

To: Cobra Stone, Inc. P.O. Box 705 Jarrell, TX 76537

Attn: Mr. Fabian Hernandez

Project:

Cobra Stone, Inc.

P.O. #023752

Project No.: 20180443.001A

Control No.: 050208B

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REPORT OF:

Specific Gravity and Absorption of Dimension Stone

TEST METHOD:

ASTM C-97

LAB NUMBER:

G-4113

MATERIAL SOURCE:

Cobra Stone, Inc.; Williamson County, Texas

MATERIAL DESCRIPTION:

Dimension Stone, Bluish Gray Limestone; 3" cubes, sawn faces and

sides; "Blue Lueders Limestone"

SAMPLED BY:

Client delivered samples to lab

TEST PERFORMED BY:

K. Woodard, NICET #107418

RESULTS:

Specimen	SSD Wt. in SSD Wt. in Oven Dry	Oven Dry Wt.	Absorption, %	Density		
Number	Air, g	Water, g	in Air, g	Absorption, 70	lb./cu.ft.	Spec. Grav.
1	492.4	297.8	480.0	2.58	153.9	2.467
2	513.8	311.9	501.0	2.55	154.8	2.481
3	502.1	304.4	489.5	2.57	154.5	2.476
4	501.8	303.4	489.4	2.53	153.9	2.467
5	508.5	307.6	496.1	2.50	154.1	2.469
		Average of Sample:		2.55	154.3	2.472
		Standard Deviation:		0.03	0.40	0.006

Photo of C99 MOR Specimen, after testing:





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REPORT OF:

Modulus of Rupture of Dimension Stone

TEST METHOD:

ASTM C-99

LAB NUMBER:

G-4113

MATERIAL SOURCE:

Cobra Stone, Inc.; Williamson County, Texas

MATERIAL DESCRIPTION:

Dimension Stone, Bluish Gray Limestone; 2-1/4" x 4" x 8", sawn

faces and sides; "Blue Lueders Limestone"

SAMPLED BY:

Client delivered samples to lab

TEST PERFORMED BY:

K. Woodard, NICET #107418

RESULTS:

Rift Direction - Not Discernable - Oven Dry Condition

Specimen	Total	Width, in.	Thickness,	Modulus of Ruptur	
Mark	Load, lbs.	vvidui, iii.	in.	PSI	MPa
1	3,345	4.03	2.43	1,476	10.18
2	3,725	4.06	2.40	1,673	11.53
3	2,910	4.02	2.40	1,320	9.10
4	3,875	4.03	2.39	1,768	12.19
5	3,795	4.05	2.41	1,694	11.68
		Average	of Sample:	1,590	10.93
		Standard Deviation:			1.27

Note: Test span length = 7.0"



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REPORT OF: Compressive Strength of Dimension Stone

TEST METHOD: ASTM C-170 LAB NUMBER: G-4113

MATERIAL SOURCE: Cobra Stone, Inc.; Williamson County, Texas

MATERIAL DESCRIPTION: Dimension Stone, Bluish Gray Limestone; 3" cubes, sawn faces and

sides; "Blue Lueders Limestone"

SAMPLED BY: Client delivered samples to lab TEST PERFORMED BY: K. Woodard, NICET #107418

RESULTS: Rift Direction - Not Discernable - Oven Dry Condition

Specimen Mark	Total Load, lbs.	Width, in.	Thickness, in.	Area (sq. in.)	Comp. Strength	
					PSI	MPa
1	98,365	3.03	3.03	9.18	10,714	73.87
2	69,595	3.05	3.00	9.15	7,606	52.44
3	40,145	3.02	3.09	9.33	4,302	29.66
4	92,375	3.01	3.10	9.33	9,900	68.26
5	105,330	3.05	3.07	9.36	11,249	77.56
		Average of Sample:			8,750	60.36
		Standard Deviation:			2,851	19.66



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REPORT OF: Flexural Strength of Dimension Stone

TEST METHOD: ASTM C-880 LAB NUMBER: G-4113

MATERIAL SOURCE: Cobra Stone, Inc.; Williamson County, Texas

MATERIAL DESCRIPTION: Dimension Stone, Bluish Gray Limestone; 4" x 1-1/4" x 15", sawn

faces and sides; "Blue Lueders Limestone"

SAMPLED BY: Client delivered samples to lab TEST PERFORMED BY: K. Woodard, NICET #107418

RESULTS: Rift Direction - Not Discernable - Oven Dry Condition

Specimen	Total Load,	Width, in.	Thickness, in.	Flexural Strength	
Mark	lbs.	vvidui, iii.		PSI	MPa
1	1,010	4.05	1.27	1,450	9.99
2	835	4.06	1.26	1,214	8.37
3	970	4.03	1.30	1,335	9.21
4	700	4.03	1.28	994	6.85
5	865	4.02	1.29	1,212	8.36
		Average of Sample:		1,240	8.56
		Standard Deviation:		170	1.17

Note: Test span length = 12.5"

Report Reviewed by:

Robert S. Wright, P.E.