

## SECTION 073113 - ASPHALT SHINGLES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Asphalt shingles.
  - 2. Underlayment.
  - 3. Ridge vents.
- B. Related Requirements:
  - 1. Division 01 Section "Alternates" for administrative and procedural requirements for alternates
  - 2. Division 07 Section "Roof Accessories" for ridge vents.

#### 1.3 DEFINITION

- A. Roofing Terminology: See 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 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection: For each type of asphalt shingle indicated.
  - 1. Include similar Samples of accessories involving color selection.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's warranty.

#### 1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Asphalt Shingles: 100 sq. ft. of each type, in unbroken bundles.

#### 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store roofing materials in a dry, well-ventilated location protected from weather, sunlight, and moisture according to manufacturer's written instructions.
- B. Store underlayment rolls on end on pallets or other raised surfaces. Do not double stack rolls.
- C. Protect unused roofing materials from weather, sunlight, and moisture when left overnight or when roofing work is not in progress.
- D. Handle, store, and place roofing materials in a manner to prevent damage to roof deck or structural supporting members.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Install self-adhering sheet underlayment within the range of ambient and substrate temperatures recommended in writing by manufacturer.

1.10 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace asphalt shingles that fail within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Manufacturing defects.
  - 2. Material Warranty Period: 30 years from date of Substantial Completion, prorated, with first three years nonprorated.
  - 3. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds of up to 80 mph for 15 years from date of Substantial Completion.
  - 4. Workmanship Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Exterior Fire-Test Exposure: Provide asphalt shingles and related roofing materials identical to those of assemblies tested for Class A fire resistance according to ASTM E 108 or UL 790 by Underwriters Laboratories or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.

2.2 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

- A. Laminated-Strip, SBS-Modified Asphalt Shingles: ASTM D 3462/D 3462M, laminated, multi-ply overlay construction, glass-fiber reinforced, mineral-granule surfaced, and self-sealing; complying with UL 2218, Class 4.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - a. Atlas EPS; a Division of Atlas Roofing Corporation.

- b. GAF.
  - c. CertainTeed Corporation.
  - d. Johns Manville; a Berkshire Hathaway company.
- 2. Butt Edge: Straight cut.
  - 3. Strip Size: Manufacturer's standard.
  - 4. Algae Resistance: Granules resist algae discoloration.
  - 5. Color and Blends: As selected by Architect from manufacturer's full range.

## 2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering Sheet Underlayment, Polyethylene Faced: ASTM D 1970/D 1970M, minimum of 40-mil-thick, slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release backing; cold applied.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Atlas EPS; a Division of Atlas Roofing Corporation.
    - b. CertainTeed Roofing Corporation.
    - c. GAF.
    - d. Johns Manville; a Berkshire Hathaway company.
    - e. Owens Corning.

## 2.4 RIDGE VENTS

- A. Rigid Ridge Vent: Manufacturer's standard, rigid section high-density polypropylene or other UV-stabilized plastic ridge vent for use under ridge shingles.
  - 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. Air Vent, Inc.; a Gibraltar Industries company.
    - b. GAF.
    - c. Owens Corning.
  - 2. Minimum Net Free Area: As recommended by architect or engineer.
  - 3. Width: As shown.
  - 4. Features:
    - a. Nonwoven geotextile filter strips.

## 2.5 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.
- B. Roofing Nails: ASTM F 1667; aluminum, stainless-steel, copper, or hot-dip galvanized-steel wire shingle nails, minimum 0.120-inch-diameter, sharp-pointed, with a minimum 3/8-inch-diameter flat head and of sufficient length to penetrate 3/4 inch into solid wood decking or extend at least 1/8 inch through OSB or plywood sheathing.
  - 1. Shank: Barbed.
  - 2. Where nails are in contact with metal flashing, use nails made from same metal as flashing.

- C. Synthetic-Underlayment Fasteners: As recommended in writing by synthetic-underlayment manufacturer for application indicated.

## 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 the Work.
  - 1. Examine roof sheathing to verify that sheathing joints are supported by framing and blocking or metal clips and that installation is within flatness tolerances.
  - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provisions have been made for flashings and penetrations through asphalt shingles.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 UNDERLAYMENT INSTALLATION

- A. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
- B. Synthetic Underlayment: Install on roof deck parallel with and starting at the eaves. Lap sides and ends and treat laps as recommended in writing by manufacturer. Stagger end laps between succeeding courses at interval recommended in writing by manufacturer. Fasten according to manufacturer's written instructions. Cover underlayment within period recommended in writing by manufacturer.
  - 1. Install in single layer on roofs sloped at 4:12 and greater.
- C. Self-Adhering Sheet Underlayment: Install, wrinkle free, on roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Install lapped in direction that sheds water. Lap sides not less than 3-1/2 inches. Lap ends not less than 6 inches staggered 24 inches between courses. Roll laps with roller. Cover underlayment within seven days.
  - 1. Eaves: Extend from edges of eaves 36 inches beyond interior face of exterior wall.
  - 2. Rakes: Extend from edges of rake 36 inches beyond interior face of exterior wall.
  - 3. Hips: Extend 18 inches on each side.
  - 4. Ridges: Extend 36 inches on each side without obstructing continuous ridge vent slot.
  - 5. Sidewalls: Extend beyond sidewall 18 inches, and return vertically against sidewall not less than 4 inches.
  - 6. Dormers, Chimneys, Skylights, and Other Roof-Penetrating Elements: Extend beyond penetrating element 18 inches, and return vertically against penetrating element not less than 4 inches.
  - 7. Roof Slope Transitions: Extend 18 inches on each roof slope.

### 3.3 ASPHALT-SHINGLE INSTALLATION

- A. General: Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and recommendations in NRCA's "NRCA Guidelines for Asphalt Shingle Roof Systems."
- B. Install starter strip along lowest roof edge, consisting of an asphalt-shingle strip at least 7 inches wide with self-sealing strip face up at roof edge.
  - 1. Extend asphalt shingles 1/2 inch over fasciae at eaves and rakes.
  - 2. Install starter strip along rake edge.
- C. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.
- D. Install asphalt shingles by single-strip column or racking method, maintaining uniform exposure. Install full-length first course followed by cut second course, repeating alternating pattern in succeeding courses.
- E. Fasten asphalt-shingle strips with a minimum of four roofing nails located according to manufacturer's written instructions.
  - 1. When ambient temperature during installation is below 50 deg F, seal asphalt shingles with asphalt roofing cement spots.
- F. Ridge Vents: Install continuous ridge vents over asphalt shingles according to manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.

END OF SECTION 073113