



NEMO|etc.

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ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT

PLYCEM USA LLC
Fiber Cement Products
15055 Woodham Drive
Houston, TX 77073
(281) 813-1260

Evaluation Report 9915.06.16-R5
FL20742-R5
Date of Issuance: 06/17/2016
Revision 5: 10/14/2020

SCOPE:

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the **State of Florida**. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: Allura™ Fiber Cement Siding

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein and the minimum provisions of **FBC 1404.10**.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO|etc. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus an 8-page Appendix.

Prepared by:

Robert J.M. Nieminen, P.E.
Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 10/14/2019. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

PANEL WALLS - SIDING EVALUATION:
1. SCOPE:
Product Category: Panel Walls

Sub-Category: Siding

Compliance Statement: Allura™ Fiber Cement Siding, as produced by PLYCEM USA LLC, has demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

| Section | Property | Standard | Year |
|---------|-------------------|------------|------|
| 1404.10 | Material standard | ASTM C1186 | 2012 |
| 1609.1 | Wind | ASTM E330 | 2002 |

3. REFERENCES:

| Entity | Examination | Reference | Date |
|----------------|----------------------------|--------------------------|------------|
| ERD (TST6049) | Transverse Load (Wind) | Florida Windload Testing | 06/15/2016 |
| ERD (TST6049) | Transverse Load (Wind) | 7.25B/W/16 | 08/22/2016 |
| ERD (TST6049) | Transverse Load (Wind) | The Cove | 10/26/2016 |
| ERD (TST6049) | Transverse Load (Wind) | 7.25/B/CMU/16 | 12/04/2017 |
| HETI (TST1691) | Transverse Load (Wind) | HETI-01-1000 | 04/11/2002 |
| HETI (TST1691) | Transverse Load (Wind) | HETI-01-1021 | 04/11/2002 |
| HETI (TST1691) | Transverse Load (Wind) | HETI-01-1023 | 04/11/2002 |
| HETI (TST1691) | Transverse Load (Wind) | HETI-01-1058 | 04/11/2002 |
| HETI (TST1691) | Transverse Load (Wind) | HETI-01-1060 | 04/11/2002 |
| ITS (TST1509) | ASTM C1186 | 3155389COQ-004 | 11/24/2008 |
| NEMO (TST6049) | ASTM C1186 | ERD-SC13565.10.18 | 10/18/2018 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-5 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-6 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-9 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-10 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-11 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ0893-12 | 12/20/2010 |
| QAI (TST9808) | Transverse Load (Wind) | RJ2420-P | 04/18/2013 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-5 | 02/09/2019 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-6 | 02/09/2019 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-1-R1 | 02/11/2019 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-2-R1 | 02/11/2019 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-3-R1 | 02/11/2019 |
| QAI (TST9808) | Racking / Shear Load (E72) | RJ6701P-4-R1 | 02/11/2019 |
| PLYCEM USA LLC | Quality Assurance | Declaration Letter | 02/01/2017 |
| QAI (QUA7628) | Quality Assurance | Inspection Report (NC) | 07/09/2018 |
| QAI (QUA7628) | Quality Assurance | Inspection Report (MX) | 09/14/2018 |
| QAI (QUA7628) | Quality Assurance | Florida BCIS | Current |

4. PRODUCT DESCRIPTION:

This Evaluation Report covers **Allura™ Fiber Cement Siding**, and is limited to the specific product trade names referenced in this report subject to the Installation Requirements and Limitations / Conditions of Use herein.

| TABLE 1: EVALUATED SIDING PRODUCTS | | | | |
|------------------------------------|-----------------------------|----------------|---|--|
| Product | Material Standard | Thickness (in) | Dimensions | Surface / Design |
| Vertical Panel Siding | ASTM C1186, Type A, Grade 2 | 5/16 | 48-inch wide x 8, 9, 10 or 12 ft long | Smooth or textured |
| Lap Siding | ASTM C1186, Type A, Grade 2 | 5/16 | 5¼, 6¼, 7¼, 8¼ or 9¼-inch wide x 12 ft long | Smooth or textured |
| Shapes Siding | ASTM C1186, Type A, Grade 2 | 5/16 | 16 x 48-inch | Smooth or textured Random Square Strait Edge Random Square Staggered Edge Half Rounds Octagons |

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC High Velocity Hurricane Zone jurisdictions (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report does not address fire-resistance-rating performance of the completed wall assemblies.
- 5.4 Wind Resistance (Transverse Load):
 - 5.4.1 Limitations relating to design wind pressure resistance are outlined in Appendix 1.
 - 5.4.2 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to **FBC 1609** for determination of project-specific design wind pressures. The MDP for the selected installation shall meet or exceed the design wind pressure requirement for the project for each pressure zone.
 - 5.4.3 Use the tables herein is limited to siding installations with the following design parameters. Analysis for buildings falling outside these constraints shall be on a project-by-project basis by a Florida Registered P.E.

| PARAMETER* | REFERENCE | SYMBOL | VALUE |
|-------------------------------|---------------------------|-------------|-------------------|
| Mean roof height (ft) | N/A | <i>h</i> | ≤ 30 ft |
| Ultimate wind speed (mph) | FBC 1609.3 | <i>Vult</i> | Various |
| Exposure Category | FBC 1609.4.3 | N/A | B, C or D |
| Topographical factor | ASCE 7-16, Section 26.8.2 | <i>Kzt</i> | 1.0 |
| Wind directionality factor | ASCE 7-16, Section 26.6 | <i>Kd</i> | 0.85 |
| Ground elevation factor | ASCE 7-16, Table 26.9-1 | <i>Ke</i> | 1.0 |
| Internal Pressure Coefficient | ASCE 7-16, Table 26.13-1 | <i>GCpi</i> | ± 0.18 (enclosed) |

**Defining project design parameters is the responsibility of the user, subject to acceptance by the Authority Having Jurisdiction*

- 5.5 Shear load performance data for Vertical Panel Siding is presented in Appendix 2. Lap Siding and Shapes Siding are not intended for racking or shear resistance; walls shall be braced by other means as required by the Authority Having Jurisdiction.

- 5.6 For existing substrates, the Authority Having Jurisdiction may require fasteners be tested in the existing substrate for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system.
- 5.7 All products in the wall assembly shall have QA audit in accordance with the **F.A.C. Rule 61G20-3**.

6. INSTALLATION:

- 6.1 **Allura™ Fiber Cement Siding** shall be installed in accordance with **PLYCEM USA LLC** published installation instructions, subject to the Limitations / Conditions of Use noted herein.
- 6.2 The underlying wall substrate shall include a water-resistive barrier in accordance with **FBC 1403.2**.
- 6.3 Minimum system attachment requirements are set forth in Appendix 1, and shall not be exceeded. Fastener lengths noted are minimum lengths, and shall be adjusted as necessary for minimum 1-inch embedment into wood studs or minimum three full threads for metal framing (Reference: **FBC 1405.16**).

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Nuevo Laredo, Mexico
North Wilkesboro, NC (aka, "Roaring River")

9. QUALITY ASSURANCE ENTITY:

QAI Laboratories – QUA7628; (604) 527-8378; mlansdowne@gai.org

- THE EIGHT (8) PAGE APPENDICES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND RESISTANCE

| Table | Type | Application | Fastener Engage | Page |
|-------|-----------------------|----------------|--------------------------|------|
| 1 | Allura™ Panel Siding | Face Fastened | Framing | 2 |
| 2A | Allura™ Lap Siding | Blind Fastened | Framing | 3 |
| 2B | Allura™ Lap Siding | Face Fastened | Framing | 3 |
| 2C | Allura™ Lap Siding | Blind Fastened | Sheathing | 4 |
| 2D | Allura™ Lap Siding | Blind Fastened | Framing & Furring Strips | 5 |
| 2E | Allura™ Lap Siding | Blind Fastened | Vertical Battens | 5 |
| 3 | Allura™ Shapes Siding | Blind Fastened | Framing | 6 |

The following notes apply to the systems outlined herein:

- The evaluation herein pertains to wall-cladding components. Framing and sheathing shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- Fasteners shall be corrosion resistant. Fastener lengths noted are minimum lengths, and shall be adjusted as necessary for minimum 1-inch embedment into wood studs or minimum three full threads for metal framing (Reference: **FBC 1405.16**).
- Vertical joints shall occur over wall framing and shall be staggered on subsequent courses. The siding shall be applied with a minimum 1¼ inch overlap. Position the fasteners ¾ inch from the top edge of the siding. Fasten 3/8 inch from butt ends. For installation over metal wall studs, a minimum of ½ inch thick gypsum shall be applied on the interior surface.
- “MDP” = Maximum Allowable Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to **FBC 1609** for determination of design wind loads. The MDP for the selected installation shall meet or exceed the design wind pressure requirement for the project for each pressure zone.
- Use the tables herein is limited to siding installations with the following design parameters. Tables are based on wall cladding design wind pressure requirements in accordance with **ASCE 7-16**, multiplied by 0.6 (P_{asd}) for **allowable loads**. Analysis for buildings falling outside these constraints shall be on a project-by-project basis by a Florida Registered P.E.

| PARAMETER* | REFERENCE | SYMBOL | VALUE |
|-------------------------------|---------------------------|-----------|-----------------------|
| Mean roof height (ft) | N/A | h | ≤ 30 ft |
| Ultimate wind speed (mph) | FBC 1609.3 | V_{ult} | Various |
| Exposure Category | FBC 1609.4.3 | N/A | B, C or D |
| Topographical factor | ASCE 7-16, Section 26.8.2 | K_{zt} | 1.0 |
| Wind directionality factor | ASCE 7-16, Section 26.6 | K_d | 0.85 |
| Ground elevation factor | ASCE 7-16, Table 26.9-1 | K_e | 1.0 |
| Internal Pressure Coefficient | ASCE 7-16, Table 26.13-1 | G_{Cpi} | ± 0.18 (enclosed) |

*Defining project design parameters is the responsibility of the user, subject to acceptance by the Authority Having Jurisdiction.

**TABLE 1: ALLURA™ PANEL SIDING
FACE FASTENED TO FRAMING**

| System No. | Max. Width (in) | Substrate (Note 1) | | Siding Attach | | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|--|-------------------|--------------------------|--|---|-----------|---------------------------------------|------------|------------|
| | | Framing/Sheathing | Max. Spacing (in) | Type | Fasteners (Note 2) | Spacing | | Exposure B | Exposure C | Exposure D |
| 1. | 48 | Min. 20 ga. steel stud with nominal 5/8" plywood sheathing | 16 | Face fastened to framing | ITW Buildex Rock-On® Type S 2PWH HI-LO® CLC, 9-15 x 2¼" (Part No. 2155500) | 6-inch o.c. along panel edges; 6-inch o.c. along interior framing | -38 | 162 | 137 | 126 |
| 2. | 48 | 2x4 Spruce-Pine-Fur with nominal 5/8" plywood sheathing | 16 | Face fastened to framing | 6d common nails, min. 2" long x 0.113" shank dia. x 0.265" head dia. | 6-inch o.c. along panel edges; 6-inch o.c. along interior framing | -38 | 162 | 137 | 126 |

**TABLE 2A: ALLURA™ LAP SIDING
BLIND FASTENED TO FRAMING**

| System No. | Max. Width (in) | Substrate (Note 1) | | Siding Attach | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|---|-------------------|---------------------------|---|-----------|------------------------------------|------------|------------|
| | | Framing/Sheathing | Max. Spacing (in) | Type | Fasteners (Note 2) | | Exposure B | Exposure C | Exposure D |
| 3. | 8¼ | Min. 20 ga. steel stud | 16 | Blind fastened to framing | Min. #8 x 1 5/8 inch long self-tapping screws with a 0.375 inch dia. wafer head | -22 | 123 | N/A | N/A |
| 4. | 8¼ | 2x4 Spruce-Pine-Fur | 16 | Blind fastened to framing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | -23 | 126 | 107 | N/A |
| 5. | 7¼ | 2x4 Spruce-Pine-Fur with nominal 1/2" plywood sheathing | 16 | Blind fastened to framing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | -27 | 137 | 116 | 106 |
| 6. | 6¼ | 2x4 Spruce-Pine-Fur | 16 | Blind fastened to framing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | -36 | 158 | 133 | 123 |
| 7. | 5¼ | 2x4 Spruce-Pine-Fur | 16 | Blind fastened to framing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | -38 | 162 | 137 | 126 |

**TABLE 2B: ALLURA™ LAP SIDING
FACE FASTENED TO FRAMING**

| System No. | Max. Width (in) | Substrate (Note 1) | | Siding Attach | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|--|-------------------|--------------------------|---|-----------|------------------------------------|------------|------------|
| | | Framing/Sheathing | Max. Spacing (in) | Type | Fasteners (Note 2) | | Exposure B | Exposure C | Exposure D |
| 8. | 9¼ | Min. 20 ga. steel stud with nominal 5/8" plywood sheathing | 16 | Face fastened to framing | ITW Buildex Rock-On® Type S-12 2PWH CLC, 8 x 2¼" (Part No. 2139500) | -46 | 178 | 151 | 139 |
| 9. | 9¼ | 2x4 Spruce-Pine-Fur with nominal 5/8" plywood sheathing | 16 | Face fastened to framing | 8d common nails, min. 2½" long x 0.134" shank dia. x 0.281" head dia. | -58 | 200 | 169 | 156 |

**TABLE 2C: ALLURA™ LAP SIDING
BLIND FASTENED TO SHEATHING**

| System No. | Max. Width (in) | Substrate (Note 1) | | | Siding Attach | | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|---------------------|-------------------|-------------------------|---|--|---------------------|-----------|------------------------------------|------------|------------|
| | | Framing | Max. Spacing (in) | Sheathing | Method | Fasteners (Note 2) | Spacing (inch o.c.) | | Exposure B | Exposure C | Exposure D |
| 10. | 9% | 2x4 Spruce-Pine-Fur | 24 | Min. 7/16-inch OSB | Blind fastened to sheathing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 8 | -33 | 151 | 128 | 117 |
| 11. | 8% | 2x4 Spruce-Pine-Fur | 24 | Min. 7/16-inch OSB | Blind fastened to sheathing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 12 | -28 | 139 | 118 | 108 |
| 12. | 8% | 2x4 Spruce-Pine-Fur | 16 | Min. 7/16-inch OSB | Blind fastened to studs <u>and</u> to sheathing between studs | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 8 | -38 | 162 | 137 | 126 |
| 13. | 8% | 2x4 Spruce-Pine-Fur | 24 | Min. 7/16-inch OSB | Blind fastened to sheathing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 8 | -41 | 169 | 142 | 131 |
| 14. | 8% | 2x4 Spruce-Pine-Fur | 16 | Min. 7/16-inch OSB | Blind fastened to sheathing | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 6 | -56 | 197 | 166 | 153 |
| 15. | 7% | 2x4 Spruce-Pine-Fur | 16 | Min. 15/32-inch plywood | Blind fastened to studs <u>and</u> to sheathing between studs | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 8 | -57 | 199 | 168 | 154 |

**TABLE 2D: ALLURA™ LAP SIDING
BLIND FASTENED TO FRAMING & FURRING STRIPS**

| System No. | Max. Width (in) | Substrate (Note 1) | | | | Siding Attach | | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|---------------------|-----------------|--------------------|--|----------------------------------|--|---------------------|-----------|------------------------------------|------------|------------|
| | | Framing | Max. Space (in) | Sheathing | Furring Strips | Method | Fasteners (Note 2) | Spacing (inch o.c.) | | Exposure B | Exposure C | Exposure D |
| 16. | 9½ | 2x4 Spruce-Pine-Fur | 24 | Min. 7/16-inch OSB | 1x4-inch PT furring strips, 12-inch o.c. | Blind fastened to furring strips | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 12 | -21 | 121 | N/A | N/A |
| 17. | 9½ | 2x4 Spruce-Pine-Fur | 24 | Min. 7/16-inch OSB | 1x4-inch PT furring strips, 8-inch o.c. | Blind fastened to furring strips | Ring shank roofing nails, min. 1¾" long x 0.120" shank dia. x 0.375" head dia. | 8 | -40 | 166 | 141 | 129 |

**TABLE 2E: ALLURA™ LAP SIDING
BLIND FASTENED TO VERTICAL BATTENS**

| System No. | Max. Width (in) | Substrate (Note 1) | | | | | Siding Attach | | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|--------------------|--|----------------------------|--|-------------------------------------|---------------------------|---|---------------------|-----------|------------------------------------|------------|------------|
| | | Wall | Vertical Battens | Batten Spacing (inch o.c.) | Batten Fasteners | Batten Fastener Spacing (inch o.c.) | Method | Fasteners (Note 2) | Spacing (inch o.c.) | | Exposure B | Exposure C | Exposure D |
| 18. | 7½ | CMU block | 1x4-inch PT Spruce-Pine-Fir (SPF) | 16 | ¼" diameter threaded concrete anchor, min. 1¼" embedment | Max. 12 | Blind fastened to battens | Ring shank roofing nails, 1¾" long x 0.120" shank dia. x 0.375" head dia. | 16 | -40 | 166 | 141 | 129 |
| 19. | 7½ | CMU block | 1x4-inch PT Southern Yellow Pine (SYP) | 16 | ¼" diameter threaded concrete anchor, min. 1¼" embedment | Max. 12 | Blind fastened to battens | Ring shank roofing nails, 1¾" long x 0.120" shank dia. x 0.375" head dia. | 16 | -52 | 190 | 160 | 147 |

**TABLE 3: ALLURA™ SHAPES SIDING
BLIND FASTENED TO FRAMING**

| System No. | Max. Width (in) | Substrate (Note 1) | | Siding Attach | | MDP (psf) | Ultimate Wind Speed (mph) (Note 5) | | |
|------------|-----------------|--|-------------------|---------------------------|---|-----------|------------------------------------|------------|------------|
| | | Framing/Sheathing | Max. Spacing (in) | Type | Fasteners (Note 2) | | Exposure B | Exposure C | Exposure D |
| 20. | 16 | Min. 20 ga. steel stud with nominal 5/8" plywood sheathing | 16 | Blind fastened to framing | ITW Buildex Rock-On® Type S-12 2PWH CLC, 8 x 2½" (Part No. 2139500) | -48 | 182 | 154 | 142 |
| 21. | 16 | 2x4 Spruce-Pine-Fur with nominal 5/8" plywood sheathing | 16 | Blind fastened to framing | 8d common nails, min. 2½" long x 0.134" shank dia. x 0.281" head dia. | -48 | 182 | 154 | 142 |

APPENDIX 2: ALLOWABLE SHEAR LOADS FOR PANEL SHEAR WALLS

| Table | Type | Application | Fastener Engage |
|-------|----------------------|---------------|-----------------|
| 4A | Allura™ Panel Siding | Face Fastened | Wood Framing |
| 4B | Allura™ Panel Siding | Face Fastened | Steel Framing |

The following notes apply to the systems outlined herein:

1. Shear load data are based on ASTM E72 testing at an ISO 17025 accredited laboratory, and are offered within this Evaluation Report at the request of the applicant.
2. All board edges shall be supported by framing. Panels shall be applied with the long dimension either parallel or perpendicular to studs.
3. The maximum height-to-length ratio for use of this data is 2:1.
4. Allowable shear loads are based on a 3 to 1 margin of safety.
5. For steel framed assemblies in Table 4B, allowable loads are offered for the panel-siding itself and based on the average test load at 1/8-inch net deflection, with the lesser of the two highlighted red.

**TABLE 4A: ALLURA™ PANEL SIDING
FACE FASTENED TO WOOD FRAMING**

| System No. | Max. Width (in) | Substrate | | Siding Attach | | | Ultimate Shear Load (plf) | Allowable Shear Load (plf) |
|------------|-----------------|-------------------|-------------------|-----------------|---------------------|------------------|---------------------------|----------------------------|
| | | Framing/Sheathing | Max. Spacing (in) | Fasteners | Spacing (inch o.c.) | | | |
| | | | | | Panel Edges | Interior Framing | | |
| 1. | 48 | 2X4 wood, Hem-Fir | 16 | 6d common nails | 6 | 6 | 541 | 180 |
| 2. | 48 | 2X4 wood, Hem-Fir | 16 | 6d common nails | 4 | 4 | 694 | 231 |
| 3. | 48 | 2X4 wood, Hem-Fir | 24 | 6d common nails | 6 | 6 | 490 | 163 |
| 4. | 48 | 2X4 wood, Hem-Fir | 24 | 6d common nails | 4 | 4 | 622 | 207 |

**TABLE 4B: ALLURA™ PANEL SIDING
FACE FASTENED TO STEEL FRAMING**

| System No. | Max. Width (in) | Substrate | | Siding Attach | | Panel Performance | | Performance at 1/8" Net Deflection | | |
|------------|-----------------|---|-------------------|--|---------------------|-------------------|---------------------------|------------------------------------|-----------------|------------------|
| | | Framing/Sheathing | Max. Spacing (in) | Fasteners | Spacing (inch o.c.) | | Ultimate Shear Load (plf) | Allowable Shear Load (plf) | Test Load (lbf) | Shear Load (plf) |
| | | | | | Panel Edges | Interior Framing | | | | |
| 5. | 48 | Min. 20 ga. steel x 3.625 in. x 1.375 in. steel studs | 16 | #8-18 x 1-5/8" Phillips Wafer Head w/ Nibs self-drilling cement board screws | 6 | 6 | 729 | 243 | 2483 | 310 |
| 6. | 48 | Min. 20 ga. steel x 3.625 in. x 1.375 in. steel studs | 24 | #8-18 x 1-5/8" Phillips Wafer Head w/ Nibs self-drilling cement board screws | 6 | 6 | 591 | 197 | 2500 | 313 |
| 7. | 48 | Min. 20 ga. steel x 3.625 in. x 1.375 in. steel studs | 16 | ET&F Fastening Systems: Trimfast Pins AST-100 | 4 | 8 | 503 | 168 | 1117 | 140 |
| 8. | 48 | Min. 20 ga. steel x 3.625 in. x 1.375 in. steel studs | 24 | ET&F Fastening Systems: Trimfast Pins AST-100 | 4 | 8 | 473 | 158 | 1067 | 133 |