

SECTION 061000
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Structural composite lumber framing.
- C. Nonstructural dimension lumber framing.
- D. Rough opening framing for doors, windows, and roof openings.
- E. Sheathing.
- F. Roofing nailers.
- G. Preservative treated wood materials.
- H. Miscellaneous framing and sheathing.
- I. Concealed wood blocking, nailers, and supports.
- J. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

- A. ANSI A190.1 - Product Standard for Structural Glued Laminated Timber; 2022.
- B. ANSI A208.1 - American National Standard for Particleboard; 2022.
- C. APA Z725 - Performance Rated I-Joists Design and Construction Guide; 2024.
- D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- F. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing; 2019a.
- G. ASTM D5055 - Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists; 2019, with Editorial Revision (2020).

- H. ASTM D5456 - Standard Specification for Evaluation of Structural Composite Lumber Products; 2021, with Editorial Revision.
- I. AWWA U1 - Use Category System: User Specification for Treated Wood; 2025.
- J. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. PS 1 - Structural Plywood; 2023.
- L. PS 2 - Performance Standard for Wood Structural Panels; 2018.
- M. PS 20 - American Softwood Lumber Standard; 2025.
- N. WWP A G-5 - Western Lumber Grading Rules; 2025.

1.03 SUBMITTALS

- A. Structural Composite Lumber: Submit manufacturer's published structural data including span tables, marked to indicate which sizes and grades are being used; if structural composite lumber is being substituted for dimension lumber or timbers, submit grading agency structural tables marked for comparison.
- B. Wood I-Joists: Submit shop drawings and product data for wood I-Joists per Structural Drawings.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species and Grade: As indicated on structural drawings.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Western Wood Products Association; WWP A G-5.
- B. Sizes: Nominal sizes and grades as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Stud Framing: As indicated on structural drawings.
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

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1. Lumber: S4S, No. 2 or Standard Grade.
2. Boards: Standard or No. 3.

2.03 EXPOSED DIMENSION LUMBER

- A. Sizes: Nominal sizes as indicated on drawings.
- B. Surfacing: S4S.
- C. Moisture Content: S-dry or MC19.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16):
 1. Species and Grades: As indicated on drawings for various locations.

2.04 EXPOSED TIMBERS

- A. Submit manufacturer's certificate that products meet or exceed specified requirements, in lieu of grade stamping.
- B. Moisture Content: Kiln-dry (20 percent maximum).
- C. Surfacing: S4S.
- D. Species and Grade: As indicated on drawings.

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2.05 STRUCTURAL COMPOSITE LUMBER

- A. Structural Composite Lumber Materials: Factory-fabricated engineered wood products consisting of wood veneers, strands, or flakes pressed with moisture-resistant adhesive into blocks of material, evaluated in accordance with ASTM D5456.
 1. Laminated Veneer Lumber (LVL): Engineered wood products consisting of thin wood veneer bonded together with adhesive with grain of veneers running parallel to long dimension.
 2. Laminated Strand Lumber (LSL): Engineered wood products consisting of flaked wood strands bonded together with adhesive.
 3. Parallel Strand Lumber (PSL): Engineered wood products consisting of long wood strands compressed together running parallel to long dimension.
- B. Structural Composite Lumber Assemblies:

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1. Wood I-Joists: Factory-prefabricated engineered wood structural members consisting of structural composite flanges and oriented strand board webs, bonded together with adhesive, evaluated in accordance with ASTM D5055.
 - a. Markings: Comply with APA Z725.

2.06 CONSTRUCTION PANELS

- A. Subflooring: PS 2 type, rated Sheathing.
 1. Bond Classification: Exterior.
 2. Span Rating: As indicated on structural drawings..
 3. Performance Category: 3/4 PERF CAT.
- B. Roof Sheathing: PS 2 type, rated Structural I Sheathing.
 1. Bond Classification: Exterior.
 2. Span Rating: As indicated on structural drawings..
 3. Tongue and groove edges or square edges with panel clips.
- C. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.
 1. Span Rating: As indicated on structural drawings.

2.07 ACCESSORIES

- A. Fasteners and Anchors:
 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
- B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 1. For contact with preservative treated wood in exposed locations, provide minimum G185 galvanizing complying with ASTM A653/A653M.
- C. Sill Gasket on Top of Foundation Wall: 3/8 inch thick, closed-cell plastic foam.
 1. Width: Full width of studs/bottom plate.
 2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.

- D. Subfloor Adhesives: Gap-filling construction adhesive for bonding wood structural panels to wood-based floor system framing; complying with ASTM D3498.
- E. Water-Resistive Barrier: See Section 072500.

2.08 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: Per structural drawing requirements.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.
 - c. Treat lumber in contact with masonry or concrete.

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PART 3 EXECUTION

3.01 PREPARATION

- A. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.

- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
- E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- C. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

3.04 INSTALLATION OF CONSTRUCTION PANELS

- A. Subflooring: Fasten and glue to framing; staples are not permitted.
- B. Roof Sheathing: Fasten panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.

- 1. Nail panels to framing; staples are not permitted.

- C. Wall Sheathing: Fasten with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails or screws.

3.05 BLOCKING

- A. Provide 2x blocking in partitions for all wall mounted and recessed items, including but not limited to handrail bracket, FE's, FE cabinets, Kox box, casework, countertops, shelving, wall stops, whiteboards, tackboards, display cases, mirrors, toilet accessories, grab bars, future grab bar locations, coathooks, owner installed wall mounted equipment (OFOI), contractor installed wall mounted equipment (CFCI) and the like. Hollow wall anchors and toggle bolts are not acceptable.

Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

TOLERANCES

Framing Members: 1/4 inch from true position, maximum.

Surface Flatness of Floor: 1/8 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

Variation from Plane, Other than Floors: 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

END OF SECTION