

SECTION 06 10 00  
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
1. Wood blocking and nailers.
  2. Wood furring.
  3. Plywood backing panels.

1.2 DEFINITIONS

- A. Lumber grading agencies, and the abbreviations used to reference them, include the following:
1. NeLMA: Northeastern Lumber Manufacturers' Association.
  2. NLGA: National Lumber Grades Authority.
  3. RIS: Redwood Inspection Service.
  4. SPIB: The Southern Pine Inspection Bureau.
  5. WCLIB: West Coast Lumber Inspection Bureau.
  6. WWPA: Western Wood Products Association.

1.3 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. 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 materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  2. Include copies of warranties from chemical treatment manufacturers for each type of treatment.
  3. Wood-preservative-treated wood.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.

### 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWWA C2. ACQ products.
  - 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 lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
  - 1. Wood cants, nailers, curbs, blocking, stripping, and similar members in connection with roofing, flashing, and waterproofing.
  - 2. Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete.
  - 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
  - 4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
  - 5. Wood floor plates that are installed over concrete slabs-on-grade.

### 2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Furring.
  - 4. Grounds.

B. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 15 (if available) or 19 percent maximum moisture content and the following species:

1. Mixed southern pine; SPIB.

#### 2.4 PLYWOOD BACKING PANELS

A. DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, not less than 1/2-inch (13-mm) nominal thickness.

#### 2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- 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, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.

### 3.2 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Install to comply with Factory Mutual and NRCA standards.

### 3.3 WOOD FURRING INSTALLATION

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

### 3.4 PROTECTION

- A. Protect rough carpentry from weather.

END OF SECTION

## SECTION 06 16 00

### SHEATHING

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Wall sheathing.
- B. Related Sections include the following:
  - 1. Division 7 Section "Flexible Flashings".

##### 1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

##### 1.3 QUALITY ASSURANCE

- A. Installer trained in the installation of specified product.
- B. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to the job site in manufacturer's original packaging, containers and bundles with manufacturer's brand name and identification intact and legible.
- B. Storage and handling: Store level and handle materials to protect against contact with damp and wet surfaces, exposure to weather, breakage and damage to edges. Provide air circulation under covering and around stacks of materials.

##### 1.5 WARRANTY

- A. Materials Warranty: Provide sheathing manufacturer's standard warranty covering sheathing materials for five years commencing on date of purchase.
- B. Weathering Warranty: Provide sheathing manufacturer's standard warranty covering in-place exposure damage to sheathing for six months commencing on date of purchase by Contractor.

## PART 2 - PRODUCTS

### 2.1 WALL SHEATHING

#### A. Glass-Mat Gypsum Wall Sheathing:

1. Product: Subject to compliance with requirements, provide "Dens-Glass Gold" by G-P Gypsum Corporation, 800-327-2344.
2. Type and Thickness: Regular, 1/2 inch (13 mm) thick.
3. Size: 48 by 96 inches or 48 by 108 inches or 48 by 120 inches for vertical installation.

#### B. Optional Product:

1. Product: Subject to compliance with requirements, provide "E2XP Extended" Gold Bond Brand Sheathing by National Gypsum, 800-628-4662.
2. Type and Thickness: Regular, 1/2 inch (13 mm) thick.
3. Size: 48 by 96 inches or 48 by 108 inches or 48 by 120 inches for vertical installation.

#### C. Optional Product:

1. Product: Subject to compliance with requirements, provide "Securock" Sheathing by United States Gypsum Co, 800-950-3839.
2. Type and Thickness: Regular, 1/2 inch (13 mm) thick.
3. Size: 48 by 96 inches or 48 by 108 inches or 48 by 120 inches for vertical installation.

#### D. Optional Product:

1. Product: Subject to compliance with requirements, provide "GlasRoc" Sheathing by Certaineed, 800-233-8990.
2. Type and Thickness: Regular, 1/2 inch (13 mm) thick.
3. Size: 48 by 96 inches or 48 by 108 inches or 48 by 120 inches for vertical installation.

#### E. Optional Product:

1. Product: Subject to compliance with requirements, provide "Greenglass" Sheathing by Temple-Inland, 800-231-6060.
2. Type and Thickness: Regular, 1/2 inch (13 mm) thick.
3. Size: 48 by 96 inches or 48 by 108 inches or 48 by 120 inches for vertical installation.

#### F. Location: Where indicated in this specification and where indicated on the Drawings as "SHEATHING".

### 2.2 FASTENERS

#### A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

- B. Screws for Fastening Sheathing to Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing board to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.
  - 1. For steel framing less than 0.0329 inch (0.835 mm) thick, attach sheathing to comply with ASTM C 1002.
  - 2. For steel framing from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick, attach sheathing to comply with ASTM C 954.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine subframing; verify that surface of framing and furring members to receive sheathing does not vary more than 1/8 inch from the place of faces of adjacent members.
- B. Ensure flashing, which is indicated to be installed before sheathing, is properly anchored and of proper size.

### 3.2 INSTALLATION, GENERAL

- A. Coordinate location and installation of flashing which extends through sheathing and up behind sheathing. Install portions of sheathing behind flashing as shown on the Drawings.
- B. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.
- D. Securely attach to substrate by fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."
- E. Coordinate wall sheathing installation with flashing and dampproofing installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
- G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

### 3.3 SHEATHING INSTALLATION

- A. Provide exterior wall sheathing where sheathing is indicated on Drawings. Install sheathing in accordance with manufacturer's instructions, applicable instructions in GA-253 and ASTM C 1280.
- B. Install Dens-Glass Gold sheathing with gold side out.
- C. Arrange panels to minimize number of horizontal joints by installing the long dimension of panels vertically, where possible and secured to flanges of vertical studs. No options. 8 foot long panels may be used but 10 foot long is preferred.
- D. At corners, overlap "cut" edges of exposed gypsum with finished glass-mat edges. When sheathing installation is completed, gypsum surfaces should not be exposed to view.
- E. Care must be taken to ensure bottom board of horizontal joints does not project out past the top board above, thus creating a horizontal shelf.
- F. Apply fasteners so heads bear tightly against face of sheathing boards but do not cut into facing.
- G. Vertical Installation: Install board vertical edges centered over studs. Abut ends and edges of each board with those of adjacent boards. Attach boards at perimeter and within field of board to each stud.
  - 1. Space fasteners approximately 8 inches (200 mm) o.c. and set back a minimum of 3/8 inch (9.5 mm) from edges and ends of boards.

END OF SECTION

## SECTION 06 40 23

### INTERIOR ARCHITECTURAL WOODWORK

#### PART 1 - GENERAL

##### 1.1 SUMMARY

A. This Section includes the following:

1. Interior standing and running trim.
2. Flush wood paneling, wood frames for panels and associated wood trim.
3. Wood cabinets.
4. Shop finishing of interior woodwork.

B. Related Sections include the following:

1. Division 6 Section "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
2. Division 8 Section "Flush Wood Doors" for exterior veneer entrance doors.
3. Division 9 Section "Non-Structural Metal Framing" for partition studs.

##### 1.2 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

##### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.

- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show details full size.
2. Show locations and sizes of furring, blocking, and hanging strips, metal support frame, including concealed blocking and reinforcement specified in other Sections.
3. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.
4. For walnut veneer supply FSC-certified compliance label to first page of Shop Drawings.

- C. Samples for Initial Selection:

1. Shop-applied transparent finishes.

D. Samples for Verification:

1. Lumber with or for transparent finish, not less than 5 inches (125 mm) wide by 24 inches (600 mm) long, for each species and cut, finished on 1 side and 1 edge.
2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
3. Veneer-faced panel products with or for transparent finish, 8 by 10 inches (200 by 250 mm), for each species and cut. Include at least one face-veneer seam and finish as specified.

E. Product Certificates: For each type of product, signed by product manufacturer.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

B. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork with book-matched wood veneers.

C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

D. Forest Certification for Walnut Veneer: Provide interior architectural woodwork 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. Mockups:

1. Build 2 foot by 4 foot mockup, of complete panel, to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
  - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

## 1.7 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

## 1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Flush wood panels including wood frames: Six (6) additional wood panels and frames fabricated and finished to match installed panels given to the Owner for replacement /additional renovation work.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Species and Cut for Veneer Wall Panels and Transparent Finish: American Walnut, Plain Sliced.
- C. Wood Species for Frame and Trim of Wall Panels and Transparent Finish: Lumber from American Walnut or "stained to match" clear Poplar FAS or Ponderosa Pine C and Better.
- D. Wood Species for opaque painted finishes: Clear Poplar FAS, Ponderosa Pine C and Better, Douglas Fir C and better or Select Cypress.
  - 1. Generally, but not necessarily limited to, wood base.

## 2.2 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.

## 2.3 FLUSH WOOD PANELING

- A. Grade: Premium.
- B. Core: 3/4 inch, Medium Density Fiberboard or particleboard as recommended by fabricator to ensure dimensional stability.
  - 1. Size: Height and width as indicated on the Drawings.
- C. Veneer Wood Species and Cut: As indicated in Article 2.1 MATERIALS.
- D. Matching of Adjacent Veneer Leaves: Book match.
- E. Veneer: Grade AA, Dooge Veneers Inc., 616 698 6450, as the basis of design.
- F. Panels shall be blind fastened to metal studs framing.

## 2.4 WOOD CABINETS FOR TRANSPARENT FINISH

- A. Grade: Custom.
- B. Type of Cabinet Construction: Open cabinets with adjustable shelving.
- C. Wood Species and Cut for Exposed Surfaces: Same as for “Flush Wood Paneling”: American Walnut, Plain Sliced.
- D. Wood Species for Frame and Trim of Shelving unit: Lumber from American Walnut or “stained to match” clear Poplar FAS or Ponderosa Pine C and Better.
  - 1. Edge Banding: Minimum 1/2 inch thick.
- E. Adjustable Shelves and Supports: Multiple holes with single pin BHMA A156.9, B04071; with shelf rests, B04081.

## 2.5 SHOP FINISHING

- A. General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- B. Stain: Panels may require staining as well as transparent finish.
- C. Transparent Finish:
  - 1. Grade: Custom.
  - 2. AWI Finish System: Conversion varnish.

3. Sheen: Satin, 31-45 gloss units measured on 60-degree gloss meter per ASTM D 523.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing.

### 3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible.
- G. Paneling: Anchor paneling with concealed fasteners.
  1. Install flush paneling without vertical cup or bow or horizontal variation from a true plane.

### 3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION

