

SECTION 061500

WOOD, LUMBER AND TIMBERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide labor, materials and equipment necessary to complete the work of this Section, including the following:
  - 1. Wood, lumber and timbers for the following application:
    - a. , Lumber and Timbers
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections.
  - 1. Section 061000 – ROUGH CARPENTRY for other rough carpentry work.
  - 2. Section 062000 – FINISH CARPENTRY for other finish carpentry work.
- C. Reference Standards Technical: Comply with applicable requirements of the following:
  - 1. ASTM D143 – Standard Test Methods for Small Clear Specimens of Timber.
  - 2. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
  - 3.
- D. Reference Standards Legal and Environmental: Comply with applicable requirements of the following:
  - 1. Iron Woods Grading Rules
  - 2. Iron Woods Allowable Design Values by Grade
  - 3. ASTM D143 – Standard Test Methods for Small Clear Specimens of Timber.
  - 4. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
  - 5. THUSA Green By Nature “Due Care” Standards Policies and Procedures
  - 6. U.S. Lacey Act.
  - 7. U.S. Buy American Act.
  - 8. U.S. Foreign Corrupt Practices Act
  - 9. U.S. Forced Labor Laws

1.2 SUBMITTALS

- A. Submittals: Submit under provisions of Division 01.
- B. Product Literature: Manufacturer’s product literature describing all components. Include Best Practices installation and maintenance recommendations and instructions.
- C. Grading Rules – “Iron Woods “or Equal” Tropical Hardwood Decking - Grading Rules and Definitions”.

- D. Verification Samples: For each type of decking, lumber and timbers.
- E. Certificate of Compliance "Inspection": A vendor certificate confirming product compliance with grade and quality requirements.
- F. Certificate of Compliance "Technical": A vendor certificate confirming product compliance with minimum specified Physical, Mechanical and Technical performance requirements as defined by the specification.
- G. MSDS (Material Safety Data Sheet) – Submit a Material Safety and Data Sheet for the wood products supplied on the project.
- H. Verification of Environmental Compliance: Manufactures documented, comprehensive and verifiable Policies and Procedures confirming participation in and compliance with 'Green By Nature...Build with Conscience' or Pre-Approved Equal "Due Care" Environmental Compliance Program.
- I. Certificate of Compliance, Green By Nature: Controlled Wood, Chain of Custody, Life Cycle Impact and Due Care Policies And Procedures. Submit Vendor documented, comprehensive and verifiable Policies and Procedures outlining step by step a process of verification and accountability related to Environmental Compliance Submittals.
- J. Certificate of Compliance, Green by Nature: Submit a certificate confirming compliance with "Green By Nature 'Due Care' Policies and Procedures – Life Cycle Impact, CITES, U.S. Buy American Act, U.S Foreign Corrupt Practices Act, U.S. Forced Labor Laws, U.S. Lacey Act, Third Party Controlled Wood, Chain of Custody, Verification of Legal Origin, and Legal Compliance.
- K. Certificate of Compliance, Verification of Legal Origin / Verification of Legal Compliance: Submit Third Party Environmental NGO such as Unifloresta™, Rainforest Alliance™ "Or Approved Equal" confirming audit of legal chain of custody and legal compliance from harvest source to importer as verification of U.S. Lacey Act Compliance.

### 1.3 QUALITY ASSURANCE

- A. Manufacturer/Vendor Qualifications: Products covered under this Section shall be supplied by a single manufacturer/vendor unless otherwise specified with a minimum of fifteen years proven production or supply experience of the materials specified.
- B. Installer Qualifications: Installer shall have a minimum of three years proven construction experience and be capable of estimating and building from drawings and details, determining elevations, in addition to proper material handling.
- C. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials during shipment, storage and construction against damage. If material is air dried, stickers of a minimum of 10mm shall be placed between each layer of boards when packed. If material is kiln dried, material shall be dense packed and wrapped.
- B. All units shall be individually strapped to wood pallets or blocking of a minimum thickness to allow the egress of lift forks using high strength strapping with a minimum of 4 straps per crate.

- C. Store a minimum of 4 inches off the ground in a dry location and cover with polyethylene to protect from contact with materials which would cause staining or discoloration.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Basis-of-Design: Iron Woods™ Ekki/Azobé, Lophira Alata species by Timber Holdings USA LLC, Tel 888-932-9663, www.ironwoods.com
  - 1. Moisture Content:
    - a. Air Dried, moisture content of 18 to 25 percent; all dimensions when net thickness is over 1.5 inch.
  - 2. Surface:
    - a. S4S (surfaced four sides), E4E (eased four edges). Edges shall be eased to a radius of 1/8 inch.
    - b. Rough Sawn. Edges shall be square.
  - 3. Dimensions on Drawings: Nominal and Actual Size shall be listed.
  - 4. Length:
    - a. Lumber shall be supplied over specified length for final fit in the field.
  - 5. Dimensional Tolerance: Plus or minus 0.125 inch in width and 0.0625 in thickness, measured at time of milling.
  - 6. End Coating: Supply lumber with ends sealed with Anchorseal™, Paraffin "Or Equal" wax end sealer. Lumber shall be resealed after cutting to reduce end splits.
- B. Grade Option/Requirements: Iron Woods Premium Select Architectural Grade (First 4 Faces 4 Edges) Inspected and Hand Selected for Serviceable appearance on 4 faces and 4 Edges (reversible).
  - 1. Grading Face, Back Face, and Edges – Clear All Heart.
    - a. Include - Appearance characteristics.
    - b. Include - Physical characteristics which can be removed using normal installation methods, tools, or sanding.
    - c. Exclude - Sound defects.
    - d. Exclude - Unsound defects.
    - e. Exclude - Milling defects.
- C. Mechanical Properties: Meet or exceed the following when tested in accordance with ASTM D143:
  - 1. Bending Strength: 17,800 psi
  - 2. Modulus of Elasticity: 2,010,000 psi/
  - 3. Compression Parallel to Grain: 8,160psi.
  - 4. Compression Perpendicular to Grain: 2,900 psi.
  - 5. Shear Parallel to Grain: 1,971 psi

6. Average Air-Dry Density: Ranges from 64 to 68 pcf.
7. Basic Specific Gravity: Ranges from 0.89-1.09.

D. Decay Resistance: Meet or exceed International Building Code/International Residential Code definition for “Naturally Durable Wood” being durability rated by the U.S Forest Products Laboratory or the Forest Research Laboratory Oregon State University as Class 2 or better.

Ekki/Azobe (Lophira Alata) = Class 1.

E. Fire Rating: Meet or exceed the following.

1. Lumber supplied shall be naturally fire resistant without the use of any fire resistant treatments to meet NFPA Class A, in accordance with ASTM E 84 standard test methods.
2. Lumber Supplied shall meet International Building Code / International Residential Code minimum requirements for “Fire Resistant Wood”.

F. Environmental Compliance:

1. Green by Nature Compliance: All lumber shall meet minimum environmental requirements as defined under Green By Nature...Build With Conscience™ Controlled Wood, Chain of Custody, Life Cycle Impact and Due Care – Environmental Compliance Standards, Policies and Procedures confirming that:
  - a. All Iron Woods products have been verified of legal origin and compliance as being, legally harvested, transported, exported, imported and documented in compliance with all country of origin, international and domestic laws, rules, regulations and treaties pertaining to the fair and legal trade of forest products including but not limited to the U.S. Department of Agriculture Lacey Act, ITTA (International Tropical Timber Trade Agreement), CITES (Convention On The International Trade of Endangered Species), and U.S. Buy American Act.
  - b. All Iron Woods products are derived from forests which are naturally occurring, renewable and sustainable and are not harvested from forests or forest plantations where traditional or civil rights have been violated, forests having high conservation values which are threatened, forests that have been genetically modified or forests which have been converted to non-forest use. All Iron Woods and their packaging materials have been kiln dried and or fumigated and are free from live and or invasive insect, plant or animal species.
  - c. All Iron Woods products are 100 percent organic and grown without the use of chemical fertilization and are regenerated naturally or by seeding and replanting. The natural service life of Iron Woods®, exceed their natural growth cycle, trap and store carbon and are able to be reclaimed, reused or recycled. Iron Woods® do not require for service any petroleum based or inorganic chemical treatments adhesives or coatings. Iron Woods® do not require for service any specialized handling storage or disposal procedures and generate zero post-industrial or post-consumer non-biodegradable waste. Iron Woods are also safe for human and animal contact, meet Low VOC emission standards and meet International Building Code and International Residential Code requirements for naturally durable wood.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Prior to starting work inspect the substrate to ensure that it has been properly prepared to accept materials specified in this Section. Commencement of work shall imply acceptance of surfaces and deck conditions.
  - 1. Review drawings for items such as planters, hot tubs, sculptures or equipment that will be installed on top of wood decking, lumber and timbers. Verify with manufacturer whether additional supports are required.
  - 2. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
  - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals including the following:
  - 1. Install materials plumb, true to line, cut and fitted.
  - 2. Scribe and cope as required for accurate fit to adjacent construction.
  - 3. Use manufacturer's recommended fasteners.
  - 4. Fasten tight to supports. Provide shims if there are variations in framing.

#### 3.3 CLEANING AND PROTECTION

- A. Protect from damage during construction operations. Promptly repair any damaged surfaces. Remove and replace work which cannot be satisfactorily repaired.
- B. Clean using materials recommended by the manufacturer to remove stains, dirt and debris prior to final acceptance.

END OF SECTION

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