

SECTION 07460 (07 46 43)

EXTERIOR COMPOSITE SIDING AND ACCESSORIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Siding system panels.
- B. Trim and accessory components.

1.2 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry.
- B. Section 06160 - Sheathing.
- C. Section 07210 - Thermal Protection.
- D. Section 07260 - Vapor Retarders.
- E. Section 07600 - Flashing and Sheet Metal.
- F. Section 07900 - Joint Protection.

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM C1363 - Standard Test Method for Thermal Performance of Building Material and Envelope Assemblies by Means of a Hot Box Apparatus.
 - 2. ASTM D635 - Standard Test Methods for Rate of Burning and/or Extent and Time of Burning of Plastics in Horizontal Position.
 - 3. ASTM D696 - Standard Test Method for Coefficient of Linear Dimension Changes of Plastics.
 - 4. ASTM D1929 - Standard Test Method for Determining Ignition Temperature of Plastics.
 - 5. ASTM D3345 - Standard Test Method for Laboratory Evaluation of Solid Wood for Resistance to Termites.
 - 6. ASTM D3679 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding.
 - 7. ASTM D4226 - Standard Test Methods for Impact Resistance of Rigid Poly (Vinyl Chloride) (PVC) Building Products.
 - 8. ASTM D5206 - Standard Test Methods for Wind load Resistance.
 - 9. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 10. ASTM E119 - Standard Test Method for Fire Tests of Building Construction and Materials.
 - 11. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 268 - Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data:
 - 1. Manufacturer's data sheets on each product to be used.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements and recommendations.
 - 4. Typical installation methods.
- C. Regulatory Requirements:
 - 1. Intertek Code Compliance Research Report No. 0316.
 - 2. ICC-ES Evaluation Report - ESR 4449.
 - 3. Florida Product Approval No. 31747, 46921.
- D. Verification Samples: Two representative units of each type, size, pattern, and color.
- E. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
 - 1. Documented verification of maintaining rigorous production quality control standards ensuring siding performs as expected for its intended use.
- B. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
- C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.
- D. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
 - 1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
 - 2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
 - 3. Retain mock-up during construction as a standard for comparison with completed work.
 - 4. Do not alter or remove mock-up until work is completed or removal is authorized.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store and handle in compliance with manufacturer's written instructions and recommendations.
- B. Protect from damage due to weather, excessive temperature, and construction operations.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 PRE-INSTALLATION CONFERENCE

- A. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.

1.9 WARRANTY

- A. Upon completion, provide the Manufacturer's written transferable lifetime limited warranty

unless indicated otherwise.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Associated Materials Innovations which is located at: 3773 State Rd.; Cuyahoga Falls, OH 44223; Toll Free Tel: 800-922-6009; Tel: 330-929-1811; Email: MarketingInfo@associatedmaterials.com; Web: <https://ALIGNcompositecladding.com/>.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 SIDING SYSTEM PANELS

- A. Basis or Design: ALIGN Composite Siding as manufactured by Associated Materials Innovations.
 - 1. Design Requirements:
 - a. Glass fiber reinforced polymer and graphite infused polystyrene foam.
 - b. Reinforced Nail Hem: Increases wind load up to 180 mph (289.7 kph).
 - c. Exposed Surface: Cedar mill grain embossing or matte on flat face.
 - d. Bottom Edge: Sharp butting to better replicate the look of real wood.
 - e. No sealing, touch-up painting, joint flashing or caulking required.
 - 2. Fire Properties:
 - a. May be used in ASTM E119 and ASTM E2707 fire resistance rated assemblies.
 - b. Approved for use as specified in section 1406 of the International Building Code and as tested to NFPA 268.
 - c. Average Burn Time, ASTM D635: Pass. No self-sustained burn.
 - d. Average Extent of Burn, ASTM D635: Pass. No self-sustained burn.
 - e. Flame Spread Index per ASTM E84-18b: Less than or equal to 25.
 - f. Smoke Developed Index per ASTM E84-18b: Less than or equal to 450.
 - g. Ignition Temperature per ASTM D1929:
 - 1) No Self-Ignition: At less than 770 degrees F (410 degrees C).
 - 2) No Flaming/Smoldering: At less than 734 degrees F (390 degrees C).
 - 3. Typical ALIGN Siding Properties:
 - a. Camber per ASTM D3679: Less than 1/8 inch (3 mm).
 - b. Heat Shrinkage per ASTM D3679: 0.2 percent.
 - c. Impact Resistance per ASTM D4226, Procedure A: Greater than 35 inch-lbs (3.95 N-m).
 - d. Weatherability per ASTM G155: No surface or structural defects such as peeling, cracking, or chipping.
 - e. Pigmentation: Spectrophotometer controlled, not exceeding ASTM requirement of DE 1.5.
 - f. Coefficient of Linear Expansion per ASTM D696: 0.00002.3 inch / inch F.
 - g. Gloss: Garner Gloss meter controlled.
 - h. Surface Distortion per ASTM D3679: Exceeds 165 degrees F (40.5 degrees C).
 - i. Nails: 24-inch (610 mm) on center, 1-1/4-inch (32 mm) penetration.
 - 4. Horizontal Siding: ALIGN 7 inches (178 mm) clapboard.
 - a. Code Compliance:
 - 1) Intertek Code Compliance Research Report No. 0316.
 - 2) ICC-ES Evaluation Report: ESR 4449.
 - 3) Florida Product Approval: No.31747.
 - 4) CCMC Evaluation 14182-R (Cedar mill grain only)

- b. Panel Projection: 3/4 inch (19 mm).
 - c. Panel Length: 12 ft 3 inches (3.734 m).
 - d. Width: 8.25 inch (210 mm).
 - e. Exposure: 7 inch (178 mm).
 - f. Butt Height: 3/8 inch (9.5 mm).
 - g. Weight: 0.31 lbs per ft. (0.46 kg per m).
 - h. Finish: Uniform low gloss, Cedar mill grain or Matte.
 - i. Interlock: Stack-lock with positive interlock; both ends of panel factory cut and notched, flush cutting required for under plank.
 - j. Thermal Resistance R-value per ASTM C1363: 2.0.
 - k. Wind Load Design Pressure: 24-inch (609.6 mm) nails O.C.: 46 psf (2.20 kPa)
 - l. Wind Load Design Pressure: 24-inch (609.6 mm) staples O.C.: 33 psf (1.58 kPa).
 - m. Nail Slots: 1/4 inch (6 mm) spaced approximately 3/8 inch (9.5 mm) apart.
 - n. Color: As selected by Architect from Manufacturer's standard colors.
 - 1. Almond
 - 2. Chesapeake Gray
 - 3. Coastal Blue
 - 4. Dark Drift
 - 5. Dover Gray
 - 6. Hudson Slate
 - 7. Iron Ore
 - 8. Majestic Brick
 - 9. Marine Dusk
 - 10. Meadow Fern
 - 11. Midnight Surf
 - 12. Moonlit Moss
 - 13. Monterey Sand
 - 14. Pebble
 - 15. Rockport Brown
 - 16. Rockwell Blue
 - 17. Smoked Timber
 - 18. Snow White
 - 19. Storm
 - 20. Windswept Smoke
5. 5. Horizontal Siding: ALIGN 5 inches (127 mm) clapboard.
- a. Code Compliance:
 - 1) Intertek Code Compliance Research Report No. 0316.
 - 2) Florida Product Approval: No.31747.
 - b. Panel Projection: 3/4 inch (19 mm).
 - c. Panel Length: 12 ft (3.658 m).
 - d. Width: 8.25 inch (210 mm).
 - e. Exposure: 5 inches (127 mm).
 - f. Butt Height: 3/8 inch (9.5 mm).
 - g. Weight: 0.28 lbs. per ft. (0.41 kg per m).
 - h. Finish: Uniform low gloss, Cedar mill grain.
 - i. Interlock: Stack-lock with positive interlock; both ends of panel factory cut and notched, flush cutting required for under plank.
 - j. Thermal Resistance R-value per ASTM C1363: 2.0.
 - k. Wind Load Design Pressure: 24-inch (609.6 mm) nails O.C.: 124 psf (5.93 kPa).
 - l. Wind Load Design Pressure: 24-inch (609.6mm) staples O.C.: 33 psf (1.58 kPa)
 - m. Nail Slots: 1/4 inch (6 mm) spaced approximately 3/8 inch (9.5 mm) apart.
 - n. Color: As selected by Architect from Manufacturer's standard colors.

1. Almond
2. Chesapeake Gray
3. Coastal Blue
4. Dark Drift
5. Dover Gray
6. Hudson Slate
7. Iron Ore
8. Majestic Brick
9. Marine Dusk
10. Meadow Fern
11. Midnight Surf
12. Moonlit Moss
13. Monterey Sand
14. Pebble
15. Rockport Brown
16. Rockwell Blue
17. Smoked Timber
18. Snow White
19. Storm
20. Windswept Smoke

Vertical Siding: ALIGN 12-inch (305 mm) Board and Batten.

a. Code Compliance:

- 1) Intertek Code Compliance Research Report No. 0316.
- 2) ICC-ES Evaluation Report: ESR 4449.
- 3) Florida Product Approval: No. 46921. (Scheduled to be absorbed into 31747.)

b. Projection: 3/4 inch (19 mm).

c. Length: 12 feet (3.66 m).

d. Exposure: 12 inch (305 mm).

e. Total Width: 13.6 inches (345 mm).

f. Finish: Low gloss wood grain or matte

h. Nail Slots: 1 inch (25 mm) spaced approximately 1/2 inch (13 mm) apart.

i. Thermal Resistance R-value per ASTM C1363: 1.6.

j. Wind Load Design Pressure, 12-inch (305 mm) nails O.C.: 50 psf (2.39 kPa).

k. Wind Load Design Pressure, 8-inch (203 mm) nails O.C.: 61 psf (2.92 kPa).

l. Wind Load Design Pressure, 12-inch (305 mm) staples O.C.: 61 psf (2.92 kPa).

m. Wind Load Design Pressure, 8-inch (203 mm) staples O.C.: 65 psf (5.60 kPa).

n. Wind Load Design Pressure, 12 inch (305 mm) self-drilling pan head screws O.C.:
53 psf (2.53 kPa)

o. Color: As selected by Architect from Manufacturer's standard colors.

1. Almond
2. Chesapeake Gray
3. Coastal Blue
4. Dark Drift
5. Dover Gray
6. Hudson Slate
7. Iron Ore
8. Majestic Brick
9. Marine Dusk
10. Meadow Fern
11. Midnight Surf
12. Moonlit Moss
13. Monterey Sand
14. Pebble
15. Rockport Brown
16. Rockwell Blue
17. Smoked Timber
18. Snow White

- 19. Storm
- 20. Windswept Smoke

2.3 TRIM AND ACCESSORY COMPONENTS

A. ALIGN H Trim:

- a. Width: 5.5 inch (140 mm).
- b. Length: 16 feet (4.88 m).
- c. Channel Pocket: 3/4 inch.
- d. Thickness: 0.060 inch (1.52 mm).
- e. Finish: Low gloss matte texture.
- f. Color: As selected by Architect from Manufacturer's standard colors.
 - 1. Almond
 - 2. Chesapeake Gray
 - 3. Coastal Blue
 - 4. Dark Drift
 - 5. Dover Gray
 - 6. Hudson Slate
 - 7. Iron Ore
 - 8. Majestic Brick
 - 9. Marine Dusk
 - 10. Meadow Fern
 - 11. Midnight Surf
 - 12. Moonlit Moss
 - 13. Monterey Sand
 - 14. Pebble
 - 15. Rockport Brown
 - 16. Rockwell Blue
 - 17. Smoked Timber
 - 18. Snow White
 - 19. Storm
 - 20. Windswept Smoke

B. ALIGN Lineal Trim:

- a. Width: 5.5 inch (140 mm).
- b. Length: 16 feet (4.88 m).
- c. Channel Pocket: 3/4 inch.
- d. Thickness: 0.060 inch (1.52 mm).
- e. Finish: Low gloss matte texture.
- f. Color: As selected by Architect from Manufacturer's standard colors.
 - 1. Dover Gray
 - 2. Rockport Brown.
 - 3. Snow White.
 - 4. Monterey Sand.
 - 5. Pebble.
 - 6. Storm.

C. ALIGN Lineal Trim:

- a. Width: 3.5 inch (88.9 mm).
- b. Length: 16 feet (4.88 m).
- c. Channel Pocket: 3/4 inch.
- d. Thickness: 0.060 inch (1.52 mm).
- e. Finish: Low gloss matte texture.
- f. Color: As selected by Architect from Manufacturer's standard colors.
 - 1. Dover Gray
 - 2. Rockport Brown.
 - 3. Snow White.
 - 4. Monterey Sand.

5. Color: Pebble.
6. Color: Storm.

D. ALIGN J Channel

- a. Width: 1.0 inch (25.4 mm).
- b. Length: 12 feet (3.66 m).
- c. Channel Pocket: 3/4 inch.
- d. Thickness: 0.060 inch (1.52 mm).
- e. Finish: Low gloss matte texture.
- f. Color: As selected by Architect from Manufacturer's standard colors.
 1. Almond
 2. Chesapeake Gray
 3. Coastal Blue
 4. Dark Drift
 5. Dover Gray
 6. Hudson Slate
 7. Iron Ore
 8. Majestic Brick
 9. Marine Dusk
 10. Meadow Fern
 11. Midnight Surf
 12. Moonlit Moss
 13. Monterey Sand
 14. Pebble
 15. Rockport Brown
 16. Rockwell Blue
 17. Smoked Timber
 18. Snow White
 19. Storm
 20. Windswept Smoke

E. ALIGN Outside Corner Post

- a. Width: 3.5 inch (88.9 mm).
- b. Length: 12 feet (3.66 m).
- c. Channel Pocket: 3/4 inch.
- d. Thickness: 0.060 inch (1.52 mm).
- e. Finish: Low gloss matte texture.
- f. Color: As selected by Architect from Manufacturer's standard colors.
 1. Almond
 2. Chesapeake Gray
 3. Coastal Blue
 4. Dark Drift
 5. Dover Gray
 6. Hudson Slate
 7. Iron Ore
 8. Majestic Brick
 9. Marine Dusk
 10. Meadow Fern
 11. Midnight Surf
 12. Moonlit Moss
 13. Monterey Sand
 14. Pebble
 15. Rockport Brown
 16. Rockwell Blue
 17. Smoked Timber
 18. Snow White
 19. Storm

20. Windswept Smoke

- F. ALIGN Outside Corner Post
 - a. Width: 5.5 inch (88.9 mm).
 - b. Length: 12 feet (3.66 m).
 - c. Channel Pocket: 3/4 inch.
 - d. Thickness: 0.060 inch (1.52 mm).
 - e. Finish: Low gloss matte texture.
 - f. Color: As selected by Architect from Manufacturer's standard colors.
 - 1. Almond
 - 2. Chesapeake Gray
 - 3. Coastal Blue
 - 4. Dark Drift
 - 5. Dover Gray
 - 6. Hudson Slate
 - 7. Iron Ore
 - 8. Majestic Brick
 - 9. Marine Dusk
 - 10. Meadow Fern
 - 11. Midnight Surf
 - 12. Moonlit Moss
 - 13. Monterey Sand
 - 14. Pebble
 - 15. Rockport Brown
 - 16. Rockwell Blue
 - 17. Smoked Timber
 - 18. Snow White
 - 19. Storm
 - 20. Windswept Smoke
- G. Steel Starter Strip: 2.5 inch (64 mm). G90 Galvanized steel. Length: 10 ft (3.048 m).
- H. ALIGN Finish Trim: Length: 12 ft 6 inches (3.810 m). PVC material.
- I. Color Matched Shakes / Scallops:
 - 1. Traditional Shakes: Polypropylene panel.
 - a. Exposure: Single 7 inches (178 mm).
 - b. Length: 81.29 inches (2065 mm).
 - c. Butt Height: 5/8 inches (16 mm).
 - d. Finish: Deep Cedar Grain Texture.
 - e. Color: _____.
 - f. Color: Match siding.
 - g. Color: As determined by the Architect. From manufacturer's standard range.
 - 2. Hand-Split Shakes: Polypropylene panel.
 - a. Exposure: Single 9 inches (229 mm).
 - b. Length: 75-1/2 inches (1918 mm).
 - c. Butt Height: 5/8 inches (16 mm).
 - d. Finish: Deep Cedar Grain Texture.
 - e. Bottom Edge: Staggered.
 - f. Color: _____.
 - g. Color: Match siding.
 - h. Color: As determined by the Architect. From manufacturer's standard range.
 - 3. Scallops: Polypropylene panel.
 - a. Exposure: Single 6-1/4 inches (159 mm).
 - b. Length: 76.86 inches (1952 mm).
 - c. Butt Height: 1/2 inch (13 mm) nominal.
 - d. Finish: Natural Cedar grain texture.
 - e. Color: _____.
 - f. Color: Match siding.

- g. Color: As determined by the Architect. From manufacturer's standard range.
- 4. Cape Cod Shingle: Polypropylene panel.
 - a. Exposure: Double 5 inches (140 mm).
 - b. Length: 67.33 inches (1710 mm).
 - c. Butt Height: 1/2 inch (13 mm) nominal.
 - d. Finish: Natural Cedar grain texture.
 - e. Color: _____.
 - f. Color: Match siding.
 - g. Color: As determined by the Architect. From manufacturer's standard range.
- 5. Traditional Shake and Corner Post: Polypropylene panel.
 - a. Panel Length: 15.86 inches (403 mm).
 - b. Finish: Deep Cedar Grain Texture
 - c. Color: _____.
 - d. Color: Match siding.
 - e. Color: As determined by the Architect. From manufacturer's standard range.
- 6. Hand-Split Shake Corner Post: Polypropylene panel.
 - a. Panel Length: 20.18 inches (513 mm).
 - b. Finish: Deep Cedar Grain Texture.
 - c. Bottom Edge: Staggered.
 - d. Color: _____.
 - e. Color: Match siding.
 - f. Color: As determined by the Architect. From manufacturer's standard range.
- J. Color Matched Vinyl Accessories:
 - 1. Inside Corner Post:
 - a. Length: 10 ft (3.048 m).
 - b. Receiving Channel: 3/4 inch (19 mm).
 - c. Finish: Matte.
 - d. Color: Match siding.
 - e. Color: As determined by the Architect. From manufacturer's standard range.
 - 2. Utility Trim: (Required with use of ALIGN Lineal Trim)
 - a. Length: 12 ft 6 in (3.810 m)
 - b. Finish: Matte
 - c. Color: Match siding.
 - d. Color: As determined by the Architect. From manufacturer's standard range.
- K. Aluminum Trim Coil:
 - 1. Poly Aluminum Trim Coil (W x L): 24 inches (610 mm) x 50 ft (15.240 m).
 - a. Thickness: 0.019 inches (0.48 mm).
 - b. Color: Match siding.
 - c. Color: As determined by the Architect. From manufacturer's standard range.
 - 2. PVC Aluminum Trim Coil: 24 inches (610 mm) x 50 ft (15.24 m).
 - a. Thickness: 0.019 inches (0.48 mm).
 - b. Color: Match cladding.
 - c. Color: As determined by the Architect. From manufacturer's standard range.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed and prepared.
- B. Confirm that all critical dimensions are as specified on the drawings.
- C. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
 - 1. Where necessary, fur surfaces to an even plane and free from obstructions before application.

3.3 INSTALLATION

- A. Install siding and accessories in accordance with manufacturer's instructions, approved submittals, accepted best practice, and in proper relationship with adjacent construction.
 - 1. Verify joint members are plumb and true.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.
 - 1. After installation of siding, check entire surface for obvious flaws or defects.
 - 2. Replace and repair any problem areas, paying close attention to the substrate for causes of the problem.
- B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.5 CLEANING AND PROTECTION

- A. After application of siding, clean as necessary to remove all fingerprints and soiled areas.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. Upon completion of siding application, clean entire area, removing all scrap, packaging, and unused materials related to this work.

END OF SECTION