

SECTION 060000 - EXTERIOR TREATED WOOD COMPOSITE TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Exterior grade, treated wood, composite trim for non-structural applications.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of composite trim product.

1.3 WARRANTY

A. Warranty Period:

1. Composite Trim Material: Fifty (50) years.

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 10 years, in manufacture of composite trim of similar type to that specified.

1.5 DELIVERY, STORAGE AND HANDLING

A. Delivery Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
3. Store composite trim under cover, protected from weather, off ground, and on flat surface.
4. Keep composite trim dry.
5. Protect materials during storage, handling, and installation to prevent damage.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include:

1. JELD-WEN, Inc., 825 Shiner Road, Towanda, PA
www.miratectrim.com 1-800-255-0785

2.2 EXTERIOR TREATED WOOD COMPOSITE TRIM

- A. Composite Trim: "MiraTEC" exterior treated wood composite trim.

1. Description: Exterior-grade, treated wood composite trim for non-structural applications.
2. Compliance: ICC-ES Evaluation Report ESR-3043
3. Material:
 - a. Wood fibers combined with phenolic resins, zinc borate, and water repellent.
 - b. No added urea formaldehyde.
4. Surface:
 - a. Clear cedar wood grain texture on 1 side, smooth surface on other side.
 - b. Factory-primed on 4 sides with low VOC primer containing mildewcide.
5. Substrate:
 - a. 1-piece solid substrate, uniform density, not laminated.
 - b. No knots or voids.
6. Thickness: 4/4 (3/4-inch actual).
7. Sizes: As indicated on drawings.

- B. Typical Properties, 4/4 Thickness:

1. Density, ASTM D 1037: 47.6 pcf
2. Modulus of Rupture, ASTM D 1037: 2,860 psi
3. 24-Hour Soak, ASTM D 1037:
 - a. Water Absorption: 6.6 percent
 - b. Thickness Swell: 2.8 percent
4. Accelerated Aging Test, 6-Cycle, ASTM D 1037: Retained 90 percent of original strength.
5. Termite Resistance and Decay, AWP A E7 Rating Scale, 3Year Exposure: 7.8 out of 10.
6. Rot Resistance, AWP A E16: 1.0 out of 5.
7. ANSI/UL 723 (ASTM E84-01):
 - a. Flamespread: 125
 - b. Smoke Developed: 110

2.3 ACCESSORIES

- A. Adhesives: Designed for use on wood composite materials.
- B. Fasteners:
 - 1. Nails appropriate to style of construction and as specified.
 - 2. Equal or better in performance (such as nail withdrawal, bending strength, and corrosion resistance) to 6d or 8d 15-gauge finish nails or headed nails.
 - 3. Long enough to penetrate 1-1/4 inches into structural wood studs or studs and structural sheathing material.
 - 4. Corrosive resistance equivalent to hot-dipped galvanized nails.
 - 5. Fasteners Not Acceptable:
 - a. Staples
 - b. Brads
 - c. T-nails
- C. Joint Sealants:
 - 1. Exterior quality sealants that remain flexible over time.
 - 2. ASTM C 920
 - 3. Specified in Section 079200
 - 4. Not Acceptable: Hard-Setting Caulk or Bondo.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and surfaces to receive composite trim.
- B. Notify Architect of conditions that would adversely affect installation.
- C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

- A. Install composite trim in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install composite trim plumb, level, and square.
- C. Cut composite trim in accordance with manufacturer's instructions.
- D. Fastening:
 - 1. Fasten composite trim in accordance with manufacturer's instructions.

2. Set nails a minimum of 1/2 inch from edge.
3. Do not nail into edges.
4. Set nails flush or slightly countersunk not more than 1/8 inch.
5. Apply spackling putty. Reapply putty as needed for desired appearance.
6. 4/4 and 5/4 Fascia and Soffit Applications: Fasten directly to rafter ends, double nail a minimum of 24 inches on center.
7. 5/8-Inch Fascia and Soffit Applications: Include trim sub-fascia and nail 16 inches on center to rafter ends or sub-fascia.
8. All Other Horizontal and Vertical Applications: Double nail 16 inches on center, falling on studs.
9. Fasten trim from one end to the other.
10. Do not nail towards the center from both ends.
11. Use adhesives in accordance with adhesive manufacturer's instructions.

E. Butt Joints:

1. Ensure joints fall over framing members.
2. Miter, scarf, or bevel composite trim as required.
3. Runs Less than 30 Feet in Length: Install butt joints to lightly touch.
4. Runs Over 30 Feet in Length: Space butt and scarf joints 1/8 inch apart and apply joint sealants into full depth of 1/8-inch joint.
5. Double nail on both sides of joint, a minimum of 1/2 inch from edge.

F. Flashing and Moisture Control:

1. Do not apply composite trim to wet sheathing.
2. Do not apply composite trim closer than 6 inches to finished grade or final landscaping.
3. Do not allow composite trim to stand in water.
4. Do not allow direct contact of composite trim with masonry or concrete.
5. Do not allow water to stand on or leak behind composite trim.
6. Properly flash and space composite trim a minimum of 1/2 inch from concrete flatwork or horizontal brick ledge.
7. Separate composite trim at foundations or brick veneer from masonry by metal flashing, polyethylene film, 30-lb. felt, or 1/4-inch to 1/2-inch air space using masonry standoffs.
8. Horizontal Applications including Window and Door Headers: Flash in accordance with siding manufacturer's, window manufacturer's, or door manufacturer's instructions.
9. Maintain a minimum angle of 100 degrees from vertical to provide positive drainage.

10. Joint Sealants: Apply joint sealants at butt joints and where composite trim abuts siding, windows, doors, or other materials.

G. Paint Application:

1. Prime and paint exposed field-cut edges of composite trim using high-quality exterior oil/alkyd solvent-based or acrylic-latex primer recommended by paint manufacturer for application over composite wood substrates.
2. Coat exposed surfaces including bottom edge.
3. Finish composite trim with 2 coats of paint within 90 days after installation.
4. If material is not painted within 90 days, re-prime composite trim using exterior primer recommended for use on composite wood products and that is compatible with topcoat to be used.
5. Use same primer for repair of damage to original, factory-applied primer.
6. Apply total field-applied dry film paint thickness of a minimum of 2-1/2 mils on composite trim.

3.2 PROTECTION

- A. Protect installed composite trim to ensure that, except for normal weathering, trim will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 060000

**NEW CONCESSIONS & RESTROOMS FOR
SPRINGFIELD PARK –
CITY OF MAULDIN RECREATION DEPT.
204 HYDE CIRCLE - MAULDIN, SC**

**LA PROJECT NO: 2016-01
JUNE 30, 2016**

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Rooftop equipment bases and support curbs.
3. Wood blocking, cants, and nailers.
4. Wood furring.
5. Wood sleepers.
6. Utility shelving.
7. Plywood backing panels.

1.2 ACTION SUBMITTALS

- ##### **A. Product Data:** For each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

1. Preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.

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. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
 3. Dress lumber, S4S, unless otherwise indicated.
- ##### **B. Maximum Moisture Content of Lumber:** 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
- 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, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, 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 above the ground in crawlspaces or unexcavated areas.
 - 5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 2. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664, and design value adjustment factors shall be calculated according to ASTM D 6841. For enclosed roof framing, framing in attic spaces, and where high-temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
- C. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

D. Application: Treat items indicated on Drawings, and the following:

1. Framing for raised platforms.
2. Plywood backing panels.

2.4 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade of any species.

B. Other Framing: No. 2 grade of any of the following species:

1. Southern pine or mixed southern pine; SPIB.
2. Douglas fir-south; WWPA.
3. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

2.5 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. Rooftop equipment bases and support curbs.
4. Cants.
5. Furring.
6. Utility shelving.

B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

C. Utility Shelving: Lumber with 15 percent maximum moisture content of eastern white pine, Idaho white, lodgepole, ponderosa, or sugar pine; Premium or No. 2 Common (Sterling) grade; NeLMA, NLGA, WCLIB, or WWPA.

D. Concealed Boards: 19 percent maximum moisture content of any of the following species and grades:

1. Mixed southern pine or southern pine, No. 2 grade; SPIB.
2. Eastern softwoods, No. 2 Common grade; NELMA.

2.6 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

1. Use for exterior soffits: painted finish.
2. Use for interior ceilings: painted finish.

2.7 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 with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Screws for Fastening to Metal Framing: ASTM C 954, length as recommended by screw manufacturer for material being fastened.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

2.8 MISCELLANEOUS MATERIALS

- A. Adhesives for Gluing Furring and Sleepers to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.
- B. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant-treated plywood backing panels with classification marking of testing agency exposed to view.
- D. Do not splice structural members between supports unless otherwise indicated.
- E. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- F. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code for all projects other than one- and two-family dwellings.

2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

3.2 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.

END OF SECTION 061053

**NEW CONCESSIONS & RESTROOMS FOR
SPRINGFIELD PARK –
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204 HYDE CIRCLE - MAULDIN, SC**

**LA PROJECT NO: 2016-01
JUNE 30, 2016**

SECTION 061600 - SHEATHING

1.1 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Parapet sheathing.
4. Composite nail base insulated roof sheathing.
5. Subflooring.
6. Underlayment.
7. Sheathing joint and penetration treatment.

1.2 ACTION SUBMITTALS

- #### A. Product Data:
- For each type of process and factory-fabricated product.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports:

For the following, from ICC-ES:

1. Wood-preserved-treated plywood.
2. Fire-retardant-treated plywood.
3. Foam-plastic sheathing.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- #### A. Fire-Resistance Ratings:
- As tested according to ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 WOOD PANEL PRODUCTS

2.3 PRESERVATIVE-TREATED PLYWOOD

- #### A. Preservative Treatment by Pressure Process:
- AWPA U1; Use Category UC2 for interior construction not in contact with ground, Use Category UC3b for exterior construction not in contact with ground, and Use Category UC4a for items in contact with ground.

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

2.4 FIRE-RETARDANT-TREATED PLYWOOD

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
 - 1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 - 2. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201/D 3201M at 92 percent relative humidity. Use where exterior type is not indicated.
 - 3. Design Value Adjustment Factors: Treated lumber plywood shall be tested according to ASTM D 5516 and design value adjustment factors shall be calculated according to ASTM D 6305. Span ratings after treatment shall be not less than span ratings specified. For roof sheathing and where high-temperature fire-retardant treatment is indicated, span ratings for temperatures up to 170 deg F shall be not less than span ratings specified.
- C. Kiln-dry material after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.
- E. Application: Treat plywood indicated on Drawings.

2.5 WALL SHEATHING

- A. Plywood Sheathing: Either DOC PS 1 or DOC PS 2, Exterior, Structural I sheathing.
- B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.
- C. Paper-Surfaced Gypsum Sheathing: ASTM C 1396/C 1396M, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Georgia-Pacific Building Products.
 - b. National Gypsum Company.
 - c. United States Gypsum.
 2. Type and Thickness: Type X, 5/8 inch thick.
- D. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. CertainTeed Corporation.
 - b. Georgia-Pacific Building Products.
 - c. National Gypsum Company.
 2. Type and Thickness: Type X, 5/8 inch thick.
- E. Cellulose Fiber-Reinforced Gypsum Sheathing: ASTM C 1278/C 1278M, gypsum sheathing.
1. Product: Subject to compliance with requirements, provide "Fiberock Sheathing with Aqua-Tough" by United States Gypsum Co.
 2. Type and Thickness: Type X, 5/8 inch thick.
- F. Cementitious Backer Units: ASTM C 1325, Type A.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Custom Building Products.
 - b. United States Gypsum.
 2. Thickness: 1/2 inch.
- G. Extruded-Polystyrene-Foam Sheathing: ASTM C 578, Type IV, in manufacturer's standard lengths and widths with tongue-and-groove or shiplap long edges as standard with manufacturer.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Dow Chemical Company (The).
 2. Thickness: As indicated.

3. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

H. Foil-Faced, Polyisocyanurate-Foam Sheathing: ASTM C 1289, Type I or Type II, Class 2, rigid, cellular, polyisocyanurate thermal insulation. Foam-plastic core and facings shall have a flame-spread index of 25 or less when tested individually.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Atlas Roofing Corporation.
 - b. Dow Chemical Company (The).
 - c. Firestone Building Products.
2. Thickness: As indicated.
3. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

2.6 ROOF SHEATHING

- A. Plywood Sheathing: Either DOC PS 1 or DOC PS 2, Exterior, Structural I sheathing.
- B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.

2.7 PARAPET SHEATHING

- A. Plywood Sheathing: Either DOC PS 1 or DOC PS 2, Exterior, Structural I sheathing.
- B. Oriented-Strand-Board Sheathing: DOC PS 2, Exposure 1, Structural I sheathing.
- C. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. CertainTeed Corporation.
 - b. Georgia-Pacific Building Products.
 - c. National Gypsum Company.
 2. Type and Thickness: Type X, 5/8 inch thick.
- D. Cementitious Backer Units: ASTM C 1325, Type A.
 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Custom Building Products.

b. United States Gypsum.

2. Thickness: 1/2 inch.

2.8 SUBFLOORING AND UNDERLAYMENT

- A. Plywood Subflooring: Either DOC PS 1 or DOC PS 2, Exterior, Structural I single-floor panels or sheathing.
- B. Oriented-Strand-Board Subflooring: DOC PS 2, Exposure 1, Structural I sheathing.
- C. 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 over board or uneven subfloors.
 - 1. Plywood Underlayment for Resilient Flooring: DOC PS 1, Exterior A-C 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, Exterior, C-C Plugged.
 - 4. Particleboard Underlayment: ANSI A208.1, Grade PBU.
 - 5. Hardboard Underlayment: ANSI A135.4, Class 4 (Service), Surface S1S; with back side sanded.

2.9 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 A 153/A 153M.
 - 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 B 117.

2.10 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

- A. Sealant for Paper-Surfaced 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 079200 "Joint Sealants."
- 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 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.

2.11 MISCELLANEOUS MATERIALS

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

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 2304.9.1, "Fastening Schedule," in the ICC's International Building Code except for one- and two-family dwellings.
 - 2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
 - 3. ICC-ES evaluation report for fastener.
- 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. Glue and 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. Glue and nail Nail or staple 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. Apply a continuous bead of glue to framing members at edges of wall sheathing panels.
 - b. Screw to cold-formed metal framing.
 - c. Space panels 1/8 inch apart at edges and ends.
4. Underlayment:
 - a. Nail or staple 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 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. This applies to gypsum sheathing.
 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. This applies only to glass-mat gypsum sheathing.

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.

3.5 FOAM-PLASTIC SHEATHING INSTALLATION

- A. Comply with manufacturer's written instructions.
- B. Foam-Plastic Wall Sheathing: Install vapor-relief strips or equivalent for permitting escape of moisture vapor that otherwise would be trapped in stud cavity behind sheathing.
- C. Apply sheathing tape to joints between foam-plastic sheathing panels and at items penetrating sheathing. Apply at upstanding flashing to overlap both flashing and sheathing.

3.6 PARTICLEBOARD UNDERLAYMENT INSTALLATION

- A. Comply with CPA's recommendations for type of subfloor indicated. Fill and sand gouges, gaps, and chipped edges. Sand uneven joints flush.
 - 1. Fastening Method: Glue and nail underlayment to subflooring.

3.7 HARDBOARD UNDERLAYMENT INSTALLATION

- A. Comply with CPA's recommendations and hardboard manufacturer's written instructions for preparing and applying hardboard underlayment.
 - 1. Fastening Method: Nail or staple underlayment to subflooring.

END OF SECTION 061600