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DIVISION: 09 00 00 – FINISHES
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REPORT HOLDER:

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REPORT SUBJECT:

Sika Corporation:
SikaWall-9000 PermaLath® 1000 Glass Fiber Lath

Saint-Gobain ADFORS America, Inc.:
FibaLath™ Glass Fiber Lath

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes (see Table 1):

- 2021, 2018 and 2015 *International Building Code*® (IBC)
- 2021, 2018 and 2015 *International Residential Code*® (IRC)
- 2023, 2020 *Florida Building Code* excluding High Velocity Hurricane Zones (see Section 8)

Note: 2023 Florida Building Code Sections are the same as the 2021 International Building Code.

1.2 The PermaLath® 1000 and FibaLath™ Glass Fiber Laths have been evaluated for the following properties (see Table 1):

- Wind resistance
- Durability

- Fire resistance
- Non-combustibility
- Use in Types I, II, III, IV and V Construction

1.3 The PermaLath® 1000 and FibaLath™ Glass Fiber Laths have been evaluated for the following uses:

- Reinforcement for exterior cement plaster
- Sika Corporation StuccoBase cementitious wall covering
- SPEC MIX Fiber Base Coat (FBC)
- Exterior cement plaster supporting precast stone veneer

2.0 STATEMENT OF COMPLIANCE

The PermaLath® 1000 and FibaLath™ Glass Fiber Laths comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 5.0.

3.0 DESCRIPTION

3.1 Glass Fiber Lath:

PermaLath® 1000 and FibaLath™ are open-weave, three dimensional laths, formed from glass fibers. The lath has a nominal thickness of 1/4 inch, weighs 8.8 oz/yd² and is supplied in 39-inch-wide by 150-foot-long rolls.

3.2 Exterior Wall Coverings:

This report recognizes use of PermaLath® 1000 and FibaLath™ with the following exterior wall coverings:

- Sika Corporation StuccoBase cementitious wall covering recognized in CCRR-0230;
- SPEC MIX Fiber Base Coat (FBC) cementitious wall covering recognized in CCRR-0231;
- Exterior cement plaster supporting precast stone veneer recognized in a current research or evaluation report as complying with ICC-ES AC51; and Exterior cement plaster (stucco) conforming to ASTM C926.



3.3 Substrates:

Substrates must be:

- Minimum 7/16-inch-thick, Exposure 1, oriented strand board (OSB) complying with U.S. DOC PS-2;
- Minimum 7/16-inch-thick, Exterior or Exposure 1 plywood complying with U.S. DOC PS-1 or PS-2; or
- Minimum 1/2-inch-thick water-resistant core gypsum sheathing board complying with ASTM C1396 or ASTM C1177.

4.0 INSTALLATION

4.1 General:

The PermaLath® 1000 and FibaLath™ Glass Fiber Laths must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

The lath must be attached as described in Tables 2 and 3.

Exterior cement plaster must be proportioned, mixed, and installed in accordance with ASTM C926, and must have a minimum thickness of 3/4 inch.

Sika Corporation StuccoBase and SPEC MIX Fiber Base Coat (FBC) exterior wall coverings must be installed in accordance with the applicable evaluation report and as follows:

- The coating must have a minimum thickness of 1/2 inch.
- Installation is limited to the assemblies described in this report.

Precast stone veneer must be recognized in a current evaluation report as complying with ICC-ES AC51, where the PermaLath® 1000 or FibaLath™ is permitted in lieu of metal lath.

4.2 Resistance to Windloads:

The maximum allowable positive and negative wind loads on exterior wall systems incorporating PermaLath® 1000 or FibaLath™ glass fiber laths are noted in Table 2.

4.3 One-hour Fire-resistance-rated Wall Assemblies:

Fire-resistance-rated wall assemblies incorporating PermaLath® 1000 or FibaLath™ laths must conform with the assemblies described in Tables 3 and 4.

4.4 Exterior Walls in Types I, II, III and IV Construction:

4.4.1 Assemblies Without Foam Plastic Insulation: PermaLath® 1000 or FibaLath™ embedded into exterior cement plaster complying with the code, Sika Corporation StuccoBase cementitious exterior wall coating and SPEC MIX Fiber Base Coat (FBC) cementitious exterior wall coating are considered noncombustible in accordance with Section 703.3 of the IBC.

4.4.2 Assemblies Incorporating Foam Plastic Insulation: Assemblies incorporating foam plastic insulation must be as described in Table 5.

5.0 CONDITIONS OF USE

5.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

5.2 Design loads for the exterior wall covering systems described in this report must be determined in accordance with the applicable code and must not exceed the allowable wind loads described in Table 2 of this report. The framing and sheathing must be designed and installed in accordance with the applicable code.

5.3 Use in one-hour fire-resistance-rated wall assemblies must be as described in Section 4.3 and Table 3.

5.4 Use on exterior walls of Type I, II, III or IV construction must be as described in Section 4.4 and Table 4.

5.5 When used as a component of a precast stone veneer system, use of the PermaLath® 1000 or FibaLath™ glass fiber lath must be acceptable to the manufacturer of the precast stone veneer system.

5.6 The lath is manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.



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6.0 SUPPORTING EVIDENCE

6.1 Reports of tests in accordance with ASTM E119-12a (18b), ASTM E136-12 (-19), NFPA 268-12 (-19), NFPA 285-12 (19).

6.2 Data in accordance with the ICC-ES AC275, *Acceptance Criteria for Glass Fiber Lath Used in Cementitious Exterior Wall Coatings or Exterior Cement Plaster (Stucco)*, dated April 2011, editorially revised August 2013.

6.3 Third-party engineering analysis of ASTM E119 and NFPA 285 assemblies.

6.4 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

7.0 IDENTIFICATION

Each roll of PermaLath® 1000 and FibaLath™ is identified by a label bearing the company name, roll dimensions, the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0249).



8.0 FLORIDA BUILDING CODE

PermaLath® 1000 and Saint-Gobain FibaLath™ glass fiber laths, described in Sections 2.0 through 6.0 of this Research Report, comply with the 2023 and 2020 *Florida Building Code – Building* and *Florida Building Code – Residential*, subject to the following condition:

- Use of PermaLath® 1000 or FibaLath™ glass fiber lath for compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code has not been evaluated and is outside the scope of this Research Report.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*

9.0 CODE COMPLIANCE RESEARCH REPORT USE

9.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

9.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

9.3 Reference to the <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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TABLE 1 – PROPERTIES EVALUATED

| PROPERTY | 2021 IBC | 2023 FBC - BUILDING | 2021 IRC | 2023 FBC - RESIDENTIAL |
|------------------------------------------------------|--------------|---------------------|----------------|------------------------|
| Wind resistance | 104.11, 1609 | 104.11, 1609 | R301.2.1 | R302.1.2.1 |
| Durability | 104.11 | 104.11 | 104.11 | 104.11 |
| Fire resistance | 703.2 | 703.2 | R302 | R302 |
| Noncombustibility | 703.3 | 703.3 | Not applicable | Not applicable |
| Use on walls in Types I, II, III and IV Construction | 2503.5 | 2603.5 | Not applicable | Not applicable |

TABLE 2 – ALLOWABLE WIND LOADS

| FRAMING | SHEATHING ¹ | LATH ATTACHMENT | EXTERIOR WALL COVERING | ALLOWABLE WIND LOADS (psf) | |
|-------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------|----------|
| | | | | Positive | Negative |
| 2 x 4 wood studs, min. 0.42 specific gravity, max. 16" o.c. | Min. 7/16 in. OSB or 7/16 in. plywood | 3/4 in. crown x 1-1/4 in., No. 16 ga. staples, spaced at 6 in. o.c., fastened into framing | Exterior cement plaster complying with ASTM C926 – 3/4 in. thick | 54 | 41 |
| | | | StuccoBase or SPEC MIX – 1/2 in. thick | 23 | 30 |
| | | | Precast stone veneer ² | Per the research report on the stone veneer | |
| No. 20 gage steel, max. 16 in. o.c. | Min. 1/2 in. gypsum sheathing | #6 x 1-1/4 in. Type S, 0.32-in-dia. head screws, OR 1-1/4 in. by 0.10-in. dia. VersaPIN Gripshank fasteners, With 1-1/4 in. Wind-Lock Lath Plates (legless), spaced 6 in. o.c., fastened into framing | Exterior cement plaster complying with ASTM C926 – 3/4 in. thick | 51 | 21 |
| | | | StuccoBase or SPEC MIX – 1/2 in. thick | 23 | 21 |
| | | | Precast stone veneer ² | Per the research report on the stone veneer | |

¹Sheathing must comply with, and be installed in accordance with, the code.

²Precast stone veneer must comply with ICC-ES AC51



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TABLE 3 – ONE-HOUR FIRE-RESISTANCE-RATED ASSEMBLIES WITHOUT FOAM PLASTIC INSULATION

| ASSEMBLY | INTERIOR | FRAMING | SHEATHING | LATH ATTACHMENT | COATING |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------|
| Nonload Bearing | Min. 5/8 in. Type X gypsum sheathing installed vertically with #6 x 1 in., screws spaced 8 in. o.c. on perimeter and 12 in. o.c. on intermediate studs, joints must be backed by framing, joints and nail heads must be treated per ASTM C840 or GA216 | Min. No. 20 gage steel, max. 16 in. o.c. | Min. 5/8 in. Type X gypsum sheathing installed horizontally with #6 x 1-1/4 in. screws spaced 8 in. o.c.; weather-resistive barrier applied over sheathing | PermaLath® 1000 or FibaLath™ attached per Table 2 | StuccoBase or SPEC MIX – 1/2 in. |
| Nonload Bearing | Min. 5/8 in. Type X gypsum sheathing installed vertically with #6 x 1 in., screws spaced 8 in. o.c. on perimeter and 12 in. o.c. on intermediate studs, joints must be backed by framing, joints and nail heads must be treated per ASTM C840 or GA216 | Min. No. 20 gage steel, max. 16 in. o.c. | Min. 5/8 in. Type X gypsum sheathing installed horizontally with #6 x 1-1/4 in. screws spaced 8 in. o.c.; weather-resistive barrier applied over sheathing | PermaLath® 1000 or FibaLath™ attached per Table 2 | ASTM C926 – 3/4 in. |
| Limited Load Bearing ^{1, 2} | Min. 5/8 in. Type X gypsum sheathing installed vertically with 1-7/8 in., 0.0975 in. dia., cuphead drywall nails, spaced 8 in. o.c., joints must be backed; joints and nail heads must be treated per ASTM C840 or GA216 | Min. 2 x 4 wood, max. 16 in. o.c., R-11 kraft-faced fiberglass in stud cavities | Min. 7/16 in. OSB installed horizontally with 6d sinker nails spaced at 8 in. o.c.; two layers of water-resistive barrier applied over sheathing per IBC Section 2510.6 or IRC Section R703.6 | PermaLath® 1000 or FibaLath™ attached per Table 2 | ASTM C926 – 3/4 in. |

¹Axial Design: Axial loads applied to the wall assembly shall be limited to the lesser of the following:

- 1,100 pounds per stud
- A maximum of 47.5% of the load calculated in accordance with Sections 3.6 and 3.7 of the ANSI/AWC NDS
- Design stress of $0.78 F'_c$ calculated in accordance with Sections 3.6 and 3.7 of the NDS
- Design stress of $0.78 F'_c$ calculated at a maximum l_e/d of 33 calculated in accordance with Sections 3.6 and 3.7 of the NDS

² Exterior walls shall have a minimum fire separation distance of 5 feet (1524 mm) in accordance with IBC Section 705.5

**TABLE 4 – ONE-HOUR NONLOAD-BEARING FIRE-RESISTANCE-RATED ASSEMBLIES INCORPORATING FOAM PLASTIC INSULATION**

| WAL COMPONENT | MATERIALS |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interior gypsum board | Minimum 5/8-inch-thick Type X gypsum board complying with ASTM C1396, installed vertically and attached to framing using minimum #6 by 1-1/4-inch self-tapping drywall screws at 8 in. o.c. on top and bottom tracks and 12 in. o.c. on each stud. All joints and fasteners require a Level 2 finish |
| Steel framing | Minimum 3-5/8-inch-deep, minimum No. 20 gage steel studs spaced a maximum of 24 in. o.c. |
| Wall cavity insulation – use 1, 2 or 3 | 1 – none 2 – fiberglass batt insulation (faced or unfaced) 3 – mineral wool insulation (faced or unfaced) |
| Exterior sheathing | Minimum 5/8-inch-thick Type X gypsum board complying with ASTM C1396 of ASTM C1177, installed vertically and attached to framing with No. 6 by 1-1/4-inch self-tapping screws spaced 8 in. o.c. around the perimeter and in the field. |
| Water-resistive barrier – use 1, 2, 3, 4 or 5 | 1 – one layer of No. 15 felt complying with ASTM D226, Type I 2 – Sikagard AWB 660, Senershield-R, Finestop-RA, or Acrostop R – Sikagard AWB 660 I, Senershield-VB or Finestop-VB 4 – Grade D building paper recognized in a current evaluation report 5 – Tyvek Commercial Wrap (ICC-ES ESR-2375) |
| Continuous insulation – use 1 or 2 | 1 – expanded polystyrene (EPS) foam plastic insulation complying with ASTM C578, Type II, max. 2-1/2 inches thick 2 – BASF Neopor EPS insulation, recognized in ICC-ES ESR-3463, max 2-1/2 inches thick Insulation installed in running bond pattern and attached to framing with two #8 by 4-inch ITX Buildex screws and 1-1/4-inch diameter Wind-Lock Lath-Plate Fasteners (legless) (Part no. SP114WLF) (or equivalent) spaced 7 in. o.c. |
| Lath | PermaLath® 1000 or FibaLath™ glass fiber lath installed horizontally over insulation with minimum 3-inch overlaps at horizontal edges and attached to framing with #8 by 4-inch ITW Buildex screws and 1-1/4 in. Wind-Lock Lath-Plates (legless) (Part No. SP114WLF) (or equivalent), spaced 7 in. o.c. |
| Exterior wall covering | Minimum 1/2-inch-thick StuccoBase or SPEC MIX |
| Finish | Any acrylic or cement-based finish or coating material applied over the stucco surface per manufacturer's instructions |



TABLE 5A – EXTERIOR WALLS IN TYPES I, II, III AND IV CONSTRUCTION

| WALL COMPONENT | MATERIALS |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Base wall system – use 1, 2 or 3 | 1 – concrete wall 2 – concrete masonry wall 3 – one layer of 1/2-inch thick regular or Type X gypsum board on interior, installed horizontally or vertically over minimum 3-5/8 inch, No. 20 gage steel framing spaced a maximum of 16 inches on center with lateral bracing every 4 feet vertically; gypsum board attached to framing with #6 by 1-1/4 self-drilling bugle-head screws spaced 8 in. o.c. on the perimeter and 12 in. o.c. in the field; joints and fasteners must have a Level 2 finish; framing for openings must be minimum No. 20 gage steel |
| Floorline firestopping | Min. 4 pcf mineral wool (e.g. Thermafiber) in each stud cavity at each floorline; attached with Z-clips or equivalent |
| Cavity insulation – use 1 or 2 | 1- none 2 – any noncombustible insulation (faced or unfaced) |
| Exterior sheathing | 1/2- or 5/8-inch-thick exterior gypsum sheathing complying with ASTM C1396 or ASTM C1177; sheathing attached to framing with #6 by 1-14 self-drilling screws spaced at 8 in. o.c. |
| Air or water-resistive barrier applied over exterior sheathing | Any barrier described in Table 5B |
| Exterior insulation – use 1, 2, 3, 4, 5 or 6 | 1 – EPS, ASTM C578, Type II, max 2.5 inches (see note 1) 2 – EPS, ASTM C578, Type XI, max. 4.7 inches (see note 1) 3 – EPS, ASTM C578, Type IX, max. 1.8 inches (see note 1) 4 – BASF Neopor EPS, ASTM C578 Type II, max. 2.4 inches (see note 1) 5 – XPS, ASTM C578 Type X or Type IV (see notes 1 and 2) 6 – polyisocyanurate, ASTM C1289 (see notes 1 and 2) |
| Lath | PermaLath® 1000 or FibaLath™ glass fiber lath applied horizontally with 3-inch overlaps at seams; attached to framing with #8 by 4-inch ITW Buildex screws and 1-1/4 in. Wind-Lock Lath-Plates (legless) (Part No. SP114WLF) (or equivalent), spaced 7 in. o.c. |
| Exterior wall covering – use 1 or 2 | 1 – StuccoBase or SPEC MIX, min. 1/2 inch thick 2 – Stucco complying with ASTM C926, min. 3/4 inch thick |
| Finish – use 1 or 2 | 1 – Any Sika Corporation finish coating 2 – Any cementitious finish coating |
| Flashing of window, door and other exterior wall penetrations (optional) | Window, door and penetrations may be flashed with acrylic, asphalt or butyl-based flashing tape, max. 12 inches wide |
| Accessories – use 1 or 2 (see Figure 1) | 1 – Galvanized steel, minimum 0.0172 inch thick 2 – PVC extrusions |

Note 1 – Foam plastic insulation must be recognized in a current research report and must have a flame-spread index and smoke-developed index of 25 or less and 450 or less, respectively.

Note 2 – The potential heat of the foam plastic insulation at the maximum installed thickness must not exceed 4999 Btu/ft², as determined in accordance with NFPA 259.



TABLE 5B – AIR AND WATER-RESISTIVE BARRIERS FOR USE IN ASSEMBLIES DESCRIBED IN TABLE 5A

| Water-resistive Barrier – Over Sheathing |
|-----------------------------------------------------|
| No. 15 Asphalt felt – ASTM D226, Type 1 – one layer |
| –Sikagard AWB 660 I |
| Senershield-VB |
| Finestop-VB |
| –Sikagard AWB 660 |
| Senershield-R |
| Finestop-RA |
| Acrostop R |
| Tyvek® StuccoWrap® - DuPont |
| WeatherMate™ or WeatherMate™Plus – Dow Chemical |
| CertaWrap™ - CertainTeed |

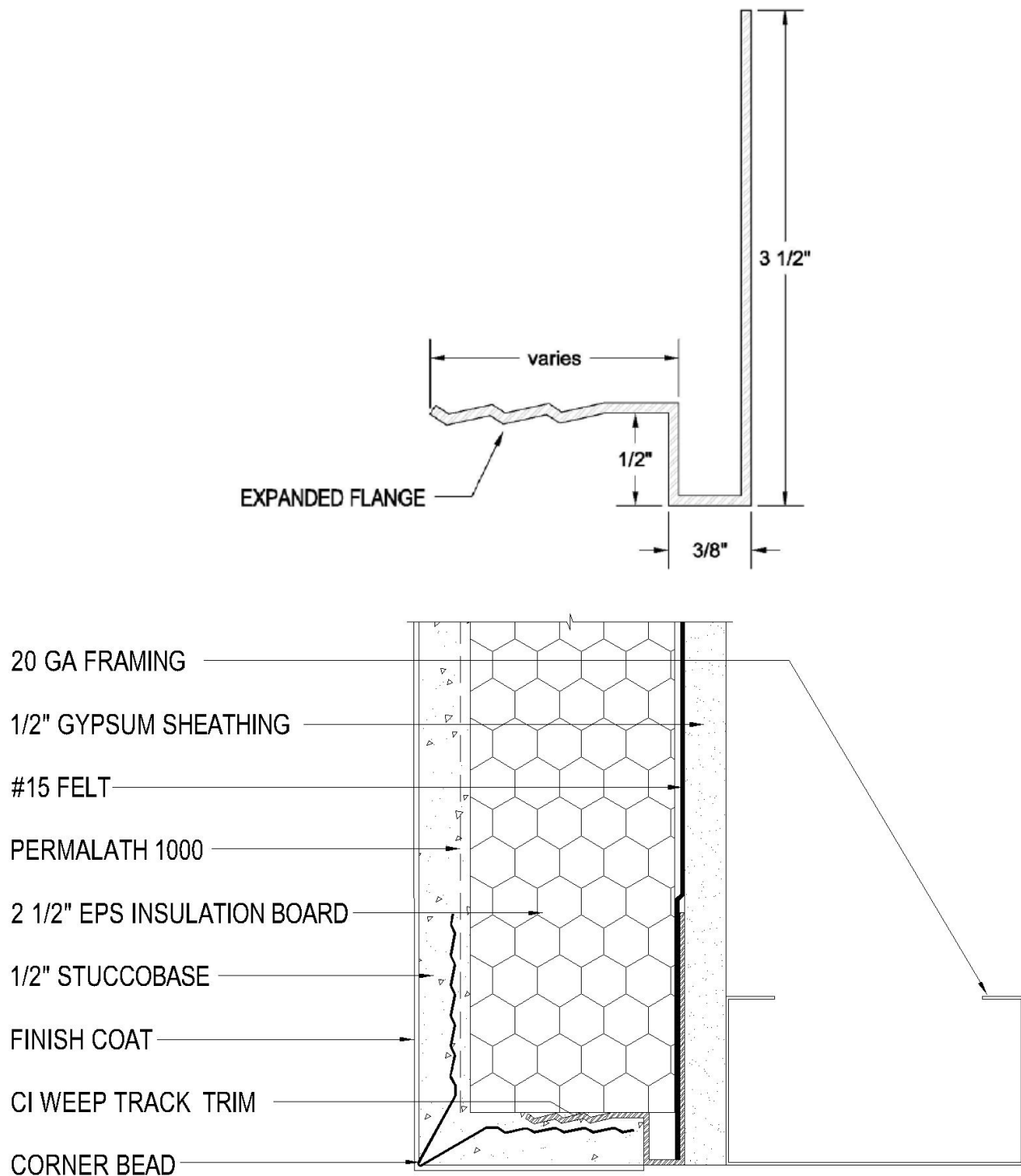


Figure 1 – Typical opening detail for NFA 285 assembly (See Table 5)