



## Ultra Wall System

### CAD Detail Sets

# DETAILS

## Contents

	Page
<b>UWS-CM CAVITYMATE™ Ultra Contents</b>	1-0
Details continuing on	1-1 thru 1-17

FOR: Cavity cut XPS board to fit between ladder tie masonry ties in CMU walls

<b>UWS-SL Ultra SL Contents</b>	2-0
Details continuing on	2-1 thru 2-18

For: 4'x8' shiplapped XPS over steel stud or concrete walls

## Detail Set Overview

The **Ultra Wall System (UWS)** detail set outlines the general guidelines for design using the system, focusing maintaining continuity of the thermal, air, and water control layers. These details are meant to be used as guides during the design phase of a project.

“**UWS-CM**” details show **STYROFOAM™ Brand CAVITYMATE™ Ultra Insulation** over CMU, and are most commonly used in block and brick construction.

“**UWS-SL**” details show **STYROFOAM™ Brand Ultra SL Insulation** (ship-lapped 4'x8' XPS) commonly used over steel studs.

*Other system detail sets available at [dowbuildingsolutions.com](http://dowbuildingsolutions.com)*

### NAVIGATING

#### Nomenclature

**UWS-CM01**

System —  
Detail Set —  
Detail Number —

#### Key

**UWS** Ultra Wall System  
**CM** CAVITYMATE Ultra  
**SL** Ultra SL



## Ultra Wall System Details

WITH  
**CAVITYMATE™ Ultra**  
Insulation (15.75"x96")

# DETAILS

## Contents

### ➤ **UWS-CM CAVITYMATE™ Ultra**

	Page
	1-0
UWS-CM01 Control Layer Summary	1-1
UWS-CM02 System Options	1-2
UWS-CM03 Fastening Guidelines	1-3
UWS-CM04 Transitions	1-4
UWS-CM05 Penetrations	1-5
UWS-CM06 Patching Insulation	1-6
UWS-CM07 Foundation	1-7
UWS-CM08 Win. Head Mineral Wool	1-8
UWS-CM09 Win. Head Mineral Wool 2	1-9
UWS-CM10 Window Jamb	1-10
UWS-CM11 Window Sill	1-11
UWS-CM12 Edge of Slab / Relief Angle	1-12
UWS-CM13 Corners	1-13
UWS-CM14 Change in Plane	1-14
UWS-CM15 Expansion Joint	1-15
UWS-CM16 Control Joint	1-16
UWS-CM17 Parapet	1-17

### **UWS-SL Ultra SL**

2-0

## Detail Set Overview

The **Ultra Wall System (UWS)** detail set outlines the general guidelines for design using the system, focusing maintaining continuity of the thermal, air, and water control layers. These details are meant to be used as guides during the design phase of a project.

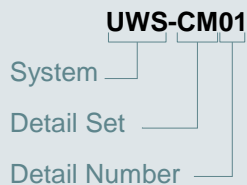
"**UWS-CM**" details show **STYROFOAM™ Brand CAVITYMATE™ Ultra** Insulation over CMU, and are most commonly used in block and brick construction.

"**UWS-SL**" details show **STYROFOAM™ Brand Ultra SL** Insulation (ship-lapped 4'x8' XPS) commonly used over steel studs.

*Other system detail sets available at [dowbuildingsolutions.com](http://dowbuildingsolutions.com)*

### NAVIGATING

#### Nomenclature



#### Key

**UWS** Ultra Wall System  
**CM** CAVITYMATE Ultra  
**SL** Ultra SL

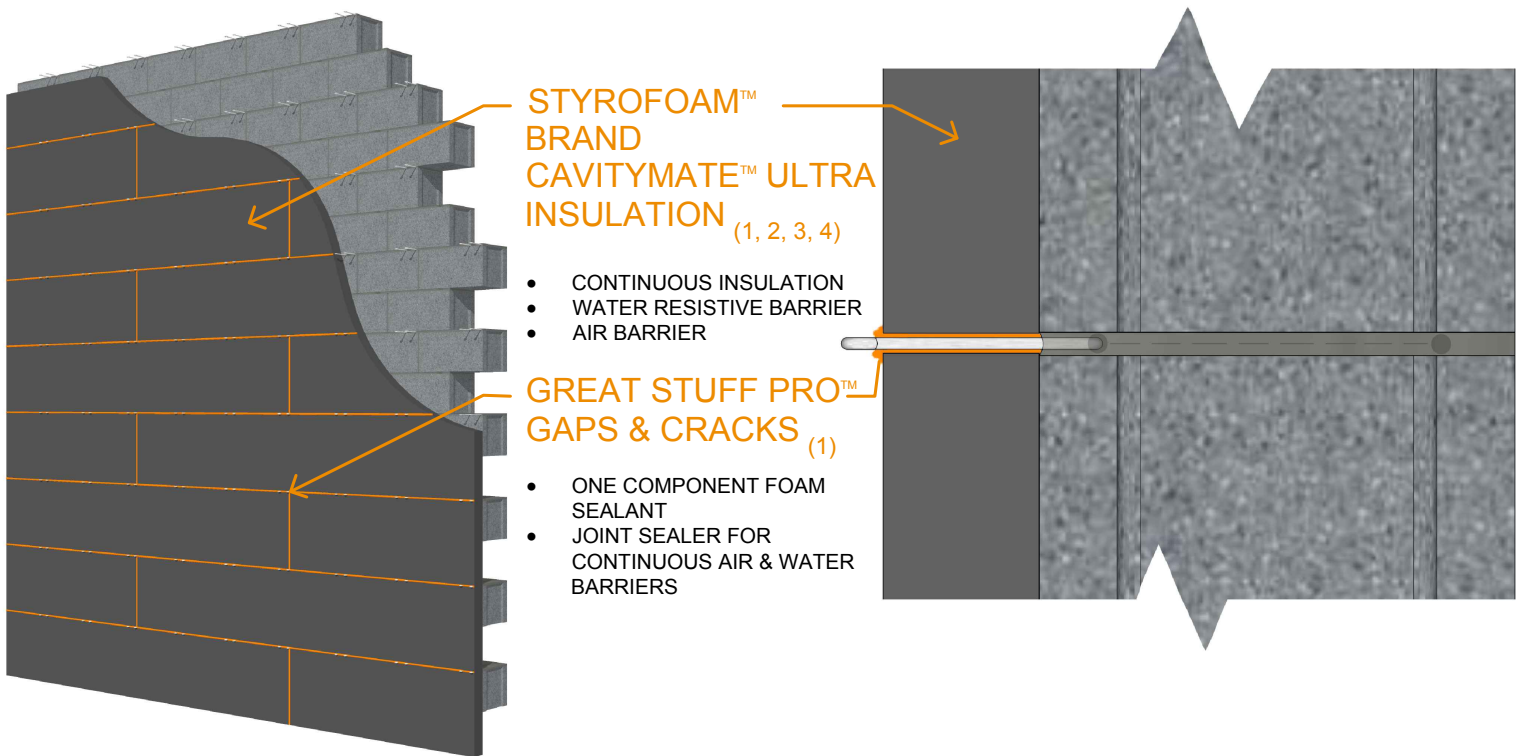
### DESIGN INTENT

1. STYROFOAM™ BRAND EXTRUDED POLYSTYRENE RIGID INSULATION ACTS AS PRIMARY CONTROL LAYERS: THERMAL (CI), WATER-RESISTIVE, AND AIR SEALING, WHILE THE INSULATION JOINT TREATMENT (GREAT STUFF PRO™ GAPS & CRACKS OR LIQUIDARMOR™ FLASHING AND SEALANT) SEALS ALL VERTICAL & HORIZONTAL BOARD JOINTS TO MAKE THE CONTROL LAYERS CONTINUOUS.
2. CONTINUOUS INSULATION THICKNESS TO BE DETERMINED TO MINIMIZE CONDENSATION POTENTIAL AND COMPLY WITH ENERGY CODE.

### DESIGN STANDARDS

STYROFOAM™ BRAND CAVITYMATE™ ULTRA INSULATION WITH GREAT STUFF PRO™ GAPS & CRACKS

- CLASS A PER ASTM E84
- AIR BARRIER PER ASTM E2357
- WATER BARRIER PER ASTM E331
- R-5.6 @ 1" PER ASTM C518
- NFPA 285 APPROVED ASSEMBLIES PER ENGINEERING JUDGMENT LETTERS



CAVITYMATE ULTRA SYSTEM | ISOMETRIC

UWS-CM01.1 (EXCLUDES BASE FLASHINGS, FASTENERS, CLADDINGS, ETC.)



CAVITYMATE ULTRA SYSTEM | SECTION

UWS-CM01.2

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER JOINT TREATMENT OPTIONS AND SYSTEM CONFIGURATIONS.
2. STYROFOAM™ XPS INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
4. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.
5. THRU-WALL / SURFACE-MOUNT FLASHINGS BY OTHER.

# ULTRAWALLsystem

details by 

CAVITYMATE™ Ultra Insulation

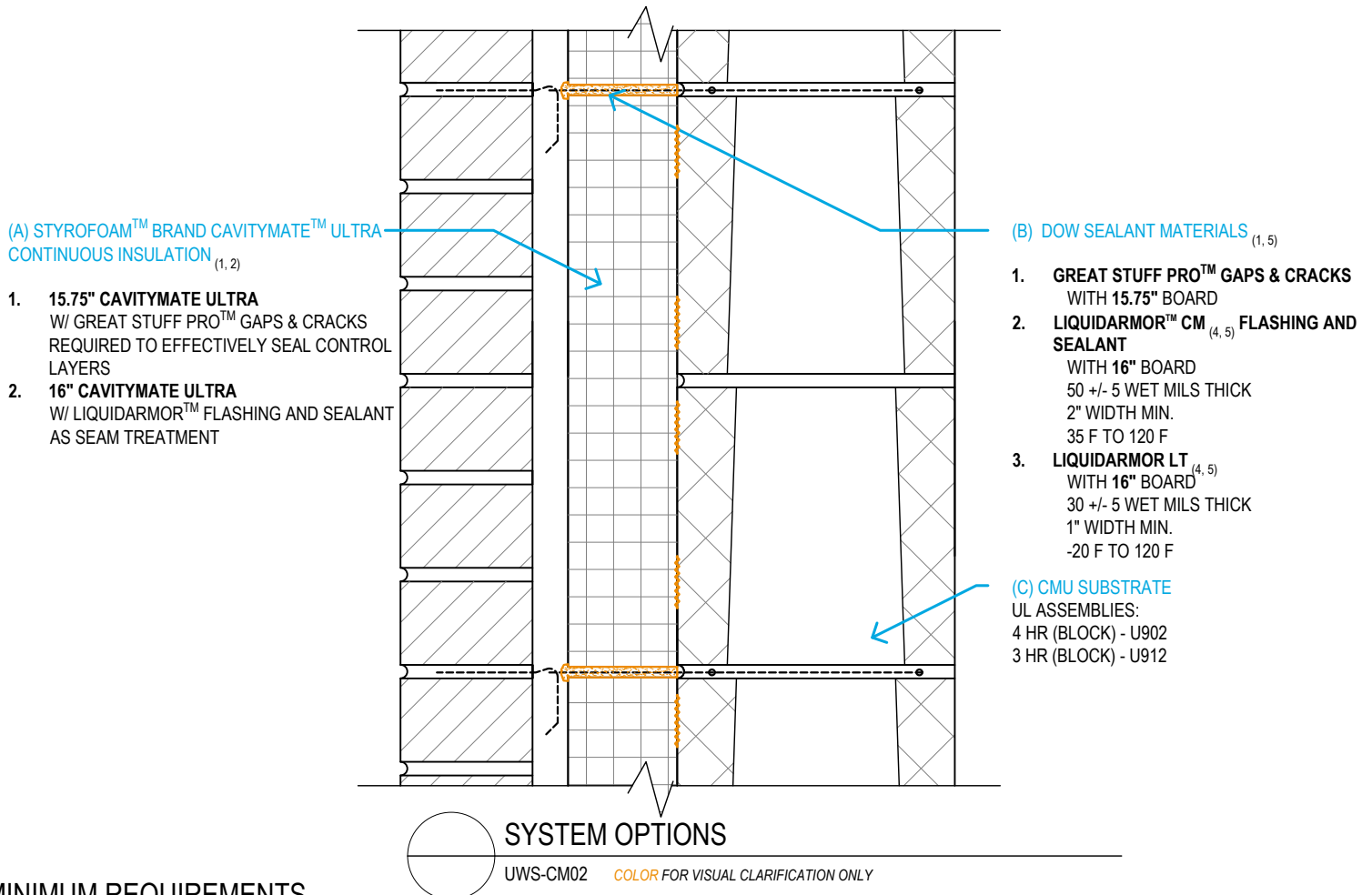
## System Options

### DESIGN INTENT

1. BASIS OF DESIGN FOR THE ULTRA WALL SYSTEM USES STYROFOAM™ BRAND CAVITYMATE™ ULTRA INSULATION AND GREAT STUFF PRO™ GAPS & CRACKS. OTHER OPTIONS ARE ACCEPTABLE PER CODE.
2. THE CAVITYMATE™ ULTRA WALL SYSTEM CAN BE COMPOSED BY CHOOSING COMBINATIONS OF ITEMS FROM SECTIONS (A) AND (B). OPTIONS WILL MEET CODE FOR CONTINUOUS INSULATION (R-VALUE REQUIREMENTS VARY BY CLIMATE ZONE), AIR BARRIER, VAPOR RETARDER, AND WATER BARRIER.
3. VERIFY ASSEMBLY HAS **NFPA 285 APPROVAL** IF APPLICABLE, INCLUDING SEAM TREATMENT AND FLASHING MAX. WIDTHS.

### WARRANTY AVAILABLE

50 YEAR THERMAL LIMITED WARRANTY FOR STYROFOAM™ BRAND XPS INSULATION 1.5" THICK AND GREATER.



### MINIMUM REQUIREMENTS

1. INSULATION MUST BE COVERED WITHIN 90 DAYS.
2. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
3. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR APPROVED TIES.
4. LIQUIDARMOR™ FLASHING AND SEALANT CAN SPAN A MAX. 1/4" GAPS - AREAS WHERE JOINTS BETWEEN CAVITYMATE™ ULTRA BOARDS EXCEED 1/4" REQUIRE GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE INSTALLED. GREAT STUFF PRO MUST TACK OVER (10-15 MIN.) PRIOR TO INSTALLATION OF LIQUIDARMOR FLASHING.
5. AT BOARD JOINTS, SELF ADHERED TAPE AND FLASHING MATERIALS ARE NOT ACCEPTABLE FOR THIS APPLICATION DUE TO THE DIFFICULTY IN CREATING A PROPER SEAL AROUND MASONRY WIRE TIES.
6. IF USING BOTH LIQUIDARMOR™ LT AND CM, NOTE THAT LIQUIDARMOR CM CANNOT BE APPLIED OVER LIQUIDARMOR LT. LIQUIDARMOR LT CAN BE APPLIED OVER LIQUIDARMOR CM.

1-2

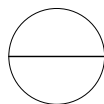
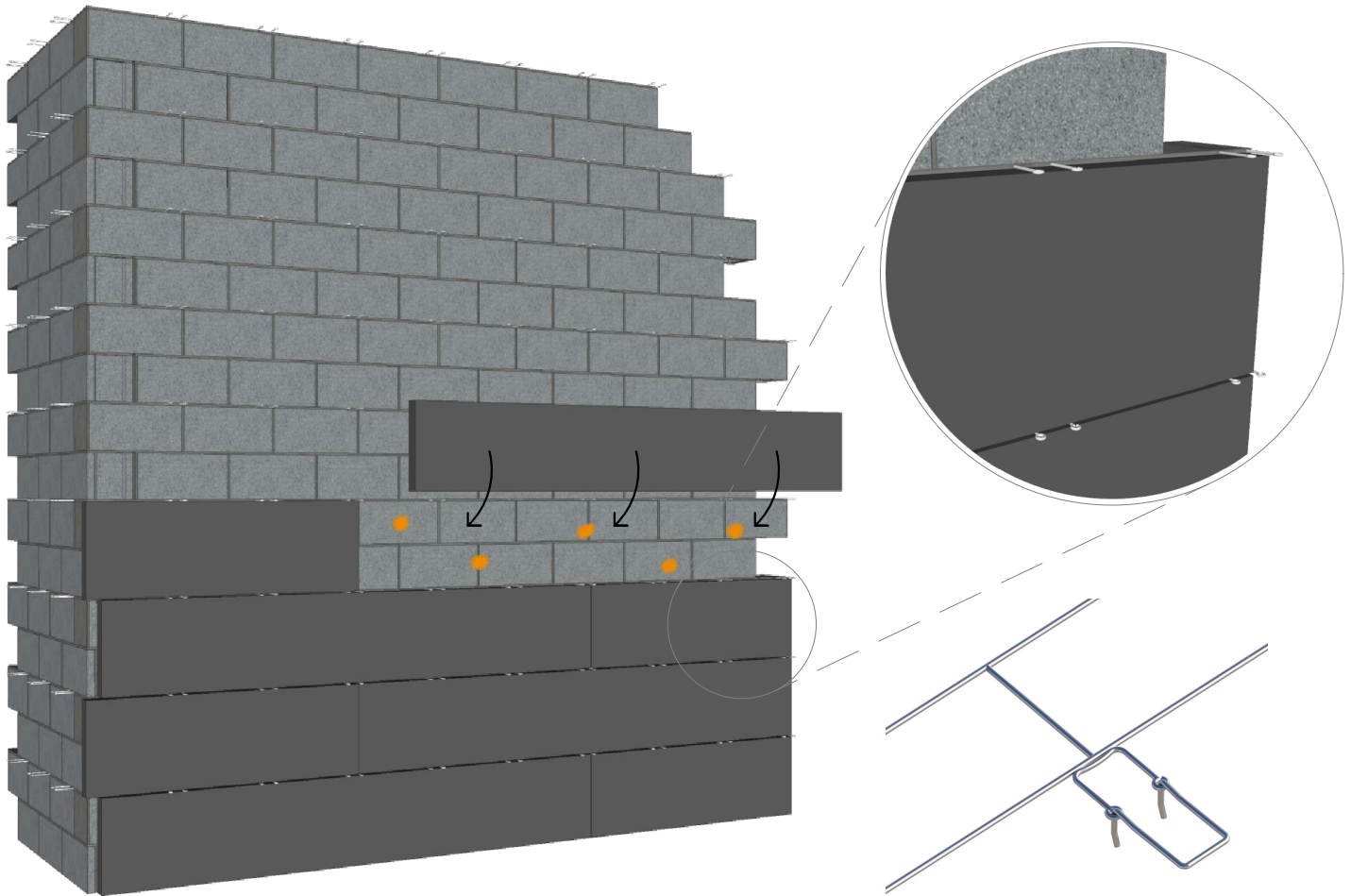


### DESIGN INTENT

1. SECURE STYROFOAM™ BRAND CAVITYMATE™ ULTRA INSULATION TO CMU BETWEEN MASONRY TIES.
2. MASONRY TIE LENGTH TO BE DETERMINED BY INSULATION THICKNESS.
3. BOARDS ARE INSTALLED PRIOR TO JOINT TREATMENT TO ACHIEVE A FULL SEAL FROM THE FACE OF CMU TO FACE OF INSULATION.

### ACCEPTABLE ADHESIVE:

GREAT STUFF PRO™ GAPS & CRACKS



### FASTENING GUIDELINES | ISOMETRIC

UWS-CM03 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. VERIFY SUBSTRATES HAVE NO VISIBLE WATER DROPLETS BEFORE INSTALLING BOARDS.
2. APPLY MIN. FIVE (5) DAUBS OF GREAT STUFF PRO™ GAPS & CRACKS TO WALL BEFORE FITTING BOARD BETWEEN MASONRY TIES.
3. INSTALL INSULATION IN RUNNING BOND PATTERN.
4. GREAT STUFF PRO GAPS & CRACKS MAY BE LEFT EXPOSED FOR 60 DAYS MAX.





### DESIGN INTENT

1. MUST MAINTAIN CONTINUITY OF ALL CONTROL LAYERS AT TRANSITIONS FROM ULTRA WALL SYSTEM TO OTHER SYSTEMS.
2. ENSURE COMPATIBILITY WHERE DOW FLASHING MATERIALS JOIN MATERIALS PRODUCED BY OTHER MANUFACTURERS.
3. COUNTERFLASH MATERIALS TO PROMOTE WATERSHEDDING AT TRANSITION LOCATIONS.
4. CONCRETE & CMU APPLICATIONS: ENSURE ADEQUATE LIQUIDARMOR™ FLASHING AND SEALANT THICKNESS IS APPLIED FOR PROPER ADHESION TO AGGREGATE.

### COMPATIBILITY RECOMMENDATIONS

1. CHEMICALLY COMPATIBLE ADHESIVE TECHNOLOGIES WITH STYROFOAM™ BRAND XPS INSULATION AND LIQUIDARMOR™ FLASHING AND SEALANT (NOTE CHEMICAL COMPATIBILITY IS NOT A QUALIFIER OF LONG-TERM ADHESION):  
ACRYLIC & ACRYLIC LATEX • BUTYL • RUBBERIZED ASPHALT • SILICONE • HOT RUBBER
2. COMPATIBILITY OF PRODUCTS/CHEMISTRIES NOT LISTED ABOVE MUST BE VERIFIED BY RESPECTIVE MANUFACTURER.
3. DESIGNER IS RESPONSIBLE TO VERIFY COMPATIBILITY OF MATERIALS WITH ADDITIONAL COMPONENTS IN ASSEMBLY.

#### KEY

-  LIQUIDARMOR™ FLASHING AND SEALANT
-  3RD PARTY WRB / AIR BARRIER
-  DOW JOINT FILLER / SEALANT
-  3RD PARTY TRANSITION MEMBRANE, CAPABLE OF BRIDGING MOVING JOINTS

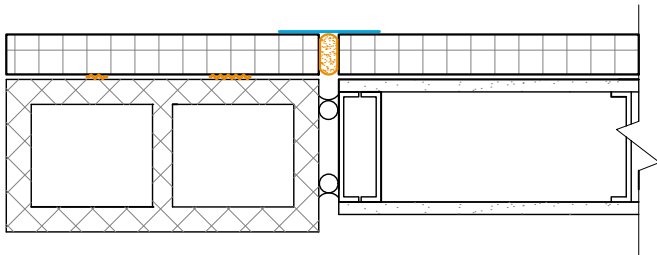


FIG 1: TRANSITION FROM CMU TO STUD | PLAN  
UWS-CM04.1 (NOTE: NOT AN EXPANSION JOINT DETAIL - MOVEMENT NOT TO EXCEED 15%)

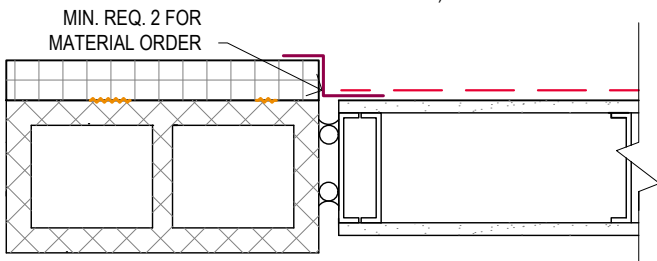


FIG 3: TRANSITION FROM ULTRA TO WRB ON EXT. GYP. | PLAN  
UWS-CM04.3

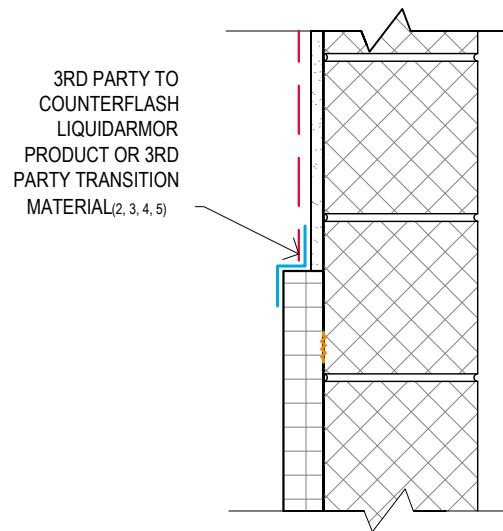


FIG 2: VERTICAL TRANSITION OF OTHER WRB TO ULTRA | SECTION  
UWS-CM04.2

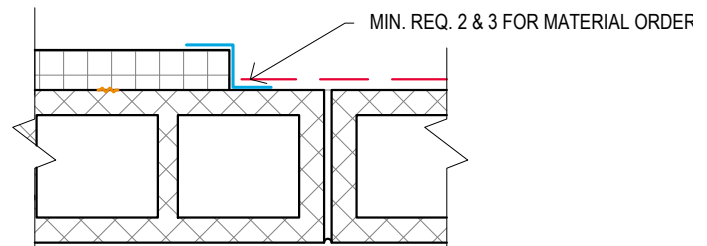


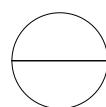
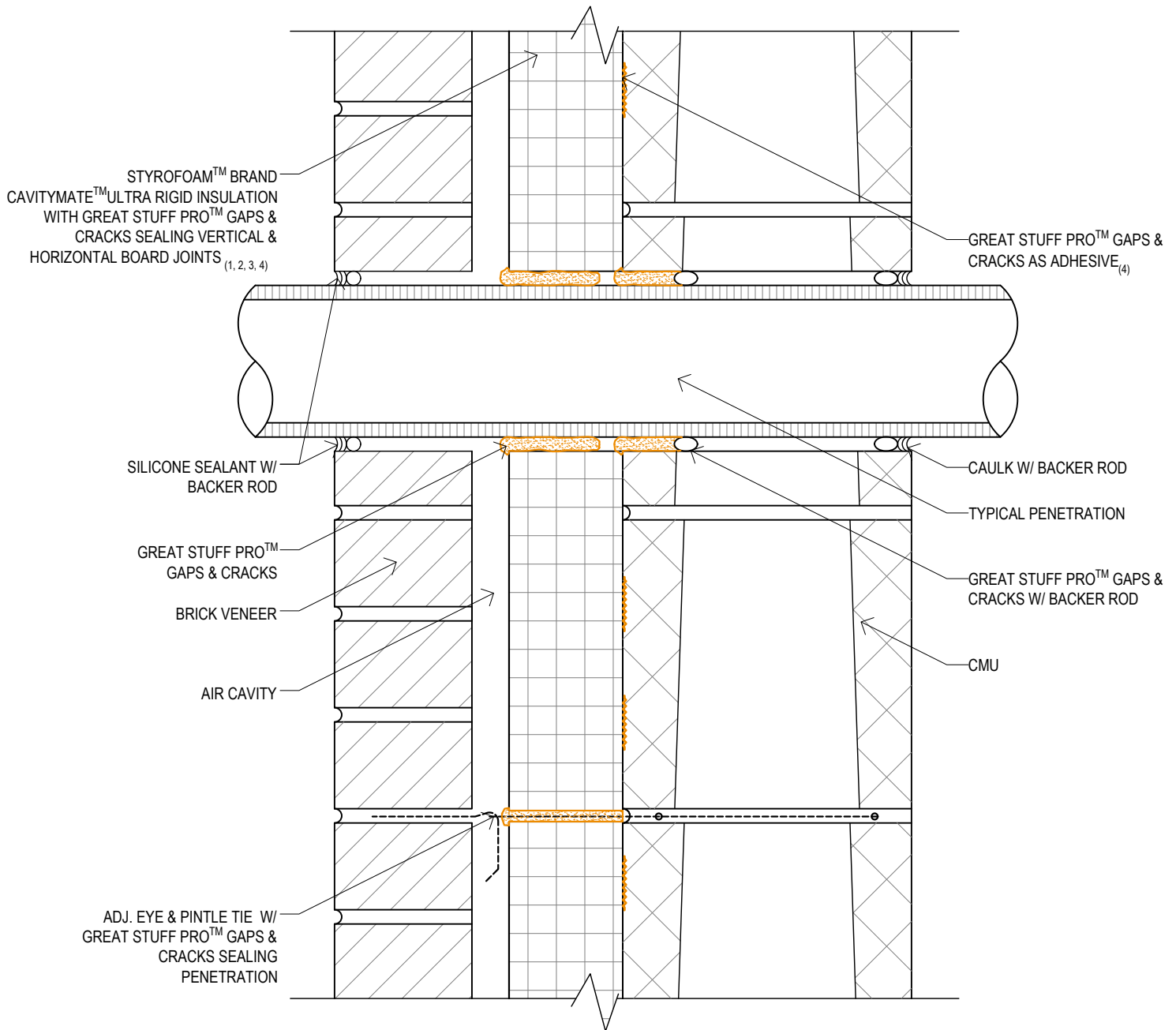
FIG 4: HORIZONTAL TRANSITION OF ULTRA TO OTHER WRB | PLAN  
UWS-CM04.4

### TRANSITIONS

UWS-CM04 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. OVERLAP OF SEALANT ADHESION ON ANY TRANSITION FROM FACE OF INSULATION ONTO ADJACENT MATERIALS MUST USE LIQUIDARMOR™ FLASHING AND SEALANT AND APPLY USING REQUIREMENTS ON DETAIL UWS-CM02 "SYSTEM OPTIONS".
2. CONFIRM WITH MATERIAL MANUFACTURERS FOR ADHESION COMPATIBILITY AND ORDER OF INSTALLATION.
3. LIQUIDARMOR CM CANNOT BE APPLIED OVER LIQUIDARMOR LT OR ANY OTHER SILICONE PRODUCTS.
4. FIG.1, GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO FILL JOINTS  $\geq 1/4"$  PRIOR TO FLASHING WITH MIN. OVERLAP TO FACE OF REQUIREMENTS ON DETAIL UWS-CM02 TO EACH FACE OF BOARD.
5. MIN. WIDTH OF LIQUIDARMOR FLASHING AND SEALANT BASED ON DETAIL UWS-CM02 ONTO FACE OF BOARD AND FACE OF OTHER SUBSTRATE. 1-4



### PENETRATIONS

UWS-CM05 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS..
2. VOIDS SURROUNDING PENETRATION TO BE MIN.  $\frac{1}{4}$ " AND MAX. 1" AND MUST BE FILLED WITH GREAT STUFF PRO™ GAPS & CRACKS.
3. INSULATION MUST BE COVERED WITHIN 90 DAYS.
4. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM06 "PATCHING INSULATION".
5. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. MAINTAIN INTEGRITY OF 4 CONTROL LAYERS BY PATCHING AS APPROPRIATE.
2. USE RESPECTIVE PATCHING TECHNIQUE, DICTATED BY SIZE OF DAMAGED AREA.

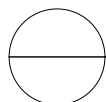
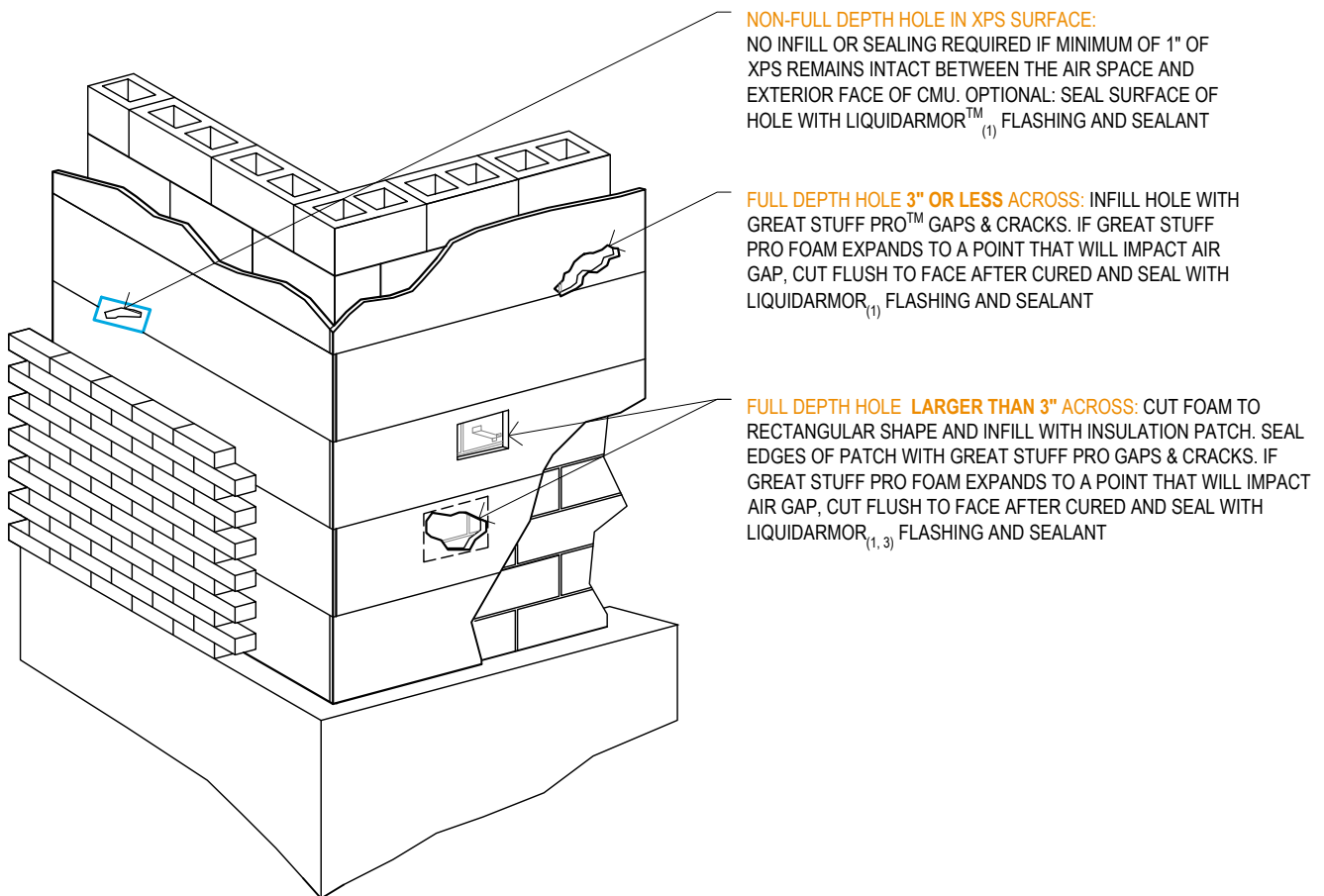
### SEALANT OPTIONS

#### ONE COMPONENT FOAM

- GREAT STUFF PRO™ GAPS & CRACKS
- GREAT STUFF PRO™ WINDOW & DOOR

#### FLUID APPLIED

- LIQUIDARMOR™ LT FLASHING AND SEALANT
- LIQUIDARMOR™ CM FLASHING AND SEALANT



### REPAIRING HOLES IN INSULATION

UWS-CM06 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

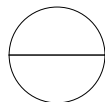
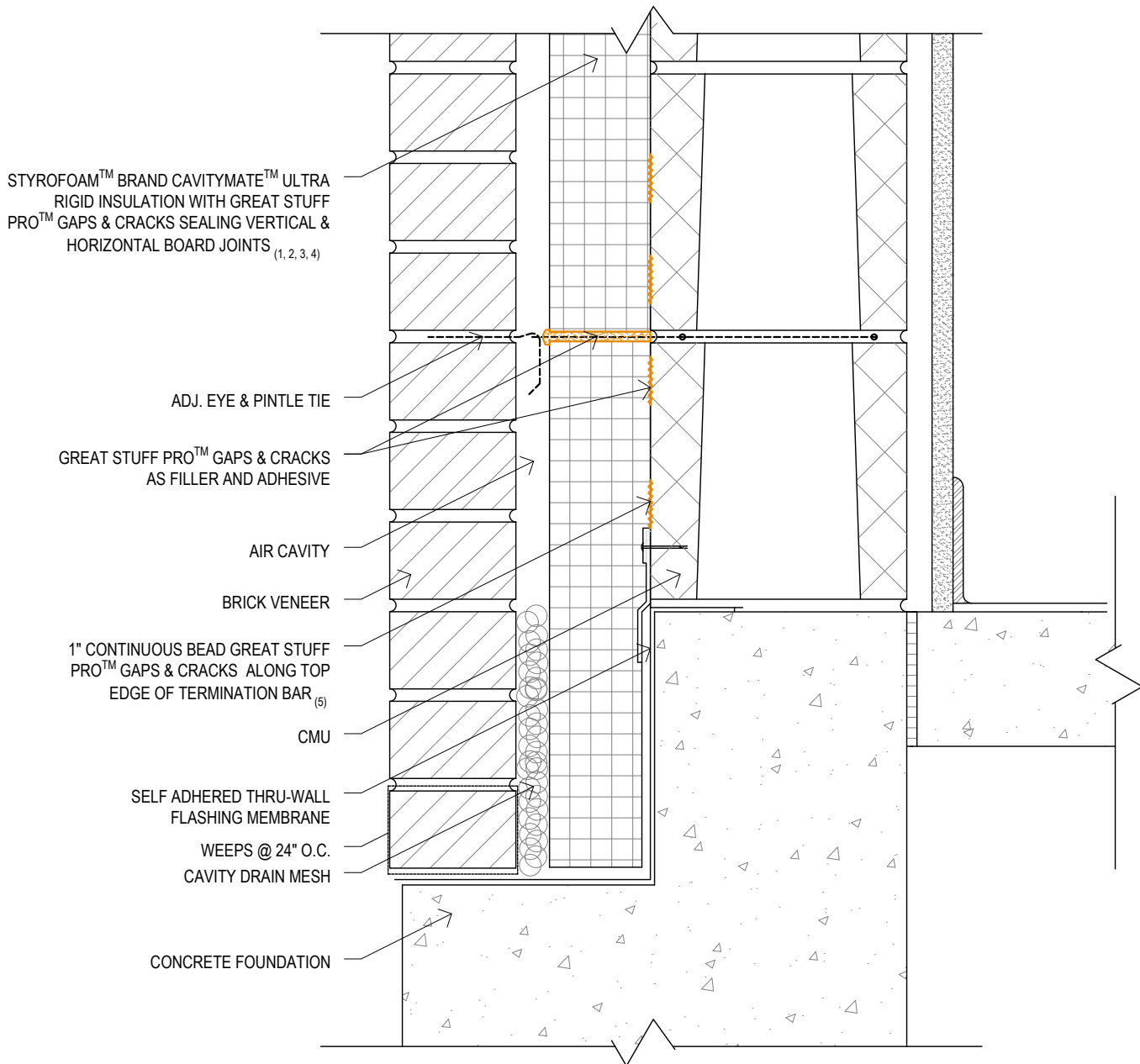


# ULTRAWallsystem

details by 

CAVITYMATE™ Ultra Insulation

## Foundation



### FOUNDATION

UWS-CM07 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
4. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.
5. TERMINATION BAR TO BE INSTALLED MIN. 16" ABOVE GRADE.

# ULTRAwallsystem

details by 

CAVITYMATE™ Ultra Insulation

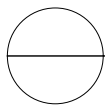
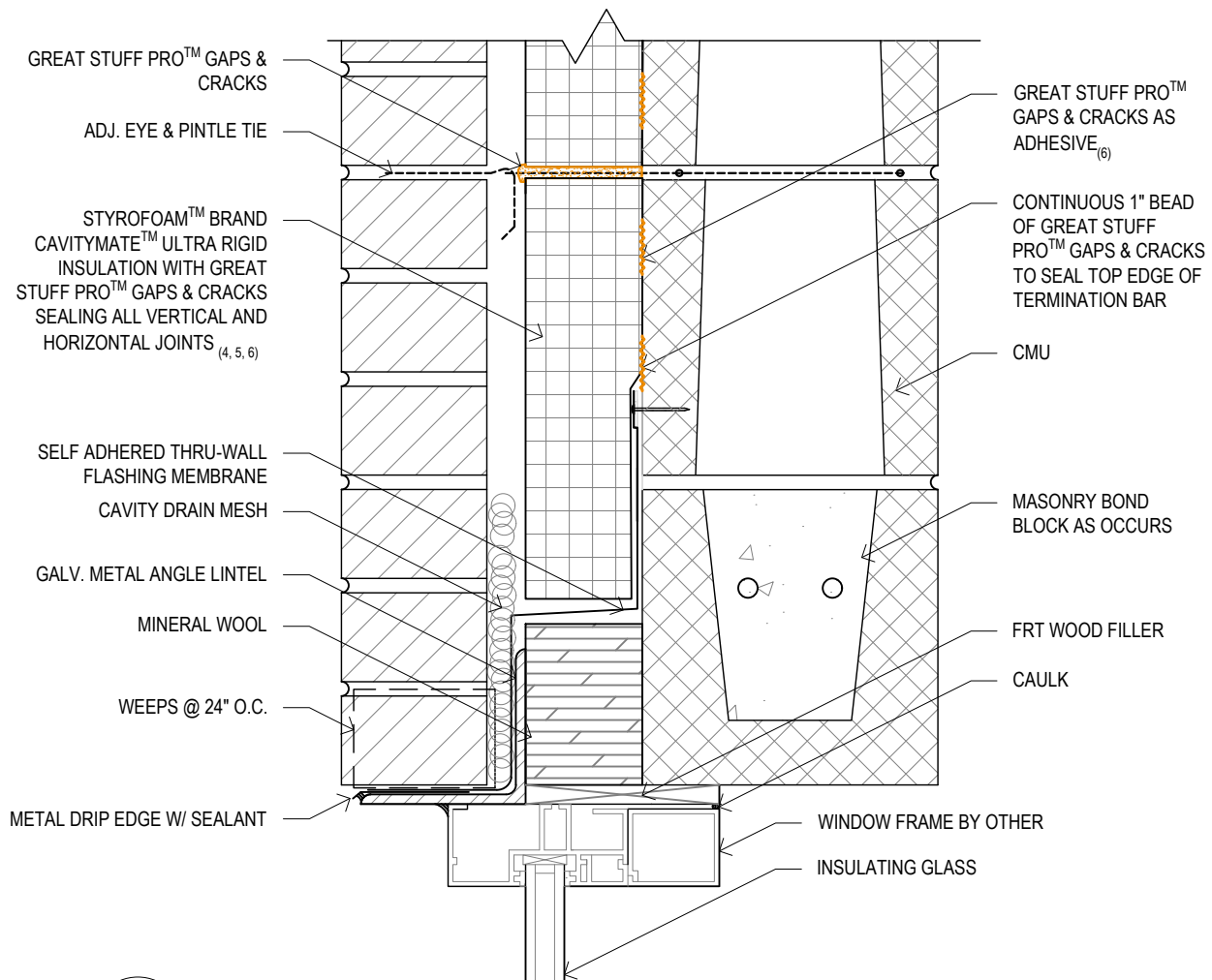
## Win. Head w/ Mineral Wool

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



### WINDOW HEAD WITH MINERAL WOOL

UWS-CM08 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-CM-02 "SYSTEM OPTIONS" AND MIN. 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

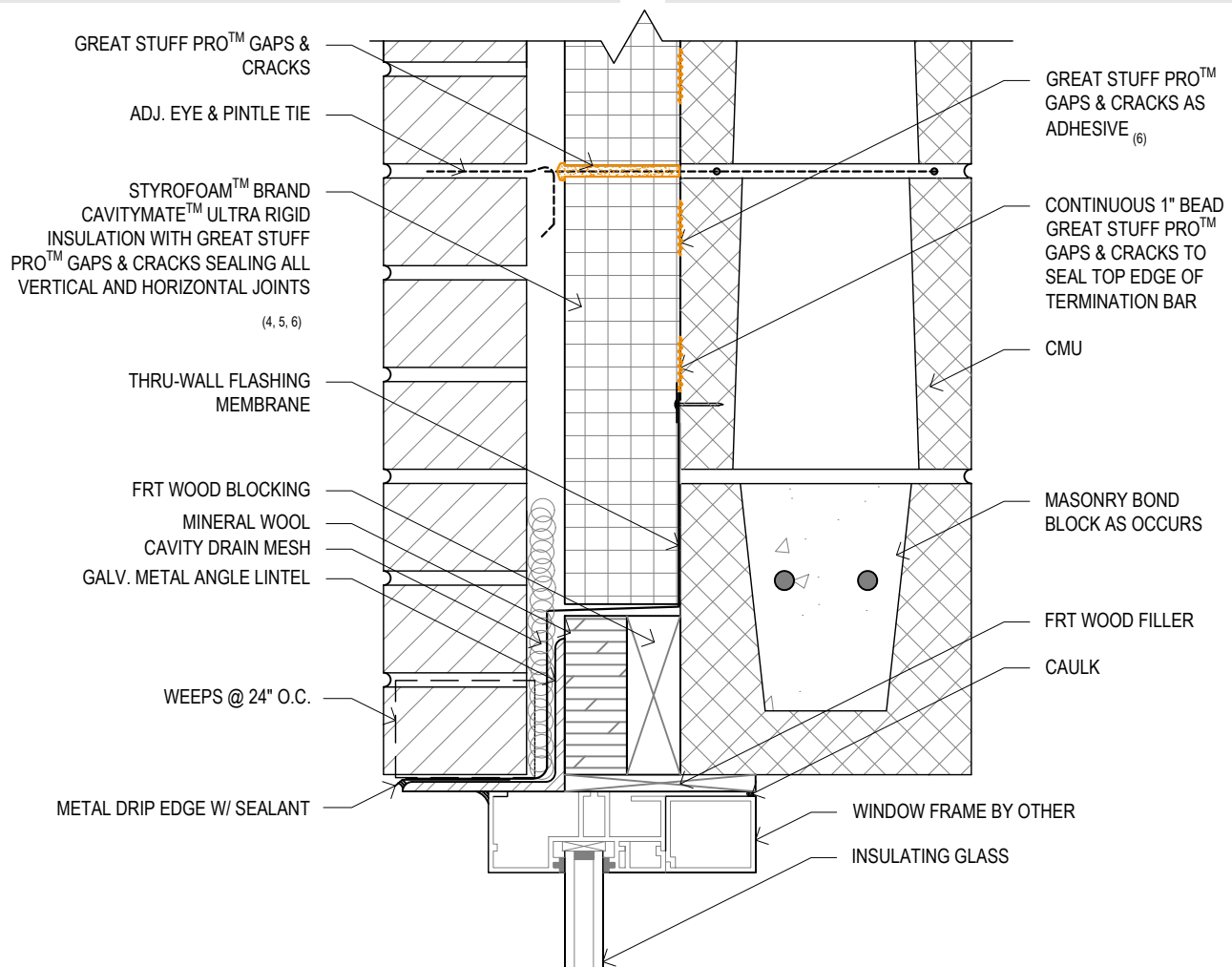
1-8

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



WINDOW HEAD WITH MINERAL WOOL AND WOOD BLOCKING

UWS-CM09 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

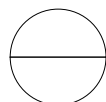
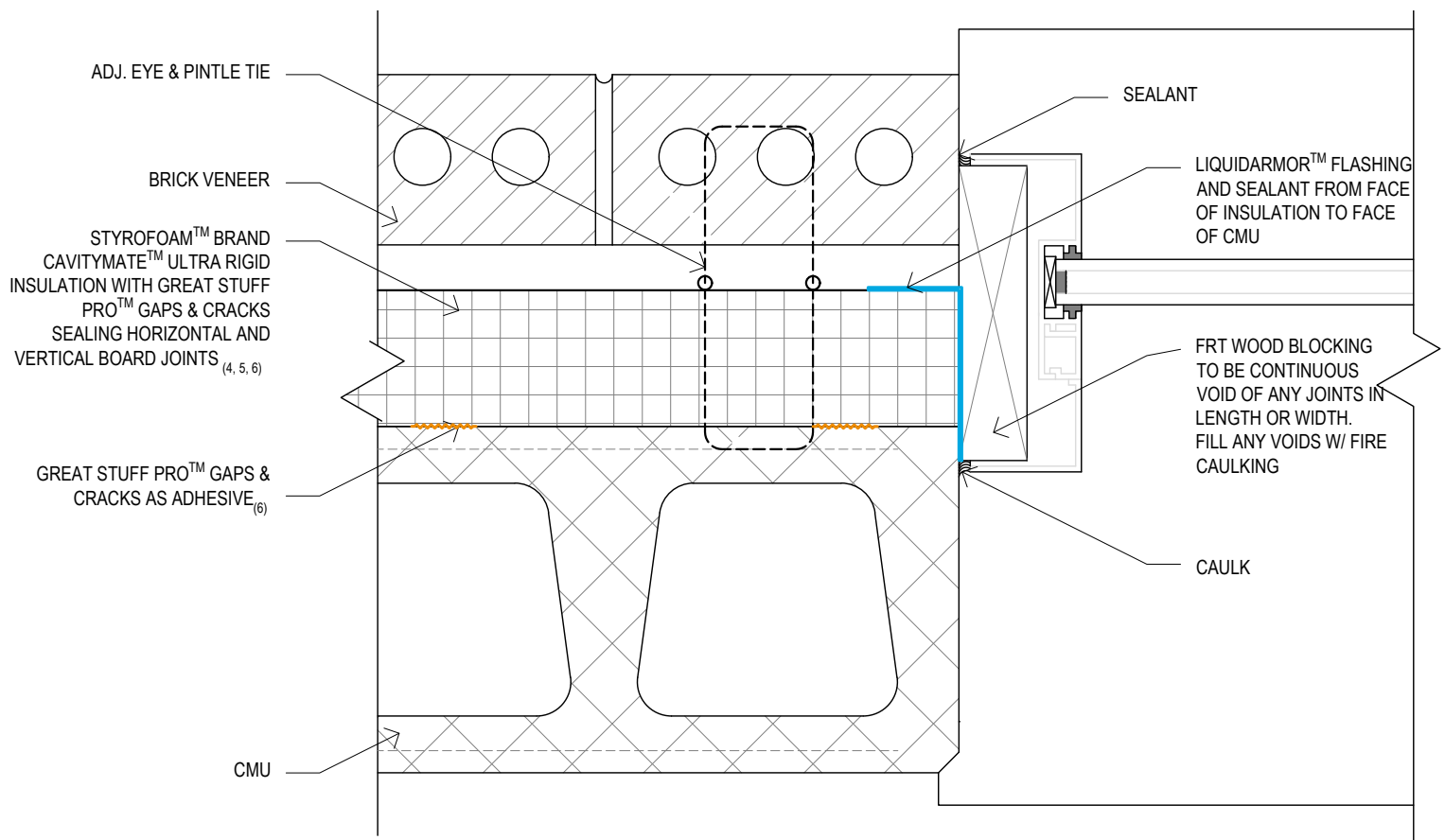
1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-CM-02 "SYSTEM OPTIONS" AND MIN. 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



### WINDOW JAMB

UWS-CM10 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

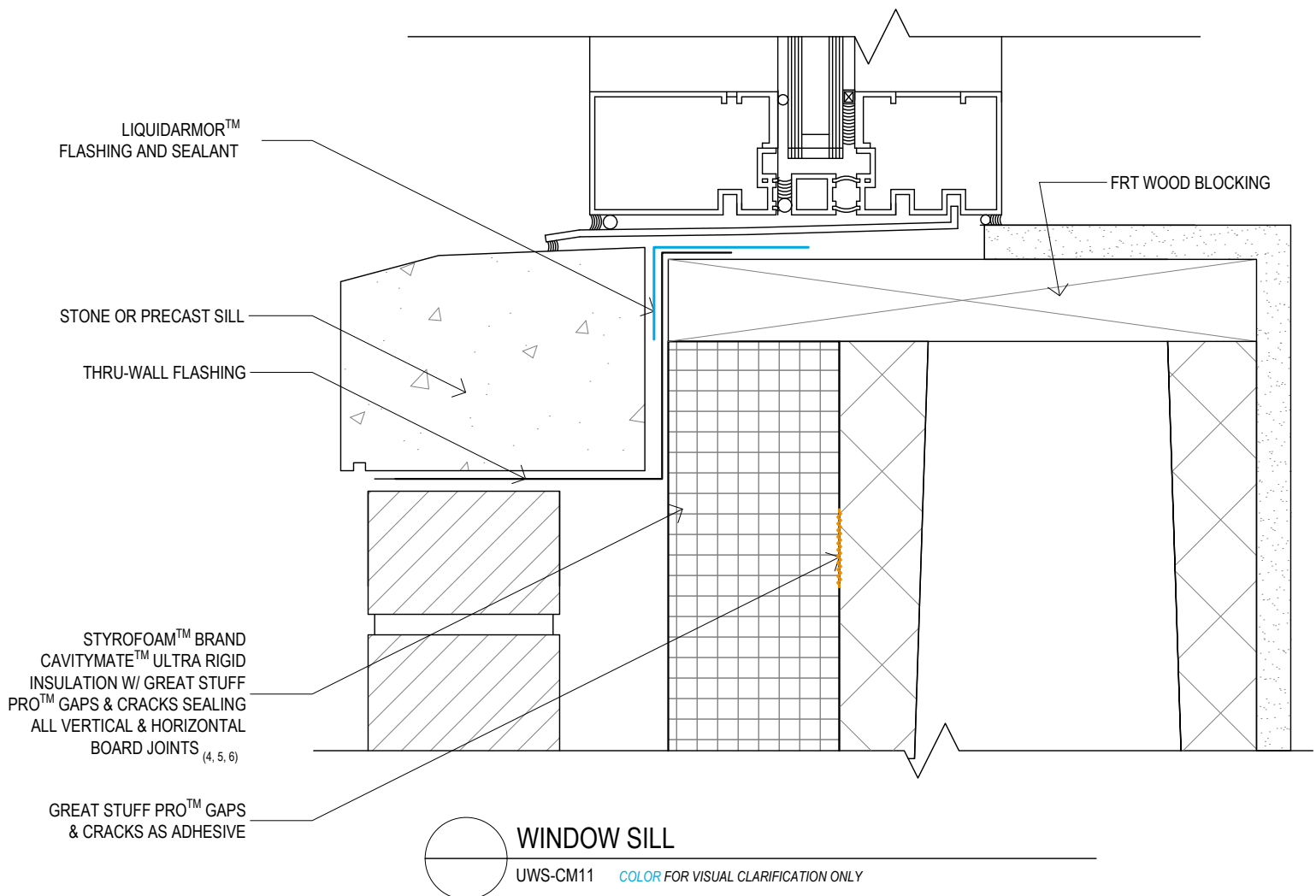
1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-CM-02 "SYSTEM OPTIONS" AND MIN . 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



### MINIMUM REQUIREMENTS

1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-CM-02 "SYSTEM OPTIONS" AND MIN . 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

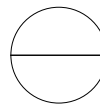
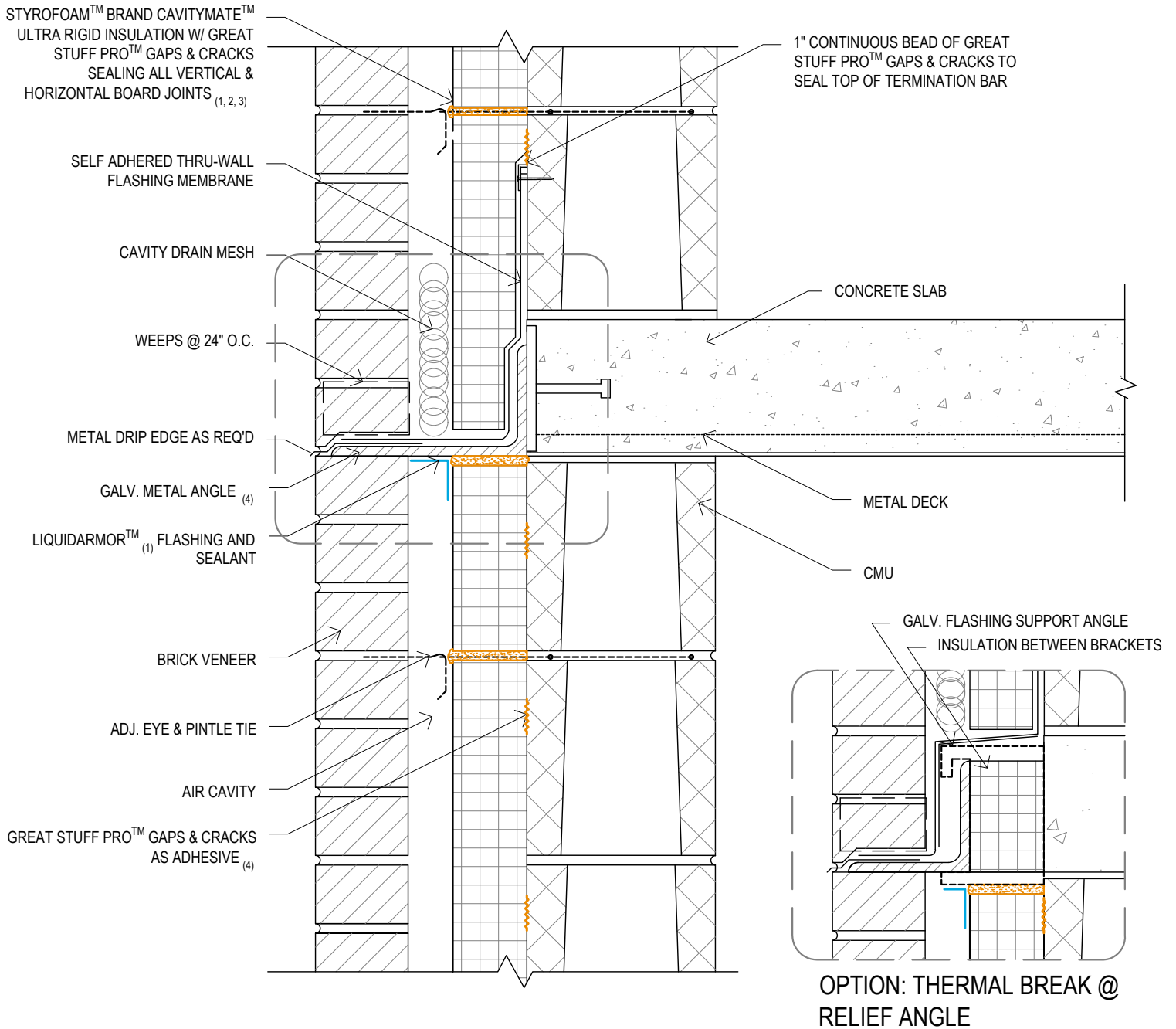


# ULTRAWALLsystem

details by 

CAVITYMATE™ Ultra Insulation

## Edge of Slab Relief Angle



### EDGE OF SLAB RELIEF ANGLE

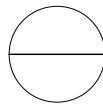
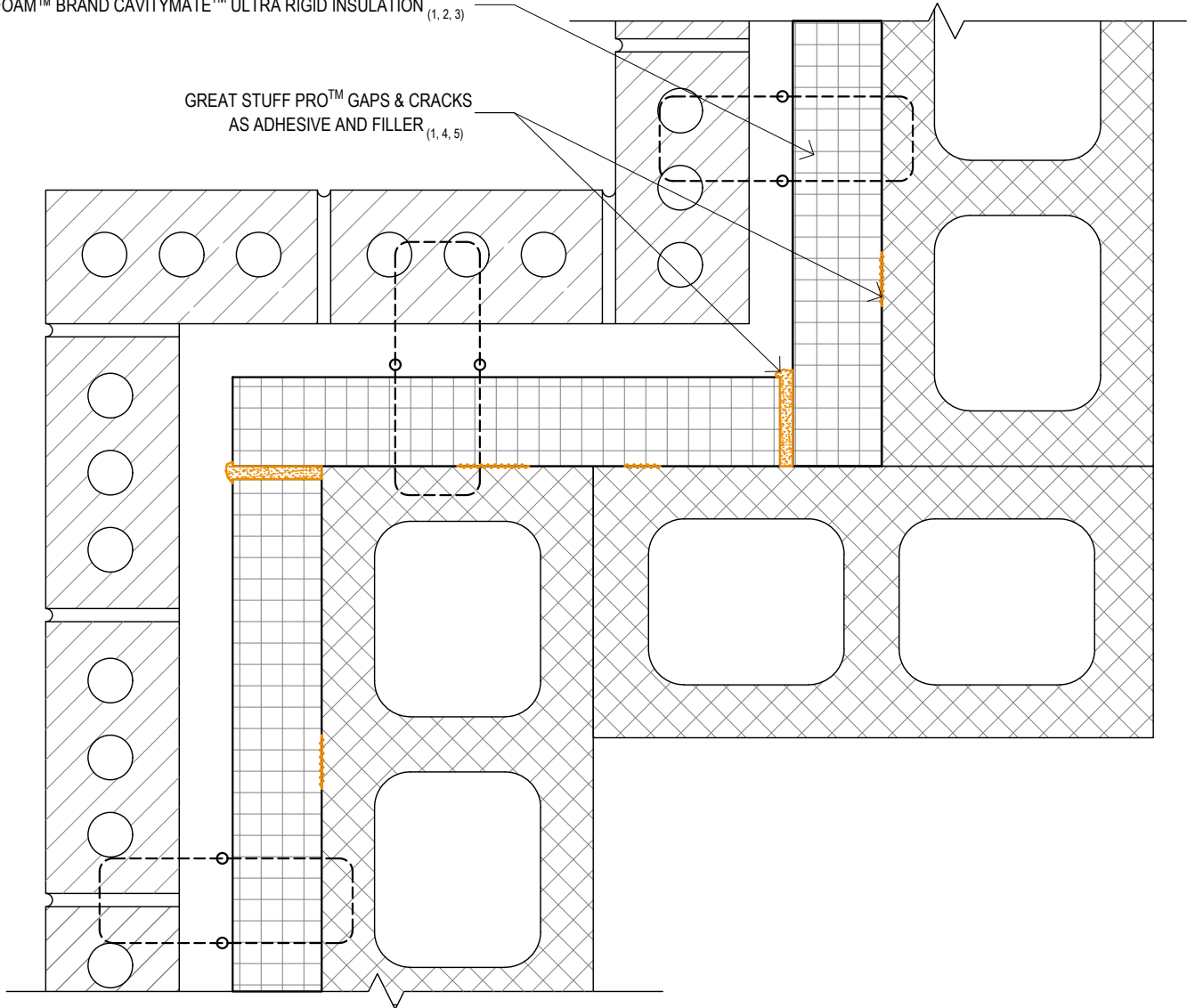
UWS-CM12 COLOR FOR VISUAL CLARIFICATION ONLY

#### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.
4. 1" GAP MAX. BETWEEN BOTTOM OF METAL ANGLE AND TOP OF INSULATION BOARD.

STYROFOAM™ BRAND CAVITYMATE™ ULTRA RIGID INSULATION (1, 2, 3)

GREAT STUFF PRO™ GAPS & CRACKS  
AS ADHESIVE AND FILLER (1, 4, 5)



### CORNERS

UWS-CM13 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
4. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.
5. ALLOW MIN.  $\frac{1}{4}$ " TO MAX. 3" GAP BETWEEN INSULATION BOARDS TO ALLOW PROPER INSTALLATION OF GREAT STUFF PRO™ GAPS & CRACKS.

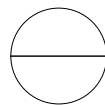
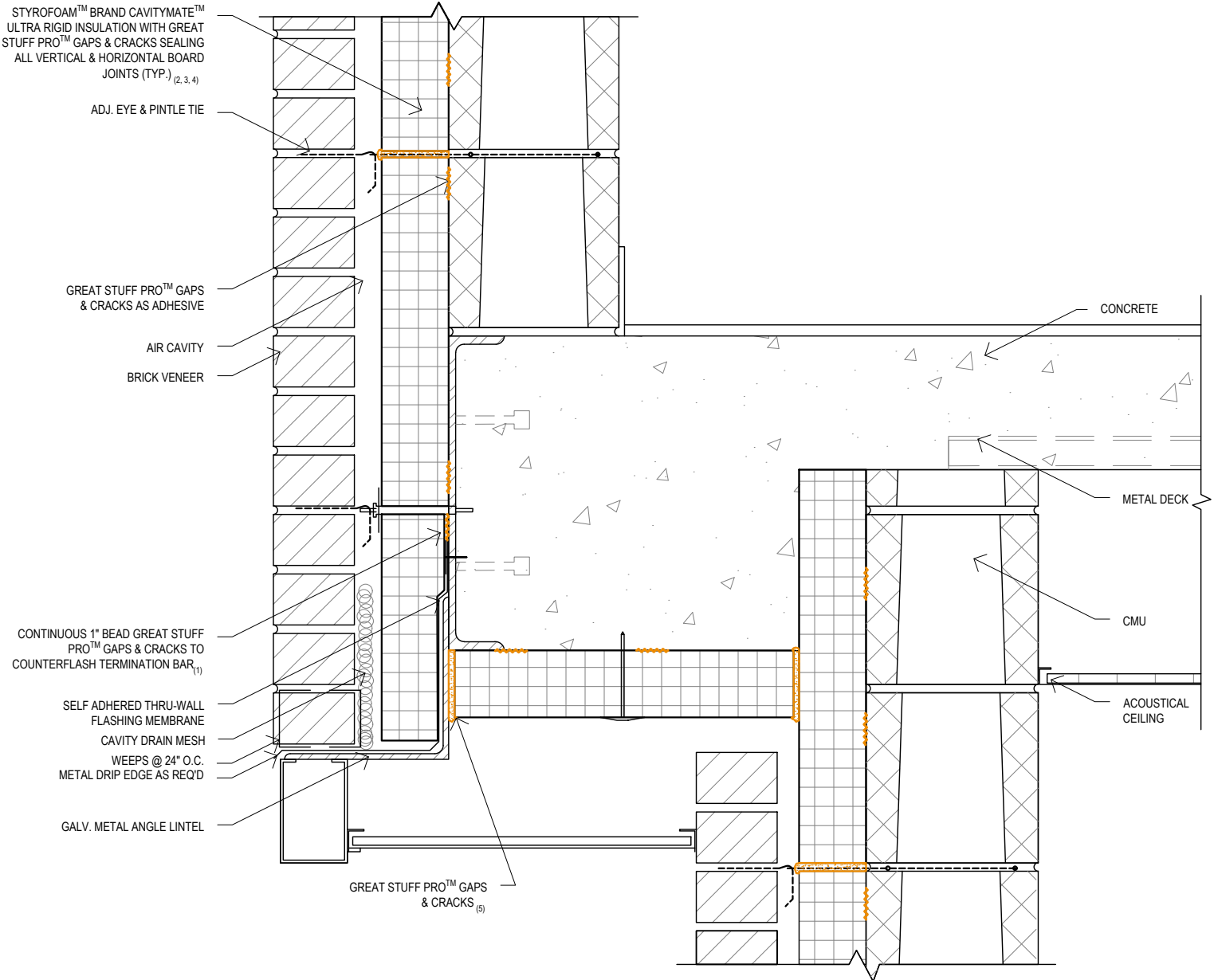
1-13

# ULTRAWallsystem

details by 

CAVITYMATE™ Ultra Insulation

## Change in Plane



### CHANGE IN PLANE

UWS-CM14 COLOR FOR VISUAL CLARIFICATION ONLY

#### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
4. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.
5. ALLOW MIN.  $\frac{1}{4}$ " TO MAX. 3" GAP BETWEEN INSULATION BOARDS TO ALLOW PROPER INSTALLATION OF GREAT STUFF PRO™ GAPS & CRACKS.

1-14

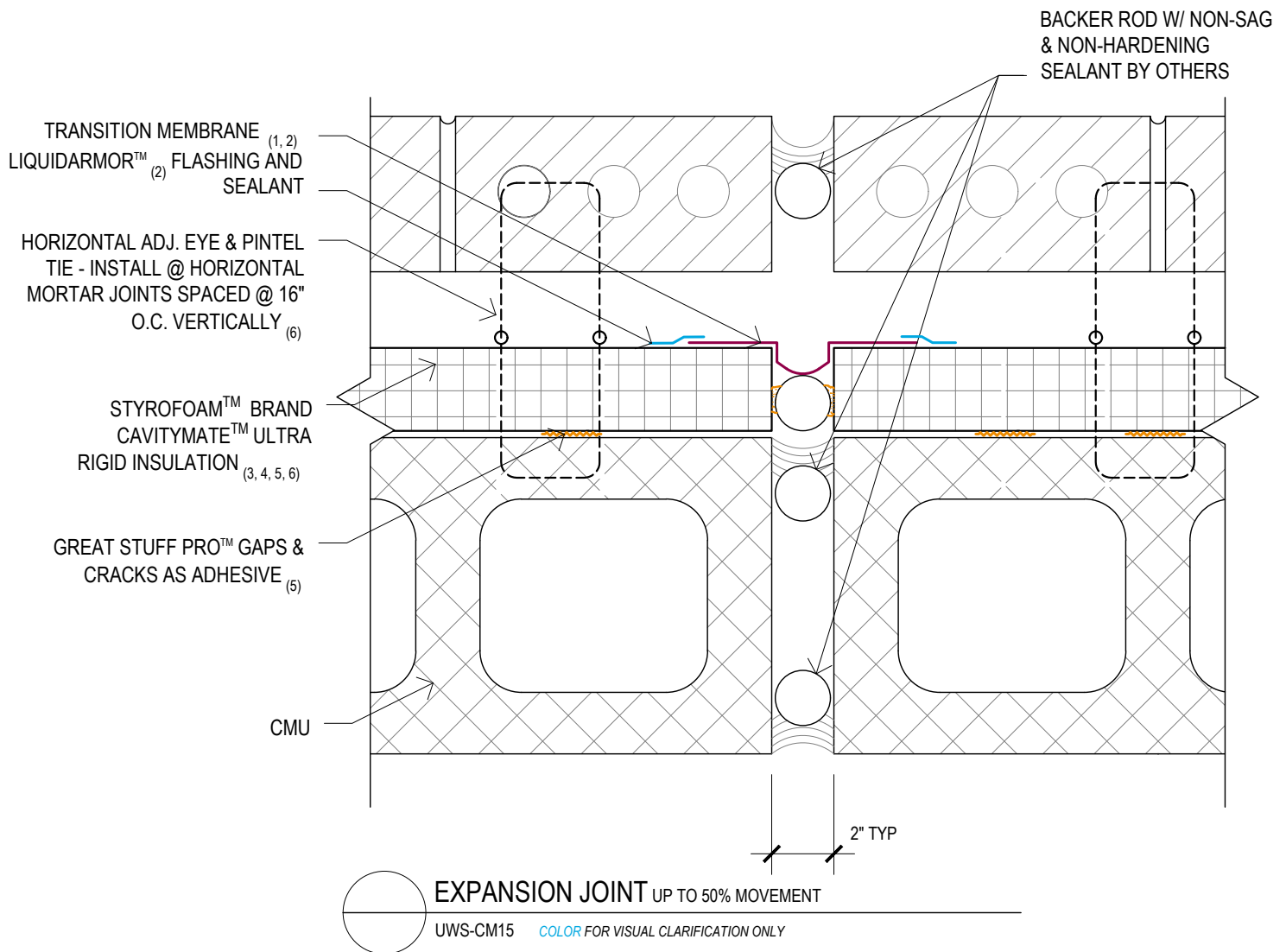
### DESIGN INTENT

1. ALLOW UP TO 50% MOVEMENT OF EXPANSION JOINT.
2. MAINTAIN CONTINUITY OF AIR AND WATER BARRIERS ACROSS EXPANSION JOINT USING TRANSITION MEMBRANE.

### TRANSITION MEMBRANE RECOMMENDATIONS

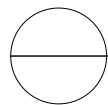
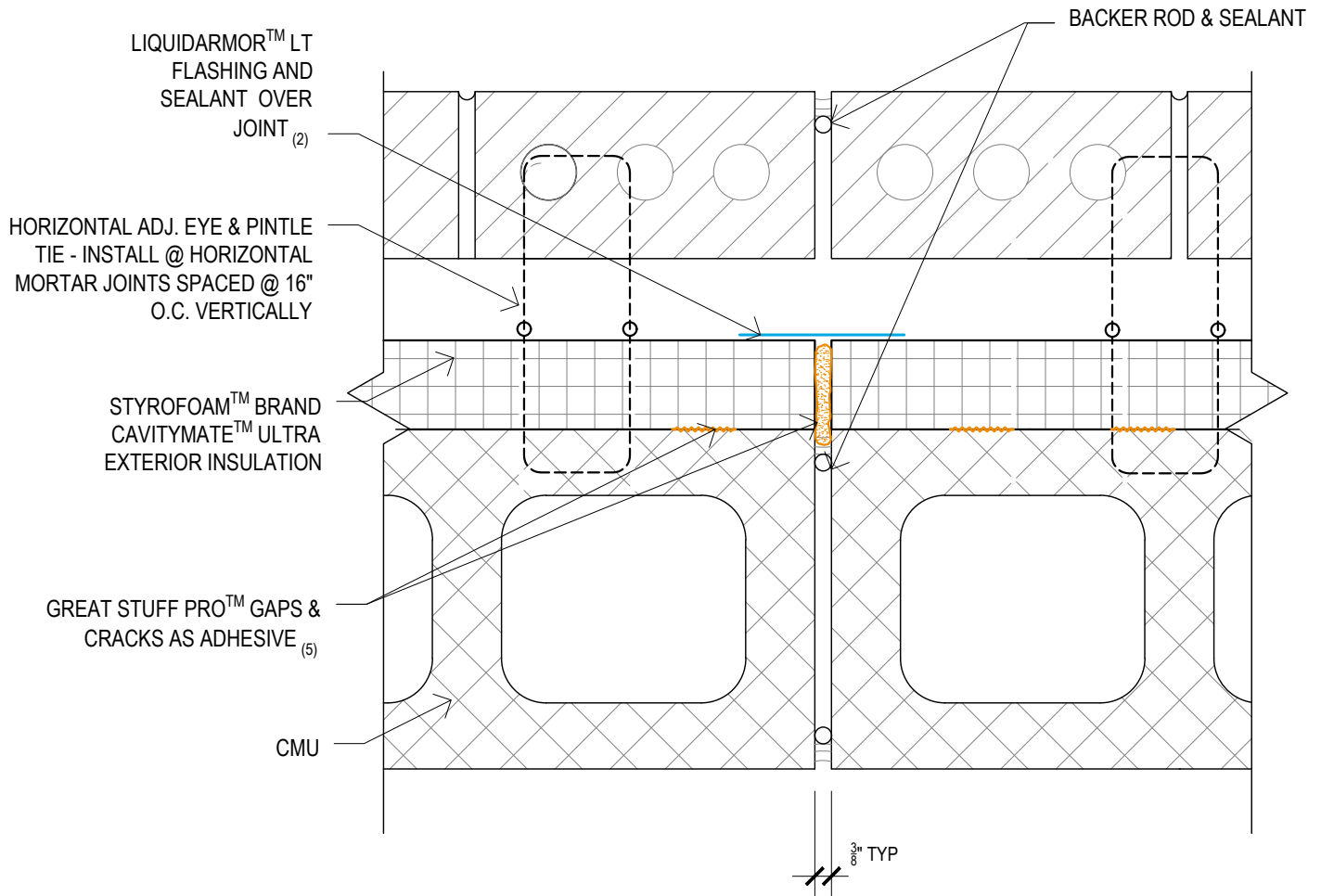
- SILICONE TRANSITION STRIP\* WITH LIQUIDARMOR™ LT FLASHING AND SEALANT TO SEAL EDGES TO FACE OF INSULATION.

*\*OTHER EXPANSION TRANSITION MEMBRANES MAY BE USED. DESIGNER IS RESPONSIBLE FOR SELECTING EXPANSION TRANSITION MEMBRANE AND VERIFYING MATERIAL & ADHESION COMPATIBILITIES.*



### MINIMUM REQUIREMENTS

1. TRANSITION MEMBRANE MUST BE CAPABLE OF BRIDGING JOINT WITH UP TO 50% MOVEMENT AND SEALED TO FACE OF INSULATION.
2. CONFIRM WITH MATERIAL MANUFACTURERS ON ADHESION COMPATIBILITY.
3. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
6. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.



**CONTROL JOINT** UP TO 25% MOVEMENT

UWS-CM16 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. LIQUIDARMOR™ CM NOT ACCEPTABLE OVER CONTROL JOINT.
3. INSULATION MUST BE COVERED WITHIN 90 DAYS.
4. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
5. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.



# ULTRAWallsystem

details by 

CAVITYMATE™ Ultra Insulation

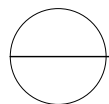
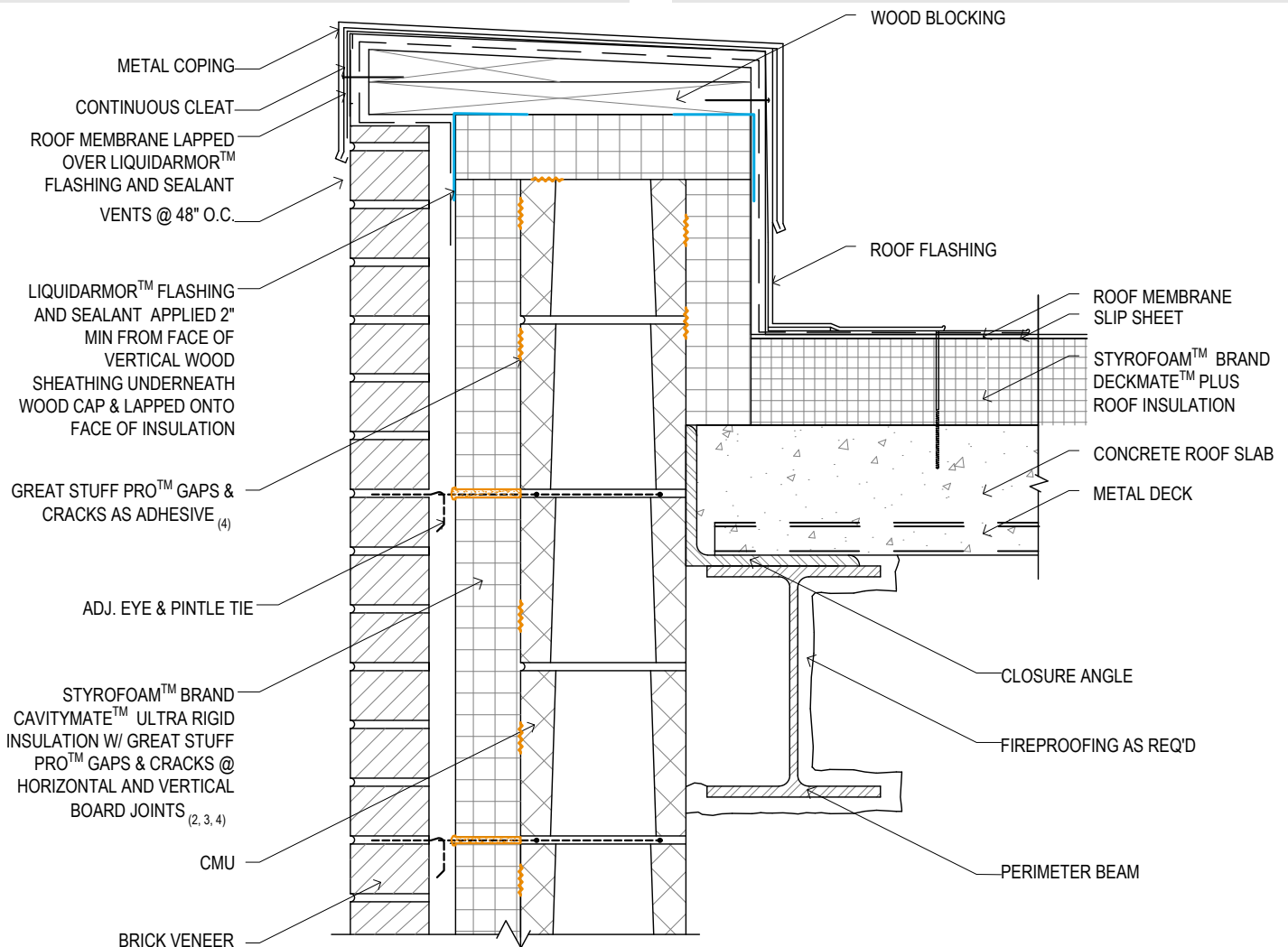
## Parapet

### DESIGN INTENT

1. SUCCESSFULLY TRANSITION 4 CONTROL LAYERS FROM VERTICAL WALL PLANE TO HORIZONTAL ROOFING PLANE WITHOUT INTERRUPTION.
2. INSULATION & AIR BARRIER TO SEAL OFF UNCONDITIONED PARAPET WALL FROM INTERACTING WITH CONDITIONED INTERIOR AIR TO FURTHER PREVENT CONDENSATION POTENTIAL.
3. TRANSITION TO ROOFING MEMBRANE MATERIALS USING COMPATIBLE MATERIALS.

### GENERAL RECOMMENDATIONS

1. COMBINATION OF MATERIALS MAY BE USED TO ENCAPSULATE PARAPET WALL - ALL MANUFACTURERS SHOULD BE CONSULTED TO ENSURE CHEMICAL COMPATIBILITY OF MEMBRANE/TRANSITION MATERIALS TO INSULATION.
2. 3RD PARTY MATERIAL TO TRANSITION FROM ROOFING MEMBRANE OVER/UNDER COPING TO TERMINATE ON FACE OF RIGID INSULATION.
3. FROTH-PAK™ INSULATION (CLASS A) AT ROOF DECK / PARAPET JUNCTURE TO BE INSTALLED PRIOR TO ROOF INSULATION & MEMBRANE.



### PARAPET - ROOF/WALL JUNCTURE

UWS-CM17 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-CM02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
2. INSULATION MUST BE COVERED WITHIN 90 DAYS.
3. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-CM08 "PATCHING INSULATION".
4. SEE DETAIL UWS-CM03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.



## Ultra Wall System Details

WITH

### Ultra SL

Insulation (48"x96")

# DETAILS

## Contents

**UWS-CM CAVITYMATE™ Ultra**

Page

1-0

**UWS-SL Ultra SL**

2-0

UWS-SL01	Control Layer Summary	2-1
UWS-SL02	System Options	2-2
UWS-SL03	Fastening Guidelines	2-3
UWS-SL04	Transitions	2-4
UWS-SL05	Expansion Joint	2-5
UWS-SL06	Control Joint	2-6
UWS-SL07	Penetrations	2-7
UWS-SL08	Patching Insulation	2-8
UWS-SL09	Foundation - Face Flashed	2-9
UWS-SL10	Foundation - Stud Flashed	2-10
UWS-SL11	Win. Head In-Wall Fireblock	2-11
UWS-SL12	Win. Head Face Mineral	2-12
UWS-SL13	Win. Head Stud Mineral	2-13
UWS-SL14	Window Sill	2-14
UWS-SL15	Edge of Slab Relief Angle	2-15
UWS-SL16	Corners	2-16
UWS-SL17	Change in Plane	2-17
UWS-SL18	Parapet	2-18

## Detail Set Overview

The **Ultra Wall System (UWS)** detail set outlines the general guidelines for design using the system, focusing maintaining continuity of the thermal, air, and water control layers. These details are meant to be used as guides during the design phase of a project.

"**UWS-CM**" details show **STYROFOAM™ Brand CAVITYMATE™ Ultra** Insulation over CMU, and are most commonly used in block and brick construction.

"**UWS-SL**" details show **STYROFOAM™ Brand Ultra SL** Insulation (ship-lapped 4'x8' XPS) commonly used over steel studs.

*Other system detail sets available at [dowbuildingsolutions.com](http://dowbuildingsolutions.com)*

### NAVIGATING

Nomenclature

Key

**UWS-CM01**

System —

Detail Set —

Detail Number —

**UWS** Ultra Wall System  
**CM** CAVITYMATE Ultra  
**SL** Ultra SL

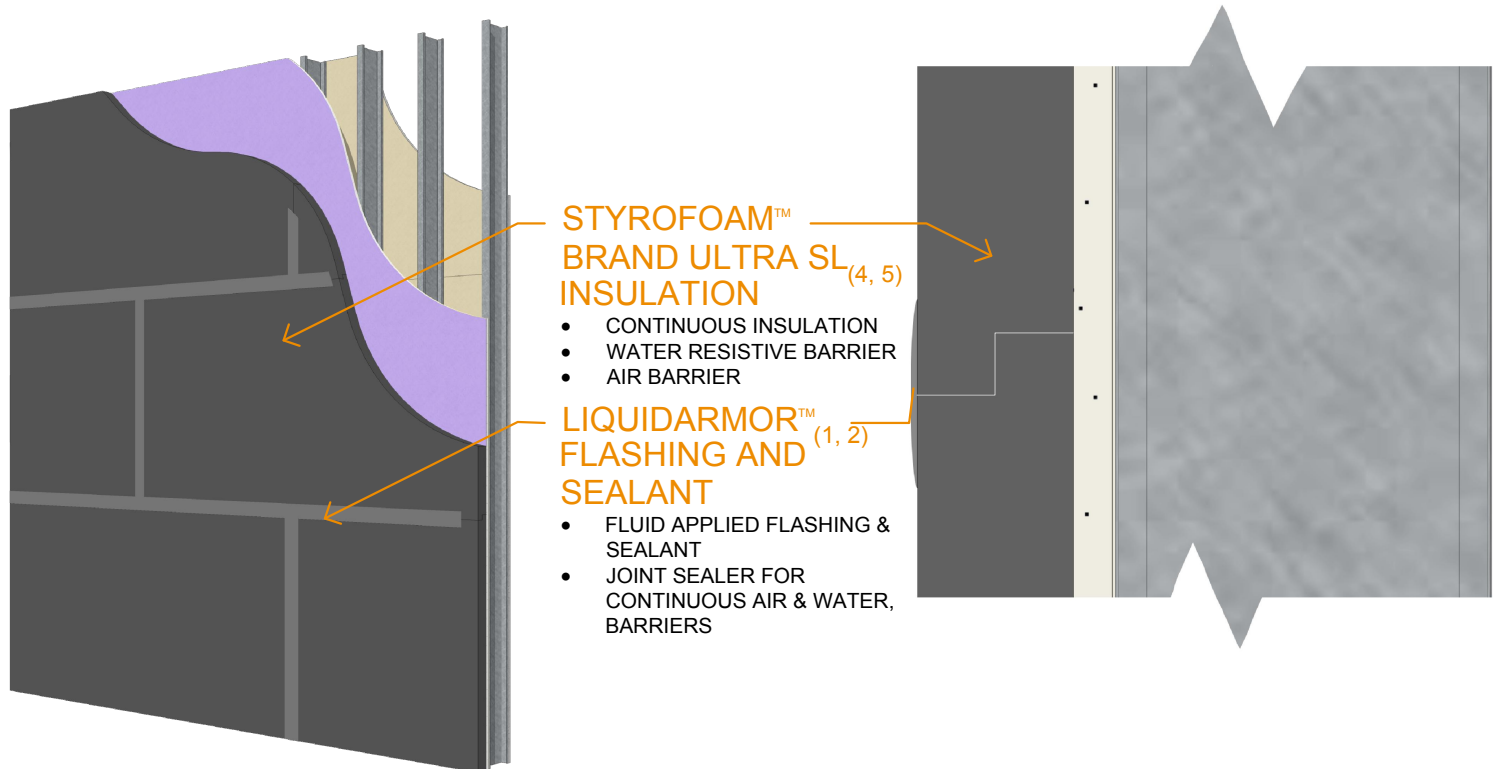
### DESIGN INTENT

1. STYROFOAM™ BRAND EXTRUDED POLYSTYRENE RIGID INSULATION ACTS AS PRIMARY CONTROL LAYERS: THERMAL (CI), WATER-RESISTIVE, AND AIR SEALING, WHILE THE INSULATION JOINT TREATMENT (LIQUIDARMOR™) WILL SEAL ALL VERTICAL & HORIZONTAL BOARD JOINTS TO MAKE THE CONTROL LAYERS CONTINUOUS.
2. CONTINUOUS INSULATION THICKNESS TO BE DETERMINED TO MINIMIZE CONDENSATION POTENTIAL AND COMPLY WITH ENERGY CODE.

### ASTM STANDARDS

STYROFOAM™ BRAND ULTRA SL INSULATION WITH LIQUIDARMOR™ FLASHING AND SEALANT

- CLASS A PER ASTM E84
- AIR BARRIER PER ASTM E2357
- WATER BARRIER PER ASTM E331
- R-5.6 @ 1" PER ASTM C518



ULTRA SL SYSTEM | ISOMETRIC

UWS-SL01.1 (EXCLUDES BASE FLASHINGS, FASTENERS, CLADDINGS, ETC.)



ULTRA SL SYSTEM | SECTION

UWS-SL01.2

### MINIMUM REQUIREMENTS

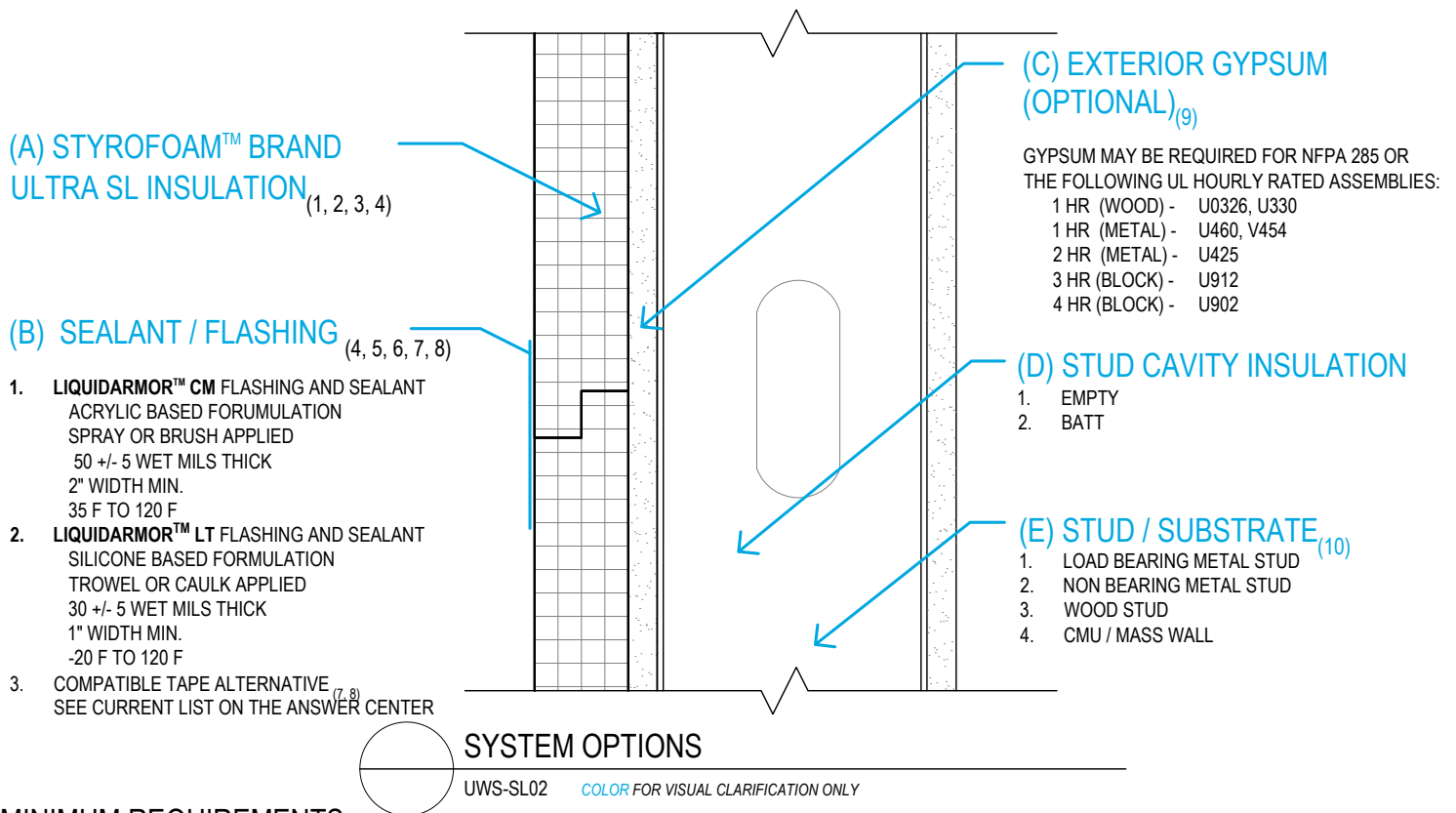
1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4$ " BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.

### DESIGN INTENT

1. THE BASIS OF DESIGN FOR THE ULTRA (SL) WALL SYSTEM USES STYROFOAM™ BRAND ULTRA SL INSULATION AND LIQUIDARMOR™ CM OR LT FLASHING AND SEALANT. NOTE THAT OTHER OPTIONS SHOWN ON PAGE ARE ACCEPTABLE PER CODE.
2. THE ULTRA (SL) WALL SYSTEM CAN BE COMPOSED OF SEVERAL DIFFERENT OPTIONS, CHOOSING COMBINATION OF ITEMS FROM SECTIONS (A) THRU (E). ALL OPTIONS WILL MEET CODE FOR CONTINUOUS INSULATION (R-VALUE REQUIREMENTS VARY BY CLIMATE ZONE), AIR BARRIER, AND WATER BARRIER.
3. VERIFY ASSEMBLY HAS **NFPA 285 APPROVAL** IF APPLICABLE, INCLUDING SEAM TREATMENT AND FLASHING MAX. WIDTHS.

### WARRANTY AVAILABLE

50 YEAR THERMAL LIMITED WARRANTY FOR STYROFOAM™ BRAND XPS INSULATION 1.5" THICK AND GREATER.



### MINIMUM REQUIREMENTS

1. INSULATION MUST BE COVERED WITHIN 90 DAYS.
2. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
3. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES & FASTENERS.
4. INSULATION JOINTS TO BE SEALED CENTERED OVER JOINT WITH MIN. 2" WIDTH (CENTERED OVER JOINT) LIQUIDARMOR™ CM FLASHING AND SEALANT @ 50 +/- 5 WET MILS  
OR MIN. 1" WIDTH (CENTERED OVER JOINT) LIQUIDARMOR LT @ 30 +/- 5 WET MILS  
OR 4" WIDTH COMPATIBLE TAPE (SEE ANSWER CENTER FOR CURRENT LIST).
5. LIQUIDARMOR CM CANNOT BE APPLIED OVER LIQUIDARMOR LT OR ANY OTHER SILICONE PRODUCTS. LIQUIDARMOR LT CAN BE APPLIED OVER LIQUIDARMOR CM.
6. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS ≥ 1/4" BEFORE SEALING WITH LIQUIDARMOR™ PRODUCT.
7. ALL APPLICATIONS USING COMPATIBLE TAPE MUST BE INSTALLED IN A "SHINGLE LAP" PATTERN VERTICALLY TO PROMOTE WATER SHEDDING.
8. ALL APPLICATIONS USING COMPATIBLE TAPE TO BE INSTALLED USING HARD STRAIGHT EDGING TOOL (HAND PRESSURE NOT ACCEPTABLE).
9. EXTERIOR GYPSUM SHEATHING IS NOT REQUIRED TO MEET WEATHER RESISTIVE & AIR BARRIER REQUIREMENTS, BUT MAY BE REQUIRED FOR HOURLY RATED WALL ASSEMBLIES OR OTHER PROJECT SPECIFICS.
10. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.

### DESIGN INTENT

1. SECURE STYROFOAM™ BRAND ULTRA SL INSULATION TO STRUCTURE.
2. USE SELF-SEALED MASONRY TIES AS INSULATION FASTENERS TO MINIMIZE NUMBER OF PENETRATIONS AND MAINTAIN INTEGRITY OF 4 CONTROL LAYERS.
3. MASONRY TIE LENGTH TO ACCOMMODATE INSULATION THICKNESS.

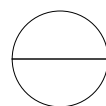
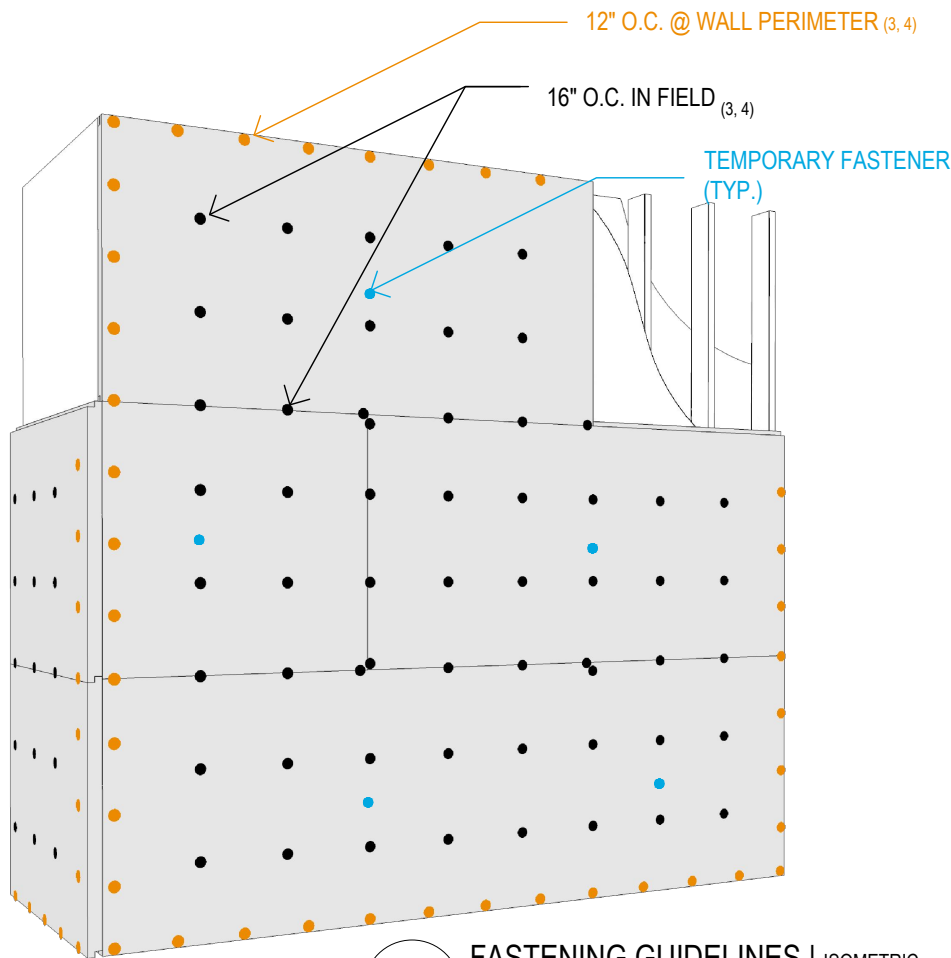
### FASTENER / MASONRY TIE RECOMMENDATIONS

#### SELF-SEALING BARREL STYLE MASONRY TIES (PICTURED BELOW)

- HECKMANN POS-I-TIE WITH RODENHOUSE THERMAL-GRIP CI WASHER
- HOHMANN & BARNARD 2-SEAL TIE, 2-SEAL THERMAL WINGNUT ANCHOR, & THERMAL 2-SEAL TIE
- WIRE-BOND SURE TIE WITH THERMAL WASHER

#### INSULATION FASTENERS (FOR TEMPORARY BOARD PLACEMENT)

- RODENHOUSE THERMAL GRIP CI WASHER WITH SELF TAPPING SCREW (FOR STEEL STUD WALLS)
- RODENHOUSE THERMAL GRIP WASHER WITH TAP-CON OR SIMILAR MASONRY SCREW (FOR CMU OR CONCRETE WALLS)



FASTENING GUIDELINES | ISOMETRIC

UWS-SL03 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. STEEL STUDS MIN. 18 GA. @ 24" MAX. O.C. W/ LATERAL BRACING EVERY 48" VERTICALLY.
2. INSULATION BOARDS SHOULD BE INSTALLED IN RUNNING BOND PATTERN.
3. INSULATION TO BE FASTENED @ MAX. 12" O.C. AT WALL PERIMETERS AND AROUND OPENINGS AND MAX 16" O.C. IN WALL FIELD.
4. ALL FASTENERS USED TO SECURE ULTRA SL TO SUBSTRATE TO HAVE A MIN. 2" DIA. WASHER. IF NOT USING RECOMMENDED FASTENERS / TIES, OR IF THESE ARE COUNTERSUNK INTO INSULATION, MUST SEAL WITH LIQUIDARMOR™ FLASHING AND SEALANT USING GUIDELINES ON DETAIL UWS-SL02 "SYSTEM OPTIONS".
5. ONE FASTENER CAN BE USED FOR NO MORE THAN 2 BOARDS. WHERE 3 OR MORE BOARDS MEET, USE AT LEAST 2 FASTENERS.
6. INSULATION MUST BE COVERED WITHIN 90 DAYS.
7. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".



### DESIGN INTENT

1. MUST MAINTAIN CONTINUITY OF ALL CONTROL LAYERS AT TRANSITIONS FROM ULTRA SL WALL SYSTEM TO OTHER SYSTEMS.
2. ENSURE COMPATIBILITY WHERE DOW FLASHING MATERIALS JOIN MATERIALS PRODUCED BY OTHER MANUFACTURERS.
3. COUNTERFLASH MATERIALS TO PROMOTE WATERSHEDDING AT TRANSITION LOCATIONS
4. CONCRETE & CMU APPLICATIONS: ENSURE ADEQUATE LIQUIDARMOR™ FLASHING AND SEALANT THICKNESS IS APPLIED FOR PROPER ADHESION TO AGGREGATE.

### COMPATIBILITY RECOMMENDATIONS

1. CHEMICALLY COMPATIBLE ADHESIVE TECHNOLOGIES WITH STYROFOAM™ BRAND XPS INSULATION AND LIQUIDARMOR™ FLASHING AND SEALANT (NOTE CHEMICAL COMPATIBILITY IS NOT A QUALIFIER OF LONG-TERM ADHESION):  
ACRYLIC & ACRYLIC LATEX • BUTYL • RUBBERIZED ASPHALT • SILICONE • HOT RUBBER
2. COMPATIBILITY OF PRODUCTS/CHEMISTRIES NOT LISTED ABOVE MUST BE VERIFIED BY RESPECTIVE MANUFACTURER.
3. DESIGNER IS RESPONSIBLE TO VERIFY COMPATIBILITY OF MATERIALS WITH ADDITIONAL COMPONENTS IN ASSEMBLY.

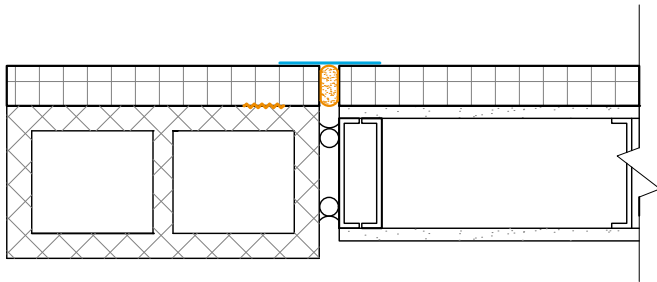
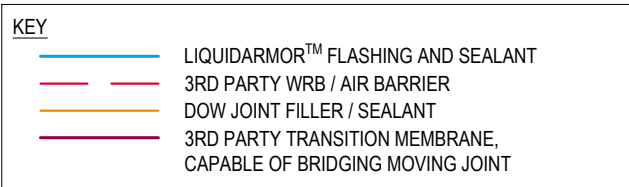


FIG 1: TRANSITION FROM CMU TO STUD | PLAN  
UWS-CM04.1 (NOTE: NOT AN EXPANSION JOINT DETAIL - MOVEMENT NOT TO EXCEED 15%)

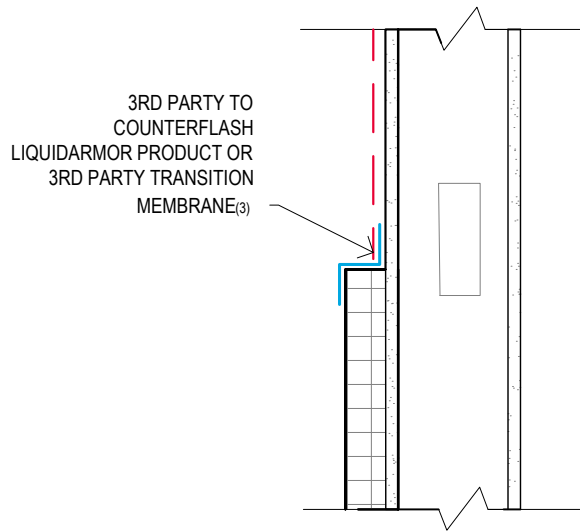


FIG 2: VERTICAL TRANSITION OF OTHER WRB TO ULTRA SL | SECTION  
UWS-SL04.2

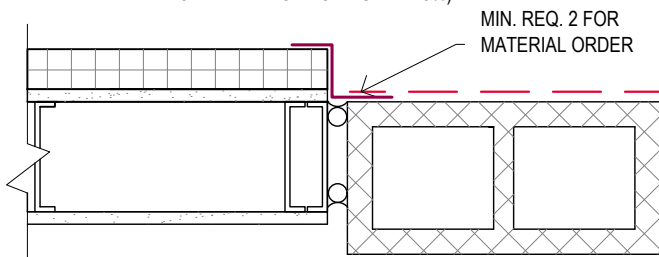


FIG 3: TRANSITION FROM ULTRA TO WRB ON CMU | PLAN  
UWS-SL04.3

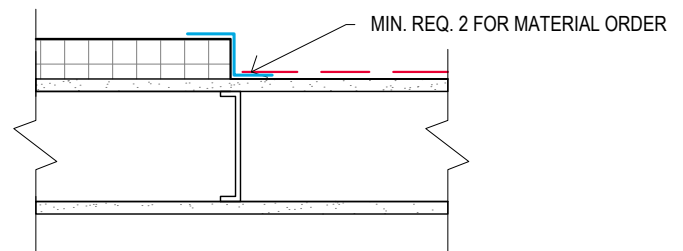
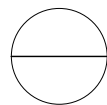


FIG 4: HORIZONTAL TRANSITION OF ULTRA SL TO OTHER WRB | PLAN  
UWS-SL04.4



### TRANSITIONS

UWS-SL04 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. OVERLAP OF SEALANT ADHESION ON ANY TRANSITION FROM FACE OF ULTRA SL ONTO ADJACENT MATERIALS MUST USE LIQUIDARMOR™ FLASHING AND SEALANT. SEE APPLICATION REQUIREMENTS ON DETAIL UWS-SL02.
2. CONFIRM WITH MATERIAL MANUFACTURERS FOR ADHESION COMPATIBILITY AND ORDER OF INSTALLATION.
3. FIG.1, GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO FILL JOINTS  $\geq 1/4"$  PRIOR TO FLASHING WITH MIN. OVERLAP TO FACE OF REQUIREMENTS ON DETAIL UWS-SL02 TO EACH FACE OF ULTRA SL.
4. FIG. 2, 3, 4, SEE MIN. WIDTH OF LIQUIDARMOR™ FLASHING AND SEALANT REQUIREMENTS ON DETAIL UWS-SL02 ONTO FACE OF ULTRA SL AND FACE OF OTHER SUBSTRATE.

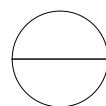
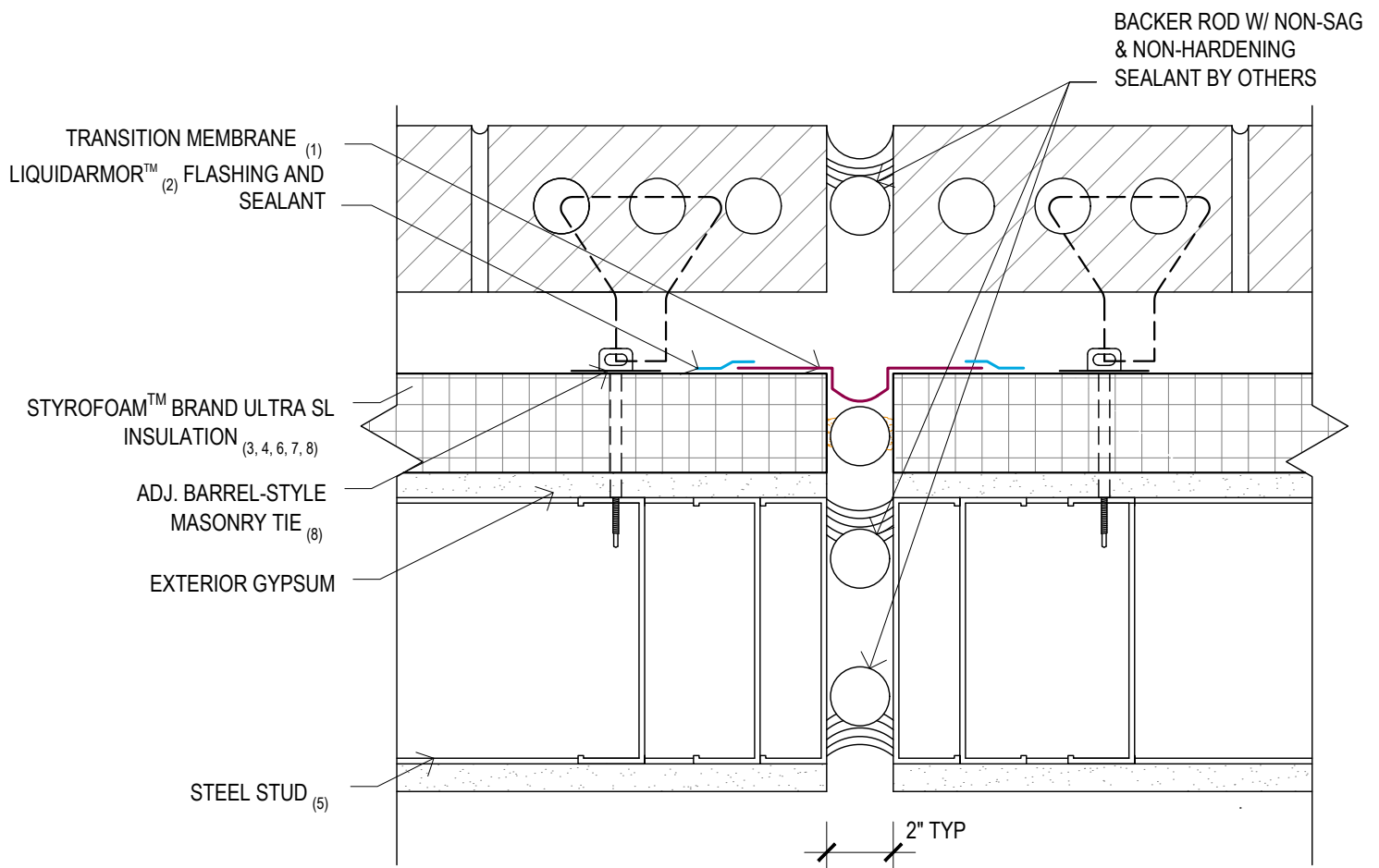
### DESIGN INTENT

1. ALLOW UP TO 50% MOVEMENT OF EXPANSION JOINT.
2. MAINTAIN CONTINUITY OF AIR AND WATER BARRIERS ACROSS EXPANSION JOINT USING TRANSITION MEMBRANE.

### TRANSITION MEMBRANE RECOMMENDATIONS

- SILICONE TRANSITION STRIP\* WITH LIQUIDARMOR™ LT FLASHING AND SEALANT TO SEAL EDGES TO FACE OF INSULATION.

*\*OTHER EXPANSION TRANSITION MEMBRANES MAY BE USED. DESIGNER IS RESPONSIBLE FOR SELECTING EXPANSION TRANSITION MEMBRANE AND VERIFYING MATERIAL & ADHESION COMPATIBILITIES.*

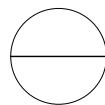
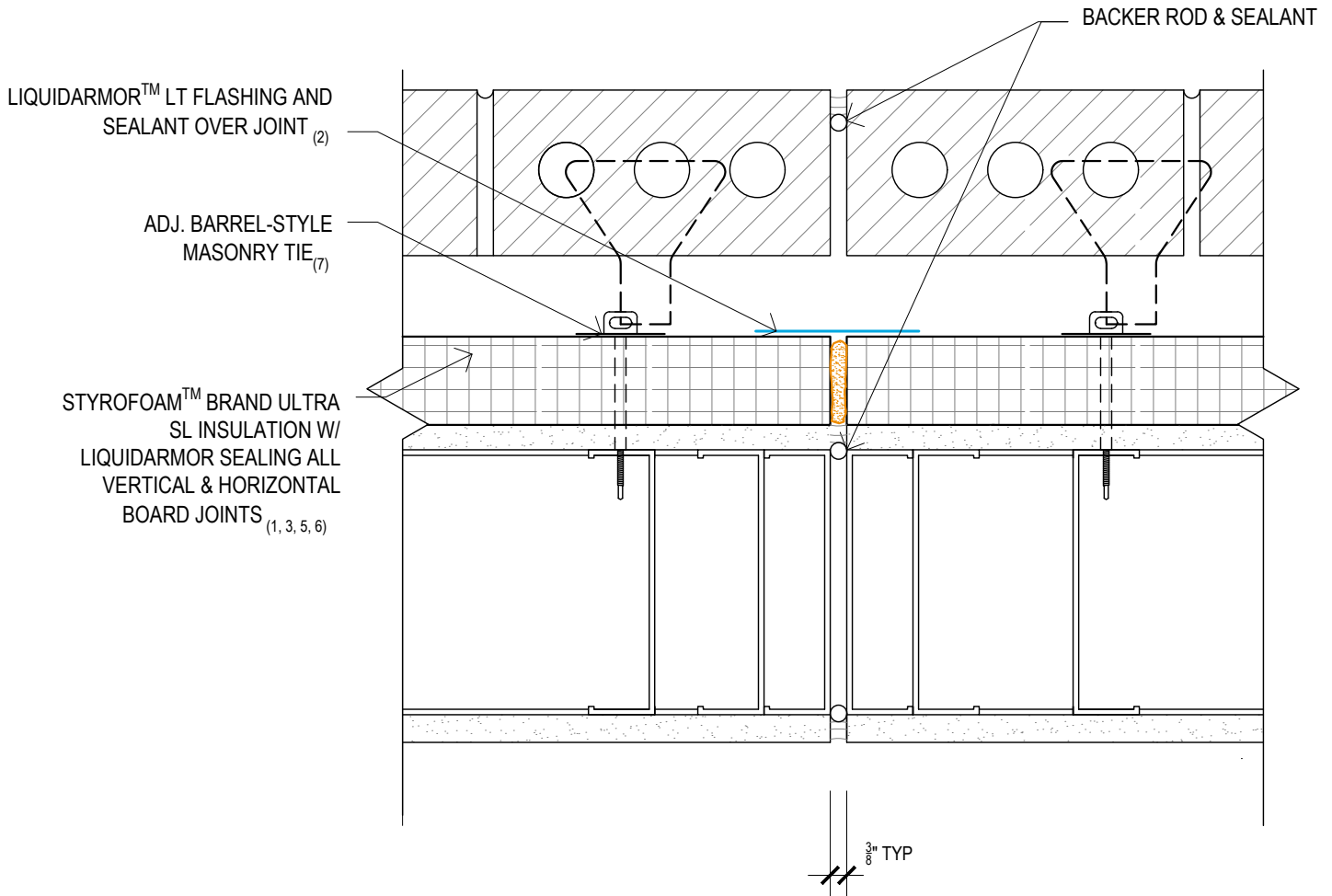


EXPANSION JOINT UP TO 50% MOVEMENT

UWS-SL05 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. TRANSITION MEMBRANE TO BE CAPABLE OF BRIDGING EXPANSION JOINT WITH UP TO 50% MOVEMENT AND SEALED TO FACE OF INSULATION.
2. CONFIRM WITH MATERIAL MANUFACTURERS ON ADHESION COMPATIBILITIES.
3. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
4. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
5. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
6. INSULATION MUST BE COVERED WITHIN 90 DAYS.
7. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
8. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.

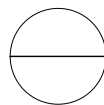
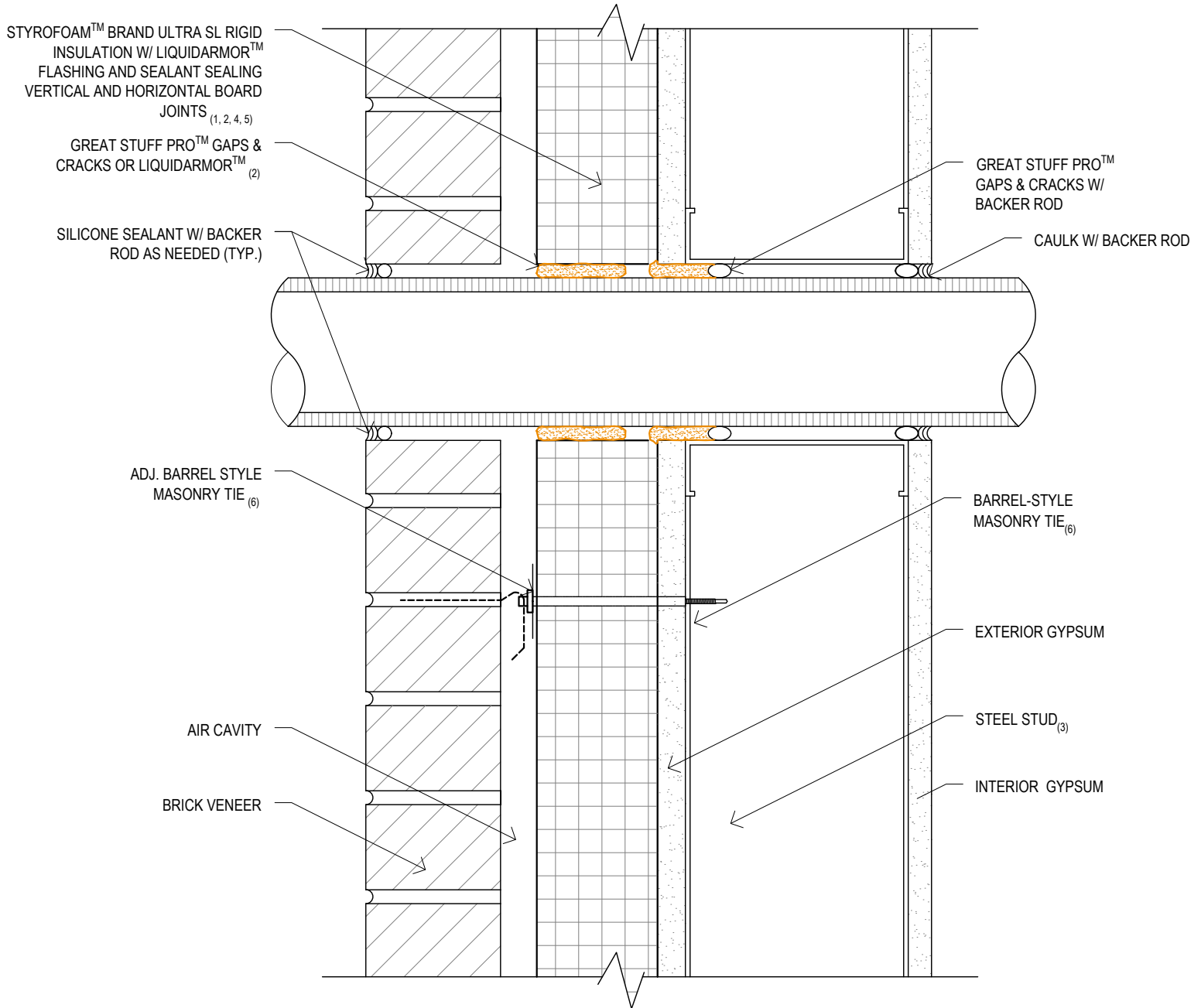


### CONTROL JOINT UP TO 25% MOVEMENT

UWS-SL06 COLOR FOR VISUAL CLARIFICATION ONLY

## MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. LIQUIDARMOR™ CM FLASHING AND SEALANT NOT ACCEPTABLE OVER CONTROL JOINT.
3. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
4. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
7. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.



### PENETRATION

UWS-SL07

COLOR FOR VISUAL CLARIFICATION ONLY

## MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.

### DESIGN INTENT

1. MAINTAIN INTEGRITY OF 4 CONTROL LAYERS BY PATCHING AS APPROPRIATE.
2. USE RESPECTIVE PATCHING TECHNIQUE, DICTATED BY SIZE OF OPENING OR DAMAGED AREA.

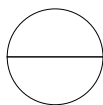
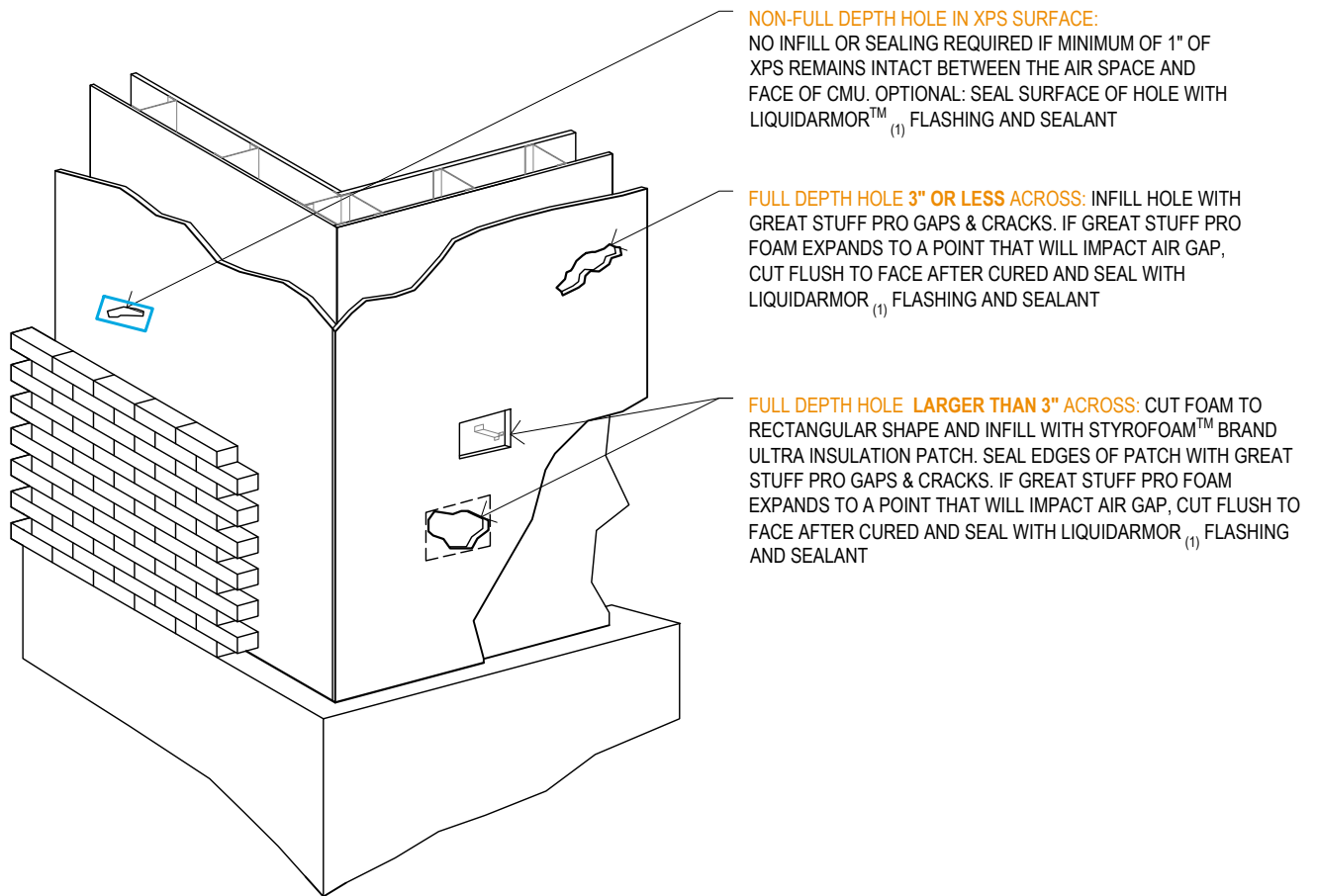
### SEALANT OPTIONS

#### ONE COMPONENT FOAM

- GREAT STUFF PRO™ GAPS & CRACKS
- GREAT STUFF PRO™ WINDOW & DOOR

FLUID APPLIED<sup>(1, 2)</sup>

- LIQUIDARMOR™ LT FLASHING AND SEALANT
  - LIQUIDARMOR™ CM FLASHING AND SEALANT
- COMPATIBLE TAPE (SEE DETAIL UWS-SL02)



### REPAIRING HOLES IN INSULATION

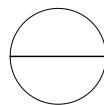
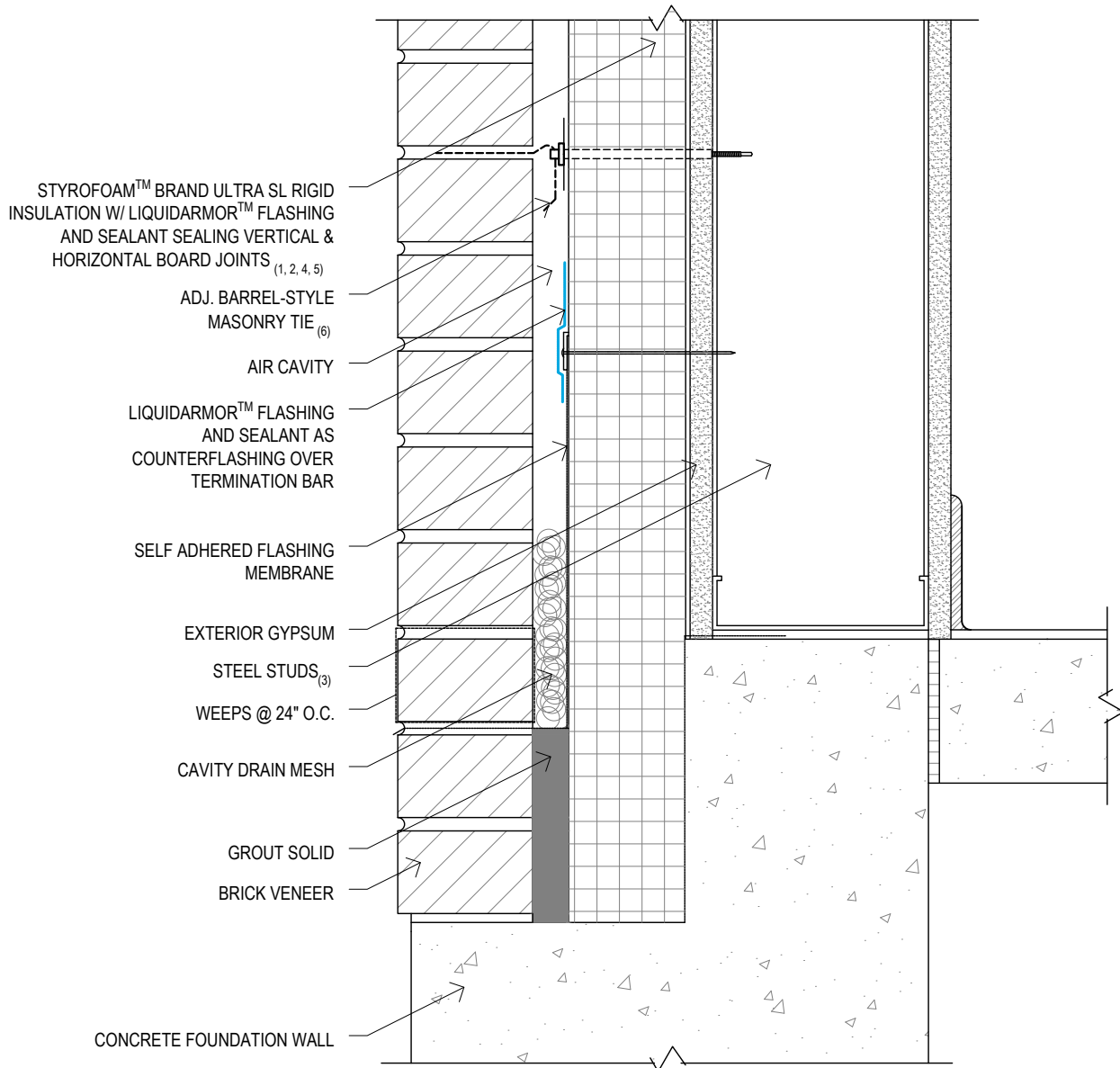
UWS-SL08

COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4$ " BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.



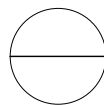
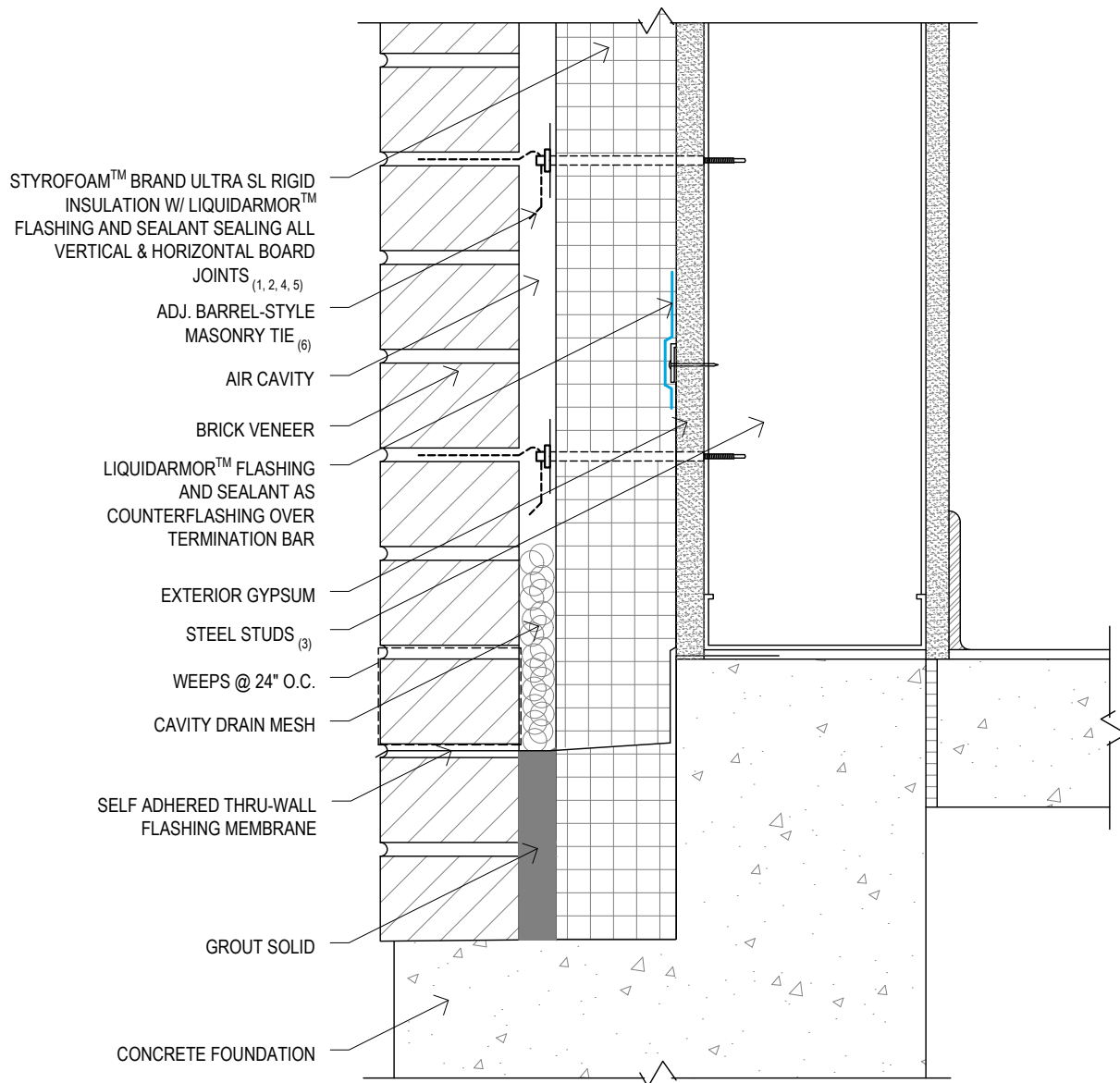


### FOUNDATION - FACE FLASHED

UWS-SL09 COLOR FOR VISUAL CLARIFICATION ONLY

#### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.



### FOUNDATION - STUD FLASHED

UWS-SL10 COLOR FOR VISUAL CLARIFICATION ONLY

#### MINIMUM REQUIREMENTS

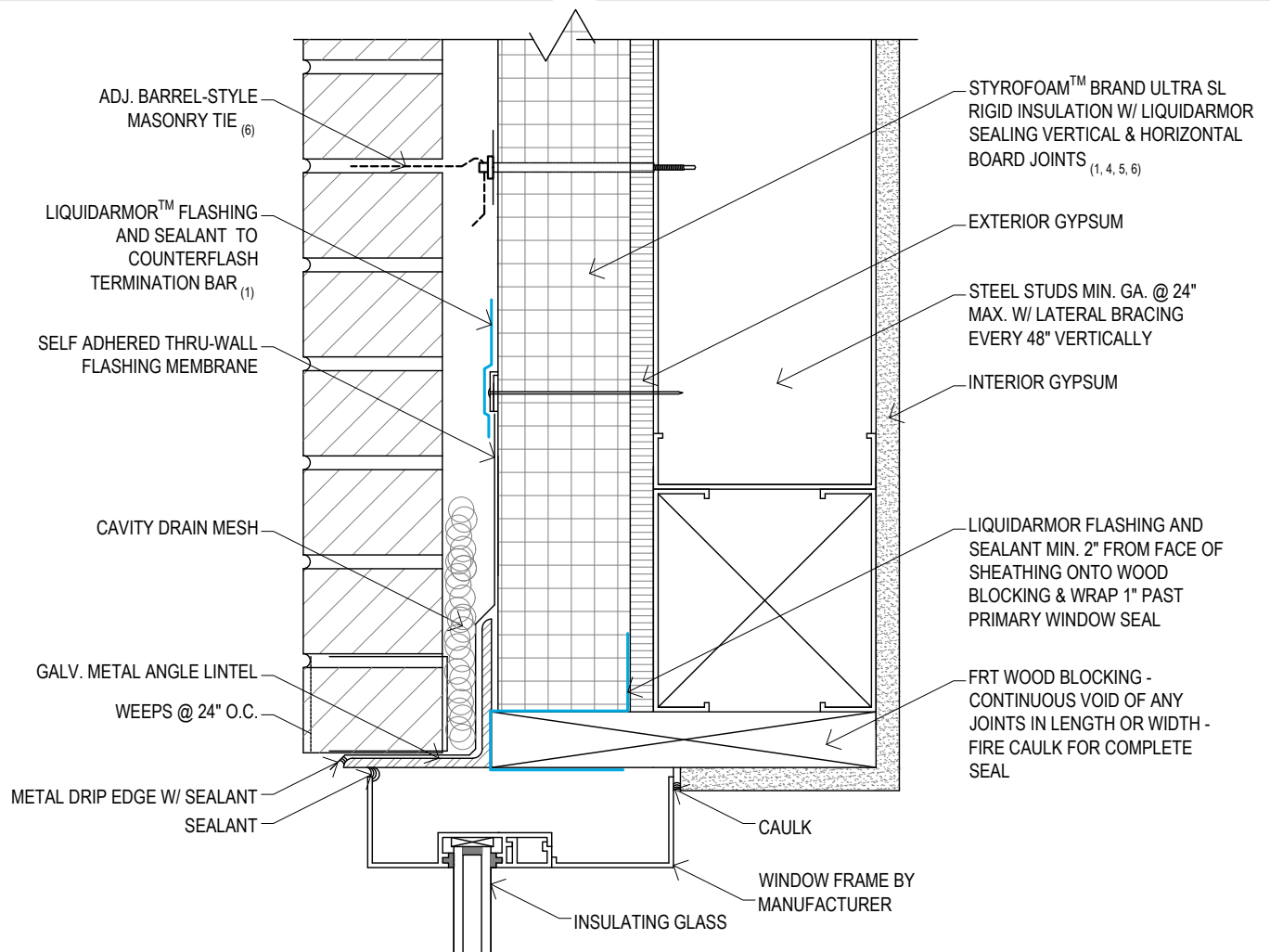
1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



WINDOW HEAD - FACE FLASHED IN-WALL FIREBLOCK

UWS-SL11 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

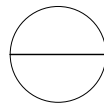
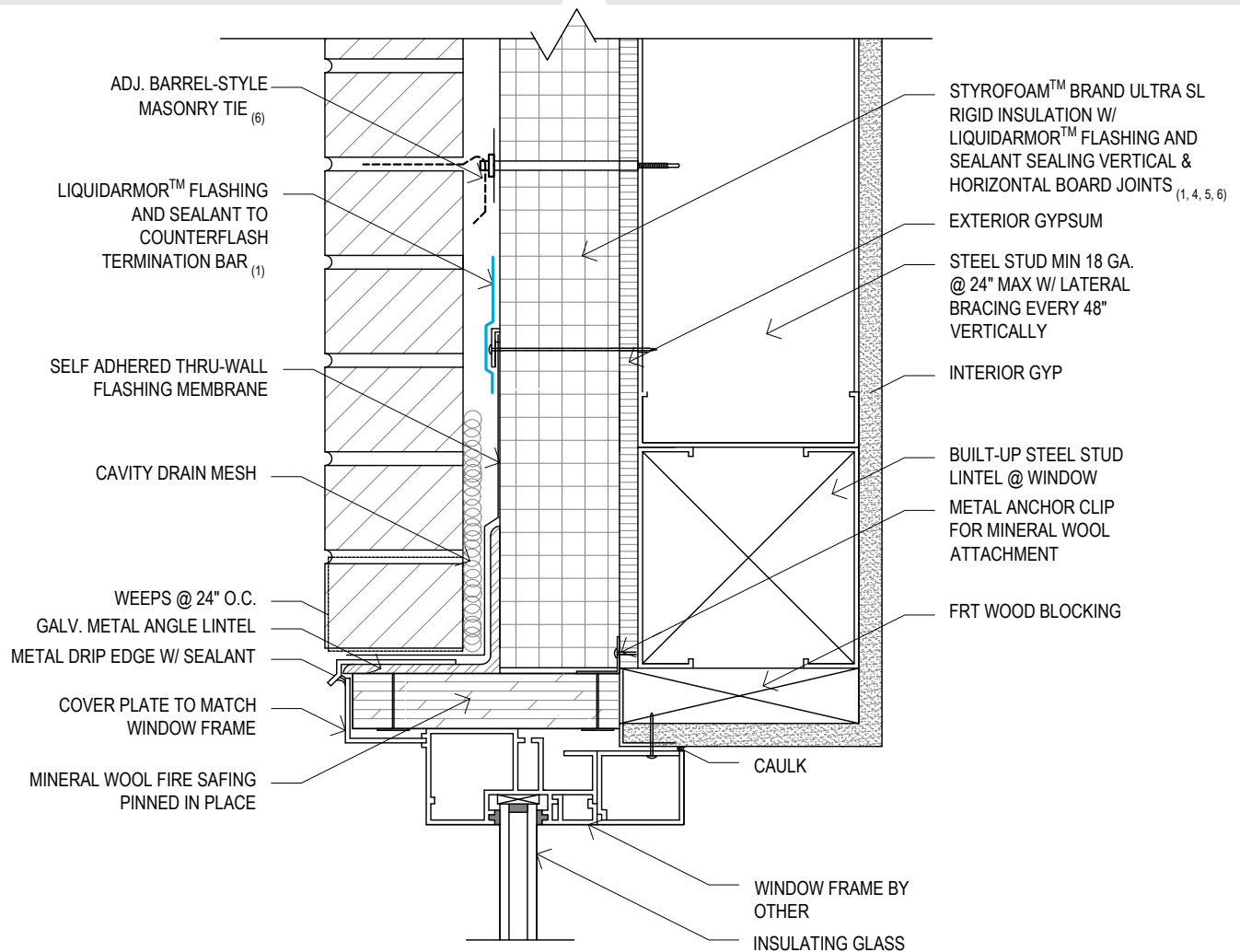
1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-SL-02 "SYSTEM OPTIONS" AND MIN. 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



### WINDOW HEAD - FACE FLASHED MINERAL WOOL

UWS-SL12 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

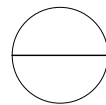
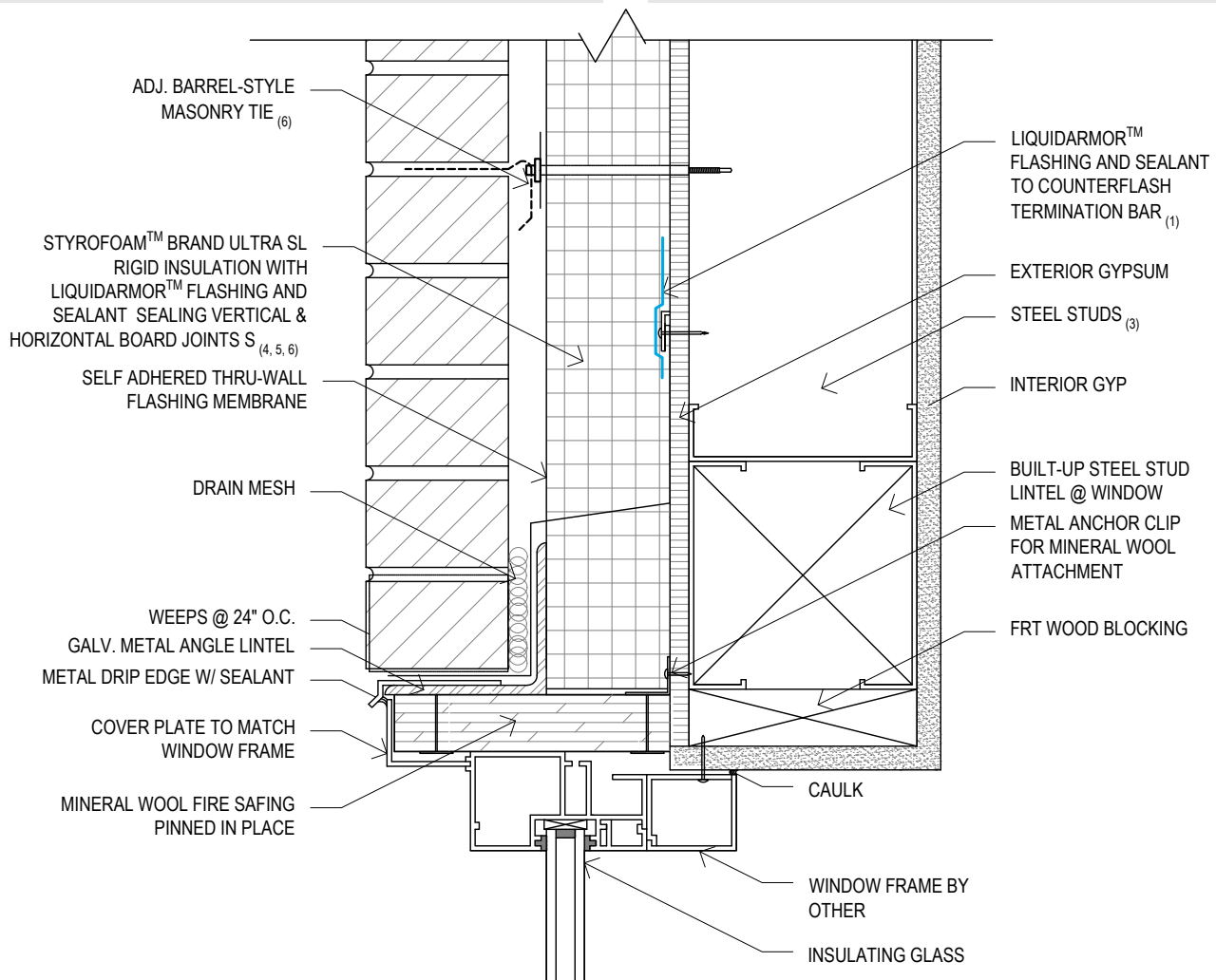
1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-SL-02 "SYSTEM OPTIONS" AND MIN . 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



WINDOW HEAD - STUD FLASHED MINERAL WOOL

UWS-SL13 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

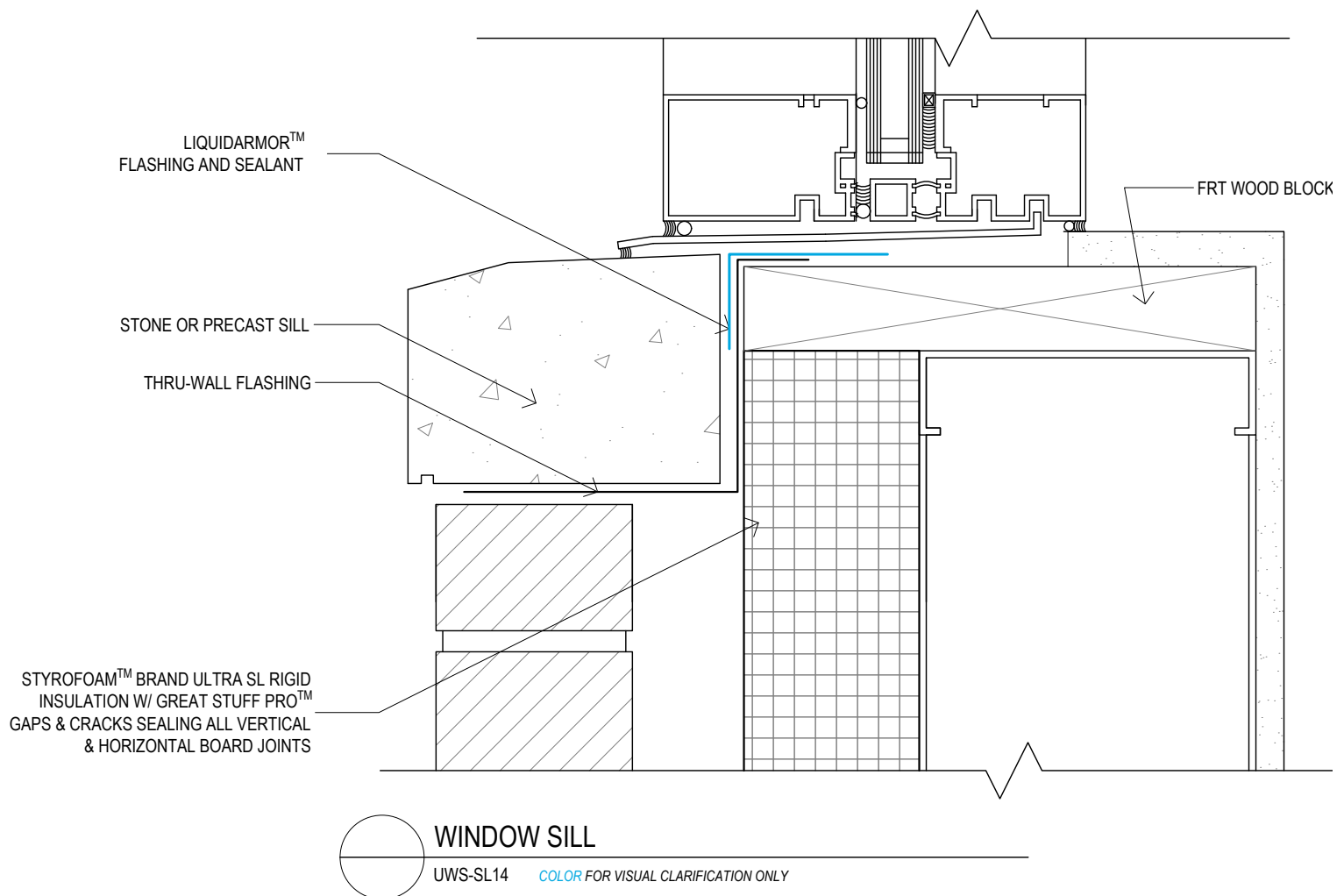
1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-SL-02 "SYSTEM OPTIONS" AND MIN. 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.

### DESIGN INTENT

1. USE LIQUIDARMOR™ FLASHING AND SEALANT TO TRANSITION THE AIR & WATER BARRIERS FROM THE FACE OF INSULATION INTO ALL JAMBS, SILLS, HEADS PRIOR TO INSTALLATION OF WINDOWS & RECEPTORS.
2. SEALANTS AND CAULKS AS SPECIFIED BY WINDOW MANUFACTURER TO BE USED AS PRIMARY DEFENSE AGAINST MOISTURE INTRUSION & AIR INFILTRATION.
3. WINDOW RECEPTOR TO ATTACH TO WOOD BLOCKING THROUGH DOW SEALANT MEMBRANE FOR ENHANCED AIR AND MOISTURE SEALING.

### GENERAL RECOMMENDATIONS

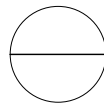
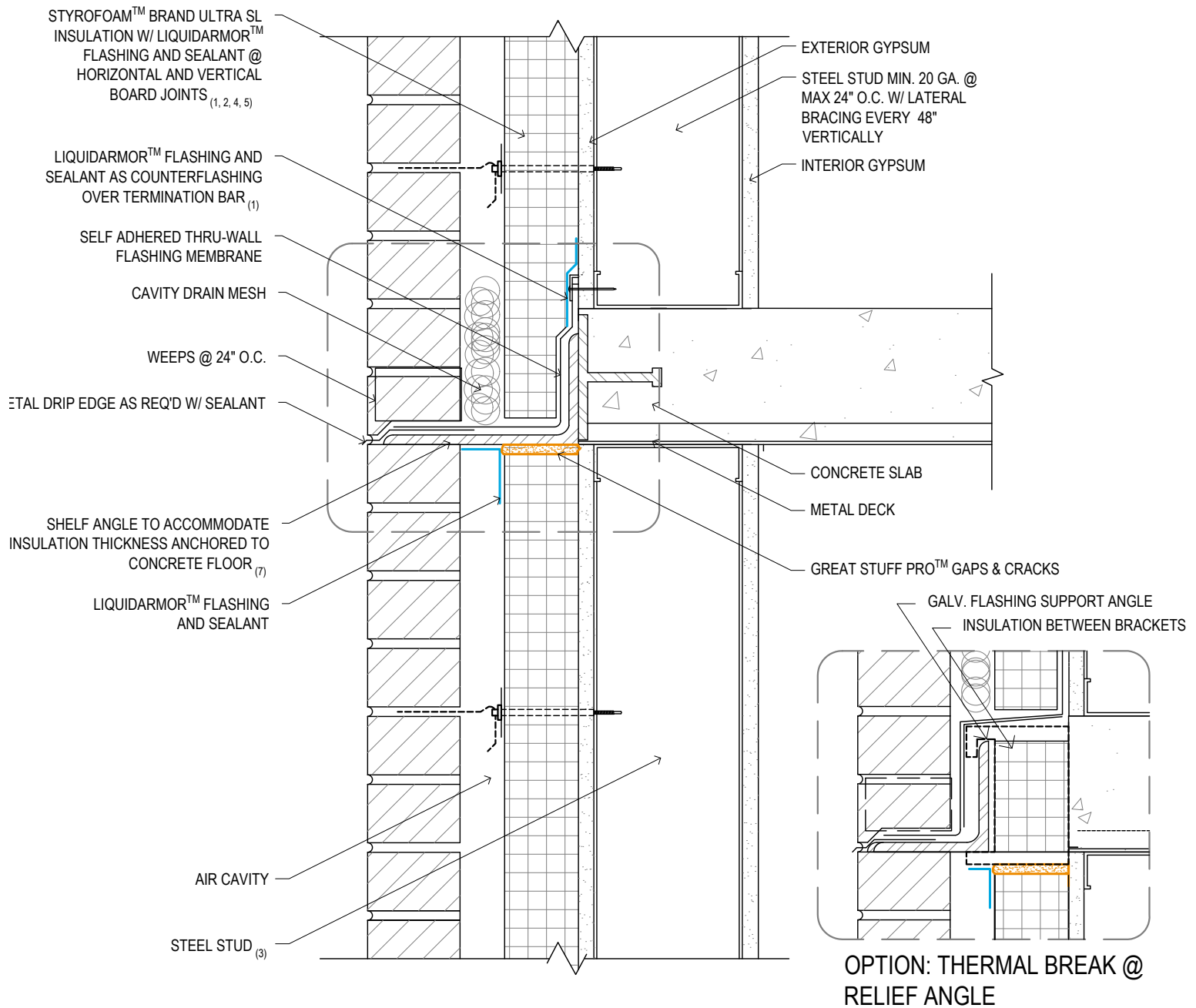
1. WINDOW SEALANT COMPATIBILITY SHOULD BE VERIFIED WITH DOW FOR LONG-TERM ADHESION TO DOW FLASHING.
2. WOOD BLOCKING IS PREFERRED TO PROVIDE ADDED RIGIDITY AND A NAILING BASE AT JAMBS, SILLS, HEADS.
3. DOUBLE STUD IS RECOMMENDED AT JAMBS TO ALLOW FOR GREATER FLEXIBILITY WITH CLADDING TERMINATION AROUND WINDOWS & DOORS.



### MINIMUM REQUIREMENTS

1. DOW SEALANT TO BE INSTALLED ONTO FACE OF INSULATION BASED ON WIDTH REQUIREMENTS ON DETAIL UWS-SL-02 "SYSTEM OPTIONS" AND MIN . 2" INTO ROUGH OPENING (SILL, JAMB, HEADER) OR 1" PAST INTERIOR CAULK JOINT, WHICHEVER IS GREATER.
2. IF NOT USING WOOD BLOCKING AT JAMB, HEAD, SILL, MUST USE METAL ANGLE TRIM ("SHINY 90") TO BRIDGE INSULATION.
3. ACCEPTABLE BLOCKING TYPES: DIMENSIONAL LUMBER (SHOWN), OSB, PLYWOOD, METAL ANGLE TRIM ("SHINY 90").
4. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR OTHER SYSTEM CONFIGURATIONS AND SEALANT OPTIONS & REQUIREMENTS.
5. INSULATION MUST BE COVERED WITHIN 90 DAYS.
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED ATTACHMENT.



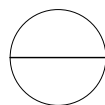
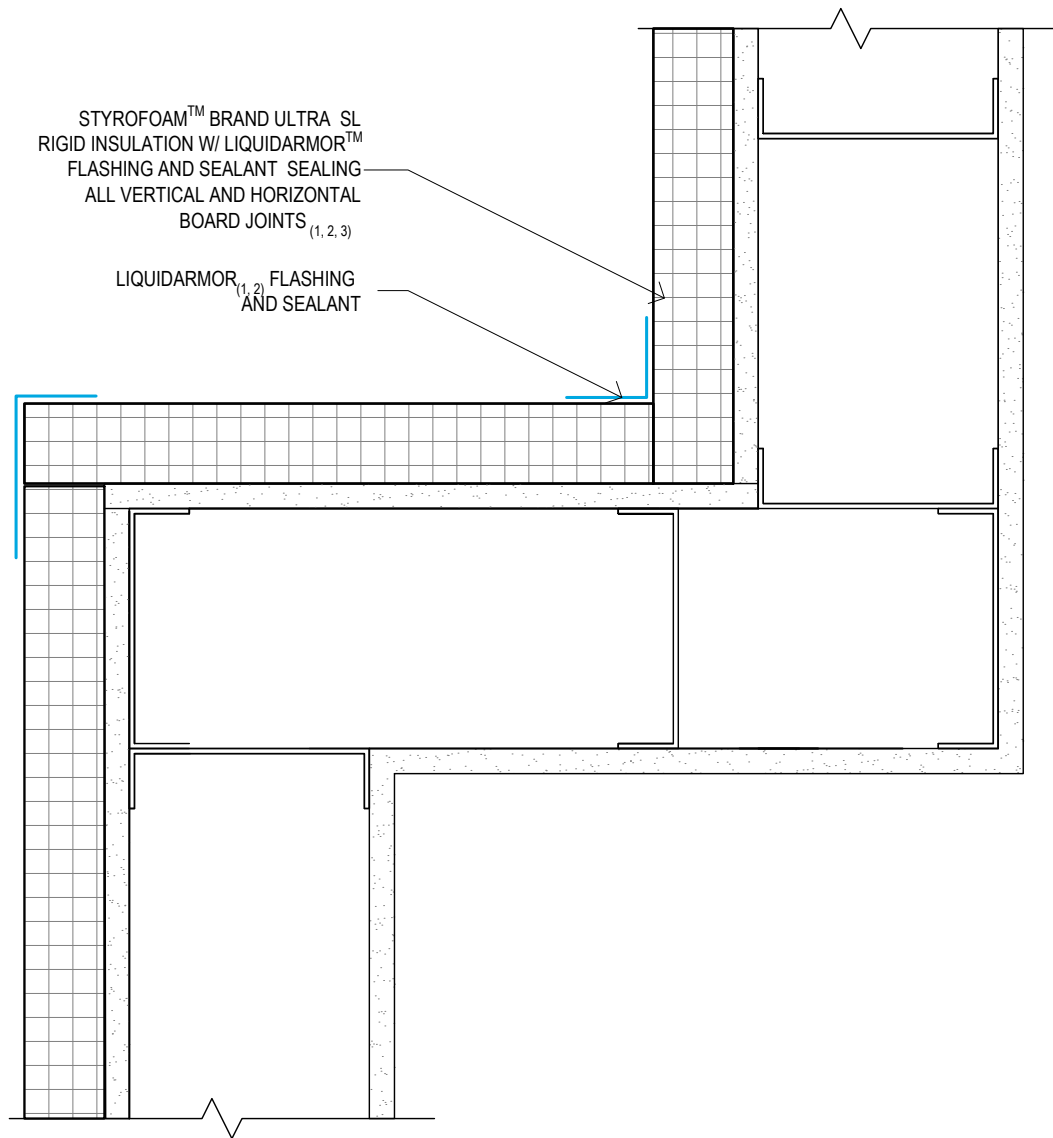


### EDGE OF SLAB RELIEF ANGLE

UWS-SL15 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.
7. 1" GAP MAX. BETWEEN BOTTOM OF METAL ANGLE AND TOP OF INSULATION BOARD.

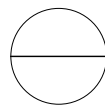
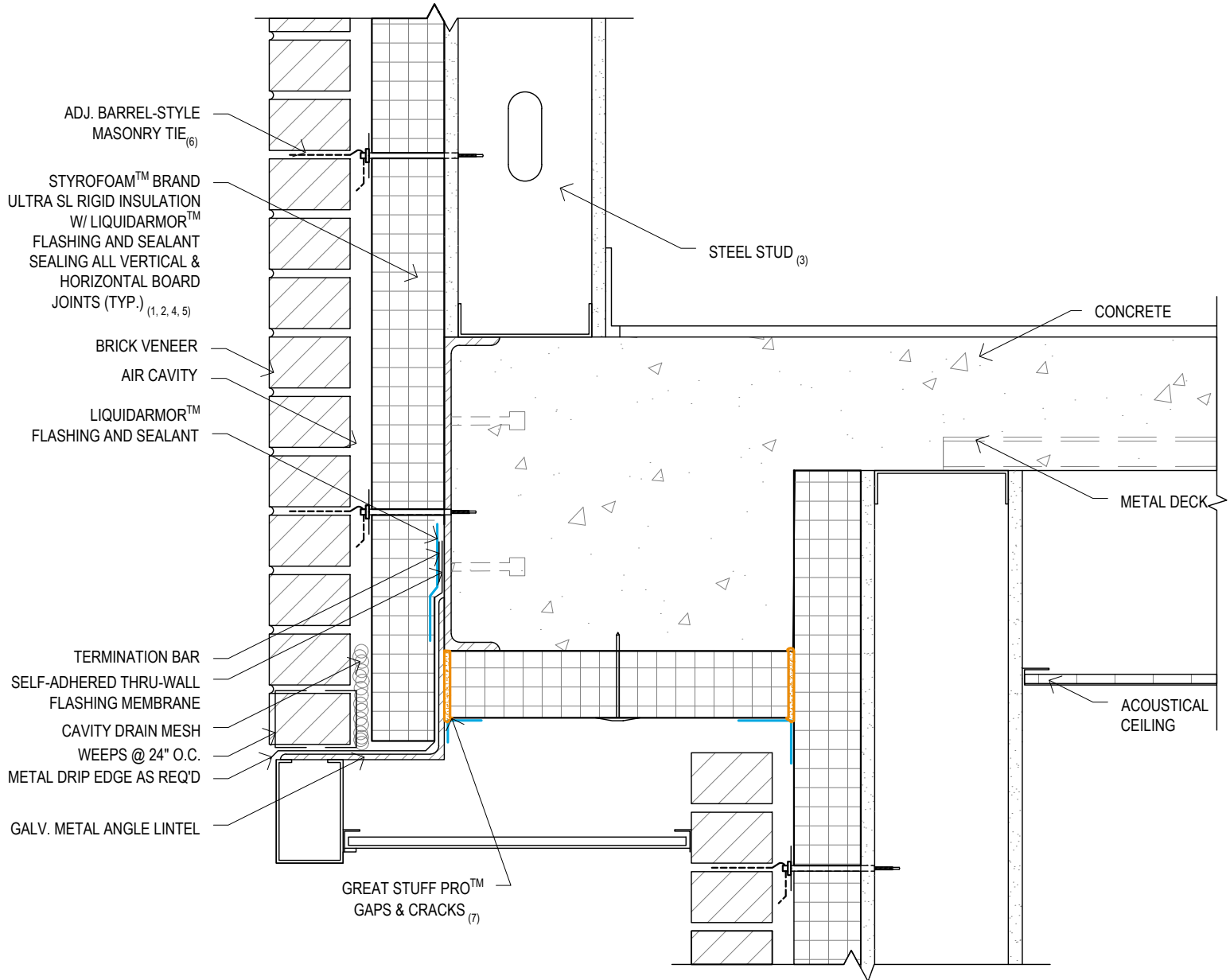


### CORNERS

UWS-SL16 *COLOR FOR VISUAL CLARIFICATION ONLY*

#### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT APPLICATION REQUIREMENTS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. INSULATION MUST BE COVERED WITHIN 90 DAYS.



### CHANGE IN PLANE

UWS-SL17 COLOR FOR VISUAL CLARIFICATION ONLY

### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.
7. INSULATION BOARDS TO HAVE MIN.  $\frac{1}{4}"$  TO MAX. 1" GAP TO ALLOW FOR PROPER INSTALLATION OF GREAT STUFF PRO™ GAPS & CRACKS.

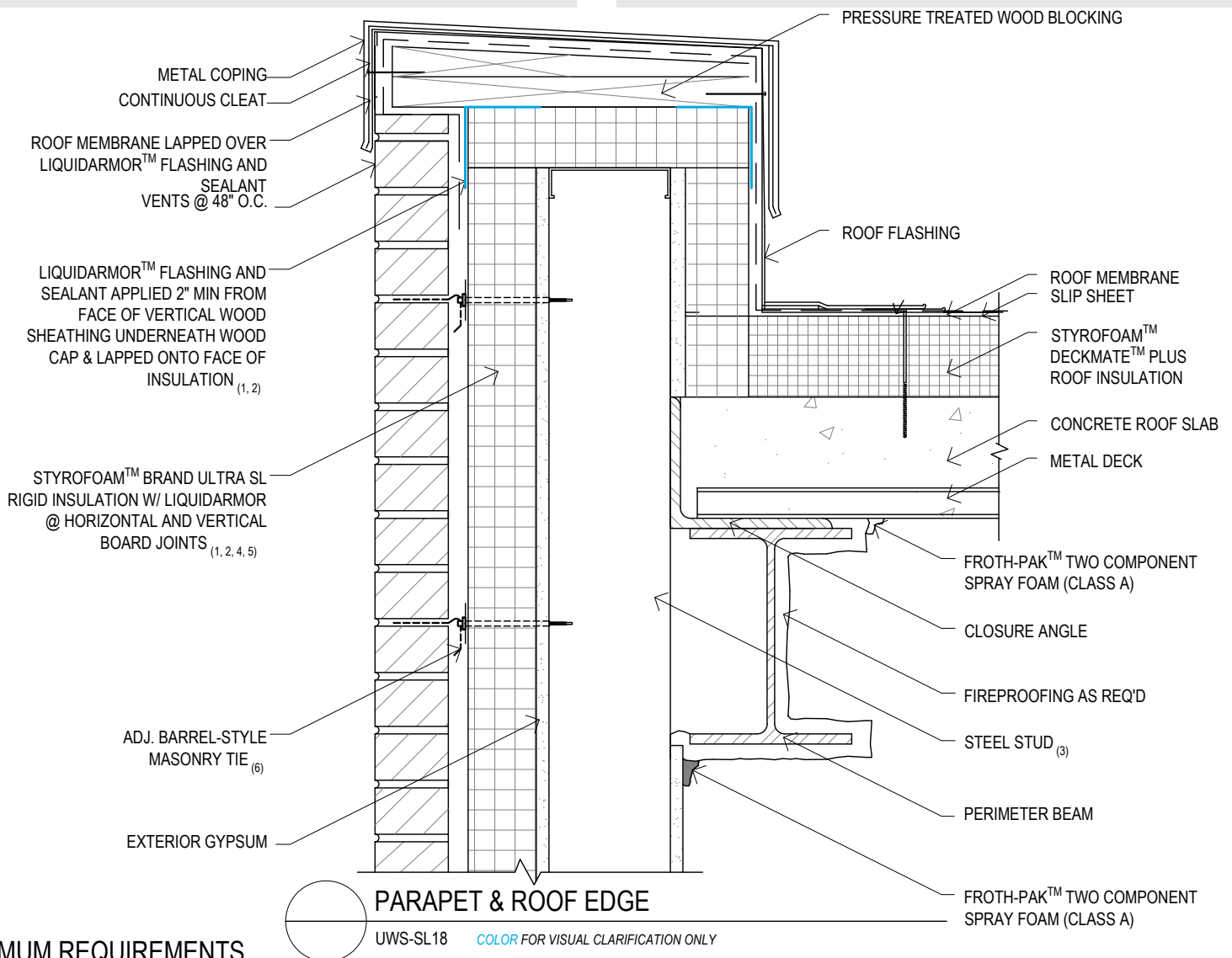
2-17

### DESIGN INTENT

1. SUCCESSFULLY TRANSITION 4 CONTROL LAYERS FROM VERTICAL WALL PLANE TO HORIZONTAL ROOFING PLANE WITHOUT INTERRUPTION.
2. INSULATION & AIR BARRIER TO SEAL OFF UNCONDITIONED PARAPET WALL FROM INTERACTING WITH CONDITIONED INTERIOR AIR TO FURTHER PREVENT CONDENSATION POTENTIAL.
3. TRANSITION TO ROOFING MEMBRANE MATERIALS USING COMPATIBLE MATERIALS.

### GENERAL RECOMMENDATIONS

1. COMBINATION OF MATERIALS MAY BE USED TO ENCAPSULATE PARAPET WALL - ALL MANUFACTURERS SHOULD BE CONSULTED TO ENSURE CHEMICAL COMPATIBILITY OF MEMBRANE/TRANSITION MATERIALS TO INSULATION.
2. 3RD PARTY MATERIAL TO TRANSITION FROM ROOFING MEMBRANE OVER/UNDER COPING TO TERMINATE ON FACE OF RIGID INSULATION.
3. FROTH-PAK™ INSULATION (CLASS A) AT ROOF DECK / PARAPET JUNCTURE TO BE INSTALLED PRIOR TO ROOF INSULATION & MEMBRANE.



### MINIMUM REQUIREMENTS

1. SEE DETAIL UWS-SL02 "SYSTEM OPTIONS" FOR LIQUIDARMOR™ FLASHING AND SEALANT OPTIONS AND OTHER SYSTEM CONFIGURATIONS.
2. GREAT STUFF PRO™ GAPS & CRACKS OR WINDOW & DOOR TO BE USED FOR GAPS  $\geq 1/4"$  BEFORE SEALING WITH LIQUIDARMOR™ FLASHING AND SEALANT.
3. STEEL STUDS MIN. 18 GA. @ 24" MAX. W/ LATERAL BRACING EVERY 48" VERTICALLY.
4. INSULATION MUST BE COVERED WITHIN 90 DAYS.
5. BREACHES TO INSULATION MUST BE SEALED PER DETAIL UWS-SL08 "PATCHING INSULATION".
6. SEE DETAIL UWS-SL03 "FASTENING GUIDELINES" FOR RECOMMENDED TIES.

**NOTICE:** No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries or regions. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DOW. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

Illustrations are not intended to replace the need for design by appropriate professionals such as architects or engineers.

#### **STYROFOAM™ Extruded Polystyrene Foam Insulation**

**CAUTION:** This product is combustible. Protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult (Material) Safety Data Sheet ((M)SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

**WARNING:** Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

**GREAT STUFF PRO™** Insulating Foam sealant and adhesive products contain isocyanate and a flammable blowing agent. Read all instructions and (Material) Safety Data Sheet ((M)SDS), carefully before use. Eliminate all sources of ignition before use. Cover all skin. Wear long sleeves, gloves, and safety glasses or goggles. Not for use in aviation, or food/beverage contact, or as structural support in marine applications. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure. Not to be used for filling closed cavities or voids such as behind walls and under tub surrounds.

**CAUTION:** When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

#### **LIQUIDARMOR™ Flashing and Sealant**

Read the instructions and (Material) Safety Data Sheets ((M)SDS) carefully before use. It is recommended that spray applicators and those working in the spray area wear eye protection. Contact with exposed skin may cause skin discoloration and dryness. Gloves are recommended for prolonged exposures. Ensure adequate ventilation during spray applications.

#### **Dow Polyurethane Foam Insulation and Sealant**

**CAUTION:** When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

**CAUTION:** This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier. For more information, consult (Material) Safety Data Sheet ((M)SDS), call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

**FROTH-PAK™ Spray Polyurethane Foam** contains isocyanate, blowing agent and polyol. Contents under pressure. Read the instructions, review safe handling presentations, and read (Material) Safety Data Sheet ((M)SDS) carefully before use. Wear protective clothing to cover all skin (including long sleeves and hood), gloves, goggles or safety glasses, and proper respiratory protection. Do not breathe vapor or mist. Use only with adequate ventilation per use instructions. The spray foam applicator and anyone within 25 feet of the applicator must use an approved air purifying respirator equipped with an organic vapor sorbent and a particle filter at a minimum. Increased ventilation significantly reduces the potential for isocyanate exposure; however, supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a particulate filter may still be required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure, air-supplying respirator (air line or self-contained breathing apparatus). Spraying large amounts of foam indoors may require the use of a positive pressure, air-supplying respirator. Follow all applicable federal, state, local and employer regulations.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.

References to "DOW" or the "Company" mean The Dow Chemical Company and its consolidated subsidiaries unless otherwise expressly noted.

®™ Trademark of The Dow Chemical Company ("Dow") or Dow affiliate.