

SLATE 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. Slate Shingles
2. Underlayment
3. Metal flashings required for a watertight slate shingle roof installation
4. Fasteners

1.3 DEFINITIONS

- A. Roofing Terminology: *Refer* to ASTM 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: Include slate properties, construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of slate indicated.
- B. Shop Drawings: Include sections at hips, gables, ridges, valleys and eaves; component details; accessories; and attachments for other work.
- C. Samples for Submittal: Manufacturer's color charts consisting of units for sections of units showing the full range of colors, textures, shape and size specified, showing the full range of variations expected. Prepare samples from the same material to be used for the work.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each color of slate from single quarry capable of producing slate of consistent quality in appearance and physical properties.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver slate shingles to Project site and store as close as possible to the point of installation to minimize damage while handling.
- B. Store and handle roofing materials to prevent breakage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

1. Newmont Slate Co., 720 Vermont Route 149, West Pawlet, VT 05775
Tel: (802) 884-8091
2. QWIK Slate, Inc., 1075 Ferncliff Road, Poultney, VT 05764
Tel: (802) 282-3992

2.2 SLATE

A. Slate Shingles: C406-89, 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 exceeding 1 1/2", and no broken corners on covered ends that could sacrifice nailing strength or laying of a watertight roof.

1. Thickness of Slate:

- | | |
|---|------------------|
| A. 1/4" Old Standard Grade-Selects | 680-780 lbs/sq |
| B. 1/4" to 3/8" Standard - Rough Texture | 800-1000 lbs/sq |
| C. 3/8" to 1/2" Thickness - Architectural | 1200- lbs/sq |
| D. 1/2" to 3/4" Thickness – Heavy Grade | 1800-2200 lbs/sq |
| E. 3/4" to 1" Thickness – Mansion Grade | 2500-3000 lbs/sq |

4. Color of slate shall be Newmont:

- A. Vermont Semi-Weathering Gray Green (SWGG)
- B. Vermont Black
- C. Vermont Semi-Weathering Purple
- D. Vermont Gray-Black
- E. Vermont Strata Gray
- F. Non-Weathering Mottled Green and Purple
- G. Non-Weathering Purple
- H. Non-Weathering Gray/Green
- I. Newmont Imported Unfading Black
- J. Vermont Variegated Purple
- K. Non-Weathering Red

2. Size:

- A. Length of Slate To Be _____"
- B. Width of Slate To Be _____"
- C. Graduated In Length from _____" to _____".
(If Random Widths to be used, width shall not be less than 1/2 length.)

2.3 METAL FLASHING AND TRIM

A. Sheet Metal Flashing and Trim: Comply with requirements in Division 7 Section "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.

2.4 UNDERLAYMENTS

- A. One layer of 30# felt paper over entire roof deck.
- B. Ice and water shield as needed.

2.5 FASTENERS

- A. Provide stainless steel or copper slate hooks or 10 gauge solid copper slater's nails. Length (formula=thickness x 2 + 1")

2.6 Elastomeric Sealant

- A. ASTM C920 elastomeric polyurethane, polymer sealant; of Type, Grade, Class and Use classifications required to seal joints in slate shingle roofing and remain watertight. Where sealant will be exposed, provide in color matching shingle.

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. Examine roof sheathing to verify 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 provision has been made for flashings and penetrations through roofing.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 METAL FLASHING INSTALLATION

- A. General: Install metal flashings and other sheet metal to comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim".
- B. Install metal flashings according to recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual".
- C. Apron Flashing: Extend lower flange over and beyond each side of down slope slate shingles and up the vertical surface.
- D. Step Flashings: Install with a 3-inch head lap extending over the underlying slates shingles and up the vertical surface. Install with lower edge of flashing just upslope of and concealed by, butt of overlying slate shingle. Fasten to roof deck only.
- E. Cricket Flashings: Install against the roof penetrating element, extending concealed flange beneath upslope slate shingles and beyond each side.
- F. Hip Flashings: Install centrally over hip with lower edge of flashing concealed by butt of overlying slate shingle. Fasten to roof deck.

G. 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.

H. Rake Drip Edges: Install over underlayment and fasten to roof deck.

I. Eave Drip Edges: Install beneath underlayment and fasten to roof deck.

3.4 SLATE-SHINGLE INSTALLATION

A. Installation, General: Beginning at eaves, install slate shingles according to written recommendations of Newmont Slate and details and recommendations in NRCA's "The NRCA Roofing And Waterproofing Manual".

1. Install shingle starter course chamfered edge down.

B. Install first and remaining shingle courses with chamfered face up. Install full width first course at rake edge.

1. Offset joint of (random width slate) (uniform width slate) a minimum of 3 inches in succeeding courses.

C. Maintain a 3-inch minimum head lap between succeeding shingle courses.

D. Extend shingle starter course and first course 2 inches over facial at eaves.

E. Extend shingle starter course and succeeding courses 1 inch over rake edge.

F. Cut and fit slate neatly around projections through roof.

G. Hang slate with hook or two fasteners (nail) for each shingle with fasteners lightly touching slate. Do not drive fasteners home drawing slates downward or leave fastener head protruding enough to interfere with overlapping shingle above.

H. Hips:

1. Mitered Hip

2. Saddle Hip

3. Boston Hip

4. Fantail Hip

5. Copper

I. Ridges:

1. Saddle Ridge

2. Strip Saddle Ridge

3. Comb Ridge

4. Copper Ridge

J. Valleys:

1. Open Valleys

2. Closed Valleys

3. Round Valleys

4. Canoe Valleys

Cut slate shingles to form straight lines at open valleys, trimming upper concealed comers of shingles. Maintain uniform width of exposed open valley from highest to lowest point.

1. Do not nail shingles to valley metal flashings.

3.5 ADJUSTING AND CLEANING

- A. Remove and replace damaged or broken slates.
- B. Remove excess slate and debris from project site.

3.6

- A. The Architect shall *perform* a final inspection of work and supply Contractor with Punch List if necessary. All punch list items shall be completed prior to approval by Architect for final payment.