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Installation Manual EXTERIOR WALL SIPs



Thermapan
Structural
Insulated
Panels

EXTERIOR WALL SIPs Installation Manual

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EXTERIOR WALL SIPs

Installation Manual

1. General Requirements

1.1 Scope

The basic design and construction requirements for the Thermapan Structural Insulated Panel (SIP) wall system is set forth in this specification. Criteria for materials, environmental control, design loads, and structural design are included. Where requirements are based on internationally recognized standards and specifications, these standards and specifications are referenced without elaboration.

Installers shall reference engineering design package for fastening arrangements.

2. Materials

- 2.1** The Thermapan Wall SIP is composed of an expanded polystyrene (EPS) foam core laminated between two layers of oriented strand board (OSB) with a structural adhesive. (See Detail W-1)
- 2.2** Framing Lumber shall be DOC PS 20 or NLGA No.2 or better.
- 2.3** Wire nails, ring nails, spikes and staples shall conform to CSA B111 or ANSI/ASME B11.1.
- 2.4** Wood screws shall conform to ANSI/ASME B18.6.1..
- 2.5** SIP screws shall conform to ICC-AC233.
- 2.6** Caulking Compounds shall conform to CAN/CGSB 19.13 or ASTM C 920.
- 2.7** Polyethylene Sheeting shall conform to CAN/CGSB-37.2, CAN/CGSB-37.16, or ASTM D 4397.
- 2.8** Low expansion foam seal shall conform to AAMA 812-04.
- 2.9** Structural adhesive shall conform to CAN/CGSB 71GP26, APA AFG-01 or ASTM D3498.

3. Electrical Wiring

- 3.1** All wire chases to be vertically cut into the wall SIP at a minimum depth of 2". See Detail W-14.

4. Interior Finish

- 4.1** The interior of the wall SIP can be finished with any of the common required building code materials. It is recommended that the SIP joints and connections be sealed as per Details AB-1 and AB-2.

5. Exterior Cladding

- 5.1** A weather barrier is to be installed over the exterior OSB of the SIP and under the cladding and/or furring. Refer to Details W-15 and W-16 and your local building code for compliant weather barrier materials.

MATERIALS ESTIMATING

Above Grade Exterior Walls Estimation Only

Lumber Requirements:

- SPF Single top and bottom plate
- OSB 1-1/8" (28mm) Cap plate – 12 ft (3658mm) lengths
- Every panel requires a spline
- Every corner requires 2 SPF studs
- Windows and doors require jack studs as per OBC and cripples

Caulking and Sealant Requirements:

- Every 1200 sqft (111 m²) of SIP equals 1 case of Expandable Foam
- Every 2000 sqft (185 m²) of SIP requires 1 case of Sealant

Fasteners:

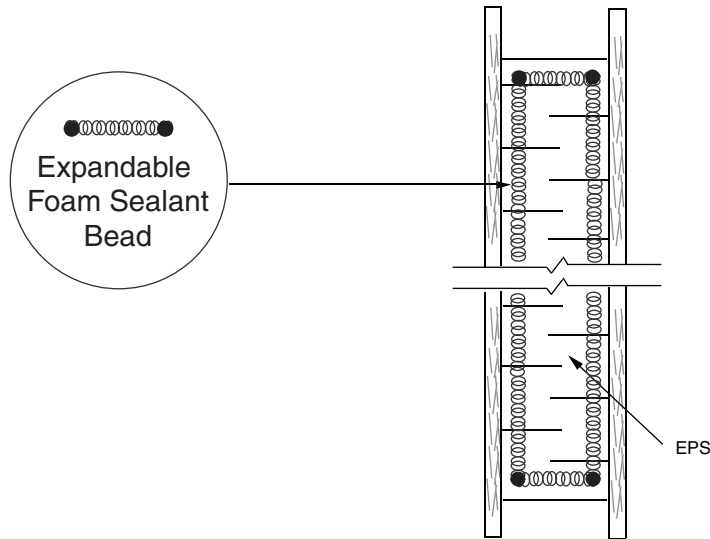
- Recommend 2" (50mm) Ring nail or 2" (50mm) screws for connection to panel
- 3.0 times the square footage of SIPs

AIR BARRIER

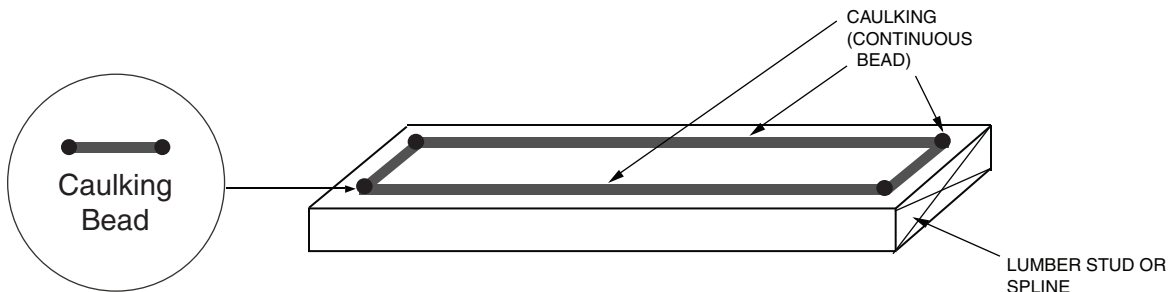
RECOMMENDED DETAILS FOR AIR BARRIER SEALANTS

All sealants, FOAM (A) or CAULKING (B), should be applied onto the SIP in a continuous rectangular pattern along the outer most edge of the area to be sealed.

- (A) A low expansion EXPANDABLE FOAM SEALANT should conform to the AAMA 812-04 standard. Apply a 1/2 inch or a 12.5 mm diameter of a *continuous* bead of expandable foam sealant onto the SIP:



- (B) A CAULKING SEALANT should conform to ASTM C920-02 and/or CAN/CGSB 19.13-M. Apply a 3/8 inch or a 10 mm diameter *continuous* bead of caulking onto the lumber spline:



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1-877-443-WALL (9255)

TITLE

AIR BARRIER DETAILS FOR AIR BARRIER SEALANTS

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

NOVEMBER 2010

REVISION

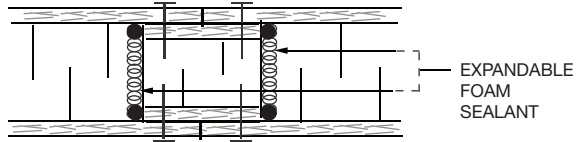
DWG. No.

1 AB-1

AIR BARRIER

RECOMMENDED DETAILS FOR SEALING SIP CONNECTIONS

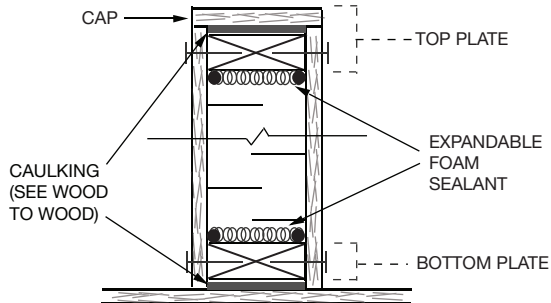
(1) Foam to Foam: Use a low expansion foam sealant.



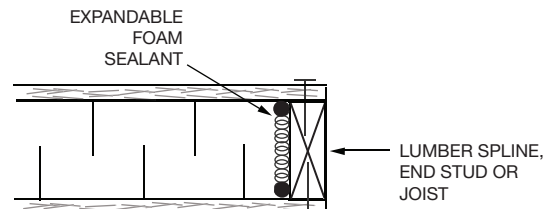
SIP SPLINE JOINT

(2) Foam to Wood: Use a low expansion foam sealant.

PLATES SECTION

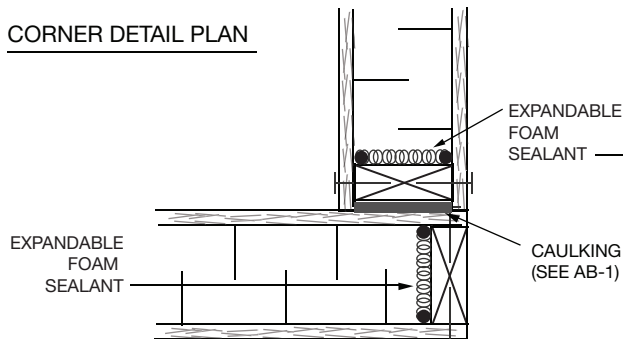


LUMBER SPLINES

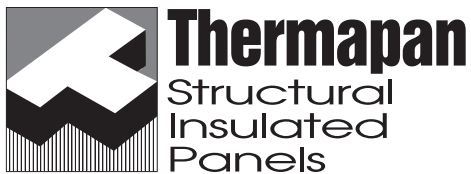
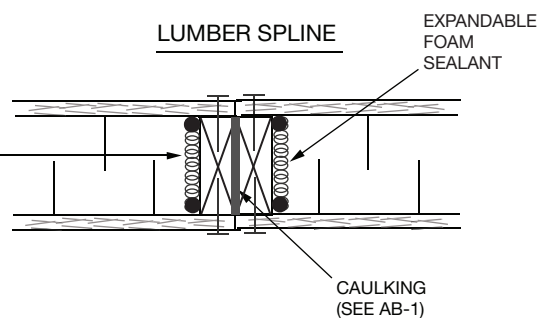


(3) Wood to Wood: Use caulking and a low expansion foam sealant.

CORNER DETAIL PLAN



LUMBER SPLINE



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TITLE

AIR BARRIER DETAILS
FOR SEALING
SIP CONNECTIONS

PROJECT

REFERENCE

SCALE

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DATE

MAY 2020

REVISION

DWG. No.

1

AB-2

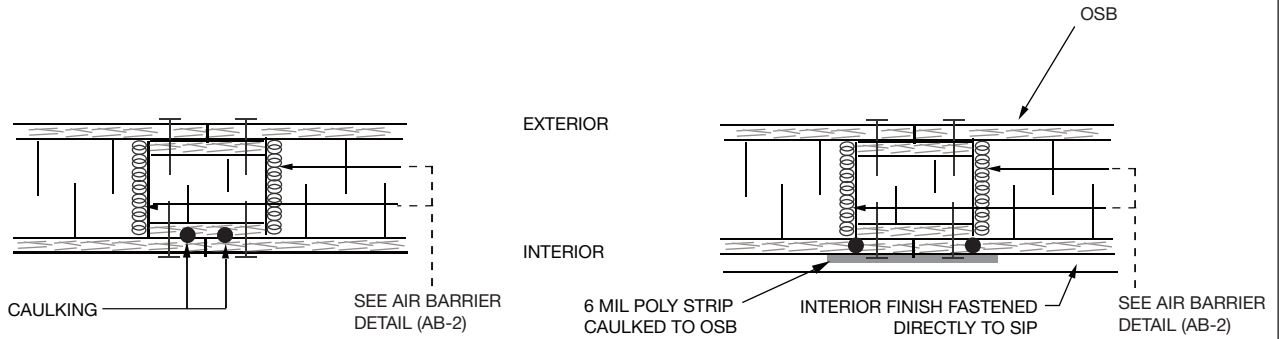
VAPOUR BARRIER

RECOMMENDED DETAILS FOR VAPOUR SEALING SIP CONNECTIONS

The function of a vapour barrier is to control the entry of water vapour into the building assembly. Vapour barriers should not be confused with an air barrier.

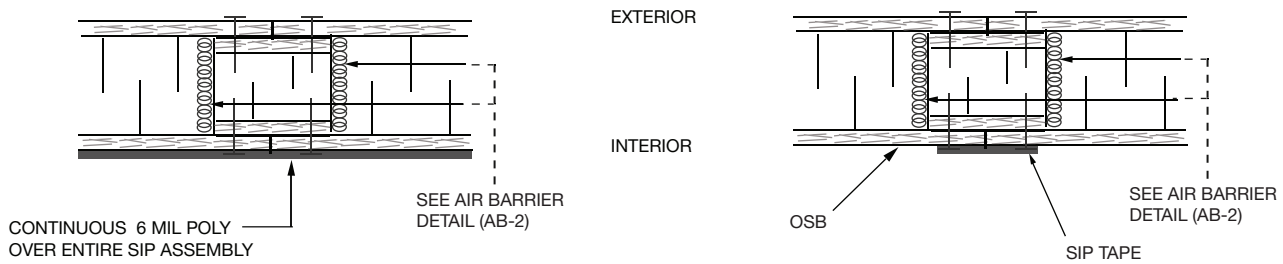
All SIP seams and connections must be VAPOUR SEALED from the INTERIOR.

These are recommended vapour barrier methods:



CAULKING

6 MIL POLY STRIPS & CAULKING



CONTINUOUS 6 MIL POLY

SIP TAPE



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TITLE

VAPOUR BARRIER DETAILS
FOR VAPOUR SEALING
SIP CONNECTIONS

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

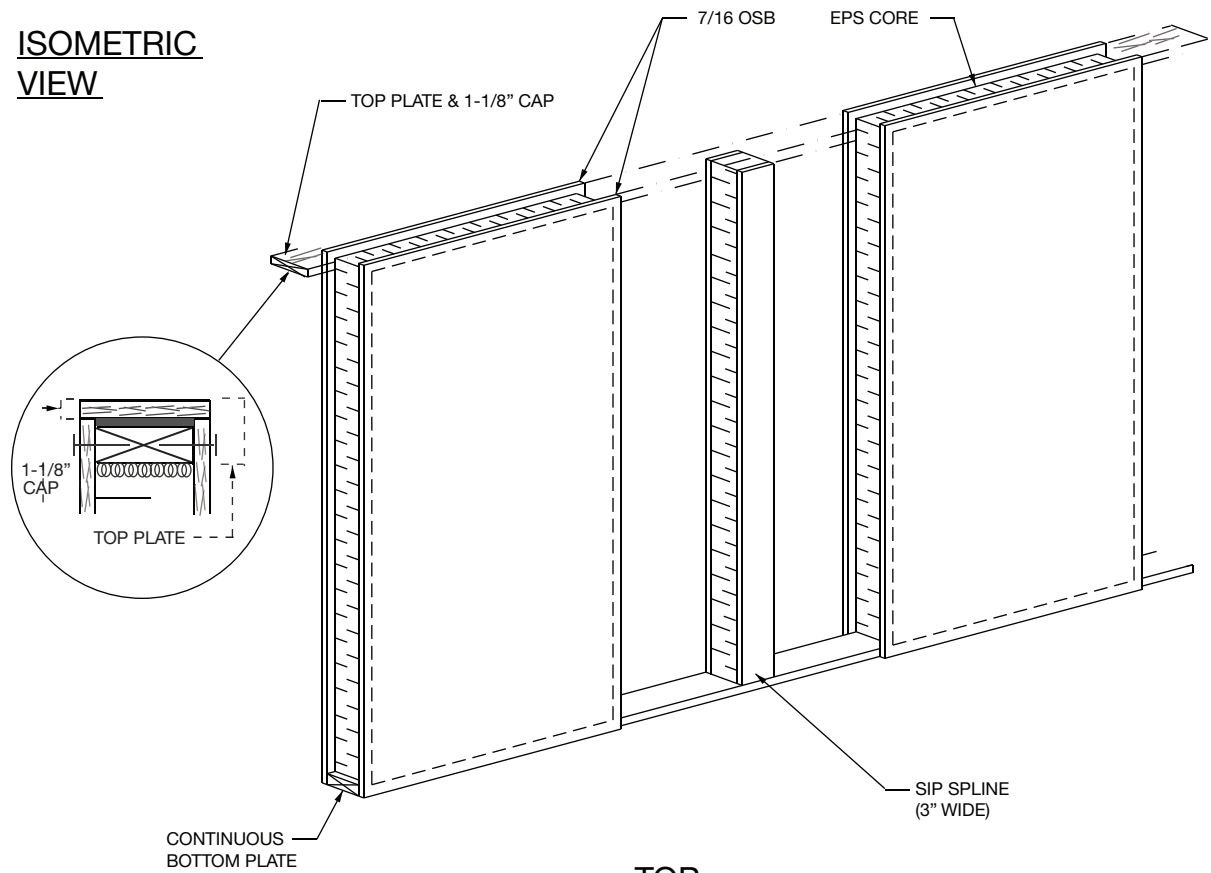
JULY 2026

REVISION

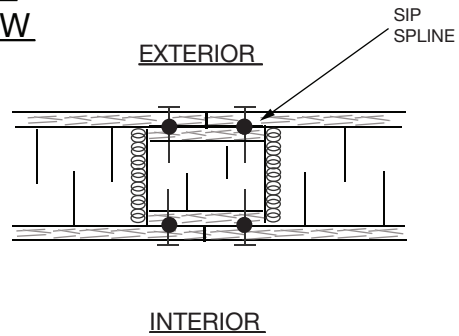
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3 VB-1

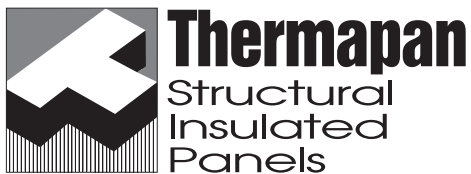
ISOMETRIC VIEW



TOP VIEW



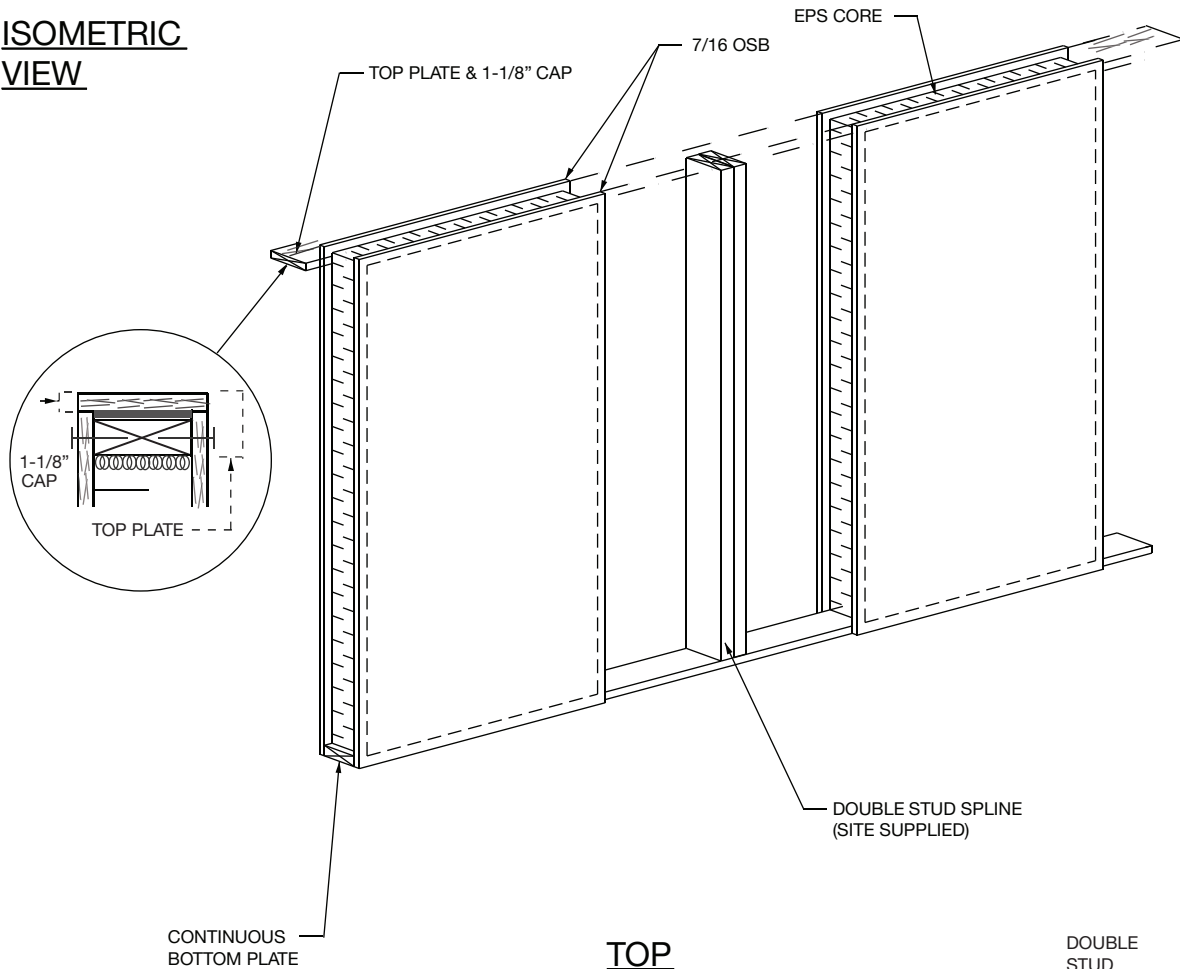
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



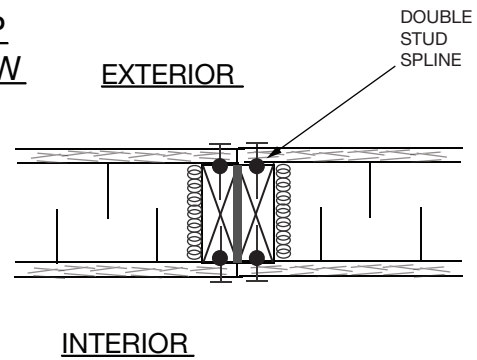
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TITLE		PROJECT	
FOAM CORE (SIP) SPLINE DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
APRIL 2014	6	W-1	

**ISOMETRIC
VIEW**



**TOP
VIEW**



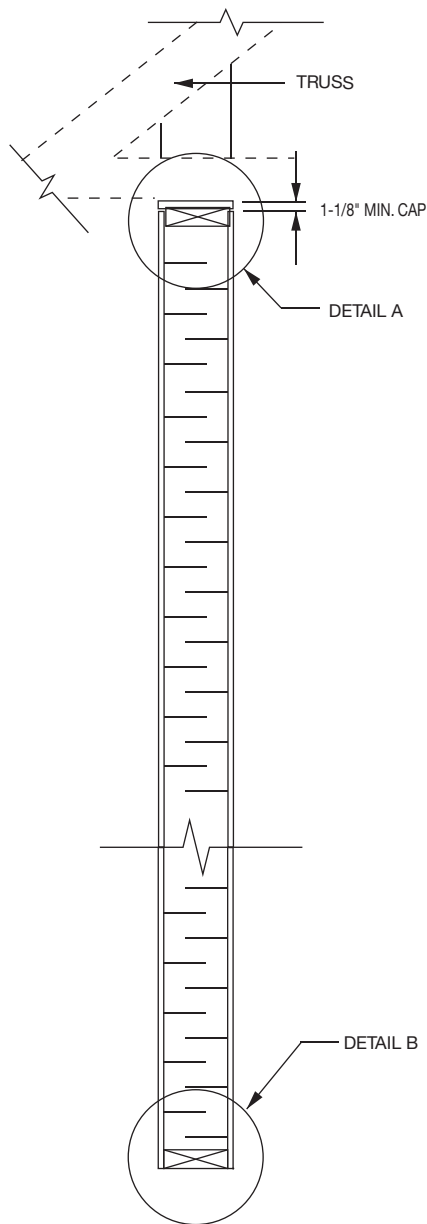
NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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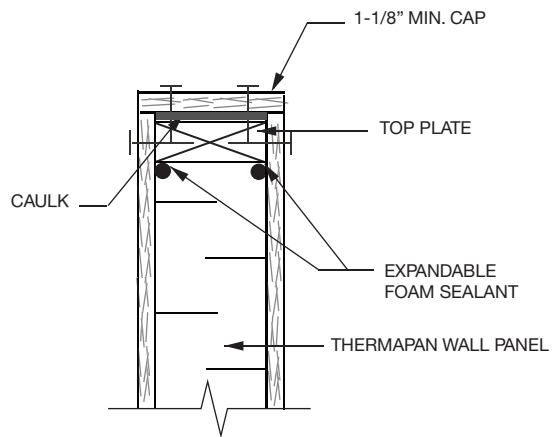
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1-877-443-WALL (9255)

TITLE		PROJECT	
WOOD STUD SPLINE JOINT DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
APRIL 2014	6	W-2	

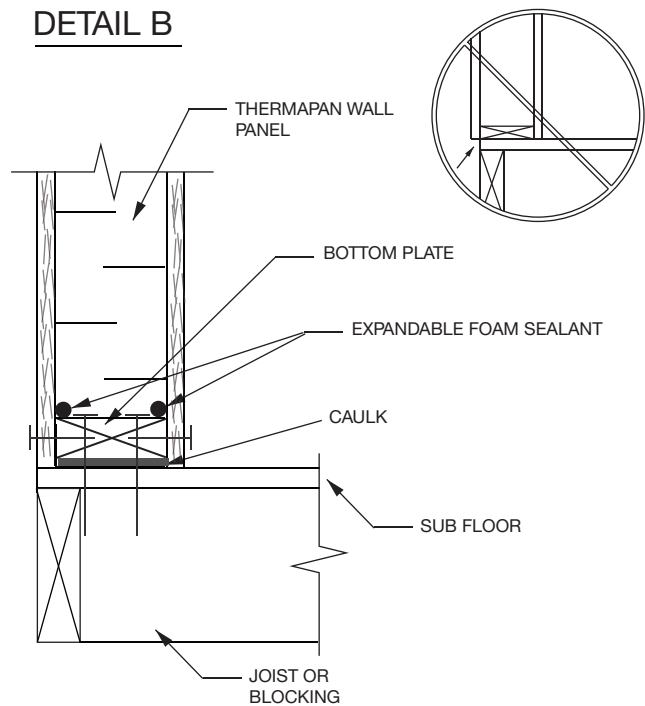


SECTION

DETAIL A



DETAIL B



NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE

TYPICAL WALL SECTION

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

APRIL 2014

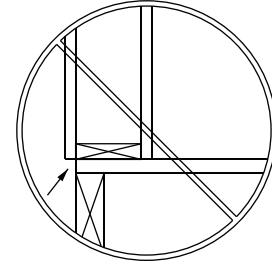
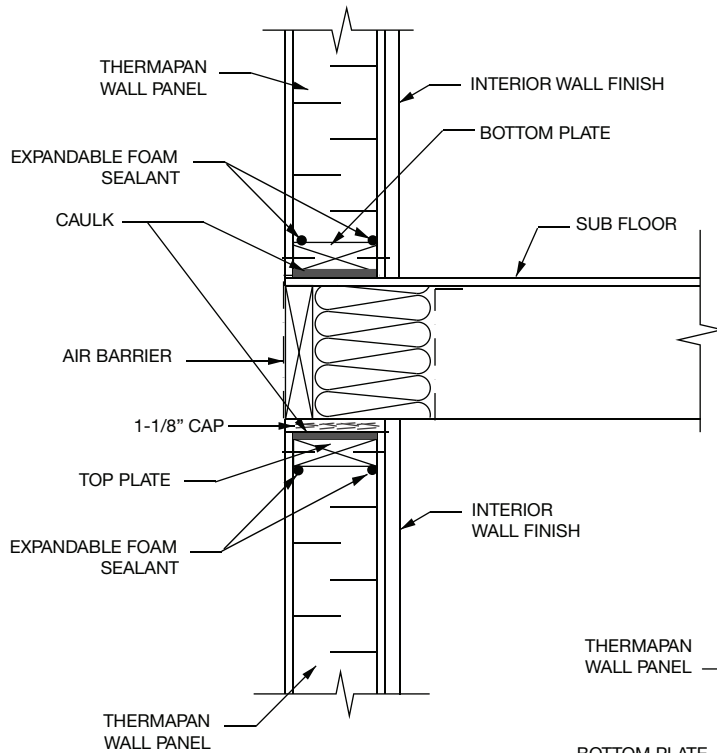
REVISION

6

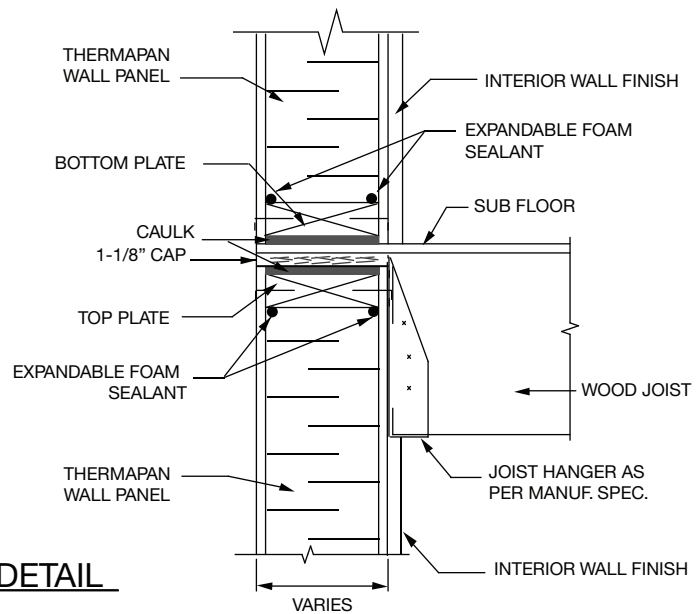
DWG. No.

W-3

PLATFORM FRAMING



SUSPENDED FLOOR DETAIL



NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE

FLOOR-TO-WALL CONNECTION DETAIL

PROJECT

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DATE

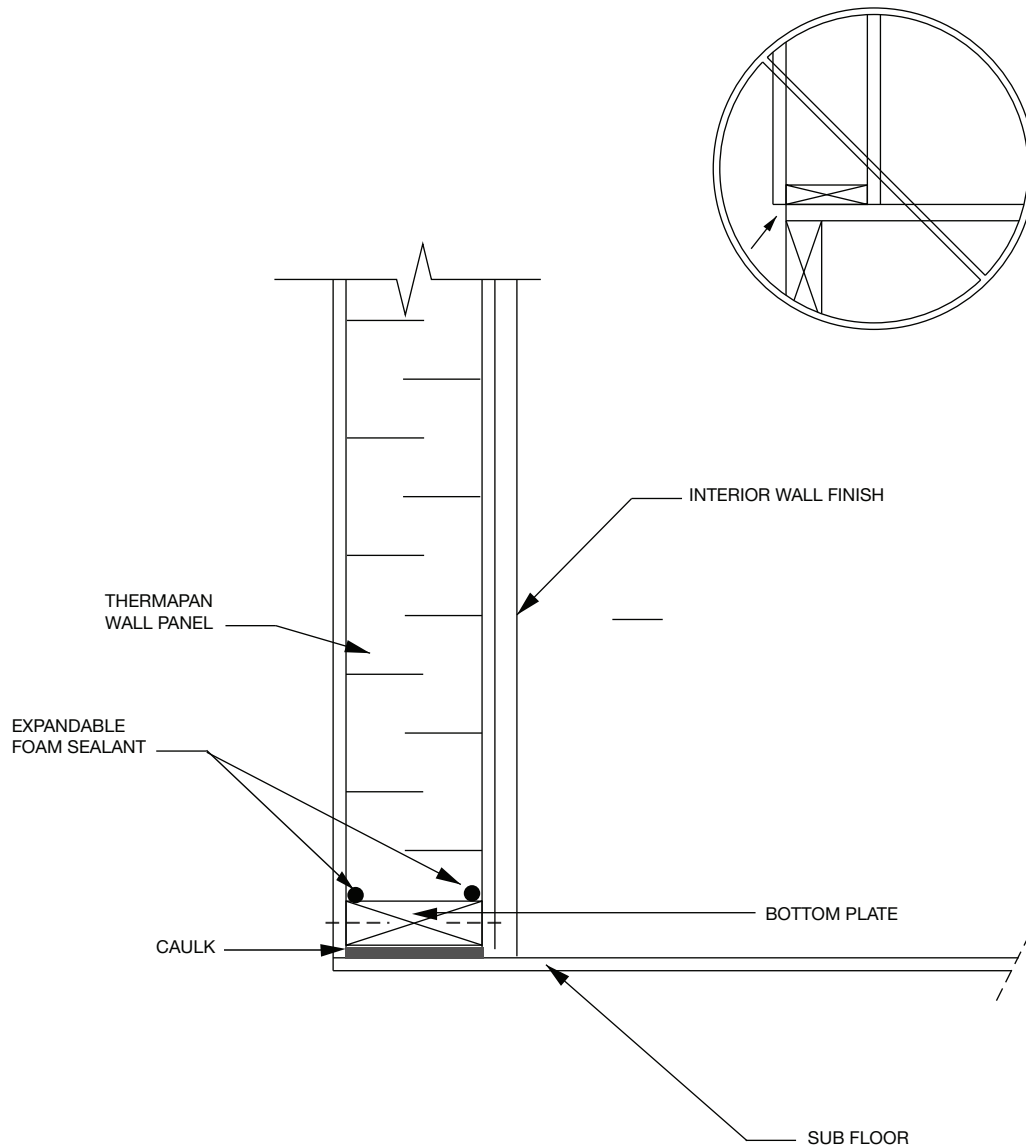
REVISION

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JUNE 2016

6

W-4



NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE

SILL PLATE DETAIL

PROJECT

REFERENCE

SCALE

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DATE

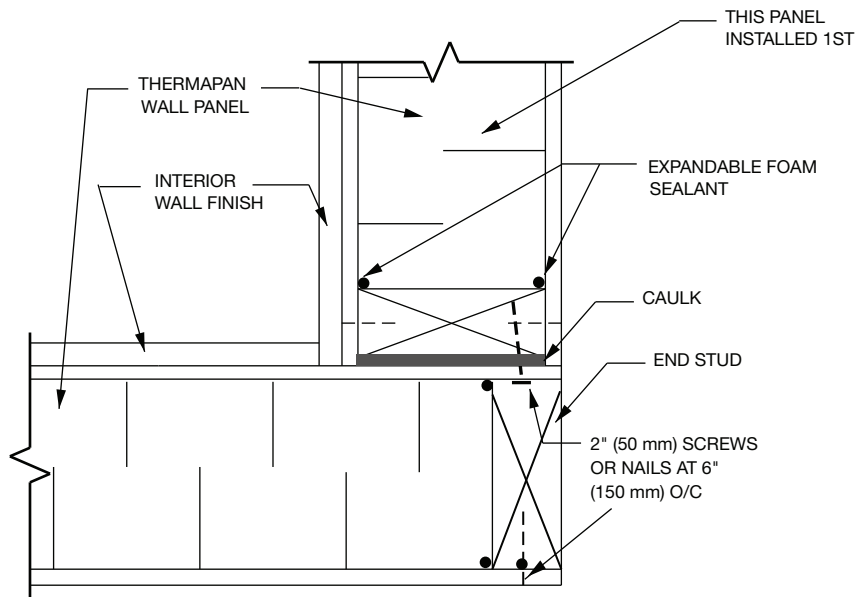
JUNE 2016

REVISION

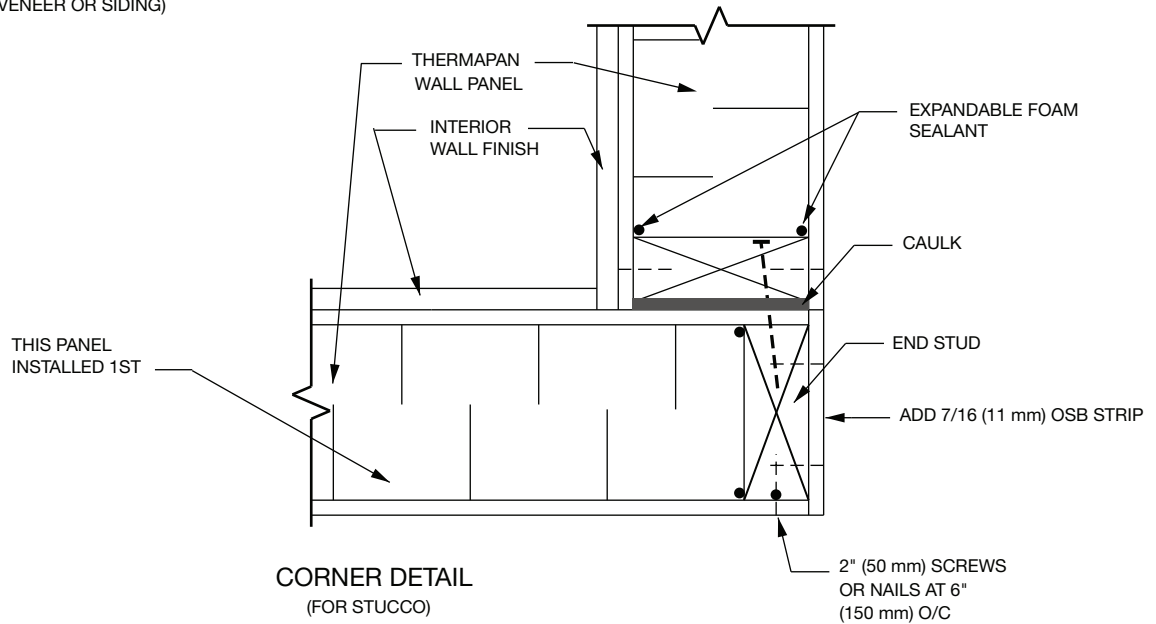
DWG. No.

5

W-5



CORNER DETAIL
(FOR BRICK VENEER OR SIDING)



CORNER DETAIL
(FOR STUCCO)

NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE

**WALL BUTT CORNER
CONNECTION DETAIL**

PROJECT

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DATE

JUNE 2016

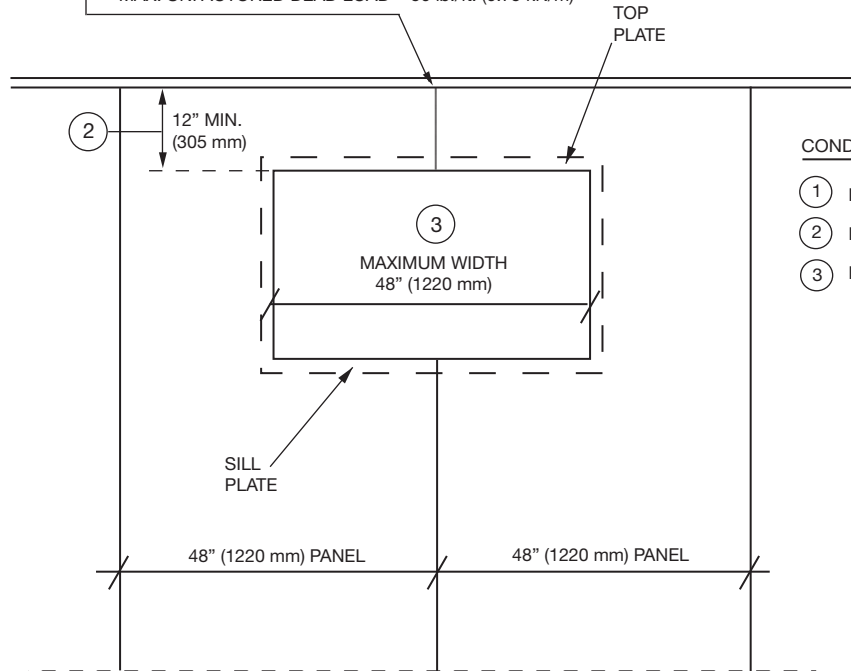
REVISION

DWG. No.

5

W-6

- ① NON-LOAD BEARING WALL:
 MAX. UNFACTORED LIVE LOAD = 160 lb./ft. (2.4 kN/m)
 MAX. UNFACTORED DEAD LOAD = 50 lb./ft. (0.75 kN/m)

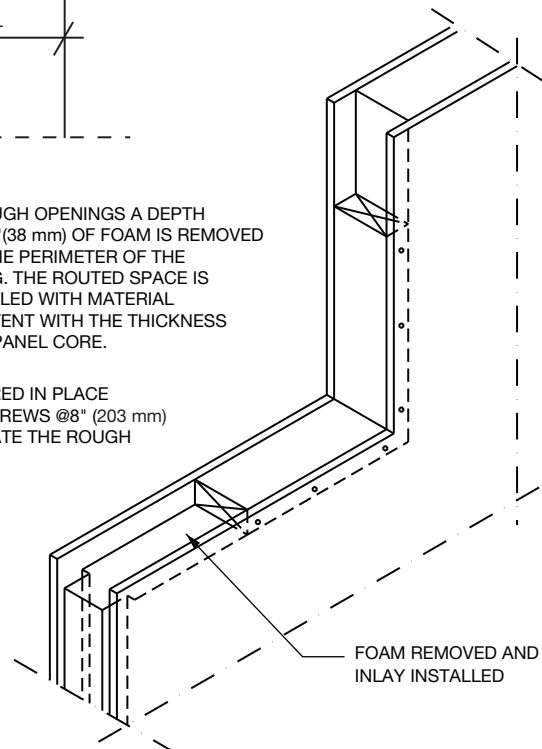


CONDITIONS

- ① NON-LOAD BEARING WALL
 ② MINIMUM LINTEL HEIGHT OF 12" (305 mm)
 ③ MAXIMUM OPENING WIDTH OF 48" (1220 mm)

FOR ROUGH OPENINGS A DEPTH OF 1-1/2" (38 mm) OF FOAM IS REMOVED FROM THE PERIMETER OF THE OPENING. THE ROUTED SPACE IS THEN FILLED WITH MATERIAL CONSISTENT WITH THE THICKNESS OF THE PANEL CORE.

THESE ARE SECURED IN PLACE WITH NAILS OR SCREWS @8" (203 mm) O/C MAX., TO CREATE THE ROUGH OPENING.



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TITLE

WINDOW CUT-OUT (NON-LOAD BEARING WALL)

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SCALE

N.T.S.

DATE

FEBRUARY 2012

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2

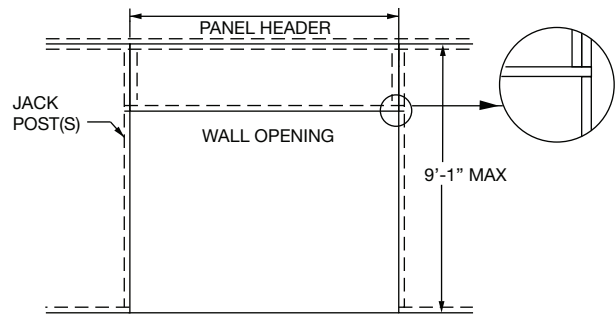
W-7

DETAIL 1

CONDITION 1:

- (1) MAX 9'-1" WALL HEIGHT
- (2) MAX 5,000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK STUD

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.

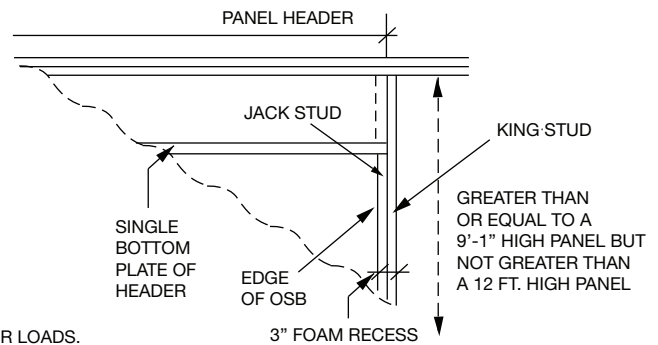


DETAIL 2

CONDITION 2:

- (1) $9'-1" \leq X \leq 12'$ (WALL HEIGHT)
- (2) MAX 5,000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK AND KING STUD

NOTE: OSB TO BE ADDED TO BOTH SIDES OF STUDS WHEN ONLY 1-1/2" FOAM RECESS IS PROVIDED IN WALL PANEL. REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



DETAIL 3

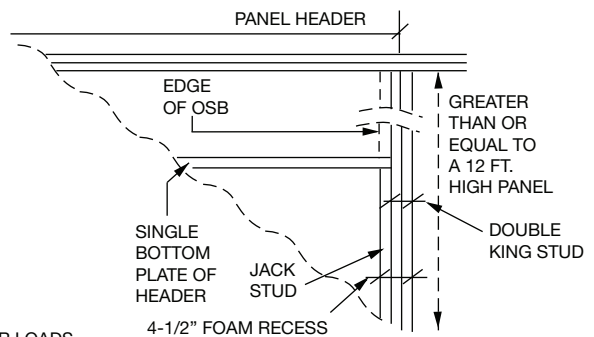
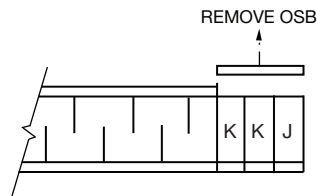
INSTALLING STUDS:

1. REMOVE OSB ONE SIDE
2. REMOVE FOAM
3. INSTALL STUDS
4. REPLACE OSB

CONDITION 3:

- (1) $X \geq 12'$ (WALL HEIGHT)
- (2) MAX 5000 LBS. (22.3 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) SINGLE JACK AND DOUBLE KING STUDS

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



DETAIL 4

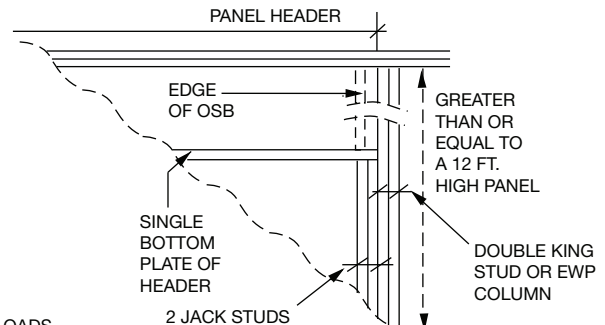
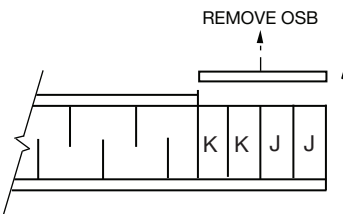
INSTALLING STUDS:

1. REMOVE OSB ONE SIDE
2. REMOVE FOAM
3. INSTALL STUDS
3. REPLACE OSB

CONDITION 4:

- (1) $X \geq 12'$ (WALL HEIGHT)
- (2) MAX 10,000 LBS. (44.6 kN) FACTORED REACTION
- (3) CONFIRM JACK POST REACTIONS
- (4) DOUBLE JACK AND DOUBLE KING STUDS

NOTE: REFER TO APPENDIX A OR DESIGN HANDBOOK FOR ALLOWABLE HEADER LOADS.



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TITLE

PANEL LINTEL/HEADER
DETAILS & BEARING
CONDITIONS 1 - 4

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

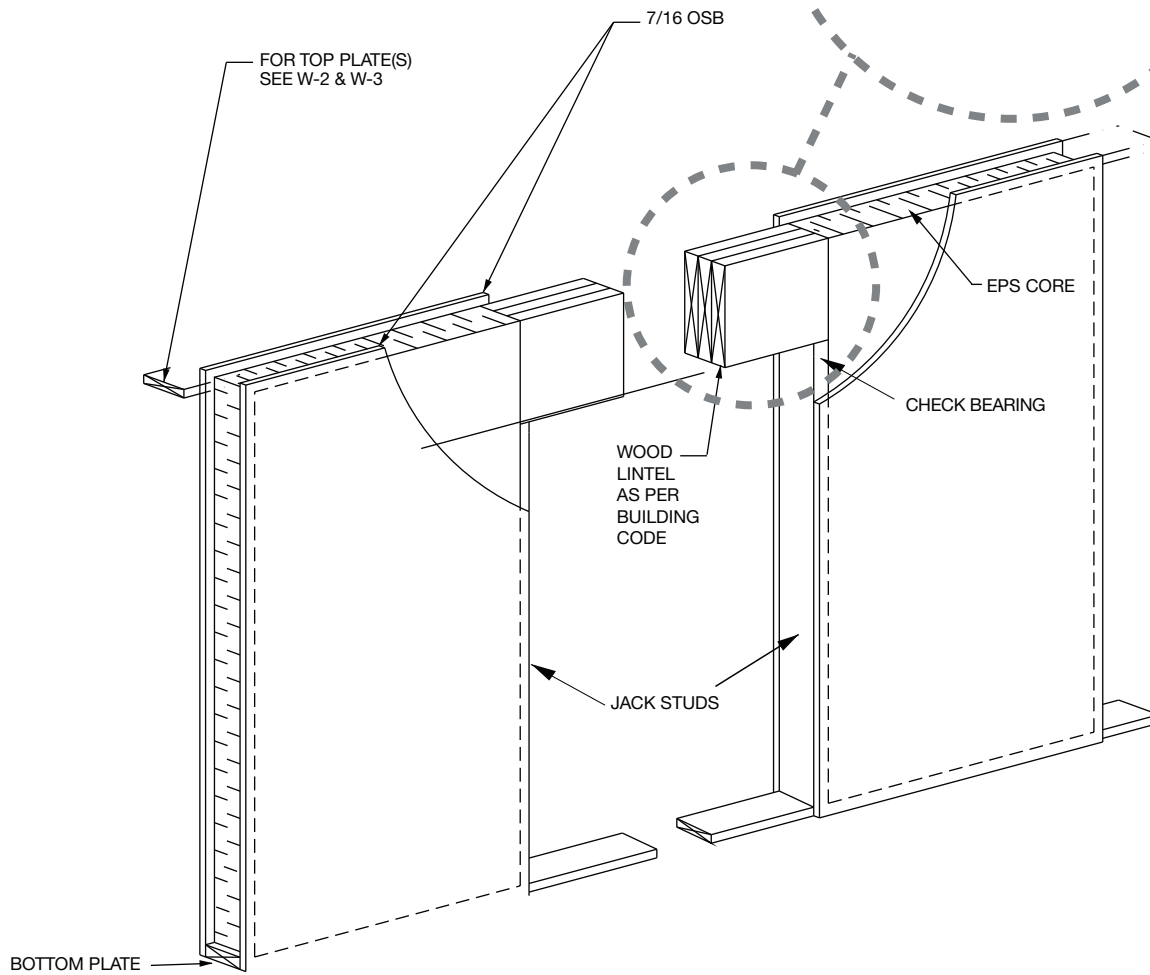
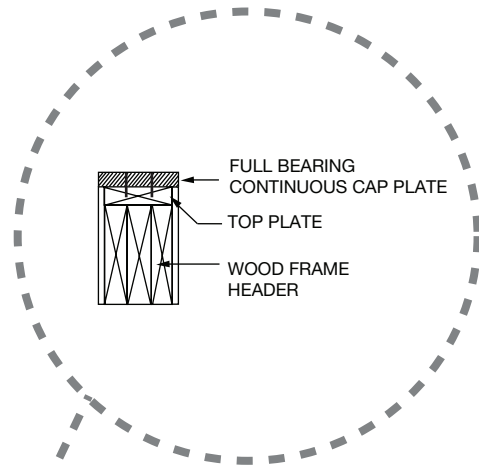
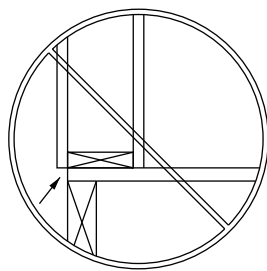
NOVEMBER 2023

REVISION

DWG. No.

1

W-8



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TITLE

LINTEL DETAIL (HEADER BY OTHERS)

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

NOVEMBER 2021

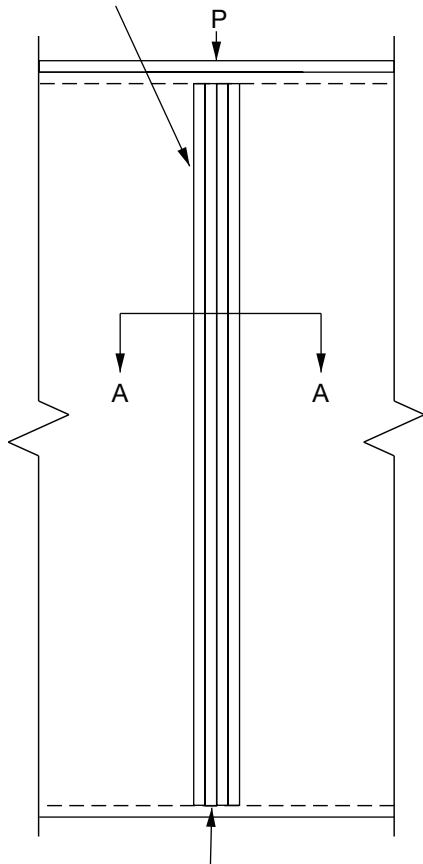
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5

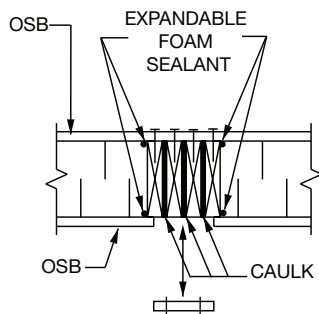
W-9

COLUMN (BUILT-UP STUDS, TIMBER, STEEL, ETC.)
INSTALL AS PER LOCAL BUILDING CODE.



REMOVE BOTTOM PLATE SECTION AND INSTALL
COLUMN DIRECTLY ONTO FLOOR IF LOAD IS GREATER
THAN BEARING RESISTANCE OF WOOD PLATE.

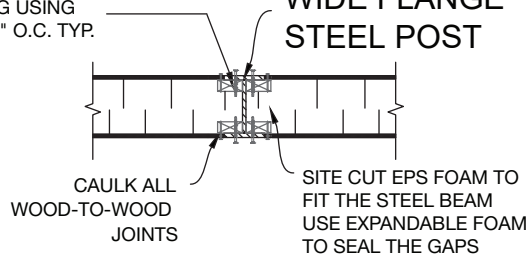
SECTION A-A



TYPICAL STEEL POST TO SIP CONNECTIONS

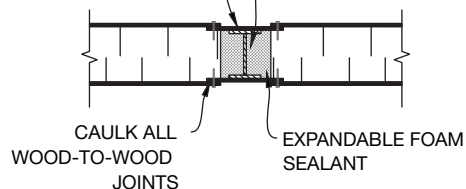
FASTEN WOOD BLOCKING TO STEEL
COLUMN USING STEEL-TO-WOOD
SCREWS AND FASTEN SIP PANEL SKIN
TO BLOCKING USING
8d NAILS @ 6" O.C. TYP.

WIDE FLANGE STEEL POST



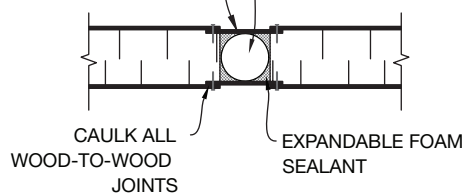
FASTEN STRIP OF
OSB/PLYWOOD
TO SIP SKIN USING 8d
NAILS @ 6" O.C. TYP.

WIDE FLANGE STEEL POST



FASTEN STRIP OF
OSB/PLYWOOD
TO SIP SKIN USING 8d
NAILS @ 6" O.C. TYP.

ROUND STEEL POST



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TITLE

POINT LOAD DETAIL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

AUGUST 2025

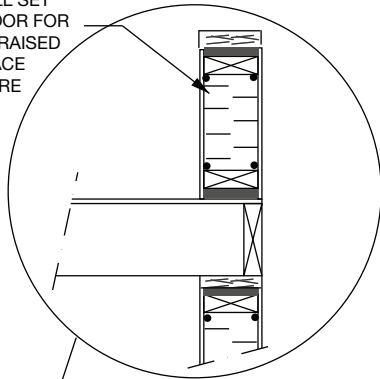
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5

DWG. No.

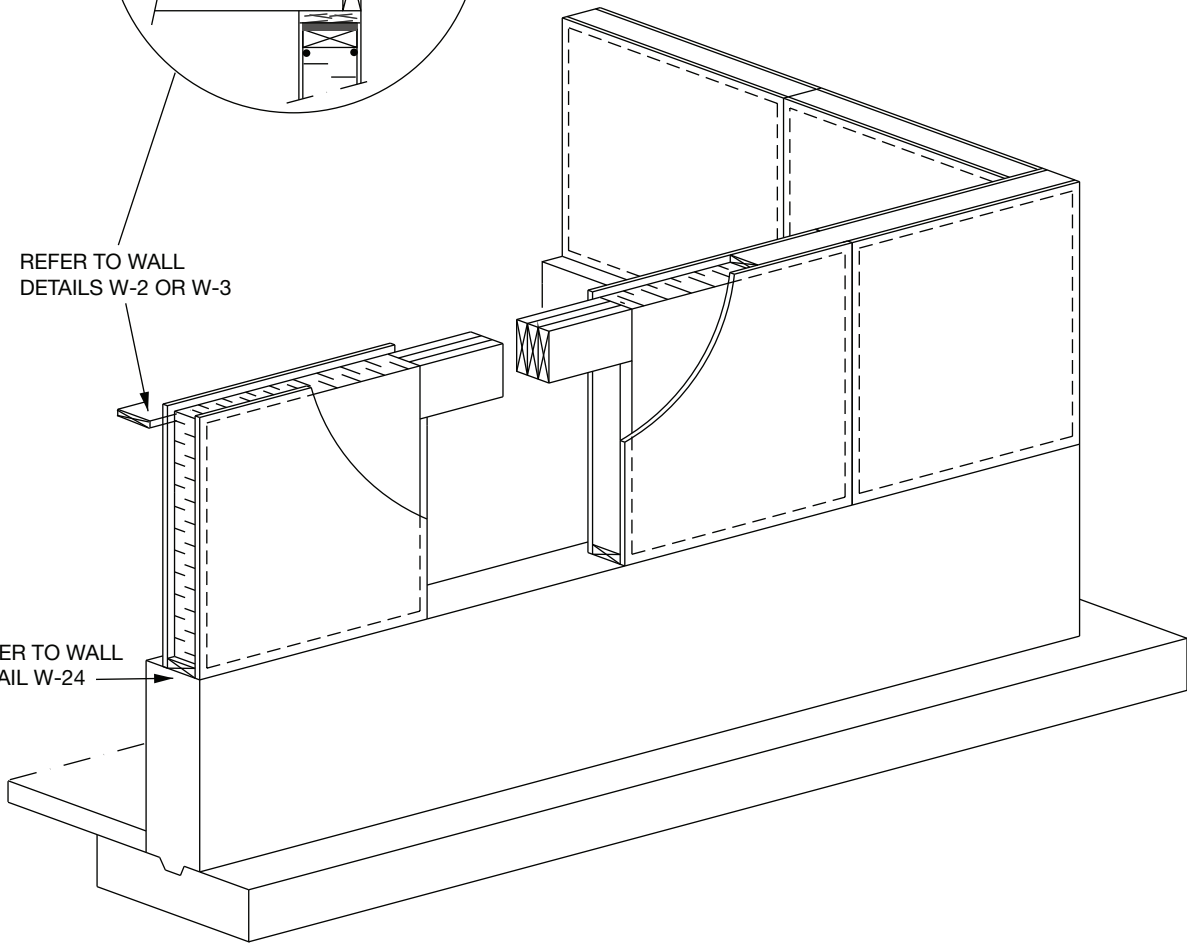
W-10

KNEE WALL SET
ONTO FLOOR FOR
ATTIC OR RAISED
ROOF SPACE
ENCLOSURE



REFER TO WALL
DETAILS W-2 OR W-3

REFER TO WALL
DETAIL W-24



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TITLE

KNEE WALL DETAIL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

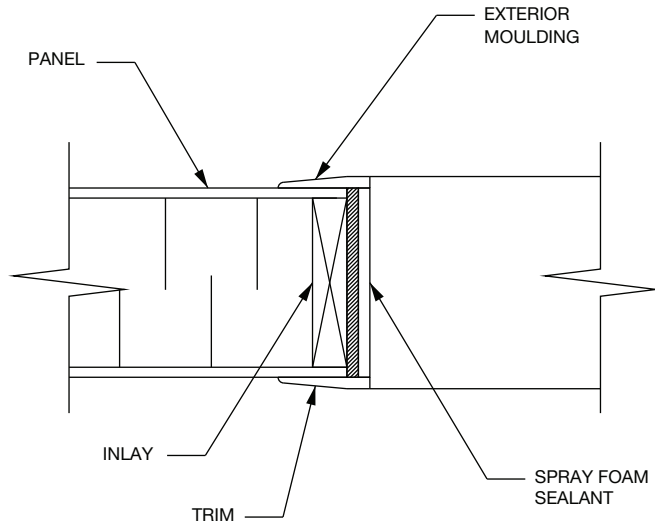
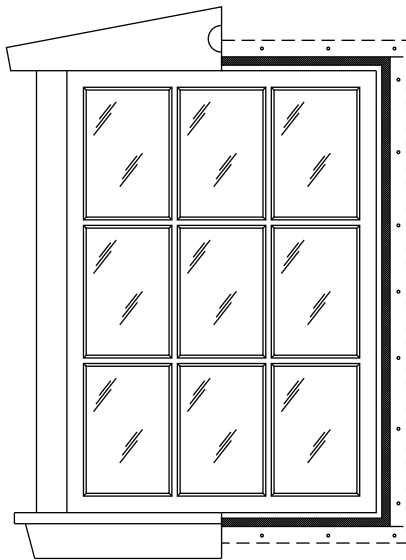
MAY 2009

REVISION

DWG. No.

1

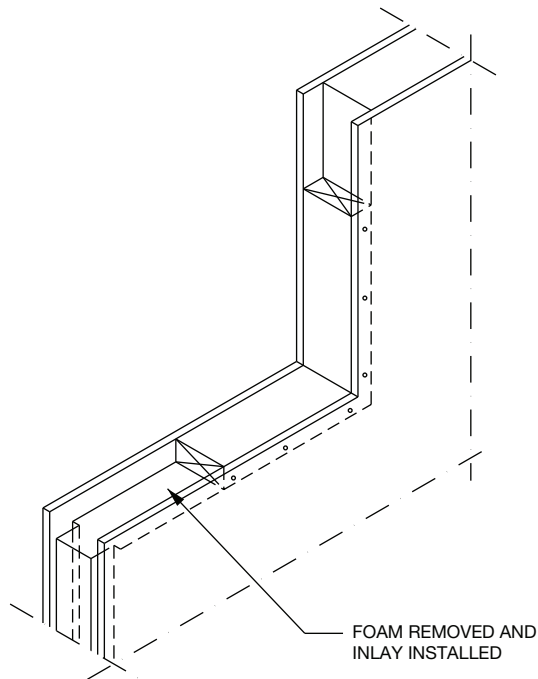
W-11



FOR ROUGH OPENINGS A DEPTH OF 1 1/2 " OF FOAM IS REMOVED FROM THE PERIMETER OF THE OPENING. THE ROUTED SPACE IS THEN FILLED WITH A MATERIAL CONSISTENT WITH THE THICKNESS OF THE PANEL CORE.

THESE ARE SECURED IN PLACE WITH NAILS OR SCREWS @8" O/C MAX., TO CREATE THE ROUGH OPENING.

THE WINDOW OR DOOR IS THEN INSTALLED CONVENTIONALLY.



NOTE: REFER TO LINTEL DETAILS W-7.



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TITLE

DOOR & WINDOW ROUGH OPENINGS

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

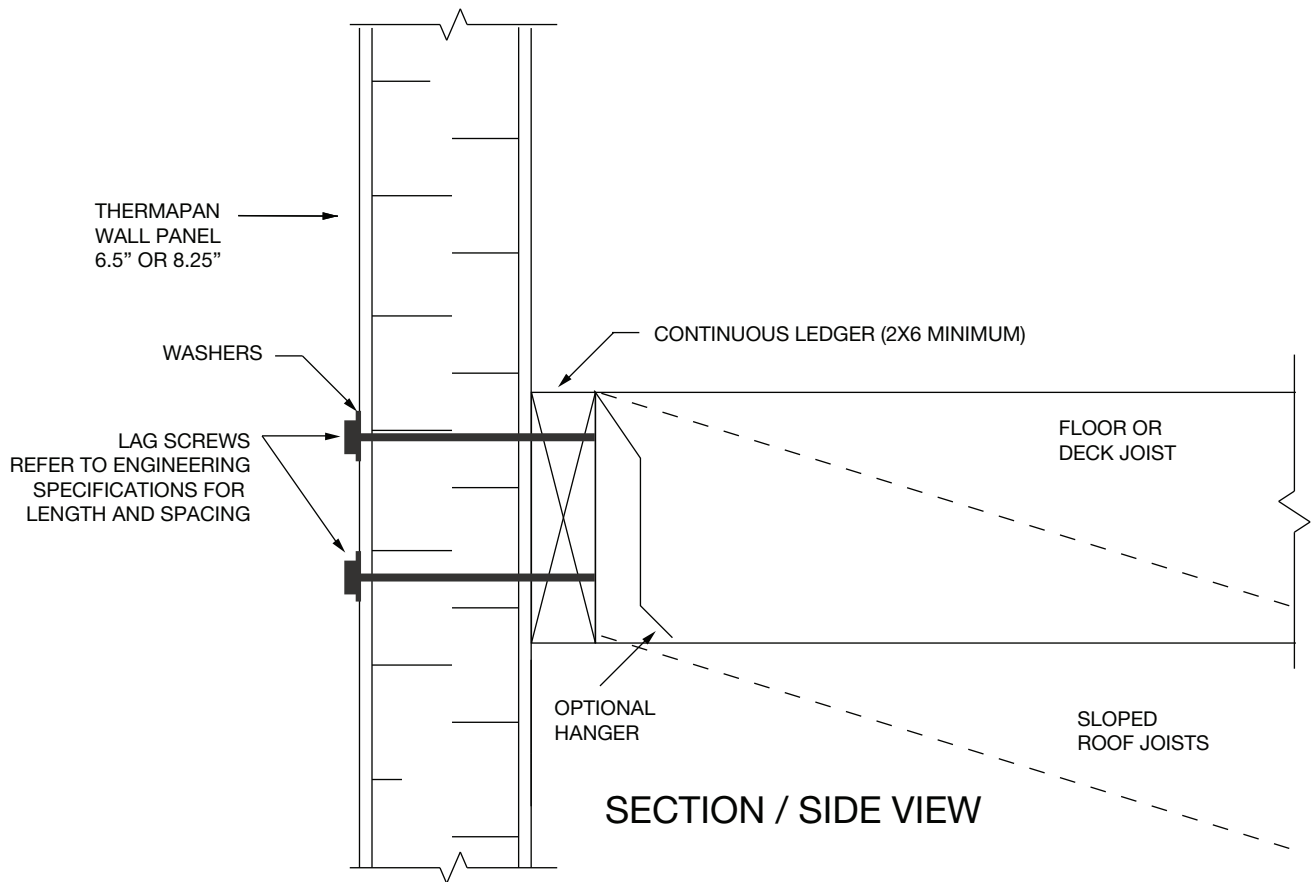
FEBRUARY 2012

REVISION

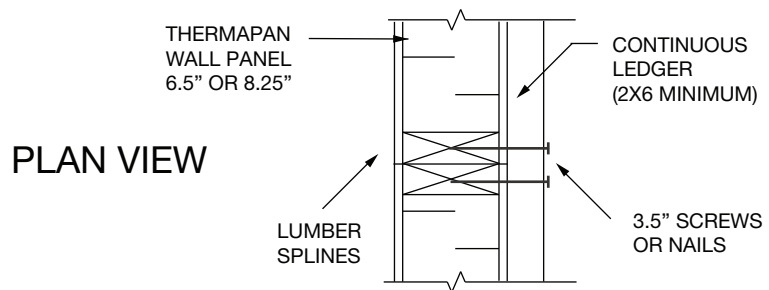
DWG. No.

3

W-12



LEDGER CAN ALSO BE NAILED OR SCREWED (3.5" LONG) INTO LUMBER SPLINES (IF USED) AT 4' O/C



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TITLE

**WOOD LEDGER ATTACHED
TO SIP WALL PANEL®**

PROJECT

REFERENCE

SCALE

NTS

DATE

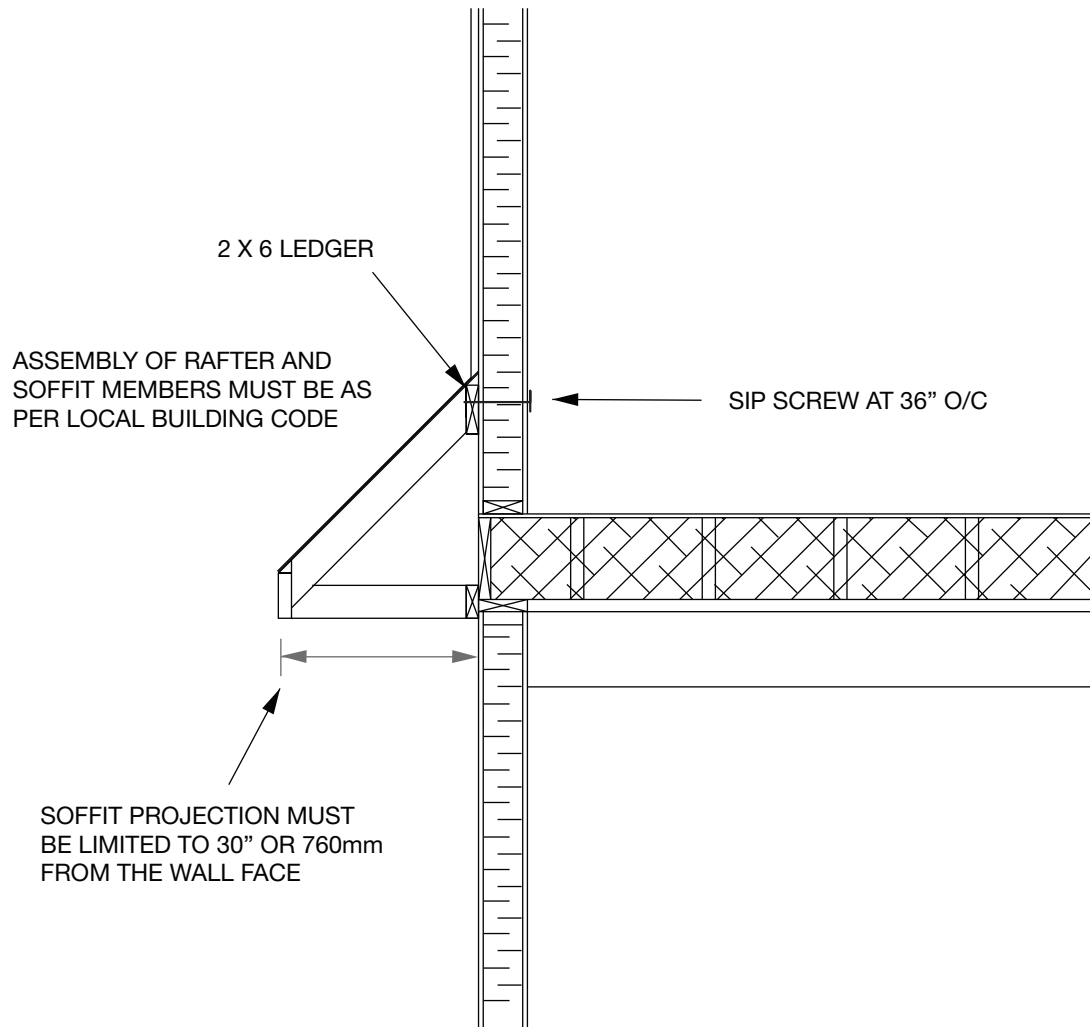
REVISION

DWG. No.

APRIL 2020

3

W-13



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1-877-443-WALL (9255)

TITLE

KICKER TRUSS DETAIL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

OCTOBER 2021

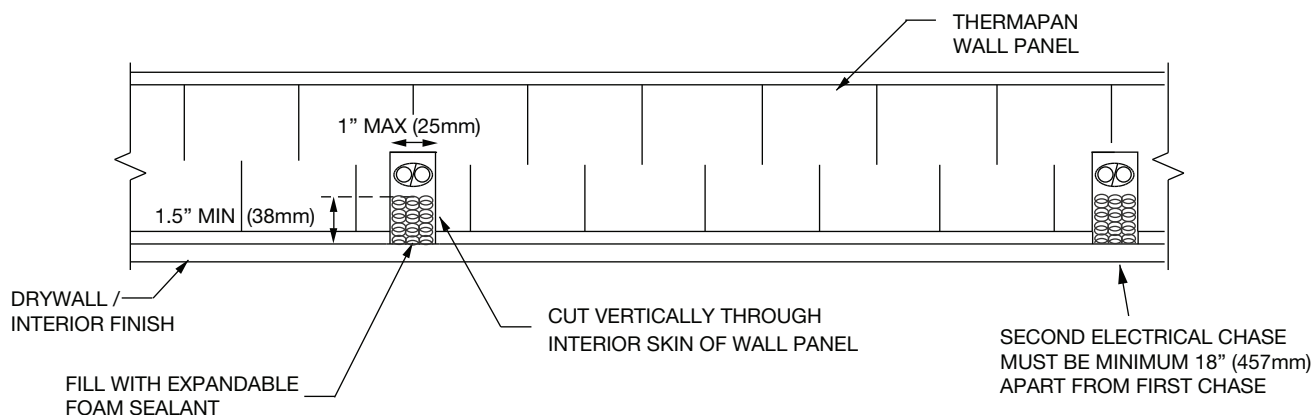
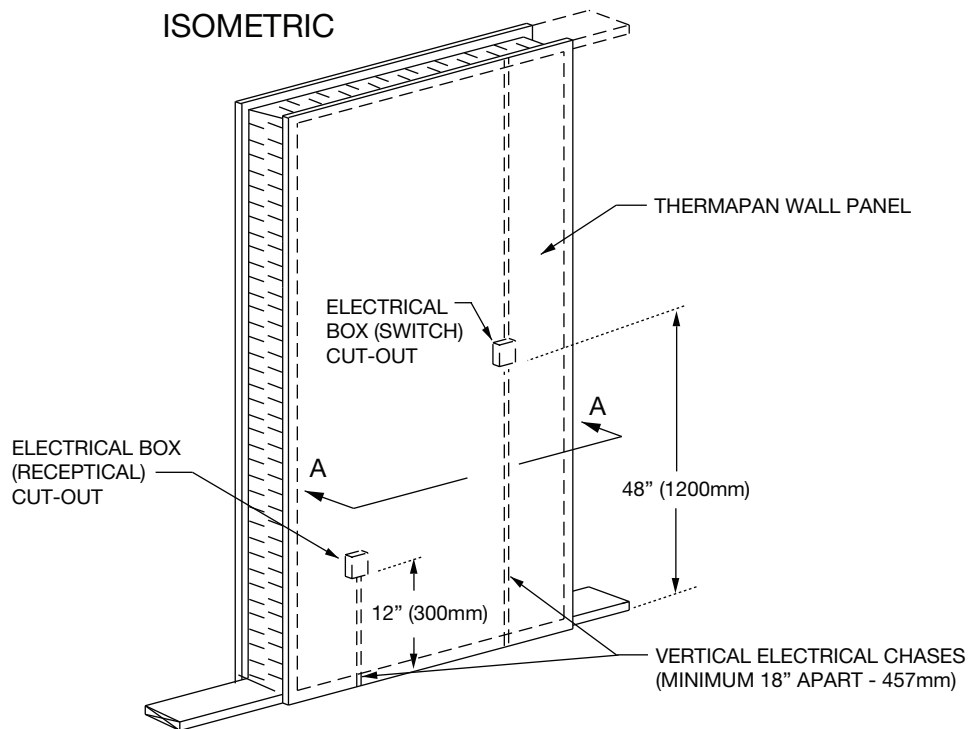
REVISION

DWG. No.

1

W-14

ISOMETRIC



SECTION A-A

NOTES:

1. MAXIMUM OF TWO (2) VERTICAL CHASES PERMITTED FOR WALL PANELS 2'-6" (760mm) TO 4' (1220 mm) WIDE, MINIMUM 18"(457mm) APART.
2. MAXIMUM OF ONE (1) VERTICAL CHASE PERMITTED FOR WALL PANELS LESS THAN 2'-6" WIDE (760mm) .



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TITLE

VERTICAL ELECTRICAL
CHASE®

PROJECT

REFERENCE

SCALE

DATE

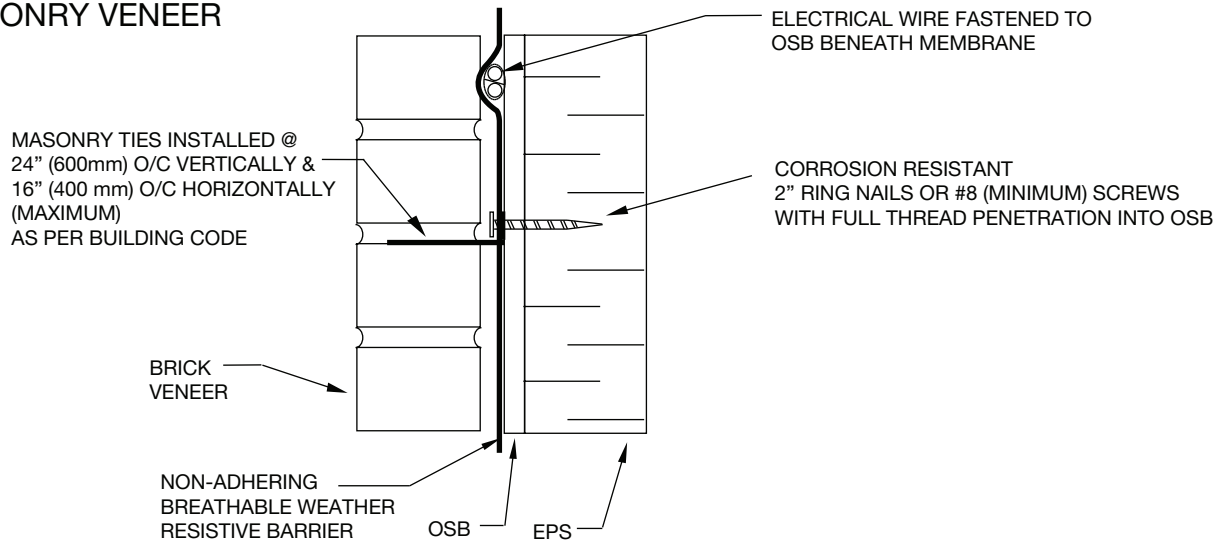
FEBRUARY 2018

REVISION

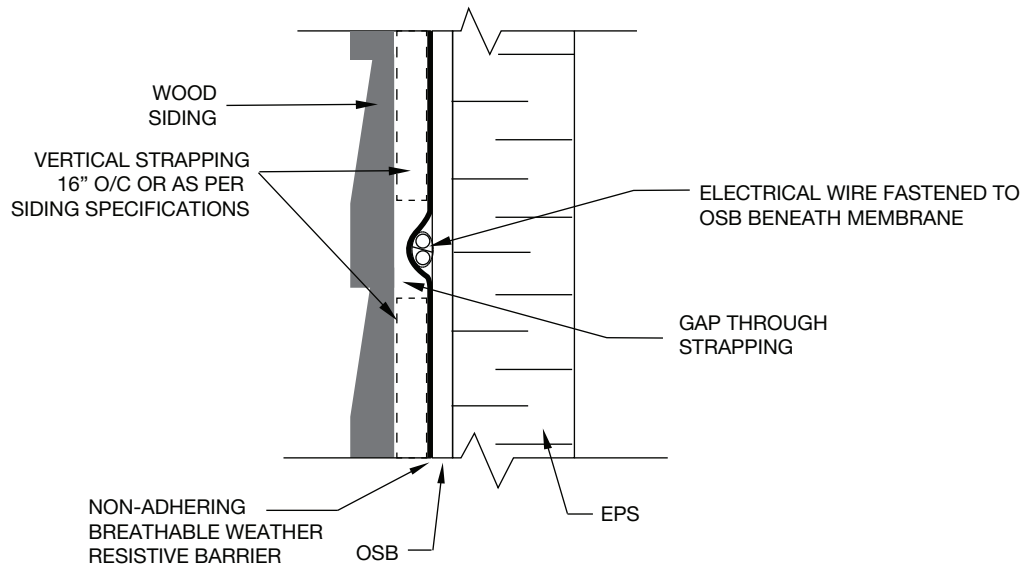
DWG. No.

2 W-15

MASONRY VENEER



WOOD SIDING



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TITLE

**ELECTRICAL WIRE FASTENED
TO SIP EXTERIOR**

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

MARCH 2026

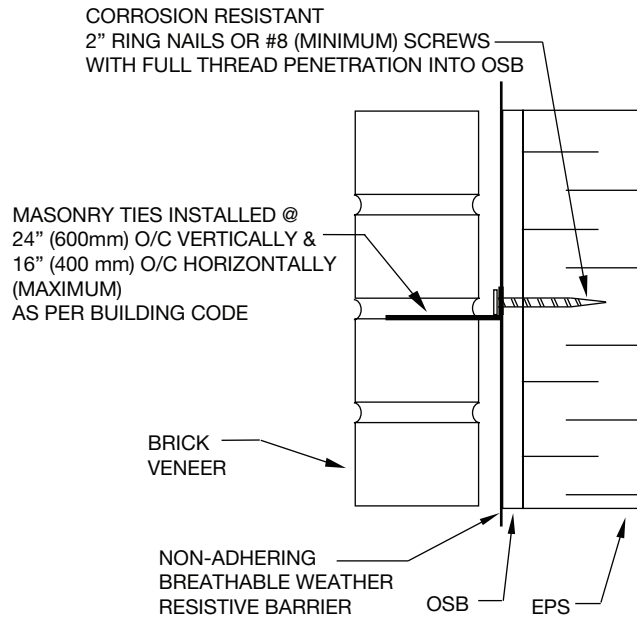
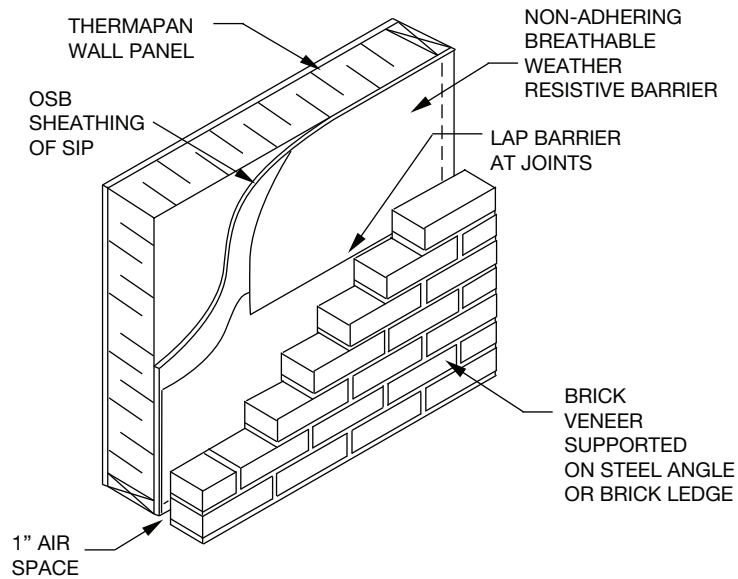
REVISION

DWG. No.

1

W-16

MASONRY VENEER



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www.thermapan.com
1-877-443-WALL (9255)

TITLE

**EXTERIOR WALL CLADDING
BRICK & CULTURED STONE**

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

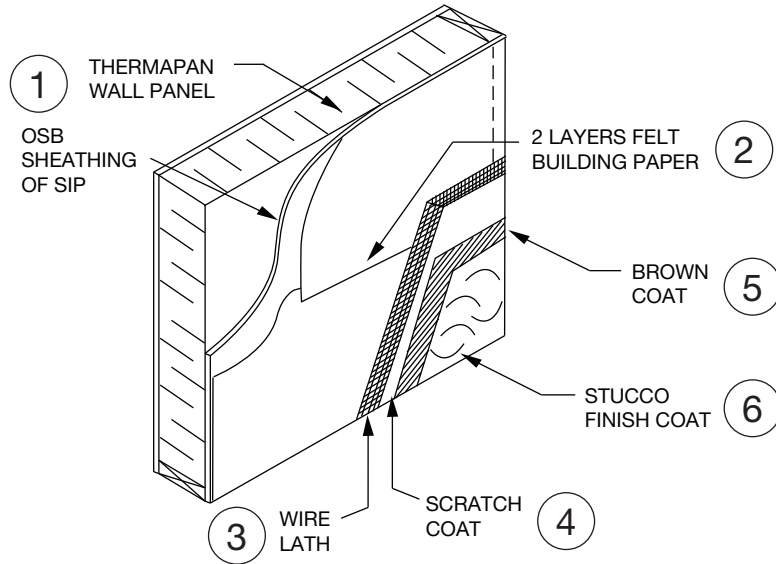
MARCH 2023

REVISION

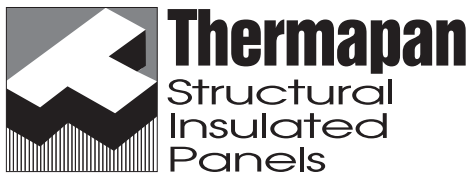
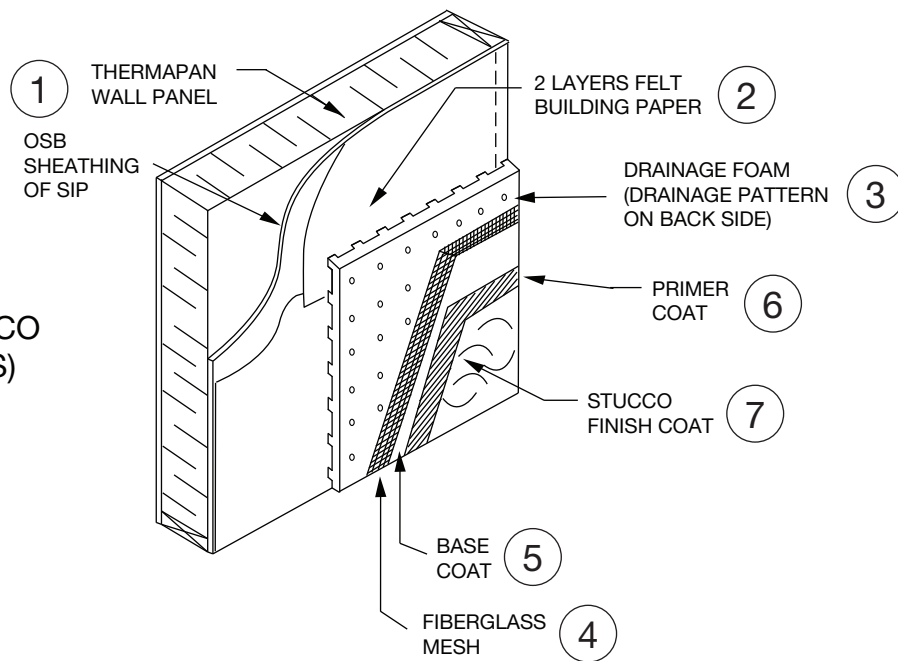
DWG. No.

W-17

STUCCO (TRADITIONAL)



STUCCO (EIFS)



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1-877-443-WALL (9255)

TITLE

EXTERIOR WALL CLADDING STUCCO (TRADITIONAL & EIFS)

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

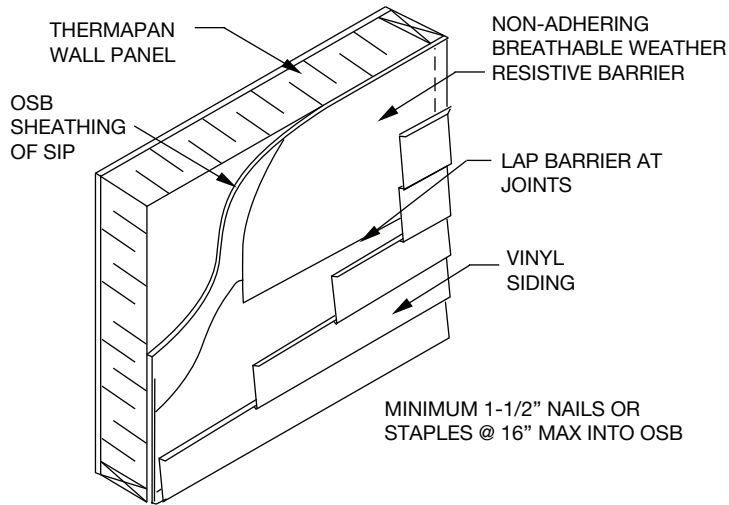
MARCH 2023

REVISION

DWG. No.

W-18

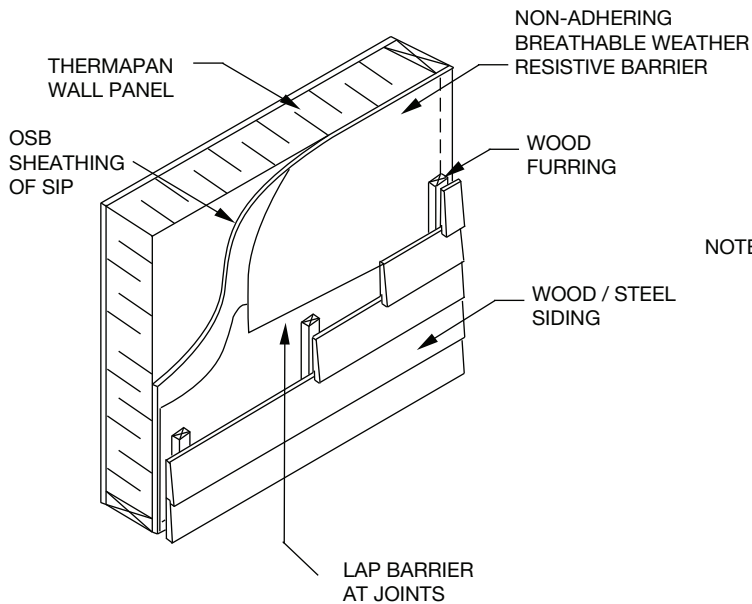
VINYL SIDING



FIBRE CEMENT SIDING

FOR FIBRE CEMENT LAP SIDING REFER TO MANUFACTURER'S RECOMMENDED FASTENING METHODS.

WOOD OR STEEL SIDING



NOTES: ALL NAILS TO BE RING (ANNULARLY THREADED).

FURRING TO BE AS RECOMMENDED BY SIDING MANUFACTURER.

REFERENCE WALL CLADDING MANUFACTURER INSTALLATION INSTRUCTIONS FOR SIDING/CLADDING CONNECTION TO SIP WALL.



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TITLE

EXTERIOR WALL CLADDING -
SIDING

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

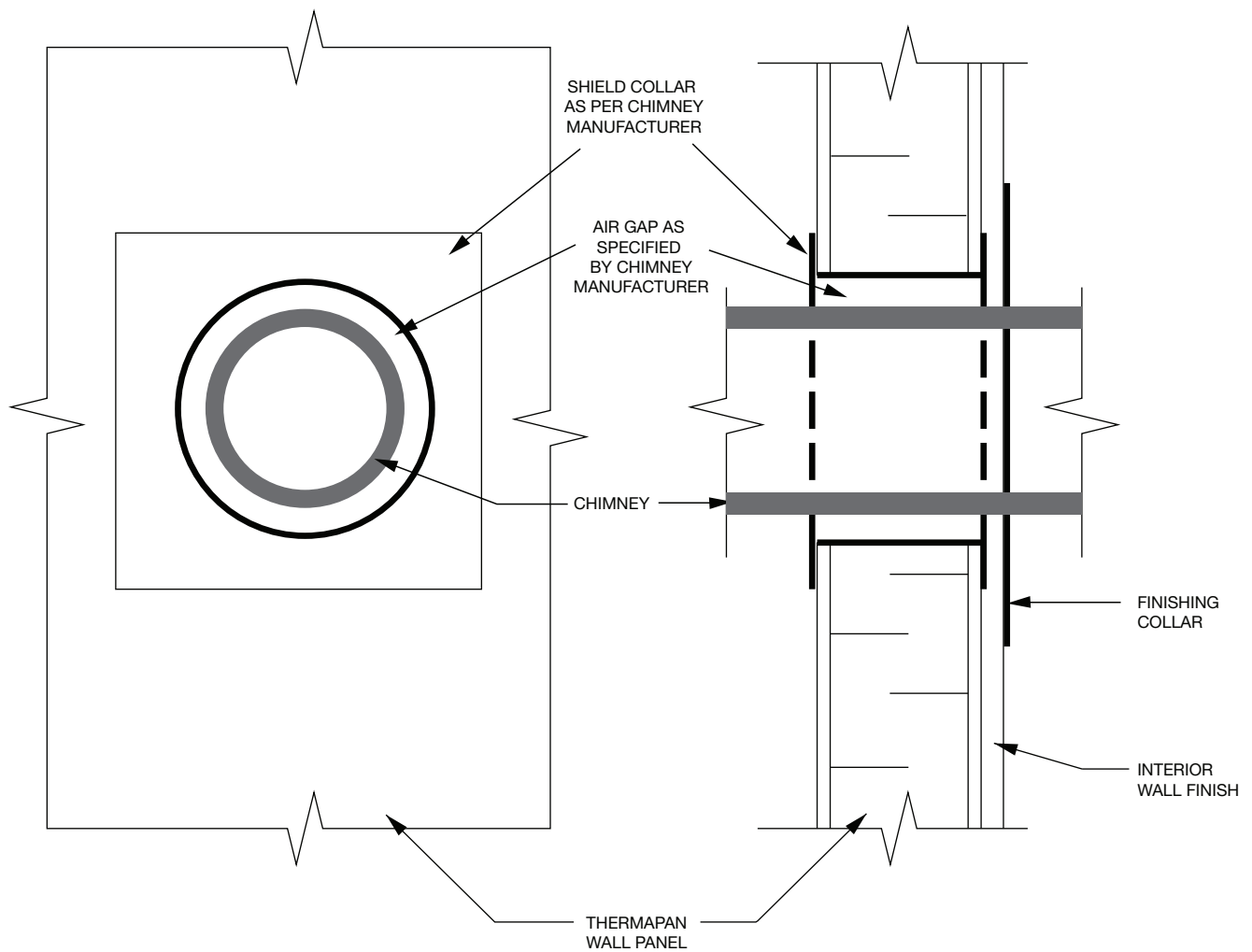
APRIL 2026

REVISION

5

DWG. No.

W-19



NOTE: ABOVE DETAILS ARE TYPICAL REQUIREMENTS TO INSTALL A PREFABRICATED METAL CHIMNEY IN A THERMAPAN STRUCTURAL INSULATED PANEL. THE CHIMNEY INSTALLATION MUST COMPLY WITH THE CHIMNEY MANUFACTURERS'S SPECIFICATION AND THE APPLICABLE BUILDING CODE.



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TITLE

PRE-FABRICATED METAL
CHIMNEY INSTALLATION IN WALL

PROJECT

REFERENCE

SCALE

N.T.S.

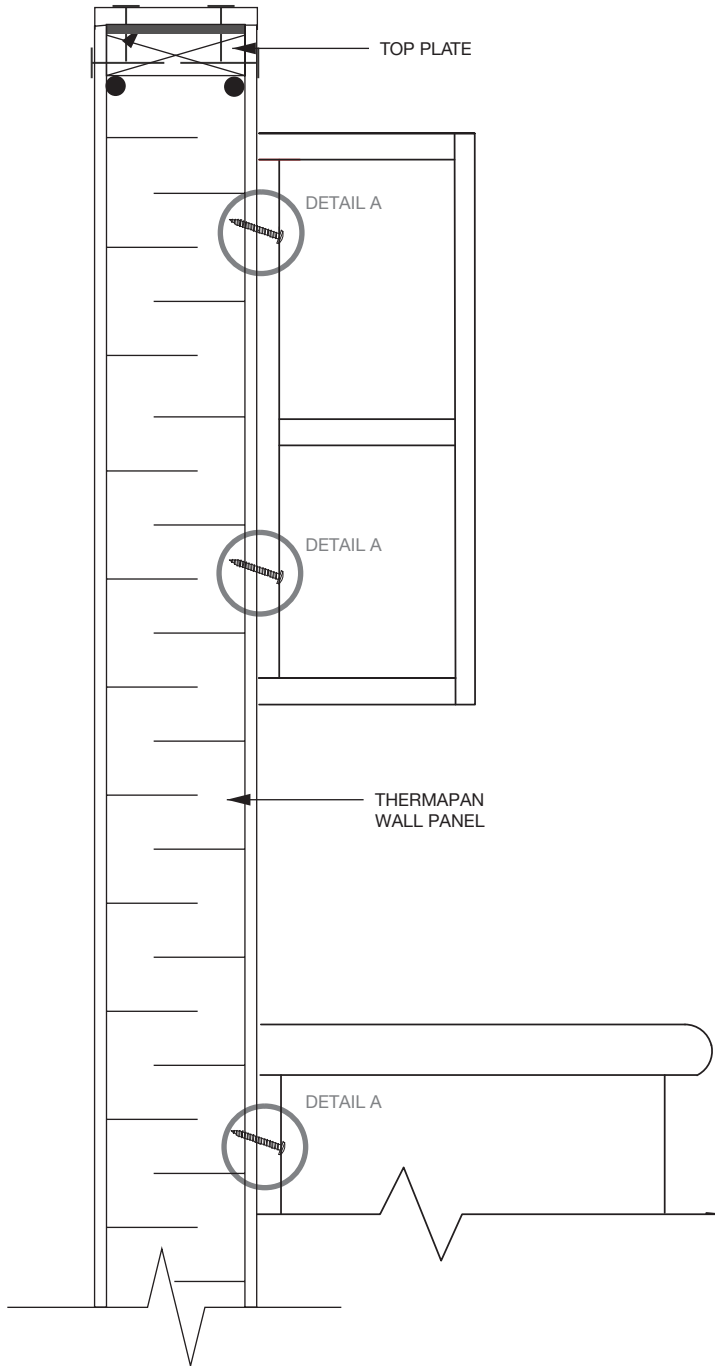
DATE

FEBRUARY 2019

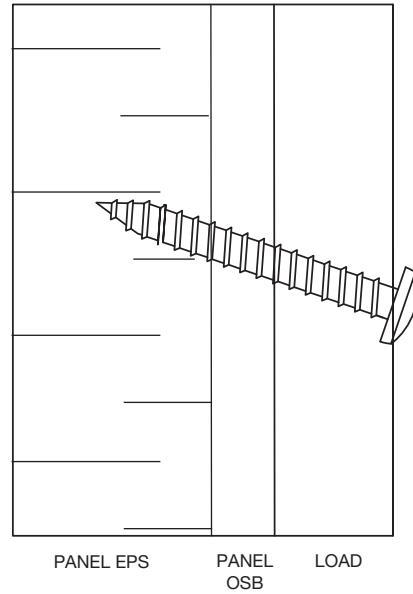
REVISION

DWG. No.

W-21

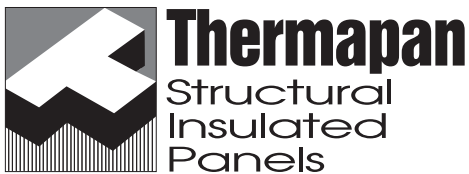


DETAIL A



NOTE: NUMBER 10 TYPE A SHEET METAL SCREWS CAN RESIST A PULL OUT OF 106 POUNDS IN 7/16" OSB. CONTRACTOR TO CONFIRM LOAD TO BE SECURED AND NUMBER OF FASTENERS REQUIRED. FULL THICKNESS OF OSB TO RECEIVE SCREW THREAD ON ANGLE AS DETAILED

*THE GIVEN LOAD CAPACITY OF THE SCREW IS BASED ON THE AVERAGE ULTIMATE FAILURE LOAD DIVIDED BY A FACTOR OF SAFETY OF 3 AND TAKING INTO ACCOUNT A LONG TERM LOAD DURATION FACTOR OF 0.9. DESIGNERS MUST USE THE APPROPRIATE SAFETY FACTOR AND LOAD DURATION FACTOR FOR EACH LOADING CONDITION.



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1-877-443-WALL (9255)

TITLE

SCREW FASTENER DETAIL FOR SECURING SHELVING TO THERMAPAN PANEL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

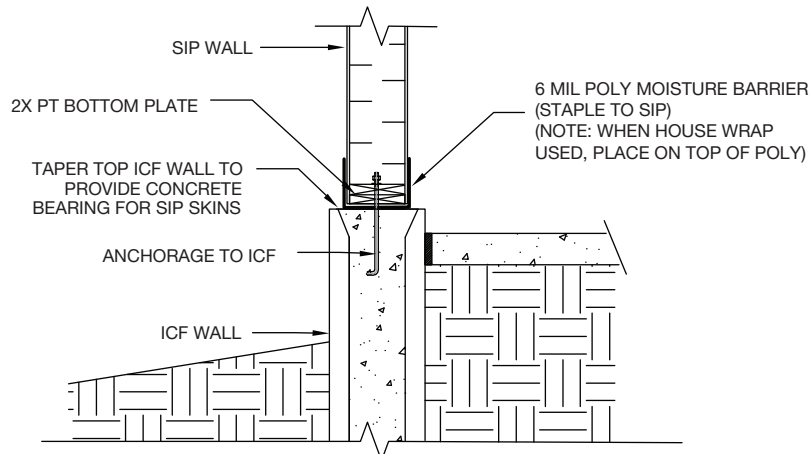
MARCH 2022

REVISION

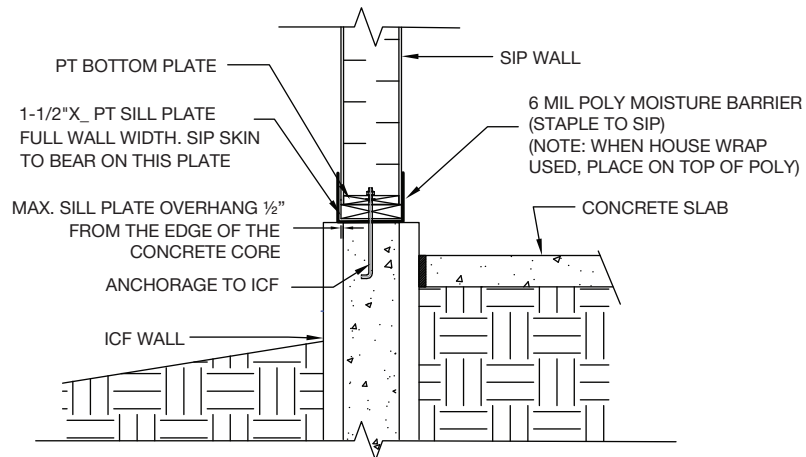
1

DWG. No.

W-22



**SIP WALL TO ICF CONNECTION
(TAPERED TOP OF ICF WALL)**



**SIP WALL TO ICF CONNECTION
(SQUARE TOP OF ICF WALL)**



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TITLE

**WALL SIP TO ICF
CONNECTION DETAIL**

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

APRIL 2026

REVISION

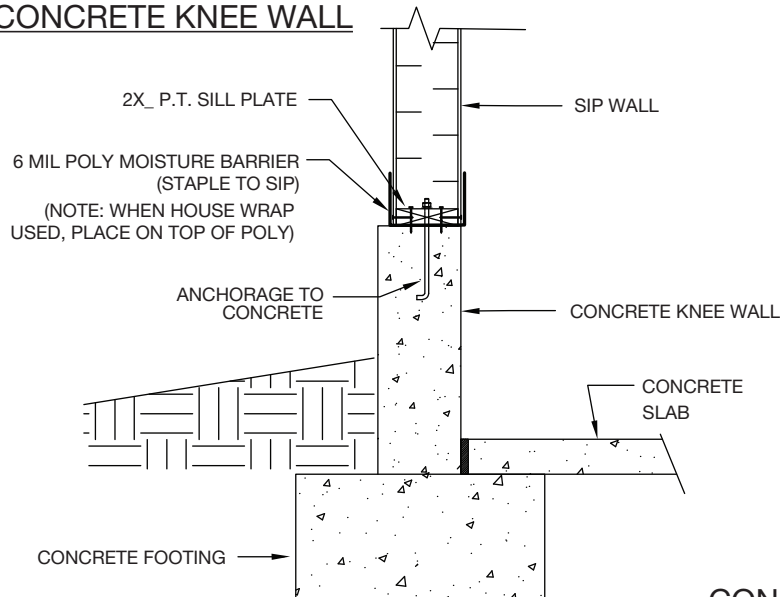
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DWG. No.

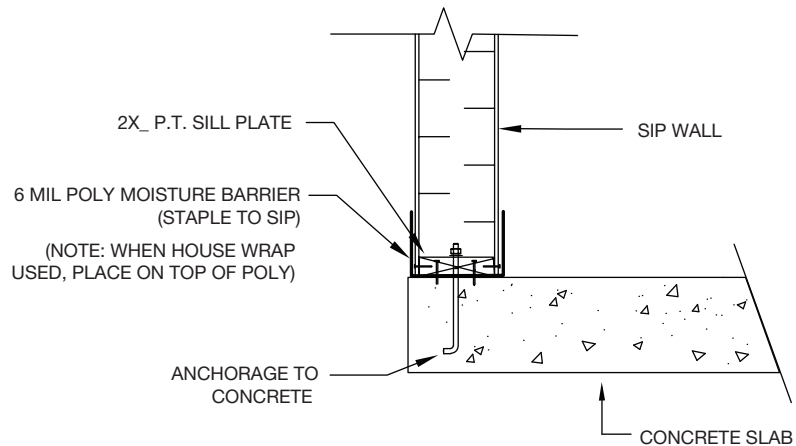
W-23

- NOTE:**
1. THE CONCRETE CONTRACTOR SHALL ENSURE THAT THE KNEE WALL IS DESIGNED TO RESIST LATERAL LOADS AT THE BASE OF THE SIP WALL.
 2. THE CONTRACTOR SHALL ENSURE THAT ALL SIP SKINS (OSB) BEAR FULLY ON THE CONCRETE WALLS. OFFSETTING OF SIP SKINS IS NOT PERMITTED.

CONCRETE KNEE WALL



CONCRETE SLAB



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1-877-443-WALL (9255)

TITLE

SIP WALL TO CONCRETE
KNEE WALL AND SLAB ON GRADE
FOUNDATION CONNECTION

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

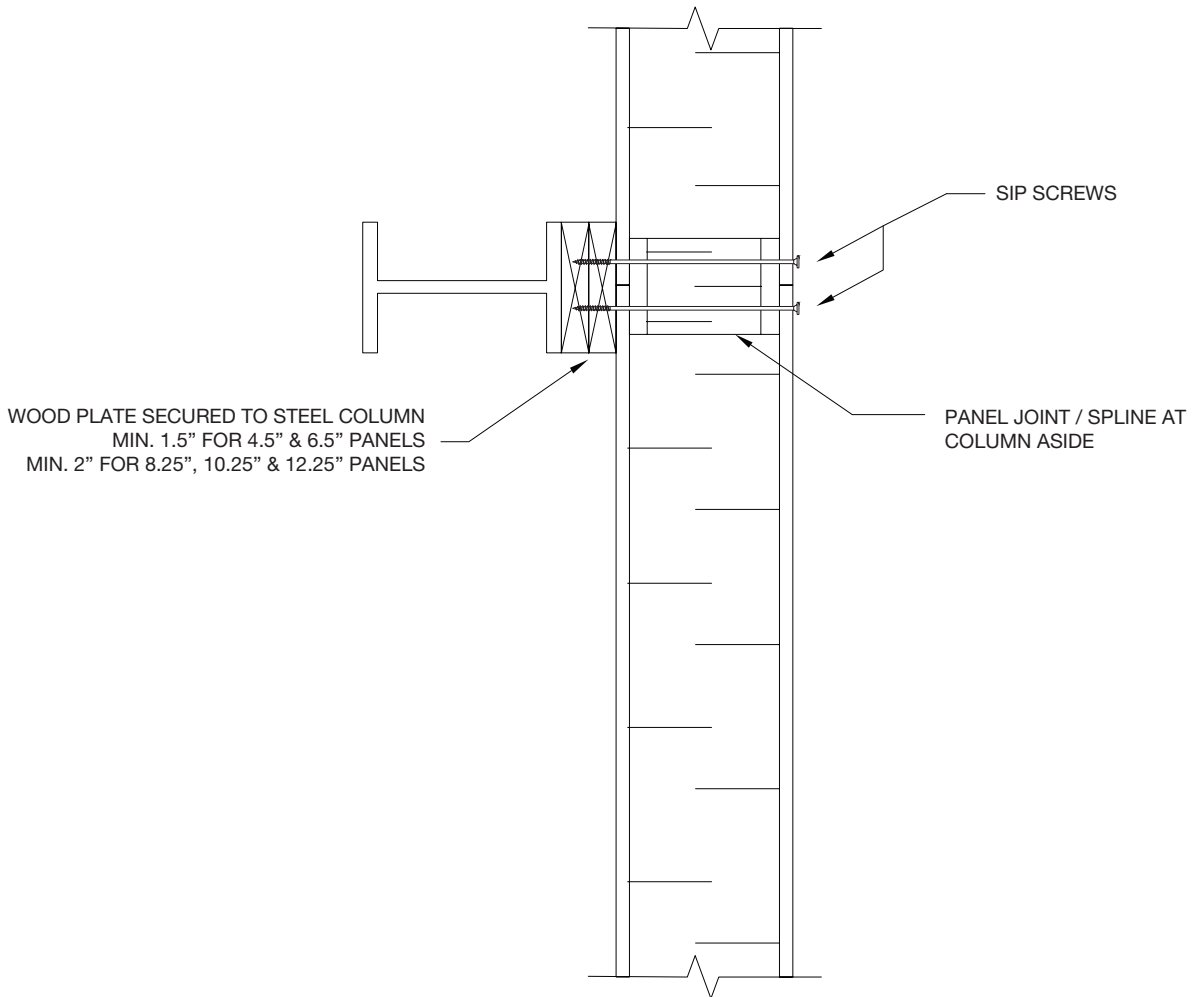
SEPTEMBER 2026

REVISION

2

DWG. No.

W-24



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1-877-443-WALL (9255)

TITLE

WALL SIP TO STEEL COLUMN CONNECTION

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

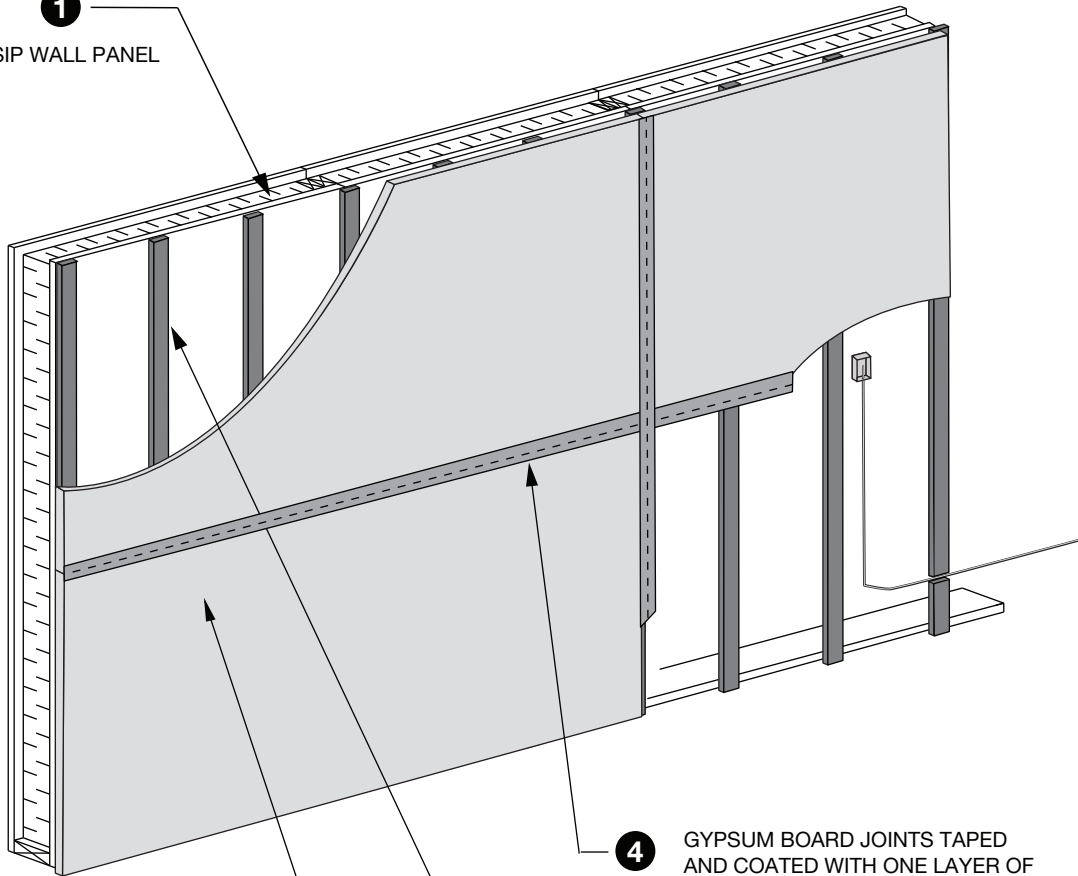
MARCH 2026

REVISION

DWG. No.

W-25

1
SIP WALL PANEL



4 GYPSUM BOARD JOINTS TAPED AND COATED WITH ONE LAYER OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND

2 RESILIENT CHANNEL FASTENED VERTICALLY TO SIP WALL PANEL, SPACED 16" ON CENTRE, WITH 1.25" LONG BUGLE HEAD TYPE W DRYWALL SCREWS

3 SINGLE LAYER OF 5/8" TYPE X GYPSUM BOARD FASTENED HORIZONTALLY TO RESILIENT CHANNEL WITH 1.25" LONG BUGLE HEAD TYPE S DRYWALL SCREWS SPACED 14" ON CENTRE



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1-877-443-WALL (9255)

TITLE

30 MINUTE FIRE RESISTANCE WALL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

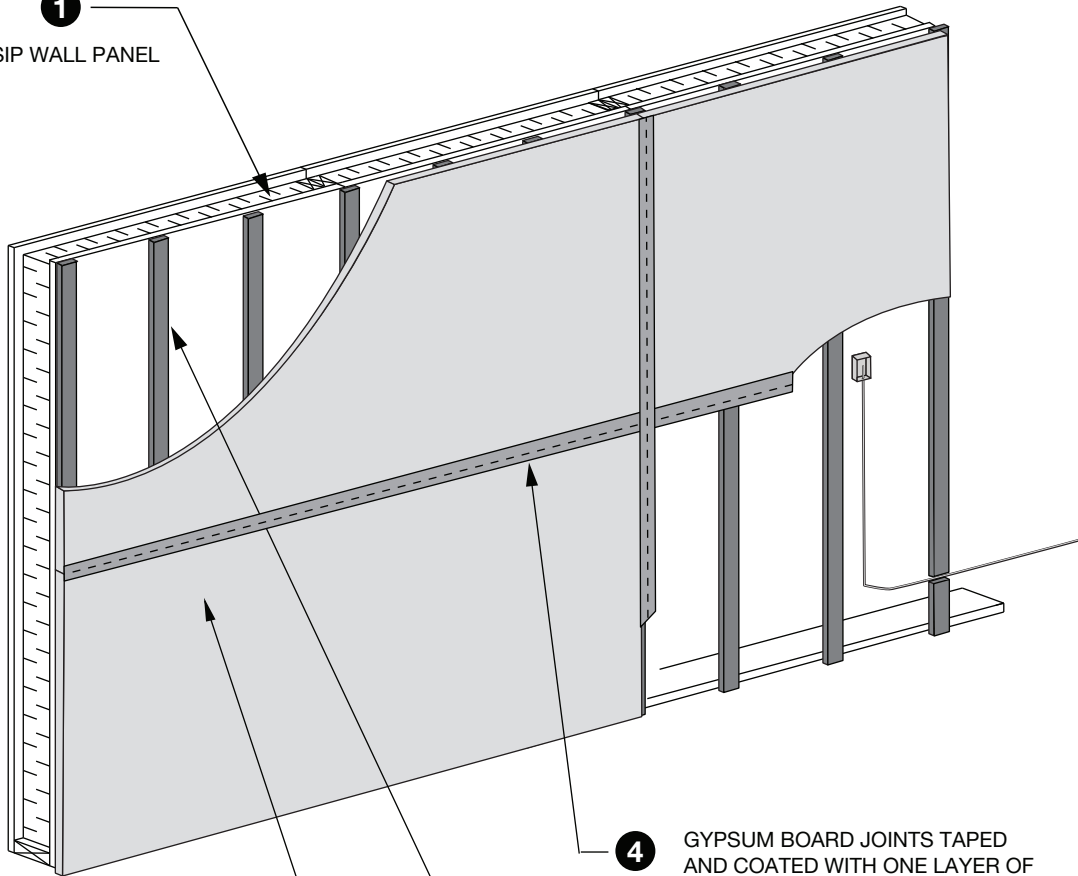
JUNE 2026

REVISION

DWG. No.

W-FR-1

1
SIP WALL PANEL



4 GYPSUM BOARD JOINTS TAPED AND COATED WITH ONE LAYER OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND

2 RESILIENT CHANNEL FASTENED VERTICALLY TO SIP WALL PANEL, SPACED 16" ON CENTRE, WITH 1.25" LONG BUGLE HEAD TYPE W DRYWALL SCREWS

3 SINGLE LAYER OF 5/8" TYPE C GYPSUM BOARD FASTENED HORIZONTALLY TO RESILIENT CHANNEL WITH 1.25" LONG BUGLE HEAD TYPE S DRYWALL SCREWS SPACED 14" ON CENTRE



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TITLE

45 MINUTE FIRE RESISTANCE WALL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

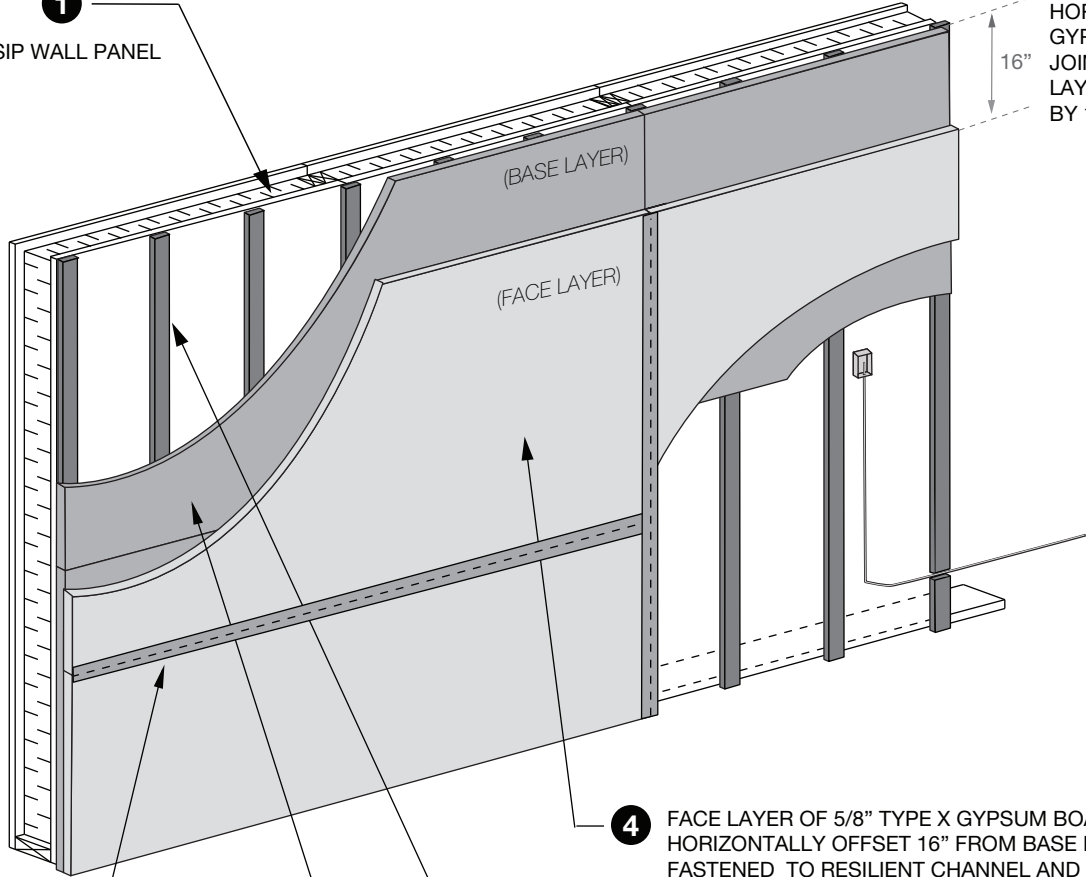
JUNE 2026

REVISION

DWG. No.

W-FR-2

1
SIP WALL PANEL



HORIZONTAL
GYPSUM BOARD
JOINTS BETWEEN
LAYERS OFFSET
BY 16"

(BASE LAYER)

(FACE LAYER)

4 FACE LAYER OF 5/8" TYPE X GYPSUM BOARD
HORIZONTALLY OFFSET 16" FROM BASE LAYER,
FASTENED TO RESILIENT CHANNEL AND BASE
LAYER WITH 1.625" LONG BUGLE HEAD TYPE S
DRYWALL SCREWS SPACED 14" ON CENTRE

2 RESILIENT CHANNEL FASTENED VERTICALLY
TO SIP WALL PANEL, SPACED 16" ON CENTRE,
WITH 1.25" LONG BUGLE HEAD TYPE W DRYWALL SCREWS

3 BASE LAYER OF 5/8" TYPE C GYPSUM
BOARD FASTENED HORIZONTALLY TO
RESILIENT CHANNEL WITH 1.25" LONG
BUGLE HEAD TYPE S DRYWALL SCREWS
SPACED 14" ON CENTRE

5
GYPSUM BOARD JOINTS TAPED
AND COATED WITH ONE LAYER OF
JOINT COMPOUND. SCREW HEADS
COVERED WITH JOINT COMPOUND.



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TITLE

60 MINUTE FIRE
RESISTANCE WALL

PROJECT

REFERENCE

SCALE

N.T.S.

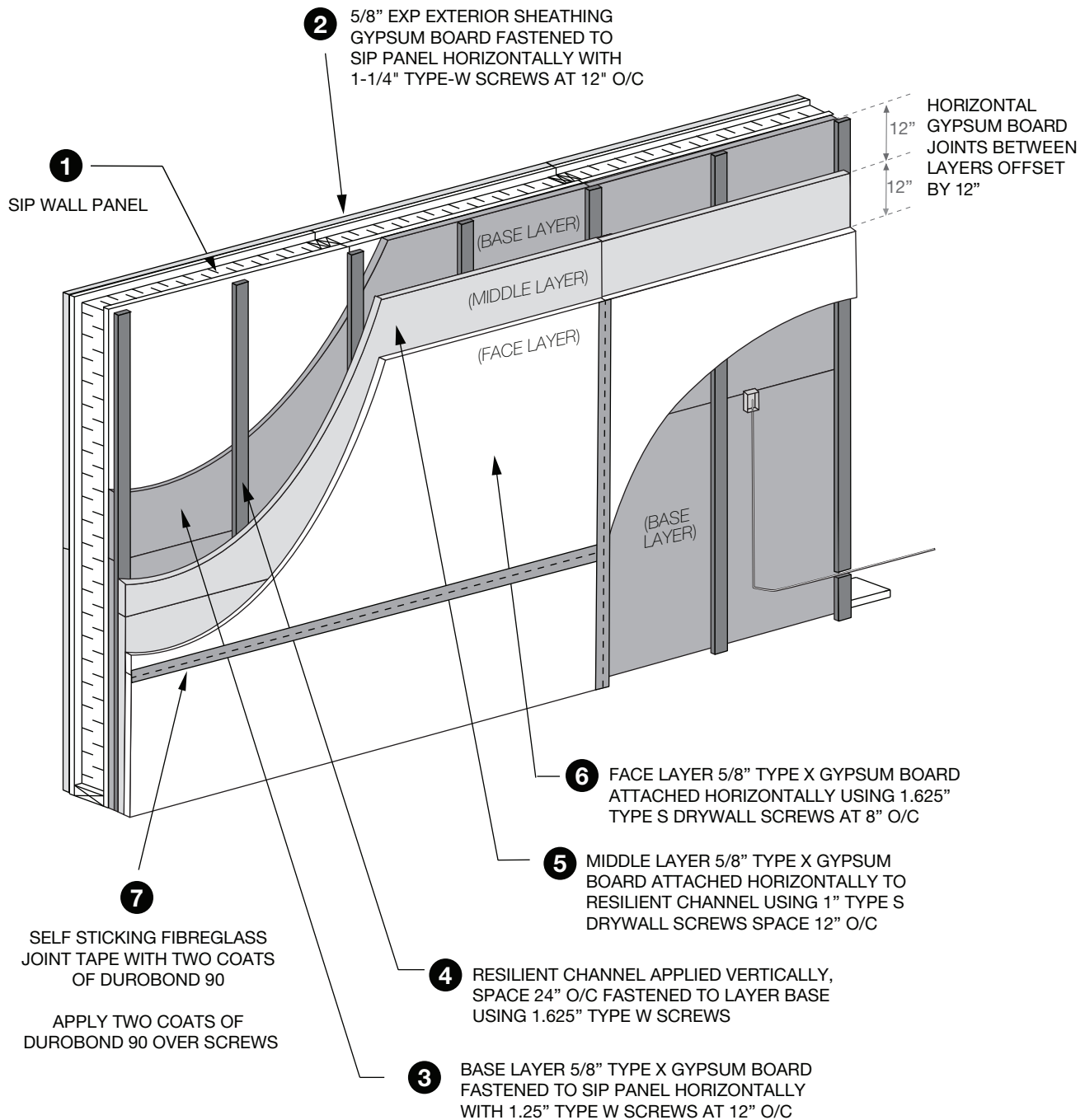
DATE

JUNE 2026

REVISION

DWG. No.

W-FR-3



www.thermapan.com
1-877-443-WALL (9255)

TITLE

120 MINUTE FIRE RESISTANCE WALL

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

JUNE 2026

REVISION

DWG. No.

W-FR-4

TRUSSES INSTALLED AS
PER LOCAL BUILDING CODE

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
6 1/2" STRUCTURAL FOAM
CORE PANEL

CONT. FIRE RATED
CAULKING TYP.

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
6 1/2" STRUCTURAL FOAM
CORE PANEL

CONT. FIRE RATED CAULKING TYP.

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

POURED CONCRETE OR
BLOCK FOUNDATION
WALL

PARTYWALL

* UL / ULC LABELLED GYPSUM SHEATHING

STRUCTURAL CAPACITY FOR WALL
NOT TO EXCEED 32.4 kn/m
(2217 LBS. PER LINEAR FOOT)
FOR OTHER REQUIREMENTS,
INCLUDING STRUCTURAL LOAD,
REFER TO MANUFACTURER'S
INSTRUCTIONS.

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
1/2" RESILIENT CHANNEL

INSTALL TOP PLATE AND CAP
SECURED TO STUDS WITH 95 mm
SPIRAL NAILS

50 mm RING NAILS
@ 250 mm O/C (TYP.)

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
1/2" RESILIENT CHANNEL

DOUBLE STUD SPLINE
SECURED TO PLATE WITH
83 mm SPIRAL NAILS

NOTE: TESTED IN CONFORMANCE WITH
CAN/ULC-S101-M, "FIRE ENDURANCE
TESTS OF BUILDING CONSTRUCTION AND
MATERIALS"



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TITLE

60 MIN. PARTYWALL
SINGLE WALL STC RATING 50

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

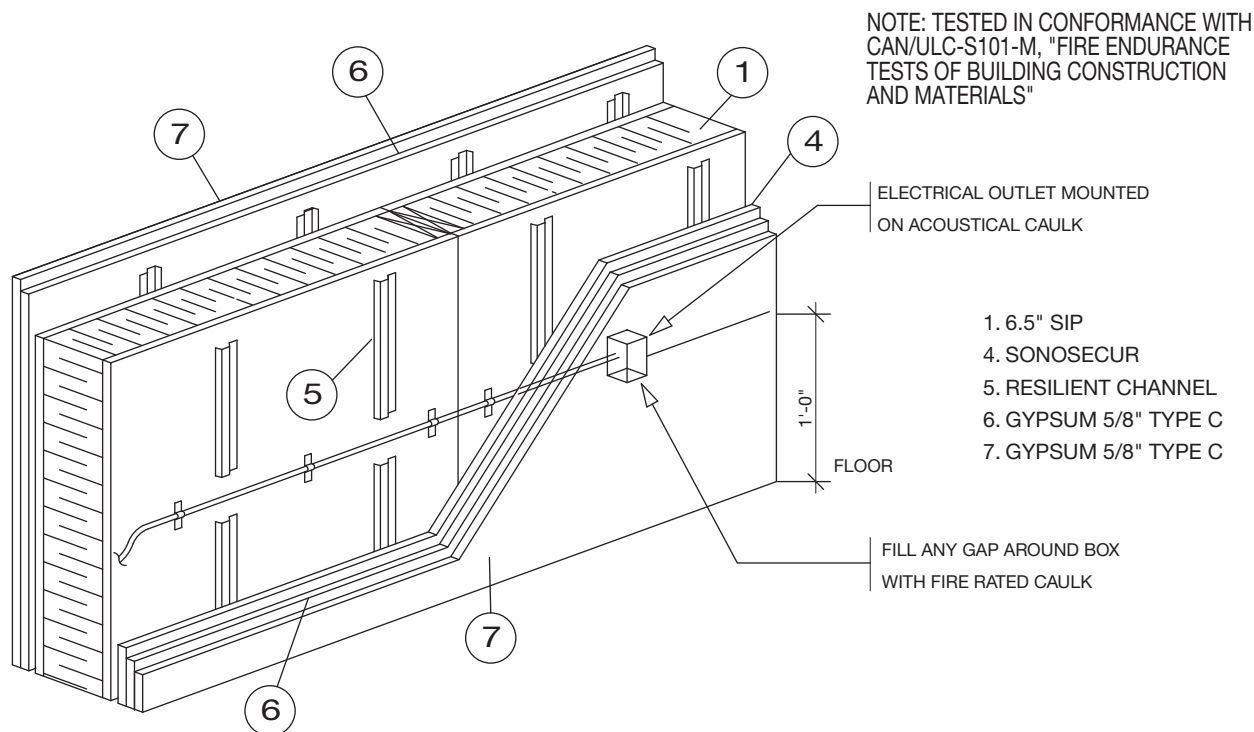
REVISION

DWG. No.

JULY 2023

9

W-PW-1



ASSEMBLY OF RESILIENT CHANNEL (5)

THE RESILIENT CHANNELS ARE ORIENTED VERTICALLY AT 16" (400 mm) OC AND SECURED WITH 1" (25 mm) TYPE W GYPSUM BOARD SCREWS AT 16" (400 mm) OC TO THE STRUCTURAL INSULATED PANEL (SIP)

ASSEMBLY OF SONOSECUR ACOUSTIC PANEL (4)

TACK THE SONOSECUR ACOUSTIC PANEL WITH 1" (25 mm) LONG TYPE W GYPSUM BOARD SCREWS TO HOLD IN PLACE. THE SONOSECUR ACOUSTIC PANEL IS ASSEMBLED ON ONE SIDE ONLY.

ASSEMBLY OF FIRST LAYER 5/8" TYPE C GYPSUM (6)

INSTALL THE FIRST GYPSUM LAYER (6) VERTICALLY ONTO RESILIENT CHANNELS WITH 1" (25 mm) TYPE W GYPSUM SCREWS SPACED 16" (400 mm) OC.

ASSEMBLY OF SECOND LAYER 5/8" TYPE C GYPSUM (7)

THE JOINTS OF THE SECOND LAYER SHOULD BE OFFSET AND STAGGERED FROM FIRST LAYER. THE SECOND LAYER SHOULD HAVE 1.75" (44 mm) SCREWS AT 12" (304 mm) OC. THE FIRST LAYER OF GYPSUM DOES NOT HAVE TO BE TAPED. ONLY THE SECOND LAYER HAS TO BE FINISHED. JOINTS SHOULD BE COVERED WITH COMPOUND, COVERED WITH JOINT TAPE AND COVERED WITH AN ADDITIONAL TWO COATS OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

UL GYPSUM BOARD FIRECODE "C"



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TITLE

PARTYWALL ELECTRICAL DETAIL
(60 MINUTE WALL RATED ASSEMBLY
(SINGLE WALL) STC RATING 50)

PROJECT

REFERENCE

8015

SCALE

N.T.S.

DATE

JULY 2023

REVISION

DWG. No.

9 W-PW-2

TRUSSES INSTALLED AS
PER BUILDING CODE

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
4 1/2" STRUCTURAL FOAM
CORE PANEL

1" AIR SPACE

CONTINUOUS FIRE
RATED CAULKING

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
SONOSECUR ACOUSTICAL PANEL
(one side only)
1/2" RESILIENT CHANNEL RC-1
4 1/2" STRUCTURAL FOAM
CORE PANEL

1" AIR SPACE

CONTINUOUS FIRE
RATED CAULKING

INSTALL AS PER LOCAL
BUILDING CODE OR JOIST
SUPPLIER SPEC.

POURED CONCRETE OR
BLOCK WALL FOUNDATION

STRUCTURAL CAPACITY FOR WALL
NOT TO EXCEED 32.4 kn/m
(2217 LBS. PER LINEAR FOOT)
FOR OTHER REQUIREMENTS,
INCLUDING STRUCTURAL LOAD,
REFER TO MANUFACTURER'S
INSTRUCTIONS.

5/8" TYPE C GYPSUM BD.
5/8" TYPE C GYPSUM BD.
1/2" RESILIENT CHANNEL

INSTALL TOP PLATE AND CAP
SECURED TO STUDS WITH 95 mm
SPIRAL NAILS

50 mm RING
NAILS @
250 mm O/C
(TYP)

DOUBLE STUD SPLINE
SECURED TO PLATE WITH
83 mm SPIRAL NAILS

ULC LABELLED CANADIAN GYPSUM COMPANY "SHEETROCK FIRECODE C" OR "SHEETROCK SW FIRECODE C"

NOTE: TESTED IN CONFORMANCE WITH
CAN/ULC-S101-M, "FIRE ENDURANCE
TESTS OF BUILDING CONSTRUCTION AND
MATERIALS"



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TITLE

60 MIN. PARTYWALL
DOUBLE WALL STC RATING 50

PROJECT

REFERENCE

7016

SCALE

N.T.S.

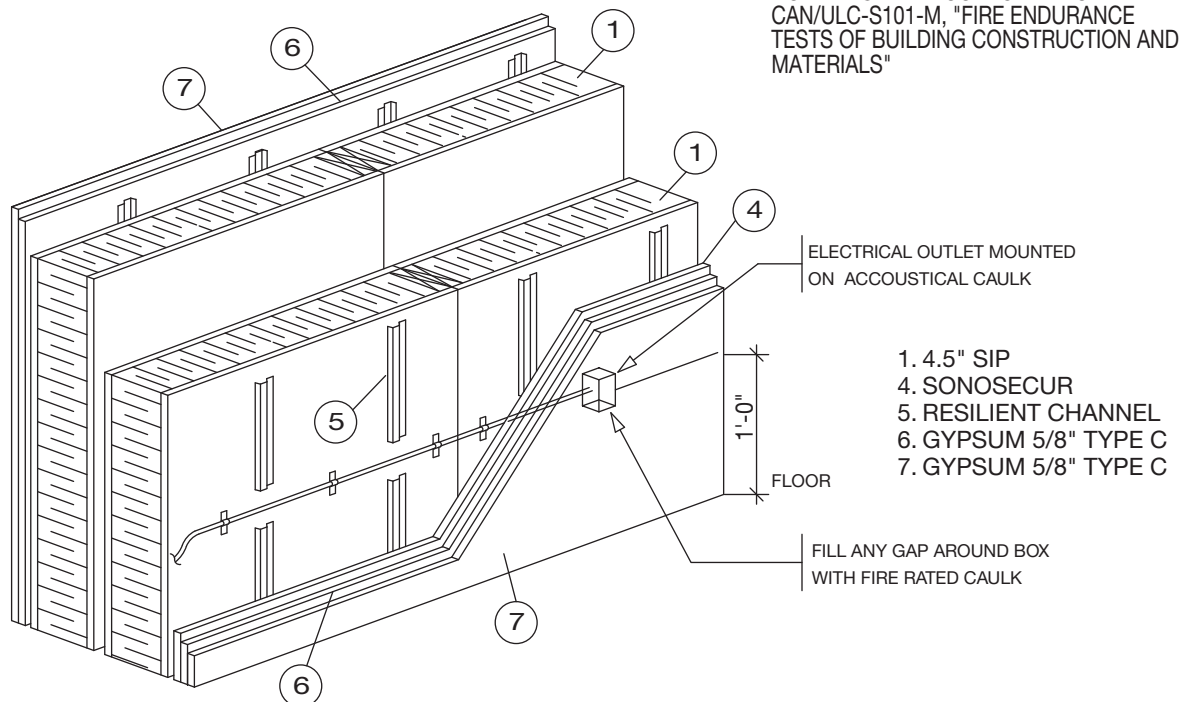
DATE

JULY 2023

REVISION

DWG. No.

6 W-PW-3



ASSEMBLY OF RESILIENT CHANNEL (5)

THE RESILIENT CHANNELS ARE ORIENTED VERTICALLY AT 16" (400 mm) OC AND SECURED WITH 1" (25 mm) TYPE W GYPSUM BOARD SCREWS AT 16" (400 mm) OC TO THE STRUCTURAL INSULATED PANEL (SIP).

ASSEMBLY OF SONOSECUR ACOUSTIC PANEL (4)

TACK THE SONOSECUR ACOUSTIC PANEL WITH 1" (25 mm) LONG TYPE W GYPSUM BOARD SCREWS TO HOLD IN PLACE. THE SONOSECUR ACOUSTIC PANEL IS ASSEMBLED ON ONE SIDE ONLY.

ASSEMBLY OF FIRST LAYER 5/8" TYPE C GYPSUM (6)

INSTALL THE FIRST GYPSUM LAYER (6) VERTICALLY ONTO RESILIENT CHANNELS WITH 1" (25 mm) TYPE W GYPSUM SCREWS SPACED 16" (400 mm) OC.

ASSEMBLY OF SECOND LAYER 5/8" TYPE C GYPSUM (7)

THE JOINTS OF THE SECOND LAYER SHOULD BE OFFSET AND STAGGERED FROM FIRST LAYER. THE SECOND LAYER SHOULD HAVE 1.75" (44 mm) SCREWS AT 12" (304 mm) OC. THE FIRST LAYER OF GYPSUM DOES NOT HAVE TO BE TAPED. ONLY THE SECOND LAYER HAS TO BE FINISHED. JOINTS SHOULD BE COVERED WITH COMPOUND, COVERED WITH JOINT TAPE AND COVERED WITH AN ADDITIONAL TWO COATS OF JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

UL GYPSUM BOARD FIRECODE "C"



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TITLE

PARTYWALL ELECTRICAL DETAIL
(60 MIN. WALL RATED ASSEMBLY
(DOUBLE WALL) STC RATING 50)

PROJECT

REFERENCE

8015

SCALE

N.T.S.

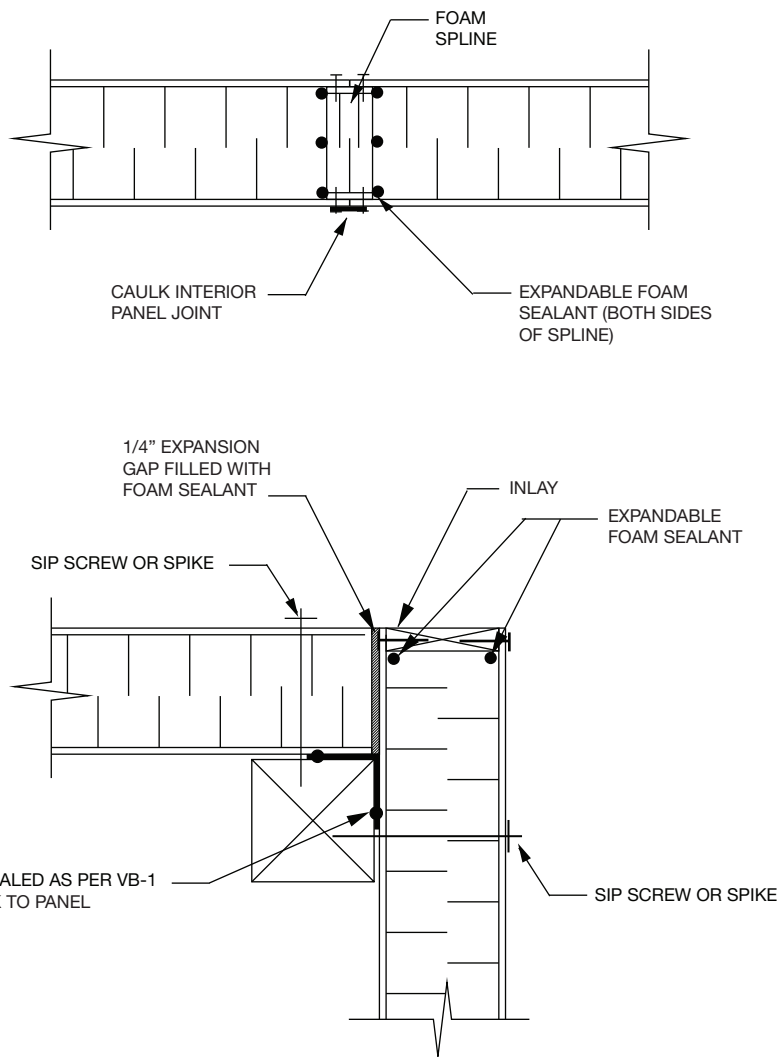
DATE

JULY 2023

REVISION

DWG. No.

7 W-PW-4



NOTE: REFER TO W-1 FOR SPLINE CONNECTION DETAILS. REFER TO AIR BARRIER (AB-1 & AB-2) DETAILS FOR SEALING SIP CONNECTIONS.

THE PANELS ARE FASTENED TO THE POST AT THE CORNERS AS SHOWN LEAVING A GAP TO BE SEALED WITH EXPANDING SPRAY FOAM.

DIMENSIONAL LUMBER INLAYS COMPLETE THE NAILING SURFACE AT THE CORNER.



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TITLE

VERTICAL PANEL CONNECTIONS SPLINE & CORNER (TIMBERFRAME)

PROJECT

REFERENCE

SCALE

N.T.S.

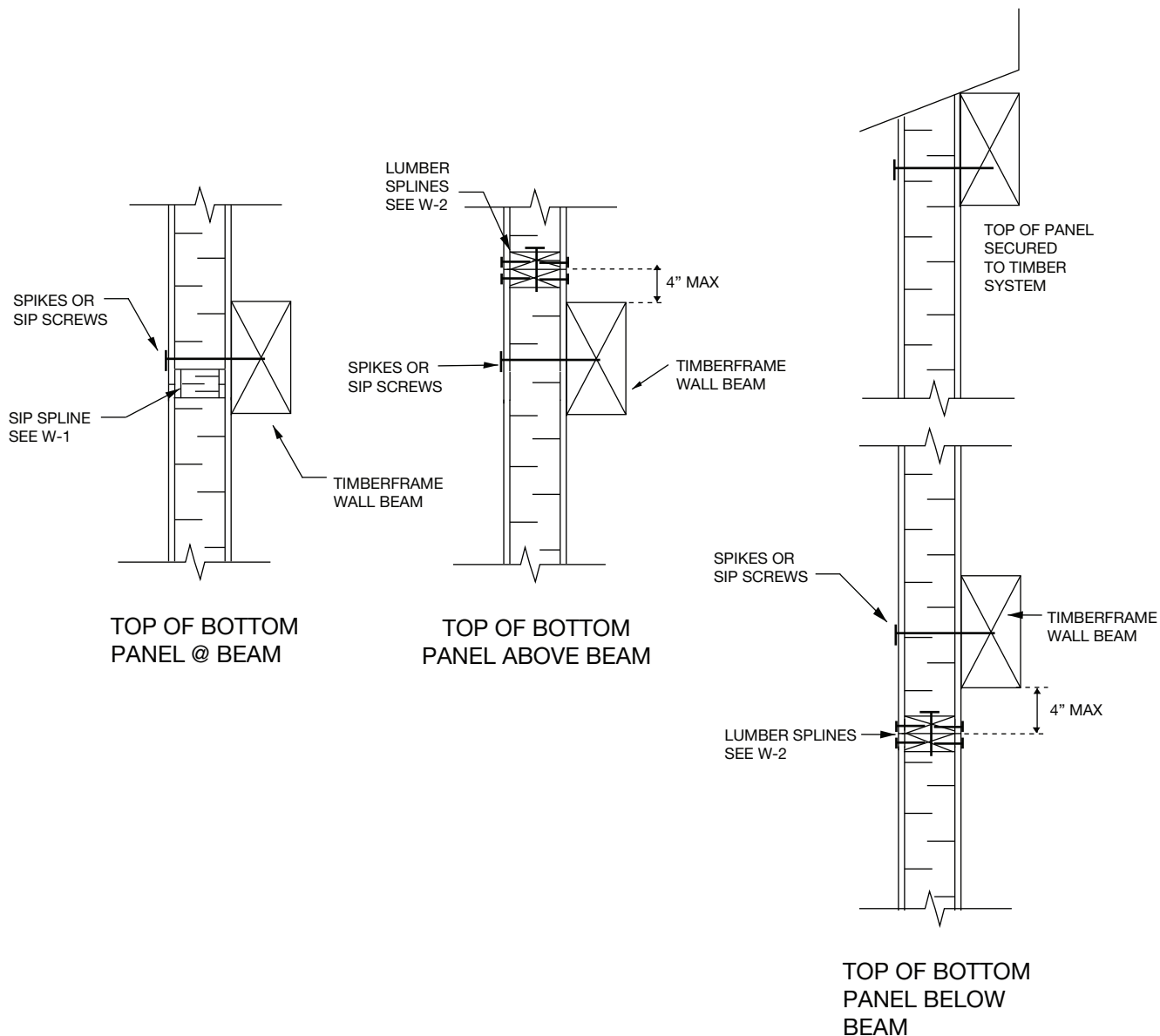
DATE

APRIL 2014

REVISION

DWG. No.

6 W-TF-1



NOTE: REFER TO AIR BARRIER (AB-1 & AB-2) DETAILS FOR SEALING SIP CONNECTIONS.



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TITLE

HORIZONTAL CONNECTIONS AT BEAMS (TIMBERFRAME)

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

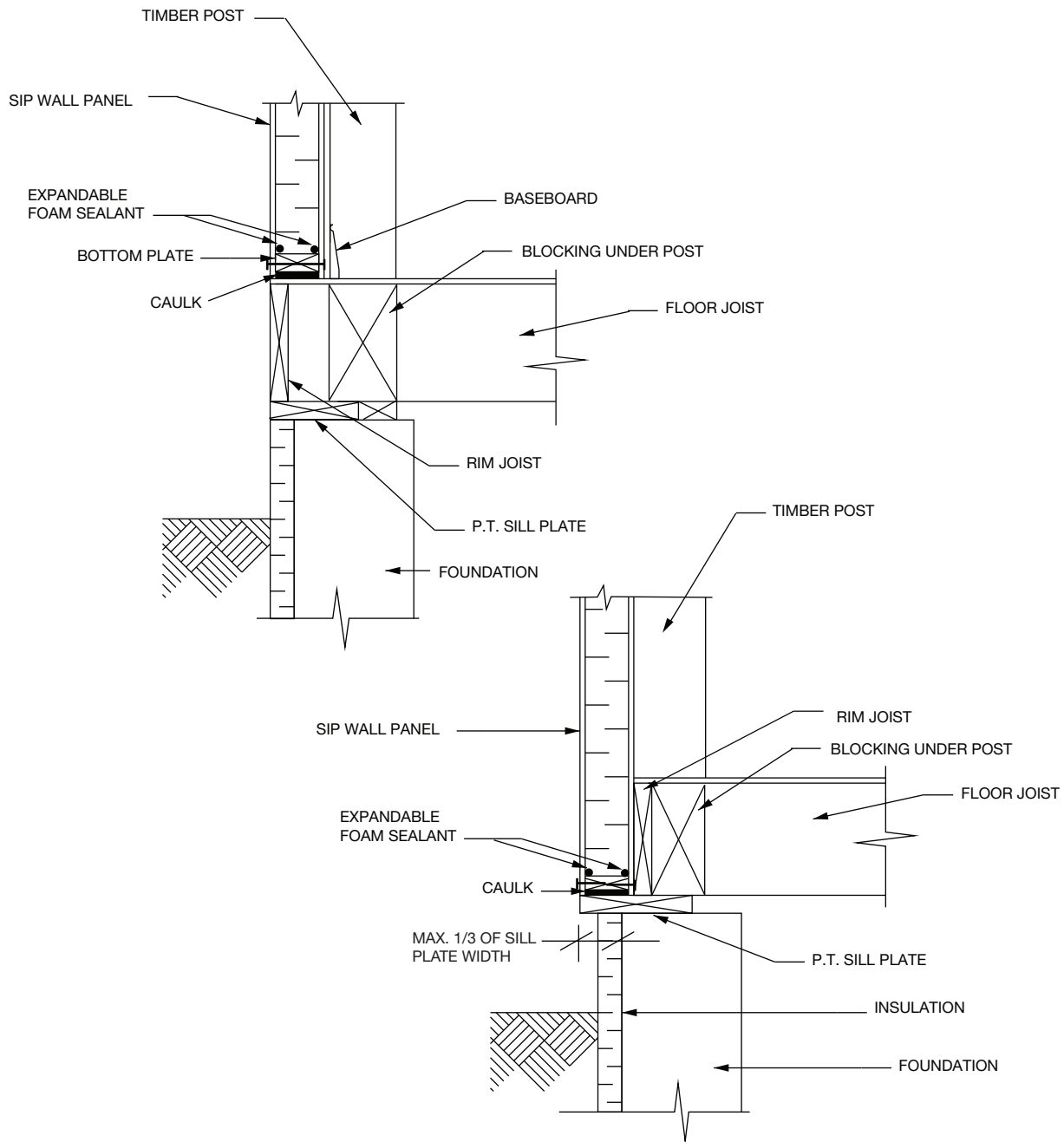
REVISION

DWG. No.

APRIL 2014

3

W-TF-2



NOTE: REFER TO AIR BARRIER (AB-2) DETAIL FOR SEALING SIP CONNECTIONS.



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TITLE

FOUNDATION DETAILS DECK OPTIONS (TIMBERFRAME)

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

REVISION

DWG. No.

APRIL 2014

5

W-TF-3