



Originally Issued: 10/25/2021

Valid Through: 10/31/2022

FACADESXi
15262 Capital Port
San Antonio, TX 78248
(800) 611-6602

FACADES ONE-COAT STUCCO SYSTEMS

CSI Section:

09 24 00 Cement Plastering

1.0 RECOGNITION

FacadesXi's FacadesOne One-Coat Stucco Systems recognized in this report have been evaluated for use as exterior wall coverings in compliance with Chapters 14 and 25 of the IBC and Chapter 7 of the IRC. The systems have been evaluated for wind resistance, fire resistance, non-combustibility, durability, and installation on walls required to be of Types I, II, III, IV, or V construction. FacadesXi's Systems evaluated in this report comply with the intent of the following codes and regulations:

- 2021, 2018, 2015, and 2012 International Building Code (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code (IRC)

2.0 LIMITATIONS

Use of FacadesXi's FacadesOne One-Coat Systems recognized in this report is subject to the following limitations:

2.1 The stucco systems shall be installed in accordance with this report, the code (IBC or IRC) as referenced in this report, and the manufacturer's published installation instructions. In the event of a conflict, this report governs.

2.2 All inspections outlined in IBC Section 110 or IRC Section R109 and required by the building official, shall be completed.

2.3 Wall bracing shall be provided in accordance with the applicable code.

2.4 The base coat shall be moist-cured in accordance with the manufacturer's installation instructions and the finish coat installation instructions, but no less than 24 hours. Shorter times may be allowed by the manufacturer using specific primers and level coats where allowed by FacadesXi.

2.5 Where foam plastic insulation is used, a thermal barrier complying with IBC Section 2603.4 or IRC Section R316 is required and the foam plastic shall be protected against termites in accordance with 2021, 2018 and 2015 IBC Section 2603.8 (2012 IBC Section 2603.9) or IRC Section R318.4, as applicable.

2.6 Where applied over wood-based sheathing, installation shall include a water-resistive barrier conforming with Section 3.2.4.2 of this report.

2.7 Under the 2021 IBC, the installation of water-resistive barriers shall comply with IBC Sections 2510.6.1 and 2510.6.2, as applicable. When compliance with Item No.2 of Section 2510.6.2 of the 2021 IBC is desired, a drainage test in accordance with ASTM E2273 or Annex A2 of ASTM E2925 shall be submitted to the building official for approval.

2.8 The FacadesOne One-Coat Stucco Systems recognized in this report are produced San Antonio, Texas.

3.0 PRODUCT USE

The FacadesOne Stucco Systems described in this report are used as an alternative exterior wall covering. The exterior stucco systems may be used as standard 3/4-inch (19.1 mm) thick scratch and brown coats complying with ASTM C926 in accordance with Sections 2510.3 and 2512.1 of the IBC.

When applied in accordance with Section 3.3.2 of this report, the exterior stucco systems are a component of one-hour fire-resistance-rated exterior wall assemblies. When applied in accordance with Section 3.3.3. of this report the exterior stucco systems may be applied on exterior walls of buildings of Type I, II, III or IV construction of any height. The manufacturer's published installation instructions shall be considered as part of this report. The manufacturer's installation instructions shall be strictly adhered to and be available at the jobsite during application.

3.1 Installation: The stucco systems described in this report, shall be installed in accordance with the code as referenced in this report, the manufacturer's published installation instructions, and the NOCSA Standard for Installation and Furring of Plaster Base (Lath) for Vertical Construction, required by the manufacturer, as applicable. The installation instructions shall be provided to the building official upon request.

The systems shall be installed by qualified contractors recognized by FacadesXi. An installation card like that shown in Figure 2 of this report, and containing equivalent information, shall be completed by the installation contractor and presented to the building official prior to final inspection.

3.2 Substrates: Substrates shall be concrete or masonry walls, or light-framing covered with gypsum board, fiberboard, wood structural panel wall sheathing, foam plastic insulation, or similar substrates. The light-framed walls shall be of minimum 0.42-specific-gravity wood studs or minimum 20-gauge [0.035 inch (0.889 mm)] steel studs spaced at 24 inches (610 mm) on center, maximum. The wall shall be prepared for the application of stucco in accordance with Section 3.2.3 of this report.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





3.2.1 Foam Backing: Expanded polystyrene, extruded polystyrene or polyisocyanurate foam plastic insulation boards may be used as components of wall substrates receiving FacadesXi Stucco. Table 1 of this report specifies the minimum thickness for foam plastic insulation installed over sheathing or open studs. Where used, foam plastic insulation shall be installed to the exterior of the water-resistive barrier and installed as required by the evaluation report. All foam plastic insulation shall have flame-spread and smoke-developed indices complying with Section 2603.3 of the IBC and Section 316.3 of the IRC. Foam plastic used in Types I, II, III or IV construction shall comply with Section 2603.5.4 of the IBC.

3.2.1.1 Expanded Polystyrene (EPS): EPS foam plastic insulation boards, where used as a backer over open framing shall be Type II in accordance with ASTM C578, with a minimum nominal density of 1.5 pcf (24 kg/m³).

3.2.1.2 Extruded Polystyrene (XPS): XPS foam plastic insulation boards shall be Type IV or Type V in accordance with ASTM C578, with a minimum nominal density of 1.5 pcf (24 kg/m³).

3.2.1.3 Polyisocyanurate Foam Plastic Insulation Board: Polyisocyanurate foam plastic insulation boards shall be Type II as set forth in ASTM C1289, with a minimum nominal density of 2.0 pcf (32 kg/m³).

3.2.1.4 Fastening: Where the foam backing boards are installed over wood framing, the boards shall be fastened using 11-gauge roofing nails or 16-gauge staples with 7/16-inch-wide (11.1 mm) crowns complying with ASTM F1667. The fasteners shall penetrate no less than 1 inch (25.4 mm) into the wood framing. Where the foam boards are installed over steel framing, the boards shall be fastened using No.6, Type S screws that shall penetrate no less than 1/4 inch (6.35 mm) through the steel flanges. Fastener spacing shall be maximum 6 inches (152 mm) on center.

TABLE 1 – FOAM PLASTIC BOARDS

Backing	Configuration
Open framing	1.0- to 1.5-inch-thick foam plastic boards with 3/8-inch tongue and groove horizontal joints as shown in Figure 1 of this report
	1-inch-thick, 2 ft by 8 ft Dow StyroFoam XPS with 4-sided tongue and groove edges installed according to ICC ESR-2142.
	Insulation boards shown in an evaluation report by an approved evaluation entity allowing installation of lath and stucco over open framing.
Wood structural panel (WSP) sheathing	Minimum 0.5-inch-thick, 1.0 pcf minimum density EPS insulation with vertical drainage grooves ¹ on the back face of the EPS board as with solid sheathing

WSP sheathing where foam plastic forms part of the water-resistive barrier	Minimum 1.0-inch-thick foam plastic insulation with 3/8-inch tongue and groove horizontal joints as shown in Figure 1 of this report
Other rigid sheathing	Minimum 0.5-inch-thick, 1.0 pcf density EPS insulation with vertical drainage grooves ¹ on the back face of the EPS board

SI conversions: 1 inch = 25.4 mm; 1 foot = 305 mm; 1 pcf = 16 kg/m³

¹ Grooves 1/4-inch-wide x 1/8-inch-deep, spaced 12 inches on center. As an alternative to the vertical drainage grooves, the EPS may be installed over Tyvek® Stuccowrap® or Tyvek® DrainWrap™ water-resistive barrier.

3.2.2 Mineral Wool: Mineral wool shall be certified an approved evaluation entity and installed as required by the evaluation report.

3.2.3 Rigid Backing: Rigid backings include gypsum board, fiberboard, and wood structural panel sheathing. The water-resistive barrier shall be installed to the exterior of rigid backings.

3.2.3.1 Gypsum Board: Gypsum boards shall be protected from the weather in accordance with IBC Section 2508.2 and ASTM C1280. The boards shall be minimum 1/2-inch-thick (12.7 mm) and shall comply with Section 2506 of the IBC or Sections R602.3 and R702 of the IRC, as applicable. Permitted types include water-resistant gypsum backing board and gypsum sheathing board complying with ASTM C1396, and glass mat gypsum substrate complying with ASTM C1177. Gypsum wallboard complying with ASTM C1396 is permitted on the interior side of walls where specified in this report. Refer to the gypsum board evaluation report or manufacturer’s literature for limitations and use recommendations.

3.2.3.2 Fiberboard: Cellulosic fiber insulating board (fiberboard) shall comply with Section 2303.1.6 of the 2021, 2018 and 2015 IBC (Section 2303.1.5 of the 2012 IBC) and shall be Type IV, Grade 1 or Grade 2 wall sheathing as set forth in ASTM C208, minimum 1/2-inch-thick (12.7 mm). Refer to the fiberboard evaluation report or manufacturer’s literature for limitations and use recommendations.

3.2.3.3 Wood Structural Panel Sheathing: Wood structural panel (WSP) sheathing shall comply with Sections 2303.1.5 of the 2021, 2018 and 2015 IBC (2303.1.4 of the 2012 IBC), Section 2304.6.1 and Table 2304.6.1 of the IBC or Section R602.3 and Table R602.3(3) of the IRC, as applicable.

3.2.3.4 Concrete or Masonry Substrates: Application of the stucco directly to concrete or masonry shall be by others and is permitted in accordance with AC11. No water-repellent coatings such as bituminous coatings or other foreign matter shall be present on the substrate. The substrate shall be sufficiently moist to prevent it from drawing the



water needed for hydration from the stucco paste. Where required to remove foreign matter, surfaces shall be cleaned using acid solutions, solvents, or detergents and then washed with clean water. Smooth surfaces shall be roughened, and an approved bonding agent shall be applied to block, concrete, or masonry surfaces, as appropriate.

3.2.4 Substrate Preparation: The substrates shall be prepared for the application of stucco in accordance with this section (Section 3.2.4) of this report.

3.2.4.1 Weep Screed: Weep screeds shall be installed at the base of the assembly. Weep screeds shall comply with Section 2512.1.2 of the IBC or Section R703.7.2.1 of the 2021, 2018 and 2015 IRC (R703.6.2.1 of the 2012 IRC).

3.2.4.2 Water-Resistive Barrier: Water-resistive barriers shall be installed in accordance with applicable IBC Sections and IRC Sections shown in Section 3.2.4.2.1, 3.2.4.2.2 and 3.2.4.2.3, or the water-resistive barrier evaluation report, as applicable, to prevent water from entering the substrate.

3.2.4.2.1 Wood-based sheathing: For installation over wood-based sheathing, the water-resistive barrier shall be installed in accordance with Section 2510.6 of the IBC, Section R703.6.3 of the IRC, or the water-resistive evaluation report, as applicable. Under the 2018 IBC, where installed in Climate Zone 1A, 2A, or 3A, a ventilated air space shall be provided between the stucco and water-resistive barrier.

3.2.4.2.2 Other installations: For installations without wood-based sheathing, the water-resistive barrier shall meet the requirements of Section 1403.2 of the 2021 and 2018 IBC, Section 1404.2 of the 2015 and 2012 IBC, and Sections R703.2 and R703.7.3, or the water-resistive barrier evaluation report, as applicable.

3.2.4.2.3 Water-resistive Barriers in Exterior Walls on Buildings of Type I, II, III or IV Construction: Walls including water-resistive barriers as noted in Section 3.3.3 of this report are permitted to be constructed in Types I, II, III, and IV construction.

3.2.4.3 Casing Beads and Corner Beads: Casing and corner beads shall be installed to provide a finish at the boundaries of the assemblies in accordance with NOCSA Standard for Installation and Furring of Plaster Base (Lath) for Vertical Construction. Casing beads and corner beads shall be galvanized steel or approved plastic.

3.2.4.4 Flashing: Flashing shall be installed to divert water in accordance with the manufacturer's instructions and the applicable code. Flashing shall comply with Section 1404.4 of the 2021 and 2018 IBC, Section 1405.4 of the 2015 and 2012 IBC, Section R703.4 of the 2021, 2018 and 2015 IRC, or Section R703.8 of the 2012 IRC, as applicable. Membrane flashing shall be as required by an evaluation report by an approved evaluation entity.

3.2.4.5 Metal or Wire Fabric Lath: Lath shall be regular or self-furring wire fabric or metal lath complying with the code or ICC-ES AC191, as applicable. The lath shall be corrosion-resistant and shall be the furred or self-furring type. Wire fabric lath shall be minimum 20 gauge [0.035 inch (0.889 mm)] by 1-inch (25.4 mm), galvanized steel, woven-wire fabric. Lath fasteners shall penetrate through foam plastic insulation and sheathing and shall be embedded directly into framing to transfer the loads to structural load bearing members. Refer to the lath evaluation report or the lath manufacturer's literature for limitations and use recommendations. Furred 20-gauge [0.035 inch (0.889 mm)] lath shall be used with the FacadesXi products up to ½-inch-thick (12.7 mm). For coating thicknesses greater than ½ inch (12.7 mm), furred 17-gauge [0.056 inch (1.42 mm)] wire fabric lath shall be used. Furring crimps shall be provided at maximum 6-inch (152 mm) intervals each way. The crimps shall fur the body of the lath a minimum of ⅛ inch (3.18 mm) from the substrate after installation. Unfurred lath is permitted over unbacked polystyrene boards in accordance with AC11.

3.2.4.6 Alternative laths: Laths that are part of an evaluation report by an approved evaluation entity may be used as an alternate to metal or wire fabric lath.

3.2.5 Plaster Mixing: The stucco blends shall be mixed with suitable sand and clean, potable water in accordance with Section 4.0 of this report and the manufacturer's mixing instructions.

3.2.6 Plaster Application: FacadesXi Stucco shall be applied at minimum ⅜-inch-thick (9.53 mm) up to ½-inch-thick (12.7 mm) without cold joints as specified in the manufacturer's installation instructions. When used in construction Types I through IV assemblies incorporating foam plastic insulation on buildings over 40 feet in height, stucco shall be applied in one coat, in accordance with Section 3.3.3.2 of this report. The ambient air temperature range for application of the plaster shall be 40°F to 110° F (4.4°C to 43°C).

3.2.7 Finish Coat: If required, finish coats shall be applied in accordance with the FacadesXi application instructions after the base coat fully cures.

3.2.8 Miscellaneous:

3.2.8.1 Sills: Windowsills or pop-outs may be plastered where the sill is up to 6 inches (152 mm) wide. Wider sills require lumber or WSP fastened to framing in accordance with Section 2304.10.2 of the 2021 IBC, 2304.10.1 of the 2018 and 2015 IBC, and 2304.9.1 of the 2012 IBC, or IRC Section R602.3.

3.2.8.2 Control and Expansion Joints: Control and expansion joints shall be provided as specified by the building designer, the installation contractor, or the stucco manufacturer, as applicable.



3.2.8.3 Caulking: Joints formed where the boards abut dissimilar materials such as at windows, door, and other penetrations shall be filled with caulking. Caulking shall be acrylic latex complying with ASTM C834 or polysulfide, polyurethane, polyurethane modified, or silyl-terminated polyether elastomeric sealant complying with ASTM C920.

3.2.8.4 Vapor Retarder: Vapor retarders shall comply with Section 1404.3 of the 2021 and 2018 IBC, 1405.3 of the 2015 and 2012 IBC or Section R702.7 of the IRC, as applicable.

3.2.8.5 Soffits: Application of plaster to soffits requires metal lath complying with Section 3.2.4.5 in lieu of fabric wire lath per ASTM C1063. Fasteners shall penetrate into framing.

3.2.8.6 Product Storage: The bags shall be kept indoors or, if stored outdoors, shall be stored off the ground and adequately covered to keep the product dry.

3.3 Design

3.3.1 Wind Load: The maximum allowable wind pressures, for the stucco applied over various substrates, is given in Table 4 of this report. The backing and fastening of the backing, including the lath on which the stucco is applied shall be capable of withstanding the design wind loads, and installation shall comply with the applicable code and this report.

3.3.2 One-hour Fire-resistance-rated Construction: Fire-resistance-rated assemblies incorporating FacadesXi's Stucco are described in Table 3 of this report are recognized as meeting ASTM E119 and UL 263 fire-resistance ratings from both the interior and exterior.

3.3.3 Exterior Walls on Buildings of Types I, II, III, or IV Construction:

3.3.3.1 General: Exterior wall assemblies incorporating FacadesXi Stucco and constructed entirely of noncombustible components or concrete/masonry walls with directly applied stucco in accordance with Section 3.2.3.4 of this report, are permitted to be used in Types I through IV construction on buildings of any height allowed in IBC Section 504.

Exception: These assemblies may include a water-resistive barrier as its only combustible component, provided the WRB does not exceed the maximum combustion, heat release, and surface burning criteria contained in ASTM E1354 and ASTM E84 as described in Section 1402.5 and 2603.5 of the 2021 and 2018 IBC, Sections 1403.5 and 2603.5 of the 2015, and 2012 IBC. Use of these WRBs shall be approved by the building official based on reports of WRB testing in accordance with ASTM E1354 and ASTM E84.

3.3.3.2 Assembly based on NFPA 285 testing: The following assembly is provided for compliance with Section 2603.5.5 of the IBC as complying with the acceptance criteria

of NFPA 285. Documentation shall be provided to the building official showing compliance with Section 2603.5. Use of wood in Types I through IV construction shall meet the requirements of Chapter 6 of the IBC.

No. 20 gauge (0.0359 inch) 3⁵/₈-inch-wide (92 mm) nonload-bearing steel framing spaced a maximum of 16 inches (406 mm) on-center. The inside face has one layer of 1/2-inch-thick (15.9 mm) gypsum wallboard applied vertically and attached with No. 8, 1¹/₄-inch-long (32 mm) self-drilling drywall screws spaced 8-inches on-center (203 mm) and 12 inches on-center (305 mm) in the field. Fasteners and joints of wallboard shall be taped and treated as set forth in Section 2508.4 of the IBC and either ASTM C840 or GA-216.

Fireblocking in accordance with Section 718.2 of the IBC shall be required in the wall stud spaces at ceiling and floor levels and shall consist of mineral fiber insulation with a minimum nominal density of 4 pcf (64 kg/m³).

The outside face has one layer of minimum 15/32-inch-thick (11.9 mm) OSB sheathing, oriented horizontally and attached to the steel framing using No. 6, 1⁵/₈-inch-long (41.9 mm), self-drilling drywall screws spaced at 8 inches (203 mm) on center on all perimeter ends and edges of the OSB sheathing, and 12 inches (305 mm) on center in the field.

1³/₄-inch x 1¹/₂-inch x 1/4-inch J channel shall be applied around the entire perimeter of the window opening.

60-minute paper shall be applied to the wall surface with 1/4 inch (6.35 mm) staples over each preceding layer with a 4-inch (102 mm) ship lap. A 1-inch (25.4 mm) thick, Type II EPS placed over the paper and secured with roofing nails shall be spaced approximately 12 inches (305 mm) from the edges and nailed at 16 inches on center at the top and bottom. All gaps larger than 1/4-inch (6.35 mm) are filled with EPS foam. 20-gauge wire mesh (36 inches wide) shall be applied over the foam with self-drilling screws at 7 inches (178 mm) maximum spacing on center with 2 to 4 inches (51 to 102 mm) lap for the mesh. The stucco shall be applied over the mesh at the minimum 3/8-inch (9.53 mm) thickness in accordance with Section 3.1 of this report.

4.0 PRODUCT DESCRIPTION

4.1 General: FacadesXi system is a factory prepared, dry-blended, fiber-reinforced, modified Portland cement product which, when mixed with the proper types and amounts of sand and water, forms a stucco plaster. The coating is applied in one coat, minimum 3/8-inch-thick (9.53 mm), as an alternative to the code prescribed scratch and brown coats in conventional stucco systems. The FacadesXi Stucco Systems comply with 2021, 2018, 2015, and 2012 IBC Chapters 14 and 25, IRC Chapter 7, and ICC AC11 as alternative exterior



wall coverings. The systems also comply with Chapter 8 of the IBC and Chapter 7 of the IRC as interior wall coverings. FacadesXi products are noncombustible materials in accordance with Section 703.5 of the IBC.

4.2 Formulations: FacadesXi products are manufactured in three formulation classes: FacadesOne Concentrate: One Coat Concentrate, FacadesOne Sanded: One Coat Sanded and FacadesOne Enhanced Concentrates. The concentrates are packaged in 80 lb. (36.29 kg) bags.

Each bag of FacadesOne One-Coat Concentrate is mixed with 200-250 pounds of sand and approximately 4-6 gallons of water. Each bag of FacadesOne Enhanced is mixed with 250 pounds of sand and approximately 5.6 gallons of water. FacadesOne Sanded is field mixed with approximately 1.5 gallons of water per bag.

Mixes shall be in accordance with FacadesXi product datasheets.

4.2.1 Sand: The stucco sand shall be clean and free of deleterious amounts of loam, clay, silt, soluble salts and organic matter; and shall comply with ASTM C144, ASTM C897, or shall be graded in accordance with Table 2 of this report.

TABLE 2 – Sand Gradation

U.S. Standard Sieve	Weight Percent of Aggregate Retained ± 2 Percent	
	Min.	Max.
No. 4	–	0
No. 8	0	10
No. 16	10	40
No. 30	30	65
No. 50	70	90
No. 100	95	100

5.0 IDENTIFICATION

FacadesOne is identified by the FacadesXi name and trademark, product name and evaluation report number (ER-687). The identification includes the IAPMO Uniform Evaluation Service Mark of Conformity. Either Mark of Conformity may be used as shown below:



IAPMO UES ER-687

6.0 SUBSTANTIATING DATA

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Cementitious Exterior Wall Coatings (AC11), dated January 2013 (editorially revised October 2020).

6.2 Manufacturer’s descriptive literature and installation instructions.

6.3 Reports of testing in accordance with ASTM E119

6.4 Reports of testing in accordance with ASTM E136

6.5 Reports of testing of transverse loading in accordance with ASTM E330.

6.6 Reports of fire propagation testing in accordance with NFPA 285.

6.7 Reports of testing in accordance with G155, C926, C840, C1396, C1177, C834 and C920.

6.8 Test reports are from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on FacadesXi’s Exterior Stucco System to assess its conformance to the codes and standards shown in Section 1.0 of this report and documents the product’s certification. Products are manufactured at the locations noted in Section 2.8 of this report under a quality control program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email at info@uniform-es.org



TABLE 3 – ONE-HOUR FIRE-RESISTANCE-RATED WALL ASSEMBLIES (cont'd on next page)

Assembly No.1	2x4 or 2x6 wood studs 24 inches on center with 5/8-inch Type X gypsum wallboard
<p>Construction¹ – 2X4 or 2X6 wood studs (minimum specific gravity of 0.50) spaced a maximum 24-inches on center. Interior face has one layer of 5/8-inch thick Type X gypsum wallboard applied horizontally with all joints backed by framing and attached with gypsum wallboard nails, 1⁵/₈ inches long, 0.3-inch diameter heads, 0.1-inch shaft diameter or equivalent galvanized metal fasteners with the same pullout strength, shear resistance and holding capacity, spaced at 8 inches (203 mm) on-center to studs, plates and blocking. Nail heads and Joints of wallboard shall be taped and treated with joint compound in accordance with IBC Section 2508.4, and either ASTM C840 or GA-216.</p> <p>Wood stud cavities are insulated with faced or unfaced, minimum R-11, fiberglass batts or mineral wool batts. If insulation batts have a vapor retarder, the vapor retarder shall be facing the interior side of the wall. The insulation batts shall be secured to the studs with nominal 24 gage, 3/8-inch-long leg by 0.422-inch-wide crown steel staples or equivalent metal fasteners, spaced nominally 12 inches on center.</p> <p>Exterior face has a minimum 7/16-inch-thick wood structural panel sheathing attached with all joints backed by framing and attached to wood studs using 2³/₈-inch-long, 8d coated, sinker nails or equivalent metal fasteners having at least the same pullout strength, shear resistance and holding capacity, spaced 8 inches on center over wood studs and wood plates. A water-resistive barrier meeting the requirements of Section 2510.6 of the IBC shall be installed over the sheathing.</p> <p>A strip of 1³/₈-inch J-metal shall be attached to the perimeter of the wall using nominal 1 3/4-inch roofing nails or equivalent metal fasteners, nominally spaced 16 inches on center.</p> <p>A single layer of nominal 1-inch, 20 gauge, 36-inch-wide hexagonal stucco netting over the wall using nominal 1-inch wide, 0.56-inch diameter, galvanized steel staples or equivalent metal fasteners having at least the same pullout strength, shear resistance and holding capacity, and spaced nominal 6 inches on center along all wood studs and wood plates. A minimum 3/8-inch-thick layer of hand trowel applied stucco shall be provided as required in this report.</p>	
<p>Axial (ASD) Loading shall be the lesser of:</p> <ol style="list-style-type: none"> 1,100 pounds per stud for 2x4 construction. 3,000 pounds per stud for 2x6 construction. For 2x4 construction, a maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of the ANSI/AWC NDS (NDS). For 2x6 construction, a maximum of 44.7 percent of the load calculated in accordance with Sections 3.6 and 3.7 of the NDS. For studs with a slenderness ratio, le/d, greater than 33, the design stress shall be reduced to 78 percent of allowable F_c' (IBC); or For studs with a slenderness ratio, le/d, not exceeding 33, the design stress shall be reduced to 78 percent of the adjusted stress F_c' calculated for studs having a slenderness ratio le/d of 33 (IBC). 	
Assembly 2	2x4 or 2x6 wood studs with partial OSB and EPS on the Exterior Surface
<p>Construction¹ – 2x4 or 2x6 wood studs spaced a maximum 24 inches on-center with minimum 2x4 blocking spaced at 5'-0 on-center. The interior face has one layer of 5/8-inch-thick Type X gypsum wallboard with the long dimension applied horizontally with all joints backed by framing and attached with 1⁵/₈-inch long 5d gypsum wallboard nails spaced 8 inches on-center to studs, plates, and blocking. All wall board joints shall be backed with a minimum 2x4 stud and nail heads and wallboard Joints shall be taped and treated with joint compound in accordance with IBC Section 2508.4 and either ASTM C840 or GA-216. R-11 Fiberglass batts, 3 1/2-inch- thick, and with a vapor retarder on the inside face shall be placed between the studs and stapled to one face of the studs. The studs shall be covered with 2 layers of Grade D Kraft Paper with a minimum of 3 inches of overlap between the pieces.</p> <p>The perimeter of the walls is covered with 1³/₈-inch J-Metal attached with 1⁷/₈ -inch galvanized roofing nails spaced 12 inches on center.</p> <p>Exterior Face: The exterior of the wall shall be covered with one-inch-thick T/G Type 2 attached with 1³/₄-inch galvanized steel roofing nails with a head diameter of 0.375 inch and a shaft diameter of 0.125-inch, space at 24 inches on center of studs, plates, and blocking. The EPS shall be covered with 1-inch, 20-gauge, 36-inch wide, hexagonal stucco netting, with a minimum of 2-inch overlap between pieces, attached with 2-inch-long, 1⁵/₁₆-inch crown, galvanized steel staples spaced 6 inches on center along all studs and perimeters. The lath shall be covered with 3/8-inch thickness of FACADES XI stucco.</p>	
<p>Axial (ASD) Loading shall be the lesser of:</p> <ol style="list-style-type: none"> 1,100 pounds per stud for 2x4 construction. 2,278 pounds per stud for 2x6 construction. 	



- 3. A maximum of 47.5 percent of the load calculated in accordance with Sections 3.6 and 3.7 of the NDS.
- 4. For studs with a slenderness ratio, le/d , greater than 33, the design stress shall be reduced to 78 percent of allowable F_c' (IBC); or
- 5. For studs with a slenderness ratio, le/d , not exceeding 33, the design stress shall be reduced to 78 percent of the adjusted stress F_c' calculated for studs having a slenderness ratio le/d of 33 (IBC).

Assembly No.3

2x4 or 2x6 wood studs 24 inches on center with 5/8-inch-thick Type X gypsum wallboard, foam plastic panels, and/or wood structural panel sheathing

Construction¹ – Interior Face: 2-by-4 or 2-by-6 wood studs (minimum specific gravity of 0.50) spaced a maximum 24-inches on center. Interior face has one layer of 5/8-inch (15.9 mm) thick Type X gypsum wallboard be applied horizontally to the interior face of wood studs with joints backed by framing and solid blocking installed horizontally at the wall mid-height and attached with 1 5/8-inch (41 mm) long cupped-head gypsum wallboard nails having a 0.10-inch diameter shank and 0.30-inch (7.6 mm) diameter head spaced 8 inches on center to studs, plates, and blocking. Nail heads and board joints shall be taped and treated with joint compound in accordance with IBC Section 2508.4 and either ASTM C840 or GA-216. 3 1/2-inch -thick R-11 Kraft-paper-faced fiberglass batt insulation or mineral fiber batt insulation, complying with Section 720 of the IBC or Section R302.10 of the IRC shall be placed between the studs.

Exterior Face: The outside face of the studs shall be open or partially or fully covered with 7/16-inch-thick wood structural panel sheathing attached with 8d sinker nails 2 3/8 inches long spaced 8 inches on center. The water-resistive barrier, metal lath, and stucco shall be applied as described in Sections 3.1 of this report. One-inch-thick EPS, XPS or polyisocyanurate insulation complying with this report shall be applied. One layer of steel lath applied over the EPS insulation in accordance with this report shall be fastened with 2-inch long, 15/16-inch crown galvanized steel staples. FacadesXi stucco shall be applied at a minimum thickness of 3/8 inch.

Axial (ASD) Loading shall be the lesser of:

- 1. 1,100 pounds per stud for 2x4 construction.
- 2. 2,278 pounds per stud for 2x6 construction.
- 3. A maximum of 44.2 percent of the load calculated in accordance with Sections 3.6 and 3.7 of the NDS.
- 4. For studs with a slenderness ratio, le/d , greater than 33, the design stress shall be reduced to 78 percent of allowable F_c' (IBC); or
- 5. For studs with a slenderness ratio, le/d , not exceeding 33, the design stress shall be reduced to 78 percent of the adjusted stress F_c' calculated for studs having a slenderness ratio le/d of 33 (IBC).

SI conversions: 1 inch = 25.4 mm; 1 lbs = 4.4 N; 1pcf = 16 kg/m3



TABLE 4 – ALLOWABLE TRANSVERSE LOADING

Assembly Number	INTERIOR SHEATHING	FRAMING TYPE AND SPACING	Sheathing		Lath		Allowable transverse loading (psf)	
			Type	Fastener and Spacing	Type (See Note 2)	Fasteners and spacing	Positive	Negative
1	Optional	2 x 4 wood at 24 inches o.c.	Any (including continuous insulation) (See note 2)	Per code requirements	Minimum No. 20 gauge woven wire fabric lath	½-inch crown x 2-inch No 16 gauge staples at 7 inches o.c.	54	22
2	Optional	2 x 4 wood at 16 inches o.c.	½-inch gypsum sheathing complying with ASTM C1177 or C1396	1½-inch No. 11 gauge roofing nails at 8 inches o.c.	Minimum No. 20 gauge woven wire fabric lath	½-inch crown x 2-inch No 16 gauge staples at 7 inches o.c. (see note 8)	138	81
3	Optional	2 x 4 wood at 16 inches o.c.	7/16-inch OSB 24/16 Exp 1	6d common nails (0.113-inch X 2-inch) at 6 inches o.c. on the perimeter and 12 inches in the field.	Minimum No. 20 gauge woven wire fabric lath	½-inch crown x 2-inch No 16 gauge staples at 7 inches o.c. (see note 8)	138	133
4	Optional	Minimum No. 20 gauge metal 3 ⁵ / ₈ -inch x 1 ⁵ / ₈ -inch at 16 inches o.c.	½-inch gypsum sheathing complying with ASTM C1177 or C1396	#6 x 1 ⁵ / ₈ -inch self-drilling screws at 8 inches o.c.	Minimum No. 20 gauge woven wire fabric lath	No 8 x 1 ⁵ / ₈ -inch wafer-head self-drilling screws at 7 inches o.c.	109	60
5	Optional	Minimum No. 20 gauge metal 3 ⁵ / ₈ -inch x 1 ⁵ / ₈ -inch at 16 inches o.c.	7/16-inch OSB 24/16 Exp 1	#6 x 1 ⁵ / ₈ -inch self-drilling screws at 8 inches o.c.	Minimum No. 20 gauge woven wire fabric lath	No 8 x 1 ⁵ / ₈ -inch wafer-head self-drilling screws at 7 inches o.c.	109	64

For SI: 1 inch = 25.4 mm, 1 psf = 4.88 kg/m²

Notes:

1. Wood framing shall have a minimum specific gravity of 0.42.
2. Insulation when used without sheathing shall have a minimum flexural strength of 35 psi, equivalent to ASTM C578 EPS Type II.
3. Lath may be No. 20 gauge (0.035 inch), 1-inch opening, galvanized steel, woven-wire fabric lath complying with ASTM C1032, metal lath complying with ASTM C847 or welded wire lath complying with ASTM C933.
4. Continuous insulation or a drainage mat, or a combination of the two, up to 1½ inches thick may be used with any assembly. Fastener length shall be extended to achieve the same penetration into framing.
5. Minimum thickness of FacadesOne One Coat Stucco is 3/8 inch.
6. Reported values are based on FacadesOne One Coat Stucco mixture have a nominal compressive strength of 3474 psi.
7. Assembly 1, results may be applied to metal framing provided the screws attaching the sheathing and lath conform with requirements in Note 8.
8. Screws having a minimum withdrawal capacity of 21 lbf/inch of penetration in wood having a specific gravity of 0.42 are permitted to be used in lieu of staples.
9. Deflections are less than L/360.

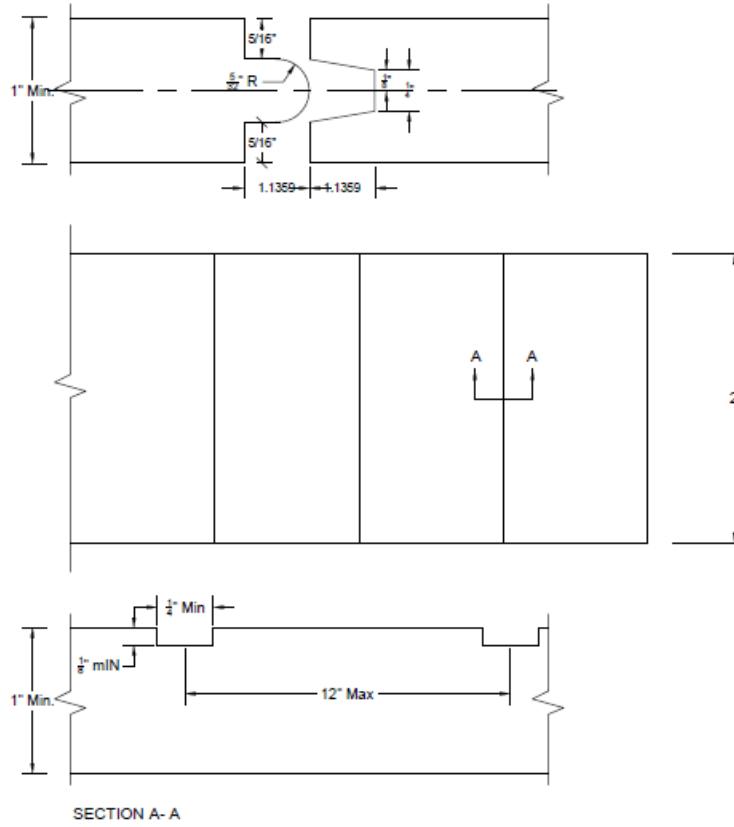


FIGURE 1
Tongue and Groove



INSTALLATION CARD

System: FacadesOne Wall Assembly

Manufacturer: FacadesXi

IAPMO EVALUATION REPORT NUMBER: _____

Project Address:

Completion Date: _____

Plastering Contractor

Name: _____

Address: _____

Phone/Email: _____

Contractor Number as Issued by FacadesXi: _____

This is to certify that the stucco assembly on the building exterior at the above address has been installed in accordance with Evaluation Report Number _____ and the FacadesXi instructions

Signature of authorized representative
of plastering contractor

Date

FIGURE 2
Installation Card