Pangaea® Natural Stone Inc.
1313 E. Maple Street Suite 668
Bellingham, WA USA
98225
Toll Free – 888-801-3266

Pangaea® Natural Stone Inc.
1880 Savage Road
Richmond BC Canada
V6V 3A5
Toll Free – 888-801-3266

Website www.pangaeanaturalstone.com
E-mail info@pangaeanaturalstone.com

June 2025

Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition.*

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" after editing this section.

Section numbers and titles are from *MasterFormat 1995 Edition*, with numbers and titles from *MasterFormat 2004 Edition* in parentheses. Deleted version not required.

SECTION 04850 (04 40 00)

NATURAL THIN VENEER STONE

Specifier Notes: This section covers Pangaea® Natural Stone Inc., natural thin veneer stone and architectural stone for exterior and interior vertical surfaces.

PART 1 GENERAL

1.1 1.1 SECTION INCLUDES

Specifier Notes: Edit the following as required.

1.1.1 A. Natural thin veneer stone for [exterior] [and] [interior] vertical surfaces.

1.2 1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section. Delete sections not required.

1.2.1 A. Section 04810 (04 22 00) – Unit Masonry Assemblies (Concrete Unit Masonry): Masonry supporting walls.

1.2.2 B. Section 05400 (05 40 00) – Cold-Formed Metal Framing: Formed steel-framed supporting walls.

1.2.3 C. Section 05500 (05 50 00) – Metal Fabrications: Galvanized shelf angles, structural supports, anchors and other built-in components for building into natural thin veneer stone.

1.2.4 D. Section 06110 (06 11 00) – Wood Framing: Wood frame supporting walls.

1.2.5 E. Section 06160 (06 16 00) – Sheathing: Wood frame supporting walls.

1.2.6 F. Section 07900 (07 90 00) – Joint Sealers (Joint Protection): Sealant and joint filler for perimeter and control joints.

1.2.7 G. Section 09220 (09 24 00) – Portland Cement Plaster (Portland Cement Plastering): Metal lath and scratch coat back-up over supporting walls.

1.2.8 H. Section 09630 (09 63 40) – Stone Flooring: Natural thin veneer stone used for flooring.

1.3 1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. Delete standards not included in the edited section. This article does not require compliance with standards but is merely a listing of those used.

1.3.1 A. ACI 530.1/ASCE 6/TMS 602 – Specifications for Masonry Structures.

1.3.2 B. ANSI A118.4 – Specifications for Latex-Portland Cement Mortar.

1.3.3 C. ASTM C 144 – Standard Specification for Aggregate for Masonry Mortar.

1.3.4 D. ASTM C 207 – Standard Specification for Hydrated Lime for Masonry Purposes.

1.3.5 E. ASTM C 270 – Standard Specification for Mortar for Unit Masonry.

1.3.6 F. ASTM C 503 – Standard Specification for Marble Dimension Stone.

1.3.7 G. ASTM C 568 – Standard Specification for Limestone Dimension Stone.

1.3.8 H. ASTM C 615 – Standard Specification for Granite Dimension Stone.

1.3.9 I. ASTM C 616 – Standard Specification for Quartz Based Dimension Stone.

1.3.10 J. ASTM C 629 – Standard Specification for Slate Dimension Stone.

1.3.11 K. ASTM C 847 – Standard Specification for Metal Lath.

1.3.12 L. ASTM C 979 – Standard Specification for Pigments for Integrally Colored Concrete.

1.3.13 M. ASTM C 1063 – Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.

1.3.14 N. ASTM D 226 – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

1.3.15 O. PCA – Portland Cement Plaster (Stucco) Manual.

1.4 1.4 SUBMITTALS

Specifier Notes: Edit submittal requirements as required. Delete submittal types not required.

1.4.1 A. Comply with Section 01330 (01 33 00) – Submittal Procedures.

1.4.2 B. Product Data: Submit manufacturer's product specification sheets on natural stone, mortar products, and sealant products, including:
1.4.2.1 1.Surface preparation and installation instructions.
1.4.2.2 2.Storage and handling instructions.

1.4.3 C. Shop Drawings: Submit manufacturer’s technical drawings, including plans, elevations, sections, and details, indicating layout, dimensions, anchorages, and jointing methods.

1.4.4 D. Selection Samples: Submit mortar color samples.

1.4.5 E. Verification Samples: Submit 2 manufacturer’s full-size samples of natural thin veneer stone for each pattern specified.

1.4.6 F. Warranty: Submit manufacturer’s standard warranty for natural thin veneer stone.

1.5 1.5 QUALITY ASSURANCE

1.5.1 A. Manufacturer’s Qualifications: Manufacturer regularly engaged, for preceding 17 years, in manufacture of natural thin veneer stone of similar type to that specified.

Specifier Notes: Include a mock-up if the project size or quality warrant taking such a precaution. Edit mock-ups as required. Delete mock-ups if not required.

1.5.2 B. Mock-Ups: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1.5.2.1 1.Finish areas designated by Architect.
1.5.2.2 2.Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
1.5.2.3 3.Refinish mock-up area as required to produce acceptable work.

1.6
1.7 1.6 DELIVERY, STORAGE, AND HANDLING

1.7.1 A. Delivery: Deliver materials to site in manufacturer’s original, unopened crates, boxes and other packaging, with labels clearly identifying product name and manufacturer. Do not remove any of the

original packaging labels for quality assurance purposes.

1.7.2

1.7.3 B. Storage:

1.7.3.1 1. Store materials in accordance with manufacturer’s instructions.

1.7.3.2 2. Store materials in manufacturer's unopened packaging until ready for installation.

1.7.3.3 3. Store stone materials on pallets, on dry level surface and cover with tarps.

1.7.3.4 4. Do not stack pallets.

1.7.3.5 5. Mortar: Store mortar under cover in area where air temperature is maintained between 40 degrees F and 110 degrees F (4 degrees C and 43 degrees C).

1.7.4 C. Handling: Protect materials during handling and installation to prevent damage or contamination.

1.8 1.7 PROJECT ENVIRONMENTAL REQUIREMENTS

1.8.1 A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install natural thin veneer stone under environmental conditions outside manufacturer's limits.

1.8.2 B. Hot and Cold Weather Requirements: ACI 530.1/ASCE 6/TMS 602.

1.8.3 C. Air Temperature: 40 degrees F (~4 degrees C) or below during installation of natural thin veneer stone.

1.8.4 D. Mortar Mixing Water: Heat mortar mixing water when air temperature falls below 50 degrees F (10 degrees C).

PART 2 PRODUCTS

1.9 2.1 MANUFACTURER

a.i.1. Pangaea ® Natural Stone Inc., mailing address: 1313 E. Maple Street, Bellingham, WA, USA 98225. Toll Free (888) 801-3266. Website www.PangaeaNaturalStone.com. E-mail info@pangaeanaturalstone.com.

a.i.2. Pangaea® Natural Stone Inc., mailing address: 1880 Savage Road, Richmond, BC, Canada V6V 3A5. Toll Free (888) 801-3266. Website www.PangaeaNaturalStone.com. E-mail info@pangaeanaturalstone.com.

1.10 2.2.1 MANUFACTURER’S DISTRIBUTOR

2 A. Instone, 1 Red Valley Rd, Millstone, NJ Zip 08510, United States; Phone: (708) 371-0660; Website: https://www.instoneco.com/

B. Instone, 5141 W 122nd St, Alsip, IL Zip 60803, United States; Phone: (708) 371-0660; Website: https://www.instoneco.com/

C. Instone, 9318 Erie Ave, Navarre, OH. Zip 44662 (708) 371-0660; Website: https://www.instoneco.com/

D. Instone, 26 Commerce Blvd, Plainville, MA Zip 02762 (708) 371-0660; Website: https://www.instoneco.com/

E. INSERT NAME, ADDRESS AND PHONE NUMBERS OF LOCAL DEALER BELOW.

2.2 NATURAL STONE THIN VENEER

Specifier Notes: Natural thin veneer stone collections and patterns are listed alphabetically. Specify required collections and patterns. Delete collections and patterns not required. Consult Pangaea Natural Stone Inc., for more information.

A. Collective Pattern: “3 Course Ashlar”

1.1.1.1

1.1.1.2 1. Name/Color: “Ash”

1.1.1.2.1 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.2.2 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.2.3 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.2.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.2.5 f. Material: Quarzitic sandstone, rated as Type-II when tested in accordance with ASTM C 616.

1.1.1.3 2. Name/Color: “Chinook”

1.1.1.3.1 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.3.2 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.3.3 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.3.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.3.5 f. Material: Granite, rated as Type-II when tested in accordance with ASTM C 616.

1.1.1.4 3. Name/Color: “Diamond River”

1.1.1.4.1 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.4.2 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.4.3 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.4.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.4.5 f. Material: Quarzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

4. Name/Color: “Klondike”

1.1.1.4.6 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.4.7 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.4.8 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.4.9 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.4.10 f. Material: Limestone, rated as Type-III when tested in accordance with ASTM C 568.

5. Name/Color: “Lancaster”

1.1.1.4.11 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.4.12 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.4.13 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.4.14 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.4.15 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

1.1.1.5

6. Name/Color: “Oxford”

1.1.1.5.1 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.5.2 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.5.3 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.5.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.5.5 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

7. Name/Color: “Providence”

1.1.1.5.6 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.5.7 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.5.8 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.5.9 d. Color: As per sample

e. Weight/sf: 10-13 lbs. (4.54-5.9 kgs)

1.1.1.5.10 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

8. Name/Color: “Saddleback”

1.1.1.5.11 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.5.12 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.5.13 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.5.14 d Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.5.14.1.1 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

9. Name/Color: “Siena”

1.1.1.5.15 a. Height: 2-1/4 inches, 5 inches, and 7-3/4 inches (57 mm, 127 mm, and 197 mm).

1.1.1.5.16 b. Length: 6 inches to 18 inches (152 mm to 457 mm).

1.1.1.5.17 c. Nominal Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.5.18 d . Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.5.19 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C616.

Dimensional Tolerance

Length, Width, and Thickness

- ±2 mm (±5/64") for slabs
- ±2 mm (±5/64") for large-format façade panels
- Up to ±5 mm (±13/64") for natural cleft stone

Flatness / Warping Tolerance (for Long Lengths)

- Maximum variation of 1.5 mm per 300 mm (1/16" per 12")
- For lengths over 2 meters (6.5 feet), total warp should not exceed 3 mm (1/8")

Joint Tolerances (Seams & Joints for Tight Fit Applications)

- 0.8 mm to 1.5 mm (1/32" to 1/16") for slabs and precision joints
- Up to 3 mm (1/8") max for architectural stone cladding with open joints
  - Larger gaps of 3–5 mm (1/8" to 13/64") may be used for expansion in exterior applications.

B. Collective Pattern: "4 Course Ashlar FormFit"

1. Name/Color: "Ash"
   1.1.1.5.20 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
1.1.1.5.20.1.1.1 b. Length: Up to 24 inches (610 mm).
   1.1.1.5.21 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.5.22 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

2. Name/Color: "Broadway"
   1.1.1.5.23 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.5.24 b. Length: Up to 24 inches (610 mm).
   1.1.1.5.25 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.5.26 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.5.27 f. Material: Granite. Rated as (currently under materials testing).

3. Name/Color: "Chinook"
   1.1.1.5.28 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.5.29 b. Length: Up to 24 inches (610 mm).
   1.1.1.5.30 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.5.31 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   f. Material: Granite. Rated as (currently under materials testing).

1.1.1.5.32

4. Name/Color: "Diamond River"
   1.1.1.5.33 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.5.34 b. Length: Up to 24 inches (610 mm).
   1.1.1.5.35 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.5.36 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
3 C 616.

4

5. Name/Color: “Kings Point”
   1.1.1.1.1 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.1.2 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.3 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.1.4 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
5 C 616.
6

6. Name/Color: “Klondike”
   1.1.1.1.1 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.1.2 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.3 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.1.4 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Limestone, rated as Type-III when tested in accordance with ASTM C 568.

7. Name/Color: “Lancaster”
   1.1.1.1.5 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.1.6 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.7 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.1.8 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   f. Material: Quartzitic sandstone, rated as Type-II when tested in accordance with ASTM C 616.

8. Name/Color: “Oxford”
   1.1.1.1.9 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.1.10 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.11 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.1.12 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
7 C 616.
8

9. Name/Color: “Providence”
   1.1.1.1.1 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
   1.1.1.1.2 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.3 c. Thickness: Average 1-1/4 inches (32 mm).
   1.1.1.1.4 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.1.5 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing).

1.1.1.1.6

10. Name/Color: “Saddeback”
    1.1.1.1.7 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
    1.1.1.1.8 b. Length: Up to 24 inches (610 mm).
    1.1.1.1.9 c. Thickness: Average 1-1/4 inches (32 mm).
    1.1.1.1.10 d. Color: As per sample
    e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
    f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
9 C 616.

11. Name/Color: “Yukon”
    1.1.1.1.1 a. Height: 2 inches, 4 inches, 6 inches, 8 inches (51 mm, 102 mm, 152 mm, 203 mm).
    1.1.1.1.2 b. Length: Up to 24 inches (610 mm).
    1.1.1.1.3 c. Thickness: Average 1-1/4 inches (32 mm).
    1.1.1.1.4 d. Color: As per sample
    e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.1.5 f. Material: Marble.Rated as (currently under materials testing).

Dimensional Tolerance

Length, Width, and Thickness

- ±2 mm (±5/64") for slabs
- ±2 mm (±5/64") for large-format façade panels
- Up to ±5 mm (±13/64") for natural cleft stone

Flatness / Warping Tolerance (for Long Lengths)

- Maximum variation of 1.5 mm per 300 mm (1/16" per 12")
- For lengths over 2 meters (6.5 feet), total warp should not exceed 3 mm (1/8")

Joint Tolerances (Seams & Joints for Tight Fit Applications)

- 0.8 mm to 1.5 mm (1/32" to 1/16") for slabs and precision joints
- Up to 3 mm (1/8") max for architectural stone cladding with open joints
  - Larger gaps of 3–5 mm (1/8" to 13/64") may be used for expansion in exterior applications.

C. Collective Pattern: “Atlas Strip”

1. Name/Color: “Cambrian”
   1.1.1.1.6 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.7 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.8 c. Thickness: Average 1-1/8 inches (28 mm).
   1.1.1.1.9 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

2. Name/Color: “Chinook”
   1.1.1.1.10 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.11 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.12 c. Thickness: Average 1-1/8 inches (28 mm).
   1.1.1.1.13 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.1.14 f. Material: Granite. Rated as (currently under materials testing).

3. Name/Color: “Copper Canyon”
   1.1.1.1.15 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.16 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.17 c. Thickness: Average 1-1/8 inches (28 mm).
   1.1.1.1.18 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

4. Name/Color: “Grigio”
   1.1.1.1.19 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.20 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.21 c. Thickness: Average 1-1/8 inches (28 mm).
   1.1.1.1.22 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

5. Name/Color: “Lancaster”
   1.1.1.1.23 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.24 b. Length: Up to 24 inches (610 mm).
   1.1.1.1.25 c. Thickness: Average 1-1/8 inches (28 mm).
   1.1.1.1.26 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   f. Material: Quartzite. Rated as Type-II when tested in accordance with ASTM C 616.

6. Name/Color: “New England”
   1.1.1.1.27 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
   1.1.1.1.28 b. Length: Up to 24 inches (610 mm).

1.1.1.1.29 c. Thickness: Average 1-1/8 inches (28 mm).
1.1.1.1.30 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

7. Name/Color: “Providence”
1.1.1.1.31 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
1.1.1.1.32 b. Length: Up to 24 inches (610 mm).
1.1.1.1.33 c. Thickness: Average 1-1/8 inches (28 mm).
1.1.1.1.34 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.1.35 f. Material: Granite/Quartzite. Rated as (currently under materials testing).

8. Name/Color: “Tuscan”
1.1.1.1.36 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
1.1.1.1.37 b. Length: Up to 24 inches (610 mm).
1.1.1.1.38 c. Thickness: Average 1-1/8 inches (28 mm).
1.1.1.1.39 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

10 Name/Color: “WestCoast®”
1.1.1.1.1 a. Height: 4 inches – 8 inches (102 mm – 203 mm).
1.1.1.1.2 b. Length: Up to 24 inches (610 mm).
1.1.1.1.3 c. Thickness: Average 1-1/8 inches (28 mm).
1.1.1.1.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Quartzite. Rated as Type-II when tested in accordance with ASTM C 616.

D. Collective Pattern: “Castlestone”

1. Name/Color: “Black Rundle”
1.1.1.1.4.1.1 a. Height: 4 inches to12 inches (102 mm to 305 mm).
1.1.1.1.4.1.2 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
1.1.1.1.4.1.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.1.4.1.4 d. Color: As per sample
e.Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.1.5 f. Material: Limestone, rated as Type-III when tested in accordance with ASTM C 568.
1.1.1.1.6
2. Name/Color: “Cambrian”
1.1.1.1.7 a. Height: 4 inches to12 inches (102 mm to 305 mm).
1.1.1.1.8 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
1.1.1.1.9 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.1.10 d. Color: As per sample
1.1.1.1.11 e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)

1.1.1.1.12 f. Material: Quarzitic sandstone, rated as Type-II when tested in accordance with ASTM C 616.

3. Name/Color: “Copper Canyon”

1.1.1.1.13 a. Height: 4 inches to12 inches (102 mm to 305 mm).
1.1.1.1.14 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
1.1.1.1.15 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.1.16 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.1.17 f. Material: Quartzitic sandstone, rated as Type-II when tested in accordance with ASTM C 616.

1.1.1.2

4. Name/Color: “Providence”

1.1.1.2.1 a. Height: 4 inches to12 inches (102 mm to 305 mm).
1.1.1.2.2 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
1.1.1.2.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.2.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.2.5 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing).

5. Name/Color: “WestCoast®”

1.1.1.2.6 a. Height: 4 inches to12 inches (102 mm to 305 mm).
1.1.1.2.7 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
1.1.1.2.8 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.2.9 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.2.10 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

E. Collective Pattern: “Fieldstone”

1.1.1.3 1. Name/Color: “Cambrian”

1.1.1.3.1 a. Height: Irregular shapes.
1.1.1.3.2 b. Length: Irregular to 18 inches (457 mm) across.
1.1.1.3.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.3.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.3.5 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.3.6 C 616.

1.1.1.4 2. Name/Color: “Chinook”

1.1.1.4.1 a. Height: Irregular shapes.
1.1.1.4.2 b. Length: Irregular to 18 inches (457 mm) across.
1.1.1.4.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.4.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.4.5 f. Material: Granite. Rated as (currently under materials testing).

1.1.1.5 3. Name/Color: “Copper Canyon”

1.1.1.5.1 a. Height: Irregular shapes.

1.1.1.5.2 b. Length: Irregular to 18 inches (457 mm) across.

1.1.1.5.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.5.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)

1.1.1.5.5 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

1.1.1.6 4. Name/Color: “Grigio”

1.1.1.6.1 a. Height: Irregular shapes.

1.1.1.6.2 b. Length: Irregular to 18 inches (457 mm) across.

1.1.1.6.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.6.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.6.5 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM

1.1.1.6.6 C 616.

1.1.1.7

1.1.1.8 5. Name/Color: “Lancaster”

1.1.1.8.1 a. Height: Irregular shapes.

1.1.1.8.2 b. Length: Irregular to 18 inches (457 mm) across.

1.1.1.8.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.8.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)

1.1.1.8.5 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

1.1.1.9

1.1.1.10 6. Name/Color: “Providence”

1.1.1.10.1 a. Height: Irregular shapes.

1.1.1.10.2 b. Length: Irregular to 18 inches (457 mm) across.

1.1.1.10.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.10.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)

1.1.1.10.5 f. Material: Granite/Quartzite. Rated as (currently under materials testing).

1.1.1.11 7. Name/Color: “Sierra Ridge”

1.1.1.11.1 a. Height: Irregular shapes.

1.1.1.11.2 b. Length: Irregular to 18 inches (457 mm) across.

1.1.1.11.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.11.4 d. Color: As per sample

e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)

1.1.1.11.5 f. Material: Quartzite. Rated as Type-III when tested in accordance with ASTM C 616.

8. Name/Color: “WestCoast®”

1.1.1.11.6 a. Height: Irregular shapes.

1.1.1.11.7 b. Length: Irregular to 18 inches (457 mm) across.
1.1.1.11.8 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.9 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.11.10 f. Material: Quartzite. Rated as Type-III when tested in accordance with ASTM C 616.

F. Collective Pattern: "Ledgestone"

1. Name/Color: "Black Rundle"
1.1.1.11.11 a. Height: 2 inches to 5 inches (51 mm to 127 mm).
1.1.1.11.12 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.13 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.14 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.15 f. Material: Limestone, rated as Type-III when tested in accordance with ASTM C 568.

2 . Name/Color: "Cambrian"
1.1.1.11.16 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.17 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.18 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.19 d. Color: As per sample
1.1.1.11.20 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.21 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.22 C 616.

3. Name/Color: "Chinook"
1.1.1.11.23 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.24 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.25 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.26 d. Color: As per sample
1.1.1.11.27 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.28 f. Material: Granite. Rated as (currently under materials testing).

4. Name/Color: "Copper Canyon"
1.1.1.11.29 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.30 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.31 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.32 d. Color: As per sample
1.1.1.11.33 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.34 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.35 C 616.

5. Name/Color: "Grigio"
1.1.1.11.36 a. Height: 2 inches to 4 inches (51 mm to 102 mm).

1.1.1.11.37 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.38 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.39 d. Color: As per sample
1.1.1.11.40 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.41 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.42 C 616.

6. Name/Color: “Lancaster”
1.1.1.11.43 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.44 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.45 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.46 d. Color: As per sample
1.1.1.11.47 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.48 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.49 C 616.

7. Name/Color: “New England”
1.1.1.11.50 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.51 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.52 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.53 d. Color: As per sample
1.1.1.11.54 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.55 f. Material: Schist. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.56 C 616.

8. Name/Color: “Providence”
1.1.1.11.57 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.58 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.59 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.60 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.60.1.1.1 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing).

9. Name/Color: “Tuscan”
1.1.1.11.61 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.62 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.63 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.64 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.11.65 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.66 C 616.

10. Name/Color: “WestCoast®”
1.1.1.11.67 a. Height: 2 inches to 4 inches (51 mm to 102 mm).
1.1.1.11.68 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.11.69 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.11.70 d. Color: As per sample

1.1.1.11.71 e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.72 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.73 C 616.

G. Collective Pattern: "Metropolitan"

1. Name/Color: "Black Rundle Split Face"
   1.1.1.11.74 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
   1.1.1.11.75 b. Length: 24 inches (610 mm).
   1.1.1.11.76 c. Thickness: 1 inch (25 mm).
   1.1.1.11.77 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   1.1.1.11.78 f. Material: Limestone. Rated as Type-I when tested in accordance with ASTM C 616.

2. Name/Color: "Broadway Split Face"
   1.1.1.11.79 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
   1.1.1.11.80 b. Length: 24 inches (610 mm).
   1.1.1.11.81 c. Thickness: 1 inch (25 mm).
   1.1.1.11.82 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   1.1.1.11.83 f. Material: Granite. Rated as (currently under materials testing).

3. Name/Color: "Broadway Textured"
   1.1.1.11.84 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
   1.1.1.11.85 b. Length: 24 inches (610 mm).
   1.1.1.11.86 c. Thickness: 1 inch (25 mm).
   1.1.1.11.87 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   1.1.1.11.88 f. Material: Granite. Rated as (currently under materials testing).

4. Name/Color: "Cambrian Split Face"
   1.1.1.11.89 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
   1.1.1.11.90 b. Length: 24 inches (610 mm).
   1.1.1.11.91 c. Thickness: 1 inch (25 mm).
   1.1.1.11.92 d. Color: As per sample
   e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
   1.1.1.11.93 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.94 C 616.

5. Name/Color: "Cambrian Textured"
   1.1.1.11.95 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
   1.1.1.11.96 b. Length: 24 inches (610 mm).
   1.1.1.11.97 c. Thickness: 1 inch (25 mm).

1.1.1.11.98 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.99 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.100 C 616.

6. Name/Color: “Chinook Split Face”
1.1.1.11.101 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.102 b. Length: 18 inches (457 mm).
1.1.1.11.103 c. Thickness: 1 inch (25 mm).
1.1.1.11.104 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.105 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing).

7. Name/Color: “Chinook Textured”
1.1.1.11.106 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.107 b. Length: 24 inches (610 mm).
1.1.1.11.108 c. Thickness: 1 inch (25 mm).
1.1.1.11.109 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.110 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

8. Name/Color: “Kings Point Split Face”
1.1.1.11.111 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.112 b. Length: 24 inches (610 mm).
1.1.1.11.113 c. Thickness: 1 inch (25 mm).
1.1.1.11.114 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.115 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.116 C 616.

9. Name/Color: “Kings Point Textured”
1.1.1.11.117 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.118 b. Length: 24 inches (610 mm).
1.1.1.11.119 c. Thickness: 1 inch (25 mm).
1.1.1.11.120 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.121 f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.122 C 616.

10. Name/Color: “WestCoast® Split Face”
1.1.1.11.123 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.124 b. Length: 24 inches (610 mm).

1.1.1.11.125 c. Thickness: 1 inch (25 mm).
1.1.1.11.126 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.127 f. Material: Quartzite. Rated as Type-II when tested in accordance with ASTM
1.1.1.11.128 C 616.

11. Name/Color: “WestCoast® Textured”
1.1.1.11.129 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.130 b. Length: 24 inches (610 mm).
1.1.1.11.131 c. Thickness: 1 inch (25 mm).
1.1.1.11.132 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.133 f. Material: Quartzite. Rated as Type-II when tested in accordance with ASTM C616.

12. Name/Color: “Yukon Split Face”
1.1.1.11.134 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.135 b. Length: 24 inches (610 mm).
1.1.1.11.136 c. Thickness: 1 inch (25 mm).
1.1.1.11.137 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.138 f. Material: Marble. Rated as (currently under materials testing).

13. Name/Color: “Yukon Textured”
1.1.1.11.139 a. Height: 2 inches, 4 inches, 6 inches, 8 inches, 10 inches (51 mm, 102 mm, 152 mm, 203 mm, and 254 mm)
1.1.1.11.140 b. Length: 24 inches (610 mm).
1.1.1.11.141 c. Thickness: 1 inch (25 mm).
1.1.1.11.142 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.11.143 f. Material: Marble. Rated as (currently under materials testing).

Dimensional Tolerance

Length, Width, and Thickness

- ±2 mm (±5/64") for slabs
- ±2 mm (±5/64") for large-format façade panels
- Up to ±5 mm (±13/64") for natural cleft stone

Flatness / Warping Tolerance (for Long Lengths)

- Maximum variation of 1.5 mm per 300 mm (1/16" per 12")
- For lengths over 2 meters (6.5 feet), total warp should not exceed 3 mm (1/8")

Joint Tolerances (Seams & Joints for Tight Fit Applications)

- 0.8 mm to 1.5 mm (1/32" to 1/16") for slabs and precision joints

- Up to 3 mm (1/8") max for architectural stone cladding with open joints
    - Larger gaps of 3–5 mm (1/8" to 13/64") may be used for expansion in exterior applications.

H. Collective Pattern: "Microledge"

1. Name/Color: "WestCoast®"

1.1.1.11.144 a. Height: 1 inches to 2 inches (25 mm to 51 mm).
1.1.1.11.145 b. Length: 5 inches to 12 inches (127 mm to 305 mm).
1.1.1.11.146 c. Thickness: 1 inch to 1-1/2 inches (25 mm to 38 mm).
1.1.1.11.147 d. Color: As per sample
e. Weight/sf: 11-13 lbs. (5.0-5.9 kgs)
1.1.1.11.148 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

I. Collective Pattern: "Quarry Ledgestone®"

1.1.1.12

1. Name/Color: "Chinook"
a. Height: 2 inches to 8 inches (51 mm to 203 mm).
b. Length: 4 inches to 16 inches (100 mm to 406 mm).
c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
1.1.1.12.1.1.1.1 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

2. Name/Color: "Coyote"
a. Height: 2 inches to 6 inches (51 mm to 152 mm).
b. Length: 4 inches to 16 inches (100 mm to 406 mm).
c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Sandstone. Rated as Type-I when tested in accordance with ASTM C 616.

3. Name/Color: "Lancaster"
1.1.1.12.2 a. Height: 2 inches to 8 inches (51 mm to 203 mm).
1.1.1.12.3 b. Length: 4 inches to 18 inches (100 mm to 457 mm).
1.1.1.12.4 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.12.5 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.
1.1.1.13

4. Name/Color: "New England"
1.1.1.13.1 a. Height: 2 inches to 6 inches (51 mm to 152 mm).
1.1.1.13.2 b. Length: 6 inches to 18 inches (152 mm to 457 mm).
1.1.1.13.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).

1.1.1.13.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.13.5 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

5. Name/Color: “Providence”
1.1.1.13.6 a. Height: 2 inches to 8 inches (51 mm to 203 mm).
1.1.1.13.7 b. Length: 4 inches to 18 inches (100 mm to 457 mm).
1.1.1.13.8 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.13.9 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

1.1.1.14
6. Name/Color: “Thunder Ridge”
1.1.1.14.1 a. Height: 2 inches to 6 inches (51 mm to 152 mm).
1.1.1.14.2 b. Length: 4 inches to 16 inches (100 mm to 406 mm).
1.1.1.14.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.14.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.14.4.1.1.1 f. Material: Sandstone. Rated as Type-I when tested in accordance with ASTM C 616.

7. Name/Color: “Wolverine”
1.1.1.14.5 a. Height: 2 inches to 8 inches (51 mm to 203 mm).
1.1.1.14.6 b. Length: 4 inches to 18 inches (100 mm to 457 mm).
1.1.1.14.7 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
1.1.1.14.8 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.14.9 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

J. Collective Pattern: “Roman Castlestone”

1.1.1.15
1. Name/Color: “Chinook”
1.1.1.15.1.1.1 a. Height: Up to 12 inches (305 mm).
1.1.1.15.1.1.2 b. Length: Up to 18 inches (457 mm) across.
1.1.1.15.1.1.3 c. Thickness: Average 1 inch (25 mm).
1.1.1.15.1.1.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs. (4.08-5.9 kgs)
f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

2. Name/Color: “Lancaster”
1.1.1.15.2 a. Height: Irregular up to 12 inches (30.5cm) .
1.1.1.15.3 b. Length: Irregular up to 18 inches (457 mm) across.
1.1.1.15.3.1.1.1 c. Thickness: Average 1 inch (25 mm).
1.1.1.15.4 d. Color: As per sample
e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
1.1.1.16 f. Material: Quartzite. Rated as Type-III when tested in accordance with ASTM C

616.

3. Name/Color: “Sierra Ridge”
   1.1.1.16.1 a. Height: 4 inches to12 inches (102 mm to 102 mm).
   1.1.1.16.2 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
   1.1.1.16.3 c. Thickness: 3/4 inch to 1-3/8 inches (19 mm to 35 mm).
   1.1.1.16.4 d. Color: As per sample
   e. Weight/sf: 9-13 lbs (4.08-5.9 kgs)
   1.1.1.16.5 f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM
   1.1.1.16.6 C 616.

1.1.1.17

K. Collective Pattern: “Terrain Ledgestone FormFit”

1. Name/Color: “Black Rundle”
   1.1.1.17.1.1.1 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).
   1.1.1.17.1.1.2 b. Length: Up to 20 inches (508 mm).
   1.1.1.17.1.1.3 c. Thickness: Average 1 inch (25 mm)
   1.1.1.17.1.1.4 d. Color: As per sample
   e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)
   1 f. Material: Limestone. Rated as Type-I when tested in accordance with ASTM C 616.

2. Name/Color: “Cambrian”
   1.1.1.17.1.1.5 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).
   1.1.1.17.1.1.6 b. Length: Up to 20 inches (508 mm).
   1.1.1.17.1.1.7 c. Thickness: Average 1 inch (25 mm)
   1.1.1.17.1.1.8 d. Color: As per sample
   e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)
   2 f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

3. Name/Color: “Chinook”
   1.1.1.17.1.1.9 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).
   1.1.1.17.1.1.10 b. Length: Up to 20 inches (508 mm).
   1.1.1.17.1.1.11 c. Thickness: Average 1 inch (25 mm)
   1.1.1.17.1.1.12 d. Color: As per sample
   e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)
   f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

4. Name/Color: “Copper Canyon”
   1.1.1.17.1.1.13 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).
   1.1.1.17.1.1.14 b. Length: Up to 20 inches (508 mm).
   1.1.1.17.1.1.15 c. Thickness: Average 1 inch (25 mm)
   1.1.1.17.1.1.16 d. Color: As per sample
   e. Weight/sf: Up to 13 lbs./ft² (63 kgs/m²)
   3 f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

5. Name/Color: “Grigio”

1.1.1.17.1.1.17 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).

1.1.1.17.1.1.18 b. Length: Up to 20 inches (508 mm).

1.1.1.17.1.1.19 c. Thickness: Average 1 inch (25 mm)

1.1.1.17.1.1.20 d. Color: As per sample

e. Weight/sf: Up to 13 lbs./ft² (63 kgs/m²)

4 f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

6. Name/Color: “Lancaster”

1.1.1.17.1.1.21 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).

1.1.1.17.1.1.22 b. Length: Up to 20 inches (508 mm).

1.1.1.17.1.1.23 c. Thickness: Average 1 inch (25 mm)

1.1.1.17.1.1.24 d. Color: As per sample

e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)

5 f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

7. Name/Color: “New England”

1.1.1.17.1.1.25 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).

1.1.1.17.1.1.26 b. Length: Up to 20 inches (508 mm).

1.1.1.17.1.1.27 c. Thickness: Average 1 inch (25 mm)

1.1.1.17.1.1.28 d. Color: As per sample

e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)

6 f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

8. Name/Color: “Providence”

1.1.1.17.1.1.29 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).

1.1.1.17.1.1.30 b. Length: Up to 20 inches (508 mm).

1.1.1.17.1.1.31 c. Thickness: Average 1 inch (25 mm)

1.1.1.17.1.1.32 d. Color: As per sample

e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)

7 f. Material: Granite/Quartzitic Blend. Rated as (currently under materials testing)

9. Name/Color: “Tuscan”

1.1.1.17.1.1.33 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).

1.1.1.17.1.1.34 b. Length: Up to 20 inches (508 mm).

1.1.1.17.1.1.35 c. Thickness: Average 1 inch (25 mm)

1.1.1.17.1.1.36 d. Color: As per sample
e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)
8 f. Material: Sandstone.Rated as Type-I when tested in accordance with ASTM C 616.

10. Name/Color: “WestCoast®”
1.1.1.17.1.1.37 a. Height: 1-½ inches, 2-½ inches, and 4 inches (38 mm, 64 mm, and 102 mm).
1.1.1.17.1.1.38 b. Length: Up to 20 inches (508 mm).
1.1.1.17.1.1.39 c. Thickness: Average 1 inch (25 mm)
1.1.1.17.1.1.40 d. Color: As per sample
e. Weight/sf: Up to 13 lbs/ft² (63 kgs/m²)
9 f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

2.3 FULL BED VENEER

A. Collective Pattern: “Castlestone”

1. Name/Color: “Black Rundle”
a. Height: 4 inches to 12 inches (102 mm to 305 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Limestone. Rated as Type-III when tested in accordance with ASTM C 568.

2. Name/Color: “Copper Canyon”
a. Height: 4 inches to 12 inches (102 mm to 305 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone. Rated as Type-II when tested in accordance with ASTM C 616.

3. Name/Color: “WestCoast®”
a. Height: 4 inches to 12 inches (102 mm to 305 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).

c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

B. Collective Pattern: "Fieldstone"

1. Name/Color: "Copper Canyon"
   a. Height: Irregular up to 1-½ sqft (0.14m²)
   b. Length: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   d. Color: As per sample
   e. Weight/sf: 55 lbs (25 kgs)
   f. Material:Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

2. Name/Color: "Grigio"
   a. Height: Irregular up to 1-½ sqft (0.14m²).
   b. Length: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   d. Color: As per sample
   e. Weight/sf: 55 lbs (25 kgs)
   f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

3. Name/Color: "Lancaster"
   a. Height: Irregular up to 1-½ sqft (0.14m²).
   b. Length: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   d. Color: As per sample
   e. Weight/sf: 55 lbs (25 kgs)
   f. Material: Quartzitic sandstone, rated as Type-III when tested in accordance with ASTM C 616.

4. Name/Color: "WestCoast®"
   a. Height: Irregular up to 1-½ sqft (0.14m²).
   b. Length: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
   d. Color: As per sample
   e. Weight/sf: 55 lbs (25 kgs)
   f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

C. Collective Pattern: "Ledgestone"

1. Name/Color: "Black Rundle"
   a. Height: 2 inches to 5 inches (51 mm to 127 mm).
   b. Length: 6 inches to 18 inches (152 mm to 457 mm).

c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Limestone. Rated as Type-III when tested in accordance with ASTM C 568.

2. Name/Color: “Copper Canyon”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

3. Name/Color: “Grigio”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

4. Name/Color: “Lancaster”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

5. Name/Color: “New England”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

6. Name/Color: “Tuscan”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Sandstone.Rated as Type-I when tested in accordance with ASTM C 616.

7. Name/Color: “WestCoast®”
a. Height: 2 inches to 5 inches (51 mm to 127 mm).
b. Length: 6 inches to 18 inches (152 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-III when tested in accordance with ASTM C 616.

D. Collective Pattern: “Roman Castlestone”

1. Name/Color: “Lancaster”

a. Height: 4 inches to 12 inches (102 mm to 102 mm).
1.1.1.18 b. Length: 4 inches to 18 inches (102 mm to 457 mm).
c. Thickness: 3-1/2 inch to 5 inches (89 mm to 127 mm).
d. Color: As per sample
e. Weight/sf: 55 lbs (25 kgs)
f. Material: Quartzitic Sandstone.Rated as Type-II when tested in accordance with ASTM C 616.

1.3.1 ARCHITECTURAL TRIM STONES

1.4 Post Caps:
a. Finish: [Natural split surface with hewn edges].
b. Color: [As per sample] [As shown on Drawings].
c. Size: [24 by 24 inches (610 by 610 mm) by 2” (51mm)] [As shown on Drawings].
Dimensions are nominal.

1.5 Wall Caps:
a. Finish: [Natural split surface with hewn edges].
b. Color: [As per sample] [As shown on Drawings].
c. Size: [12 by 20 inches (305 by 508 mm) by 2” (51mm)] [14 by 20 inches (356 by 508 mm) by 2” (51mm)] [As shown on Drawings].
Dimensions are nominal.

1.6 Hearth Stone:
a. Finish: [Natural split surface with hewn edges].
b. Color: [As per sample] [As shown on Drawings].
c. Size: [19 by 20 inches (483 by 508 mm) by 2” (51mm)] [As shown on Drawings].
Dimensions are nominal.

1.7 Slabs:
a. Finish: [Natural split surface with hewn edges] [Textured surface with hewn edges] [Natur surface with hewn edges].
b. Color: [As per sample] [As shown on Drawings].
c. Size: [72 by 24 inches (1,829 by 610 mm) by 2” (51mm)] [84 by 25 inches (2,134 by 610 mm) by 2” (51mm)] [72 by 20 inches (1,829 by 508 mm) by 2” (51mm)] [As shown on Drawings].
Dimensions are nominal.

1.8 Watertable Sill:
a. Finish: [Natural split surface with hewn edge and sawn cut]

b. Color: [As per sample] [As shown on Drawings].
c. Size: [34” by 3 by 2 inch (864 by 76 by 51mm)] [18 by by 3 by 2 inch (457 by 76 by 51mm)] [As shown on Drawings].
Dimensions are nominal.

Specifier Notes: Specify special shapes as required. Delete special shapes not required. Indicate location and sizes of special shapes on the Drawings.

1.1.2 A. Provide special shapes as indicated on the Drawings and as follows:
1.1.2.1 1. Trimstones.
1.1.2.2 2. Keystones.
1.1.2.3 3. _____ .

1.1.3 B. Color: As per sample

Specifier Notes: Specify color of special shapes as required. Delete colors not required.

1.1.3.1 1. Brown
1.1.3.2 2. Charcoal
1.1.3.3 3. Taupe
1.1.3.4 4. Black
1.1.3.5 5. Grey
1.1.3.6 6. _____.

1.2

1.3 2.4 ACCESSORIES

Specifier Notes: Edit the following three paragraphs as required. Delete if not required.

Specify paper-backed, expanded metal lath when thin masonry veneer is installed over metal siding back-up. Specify expanded metal lath for use over wood sheathing or existing concrete or masonry back-up.

1.3.1 A. Paper-Backed, Expanded Metal Lath: ASTM C 847; galvanized, self-furring mesh of weight to suit application, backed with paper.

1.3.2 B. Expanded Metal Lath: ASTM C 847; galvanized, self-furring.

1.3.3 C. Lath Anchorage: Tie wire, nails, screws, and other metal supports; galvanized; type and size to suit application and to rigidly secure materials in place.

Specifier Notes: Edit the following two paragraphs as required. Delete if not required. Specify building paper with wood sheathing.

1.3.4 D. Building Paper: ASTM D 226, No. 30 asphalt saturated felt.

1.3.5 E. House Wrap: Air/vapor barrier polymeric membrane as specified in Section _____ .

1.3.6 F. Concrete Bonding Agent: Latex type.

1.3.7 G. Setting Buttons and Shims: Lead or plastic.

1.3.8 H. Joint Sealants and Joint Fillers: As specified in Section 07900 (07 90 00).

1.4 2.5 MORTAR

1.4.1 A. Mortar:
- 1.4.1.1 1. Cement: ASTM C 270.
- 1.4.1.2 2. Lime: ASTM C 207.
- 1.4.1.3 3. Sand: ASTM C 144, natural or manufactured.
- 1.4.1.4 4. Color Pigments: ASTM C 979, mineral oxide.
- 1.4.1.5 5. Water: Potable.
- 1.4.1.6 6. Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4.

1.4.2 B. Bonding Agent: Acrylic additive.

Specifier Notes: Specify clear or semi-gloss sealer. Delete sealer if not required.

1.4.3 C. Sealer: Water-based silane or siloxane masonry sealer, [clear] [semi-gloss].

1.4.4 D. Mortar Mixes:

Specifier Notes: Specify mortar mixes for grouted joints or jointless dry-stack installation.

1.4.4.1.1.1.1.1 1. Grouted Joints:
- 1.4.4.1.2 a. Mix Mortar: ASTM C 270, Type S.
- 1.4.4.1.3 b. Add color pigments to mortar in accordance with pigment manufacturer's instructions.

1.4.4.1.3.1.1.1 2. Jointless Dry-Stack Installation:
- 1.4.4.1.4 a. Mix mortar in accordance with ANSI A118.4.
- 1.4.4.1.5 b. Add color pigments in accordance with pigment manufacturer's instructions.

2 PART 3 EXECUTION

2.1.1

2.2 3.1 EXAMINATION

2.2.1 A. Examine surfaces to receive natural thin veneer stone.

2.2.2 B. Notify Architect of conditions that would adversely affect installation.

a.i.3. Do not begin surface preparation or installation until unacceptable conditions are corrected.

2.2.3 D. Do not begin installation until backing structure is plumb, bearing surfaces are level, and substrates are clean and properly prepared.

2.2.4 E. Verify location and secure installation if shelf angles are required.

2.3 3.2 SURFACE PREPARATION

2.3.1 A. Prepare surfaces in accordance with manufacturer's instructions.

2.3.2 B. Clean surfaces thoroughly before installation.

2.3.3 C. Prepare surfaces using methods for achieving best results for substrate under project conditions.

Specifier Notes: Edit the following paragraphs as required. Delete paragraphs not required.

2.3.4 D. Prepare for Installation Over Plywood, Gypsum, or other exterior grade sheathing:

2.3.4.1 1.Water Resistant Barriers: Cover plywood sheathing with combination of House Wrap (first) and Building Paper with joints lapped shingle style a minimum of 4 inches (102 mm).

2.3.4.2

2.3.4.3 2.Metal Lath:

2.3.4.3.1 a. Install metal lath in accordance with ASTM C 1063.

2.3.4.3.2 b. Apply metal lath with long dimension perpendicular to supports and with joints lapped a minimum of 1 inch (25 mm).

2.3.4.3.3 c. Secure laps with tie wire where they occur between supports.

2.3.4.4

2.3.4.5 3. Fastening Metal Lath:

2.3.4.5.1 a. Fasten lath to wood supports using galvanized nails at maximum 6 inches (152 mm) on center vertically and 16 inches (406 mm) on center horizontally.

2.3.4.5.2 b. Fasten with a minimum of 1-inch (25-mm) penetration of wood studs.

2.3.4.5.3 c. Stop lath 1 inch (25 mm) from finished edges.

2.3.5 E. Prepare for Installation Over Formed Concrete Surface:

2.3.5.1.1 1. Metal Lath:

2.3.5.1.2 a. Install metal lath in accordance with ASTM C 1063.

2.3.5.1.3 b. Apply metal lath with long dimension perpendicular to supports and with joints lapped a minimum of 1 inch (25 mm).

2.3.5.1.4 c. Secure laps with tie wire where they occur between supports.

2.3.5.2 2. Fastening Metal Lath:

2.3.5.2.1 a. Attach lath to concrete using galvanized concrete nails at maximum 6 inches (152 mm) on center vertically and 16 inches (406 mm) on center horizontally.

2.3.5.2.2 b. Stop lath 1 inch (25 mm) from finished edges.

2.3.6 F. Prepare for Installation Over Concrete Masonry Units: Adhere stone directly to concrete masonry units with mortar.

2.3.7 G. Prepare for Installation Over Metal Siding:

2.3.7.1 1. Metal Lath:

2.3.7.1.1 a. Install paperbacked metal lath over metal siding in accordance with ASTM C 1063.

2.3.7.1.2 b. Apply metal lath with long dimension perpendicular to supports and with joints lapped a minimum of 1 inch (25 mm).

2.3.7.1.3 c. Secure laps with tie wire where they occur between supports.

2.3.7.2 2. Fastening Metal Lath:

2.3.7.2.1 a. Attach lath to metal siding support members using galvanized 1-1/4-inch (32-mm) Type S-12 Panhead Super Tight Screws as manufactured by United States Gypsum.

2.3.7.2.2 b. Screws shall penetrate a minimum of 3/8 inch (9.5 mm) into support members.

2.3.7.2.3 c. Provide 1 fastener per square foot of surface area and do not exceed 6 inches

(152 mm) on center in any 1 direction.

2.3.7.3 3. Dissimilar Backing Materials:

2.3.7.3.1 a. Place minimum 4-inch (100-mm) wide strips of metal lath centered over junctions of dissimilar backing materials.

2.3.7.3.2 b. Secure lath rigidly in place.

2.3.7.4 4 .Door and Glazed Frames: Place lath vertically above each top corner and each side of door and glazed frames.

2.3.8 H. Application of Base Coat Stucco:

2.3.8.1 1. Apply scratch coat in accordance with PCA Plaster (Stucco) Manual.

2.3.8.2 2. Apply scratch coat to nominal thickness of 1/2 inch to 3/4 inch (13 mm to 19 mm) over metal lath surfaces.

2.3.8.3 3. If weather is hot or surface is dry, dampen previous coat before applying mortar and thin stone veneer.

2.3.8.4 4. If scratch coat is done in advance, use notch trowel to create texture for better bond. Smooth surface is not acceptable for bond.

2.3.9 I. Prepare for Installation of Thin Veneer Stone:

2.3.9.1 1. Coordination: Coordinate placement of reinforcement, anchors, accessories, flashings, weep holes, and other moisture-control products specified in other sections.

2.3.9.2 2. Cleaning: Clean built-in items of loose rust, ice, mud, and other foreign matter before incorporating into wall.

2.3.9.3 3. Prime or galvanize ferrous metal built into wall.

2.3.9.4 4. Temporary Bracing:

2.3.9.4.1 a. Provide temporary bracing as required during installation of masonry.

2.3.9.4.2 b. Maintain bracing in place until building structure provides permanent support.

2.4

2.5 3.3 INSTALLATION

Specifier Notes: The following paragraphs cover typical natural thin veneer stone installation with mortared joints. Edit the following as required.

2.5.1 A. Install thin veneer stone and mortar in accordance with manufacturer's instructions and ACI 530.1/ASCE 6/TMS 602.

2.5.2 B. Maintain masonry courses to uniform dimensions. Form vertical and horizontal joints of uniform thickness.

2.5.3 C. Pattern Bond:

2.5.3.1 1. Veneer layer composition has been prepared at the manufacturing level. Each layer is blended in accordance to color and size. Installation ready. Insure color range and sizes of stones uniformly over total work area.

2.5.3.2 2. Lay stone with face exposed. GripSet® for ease of installation.

2.5.3.3 4. Maintain approximate 1/2-inch (13-mm) joint, as stone allows.

2.5.3.4 5. Do not use stacked vertical joints.

2.5.4 D. Placing and Bonding:

2.5.4.1 1 Dampen substrate as required to reduce excessive suction.

2.5.4.2 2. Apply mortar in accordance with PCA Plaster (Stucco) Manual to thickness of 1/2 inch to 3/4 inch (13 mm to 19 mm).

2.5.4.3 3. Do not spread more than workable area of 5 to 10 square feet, so mortar will not set before

stone is applied.

2.5.4.4 4. Lay thin veneer stone in full bed of mortar with full head joints.

2.5.4.5 5. Work from bottom up, laying corner pieces first.

2.5.4.6 6. Remove excessive mortar as work progresses.

2.5.4.7 7. Do not shift or tap veneer stone after mortar has achieved initial set. Where adjustment is required, remove mortar and replace.

2.5.4.8 8. Isolate top of veneer stone from horizontal structural framing members and slabs or decks with compressible joint filler and sealant as specified in Section 07900 (07 90 00).

2.5.5 E. Joining Work: Where fresh masonry joins partially set masonry.

2.5.5.1 1. Remove loose stone and mortar.

2.5.5.2 2. Clean and lightly wet surface of set masonry.

2.5.5.3 3. To avoid horizontal run of masonry, rack back 1/2 the length of stone in each course.

2.5.5.4 4. Tooting of the masonry is not permitted.

2.5.6 F. Joints:

2.5.6.1 1. Lay stone with approximate 1/2-inch (13-mm) mortar joint, as stone allows.

2.5.6.2 2. Tool joints when "thumb-print" hard with round jointer, slightly larger than width of joint.

2.5.6.3 3. Trowel point or concave tool exterior joints below grade.

2.5.6.4 4. Flush cut joints to be finished with soft brush only.

2.5.6.5 5. Retempering of mortar is not permitted.

2.5.6.6 6. Use non-corrosive stone shims as required to maintain uniform joint thickness.

Specifier Notes: Verify control and expansion joints are correctly indicated and detailed on the Drawings. Control joints shall be designed in accordance with National Concrete Masonry Association TEK 10-2B for control joint design and locations.

2.5.7 G. Control and Expansion Joints:

2.5.7.1 1. Keep joints open and free of debris.

2.5.7.2 2. Coordinate control joints as specified in Section 07900 (07 90 00) for sealant performance.

2.5.8 H. Sealant Recesses:

2.5.8.1 1. Provide open joints 3/4 inch (19 mm) deep and 1/4 inch (6 mm) wide, where masonry meets doors, windows, and other exterior openings.

2.5.8.2 2. Coordinate sealant joints as specified in Section 07900 (07 90 00) for sealant performance.

2.5.9

2.5.10 I. Cutting and Fitting:

2.5.10.1 1. Cut and fit thin veneer stone for chases, pipes, conduit, sleeves, grounds, and other penetrations and adjacent materials.

2.5.10.2 2. Coordinate with other work to provide correct size, shape, and location.

2.5.11 J. During progress of the work, cover top of unfinished stone masonry work for protection from weather.

Specifier Notes: The following paragraphs cover dry-stack thin natural thin veneer stone installation with no visible mortar joints. This method of installation is used for the “Ledgestone” collection. Edit the following as required. Delete if not required.

2.6

2.7 3.4 DRY-STACK INSTALLATION

2.7.1 A. Install thin veneer stone and mortar in accordance with manufacturer’s instructions and ACI

530.1/ASCE 6/TMS 602.

2.7.2 B. Maintain masonry courses to uniform dimensions. Form vertical and horizontal joints of uniform thickness.

2.7.3 C. Pattern Bond:

2.7.3.1 1. Lay out work in advance and distribute color range of stone uniformly over total work area.
2.7.3.2 2. Lay stone with face exposed.
2.7.3.3 3. Take care to avoid a concentration of any 1 color to any 1 wall surface.
2.7.3.4 4. Maintain squared and uniform profile.
2.7.3.5 5. Do not use stacked vertical joints.

2.7.4 D. Placing and Bonding:

2.7.4.1 1. Dampen substrate as required to reduce excessive suction.
2.7.4.2 2. Use thin-set mortar in accordance with ANSI A118.4 for exterior dry stack installation.
2.7.4.3 3. Apply mortar to thickness of 1/4 inch (6 mm) to back of stone.
2.7.4.4 4. Press firmly to seat each stone as placed.
2.7.4.5 5. Work from bottom up, laying corner pieces first.
2.7.4.6 6. Remove excessive mortar as work progresses.
2.7.4.7 7. Do not shift or tap veneer stone after mortar has achieved initial set. Where adjustment is required, remove mortar, and replace.
2.7.4.8 8. Isolate top of veneer stone from horizontal structural framing members and slabs or decks with compressible joint filler and sealant as specified in Section 07900 (07 90 00).

2.7.5

2.7.6 E. Joints:

2.7.6.1 1. Lay stone with reasonably uniform joints, as stone allows.
2.7.6.2 2. Remove excess mortar as stone is pressed into position.
2.7.6.3 3. Use non-corrosive stone shims as required to maintain joint thickness.

Specifier Notes: Verify control and expansion joints are correctly indicated and detailed on the Drawings. Control joints shall be designed in accordance with National Concrete Masonry Association TEK 10-2B for control joint design and locations.

2.7.7

2.7.8 F. Control and Expansion Joints:

2.7.8.1 1. Keep joints open and free of debris.
2.7.8.2 2. Coordinate control joints as specified in Section 07900 (07 90 00) for sealant performance.

2.7.9 G. Sealant Recesses:

2.7.9.1 1. Provide open joints 3/4 inch (19 mm) deep and 1/4 inch (6 mm) wide, where masonry meets doors, windows, and other exterior openings.
2.7.9.2 2. Coordinate sealant joints as specified in Section 07900 (07 90 00) for sealant performance.

2.7.10 H. Cutting and Fitting:

2.7.10.1 1. Cut and fit thin veneer stone for chases, pipes, conduit, sleeves, grounds, and other penetrations and adjacent materials.
2.7.10.2 2. Coordinate with other work to provide correct size, shape, and location.

2.7.11 I. During the progress of the work, cover top of unfinished stone masonry for protection from weather.

2.8 3.5 CLEANING

2.8.1 A. Keep face of stone free of mortar as work progresses.
2.8.2 B. If residual mortar is on face of stone, allow to dry partially and brush mortar off surface and sponge off residue.
2.8.3 C. When work is completed, and mortar has set for 2 to 3 days, clean surface from top to bottom using mild masonry detergent acceptable to natural thin veneer stone manufacturer.
2.8.4 D. Do not use harsh cleaning materials or methods that could damage stone.
2.8.5 E. Do not use metal brushes or acids for cleaning.

2.9 3.6 PROTECTION

2.9.1 A. Protect installed natural thin veneer stone to ensure that, except for normal weathering, stone will be without damage or deterioration at time of Substantial Completion.
2.9.2 B. Touch-up, repair, or replace damaged stone before Substantial Completion.

END OF SECTION