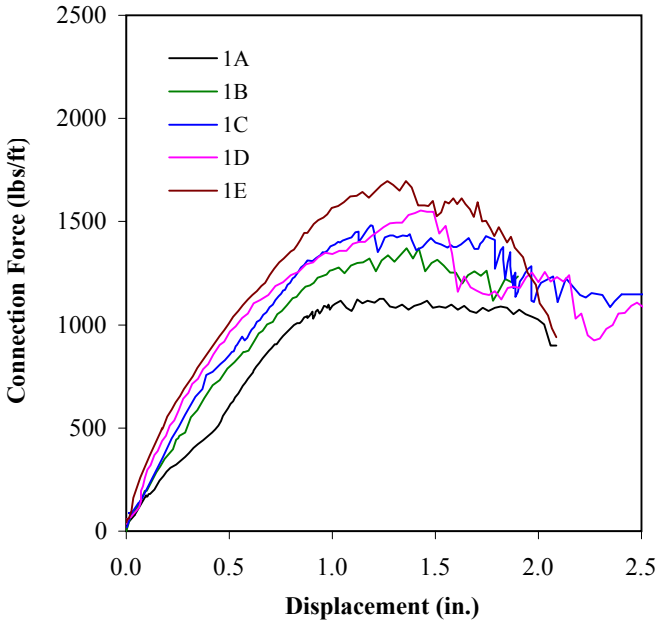
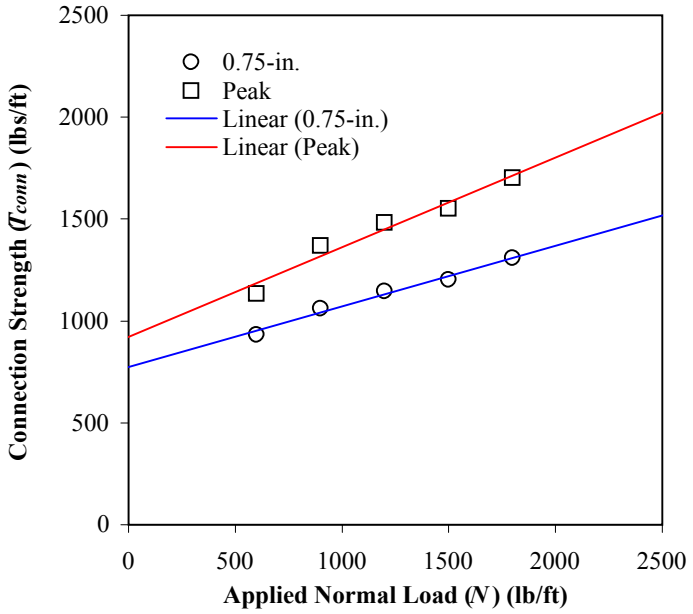
GEOSTAR TECHNOLOGIES, LLC
CONNECTION STRENGTH TESTING (ASTM D 6638)

TEST SERIES NO. 1: Optima HP200 geogrid in machine direction between two courses of GeoStone Standard blocks (8" Thick) with compacted AASHTO #57 stone within block apertures and space 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})
1A	32.0	4.2	600	8	5.0	932	1134	
1B	32.0	6.3	900	11	7.5	1062	1370	$T_{0.75\text{-in.}} = 775 \text{ (N) } \tan(17^\circ)$
1C	32.0	8.3	1200	15	10.0	1148	1483	
1D	32.0	10.4	1500	19	12.5	1202	1553	$T_{peak} = 920 \text{ (N) } \tan(24^\circ)$
1E	32.0	12.5	1800	23	15.0	1308	1703	

NOTES:

Dimensions of Block:	18 in. wide by 12 in. long and 8 in. high.
Weight of Full-Size Block:	70 lbs
Unit Weight of Facing (Block and Gravel):	120 pcf
Failure Mode:	Abrasion and rupture of geogrid ribs in each test.

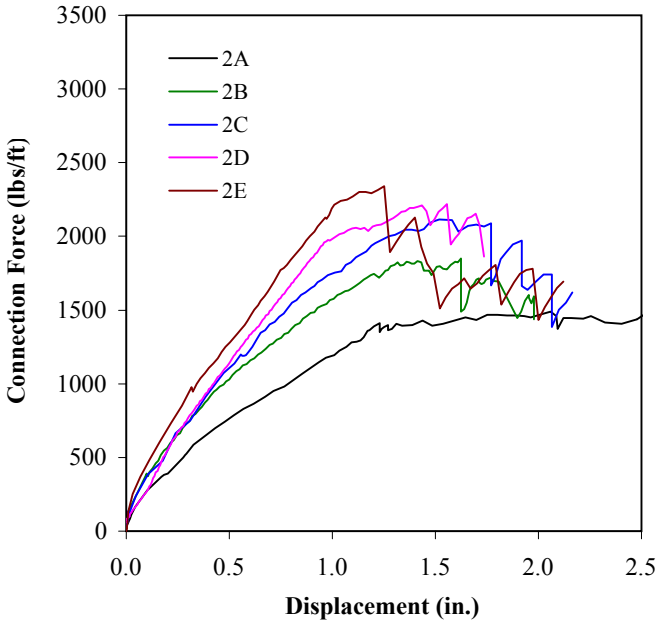
DATE REPORTED: 4/23/2009

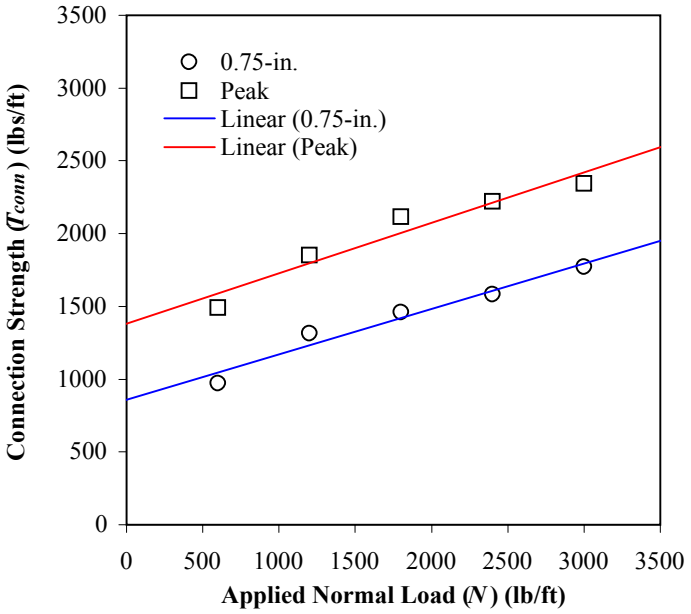
SGI TESTING SERVICES, LLC

FIGURE NO.	C-1
PROJECT NO.	SGI9011
DOCUMENT NO.	
FILE NO.	

GEOSTAR TECHNOLOGIES, LLC
CONNECTION STRENGTH TESTING (ASTM D 6638)

TEST SERIES NO. 2: Optima HP300 geogrid in machine direction between two courses of GeoStone Standard blocks (8" Thick) with compacted AASHTO #57 stone within block apertures and space 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	32.0	4.2	600	8	5.0	971	1491	
2B	32.0	8.3	1200	15	10.0	1313	1851	$T_{0.75\text{-in.}} = 860 \text{ (N) } \tan(17^\circ)$
2C	32.0	12.5	1800	23	15.0	1462	2114	
2D	32.0	16.7	2400	30	20.0	1585	2220	$T_{peak} = 1380 \text{ (N) } \tan(19^\circ)$
2E	32.0	20.8	3000	38	25.0	1772	2346	

NOTES:

Dimensions of Block:	18 in. wide by 12 in. long and 8 in. high.
Weight of Full-Size Block:	70 lbs
Unit Weight of Facing (Block and Gravel):	120 pcf
Failure Mode:	Abrasion and rupture of geogrid ribs in each test.

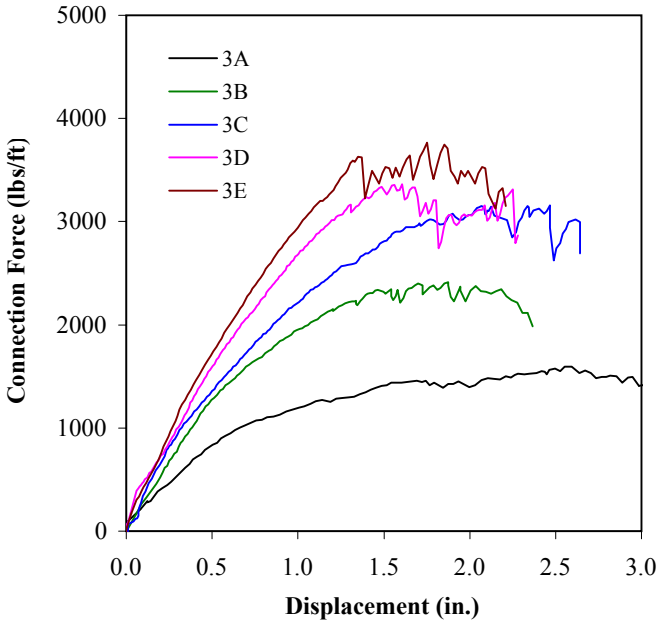
DATE REPORTED: 4/23/2009

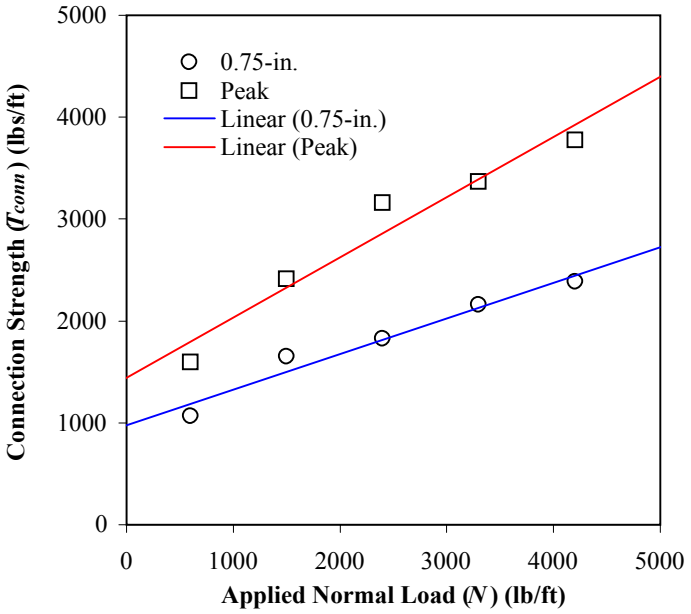
SGI TESTING SERVICES, LLC

FIGURE NO.	C-2
PROJECT NO.	SGI9011
DOCUMENT NO.	
FILE NO.	

GEOSTAR TECHNOLOGIES, LLC
CONNECTION STRENGTH TESTING (ASTM D 6638)

TEST SERIES NO. 3: Optima HP500 geogrid in machine direction between two courses of GeoStone Standard blocks (8" Thick) with compacted AASHTO #57 stone within block apertures and space 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})
3A	32.0	4.2	600	8	5.0	1066	1593	
3B	32.0	10.4	1500	19	12.5	1652	2412	$T_{0.75\text{-in.}} = 980 \text{ (N) } \tan(19^\circ)$
3C	32.0	16.7	2400	30	20.0	1827	3159	
3D	32.0	22.9	3300	41	27.5	2159	3365	$T_{peak} = 1445 \text{ (N) } \tan(31^\circ)$
3E	32.0	29.2	4200	53	35.0	2385	3776	

NOTES:

Dimensions of Block:	18 in. wide by 12 in. long and 8 in. high.
Weight of Full-Size Block:	70 lbs
Unit Weight of Facing (Block and Gravel):	120 pcf
Failure Mode:	Abrasion and rupture of geogrid ribs in each test.

DATE REPORTED: 4/23/2009

SGI TESTING SERVICES, LLC

FIGURE NO.	C-3
PROJECT NO.	SGI9011
DOCUMENT NO.	
FILE NO.	