

KNOTWOOD

Aluminum Siding, Soffits, and Accessories

PART 1 GENERAL

1.1 Section Includes

- A. Aluminum Siding.
- B. Aluminum Soffits.
- C. Aluminum Trim and Accessories.
- D. 88mm Shutter Blade.
- E. Fixed Routed Louver Sections.
- F. 65mm Slat.
- G. Small Infill.

1.2 Related Sections

- A. Section 05400 - Cold-Formed Metal Framing: Metal framing for support of aluminum soffits.
- B. Section 06000 – Rough Carpentry: Wood stud framing, furring and sheathing for support of aluminum soffits.
- C. Section 07210 – Building Insulation: Rigid thermal insulation installed behind siding.
- D. Section 07600 – Flashing and Sheet Metal: Sheet Metal gutters and downspouts.
- E. Section 07900 – Joint Sealants: Sealants used in conjunction with aluminum siding installation.

1.3 References

- A. ASTM D 958 – Practice for Determining Temperatures of Standard ASTM Molds for Test Specimens of Plastics.
- B. AAMA 2605-05 - Voluntary Specification, Performance requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- C. AAMA 2604 - Voluntary Specification, Performance requirements and Test Procedures for High Performing Organic Coatings on Aluminum Extrusions and Panels.
- D. AAMA 2603 - Voluntary Specification, Performance requirements and Test Procedures for High Performing Organic Coatings on Aluminum Extrusions and Panels.

1.4 Performance Requirements

- A. Components: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of walls as calculated in accordance with applicable code.
- B. Movement: Accommodate movement within system without damage to components or movement within system: movement between system and perimeter components

when subject to seasonal temperature cycling: dynamic loading and release of loads: deflection of structural support framing.

- C. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

1.5 Submittals

- A. Submit under provisions of section 01300
- B. 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.
- C. Shop drawings: indicate dimensions, layout, joints, expansion joints, construction details, methods of anchorage, and interface with adjacent materials.
- D. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 - 1. EAc1 Energy and Atmosphere: Provide documentation on how the aluminum siding/ back framing system can reduce the design energy consumption and/ or cost. (LEED Form).
 - 2. MRc2 Construction Waste Management: For products being recycled documentation of total weight of project waste diverted from landfill. (LEED Form).
 - 3. MRc5 Local and Regional Materials: Product data for credit MR 5.1 and Credit MR 5.2. Submit data, including location and distance from project of material manufacturer and point of extraction, harvest or recovery for main raw material. (LEED Form).
 - 4. MRc8 Durable Building: Provide documentation on how the use of aluminum siding/soffit will help increase the buildings service life. (LEED Form).
 - 5. EQc4.2 Low Emitting Materials- Provide documentation on how the powder coating on the aluminum siding/soffit indoors has no VOC's and will not contribute to air pollution/ozone depletion. (VOC Certification Letter).
 - 6. EQc7.1 Thermal Comfort: Provide documentation on how the aluminum siding back framing, which allows for external insulation, helps the building to maintain an indoor level of comfort at greater energy efficiency. (LEED Form).
 - 7. IDc1.1 Innovation in Design: Provide documentation on how the use of aluminum siding/soffit with a powder coated finish supports innovation in design. (LEED Form).
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing the manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 2 inches (51mm) by 3-1/2 inches (89mm), representing actual product, color and gloss.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of components.

1.6 Quality Assurance

- A. Manufacturer's Qualifications: Minimum ten years' experience producing aluminum finishes of the types specified in AAMA 2604 and 2605 Certified.
 - B. Installer: Company specializing in performing work of this section with minimum three years documented experience.
 - C. Mock-up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designed by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and gloss are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.
- 1.7 Delivery, Storage, and Handling
- A. Package and store products under cover in manufacturer's unopened packaging until ready for transport and installation.
 - B. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
 - C. Store prefinished material off ground protected from weather, to prevent twisting, bending, or abrasion, and provide ventilation. Slope metal sheets to ensure drainage.
 - D. Prevent contact with materials capable of causing discoloration or staining.
- 1.8 Project Conditions
- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not fabricate products under environmental conditions outside manufacturer's absolute limits.
- 1.9 Coordination
- A. Coordinate work with installation of windows, louvers, and adjacent components or materials.
- 1.10 Warranty
- A. Knotwood's limited lifetime warranty against cracking, peeling and gloss/color retention within the guidelines stated by the American Aluminum Manufacturers Association (AAMA).
 - 1. Standard Colors
 - a. Dulux Duratec – AAMA 2604 (5 year Florida) 15 year manufacturer's warranty.
 - b. Dulux Fluoraset – AAMA 2605 (10 year Florida) 20 year manufacturer's warranty.
 - 2. Wood Grains
 - a. AMMA 2064 (5 year Florida) 15 year manufacturer's warranty.

PART 2 PRODUCTS

2.1 Manufacturers

A. Bases of design: Knotwood Aluminum Cladding. Represented by ACMPanelworx
357 Croft Dr. Lakeshore, ON N8M 2J6 1 519.739.2380/226.260.6434

Web: www.knotwoodap.com

- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of section 01600.

2.2 Materials

A. Extruded Aluminum Siding and Soffits: Knotwood Wood Grain Aluminum Siding and Soffits with Alluminate bonded film finish is extruded aluminum.

EXDC90-	3-3/4" x 5/8" x 18'6" Cladding Board Smooth
EXDC100R-	4" x 5/8" x 18'6" Cladding Board Ribbed
EXDC100S-	4" 5/8" x 18'6" Cladding Board Smooth
EXDC150-	6" x 5/8" x 18'6" Cladding Board Smooth
EXSM3816-	1-1/2" x 5/8" x 18'6" Self Mating Slat (2-part)
EXSM6516-	2-1/2" x 5/8 x 18'6" Self Mating Slat (2-part)
EXSM10016-	4" x 5/8" x 18'6" Self Mating Slat (2-part)
ESM15016-	6" x 5/8" x 18'6" Self Mating Slat (2-part)

B. Extruded Aluminum Vented Soffit: Knotwood Wood Grain Aluminum Vented soffits with Alluminate bonded film finish is extruded aluminum.

KWCV150-	6" x 5/8" x 18'6" Cladding Vented Board
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C. Extruded Aluminum Accessories and Trim: Knotwood Wood Grain Aluminum Trim and Accessories with Alluminate bonded film finish is extruded aluminum.

EXDCST-	Starter Piece for Cladding and Decking 18'6"
KWCFB-	Cladding Flashing Base 16'4" (used with KWCFTCL or KWCFTCS)
KWCFTCL-	Cladding Top Clip 16'4"
KWCFTCS-	Cladding Top Blip Small 16'4"
KWCBJ-	Cladding Bottom Joiner 16'4" (used with KWCTJ)
KWCTJ-	Cladding Top Joiner 16'4"
KWCTF-	Cladding Window and Door Top Flashing 16'4"

KWCIEFC- Cladding Internal/External Female Corner 16'4"

KWCIEMC- Cladding Internal/External Male Corner 16'4"

D. Extruded Aluminum Shutter Blade, Slat, Small Infill, and Fixed Louver Sections: Knotwood Wood Grain Aluminum Trim and Accessories with Alluminate bonded film finish is extruded aluminum.

EXS88- 3-7/16" (88mm) x 18'6" Shutter Blade.

EXS6516- 2-1/2" x 5/8" x 18'6" Slat

EXINFS- Small Infill Length: 18'6"

KWRF65L- Routed Louver Frame Left to fit 2-1/2" Slat Length: 17'8"

KWRF65R- Routed Louver Frame Right to fit 2-1/2" Slat Length: 17'8"

KWRF65M- Routed Louver Frame Mid-Rail to 2-1/2" Slat Length: 17'8"

KWRF88L- Routed Louver Frame Left to fit EXS88 Length: 17'8"

KWRF88R- Routed Louver Frame Right to fit EXS88 Length: 17'8"

KWRF88M- Routed Louver Frame Mid-Rail to fit EXS88 Length: 17'8"

KWRF- Routed Top Bottom Frame Length: 17'8"

2.3 Finishes

- A. Pretreatment: E-CLPS Chrome Free five stager aluminum pretreatment system. Complies with, AAMA 2604, and AAMA 2605 Superior Performance Standard and meets EPA, OSHA, State and Local environmental requirements and contains no chromates, cyanides, or other heavy metals. Waste treatment is usually a simple pH neutralization and disposal to the sanitary sewer.
- B. Dulux Group Mannex base coat and Duratec Series electrostatic applied Architectural Powder Coatings are approved to AAMA 2604 Performance Standard.
 1. Gloss Level: Standard Gloss is 30 percent, plus or minus 5 percent.
- C. Super Durable Powder Coatings: Alluminate Premium Wood Finishes use a polyurethane powder coat with ink based wood grain patterns sublimated into the base powder effectively tattooing the powder. The combined effect creates all the aesthetic aspects of real wood while offering the same environmental advantages of powder coated finishes.
 1. Wood Grained
 - a. Western Red Cedar
 - b. Atlantic Cedar
 - c. Black Butt
 - d. Bush Cherry
 - e. Jarrah

- f. Kwila
- g. Light Oak
- h. Tassie Oak
- i. Australian Cedar
- j. Iron Bark
- k. Knotty Pine
- l. Aspen
- m. Chestnut
- n. Iroko
- o. Maple
- p. Merbau
- q. Red Gum
- r. Rose Mahogany
- s. Teak Brown
- t. English Oak
- u. Black Walnut
- v. Sydney Blue Gum
- w. Weathered Oak
- x. Wenge
- y. Ash
- z. Hickory
- aa. Tiger Wood
- bb. Olive Tree
- cc. Zebrano
- dd. Black Ash
- ee. Koa
- ff. Spotted Gum
- gg. Drift Wood
- hh. Beach Wood

2.4 Fabrication

- A. Prepare surfaces, pre-treat and coat components in accordance with AAMA 2604 and 2605 Quality Standards and applicable European standards for the coating material specified.
- B. Wrap and package coated components using methods suitable for transit and covered site storage without damage.

PART 3 EXECUTION

3.1 Examination

- A. Do not begin installation until colors have been verified.
- B. Verify framing members are ready to receive panel system.

C. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 Preparation

- A. Clean Surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by the manufacturer.

3.3 Installation

- A. Install in accordance with manufacturer's installation instructions.
- B. Barrier Protection: Do not install over cementitious materials, dissimilar metals or pressure treated material without adequate barrier protection.
 - 1. Install building paper horizontally on walls to receive metal siding.
 - 2. Weather lap edges 6 inches (150mm) and ends minimum 6 inches (150mm).
 - 3. Stagger vertical joints f each layer.
 - 4. Securely staple, nail in place.
- C. Fasten siding to structural supports; aligned, level, and plumb.
- D. Locate joints over supports.
- E. Install expansion control joints where needed.
- F. Use concealed fasteners unless otherwise approved by Architect.
- G. Install soffits, and accessories in accordance with best practice, with all joint members plumb and true.

3.4 Field Quality Control

- A. After installation of soffits, check entire surface for obvious flaws or defects.
- B. Replace and repair any problem areas, paying close attention to the substrate for causes of the problem.

3.5 Cleaning

- A. After application of soffits, clean as necessary to remove all fingerprints and soiled areas.
- B. Upon completion of soffit application, clean entire area, removing all scrap, packaging and unused materials related to this work.

3.6 Protection

- A. Protect installed products until completion of project

B. Touch-up, repair or replace damaged products before Substantial Completion.

3.7 Schedules