



American Granite Curb Producers

Georgia Grey

Client:	North Carolina Granite	Project:	Georgia Grey
Material:	Georgia Grey Granite	Project Number:	14633 A – Georgia Grey (RB)
Source:	Georgia Grey Quarry	Report Number:	TCNA-690-12
Date Sampled:		Sampled By:	Client
Date Tested:	1/4/2013 – 1/9/2013	Tested By:	TCNA

Report of Compressive Strength of Dimension Stone

Test Method: ASTM C170

Specimen	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	18,288	12,381	16,986	12,409
2	19,811	12,644	25,980	13,009
3	18,485	15,250	24,351	8,919
4	23,669	13,029	24,365	8,631
5	18,618	11,290	15,041	6,843
Avg	19,774	12,938	21,345	9,962

- All twenty specimens were compressed on the Forney compression tester at a rate of 5000 psi/min until failure.
- The ASTM C 615 specification for granite gives a minimum compressive strength of 19,000 psi

Report of Flexural Strength of Dimension Stone Testing

Test Method: ASTM C 880

Stone Type: Granite		Preconditioning Procedure: ½ Dried in an Oven (48 hours), ½ Submerged in Water		
Sample#	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	2214	2045	1497	1077
2	2335	2178	2173	1901
3	1742	1579	1265	2491
4	1818	1913	2597	1225
5	2086	1955	2685	2243
Avg	2039	1934	2043	1787

- All twenty specimens were broken by a four-point load on an Instron universal tester.
- Parallel to Rift: Standard deviation for dry, 254. Standard deviation for wet 223.
- Perpendicular to Rift: Standard deviation for dry 640. Standard deviation for wet 620.
- The ASTM C 615 specification for granite gives a minimum flexural strength requirement of 1200 psi.

Absorption and Bulk Specific Gravity of Dimension Stone

Test Method: ASTM C97

Sample Number	Dry Weight	SSD Weight	Weight in Water	Absorption, % of Dry Weight	Bulk Specific Gravity	Units Weight lbs/cu ft
1				0.29		164.3
2				0.28		164.3
3				0.27		164.3
4				0.28		164.2
5				0.28		164.2
Avg				0.37		164.2

The ASTM C 615 specification for granite gives a maximum absorption requirement of 0.4% and a minimum density requirement of 160 lb/ft³.



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Modulus of Rupture of Dimension Stone				
Test Method: ASTM C99				
Stone Type: Granite		Preconditioning Procedure: ½ Dried in an Oven (48 hours), ½ Submerged in Water		
Sample#	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	2183	1757	2063	1986
2	2262	1774	2118	1932
3	2111	1875	2112	1991
4	1938	1778	2034	2100
5	1962	1857	2134	2080
Avg	2091	1808	2092	2081

- All twenty specimens were broken by a three-point load on the Instron universal tester with a load rate of 1000 lbf/min and a span of 7 inches.
- The ASTM C 615 specification for granite gives a minimum modulus of rupture of 1500 psi.



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Material:	Georgia Grey Granite	Project Number:	14633 B – Georgia Grey (RB)
Source:	Georgia Grey Quarry	Report Number:	TCNA-690-12
Date Sampled:		Sampled By:	Client
Date Tested:	1/4/2013 – 1/9/2013	Tested By:	TCNA

Report of Compressive Strength of Dimension Stone

Test Method: ASTM C170

Specimen	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	15,281	14,152	20,648	11,064
2	22,272	9,434	19,786	12,442
3	11,895	7,299	15,899	17,610
4	13,717	13,387	18,154	10,898
5	18,248	13,439	21,629	13,270
Avg	16,283	11,542	19,223	13,057

- All twenty specimens were compressed on the Forney compression tester at a rate of 5000 psi/min until failure.
- The ASTM C 615 specification for granite gives a minimum compressive strength of 19,000 psi

Report of Flexural Strength of Dimension Stone Testing

Test Method: ASTM C 880

Stone Type: Granite		Preconditioning Procedure: ½ Dried in an Oven (48 hours), ½ Submerged in Water		
Sample#	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	2491	2038	631	1987
2	1716	2066	2153	2150
3	1809	1378	838	1795
4	1847	1986	2355	1911
5	2569	2154	1870	1991
Avg	2086	1924	1570	1967

- All twenty specimens were broken by a four-point load on an Instron universal tester.
- Parallel to Rift: Standard deviation for dry, 409. Standard deviation for wet 311.
- Perpendicular to Rift: Standard deviation for dry 785. Standard deviation for wet 130.
- The ASTM C 615 specification for granite gives a minimum flexural strength requirement of 1200 psi.

Absorption and Bulk Specific Gravity of Dimension Stone

Test Method: ASTM C97

Sample Number	Dry Weight	SSD Weight	Weight in Water	Absorption, % of Dry Weight	Bulk Specific Gravity	Units Weight lbs/cu ft
1				0.28		164.2
2				0.29		164.2
3				0.28		164.2
4				0.28		164.3
5				0.29		164.2
Avg				0.28		164.2

The ASTM C 615 specification for granite gives a maximum absorption requirement of 0.4% and a minimum density requirement of 160 lb/ft³.



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Test Method: ASTM C99				
Stone Type: Granite		Preconditioning Procedure: ½ Dried in an Oven (48 hours), ½ Submerged in Water		
Sample#	Load Parallel to Rift		Load Perpendicular to Rift	
	Dry Condition, psi	Wet Condition, psi	Dry Condition, psi	Wet Condition, psi
1	2155	2025	2019	1896
2	2011	1957	2132	1916
3	2096	1965	1933	1914
4	2053	1990	1960	1966
5	2007	2048	2280	1890
Avg	2065	1997	2065	1916

- All twenty specimens were broken by a three-point load on the Instron universal tester with a load rate of 1000 lbf/min and a span of 7 inches.
- The ASTM C 615 specification for granite gives a minimum modulus of rupture of 1500 psi.



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