

**SECTION 074646
FIBER CEMENT SIDING – HARDIE ARCHITECTURAL PANEL**

PART 1 – GENERAL**1.01 REFERENCE STANDARDS**

- A. 8 - test; 1.
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- C. ASTM C1185 - Standard Test Methods for Sampling and Testing Fiber-Cement Flat Sheet, Roofing and Siding Shingles, and Clapboards; 2023.
- D. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets; 2026.
- E. ASTM D3359 - Standard Test Methods for Rating Adhesion by Tape Test; 2023.
- F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- G. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2026.
- H. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2026.
- I. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).

1.02 1.1 SECTION INCLUDES

- A. Fiber Cement Panel Siding.
- B. Fiber Cement Architectural Panel Siding.
- C. Trim, Fascia, Molding, and Accessories.

1.2 RELATED REQUIREMENTS

- A. Section 06 10 00 – Rough Carpentry.
- B. Section 07 21 00 – Thermal Insulation.
- C. Section 07 27 26 – Fluid Applied Membrane Air Barrier.
- D. Section 07 92 00 – Joint Sealants.
- E. Section 09 91 13 – Exterior Painting.

1.3 REFERENCE STANDARDS

- A. ASCE 7, Minimum Design Loads for Buildings and Other Structures, Current Edition.
- B. ASTM C1185, Standard Test Methods for Sampling and Testing Fiber-Cement Flat Sheet, Roofing and siding Shingles, and Clapboards; 2023.
- C. ASTM C1186., Standard Specification for Flat Fiber-Cement Sheets; 2022, with 2023 Editorial Revision.
- D. ASTM D3359, Standard Test Methods for Rating Adhesion by Tape Test; 2023.
- E. ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials; 2020.
- F. ASTM E119, Standard Test Methods for Fire Tests of Building Construction and Materials; 2024.
- G. ASTM E136, Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2022.

- H. ASTM E330/E330M, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2021.
- I. ICC-ES Evaluation Reports ESR-1844, ESR-2290 and ESR-2273 (IBC, IRC, CBC, CRC); Current Editions.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Conference:
 - 1. A minimum of 2-weeks prior to the commencement of the Work of this section, conduct a preliminary pre-installation conference at project site.
 - 2. Meet with Owner, Architect, and Installer, and Subcontractors completing related work.
 - 3. Review the Following:
 - a. Methods and procedures to complete the Work.
 - b. Substrate and installation requirements.
 - c. Temporary protection requirements.
 - d. Repair procedures.
 - e. Schedule.
 - f. Other pertinent topics.
 - 4. Provide record of discussion with meeting minutes distributed to all attendees.

1.5 SUBMITTALS

- A. See Section 01 30 00, Administrative Requirements.
- B. Product Data:
 - 1. Manufacturer's product data sheets.
 - 2. Manufacturer's storage and handling requirements.
 - 3. Manufacturer's preparation instructions.
 - 4. Manufacturer's installation instructions.
 - 5. Manufacturer's operation and maintenance instructions.
- C. Shop Drawings:
 - 1. Provide detailed drawings showing dimensions, layout, joints, construction details, and attachments.
 - 2. Indicate atypical non-standard applications outside of manufacturer's standard details and specifications.
- D. Selection Samples:
 - 1. Provide two complete sets of color chips representing manufacturer's full range of available colors and patterns for each finish product specified.
- E. Verification Samples:
 - 1. Provide two samples, minimum 4-inch x 6-inch (100 mm x 150 mm) representing selected product, color, texture, and patterns for each finish product specified.
- F. Installers qualification statement.
- G. Warranty:
 - 1. Manufacturer's sample warranty.
 - 2. Manufacturer's executed written warranty, completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in work specified in this section with a minimum of 3-years of experience with installation of products of this type.
- B. Mock-up:
 - 1. Mock-Up: Build mock-up for evaluation of surface preparation techniques, installation workmanship, and to verify selections made from sample submittals to demonstrate aesthetic effects and set quality standards for fabrication and installation.

- a. Minimum 48-inches wide x 60-inches high or similar area as fits the layout of the building exterior.
 - b. Include outside corner on one end of mockup and inside corner on the other end.
 - c. Finish areas designated by Architect.
 - d. Approval of mock-up does not constitute approval of deviations from the Contract Documents unless approved in writing.
 - e. Approved mock-up may not remain as a part of the completed work.
2. Provide a minimum of 7-days notification to Architect, Installer, and Manufacturer's Representative prior to application of mock-up for review.
3. Obtain approval of mock-up from Architect prior to commencement of Work.

1.7 DELIVERY, STORAGE, AND HANDLING

Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.

Store siding flat on a smooth level surface and carry on its side.

Protect edges and corners from chipping.

Store materials under dry, waterproof, well-ventilated cover, elevated above grade, and kept dry prior to installation.

Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of the Authorities Having Jurisdiction.

Protect materials from damage, dust, or other detrimental conditions.

1.8 FIELD CONDITIONS

Maintain environmental conditions including temperature, humidity, and ventilation in accordance with the limits indicated in the manufacturer's written instructions.

Do not install products in conditions outside of the manufacturer's stated limits.

1.9 WARRANTY

Manufacturer's Limited, Non Pro-rated Product Warranty:

1. Plank, Soffit, and Trim: 30-year Warranty.
2. Color-Plus Finish: 15-year Warranty.
3. When installed and maintained in accordance with manufacturer's written requirements, warranty for 15-years from date of purchase covering peeling, cracking, and chipping.

Installers Warranty:

1. Provide 3-year installers warranty covering workmanship for work of this Section.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

Basis-of-Design: James Hardie Building Products, Inc.; Hardie Panel and Hardie Architectural Panel; www.jameshardie.com.

Substitutions: In accordance with the requirements of Division 01, General Requirements.

2.3 FIBER CEMENT – ARCHITECTURAL PANEL SIDING

Fiber Cement Panel Siding:

1. Type A, Grade II, ASTM C1186.
2. Non-combustible Material, ASTM E136.
3. Flame Spread Index: 0, ASTM E84.
4. Smoke Developed Index: 0, ASTM E84.

Vertical Siding Panel – Architectural Collection - Type:

1. Thickness: 0.3125 inches.
2. Fine Sand:
 - a. 4-feet (1219 mm) x 8-feet (2438 mm).

- b. 4-feet (1219 mm) x 10-feet (3048 mm).
- c. 4-feet (1219 mm) x 12-feet (3658 mm).

Color:

- 1. As selected by Architect from manufacturer's standard range.

Product:

- 1. Basis-of-Design: Hardie Architectural Panel Siding; www.jameshardie.com.
- 2. Substitutions: In accordance with the requirements of Division 01, General Requirements.

2.7 ACCESSORIES

HardieTrim Trim Boards; www.jameshardie.com.

- 1. Type A, Grade I, ASTM C1186..
- 2. Flame Spread Index: 0, ASTM E84.
- 3. Smoke Developed Index: <5, ASTM E84.
- 4. 4/4 Boards:
 - a. 3-1/2 inch (89 mm) width.
 - b. 5-1/2 inch (140 mm) width.
 - c. 7-1/4 inch (184 mm) width.
 - d. 9-1/4 inch (235 mm) width.
 - e. 11-1/4 inch (286 mm) width.
- 5. 5/4 Boards:
 - a. 3-1/2 inch (89 mm) width.
 - b. 5-1/2 inch (140 mm) width.
 - c. 7-1/4 inch (184 mm) width.
 - d. 9-1/4 inch (235 mm) width.
 - e. 11-1/4 inch (286 mm) width.
- 6. Color:
 - a. As selected by Architect from manufacturer's standard range.
- 7. Texture:
 - a. Smooth.
- 8. Length: 12-feet (3658 mm).
- 9. Thickness:
 - a. 3/4-inch (19 mm) see drawings.
 - b. 1-inch see drawings.

Seam Tape: HardieWrap; www.jameshardie.com.

Flashing:

- 1. HardieWrap Flashing Tape; www.jameshardie.com.
- 2. HardieWrap Flex Flashing Tape; www.jameshardie.com.

Fasteners:

- 1. Wood Framing Fasteners:
 - a. 6d common corrosion resistant nails.
 - b. 8d box ring common corrosion resistant nails.

Reveal Trim:

- 1. Aluminum Y trim Paintable

2.8 FINISHES

Factory Primer: Provide factory applied universal primer.

- 1. Primer: Factory primed by manufacturer.
- 2. Topcoat: Reference Section 09 90 00, Painting and Coating and project Finish Schedule.

Factory Finish: Reference project Finish Schedule.

- 1. As supplied by manufacturer.

2. Factory applied finish is finish applied by the same company and in the same facility that manufactures the siding substrate.
3. Require factory applied finish by fiber cement manufacturer applied in controlled environment within manufacturer's facility utilizing multi-coat, heat cured finish within one manufacturing process.
4. Each finish color to have documented color match to Delta E of 0.5 or better between product lines, manufacturing lots, or production runs as measured by photospectrometer and verified by third party.
5. Provide factory applied finish protection prior to transit to site. Remove finish protection after installation.
6. Accessories: Provide complete finishing system including pre-packaged touch-up kit provided by manufacturer.
7. Provide quantities as recommended by manufacturer.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Examine substrate, clean and repair to eliminate conditions detrimental to installation.
- C. Do not commence with the Work until unacceptable conditions are remedied.
- D. Verify that weather barrier is installed over substrate and ready to receive the Work.
- E. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation prior to commencement of Work.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer's written requirements.
- C. Protect surrounding work areas and surface during installation.
- D. Repair punctures or tears in weather barrier prior to installation of siding.

3.3 WEATHER BARRIER

- A. See Section 07 27 26, Fluid Applied Membrane Air Barrier.
- B. Ensure weather barrier is installed with penetration and junction flashing in accordance with manufacturer's written requirements and the Authorities Having Jurisdiction.

3.4 INSTALLATION – PANEL SIDING

- A. Install in strict accordance with manufacturer's written installation instructions at locations shown on Drawings.
- B. General:
 1. Protect siding from Work of other trades.
 2. Surfaces to be dry prior to installation of weather barriers and siding.
 3. Reference trim details on Drawings.
 4. Touch-up cut edges prior to installation.
- C. Flashing:
 1. Install above door and window trim and casings.
 2. Install above horizontal trim in field of siding.
 3. Install at transitions between materials.
 4. Install at base of wall to roof transition..

3.5 INSTALLATION OF SOFFIT AND VENTED PANELS

Install in strict accordance with manufacturer's written installation instructions at locations shown on Drawings.

Panels may be installed as soffit or ceiling over wood or steel framing.

20-gauge (33 mil) minimum to 16-gauge (54 mil) in compliance with the Authorities Having Jurisdiction.

Additional framing may be necessary to ensure proper fastening of siding.

3.6 INSTALLATION OF TRIM BOARDS

Install in strict accordance with manufacturer's written installation instructions at locations shown on Drawings.

Install flashing around all wall openings.

3.7 FINISHING

Finish in accordance with paint manufacturer's written application instructions.

Finish unprimed siding with a minimum of one coat of manufacturer approved primer and one coat of 100 percent acrylic; latex exterior grade topcoat or two coats of manufacturer approved high quality alkali resistant 100 percent acrylic; latex exterior grade topcoat within 90-days of installation.

Finish factory primed siding with a minimum of one coat of manufacturer approved high quality 100 percent acrylic exterior grade paint within 180-days of installation.

3.8 CLEANING

See Section 01 70 00, Execution and Closeout Requirements.

Clean siding in accordance with manufacturer's written instructions using materials and methods acceptable to manufacturer.

3.9 PROTECTION

Protect installed products until date of Substantial Completion.

Touch-up, repair or replace damaged areas prior to date of Substantial Completion.

END OF SECTION