1. Section 073113   
   Asphalt Shingles
   1. PART 1  GENERAL
      1. REFERENCE STANDARDS
         1. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
         2. ASTM D3462/D3462M - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules; 2023.
         3. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.
         4. ASTM F1667/F1667M - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2021a.
         5. NRCA (RM) - The NRCA Roofing Manual; 2024.
      2. SUBMITTALS
         1. See Section 013000 - Administrative Requirements for submittal procedures.
         2. Samples:  Submit two samples of each shingle color indicating color range and finish texture/pattern ; for color selection.
         3. Warranty Documentation:  Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
      3. WARRANTY
         1. See Section 017800 - Closeout Submittals for additional warranty requirements.
         2. Provide 5-year manufacturer's warranty for wind damage.
         3. Extended Correction Period:  Correct defective work within 2-year period commencing on Date of Substantial Completion.
   2. PART 2  PRODUCTS
      1. ASPHALT SHINGLES
         1. Asphalt Shingles:  Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
            1. Fire Resistance:  Class A, complying with ASTM E108.
            2. Self-sealing type.
            3. Style:  ​Staggered edge butt​.
            4. Color:  As selected by Architect.
      2. SHEET MATERIALS
         1. Underlayment:  Self-adhering rubber-modified asphalt sheet complying with ASTM D1970/D1970M; 22 mil total thickness; with strippable release film and woven polypropylene sheet top surface.
      3. Flashing
         1. Metal Flashings:  Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, chimney flashing, dormer flashing, and other flashing as indicated.
            1. Form flashings to profiles indicated on drawings.
            2. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
            3. Hem exposed edges of flashings minimum 1/4 inch on underside.
         2. Steel Flashing:  Prefinished and galvanized steel sheet, 26 gauge, 0.0179 inch minimum thickness, G90/Z275 hot-dip galvanized; PVC coated, color as selected.
      4. ACCESSORIES
         1. Roofing Nails:  Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8-inch head diameter, 12-gauge, 0.109-inch nail shank diameter, 1-1/2 inches long and complying with ASTM F1667/F1667M.
   3. PART 3  EXECUTION
      1. INSTALLATION
         1. Underlayment:
            1. Roof Slopes Up to 4:12:  Install two layers of underlayment over area not protected by eave protection, with ends and edges weather lapped minimum 4 inches; stagger end laps of each consecutive layer and nail in place.
            2. Roof Slopes Greater Than 4:12:  Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches; stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches over eave protection.
            3. Weather lap and seal watertight with plastic cement any items projecting through or mounted on roof.
         2. Shingles:
            1. Install shingles in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.

Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.

* + - * 1. Place shingles in straight coursing pattern with 5-inch weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.
        2. Project first course of shingles 3/4 inch beyond fascia boards.
        3. Extend shingles 1/2 inch beyond face of gable edge fascia boards.
        4. Complete installation to provide weathertight service.

1. END OF SECTION