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073126 - Slate Shingles

Stephanie Weatherbee
s.weatherbee@unh.edu

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SECTION 07 3126 - SLATE SHINGLES

1.1 SUMMARY

- A. Section Includes:
1. Slate shingles.
 2. Underlayment.
 3. Snow guards.

1.2 DEFINITIONS

- A. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

PART 2 - PRODUCTS

2.1 SLATE SHINGLES

- A. Slate Shingles: ASTM C 406, Grade S1; hard, dense, and sound; chamfered edges, with nail holes machine punched or drilled and countersunk. No broken or cracked slates, no broken exposed corners, and no broken corners on covered ends that could sacrifice nailing strength or laying of a watertight roof.
- B. The university prefers to use regional materials within a 500 mile radius of the campus.
1. Manufacturers:
 - a. Evergreen Slate Company.
 - b. Greenstone Slate Company, Inc.
 - c. New England Slate Company (The).
 - d. U.S. Quarried Slate Products, Inc.
 - e. Vermont Structural Slate Company, Inc.
 - f. Glendyne Slate.
 2. Thickness: Nominal 1/4 to 3/8 inch (6 to 10 mm).
 3. Surface Texture: Smooth.
 4. Size: 10 by 16 inches, with 7 inch reveal.
 5. Nail Holes: Two per shingle.
 6. Butt Shape: Standard square cut.
 7. Color: Match existing.
 8. Weather-Exposure Color Change: Non-fading.
- C. Starter Slate: Slate shingles with chamfered nail holes front-side punched.
1. Length: Exposure of slate shingle plus head lap.

- D. Ridge Slate: Slate shingles fabricated with vertical grain orientation.

2.2 UNDERLAYMENT MATERIALS

- A. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970, minimum of 40-mil- (1.0-mm-) thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; cold applied.

- 1. Manufacturers:

- a. Carlisle Coatings & Waterproofing, Inc.
- b. Grace, W. R. & Co. - Conn.
- c. Henry Company.
- d. Johns Manville.
- e. Owens Corning.
- f. Polyguard Products, Inc.
- g. Protecto Wrap Company.

2.3 SNOW GUARDS

- A. Snow-Guard Pads: Fabricated copper units, designed to be installed without penetrating slate shingles, and complete with predrilled holes or hooks for anchoring.

- 1. Manufacturers:

- a. Alpine SnowGuards, a division of Vermont Slate & Copper Services, Inc.
- b. Berger Building Products.
- c. Zaleski Snow-Guards for Roofs, Inc.

- B. Snow-Guard Rails: Units fabricated from metal baseplate anchored to fixed bracket and equipped with two bars unless otherwise designed.

- 1. Manufacturers:

- a. Alpine SnowGuards, a division of Vermont Slate & Copper Services, Inc.
- b. Berger Building Products.

- 2. Brackets and Baseplate: Bronze or brass.
- 3. Bars: Brass or bronze tubing.

2.4 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.
- B. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in slate-shingle roofing and remain watertight.

- C. Slating Nails: ASTM F 1667, copper, smooth shanked, wire nails; 0.135-inch (3.4-mm) minimum thickness; sharp pointed; with 3/8-inch- (10-mm-) minimum diameter flat head; of sufficient length to penetrate a minimum of 3/4 inch (19 mm) into sheathing.
 - 1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.

2.5 METAL FLASHING AND TRIM

- A. General: Comply with requirements in Chapter 5, Division 07, Section 076200.
 - 1. Sheet Metal: Copper.
- B. Fabricate sheet metal flashing and trim to comply with recommendations that apply to design, dimensions, metal, and other characteristics of the item in SMACNA's "Architectural Sheet Metal Manual."

2.6 UNDERLAYMENT INSTALLATION

- A. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
- B. Self-Adhering Sheet Underlayment: Install, wrinkle free, on roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Install at locations indicated, lapped in direction to shed water. Lap sides not less than 3-1/2 inches (89 mm). Lap ends not less than 6 inches (152 mm), staggered 24 inches (600 mm) between courses. Roll laps with roller. Cover underlayment within seven days.

2.7 METAL FLASHING INSTALLATION

- A. General: Install metal flashings and other sheet metal to comply with requirements in Chapter 5, Division 07, Section 076200.
 - 1. Install metal flashings according to recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."
- B. Apron Flashings: Extend lower flange over and beyond each side of downslope slate shingles and up the vertical surface.
- C. Step Flashings: Install with a head lap of 3 inches (75 mm) and extend both horizontally and vertically. Install with lower edge of flashing just upslope of, and concealed by, butt of overlying slate shingle. Fasten to roof deck only.
- D. Hip Flashings: Install centrally over hip with lower edge of flashing concealed by butt of overlying slate shingle. Fasten to roof deck.

- E. Open-Valley Flashings: Install centrally in valleys, lapping ends at least 8 inches (205 mm) in direction to shed water. Fasten upper end of each length to roof deck beneath overlap.
- F. Rake Drip Edges: Install over underlayment and fasten to roof deck.
- G. Eave Drip Edges: Install beneath underlayment and fasten to roof deck.
- H. Pipe Flashings: Form flashing around pipe penetrations and slate shingles. Fasten and seal to slate shingles.

END OF SECTION 07 3126