

SECTION 06 16 00  
BUILDING SHEATHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Wall sheathing.
  2. Parapet sheathing.
  3. Sheathing joint and penetration treatment.

1.2 ACTION 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 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 in accordance with ASTM D 5516.
  4. For products receiving waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: Submit ICC-ES reports for:
1. Wood preservative treated plywood.
  2. Fire retardant treated plywood.
  3. Foam plastic sheathing.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

## 1.5 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.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. 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. Fire Resistance Ratings: Indicated by design designations from UL *Fire Resistance Directory* or GA-600 *Fire Resistance Design Manual*.

### 2.2 WALL SHEATHING

- A. Glass Mat Gypsum Sheathing: ASTM C 1177/1177M.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. GlasRoc by CertainTeed Corporation.
    - b. Dens-Glass Exterior Sheathing by Georgia-Pacific Building Products.
    - c. EXP Fire-Shield Sheathing by National Gypsum Company.
    - d. Securock by United States Gypsum Company.
  - 2. Type and Thickness: Type X, 5/8 inch (15.9 mm) thick.
  - 3. Size: 48 inches by 96 inches (1219 mm by 2438 mm) minimum for horizontal installation on walls.
  - 4. .

### 2.3 PARAPET SHEATHING

- A. Sheathing: Roofing system substrate Board compatible with roofing system for adhesion: ASTM C1177/C1177M, glass-mat, water-resistant gypsum substrate or ASTM C1278/C1278M, fiber-reinforced gypsum board.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Georgia-Pacific Gypsum LLC.
    - b. National Gypsum Company.
    - c. USG Corporation.
  - 2. Thickness: 5/8 inch.
  - 3. Size: 48 inches by 96 inches (1219 mm by 2438 mm) for vertical or horizontal installation depending on field conditions.
  - 4. Surface Finish: Factory primed.

5. Prepare surface for fully adhered roof system vapor retarder.
6. .

B. Cementitious Backer Units only where indicated: ASTM C 1325, Type A.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. C-Cure.
  - b. Custom Building Products.
  - c. FinPan, Inc.
  - d. United States Gypsum Company.
2. Thickness: 5/8 inch (15.9 mm) or As indicated on the Drawings.

## 2.4 FASTENERS

A. Provide fasteners of size and type indicated that comply with requirements for material and manufacture.

1. For parapet and wall sheathing, provide fasteners of Type 304 stainless steel.

B. Staples: ASTM F 1667.

C. Screws for Fastening Gypsum Sheathing to Cold Formed Metal Framing: Steel drill screws, in length recommended by sheathing manufacturer for thickness of sheathing to be attached.

1. For steel framing less than 0.0329 inch (0.835 mm) thick, use screws that comply with ASTM C 1002.
2. For steel framing from 0.033 inch to 0.112 inch (0.84 mm to 2.84 mm) thick, use screws that comply with ASTM C 954.

D. Screws for Fastening Composite Nail Base Insulated Roof Sheathing to Metal Roof Deck: Steel drill screws, in type and length recommended by sheathing manufacturer for thickness of sheathing to be attached, with organic polymer or other corrosion protective coating having a salt spray resistance of more than 800 hours in accordance with ASTM B 117. Provide washers or plates if recommended by sheathing manufacturer.

## 2.5 SHEATHING JOINT AND PENETRATION TREATMENT MATERIALS

A. Sealant for 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 and complying with requirements for elastomeric sealants specified in Section 07 92 00.

B. Sealant for Glass Mat Gypsum Sheathing: Silicone emulsion sealant complying with ASTM C 834, 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 (50 mm) wide, 10 by 10 or 10 by 20 threads/inch (390 by 390 or 390 by 780 threads/m), 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.

## 2.6 MISCELLANEOUS MATERIALS

- A. Adhesives for Field Gluing Panels to Wood Framing: Formulation complying with APA AFG-01 or ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- 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 2304.9.1 Fastening Schedule in the ICC International Building Code.
  - 2. Table R602.3(1) Fastener Schedule for Structural Members and Table R602.3(2), Alternate Attachments in the ICC International Residential Code for One and Two Family Dwellings.
  - 3. ICC-ES evaluation report for fastener.
- D. 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. Install fasteners without splitting wood.
- E. Coordinate wall parapet 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.
- 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.

### 3.2 GYPSUM SHEATHING INSTALLATION

- A. Comply with GA-253 and with manufacturer's written instructions.
  - 1. Fasten gypsum sheathing to cold formed metal framing with screws.
  - 2. Install panels with a 3/8 inch (9.5 mm) gap where nonload bearing construction abuts structural elements.
  - 3. Install panels with a 1/4 inch (6.4 mm) gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.
- B. Apply fasteners so heads bear tightly against face of sheathing, but do not cut into facing.
- C. Horizontal Installation all wall sheathing: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent panels without forcing. Abut ends over centers of studs, and stagger end joints of adjacent panels not less than one stud spacing. Attach at perimeter and within field of panel 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 panels.
  - 2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self furring metal lath is screw attached through sheathing to studs immediately after sheathing is installed.
- D. Vertical Installation, parapet sheathing only: Install vertical edges centered over studs. Abut ends and edges with those of adjacent panels. Attach at perimeter and within field of panel 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 panels.
  - 2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self furring metal lath is screw attached through sheathing to studs immediately after sheathing is installed.
- E. Seal sheathing joints in accordance with sheathing manufacturer's written instructions unless there is a conflict with the following minimum requirements.
  - 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. Notify Architect of any variances in installation instructions in the manufacturer's written instructions.

### 3.3 CEMENTITIOUS BACKER UNIT INSTALLATION

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

END OF SECTION