

SECTION 07 31 13

WOOD SHINGLES

PART 1 - GENERAL

1.1 DESCRIPTION

This section specifies wood shingle roofing including moisture shedding underlayment, eave protection and flashings.

1.2 RELATED WORK

- A. Counterflashing and flashing of roof projections: Section 07 60 00, FLASHING AND SHEET METAL.
- B. Skylights, roof scuttles, ridge and roof vents, Section 07 71 00, ROOF SPECIALTIES.

1.3 SUMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: Shingles, each type, color and texture.
- C. Manufacturer's Literature and Data:
 - 1. Shingles, each type
 - 2. Installation instructions
- D. Qualifications: Submit documentation which verifies qualifications of subcontractors, their site supervisors and craftsmen per part 1.6 of this section

1.4 DELIVERY AND STORAGE

- A. Deliver materials in manufacturer's unopened bundles or containers with the manufacturer's brand and name clearly marked thereon.
- B. Shingle bundle wrapping shall bear the label of Underwriters Laboratories, Inc.
- C. Store shingles in accordance with manufacturer's printed instructions. Store roll goods on end in an upright position.
- D. Keep materials dry, covered completely and protected from the weather.

1.5 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - B370.....Copper Sheet and Strip for Building Construction
 - D4586.....Asphalt roof Cement, Asbestos Free D2178-04
- C. RCSHSB (Red Cedar Shingles and Handsplit Shakes Bureau) - Grading rules for red cedar shingles and handsplit shakes.
- D. SMACNA (Sheet Metal and Air Condition Contractors National Association) - Architectural Sheet Metal Manual.
- E. National Park Service, *Preservation Brief 19: The Repair and Replacement of Historic Wooden Shingle Roofs*, (1989).

1.6 QUALIFICATIONS

- A. Subcontractor: Company and designated personnel specializing in shingle installation, with minimum five years documented experience, or five significant similar projects.

PART 2 - PRODUCTS

2.1 SHINGLES

- A.Cedar Shingles: CSSB Sized and Graded, NO. 1 (Blue Label) 24 inches long. Site-Treat with water based clear preservatives to improve fungus and moisture resistance and UV protection.

2.2 ROOFING NAILS

- A. Nails: Standard round wire shingle type hot dipped Zinc coated steel type, of sufficient length to penetrate through roof sheathing.

2.3 ROOFING COMPONENTS

- A. Underlayment and Eave (Ice Dam)underlayment and eave (ice dam) protection: sheet barrier of rubberized asphalt bonded to sheet

polyethylene, (1 mm) total thickness, with strippable treated release paper; Grace ice & watershield or approved equal.

- B. Continuous ventilation sheet layer: as recommended by shingle manufacturer.
- B. Plastic cement: asphalt type with mineral fiber components, free of toxic solvents, capable of setting within 24 hours at temperatures of 75 degrees F and 50 percent relative humidity.
- C. Lap cement: fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.
- D. Site preservative treatment: water based, clear type, to resist fungus and moisture intrusion manufactured by cedar renew or approved equal.
- E. Flashing materials: as specified in sections 07 60 00.

PART 3 EXECUTION

3.1 PREPARATION- Removal of existing roof construction

- A. Once approval to proceed is granted by the architect, remove all shingles, flashings, base flashings as applicable.
- C. Prior to removing damaged sheathing materials, notify architect and provide architect and owner the opportunity to observe exist sheathing conditions. Remove and replace damaged sheathing back to next roof framing member, only after gaining approval of owner and architect. If historic sheathing remains, effort should be made to protect and retain material in place.
- D. As directed by architect, replace removed wood sheathing and deck materials with new wood sheathing, 1" x 6" cypress boards, 20% maximum moisture content, full length, cut to neatly infill void.
- E. Roof surfaces shall be sound, reasonably smooth and free from defects which would interfere with roofing installation.
- F. Roof accessories, vent pipes and other projections through the roof must be in place and roof flashing installed or ready for installation before laying shingles.

3.2 INSTALLATION

- A. Underlayment and eave (ice dam) protection installation:

1. Place eave edge metal flashings tight with fascia molding. Weather lap joints 2 inches and seal with plastic cement. Secure flange with nails.

2. Apply rubberized asphalt/polyethylene sheet underlayment and eave protection.

B. Metal flashing and accessories installation:

1. Install flashings in accordance with RCSHSB requirements.
2. Weather lap joints minimum 2 inches and seal weather tight with plastic cement.
3. Secure in place. Conceal fastenings.
4. Flash and seal work weather tight, projecting through or mounted on roofing with plastic cement.

C. Shingles installation:

1. Place shingles in accordance with RCSHSB requirements to produce fan coursing pattern (radiating from peak) with 7-1/2" weather exposure to produce triple thickness over roof area.
2. Provide double course at eaves as detailed.
3. Project first course 1 inch beyond top of cornice molding.
4. Complete installation to provide weather tight service.

3.3 METAL DRIP EDGES

- A. At rakes, install metal drip edges made of stainless steel specified under Section 07 60 00, FLASHING AND SHEET METAL. Apply the metal drip edge directly over the underlayment along the rakes.
- B. Secure metal drip edges with compatible nails spaced not more than 250 mm (10 inches) on center along the inner edges.

3.4 FLASHINGS

Provide metal flashings specified under Section 07 60 00, FLASHING AND SHEET METAL at the intersections of roofs, adjoining walls, or projections through the deck such as chimneys and vent stacks. Give careful attention to the installation of all flashings.

3.5 RIDGE

- A. Shape and hip lap each shingle lengthwise down center to provide equal exposure on each side of ridge. Beginning at one end of ridge, apply shingles with maximum 125 mm (5 inches) exposure.
- B. Secure each shingle with two nails on each side, 210 mm (8-1/2 inches) back from exposed end and one inch up from edge.

3.6 VALLEY FLASHING

- A. Install metal valley flashing shown and as specified under Section 07 60 00, FLASHING AND SHEET METAL.
- B. Secure valley flashing in accordance with shingle manufacturer's printed instructions and in accordance with SMACNA.
- C. Expose flashing in open portion of valley a minimum of 2 inches and lap the shingles over the flashing a minimum of 3 inches.

3.7 ROOF ACCESSORIES

- A. Install ridge and roof vents, as recommended by SMACNA prior to placing shingles.
- B. Lap shingles over the accessories flashing a minimum of 125 mm (5 inches).

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