

## SECTION 061500

### WOOD DECKING AND LUMBER

#### **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 decking, lumber and timbers for the following applications:
    - a. Decks
    - b. Boardwalk
    - c. Cladding
    - d. Walkways
    - e. Fencing
    - f. Site furnishings
    - g. Pavilions
    - h. Pergolas
    - i. Dividers
    - j. Porte cochere
    - k. Lattice structures
    - l. Arbors
    - m. Paneling
    - n. Ceilings
- 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.
  3. Section 061500 – WOOD DECKING
  4. Section 063000 – EXTERIOR CARPENTRY

C. Reference Standards:

1. ASTM D1037-12: Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials hardness
2. ASTM D143: Standard Test Methods for Small Clear Specimens of Timber for bending strength and moisture content
3. ASTM E303-22: Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
4. ASTM E84 - 23: Standard Test Method for Surface Burning Characteristics of Building Materials
5. CEN/TS 15083-1:2005: Durability of wood and wood based products
6. EN ISO 12460 - 5 - 2015: Emissions from wood products
7. EN 927-6 and ISO 105-A02: Testing for color fastness

1.2 **SUBMITTALS**

- A. Submittals: Submit under provisions of Division 01.
- B. Product Literature: Manufacturer's product literature describing all components. Include installation recommendations and instructions.
- C. Verification Samples: For each type of decking and lumber.
- D. Certificate of Compliance, Forest Stewardship Council: FSC Controlled Wood, Chain of Custody.
- E. USGBC LEED Submittals Only, Certified Wood: Submit chain-of-custody certificates signed by manufacturer certifying that wood products comply with LEED forest certification and chain-of-custody requirements. Include evidence that mill and fabricator is certified for chain-of-custody or that outsourcing agreements are in place approved by an FSC-accredited certification body. Include statement indicating costs for each certified wood product.
- F. Certificates of Compliance: Submit documentation of the following.
  1. MSDS (Material Safety Data Sheet) – Submit a Material Safety and Data Sheet for the wood products supplied on the project.

### 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 ten years proven production or supply experience.
- 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.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials during shipment, storage and construction against damage.
- 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.
- 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: Sicaro High Performance Timber # S-WWD-14421-01-AB/T nominal 13/16" x 5.5" by SicaroUSA, tel 111-444-4444, hello@sicarousa.com, www.sicarousa.com
  - 1. Moisture Content:
    - a. Moisture content of 10% to 14 %; all dimensions when net thickness is over 1 inch.

2. Surface:
  - a. S4S (surfaced four sides), E2E (eased two edges). Edges shall be eased to a radius of 3mm.
  - b. Rough Sawn. Edges shall be square.
  - c. Custom profiles shall be as per plans and specifications.
  - d. Pitch pockets and checks may be visible and are a natural occurrence in wood.
  - e. Cupping: Max 1 % of width.
3. Dimensions on Drawings: Nominal and Actual Size shall be listed.
4. Length:
  - a. Lumber shall be supplied at or over specified length for final fit in the field.
  - b. Lumber shall be supplied precision trimmed to specified lengths only when specified in writing.
5. End Coating: protect with quality wax or end seal products.

B. Mechanical Properties: Meet or exceed the following when tested in accordance with ASTM D143:

1. Bending Strength Sicaro Safariwood (MOR): 1.94 Mpsi
2. Bending Strength Sicaro Wildwood (MOR): 1.83 Mpsi
3. Modulus of Elasticity Sicaro Safariwood (MOE): 18,320 psi
4. Modulus of Elasticity Sicaro Wildwood (MOE): 16,982 psi
5. Average Air-Dry Density: Approximately 42 lb/ft<sup>2</sup>, 670 Kg/m<sup>3</sup>
6. Basic Specific Gravity: Ranges from 0.80-0.91.
7. Maximum swelling: 4% (dry to wet, tangential)

Above values are typical, but not engineering design values.

- C. Fire Rating, Acute Inhalation, Combustion Toxicity Requirements: Meet or exceed the following.

Lumber supplied shall be fire resistant to Class A without the use of any fire-resistant treatments to meet ASTM E84-23 "Standard Method of Test for Surface Burning Characteristics of Building Materials".

- D. Environmental Compliance:

1. All Biotanex fortification formulations are water based with the main component being polymeric thermoset resin made from raw materials based on natural gas or oil but future proofing with renewables is feasible. One raw material that makes up about 50% by weight of the polymer is steadily becoming more available from renewable resources, in fact all of the elements required to make the formulation could be derived from sustainable materials. As these become commercially available they will be adopted and used to make renewable bio formulations.
2. The service life of Sicaro products exceed that of non fortified plantation feedstock, trap and store carbon and are able to be reclaimed, reused or recycled. Sicaro wood products can be used without petroleum based or inorganic chemical treatments adhesives or coatings however these can enhance the color and appearance of these products over their lifecycle. Sicaro products do not require for service any specialized handling storage or disposal procedures and generate zero post-industrial or post- consumer non-biodegradable waste. Sicaro 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.
3. USGBC LEED Compliance Only: Certified Wood: Materials shall be 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."

E. Fastening Systems:

1. Use A2 or A4 stainless steel fastenings to prevent staining and increase the lifespan of the installation.
2. Sicaro products are suitable for hidden fixings, side fixings and face fixing

**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 heavy static items such as planters, hot tubs, sculptures or equipment that will be installed on top of wood decking, lumber and timbers.

**3.2 INSTALLATION**

- A. Install in accordance with manufacturer's instructions and approved submittals including the following:
1. Install materials smooth side up
  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.
  5. Use of a quality penetrating oil to be used applied to all faces, side and sealed ends.

**3.3 CLEANING AND PROTECTION**

1. Protect from damage during construction operations. Promptly repair any damaged surfaces. Remove and replace work which cannot be satisfactorily repaired.