/OR NOTCHED AT FOUNDATION			
DRAWN BY	CHECKED BY	GROUP NUMBER: 26-023-01	
RHE	BJF		
FIRST RELEASE DATE	REVISION DATE		
01/21/10	12/04/18		

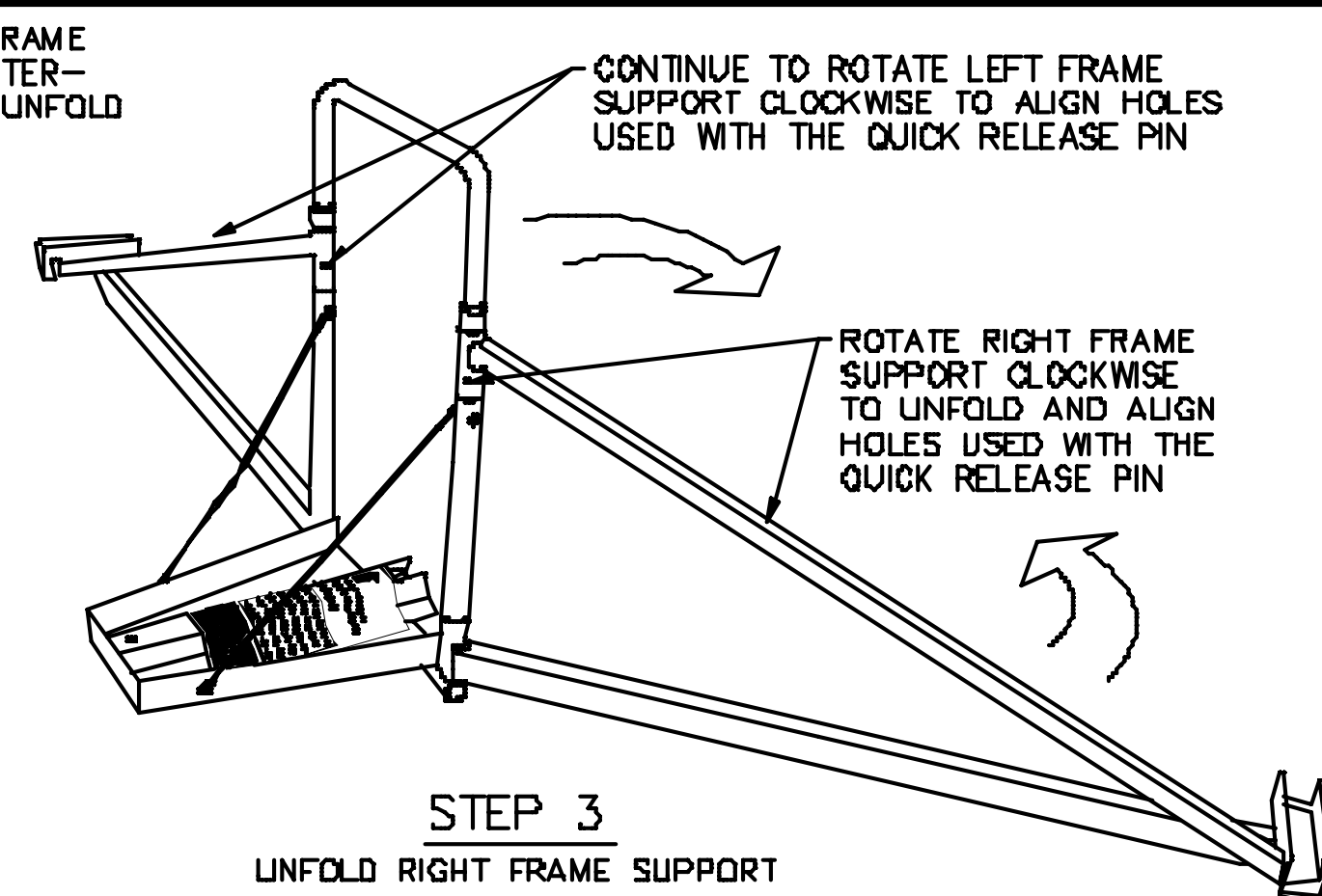
B P-081505 04



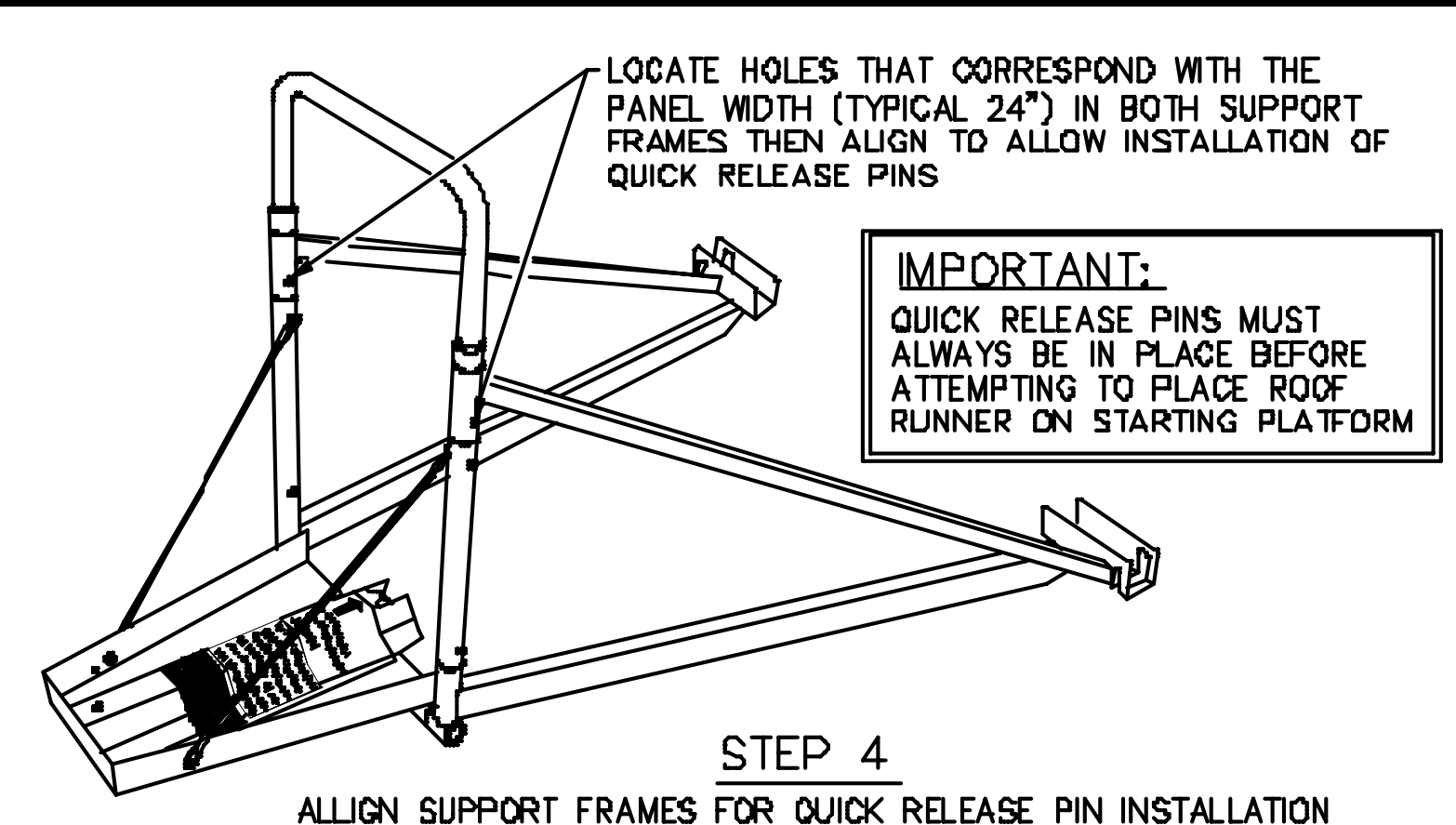
STEP 1
REMOVAL OF PACKAGING MATERIAL AND PLASTIC TIES



STEP 2
LOWER TRAY AND UNFOLD LEFT FRAME SUPPORT

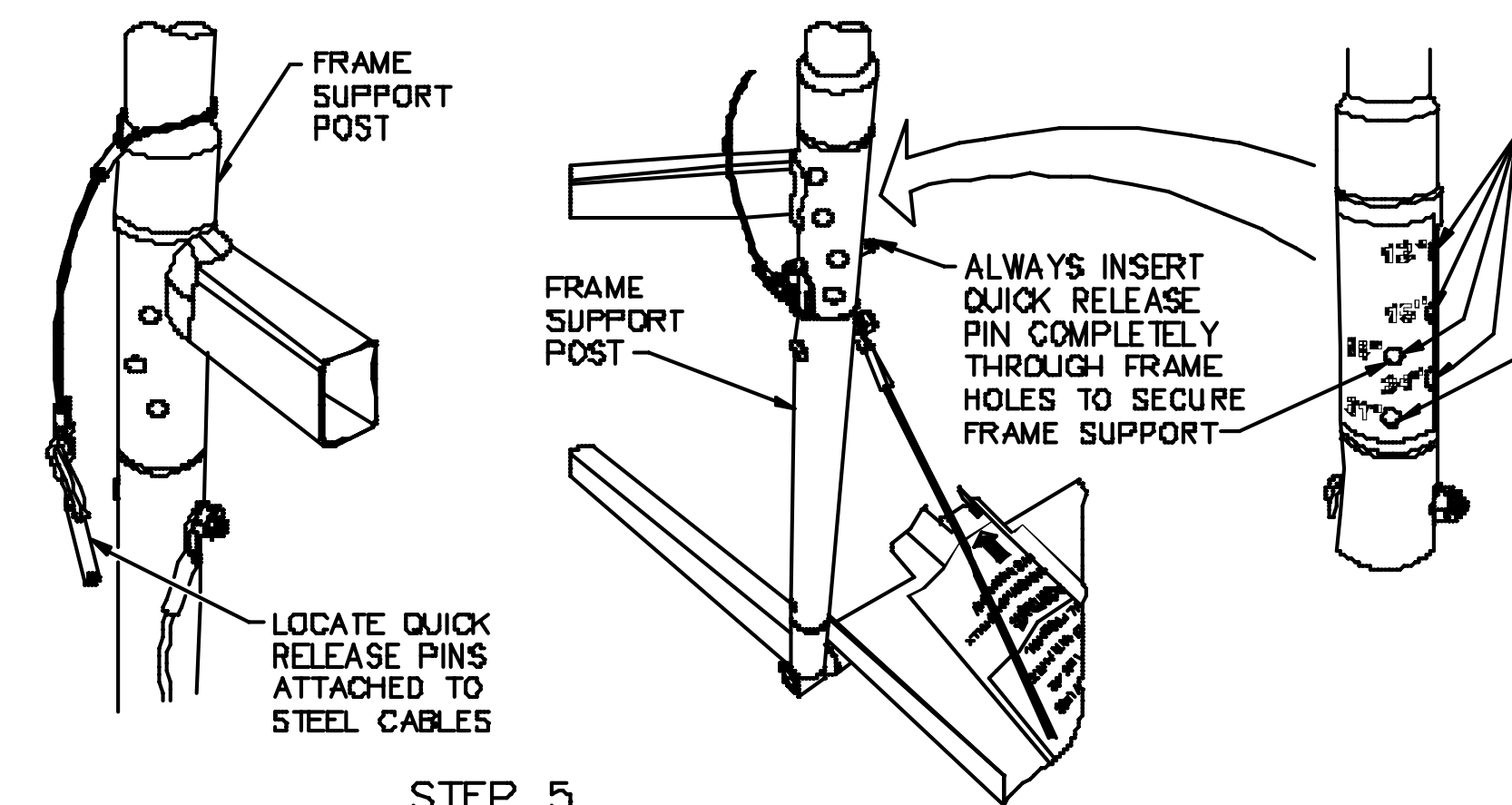


STEP 3
UNFOLD RIGHT FRAME SUPPORT

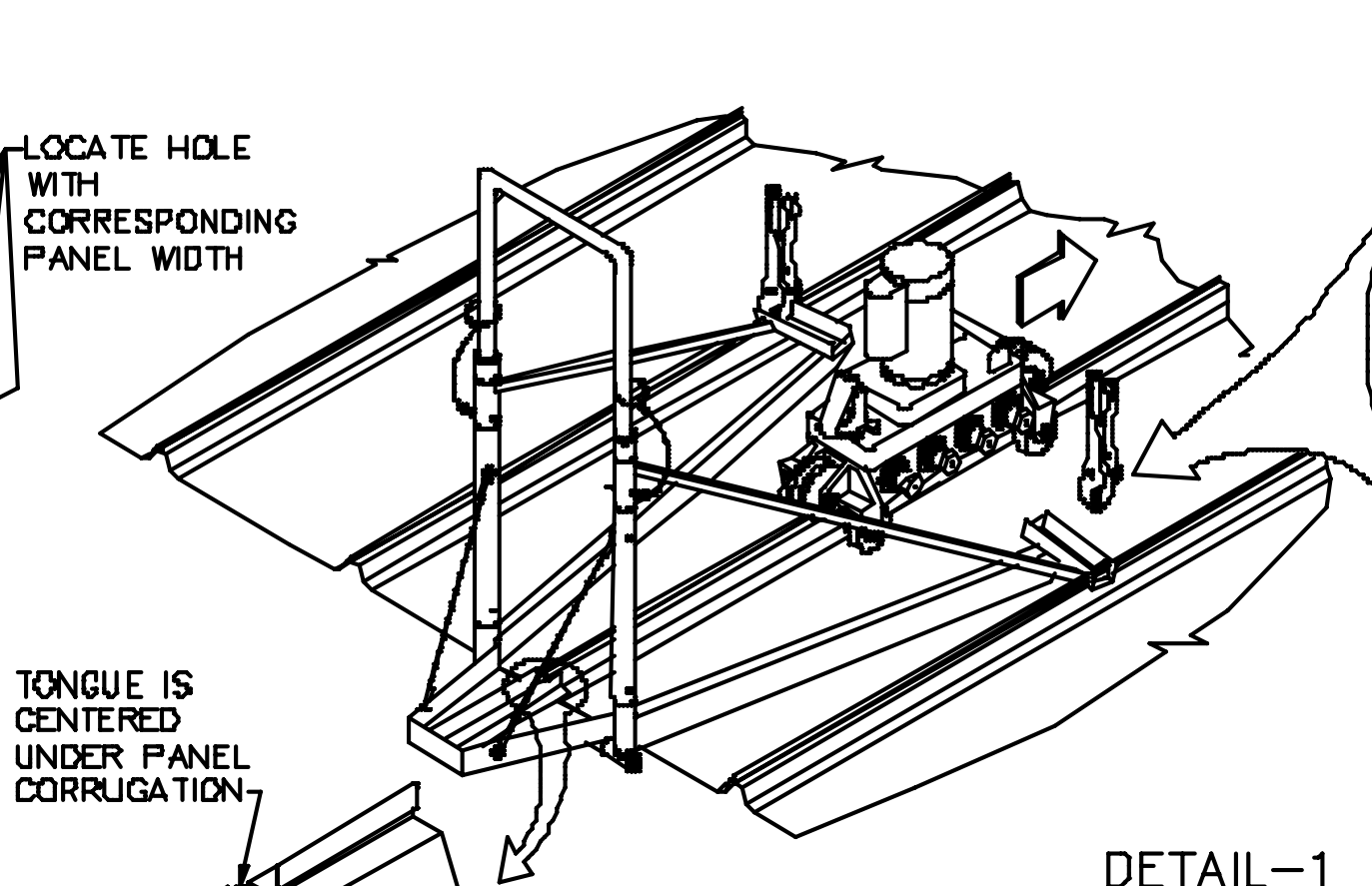


STEP 4
ALIGN SUPPORT FRAMES FOR QUICK RELEASE PIN INSTALLATION

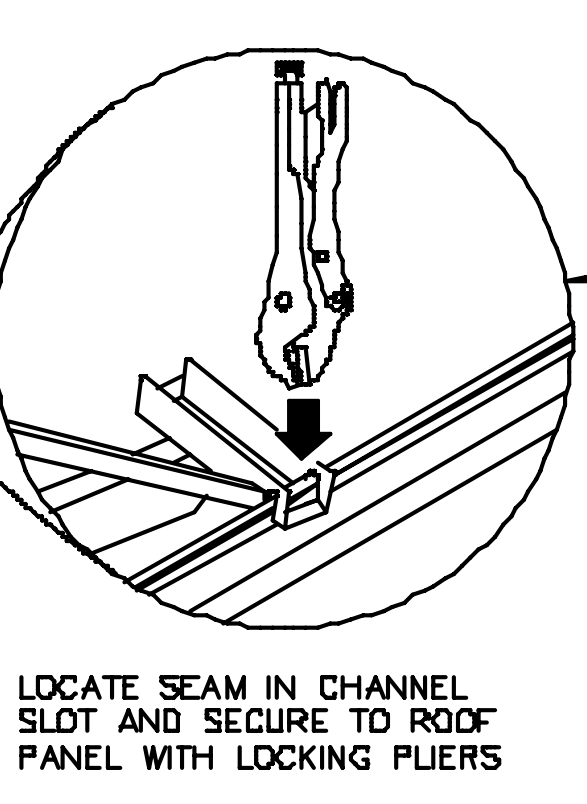
IMPORTANT:
QUICK RELEASE PINS MUST ALWAYS BE IN PLACE BEFORE ATTEMPTING TO PLACE ROOF RUNNER ON STARTING PLATFORM



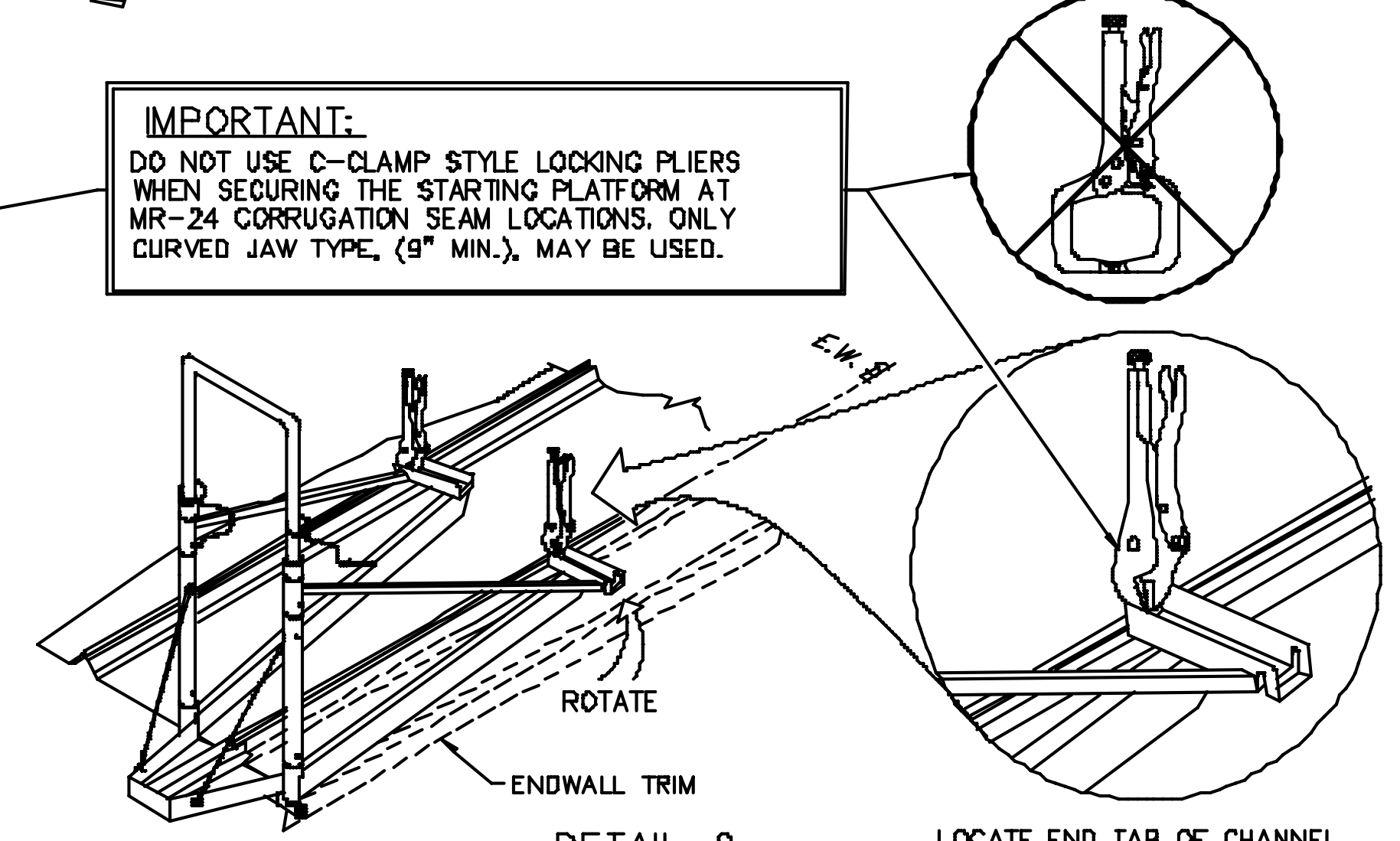
STEP 5
INSTALL QUICK RELEASE PIN TO BOTH SUPPORT FRAMES



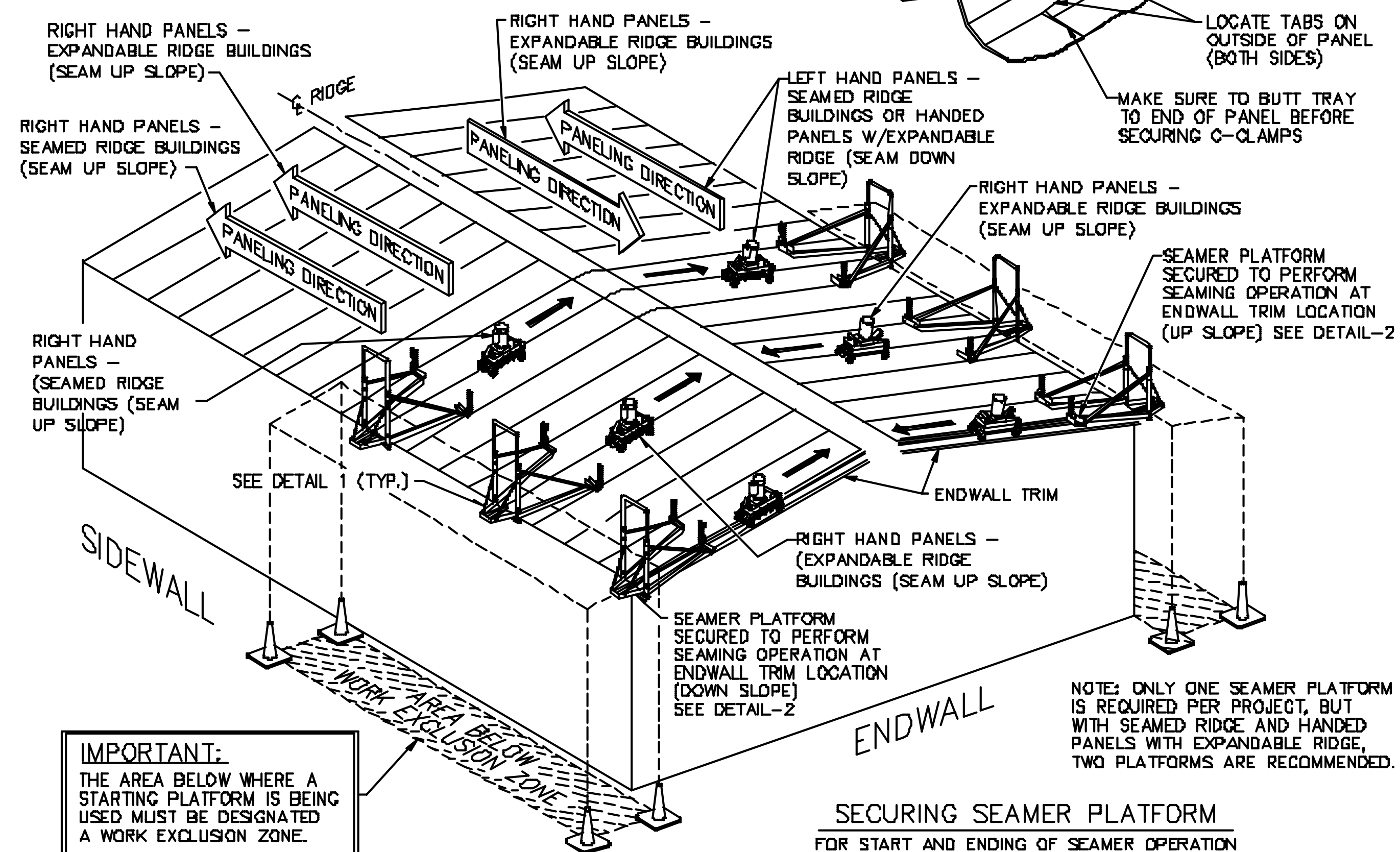
DETAIL-1
SECURING THE SEAMER PLATFORM
(TYP. AT INTERMEDIATE LOCATION)



DETAIL-2
SECURING THE SEAMER PLATFORM
(TYP. AT ENDWALL TRIM)



DETAIL-2
SECURING THE SEAMER PLATFORM
(TYP. AT ENDWALL TRIM)



SECURING SEAMER PLATFORM
FOR START AND ENDING OF SEAMER OPERATION

IMPORTANT:
THE AREA BELOW WHERE A STARTING PLATFORM IS BEING USED MUST BE DESIGNATED A WORK EXCLUSION ZONE.

GENERAL NOTES:

1. THE MR-24 SEAMER PLATFORM IS DESIGNED FOR STARTING AND REMOVING THE SEAMER AT THE EAVE.
2. THE SEAMER PLATFORM SUPPORTS THE ROOF RUNNER OUT BEYOND THE END OF THE PANEL AND ALIGNS IT WITH THE ROOF SLOPE WHEN SEAMING THE SEAM. THIS SEAMER PLATFORM IS ALSO DESIGNED TO SAFELY CATCH THE ROOF RUNNER WHEN RUNNING IT OFF AT THE EAVE.
3. THE SEAMER PLATFORM IS A PURCHASE ITEM AND IS NOT TO BE RETURNED.

ASSEMBLY NOTES:

1. THE MR-24 SEAMER PLATFORM COMES ASSEMBLED AND PARTIALLY ENCLOSED WITH A CARDBOARD BOX PROTECTING THE FRAME AND TRAY AREA, ALONG WITH FOAM WRAP SURROUNDING THE TAPERED ENDS OF THE LEFT AND RIGHT FRAME SUPPORTS. REMOVE ALL PROTECTIVE MATERIAL IN THESE AREAS, THEN USING WIRE CUTTERS, CAREFULLY CUT THROUGH THE PLASTIC TIES USED TO SECURE THE FRAME DURING SHIPMENT, SEE STEP 1. BE CAREFUL NOT TO CUT THROUGH ANY CABLES, RINGS OR HARDWARE USED TO SECURE AND STABILIZE THE SEAMER PLATFORM DURING USE.
2. ONCE ALL PACKING MATERIALS HAVE BEEN REMOVED, FOLLOW STEPS 2 THROUGH STEP 5 TO UNFOLD THE SEAMER PLATFORM AND PROPERLY ORIENT THE PLATFORM TRAY (WARNING LABEL FACE UP) ALONG WITH BOTH FRAME SUPPORTS TO ALLOW FOR INSTALLATION OF QUICK RELEASE PINS.

SECURING THE SEAMER PLATFORM:

1. BEFORE PLACING PLATFORM ON END OF PANEL, ROTATE BOTH FRAME SUPPORTS AND ATTACH QUICK RELEASE PIN IN HOLE CORRESPONDING WITH PANEL WIDTH BEING CLAMPED TO.
2. PLACE THE SEAMER PLATFORM AT THE END OF THE CORRUGATION TO BE SEAMED. INSERT THE CORRUGATION SUPPORT (ON THE PLATFORM TRAY) INTO THE PANEL CORRUGATION AND PULL THE PLATFORM UPSLOPE TIGHT AGAINST THE EDGE OF THE ROOF PANEL.
3. LOCATE THE SLOTS OF THE SUPPORT FRAMES OVER THE ADJACENT PANEL SEAMS (SEE DETAIL 1 AND DETAIL 2), THEN CLAMP THE LOCKING PLIERS WITHIN THE CHANNEL. THE LOCKING PLIERS SHOULD BE POSITIONED SNUG AGAINST THE BOTTOM OF THE CHANNEL WHILE APPLYING DOWNWARD FORCE TO THE FRAME SUPPORT, TO PROVIDE MAXIMUM SURFACE GRIP AT THE PANEL SEAM. ALWAYS DOUBLE CHECK THIS CONNECTION TO MAINTAIN A SAFE AND SECURE ATTACHMENT OF THE SEAMER PLATFORM TO THE ROOF.
4. IF THE CORRUGATION TO BE SEAMED IS AT THE ENDWALL TRIM, REMOVE THE SUPPORT FRAME LOCKING PIN AND ROTATE THE SUPPORT FRAME BACK TO THE ENDWALL TRIM SEAM. THEN CLAMP THE LOCKING PLIERS ON THE TAB OF THE SUPPORT FRAME AND THE ENDWALL TRIM SEAM. ALSO CLAMP AND SECURE THE OTHER SUPPORT FRAME ON THE ADJACENT PANEL SEAM.

MR-24 SEAMER PLATFORM UNPACKING AND SECURING THE PLATFORM				
DRAWN BY:	CHECKED BY:	GROUP NUMBER: 02-064-01		
GW	RMC			
FIRST RELEASE DATE:	REVISION DATE:			
01/21/10	09/20/16	B	P-081616	03

SAFETY PRECAUTIONS

SAFETY MUST BE A PRIME CONCERN THROUGHOUT THE ENTIRE ERECTION PROCESS. THESE INSTRUCTIONS CONTAIN SAFETY INFORMATION THAT IS IMPORTANT FOR ALL WORKERS TO KNOW AND UNDERSTAND. IN ADDITION, LOCAL, STATE AND OSHA SAFETY REGULATIONS MUST BE FOLLOWED AT ALL TIMES. THE ERECTION CONTRACTOR HAS THE ULTIMATE RESPONSIBILITY FOR THE SAFETY OF THE WORKERS AND MUST COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS.

RECOGNIZE SAFETY INFORMATION



THIS IS THE SAFETY-ALERT SYMBOL. WHEN YOU SEE THIS SYMBOL IN THESE INSTRUCTION, BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY. FOLLOW RECOMMENDED PRECAUTIONS AND SAFE PRACTICES.

FOLLOW SAFETY INSTRUCTIONS

CAREFULLY READ ALL SAFETY MESSAGES IN THESE INSTRUCTIONS AS WELL AS MR-24 ERECTION MANUAL, ALL APPLICABLE DRAWINGS AND THE ROOFING WORK SAFETY INSTRUCTIONS AND ROOF PANEL WARNING LABEL THAT ARE SHIPPED WITH THE ROOF MATERIALS.

THE FOLLOWING WARNING DECAL IS ATTACHED TO THE SEAMER PLATFORM PAN.

! WARNING

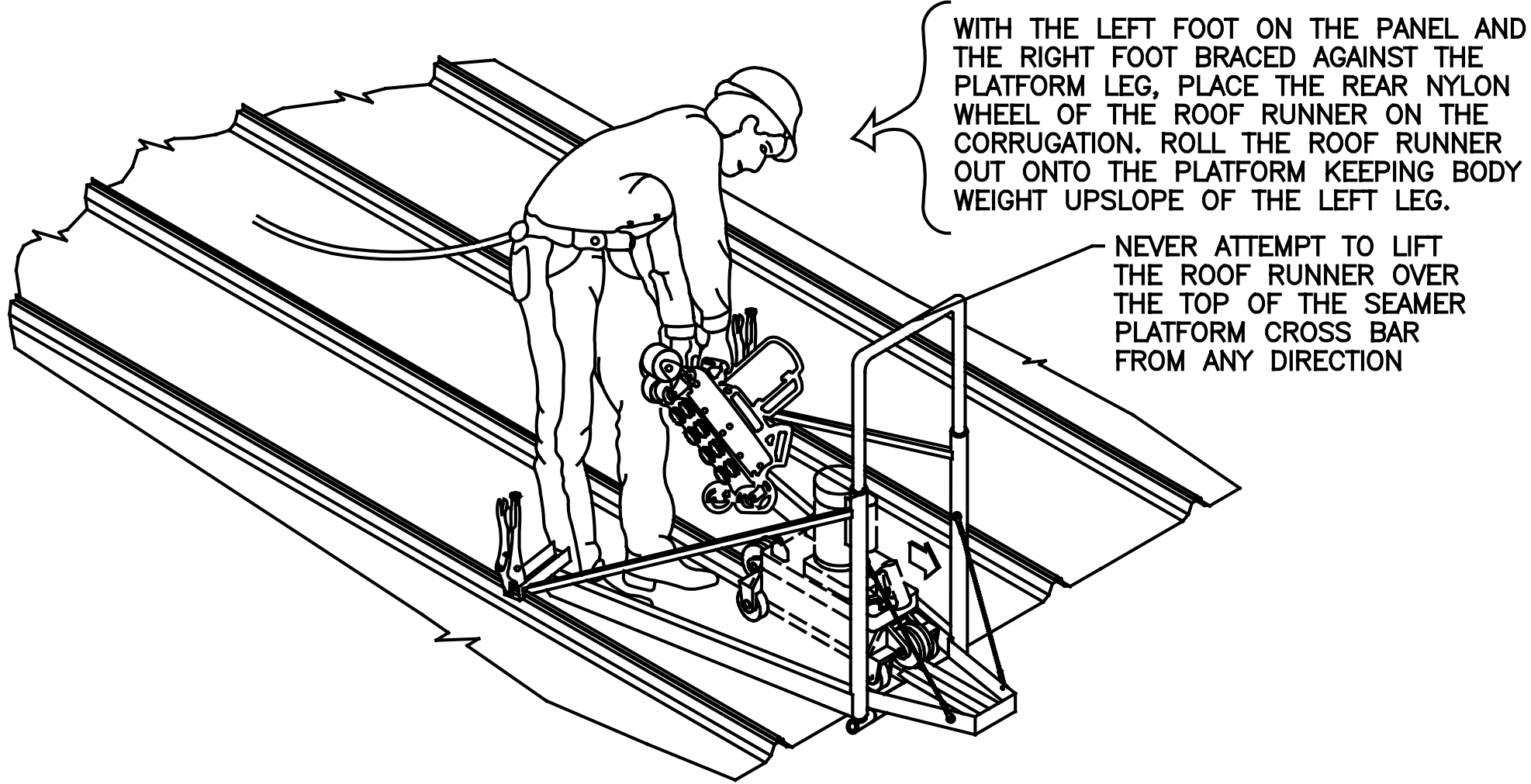
- DO NOT STEP ON PLATFORM PAN.
- DO NOT LEAN ON PLATFORM.
- DO NOT STRADDLE PLATFORM LEGS.
- MAKE SURE LOCKING PLIERS ARE SECURELY CLAMPED ONTO PANELS.
- ALWAYS USE FALL PROTECTION.

IMPORTANT:

CORRUGATION SUPPORT MUST BE FULLY INSERTED INTO CORRUGATION.

FAILURE TO HEED THESE WARNINGS CAN RESULT IN SERIOUS INJURY OR EVEN DEATH.

IF THE WARNING DECAL BECOMES ILLEGIBLE, ORDER A FREE REPLACEMENT FROM THE ROOF RUNNER OPERATIONS DEPARTMENT.



WARNING: NEVER STRADDLE THE PLATFORM OR COUNTERBALANCE THE ROOF RUNNER WITH YOUR WEIGHT.

IN ADDITION, FOLLOW THESE GUIDELINES DURING ALL ROOF RUNNER SEAMING OPERATIONS:

- ALWAYS USE FALL PROTECTION AND WALKBOARDS WHEN INSTALLING PANELS OR WORKING NEAR ROOF EDGES.
- MAKE SURE SEAMING FOLLOWS LAYING OF PANELS AS CLOSELY AS POSSIBLE AND USE FALL PROTECTION.
- LOCKING PLIERS (NOT BY BUTLER MANUFACTURING COMPANY) USED TO ATTACH SEAMER PLATFORM TO PANELS MUST BE IN GOOD CONDITION AND ADJUSTED TO RESIST A GOOD HARD PULL (60 POUNDS). ALWAYS DOUBLE CHECK SECURENESS OF LOCKING PLIERS EACH TIME THE SEAMER PLATFORM IS SECURED TO THE ROOF CORRUGATIONS.
- NEVER STEP ON THE SEAMER PLATFORM PAN.
- NEVER "RIDE" THE ROOF RUNNER OR BLOCK VENTS ON THE MOTOR IN ANY WAY.
- PANELS NOT FULLY SEAMED CAN COLLAPSE OR SLIDE OUT FROM UNDER YOU. ALWAYS USE FALL PROTECTION AND WALKBOARDS WHEN INSTALLING PANELS OR WORKING NEAR ROOF EDGES. MAKE SURE SEAMING FOLLOWS THE LAYING OF PANELS AS CLOSELY AS POSSIBLE.



WARNING: NEVER TIE POWER CORDS TOGETHER OR TO THE ROOF RUNNER.



CAUTION: KEEP THE PATH OF THE ROOF RUNNER CLEAR AT ALL TIMES AND POWER CORDS FREE OF ENTANGLEMENTS. A NON-LOCKING PLUG IS SUPPLIED SO THAT IT WILL UNPLUG ITSELF SHOULD THE POWER CORD BECOME ENTANGLED. DO NOT DEFEAT THIS SAFETY FEATURE BY TYING THE POWER CORD TO THE MOTOR LEAD OR TO THE ROOF RUNNER. ADDITIONALLY, TOWING OF THE POWER CORD(S) CAN CAUSE IMPROPER SEAMS TO BE FORMED.



WARNING: DON'T RIDE THE ROOF RUNNER OR BLOCK VENTS ON THE MOTOR IN ANY WAY.

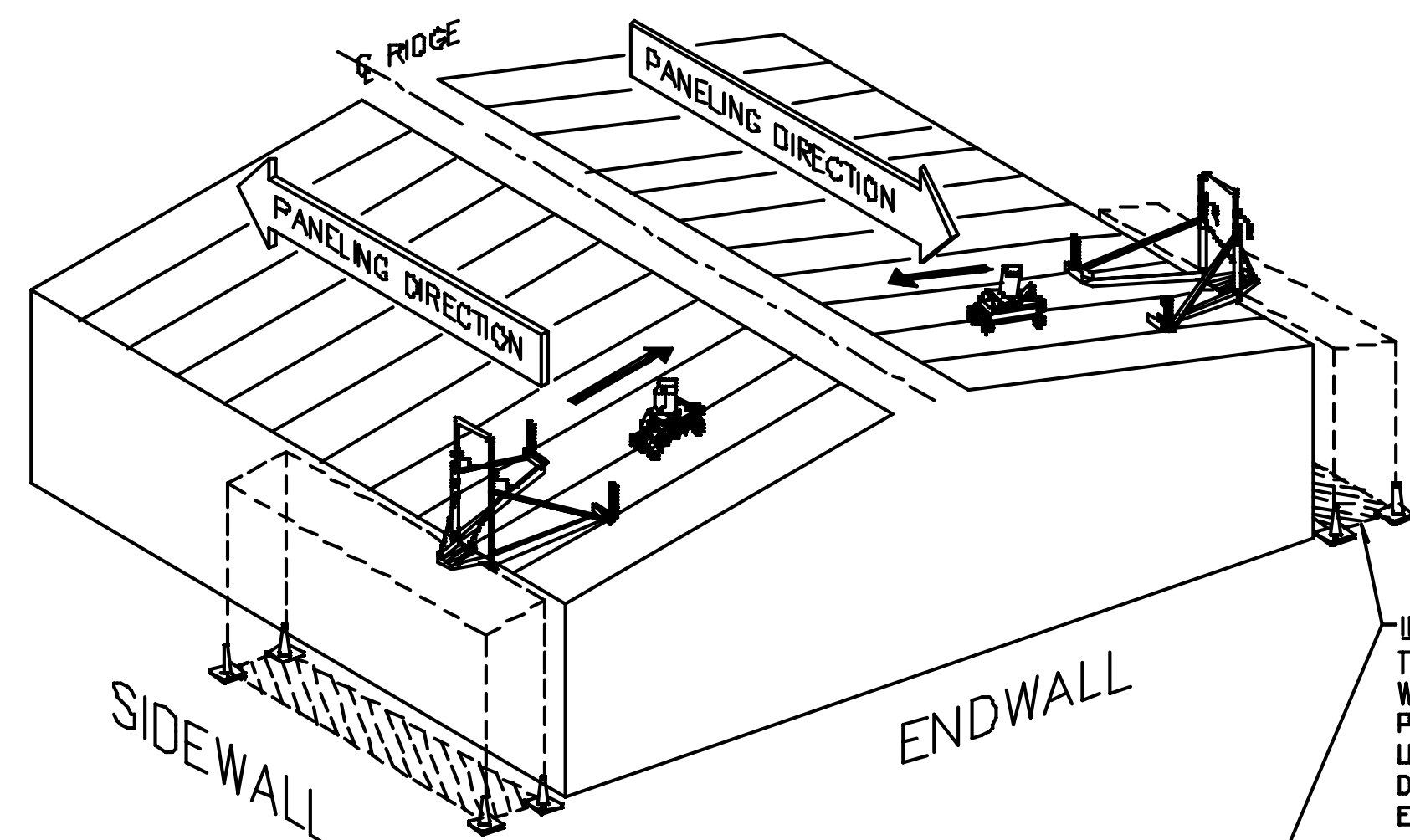


WARNING: PANELS NOT FULLY SEAMED CAN COLLAPSE OR SLIDE OUT FROM UNDER YOU. ALWAYS USE FALL PROTECTION AND WALKBOARDS WHEN INSTALLING PANELS OR WORKING NEAR ROOF EDGES. MAKE SURE SEAMING FOLLOWS THE LAYING OF PANELS AS CLOSELY AS POSSIBLE.

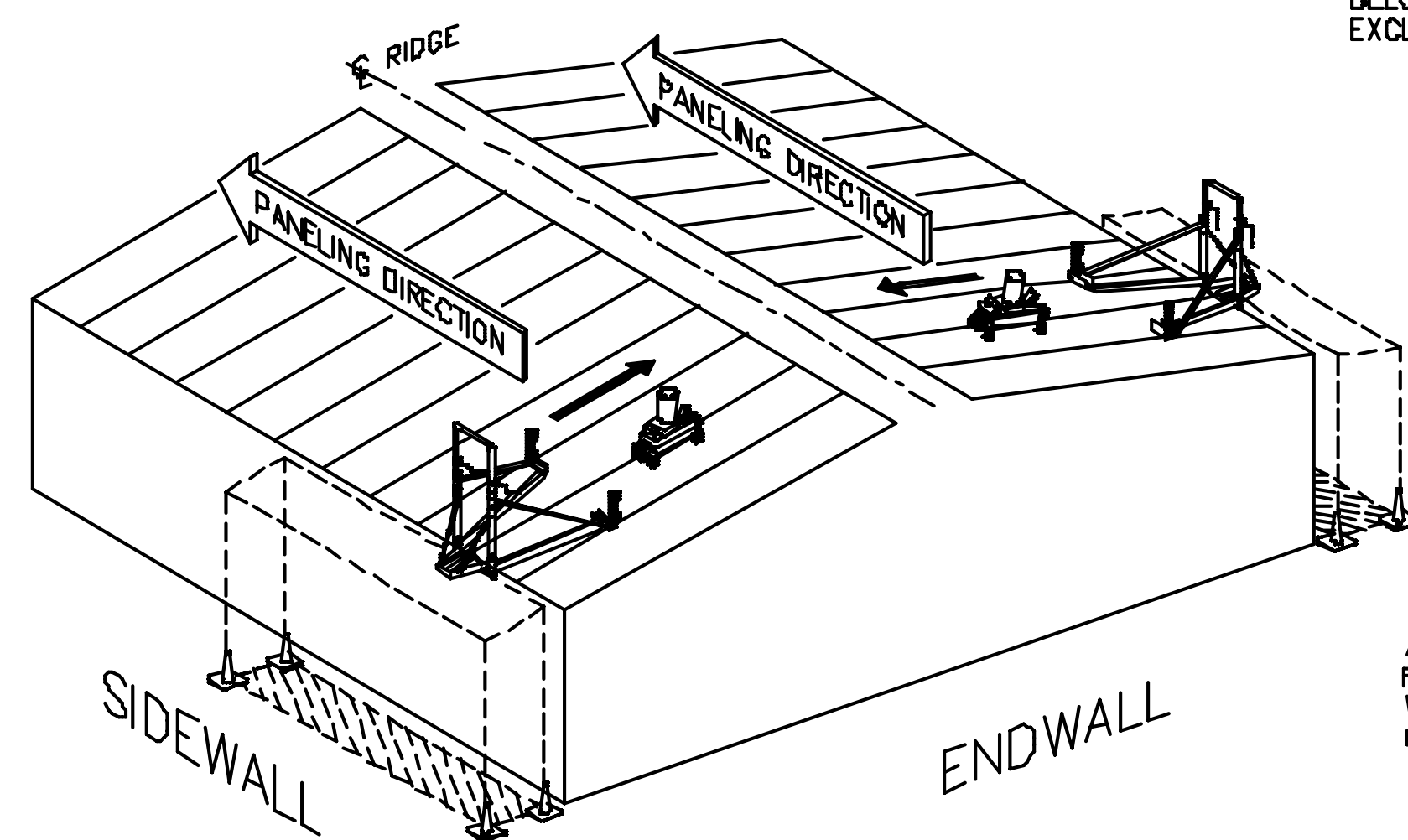


CAUTION: ALL ELECTRICAL SERVICE MUST BE PROPERLY GROUNDED, AND MUST INCLUDE A GROUND FAULT INTERRUPTER!

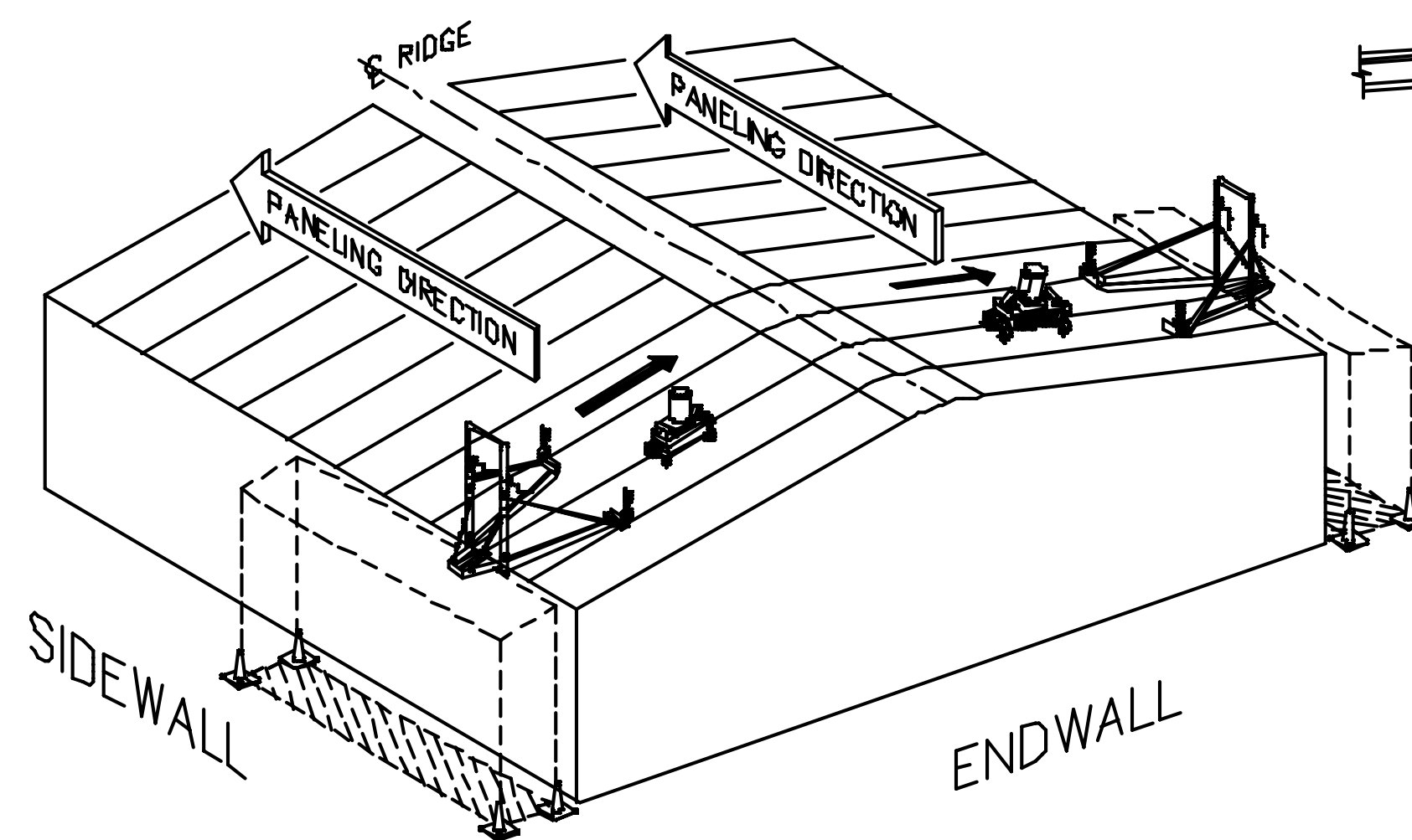
MR-24 ROOF RUNNER OPERATIONS SAFETY PRECAUTIONS				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-064-01		
RHE	RMC	B	P-081672	01
FIRST RELEASE DATE	REVISION DATE			
01/21/10	12/04/18			



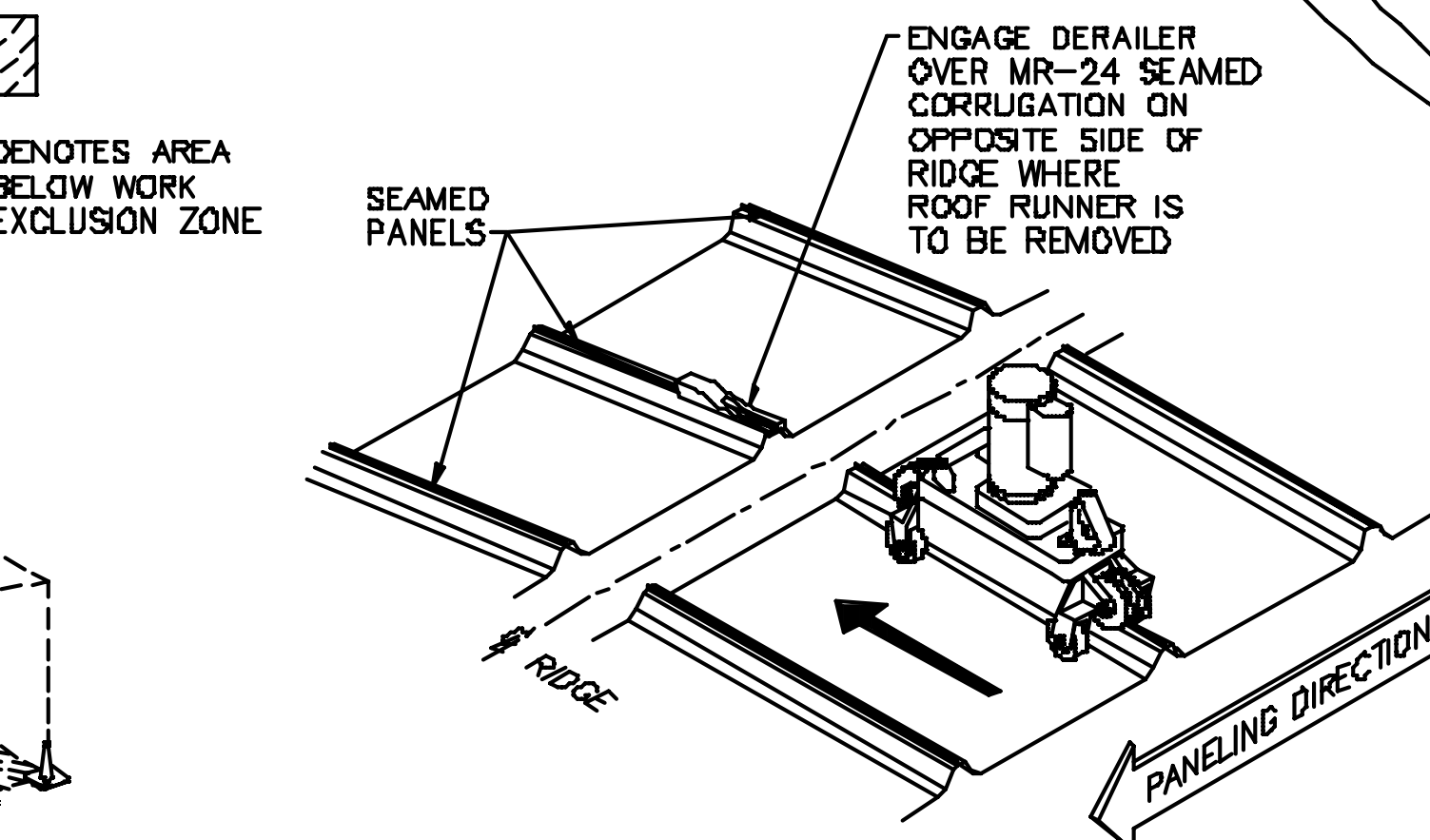
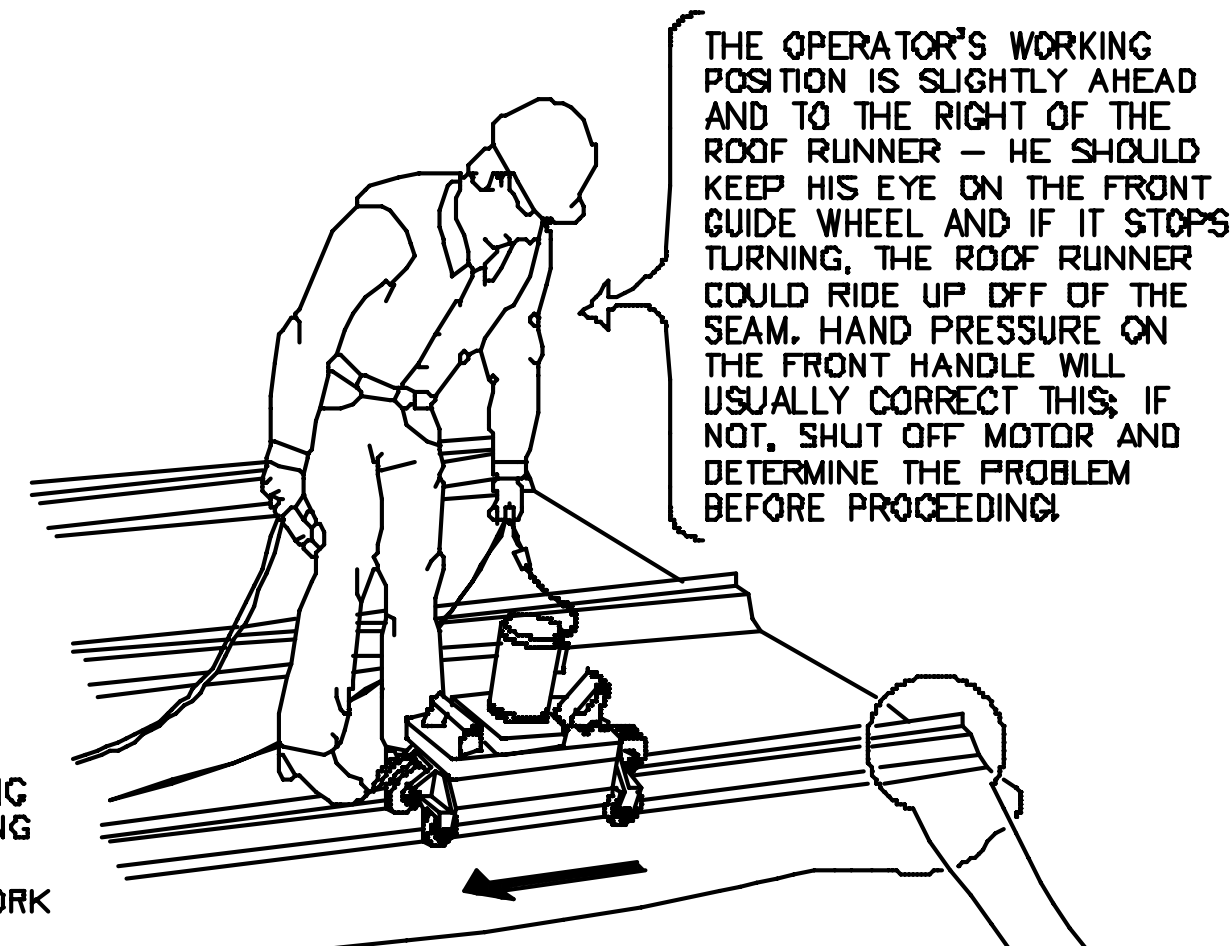
INSTALLATION OF MR-24
ON OPPOSITE SLOPES IN THE OPPOSITE DIRECTION
(PREFERRED METHOD OF INSTALLATION)



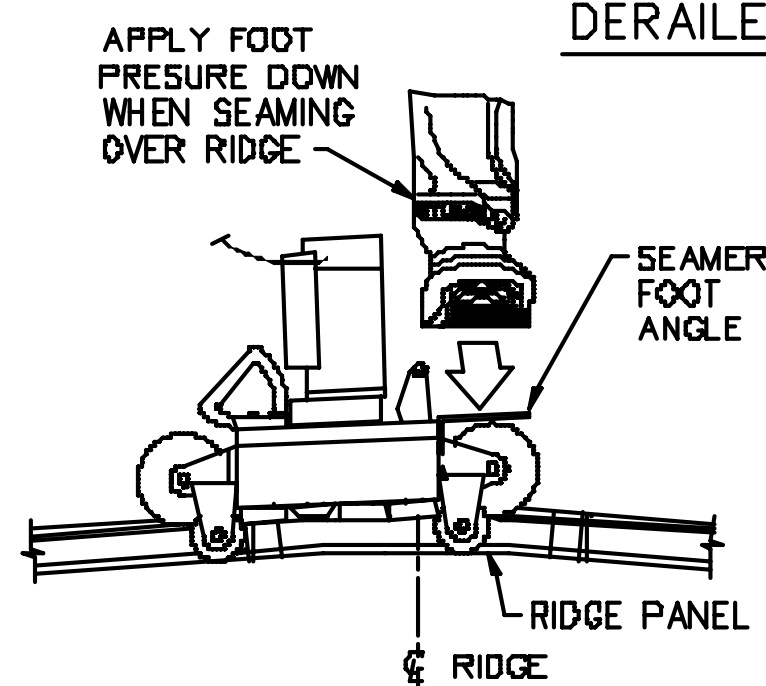
INSTALLATION OF (HANDED) MR-24
ON OPPOSITE SLOPES IN THE OPPOSITE DIRECTION



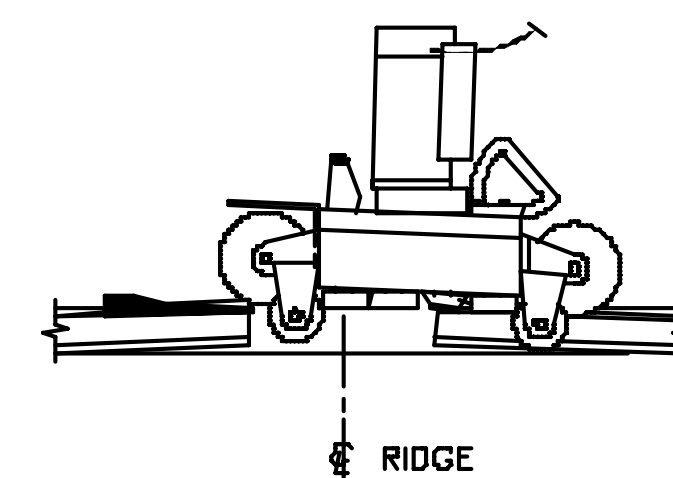
INSTALLATION OF (SEAMED RIDGE) MR-24
ON OPPOSITE SLOPES IN THE SAME DIRECTION



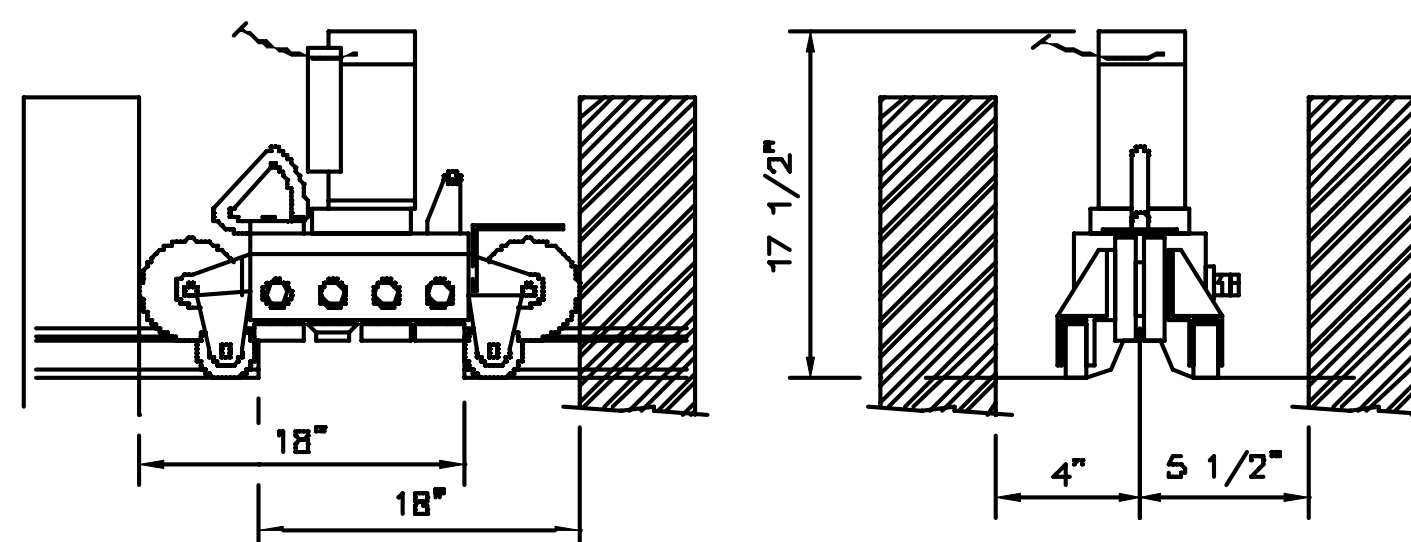
DERAILER AND ROOF RUNNER
AT RIDGE



CROSS SECTION
AT SEAMED RIDGE



CROSS SECTION
DERAILER AND ROOF RUNNER AT RIDGE



ROOF RUNNER CLEARANCES

ROOF RUNNER DESCRIPTION

THE ROOF RUNNER IS A FOUR STAND, PORTABLE, ROLL FORMING MACHINE THAT JOINS THE MR-24 ROOF PANELS TOGETHER BY MAKING A DOUBLE LOCK SEAM OF THE VERTICAL LEGS OF THE PANEL HALF CORRUGATIONS. IT IS POWERED BY AN ELECTRIC MOTOR AND WEIGHS APPROXIMATELY 70 POUNDS (72 POUNDS IN ITS SHIPPING BOX). ITS AVERAGE FORMING SPEED IS 13 FEET PER MINUTE AT 120V.

IT IS LEASED FROM AND REMAINS THE PROPERTY OF BUTLER MANUFACTURING CO. FOR LOSS VALUE SEE LEASE AGREEMENT.

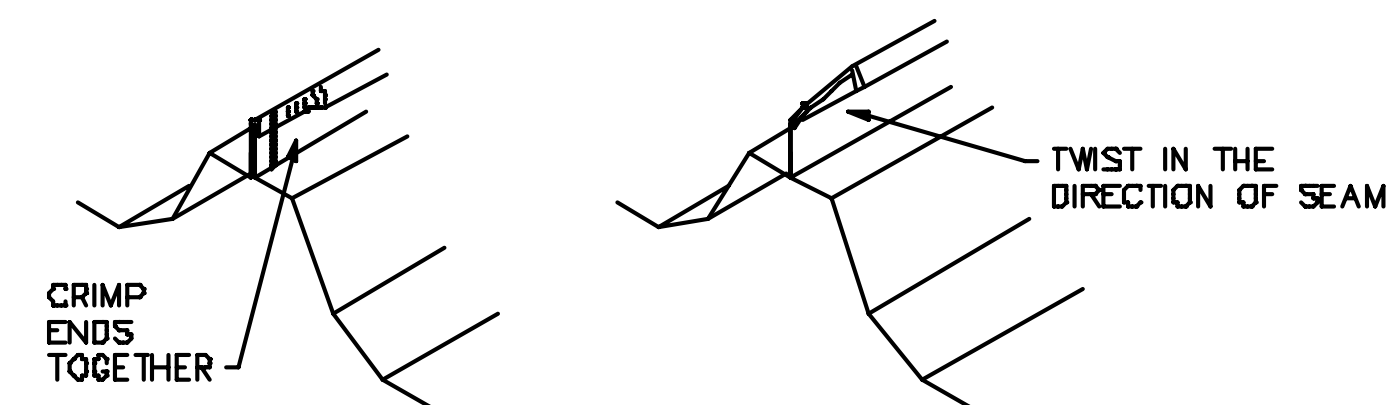
PAINTED PANELS

PRIOR TO USE ON "PAINTED" MR-24 PANELS, PLEASE CONTACT ROOF RUNNER OPERATIONS 816-763-0815. PAINTED MATERIAL PRESENTS SPECIAL CONDITIONS THAT REQUIRE NEW OR NEARLY NEW FEED WHEELS. IF YOU ALREADY HAVE A MACHINE, FEED WHEELS WILL BE SUPPLIED FOR FIELD INSTALLATION OR A REPLACEMENT MACHINE WILL BE FURNISHED IN ANY CASE, THERE IS NO ADDITIONAL CHARGE FOR THIS UPGRADE AND IT WORKS FINE WITH UNPAINTED MR-24. 22 GA. ROOF RUNNERS DO NOT REQUIRE UPGRADING FOR PAINTED PANELS.

THE SEAMING OPERATION

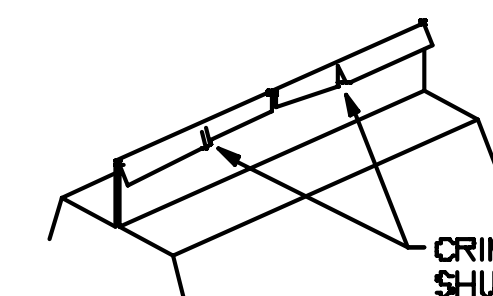
SEAMING WITH THE ROOF RUNNER CAN BEGIN AS SOON AS SUFFICIENT ROWS OF PANELS ARE LAYED IN PLACE TO PERMIT OPERATION OF THE ROOF RUNNER WITHOUT INTERFERENCE WITH THE CREW LAYING THE PANELS. IMPORTANT: REFER TO THE MR-24 INSTALLATION MANUAL AND THE ERECTION DRAWINGS FOR MORE SPECIFIC INFORMATION ON PANEL INSTALLATION, CLIP ATTACHMENT, MASTIC PLACEMENT, ETC.

1. PANELS AND CLIP TABS MUST BE PROPERLY ENGAGED AND REMAIN IN POSITION DURING THE SEAMING OPERATION. IF NECESSARY, USE LOCKING PLIERS TO HOLD THE PANELS IN POSITION.
2. BEFORE BEGINNING THE SEAMING OPERATION, THE ENDS OF THE PANELS MUST BE CRIMPED TOGETHER, TWISTING THE END SLIGHTLY IN THE DIRECTION OF SEAMING. CHECK FOR THE PIGTAIL OF PANLATIC IN THE SEAM LAP.



3. ALWAYS KEEP THE TWO PANEL EDGES ENGAGED. IF THEY BECOME DISENGAGED, STOP THE ROOF RUNNER OPERATION AND CORRECT THE PROBLEM IMMEDIATELY.

PANEL AND SPLICES REQUIRE SPECIAL ATTENTION - IMPROPERLY PLACED OR EXCESS MASTIC WILL BE PICKED UP BY THE ROOF RUNNER MACHINE MAKING THE SEAMING PROCESS MORE DIFFICULT. THE UPPER PANELS MUST FIT INTO THE LOWER PANELS NOTCHES TO MINIMIZE THE MATERIAL THICKNESS TO BE SEAMED. BE SURE TO CRIMP THE PANEL LIPS SHUT AT THE JOINT TO PREVENT THE POSSIBILITY OF THE UPSLOPE END JAMMING IN THE MACHINE.

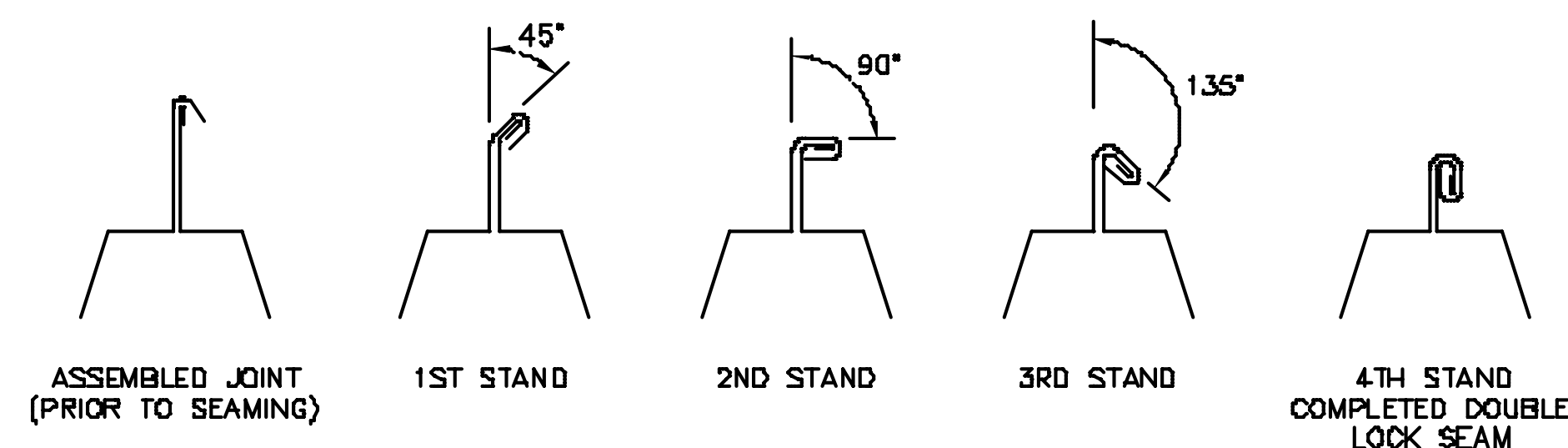


AVOID ROOF TRAFFIC DISTORTION TO THE PANELS BEING SEAMED. KEEP ROOF TRAFFIC AWAY FROM THE ROOF RUNNER. IMPORTANT: THE OPERATOR SHOULD STAY IN A POSITION THAT MINIMIZES TRAFFIC DISTORTION. THE BEST POSITION IS 4' TO 5' AHEAD, TO THE RIGHT OF THE ROOF RUNNER ON A FULLY SEAMED PANEL FROM THIS POSITION, THE OPERATOR CAN:

- KEEP PANELS ENGAGED
- WATCH SEAM AND ROOF RUNNER
- STOP MACHINE AS NECESSARY
- HOLD DOWN FRONT OF MACHINE ACROSS LAPS
- WORK FROM SAFEST POSITION ON A STABLE PANEL

LOCK-SEAM SEQUENCE

THE FOLLOWING SERIES OF ILLUSTRATIONS SHOW THE LOCK-SEAM SEQUENCE PERFORMED BY THE ROOF RUNNER AS IT PROGRESSES ALONG THE LENGTH OF THE PANEL CORRUGATION.



ROOF RUNNER CLEARANCES

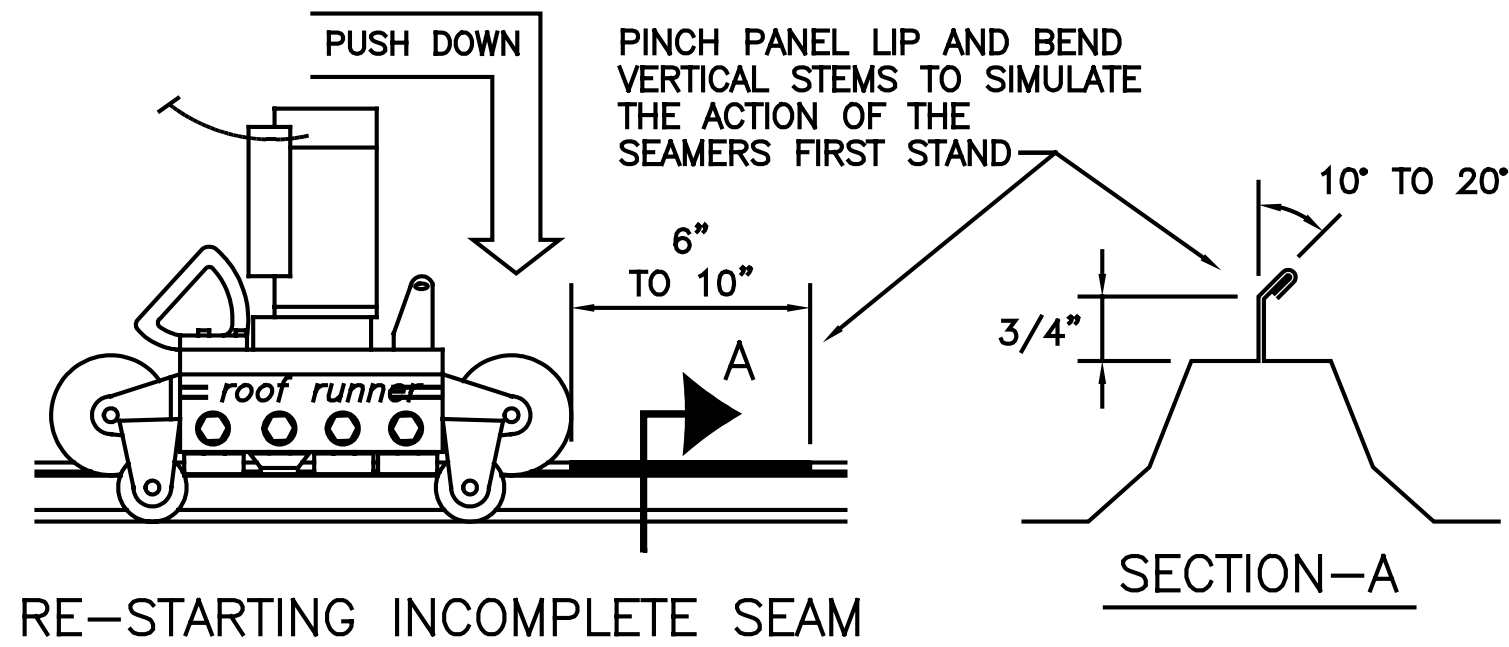
IN ORDER TO START OR REMOVE THE ROOF RUNNER IN CONDITIONS SUCH AS PARAPET WALLS OR OTHER OBSTRUCTION, A MINIMUM CLEAR DISTANCE OF 18 INCHES IS REQUIRED. THE MULTIPLE GUTTER CONDITION WILL REDUCE THIS DISTANCE DEPENDING ON THE ROOF SLOPES USED.

A DISTANCE OF 4" OR 5 1/2" AT THE SIDE OF THE SEAM IS REQUIRED FOR MACHINE CLEARANCE. 17 1/2" IS NEEDED FOR THE MACHINE TO PASS BENEATH OBSTRUCTION.

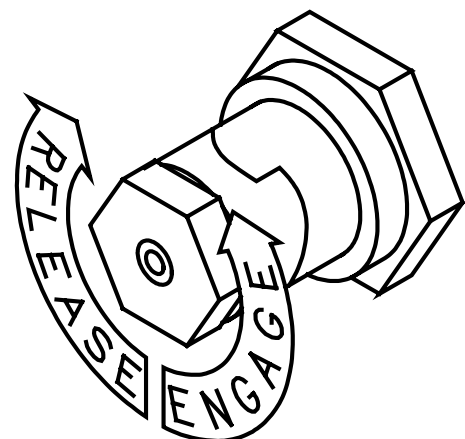
MR-24 ROOF RUNNER OPERATIONS GENERAL SEAMING OPERATIONS				
DRAWN BY:	CHECKED BY:	GROUP NUMBER: 02-064-01		
RHE	RMC			
FIRST RELEASE DATE:	REVISION DATE:			
01/21/10	10/11/16	B	P-081673	01

TIPS FOR TROUBLE FREE OPERATION

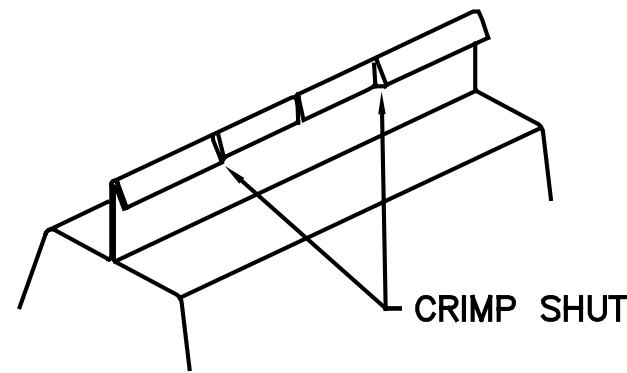
1. SAFE AND CORRECT SEAMING REQUIRES ALL MACHINE OPERATORS TO BE FAMILIAR WITH THE MACHINE FEATURES. BE SURE THEY ARE AWARE OF THE PROPER MATERIAL FLOW THROUGH THE FEED WHEELS SO THAT THEY CAN SPOT A MALFUNCTION QUICKLY AND CAN CORRECT ITS CAUSE IMMEDIATELY. IMPROPER SEAMS LONGER THAN 5 FEET ARE DIFFICULT TO REPAIR AS THEY INVOLVE THE PANEL CLIPS AND TABS.
2. ALWAYS USE A SEAMER PLATFORM.
3. MAKE SURE THE FEED WHEELS ARE KEPT CLEAN, ESPECIALLY ON PAINTED MATERIAL! (SEE MAINTENANCE)
4. MANY SEAMING PROBLEMS ARE THE RESULT OF MIS-ALIGNED PURLINS AND/OR FRAMES. A SUDDEN CHANGE IN DIRECTION (1/4" IN 5'-0") CAN CAUSE AN INCORRECT SEAM. A GOOD RULE TO FOLLOW IS TO "STRING LINE" THE PURLIN HOLES IN EACH BAY BEFORE PANELING.
5. BE SURE THE PANELS ARE PROPERLY ENGAGED PRIOR TO SEAMING. USE LOCKING PLIERS TO HOLD THEM IN POSITION AS REQUIRED. SHOULD AN INCOMPLETE SEAM OCCUR, STOP THE ROOF RUNNER IMMEDIATELY! AN INCOMPLETE SEAM CAN USUALLY BE RESTARTED BY BENDING THE PANEL STEMS SEVERAL INCHES AHEAD OF THE SEAMER, IN THE DIRECTION OF SEAMING.



6. WATCH TO SEE THAT THE LARGE FRONT AND REAR GUIDE WHEELS ARE BEARING ON THE CORRUGATION. THE WHEELS SHOULD TURN THROUGHOUT THE SEAMING OPERATION (AT CLIPS AND END SPLICES THEY MAY STOP MOMENTARILY, BUT SHOULD RESUME TURNING AGAIN IMMEDIATELY).
7. CAM RELEASES ARE PROVIDED FOR THE PURPOSE OF DISENGAGING THE MACHINE FROM THE PANEL. THEY SHOULD BE USED ONLY WHEN ABSOLUTELY NECESSARY. A LARGE ADJUSTABLE WRENCH OR 30 MM SOCKET IS REQUIRED AND THE PROCESS SHOULD BE DONE SLOWLY AND WITH GREAT CARE AS THERE ARE SEVERAL CAST PIECES INVOLVED THAT ARE UNDER HEAVY SPRING PRESSURE. THESE PIECES WILL BREAK IF EXTREME CARE IS NOT USED TO RELEASE AND ENGAGE THE CAM.



8. PANEL AND SPLICES REQUIRE SPECIAL ATTENTION – IMPROPERLY PLACED OR EXCESS MASTIC WILL BE PICKED UP BY THE ROOF RUNNER MACHINE MAKING THE SEAMING PROCESS MORE DIFFICULT. THE UPPER PANELS MUST FIT INTO THE LOWER PANELS NOTCHES TO MINIMIZE THE MATERIAL THICKNESS TO BE SEAMED. BE SURE TO CRIMP THE PANEL LIPS SHUT AT THE JOINT TO PREVENT THE POSSIBILITY OF THE UPSLOPE END JAMING THE ROOF RUNNER MACHINE.



9. AVOID ROOF TRAFFIC DISTORTION TO THE PANELS BEING SEAMED. KEEP ROOF TRAFFIC AWAY FROM THE ROOF RUNNER. IMPORTANT: THE OPERATOR SHOULD STAY IN A POSITION THAT MINIMIZES TRAFFIC DISTORTION. THE BEST POSITION IS 4' TO 5' AHEAD, TO THE RIGHT OF THE ROOF RUNNER THE OPERATOR CAN:
 - KEEP PANELS ENGAGED
 - WATCH SEAM AND ROOF RUNNER
 - STOP MACHINE AS NECESSARY
 - HOLD DOWN FRONT OF MACHINE ACROSS LAPS
 - WORK FROM SAFEST POSITION ON A STABLE PANEL

MAINTENANCE FOR THE SEAMER PLATFORM

ALL MAINTENANCE AND REPAIRS ARE THE RESPONSIBILITY OF THE BUILDER.

THE SEAMER PLATFORM MUST BE MAINTAINED IN GOOD WORKING CONDITION IN ORDER TO FUNCTION PROPERLY AND SAFELY. DO NOT ALLOW THE SEAMER PLATFORM TO BE DROPPED, BENT, OR IN ANY WAY BE DAMAGED.

REGULAR INSPECTION OF THE SEAMER PLATFORM IS ADVISABLE IN ORDER TO DISCOVER HIDDEN DAMAGE AND TO INSURE IT IS IN GOOD WORKING ORDER.

IF ANY DAMAGE TO THE SEAMER PLATFORM AFFECTS ITS SAFE USAGE, DO NOT CONTINUE TO USE IT.

TO PURCHASE A REPLACEMENT, CALL THE ROOF RUNNER OPERATIONS DEPARTMENT.

THE WARNING DECAL ON THE SEAMER PLATFORM MUST ALSO BE KEPT IN GOOD CONDITION. REPLACEMENTS MAY BE ORDERED, FREE OF CHARGE, FROM THE ROOF RUNNER OPERATIONS DEPARTMENT (816-763-0815).

MAINTENANCE FOR THE ROOF RUNNER

ALL MAJOR MAINTENANCE AND REPAIRS WILL BE DONE BY BUTLER MANUFACTURING COMPANY – ROOF RUNNER OPERATIONS. EACH MACHINE WILL BE CLEANED, WORN PARTS REPLACED, LUBRICATED, PAINTED, AND TESTED BEFORE BEING SHIPPED TO INSURE RELIABLE PERFORMANCE ON THE JOB SITE.

MINOR MAINTENANCE SUCH AS MASTIC REMOVAL, PROTECTION FROM MOISTURE, DAMAGE, SHIPPING BOX CARE, ETC., ARE SOLELY THE RESPONSIBILITY OF THE LESSEE.

ALL QUESTIONS PERTAINING TO THE ROOF RUNNER SHOULD BE DIRECTED TO:
(PLEASE REFER TO SPECIFIC ROOF RUNNERS BY SERIAL NUMBER ON ALL CORRESPONDENCE)

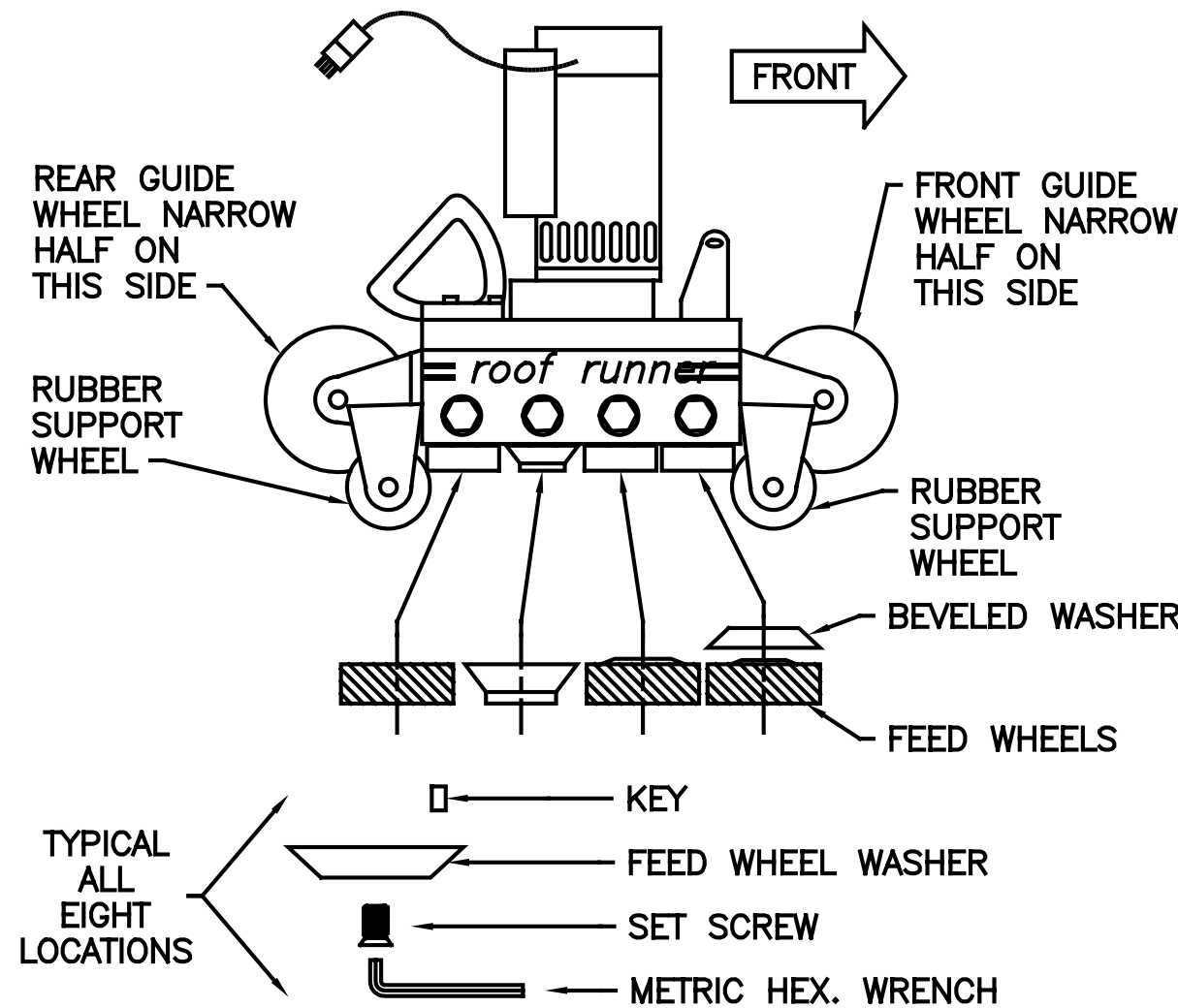
BUTLER MANUFACTURING COMPANY
13500 BOTTS ROAD
GRANDVIEW, MISSOURI 64030

TEL: 816-763-0815
FAX: 816-763-1717
ATTN: ROOF RUNNER OPS.

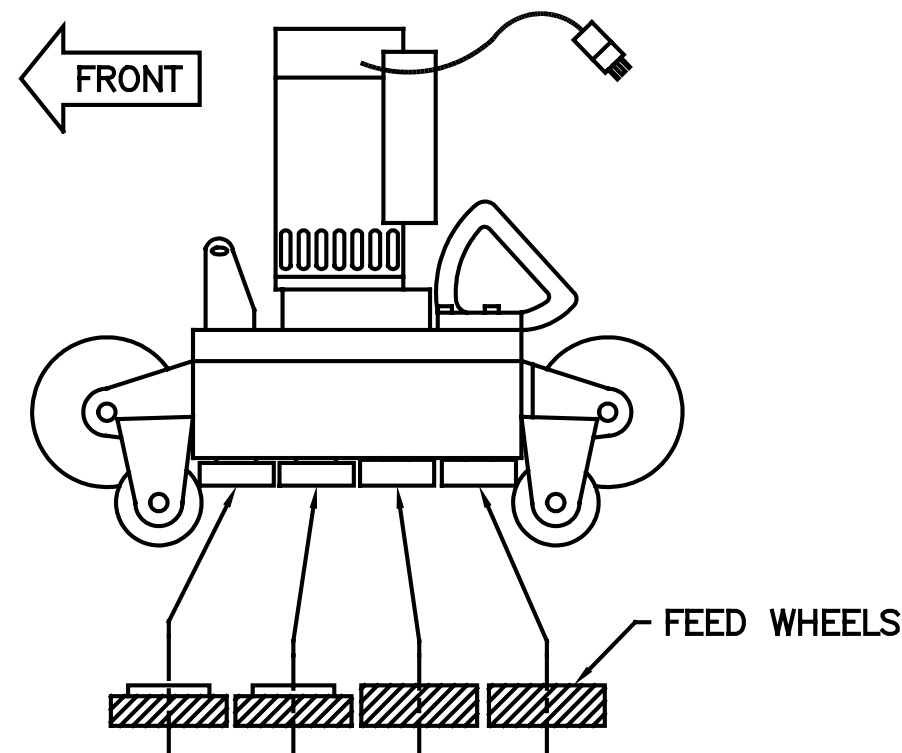
MASTIC REMOVAL – THE EIGHT FORMING WHEELS ON THE UNDERSIDE OF THE ROOF RUNNER MAY BE REMOVED FOR CLEANING (AN "L" SHAPED METRIC HEX WRENCH IS FURNISHED WITH THE ROOF RUNNER TO REMOVE THE FEED WHEEL SET SCREWS). THE FEED WHEELS, WASHERS, AND SET SCREWS CAN BE SOAKED IN A SOLVENT BATH TO REMOVE MASTICS. NAPHTHA OR MINERAL SPIRITS WILL EFFECTIVELY CUT BUTLER MASTICS. CAUTION – READ SOLVENT LABELS THOROUGHLY BEFORE USING. DO NOT SOAK ANY OTHER PART OF THE ROOF RUNNER – SOLVENTS WILL ATTACK THE RUBBER SUPPORT WHEELS AND REMOVE THE LUBRICATING ABILITY OF THE BRONZE BEARINGS IF SOAKED. THESE PARTS MAY BE CLEANED BY BRUSHING OR WIPING WITH SOLVENTS AND SHOULD BE DRIED IMMEDIATELY. THE FOLLOWING SKETCHES SHOW THE PROPER ORIENTATION OF THE FEED WHEELS, KNURLING DIRECTION, AND OTHER PARTS THAT CAN BE REMOVED FOR CLEANING. FEED WHEELS MUST BE RE-INSTALLED EXACTLY AS SHOWN BEFORE THE MACHINE CAN FUNCTION PROPERLY.

PAINTED PANELS – FEED WHEELS MUST PENETRATE THE PAINTED SURFACE IN ORDER TO GRIP THE PANEL AND MAKE THE SEAM. THIS WILL LEAVE NON-OBJECTIONABLE TRACKS ON THE SEAM. A BUILD-UP OF PAINT CHIPS IN THE GROOVES OF THE FEED WHEELS WILL OCCUR REQUIRING CONTINUOUS WIRE BRUSHING TO INSURE AN ADEQUATE GRIP DURING THE SEAMING PROCESS.

THE FREQUENCY OF CLEANING SHOULD BE DETERMINED BY THE MACHINE OPERATOR. MASTIC MUST NOT BE ALLOWED TO ACCUMULATE ON THE FEED WHEELS EVEN THOUGH THE MACHINE IS FUNCTIONING PROPERLY. AS MASTICS BUILD UP, A CERTAIN AMOUNT WILL MIGRATE TO THE INTERNAL PARTS CAUSING BINDING OF PARTS AND RESULTING IN IMPROPER FUNCTIONING. INTERNAL CLEANING IS CONSIDERED MAJOR MAINTENANCE AND MUST BE DONE BY ROOF RUNNER OPERATIONS.



NOTICE THE ANGLED GROOVES IN THE FEED WHEELS, THEY MUST BE RE-INSTALLED EXACTLY AS SHOWN!



GUIDE WHEELS AND RUBBER SUPPORT WHEELS MAY ALSO BE REMOVED FOR CLEANING BY REMOVING SNAP RINGS AND WITHDRAWING THE AXLES

MR-24 ROOF RUNNER OPERATIONS TIPS FOR TROUBLE FREE OPERATION-MAINT.

DRAWN BY	CHECKED BY	GROUP NUMBER: 02-064-01	
RHE	RMC		
FIRST RELEASE DATE	REVISION DATE	B	P-081674 01
01/21/10	12/04/18		

SCRUBOLTS		
PART MARK	COLOR	DESCRIPTION
095984		11/32 X 7/8", HEX HD, SS W/WASHER
096932		3/8 X 1 1/4", HEX HD W/WASHER
097104		11/32 X 1 1/4", HEX HD, SS W/WASHER
097196		3/8 X 1", HEX HD W/WASHER
097222		3/8 X 2", HEX HD W/WASHER
097264		3/8 X 2 3/4", HEX HD W/WASHER
097270		3/8 X 2 1/4", HEX HD W/WASHER
097271		3/8 X 3 1/2", HEX HD W/WASHER
097292		3/8 X 5", HEX HD W/WASHER
097298		3/8 X 6", HEX HD W/WASHER
097351		11/32 X 7/8", T-45 TORX HD W/O WASHER (GRAY)
097352		11/32 X 1 1/4", T-45 TORX HD W/O WASHER (GRAY)
097361-	----	11/32 X 7/8", T-45 TORX HD W/WASHER
097362-	----	11/32 X 1 1/2", T-45 TORX HD W/WASHER
097363-	----	11/32 X 2", T-45 TORX HD W/WASHER
097604-	----	11/32 X 3 1/2", T-45 TORX HD W/WASHER
097267		SCRUBOLT NUT, 11/32", 1/2" HEX
097466		SCRUBOLT NUT, 23/64", 1/2" HEX

SELF-DRILLING SCREWS		
PART MARK	COLOR	DESCRIPTION
097216		(T-3) #10-16 X 3/4", 5/16" HEX HD
097295		(T-3) #12-14 X 3/4", 5/16" HEX HD W/WASHER
097296		(T-3) #12-14 X 1 1/4", 5/16" HEX HD W/WASHER
097354		(T-4) 1/4-14 X 1 1/2", 3/8" HEX HD W/WASHER
097356		(T-3) 1/4-14 X 1" PHILLIPS WAFER HD
097373		(T-3) #12-14 X 1 1/4", 3/8" HEX HD, SS W/WASHER
097374		(T-3) #12-14 X 1 1/4", 3/8" HEX HD, SS W/WASHER
097405		(T-3) 5/16-12 X 1", 3/8" HEX HD W/WASHER
097406		(T-3) 5/16-12 X 1 1/2", 3/8" HEX HD W/WASHER
097409		(T-3) 1/4-14 X 7/8", 3/8" HEX HD, SS W/WASHER
097460		(T-3) 5/16-18 X 1 1/4", 3/8" HEX HD W/WASHER
097554		(T-5) #12-24 X 1 1/4", 5/16" HEX HD W/O WASHER
097555		(T-3) 1/4-14 X 1 1/4", 3/8" HEX HD W/O WASHER
097230-	----	(T-3) 1/4-14 X 1 1/4", 3/8" HEX HD W/WASHER
097357-	----	(T-1) 1/4-14 X 7/8", 3/8" HEX HD W/WASHER
097364-	----	(T-1) 1/4-14 X 3/4", T-30 TORX HD W/WASHER
097365-	----	(T-3) #12-14 X 1 1/4", T-30 TORX HD W/WASHER
097529-	----	(T-5) #12-24 X 1 1/2", T-30 TORX HD W/WASHER
097584-	----	(T-2) #12-14 X 1 1/4", 5/16" HEX HD, SS CAP W/WASHER
097605-	----	(T-3) 1/4-14 X 3 1/8", T-30 TORX HD STANDOFF SDS W/WASHER
55307		(T-3) 1/4-14 X 1 1/4", 5/16" HEX HD
55310		(T-3) 1/4-14 X 3", 5/16" HEX HD
55312		(T-3) #12-14 X 1" PANCAKE PHILLIPS SQUARE DRIVE
55320		(T-3) 1/4-14 X 1 1/2", 5/16" HEX HD
56104		(T-5) #12-24 X 1 1/2", 5/16" HEX HD
56450		(T-2) #12-14 X 1 1/4", 5/16" HEX HD W/O WASHER
097581-		(T-1) 1/4-14 X 7/8", 5/16" HEX HD, SS CAP W/WASHER

MISCELLANEOUS FASTENERS		
PART MARK	COLOR	DESCRIPTION
095051		MACHINE SCREW 1/4 X 1", HEX HD
095056		MACHINE SCREW 1/4 X 3", HEX HD
095062		NUT, MACHINE SCREW 1/4", HEX HD
095241		NUT, 1/4" FLAT SPEED NUT
095895		(T-A) #10 X 3/4", PAN HD (SHEET METAL SCREW)
097190-	----	NUT, 1/4-20 SS FLANGE NUT

BLIND RIVETS		
PART MARK	COLOR	DESCRIPTION
097580-	----	POP RIVET, 1/8 X 3/8"

FASTENER COLOR SUFFIX CHART

SUFFIX	COLOR	SUFFIX	COLOR
100 =	COOL IGLOO WHITE	112 =	COOL SHELL GRAY
101 =	COOL IVORY WHITE	113 =	COOL DESERT BEIGE
102 =	COOL SOLAR WHITE	115 =	COOL OCEAN BLUE
103 =	COOL BRICK RED	116 =	COOL GRAY STONE
104 =	COOL COUNTRY WHEAT	117 =	COOL COPPER PENNY
105 =	COOL HARVEST	118 =	COOL METALLIC SILVER
106 =	COOL SAFARI BROWN	119 =	COOL JADE GREEN
107 =	COOL PALM GREEN	120 =	COOL BRIGHT RED
108 =	COOL MARSH GREEN	121 =	COOL PARCHMENT
109 =	COOL EMERALD GREEN	122 =	COOL OLD TOWN GRAY
110 =	COOL ONYX BLACK	141 =	COOL BIRCH WHITE
111 =	COOL MAJESTIC BLUE	UNPNTD =	UNPAINTED

LOCK-RIVETS	
PART MARK	DESCRIPTION
096295	9/32" X 1 3/32", "A" HD W/BLACK WASHER
096306	9/32" X 1 3/32", "B" HD W/GREEN WASHER
096582	9/32" X 1 11/32", "A" HD W/BLUE WASHER
096583	9/32" X 1 11/32", "B" HD W/GOLD WASHER

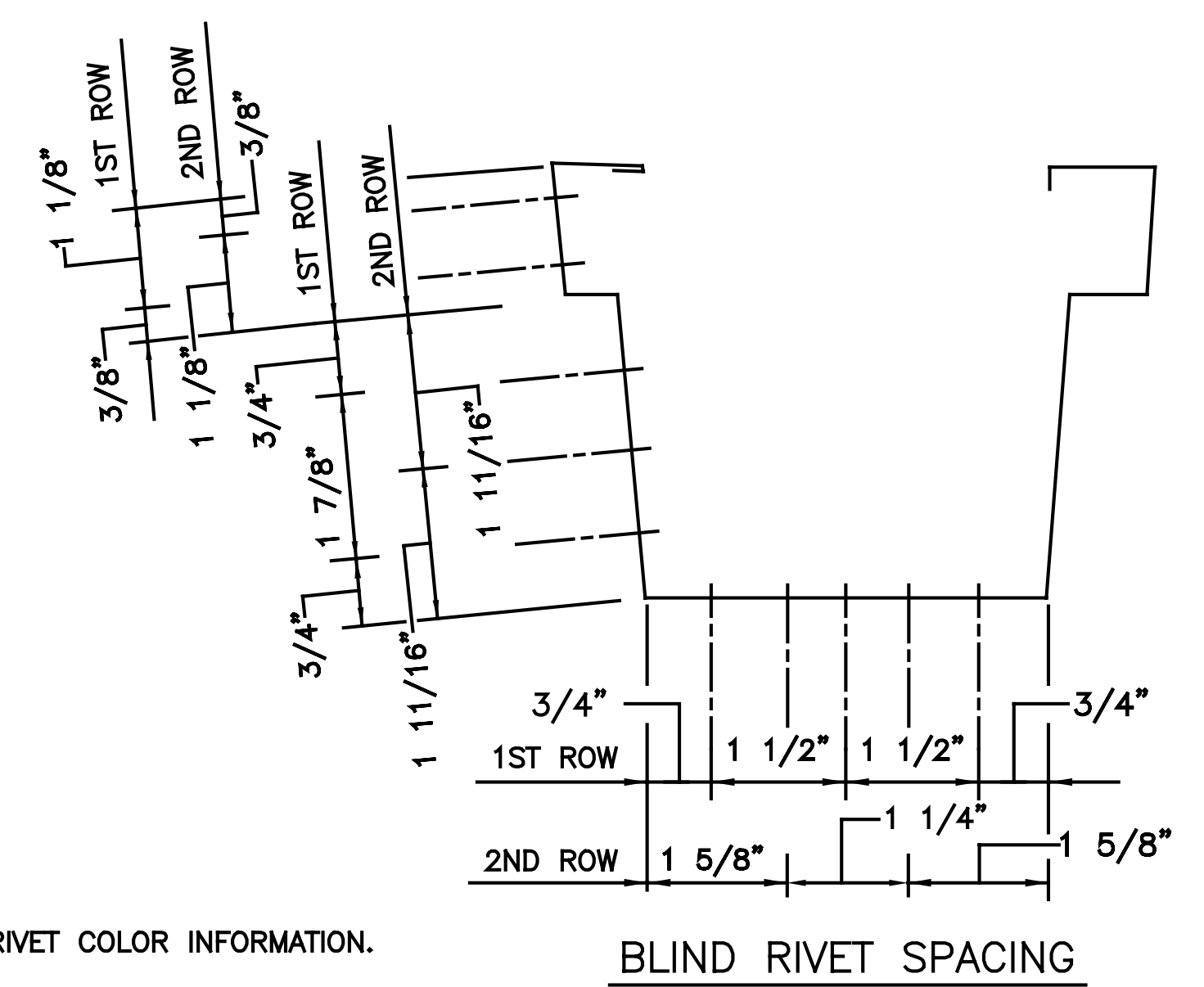
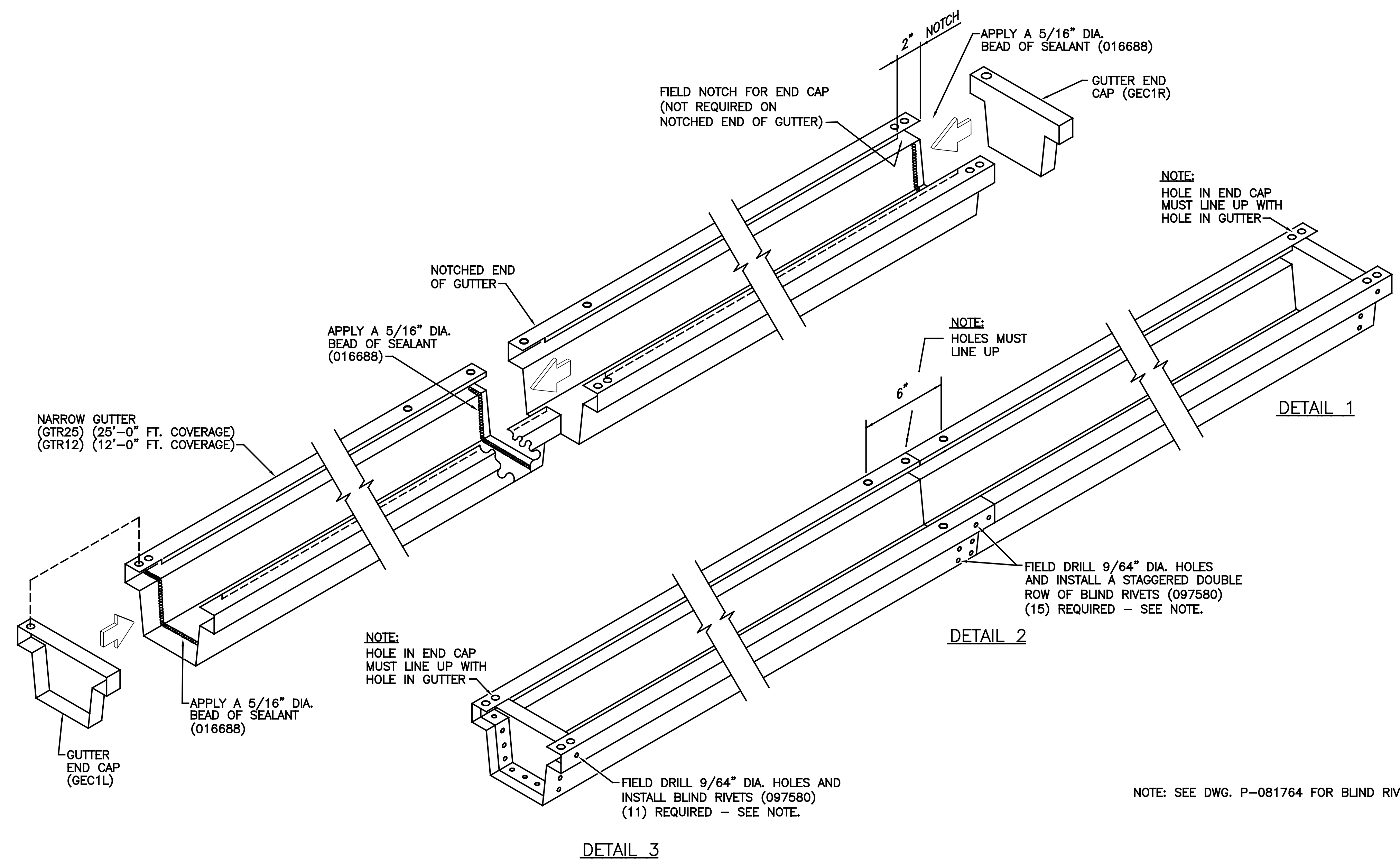
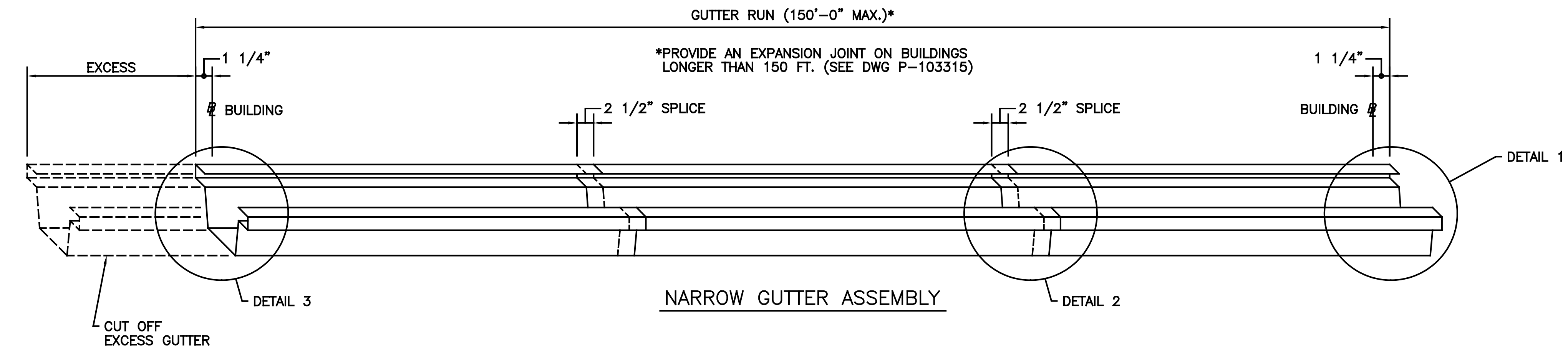
FOAM TYPE SEALANT	
PART MARK	DESCRIPTION
560185	3/16" X 3/4" X 50' ROLL
560201	3" X 3" X 1'-10" STRIP

SEALANT	
PART MARK	DESCRIPTION
016688	GRAY SKINNING SEALANT
025392	WHITE NON-SKINNING PANLASTIC SEALANT
80531	IMMERBOND FLEXIBLE SEAL ADHESIVE
560460	FLEXIBLE FLASHING ADHESIVE

TAPE MASTIC	
PART MARK	DESCRIPTION
025390	3/16" X 1/4" X 40' ROLL (10 ROLLS PER BOX)
027893	1/8" X 1" X 25' (5 ROLLS PER BOX)
042715	1/8" X 1 1/2" X 40' ROLL
042717	1/8" X 1" X 2'-0 1/4" STRIP (64 STRIPS PER BOX)
541063	1/8" X 3 7/8" X 10" ROLL FOIL STRIP (5 ROLLS PER CARTON)
560562	1/16" X 1" X 40' ROLL (5 ROLLS PER BOX)
560564	3/16" DIA. X 40' ROLL (10 ROLLS PER BOX)

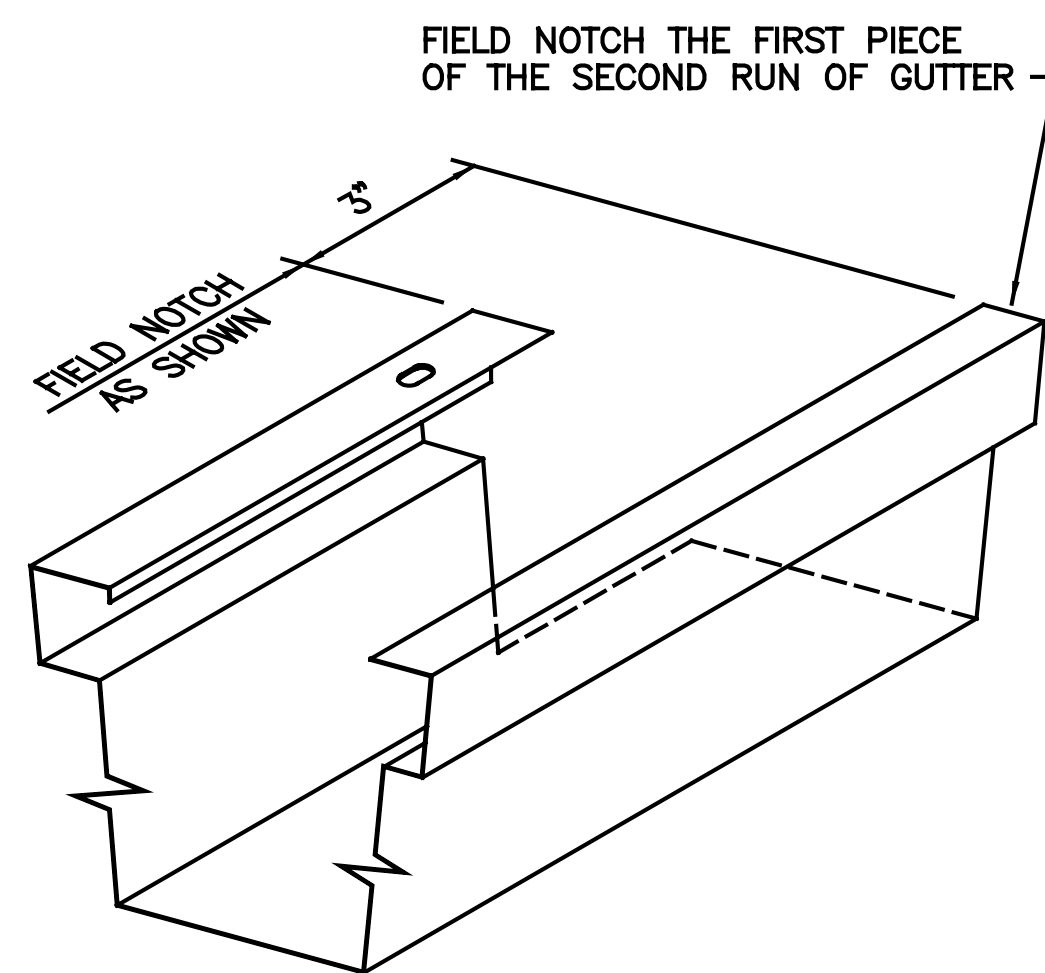
PANEL CLOSURES	
PART MARK	DESCRIPTION
026648	OPT. BUTLERIB RUBBER BASE CLOSURE 3'
026649	OPT. BUTLERIB FOAM BASE CLOSURE 3'
026654	BUTLERIB RUBBER ROOF CLOSURE 10 23/32"
560000	MR-24 RUBBER CORRUGATION CLOSURE
560158	MR-24 LOCK SEAM PLUG
560348	MR-24 PLASTIC CORRUGATION CLOSURE
570452	OPT. STYLWALL FLUTED FOAM WALL CLOSURE 2'-8"
570555	BUTLERIB OUTSIDE FOAM WALL CLOSURE 3'
570597	STYLWALL FLAT FOAM BASE CLOSURE 1'-4"
570674	STYLWALL FLUTED FOAM BASE CLOSURE 1'-4"
570730	OPT. SHADOWALL RUBBER BASE CLOSURE 10 11/16"
570731	OPT. SHADOWALL FOAM BASE CLOSURE 3'
570776	SHADOWALL OUTSIDE FOAM WALL CLOSURE 3'
ARPCPG	VSR II CORRUGATION CLOSURE
ARPHCP	VSR II HIP CORRUGATION PLUG 3'
BRCC12	BUTLERIB CANOPY CLOSURE 12'
BRCL10A	OPT. BUTLERIB WALL CLOSURE 10' .75:12-3:12
BRCL10B	OPT. BUTLERIB WALL CLOSURE 10' 3.1:12-4:12
BRCL12	OPT. BUTLERIB WALL CLOSURE 12' .25:12-1:12
BRCL12	VSR II EAVE CLOSURE 12' W/BUTLERIB WALL
CLE12A	BUTLERIB EAVE CLOSURE 12', 6 3/4"
CLE12B	BUTLERIB EAVE CLOSURE 12" W/BUTLERIB OVER 4:12, SHADOWALL OVER 1/2:12
CLE12C	MR-24 EAVE CLOSURE 12' W/STYLWALL OR SHADOWALL
CLE12D	MR-24 EAVE CLOSURE 12'-0" WITH INSULATED WALL PANEL
CLE1A	MR-24 EAVE CLOSURE 12' W/BUTLERIB
CLP2	MR-24 PANEL CLOSURE 2'-1 1/2"
MRCLE12A	CMR-24 EAVE CLOSURE 12'-0" WITH INSULATED WALL PANEL 10 3/4"
MRCLE12B	CMR-24 EAVE CLOSURE 12'-0" WITH INSULATED WALL PANEL 1'-1 3/4"
SHCL12	OPT. SHADOWALL WALL CLOSURE 12' .25:12-4:12
SHCLE11A	VSR II EAVE CLOSURE 11' W/SHADOWALL
SIIC12A	VSR II EAVE CLOSURE 12'-0" WITH INSULATED WALL PANEL OR FLAT STYLWALL
SIIC12B	VSR II EAVE CLOSURE 12' W/FLUTED STYLWALL
SIICLB1A	STYLWALL FLUTED METAL TRANSITION BASE CLOSURE 1'-4"
SIICLB1B	STYLWALL FLAT METAL TRANSITION BASE CLOSURE 1'-4"
TLCLB_	BUTLERIB WITH TLS PARTIAL WALL HEIGHT EAVE CLOSURE
TLCLM_	MR-24 WITH TLS PARTIAL WALL HEIGHT EAVE CLOSURE
TLCLV_	VSR II WITH TLS PARTIAL WALL HEIGHT EAVE CLOSURE

BMC COMMON WAREHOUSE PARTS				
DRAWN BY:	CHECKED BY:	GROUP NUMBER:		
BJF				
FIRST RELEASE DATE	REVISION DATE	B	P-081764	15
01/10/13	06/05/23			

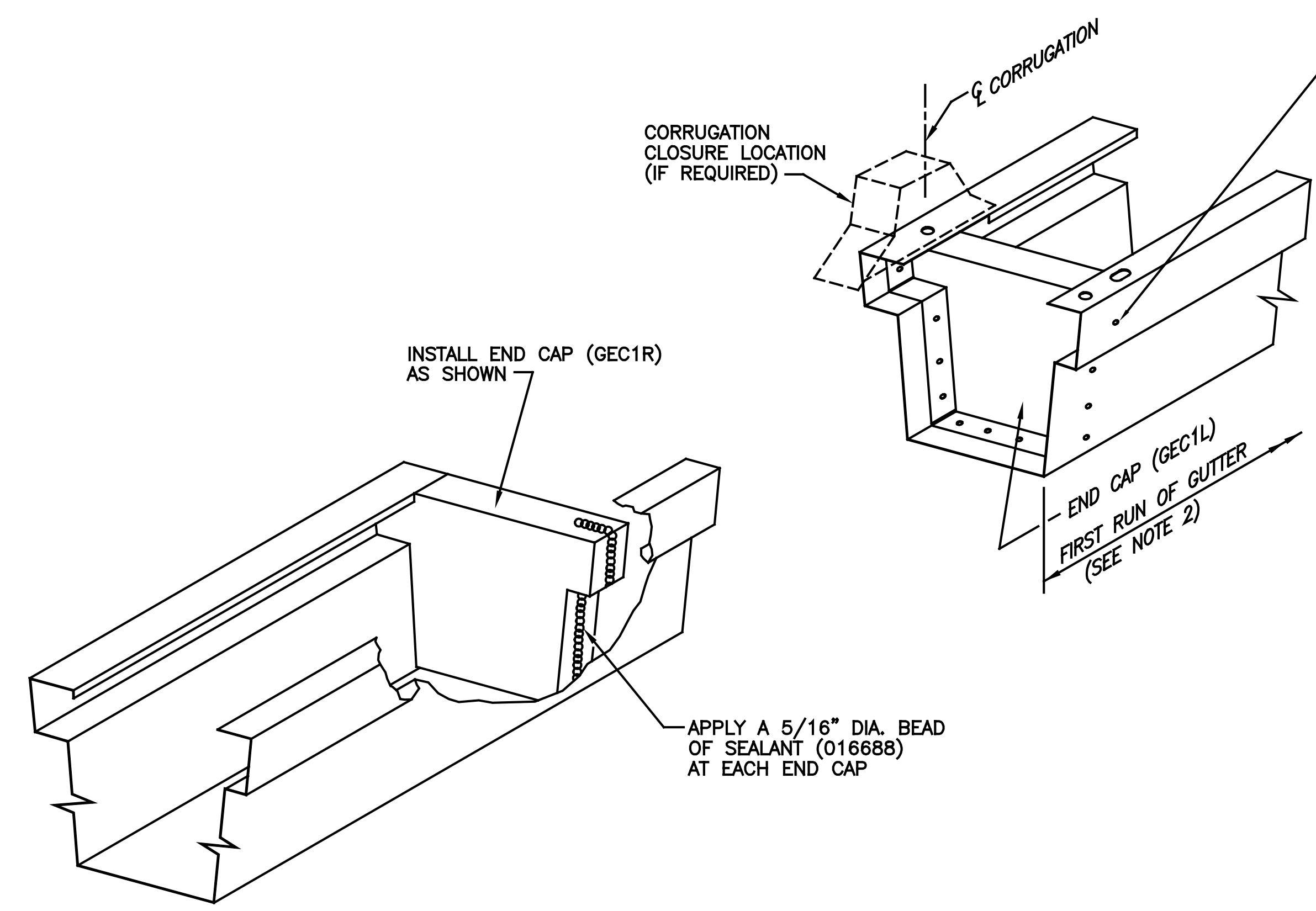


NOTE: SEE DWG. P-081764 FOR BLIND RIVET COLOR INFORMATION.

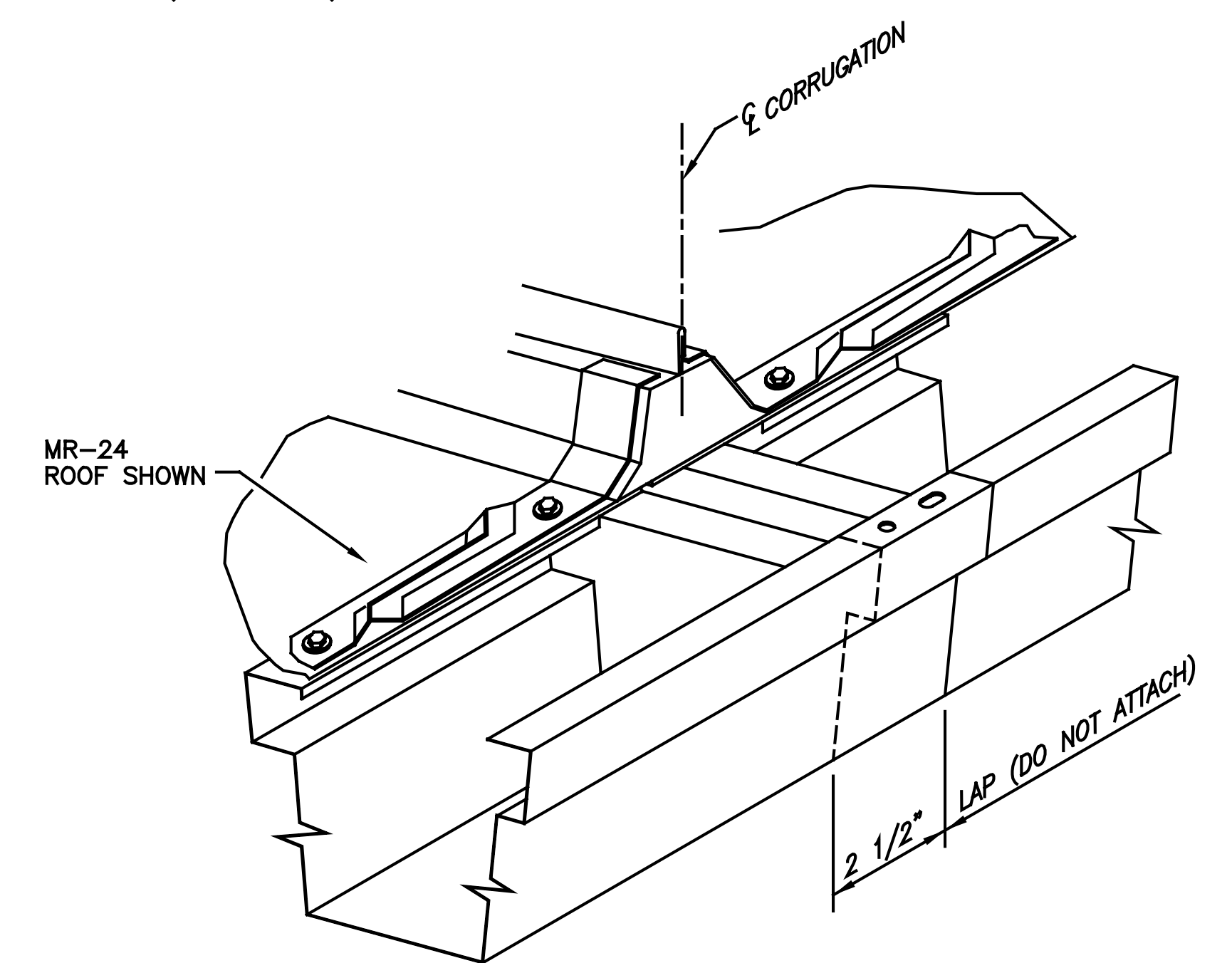
NARROW GUTTER ASSEMBLY (ALL ROOFS)				
DRAWN BY	CHECKED BY	GROUP NUMBER: 01-004-01		
FIRST RELEASE DATE	REVISION DATE	B	P-103223	05
01/21/10	07/18/22			



STEP 1



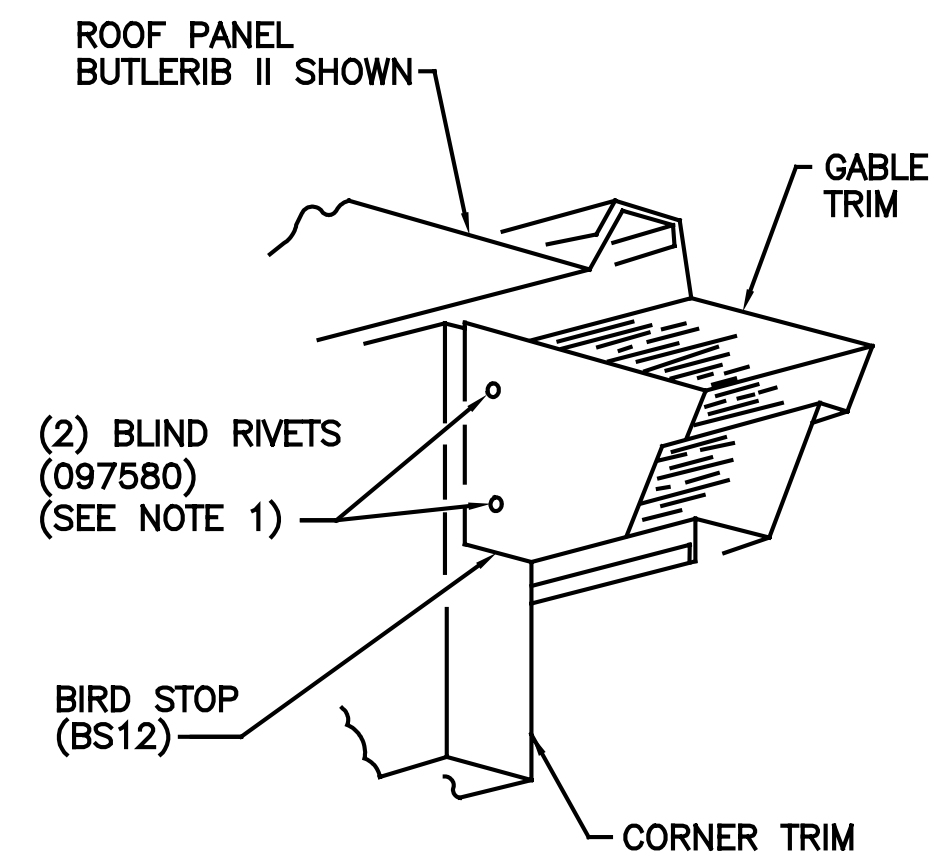
STEP 2



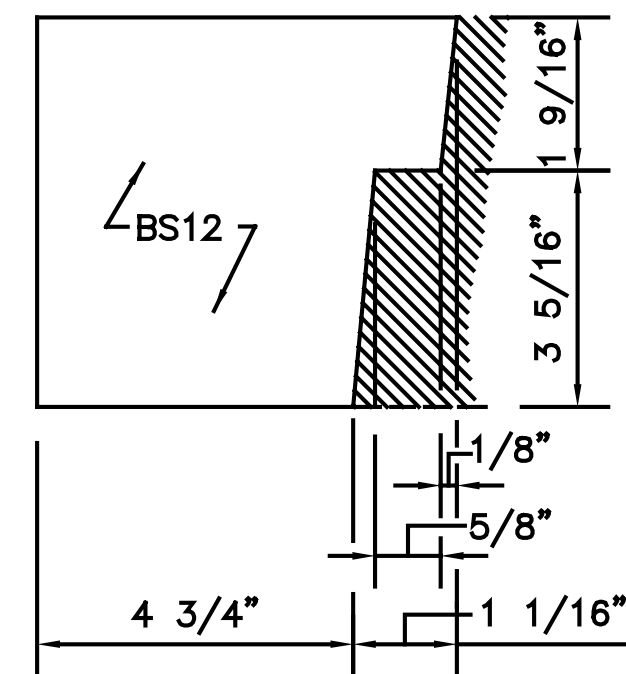
STEP 3

- NOTES:
1. SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.
 2. REFER TO DWG. P-103223 FOR "GUTTER ASSEMBLY"

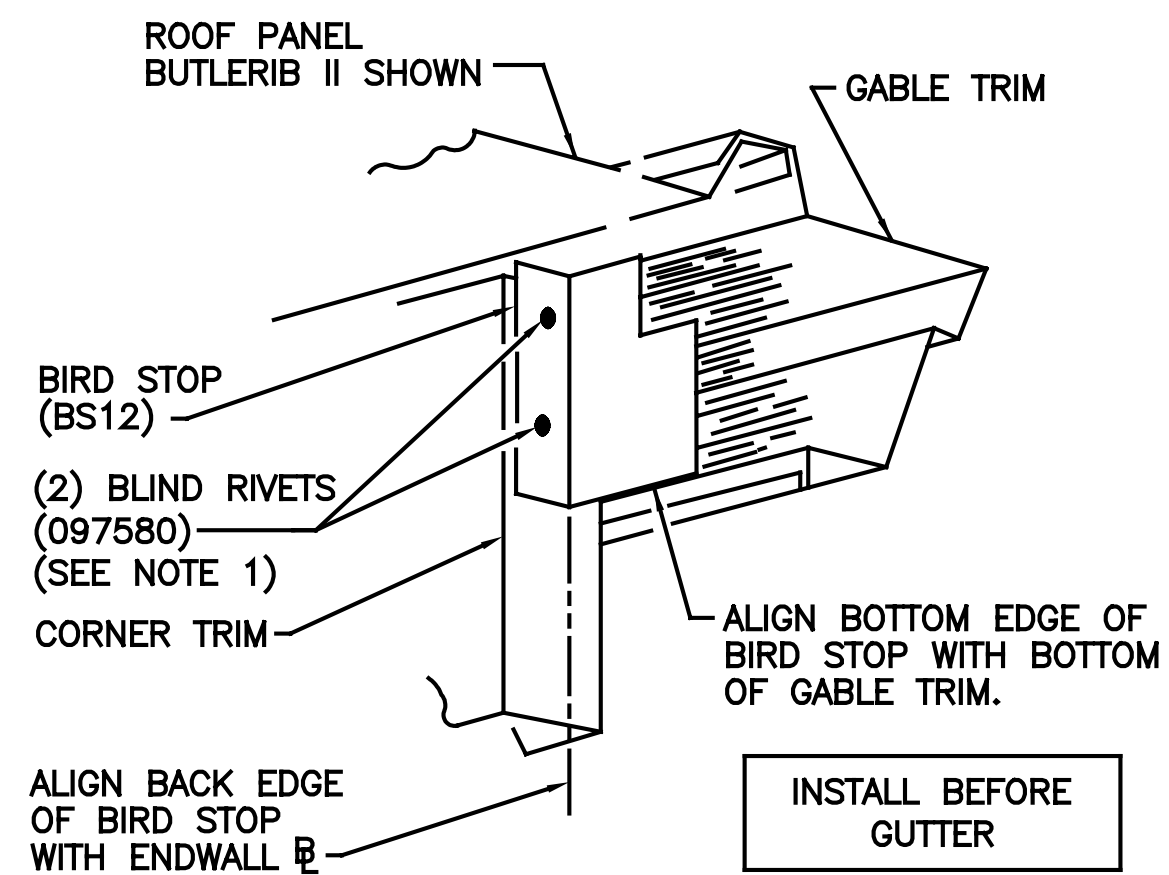
NARROW GUTTER EXPANSION JOINT				
GUTTER - ALL ROOFS				
DRAWN BY	CHECKED BY	GROUP NUMBER: 01-004-01		
M.B.	J.S.			
FIRST RELEASE DATE	REVISION DATE	B	P-103315	04
01/21/10	12/04/18			



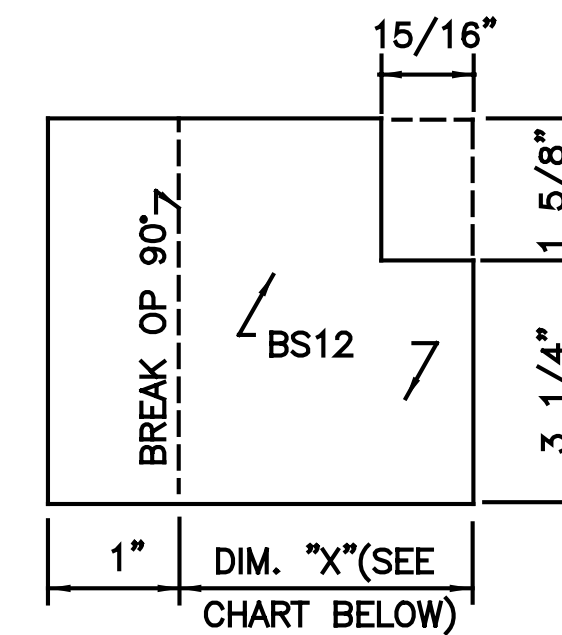
UNTRIMMED EAVE



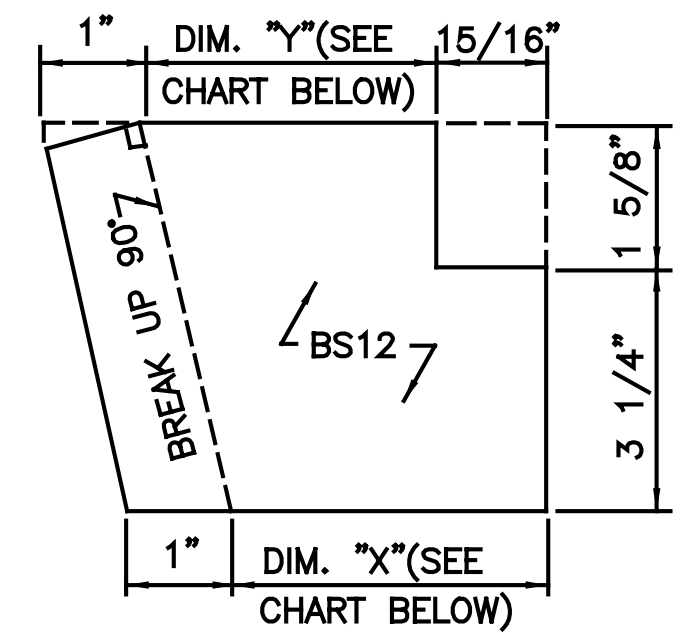
UNTRIMMED EAVE
BIRD STOP CUTTING DIAGRAM
FOR INSTALLATION SHOWN,
(REVERSE FOR OPPOSITE CORNER)



EAVE WITH GUTTER



1/4:12, 1/2:12, AND 1:12 ROOF SLOPES
(SEE NOTE 2)



4:12 ROOF SLOPE
(SEE NOTE 2)

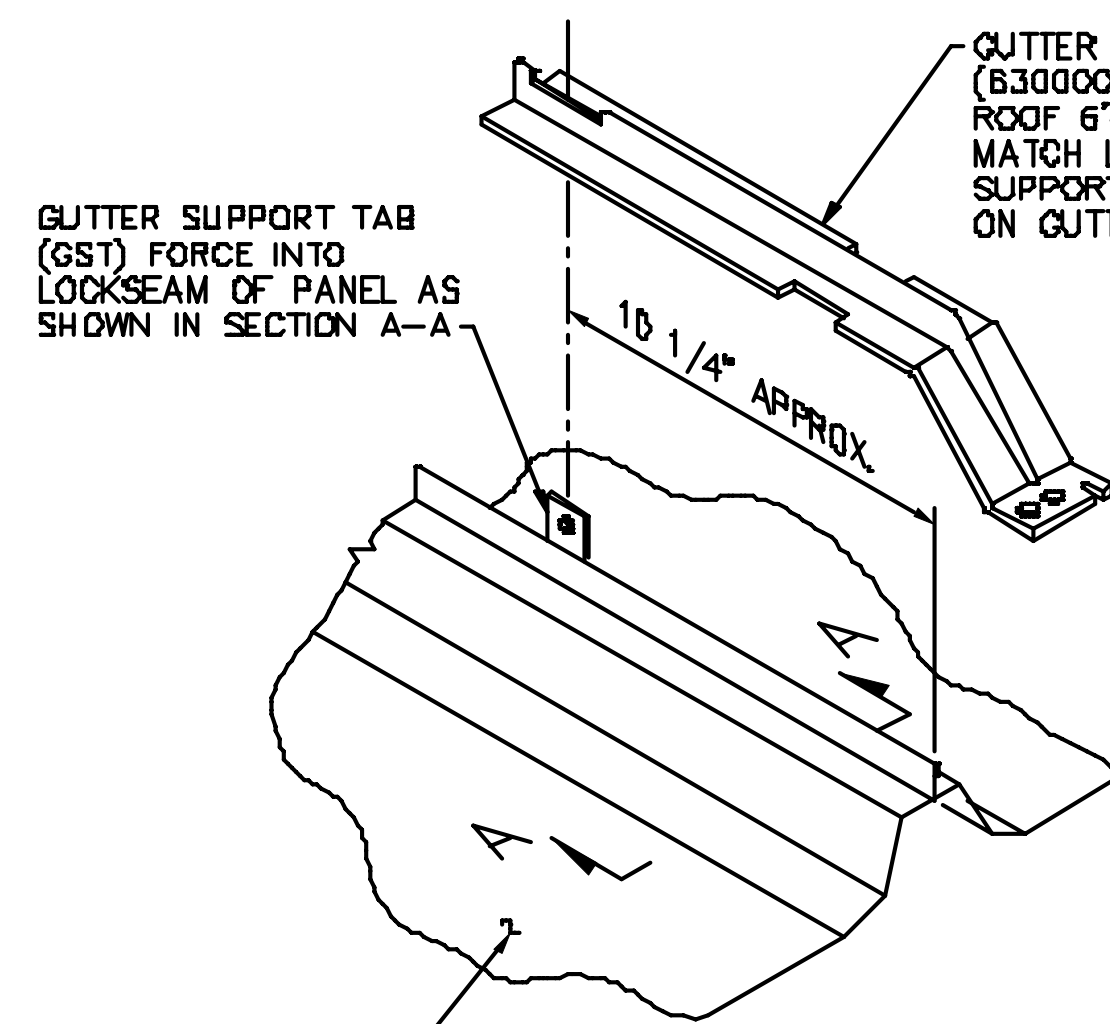
EAVE WITH GUTTER
BIRD STOP CUTTING DIAGRAM
FOR INSTALLATION SHOWN,
(REVERSE FOR OPPOSITE CORNER)

CUTTING DIMENSIONS				
WALL		1/4, 1/2, AND 1:12 ROOF SLOPES	4:12 ROOF SLOPE	
		DIM. "X"	DIM. "X"	DIM. "Y"
BUTLERIB II OR SHADOWWALL		3 1/8"	1 3/4"	2 3/8"
SHADOWWALL		3 1/8"	1 3/4"	2 3/8"
INSULATED WALL PANEL	2"	2 5/8"	1 1/4"	1 7/8"
	2 1/2"	2 1/8"	NOT AVAILABLE	
	3"	1 5/8"	1 1/4"	1 7/8"
	4"	5/8"	NOT AVAILABLE	
TEXTURED INSULATED WALL PANEL	2"	2 1/8"	1/4"	7/8"
	2 1/2"	1 5/8"	NOT AVAILABLE	
	3"	5/8"	NOT AVAILABLE	
	4"	NOT AVAILABLE		
STYLWALL II	HIGH CORR.	2 5/8"	NOT AVAILABLE	
	LOW CORR.	3 1/8"	NOT AVAILABLE	

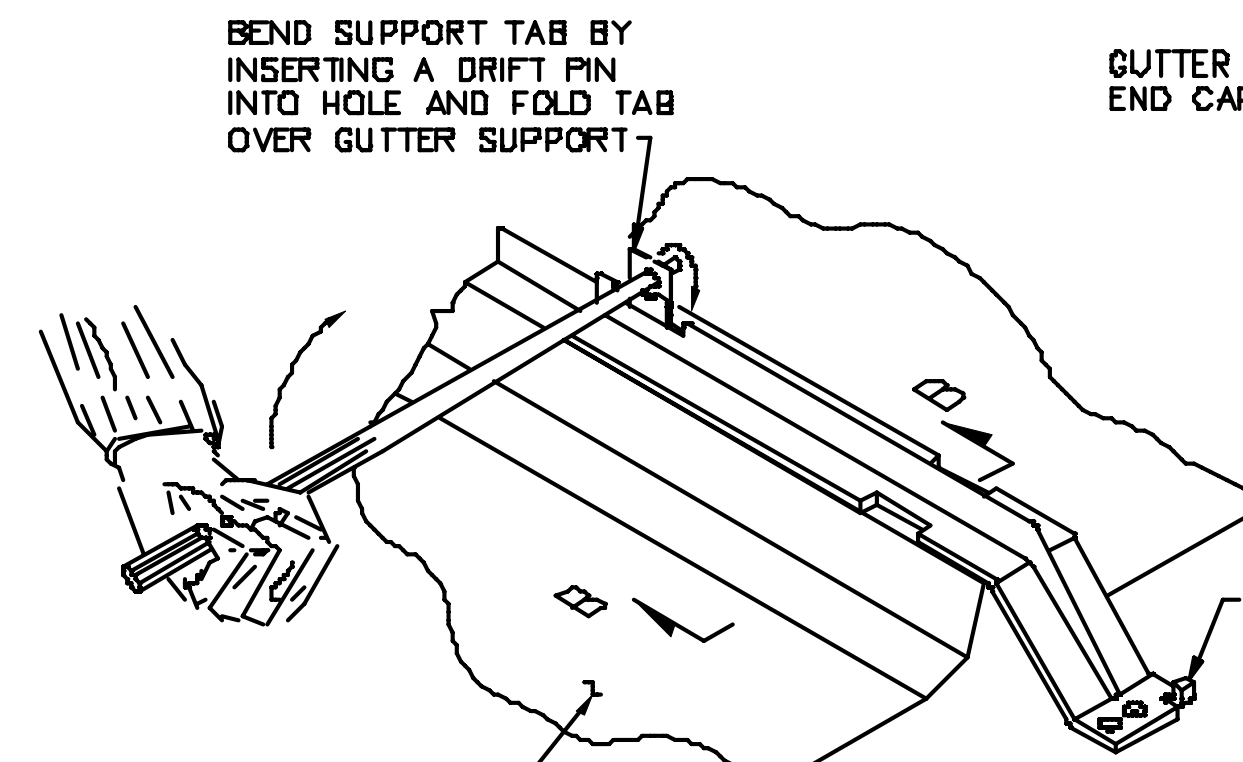
NOTE:

- SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.
- FIELD CUT BIRD STOP AS SHOWN IN CUTTING DIAGRAM FOR STANDARD SLOPES. FOR NON-STANDARD SLOPES, USE NEAREST STD. SLOPE INFO. AND ADJUST AS REQUIRED.

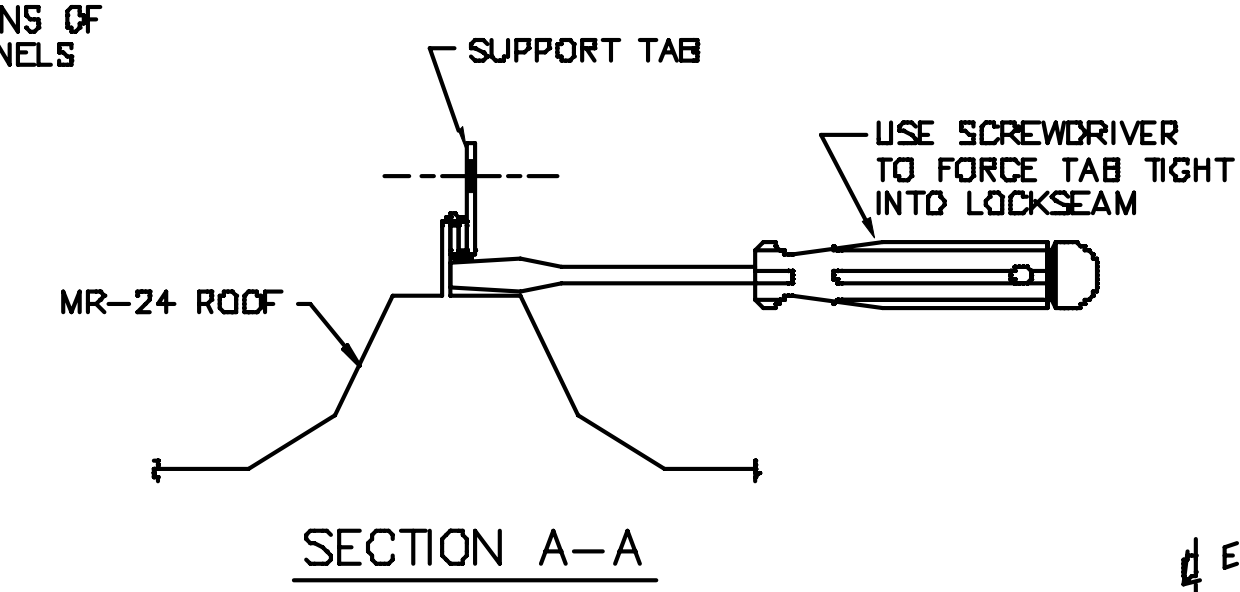
BIRD STOP INSTALLATION – ALL ROOFS				
DRAWN BY	CHECKED BY	GROUP NUMBER: 01-001-01		
FIRST RELEASE DATE	REVISION DATE	B	P-104542	06
02/25/10	08/17/20			



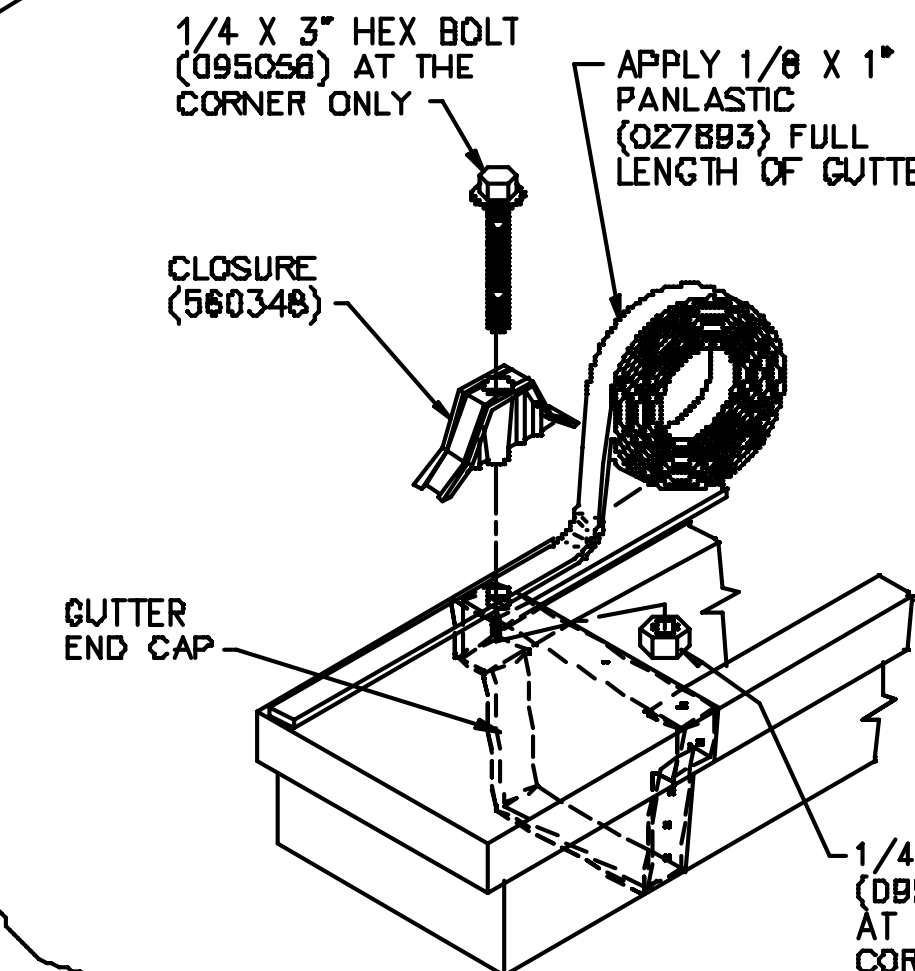
STEP 1
GUTTER SUPPORT TAB INSTALLATION



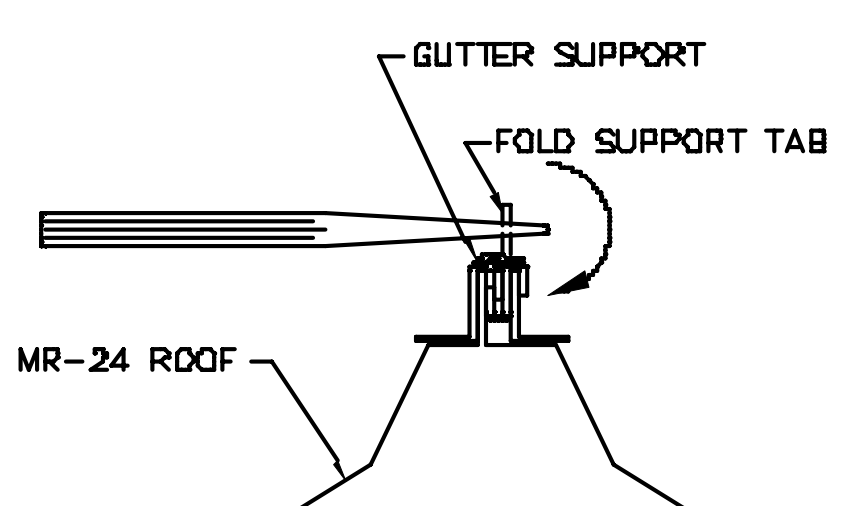
STEP 2
GUTTER SUPPORT INSTALLATION



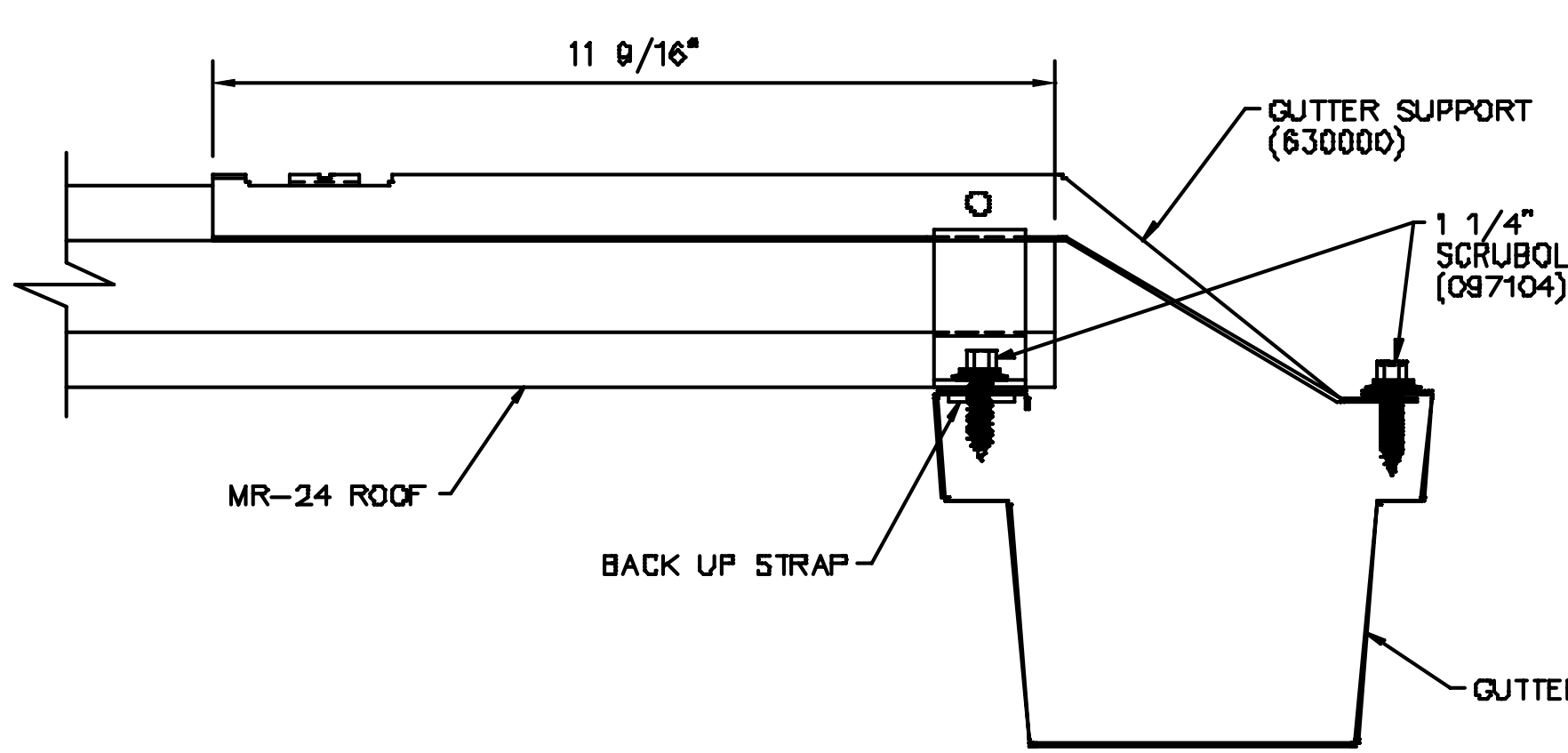
SECTION A-A



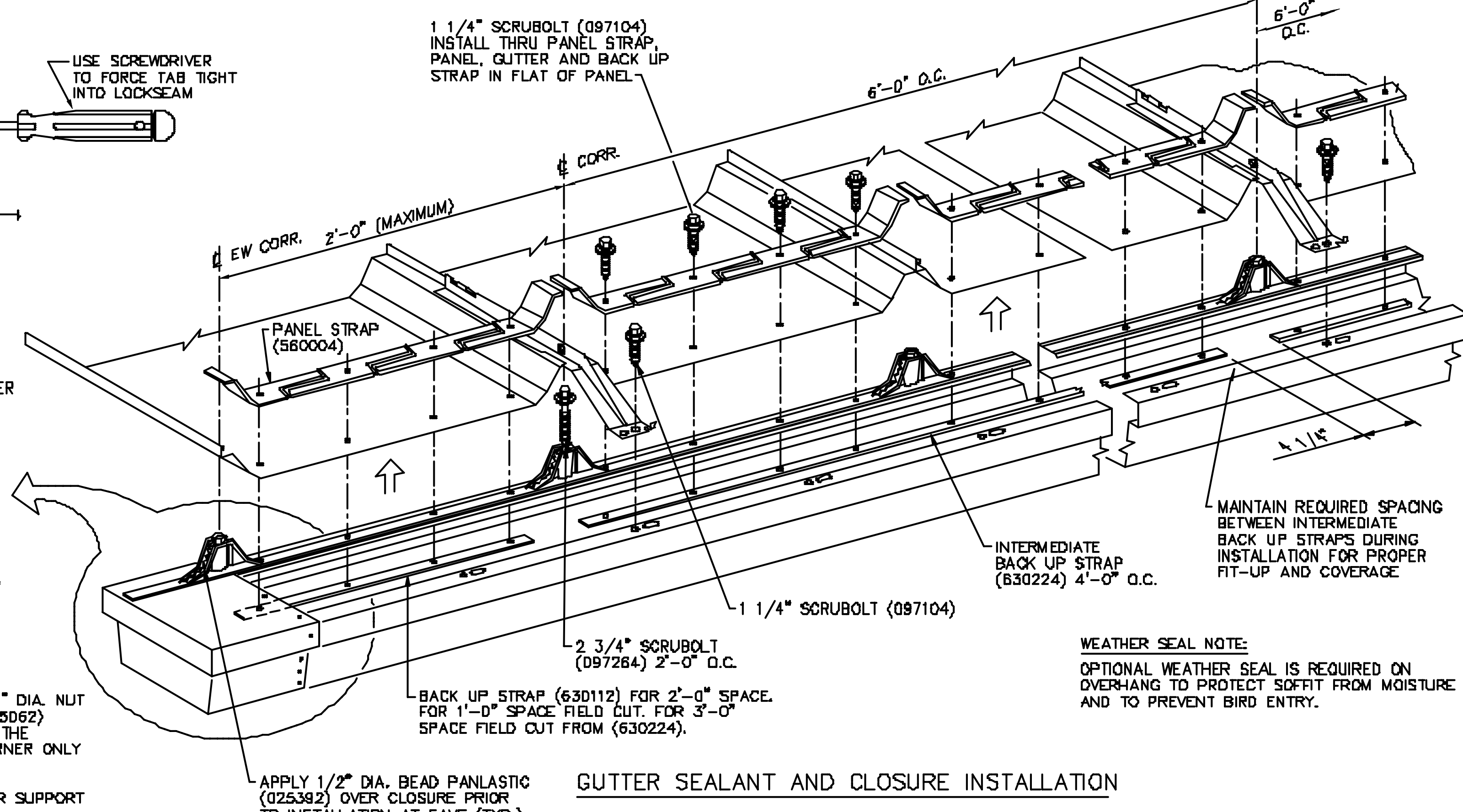
GUTTER END CAP



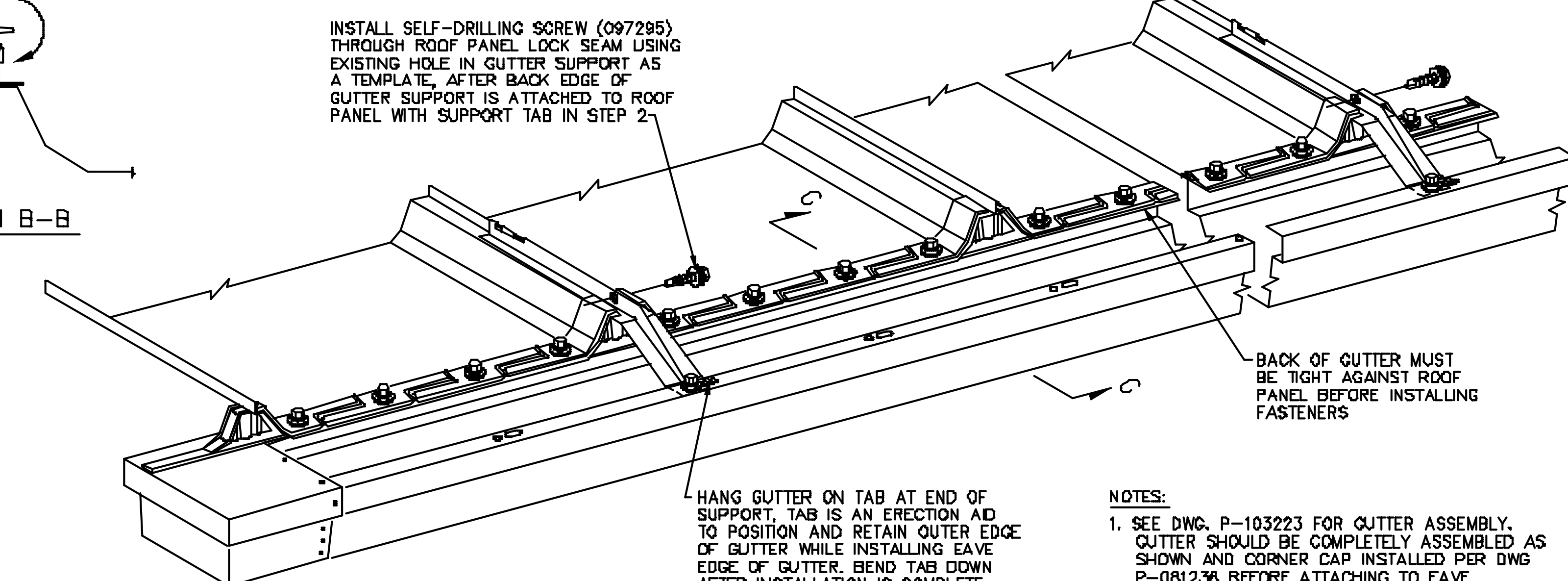
SECTION B-B



SECTION C-C



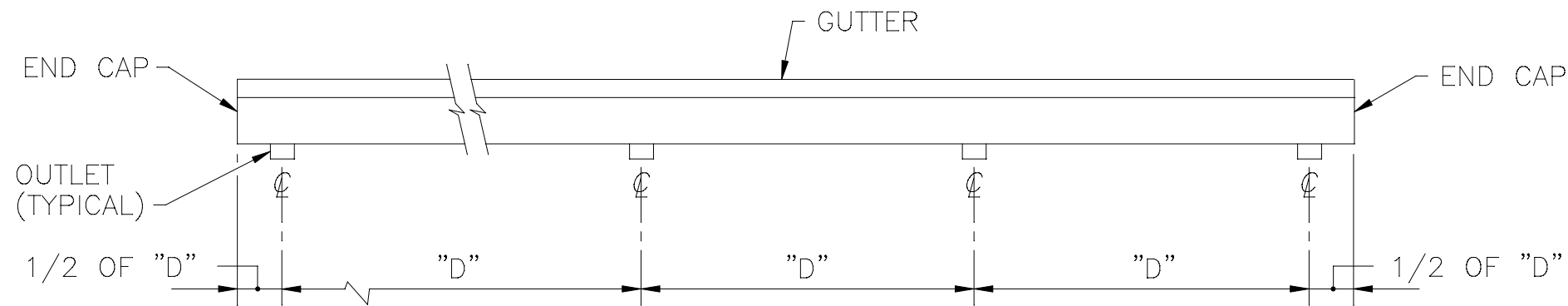
GUTTER SEALANT AND CLOSURE INSTALLATION



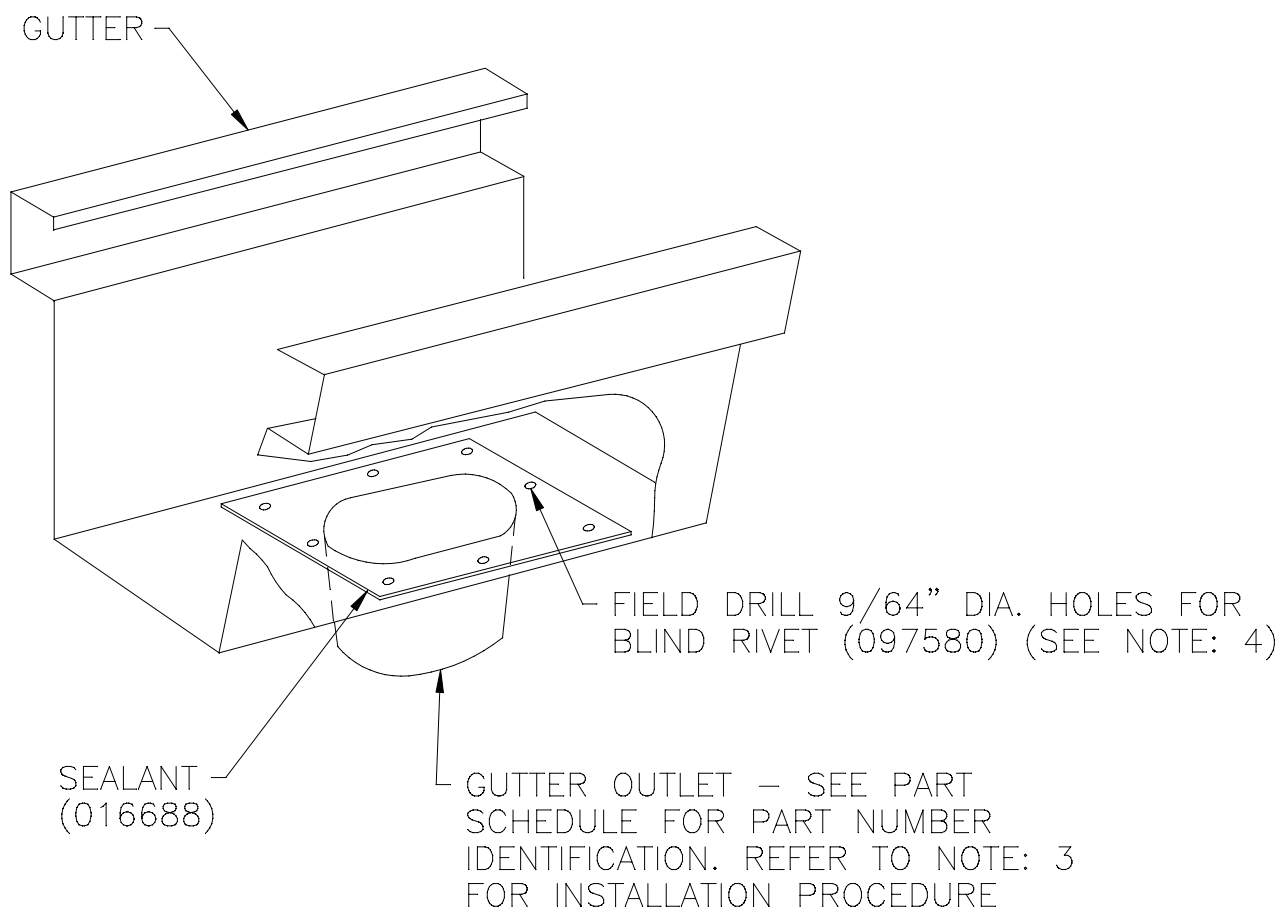
FINISHED GUTTER

- NOTES:**
1. SEE DWG. P-103223 FOR GUTTER ASSEMBLY. GUTTER SHOULD BE COMPLETELY ASSEMBLED AS SHOWN AND CORNER CAP INSTALLED PER DWG P-081236 BEFORE ATTACHING TO EAVE.
 2. SEE DRAWING P-090005 FOR 12" VARIABLE WIDTH PANEL INFORMATION

MR-24/CMR-24 NARROW GUTTER INSTALLATION WITH WEATHERSEAL				
DRAWN BY	CHECKED BY	GROUP NUMBER: 02-004-01		
RP	VLT			
FIRST RELEASE DATE	REVISION DATE	B	P-104714	03
01/21/10	03/08/16			



NOTE: MAXIMUM CONDUCTOR SPACING "D" MUST BE DETERMINED BASED ON RAINFALL INTENSITY.



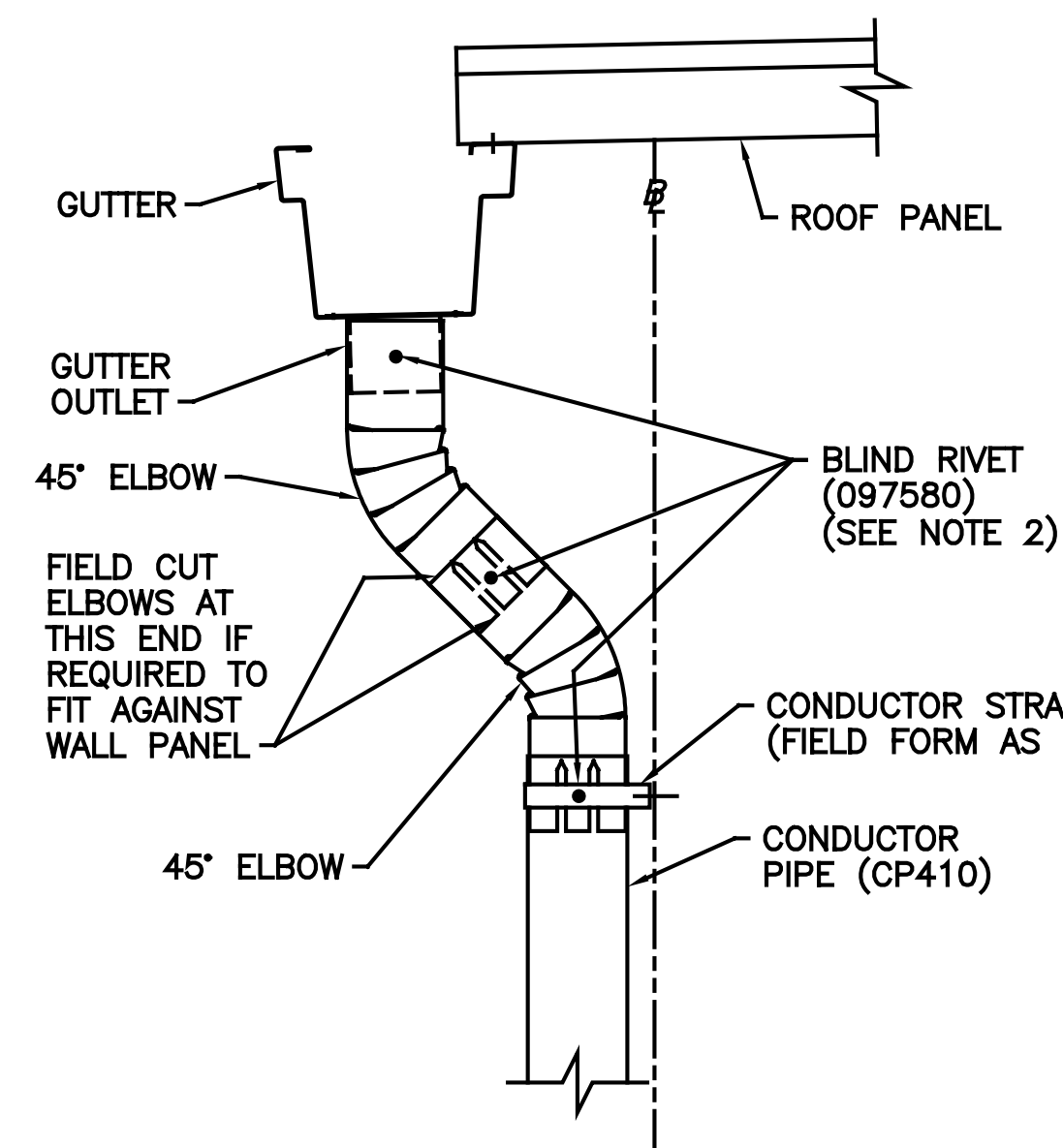
OUTLET INSTALLATION

10'-0" CONDUCTOR PIPE AND STRAPS								
EAVE HEIGHT	BUTLERIB II BUTLERIB II EX SHADOWALL SHADOWALL EX eSHADOWALL STYLWALL II FLAT STYLWALL II FLUTED eSTYLWALL II FLAT eSTYLWALL II FLUTED INSULATED WALL 2" TEXTURED INSULATED WALL 2"		ALL WALLS		4'-0" OVERHANG		5'-0" OR 10'-0" CANOPY	
	AT WALL 1/4:12 THRU 1/2:12 ROOF SLOPE		AT WALL >1/2:12 THRU 4:12 ROOF SLOPE					
	QUANTITY PER OUTLET							
HEIGHT	PIPE	STRAPS	PIPE	STRAPS	PIPE	STRAPS	PIPE	STRAPS
10'	1	2	1	2	1 1/2	2	2 1/2	2
11'	1 1/2	3	1 1/2	3	2	3	3	3
12'	1 1/2	3	1 1/2	3	2	3	3	3
13'	1 1/2	3	1 1/2	3	2	3	3	3
14'	1 1/2	3	1 1/2	3	2	3	3	3
15'	1 1/2	3	1 1/2	3	2	3	3	3
16'	2	3	2	3	2 1/2	3	3 1/2	3
17'	2	3	2	3	2 1/2	3	3 1/2	3
18'	2	3	2	3	2 1/2	3	3 1/2	3
19'	2	3	2	3	2 1/2	3	3 1/2	3
20'	2	3	2	3	2 1/2	3	3 1/2	3
21'	2 1/2	4	2 1/2	4	3	4	4	4
22'	2 1/2	4	2 1/2	4	3	4	4	4
23'	2 1/2	4	2 1/2	4	3	4	4	4
24'	2 1/2	4	2 1/2	4	3	4	4	4
25'	2 1/2	4	2 1/2	4	3	4	4	4
26'	3	4	3	4	3 1/2	4	4 1/2	4
27'	3	4	3	4	3 1/2	4	4 1/2	4
28'	3	4	3	4	3 1/2	4	4 1/2	4
29'	3	4	3	4	3 1/2	4	4 1/2	4
30'	3	4	3	4	3 1/2	4	4 1/2	4
31'	3 1/2	5	3 1/2	5	4	5	5	5
32'	3 1/2	5	3 1/2	5	4	5	5	5
33'	3 1/2	5	3 1/2	5	4	5	5	5
34'	3 1/2	5	3 1/2	5	4	5	5	5
35'	3 1/2	5	3 1/2	5	4	5	5	5
36'	4	5	4	5	4 1/2	5	5 1/2	5
37'	4	5	4	5	4 1/2	5	5 1/2	5
38'	4	5	4	5	4 1/2	5	5 1/2	5
39'	4	5	4	5	4 1/2	5	5 1/2	5
40'	4	5	4	5	4 1/2	5	5 1/2	5

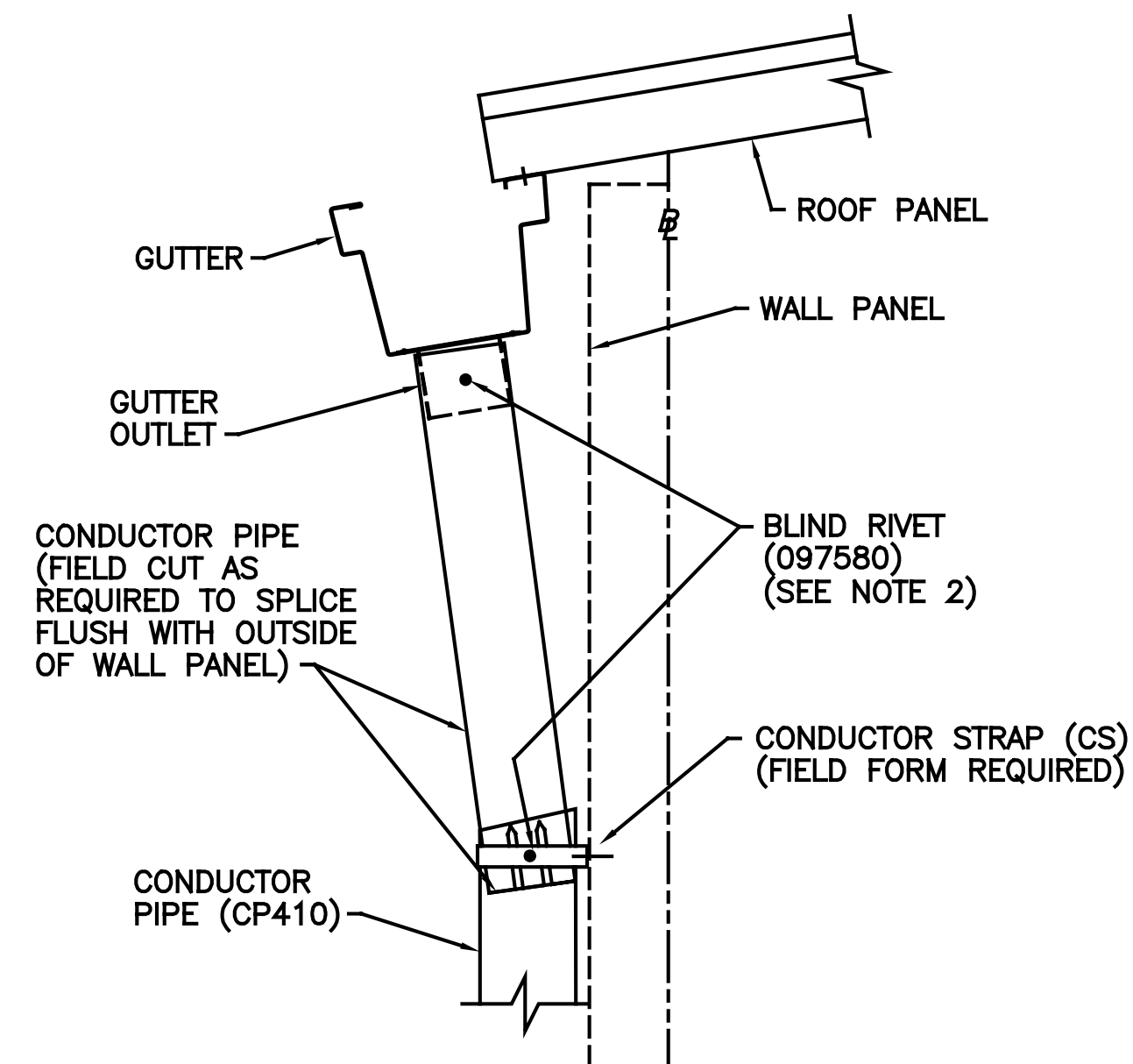
PART SCHEDULE	
PART NUMBER	DESCRIPTION
CP410	CONDUCTOR PIPE
4CE45	45' ELBOW
008738	GUTTER OUTLET 1/4:12 THRU 1/2:12
4CE75	75' ELBOW
016688	GRAY SEALANT
CS	CONDUCTOR STRAP (FIELD FORMED)
640432	GUTTER OUTLET - >3:12 THRU 4:12
640492	GUTTER OUTLET - >1/2:12 THRU 3:12

- NOTES:
- CONDUCTOR PIPE (CP410) FURNISHED IN 10'-0" LENGTHS ONLY. FIELD CUT TO LENGTHS REQUIRED.
 - USE (2) BLIND RIVETS AT EACH PIPE JOINT.
 - USING GUTTER OUTLET AS A PATTERN. FIELD CUT GUTTER FOR PROPER FIT. APPLY 016688 SEALANT TO UNDERSIDE OF OUTLET LIP AND ATTACH WITH (8) BLIND RIVETS. IMPORTANT: BE SURE TO ORIENT GUTTER AND GUTTER OUTLET PROPERLY PRIOR TO ATTACHMENT.
 - SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.
 - FOR CONDUCTOR PIPE DETAILS SEE DRAWINGS P-105225 AND P-105228.

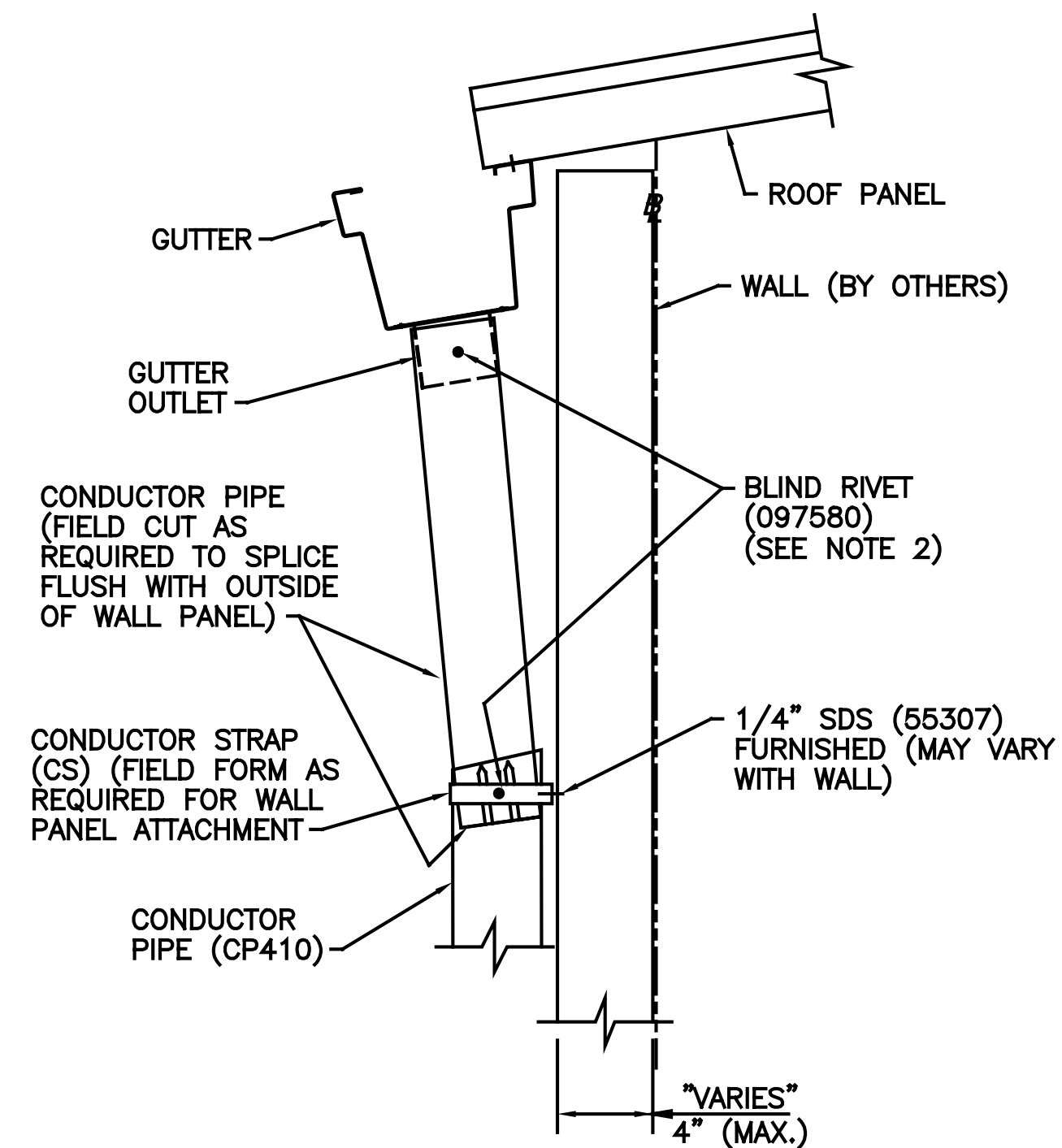
4" CONDUCTOR PIPE INSTALLATION ALL WALLS				
DRAWN BY	CHECKED BY	GROUP NUMBER: 26-008-01		
RHE	BJF			
FIRST RELEASE DATE	REVISION DATE	B	P-105224	08
01/21/10	05/20/24			



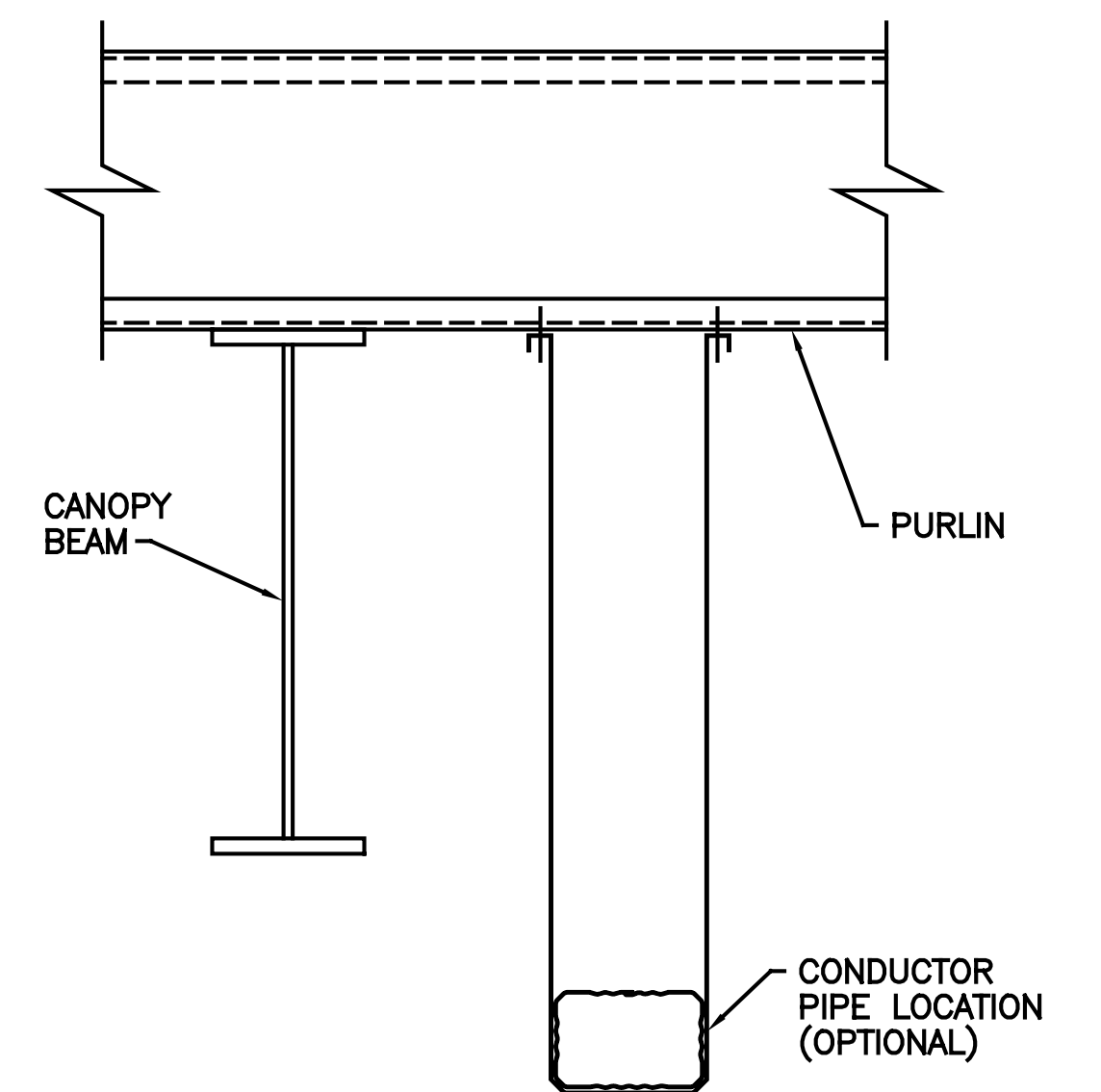
BUTLERIB II AND SHADOWWALL
1/4:12 THRU 1/2:12 ROOF SLOPE



BUTLERIB II AND SHADOWWALL
>1/2:12 THRU 4:12 ROOF SLOPE

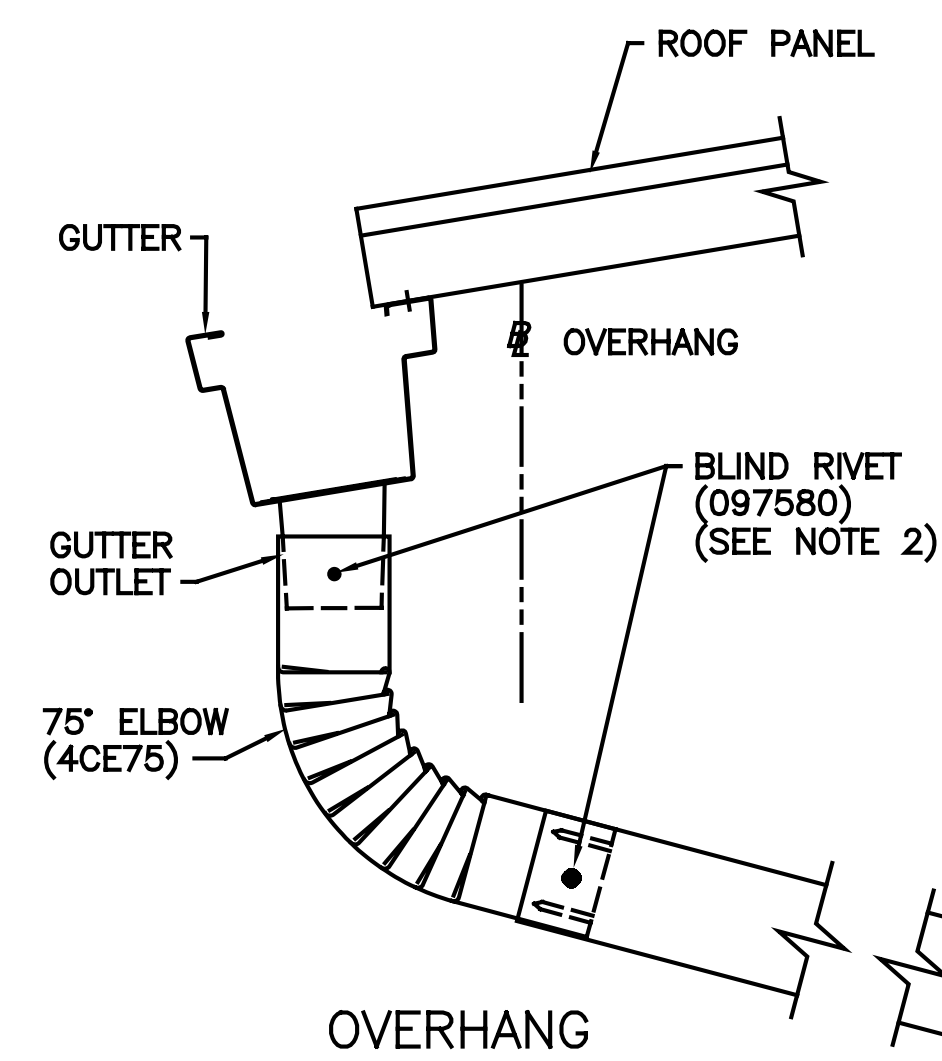


WALL (BY OTHERS)
>1/2:12 THRU 4:12 ROOF SLOPE

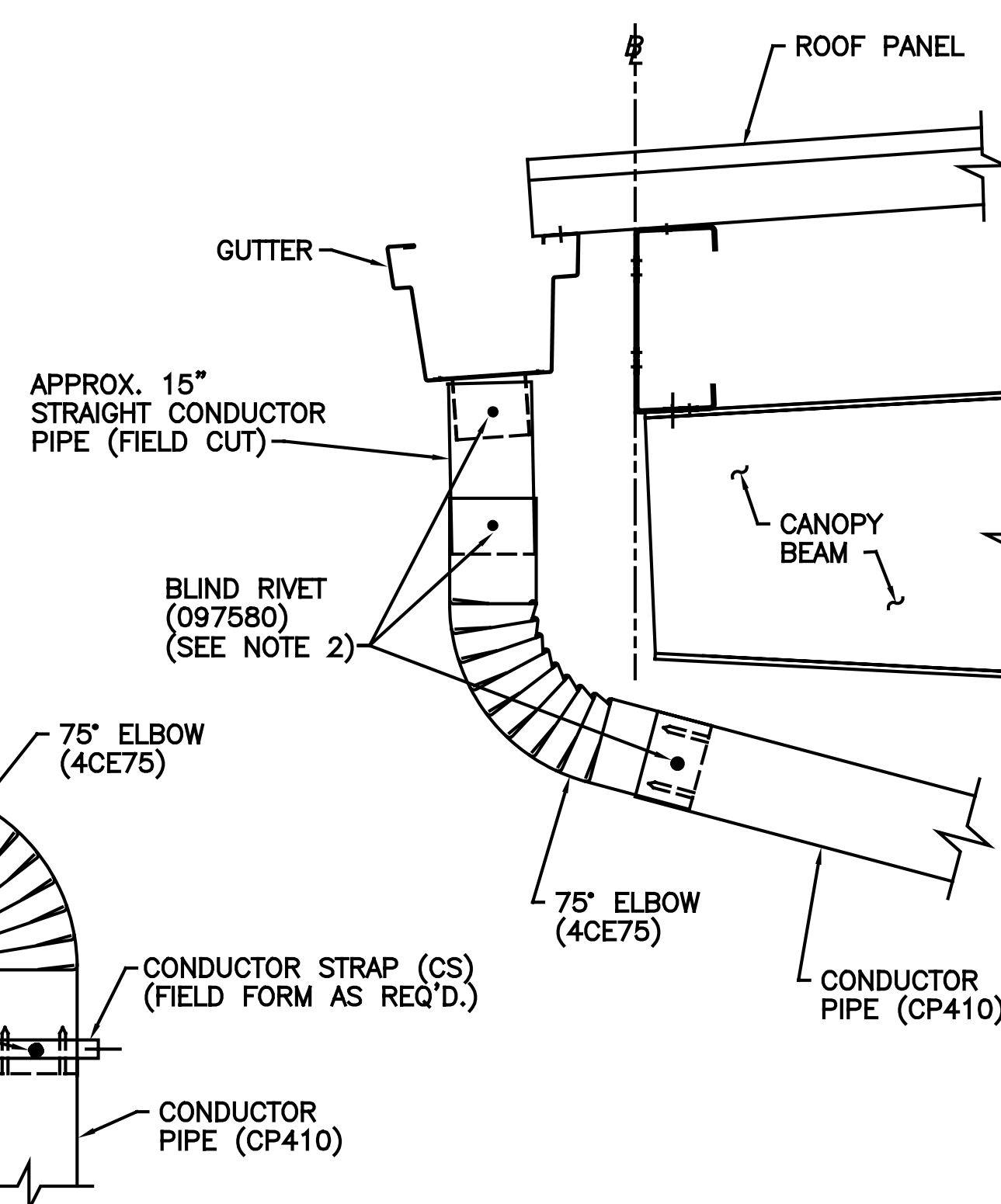


SECTION A-A

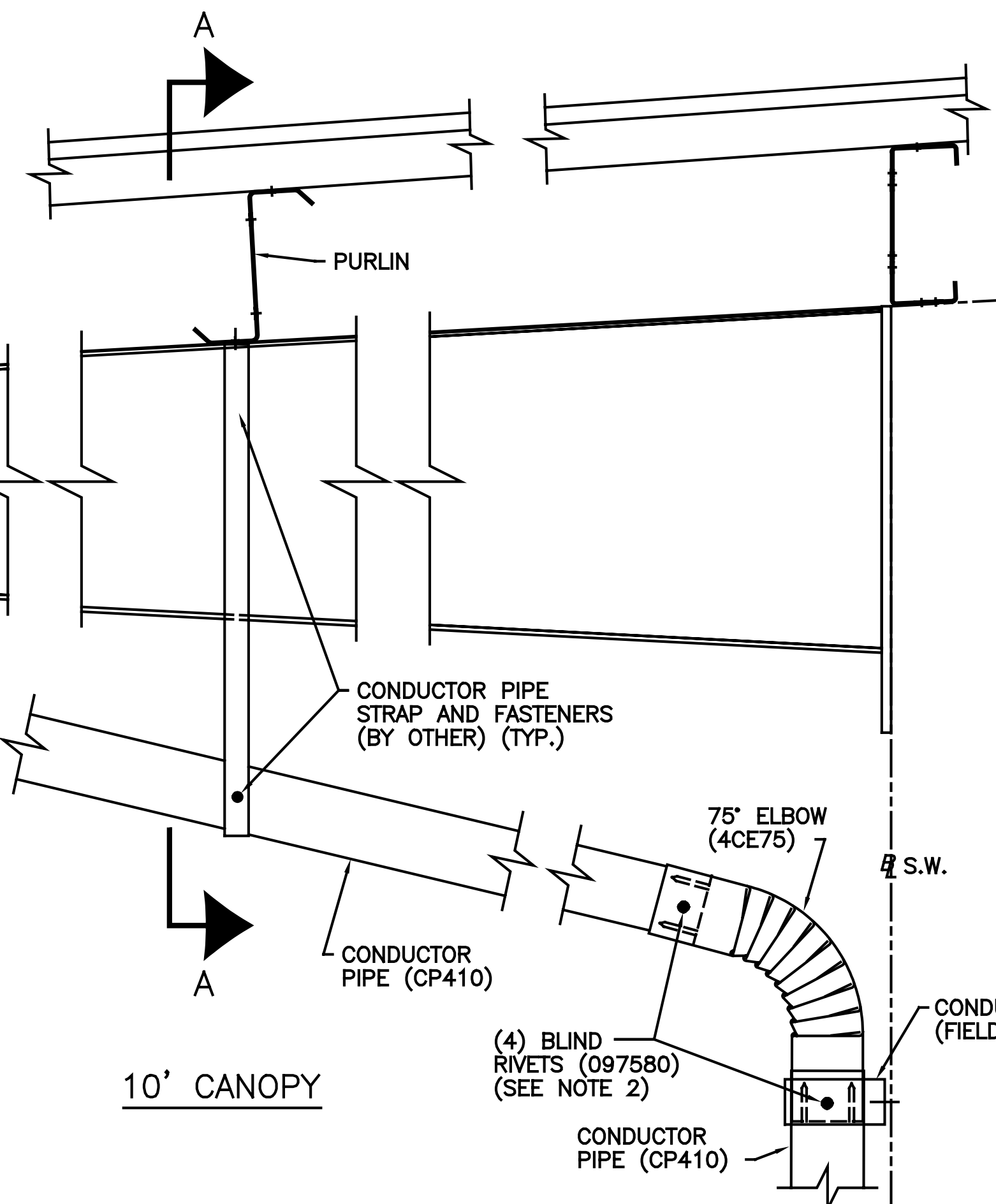
STYLWALL II, eSTYLWALL II, eSHADOWWALL,
BUTLERIB II EX, SHADOWWALL EX,
AND ALL INSULATED WALL PANELS/TEXTURED INSULATED WALL PANELS
1/4:12 THRU 4:12 ROOF SLOPE



5' CANOPY OR 4' OVERHANG

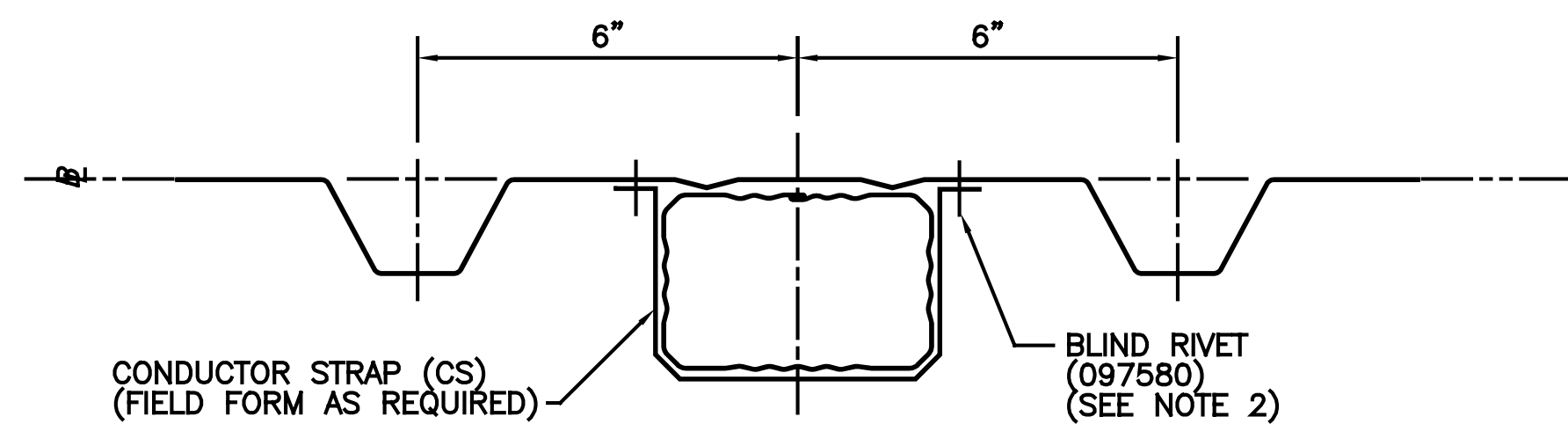


10' CANOPY

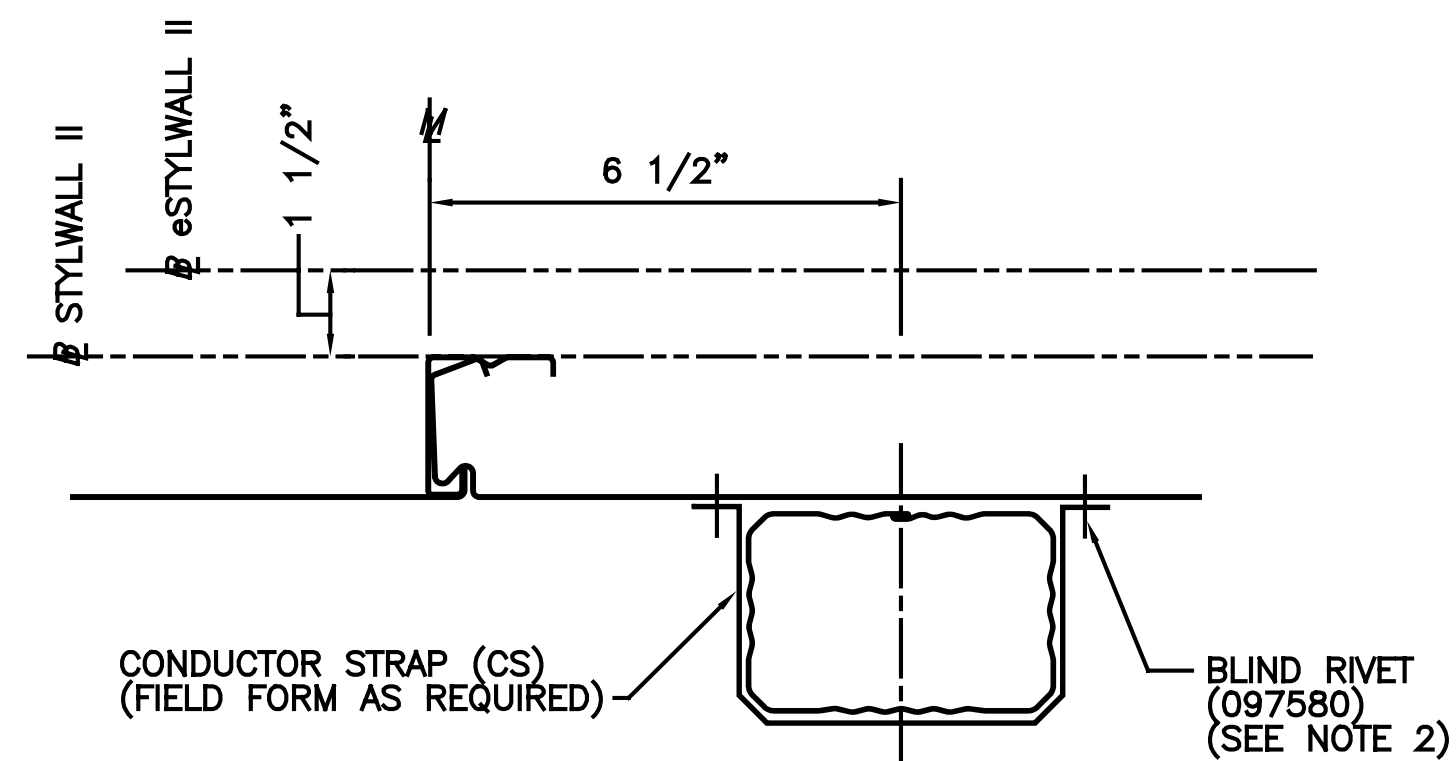


- NOTES:
1. FIELD DRILL 9/64" DIA. FOR BLIND RIVETS (097580).
 2. SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.
 3. SEE DWG. P-105224 FOR PART SCHEDULE.
 4. SEE DWG. P-105228 FOR CONDUCTOR PIPE DETAILS.

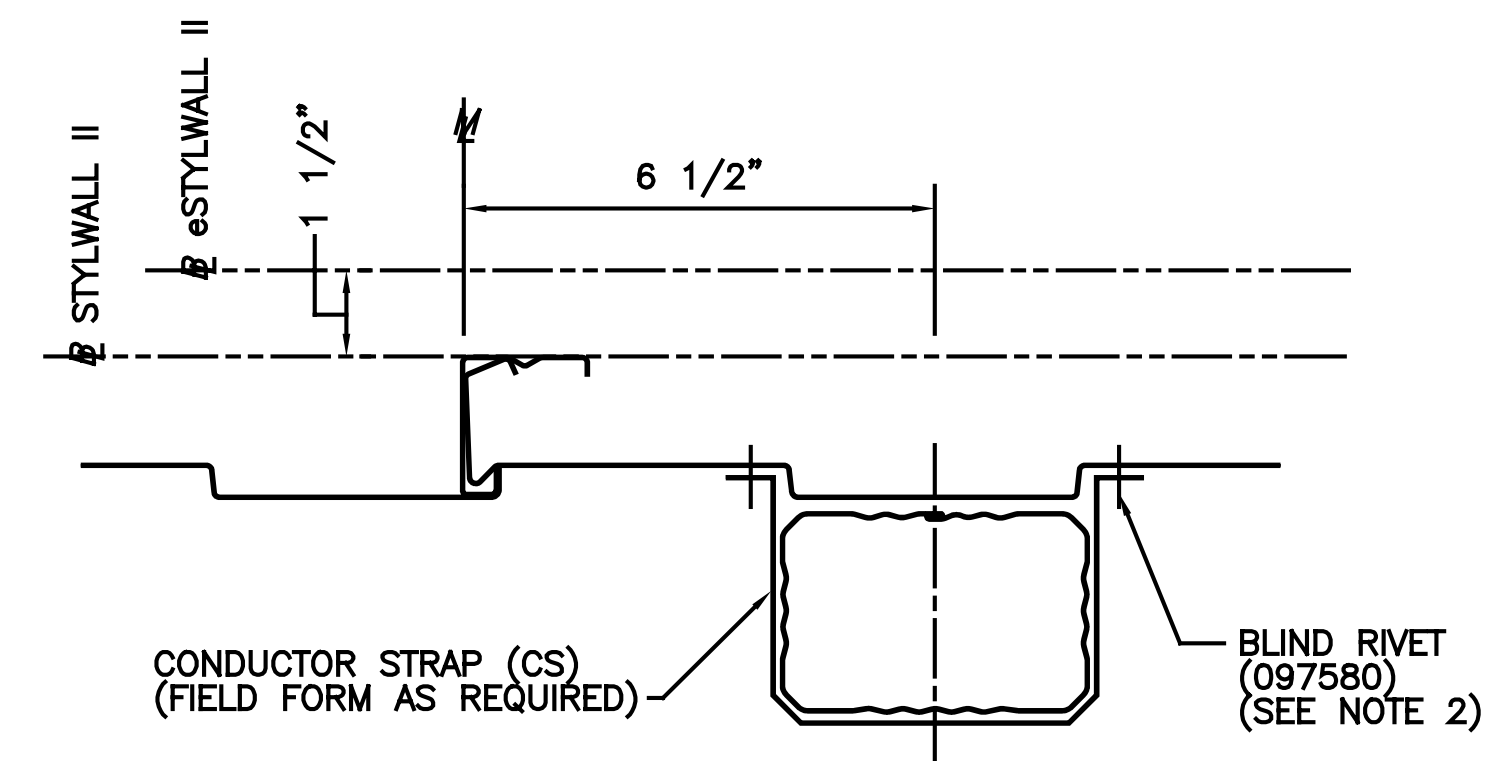
4" CONDUCTOR PIPE DETAILS				
ALL WALLS				
DRAWN BY	CHECKED BY	GROUP NUMBER: 26-008-01		
FIRST RELEASE DATE	REVISION DATE	B	P-105225	08
01/21/10	08/18/20			



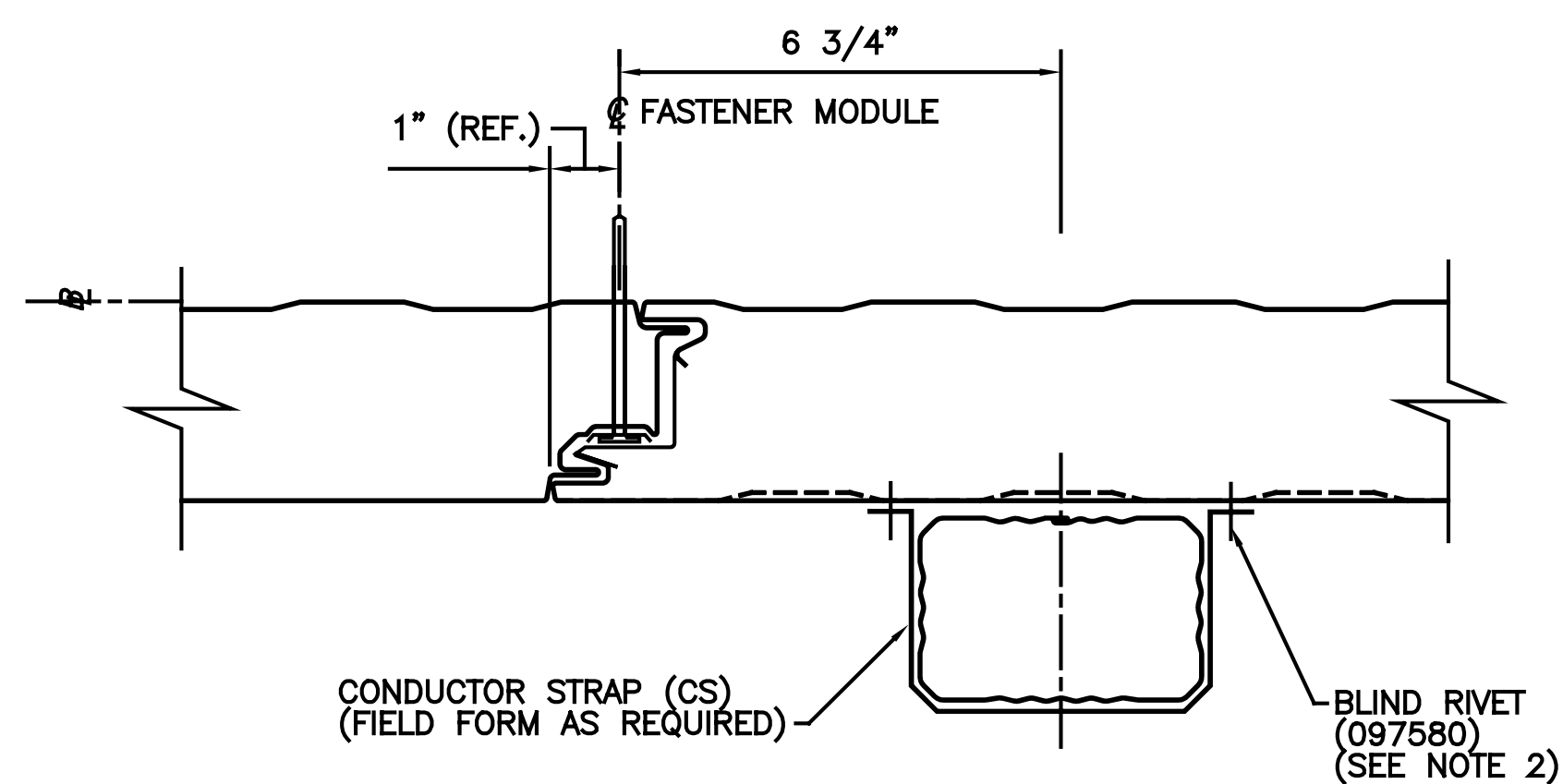
BUTLERIB II AND BUTLERIB EX



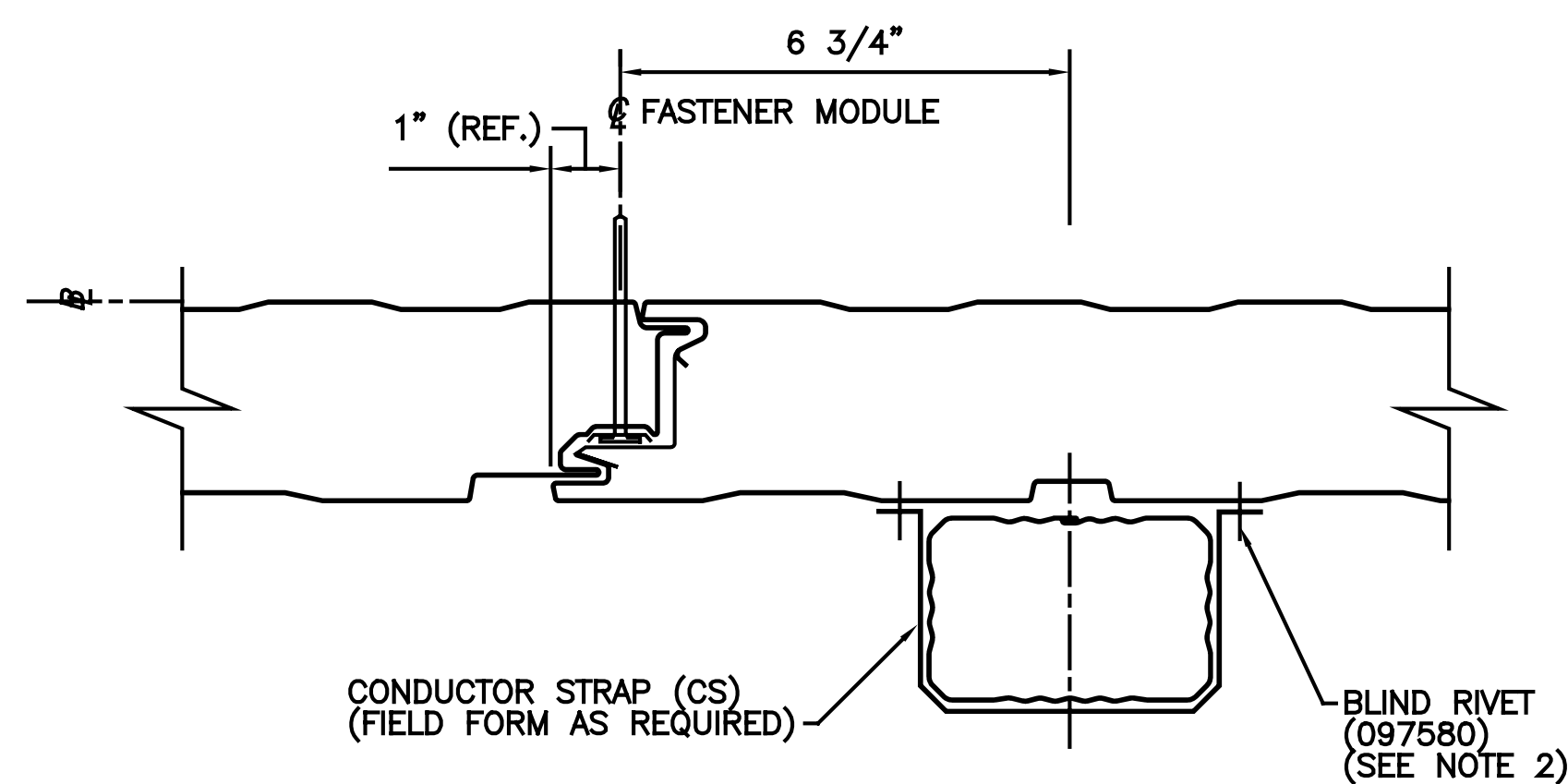
FLAT STYLWALL II AND FLAT eSTYLWALL II



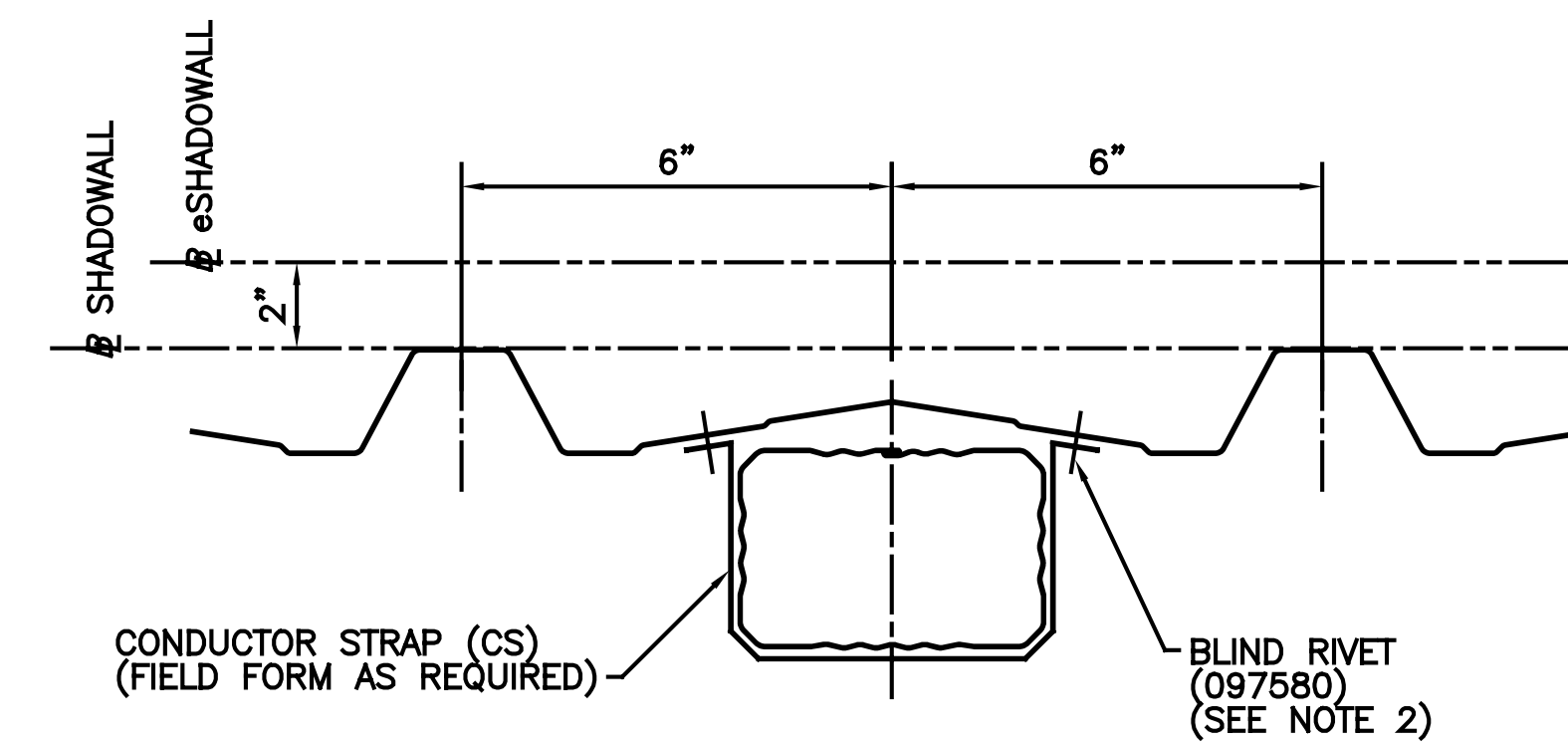
FLUTED STYLWALL II AND FLUTED eSTYLWALL II



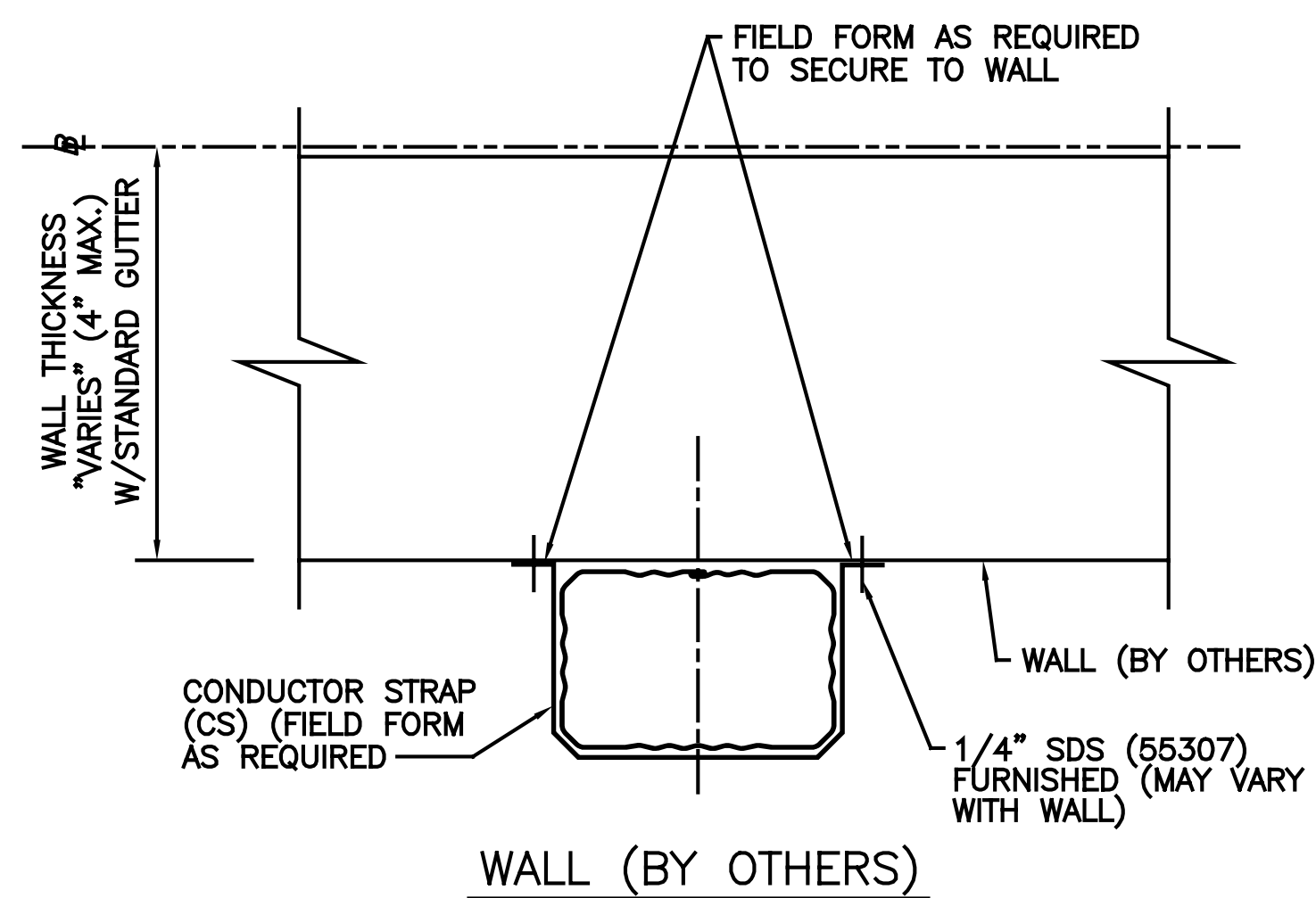
INSULATED WALL PANEL WITHOUT FLUTES
TEXTURED INSULATED WALL PANEL



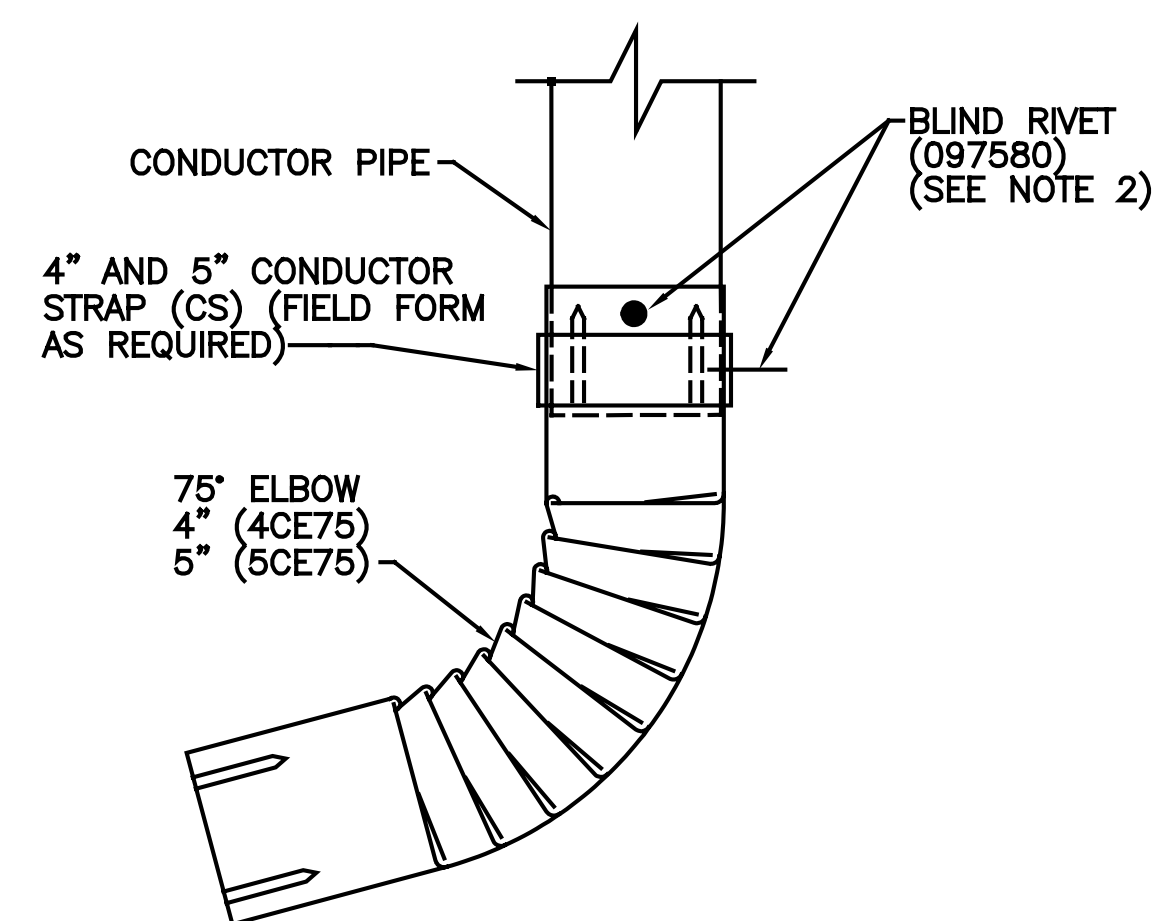
INSULATED WALL PANEL WITH FLUTES



SHADOWWALL, SHADOWWALL EX AND eSHADOWWALL



WALL (BY OTHERS)

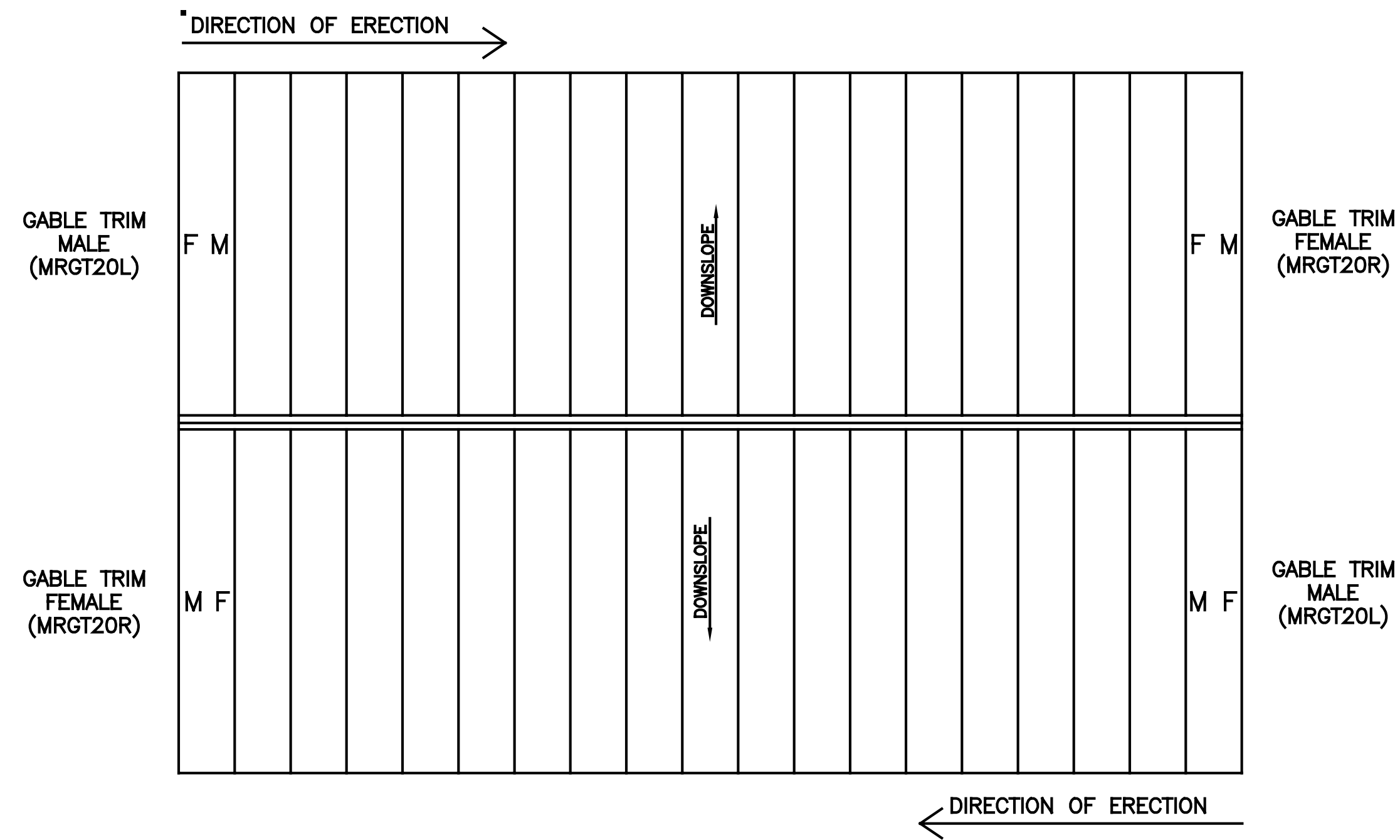


SHOE INSTALLATION
(TYPICAL SECTIONS - ABOVE)

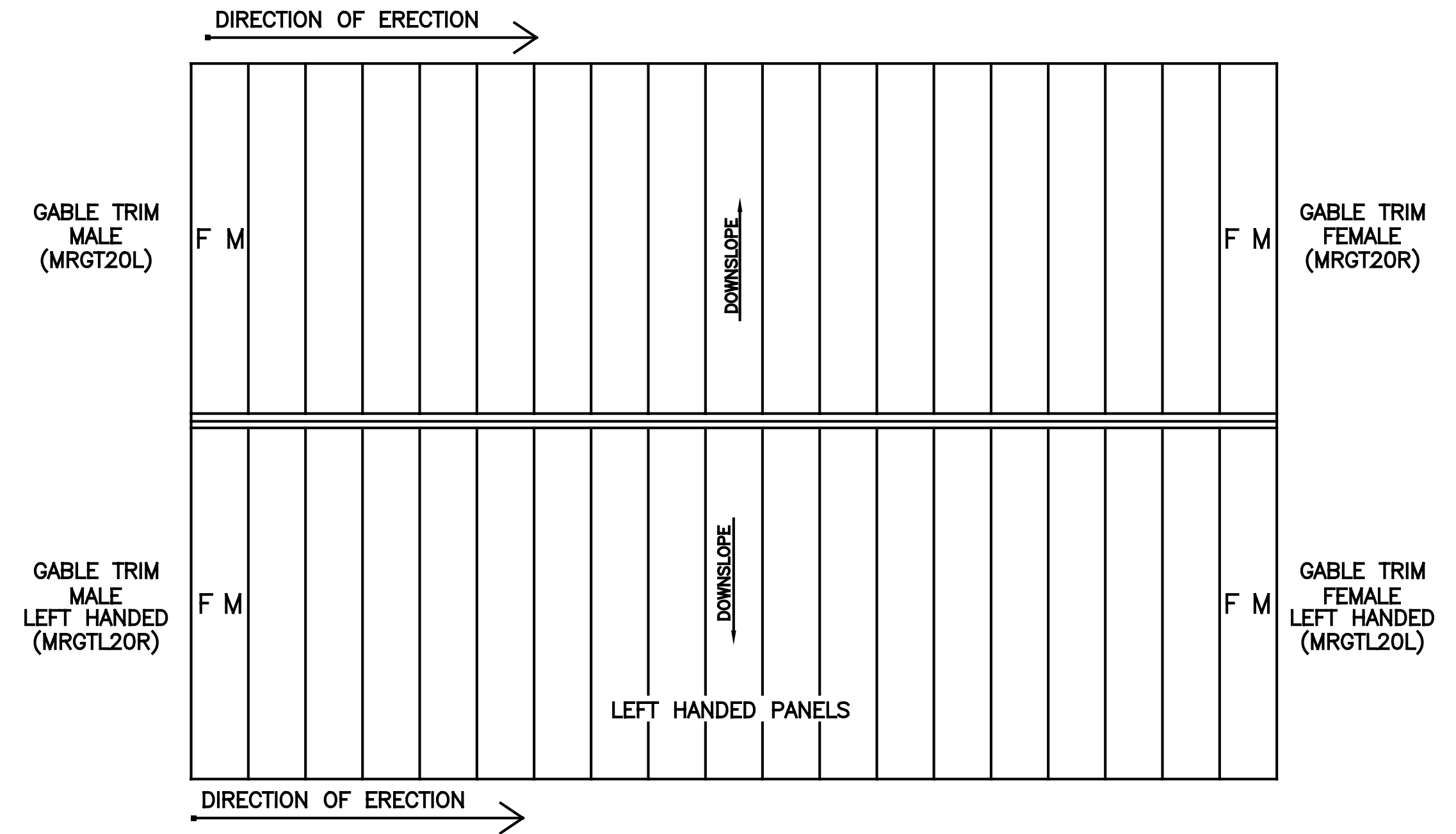
NOTES:

1. LOCATE CONDUCTOR STRAPS AT TOP, BOTTOM AND JOINTS OF VERTICAL 4" CONDUCTOR PIPES. 5" CONDUCTOR PIPES MAX. 6'-0" O.C. SPACING.
2. SEE DRAWING P-081764 FOR BLIND RIVET COLOR INFORMATION.
3. FOR PART SCHEDULES, SEE DWG. P-105224 (NARROW GUTTER), AND P-080091 (WIDE GUTTER).

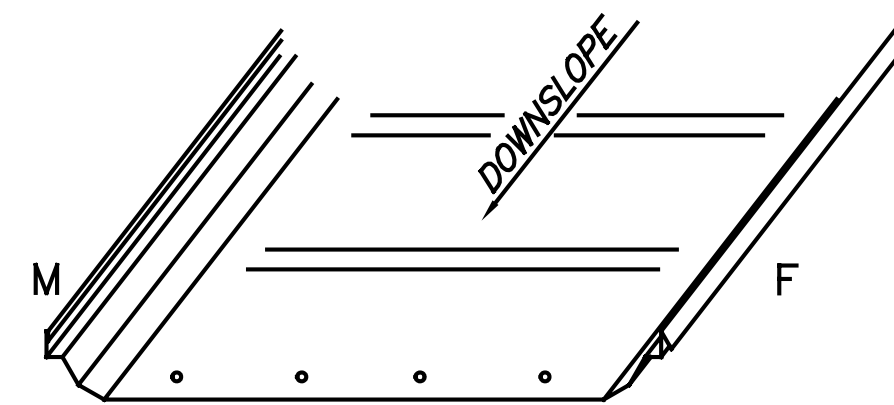
4" AND 5" CONDUCTOR PIPE AND CONDUCTOR STRAP DETAILS (ALL WALLS)				
DRAWN BY	CHECKED BY	GROUP NUMBER: 26-008-01		
FIRST RELEASE DATE	REVISION DATE	B	P-105228	08
01/21/10	03/17/21			



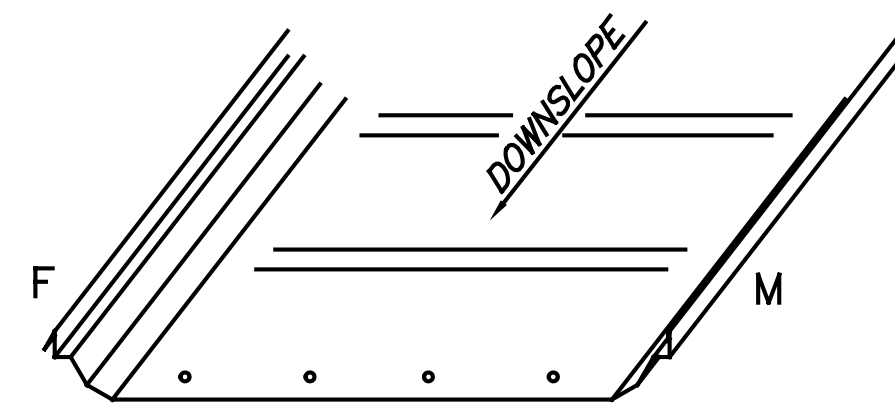
NORMAL ERECTION PROCEDURE



ERECTION PROCEDURE FROM LEFT TO RIGHT
(USING LEFT HANDED PANELS)

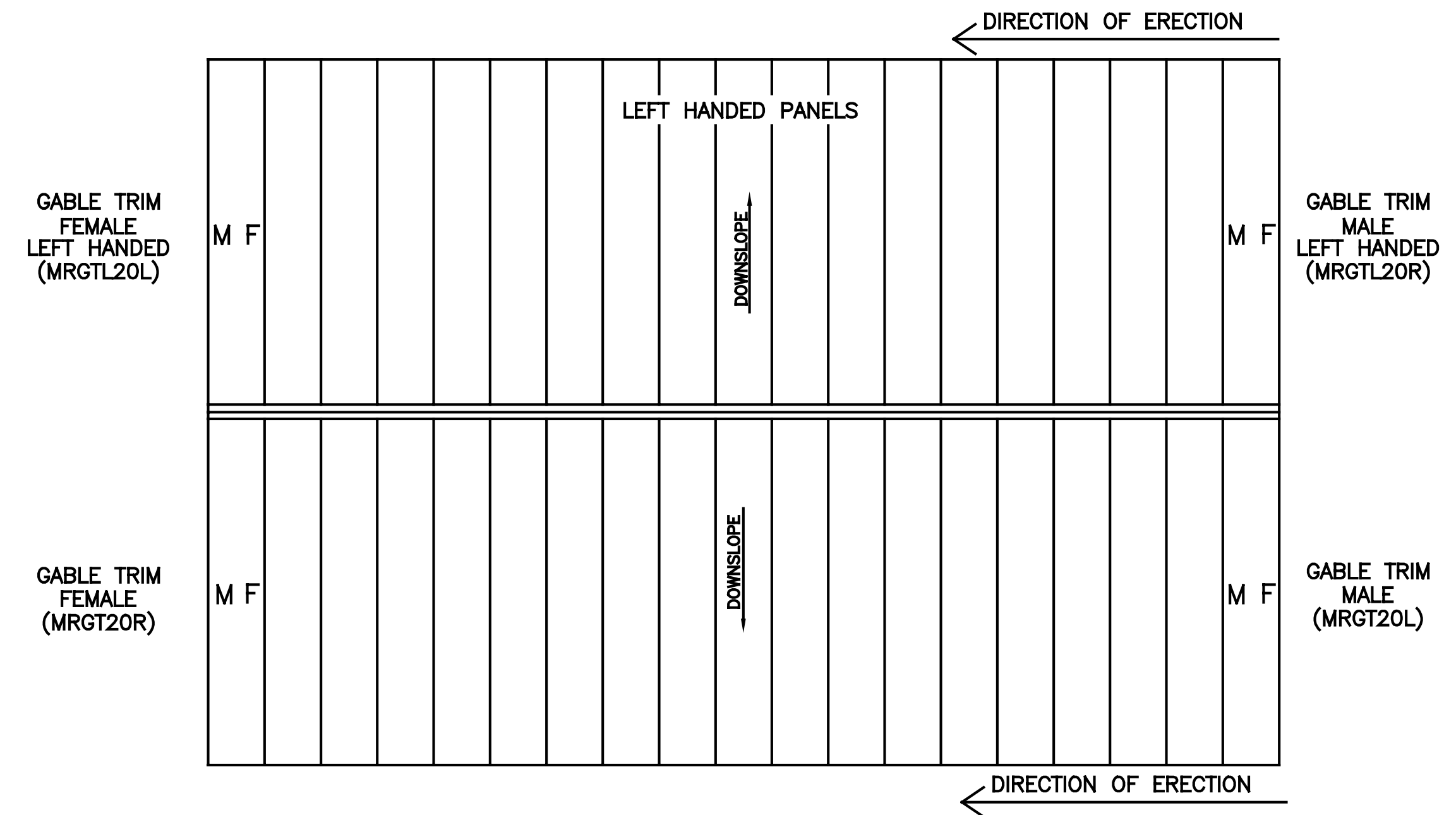


MR24 PANEL



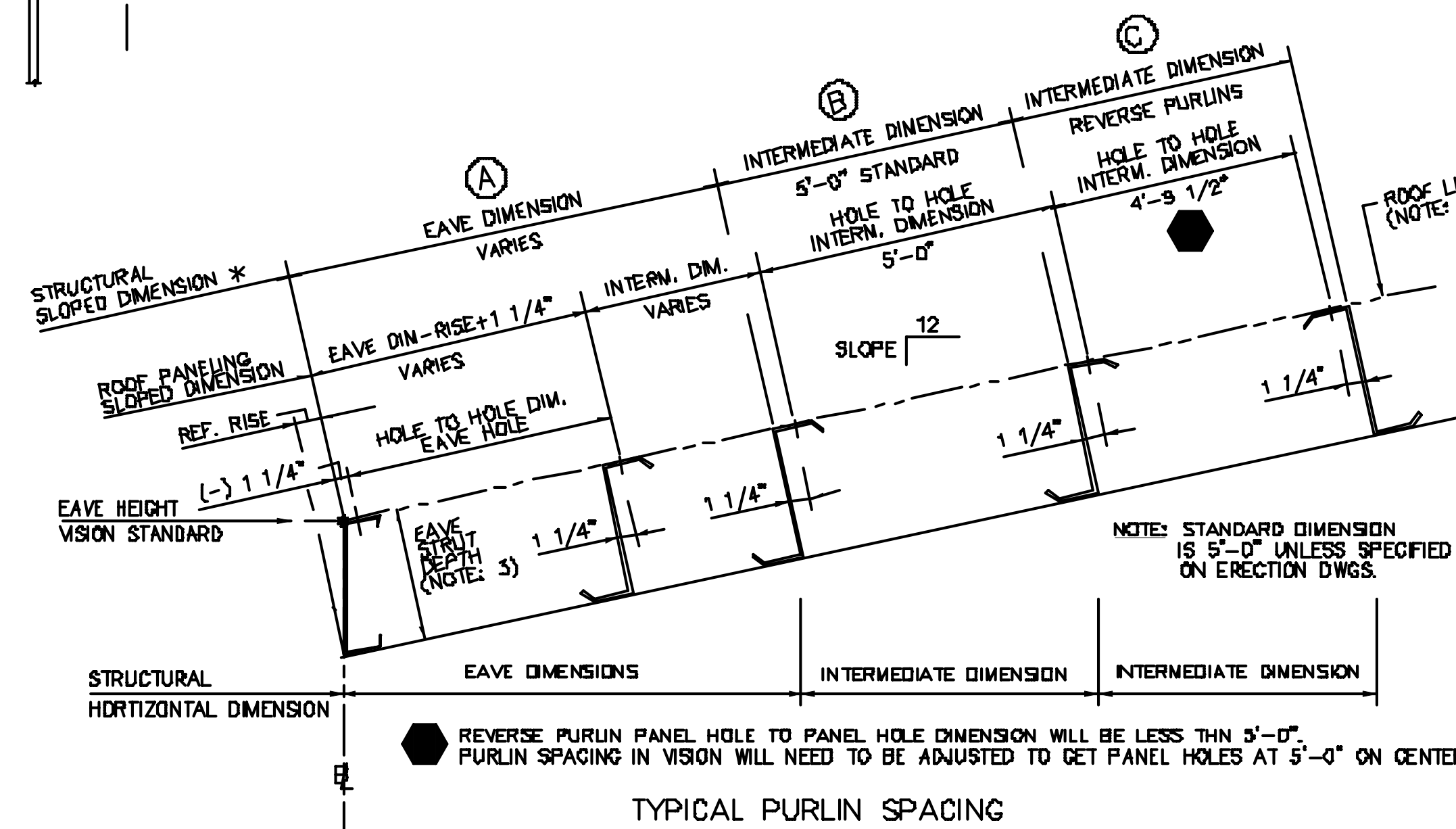
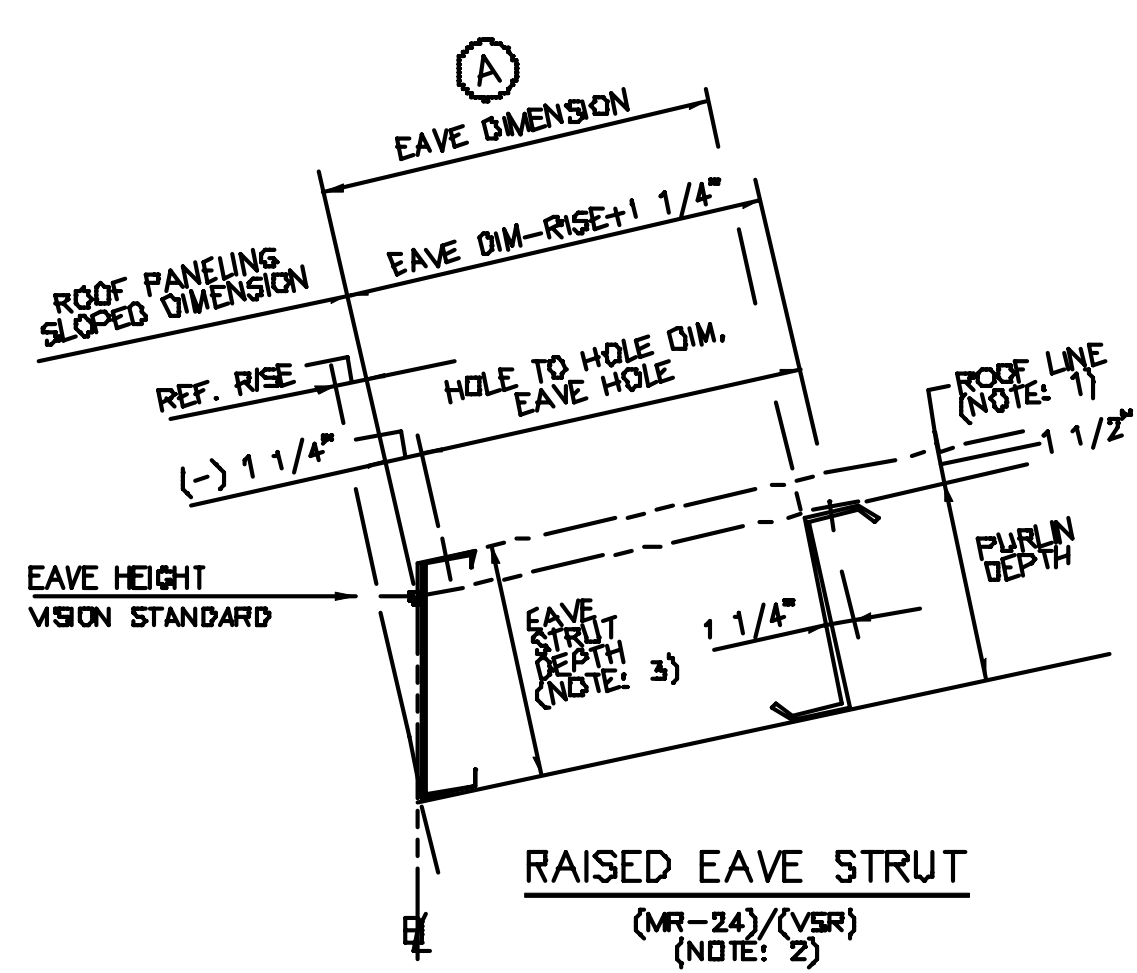
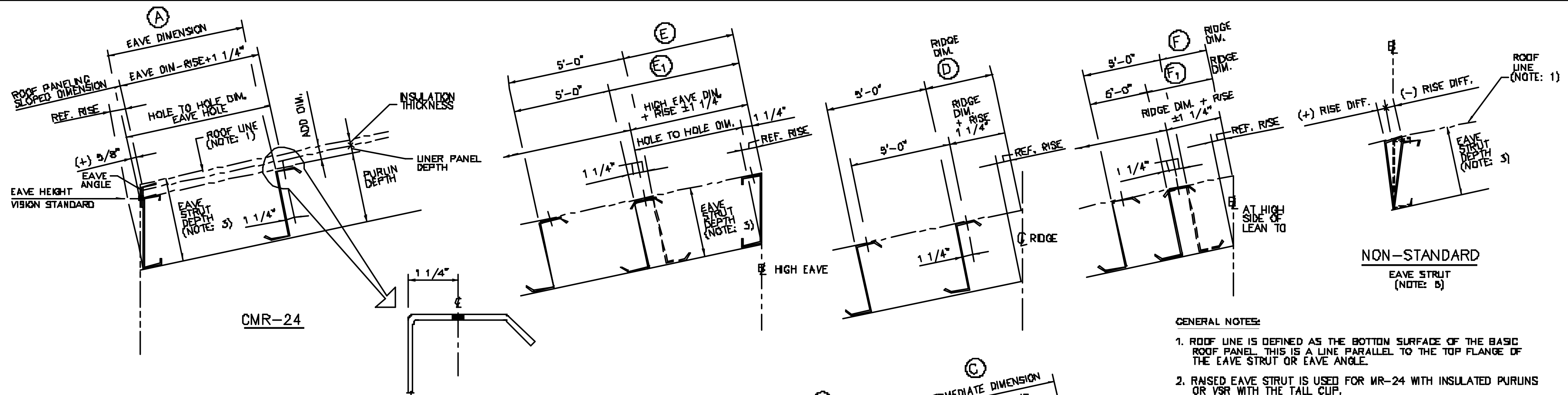
LEFT HANDED
MR24 PANEL

KEY	
F	= FEMALE
M	= MALE



ERECTION PROCEDURE FROM RIGHT TO LEFT
(USING LEFT HANDED PANELS)

GABLE TRIM — ERECTION PROCEDURE MR-24 ROOF				
DRAWN BY	CHECKED BY	GROUP NUMBER: — —		
RHE	JWH			
FIRST RELEASE DATE	REVISION DATE	B	P-149060	00
04/12/21	04/12/21			



GENERAL NOTES:

1. ROOF LINE IS DEFINED AS THE BOTTOM SURFACE OF THE BASIC ROOF PANEL. THIS IS A LINE PARALLEL TO THE TOP FLANGE OF THE EAVE STRUT OR EAVE ANGLE.
2. RAISED EAVE STRUT IS USED FOR MR-24 WITH INSULATED PURLINS OR VSR WITH THE TALL CLIP.
3. EAVE STRUT DEPTH IS THE DIMENSION FROM TOP OF ROOF BEAM TO THE ROOF LINE (BOTTOM OF THE BASIC ROOF PANEL).
4. SLOPED PURLIN SPACES ARE SHOWN IN THE TABLE AND ARE DIMENSIONED FROM TOP OF PURLIN.

THE BASIC SLOPE IN THE TABLE IS A BUTLER STANDARD SLOPE. THE PURLIN SPACES ARE USED FOR THE ENTIRE SLOPE RANGE. THE HORIZONTAL SPACES ARE FOR THE BASIC SLOPE ONLY. TO DETERMINE THE HORIZONTAL SPACES FOR OTHER SLOPES IN THE SLOPE RANGE, DIVIDE THE SLOPED DIMENSION BY THE COSINE OF THE ROOF SLOPE.

5. STANDARD EAVE STRUTS ARE DESIGNED FOR THE "BASIC" SLOPES ONLY. ON STANDARD BUILDINGS THESE EAVE STRUTS ARE USED FOR ALL SLOPES WITHIN THE SLOPE RANGE.

THE ORDER PROCESSOR SHOULD BE AWARE THAT THE ROOF PANEL LENGTHS MAY NEED TO BE ADJUSTED TO INSURE PROPER FIT-UP AT THE RIDGE AND SPICES.

THE ADJUSTMENT DIMENSION IS THE RISE DIFFERENCE FROM THE TOP OF THE EAVE STRUT TO BUILDING LINE. IF THIS DIMENSION IS GREATER THAN $\pm 1/8"$, IT IS RECOMMENDED TO ADJUST THE PANEL LENGTH, OR AS AN ALTERNATE, USE A CUSTOM EAVE STRUT DESIGNED FOR THE ACTUAL ROOF SLOPE.

EXAMPLE: A 2 1/2:12 BUILDING USES A 3:12 EAVE STRUT WITH A 10" DEPTH.

$$3 \div 12 \times 10 = 2.500"$$

$$\text{MINUS } 2.5 \div 12 \times 10 = 2.083"$$

$$\text{RISE DIFFERENCE} = 27/64" \text{ (13/32")}$$

SINCE THE RISE DIFFERENCE IS GREATER THAN $1/8"$, $3/8"$ SHOULD BE DEDUCTED FROM THE EAVE PANEL LENGTH.

6. TO COMPLETE ROOF PANEL CALCULATIONS, REFER TO SPECIFIC ROOF PANELING CALCULATOR DRAWINGS OR PROCESSING PROCEDURES.

SLOPE RANGE		A	B	C	D				E	F	F1				RISE DIMENSION (IN INCHES) EAVE STRUT DEPTH (NOTE: 3)			
		LOW EAVE DIMENSION FIRST AND SECOND PURLIN SPACES	INTERMEDIATE DIMENSION	SINGLE SLOPE REVERSE PURLIN DIMENSION	OBL. SLOPE RIDGE DIMENSION				DOWN SLOPE HIGH EAVE DIMENSION	UP SLOPE HIGH EAVE DIMENSION	DOWN SLOPE LEAN TO HIGH SIDE OR PERP. TRANSITION DIMENSION				UP SLOPE LEAN TO HIGH SIDE OR PERP. TRANSITION DIMENSION			
RANGE	DIM.	ALL PANEL TYPES	ALL PANEL TYPES	ALL PANEL TYPES	ALL PANEL TYPES / PURLIN DEPTH				ALL PANEL TYPES	ALL PANEL TYPES	ALL PANEL TYPES / PURLIN DEPTH				ALL PANEL TYPES / PURLIN DEPTH			
					7"	8 1/2"	10"	11 1/2"			7"	8 1/2"	10"	11 1/2"	7"	8 1/2"	10"	11 1/2"
.25	SLOPED *	VARIABLES	5'-0" 60.00	5'-0" 60.00	1'-1 3/16" 13.15	1'-1 3/16" 13.15	1'-1 3/16" 13.21	1'-1 1/4" 13.25	5'-0" 60.00	5'-0" 60.00	10 7/8" 10.88	10 7/8" 10.88	10 7/8" 10.88	10 7/8" 10.88	1'-1 3/8" 13.36	1'-1 3/8" 13.36	1'-1 3/8" 13.36	1'-1 3/8" 13.36
	HORIZ.				1'-1" 13.00	1'-1" 13.00	1'-1" 13.00	1'-1" 13.00			10 3/4" 10.75	10 11/16" 10.67	10 11/16" 10.67	10 3/8" 10.64	1'-1 1/4" 13.25	1'-1 3/16" 13.17	1'-1 1/8" 13.14	1'-1 1/8" 13.14
.251 THRU .749	SLOPED *				1'-1 5/16" 13.30	1'-1 5/16" 13.35	1'-1 3/8" 13.40	1'-1 1/2" 13.49			10 7/8" 10.88	10 7/8" 10.88	10 7/8" 10.88	10 7/8" 10.88	1'-1 3/8" 13.36	1'-1 3/8" 13.36	1'-1 3/8" 13.36	1'-1 3/8" 13.36
	HORIZ.				1'-1" 13.00	1'-1" 13.00	1'-1" 13.00	1'-1" 13.00			10 5/8" 10.56	10 5/8" 10.56	10 5/8" 10.56	10 5/8" 10.40	1'-1 1/8" 13.02	1'-0 31/32" 12.94	1'-0 29/32" 12.86	1'-0 29/32" 12.86
.75 THRU 1.249	SLOPED *				1'-0 27/32" 12.85	1'-0 31/32" 12.97	1'-1 1/16" 13.08	1'-1 7/32" 13.23			10 7/16" 10.44	10 7/16" 10.44	10 7/16" 10.44	10 7/16" 10.44	1'-0 15/16" 12.94	1'-0 15/16" 12.94	1'-0 15/16" 12.94	1'-0 15/16" 12.94
	HORIZ.				1'-0 7/32" 12.22	1'-0 7/32" 12.22	1'-0 7/32" 12.22	1'-0 7/32" 12.22			9 27/32" 9.85	9 3/4" 9.75	9 19/32" 9.60	9 15/32" 9.46	1'-0 11/32" 12.35	1'-0 1/8" 12.10	1'-0" 11.90	1'-0" 11.90
1.25 THRU 2.249	SLOPED *				1'-1 11/32" 13.33	1'-1 9/16" 13.11	1'-1 13/16" 13.81	1'-2 1/32" 14.12			11" 11.00	11" 11.00	11" 11.00	11" 11.00	1'-1 1/2" 13.50	1'-1 1/2" 13.50	1'-1 1/2" 13.50	1'-1 1/2" 13.50
	HORIZ.				1'-0" 12.00	1'-0" 12.00	1'-0" 12.00	1'-0" 12.00			9 27/32" 9.85	9 19/32" 9.68	9 11/32" 9.53	9 1/8" 9.08	1'-0 5/16" 12.33	1'-0 1/16" 12.06	11 15/16" 11.93	11 15/32" 11.58
2.25 THRU 3.499	SLOPED *				1'-1 13/32" 13.41	1'-1 25/32" 13.78	1'-2 1/8" 14.14	1'-2 17/32" 14.54			11 1/4" 11.25	11 1/4" 11.25	11 1/4" 11.25	11 1/4" 11.25	1'-1 7/8" 13.88	1'-1 7/8" 13.88	1'-1 7/8" 13.88	1'-1 7/8" 13.88
	HORIZ.				11 5/16" 11.31	11 5/16" 11.31	11 5/16" 11.31	11 5/16" 11.31			9 1/2" 9.5	9 1/2" 9.13	8 3/4" 8.75	8 3/8" 8.38	1'-0 1/8" 12.13	11 3/8" 11.75	11 3/8" 11.38	11" 11.00
3.5 THRU 4.0	SLOPED *				1'-0 9/8" 12.61	1'-1 1/8" 13.11	1'-1 19/32" 13.09	1'-2 1/8" 14.12			10" 10.00	10" 10.00	10" 10.00	10" 10.00	1'-0 5/8" 12.63	1'-0 5/8" 12.63	1'-0 5/8" 12.63	1'-0 5/8" 12.63
	HORIZ.	VARIABLES	6'-0" 60.00	6'-0" 60.00	9 3/4" 8.75	9 3/4" 8.75	9 3/4" 8.75	9 3/4" 8.75	6'-0" 60.00	6'-0" 60.00	7 11/16" 7.67	7 3/16" 7.17	8 11/16" 8.67	8 3/16" 8.17	10 9/32" 10.29	9 25/32" 9.79	9 9/32" 8.29	8 25/32" 8.79

* DEFAULT DIMENSION USED BY VISION

FORMULAS USED IN ROOF CALCULATIONS:

1. (CONVERT ROOF SLOPE DIMENSIONS TO DECIMAL FOR THESE CALCULATIONS)
2. RISE DIMENSION = (ROOF SLOPE $\div$ 12) X EAVE STRUT DEPTH
3. SLOPED DIMENSION = (HORIZONTAL DIM. $\div$ COSINE OF THE ROOF SLOPE DEGREES)
4. HORIZONTAL DIM. = (SLOPE DIM. X COSINE OF THE ROOF SLOPE DEGREES)
5. ROOF SLOPE DEG = ARC TANGENT (OR INVERSE TANGENT) X (ROOF SLOPE $\div$ 12)

Z-PURLIN ROOF STRUCTURAL LOCATION PURLIN SPACING			
DRAWN BY	CHECKED BY	GROUP NUMBER: 00-000-00	
BSN	MCC		
FIRST RELEASE DATE	REVISION DATE		
01/21/10	11/06/14		
C		P-ZRSLO	05