

SECTION 061600 – SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Subflooring.
4. Underlayment.
5. Sheathing joint and penetration treatment.

B. Related Sections:

1. Section 074616 – Aluminum Siding
2. Section 074646 – Fiber-Cement Siding
3. Section 075213 – APP Modified Bituminous Membrane Roofing
4. Section 075216 – SBS Modified Bituminous Membrane Roofing
5. Section 093013 – Ceramic Tiling
6. Section 093500 – Chemical-Resistant (Quarry) Tiling
7. Section 096400 – Wood Flooring
8. Section 096519 – Resilient Tile Flooring

C. Reference and Industry Standards

1. The following reference standards shall be applicable this Section:
 - a. New York City Building Code, **current** edition, as amended, inclusive of:
 - Chapter 23 Wood
 - b. The current Enterprise Green Communities (EGC) Criteria, and the current New York City Overlay.
2. Industry Standards
 - ANSI (American National Standards Institute)
 - APA (The Engineered Wood Association)
 - AWPA (American Wood Protection Association)
 - ASTM (American Society for Testing and Materials)
 - CDPH (California Department of Public Health)
 - FSC (Forest Stewardship Council)
 - GA (Gypsum Association)
 - ICC-ES (International Code Council – Evaluation Services)

D. The current NYC Overlay of the current Enterprise Green Communities Criteria:

1. Mandatory Requirements: See the NYC Overlay of the EGC reference standard for full specifications.
 - a. All projects must achieve compliance with the mandatory criteria measures that are applicable:
 - Criterion 6.4: Healthier Material Selection
 - Criterion 6.9: Managing Moisture: Roofing and Wall Systems
 - Criterion 6.10: Construction Waste Management
2. Optional Project Requirements for Certification Points
 - a. Additionally, rehab projects are required to achieve **55** optional points. Criteria with optional points related to this Specification Section include, but may not be limited to:
 - Criterion 6.1: Ingredient Transparency for Material Health
 - Criterion 6.2: Recycled Content and Ingredient Transparency
 - Criterion 6.3: Chemical Hazard Optimization
 - Criterion 6.5: Environmentally Responsible Material Selection
 - Criterion 6.7: Regional Materials
 - Criterion 6.10: Construction Waste Management

1.2 ACTION SUBMITTALS

- A. Environmental Product Declaration (EPD) for each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
 1. Wood-preservative-treated plywood.
- B. Documentation for compliance with Enterprise Green Communities.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

- A. Emissions: Products shall meet the testing and product requirements of the California Department of Public Health (CDPH) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.

2.2 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWWA-C9 for interior construction not in contact with ground.

- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat all plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.3 WALL SHEATHING

- A. Plywood Sheathing: DOC PS 1.
- B. Oriented-Strand-Board Sheathing: DOC PS 2 .
- C. Paper-Surfaced Gypsum Sheathing: ASTM C1396, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges.
 - 1. Type and Thickness: [**Regular, 1/2 inch**] [**Type X, 5/8 inch**] thick.
- D. Glass-Mat Gypsum Sheathing: ASTM C1177.
 - 1. Type and Thickness: [**Regular, 1/2 inch**] [**Type X, 5/8 inch**] thick.
- E. Cellulose Fiber-Reinforced Gypsum Sheathing: ASTM C1278, gypsum sheathing.
 - 1. Type and Thickness: [**Regular, 1/2 inch**] [**Type X, 5/8 inch**] thick.
- F. Cementitious Backer Units: ASTM C1325, Type A.
 - 1. Thickness: [**1/2 inch**] [**5/8 inch**].

2.4 ROOF SHEATHING

- A. Plywood Sheathing: DOC PS 1.
- B. Oriented-Strand-Board Sheathing: DOC PS 2.

2.5 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Combination Subfloor-Underlayment: DOC PS 1, single-floor panels.
- B. Oriented-Strand-Board Combination Subfloor-Underlayment: DOC PS 2, Exposure 1 single-floor panels.
- C. Plywood Subflooring: DOC PS 1 single-floor panels or sheathing.
- D. Oriented-Strand-Board Subflooring: DOC PS 2, Exposure 1.
- E. Underlayment: Provide underlayment in nominal thicknesses indicated or, if not indicated, not less than 1/4 inch over smooth subfloors and not less than 3/8 inch overboard or uneven subfloors.
 - 1. Plywood Underlayment for Resilient Flooring: DOC PS 1, with fully sanded face.

2. Plywood Underlayment for Ceramic Tile: DOC PS 1, Exterior, C-C Plugged, not less than 5/8-inch nominal thickness.
3. Plywood Underlayment for Carpet: DOC PS 1.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A153.
 2. For roof and wall sheathing, provide fasteners with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117.

2.7 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

- A. Sealant for [**Paper-Surfaced**] [**Glass-Mat**] Gypsum Sheathing: Elastomeric, medium-modulus, neutral-curing silicone joint sealant compatible with joint substrates formed by gypsum sheathing and other materials, recommended by sheathing manufacturer for application indicated.
- B. Sealant for Glass-Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C834, compatible with sheathing tape and sheathing and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.
 1. Sheathing Tape: Self-adhering glass-fiber tape, minimum 2 inches wide, 10 by 10 or 10 by 20 threads/inch, of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing and with a history of successful in-service use.
- C. Sheathing Tape for Foam-Plastic Sheathing: Pressure-sensitive plastic tape recommended by sheathing manufacturer for sealing joints and penetrations in sheathing.

2.8 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.
- B. All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District (www.AQMD.gov). All caulks and sealants must comply with Regulation 8, Rule 51, of the Bay Area Air Quality Management District.
 1. VOC Limits:
 - a. Multi-Purpose construction adhesive: 70g/L.
 - b. Structural wood member adhesive: 140g/L.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. 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. Arrange joints so that pieces do not span between fewer than three support members.
- B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.
- C. Securely attach to substrate by fastening as indicated, complying with the following:
 - 1. Table 10-4 Nailing Schedule of Chapter 10 (Structural Wood) of the New York City 1968 Building Code.
- D. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.
- E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations in APA Form No. E30, Engineered Wood Construction Guide, for types of structural-use panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Combination Subfloor-Underlayment:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 2. Subflooring:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 3. Wall and Roof Sheathing:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
 - 4. Underlayment:
 - a. Nail to subflooring.

- b. Space panels 1/32 inch apart at edges and ends.
- c. Fill and sand edge joints of underlayment receiving resilient flooring immediately before installing flooring.

3.3 GYPSUM SHEATHING INSTALLATION

- A. Comply with GA-253 and with manufacturer's written instructions.
 - 1. Fasten gypsum sheathing to wood framing with [**nails**] [**or**] [**screws**].
 - 2. Fasten gypsum sheathing to cold-formed metal framing with screws.
 - 3. Install panels with a 3/8-inch gap where non-load-bearing construction abuts structural elements.
 - 4. Install panels with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.
- B. Seal sheathing joints according to sheathing manufacturer's written instructions.
 - 1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient amount of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.
 - 2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.

3.4 CEMENTITIOUS BACKER UNIT INSTALLATION

- A. Install panels and treat joints according to ANSI A108.11 and manufacturer's written instructions for type of application indicated.

END OF SECTION 061600