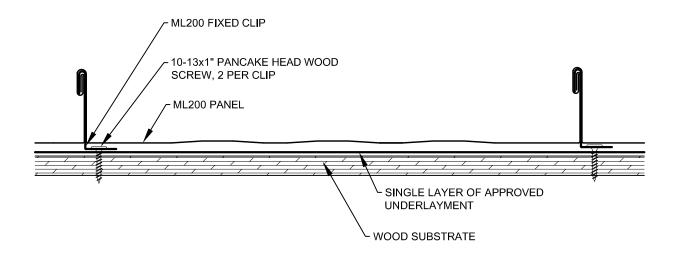


ML200 Standing Seam Wood Substrate Master Details

Architectural / Solid Substrate / Steep Slope

The following details are commonly used over steep sloped applications including those over solid substrates such as plywood or steel decking with rigid insulation. Such details are largely based on hydrokinetic (water shedding) design principles and architectural detailing.



FAYETTEVILLE, NC 888-685-7663

> OCALA, FL 800-331-3584

SPENCER, NC 800-526-8156

VICKSBURG, MS 888-661-0577 ANDERSON, SC 800-544-5169

TIPP CITY, OH 877-615-9812

TIFTON, GA 800-962-9131

OKLAHOMA CITY, OK 866-373-5286 **ORANGE, VA** 800-762-6785

SCRANTON, PA 866-695-6455



ML200 Standing Seam

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-Wood Substrate-Fixed Clip and Expansion Clip

B. and the form of the	D 4 2 1 M
Panel Information	Detail No.
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System Overview - Clips	
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Thermal Gap Installation Chart - Aluminum	
The first cap metallication of the first cap and	
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Extended Eave with Gutter - Steep Slope	
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Extended Eave with Soffit & Gutter	
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Extended Eave with Vertical Flush Panel	
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Gable Details	Detail No.
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Box Gable Lap Detail	
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ML200 Standing Seam

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-Wood Substrate-Fixed Clip and Expansion Clip

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Nuge & Tip Details	Detail No.
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r ear Detail with Vertical Flush Faher	0.40_LX
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High Wall - Reglet	
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High Wall - Parapet	
High Wall - Parapet	_
Valley Wall Detail	_
Valley Wall Detail	
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Sidewall Details	Detail No.
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Sidewall - Reglet with Subflashing Angle	7.11_FX
Sidewall - Reglet with Subflashing Angle	7.11_EX
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Sidewall - Wood Framing & Siding with Subflashing Angle	7.13_FX
Sidewall - Wood Framing & Siding with Subflashing Angle	7.13_EX

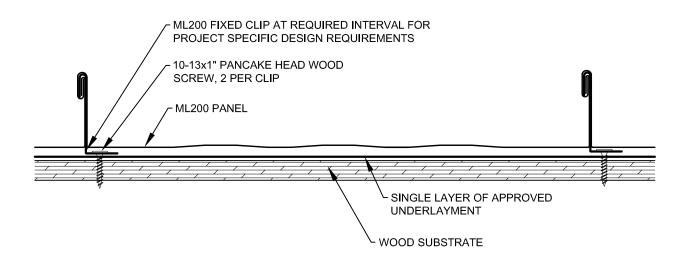


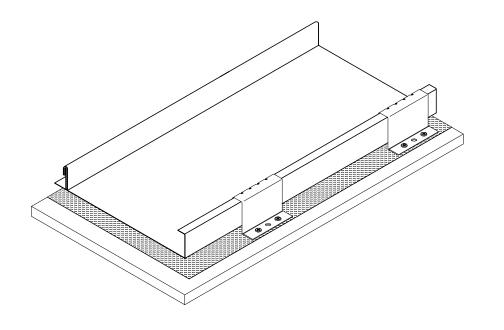
ML200 Standing Seam

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-Wood Substrate-Fixed Clip and Expansion Clip

Sidewall Details (continued)	Detail No.
Sidewall - Reglet with J-Channel Subflashing	7.21_FX
Sidewall - Reglet with J-Channel Subflashing	7.21_ <i>EX</i>
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Curb at High Wall & Low Wall	
Curb at High Wall & Low Wall	_
Curb at Sidewall	
Curb at Sidewall	
Curb Installation Detail	CRB 1-6







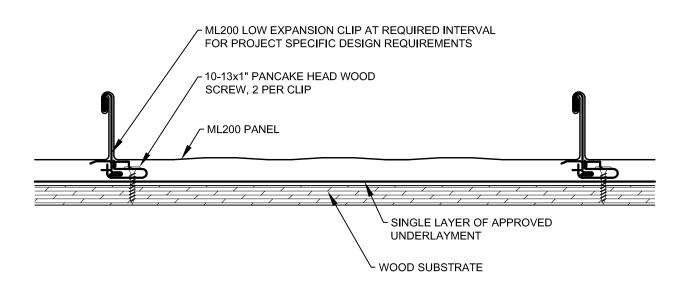
Description:

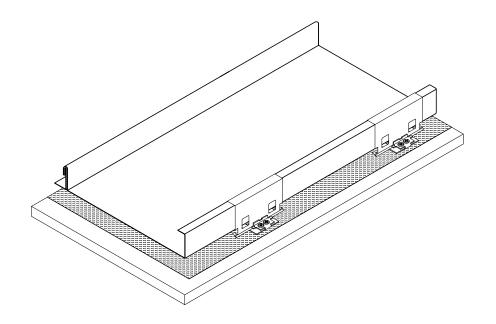
ML200 APPLICATION - FIXED CLIP

Detail No.:

ML200-WS-0.10_FX

Substrate: WOOD SUBSTRATE







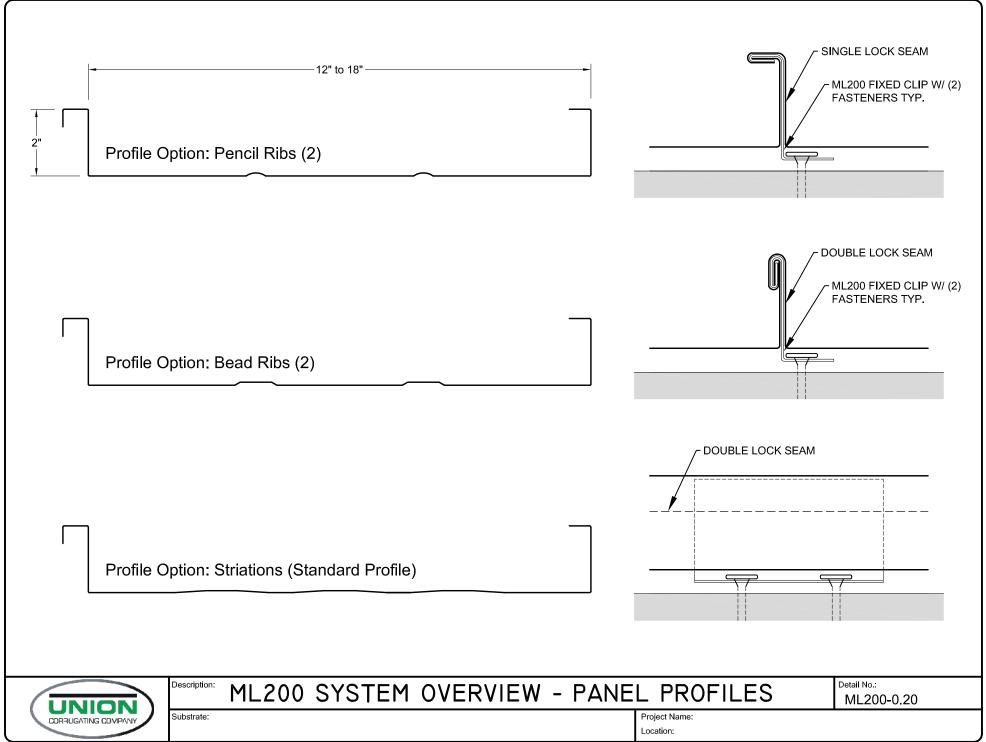
Description: ML200 APPLICATION - EXPANSION CLIP

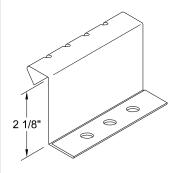
Detail No.:

ML200-WS-0.10_EX

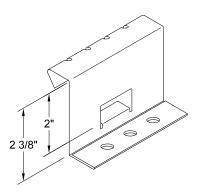
Substrate:

WOOD SUBSTRATE

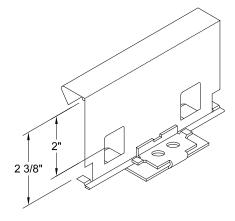




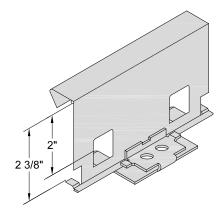
Clip 40 Fixed 22 Ga. Galvanized 2.125" x 3.25"



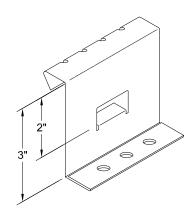
Clip 41 Fixed
22 Ga. Galvanized
2.375" x 3.25" (0.375" Substrate Standoff)



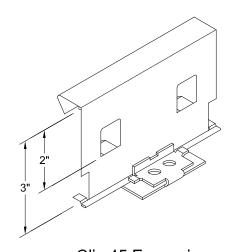
Clip 42 Expansion
22 Ga. Galvanized w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Use with up to 3" of blanket insulation



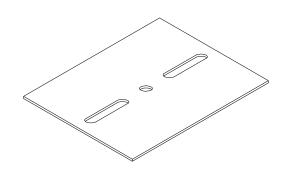
Clip 43 Expansion
22 Ga. Stainless Steel w/ 16 Ga. Base
2.375" x 4.25" (0.375" Substrate Standoff)
Recommended for use with aluminum panels
Use with up to 3" of blanket insulation



Clip 44 Fixed
22 Ga. Galvanized
3" x 3" (1" Substrate Standoff)
Use with up to 6" of blanket insulation



Clip 45 Expansion
22 Ga. Galvanized w/ 16 Ga. Base
3" x 3" (1" Substrate Standoff)
Use with up to 6" of blanket insulation



4" x 5" Bearing Plate
16 Ga. Galvanized
Required for use when clips are applied directly over rigid board insulation

IMPORTANT INSTALLATION NOTE EXPANSION CLIPS ARE RECOMMENDED FOR PANEL LENGTHS GREATER THAN 30'-0".



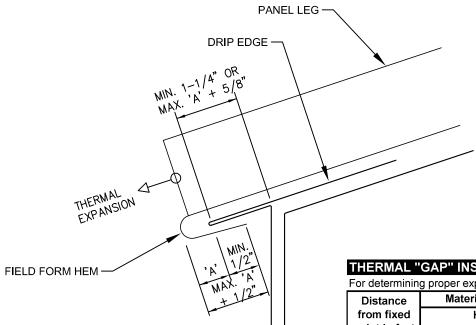
Description:

ML200 SYSTEM OVERVIEW - CLIPS

Detail No.:

ML200-0.21

Substrate:



THERMAL "GAP" INSTALLATION CHART (In inches) - STEEL

For determining proper expansion/contraction gap at panel ends during installation

Distance	Materia	laterial Temperature (Surface Temperature) During Installation						
from fixed	Hot			Warm		Cold <50° F		
point in feet	>100° F		n feet >100° F 100° to 50° F					
10	0.145		1/8	0.072	1/16	0.000	0	
20	0.289		5/16	0.145	1/8	0.000	0	
30	0.434		7/16	0.217	3/16	0.125		1/8
40	0.579		9/16	0.289	5/16	0.125		1/8
50	0.724		3/4	0.362	3/8	0.188		3/16
60	0.868		7/8	0.434	7/16	0.188		3/16
70	1.013	1		0.507	1/2	0.250		1/4
80	1.158	1	3/16	0.579	9/16	0.250		1/4
90	1.302	1	5/16	0.651	5/8	0.375		3/8
100	1.447	1	7/16	0.724	3/4	0.375		3/8

^{*} Chart based on temperature differential of:

180 degrees F

UNION CORRUGATING COMPANY Description: THERMAL GAP INSTALLATION CHART - STEEL

Detail No.:

ML200-0.30

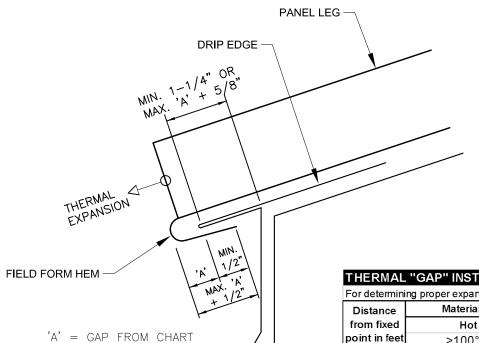
Substrate:

Project Name: Location:

'A' = GAP FROM CHART DURING

TIME OF INSTALLATION

^{*} Coefficient of thermal expansion for steel: 0.0000067



THERMAL "GAP" INSTALLATION CHART (In inches) - ALUMINUM

For determining proper expansion/contraction gap at panel ends during installation

Distance	Material Temperature (Surface Temperature) During Installation						
from fixed	H	Hot		arm	Cold		
point in feet	>10	0° F	100° to 50° F		<50° F		
10	0.279	1/4	0.139	1/8	0.000	0	
20	0.557	9/16	0.279	1/4	0.000	0	
30	0.836	13/16	0.418	7/16	0.125	1/8	
40	1.115	1 1/8	0.557	9/16	0.125	1/8	
50	1.393	1 3/8	0.697	11/16	0.188	3/16	
60	1.672	1 11/16	0.836	13/16	0.188	3/16	
70	1.950	1 15/16	0.975	1	0.250	1/4	
80	2.229	2 1/4	1.115	1 1/8	0.250	1/4	
90	2.508	2 1/2	1.254	1 1/4	0.375	3/8	
100	2.786	2 13/16	1.393	1 3/8	0.375	3/8	

* Chart based on temperature differential of: 180 degrees F * Coefficient of thermal expansion for alum.: 0.0000129



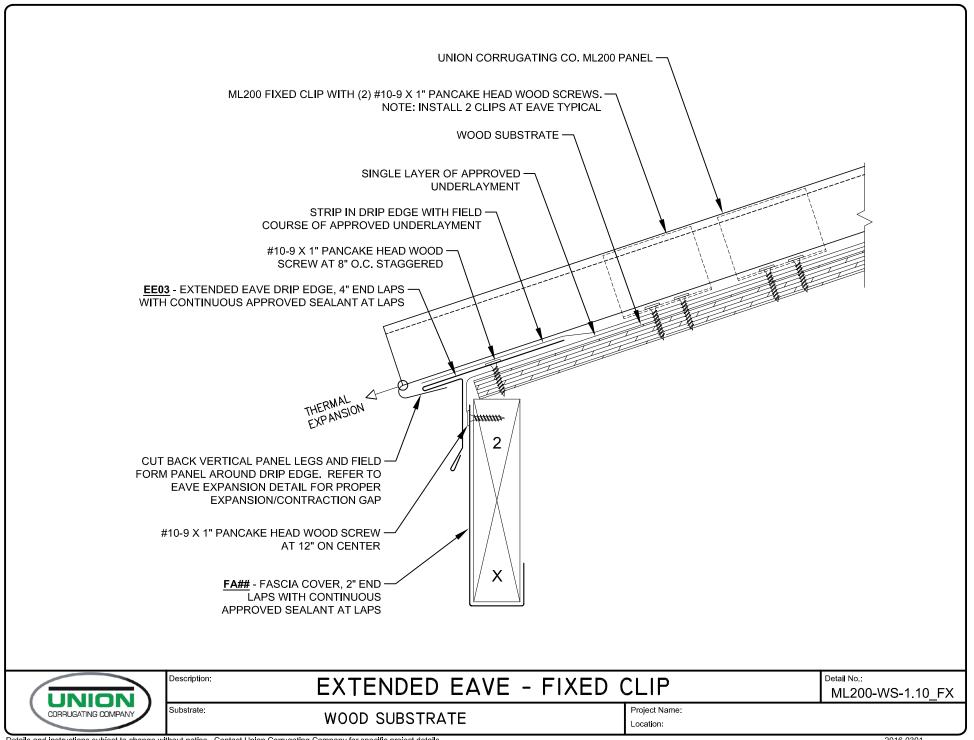
THERMAL GAP INSTALLATION CHART - ALUMINUM

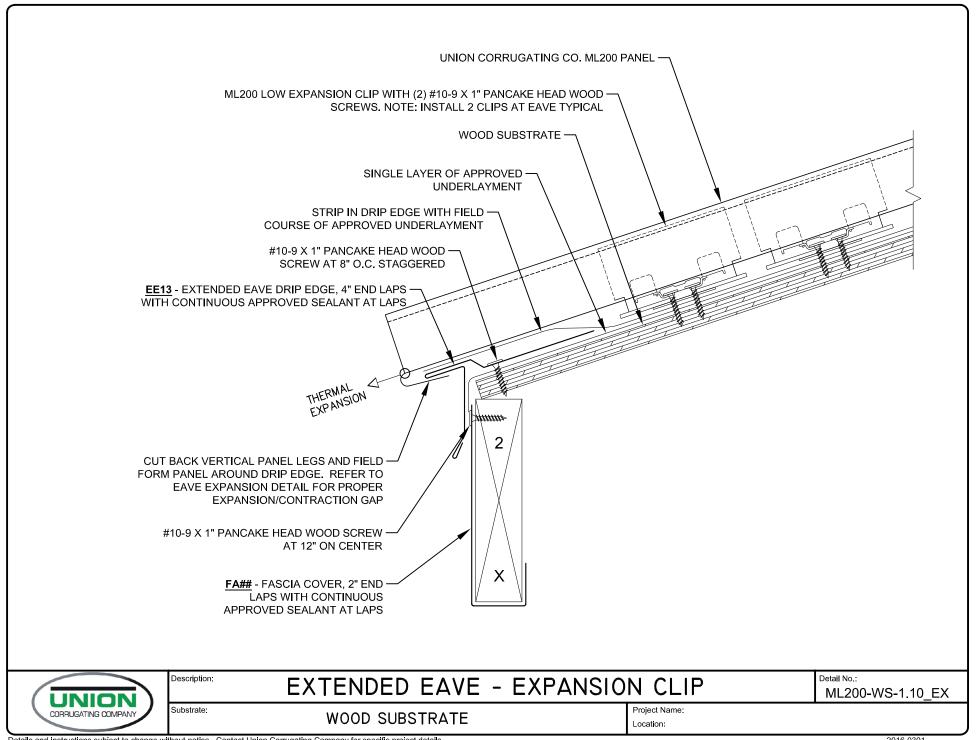
Detail No.: ML200-0.31

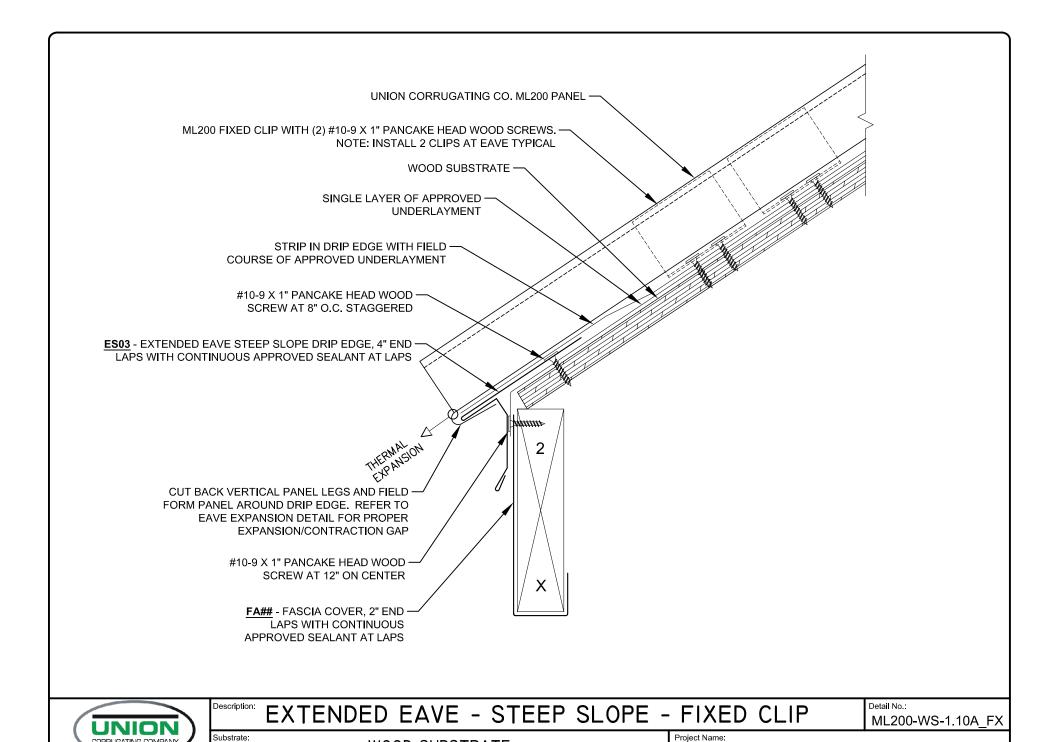
Substrate:

Project Name: Location:

DURING TIME OF INSTALLATION

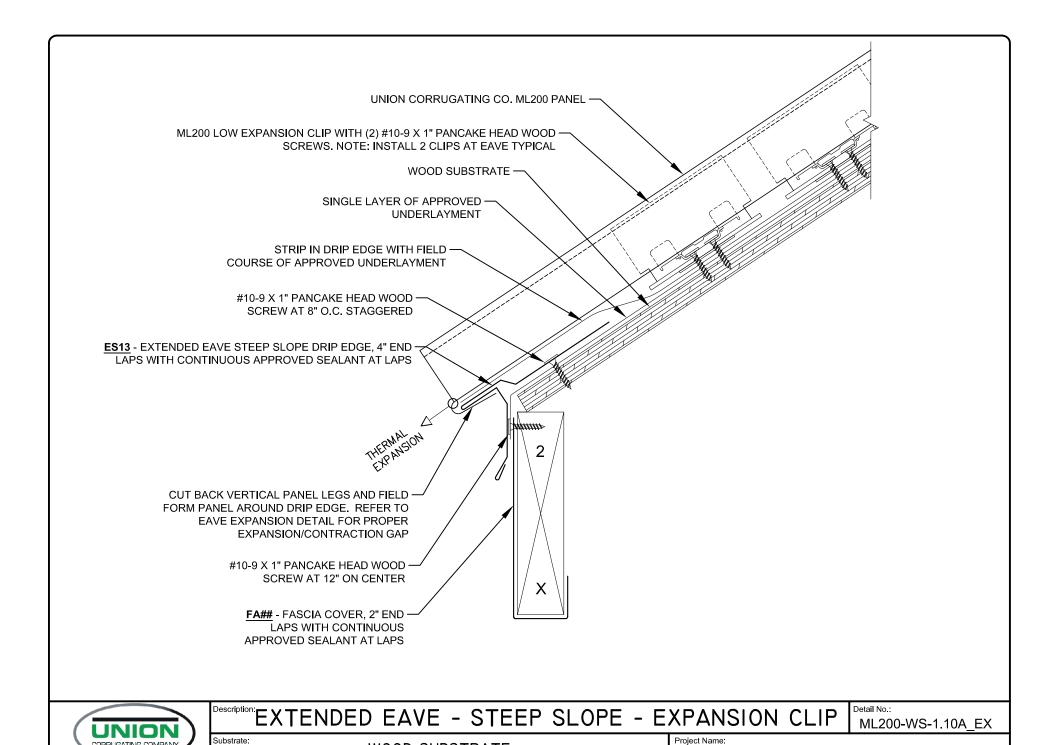






Location:

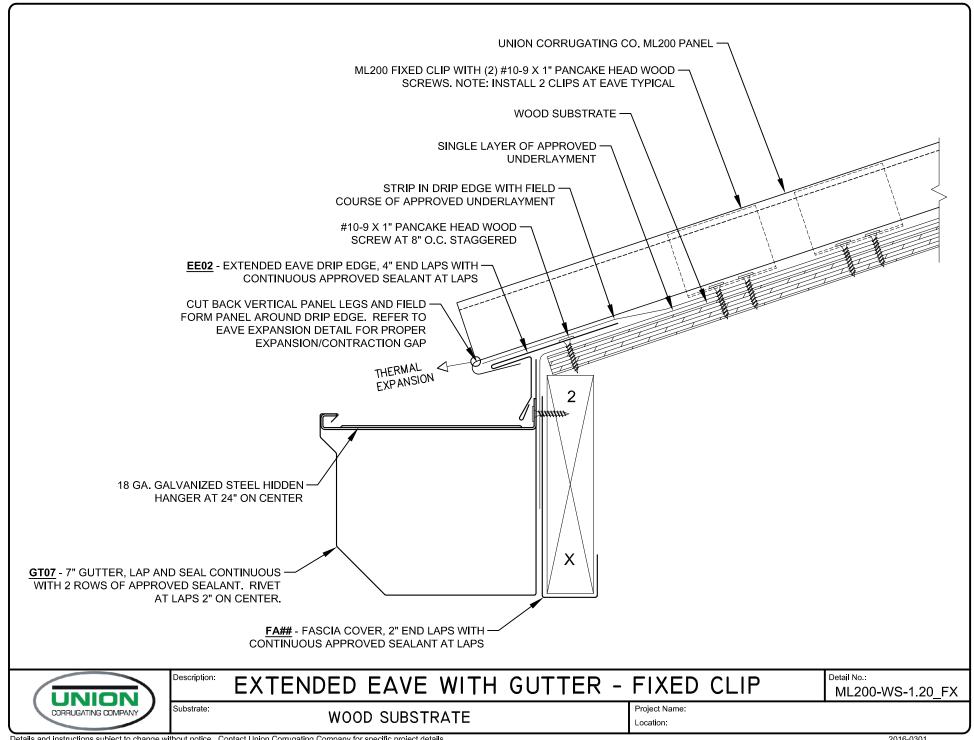
WOOD SUBSTRATE

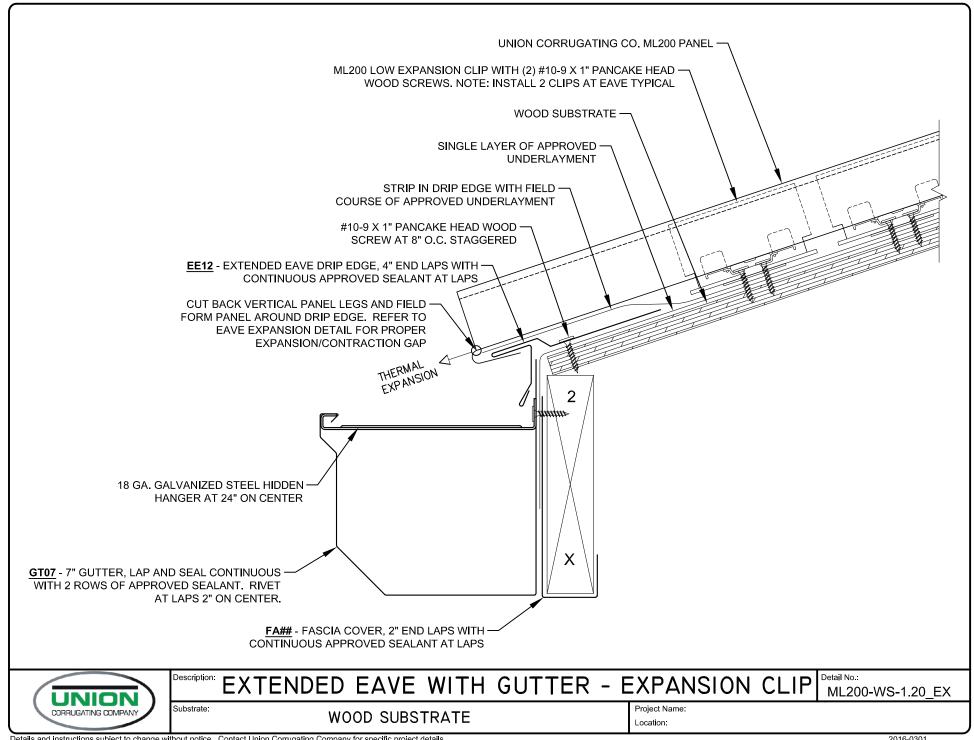


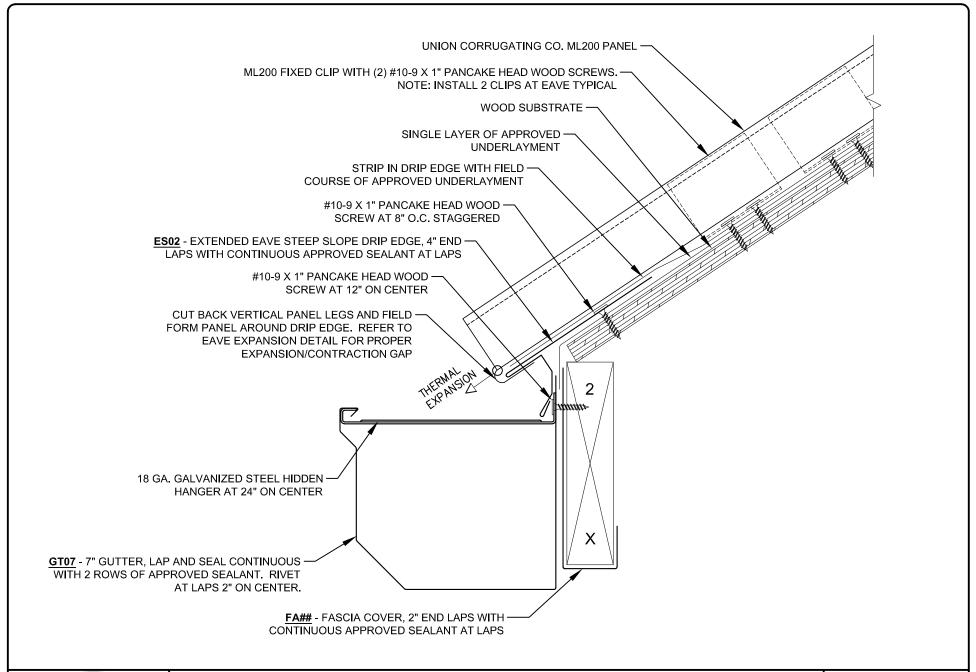
Location:

WOOD SUBSTRATE

CORRUGATING COMPAN







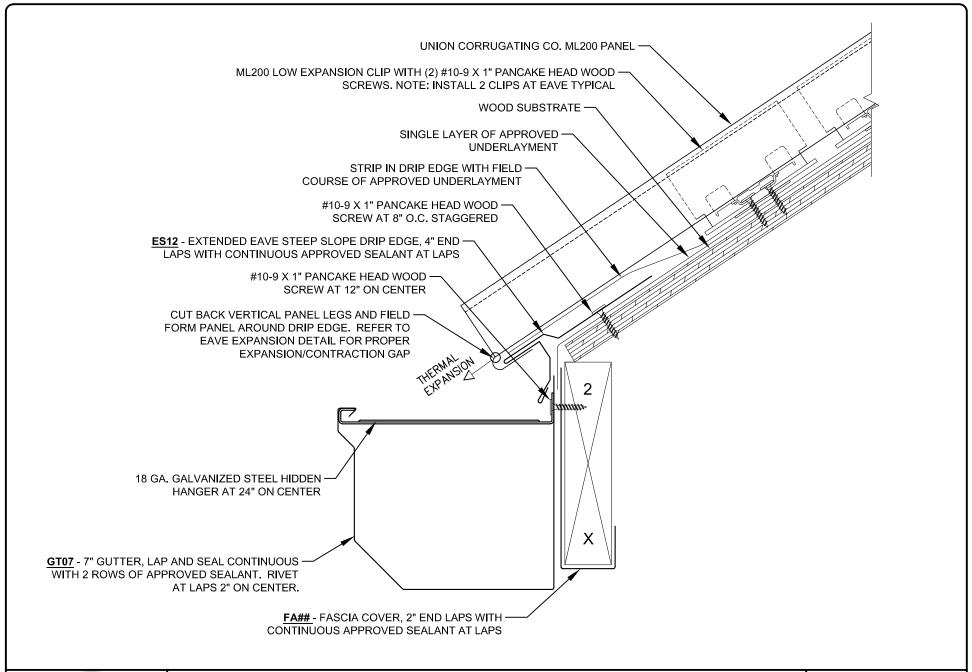


Description: EXT. EAVE W/ GUTTER- STEEP SLOPE - FIXED CLIP

Detail No.: ML200-WS-1.20A_FX

Substrate:

WOOD SUBSTRATE





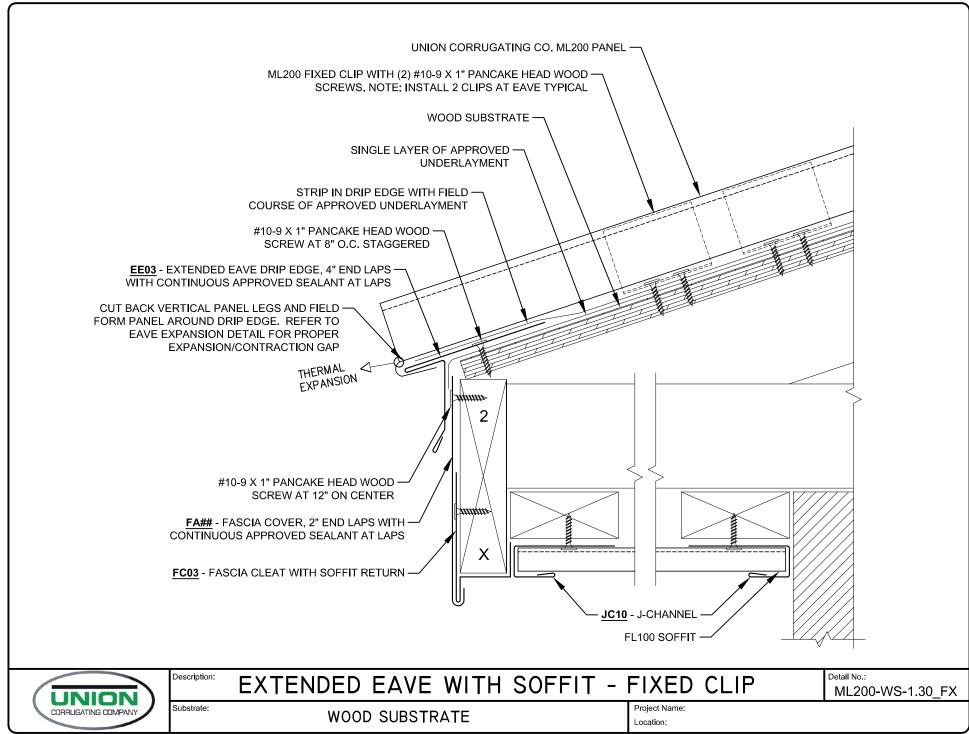
Description: EXT. EAVE W/ GUTTER- STEEP SLOPE - EXPANSION CLIP

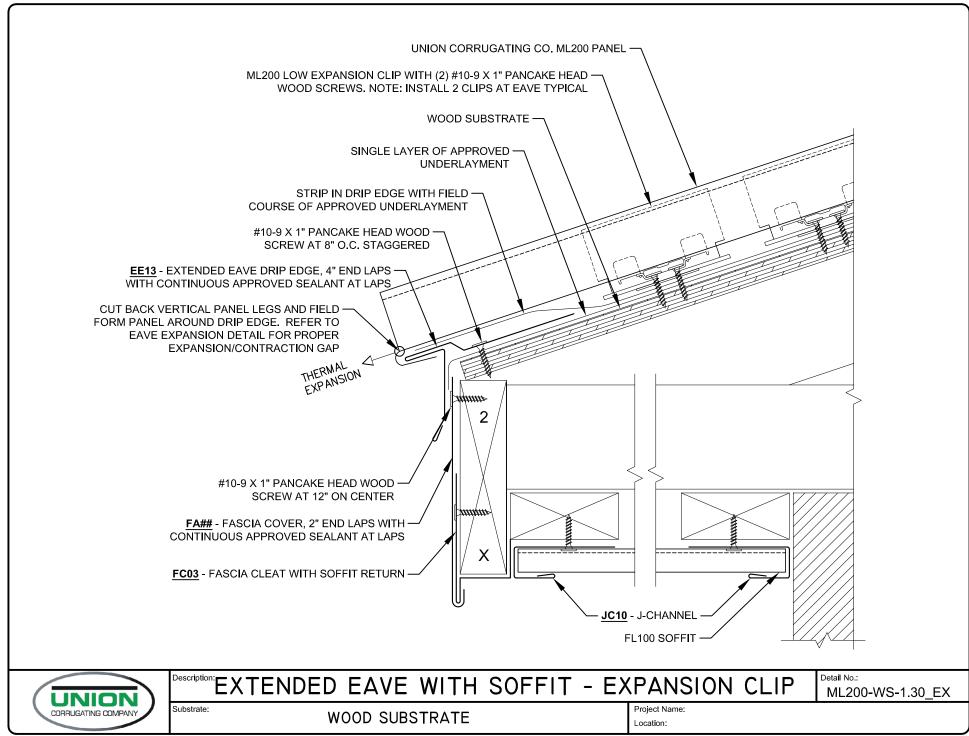
Detail No.:

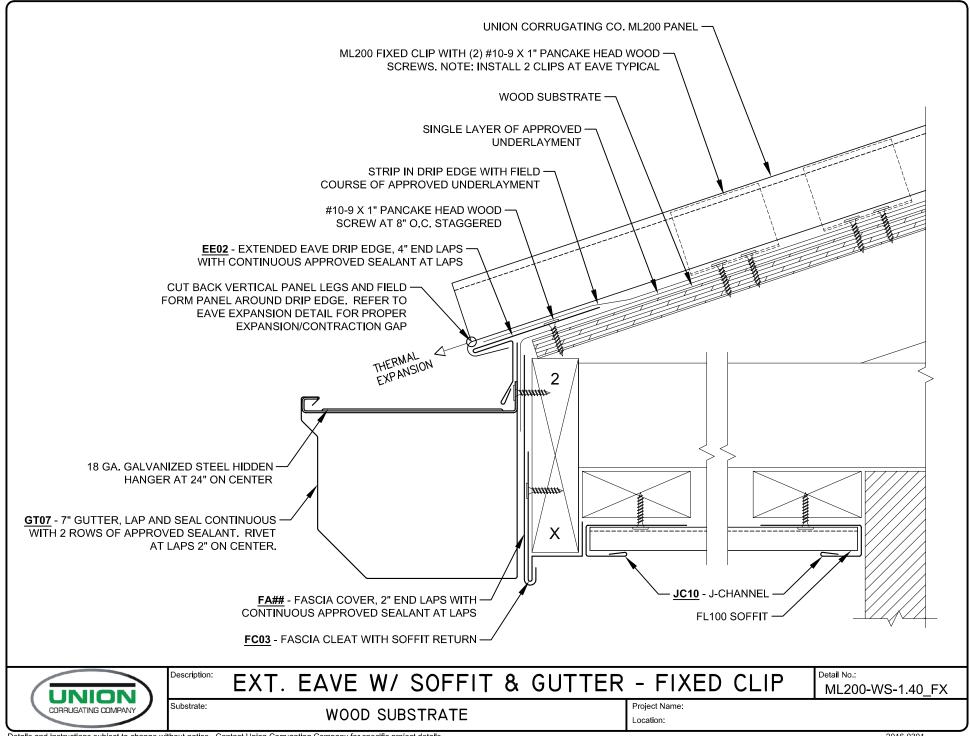
ML200-WS-1.20A_EX

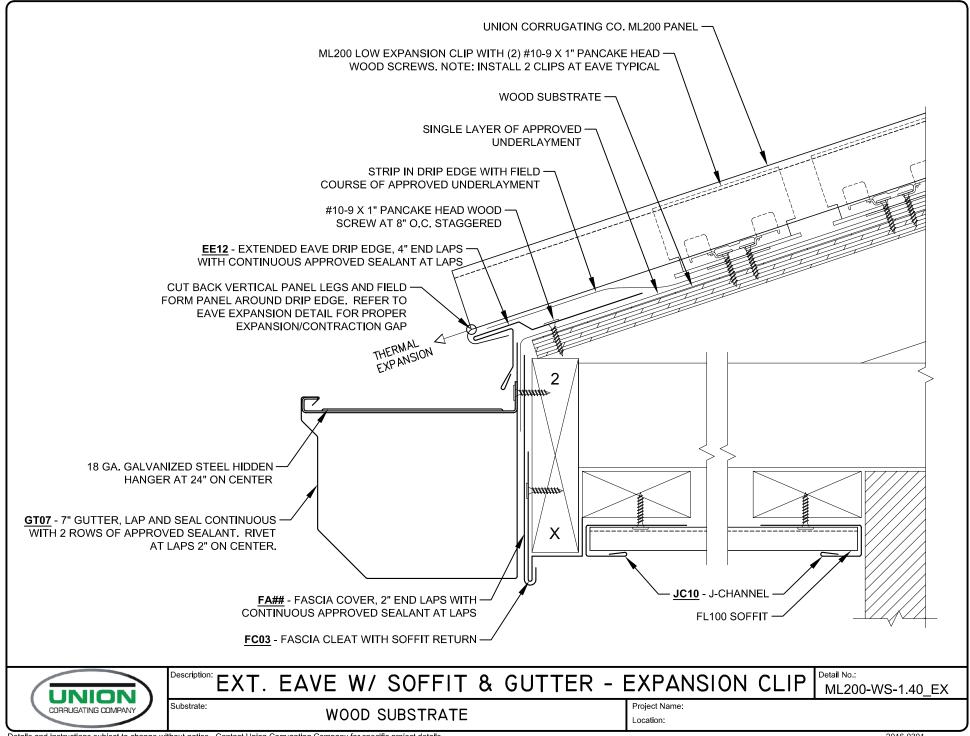
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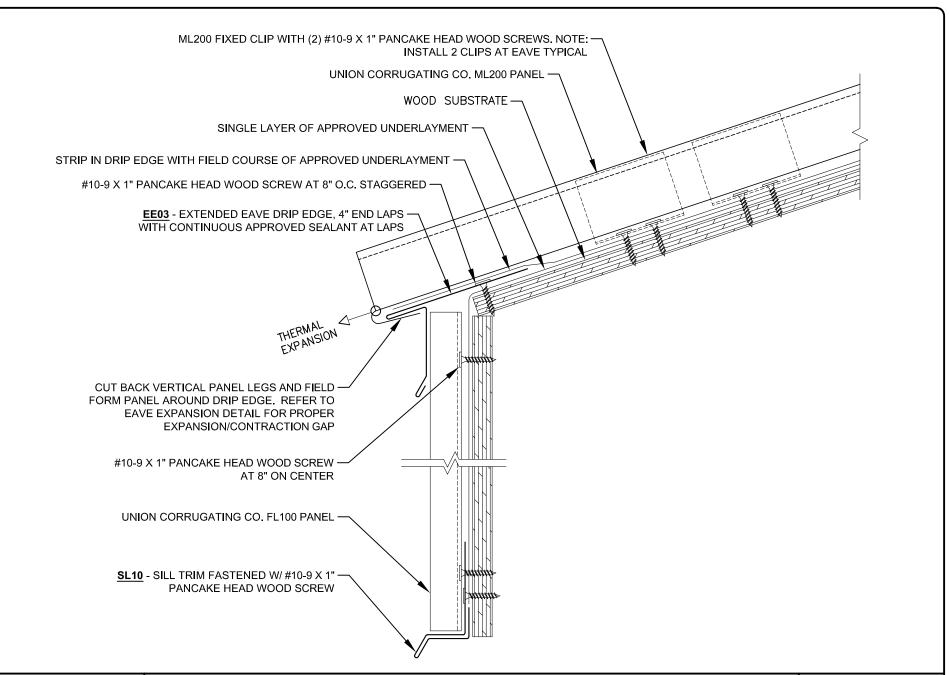
WOOD SUBSTRATE











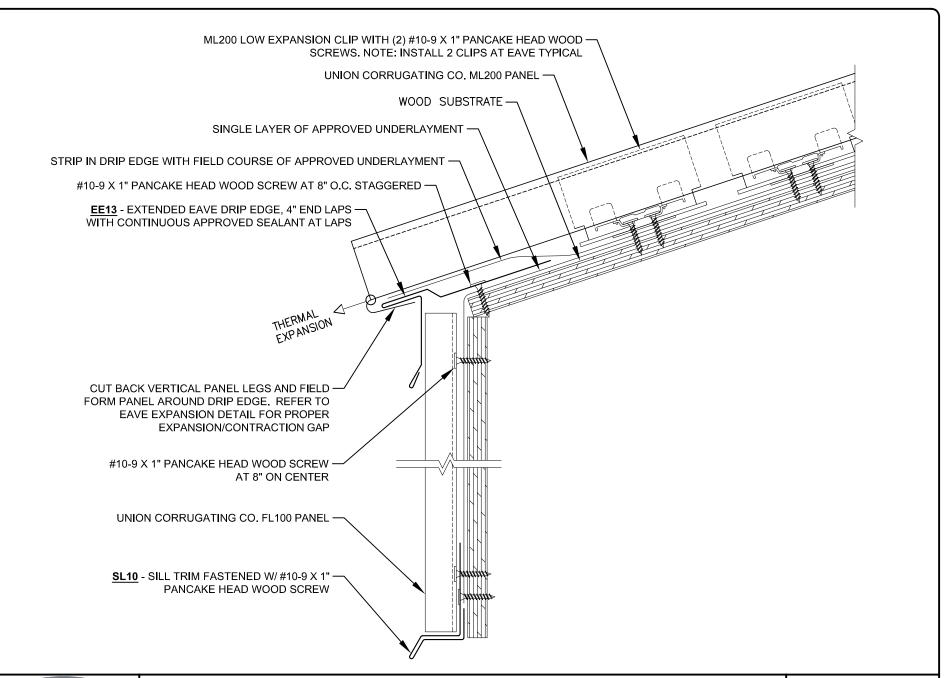
UNION CORRUGATING COMPANY Description: EXT. EAVE W/ FLUSH WALL PANEL - FIXED CLIP

Detail No.:

ML200-WS-1.50 FX

Substrate:

WOOD SUBSTRATE



UNION CORRUGATING COMPANY Description: EXT. EAVE W/ FLUSH WALL PANEL - EXPANSION CLIP

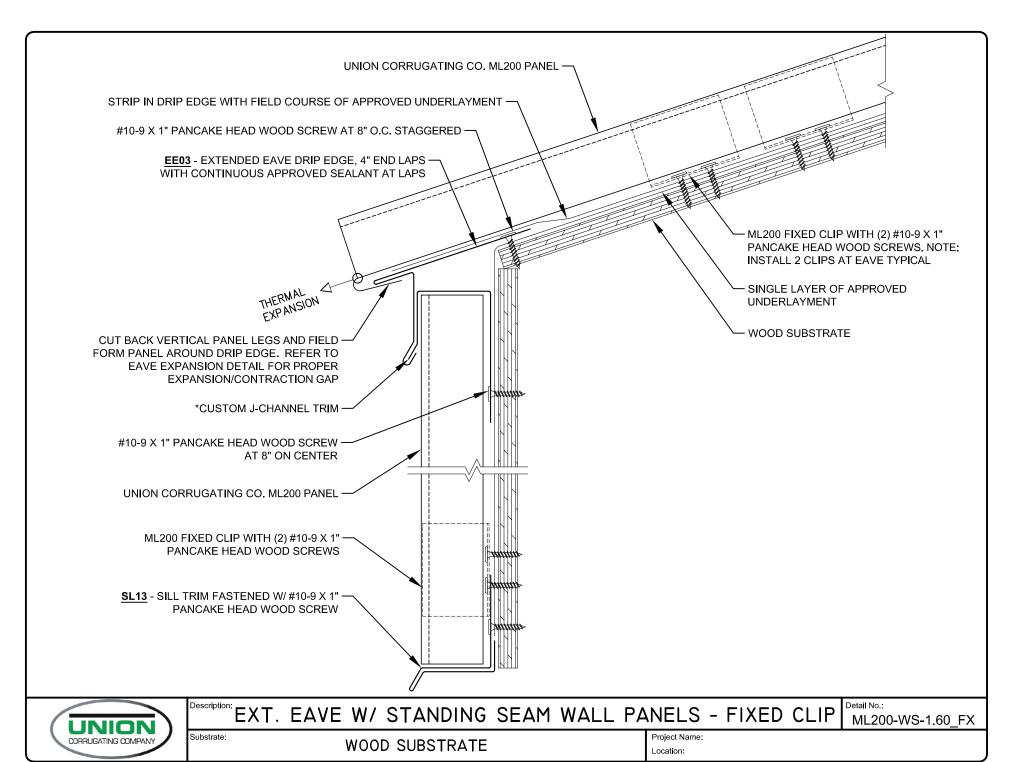
Detail No.: ML200-WS-1.50 EX

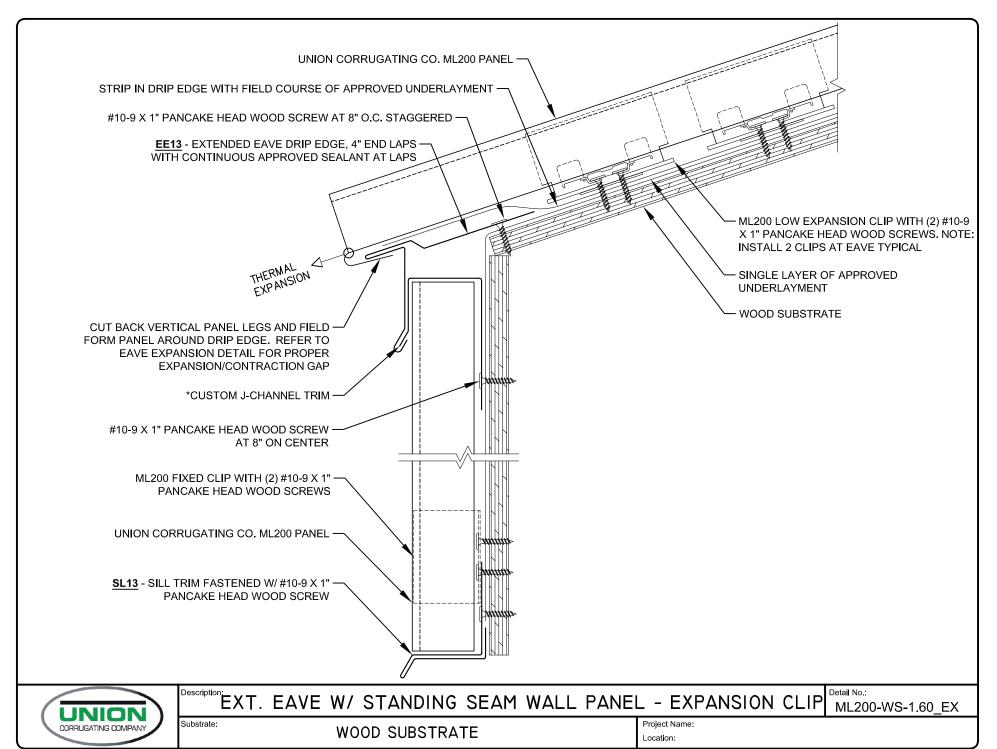
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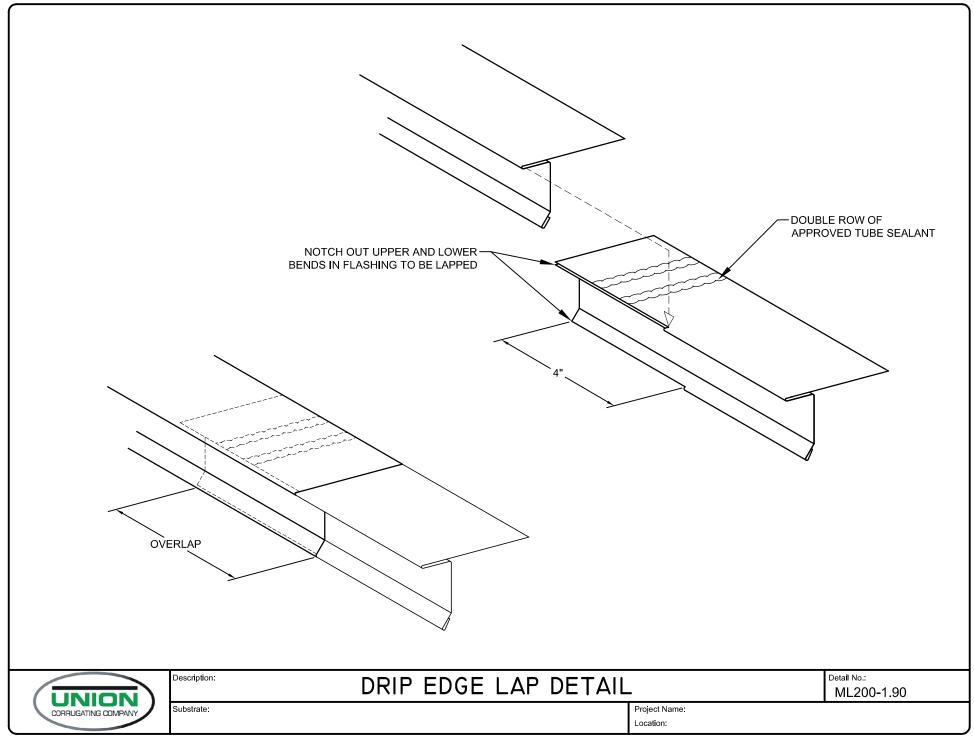
WOOD SUBSTRATE

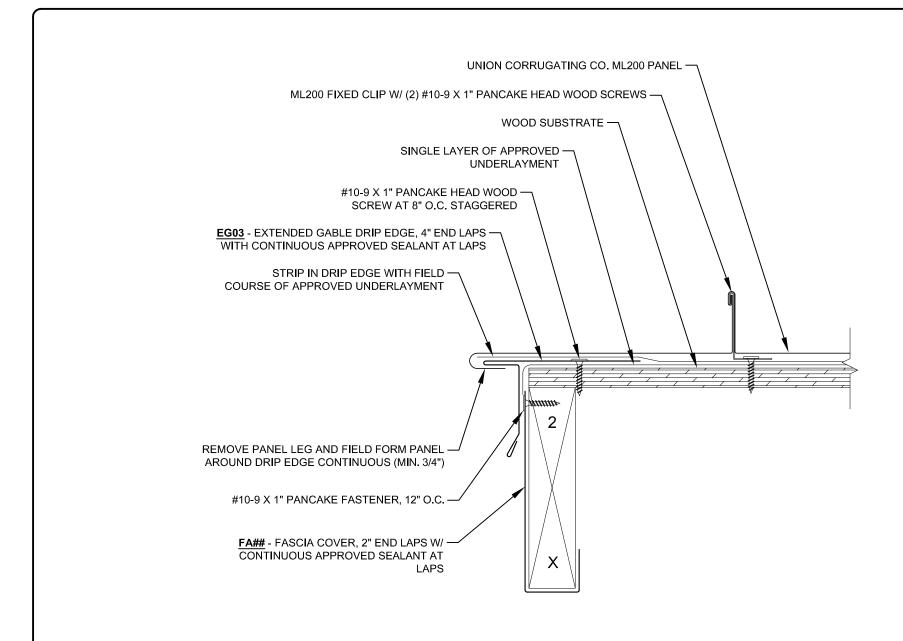
Project Name:

Location:









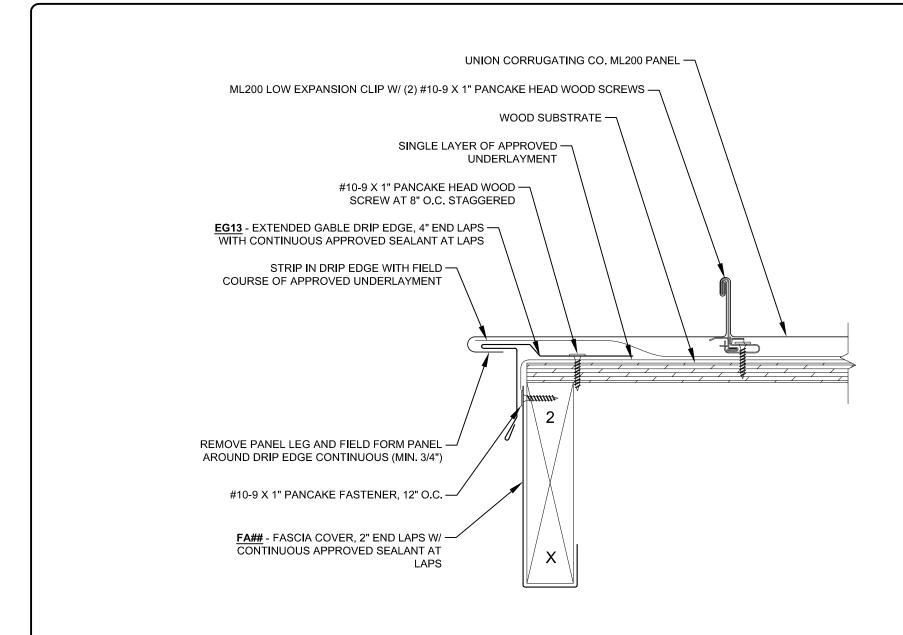


Description: GABLE DETAIL - EXTENDED DRIP - FIXED CLIP

ABLE DETAIL - EXTENDED DRIF - FIXED CLIF | ML200-WS-2.10_FX

WOOD SUBSTRATE

Project Name: Location: Detail No.:





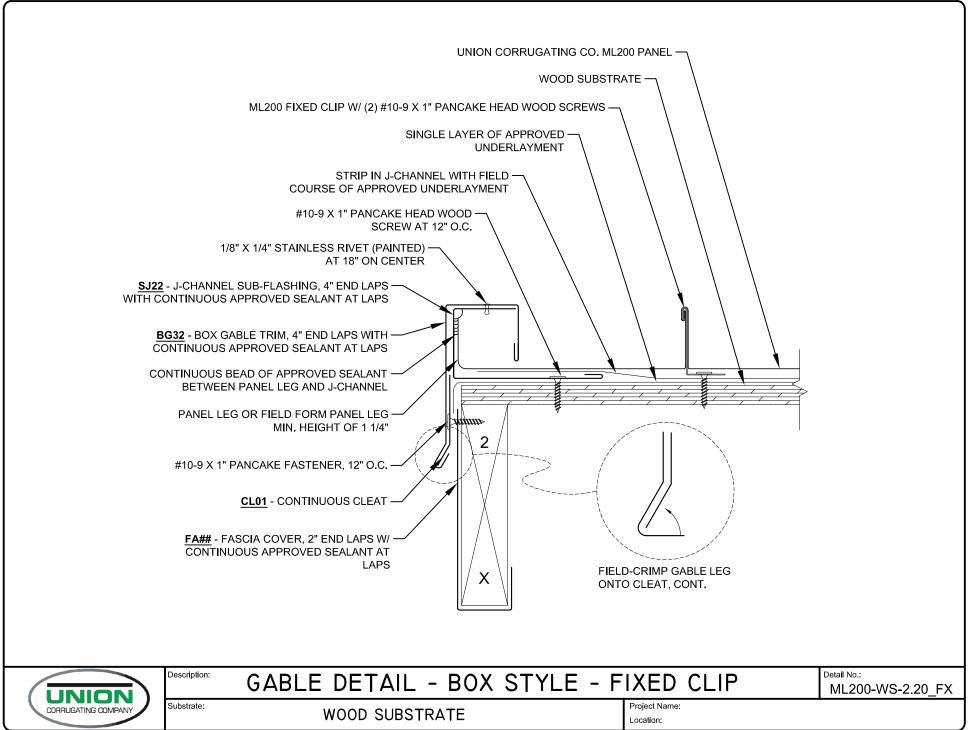
Description: GABLE DETAIL - EXTENDED DRIP - EXPANSION CLIP

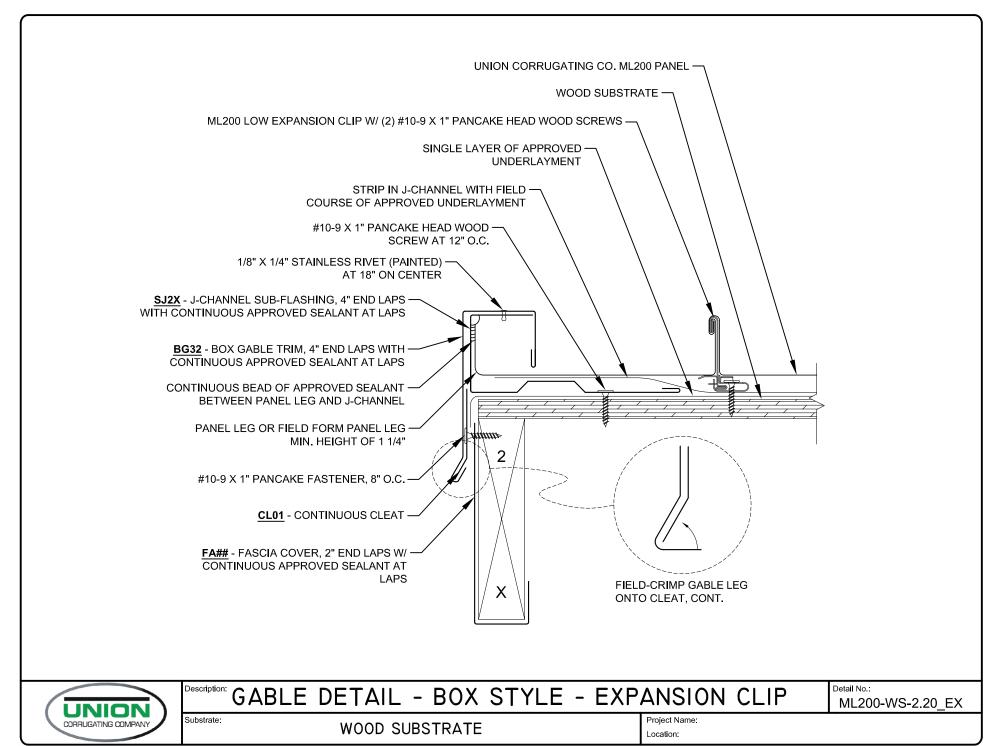
Detail No.:

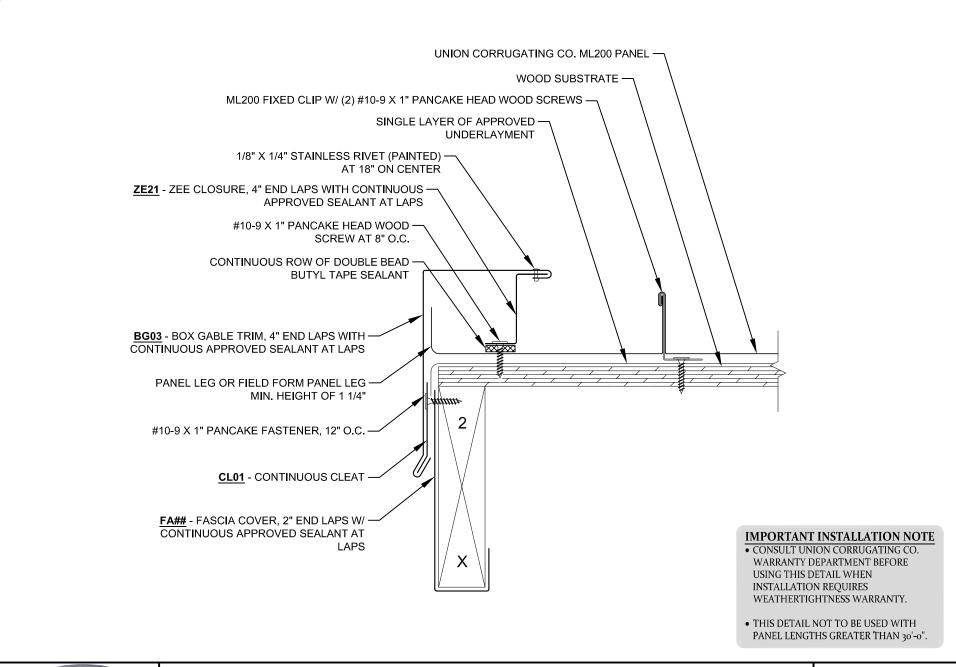
ML200-WS-2.10_EX

Substrate:

WOOD SUBSTRATE









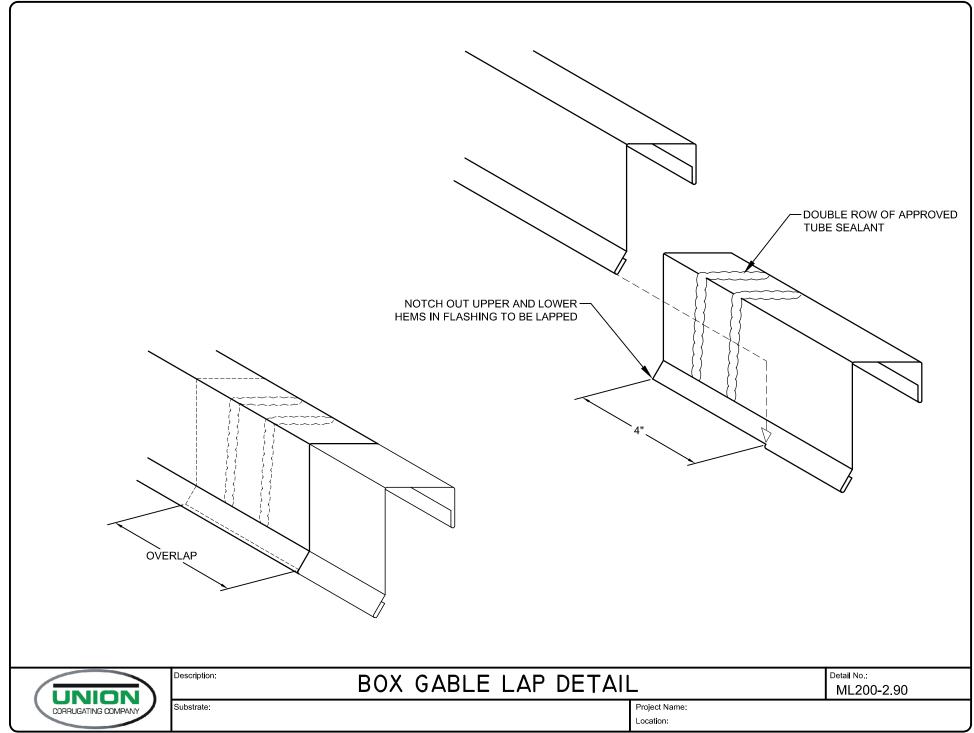
Description: GABLE DETAIL - BOX STYLE W/ ZEE - FIXED CLIP

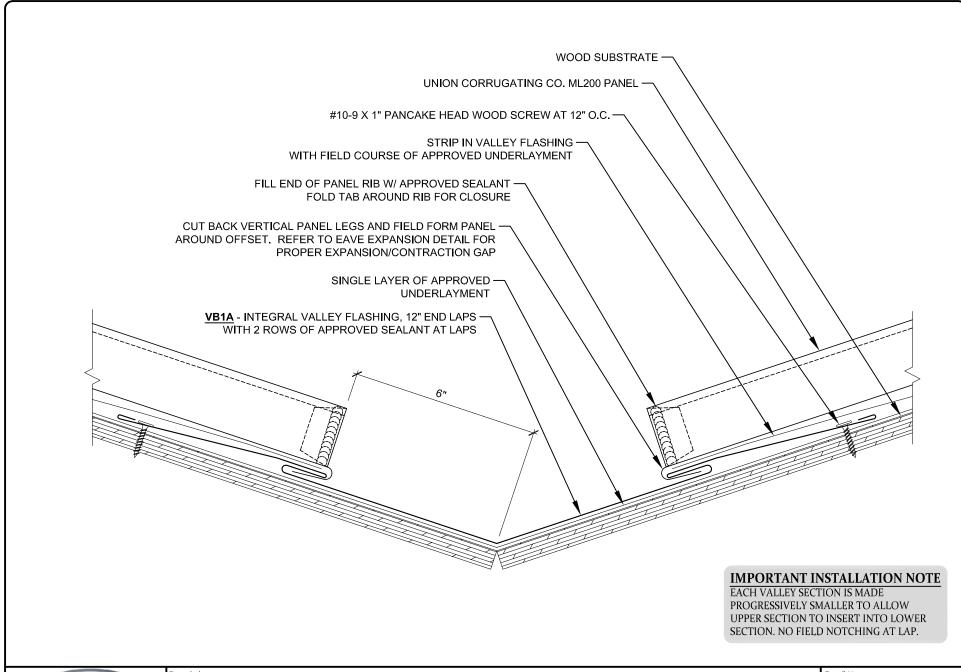
Detail No.:

ML200-WS-2.30 FX

trate:

WOOD SUBSTRATE



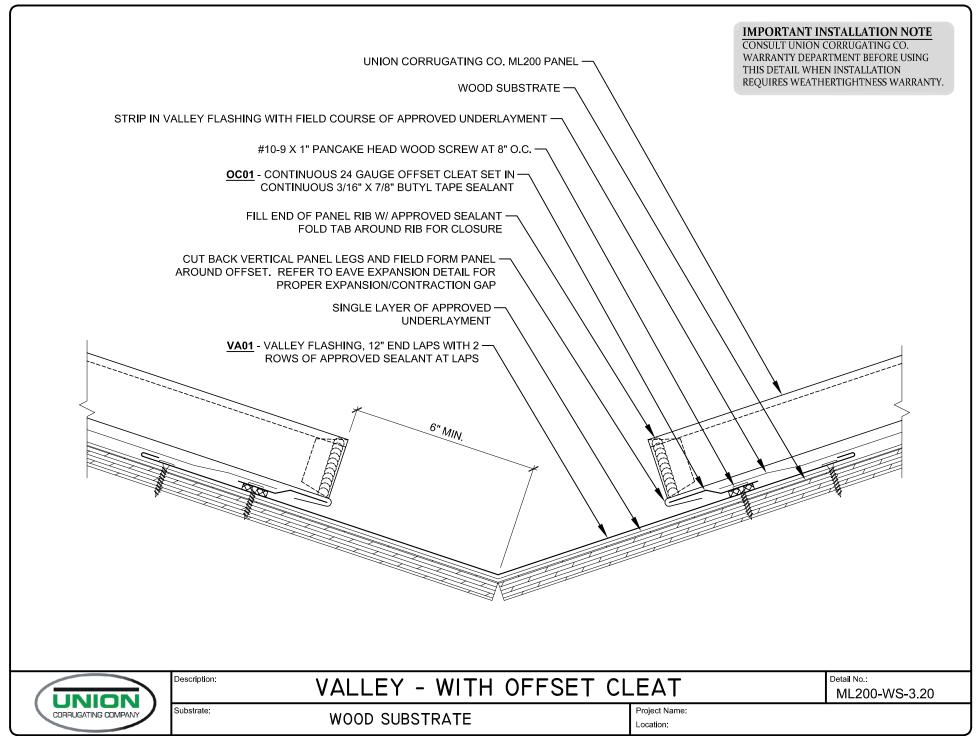


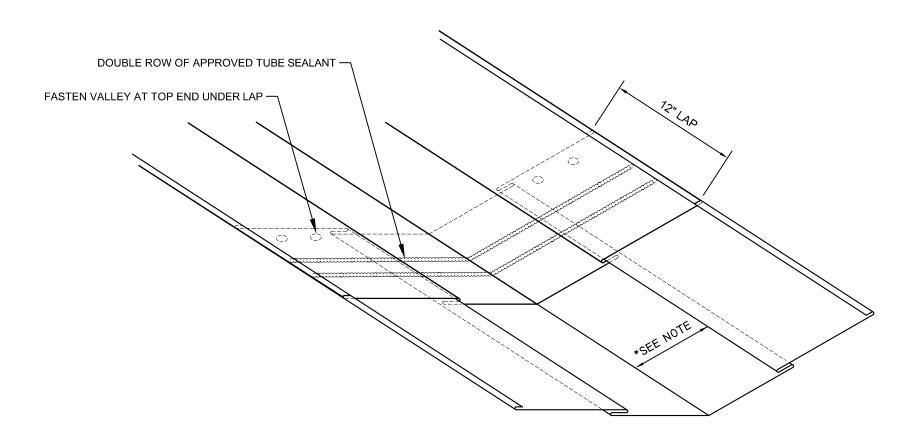


VALLEY DETAIL - INTEGRAL CLEAT

Detail No.: ML200-WS-3.10

Substrate: WOOD SUBSTRATE





TELESCOPING VALLEY FLASHING LAP

IMPORTANT INSTALLATION NOTE

EACH VALLEY SECTION IS MADE PROGRESSIVELY SMALLER TO ALLOW UPPER SECTION TO INSERT INTO LOWER SECTION. NO FIELD NOTCHING AT LAP.

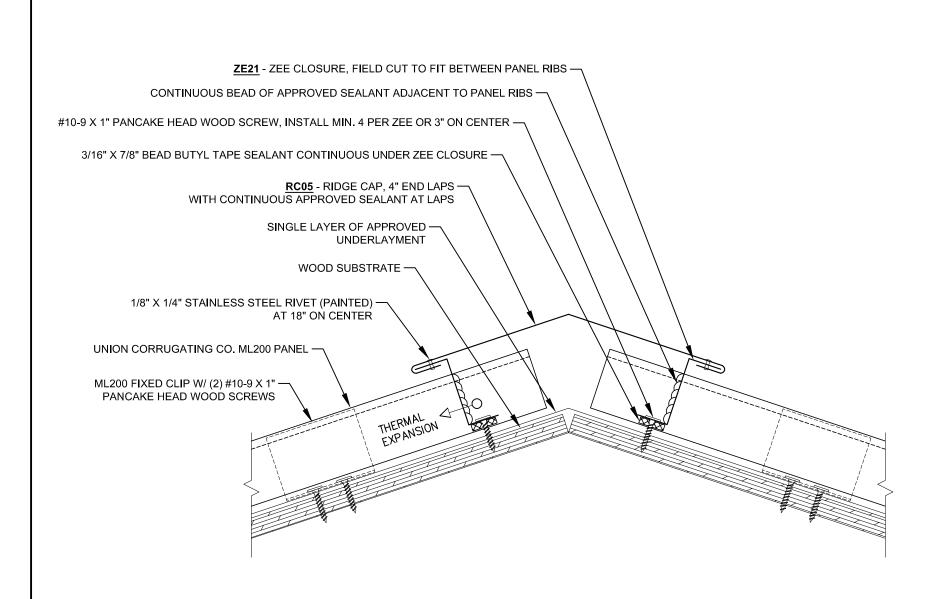
UNION CORRUGATING COMPANY VALLEY LAP DETAIL

Detail No.:

ML200-3.90

Substrate:

Description:

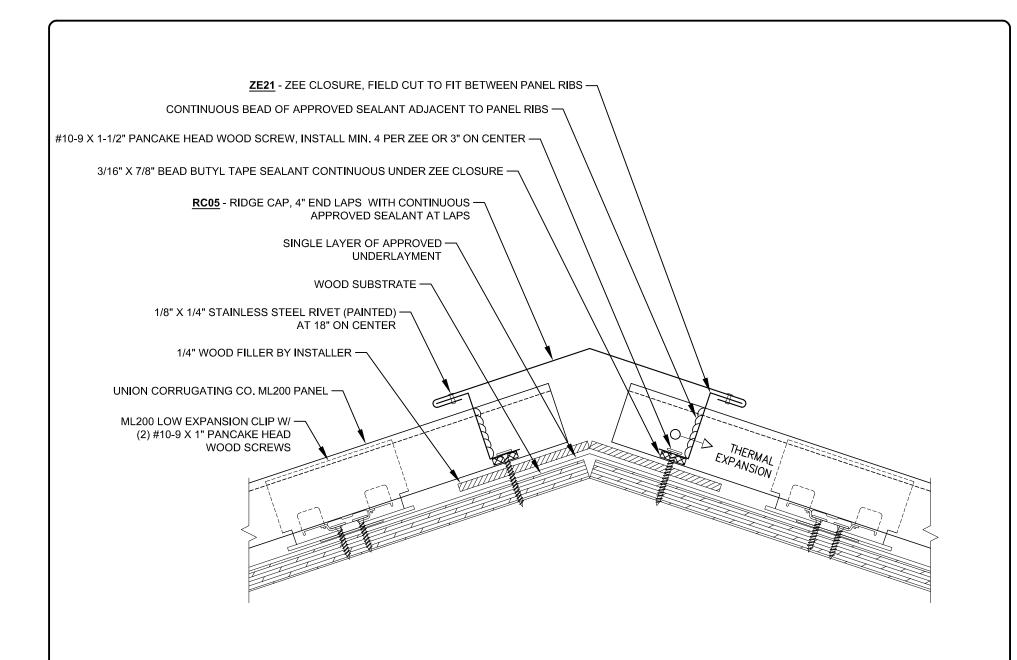




HIP AND RIDGE DETAIL - FIXED CLIP

Detail No.: ML200-WS-4.10 FX

Substrate: WOOD SUBSTRATE

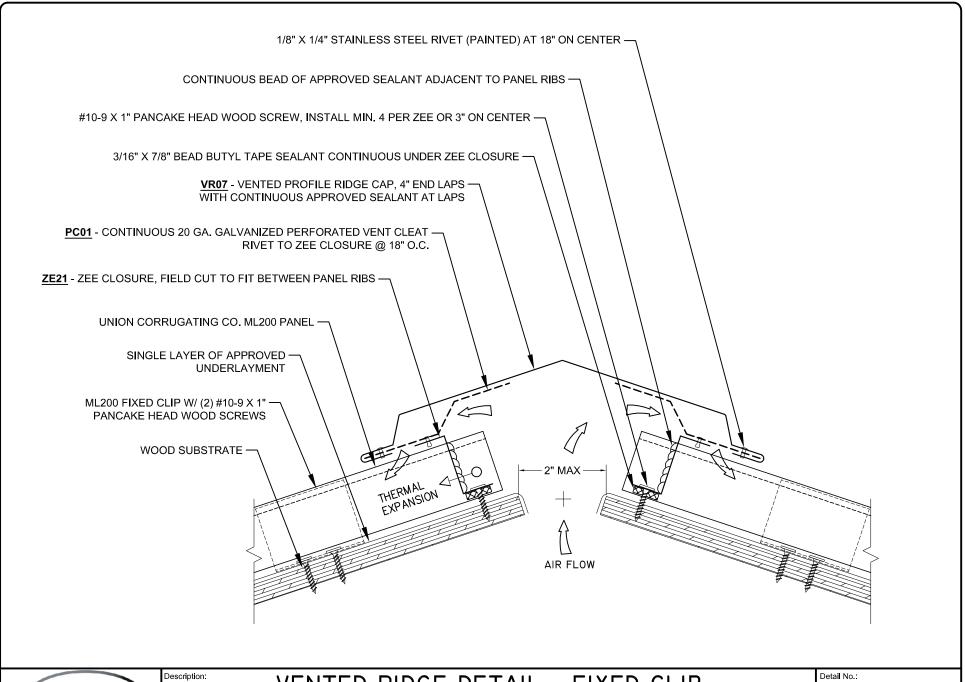




Description: HIP AND RIDGE DETAIL - EXPANSION CLIP

Substrate: WOOD SUBSTRATE Project Name: Location:

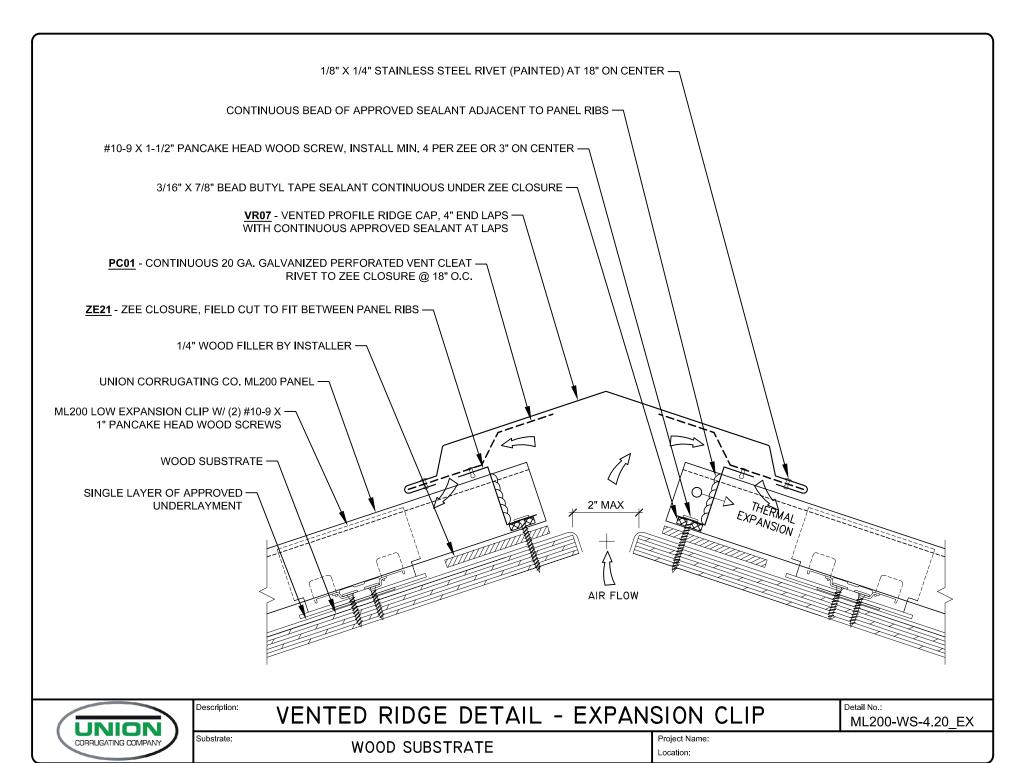
ML200-WS-4.10 EX

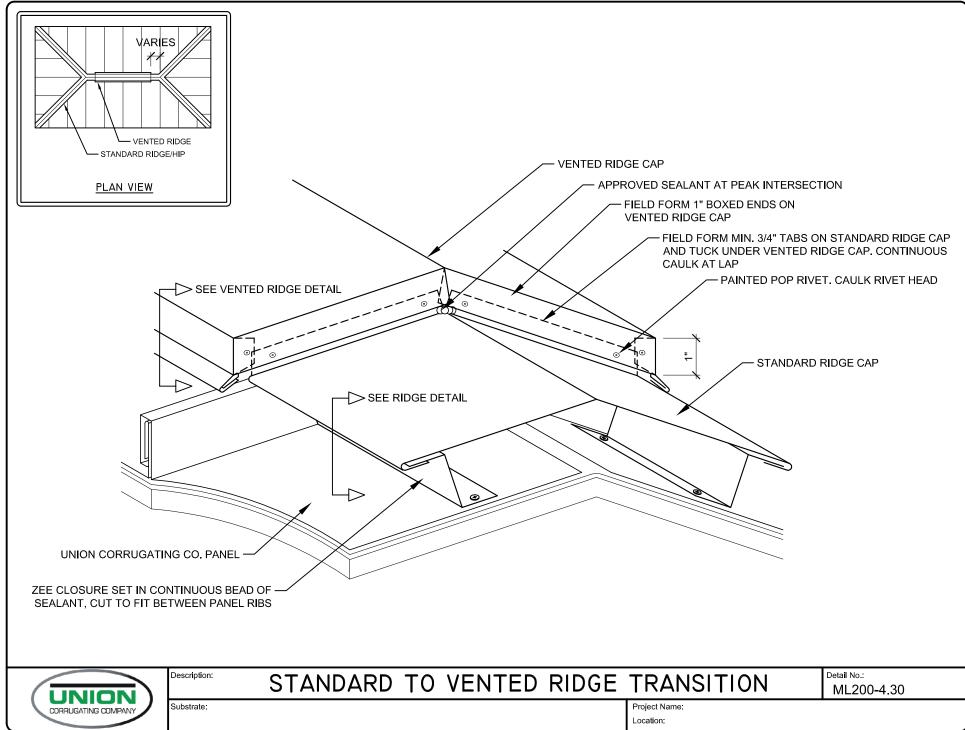


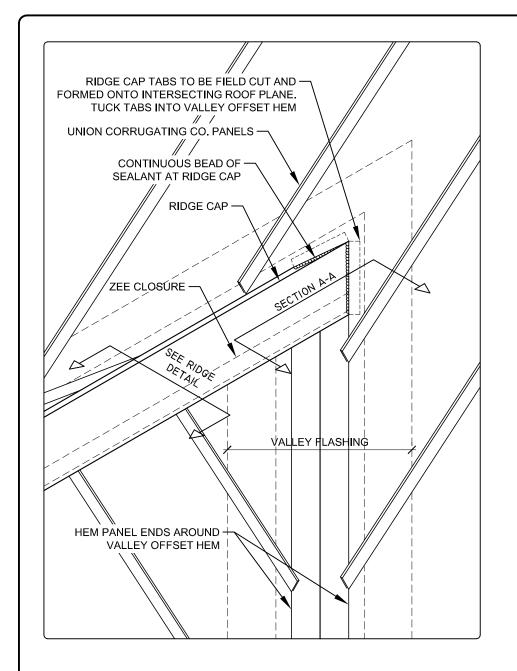
UNION CORRUGATING COMPANY VENTED RIDGE DETAIL - FIXED CLIP

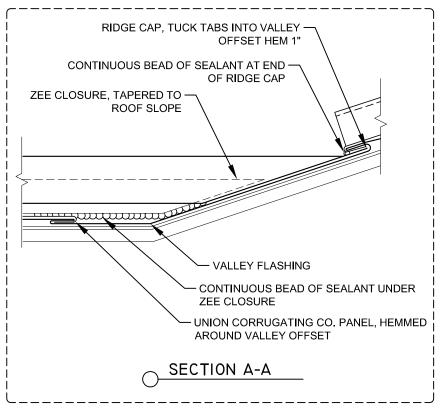
ML200-WS-4.20 FX

Substrate: WOOD SUBSTRATE











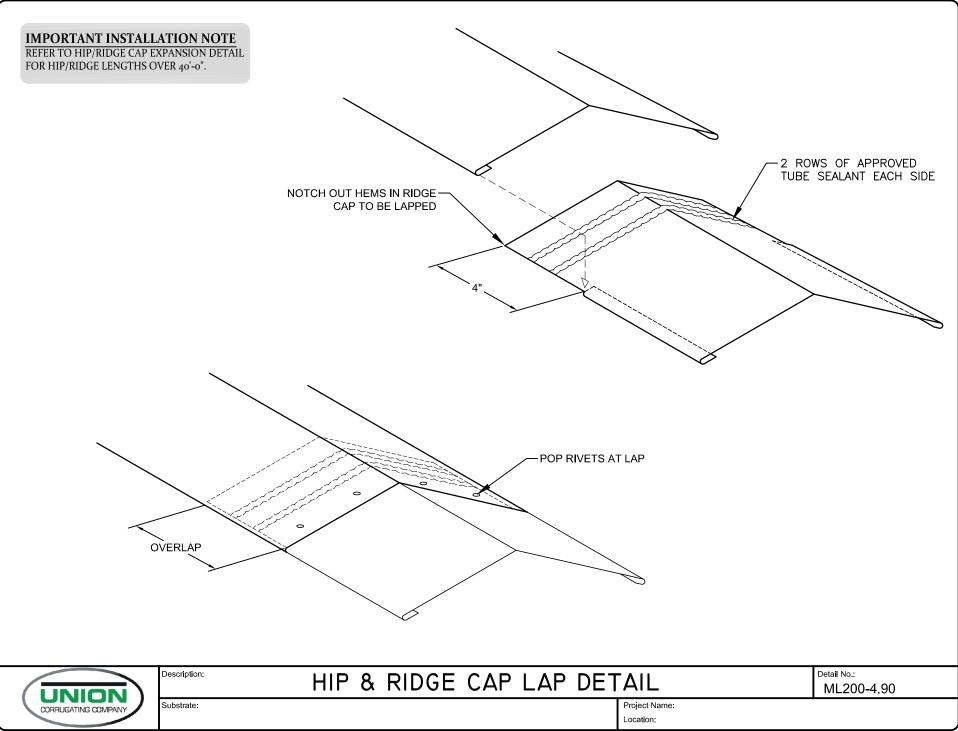
Description:

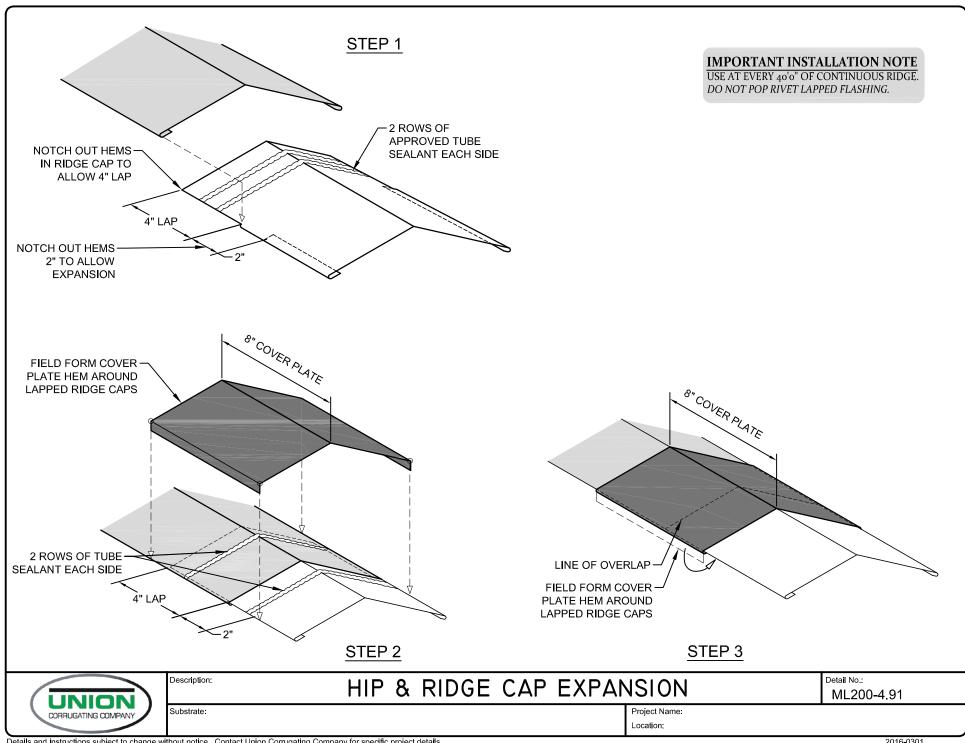
RIDGE TERMINATION @ VALLEY

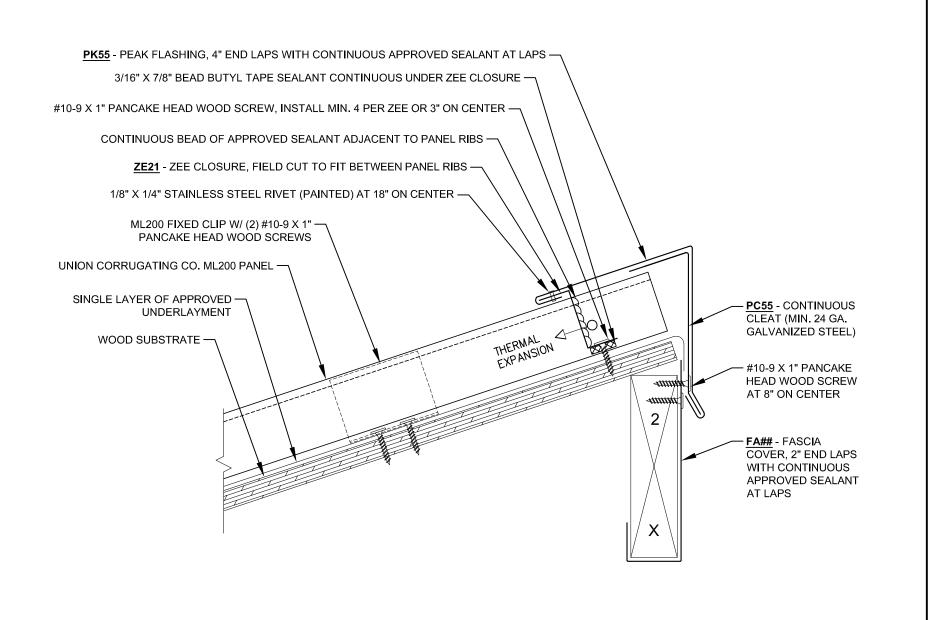
Detail No.:

ML200-4.40

Substrate:









PEAK DETAIL - FIXED CLIP

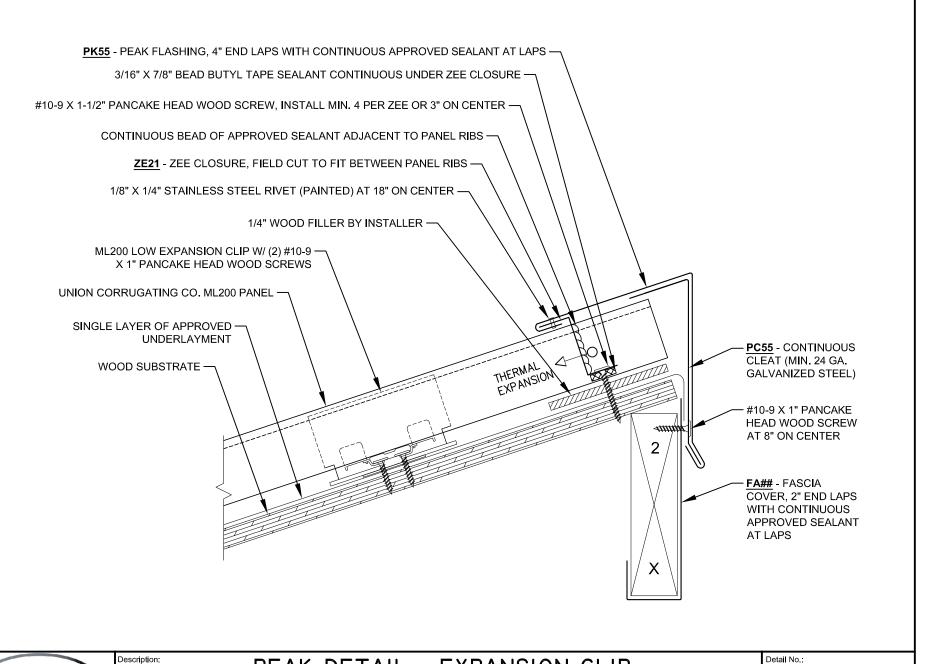
Detail No.:

Substrate: WOOD SUBSTRATE

Project Name: Location:

Description:

ML200-WS-5.10 FX



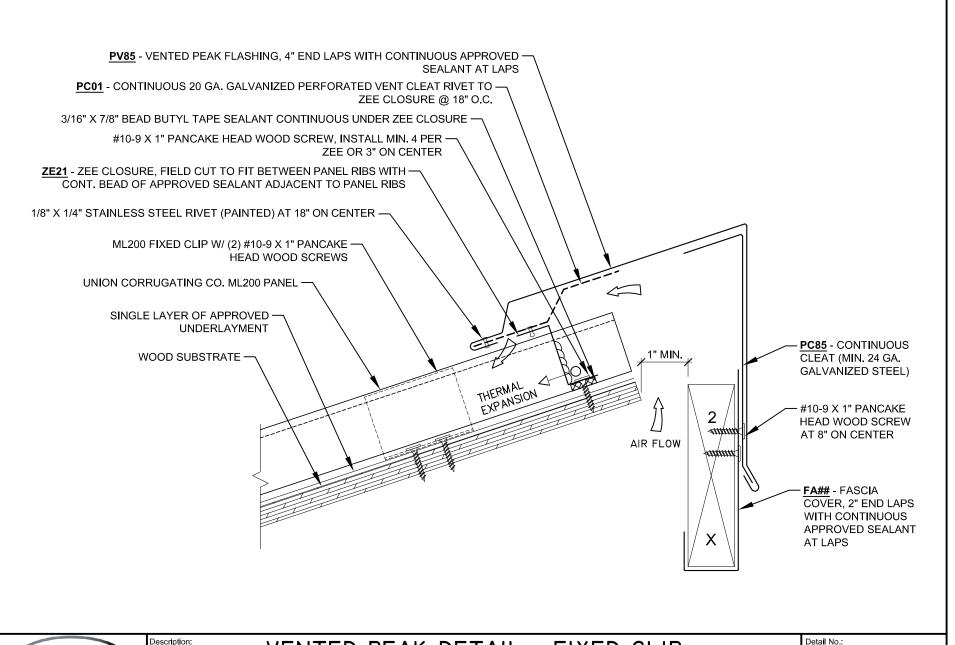


PEAK DETAIL - EXPANSION CLIP

Detail No.: ML200-WS-5.10 EX

Substrate:

WOOD SUBSTRATE

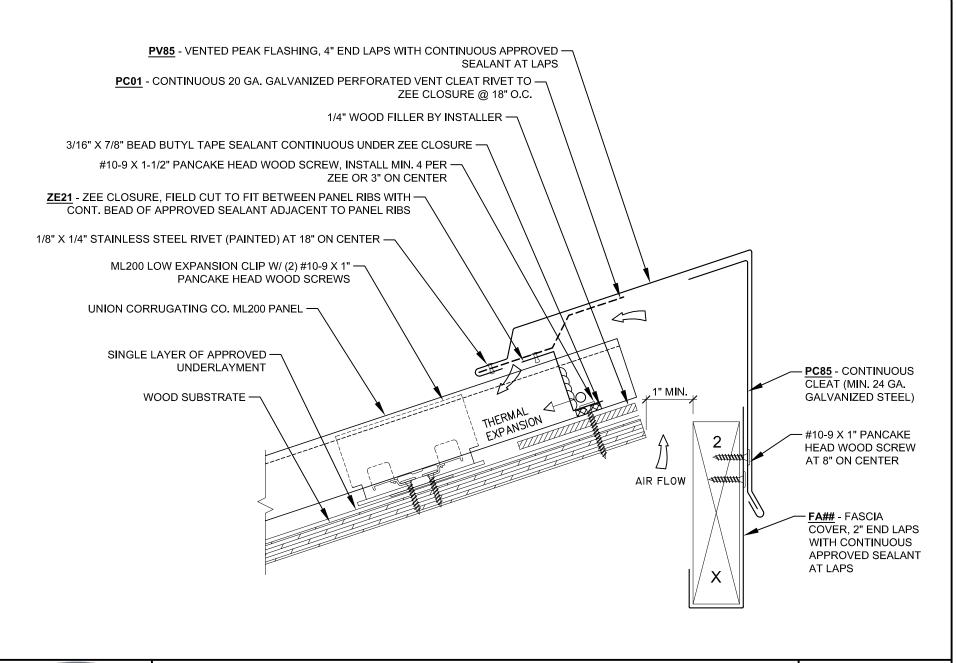




VENTED PEAK DETAIL - FIXED CLIP

Detail No.: ML200-WS-5.20 FX

Substrate: WOOD SUBSTRATE



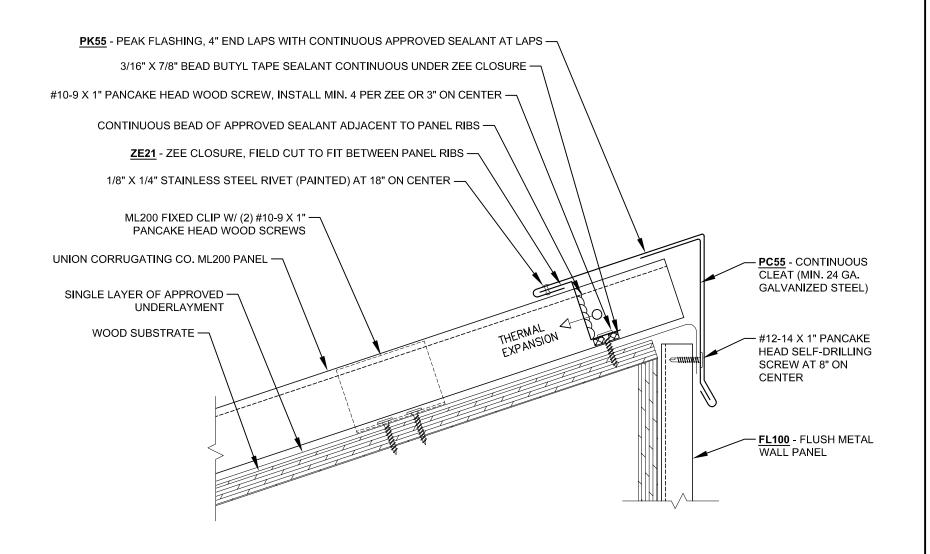


VENTED PEAK DETAIL - EXPANSION CLIP

Detail No.:

ML200-WS-5.20_EX

Substrate: WOOD SUBSTRATE





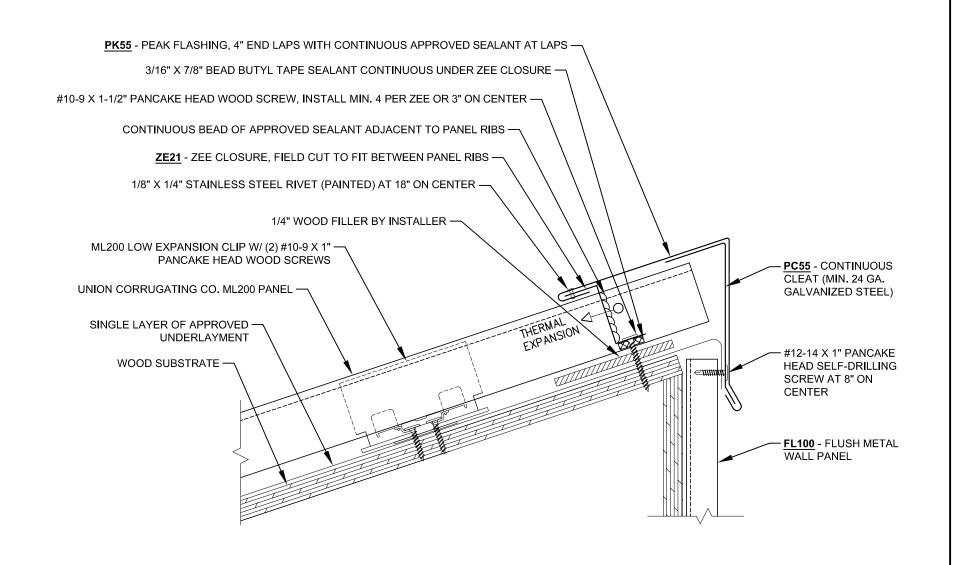
Description: PEAK DETAIL - W/ WALL PANELS - FIXED CLIP

Detail No.: ML200-WS-5.40 FX

WOOD SUBSTRATE

Project Name: Location:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.



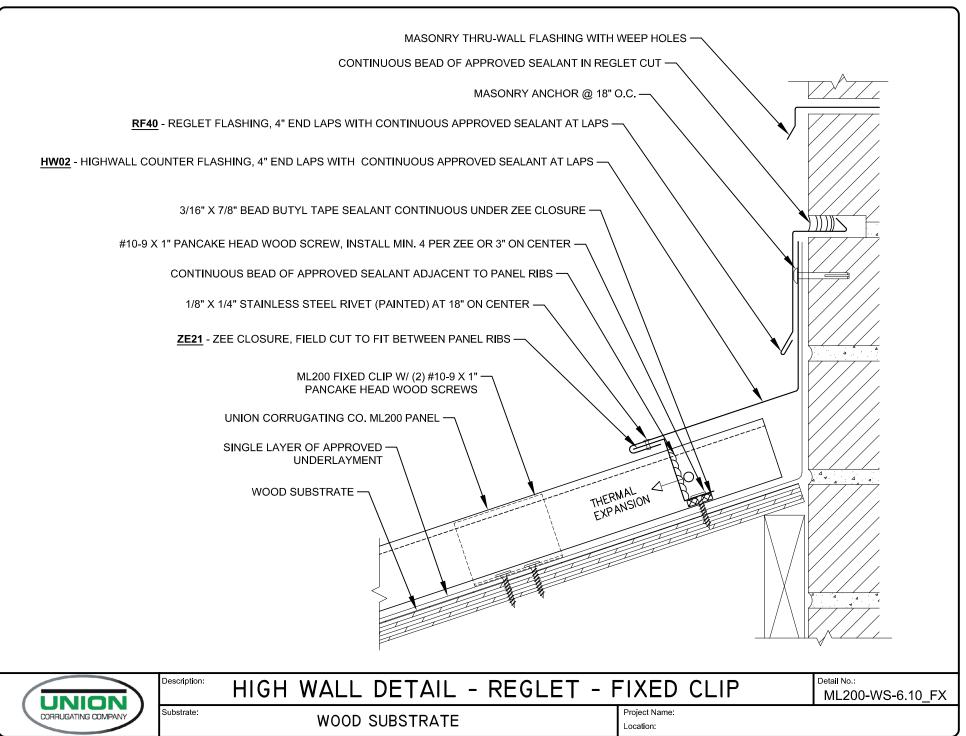


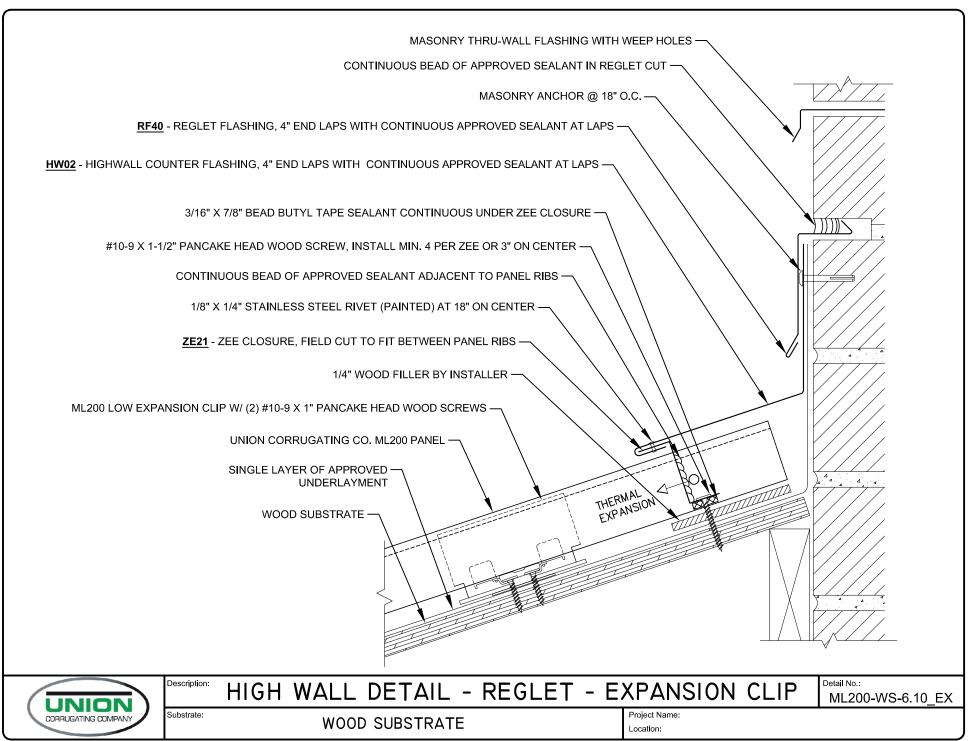
Description PEAK DETAIL - W/ WALL PANELS - EXPANSION CLIP

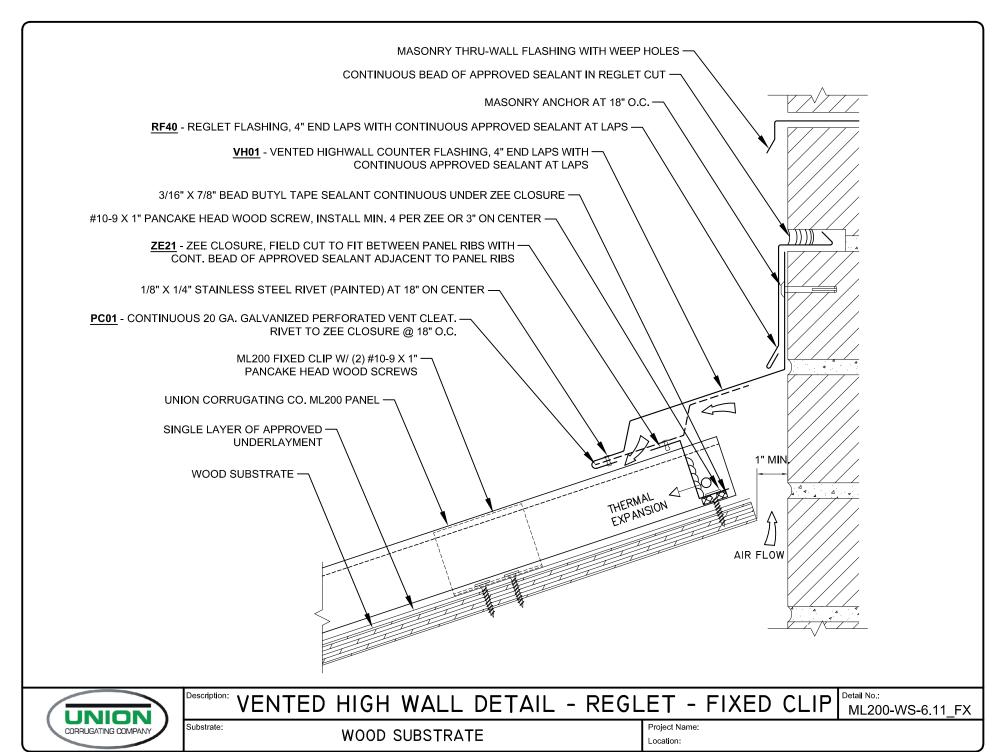
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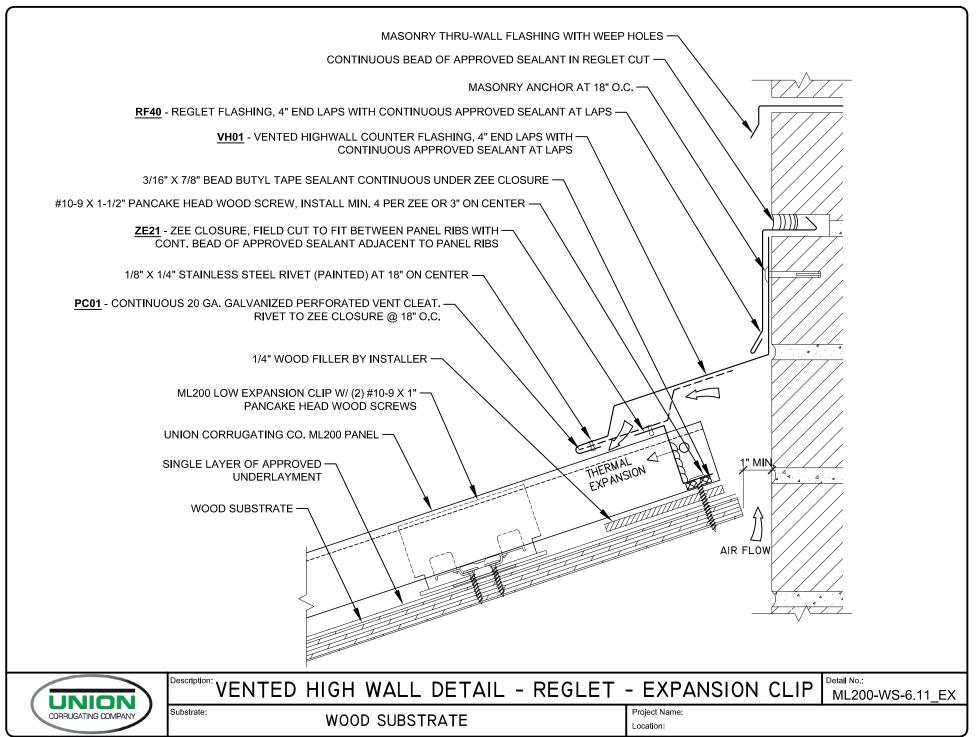
ML200-WS-5.40_EX

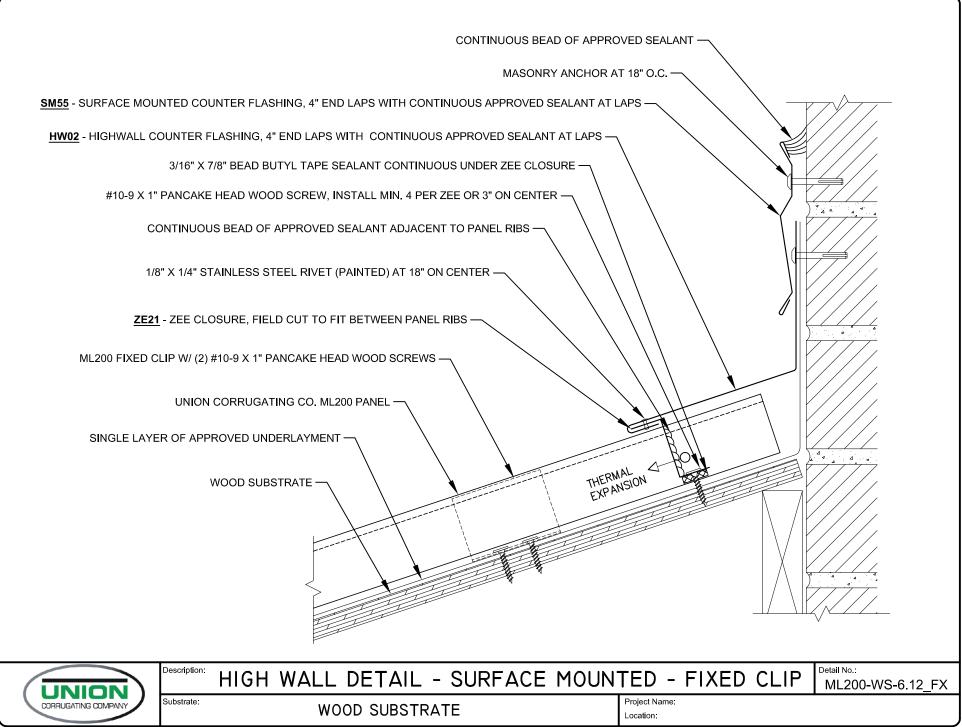
wood substrate

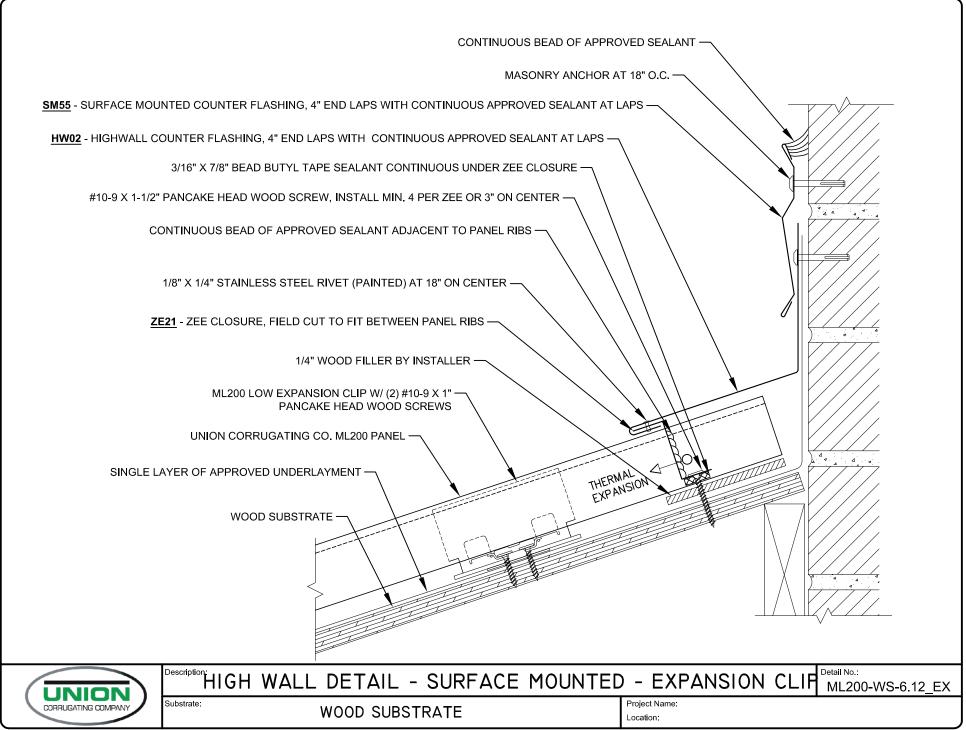


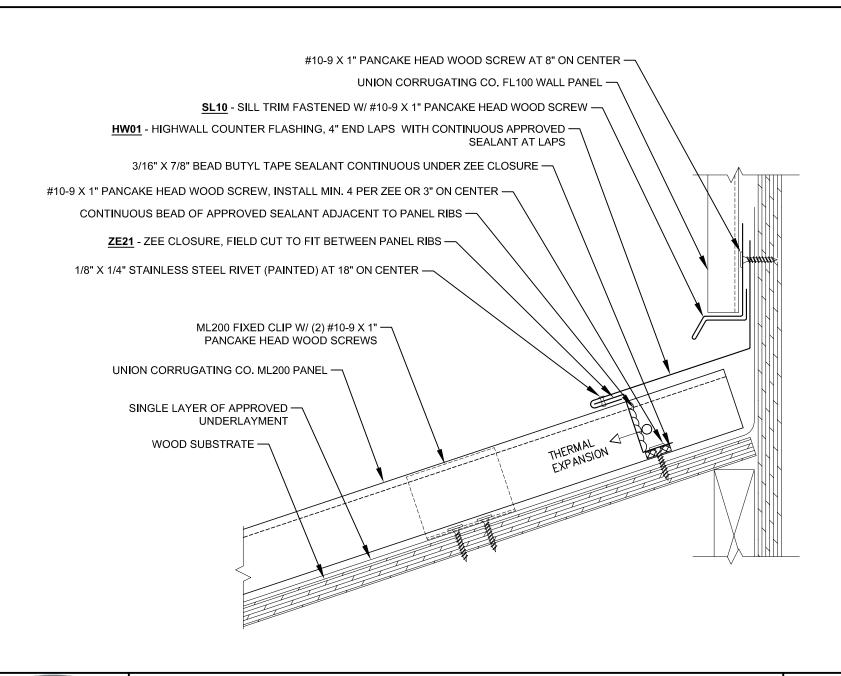












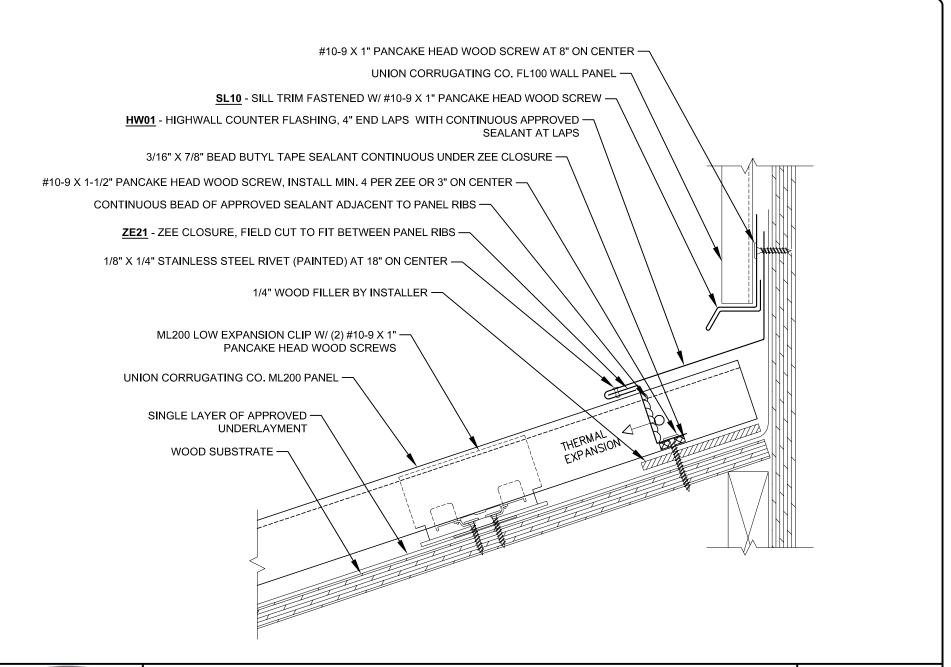


Description: HIGH WALL DETAIL - WALL PANEL W/ SILL - FIXED CLIP

Detail No.:
ML200-WS-6.14 FX

Substrate

WOOD SUBSTRATE



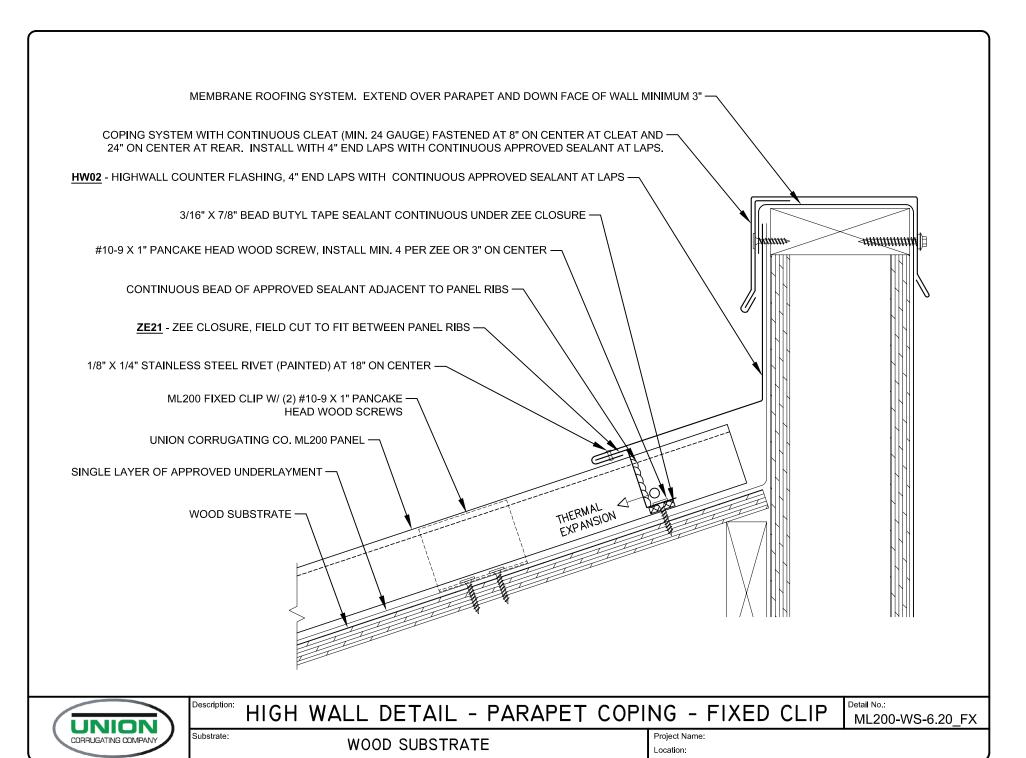


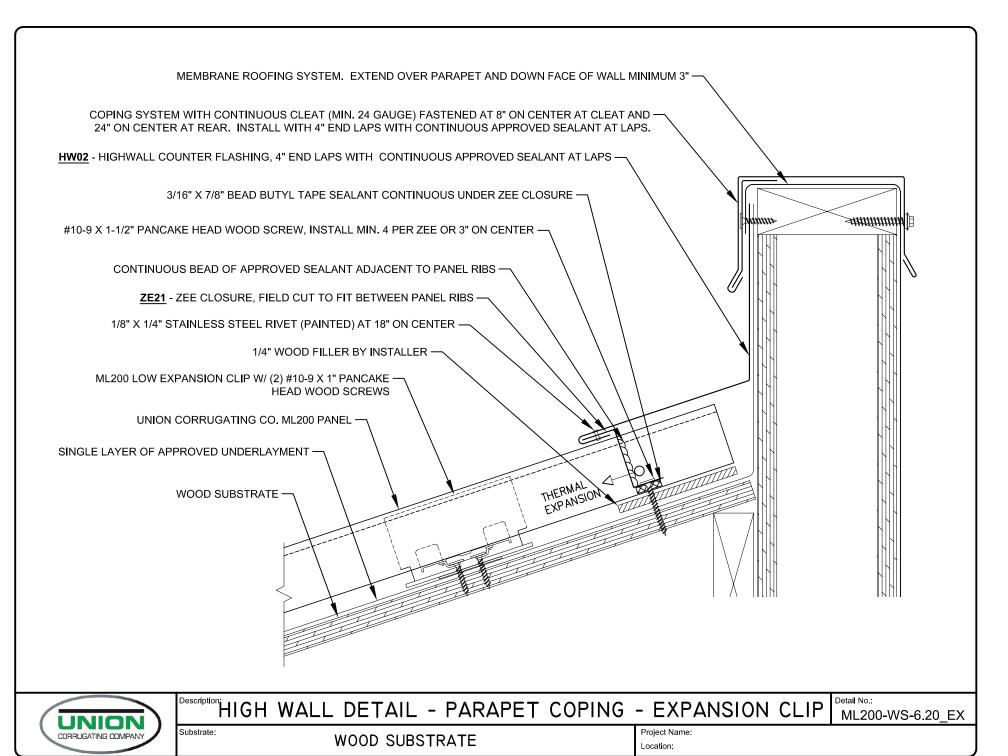
Description: HIGH WALL DETAIL - WALL PANEL W/ SILL - EXPANSION CLIP

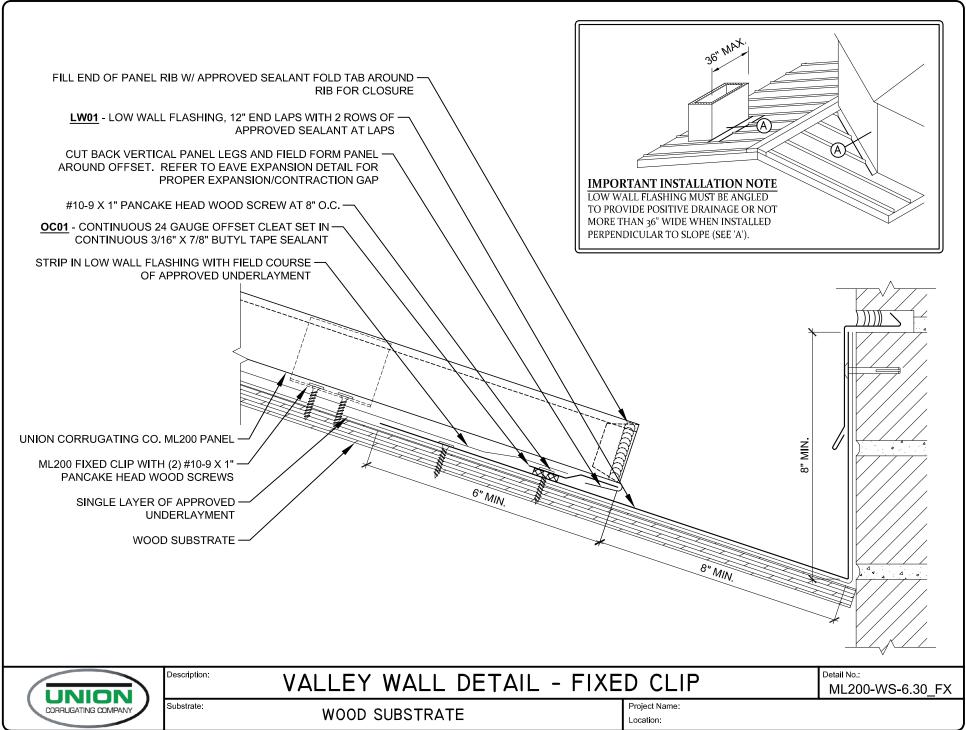
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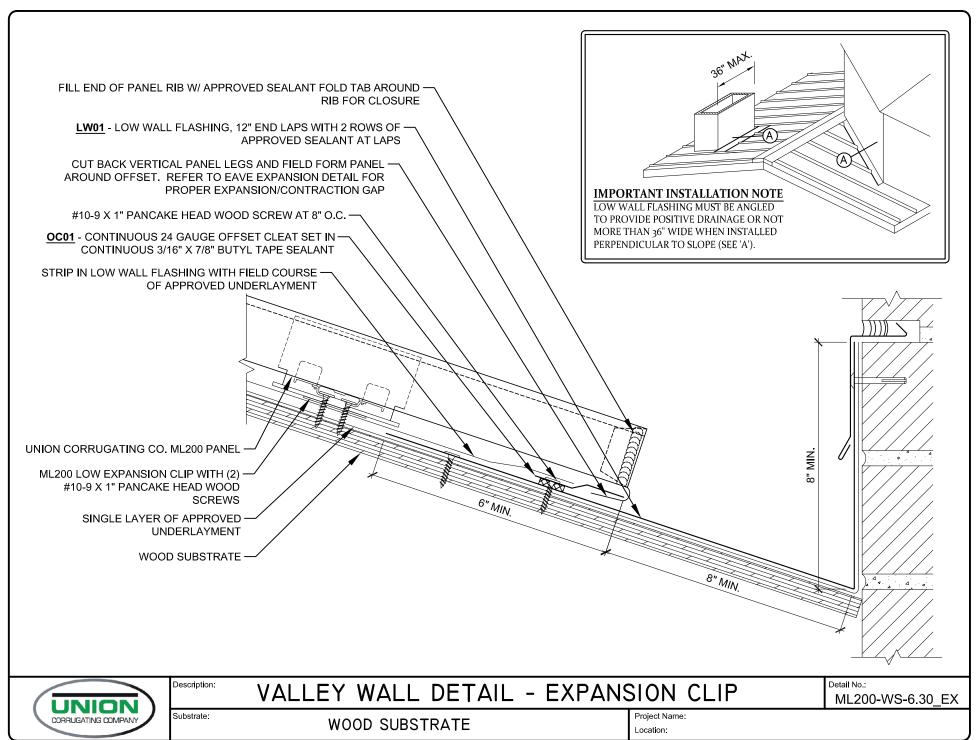
Substrate

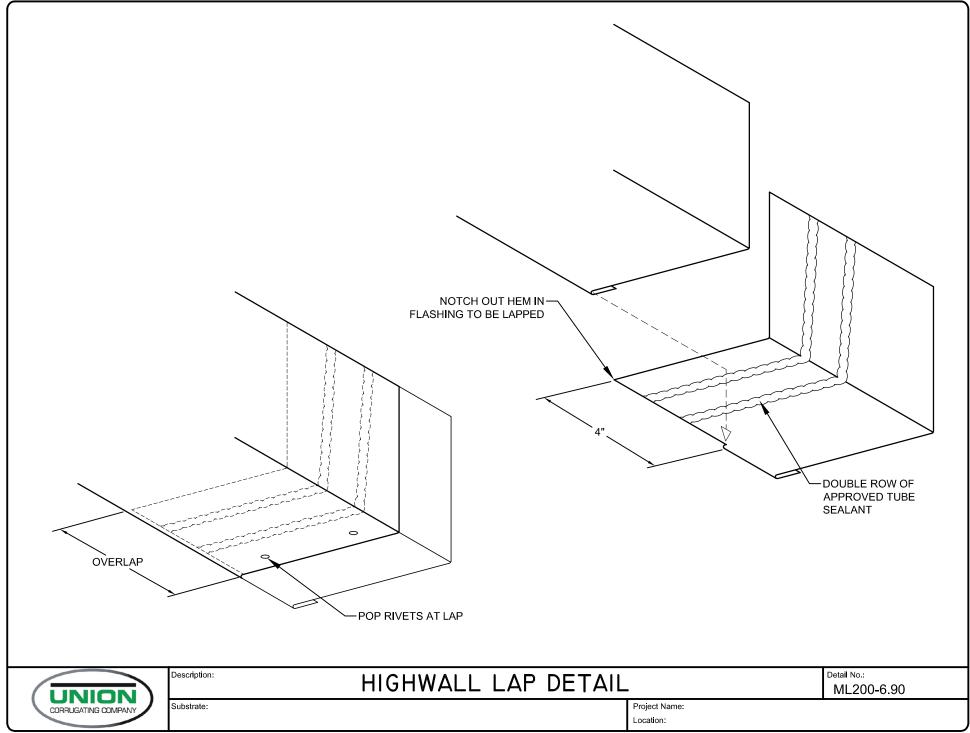
WOOD SUBSTRATE

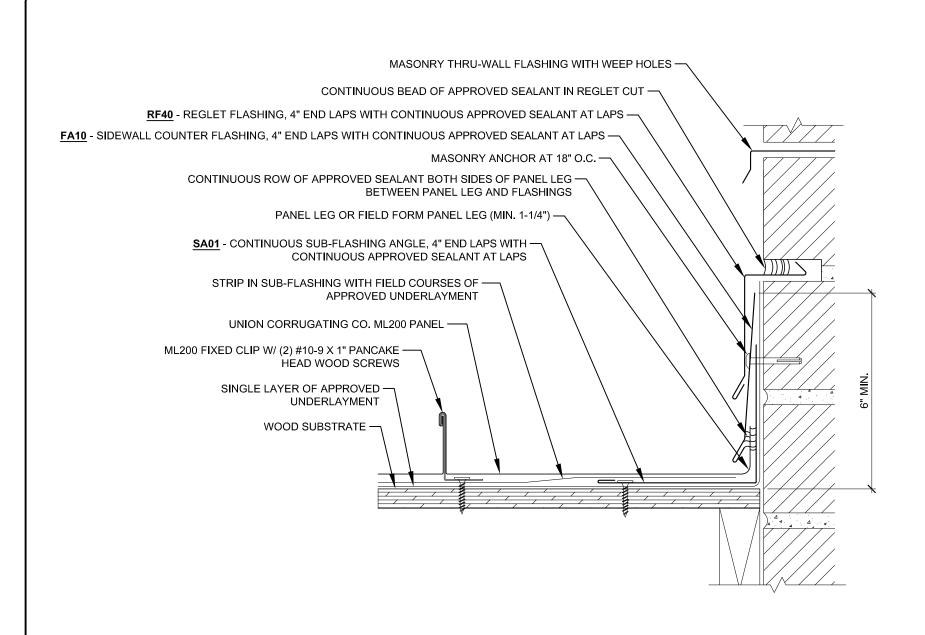














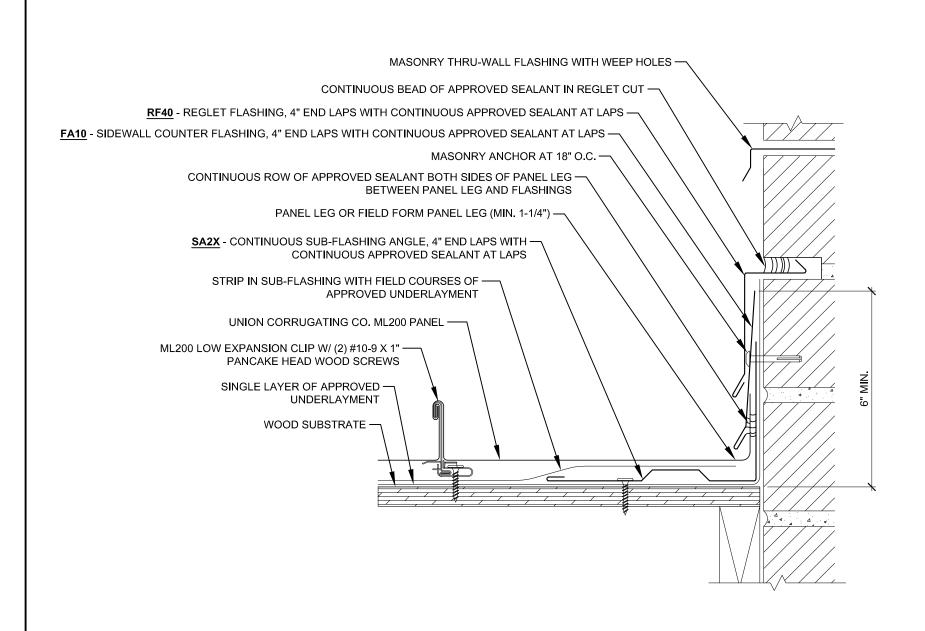
SIDEWALL DETAIL - REGLET - FIXED CLIP

Detail No.: ML200-WS-7.11 FX

Substrate: WOOD SUBSTRATE

Project Name: Location:

Description:



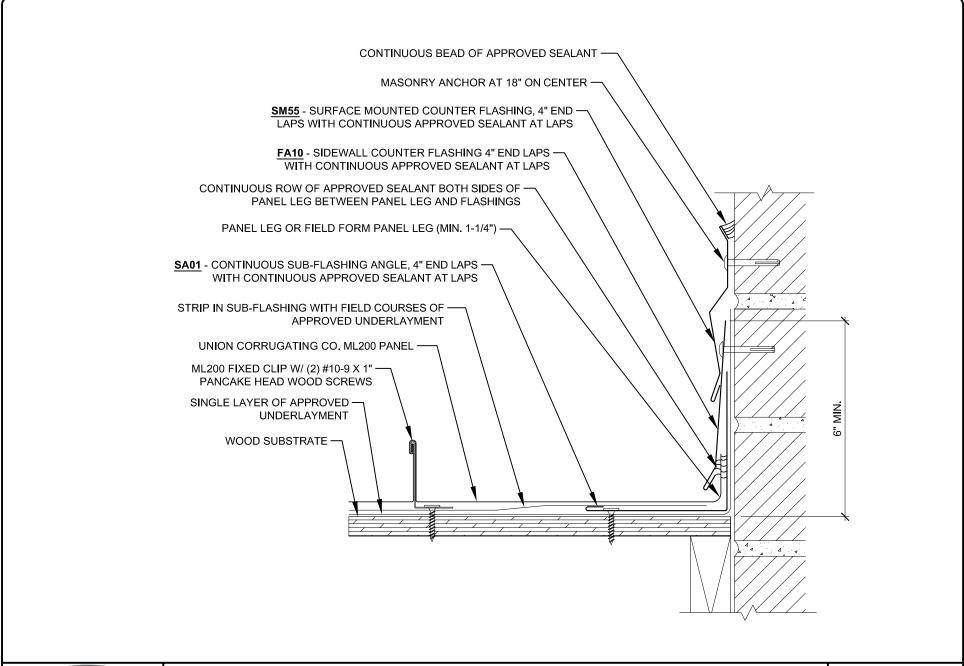


Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

Detail No.:

ML200-WS-7.11_EX

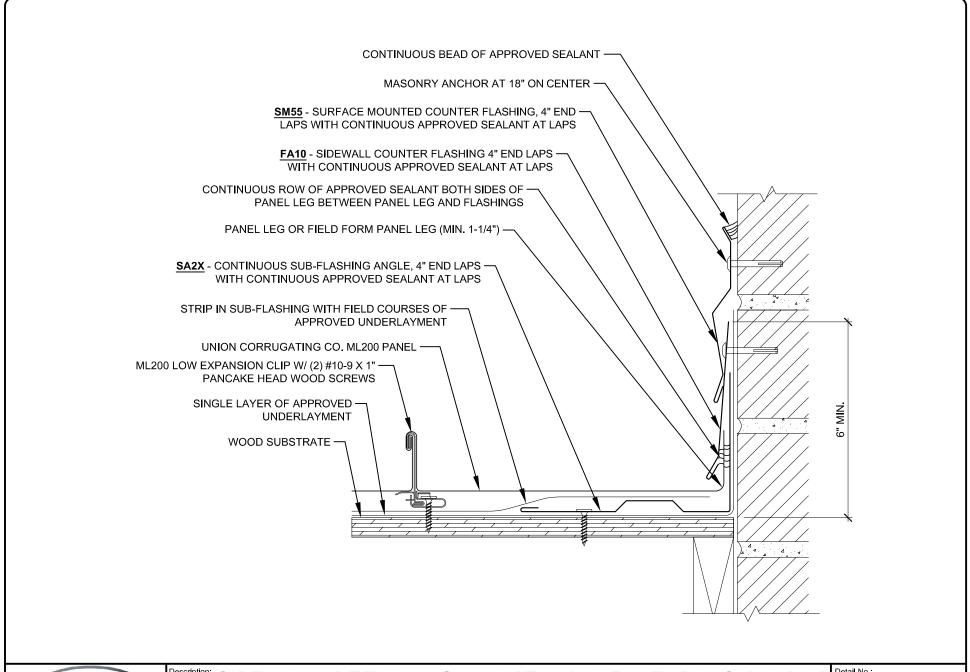
wood substrate



UNION CORRUGATING COMPANY Description: SIDEWALL DETAIL - SURFACE MOUNT - FIXED CLIP

ML200-WS-7.12 FX

Substrate: WOOD SUBSTRATE



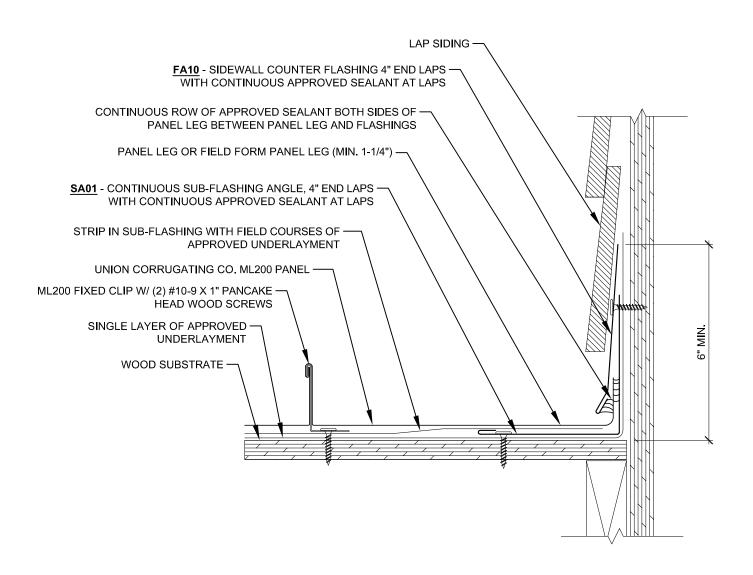


SIDEWALL DETAIL - SURFACE MOUNT - EXPANSION CLIP $^{ ext{Detail No.:}}_{ ext{ML}200-WS-7.12}$ EX

Substrate: WOOD SUBSTRATE

Project Name:

Location:





Description: SIDEWALL DETAIL - W/ SIDING - FIXED CLIP

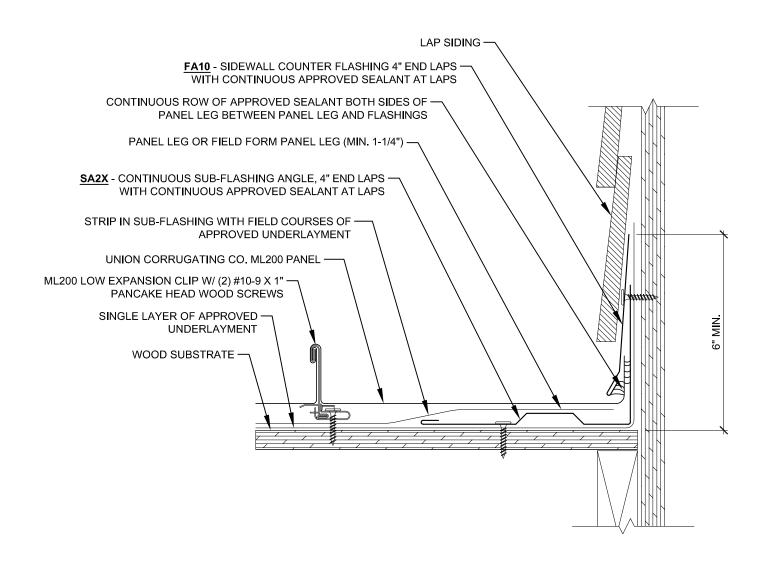
Detail No.:

ML200-WS-7.13_FX

Substrate: WOOD SUBSTRATE

Location:

Project Name:



UNION CORRUGATING COMPANY Description: SIDEWALL DETAIL - W/ SIDING - EXPANSION CLIP

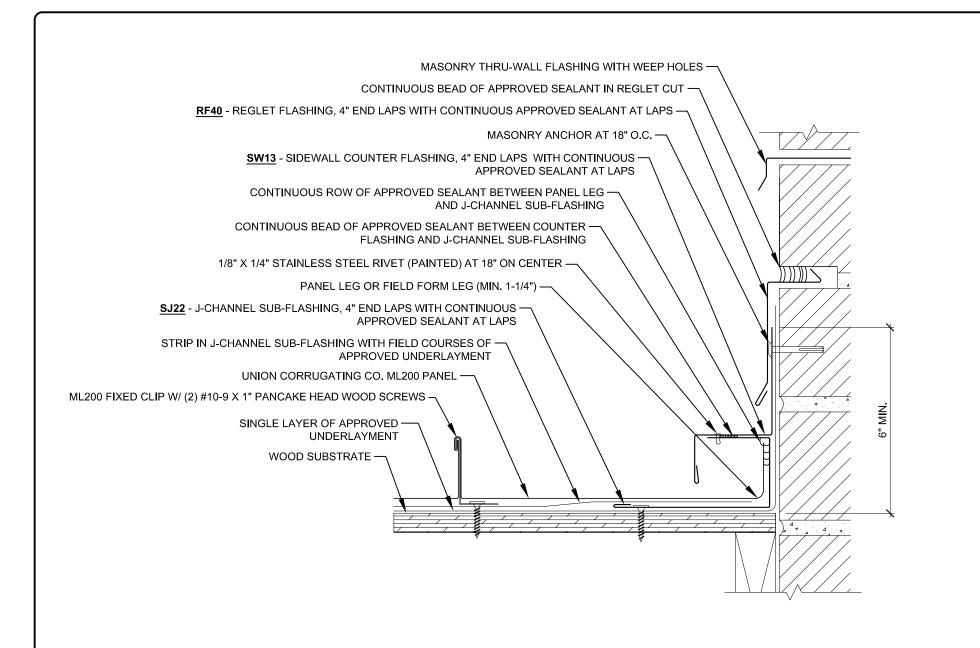
Detail No.:

ON CLIF | ML200-WS-7.13_EX

Substrate: WOOD SUBSTRATE

Project Name: Location:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.





Description: SIDEWALL DETAIL - REGLET - FIXED CLIP

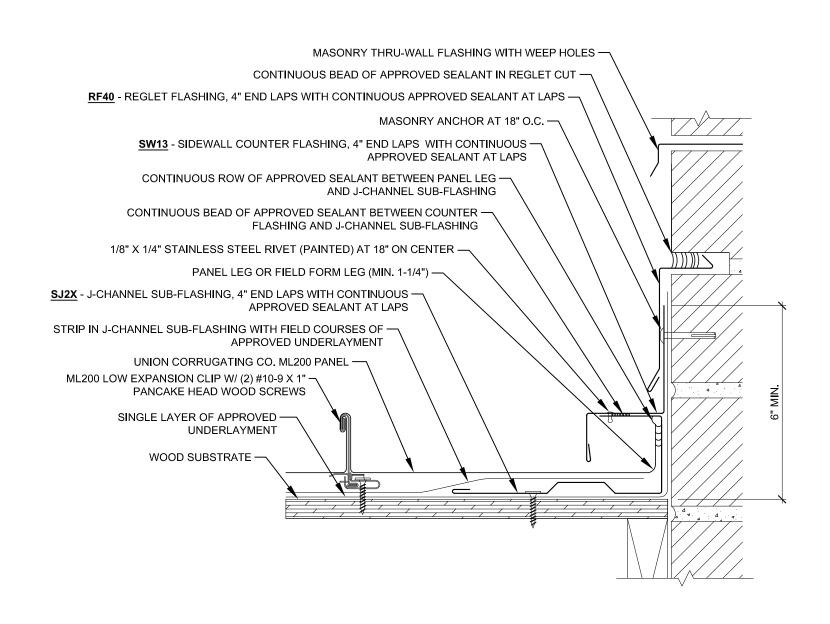
Detail No.:
ML200-WS-7.21 FX

Substrate: WOOD SUBSTRATE

Location:

Project Name:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.



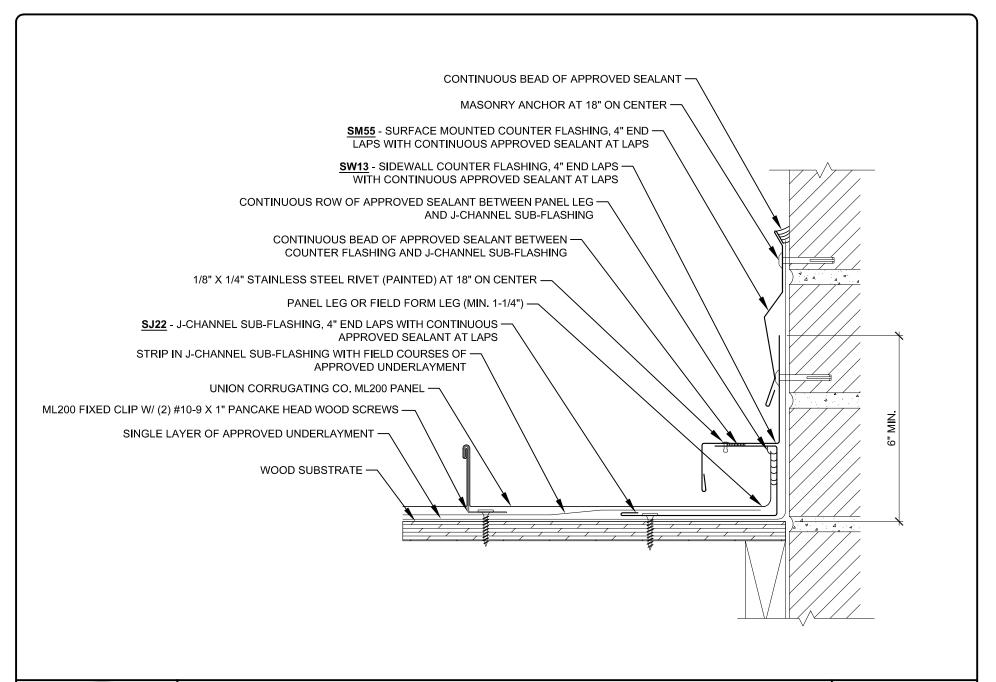


Description: SIDEWALL DETAIL - REGLET - EXPANSION CLIP

Detail No.:
ML200-WS-7.21 EX

Substrate:

WOOD SUBSTRATE





Description: SIDEWALL DETAIL - SURFACE MOUNT - FIXED CLIP

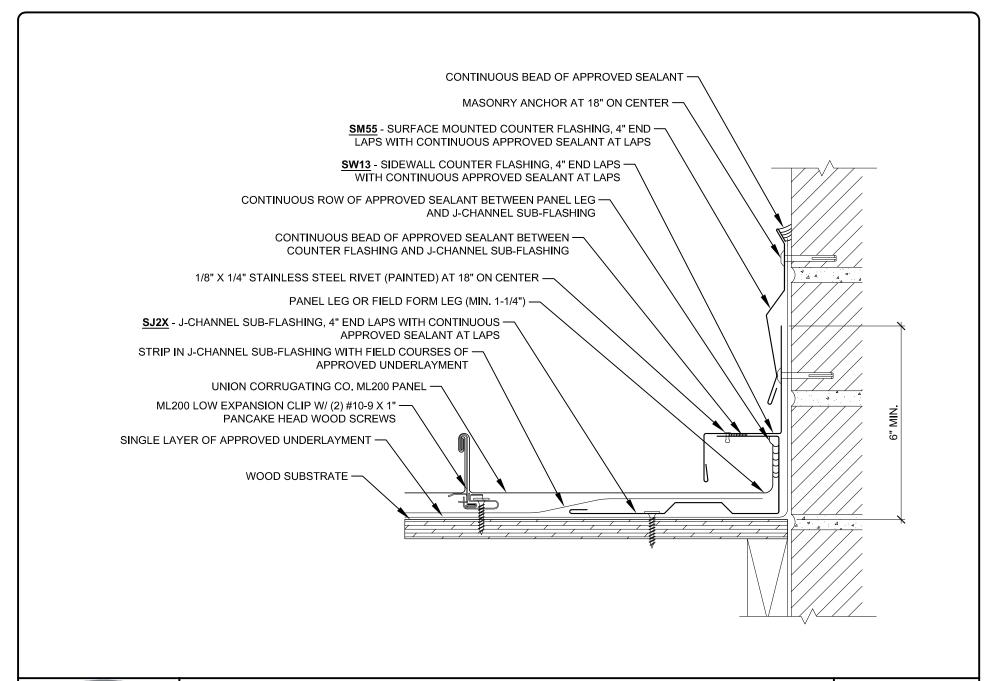
Detail No.: ML200-WS-7.22 FX

Substrate:

WOOD SUBSTRATE

Project Name:

Location:





Description SIDEWALL DETAIL - SURFACE MOUNT - EXPANSION CLIP ML20

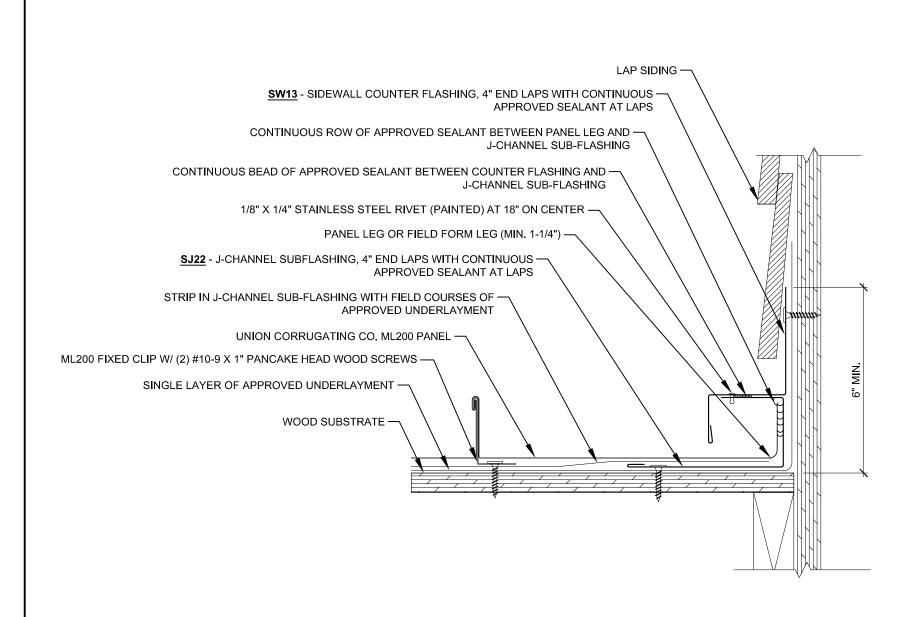
ML200-WS-7.22 EX

Substrate:

WOOD SUBSTRATE

Project Name:

Location:





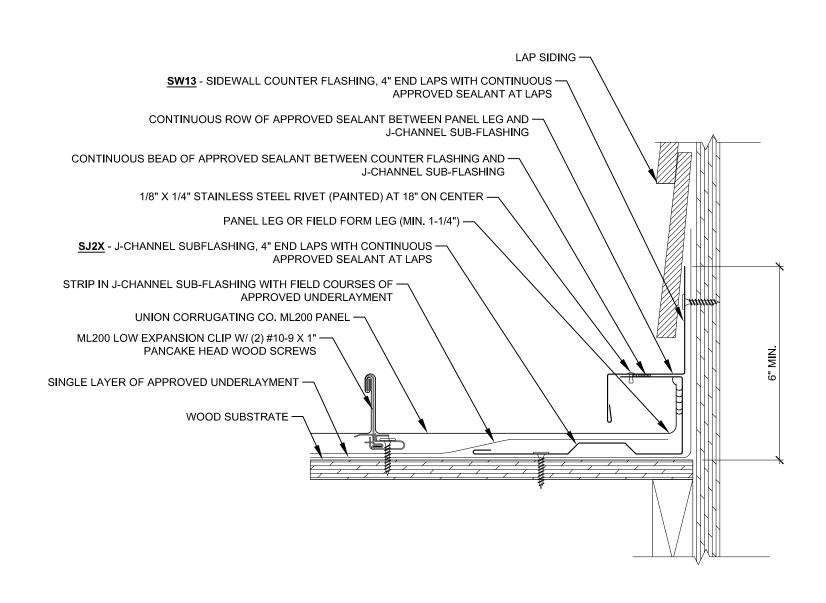
SIDEWALL DETAIL - W/ SIDING - FIXED CLIP

Detail No.:

ML200-WS-7.23_FX

Substrate:

WOOD SUBSTRATE





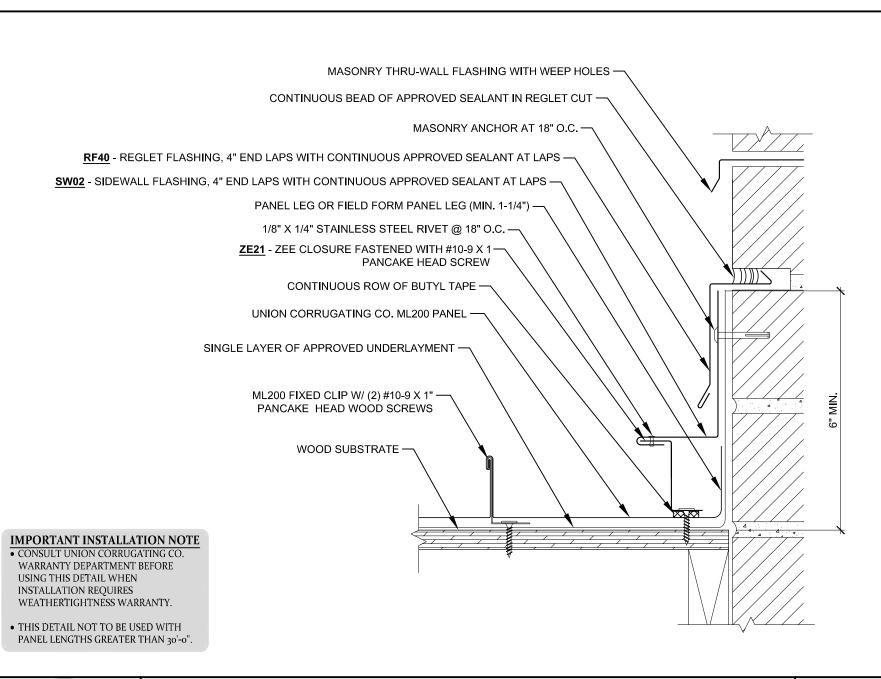
Description: SIDEWALL DETAIL - W/ SIDING - EXPANSION CLIP

Detail No.:

ML200-WS-7.23_EX

Substrate:

WOOD SUBSTRATE



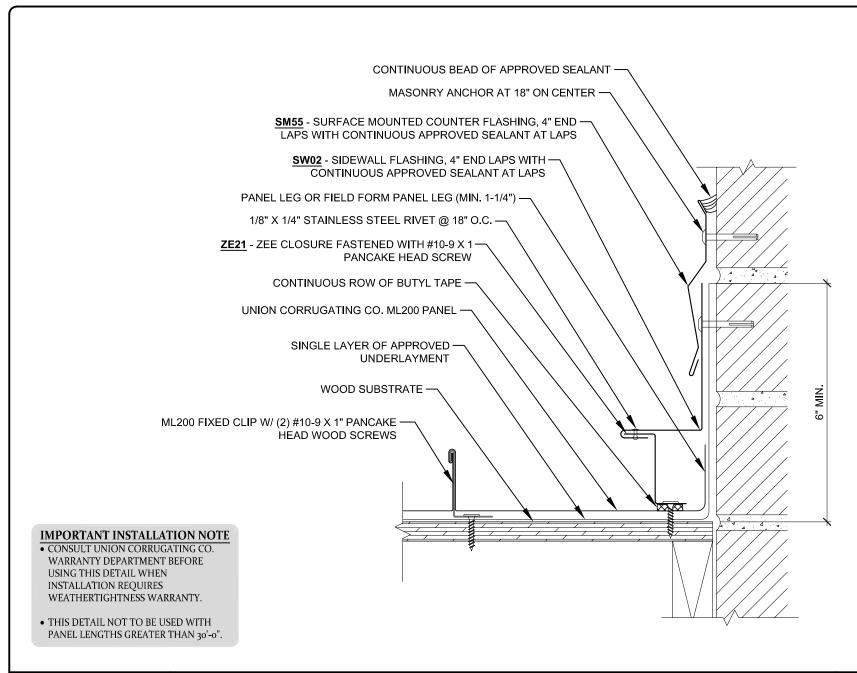


SIDEWALL W/ ZEE DETAIL - REGLET - FIXED CLIP

Detail No.: ML200-WS-7.31 FX

Substrate:

WOOD SUBSTRATE

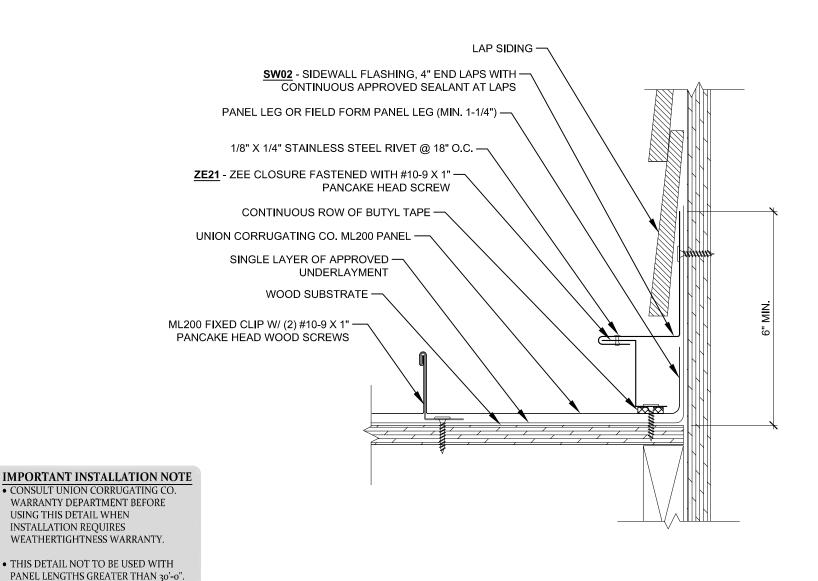




Description: SIDEWALL W/ ZEE DETAIL - SURFACE MOUNT - FIXED CLIP

ML200-WS-7.32 FX

Substrate: WOOD SUBSTRATE

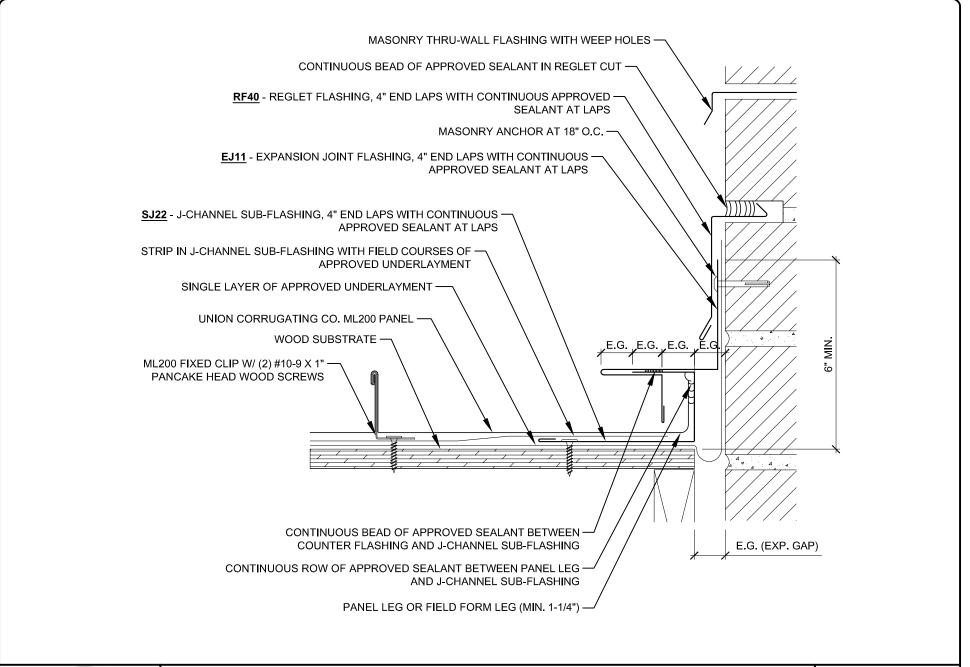




SIDEWALL W/ ZEE - W/ SIDING - FIXED CLIP

ML200-WS-7.33 FX

Substrate: WOOD SUBSTRATE





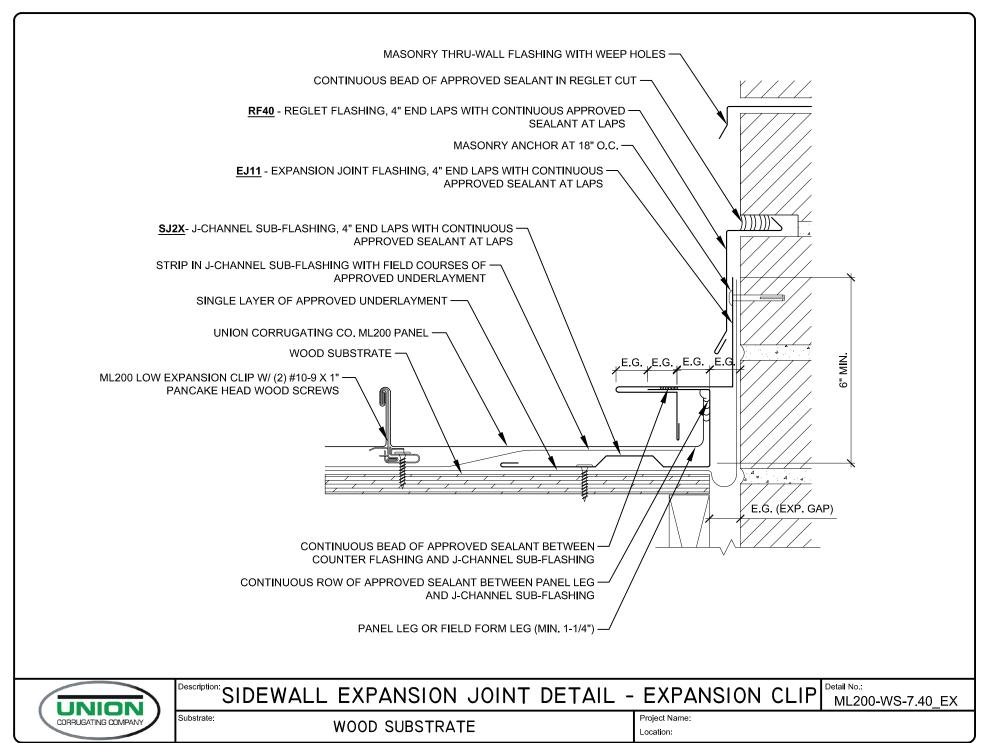
escription: SIDEWALL EXPANSION JOINT DETAIL - FIXED CLIP

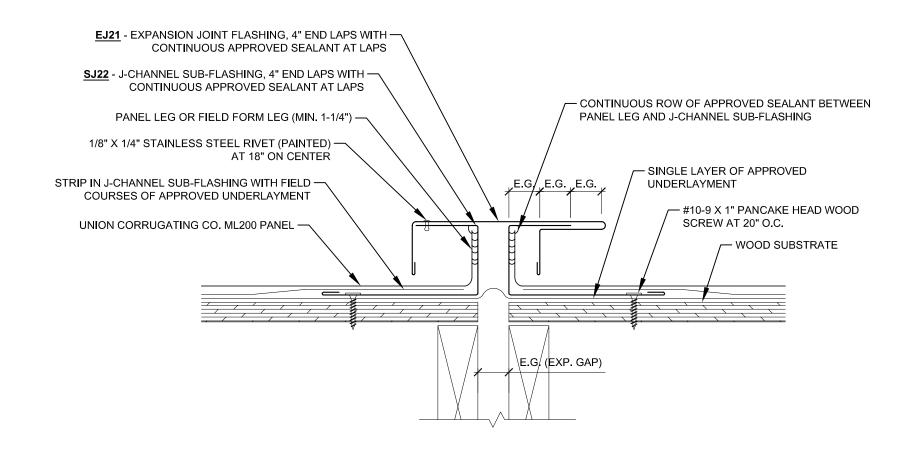
Detail No.:

ML200-WS-7.40_FX

ubstrate:

WOOD SUBSTRATE







EXPANSION JOINT (MID-ROOF) - FIXED CLIP

Detail No.:

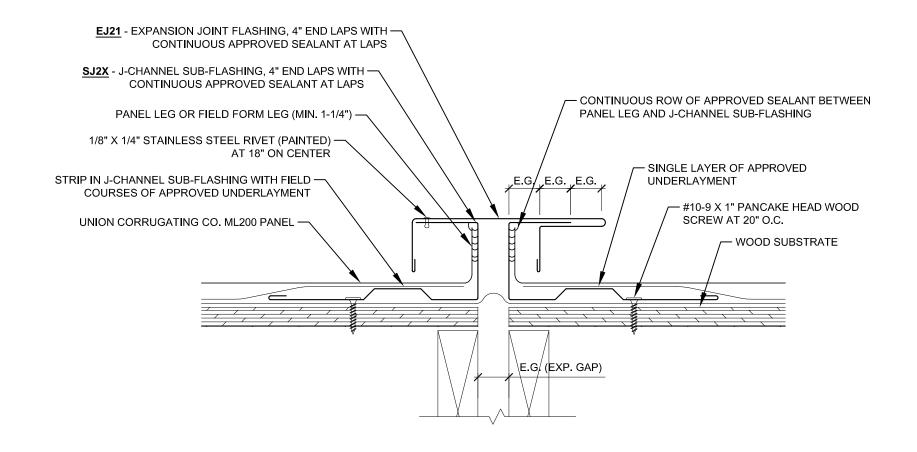
ML200-WS-7.50_FX

WOOD SUBSTRATE

Project Name: Location:

Description:

Substrate:



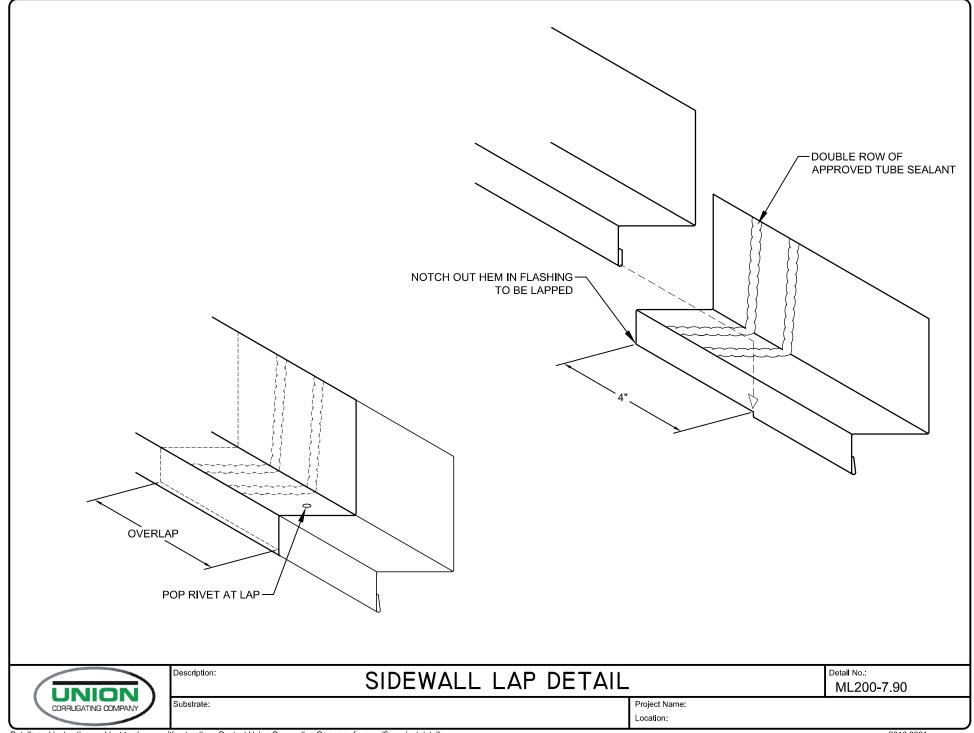


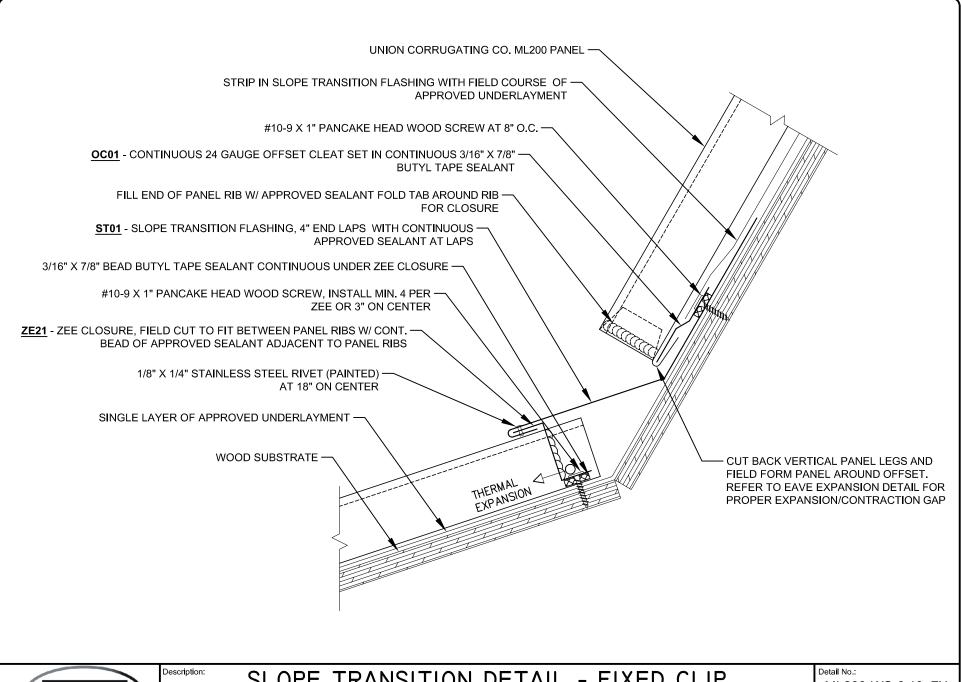
Description: EXPANSION JOINT (MID-ROOF) - EXPANSION CLIP

Detail No.:

ML200-WS-7.50 EX

Substrate: WOOD SUBSTRATE







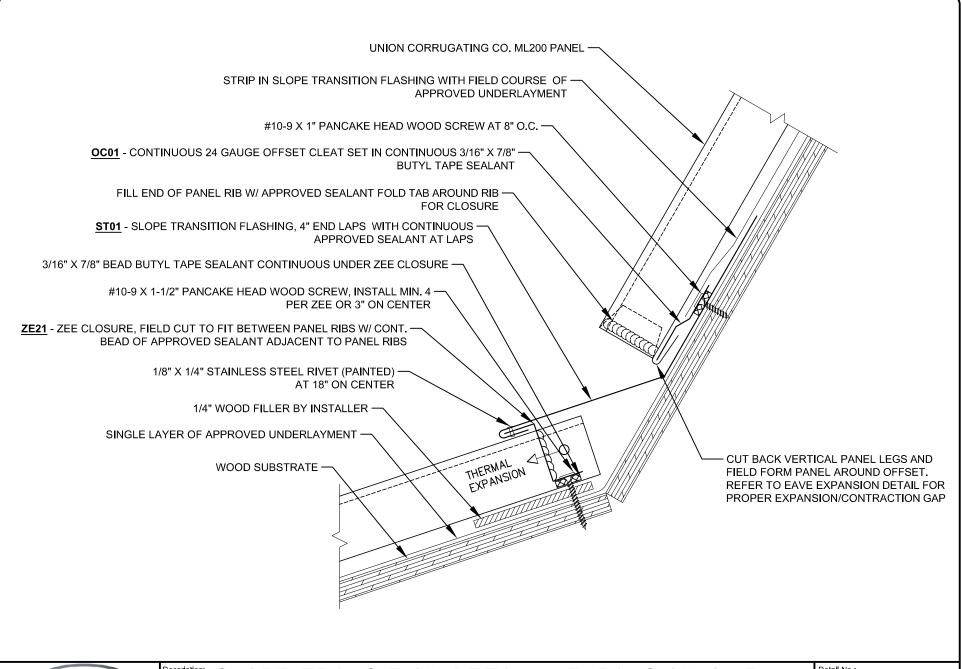
SLOPE TRANSITION DETAIL - FIXED CLIP

ML200-WS-8.10 FX Project Name:

WOOD SUBSTRATE

Location:

Substrate:



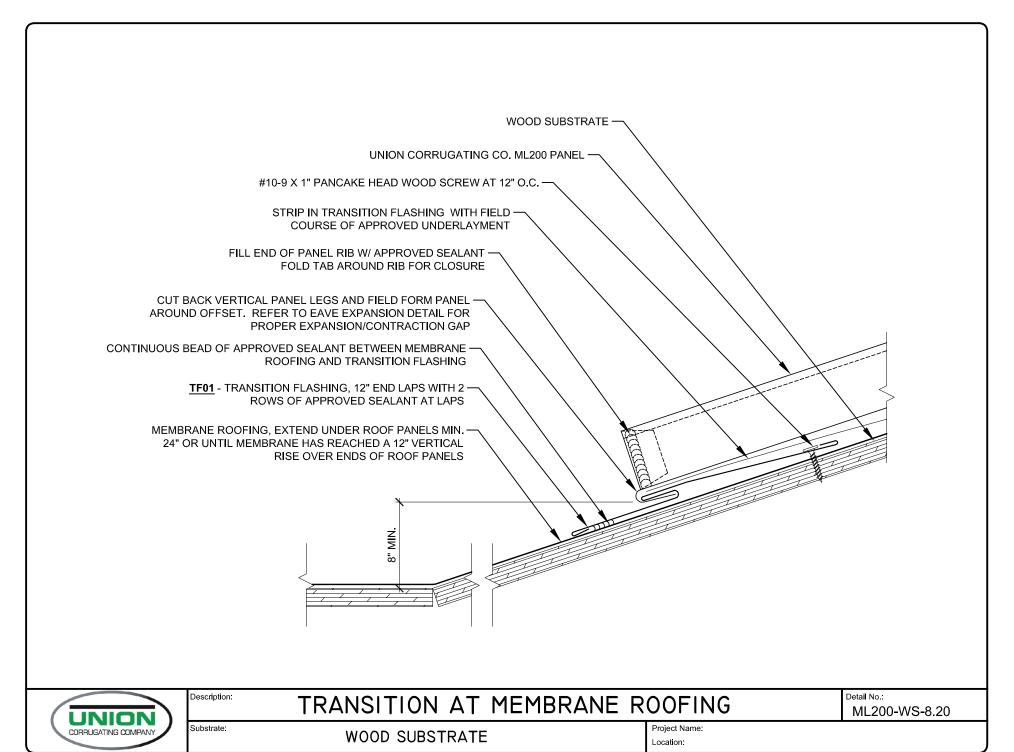


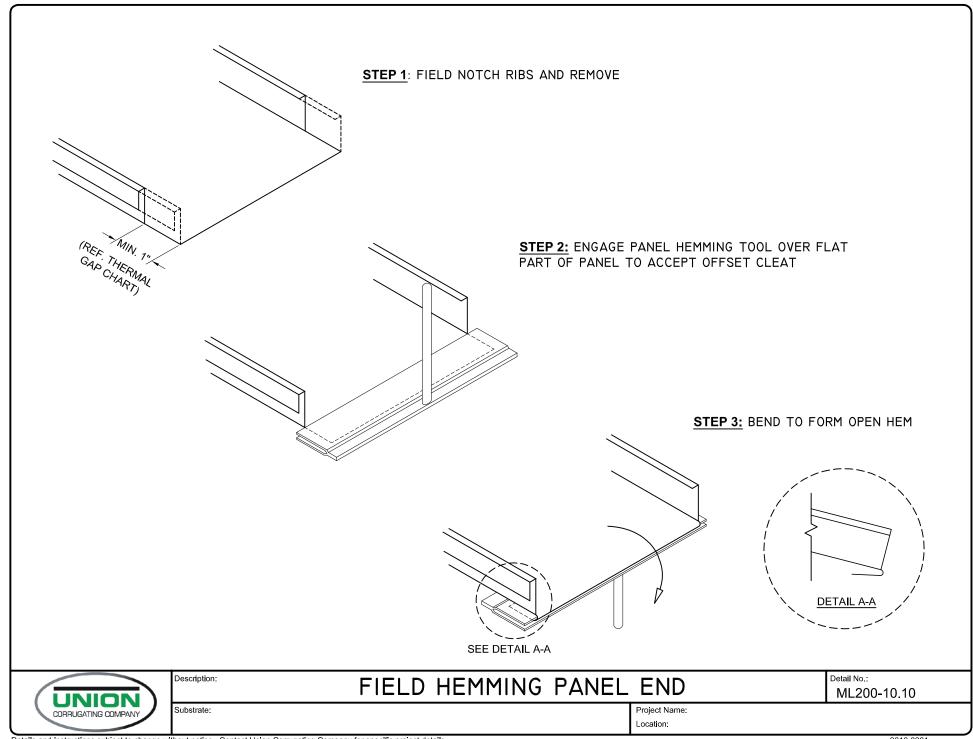
Description: SLOPE TRANSITION DETAIL - EXPANSION CLIP

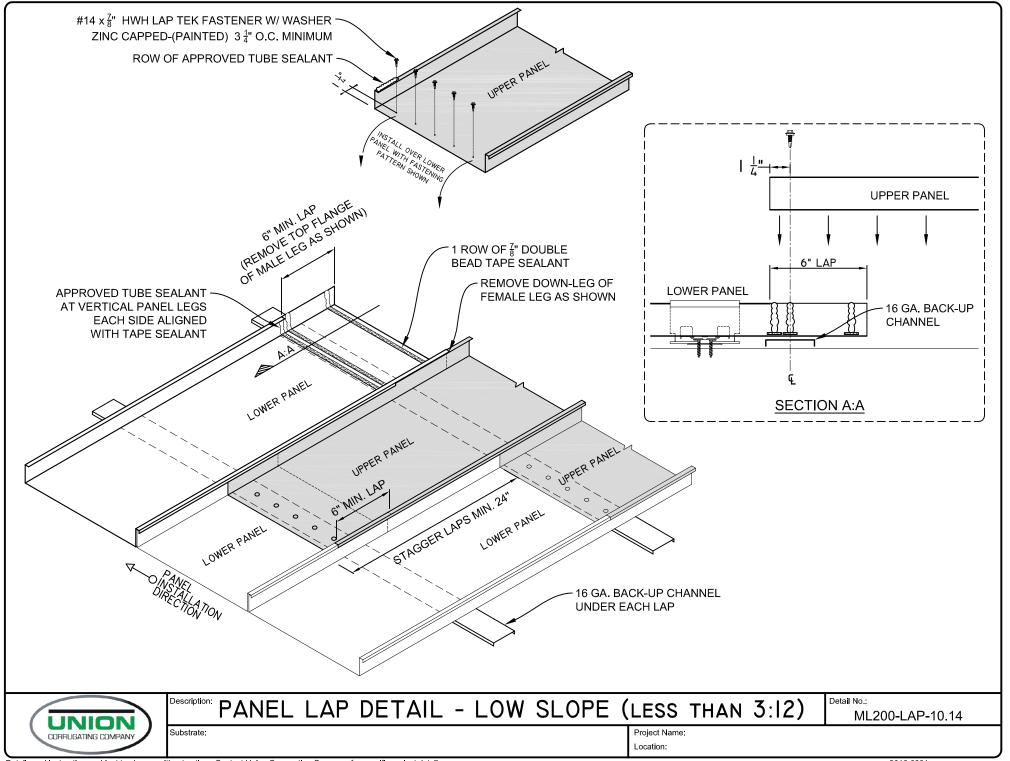
etall No.:

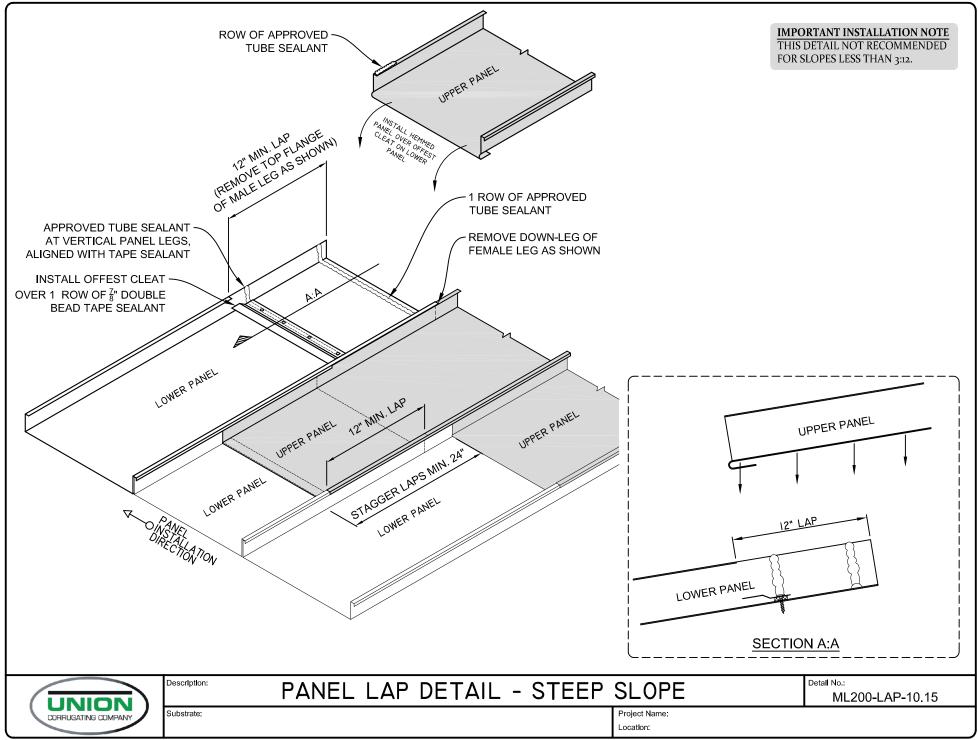
ML200-WS-8.10_EX

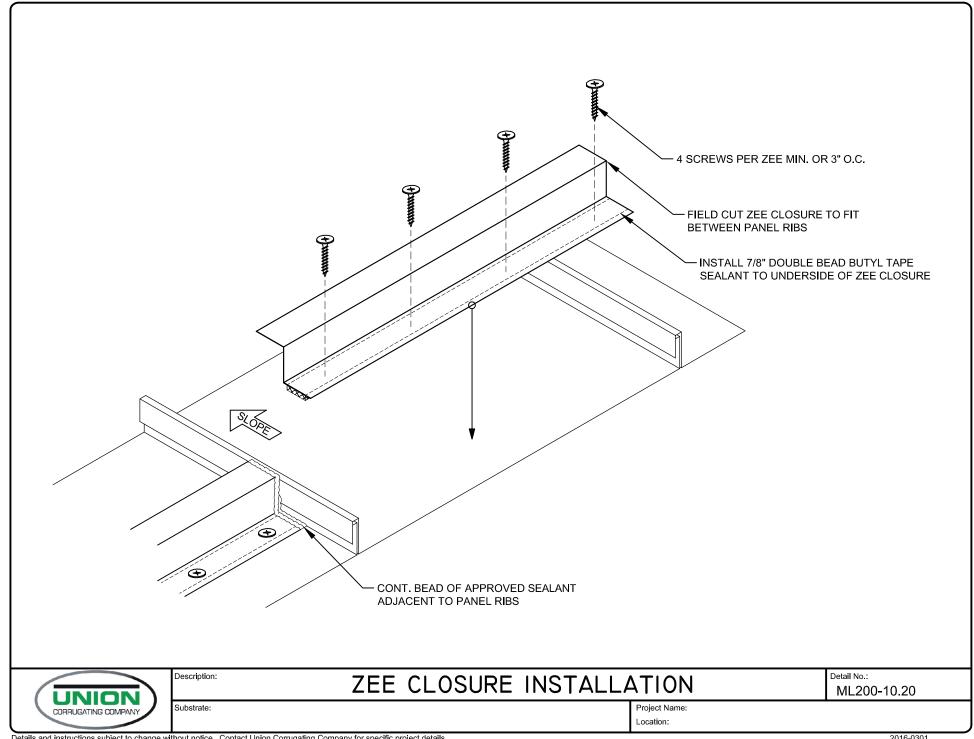
Substrate: WOOD SUBSTRATE

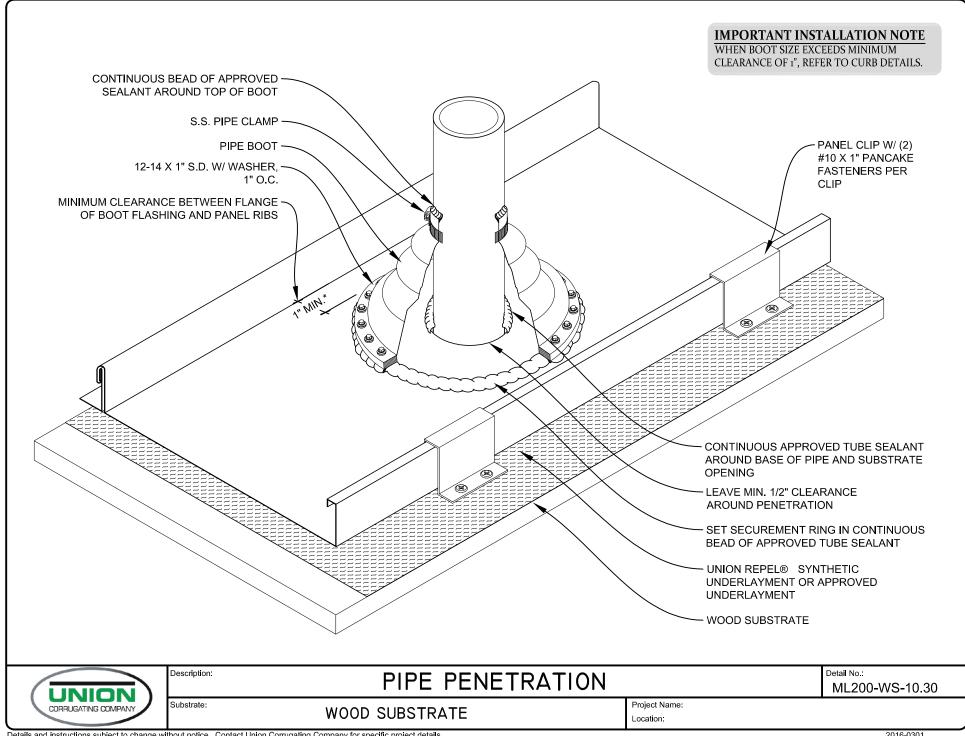


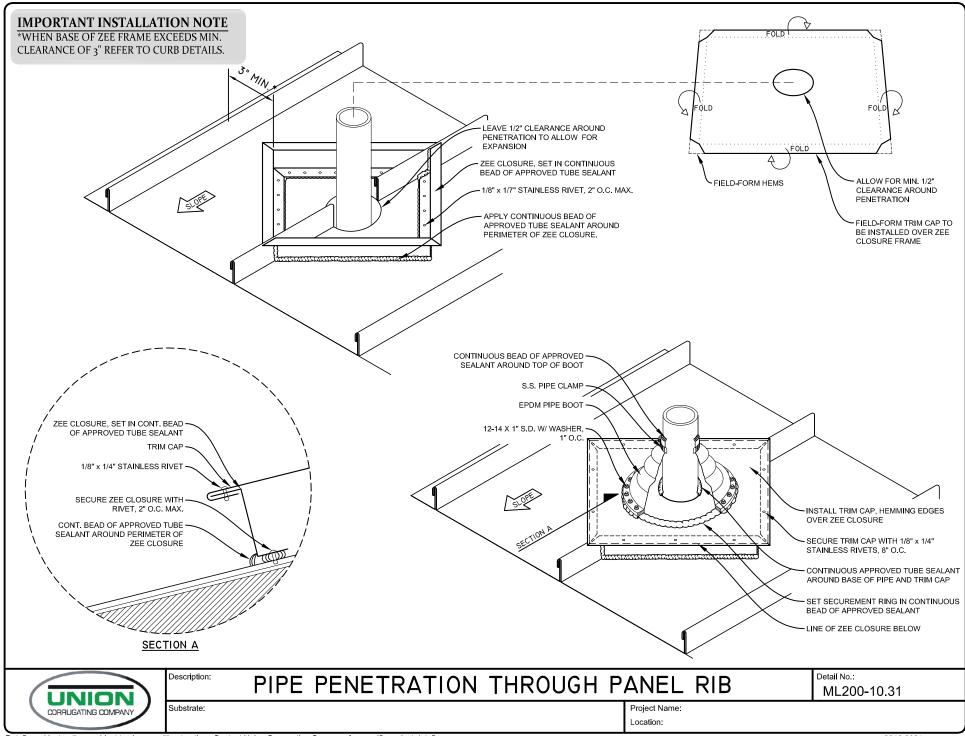


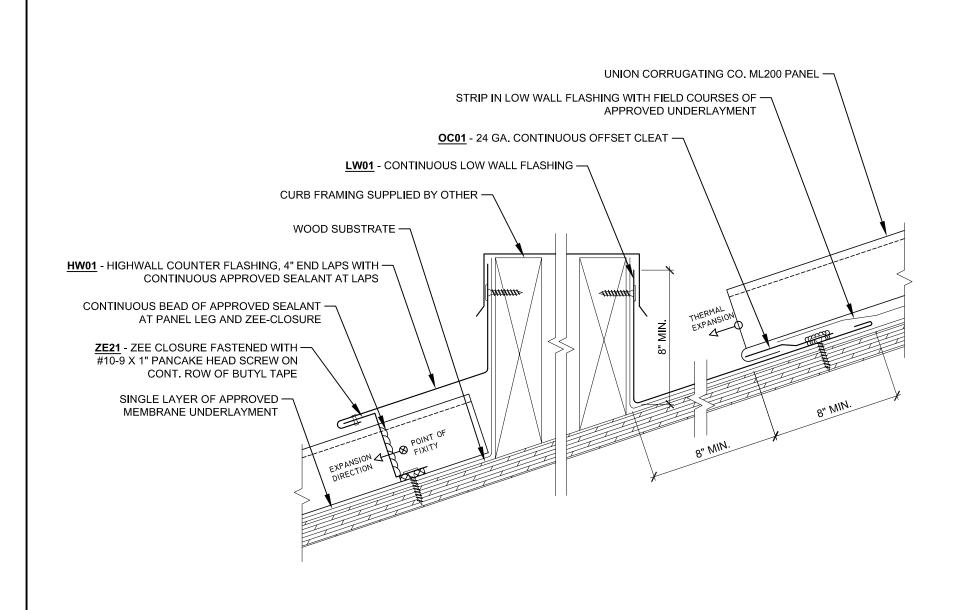










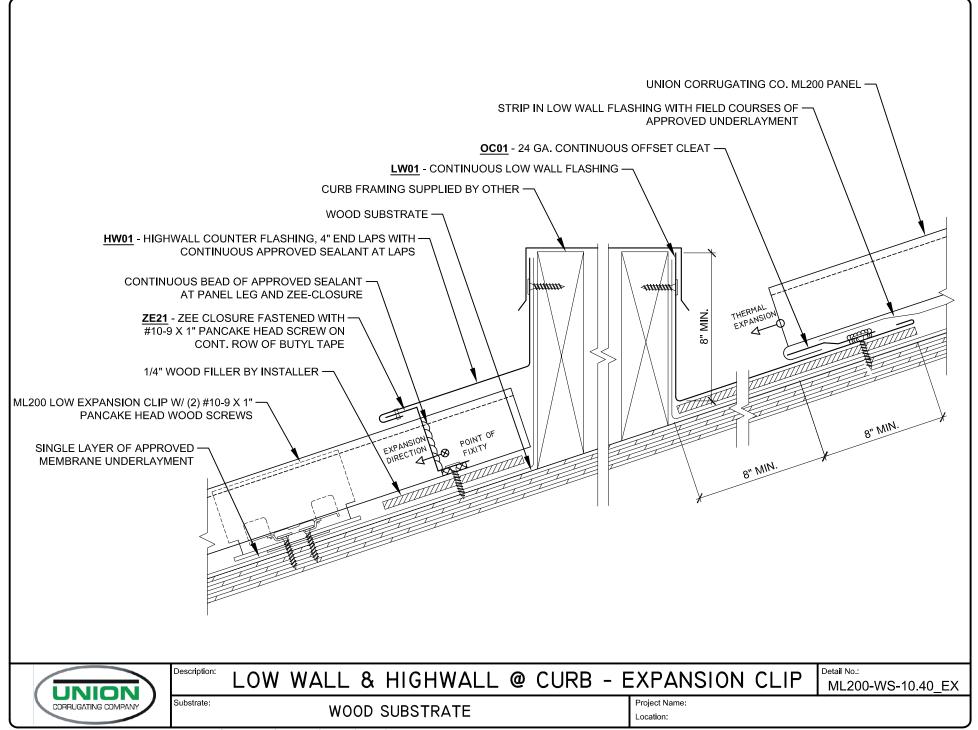


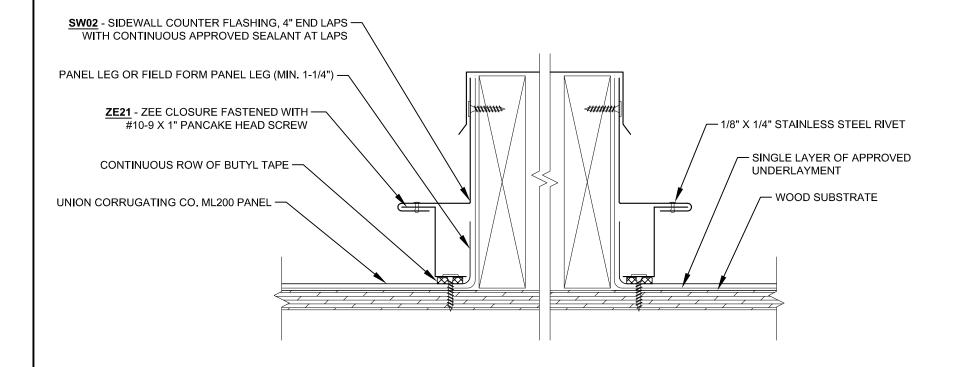


Description: LOW WALL & HIGHWALL @ CURB - FIXED CLIP

Substrate: WOOD SUBSTRATE Project Name: Location:

ML200-WS-10.40 FX







SIDEWALL @ CURB - FIXED CLIP

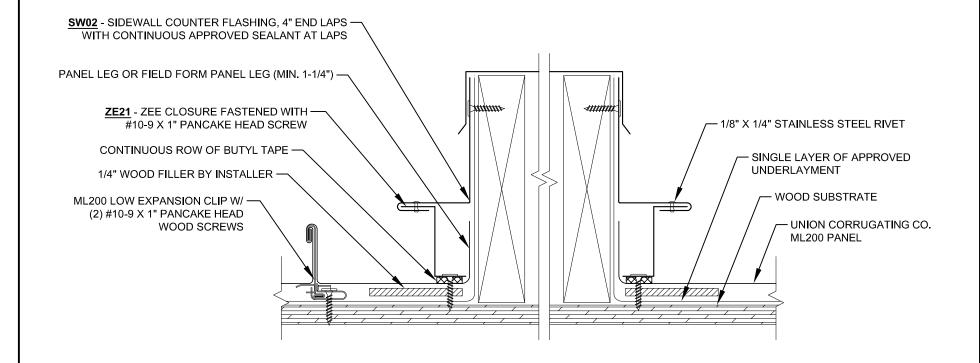
Detail No.:

Substrate: WOOD SUBSTRATE

Project Name: Location:

Description:

ML200-WS-10.41 FX





SIDEWALL @ CURB - EXPANSION CLIP

Detail No.:

Substrate: WOOD SUBSTRATE Pro

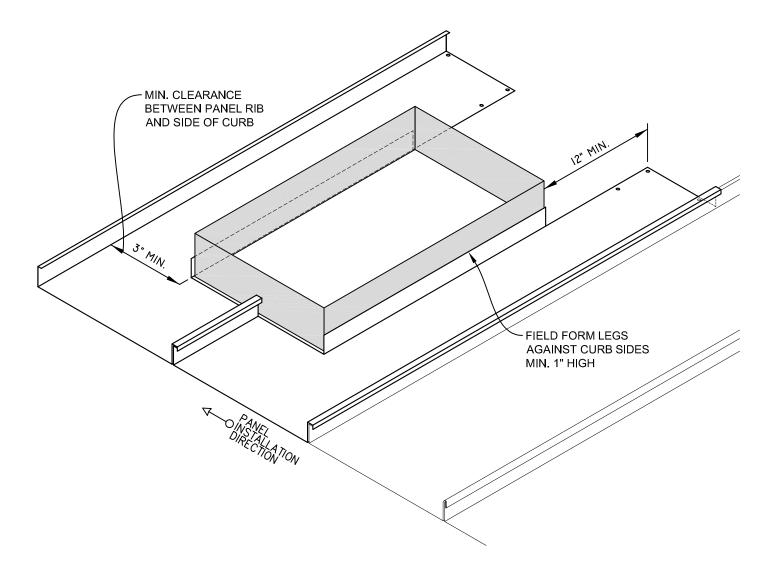
Project Name: Location:

Description:

ML200-WS-10.41 EX

STEP I

INSTALL PANELS AROUND CURB





ML200 CURB DETAILS - STEP I

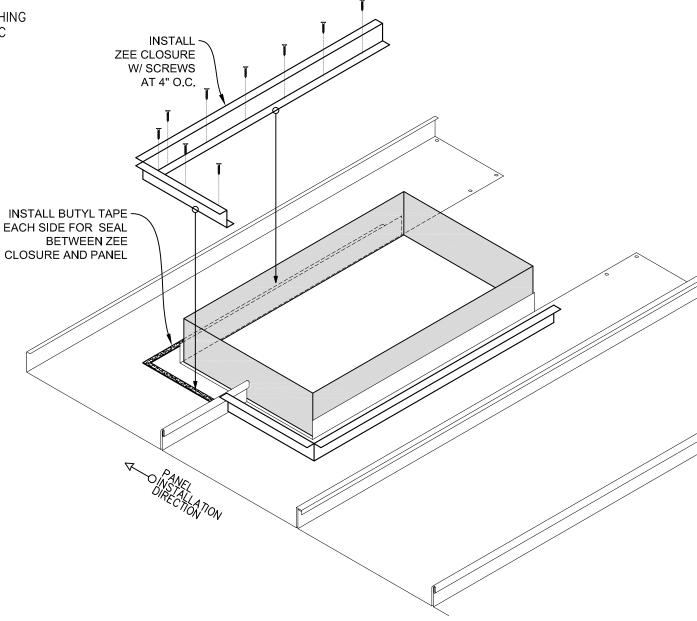
ML200-CRB: 1 of 6

Substrate:

Project Name:

STEP 2

APPLY ZEE CLOSURE FLASHING OVER DOUBLE BEAD MASTIC





ML200 CURB DETAILS - STEP 2

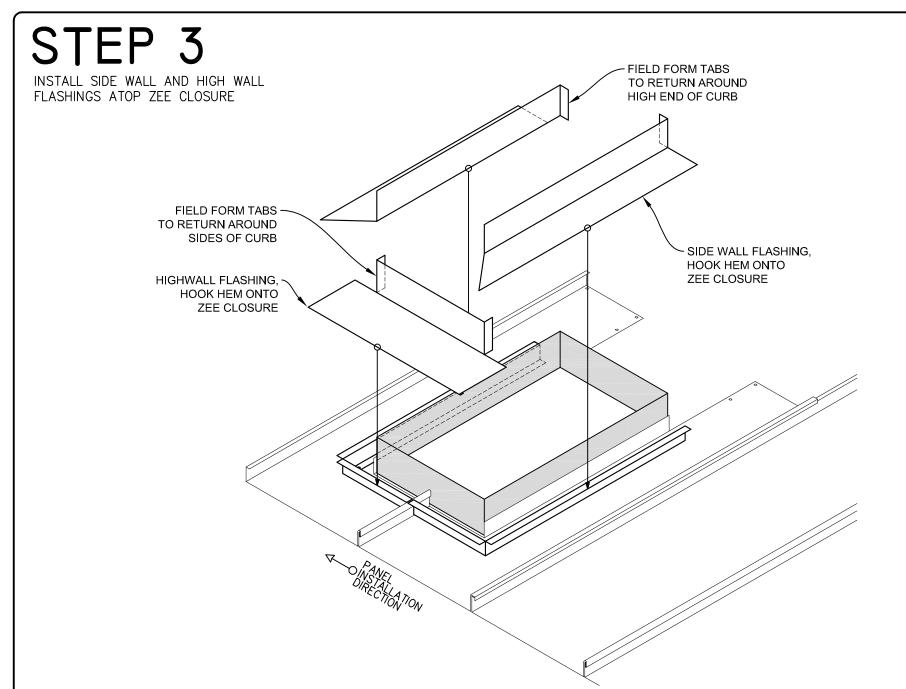
Detail No.:

ML200-CRB: 2 of 6

Substrate:

Project Name: Location:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.



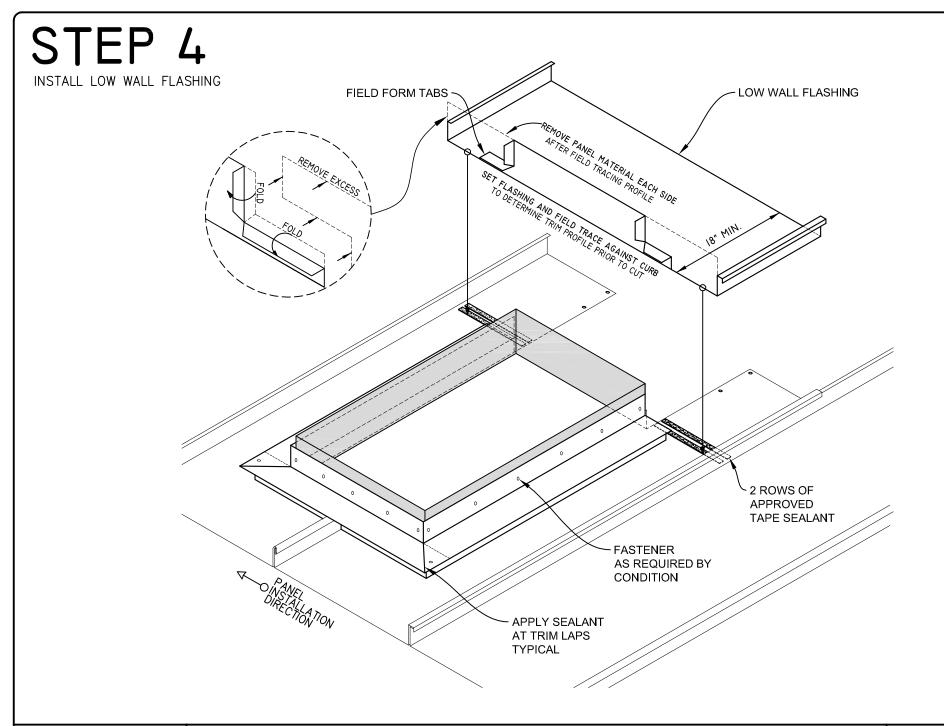


ML200 CURB DETAILS - STEP 3

ML200-CRB: 3 of 6

Detail No.:

Substrate:





Substrate:

ML200 CURB DETAILS - STEP 4

etail No.:

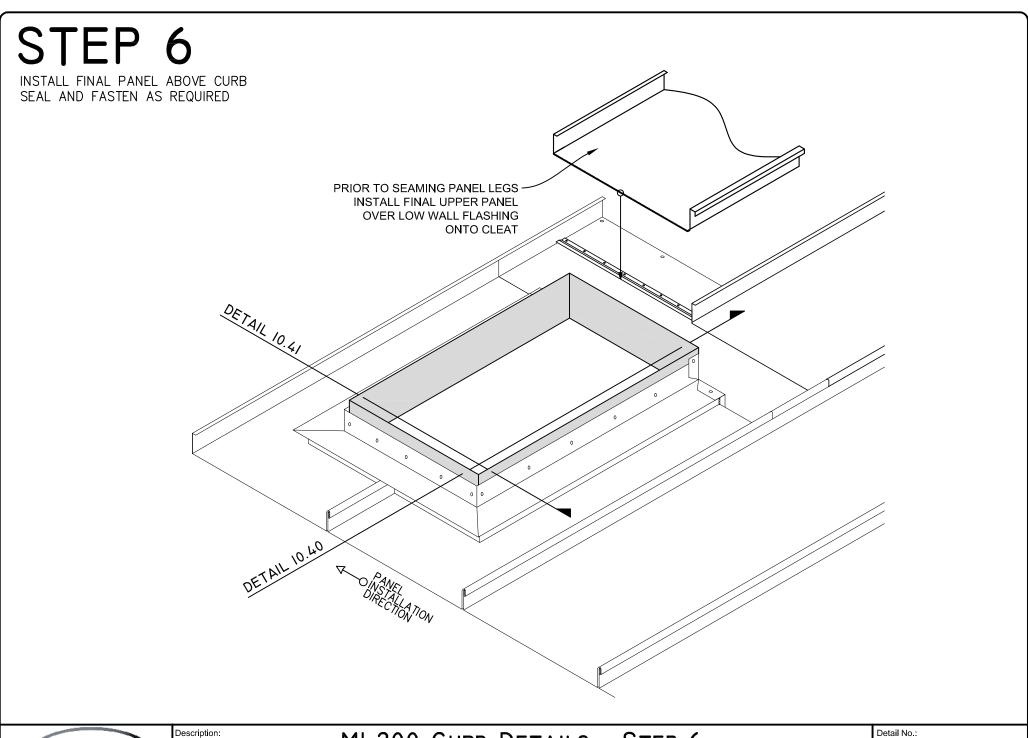
ML200-CRB: 4 of 6

Project Name: Location:

Details and instructions subject to change without notice. Contact Union Corrugating Company for specific project details.

STEP 5 INSTALL CLEAT AND PREPARE FOR **NEST PANEL TABS PRIOR** UPPER PANEL INSTALLATION TO SEAMING AS SHOWN INSTALL FIELD HEMMED UPPER PANELS -OVER LOW WALL FLASHING AND ONTO CLEAT PRIOR TO MECHANICALLY SEAMING CONTINUOUS CLEAT SET IN SEALANT FASTEN AT 4" O.C. SEALANT AT ZEE & LOW WALL INTERSECTION **BOTH SIDES OF CURB** Detail No.: Description: ML200 CURB DETAILS - STEP 5 ML200-CRB: 5 of 6 Substrate: Project Name:

Location:





ML200 CURB DETAILS - STEP 6

ML200-CRB: 6 of 6

Substrate: