



GLACIAL TILL STONE SPECIFICATIONS

PART 1: GENERAL

1.1 PRODUCT USES

- A. Stone Cladding (interior and exterior walls).
- B. Stone Patios.
- C. Stone Waterfalls.
- D. Stone Walkways.
- E. Stone Driveways.
- F. Stone Flooring.
- G. Stone Stair Treads.
- H. Stone Fireplaces.
- I. Stone Steppers.
- J. Stone Pavers.

1.2 INFORMATION REQUIREMENTS

- A. Section 03300 - Cast-In Place Concrete: Horizontal floor substrate requirements.
- B. Section 04200 - Masonry: Concrete block masonry for vertical wall substrate requirements.
- C. Section 06100 - Rough Carpentry: Vertical wall structure, sheathing and metal lath requirements.

1.3 TERMINOLOGY REFERENCES

- D. ASTM C119 - Terminology Relating to Dimension Stone.
- E. ASTM C1353 - Test Method Using the Taber Abraser for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic.
- F. ASTM C170 - Test Method for Compressive Strength of Dimension Stone.
- G. ASTM C241 - Test Method for Abrasion Resistance of Stone Subjected to Foot Traffic.
- H. ASTM C880 - Test Method for Flexural Strength of Dimension Stone.
- I. ASTM C97 - Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
- J. ASTM C99 - Test Method for Modulus of Rupture of Dimension Stone.

1.4 SAMPLES

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Selection Samples: For each product specified, two sample boards representing manufacturer's brilliant variation in color and veining range.
- D. Verification Samples: For each finish product specified, two sample boards, minimum sample size of 6 inches (150 mm) square, representing actual product, color, and characteristics.

1.5 QUALITY/PRODUCT ASSURANCE

- A. Manufacturer Qualifications:
- B. Installer Qualifications:
- C. Mock-Up: Provide a mock-up for evaluation of stone, mortar color and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store stone on pallets. Pallet shall be shrink wrapped, double banded wood crates with 1 ton of product.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2: PRODUCTS

2.1 MANUFACTURER

Manufacturer: RealStone Supply, which is located at: 335 Park Ave NW Bagley, MN;

Tel: 218-694-6207; Fax: 218-694-6208;

Web: www.realstonesupply.com

2.2 STONE

A. Physical Characteristics: Granite

1. RealStone is quarried in Northern Minnesota and fabricated from Glacial Till Granite.
2. Grade: Grade A.
3. Color Range: 290 different colors.
4. Water Absorption: Bulk Specific Gravity- 2.67, Absorption- 0.12 percent.
5. Modulus of Rupture: Load Parallel to Rift-dry condition 2006 psi (13.8 MPa)- wet condition 2512 (17.3 MPa) psi. Load Perpendicular to Rift- dry condition 2586 psi (17.8 MPa) - wet condition 2277 (15.7 MPa) psi.
6. Flexural Strength: Load Parallel to Rift-dry condition 2275 psi (15.7 MPa) -wet condition 1975 (13.6 MPa) psi, Load Perpendicular to Rift-dry condition 2390 psi (16.5 MPa) - wet condition 2565 psi (17.7 MPa).
7. Abrasion Resistance: 132.88 smooth thin veneer, 130.31 textured thin veneer.
8. Compressive Strength: Load Parallel to Rift- wet condition 22042 psi (152 MPa) -dry condition 20812 psi (143.4 MPa), Load Perpendicular to Rift- wet condition 20538 psi (141.5 MPa) -dry condition 22969 psi (156.3 MPa).

B. Sizes and Finishes:

1. Glacial Till Thin Veneer – 3/4” (19 mm) Glacial Till Granite - Mixed Color. Commonly used for fireplaces, walls, flooring, siding (anywhere low weight is necessary for installation):
 - a. Product size ranges from 5 to 18 inches (127 mm to 457 mm) in width, and up to 32 inches (813 mm) in length.
 - b. Thin Veneer - Approximately 3/4 inch (19 mm) thick and 230 sq ft per ton.
 - c. #150-0 Sawn Finish.
 - d. #150-1 Textured Finish.
 - e. #150-2 Sawn w/Cut Edge.
 - f. #150-3 Sawn w/Cut Edge & Textured Finish.

2. Glacial Till Thin Veneer – 1.5” (35 mm) Steppers/Pavers, Glacial Till Granite - Mixed Color. Commonly used for garden path steppers, patios, pavers, walkways, and landscaping, brick ledge and both vertical and horizontal installations:
 - a. Product size ranges from 5 to 18 inches (127 mm to 457 mm) in width, and up to 32 inches (813 mm) in length.
 - b. Veneer - Approximately 1-3/8 inches (35 mm) thick and 120 sf (11 sm) per ton.
 - c. #151-0 Sawn Finish.
 - d. #151-1 Textured Finish.
 - e. #151-2 Sawn Finish w/Cut Edge
 - f. #151-3 Sawn w/Cut Edge & Textured Finish

3. Glacial Till Full Veneer – 2” (52 mm) Glacial Till Granite - Mixed Color. Commonly used for patios, walkways, driveways and landscaping, brick ledge and both vertical and horizontal installations:
 - a. Product size ranges from 5 to 18 inches (127 mm to 457 mm) in width, and up to 32 inches (813 mm) in length.
 - b. Veneer - Approximately 2” (51 mm) thick and 90 sf (8.4 sm) per ton.
 - c. #152-0 Sawn Finish.
 - d. #152-1 Textured Finish.
 - e. #152-2 Sawn Finish w/Cut Edge
 - f. #152-3 Sawn w/Cut Edge & Textured Finish

4. Glacial Till Thin Veneer - Outside Corners – 3/4" Thick (19 mm) veneer Random sizes 5 to 18 inches (127 mm to 457 mm) length:
 - a. #150-4 Sawn 150 ft (45 m).
 - b. #150-5 Textured 150ft/pallet (45 m).

5. Split-Face Thin Veneer - 1 – 2.5” (25mm to 76mm) thick, 5 to 10 inches (76 mm to 254 mm) diameter:
 - a. Glacial Till Granite-Split faced Style. Commonly used for fireplaces and walls.
 - b. #159-0 Thin Split Faced 162sf (15sm)/ton.
 - c. #159-1 Thin Split Faced Oversized: 10-16” Diameter
 - d. #159-2 Thick Split Faced Jumbo: 16-24” Diameter

6. Split-Face Outside Corners – 1 – 2.5” Thick, 5 to 10 inches (127 mm to 254 mm) diameter:
 - a. #159-4 Split Faced 150 ft/pallet (45m).

7. Cobble Fieldstone Thin Veneer – 1 – 2.5” Thick (25 mm to 76 mm), 6 to 10 inches (76 mm to 254 mm) diameter:
 - a. Glacial Till Granite-Cobble Style end caps. Commonly used for fireplaces and walls.
 - b. #158-0 Thin Cobble 162 sf (15 sm) / ton.
 - c. #158-1 Thin Cobble Oversized: 10-16” Diameter
 - d. #158-2 Thick Cobble Jumbo: 16-24” Diameter

8. Cobble Fieldstone Full Depth Veneer – 3 – 7” Thick, (76 mm to 178 mm) thick / 6 to 18 inches (152 mm to 457 mm) diameter:
 - a. Glacial Till Granite-Cobble Style end caps. Commonly used for fireplaces and walls.
 - b. #158-3 Full Depth Cobble.

9. Cobble Fieldstone Outside Corners – 1 – 2.5” Thick, 5 to 10 inches (127 mm to 254 mm) diameter:
 - a. #158-4 Cobble Corners 150 ft/pallet (45 m).

10. Cobble Fieldstone Outside Corners – 3 – 5” Thick, 8 to 17 inches (203 mm to 432 mm) diameter:
 - a. #158-5 Full Depth Cobble Corners.

2.3 MORTAR AND GROUTS

A. Vertical Grout:

1. Exterior Scratch Coat: STONE VENEER SCRATCH AND BASE from SPEC MIX.
2. Mortar: STONE VENEER MORTOR from SPEC MIX.

B. Horizontal Grout:

1. Accucolor Premium Sanded Grout from TEC Produce a fine sanded look with multiple colors available.
2. STONE VENEER JOINT GROUT from SPEC MIX produce a coarser mortar sand look often associated with a rustic installation.

PART 3: EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.