

SECTION 061100**ROUGH CARPENTRY****PART 1 - GENERAL****1.1 GENERAL PROVISIONS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions of the Specifications and Addenda apply to work of this section.
- B. The Contractor shall cooperate with and coordinate all other trades in executing the work described in this section.
- C. The work covered by this section consists of furnishing all labor and materials, equipment, and tools, protection and performing all operations in connection with the installation of framing lumber and other rough carpentry.

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product indicated. Indicate component materials and dimensions and include construction and application details
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Include physical properties of treated materials.
 - 3. For fire-retardant treatments, include physical properties of treated plywood both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5516.
 - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
- B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses.
- C. Research/Evaluation Reports:
 - 1. Engineered wood products.
 - 2. Power-driven and Powder-actuated fasteners.
 - 3. Expansion anchors.
 - 4. Metal framing anchors.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

1.4 WARRANTY

- A. Submit chemical manufacturer's warranty for wood treatment, warranting that wood treatment uses chemicals that will not require incising, contain colorants, bleed through or otherwise adversely affect finishes for the period of warranty
 - 1. Warranty Period: 2 years from substantial completion.

PART 2 – PRODUCTS**2.1 WOOD PRODUCTS, GENERAL**

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Provide dressed lumber, S4S, unless otherwise indicated.
 - 3. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - 1. Allowable Design Stresses: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Wood Structural Panels:
 - 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.

2.2 DIMENSION LUMBER

- A. Non-Load-Bearing Interior Partitions: Stud grade and any of the following species:
 - 1. Mixed southern pine; SPIB.
 - 2. Eastern softwoods; NELMA.
- B. Framing Other Than Non-Load-Bearing Partitions: No. 2 grade and the following species:
 - 1. Douglas fir-larch, Douglas fir-larch (north), or Douglas fir-south; NLGA, WCLIB, or WWPA.

2.3 TIMBER AND MISCELLANEOUS LUMBER

- A. For timbers of 5-inch nominal (117-mm actual) size and thicker, provide material complying with the following requirements:
 - 1. Species and Grade: Douglas fir-larch, No. 1 grade; NLGA, WCLIB, or WWPA.
- B. Provide miscellaneous lumber for support or attachment of other construction, including the following:

1. Rooftop equipment bases and support curbs.
2. Blocking.
3. Cants.
4. Nailers.
5. Furring.
6. Grounds.

- C. For items of dimension lumber size, provide Stud, grade lumber with 19 percent maximum moisture content of any species.

2.4 ENGINEERED WOOD PRODUCTS

- A. Laminated-Veneer Lumber: Composite of wood veneers with grain primarily parallel to member lengths, manufactured with exterior-type adhesive complying with ASTM D2559. Allowable design values determined according to ASTM D5456.

1. Manufacturers:
 - a. Boise Cascade Corporation.
 - b. Georgia-Pacific Corporation.
 - c. Louisiana-Pacific Corporation.
 - d. Pacific Woodtech Corp.
 - e. Trus Joist MacMillan.
2. Extreme Fiber Stress in Bending, Edgewise: 2600 psi for 12-inch nominal-depth members.
3. Modulus of Elasticity, Edgewise: 1,800,000 psi.

2.5 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Subflooring: Exterior, Structural I, single-floor panels or sheathing.
1. Span Rating: Not less than 24
 2. Nominal thickness: Not less than 1 inch

2.3 PRESERVATIVE-TREATMENT

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark wood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
1. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes. Mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.

- D. Application: Treat items indicated on Drawings and wood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.4 FIRE-RETARDANT-TREATMENT

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treatment by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Use treatment that does not promote corrosion of metal fasteners.
 - 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated wood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
 - 4. Design Value Adjustment Factors: Treated lumber shall be tested according ASTM D 5516 and design value adjustment factors shall be calculated according to ASTM D 6305. Span ratings after treatment shall be not less than span ratings specified. For applications where high-temperature fire-retardant treatment is indicated, span ratings for temperatures up to 170 deg F shall be not less than span ratings specified.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.
 - 1. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes. Mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat wood indicated on Drawings, and required by NY City Building Code.

2.6 MISCELLANEOUS MATERIALS

- A. Fasteners:
 - 1. Power-Driven Fasteners: CABO NER-272.

2. Bolts: Steel bolts complying with ASTM A307 with ASTM A563 hex nuts and, where indicated, flat washers.
- B. Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A653, G60 coating designation.
1. Manufacturers:
 - a. Alpine Engineered Products, Inc.
 - b. Cleveland Steel Specialty Co.
 - c. Harlen Metal Products, Inc.
 - d. KC Metals Products, Inc.
 - e. Silver Metal Products, Inc.
 - f. Simpson Strong-Tie Company, Inc.
 - g. United Steel Products Company, Inc.
 2. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
 3. Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 1. Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.
 2. Published requirements of metal framing anchor manufacturer.
 3. Table 2304.9.1, "Fastening Schedule" in the New York City Building Code.
- C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- D. Fastening Methods:
 1. Subflooring: Glue and nail to wood framing.
 2. Space panels 1/8 inch apart at edges and ends.

END OF SECTION 061100

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