Construction Testing Sciences
2978 Congressman Ln. Dallas, TX 75220
Phone: 214.703.8911
www.ctsciences.com

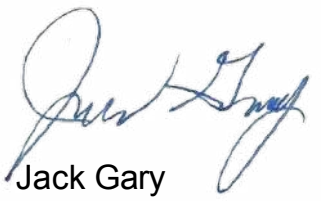
Report of Extruded Rail Load / Deflection Testing

Client: Precision Wall Systems, Inc., dba Gridworx **Report No.:** 14617-580
Project: **Ultra L 580-A Anchor** **Date of Service:** 06/04/21
Project No.: 20-00157-900-02

Construction Testing Sciences (CTS) was retained by Precision Wall Systems, Inc., dba Gridworx, to perform compression load / deflection testing on a continuous "L" anchor, identified as Continuous Ultra L Anchor, Part Number 580-A. This test program consisted of a steel frame with three vertical members at 16" o.c., simulating typical metal stud construction. The 580-A anchor, which measured 34" long, was secured to the frame with 1/4" Ø Grade 8 bolts. The dead load rail, Part Number 581, was interlocked into the "L" anchor with the pitch adjustment bolts set at 1/4" engagement. A rigid steel loading bar, simulating stone, was secured to the dead load rail with 1/4" Grade 8 bolts, through which to apply a compression load. Dial gauges were installed at each end of the the anchor to measure deflection under load. Initially, load was applied in 25 lbs. increments up to 300 lbf., followed by loading in 50 lbs. increments up to a minimum of 1,500 lbf. Deflection was recorded at each increment throughout the test. A total of five anchors were tested in this manner. Results of these tests are given on the following pages.

We trust the information provided is acceptable for your use. If you have any questions or require additional information please contact us.

Respectfully submitted,



Jack Gary
General Manager

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Gridworx Extruded Rail Compression Loading

Date of Service: 06/04/21

Sample ID: Ultra L 580-A Anchor

Report Number: 14617-580

Sample #: 1

Load (lbs)	Deflection (inches)			Load (lbs)	Deflection (inches)		
	Gauge 1	Gauge 2	Avg.		Gauge 1	Gauge 2	Avg.
25	0.006	0.009	**0.008**	950	0.273	0.253	**0.263**
50	0.014	0.020	**0.017**	1000	0.290	0.268	**0.279**
75	0.019	0.028	**0.024**	1050	0.301	0.276	**0.289**
100	0.025	0.038	**0.032**	1100	0.334	0.292	**0.313**
125	0.031	0.046	**0.039**	1150	0.350	0.301	**0.326**
150	0.040	0.054	**0.047**	1200	0.357	0.306	**0.332**
175	0.047	0.060	**0.054**	1250	0.364	0.310	**0.337**
200	0.054	0.067	**0.061**	1300	0.377	0.314	**0.346**
225	0.061	0.074	**0.068**	1350	0.394	0.333	**0.364**
250	0.067	0.081	**0.074**	1400	0.403	0.342	**0.373**
275	0.074	0.088	**0.081**	1450	0.411	0.351	**0.381**
300	0.080	0.094	**0.087**	1500	0.420	0.361	**0.391**
350	0.093	0.106	**0.100**	1550	0.431	0.375	**0.403**
400	0.110	0.119	**0.115**	1600	0.443	0.388	**0.416**
450	0.125	0.130	**0.128**	1650	0.467	0.417	**0.442**
500	0.138	0.139	**0.139**	1700	0.491	0.454	**0.473**
550	0.152	0.149	**0.151**	1750	0.505	0.470	**0.488**
600	0.170	0.161	**0.166**	1800	0.520	0.484	**0.502**
650	0.185	0.172	**0.179**	1850	0.532	0.498	**0.515**
700	0.204	0.183	**0.194**				
750	0.219	0.195	**0.207**				
800	0.235	0.209	**0.222**				
850	0.247	0.223	**0.235**				
900	0.259	0.239	**0.249**				

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Gridworx Extruded Rail Compression Loading

Date of Service: 06/04/21

Sample ID: Ultra L 580-A Anchor
Sample #: 2

Report Number: 14617-580

Load (lbs)	Deflection (inches)			Load (lbs)	Deflection (inches)		
	Gauge 1	Gauge 2	Avg.		Gauge 1	Gauge 2	Avg.
25	0.005	0.023	**0.014**	*950*	0.199	0.212	**0.206**
50	0.010	0.030	**0.020**	*1000*	0.212	0.223	**0.218**
75	0.015	0.036	**0.026**	*1050*	0.225	0.237	**0.231**
100	0.019	0.042	**0.031**	*1100*	0.240	0.254	**0.247**
125	0.023	0.046	**0.035**	*1150*	0.254	0.272	**0.263**
150	0.027	0.051	**0.039**	*1200*	0.271	0.293	**0.282**
175	0.030	0.055	**0.043**	*1250*	0.282	0.304	**0.293**
200	0.033	0.060	**0.047**	*1300*	0.291	0.311	**0.301**
225	0.037	0.064	**0.051**	*1350*	0.310	0.324	**0.317**
250	0.041	0.069	**0.055**	*1400*	0.315	0.327	**0.321**
275	0.046	0.076	**0.061**	*1450*	0.323	0.332	**0.328**
300	0.050	0.081	**0.066**	*1500*	0.335	0.341	**0.338**
350	0.058	0.091	**0.075**	*1550*	0.345	0.349	**0.347**
400	0.068	0.100	**0.084**	*1600*	0.357	0.361	**0.359**
450	0.085	0.116	**0.101**	*1650*	0.368	0.372	**0.370**
500	0.103	0.125	**0.114**	*1700*	0.377	0.382	**0.380**
550	0.114	0.134	**0.124**	*1750*	0.386	0.392	**0.389**
600	0.125	0.144	**0.135**	*1800*	0.398	0.406	**0.402**
650	0.135	0.153	**0.144**	*1850*	0.408	0.419	**0.414**
700	0.145	0.163	**0.154**	*1900*	0.420	0.433	**0.427**
750	0.155	0.171	**0.163**	*1950*	0.431	0.453	**0.442**
800	0.166	0.181	**0.174**	*2000*	0.509	0.579	**0.544**
850	0.176	0.190	**0.183**				
900	0.187	0.201	**0.194**				

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Gridworx Extruded Rail Compression Loading

Date of Service: 06/04/21

Sample ID: Ultra L 580-A Anchor
Sample #: 3

Report Number: 14617-580

Load (lbs)	Deflection (inches)			Load (lbs)	Deflection (inches)		
	Gauge 1	Gauge 2	Avg.		Gauge 1	Gauge 2	Avg.
25	0.001	0.003	**0.002**	*950*	0.181	0.203	**0.192**
50	0.008	0.012	**0.010**	*1000*	0.196	0.219	**0.208**
75	0.014	0.020	**0.017**	*1050*	0.211	0.233	**0.222**
100	0.021	0.026	**0.024**	*1100*	0.237	0.261	**0.249**
125	0.027	0.032	**0.030**	*1150*	0.243	0.265	**0.254**
150	0.031	0.037	**0.034**	*1200*	0.258	0.281	**0.270**
175	0.035	0.042	**0.039**	*1250*	0.278	0.301	**0.290**
200	0.039	0.046	**0.043**	*1300*	0.301	0.321	**0.311**
225	0.042	0.050	**0.046**	*1350*	0.311	0.326	**0.319**
250	0.046	0.055	**0.051**	*1400*	0.324	0.335	**0.330**
275	0.050	0.060	**0.055**	*1450*	0.339	0.349	**0.344**
300	0.055	0.064	**0.060**	*1500*	0.360	0.381	**0.371**
350	0.063	0.075	**0.069**				
400	0.073	0.087	**0.080**				
450	0.082	0.096	**0.089**				
500	0.091	0.106	**0.099**				
550	0.100	0.116	**0.108**				
600	0.108	0.125	**0.117**				
650	0.116	0.134	**0.125**				
700	0.125	0.143	**0.134**				
750	0.134	0.154	**0.144**				
800	0.144	0.165	**0.155**				
850	0.155	0.177	**0.166**				
900	0.167	0.190	**0.179**				

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Gridworx Extruded Rail Compression Loading

Date of Service: 06/04/21

Sample ID: Ultra L 580-A Anchor

Report Number: 14617-580

Sample #: 4

Load (lbs)	Deflection (inches)			Load (lbs)	Deflection (inches)		
	Gauge 1	Gauge 2	Avg.		Gauge 1	Gauge 2	Avg.
25	0.003	0.005	**0.004**	*950*	0.188	0.202	**0.195**
50	0.008	0.011	**0.010**	*1000*	0.202	0.215	**0.209**
75	0.011	0.016	**0.014**	*1050*	0.215	0.226	**0.221**
100	0.015	0.022	**0.019**	*1100*	0.237	0.242	**0.240**
125	0.019	0.026	**0.023**	*1150*	0.243	0.247	**0.245**
150	0.023	0.031	**0.027**	*1200*	0.251	0.252	**0.252**
175	0.027	0.037	**0.032**	*1250*	0.263	0.258	**0.261**
200	0.031	0.042	**0.037**	*1300*	0.276	0.265	**0.271**
225	0.034	0.045	**0.040**	*1350*	0.294	0.277	**0.286**
250	0.039	0.051	**0.045**	*1400*	0.300	0.281	**0.291**
275	0.043	0.057	**0.050**	*1450*	0.307	0.287	**0.297**
300	0.047	0.062	**0.055**	*1500*	0.316	0.293	**0.305**
350	0.057	0.071	**0.064**	*1550*	0.328	0.301	**0.315**
400	0.068	0.080	**0.074**	*1600*	0.400	0.342	**0.371**
450	0.077	0.090	**0.084**	*1650*	0.421	0.362	**0.392**
500	0.087	0.100	**0.094**	*1700*	0.437	0.376	**0.407**
550	0.095	0.109	**0.102**	*1750*	0.451	0.392	**0.422**
600	0.105	0.120	**0.113**				
650	0.115	0.130	**0.123**				
700	0.125	0.140	**0.133**				
750	0.137	0.150	**0.144**				
800	0.149	0.162	**0.156**				
850	0.161	0.174	**0.168**				
900	0.174	0.188	**0.181**				

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Gridworx Extruded Rail Compression Loading

Date of Service: 06/04/21

Sample ID: Ultra L 580-A Anchor

Report Number: 14617-580

Sample #: 5

Load (lbs)	Deflection (inches)			Load (lbs)	Deflection (inches)		
	Gauge 1	Gauge 2	Avg.		Gauge 1	Gauge 2	Avg.
25	0.005	0.006	**0.006**	*950*	0.161	0.187	**0.174**
50	0.010	0.013	**0.012**	*1000*	0.172	0.199	**0.186**
75	0.014	0.020	**0.017**	*1050*	0.184	0.210	**0.197**
100	0.019	0.025	**0.022**	*1100*	0.205	0.232	**0.219**
125	0.022	0.031	**0.027**	*1150*	0.210	0.236	**0.223**
150	0.026	0.036	**0.031**	*1200*	0.222	0.248	**0.235**
175	0.030	0.041	**0.036**	*1250*	0.235	0.262	**0.249**
200	0.034	0.045	**0.040**	*1300*	0.247	0.273	**0.260**
225	0.037	0.049	**0.043**	*1350*	0.263	0.284	**0.274**
250	0.041	0.053	**0.047**	*1400*	0.272	0.289	**0.281**
275	0.043	0.056	**0.050**	*1450*	0.281	0.294	**0.288**
300	0.046	0.060	**0.053**	*1500*	0.295	0.302	**0.299**
350	0.051	0.066	**0.059**	*1550*	0.305	0.308	**0.307**
400	0.060	0.077	**0.069**	*1600*	0.315	0.313	**0.314**
450	0.068	0.087	**0.078**	*1650*	0.330	0.322	**0.326**
500	0.076	0.097	**0.087**	*1700*	0.345	0.333	**0.339**
550	0.084	0.107	**0.096**	*1750*	0.357	0.343	**0.350**
600	0.093	0.118	**0.106**	*1800*	0.369	0.354	**0.362**
650	0.101	0.127	**0.114**	*1850*	0.430	0.456	**0.443**
700	0.109	0.138	**0.124**				
750	0.119	0.148	**0.134**				
800	0.130	0.157	**0.144**				
850	0.139	0.166	**0.153**				
900	0.149	0.177	**0.163**				