



SECTION 09640

PREFINISHED ENGINEERED WIDE-PLANK BAMBOO FLOORING

General notes to the specifier:

This is a template: edit this specification carefully to suit specific project requirements.

Following guidelines established by the construction specifications institute

This specification section organizes information in three parts:

Part 1 – General: describes administrative and procedural requirements;

Part 2 – Products: describes materials, products, and accessories to be used in the project; and

Part 3 – Execution: describes how these products are to be installed.

Referenced section numbers and titles are based on *Masterformat*, 1995 edition.

This section assumes the project manual contains complete Division 1 documents including Sections 01330–Submittal Procedures, 01620–Product Options, 01630–Product Substitution Procedures, 01660–Product Storage And Handling Requirements, 01740–Cleaning, 01770–Closeout Procedures, And 01780–Closeout Submittals. If the project manual is lacking these sections, additional information should be included under the appropriate articles herein.

Editing guide:

/ italicised paragraphs are notes to the specifier and should be deleted from final draft.

[square brackets] denote options requiring selection by the specifier- delete unused options.

 underlined blanks indicate items that may require supplementary information.

Bold face type is used to highlight optional paragraphs and phrases that may be selected or deleted as required. Reformat bold face type when including these elements



PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Prefinished, [pre-stained] 3-cross-ply engineered bamboo flooring installed by the [floating method] [glue down method.]

- B. Related sections:

List other specification sections dealing with work directly related to this section and for other types of flooring materials abutting the bamboo flooring

1. **01115 – Green Building Requirements: LEED requirements.**
2. **03300 – Cast-in-Place Concrete: Concrete slab substrate.**
3. **06100 – Rough Carpentry: Wood subfloor.**
4. **06200 – Finish Carpentry: Baseboards and associated trim not otherwise included in this section.**
5. _____ - _____.

1.2 SUBMITTALS

- A. Submit under provisions of Section 01330–Submittal Procedures the following items:
1. Product Data.
 - a. Flooring: Include **natural and complete range of 54 available colors or selected custom-matched colors**, adhesive used in manufacture of flooring planks and finish data.
 - b. **Accessories.**
 - c. **Installation adhesive.**
 - d. **Installation fasteners.**
 2. Shop Drawings: Include direction of flooring, fastening method, flooring patterns and color layout, and 1:1 scale sectional details of **accessories and** transition to other flooring materials.
 3. Samples:
 - a. 12 inch (300 mm) long piece of pre-finished engineered wide-plank bamboo flooring material in specified stock or custom color-matched color.
 - b. Fasteners.
 - c. **One of each specified accessory, minimum 4 inches (100 mm) long.**
 4. Quality Assurance/Control Submittals:
 - a. Qualifications: Proof of manufacturer and installer qualifications.
 - b. Test Reports: Reports for specified Physical Property Performance Requirements.
 - c. Manufacturer's Installation Instructions.
- B. Closeout Submittals: Submit under provisions of Section 01780–Closeout Submittals the following items:
1. Maintenance Instructions.
 2. Letter of Warranty.



- C. LEED Submittals:
 - 1. Credit EQ 4.1: Wood flooring adhesive manufacturer's product data indicating that the adhesive used has a VOC of less than 100 (g/L less water).
 - 2. Credit EQ 4.2: Wood flooring coating data indicating finish used has a VOC of less than 275 g/L.
 - 3. Credit MR 6: Rapidly renewable material

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Manufacturer Qualifications
 - a. Minimum five years experience in the development, manufacture and distribution of high-performance polyurethane floor coatings and stains for wood flooring.
 - 2. Installer Qualifications:
 - a. Minimum three years experience in hardwood flooring installation.
 - b. **Minimum three years experience in installation of hardwood flooring over radiant heating systems.**

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Reference Section 01660–Product Storage and Handling Requirements.
- B. Deliver engineered wide-plank bamboo flooring to project site in original packaging not less than 5 days prior to installation start date. Leave flooring in their sealed boxes until time of actual installation.

1.5 PROJECT/SITE CONDITIONS

*For a **radiant floor heating system** specify "5 days" in the paragraph below, otherwise specify "72 hours."*

- A. Environmental Requirements: Area to receive pre-finished wide-plank bamboo flooring, **and adhesive** must be maintained at normal occupancy temperature and humidity levels (40-60 R.H) for minimum [72 hours] [5 days] prior to, during and continuously following installation.
- B. Concrete sub floors: must be cured at least six weeks prior to installation.
- C. Wood sub floors: should be between 6-10% Moisture content (MC).

1.6 WARRANTY

FOR COMMERCIAL PROJECTS, USE WARRANTY ARTICLES A. AND B. FOR RESIDENTIAL PROJECTS USE WARRANTY ARTICLE C. ONLY.

- A. Structural Warranty: lifetime residential warranty against delamination, separation, buckling or cupping as a result of a manufacturing defect when installed and maintained in accordance with manufacturer's installation instructions.
- B. Finish Warranty: 5 years against wear through to the underlying bamboo flooring or separation from the flooring when installed and maintained in accordance with



manufacturer's installation and maintenance instructions: two coats of MP765 water-base polyurethane is applied yearly for high-traffic retail areas, two to three years for low to medium commercial traffic and five to seven years for residential applications.

- C. Color Warranty: no fading or discoloration of the stain over time not due to natural shading from direct exposure to sunlight.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Duro-Design Inc.
4656 Louis B. Mayer,
Laval, Québec, Canada H7P 6E4
Website: <http://www.durodesign.com/>
Toll free: (888) 528-8518
Tel.: (450) 978-3403
Fax: (450) 978-2542
e-mail: info@durodesign.com

| *Insert name, address and phone numbers of local distributor/dealer below.*

- 1. Distributor/Dealer:

- B. Prefinished Engineered Wide-Plank Bamboo Flooring:
 - 1. **Flat Grain:**
 - a. **Colour: [Natural] [DuroDesign Colour] [Natural and colored as shown on Drawings].**
 - 2. **Vertical Grain:**
 - a. **Colour: [Natural] [DuroDesign Colour] [Natural and colored as shown on Drawings].**

- C. Substitutions: None Permitted.

2.2 MATERIALS

- A. Engineered Wide-Plank Bamboo Flooring:
 - 1. Species: Mao Zhu (Moso) (Phyllostachys Pubescens)
 - 2. Size: 7-3/8 inches (187 mm) wide by 19/32 inch (15 mm) thick by 72 inches (1829 mm)
 - 3. Construction: 1/8 inch (3.2mm) bamboo lamination on a 8-ply hardwood ply core bonded with waterproof adhesive.
 - 4. Edge: Micro-Bevel-edged Tongue and groove.
 - 5. Back: Flat.
 - 6. Chemical Treatment: Natural borate solution and hydrogen peroxide to eliminate pests and mildew.
 - 7. Factory finish: Six (6) coats MP 765 water base polyurethane for high traffic use and maximum transparency
 - 8. Physical Property Performance Requirements:



- a. Hardness: ASTM D 1037, Janka Ball: Minimum 1820 lbs (8100 N).
- b. Flammability: ASTM E 648: Class I Interior Floor Finish rating per NFPA 101.
- c. Smoke Density: ASTM E 622: Maximum 270 in flaming mode; 330 in non-flaming mode.
- d. Compressive Strength: ASTM D 3501: Minimum 7,600 psi (52 MPa) parallel to grain; 2,600 psi (18 MPa) perpendicular to grain.
- e. Tensile Strength: ASTM D 3500: Minimum 15,300 psi (105 MPa) parallel to grain.
- f. Slip resistance (ASTM C-1028): Dry .7048, Wet .7293
- g. Abrasion Resistance: ASTM D 4060, CS-17 Taber abrasive wheels: Final wear-through: Minimum 12,600 cycles.
- h. Moisture Content: ASTM D 4442, Oven Dry Method: 5.47 percent average.

B. Adhesive: [Glue-down method: One-part moisture-cured urethane premium wood floor adhesive (such as Bostik's Best).] [Floating method: PVA wood adhesive.]

2.3 ACCESSORIES

A. Sub floor filler: Portland cement-based as recommended by flooring manufacturer.

Insert accessories such as baseboards, transition strips, and thresholds here. Coordinate installation of transition strips to other flooring materials and finished floor heights, if applicable, and determine which flooring installer should provide transition materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates upon which engineered wide-plank bamboo flooring will be installed.
 1. Verify that sub floor is structurally sound, clean, dry, and free of contaminants that would interfere with bonding of the flooring adhesive (such as concrete curing compounds, waxes or oils).
 2. In wood frame structures, do not begin installation of flooring until structure has been dried out, with moisture content of wood sub floors between 6 and 10 percent.

Following three paragraphs apply only to bamboo flooring installed over concrete substrates.

3. Test concrete floors for moisture vapor emission using a Calcium Chloride test. Do not install flooring if vapor pressure exceeds 3 lbs per 1,000 square feet (15 g per m²) in 24 hours.
 4. Test alkalinity of the concrete slab to confirm it is within adhesive manufacturer's acceptable range.
 5. Document test results and mark all test location(s) on As-Built Drawings.
- B. Verify that HVAC system is operating and maintaining occupancy level temperature and humidity conditions.
- C. Report unsatisfactory conditions to Architect and/or General Contractor and correct before proceeding.



3.2 PREPARATION

- A. Do not acclimatize as with conventional hardwood flooring. Leave engineered wide-plank bamboo flooring in their sealed boxes until time of actual installation.
- B. Grind and fill sub floor using methods and materials appropriate to the sub floor construction to eliminate humps and depressions exceeding 1/8 (3 mm) inch in 6 feet (1830 mm).
- C. Clean surfaces thoroughly prior to installation.

3.3 INSTALLATION

Under normal installation conditions, the manufacturer's installation instructions are sufficient. Unusual or unique site or design conditions may demand supplementary information in this article.

- A. Engineered wide-plank bamboo Flooring: Install in accordance with manufacturer's complete installation instructions by [nailing or stapling to substrate] [gluing to substrate]. Details below are a summary only.
- B. Lay flooring in the direction(s)/pattern(s) as shown on Drawings.
- C. For a blended appearance select pieces randomly from several boxes.
- D. Allow 3/8-inch (10 mm) space for expansion and movement of flooring at walls and permanent obstructions.

| Include the following paragraphs if floating installation method is used.

- E. Lay 6-mil polyethylene vapor barrier on substrate. Lap edges and ends a minimum of 8" and tape seal. Lay Foam underlayment per manufacturer's instructions.
- F. Apply thin glue bead to the top inside edge of groove at side and end of each board. Press boards firmly together, using tapping block as necessary. Tape glued boards together at side and end seams. Allow first two rows to set and dry before continuing to lay subsequent rows in the same fashion.

| Include the following paragraphs if adhesive installation method is used.

- G. Do not use the "wet lay" or "loose lay" installation method. This method will trap moisture under the floor and could cause the flooring to warp. Spread adhesive with appropriate notched trowel at 45 deg. angle. Spread as much adhesive as can be covered by flooring in one hour (or as recommended by your adhesive instructions). Once adhesive has tacked, lay the first row of flooring and continue laying flooring until adhesive is covered.
- H. Adhere flooring planks without gaps. Ensure that each floor strip is completely adhered to substrate.
- I. Immediately remove excess adhesive from pre-finished surface of flooring.
- J. **Accessories: Install using methods appropriate to the accessory and flooring system.**



3.4 CLEANING

- A. Reference Section 01740–Cleaning.
- B. Follow manufacturer’s recommended maintenance instructions.

3.5 PROTECTION

- A. Repair or replace defective or damaged work as directed by the Architect. All chipped, scratched or otherwise damaged or defective work will be repaired or replaced. All repairs shall be undetectable. Use manufacturer-supplied touch up stain if required.
- B. Cover and protect completed engineered wide-plank bamboo flooring from further construction traffic with heavy Kraft-paper or other suitable covering. Do not use non-breathable sheet or film that could cause condensation to form. Maintain covering throughout remainder of construction period.

END OF SECTION

This specification was compiled in January 2008.
The most recent revision of this document is available at www.durodesign.com