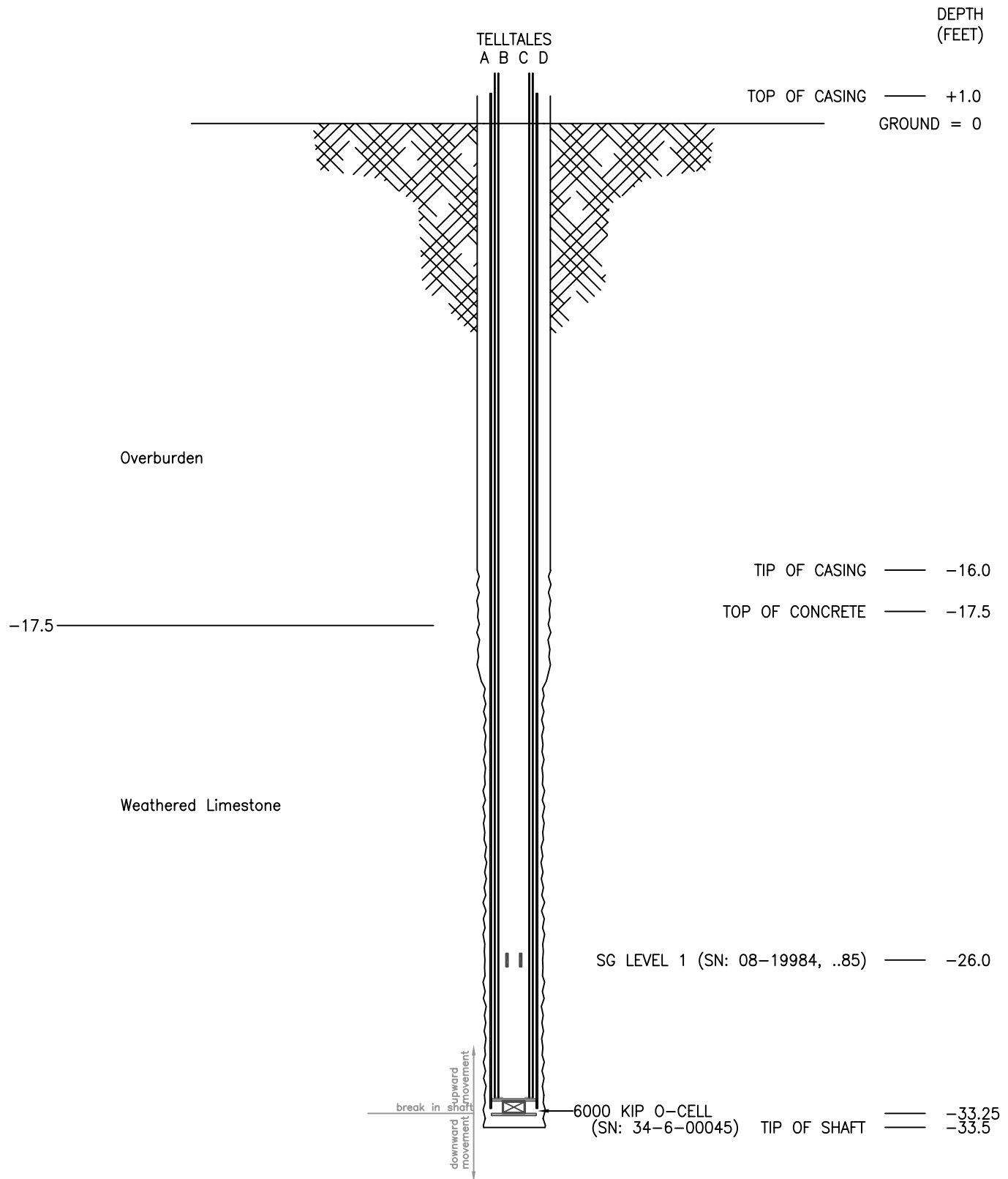




**TABLE A:
SUMMARY OF DIMENSIONS, ELEVATIONS & SHAFT PROPERTIES**

Shaft:		
Nominal shaft diameter (EL -17.5 ft to -33.5 ft)	=	48 in 1219 mm
O-cell: 34-6-00045	=	34 in 860 mm
Length of side shear above break at base of O-cell	=	15.8 ft 4.80 m
Length of side shear below break at base of O-cell	=	0.3 ft 0.08 m
Shaft side shear area above O-cell base	=	197.9 ft ² 18.4 m ²
Shaft side shear area below O-cell base	=	3.1 ft ² 0.3 m ²
Shaft base area (assumed to be 36" + 2:1 load distribution over 3" below the O-cell)	=	8.3 ft ² 0.8 m ²
Bouyant weight of pile above base of O-cell	=	31 kips 0.14 MN
Estimated shaft stiffness, AE (EL -17.5 ft to -33.5 ft)	=	8,020,000 kips 35,700 MN
Elevation of ground surface (assumed)	=	+0.0 ft +0.00 m
Elevation of top of shaft concrete	=	-17.5 ft -5.33 m
Elevation of base of O-cell (The break between upward and downward movement.)	=	-33.2 ft -10.13 m
Elevation of shaft tip	=	-33.5 ft -10.21 m
Elevation of water table	=	NOT ENCOUNTERED
Casings:		
Elevation of top of inner temporary casing (54.0 in O.D.)	=	+1.0 ft +0.30 m
Elevation of bottom of inner temporary casing (54.0 in O.D.)	=	-16.0 ft -4.88 m
Compression Sections:		
Elevation of top of compression section used for upper shaft compression	=	-17.5 ft -5.33 m
Elevation of bottom of compression section used for upper shaft compression	=	-32.1 ft -9.78 m
Strain Gages:		
Elevation of strain gage Level 1	=	-26.0 ft -7.94 m
Miscellaneous:		
Top plate diameter (2-inch thickness)	=	33.0 in 838 mm
Bottom plate diameter (2-inch thickness)	=	36.0 in 914 mm
ReBar size (6 No.)	=	# 10 M 32
Spiral size (13 inch spacing)	=	# 5 M 16
ReBar cage diameter	=	36 in 914 mm
Unconfined compressive concrete strength	=	5771 psi 39.8 MPa
Bottom Plate Telltales with radius	=	16.5 in 419 mm

NOTE: NOMINAL SHAFT 48"Ø
CASING 54"Ø



NOTE: SOIL BASED ON BORING # B-1

SCHEMATIC SECTION OF TEST SHAFT

ADSC RESEARCH - NASHVILLE, TN



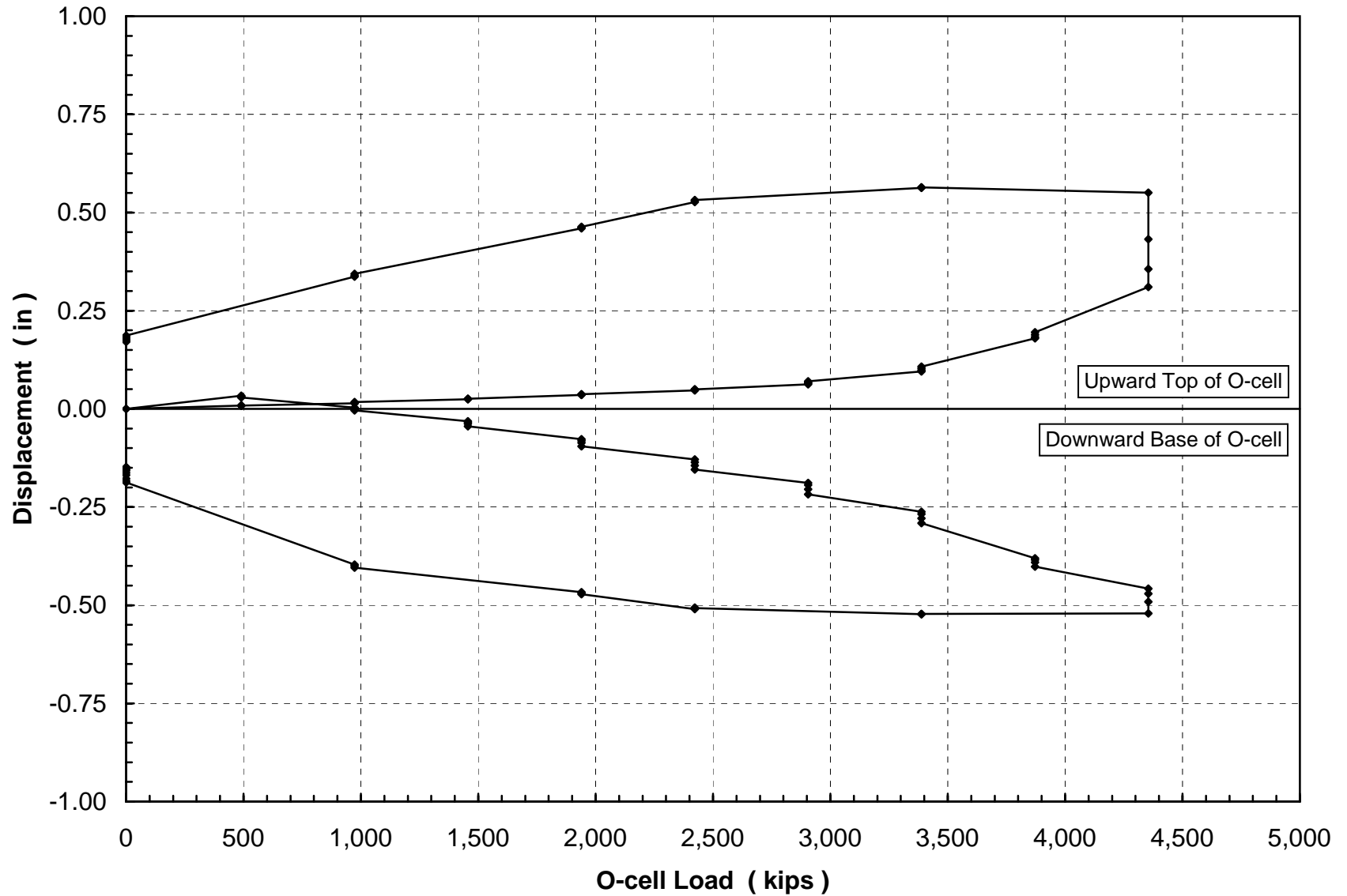
2631-D NW 41st St.
Gainesville, FL 32606
Phone 800-368-1138
FAX 352-378-3934

DRAWN BY: THE	DATE: 09/02/08	CHECKED BY:	LT-9507
REVISED BY: THE	DATE: 09/30/08	SCALE: NTS	FIGURE A



Osterberg Cell Load-Displacement

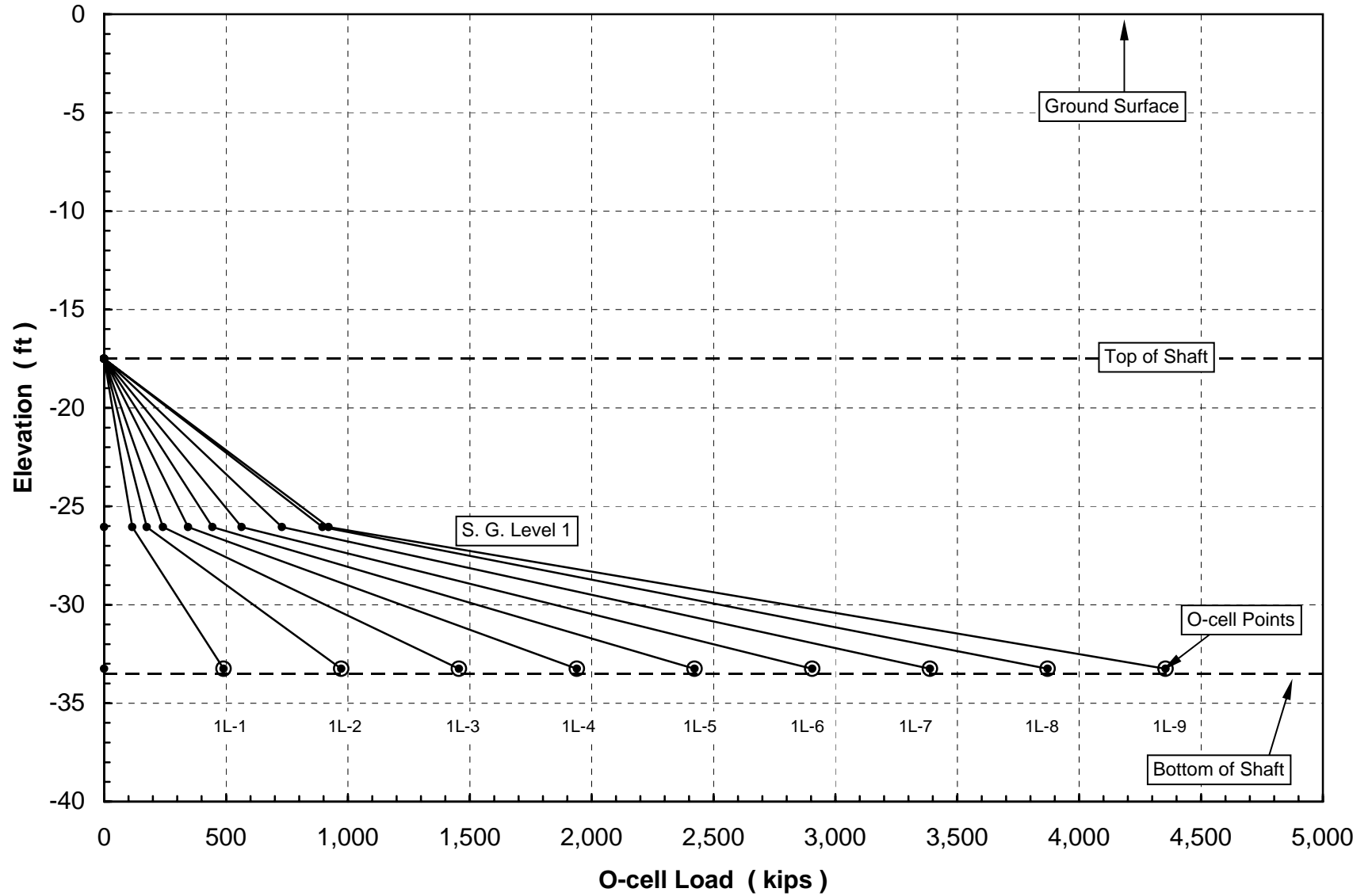
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Strain Gage Load Distribution

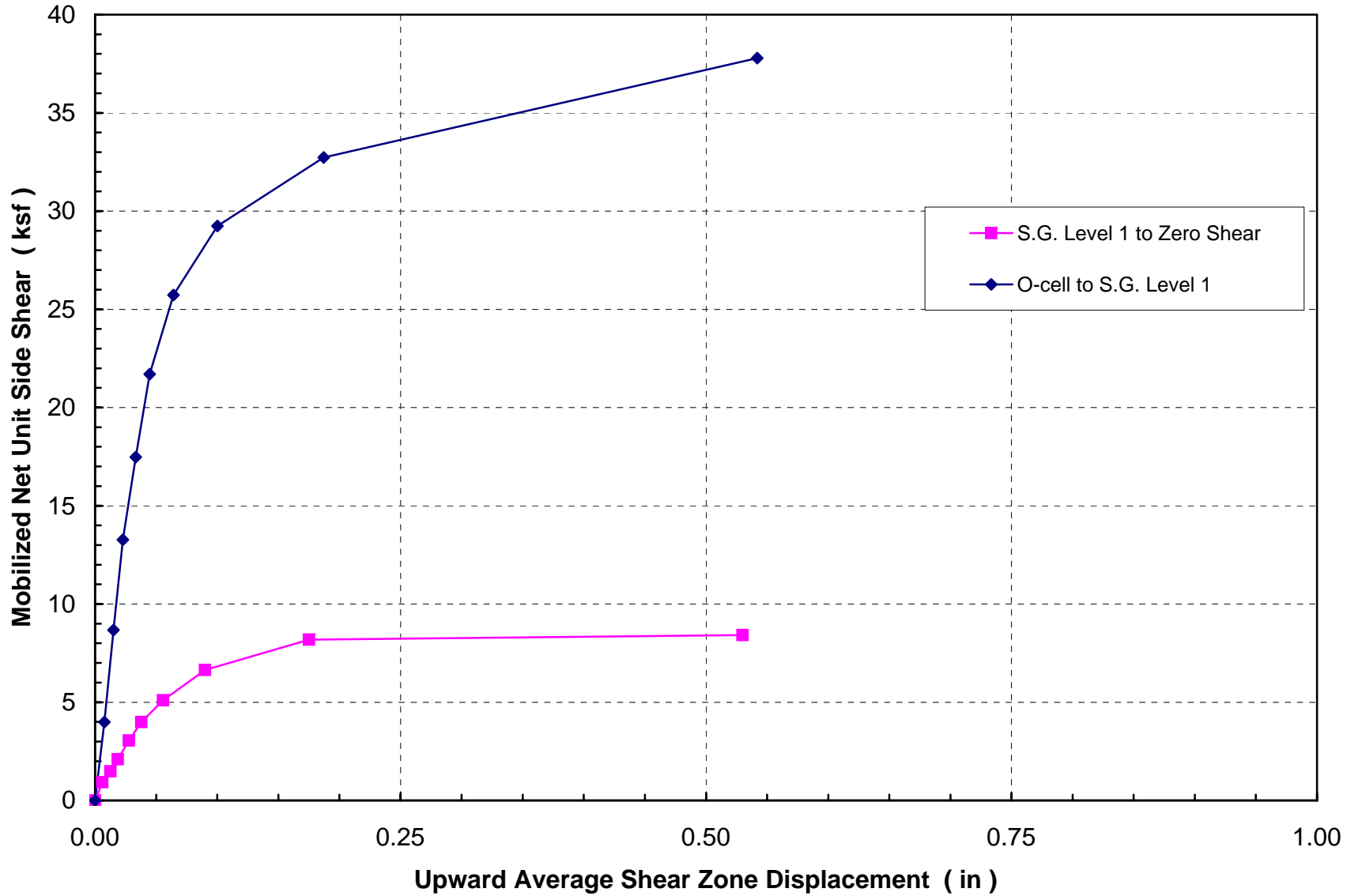
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Mobilized Net Unit Side Shear

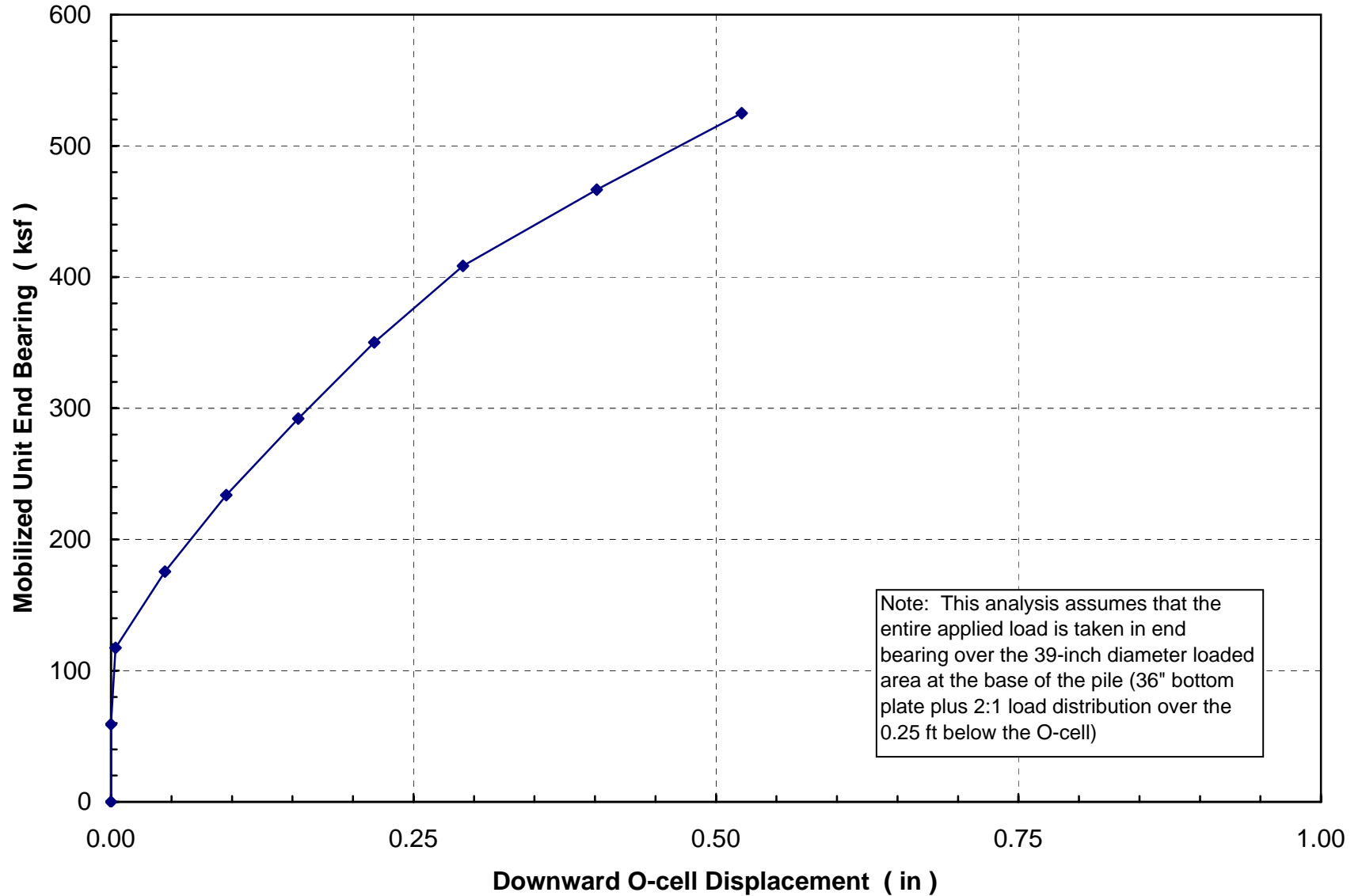
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Mobilized Unit End Bearing

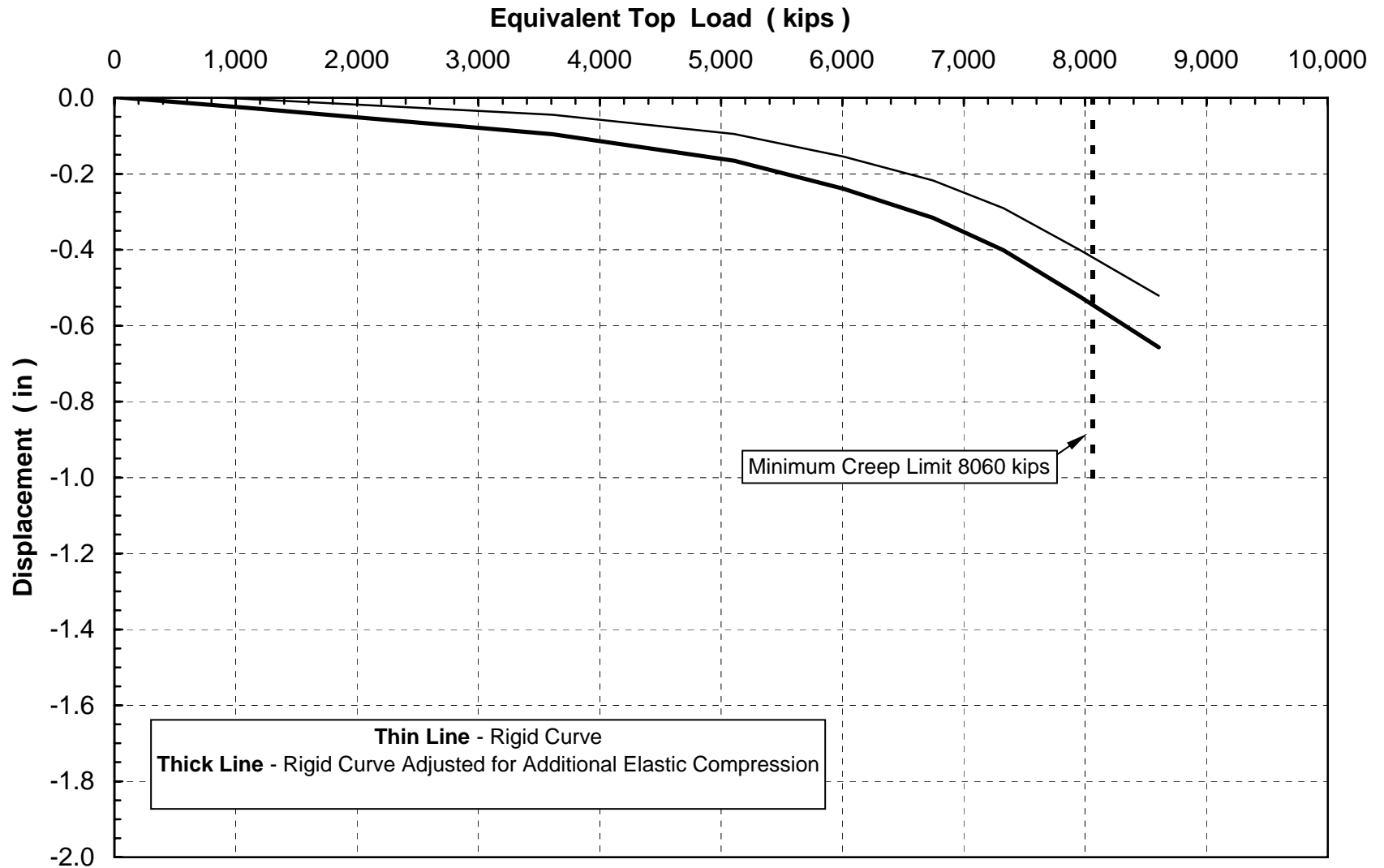
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Equivalent Top Load-Displacement

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**Upward Top of Shaft Movement Telltales
TS-1 - ADSC Research Project - Nashville, TN**

Load Test Increment	Hold Time (minutes)	Time (h:m:s)	O-cell		Top of Shaft			Top Plate Telltales			Bottom Plate Telltales			
			Pressure (psi)	Load (kips)	A (in)	B (in)	Avg (in)	A (in)	B (in)	Average (in)	A - (04) - 9336 (in)	B - (06) - 14175 (in)	Average (in)	
1 L - 0	-	10:19:00	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1 L - 1	1	11:05:30	800	490	0.005	0.006	0.005	0.003	0.002	0.003	0.060	-0.116	-0.028	
1 L - 1	2	11:06:30	800	490	0.005	0.006	0.005	0.003	0.002	0.003	0.061	-0.115	-0.027	
1 L - 1	4	11:08:30	800	490	0.005	0.006	0.005	0.003	0.003	0.003	0.063	-0.114	-0.025	
1 L - 1	8	11:12:30	800	490	0.005	0.006	0.005	0.003	0.003	0.003	0.065	-0.112	-0.023	
1 L - 2	1	11:14:30	1,600	973	0.009	0.010	0.010	0.005	0.004	0.005	0.101	-0.089	0.006	
1 L - 2	2	11:15:30	1,600	973	0.010	0.010	0.010	0.005	0.005	0.005	0.104	-0.087	0.008	
1 L - 2	4	11:17:30	1,600	973	0.010	0.010	0.010	0.005	0.005	0.005	0.108	-0.084	0.012	
1 L - 2	8	11:21:30	1,600	973	0.012	0.012	0.012	0.006	0.005	0.005	0.112	-0.081	0.016	
1 L - 3	1	11:23:30	2,400	1,456	0.016	0.018	0.017	0.008	0.006	0.007	0.151	-0.054	0.049	
1 L - 3	2	11:24:30	2,400	1,456	0.017	0.017	0.017	0.009	0.007	0.008	0.155	-0.051	0.052	
1 L - 3	4	11:26:30	2,400	1,456	0.017	0.018	0.017	0.009	0.007	0.008	0.159	-0.048	0.056	
1 L - 3	8	11:30:30	2,400	1,456	0.017	0.018	0.018	0.009	0.007	0.008	0.166	-0.042	0.062	
1 L - 4	1	11:33:30	3,200	1,939	0.024	0.025	0.025	0.012	0.010	0.011	0.213	-0.009	0.102	
1 L - 4	2	11:34:30	3,200	1,939	0.025	0.026	0.025	0.012	0.010	0.011	0.218	-0.006	0.106	
1 L - 4	4	11:36:30	3,200	1,939	0.025	0.026	0.026	0.012	0.010	0.011	0.225	0.000	0.112	
1 L - 4	8	11:40:30	3,200	1,939	0.026	0.026	0.026	0.012	0.011	0.011	0.235	0.008	0.121	
1 L - 5	1	11:43:00	4,000	2,422	0.033	0.034	0.034	0.013	0.013	0.013	0.283	0.041	0.162	
1 L - 5	2	11:44:00	4,000	2,422	0.034	0.035	0.035	0.013	0.013	0.013	0.294	0.047	0.170	
1 L - 5	4	11:46:00	4,000	2,422	0.035	0.036	0.036	0.014	0.013	0.014	0.306	0.054	0.180	
1 L - 5	8	11:50:00	4,000	2,422	0.036	0.036	0.036	0.014	0.014	0.014	0.319	0.063	0.191	
1 L - 6	1	11:52:30	4,800	2,905	0.046	0.047	0.047	0.016	0.016	0.016	0.372	0.099	0.235	
1 L - 6	2	11:53:30	4,800	2,905	0.049	0.049	0.049	0.016	0.017	0.016	0.381	0.105	0.243	
1 L - 6	4	11:55:30	4,800	2,905	0.050	0.051	0.050	0.016	0.017	0.017	0.396	0.114	0.255	
1 L - 6	8	11:59:30	4,800	2,905	0.053	0.054	0.053	0.017	0.017	0.017	0.414	0.128	0.271	
1 L - 7	1	12:02:30	5,600	3,388	0.075	0.076	0.076	0.019	0.020	0.020	0.493	0.183	0.338	
1 L - 7	2	12:03:30	5,600	3,388	0.079	0.079	0.079	0.019	0.021	0.020	0.504	0.190	0.347	
1 L - 7	4	12:05:30	5,600	3,388	0.082	0.083	0.083	0.020	0.021	0.020	0.520	0.202	0.361	
1 L - 7	8	12:09:30	5,600	3,388	0.087	0.087	0.087	0.020	0.021	0.020	0.540	0.216	0.378	
1 L - 8	1	12:24:00	6,400	3,871	0.156	0.156	0.156	0.022	0.025	0.024	0.721	0.352	0.537	
1 L - 8	2	12:25:00	6,400	3,871	0.159	0.160	0.159	0.022	0.025	0.024	0.729	0.358	0.543	
1 L - 8	4	12:27:00	6,400	3,871	0.165	0.165	0.165	0.023	0.025	0.024	0.743	0.368	0.556	
1 L - 8	8	12:31:00	6,400	3,871	0.171	0.172	0.172	0.023	0.025	0.024	0.763	0.383	0.573	
1 L - 9	1	12:34:00	7,200	4,354	0.285	0.285	0.285	0.022	0.028	0.025	0.945	0.541	0.743	
1 L - 9	2	12:35:00	7,200	4,354	0.332	0.332	0.332	0.021	0.028	0.025	1.006	0.600	0.803	
1 L - 9	4	12:37:00	7,200	4,354	0.408	0.408	0.408	0.020	0.028	0.024	1.104	0.695	0.900	
1 L - 9	8	12:41:00	7,200	4,354	0.526	0.527	0.527	0.019	0.029	0.024	1.255	0.841	1.048	
1 U - 1	1	12:49:30	5,600	3,388	0.543	0.543	0.543	0.016	0.026	0.021	1.274	0.857	1.065	
1 U - 1	2	12:50:30	5,600	3,388	0.542	0.543	0.543	0.016	0.026	0.021	1.274	0.856	1.065	
1 U - 1	4	12:52:30	5,600	3,388	0.541	0.542	0.541	0.016	0.026	0.021	1.273	0.856	1.064	
1 U - 2	1	12:54:30	4,000	2,422	0.514	0.515	0.515	0.013	0.021	0.017	1.230	0.815	1.022	
1 U - 2	2	12:55:30	4,000	2,422	0.514	0.514	0.514	0.013	0.021	0.017	1.227	0.813	1.020	
1 U - 2	4	12:57:30	4,000	2,422	0.509	0.510	0.510	0.013	0.021	0.017	1.227	0.812	1.020	
1 U - 3	1	12:59:30	3,200	1,939	0.452	0.452	0.452	0.010	0.015	0.012	1.126	0.720	0.923	
1 U - 3	2	13:00:30	3,200	1,939	0.450	0.450	0.450	0.010	0.015	0.012	1.120	0.717	0.918	
1 U - 3	4	13:02:30	3,200	1,939	0.448	0.448	0.448	0.010	0.014	0.012	1.117	0.713	0.915	
1 U - 4	1	13:05:00	1,600	973	0.335	0.336	0.336	0.007	0.009	0.008	0.931	0.549	0.740	
1 U - 4	2	13:06:00	1,600	973	0.331	0.332	0.332	0.007	0.009	0.008	0.919	0.543	0.731	
1 U - 4	4	13:08:00	1,600	973	0.329	0.329	0.329	0.007	0.009	0.008	0.914	0.537	0.725	
1 U - 5	1	13:11:00	0	0	0.182	0.182	0.182	0.004	0.005	0.005	0.508	0.231	0.369	
1 U - 5	2	13:12:00	0	0	0.179	0.179	0.179	0.004	0.005	0.005	0.501	0.224	0.363	
1 U - 5	4	13:14:00	0	0	0.176	0.176	0.176	0.004	0.005	0.005	0.491	0.216	0.354	
1 U - 5	8	13:18:00	0	0	0.173	0.173	0.173	0.004	0.005	0.005	0.476	0.208	0.342	
1 U - 5	16	13:26:00	0	0	0.170	0.170	0.170	0.004	0.005	0.005	0.466	0.199	0.333	
1 U - 5	30	13:40:00	0	0	0.168	0.168	0.168	0.005	0.006	0.005	0.457	0.193	0.325	
1 U - 5	45	13:55:00	0	0	0.167	0.167	0.167	0.005	0.006	0.005	0.453	0.189	0.321	
1 U - 5	60	14:10:00	0	0	0.167	0.166	0.167	0.004	0.006	0.005	0.449	0.186	0.317	
1 U - 5	75	14:25:00	0	0	0.166	0.166	0.166	0.004	0.005	0.005	0.445	0.184	0.315	

* Positive values indicate upward reference beam movement.

** Average top of shaft includes reference beam correction.



Upward and Downward O-cell Plate Movement and Creep (calculated)
TS-1 - ADSC Research Project - Nashville, TN

Load Test Increment	Hold Time (minutes)	Time (h:m:s)	O-cell		Top of Shaft (in)	Total Comp. * (in)	Top Plate Movement (in)	Bot. Plate Movement** (in)	Creep Up Per Hold (in)	Creep Dn Per Hold (in)
			Pressure (psi)	Load (kips)						
1 L - 0	-	10:19:00	0	0	0.000	0.000	0.000	0.000		
1 L - 1	1	11:05:30	800	490	0.005	0.003	0.008	0.033		
1 L - 1	2	11:06:30	800	490	0.005	0.003	0.008	0.032	0.000	0.001
1 L - 1	4	11:08:30	800	490	0.005	0.003	0.008	0.031	0.000	0.002
1 L - 1	8	11:12:30	800	490	0.005	0.003	0.009	0.029	0.000	0.002
1 L - 2	1	11:14:30	1,600	973	0.010	0.005	0.014	0.003		
1 L - 2	2	11:15:30	1,600	973	0.010	0.005	0.015	0.002	0.001	0.002
1 L - 2	4	11:17:30	1,600	973	0.010	0.005	0.015	-0.003	0.000	0.004
1 L - 2	8	11:21:30	1,600	973	0.012	0.005	0.017	-0.004	0.002	0.001
1 L - 3	1	11:23:30	2,400	1,456	0.017	0.007	0.024	-0.032		
1 L - 3	2	11:24:30	2,400	1,456	0.017	0.008	0.025	-0.035	0.001	0.003
1 L - 3	4	11:26:30	2,400	1,456	0.017	0.008	0.025	-0.038	0.000	0.003
1 L - 3	8	11:30:30	2,400	1,456	0.018	0.008	0.026	-0.045	0.001	0.006
1 L - 4	1	11:33:30	3,200	1,939	0.025	0.011	0.036	-0.077		
1 L - 4	2	11:34:30	3,200	1,939	0.025	0.011	0.036	-0.081	0.000	0.004
1 L - 4	4	11:36:30	3,200	1,939	0.026	0.011	0.037	-0.087	0.001	0.005
1 L - 4	8	11:40:30	3,200	1,939	0.026	0.011	0.037	-0.095	0.001	0.009
1 L - 5	1	11:43:00	4,000	2,422	0.034	0.013	0.047	-0.129		
1 L - 5	2	11:44:00	4,000	2,422	0.035	0.013	0.048	-0.136	0.001	0.007
1 L - 5	4	11:46:00	4,000	2,422	0.036	0.014	0.049	-0.144	0.001	0.008
1 L - 5	8	11:50:00	4,000	2,422	0.036	0.014	0.050	-0.155	0.000	0.011
1 L - 6	1	11:52:30	4,800	2,905	0.047	0.016	0.063	-0.188		
1 L - 6	2	11:53:30	4,800	2,905	0.049	0.016	0.065	-0.194	0.003	0.005
1 L - 6	4	11:55:30	4,800	2,905	0.050	0.017	0.067	-0.205	0.002	0.011
1 L - 6	8	11:59:30	4,800	2,905	0.053	0.017	0.070	-0.218	0.003	0.013
1 L - 7	1	12:02:30	5,600	3,388	0.076	0.020	0.095	-0.262		
1 L - 7	2	12:03:30	5,600	3,388	0.079	0.020	0.099	-0.268	0.003	0.006
1 L - 7	4	12:05:30	5,600	3,388	0.083	0.020	0.103	-0.279	0.004	0.011
1 L - 7	8	12:09:30	5,600	3,388	0.087	0.020	0.107	-0.291	0.004	0.012
1 L - 8	1	12:24:00	6,400	3,871	0.156	0.024	0.180	-0.381		
1 L - 8	2	12:25:00	6,400	3,871	0.159	0.024	0.183	-0.384		
1 L - 8	4	12:27:00	6,400	3,871	0.165	0.024	0.188	-0.391	0.006	0.007
1 L - 8	8	12:31:00	6,400	3,871	0.172	0.024	0.195	-0.401	0.007	0.011
1 L - 9	1	12:34:00	7,200	4,354	0.285	0.025	0.310	-0.458		
1 L - 9	2	12:35:00	7,200	4,354	0.332	0.025	0.356	-0.471	0.046	0.013
1 L - 9	4	12:37:00	7,200	4,354	0.408	0.024	0.432	-0.492	0.076	0.021
1 L - 9	8	12:41:00	7,200	4,354	0.527	0.024	0.550	-0.521	0.118	0.030
1 U - 1	1	12:49:30	5,600	3,388	0.543	0.021	0.564	-0.522		
1 U - 1	2	12:50:30	5,600	3,388	0.543	0.021	0.564	-0.523		
1 U - 1	4	12:52:30	5,600	3,388	0.541	0.021	0.563	-0.523		
1 U - 2	1	12:54:30	4,000	2,422	0.515	0.017	0.532	-0.507		
1 U - 2	2	12:55:30	4,000	2,422	0.514	0.017	0.531	-0.506		
1 U - 2	4	12:57:30	4,000	2,422	0.510	0.017	0.526	-0.510		
1 U - 3	1	12:59:30	3,200	1,939	0.452	0.012	0.464	-0.472		
1 U - 3	2	13:00:30	3,200	1,939	0.450	0.012	0.462	-0.469		
1 U - 3	4	13:02:30	3,200	1,939	0.448	0.012	0.460	-0.467		
1 U - 4	1	13:05:00	1,600	973	0.336	0.008	0.344	-0.404		
1 U - 4	2	13:06:00	1,600	973	0.332	0.008	0.340	-0.400		
1 U - 4	4	13:08:00	1,600	973	0.329	0.008	0.337	-0.397		
1 U - 5	1	13:11:00	0	0	0.182	0.005	0.186	-0.188		
1 U - 5	2	13:12:00	0	0	0.179	0.005	0.184	-0.183		
1 U - 5	4	13:14:00	0	0	0.176	0.005	0.181	-0.177		
1 U - 5	8	13:18:00	0	0	0.173	0.005	0.178	-0.169		
1 U - 5	16	13:26:00	0	0	0.170	0.005	0.175	-0.163		
1 U - 5	30	13:40:00	0	0	0.168	0.005	0.173	-0.157		
1 U - 5	45	13:55:00	0	0	0.167	0.005	0.172	-0.154		
1 U - 5	60	14:10:00	0	0	0.167	0.005	0.171	-0.151		
1 U - 5	75	14:25:00	0	0	0.166	0.005	0.171	-0.148		

* Elastic compression above the O-cell.
 **Top of shaft minus Bottom Plate Telltale



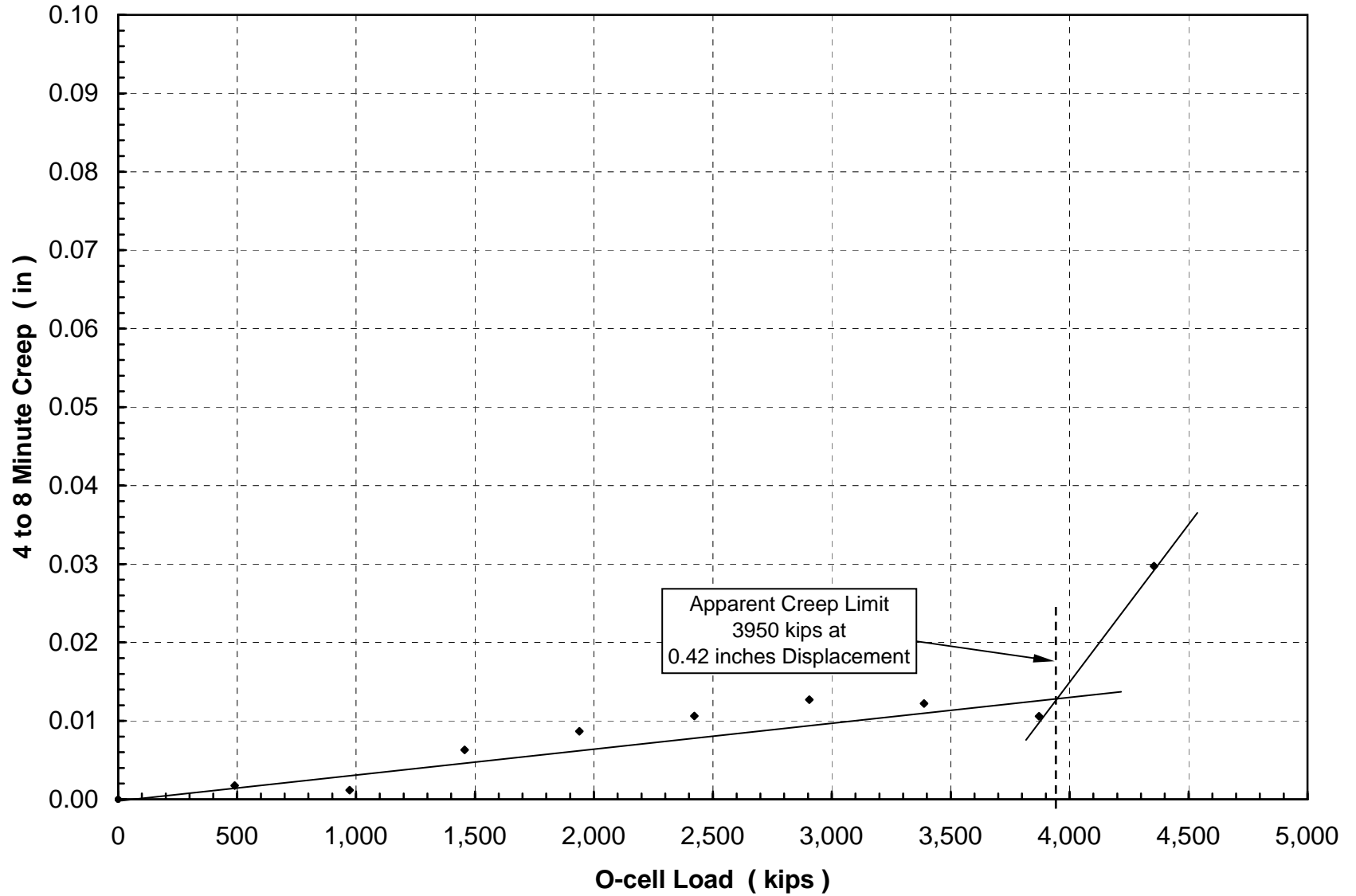
**Strain Gage Readings and Loads at Level 1
TS-1 - ADSC Research Project - Nashville, TN**

Load Test Increment	Hold Time (minutes)	Time (h:m:s)	O-cell		Level 1		Av. Load (kips)
			Pressure (psi)	Load (kips)	A - (08) - 19984 (µε)	B - (08) - 19984 (µε)	
1 L - 0	-	10:19:00	0	0	0.0	0.0	0
1 L - 1	1	11:05:30	800	490	17.0	10.1	108
1 L - 1	2	11:06:30	800	490	17.1	10.3	110
1 L - 1	4	11:08:30	800	490	17.4	10.9	114
1 L - 1	8	11:12:30	800	490	17.7	11.1	115
1 L - 2	1	11:14:30	1,600	973	27.9	14.2	169
1 L - 2	2	11:15:30	1,600	973	28.4	14.5	172
1 L - 2	4	11:17:30	1,600	973	28.5	14.6	173
1 L - 2	8	11:21:30	1,600	973	28.8	14.8	175
1 L - 3	1	11:23:30	2,400	1,456	38.6	19.3	232
1 L - 3	2	11:24:30	2,400	1,456	38.9	19.5	234
1 L - 3	4	11:26:30	2,400	1,456	39.4	19.9	238
1 L - 3	8	11:30:30	2,400	1,456	39.9	20.4	242
1 L - 4	1	11:33:30	3,200	1,939	52.6	30.2	332
1 L - 4	2	11:34:30	3,200	1,939	53.0	30.8	336
1 L - 4	4	11:36:30	3,200	1,939	53.6	31.2	340
1 L - 4	8	11:40:30	3,200	1,939	54.2	31.8	345
1 L - 5	1	11:43:00	4,000	2,422	65.1	41.6	428
1 L - 5	2	11:44:00	4,000	2,422	65.7	42.1	432
1 L - 5	4	11:46:00	4,000	2,422	66.3	42.8	438
1 L - 5	8	11:50:00	4,000	2,422	67.0	43.9	445
1 L - 6	1	11:52:30	4,800	2,905	77.7	54.5	530
1 L - 6	2	11:53:30	4,800	2,905	78.3	55.8	538
1 L - 6	4	11:55:30	4,800	2,905	79.6	57.2	549
1 L - 6	8	11:59:30	4,800	2,905	81.0	59.7	564
1 L - 7	1	12:02:30	5,600	3,388	96.1	77.0	694
1 L - 7	2	12:03:30	5,600	3,388	97.0	78.1	702
1 L - 7	4	12:05:30	5,600	3,388	98.7	80.0	717
1 L - 7	8	12:09:30	5,600	3,388	99.9	82.0	729
1 L - 8	1	12:24:00	6,400	3,871	118.1	101.6	881
1 L - 8	2	12:25:00	6,400	3,871	118.2	101.8	882
1 L - 8	4	12:27:00	6,400	3,871	118.5	102.9	888
1 L - 8	8	12:31:00	6,400	3,871	119.1	104.4	896
1 L - 9	1	12:34:00	7,200	4,354	119.3	123.2	972
1 L - 9	2	12:35:00	7,200	4,354	112.4	124.1	948
1 L - 9	4	12:37:00	7,200	4,354	107.0	126.1	935
1 L - 9	8	12:41:00	7,200	4,354	99.1	130.7	921
1 U - 1	1	12:49:30	5,600	3,388	83.4	122.2	824
1 U - 1	2	12:50:30	5,600	3,388	83.3	122.3	825
1 U - 1	4	12:52:30	5,600	3,388	83.2	122.3	824
1 U - 2	1	12:54:30	4,000	2,422	64.9	103.3	674
1 U - 2	2	12:55:30	4,000	2,422	65.2	103.6	677
1 U - 2	4	12:57:30	4,000	2,422	64.6	103.1	672
1 U - 3	1	12:59:30	3,200	1,939	47.3	76.0	494
1 U - 3	2	13:00:30	3,200	1,939	46.8	75.2	489
1 U - 3	4	13:02:30	3,200	1,939	46.3	74.6	485
1 U - 4	1	13:05:00	1,600	973	27.5	46.8	298
1 U - 4	2	13:06:00	1,600	973	27.2	46.0	293
1 U - 4	4	13:08:00	1,600	973	26.7	45.4	289
1 U - 5	1	13:11:00	0	0	21.7	20.3	168
1 U - 5	2	13:12:00	0	0	21.7	20.1	168
1 U - 5	4	13:14:00	0	0	21.7	19.6	166
1 U - 5	8	13:18:00	0	0	21.7	19.0	163
1 U - 5	16	13:26:00	0	0	21.5	18.9	162
1 U - 5	30	13:40:00	0	0	21.1	18.5	159
1 U - 5	45	13:55:00	0	0	20.9	18.5	158
1 U - 5	60	14:10:00	0	0	20.9	18.5	158
1 U - 5	75	14:25:00	0	0	20.7	18.4	157



End Bearing Creep Limit

TS-1 - ADSC Research Project - Nashville, TN





Upper Side Shear Creep Limit

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