

SGI TESTING SERVICES

A GEORGIA LIMITED LIABILITY COMPANY

11 April 2010

Mr. James Hammer
WestBlock Systems
2162 Kent Way
Hoover, AL 35226

Subject: Laboratory Test Results Transmittal
Connection Strength Testing
Strata SG200 and SG350 Geogrids/
WestBlock Jumbo NurseryStone Blocks

Dear Mr. Hammer,

SGI Testing Services, LLC (SGI) is pleased to present the attached test results for the above-mentioned testing program. The note section below addresses sample preparation, sample disposal and a disclosure statement.

SGI appreciates the opportunity to provide laboratory testing services to WestBlock Systems. Should you have any questions regarding the attached document(s), or if you require additional information, please do not hesitate to contact the undersigned.

Sincerely,

Zehong Yuan, Ph.D., P.E.
Laboratory Manager

Attachments

NOTES:

- (1) Unless otherwise noted in the test results the sample(s)/specimen(s) were prepared in accordance with the applicable test standards or generally accepted sampling procedures.
- (2) Contaminated/chemical samples and all related laboratory generated waste (i.e., test liquids, PPE, absorbents, etc.) will be returned to the client or designated representative(s), at the client's cost, within 60 days following the completion of the testing program, unless special arrangements for proper disposal are made with SGI.
- (3) Materials that are not contaminated will be discarded after test specimens and archived specimens are obtained. Archived specimens will be discarded 30 days after the completion of the testing program, unless long-term storage arrangements are specifically made with SGI.
- (4) The reported results apply only to the materials and test conditions used in the laboratory testing program. The results do not necessarily apply to other materials or test conditions. The test results should not be used in engineering analysis unless the test conditions model the anticipated field conditions. The testing was performed in accordance with general engineering testing standards and requirements. The reported results are submitted for the exclusive use of the client to whom they are addressed.

SGI10008.REPORT.2010.01

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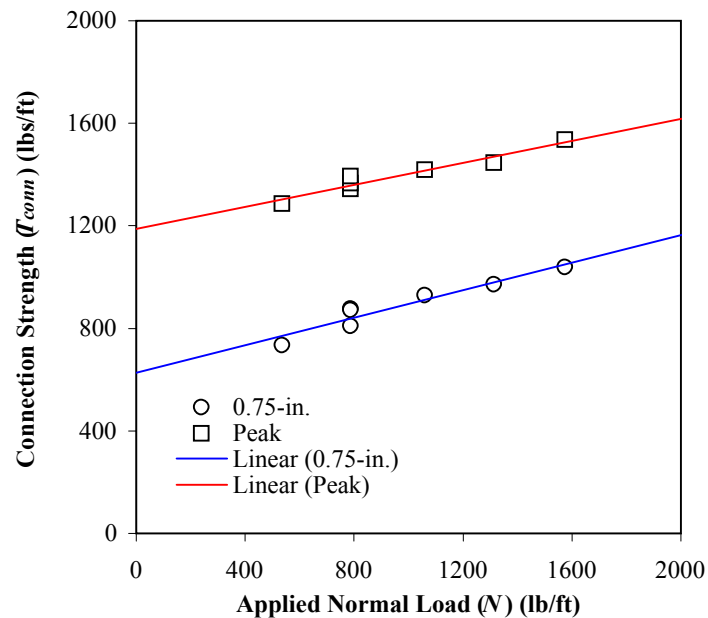
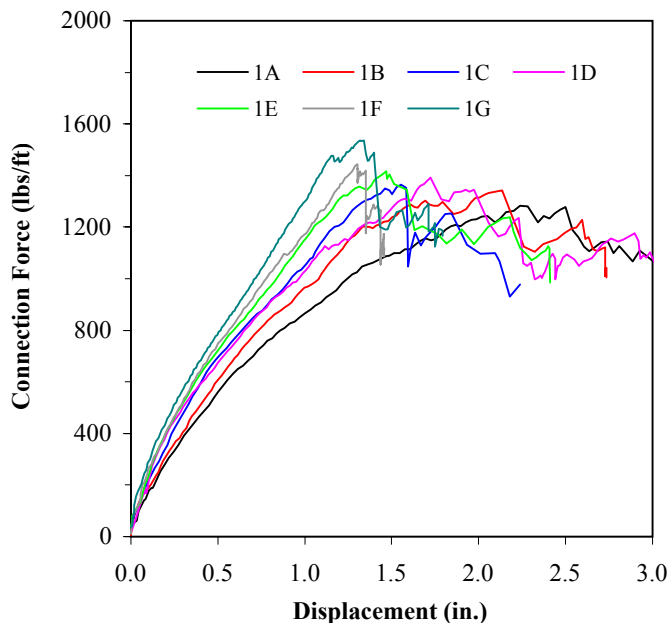
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ATTACHMENT A

CONNECTION TEST RESULTS

WESTBLOCK SYSTEMS CONNECTION STRENGTH TESTING (ASTM D 6638)

TEST SERIES NO. 1: SG200 geogrid (Lot #0010840100) in machine direction between two courses of Jumbo NurseryStone blocks with compacted AASHTO #57 stone within the spaces between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations (T_{conn})	
								$T_{0.75-in.}$	T_{peak}
1A	30.8	3.7	535	11	5.3	734	1285	$T_{0.75-in.} = 625 + (N) \tan (15^\circ)$ $T_{peak} = 1190 + (N) \tan (12^\circ)$	
1B	30.8	5.5	788	16	7.8	809	1343		
1C	30.8	5.5	788	16	7.8	875	1367		
1D	30.8	5.5	788	16	7.8	871	1392		
1E	30.8	7.4	1059	21	10.5	929	1418		
1F	30.8	9.1	1313	26	13.0	971	1445		
1G	30.8	10.9	1575	31	15.6	1038	1536		

NOTES:

Nominal Dimensions of Block: 16 in. wide by 12 in. long and 6 in. high.
 Weight of Full-Size Block: 59 lbs
 Unit Weight of Facing (Block and Gravel): 101 pcf.
 Failure Mode: Abrasion and rupture of geogrid ribs along the concrete shear key in each test.

DATE REPORTED: 4/9/2010

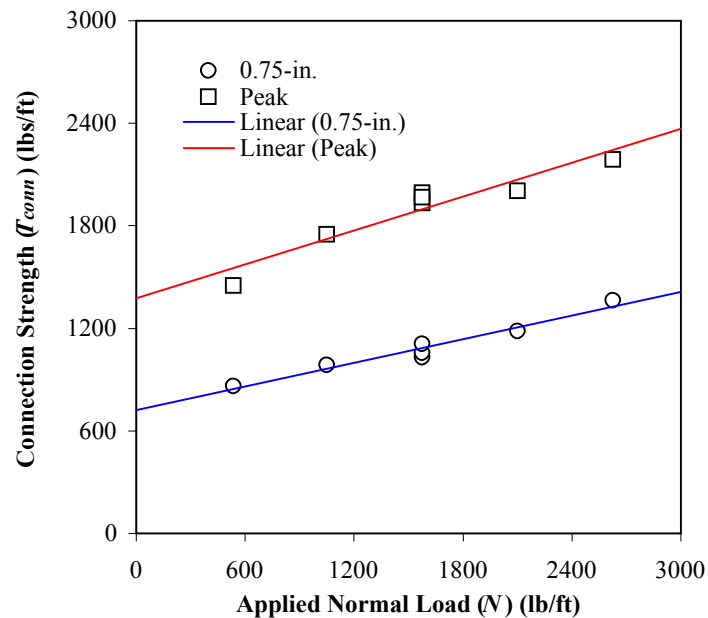
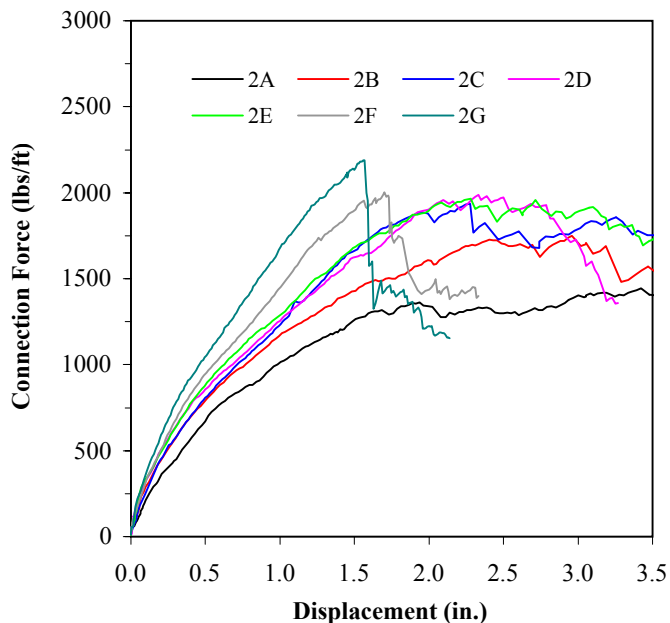


SGI TESTING SERVICES, LLC

FIGURE NO. C-1
 PROJECT NO. SGI9029
 DOCUMENT NO.
 FILE NO.

WESTBLOCK SYSTEMS CONNECTION STRENGTH TESTING (ASTM D 6638)

TEST SERIES NO. 2: SG350 geogrid (Lot #0010841300) in machine direction between two courses of Jumbo NurseryStone blocks with compacted AASHTO #57 stone within the spaces between blocks



Test No.	Geogrid Specimen Nominal Width (in.)	Test Normal Stress (psi)	Equivalent Normal Load (lb/ft)	Approx. No. of Blocks	Approx. Wall Height (ft)	0.75-in. Strength (lb/ft)	Peak Strength (lb/ft)	Connection Strength Equations
								(T_{conn})
2A	31.0	3.7	535	11	5.3	860	1448	$T_{0.75-in.} = 720 + (N) \tan (13 ^\circ)$ $T_{peak} = 1375 + (N) \tan (18 ^\circ)$
2B	31.0	7.3	1050	21	10.4	986	1750	
2C	31.0	10.9	1575	31	15.6	1029	1934	
2D	31.0	10.9	1575	31	15.6	1056	1994	
2E	31.0	10.9	1575	31	15.6	1108	1966	
2F	31.0	14.6	2100	42	20.8	1185	2004	
2G	31.0	18.2	2625	52	26.0	1363	2187	

NOTES:

Nominal Dimensions of Block: 16 in. wide by 12 in. long and 6 in. high.
 Weight of Full-Size Block: 59 lbs
 Unit Weight of Facing (Block and Gravel): 101 pcf.
 Failure Mode: Abrasion and rupture of geogrid ribs along the concrete shear key in each test.

DATE REPORTED: 4/9/2010



SGI TESTING SERVICES, LLC

FIGURE NO. C-2
 PROJECT NO. SGI9029
 DOCUMENT NO.
 FILE NO.