

SECTION 073117 – CEDAR SHINGLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wood shingle roofing.
 - 2. Felt underlayment.
 - 3. Roof flashing.
 - 4. Ridge vent.
- B. Related Sections include the following:
 - 1. Division 6 Section "Exterior Finish Carpentry".

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of wood shake hip and ridge unit indicated.
 - 1. Include similar Samples of trim and accessories involving color selection.
- C. Samples for Verification: For the following products, of sizes indicated, to verify color selected.
 - 1. Wood Shakes: Full size. (Verify to match existing)
 - 2. Hip and Ridge Unit: Full size.
 - 3. Ridge Vent: 12-inch- long Sample.
 - 4. Self-Adhering Underlayment: 12 inches square.
- D. Qualification Data: For Installer.

- E. Research/Evaluation Reports: For wood shakes.
- F. Maintenance Data: For wood shakes to include in maintenance manuals.
- G. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who is an approved affiliate member of CSSB.
- B. Grading Agency Qualifications: An independent testing and inspecting agency recognized by authorities having jurisdiction as qualified to label wood shakes for compliance with referenced grading rules.
- C. Source Limitations: Obtain wood shakes through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide wood shakes and related roofing materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Exterior Fire-Test Exposure: Class B; UL 790 or ASTM E 108 with ASTM D 2898, for application and roof slopes indicated.
- E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.
 - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store underlayment rolls on end on pallets or other raised surfaces. Do not double-stack rolls.
 - 1. Handle, store, and place roofing materials in a manner to avoid significant or permanent damage to roof deck or structural supporting members.
- B. Protect unused underlayment from weather, sunlight, and moisture when left overnight or when roofing work is not in progress.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing to be performed according to manufacturer's written instructions and warranty requirements.
 - 1. Install self-adhering sheet underlayment within the range of ambient and substrate temperatures recommended by manufacturer.

1.8 WARRANTY

- A. Special Warranty: CSSB's standard form in which CSSB agrees to repair or replace wood shakes that fail in materials within specified warranty period. Material failures include manufacturing defects that result in leaks.
 - 1. Material Warranty Period: 25 years for shakes, and 20 years for manufactured hip and ridge units, from date of Final Acceptance.
- B. Special Project Warranty: Roofing Installer's warranty, on warranty form at end of this Section, signed by roofing Installer, covering Work of this Section, in which roofing Installer agrees to repair or replace components of wood shake roofing that fail in materials or workmanship within the following warranty period:
 - 1. Warranty Period: Two years from date of Final Acceptance.

PART 2 - PRODUCTS

2.1 ROOF SHINGLES

- A. Certified Wood: Provide shingles produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- B. Cedar Roof Shingles: Smooth-sawn western red cedar shingles.
 - 1. Grading Standards: CSSB's "Grading Rules for Certigrade Red Cedar Shingles."
 - 2. Grade: No. 1, with starter courses of No. 1.
 - 3. Size: 16 inches long; 0.40 inch thick at butt.
- C. Ridge and Hip Units: Manufactured units of same thickness as roof shingle, 7 inches wide; beveled, alternately overlapped, and nailed.
 - 1. Grade: No. 1.
 - 2. Length: 16 inches

2.2 UNDERLAYMENT MATERIALS

- A. Roof Felt Interlayment: ASTM D 226, Type II, asphalt-saturated organic felt.

- B. Self-Adhering Sheet Underlayment, Granular Surfaced: ASTM D 1970, minimum of 55 mils thick; glass-fiber-mat-reinforced, SBS-modified asphalt; mineral-granule surfaced; with release-paper backing; cold applied.

2.3 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.
- B. Roofing Nails: ASTM F 1667; stainless-steel wire nails, sharp-pointed, and of sufficient length to penetrate a minimum of 3/4 inch into sheathing.
 - 1. Use box-type nails for wood shakes.
 - 2. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
- C. Roofing Staples: Type 304 or 316 stainless-steel staples, 0.05-inch thick, with minimum 7/16-inch crown width, of sufficient length to penetrate a minimum of 3/4 inch into sheathing.
- D. Felt Underlayment Nails: Aluminum, stainless-steel, or hot-dip galvanized steel wire nails with low-profile capped heads or disc caps, 1-inch minimum diameter.
- E. Wood Lath Strip: Western red cedar, clear heartwood, minimum width 1-1/2 inches.

2.4 METAL FLASHING AND TRIM

- A. Sheet Metal Flashing and Trim:
 - 1. Sheet Metal: Copper
- B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item.
 - 1. Apron Flashings: Fabricate with lower flange a minimum of 6 inches over and beyond each side of downslope wood roofing and 6 inches up the vertical surface.
 - 2. Step Flashings: Fabricate with a headlap of 3 inches and a minimum extension of 5 inches over the underlying wood roofing and up the vertical surface.
 - 3. Cricket Backer Flashings: Fabricate with concealed flange extending a minimum of 18 inches beneath upslope wood roofing and 6 inches beyond each side of chimney and 6 inches above the roof plane.
 - 4. Open-Valley Flashings: Fabricate in lengths not exceeding 10 feet with 1-inch-high, inverted-V profile at center of valley and equal flange widths of 12 inches.
 - 5. Drip Edges: Fabricate in lengths not exceeding 10 feet with 2-inch roof-deck flange and 1-1/2-inch fascia flange with 3/8-inch drip at lower edge.
- C. Vent-Pipe Flashings: ASTM B 749, Type L51121, at least 1/16 inch thick. Provide lead sleeve sized to slip over and turn down into pipe, soldered to skirt at slope of roof and extending at least 4 inches from pipe onto roof.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
 - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provision has been made for flashings and penetrations through roofing.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROOF UNDERLAYMENT INSTALLATION

- A. Double-Layer Roof Felt Underlayment: Install double layers of roof felt underlayment on roof deck perpendicular to roof slope in parallel courses. Install a 19-inch- wide starter course at eaves and completely cover with full-width second course. Install succeeding courses lapping previous courses 19 inches in shingle fashion. Lap ends a minimum of 6 inches. Stagger end laps between succeeding courses at least 72 inches. Fasten with felt underlayment nails.
 - 1. Apply a continuous layer of asphalt roofing cement over starter course and on roof felt underlayment surface to be concealed by succeeding courses as each roof felt course is installed. Apply over entire roof.
 - 2. Install roof felt underlayment on roof sheathing not covered by self-adhering sheet underlayment. Lap edges over self-adhering sheet underlayment not less than 3 inches in direction to shed water.
 - 3. Terminate roof felt underlayment extended up not less than 4 inches against sidewalls, curbs, chimneys, and other roof projections.
- B. Open-Valley Underlayment: Install 2 layers of 36-inch- wide roof felt underlayment centered in valley. Stagger end laps between layers at least 72 inches. Lap ends of each layer at least 12 inches in direction to shed water, and seal with asphalt roofing cement. Fasten each layer to roof deck with felt underlayment nails.
 - 1. Lap roof-deck roof felt underlayment over first layer of valley roof felt underlayment at least 6 inches.

3.3 METAL FLASHING INSTALLATION

- A. Install metal flashings according to wood roofing recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."
- B. Apron Flashings: Extend lower flange over and beyond each side of downslope wood roofing and up the vertical surface.

- C. Step Flashings: Install with a headlap of 3 inches and extend over the underlying wood roofing and up the vertical surface. Install with lower edge of flashing just upslope of, and concealed by, butt of overlying shingle or shake. Fasten to roof deck only.
- D. Cricket and Backer Flashings: Install against the roof-penetrating element extending concealed flange beneath upslope wood roofing and beyond each side.
- E. Open-Valley Flashings: Install centrally in valleys, lapping ends at least 8 inches in direction to shed water. Fasten upper end of each length to roof deck beneath overlap.
 - 1. Secure hemmed flange edges into metal cleats spaced 12 inches apart and fastened to roof deck.
 - 2. Adhere 9-inch- wide strip of self-adhering sheet to metal flanges and to self-adhering sheet underlayment.
- F. Rake Drip Edges: Install rake drip edge flashings over underlayment and fasten to roof deck.
- G. Eave Drip Edges: Install eave drip edge flashings below underlayment and fasten to roof deck.
- H. Pipe Flashings: Form flashing around pipe penetrations and wood roofing. Fasten and seal to wood roofing.

3.4 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS **<Insert name>** of **<Insert address>**, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: The Roanoke Island Festival Park
 - 2. Address: Manteo, NC
 - 3. Building Name/Type: Entry Pavillion/Museum
 - 4. Address: 1 Festival Park, Manteo, NC 27954
 - 5. Area of Work: Roof
 - 6. Acceptance Date: **<Insert date.>**
 - 7. Warranty Period: 25 years
 - 8. Expiration Date: **<Insert date.>**
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;
 - b. peak gust wind speed exceeding 120 MPH mph;
 - c. fire;
 - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this **<Insert day>** day of **<Insert month>**, **<Insert year>**.

1. Authorized Signature: <Insert signature.>
2. Name: <Insert name.>
3. Title: <Insert title.>

END OF SECTION 073117