EXPERIENCE THE THIN BRICK REVOLUTION

Speedymason™ Mortar Bed Panel System for Thin Masonry Guide Specification - Speedymason Brick Lath US PATEND 10,106,989 B2

The following information has been compiled as a Guide Specification for Speedymason Mortar Bed Panel System for Thin Masonry. The numbers and titles used to identify this, and related specification sections are in accordance with the 2004 Construction Specifications Institute Master Format.

This guide specification is intended to assist the Design Professional/Specifier in selecting appropriate products and preparing a project specification section for Speedymason Mortar Bed Panel System for Thin Masonry and is not intended to be all inclusive. Additional Technical Information related to Speedymason and designs utilizing the Speedymason Mortar Bed Panel System for Thin Masonry available upon request. The Design Professional/Specifier is responsible for the use and application of this information.

Confirm and edit guide specifications to ensure conformance to local building codes. Sections beginning with ***NOTE TO SPECIFIER:*** indicate action is required: edit/select/add/delete to suit specific project requirements. Optional text is indicated by brackets
[ ]. Delete unused optional text and brackets in final specification. Coordinate all Sections with other materials and project conditions of the contract.

SECTION 04 25 16
Thin Brick Panel System
SPECIFICATIONS: MORTAR BED PANEL SYSTEM FOR THIN MASONRY

PART 1: GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 general requirements apply to this section.

1.2 SUMMARY

A. Section Includes: Speedymason- Mortar Bed Panel System for Thin Masonry and related materials.

NOTE TO SPECIFIER: Delete items below not required for project.

1. Thin Brick
2. Thin Concrete Masonry
3. Mortar
4. Cleaning
5. Embedded Flashing
6. Drip Edge
7. Expansion and Control Joints
8. Fasteners

B. Related Sections:

NOTE TO SPECIFIER: Delete any sections below not relevant to this project; add others as required.

1. Division 03 Section – "Cast-in-Place Concrete"
2. Division 03 Section – "Precast Concrete"
3. Division 04 Section – "Unit Masonry"
4. Division 05 Section – "Structural Metal Framing"
5. Division 05 Section – "Cold Form Metal Framing"
6. Division 05 Section – "Metal Fabrications"
7. Division 06 Section – "Rough Carpentry"
8. Division 06 Section – "Sheathing"
9. Division 07 Section – "Damp proofing and Waterproofing"
10. Division 07 Section – "Thermal Protection"
11. Division 07 Section – "Flashing and Sheet Metal"
12. Division 07 Section – "Joint Protection"
13. Division 08 Section – "Wall Vents"
14. Division 09 Section – "Plaster and Gypsum Board"
15. Division 09 Section – "Tile"
16. Division 13 Section – "Pre-Engineered Structures"

1.3 REFERENCES

NOTE TO SPECIFIER: Delete references from the list below that are not required by the text of the edited section.

A. ASTM C 67 – Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.

B. ASTM C 126 – Standard Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units.

C. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.

D. ASTM C 847 – Standard Specification for Metal Lath.

E. ASTM C 1088 – Standard Specification for Thin Veneer Brick Units Made from Clay or Shale.

F. ASTM C 1714 – Standard Specification for Preblended Dry Mortar Mix for Unit Masonry.

G. ASTM D 226 – Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.

H. ASTM D 1056 – Standard Specification for Flexible Cellular Materials Sponge or Expanded Rubber.

I. TMS 602/ACI 530.1/ASCE 6 – Specifications for Masonry Structures.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

C. Shop Drawings:

1. Indicate masonry layout, patterns, color arrangement, perimeter conditions, shape requirements, junctions with dissimilar materials, connections, and other related components.
2. Locate and detail expansion and control joints.

D. Samples: Furnish not less than five (5) individual masonry units as samples, showing extreme variations in color and texture.

1.5 QUALITY ASSURANCE

A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6 unless modified by requirements in the Contract Documents.

B. Comply with all applicable codes, regulations, and standards. Where provision of applicable codes, regulations, and standards conflict with requirements of this section, the more demanding shall govern.

NOTE TO SPECIFIER: Insert additional qualifications below if required.

C. Manufacturer Qualifications:

1. Obtain materials from one manufacturer to ensure compatibility.
2. Composite Panel:
   a. A history of corporate experience with composite supported unit masonry panels.
   b. Documented qualifications and capabilities that fully describe the ability to provide the required system and technical support to the Owner.
   c. At least five (5) completed projects over the last two years, illustrating system performance equal or greater to the criteria listed in this specification.
      i. Include the project location, award date, the completion date, the contract value, and the name and telephone number of a person employed by the Owner who has personal knowledge of the manufacturer's contractual and technical performance.

D. Installer Qualifications:

NOTE TO SPECIFIER: Insert additional qualifications below if required.

1. Authorized Speedymason Mortar Bed Panel System for Thin Masonry installer or proof of experience in thin brick masonry.
2. At least one supervisory journeyman who shall be always present during execution of work, who shall be thoroughly familiar with design requirement, type of materials being installed, reference standards and other requirements, and who shall direct all work performed at jobsite.

NOTE TO SPECIFIER: Include a mock-up panel if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified.

E. Material Certificates: Prior to delivery, submit to Architect/Engineer certificates indicating compliance with the applicable specifications for Thin Brick Grades, Types or Classes included in these specifications.

F. Thin Brick Test Reports: Submit test reports substantiating compliance with requirements: Sample and test in accordance with ASTM C67.

1. Testing and reports shall be completed by an independent laboratory.

a. Test reports for each type of brick shall be submitted to the Architect/Engineer for review.

b. Thin Brick Test reports shall indicate:

1) 2-hour cold water absorption
2) 5-hour boil absorption
3) Saturation coefficient
4) Initial rate of absorption
5) Efflorescence

G. Costs of Tests: Cost of tests shall be borne by the purchaser, unless tests indicate that units do not conform to the requirements of the specifications, in which case cost shall be borne by the seller.

H. Shop Drawings: Submit individual drawings to be approved by Architect for special shaped thin brick units.

NOTE TO SPECIFIER: Include a sample panel and/or mockup panel if the project size warrants taking such a precaution. The following is one example of how a mock-up panel on a large project might be specified.

I. Sample Panel: Sample or mock-up panels shall be used to review installation process as well as thin brick and mortar color and serves as the standard of workmanship for the Project.

1. Build *[sample] [mock-up]* panel for walls to receive Speedymason Mortar Bed Panel System as shown on drawings.

2. Build Mock-up panels for Mortar Bed Panel System for Thin Masonry in sizes approximately *[48" (1,200 mm)]* long by *[48" (1,200 mm)] <Insert size>* high by full wall thickness.

a. All thin brick shipped for the sample shall be included in the panel.

b. Use panel as standard of comparison for all masonry work built of same material.

c. Where masonry is to match existing, erect panel adjacent and parallel to existing surface.

d. Clean *[one-half of]* exposed faces of panel with masonry cleaner as indicated and approved by manufacturer.

e. Protect accepted panel from the elements with weather-resistant membrane.

f. Approval of panel is for color, texture, and blending of masonry units; relationship of mortar to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.

g. Do not start work until Architect/Engineer/Owner has accepted sample panel.

h. Do not destroy or move panel until work is completed and accepted by Architect/Engineer/Owner.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in manufacturer's unopened containers, identified with name, brand, type, and grade.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Store Speedymason Mortar Bed Panel System for Thin Masonry and accessories off the ground to prevent contamination by mud, dust, or other materials likely to cause staining or other defects.

D. Protect materials from contamination, dampness, freezing, or overheating in accordance with manufacturer's instructions.

E. Store different types of materials separately.

1.7 PROJECT CONDITIONS

A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.

B. Protection of Work:

1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

2. Stain Prevention:

a. Prevent mortar from staining the face of masonry.
b. Remove immediately grout or mortar in contact with face of such masonry.
c. Protect all sills, ledges, and projections from droppings of mortar.
d. Protect the wall from rain-splashed mud and mortar splatter.

e. Turn scaffold boards closest to the wall on edge when work is not in progress to prevent rain from splashing mortar and dirt onto masonry.

NOTE TO SPECIFIER: Weather conditions affect application and drying time of adhesive and mortar. Hot or dry conditions limit working time and accelerate drying and may require adjustments in the scheduling of work to achieve desired results. Cool or damp conditions extend working time and retard drying and may require additional measures of protection against wind, dust, dirt, rain and freezing.

C. Cold Weather Requirements:

1. Do not use frozen materials or materials mixed or coated with ice or frost.

2. Do not build on frozen substrates.

3. Remove and replace unit masonry damaged by frost or by freezing conditions.

4. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

5. Comply with adhesive manufacturers application and temperature requirements.

D. Hot Weather Requirements:

1. Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

2. Protect mortar from uneven and excessive evaporation.

a. The face of the installed thin brick may be dampened with water prior mortar installation to reduce the absorption of moisture from the mortar joint and increase bond.

b. Veneer may be fogged with water to allow the mortar enough time to set. Apply only enough moisture to consistently dampen the wall without allowing water to run down the face.

3. Comply with adhesive manufacturer's application and temperature requirements.

PART 2: PRODUCTS

2.1.1 FULL BED MASONRY SUPPORT PANEL, GENERAL

A. Full Bed Masonry Support Panel intended for the interior or exterior structural mechanical support of thin veneer on concrete, masonry, metal, or frame construction.

2.1.2 MANUFACTURERS

A. Acceptable Manufacturer: Speedymason, LLC located at 300 Sherry Lynn Lane, Sparta, WI 54656Tel: 608-855-5903 • Email: info@speedymason.com • Web: www.speedymason.com

B. Substitutions: Not permitted.

2.1.3 FULL BED MASONRY SUPPORT PANELS

A. All Full Bed Panels for Thin Brick Support specified and shown on drawings shall be as manufactured by Speedymason, LLC.

1. Flat Panels: 10.67-square foot (1 m^2) masonry support panels for flat wall areas 96" (2438.4 mm) x 16" (406 mm) nominal (see below), or Flat Panels: 5.335-square foot masonry support panels for flat wall areas 48"x16" nominal, shall have support spacing as follows (actual dimensions listed):

NOTE TO SPECIFIER: Delete size options and panel type not required for project. Additional sizes may be available; verify availability with local Speedymason Representative. Custom panel lengths can also be ordered

Available Speedymason Matrix Sizes:

a. 2-5/8" (66.675 mm) for Modular, standard, Norman, and other 2-1/4" (57.2mm) high units.
Standard panel size: 96" (2438.4 mm) x 16" (406 mm)
6 rows of bricks with 6 mortar joints equal 16" (406 mm)

b. 3-1/8" (79.375 mm) for Engineer, Queen, King and other 2-3/4" (71 mm) high units.
Standard panel size: 96" (2438.4 mm) x 16" (406mm)
5 rows of bricks with 5 mortar joints equal 16" (406 mm)

c. 4" (101.6 mm) for Closure, Utility and other 3-5/8" (92.1 mm) high units.
Standard panel size: 96" (2438.4 mm) x 16" (406 mm)
4 rows of bricks with 4 mortar joints equal 16" (406 mm)

d. 8" (203.2 mm) for 8"-Square/Triple and other 7-5/8" (193.7 mm) high units.
Standard panel size: 96" (2438.4 mm) x 16" (406 mm)
2 rows of tile or stone with 2 mortar joints equal 16" (406 mm)

e. 16" (406.4 mm) for stone or tile products.
Standard panel size: 96" (2438.4 mm) x 16" (406 mm)
1 row of stone or tile with 1 mortar joint equals 16" (406 mm)

NOTE TO SPECIFIER: Delete corner panels if not required. Corner panels are recommended to reduce possibility of cracking due to differential movement, particularly in wood stud applications. Additional sizes may be available; verify availability with local Speedymason representative.

B. Pre-Bent Corner Panels: 1.78 sq. ft. (1.44 m^2) masonry support panels for external corner applications 16" high (406 mm) with 8" (406 mm) leg and 8" (406 mm) leg.

C. 16" x 48" panels are available with a pre-attached rainscreen.
1. DP-1 is Speedymason with integrated dimples for water management.
2. DP-2 is Speedymason with pre-attached 6mm or 10mm rainscreen.
3. DP-3 is Speedymason with pre-attached rainscreen that is greater than 10mm.

2.2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed work.

2.2.2 MANUFACTURERS

A. Acceptable Manufacturer: Speedymason, LLC located at 300 Sherry Lynn Lane, Sparta, WI 54656Tel: 608-855-5903 • e-mail: info@speedymason.com • Web: www.speedymason.com

B. Substitutions: Not permitted.

2.2.3 CLAY MASONRY UNITS

A. General: Provide shapes indicated and as follows:

NOTE TO SPECIFIER: Standard shapes such as corners, edge caps, 1/2 flats, 1/2 corners and thicker units for corbelling or accents, as well as custom shapes are often available. Verify shapes availability with local Speedymason representative.

1. Provide special shapes for applications where flats (stretcher units) cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, shelf angles and lintels. Mitered units shall not be used at standard corners.
2. Provide special shapes for applications requiring thin brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
3. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

NOTE TO SPECIFIER: Insert product name(s) required for project.

B. All thin brick specified and shown on drawings shall be *[Add thin brick product name(s) here]*

1. Thin Brick: ASTM C 1088, Grade Exterior.

NOTE TO SPECIFIER: Delete types not required.

a. Type *[TBS], [TBX] [or] [TBA]*

b. Size (height, length – actual dimensions listed)

NOTE TO SPECIFIER: Delete size options not required for project. Size availability varies by product and may be available in additional sizes not listed below. Verify availability with local Speedymason representative.

1. Modular Size: 2-1/4" (57.2 mm) high, 7-5/8" (193.7 mm) long
2. Queen Size: 2-3/4" (69.9 mm) high, 7-5/8" (193.7 mm) long
3. Standard Size: 2-1/4" (57.2 mm) high, 8" (203.2 mm) long
4. Engineer Standard Size: 2-3/4" (69.8 mm), 8" (203.2 mm) long
5. King Size: 2-3/4" (69.8 mm), 9-5/8" (244.5 mm)
6. Closure Size: 3-5/8" (92.1 mm) high, 7-5/8" (193.7 mm) long
7. 8"-Square/Triple: 7-5/8" (193.7 mm) high, 7-5/8" (193.7 mm) long
8. Norman Size: 2-1/4" (57.2 mm) high, 11-5/8" (295.3 mm) long 9) Utility Size: 3-5/8" (92.1 mm) high, 11-5/8" (295.3 mm) long
9. (Other) Size: *[add size]* inches wide, *[add size]* inches high, *[add size]* inches long.

NOTE TO SPECIFIER: Delete thickness options not required for project. Thickness availability varies by product and may be available in additional thicknesses not listed below including thicknesses for use as soaps (1/2 brick), corbelled areas and other applications. Verify availability with local Speedymason representative.

c. Thickness: *[3/8" (85.7)] [1/2" (13 mm)] [3/4" (19 mm)] [or] [1" (25 mm)]*

NOTE TO SPECIFIER: Delete first paragraph and subparagraphs below if no Glazed Thin Brick are required.

2.3 MORTAR

NOTE TO SPECIFIER: Delete mortar not required. Add Project specific requirements.

A. Must exceed ANSI A 118.4 Shear Bond Requirements and Exceed ASTM C270 Compressive Strength requirements such as Laticrete Thin Veneer Mortar or Spec Mix XP500.

[OR]

B. Thin Set Adhesive and Mortar for thin brick. Must be polymer modified mortar.

1. Thin Set Adhesive shall exceed ANSI A 118.4 Shear Bond Requirements
2. Mortar shall conform to ASTM C 270 Standard Specification for Mortar for Unit Masonry under the guidelines provided in BIA Technical Notes #8 Series.
3. Mortar shall conform to ASTM C 1714 Standard Specification for Preblended Dry Mortar Mix for Unit Masonry.

a. Type *[S] [or] [N] (Polymer Modified)*

C. Mortar for thin *[concrete] [or] [stone]* units.

1. Comply with masonry unit manufacturer's mortar requirements. Mortar shall conform to ASTM C 270 Standard Specification for Mortar for Unit Masonry.

D. Cold Weather Additives (including accelerators) shall not be used in thin brick mortar mix.

2.4 EMBEDDED FLASHING MATERIALS

NOTE TO SPECIFIER: Starter angle listed below for use as flashing for Speedymason Mortar Bed Panel System for Thin Masonry. Delete flashing options not required for project or referenced in specification Division 07.

A. Metal Flashing:

1. Drip Edge *[Galvanized sheet steel: ASTM A 653 0.024" (0.61 mm) (26-gauge), minimum ASTM A 925 G-90 coating] [or] [Stainless Steel: ASTM A 240/A 240M, Type 304, 0.019" (0.45 mm) (24-gauge)]* pre-bent in 8' (2438.4 mm) lengths.

NOTE TO SPECIFIER: Delete subsection below if not required. Speedymason Mortar Bed Panel System for Thin Masonry® air vent is recommended when using Speedymason Mortar Bed Panel System for Thin Masonry and should be installed per manufacturer's instructions where the panel meets the drip edge to ensure proper ventilation and facilitate water drainage.

2.5 CONTROL AND EXPANSION JOINTS

NOTE TO SPECIFIER: Typical Speedymason Mortar Bed Panel System for Thin Masonry· Panel applications do not require compressible fill. Backer rod may be needed if depth of joint exceeds 3/4" (19 mm) per Division 07 Section "Joint Sealants".

A. Follow local building codes for control and expansion joint placement.
B. Control joints should preferably be square in shape but may have a maximum length-to-height or height-to-length ratio of 2-1/2 to 1.
C. Backer Rod: Non-gassing polyethylene or flexible polyurethane foam rod 25% wider than width of joint to be filled and depth exceeds requirements in as indicated in Division 07 Section "Joint Sealants".

2.6 FASTENERS

NOTE TO SPECIFIER: Fasteners are dependent upon substrate construction. More than one type of fastener

may be required on a single project. REVIEW construction conditions and DELETE fasteners that are unnecessary or inappropriate for specific project.)

NOTE TO SPECIFIER: Consult a corrosion specialist to determine the best fastener for project conditions.

A. Screw fasteners shall be a minimum *[#6, minimum 0.138" (3.5 mm) shank diameter] [or] [#8, minimum 0.164" (4.2 mm) shank diameter]* with a *[wafer,] [pancake]* head and corrosion resistance provided by *[zinc plating] [ceramic coating] [or] [stainless steel]* with a minimum protection of 800 hrs. when tested according to ASTM B 117.

B. Nail fasteners shall be ring-shanked stainless-steel Miami/Dade approved roofing nails with a minimum of 1-3/4" (19.05 mm) length.

NOTE TO SPECIFIER: Delete subparagraphs below that are unnecessary or inappropriate for specific project.

C. Fasteners Length:

1. Wood frame: Fasteners shall penetrate the studs a minimum of 1" (25 mm).

2. *[Masonry] [or] [Concrete]*: Fasteners shall penetrate the substrate a minimum of 1" (25 mm).

3. Steel studs, girts or purlins: Self tapping/self-drilling fasteners shall penetrate a minimum 1/4" (6.4 mm), or not less than three exposed threads behind the stud flange, girt or purlin.

NOTE TO SPECIFIER: Delete sheathing section below if not applicable for specific project.

2.7 SHEATHING

A. Provide sheathing, as designated in Section 06 00 00.

NOTE TO SPECIFIER: Verify specific project needs regarding fire and moisture resistance as well as structural requirements prior to specifying sheathing.

B. Sheathing shall be one of the following as deemed suitable for specific project conditions:

1. Exterior grade gypsum sheathing or glass fiber mat-faced sheathing or cement board, not less than 5/8" (15.9 mm) in thickness.

[OR]

2. Oriented strand board (OSB) not less than 5/8" (15.9 mm) in thickness; or exterior grade plywood not less than 5/8" (15.9 mm) in thickness.

2.8 WEATHER BARRIER

NOTE TO SPECIFER: Delete subsection if assembly does not require weather barrier (e.g., concrete or masonry substrate). For frame construction, Speedymason recommends a minimum of one Weather Barrier Climatically specific moisture vapor flow must also be considered in the selection of materials for the water resistive barrier. Determine if the potential for condensation exists within the wall and make necessary changes to the wall design as needed.

A. Provide weather barrier as designated in Division 07.

2.9 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

NOTE TO SPECIFIER: Contact a Brick Company representative to determine cleaning solution and procedure for thin brick specified. Verify acceptability of cleaner for cleaning masonry with pigmented mortar joints. Delete solution(s) not recommended.

PART 3: EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates and foundations as well as rough-in and built-in construction have been properly prepared.

1. Walls must be structurally sound, and the substrate system designed with a wall deflection not greater than L/360.

   a. Maximum wall frame spacing for stud walls = 24" (609.6 mm) O.C.

   b. Maximum wall frame spacing for girts = 30" (762 mm) O.C.

   c. Minimum 0.043" (18-gauge; 1.09 mm) studs for exterior walls.

2. Substrate shall have no planer irregularities greater than 1/4" in 10' (7 mm in 3.05 m).

B. Verify substrate including, concrete, masonry or framing as well as sheathings and weather barrier are properly installed.

C. Verify walls are plumb and corners are braced to specifications.

D. Substrate must be flat, within 1/8" (3.2 mm) within any 4' (1.2 m) square area with no planar irregularities greater than 1/4" per 10 lin. ft.

E. If substrate, foundations, or flashings are the responsibility of another installer, notify Architect and General contractor of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation. All surfaces must be free of water, snow, dirt, mud, oil, and other foreign materials prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Trim or flash in place per manufacturer's details and/or BIA Technical Note 7A on flashing of Brick Walls.

3.3 INSTALLATION, GENERAL

A. Install materials in accordance with manufacturer's instructions.

B. Select and arrange exposed masonry units to produce a uniform blend of color and texture.

1. Mix units from several pallets or cubes as they are placed.

C. Comply with tolerances in TMS 602/ACI 530.1/ASCE 6.

3.4 SPEEDYMASON PANEL

A. Install in accordance with manufacturer's written instructions as applicable to each type of substrate required.

1. See www.speedymason.com for installation guild.

B. Trim, starter angle and flashing shall be installed prior to panel installation.

C. Walls shall be constructed of structurally sound masonry, wood, or steel studs, with an approved building sheathing and weather resistant barriers as required.

D. Panels shall be clean, free of dirt, oil, or any other foreign contaminant.

E. Lay out panels in advance for accurate spacing of tabs to allow installation of full height masonry units at top and bottom of walls, openings, etc. when possible. Note: Panel sizes will vary depending on spacing.

F. Attach panels flat to the substrate in true and level rows with support ties aligned and level to each other at flat sections as well as corners with the female edge facing down.

G. Do not allow panels to bridge movement joints in substrate.

H. Install panels to butt the sides of the panels and butt panels vertically, always leaving a gap at movement joints locations equal to the thickness of the joint.

I. Stop panel 1/4" to 3/8" from inside corners, openings, and other materials to allow for movement.

J. Fastener Installation: Mechanically attach panels with a minimum of one fastener per 8" of each fastener strip on the Speedymason panel and at the edge along the top and bottom of the wall and around openings.

1. Horizontal fastener spacing shall not exceed 8" for exterior and 16" for interior; vertical fastener spacing shall have a fastener per fastener strip.

2. Provide additional anchors around the perimeter of walls as well as openings larger than 24" (406 mm) in either dimension, as well as building corners not utilizing corner panels as follows:

a. Install fasteners a minimum of 4 per sq. ft. (900 cm^2).

i. At the top and bottom of the walls, fasteners shall be spaced a maximum of 8" (305 mm) horizontally and within the height of a single row or course of masonry.

3.5 FASTENERS (For Speedymason)

NOTE TO SPECIFIER: Revise subparagraphs below to suit Project.

A. Attach fasteners to the framing through the sheathing.

B. Fasteners for wood frame shall penetrate the studs a minimum of 1" (25 mm).

C. Fasteners for steel studs, girts or purlins shall penetrate a minimum 1/4" (6.4 mm) with not less than three exposed threads behind the steel members.

D. Fasteners for *[masonry] [or] [concrete]* shall penetrate the substrate a minimum of 1" (25 mm).

3.6 THIN VENEERS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement joints, returns, and offsets.

1. Avoid using less-than-half-size units, particularly at corners and jambs.

2. Ensure unfinished or cut faces are not exposed to view upon completion.

B. Select and arrange units for exposed unit masonry to produce a uniform blend of color and texture.

C. Lay masonry in bond pattern as indicated on drawings or general notes.

D. Back face of thin brick must be dry and clean, free of dirt, oil, or any other foreign contaminant.

E. Leave a uniform 3/8" to 1/2" (9.5 to 12.7 mm) gap at openings to allow for movement joint installation.

F. Thin veneers shall be applied within 15 minutes after thin set adhesive has been applied and before film begins to form on the thin set adhesive.

G. Space thin brick to ensure that the head joints do not exceed 5/8" (16 mm) or fall below 1/4" (6.4 mm).

H. Keep areas intended to receive sealant clean of thin brick, adhesive, and other materials during construction.

I. Do not allow masonry units to bridge movement joints in substrate.

3.7 MORTAR INSTALLATION AND JOINTING

A. Use an approved Polymer Modified Mortar Mix (bed mix) to mechanically bond thin brick to panel.

1. Trowel the mortar onto the panel and expose the coursing on the Speedymason Panel.
2. Place the thin veneer on the panel leg.
3. Bag joints with a Type N or S Mortar (not a polymer modified mortar). Strike joints using a joint profile tool.

[OR]

B. Completely cover back of bricks (Back Butter) with approved Polymer Modified Mortar Mix, place thin veneer on the panel leg, and bag in joints with a Type N or S Mortar.

C. Do not fill the drainage area of the drip edge starter angle.

NOTE TO SPECIFIER: Delete joint profiles not required.

D. Tool exposed joints to profile listed below:

1. Joint Profile: Tool mortar joints to a concave appearance.
2. Joint Profile: Tool mortar joints to a concave V-shaped appearance.
3. Joint Profile: Tool mortar joints to a concave grapevine appearance.

NOTE TO SPECIFIER: Delete subparagraph below if no glazed thin brick is required.

E. For glazed thin brick, use nonmetallic jointer.

F. Flush cut all joints not tooled.

G. When pointing, completely remove mortar, and refill solidly with pointing mortar, and tool joints.

3.8 FLASHING

A. Install embedded flashing in Speedymason Mortar Bed Panel System for Thin Masonry assemblies at the base of the wall, above openings, above horizontal movement joints and other obstructions to downward flow of water in wall, and where indicated.

B. Before covering with wall panel or mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.

C. Carry flashing vertically as detailed, but not less than 3" (76 mm) above horizontal plane.

D. Lap flashing a minimum of 3" (76 mm) or recommended by local building code.

E. Seal all flashing laps with compatible lap cement or tape.

F. Extend head and sill flashings not less than 6" (150 mm) beyond edges of openings; seal with mastic.

G. Project starter angle from face of wall approximately 1/4" (6 mm) to form a drip.

3.9 CONTROL AND EXPANSION JOINTS

A. Keep clean of all mortar, adhesive, and debris.

B. Locate joints were indicated on drawings.

C. Provide vertical and horizontal pressure-relieving joints were indicated by installing sealant, and inserting a compressible filler when required, as specified in Division 07 Section "Joint Sealants," but not less than 3/8" (10 mm). Backer rod may not be required and is dependent upon depth of joint.

D. Install joints between Mortar Bed Panel System for Thin Masonry wall assemblies and other materials including around windows and doors.

E. Install joints at changes in substrate and where movement joints occur in substrate.

F. Follow local building codes for control and expansion joint placement.

3.10 CLEANING

A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove adhesive as well as mortar fins and smears before tooling joints.

B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Cut out all defective mortar joints and holes in exposed masonry and provide new mortar.

2. Clean preselected sample wall area with specified cleaning solution as per manufacturer's recommendations. Do not proceed with cleaning until approved by Architect.

3. Clean thin brick in accordance with manufacturer's written instructions.

4. Protect adjacent stone and non-masonry surfaces from contact with cleaner.

5. All cleaning practices and product used shall be in accordance with cleaning products manufacturer's written instructions.

608-855-5903
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EXPERIENCE THE THIN BRICK REVOLUTION

Speedymason Brick Lath PATENT No. 10,106,989 2

PRODUCT DESCRIPTION

Speedymason Brick Lath is a thin brick masonry support system for exterior and interior applications specifically designed to install thin brick quickly with ease. Made from a proprietary fiber composite material, Speedymason is manufactured to be cut to size using a hand-held circular saw. Each panel is applied to the wall with a nail gun or drill with approved fastener. Once installed, use a full bed of mortar over the panel for exterior installation or spot bond the brick for interior application. Place thin brick using any pattern, bag mortar into vertical and horizontal joints, strike, clean, and the wall is complete.

PRODUCT ADVANTAGES

Manufactured as a durable light weight thin brick lath, Speedymason is easy to handle and comes in standard 16" X 48" or 16" X 96" size panels. Each panel interlocks horizontally using a tongue and groove system which maintains even thin brick coursing throughout. Speedymason can be used with nearly all manufactured thin bricks including keyed and smooth backs and installs up to 3 square feet of brick per minute after panel is installed. Material will never corrode or rust and dramatically reduces overall labor cost. Speedymason can be installed over existing interior walls with an approved backer.

RECOMMENDED USES

Speedymason is ideal for all interior and exterior walls as an accent wall or back splash, and can be used in both residential and commercial applications. Speedymason adds to the overall warmth and appeal to any room or office.

HANDLING AND USE

Speedymason is easy to handle and can be stored inside away from heat and water for long periods of time. It is recommended to keep the panels inside their perspective shipping container until used, as exposed panels risk becoming damaged due to foreign material.

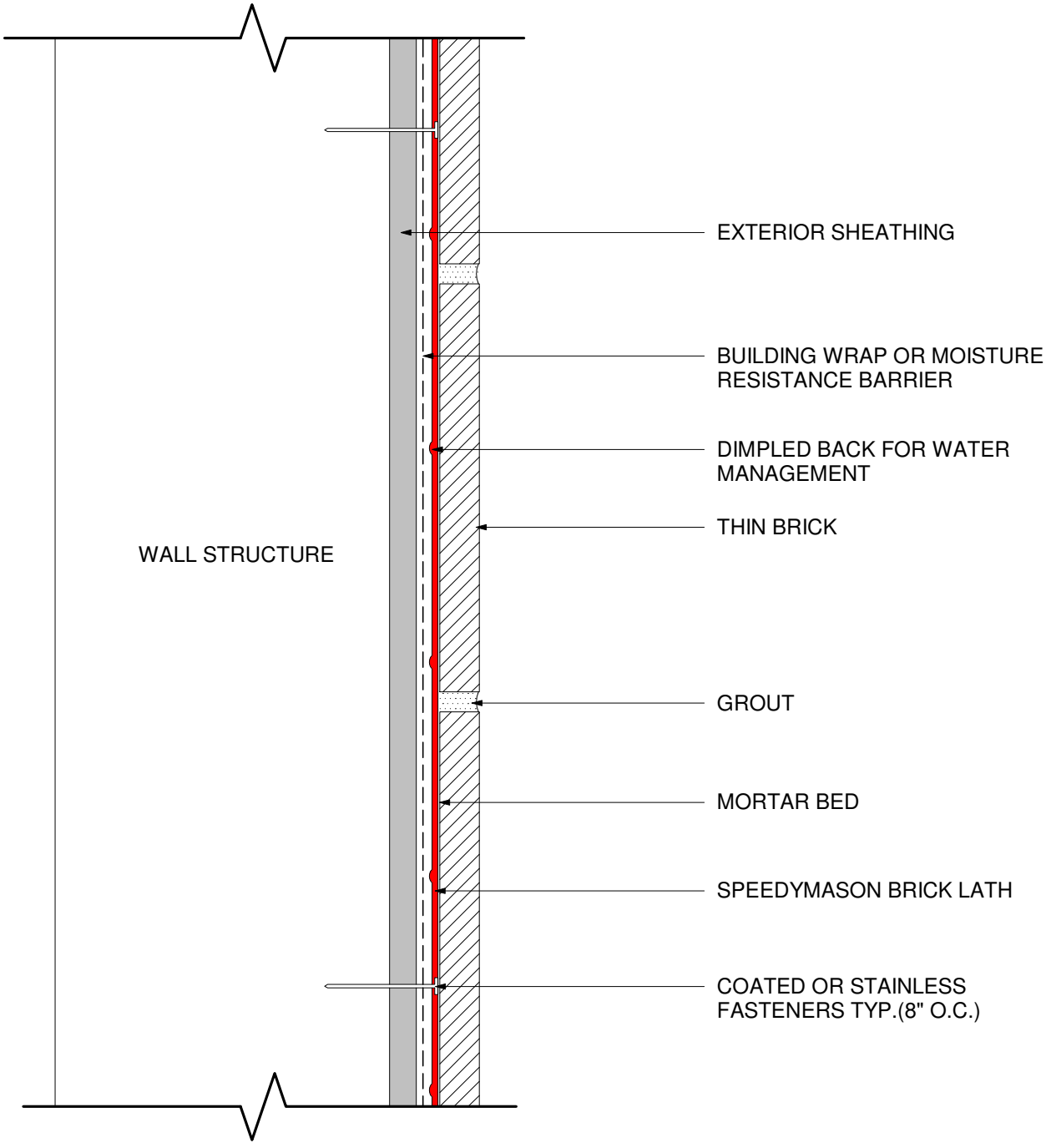
PRODUCT DATA

Material	Size	Pcs Carton	Piece Weight	Carton Weight	Piece Coverage	Box Coverage
Brick Lath	16" x 48"	16	3 lbs.	57.2 lbs.	5.335 Sqft	85.36 SQFT
Brick Lath	16" x 96"	Sold Each	6	N/A	10.67	N/A

Nail-Head/Screw Pull-Through ASTM D1037	116.9 lbf (with S.D. 5.5 lbf)

For Specific inquiries reguarding installation of Speedymason please visit Speedymason.

Office: 608-790-1322 | Web: Speedymason.com| Email: garrett@speedymason.com
300 Sherry Lynn Lane, Sparta, WI 54656



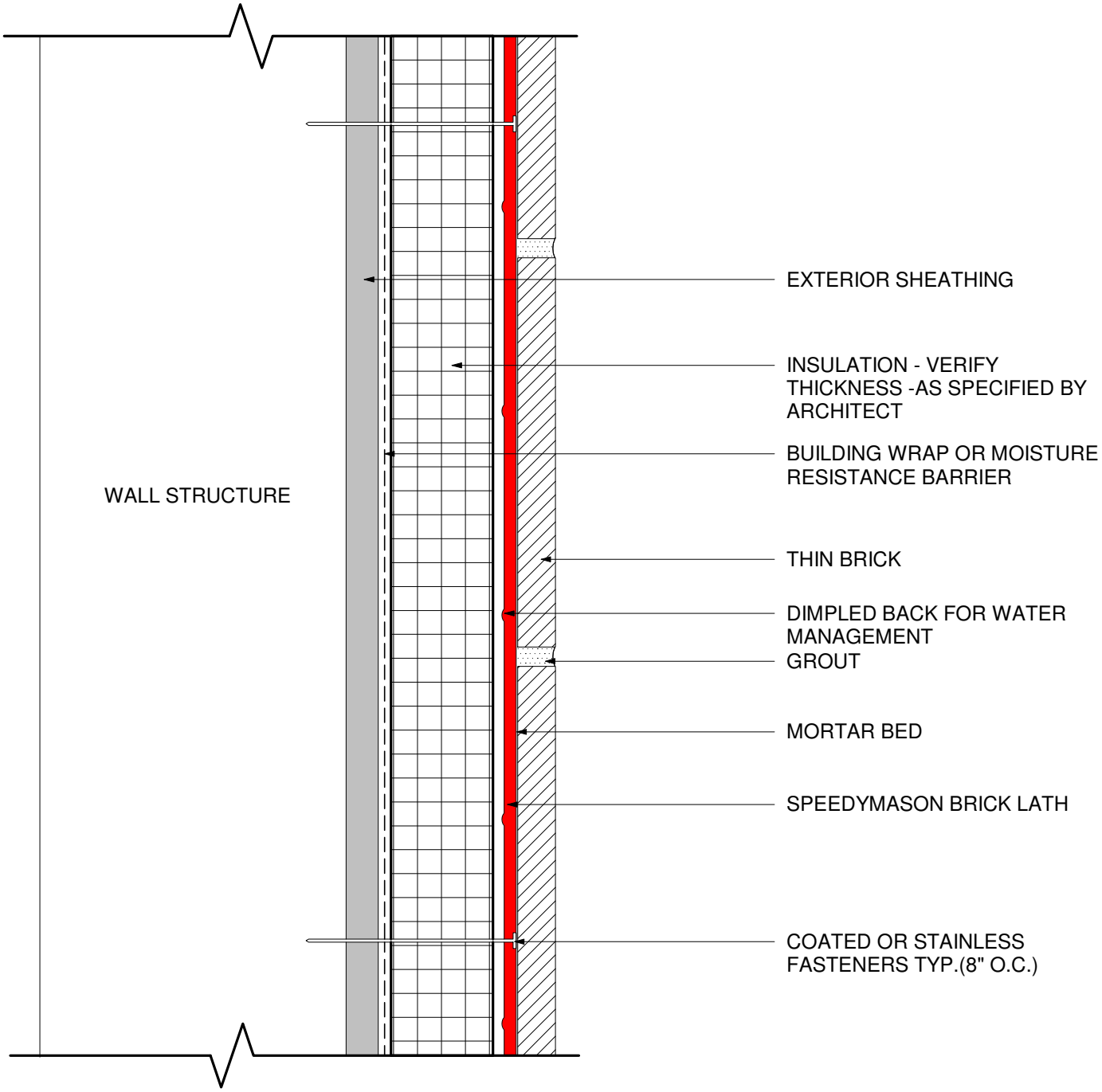
PLAN VIEW

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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EXPERIENCE THE THIN BRICK REVOLUTION



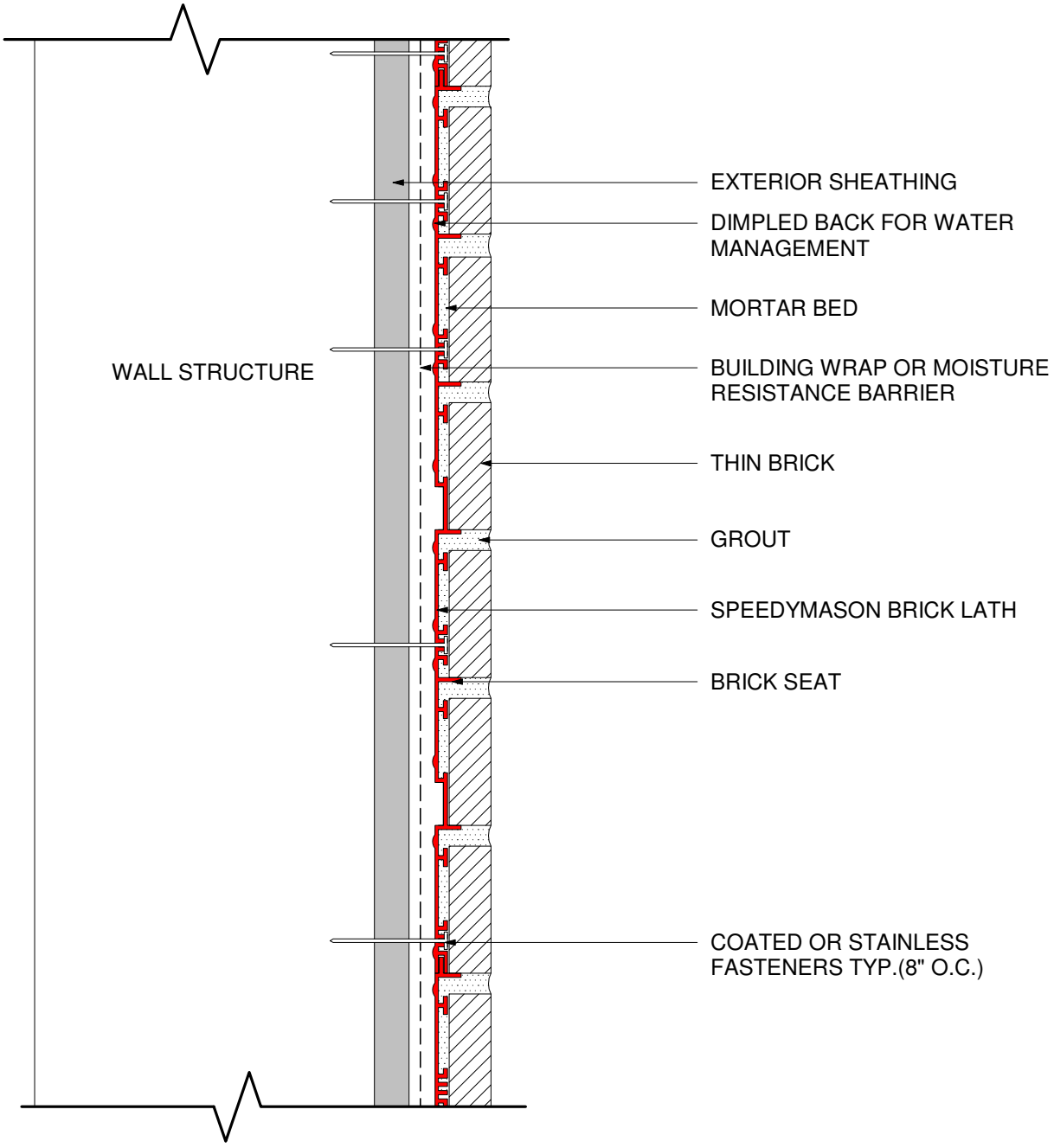
PLAN VIEW - INSULATION

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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EXPERIENCE THE THIN BRICK REVOLUTION

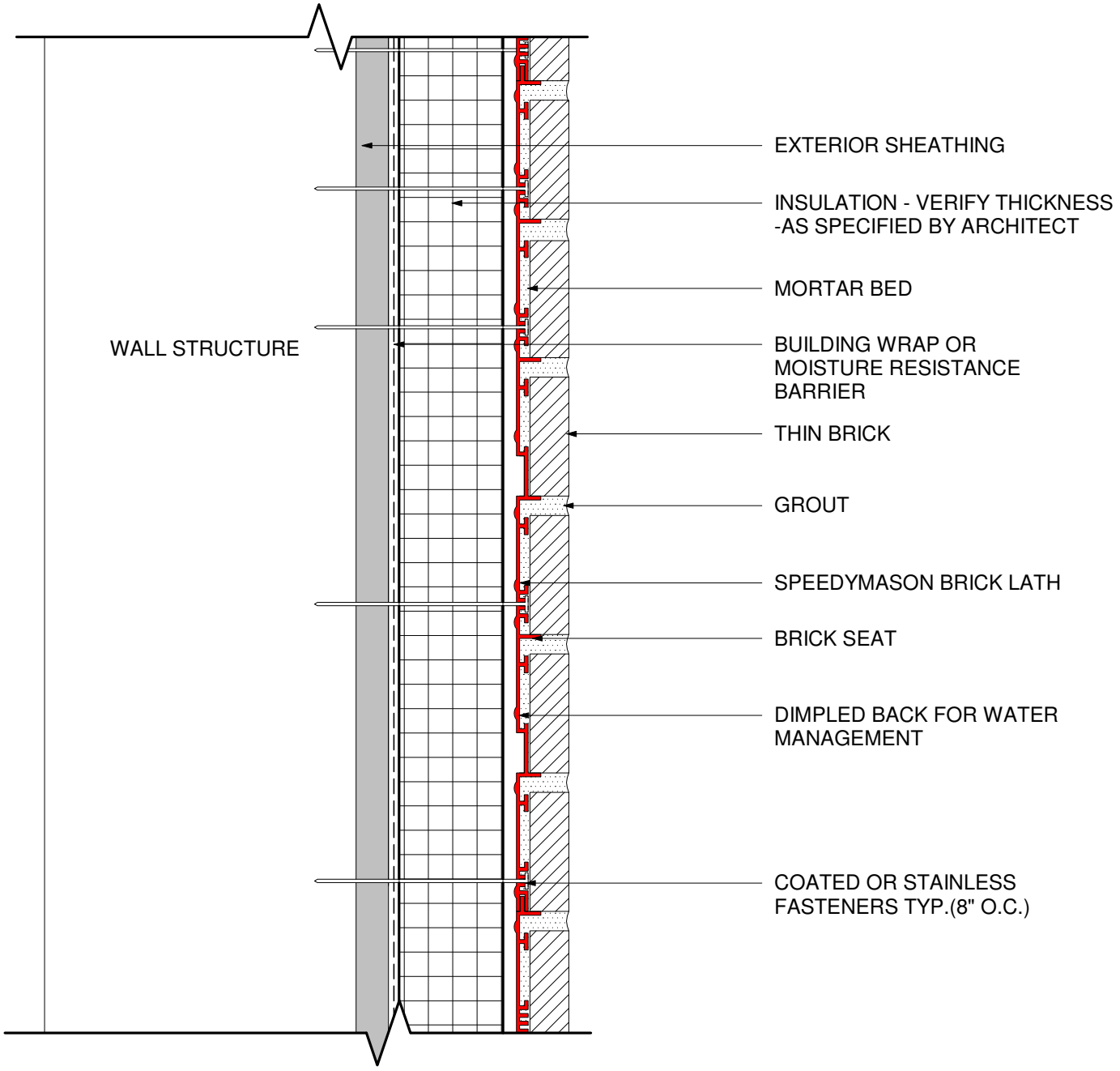


WALL SECTION

Patent No. US 10,106,989 B2

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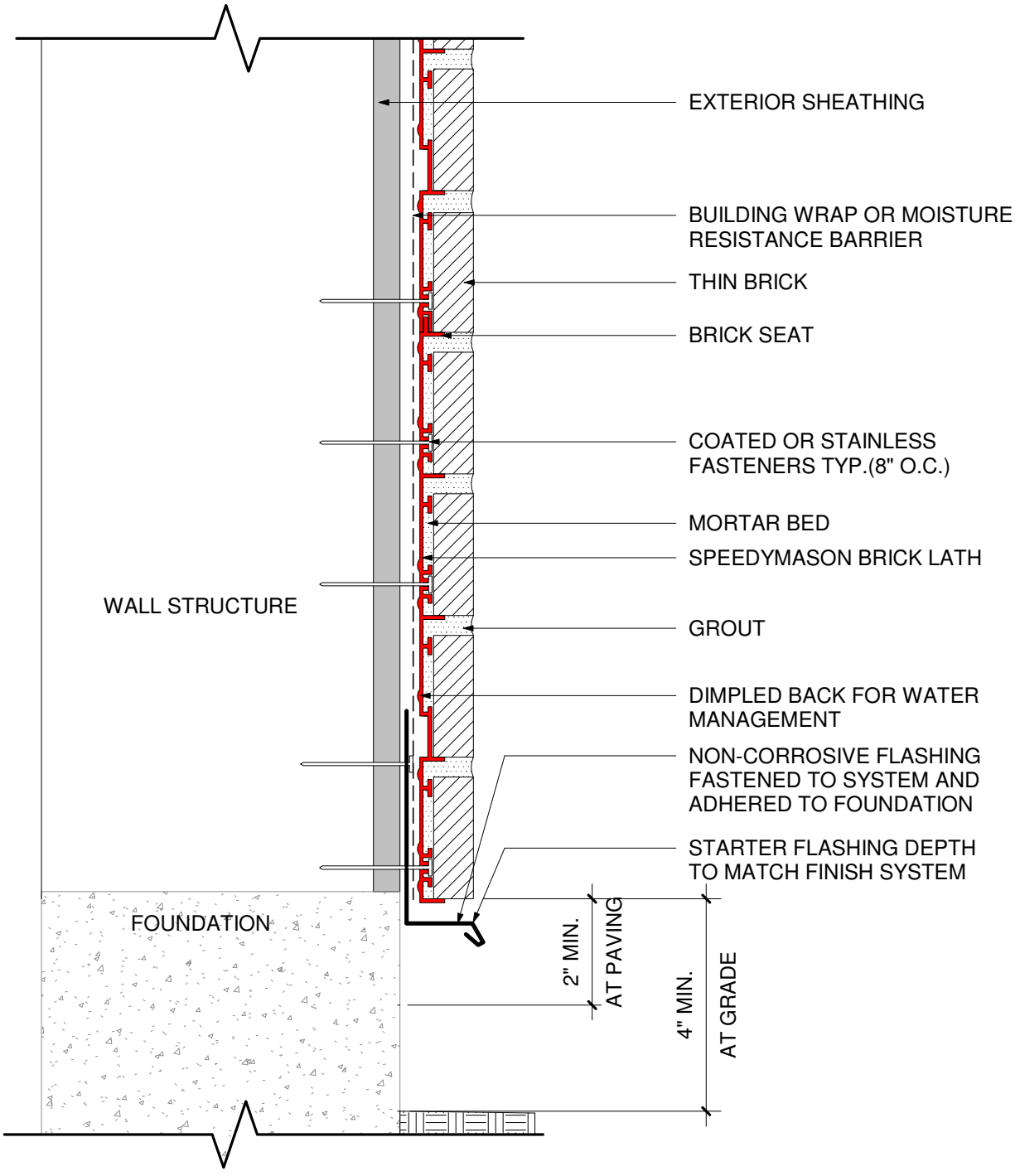


WALL SECTION - INSULATION

Patent No. US 10,106,989 B2

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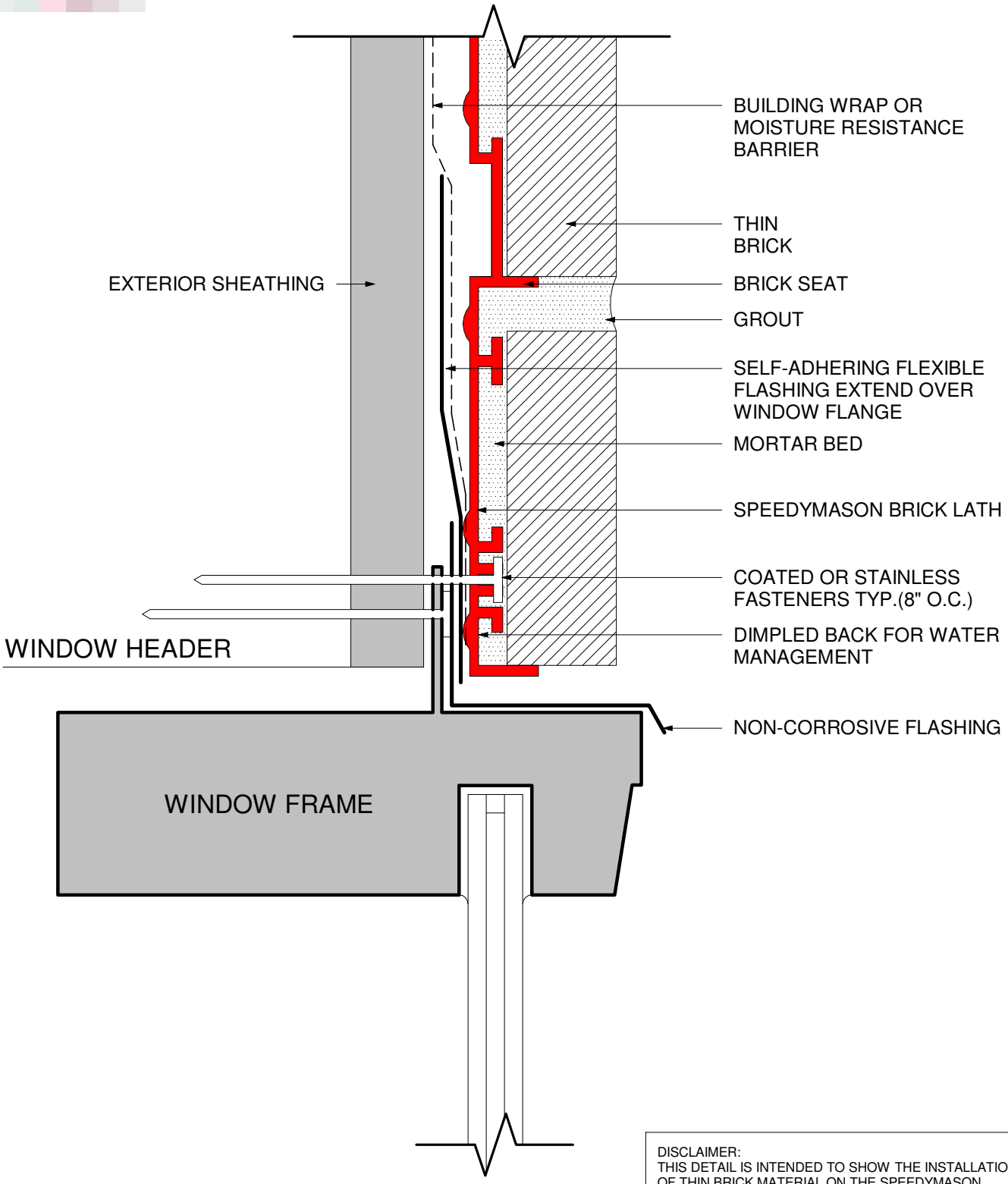


WALL SECTION - BASE

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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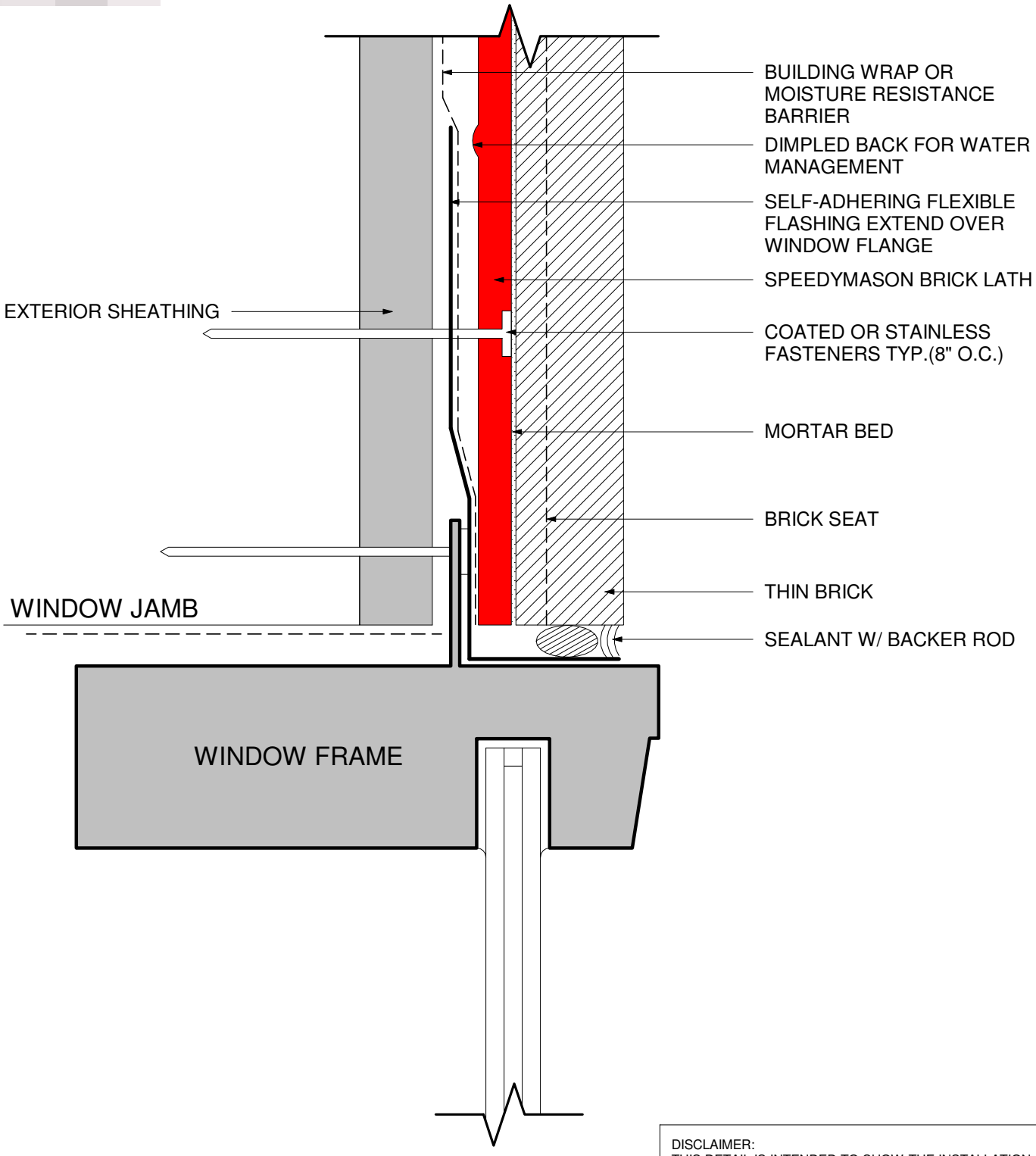
DISCLAIMER:
THIS DETAIL IS INTENDED TO SHOW THE INSTALLATION OF THIN BRICK MATERIAL ON THE SPEEDYMASON PANEL SYSTEM. VERIFY INSTALLATION DETAILS WITH WINDOW MANUFACTURER FOR PROPER FLASHING AND OTHER INSTALLATION REQUIREMENTS.

FLANGED WINDOW HEAD

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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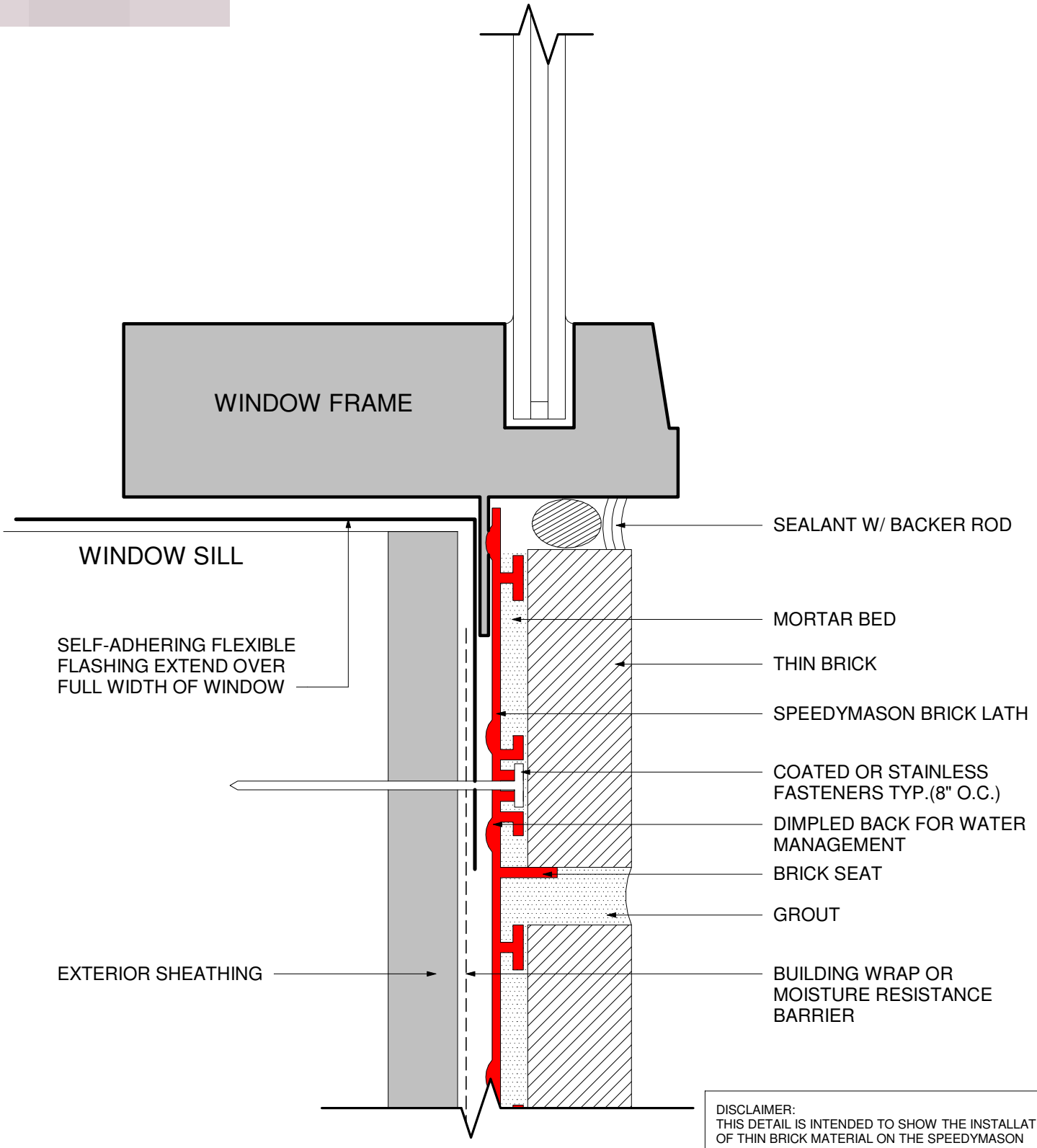
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FLANGED WINDOW JAMB

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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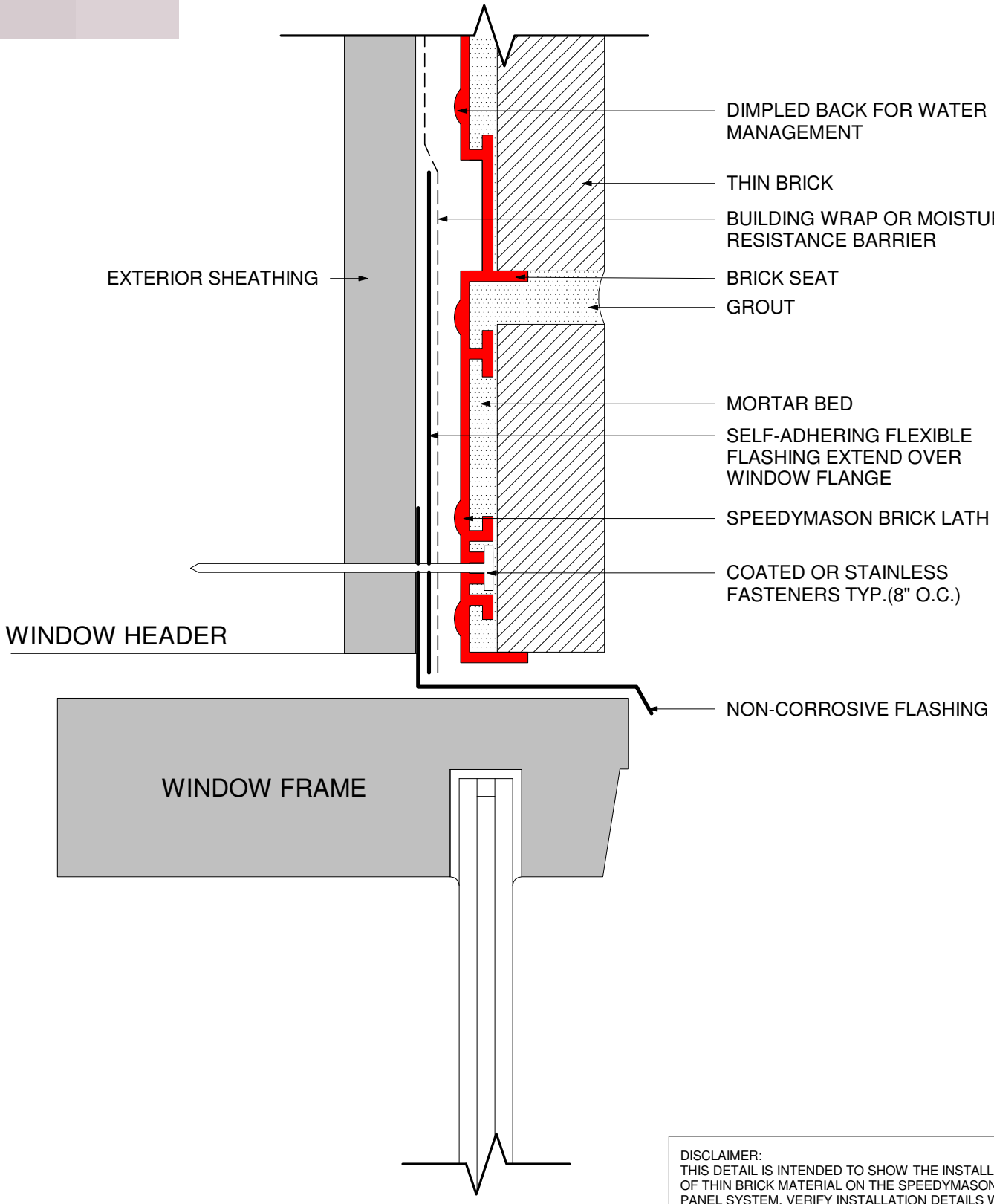
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FLANGED WINDOW SILL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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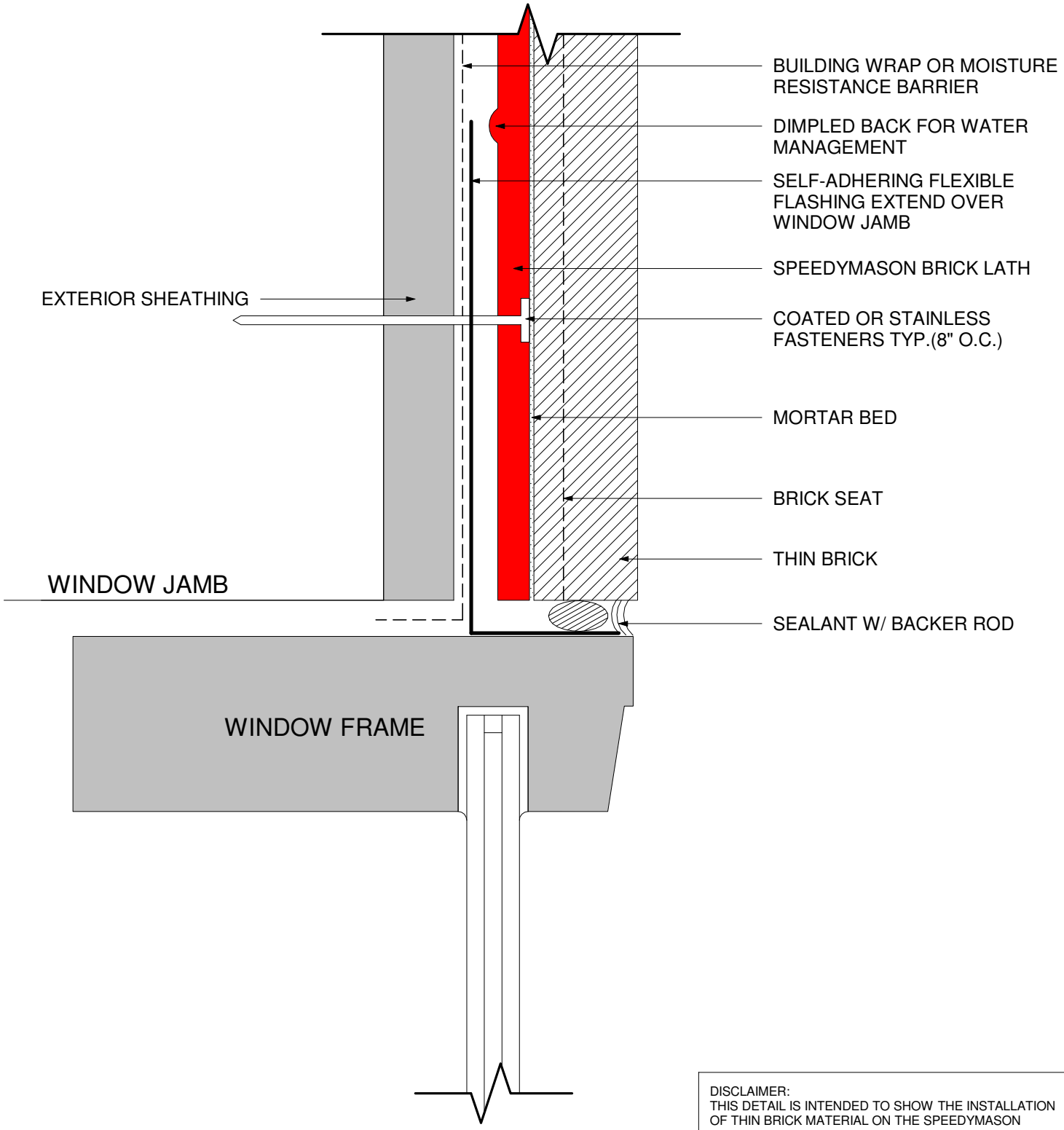
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FLUSH WINDOW HEAD

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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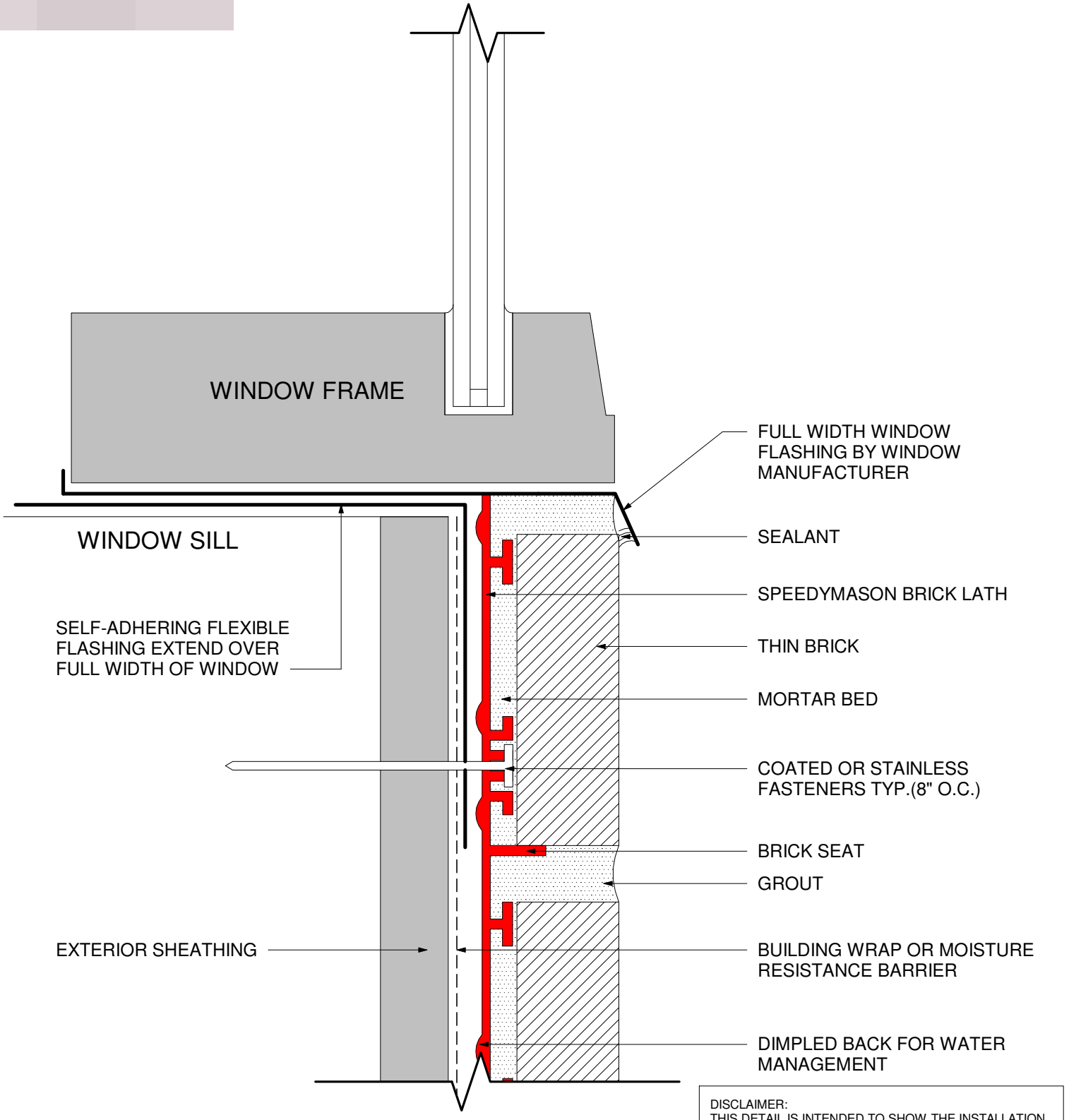
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FLUSH WINDOW JAMB

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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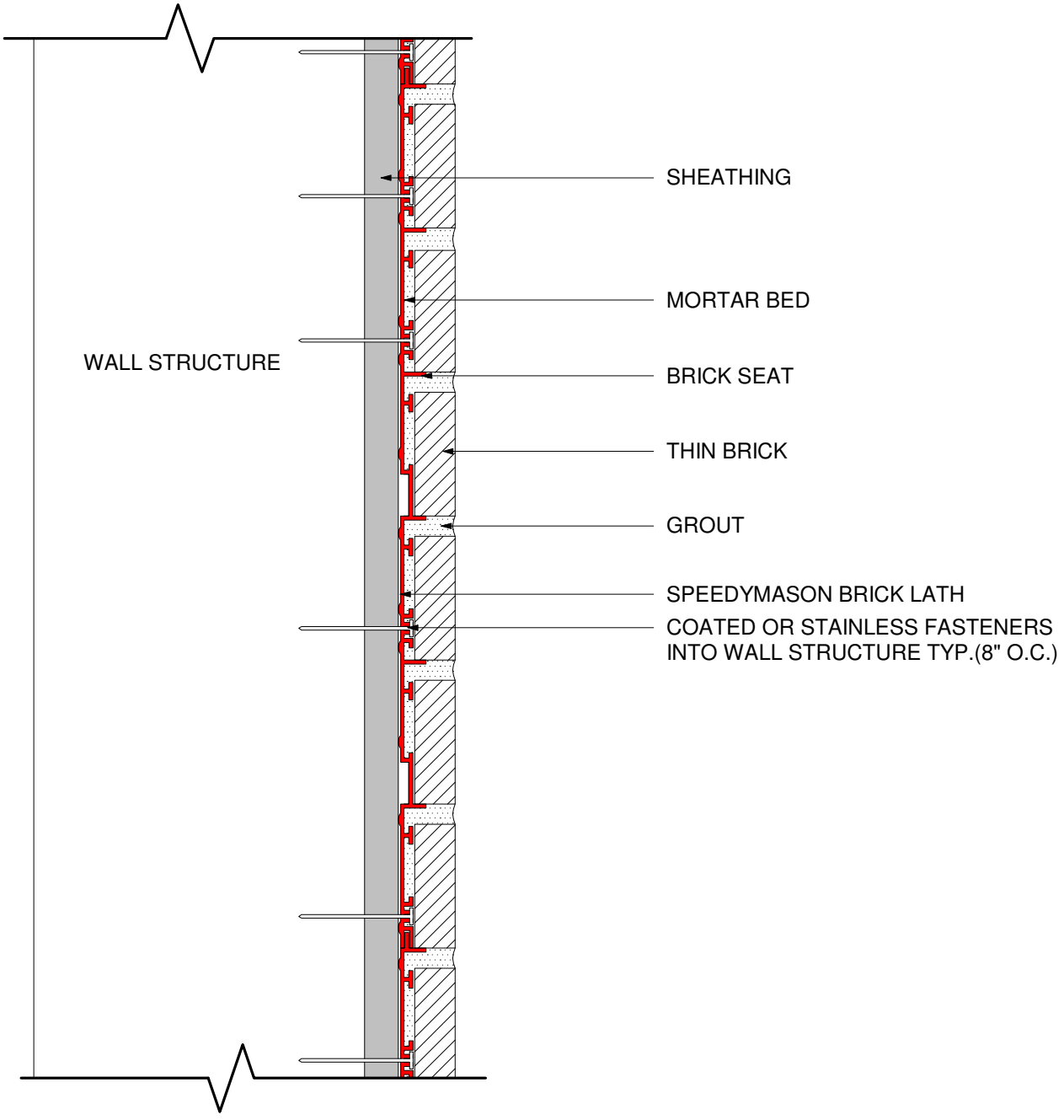
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FLUSH WINDOW SILL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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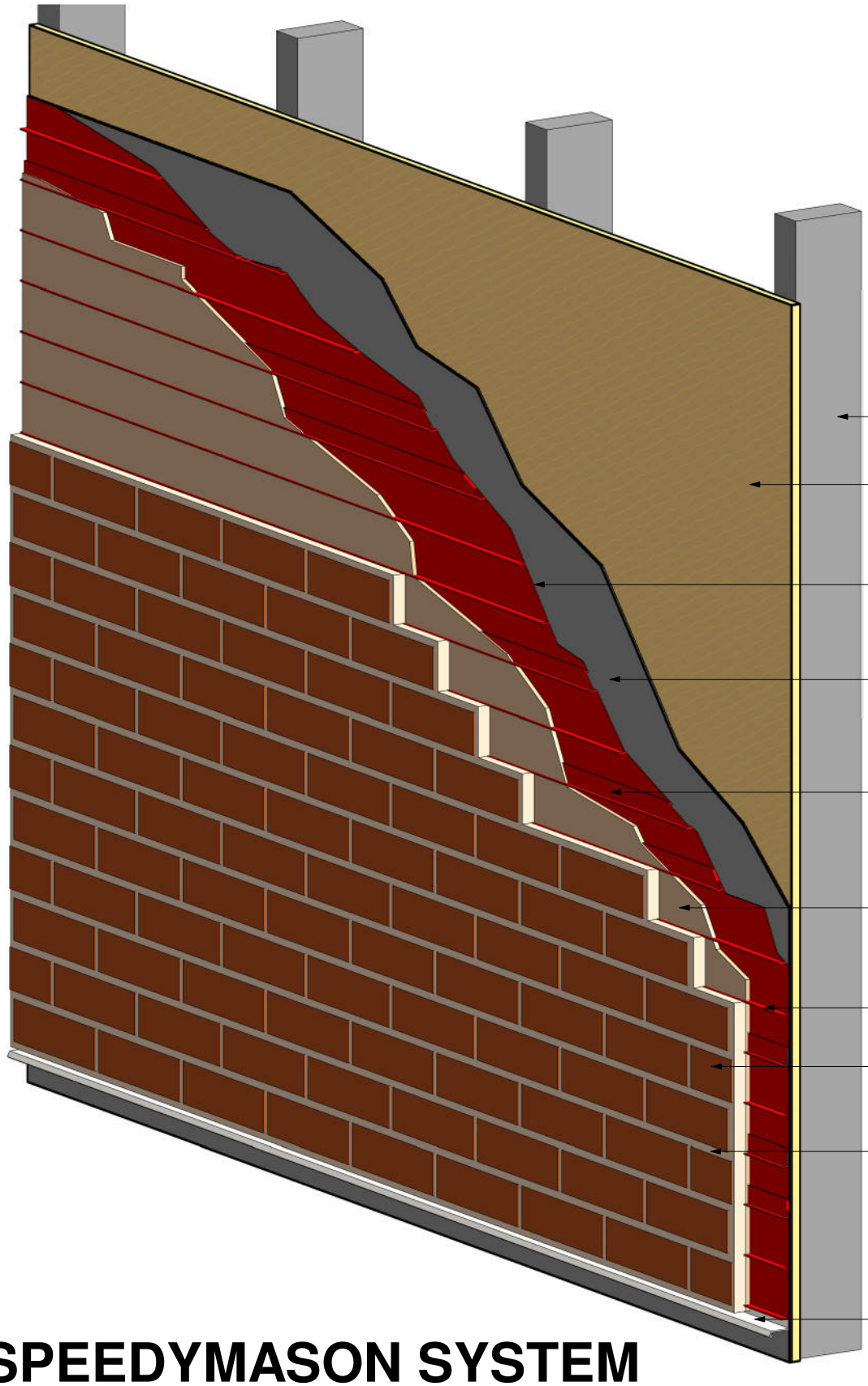


INTERIOR WALL

Patent No. US 10,106,989 B2

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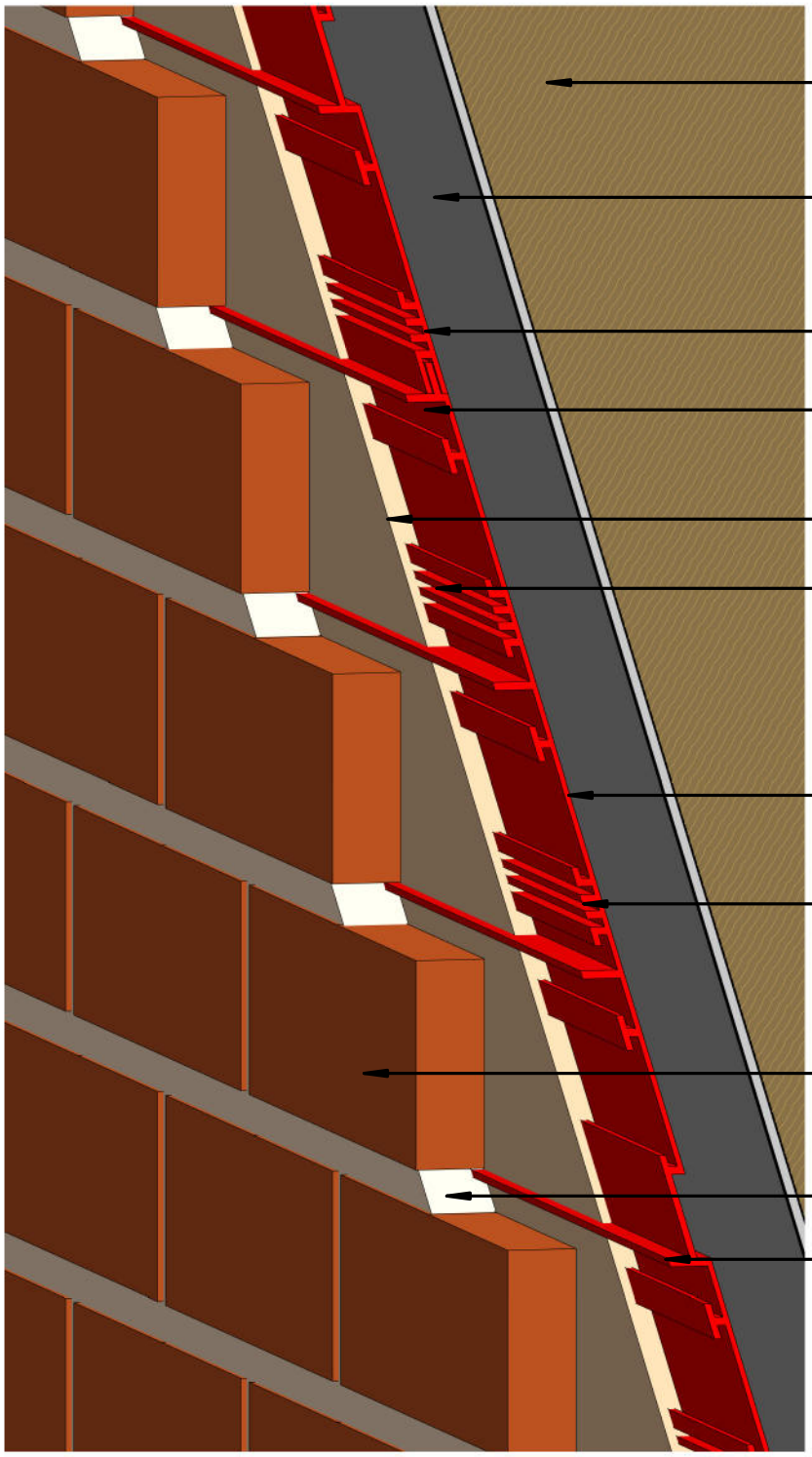


SPEEDYMASON SYSTEM

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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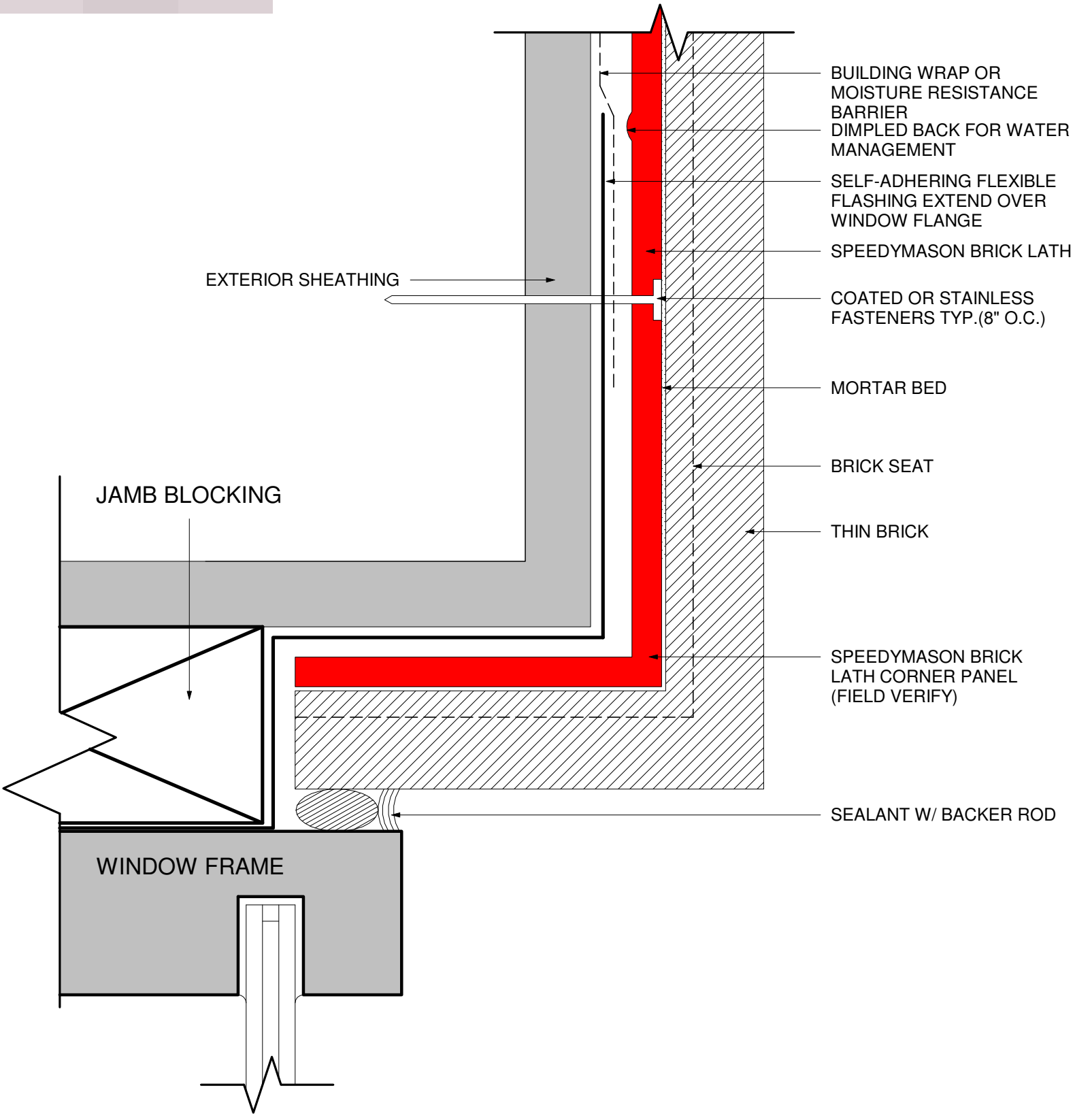


SPEEDYMASON CLOSE UP

Patent No. US 10,106,989 B2

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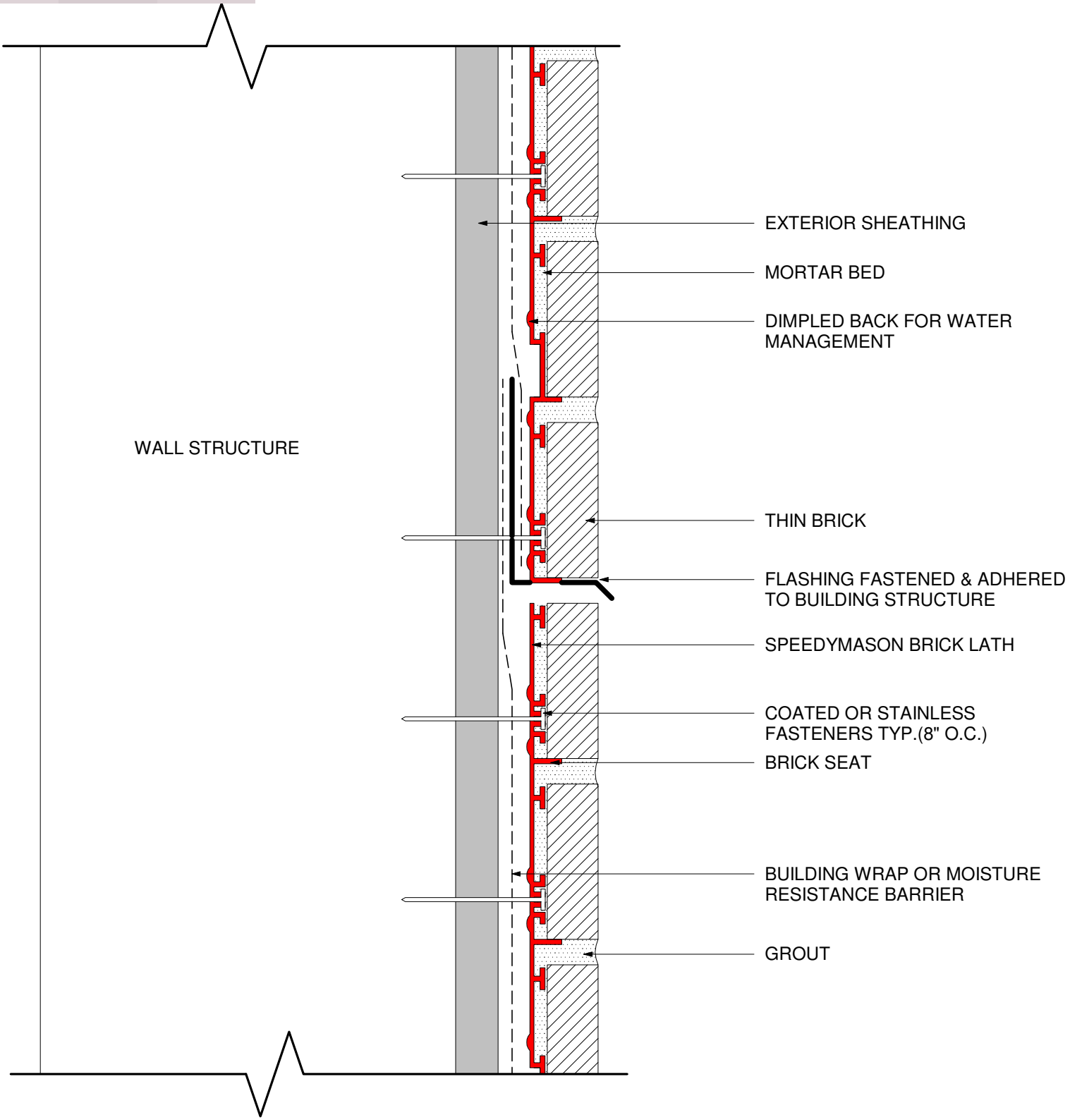


RECESSED WINDOW JAMB

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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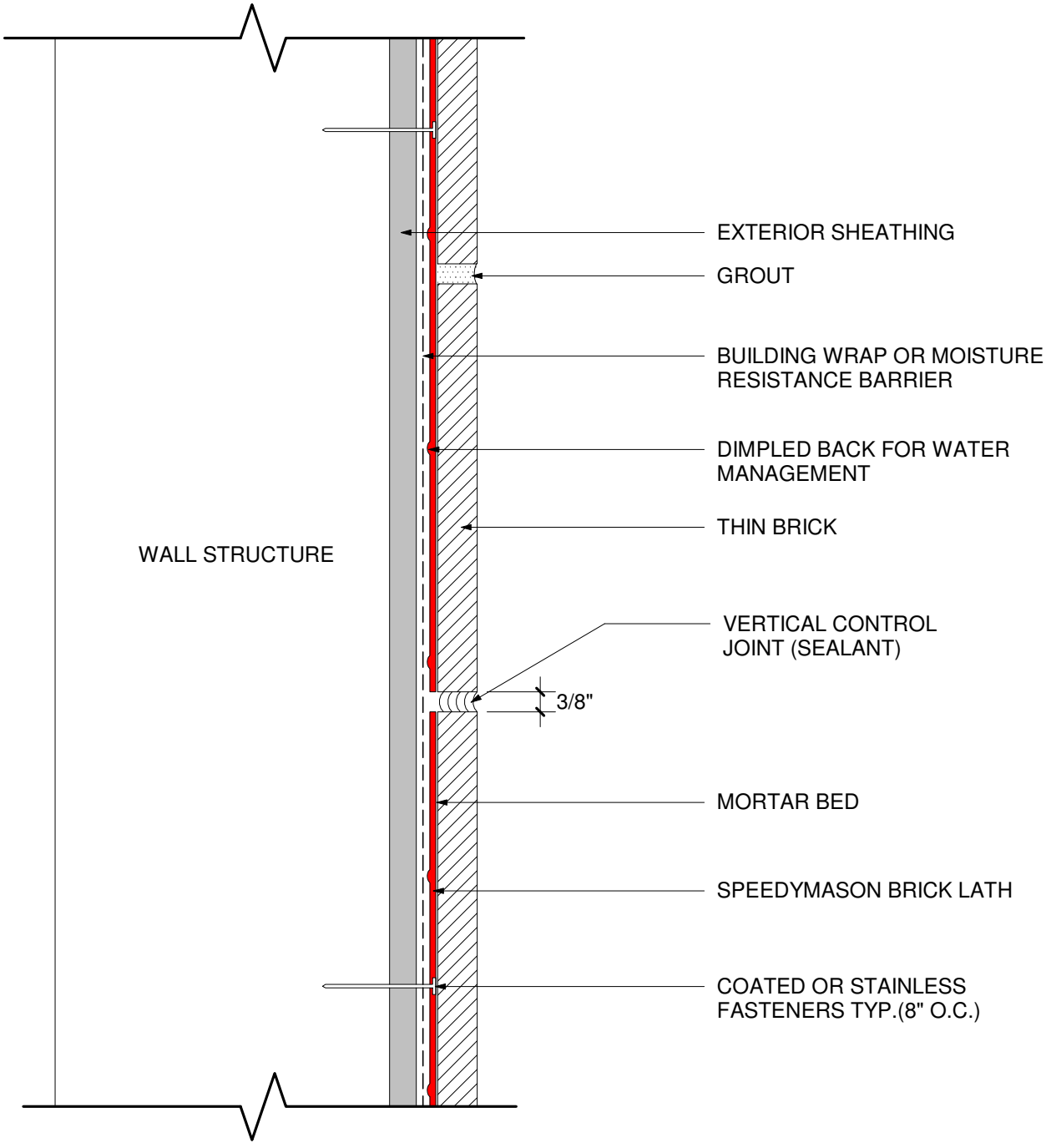


HORIZONTAL CONTROL JOINT

Patent No. US 10,106,989 B2

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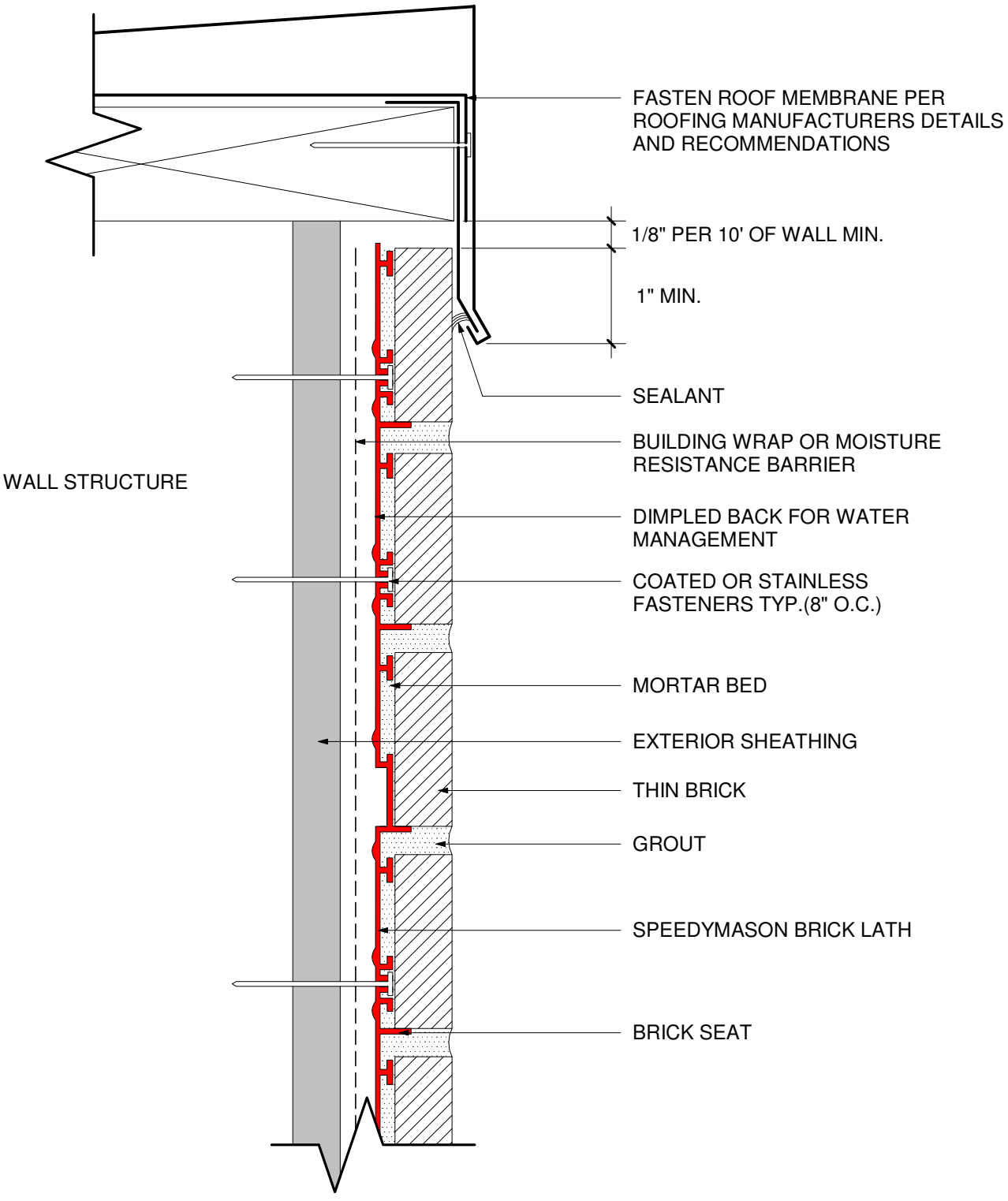


VERTICAL CONTROL/EXPANSION JOINT

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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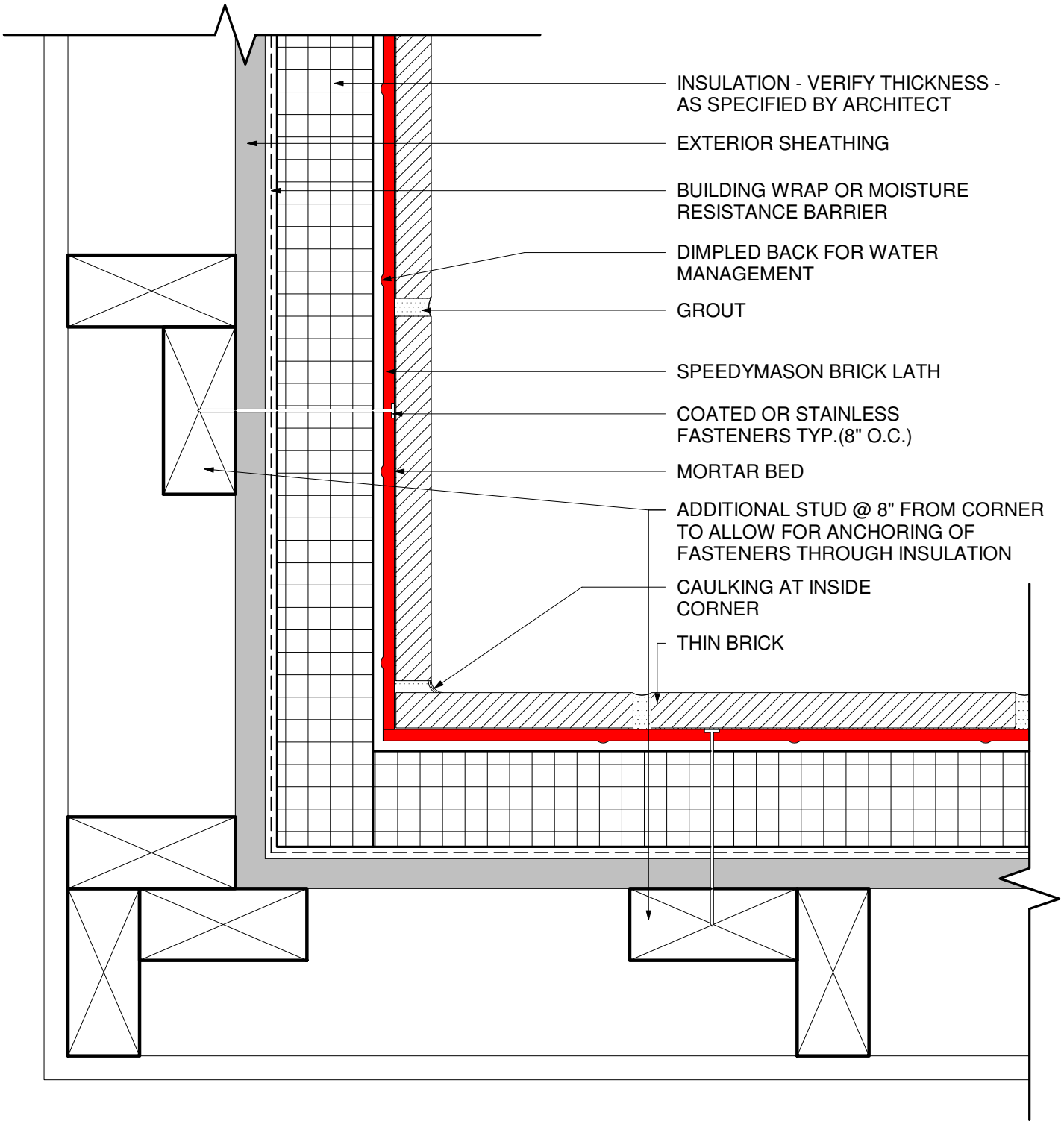


ROOF EDGE DETAIL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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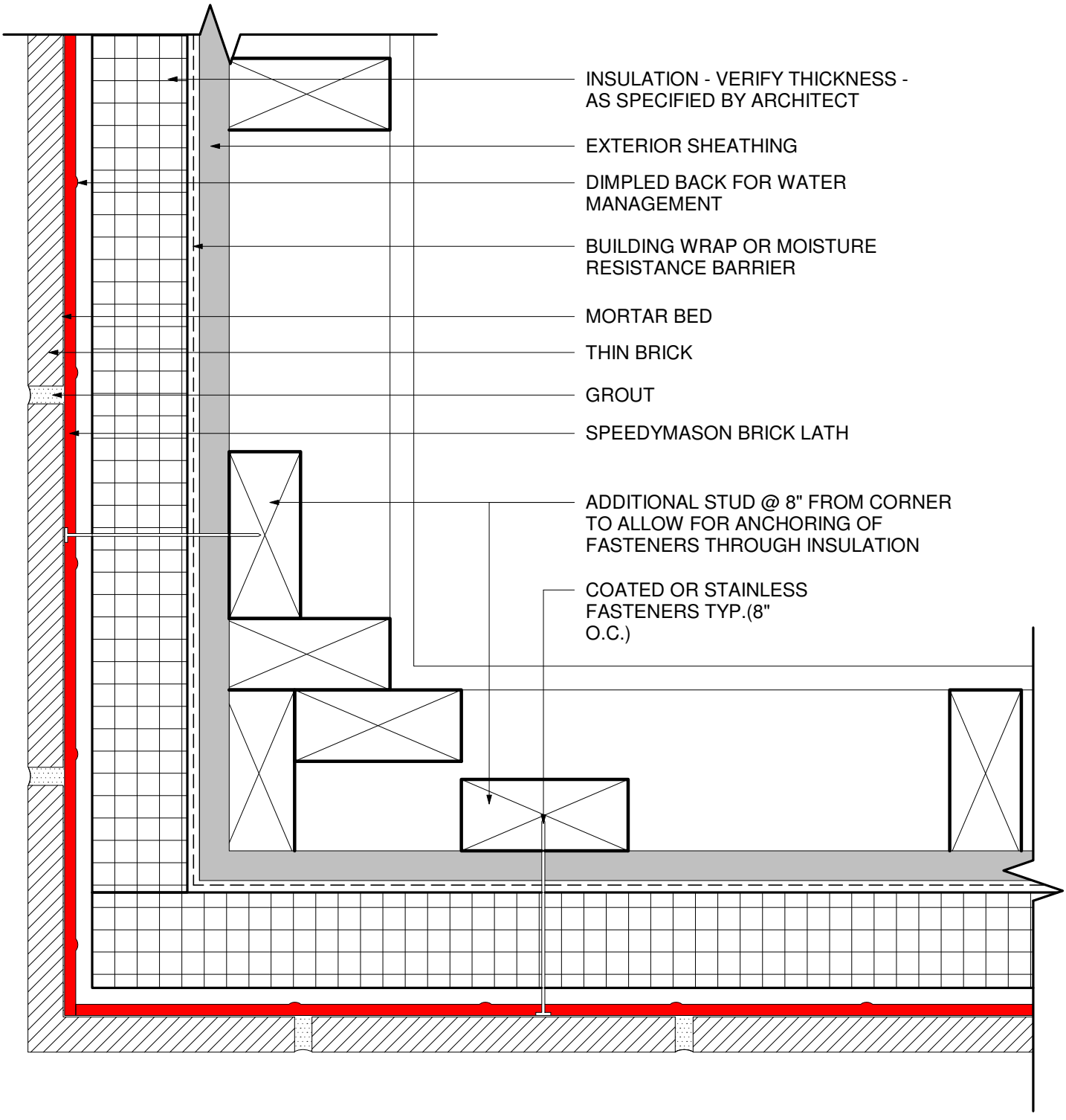


INSIDE CORNER

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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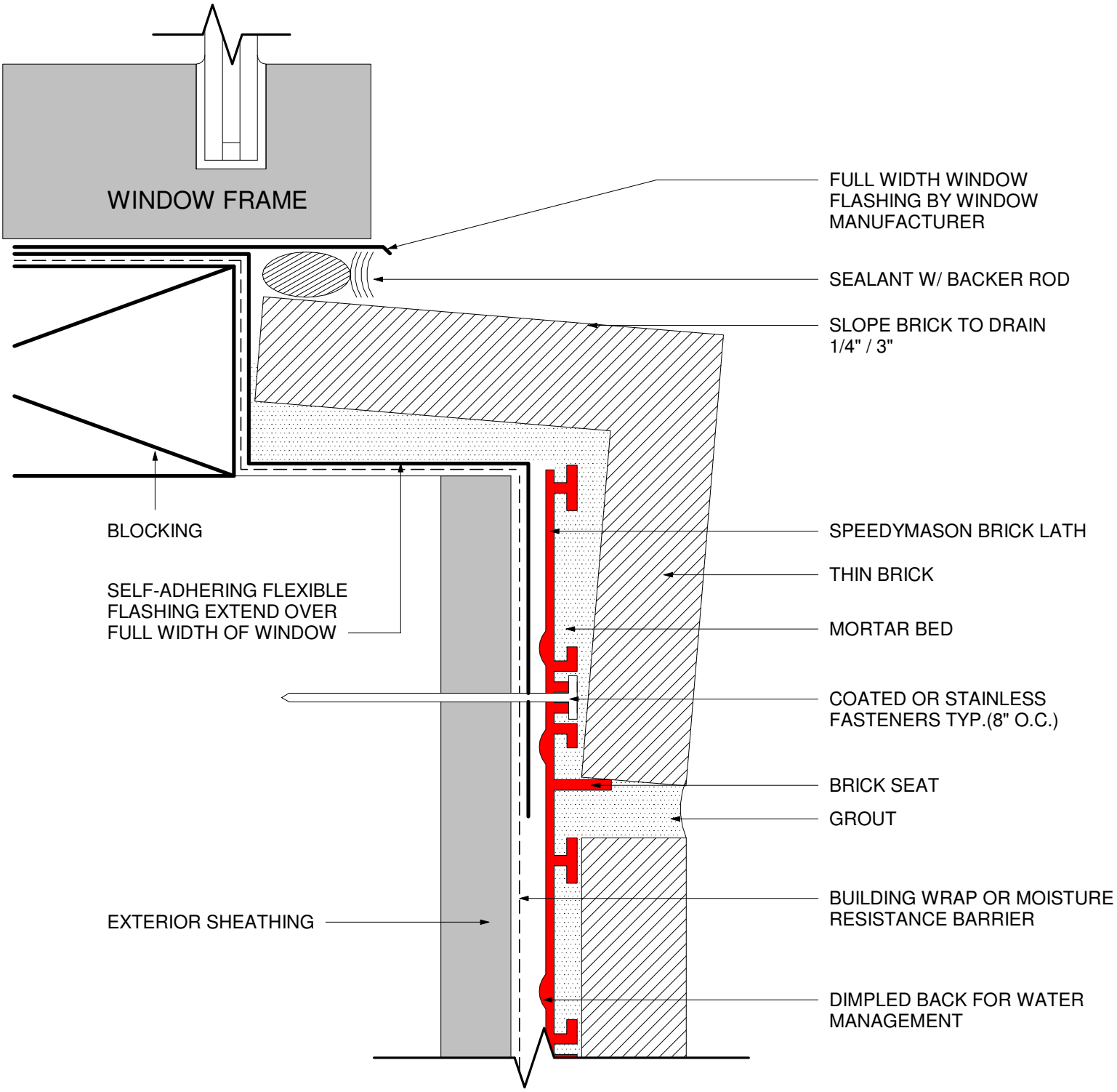


OUTSIDE CORNER

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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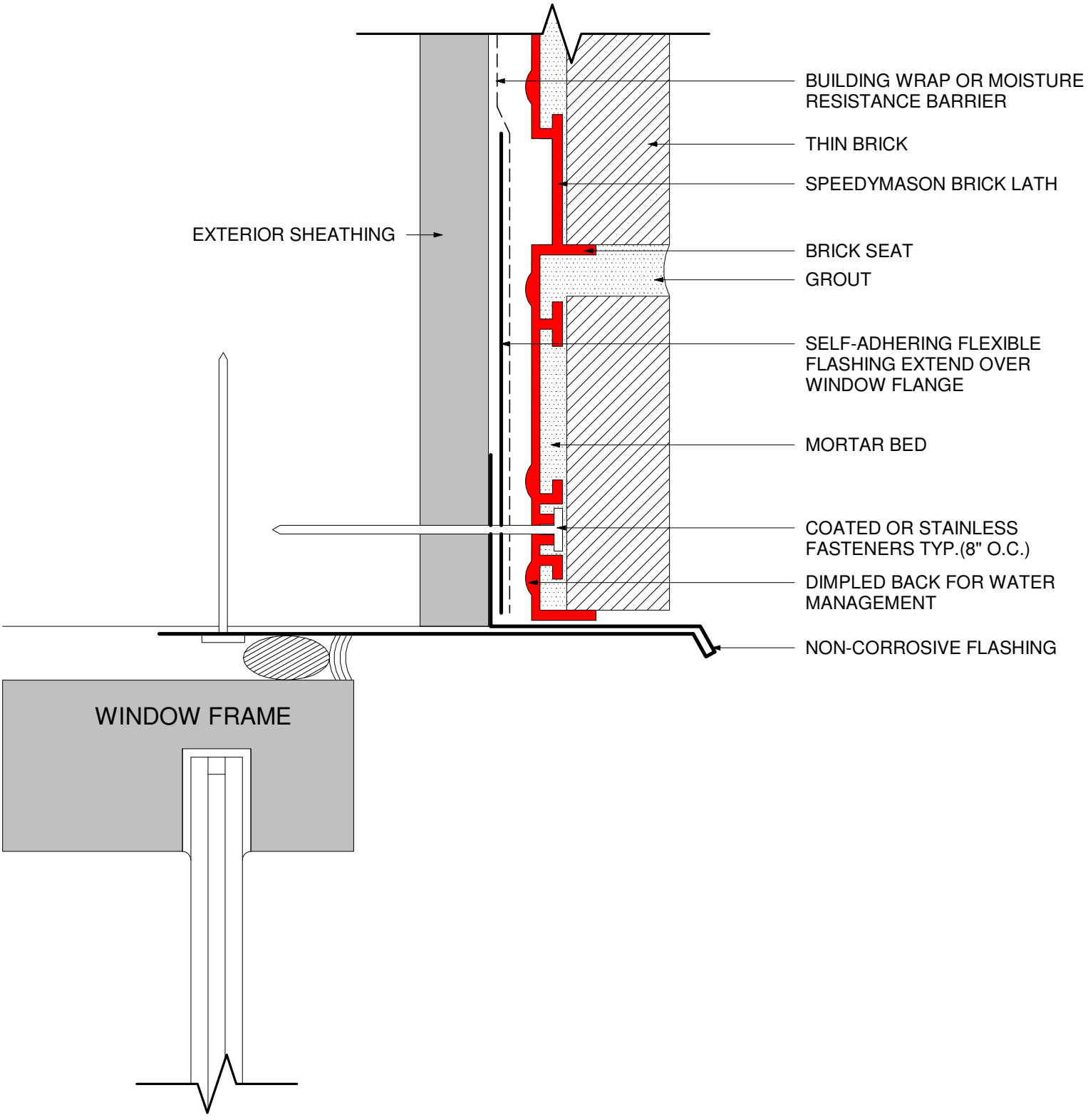


RECESSED WINDOW SILL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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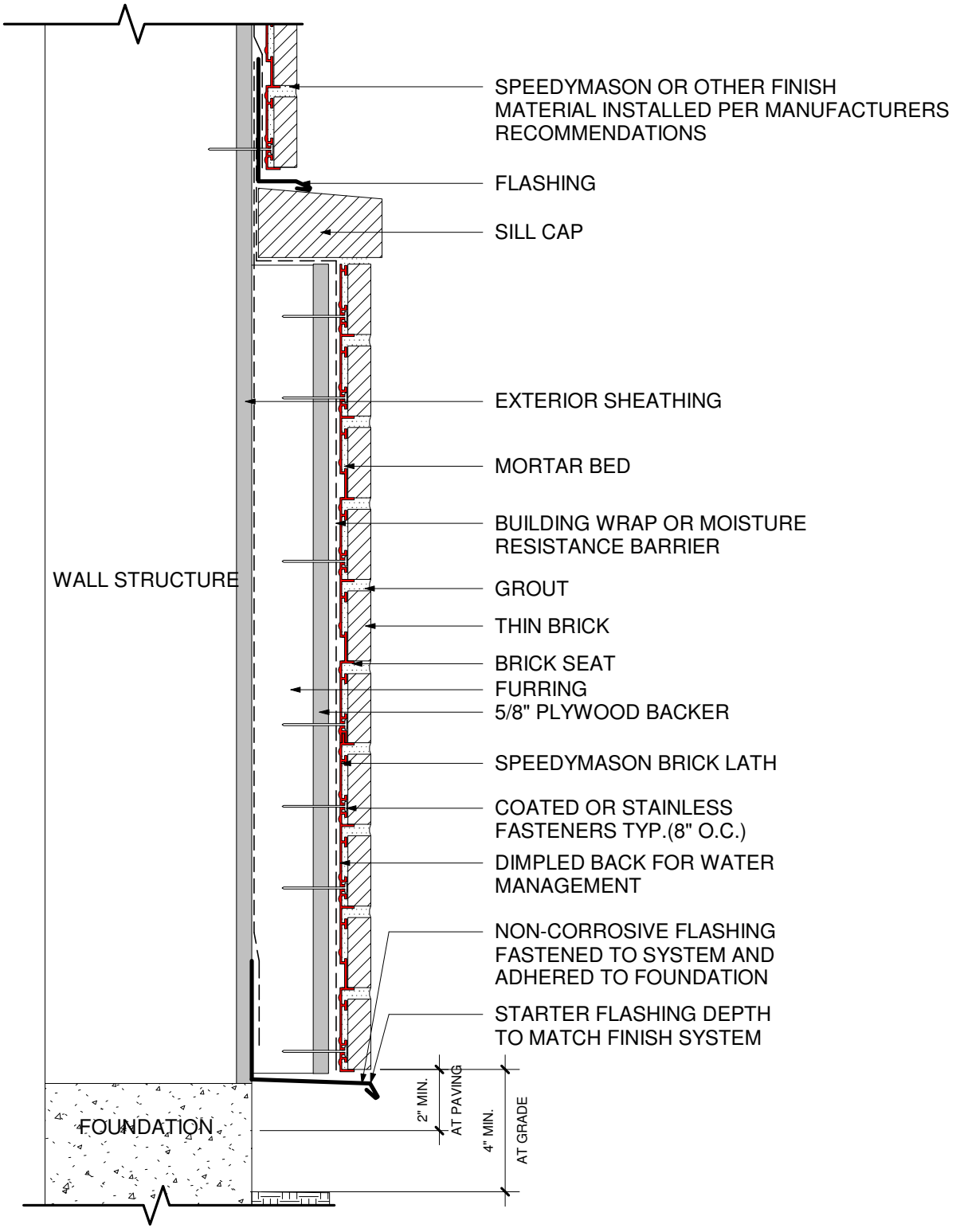


RECESSED WINDOW HEAD

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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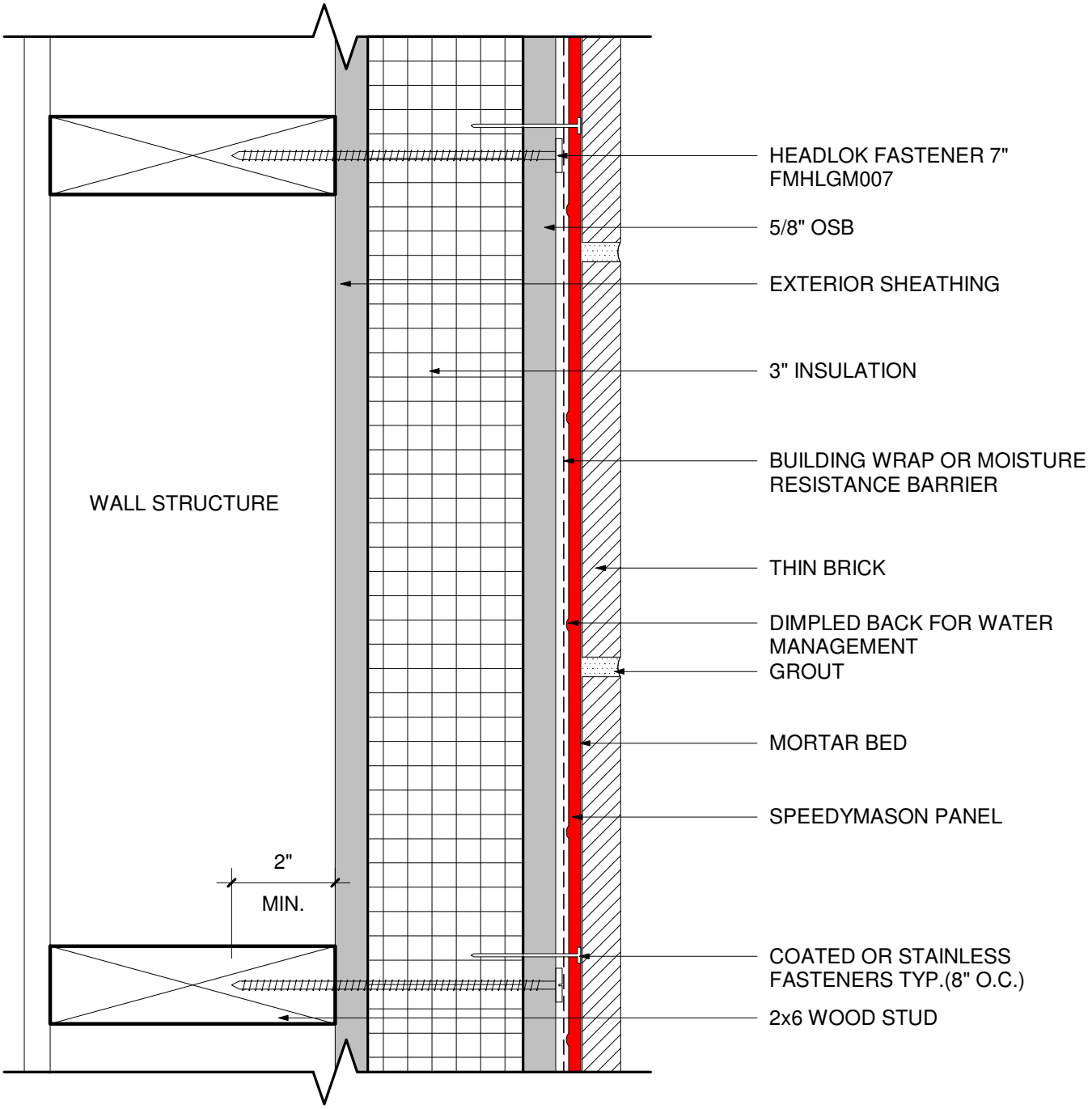


MATERIAL TRANSITION/ FURRED WALL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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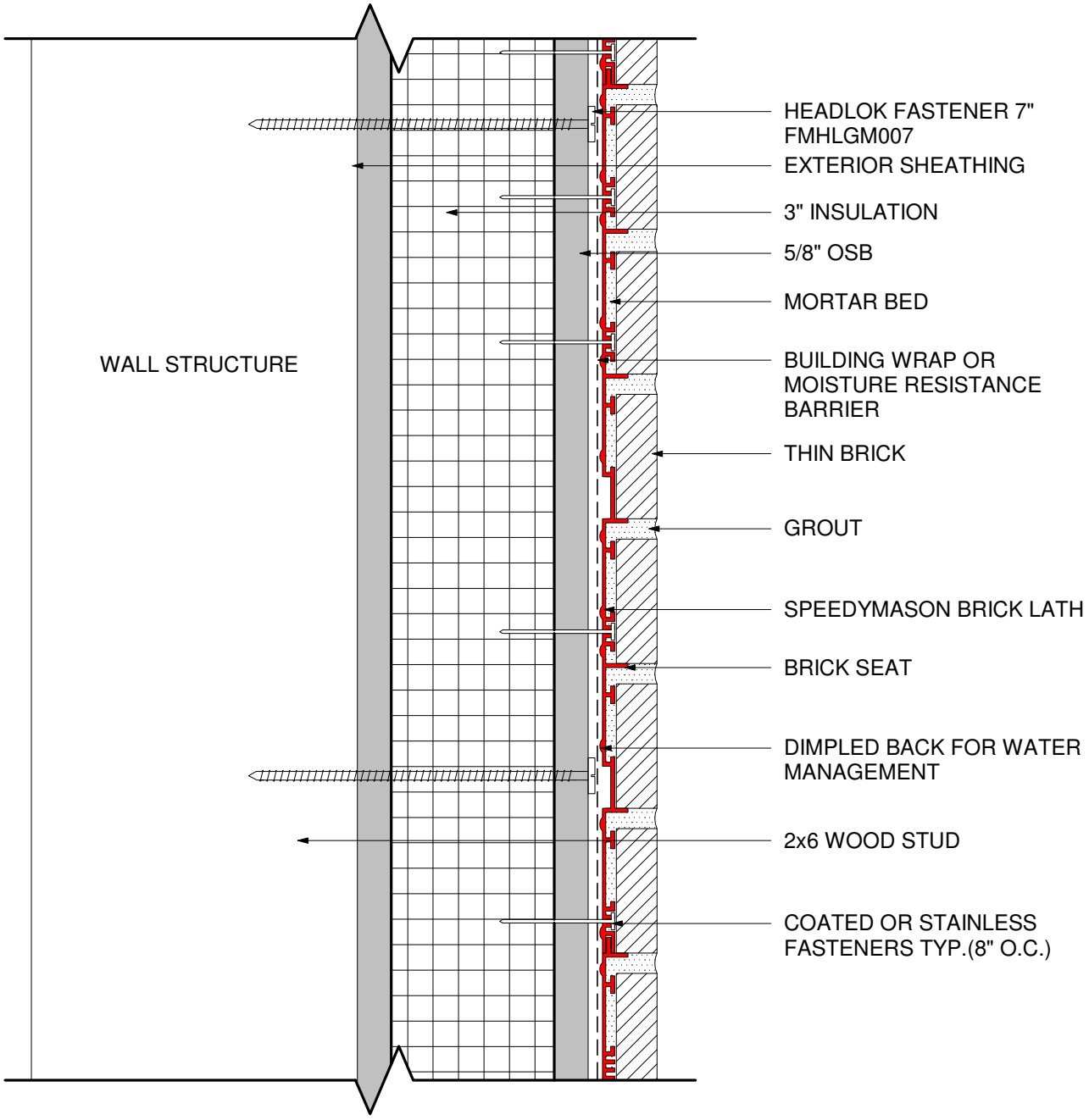
NOTES:
HEADLOK FASTENER 2" MIN. PENETRATION INTO STUD
16" O.C. STUD SPACING. SCREW INTO STUD AT 12" O.C.

PLAN VIEW - 3" INSULATION

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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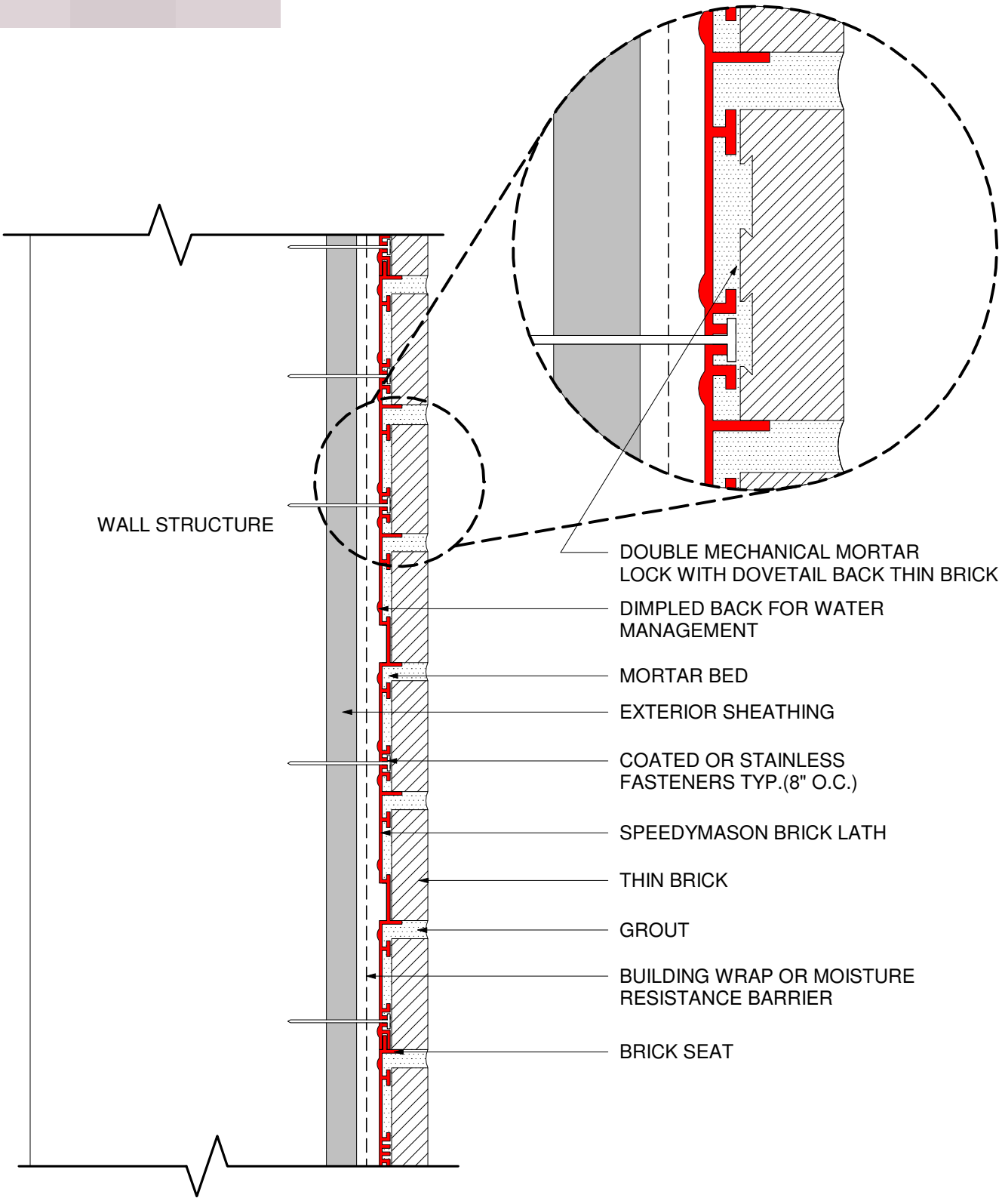
NOTES:
HEADLOK FASTENER 2" MIN. PENETRATION INTO STUD
16" O.C. STUD SPACING. SCREW INTO STUD AT 12" O.C.

WALL SECTION - 3" INSULATION

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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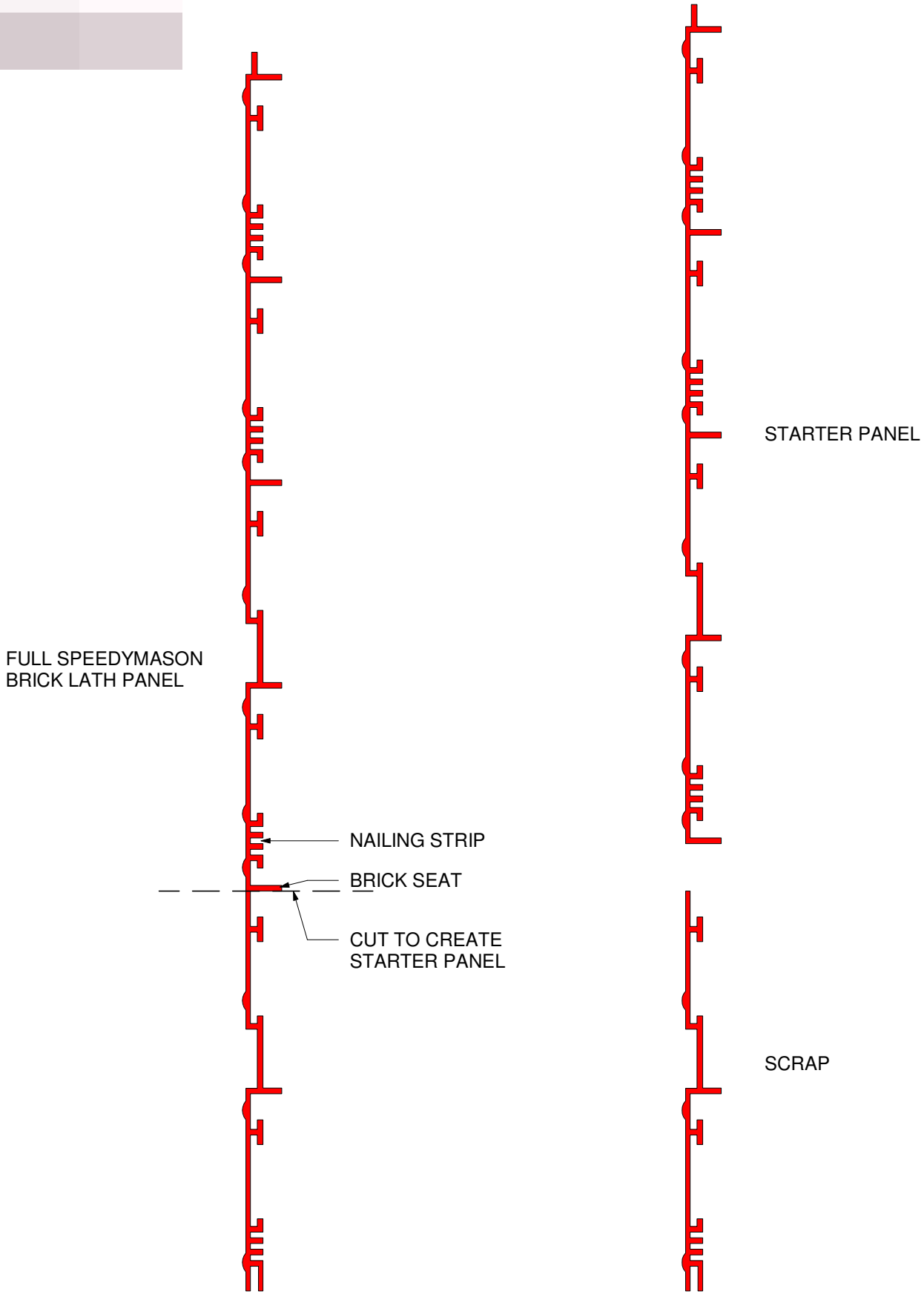


DOUBLE MECHANICAL MORTAR LOCK

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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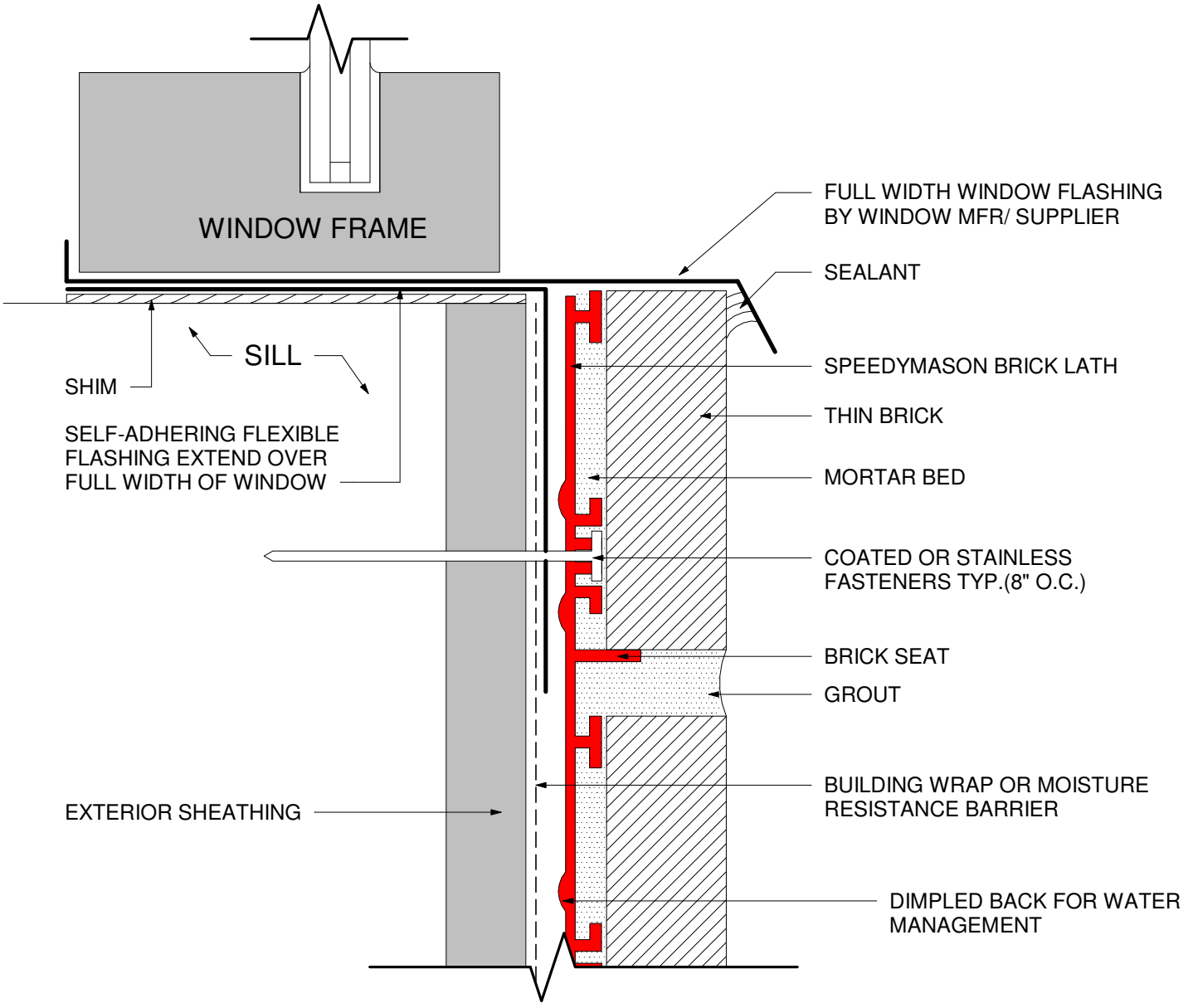


STARTER PANEL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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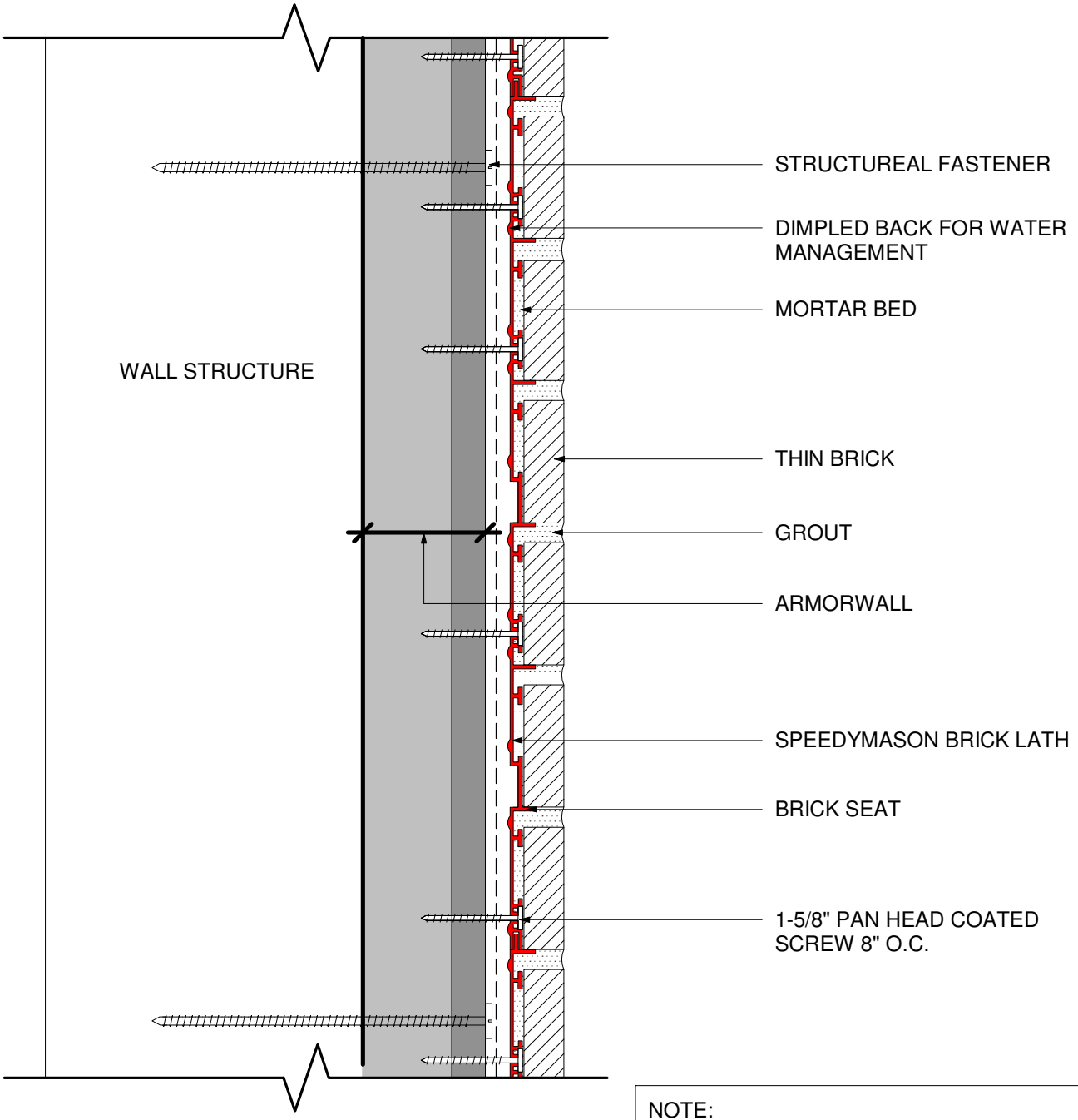


RECESSED WINDOW SILL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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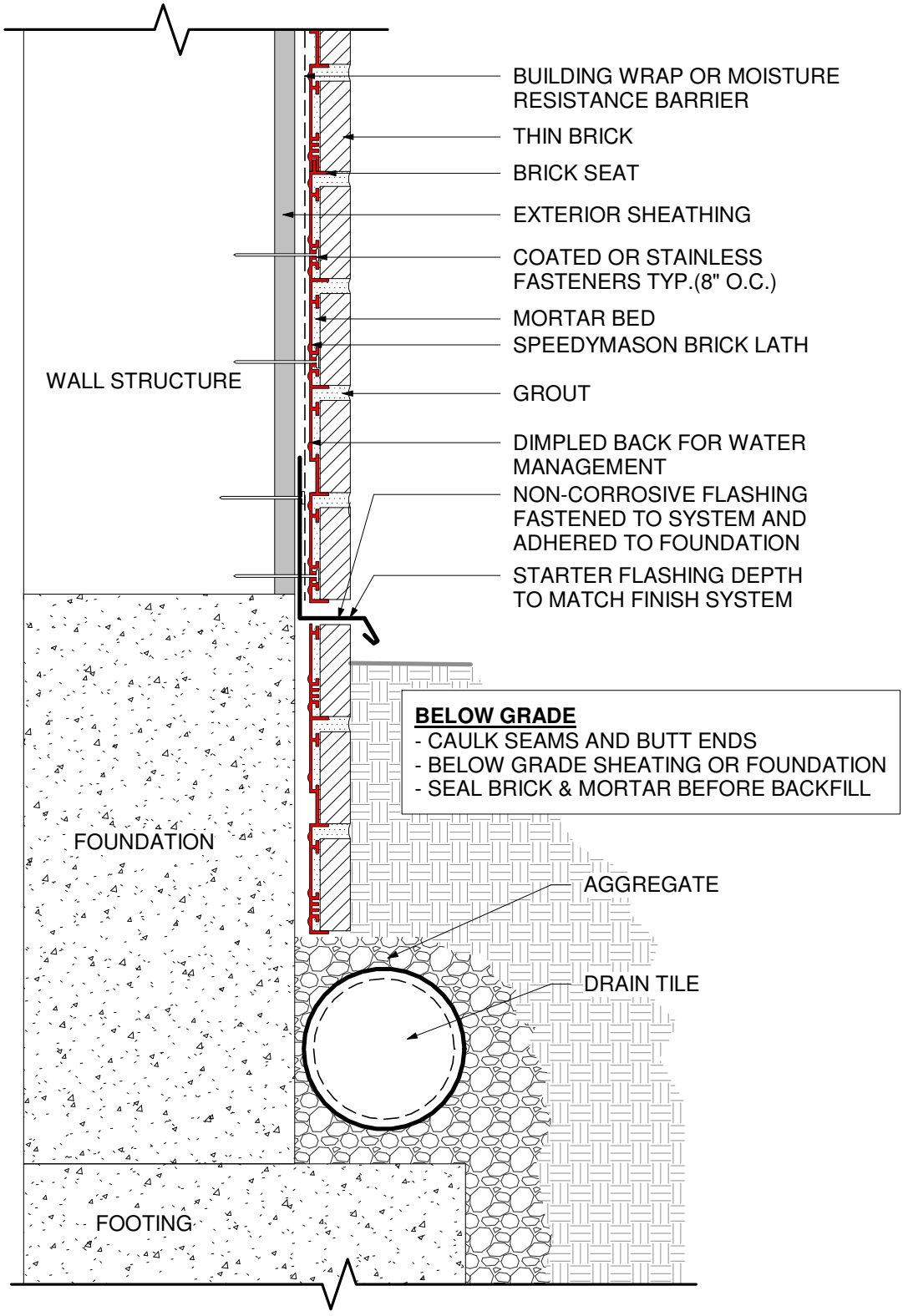
NOTE:
ARMORWALL THICKNESS: 1-1/2" R10
2-1/4" R15
3-1/4" R21

WALL SECTION - ARMORWALL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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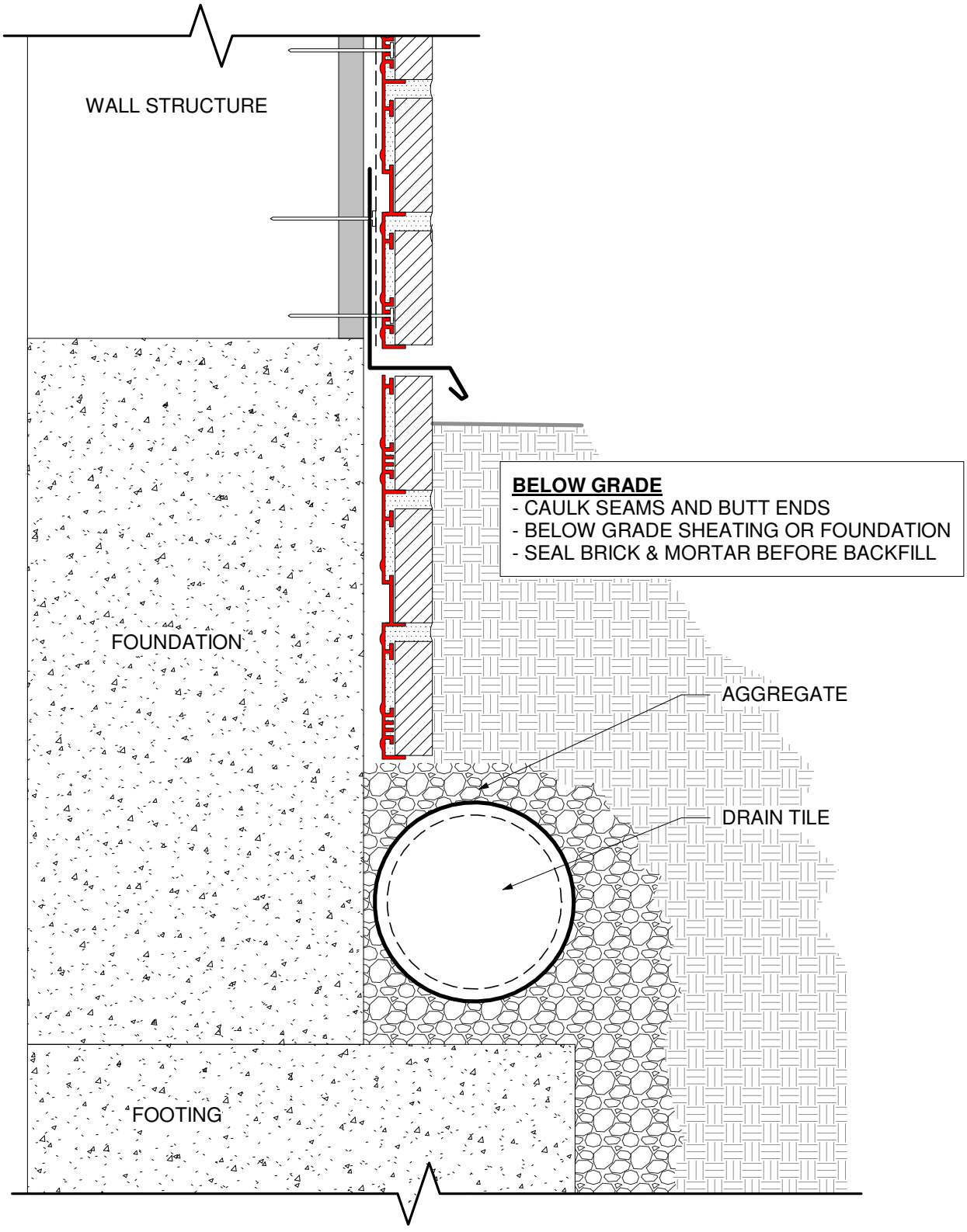


BELOW GRADE APPLICATION

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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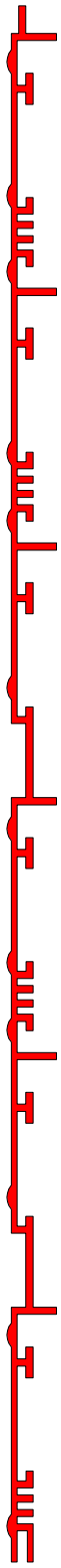


BELOW GRADE APPLICATION

Patent No. US 10,106,989 B2

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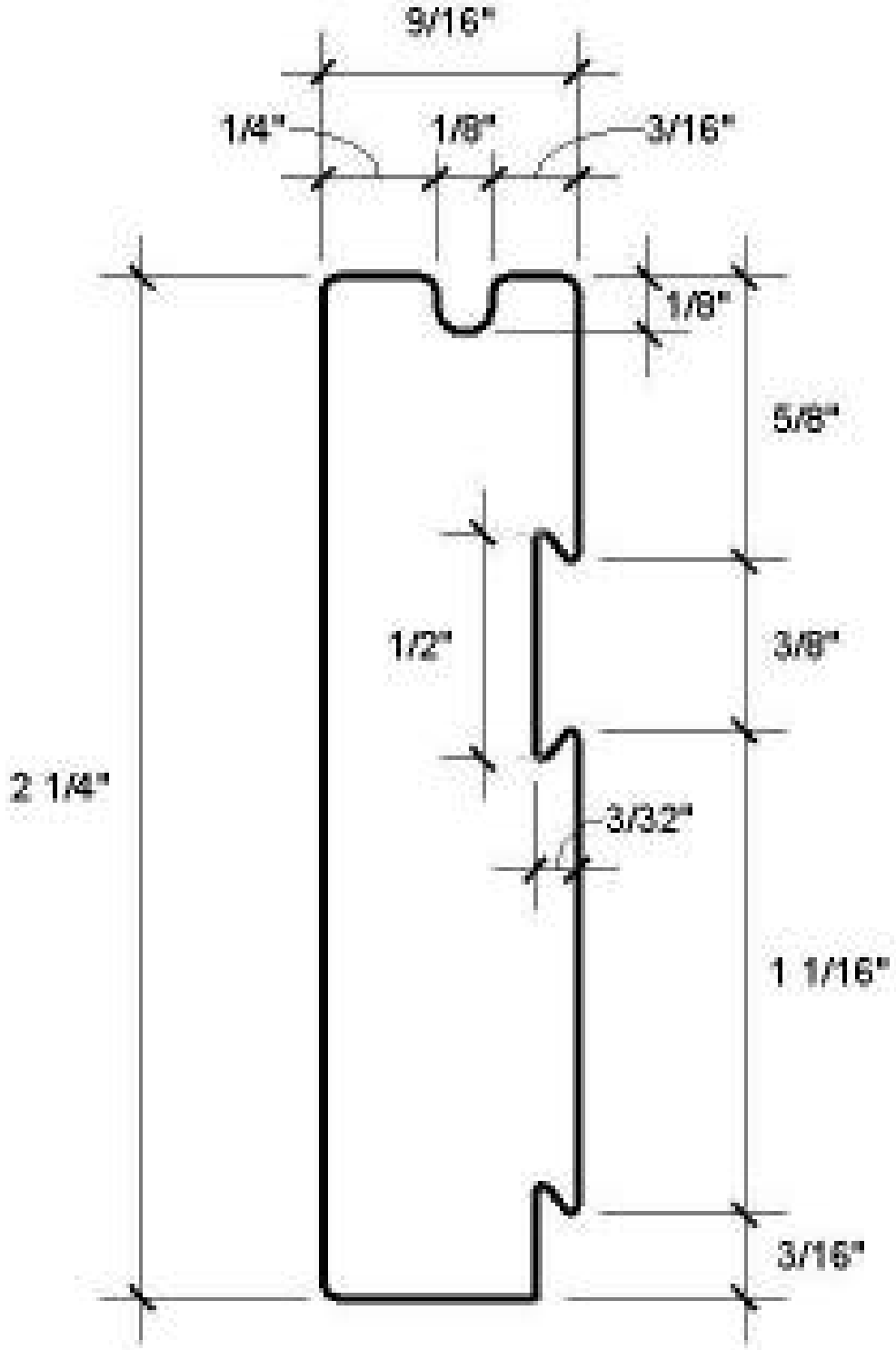
SPEEDY MASON PANEL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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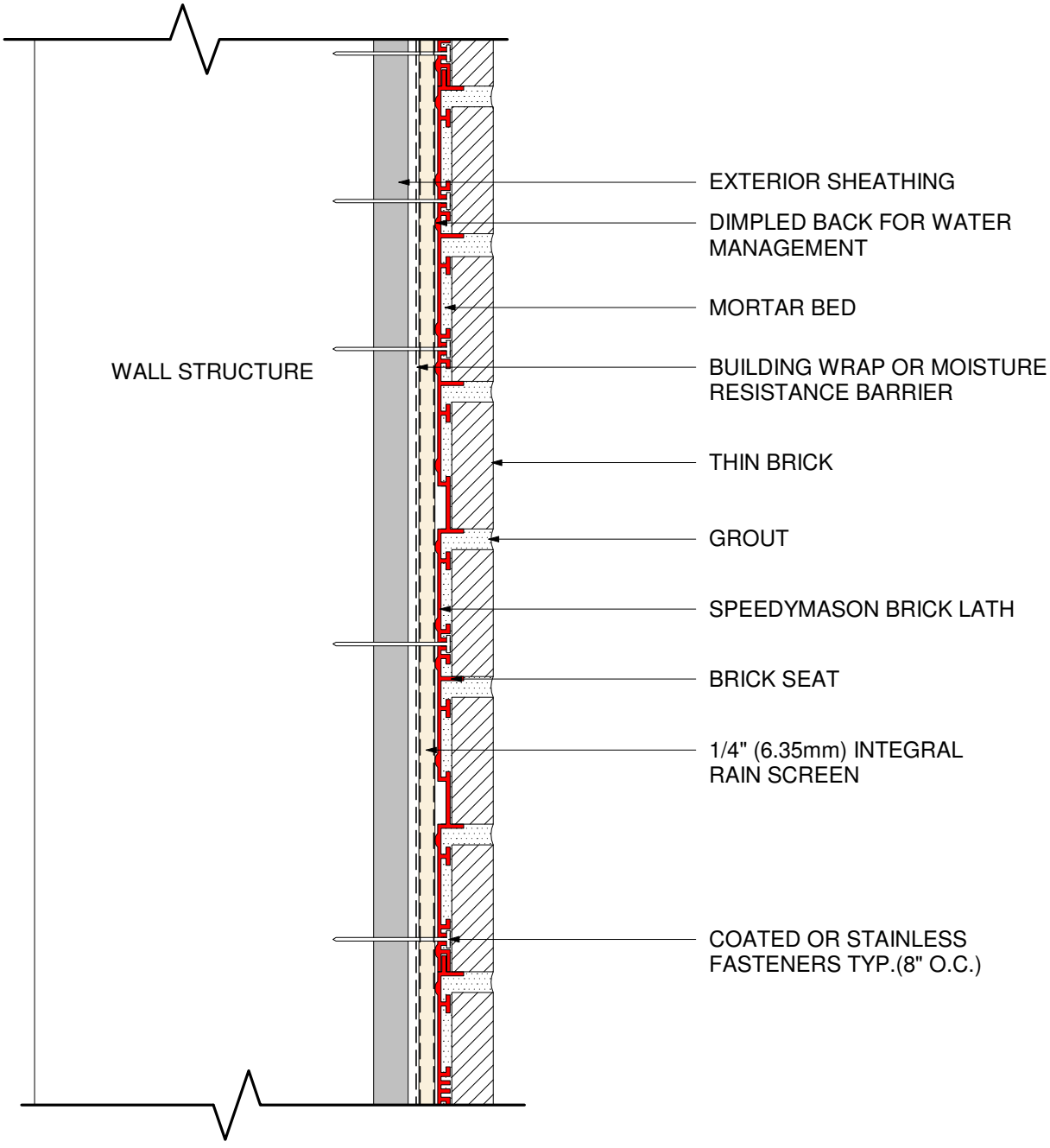
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THIN BRICK PROFILE

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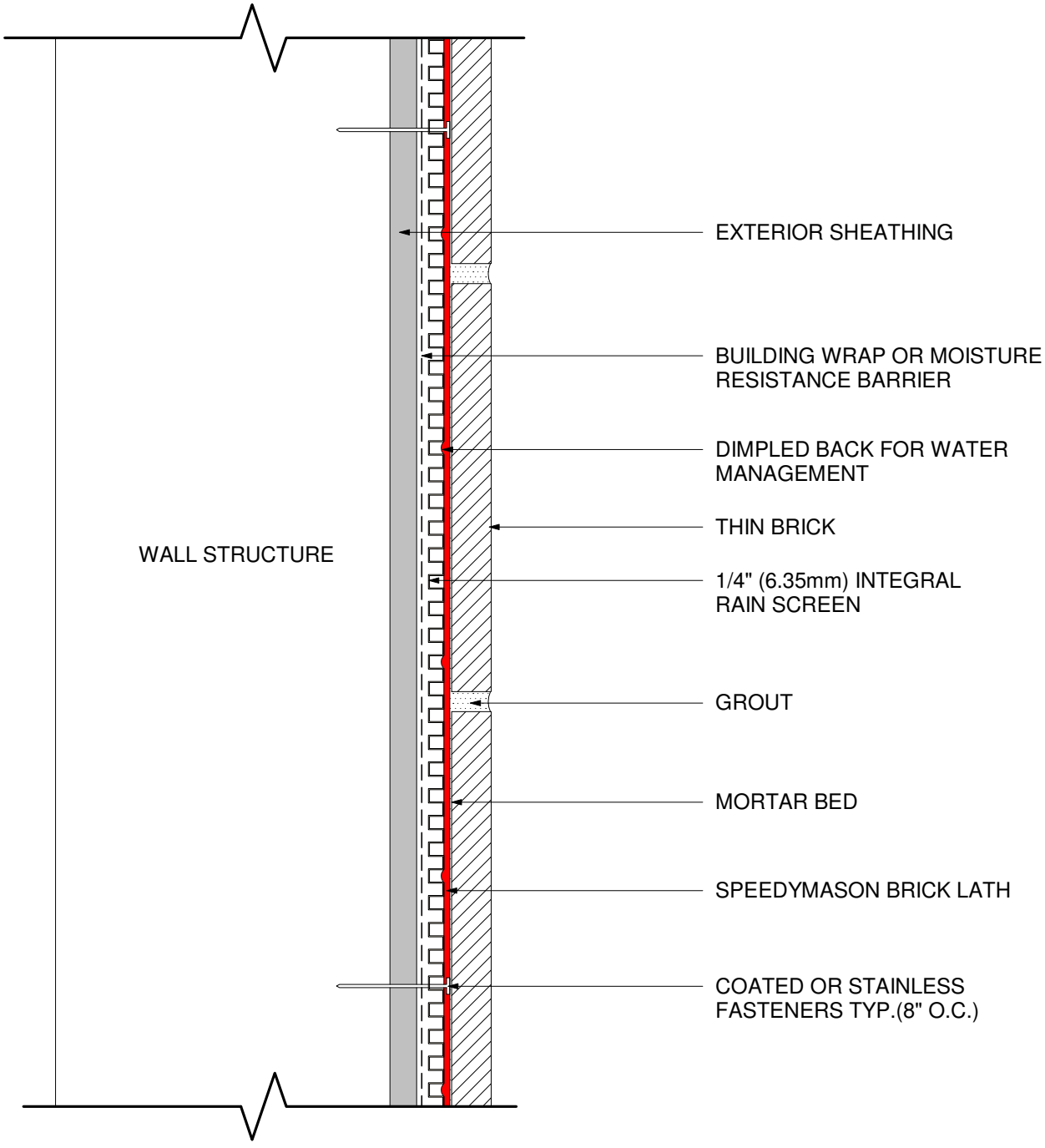


WALL SECTION - RAIN SCREEN

Patent No. US 10,106,989 B2

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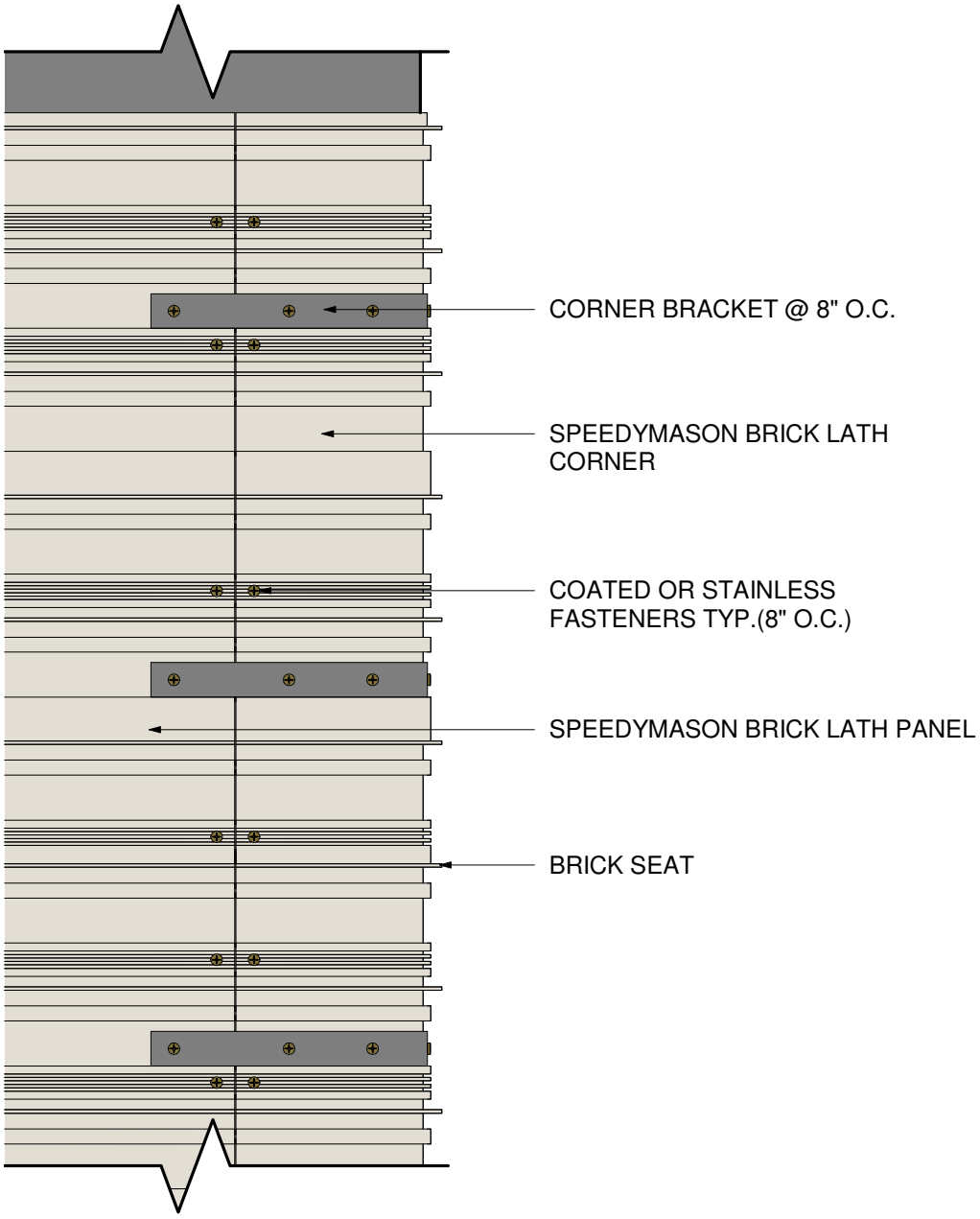


PLAN VIEW - RAIN SCREEN

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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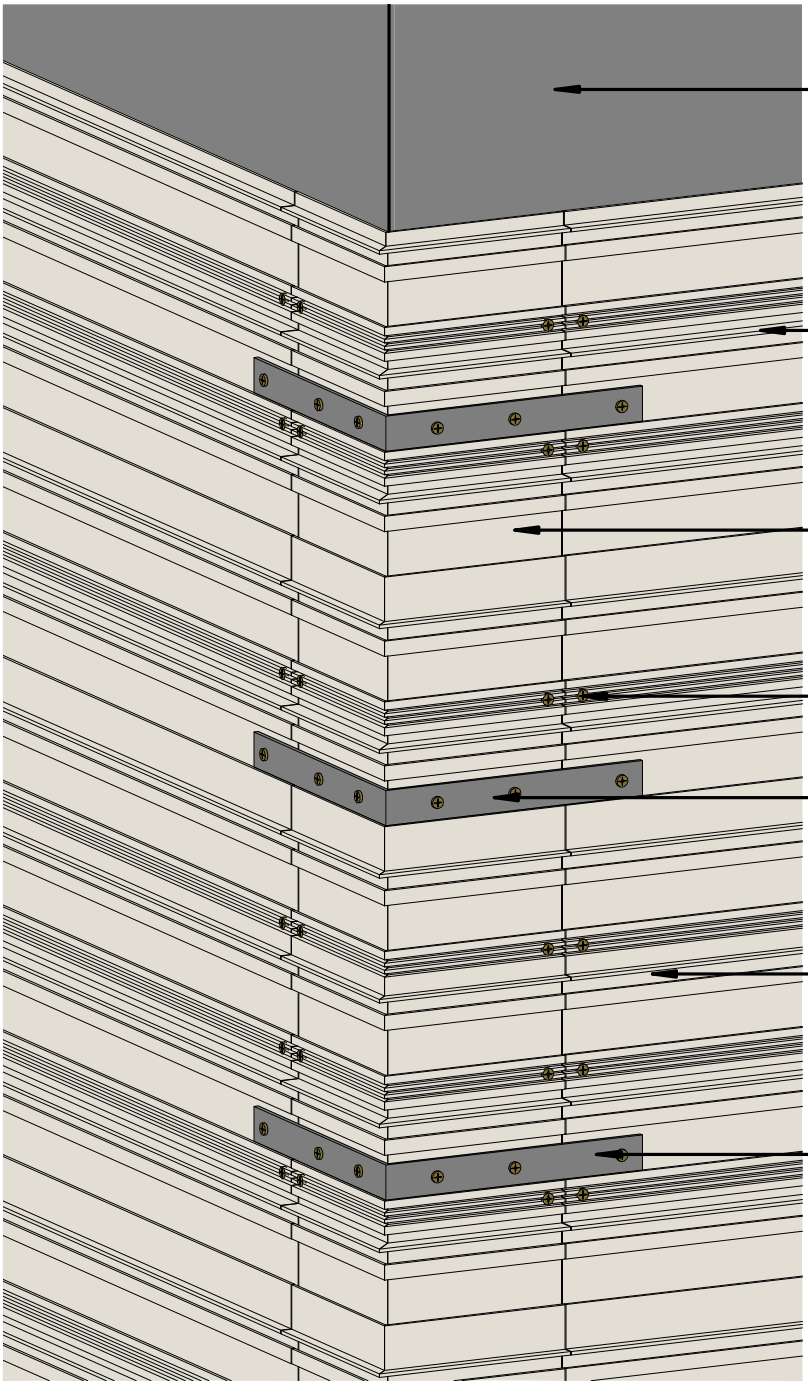


CORNER - ELEVATION

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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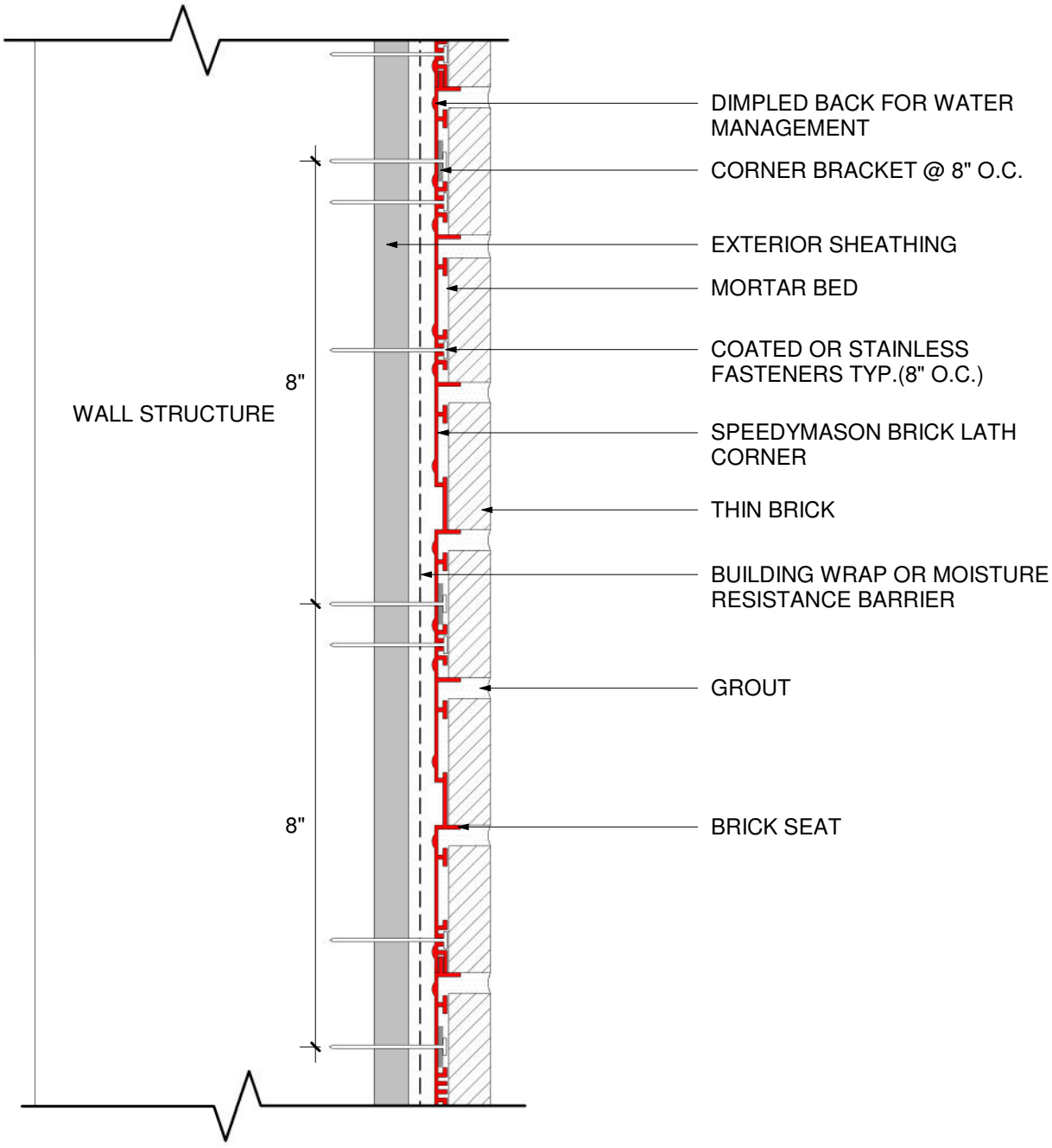


CORNER

Patent No. US 10,106,989 B2

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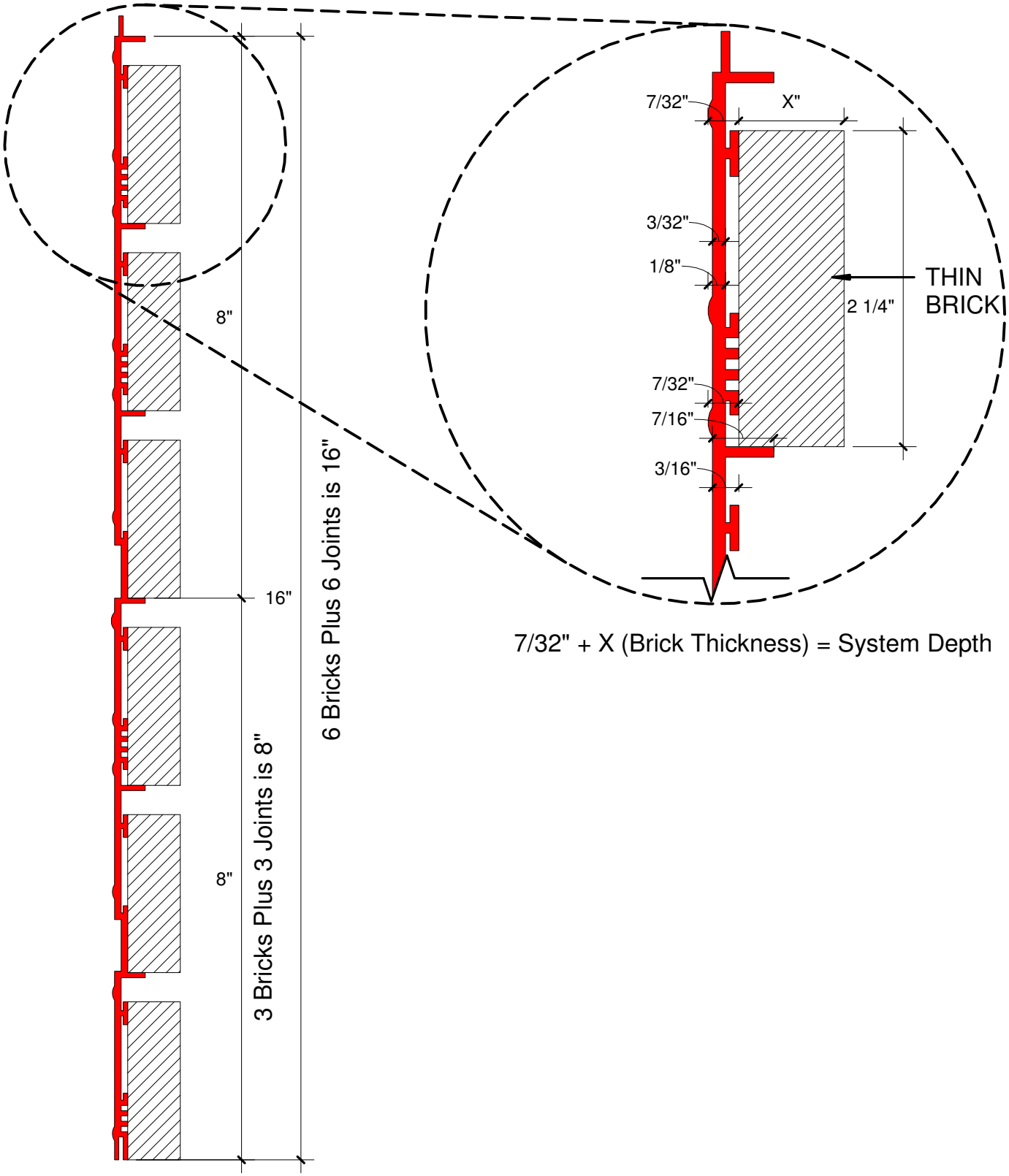


CORNER - SECTION

Patent No. US 10,106,989 B2

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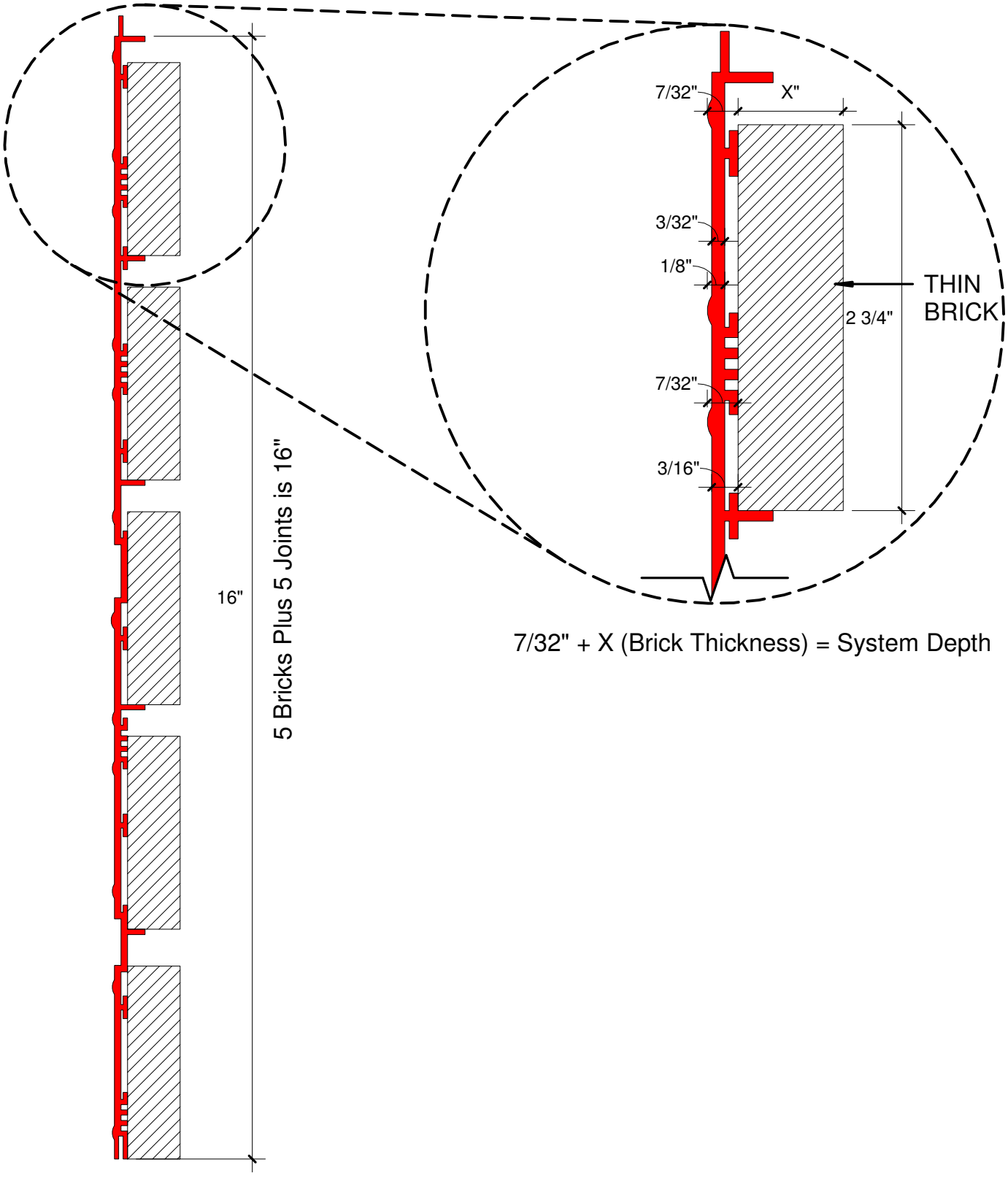


MODULAR / NORAN - PANEL PROFILE

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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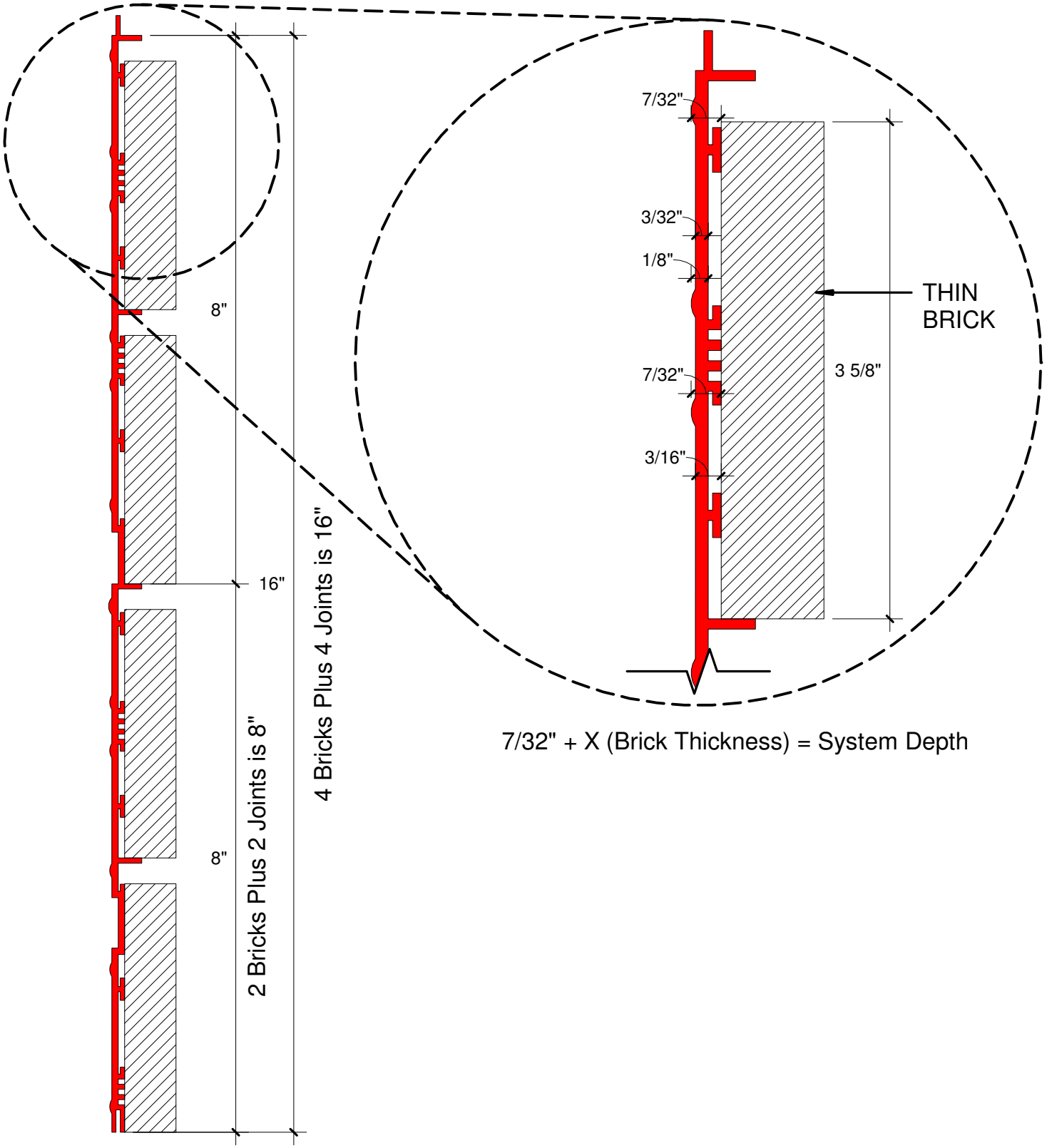
7/32" + X (Brick Thickness) = System Depth

QUEEN / KING - PANEL PROFILE

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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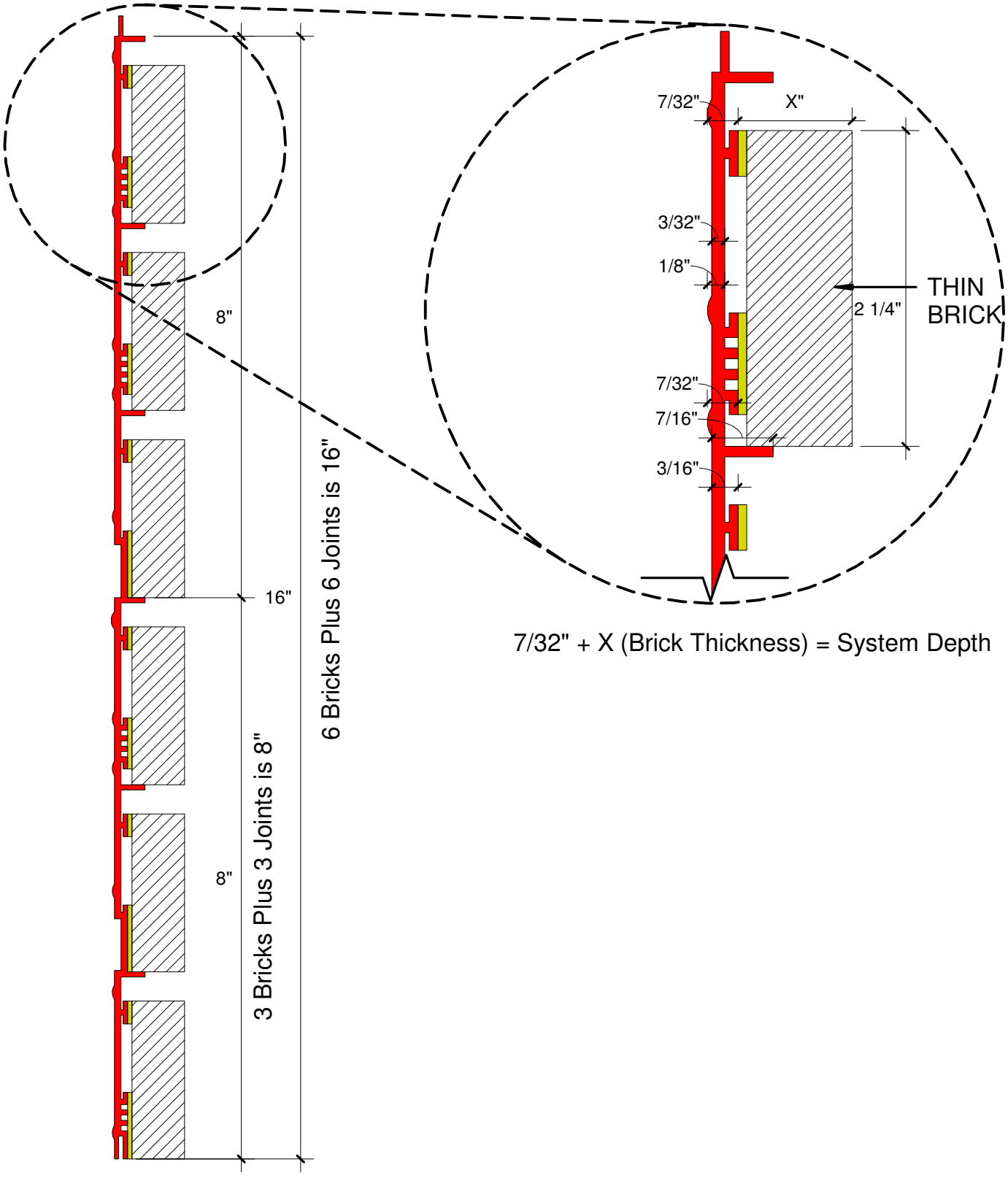


UTILITY / CLOSURE - PANEL PROFILE

Patent No. US 10,106,989 B2

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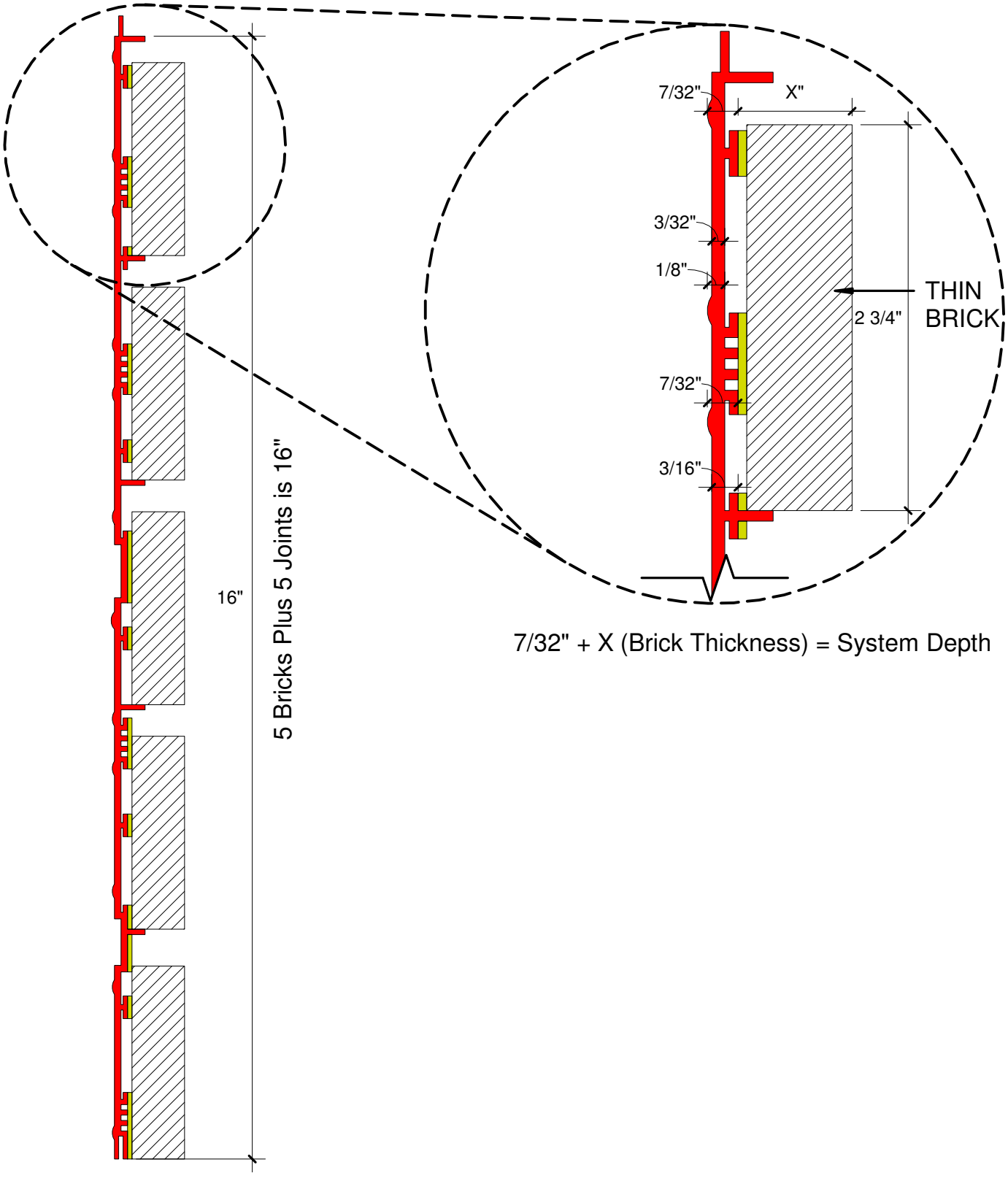


MODULAR / NORAN - PEEL N' STICK

Patent No. US 10,106,989 B2

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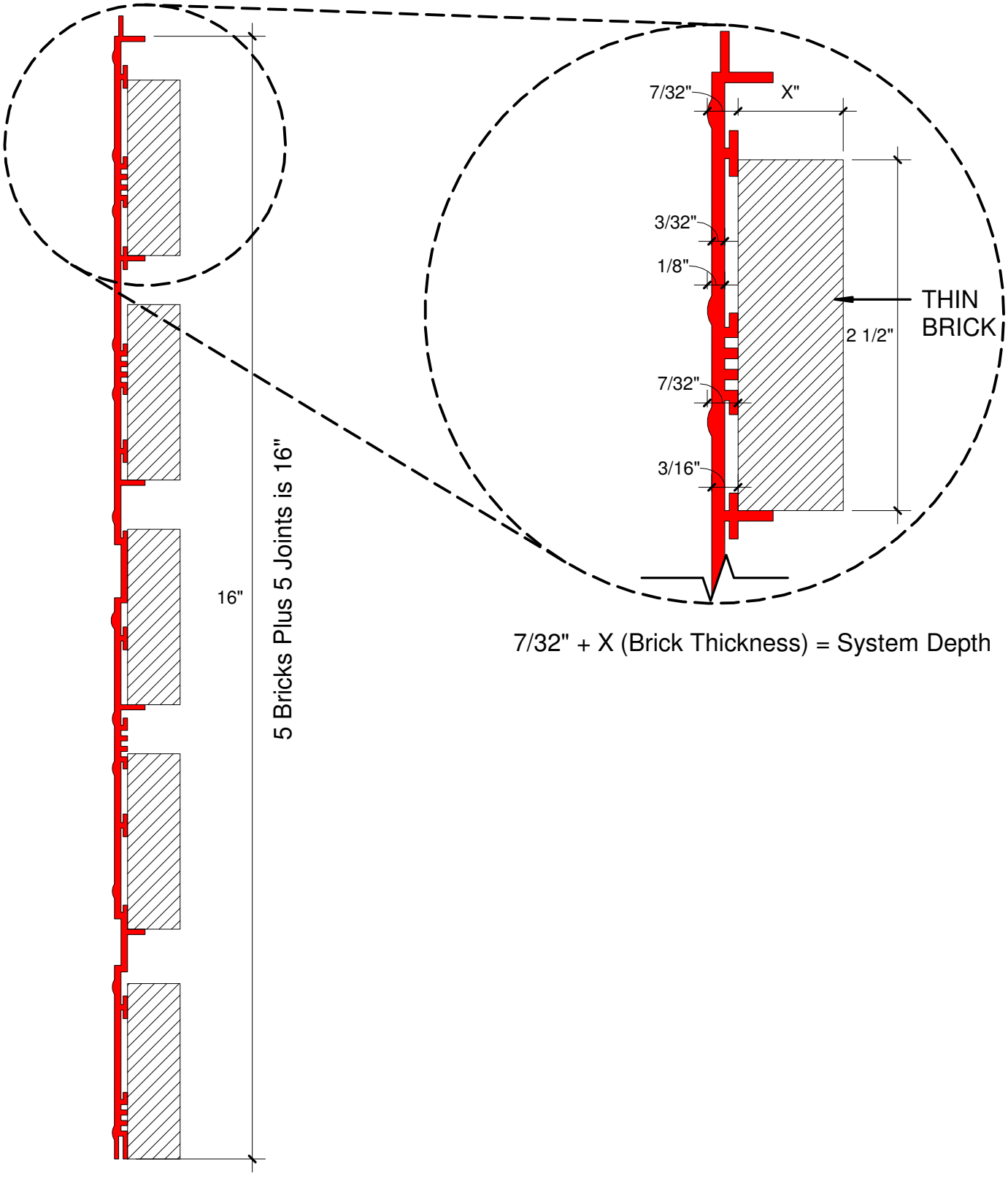
7/32" + X (Brick Thickness) = System Depth

QUEEN / KING - PEEL N' STICK

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7/32" + X (Brick Thickness) = System Depth

TUNDRA BRICK DETAIL

Patent No. US 10,106,989 B2

SCALE : NOT TO SCALE

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EXPERIENCE THE THIN BRICK REVOLUTION

RE: Speedymason Expansion and Contraction

Speedymason Brick and Stone Lath are made of a composite material to include polypropylene and minerals. Minerals are added in the manufacturing process to reduce expansion and contraction of the panel. Exterior installation of the panel requires installer to fasten the panel on the fastening points vertically (noted in the installation guide) and horizontally every 8" on center.

There can be fractional expansion and contraction in the panel before the thin brick is applied. However, Brick Lath requires a full bed of mortar behind the brick. Full bed mortar can be installed by troweling on the mortar or applying a full back butter to the thin brick. A full bed of mortar is required because the mortar mechanically bonds to the panel. Once mortar is cured, the mortar then holds the panel in suspension, eliminating any expansion and contraction in the panel.

This product has been tested by a third party, Intertek, and meets all the ASTM qualifications for thin adhered masonry. There are also many projects throughout the United States that have both Brick and Stone Lath supporting thin products. You can find these projects under Case Studies and also find testing reports under the resource tab, at Speedymason.com.

For any other technical questions, please contact Garrett Schilling, National Sales Manager for Speedymason.

Garrett Schilling
US & Canada National Sales Manager

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300 Sherry Lynn Lane, Sparta, WI 54656

EXPERIENCE THE THIN BRICK REVOLUTION

Installation Guide

Revised 4/2022



Speedymason Brick Lath
Patent No. US 10,106,989 B2



Speedymason Stone Lath
Patent No. US 10,106,989 B2

Contents:

Specifications for Brick Lath and Stone Lath 2

Brick Lath (Interior & Exterior) Installation Instructions: 4

Stone Lath (Interior & Exterior) Installation Instructions: 6

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SPECIFICATIONS FOR BRICK LATH AND STONE LATH

1. **Speedymason Panel Sizes – Brick Lath and Stone Lath**
   A. Stocked Size Flat Panels: W x H: 96”x 16” (10.67 sqft) or 48” x 16” (5.335 sqft). Calculate 5% waste when ordering.
      1. 96” panels are sold by the piece. 48” panels are sold by the box.
   B. Outside Corner Sizes: W x W x H: 4” x 4” x 16”. Sold bent at 90 degrees.
      1. Outside corners include 2 reinforcing angle brackets per corner.
      2. Outside corners are sold by the box
         A. Brick Lath 20 pcs. Per box (26’-8” Lineal Feet)
         B. Stone Lath 30 pcs. Per box (40’-0” Lineal Feet)
      3. Outside corners are only required for exterior application. Not required for interior use.
      4. Each corner requires 12 screws in reinforced brackets per corner, plus fasteners on each fastening point. Fasteners are not included.
3. **Speedymason Brick Lath: Brick Sizes, Coursing and Brick Matrix**
   A. Modular/Norman: 3 bricks and 3 joints = 8” (200mm) Brick Height 2-1/4”
   B. Queen/King: 5 bricks and 5 joints = 16” (400 mm) Brick Height 2-3/4”
   C. Utility/Closure: 4 bricks and 4 joints = 16” (400 mm) Brick Height 3-5/8”
4. **Brick Thickness – Brick Lath**
   A. Brick Lath- 3/8” minimum thickness and 1-1/2” maximum thickness
5. **Stone Thickness – Stone Lath**
   A. Speedymason Stone Lath is designed for light weight stone.
   B. Stone must comply with adhered veneer restrictions and must be less than 15 pounds per square foot.
6. **Mortar Base for Brick Lath and Stone Lath**
   A. Polymer Modified mortar is required for all exterior and interior applications with Speedymason Brick Lath and Stone Lath. See installation instructions for the difference between interior and exterior application of mortar on brick and stone.
   B. Mortar must meet the requirements of ASTM C 1714 and ASTM C 270 for Type S mortars including ANSI A 118.4 and ACI 530 shear bond standards.
   C. Approved mortars are:
      1. Laticrete MVIS Thin Veneer Mortar
      2. Laticrete Masonry Adhesive
      3. Spec Mix XP500
      4. ProSpec HB Bonding Mortar
      5. Spec Mix Adhered Veneer Polymer Modified Masonry Mortar
      6. Amerimix 480 Premium Polymer Modified Stone Veneer Mortar
      7. Contact Speedymason for approved equals.
7. **Fasteners**
   A. Fastener length will be determined by the thickness of sheathing and insulation.
   B. Screw fasteners shall be a minimum #6 or #8 shank diameter with a wafer/pancake head.
   C. Nail fasteners shall be ring shanked.
   D. Fasteners must be galvanized, stainless steel or coated for exterior use, and standard fasteners for interior application.
8. **Flashing, Drip Edge, and Trim – Exterior Only** - Caulk and Flash around openings and terminations in accordance with code and your architect, or Speedymason detail sheets.
9. **Air & Water Barrier – Exterior Only**
   A. Speedymason has dimples built into the back side of the panel that act as a watershed over any approved air and water barrier or system in accordance to building code. Speedymason Brick Lath and Stone Lath requires an air/water barrier on the wall system behind the panel.
   B. Speedymason can be installed over approved rainscreens. See Speedymason specifications for details.
9. **Control Joints – Exterior Only**
   A. Place control joints in accordance with code or called out by the architect, in areas of shifting, or areas where Speedymason cannot be attached to studs. The Speedymason support panel has properties of elongation that will be mastered by the brick, mortar, fasteners, and wall substrate making it a system able to conform to the conditions of typical masonry. Standard control joints are spaced every 15’ but confirm spacing with architectural plans before installation and layout.
   B. If control joints are not called out by architect, it is the installers responsibility to place control joints where needed. Refer to local and national building code and BIA guidelines.
10. **Sheathing**
    A. Sheathing is required behind Brick and Stone Lath for exterior application.
    B. For areas in hurricane zone, 5/8” structural sheathing is required.
    C. 7/16” OSB or Plywood sheathing is the minimum sheathing required.
    D. Speedymason must break on studs when using 7/16” – ½” sheathing.
    E. 5/8” sheathing is preferred. When using 5/8” OSB or Plywood, breaking on studs is not required.
    F. Fasten panel on fastening strips every 8” on center.
    G. 5/8” gypsum sheathings are acceptable and Speedymason must break on a stud. Use a screw to fasten between studs.

ADDITIONAL MATERIALS, TOOLS & EQUIPMENT:

- Screw gun, hammer, drill, or nail gun
- Coated or galvanized screws or nails
- Traditional level or laser level
- Safety glasses
- Extension cords
- Chalk line
- Utility knife
- Circular saw
- Wet or dry saw for cutting brick or stone
- Ladders, scaffold, or jacks (OSHA approved)
- Mortar bag and tip or mortar gun, and whip
- Brush
- Striker
- Water and mixing buckets (five gallon)
- Sawhorse and support planks
- Brick or stone cleaner
- Mortar scoop
- Template for cutting or holding brick
- Heavy duty mixer for mixing mortar
- Cleaning brushes for tools only

SPEEDYMASON BRICK LATH - EXTERIOR & INTERIOR INSTALLATION INSTRUCTIONS:

BRICK LATH EXTERIOR:

Install Overview



1. Attach Panel



2. Back Butter or Trowel



3. Place Brick



4. Bag



5. Strike

Brick Lath Installation Instructions

1. **Attach Panel**
   - A. Install the building wrap, sealer, or fluid applied barrier system over the sheathing in accordance to code.
   - B. Recommended structural sheathing must be exterior grade sheathing and 5/8" Plywood or OSB is recommended.
   - C. Ensure wall is flat to properly anchor Brick Lath.
   - D. Create a starter panel. **(See figure 2)**
   - E. Measure and determine the layout based on starter panel.
   - F. Speedymason is a tongue and groove panel. Install with the groove facing DOWN. Make sure the tongue is inserted all the way into the groove to keep perfect coursing matrix. Latterly butt Brick Lath with no more than 1/8" spacing between panels and no less than a dime width between panels.
   - G. Attach panels so the seams are staggered up the wall so no two pieces of Brick Lath end on the same seamline.
   - H. Fasten Brick Lath on the fastener strips. **(See figure 2)**
     1. Fasten panel 8" on center, breaking butt end of panels on a stud if sheathing is less than 5/8" thick.
     2. For wood construction, use colligated stainless-steel ring shank or galvanized roofing nails.
     3. Use non-corrosive screws over continuous insulation.
     4. For steel stud construction, use stainless steel or non-corrosive self-tapping screws.
     5. For masonry foundations, use non-corrosive tap con screws.
   - I. It is required for exterior application to use Speedymason Brick Lath Corners.
     1. Use screws to fasten corners through reinforced angle bracket.
     2. Nail or screw fastening points at butt ends.
2. **Back Butter or Trowel and Place Brick**
   - A. Before applying mortar, ensure that Brick Lath is free of all dirt or debris.
   - B. Mix polymer modified mortar per mortar manufacturer's specifications.
   - C. Hand trowel on the mortar using built in legs as a guide to meter out mortar or fully back-butter brick and place on panel.
   - D. After mortar is troweled out, or brick is back-buttered, find the bed joint leg, angle brick onto leg and press in from the bottom, applying pressure so mortar squeezes around the brick. **(See photo 3. Place Brick.)**
   - E. If any mortar gets on the face of the brick while installing, wipe off the mortar with a wet sponge or towel. This will help with clean up later.
3. **Bag and Strike Joints**
   - A. Bag in around thin brick with a Type N or S mortar. Let mortar set to the consistency of wet beach sand and strike.
   - B. Do not use Polymer Modified mortar for bagging and striking. Be sure to use a Type N or S mortar to fill in joints between brick. Polymer Modified is only required for the base coat between the Brick Lath and thin brick.
4. **Cleaning**
   - A. If cleaning is needed, use the brick manufacturers recommended cleaner and follow instructions. Cleaner can be jet applied or scrubbed on.
   - B. Do no clean prior to 5 days after grouting and not after 10 days.
   - C. If efflorescence appears, a chemical cleaner may be used.
5. **Sealing Brick and mortar**
   - A. Use an approved sealer specified by thin brick manufacturer.

BRICK LATH INTERIOR:

Install Overview



1. Attach Panel



2. Spot Bond Brick



3. Place Brick



4. Bag



5. Strike

Brick Lath Installation Instructions

1. **Attach Panel**
   - A. Create a starter panel. **(See Figure 2)**
   - B. Measure and determine the layout based on starter panel.
   - C. Speedymason is a tongue and groove panel. Install with the groove facing DOWN. Make sure the tongue is inserted all the way into the groove to keep perfect coursing matrix. Latterly butt Brick Lath with no more than 1/8" spacing between panels and no less than a dime width between panels.
   - D. Attach panels so the seams are staggered up the wall so no two pieces of Brick Lath end on the same seamline.
   - E. Fasten Brick Lath on the fastening strips. **(See figure 2)**
   - F. Fasten panel 16" on center, breaking butt end of panels on a stud.
2. **Spot Bond and Place Brick**
   - A. Before applying mortar, ensure that Brick Lath is free of all dirt or debris.
   - B. Mix polymer modified mortar per mortar manufacturer's specifications.
   - C. Apply a dab of mortar onto the back of the brick. This method is called "Spot Bonding". For interior application, it is not necessary to apply a complete back butter to the brick. Use enough mortar to hold the brick in place. The bagging mortar will secure the brick after it is installed.
   - D. After mortar is applied to the back of the brick, find the bed joint leg, angle brick onto leg and press in from the bottom, applying pressure so the brick holds to the Speedymason. **(See photo 3. Place Brick.)**
   - E. If any mortar gets on the face of the brick while installing, wipe off the mortar with a wet sponge or towel. This will help with clean up later.
3. **Bag and Strike Joints**
   - A. Bag in around thin brick with a Type N or S mortar. Let mortar set to the consistency of wet beach sand and strike.
   - B. Do not use Polymer Modified mortar for bagging and striking. Be sure to use a Type N or S mortar to fill in joints between brick. Polymer Modified is only required for the base coat between the Brick Lath and thin brick.
4. **Cleaning**
   - A. If cleaning is needed, use the brick manufacturers recommended cleaner and follow instructions. Cleaner can be jet applied or scrubbed on.

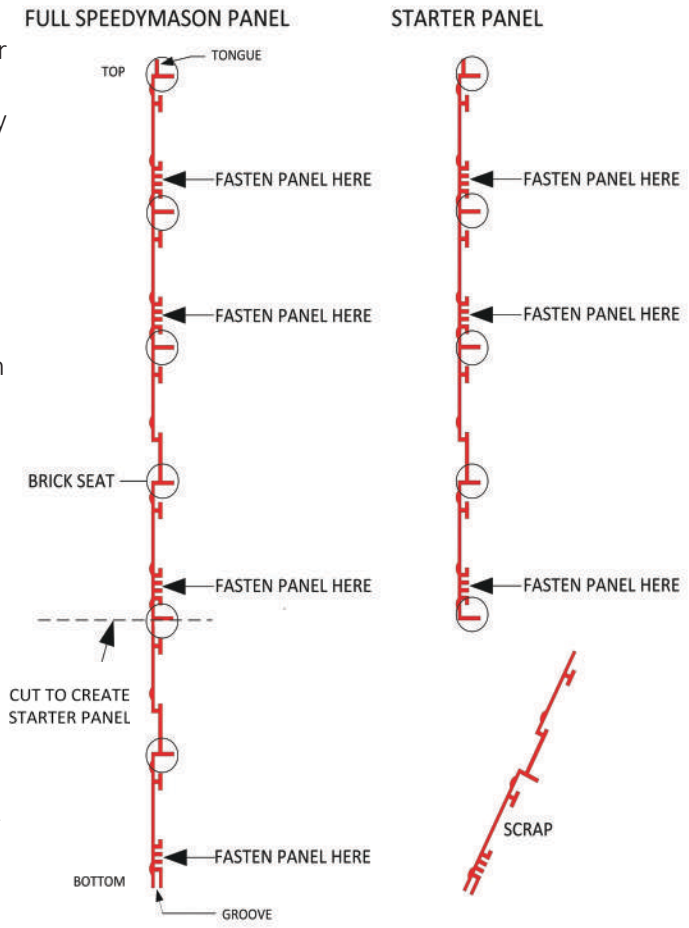


FIGURE 2

SPEEDYMASON STONE LATH - EXTERIOR & INTERIOR INSTALLATION INSTRUCTIONS:

STONE LATH EXTERIOR:

Install Overview



1. Attach Panel



2. Trowel Mortar



3. Back Butter Stone



4. Place Stone

Stone Lath Installation Instructions

1. **Attach Panel**
   - A. Install the building wrap, sealer, or fluid applied barrier system over the sheathing in accordance to code.
   - B. Recommended structural sheathing must be exterior grade sheathing and 5/8" Plywood or OSB is recommended.
   - C. Ensure wall is flat to properly anchor Stone Lath.
   - D. Speedymason is a tongue and groove panel. Install with the groove facing DOWN. Make sure the tongue is inserted all the way into the groove. Latterly butt Stone Lath with no more than 1/8" spacing between panels and no less than a dime width between panels.
   - E. Attach panels so the seams are staggered up the wall so no two pieces of Stone Lath end on the same seamline.
   - F. Fasten Stone Lath on the fastener strips. **(See figure 3)**
     1. Fasten panel 8" on center, breaking butt end of panels on a stud if sheathing is less than 5/8" thick.
     2. For wood construction, use colligated stainless-steel or galvanized ring shank roofing nails.
     3. Use non-corrosive screws over continuous insulation.
     4. For steel stud construction, use stainless steel or non-corrosive self-tapping screws.
     5. For masonry foundations, use non-corrosive tap con screws.
   - G. It is required for exterior application to use Speedymason Stone Lath Corners.
     1. Use screws to fasten corners through reinforced angle bracket.
     2. Nail or screw fastening points at butt ends.
2. **Trowel Mortar, Back Butter and Place Stone**
   - A. Before applying mortar, ensure that Stone Lath is free of all dirt or debris.
   - B. Mix polymer modified mortar with water to desired consistency.
   - C. Hand trowel on the mortar for a full scratch coat over panel.
   - D. Ensure that mortar is completely covering the panel.
   - E. After base mortar is applied, back butter stone and stick onto panel.
   - F. If any mortar gets on the face of the Stone while installing, wipe off the mortar with a wet sponge or towel. This will help with clean up later.
3. **Jointing and Striking Options**
   - A. When using a stone other than dry stack, bag the joints with a Type N or S mortar.
   - B. At no time should the Stone Lath be visible.
4. **Cleaning**
   - A. If cleaning is needed, use the stone manufacturers recommended cleaner and follow instructions. Cleaner can be jet applied or scrubbed on.
   - B. Do no clean prior to 5 days after grouting and not after 10 days.
   - C. If efflorescence appears, a chemical cleaner may be used.
5. **Sealing Stone and Mortar -** Use an approved sealer specified by thin brick manufacturer.

STONE LATH INTERIOR:

Install Overview



1. Attach Panel



2. Back Butter Stone



3. Place Stone

Stone Lath Installation Instructions

1. Attach Panel

A. Install panel over a minimum of ½" sheathing. Sheathing can be drywall, OSB, or plywood.
B. Ensure wall is flat to properly anchor Stone Lath.
C. Install the panel with the groove facing down. Make sure the tongue is inserted all the way into the groove. Latterly butt Stone Lath with no more than 1/8" spacing between panels and no less than a dime width between panels.
D. Attach panels so the seams are staggered up the wall so no two pieces of Stone Lath end on the same seamline.
E. Fasten Stone Lath on the fastener strips. **(See figure 3)**
F. Fasten panel 16" on center, breaking butt ends of panels on a stud.

2. Back Butter and Place Stone

A. Before applying mortar, ensure that Stone Lath is free of all dirt or debris.
B. Mix polymer modified mortar with water to desired consistency.
C. Back butter stone, completely covering back side of stone and adhere to panel. NOTE: For interior application, it is not necessary to do a scratch coat.
D. If any mortar gets on the face of the stone while installing, wipe off the mortar with a wet sponge or towel. This will help with clean up later.

3. Cleaning

A. If cleaning is needed, use the stone manufacturers recommended cleaner and follow instructions.

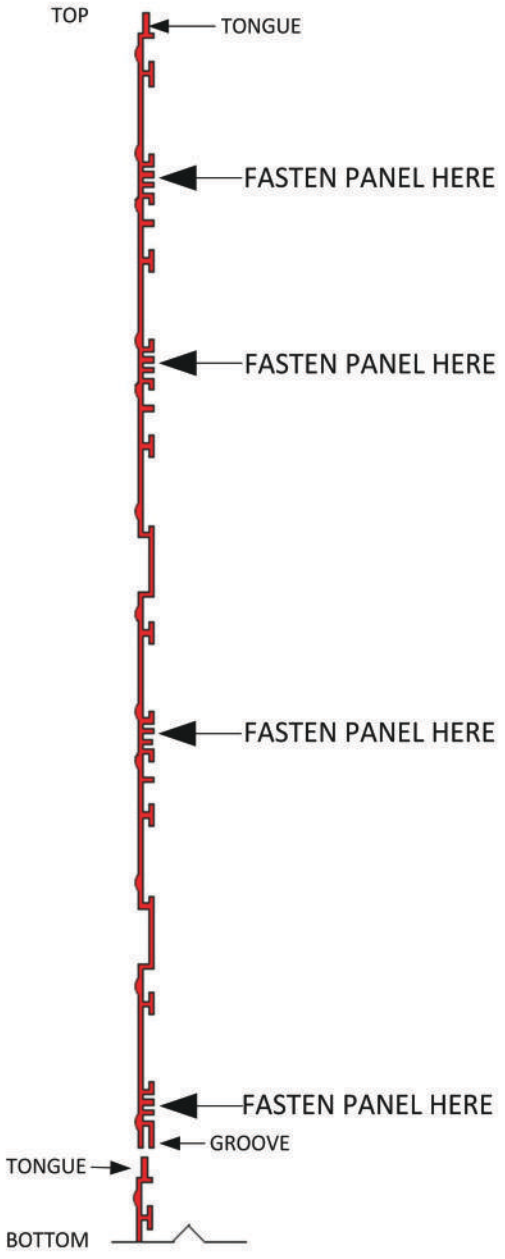
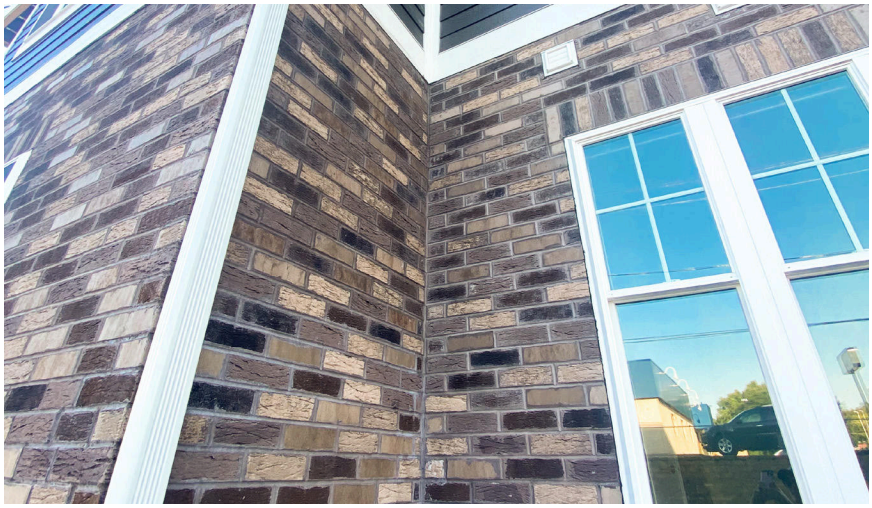


FIGURE 3











Use QR Code to see Speedymason Product Installation Guides on
www.speedymason.com/how-to

speedymason

EXPERIENCE THE THIN BRICK REVOLUTION

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Safety Data Sheet

U.S.A.
+1 608 855 5903

Section 1. Company and Product Identification

PRODUCT NAME: **Speedymason**

RECOMMENDED USE: Thin Brick Panelizing

RESTRICTIONS ON USE: For industrial processing only. MEDICAL APPLICATION CAUTION: RTP Company does not provide materials for use in any articles to be permanently implanted in the human body or to be permanently in contact with internal bodily fluids or tissues. Unless otherwise expressly agreed to in writing, RTP Company does not provide materials for use in articles to be briefly or temporarily implanted in the human body or to be in contact with internal bodily fluids or tissues.

SUPPLIED BY: Speedymason, LLC
300 Sherry Lynn Lane
Sparta, WI 54656

Information Telephone: 1-608-790-1322

Safety Data Sheet Coordinator: garrett@speedymason.com

EMERGENCY TELEPHONE: 1-608-790-1322

Section 2. Hazards Identification

GHS Classification
Not classified

Hazard Pictogram(s)
None

Signal Word
No Signal Word

Other hazards which do not result in classification

US OSHA HAZARD CATEGORY: Warning. May form combustible dust concentrations in air if small particles are generated during further processing, handling, machining, or by other means. Product, as shipped, is not a combustible dust. To reduce the risk for dust explosion do not permit dust to accumulate. If permitted to accumulate, these fines or dust can, under certain conditions, pose an explosion hazard.

Section 3. Composition/Information on ingredients

CHEMICAL CHARACTERIZATION: Mixture. Polypropylene, PP.

Chemical Name	SVHC	EC-No.	CAS-No.	Wt. %	GHS Symbols	GHS Statements
No hazardous items exist						

Section 4. First-aid Measures

DESCRIPTION OF FIRST AID MEASURES



FIRST AID - INHALATION: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician if symptoms persist or exposure was severe.

FIRST AID - SKIN CONTACT: For thermal burns, immediately flush with cold water. Do not attempt to remove polymer from skin. Obtain medical attention. Wash off with soap and water.

FIRST AID - EYE CONTACT: If eye irritation persists, consult a specialist. Rinse with plenty of water.

FIRST AID - INGESTION: Clean mouth with water and drink plenty of water afterwards. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: No Information

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: No Information

Section 5. Fire-fighting Measures

EXTINGUISHING MEDIA: Dry Chemical, Water Fog, Carbon Dioxide, Alcohol Foam

ADVICE FOR FIREFIGHTERS: Dry chemical and CO2 are not generally recommended for large fires due to their lack of cooling capacity which may allow re-ignition. Do not use water jet. Persons exposed to products of combustion should wear an approved self contained breathing apparatus and full protective equipment.

Section 6. Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: No Information

ENVIRONMENTAL PRECAUTIONS: Do not discharge into sewer or waterways.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: Spilled pellets may cause a slipping hazard. Sweep area as needed. Wear an approved dust respirator if necessary. (NIOSH, or EN143/EN149).

Section 7. Handling and Storage



PRECAUTIONS FOR SAFE HANDLING: Product, as shipped, is not combustible

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Store in a dry, sprinkler equipped warehouse.

Section 8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

No hazardous items exist

Notes

† Respirable fraction of the aerosol.
‡ Inhalable fraction of the aerosol.

EXPOSURE CONTROLS

RESPIRATORY PROTECTION: An approved respirator is recommended for protection against dust generated from grinding, sanding, or sawing operations. (NIOSH or EN143/149/14387)

EYE PROTECTION: Safety glasses with side shields are recommended when grinding, sanding or sawing operations

OTHER PROTECTIVE EQUIPMENT: No Information

HYGIENIC PRACTICES: Eating, drinking and smoking in immediate work area should be prohibited.

Section 9. Physical and Chemical Properties

Appearance:	Molded Plastic
Physical State:	Solid
Odor:	No Information available
Odor Threshold:	No Information available
pH:	Not applicable
Freeze Point, °C:	No Information available
Boiling Range, °C:	Not Applicable
Flash Point, °C:	No Information available
Evaporation Rate:	Not applicable
Combustibility:	No Information available
Explosive Limits, %:	No Information available
Vapor Pressure, mmHg:	Not applicable
Vapor Density:	Not applicable
Density, g/cm3:	1.3
Solubility in Water:	No Information available
Partition Coefficient, n-octanol/water:	Not applicable
Auto-Ignition Temperature, °C:	No Information available

Decomposition Temperature, °C:	No Information available
Viscosity:	Not applicable

Section 10. Stability and Reactivity

REACTIVITY: No Information

CHEMICAL STABILITY: Stable at recommended storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

CONDITIONS TO AVOID: No Information

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide. Hydrocarbons. Trace amounts of acrolein, formaldehyde, aldehydes, acids, ketones, and other unidentifiable organic compounds may be formed.

Section 11. Toxicological Information

INFORMATION ON TOXICOLOGICAL EFFECTS

CARCINOGENICITY:

None of the ingredients of this product are listed as a carcinogen by IARC, NTP, OSHA, MAK, or GHS.

SKIN CORROSION / IRRITATION: Based on available data, the classification criteria are not met.

SERIOUS EYE DAMAGE / IRRITATION: Based on available data, the classification criteria are not met.

RESPIRATORY OR SKIN SENSITIZATION: Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY: Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY: Based on available data, the classification criteria are not met.

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE: Based on available data, the classification criteria are not met.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE: Based on available data, the classification criteria are not met.

ASPIRATION HAZARD: Based on available data, the classification criteria are not met.

Practical Experiences

EFFECT OF OVEREXPOSURE - INHALATION: Processing fumes may cause irritation to the respiratory tract.

EFFECT OF OVEREXPOSURE - SKIN CONTACT: not likely to cause irritation. Contact with molten material may cause thermal burns. Processing fumes may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Not a probable route of exposure. Ingestion may cause gastric disturbances.

Section 12. Ecological Information

ECOLOGICAL INFORMATION: No specific ecological information is available. This material is considered to be non-biodegradable.

TOXICITY: No Information

PERSISTANCE AND DEGRADABILITY: No Information

BIOACCUMULATIVE POTENTIAL: No Information

MOBILITY IN SOIL: No Information

RESULTS OF PBT AND vPvB ASSESSMENT: No Information

OTHER ADVERSE EFFECTS: No Information

Section 13. Disposal Information

WASTE TREATMENT METHODS: The pellets, regrind, and purge of this material are non-hazardous and may be discarded in accordance with federal, state, and local regulations.
Do not discharge into sewer or waterways.

Section 14. Transport Information

Road Transport

UN Number:	-
UN Proper Shipping Name:	-
Transport Hazard Class:	Not Regulated
Packing Group:	-
ADR/RID Class:	Not Regulated

Sea Transport

IMDG Class:	Not Regulated
Marine Pollutant:	-

Air Transport

ICAO/IATA Class:	Not Regulated

ENVIRONMENTAL HAZARDS: No Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

Section 15. Regulatory Information

U.S. Federal Regulations:

TSCA Inventory:

All ingredients are listed or exempt from listing on the TSCA 8b inventory.

CERCLA - SARA Hazard Category

Under the provisions of Title III, Sections 311/312 of Superfund Amendments and Reauthorizations Act (SARA) this product is classified into the hazards listed below:

None Known

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

No Sara 313 components exist in this product.

TSCA 12b:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12b components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS

This product does not contain any ingredients that require a label or other type of warning under California Proposition 65 as known to cause cancer. This information is based on our vendors' certificates, SDS's, or letters of compliance. However, RTP Company does not routinely analyze for these specific substances.

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

This product does not contain any ingredients that require a label or other type of warning under California Proposition 65 as known to cause birth defects or other reproductive harm. This information is based on our vendors' certificates, SDS's, or letters of compliance. However, Speedymason does not routinely analyze for these specific substances.

International Regulations: As follows -

CANADIAN WHMIS 2015:

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

EU REACH - SVHC (Substances of Very High Concern)

This product contains the following chemicals at a concentration above 0.1% that are on the Candidate List of Substances of Very High Concern (SVHC) published by the European Chemicals Agency (ECHA) — (updated 16 July 2019)

https://echa.europa.eu/candidate-list-table

None known.

Section 16. Other Information

Revision Date:	17 Oct 2019
Supersedes Date:	20 Feb 2019
Datasheet produced by:	Regulatory Department
Reason for revision:	Statement(s) Changed Substance and/or Product Properties Changed in Section(s) : 03 09

HMIS Ratings:

Health:	0
Flammability:	1
Reactivity:	0
Personal Protection:	N.I.

Method used for hazard classifications: Calculation method for mixtures.

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

Not applicable

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

Not applicable

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined, N.I. - No Information

It is believed that the information contained herein is accurate as of the date hereof. HOWEVER, NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREIN AS TO THE INFORMATION PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. The health and safety precautions contained herein may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. Nothing contained herein shall be construed as a license for the use of any product in a manner that would infringe existing patents.

TEST REPORT

REPORT NUMBER: 102860812MID-003
ORIGINAL ISSUE DATE: February 21, 2017
REVISED DATE: N/A

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562
Ph: (608)836-4400

RENDERED TO

Advanced Formliners, LLC
DBA Speedy Mason
501 Eagle Court
Onalaska, WI 54650

PRODUCT EVALUATED: Speedy Mason Panel
EVALUATION PROPERTY: Fastener Pull-Through Resistance

Report of Testing Speedy Mason Panel for compliance with the applicable requirements of the following criteria: ASTM D1037-12: *Evaluating Properties of Wood-Base Fiber Particle Panel Materials,* Section 15: *Nail-Head Pull-Through*

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2 REVISION SUMMARY

DATE	SUMMARY
February 21, 2017	Date of original report

3 INTRODUCTION

Intertek has conducted testing for Advanced Formliners LLC DBA Speedy Mason, on their Speedy Mason Panel, to evaluate Fastener Pull-Through Resistance. Testing was conducted following the standard methods of ASTM 1037-12: *Evaluating Properties of Wood-Base Fiber Particle Panel Materials*, Section 15: *Nail-Head Pull-Through*. This evaluation began February 14, 2017 and was completed February 21, 2017.

4 TEST SAMPLES

4.1. SAMPLE SELECTION

Samples were independently selected for testing by Intertek representative Gregory Dupuis at Advanced Formliners, LLC.'s Onalaska, WI facility on February 2, 2017. Samples were received at the Evaluation Center on February 3, 2017 in good condition and labeled as MID1702030920.

4.2. SAMPLE AND ASSEMBLY DESCRIPTION

The Speedy Mason Panel is described as a 16" x 96" extruded polypropylene liner panel for use in a thin brick system.

Nails evaluated in this test were 1 ½" ring shank nails, with a 0.354 in. diameter head and a 0.123 in. diameter shank.

Screws evaluated in this test were 2 ½" screws, with a 0.326 in. diameter head and a 0.181 in. diameter shank.

5 TESTING AND EVALUATION METHODS

5.1. ASTM D1037 NAIL-HEAD PULL-THROUGH

Ten (10) test samples of the Speedy Mason Panel were prepared approximately 4 inches by 6 inches. The samples were conditioned for 40+ hours at a temperature of 23 ± 2°C and a relative humidity of 50 ± 5%. Length and width dimensions were measured and recorded. The test samples were restrained by a test fixture containing a 3" diameter hole centered on the sample. A supplied nail fastener was driven through the nailing fin section of each sample until flush with the fins. The end of the driven fastener was then gripped by the test machine and loaded in tension at a uniform displacement of 0.06 in/min until failure. The maximum load required to draw each fastener through the test panel was recorded.

5.2. ASTM D1037 SCREW-HEAD PULL-THROUGH

Ten (10) test samples of speedy mason panel board were prepared approximately 4 inches by 6 inches. The samples were conditioned for 40+ hours at a temperature of 23 ± 2°c and a relative humidity of 50 ± 5%. Length and width dimensions were measured and recorded. The test samples were restrained by a test fixture containing a 3" diameter hole centered on sample. A supplied screw fastener was driven through the nailing fin section of each sample until flush with the fins. The end of the driven fastener was then gripped by the test machine and loaded in tension at a uniform displacement of 0.06 in/min until failure. The maximum load required to draw each fastener through the test panel was recorded.

6 TESTING AND EVALUATION RESULTS

6.1. RESULTS AND OBSERVATIONS

The average results for the nail and screw pull-through resistance tests are listed below. Note that an appropriate factor of safety has not been applied to these values and they may not be used for design.

Results for **Speedy Mason Panel** **by Advanced Formliners, LLC DBA Speedy Mason**	
Average Nail Pull-Through Resistance	116.9 lbf [5.5 S.D. lbf]
Average Screw Pull-Through Resistance	109.5 lbf [3.3 S.D. lbf]

7 CONCLUSION

Intertek has conducted testing for Advanced Formliners LLC DBA Speedy Mason, on their Speedy Mason Panel, to evaluate Fastener Pull-Through Resistance. Testing was conducted following the standard methods of ASTM 1037-12: *Evaluating Properties of Wood-Base Fiber Particle Panel Materials*, Section 15: *Nail-Head Pull-Through*. This evaluation began February 14, 2017 and was completed February 21, 2017. Results presented in the above table have not been adjusted with an appropriate factor of safety and should not be used in design.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by: _____
Renor Seals
Technician

Reviewed by: _____
Andrew Holstein
Engineering Team Lead

Appendix A- EQUIPMENT CALIBRATION

Equipment	Asset Number	Calibration Date
Instron Universal Test Frame	0870	1/4/2018
Mitutoyo 8” Caliper	1347	10/11/17

TEST REPORT

REPORT NUMBER: 102860812MID-004
ORIGINAL ISSUE DATE: March 28, 2017
REVISED DATE: N/A

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562
Ph: (608)836-4400

RENDERED TO

Advanced Formliners, LLC
501 Eagle Court
Onalaska, WI 54650

PRODUCT EVALUATED: Speedy Mason Panel
EVALUATION PROPERTY: Water Vapor Transmission and Permeance

Report of Testing Speedy Mason Panel following the standard methods of ASTM E96-16: *Water Vapor Transmission of Materials*.

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EQUIPMENT CALIBRATION 5

2 REVISION SUMMARY

DATE	SUMMARY
March 28, 2017	Date of original report

3 INTRODUCTION

Intertek has conducted testing for Advanced Formliners, LLC, on their Speedy Mason Panel, to evaluate Water Vapor Transmission. Testing was conducted following the standard methods of ASTM E96-16: *Water Vapor Transmission of Materials*. This evaluation began March 6, 2017 and was completed March 28, 2017.

4 TEST SAMPLES

4.1. SAMPLE SELECTION

Samples were independently selected for testing by Intertek representative Greg Dupuis on January 13, 2017. Samples were received at the Evaluation Center on February 3, 2017 in good condition and labeled as MID1702030920.

4.2. SAMPLE AND ASSEMBLY DESCRIPTION

The Speedy Mason Panel is described as a 16” x 96” extruded polypropylene liner panel for use in a thin brick system.

5 TESTING AND EVALUATION METHODS

ASTM E96 Water Vapor Transmission

Four (4) test samples of Speedy Mason Panel were prepared with a 2.5-inch diameter. The first sample (labeled A) was used as a control and attached to an empty 2.5-inch metal cup. The remaining samples (labeled B, C, and D) were attached to 2.5-inch metal cups filled with anhydrous calcium chloride desiccant to within 0.25 inch of the sample. All four (4) samples were placed in an environmental chamber at 23 ± 2°C and a relative humidity of 50 ± 2% for 408 hours. Periodic measurements were taken to determine weight change over the course of the 408 hours to determine the rate of water vapor transmission.

6 TESTING AND EVALUATION RESULTS

6.1. RESULTS AND OBSERVATIONS

Results for **Speedy Mason Panel** **by Advanced Formliners LLC**	
Water Vapor Transmission per ASTM E96	0.05 (g/h·m²) [S.D. 0.02 (g/h·m²)]
	0.08 (grains/h·ft²) [S.D. 0.03 (grains/h·ft²)]
Permeance per ASTM E96	10.52 ng/(Pa.s.m2) [S.D. 3.45 ng/(Pa.s.m2)]
	0.18 (Perms) [S.D. 0.06 (Perms)]

7 CONCLUSION

Intertek has conducted testing for Advanced Formliners, LLC, on their Speedy Mason Panel, to evaluate Water Vapor Transmission. Testing was conducted following the standard methods of ASTM E96-16: *Water Vapor Transmission of Materials*. This evaluation began March 6, 2017 and was completed March 28, 2017.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by: _____
Renor Seals
Technician

Reviewed by: _____
Andrew Holstein
Engineer Team Lead

EQUIPMENT CALIBRATION

Equipment	Asset Number	Calibration Date
Envirotronics SH27 Environmental Chamber	0784	4/7/2017
Mettler Toledo AB3045 Analytical Balance	1045	1/25/2018

Intertek Testing Services NA Inc.
8431 Murphy Drive
Middleton, WI 53562

Telephone: +1 (608) 836-4400
Facsimile: +1 (608) 831-9279
www.intertek.com

Valued Quality. Delivered.

Issue Date: April 26, 2017

Letter Report No: 102860812MID-005

Advanced Formliners LLC
DBA Speedy Mason
501 Eagle Ct.
Onalaska, WI 54650

Subject: Results of TAS 201 testing of Speedy Mason Panel Wall Assembly

Dear Advanced Formliners LLC,

This letter report serves to notify you regarding the results of recent impact testing of your Speedy Mason Panel Wall Assembly per TAS 201-94. Four sample wall assemblies were received at the Middleton Evaluation Center on April 17, 2017 and testing per TAS 201-94 commenced on April 18, 2017. Two missiles were fired at the first impact sample and the results are tabulated below and depicted in figures 1-4.

Impact #	Impact Location	Missile Weight (lbm)	Missile Speed (fps)	Comments
1	Sample 1 Center	9.2	49.9	Brick dislodged, OSB cracked, no penetration. See figures 1-2.
2	Sample 1 Lower Right	9.2	50.3	Brick dislodged, OSB cracked, through penetration. See figures 3-4.



Figure 1- Impact location #1 front view



Figure 2- Impact location #1 rear view

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Figure 3- Impact location #2 front view



Figure 4- Impact location #2 rear view

If you have any questions regarding this letter report, please do not hesitate to contact the undersigned.

Sincerely,

INTERTEK TESTING SERVICES NA INC.

Reported by:

Andrew Holstein, Ph.D.
Engineering Team Lead

Reviewed by:

Russ Burt
Senior Associate Engineer

TEST REPORT

REPORT NUMBER: 102860812MID-006
ORIGINAL ISSUE DATE: May 8, 2017

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562
Ph: (608)836-4400

RENDERED TO

Advanced Formliners LLC
DBA Speedy Mason
501 Eagle Ct.
Onalaksa, WI 54650

PRODUCT EVALUATED:
Speedy Mason Panel Wall Assembly

EVALUATION SPECIFICATIONS:

Evaluated Specification	Result
Air Infiltration per ASTM E283-12	**<0.01 cfm/ft^2 at 1.57 psf**
Water Penetration per ASTM E331-16	**No Leakage at 11.27 psf**
Structural Performance per ASTM E330-14	**Sustained +/- 112.5 psf**

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2 REVISION SUMMARY

DATE	SUMMARY
May 8, 2017	Date of original report

3 INTRODUCTION

Intertek has conducted testing for Advanced Formliners LLC, DBA Speedy Mason on their Speedy Mason Panel Wall Assembly to evaluate air infiltration, water penetration, and structural performance.

This evaluation began April 17, 2017 and was completed April 19, 2017. All test records for this report will be retained until May 8, 2027.

4 TEST SAMPLES

4.1. SAMPLE SELECTION

Samples were independently selected for testing by Intertek representative Greg Dupuis on March 20, 2017. Samples were received at the Middleton Evaluation Center on April 17, 2017 in good condition and labeled as MID1704171029.

4.2. SAMPLE DESCRIPTION

The primary evaluated product was an extruded polypropylene wall liner system sold in 16" x 96" panels for use as a thin brick support system.

4.3. PRODUCT SIZES:

Overall Area: 32.0 ft^2	**Width (in.)**	**Height (in.)**
Overall Size	48	96

4.4. WALL CONSTRUCTION:

Speedy Mason panels (modular configuration) were installed on a 48" × 96" wall specimen composed of nominal 2×4 #2 Doug Fir wood studs spaced 16" on center and sheathed with 7/16" Oriented Strand Board (OSB). The OSB was attached to the studs with 2-3/8" × 0.113" nails spaced 6" o.c. along the edges and 12" o.c. at the intermediate supports. Sheathing panels were installed in such a manner that resulted in a 48" unsupported horizontal seam at the vertical center of the wall. Typar water vapor barrier and 1" R-5 XPS continuous insulation was installed between the sheathing and Speedy Mason panels. The Speedy Mason panels were cut to 32" and 16" long and installed horizontally with #8 × 2 ½" stainless steel screws through the nail track pattern spaced 8" o.c. Panels were installed in such a manner that resulted in a minimum of 288" of horizontal seams and 96" of staggered vertical seams. Speedy Mason Mortar Mix was applied to the panels and modular style 3/8" thin bricks were installed. Wall assemblies were allowed to cure for 28 days prior to installation and testing.

4.5. INSTALLATION

The wall assembly was installed in a nominal 2 x 12 Spruce-Pine-Fir wood buck and secured with two 16d common nails spaced 16" o.c. through the top and bottom plates. The perimeter of the wall assembly was sealed with silicone sealant and allowed to cure.

4.6. PRODUCT DRAWINGS:

The test specimen drawings have been reviewed by Intertek and are representative of the test specimen reported herein. Test specimen construction was verified by Intertek per the drawings located in Appendix D. Any deviations are documented herein or on the drawings.

5 TESTING AND EVALUATION RESULTS

The following table contains the results of air infiltration testing in accordance with ASTM E283.

Test Pressure	Results
Air Infiltration at 1.57 psf	<0.01 cfm/ft^2

The following table contains the results of positive and negative uniform static load testing in accordance with ASTM E330. All loads held for a duration of 30 seconds. The vertical seals between the sample and buck were removed for structural loading so that the assembly was supported solely by the top and bottom plates. Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Load (psf)	Deflection		Permanent Set	
	(inch)	Span Ratio	(inch)	Span Ratio
+56.25 50% of Test Pressure	0.25	L/373	0.02	L/4663
+75.00 Design Pressure	0.36	L/263	0.04	L/2664
-56.25 50% of Test Pressure	0.40	L/236	0.04	L/2331
-75.00 Design Pressure	0.55	L/170	0.06	L/1695

*See Sketch #1 for Deflection indicator locations.

The following table contains the results of water penetration testing in accordance with ASTM E331. Prior to testing, the sample perimeter was sealed with silicone sealant and allowed to cure.

Test Pressure	Results
Water Penetration at 11.28 psf	Pass

The following table contains the results of positive and negative structural overload testing in accordance with ASTM E330. All loads were held for 30 seconds. The vertical seals between the sample and buck were removed for structural loading so that the assembly was supported solely by the top and bottom plates. Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Load (psf)	Deflection		Permanent Set	
	(inch)	Span Ratio	(inch)	Span Ratio
+112.5 Test Pressure	0.62	L/150	0.05	L/1865
-112.5 Test Pressure	0.86	L/109	0.07	L/1435

*See Sketch #1 for Deflection indicator locations.

Intertek observed no signs of failure in any area of the specimen during the ASTM E330 Structural Performance testing.

6 CONCLUSION

Intertek has conducted testing for Advanced Formliners LLC, DBA Speedy Mason on their Speedy Mason Panel Wall Assembly.

This evaluation began April 17, 2017 and was completed April 19, 2017. All test records for this report will be retained until May 8, 2027.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report may not be reproduced, except in full, without the written approval of Intertek.

If you have any questions or concerns about the testing contained herein, please do not hesitate to contact the undersigned.

INTERTEK
Completed by: _____
Russ Burt
Senior Associate Engineer

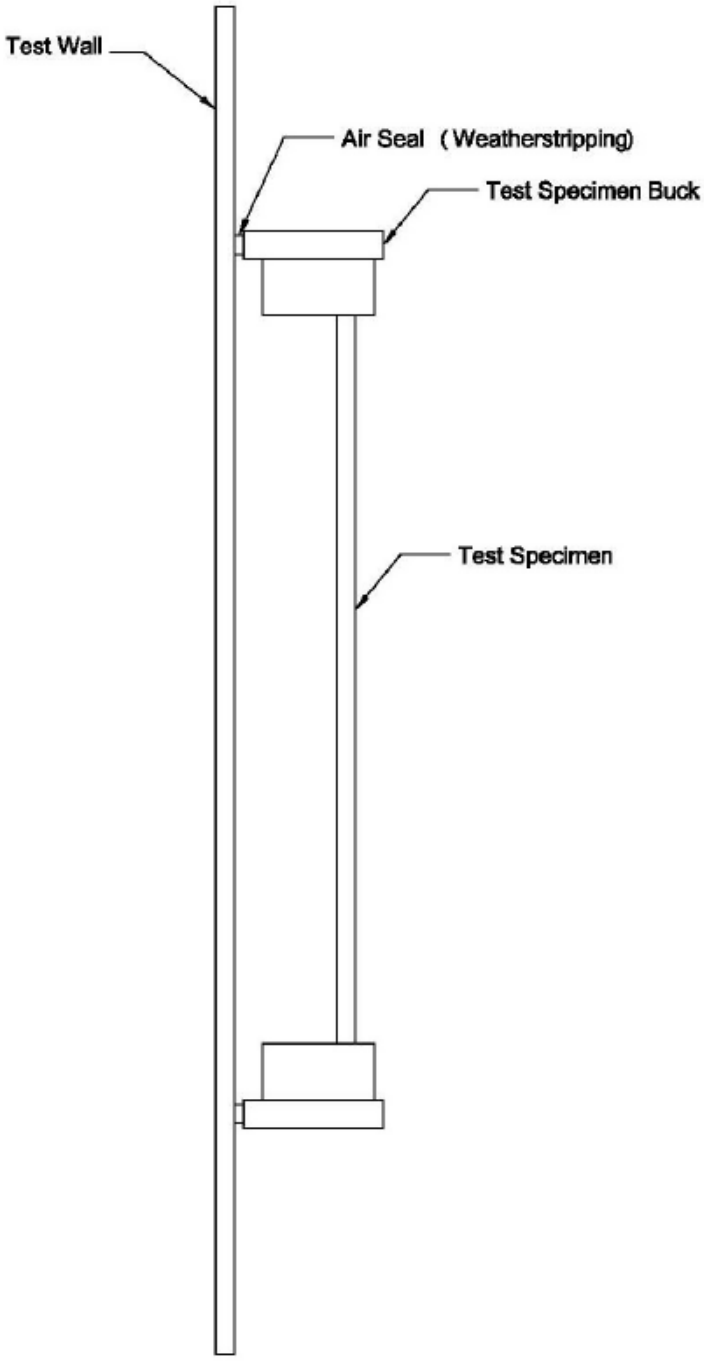
Reviewed by: _____
Andrew Holstein, Ph.D.
Engineering Team Lead

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix A: Location of Air Seal (1)
Appendix B: Sample Photograph (1)
Appendix C: Deflection Indicator Sketch (1)
Appendix D: Product Drawing (1)

Appendix A- LOCATION OF AIR SEAL

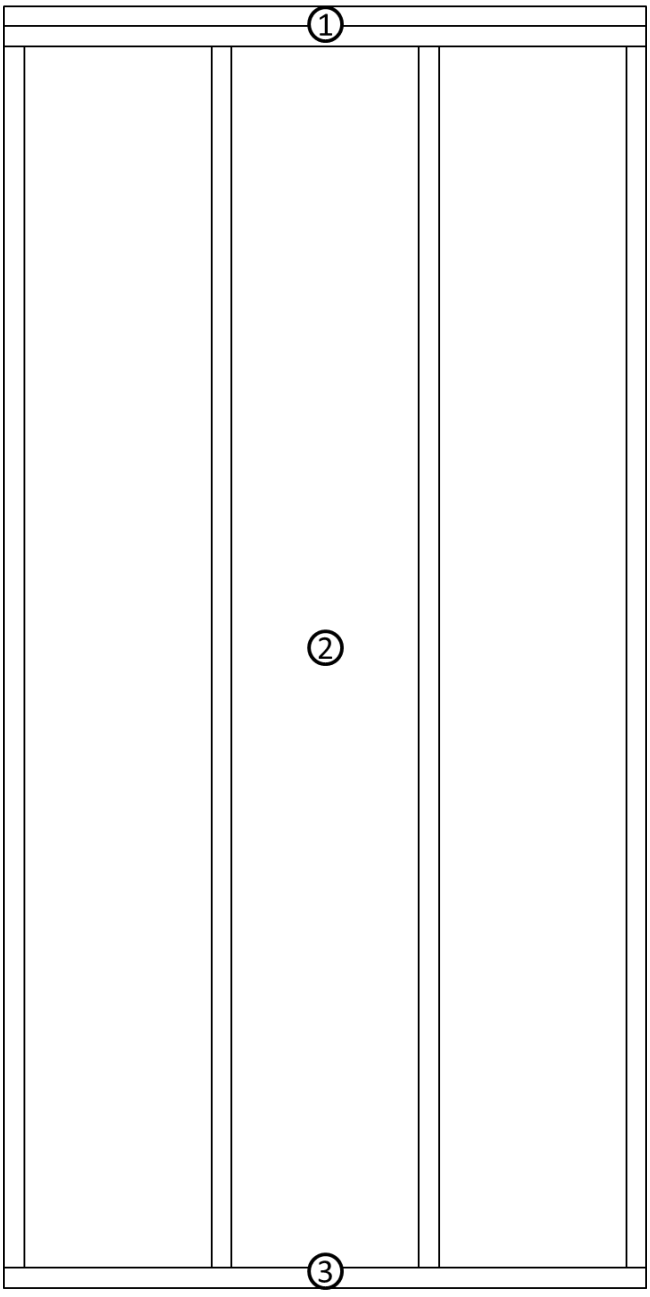
The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



Appendix B- SAMPLE PHOTOGRAPH

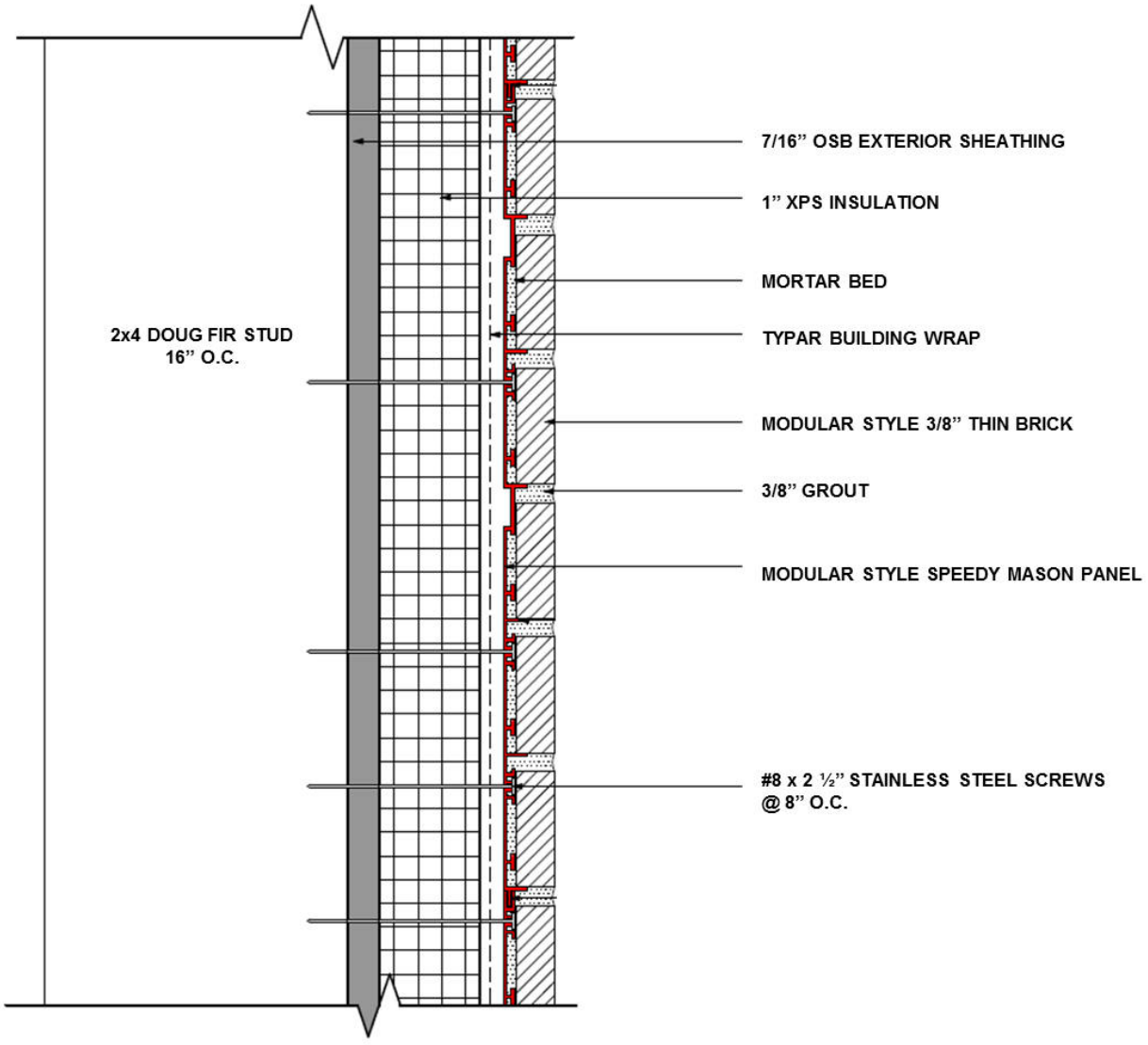


Appendix C- DEFLECTION INDICATOR SKETCH



Sketch #1: Deflection Indicator Locations
(Bricks/sheathing omitted for clarity)

Appendix D- PRODUCT DRAWING



TEST REPORT

REPORT NUMBER: 102860812MID-009
ORIGINAL ISSUE DATE: April 26, 2017

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562
Ph: (608)836-4400

RENDERED TO

Advanced Formliners LLC, DBA Speedy Mason
501 Eagle Ct.
Onalaska, WI 54650

PRODUCT EVALUATED: Speedy Mason Panel Wall Assembly
EVALUATION PROPERTY: Dynamic Water Penetration

Report of testing Speedy Mason Panel Wall Assembly for Water Penetration in accordance with AAMA 501.1-05: *Standard Test Method for Water Penetration of Windows, Curtain walls and Doors using Dynamic Pressure*

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2 REVISION SUMMARY

DATE	SUMMARY
April 26, 2017	Date of original report

3 INTRODUCTION

Intertek has conducted testing for Advanced Formliners LLC, DBA Speedy Mason, on their Speedy Mason Panel Wall Assembly, to evaluate Water Penetration. Testing was conducted following the standard methods of AAMA 501.1-05: *Standard Test Method for Water Penetration of Windows, Curtain walls and Doors using Dynamic Pressure*. This evaluation began April 19, 2017 and was completed April 19, 2017.

4 TEST SAMPLES

4.1. SAMPLE SELECTION

Samples were independently selected for testing by Intertek representative Greg Dupuis on March 20, 2017. Samples were received at the Middleton Evaluation Center on April 17, 2017 in good condition and labeled as MID1704171029.

4.2. SAMPLE AND ASSEMBLY DESCRIPTION

The primary evaluated product was an extruded polypropylene wall liner system sold in 16” x 96” panels for use as a thin brick support system.

Speedy Mason panels (modular configuration) were installed on a 48” × 96” wall specimen composed of nominal 2×4 #2 Doug Fir wood studs spaced 16” on center and sheathed with 7/16” Oriented Strand Board (OSB). The OSB was attached to the studs with 2-3/8” × 0.113” nails spaced 6” o.c. along the edges and 12” o.c. at the intermediate supports. Sheathing panels were installed in such a manner that resulted in a 48” unsupported horizontal seam at the vertical center of the wall. Typar water vapor barrier and 1” R-5 XPS continuous insulation was installed between the sheathing and Speedy Mason panels. The Speedy Mason panels were cut to 32” and 16” long and installed horizontally with #8 × 2 ½” stainless steel screws through the nail track pattern spaced 8” o.c. Panels were installed in such a manner that resulted in a minimum of 288” of horizontal seams and 96” of staggered vertical seams. Speedy Mason Mortar Mix was applied to the panels and modular style 3/8” thin bricks were installed. Wall assemblies were allowed to cure for 28 days prior to installation and testing.

The wall assembly was installed in a nominal 2 x 12 Spruce-Pine-Fir wood buck and secured with two 16d common nails spaced 16” o.c. through the top and bottom plates. The perimeter of the wall assembly was sealed with silicone sealant and allowed to cure.

Photos of the sample are included in Appendix B of this report.

5 TESTING AND EVALUATION METHODS

5.1. **AAMA 501.1-05** *STANDARD TEST METHOD FOR WATER PENETRATION OF WINDOWS, CURTAIN WALLS AND DOORS USING DYNAMIC PRESSURE*

6 TESTING AND EVALUATION RESULTS

6.1. RESULTS AND OBSERVATIONS

Dynamic Test Pressure	Duration	Results
15 PSF	15 minutes	Pass- No leakage observed

7 CONCLUSION

Intertek has conducted testing for Advanced Formliners LLC, DBA Speedy Mason, on their Speedy Mason Panel Wall Assembly, to evaluate Water Penetration. Testing was conducted following the standard methods of AAMA 501.1-05: *Standard Test Method for Water Penetration of Windows, Curtain walls and Doors using Dynamic Pressure*. This evaluation began April 19, 2017 and was completed April 19, 2017.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by: _____
Russ Burt
Senior Associate Engineer

Reviewed by: _____
Andrew Holstein, Ph. D.
Engineering Team Lead

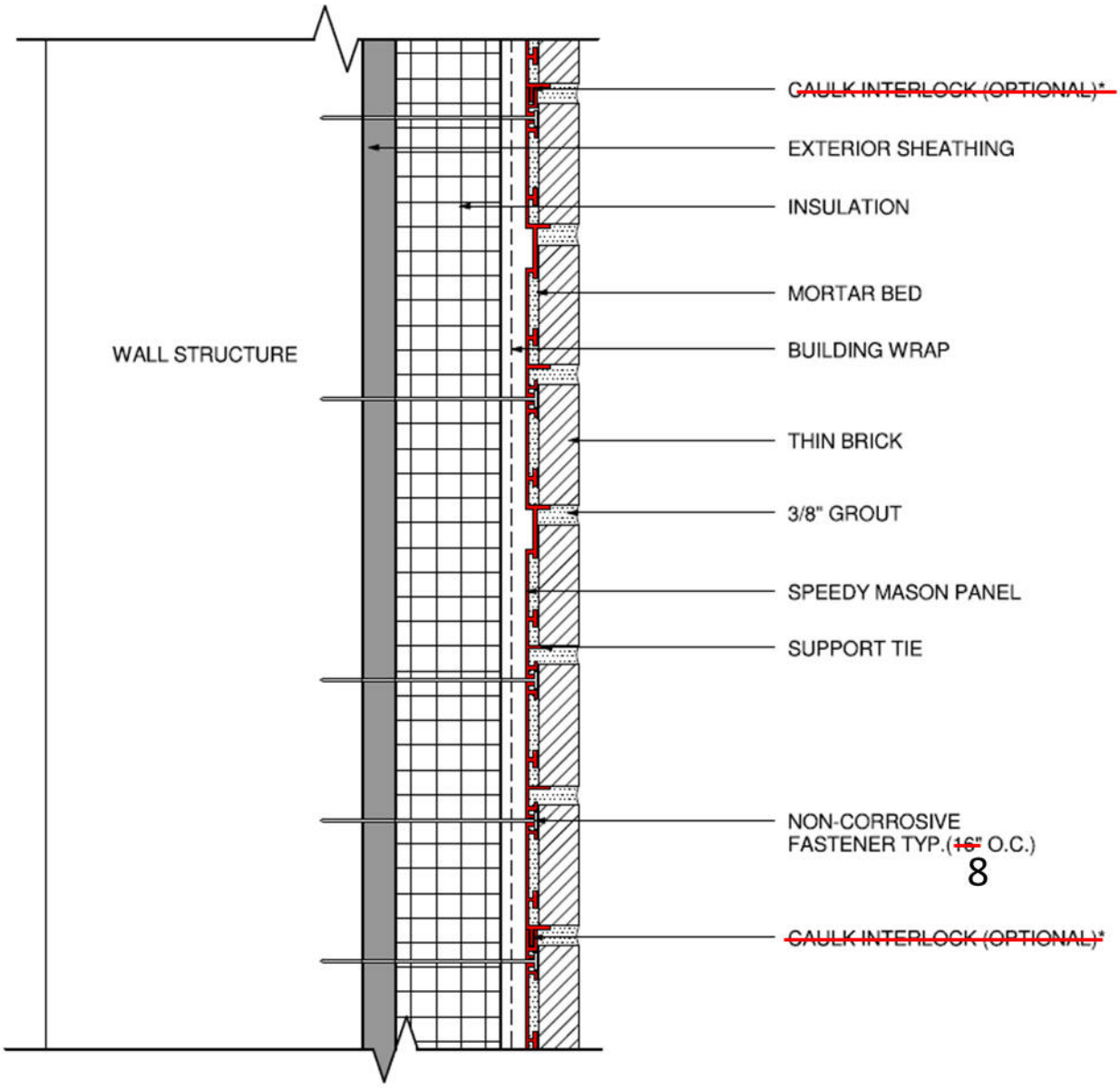
Appendix A- Equipment Calibration

Equipment	Asset Number	Calibration Due
Timer	908	April 2018
WOLF Wind Generator	005436	October 2017
Spray Rack	005591	April 2017

Appendix B- Photos



Appendix C- DRAWING



EXPERIENCE THE THIN BRICK REVOLUTION

SPEEDYMASON 50 YEAR PANEL WARRANTY

1. WARRANTY. Speedymason, LLC ("Speedymason") warrants that the Product sold hereunder will be free from defects in material under normal use and service for a period of Fifty (50) years from the date of original delivery, provided that the Buyer complies with the terms and conditions set forth at paragraph 4. hereunder. Buyer's sole remedy and Seller's sole obligation in the event of a breach of the warranties set out in this paragraph shall be to repair and replace the product to bring such into compliance with this warranty. Seller's obligation to remedy any breach of warranty set out in this paragraph shall be void to the extent that (i) installation and initialization of the Product shall not have been performed in accordance with Speedymason Product and Installation Guide, a copy of which is attached hereto and made a part hereof by reference; or (ii) the defects are caused by (A) abuse, misuse, improper maintenance or operation, electrical failure or abnormal conditions; (B) structural defects, building settlement or movement, subjection to corrosive materials, fire, flood or any other acts of God; or (C) tampering, alteration, modification, repair or rework done by anyone not approved by Seller in writing.

2. DISCLAIMER OF OTHER WARRANTY. Seller's Warranty In This Paragraph Is In Lieu Of And Excludes All Other Warranties Of Seller, Any Other Manufacturer Of The Products, And Any Other Entity Involved In The Manufacture, Sale Or Servicing Of The Product (Or Any Portion Thereof) And Their Respective Subsidiaries, Affiliates And Related Companies. Seller Hereby Expressly Disclaims All Such Other Warranties Whether Express, Implied, Statutory, Or Otherwise Created Under Applicable Law, Including But Not Limited To Any Warranty Of Merchantability And Any Warranty Of Fitness For A Particular Purpose Or Use.

3. EXCLUSIVE REMEDIES AND LIMITATION OF LIABILITY. The Remedies Provided In This Agreement Are Buyer's Sole And Exclusive Remedies. In No Event Shall Seller, Any Other Manufacturer Of The Product, Or Any Other Entity Involved In The Manufacture, Sale Or Servicing Of The Product Be Liable For Special, Incidental Or Consequential Damages, Including Loss Of Profits, Even If Seller Has Been Advised Of The Likelihood Of Such Losses. In No Event Shall Seller's Liability To Buyer Exceed The Unit Price Of The Defective Product. Seller Neither Assumes Nor Authorizes Any Agent, Employee, Representative Or Any Other Person To Assume For It Any Other Liability In Connection With The Sale, Installation, Service Or Use Of Its Product.

4. RESTRICTIONS AS TO APPLICABILITY OF WARRANTY. The following terms and conditions apply to the Speedymason Warranty set forth herein:

   (a) The Speedymason Warranty will apply only in the event that the Buyer submits a form, within ninety (90) days of the completed installation of the Product that includes the project name, address and building type; the project's start date and completion date; the Buyer's name, address and phone number; the architect's name, address and phone number; the installer's name, address, phone number and signature; the name of the general contractor(s) and their addresses, phone numbers and signatures. In addition, Buyer must submit a copy of the original Purchase Order, a minimum of six (6) photos showing the various stages of the project, including the finished building demonstrating the Product was installed in accordance with Speedymason Product and Installation Guide.

   (b) Speedymason Warranty will apply only to Products that are installed in accordance with Speedymason's Product and Installation Guide.

   (c) Speedymason Warranty will apply only to the Speedymason plastic composite panel alone.