# *HIGH PERFORMANCE WALL :*
# *R 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:*

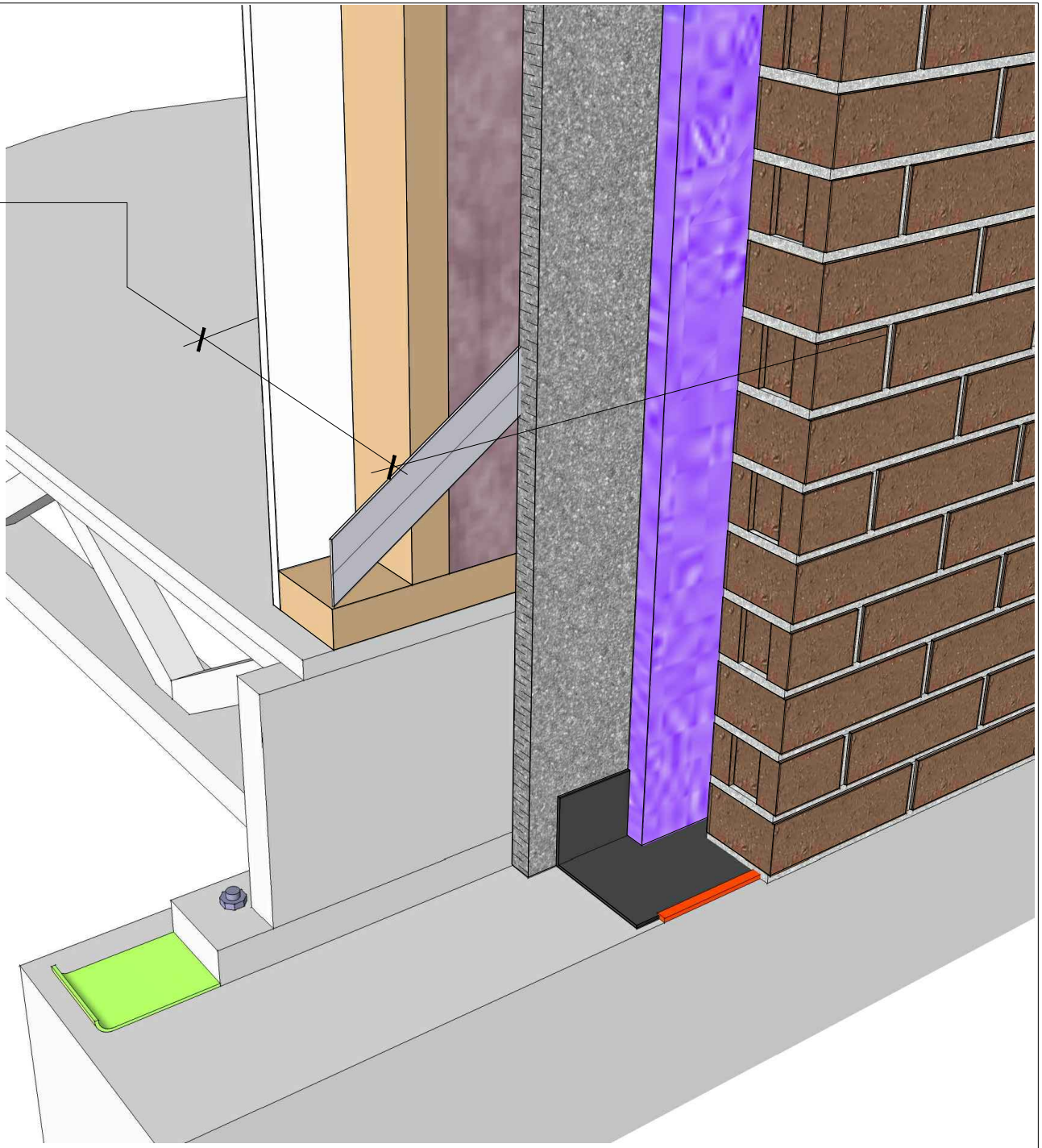
ALL REFERENCES TO MASTERSEAL® NP1™ OR 1/2" OR 1" FOAM SEALANT TAPE IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS

# *HIGH PERFORMANCE WALL : R SERIES - CANADA*

PATENT PENDING

## *WALL COMPONENTS*

- MASONRY VENEER WALL
- AIR SPACE (MAX. 1")
- 1" THICK WALLTITE® SPRAYED ONTO SURFACE OF NEOPOR® SHEATHING
* - SHEATHING:
  1" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 LB/FT³ MINIMUM DENSITY)
- 2" X 4" STUDS @ 16" C/C OR 24" C/C
- INSULATION BETWEEN STUDS BASED ON REQUIRED "R" VALUE
- 1/2" GYPSUM BOARD



## *TYPICAL WALL NOMINAL R VALUE*

***TO VALIDATE ACCORDING TO THE WALL COMPOSITION***

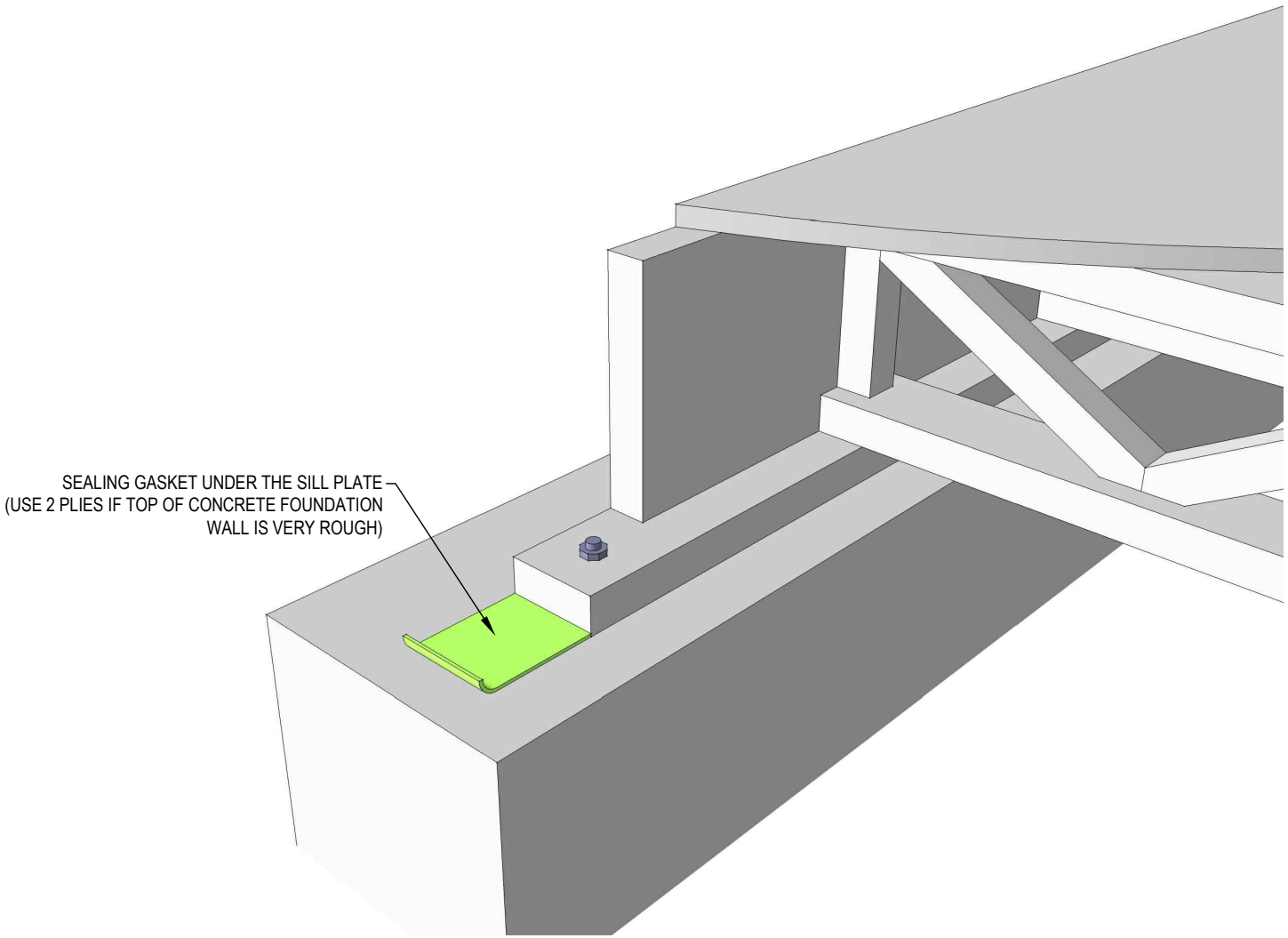
### **SHEATHING CAN BE:*

- MINIMUM 1" OF NEOPOR®;
- 0.8" EXTRUDED POLYSTYRENE (XPS);
- 1/2" GYPSUM BOARD;
- 7/16" ASPHALT FIBERBOARD;
- 1/4" OSB;
- 1" EXPANDED POLYSYRENE (EPS) TYPE II;
- 7/16" NATURAL FIBERBOARD.

IMPORTANT:
RATING AND THICKNESS OF THE SHEATHING TO BE AS PER ARTICLE 9.23.17.2 OF NBC 2015, IF EXTERIOR CLADDING REQUIRES INTERMEDIATE FASTENING BETWEEN SUPPORTS (STUDS).

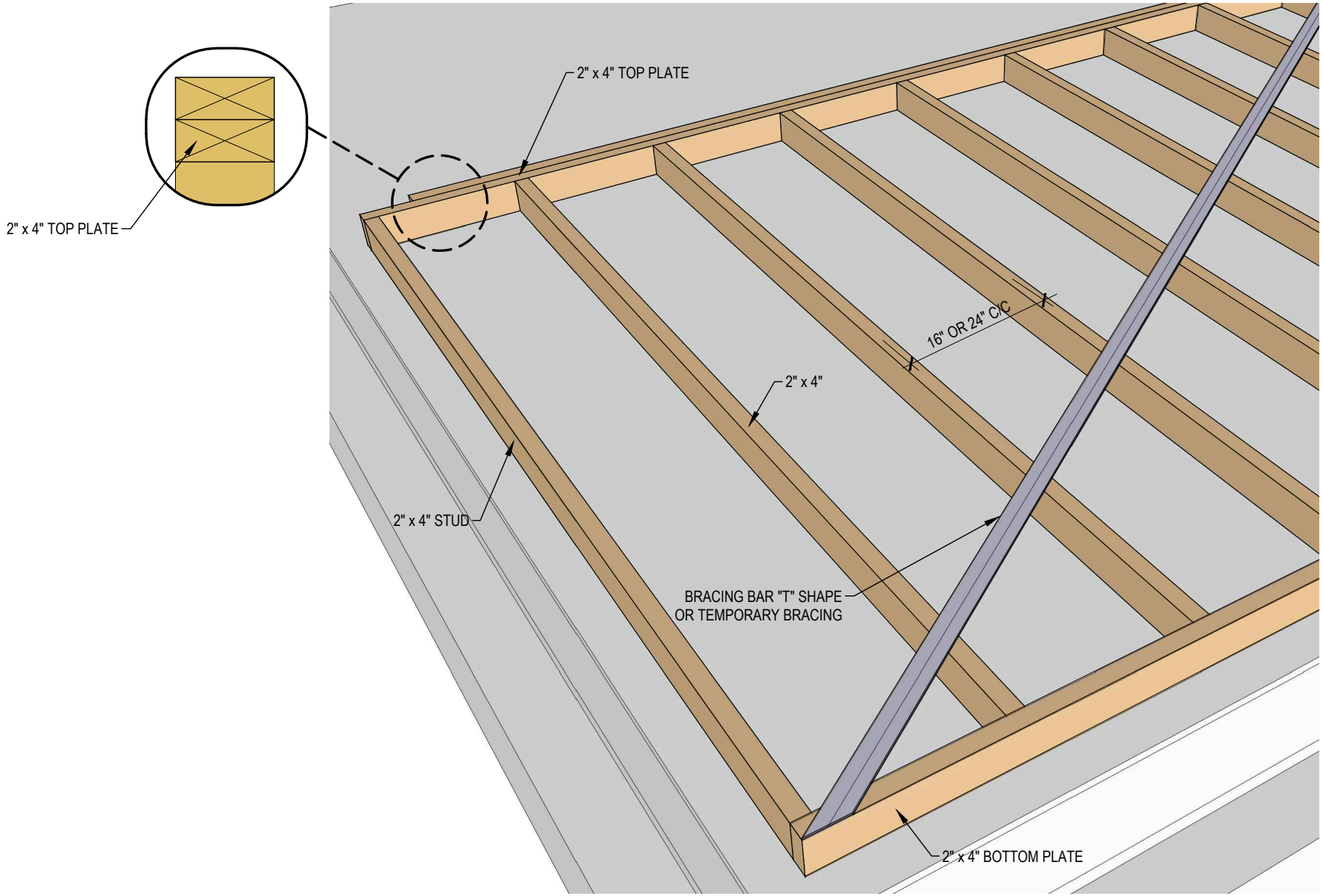
# *STEP 1 - FLOOR ASSEMBLY*

ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS
ANCHORED TO FOUNDATION WALL



# STEP 2 - WALL FRAMING

FIRST WALL FRAMING ASSEMBLY

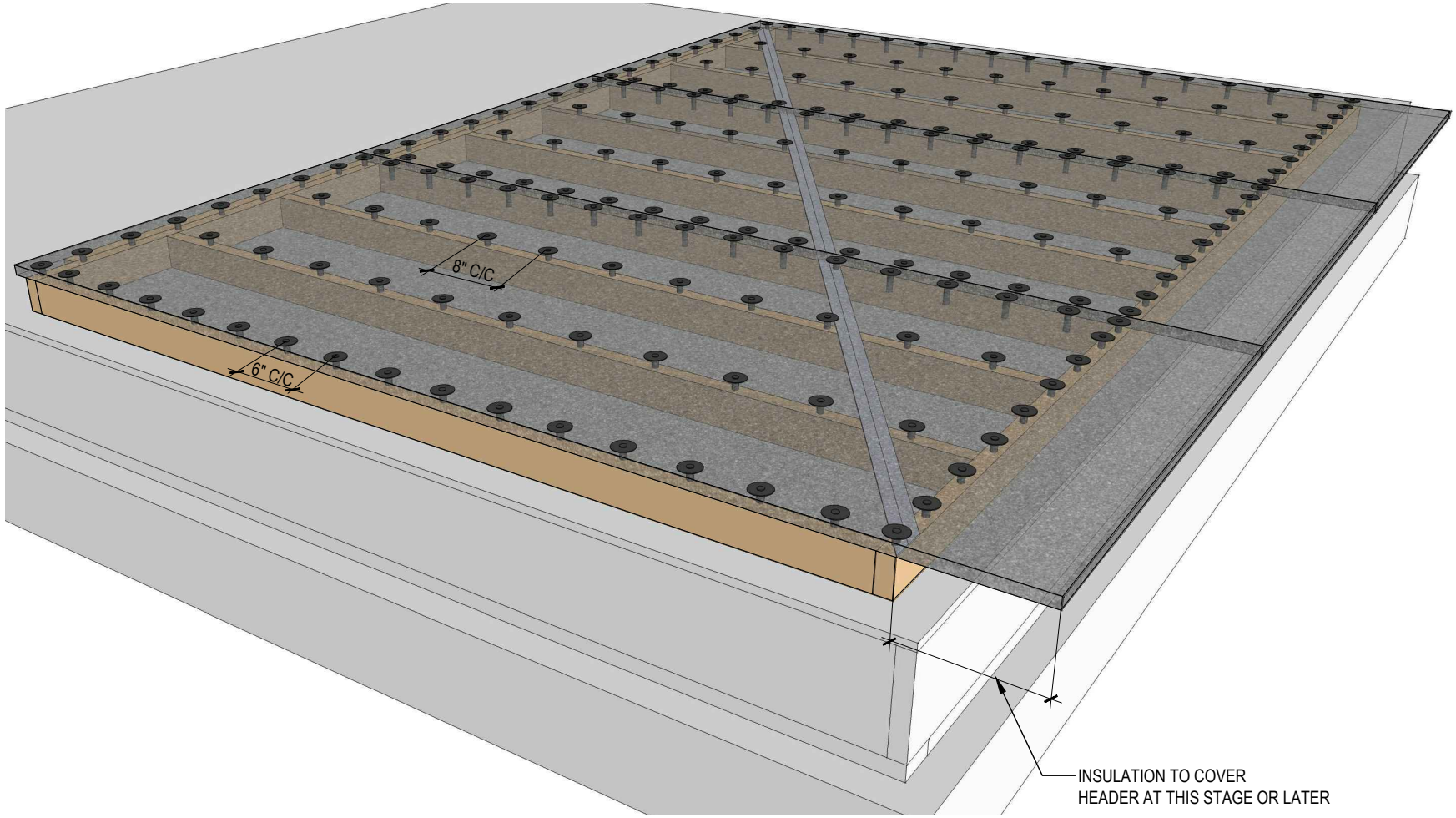


# *STEP 3A- EXTERIOR INSULATION*

INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATING SHEATHING

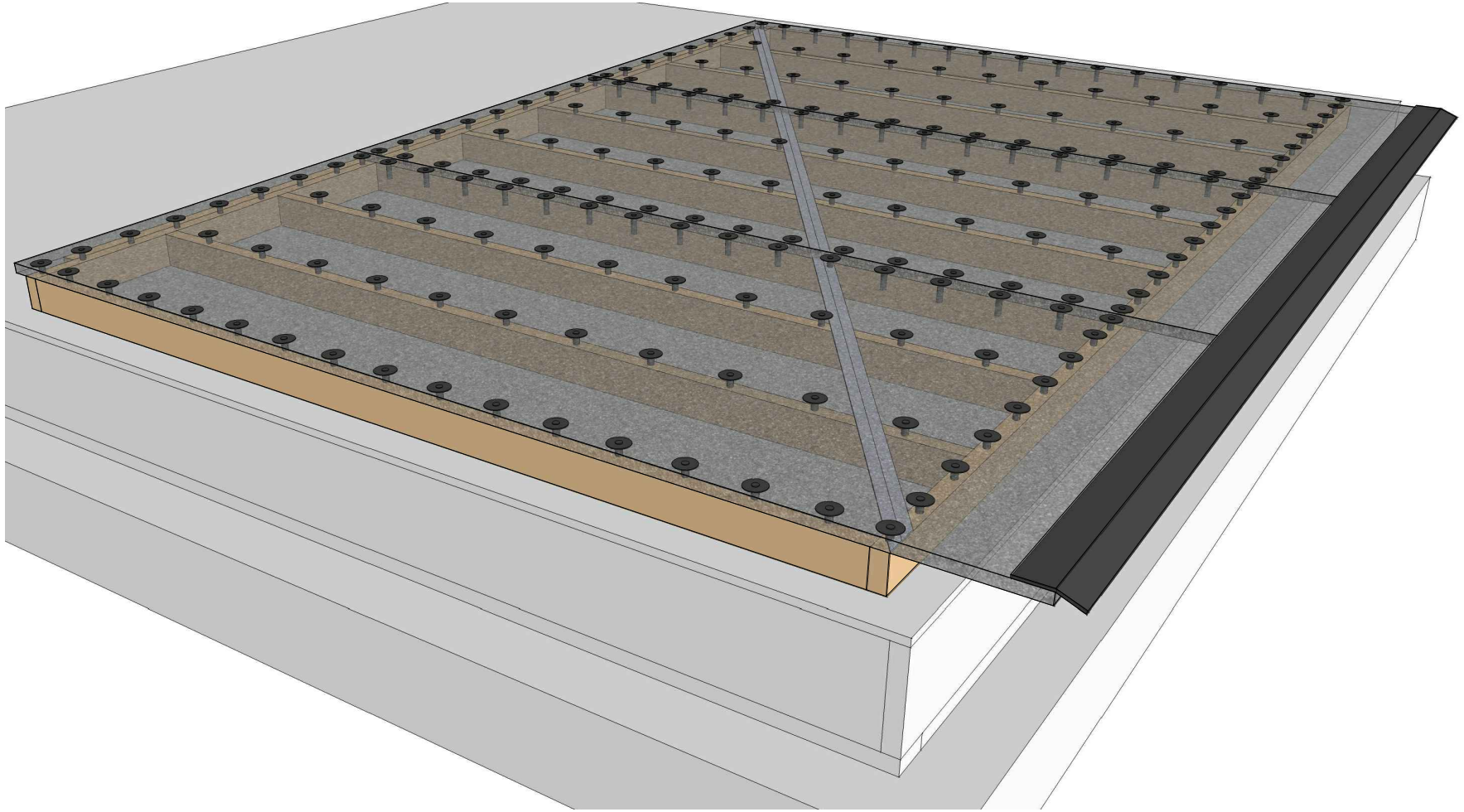
***NOTE:***

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



# *STEP 3B - SEALING*

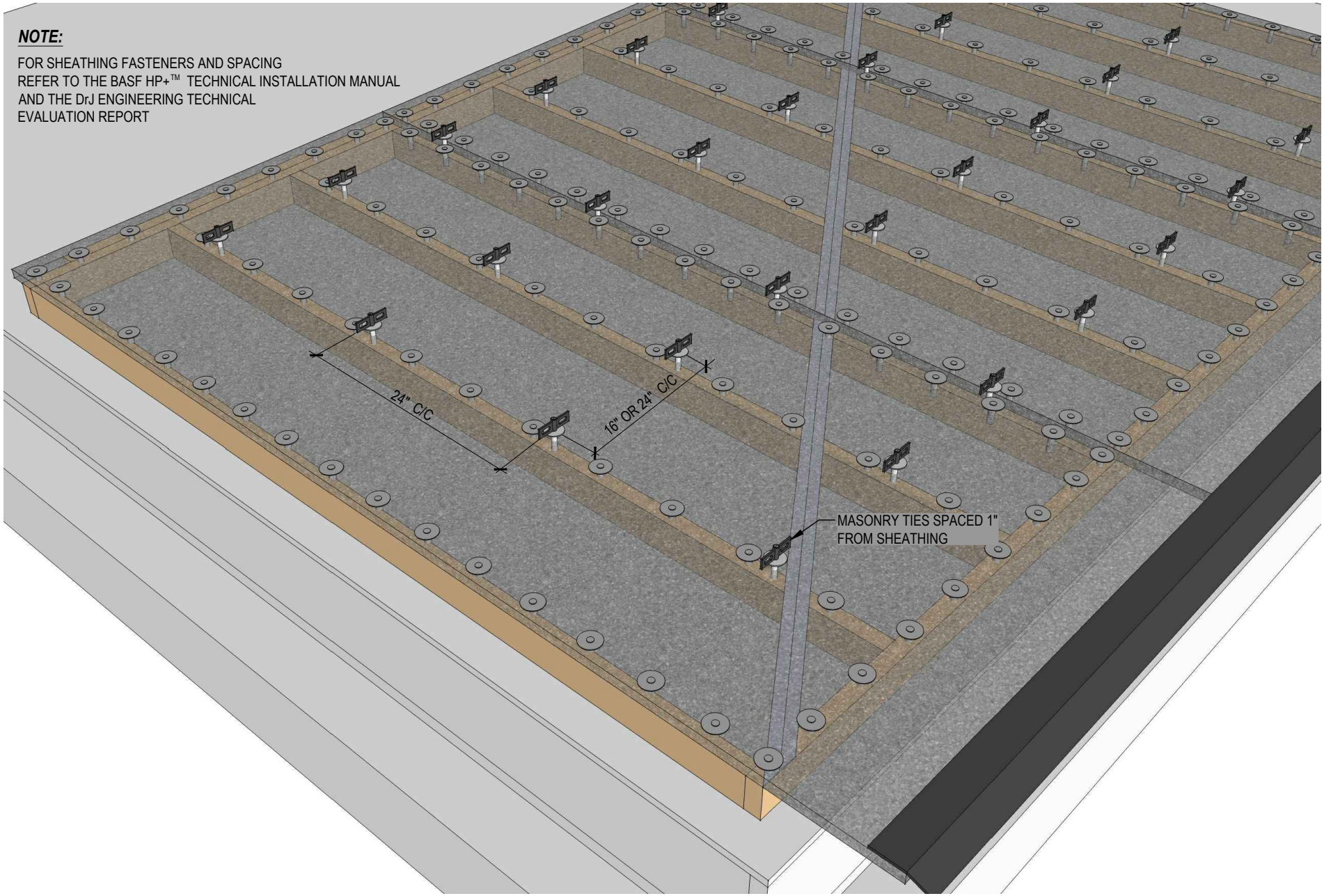
INSTALL TRANSITION MEMBRANE APPROVED BY BASF™



# STEP 4A - ATTACH MASONRY TIES

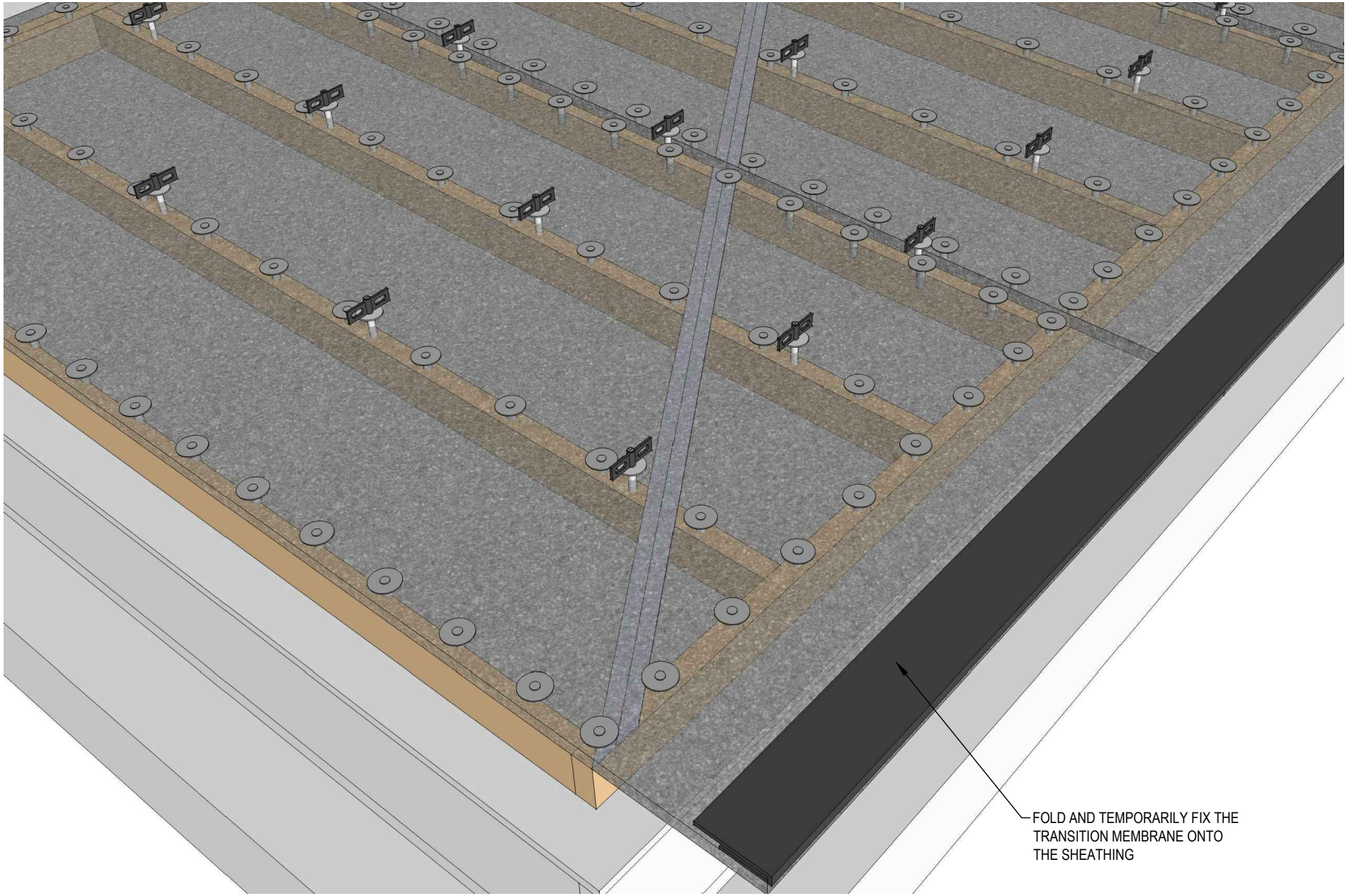
***NOTE:***

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

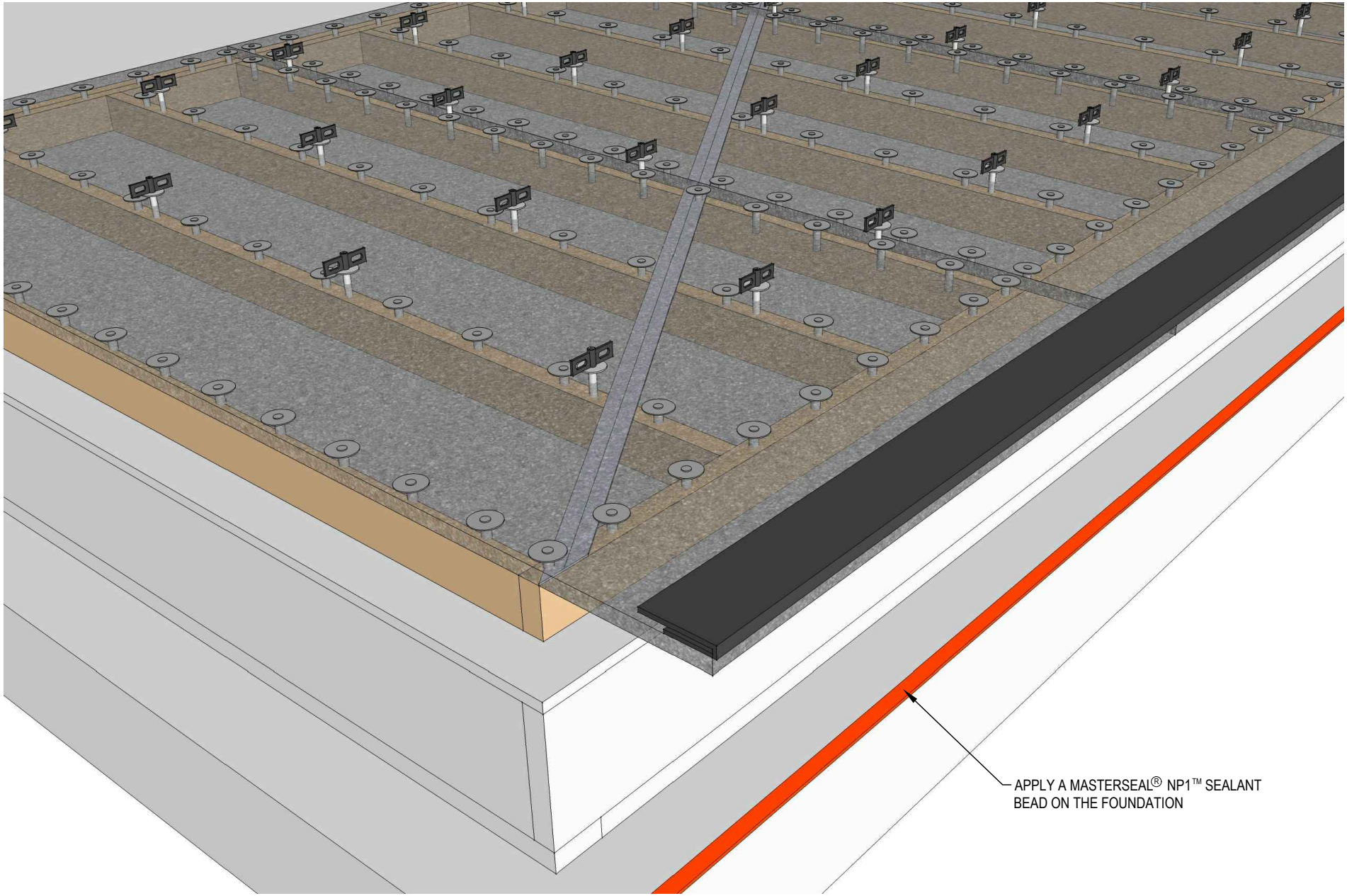


# *STEP 4B - SEALING*

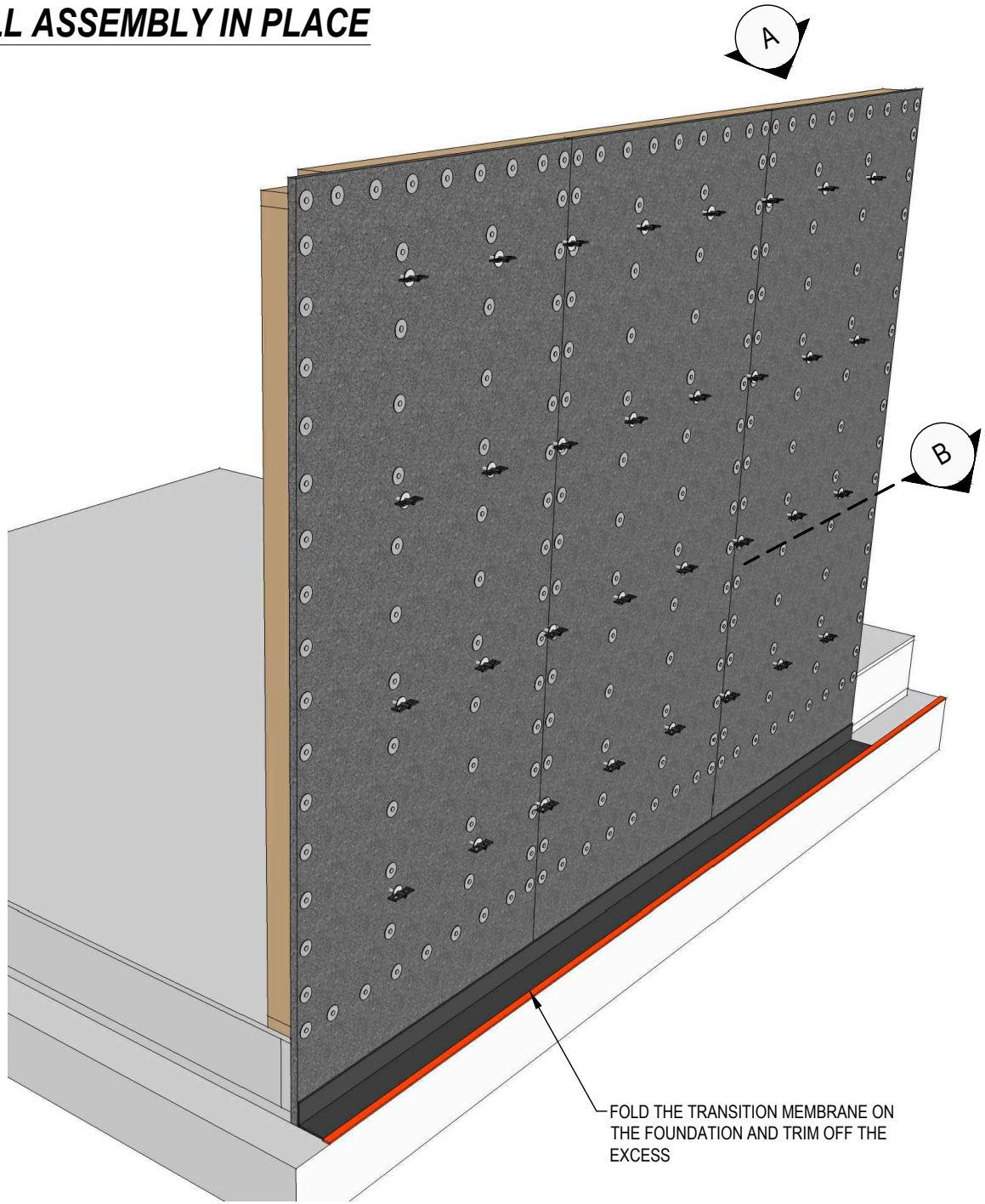
FOLD THE MEMBRANE ON THE SHEATHING

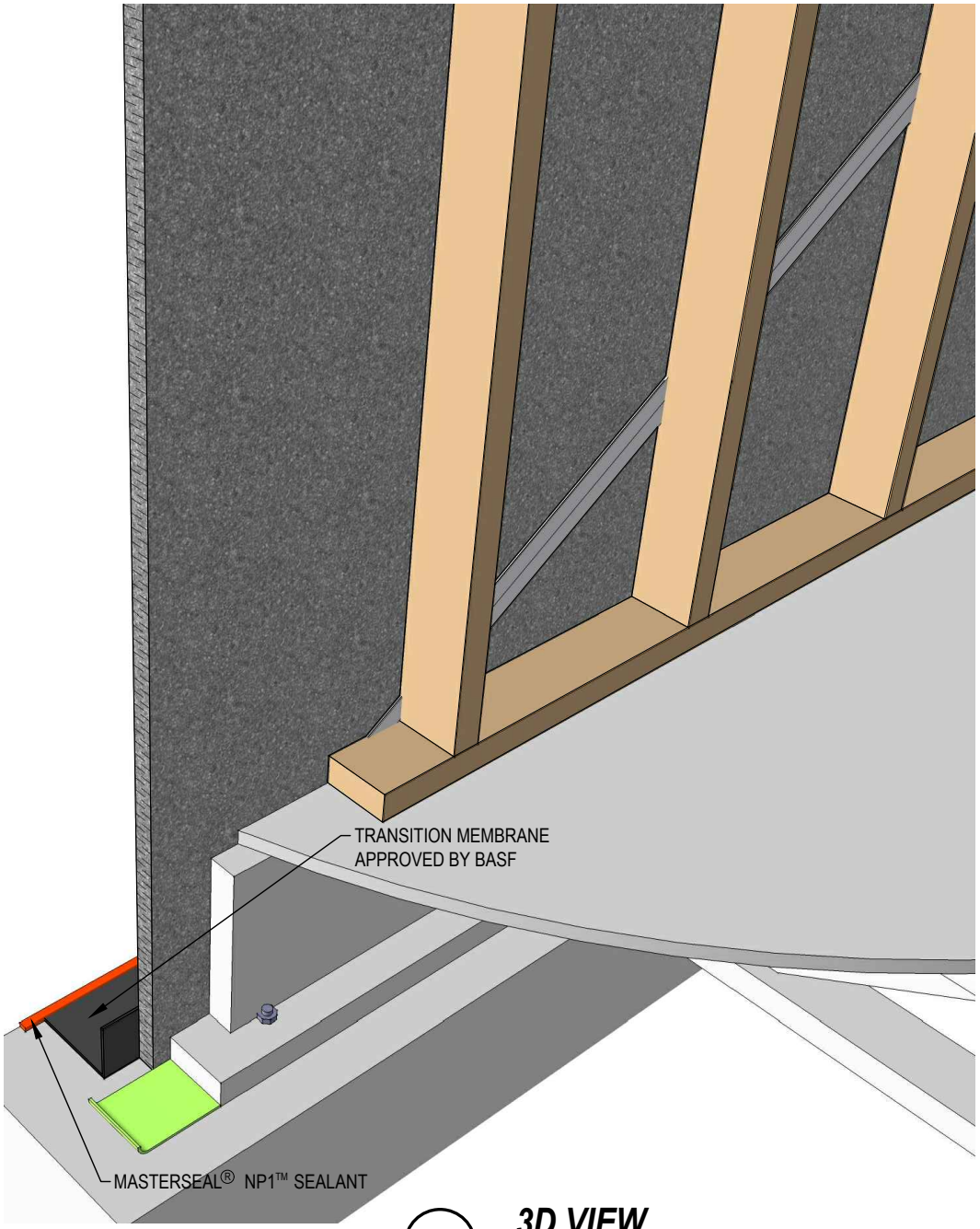


# STEP 4C - SEALING

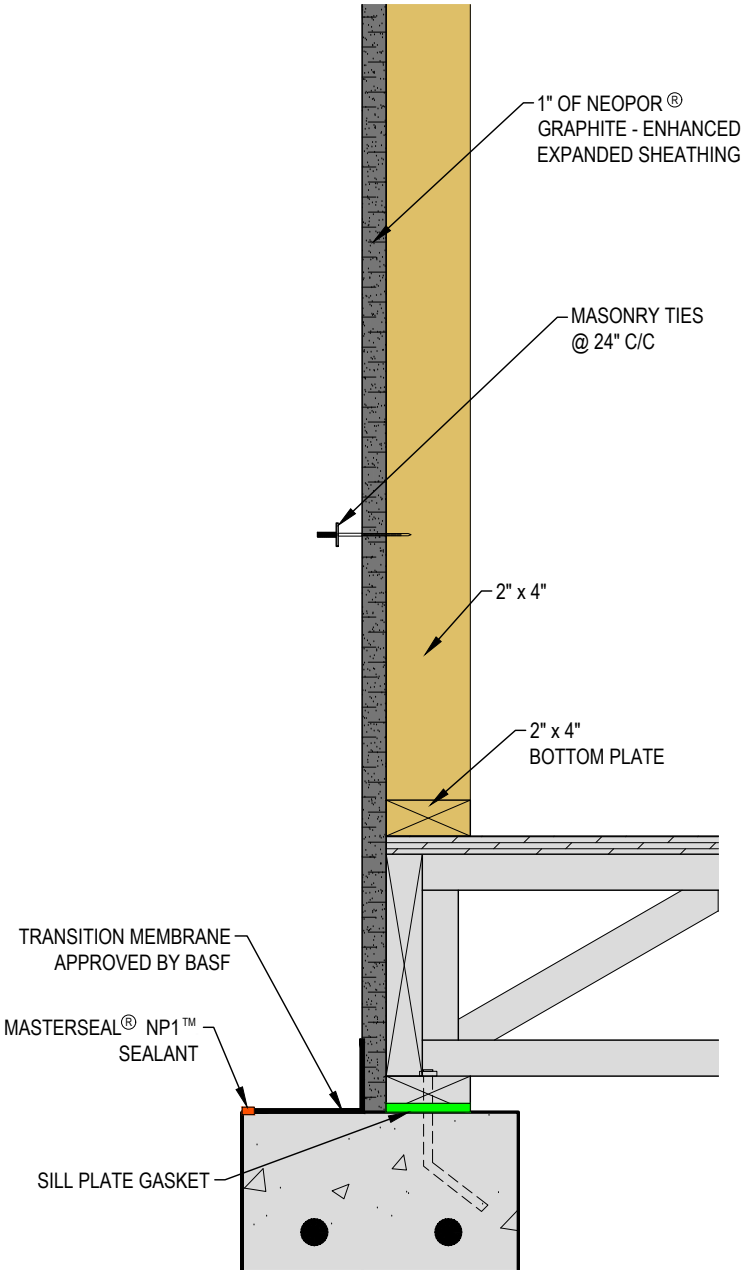


# STEP 5 - RAISE WALL ASSEMBLY IN PLACE






A **3D VIEW**



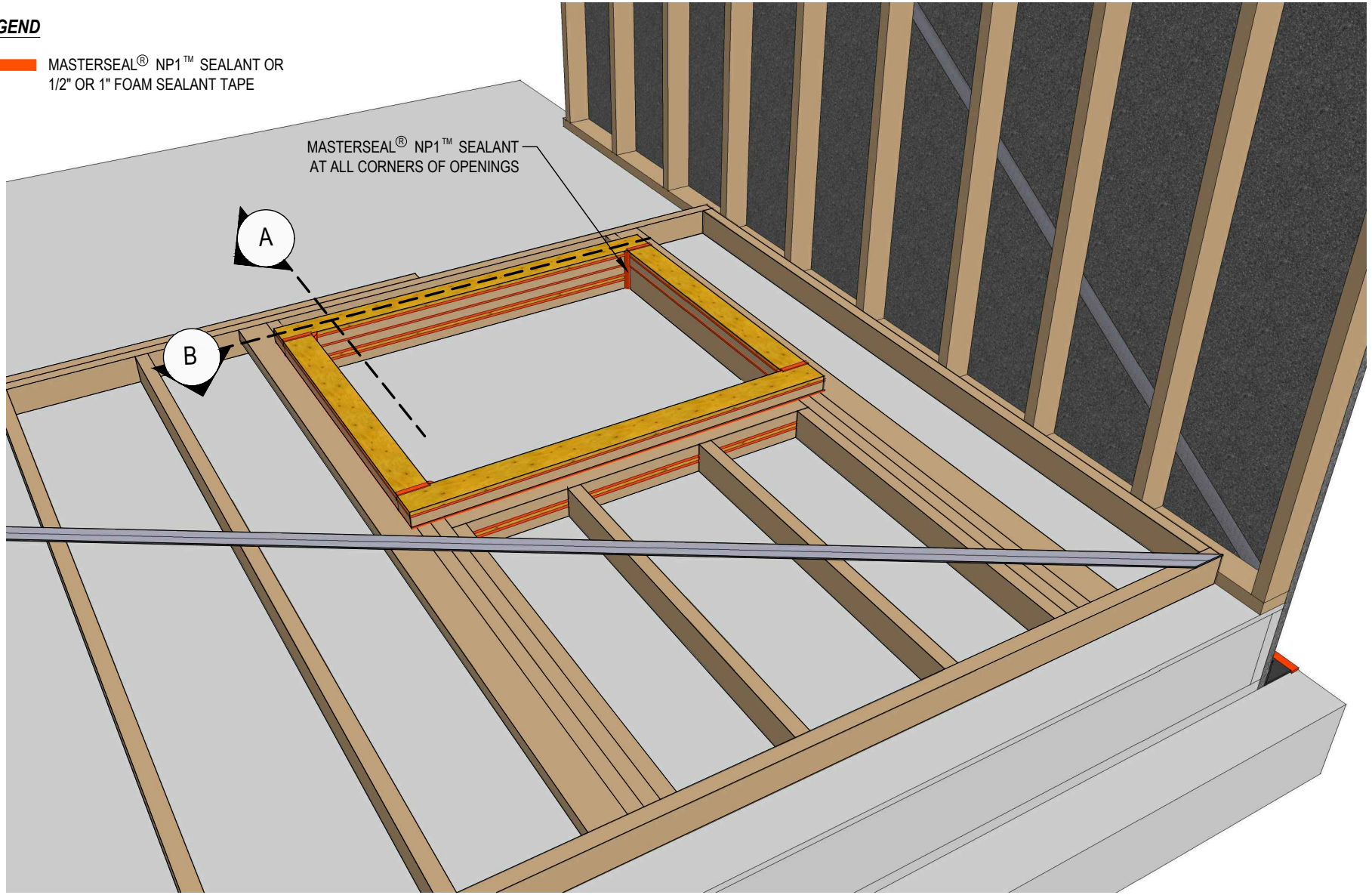

B **SECTION**

# STEP 6A - 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

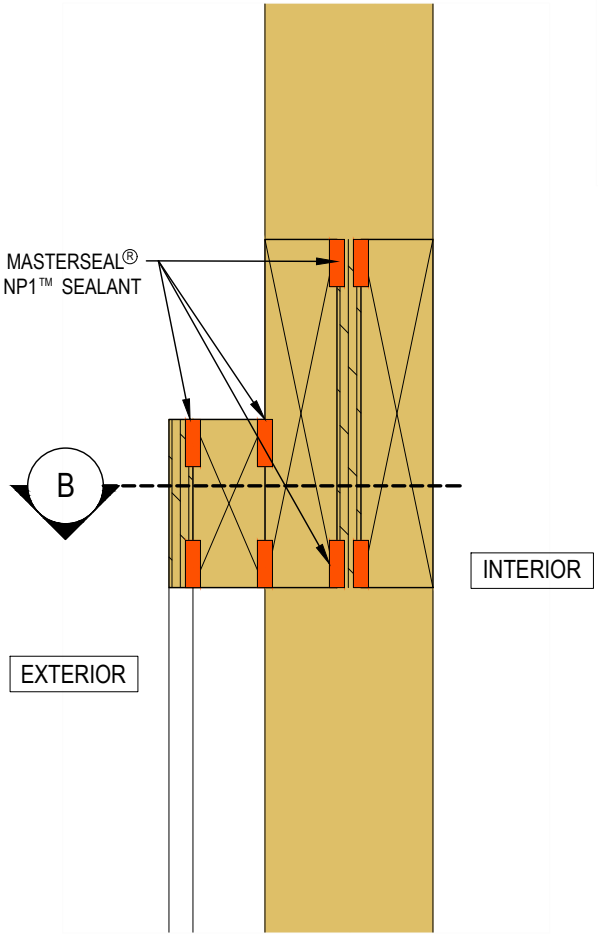


# STEP 6B - LINTEL DETAILS

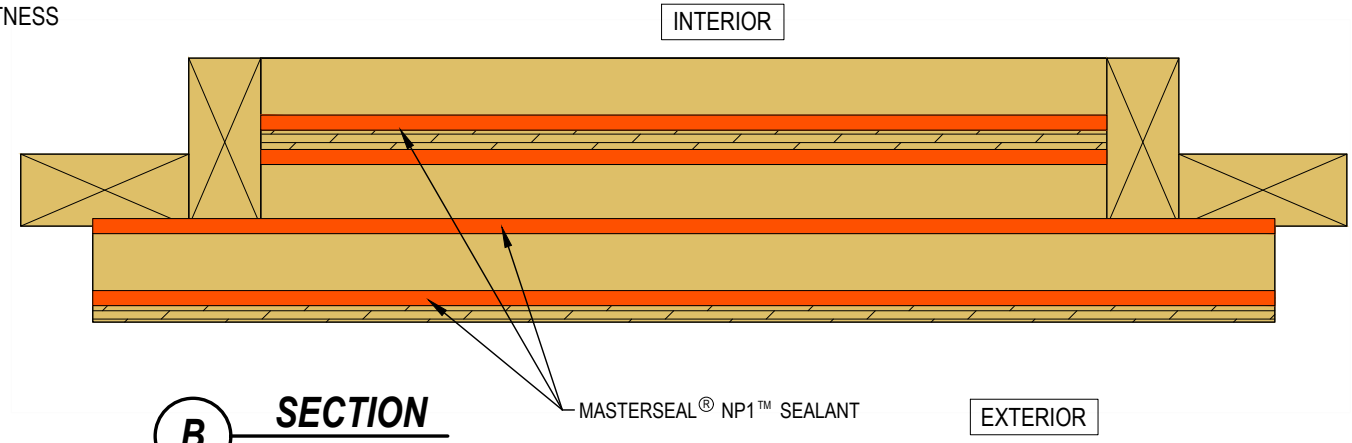
ALL REFERENCE TO MASTERSEAL® NP1™ OR 1/2" OR 1" FOAM SEALANT TAPE FOR THE LINTEL IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS

***LEGEND***

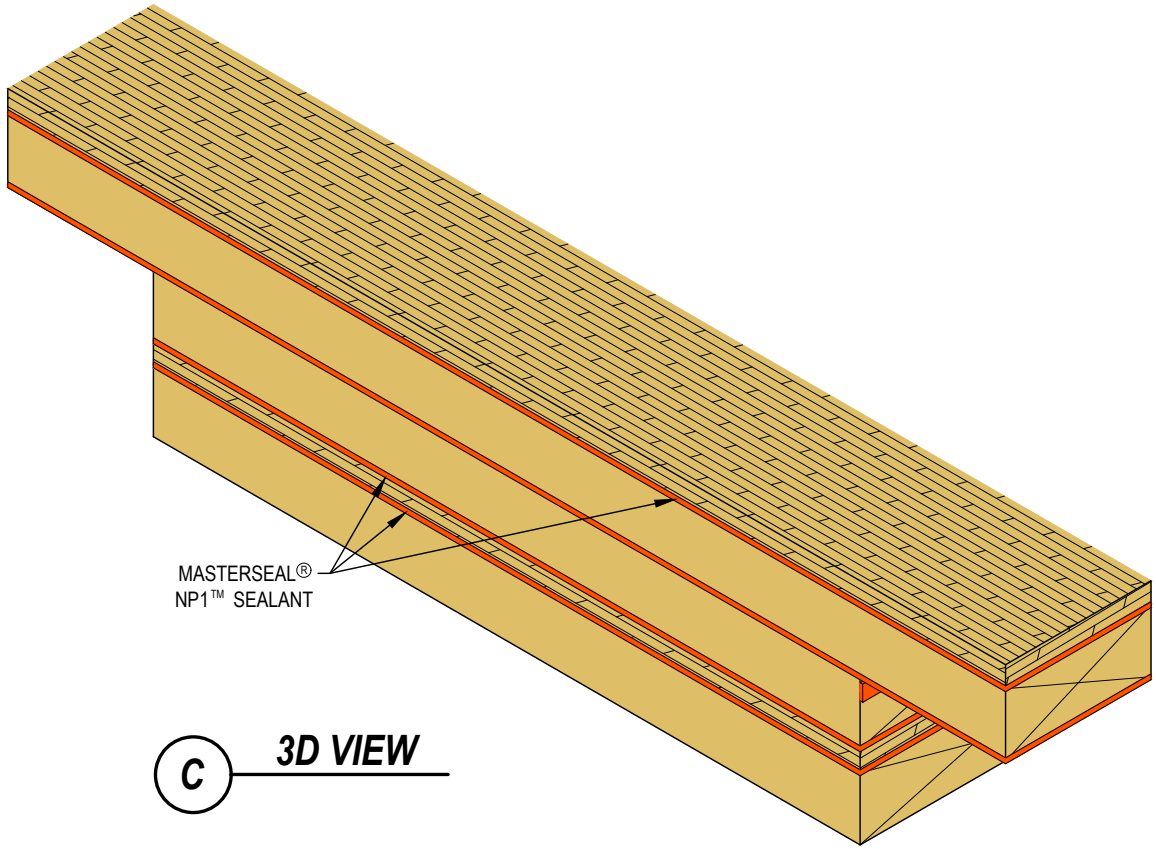
MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE




**A** ***SECTION***




**B** ***SECTION***




**C** ***3D VIEW***

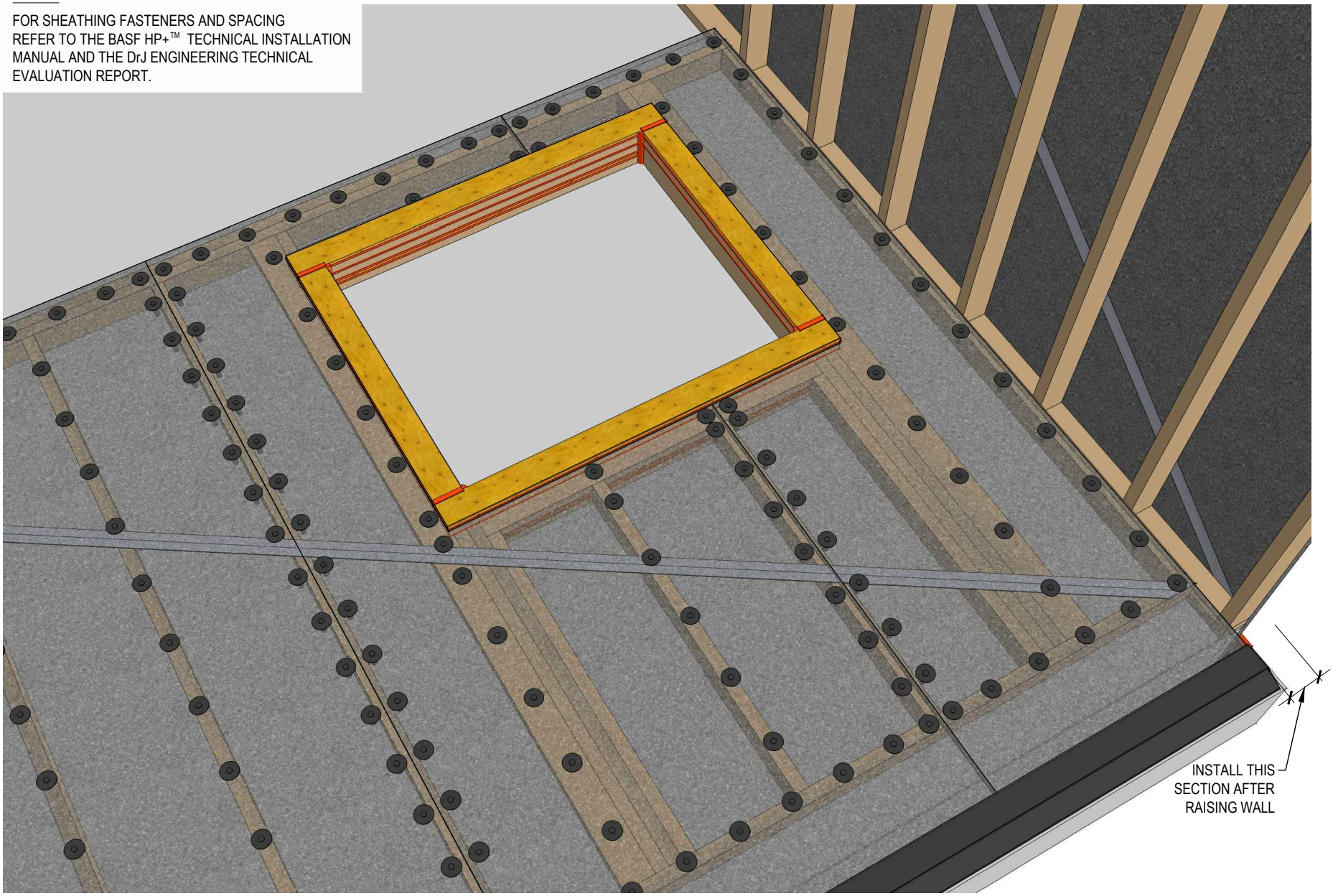
BASF
We create chemistry

# *STEP 7 - EXTERIOR INSULATION AND SEALING*

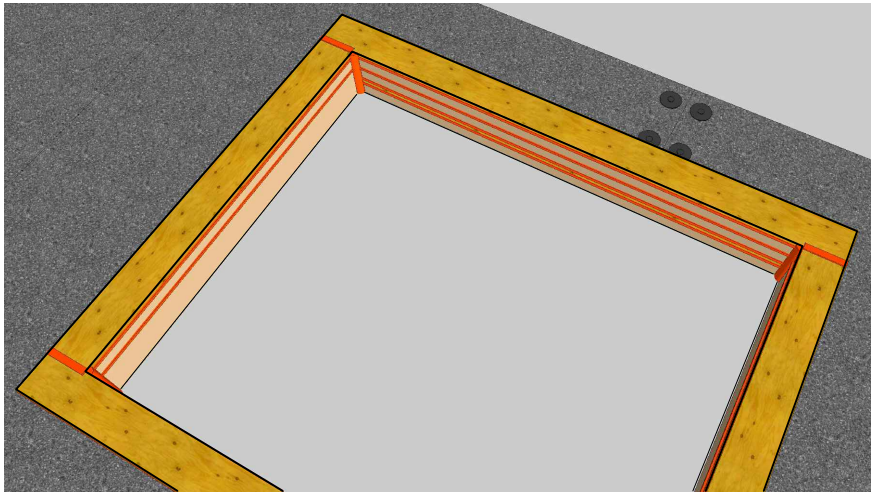
INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING AND TRANSITION MEMBRANE APPROVED BY BASF

***NOTE:***

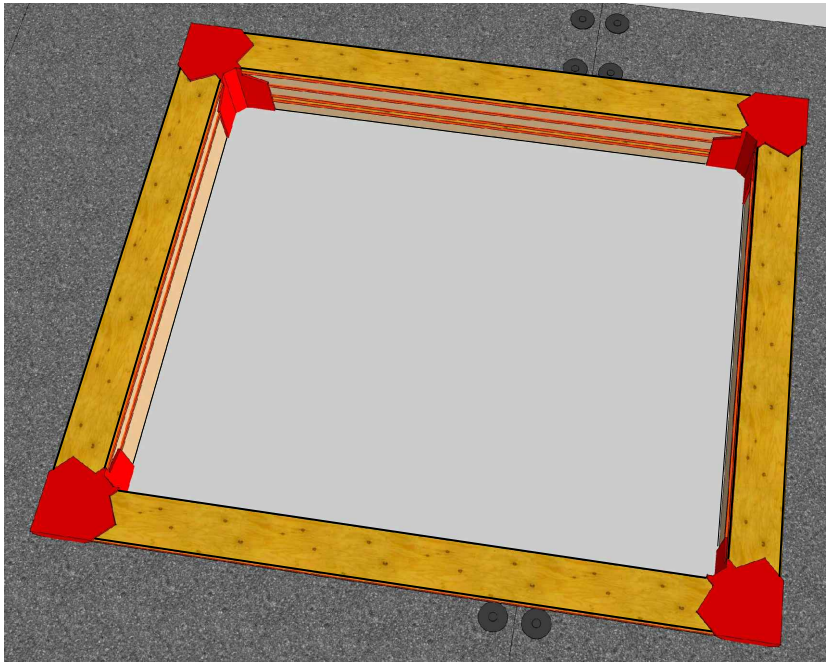
FOR SHEATHING FASTENERS AND SPACING REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.



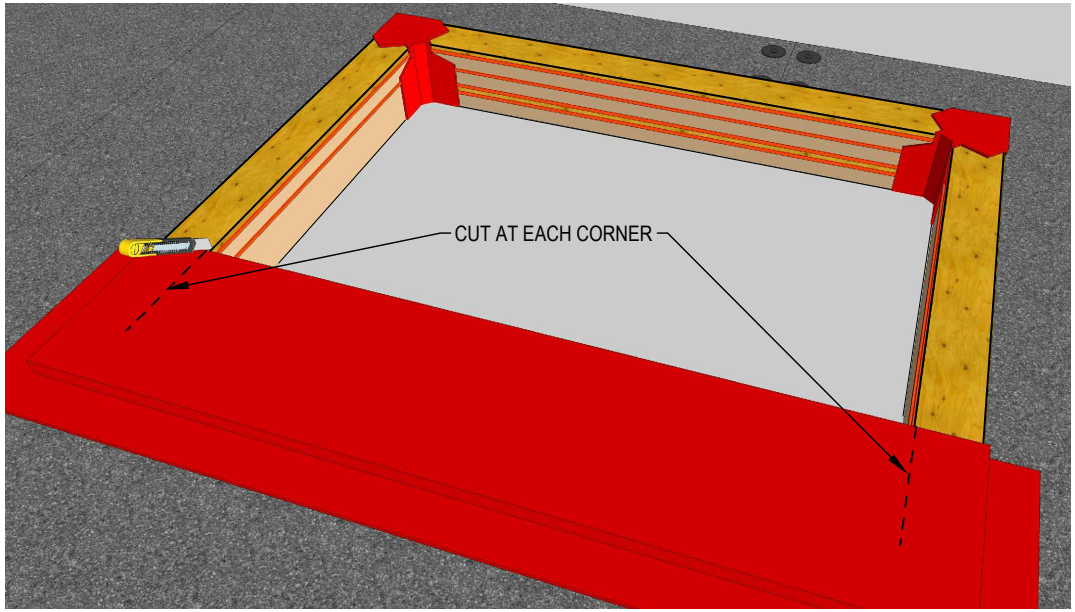
# STEP 8 - AIR / WATER TIGHTNESS OF OPENINGS



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

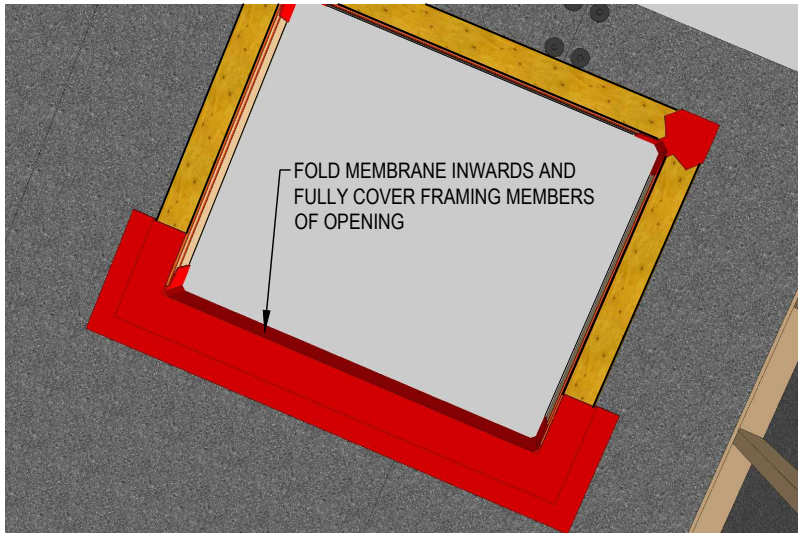


B - INSTALL AIR BARRIER AND WATERPROOFING MEMBRANE AT EACH CORNER, COVERING SEALANT APPLIED IN STEP 6A

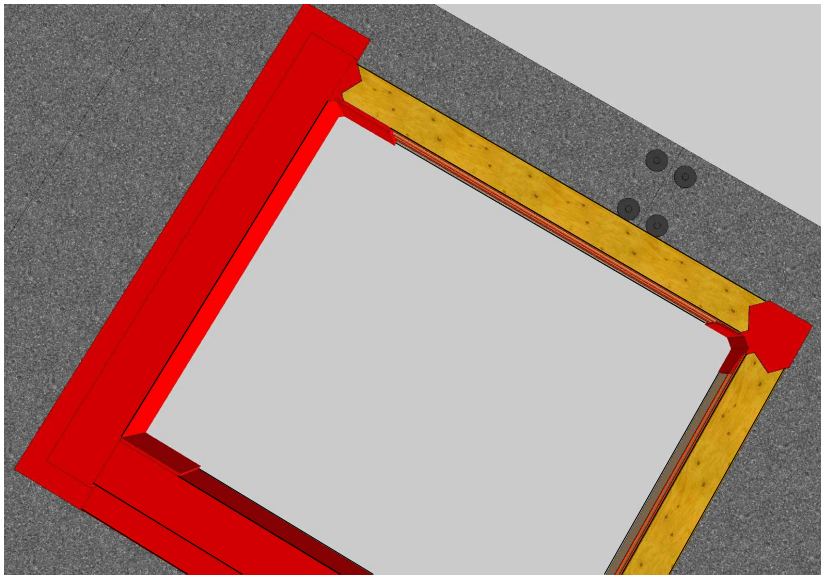



C - STARTING ALONG BOTTOM EDGE, INSTALL MEMBRANE AROUND ENTIRE PERIMETER OF OPENINGS

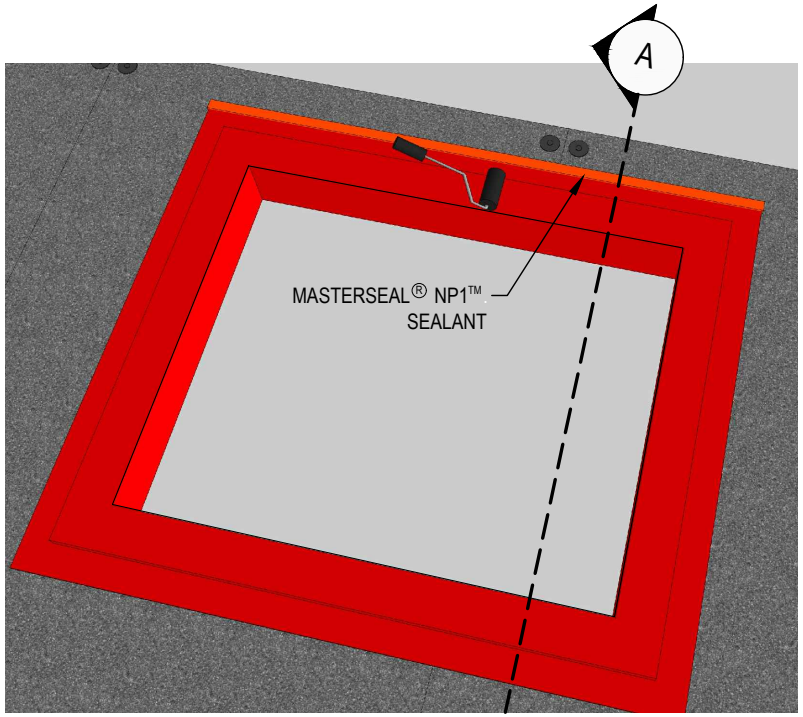
# STEP 8 - AIR / WATER TIGHTNESS OF OPENINGS



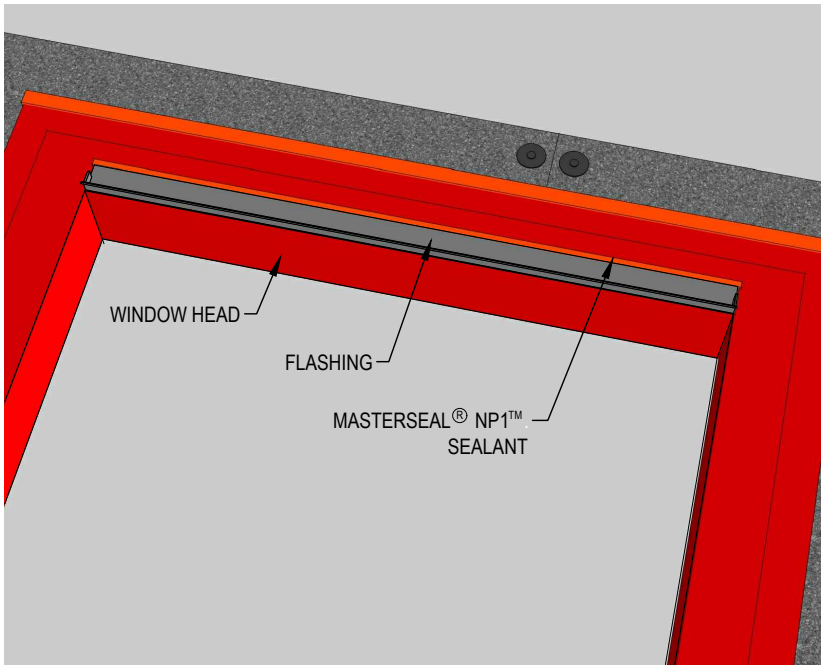

D - FOLD MEMBRANE INTO OPENING



E - INSTALL MEMBRANE ALONG VERTICAL EDGES OF OPENINGS

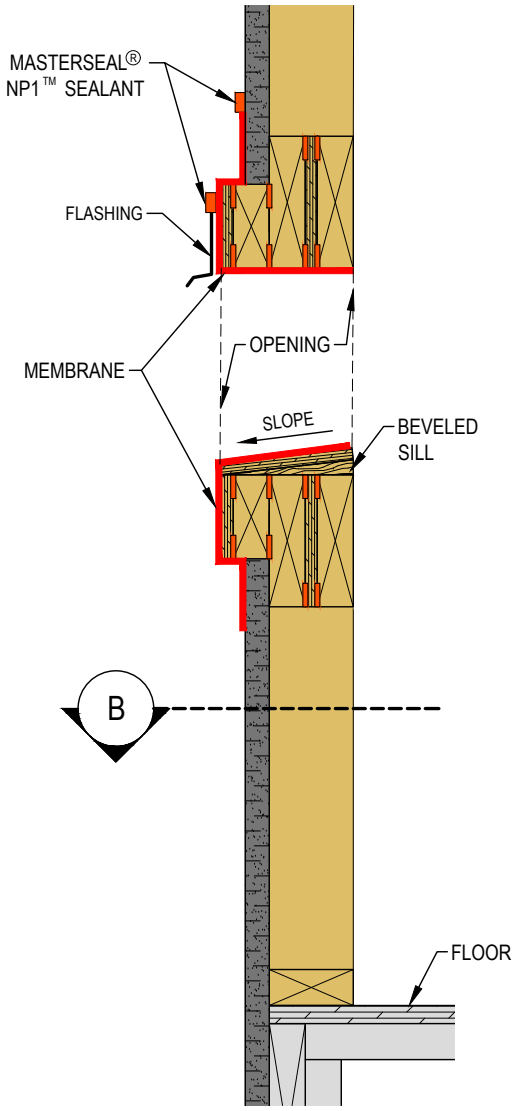



F - WHEN REQUIRED BY MANUFACTURER USE ROLLER TO APPLY PRESSURE AND SEAL MEMBRANE TO SUBSTRATE

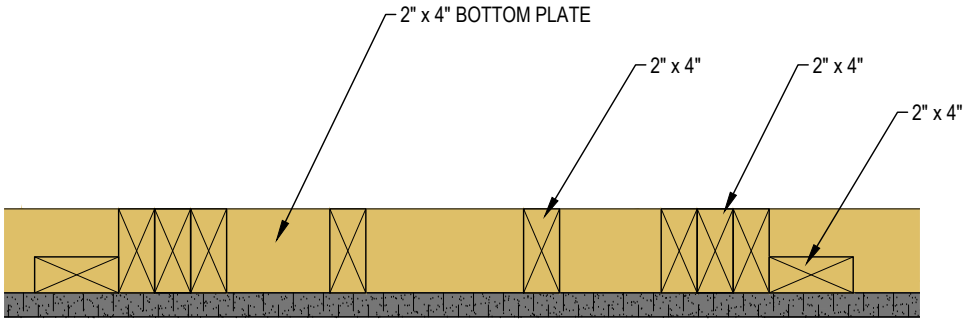



G - INSTALL THE WINDOW HEAD FLASHING

# STEP 9 - WALL AND OPENING DETAILS




A SECTION



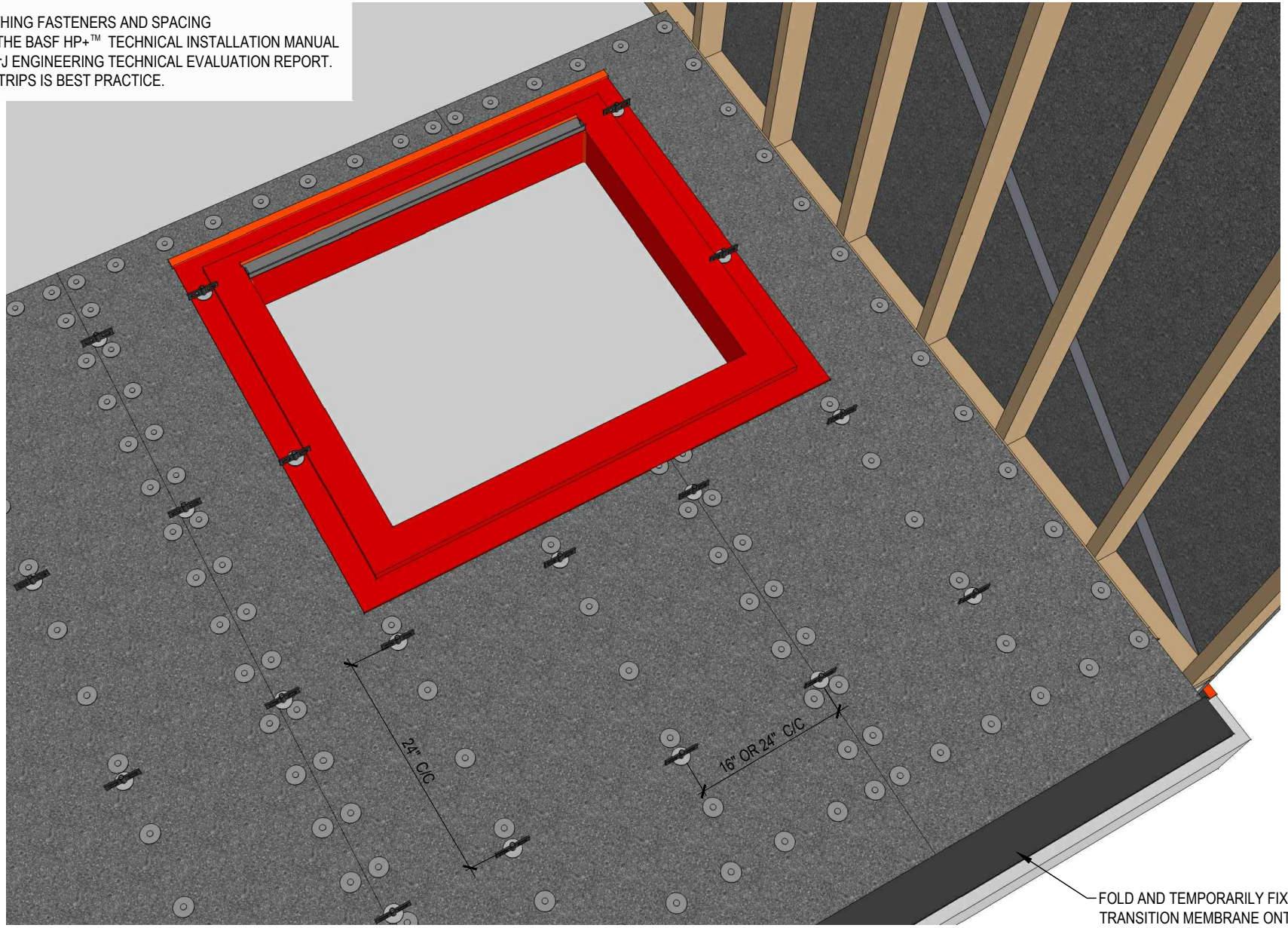

B SECTION

# STEP 10 - MASONRY TIES ATTACHMENT AROUND WINDOWS

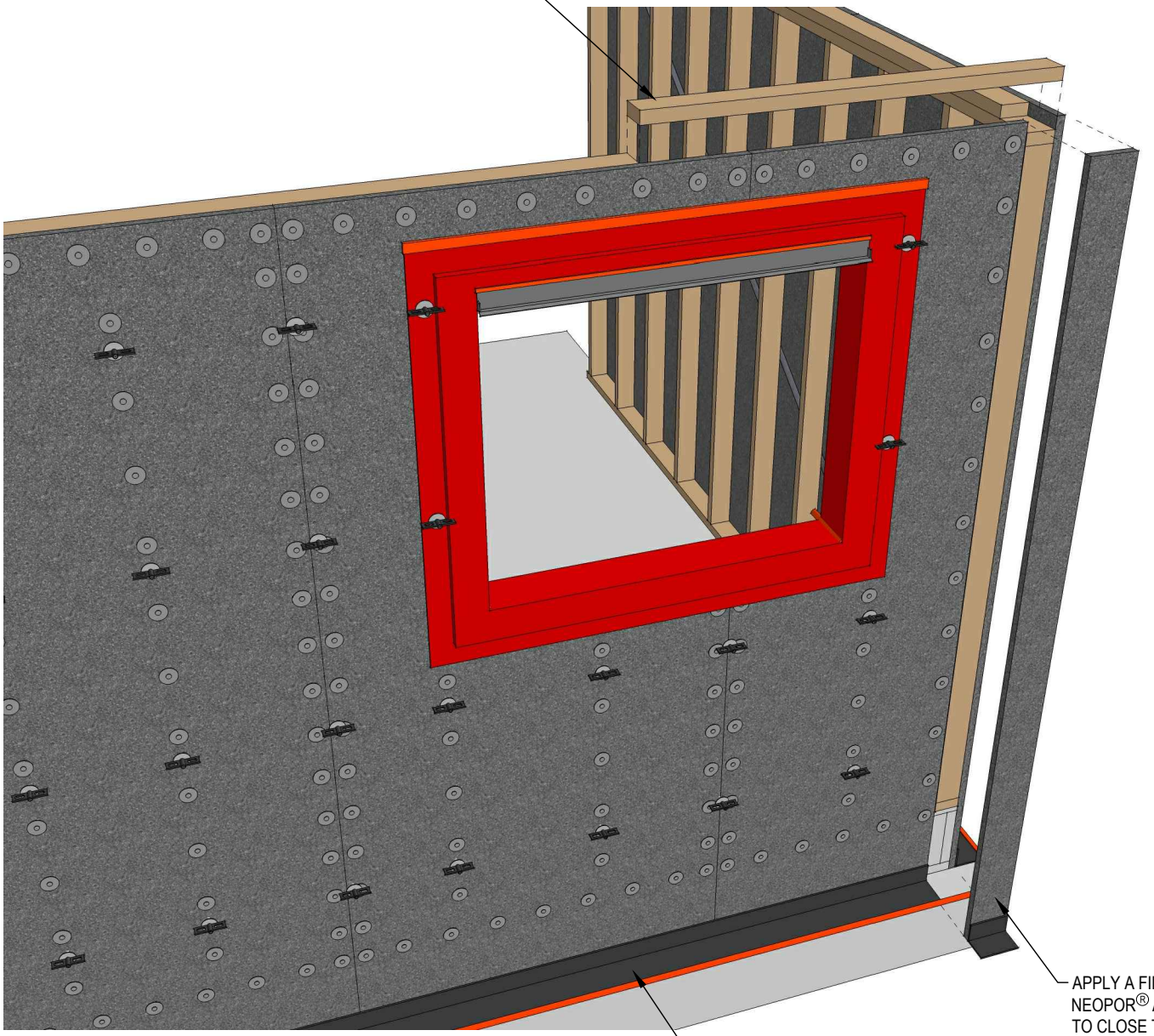
(SEE STEP #4A)

***NOTE:***

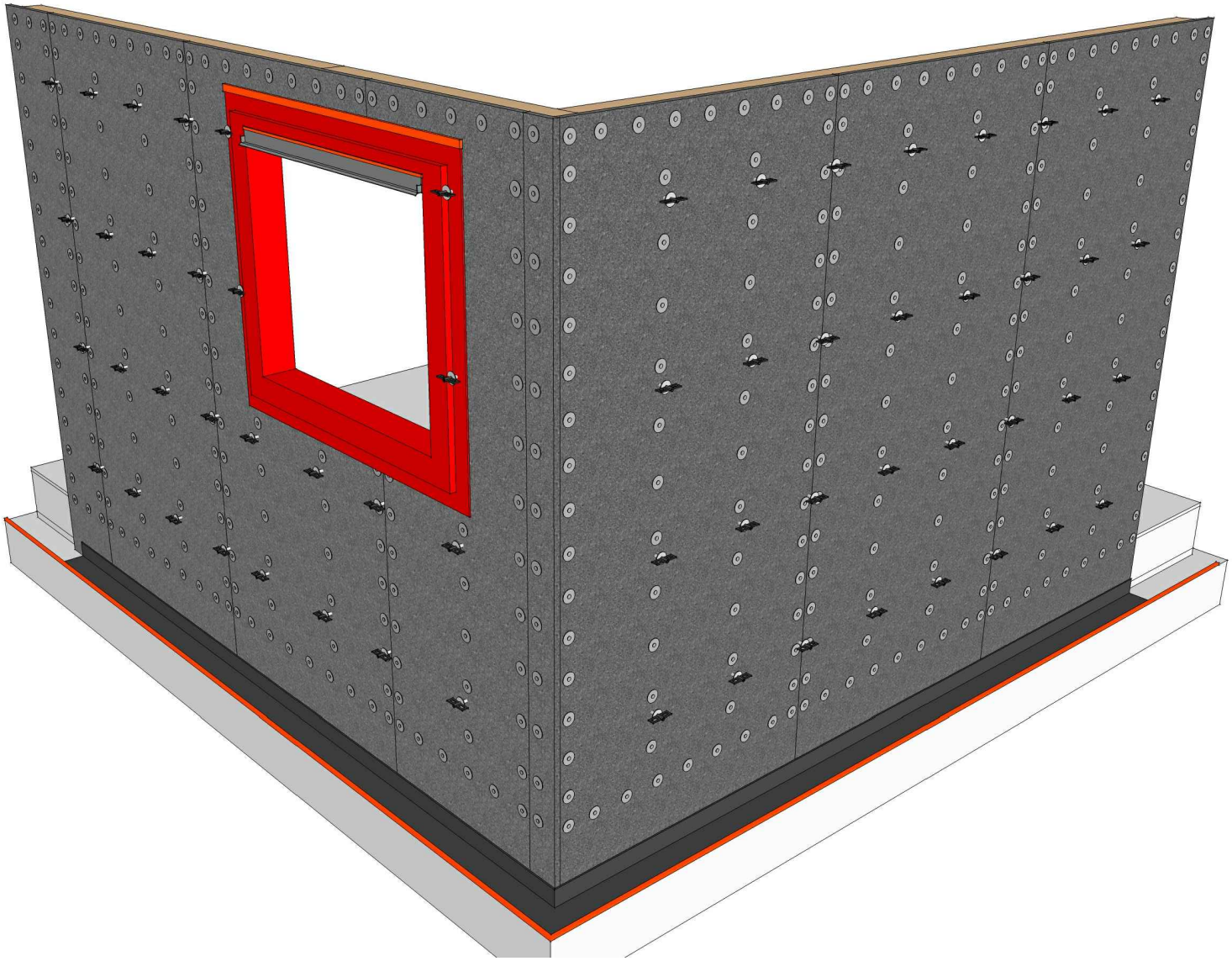
FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.
FURRING STRIPS IS BEST PRACTICE.



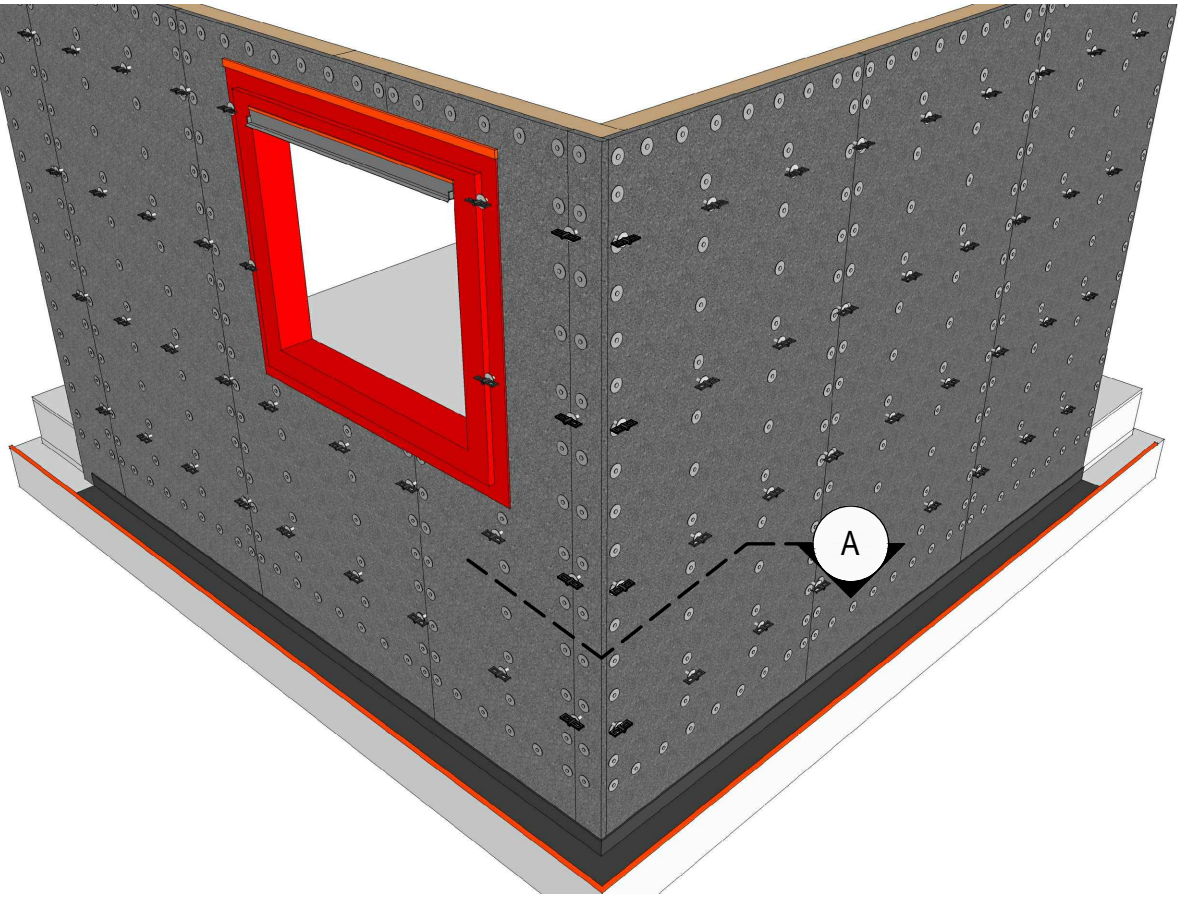
# STEP 11 - RAISE WALL ASSEMBLY

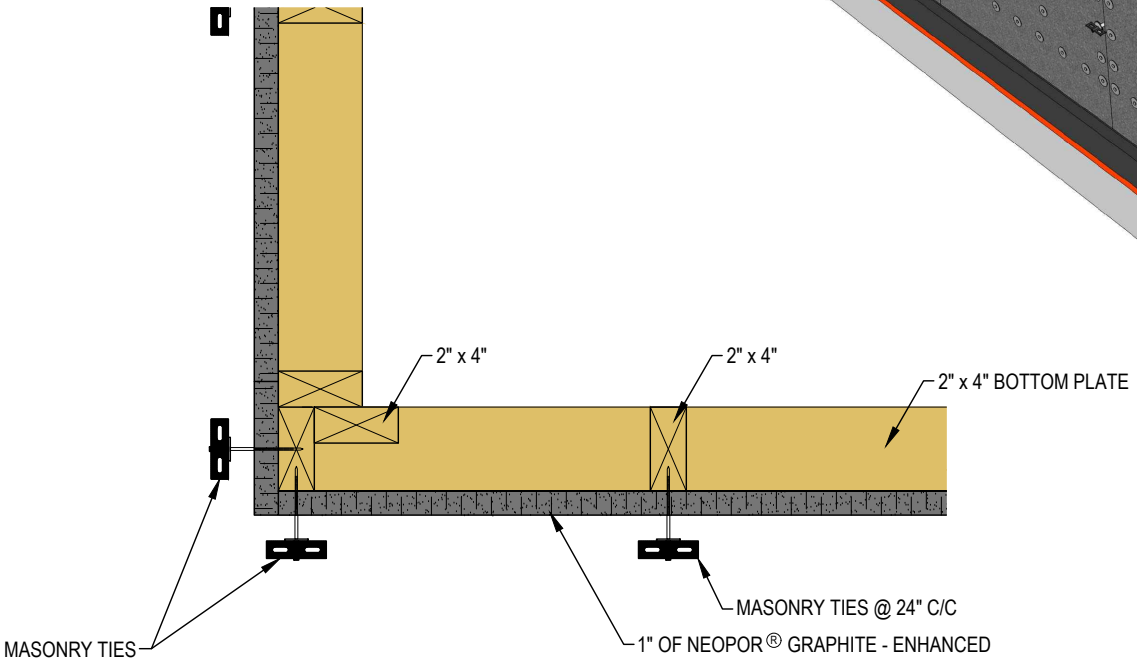


# STEP 12 - CORNER VIEW OF INSTALLED WALLS



# STEP 13 - ATTACH CORNER MASONRY TIES

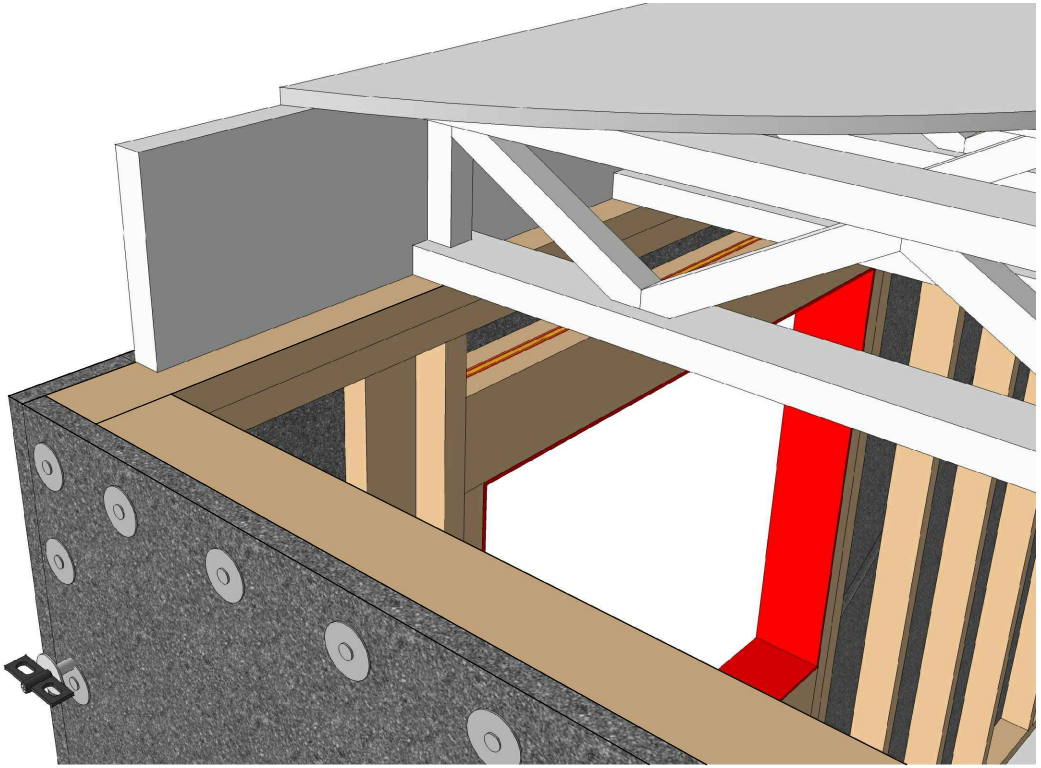


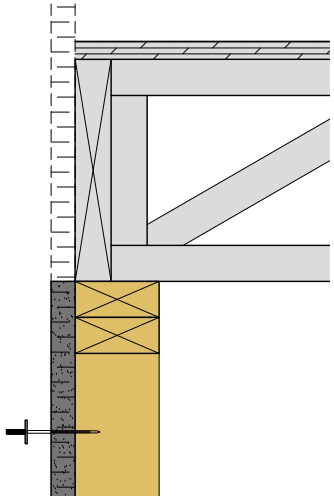




## A SECTION

# *STEP 14 - SECOND FLOOR ASSEMBLY*

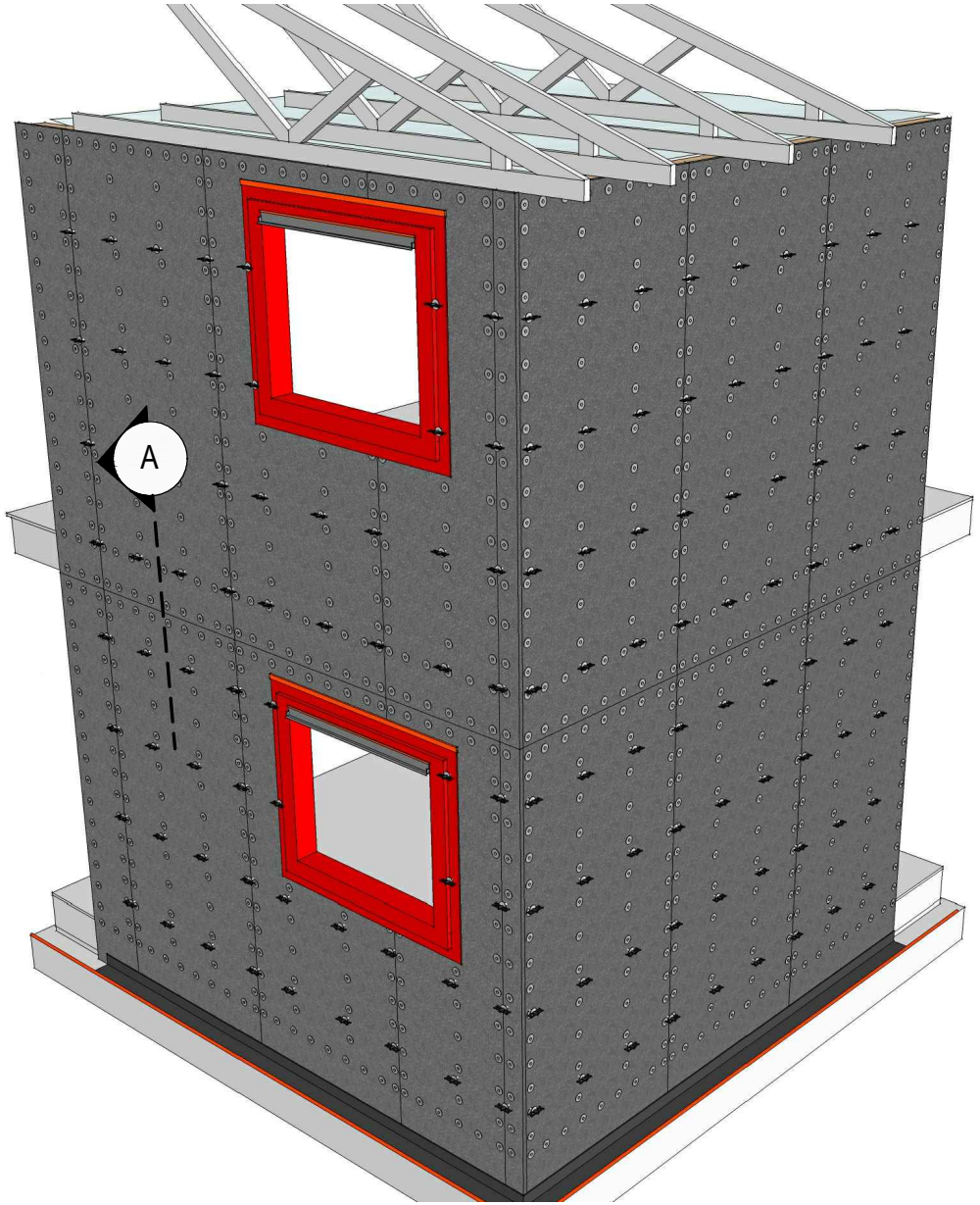
ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS USING MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE



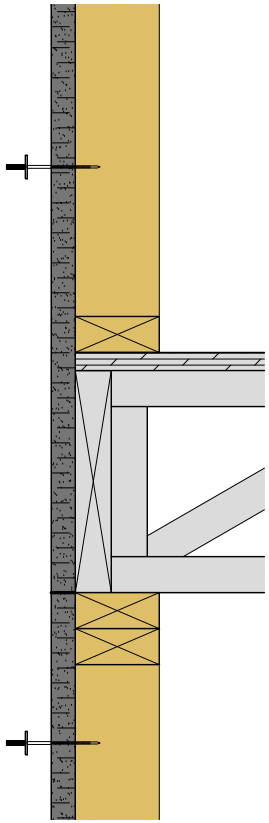


# STEP 15A - BUILD AND POSITION SECOND FLOOR WALLS AND ROOF

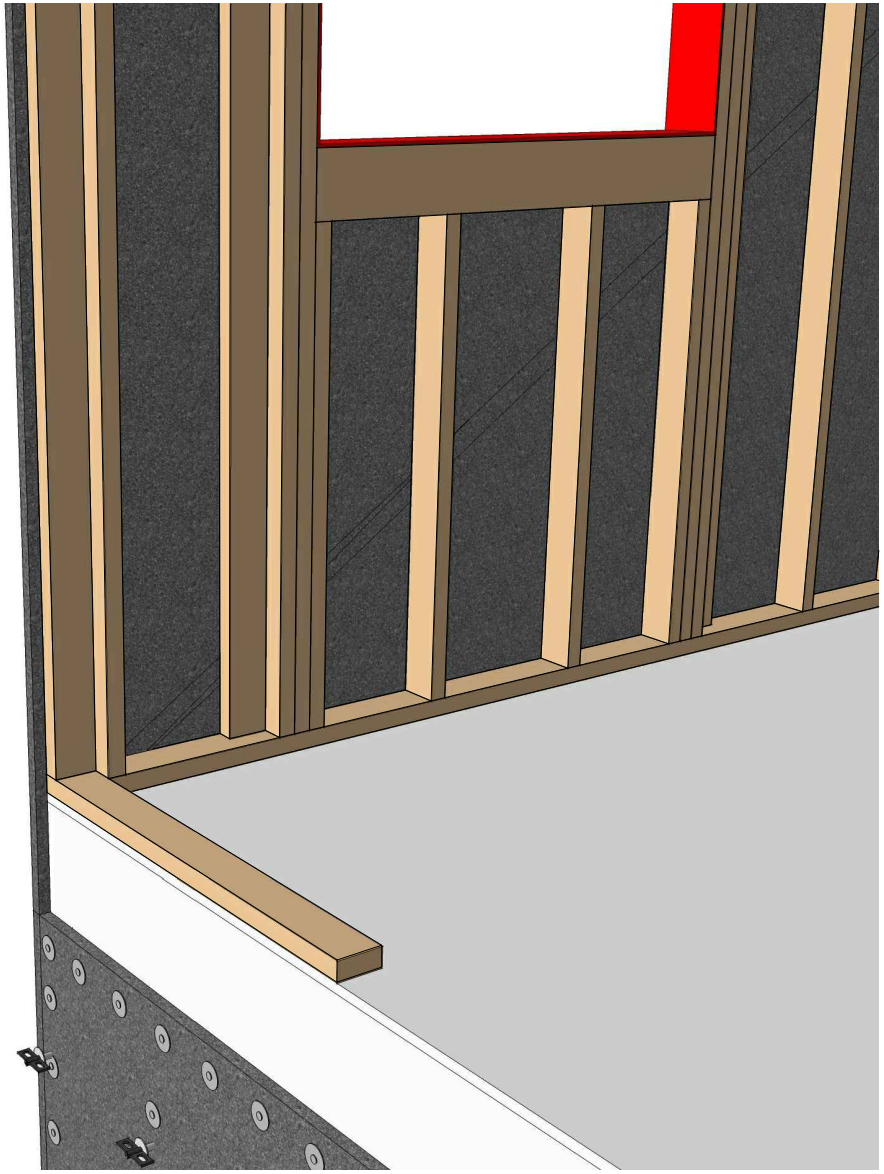
(SEE STEPS 2 TO 14)



# STEP 15B - DETAILS

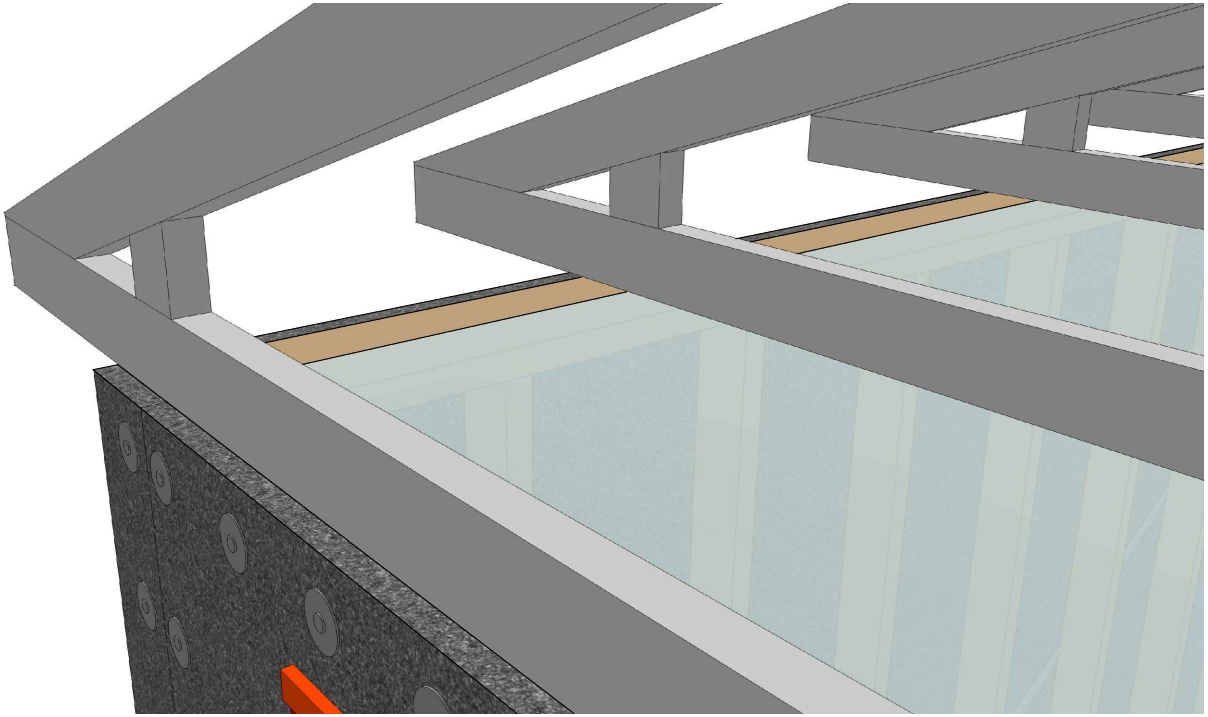


A SECTION

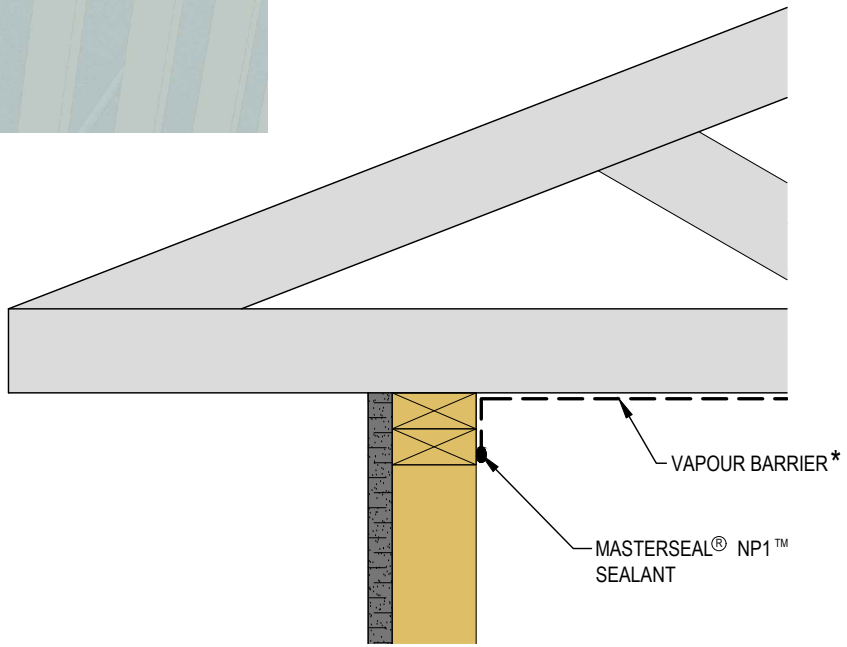


B 3D VIEW

# STEP 16 - ROOF FRAMING



A 3D VIEW

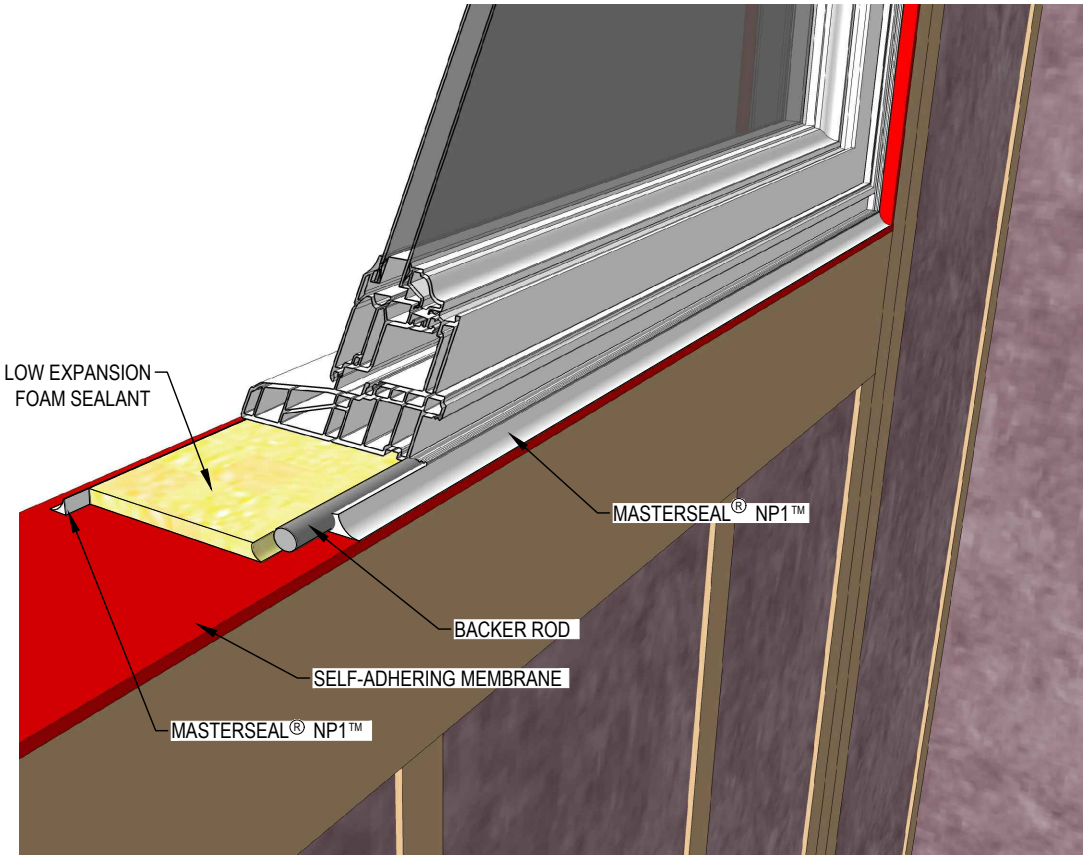



B SECTION

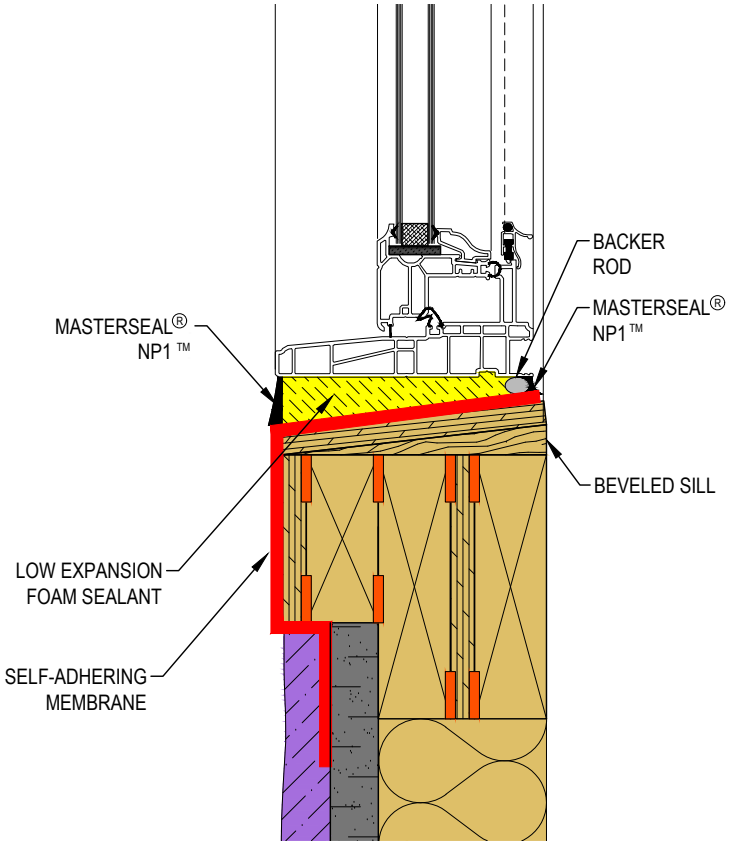
*AS REQUIRED BY CODE

# STEP 17 - WINDOWS AND DOORS INSTALLATION

WINDOW INSTALLATION ACCORDING TO CSA A440.4




A **3D VIEW**

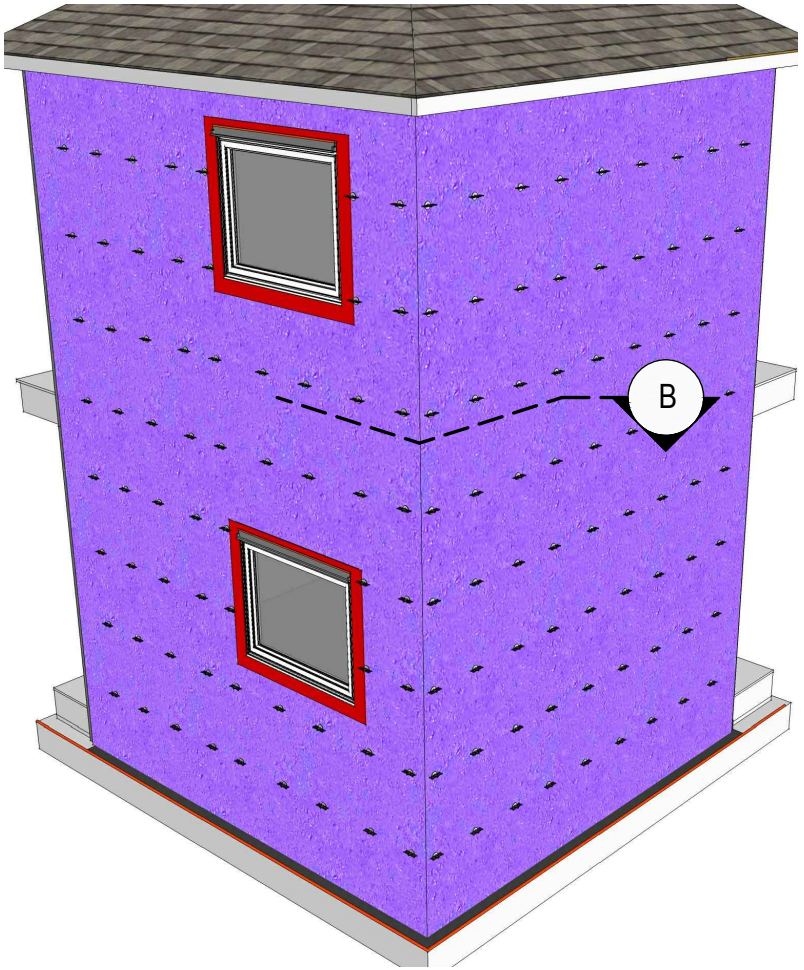



B **SECTION**

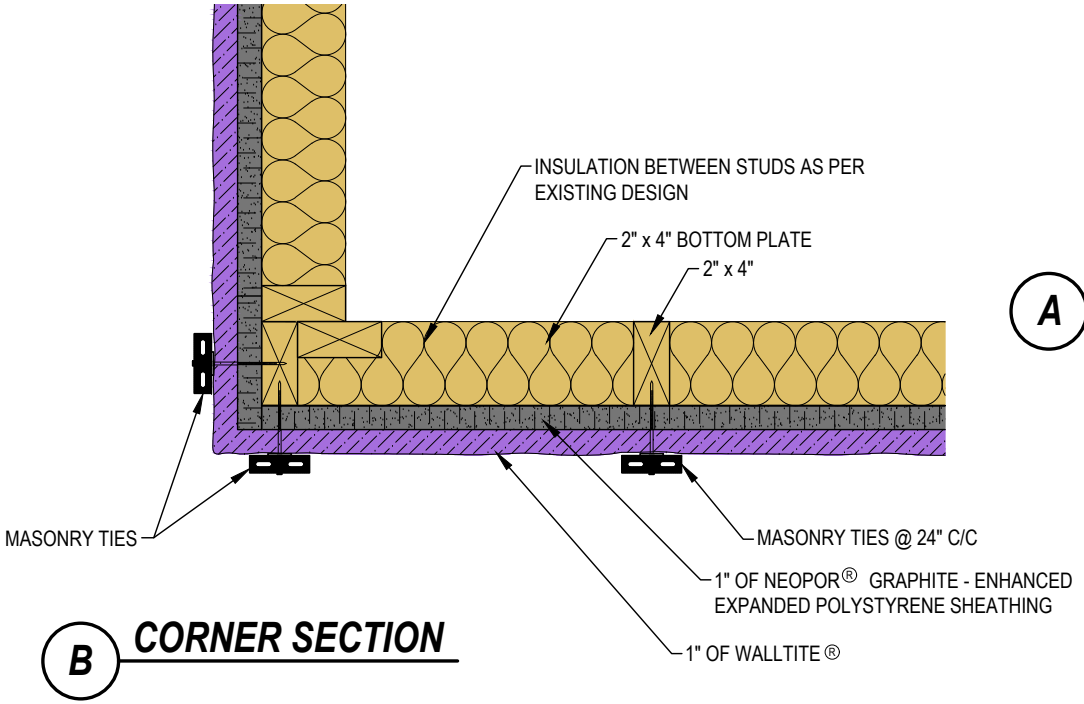
# *STEP 18A - INTERIOR AND EXTERIOR INSULATION: CORNER DETAILS*

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

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

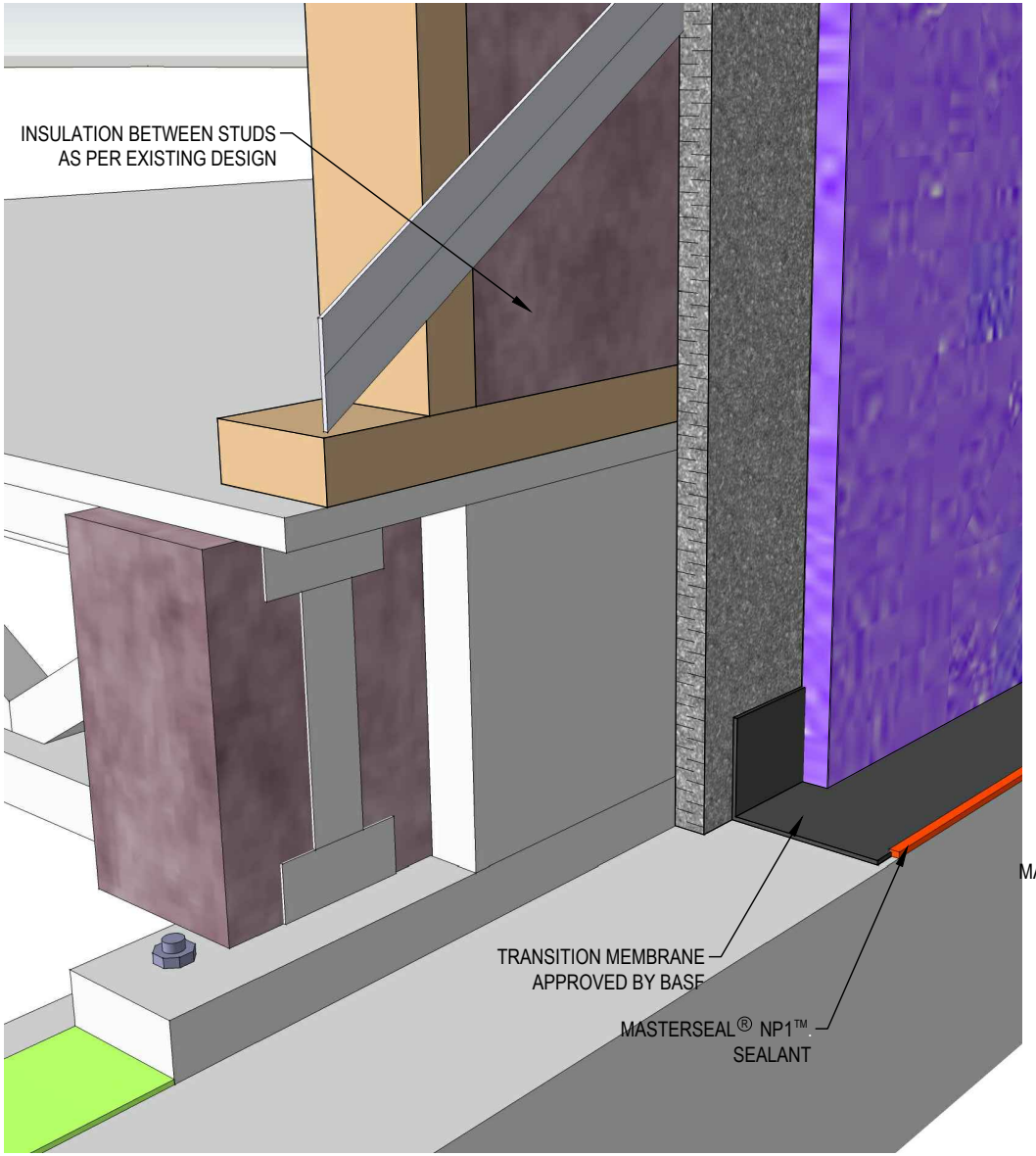



**A** ***3D VIEW***

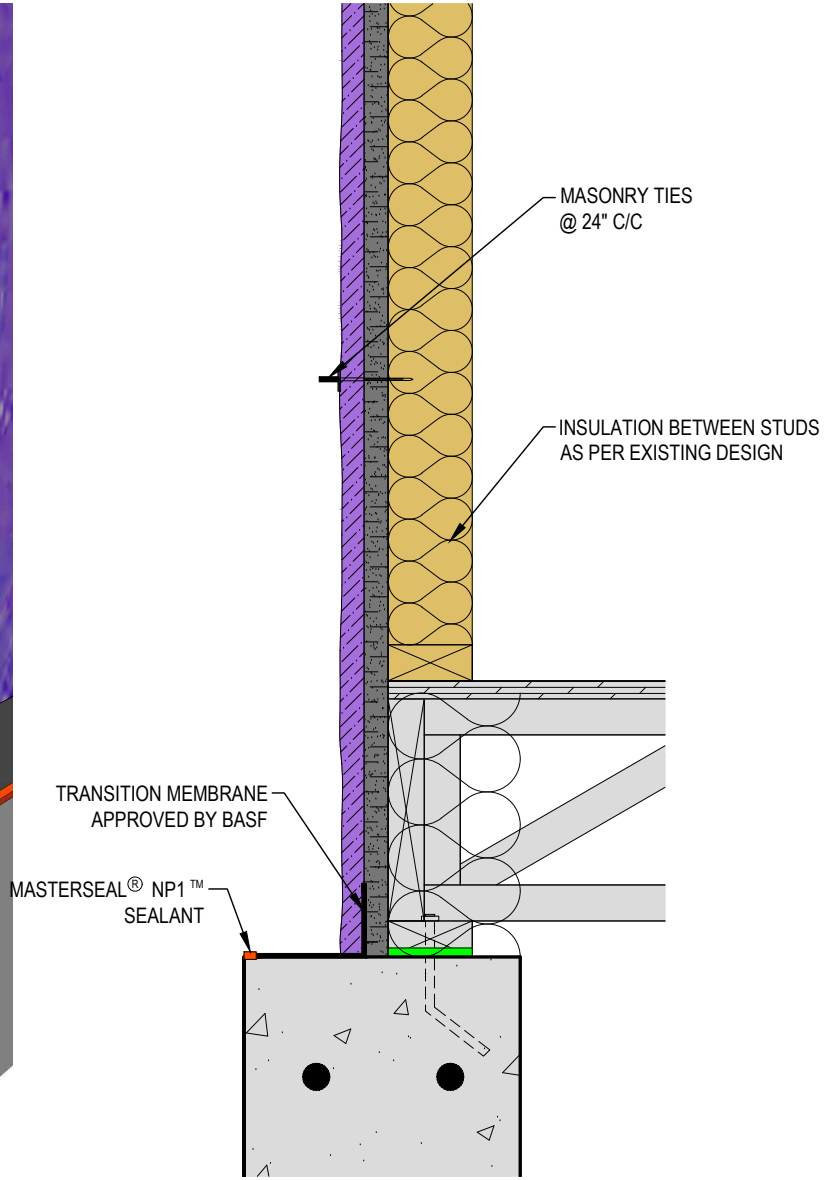



**B** ***CORNER SECTION***

# STEP 18B - INTERIOR AND EXTERIOR INSULATION: FIRST FLOOR WALLS AND HEADERS

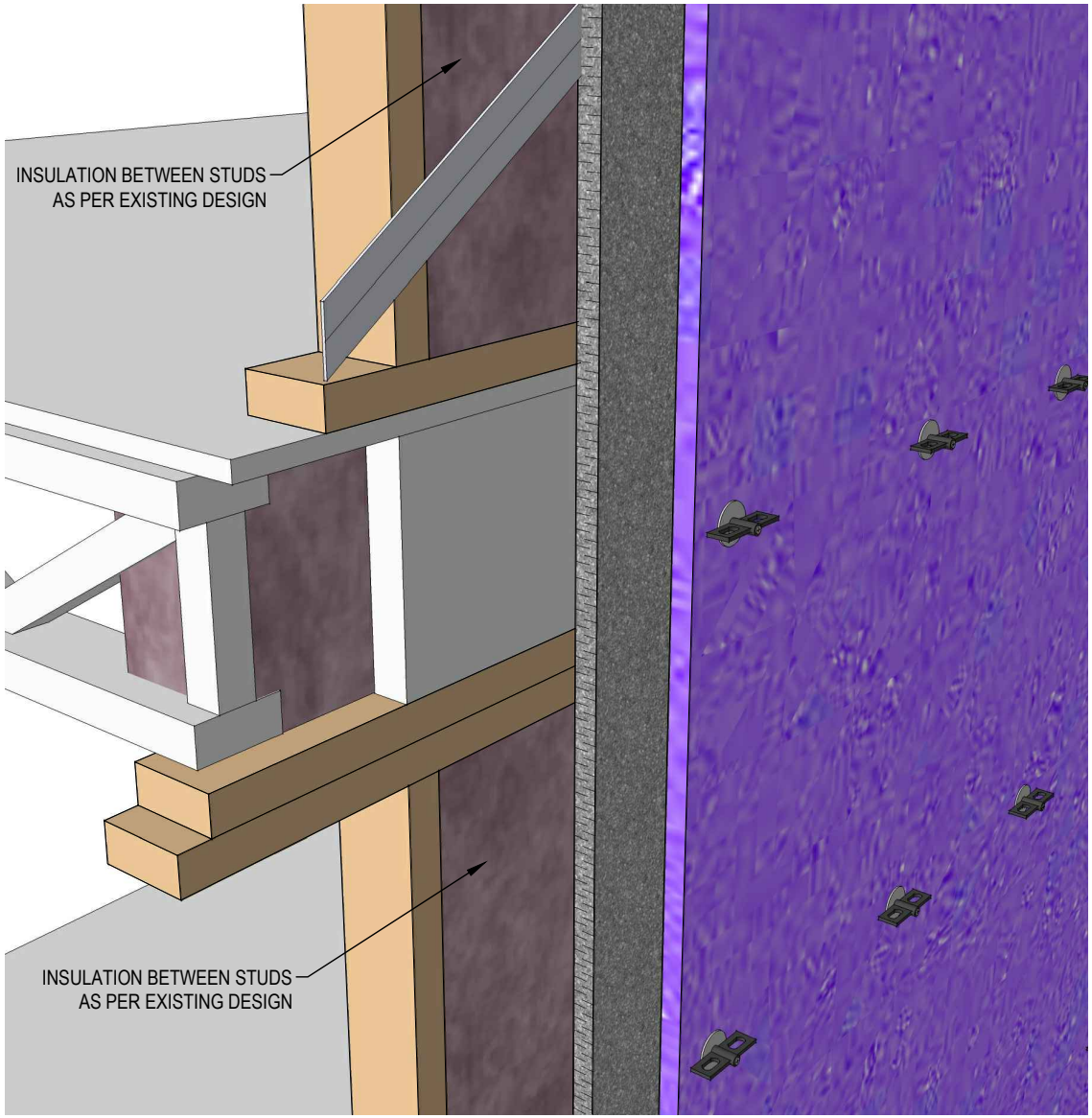



A 3D VIEW

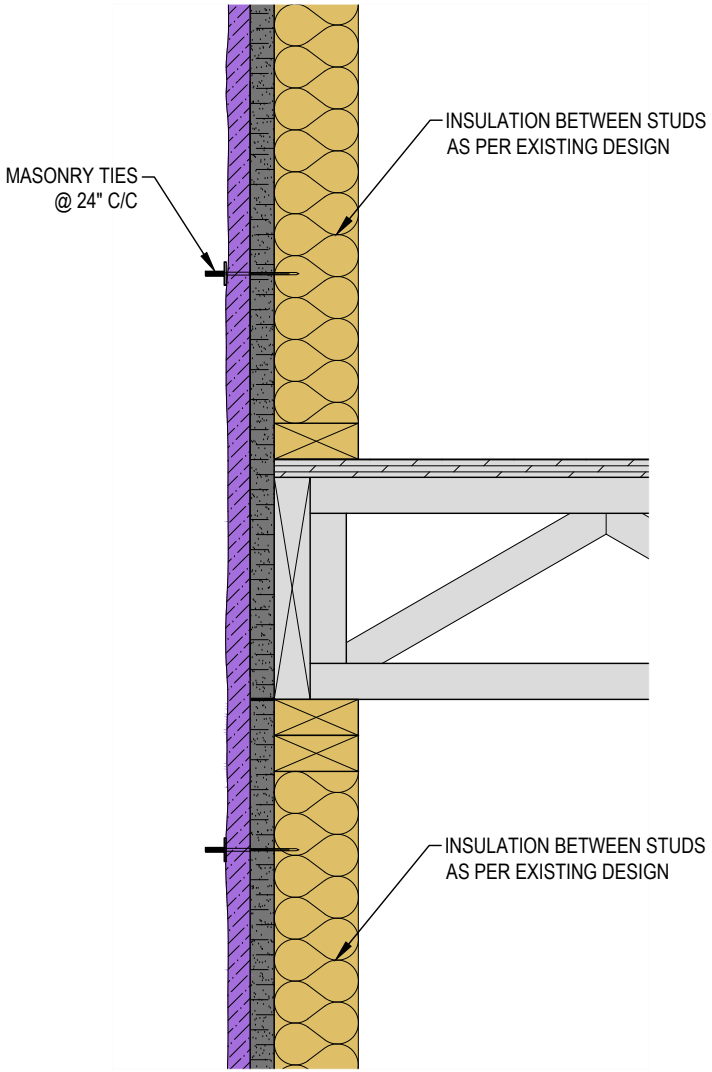



B SECTION

# STEP 18C - INTERIOR AND EXTERIOR INSULATION: SECOND FLOOR WALLS AND HEADERS

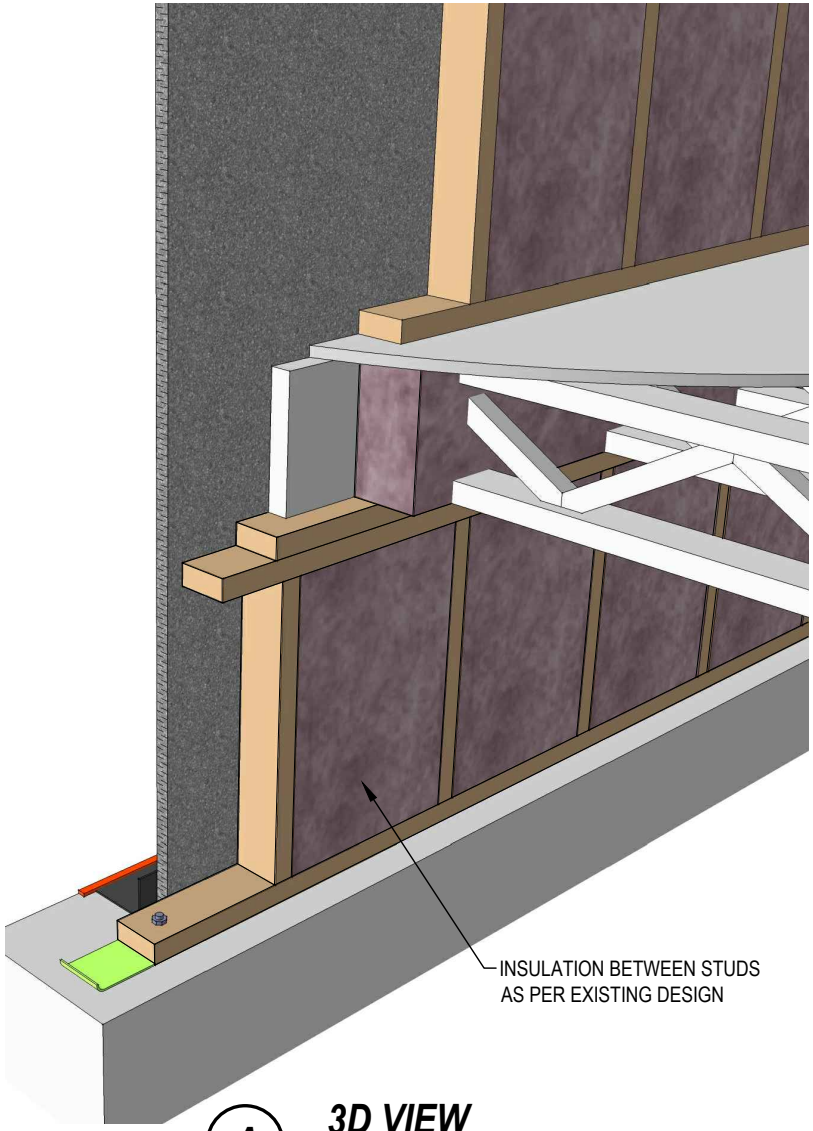



A 3D VIEW

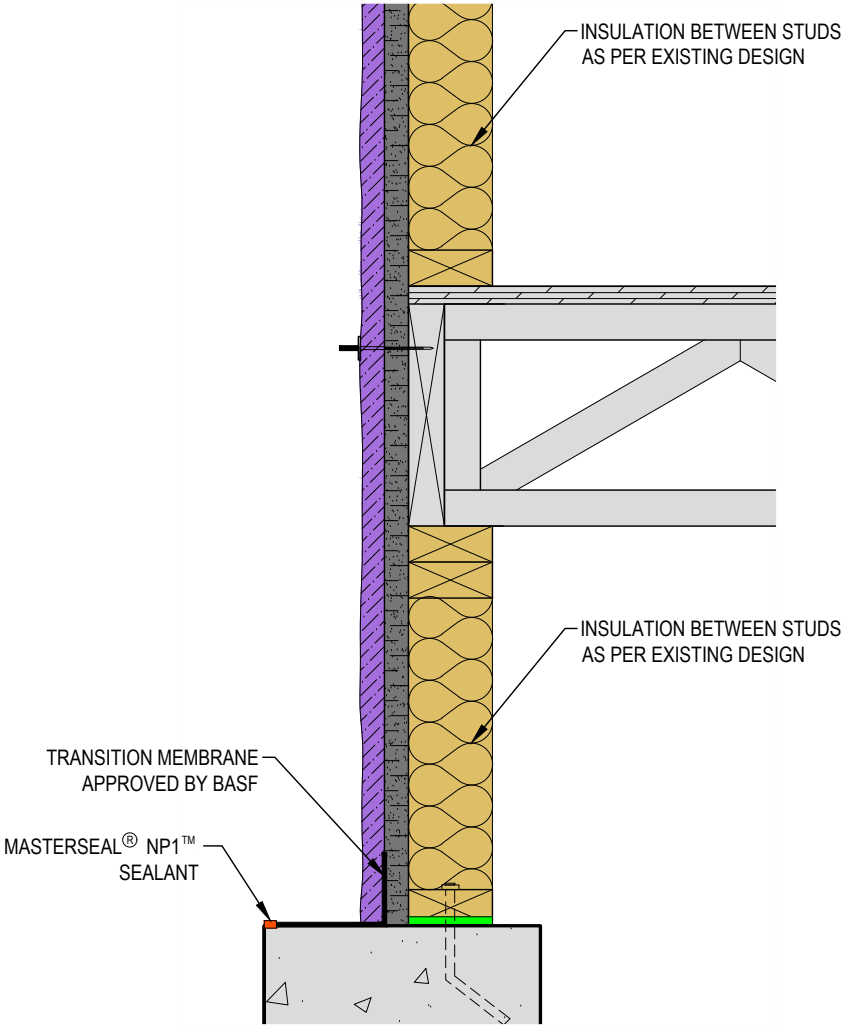



B SECTION

# VARIOUS DETAILS: 1- KNEE WALL

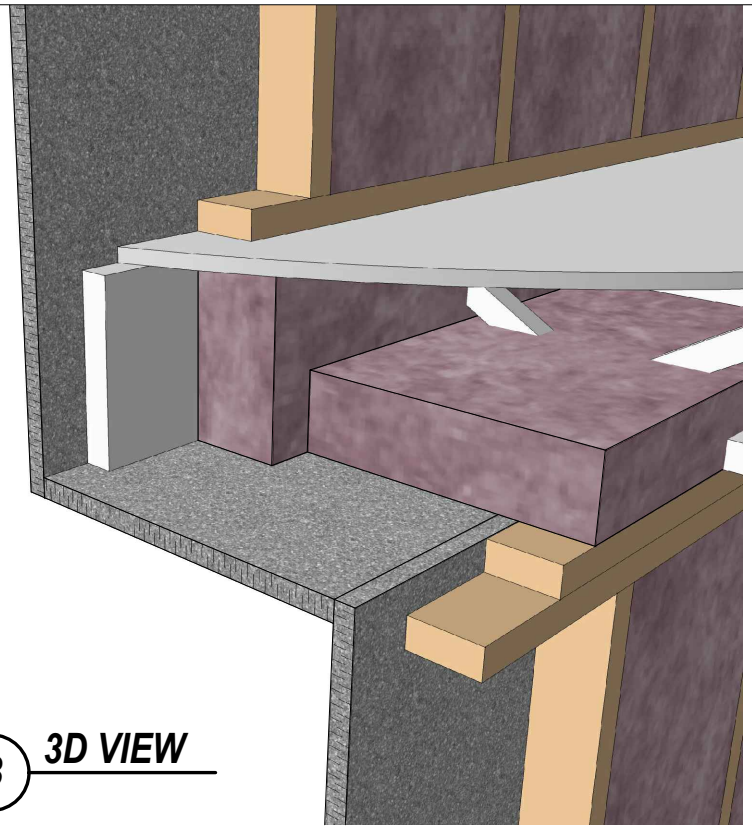



A 3D VIEW

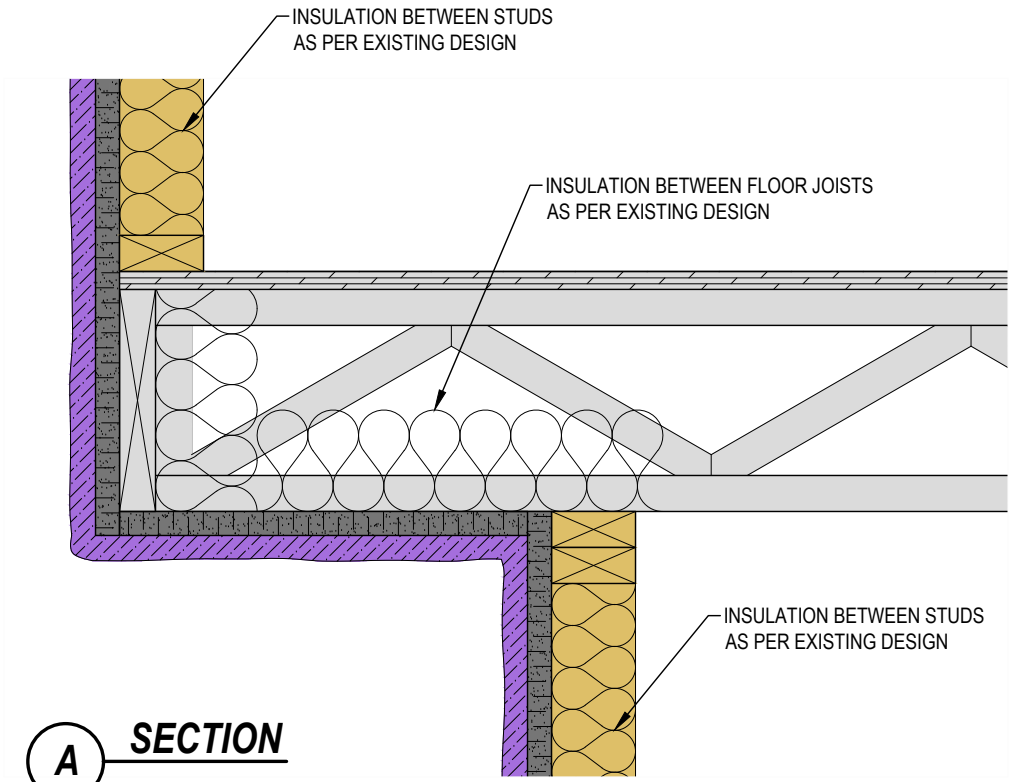



B SECTION

# VARIOUS DETAILS:
# 2- CANTILEVERED FLOOR

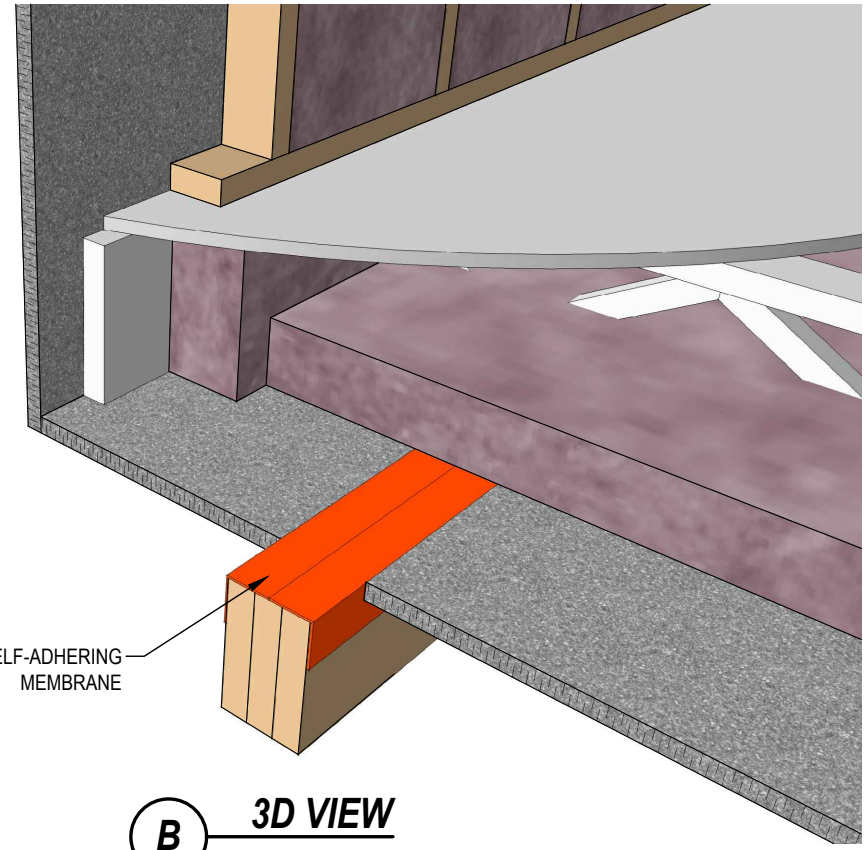


B 3D VIEW

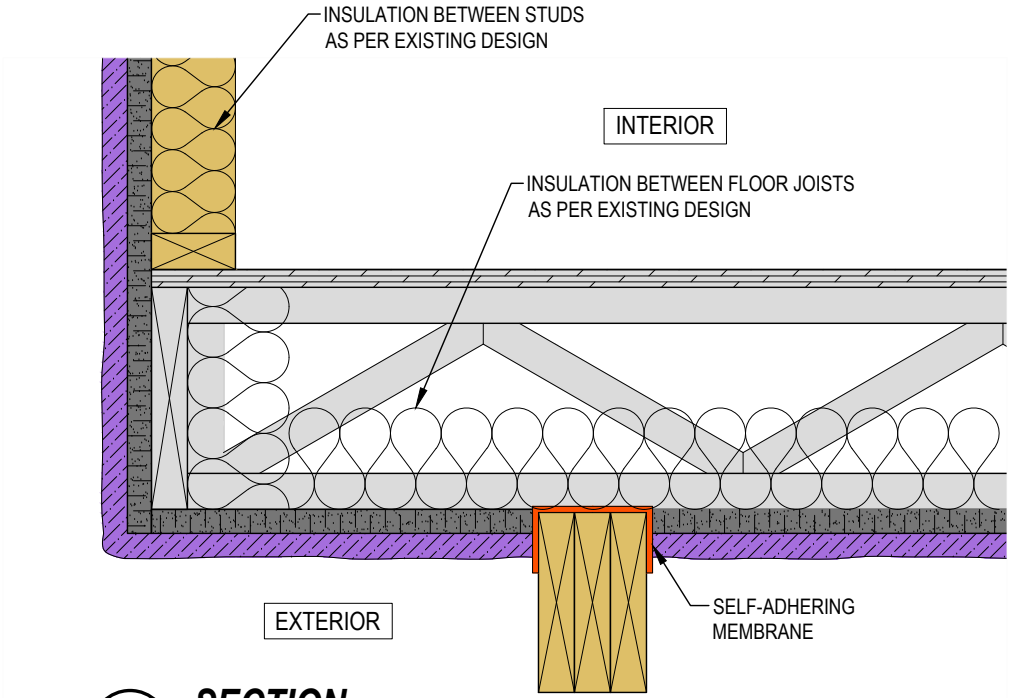



A SECTION

# VARIOUS DETAILS:
# 3- CANTILEVERED FLOOR ON BEAM




B **3D VIEW**

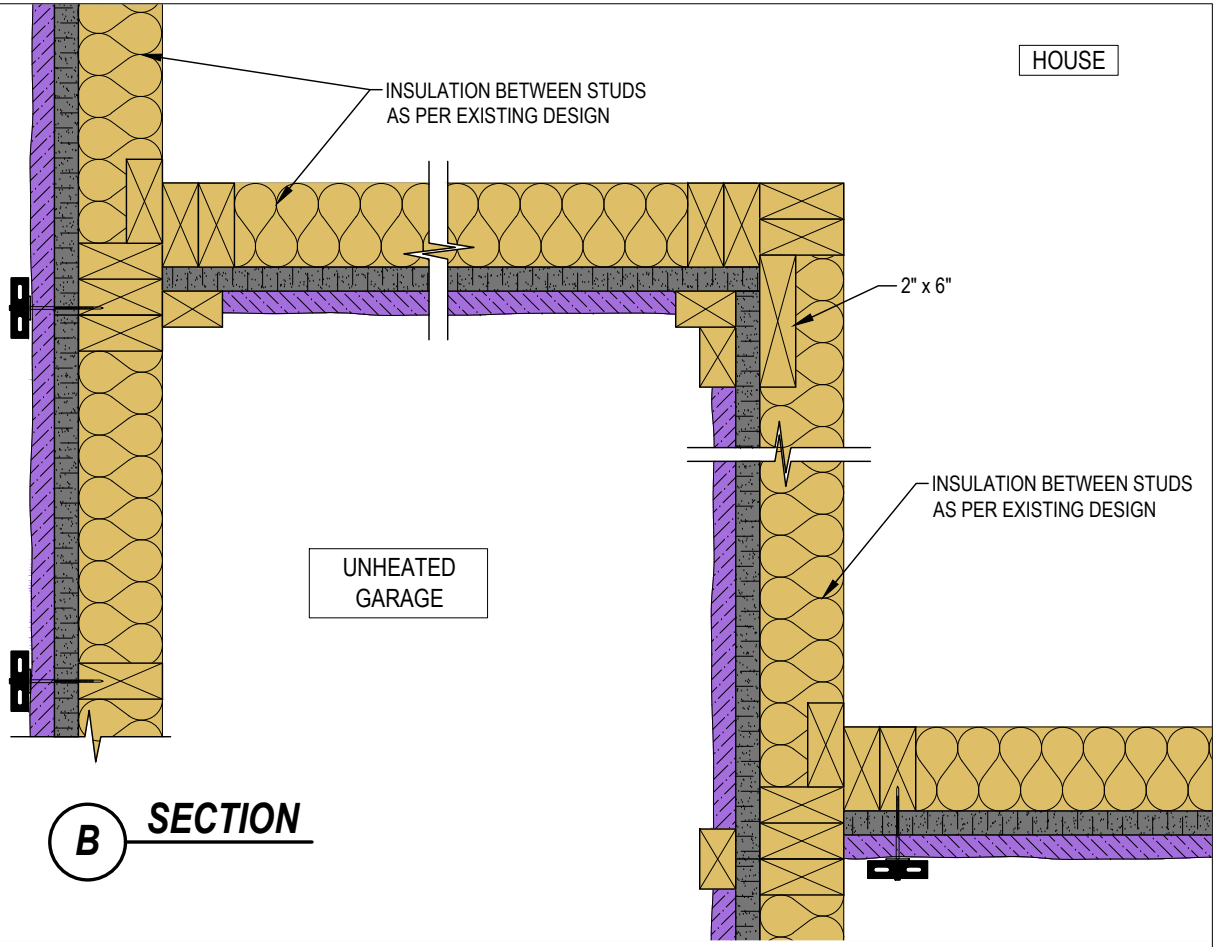



A **SECTION**

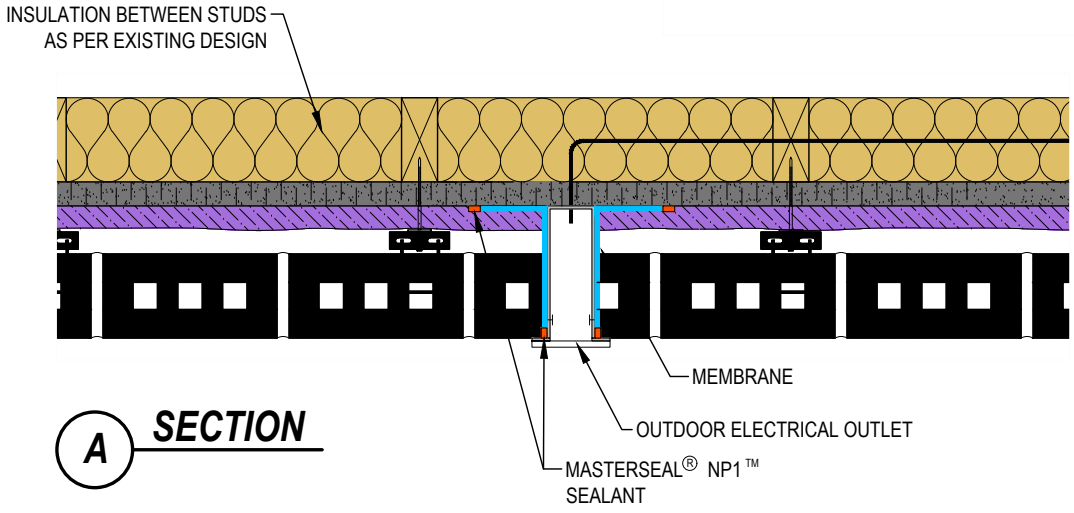
# VARIOUS DETAILS:
# 4- UNHEATED GARAGE ELECTRICAL OUTLET

***NOTE:***

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

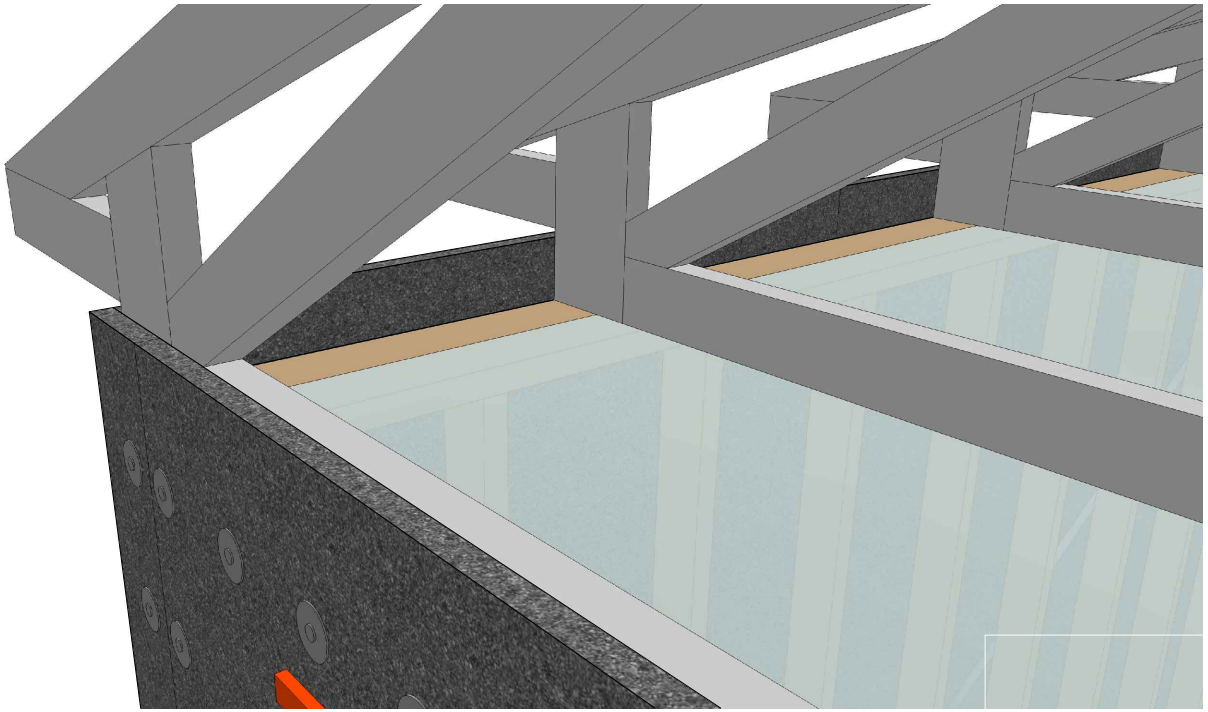



**B** ***SECTION***

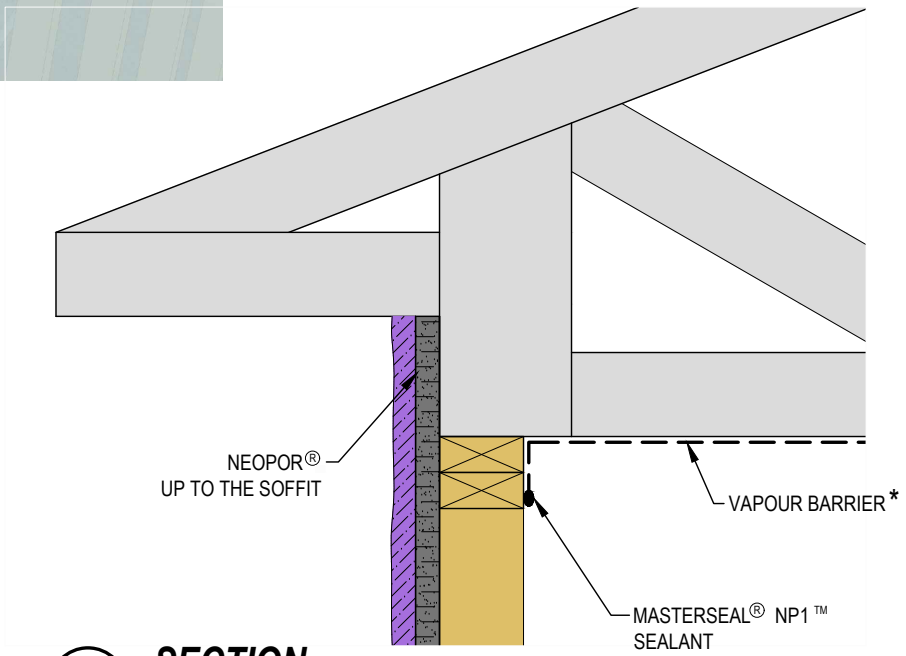



**A** ***SECTION***

# VARIOUS DETAILS: 5- RAISED HEEL ROOF TRUSS



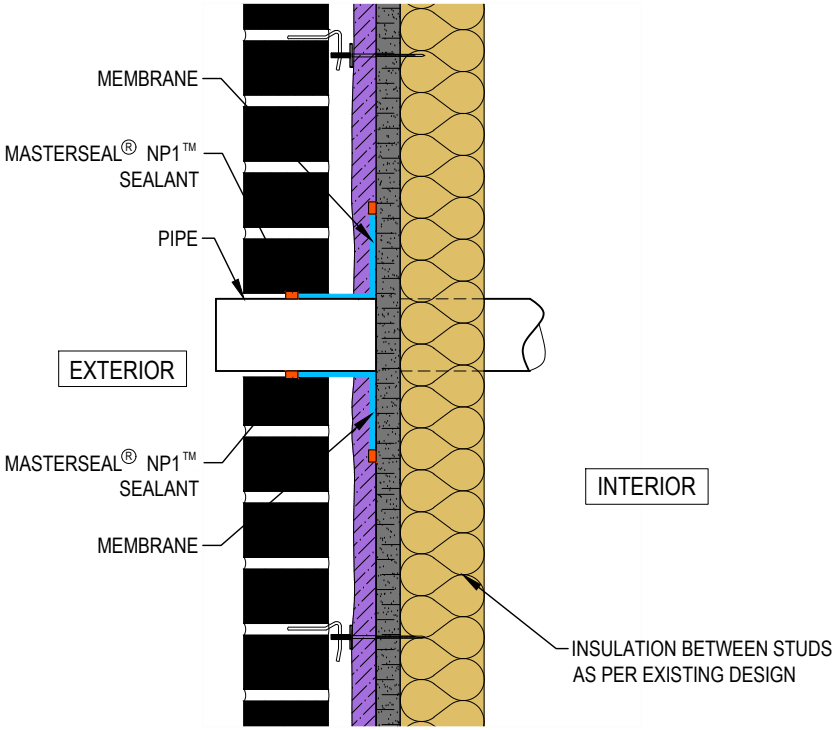
A 3D VIEW

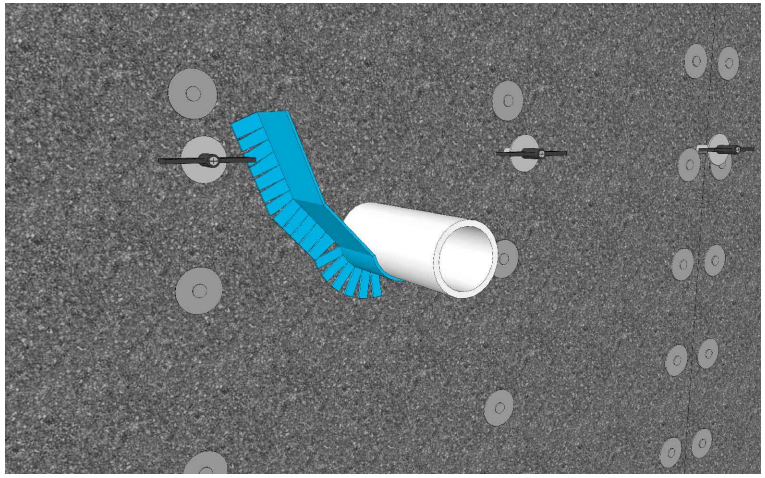



B SECTION

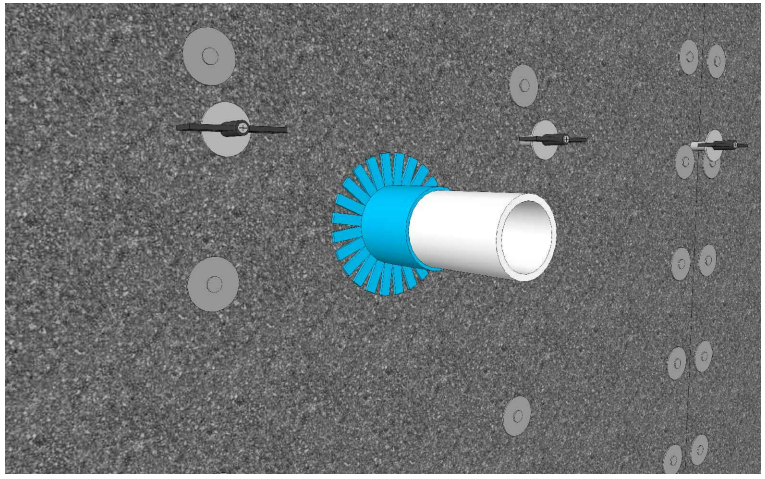
*AS REQUIRED BY CODE

# VARIOUS DETAILS: 6- SEALING AROUND WALL PENETRATIONS



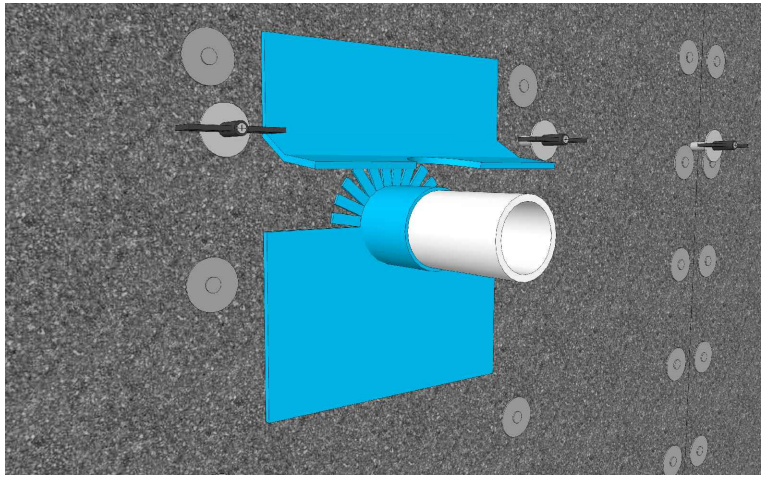



A - INSTALL A TRANSITION MEMBRANE AROUND THE PIPE.
CUT THE EDGE OF THE MEMBRANE TO ENSURE THE MEMBRANE IS WELL ADHERED TO THE WALL AND ALONG THE PERIMETER OF THE PIPE.
NOTE: INSTALL THE MEMBRANE STARTING FROM THE BOTTOM OF THE PIPE.

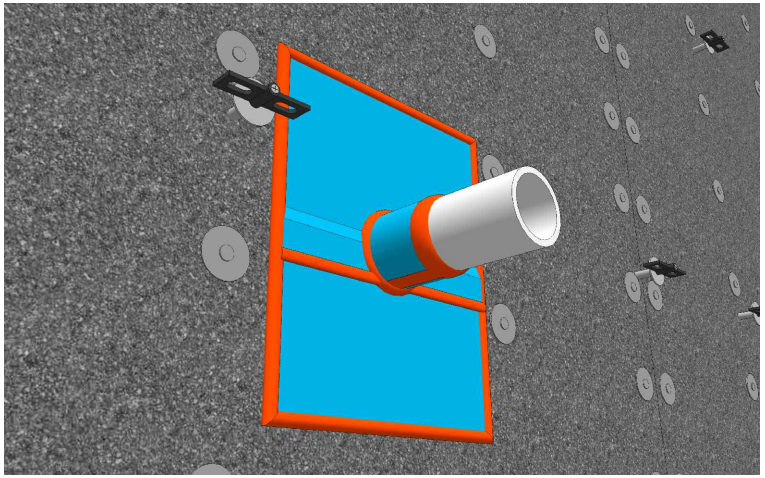


B - ENSURE THE MEMBRANE IS WELL ADHERED TO THE WALL AND ALONG THE ENTIRE PERIMETER OF THE PIPE

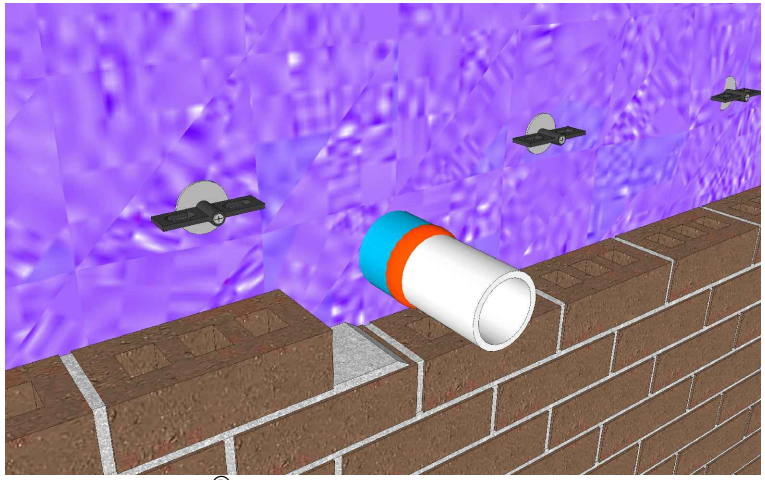
# VARIOUS DETAILS: 6- SEALING AROUND WALL PENETRATIONS



C - INSTALL A MEMBRANE ON THE WALL TO COVER THE LOWER HALF OF THE PIPE.



D - INSTALL A SECOND MEMBRANE ON THE WALL TO COVER THE UPPER PART OF THE PIPE AND OVERLAP WITH THE LOWER MEMBRANE.
SEAL THE PERIMETER AND ALL THE MEMBRANE JOINTS.



E - SPRAY WALLTITE® BEFORE LAYING BRICKS.