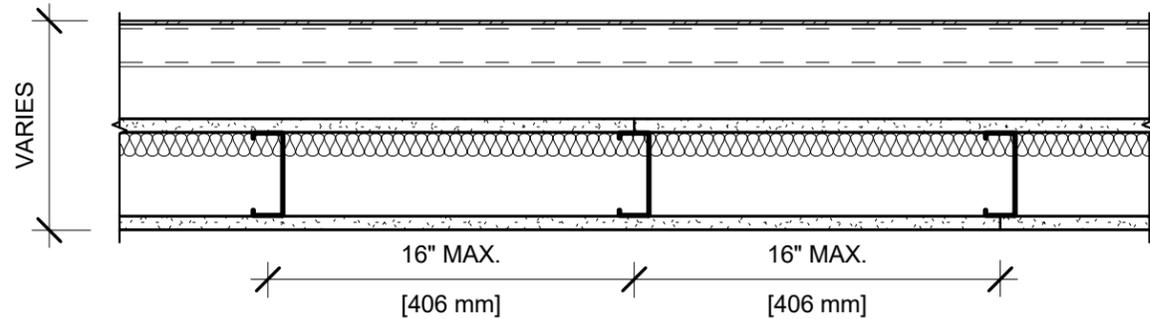


**UL Design No. EWS0009**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.029 CFM/FT<sup>2</sup> (0.015 L/S•M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: VARIES



**ASSEMBLY OPTIONS:**

**EXTERIOR PANELS:** ALUMINUM COMPOSITE MATERIAL PANEL SYSTEM

**MOUNTING SYSTEM:** EXTRUDED ALUMINUM MOUNTING SYSTEM SECURED TO FURRING CHANNELS, SPACED 16" O.C. MAX. BACKER EXTRUSIONS INSTALLED VERTICALLY AT LOCATIONS CORRESPONDING TO VERTICAL EDGES OF EXTERIOR PANELS

**FURRING CHANNEL (NOT SHOWN):** 1-1/4" WIDE BY 2-1/4" DEEP, 16 GA., HAT SHAPED. INSTALLED HORIZONTALLY AT THE TOP AND BOTTOM OF EACH EXTERIOR PANEL

**SEALANT (NOT SHOWN):** SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS AND SCREW HEADS (*TREM-FLEX 834 OR DYMONIC 100*)

**EXTERIOR GYPSUM SHEATHING (FWFX):** (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (*UL TYPES USGX, SECUROCK EXOAIR 430 PANEL*)

**STEEL STUDS:** 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.

**BATT INSULATION:** 1" THICK MINERAL WOOL INSTALLED WITHIN EACH WALL STUD CAVITY AT EACH FLOOR LINE, HELD IN PLACE WITH Z CLIPS SPACED MAX 24" O.C.

**INTERIOR GYPSUM BOARD (CKNX):** (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (*UL TYPE SCX*)

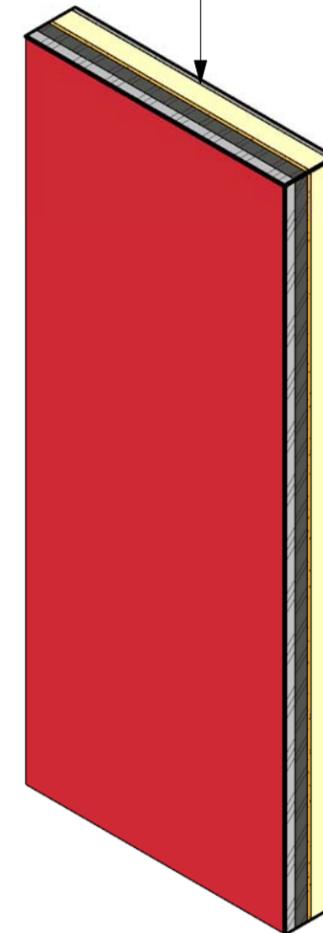
**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

**STEEL FLASHING:** MIN. 24 GA. STEEL FORMED TO COMPLETELY LINE WINDOW OPENING AND OVERLAP ONTO BOTH SURFACES OF WALL ASSEMBLY 1/2" MIN.

**SEALANT:** SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING AND USED TO ATTACH STIFFENERS TO BACK OF EXTERIOR PANELS (*TREMCO — SPECTREM 1*)

**WINDOW FLASHING (OPTIONAL):** NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (*TREMCO — PROGLAZE ETA*)

**REVIT SYSTEM FAMILY**  
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**REMARKS:**

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3. VISIT WWW.USG.COM FOR THE MOST UP-TO-DATE PRODUCT INFORMATION AND INSTALLATION INSTRUCTIONS.
4. WALL THICKNESSES ARE INDICATED PER UL TEST ONLY.
5. REFERENCE IBC AND LOCAL BUILDING CODES FOR MINIMUM STUD DEPTH AND INSULATION VALUES FOR EXTERIOR ASSEMBLIES.



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**UL FWFO.EWS0009**

**ISSUE RECORD:**

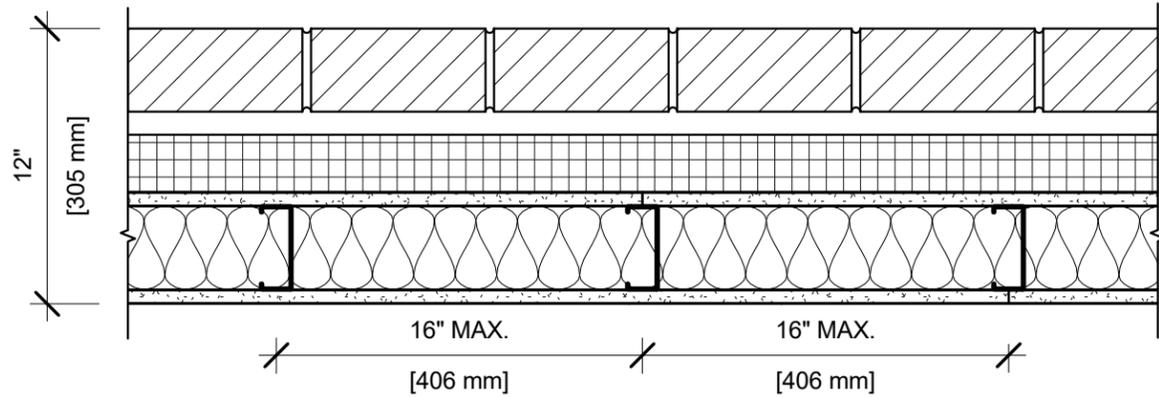
Revision	Date
2	06-04-2019

SHEET INFORMATION:

**EWS0009**

**UL Design No. EWS0016**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.029 CFM/FT<sup>2</sup> (0.015 L/S•M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: 12"



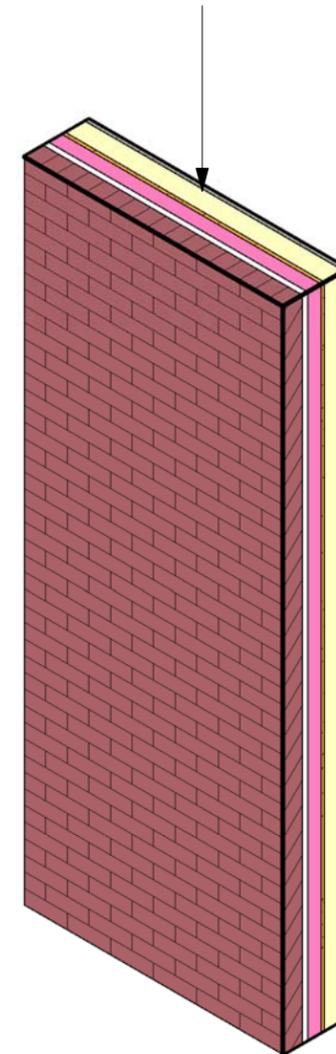
**ASSEMBLY OPTIONS:**

EXTERIOR BRICK VENEER: 4" NOM. CLAY BRICK, WITH STANDARD ANCHORS SPACED 24" O.C. MAX.  
 AIR CAVITY: 1" NOM. AIR GAP  
 FOAM INSULATION: MAX. 2-1/2" THICK, EXTRUDED POLYSTYRENE INSULATION  
 BATT INSULATION: MIN. 4" THICK WITHIN STUD CAVITY AT EACH FLOOR LINE WITH ANY STANDARD INSTALLATION METHOD  
 SEALANT (NOT SHOWN): SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS AND SCREW HEADS (TREM FLEX 834 OR DYMONIC 100)  
 EXTERIOR GYPSUM SHEATHING (FWFX): (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (UL TYPES USGX, SECUROCK EXOAIR 430 PANEL)  
 STEEL STUDS: 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.  
 INTERIOR GYPSUM BOARD (BWFR): (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY (UL TYPE SCX)

**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

STEEL LINTEL: 7" x 3/8" MIN. LINTEL TO EXTEND MIN. 8" BEYOND EACH SIDE OF THE WINDOW OPENING  
 BATT INSULATION: 1" THICK MINERAL WOOL AT UNDERSIDE OF LINTEL  
 STEEL FLASHING: MIN. 22 GA. STEEL FORMED TO COMPLETELY LINE WINDOW OPENING AND OVERLAP ONTO BOTH SURFACES OF WALL ASSEMBLY 1/2" MIN.  
 SEALANT: SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING (TREMCO — SPECTREM 1)  
 WINDOW FLASHING (OPTONAL): NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (TREMCO — PROGLAZE ETA)

**REVIT SYSTEM FAMILY**  
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**UL FWFO.EWS0016**

**ISSUE RECORD:**

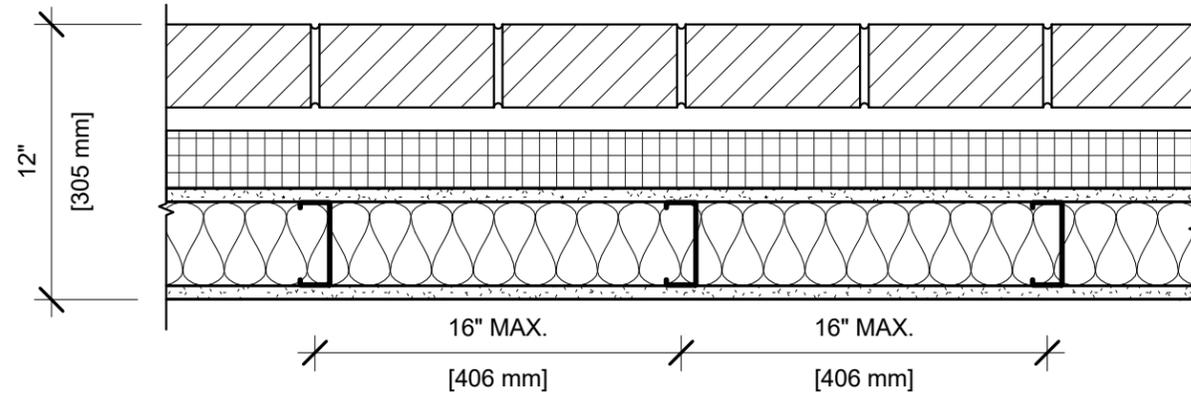
Revision	Date
2	06-04-2019

SHEET INFORMATION:

**EWS0016**

**UL Design No. EWS0017**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.029 CFM/FT<sup>2</sup> (0.015 L/S•M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: 12"



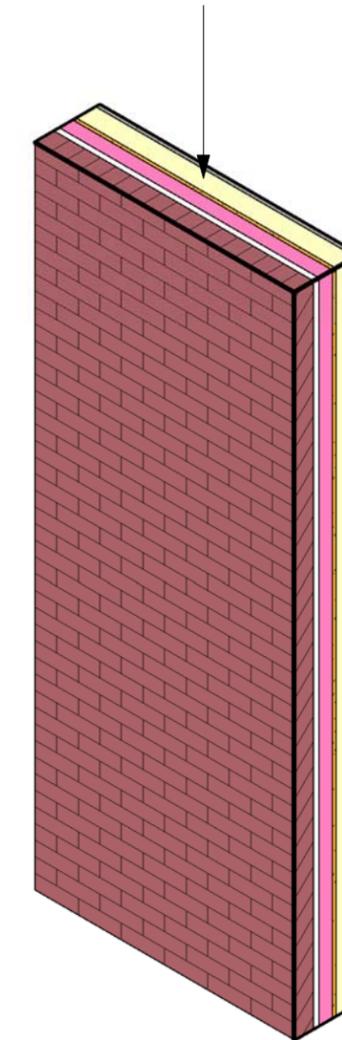
**ASSEMBLY OPTIONS:**

EXTERIOR BRICK VENEER: 4" NOM. CLAY BRICK, WITH STANDARD ANCHORS  
 AIR CAVITY: 1" NOM. AIR GAP  
 FOAM INSULATION: MAX. 2-1/2" THICK, EXTRUDED POLYSTYRENE INSULATION  
 SEALANT (NOT SHOWN): SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS AND SCREW HEADS (TREM-FLEX 834 OR DYMONIC 100)  
 EXTERIOR GYPSUM SHEATHING (FWFX): (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (UL TYPES USGX, SECUROCK EXOAIR 430 PANEL)  
 BATT INSULATION: MIN. 4" THICK WITHIN STUD CAVITY AT EACH FLOOR LINE WITH ANY STANDARD INSTALLATION METHOD  
 STEEL STUDS: 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.  
 INTERIOR GYPSUM BOARD (BWFR): (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY (UL TYPE SCX)

**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

STEEL LINTEL: 7" x 3/8" MIN. LINTEL TO EXTEND MIN. 8" BEYOND EACH SIDE OF THE WINDOW OPENING  
 BATT INSULATION: 1" THICK MINERAL WOOL AT UNDERSIDE OF LINTEL  
 BATT INSULATION: MIN. 4 PCF MINERAL WOOL, COMPRESSED 50%, INSTALLED INTO THE CAVITY SPACE BETWEEN THE FOAM INSULATION AND THE BRICK VENEER, MIN. 4" THICK, AT THE BOTTOM AND BOTH SIDES OF THE WINDOW OPENING  
 ALUMINUM FLASHING: .040" ALUMINUM, 1/2" OVERLAP, FORMED TO COMPLETELY LINE WINDOW OPENING  
 SEALANT: SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING (TREMCO — SPECTREM 1)  
 WINDOW FLASHING (OPTIONAL): NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (TREMCO — PROGLAZE ETA)

**REVIT SYSTEM FAMILY**  
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**UL FWFO.EWS0017**

**ISSUE RECORD:**

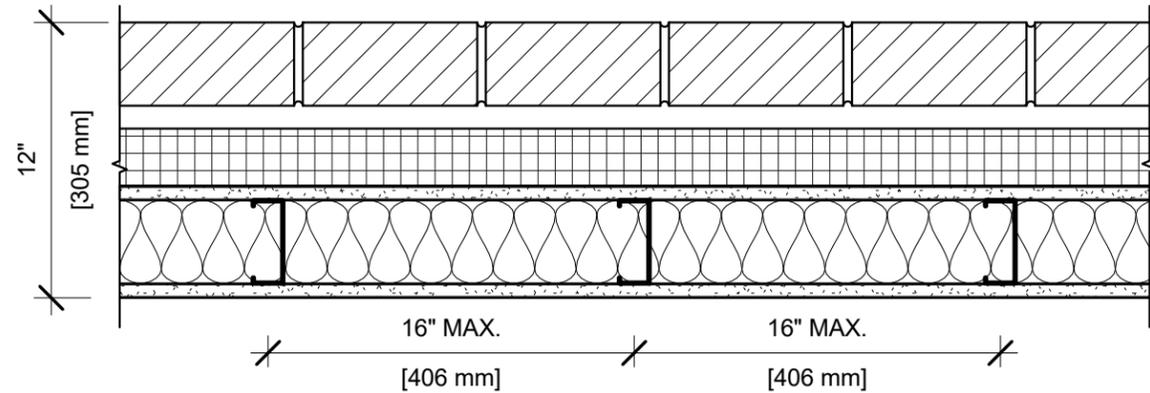
Revision Date  
 2 06-04-2019

SHEET INFORMATION:

**EWS0017**

**UL Design No. EWS0018**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.029 CFM/FT<sup>2</sup> (0.015 L/S•M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: 12"



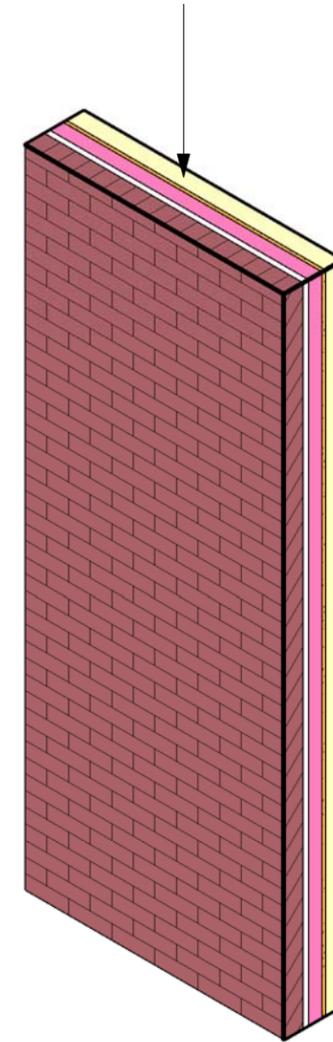
**ASSEMBLY OPTIONS:**

- EXTERIOR BRICK VENEER: 4" NOM. CLAY BRICK, WITH STANDARD ANCHORS SPACED 24" O.C. MAX.
- AIR CAVITY: 1" NOM. AIR GAP
- FOAM INSULATION: MAX. 2-1/2" THICK, EXTRUDED POLYSTYRENE INSULATION
- BATT INSULATION: MIN. 4" THICK WITHIN STUD CAVITY AT EACH FLOOR LINE WITH ANY STANDARD INSTALLATION METHOD
- SEALANT (*NOT SHOWN*): SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS AND SCREW HEADS (*TREMFLEX 834 OR DYMONIC 100*)
- EXTERIOR GYPSUM SHEATHING (FWFX): (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (*UL TYPES USGX, SECUROCK EXOAIR 430 PANEL*)
- STEEL STUDS: 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.
- INTERIOR GYPSUM BOARD (BWFR): (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY (*UL TYPE SCX*)

**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

- STEEL LINTEL: 7" x 3/8" MIN. LINTEL TO EXTEND MIN. 8" BEYOND EACH SIDE OF THE WINDOW OPENING
- BRICK: 4" NOM. CLAY BRICK INSTALLED LENGTH-WISE TO COMPLETELY COVER WINDOW OPENING OF BRICK VENEER AND EXTENDING MIN. 8" BEYOND EACH SIDE OF THE OPENING
- SEALANT: SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING (*TREMCO — SPECTREM 1*)
- WINDOW FLASHING (*OPTIONAL*): NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (*TREMCO — PROGLAZE ETA*)

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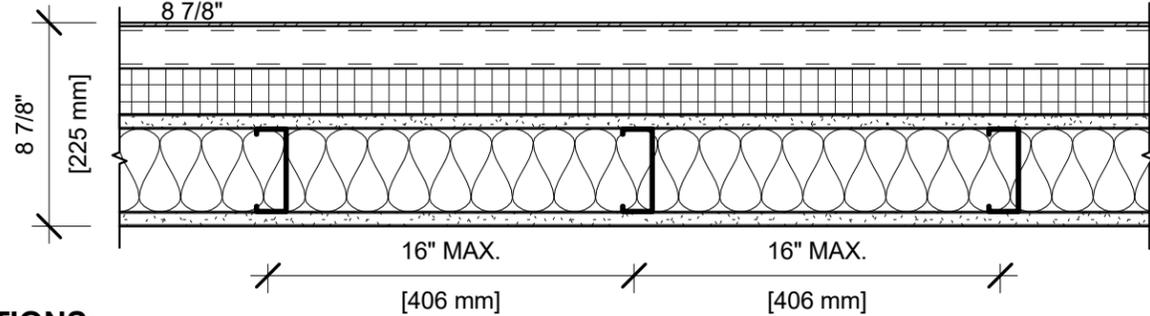
Revision	Date
2	06-04-2019

SHEET INFORMATION:

**EWS0018**

**UL Design No. EWS0019**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.001 CFM/FT<sup>2</sup> (0.004 L/S·M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1, WHEN USING OPTIONAL EXTERIOR WALL SYSTEM COMPONENT COMBUSTIBLE AIR AND VAPOR BARRIER (*TREMCO — SPECTREM 1*)  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: 8 7/8"



**ASSEMBLY OPTIONS:**

EXTERIOR PANELS: ALUMINUM COMPOSITE MATERIAL PANEL SYSTEM

MOUNTING SYSTEM: EXTRUDED ALUMINUM MOUNTING SYSTEM SECURED TO Z CHANNELS, SPACED 16" O.C. MAX. BACKER EXTRUSIONS INSTALLED HORIZONTALLY AND LOCATED AT THE TOP AND BOTTOM OF EACH EXTERIOR PANEL FOR SECUREMENT OF EXTERIOR PANELS

STEEL Z CHANNEL (*NOT SHOWN*): NOM. 1" X 2" X 1" Z CHANNEL, MIN. 16 GA., GALV. STEEL SECURED TO STEEL STUDS THROUGH SHEATHING PRIOR TO INSTALLATION OF FOAM INSULATION. INSTALLED HORIZONTALLY AT THE TOP AND BOTTOM OF EACH EXTERIOR PANEL

FOAM INSULATION: NOM. 4' X 8' X MAX. 2" THICK FOIL-FACED POLYISOCYANURATE INSULATION

SEALANT (*NOT SHOWN*): SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS

EXTERIOR WALL SYSTEM COMPONENT (*OPTIONAL, NOT SHOWN*) - COMBUSTIBLE AIR AND VAPOR BARRIER: AS AN ALTERNATE TO JOINT SEALANT (LISTED ABOVE), SELF-ADHERED BARRIER APPLIED TO COVER JOINTS AND SCREW HEADS OF THE EXTERIOR GYPSUM SHEATHING (FWFX). MAY ALSO BE APPLIED TO ENTIRELY COVER THE EXTERIOR GYPSUM SHEATHING WITH A MIN. 2" VERTICAL OR HORIZONTAL OVERLAP BETWEEN LAYERS (*TREMCO - EXOAIR 110AT*)

EXTERIOR GYPSUM SHEATHING (FWFX): (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (*UL TYPES USGX, SECUROCK EXOAIR 430 PANEL*)

STEEL STUDS: 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.

BATT INSULATION: MIN. 4" THICK WITHIN STUD CAVITY AT EACH FLOOR LINE WITH ANY STANDARD INSTALLATION METHOD

INTERIOR GYPSUM BOARD (BWFR): (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (*UL TYPE SCX*)

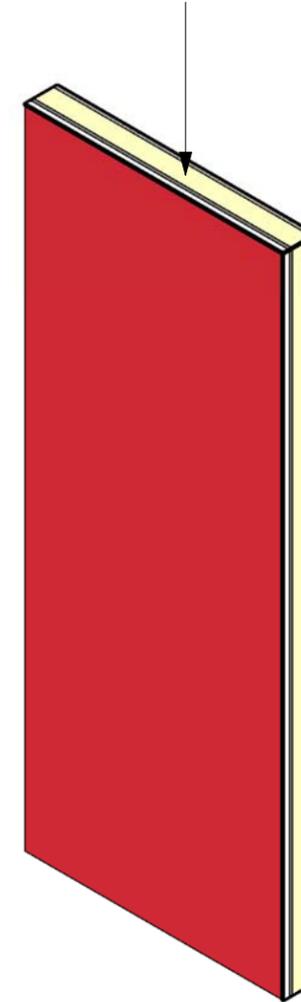
**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

STEEL FLASHING: MIN. 22 GA. STEEL FORMED TO COMPLETELY LINE WINDOW OPENING AND OVERLAP ONTO BOTH SURFACES OF WALL ASSEMBLY 1/2" MIN.

SEALANT: SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING AND USED TO ATTACH STIFFENERS TO BACK OF EXTERIOR PANELS (*TREMCO — SPECTREM 1*)

WINDOW FLASHING (*OPTIONAL*): NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (*TREMCO — PROGLAZE ETA*)

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**UL FWFO.EWS0019**

**ISSUE RECORD:**

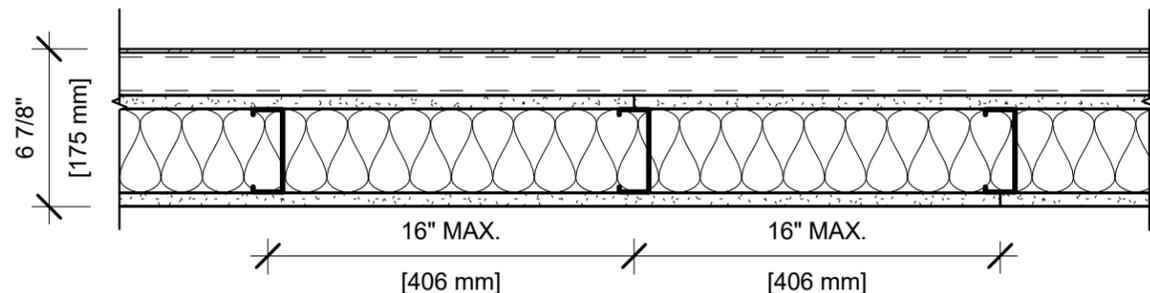
Revision	Date
2	06-04-2019

SHEET INFORMATION:

**EWS0019**

**UL Design No. EWS0020**

ASTM E331: 2 HR. @ 300 Pa (6.27 PSF)  
 ASTM E2357: 0.029 CFM/FT<sup>2</sup> (0.015 L/S•M<sup>2</sup>) @ 75 Pa (1.57 PSF) - CATEGORY 1  
 STC: N/A  
 SOUND TEST: N/A  
 SYSTEM THICKNESS: 6-7/8"



**ASSEMBLY OPTIONS:**

EXTERIOR PANELS: ALUMINUM COMPOSITE MATERIAL PANEL SYSTEM

MOUNTING SYSTEM: EXTRUDED ALUMINUM MOUNTING SYSTEM SECURED TO FURRING CHANNELS, SPACED 16" O.C. MAX. BACKER EXTRUSIONS INSTALLED VERTICALLY AT LOCATIONS CORRESPONDING TO VERTICAL EDGES OF EXTERIOR PANELS

SEALANT (NOT SHOWN): SEALANT APPLIED TO ALL EXTERIOR SHEATHING JOINTS AND SCREW HEADS (TREM-FLEX 834 OR DYMONIC 100)

EXTERIOR GYPSUM SHEATHING (FWFX): (1) LAYER 5/8" THICK EXTERIOR-GRADE GLASS MAT SHEATHING GYPSUM BOARD WITH AIR BARRIER SEALANT FACTORY APPLIED, JOINTS ORIENTED VERTICALLY OR HORIZONTALLY (UL TYPES USGX, SECUROCK EXO-AIR 430 PANEL)

STEEL STUDS: 3-5/8" DEEP, 16 GA. SPACED 16" O.C. MAX.

BATT INSULATION: MIN. 4" THICK WITHIN STUD CAVITY AT EACH FLOOR LINE WITH ANY STANDARD INSTALLATION METHOD

INTERIOR GYPSUM BOARD (BWFR): (1) LAYER 5/8" THICK GYPSUM BOARD, JOINTS ORIENTED VERTICALLY (UL TYPE SCX)

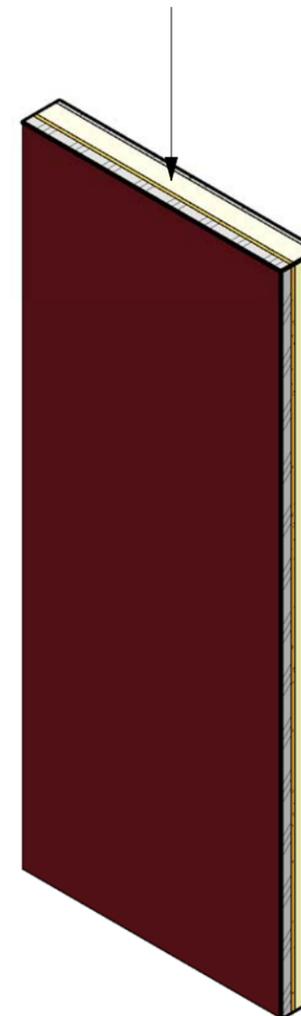
**AT WINDOW OPENINGS (NOT SHOWN ON DETAIL):**

STEEL FLASHING: MIN. 22 GA. STEEL FORMED TO COMPLETELY LINE WINDOW OPENING AND OVERLAP ONTO BOTH SURFACES OF WALL ASSEMBLY 1/2" MIN.

SEALANT: SEALANT APPLIED TO ALL EDGES OF WINDOW FLASHING MATERIAL TO ADHERE FLASHING TO GYPSUM SHEATHING AND USED TO ATTACH STIFFENERS TO BACK OF EXTERIOR PANELS (TREMCO — SPECTREM 1)

WINDOW FLASHING (OPTIONAL): NOM. 6" WIDE EXTRUDED SILICONE RUBBER FLASHING ATTACHED TO GYPSUM SHEATHING WITH SEALANT (LISTED ABOVE) TO COMPLETELY FRAME WINDOW OPENING (TREMCO — PROGLAZE ETA)

**REVIT SYSTEM FAMILY**  
 (COPY & PASTE INTO YOUR REVIT PROJECT)



**REMARKS:**

1. STUD SIZE IS MINIMUM UNLESS OTHERWISE STATED IN DESIGN.
2. FOR THE MOST UP-TO-DATE INFORMATION OR ASSEMBLY OPTIONS, REFER TO THE UL FIRE RESISTANCE DIRECTORY.
3. VISIT WWW.USG.COM FOR THE MOST UP-TO-DATE PRODUCT INFORMATION AND INSTALLATION INSTRUCTIONS.
4. WALL THICKNESSES ARE INDICATED PER UL TEST ONLY.
5. REFERENCE IBC AND LOCAL BUILDING CODES FOR MINIMUM STUD DEPTH AND INSULATION VALUES FOR EXTERIOR ASSEMBLIES.



PERFORMANCE BUILT IN  
 USG Corporation Tremco Commercial Sealants & Waterproofing  
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 www.usg.com Tremco Technical Support:  
 800.USG4YOU (847-4968) 866.209.2404

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