

**BAMBOO FLOORING
SECTION**

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes pre-finished Higuera Hardwoods bamboo flooring and accessories for floors and stairs.

1.2 RELATED DOCUMENTS

- A. Related Sections include the following:

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. LEED Submittals:
 - 1. Product Data for Credit EQ 4.1: For wood flooring installation adhesives, documentation including printed statement of VOC content.
 - 2. Product Data for Credit EQ 4.2: For field-applied finishes for wood flooring, documentation including printed statement of VOC content.
 - 3. Product Data for Credit EQ 4.4: For composite wood products, documentation indicating that the bonding agent contains no urea formaldehyde.
 - 4. Or product Data for credit MR7- Forestry Stewardship Council (FSC)-approved material
 - 5. Product Data for Credit MR 4.1 and Credit MR 4.2: For recycled-rubber underlayment, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating costs for each product having recycled content.
- C. Shop Drawings: For each type of floor assembly and accessory. Include plans, elevations, sections, details, starting point, direction and attachments to other work. Include expansion provisions and trim details.
- D. Samples for Initial Selection: Refer to finish legend sheet A2.80 for finish selection.
- E. Samples for Verification: For each type of flooring and accessory, with stain color and finish required, approximately 12 inches (300 mm) long and of same thickness and material indicated for the Work and showing the full range of normal color and texture variations expected.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
- B. Hardwood Flooring: National Wood Flooring Association certified installer.
- C. Build 4'-0" by 4'-0" mockup of typical flooring area including base and shoe moldings.

1. Dry lay a few rows before starting installation to confirm layout.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver flooring materials in unopened cartons or bundles.
- B. Examine flooring and accessories prior to installation for color, finish, and quality.
- C. Protect flooring from exposure to moisture. Do not deliver flooring until after concrete, masonry, plaster, ceramic tile, and similar wet work is complete and dry. Hardwood flooring should stay away from water.
- D. Store wood flooring materials in a dry, warm, ventilated, weather tight location.

1.6 PROJECT CONDITIONS

- A. Conditioning period begins not less than seven days before wood flooring installation, is continuous through installation, and continues not less than seven days after wood flooring installation.
 1. Environmental Conditioning: Maintain an ambient temperature between 65 and 75 deg F (18 and 24 deg C) and relative humidity planned for building occupants in spaces to receive wood flooring during the conditioning period.
 2. Wood Flooring Conditioning: Move wood flooring into spaces where it will be installed, no later than the beginning of the conditioning period.
 - a. Do not install flooring until it adjusts to relative humidity of, and is at same temperature as, space where it is to be installed typically 24-72 hours.
 - b. Do not open sealed packages to allow wood flooring to acclimatize immediately on moving flooring into spaces in which it will be installed. Bamboo flooring does not acclimate to project conditions in opened boxes.
 - c. Do not store directly on concrete prior to opening.
- B. After conditioning period, maintain relative humidity and ambient temperature planned for building occupants.
- C. Install factory-finished flooring after other finishing operations, including painting, have been completed. Install after all wet work is completed at job site.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Wood Flooring: Equal to 5 percent of amount installed for each type of wood flooring indicated.

PART 2 - PRODUCTS

2.1 PRE-FINISHED GRADE A BAMBOO FLOORING AND ACCESSORIES

- A. Certified Wood: Provide wood flooring produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- B. Solid-Bamboo Flooring: Boiled to remove sugars, impurities, and insects, kiln dried to 5 to 9 percent maximum moisture content, tongue and groove and end matched, and with backs channeled.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Higuera Hardwoods or equal product following the section of submittals for substitutions.
 - a. Species and Grade: Pre-finished, Grade A
 - b. Cut: Horizontal cut
 - c. Thickness: 5/8"
 - d. Face Width: 3 7/8"
 - e. Lengths: 72"
 - f. Micro-beveled edges subject to clients approval
 - g. Floor Sealer: per manufacturer- Not required for prefinished
 - h. Finish Coats: 7 coats 100% solids UV cured Acrylic Urethane with aluminum oxide.
 - i. Apply stain prior to final finish coats for higher durability. –Not required
 - 2. Abrasion Resistance: meets ASTM C501
 - 3. Flammability: meets ASTM E648
 - 4. Smoke Density: meets ASTM E622 = 450 or less
 - 5. Indentation Resistance: meets ASTM 1037
 - 6. Slip Resistance: meets ASTM D2047 and exceeds 590 of static co-efficient according to OSHA.
 - 7. Compressive Strength: ASTM D3501
 - 8. Tensile Strength: meets ASTM D3500

2.2 SOUND CONTROL UNDERLAYMENT

- A. Sound Control Underlayment: 1/4" Sound reducing underlayment consisting of impact-absorbing materials. Minimum Impact Insulation Class (IIC) of 50 when tested according to ASTM E 492.
 - 1. Material: Silent Step
 - 2. Thickness: 1/4"

2.3 ACCESSORY MATERIALS

- A. Fasteners: As recommended by manufacturer, but not less than that recommended in NWFA's "Installation Guidelines: Wood Flooring."
- B. Thresholds and Saddles: To match bamboo flooring. Tapered on each side.
- C. Reducer Strips: To match wood flooring. 1/2" wide, tapered, and in thickness required to match height of flooring.

- D. Cork Expansion Strip: Composition cork strip.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Installer present, for compliance with requirements for maximum moisture content, installation tolerances, and other conditions affecting performance of wood flooring.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Concrete Slabs: Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.
 - 1. Moisture Testing: Perform tests so that each test area does not exceed [200 sq. ft. (18.6 sq. m)] , and perform no fewer than two tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Perform anhydrous calcium chloride test per ASTM F 1869, as follows:
 - 1) Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m)] 4.5 lb of water/1000 sq. ft. (2.04 kg of water/92.9 sq. m) in 24 hours.
 - b. Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.

3.2 PREPARATION

- A. Concrete Slabs: Grind high spots and fill low spots to produce a maximum 3/16-inch deviation per 10' radius.
 - 1. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- B. Remove coatings, including curing compounds, and other substances on substrates that are incompatible with installation adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- C. Broom or vacuum clean substrates to be covered immediately before product installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION

- A. Comply with flooring manufacturer's written installation instructions, but not less than applicable recommendations in industry standards
- B. Wood Underlayment: Install 6-mil Polyfilm with seams overlapped a minimum of 8" to full edge of walls. Fasten seams every 18-24" Lay ¼" noise reduction pad.

- C. Provide expansion space at walls and other obstructions and terminations of flooring of not less than 3/4 inch (19 mm). Heavy objects such as reception desks and counters should be in place prior to installation of bamboo floor. Excessive weight could inhibit the floor's ability for expansion.
- D. Vapor Retarder: Comply with NOFMA's "Installing Hardwood Flooring" for vapor retarder installation and the following:
 - 1. Wood Flooring Installed Directly on Concrete: Install a layer of polyethylene sheet according to flooring manufacturer's written instructions.
- E. Sound Control Underlayment: Install over vapor retarder in accordance with manufacturer's written instructions.
- F. Solid Bamboo Flooring: Floating Installation.

Install per manufactures instructions for Commercial flooring.
- G. Pre-Lay flooring prior to installation and arrange varying grains and colors in a harmonious pattern.
- H. Do not install less than an 8" pieces at ends, corners or intersections.
- I. Install quarter round moldings to cover expansion spaces at walls.
- J. Dust mop or vacuum thoroughly to remove any dirt or debris. Clean per manufacturer's instructions.
- K. Install transition pieces as needed per manufacturer.
- L. Do not allow foot traffic for 24 hours after installation.

3.4 PROTECTION

- A. Protect installed wood flooring during remainder of construction period with covering of heavy kraft paper or other suitable material. Do not use plastic sheet or film that might cause condensation.
 - 1. Do not move heavy and sharp objects directly over kraft-paper-covered wood flooring. Protect flooring with plywood or hardboard panels to prevent damage from storing or moving objects over flooring.

END OF SECTION