



Semco Stone ASTM Stone Testing Results



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» ALABAMA SUNSET

COLOR/CHARACTERISTICS: Alabama Sunset is a multi-colored, naturally rounded pebble perfect for landscape and flower beds, plant beds and gardens. The color ranges from tan, brown, white and burgundy.

SIZE: Approximately 3/4" naturally rounded pebble

Available in bagged and bulk.

SPECIFICATIONS:

ASTM C 127

BULK SPECIFIC GRAVITY: 2.6

BULK SPECIFIC GRAVITY (SSD): 2.6

APPARENT SPECIFIC GRAVITY: 2.6

ABSORPTION: 0.6 g

MOISTURE CONTENT: 0.6 g

ADDITIONAL TESTING AVAILABLE UPON REQUEST:

ASTM C 131-06

Resistance to Degradation of Small-Size Coarse Aggregate

ASTM C88 -05

Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate



» BALTIC BUFF

COLOR/CHARACTERISTICS: A natural sandstone buff with brown swirls

SPECIFICATIONS:

ASTM C 97

OVEN DRY DENSITY: 154.4 lb/ft ³	CLASS I SANDSTONE
SSD DENSITY: 142.7 lb/ft ³	CLASS I SANDSTONE
SPECIFIC GRAVITY: 2.16	
ABSORPTION: 5.93%	CLASS I SANDSTONE

ASTM C 99

MODULUS OF RUPTURE:	Perpendicular & Dry	950 psi
	Parallel & Dry	500 psi
	Perpendicular & Wet	710 psi
	Parallel & Wet	410 psi

ASTM C 170

COMPRESSIVE STRENGTH:	Perpendicular & Dry	12,900 psi
	Parallel & Dry	7,500 psi
	Perpendicular & Wet	11,100 psi
	Parallel & Wet	7,000 psi

ASTM C 153

ABRASION RESISTANCE OF DIMENSION STONE SUBJECTED TO FOOT TRAFFIC USING A ROTARY PLATFORM:

Initial Mass (Average): 217.15	CLASS I SANDSTONE
Mass after 1,000 revolutions (Average): 199.53	CLASS I SANDSTONE
Index Abrasion Resistance (Average): 4.51	CLASS I SANDSTONE

ASTM C 666

FREEZE/THAW TESTING: These results are available upon request. It is a long report so did not include on this particular page due to lack of space.

*This information is based on test results by CTL Group



» BALTIC BUFF FREEZE / THAW TESTING RESULTS

ASTM C215, DYNAMIC MODULUS OF ELASTICITY DURING ASTM C666 FREEZE/THAW TESTING:

Number of Cycles	0	33	63	99	135	171	207	303
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SAMPLE DIMENSIONS

Length, m	0.282	0.282	0.282	0.282	0.282	0.282	0.282	0.282
Width, m	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
Depth, m	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Cross-Sectional Area, m ²	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
Poisson's Ration (assumed)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Radius of Gyration, K	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022
K/L	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Correction Factor per Table 1 of ASTM C215	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Constant per Eq. 1 of ASTM C215	888.1	888.1	888.1	888.1	888.1	888.1	888.1	888.1
Mass of Test Sample, kg	3.83	3.84	3.84	3.84	3.85	3.85	3.85	3.86

NON-DESTRUCTIVE EVALUATION PER ASTM C215

Average Transverse Resonant Frequency, Hz	1313	1223	1236	1236	1236	1236	1243	1230
Dynamic Modulus of Elasticity	5.9	5.1	5.2	5.2	5.2	5.2	5.3	5.2

NOTES:

1. As requested, Poisson' Ration was assumed to be 0.2 based on internet research.
2. This report represents specifically the samples submitted.
3. This report may not be reproduced except in its entirety.



» BLACK HILLS RUSTIC

COLOR/CHARACTERISTICS: Browns, tans, golds with tints of black and auburn tones

FEATURES:

Full Veneer: 50% seam-face, 50% bed-face

ThinCutTM Veneer: 50% seam-face, 50% bed-face

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

DENSITY: 155.34 lb/ft³

ABSORPTION: 3.0%

ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 3,065 psi

ASTM C 97

BULK SPECIFIC GRAVITY 2.561 CLASS II QUARTZITIC SANDSTONE

*This information is based on test results by Pacific Materials Laboratory



» BLUE RIVER

COLOR/CHARACTERISTICS: Gray with some variegation

FEATURES:

- Stone is available for custom fabrication for architectural projects
- Random Height: 100% Split-face
- Dimensional: Sawn heights, split-face and ends

Available for both building and landscape stone applications.

ASTM C880*

FLEXURAL STRENGTH: Perpendicular: 2,084 Parallel: 2,303

ASTM C170*

COMPRESSIVE STRENGTH: Perpendicular Area 4.512 PS 17,778
Parallel Area 4.553 PS 19,034

ASTM C97*

SPECIFIC GRAVITY: 2.68 **ABSORPTION:** 0.34%

*This information is based on test results by PSI, Inc. in St. Louis, MO.

ASTM C880, FREEZE / THAW FLEXURAL TESTING**

FINISH: Honed • **RIFT:** Perpendicular • **RESULTS:** Based on the average of 5 samples

Number of Cycles	0	50	100	150	200	250
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Number of Cycles	0
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CONDITIONS: Dry

Span (inches)	12.50	12.50	12.50	12.50	12.50	12.50
Width (inches)	4.06	4.082	4.074	4.072	4.074	4.118
Thickness (inches)	1.238	1.19	1.154	1.222	1.238	1.266
Failure Load (lbs)	1446.8	1174.4	1055	1161.4	1265	1.472
Average Dry Mode	2174	1869	1809	1732	1883	2069
Standard Deviation	185	334	432	623	219	310
Variance	8.51	17.87	23.88	35.98	11.63	14.99

CONDITIONS: Wet

Span (inches)	12.50
Width (inches)	4.082
Thickness (inches)	1.19
Failure Load (lbs)	1237
Average Wet Mode	1994
Standard Deviation	302
Variance	15.15

**This information is based on test results by Construction Testing Sciences



» BRENTWOOD

COLOR/CHARACTERISTICS: Range of chocolate to light brown, buff and gray. Some pieces have a beautiful texture resembling wood rings on a tree

FEATURES: Natural bed heights that range between 4" - 9" in height, with the split-face and natural edge exposed

Available in Full Veneer & ThinCut™

SPECIFICATIONS:

ASTM C 97

DENSITY: 151.55 lb/ft³

SPECIFIC GRAVITY: 2.429

ABSORPTION: 1.81%

CLASS II QUARTZITIC SANDSTONE

CLASS III QUARTZITE

ASTM C 99

MODULUS OF RUPTURE: 1,554 psi

CLASS III QUARTZITE

10.71 Mpa

ASTM C 170

COMPRESSIVE STRENGTH: 11,403 psi

CLASS III QUARTZITE

78.61 Mpa

ASTM C 241

ABRASION RESISTANCE: 52.58

CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH:

Perpendicular: 3,065 psi

Parallel: 21.13 Mpa

X-RAY DIFFRACTION MINERALOGICAL ANALYSIS

FREE SILICA CONTENT: 93%

CLASS II QUARTZITIC SANDSTONE

STATIC COEFFICIENT OF FRICTION DRY: 1.21 WET: .94



» BROOKHAVEN

COLOR/CHARACTERISTICS: Light gray with some buff variegation

FEATURES:

Stone is available for custom fabrication for architectural projects
Random Height: 100% Split-face
Dimensional: Sawn heights, split-face and ends

Available for both building and landscape stone applications.

SPECIFICATIONS:

ASTM C 97

SPECIFIC GRAVITY: 2.55

ABSORPTION: 2.66%

ASTM C 99

MODULUS OF RUPTURE: 1,866 lb/in²

ASTM C 170

COMPRESSIVE STRENGTH:

Perpendicular

Area 9.45 in²

13,350 psi

Parallel

Area 9.54 in²

12,800 psi

ASTM C 880

FLEXURAL STRENGTH:

Parallel to the Rift/Dry: 1,748 psi

Testing was performed in general accordance with the following ASTM Standards. This information is based in December 2017 test results by Professional Service Industries and Geotechnology.

*C 99 and C 880 were performed under the dry condition, horizontal to the rift.



» CANADIAN COBBLES (Page 1 of 2)

COLOR/CHARACTERISTICS: Pinks, whites, grays, multi-colored, smooth & round.
 Small: 12" – 18" • Medium: 18" – 24" • Large: 24" – 36" • Pallet Weight: 3000-3400 lbs.

SAMPLE DETAILS:

Material: Fine Concrete Aggregate
Specification: ASTM:C33, Fine Aggregate
Sampling Method: ASTM:D75

OTHER TEST RESULTS:

Description	Method	Result	Limits
Lightweight particles(%)	ASTM C 123	<0.1	≤0.5
Shale particles (%)		<0.1	
Coal and lignite particles (%)		<0.1	
Deleterious substances (%)		<0.1	≤0.3
Chert particles (%)		<0.1	
Test sample mass (g)		200	
Aggregate size (in)		Fine Aggregate	
Type of heavy liquid		LMT	
Heavy liquid specific gravity		2.0	
Date Tested		6/21/2017	
Fineness Modulus	ASTM C 136, ASTM C 117	2.6	2.3 – 3.1
Clay lumps & friable particles (%)	ASTM C 142	0.00	<1.0
Date Tested		6/21/2017	

PARTICLE SIZE DISTRIBUTION:

Method: ASTM C 136, ASTM C 117
Drying By: Oven

Sieve Size	% Passing	Limits
3/8in (9.5mm)	100	100
No.4 (4.75mm)	99	95-100
No.8 (2.36mm)	87	80-100
No.16 (1.18mm)	75	50-85
No.30(600µm)	55	25-60
No.50 (300µm)	18	5-30
No.100 (150µm)	2	0-10
No.200 (75µm)	0.8	0.0-3.0



>> CANADIAN COBBLES (Page 2 of 2)

SOUNDNESS

Sample Size	Weighted Multiplier %	Initial Mass (g)		Retained Mass (g)	Loss (g)	Loss %	Weighted Loss %
P1 1/2" – R1" P1" – R3/4"	**** 0	****	****	****	****	****	****
P3/4" – R1/2" P1/2" – R3/8"	**** 65	671.2 332.4	1003.6	**** 995.2	**** 8.4	**** 0.8	**** 0.5
P3/8" – R#4	35	302.4		302.4	300.2	2.2	0.7

SODIUM SULPHATE SOUNDNESS

5 cycles, AASHTOT104, Weighted Loss %

0.7

FREEZE THAW

Sample Size	Weighted Multiplier %	Initial Mass (g)		Retained Mass (g)	Loss (g)	Loss %	Weighted Loss %
P1 1/2" – R1" P1" – R3/4"	**** 0		****	****	****	****	****
P3/4" – R1/2" P1/2" – R3/8"	**** 65		****	****	****	****	****
P3/8" – R#4	35						

SOUNDNESS OF AGGREGATES BY FREEZING AND THAWING

AASHTOT103, Weighted Loss %

COARSE AGGREGATE SPECIFIC GRAVITY

Sample #	1	2	3	
Saturated Weight, g	3092.1	3196.1		
Oven-Dry Weight, g	3066.0	3167.6		
Weight in Water, g	1962.0	2021.9		Average
Absorption, %	0.851	0.900		0.876
Bulk Specific Gravity	2.713	2.698		2.705
Bulk Specific Gravity, SSD	2.736	2.722		2.729
Apparent Specific Gravity	2.777	2.765		2.771

» CANADIAN LEDGE

COLOR/CHARACTERISTICS: Class III Quartzitic Sandstone with a range of colors from light buff to dark brown and rust shades

FEATURES:

3" - 5" Heights, Random Lengths
50% snapped to 50% natural edge

Available in Full Veneer & ThinCut[™]

SPECIFICATIONS:

ASTM C 97

DENSITY: 155.43 lb/ft³
SPECIFIC GRAVITY: 2.561
ABSORPTION: 1.6%

ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi

ASTM C 880

AVERAGE FLEXURAL STRENGTH: 3,065 psi

STATIC COEFFICIENT OF FRICTION: DRY: 1.21 WET: .94



» CASTLEWOOD 14" PREMIUM MACHINE SPLIT

COLOR/CHARACTERISTICS: Buff and Gray in color with uniform heights of 13" to 15" with average depths of 18" to 20" and 4' to 5' average lengths.

Average Pallet Weight: 3500 to 4000 lbs.

SPECIFICATIONS:

ASTM C 97*

SPECIFIC GRAVITY: Dry: 2.542 Wet: 2.684

ABSORPTION: 2.1%

ASTM C 99**

MODULUS OF RUPTURE: 1,500

PARALLEL

MODULUS OF RUPTURE: 1,680

PERPENDICULAR

ASTM C 170**

COMPRESSIVE STRENGTH: 11,960 psi

FREEZE/THAW SOUNDESS RATIO* 98% Retained

*Information is based on test results by Kansas Department of Transportation

**Information is based on test results by Tetra Tech, Inc.



» MOUNTAIN RIDGE CUSTOM

COLOR/CHARACTERISTICS: Light grey natural limestone product with darker grey veining

SPECIMEN DETAILS

Test Method	Quantity	Nominal Dimensions
ASTM C97	5	2.25 in. cubes
ASTM C170	20 Total Perpendicular, Wet: 5 Perpendicular, Dry: 5 Parallel, Dry: 5 Parallel, Wet: 5	2.25 in. cubes
ASTM C99	10 Total Perpendicular, Wet: 5 Perpendicular, Dry: 5	4 in. x 8 in. x 2.25 in. thickness
ASTM C1353	3	4 in. square x 0.375 in. thickness
ASTM C880	10 Total Perpendicular, Wet: 5 Perpendicular, Dry: 5	4 in. x 15 in. x 1.25 in. thickness
ANSI A326.3	3	12 in. square x 1 in. thickness
ASTM C666 (ASTM C880)	20 Total Perpendicular: 25 Cycle: 5 50 Cycle: 5 75 Cycle: 5 100 Cycle: 5	4 in. square x 15 in. x 1.25 in. thickness



» MOUNTAIN RIDGE CUSTOM

TEST RESULTS

ASTM C97 – Absorption & Density Evaluation	Absorption (%)	Bulk Specific Gravity	Density (lbs/ft ³)
Series Average	0.25	2.692	168
Standard Deviation	0.05	0.003	0.16
Coefficient of Variation (%)	20.20	0.093	0.10

ASTM C1353 – Abrasion Resistance Evaluation	Bulk Specific Gravity	Wear Cycles Completed	Index of Abrasion
1	2.69	1,000	35.1
2			33.6
3			32.1
Series Average			33.6
Standard Deviation			1.5
Coefficient of Variation (%)			4.4

ANSI A326.3 – Dynamic Coefficient of Friction Brushed Finish (Wet Condition)	Wet Condition DCOF
Series Average	0.90
Standard Deviation	0.03
Coefficient of Variation (%)	3.5

ASTM C170 – Compressive Strength Evaluation Wet Condition, Perpendicular Loading	Compressive Strength (psi)
Series Average	15,370
Standard Deviation	3,621
Coefficient of Variation (%)	23.6



» MOUNTAIN RIDGE CUSTOM

ASTM C170 – Compressive Strength Evaluation Dry Condition, Perpendicular Loading	Compressive Strength (psi)
Series Average	16,610
Standard Deviation	2,748
Coefficient of Variation (%)	16.5

ASTM C170 – Compressive Strength Evaluation Wet Condition, Parallel Loading	Compressive Strength (psi)
Series Average	12,050
Standard Deviation	1,535
Coefficient of Variation (%)	12.7

ASTM C170 – Compressive Strength Evaluation Dry Condition, Parallel Loading	Compressive Strength (psi)
Series Average	13,110
Standard Deviation	2,168
Coefficient of Variation (%)	16.5

ASTM C99 – Modulus of Rupture Evaluation Wet Condition, Perpendicular Loading	Modulus of Rupture (psi)
Series Average	2,010
Standard Deviation	219
Coefficient of Variation (%)	10.9

ASTM C99 – Modulus of Rupture Evaluation Dry Condition, Perpendicular Loading	Modulus of Rupture (psi)
Series Average	1,790
Standard Deviation	127
Coefficient of Variation (%)	7.1





» MOUNTAIN RIDGE CUSTOM

ASTM C880 – Flexural Strength Evaluation Wet Condition, Perpendicular Loading	Flexural Strength (psi)
Series Average	1,330
Standard Deviation	389
Coefficient of Variation (%)	29.2

ASTM C880 – Flexural Strength Evaluation Dry Condition, Perpendicular Loading	Flexural Strength (psi)
Series Average	1,450
Standard Deviation	236
Coefficient of Variation (%)	16.3

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»» TIMBERLAND

ASTM C170 – Compressive Strength Evaluation – Dry Condition, Parallel Loading

Specimen No.	Test Condition	Specimen Dimensions (in)		Loading Area (in ²)	Failure Load (lbf)	Compressive Strength (psi)
		Length	Width			
LL-D-1	Loaded parallel to stone rift plane	2.22	2.28	5.07	56,400	11,120
LL-D-2		2.24	2.28	5.10	68,470	13,430
LL-D-3	Dry condition	2.20	2.28	5.01	80,490	16,070
LL-D-4		2.27	2.22	5.04	70,900	14,070
LL-D-5		2.25	1.99	4.48	48,640	10,860
Series Average						13,110
Standard Deviation						2,168
Coefficient of Variation (%)						16.5

ASTM C99 – Modulus of Rupture Evaluation – Wet Condition, Perpendicular Loading

Specimen No.	Test Condition	Specimen Dimensions (in)		Loading Area (in ²)	Failure Load (lbf)	Compressive Strength (psi)
		Length	Width			
LL-W-1	Loaded parallel to stone rift plane	2.28	2.23	5.08	53,280	10,490
LL-W-2		2.27	2.23	5.06	69,310	13,700
LL-W-3	Wet condition	2.28	2.22	5.07	61,690	12,170
LL-W-4		2.28	2.23	5.08	53,250	10,480
LL-W-5		2.24	2.23	4.99	66,820	13,390
Series Average						12,050
Standard Deviation						1,535
Coefficient of Variation (%)						12.7



» CHATEAU BAY

COLOR/CHARACTERISTICS: Overall tones are light & dark gray with some buff variegation and some stone has a blue/gray color to the stone

FEATURES:

- Random Height: 100% Split-face
- Dimensional: Sawn heights, split-face and ends

Available in Full Veneer & ThinCut™

BLUE RIVER SPECIFICATIONS:

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 2,304 Parallel: 2,303

ASTM C 170

COMPRESSIVE STRENGTH: Perpendicular Area 4.512 PS 17,778
Parallel Area 4.553 PS 19,034

ASTM C 97

SPECIFIC GRAVITY: 2.68 ABSORPTION: 0.34%

BROOKHAVEN SPECIFICATIONS:

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 2,304 Parallel: 1,748

ASTM C 170

COMPRESSIVE STRENGTH: Perpendicular Area 9.45 PS 13,350
Parallel Area 9.54 PS 12,800

ASTM C 97

SPECIFIC GRAVITY: 2.55 ABSORPTION: 2.66%

*This information is based on test results by PSI, Inc. in St. Louis, MO.



» CHESTNUT HILL

COLOR/CHARACTERISTICS: Brown and rust with red tones

FEATURES:

Full Veneer: 100% Seam-face/Bed-face

ThinCutTM Veneer: 50% Seam-face, 50% Bed-face

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

DENSITY: 155.34 lb/ft³

ABSORPTION: 3.0%

ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 3,065 psi

ASTM C 97

BULK SPECIFIC GRAVITY 2.561 CLASS II QUARTZITIC SANDSTONE

*This information is based on test results by Pacific Materials Laboratory



» CLIFFSIDE

COLOR/CHARACTERISTICS: Gray & buff tones

SPECIFICATIONS:

ASTM C 97

ABSORPTION: 2.74%
BULK SPECIFIC GRAVITY: 2.531
DENSITY: 157.99 lb/ft³

ASTM C 99

MODULUS OF RUPTURE: 1,306 psi

ASTM C 170

COMPRESSIVE STRENGTH: 13,133 psi

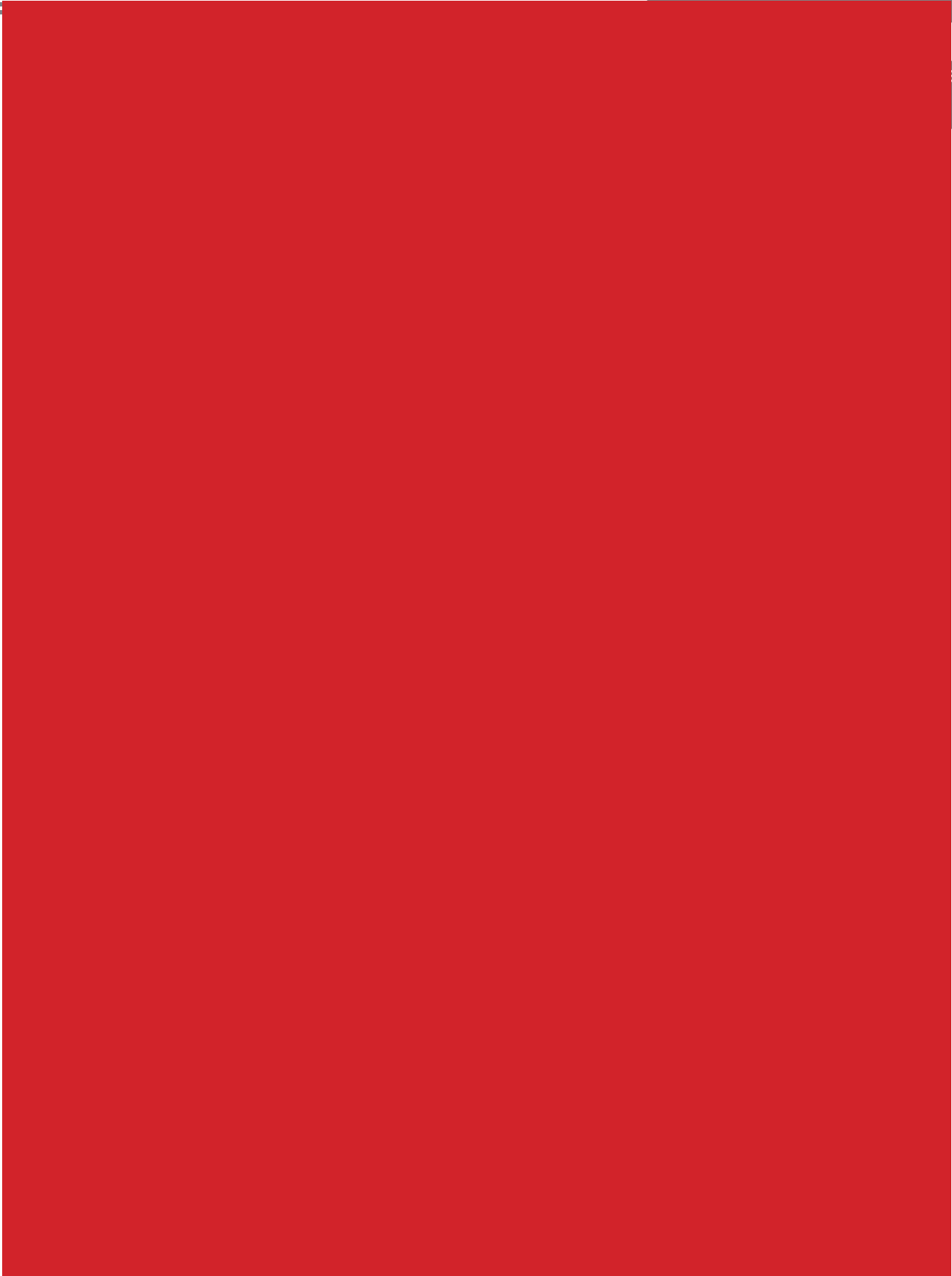
ASTM C 880

FLEXURAL STRENGTH: 1,375 psi

*C 97 and C 170 were performed under the dry condition, parallel to the bedding planes.

Testing was performed in general accordance with the following ASTM Standards.
This information is based on test results from March 2018 by Professional Service
Industries and Geotechnology, Inc. in St. Louis, MO.





» DEER HAVEN

COLOR/CHARACTERISTICS: Light tan to brown with some gray tones

FEATURES:

100% Bed-face material with random heights from 3" to 6"
Random lengths

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

BULK SPECIFIC GRAVITY	2.387	CLASS II QUARTZITIC SANDSTONE
BULK SPECIFIC GRAVITY, SSD	2.459	
APPARENT SPECIFIC GRAVITY	2.5718	

ABSORPTION: 3.0%

ASTM C 170

COMPRESSIVE STRENGTH: 7,500 psi CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 3,065 psi

*This information is based on test results by Pacific Materials Laboratory



» DOVE GRAY

COLOR/CHARACTERISTICS: Overall tone is light gray with some occasional darker gray variegation through the stone

SPECIFICATIONS:

ASTM C 97

DRY WEIGHT: 1025.7 g
SSD WEIGHT: 1045.3 g
WET WEIGHT: 641.7 g
DENSITY: 158.6 lbs/ft³
ABSORPTION: 1.91%

ASTM C 170

COMPRESSIVE STRENGTH: 11,960 psi

ASTM C 99

MODULUS OF RUPTURE: 1,500	PARALLEL
MODULUS OF RUPTURE: 1,680	PERPENDICULAR

*This information is based on test results by Tetra Tech, Inc.



» EASTERN WEATHERED SANDSTONE

COLOR/CHARACTERISTICS: Eastern Weathered Sandstone is a naturally occurring sandstone material, weathered naturally by the effects of its environment. Colors range from gray to brown and mossy covered.

SPECIFICATIONS:

ASTM C 97

SPECIFIC GRAVITY: 2.33

ABSORPTION: 2.7%

ASTM C 99

MODULUS OF RUPTURE: 2.939 psi

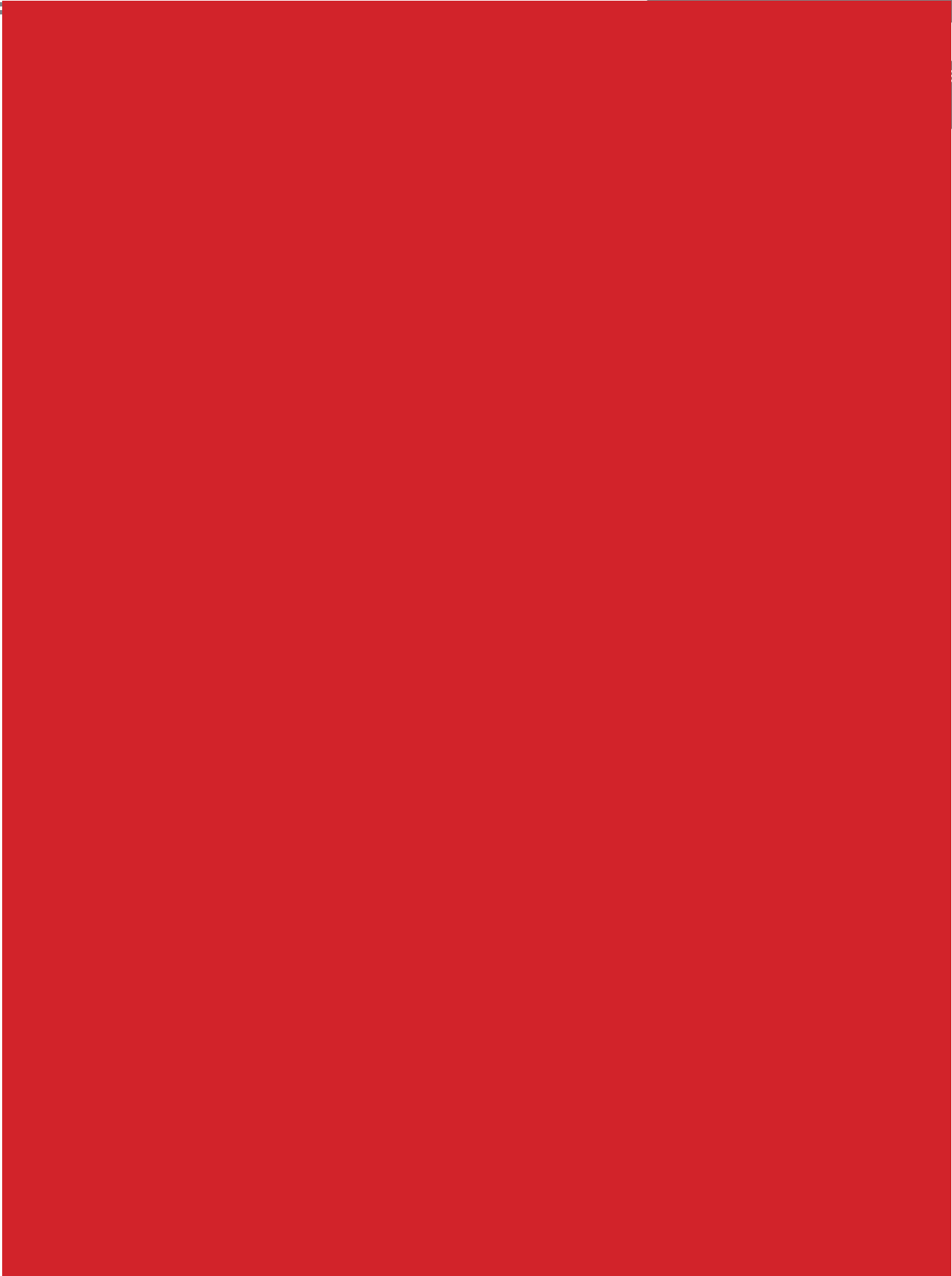
ORIENTATION/CONDITION: Parallel to the Rift/Dry

ASTM C 170

COMPRESSIVE STRENGTH: 12,000 psi

ORIENTATION/CONDITION: Parallel to the Rift/Dry





» FOND DU LAC

COLOR/CHARACTERISTICS: Range of light buff to light gray.

FEATURES: Range of heights from 2" to 6" with random lengths up to 40"
100 % split-face material

Available in Full Veneer & ThinCut™

SPECIFICATIONS:

ASTM C 97

DENSITY: 167.3 (pcf)
SPECIFIC GRAVITY: 2.683
ABSORPTION: 0.6%

ASTM C 99

MODULUS OF RUPTURE: 3,390 PARALLEL
MODULUS OF RUPTURE: 3,430 PERPENDICULAR

ASTM C 170

COMPRESSIVE STRENGTH: 19,080 (psi) PARALLEL
COMPRESSIVE STRENGTH: 24,310 (psi) PERPENDICULAR

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 2,470 (psi) Parallel: 2,470 (psi)



» GLACIER BOULDERS (Page 1 of 2)

COLOR/CHARACTERISTICS: Pinks, whites, grays, multi-colored, smooth & round.
 Small: 12" – 18" • Medium: 18" – 24" • Large: 24" – 36" • Pallet Weight: 3000-3400 lbs.

SAMPLE DETAILS:

Material: Fine Concrete Aggregate
Specification: ASTM:C33, Fine Aggregate
Sampling Method: ASTM:D75

OTHER TEST RESULTS:

Description	Method	Result	Limits
Lightweight particles(%)	ASTM C 123	<0.1	≤0.5
Shale particles (%)		<0.1	
Coal and lignite particles (%)		<0.1	
Deleterious substances (%)		<0.1	≤0.3
Chert particles (%)		<0.1	
Test sample mass (g)		200	
Aggregate size (in)		Fine Aggregate	
Type of heavy liquid		LMT	
Heavy liquid specific gravity		2.0	
Date Tested		6/21/2017	
Fineness Modulus	ASTM C 136, ASTM C 117	2.6	2.3 – 3.1
Clay lumps & friable particles (%)	ASTM C 142	0.00	<1.0
Date Tested		6/21/2017	

PARTICLE SIZE DISTRIBUTION:

Method: ASTM C 136, ASTM C 117
Drying By: Oven

Sieve Size	% Passing	Limits
3/8in (9.5mm)	100	100
No.4 (4.75mm)	99	95-100
No.8 (2.36mm)	87	80-100
No.16 (1.18mm)	75	50-85
No.30(600µm)	55	25-60
No.50 (300µm)	18	5-30
No.100 (150µm)	2	0-10
No.200 (75µm)	0.8	0.0-3.0



>> GLACIER BOULDERS (Page 2 of 2)

SOUNDNESS

Sample Size	Weighted Multiplier %	Initial Mass (g)		Retained Mass (g)	Loss (g)	Loss %	Weighted Loss %
P1 1/2" – R1" P1" – R3/4"	**** 0	****	****	****	****	****	****
P3/4" – R1/2"	****	671.2	1003.6	****	****	****	****
P1/2" – R3/8"	65	332.4		995.2	8.4	0.8	0.5
P3/8" – R#4	35	302.4	302.4	300.2	2.2	0.7	0.2

SODIUM SULPHATE SOUNDNESS

5 cycles, AASHTOT104, Weighted Loss %

0.7

FREEZE THAW

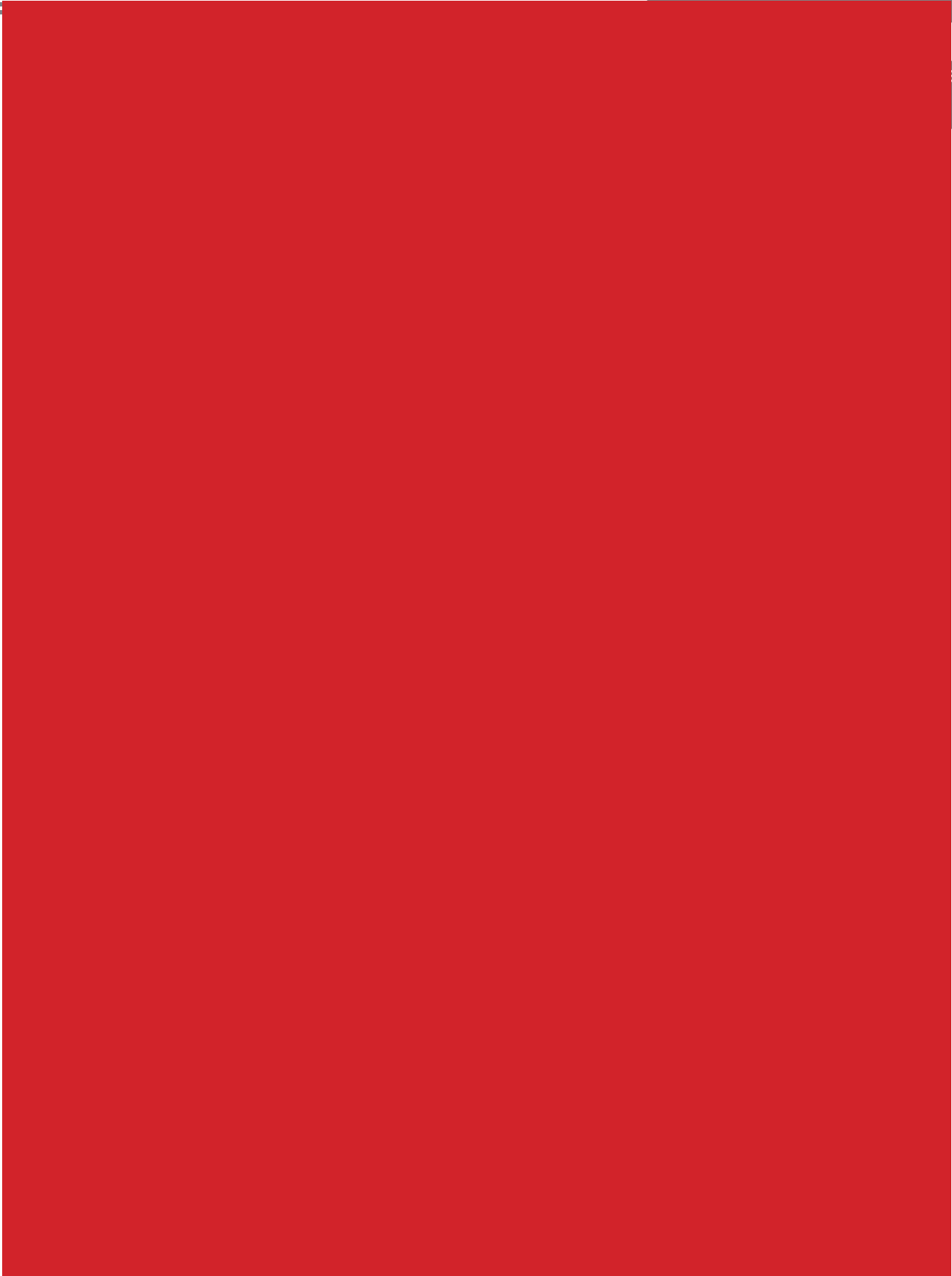
Sample Size	Weighted Multiplier %	Initial Mass (g)		Retained Mass (g)	Loss (g)	Loss %	Weighted Loss %
P1 1/2" – R1" P1" – R3/4"	**** 0		****	****	****	****	****
P3/4" – R1/2"	****		****	****	****	****	****
P1/2" – R3/8"	65			****	****	****	****
P3/8" – R#4	35						

SOUNDNESS OF AGGREGATES BY FREEZING AND THAWING

AASHTOT103, Weighted Loss %

COARSE AGGREGATE SPECIFIC GRAVITY

Sample #	1	2	3	
Saturated Weight, g	3092.1	3196.1		
Oven-Dry Weight, g	3066.0	3167.6		
Weight in Water, g	1962.0	2021.9		Average
Absorption, %	0.851	0.900		0.876
Bulk Specific Gravity	2.713	2.698		2.705
Bulk Specific Gravity, SSD	2.736	2.722		2.729
Apparent Specific Gravity	2.777	2.765		2.771



» HAWKEYE SAWN LEDGE

COLOR/CHARACTERISTICS: Color ranges from light to dark buffs & browns, tans, golds with tints of black and auburn tones.

Heights: Sawn top and bottom heights of 2", 3" and 4"
Lengths: Random lengths up to 24"

FEATURES:

Available in ThinCutTM Veneer: 100% bed-face with a natural back

SPECIFICATIONS:

ASTM C 97

DENSITY: 155.34 lb/ft³
ABSORPTION: 3.0%

ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 3,065 psi

ASTM C 97

BULK SPECIFIC GRAVITY 2.561 CLASS II QUARTZITIC SANDSTONE

*This information is based on test results by Pacific Materials Laboratory





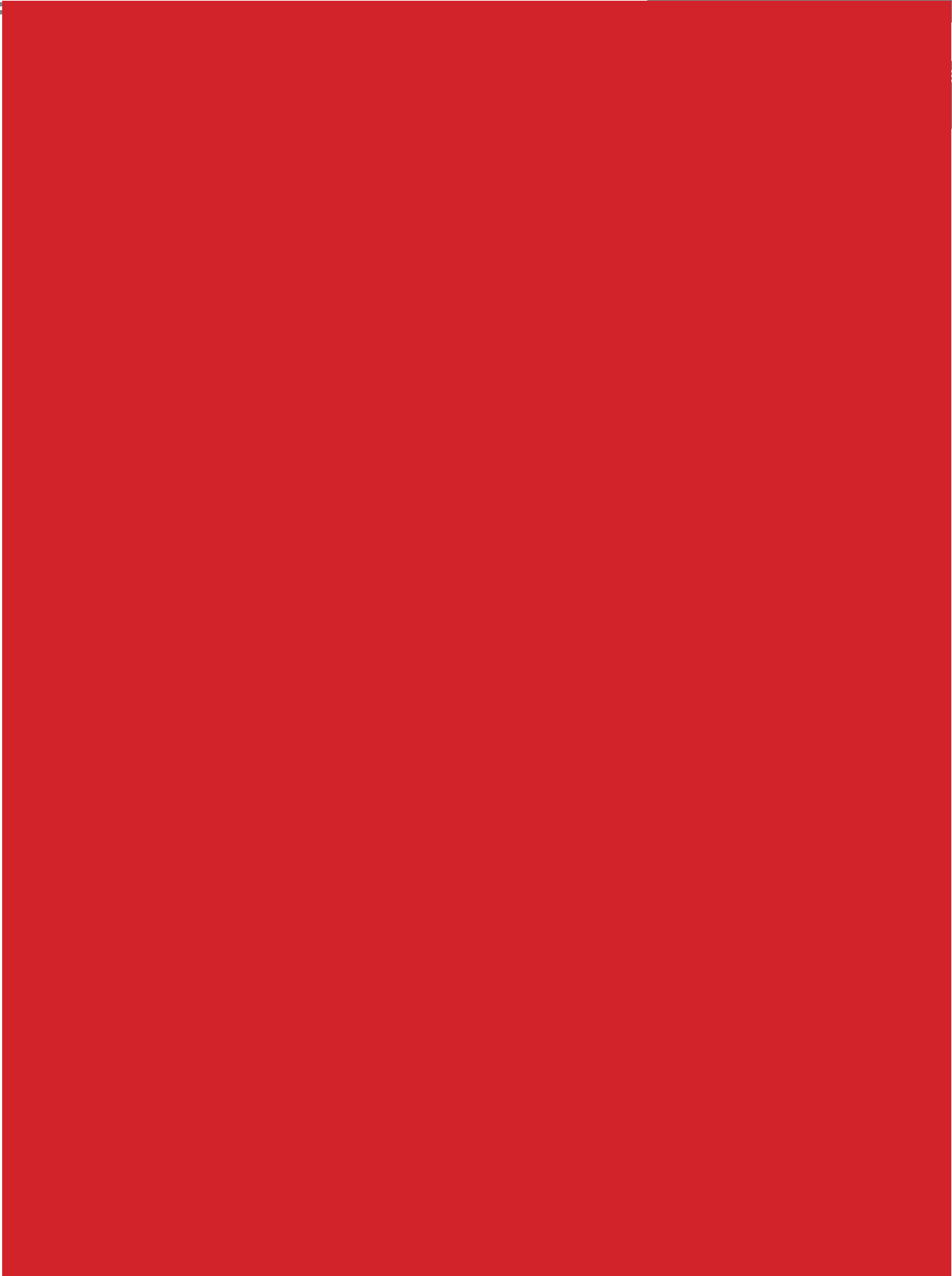
»» INDIANA LIMESTONE

Request this file by emailing info@semcostone.com
because this testing data report has several pages and is easier to email.



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» MOUNTAIN RIDGE

COLOR/CHARACTERISTICS: Gray, blue & buff tones

FEATURES:

Random Height: 100% Split-face

Dimensional: Sawn heights, split-face and ends

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 170

COMPRESSIVE STRENGTH:

Perpendicular

PSI (gross) 12,547

Parallel

PSI (gross) 12,310

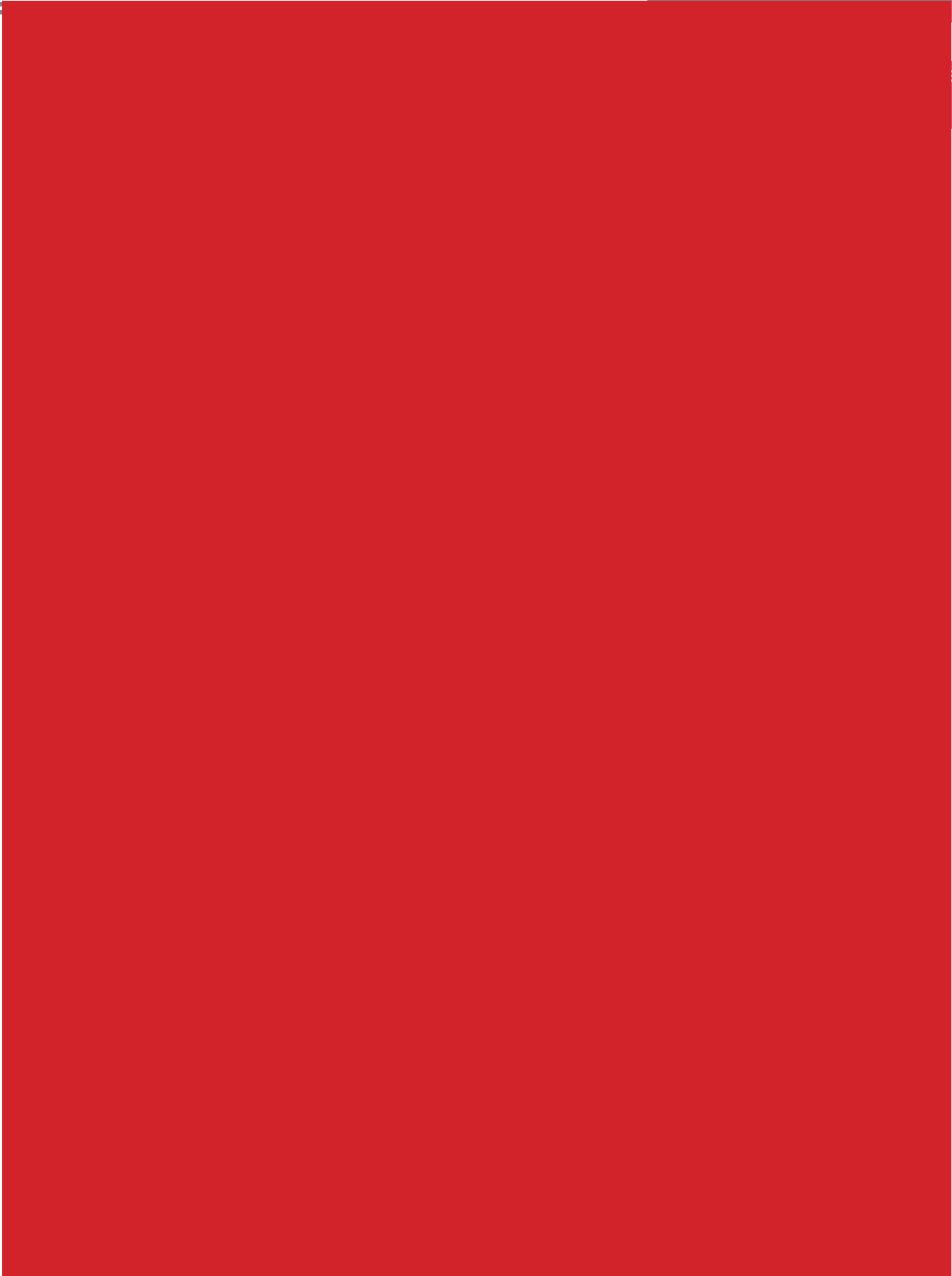
ASTM C 97

SPECIFIC GRAVITY: 2.61

ABSORPTION: 4.0%

*This information is based on test results by PSI, Inc. in St. Louis, MO.







» PINE RIDGE

COLOR/CHARACTERISTICS: Brown and rust with red tones

FEATURES:

Full Veneer: 100% Seam-face/Bed-face

ThinCut™ Veneer: 50% Seam-face, 50% Bed-face

Available in Full Veneer & ThinCut™

SPECIFICATIONS:

ASTM C 97

DENSITY: 161.77 lb/ft³

SPECIFIC GRAVITY: 2.592

ABSORPTION: 0.59%



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» PLATINUM FALLS

COLOR/CHARACTERISTICS: Light to dark grays & blues

FEATURES:

100% Bed-face with a natural back

Sawn Heights: 2", 3", 4"

Lengths: Random up to 24"

Available in ThinCutTM only

SPECIFICATIONS:

ASTM C 97

DENSITY: 142.8 lb/ft³

ABSORPTION: 1.5534%

ASTM C 99

MODULUS OF RUPTURE: 890 psi CLASS III QUARTZITE

ASTM C 170

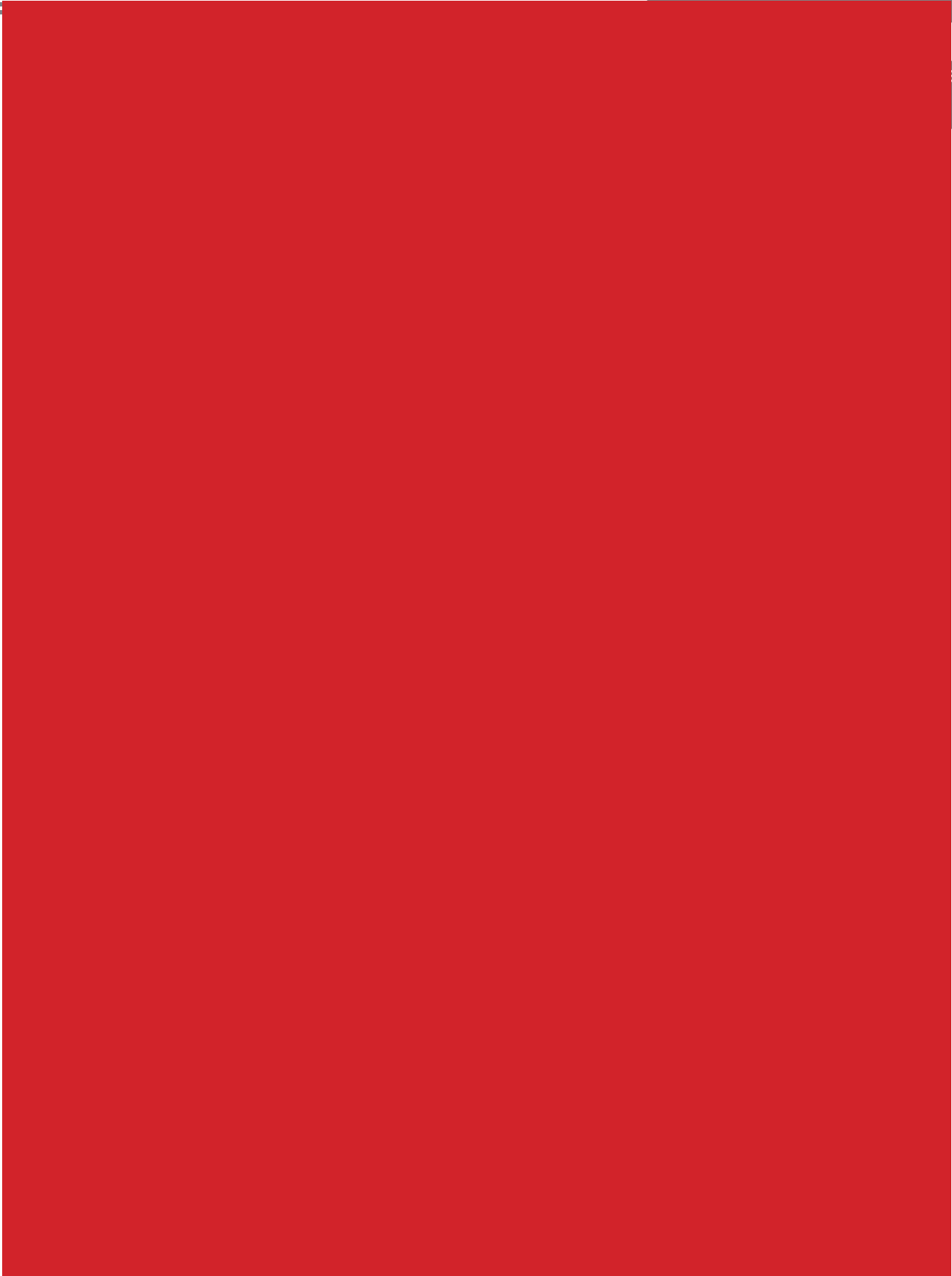
COMPRESSIVE STRENGTH: 7,500 psi CLASS III QUARTZITE

ASTM C 97

BULK SPECIFIC GRAVITY 2.3872 CLASS II QUARTZITIC SANDSTONE

*This information is based on test results by Pacific Materials Laboratory





»» ROCKPORT BLEND

BLEND PERCENTAGE: This unique blend is made up of approximately 90% Mountain Ridge Split-face and 10% Blue River Split-face.

COLOR / CHARACTERISTICS: Light & dark gray, blue & buff tones

LENGTHS: Random up to 24 inches

FEATURES:

Random Height: 100% Split-face

Dimensional: Sawn heights, split-face and ends

Available in Full Veneer & ThinCut™

MOUNTAIN RIDGE SPECIFICATIONS:

ASTM C 170

COMPRESSIVE STRENGTH:	Perpendicular	PSI (gross) 12,547
	Parallel	PSI (gross) 12,310

ASTM C 97

SPECIFIC GRAVITY: 2.61	ABSORPTION: 4.0%
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*This information is based on test results by PSI, Inc. in St. Louis, MO.

BLUE RIVER SPECIFICATIONS:

ASTM C 880

FLEXURAL STRENGTH:	Perpendicular: 2,304	Parallel: 2,303
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ASTM C 170

COMPRESSIVE STRENGTH:	Perpendicular	Area 4.512	PS 17,778
	Parallel	Area 4.553	PS 19,034

ASTM C 97

SPECIFIC GRAVITY: 2.68	ABSORPTION: 0.34%
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*This information is based on test results by PSI, Inc. in St. Louis, MO.



» RUSTIC CEDAR

COLOR/CHARACTERISTICS: Buffs, creams and gray tones with occasional veining

FEATURES:

Random Height: 100% Split-face
Dimensional: Sawn heights, split-face and ends

SPECIFICATIONS:

ASTM C 97

DENSITY: 154.6 lb/ft³
ABSORPTION: 3.54%

ASTM C 170
COMPRESSIVE STRENGTH

DRY CONDITION
Parallel: 17,002 psi
Perpendicular: 21,591 psi

WET CONDITION
Parallel: 11,919 psi
Perpendicular: 19,787 psi

ASTM C 880
FLEXURAL STRENGTH

DRY CONDITION
Parallel: 1,743 psi
Perpendicular: 922 psi

WET CONDITION
Parallel: 1,248 psi
Perpendicular: 834 psi

Testing was performed in general accordance with the following ASTM Standards.
This information is based on test results by The Council of North America, Inc.



» SILVERDALE

COLOR/CHARACTERISTICS: Limestone buff in color with some light yellow variegation throughout the stone

SPECIFICATIONS:

ASTM C 97

DENSITY: 134.19

SPECIFIC GRAVITY: 2.151 lb/ft³

ABSORPTION: 7.51%

ASTM C 99

MODULUS OF RUPTURE: 822 psi (5.67 MPa)

ASTM C 170

COMPRESSIVE STRENGTH: 5047 psi (34.79 MPa)

ASTM C 880

FLEXURAL STRENGTH: 725 psi (5.00 MPa)

ASTM C 241

ABRASION RESISTANCE: 3.18

Testing was performed in general accordance with the following ASTM Standards. Test results by SGS U.S. Testing Company, Inc.



» SILVER MIST

COLOR/CHARACTERISTICS:

100% Split-Face

Gray tones with some veining throughout the stone

FEATURES:

Heights: 4" – 10"

Lengths: Random lengths

Available in Full Veneer & ThinCut[™]

SPECIFICATIONS:

AVERAGE PSI: 11,750 (psi)

ABSORPTION: 5.2%

OVEN DRY SPECIFIC GRAVITY: 2.23

SSD SPECIFIC GRAVITY: 2.34

APPERENT SPECIFIC GRAVITY: 2.52

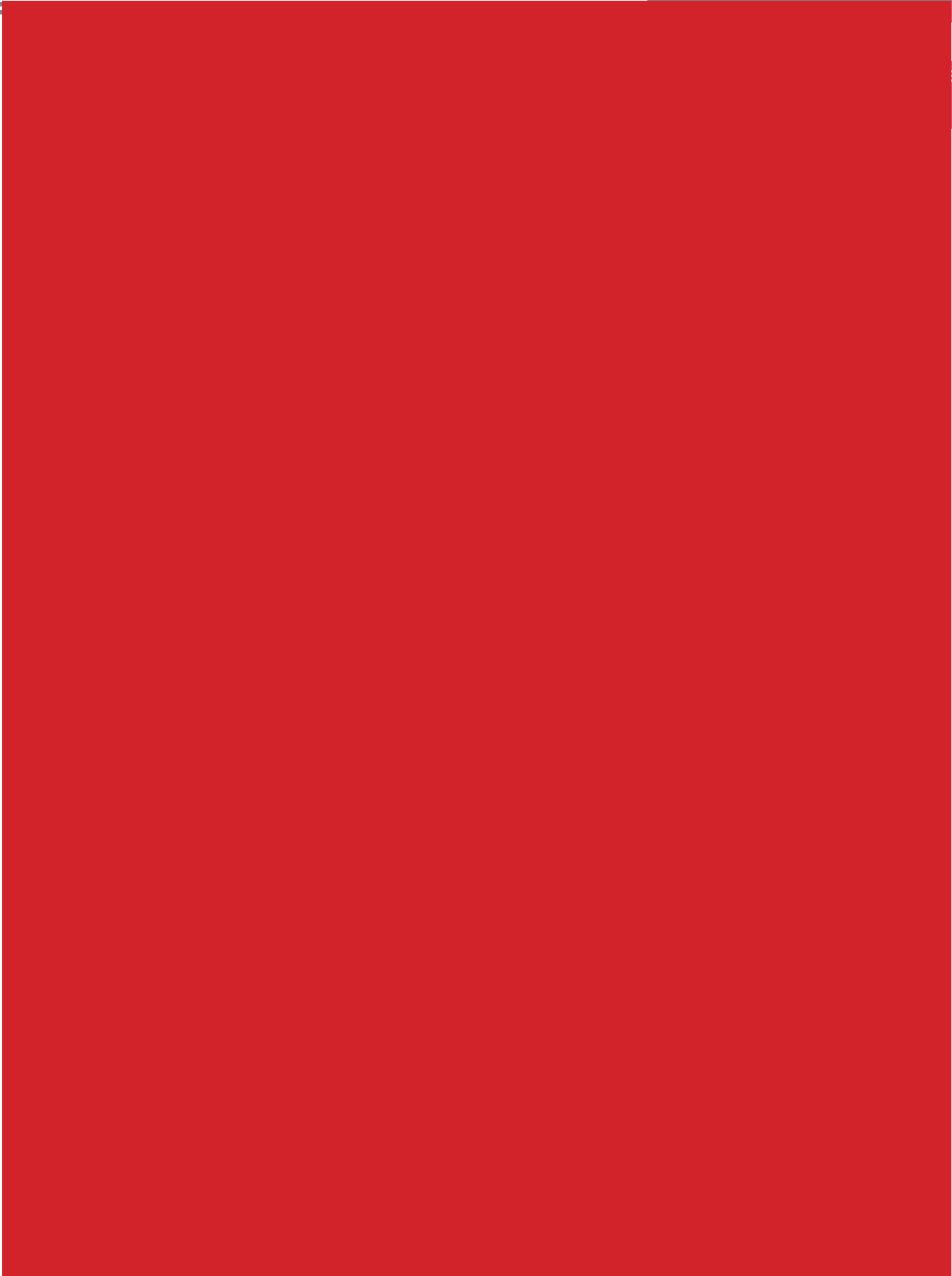
OVEN DRY DENSITY: 138.6 lbs/ft³

SSD DENSITY: 145.8 lbs/ft³

APPERENT DENSITY: 156.7 lbs/ft³

Testing was performed in general accordance with the following ASTM Standards.
This information is based on test results by Koehler Engineering.





»» TIMBER CREEK

COLOR/CHARACTERISTICS: Buff with some light and dark gray veining

FEATURES:

Dimensional: Sawn heights, split-face and ends

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

DENSITY: 166.5 lb/ft³

ABSORPTION: 2.668%

ASTM C 170

COMPRESSIVE STRENGTH

DRY CONDITION

Perpendicular: 22,600 psi

Testing was performed in general accordance with the following ASTM Standards.
This information is based on test results by Geotechnology, Inc. in St. Louis, MO.



» TUSCAN TAN

COLOR/CHARACTERISTICS:

100% Split-Face

Tan and cream colors, some gray tones with some veining throughout the stone

FEATURES:

Heights: 4" – 10"

Lengths: Random lengths

Available in Full Veneer & ThinCut™

SPECIFICATIONS:

ASTM C 568

AVERAGE PSI: 6,670 (psi)

ABSORPTION: 8.8%

OVEN DRY SPECIFIC GRAVITY: 2.08

SSD SPECIFIC GRAVITY: 2.26

APPERENT SPECIFIC GRAVITY: 2.54

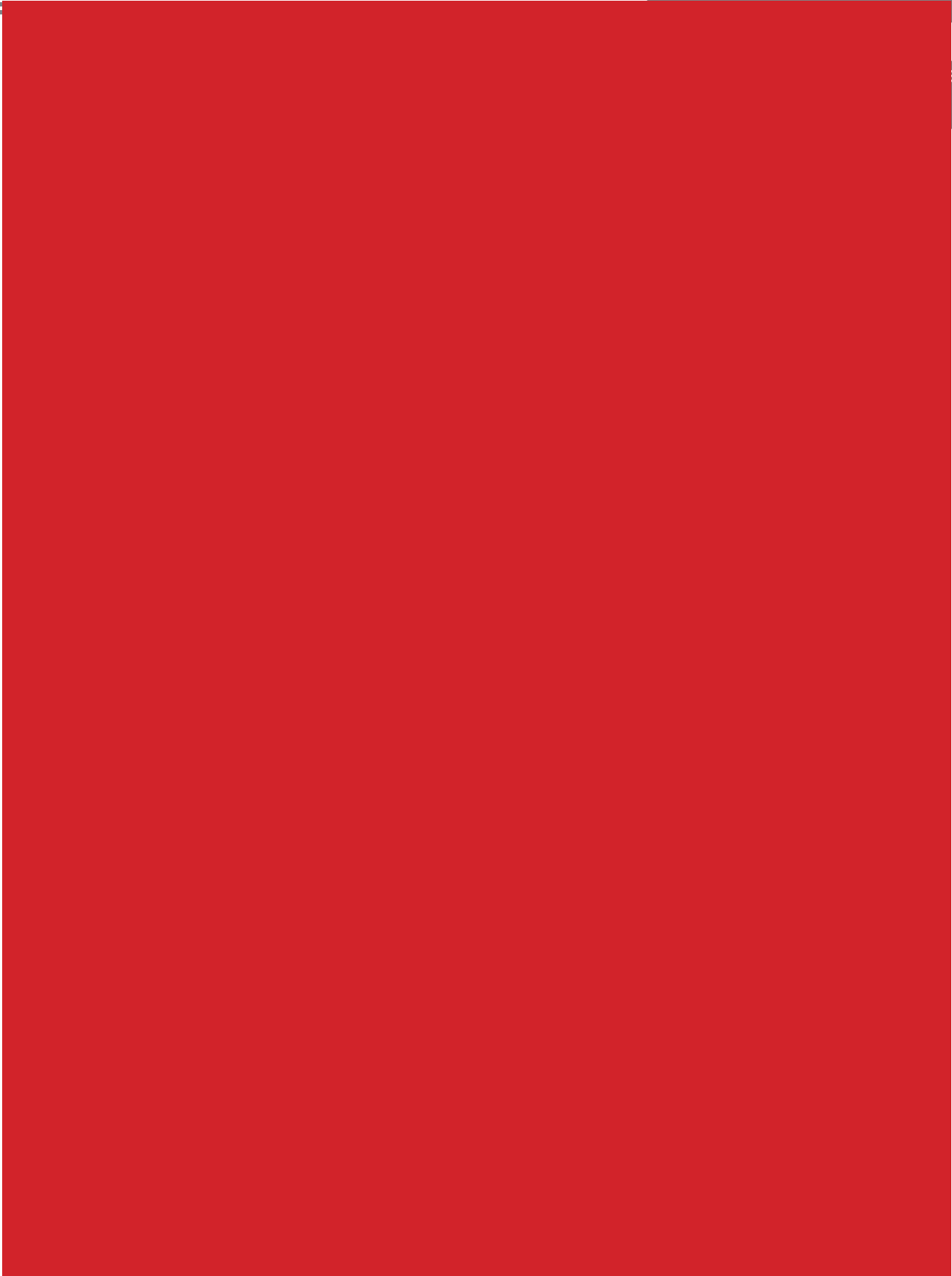
OVEN DRY DENSITY: 129.5 lbs/ft³

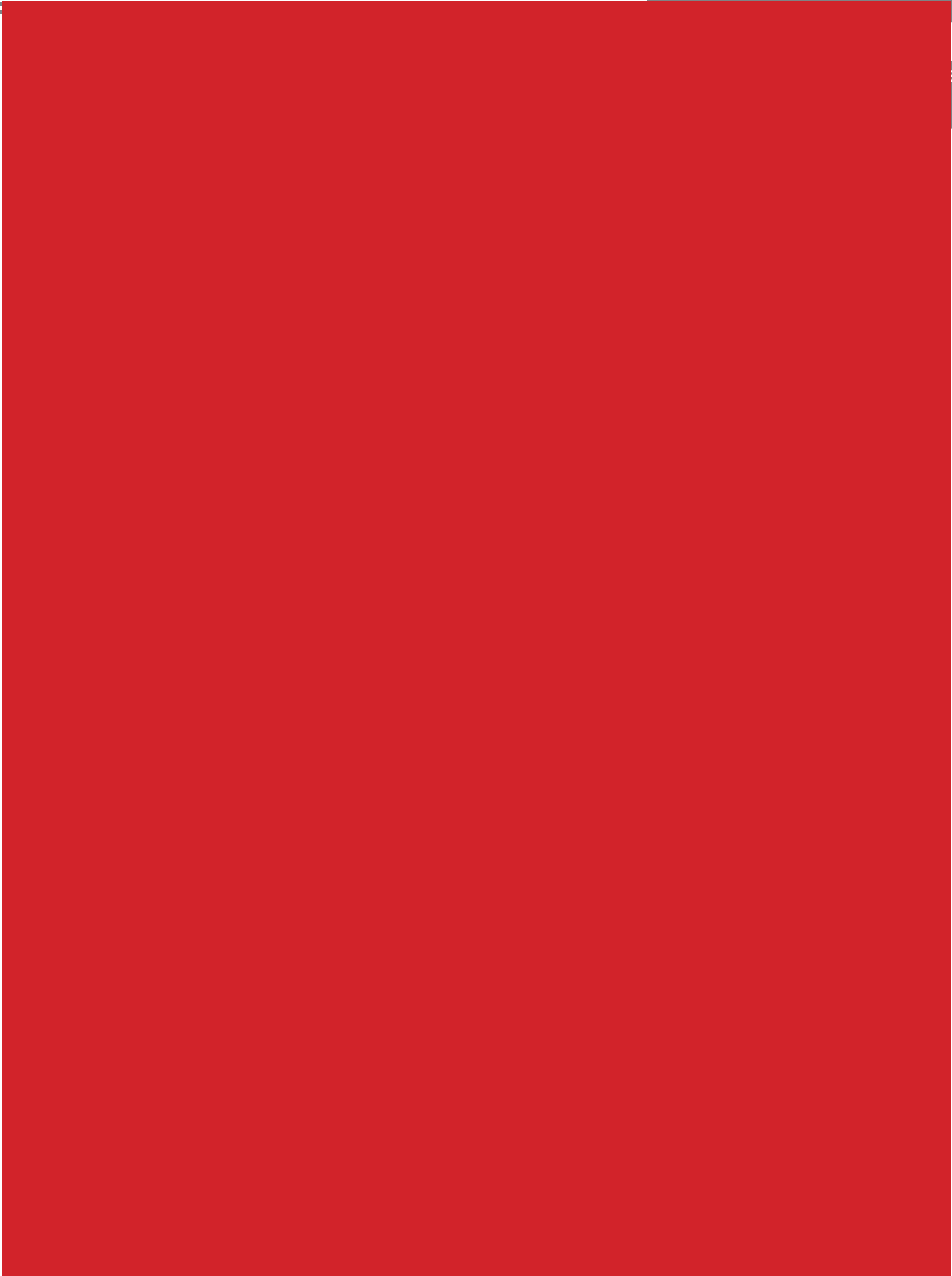
SSD DENSITY: 140.8 lbs/ft³

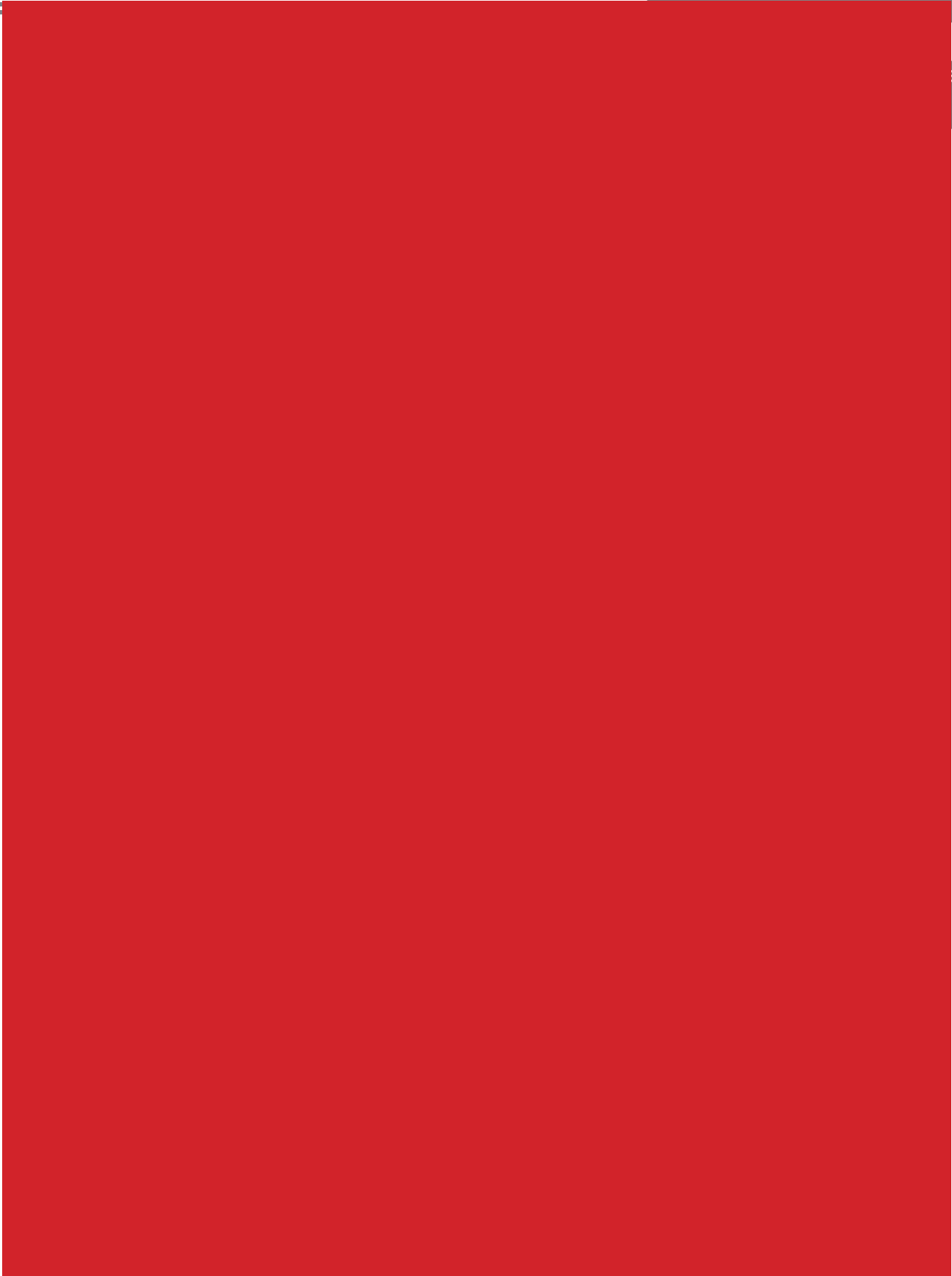
APPERENT DENSITY: 158.4 lbs/ft³

Testing was performed in general accordance with the following ASTM Standards.
This information is based on test results by Koehler Engineering.









» WEATHERED SANDSTONE

COLOR/CHARACTERISTICS: Weathered Sandstone is a naturally occurring sandstone material, weathered naturally by the effects of its environment. Harvested from the hills of Southern Missouri and Northern Arkansas

SPECIFICATIONS:

ASTM C 97

SPECIFIC GRAVITY: 2.121

ABSORPTION: 6.13%

ASTM C 99*

MODULUS OF RUPTURE: 801 psi

ASTM C 170*

COMPRESSIVE STRENGTH: 8,138 psi

Testing was performed in general accordance with the following ASTM Standards. This information is based on test results by Construction Consulting & Testing, Inc.

*C 99 and C 170 were performed under the dry condition, perpendicular to the bedding planes.





» WEATHERED LIMESTONE BOULDERS & LEDGEROCK

COLOR/CHARACTERISTICS: Weathered Limestone Boulders & Ledgerock are light buff to cream to dark gray in color. Palletized in small, medium or large. Average Pallet Weight is 2200-3800 lbs.

SPECIFICATIONS:

ASTM C 97
SPECIFIC GRAVITY: 2.77
ABSORPTION: 0.62%

Testing was performed in general accordance with the following ASTM Standards.
This information is based in August 2020 test results by Intertek-PSI in St. Louis, MO.



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» WESTON CREAM

COLOR/CHARACTERISTICS: Light buff cream colored

FEATURES:

Random Height: 100% Split-face

Dimensional: Sawn heights, split-face and ends

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

DENSITY: 135.61 lb/ft³

SPECIFIC GRAVITY: 2.173

ABSORPTION: 6.51%

ASTM C 99

MODULUS OF RUPTURE: 883 psi 6.09 Mpa

ASTM C 170

COMPRESSIVE STRENGTH: 5,686 psi 39.20 Mpa

ASTM C 241

ABRASION RESISTANCE: 5.06

ASTM C 880

FLEXURAL STRENGTH: Perpendicular: 1,053 psi Parallel: 7.26 Mpa



» WESTON SHELL

COLOR/CHARACTERISTICS: Shades of buff to tan. Sea shells have been preserved for millions of years in this unique limestone

FEATURES:

100% Split-face with random heights from 4" to 12" (ThinCutTM cannot exceed 10.5")
Random lengths from 10" to 30"

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

BULK SPECIFIC GRAVITY: 2.16

DENSITY: 134.6 lbs./ft³

ABSORPTION: 6.1%

ASTM C 170

COMPRESSIVE STRENGTH: 5,800 psi PARALLEL

COMPRESSIVE STRENGTH: 6,010 psi PERPENDICULAR

ASTM C 99

MODULUS OF RUPTURE: 1,050 PARALLEL

MODULUS OF RUPTURE: 810 PERPENDICULAR



» WOLF RIDGE

COLOR/CHARACTERISTICS:

Primarily charcoal gray in color, with some light gray color veining throughout the stone.

FEATURES:

Heights: 3" – 6"

Lengths: Random lengths up to 24"

The test results below exceed the minimum requirements of ASTM C 616-97 (see table below for reference)

SPECIFICATIONS:

ASTM C 97

DENSITY: 159.83 lb/ft³

CLASS II QUARTZITIC SANDSTONE

SPECIFIC GRAVITY: 2.561

ABSORPTION: 0.97%

CLASS III QUARTZITE

ASTM C 99

MODULUS OF RUPTURE: 2,639 psi

CLASS III QUARTZITE

18.19 Mpa

ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi

CLASS III QUARTZITE

164.17 Mpa

ASTM C 241

ABRASION RESISTANCE: 52.58

CLASS III QUARTZITE

ASTM C 880

FLEXURAL STRENGTH:

Perpendicular: 3,065 psi

Parallel: 21.13 Mpa

X-RAY DIFFRACTION MINERALOGICAL ANALYSIS

FREE SILICA CONTENT: 93%

CLASS II QUARTZITIC SANDSTONE

STATIC COEFFICIENT OF FRICTION DRY: 1.21 WET: .94



» WILLOWBROOK BLUE

COLOR/CHARACTERISTICS: Willowbrook Blue is blue/gray in color with some brown and rust variegation

FEATURES:

50% Bed-face, 50% Split-face
 Heights: 3" – 7" Lengths: Random

Available in Full Veneer & ThinCut[™]

SPECIFICATIONS:

ASTM C 97

DENSITY: 159.83 lb/ft ³	CLASS II QUARTZITIC SANDSTONE
SPECIFIC GRAVITY: 2.561	
ABSORPTION: 0.97%	CLASS III QUARTZITE

ASTM C 99

MODULUS OF RUPTURE: 2,639 psi	CLASS III QUARTZITE	18.19 Mpa
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ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi	CLASS III QUARTZITE	164.17 Mpa
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ASTM C 241

ABRASION RESISTANCE: 52.58	CLASS III QUARTZITE
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ASTM C 880

FLEXURAL STRENGTH:	Perpendicular: 3,065 psi	Parallel: 21.13 Mpa
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X-RAY DIFFRACTION MINERALOGICAL ANALYSIS

FREE SILICA CONTENT: 93%	CLASS II QUARTZITIC SANDSTONE
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STATIC COEFFICIENT OF FRICTION DRY: 1.21 WET: .94



» WILLOWBROOK BROWN

COLOR/CHARACTERISTICS: Willowbrook Brown has shades of brown & tan, speckled with dark brown

FEATURES:

50% Bed-face, 50% Split-face
Heights: 3" – 7" Lengths: Random

Available in Full Veneer & ThinCut™

SPECIFICATIONS:

ASTM C 97

DENSITY: 159.83 lb/ft ³	CLASS II QUARTZITIC SANDSTONE
SPECIFIC GRAVITY: 2.561	
ABSORPTION: 0.97%	CLASS III QUARTZITE

ASTM C 99

MODULUS OF RUPTURE: 2,639 psi	CLASS III QUARTZITE	18.19 Mpa
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ASTM C 170

COMPRESSIVE STRENGTH: 23,814 psi	CLASS III QUARTZITE	164.17 Mpa
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ASTM C 241

ABRASION RESISTANCE: 52.58	CLASS III QUARTZITE
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ASTM C 880

FLEXURAL STRENGTH:	Perpendicular: 3,065 psi	Parallel: 21.13 Mpa
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X-RAY DIFFRACTION MINERALOGICAL ANALYSIS

FREE SILICA CONTENT: 93%	CLASS II QUARTZITIC SANDSTONE
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STATIC COEFFICIENT OF FRICTION DRY: 1.21 WET: .94



» WIND RIVER

COLOR: Tan, pink, rust and dark brown in color

SPECIFICATIONS:

ASTM C 97

SPECIFIC GRAVITY: 2.53

ABSORPTION: 1.2%

ASTM C 99

MODULUS OF RUPTURE: 3,225 psi

ORIENTATION/CONDITION: Parallel to the Rift/Dry

ASTM C 170

COMPRESSIVE STRENGTH: 29,300 psi

ORIENTATION/CONDITION: Parallel to the Rift/Dry



» YUKON LEDGE

COLOR/CHARACTERISTICS: Deep rust to dark brown seam-face

FEATURES:

Random heights 1" to 4"

Random lengths 5" to 20"

Available in Full Veneer & ThinCutTM

SPECIFICATIONS:

ASTM C 97

BULK SPECIFIC GRAVITY: 2.387

CLASS II QUARTZITIC SANDSTONE

DENSITY: 155.34 lbs./ft³

ABSORPTION: 3.0%

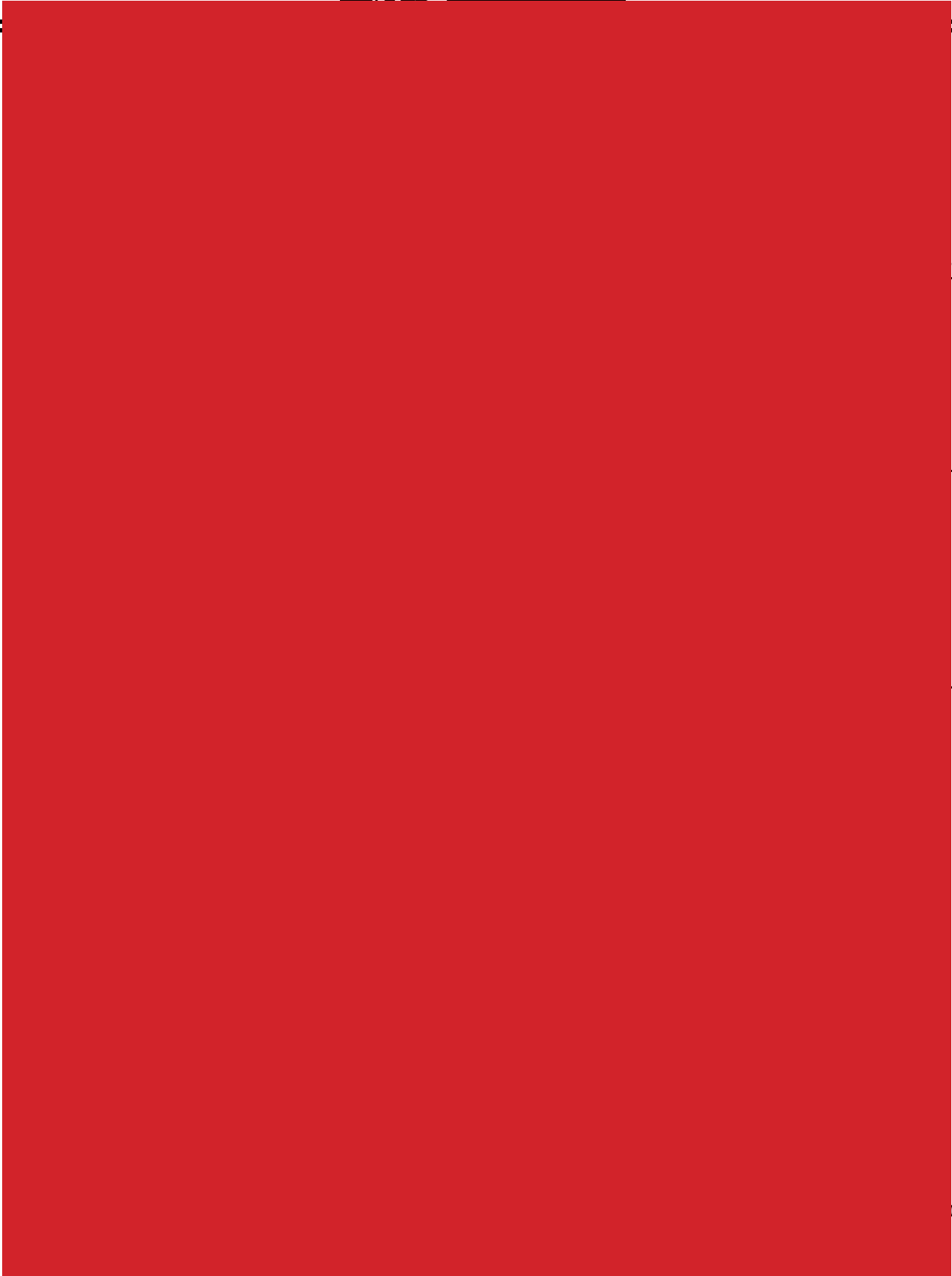
ASTM C 170

COMPRESSIVE STRENGTH: 7,500 psi

CLASS III QUARTZITE

*This information is based on test results by Pacific Materials Laboratory





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