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TECHNICAL SUBMITTAL: Micropile Load Test Results

**H. E. Myers WTP Solids Handling Improvements
1475 Hubert Pierce Road
Mobile
AL 36608**

FROM: Mark Tominey, Engineer for Engineered Solutions of Georgia

DATE: 19 January 2023

Details and results of the load test program for helical piles at the above referenced project are included under this cover.

Please contact the undersigned with any questions.

Regards,

Mark Tominey, PE

TEST PROGRAM DETAILS:

Engineered Solutions of Georgia conducted a test pile program at The H. E. Myers Water Treatment Plant in Mobile AL to demonstrate the ability of the helical piles designed for the above-mentioned project to withstand the loading conditions noted on the design drawings.

One test pile was installed at the project site at a location chosen by the general contractor

The helical pile to be tested in compression was drilled on 1/18/2023 to a depth of 29 feet.

Pile testing was performed on 1/18/2023. ESOG personnel on site to perform and monitor the tests were as follows: Eddie Suddeth & Taylor Grice.

The test was carried out in general accordance with the relevant ASTM: ASTM D1143D: Standard Test Methods for Deep Foundations Under Static Axial Compressive Load, and the project specifications.

LOAD TEST RESULTS AND ANALYSIS:

All data was transcribed during testing and is presented in tabular & graphical form in Appendix A. In accordance with ASTM D1143, the test pile was loaded as indicated on the test sheet. The average axial movement recorded after unloading the pile was 0.357". The initial gauge reading at alignment load was 0.105". This indicates a net movement of 0.252". The project specifications require the unloaded pile to have a net movement of less than 0.3"

CONCLUSIONS:

The pile installations, test setup and performance are considered to be acceptable and conform to the requirements of the project. It is considered that helical piles installed in the production areas with similar means and methods as those used for the installation of the test piles will exhibit similar behavior under similar loading conditions.

I hope that this has addressed the concerns you may have with the pile performance. Please call our office if you have further questions.

Sincerely,



Mark Tominey, PE



APPENDIX A

Proposed Load Test Schedule - Compression
 Meyers Solids Handling Improvements Helical Micropiles
 DL = 25 kips

Date: 1/18/2023
 Job No. _____

%Design Load	Load (kips)	Jack Pressure (psi)	Gauge Readings			Hold Time (Minutes)
			Axial			
			1 (in)	2 (in)	Average (in)	
0.05	1.3	184	0.104	0.106	0.105	5
0.10	2.5	184	0.104	0.103	0.104	5
0.10	2.5	184	0.104	0.106	0.105	
0.20	5.0	369	0.155	0.167	0.161	5
0.20	5.0	369	0.159	0.171	0.165	
0.30	7.5	553	0.187	0.194	0.191	5
0.30	7.5	553	0.190	0.196	0.193	
0.40	10.0	737	0.217	0.217	0.217	5
0.40	10.0	737	0.221	0.219	0.220	
0.50	12.5	992	0.245	0.236	0.241	5
0.50	12.5	992	0.250	0.239	0.245	
0.60	15.0	1106	0.273	0.256	0.265	5
0.60	15.0	1106	0.276	0.259	0.268	
0.70	17.5	1291	0.298	0.277	0.288	5
0.70	17.5	1291	0.301	0.279	0.290	
0.80	20.0	1475	0.334	0.311	0.323	5
0.80	20.0	1475	0.338	0.313	0.326	
0.90	22.5	1659	0.361	0.341	0.351	5
0.90	22.5	1659	0.366	0.343	0.355	
1.00	25.0	1844	0.386	0.370	0.378	5
1.00	25.0	1844	0.391	0.373	0.382	
1.10	27.5	2028	0.415	0.403	0.409	5
1.10	27.5	2028	0.419	0.406	0.413	
1.20	30.0	2212	0.439	0.432	0.436	5
1.20	30.0	2212	0.445	0.435	0.440	
1.30	32.5	2397	0.472	0.468	0.470	5
1.30	32.5	2397	0.478	0.473	0.476	
1.40	35.0	2581	0.508	0.510	0.509	5
1.40	35.0	2581	0.513	0.514	0.514	
1.50	37.5	2765	0.531	0.534	0.533	5
1.50	37.5	2765	0.537	0.538	0.538	
1.60	40.0	2950	0.570	0.577	0.574	5
1.60	40.0	2950	0.576	0.582	0.579	
1.70	42.5	3134	0.601	0.610	0.606	5
1.70	42.5	3134	0.607	0.614	0.611	
1.80	45.0	3319	0.635	0.643	0.639	5
1.80	45.0	3319	0.641	0.647	0.644	
1.90	47.5	3503	0.677	0.686	0.682	5
1.90	47.5	3503	0.682	0.690	0.686	
2.00	50.0	3687	0.710	0.719	0.715	5
2.00	50.0	3687	0.715	0.723	0.719	
1.60	40.0	2950	0.715	0.723	0.719	5
1.60	40.0	2950	0.714	0.723	0.719	
1.20	30.0	2212	0.554	0.571	0.563	5
1.20	30.0	2212	0.553	0.571	0.562	
0.80	20.0	1475	0.546	0.564	0.555	5
0.80	20.0	1475	0.545	0.564	0.555	5
0.40	10.0	737	0.516	0.538	0.527	5
0.40	10.0	737	0.477	0.497	0.487	5
0.00	0.0	0	0.337	0.383	0.360	5
0.00	0.0	0	0.333	0.381	0.357	6
0.00	0.0	0			0.000	6

1. Alignment Load = 0.05 x DL

Meyers Solids Handling Improvements - Helical Pile Compression Test
January 18, 2023
Project No.

