SECTION 07 46 46.10

FIBER-CEMENT SIDING

(Hardie Architectural Collection Engineered for HZ5 and HZ10 Climate)

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* James Hardie Building Products, Inc.; HardieTM Architectural Collection.  
This section is based on the products of James Hardie Building Products, Inc., which is located at:303 E. Wacker Dr.Chicago, IL 60601 Toll Free Tel: 877-236-7526Email: [request info (info@jameshardie.com)](https://arcat.com/rfi?action=email&company=James%252BHardie%252BBuilding%252BProducts%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(07463jhi)%253A%2520&coid=33418&spec=07463jhi&rep=&fax=)  
Web: <https://www.jameshardiepros.com> | <https://www.jameshardie.com>   
 [ [Click Here](https://arcat.com/company/james-hardie-building-products-inc-33418) ] for additional information.  
We have operations in the United States, Australia, New Zealand, Asia, and Europe. No matter where we operate, our goal is to remain at the forefront of the fiber-cement industry, capitalizing on our global leadership in building products and manufacturing and technology for both new home construction and remodeling.  
At James Hardie, we create innovative products that increase the beauty, value, safety, and durability of the buildings you design. Explore increased design options through our wide variety of product colors and textures and enjoy superior performance that allows your designs to last a lifetime.  
HardieTM Architectural Collection Products  
James Hardie Building Products, Inc. Hardie Artisan Lap.  
Use architectural-grade Hardie® Artisan Lap and the difference is plain to see. Utilizing the thickest material on the market- Hardie® Artisan Lap creates deeply defined shadow lines which are both aesthetically pleasing and structurally integrated.  
James Hardie Building Products, Inc. Hardie® Artisan Lap with proprietary engineering and 5/8-inch thickness of all profiles provides a precise fit and finish as well as creative freedom. You can miter corners for attractive, streamlined styling. Add visual impact by orienting any of the Artisan Lock Joint profiles vertically. Or use these profiles as both siding and soffit to bring continuity to your overall design. The multi-coat, baked-on factory application process delivers a strikingly beautiful and consistent finished product.   
James Hardie Building Products, Inc. Hardie® Architectural Panels:  
Non-combustible fiber-cement panels, available in fine sand, mounded sand, multi-groove, seagrass, and sculpted clay patterns. The use of this product is limited to buildings not exceeding 85 feet in height.  
James Hardie Building Products, Inc. Hardie® Trim Boards:   
Our fiber cement trim and fascia add the finishing touch to a beautiful, lasting project. They provide unmatched durability in corners, columns, windows, rakes, and friezes. HardieTrim boards are pre-primed with prime sealer and primer. This proprietary process for fiber cement trim ensures uniform coverage of sealer and primer, providing an excellent surface for paints. HardieTrim boards come with a -year transferable limited warranty.  
Green and Sustainable:  
We support the entire building industry's efforts in creating materials that deliver more sustainable homes, neighborhoods, and commercial buildings. Together, we hope to provide a better built environment that will endure years to come.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Fiber cement lap siding, panels, trim, and accessories; James Hardie HZ10Engineered for Climate Siding, James Hardie HZ5Engineered for Climate Siding, HardieArchitectural Panels, HardieArtisan Lap, and HardieArtisan Lap with Lock Joint.
    2. Factory-finished fiber cement lap siding, panels, trim, and accessories; James Hardie HZ10 Engineered for Climate Siding, James Hardie HZ5Engineered for Climate Siding.
  1. RELATED SECTIONS

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

* + 1. Section 05 40 00 - Cold-Formed Metal Framing.
    2. Section 06 10 00 - Rough Carpentry.
    3. Section 06 10 00 - Rough Carpentry.
    4. Section 07 21 19 - Foamed-In-Place Insulation.
  1. REFERENCES

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

* + 1. ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test, Tool, and Tape.
    2. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual product, color, and patterns.
  1. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Add installer quality assurance provisions. Delete if not required.

* + 1. Installer Qualifications: Minimum of 2 years' experience with installation of similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Remodel mock-up area as required to produce acceptable work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.
     3. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside the manufacturer's absolute limits.
  3. WARRANTY
     1. Product Warranty: Limited, non-pro-rated product warranty.
        1. Hardie Architectural Panels for 30 years.
        2. Hardie Artisan Lap Siding for 30 years.
        3. Hardie Artisan Lock Joint Siding for 30 years.
     2. Finish Warranty: Limited product warranty against manufacturing finish defects.
        1. When used for its intended purpose, properly installed and maintained according to Hardie's published installation instructions, James Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack; and will not chip. Finish warranty includes the coverage for labor and material.

\*\* NOTE TO SPECIFIER \*\* Delete if workmanship warranty not required.

* + 1. Workmanship Warranty: Application limited warranty for 2 years.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at:303 E. Wacker Dr.Chicago, IL 60601 Toll Free Tel: 877-236-7526Email: [request info (info@jameshardie.com)](https://arcat.com/rfi?action=email&company=James%252BHardie%252BBuilding%252BProducts%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(07463jhi)%253A%2520&coid=33418&spec=07463jhi&rep=&fax=);Web: <https://www.jameshardiepros.com> | <https://www.jameshardie.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for approval of equal substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.
  1. SIDING AND TRIM

\*\* NOTE TO SPECIFIER \*\* The use of this product is limited to buildings not exceeding 85 feet (25908 mm) in height and wood braced construction. Delete options if not required.

* + - 1. Hardie Artisan HZ10 and HZ5 lap siding requirement for Materials:
      2. Fiber-cement siding - complies with ASTM C 1186 Type A Grade II.
      3. Fiber-cement siding - complies with ASTM E 136 as a noncombustible material.
      4. Fiber-cement Siding - complies with ASTM E 84 Flame. Spread Index: 0. Smoke Developed Index: 5.
      5. ICC-ES evaluation report ESR-2290.
      6. Intertek Product Listing.
      7. CAL-FIRE, Fire Engineering Division Building Materials Listing - Wildland Urban Interface (WUI) Listed Product.
      8. Florida State Product Approval FL-13192.
      9. Miami Dade County, Florida Notice of Acceptance -20-0730.07.
      10. Texas Department of Insurance Product Evaluation EC-55.
      11. Manufacturer's Technical Data Sheet.

\*\* NOTE TO SPECIFIER \*\* Available in 12 foot lengths in varying widths - 5-1/4 inches , 7-1/4 inches, and 8-1/4 inches - 4 inches, 6 inches and 7 inches exposures for several aesthetic options. Delete if not required.

* + 1. Lap Siding: Hardie Artisan HZ10 and HZ5 lap siding as manufactured by James Hardie Building Products, Inc.
       1. Type: Smooth 5-1/4 inches (133 mm) with 4 inches (102 mm) exposure.
       2. Type: Smooth 7-1/4 inches (184 mm) with 6 inches (152 mm) exposure.
       3. Type: Smooth 8-1/4 inches (210 mm) with 7 inches (178 mm) exposure.
       4. Type: Texture 5-1/4 inches (133 mm) with 4 inches (102 mm) exposure.
       5. Type: Texture 7-1/4 inches (184 mm) with 6 inches (152 mm) exposure.
       6. Type: Texture 8-1/4 inches (210 mm) with 7 inches (178 mm) exposure.

\*\* NOTE TO SPECIFIER \*\* Available in 12 foot lengths, width as indicated. Delete if not required.

* + 1. Lap Siding: Hardie Artisan HZ10 and HZ5 lap siding with Lock Joint System as manufactured by James Hardie Building Products, Inc.
       1. Type: V-Groove 8-1/4 inches (210 mm) with 7 inches (178 mm) exposure.
       2. Type: Shiplap 10-1/4 inches (260 mm) with 9 inches (229 mm) exposure.
       3. Type: Square Channel 10-1/4 inches (260 mm) with 9 inches (229 mm) exposure.
    2. Hardie Architectural Panels as manufactured by James Hardie Building Products, Inc. A non-combustible fiber-cement panel.
       1. Product Composition: Grade II, Type A, fiber-cement sheets as defined by ASTM C1186. manufactured by the Hatschek process and cured by high pressure steam autoclaving.
       2. Florida State Product Approval FL13223.
       3. Florida State Product Approval FL 32103.
       4. Intertek Product Listing.
       5. Code Compliance:
          1. International Building Code (IBC):

Section 1404.10: 2009, 2012 and 2015.

Section 1403.10: 2018 and 2021.

* + - * 1. International Residential Code (IRC):

Table R703.3(1): 2009, 2012, 2015, 2018, and 2021.

Section R703.10.1 as ASTM C 1186 Grade II, Type A Fiber Cement: 2009, 2012, 2015, 2018 and 2021.

* + - * 1. Florida Building Code (FBC):

Section 1404.10: 2017 and 2020.

Section 1405.16 as ASTM C 1186 Grade II, Type A Fiber Cement.

* + - * 1. Wind Design:

Manufacturer's readily available design load and exposure category tables are derived from testing in accordance with ASTM E 330.

Wind speed design coefficient assumptions per Analytical Method in ASCE 7.

Wood Framing Specific Gravity: 0.42 or greater unless otherwise stated.

Wood Structural Sheathing Panel Specific Gravity of 0.50 or higher unless otherwise stated.

* + - 1. Fire Characteristics:
         1. Tested in Accordance with ASTM E136: Classified as non-combustible.
         2. May be used in ASTM E119 fire resistance rated assemblies as listed by Warnock Hersey.
         3. Class A Material: Per FBC 2017 and 2020, and 2018 IBC Section 803.1.1 Surface Burning Characteristics when tested in accordance with ASTM E84:

Flame Spread Index : 0. Smoke Developed Index: 0.

* + - 1. Type (WxL): Hardie Architectural Panel - Fine Sand 4 by 8 feet (1219 by 2438 mm).
      2. Type (WxL): Hardie Architectural Panel - Fine Sand 4 by 10 feet (1219 by 3048 mm).
      3. Type (WxL): Hardie Architectural Panel - Fine Sand 4 by 12 feet (1219 by 3658 mm).
      4. Type (WxL): Hardie Architectural Panel - Mounded Sand 4 by 8 feet (1219 by 2438 mm).
      5. Type (WxL): Hardie Architectural Panel - Mounded Sand 4 by 10 feet (1219 by 3048 mm).
      6. Type (WxL): Hardie Architectural Panel - Mounded Sand 4 by 12 feet (1219 by 3658 mm).
      7. Type (WxL): Hardie Architectural Panel - Fine Sand-Grooved 4 by 8 feet (1219 by 2438 mm).
      8. Type (WxL): Hardie Architectural Panel - Fine Sand-Grooved 4 by 10 feet (1219 by 3048 mm).
      9. Type (WxL): Hardie Architectural Panel - Fine Sand-Grooved 4 by 12 feet (1219 by 3658 mm).
      10. Type (WxL): Hardie Architectural Panel - Seagrass 4 by 8 feet (1219 by 2438 mm).
      11. Type (WxL): Hardie Architectural Panel - Seagrass 4 by 10 feet (1219 by 3048 mm).
      12. Type (WxL): Hardie Architectural Panel - Seagrass 4 by 12 feet (1219 by 3658 mm).
      13. Type (WxL): Hardie Architectural Panel - Sculpted Clay 4 by 8 feet (1219 by 2438 mm).
      14. Type (WxL): Hardie Architectural Panel - Sculpted Clay 4 by 10 feet (1219 by 3048 mm).
      15. Type (WxL): Hardie Architectural Panel - Sculpted Clay 4 by 12 feet (1219 by 3658 mm).
          1. Thickness: 0.3125 inches (8 mm).
          2. Length: 96 inches (02438 mm).
          3. Length: 120 inches (3048 mm).
          4. Length: 144 inches (3658 mm).
          5. Width: 48 inches (1219 mm).
          6. Vertical Joint: Shiplap.
      16. Physical Properties:
          1. Test Method ASTM C1185: Passed.

Dimensional Tolerances:

Length: Plus or minus 0.5 percent or plus or minus1/4 inch (6 mm).

Width: Plus or minus 0.5 percent or plus or minus1/4 inch (6 mm).

Thickness: Plus or minus 0.04 inch (1 mm).

Squareness: Less than1/32 inches per ft (2.6 mm per m) of length.

Edge Straightness: Less than 1/32 inches per ft (2.6 mm per m) of length.

Density: Less than 83 pounds per sq ft (4 kPa).

Water Tightness: No drop formation; Pass.

Flexural strength:

Wet Conditioned, psi: Greater than 1015 psi (7 MPa); Pass.

Equilibrium Conditioned, psi: Greater than 1450 psi (10 MPa); Pass.

Warm Water Resistance, Observations: No structural alteration; Pass.

Heat and Rain Resistance: No structural alteration; Pass.

Freeze and Thaw Resistance:

Physical Observations Mass: No structural alteration; Pass.

Loss Percentage: Less than or equal to 3.0 percent; Pass.

Freeze/Thaw, Percent Strength Retention: Greater than or equal to 80 percent; Pass.

* + - * 1. Fire Characteristics:

ASTM E84: Surface Burning Characteristics.

Flame Spread Index (FSI) Smoke: 0.

Developed Index (SDI): 0.

Fuel Contributed: 0.

International Building Code: A.

ASTM E136: Non-combustibility: Pass.

* + - 1. Trim Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete trim options not required.

* + - * 1. J Trim: Aluminum extrusion to be used as a trim at abutments; soffits, masonry, etc. Not recommended for windows and doors.
        2. 2-pc. J Trim: Aluminum extrusion to be used as a trim at abutments; soffits, masonry, windows, etc.
        3. Low-Profile Inside Corner Trim: Aluminum extrusion to be used for inside corners.
        4. Inside Corner Trim: Aluminum extrusion to be used for inside corners.
        5. Low Profile 45 degrees Inside Corner Trim: Aluminum extrusion to be used for bay windows.
        6. Low-Profile Inside Corner Transition Trim: Aluminum Extrusion to be used for transitions at inside corners.
        7. Low-Profile Outside Corner Trim: Aluminum extrusion to be used for outside corners.
        8. Low-Profile Outside Corner Transition Trim: Aluminum Extrusion to be used for transitions at outside corners.
        9. Low Profile 45 degrees Outside Corner Trim: Aluminum extrusion to be used for bay windows.
        10. Vertical Y Trim: Aluminum extrusion to be used along vertical butt joints. For horizontal panel orientations only.
        11. Vertical H Trim: Aluminum extrusion to be used along vertical butt joints. For horizontal panel orientations only.
        12. Low-Profile Vertical Transition Trim: Aluminum Extrusion to be used for transitions at mid-wall.
        13. Low Profile Horizontal Z Flashing Trim: Aluminum extrusion to be used along horizontal control joints.
        14. Horizontal Z Flashing Trim: Aluminum extrusion to be used along horizontal control joints.
        15. Base Trim: Aluminum extrusion to be used as a base edge solution.
        16. Raised Reveal Base Trim: Aluminum extrusion to be used as a base edge solution.
        17. Base Trim: Aluminum extrusion to be used as a base edge solution.
        18. Hardie Trim Boards: Fiber cement trim for corners and windows. Can be mounted horizontally or vertically.

\*\* NOTE TO SPECIFIER \*\* Certain geographic areas allow a minimum single coat of 100 percent acrylic or exterior grade latex, high quality alkali resistant paint on unprimed product. James Hardie recommends, minimum one coat primer plus one or two topcoats.

* 1. FINISHES

\*\* NOTE TO SPECIFIER \*\* Field painted option: Delete if not required.

* + 1. Factory Primer: Provide factory applied universal primer.
       1. Primer: Factory primed by James Hardie.

\*\* NOTE TO SPECIFIER \*\* The use of oil based paints on unprimed fiber cement could result in increased surface roughness, loss of adhesion, cracking, or excessive chalking. James Hardie does not recommend the use of oil based paints over unprimed fiber cement siding products. Stains containing linseed oil are specifically designed for wood and may not be suitable for fiber cement siding products, primed or unprimed.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until the substrates have been properly prepared.
      2. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

\*\* NOTE TO SPECIFIER \*\* Wood framing provisions. Delete if not required.

* + 1. Nominal 2 inch by 4 inch (51 mm by 102 mm) wood framing selected for minimal shrinkage and complying with local building codes, including the use of water-resistive barriers or vapor barriers where required. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
       1. Install water-resistive barriers and claddings to dry surfaces.
       2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
       3. Protect siding from other trades.

\*\* NOTE TO SPECIFIER \*\* Metal framing provisions. Delete if not required.

* + 1. Minimum 20 gauge 3-5/8 inch (92 mm) C-Stud 16 inches maximum on center or 16 gauge 3-5/8 inches (92 mm) C-Stud 24 inches (610 mm) maximum on center metal framing complying with local building codes, including the use of water-resistive barriers and/or vapor barriers where required. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
       1. Install water-resistive barriers and claddings to dry surfaces.
       2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
       3. Protect siding from other trades.
  1. PREPARATION
     1. Clean surfaces thoroughly prior to installation.
     2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
     3. Install a water-resistive barrier is required in accordance with local building code requirements.
     4. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.
     5. Install Engineered for Climate Hardie Weather Barrier in accordance with local building code requirements.
     6. Use Hardie Weather Barrier Seam Tape and joint and laps.
     7. Install and Hardie Weather Barrier flashing, Hardie Weather Barrier Flex Flashing.

\*\* NOTE TO SPECIFIER \*\* These instructions to be used for single family installations only. For Commercial / Multi-Family installation requirements go to www.JamesHardieCommercial.com. Delete article if not required.

* 1. INSTALLATION - HARDIE ARCHITECTURAL PANELS
     1. Install materials in strict accordance with manufacturer's installation instructions.
     2. Install over braced wood. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
     3. A water-resistive barrier (WRB) is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture Hardie Weather Barrier, a non-woven non-perforated housewrap, which complies with building code requirements.
     4. When installing horizontally, a WRB with min. 90 percent drainage efficiency shall be used.
     5. Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 inches (152 mm). in the first 10 ft (3.048 mm).
     6. Do not use Hardie Architectural Panels in Fascia or Trim applications.
     7. Do not install that product remains in contact with standing water.
     8. Installed on flat vertical wall applications only.
     9. For larger projects where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie Siding Products" at www.jameshardie.com.
     10. James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet (25.9 m). For information on installations above 60 feet (18.288 m), please contact JH technical support.
     11. Minimum standard panel design size is 12 x 16 inches (305 x 406 mm). Panels may be notched and cut to size to fit between windows, doors, corners, etc.

\*\* NOTE TO SPECIFIER \*\* All the siding and trim products (not including Artisan Lap products) are available with a factory applied baked on paint finish. Delete if field finishing not required.

* 1. FINISHING

\*\* NOTE TO SPECIFIER \*\* Certain geographic areas allow minimum shingle coat of 100 percent acrylic or latex exterior grade, high quality alkali resistant paint on unprimed product. James Hardie recommends minimum one coat primer plus one topcoat, or two topcoats for best results. Delete finish not required.

* + 1. Finish unprimed siding with a minimum one coat high quality, alkali resistant primer and one coat of either, 100 percent acrylic or latex or oil based, exterior grade topcoats or two coats high quality alkali resistant 100 percent acrylic or latex, exterior grade topcoat within 90 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.
    2. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic or latex or oil based exterior grade paint within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION