HIGH PERFORMANCE WALL :
X SERIES - CANADA

PATENT PENDING

DISCLAIMER

THE PROCEDURES PRESENTED IN THIS FIELD ASSEMBLY GUIDE ARE INTENDED AS A GUIDELINE ONLY, TO PROVIDE A BASIC UNDERSTANDING OF THE CONCEPTS INVOLVED IN THE PROPER AND AFFECTIVE INSTALLATION OF OUR HP+™ WALL SYSTEMS.

FOR CODE, DESIGN, AND INSTALLATION INFORMATION, PLEASE REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.

IT REMAINS THE RESPONSIBILITY OF THE HP+™ WALL SYSTEMS INSTALLER AND/OR BUILDER TO MESURE ALL WORK PERFORMED CONFORMS TO APPLICABLE BUILDING CODE AND LABOUR SAFETY REGULATIONS GOVERNING THE CONSTRUCTION.

NOTE:

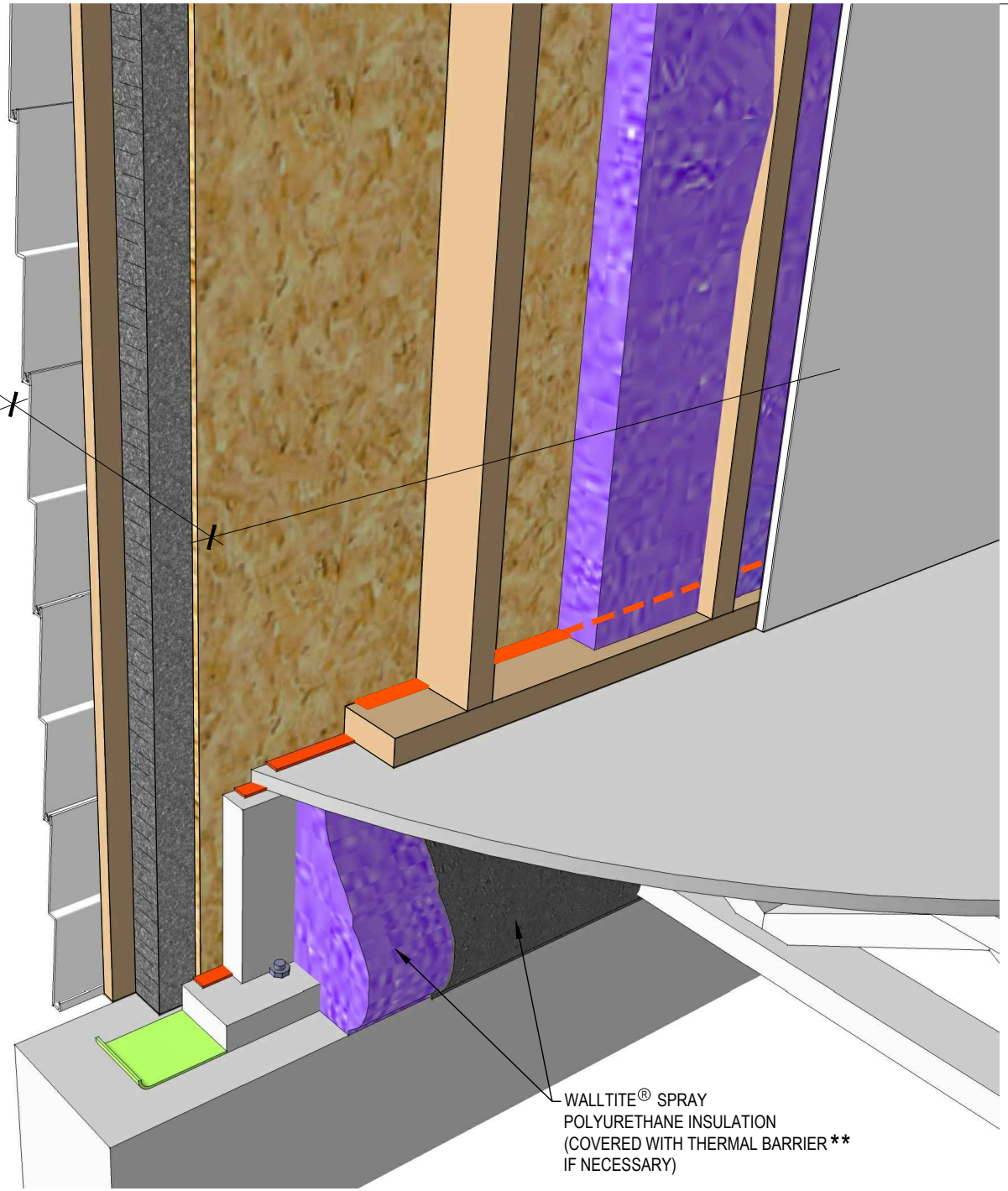
ALL REFERENCES TO MASTERSEAL® NP1™ OR 1/2" OR 1" FOAM SEALANT TAPE IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS

HIGH PERFORMANCE WALL : X SERIES - CANADA

PATENT PENDING

WALL COMPONENTS

- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 1" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 lb/ft³ MINIMUM DENSITY)
- OSB WALL SHEATHING
- 2" x 4" STUDS @ 16" C/C OR 24" C/C
- 2 1/2" THICK WALLTITE® SPRAYED ONTO SURFACE OF OSB PANEL
- 1/2" GYPSUM BOARD



** TYPICAL WALL NOMINAL R VALUE*

COMPONENTS	*R VALUE*
OUTSIDE AIR FILM	R 0.17
EXTERIOR CLADDING	+/- R 0.62
AIR SPACE 3/4"	R 1.02
NEOPOR® SHEATHING 1"	R 4.70
OSB WALL SHEATHING 1/4"	R 0.35
WALLTITE® CM01, 2 1/2"	R 13.5
AIR SPACE 1"	R 1.02
GYPSUM BOARD 1/2"	R 0.44
INSIDE AIR FILM	R 0.68
TOTAL R	***R 22.50***

**** NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE***

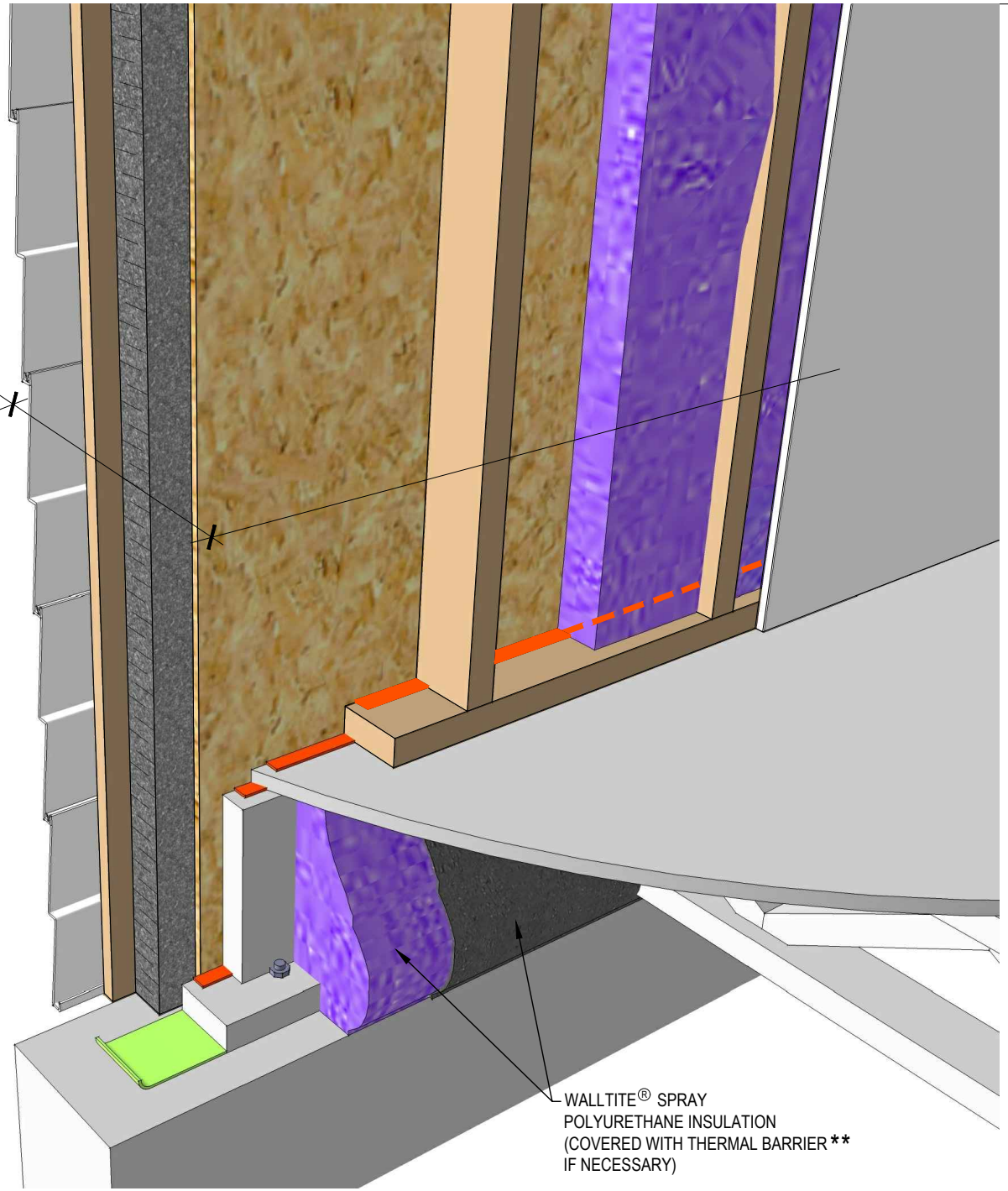
****** FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE.

HIGH PERFORMANCE WALL : X SERIES - CANADA

PATENT PENDING

WALL COMPONENTS

- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 1 1/2" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 lb/ft³ MINIMUM DENSITY)
- OSB WALL SHEATHING
- 2" x 4" STUDS @ 16" C/C OR 24" C/C
- 2 1/2" THICK WALLTITE® SPRAYED ONTO SURFACE OF OSB PANEL
- 1/2" GYPSUM BOARD



** TYPICAL WALL NOMINAL R VALUE*

COMPONENTS	*R VALUE*
OUTSIDE AIR FILM	R 0.17
EXTERIOR CLADDING	+/- R 0.62
AIR SPACE 3/4"	R 1.02
NEOPOR® SHEATHING 1 1/2"	R 7.00
OSB WALL SHEATHING 1/4"	R 0.35
WALLTITE® CM01, 2 1/2"	R 13.5
AIR SPACE 1"	R 1.02
GYPSUM BOARD 1/2"	R 0.44
INSIDE AIR FILM	R 0.68
TOTAL R	***R 24.80***

**** NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE***

BASF
We create chemistry

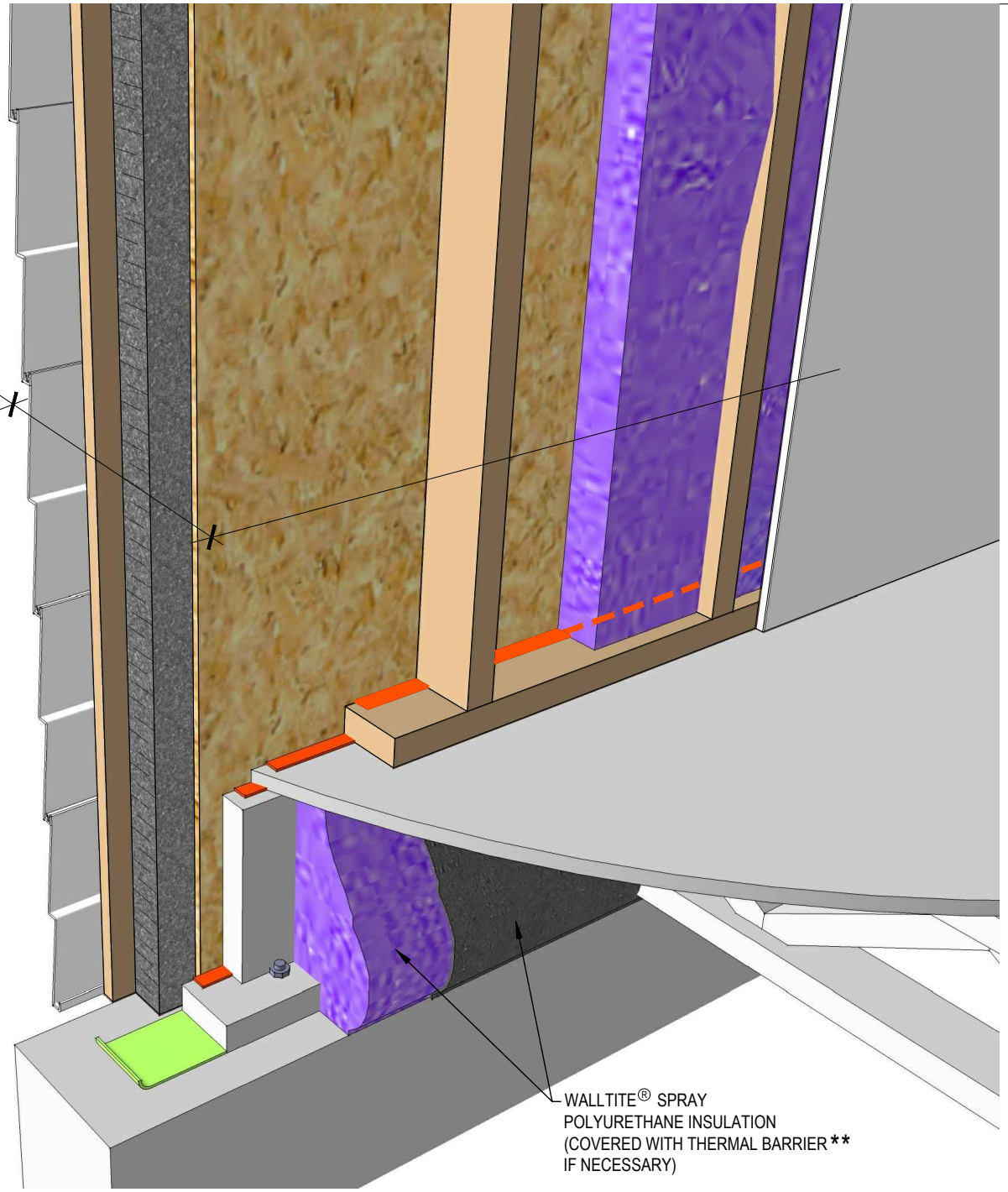
**FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE.

HIGH PERFORMANCE WALL : X SERIES - CANADA

PATENT PENDING

WALL COMPONENTS

- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 2" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 lb/ft³ MINIMUM DENSITY)
- OSB WALL SHEATHING
- 2" x 4" STUDS @ 16" C/C OR 24" C/C
- 2 1/2" THICK WALLTITE® SPRAYED ONTO SURFACE OF OSB PANEL
- 1/2" GYPSUM BOARD



** TYPICAL WALL NOMINAL R VALUE*

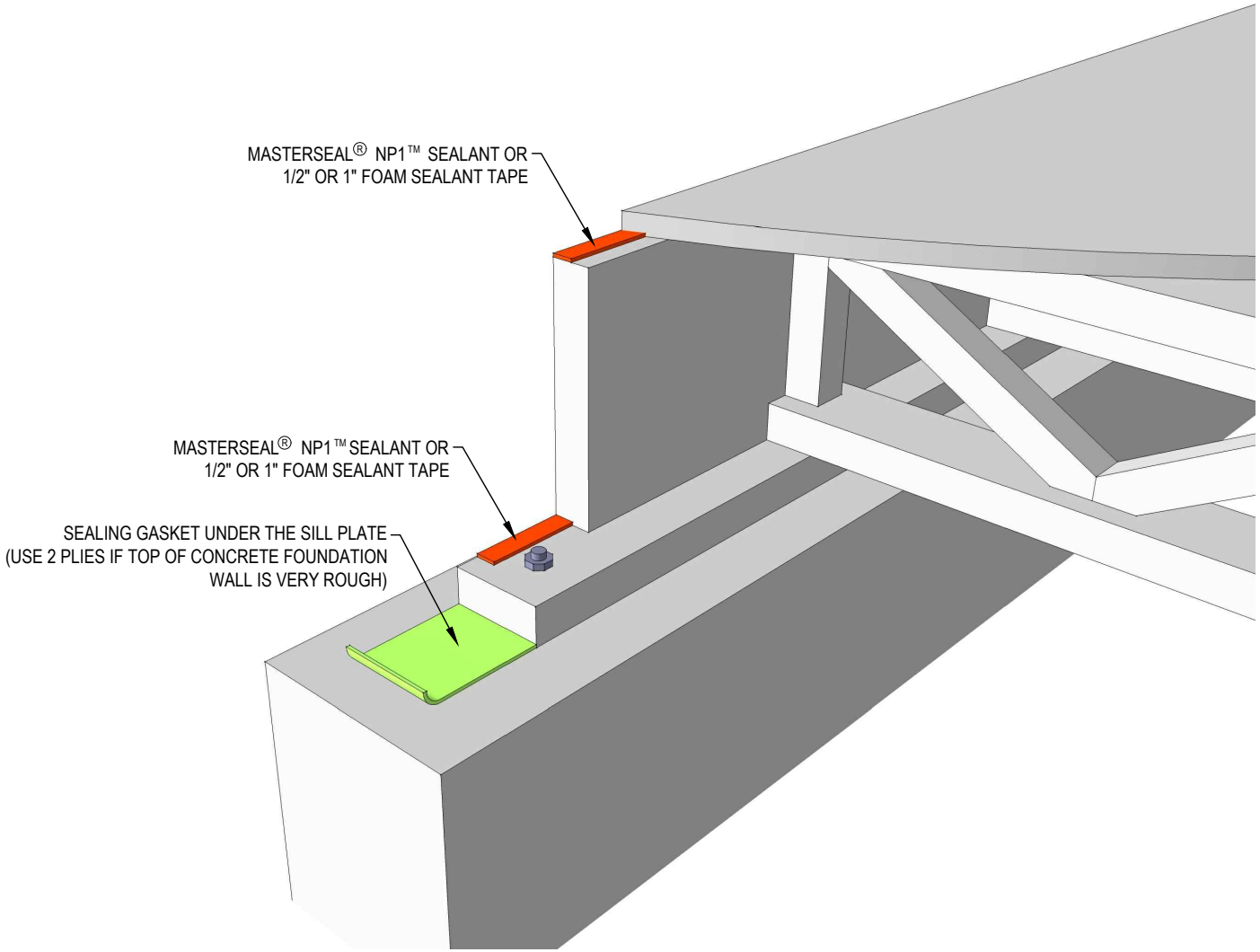
COMPONENTS	*R VALUE*
OUTSIDE AIR FILM	R 0.17
EXTERIOR CLADDING	+/- R 0.62
AIR SPACE 3/4"	R 1.02
NEOPOR® SHEATHING 2"	R 9.40
OSB WALL SHEATHING 1/4"	R 0.35
WALLTITE® CM01, 2 1/2"	R 13.5
AIR SPACE 1"	R 1.02
GYPSUM BOARD 1/2"	R 0.44
INSIDE AIR FILM	R 0.68
TOTAL R	***R 27.20***

**** NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE***

****** FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE.

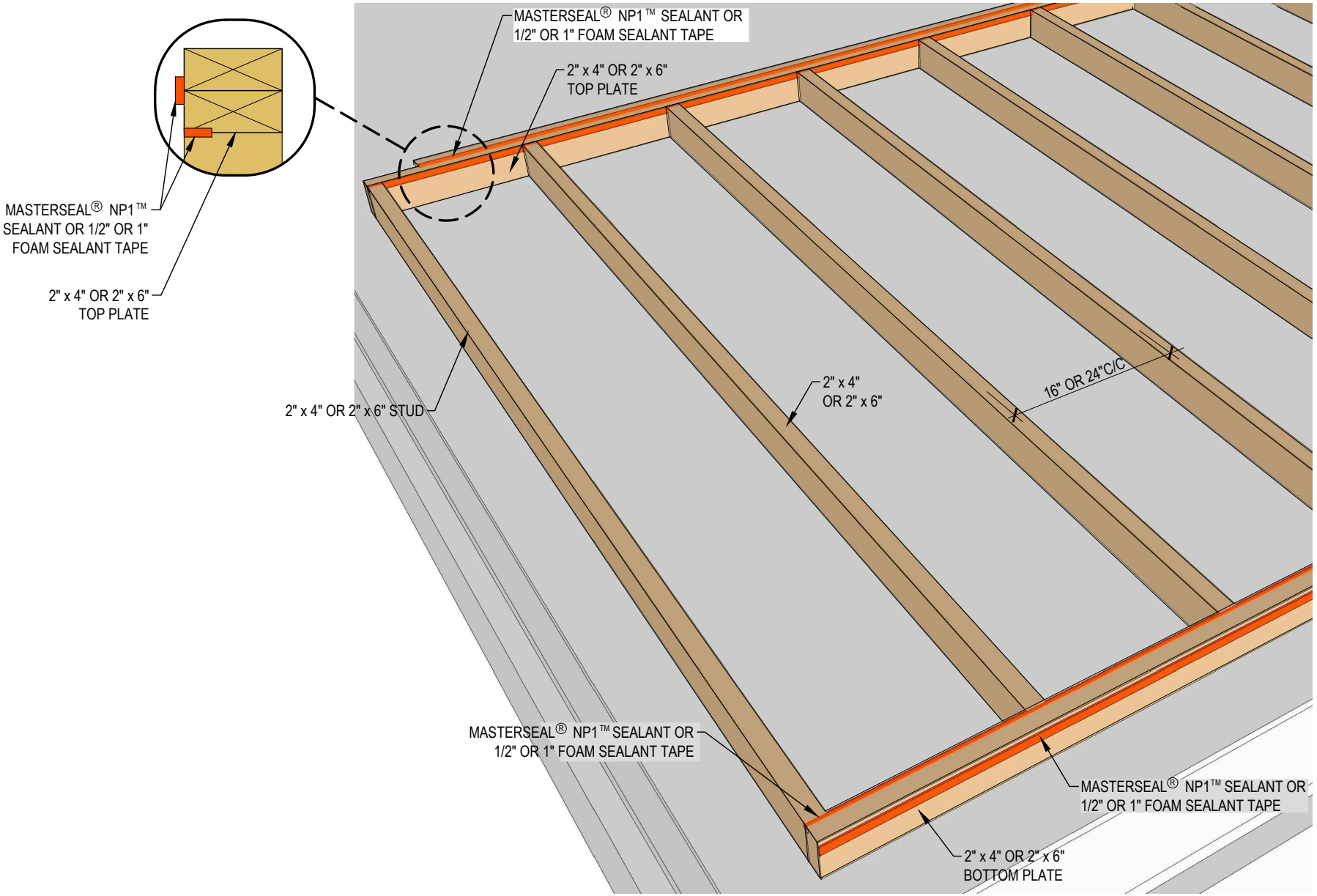
STEP 1 - FLOOR ASSEMBLY

ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS
ANCHORED TO FOUNDATION WALL



STEP 2 - WALL FRAMING

FIRST WALL FRAMING ASSEMBLY

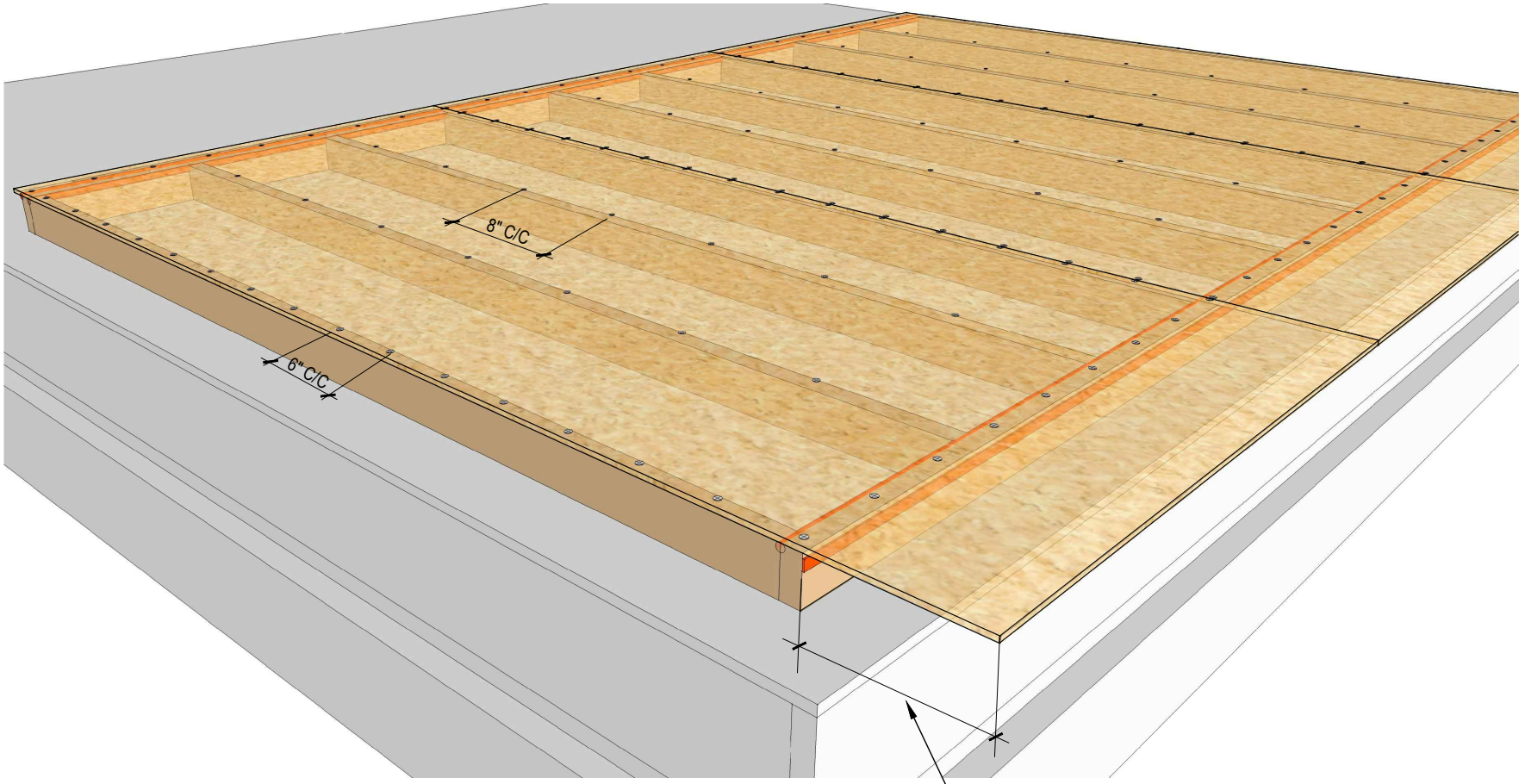


STEP 3A - EXTERIOR OSB WALL SHEATHING INSTALLATION

INSTALL OSB SHEATHING

NOTE:

FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL
EVALUATION REPORT.

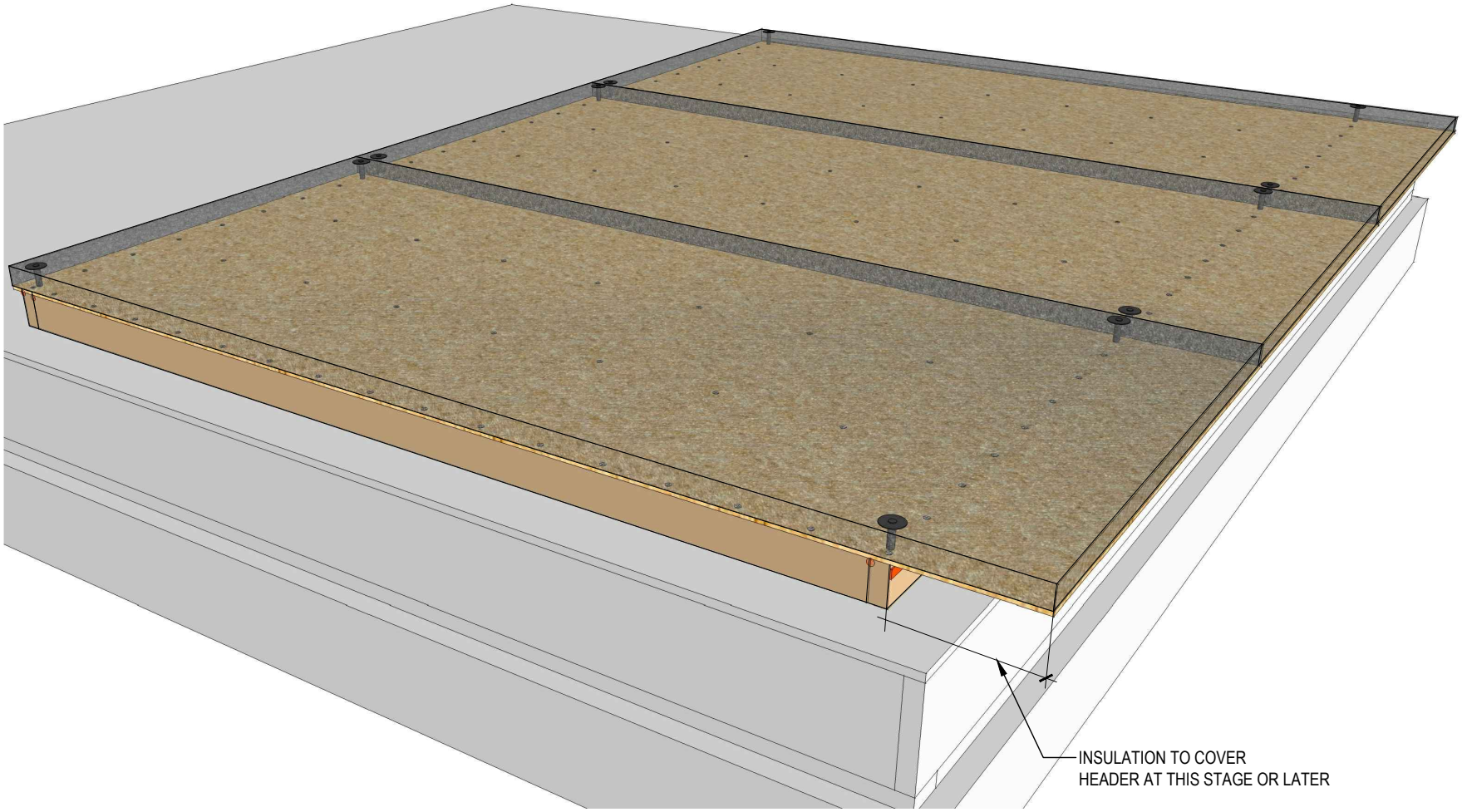


STEP 3B- EXTERIOR INSULATION

INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATING SHEATHING

NOTE:

FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL
EVALUATION REPORT.



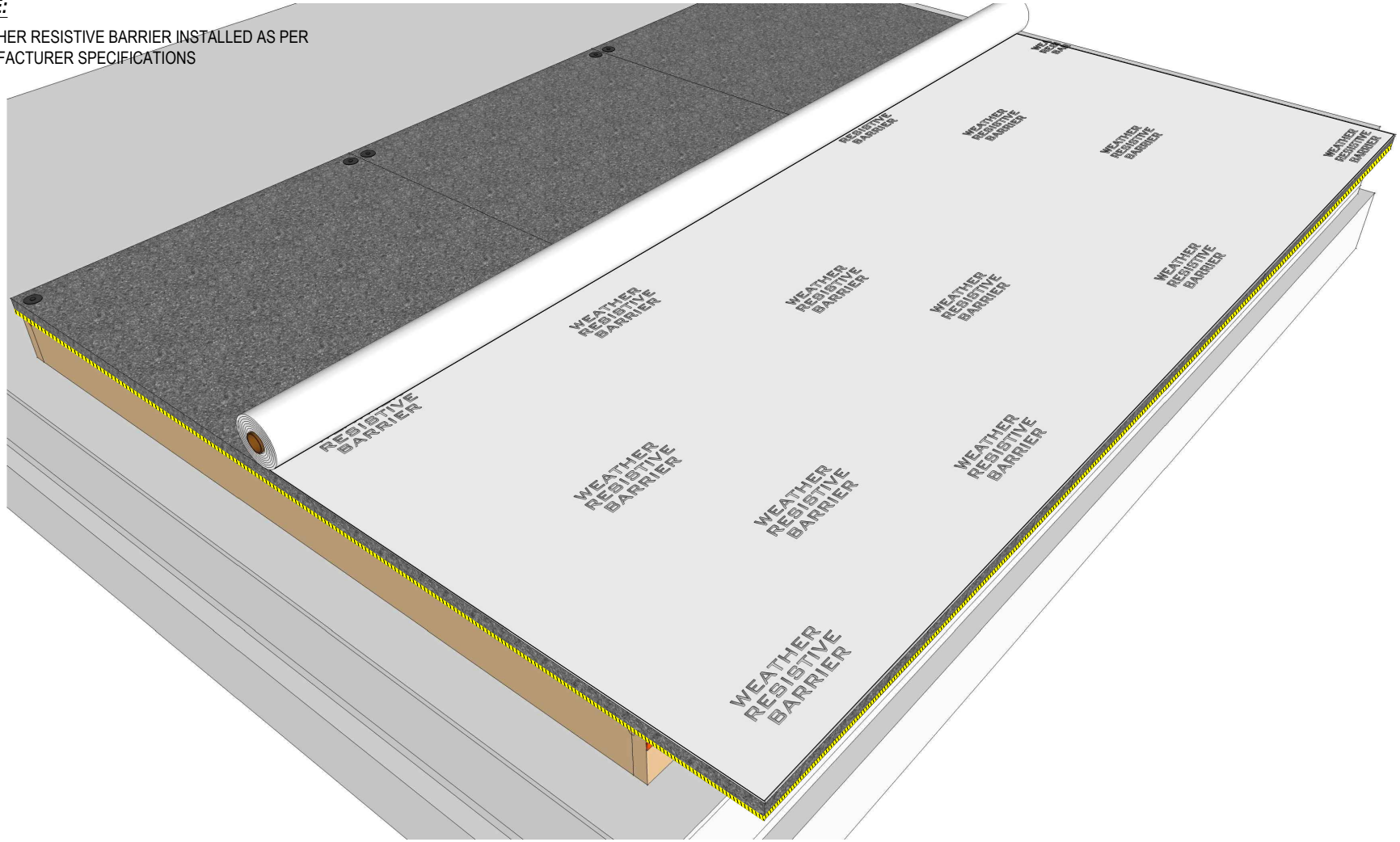
STEP 3C- WEATHER RESISTIVE BARRIER (WRB) - OPTIONAL

NOTE:

NEOPOR'S® FASTENERS ARE NOT SHOWN ON THIS PAGE AND THE FOLLOWING PAGES TO SIMPLIFY THE DRAWINGS.

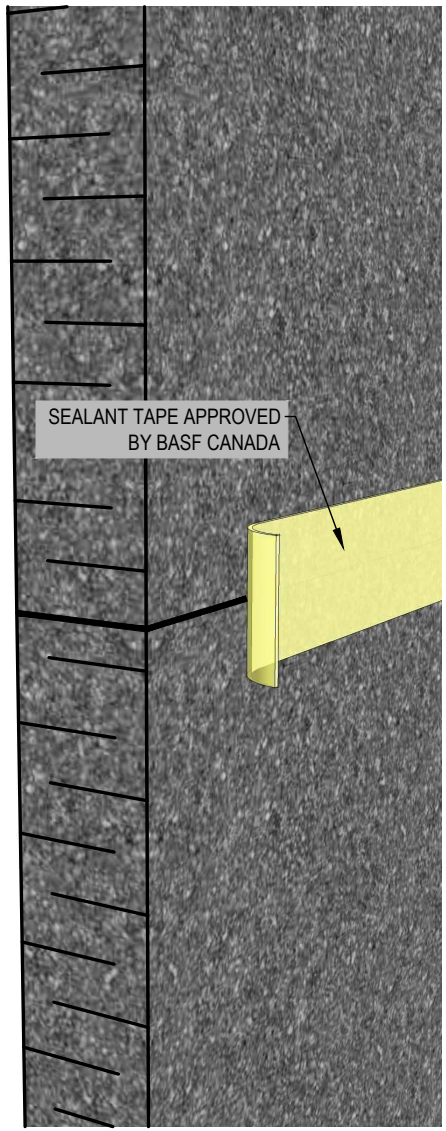
NOTE:

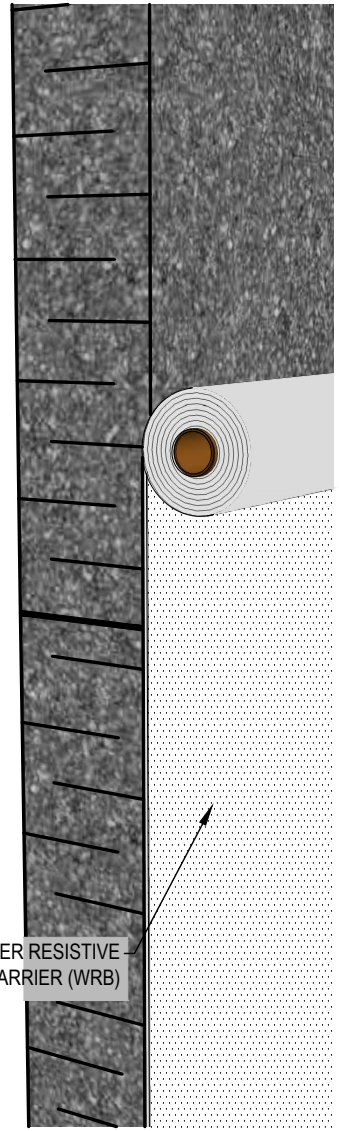
WEATHER RESISTIVE BARRIER INSTALLED AS PER MANUFACTURER SPECIFICATIONS



STEP 4 - NEOPOR® SEALING JOINTS - VARIOUS OPTIONS

SEAL BUTT JOINTS; SHIPLAP AND T&G JOINTS MAY BE LEFT UNSEALED WHEN DESIGN SHEDS WATER

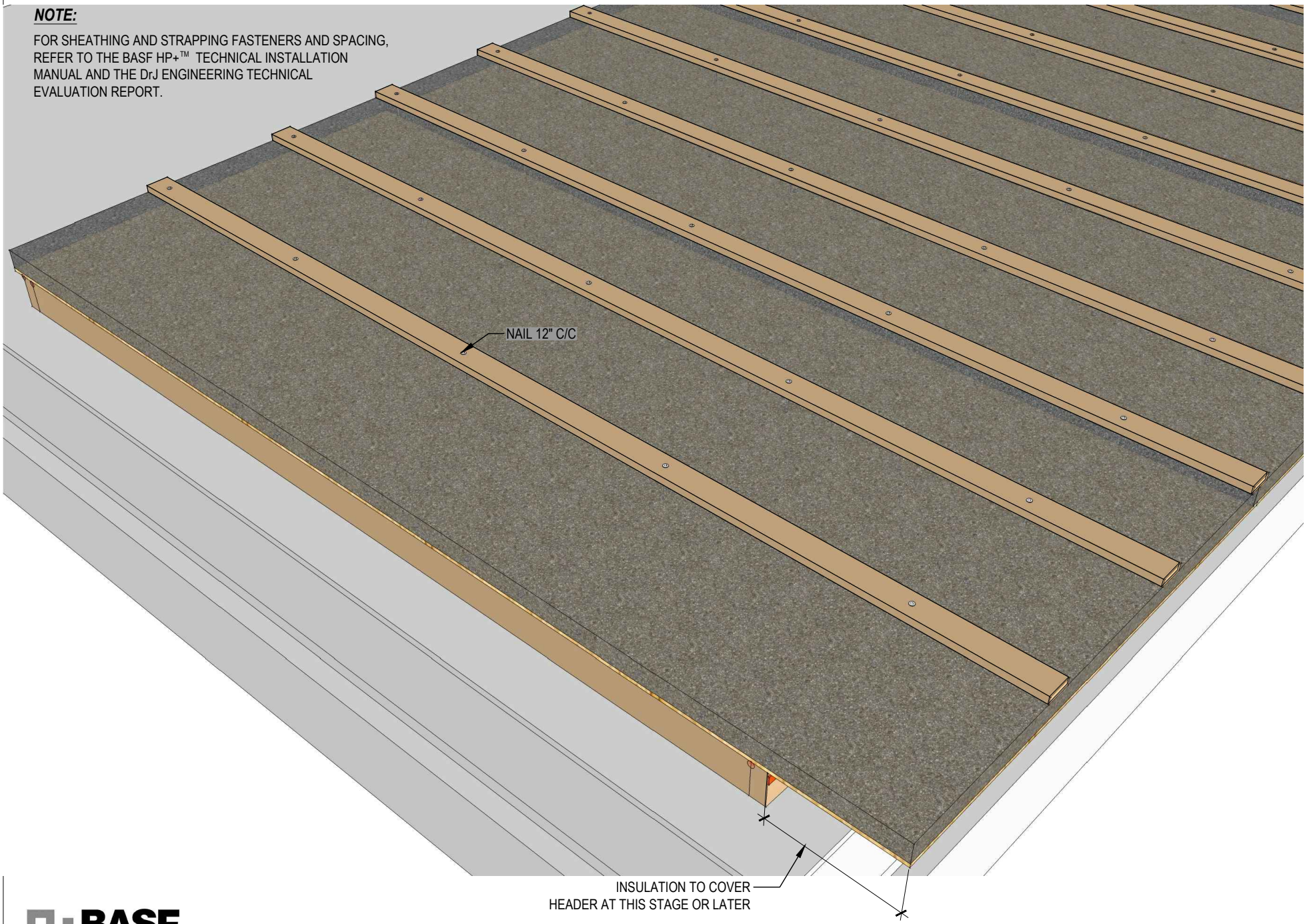




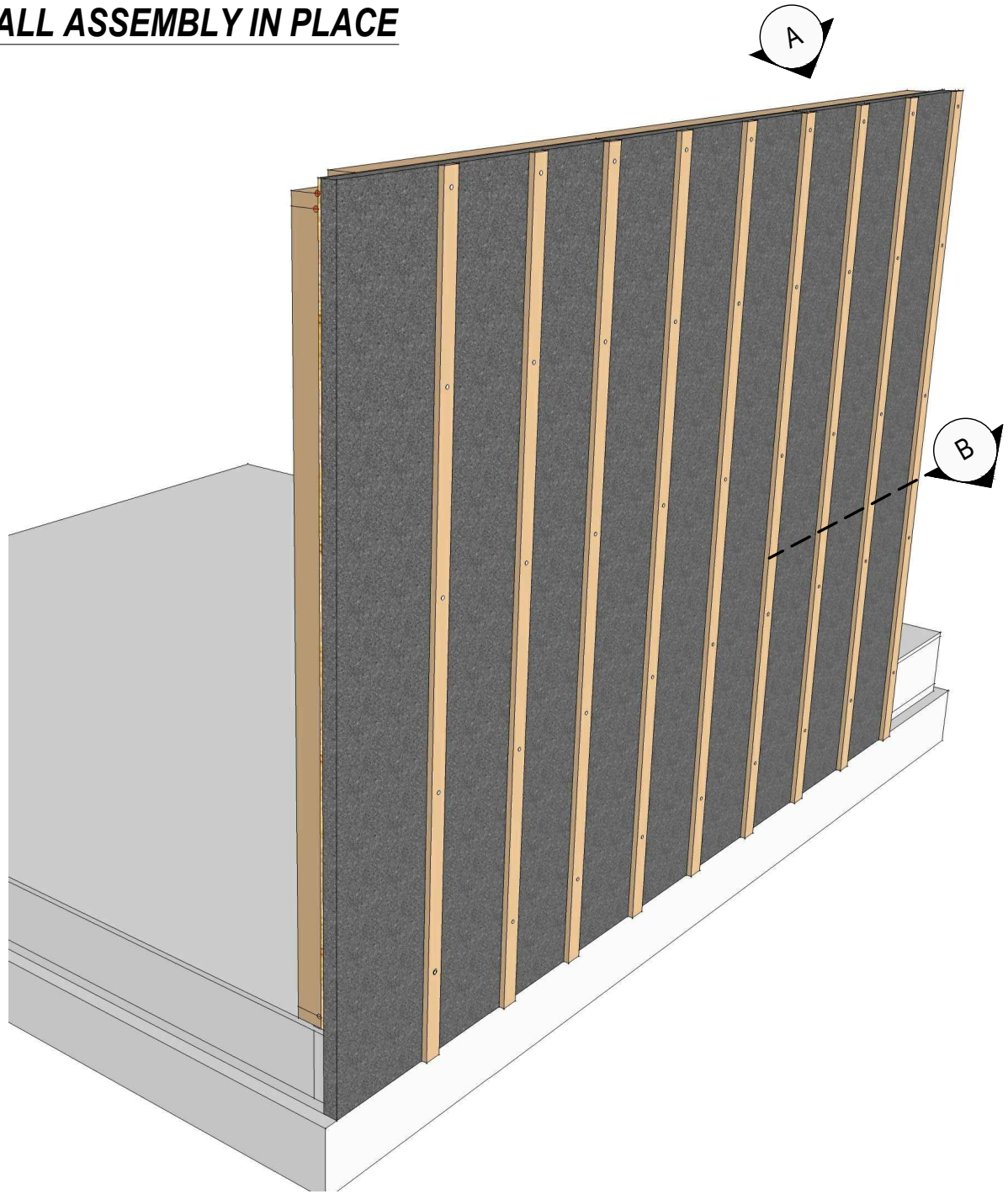
STEP 5 - STRAPPING INSTALLATION

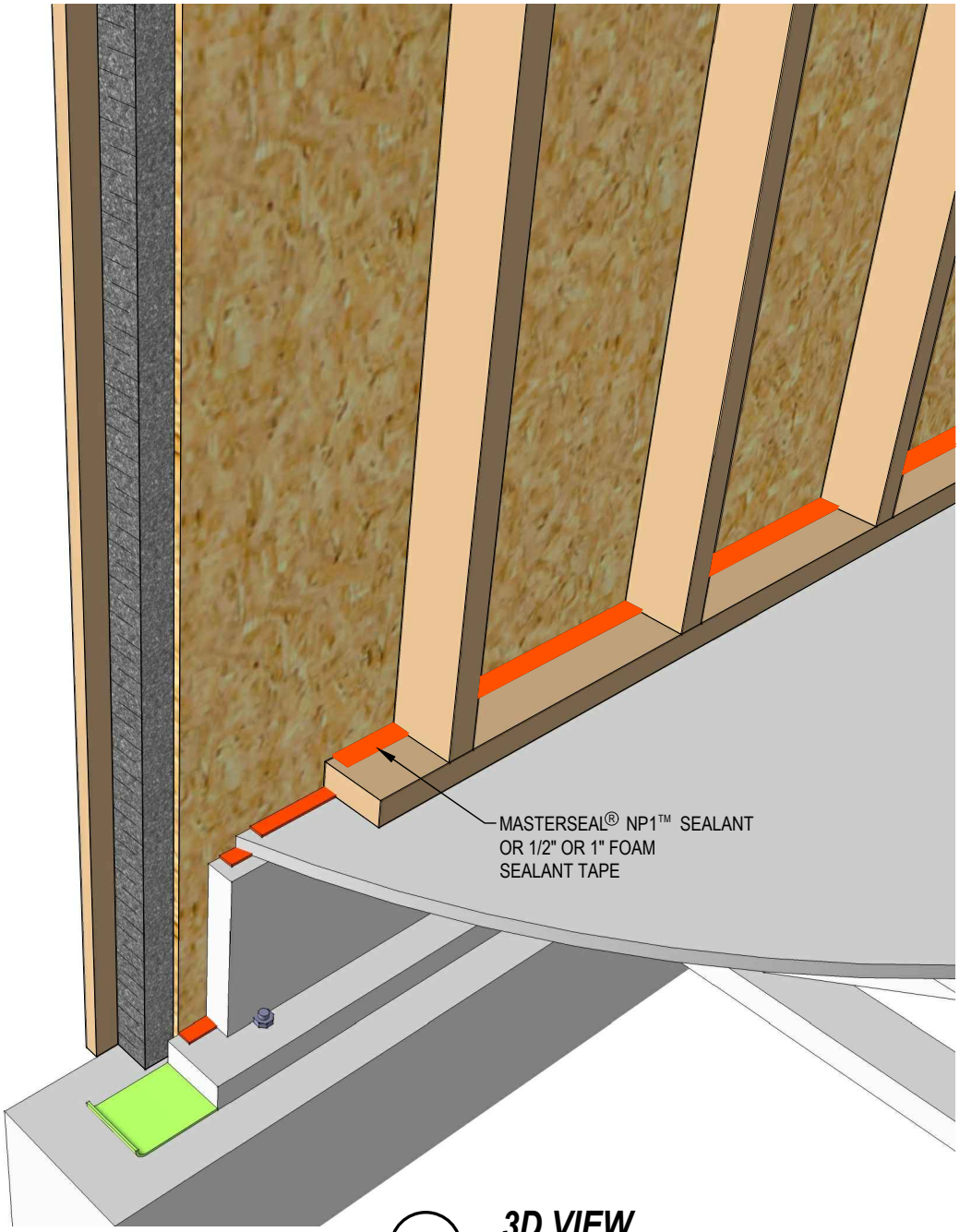
NOTE:

FOR SHEATHING AND STRAPPING FASTENERS AND SPACING, REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.

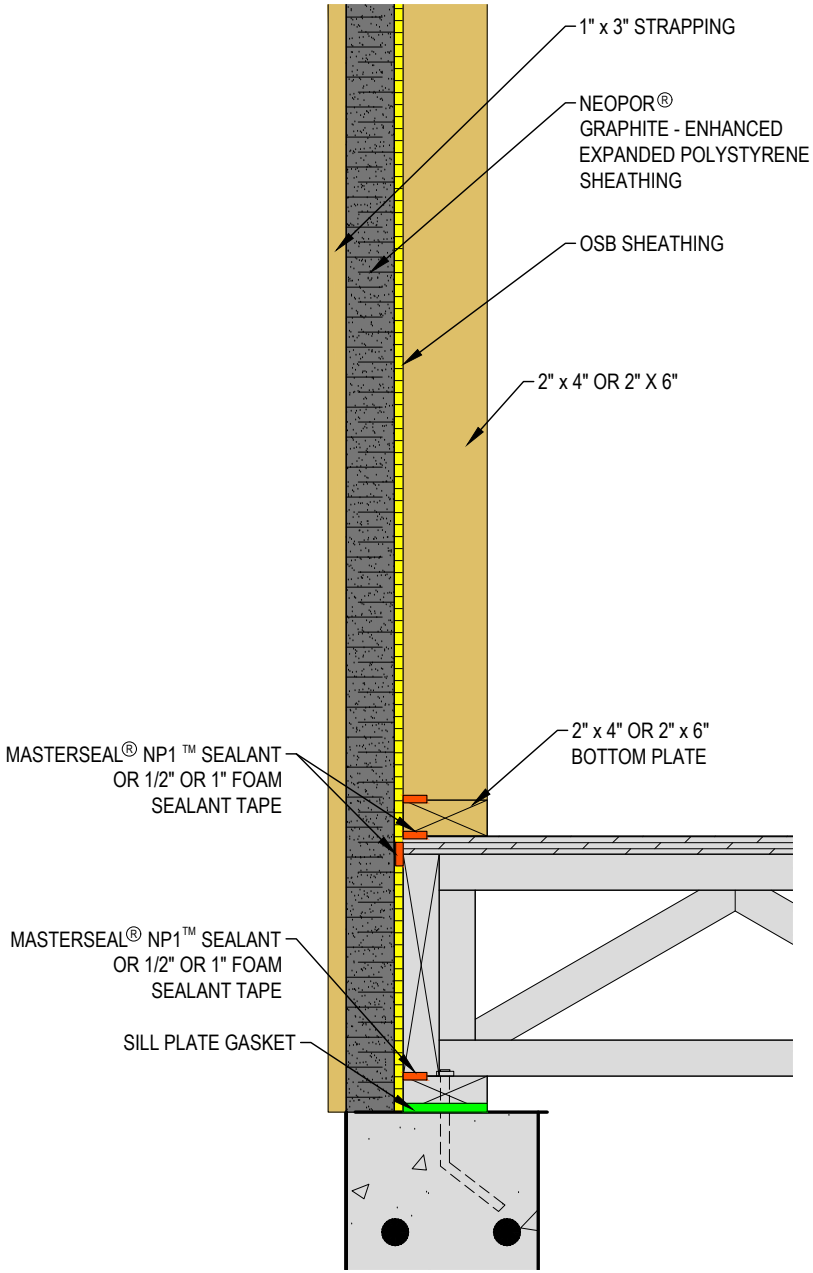


STEP 6 - RAISE WALL ASSEMBLY IN PLACE





A **3D VIEW**



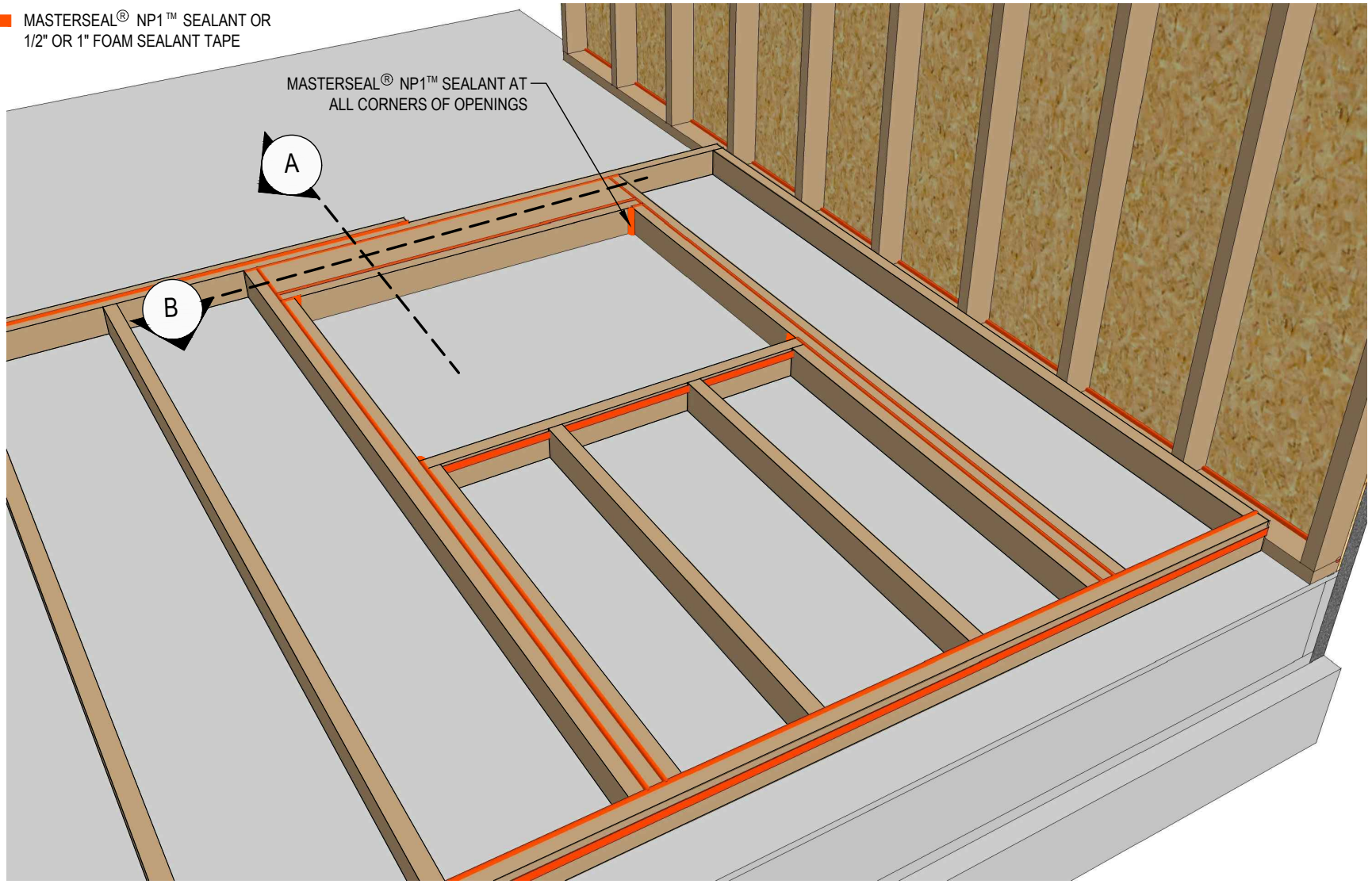
B **SECTION**

STEP 7A - WALL FRAMING WITH OPENING

SECOND WALL FRAMING AND ASSEMBLY
APPLY MASTERSEAL® NP1™ SEALANT AT ALL CORNERS OF OPENINGS

LEGEND

MASTERSEAL® NP1™ SEALANT OR
1/2" OR 1" FOAM SEALANT TAPE

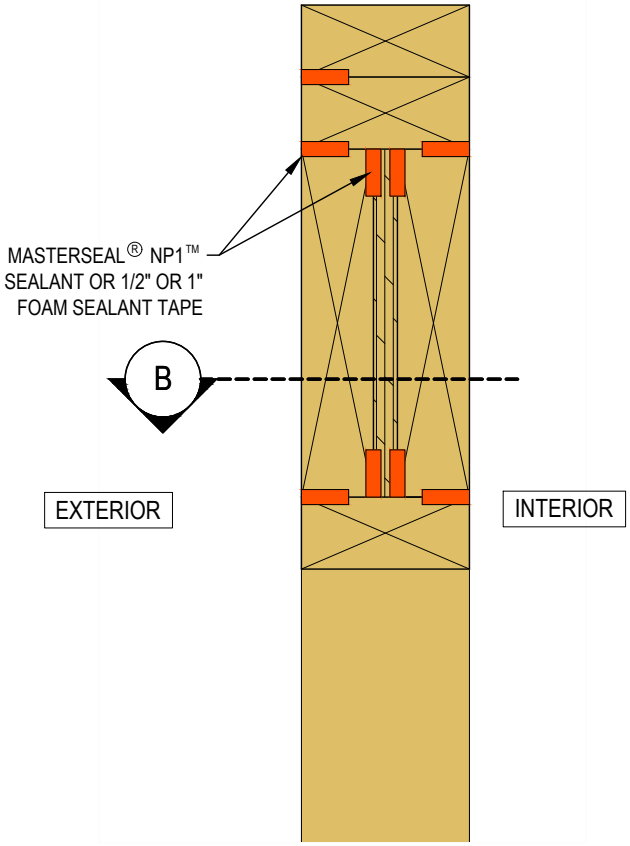


STEP 7B - LINTEL DETAILS

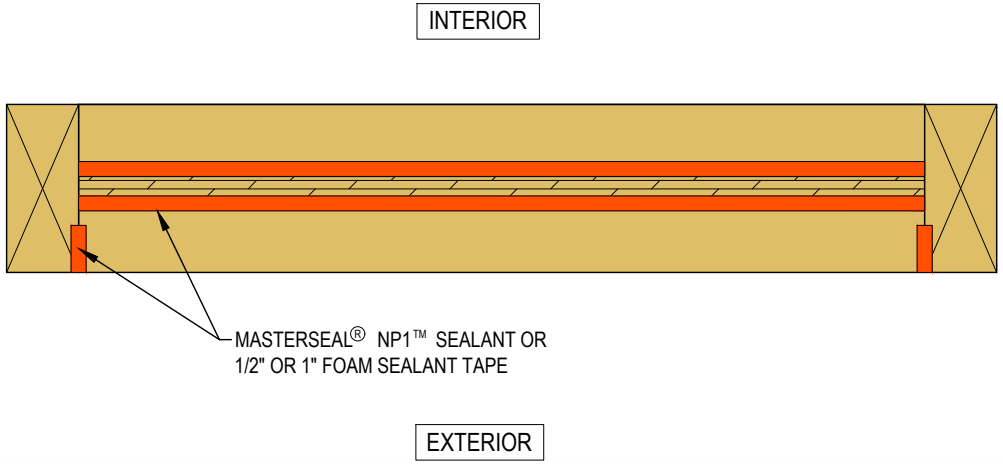
ALL REFERENCE TO MASTERSEAL® NP1 ™ OR 1/2" OR 1" FOAM SEALANT TAPE FOR THE LINTEL IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS

LEGEND

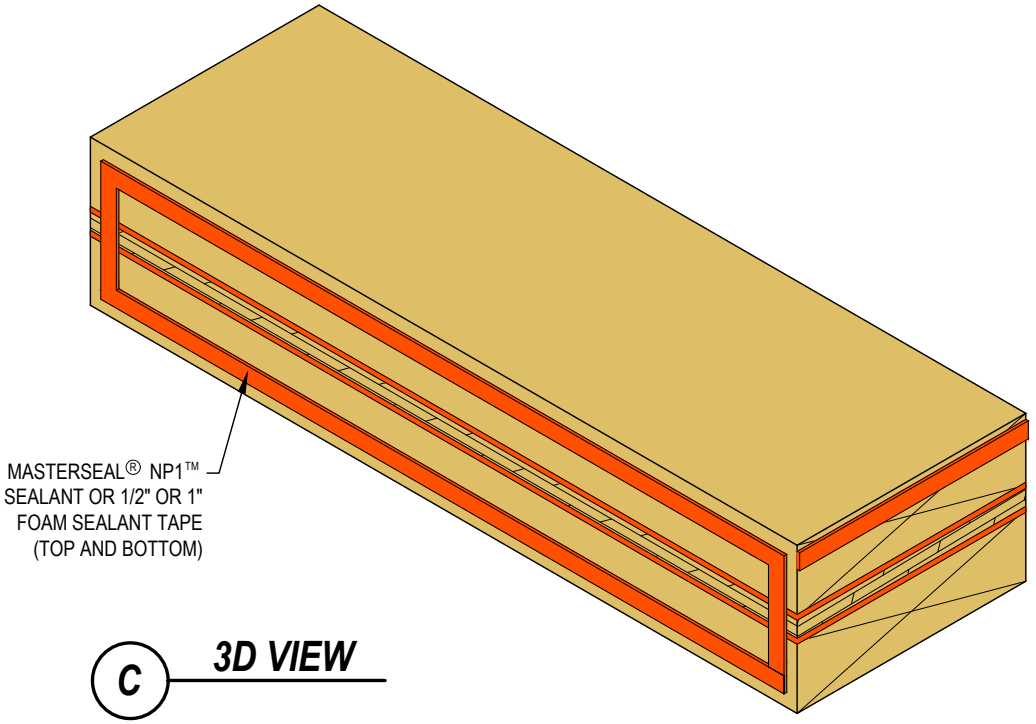
MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE



A SECTION



B SECTION



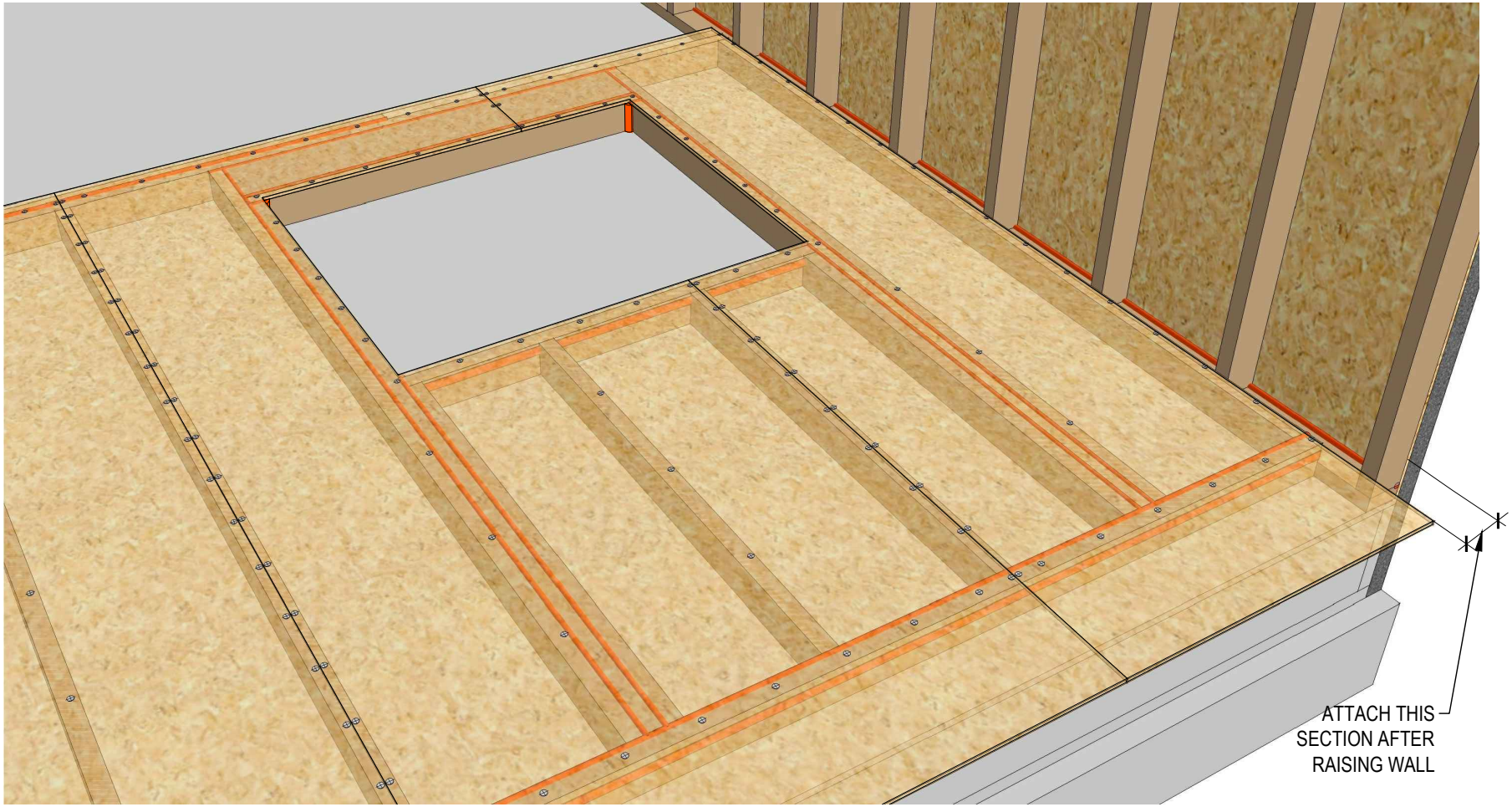
C 3D VIEW

STEP 8A - OSB WALL SHEATHING INSTALLATION

INSTALL OSB SHEATHING

NOTE:

FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL
EVALUATION REPORT.

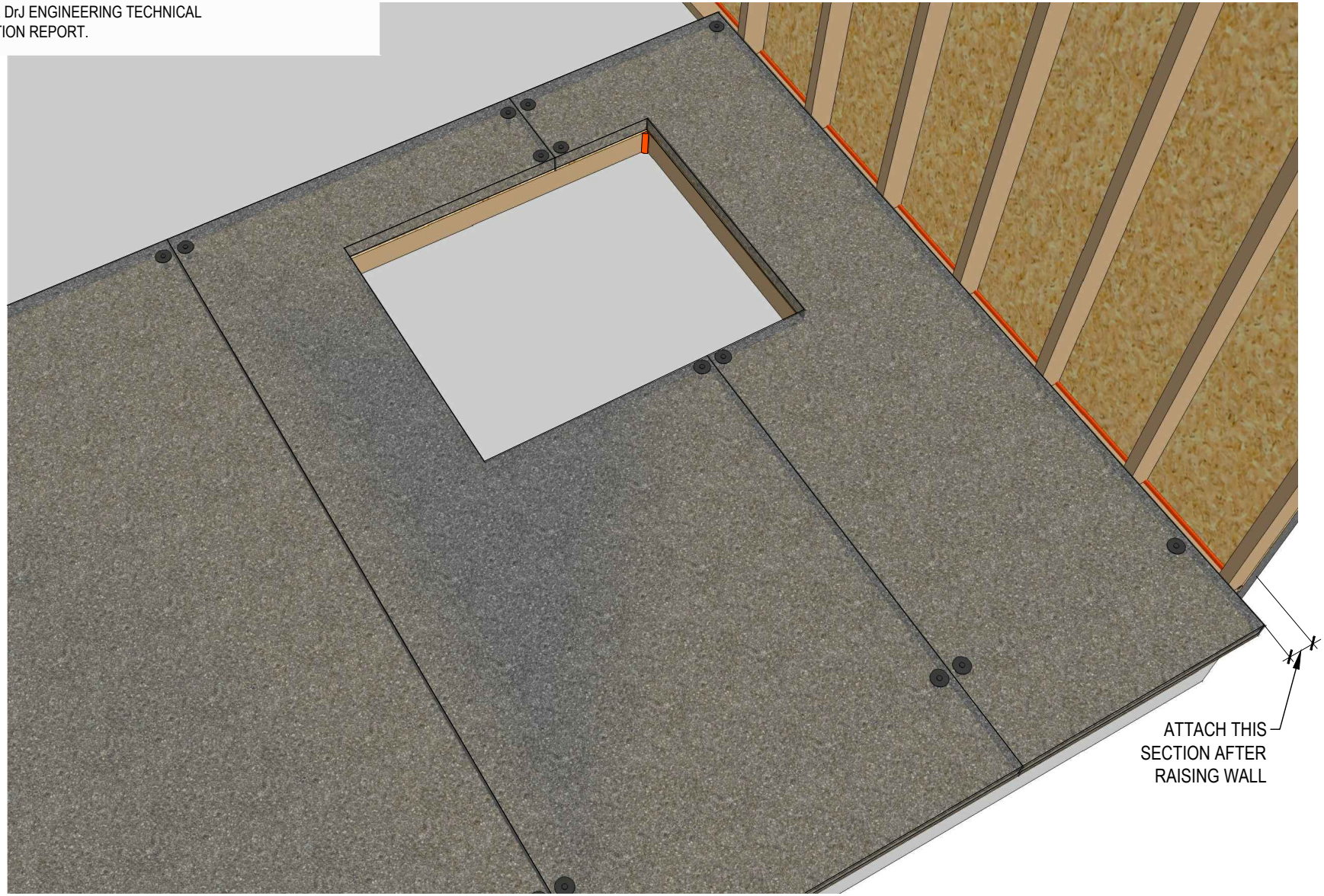


STEP 8B - EXTERIOR INSULATION

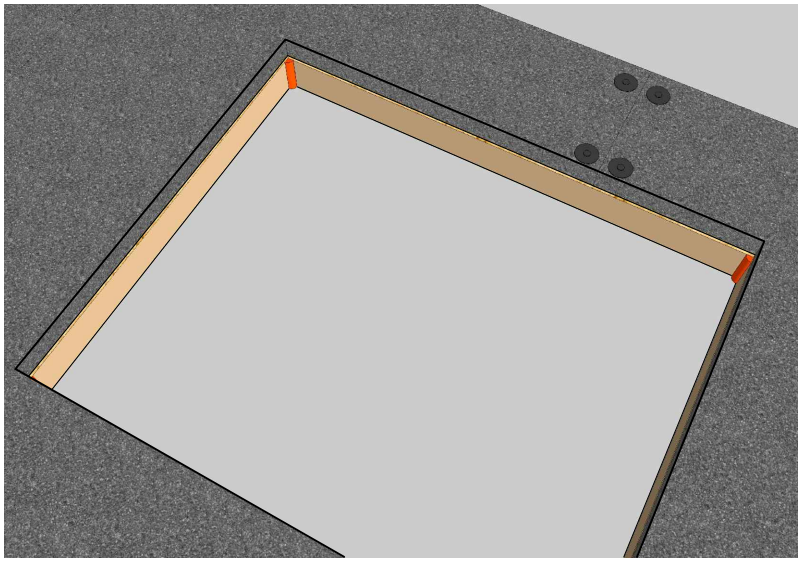
INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING

NOTE:

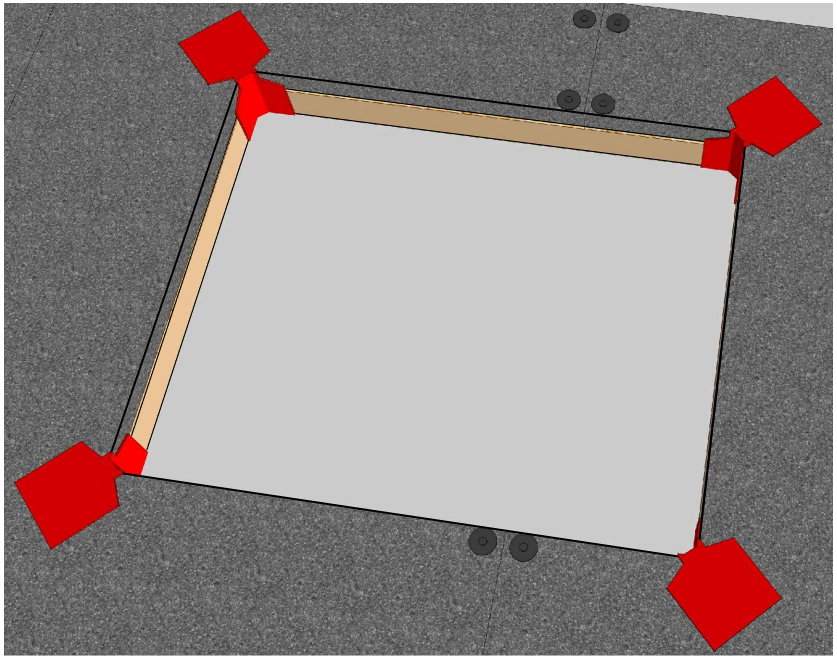
FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL
EVALUATION REPORT.



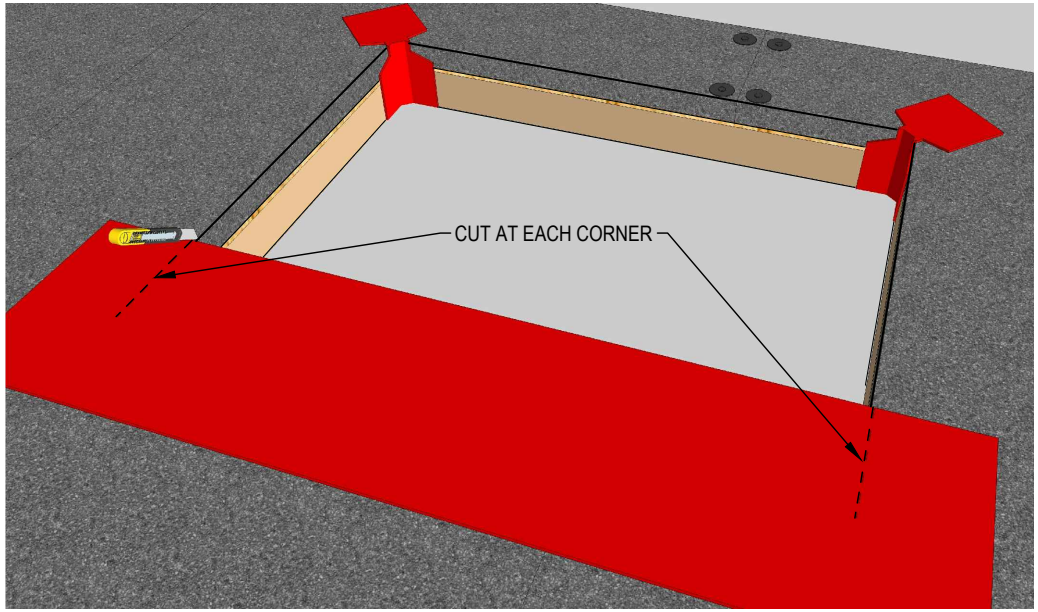
STEP 9A - AIR / WATER TIGHTNESS OF OPENINGS



A - ENSURE THAT MASTERSEAL® NP1 ™ SEALANT HAS BEEN APPLIED IN ALL CORNERS OF OPENINGS

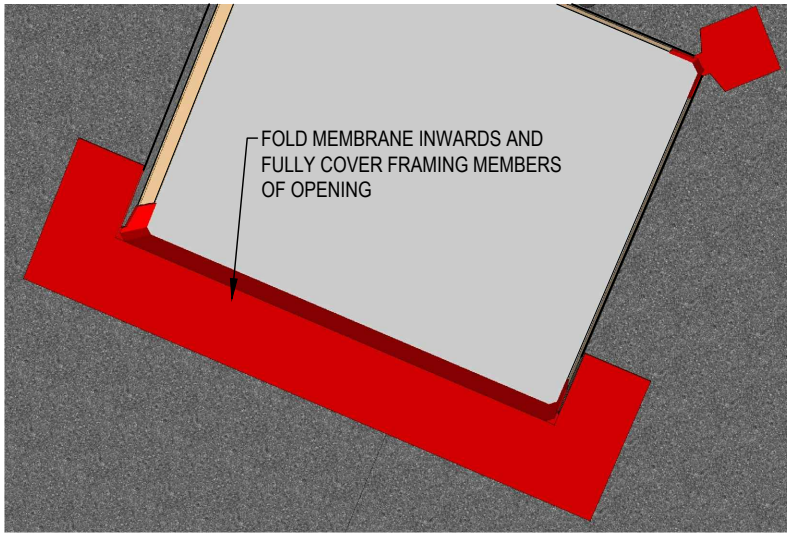


B - INSTALL AIR BARRIER AND WATERPROOFING MEMBRANE AT EACH CORNER, COVERING SEALANT INSTALLED IN STEP 7A

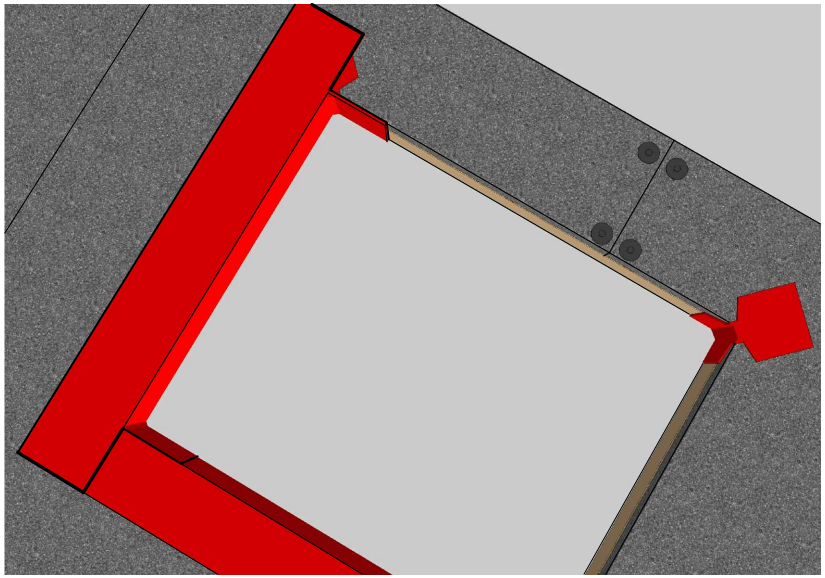


C - STARTING ALONG BOTTOM EDGE, INSTALL MEMBRANE AROUND ENTIRE PERIMETER OF OPENINGS

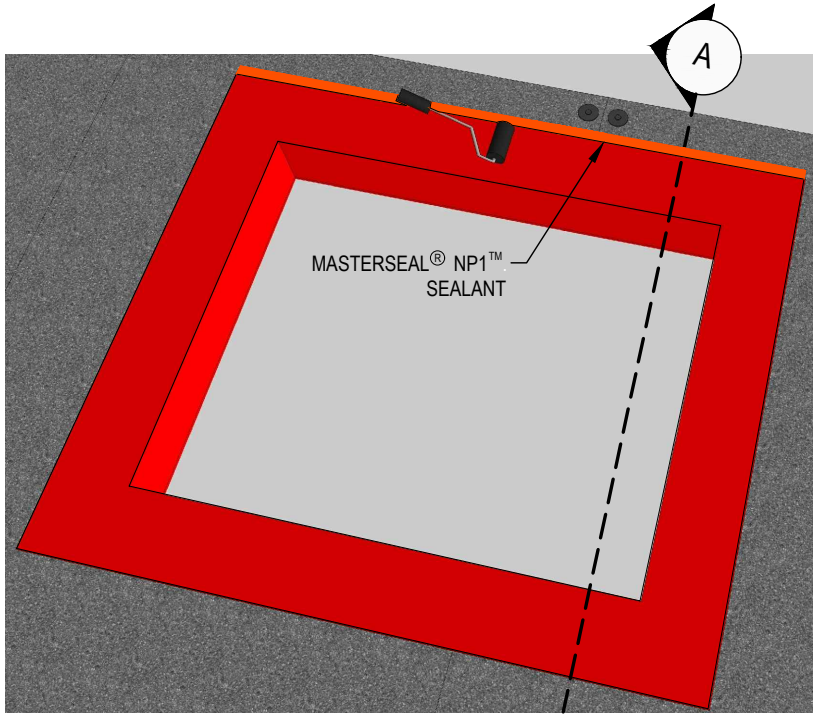
STEP 9A - AIR / WATER TIGHTNESS OF OPENINGS



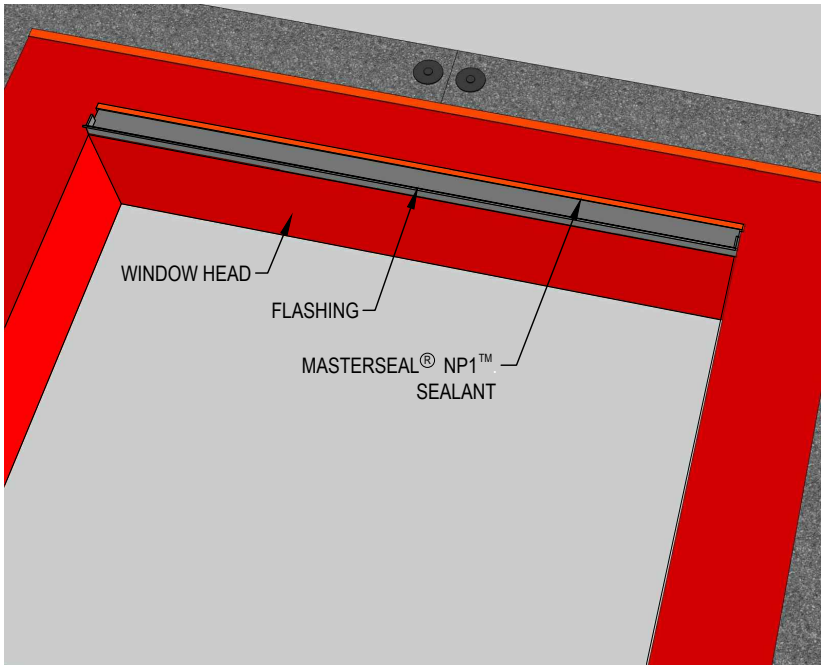
D - FOLD MEMBRANE INTO OPENING



E - INSTALL MEMBRANE ALONG VERTICAL EDGES OF OPENINGS



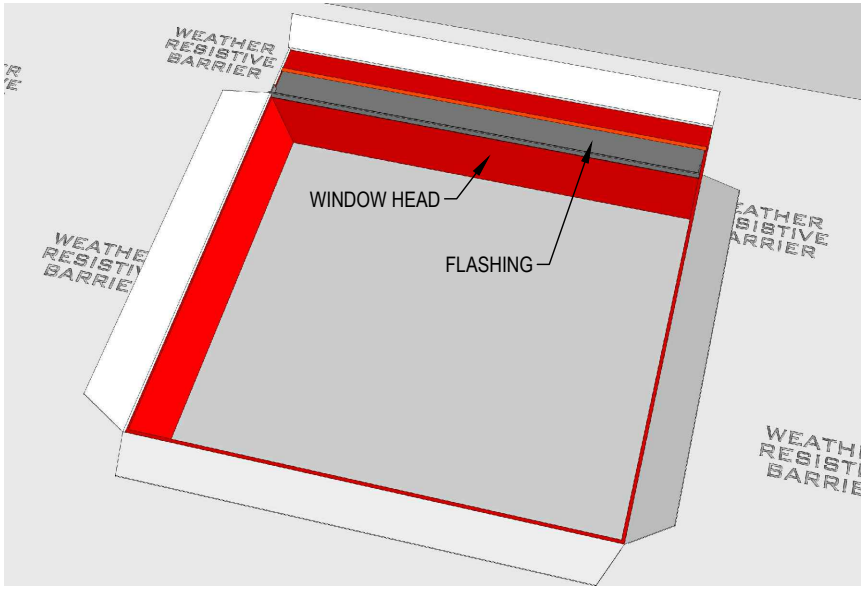
F - WHEN REQUIRED BY MANUFACTURER USE ROLLER TO APPLY PRESSURE AND SEAL MEMBRANE TO SUBSTRATE



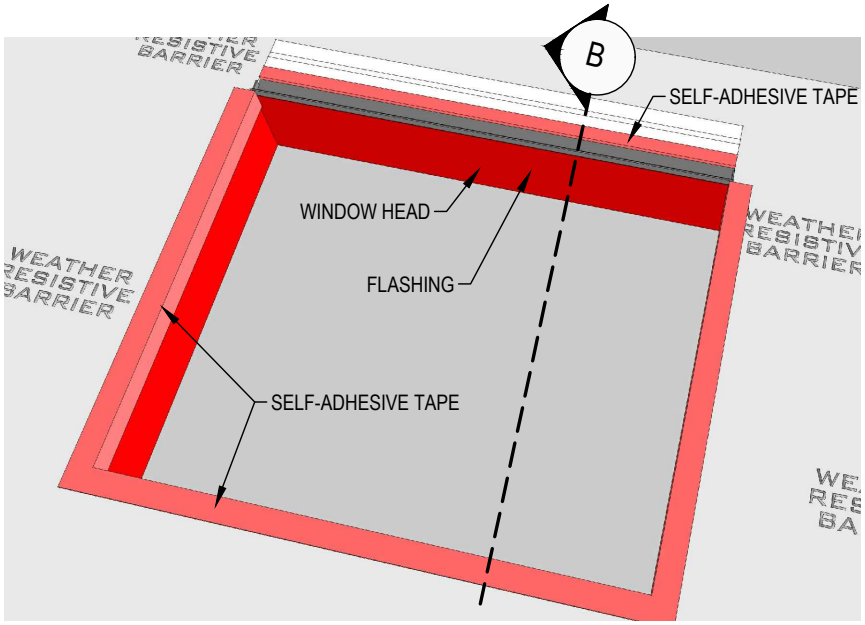
G - INSTALL THE WINDOW HEAD FLASHING

STEP 9B - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER OPTION

EXECUTE STEPS "A TO G" AND CONTINUE WITH THE FOLLOWING STEPS WHEN USING A WEATHER-RESISTIVE BARRIER

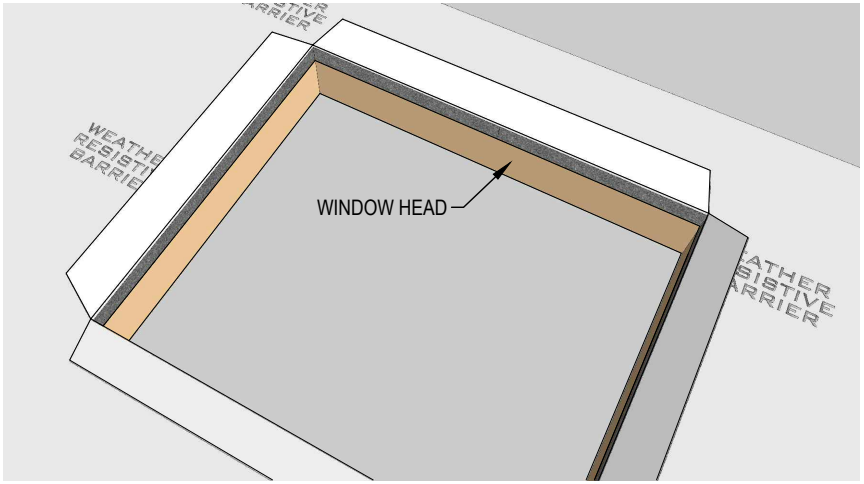


H - INSTALL THE WEATHER-RESISTIVE BARRIER

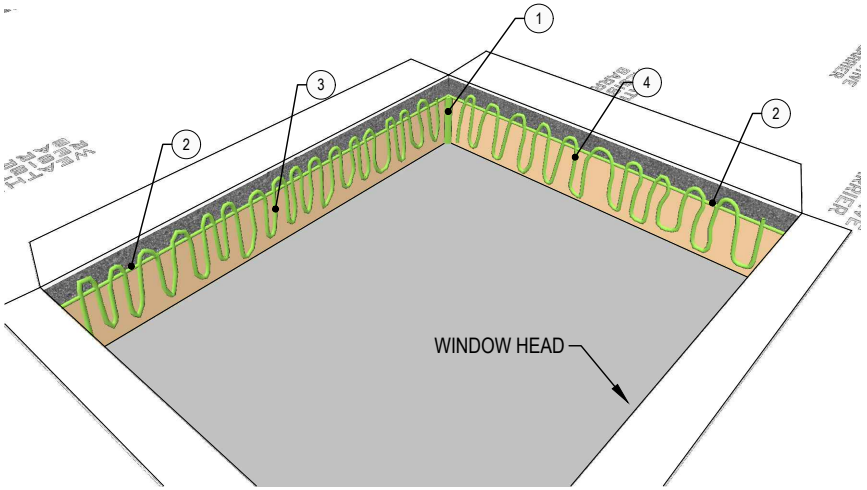


I - INSTALL A SELF-ADHESIVE TAPE ALONG THE EDGES OF THE WEATHER-RESISTIVE BARRIER

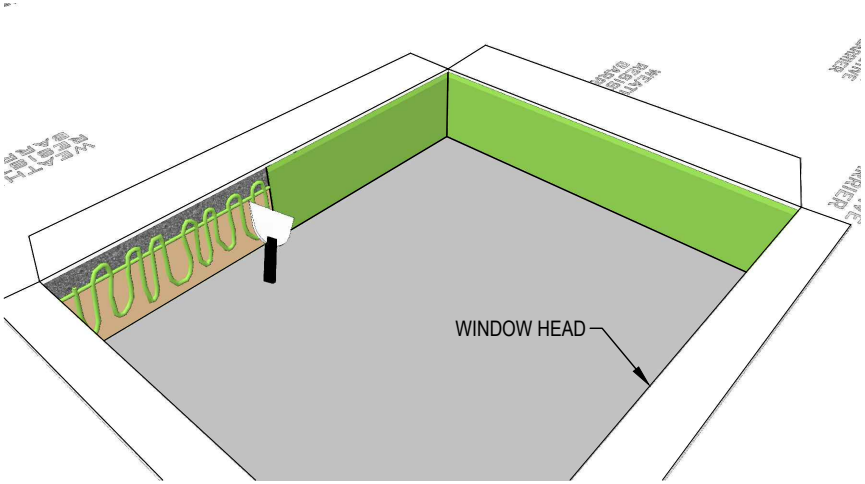
STEP 9C - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION



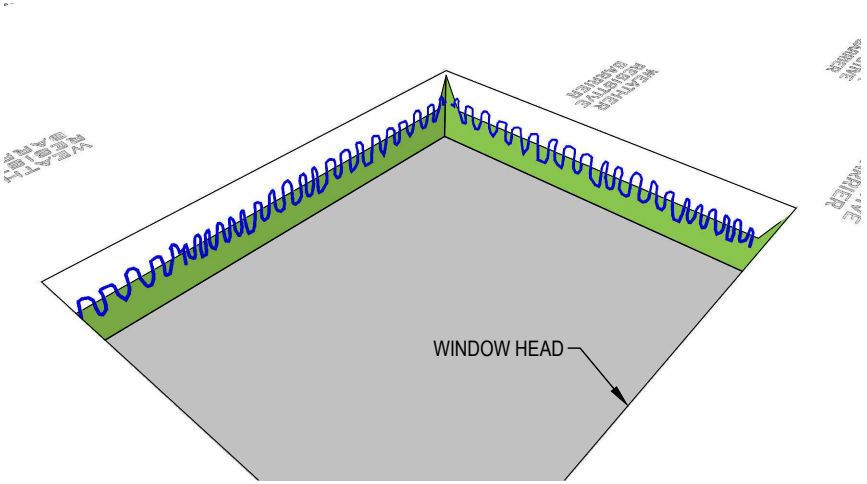
A - INSTALL THE WEATHER-RESISTIVE BARRIER AND FOLD THE EDGES AT THE FOUR SIDES OF THE OPENING



B - APPLY THE HP+™ FLASH LIQUID FLASHING MEMBRANE: IN THE CORNERS (1), AT THE NEOPOR® - WOOD JOINT (2), ON THE SILL OF THE OPENING (3), ON EACH SIDE OF THE OPENING (4) AND ON THE HEAD OF THE OPENING.

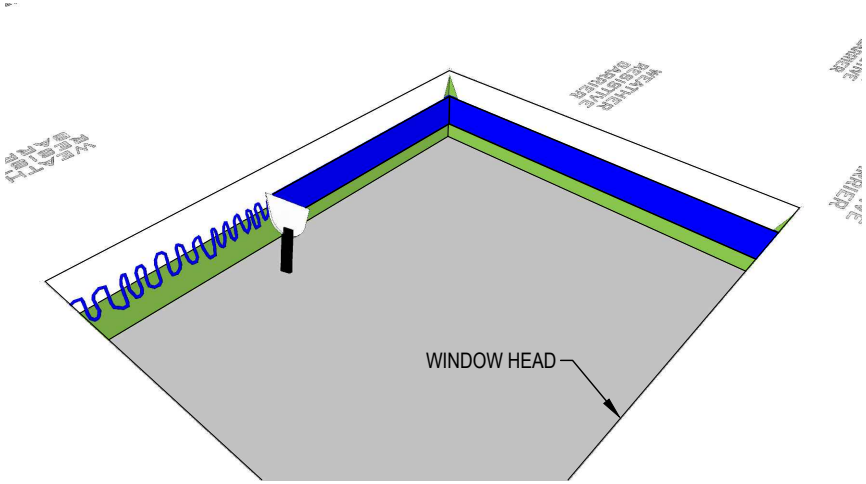


C - EXTEND THE HP+™ FLASH LIQUID FLASHING MEMBRANE USING A TROWEL

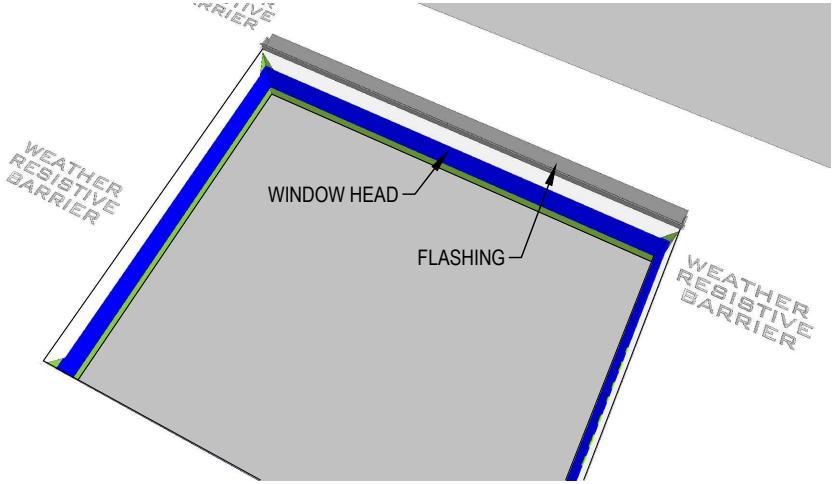


D - FOLD AND FIX THE WEATHER-RESISTIVE BARRIER TOWARDS THE INTERIOR OF THE OPENING, AND APPLY A SECOND LAYER OF HP+™ FLASH

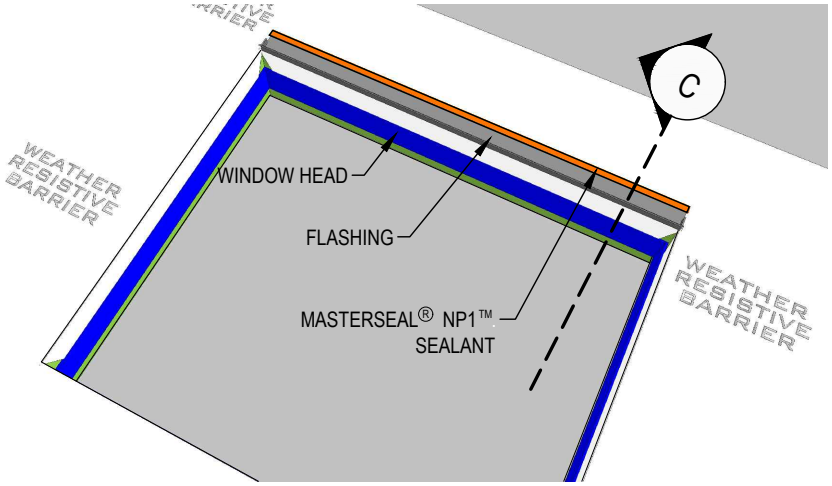
STEP 9C - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION



E - EXTEND THE HP+™ FLASH LIQUID FLASHING MEMBRANE USING A TROWEL

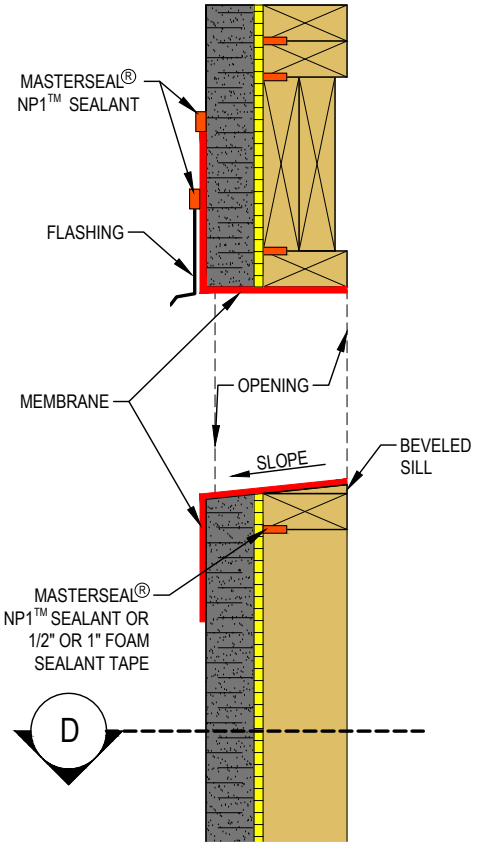


F - INSTALL THE WINDOW HEAD FLASHING

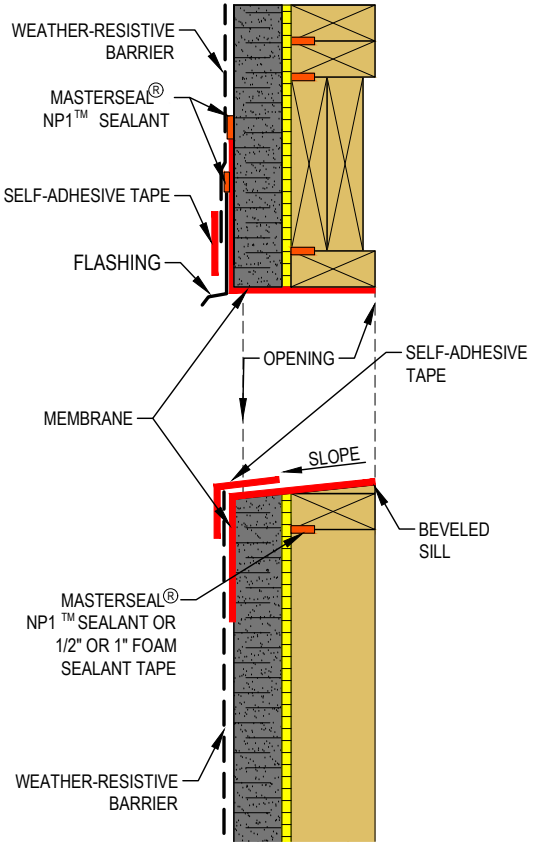


G - APPLY MASTERSEAL® NP1™ SEALANT ON TOP OF THE WINDOW HEAD FLASHING

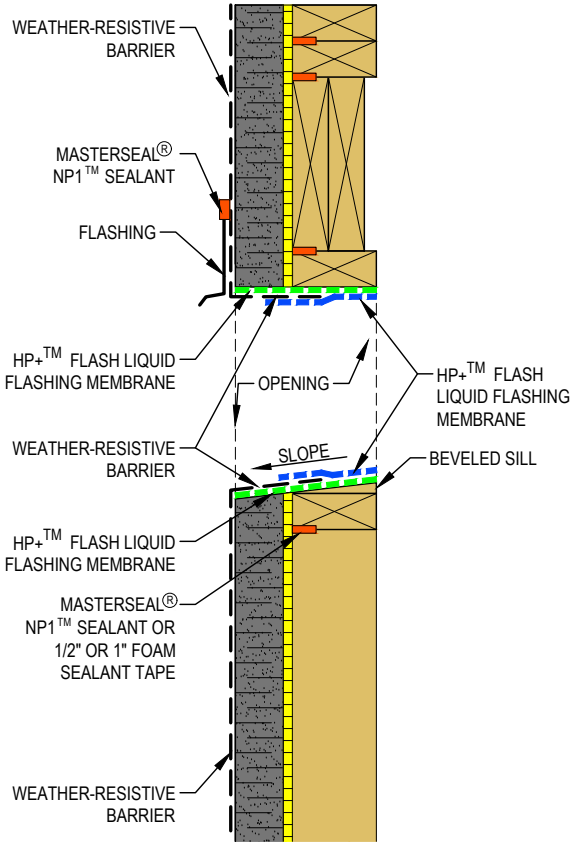
STEP 10 - WALL AND OPENING DETAILS



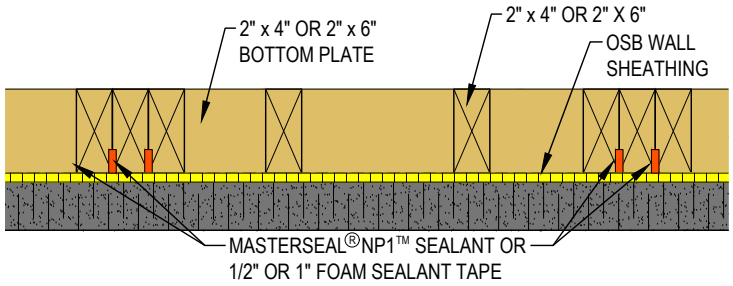
A SECTION



B SECTION - WEATHER-RESISTIVE BARRIER OPTION



C SECTION - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION



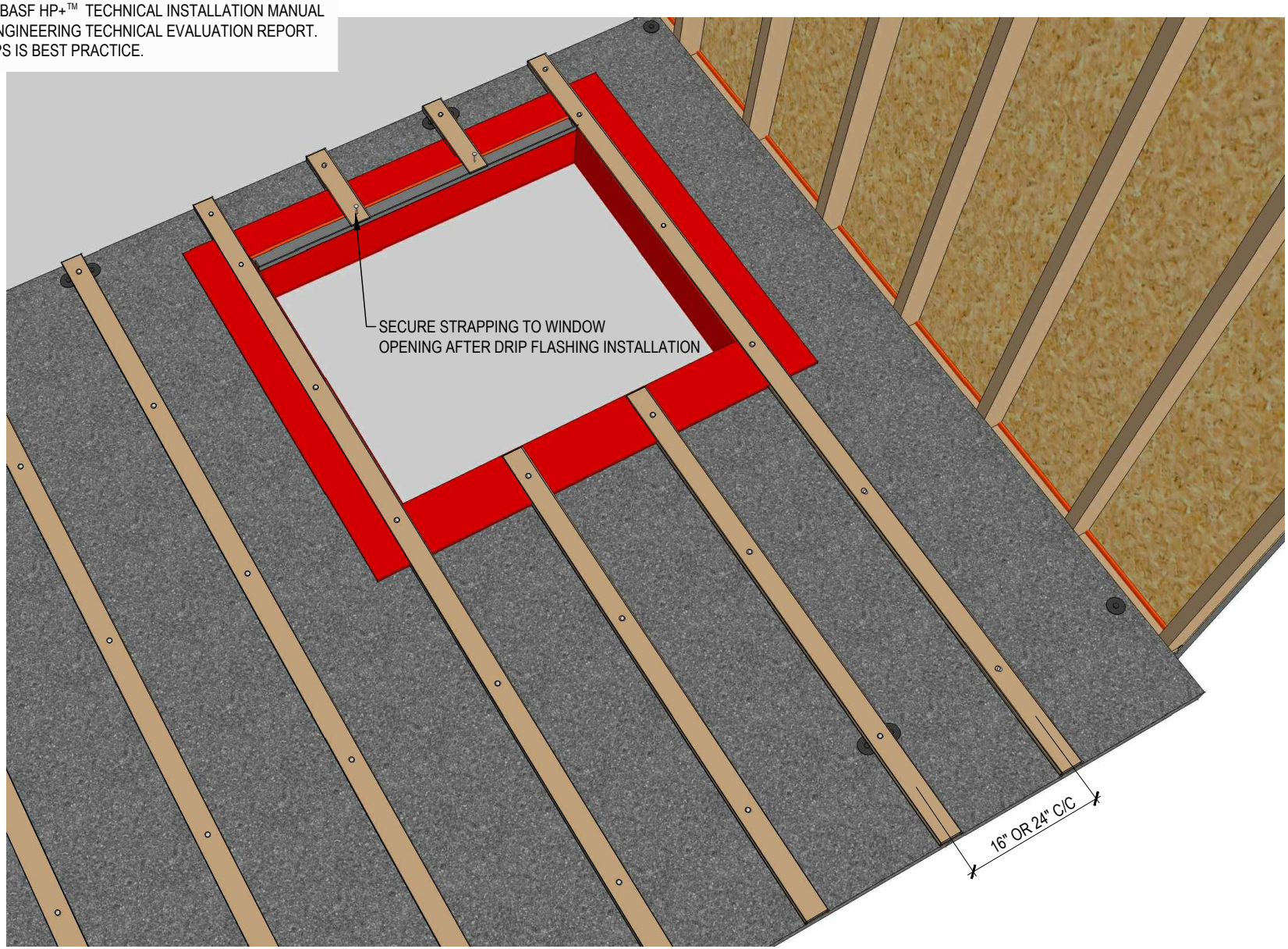
D PLAN SECTION

STEP 11 - STRAPPING INSTALLATION AROUND WINDOWS

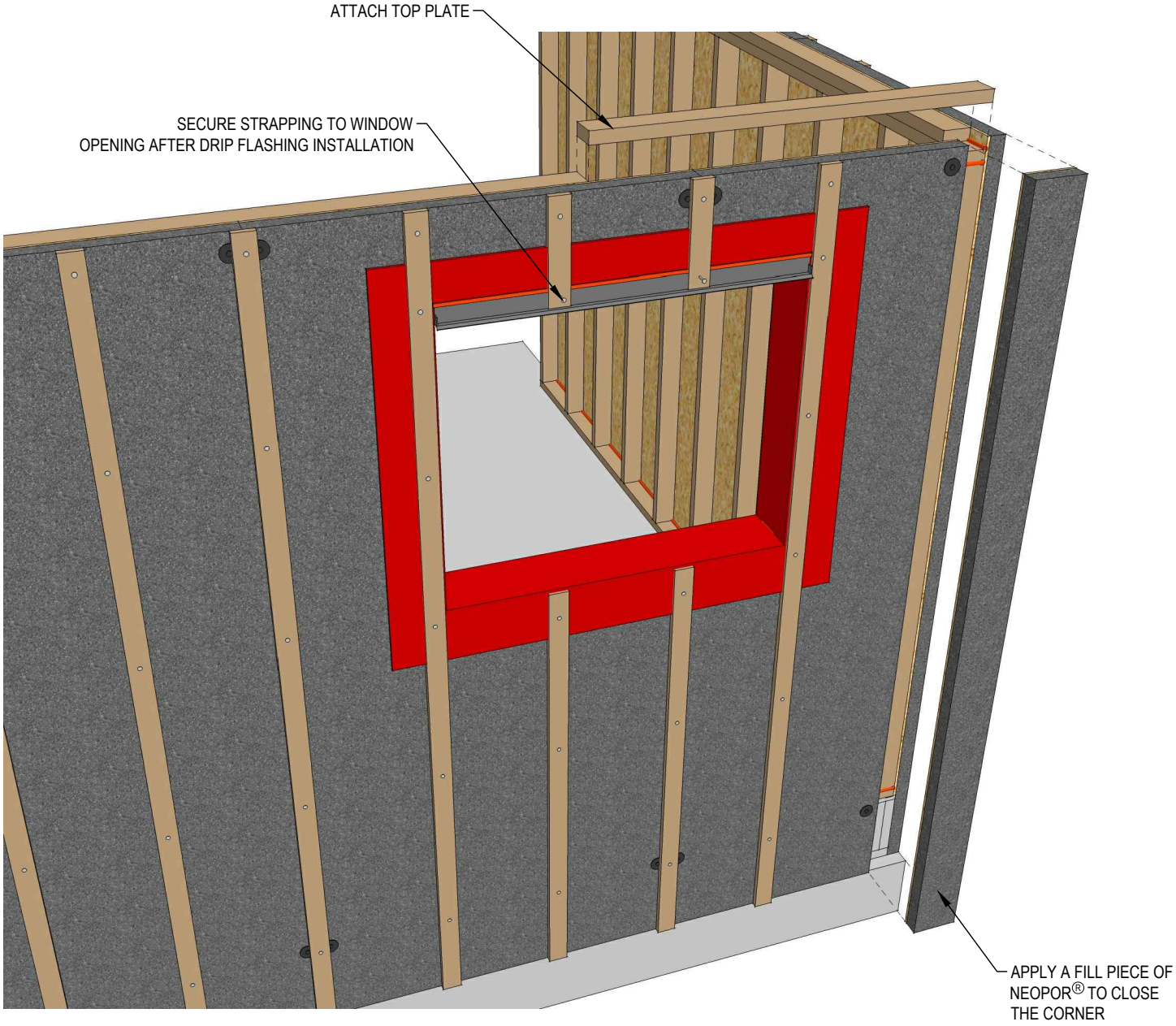
(SEE STEP #5)

NOTE:

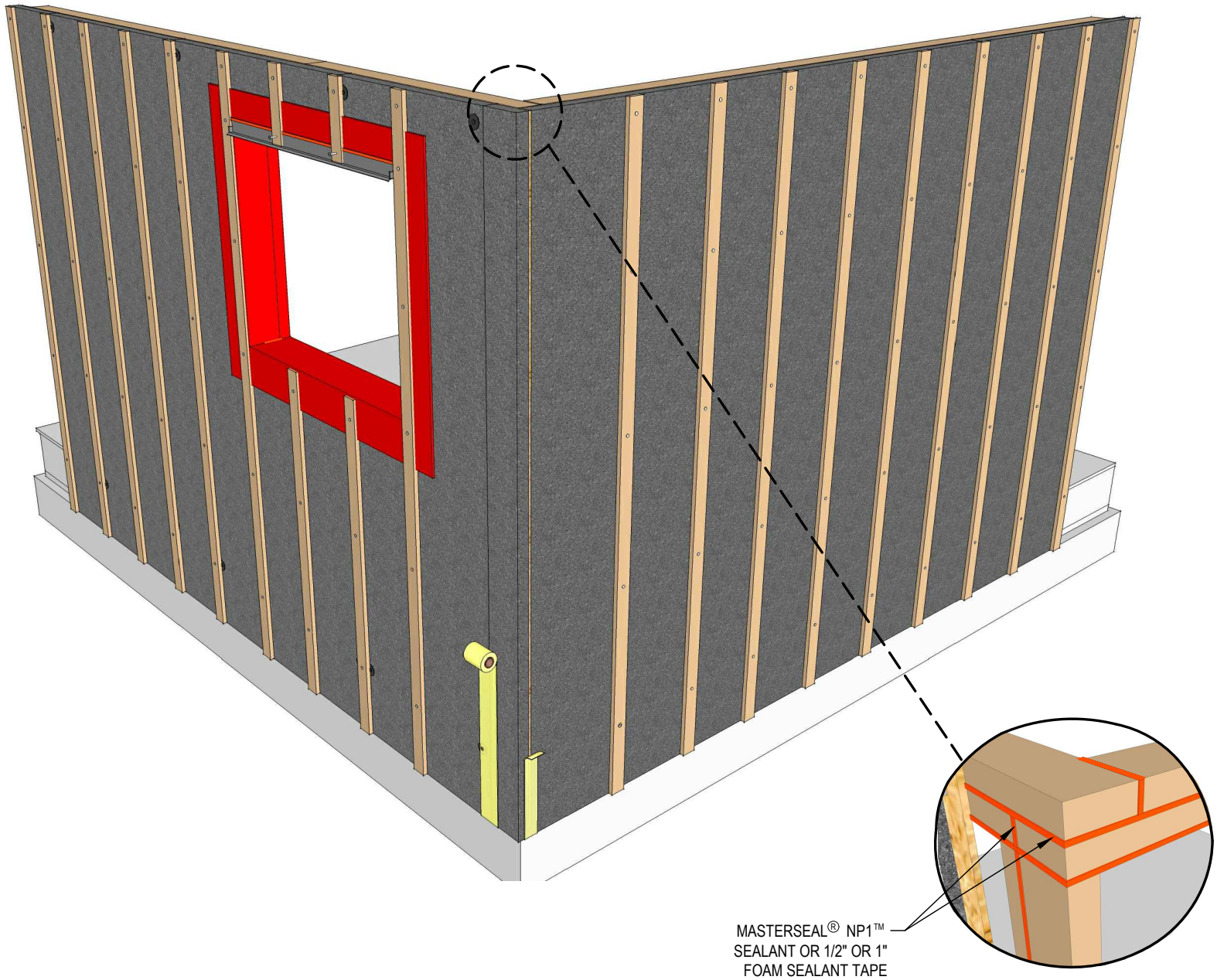
FOR SHEATHING AND STRAPPING FASTENERS AND SPACING, REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT. FURRING STRIPS IS BEST PRACTICE.



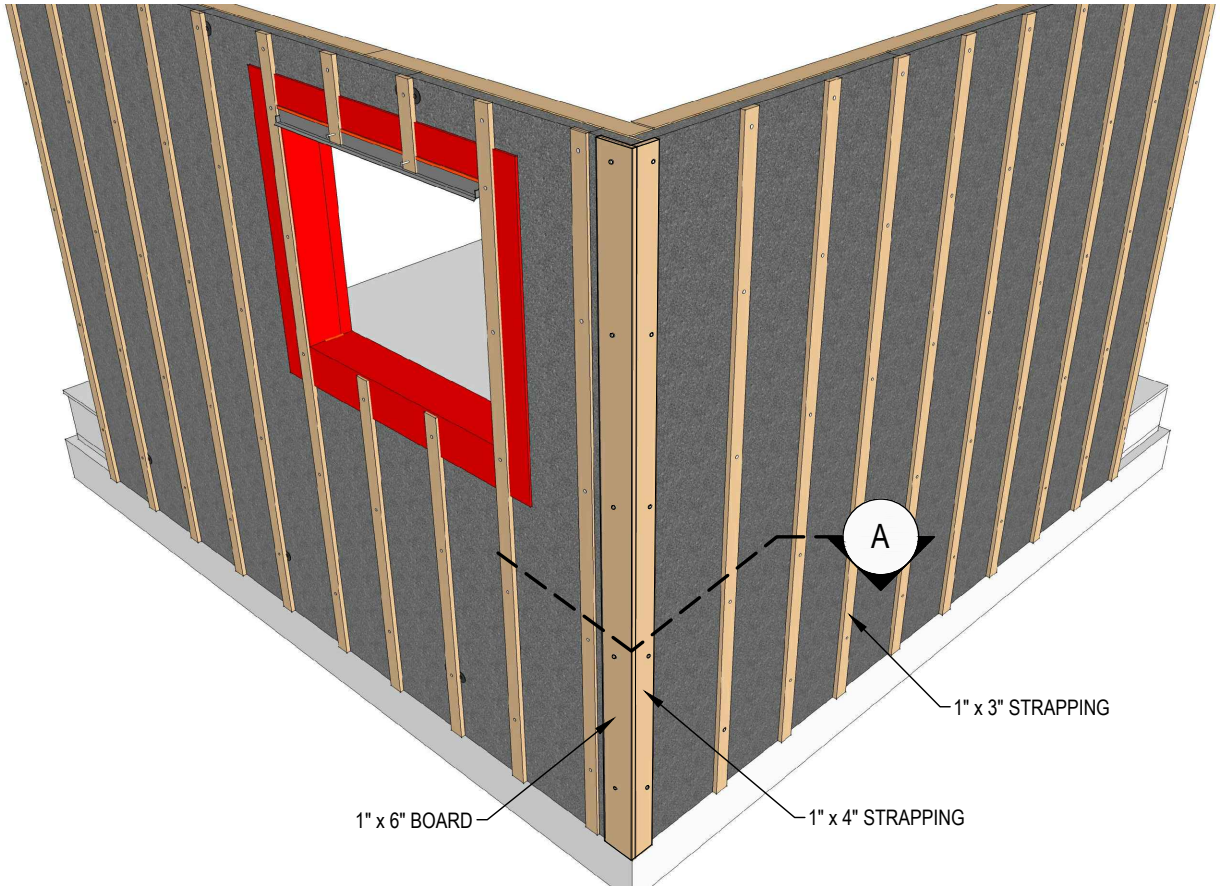
STEP 12 - RAISE WALL ASSEMBLY

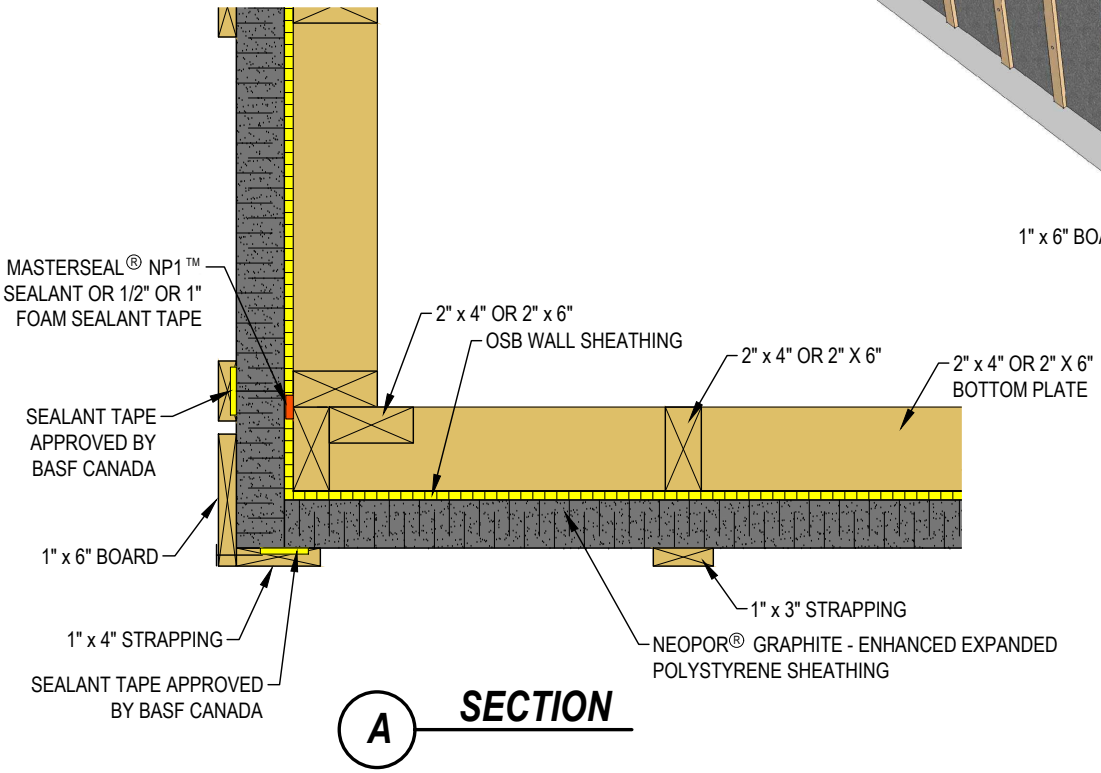


STEP 13 - CORNER VIEW OF INSTALLED WALLS



STEP 14 - CORNER STRAPPING INSTALLATION

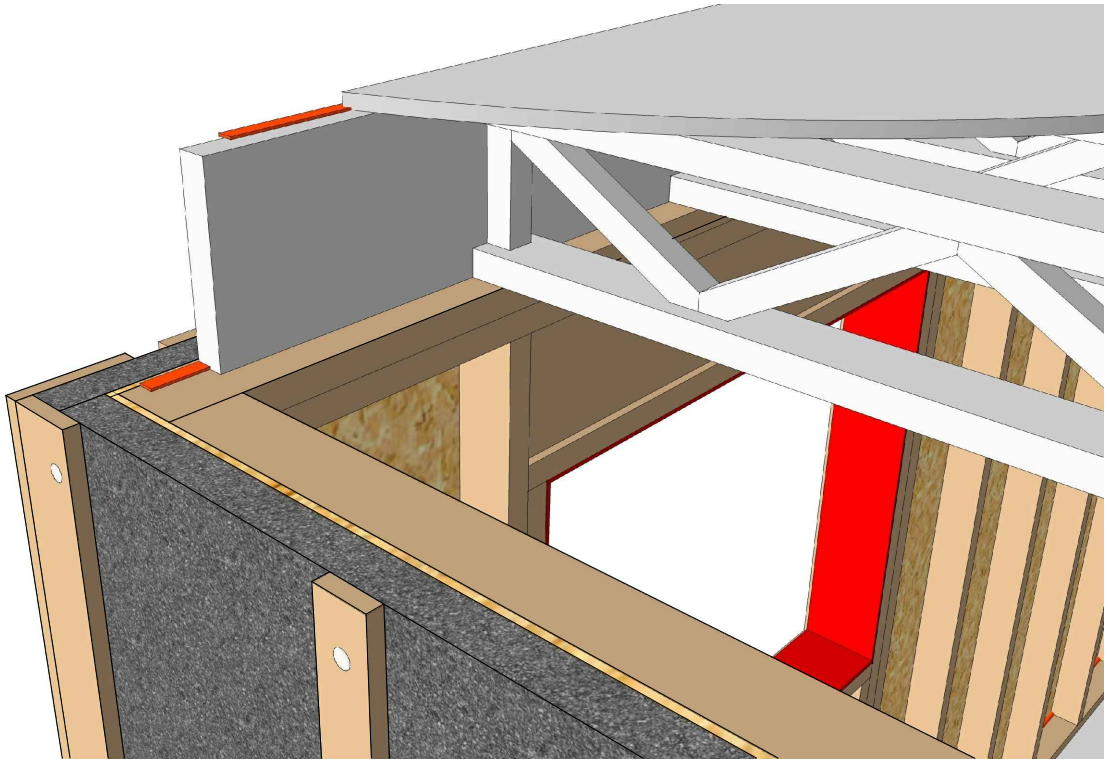


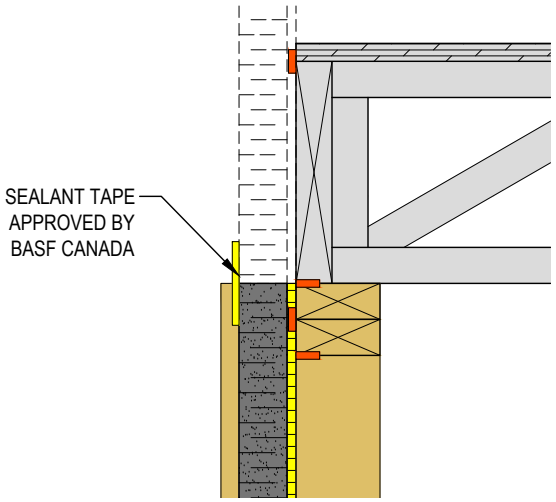


A **SECTION**

STEP 15 - SECOND FLOOR ASSEMBLY

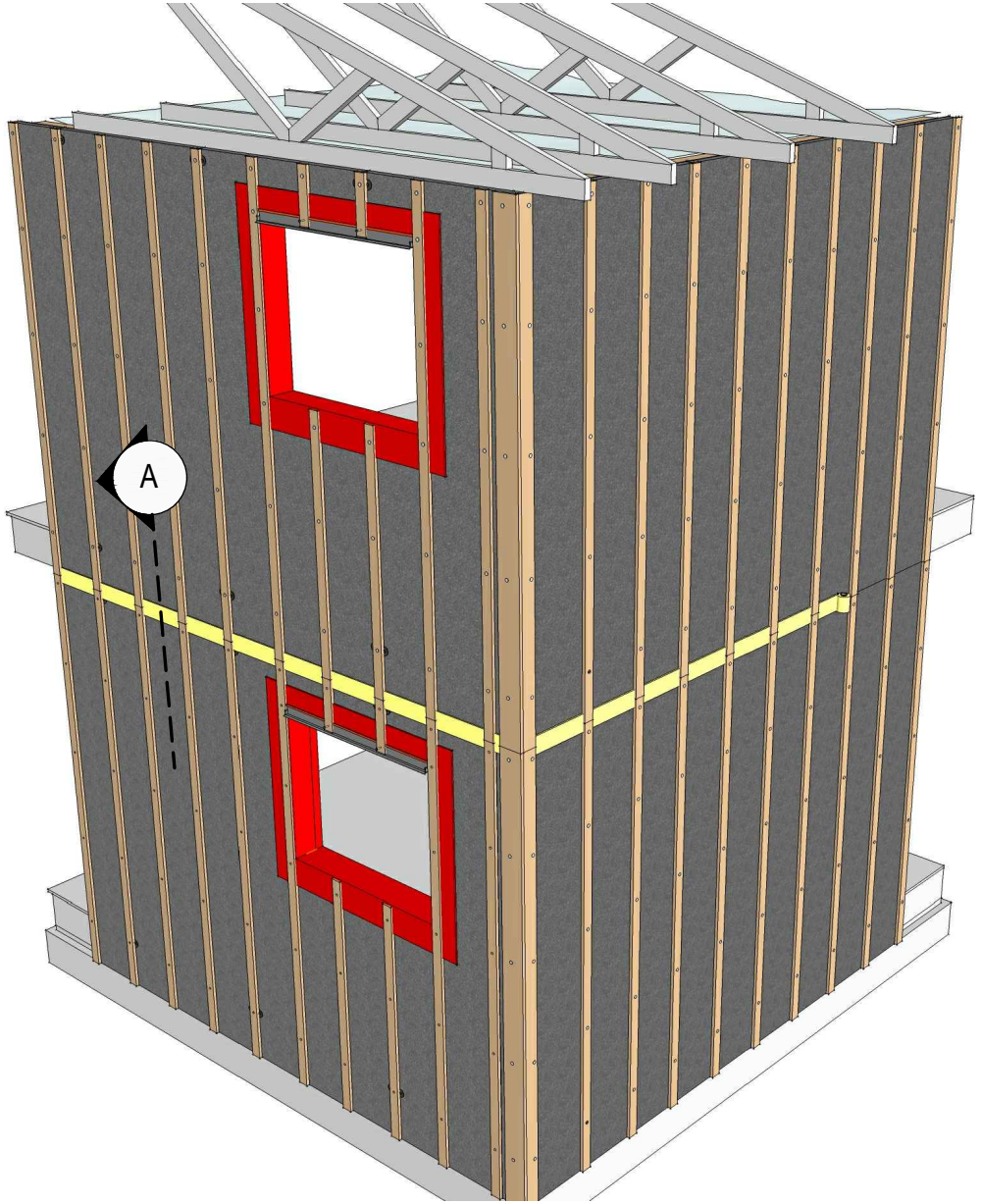
ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS USING MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE



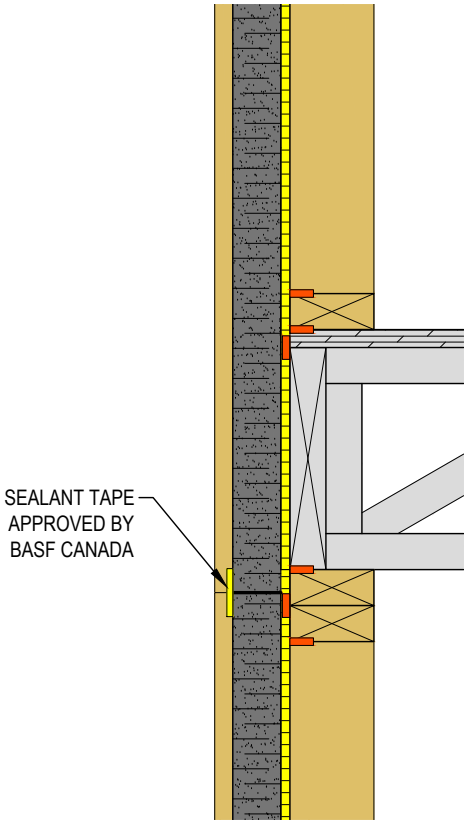


STEP 16A - BUILD AND POSITION SECOND FLOOR WALLS

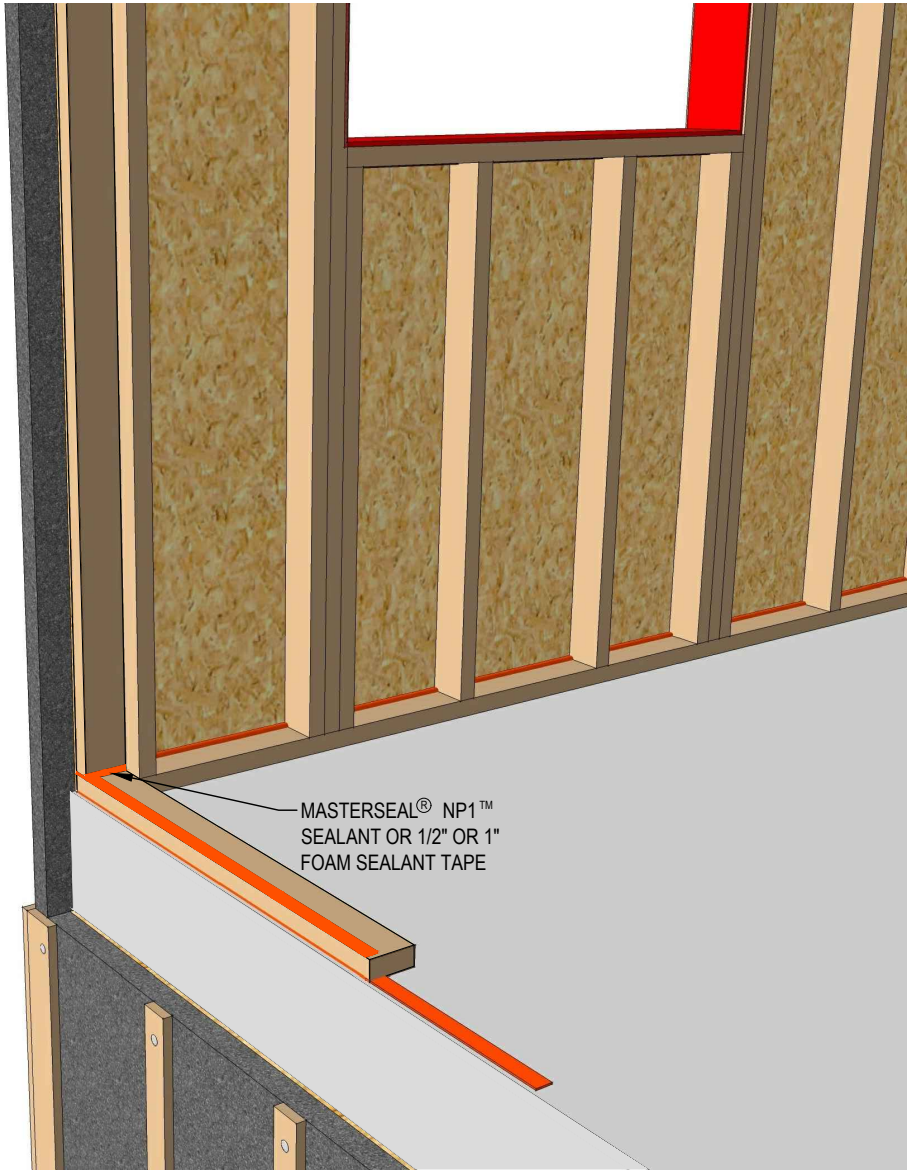
(SEE STEPS 2 TO 14)



STEP 16B - DETAILS

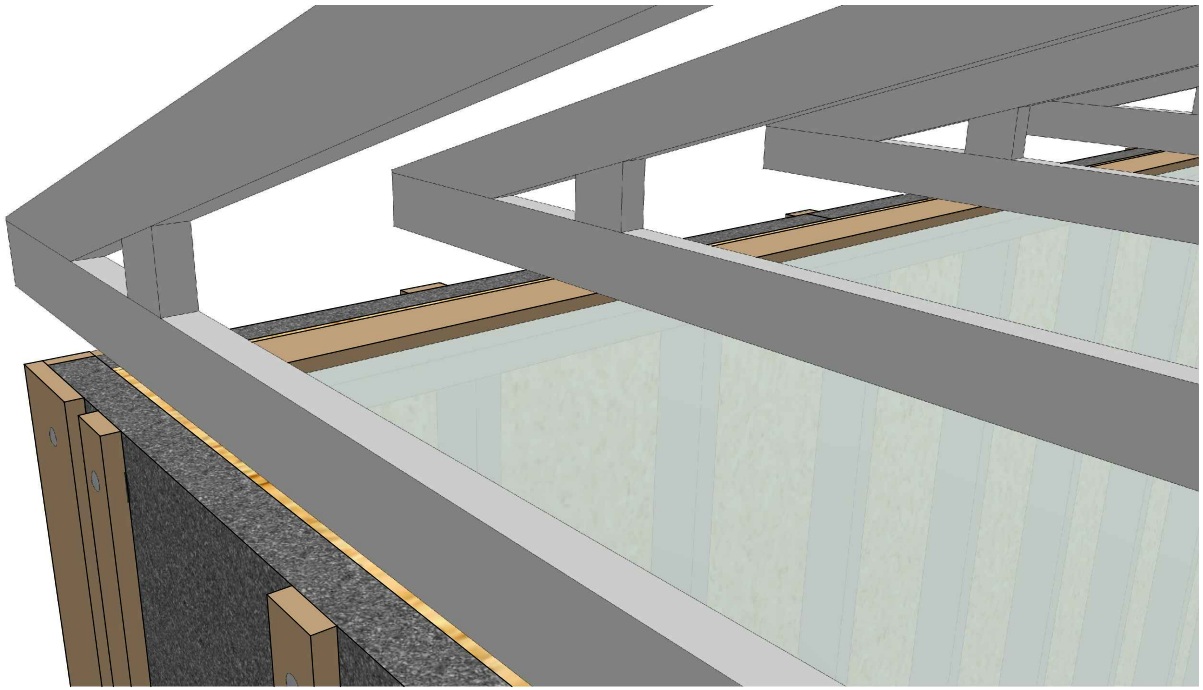


A SECTION

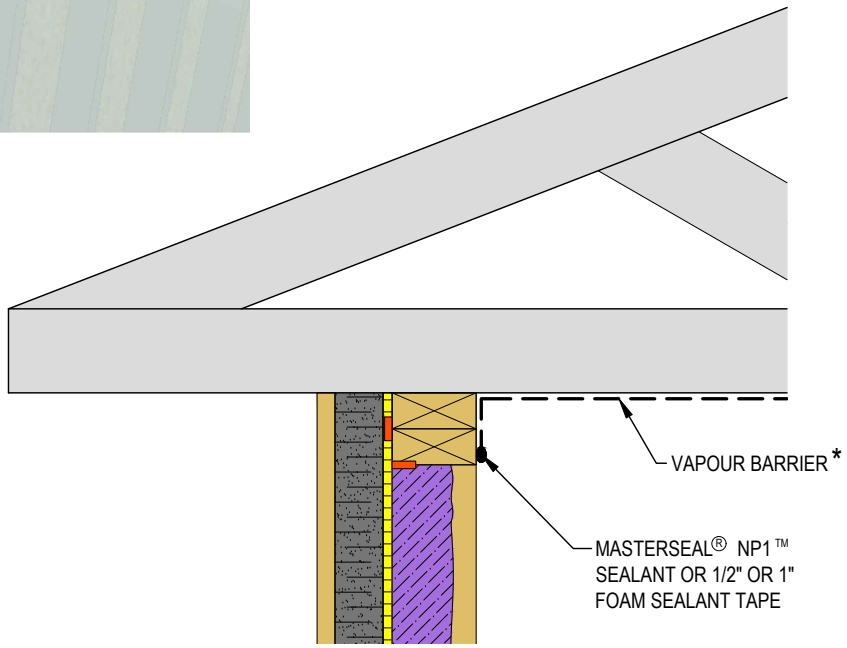


B 3D VIEW

STEP 17 - ROOF FRAMING



A 3D VIEW

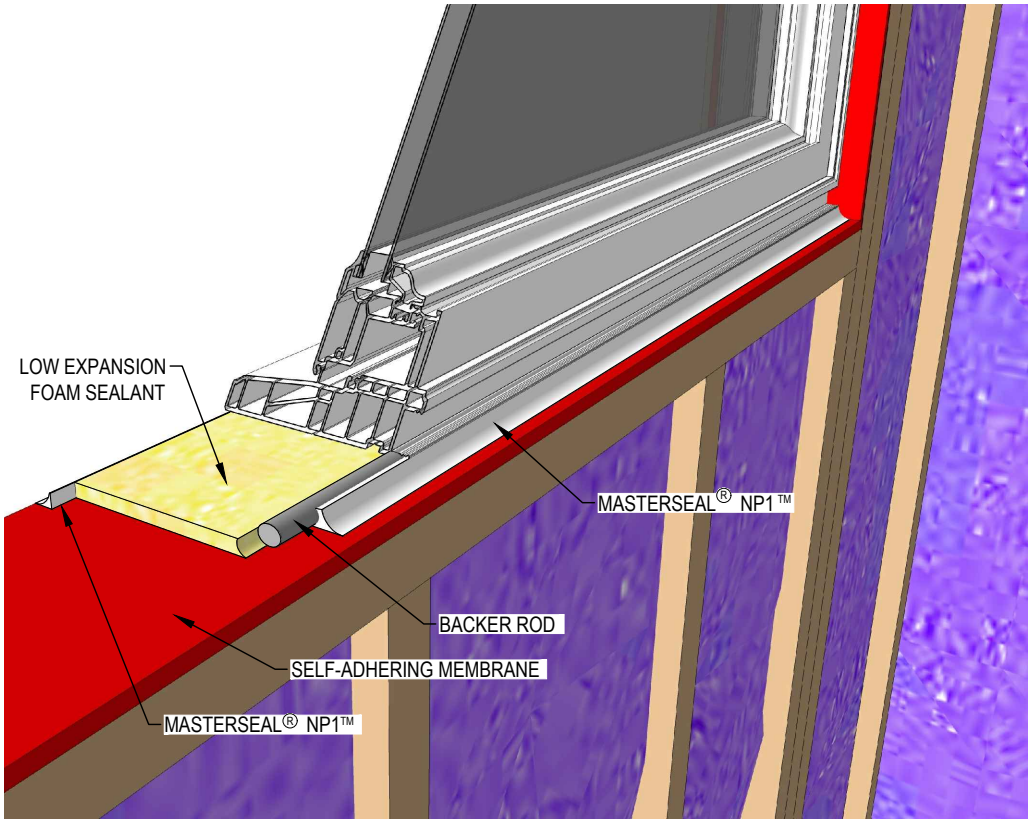


B SECTION

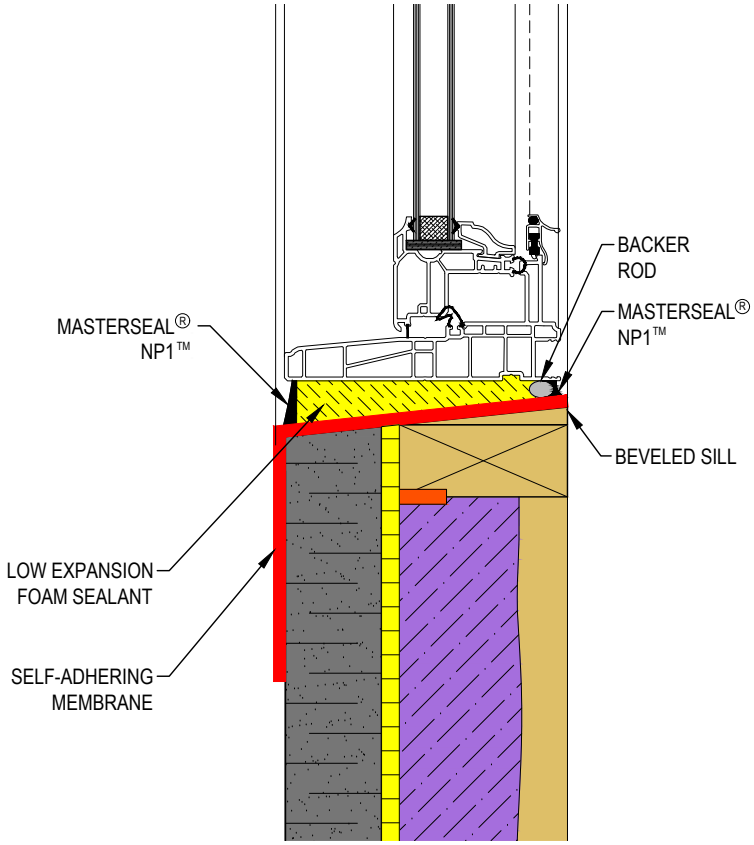
* AS REQUIRED BY CODE

STEP 18A - WINDOWS AND DOORS INSTALLATION

WINDOW INSTALLATION ACCORDING TO CSA A440.4



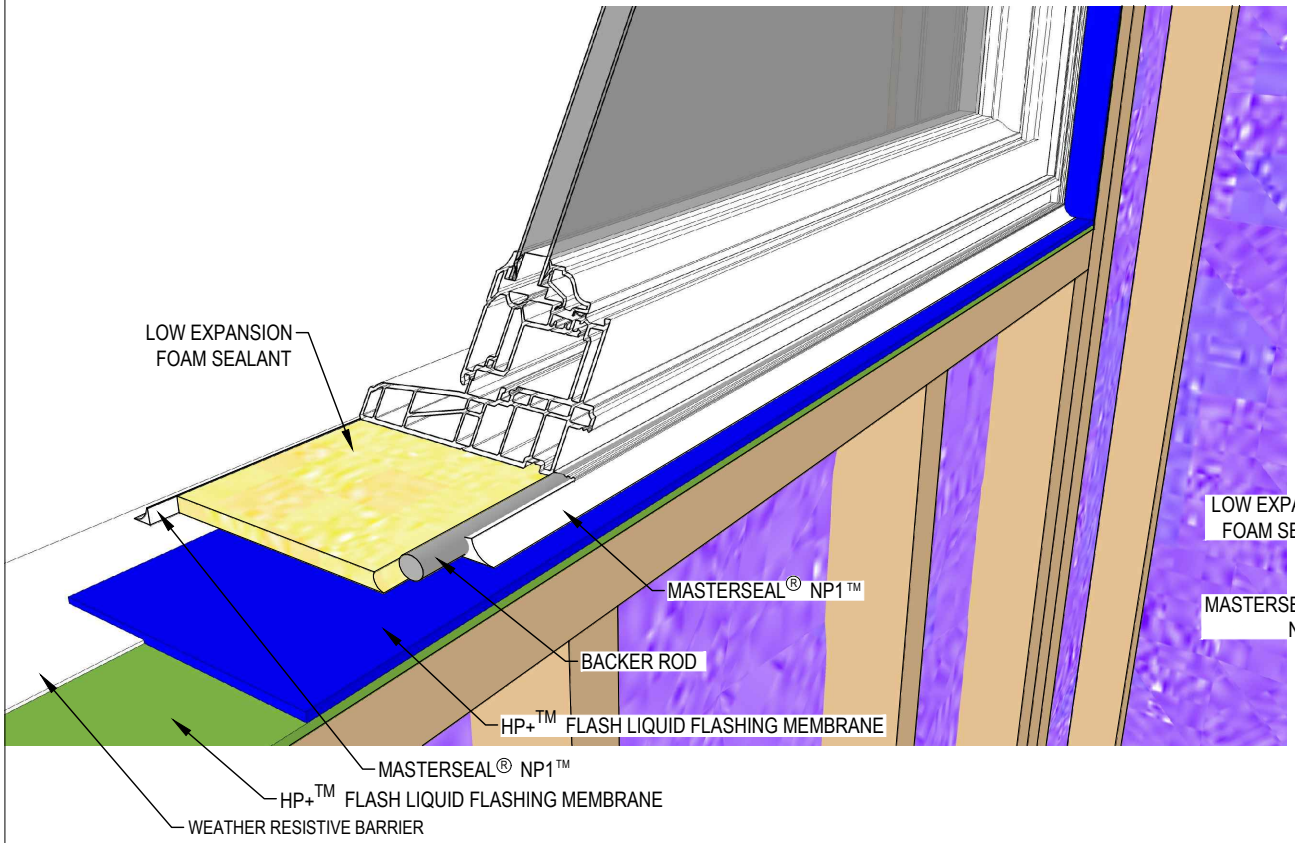
A **3D VIEW**



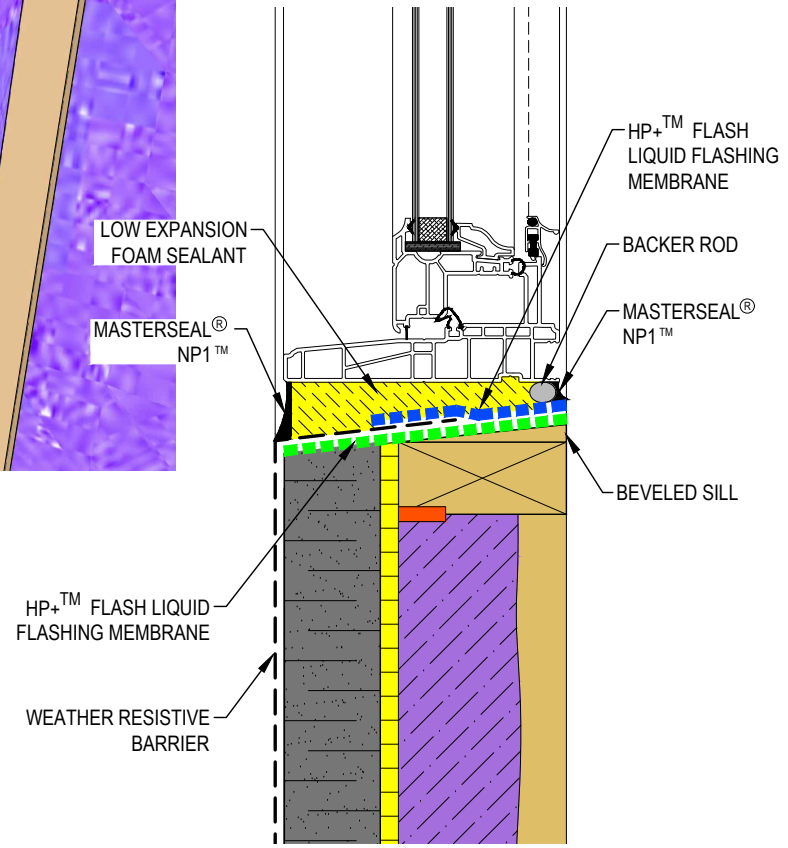
B **SECTION**

STEP 18B - WINDOWS AND DOORS INSTALLATION - ALTERNATIVE DETAIL

WINDOW INSTALLATION ACCORDING TO CSA A440.4



A **3D VIEW**



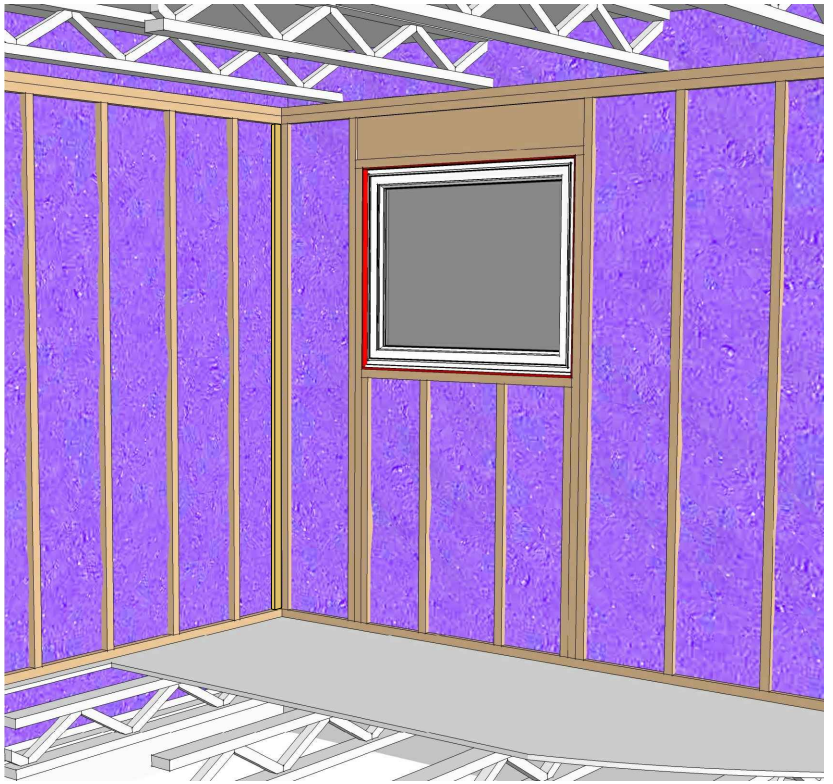
B **SECTION**

STEP 19A - INTERIOR INSULATION CORNER DETAILS

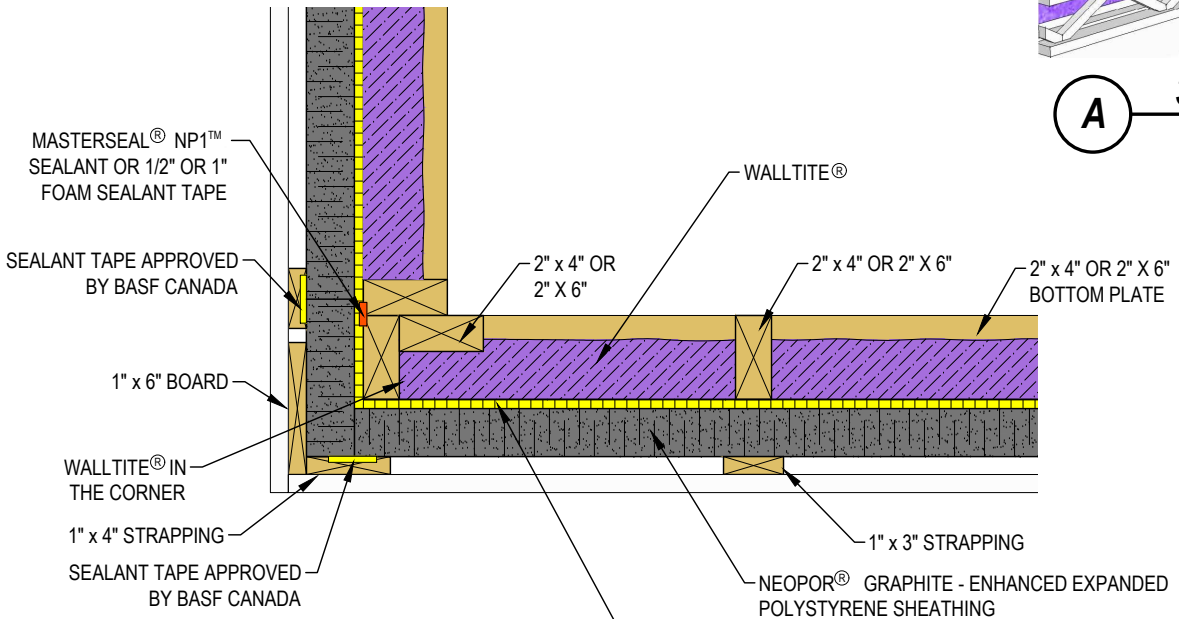
WALLTITE® MUST BE INSTALLED, IN ACCORDANCE WITH BASF'S QUALITY ASSURANCE PROGRAM.

WALLTITE® IS INSTALLED BEFORE OR AFTER ELECTRICAL WIRING AND PLUMBING TASKS

NOTE: REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT

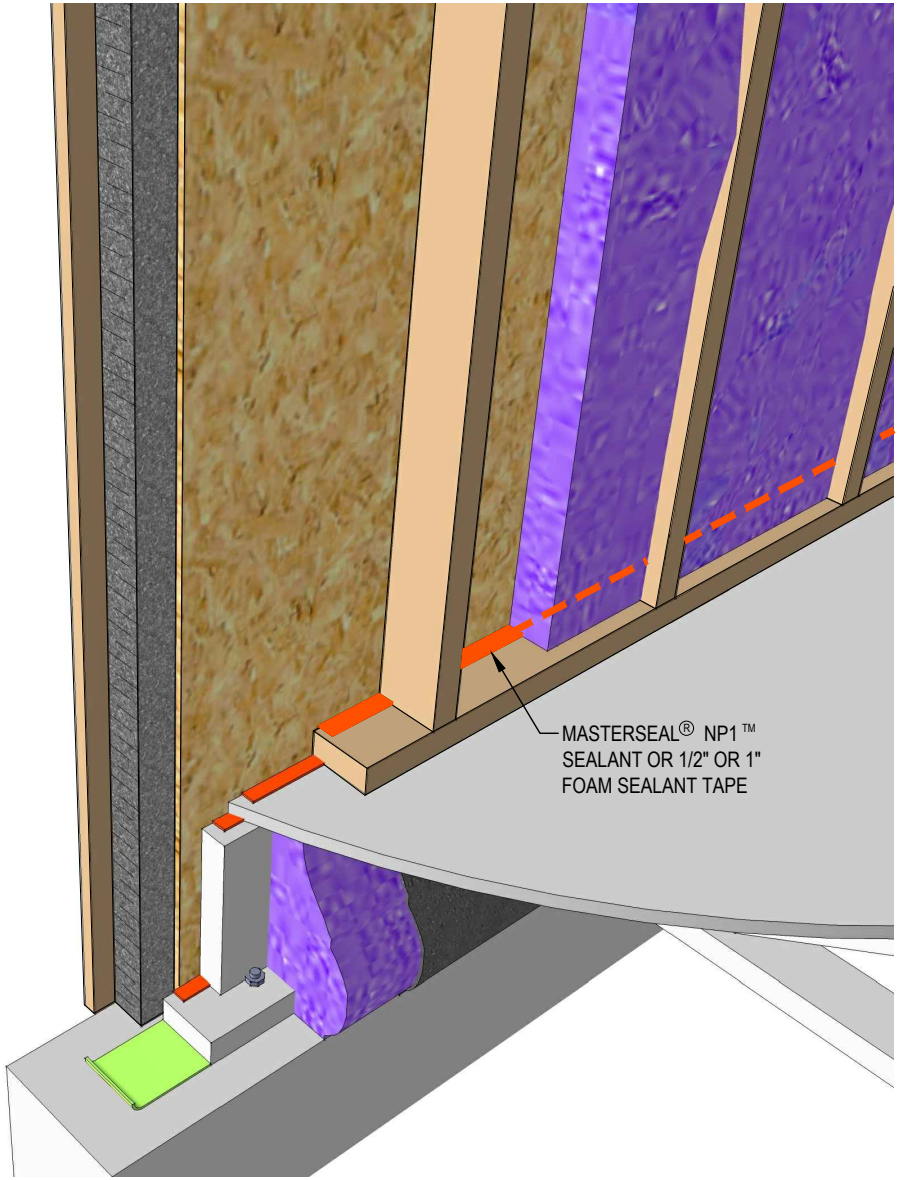


A **3D VIEW**

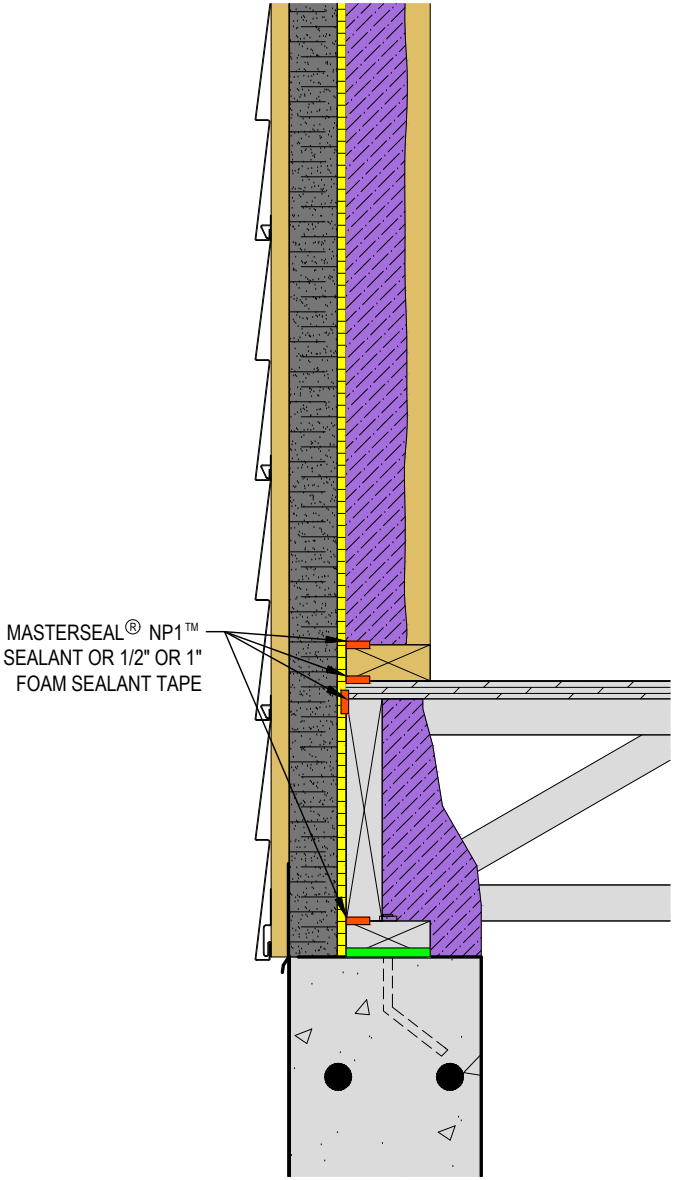


B **CORNER SECTION**

STEP 19B - INTERIOR INSULATION: FIRST FLOOR WALLS AND HEADERS

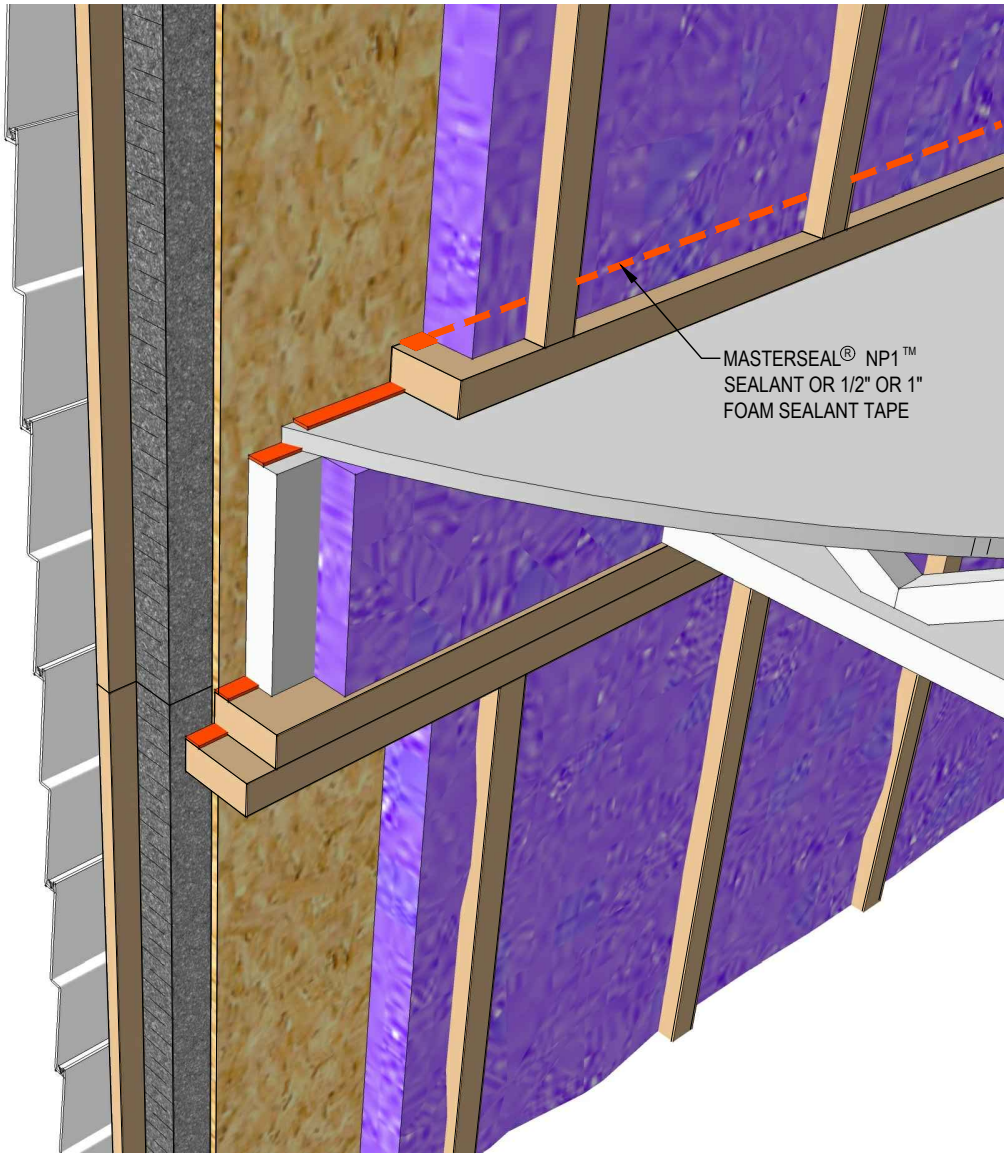


A 3D VIEW

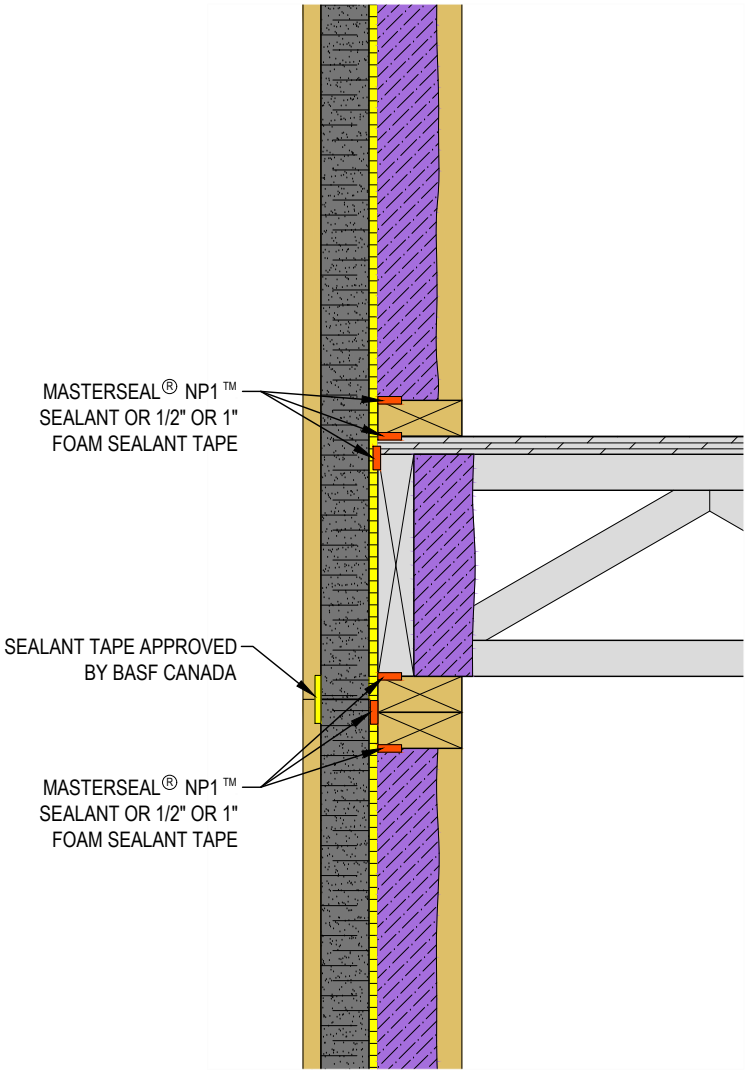


B SECTION

STEP 19C - INTERIOR INSULATION: SECOND FLOOR WALLS AND HEADERS

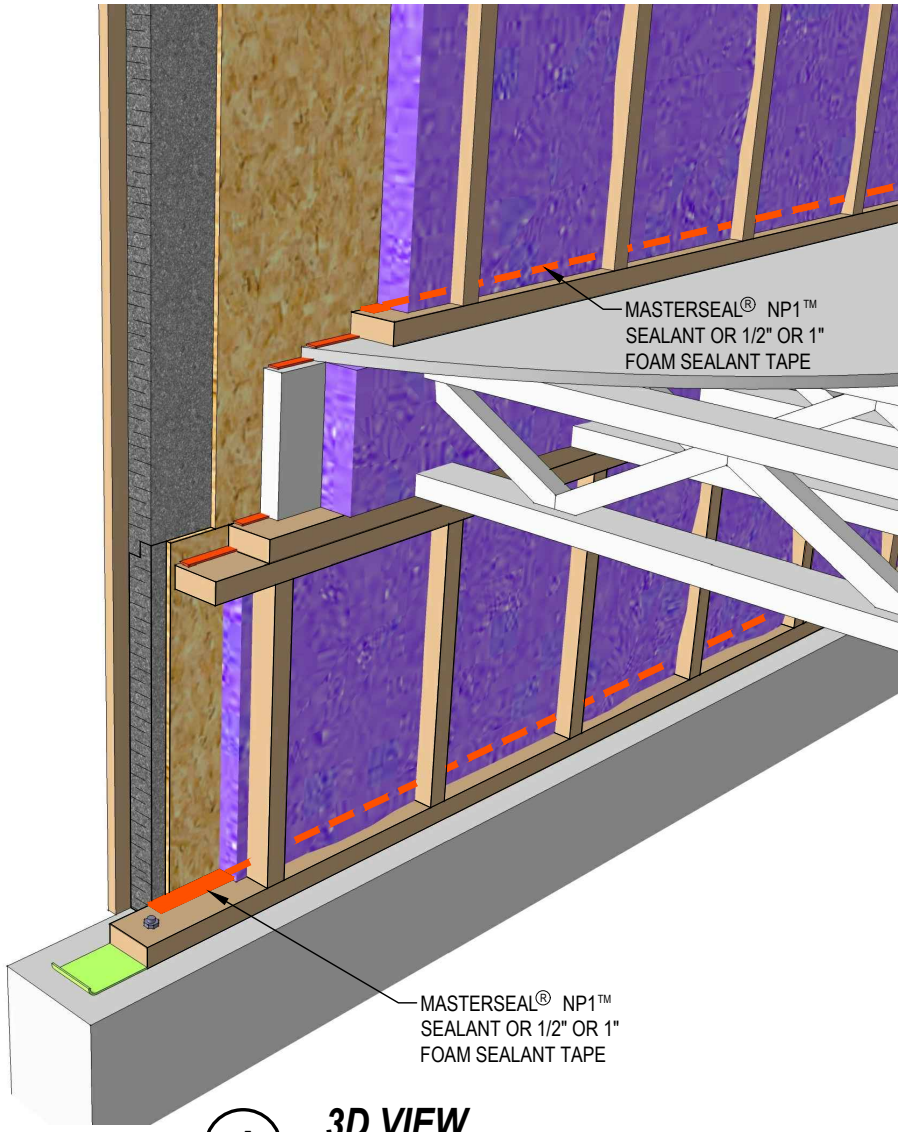


A **3D VIEW**

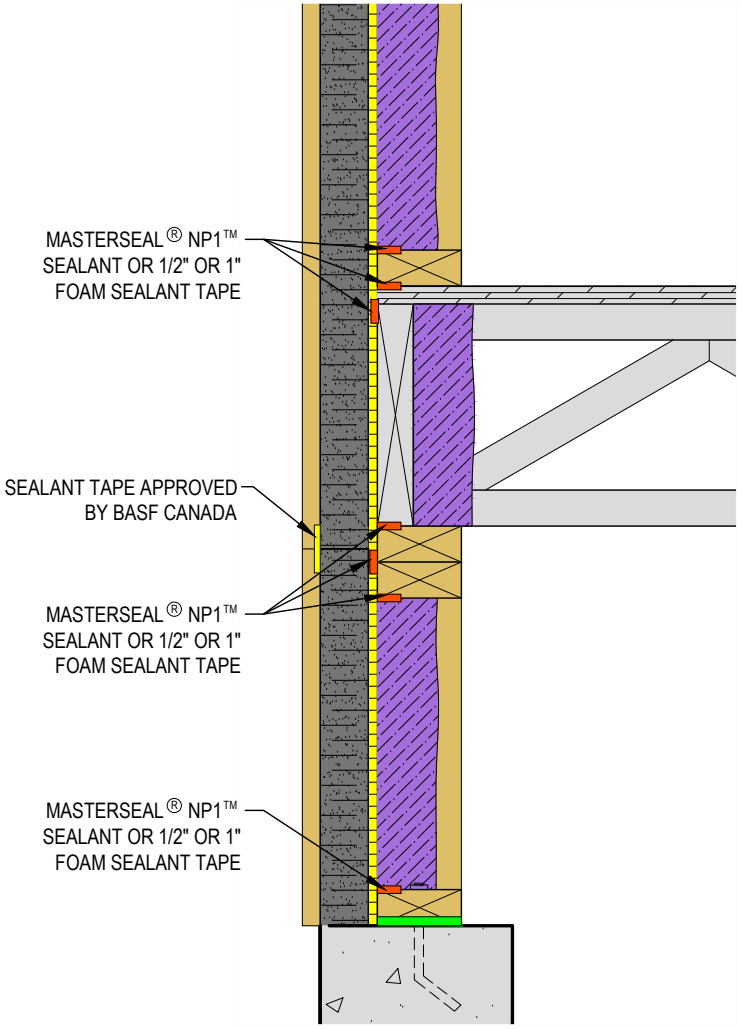


B **SECTION**

VARIOUS DETAILS: 1- KNEE WALL

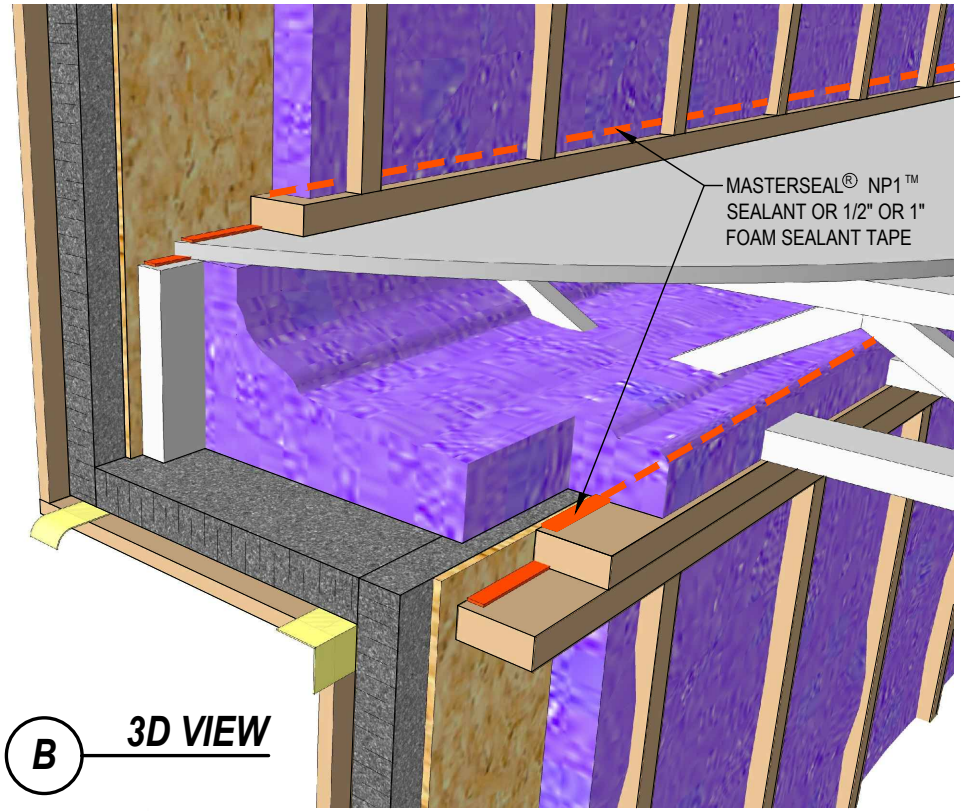


A 3D VIEW

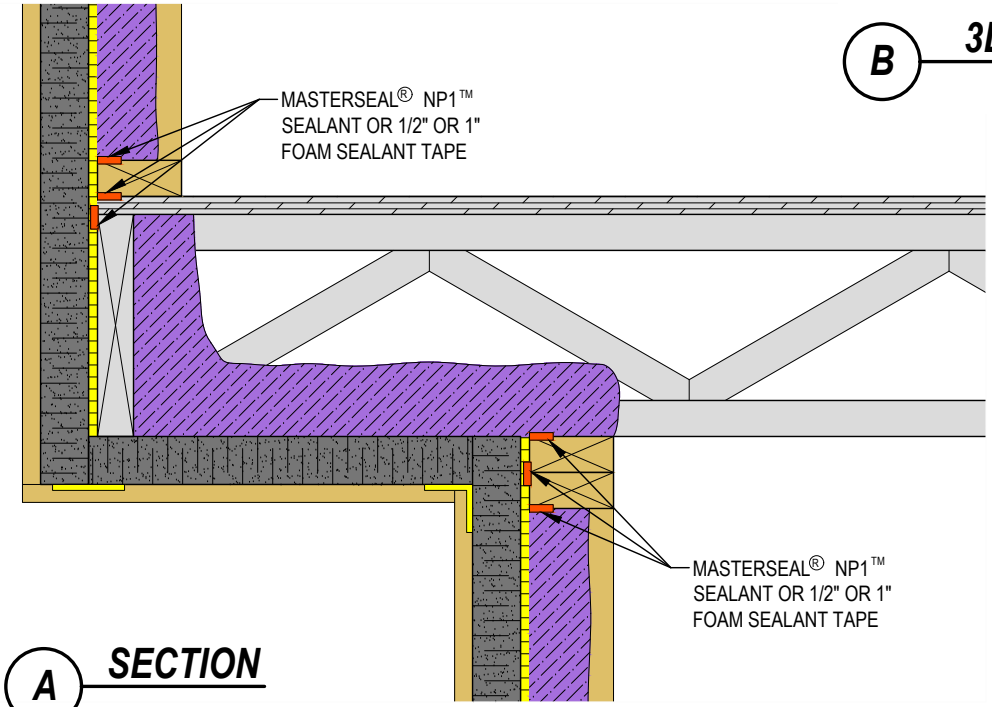


B SECTION

VARIOUS DETAILS:
2- CANTILEVERED FLOOR

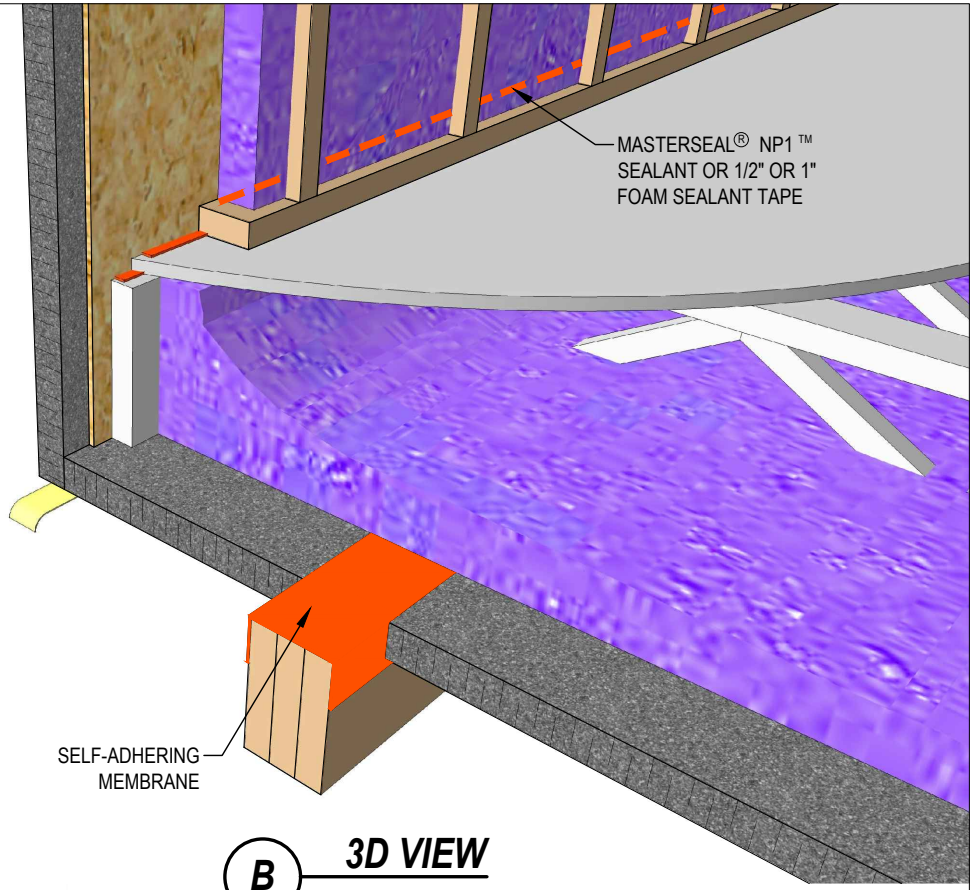


B **3D VIEW**

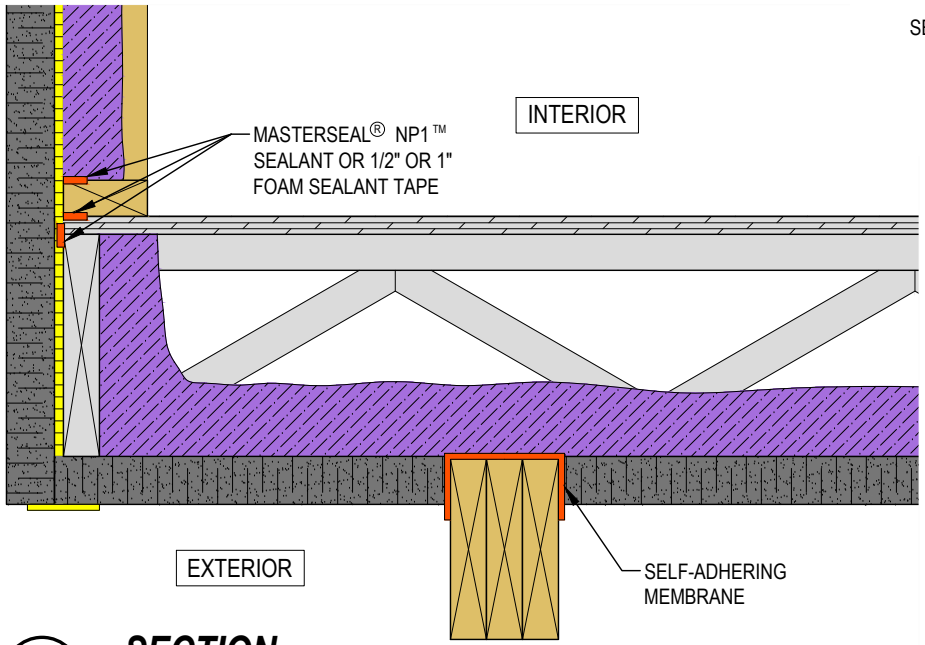


A **SECTION**

VARIOUS DETAILS:
3- CANTILEVERED FLOOR ON BEAM



B **3D VIEW**

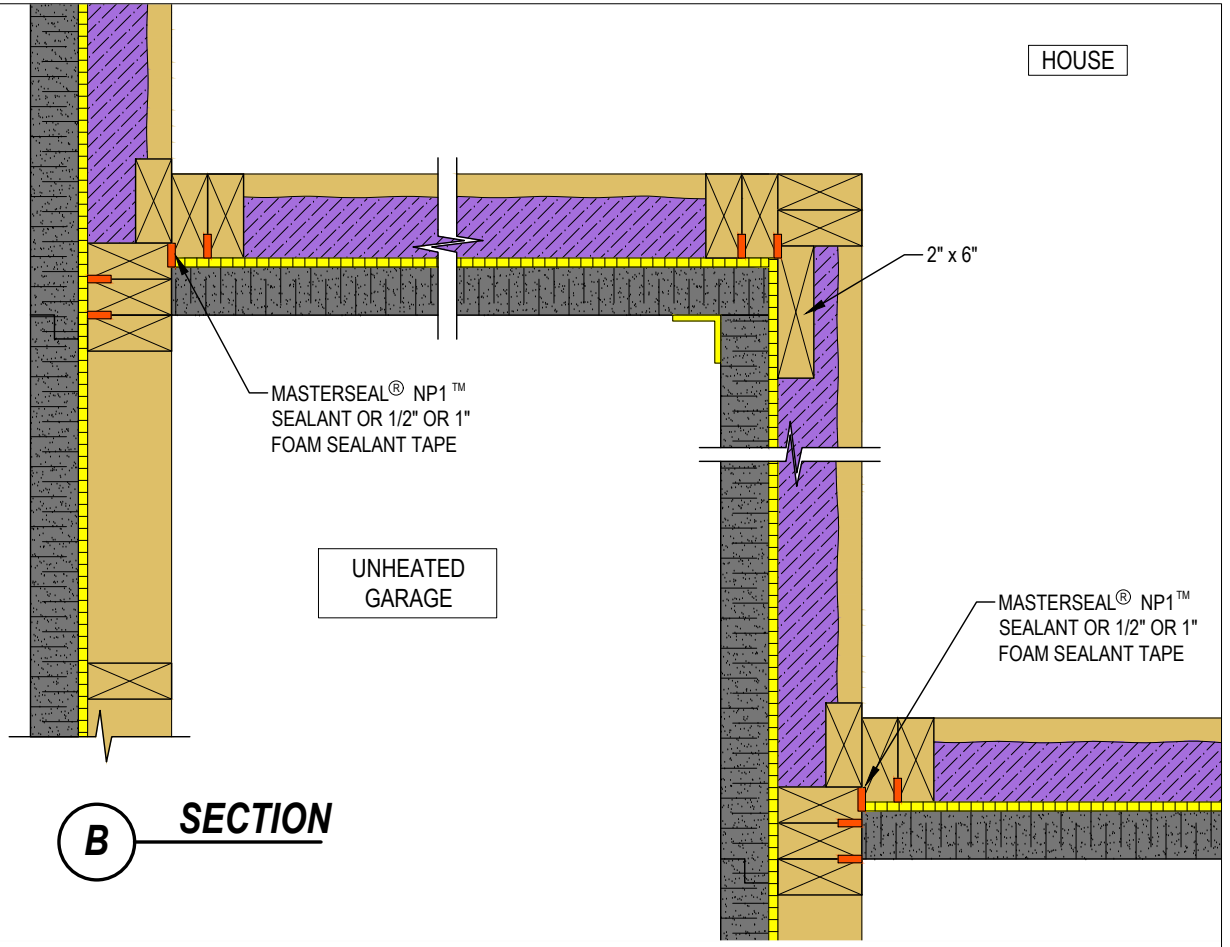


A **SECTION**

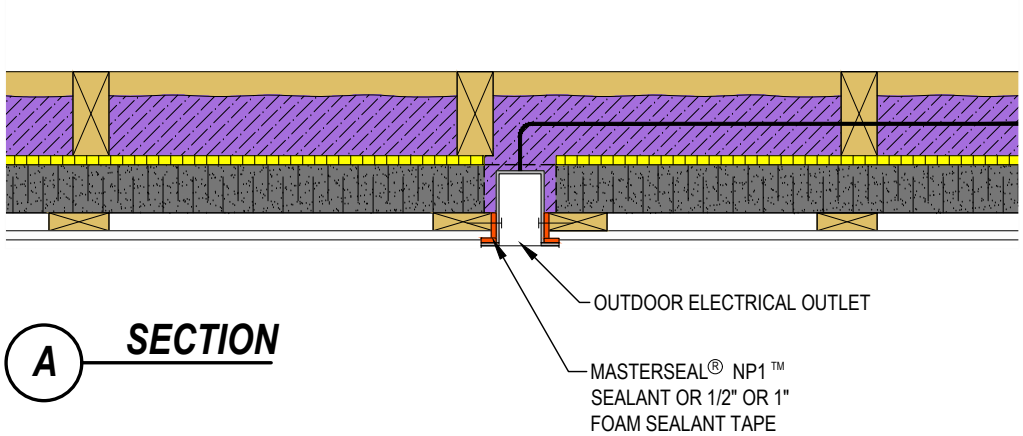
VARIOUS DETAILS:
4- UNHEATED GARAGE ELECTRICAL OUTLET

NOTE:

ALL EXPOSED FOAM PLASTIC INSULATION MUST BE COVERED WITH A THERMAL BARRIER APPROVED BY CODE

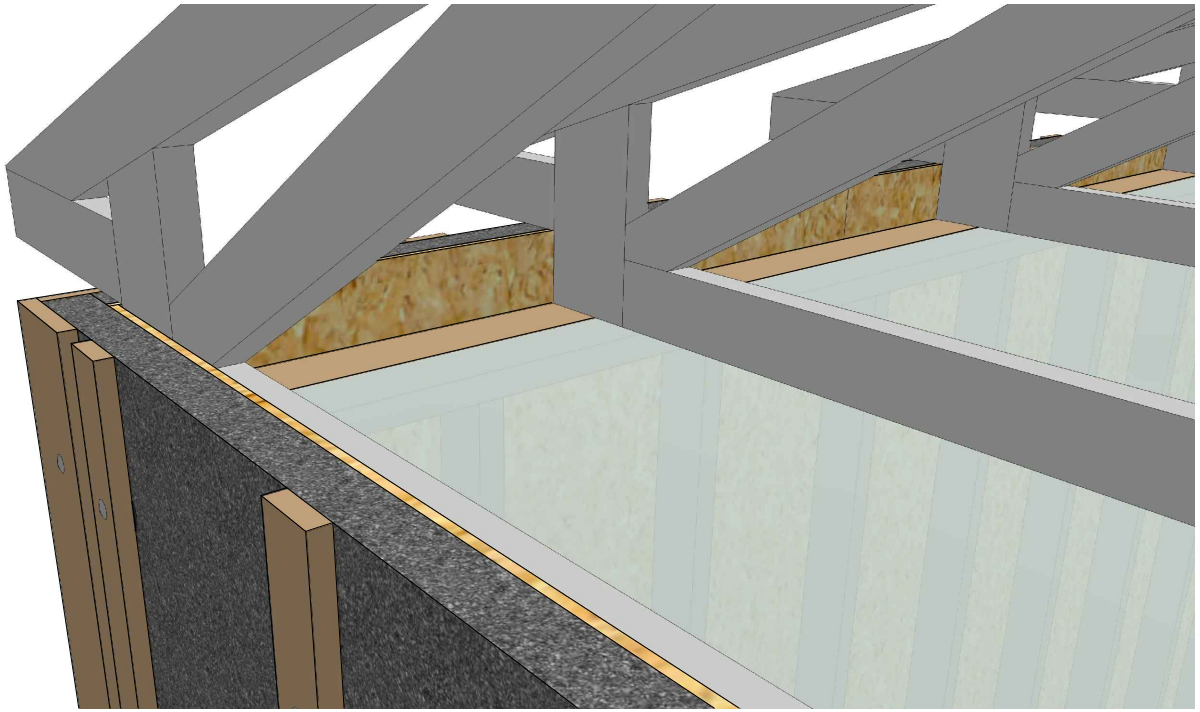


B ***SECTION***

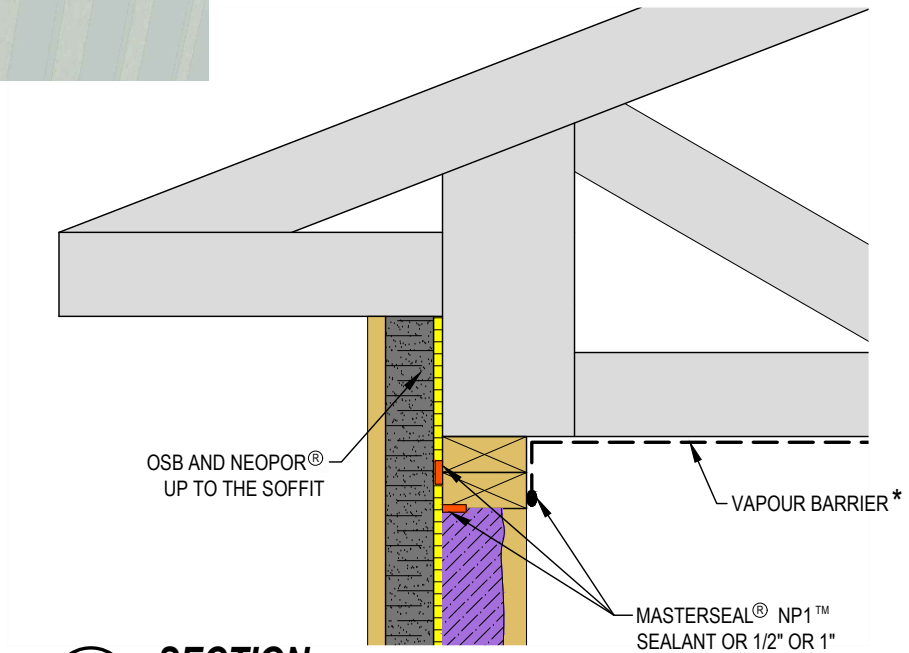


A ***SECTION***

VARIOUS DETAILS: 5- RAISED HEEL ROOF TRUSS



A **3D VIEW**



B **SECTION**

*AS REQUIRED BY CODE