



SECTION 06 73 00

COMPOSITE DECKING

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composite Decking (LambooFusion™ Decking)
- B. Composite Decking (Rim Board)

1.2 RELATED SECTIONS

- A. Section 06 11 16 - Mechanically Graded Lumber.
- B. Section 05 40 00 - Cold-Formed Metal Framing.

1.3 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM D1037: Water Absorption of Plastics.
 - 2. ASTM D1761: Mechanical Fasteners in Wood.
 - 3. ASTM D1413: Test method for Wood Preservatives by Laboratory Soil-block Cultures.
 - 4. ASTM D7031: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products, ASTM International.
 - 5. ASTM D7032: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails).
 - 6. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials, ASTM International.
- B. Code Reports:
 - 1. Nationally Recognized Testing Facilities:
 - a. Uniform Building Code (UBC)
 - b. International Building Code (IBC)

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- 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:
 - 1. Provide plans and details which include layout, spacing, and sizes of decking and railings.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, representing actual product color, size, and finish.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5-year experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2-year experience installing similar products.
- C. 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 is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Store products on a flat and level surface. Adjust support blocks accordingly.
- C. Support bundles on supplied dunnage.
- D. When stacking bundles, supports should start approximately 8 inches from each end and be spaced approximately 2 feet on center. Supports shall line up vertically/perpendicular to the decking product.
- E. Do not stack LambooFusion™ decking more than 10 bundles high.
- F. Keep material covered using the provided bundle cover until time of installation.
- G. Minimize Handling materials to avoid damage.

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 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.9 WARRANTY

- A. Provide manufacturer's warranty against rot, decay, splitting, checking, splintering, fungal damage, and termite damage for a period of 15 years for a residential installation and 10 years for a commercial installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Lamboo Technologies, LLC; 301 West Edwards Street, Litchfield, IL 62056. Tel: (866) 966-2999. Fax: (217) 250-2198. Email: sales@lamboo.us Web: <http://www.lamboo.us> Contact: Jeran Hammann
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 Design/Performance Requirements:

- A. Structural Performance:
 - 1. Deck: Uniform Load - 100lb/sq.ft.
 - 2. Tread of Stairs: Concentrated Load: 750 lbf on area of 4 sq. in., and 1/8 inch maximum deflection at a concentrated load of 300 lbf.
- B. Fire-Surface Burning Characteristics per ASTM E-84.

2.3 COMPOSITE DECKING

- A. Bamboo-Plastic Composite Decking:
 - 1. Product: Lamboo® LambooFusion™ Decking Boards as manufactured by Lamboo Technologies, LLC.
 - 2. Material Description: Composite Decking consisting of recycled High Density Polyethylene (HDPE) and recycled bamboo fiber. The product is extruded into shapes and sizes as follows:
 - a. Thickness: 7/8 inch (22mm)
 - b. Width: 5.5 inches (140 mm)
 - c. Lengths - 12 feet (3658 mm) and 16 feet (4877 mm)
 - d. Color - To be specified by customer
 - 3. Physical and Mechanical Properties as follows:
 - a. Flame Spread, ASTM E 84: 70
 - b. Thermal Expansion, ASTM D 1037: 0.000030 inch/inch/degree F
 - c. Moisture Absorption, ASTM D 1037: Less than 1 percent
 - d. Screw Withdrawal, ASTM D1761: 602 lbs/in.
 - e. Fungus Resistance, ASTM D1413: Rating - no decay
 - f. Termite Resistance, AWPAE1-72: Rating: 9.8
 - g. Compression Parallel, ASTM D198: 1698 psi ultimate, 570 psi design.
 - h. Compression Perpendicular, ASTM D143: 1430 psi ultimate, 520 psi design.
 - i. Bending Strength, ASTM D198: 3280 psi ultimate, 500 psi design.
 - j. Shear Strength, ASTM D143: 1751 psi ultimate, 330 psi design.
 - k. Modulus of Elasticity, ASTM D4761: 504,000 psi ultimate, 220,000 psi design.

- l. Modulus of Rupture, ASTM D4761: 4,134 psi ultimate, 700 psi design.
 - m. Ultimate strength values are not meant for design analysis. Design values are for temperatures up to 125 degree F (52 degree C)

- B. Bamboo-Plastic Composite Lumbers:
 - 1. Product: Lamboo® LambooFusion™ Composite Lumber as manufactured by Lamboo Technologies, LLC.
 - 2. Pattern: 3D Wood Embossed or Sanded Texture
 - 3. Material Description: Composite Decking consisting of recycled High Density Polyethylene (HDPE) and recycled bamboo fiber. The product is extruded into shapes and sizes as follows:
 - a. Lumber Sizes: ¾" thick up to 1-1/2" / Width: 3-1/2" up to 12-1/4"
 - b. Lengths - 12 feet (3658 mm) and 16 feet (4877 mm)
 - c. Color - To be specified by customer
 - 4. Physical and Mechanical Properties as follows:
 - a. Flame Spread, ASTM E 84: 70
 - b. Thermal Expansion, ASTM D 1037: 0.000019 inch/inch/degree F
 - c. Moisture Absorption, ASTM D 1037: Less than 1 percent
 - d. Screw Withdrawal, ASTM D1761: 602 lbs/in.
 - e. Fungus Resistance, ASTM D1413: Rating - no decay
 - f. Termite Resistance, AWPAE1-72: Rating: 9.8
 - g. Compression Parallel, ASTM D198: 1698 psi ultimate, 570 psi design.
 - h. Compression Perpendicular, ASTM D143: 1430 psi ultimate, 520 psi design.
 - i. Bending Strength, ASTM D198: 3280 psi ultimate, 500 psi design.
 - j. Shear Strength, ASTM D143: 1751 psi ultimate, 330 psi design.
 - k. Modulus of Elasticity, ASTM D4761: 504,000 psi ultimate, 220,000 psi design.
 - l. Modulus of Rupture, ASTM D4761: 4,134 psi ultimate, 700 psi design.
 - m. Ultimate strength values are not meant for design analysis. Design values are for temperatures up to 125 degree F (52 degree C)

- C. Composite Decking and Lumber Colors:
 - 1. Color: Driftwood Gray
 - 2. Color: Sandstone Hickory
 - 3. Color: Desert Sand
 - 4. Color: Coffee
 - 5. Color: Cinnamon

- D. Surface Options:
 - 1. 3D Wood Embossed
 - 2. Sanded Texture

- E. Accessory Hardware:
 - 1. Fasteners:
 - a. Lamboo Hidden Fasteners
 - b. Composite Decking Screws: (provided by Installers)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate 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 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, and in proper relationship with adjacent construction.
- B. Cut, drill, and rout using carbide tipped blades.
- C. Do not use composite wood material for structural applications.

3.4 Cleaning

- A. Cleaning as required by manufacturer for warranty compliance.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION