



SECTION 07 46 16
Aluminum Cladding

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aluminum cladding, trim and accessories

1.2 RELATED SECTIONS

- A. Section 05 40 00 - Cold-formed Metal Framing: Metal framing for support of aluminum cladding.
- B. Section 06 10 00 - Rough Carpentry. Wood stud framing, furring and sheathing for support of aluminum cladding
- C. Section 07 62 00 - Sheet Metal Flashing and Trim
- D. Section 07 92 00 - Joint Sealants

1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. Aluminum finishes AAMA 2604 Powder Coat: High-performance super durable polyester resin
 - 2. Aluminum finishes AAMA 2605 Superior-performance coating in either 70% (Polyvinylidene Fluoride) liquid paint coating, 70% PVDF 2 coat FEVE (Fluoroethylene Vinyl Ether) powder coating

- B. American Society for Testing Materials (ASTM):
 - 1. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees
 - 2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building

- Materials.
- 3. ASTM E2768 - Standard Test Method for Extended Duration Surface Burning Characteristics for Building Materials (30 min test tunnel).
- C. International Code Council Evaluation Service (ICC-ES)
 - 1. ICC-ESR 5413 Evaluation Report
- D. Testing Application Standard (TAS):
 - 1. TAS 201 – 94 Criteria for Impact Test Resistance.
 - 2. TAS 202 – 94 Criteria for testing impact & non-impact resistant building envelope components using uniform static air pressure.
 - 3. TAS 203 – 94 Criteria for testing products subject to cyclic wind pressure loading

1.4 SUBMITTALS.

- A. 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.
- B. Verification Samples: Submit two representative samples of each profile type, size, pattern, and color.
- C. Shop Drawings: Include dimensions of product, construction details, layout, finish, trim, and relationship with adjacent construction.
- D. Certifications: Submit manufacturer's written certifications stating that products comply with specified requirements, including copies of test reports from qualified independent testing laboratories demonstrating compliance with referenced standards.
- E. Closeout Submittals: Manufacturer provided maintenance instructions outlining recommended practices for routine cleaning and maintenance of components.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer has a minimum of five years of experience in manufacturing extruded plank systems of this nature. The aluminum planks specified in this section shall be produced in a professional factory environment.
- 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. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
 - 2. If the mock-up is not acceptable, rebuild the 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 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials to job site in manufacturer's original unopened packaging
- B. Handling: Exercise extreme care in unloading, storing, and erecting extruded plank system to prevent bending, warping, twisting, scratches, and surface damage.
- C. Storage: Store in accordance with manufacturer's written instructions keeping materials and accessories above ground on well skidded platforms or crates away from moisture and excessive UV exposure.

1.7 WARRANTY

- A. Manufacturer's standard limited warranty unless indicated otherwise.
 1. A guaranteed warranty of fifteen years is to be signed and issued in the name of the owner to cover the extruded plank material.
 2. The warranty is limited to replacement of defective material only.
 3. Not Covered: Faulty installation; which is to be rectified by the installing contractor. The manufacturer is not liable for incidental expenses or consequential damages.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. : Alumination Architectural Products, 2108 E Richmond Ave.; Fort Worth, TX 76104; Tel: 817-678-4440; Email: info@aluminacion-ap.com ; Web: <https://aluminacion-ap.com>
- B. Substitutions: Not permitted.

2.2 ALUMINUM CLADDING.

- A. Basis of Design: EcoFlex Panel System manufactured by Aluminacion Architectural Products. Extruded aluminum cladding panels with concealed fastening system.
 1. Alloy: 6063-T5.
 2. Orientation: Horizontal or Vertical
 3. Minimum Extrusion Depth: 0.050 inches (1.27 mm) depth extruded aluminum.
 4. Nominal Plank Thickness: 0.063 inches (1.60 mm).
 5. Plank Width: 3 inches (76 mm).
 6. Plank Width: 4 inches. (102 mm).
 7. Plank Width: 6 inches (152 mm).
 8. Plank Width: 8 inches (203 mm).
- B. End Caps: Mechanically fastened to extruded screw bosses with provided concealed fasteners. Alloy: 6063-T5.
- C. Trim: Two-piece extruded j-trim and/or corner trim.
 1. Nominal Thickness: 0.024 to 0.050 inches (0.61 to 1.37 mm).
- D. Finish: Powder Coating: Electrostatically applied.
- E. Coating: 0.002 to 0.004 inches (0.051 to 0.102 mm) per manufacturer's recommendations
- F. Color: As determined by the Architect from Manufacturer's offering.
- G. Standard Colors:
 1. Woodgrain: Dark Cherry

2. Woodgrain: Dark Oak
3. Woodgrain: Douglas Fir
4. Woodgrain: Medium Cherry
5. Woodgrain: Light Walnut
6. Woodgrain: National Walnut
7. Woodgrain: Red Oak
8. Woodgrain: Smoked Chestnut
9. Solid: Antique Bronze
10. Solid: Bone White
11. Solid: Burgundy
12. Solid: Charcoal Gray
13. Solid: Dark Bronze
14. Solid: Fashion Gray
15. Solid: Hartford Green
16. Solid: Matte Black
17. Solid: Military Blue
18. Solid: Rustic Texture
19. Solid: Sandstone
20. Solid: Satin White
21. Solid: Stardust Silver
22. Solid: Super Black

H. Non-Standard Colors:

1. Woodgrain: Blonde Teak
2. Woodgrain: Cabana Teak
3. Woodgrain: Charcoal Barnwood
4. Woodgrain: English Mahogany
5. Woodgrain: Fonthill Cherry
6. Woodgrain: Light Maple
7. Woodgrain: Southern Pecan
8. Woodgrain: Table Walnut
9. Woodgrain: Barnwood
10. Woodgrain: White Oak

2.3 PERFORMANCE REQUIREMENTS

- A. Design components to withstand applicable live and dead loads per governing code.
- B. Accommodate thermal movement and deflection of supporting structure without damage.
 1. Accommodate differential movement between cladding system components and adjacent or perimeter construction caused by seasonal temperature variation.
 - a. Thermal Expansion of Aluminum: Install components in accordance with the manufacturer's recommended installation, spacing, and gapping requirements to allow for thermal movement.
 2. Allow for dynamic loads, including loading and release cycles, without damage to system components or connections.
 3. Accommodate deflection of supporting structural framing without inducing stress, distortion, or failure of the cladding system.
- C. Drainage: Provide positive drainage to exterior
- D. Fire Performance
 1. 6063-T5 Aluminum components are inherently non-combustible.
 - a. Where required by code, systems shall be evaluated as part of a complete wall assembly in accordance with NFPA 285.
 2. Tested in accordance to ASTM E84: Class A surface burning characteristics.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until the substrates have been properly constructed and prepared verifying that the substrates are plumb, level, true, and within tolerances required to support the extruded aluminum plank system without inducing stress, distortion, or misalignment.
- B. 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.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, approved submittals, as indicated on drawings, and in proper relationship with adjacent construction.
 - 1. Install extruded plank system without waves, warps, buckles, fastening stress or distortion.
 - 2. Use concealed anchors whenever possible.
 - a. Rivets may be used where concealed anchors are not feasible.

3.4 Install planks in true alignment, plumb, level, and straight, with seams parallel but not adjoining, as designed and detailed. CLEANING AND PROTECTION

- A. Clean work in accordance with manufacturer's recommendations.
- B. Repair or replace damaged materials prior to substantial completion. Upon completion of installation, maintain the product in accordance with the manufacturer's maintenance recommendations, including annual cleaning. Refer to warranty documentation for further requirements.

END OF SECTION