

The better way to build™



Installation Manual NAILBASE PANELS



Thermapan
Structural
Insulated
Panels

NAILBASE SIPs Installation Manual

Table of Contents

Topics

General Requirements	3
Materials	3

Details

Air Barrier Details for Nailbase Panel Butt Joint	AB-1(NB)
Nailbase Panel Retrofit Over Existing Wall Sheathing	NB-1
Retrofit Nailbase Panel Outside Corner	NB-2
Retrofit Nailbase Panel Over Rim Joist	NB-3
Inside Corner Detail	NB-4
Retrofit Nailbase Panel Edges	NB-5
Window Mounted at Exterior Plane (Header)	NB-6A
Window Mounted at Exterior Plane (Sill)	NB-6B
Window Left in Place (Header)	NB-7A
Window Left in Place (Sill)	NB-7B
Nailbase Wall Attachment: Concrete or Masonry Wall	NB-8
Exterior Wall Cladding: Brick & Stucco	NB-9
Exterior Wall Cladding: Vinyl & Wood Siding	NB-10
Electrical Wire Fastened to Nailbase Panel	NB-11
Pre-Fabricated Metal Chimney Installation in Wall	NB-12
Retrofit Nailbase Panels on Roof Structure	NB-13
Retrofit Roof & Wall Nailbase Connection at Overhang	NB-14
Nailbase Roof Overhang Details	NB-15
Nailbase Panel Attic Air Block	NB-16
Sloped Roof Applied to Nailbase SIPs	NB-17
Flat Roof Applied to Nailbase SIPs	NB-18
Nailbase Ceiling Panel	NB-19
LED Pot Light Installation in Ceiling SIPs	NB-20
Electrical Wire Fastened to Nailbase Roof SIP	NB-21
Pre-Fabricated Metal Chimney - Roof Installation	NB-22
Screw Fastener Detail for Securing Load to Nailbase Ceiling	NB-23

Steel Frame Nailbase Installation

Typical Wall Detail	IN-1
Gable & Corner Trim Detail	IN-2
Peak & High Wall Detail	IN-3
Header & Trim @ Self Framing Walkdoor	IN-4
Header & Jamb Trim @ Overhead Door	IN-5

NAILBASE SIPs

Installation Manual

1. General Requirements

1.1 Scope

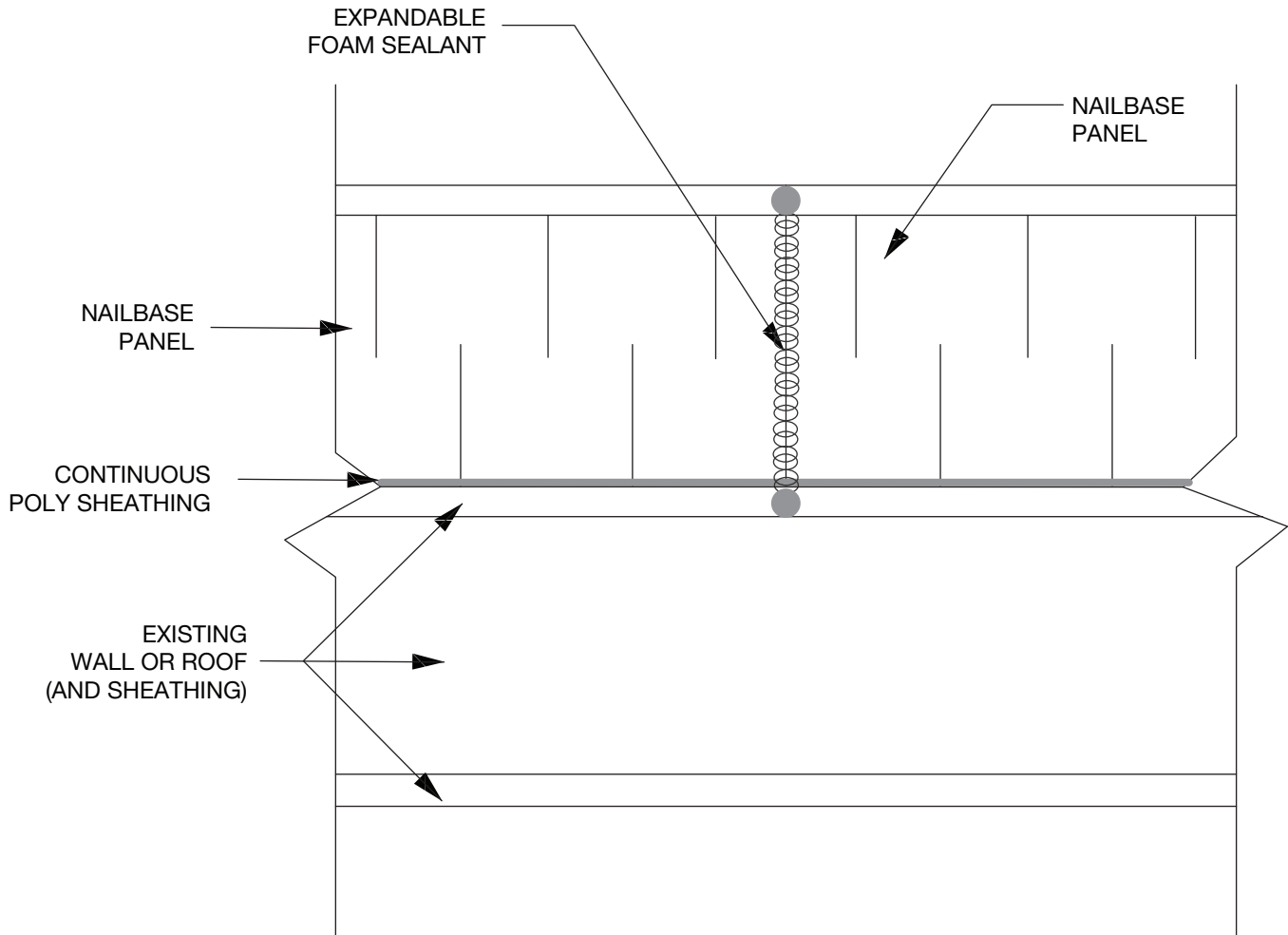
The basic design and construction requirements for the Thermapan Nailbase retrofit panel system is set forth in this specification.

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 Nailbase SIP is composed of an expanded polystyrene (EPS) foam core laminated on one side with a layer of oriented strand board (OSB) with a structural adhesive.
- 2.2** Framing Lumber shall be DOC PS 20 or NLGA No.2 or better.
- 2.3** SIP screws shall conform to ICC-AC233.
- 2.4** Polyethylene (Poly) Sheathing shall conform to CAN/CGSB-37.2, CAN/CGSB-37.16, or ASTM D 4397.
- 2.5** Low expansion foam seal shall conform to AAMA 812-04.
- 2.6** Sill seal gasket is a flexible polyethylene foam gasketing strip that can help reduce air infiltration between a concrete or masonry surface and a lumber plate.



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

TITLE

AIR BARRIER DETAILS FOR
NAILBASE PANEL BUTT JOINT

PROJECT

REFERENCE

SCALE

N.T.S.

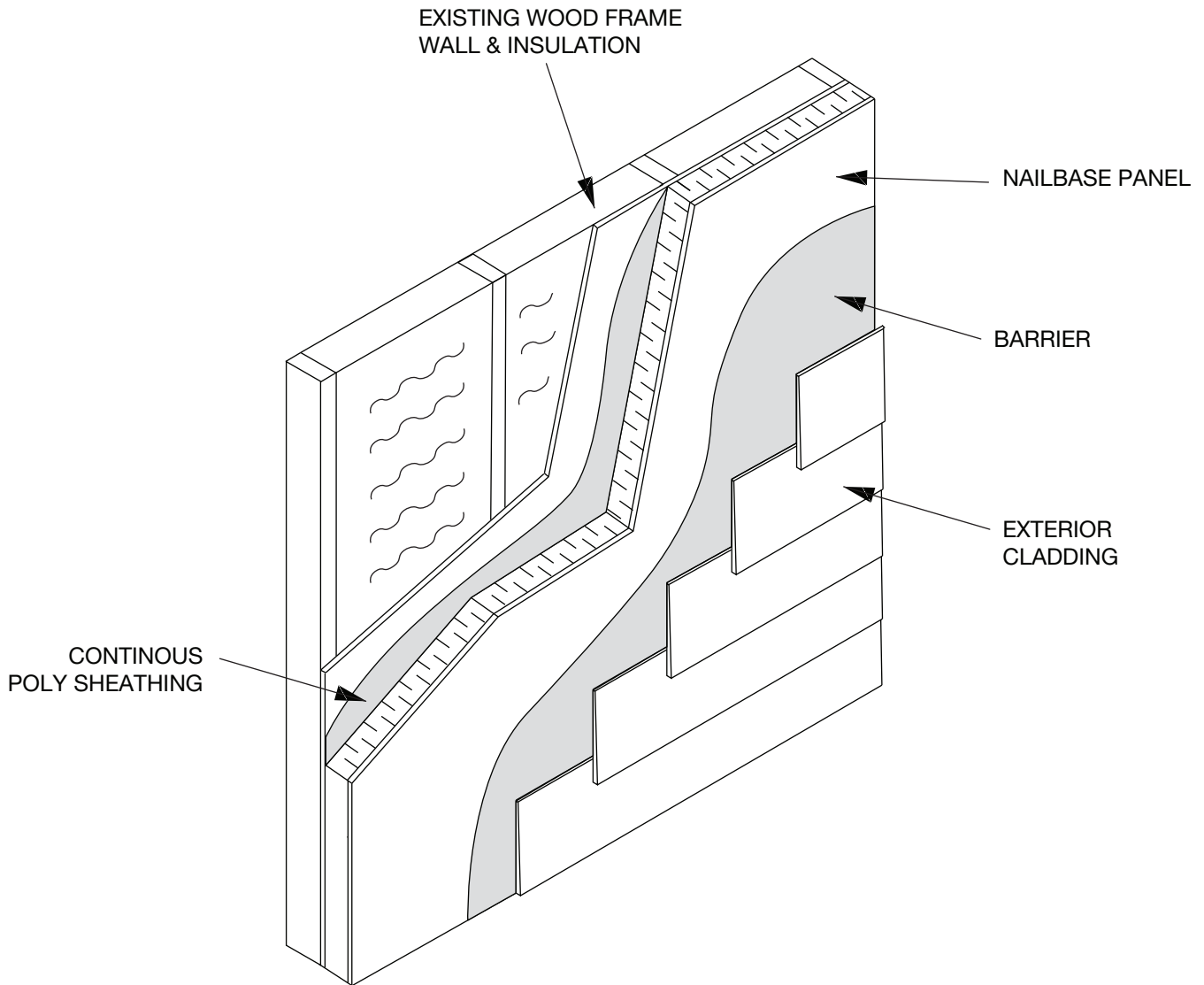
DATE

NOVEMBER 2018

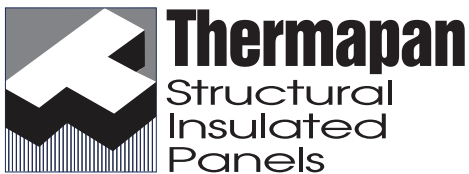
REVISION

DWG. No.

AB-1(NB)



NOTE: SEE NB-10 & NB-11 FOR EXTERIOR CLADDING OPTIONS



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

TITLE

NAILBASE PANEL RETROFIT
OVER EXISTING WALL SHEATHING

PROJECT

REFERENCE

SCALE

N.T.S.

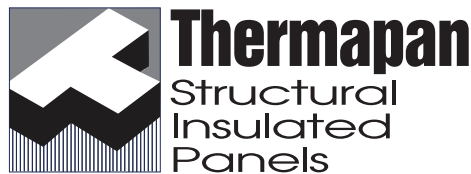
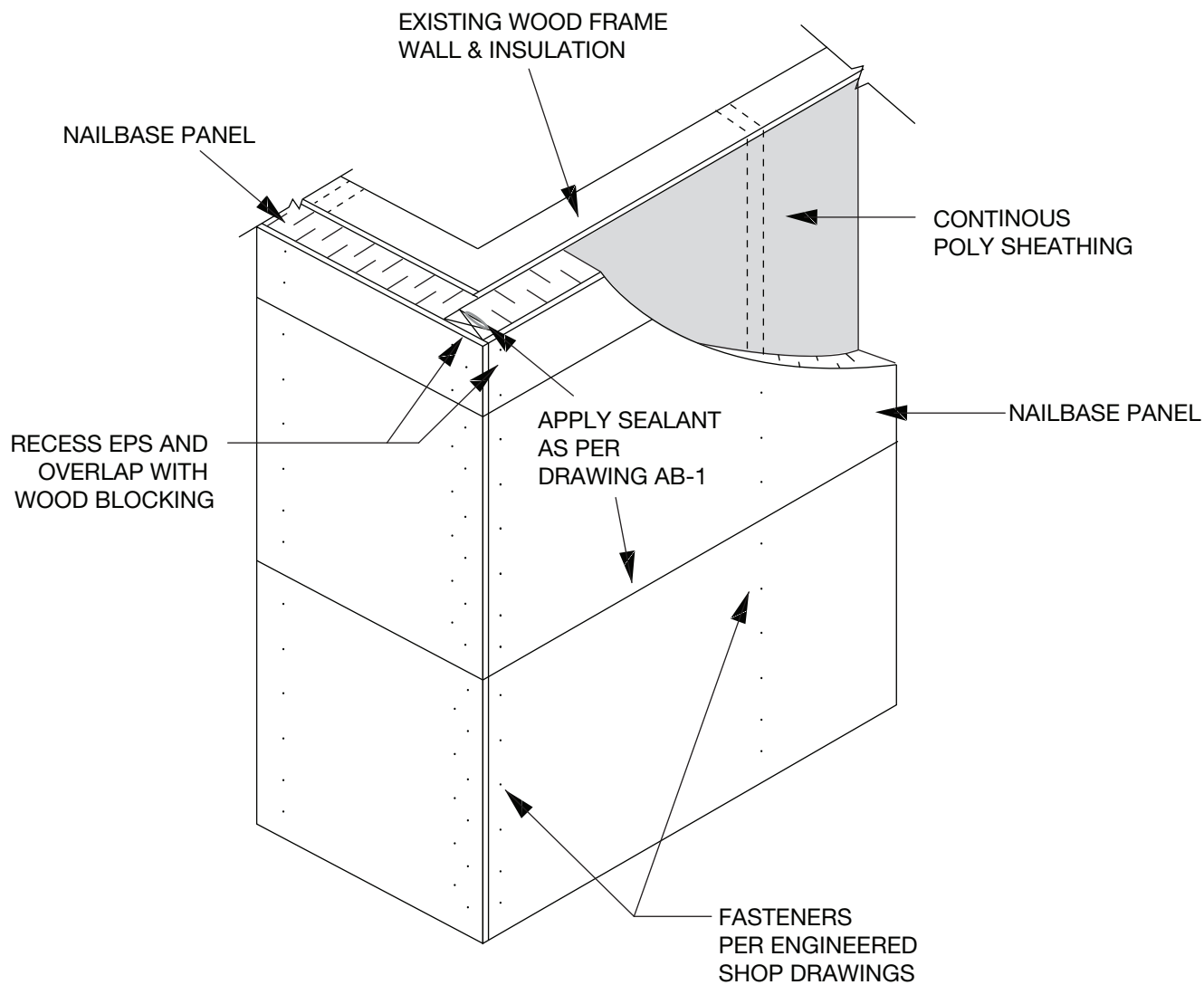
DATE

NOVEMBER 2018

REVISION

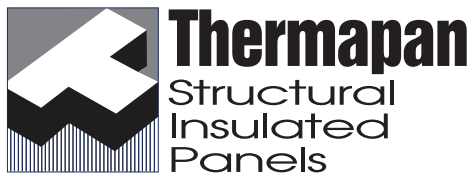
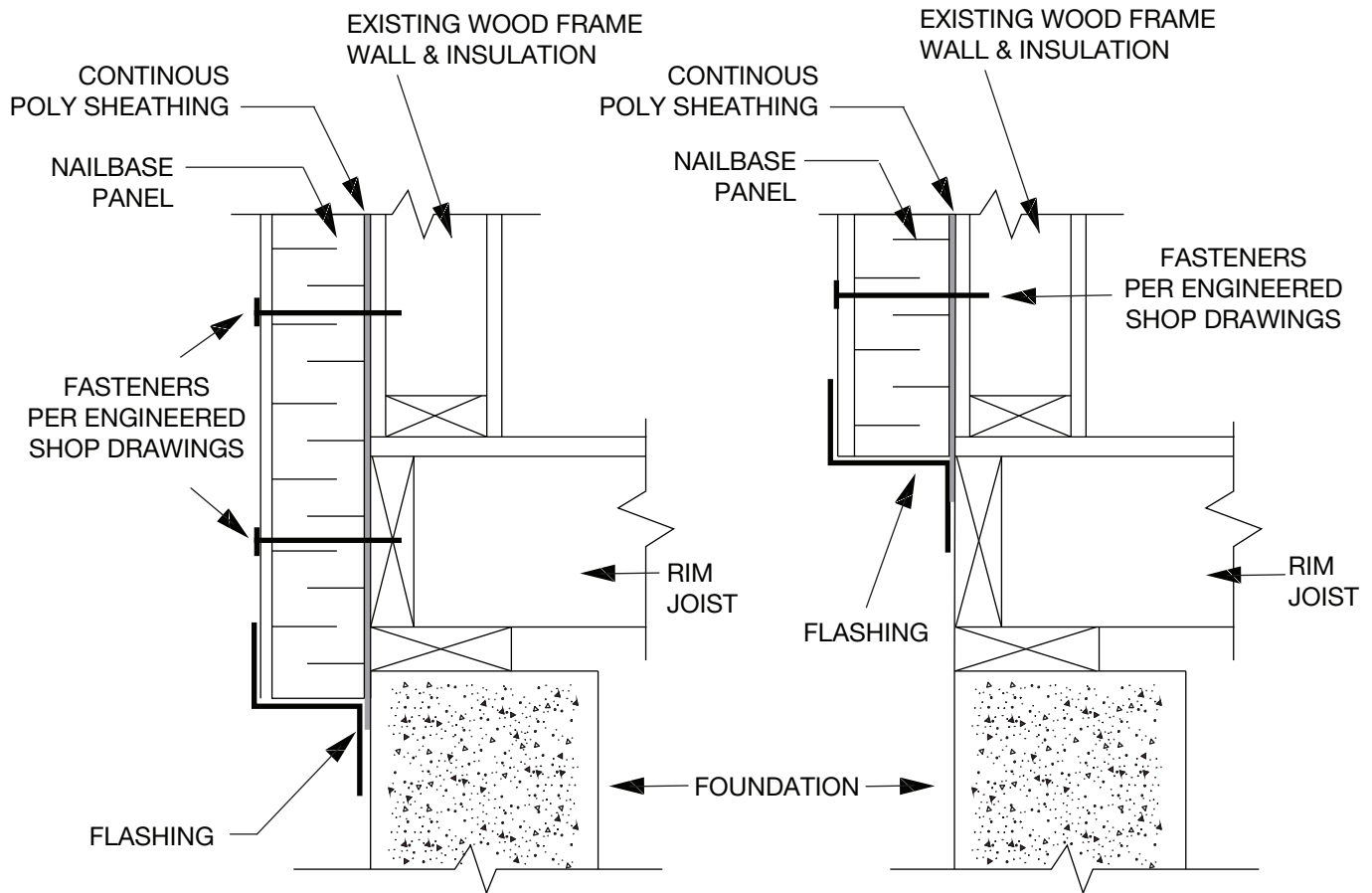
DWG. No.

NB-1



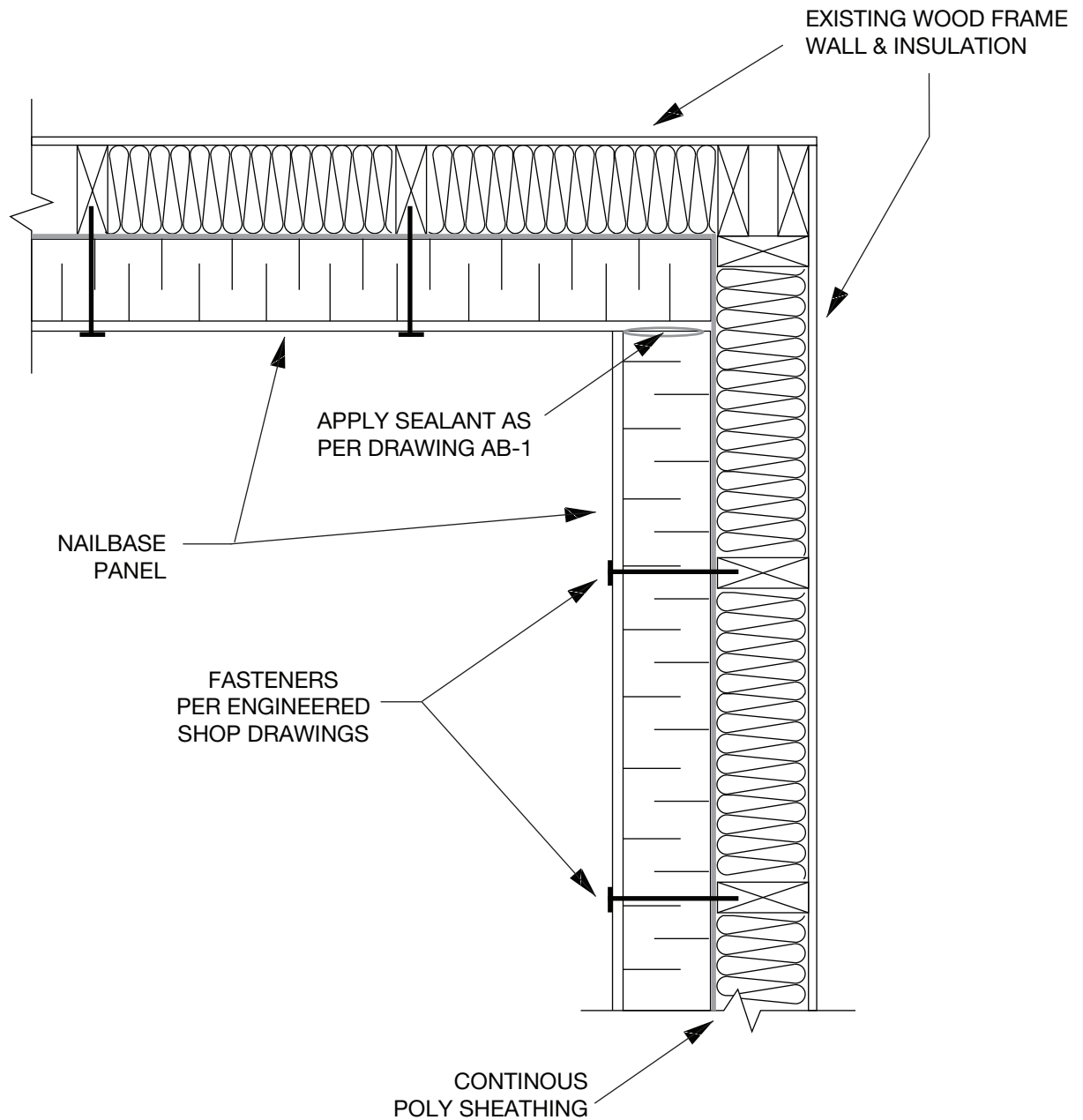
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
RETROFIT NAILBASE PANEL OUTSIDE CORNER			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-2	



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

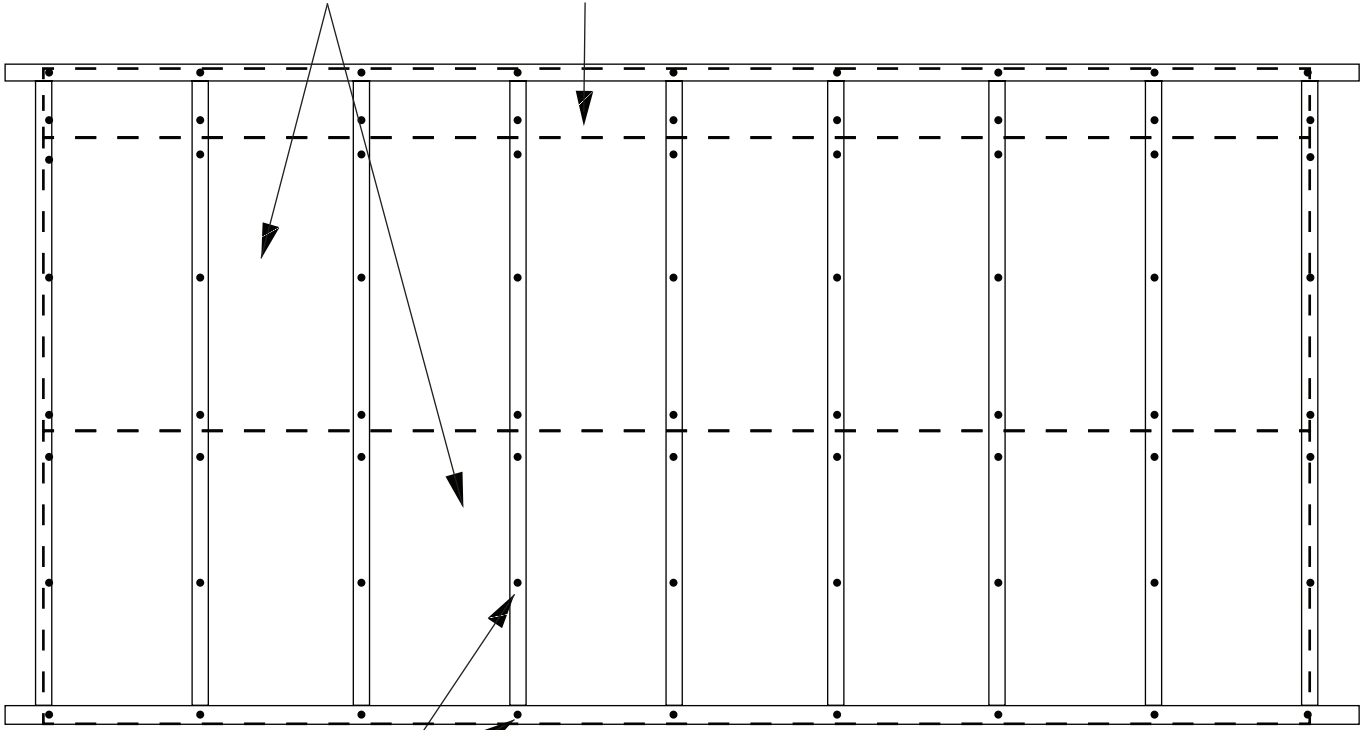
TITLE		PROJECT	
RETROFIT NAILBASE PANEL OVER RIM JOIST			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-3	



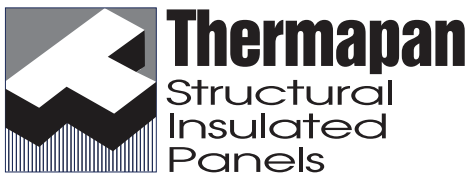
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
INSIDE CORNER DETAIL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-4	

NAILBASE PANELS
 OVER CONTINUOUS POLY SHEATHING
 (TWO 4x16 PANELS & ONE CUT 1X16 PANEL SHOWN)

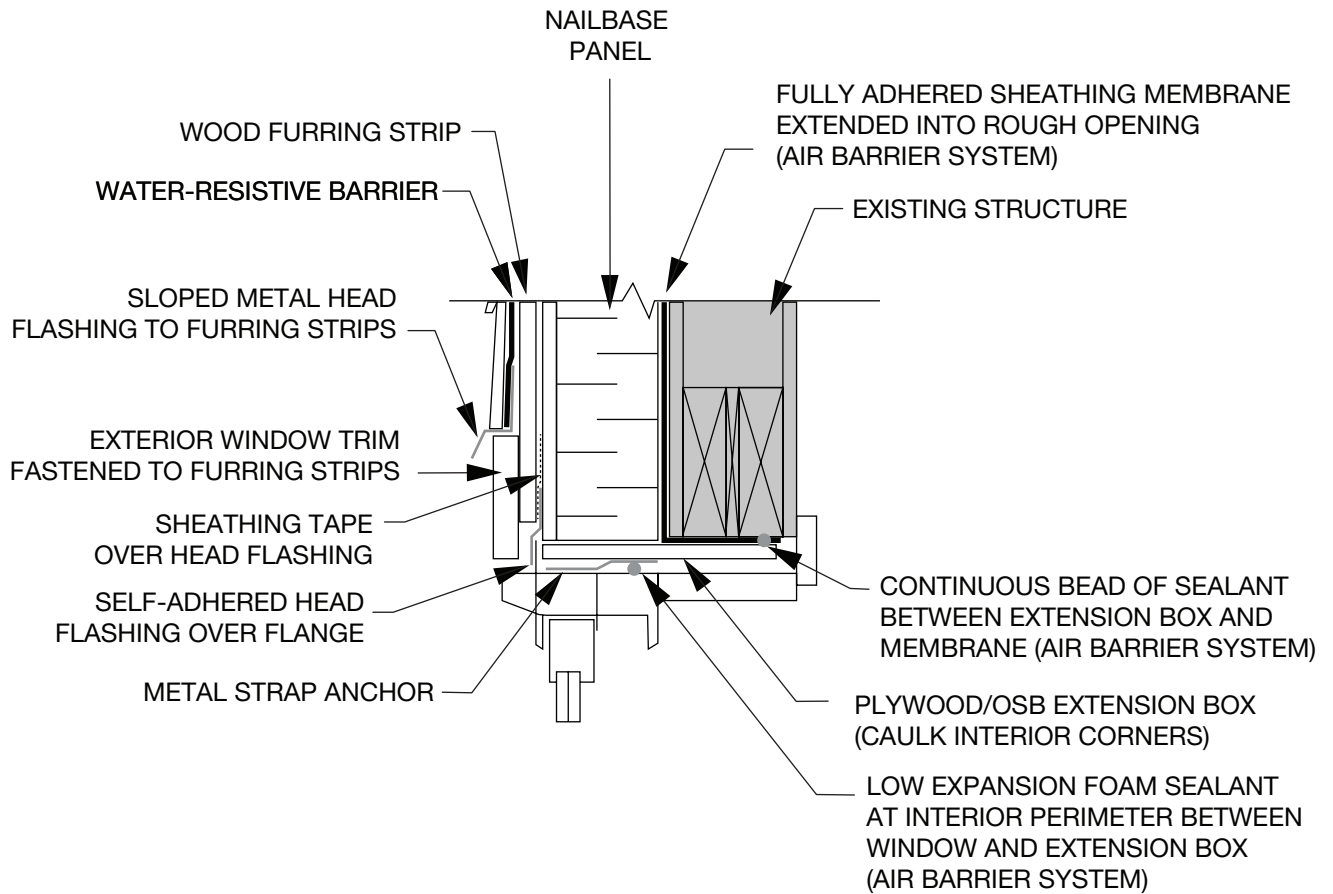


FASTENERS
 PER ENGINEERED
 SHOP DRAWINGS



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

TITLE		PROJECT	
RETROFIT NAILBASE PANEL EDGES			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-5	

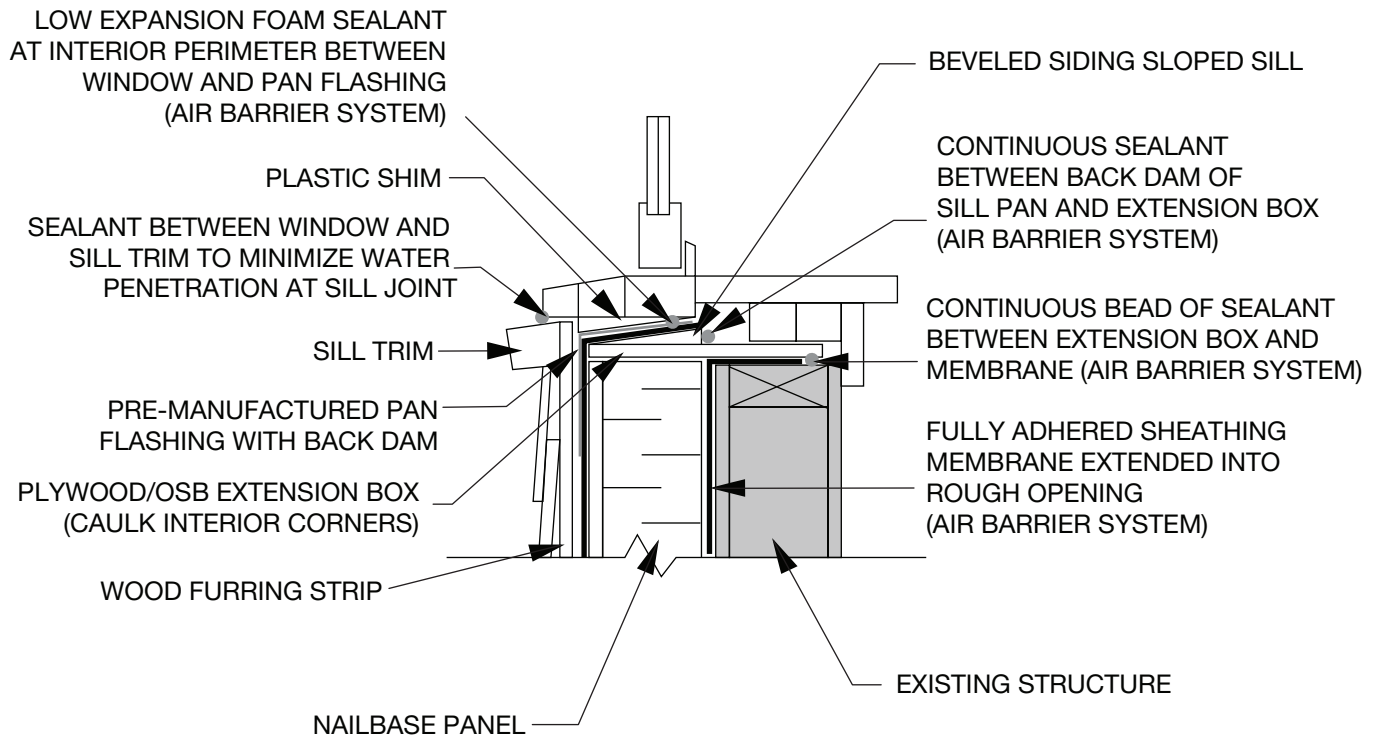


NOTE: SEE NB-6B FOR SILL DETAIL



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

TITLE		WINDOW MOUNTED AT EXTERIOR PLANE (HEADER)		PROJECT
REFERENCE	SCALE	N.T.S.		
DATE	REVISION	DWG. No.		
NOVEMBER 2018		NB-6A		



NOTE: SEE NB-6A FOR HEADER DETAIL



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

TITLE

WINDOW MOUNTED
AT EXTERIOR PLANE
(SILL)

PROJECT

REFERENCE

SCALE

N.T.S.

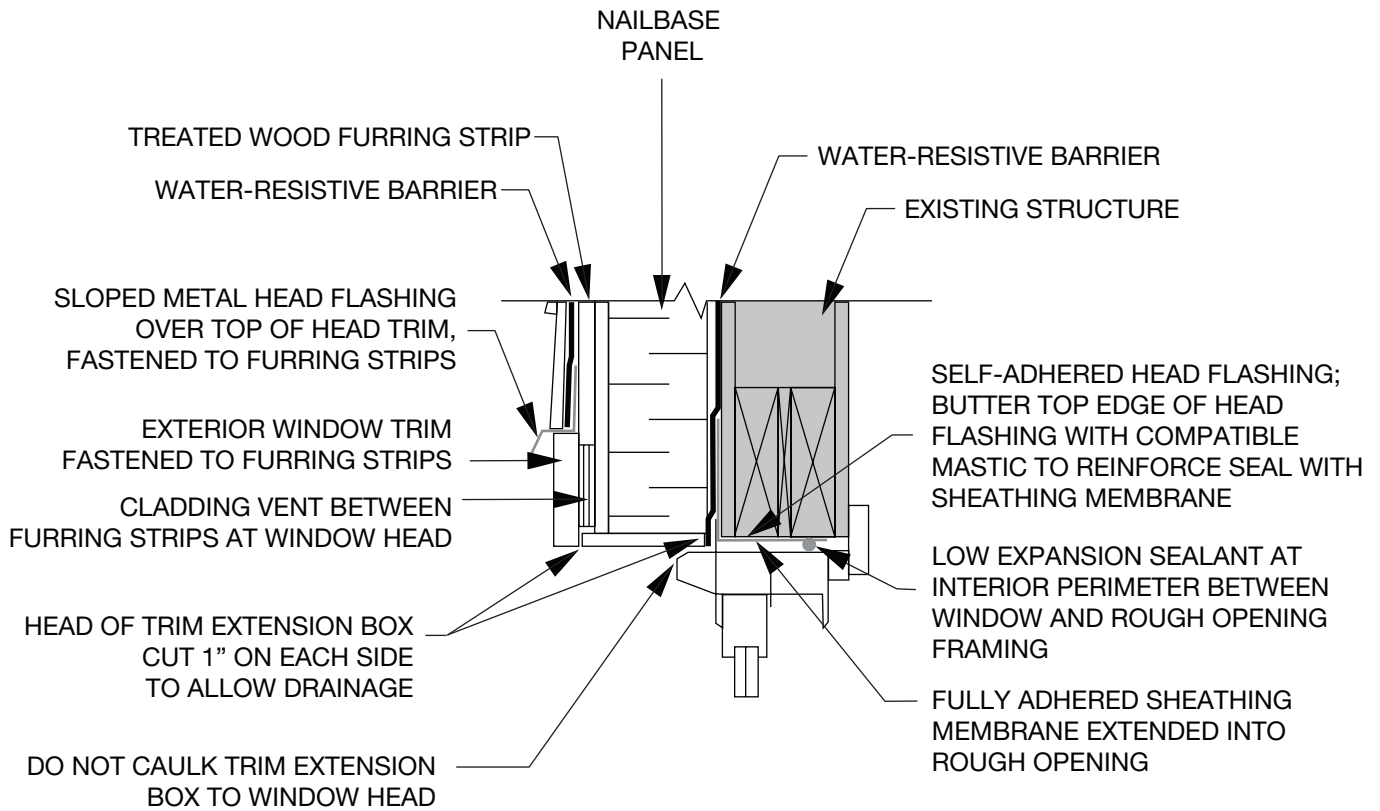
DATE

NOVEMBER 2018

REVISION

DWG. No.

NB-6B



NOTE: SEE NB-7B FOR SILL DETAIL



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

TITLE

**WINDOW LEFT IN PLACE
(HEADER)**

PROJECT

REFERENCE

SCALE

N.T.S.

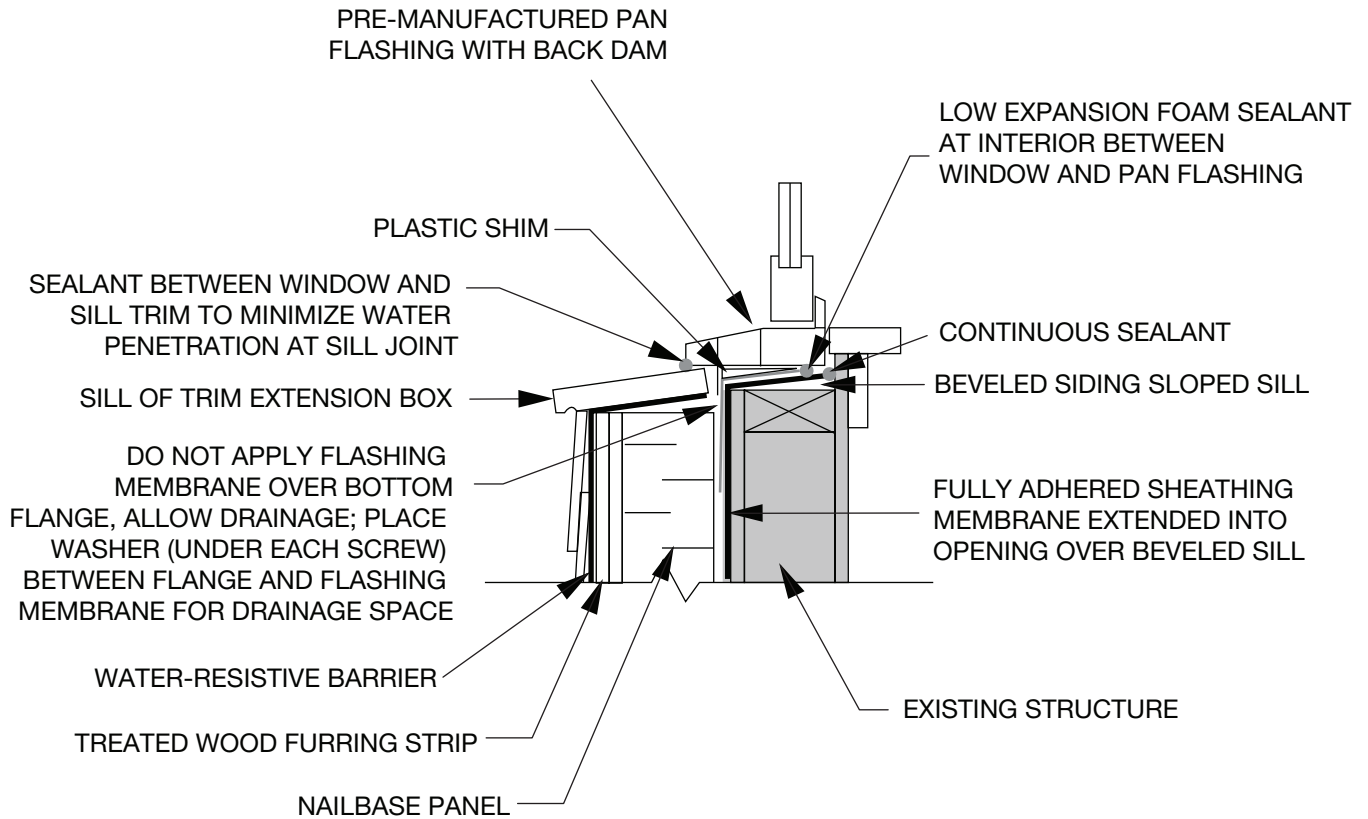
DATE

NOVEMBER 2018

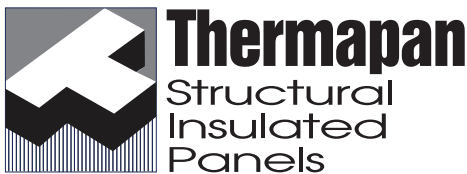
REVISION

DWG. No.

NB-7A

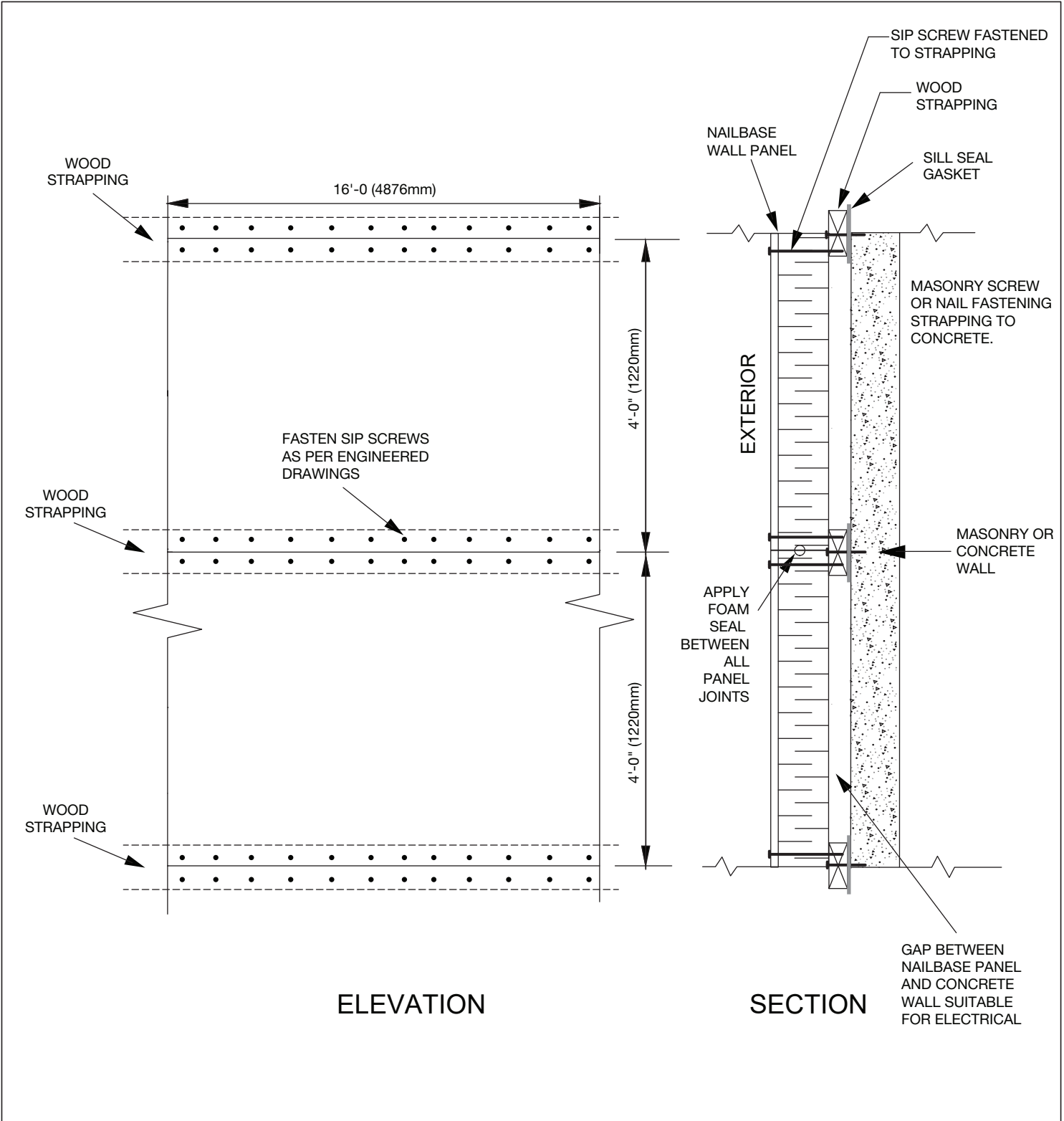


NOTE: SEE NB-7A FOR HEADER DETAIL



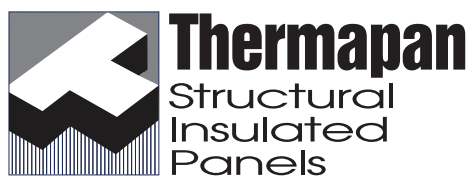
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
WINDOW LEFT IN PLACE (SILL)			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-7B	



ELEVATION

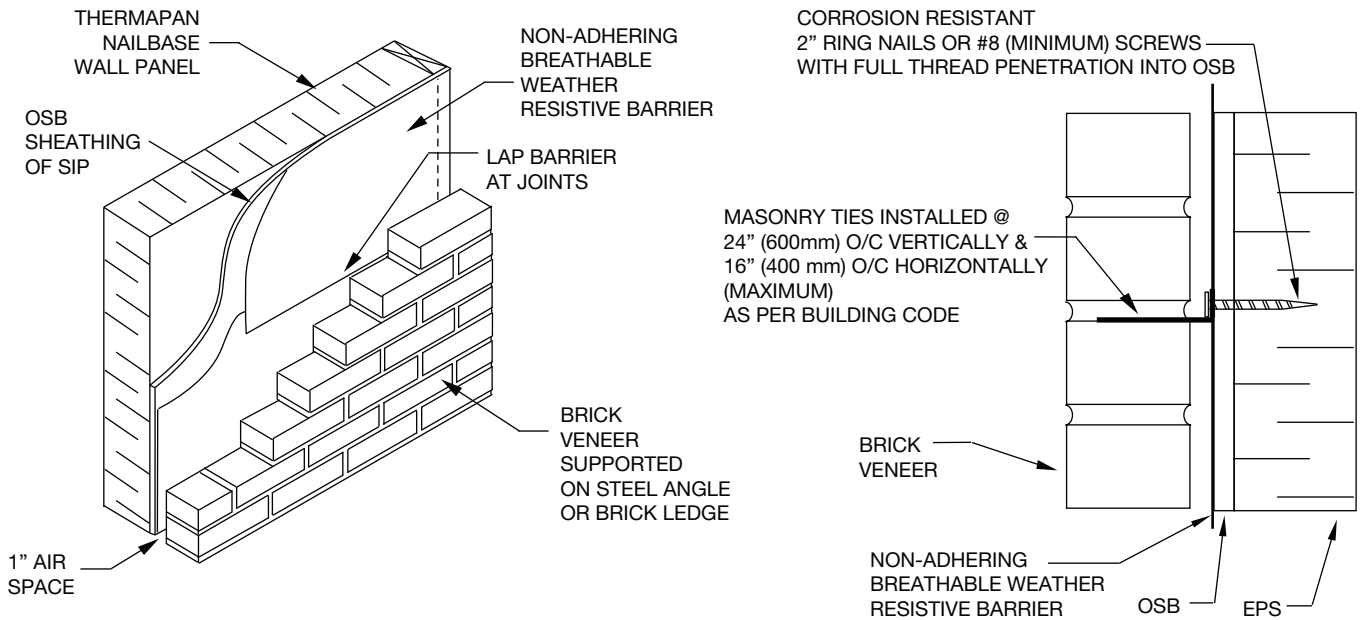
SECTION



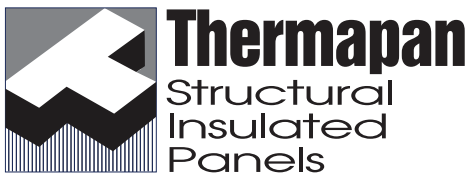
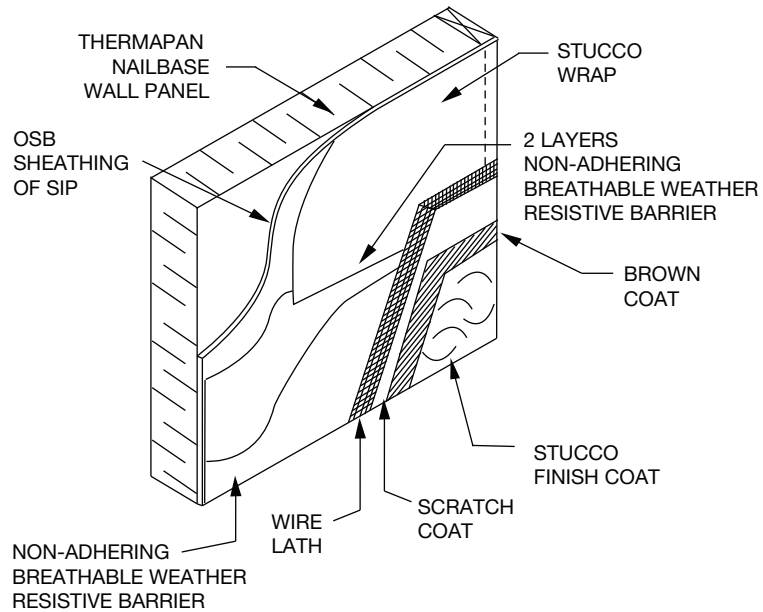
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
NAILBASE WALL ATTACHMENT (CONCRETE OR MASONRY WALL)			
REFERENCE	SCALE	N.T.S.	
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-8	

MASONRY VENEER



STUCCO



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

TITLE

**EXTERIOR WALL CLADDING
BRICK & STUCCO**

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

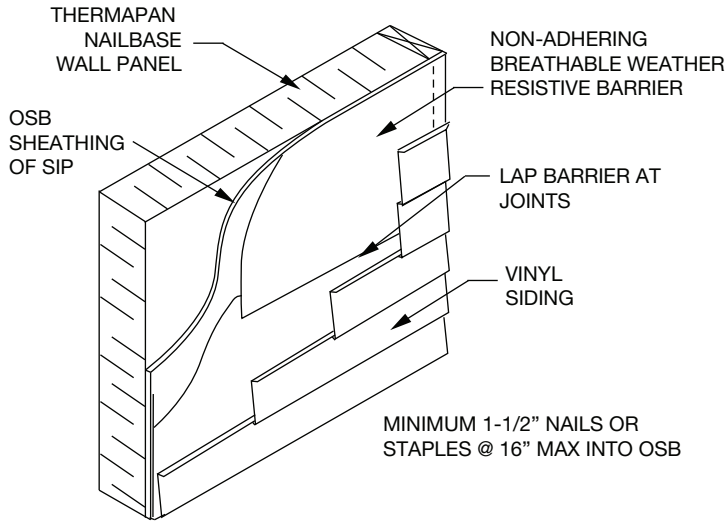
NOVEMBER 2018

REVISION

DWG. No.

NB-9

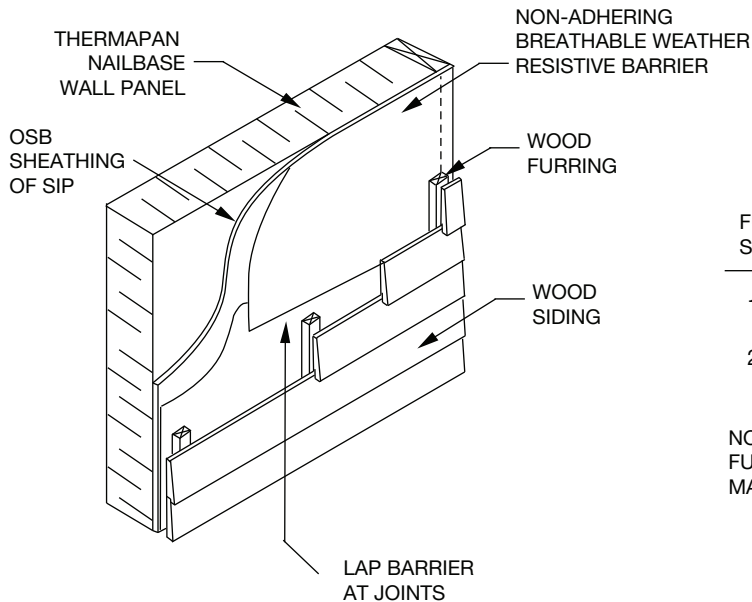
VINYL SIDING



FIBRE CEMENT SIDING

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

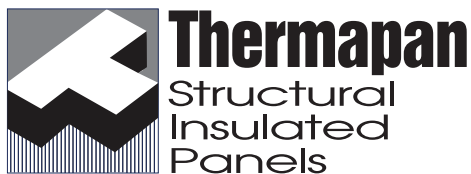
WOOD SIDING



FURRING REQUIREMENTS

FURRING SPACING	FASTENER SPACING (MIN 1-1/2" SCREWS)	FASTENER SPACING (MIN 1-1/4" NAILS)
16" O/C	10" O/C	8" O/C
24" O/C	8" O/C	8" O/C

NOTE: ALL NAILS TO BE RING (ANNULARLY THREADED). FURRING TO BE AS RECOMMENDED BY SIDING MANUFACTURER.



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

TITLE

EXTERIOR WALL CLADDING:
SIDING

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

NOVEMBER 2018

REVISION

DWG. No.

NB-10

MASONRY VENEER

MASONRY TIES INSTALLED @
24" (600mm) O/C VERTICALLY &
16" (400 mm) O/C HORIZONTALLY
(MAXIMUM)
AS PER BUILDING CODE

BRICK
VENEER

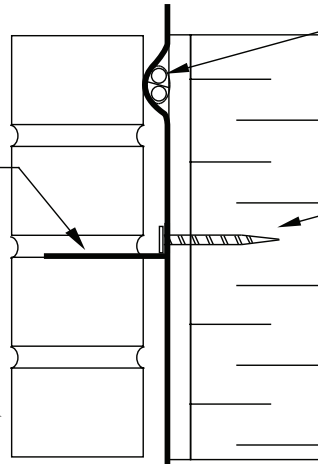
NON-ADHERING
BREATHABLE WEATHER
RESISTIVE BARRIER

OSB

EPS

ELECTRICAL WIRE FASTENED TO
OSB BENEATH MEMBRANE

CORROSION RESISTANT
2" RING NAILS OR #8 (MINIMUM) SCREWS
WITH FULL THREAD PENETRATION INTO OSB



WOOD SIDING

WOOD
SIDING

VERTICAL STRAPPING
16" O/C OR AS PER
SIDING SPECIFICATIONS

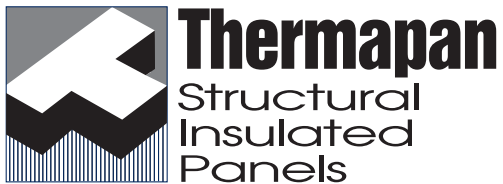
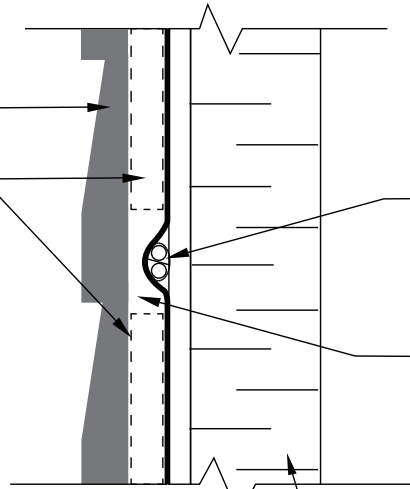
NON-ADHERING
BREATHABLE WEATHER
RESISTIVE BARRIER

OSB

EPS

ELECTRICAL WIRE FASTENED TO
OSB BENEATH MEMBRANE

GAP THROUGH
STRAPPING



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

TITLE

ELECTRICAL WIRE FASTENED
TO NAILBASE SIP EXTERIOR

PROJECT

REFERENCE

SCALE

N.T.S.

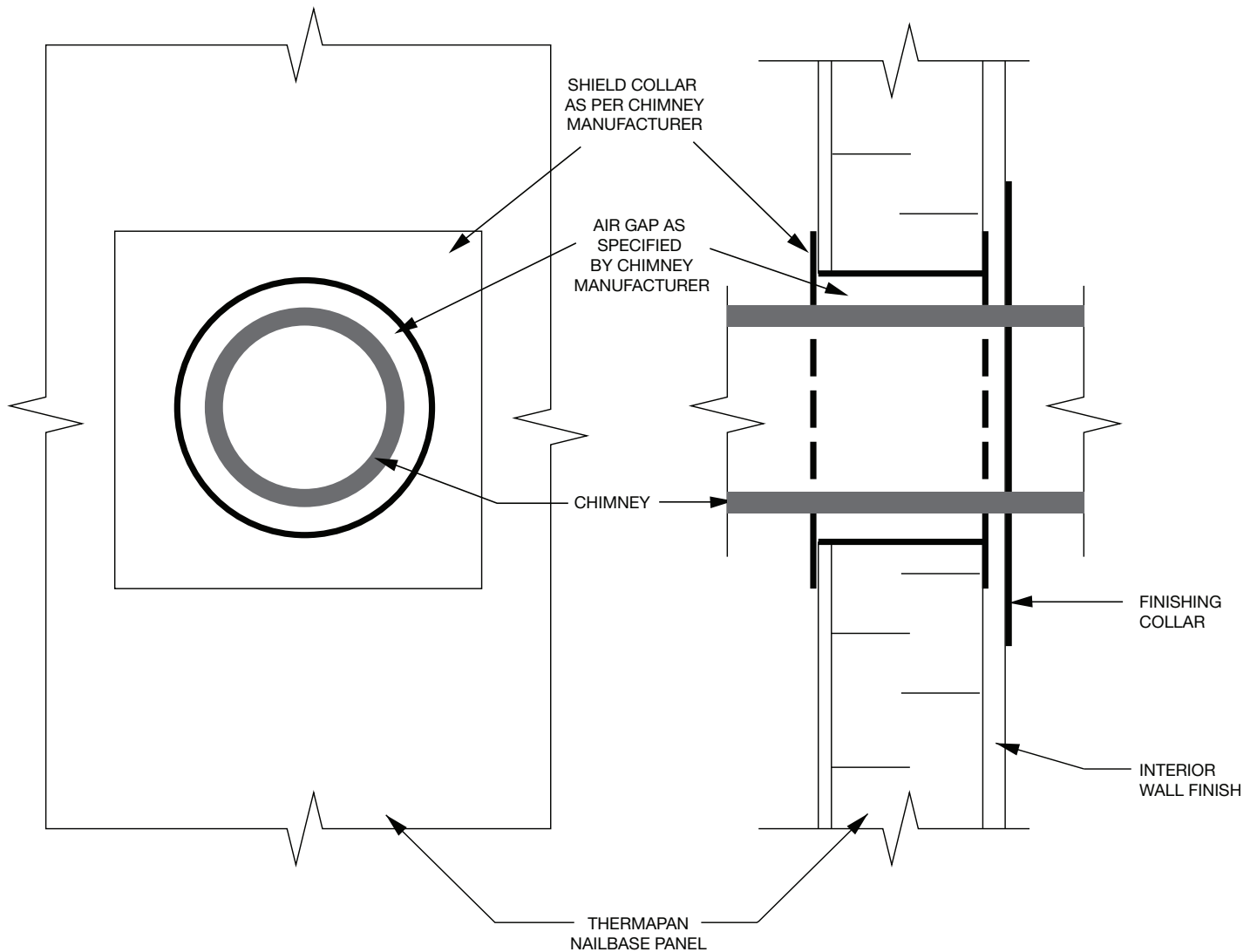
DATE

MARCH 2021

REVISION

DWG. No.

NB-11

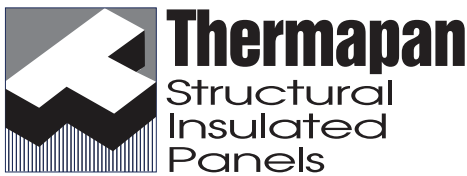
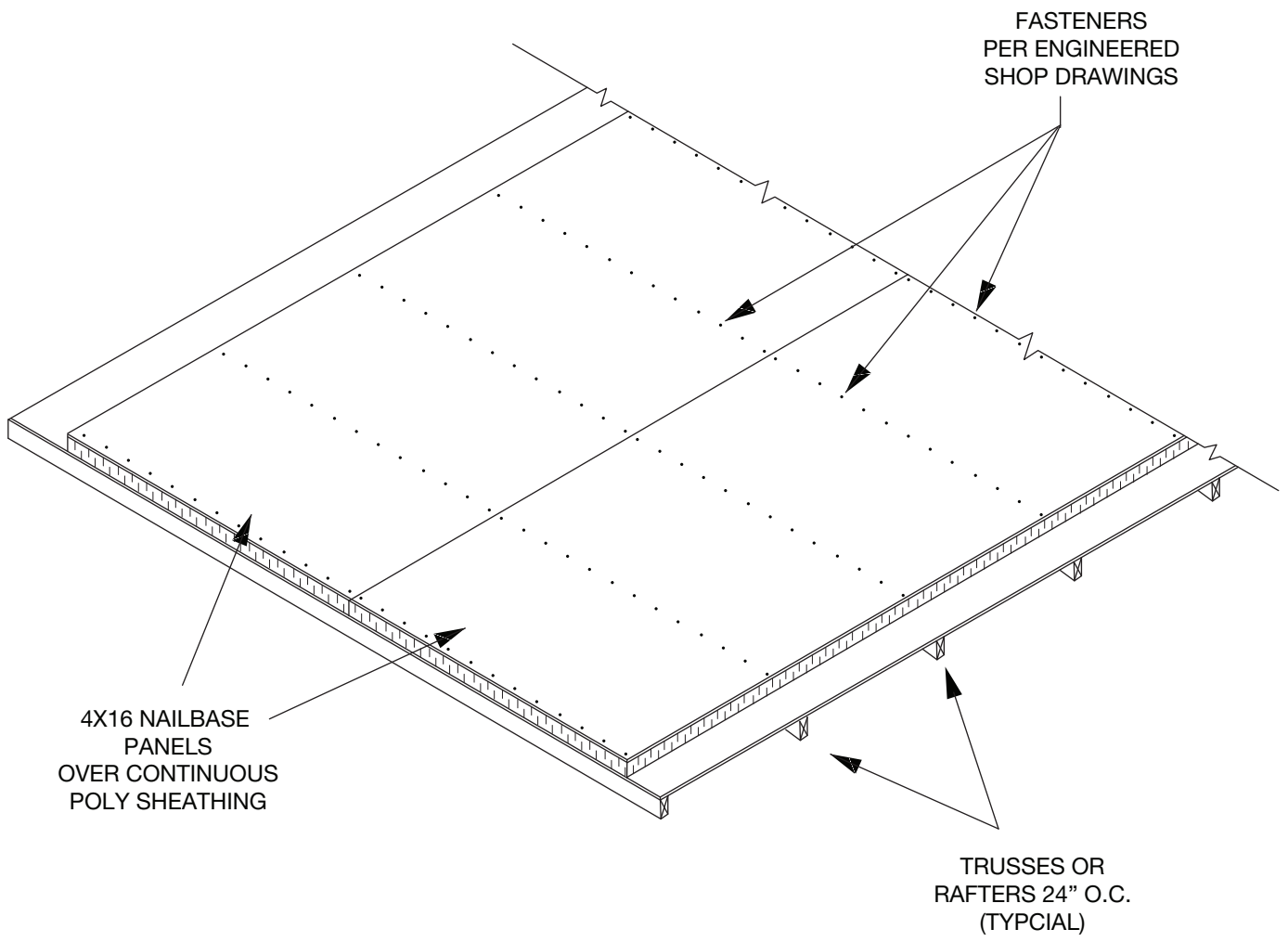


NOTE: ABOVE DETAILS ARE TYPICAL REQUIREMENTS TO INSTALL A PREFABRICATED METAL CHIMNEY IN A THERMAPAN STRUCTURAL INSULATED PANEL. THE CHIMNEY INSTALLATION MUST COMPLY WITH THE CHIMNEY MANUFACTURERS'S SPECIFICATION AND THE APPLICABLE BUILDING CODE.



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

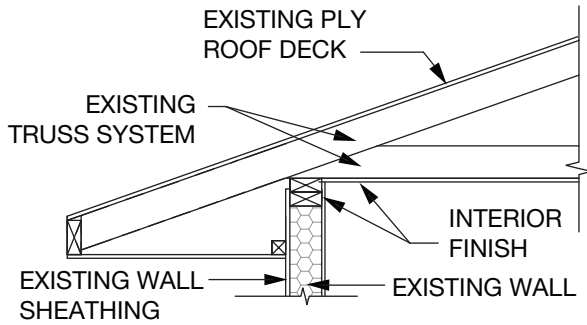
TITLE		PROJECT	
PRE-FABRICATED METAL CHIMNEY INSTALLATION IN WALL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
OCTOBER 2019		NB-12	



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

TITLE		PROJECT	
RETROFIT NAILBASE PANELS ON ROOF STRUCTURE			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-13	

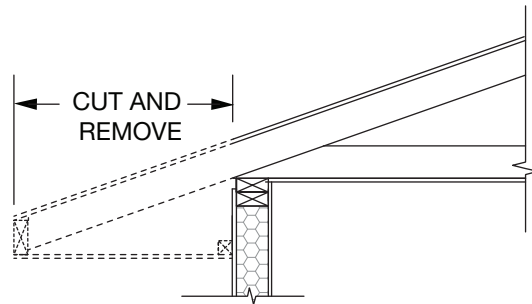
**STEP 1
ANALYSE CONSTRUCTION DETAIL**



TYPICAL EAVE CONSTRUCTION DETAIL

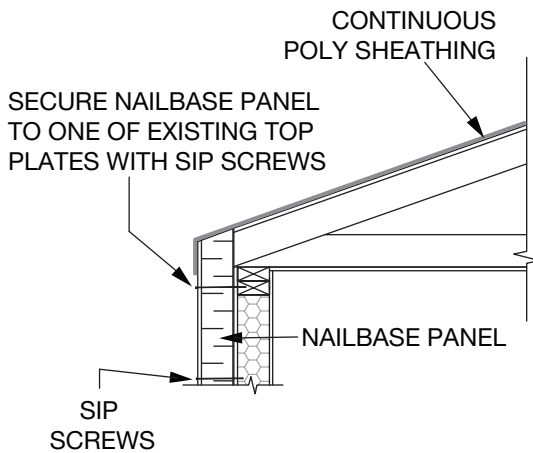
**STEP 2
REMOVE OVERHANG PORTION AS SHOWN**

REMOVE ROOF PLY, TRUSS OVERHANG FACIA AND SOFFIT AS REQUIRED AT FACE OF WALL SHEATHING

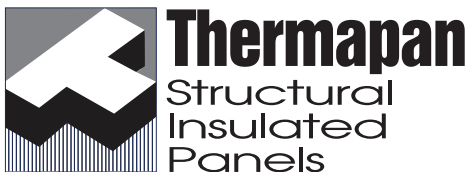
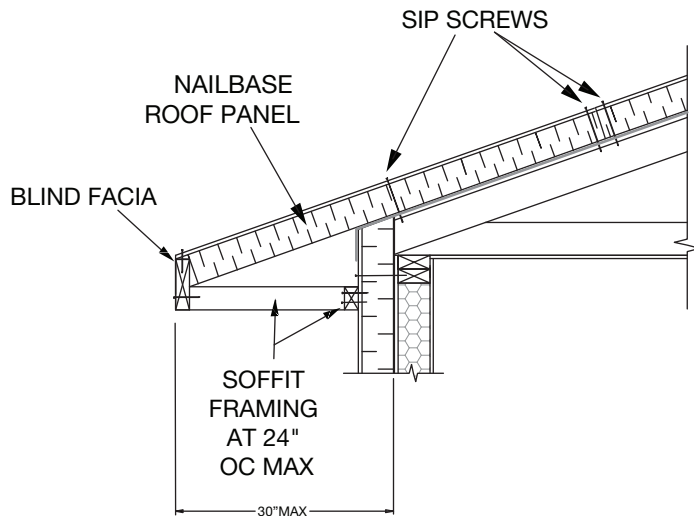


**STEP 3
INSTALL NAIL BASE WALL PANEL AND VAPOUR BARRIER ON ROOF**

INSTALL NAIL BASE PANEL ONTO WALL SHEATHING. SECURE PANEL TO TOP PLATE AS SHOWN AND INSTALL 2X3 FRAMING AT 24" OC TO SUPPORT SOFFIT AND BLIND FACIA



**STEP 4
INSTALL NAIL BASE ROOF PANEL BLIND FACIA AND SOFFIT TO CREATE OVERHANG**



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

TITLE

RETROFIT ROOF & WALL NAILBASE CONNECTION AT OVERHANG

PROJECT

REFERENCE

SCALE

N.T.S.

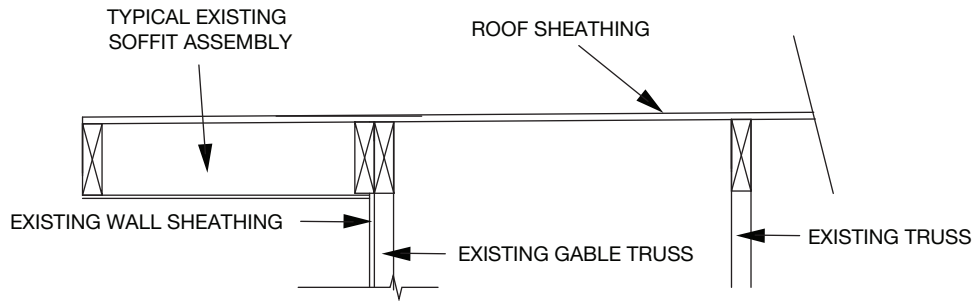
DATE

NOVEMBER 2018

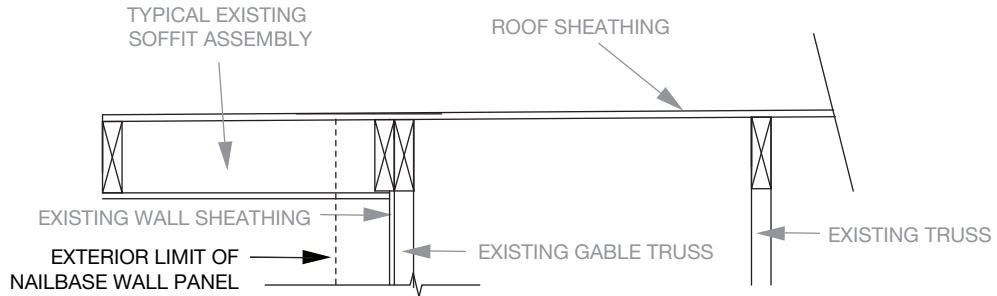
REVISION

DWG. No.

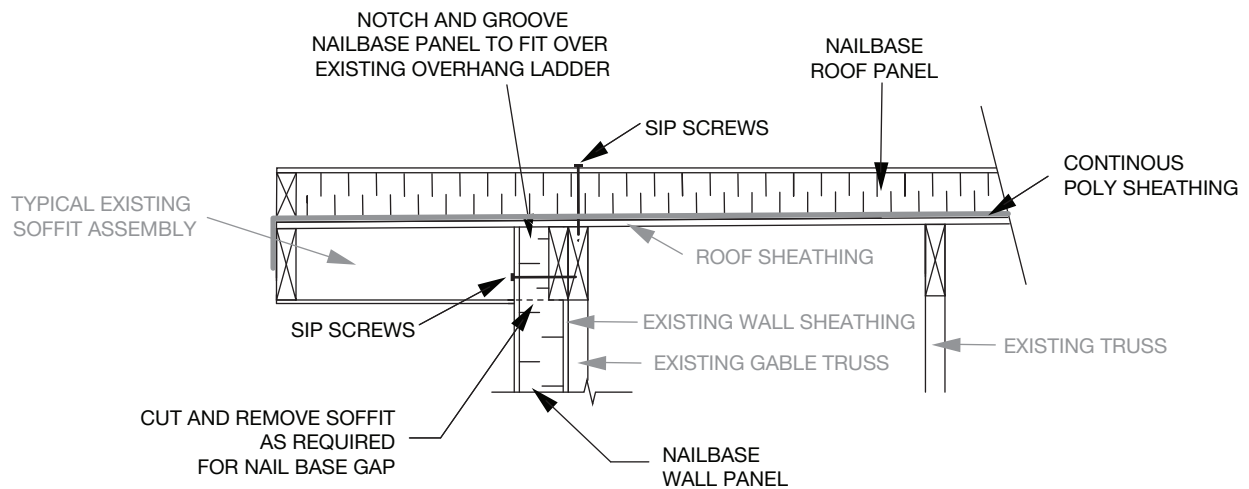
NB-14



TYPICAL GABLE OVERHANG CONSTRUCTION DETAIL



OVERHANG ADJUSTMENT FOR NAIL BASE ATTACHMENT



NAIL BASE WALL AND ROOF INSTALLATION FOR TYPICAL GABLE OVERHANG INSTALLATION



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

TITLE

NAILBASE ROOF OVERHANG DETAILS

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

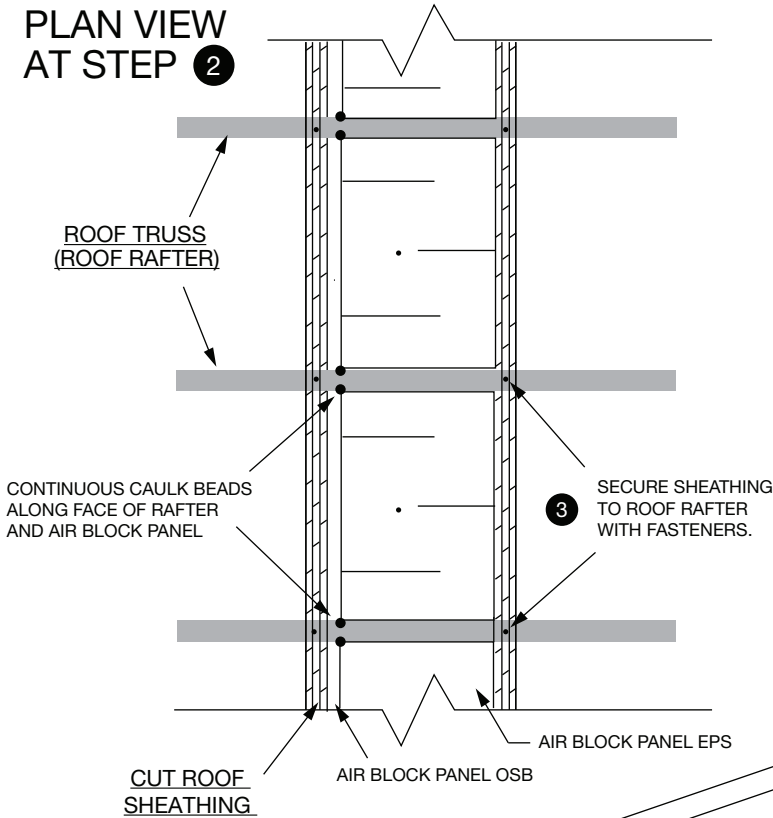
NOVEMBER 2018

REVISION

DWG. No.

NB-15

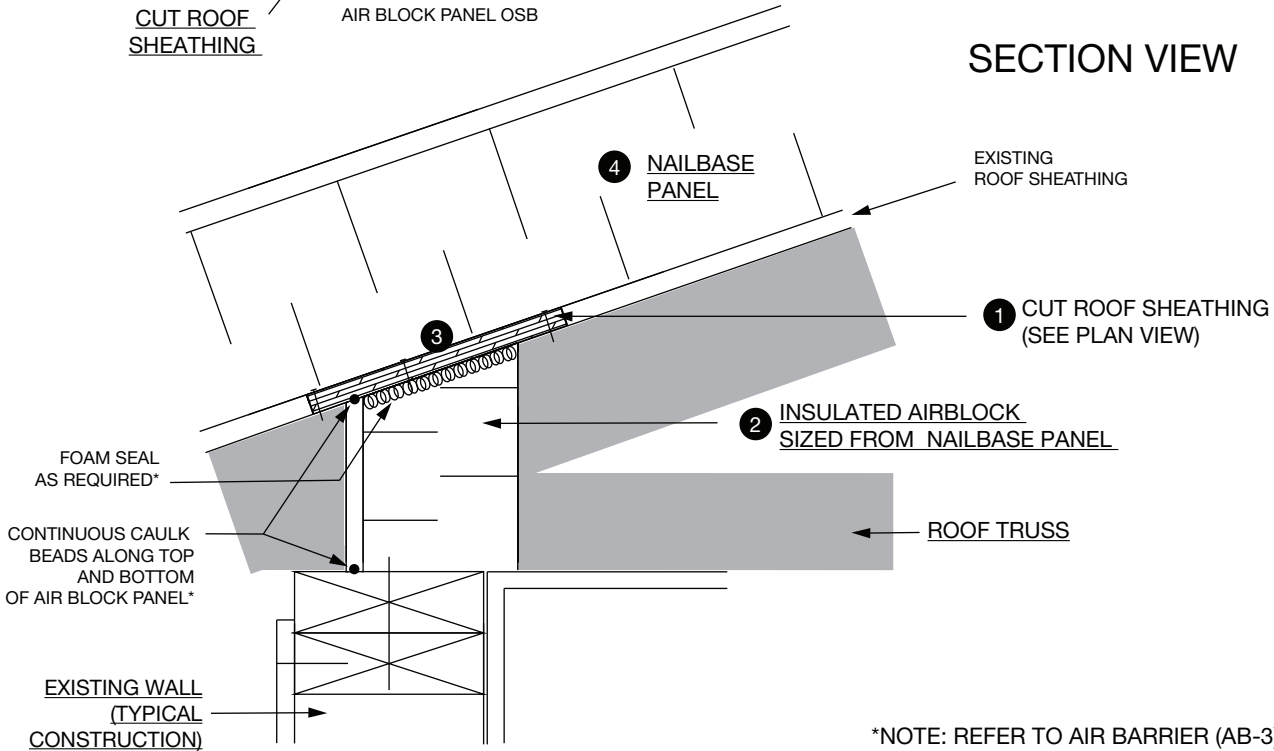
**PLAN VIEW
AT STEP 2**



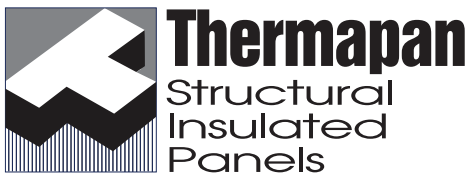
STEPS

- 1 CUT EXISTING ROOF SHEATHING AS REQUIRED
- 2 INSERT, FASTEN AND SEAL AIR BLOCK SIZED FROM NAILBASE PANEL (ENSURE BLOCKING FIT IS SUCH TO PREVENT AIR LEAKAGE WHEN SHEATHING IS RE-INSTALLED)
- 3 SEAL AND FASTEN ROOF SHEATHING CUT PIECE TO ROOF RAFTER WITH FASTENERS
- 4 APPLY NAILBASE PANEL (SEE NB-12)

SECTION VIEW

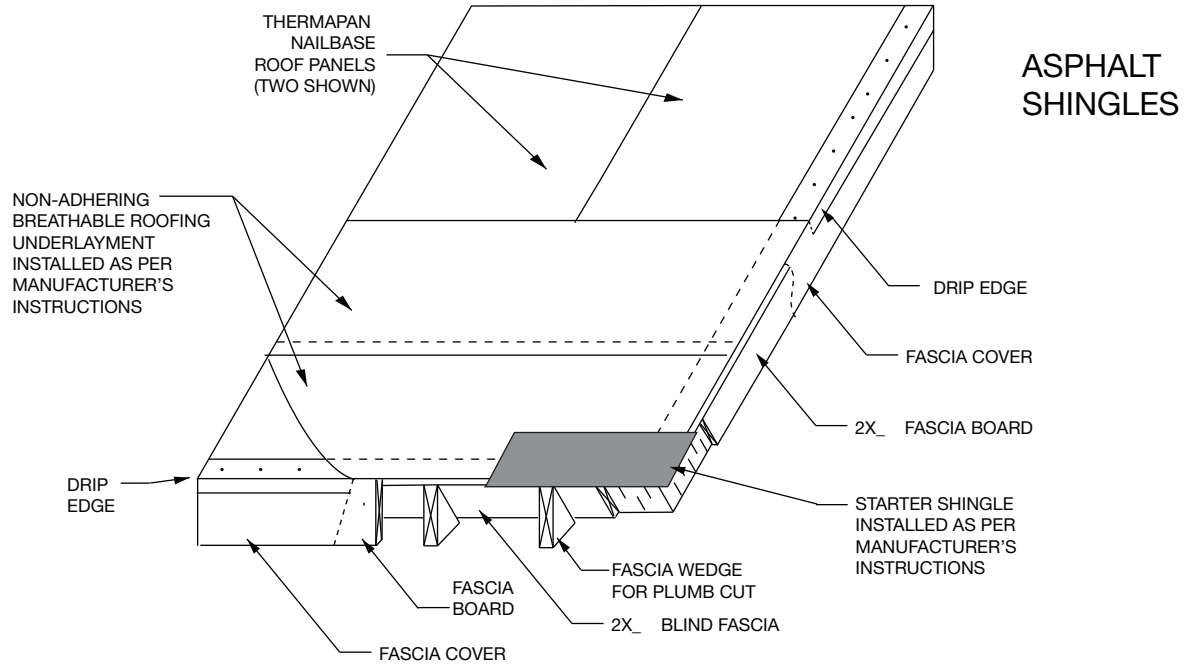


*NOTE: REFER TO AIR BARRIER (AB-3) DETAILS FOR SEALING NAILBASE PANEL CONNECTIONS.

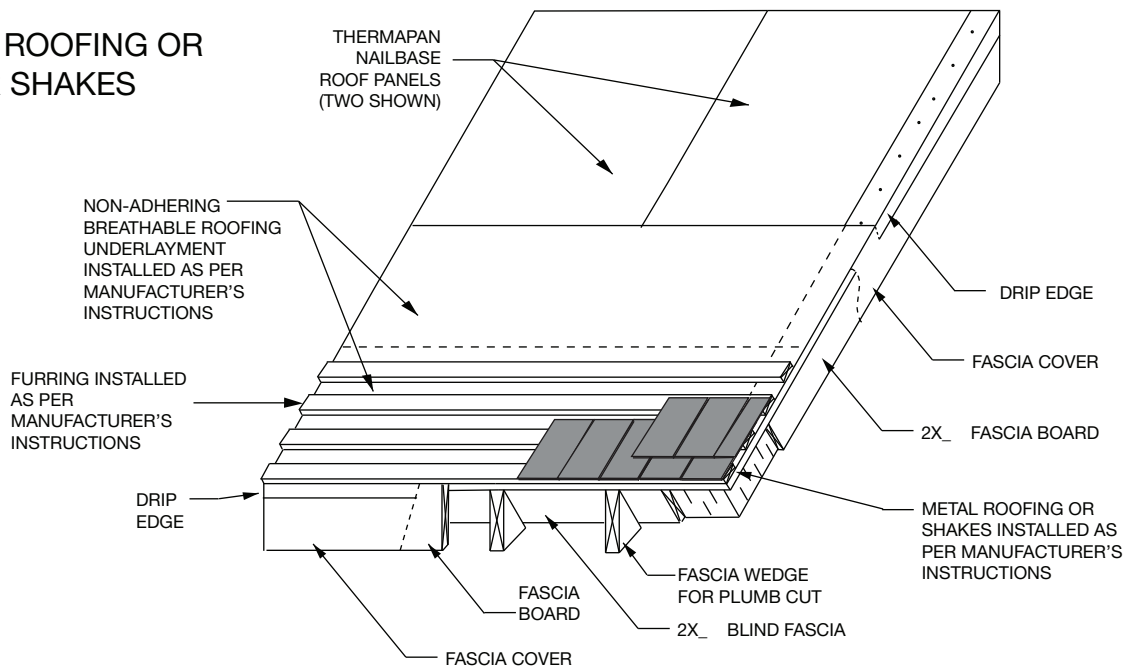


www.thermapan.com
1-877-443-WALL (9255)

TITLE NAILBASE PANEL ATTIC AIR BLOCK		PROJECT	
REFERENCE	SCALE N.T.S.		
DATE MARCH 2020	REVISION	DWG. No. NB-16	



METAL ROOFING OR CEDAR SHAKES



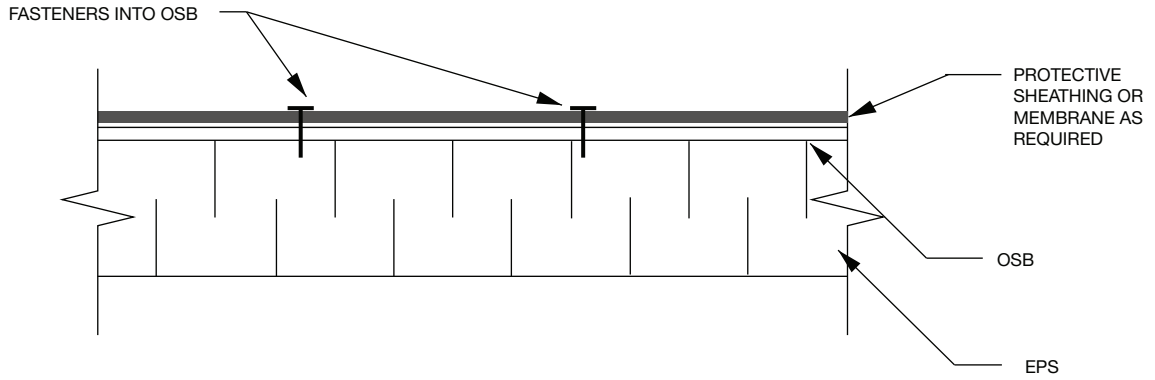
NOTE: VENTILATION OF ROOF NOT REQUIRED.



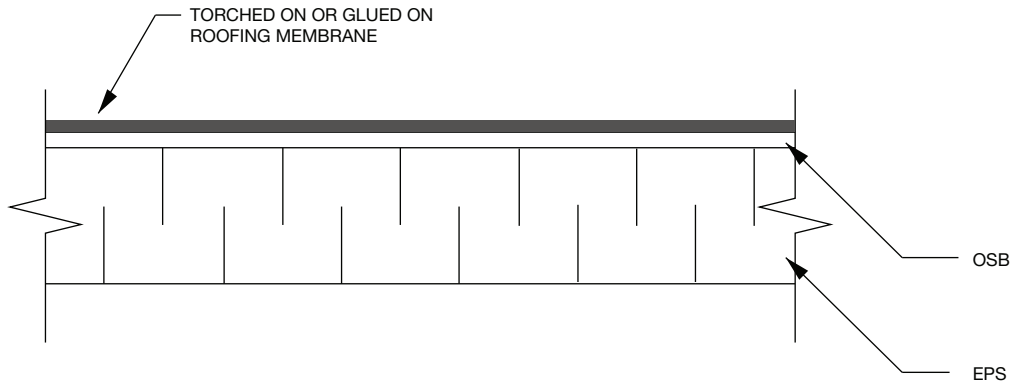
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
SLOPED ROOFING APPLIED TO NAILBASE SIPS			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-17	

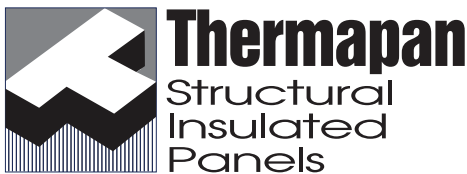
**NON-ADHERED MEMBRANE
(EPDM, PVC, TPO, ETC.)**



ADHERED ROOFING MEMBRANE



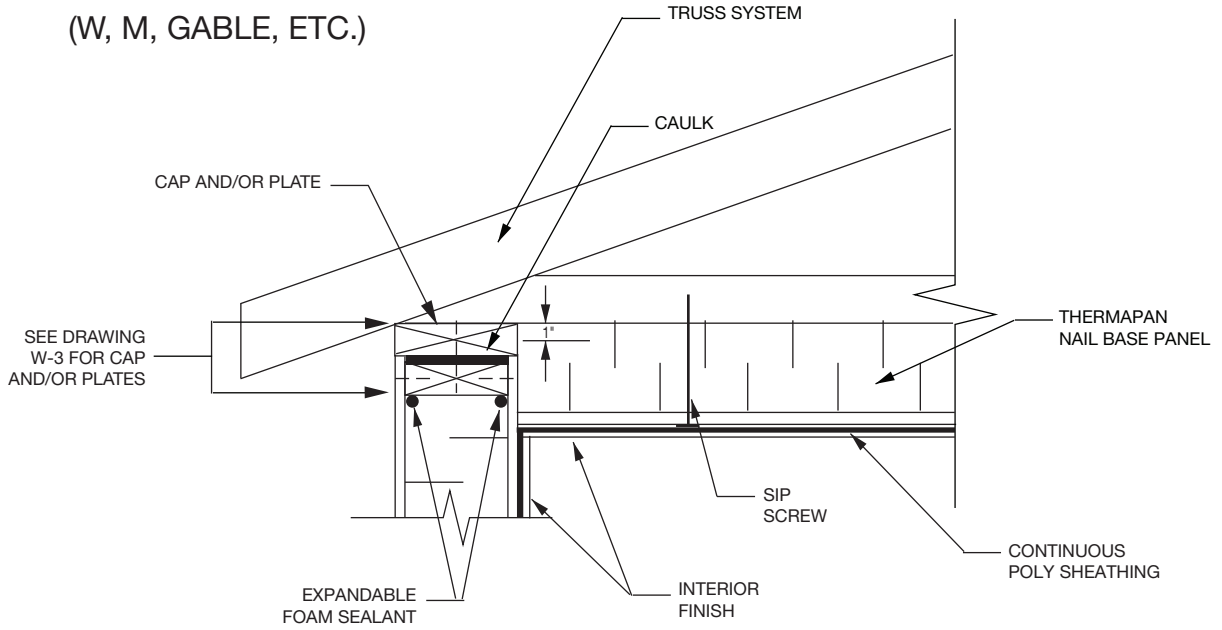
- NOTES:
- NAILBASE SURFACE TO BE DRY AND FREE OF MOISTURE.
 - INSTALL MEMBRANE ACCORDING TO MEMBRANE MANUFACTURER'S DETAILS AND CONFORM TO REQUIREMENTS OF LOCAL BUILDING CODE.
 - SOLVENT BASED ADHESIVES ARE NOT PERMITTED.



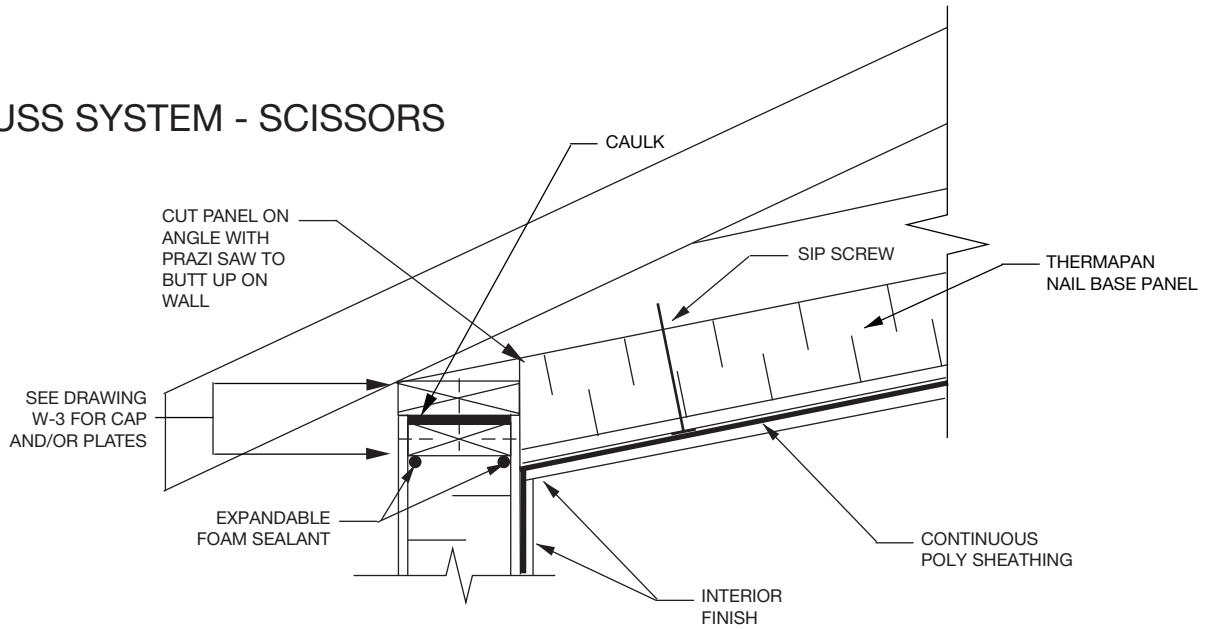
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
FLAT ROOFING APPLIED TO NAILBASE SIPS			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
MAY 2023	1	NB-18	

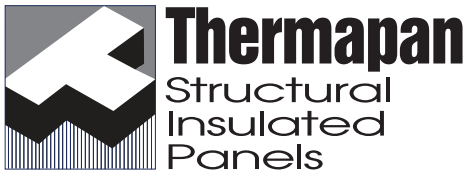
TRUSS SYSTEM - FLAT CEILING (W, M, GABLE, ETC.)



TRUSS SYSTEM - SCISSORS

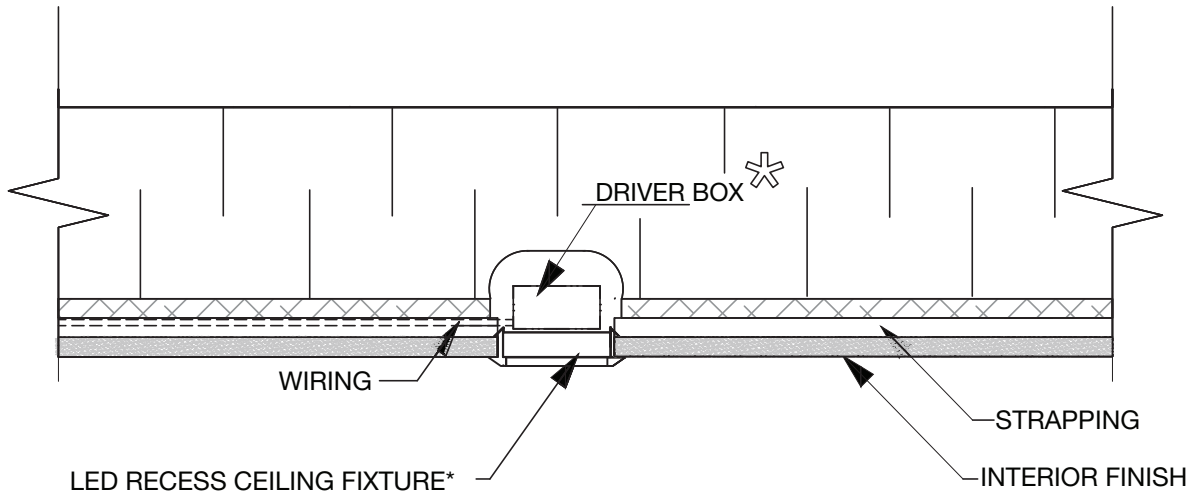


NOTES: SIP SCREWS TO BE INSTALLED EVERY 2' O/C BOTH DIRECTIONS.
REFER TO AIR BARRIER (AB-3) DETAILS FOR SEALING
NAILBASE PANEL CONNECTIONS.



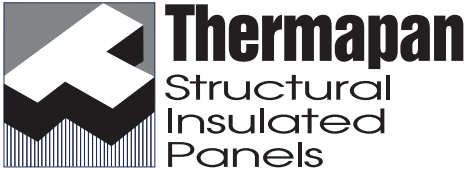
www.thermapan.com
1-877-443-WALL (9255)

TITLE		PROJECT	
NAILBASE CEILING PANEL			
REFERENCE	SCALE		
	N.T.S.		
DATE	REVISION	DWG. No.	
NOVEMBER 2018		NB-19	

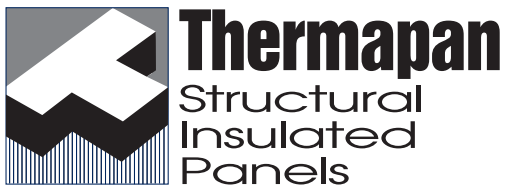
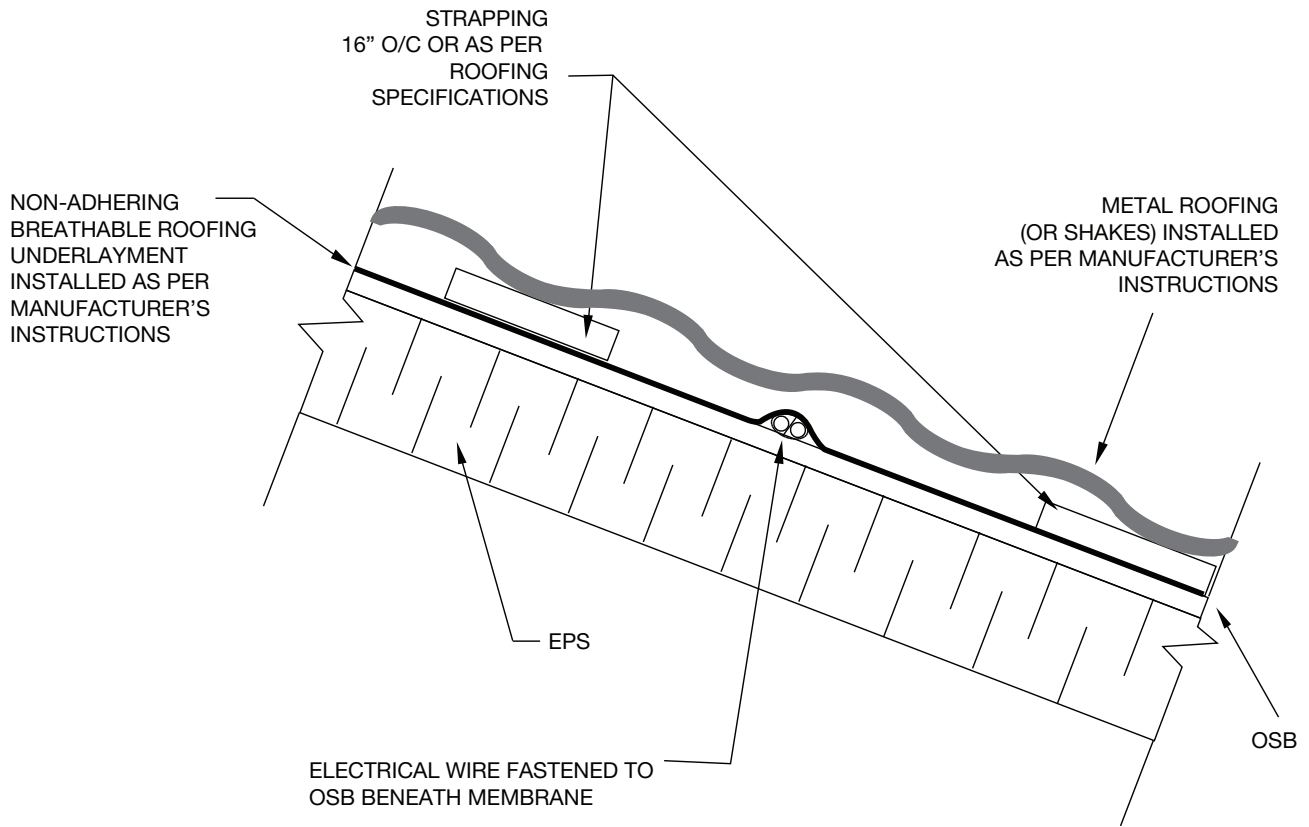


*** FIXTURE SPECIFICATIONS**

FIXTURE TO HAVE AMBIENT OPERATING TEMPERATURE +140F(+40C) MAXIMUM
 INSTALL AS PER MANUFACTURERS SPECIFICATIONS

 <p>www.thermapan.com 1-877-443-WALL (9255)</p>	TITLE		LED POT LIGHT INSTALLATION IN CEILING SIPS		PROJECT
	REFERENCE	SCALE		N.T.S.	
	DATE	REVISION	DWG. No.		
	NOVEMBER 2018		NB-20		

METAL ROOFING OR CEDAR SHAKES



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

TITLE

**ELECTRICAL WIRE
FASTENED TO NAILBASE
ROOF SIP**

PROJECT

REFERENCE

SCALE

N.T.S.

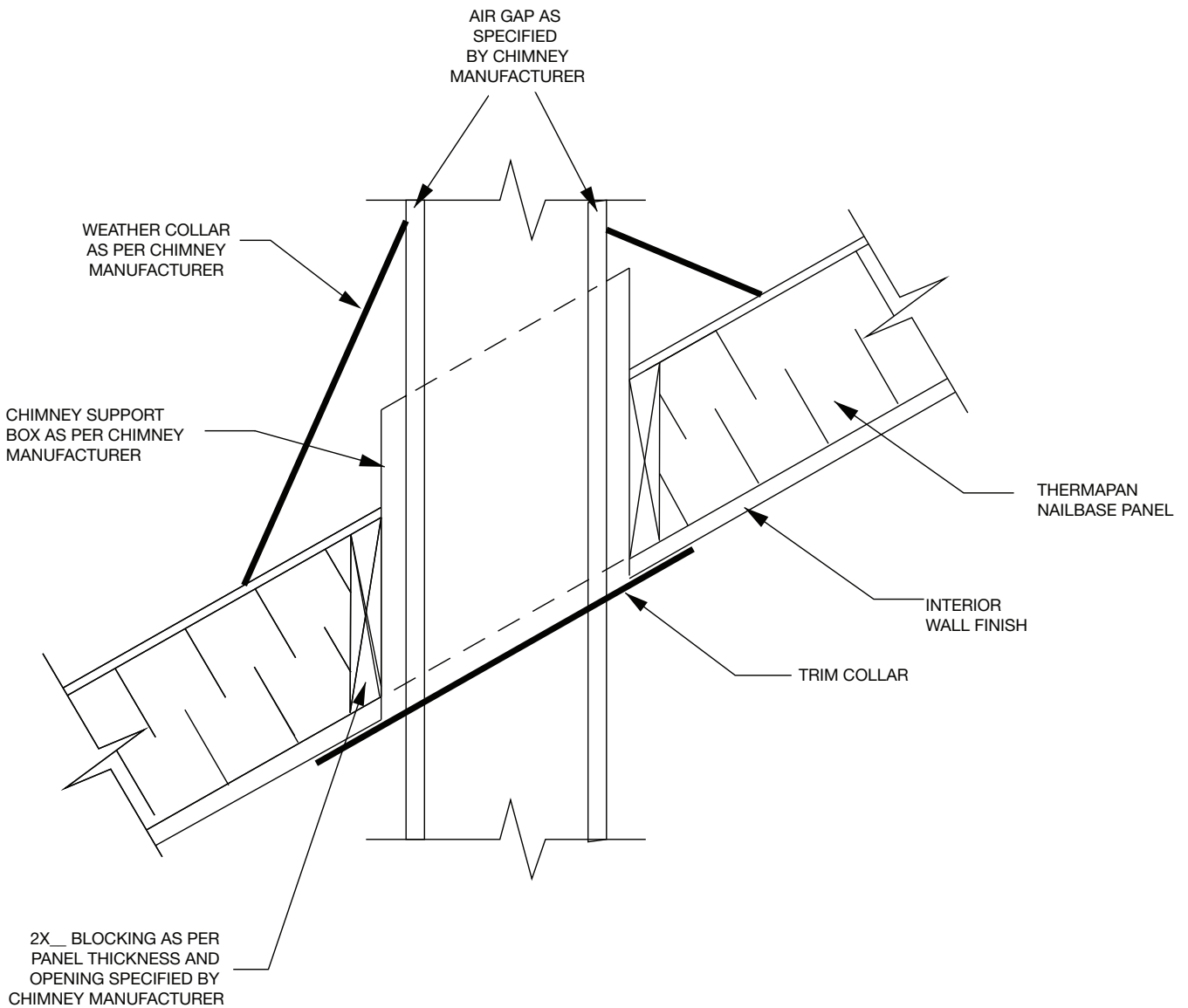
DATE

MARCH 2021

REVISION

DWG. No.

NB-21



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.



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

TITLE

PRE-FABRICATED METAL CHIMNEY – ROOF INSTALLATION

PROJECT

REFERENCE

SCALE

N.T.S.

DATE

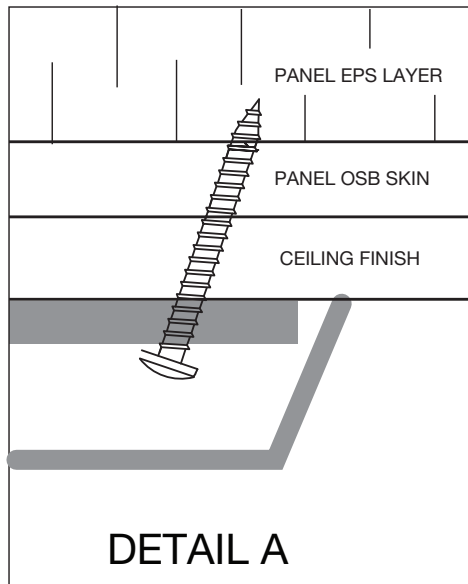
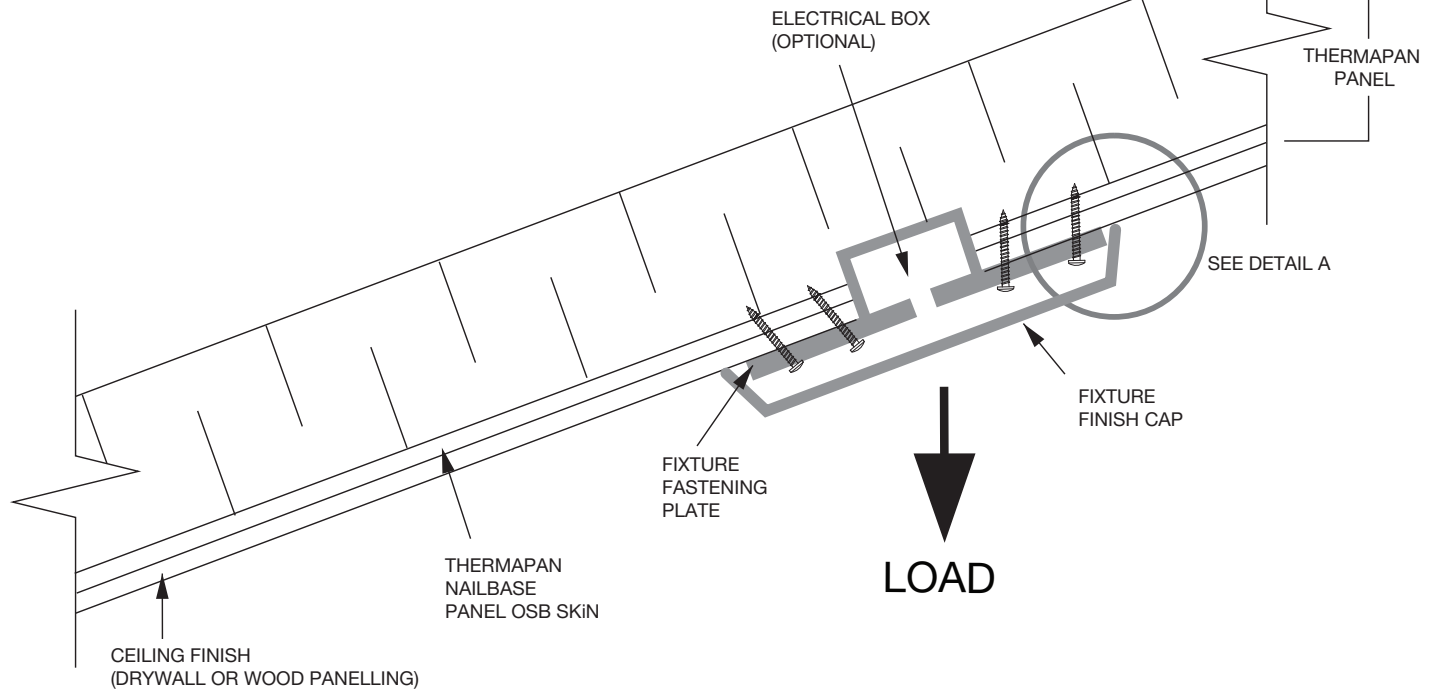
OCTOBER 2019

REVISION

DWG. No.

NB-22

TYPICAL SIP ROOF SECTION



CEILING LOAD RESISTANCE CAN BE ACHIEVED WITH NUMBER 10 SHEET METAL SCREWS INSTALLED TO A SIP CEILING FINISH AS DETAILED OR TO THE SIP SKIN DIRECTLY.

EACH SCREW CAN RESIST A PULL OUT OF 90 POUNDS IN 7/16" OSB. CONTRACTOR TO CONFIRM LOAD TO BE SECURED AND NUMBER OF FASTENERS REQUIRED. MINIMUM 4 SCREWS PER FIXTURES. FULL THICKNESS OF OSB TO RECEIVE SCREW THREAD ON ANGLE AS DETAILED



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

TITLE

**SCREW FASTENER DETAIL
FOR SECURING LOAD TO
NAILBASE CEILING PANEL**

PROJECT

REFERENCE

SCALE

N.T.S.

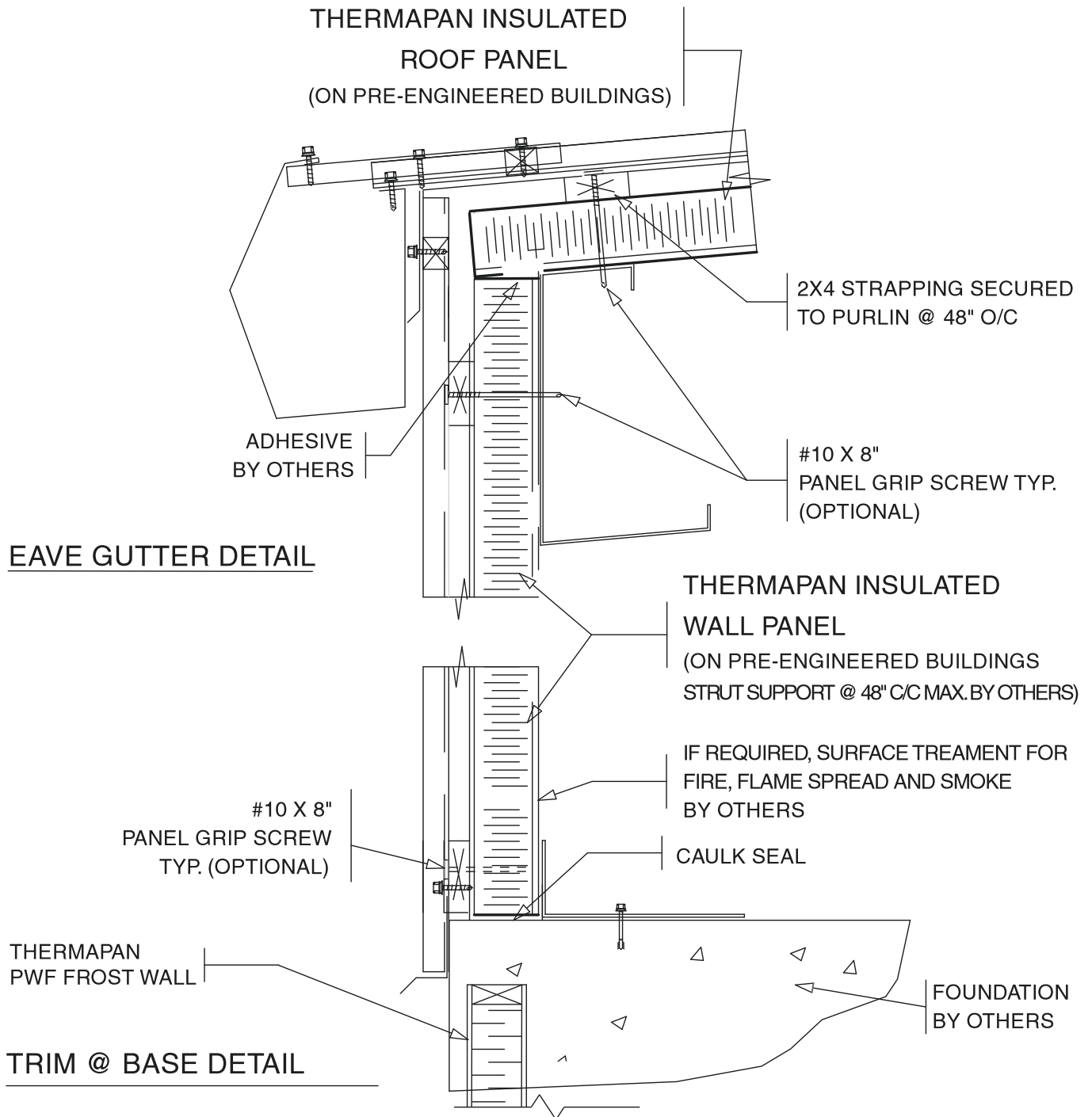
DATE

FEBRUARY 2020

REVISION

DWG. No.

NB-23



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

TITLE

TYPICAL WALL DETAIL

NOTE
THERMAPAN
INSULATED PANEL
DETAILING TO
COMPLEMENT
PRE-ENGINEERED
BUILDING

REFERENCE

SCALE

NTS

DATE

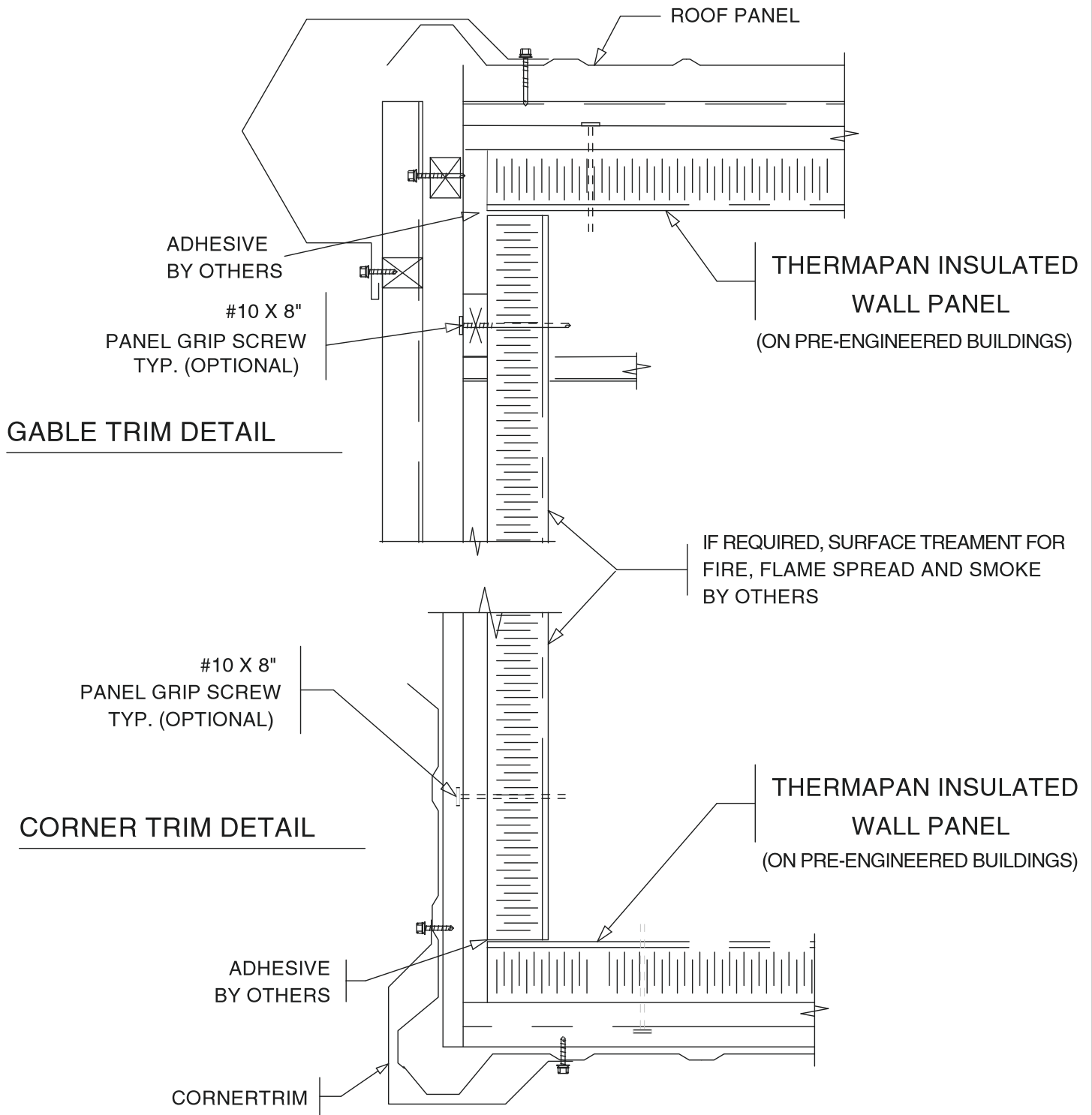
REVISION

DWG. No.

JAN. 10, 2005

5

IN-1



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

TITLE

GABLE & CORNER TRIM DETAIL

NOTE
THERMAPAN
INSULATED PANEL
DETAILING TO
COMPLEMENT
PRE-ENGINEERED
BUILDING

REFERENCE

SCALE

NTS

DATE

REVISION

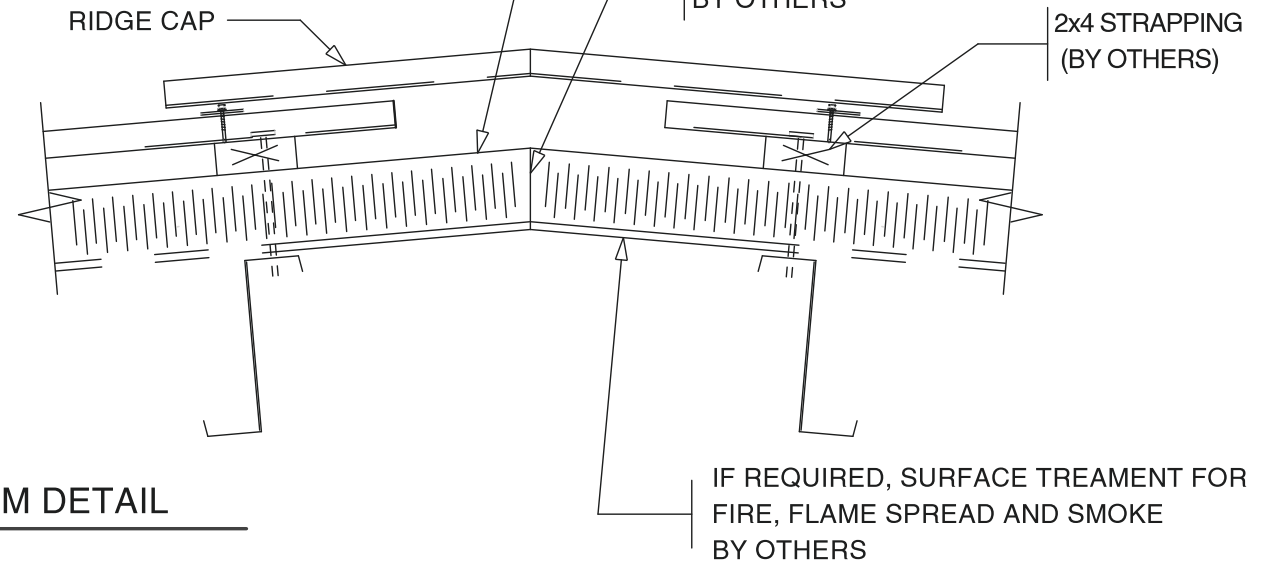
DWG. No.

JAN. 10, 2005

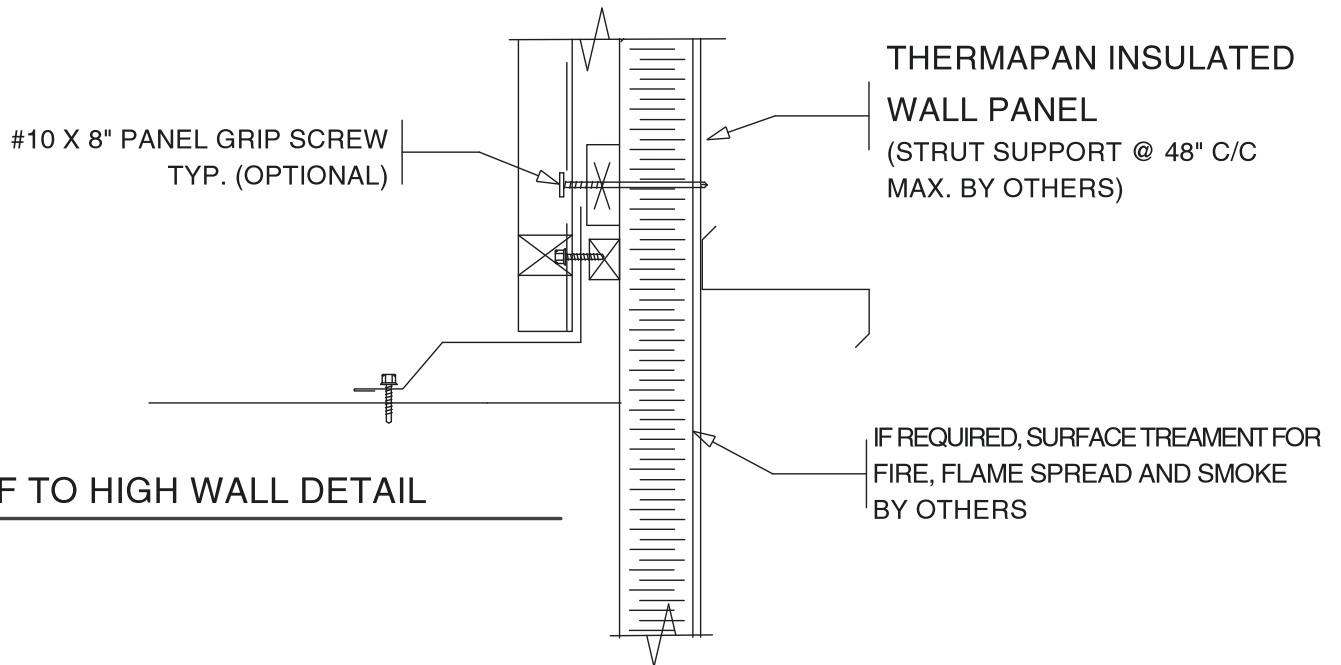
5

IN-2

THERMAPAN INSULATED
ROOF PANEL
(ON PRE-ENGINEERED BUILDINGS)



PEAK TRIM DETAIL



ROOF TO HIGH WALL DETAIL



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

TITLE

PEAK & HIGH WALL DETAIL

NOTE
THERMAPAN
INSULATED PANEL
DETAILING TO
COMPLEMENT
PRE-ENGINEERED
BUILDING

REFERENCE

SCALE

NTS

DATE

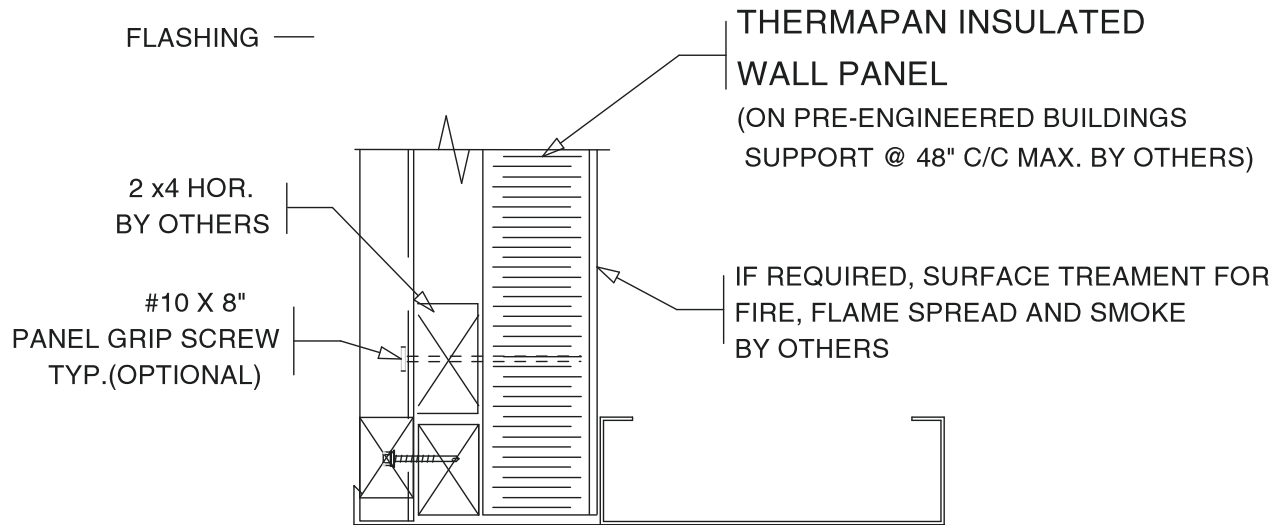
JAN. 10, 2005

REVISION

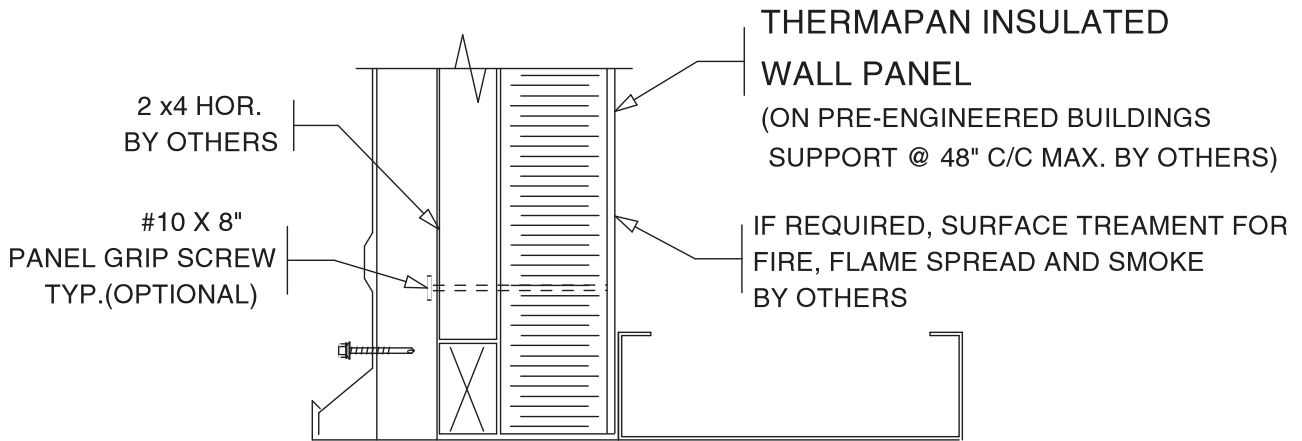
5

DWG. No.

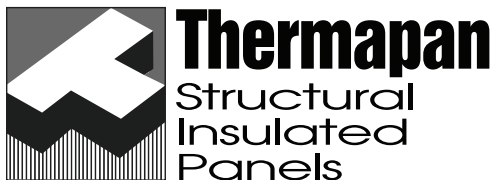
IN-3



HEADER



DOOR JAMB



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

TITLE

HEADER & JAMB TRIM @
OVERHEAD DOOR

NOTE
THERMAPAN
INSULATED PANEL
DETAILING TO
COMPLEMENT
PRE-ENGINEERED
BUILDING

REFERENCE

SCALE

NTS

DATE

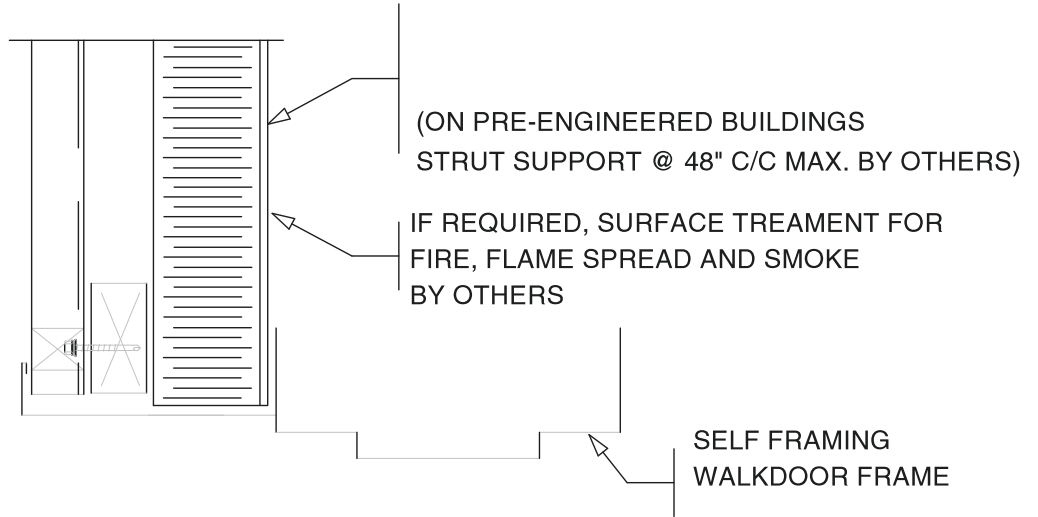
JAN. 10, 2005

REVISION

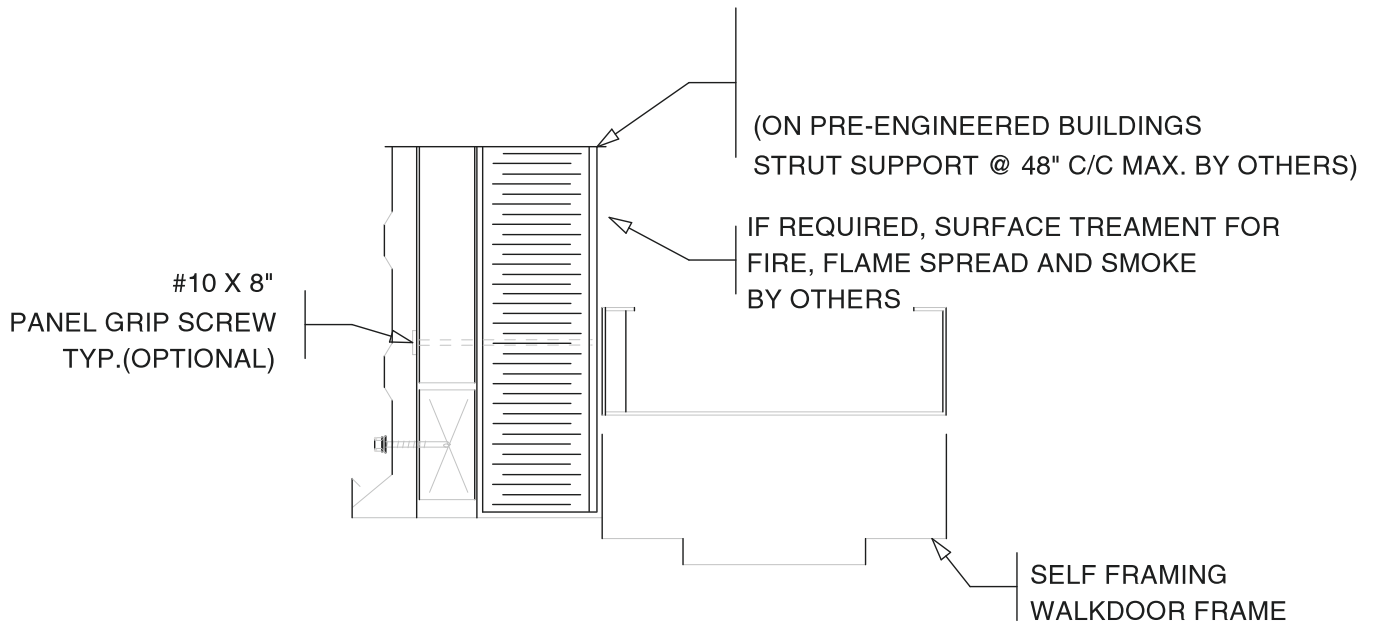
5

DWG. No.

IN-4



HEAD TRIM



JAMB TRIM



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

TITLE		HEADER & TRIM @ SELF FRAMING WALKDOOR		NOTE THERMAPAN INSULATED PANEL DETAILING TO COMPLEMENT PRE-ENGINEERED BUILDING
REFERENCE	SCALE	NTS		
DATE	REVISION	DWG. No.		
JAN. 10, 2005	5	IN-5		