SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Wood blocking nailers and furring strips.
   2. Plywood backing panels for electrical or communications panels and equipment.

B. Related Sections include the following:
   1. Division 06 Section "Interior Architectural Woodwork" for nonstructural carpentry items exposed to view and not specified in another Section.

1.3 DEFINITIONS

A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise specified.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

   3. NLGA: National Lumber Grades Authority.
   5. WCLIB: West Coast Lumber Inspection Bureau.

1.4 ACTION SUBMITTALS

A. LEED Submittals: Refer To LEED User Guide for Interior Design and Construction as required by the Contract Documents for compliance requirements and thresholds.

   1. Credit MR 7: For all NEW WOOD (excluding particleboard, fiberboard and other composite woods), provide required certificates and INVOICES showing that a minimum of 50% of the new wood is in accordance with the Forest Stewardship Council’s (FSC) principals and criteria. Certificates must include evidence that
manufacturer is certified for chain of custody (COC) by an FSC-accredited certification body and contain the manufacturer’s COC number.

a. Invoices MUST at a minimum show FSC products, by wood type, on individual lines with costs for each. Any Non-Compliant wood must be on a separate line and labeled as such.

b. Architect must be notified in advance of purchase of any Non-FSC wood products. Failure to notify Architect in advance or such purchase is the sole responsibility of the General Contractor and the same will be held responsible for purchase of correct, compliant materials.

2. Credit EQ 4.4: Provide a list of all Composite Wood Products and confirm manufacturer No Urea Formaldehyde compliance. Cutsheet or certificate is required as part of the submittal.

3. Credit(s) IEQ 4.1 and 4.4; Provide manufacturer documentation on Low Emitting Materials inside of the weatherproofing system; must meet VOC requirements required for LEED compliance. Ensure all paints, coatings, sealants, preservatives and/or adhesives comply.

1.5 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.

B. Deliver interior wood materials tow which finished carpentry is anchored only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

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.

3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
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 the following miscellaneous rough carpentry:

1. Wood nailers, curbs, blocking, and similar members in connection with roofing and flashing.

2. Wood nailers, and blocking in exterior cavity walls and installed for anchorage of exterior windows and doors.

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.

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

1. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

C. For exposed boards, provide lumber with 15 percent maximum moisture content.

1. Mixed southern pine, No. 1 grade; SPIB.

D. For concealed boards, provide lumber with 19 percent maximum moisture for lumber not to receive wood preservative treatment.

1. Mixed southern pine, No. 2 grade; SPIB.

E. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

F. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

G. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.
2.4 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-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 carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel or hot-dip zinc coating per ASTM A 153.

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


D. Wood Screws: ASME B18.6.1.

E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

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

G. 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.

2.6 MISCELLANEOUS MATERIALS

A. Flexible Flashing: Self-adhesive, rubberized-asphalt compound, bonded to a high-density, polyethylene film to produce an overall thickness of not less than 0.025 inch (0.6 mm).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit 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. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

C. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
D. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.

E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

F. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

G. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
   1. Use inorganic boron for items that are continuously protected from liquid water.
   2. Use copper naphthenate for items not continuously protected from liquid water.

H. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. NES NER-272 for power-driven fasteners.

I. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, 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.

3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Plastic-laminate cabinets.
   2. Granite countertops and fasica panel.

B. Related Sections include the following:
   1. Division 06 Section "Miscellaneous Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.

1.3 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.

1.4 SUBMITTALS

A. Product Data: For high-pressure decorative laminate adhesive for bonding plastic laminate, solid-surfacing material, cabinet hardware and accessories and finishing materials and processes. Submit product samples for glass and stainless steel standoff's as indicated on plans.

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, including concealed blocking and reinforcement specified in other Sections.
   3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, and other items installed in architectural woodwork.
   4. Apply WI-certified compliance label to first page of Shop Drawings.
C. Samples for Verification:
   1. Plastic laminates, 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish.
   2. Thermoset decorative-panels, 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish.
   3. Solid-surfacing materials, 6 inches (150 mm) square.

1.5 LEED Submittals: Refer to LEED User Guide for Interior Design and Construction as required by the Contract Documents for compliance requirements and thresholds.

   1. Credit MR 7: For all NEW WOOD (excluding particleboard, fiberboard and other composite woods), provide required certificates and INVOICES showing that a minimum of 50% of the new wood is in accordance with the Forest Stewardship Council's (FSC) principals and criteria. Certificates must include evidence that the manufacturer is certified for chain of custody (COC) by an FSC-accredited certification body and contain the manufacturer's COC number.
      a. Invoices MUST at a minimum show FSC products, by wood type, on individual lines with costs for each. Any Non-Compliant wood must be on a separate line and labeled as such.
      b. Architect must be notified IN ADVANCE of purchase of any Non-FSC wood products. Failure to notify Architect in advance or such purchase is the sole responsibility of the General Contractor and the same will be held responsible for purchase of correct, compliant materials.

   2. Credit EQ 4.4: Provide a list of all Composite Wood Products and confirm manufacturer No Urea Formaldehyde compliance. Cutsheet or certificate is required as part of the submittal.

   3. Credit(s) IEQ 4.1 and 4.4; Provide manufacturer documentation on Low Emitting Materials inside of the weatherproofing system; must meet VOC requirements required for LEED compliance. Ensure all paints, coatings, sealants, preservatives and/or adhesives comply.

1.6 QUALITY ASSURANCE

   D. 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.

   E. Installer Qualifications: Fabricator of products.

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

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

   H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

INTERIOR ARCHITECTURAL WOODWORK 064023 - 2
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.

B. Hardware Coordination: Distribute copies of approved hardware schedule specified in Division 08 Section "Door Hardware (Scheduled by Describing Products)" to fabricator of architectural woodwork; coordinate Shop Drawings and fabrication with hardware requirements.

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 for Opaque Finish: Any closed-grain hardwood.

C. Wood Products: Comply with the following:

D. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.
1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following manufacturers or equal product:
   a. Abet Laminati, Inc.
   b. Formica Corporation.
   c. Lamin-Art, Inc.
   d. Lab Designs
   e. Nevamar Company, LLC; Decorative Products Div.
   f. Panolam Industries International Incorporated.
   g. Wilsonart International; Div. of Premark International, Inc.
2. Type: Standard type
3. Colors and Patterns: As selected on finish schedule

E. Thermoset Decorative Overlay: Decorative surface of thermally fused polyester or melamine-impregnated web, bonded to specified substrate and complying with ALA 1992.

F. Stone Material:

2.2 GRANITE GR-2

A. Material Standard: Comply with ASTM C 615.

B. Regional Materials: Granite shall be fabricated within 500 miles (800 km) of Project site from stone that has been extracted within 500 miles (800 km) of Project site.

C. Varieties and Sources: Subject to compliance with requirements, Basis of design product is Cold Spring Granite, Rockville White (polished) or approved equal product.

D. Cut stone from contiguous, matched slabs in which natural markings occur.

E. Finish: Polished

2.3 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 08 Section "Door Hardware (Scheduled by Describing Products)."
B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening.

C. Wire Pulls: Back mounted, solid metal, 4 inches (100 mm) long, 2-1/2 inches (63.5 mm) deep, and 5/16 inch (8 mm) in diameter.

D. Catches: Roller catches, BHMA A156.9, B03071.

E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

F. Shelf Rests: BHMA A156.9, B04013; metal, two-pin type with shelf hold-down clip.

G. Drawer Slides: BHMA A156.9, B05091.
   1. Standard Duty (Grade 1, Grade 2, and Grade 3): full-extension type; epoxy-coated steel with polymer rollers.

H. Door Locks: BHMA A156.11, B07121.

I. Drawer Locks: BHMA A156.11, B07041.

J. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
   1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.

K. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.4 MISCELLANEOUS MATERIALS

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

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

D. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Wood Glues: 30 g/L.
   2. Contact Adhesive: 250 g/L.
E. Adhesive for Bonding Plastic Laminate: Contact cement.
   

2.5 FABRICATION, GENERAL

A. Interior Woodwork Grade: Unless otherwise indicated, provide Custom grade interior woodwork complying with referenced quality standard.

B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
   
   1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch (1.5 mm).

D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

   1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

2.6 PLASTIC-LAMINATE CABINETS

A. Grade: Custom.

B. AWI Type of Cabinet Construction: Flush overlay.

C. Backing Materials:

   1. Wall Cabinet Tops, Bottoms, Sides and Shelves: 3/4-inch Particle Board.
   2. Wall Cabinet Backs: 1/4-inch Softwood Plywood.
   3. Wall Cabinet Doors: 3/4-inch Particle Board or 3/4-inch Medium Density Fiber Board.
   4. Base Cabinet Tops, Bottoms Sides and Shelves: 3/4-inch Particle Board.
6. Base Cabinet Doors: 3/4-inch Particle Board or 3/4-inch Medium Density Fiber Board.
7. Base Cabinet Drawers: 3/4-inch Particle Board.
8. Open Wall Shelves Tops, Bottoms, Sides and Shelves: 3/4-inch Particle Board.

D. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
   1. Horizontal Surfaces Other Than Tops: Grade HGS.
   2. Vertical Surfaces: Grade HGS.
   3. Edges: Grade HGS matching laminate in color, pattern, and finish.

E. Materials for Semiexposed Surfaces:
   1. Thermoset decorative panels.
      a. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS.

F. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.

G. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
   1. As indicated on finish schedule.
      a. Solid colors, matte finish.
      b. Patterns, matte finish.

2.7 PLASTIC-LAMINATE COUNTERTOPS

A. Grade: Premium

B. High-Pressure Decorative Laminate Grade: HGS

C. Backing Materials:
   2. Backsplashes at countertops without sinks: 3/4-inch Particle Board.

D. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
   1. As selected by Architect from manufacturer's full range.
      a. Solid colors, matte finish
      b. Patterns, matte finish.
E. Grain Direction: Parallel to cabinet fronts.

F. Edge Treatment: Same as laminate cladding on horizontal surface.


2.8 STONE COUNTERTOPS

A. General: Comply with recommendations in MIA's "Dimension Stone - Design Manual VI."

B. Nominal Thickness: Provide thickness indicated, but not less than 3/4 inch (20 mm). Gage backs to provide units of identical thickness.

C. Edge Detail: Straight, slightly eased at top.

D. Splashes: Provide 3/4-inch- (20-mm-) thick backsplashes unless otherwise indicated.
   1. Height: 4 inches (100 mm).
   2. Top-Edge Detail: Straight, slightly eased at corner.

E. Joints: Fabricate countertops without joints.

F. Joints: Fabricate countertops in sections for joining in field, with joints at locations indicated and as follows:
   1. Bonded Joints: 1/32 inch (0.8 mm) or less in width.
   2. Grouted Joints: 1/16 inch (1.5 mm) in width.
   3. Sealant-Filled Joints: 1/16 inch (1.5 mm) in width.
   4. Splined Joints: Accurately cut kerfs in edges at joints for insertion of metal splines to maintain alignment of surfaces at joints where indicated. Make width of cuts slightly more than thickness of splines to provide snug fit. Provide at least three splines in each joint.

G. Cutouts and Holes:
   1. Undercounter Fixtures: Make cutouts for undercounter fixtures in shop using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.
      a. Provide vertical edges, slightly eased at juncture of cutout edges with top and bottom surfaces of countertop and projecting 3/16 inch (5 mm) into fixture opening.
      b. Provide vertical edges, rounded to 3/8-inch (10-mm) radius at juncture of cutout edges with top surface of countertop, slightly eased at bottom, and projecting 3/16 inch (5 mm) into fixture opening.
      c. Provide 3/4-inch (20-mm) full bullnose edges projecting 3/8 inch (10 mm) into fixture opening.
3. Fittings: Drill countertops in shop for plumbing fittings, undercounter soap dispensers, and similar items.

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 and backpriming.
C. Before installing stone countertops, clean dirty or stained stone surfaces by removing soil, stains, and foreign materials. Clean stone by thoroughly scrubbing with fiber brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives. Allow stone to dry before installing.

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. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
F. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
2. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches (400 mm) o.c. with No. 10 wafert-head sheet metal screws.

G. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

1. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
2. Secure backsplashes to tops with concealed metal brackets at 16 inches (400 mm) o.c. and to walls with adhesive.
3. Calk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."

H. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

3.3 INSTALLATION OF STONE COUNTERTOPS

A. General: Install countertops over plywood subtops with full spread of water-cleanable epoxy adhesive.

B. General: Install countertops by adhering to supports with water-cleanable epoxy adhesive.

C. Do not cut stone in field unless otherwise indicated. If stone countertops or splashes require additional fabrication not specified to be performed at Project site, return to fabrication shop for adjustment.

D. Do necessary field cutting as stone is set. Use power saws with diamond blades to cut stone. Cut lines straight, true, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.

E. Set stone to comply with requirements indicated. Shim and adjust stone to locations indicated, with uniform joints of widths indicated and with edges and faces aligned according to established relationships and indicated tolerances.

F. Space joints with 1/16-inch (1.5-mm) gap for filling with sealant. Use temporary shims to ensure uniform spacing.

G. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Use power saws with diamond blades to cut stone. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.

H. Install backsplashes and end splashes by adhering to wall with water-cleanable epoxy adhesive and to countertops with stone adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears.

I. Install backsplashes and end splashes by adhering to countertops with stone adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears. Leave 1/16-
inch (1.5-mm) gap between splashes and wall for filling with sealant. Use temporary shims to ensure uniform spacing.

J. Install backsplashes and end splashes by adhering to wall with water-cleanable epoxy adhesive. Leave 1/16-inch (1.5-mm) gap between countertop and splashes for filling with sealant. Use temporary shims to ensure uniform spacing.

K. Grout joints to comply with ANSI A108.10. Remove temporary shims before grouting. Tool grout uniformly and smoothly with plastic tool.

3.4 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, lubricate, and adjust hardware.

C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

D. Clean stone countertops no fewer than six days after completion of installation, using clean water and soft rags. Do not use wire brushes, acid-type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods that could damage stone.

END OF SECTION 064023
SECTION 064600 - WOOD TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior standing and running trim.
2. Shop priming of standing and running trim
3. Closet and utility shelving.
4. Wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

B. Related Requirements:

1. Section 061000 "Miscellaneous Rough Carpentry" for wood furring, blocking, and shims required for installing wood trim and concealed within other construction before wood trim installation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. LEED Submittals: Refer To LEED User Guide for Interior Design and Construction as required by the Contract Documents for compliance requirements and thresholds.

1. Credit MR 7: For all NEW WOOD (excluding particleboard, fiberboard and other composite woods), provide required certificates and INVOICES showing that a minimum of 50% of the new wood is in accordance with the Forest Stewardship Council’s (FSC) principals and criteria. Certificates must include evidence that manufacturer is certified for chain of custody (COC) by an FSC-accredited certification body and contain the manufacturer’s COC number.

   a. Invoices MUST at a minimum show FSC products, by wood type, on individual lines with costs for each. Any Non-Compliant wood must be on a separate line and labeled as such.

   b. Architect must be notified IN ADVANCE of purchase of any Non-FSC wood products. Failure to notify Architect in advance or such purchase is the sole responsibility of the General Contractor and the same will be held responsible
for purchase of correct, compliant materials.

2. Credit EQ 4.4: Provide a list of all Composite Wood Products and confirm manufacturer No Urea Formaldehyde compliance. Cutsheet or certificate is required as part of the submittal.

3. Credit(s) IEQ 4.1 and 4.4; Provide manufacturer documentation on Low Emitting Materials inside of the weatherproofing system; must meet VOC requirements required for LEED compliance. Ensure all paints, coatings, sealants, preservatives and/or adhesives comply.

C. 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, including concealed blocking and reinforcement specified in other Sections.
3. Apply WI Certified Compliance Program label or AWI Quality Certification Program label to Shop Drawings.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator and installer.

B. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates or WI Certified Compliance Program certificates.

1.5 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. Shop is a certified participant in AWI's Quality Certification Program or Shop is a licensee of WI's Certified Compliance Program.

B. Installer Qualifications: Certified participant in AWI's Quality Certification Program or Licensee of WI's Certified Compliance Program.

C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups of typical wood trim as shown on Drawings.
2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
1.6 DELIVERY, STORAGE, AND HANDLING

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

1.7 FIELD CONDITIONS

A. Environmental Limitations for Interior Work: Do not deliver or install interior wood trim until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 25 and 70 percent during the remainder of the construction period.

1.8 COORDINATION

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

PART 2 - PRODUCTS

2.1 WOOD TRIM, GENERAL

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of wood trim indicated for construction, finishes, installation, and other requirements.

2.2 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

A. Grade: Premium.

B. Regional Materials: Interior trim for opaque finish shall be manufactured within 500 miles (800 km) of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.

C. Certified Wood: Interior trim for opaque finish shall be certified as "FSC Pure" or "FSC Mixed Credit" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."

D. Wood Species: Any closed-grain hardwood.

2.3 CLOSET AND UTILITY SHELVING

A. Grade: Custom
B. Shelf Material: 3/4-inch (19-mm) veneer-faced panel product with solid-lumber edge
C. Cleats: 3/4-inch (19-mm) solid lumber
D. Wood Species: Eastern white pine, sugar pine, or western white pine.
E. Closet Rods: 1-1/2-inch- (38-mm-) diameter, hardwood.
F. Rod Flanges: Clear, kiln-dried, hardwood turnings.

2.4 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.

1. Wood Moisture Content for Interior Materials: 8 to 13 percent.

2.5 MISCELLANEOUS MATERIALS

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

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.

C. Adhesives: Do not use adhesives that contain urea formaldehyde.

D. Adhesives: Use adhesives that meet the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

E. VOC Limits for Installation Adhesives and Sealants: Use products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Wood Glues: 30 g/L.
2. Multipurpose Construction Adhesives: 70 g/L.
3. Structural Wood Member Adhesive: 140 g/L.
4. Architectural Sealants: 250 g/L.

2.6 FABRICATION

A. Fabricate wood trim to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

1. Edges of Solid-Wood (Lumber) Members: 1/16 inch (1.5 mm) unless otherwise indicated.
B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members except for members with ends exposed in finished work.

C. Assemble casings in shop except where shipping limitations require field assembly.

D. Assemble moldings in shop to maximum extent possible. Miter corners in shop and prepare for field assembly with bolted fittings designed to pull connections together.

2.7 SHOP PRIMING

A. Interior Wood Trim for Opaque Finish: Shop prime with one coat of wood primer specified in Section 099123 "Interior Painting."

B. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.

1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim. Apply two coats to end-grain surfaces.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition wood trim to average prevailing humidity conditions in installation areas.

B. Before installing architectural wood trim, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

A. Grade: Install wood trim to comply with same grade as item to be installed.

B. Assemble wood trim and complete fabrication at Project site to the extent that it was not completed in the shop.

C. Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).

D. Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Anchor wood trim to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork.

WOOD TRIM
1. For shop-finished items, use filler matching finish of items being installed.

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. Do not use pieces less than 60 inches (1500 mm) long except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

1. Fill gaps, if any, between top of base and wall with plastic wood filler; sand smooth; and finish same as wood base if finished.
2. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches (3 mm in 2400 mm).

G. Touch up finishing work specified in this Section after installation of wood trim. Fill nail holes with matching filler where exposed.

1. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are applied in shop.

H. Refer to Section 099123 "Interior Painting" for final finishing of installed wood trim.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective wood trim, where possible, to eliminate functional and visual defects; where not possible to repair, replace wood trim. Adjust joinery for uniform appearance.

B. Clean wood trim on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064600