

ENGINEERING CONSULTING SERVICES, LTD.  
Geotechnical • Construction Materials • Environmental

November 1, 2005

Mr. Pierre A. Gorja  
Goria Corporation  
5517 Burlington Road  
McLeansville, North Carolina 27301

ECS, Ltd. Project G-11611

RE: Report of Engineering Services  
Goria Burial Vault Load Testing  
McLeansville, North Carolina

Dear Mr. Gorja:

Engineering Consulting Services, Ltd. (ECS) has visited the subject site as requested. The purpose of our visit was to perform static load testing on the burial vaults. Load testing was performed in general accordance with the procedure used by the National Concrete Burial Vault Association for precast concrete burial vaults.

Load tests were performed on three burial vaults on October 18, 2005; two full size burial vaults - the Endurance and the Eonian brands, and one urn burial vault. Static loads were applied incrementally with a hydraulic jack; a steel load frame was used to distribute the loads uniformly over the surface of the vaults to simulate earth cover over the vaults. A ½" thick metal plate was used in place of the frame when testing the urn burial vault. Deflection of the full sized vault walls was measured by positioning dial gauges at the centers of the long sides. The load was applied in 1,000 lb (1 kip) increments and held for 4 minutes. The final loads on the full size vaults were held for 30 minutes. Please see the attached Load Testing Records.

The maximum static loads applied were 5,000 lb on the Endurance vault, 8,000 lb on the Eonian vault, and 9,000 lb on the urn vault. The deflection measured on the two full size vaults ranged from 0.147 inches to 0.42 inches.

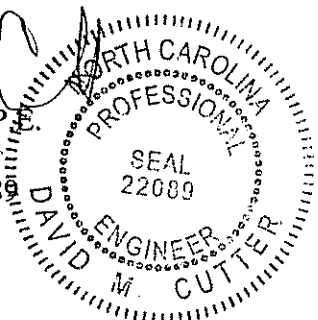
We appreciate the opportunity to be of service to Goria Corporation. If you have any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

ENGINEERING CONSULTING SERVICES, LTD.

*Bopanna T. Kolera*  
Bopanna T. Kolera, E.I.  
CMT Project Manager

*David M. Cutter*  
David M. Cutter, P.E.  
Principal Engineer  
Licensed NC 22089



Attachment: Load Testing Records

**ENGINEERING CONSULTING SERVICES, LTD.**

6909 International Drive, Suite 103

Greensboro, NC 27409

(336)856-7150 PH

(336)856-7160 FAX

**LOAD TESTING RECORD**ECS Project Name: **Goria Burial Vault Load Testing**Date: **10-17-2005**ECS Project Number: **11611**Object: **Endurance Burial Vault**

Load (kips)	Pressure Gauge (psi)	Time (mins)	Dial Gauge Reading (in)		Remarks
			Left	Right	
0	0	0	0.100	0.100	
1.0	175	0.5	0.398	0.266	
		1	0.398	0.265	
		2	0.399	0.264	
		4	0.399	0.264	
2.0	250	0.5	0.479	0.329	
		1	0.479	0.329	
		2	0.479	0.329	
		4	0.479	0.329	
3.0	450	0.5	0.509	0.355	
		1	0.509	0.355	
		2	0.509	0.355	
		4	0.509	0.356	
4.0	600	0.5	0.510	0.356	
		1	0.510	0.357	
		2	0.510	0.357	
		4	0.511	0.358	
5.0	750	0.5	0.512	0.358	
		1	0.512	0.359	
		2	0.513	0.359	
		4	0.513	0.359	
		12	0.516	0.361	
		20	0.518	0.364	
		30	0.520	0.365	

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**LOAD TESTING RECORD**

ECS Project Name: **Goria Burial Vault Load Testing**

Date: **10-17-2005**

ECS Project Number: **11611**

Object: **Eonian Burial Vault**

Load (kips)	Pressure Gauge (psi)	Time (mins)	Dial Gauge Reading (in)				Remarks
			Left	Right	Left	Right	
0	0	0	0.100	0.200	0.100	0.100	
1.0	175	0.5	0.127	0.256			
		1	0.127	0.256			
		2	0.127	0.256			
		4	0.129	0.257			
2.0	250	0.5	0.165	0.315			
		1	0.165	0.316			
		2	0.166	0.316			
		4	0.168	0.321			Set-up and dial
3.0	450	0.5			0.229	0.266	gauges reset
		1			0.230	0.267	
		2			0.231	0.267	
		4			0.233	0.269	
4.0	600	0.5			0.234	0.273	
		1			0.234	0.274	
		2			0.234	0.275	
		4			0.235	0.276	
6.0	850	0.5			0.236	0.278	
		1			0.236	0.278	
		2			0.237	0.279	
		4			0.238	0.280	
8.0	1200	0.5			0.239	0.280	
		1			0.239	0.281	
		2			0.239	0.281	
		4			0.240	0.282	
		12			0.243	0.286	
		20			0.245	0.289	
		30			0.247	0.293	