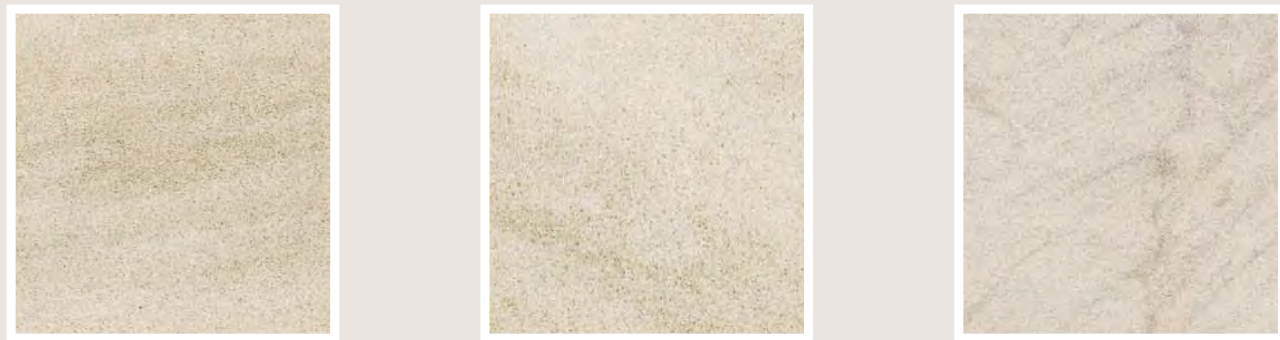




QUARRIERS AND FABRICATORS OF
BEREA SANDSTONE™

SINCE 1868

BIRMINGHAM BUFF™



BUFF COLOR RANGE

There is no limit to our capabilities



- Block
- Slab
- Stone Carving
- Restoration
- Dimensional Stone
- Building Stone
- Caps
- Treads
- Hearths
- Sills
- Panels
- Wall Stone
- Coping
- And much more

AMHERST GRAY™



GRAY COLOR RANGE

The physical properties of our stone are the same regardless of color variations and natural characteristics



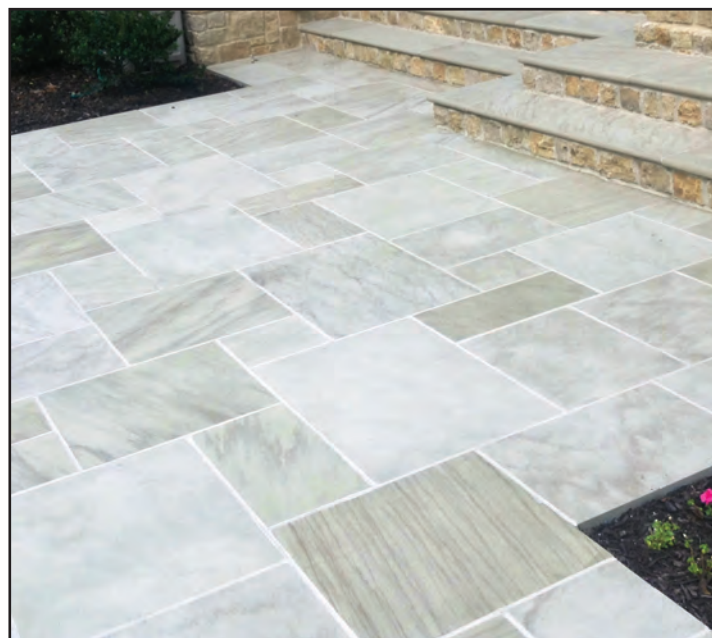
PATIO STONE



Birmingham Buff™ Patio



Amherst Gray™ Patio with Wood Borders



Birmingham Buff™ Patio with Bullnose Treads

PATIO STONE

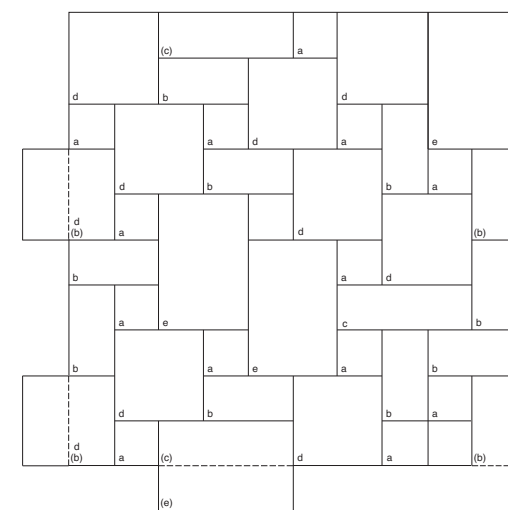


Cleveland Quarries Berea Sandstone™ Patio is available in Birmingham Buff™, Amherst Gray™ and full color blend. Cleveland Quarries Patio offers a luxurious natural look and feel. It stays unusually cool in hot weather, and offers exceptional durability in all climates.



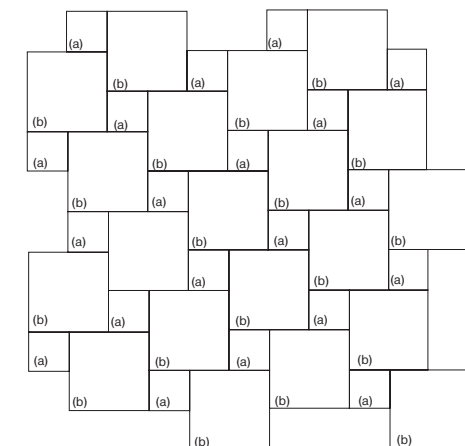
Amherst Gray™

Example Patio Patterns



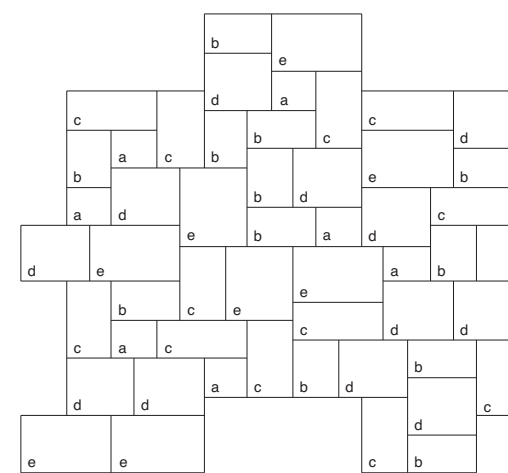
Pattern A

Size Schedule per 100 sq. ft.	
a)	12 x 12 13 pieces
b)	12 x 24 10 pieces
c)	12 x 36 1 piece
d)	24 x 24 10 pieces
e)	24 x 36 4 pieces



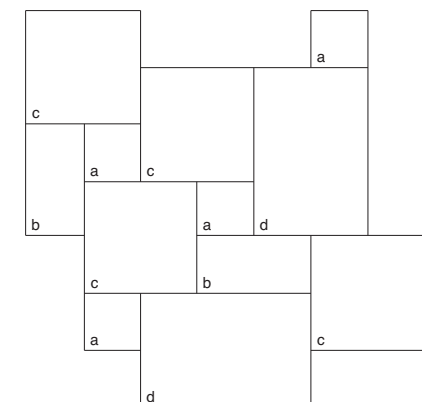
Pattern B

Size Schedule per 100 sq. ft.	
a)	12 x 12 20 pieces
b)	12 x 24 20 pieces



Pattern C

Size Schedule per 100 sq. ft.	
a)	12 x 12 7 pieces
b)	12 x 18 12 pieces
c)	12 x 24 12 pieces
d)	18 x 18 12 pieces
e)	18 x 24 8 pieces



Pattern D

Size Schedule per 100 sq. ft.	
a)	12 x 12 11 pieces
b)	12 x 24 6 pieces
c)	24 x 24 11 pieces
d)	24 x 36 6 pieces



Birmingham Buff™ 2" Sawn Coping and Treads

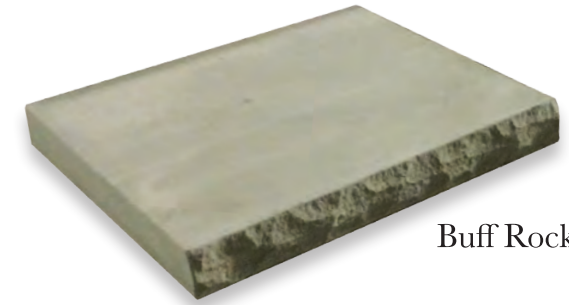


Amherst Gray™ 2" Sawn Sill

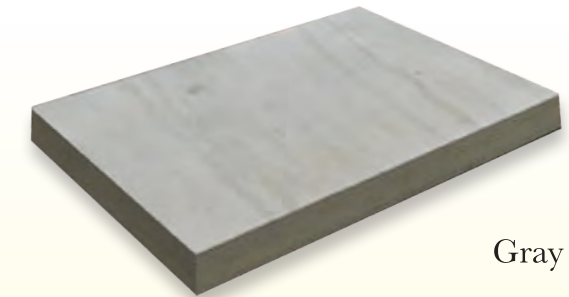


Amherst Gray™ Rockfaced Treads

A full line of sawn rectangular stone is available in stock in a variety of lengths and widths for use as sills, hearths, mantels, coping and treads. Rockfaced and bullnosed finishes are also available. All products available in Birmingham Buff™ or Amherst Gray™. See price sheet for available standard sizes.



Buff Rockfaced Tread



Gray Sawn Tread

POOL COPING



Bullnosed Pool Coping





Birmingham Buff™ 2" Split Coping



Birmingham Buff™ 4" Sill



Amherst Gray™ 2" Mantel

The beauty and durability of Berea Sandstone at a more affordable price. Cleveland Quarries offers our machine split product line to allow our distributors versatility in their offering while giving their customers a product that is less expensive than our sawn edge options. Produced at a variety of standard rectangular shapes, these stock lengths are readily available for use as sills, hearths, mantels, treads or coping. All products are available in Birmingham Buff™ or Amherst Gray™. See price sheet for available standard sizes.



Palletized Split Stock

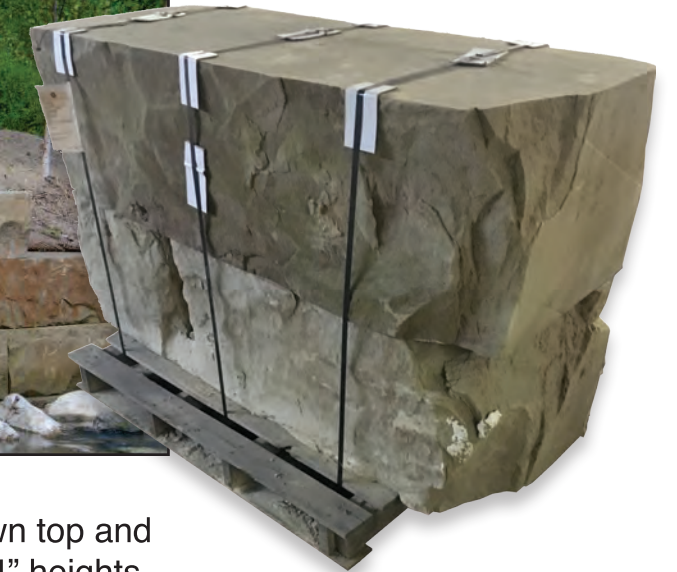


Steps & Wall Stone

Landscape steps and wall stone are the perfect compliment to any landscape design. Rustic yet uniform, they allow for easy installation and are durable enough to last a lifetime. Both wallstone and steps come standard with split front, back and ends, and are sawn top and bottom. Both are available in Birmingham Buff™ and Amherst Gray™. See price sheet for available standard sizes.

Pier Caps

Birmingham Buff™ and Amherst Gray™ caps are available in stock with a sawn smooth or rockface finish. See price sheet for details.



Landscape Stacking Block

Large stacking stone with a natural face and a sawn top and bottom for retaining walls and benches. 12" and 24" heights available in stock, custom sizes also available.

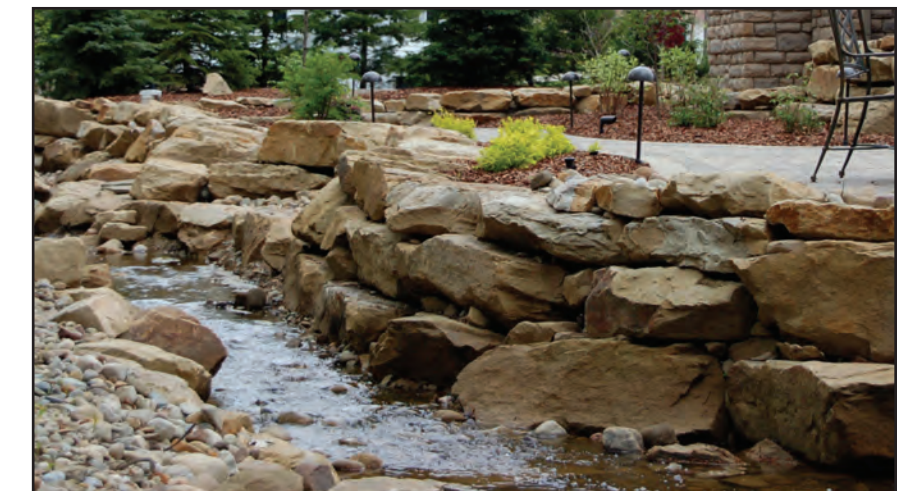


Ledgerrock

Palletized ledgerrock is a versatile product often used for walls, veneer, garden paths, and water features.

Outcropping

Outcropping stone is available in a variety of sizes and shapes ranging from under 10 lbs to over a ton. Bulk and palletized stone available. See price sheet for details.





Bedface Ashlar



Crossgrain Ashlar

Cleveland Quarries offers a wide range of veneer stone to fit every architectural style and application, all of which bring the beauty and durability of Berea sandstone to the project.



Random Ashlar

Bedface Ashlar

Veneer Split with the bed of the stone and sawn on top and bottom. Available in a variety of heights to course as needed. See pricing for standard sizes. Available in Birmingham Buff™ and Amherst Gray™.



Crossgrain Ashlar

Veneer split against the bed of the stone and sawn top and bottom. Available in a variety of heights to course as needed. See pricing for standard sizes. Available in Birmingham Buff™ and Amherst Gray™.



Random Ashlar

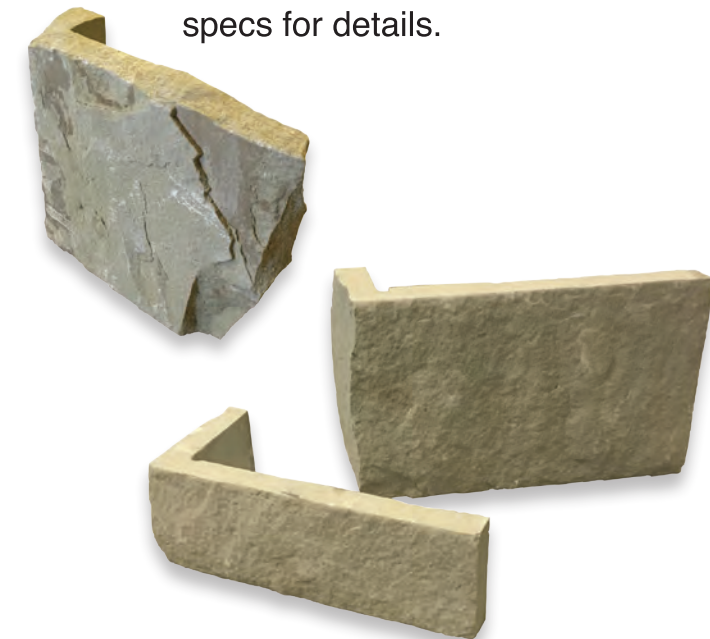
Veneer showing the natural bed of the stone. Split on all four sides and used when coursing is not desired. Available in Birmingham Buff™ and Amherst Gray™.



Random Ashlar - Mixed Color

Thin Veneer

Our Random and Bedface Ashlar products are available in thin veneer flats and corners. See specs for details.



Blocks & Slabs



Cleveland Quarries provides slabs to natural stone fabricators across North America. Available in both Amherst Gray™ and Birmingham Buff™, slabs can be ordered in thicknesses ranging from 1.5" up to 24". 2", 2.5", 3", 4" and 6" slabs are available in stock.

Slabs are sold by the cubic foot.



Raw block is also available for customers who prefer to slab their own material.

*Blocks available in Birmingham Buff™ and Amherst Gray™.

*Block sold by the cubic feet

Physical Properties of Berea Sandstone



The following table of physical properties of Amherst Gray™ and Birmingham Buff™ Sandstone are based on test results using ASTM procedures. Tests were performed by Geocon Geotechnical Consultants.

Birmingham Buff™ Sandstone

ASTM C170	ASTM C-99	ASTM C-97	ASTM C-241
Compressive Strength PSI	Modules of Rupture	Absorption and Bulk Specific Gravity	Abrasion Resistance of Stone Subjected to Foot Traffic
Average	Average	Absorption Bulk Specific Gravity	Abrasive Hardness Value (1.1a)
(PSI) (MPa) 11576 79.8	(PSI) (MPa) 1177 8.1	(%) (kg/m³) 5.85 21533	9.48

Amherst Gray™ Sandstone

ASTM C170	ASTM C-99	ASTM C-97	ASTM C-241
Compressive Strength PSI	Modules of Rupture	Absorption and Bulk Specific Gravity	Abrasion Resistance of Stone Subjected to Foot Traffic
Average	Average	Absorption Bulk Specific Gravity	Abrasive Hardness Value (1.1a)
(PSI) (MPa) 11169 70.1	(PSI) (MPa) 772 5.28	(%) (kg/m³) 6.12 2119	10.89

Berea Sandstone Facts

Silica	SiO ₂	93.13%	Magnesium Oxide	MgO	0.25%
Alumina	Al ₂ O ₃	3.86%	Calcium Oxide	CaO	0.10%
Ferric Oxide	Fe ₂ O ₃	0.11%	Alkali	Alk	
Ferrous Oxide	FeO	0.54%	Loss on Ignition		1.43%

Berea Sandstone is an excellent building stone due to the composition of grains of Quartz bonded by Silica. The extreme hardness of the Quartz grains of Berea Sandstone enables it to preserve an abrasive non-slip surface. In addition to hardness, the quartz grains of Berea Sandstone possess a chemical resistance to the erosive action of the acidic chemicals in the atmosphere of today's cities. The silica bond does not deteriorate with time, exposure to water or temperature change and so prolongs to longevity of the stone.

Additional Information

CUT STONE

Quality: All stone indicated on the drawings shall be fine-grained Berea Sandstone™, quarried from the Northern Ohio deposits of Cleveland Quarries and geologically referred to as the "Berea Formation." Sandstone shall be of homogeneous composition throughout, with a moderate range of shadings and veinings, and shall come from quarries which have been in continuous operation for a period of 75 years or more.

Cut Stone Finishes: Exposed surfaces of sandstone shall be finished with a Sand-Sawed, a smooth planed, diamond sawed finish as desired by architects.

Samples: Prior to award of general contract, samples indicating range of color and veinings shall be submitted for approval of the architects.

ASHLAR VENEERING

Split Face Veneering: Sandstone fabricated by Cleveland Quarries, shall be furnished in random length unjointed strips, smooth sawed on top and bottom beds, split on back and front faces, in approximately 3-1/2" to 4" bed thicknesses. Standard Course Height Ratio is: 15% - 2-1/4", 45% - 5", and 40% - 7-3/4". For large scale projects a 10-1/2" course height may be included. Other course heights and face finishes are also available. Please note: Course height ratios may be varied by architects.

Coverage: Wall coverage obtainable with the height ratio given for Split Face Ashlar, using a 1/2" mortar joint, should be approximately 40-50 square feet per ton.

Pallets: All Ashlar Veneering is sold by weight and is furnished on wooden pallets, each of which contains approximately one ton quantities of specific colors and course heights. Prices are based on heights, colors and finish.

ROCK FACE SILLS

Sawn bed and full rock face. Widths up to 12 inches, lengths up to 8 feet and up to 3 inches height. Drip groove is also available.

PATIO STONES

Square sawn 2" thick from 12"x12" up to 24"x36". Available in buff and gray colors.

SLAB

Buff and gray colors average yield 96"x48", available from 2" to 18" thick.

CLEANING

Stone work shall be cleaned down after completion of setting, using clear water and bristle brushes. Under no circumstances should acids or detergent be used. Stone shall be sponged free of mortar as the work progresses.



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