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November 6, 2017

Mr. Scott W. George, P.E.
Materials and Test Engineer
Alabama Department of Transportation
Bureau of Materials and Test
3700 Fairgrounds Road
Montgomery, Alabama 36130

Attention: **Kaye Chancellor Davis, P.E.**
ALDOT Geotechnical Engineer

Subject: **Report of Geotechnical Consulting Services**
Soil Test Data Report
I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: DPI-AL06 (900)
Mobile County, Alabama
TE Project No. 13-2123-0004

Dear Ms. Davis:

Thompson Engineering is pleased to transmit this soil test data report for the project referenced above. The results presented in this submittal will be used in support of the referenced project. In addition, we have provided vibrating wire groundwater measurements and a summary table for the electrochemical test results within this soil test data report.

We appreciate the opportunity to assist the Alabama Department of Transportation with project-related geotechnical matters. Please do not hesitate to contact our office with any questions concerning this submittal.

Respectfully submitted,

THOMPSON ENGINEERING, INC.

Sam Sternberg III, P.E.
Project Geotechnical Engineer

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Geotechnical Team Leader

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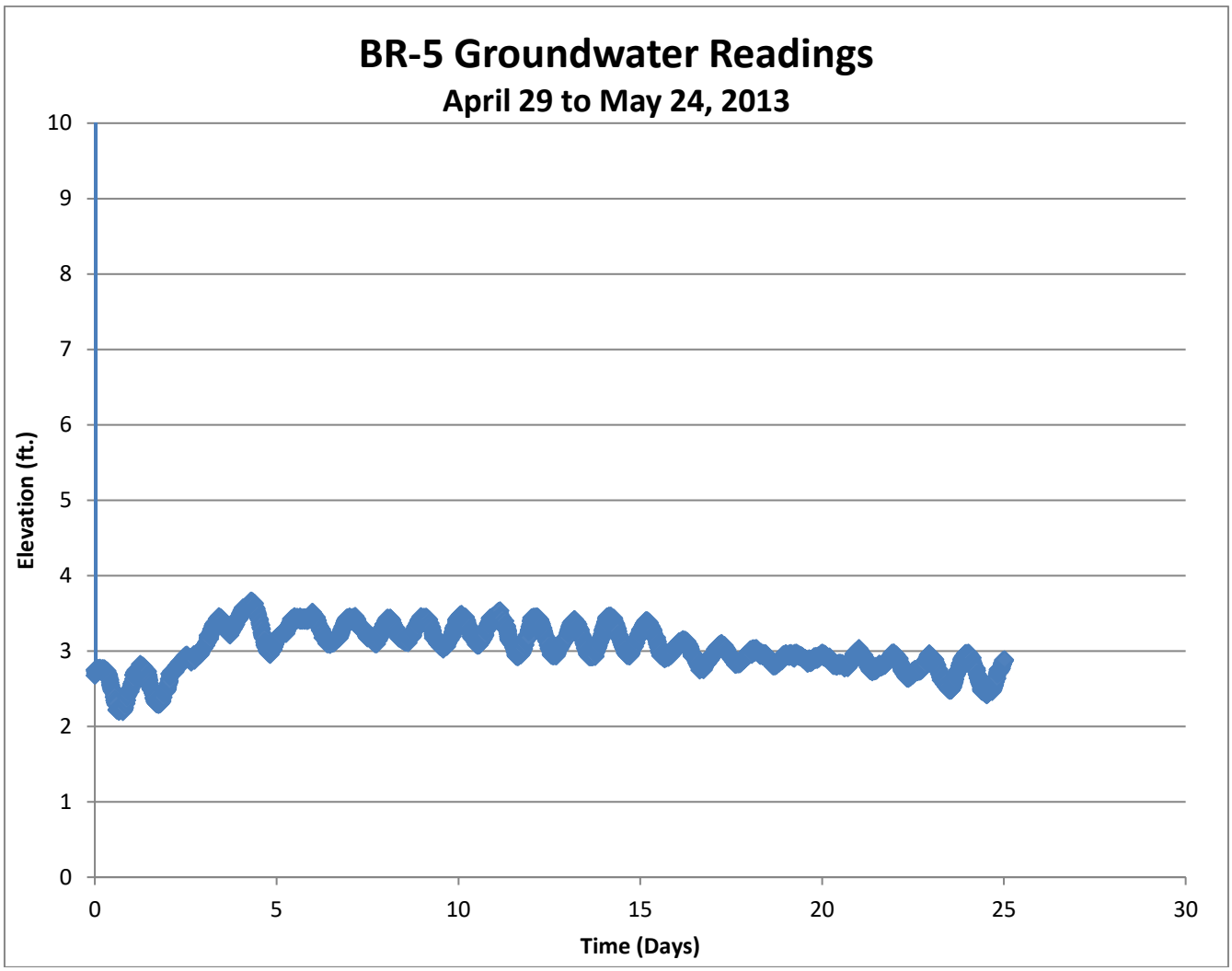
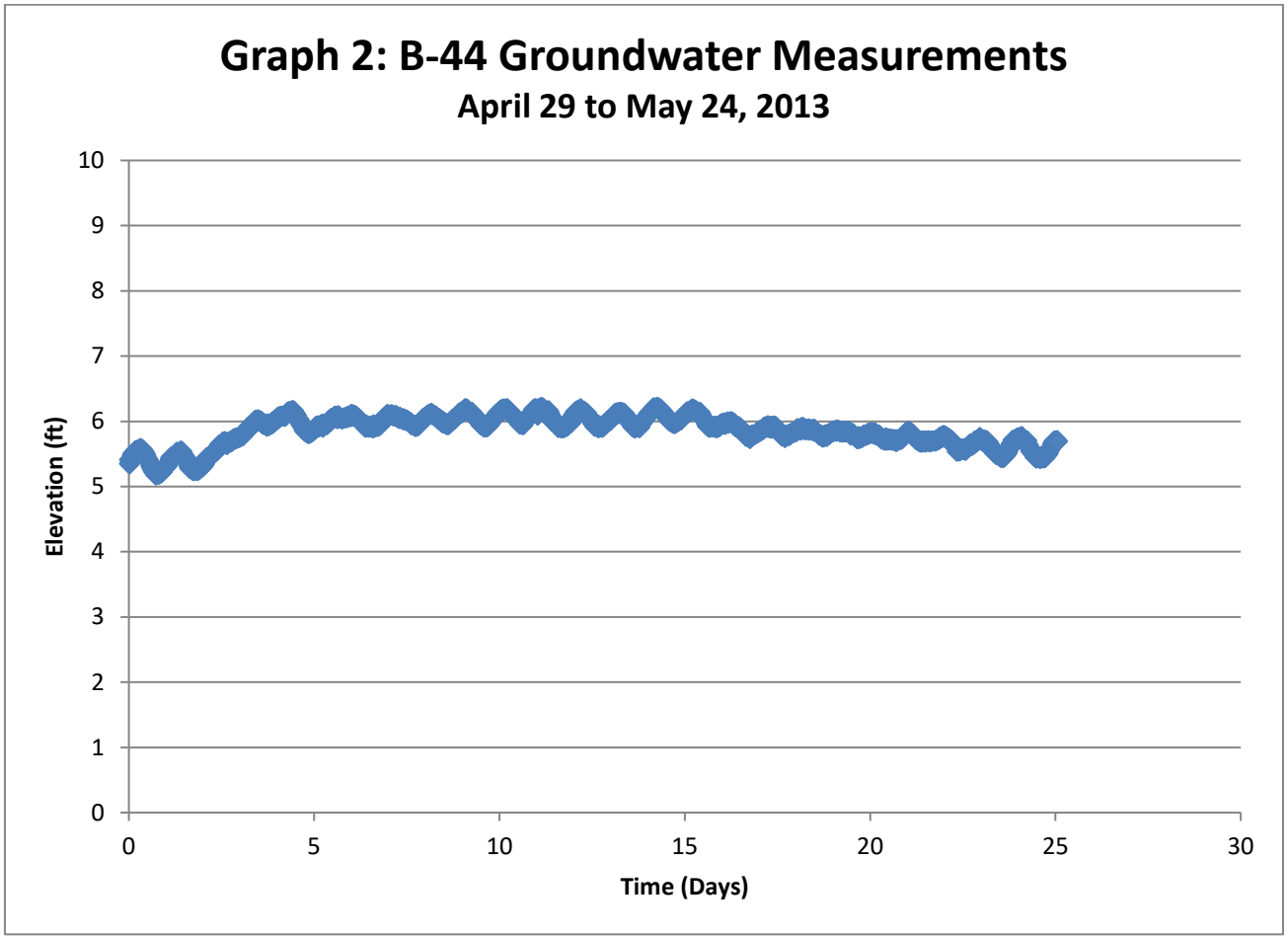
1.0 VIBRATING WIRE GROUNDWATER MEASUREMENTS

Two (2) vibrating wire piezometers, Geokon model 4500, were installed into a 2-inch standpipe piezometer at BR-5 and B-44. The piezometer was connected to a single channel datalogger and were set to obtain a groundwater reading at approximately every 10 minutes. Groundwater elevations of the recorded measurements are provided below on **Graphs 1 and 2**.





2.0 ELECTROCHEMICAL TESTS

Electrochemical series soil tests (total chlorides, total sulfates, resistivity and pH) were performed on select samples for environment classification. The following soil limit conditions for corrosive environments for steel piles have been provided by ALDOT and FHWA.

ALDOT:

- Resistivity less than 3,000 ohm-cm
- pH less than 5 or greater than 10
- Chlorides greater than 50 ppm
- Sulfates greater than 100 ppm

FHWA *(Publication NHI-16-009):*

- Resistivity less than 2,000 ohm-cm
- pH less than 4.5
- Resistivity is between 2,000 and 5,000 ohms-cm and chlorides are greater than 100 ppm or sulfate greater than 200 ppm

Summary of the corrosion test results are summarized in **Table 1** below and appended in **Appendix D** of this report.

Table 1: Summary of Electrochemical Test Results							
Boring No.	**Sample No.**	**Composite Samples(6)**	**pH(1)**	**Chlorides (ppm)(2)**	**Sulfates (ppm)(3)**	**Resistivity (ohms-cm)(4)**	**ALDOT Classification**
BR-1	S-3	S-2, S-3, S-4	6	<63	140	1,042	Aggressive
BR-1	S-6	S-6, S-7, S-8, S-9	6	<12	<25	5,468	Non-Aggressive
BR-1	S-11	S-10, S-11, S-12	7	<12	<25	4,427	Non-Aggressive
BR-12	S-3	S-2, S-3	6	<11	58	11,000	Non-Aggressive
BR-12	S-7	S-6, S-7, S-8	6	<61	130	9,000	Aggressive(5)
BR-12	S-12	S-11, S-12, S-14	6	<12	<24	8,000	Non-Aggressive
BR-12	S-16	S-14, S-15, S-16, S-17	7	<12	<23	12,000	Non-Aggressive

Note: *(1) AASHTO T289 Method (pH) performed.*
(2) EPA Method 325.2 (chloride) performed.
(3) Standard Methods for the Examination of Water and Waste Water Method 4500-SO4E (sulfate) performed equivalent to EPA Method 375.4.
(4) AASHTO T288 Method (Resistivity) performed.
(5) FHWA Publication NHI-16-009 classifies this as a non-aggressive environment.
(6) Composite samples provided in the table were used for the pH and resistivity tests.

3.0 REPORT LIMITATIONS

This Soil Test Data Report has been prepared for the exlusive use of ALDOT for the specific project discussed herein. This Soil Test Data Report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards.

4.0 REFERENCES

Hannigan, P.J., Rausche, F., Likins, G., Robinson, B.R., and Becker, M. (2016). Geotechnical Engineering Circular No. 12 – Vol. 1: Design and Construction of Driven Pile Foundations. FHWA-NHI-16-009. National Highway Institute, Federal Highway Administration, Washington, D.C.

APPENDIX A

- **Laboratory Summary**
- **BMT-5's**
- **Topsoil Test Results Summary**

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 (if hydrometer data available) % Silt	% Clay	D50 (mm)	USCS	AASHTO Classification
113+01 RT 74'	B-1	S-1	0.3	9.4	NP	NP	NP	0.0	81.8	11.2	7.0	0.2777	SM	A-2-4(0)
		S-4	5.0	8.2	NP	NP	NP	0.0	83.9	13.0	3.1	0.2903	SM	A-2-4(0)
124+00 LT 65'	B-2	S-2	1.5	12.3	NP	NP	NP	0.6	82.0	17.4		0.1736	SM	A-2-4(0)
		S-4	5.0	17.8	NP	NP	NP	0.0	82.0	18.0		0.1841	SM	A-2-4(0)
		S-8	23.5	21.2	24	18	6	0.0	51.3	31.4	17.3	0.0767	SC-SM	A-4(0)
127+00 LT 70'	B-3	S-2	1.5	14.1	NP	NP	NP	0.2	79.9	19.9		0.1894	SM	A-2-4(0)
		S-6	13.5	29.5	NP	NP	NP	0.0	70.4	15.9	13.7	0.1448	SM	A-2-4(0)
		S-7	18.5	89.1	61	39	22	0.0	1.0	45.2	53.8	0.0043	MH	A-7-5(30)
127+00 RT 118'	B-4	S-1	0.3	11.0	NP	NP	NP	0.0	76.9	23.1		0.1995	SM	A-2-4(0)
		S-4	5.0	7.7	NP	NP	NP	0.5	84.3	15.2		0.3284	SM	A-2-4(0)
130+00 LT 70'	B-5	S-3	3.5	23.6	NP	NP	NP	0.0	86.8	13.2		0.1954	SM	A-2-4(0)
		S-6	13.5	130.3	54	28	26	0.0	20.4	25.8	53.8	0.0040	CH	A-7-6(23)
130+00 LT 30'	B-6	S-2	1.5	8.2	NP	NP	NP	0.2	79.3	20.5		0.2686	SM	A-2-4(0)
		S-4	5.0	10.0	NP	NP	NP	0.0	84.3	15.7		0.1851	SM	A-2-4(0)
133+00 LT 20'	B-7	S-2	1.5	10.0	NP	NP	NP	0.3	75.9	23.8		0.2656	SM	A-2-4(0)
		S-4	5.0	11.5	NP	NP	NP	0.6	71.7	27.7		0.2416	SM	A-2-4(0)
136+00 LT 50'	B-8	S-2	1.5	15.9	NP	NP	NP	0.0	79.6	16.5	3.9	0.1780	SM	A-2-4(0)
		S-7	18.5	26.4	NP	NP	NP	0.0	69.3	27.2	3.5	0.1472	SM	A-2-4(0)
		S8/T1	23.5	35.3	48	17	31	0.0	4.1	73.8	22.1	0.0305	CL	A-7-6(32)
136+05 RT 87'	B-9	S-2	3.0	13.8	NP	NP	NP	1.7	72.0	14.7	11.6	0.2112	SM	A-2-4(0)
		S-3	5.0	12.7	NP	NP	NP	1.2	80.3	18.5		0.2560	SM	A-2-4(0)
138+97.4 LT 95'	B-10	S-2	1.5	11.2	NP	NP	NP	0.0	78.9	15.3	5.8	0.2435	SM	A-2-4(0)
		S-6	13.5	26.2	NP	NP	NP	0.0	70.3	24.4	5.3	0.1548	SM	A-2-4(0)
		S-9	28.5	26.2	NP	NP	NP	0.0	94.3	5.7		0.2174	SP-SM	A-3
138+80 RT 11'	B-11	S-2	1.5	10.7	19	12	7	1.3	67.7	20.6	10.4	0.1645	SC-SM	A-2-4(0)
		S-4	5.0	14.4	NP	NP	NP	0.5	79.1	20.4		0.1998	SM	A-2-4(0)
142+89 RT 1'	B-12	S-3	3.5	20.9	NP	NP	NP	0.0	83.2	5.3	11.5	0.1813	SM	A-2-4(0)

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
142+89 RT 1'	B-12	S-6	13.5	45.4	96	43	53	0.0	27.7	38.2	34.1	0.0098	MH	A-7-5(42)
		S-8	23.5	23.6	18	14	4	0.0	86.9	9.5	3.6	0.2607	SM	A-2-4(0)
		S-9	28.5	21.2	NP	NP	NP	0.0	95.6	4.4		0.2184	SP	A-3
		S-12	41.0	18.5	NP	NP	NP	0.0	99.1	0.9		0.4141	SP	A-3
146+10 LT 49'	B-13	S-2	1.5	11.4	NP	NP	NP	2.3	77.0	20.7		0.1862	SM	A-2-4(0)
		S-6	13.5	23.8	NP	NP	NP	0.0	73.3	25.5	1.2	0.1533	SM	A-2-4(0)
		S-10	33.5	22.5	NP	NP	NP	0.6	88.9	10.5		0.2928	SP-SM	A-3
150+00 CL	B-14	S-1	0.5	11.2	NP	NP	NP	0.7	78.1	21.2		0.1921	SM	A-2-4(0)
		S-3	3.5	15.9	NP	NP	NP	1.1	73.4	25.5		0.2120	SM	A-2-4(0)
		S-6	13.5	6.2	NP	NP	NP	0.8	88.2	11.0		0.2769	SP-SM	A-2-4(0)
155+79 RT 42'	B-15	S-2	1.5	7.1	NP	NP	NP	27.6	55.5	16.9		0.3118	SM	A-2-4(0)
		S-4	7.0	9.3	NP	NP	NP	0.0	73.1	13.4	13.5	0.1918	SM	A-2-4(0)
801+00 LT 23'	B-16	S-2	2.0	9.9	NP	NP	NP	1.2	87.8	11.0		0.2017	SP-SM	A-2-4(0)
		S-4	5.0	14.6	NP	NP	NP	2.9	85.8	11.3		0.2031	SP-SM	A-2-4(0)
802+12 RT 4'	B-17	S-1	0.5	11.0	NP	NP	NP	5.9	84.1	10.0		0.2120	SP-SM	A-3
		S-3	3.5	15.0	NP	NP	NP	3.9	85.2	10.9		0.2279	SP-SM	A-2-4(0)
		S-4	5.0	18.0	NP	NP	NP	0.5	90.0	9.5		0.1983	SP-SM	A-3
805+16 RT 7'	B-18	S-1	0.5	9.1	NP	NP	NP	17.0	62.3	20.7		0.2643	SM	A-2-4(0)
		S-3	3.5	10.4	NP	NP	NP	1.8	88.1	10.1		0.2194	SP-SM	A-3
		S-5	8.5	26.3	NP	NP	NP	0.0	68.3	22.8	8.9	0.1436	SM	A-2-4(0)
807+18 RT 83'	B-19	S-2	1.5	10.5	NP	NP	NP	0.8	74.9	12.5	11.8	0.2141	SM	A-2-4(0)
808+00 LT 50'	B-20	S-1	0.3	16.7	NP	NP	NP	9.5	74.8	15.7		0.3502	SM	A-2-4(0)
		S-4	7.0	28.2	NP	NP	NP	37.7	28.7	33.6		0.3862	GM	A-2-4(0)
		S-7	18.5	63.1	87	33	54	0.0	3.1	55.6	41.3	0.0047	CH	A-7-5(63)
810+00 LT 5'	B-21	S-1	1.0	10.8	NP	NP	NP	6.3	76.7	10.6	6.4	0.1923	SM	A-2-4(0)
		S-2	3.5	23.2	NP	NP	NP	7.5	65.0	17.4	10.1	0.1791	SM	A-2-4(0)
		S-4	8.5	27.6	NP	NP	NP	0.0	59.0	29.2	11.8	0.1087	SM	A-4(0)

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
813+00 LT 9'	B-22	S-2	3.5	18.2	NP	NP	NP	72.9	1.3	25.8		10.2539	GM	A-2-4(0)
		S-4	13.5	144.8	130	47	83	0.0	17.0	41.5	41.5	0.0048	CH	A-7-5(81)
816+00 LT 50'	B-23	S-2	1.5	10.0	NP	NP	NP	6.5	58.8	34.7		0.7095	SM	A-2-4(0)
		S-4	7.0	23.2	NP	NP	NP	3.7	86.4	9.9		0.3251	SP-SM	A-3
		S-6	13.5	122.1	102	73	29	0.0	26.1	41.6	32.3	0.0072	MH	A-7-5(31)
816+00 RT 54'	B-24	S-2	3.5	20.7	NP	NP	NP	22.7	66.8	9.4	1.1	0.2142	SP-SM	A-2-4(0)
		S-4	8.5	26.7	NP	NP	NP	0.0	68.4	20.0	11.6	0.1443	SM	A-2-4(0)
819+00 LT 60'	B-25	S-1	0.0	14.3	NP	NP	NP	1.7	49.2	49.1		0.0779	SM	A-4(0)
		S-3	3.5	13.0	NP	NP	NP	68.0	2.7	29.3		3.7135	GM	A-2-4(0)
		S-6	13.5	55.8	67	24	43	0.0	4.0	44.7	51.3	0.0018	CH	A-7-6(47)
819+00 RT 60'	B-26	S-1	1.0	8.7	NP	NP	NP	7.0	70.8	11.2	11.0	0.2036	SM	A-2-4(0)
		S-3	7.0	20.3	NP	NP	NP	0.0	87.0	13.0	0.0	0.1994	SM	A-2-4(0)
821+97 RT 1'	B-27	S-2	1.5	15.3	NP	NP	NP	16.6	63.9	15.3	4.2	0.2193	SM	A-2-4(0)
		S-4	7.0	26.0	NP	NP	NP	5.8	72.5	19.1	2.6	0.1876	SM	A-2-4(0)
824+00 CL	B-28	S-2	1.5	13.8	NP	NP	NP	18.7	74.5	6.8		0.3437	SP-SM	A-3
		S-4	5.0	22.1	NP	NP	NP	1.8	88.4	9.8		0.2206	SP-SM	A-3
827+00 CL	B-29	S-1	0.3	8.1	NP	NP	NP	20.3	63.6	16.1		0.2832	SM	A-2-4(0)
831+00 CL	B-30	S-1	0.5	10.0	NP	NP	NP	0.0	75.8	11.1	13.1	0.2373	SM	A-2-4(0)
		S-3	3.5	8.5	NP	NP	NP	20.4	63.5	16.1		0.3173	SM	A-2-4(0)
834+00 LT 3'	B-31	S-1	1.0	9.0	NP	NP	NP	0.0	80.8	12.8	6.4	0.2500	SM	A-2-4(0)
		S-4	5.5	25.6	NP	NP	NP	23.9	62.0	14.1		0.2244	SM	A-2-4(0)
1601+00 CL	B-32	S-2	2.0	16.3	NP	NP	NP	0.0	85.2	14.8		0.1848	SM	A-2-4(0)
		S-5	8.5	22.9	NP	NP	NP	0.0	75.6	19.6	4.8	0.1564	SM	A-2-4(0)
1603+97 LT 6'	B-33	S-2	2.0	12.7	NP	NP	NP	0.0	83.0	9.5	7.5	0.1470	SM	A-2-4(0)
		S-5	8.5	30.6	22	15	7	0.0	59.6	26.0	14.4	0.0973	SC-SM	A-4(0)
		S-7	18.5	63.1	50	36	14	0.0	6.7	81.6	11.7	0.0343	MH	A-7-5(18)
1501+01 LT 7'	B-34	S-2	2.0	16.8	NP	NP	NP	0.0	81.5	18.5		0.1339	SM	A-2-4(0)

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1501+01 LT 7'	B-34	S-4	5.0	23.8	NP	NP	NP	0.0	89.1	10.9		0.1483	SP-SM	A-2-4(0)
		S-6	13.5	26.2	NP	NP	NP	0.0	74.4	16.9	8.7	0.1432	SM	A-2-4(0)
1503+00 LT 2'	B-35	S-1	0.3	9.5	NP	NP	NP	0.0	80.9	19.1		0.1735	SM	A-2-4(0)
		S-3	3.5	16.6	NP	NP	NP	0.0	84.5	15.5		0.1369	SM	A-2-4(0)
		S-6	13.5	24.4	NP	NP	NP	0.0	73.1	18.6	8.3	0.1317	SM	A-2-4(0)
1700+14 RT 7'	B-36	S-1	0.5	6.5	NP	NP	NP	37.3	48.2	10.8	3.7	0.4278	SM	A-2-4(0)
		S-2	2.0	8.6	NP	NP	NP	0.0	82.4	17.0	0.6	0.1412	SM	A-2-4(0)
		S-6	13.5	58.6	22	13	9	0.0	62.5	25.1	12.4	0.1080	SC	A-4(0)
2200+24 LT 5'	B-37	S-1	0.5	8.6	NP	NP	NP	20.0	60.0	20.0		0.2919	SM	A-2-4(0)
		S-3	3.5	20.4	NP	NP	NP	0.8	93.6	5.6		0.3278	SP-SM	A-3
		S-6	13.5	71.1	42	18	24	0.0	15.4	61.6	23.0	0.0112	CL	A-7-6(20)
1802+55 RT 26'	B-38A	S-1	0.6	7.3	NP	NP	NP	10.0	77.8	12.2		0.1893	SM	A-2-4(0)
		S-3	3.5	7.3	NP	NP	NP	1.0	83.0	16.0		0.1374	SM	A-2-4(0)
		S-6	13.5	16.1	NP	NP	NP	0.0	75.4	17.7	6.9	0.1446	SM	A-2-4(0)
		S-8	23.5	26.8	NP	NP	NP	0.0	56.0	31.5	12.5	0.0854	SM	A-4(0)
2301+64 LT 3'	B-39	S-1	0.5	30.3	NP	NP	NP	28.9	53.6	17.5		0.3658	SM	A-2-4(0)
		S-2	2.0	8.2	NP	NP	NP	1.8	83.8	14.4		0.1812	SM	A-2-4(0)
		S-4	5.0	13.7	NP	NP	NP	0.0	83.0	8.5	8.5	0.1811	SM	A-2-4(0)
2101+24 CL	B-40	S-1	0.5	22.5	NP	NP	NP	17.1	65.7	15.2	2.0	0.2546	SM	A-2-4(0)
		S-3	3.5	10.0	NP	NP	NP	1.7	81.7	16.6		0.1831	SM	A-2-4(0)
1701+50 CL	B-41	S-2	1.5	20.0	NP	NP	NP	0.0	83.0	17.0		0.1889	SM	A-2-4(0)
		S-4	5.0	12.6	NP	NP	NP	0.0	71.7	28.3		0.1313	SM	A-2-4(0)
		S-7	18.5	14.4	NP	NP	NP	0.0	87.6	12.4		0.1412	SM	A-2-4(0)
		S-9	28.5	21.6	NP	NP	NP	0.0	70.2	23.6	6.2	0.1203	SM	A-2-4(0)
		S-11	38.5	28.9	26	20	6	0.0	33.5	52.8	13.7	0.0524	CL-ML	A-4(2)
1702+52 LT 74'	B-42	S-2	1.5	30.8	NP	NP	NP	0.0	74.3	25.7		0.1754	SM	A-2-4(0)
		S-5	8.5	9.9	NP	NP	NP	2.2	76.1	21.7		0.2586	SM	A-2-4(0)

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Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 (if hydrometer data available) % Silt	% Clay	D50 (mm)	USCS	AASHTO Classification
1702+52 RT 46'	B-42	S-8	23.5	9.5	NP	NP	NP	0.0	70.2	21.0	8.8	0.1596	SM	A-2-4(0)
		T-1	30.0	26.2	NP	NP	NP	0.0	37.2	47.5	15.3	0.0468	ML	A-4(0)
1703+00 CL	B-43	S-2	1.5	14.6	NP	NP	NP	1.4	63.6	17.3	17.7	0.1169	SM	A-2-4(0)
		S-3	3.5	11.6	18	13	5	0.2	75.2	15.9	8.7	0.1929	SC-SM	A-2-4(0)
		S-5	8.5	14.9	NP	NP	NP	0.4	75.0	11.3	13.3	0.2151	SM	A-2-4(0)
		S-7	18.5	27.2	NP	NP	NP	9.4	76.7	7.8	6.1	0.1955	SM	A-2-4(0)
1702+82 LT 74'	B-44	S-2	1.5	8.9	NP	NP	NP	0.0	72.3	13.4	14.3	0.1729	SM	A-2-4(0)
		S-3	3.5	12.0	---	---	---	0.0	66.3	17.0	16.7	0.1408	SM	A-2-4
		S-5	8.5	9.8	NP	NP	NP	53.4	37.8	7.4	1.4	4.6187	GP-GM	A-1-b
		S-7	18.5	25.0	NP	NP	NP	2.9	75.6	14.6	6.9	0.1825	SM	A-2-4(0)
		S8/T1	23.5	27.4	NP	NP	NP	12.1	65.9	10.7	11.3	0.1871	SM	A-2-4(0)
		S-9	28.5	78.7	108	32	76	0.0	11.7	50.2	38.1	0.0034	CH	A-7-5(77)
		S-10	33.5	28.0	74	18	56	0.0	22.8	47.9	29.3	0.0324	CH	A-7-6(44)
1705+00 CL	B-45	S-2	1.5	15.9	NP	NP	NP	0.0	82.3	8.7	9.0	0.2496	SM	A-2-4(0)
		S-4	7.0	17.3	NP	NP	NP	0.0	83.3	16.7		0.1801	SM	A-2-4(0)
		S-5	8.5	18.8	NP	NP	NP	0.0	87.6	8.0	4.4	0.1844	SM	A-2-4(0)
		S-6	13.5	24.4	NP	NP	NP	0.0	67.8	25.2	7.0	0.1479	SM	A-2-4(0)
		S7/T1	18.5	52.4	70	26	44	0.0	17.6	53.1	29.3	0.0283	CH	A-7-6(39)
1707+00 LT 70'	B-46	S-2	1.5	9.1	NP	NP	NP	0.0	83.6	16.4		0.2021	SM	A-2-4(0)
		S-5	8.5	15.0	NP	NP	NP	0.7	66.9	32.4		0.1472	SM	A-2-4(0)
		S-8	23.5	22.1	NP	NP	NP	0.0	82.0	18.0		0.1753	SM	A-2-4(0)
1707+00 CL	B-47	S-3	3.5	12.1	NP	NP	NP	13.5	58.2	28.3		0.1848	SM	A-2-4(0)
		S-6	15.0	26.2	NP	NP	NP	2.1	73.6	15.5	8.8	0.1750	SM	A-2-4(0)
		S8/T1	23.5	67.4	35	33	2	---	---	---	---	---	ML	---
		S-9	28.5	37.6	NP	NP	NP	3.5	65.9	30.6		0.1619	SM	A-2-4(0)
1709+00 CL	B-48	S-2	1.5	13.4	NP	NP	NP	1.0	85.3	13.7		0.2967	SM	A-2-4(0)
		S-4	7.0	24.9	NP	NP	NP	3.4	73.0	23.6		0.1117	SM	A-2-4(0)

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
1709+00 CL	B-48	S-6	13.5	28.5	NP	NP	NP	0.0	70.1	18.4	11.5	0.1471	SM	A-2-4(0)
402+19 RT 48'	B-49	S-2	2.0	8.4	NP	NP	NP	0.7	77.9	12.2	9.2	0.2446	SM	A-2-4(0)
		S-4	5.0	8.6	NP	NP	NP	0.1	85.1	8.3	6.5	0.3716	SM	A-2-4(0)
405+27 RT 29'	B-50	S-2	3.5	7.9	NP	NP	NP	0.6	89.3	10.1		0.3118	SP-SM	A-3
		S-4	6.5	11.3	NP	NP	NP	0.3	85.0	14.7		0.2659	SM	A-2-4(0)
407+85 LT 6'	B-51	S-2	2.3	9.6	18	14	4	2.6	74.7	22.7		0.2237	SC-SM	A-2-4(0)
		S-6	13.5	10.5	NP	NP	NP	7.9	77.8	14.3		0.2091	SM	A-2-4(0)
407+65 LT 30'	B-51A	S-2	23.5	26.6	NP	NP	NP	0.0	64.9	35.1		0.1261	SM	A-2-4(0)
		S-3/T-1	28.0	125.7	177	75	102	0.0	15.7	59.0	25.3	0.0144	CH	A-7-5(107)
		S-4	33.5	24.8	---	---	---	0.0	66.2	33.8		0.1107	SM	A-2-4
410+50 LT 30'	B-52	S-1	0.4	13.2	19	15	4	1.4	66.6	17.5	14.5	0.1555	SC-SM	A-2-4(0)
		S-3	3.5	14.2	NP	NP	NP	2.0	81.8	16.2		0.2537	SM	A-2-4(0)
		S-6	13.5	19.2	22	12	10	4.3	66.6	14.9	14.2	0.1920	SC	A-2-4(0)
		S-9	28.5	26.5	NP	NP	NP	0.0	61.5	33.0	5.5	0.1060	SM	A-4(0)
		S-11	38.5	32.1	48	20	28	0.0	5.4	56.7	37.9	0.0053	CL	A-7-6(29)
		S-13	48.5	19.0	NP	NP	NP	0.0	94.0	6.0		0.2041	SP-SM	A-3
700+00 LT 10'	B-53	S-2	1.5	15.0	NP	NP	NP	0.0	79.9	20.1		0.1787	SM	A-2-4(0)
		S-5	8.5	28.8	NP	NP	NP	0.0	82.6	17.4		0.1881	SM	A-2-4(0)
		S-7/T-1	18.5	41.8	50	20	30	0.0	7.9	48.0	44.1	0.0054	CH	A-7-6(30)
703+00 LT 20'	B-54	S-2	1.5	16.5	NP	NP	NP	0.0	82.8	17.2		0.1867	SM	A-2-4(0)
		S-4	5.0	22.5	NP	NP	NP	0.0	90.0	10.0		0.2020	SP-SM	A-3
		S-6	13.5	26.2	NP	NP	NP	0.0	72.4	19.0	8.6	0.1589	SM	A-2-4(0)
		S-9	28.5	22.9	NP	NP	NP	0.0	95.8	4.2		0.2133	SP	A-3
706+00.8 LT 24'	B-55	S-2	1.5	12.7	NP	NP	NP	0.0	81.6	18.4		0.1850	SM	A-2-4(0)
		S-4	5.0	20.4	NP	NP	NP	0.0	91.5	8.5		0.2036	SP-SM	A-3
		S-9	28.5	19.9	NP	NP	NP	0.2	97.5	2.3		0.2839	SP	A-3
707+86 LT 23'	B-56	S-2	1.5	8.9	NP	NP	NP	19.2	66.8	14.0		0.2856	SM	A-2-4(0)

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Mobile County, Alabama

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		S-4	7.0	29.3	NP	NP	NP	0.0	70.8	29.2		0.1255	SM	A-2-4(0)
		S-6	13.5	26.1	NP	NP	NP	1.3	76.0	14.3	8.4	0.1743	SM	A-2-4(0)
707+86 LT 23'	B-56	S-8	23.5	108.2	49	16	33	0.2	18.7	53.1	28.0	0.0270	CL	A-7-6(26)
		S-10	33.5	31.0	NP	NP	NP	0.0	87.6	12.4		0.2920	SM	A-2-4(0)
1201+00 LT 30'	B-57	S-3	3.5	16.5	NP	NP	NP	0.0	82.5	17.5		0.1863	SM	A-2-4(0)
		S-6	13.5	31.5	82	33	49	1.3	17.9	80.8		0.0032	CH	A-7-5(45)
		S-8	23.5	25.8	NP	NP	NP	0.0	80.9	19.1		0.1612	SM	A-2-4(0)
		S-10	33.5	10.6	NP	NP	NP	0.0	97.2	2.8		0.3416	SP	A-3
1203+00 LT 30'	B-58	S-2	1.5	19.5	NP	NP	NP	0.8	73.9	25.3		0.2283	SM	A-2-4(0)
		S-4	5.0	13.1	NP	NP	NP	0.6	62.6	29.7	7.1	0.1245	SM	A-4(0)
		S-6	13.5	23.3	NP	NP	NP	3.0	60.9	30.3	5.8	0.1344	SM	A-4(0)
		S-8	23.5	28.4	NP	NP	NP	0.0	85.8	14.2		0.1822	SM	A-2-4(0)
		S-10	33.5	45.2	NP	NP	NP	0.0	72.5	20.9	6.6	0.1676	SM	A-2-4(0)
		S-12	43.5	13.6	78	29	49	0.7	6.2	59.7	33.4	0.0059	CH	A-7-6(53)
1203+00 RT 30'	B-59	S-4	5.0	27.7	NP	NP	NP	0.0	77.8	22.2		0.1894	SM	A-2-4(0)
		S-7	18.5	74.3	NP	NP	NP	0.0	62.5	34.5	3.0	0.1216	SM	A-4(0)
		S9/T1	28.5	74.3	98	35	63	1.0	4.4	50.9	43.7	0.0032	CH	A-7-5(72)
1205+00 LT 20'	B-60	S-4	5.0	16.9	23	13	10	0.3	61.7	14.8	23.2	0.1104	SC	A-4(0)
		S-5	8.5	14.5	NP	NP	NP	0.8	79.5	15.6	4.1	0.1994	SM	A-2-4(0)
		S-9	28.5	27.1	NP	NP	NP	0.0	70.1	21.0	8.9	0.1544	SM	A-2-4(0)
		S10/T1	33.5	42.7	39	21	18	3.8	22.0	40.1	34.1	0.0291	CL	A-6(12)
1207+00 LT 25'	B-61	S-2	1.5	9.3	NP	NP	NP	15.6	66.1	11.6	6.7	0.2875	SM	A-2-4(0)
		S-4	7.0	13.3	23	18	5	0.0	69.4	14.9	15.7	0.1640	SC-SM	A-2-4(0)
		S-6	13.5	13.6	NP	NP	NP	0.0	73.2	26.8		0.2116	SM	A-2-4(0)
		S-9	28.5	25.8	NP	NP	NP	0.0	70.1	19.9	10.0	0.1569	SM	A-2-4(0)
1212+96 RT 10'	B-62	S-2	2.0	12.7	NP	NP	NP	3.8	73.0	10.2	13.0	0.2370	SM	A-2-4(0)
		S-4	7.0	12.9	NP	NP	NP	0.0	67.4	32.6		0.1720	SM	A-2-4(0)

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Soil Classification Summary

Alabama Department of Transportation
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Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
1301+99 RT 25'	B-63	S-2	1.5	14.3	NP	NP	NP	0.4	72.0	10.5	17.1	0.1594	SM	A-2-4(0)
		S-4	5.0	20.3	NP	NP	NP	0.2	85.1	14.7		0.1883	SM	A-2-4(0)
		S-5	8.5	29.6	NP	NP	NP	0.0	72.4	21.9	5.7	0.1321	SM	A-2-4(0)
		S-7	18.5	104.2	119	56	63	0.0	13.5	45.5	41.0	0.0036	MH	A-7-5(68)
		S-8	23.5	24.4	NP	NP	NP	0.0	98.0	2.0		0.3321	SP	A-3
		S-10	33.5	23.1	NP	NP	NP	0.2	96.3	3.5		0.3437	SP	A-3
1303+97 LT 3'	B-64	S-2	2.0	14.4	NP	NP	NP	0.0	78.7	21.3		0.1788	SM	A-2-4(0)
		S-5	13.5	26.4	NP	NP	NP	0.0	45.3	32.1	22.6	0.0294	ML	A-4(0)
		S-8	28.5	23.3	NP	NP	NP	0.0	92.0	8.0		0.2247	SP-SM	A-3
1306+00 LT 10'	B-65	S-2	1.5	10.0	NP	NP	NP	3.3	78.3	18.4		0.1816	SM	A-2-4(0)
		S-4	5.0	21.4	NP	NP	NP	0.0	88.4	11.6		0.1864	SP-SM	A-2-4(0)
		S-7	18.5	46.0	38	22	16	0.0	25.6	63.8	10.6	0.0375	CL	A-6(11)
		S-11	38.5	23.6	NP	NP	NP	0.3	97.7	2.0		0.3268	SP	A-3
1307+96 LT 7'	B-66	S-1	0.5	9.3	NP	NP	NP	29.6	51.5	18.9		0.4235	SM	A-2-4(0)
		S-3	3.5	23.6	NP	NP	NP	0.0	85.9	14.1		0.1833	SM	
		S-6	13.5	27.8	NP	NP	NP	0.1	74.4	15.4	10.1	0.1663	SM	A-2-4(0)
		S-8	23.5	59.1	NP	NP	NP	2.3	88.8	8.9		0.2700	SP-SM	A-3
		S-10	33.5	24.8	NP	NP	NP	0.0	96.2	3.8		0.3252	SP	A-3
1310+00 LT 10'	B-67	S-2	1.5	11.5	NP	NP	NP	4.6	64.1	31.3		0.1110	SM	A-2-4(0)
		S-5	8.5	38.1	36	15	21	0.0	51.9	24.7	23.4	0.0905	SC	A-6(6)
		S-8	23.5	36.8	NP	NP	NP	1.4	82.3	16.3		0.1926	SM	A-2-4(0)
		S-12	43.5	19.9	NP	NP	NP	0.2	98.0	1.8		0.4144	SP	A-3
321+00 LT 20'	B-68	S-2	1.5	7.2	NP	NP	NP	0.0	85.3	14.7		0.2763	SM	A-2-4(0)
		S-4	5.0	6.9	NP	NP	NP	1.4	87.2	11.4		0.3220	SP-SM	A-2-4(0)
324+00 RT 10'	B-69	S-1	0.3	11.1	NP	NP	NP	15.5	64.9	19.6		0.3159	SM	A-2-4(0)
		S-2	3.5	7.6	NP	NP	NP	0.0	86.5	13.5		0.3592	SM	A-2-4(0)
153+95 LT 59'	B-70	S-1	1.0	11.5	NP	NP	NP	0.0	79.3	16.3	4.4	0.1558	SM	A-2-4(0)

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Soil Classification Summary

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Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
		S-3	3.5	11.8	NP	NP	NP	0.0	76.4	15.8	7.8	0.1563	SM	A-2-4(0)
		S-5	8.5	19.4	NP	NP	NP	0.0	87.3	12.7		0.1373	SM	A-2-4(0)
153+95 LT 59'	B-70	S-7	18.5	66.7	37	18	19	0.0	29.7	54.7	15.6	0.0366	CL	A-6(11)
		S-8	23.5	23.8	NP	NP	NP	0.0	89.1	10.9		0.1223	SP-SM	A-2-4(0)
		S-11	38.5	27.7	NP	NP	NP	0.0	95.7	4.3		0.2953	SP	A-3
157+06 LT 77'	B-71	S-2	1.5	10.0	NP	NP	NP	5.5	79.8	14.7		0.1987	SM	A-2-4(0)
		S-4	5.0	14.2	NP	NP	NP	15.8	66.9	17.3		0.3129	SM	A-2-4(0)
		S-5	8.5	26.8	NP	NP	NP	0.0	60.1	24.6	15.3	0.1179	SM	A-4(0)
		S-6	13.5	39.1	NP	NP	NP	0.0	75.2	14.0	10.8	0.1580	SM	A-2-4(0)
		S-8	23.5	24.2	NP	NP	NP	0.1	87.1	12.8		0.1911	SM	A-2-4(0)
159+00 LT 67'	B-72	S-2	2.0	4.4	NP	NP	NP	7.5	83.2	9.3		0.3337	SP-SM	A-3
		S-6	13.5	15.8	NP	NP	NP	0.0	73.7	26.3		0.1626	SM	A-2-4(0)
		S-8	23.5	23.6	18	14	4	0.2	86.7	7.4	5.7	0.2610	SC-SM	A-2-4(0)
		S-11	38.5	25.5	NP	NP	NP	0.0	98.3	1.7		0.3365	SP	A-3
317+75 RT 17'	B-73	S-2	1.5	10.8	NP	NP	NP	0.0	86.5	13.5		0.2221	SM	A-2-4(0)
		S-5	8.5	27.3	NP	NP	NP	0.0	68.8	20.3	10.9	0.1258	SM	A-2-4(0)
		T-1	15.5	31.6	28	18	10	0.0	63.2	22.7	14.1	0.1011	SC-SM	A-4(0)
		S-9	28.5	24.6	NP	NP	NP	0.0	89.6	10.4		0.2195	SP-SM	A-3
319+55 RT 43'	B-74	S-2	3.5	23.1	NP	NP	NP	0.0	85.0	15.0		0.2117	SM	A-2-4(0)
		S-3	5.0	24.9	NP	NP	NP	0.0	71.1	28.9		0.1405	SM	A-2-4(0)
		S-5	13.5	35.8	NP	NP	NP	0.0	64.3	19.8	15.9	0.1128	SM	A-2-4(0)
321+48 RT 65'	B-75	S-2	3.0	29.4	NP	NP	NP	0.0	85.2	14.8		0.1903	SM	A-2-4(0)
		S-5	8.5	20.6	NP	NP	NP	0.0	88.1	11.0	0.9	0.1908	SP-SM	A-2-4(0)
		T-1	10.5	23.8	25	22	3	0.0	40.1	42.8	17.1	0.0645	ML	A-4(0)
		S-8	23.5	32.5	---	---	---	0.0	45.6	54.4		---	CL	---
323+37 RT 63'	B-76	S-1	0.3	18.3	NP	NP	NP	0.0	78.4	21.6		0.1902	SM	A-2-4(0)
		S-3	3.5	13.8	NP	NP	NP	0.0	83.8	16.2		0.1888	SM	A-2-4(0)

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Soil Classification Summary

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		S-8	23.5	24.4	NP	NP	NP	0.0	90.5	9.5		0.1635	SP-SM	A-3
410+86 RT 57'	B-100	S-2	1.5	8.7	NP	NP	NP	28.0	55.5	16.5		0.4059	SM	A-2-4(0)
		S-7	23.5	25.0	NP	NP	NP	0.0	90.4	9.6		0.3467	SP-SM	A-3
		S-10	38.5	26.6	NP	NP	NP	0.0	92.5	7.5		0.2853	SP-SM	A-3
139+95.2 LT 40.8'	BR-1	S-2	3.5	20.9	NP	NP	NP	0.0	91.0	7.3	1.7	0.1959	SP-SM	A-3
		S-4	13.5	25.6	NP	NP	NP	0.0	69.6	18.6	11.8	0.1535	SM	A-2-4(0)
		S-5	20.0	36.5	35	16	19	0.0	23.4	45.1	31.5	0.0335	CL	A-6(13)
		S-8	35.0	21.3	NP	NP	NP	0.3	99.6	0.1		0.3959	SP	A-3
		S-12	55.0	18.5	NP	NP	NP	0.3	97.2	2.5		0.3116	SP	A-3
		S-17	80.0	34.1	50	14	36	0.0	21.1	39.3	39.6	0.0117	CH	A-7-6(28)
		S-18	85.0	22.7	NP	NP	NP	7.3	74.0	18.7		0.4689	SM	A-1-b
		S-19	90.0	27.7	NP	NP	NP	0.0	60.8	22.6	16.6	0.1094	SM	A-4(0)
		S-22	110.0	25.2	NP	NP	NP	0.0	55.1	33.2	11.7	0.0842	SM	A-4(0)
139+74.02 - CL	BR-2	S-2	1.5	16.1	NP	NP	NP	0.0	84.9	15.1		0.1452	SM	A-2-4(0)
		S-4	5.0	20.9	NP	NP	NP	0.0	88.9	11.1		0.1549	SP-SM	A-2-4(0)
		S-5	8.5	25.3	NP	NP	NP	0.0	61.8	31.8	6.4	0.0967	SM	A-4(0)
		S-7	19.0	25.6	NP	NP	NP	0.0	67.2	23.2	9.6	0.1040	SM	A-2-4(0)
		S-10	34.0	18.1	NP	NP	NP	0.0	94.6	5.4		0.4039	SP-SM	A-3
		S-14	54.0	21.4	NP	NP	NP	1.1	94.7	4.2		0.3283	SP	A-3
		S-17	69.0	15.8	NP	NP	NP	19.1	59.5	21.4		0.6308	SM	A-1-b
		S-20	84.0	18.0	NP	NP	NP	1.3	95.1	3.6		0.6703	SM	A-1-b
		S-21	88.5	30.1	23	13	10	18.8	55.7	16.6	8.9	0.3145	SC	A-2-4(0)
139+95.2 RT 74'	BR-3	S-3	3.5	21.8	NP	NP	NP	0.0	89.1	10.9		0.1971	SP-SM	A-2-4(0)
		S-6	13.5	43.7	35	18	17	0.0	43.4	33.2	23.4	0.0649	CL	A-6(7)
		S-9	28.5	22.4	NP	NP	NP	0.0	95.2	4.8		0.3255	SP	A-3
		S-17	68.5	20.1	NP	NP	NP	1.9	88.9	9.2		0.5579	SP-SM	A-1-b
		S-22	93.5	59.4	29	21	8	0.0	44.1	26.6	29.3	0.0504	CL	A-4(2)

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
141+26 LT 45.7'	BR-4	S-2	1.5	18.9	NP	NP	NP	1.4	83.5	8.8	6.3	0.1880	SM	A-2-4(0)
		S-3	5.0	24.2	NP	NP	NP	5.1	82.2	6.5	6.2	0.1904	SM	A-2-4(0)
		S-5	13.5	33.6	NP	NP	NP	0.4	72.0	15.5	12.1	0.1586	SM	A-2-4(0)
		S6/T1	18.0	56.4	77	27	50	0.0	29.7	40.8	29.5	0.0103	CH	A-7-6(35)
141+26 LT 45.7'	BR-4	S6/T1	18.5	55.3	83	28	55	0.0	14.6	37.8	47.6	0.0025	CH	A-7-6(52)
		S6/T1	19.0	31.5	39	23	16	0.0	20.9	45.5	33.6	0.0149	CL	A-6
		S-8	28.5	23.4	NP	NP	NP	0.8	87.5	11.7		0.3206	SP-SM	A-2-4(0)
		S-10	38.5	19.4	NP	NP	NP	0.0	96.9	3.1		0.3522	SP	A-3
		S-12	48.5	23.2	NP	NP	NP	0.3	96.9	2.8		0.2929	SP	A-3
		S-16	68.5	17.5	NP	NP	NP	23.6	73.1	3.3		0.5567	SP	A-1-b
		S-19	83.5	41.1	63	20	43	0.0	22.0	40.7	37.3	0.0091	CH	A-7-6(34)
		S-21	93.5	38.6	65	26	39	0.0	26.1	45.4	28.5	0.0391	CH	A-7-6(30)
141+26 LT 6.4'	BR-5	S-2	1.5	15.8	NP	NP	NP	0.0	84.8	15.2		0.1850	SM	A-2-4(0)
		S-4	5.0	25.1	NP	NP	NP	0.0	90.2	6.8	3.0	0.1922	SP-SM	A-3
		S-7	18.5	26.5	50	17	33	0.0	8.0	54.3	37.7	0.0073	CH	A-7-6(32)
		S-9	28.5	24.1	NP	NP	NP	0.0	85.8	14.2		0.2848	SM	A-2-4(0)
		S-13	48.5	20.7	NP	NP	NP	0.1	92.5	7.4		0.3294	SP-SM	A-3
		S-17	68.5	19.8	NP	NP	NP	21.4	68.8	9.8		0.6210	SW-SM	A-1-b
		S-18	73.5	23.8	NP	NP	NP	0.6	96.8	2.6	0.0	0.5965	SP	A-1-b
		S-21	88.5	42.8	65	25	40	0.0	14.2	43.1	42.7	0.0038	CH	A-7-6(38)
		S-23	98.5	39.9	77	30	47	0.0	6.6	47.1	46.3	0.0024	CH	A-7-5(51)
140+98 RT 70'	BR-6	S-2	1.5	14.1	NP	NP	NP	4.8	76.0	19.2		0.1906	SM	A-2-4(0)
		S-5	8.5	28.2	---	---	---	0.0	69.2	17.1	13.7	0.1453	SM	---
		S-10	33.5	25.5	NP	NP	NP	0.0	96.0	4.0		0.3227	SP	A-3
151+03 LT 23'	BR-9	S-2	1.5	12.9	NP	NP	NP	7.6	73.3	19.1		0.1969	SM	A-2-4(0)
		S-6	13.5	32.0	NP	NP	NP	0.0	24.8	62.7	12.5	0.0484	ML	A-4(0)
		S-8	23.5	162.4	84	42	42	1.8	14.2	46.2	37.8	0.0052	MH	A-7-5(43)

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
		S-9	28.5	26.2	NP	NP	NP	0.0	15.0	69.8	15.2	0.0437	ML	A-4(0)
		S-12	43.5	22.7	NP	NP	NP	0.0	94.0	6.0		0.2328	SP-SM	A-3
		S-16	63.5	19.3	NP	NP	NP	2.5	95.9	1.6		0.5099	SP	A-1-b
		S-22	93.5	17.3	NP	NP	NP	9.5	88.9	1.6		0.6374	SP	A-1-b
150+90 RT 21'	BR-10	S-4	5.0	14.3	NP	NP	NP	3.3	68.9	27.8		0.2011	SM	A-2-4(0)
		S-7	18.5	20.3	NP	NP	NP	0.1	85.5	14.4		0.1874	SM	A-2-4(0)
		S-8	23.5	33.8	NP	NP	NP	0.0	25.4	61.8	12.8	0.0501	ML	A-4(0)
		S-10	33.5	54.5	47	20	27	0.2	9.5	48.8	41.5	0.0037	CL	A-7-6(26)
		S-13	48.5	24.5	NP	NP	NP	0.0	53.7	42.4	3.9	0.0359	SM	A-4(0)
		S-19	78.5	19.9	NP	NP	NP	2.6	96.6	0.8		0.6086	SP	A-1-b
152+05 LT 67'	BR-11	S-1	0.0	15.6	NP	NP	NP	4.6	76.2	19.2		0.1871	SM	A-2-4(0)
		S-3	8.5	76.4	28	12	16	0.0	42.2	30.5	27.3	0.0459	CL	A-6(6)
		S-4	13.5	26.0	NP	NP	NP	0.0	32.8	57.1	10.1	0.0534	ML	A-4(0)
		S-6	23.5	33.6	29	18	11	4.3	53.6	27.5	14.6	0.0926	SC	A-6(1)
		S-10	43.5	18.3	NP	NP	NP	4.4	93.5	2.1		0.4049	SP	A-3
		S-16	73.5	19.5	NP	NP	NP	6.6	88.0	5.4		0.5951	SP-SM	A-1-b
151+54 RT 74'	BR-12	S-2	3.5	13.7	NP	NP	NP	0.9	71.3	27.8		0.1850	SM	A-2-4(0)
		S-5	18.5	23.6	NP	NP	NP	0.0	35.8	58.4	5.8	0.0589	ML	A-4(0)
		S-8	33.5	66.3	41	16	25	0.6	16.8	52.2	30.4	0.0044	CL	A-7-6(20)
		S-12	58.5	29.2	NP	NP	NP	0.0	24.2	68.2	7.6	0.0531	ML	A-4(0)
		S-14	68.5	20.0	NP	NP	NP	0.0	96.9	3.1		0.3575	SP	A-3
		S-18	93.5	20.7	NP	NP	NP	1.2	97.5	1.3		0.4998	SP	A-1-b
152+88 LT 30'	BR-13	S-2	1.5	13.4	NP	NP	NP	1.0	72.2	26.8		0.2149	SM	A-2-4(0)
		S-4	5.0	13.4	NP	NP	NP	3.2	72.4	13.0	11.4	0.1843	SM	A-2-4(0)
		S-7	18.5	24.6	NP	NP	NP	0.0	15.8	75.5	8.7	0.0495	ML	A-4(0)
		S-9	28.5	125.0	57	28	39	0.0	19.1	59.0	21.9	0.0274	CH	A-7-6(35)
		S-12	43.5	20.7	NP	NP	NP	0.0	92.9	7.1		0.2984	SP-SM	A-3

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Soil Classification Summary

Alabama Department of Transportation
ALDOT Project No.: DPI-AL06 (900)
Project Name: I-10 Interchange Modifications
Mobile County, Alabama

Station & Offset	Boring No.	Sample ID	Depth (ft)	Water Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Gravel	% Sand	% Pass 200 % Silt (if hydrometer data available)	% Pass 200 % Clay (if hydrometer data available)	D50 (mm)	USCS	AASHTO Classification
		S-15	63.5	18.3	NP	NP	NP	2.3	94.1	3.6		0.4980	SP	A-1-b
		S-18	78.5	21.8	NP	NP	NP	2.2	94.5	3.3		0.4580	SP	A-1-b
		S-22	98.5	17.4	NP	NP	NP	12.1	85.7	2.2		0.6299	SP	A-1-b
		S-24	108.5	43.2	59	26	33	0.0	6.1	50.5	43.4	0.0030	CH	A-7-6(36)
		S-27	123.5	23.4	NP	NP	NP	0.0	19.4	64.2	16.4	0.0462	ML	A-4(0)
152+65 RT 13'	BR-14	S-1	0.0	7.3	NP	NP	NP	0.0	31.9	60.2	7.9	0.0556	ML	A-4(0)
		S-3	8.5	12.7	21	13	8	1.6	73.6	9.6	15.2	0.2083	SC	A-2-4(0)
		S-5	18.5	22.4	NP	NP	NP	0.0	83.9	16.1		0.1822	SM	A-2-4(0)
		S-7	28.5	26.5	NP	NP	NP	0.0	34.6	54.7	10.7	0.0558	ML	A-4(0)
		S-9	38.5	30.0	45	20	25	0.6	18.3	50.0	31.1	0.0314	CL	A-7-6(20)
		S-12	53.5	22.6	NP	NP	NP	0.4	96.4	3.2		0.3333	SP	A-3
		S-18	83.5	20.1	NP	NP	NP	0.0	84.5	15.5		0.2746	SM	A-2-4(0)
		S-21	98.5	18.0	NP	NP	NP	8.6	57.4	34.0		0.1739	SM	A-2-4(0)

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Soil Classification Summary

Alabama Department of Transportation

ALDOT Project No.: DPI-AL06 (900)

Project Name: I-10 Interchange Modifications

Mobile County, Alabama

BMT-5

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-1	B-1	B-2	B-2	B-2	B-3
Station			113+01	113+01	124+00	124+00	124+00	127+00
Offset			RT 74'	RT 74'	LT 65'	LT 65'	LT 65'	LT 70'
Sample ID			S-1	S-4	S-2	S-4	S-8	S-2
Depth (ft)			0.3	5.0	1.5	5.0	23.5	1.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	99.8
#10	"	(2.00mm)	100.0	100.0	99.4	100.0	100.0	99.8
#20	"	(0.85mm)	97.6	97.9	98.8	99.6	99.7	99.5
#40	"	(425um)	77.5	73.1	97.3	98.1	99.3	98.0
#60	"	(250um)	43.6	41.6	77.0	76.1	98.3	70.8
#100	"	(150um)	24.8	23.4	41.1	34.6	90.6	35.2
#140	"	(106um)	20.5	18.7	29.8	22.8	70.9	24.2
#200	"	(75um)	18.2	16.1	17.4	18.0	48.7	19.9
Clay			7.0	3.1	17.4	18.0	17.3	19.9
Silt			11.2	13.0			31.4	
Total Sand			81.8	83.9	82.0	82.0	51.3	79.9
Total Gravel			0.0	0.0	0.6	0.0	0.0	0.2
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	24	NP
Plastic Limit			NP	NP	NP	NP	18	NP
Plasticity Index			NP	NP	NP	NP	6	NP
USCS			SM	SM	SM	SM	SC-SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(0)	A-2-4(0)

BMT-5

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-3	B-3	B-4	B-4	B-5	B-5
Station			127+00	127+00	127+00	127+00	130+00	130+00
Offset			LT 70'	LT 70'	RT 118'	RT 118'	LT 70'	LT 70'
Sample ID			S-6	S-7	S-1	S-4	S-3	S-6
Depth (ft)			13.5	18.5	0.3	5.0	3.5	13.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	99.5	100.0	100.0
#20	"	(0.85mm)	99.9	99.9	98.6	95.3	100.0	98.5
#40	"	(425um)	98.5	99.8	89.2	64.5	98.7	95.7
#60	"	(250um)	93.1	99.6	63.4	36.6	72.9	90.6
#100	"	(150um)	52.5	99.4	35.8	22.2	28.2	84.5
#140	"	(106um)	35.3	99.2	27.1	17.6	17.1	81.7
#200	"	(75um)	29.6	99.0	23.1	15.2	13.2	79.6
Clay			13.7	53.8	23.1	15.2	13.2	53.8
Silt			15.9	45.2				25.8
Total Sand			70.4	1.0	76.9	84.3	86.8	20.4
Total Gravel			0.0	0.0	0.0	0.5	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	61	NP	NP	NP	54
Plastic Limit			NP	39	NP	NP	NP	28
Plasticity Index			NP	22	NP	NP	NP	26
USCS			SM	MH	SM	SM	SM	CH
AASHTO			A-2-4(0)	A-7-5(30)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-7-6(23)

BMT-5

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-6	B-6	B-7	B-7	B-8	B-8
Station			130+00	130+00	133+00	133+00	136+00	136+00
Offset			LT 30'	LT 30'	LT 20'	LT 20'	LT 50'	LT 50'
Sample ID			S-2	S-4	S-2	S-4	S-2	S-7
Depth (ft)			1.5	5.0	1.5	5.0	1.5	18.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	99.8	100.0	99.7	99.4	100.0	100.0
#20	"	(0.85mm)	97.6	98.7	96.8	94.8	100.0	99.8
#40	"	(425um)	78.1	94.6	76.3	76.8	98.8	99.3
#60	"	(250um)	45.9	75.5	46.9	51.5	77.3	91.6
#100	"	(150um)	27.7	33.5	29.6	34.2	37.9	51.2
#140	"	(106um)	23.2	20.8	25.8	30.3	25.5	37.3
#200	"	(75um)	20.5	15.7	23.8	27.7	20.4	30.7
Clay			20.5	15.7	23.8	27.7	3.9	3.5
Silt							16.5	27.2
Total Sand			79.3	84.3	75.9	71.7	79.6	69.3
Total Gravel			0.2	0.0	0.3	0.6	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-8	B-9	B-9	B-10	B-10	B-10
Station			136+00	136+05	136+05	138+97	138+97	138+97
Offset			LT 50'	LT 50'	LT 50'	LT 95'	LT 95'	LT 95'
Sample ID			S8/T1	S-2	S-3	S-2	S-6	S-9
Depth (ft)			23.5	3.0	5.0	1.5	13.5	28.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	99.6	99.6	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	98.3	98.8	100.0	100.0	100.0
#20	"	(0.85mm)	98.6	96.0	96.5	98.1	99.9	99.9
#40	"	(425um)	98.2	82.8	78.7	80.7	99.3	99.5
#60	"	(250um)	98.0	57.4	48.7	51.5	91.0	64.4
#100	"	(150um)	97.6	38.3	29.5	28.9	47.8	16.9
#140	"	(106um)	96.7	30.5	22.8	23.5	34.8	8.7
#200	"	(75um)	95.9	26.3	18.5	21.1	29.7	5.7
Clay			22.1	11.6	18.5	5.8	5.3	5.7
Silt			73.8	14.7		15.3	24.4	
Total Sand			4.1	72.0	80.3	78.9	70.3	94.3
Total Gravel			0.0	1.7	1.2	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			48	NP	NP	NP	NP	NP
Plastic Limit			17	NP	NP	NP	NP	NP
Plasticity Index			31	NP	NP	NP	NP	NP
USCS			CL	SM	SM	SM	SM	SP-SM
AASHTO			A-7-6(32)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-3

BMT-5

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-11	B-11	B-12	B-12	B-12	B-12
Station			138+80	138+80	142+89	142+89	142+89	142+89
Offset			RT 11'	RT 11'	RT 1'	RT 1'	RT 1'	RT 1'
Sample ID			S-2	S-4	S-3	S-6	S-8	S-9
Depth (ft)			1.5	5.0	3.5	13.5	23.5	28.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	98.7	99.5	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	93.5	96.7	100.0	100.0	99.8	100.0
#40	"	(425um)	84.1	83.3	98.9	99.6	98.6	94.3
#60	"	(250um)	67.0	61.2	80.5	96.6	45.9	63.6
#100	"	(150um)	46.6	36.8	33.9	79.2	17.9	15.6
#140	"	(106um)	36.8	26.0	21.4	74.4	15.1	7.6
#200	"	(75um)	31.0	20.4	16.8	72.3	13.1	4.4
Clay			10.4	20.4	11.5	34.1	3.6	4.4
Silt			20.6		5.3	38.2	9.5	
Total Sand			67.7	79.1	83.2	27.7	86.9	95.6
Total Gravel			1.3	0.5	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			19	NP	NP	96	18	NP
Plastic Limit			12	NP	NP	43	14	NP
Plasticity Index			7	NP	NP	53	4	NP
USCS			SC-SM	SM	SM	MH	SM	SP
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-7-5(42)	A-2-4(0)	A-3

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-12	B-13	B-13	B-13	B-14	B-14
Station			142+89	146+10	146+10	146+10	150+00	150+00
Offset			RT 1'	RT 49'	RT 49'	RT 49'	CL	CL
Sample ID			S-12	S-2	S-6	S-10	S-1	S-3
Depth (ft)			41.0	1.5	13.5	33.5	0.5	3.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	99.7	99.5
#10	"	(2.00mm)	100.0	97.7	100.0	99.4	99.3	98.9
#20	"	(0.85mm)	96.5	95.2	99.8	98.4	97.3	95.9
#40	"	(425um)	52.3	89.3	99.0	90.3	87.1	82.3
#60	"	(250um)	10.7	70.0	86.8	34.1	65.8	58.1
#100	"	(150um)	2.6	36.7	48.6	16.6	36.7	36.1
#140	"	(106um)	1.6	25.8	35.6	13.1	26.7	29.2
#200	"	(75um)	0.9	20.7	26.7	10.5	21.2	25.5
Clay			0.9	20.7	1.2	10.5	21.2	25.5
Silt					25.5			
Total Sand			99.1	77.0	73.3	88.9	78.1	73.4
Total Gravel			0.0	2.3	0.0	0.6	0.7	1.1
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SP	SM	SM	SP-SM	SM	SM
AASHTO			A-3	A-2-4(0)	A-2-4(0)	A-3	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-14	B-15	B-15	B-16	B-16	B-17
Station			150+00	155+79	155+79	801+00	801+00	802+12
Offset			CL	RT 42'	RT 42'	LT 23'	LT 23'	RT 4'
Sample ID			S-6	S-2	S-4	S-2	S-4	S-1
Depth (ft)			13.5	1.5	7.0	2.0	5.0	0.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	92.8	100.0	100.0	100.0	96.1
3/8"	"	(9.5mm)	100.0	88.3	100.0	100.0	100.0	96.1
#4	"	(4.75mm)	100.0	79.4	100.0	99.5	99.7	95.2
#10	"	(2.00mm)	99.2	72.4	100.0	98.8	97.1	94.1
#20	"	(0.85mm)	94.0	67.8	93.9	98.0	95.4	92.3
#40	"	(425um)	76.9	58.2	82.8	94.5	90.6	86.8
#60	"	(250um)	43.0	42.7	61.4	68.9	67.3	63.1
#100	"	(150um)	16.6	25.5	41.1	26.3	26.7	24.1
#140	"	(106um)	12.7	20.0	32.5	15.4	15.9	14.1
#200	"	(75um)	11.0	16.9	26.9	11.0	11.3	10.0
Clay			11.0	16.9	13.5	11.0	11.3	10.0
Silt					13.4			
Total Sand			88.2	55.5	73.1	87.8	85.8	84.1
Total Gravel			0.8	27.6	0.0	1.2	2.9	5.9
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SP-SM	SM	SM	SP-SM	SP-SM	SP-SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-3

BMT-5

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-17	B-17	B-18	B-18	B-18	B-19
Station			802+12	802+12	805+16	805+16	805+16	807+18
Offset			RT 4'	RT 4'	RT 7'	RT 7'	RT 7'	RT 83'
Sample ID			S-3	S-4	S-1	S-3	S-5	S-2
Depth (ft)			3.5	5.0	0.5	3.5	8.5	1.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	97.7	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	96.8	100.0	100.0	100.0
#4	"	(4.75mm)	98.9	100.0	90.1	98.7	100.0	100.0
#10	"	(2.00mm)	96.1	99.5	83.0	98.2	100.0	99.2
#20	"	(0.85mm)	93.2	98.9	77.6	97.6	99.8	95.9
#40	"	(425um)	81.0	96.0	66.7	95.7	99.2	82.2
#60	"	(250um)	56.2	71.8	47.7	60.8	92.1	57.8
#100	"	(150um)	23.8	25.8	29.1	23.9	52.7	35.1
#140	"	(106um)	14.9	13.9	23.7	14.2	38.4	27.8
#200	"	(75um)	10.9	9.5	20.7	10.1	31.7	24.3
Clay			10.9	9.5	20.7	10.1	8.9	11.8
Silt							22.8	12.5
Total Sand			85.2	90.0	62.3	88.1	68.3	74.9
Total Gravel			3.9	0.5	17.0	1.8	0.0	0.8
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SP-SM	SP-SM	SM	SP-SM	SM	SM
AASHTO			A-2-4(0)	A-3	A-2-4(0)	A-3	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-20	B-20	B-20	B-21	B-21	B-21
Station			808+00	808+00	808+00	810+00	810+00	810+00
Offset			LT 50'	LT 50'	LT 50'	LT 5'	LT 5'	LT 5'
Sample ID			S-1	S-4	S-7	S-1	S-2	S-4
Depth (ft)			0.3	7.0	18.5	1.0	3.5	8.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	99.6	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	99.0	92.7	100.0	98.5	99.7	100.0
#4	"	(4.75mm)	93.5	69.8	100.0	96.2	95.9	100.0
#10	"	(2.00mm)	90.5	62.3	100.0	93.7	92.5	100.0
#20	"	(0.85mm)	85.2	59.5	100.0	92.0	90.0	100.0
#40	"	(425um)	59.2	51.2	99.9	87.9	85.7	99.7
#60	"	(250um)	36.8	44.0	98.9	70.3	70.2	95.1
#100	"	(150um)	28.9	36.3	98.1	32.2	40.6	64.6
#140	"	(106um)	23.1	34.1	97.7	21.9	31.9	49.2
#200	"	(75um)	15.7	33.6	96.9	17.0	27.5	41.0
Clay			15.7	33.6	41.3	6.4	10.1	11.8
Silt					55.6	10.6	17.4	29.2
Total Sand			74.8	28.7	3.1	76.7	65.0	59.0
Total Gravel			9.5	37.7	0.0	6.3	7.5	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	87	NP	NP	NP
Plastic Limit			NP	NP	33	NP	NP	NP
Plasticity Index			NP	NP	54	NP	NP	NP
USCS			SM	GM	CH	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-7-5(63)	A-2-4(0)	A-2-4(0)	A-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-22	B-22	B-23	B-23	B-23	B-24
Station			813+00	813+00	816+00	816+00	816+00	816+00
Offset			LT 9'	LT 9'	LT 50'	LT 50'	LT 50'	RT 54'
Sample ID			S-2	S-4	S-2	S-4	S-6	S-2
Depth (ft)			3.5	13.5	1.5	7.0	13.5	3.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	78.1	100.0	100.0	100.0	100.0	84.5
3/4"	"	(19mm)	72.0	100.0	100.0	100.0	100.0	84.5
1/2"	"	(12.5mm)	52.9	100.0	100.0	100.0	100.0	82.7
3/8"	"	(9.5mm)	49.6	100.0	98.6	100.0	100.0	81.5
#4	"	(4.75mm)	36.2	100.0	97.4	97.9	100.0	79.5
#10	"	(2.00mm)	27.1	100.0	93.5	96.3	100.0	77.3
#20	"	(0.85mm)	26.1	99.6	57.9	85.2	99.3	76.0
#40	"	(425um)	25.8	97.9	35.4	58.4	96.9	73.5
#60	"	(250um)	25.8	92.5	34.8	43.8	91.1	60.9
#100	"	(150um)	25.8	87.2	34.8	33.5	80.8	23.3
#140	"	(106um)	25.8	84.5	34.7	22.9	76.4	13.4
#200	"	(75um)	25.8	83.0	34.7	9.9	73.9	10.5
Clay			25.8	41.5	34.7	9.9	32.3	1.1
Silt				41.5			41.6	9.4
Total Sand			1.3	17.0	58.8	86.4	26.1	66.8
Total Gravel			72.9	0.0	6.5	3.7	0.0	22.7
ATTERBERG LIMITS								
Liquid Limit			NP	130	NP	NP	102	NP
Plastic Limit			NP	47	NP	NP	73	NP
Plasticity Index			NP	83	NP	NP	29	NP
USCS			GM	CH	SM	SP-SM	MH	SP-SM
AASHTO			A-2-4(0)	A-7-5(81)	A-2-4(0)	A-3	A-7-5(31)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-24	B-25	B-25	B-25	B-26	B-26
Station			816+00	819+00	819+00	819+00	819+00	819+00
Offset			RT 54'	RT 53.5'	LT 60'	LT 60'	RT 60'	RT 60'
Sample ID			S-4	S-1	S-3	S-6	S-1	S-3
Depth (ft)			8.5	0.0	3.5	13.5	1.0	7.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	98.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	89.7	100.0	97.4	100.0
#4	"	(4.75mm)	100.0	100.0	59.9	100.0	95.1	100.0
#10	"	(2.00mm)	100.0	98.3	32.0	100.0	93.0	100.0
#20	"	(0.85mm)	99.8	83.0	30.5	100.0	91.6	99.0
#40	"	(425um)	99.3	72.9	30.3	99.7	85.2	93.2
#60	"	(250um)	90.2	61.8	29.5	99.2	64.1	72.4
#100	"	(150um)	52.5	60.6	29.3	98.0	31.8	24.4
#140	"	(106um)	36.8	56.5	29.3	97.0	25.6	16.6
#200	"	(75um)	31.6	49.1	29.3	96.0	22.2	13.0
Clay			11.6	49.1	29.3	51.3	11.0	0.0
Silt			20.0			44.7	11.2	13.0
Total Sand			68.4	49.2	2.7	4.0	70.8	87.0
Total Gravel			0.0	1.7	68.0	0.0	7.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	67	NP	NP
Plastic Limit			NP	NP	NP	24	NP	NP
Plasticity Index			NP	NP	NP	43	NP	NP
USCS			SM	SM	GM	CH	SM	SM
AASHTO			A-2-4(0)	A-4(0)	A-2-4(0)	A-7-6(47)	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-27	B-27	B-28	B-28	B-29	B-30
Station			821+97	821+97	824+00	824+00	827+00	831+00
Offset			RT 1'	RT 1'	CL	CL	CL	CL
Sample ID			S-2	S-4	S-2	S-4	S-1	S-1
Depth (ft)			1.5	7.0	1.5	5.0	0.3	0.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	97.8	100.0	89.6	100.0	98.5	100.0
3/8"	"	(9.5mm)	95.7	100.0	89.2	100.0	96.1	100.0
#4	"	(4.75mm)	90.5	97.1	85.8	99.1	87.5	100.0
#10	"	(2.00mm)	83.4	94.2	81.3	98.2	79.7	100.0
#20	"	(0.85mm)	80.7	92.5	76.0	96.9	74.9	94.4
#40	"	(425um)	74.0	87.9	63.0	89.9	64.4	79.1
#60	"	(250um)	56.7	70.0	28.2	60.5	44.7	52.6
#100	"	(150um)	31.6	36.1	9.4	21.1	24.5	32.7
#140	"	(106um)	24.3	26.8	7.5	13.1	18.5	27.6
#200	"	(75um)	19.5	21.7	6.8	9.8	16.1	24.2
Clay			4.2	2.6	6.8	9.8	16.1	13.1
Silt			15.3	19.1				11.1
Total Sand			63.9	72.5	74.5	88.4	63.6	75.8
Total Gravel			16.6	5.8	18.7	1.8	20.3	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SP-SM	SP-SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-3	A-3	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-30	B-31	B-31	B-32	B-32	B-33
Station			831+00	833+99	833+99	1601+00	1601+00	1603+97
Offset			CL	LT 3'	LT 3'	CL	CL	LT 6'
Sample ID			S-3	S-1	S-4	S-2	S-5	S-2
Depth (ft)			3.5	1.0	5.5	2.0	8.5	2.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	95.6	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	92.7	100.0	97.4	100.0	100.0	100.0
3/8"	"	(9.5mm)	89.8	100.0	95.0	100.0	100.0	100.0
#4	"	(4.75mm)	83.5	100.0	84.3	100.0	100.0	100.0
#10	"	(2.00mm)	79.6	100.0	76.1	100.0	100.0	100.0
#20	"	(0.85mm)	72.8	94.1	72.5	99.5	99.6	99.2
#40	"	(425um)	60.5	79.0	68.2	97.6	97.8	97.8
#60	"	(250um)	40.4	50.0	55.2	79.7	84.6	80.9
#100	"	(150um)	24.2	29.4	29.1	31.5	47.4	51.3
#140	"	(106um)	19.3	23.0	19.4	19.8	33.8	30.8
#200	"	(75um)	16.1	19.2	14.1	14.8	24.4	17.0
Clay			16.1	6.4	14.1	14.8	4.8	7.5
Silt				12.8			19.6	9.5
Total Sand			63.5	80.8	62.0	85.2	75.6	83.0
Total Gravel			20.4	0.0	23.9	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-33	B-33	B-34	B-34	B-34	B-35
Station			1603+97	1603+97	1501+01	1501+01	1501+01	1503+00
Offset			LT 6'	LT 6'	LT 7'	LT 7'	LT 7'	LT 2'
Sample ID			S-5	S-7	S-2	S-4	S-6	S-1
Depth (ft)			8.5	18.5	2.0	5.0	13.5	0.3
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	99.1	99.3	98.5	98.4	96.8	94.8
#40	"	(425um)	98.3	98.1	97.2	97.1	94.2	90.6
#60	"	(250um)	91.7	96.8	79.6	76.7	76.2	66.1
#100	"	(150um)	71.0	95.4	55.9	50.6	52.2	44.2
#140	"	(106um)	53.9	94.4	37.6	31.1	36.7	31.3
#200	"	(75um)	40.4	93.3	18.5	10.9	25.6	19.1
Clay			14.4	11.7	18.5	10.9	8.7	19.1
Silt			26.0	81.6			16.9	
Total Sand			59.6	6.7	81.5	89.1	74.4	80.9
Total Gravel			0.0	0.0	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			22	50	NP	NP	NP	NP
Plastic Limit			15	36	NP	NP	NP	NP
Plasticity Index			7	14	NP	NP	NP	NP
USCS			SC-SM	MH	SM	SP-SM	SM	SM
AASHTO			A-4(0)	A-7-5(18)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-35	B-35	B-36	B-36	B-36	B-37
Station			1503+00	1503+00	1700+14	1700+14	1700+14	2200+24
Offset			LT 2'	LT 2'	RT 7'	RT 7'	RT 7'	LT 5'
Sample ID			S-3	S-6	S-1	S-2	S-6	S-1
Depth (ft)			3.5	13.5	0.5	2.0	13.5	0.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	---	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	---	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	---	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	---	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	---	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	---	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	---	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	---	100.0	100.0	99.6
#4	"	(4.75mm)	100.0	100.0		100.0	100.0	87.9
#10	"	(2.00mm)	100.0	100.0	62.7	100.0	100.0	80.0
#20	"	(0.85mm)	98.3	98.2	59.2	98.8	98.9	74.1
#40	"	(425um)	97.0	96.7	49.9	97.8	98.1	61.9
#60	"	(250um)	79.4	80.4	37.2	82.6	86.2	44.5
#100	"	(150um)	54.9	56.4	25.4	53.8	64.8	28.4
#140	"	(106um)	35.7	39.9	19.0	32.9	49.2	23.1
#200	"	(75um)	15.5	26.9	14.5	17.6	37.5	20.0
Clay			15.5	8.3	3.7	0.6	12.4	20.0
Silt				18.6	10.8	17.0	25.1	
Total Sand			84.5	73.1	48.2	82.4	62.5	60.0
Total Gravel			0.0	0.0	37.3	0.0	0.0	20.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	22	NP
Plastic Limit			NP	NP	NP	NP	13	NP
Plasticity Index			NP	NP	NP	NP	9	NP
USCS			SM	SM	SM	SM	SC	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-37	B-37	B-38A	B-38A	B-38A	B-38A
Station			2200+24	2200+24	1802+50	1802+50	1802+50	1802+50
Offset			LT 5'	LT 5'	LT 25'	LT 25'	LT 25'	LT 25'
Sample ID			S-3	S-6	S-1	S-3	S-6	S-8
Depth (ft)			3.5	13.5	0.6	3.5	13.5	23.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	96.5	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	92.7	100.0	100.0	100.0
#10	"	(2.00mm)	99.2	100.0	90.0	99.0	100.0	100.0
#20	"	(0.85mm)	92.0	100.0	85.6	97.5	96.5	100.0
#40	"	(425um)	67.1	99.5	80.8	96.0	93.6	100.0
#60	"	(250um)	31.9	97.2	61.4	78.8	75.8	98.6
#100	"	(150um)	10.9	91.2	40.5	54.6	51.8	79.7
#140	"	(106um)	7.4	88.1	26.3	35.7	36.1	61.2
#200	"	(75um)	5.6	84.6	12.2	16.0	24.6	44.0
Clay			5.6	23.0	12.2	16.0	6.9	12.5
Silt				61.6			17.7	31.5
Total Sand			93.6	15.4	77.8	83.0	75.4	56.0
Total Gravel			0.8	0.0	10.0	1.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	42	NP	NP	NP	NP
Plastic Limit			NP	18	NP	NP	NP	NP
Plasticity Index			NP	24	NP	NP	NP	NP
USCS			SP-SM	CL	SM	SM	SM	SM
AASHTO			A-3	A-7-6(20)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-39	B-39	B-39	B-40	B-40	B-41
Station			2301+64	2301+64	2301+64	2101+24	2101+24	1701+50
Offset			LT 3'	LT 3'	LT 3'	CL	CL	CL
Sample ID			S-1	S-2	S-4	S-1	S-3	S-2
Depth (ft)			0.5	2.0	5.0	0.5	3.5	1.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	98.3	100.0	100.0
3/8"	"	(9.5mm)	97.7	99.0	100.0	90.9	100.0	100.0
#4	"	(4.75mm)	82.9	98.6	100.0	86.5	99.6	100.0
#10	"	(2.00mm)	71.1	98.2	100.0	82.9	98.3	100.0
#20	"	(0.85mm)	64.1	97.5	98.5	80.0	96.9	93.0
#40	"	(425um)	54.0	95.4	95.6	69.3	94.4	87.3
#60	"	(250um)	38.2	79.9	78.8	49.2	78.3	62.5
#100	"	(150um)	24.7	33.8	34.8	27.3	33.5	40.9
#140	"	(106um)	20.5	20.5	22.7	20.7	21.7	28.5
#200	"	(75um)	17.5	14.4	17.0	17.2	16.6	17.0
Clay			17.5	14.4	8.5	2.0	16.6	17.0
Silt					8.5	15.2		
Total Sand			53.6	83.8	83.0	65.7	81.7	83.0
Total Gravel			28.9	1.8	0.0	17.1	1.7	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-41	B-41	B-41	B-41	B-42	B-42
Station			1701+50	1701+50	1701+50	1701+50	1702+52	1702+52
Offset			CL	CL	CL	CL	RT 46'	RT 46'
Sample ID			S-4	S-7	S-9	S-11	S-2	S-5
Depth (ft)			5.0	18.5	28.5	38.5	1.5	8.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	99.3
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	97.8
#20	"	(0.85mm)	96.1	99.1	99.3	100.0	98.2	93.0
#40	"	(425um)	92.9	98.4	98.7	100.0	93.2	75.2
#60	"	(250um)	74.8	79.3	85.7	100.0	73.0	48.3
#100	"	(150um)	55.2	53.4	61.6	91.4	41.3	29.6
#140	"	(106um)	41.7	33.3	43.7	80.5	30.7	24.6
#200	"	(75um)	28.3	12.4	29.8	66.5	25.7	21.7
Clay			28.3	12.4	6.2	13.7	25.7	21.7
Silt					23.6	52.8		
Total Sand			71.7	87.6	70.2	33.5	74.3	76.1
Total Gravel			0.0	0.0	0.0	0.0	0.0	2.2
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	26	NP	NP
Plastic Limit			NP	NP	NP	20	NP	NP
Plasticity Index			NP	NP	NP	6	NP	NP
USCS			SM	SM	SM	CL-ML	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(2)	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-42	B-42	B-43	B-43	B-43	B-43
Station			1702+52	1702+52	1703+00	1703+00	1703+00	1703+00
Offset			RT 46'	RT 46'	CL	CL	CL	CL
Sample ID			S-8	T-1	S-2	S-3	S-5	S-7
Depth (ft)			23.5	30.0	1.5	3.5	8.5	18.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	98.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	95.1
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	92.4
#10	"	(2.00mm)	100.0	100.0	98.6	99.8	99.6	90.6
#20	"	(0.85mm)	99.9	95.1	98.4	97.7	96.4	89.4
#40	"	(425um)	99.0	90.7	97.0	85.6	81.0	86.8
#60	"	(250um)	85.7	82.4	93.7	62.7	57.3	70.5
#100	"	(150um)	46.1	69.6	69.0	39.6	35.6	29.2
#140	"	(106um)	35.9	66.9	44.0	30.5	28.9	18.9
#200	"	(75um)	29.8	62.8	35.0	24.6	24.6	13.9
Clay			8.8	15.3	17.7	8.7	13.3	6.1
Silt			21.0	47.5	17.3	15.9	11.3	7.8
Total Sand			70.2	37.2	63.6	75.2	75.0	76.7
Total Gravel			0.0	0.0	1.4	0.2	0.4	9.4
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	18	NP	NP
Plastic Limit			NP	NP	NP	13	NP	NP
Plasticity Index			NP	NP	NP	5	NP	NP
USCS			SM	ML	SM	SC-SM	SM	SM
AASHTO			A-2-4(0)	A-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-44	B-44	B-44	B-44	B-44	B-44
Station			1702+82	1702+82	1702+82	1702+82	1702+82	1702+82
Offset			LT 74'	LT 74'	LT 74'	LT 74'	LT 74'	LT 74'
Sample ID			S-2	S-3	S-5	S-7	S8/T1	S-9
Depth (ft)			1.5	3.5	8.5	18.5	23.5	28.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	79.2	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	70.8	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	59.5	98.5	98.9	100.0
3/8"	"	(9.5mm)	100.0	100.0	56.7	98.5	98.6	100.0
#4	"	(4.75mm)	100.0	100.0	50.2	97.8	93.2	100.0
#10	"	(2.00mm)	100.0	100.0	46.6	97.1	87.9	100.0
#20	"	(0.85mm)	98.7	97.8	43.9	96.4	87.6	99.6
#40	"	(425um)	88.9	87.8	38.3	94.5	86.8	99.0
#60	"	(250um)	68.5	70.1	28.5	76.9	74.4	96.4
#100	"	(150um)	43.9	51.8	14.8	35.5	33.4	90.4
#140	"	(106um)	34.1	42.5	10.9	26.2	26.0	88.7
#200	"	(75um)	27.7	33.7	8.8	21.5	22.0	88.3
Clay			14.3	16.7	1.4	6.9	11.3	38.1
Silt			13.4	17.0	7.4	14.6	10.7	50.2
Total Sand			72.3	66.3	37.8	75.6	65.9	11.7
Total Gravel			0.0	0.0	53.4	2.9	12.1	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	---	NP	NP	NP	108
Plastic Limit			NP	---	NP	NP	NP	32
Plasticity Index			NP	---	NP	NP	NP	76
USCS			SM	SM	GP-GM	SM	SM	CH
AASHTO			A-2-4(0)	A-2-4	A-1-b	A-2-4(0)	A-2-4(0)	A-7-5(77)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-44	B-45	B-45	B-45	B-45	B-45
Station			1702+82	1705+00	1705+00	1705+00	1705+00	1705+00
Offset			LT 74'	CL	CL	CL	CL	CL
Sample ID			S-10	S-2	S-4	S-5	S-6	S7/T1
Depth (ft)			33.5	1.5	7.0	8.5	13.5	18.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	99.0	96.0	99.9	99.9	99.8	100.0
#40	"	(425um)	97.2	75.5	98.7	98.8	99.0	99.7
#60	"	(250um)	93.3	50.1	83.1	82.2	89.9	98.5
#100	"	(150um)	85.6	27.7	33.6	30.2	50.8	94.0
#140	"	(106um)	82.6	21.2	22.1	18.1	39.0	90.8
#200	"	(75um)	77.2	17.7	16.7	12.4	32.2	82.4
Clay			29.3	9.0	16.7	4.4	7.0	29.3
Silt			47.9	8.7		8.0	25.2	53.1
Total Sand			22.8	82.3	83.3	87.6	67.8	17.6
Total Gravel			0.0	0.0	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			74	NP	NP	NP	NP	70
Plastic Limit			18	NP	NP	NP	NP	26
Plasticity Index			56	NP	NP	NP	NP	44
USCS			CH	SM	SM	SM	SM	CH
AASHTO			A-7-6(44)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-7-6(39)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-46	B-46	B-46	B-47	B-47	B-47
Station			1707+00	1707+00	1707+00	1707+00	1707+00	1707+00
Offset			LT 70'	LT 70'	LT 70'	CL	CL	CL
Sample ID			S-2	S-5	S-8	S-3	S-6	S8/T1
Depth (ft)			1.5	8.5	23.5	3.5	15.0	23.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	
1/2"	"	(12.5mm)	100.0	100.0	100.0	93.8	100.0	
3/8"	"	(9.5mm)	100.0	100.0	100.0	93.0	98.9	
#4	"	(4.75mm)	100.0	100.0	100.0	89.1	98.5	
#10	"	(2.00mm)	100.0	99.3	100.0	86.5	97.9	
#20	"	(0.85mm)	99.1	97.3	99.7	84.5	97.8	
#40	"	(425um)	95.5	88.3	98.0	79.7	95.2	
#60	"	(250um)	69.3	73.6	84.8	65.9	83.0	
#100	"	(150um)	26.2	50.8	36.3	40.1	37.8	
#140	"	(106um)	17.8	39.0	23.5	32.1	28.3	
#200	"	(75um)	16.4	32.4	18.0	28.3	24.3	
Clay			16.4	32.4	18.0	28.3	8.8	
Silt							15.5	
Total Sand			83.6	66.9	82.0	58.2	73.6	
Total Gravel			0.0	0.7	0.0	13.5	2.1	
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	35
Plastic Limit			NP	NP	NP	NP	NP	33
Plasticity Index			NP	NP	NP	NP	NP	2
USCS			SM	SM	SM	SM	SM	ML
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	---

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-47	B-48	B-48	B-48	B-49	B-49
Station			1707+00	1709+00	1709+00	1709+00	402+19	402+19
Offset			CL	CL	CL	CL	RT 48'	RT 48'
Sample ID			S-9	S-2	S-4	S-6	S-2	S-4
Depth (ft)			28.5	1.5	7.0	13.5	2.0	5.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	97.5	99.8	99.3	100.0	100.0	100.0
#10	"	(2.00mm)	96.5	99.0	96.6	100.0	99.3	99.9
#20	"	(0.85mm)	96.1	95.6	91.5	99.9	98.3	94.9
#40	"	(425um)	95.8	79.8	90.7	99.4	83.5	58.2
#60	"	(250um)	93.8	35.9	90.5	90.8	51.3	30.3
#100	"	(150um)	43.8	14.7	68.2	51.3	29.7	20.0
#140	"	(106um)	34.2	14.2	46.6	36.1	24.2	16.8
#200	"	(75um)	30.6	13.7	23.6	29.9	21.4	14.8
Clay			30.6	13.7	23.6	11.5	9.2	6.5
Silt						18.4	12.2	8.3
Total Sand			65.9	85.3	73.0	70.1	77.9	85.1
Total Gravel			3.5	1.0	3.4	0.0	0.7	0.1
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-50	B-50	B-51	B-51	B-51A	B-51A
Station			405+27	405+27	407+85	407+85	407+65	407+65
Offset			RT 29'	RT 29'	LT 6'	LT 6'	LT 30'	LT 30'
Sample ID			S-2	S-4	S-2	S-6	S-2	S-3/T-1
Depth (ft)			3.5	6.5	2.3	13.5	23.5	28.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	98.2	94.5	100.0	100.0
#10	"	(2.00mm)	99.4	99.7	97.4	92.1	100.0	100.0
#20	"	(0.85mm)	95.9	97.5	94.9	90.3	99.8	98.6
#40	"	(425um)	70.0	80.0	82.5	84.0	98.9	95.7
#60	"	(250um)	36.6	46.1	55.4	62.1	89.4	92.1
#100	"	(150um)	18.5	23.1	35.2	28.8	58.3	88.5
#140	"	(106um)	13.4	17.8	27.6	18.6	43.9	86.3
#200	"	(75um)	10.1	14.7	22.7	14.3	35.1	84.3
Clay			10.1	14.7	22.7	14.3	35.1	25.3
Silt								59.0
Total Sand			89.3	85.0	74.7	77.8	64.9	15.7
Total Gravel			0.6	0.3	2.6	7.9	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	18	NP	NP	177
Plastic Limit			NP	NP	14	NP	NP	75
Plasticity Index			NP	NP	4	NP	NP	102
USCS			SP-SM	SM	SC-SM	SM	SM	CH
AASHTO			A-3	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-7-5(107)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-51A	B-52	B-52	B-52	B-52	B-52
Station			407+65	410+50	410+50	410+50	410+50	410+50
Offset			LT 30'	LT 30'	LT 30'	LT 30'	LT 30'	LT 30'
Sample ID			S-4	S-1	S-3	S-6	S-9	S-11
Depth (ft)			33.5	0.4	3.5	13.5	28.5	38.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	99.4	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	98.2	100.0	100.0
#4	"	(4.75mm)	100.0	99.2	100.0	96.1	100.0	100.0
#10	"	(2.00mm)	100.0	98.6	98.0	95.7	100.0	100.0
#20	"	(0.85mm)	100.0	93.9	92.6	93.0	99.8	100.0
#40	"	(425um)	99.8	86.1	75.3	82.4	99.4	100.0
#60	"	(250um)	98.1	70.4	49.3	60.3	92.4	99.6
#100	"	(150um)	71.1	48.6	29.0	42.2	64.8	97.8
#140	"	(106um)	47.5	38.2	20.9	34.1	50.0	96.4
#200	"	(75um)	33.8	32.0	16.2	29.1	38.5	94.6
Clay			33.8	14.5	16.2	14.2	5.5	37.9
Silt				17.5		14.9	33.0	56.7
Total Sand			66.2	66.6	81.8	66.6	61.5	5.4
Total Gravel			0.0	1.4	2.0	4.3	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			---	19	NP	22	NP	48
Plastic Limit			---	15	NP	12	NP	20
Plasticity Index			---	4	NP	10	NP	28
USCS			SM	SC-SM	SM	SC	SM	CL
AASHTO			A-2-4	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(0)	A-7-6(29)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
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Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-52	B-53	B-53	B-53	B-54	B-54
Station			410+50	700+00	700+00	700+00	703+00	703+00
Offset			LT 30'	LT 10'	LT 10'	LT 10'	LT 20'	LT 20'
Sample ID			S-13	S-2	S-5	S-7/T-1	S-2	S-4
Depth (ft)			48.5	1.5	8.5	18.5	1.5	5.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	100.0	100.0	96.3	99.9	100.0	100.0
#40	"	(425um)	99.7	98.6	94.4	99.6	98.5	98.3
#60	"	(250um)	73.6	78.0	73.0	99.2	75.0	70.1
#100	"	(150um)	17.5	37.2	33.8	97.5	33.5	25.1
#140	"	(106um)	9.0	25.2	22.7	95.9	22.0	14.0
#200	"	(75um)	6.0	20.1	17.4	92.1	17.2	10.0
Clay			6.0	20.1	17.4	44.1	17.2	10.0
Silt						48.0		
Total Sand			94.0	79.9	82.6	7.9	82.8	90.0
Total Gravel			0.0	0.0	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	50	NP	NP
Plastic Limit			NP	NP	NP	20	NP	NP
Plasticity Index			NP	NP	NP	30	NP	NP
USCS			SP-SM	SM	SM	CH	SM	SP-SM
AASHTO			A-3	A-2-4(0)	A-2-4(0)	A-7-6(30)	A-2-4(0)	A-3

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-54	B-54	B-55	B-55	B-55	B-56
Station			703+00	703+00	706+00	706+00	706+00	707+86
Offset			LT 20'	LT 20'	LT 24'	LT 24'	LT 24'	LT 23'
Sample ID			S-6	S-9	S-2	S-4	S-9	S-2
Depth (ft)			13.5	28.5	1.5	5.0	28.5	1.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	98.1
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	97.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	88.9
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	99.8	80.8
#20	"	(0.85mm)	100.0	100.0	99.7	99.8	99.6	75.4
#40	"	(425um)	99.5	99.6	97.8	97.9	97.7	66.0
#60	"	(250um)	91.9	66.5	75.3	69.6	34.7	43.6
#100	"	(150um)	45.5	17.7	34.5	23.7	5.2	22.7
#140	"	(106um)	32.2	8.0	23.2	12.4	3.2	17.1
#200	"	(75um)	27.6	4.2	18.4	8.5	2.3	14.0
Clay			8.6	4.2	18.4	8.5	2.3	14.0
Silt			19.0					
Total Sand			72.4	95.8	81.6	91.5	97.5	66.8
Total Gravel			0.0	0.0	0.0	0.0	0.2	19.2
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SP	SM	SP-SM	SP	SM
AASHTO			A-2-4(0)	A-3	A-2-4(0)	A-3	A-3	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-56	B-56	B-56	B-56	B-57	B-57
Station			707+86	707+86	707+86	707+86	1201+00	1201+00
Offset			LT 23'	LT 23'	LT 23'	LT 23'	LT 30'	LT 30'
Sample ID			S-4	S-6	S-8	S-10	S-3	S-6
Depth (ft)			7.0	13.5	23.5	33.5	3.5	13.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	99.5	100.0	100.0	100.0	99.9
#10	"	(2.00mm)	100.0	98.7	99.8	100.0	100.0	98.7
#20	"	(0.85mm)	99.8	97.9	99.3	99.2	99.9	98.0
#40	"	(425um)	98.8	94.0	98.2	95.1	98.7	96.6
#60	"	(250um)	89.3	79.1	94.9	33.0	76.0	92.3
#100	"	(150um)	58.4	39.3	89.2	18.1	33.3	85.7
#140	"	(106um)	43.4	27.7	86.5	15.3	22.2	82.6
#200	"	(75um)	29.2	22.7	81.1	12.4	17.5	80.8
Clay			29.2	8.4	28.0	12.4	17.5	80.8
Silt				14.3	53.1			
Total Sand			70.8	76.0	18.7	87.6	82.5	17.9
Total Gravel			0.0	1.3	0.2	0.0	0.0	1.3
ATTERBERG LIMITS								
Liquid Limit			NP	NP	49	NP	NP	82
Plastic Limit			NP	NP	16	NP	NP	33
Plasticity Index			NP	NP	33	NP	NP	49
USCS			SM	SM	CL	SM	SM	CH
AASHTO			A-2-4(0)	A-2-4(0)	A-7-6(26)	A-2-4(0)	A-2-4(0)	A-7-5(45)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-57	B-57	B-58	B-58	B-58	B-58
Station			1201+00	1201+00	1203+00	1203+00	1203+00	1203+00
Offset			LT 30'	LT 30'	LT 30'	LT 30'	LT 30'	LT 30'
Sample ID			S-8	S-10	S-2	S-4	S-6	S-8
Depth (ft)			23.5	33.5	1.5	5.0	13.5	23.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	99.1	100.0
#4	"	(4.75mm)	100.0	100.0	99.8	100.0	98.4	100.0
#10	"	(2.00mm)	100.0	100.0	99.2	99.4	97.0	100.0
#20	"	(0.85mm)	100.0	100.0	96.2	98.5	95.7	99.8
#40	"	(425um)	99.9	79.2	82.3	95.3	88.7	98.6
#60	"	(250um)	84.9	10.9	54.5	76.8	72.3	80.8
#100	"	(150um)	44.9	5.8	34.7	57.1	53.5	32.8
#140	"	(106um)	29.5	4.2	28.5	44.8	43.8	19.8
#200	"	(75um)	19.1	2.8	25.3	36.8	36.1	14.2
Clay			19.1	2.8	25.3	7.1	5.8	14.2
Silt						29.7	30.3	
Total Sand			80.9	97.2	73.9	62.6	60.9	85.8
Total Gravel			0.0	0.0	0.8	0.6	3.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SP	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-3	A-2-4(0)	A-4(0)	A-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-58	B-58	B-59	B-59	B-59	B-60
Station			1203+00	1203+00	1203+00	1203+00	1203+00	1205+00
Offset			LT 30'	LT 30'	RT 30'	RT 30'	RT 30'	LT 20'
Sample ID			S-10	S-12	S-4	S-7	S9/T1	S-4
Depth (ft)			33.5	43.5	5.0	18.5	28.5	5.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	99.7
#10	"	(2.00mm)	100.0	99.3	100.0	100.0	99.0	99.7
#20	"	(0.85mm)	99.8	98.5	97.6	99.7	98.4	98.1
#40	"	(425um)	99.2	98.4	92.9	99.1	97.9	95.4
#60	"	(250um)	87.2	98.2	66.3	93.8	97.0	82.2
#100	"	(150um)	41.5	97.6	38.5	60.0	96.1	61.4
#140	"	(106um)	31.6	96.5	28.0	45.8	95.4	48.6
#200	"	(75um)	27.5	93.1	22.2	37.5	94.6	38.0
Clay			6.6	33.4	22.2	3.0	43.7	23.2
Silt			20.9	59.7		34.5	50.9	14.8
Total Sand			72.5	6.2	77.8	62.5	4.4	61.7
Total Gravel			0.0	0.7	0.0	0.0	1.0	0.3
ATTERBERG LIMITS								
Liquid Limit			NP	78	NP	NP	98	23
Plastic Limit			NP	29	NP	NP	35	13
Plasticity Index			NP	49	NP	NP	63	10
USCS			SM	CH	SM	SM	CH	SC
AASHTO			A-2-4(0)	A-7-6(53)	A-2-4(0)	A-4(0)	A-7-5(72)	A-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-60	B-60	B-60	B-61	B-61	B-61
Station			1205+00	1205+00	1205+00	1207+00	1207+00	1207+00
Offset			LT 20'	LT 20'	LT 20'	LT 20'	LT 25'	LT 25'
Sample ID			S-5	S-9	S10/T1	S-2	S-4	S-6
Depth (ft)			8.5	28.5	33.5	1.5	7.0	13.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	96.6	98.2	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	96.4	95.6	100.0	100.0
#4	"	(4.75mm)	99.7	100.0	96.2	90.4	100.0	100.0
#10	"	(2.00mm)	99.2	100.0	96.2	84.4	100.0	100.0
#20	"	(0.85mm)	96.1	100.0	95.0	79.1	98.5	93.3
#40	"	(425um)	87.5	99.4	92.1	65.2	89.3	78.1
#60	"	(250um)	66.7	92.7	89.7	44.1	68.5	56.3
#100	"	(150um)	34.3	47.9	82.0	26.5	46.7	39.5
#140	"	(106um)	32.5	35.2	77.9	21.2	37.1	32.3
#200	"	(75um)	19.7	29.9	74.2	18.3	30.6	26.8
Clay			4.1	8.9	34.1	6.7	15.7	26.8
Silt			15.6	21.0	40.1	11.6	14.9	
Total Sand			79.5	70.1	22.0	66.1	69.4	73.2
Total Gravel			0.8	0.0	3.8	15.6	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	39	NP	23	NP
Plastic Limit			NP	NP	21	NP	18	NP
Plasticity Index			NP	NP	18	NP	5	NP
USCS			SM	SM	CL	SM	SC-SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-6(12)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-61	B-62	B-62	B-63	B-63	B-63
Station			1207+00	1212+96	1212+96	1301+99	1301+99	1301+99
Offset			LT 25'	RT 10'	RT 10'	RT 25'	RT 25'	RT 25'
Sample ID			S-9	S-2	S-4	S-2	S-4	S-5
Depth (ft)			28.5	2.0	7.0	1.5	5.0	8.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	97.8	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	97.8	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	96.8	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	96.2	100.0	99.6	99.8	100.0
#20	"	(0.85mm)	100.0	92.8	94.5	98.4	98.8	99.5
#40	"	(425um)	99.6	76.6	84.7	95.4	95.8	98.6
#60	"	(250um)	90.9	52.5	64.5	79.6	76.2	87.5
#100	"	(150um)	46.8	32.6	45.7	46.6	31.1	56.0
#140	"	(106um)	34.9	26.5	37.8	34.5	20.1	41.4
#200	"	(75um)	29.9	23.2	32.6	27.6	14.7	27.6
Clay			10.0	13.0	32.6	17.1	14.7	5.7
Silt			19.9	10.2		10.5		21.9
Total Sand			70.1	73.0	67.4	72.0	85.1	72.4
Total Gravel			0.0	3.8	0.0	0.4	0.2	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-63	B-63	B-63	B-64	B-64	B-64
Station			1301+99	1301+99	1301+99	1303+97	1303+97	1303+97
Offset			RT 25'	RT 25'	RT 25'	LT 3'	LT 3'	LT 3'
Sample ID			S-7	S-8	S-10	S-2	S-5	S-8
Depth (ft)			18.5	23.5	33.5	2.0	13.5	28.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	99.8	100.0	100.0	100.0
#20	"	(0.85mm)	98.9	99.9	99.2	94.0	99.7	99.6
#40	"	(425um)	97.7	85.2	73.0	89.6	99.1	98.2
#60	"	(250um)	94.9	11.4	17.6	72.9	92.6	59.5
#100	"	(150um)	90.8	3.0	6.6	39.0	63.4	20.9
#140	"	(106um)	88.7	2.3	4.7	27.1	56.8	12.2
#200	"	(75um)	86.5	2.0	3.5	21.3	54.7	8.0
Clay			41.0	2.0	3.5	21.3	22.6	8.0
Silt			45.5				32.1	
Total Sand			13.5	98.0	96.3	78.7	45.3	92.0
Total Gravel			0.0	0.0	0.2	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			119	NP	NP	NP	NP	NP
Plastic Limit			56	NP	NP	NP	NP	NP
Plasticity Index			63	NP	NP	NP	NP	NP
USCS			MH	SP	SP	SM	ML	SP-SM
AASHTO			A-7-5(68)	A-3	A-3	A-2-4(0)	A-4(0)	A-3

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-65	B-65	B-65	B-65	B-66	B-66
Station			1306+00	1306+00	1306+00	1306+00	1307+96	1307+96
Offset			LT 10'	LT 10'	LT 10'	LT 10'	LT 7'	LT 7'
Sample ID			S-2	S-4	S-7	S-11	S-1	S-3
Depth (ft)			1.5	5.0	18.5	38.5	0.5	3.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	96.9	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	95.1	100.0
#4	"	(4.75mm)	97.9	100.0	100.0	100.0	82.3	100.0
#10	"	(2.00mm)	96.7	100.0	100.0	99.7	70.4	100.0
#20	"	(0.85mm)	94.8	99.8	100.0	97.6	61.7	99.9
#40	"	(425um)	91.4	98.5	97.8	79.8	50.1	98.6
#60	"	(250um)	76.7	80.5	94.1	20.3	36.9	81.1
#100	"	(150um)	35.4	29.2	79.6	4.4	25.9	31.8
#140	"	(106um)	23.8	16.4	76.3	2.7	21.8	19.5
#200	"	(75um)	18.4	11.6	74.4	2.0	18.9	14.1
Clay			18.4	11.6	10.6	2.0	18.9	14.1
Silt					63.8			
Total Sand			78.3	88.4	25.6	97.7	51.5	85.9
Total Gravel			3.3	0.0	0.0	0.3	29.6	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	38	NP	NP	NP
Plastic Limit			NP	NP	22	NP	NP	NP
Plasticity Index			NP	NP	16	NP	NP	NP
USCS			SM	SP-SM	CL	SP	SM	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-6(11)	A-3	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-66	B-66	B-66	B-67	B-67	B-67
Station			1307+96	1307+96	1307+96	1310+00	1310+00	1310+00
Offset			LT 7'	LT 7'	LT 7'	LT 10'	LT 10'	LT 10'
Sample ID			S-6	S-8	S-10	S-2	S-5	S-8
Depth (ft)			13.5	23.5	33.5	1.5	8.5	23.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	99.0	100.0	96.3	100.0	100.0
#10	"	(2.00mm)	99.9	97.7	100.0	95.4	100.0	98.6
#20	"	(0.85mm)	99.8	96.9	99.6	94.3	99.8	97.2
#40	"	(425um)	99.0	95.3	80.8	93.4	99.0	96.2
#60	"	(250um)	86.8	42.1	20.8	82.0	89.8	79.8
#100	"	(150um)	42.0	12.3	5.8	63.4	59.3	25.2
#140	"	(106um)	29.9	10.0	4.5	47.9	51.5	20.2
#200	"	(75um)	25.5	8.9	3.8	31.3	48.1	16.3
Clay			10.1	8.9	3.8	31.3	23.4	16.3
Silt			15.4				24.7	
Total Sand			74.4	88.8	96.2	64.1	51.9	82.3
Total Gravel			0.1	2.3	0.0	4.6	0.0	1.4
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	36	NP
Plastic Limit			NP	NP	NP	NP	15	NP
Plasticity Index			NP	NP	NP	NP	21	NP
USCS			SM	SP-SM	SP	SM	SC	SM
AASHTO			A-2-4(0)	A-3	A-3	A-2-4(0)	A-6(6)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-67	B-68	B-68	B-69	B-69	B-70
Station			1310+00	321+00	321+00	324+00	324+00	153+95
Offset			LT 10'	LT 20'	LT 20'	LT 20'	RT 10'	LT 59'
Sample ID			S-12	S-2	S-4	S-1	S-2	S-1
Depth (ft)			43.5	1.5	5.0	0.3	3.5	1.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	95.1	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	93.3	100.0	100.0
#4	"	(4.75mm)	99.9	100.0	99.7	87.7	100.0	100.0
#10	"	(2.00mm)	99.8	100.0	98.6	84.5	100.0	100.0
#20	"	(0.85mm)	95.0	97.0	92.5	78.9	94.1	94.7
#40	"	(425um)	52.0	77.7	71.7	64.7	61.6	90.4
#60	"	(250um)	14.0	43.7	31.5	38.9	28.0	72.3
#100	"	(150um)	3.4	22.4	17.8	27.0	17.7	48.1
#140	"	(106um)	2.3	17.4	13.8	22.0	15.1	32.3
#200	"	(75um)	1.8	14.7	11.4	19.6	13.5	20.7
Clay			1.8	14.7	11.4	19.6	13.5	4.4
Silt								16.3
Total Sand			98.0	85.3	87.2	64.9	86.5	79.3
Total Gravel			0.2	0.0	1.4	15.5	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SP	SM	SP-SM	SM	SM	SM
AASHTO			A-3	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-70	B-70	B-70	B-70	B-70	B-71
Station			153+95	153+95	153+95	153+95	153+95	157+06
Offset			LT 59'	LT 59'	LT 59'	LT 59'	LT 59'	LT 77'
Sample ID			S-3	S-5	S-7	S-8	S-11	S-2
Depth (ft)			3.5	8.5	18.5	23.5	38.5	1.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	98.6
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	95.7
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	94.5
#20	"	(0.85mm)	95.1	98.7	99.5	100.0	94.7	93.3
#40	"	(425um)	91.1	97.7	99.0	100.0	90.3	87.4
#60	"	(250um)	71.8	80.6	93.8	90.6	32.6	67.1
#100	"	(150um)	48.1	55.1	86.1	64.4	20.6	30.4
#140	"	(106um)	33.5	34.5	79.0	39.0	12.4	19.8
#200	"	(75um)	23.6	12.7	70.3	10.9	4.3	14.7
Clay			7.8	12.7	15.6	10.9	4.3	14.7
Silt			15.8		54.7			
Total Sand			76.4	87.3	29.7	89.1	95.7	79.8
Total Gravel			0.0	0.0	0.0	0.0	0.0	5.5
ATTERBERG LIMITS								
Liquid Limit			NP	NP	37	NP	NP	NP
Plastic Limit			NP	NP	18	NP	NP	NP
Plasticity Index			NP	NP	19	NP	NP	NP
USCS			SM	SM	CL	SP-SM	SP	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-6(11)	A-2-4(0)	A-3	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-71	B-71	B-71	B-71	B-72	B-72
Station			157+06	157+06	157+06	157+06	159+00	159+00
Offset			LT 77'	LT 77'	LT 77'	LT 77'	LT 67'	LT 67'
Sample ID			S-4	S-5	S-6	S-8	S-2	S-6
Depth (ft)			5.0	8.5	13.5	23.5	2.0	13.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	99.0	100.0
#4	"	(4.75mm)	88.2	100.0	100.0	100.0	95.2	100.0
#10	"	(2.00mm)	84.2	100.0	100.0	99.9	92.5	100.0
#20	"	(0.85mm)	81.5	99.9	96.6	99.9	88.0	99.8
#40	"	(425um)	71.7	99.3	93.2	99.7	66.3	96.8
#60	"	(250um)	34.2	92.1	83.6	76.1	30.9	81.1
#100	"	(150um)	20.5	61.1	46.5	29.3	15.2	44.8
#140	"	(106um)	19.0	46.7	31.8	18.4	11.7	31.2
#200	"	(75um)	17.3	39.9	24.8	12.8	9.3	26.3
Clay			17.3	15.3	10.8	12.8	9.3	26.3
Silt				24.6	14.0			
Total Sand			66.9	60.1	75.2	87.1	83.2	73.7
Total Gravel			15.8	0.0	0.0	0.1	7.5	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SM	SM	SP-SM	SM
AASHTO			A-2-4(0)	A-4(0)	A-2-4(0)	A-2-4(0)	A-3	A-2-4(0)

Client: Alabama Department of Transportation
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-72	B-72	B-73	B-73	B-73	B-73
Station			159+00	159+00	317+75	317+75	317+75	317+75
Offset			LT 67'	LT 67'	RT 17'	RT 17'	RT 17'	RT 17'
Sample ID			S-8	S-11	S-2	S-5	T-1	S-9
Depth (ft)			23.5	38.5	1.5	8.5	15.5	28.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	99.8	100.0	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	99.6	99.0	99.8	99.9	100.0	99.5
#40	"	(425um)	98.4	75.8	95.9	98.2	99.7	92.6
#60	"	(250um)	45.8	18.1	59.7	89.4	97.7	61.0
#100	"	(150um)	17.9	3.4	23.5	62.2	82.4	21.6
#140	"	(106um)	15.1	2.3	14.1	40.1	53.3	12.9
#200	"	(75um)	13.1	1.7	13.5	31.2	36.8	10.4
Clay			5.7	1.7	13.5	10.9	14.1	10.4
Silt			7.4			20.3	22.7	
Total Sand			86.7	98.3	86.5	68.8	63.2	89.6
Total Gravel			0.2	0.0	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			18	NP	NP	NP	28	NP
Plastic Limit			14	NP	NP	NP	18	NP
Plasticity Index			4	NP	NP	NP	10	NP
USCS			SC-SM	SP	SM	SM	SC	SP-SM
AASHTO			A-2-4(0)	A-3	A-2-4(0)	A-2-4(0)	A-4(0)	A-3

Client: Alabama Department of Transportation
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-74	B-74	B-74	B-75	B-75	B-75
Station			319+55	319+55	319+55	321+48	321+48	321+48
Offset			RT 43'	RT 43'	RT 43'	RT 65'	RT 65'	RT 65'
Sample ID			S-2	S-3	S-5	S-2	S-5	T-1
Depth (ft)			3.5	5.0	13.5	3.0	8.5	10.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	99.9	99.8	99.8	97.5	99.7	100.0
#40	"	(425um)	97.1	98.2	98.5	94.4	97.5	100.0
#60	"	(250um)	62.5	82.1	90.8	71.0	74.2	99.8
#100	"	(150um)	29.1	53.1	68.8	33.0	30.4	98.9
#140	"	(106um)	18.8	39.3	46.6	19.2	17.3	87.0
#200	"	(75um)	15.0	28.9	35.7	14.8	11.9	59.9
Clay			15.0	28.9	15.9	14.8	0.9	17.1
Silt					19.8		11.0	42.8
Total Sand			85.0	71.1	64.3	85.2	88.1	40.1
Total Gravel			0.0	0.0	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	25
Plastic Limit			NP	NP	NP	NP	NP	22
Plasticity Index			NP	NP	NP	NP	NP	3
USCS			SM	SM	SM	SM	SP-SM	ML
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-2-4(0)	A-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-75	B-76	B-76	B-76	B-100	B-100
Station			321+48	323+37	323+37	323+37	410+86	410+86
Offset			RT 65'	RT 63'	RT 63'	RT 63'	RT 57'	RT 57'
Sample ID			S-8	S-1	S-3	S-8	S-2	S-7
Depth (ft)			23.5	0.3	3.5	23.5	1.5	23.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	84.4	100.0
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	72.0	100.0
#20	"	(0.85mm)	99.6	97.1	99.9	99.9	64.4	93.3
#40	"	(425um)	99.5	90.7	98.4	99.5	51.5	69.6
#60	"	(250um)	99.1	68.0	73.0	94.9	32.5	19.9
#100	"	(150um)	97.2	36.4	33.3	40.7	22.3	10.7
#140	"	(106um)	80.9	26.5	20.9	17.6	18.9	9.9
#200	"	(75um)	54.4	21.6	16.2	9.5	16.5	9.6
Clay Silt			54.4	21.6	16.2	9.5	16.5	9.6
Total Sand			45.6	78.4	83.8	90.5	55.5	90.4
Total Gravel			0.0	0.0	0.0	0.0	28.0	0.0
ATTERBERG LIMITS								
Liquid Limit			---	NP	NP	NP	NP	NP
Plastic Limit			---	NP	NP	NP	NP	NP
Plasticity Index			---	NP	NP	NP	NP	NP
USCS			CL	SM	SM	SP-SM	SM	SP-SM
AASHTO			---	A-2-4(0)	A-2-4(0)	A-3	A-2-4(0)	A-3

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			B-100	BR-1	BR-1	BR-1	BR-1	BR-1
Station			410+86	139+95	139+95	139+95	139+95	139+95
Offset			RT 57'	LT 41'	LT 41'	LT 41'	LT 41'	LT 41'
Sample ID			S-10	S-2	S-4	S-5	S-8	S-12
Depth (ft)			38.5	3.5	13.5	20.0	35.0	55.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	99.7
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	99.7	99.1
#20	"	(0.85mm)	99.6	12.8	35.9	80.9	1.1	3.2
#40	"	(425um)	84.0	100.0	99.8	99.2	96.5	96.2
#60	"	(250um)	38.3	98.6	99.2	98.8	55.4	85.3
#100	"	(150um)	10.9	74.7	91.8	96.6	18.6	25.0
#140	"	(106um)	8.5	25.1	48.4	83.2	3.1	4.6
#200	"	(75um)	7.5	9.0	30.4	76.6	0.1	2.5
Clay			7.5	1.7	11.8	31.5	0.1	2.5
Silt				7.3	18.6	45.1		
Total Sand			92.5	91.0	69.6	23.4	99.6	97.2
Total Gravel			0.0	0.0	0.0	0.0	0.3	0.3
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	35	NP	NP
Plastic Limit			NP	NP	NP	16	NP	NP
Plasticity Index			NP	NP	NP	19	NP	NP
USCS			SP-SM	SP-SM	SM	CL	SP	SP
AASHTO			A-3	A-3	A-2-4(0)	A-6(13)	A-3	A-3

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-1	BR-1	BR-1	BR-1	BR-2	BR-2
Station			139+95	139+95	139+95	139+95	139+74	139+74
Offset			LT 41'	LT 41'	LT 41'	LT 41'	CL	CL
Sample ID			S-17	S-18	S-19	S-22	S-2	S-4
Depth (ft)			80.0	85.0	90.0	110.0	1.5	5.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	98.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	96.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	100.0	92.7	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	85.7	20.1	48.9	61.5	33.6	29.7
#40	"	(425um)	99.7	81.3	99.8	99.9	99.0	99.3
#60	"	(250um)	98.5	45.1	98.8	99.6	98.2	98.7
#100	"	(150um)	95.7	28.4	89.4	93.5	76.8	75.0
#140	"	(106um)	92.2	22.1	63.1	78.9	51.7	48.3
#200	"	(75um)	78.9	18.7	39.2	44.9	15.1	11.1
Clay			39.6	18.7	16.6	11.7	15.1	11.1
Silt			39.3		22.6	33.2		
Total Sand			21.1	74.0	60.8	55.1	84.9	88.9
Total Gravel			0.0	7.3	0.0	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			50	NP	NP	NP	NP	NP
Plastic Limit			14	NP	NP	NP	NP	NP
Plasticity Index			36	NP	NP	NP	NP	NP
USCS			CH	SM	SM	SM	SM	SP-SM
AASHTO			A-7-6(28)	A-1-b	A-4(0)	A-4(0)	A-2-4(0)	A-2-4(0)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-2	BR-2	BR-2	BR-2	BR-2	BR-2
Station			139+74	139+74	139+74	139+74	139+74	139+74
Offset			CL	CL	CL	CL	CL	CL
Sample ID			S-5	S-7	S-10	S-14	S-17	S-20
Depth (ft)			8.5	19.0	34.0	54.0	69.0	84.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	98.9	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	97.9	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	93.5	99.4
#10	"	(2.00mm)	100.0	100.0	100.0	98.9	80.9	98.7
#20	"	(0.85mm)	54.4	51.2	9.9	11.0	22.6	5.3
#40	"	(425um)	99.3	100.0	82.4	87.7	58.8	62.3
#60	"	(250um)	98.7	100.0	53.0	71.4	38.4	27.8
#100	"	(150um)	90.0	98.1	21.2	27.8	25.5	9.5
#140	"	(106um)	70.9	73.7	14.5	17.8	23.7	7.0
#200	"	(75um)	38.2	32.8	5.4	4.2	21.4	3.6
Clay			6.4	9.6	5.4	4.2	21.4	3.6
Silt			31.8	23.2				
Total Sand			61.8	67.2	94.6	94.7	59.5	95.1
Total Gravel			0.0	0.0	0.0	1.1	19.1	1.3
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	NP	NP
Plastic Limit			NP	NP	NP	NP	NP	NP
Plasticity Index			NP	NP	NP	NP	NP	NP
USCS			SM	SM	SP-SM	SP	SM	SM
AASHTO			A-4(0)	A-2-4(0)	A-3	A-3	A-1-b	A-1-b

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-2	BR-3	BR-3	BR-3	BR-3	BR-3
Station			139+74	139+95	139+95	139+95	139+95	139+95
Offset			CL	RT 74'	RT 74'	RT 74'	RT 74'	RT 74'
Sample ID			S-21	S-3	S-6	S-9	S-17	S-22
Depth (ft)			88.5	3.5	13.5	28.5	68.5	93.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	96.3	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	87.7	100.0	100.0	100.0	98.1	100.0
#10	"	(2.00mm)	81.2	100.0	100.0	100.0	90.7	100.0
#20	"	(0.85mm)	28.9	15.5	78.5	5.9	9.8	62.3
#40	"	(425um)	72.1	99.9	99.5	100.0	74.8	99.4
#60	"	(250um)	58.3	98.3	98.5	83.2	32.9	97.7
#100	"	(150um)	43.8	72.3	97.3	19.1	12.6	94.0
#140	"	(106um)	33.6	27.1	94.2	7.7	10.5	72.5
#200	"	(75um)	25.5	10.9	56.6	4.8	9.2	55.9
Clay			8.9	10.9	23.4	4.8	9.2	29.3
Silt			16.6		33.2			26.6
Total Sand			55.7	89.1	43.4	95.2	88.9	44.1
Total Gravel			18.8	0.0	0.0	0.0	1.9	0.0
ATTERBERG LIMITS								
Liquid Limit			23	NP	35	NP	NP	29
Plastic Limit			13	NP	18	NP	NP	21
Plasticity Index			10	NP	17	NP	NP	8
USCS			SC	SP-SM	CL	SP	SP-SM	CL
AASHTO			A-2-4(0)	A-2-4(0)	A-6(7)	A-3	A-1-b	A-4(2)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-4	BR-4	BR-4	BR-4	BR-4	BR-4
Station			141+26	141+26	141+26	141+26	141+26	141+26
Offset			LT 46'	LT 46'	LT 46'	LT 46'	LT 46'	LT 46'
Sample ID			S-2	S-3	S-5	S6/T1	S6/T1	S6/T1
Depth (ft)			1.5	5.0	13.5	18.0	18.5	19.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	95.4	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	95.4	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	100.0	95.3	99.9	100.0	100.0	100.0
#10	"	(2.00mm)	98.6	94.9	99.6	100.0	100.0	100.0
#20	"	(0.85mm)	18.3	16.0	30.2	72.3	87.4	84.9
#40	"	(425um)	97.5	94.7	99.5	99.6	99.9	99.0
#60	"	(250um)	95.1	93.1	99.1	97.5	99.7	97.7
#100	"	(150um)	74.4	73.4	91.7	90.1	98.3	93.2
#140	"	(106um)	31.8	30.2	45.5	76.2	89.9	89.3
#200	"	(75um)	15.1	12.7	27.6	70.3	85.4	79.1
Clay			6.3	6.2	12.1	29.5	47.6	33.6
Silt			8.8	6.5	15.5	40.8	37.8	45.5
Total Sand			83.5	82.2	72.0	29.7	14.6	20.9
Total Gravel			1.4	5.1	0.4	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	77	83	39
Plastic Limit			NP	NP	NP	27	28	23
Plasticity Index			NP	NP	NP	50	55	16
USCS			SM	SM	SM	CH	CH	CL
AASHTO			A-2-4(0)	A-2-4(0)	A-2-4(0)	A-7-6(35)	A-7-6(52)	A-6

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
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ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-4	BR-4	BR-4	BR-4	BR-4	BR-4
Station			141+26	141+26	141+26	141+26	141+26	141+26
Offset			LT 46'	LT 46'	LT 46'	LT 46'	LT 46'	LT 46'
Sample ID			S-8	S-10	S-12	S-16	S-19	S-21
Depth (ft)			28.5	38.5	48.5	68.5	83.5	93.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	97.7	100.0	100.0
#4	"	(4.75mm)	99.8	100.0	99.8	87.6	100.0	100.0
#10	"	(2.00mm)	99.2	100.0	99.7	76.4	100.0	100.0
#20	"	(0.85mm)	13.4	4.5	3.7	3.9	86.1	88.8
#40	"	(425um)	98.3	99.2	96.4	61.4	99.8	99.9
#60	"	(250um)	76.5	68.9	77.6	38.3	99.5	99.3
#100	"	(150um)	28.4	17.9	36.8	9.9	98.6	98.4
#140	"	(106um)	15.5	6.7	5.9	4.9	93.2	95.7
#200	"	(75um)	11.7	3.1	2.8	3.3	78.0	73.9
Clay			11.7	3.1	2.8	3.3	37.3	28.5
Silt							40.7	45.4
Total Sand			87.5	96.9	96.9	73.1	22.0	26.1
Total Gravel			0.8	0.0	0.3	23.6	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	63	65
Plastic Limit			NP	NP	NP	NP	20	26
Plasticity Index			NP	NP	NP	NP	43	39
USCS			SP-SM	SP	SP	SP	CH	CH
AASHTO			A-2-4(0)	A-3	A-3	A-1-b	A-7-6(34)	A-7-6(30)

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-5	BR-5	BR-5	BR-5	BR-5	BR-5
Station			141+26	141+26	141+26	141+26	141+26	141+26
Offset			LT 6'	LT 6'	LT 6'	LT 6'	LT 6'	LT 6'
Sample ID			S-2	S-4	S-7	S-9	S-13	S-17
Depth (ft)			1.5	5.0	18.5	28.5	48.5	68.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	95.9
#4	"	(4.75mm)	100.0	100.0	100.0	100.0	100.0	86.7
#10	"	(2.00mm)	100.0	100.0	100.0	100.0	99.9	78.6
#20	"	(0.85mm)	20.2	14.5	94.7	17.9	8.4	10.6
#40	"	(425um)	100.0	100.0	100.0	98.8	95.6	62.4
#60	"	(250um)	98.7	98.7	99.9	96.4	71.8	33.0
#100	"	(150um)	78.6	76.4	99.6	36.7	27.1	15.5
#140	"	(106um)	32.2	27.2	96.7	22.2	10.5	11.8
#200	"	(75um)	15.2	9.8	92.0	14.2	7.4	9.8
Clay			15.2	3.0	37.7	14.2	7.4	9.8
Silt				6.8	54.3			
Total Sand			84.8	90.2	8.0	85.8	92.5	68.8
Total Gravel			0.0	0.0	0.0	0.0	0.1	21.4
ATTERBERG LIMITS								
Liquid Limit			NP	NP	50	NP	NP	NP
Plastic Limit			NP	NP	17	NP	NP	NP
Plasticity Index			NP	NP	33	NP	NP	NP
USCS			SM	SP-SM	CH	SM	SP-SM	SW-SM
AASHTO			A-2-4(0)	A-3	A-7-6(32)	A-2-4(0)	A-3	A-1-b

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-5	BR-5	BR-5	BR-6	BR-6	BR-6
Station			141+26	141+26	141+26	140+98	140+98	140+98
Offset			LT 6'	LT 6'	LT 6'	RT 70'	RT 70'	RT 70'
Sample ID			S-18	S-21	S-23	S-2	S-5	S-10
Depth (ft)			73.5	88.5	98.5	1.5	8.5	33.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	98.9	100.0	100.0
#4	"	(4.75mm)	100.0	100.0	100.0	97.3	100.0	100.0
#10	"	(2.00mm)	99.4	100.0	100.0	95.2	100.0	100.0
#20	"	(0.85mm)	3.1	91.8	95.1	24.3	39.2	5.0
#40	"	(425um)	86.5	99.9	99.2	93.5	99.9	98.4
#60	"	(250um)	17.2	99.6	97.9	90.7	99.1	77.6
#100	"	(150um)	6.4	98.8	96.8	68.5	88.3	25.0
#140	"	(106um)	3.8	96.2	96.0	35.4	51.7	6.9
#200	"	(75um)	2.6	85.8	93.4	19.2	30.8	4.0
Clay			0.0	42.7	46.3	19.2	13.7	4.0
Silt			2.6	43.1	47.1		17.1	
Total Sand			96.8	14.2	6.6	76.0	69.2	96.0
Total Gravel			0.6	0.0	0.0	4.8	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	65	77	NP	---	NP
Plastic Limit			NP	25	30	NP	---	NP
Plasticity Index			NP	40	47	NP	---	NP
USCS			SP	CH	CH	SM	SM	SP
AASHTO			A-1-b	A-7-6(38)	A-7-5(51)	A-2-4(0)	---	A-3

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-9	BR-9	BR-9	BR-9	BR-9	BR-9
Station			151+03	151+03	151+03	151+03	151+03	151+03
Offset			LT 23'	LT 23'	LT 23'	LT 23'	LT 23'	LT 23'
Sample ID			S-2	S-6	S-8	S-9	S-12	S-16
Depth (ft)			1.5	13.5	23.5	28.5	43.5	63.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	94.7	100.0	100.0	100.0	100.0	99.9
#10	"	(2.00mm)	92.4	100.0	98.2	100.0	100.0	97.5
#20	"	(0.85mm)	90.0	99.9	97.2	100.0	99.2	73.8
#40	"	(425um)	84.1	99.5	96.7	99.9	90.4	39.2
#60	"	(250um)	65.7	95.0	93.1	99.7	55.7	8.4
#100	"	(150um)	33.5	81.5	87.4	95.9	19.9	3.0
#140	"	(106um)	24.0	78.2	85.4	90.6	10.8	2.1
#200	"	(75um)	19.1	75.2	84.0	85.0	6.0	1.6
Clay			19.1	12.5	37.8	15.2	6.0	1.6
Silt				62.7	46.2	69.8		
Total Sand			73.3	24.8	14.2	15.0	94.0	95.9
Total Gravel			7.6	0.0	1.8	0.0	0.0	2.5
ATTERBERG LIMITS								
Liquid Limit			NP	NP	84	NP	NP	NP
Plastic Limit			NP	NP	42	NP	NP	NP
Plasticity Index			NP	NP	42	NP	NP	NP
USCS			SM	ML	MH	ML	SP-SM	SP
AASHTO			A-2-4(0)	A-4(0)	A-7-5(43)	A-4(0)	A-3	A-1-b

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-9	BR-10	BR-10	BR-10	BR-10	BR-10
Station			151+03	150+90	150+90	150+90	150+90	150+90
Offset			LT 23'	RT 21'	RT 21'	RT 21'	RT 21'	RT 21'
Sample ID			S-22	S-4	S-7	S-8	S-10	S-13
Depth (ft)			93.5	5.0	18.5	23.5	33.5	48.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	97.3	100.0	100.0	100.0	100.0	100.0
#10	"	(2.00mm)	90.5	96.7	99.9	100.0	99.8	100.0
#20	"	(0.85mm)	68.4	87.3	99.8	99.9	99.4	99.8
#40	"	(425um)	23.4	71.2	98.5	99.5	98.7	95.7
#60	"	(250um)	6.6	56.8	77.6	94.8	97.6	65.6
#100	"	(150um)	3.1	41.1	30.9	80.5	93.7	50.7
#140	"	(106um)	2.2	32.8	19.4	76.9	92.6	48.1
#200	"	(75um)	1.6	27.8	14.4	74.6	90.3	46.3
Clay			1.6	27.8	14.4	12.8	41.5	3.9
Silt						61.8	48.8	42.4
Total Sand			88.9	68.9	85.5	25.4	9.5	53.7
Total Gravel			9.5	3.3	0.1	0.0	0.2	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	47	NP
Plastic Limit			NP	NP	NP	NP	20	NP
Plasticity Index			NP	NP	NP	NP	27	NP
USCS			SP	SM	SM	ML	CL	SM
AASHTO			A-1-b	A-2-4(0)	A-2-4(0)	A-4(0)	A-7-6(26)	A-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-10	BR-11	BR-11	BR-11	BR-11	BR-11
Station			150+90	152+05	152+05	152+05	152+05	152+05
Offset			RT 21'	LT 67'	LT 67'	LT 67'	LT 67'	LT 67'
Sample ID			S-19	S-1	S-3	S-4	S-6	S-10
Depth (ft)			78.5	0.0	8.5	13.5	23.5	43.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	99.3
#4	"	(4.75mm)	99.8	100.0		100.0	98.0	96.6
#10	"	(2.00mm)	97.4	95.4	100.0	100.0	95.7	95.6
#20	"	(0.85mm)	78.3	94.0	99.7	99.9	95.5	93.0
#40	"	(425um)	20.6	89.3	99.0	99.1	95.1	54.3
#60	"	(250um)	6.2	72.2	92.3	91.1	93.7	10.8
#100	"	(150um)	2.4	34.6	67.5	73.7	77.1	4.0
#140	"	(106um)	1.4	24.4	61.3	69.7	56.7	2.9
#200	"	(75um)	0.8	19.2	57.8	67.2	42.1	2.1
Clay			0.8	19.2	27.3	10.1	14.6	2.1
Silt					30.5	57.1	27.5	
Total Sand			96.6	76.2	42.2	32.8	53.6	93.5
Total Gravel			2.6	4.6	0.0	0.0	4.3	4.4
ATTERBERG LIMITS								
Liquid Limit			NP	NP	28	NP	29	NP
Plastic Limit			NP	NP	12	NP	18	NP
Plasticity Index			NP	NP	16	NP	11	NP
USCS			SP	SM	CL	ML	SC	SP
AASHTO			A-1-b	A-2-4(0)	A-6(6)	A-4(0)	A-6(1)	A-3

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-11	BR-12	BR-12	BR-12	BR-12	BR-12
Station			152+05	151+54	151+54	151+54	151+54	151+54
Offset			LT 67'	RT 74'	RT 74'	RT 74'	RT 74'	RT 74'
Sample ID			S-16	S-2	S-5	S-8	S-12	S-14
Depth (ft)			73.5	3.5	18.5	33.5	58.5	68.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	98.3	100.0		100.0	100.0	100.0
#10	"	(2.00mm)	93.4	99.1	100.0	100.0	100.0	100.0
#20	"	(0.85mm)	76.0	98.3	99.9	99.2	100.0	94.3
#40	"	(425um)	25.5	94.1	99.4	98.5	98.6	67.5
#60	"	(250um)	9.2	66.1	91.7	95.0	85.1	15.4
#100	"	(150um)	6.5	41.4	71.5	86.3	77.4	6.7
#140	"	(106um)	5.9	32.8	66.7	84.2	---	
#200	"	(75um)	5.4	27.8	64.2	82.6	75.8	3.1
Clay			5.4	27.8	5.8	30.4	7.6	3.1
Silt					58.4	52.2	68.2	
Total Sand			88.0	71.3	35.8	16.8	24.2	96.9
Total Gravel			6.6	0.9	0.0	0.6	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	41	NP	NP
Plastic Limit			NP	NP	NP	16	NP	NP
Plasticity Index			NP	NP	NP	25	NP	NP
USCS			SP-SM	SM	ML	CL	ML	SP
AASHTO			A-1-b	A-2-4(0)	A-4(0)	A-7-6(20)	A-4(0)	A-3

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-12	BR-13	BR-13	BR-13	BR-13	BR-13
Station			151+54	152+88	152+88	152+88	152+88	152+88
Offset			RT 74'	LT 30'	LT 30'	LT 30'	LT 30'	LT 30'
Sample ID			S-18	S-2	S-4	S-7	S-9	S-12
Depth (ft)			93.5	1.5	5.0	18.5	28.5	43.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	99.8	100.0	99.0	100.0	100.0	100.0
#10	"	(2.00mm)	98.8	99.0	96.8	100.0	100.0	100.0
#20	"	(0.85mm)	79.0	96.8	94.6	99.9	99.4	99.9
#40	"	(425um)	39.6	84.0	86.4	99.4	97.5	85.2
#60	"	(250um)	10.4	57.8	66.9	95.5	93.2	33.3
#100	"	(150um)	3.6	35.6	39.8	87.3	87.8	13.7
#140	"	(106um)	2.1	29.8	29.9	85.3	84.2	9.6
#200	"	(75um)	1.3	26.8	24.4	84.2	80.9	7.1
Clay			1.3	26.8	11.4	8.7	21.9	7.1
Silt					13.0	75.5	59.0	
Total Sand			97.5	72.2	72.4	15.8	19.1	92.9
Total Gravel			1.2	1.0	3.2	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	NP	57	NP
Plastic Limit			NP	NP	NP	NP	28	NP
Plasticity Index			NP	NP	NP	NP	39	NP
USCS			SP	SM	SM	ML	CH	SP-SM
AASHTO			A-1-b	A-2-4(0)	A-2-4(0)	A-4(0)	A-7-6(35)	A-3

Client: Alabama Department of Transportation
Project: I-10 Interchange Modifications from Texas Street to West Tunnel Entrance
ALDOT Project No.: IM-AL06 (900)

Project No.: 13-2123-0004
Division: 9th
Date: 6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-13	BR-13	BR-13	BR-13	BR-13	BR-14
Station			152+88	152+88	152+88	152+88	152+88	152+65
Offset			LT 30'	LT 30'	LT 30'	LT 30'	LT 30'	RT 13'
Sample ID			S-15	S-18	S-22	S-24	S-27	S-1
Depth (ft)			63.5	78.5	98.5	108.5	123.5	0.0
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	99.8	100.0	92.3	100.0	100.0	100.0
#10	"	(2.00mm)	97.7	97.8	87.9	100.0	100.0	100.0
#20	"	(0.85mm)	85.3	90.8	66.0	99.9	100.0	98.2
#40	"	(425um)	39.4	44.3	28.0	99.7	99.9	89.3
#60	"	(250um)	16.3	12.5	9.9	99.3	99.3	76.9
#100	"	(150um)	7.3	5.7	4.6	98.9	94.3	70.6
#140	"	(106um)	5.2	4.3	3.1	98.1	87.8	69.1
#200	"	(75um)	3.6	3.3	2.2	93.9	80.6	68.1
Clay			3.6	3.3	2.2	43.4	16.4	7.9
Silt						50.5	64.2	60.2
Total Sand			94.1	94.5	85.7	6.1	19.4	31.9
Total Gravel			2.3	2.2	12.1	0.0	0.0	0.0
ATTERBERG LIMITS								
Liquid Limit			NP	NP	NP	59	NP	NP
Plastic Limit			NP	NP	NP	26	NP	NP
Plasticity Index			NP	NP	NP	33	NP	NP
USCS			SP	SP	SP	CH	ML	ML
AASHTO			A-1-b	A-1-b	A-1-b	A-7-6(36)	A-4(0)	A-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-14	BR-14	BR-14	BR-14	BR-14	BR-14
Station			152+65	152+65	152+65	152+65	152+65	152+65
Offset			RT 13'	RT 13'	RT 13'	RT 13'	RT 13'	RT 13'
Sample ID			S-3	S-5	S-7	S-9	S-12	S-18
Depth (ft)			8.5	18.5	28.5	38.5	53.5	83.5
TOTAL PASSING (%)								
3"	SIEVE	(75mm)	100.0	100.0	100.0	100.0	100.0	100.0
2 1/2"	"	(63mm)	100.0	100.0	100.0	100.0	100.0	100.0
2	"	(50mm)	100.0	100.0	100.0	100.0	100.0	100.0
1 1/2"	"	(37.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
1"	"	(25mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/4"	"	(19mm)	100.0	100.0	100.0	100.0	100.0	100.0
1/2"	"	(12.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
3/8"	"	(9.5mm)	100.0	100.0	100.0	100.0	100.0	100.0
#4	"	(4.75mm)	99.2	100.0		100.0	99.6	100.0
#10	"	(2.00mm)	98.4	100.0	100.0	100.0	99.6	100.0
#20	"	(0.85mm)	96.2	99.8	99.9	98.6	99.1	98.6
#40	"	(425um)	83.4	98.2	99.0	97.7	74.8	84.8
#60	"	(250um)	58.7	81.0	91.5	95.8	21.8	42.7
#100	"	(150um)	37.2	32.9	71.7	91.8	6.3	19.7
#140	"	(106um)	29.3	21.2	67.2	88.6	4.3	17.1
#200	"	(75um)	24.8	16.1	65.4	81.1	3.2	15.5
Clay			15.2	16.1	10.7	31.1	3.2	15.5
Silt			9.6		54.7	50.0		
Total Sand			73.6	83.9	34.6	18.3	96.4	84.5
Total Gravel			1.6	0.0	0.0	0.6	0.4	0.0
ATTERBERG LIMITS								
Liquid Limit			21	NP	NP	45	NP	NP
Plastic Limit			13	NP	NP	20	NP	NP
Plasticity Index			8	NP	NP	25	NP	NP
USCS			SC	SM	ML	CL	SP	SM
AASHTO			A-2-4(0)	A-2-4(0)	A-4(0)	A-7-6(20)	A-3	A-2-4(0)

Client:	Alabama Department of Transportation	Project No.:	13-2123-0004
Project:	I-10 Interchange Modifications from Texas Street to West Tunnel Entrance	Division:	9th
	ALDOT Project No.: IM-AL06 (900)	Date:	6/11/2013

ALABAMA DEPARTMENT OF TRANSPORTATION
SOILS AND BASE COARSE ANALYSIS

Boring No.			BR-14
Station			152+65
Offset			RT 13'
Sample ID			S-21
Depth (ft)			98.5
TOTAL PASSING (%)			
3"	SIEVE	(75mm)	100.0
2 1/2"	"	(63mm)	100.0
2	"	(50mm)	100.0
1 1/2"	"	(37.5mm)	100.0
1"	"	(25mm)	100.0
3/4"	"	(19mm)	100.0
1/2"	"	(12.5mm)	100.0
3/8"	"	(9.5mm)	100.0
#4	"	(4.75mm)	99.8
#10	"	(2.00mm)	91.4
#20	"	(0.85mm)	73.4
#40	"	(425um)	62.1
#60	"	(250um)	52.5
#100	"	(150um)	48.7
#140	"	(106um)	42.5
#200	"	(75um)	34.0

Clay Silt	34.0
Total Sand	57.4
Total Gravel	8.6

ATTERBERG LIMITS	
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

USCS	SM
AASHTO	A-2-4(0)

Sample No.	Test Station	Approximate Station Range	Average Topsoil Depth (ft)	Estimated Topsoil Volume (yd^3)	Deleterious Materials (7% max)	Organic Material (2-20%)	Sand Content (10-90%)	Silt and Clay Content (10-90%)	pH (5-7)	Meets ALDOT Specification of Special Provision 08-0120
TS-01	127+00 LT 70'	118+75 to 134+50	0.5	2,318	6.8	11.5	89.0	4.2	7	Fail
TS-02	143+00 CL	134+50 to 145+00	0.4	3,059	34.2	7.6	63.6	2.2	7	Fail
TS-03	1703+00 CL	145+00 to 155+78 and 1703+20 to 1707+00	0.7	2,345	9.0	8.4	87.4	3.6	6	Fail
TS-04	321+50 RT 49'	109+24.75 to 118+75	0.3	818	7.7	14.9	88.3	4.0	6	Fail

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Topsoil Testing Summary

Alabama Department of Transportation

ALDOT Project No.: IM-AL06 (900)

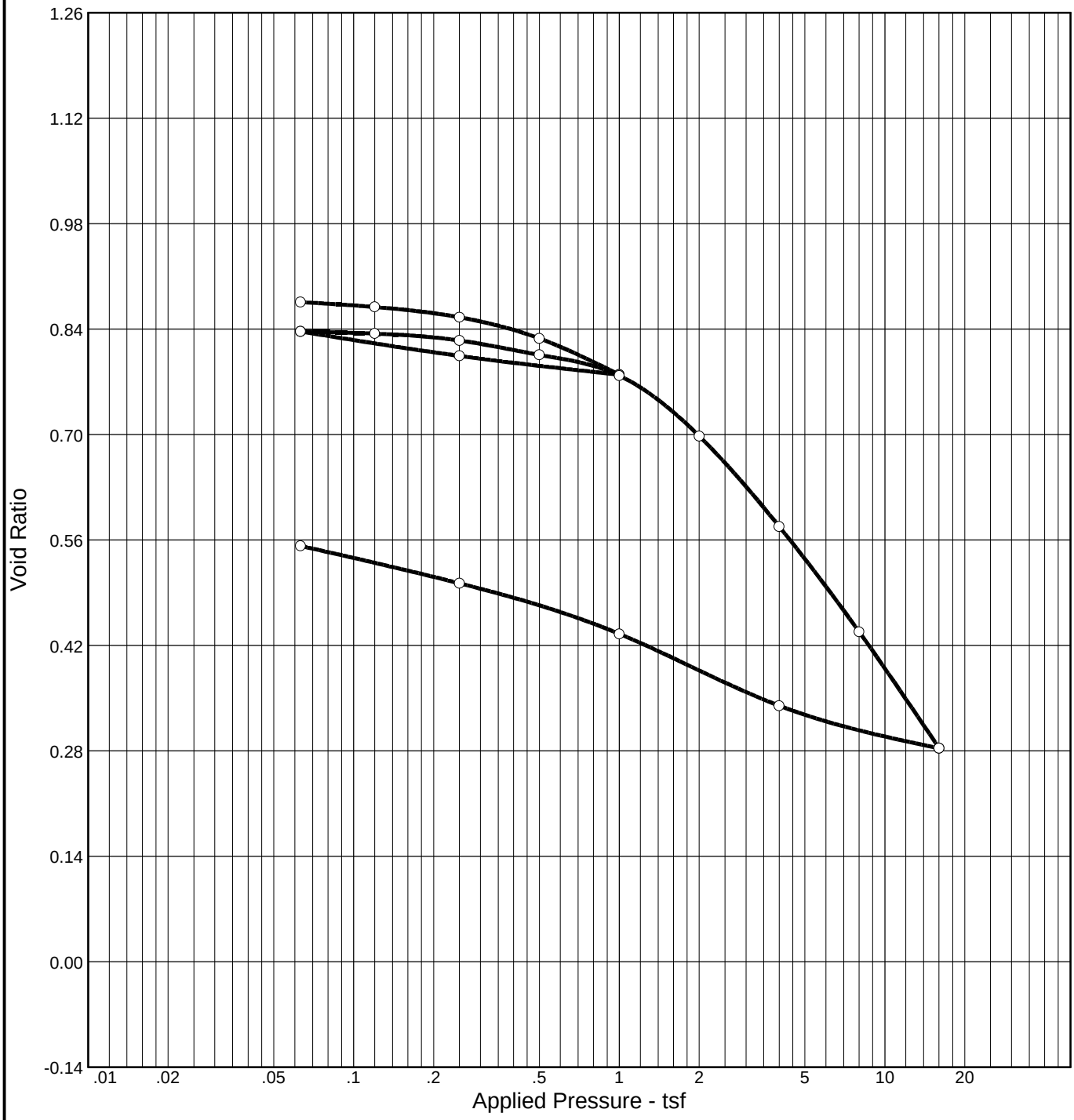
Project Name: I-10 Interchange Modifications

Mobile County, Alabama

APPENDIX B

- **One Dimensional Consolidation Test**
- **Unconsolidated Undrained (U.U.) Triaxial Shear Test**

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
99.5 %	32.3 %	89.1			2.66			0.864

MATERIAL DESCRIPTION

Project No. 13-2123- **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-6a **Elev./Depth:** 18.0

Remarks:

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Mobile, Alabama

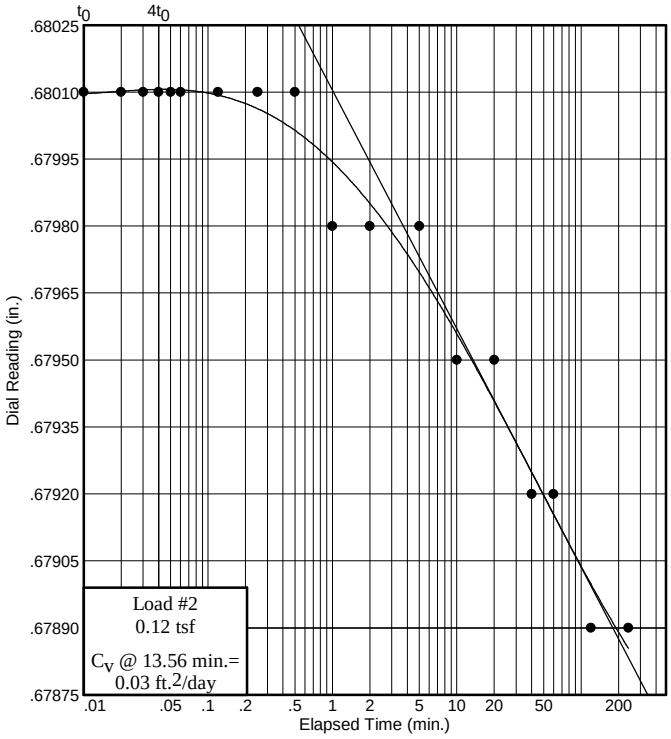
Figure

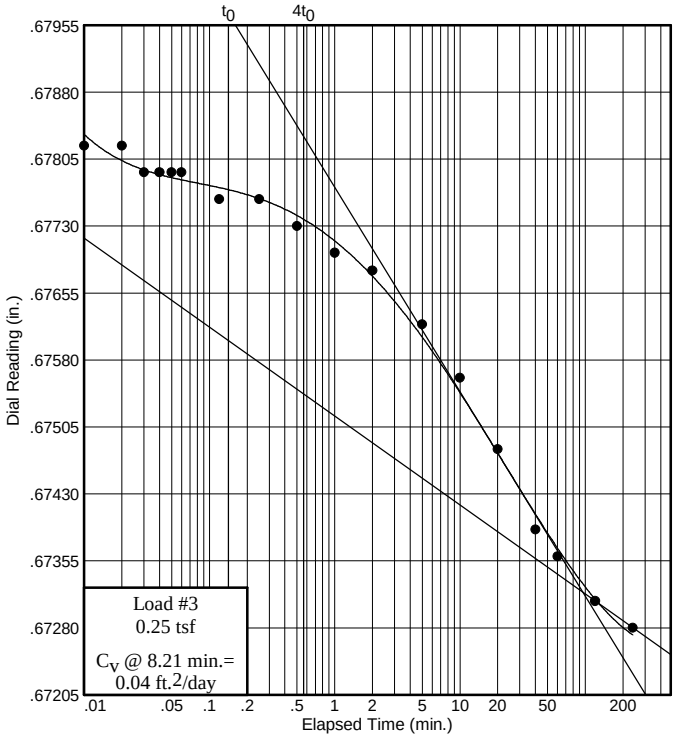
Dial Reading vs. Time

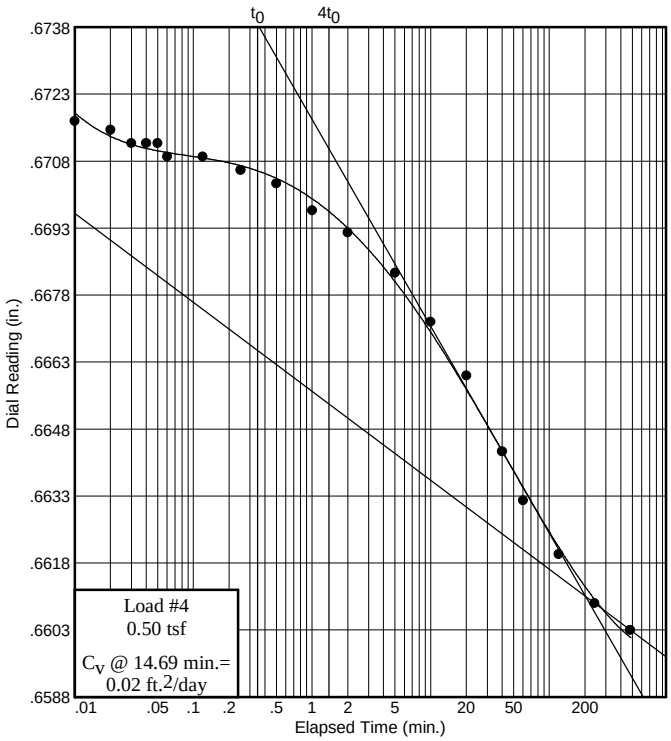
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-6a Elev./Depth: 18.0







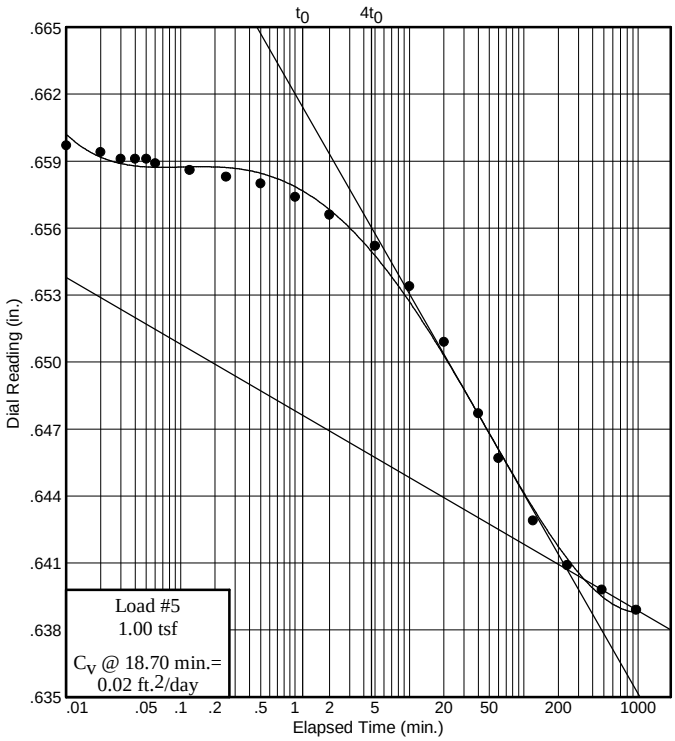


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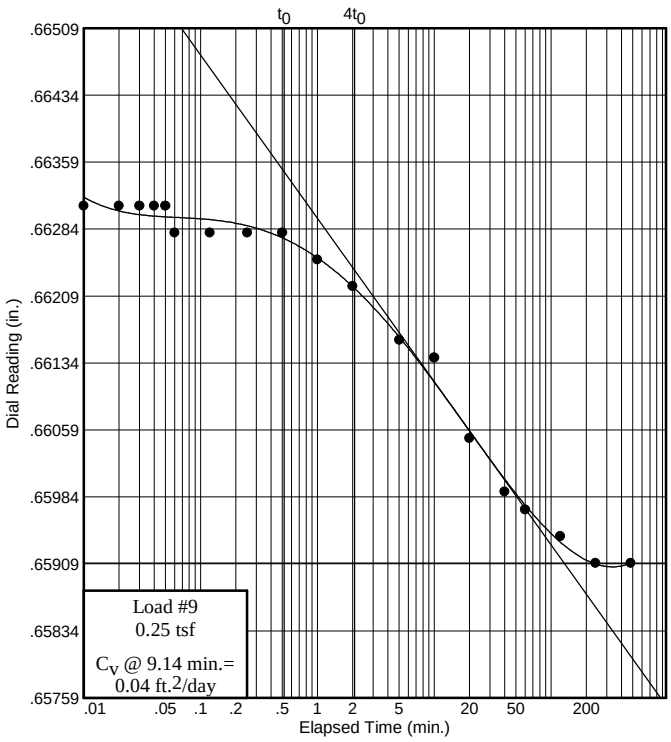
Figure

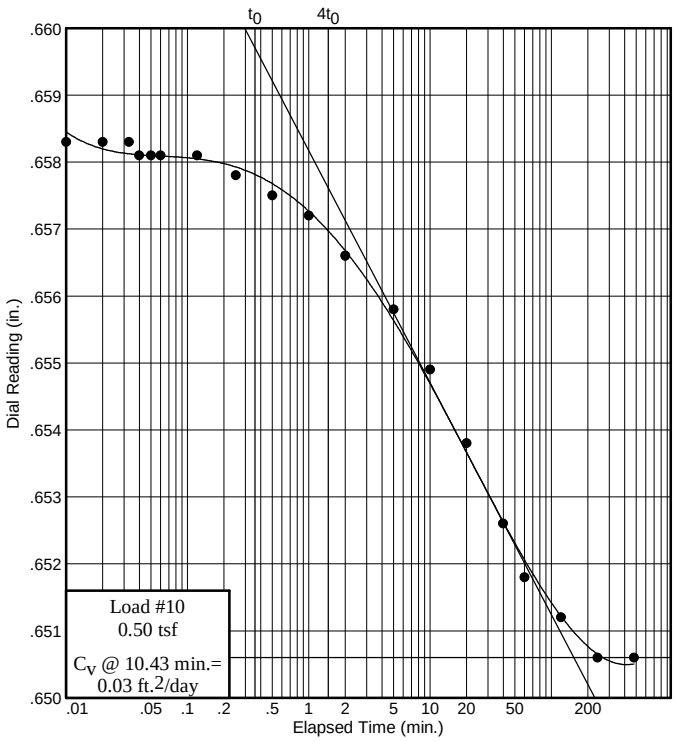
Dial Reading vs. Time

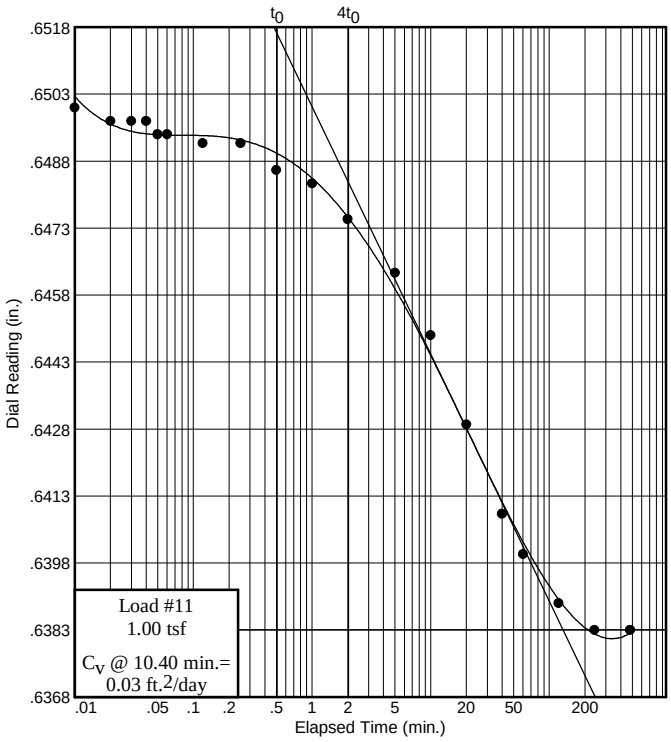
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-6a Elev./Depth: 18.0







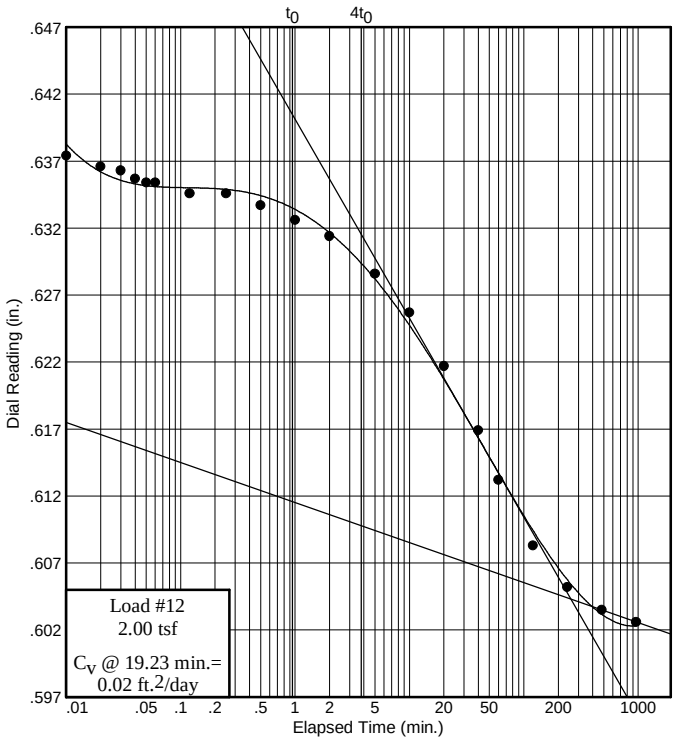


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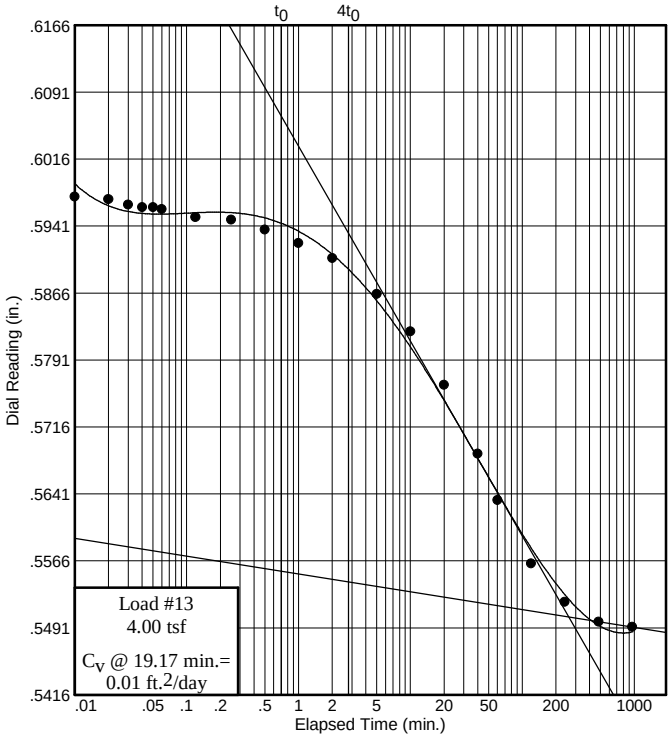
Figure

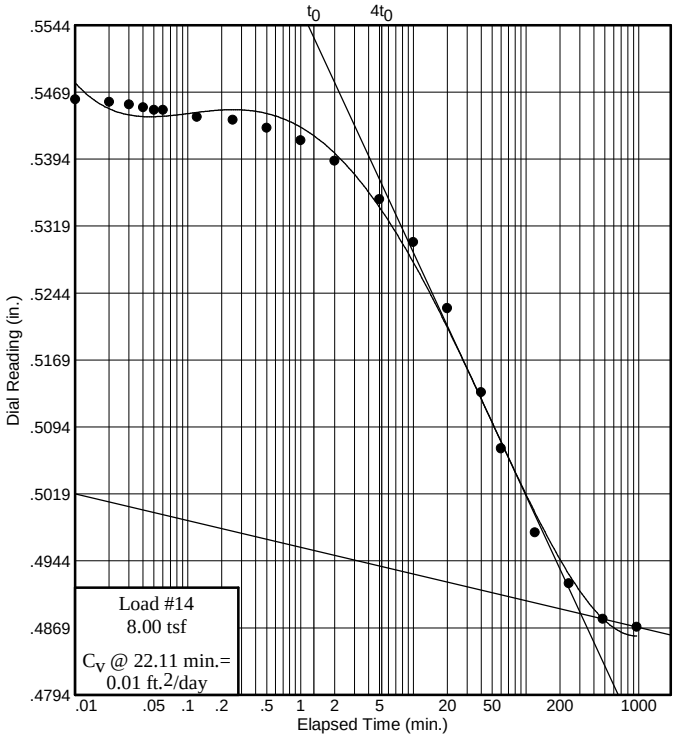
Dial Reading vs. Time

Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-6a Elev./Depth: 18.0





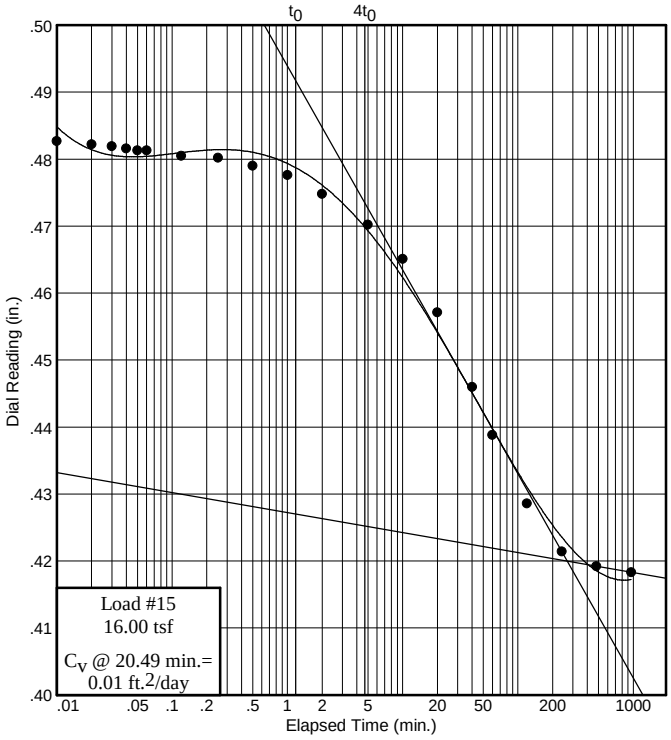


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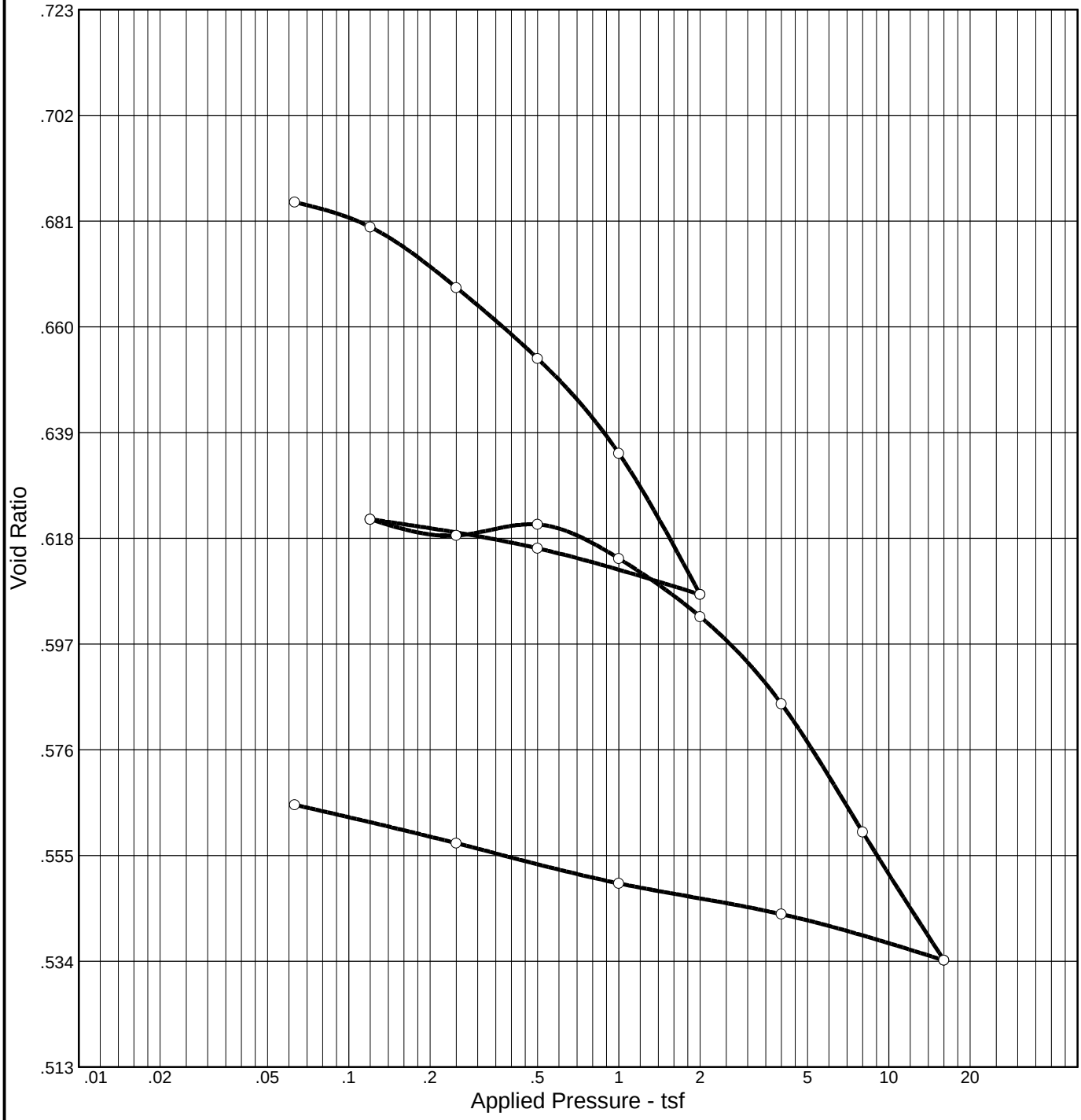
Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
105.2 %	27.9 %	94.4	28	10	2.66	SC		0.705

MATERIAL DESCRIPTION

Gray, fine grained, with trace sand lenses

Project No. 13-2123- **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: B-73 **Sample No.:** T-1 **Elev./Depth:** 15.5

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Remarks:

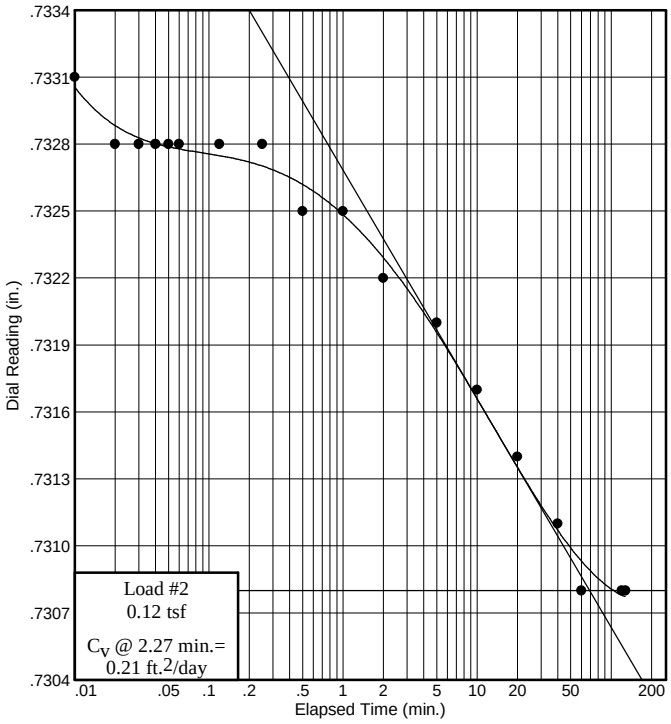
Figure

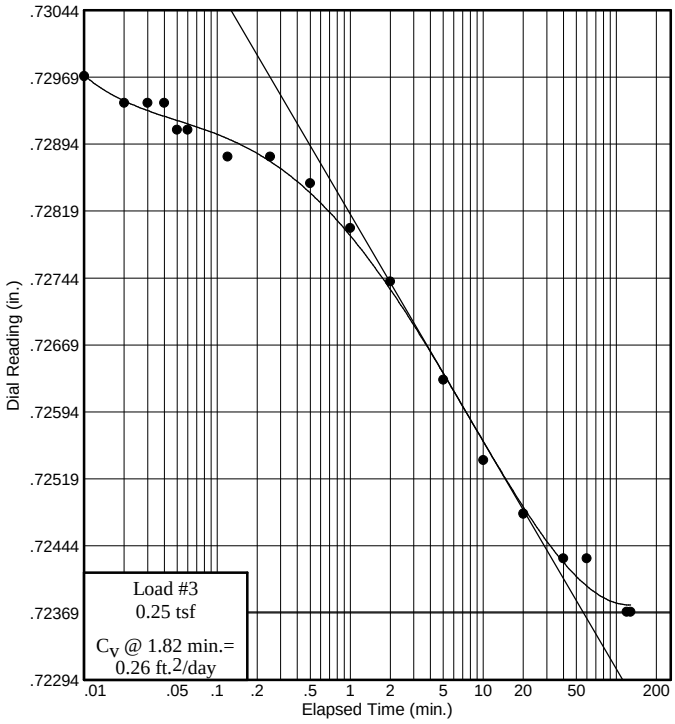
Dial Reading vs. Time

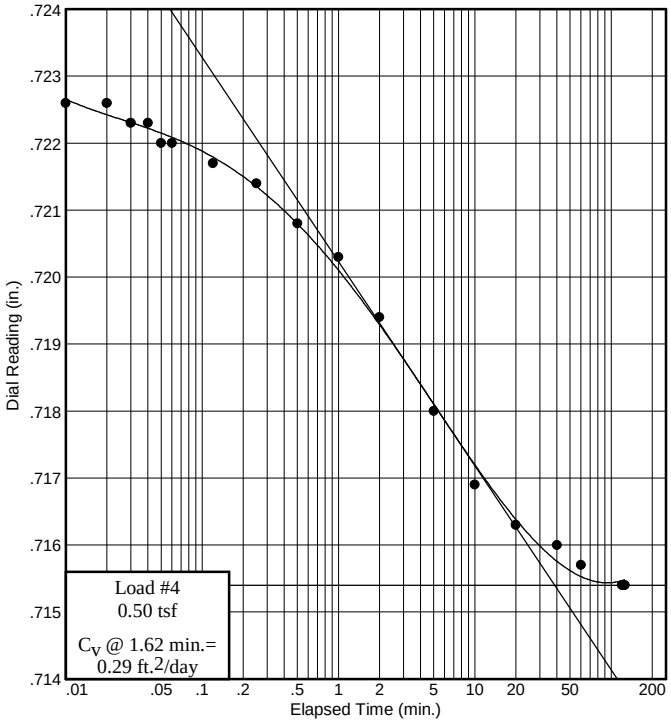
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: B-73 Sample No.: T-1 Elev./Depth: 15.5







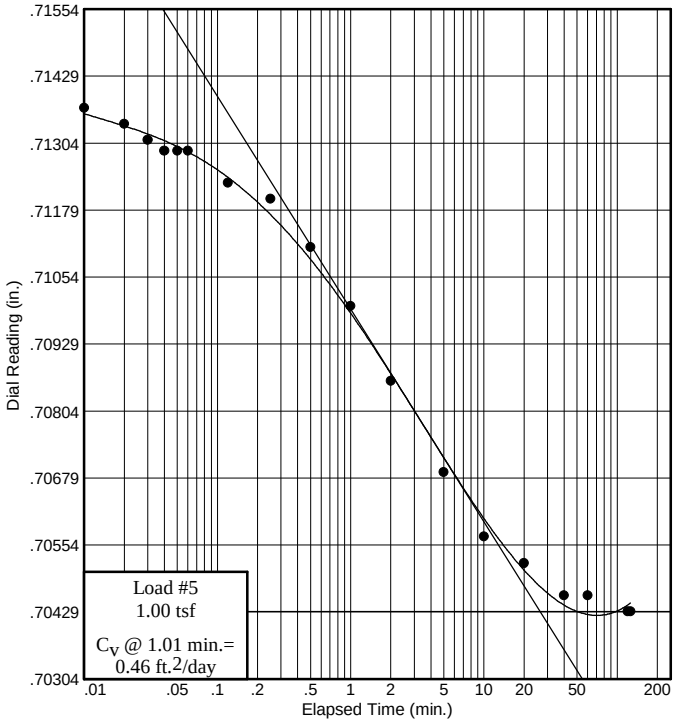


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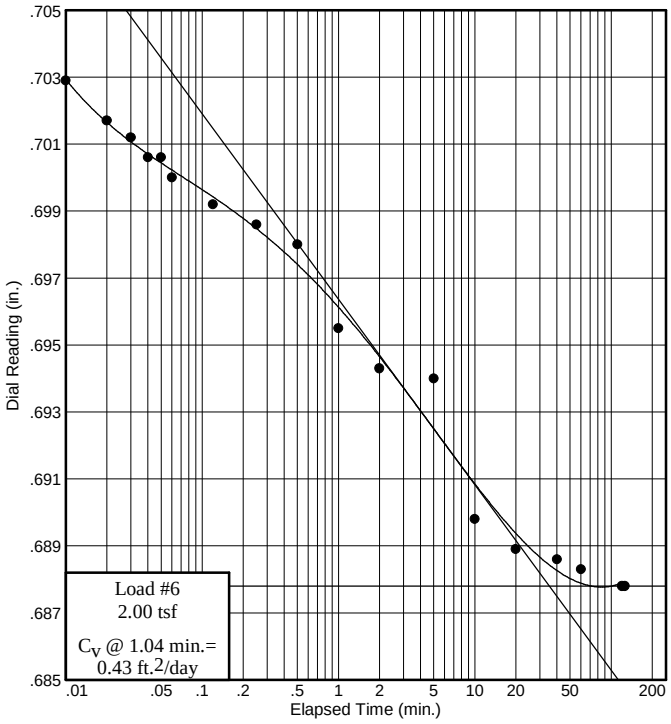
Figure

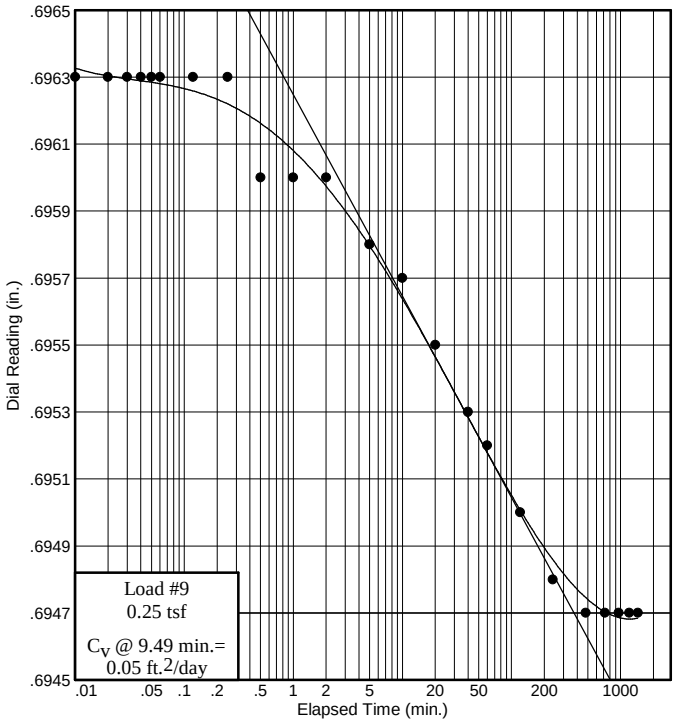
Dial Reading vs. Time

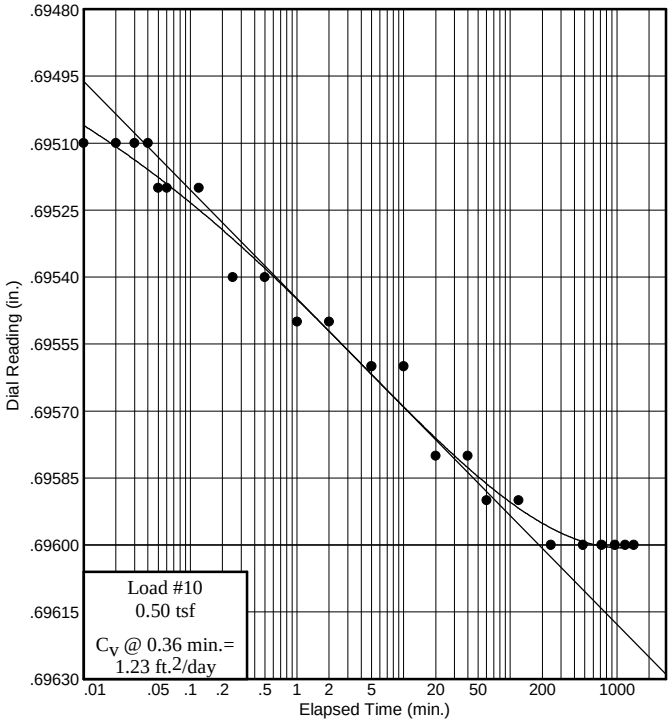
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: B-73 Sample No.: T-1 Elev./Depth: 15.5







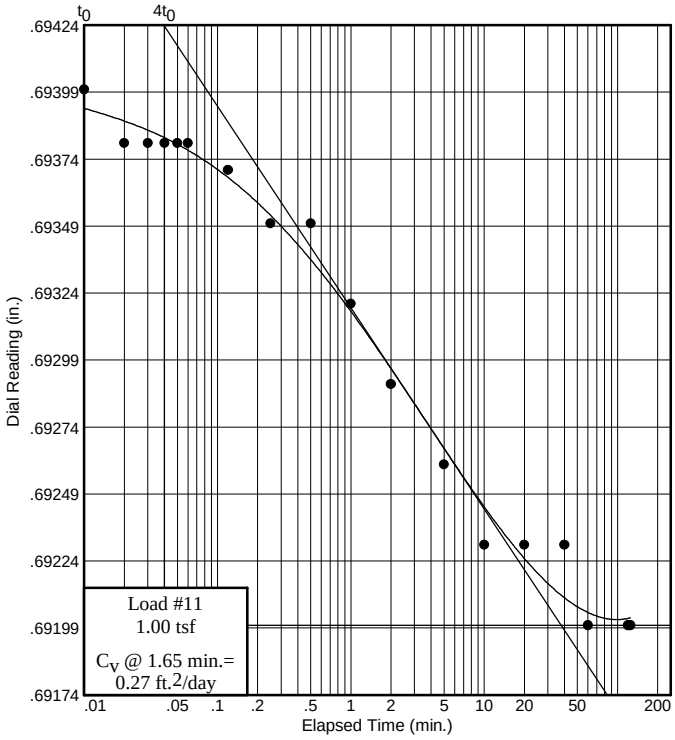


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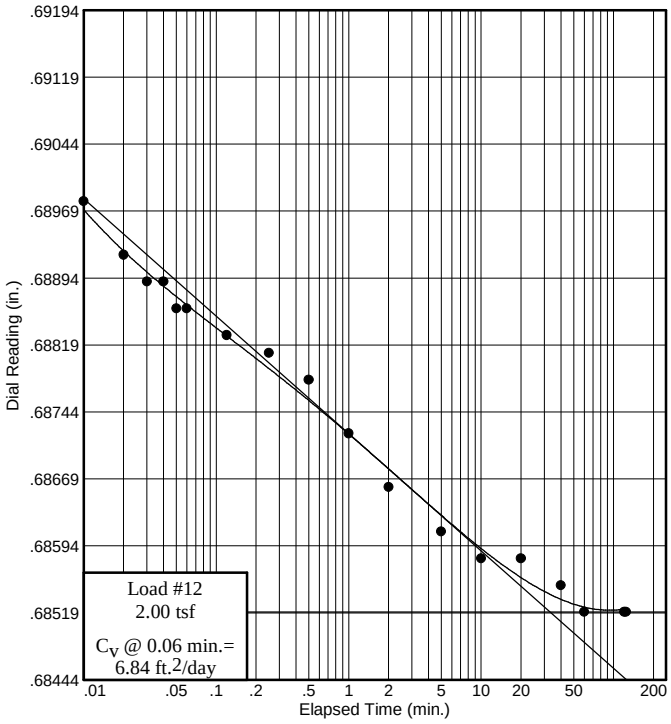
Figure

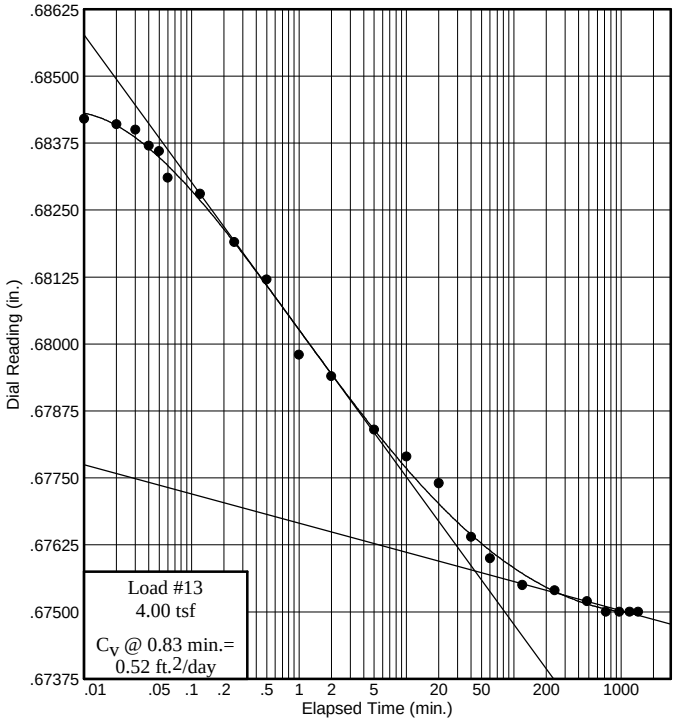
Dial Reading vs. Time

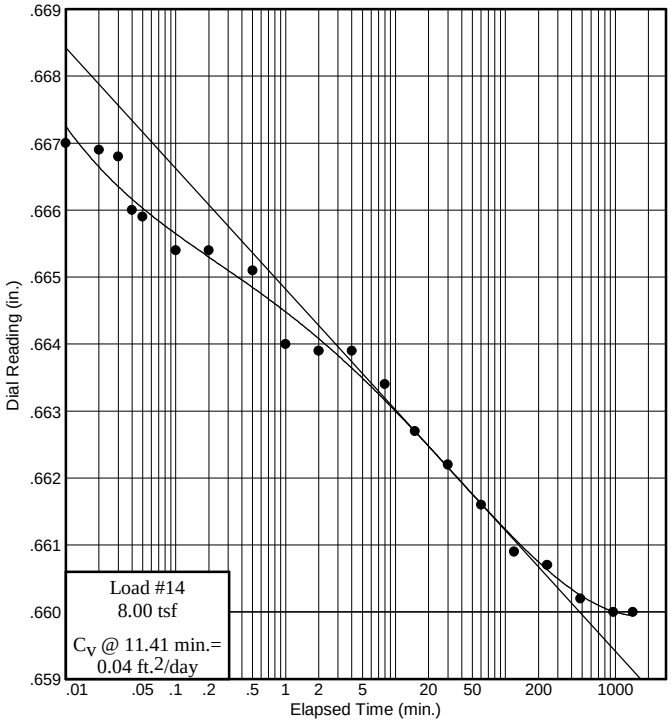
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: B-73 Sample No.: T-1 Elev./Depth: 15.5







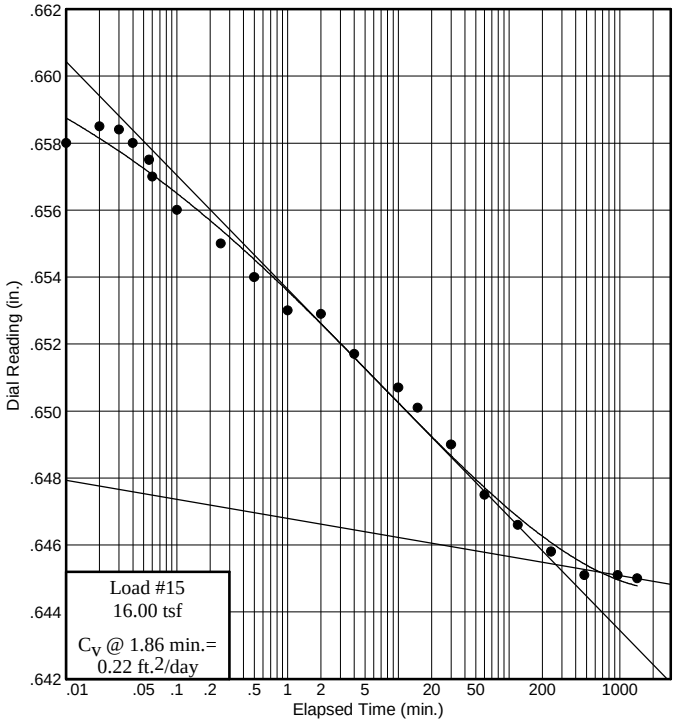


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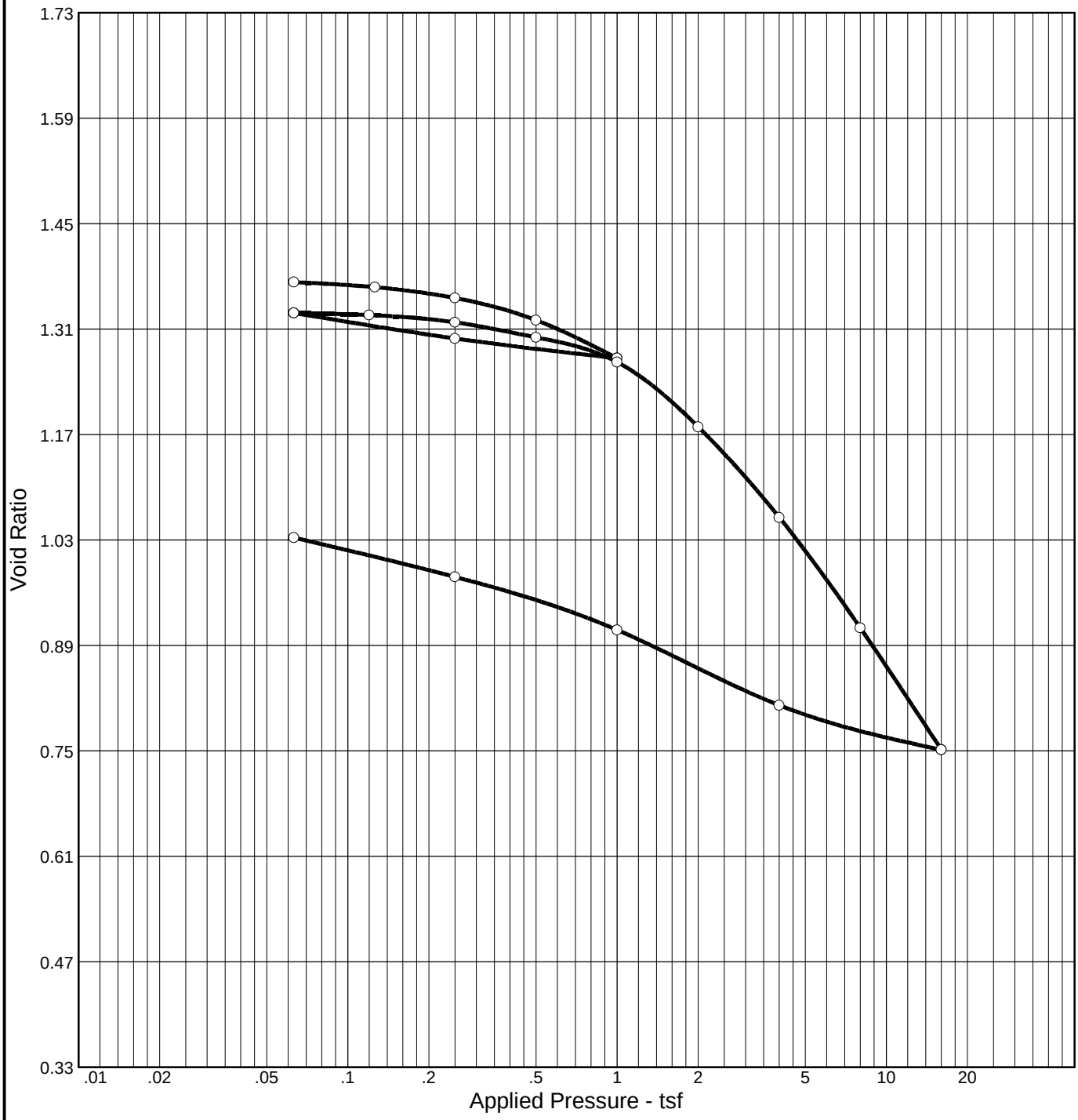
Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
97.4 %	49.8 %	70.4	77	50	2.66	CH		1.360

MATERIAL DESCRIPTION

Dark gray and brown

Project No. 13-2123- **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-4 **Elev./Depth:** 18.0

Remarks:

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Mobile, Alabama

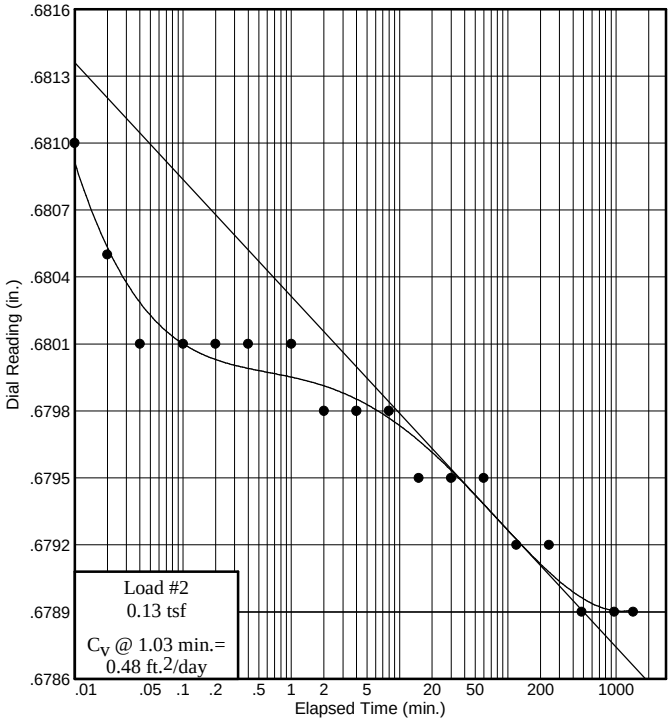
Figure

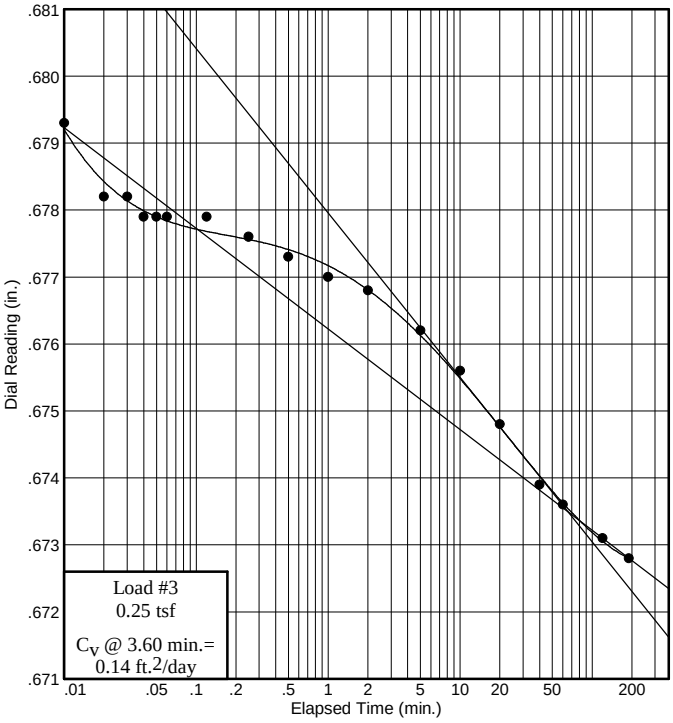
Dial Reading vs. Time

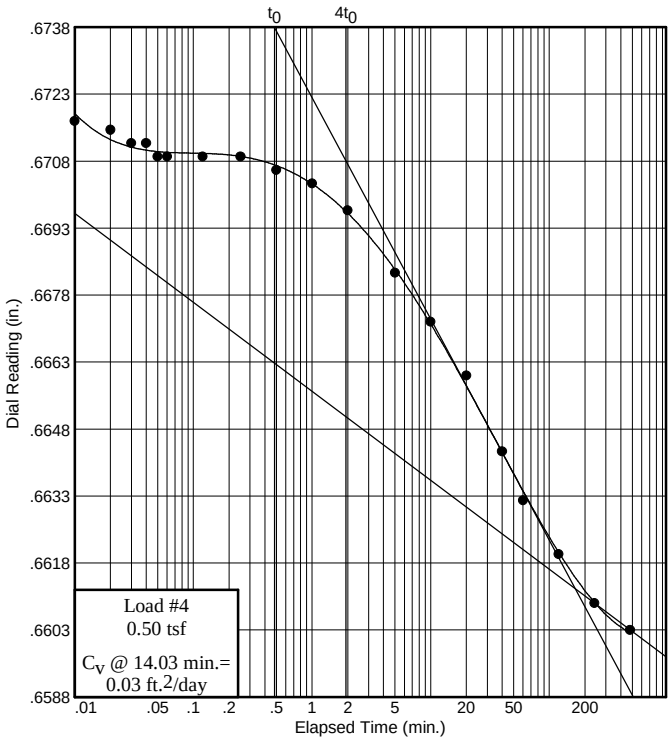
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-4 Elev./Depth: 18.0







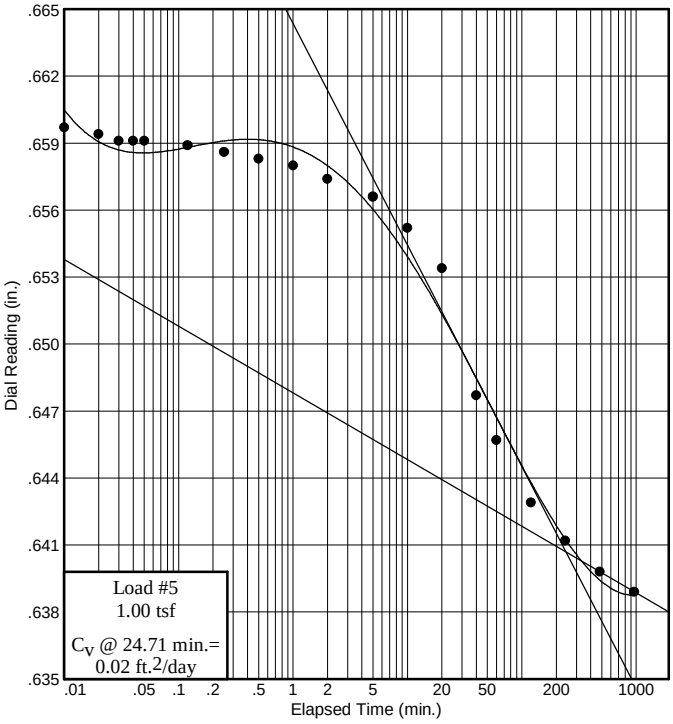


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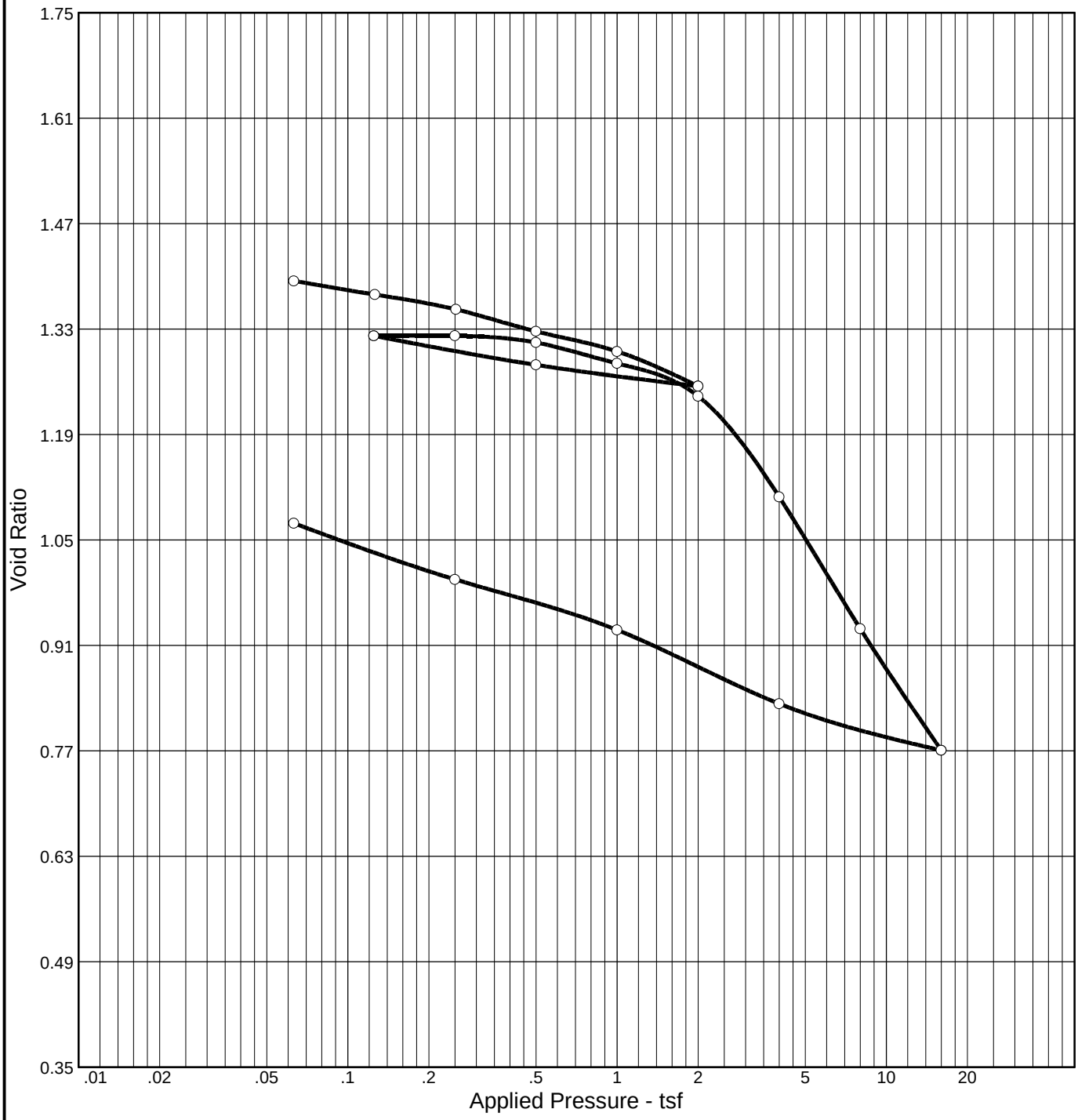
Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
102.7 %	54.3 %	69.0	39	16	2.66	CL		1.406

MATERIAL DESCRIPTION

Dark gray and brown

Project No. 13-2123- **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-4 **Elev./Depth:** 19.0

Remarks:

Thompson Engineering

Mobile, Alabama

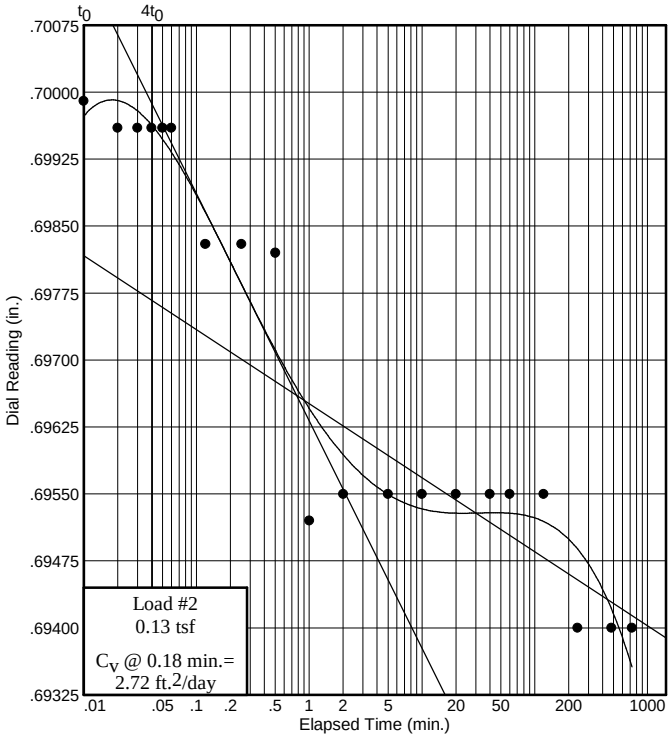
Figure

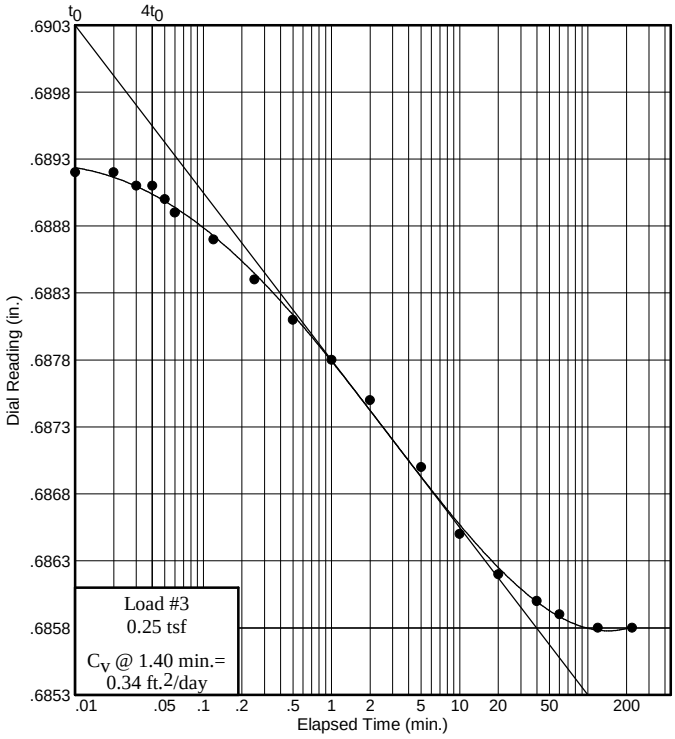
Dial Reading vs. Time

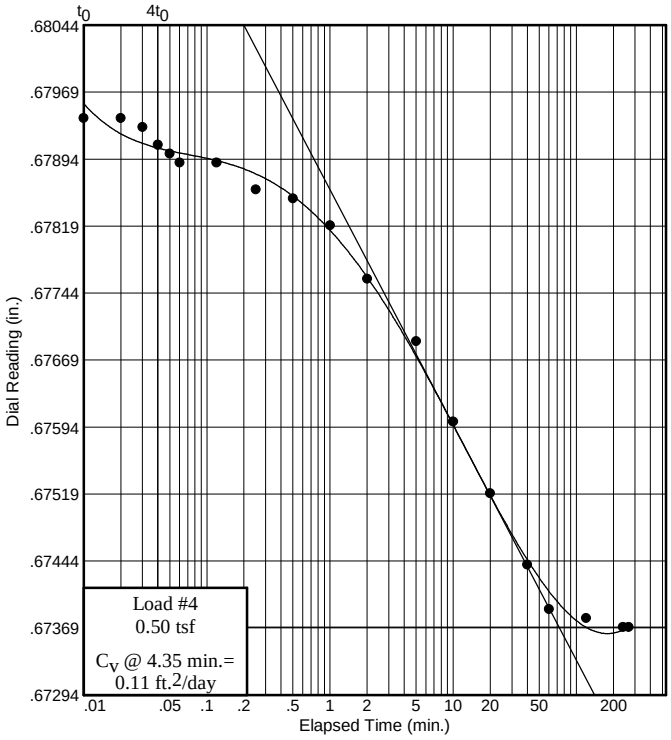
Project No.: 13-2123-0004

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source: BR-4 Elev./Depth: 19.0







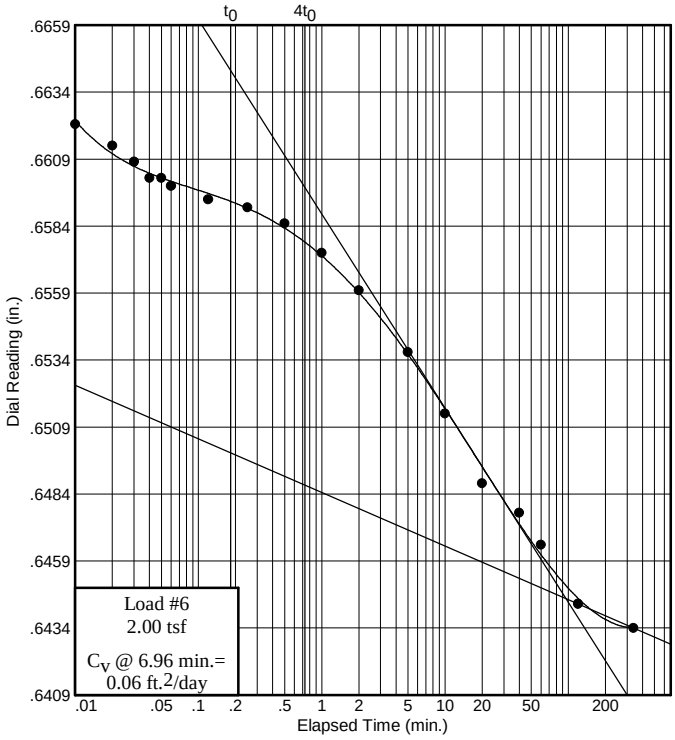


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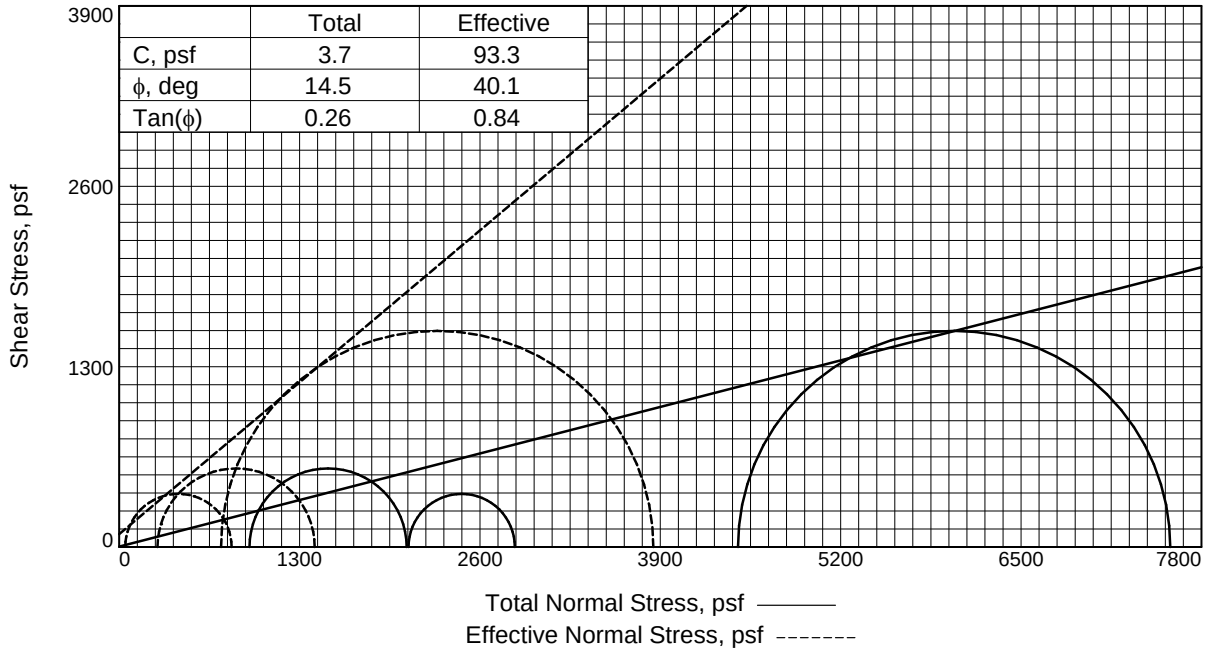
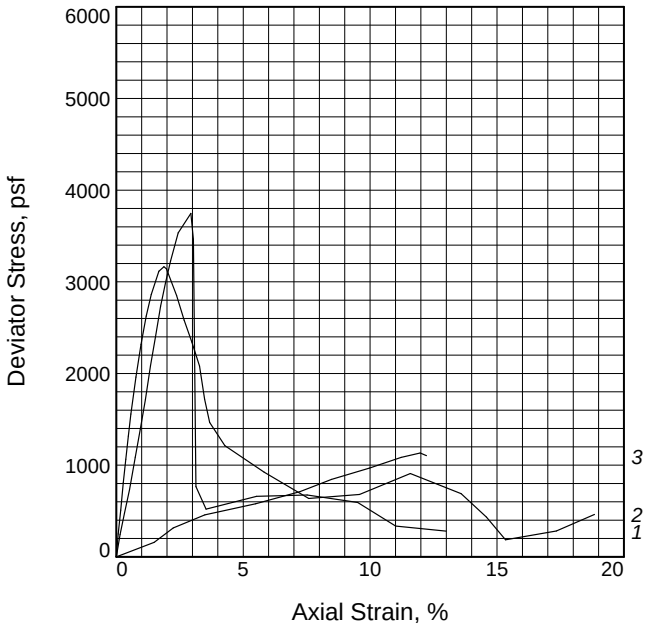
Figure





Specimen No.		1	2	3
Initial	Water Content, %	49.1	52.8	50.3
	Dry Density, pcf	70.2	66.2	68.6
	Saturation, %	95.7	93.2	94.3
	Void Ratio	1.3643	1.5083	1.4197
	Diameter, in.	1.405	1.403	1.405
	Height, in.	2.798	2.790	2.788
At Test	Water Content, %	51.8	56.5	54.2
	Dry Density, pcf	69.9	66.3	68.0
	Saturation, %	100.0	100.0	100.0
	Void Ratio	1.3770	1.5029	1.4406
	Diameter, in.	1.408	1.402	1.409
	Height, in.	2.803	2.788	2.796
Strain at peak, %		3.1	1.7	12.0
Eff. Cell Pressure, psf		2085.1	4459.7	938.9
Fail. Stress, psf		766.3	3115.8	1132.6
Excess Pore Pr., psf		2041.6	3725.9	662.8
Strain, %		3.1	1.7	12.0
Ult. Stress, psf		766.3	3115.8	1132.6
Excess Pore Pr., psf		2041.6	3725.9	662.8
Strain, %		3.1	1.7	12.0
$\bar{\sigma}_1$ Failure, psf		809.9	3849.6	1408.7
$\bar{\sigma}_3$ Failure, psf		43.6	733.7	276.1

Type of Test:
CU with Pore Pressures

Sample Type:

Description: Gray

LL= NP **PI=** NP

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

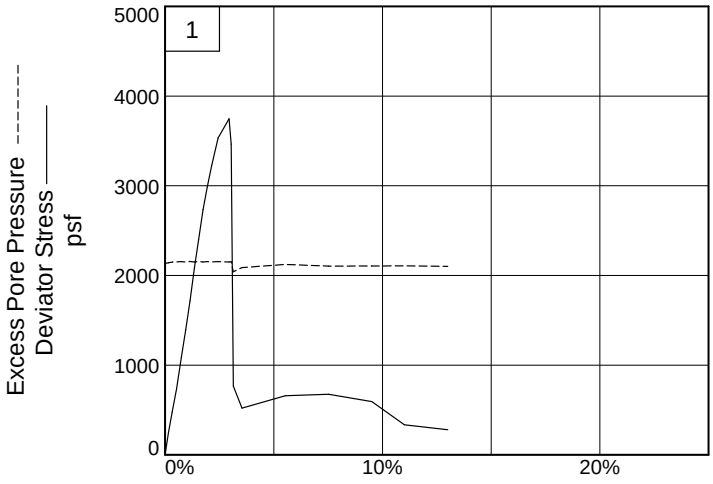
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

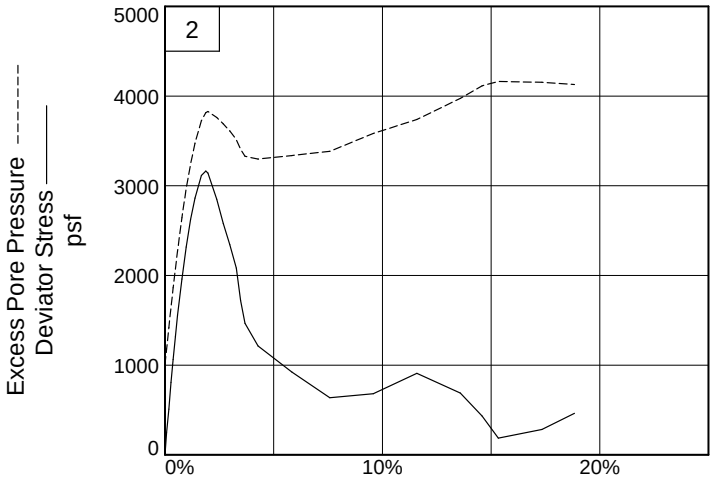
Source of Sample: B-42 **Depth:** 30.0

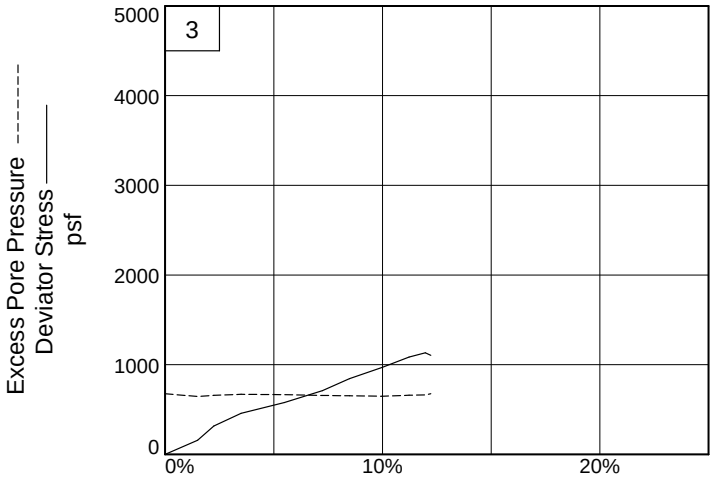
Sample Number: T-1

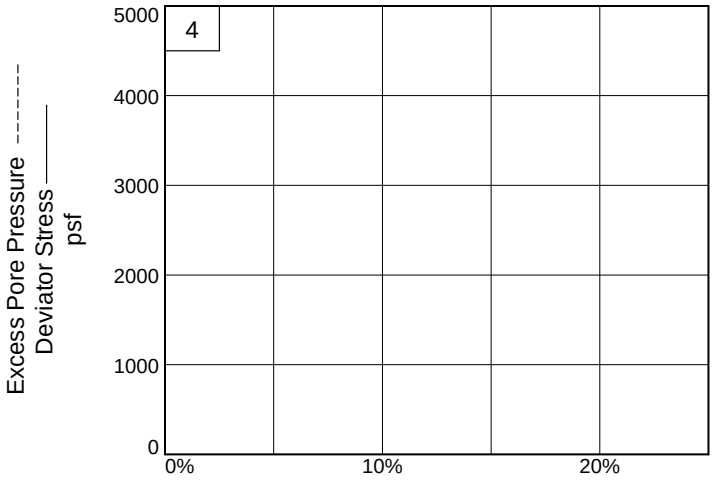
Proj. No.: 13-2123-0004 **Date Sampled:** 4/26/13

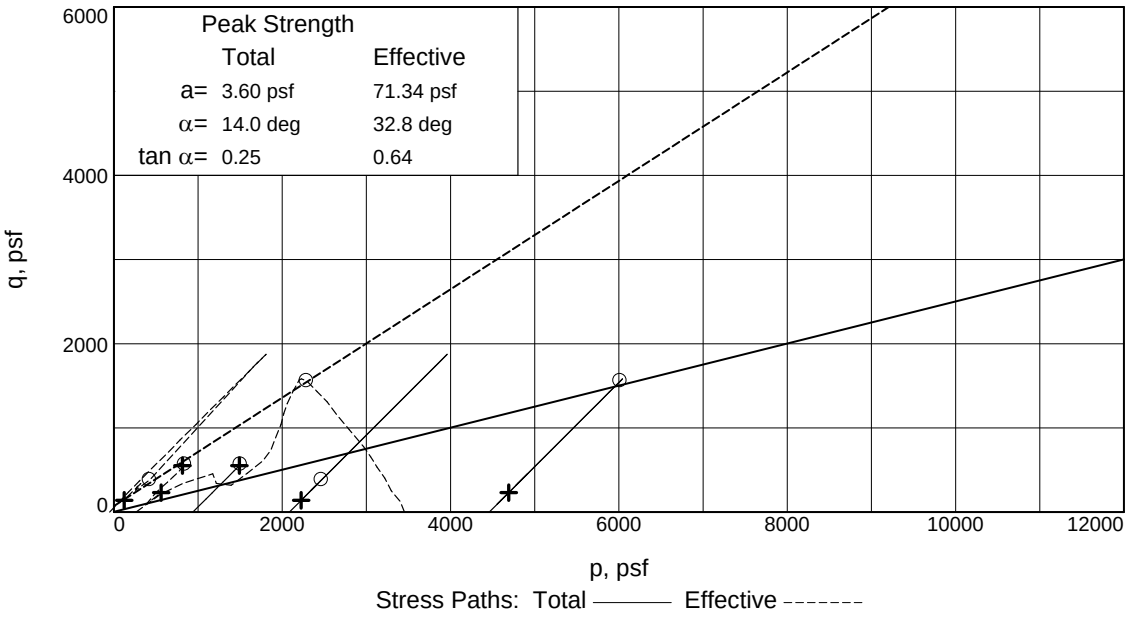
TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama











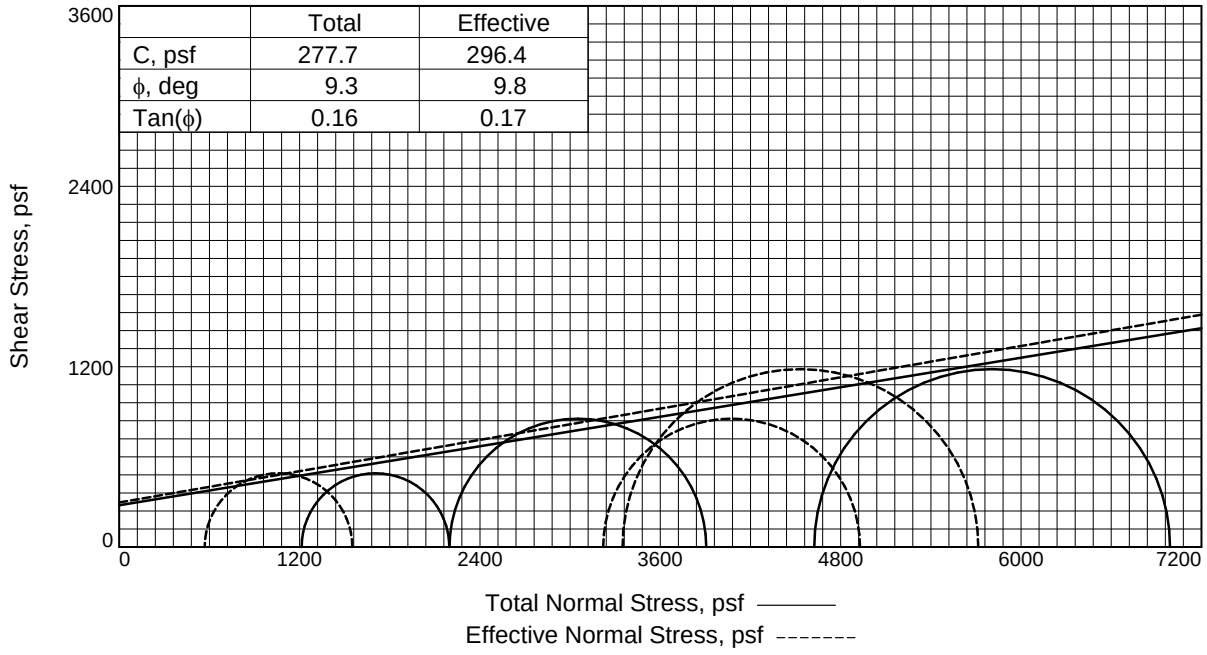
Client: ALDOT

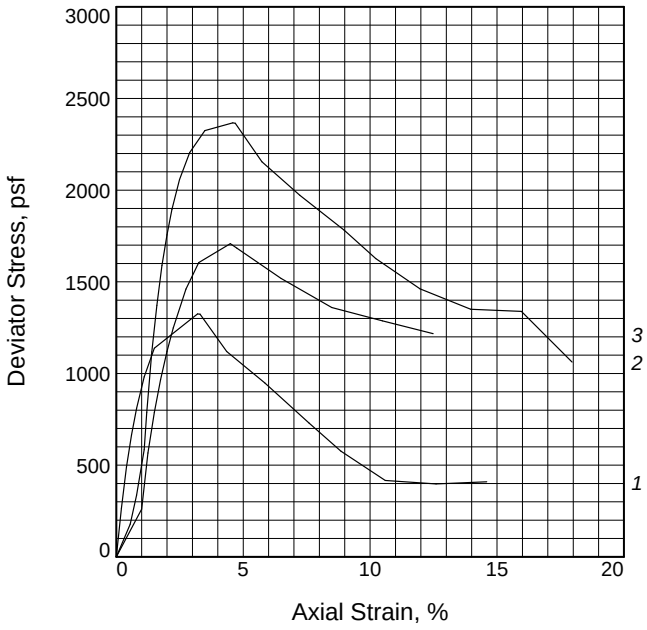
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-42 **Depth:** 30.0 **Sample Number:** T-1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1	2	3
Initial	Water Content, %	57.6	54.7	58.0
	Dry Density, pcf	65.3	65.9	65.2
	Saturation, %	99.3	95.6	99.7
	Void Ratio	1.5421	1.5217	1.5479
	Diameter, in.	1.390	1.401	1.401
	Height, in.	2.790	2.797	2.793
At Test	Water Content, %	58.0	57.2	58.2
	Dry Density, pcf	65.3	65.9	65.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	1.5432	1.5217	1.5479
	Diameter, in.	1.390	1.401	1.401
	Height, in.	2.790	2.797	2.793
Strain at peak, %		1.1	4.6	4.5
Eff. Cell Pressure, psf		1213.9	4623.8	2197.4
Fail. Stress, psf		982.0	2367.3	1708.0
Excess Pore Pr., psf		645.1	1275.5	-1022.7
Strain, %		1.1	4.6	4.5
Ult. Stress, psf		982.0	2367.3	1708.0
Excess Pore Pr., psf		645.1	1275.5	-1022.7
Strain, %		1.1	4.6	4.5
$\bar{\sigma}_1$ Failure, psf		1550.7	5715.6	4928.1
$\bar{\sigma}_3$ Failure, psf		568.8	3348.3	3220.1

Type of Test:
CU with Pore Pressures

Sample Type:

Description:

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

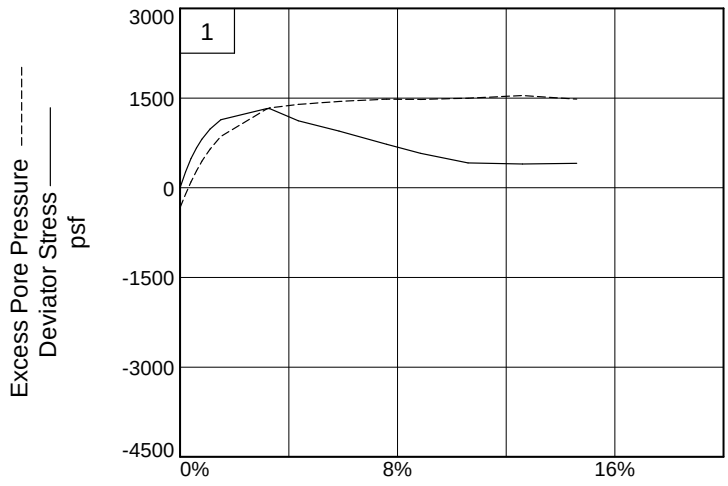
Client: ALDOT

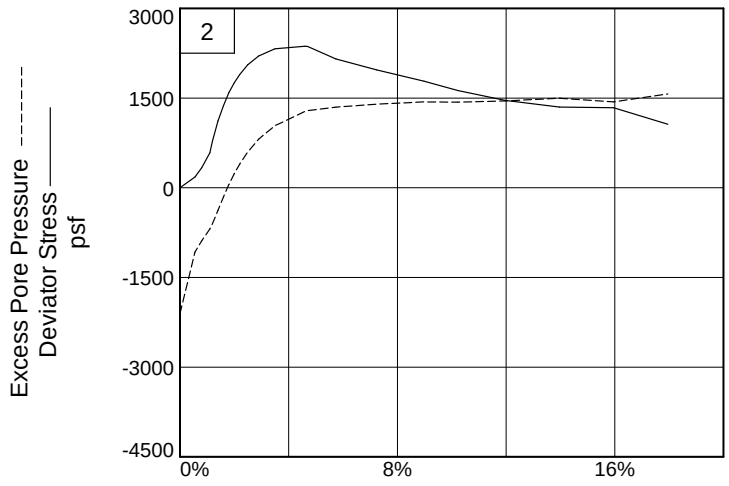
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

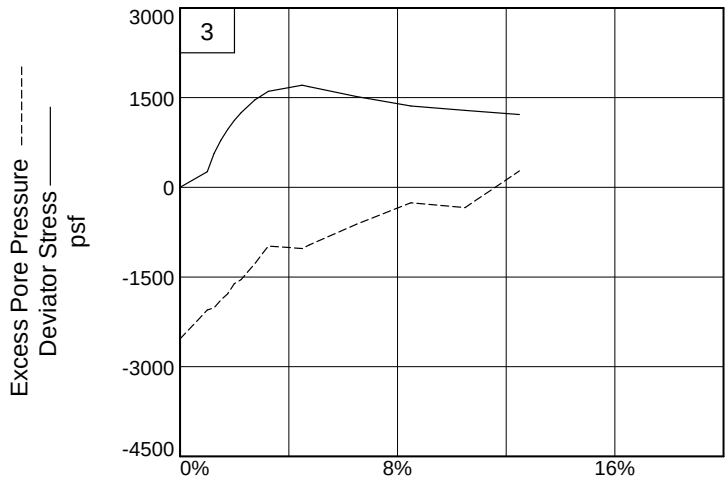
Source of Sample: B-59A **Depth:** 28.5

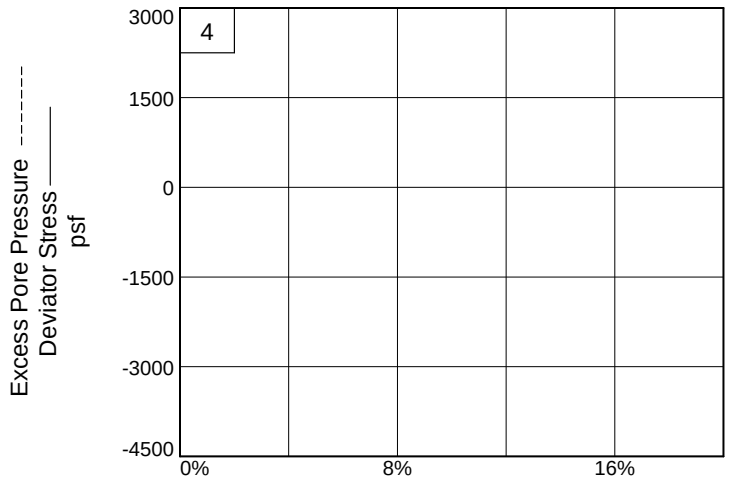
Proj. No.: 13-2123-0004 **Date Sampled:**

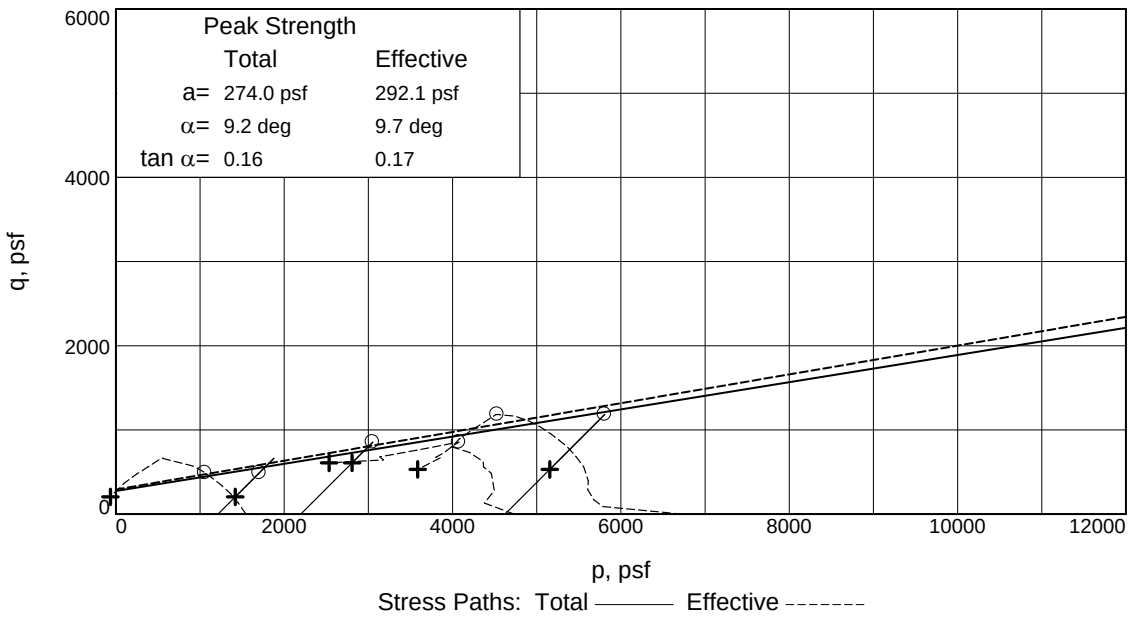
TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama











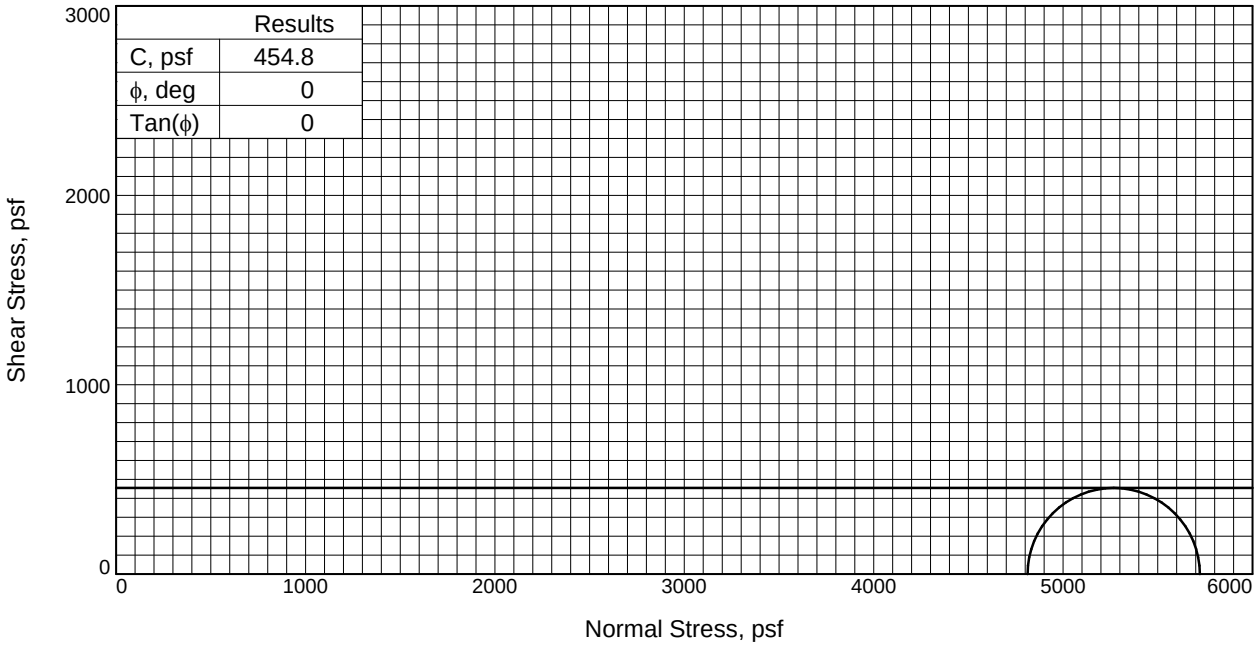
Client: ALDOT

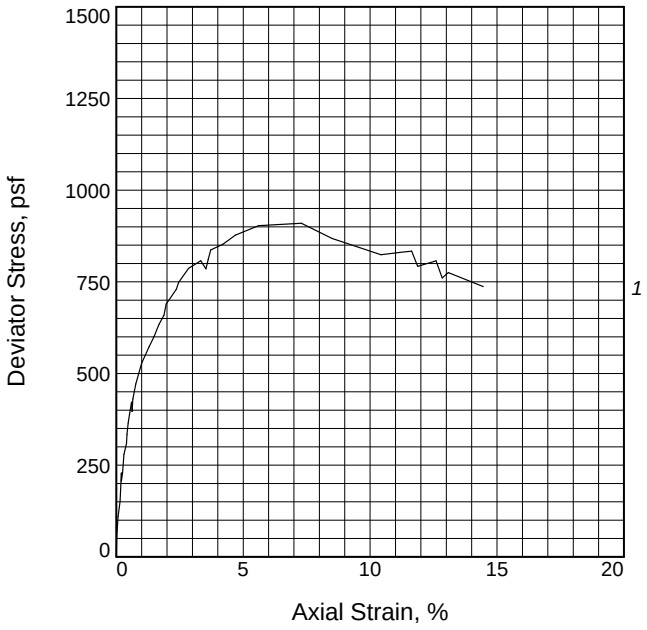
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-59A **Depth:** 28.5

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	34.1
	Dry Density, pcf	85.5
	Saturation, %	96.3
	Void Ratio	0.9431
	Diameter, in.	1.394
	Height, in.	2.898
At Test	Water Content, %	35.5
	Dry Density, pcf	85.5
	Saturation, %	100.0
	Void Ratio	0.9431
	Diameter, in.	1.394
	Height, in.	2.898
Strain at peak, %		7.3
Back Pressure, psf		0.0
Cell Pressure, psf		4812.5
Fail. Stress, psf		909.6
Strain, %		7.3
Ult. Stress, psf		909.6
Strain, %		7.3
σ_1 Failure, psf		5722.1
σ_3 Failure, psf		4812.5

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Soft, gray

LL= 48 **PL=** 17 **PI=** 31

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-8 **Depth:** 23.5

Sample Number: S8/T1

Proj. No.: 13-2123-0004 **Date Sampled:**

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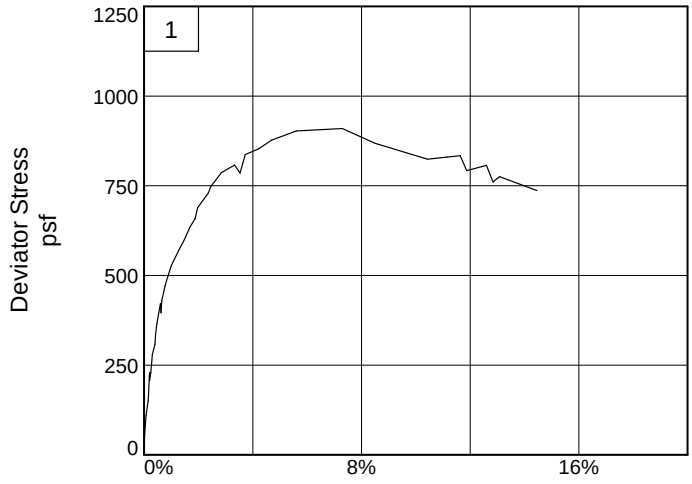
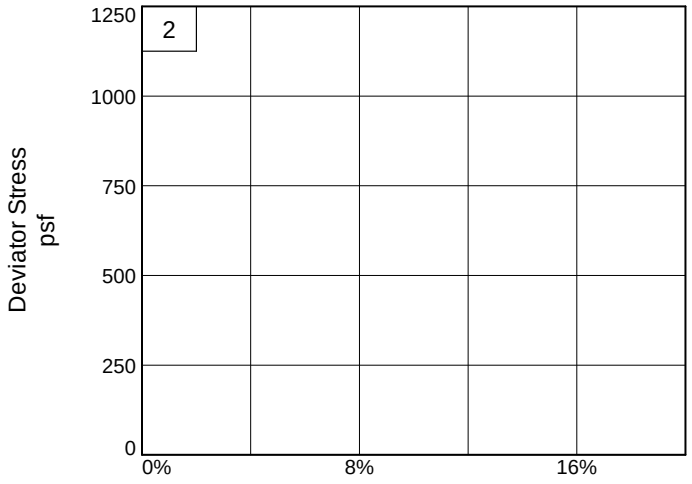
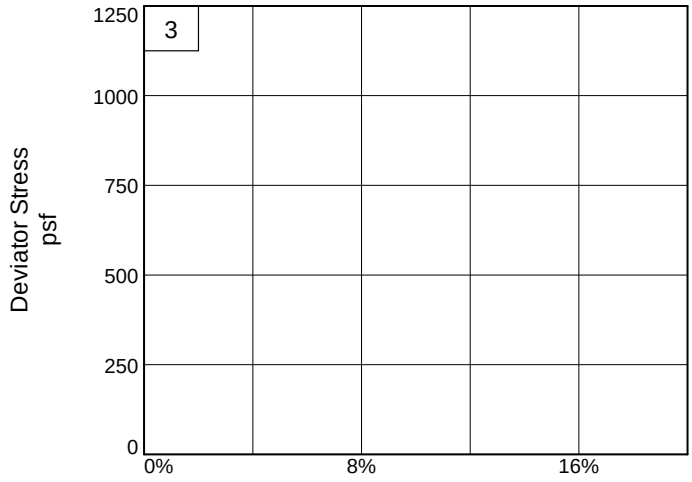
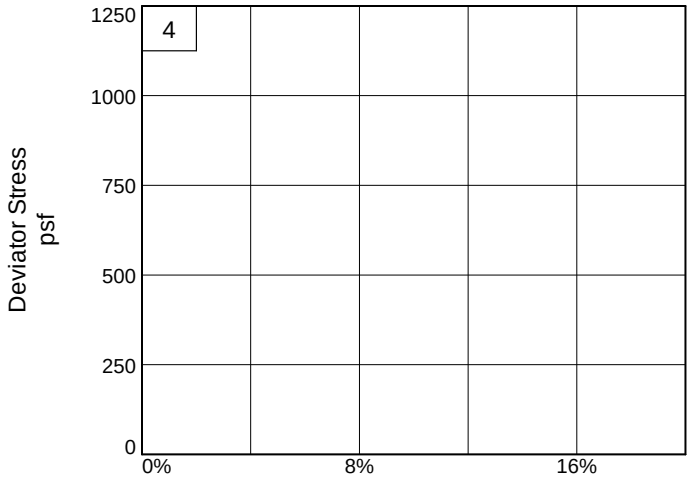
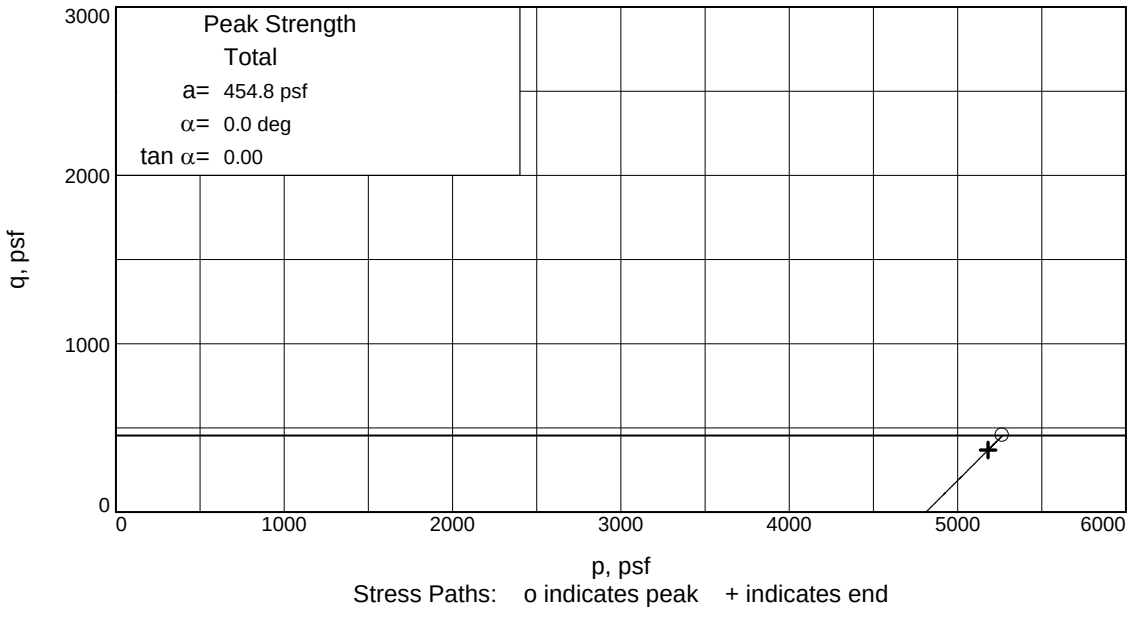
Thompson Engineering
Mobile, Alabama











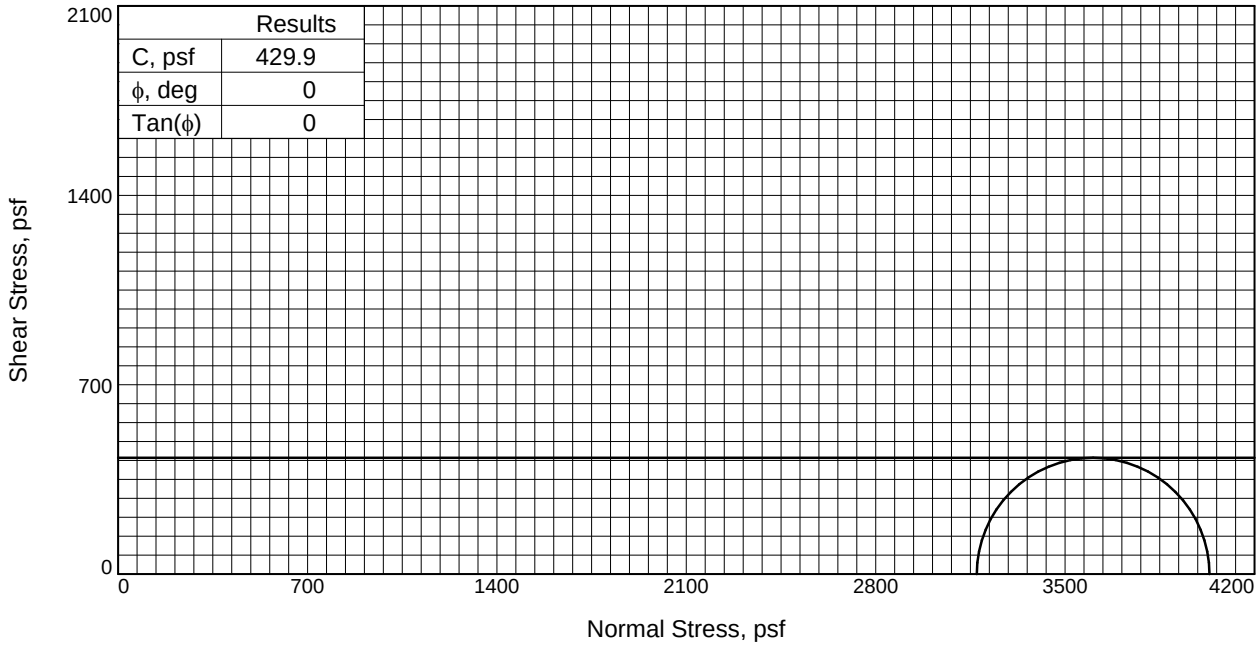
Client: ALDOT

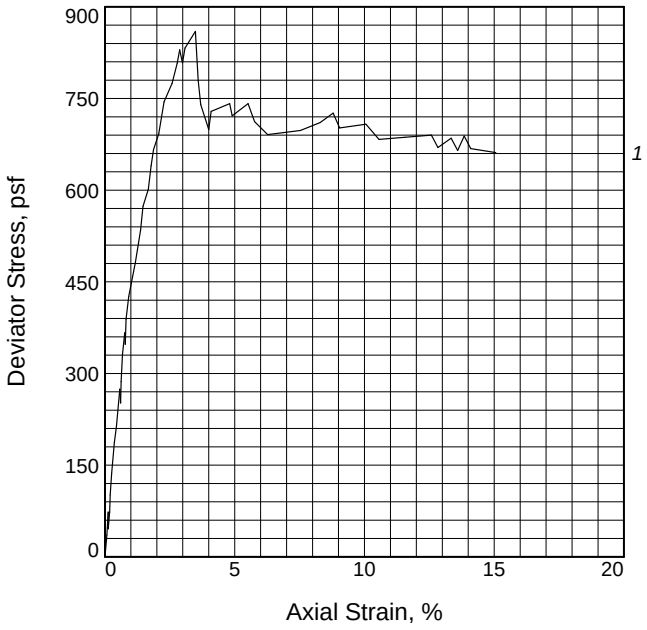
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-8 **Depth:** 23.5 **Sample Number:** S8/T1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	57.2
	Dry Density, pcf	65.2
	Saturation, %	98.4
	Void Ratio	1.5465
	Diameter, in.	1.399
	Height, in.	2.784
At Test	Water Content, %	57.2
	Dry Density, pcf	65.2
	Saturation, %	98.3
	Void Ratio	1.5465
	Diameter, in.	1.399
	Height, in.	2.784
Strain at peak, %		3.5
Back Pressure, psf		0.0
Cell Pressure, psf		3173.8
Fail. Stress, psf		859.7
Strain, %		3.5
Ult. Stress, psf		859.7
Strain, %		3.5
σ_1 Failure, psf		4033.5
σ_3 Failure, psf		3173.8

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Very soft, gray and brown, with trace organics

LL= 177 **PL=** 75 **PI=** 102

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-51A **Depth:** 28.0

Sample Number: S3/T1

Proj. No.: 13-2123-0004 **Date Sampled:**

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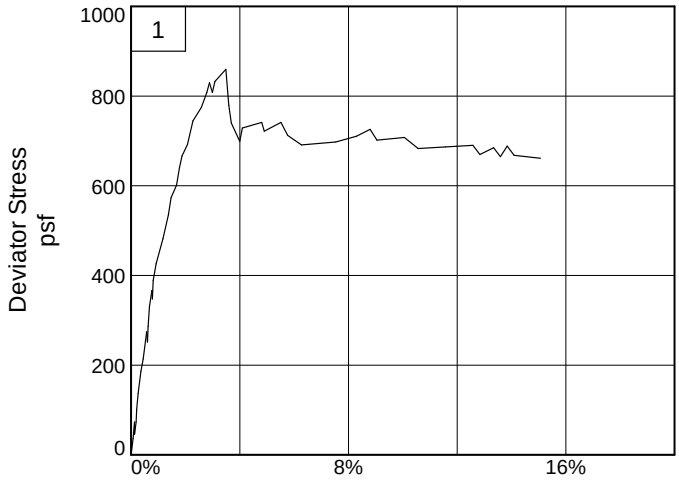
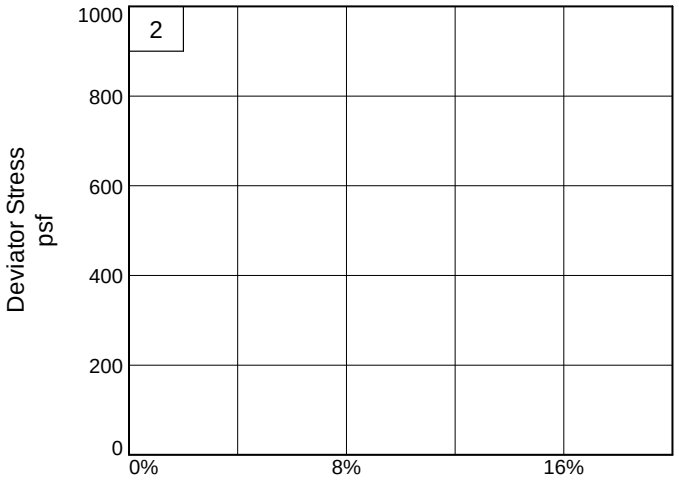
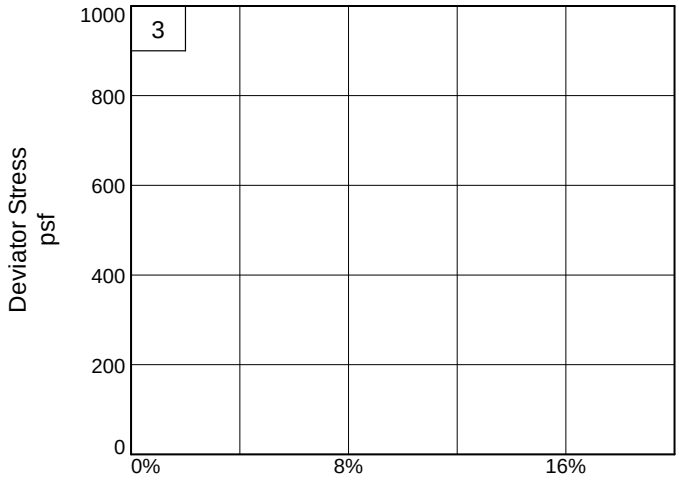
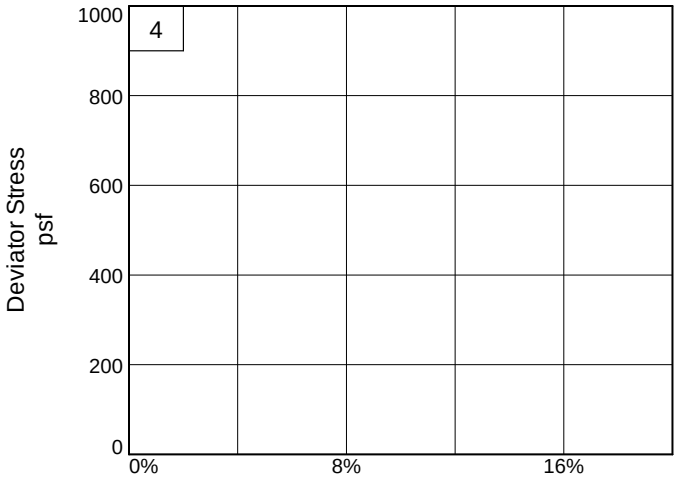
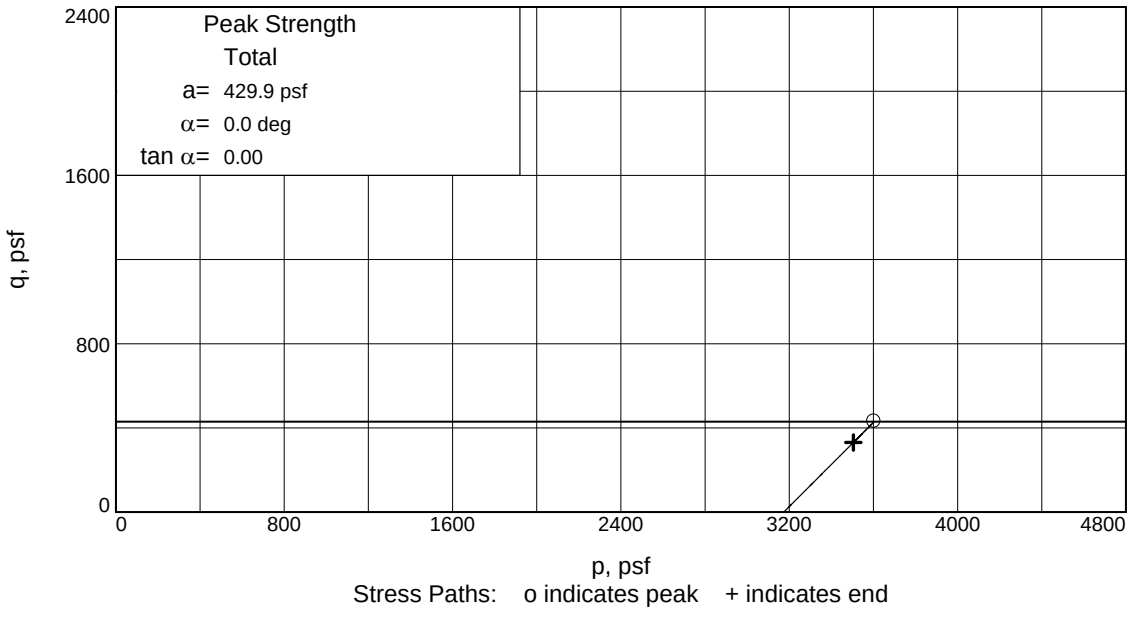
Thompson Engineering
Mobile, Alabama











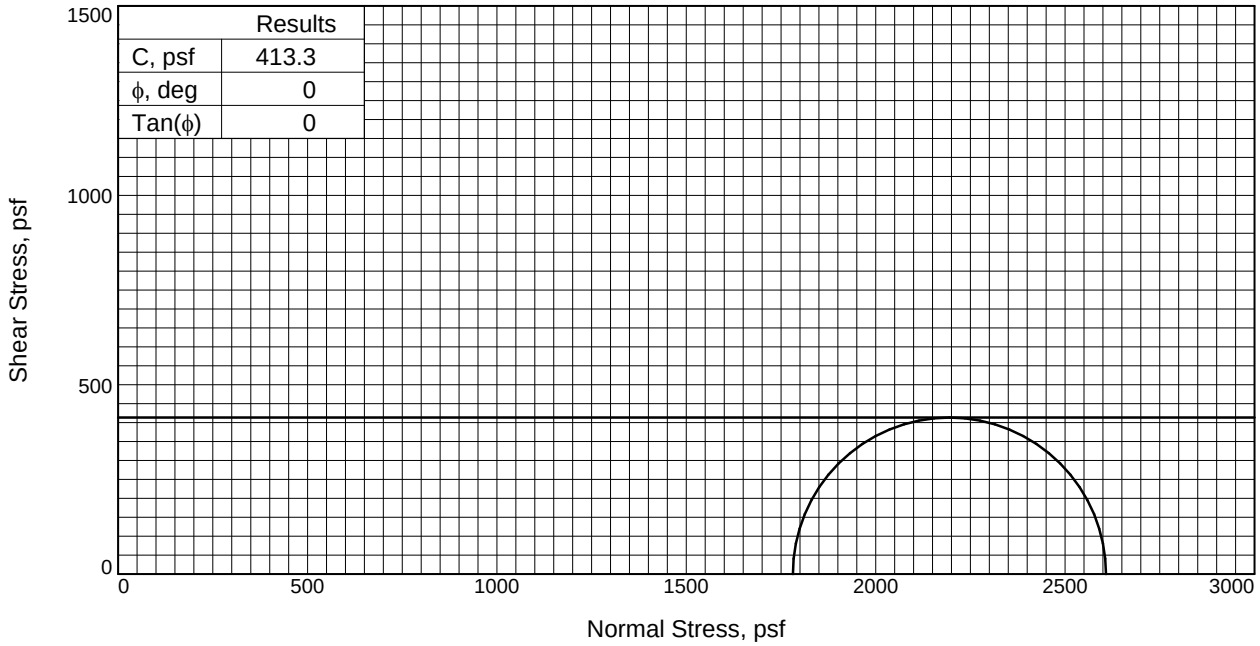
Client: ALDOT

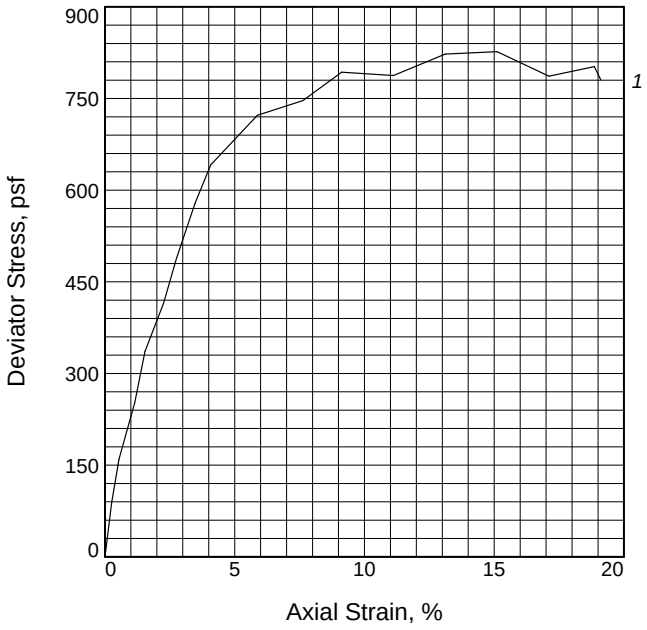
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-51A **Depth:** 28.0 **Sample Number:** S3/T1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	40.0
	Dry Density, pcf	80.0
	Saturation, %	98.7
	Void Ratio	1.0766
	Diameter, in.	1.400
	Height, in.	2.788
At Test	Water Content, %	39.3
	Dry Density, pcf	80.0
	Saturation, %	97.2
	Void Ratio	1.0766
	Diameter, in.	1.400
	Height, in.	2.788
Strain at peak, %		15.1
Back Pressure, psf		0.0
Cell Pressure, psf		1781.3
Fail. Stress, psf		826.7
Strain, %		15.1
Ult. Stress, psf		826.7
Strain, %		15.1
σ_1 Failure, psf		2607.9
σ_3 Failure, psf		1781.3

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Soft, gray and brown

LL= 50 **PL=** 20 **PI=** 30

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-53 **Depth:** 18.5

Sample Number: S7/T1

Proj. No.: 13-2123-0004 **Date Sampled:** 5/30/13

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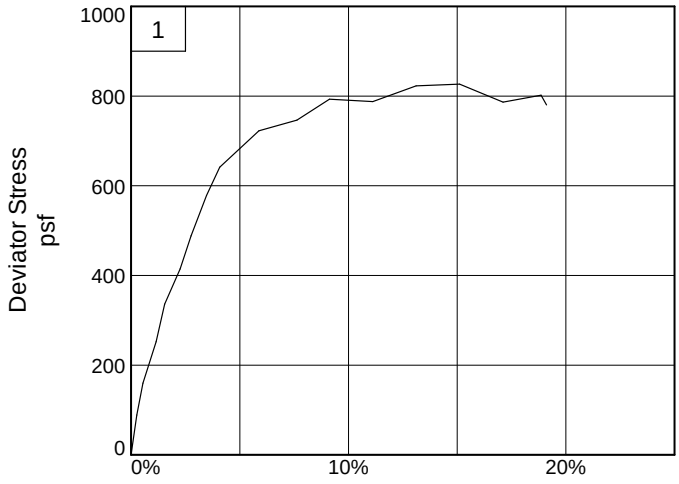
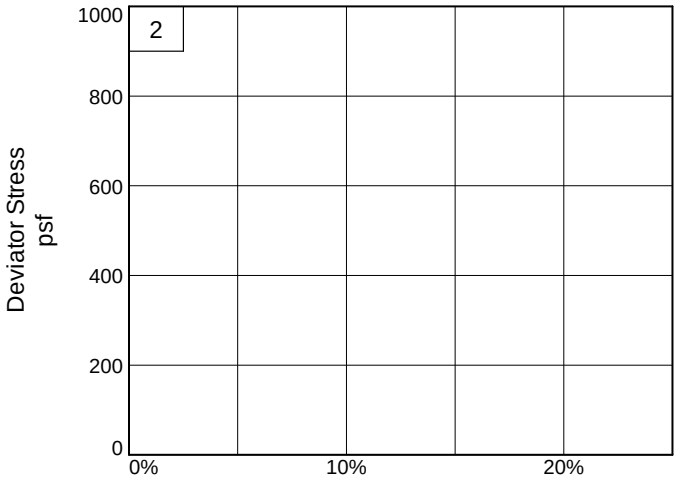
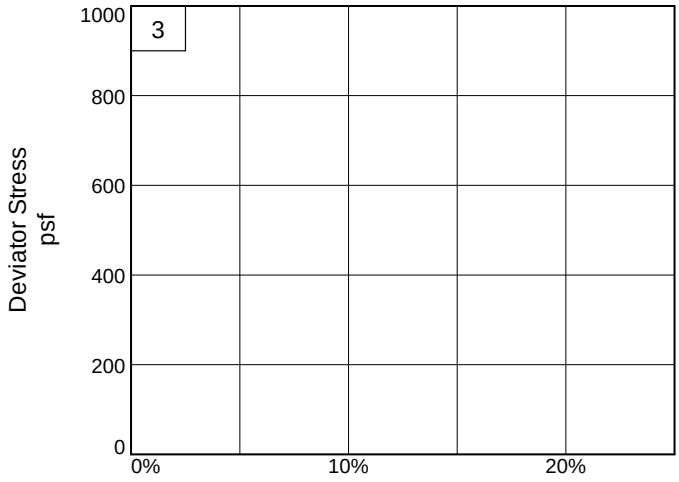
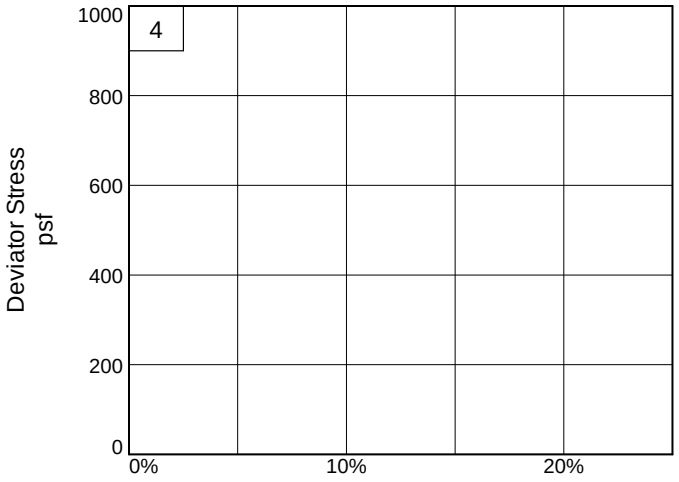
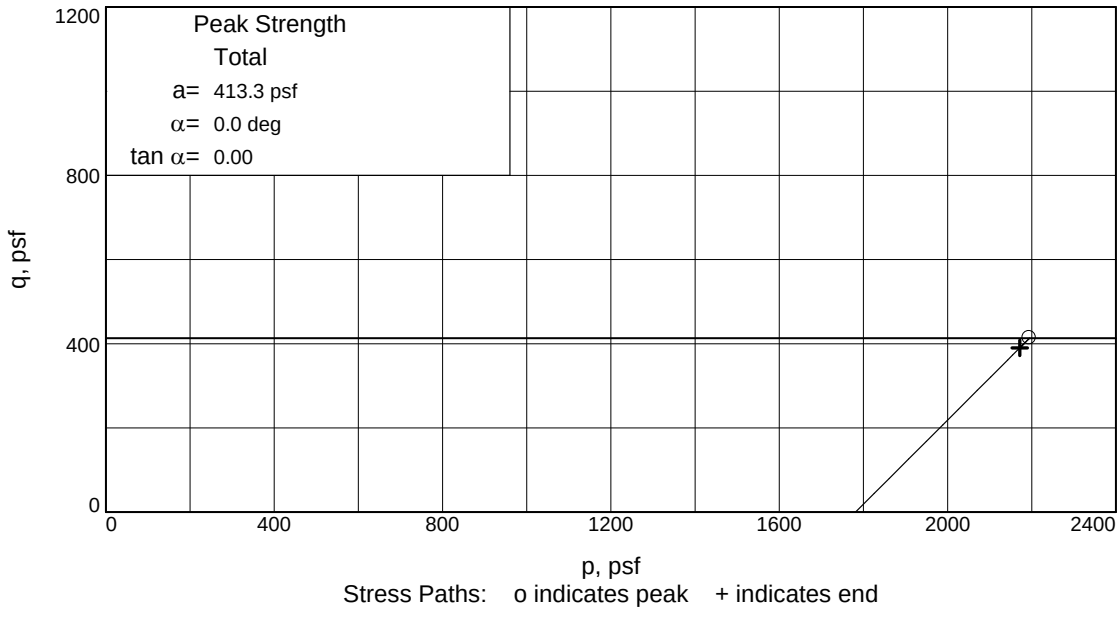
Thompson Engineering
Mobile, Alabama











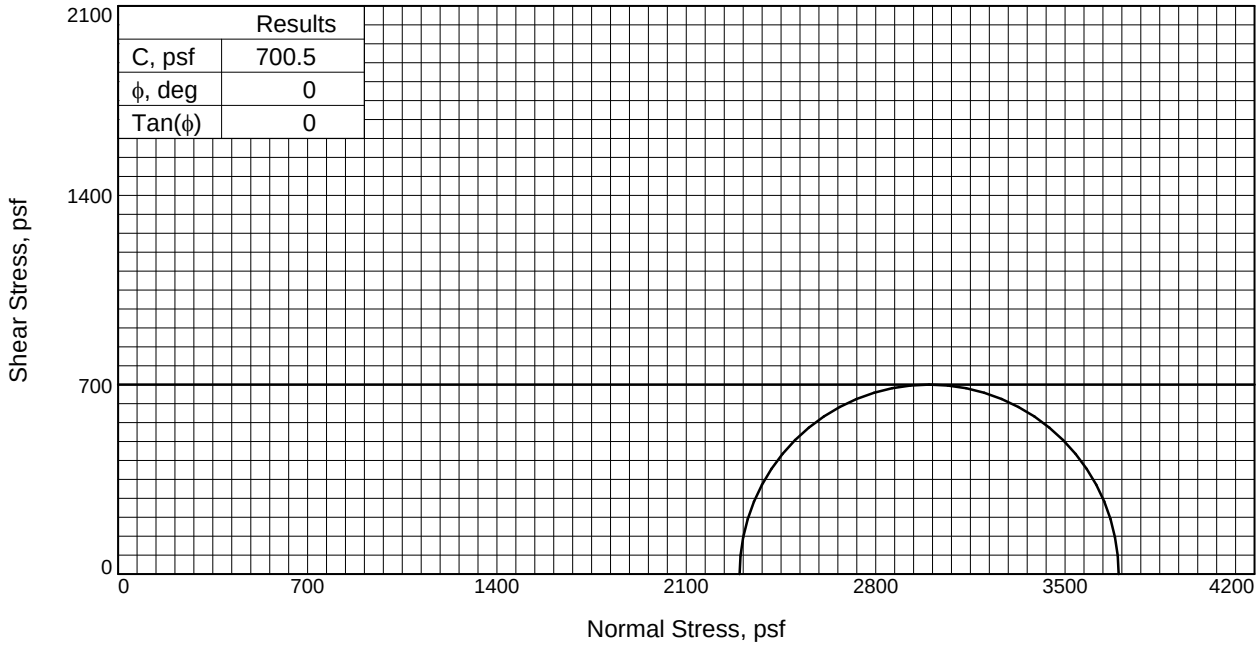
Client: ALDOT

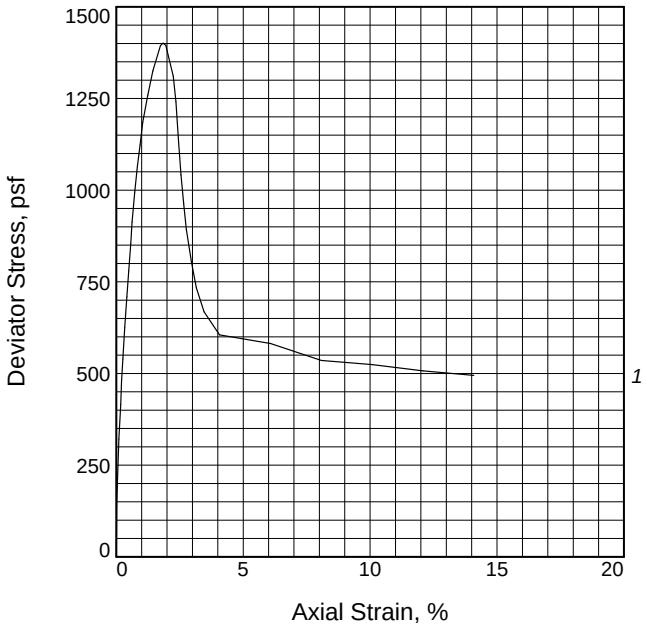
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-53 **Depth:** 18.5 **Sample Number:** S7/T1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	73.2
	Dry Density, pcf	56.3
	Saturation, %	99.8
	Void Ratio	1.9516
	Diameter, in.	1.399
	Height, in.	2.789
At Test	Water Content, %	73.4
	Dry Density, pcf	56.3
	Saturation, %	100.0
	Void Ratio	1.9516
	Diameter, in.	1.399
	Height, in.	2.789
Strain at peak, %		1.8
Back Pressure, psf		0.0
Cell Pressure, psf		2296.8
Fail. Stress, psf		1401.1
Strain, %		1.8
Ult. Stress, psf		1401.1
Strain, %		1.8
σ_1 Failure, psf		3697.9
σ_3 Failure, psf		2296.8

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Grayish brown

LL= 98 **PL=** 35 **PI=** 63

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-59 **Depth:** 28.5

Sample Number: S9/T1

Proj. No.: 13-2123-0004 **Date Sampled:** 4/26/13

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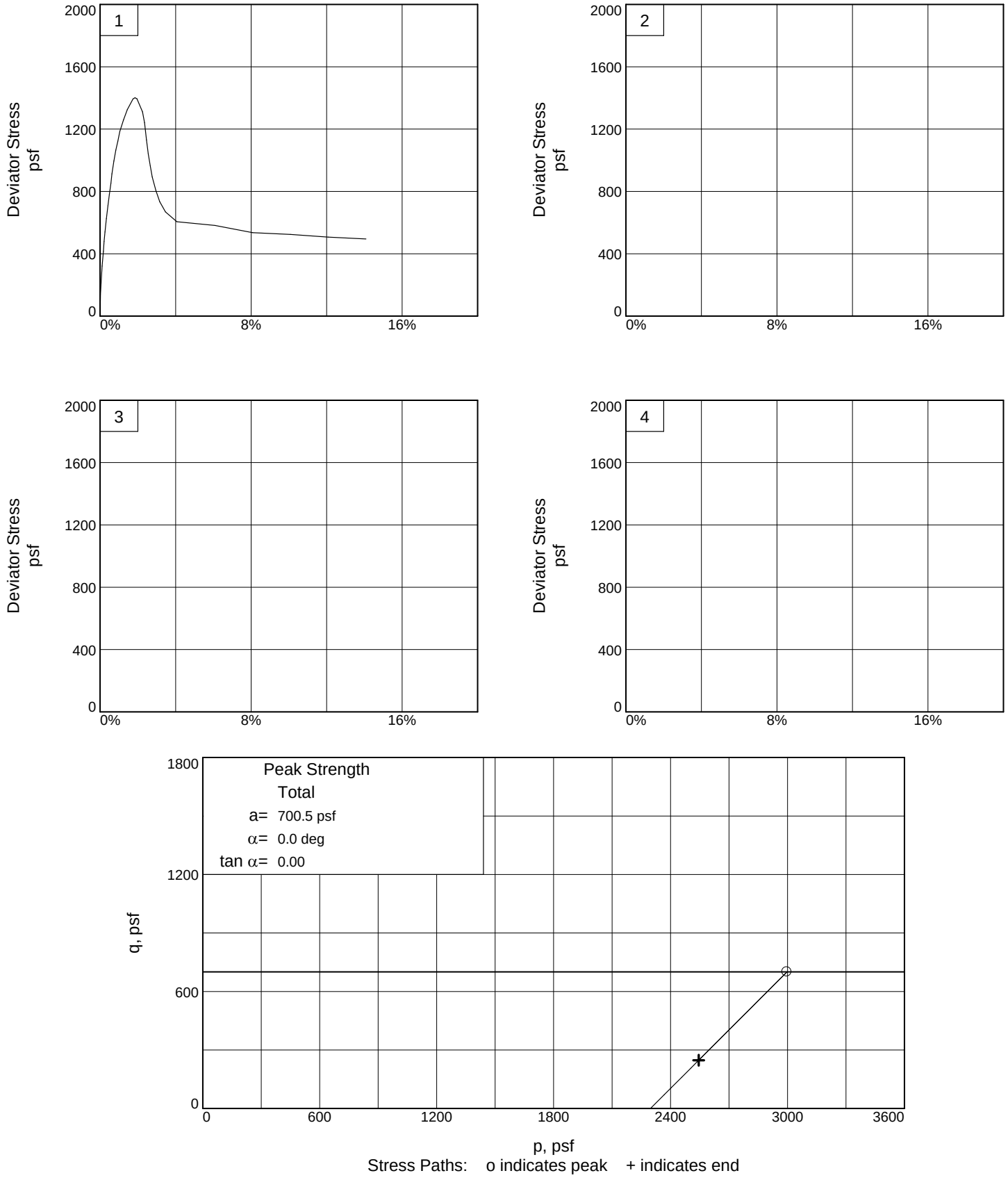
Thompson Engineering
Mobile, Alabama



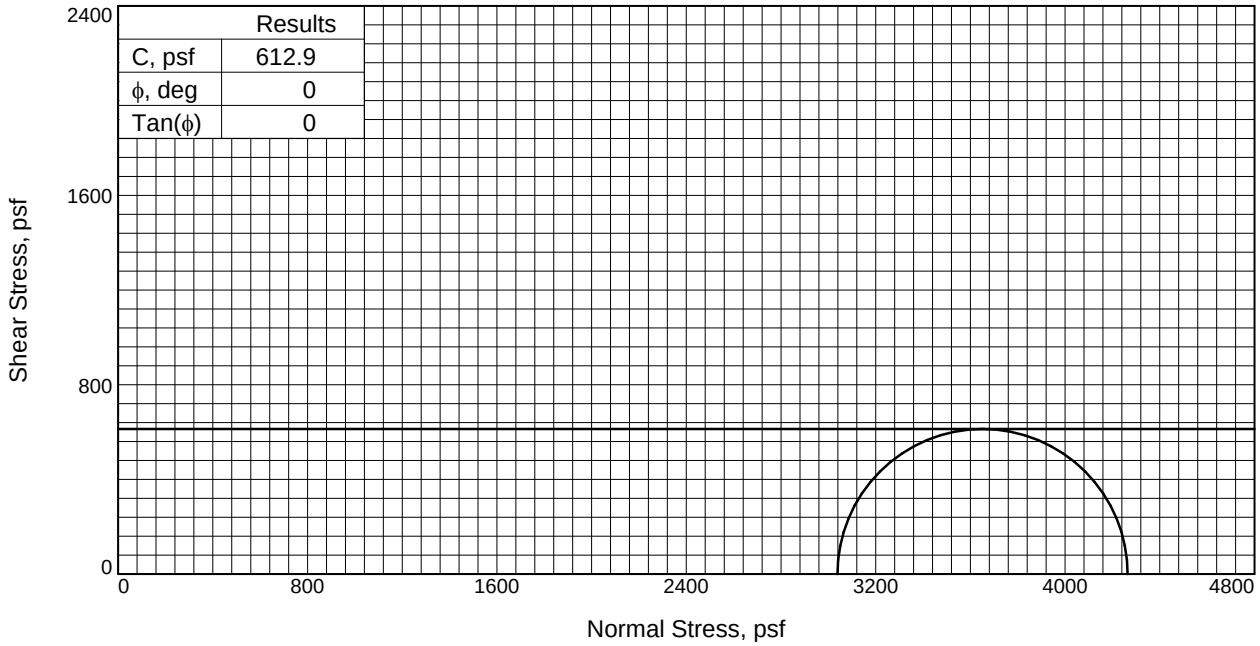
Client: ALDOT

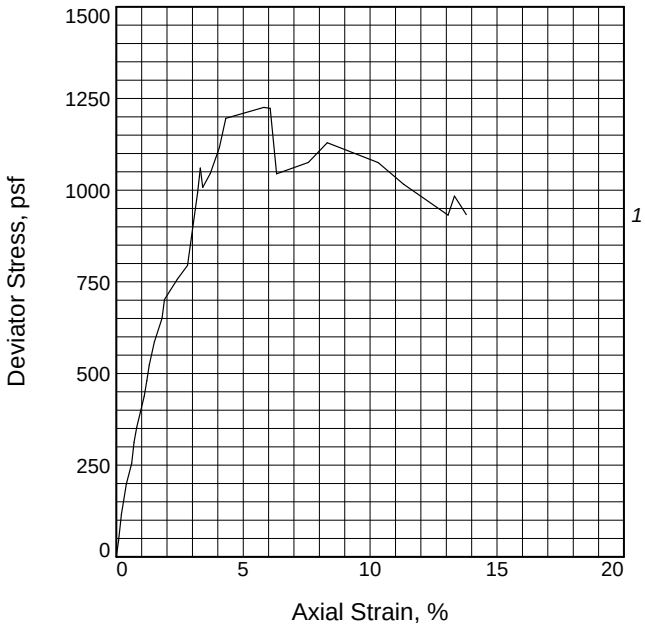
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-59 **Depth:** 28.5 **Sample Number:** S9/T1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	34.3
	Dry Density, pcf	85.7
	Saturation, %	97.5
	Void Ratio	0.9368
	Diameter, in.	1.404
	Height, in.	2.789
At Test	Water Content, %	38.0
	Dry Density, pcf	85.7
	Saturation, %	108.0
	Void Ratio	0.9368
	Diameter, in.	1.404
	Height, in.	2.789
Strain at peak, %		5.8
Back Pressure, psf		0.0
Cell Pressure, psf		3038.4
Fail. Stress, psf		1225.8
Strain, %		5.8
Ult. Stress, psf		1225.8
Strain, %		5.8
σ_1 Failure, psf		4264.2
σ_3 Failure, psf		3038.4

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Stiff, gray

LL= 39 **PL=** 21 **PI=** 18

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

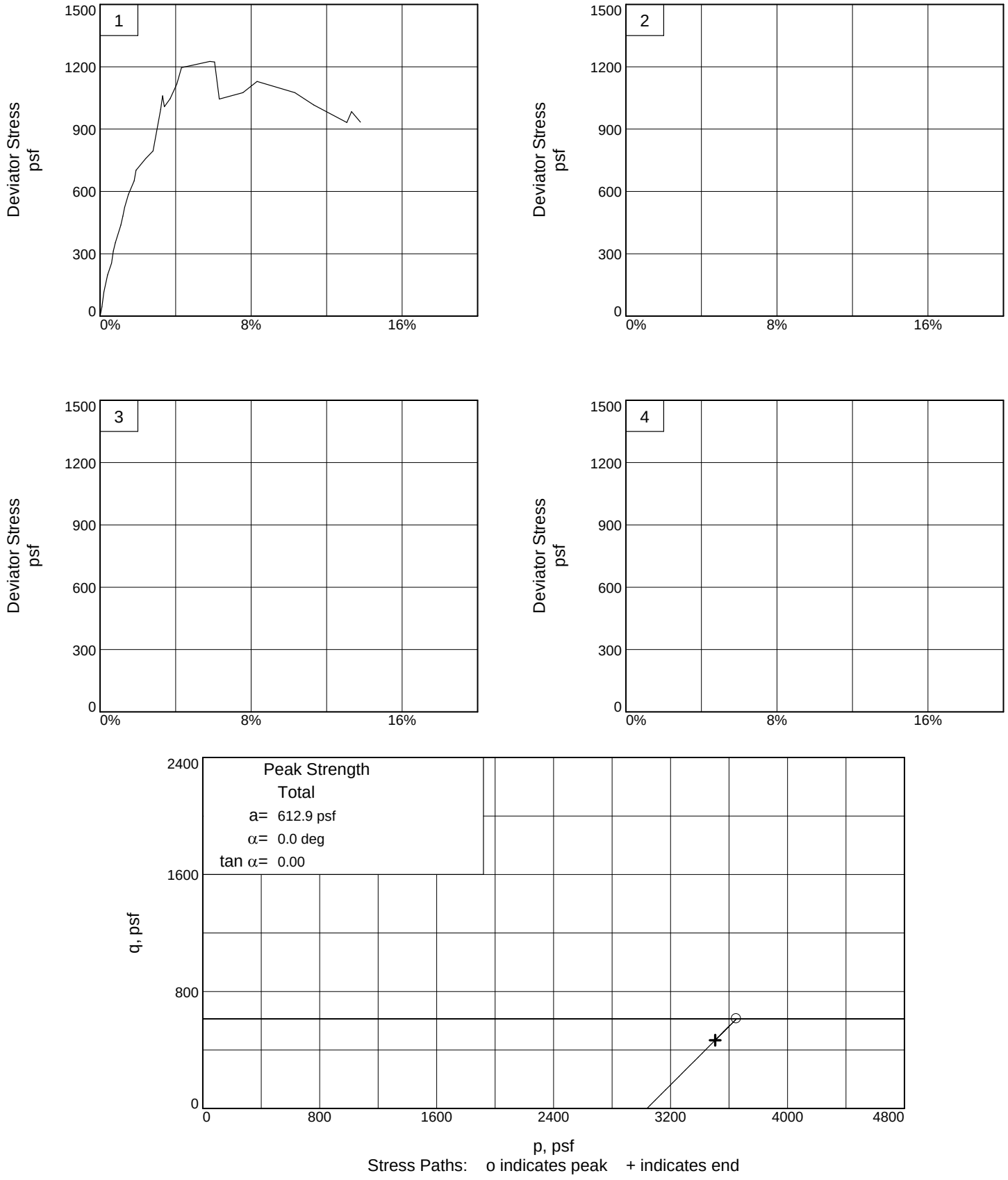
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-60 **Depth:** 33.5

Sample Number: S10T1

Proj. No.: 13-2123-0004 **Date Sampled:**

TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama



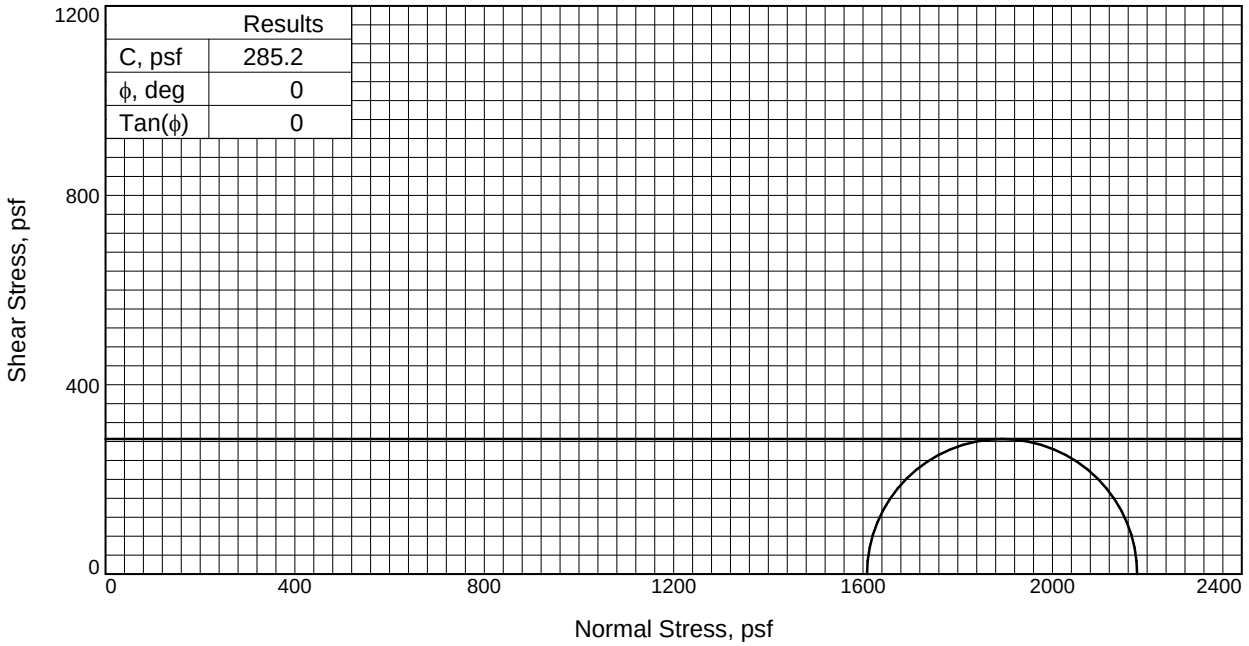
Client: ALDOT

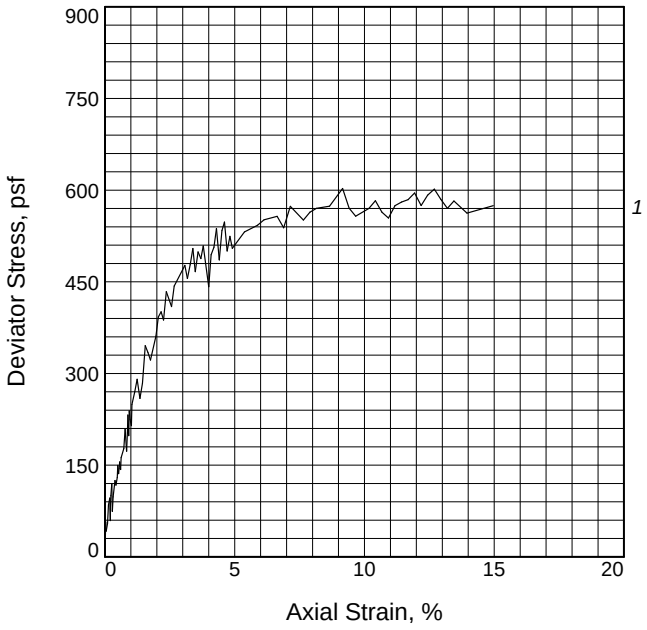
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-60 **Depth:** 33.5 **Sample Number:** S10T1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	29.6
	Dry Density, pcf	92.9
	Saturation, %	100.0
	Void Ratio	0.7874
	Diameter, in.	1.382
	Height, in.	2.784
At Test	Water Content, %	29.5
	Dry Density, pcf	92.9
	Saturation, %	99.7
	Void Ratio	0.7874
	Diameter, in.	1.382
	Height, in.	2.784
Strain at peak, %		9.4
Back Pressure, psf		0.0
Cell Pressure, psf		1608.5
Fail. Stress, psf		570.5
Strain, %		9.4
Ult. Stress, psf		570.5
Strain, %		9.4
σ_1 Failure, psf		2179.0
σ_3 Failure, psf		1608.5

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Gray, fine grained, with trace sand lenses

LL= 28 **PL=** 18 **PI=** 10

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

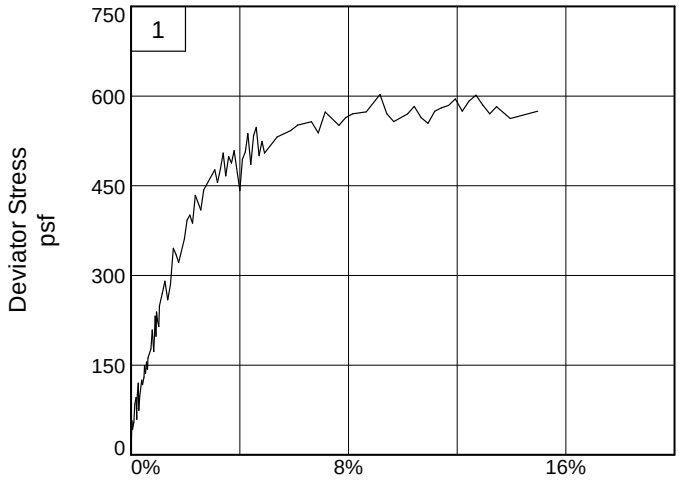
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

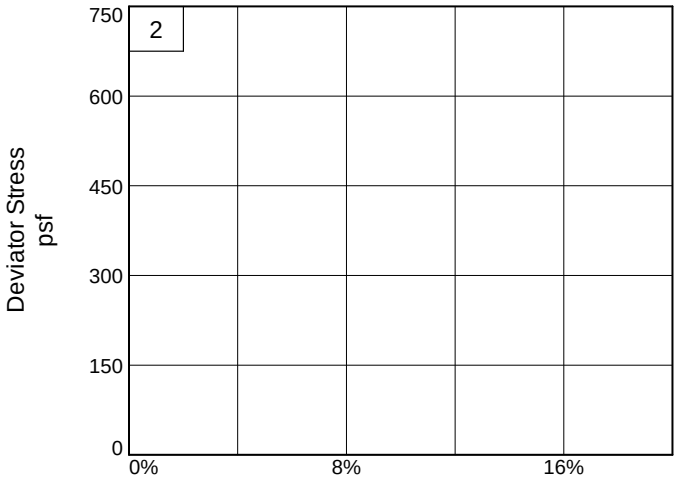
Source of Sample: B-73 **Depth:** 15.5

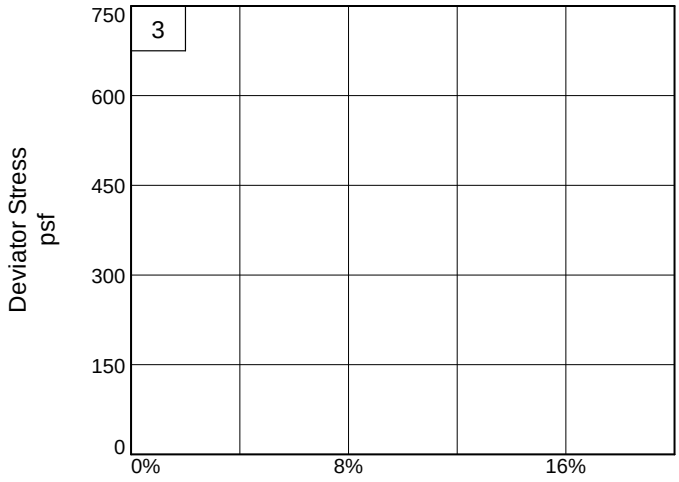
Sample Number: T-1

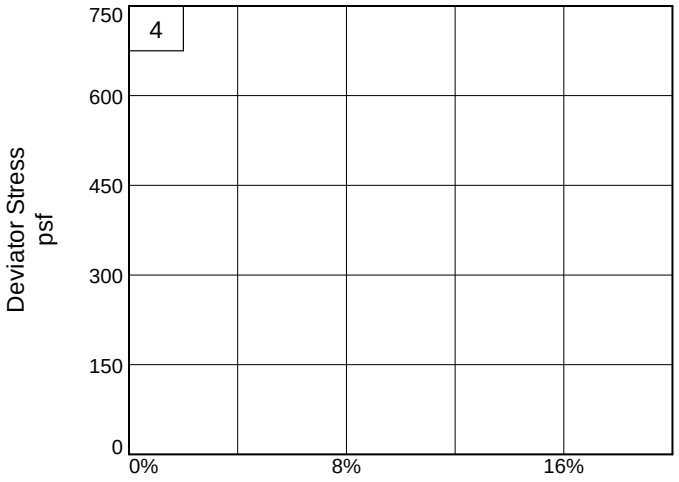
Proj. No.: 13-2123-0004 **Date Sampled:** 5/30/13

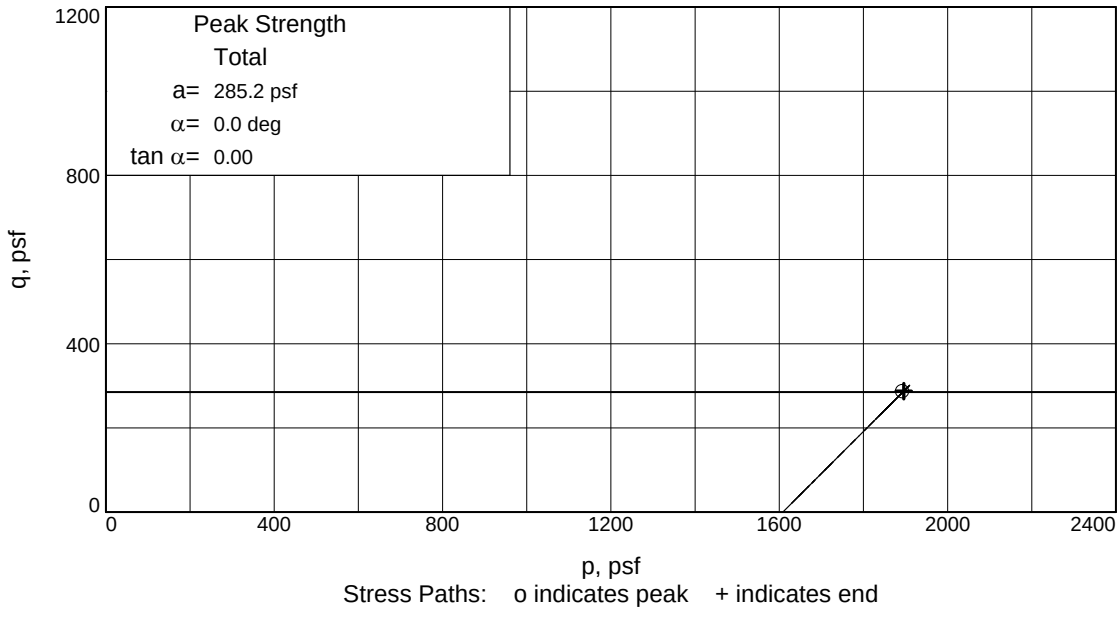
TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama











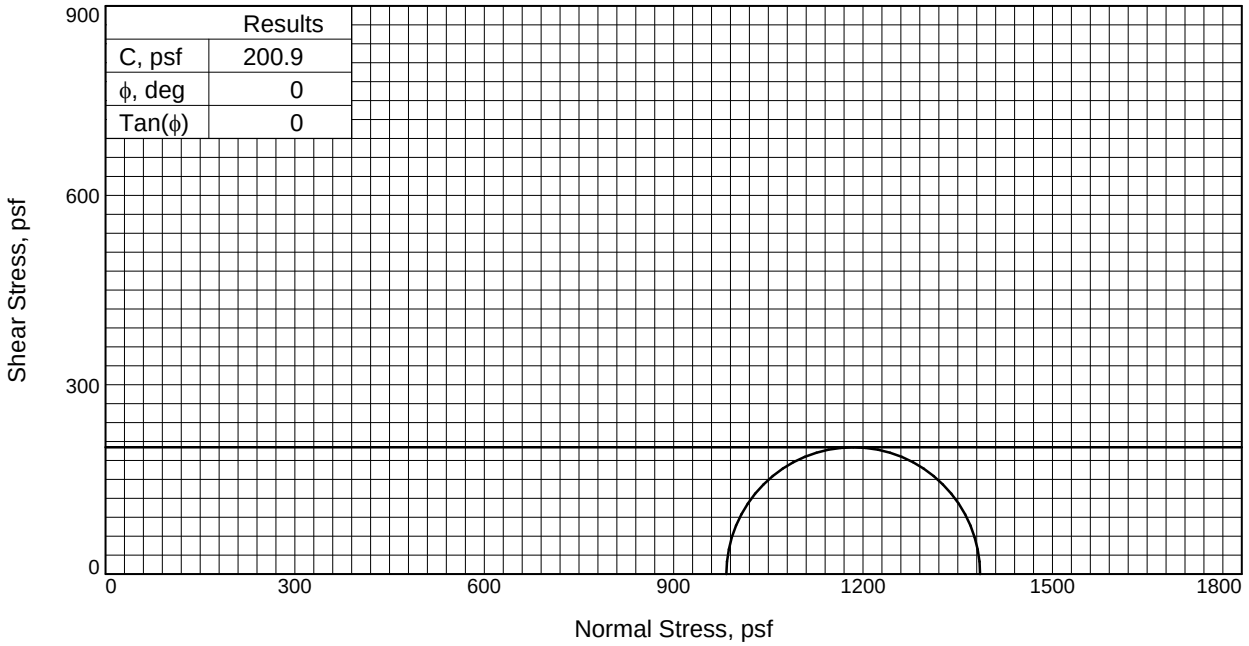
Client: ALDOT

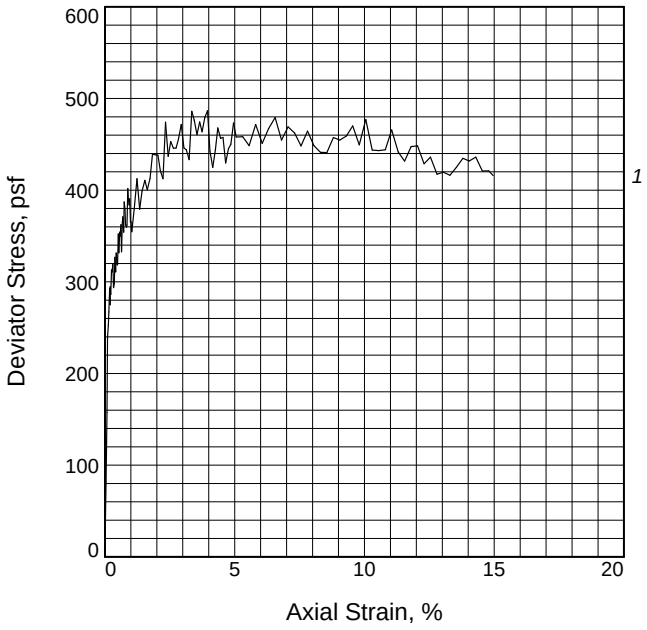
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-73 **Depth:** 15.5 **Sample Number:** T-1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	24.9
	Dry Density, pcf	99.8
	Saturation, %	99.9
	Void Ratio	0.6637
	Diameter, in.	1.396
	Height, in.	2.799
At Test	Water Content, %	23.8
	Dry Density, pcf	99.8
	Saturation, %	95.3
	Void Ratio	0.6637
	Diameter, in.	1.396
	Height, in.	2.799
Strain at peak, %		0.9
Back Pressure, psf		0.0
Cell Pressure, psf		983.5
Fail. Stress, psf		401.9
Strain, %		0.9
Ult. Stress, psf		401.9
Strain, %		0.9
σ_1 Failure, psf		1385.4
σ_3 Failure, psf		983.5

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Fine grained, gray

LL= 25 **PL=** 22 **PI=** 3

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

Client: ALDOT

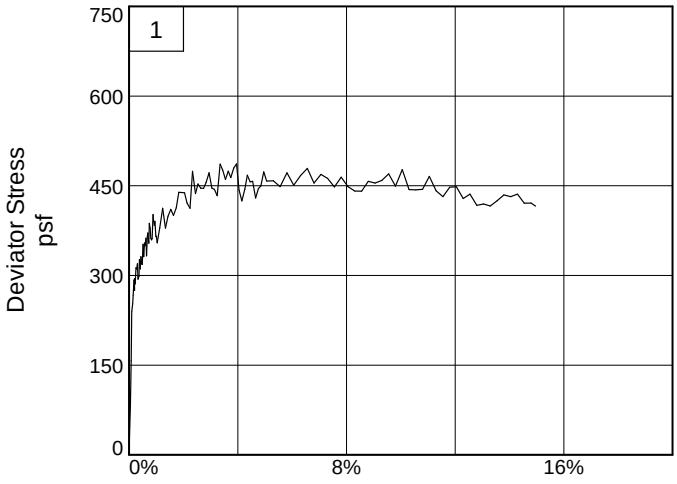
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

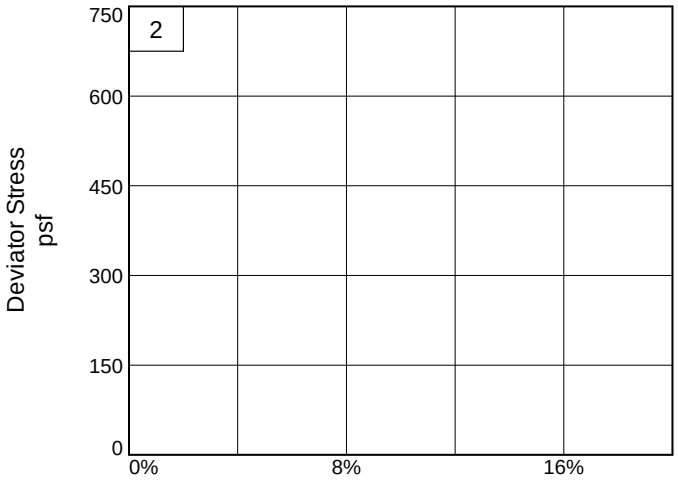
Source of Sample: B-75 **Depth:** 10.5

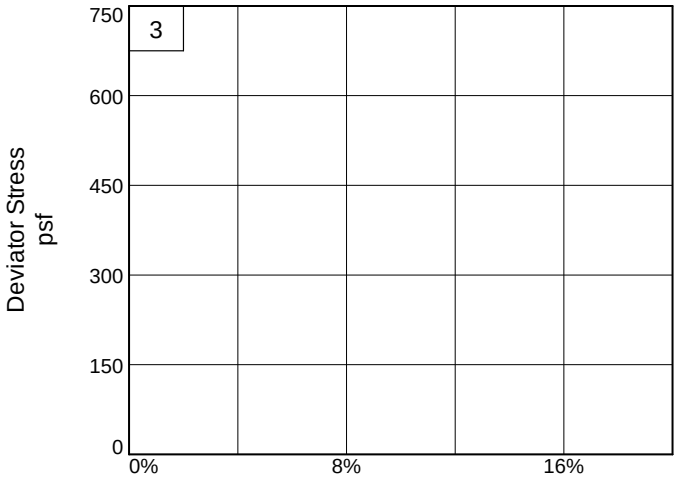
Sample Number: T-1

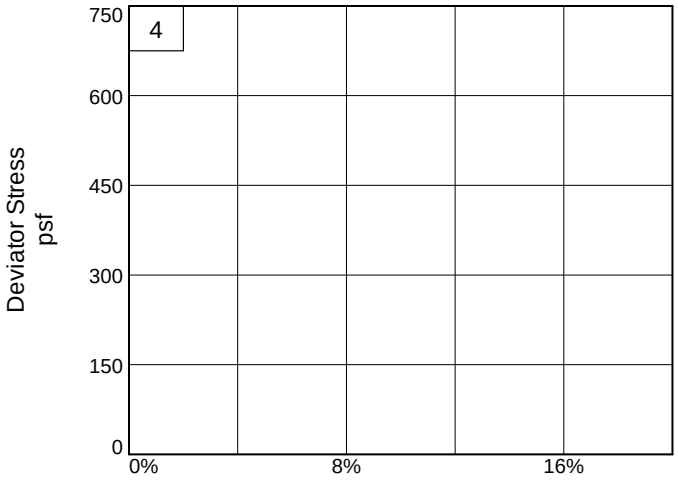
Proj. No.: 13-2123-0004 **Date Sampled:** 5/30/13

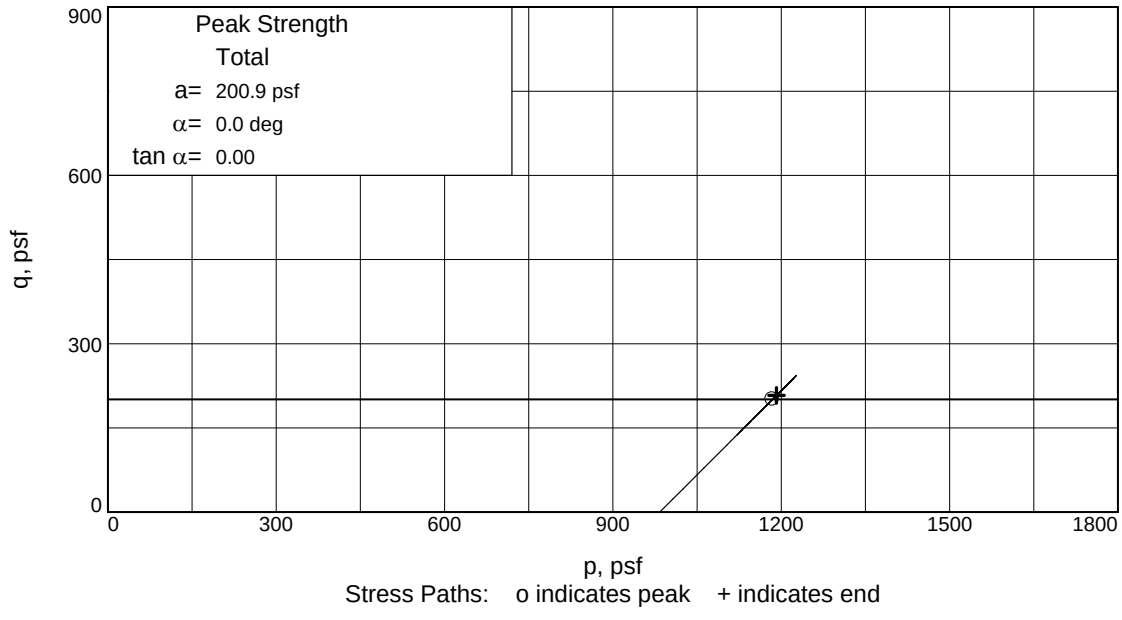
TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama











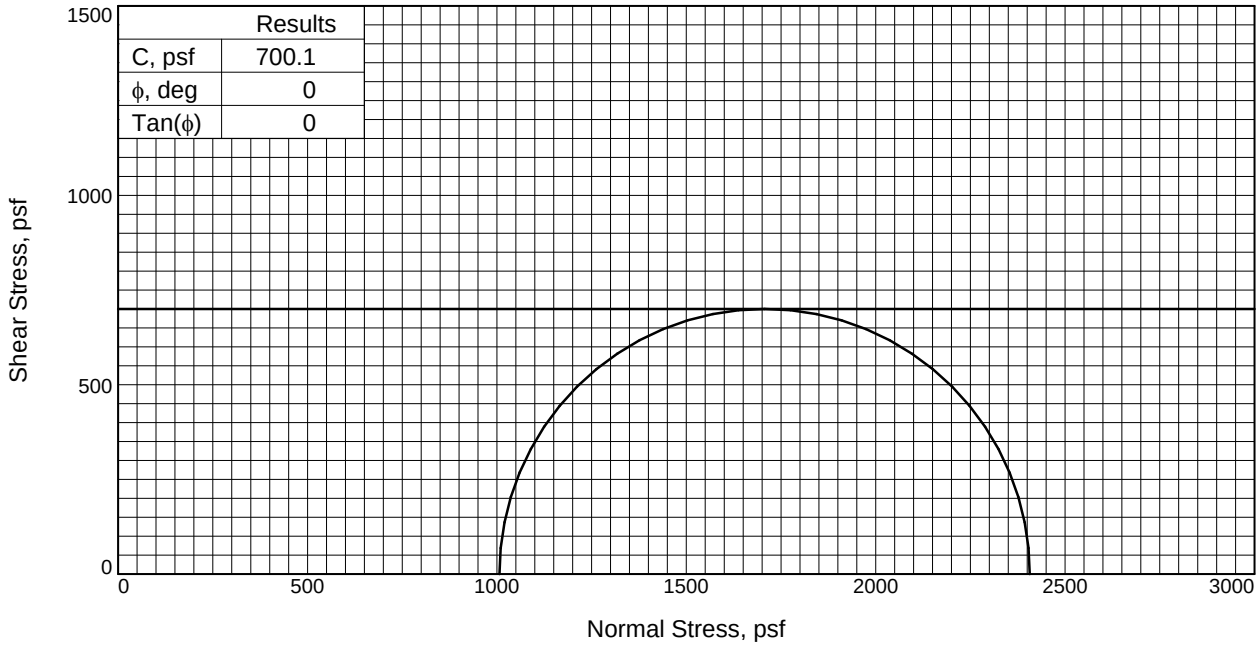
Client: ALDOT

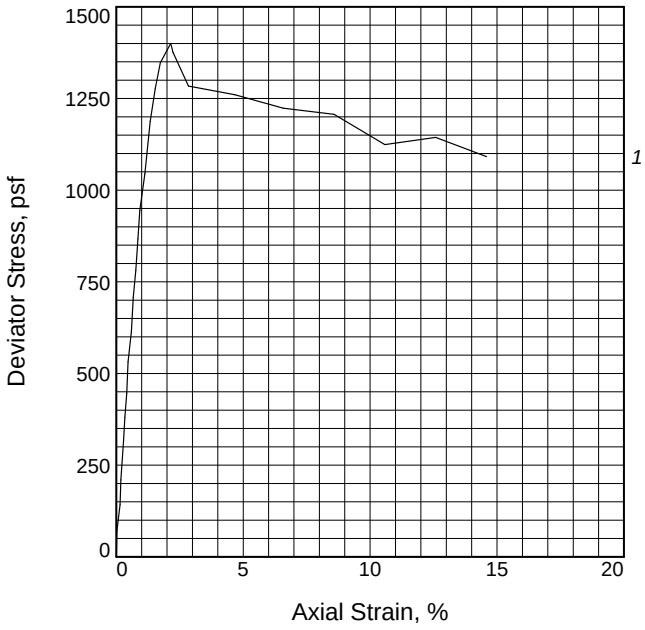
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: B-75 **Depth:** 10.5 **Sample Number:** T-1

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering





Specimen No.		1
Initial	Water Content, %	39.5
	Dry Density, pcf	80.5
	Saturation, %	98.8
	Void Ratio	1.0627
	Diameter, in.	1.395
	Height, in.	2.788
At Test	Water Content, %	39.9
	Dry Density, pcf	80.5
	Saturation, %	100.0
	Void Ratio	1.0627
	Diameter, in.	1.395
	Height, in.	2.788
Strain at peak, %		2.1
Back Pressure, psf		0.0
Cell Pressure, psf		1006.6
Fail. Stress, psf		1400.2
Strain, %		2.1
Ult. Stress, psf		1400.2
Strain, %		2.1
σ_1 Failure, psf		2406.8
σ_3 Failure, psf		1006.6

Type of Test:
Unconsolidated Undrained

Sample Type:

Description: Dark gray and brown, fine grained

LL= 77 **PL=** 27 **PI=** 50

Assumed Specific Gravity= 2.66

Remarks:

Figure _____

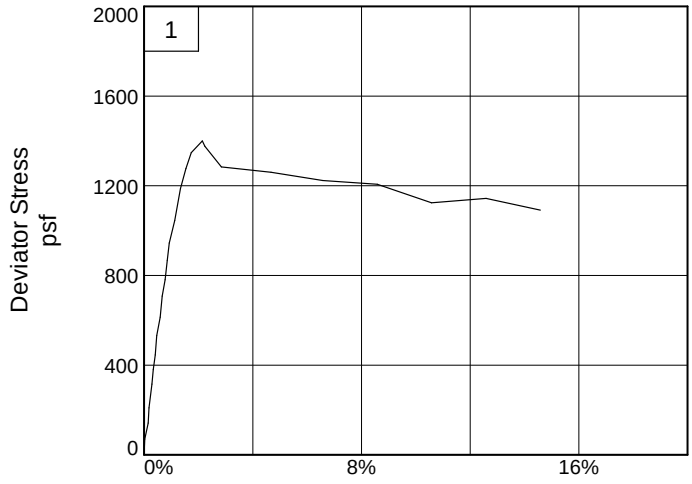
Client: ALDOT

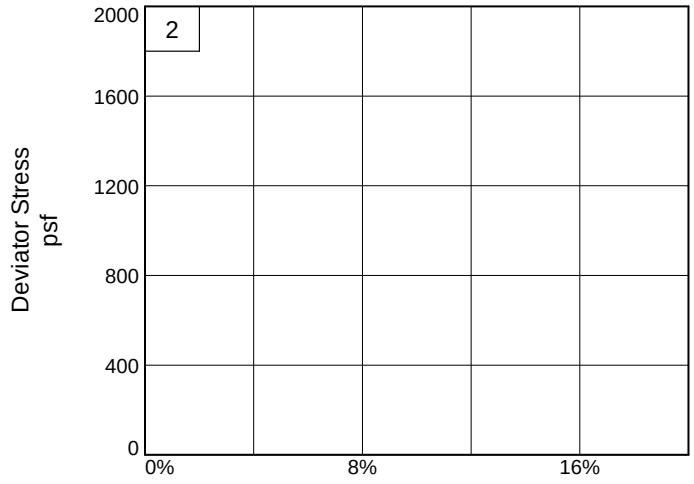
Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

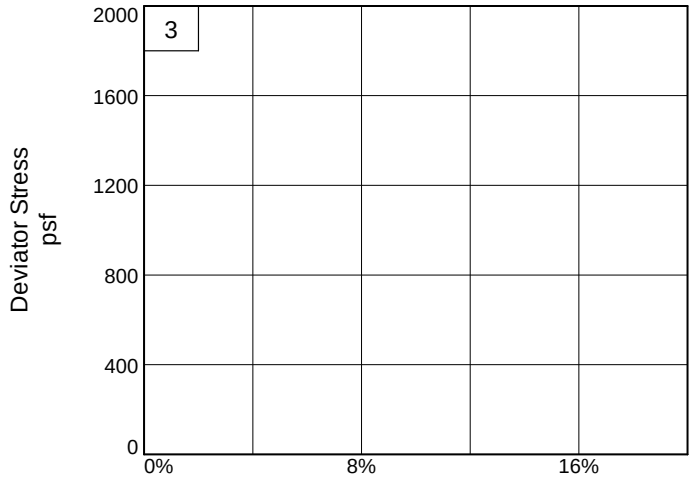
Source of Sample: BR-4 **Depth:** 18.0

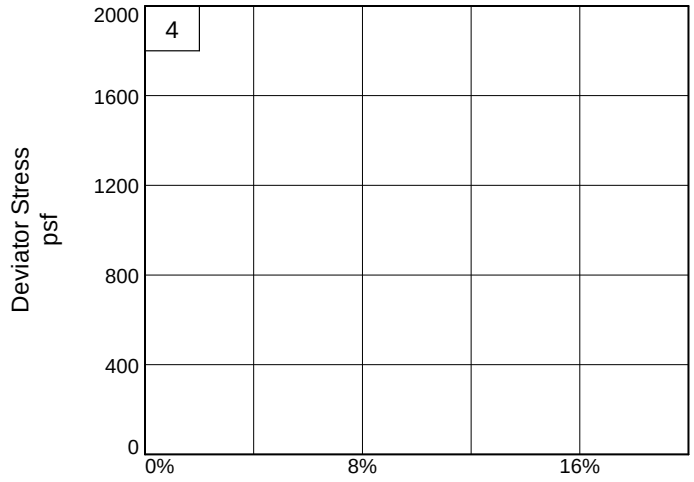
Proj. No.: 13-2123-0004 **Date Sampled:** 4/16/13

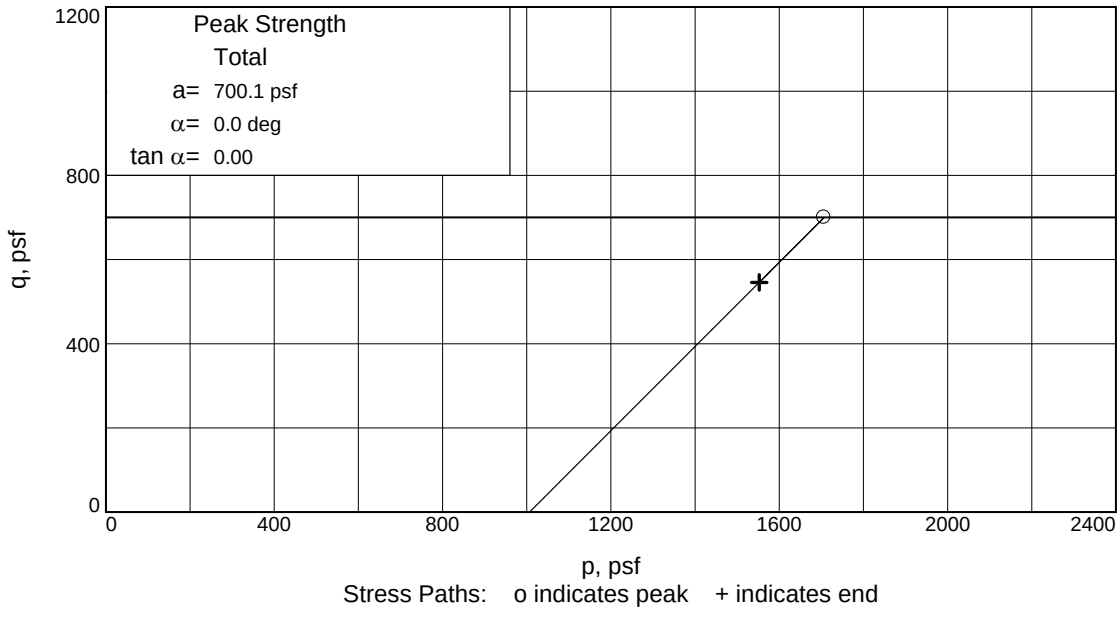
TRIAXIAL SHEAR TEST REPORT
Thompson Engineering
Mobile, Alabama











Stress Paths: o indicates peak + indicates end

Client: ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

Source of Sample: BR-4 **Depth:** 18.0

Project No.: 13-2123-0004 **Figure** _____

Thompson Engineering

APPENDIX C

- **Resilient Modulus Test Results Summary**
- **Resilient Modulus Test Results**
- **M_R Standard Proctor Maximum Dry Density**

Summary of Results - IM-AL 06(900) I-10 Interchange Modifications
Thompson #13-2123-0004
Tests performed at Boudreau Engineering on 5/18-31/2013

Results Summary

Boring No.	Depth	Dry Density (pcf)	Moisture Content, %	% compaction	M_r values at 2 psi confining pressure, psi*					Ave.
					Seq11	Seq12	Seq13	Seq14	Seq15	
B-6	0-2'	113.5	10.9	94.2	8,831	8,798	9,125	9,648	10,063	9,293
B-15	0-2'	111.1	10.6	94.1	7,845	7,904	8,282	8,893	9,313	8,447
B-15	2-3'	115.7	10.5	95.3	8,161	8,105	8,396	8,995	9,359	8,603
B-16N	0-1'	122.1	7.2	94.7	12,318	11,780	11,622	11,636	11,942	11,860
B-23	0-1'	102.7	13.8	94.1	5,572	5,423	5,530	5,753	5,770	5,610
B-31	0-1'	117.1	8.7	94.5	10,298	10,198	10,492	11,006	11,570	10,713
B-35	0-1'	105.9	12.3	94.2	6,971	7,077	7,477	7,987	8,307	7,564
B-35	1-2'	108.7	9.7	95.1	7,619	7,671	8,021	8,583	9,140	8,207
B-43	7-15'	117.4	10.4	96.1	8,868	8,658	8,794	9,182	9,548	9,010
B-43	15-16'	108.9	10.1	94.1	8,415	8,455	8,794	9,331	9,906	8,980
B-51	0-8'	114.4	11.5	95.2	9,482	9,429	9,819	10,423	10,951	10,021
B-51	8-9'	112.4	10.6	95.1	8,136	8,193	8,550	9,110	9,601	8,718
B-58	8-16'	116.8	11.8	95.7	10,596	10,460	10,447	10,533	10,655	10,538
B-58	16-17'	116.4	11.9	96.0	12,818	12,497	12,257	12,124	12,052	12,350
									AVG	**9,280**
									StDev	1,742
									(AVG-2 x StDev)	**5,795**
									85th percentile	**8,175**
									90th percentile	**7,757**
									100th percentile	**5,610**

Analysis done per ALDOT requirements (A-1, A-2-4 and A-3 soils evaluated at 4 psi confining pressure, e.g. Seq 6-10)

c:\alabama\thompson\I-10 interchange\summary.xls[ALDOT]

Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia
PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004
DATE RECEIVED: 05-15-2013
QUANTITY (REPRESENTED): N.A.
IDENTIFICATION MARKS: B-6
SOURCE OF MATERIAL: Boring B-6 (0-2ft.)

1.	*SAMPLING DATE:*	5/6/2013
2.	*SAMPLE NUMBER:*	B-6
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.70
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.1
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1224.96
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1224.96
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.9
	MAX. DRY DENSITY, pcf	120.5
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.9
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	10.8
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	113.5
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.9
	COMPACTION LEVEL ACHIEVED	94.2%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	25
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-18-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-18-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-6 (0-2ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.9% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-18-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.3	11.9	1.4	2.0	1.8	0.2	0.00095	0.00100	0.00097	0.00017	10,714
			97	13.3	11.9	1.4	2.0	1.8	0.2	0.00096	0.00099	0.00097	0.00017	10,654
			98	13.3	11.9	1.4	2.0	1.8	0.2	0.00096	0.00100	0.00098	0.00017	10,663
			99	13.4	12.0	1.4	2.1	1.8	0.2	0.00095	0.00100	0.00098	0.00017	10,782
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00095	0.00100	0.00098	0.00017	10,678
	COLUMN AVERAGE			13.3	11.9	1.4	2.0	1.8	0.2	0.00095	0.00100	0.00097	0.00017	10,698
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	52

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-6 Material Source: Boring B-6 (0-2ft.)

SEQUENCE 2	6.0	4.0	96	26.1	23.7	2.5	4.0	3.6	0.4	0.00186	0.00194	0.00190	0.00033	10,923
			97	26.1	23.6	2.5	4.0	3.6	0.4	0.00185	0.00193	0.00189	0.00033	10,924
			98	26.2	23.7	2.4	4.0	3.6	0.4	0.00185	0.00194	0.00189	0.00033	10,962
			99	26.2	23.7	2.5	4.0	3.6	0.4	0.00186	0.00193	0.00190	0.00033	10,928
			100	26.2	23.8	2.5	4.0	3.6	0.4	0.00185	0.00193	0.00189	0.00033	10,977
	COLUMN AVERAGE			26.2	23.7	2.5	4.0	3.6	0.4	0.00186	0.00193	0.00189	0.00033	10,943
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	25
SEQUENCE 3	6.0	6.0	96	39.0	35.2	3.8	6.0	5.4	0.6	0.00277	0.00290	0.00284	0.00050	10,876
			97	39.2	35.4	3.8	6.0	5.4	0.6	0.00278	0.00289	0.00283	0.00050	10,921
			98	39.2	35.4	3.8	6.0	5.4	0.6	0.00278	0.00289	0.00283	0.00050	10,929
			99	39.1	35.3	3.8	6.0	5.4	0.6	0.00277	0.00289	0.00283	0.00050	10,914
			100	39.2	35.4	3.8	6.0	5.4	0.6	0.00277	0.00289	0.00283	0.00050	10,930
	COLUMN AVERAGE			39.1	35.3	3.8	6.0	5.4	0.6	0.00278	0.00289	0.00283	0.00050	10,914
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	22
SEQUENCE 4	6.0	8.0	96	52.2	47.2	5.1	8.0	7.2	0.8	0.00361	0.00377	0.00369	0.00065	11,188
			97	52.2	47.2	5.1	8.0	7.2	0.8	0.00362	0.00377	0.00369	0.00065	11,173
			98	52.3	47.3	5.1	8.0	7.3	0.8	0.00361	0.00377	0.00369	0.00065	11,206
			99	52.3	47.3	5.1	8.0	7.3	0.8	0.00360	0.00378	0.00369	0.00065	11,204
			100	52.3	47.2	5.1	8.0	7.3	0.8	0.00362	0.00377	0.00369	0.00065	11,188
	COLUMN AVERAGE			52.3	47.2	5.1	8.0	7.3	0.8	0.00361	0.00377	0.00369	0.00065	11,192
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	14
SEQUENCE 5	6.0	10.0	96	65.5	59.1	6.4	10.1	9.1	1.0	0.00435	0.00454	0.00444	0.00078	11,639
			97	65.5	59.1	6.4	10.1	9.1	1.0	0.00436	0.00454	0.00445	0.00078	11,627
			98	65.5	59.1	6.4	10.1	9.1	1.0	0.00436	0.00455	0.00445	0.00078	11,619
			99	65.5	59.1	6.4	10.1	9.1	1.0	0.00435	0.00454	0.00444	0.00078	11,632
			100	65.5	59.1	6.4	10.1	9.1	1.0	0.00434	0.00453	0.00444	0.00078	11,650
	COLUMN AVERAGE			65.5	59.1	6.4	10.1	9.1	1.0	0.00435	0.00454	0.00445	0.00078	11,634
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	12

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-6 Material Source: Boring B-6 (0-2ft.)

SEQUENCE 6	4.0	2.0	96	13.4	11.7	1.8	2.1	1.8	0.3	0.00114	0.00117	0.00115	0.00020	8,831
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00114	0.00117	0.00116	0.00020	8,770
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00114	0.00117	0.00115	0.00020	8,828
			99	13.5	11.7	1.8	2.1	1.8	0.3	0.00114	0.00117	0.00115	0.00020	8,862
			100	13.5	11.7	1.8	2.1	1.8	0.3	0.00113	0.00117	0.00115	0.00020	8,863
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00114	0.00117	0.00115	0.00020	8,831
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	38
SEQUENCE 7	4.0	4.0	96	25.6	23.1	2.5	3.9	3.6	0.4	0.00227	0.00234	0.00231	0.00041	8,777
			97	25.7	23.2	2.5	3.9	3.6	0.4	0.00227	0.00235	0.00231	0.00041	8,803
			98	25.7	23.2	2.5	3.9	3.6	0.4	0.00227	0.00235	0.00231	0.00041	8,793
			99	25.7	23.2	2.5	3.9	3.6	0.4	0.00227	0.00235	0.00231	0.00041	8,793
			100	25.7	23.3	2.5	4.0	3.6	0.4	0.00227	0.00234	0.00231	0.00040	8,823
	COLUMN AVERAGE			25.7	23.2	2.5	3.9	3.6	0.4	0.00227	0.00234	0.00231	0.00041	8,798
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17
SEQUENCE 8	4.0	6.0	96	38.8	35.0	3.8	6.0	5.4	0.6	0.00330	0.00341	0.00335	0.00059	9,133
			97	38.8	35.0	3.8	6.0	5.4	0.6	0.00329	0.00342	0.00336	0.00059	9,107
			98	38.8	35.0	3.8	6.0	5.4	0.6	0.00330	0.00342	0.00336	0.00059	9,127
			99	38.8	35.0	3.8	6.0	5.4	0.6	0.00330	0.00341	0.00336	0.00059	9,125
			100	38.8	35.0	3.8	6.0	5.4	0.6	0.00330	0.00342	0.00336	0.00059	9,133
	COLUMN AVERAGE			38.8	35.0	3.8	6.0	5.4	0.6	0.00330	0.00342	0.00336	0.00059	9,125
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 9	4.0	8.0	96	52.0	46.9	5.1	8.0	7.2	0.8	0.00417	0.00433	0.00425	0.00075	9,649
			97	51.9	46.9	5.1	8.0	7.2	0.8	0.00418	0.00433	0.00425	0.00075	9,641
			98	51.9	46.9	5.1	8.0	7.2	0.8	0.00417	0.00433	0.00425	0.00075	9,647
			99	51.9	46.9	5.1	8.0	7.2	0.8	0.00417	0.00433	0.00425	0.00075	9,650
			100	51.9	46.8	5.1	8.0	7.2	0.8	0.00416	0.00433	0.00425	0.00075	9,654
	COLUMN AVERAGE			51.9	46.9	5.1	8.0	7.2	0.8	0.00417	0.00433	0.00425	0.00075	9,648
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-6 Material Source: Boring B-6 (0-2ft.)

SEQUENCE 10	4.0	10.0	96	65.1	58.7	6.4	10.0	9.0	1.0	0.00500	0.00520	0.00510	0.00090	10,066
			97	65.0	58.6	6.4	10.0	9.0	1.0	0.00500	0.00520	0.00510	0.00090	10,056
			98	65.0	58.6	6.4	10.0	9.0	1.0	0.00500	0.00519	0.00510	0.00090	10,053
			99	65.1	58.7	6.4	10.0	9.0	1.0	0.00500	0.00520	0.00510	0.00090	10,074
			100	65.0	58.6	6.4	10.0	9.0	1.0	0.00500	0.00519	0.00510	0.00089	10,067
	COLUMN AVERAGE			65.0	58.6	6.4	10.0	9.0	1.0	0.00500	0.00520	0.00510	0.00090	10,063
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	9
SEQUENCE 11	2.0	2.0	96	13.2	11.0	2.2	2.0	1.7	0.3	0.00149	0.00151	0.00150	0.00026	6,422
			97	13.2	11.0	2.2	2.0	1.7	0.3	0.00148	0.00151	0.00150	0.00026	6,433
			98	13.2	11.0	2.2	2.0	1.7	0.3	0.00149	0.00151	0.00150	0.00026	6,437
			99	13.2	11.0	2.2	2.0	1.7	0.3	0.00148	0.00150	0.00149	0.00026	6,465
			100	13.2	11.0	2.2	2.0	1.7	0.3	0.00149	0.00152	0.00150	0.00026	6,424
	COLUMN AVERAGE			13.2	11.0	2.2	2.0	1.7	0.3	0.00148	0.00151	0.00150	0.00026	6,436
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17
SEQUENCE 12	2.0	4.0	96	24.5	22.0	2.5	3.8	3.4	0.4	0.00301	0.00307	0.00304	0.00053	6,346
			97	24.4	22.0	2.5	3.8	3.4	0.4	0.00301	0.00307	0.00304	0.00053	6,316
			98	24.4	22.0	2.5	3.8	3.4	0.4	0.00301	0.00306	0.00304	0.00053	6,328
			99	24.5	22.0	2.5	3.8	3.4	0.4	0.00301	0.00307	0.00304	0.00053	6,321
			100	24.5	22.1	2.5	3.8	3.4	0.4	0.00302	0.00307	0.00304	0.00053	6,348
	COLUMN AVERAGE			24.5	22.0	2.5	3.8	3.4	0.4	0.00301	0.00307	0.00304	0.00053	6,332
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	15
SEQUENCE 13	2.0	6.0	96	37.4	33.6	3.8	5.7	5.2	0.6	0.00426	0.00436	0.00431	0.00076	6,822
			97	37.4	33.6	3.8	5.7	5.2	0.6	0.00426	0.00436	0.00431	0.00076	6,823
			98	37.3	33.6	3.8	5.7	5.2	0.6	0.00425	0.00435	0.00430	0.00076	6,829
			99	37.4	33.6	3.8	5.7	5.2	0.6	0.00426	0.00435	0.00430	0.00076	6,831
			100	37.4	33.6	3.8	5.7	5.2	0.6	0.00425	0.00436	0.00430	0.00076	6,837
	COLUMN AVERAGE			37.4	33.6	3.8	5.7	5.2	0.6	0.00425	0.00436	0.00430	0.00076	6,828
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-6 Material Source: Boring B-6 (0-2ft.)

SEQUENCE 14	2.0	8.0	96	50.4	45.3	5.1	7.7	7.0	0.8	0.00528	0.00542	0.00535	0.00094	7,406
			97	50.5	45.4	5.1	7.8	7.0	0.8	0.00527	0.00541	0.00534	0.00094	7,439
			98	50.4	45.4	5.1	7.7	7.0	0.8	0.00527	0.00540	0.00534	0.00094	7,437
			99	50.5	45.5	5.1	7.8	7.0	0.8	0.00528	0.00540	0.00534	0.00094	7,447
			100	50.5	45.4	5.1	7.8	7.0	0.8	0.00527	0.00539	0.00533	0.00094	7,455
	COLUMN AVERAGE			50.5	45.4	5.1	7.8	7.0	0.8	0.00528	0.00540	0.00534	0.00094	7,437
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00001	0.00000	19
SEQUENCE 15	2.0	10.0	96	63.2	56.8	6.4	9.7	8.7	1.0	0.00629	0.00644	0.00636	0.00112	7,808
			97	63.1	56.7	6.4	9.7	8.7	1.0	0.00630	0.00643	0.00636	0.00112	7,801
			98	63.1	56.7	6.4	9.7	8.7	1.0	0.00629	0.00643	0.00636	0.00112	7,797
			99	63.1	56.8	6.4	9.7	8.7	1.0	0.00629	0.00643	0.00636	0.00112	7,806
			100	63.1	56.7	6.4	9.7	8.7	1.0	0.00629	0.00644	0.00636	0.00112	7,802
	COLUMN AVERAGE			63.1	56.7	6.4	9.7	8.7	1.0	0.00629	0.00643	0.00636	0.00112	7,803
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	4

TESTED BY RLB DATE 05-18-2013

Boudreau Engineering, Inc.

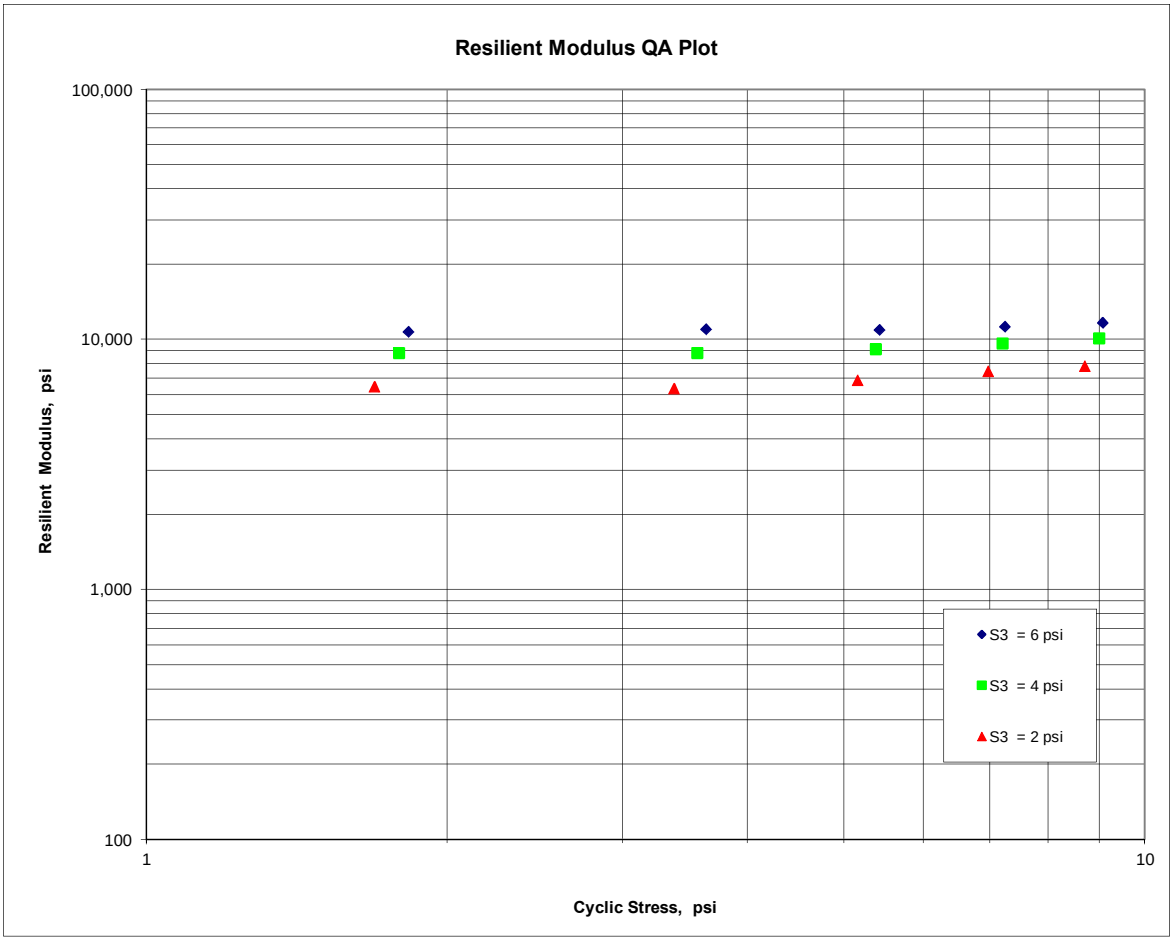
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-6 (0-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.9% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-18-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,582
K2 =	0.08255
K5 =	0.41957
R^2 =	0.97

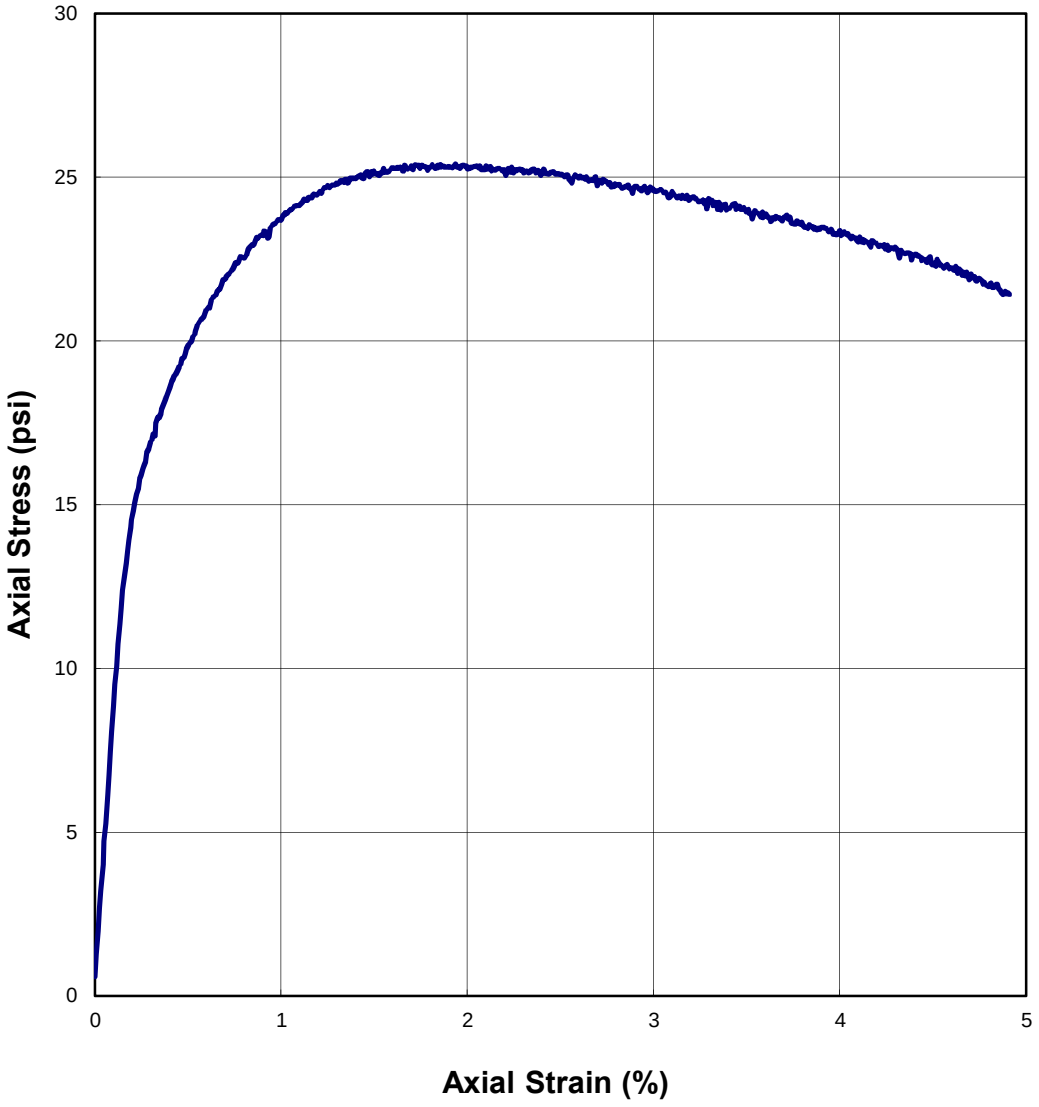


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-6 (0-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.9% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-18-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-15

SOURCE OF MATERIAL: Boring B-15 (0-2ft.)

1.	*SAMPLING DATE:*	5/6/2013
2.	*SAMPLE NUMBER:*	B-15
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.70
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.1
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1194.94
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1194.94
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.6
	MAX. DRY DENSITY, pcf	118.1
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.6
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	10.6
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	111.1
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.6
	COMPACTION LEVEL ACHIEVED	94.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	24
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-15 (0-2ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.6% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.4	12.0	1.4	2.1	1.9	0.2	0.00111	0.00112	0.00111	0.00020	9,488
			97	13.3	12.0	1.4	2.1	1.8	0.2	0.00111	0.00113	0.00112	0.00020	9,371
			98	13.4	12.1	1.4	2.1	1.9	0.2	0.00110	0.00113	0.00112	0.00020	9,479
			99	13.4	12.0	1.4	2.1	1.9	0.2	0.00112	0.00112	0.00112	0.00020	9,432
			100	13.4	12.0	1.4	2.1	1.8	0.2	0.00111	0.00114	0.00112	0.00020	9,360
	COLUMN AVERAGE			13.4	12.0	1.4	2.1	1.8	0.2	0.00111	0.00112	0.00112	0.00020	9,426
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	59

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (0-2ft.)

SEQUENCE 2	6.0	4.0	96	26.5	24.0	2.5	4.1	3.7	0.4	0.00210	0.00214	0.00212	0.00037	9,932
			97	26.4	24.0	2.4	4.1	3.7	0.4	0.00210	0.00213	0.00212	0.00037	9,940
			98	26.4	24.0	2.5	4.1	3.7	0.4	0.00210	0.00214	0.00212	0.00037	9,920
			99	26.5	24.0	2.5	4.1	3.7	0.4	0.00210	0.00214	0.00212	0.00037	9,936
			100	26.5	24.0	2.5	4.1	3.7	0.4	0.00211	0.00213	0.00212	0.00037	9,962
	COLUMN AVERAGE			26.5	24.0	2.5	4.1	3.7	0.4	0.00210	0.00214	0.00212	0.00037	9,938
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	15
SEQUENCE 3	6.0	6.0	96	39.5	35.8	3.7	6.1	5.5	0.6	0.00309	0.00317	0.00313	0.00055	10,027
			97	39.5	35.8	3.7	6.1	5.5	0.6	0.00309	0.00315	0.00312	0.00055	10,071
			98	39.5	35.7	3.8	6.1	5.5	0.6	0.00309	0.00317	0.00313	0.00055	10,026
			99	39.5	35.8	3.7	6.1	5.5	0.6	0.00308	0.00316	0.00312	0.00055	10,052
			100	39.6	35.8	3.8	6.1	5.5	0.6	0.00309	0.00315	0.00312	0.00055	10,068
	COLUMN AVERAGE			39.5	35.8	3.7	6.1	5.5	0.6	0.00309	0.00316	0.00312	0.00055	10,049
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	22
SEQUENCE 4	6.0	8.0	96	52.8	47.7	5.1	8.1	7.3	0.8	0.00400	0.00411	0.00405	0.00071	10,336
			97	52.7	47.6	5.1	8.1	7.3	0.8	0.00400	0.00410	0.00405	0.00071	10,321
			98	52.8	47.7	5.1	8.1	7.3	0.8	0.00402	0.00408	0.00405	0.00071	10,329
			99	52.9	47.8	5.1	8.1	7.4	0.8	0.00399	0.00411	0.00405	0.00071	10,358
			100	52.8	47.7	5.1	8.1	7.3	0.8	0.00400	0.00411	0.00405	0.00071	10,332
	COLUMN AVERAGE			52.8	47.7	5.1	8.1	7.3	0.8	0.00400	0.00410	0.00405	0.00071	10,335
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	14
SEQUENCE 5	6.0	10.0	96	66.2	59.8	6.4	10.2	9.2	1.0	0.00482	0.00491	0.00486	0.00085	10,788
			97	66.1	59.7	6.4	10.2	9.2	1.0	0.00481	0.00491	0.00486	0.00085	10,775
			98	66.1	59.7	6.4	10.2	9.2	1.0	0.00481	0.00492	0.00486	0.00085	10,772
			99	66.0	59.6	6.4	10.1	9.2	1.0	0.00482	0.00491	0.00487	0.00085	10,743
			100	66.1	59.7	6.4	10.2	9.2	1.0	0.00481	0.00492	0.00486	0.00085	10,773
	COLUMN AVERAGE			66.1	59.7	6.4	10.2	9.2	1.0	0.00481	0.00491	0.00486	0.00085	10,770
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	17

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (0-2ft.)

SEQUENCE 6	4.0	2.0	96	13.6	11.8	1.8	2.1	1.8	0.3	0.00130	0.00134	0.00132	0.00023	7,822
			97	13.6	11.8	1.8	2.1	1.8	0.3	0.00131	0.00133	0.00132	0.00023	7,869
			98	13.6	11.9	1.8	2.1	1.8	0.3	0.00131	0.00133	0.00132	0.00023	7,887
			99	13.6	11.8	1.8	2.1	1.8	0.3	0.00130	0.00134	0.00132	0.00023	7,829
			100	13.6	11.8	1.8	2.1	1.8	0.3	0.00130	0.00134	0.00132	0.00023	7,818
	COLUMN AVERAGE			13.6	11.8	1.8	2.1	1.8	0.3	0.00131	0.00134	0.00132	0.00023	7,845
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	31
SEQUENCE 7	4.0	4.0	96	26.0	23.6	2.5	4.0	3.6	0.4	0.00261	0.00263	0.00262	0.00046	7,908
			97	26.0	23.5	2.5	4.0	3.6	0.4	0.00260	0.00263	0.00261	0.00046	7,894
			98	26.0	23.5	2.5	4.0	3.6	0.4	0.00259	0.00265	0.00262	0.00046	7,871
			99	26.0	23.5	2.5	4.0	3.6	0.4	0.00260	0.00262	0.00261	0.00046	7,907
			100	26.1	23.6	2.4	4.0	3.6	0.4	0.00259	0.00263	0.00261	0.00046	7,941
	COLUMN AVERAGE			26.0	23.5	2.5	4.0	3.6	0.4	0.00260	0.00263	0.00261	0.00046	7,904
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	25
SEQUENCE 8	4.0	6.0	96	39.3	35.6	3.8	6.0	5.5	0.6	0.00375	0.00379	0.00377	0.00066	8,284
			97	39.3	35.6	3.8	6.1	5.5	0.6	0.00372	0.00381	0.00377	0.00066	8,291
			98	39.2	35.5	3.8	6.0	5.5	0.6	0.00374	0.00378	0.00376	0.00066	8,272
			99	39.3	35.5	3.8	6.0	5.5	0.6	0.00376	0.00377	0.00376	0.00066	8,277
			100	39.3	35.5	3.8	6.1	5.5	0.6	0.00373	0.00380	0.00376	0.00066	8,289
	COLUMN AVERAGE			39.3	35.5	3.8	6.0	5.5	0.6	0.00374	0.00379	0.00376	0.00066	8,282
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00002	0.00002	0.00000	0.00000	8
SEQUENCE 9	4.0	8.0	96	52.8	47.8	5.0	8.1	7.3	0.8	0.00467	0.00475	0.00471	0.00083	8,896
			97	52.7	47.7	5.1	8.1	7.3	0.8	0.00468	0.00475	0.00471	0.00083	8,878
			98	52.8	47.7	5.1	8.1	7.3	0.8	0.00468	0.00474	0.00471	0.00083	8,890
			99	52.8	47.8	5.1	8.1	7.3	0.8	0.00468	0.00474	0.00471	0.00083	8,900
			100	52.8	47.8	5.0	8.1	7.3	0.8	0.00468	0.00474	0.00471	0.00083	8,901
	COLUMN AVERAGE			52.8	47.7	5.1	8.1	7.3	0.8	0.00468	0.00474	0.00471	0.00083	8,893
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	9

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (0-2ft.)

SEQUENCE 10	4.0	10.0	96	65.7	59.3	6.3	10.1	9.1	1.0	0.00553	0.00565	0.00559	0.00098	9,312
			97	65.6	59.2	6.4	10.1	9.1	1.0	0.00554	0.00564	0.00559	0.00098	9,297
			98	65.5	59.1	6.3	10.1	9.1	1.0	0.00554	0.00563	0.00558	0.00098	9,294
			99	65.7	59.4	6.3	10.1	9.1	1.0	0.00554	0.00563	0.00559	0.00098	9,329
			100	65.7	59.4	6.4	10.1	9.1	1.0	0.00553	0.00564	0.00558	0.00098	9,330
	COLUMN AVERAGE			65.6	59.3	6.3	10.1	9.1	1.0	0.00554	0.00564	0.00559	0.00098	9,313
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	17
SEQUENCE 11	2.0	2.0	96	13.5	11.3	2.2	2.1	1.7	0.3	0.00170	0.00172	0.00171	0.00030	5,809
			97	13.5	11.3	2.2	2.1	1.7	0.3	0.00171	0.00172	0.00172	0.00030	5,787
			98	13.5	11.3	2.1	2.1	1.7	0.3	0.00170	0.00173	0.00172	0.00030	5,779
			99	13.5	11.3	2.2	2.1	1.7	0.3	0.00170	0.00173	0.00172	0.00030	5,773
			100	13.4	11.3	2.2	2.1	1.7	0.3	0.00171	0.00173	0.00172	0.00030	5,760
	COLUMN AVERAGE			13.5	11.3	2.2	2.1	1.7	0.3	0.00171	0.00173	0.00172	0.00030	5,782
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	18
SEQUENCE 12	2.0	4.0	96	25.1	22.7	2.5	3.9	3.5	0.4	0.00343	0.00345	0.00344	0.00060	5,782
			97	25.1	22.6	2.5	3.9	3.5	0.4	0.00343	0.00345	0.00344	0.00060	5,768
			98	25.0	22.6	2.5	3.9	3.5	0.4	0.00342	0.00345	0.00343	0.00060	5,773
			99	25.1	22.7	2.4	3.9	3.5	0.4	0.00342	0.00345	0.00343	0.00060	5,805
			100	25.1	22.7	2.4	3.9	3.5	0.4	0.00342	0.00345	0.00343	0.00060	5,801
	COLUMN AVERAGE			25.1	22.7	2.4	3.9	3.5	0.4	0.00342	0.00345	0.00344	0.00060	5,786
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	17
SEQUENCE 13	2.0	6.0	96	38.3	34.5	3.8	5.9	5.3	0.6	0.00474	0.00480	0.00477	0.00084	6,357
			97	38.3	34.6	3.7	5.9	5.3	0.6	0.00474	0.00479	0.00477	0.00084	6,366
			98	38.3	34.6	3.7	5.9	5.3	0.6	0.00474	0.00480	0.00477	0.00084	6,367
			99	38.3	34.5	3.7	5.9	5.3	0.6	0.00474	0.00478	0.00476	0.00083	6,366
			100	38.3	34.6	3.7	5.9	5.3	0.6	0.00474	0.00479	0.00477	0.00084	6,363
	COLUMN AVERAGE			38.3	34.6	3.7	5.9	5.3	0.6	0.00474	0.00479	0.00477	0.00084	6,364
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	4

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (0-2ft.)

SEQUENCE 14	2.0	8.0	96	51.6	46.5	5.0	7.9	7.2	0.8	0.00580	0.00587	0.00583	0.00102	7,002
			97	51.6	46.5	5.1	7.9	7.2	0.8	0.00579	0.00587	0.00583	0.00102	6,999
			98	51.6	46.5	5.0	7.9	7.2	0.8	0.00578	0.00588	0.00583	0.00102	7,006
			99	51.6	46.5	5.0	7.9	7.2	0.8	0.00578	0.00588	0.00583	0.00102	7,001
			100	51.6	46.5	5.0	7.9	7.2	0.8	0.00580	0.00587	0.00583	0.00102	7,002
	COLUMN AVERAGE			51.6	46.5	5.0	7.9	7.2	0.8	0.00579	0.00587	0.00583	0.00102	7,002
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	2
SEQUENCE 15	2.0	10.0	96	64.7	58.4	6.3	10.0	9.0	1.0	0.00687	0.00697	0.00692	0.00121	7,412
			97	64.7	58.4	6.3	10.0	9.0	1.0	0.00686	0.00696	0.00691	0.00121	7,413
			98	64.8	58.4	6.3	10.0	9.0	1.0	0.00685	0.00696	0.00691	0.00121	7,425
			99	64.5	58.2	6.3	9.9	9.0	1.0	0.00685	0.00696	0.00691	0.00121	7,396
			100	64.8	58.5	6.3	10.0	9.0	1.0	0.00685	0.00696	0.00691	0.00121	7,425
	COLUMN AVERAGE			64.7	58.4	6.3	10.0	9.0	1.0	0.00686	0.00696	0.00691	0.00121	7,414
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	12

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

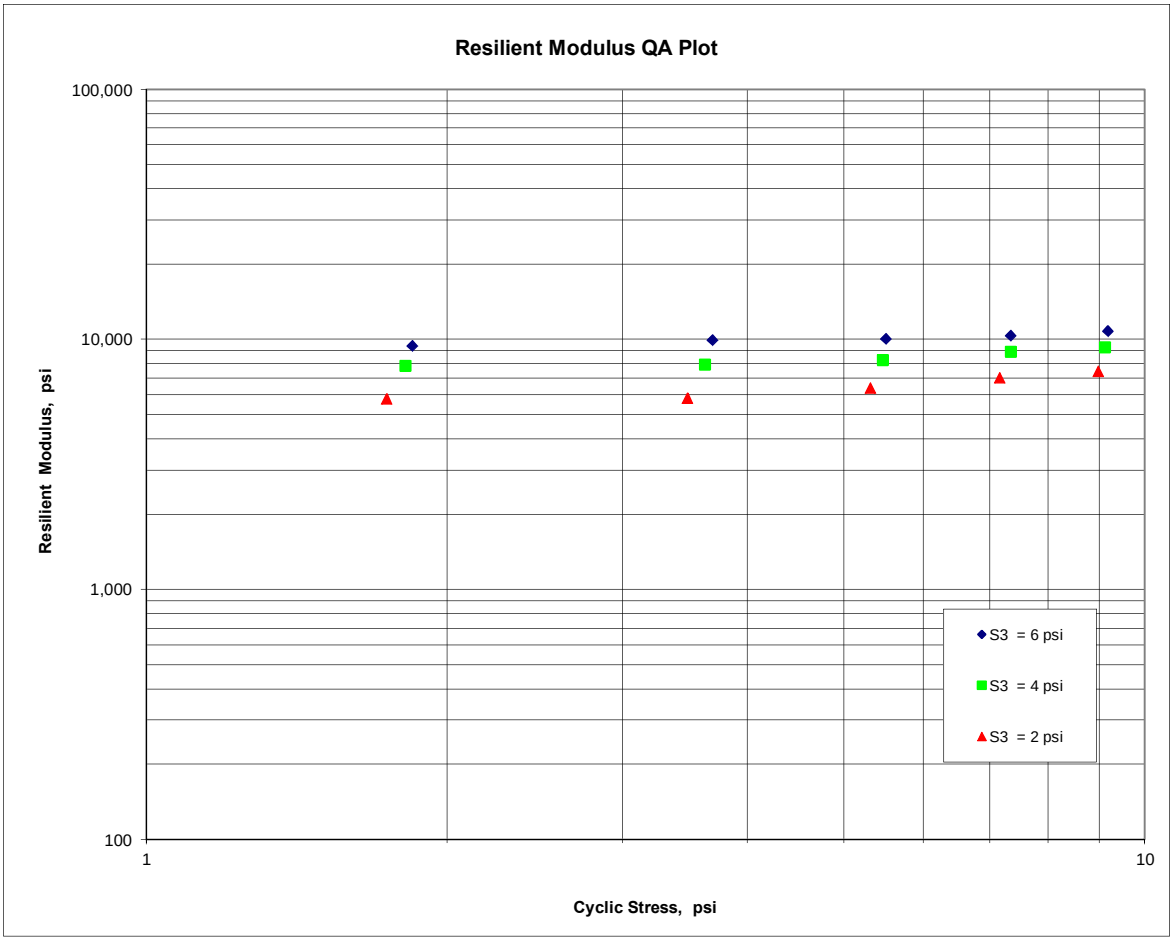
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-15 (0-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.6% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,080
K2 =	0.11323
K5 =	0.40306
R^2 =	0.97

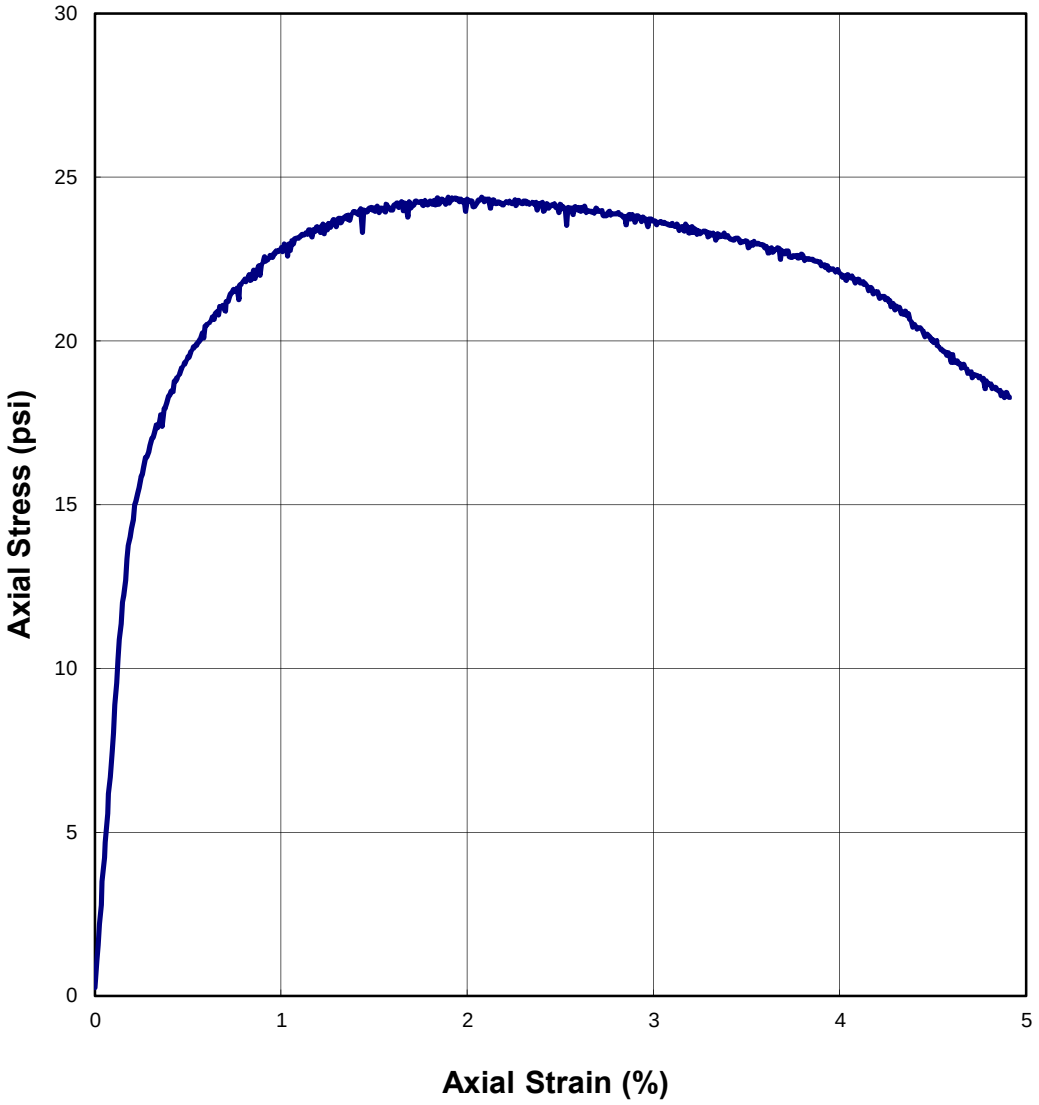


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-15 (0-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.6% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-15

SOURCE OF MATERIAL: Boring B-15 (2-3ft.)

1.	*SAMPLING DATE:*	5/16/2013
2.	*SAMPLE NUMBER:*	B-15
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.67
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.8
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1233.32
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1233.32
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.5
	MAX. DRY DENSITY, pcf	121.4
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.5
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	10.4
	COMPACTION DRY DENSITY, $\gamma_{d,}$ *pcf*	115.7
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.5
	COMPACTION LEVEL ACHIEVED	95.3%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	25
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-15 (2-3ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.5% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	___._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.2	11.8	1.4	2.0	1.8	0.2	0.00104	0.00105	0.00105	0.00018	9,846
			97	13.2	11.8	1.3	2.0	1.8	0.2	0.00105	0.00106	0.00105	0.00019	9,855
			98	13.3	11.9	1.4	2.0	1.8	0.2	0.00104	0.00106	0.00105	0.00019	9,905
			99	13.2	11.9	1.4	2.0	1.8	0.2	0.00103	0.00106	0.00105	0.00018	9,922
			100	13.2	11.8	1.4	2.0	1.8	0.2	0.00104	0.00106	0.00105	0.00019	9,814
	COLUMN AVERAGE			13.2	11.8	1.4	2.0	1.8	0.2	0.00104	0.00106	0.00105	0.00019	9,868
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	45

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (2-3ft.)

SEQUENCE 2	6.0	4.0	96	26.1	23.7	2.4	4.0	3.7	0.4	0.00204	0.00206	0.00205	0.00036	10,098
			97	26.2	23.7	2.5	4.0	3.7	0.4	0.00204	0.00207	0.00206	0.00036	10,082
			98	26.2	23.7	2.4	4.0	3.7	0.4	0.00204	0.00207	0.00206	0.00036	10,108
			99	26.2	23.7	2.4	4.0	3.7	0.4	0.00204	0.00207	0.00206	0.00036	10,079
			100	26.2	23.7	2.5	4.0	3.7	0.4	0.00203	0.00207	0.00205	0.00036	10,103
	COLUMN AVERAGE			26.2	23.7	2.4	4.0	3.7	0.4	0.00204	0.00207	0.00205	0.00036	10,094
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	13
SEQUENCE 3	6.0	6.0	96	39.1	35.4	3.7	6.0	5.5	0.6	0.00303	0.00309	0.00306	0.00054	10,113
			97	39.1	35.4	3.7	6.0	5.5	0.6	0.00303	0.00309	0.00306	0.00054	10,119
			98	39.0	35.3	3.7	6.0	5.4	0.6	0.00303	0.00309	0.00306	0.00054	10,092
			99	39.1	35.4	3.7	6.0	5.5	0.6	0.00303	0.00309	0.00306	0.00054	10,121
			100	39.1	35.3	3.7	6.0	5.4	0.6	0.00304	0.00308	0.00306	0.00054	10,099
	COLUMN AVERAGE			39.1	35.3	3.7	6.0	5.5	0.6	0.00303	0.00308	0.00306	0.00054	10,109
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	13
SEQUENCE 4	6.0	8.0	96	52.2	47.2	5.0	8.1	7.3	0.8	0.00398	0.00403	0.00400	0.00071	10,317
			97	52.3	47.2	5.0	8.1	7.3	0.8	0.00398	0.00403	0.00400	0.00071	10,321
			98	52.2	47.2	5.0	8.1	7.3	0.8	0.00398	0.00402	0.00400	0.00071	10,302
			99	52.2	47.2	5.0	8.0	7.3	0.8	0.00398	0.00404	0.00401	0.00071	10,294
			100	52.3	47.3	5.0	8.1	7.3	0.8	0.00397	0.00403	0.00400	0.00071	10,332
	COLUMN AVERAGE			52.2	47.2	5.0	8.1	7.3	0.8	0.00398	0.00403	0.00400	0.00071	10,313
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	15
SEQUENCE 5	6.0	10.0	96	65.5	59.2	6.3	10.1	9.1	1.0	0.00479	0.00489	0.00484	0.00085	10,703
			97	65.5	59.2	6.3	10.1	9.1	1.0	0.00480	0.00488	0.00484	0.00085	10,704
			98	65.5	59.2	6.3	10.1	9.1	1.0	0.00480	0.00488	0.00484	0.00085	10,699
			99	65.5	59.2	6.3	10.1	9.1	1.0	0.00480	0.00489	0.00484	0.00085	10,683
			100	65.5	59.1	6.3	10.1	9.1	1.0	0.00480	0.00489	0.00484	0.00085	10,678
	COLUMN AVERAGE			65.5	59.2	6.3	10.1	9.1	1.0	0.00480	0.00489	0.00484	0.00085	10,693
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (2-3ft.)

SEQUENCE 6	4.0	2.0	96	13.4	11.6	1.8	2.1	1.8	0.3	0.00124	0.00124	0.00124	0.00022	8,189
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00125	0.00123	0.00124	0.00022	8,213
			98	13.3	11.5	1.8	2.1	1.8	0.3	0.00125	0.00123	0.00124	0.00022	8,132
			99	13.3	11.5	1.8	2.1	1.8	0.3	0.00125	0.00124	0.00124	0.00022	8,128
			100	13.3	11.6	1.8	2.1	1.8	0.3	0.00124	0.00124	0.00124	0.00022	8,145
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00125	0.00124	0.00124	0.00022	8,161
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	38
SEQUENCE 7	4.0	4.0	96	25.6	23.2	2.4	3.9	3.6	0.4	0.00250	0.00250	0.00250	0.00044	8,102
			97	25.6	23.1	2.4	3.9	3.6	0.4	0.00249	0.00249	0.00249	0.00044	8,112
			98	25.6	23.2	2.4	4.0	3.6	0.4	0.00249	0.00250	0.00250	0.00044	8,119
			99	25.6	23.2	2.4	3.9	3.6	0.4	0.00249	0.00250	0.00250	0.00044	8,112
			100	25.5	23.1	2.5	3.9	3.6	0.4	0.00248	0.00251	0.00250	0.00044	8,080
	COLUMN AVERAGE			25.6	23.1	2.4	3.9	3.6	0.4	0.00249	0.00250	0.00250	0.00044	8,105
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	15
SEQUENCE 8	4.0	6.0	96	38.7	34.9	3.7	6.0	5.4	0.6	0.00363	0.00366	0.00365	0.00064	8,386
			97	38.7	35.0	3.7	6.0	5.4	0.6	0.00363	0.00365	0.00364	0.00064	8,403
			98	38.7	34.9	3.8	6.0	5.4	0.6	0.00363	0.00365	0.00364	0.00064	8,393
			99	38.7	35.0	3.7	6.0	5.4	0.6	0.00363	0.00366	0.00364	0.00064	8,402
			100	38.7	34.9	3.7	6.0	5.4	0.6	0.00363	0.00365	0.00364	0.00064	8,396
	COLUMN AVERAGE			38.7	35.0	3.7	6.0	5.4	0.6	0.00363	0.00365	0.00364	0.00064	8,396
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	7
SEQUENCE 9	4.0	8.0	96	51.9	46.9	5.0	8.0	7.2	0.8	0.00459	0.00463	0.00461	0.00081	8,896
			97	51.9	46.8	5.0	8.0	7.2	0.8	0.00459	0.00463	0.00461	0.00081	8,888
			98	51.9	46.9	5.0	8.0	7.2	0.8	0.00460	0.00463	0.00461	0.00081	8,897
			99	51.9	46.9	5.0	8.0	7.2	0.8	0.00459	0.00463	0.00461	0.00081	8,891
			100	52.0	46.9	5.0	8.0	7.2	0.8	0.00459	0.00463	0.00461	0.00081	8,903
	COLUMN AVERAGE			51.9	46.9	5.0	8.0	7.2	0.8	0.00459	0.00463	0.00461	0.00081	8,895
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (2-3ft.)

SEQUENCE 10	4.0	10.0	96	65.1	58.7	6.3	10.0	9.1	1.0	0.00548	0.00550	0.00549	0.00097	9,361
			97	65.0	58.7	6.3	10.0	9.0	1.0	0.00547	0.00550	0.00548	0.00097	9,357
			98	65.0	58.7	6.3	10.0	9.1	1.0	0.00547	0.00551	0.00549	0.00097	9,352
			99	65.0	58.7	6.3	10.0	9.1	1.0	0.00547	0.00550	0.00548	0.00097	9,361
			100	65.1	58.8	6.3	10.0	9.1	1.0	0.00547	0.00551	0.00549	0.00097	9,365
	COLUMN AVERAGE			65.0	58.7	6.3	10.0	9.1	1.0	0.00547	0.00550	0.00549	0.00097	9,359
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5
SEQUENCE 11	2.0	2.0	96	13.3	11.1	2.2	2.0	1.7	0.3	0.00154	0.00154	0.00154	0.00027	6,297
			97	13.2	11.0	2.2	2.0	1.7	0.3	0.00155	0.00154	0.00154	0.00027	6,270
			98	13.2	11.1	2.2	2.0	1.7	0.3	0.00155	0.00153	0.00154	0.00027	6,292
			99	13.2	11.0	2.2	2.0	1.7	0.3	0.00155	0.00154	0.00155	0.00027	6,235
			100	13.3	11.1	2.2	2.1	1.7	0.3	0.00156	0.00154	0.00155	0.00027	6,308
	COLUMN AVERAGE			13.3	11.1	2.2	2.0	1.7	0.3	0.00155	0.00154	0.00154	0.00027	6,280
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	29
SEQUENCE 12	2.0	4.0	96	24.7	22.2	2.4	3.8	3.4	0.4	0.00317	0.00313	0.00315	0.00056	6,176
			97	24.7	22.2	2.5	3.8	3.4	0.4	0.00316	0.00314	0.00315	0.00056	6,171
			98	24.6	22.1	2.5	3.8	3.4	0.4	0.00316	0.00314	0.00315	0.00055	6,155
			99	24.6	22.2	2.5	3.8	3.4	0.4	0.00316	0.00314	0.00315	0.00056	6,155
			100	24.6	22.2	2.5	3.8	3.4	0.4	0.00315	0.00314	0.00315	0.00055	6,163
	COLUMN AVERAGE			24.6	22.2	2.5	3.8	3.4	0.4	0.00316	0.00314	0.00315	0.00056	6,164
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	10
SEQUENCE 13	2.0	6.0	96	37.7	34.0	3.7	5.8	5.2	0.6	0.00447	0.00445	0.00446	0.00079	6,667
			97	37.6	33.9	3.7	5.8	5.2	0.6	0.00447	0.00445	0.00446	0.00079	6,655
			98	37.8	34.0	3.8	5.8	5.2	0.6	0.00446	0.00445	0.00446	0.00079	6,679
			99	37.7	34.0	3.7	5.8	5.2	0.6	0.00446	0.00446	0.00446	0.00079	6,662
			100	37.7	33.9	3.7	5.8	5.2	0.6	0.00445	0.00446	0.00445	0.00079	6,664
	COLUMN AVERAGE			37.7	34.0	3.7	5.8	5.2	0.6	0.00446	0.00445	0.00446	0.00079	6,665
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	8

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-15 Material Source: Boring B-15 (2-3ft.)

SEQUENCE 14	2.0	8.0	96	50.9	45.9	5.1	7.9	7.1	0.8	0.00548	0.00547	0.00547	0.00097	7,330
			97	50.7	45.7	5.1	7.8	7.0	0.8	0.00547	0.00547	0.00547	0.00096	7,307
			98	50.8	45.8	5.0	7.8	7.1	0.8	0.00547	0.00547	0.00547	0.00096	7,323
			99	50.8	45.8	5.0	7.8	7.1	0.8	0.00547	0.00547	0.00547	0.00096	7,318
			100	50.9	45.8	5.0	7.8	7.1	0.8	0.00547	0.00548	0.00547	0.00096	7,326
	COLUMN AVERAGE			50.8	45.8	5.0	7.8	7.1	0.8	0.00547	0.00547	0.00547	0.00096	7,321
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	9
SEQUENCE 15	2.0	10.0	96	64.0	57.7	6.3	9.9	8.9	1.0	0.00643	0.00645	0.00644	0.00114	7,828
			97	64.1	57.7	6.3	9.9	8.9	1.0	0.00643	0.00646	0.00644	0.00114	7,834
			98	63.8	57.5	6.3	9.8	8.9	1.0	0.00644	0.00645	0.00645	0.00114	7,800
			99	64.1	57.7	6.3	9.9	8.9	1.0	0.00644	0.00645	0.00644	0.00114	7,837
			100	63.9	57.5	6.3	9.9	8.9	1.0	0.00644	0.00645	0.00644	0.00114	7,812
	COLUMN AVERAGE			64.0	57.6	6.3	9.9	8.9	1.0	0.00644	0.00645	0.00644	0.00114	7,822
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	16

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

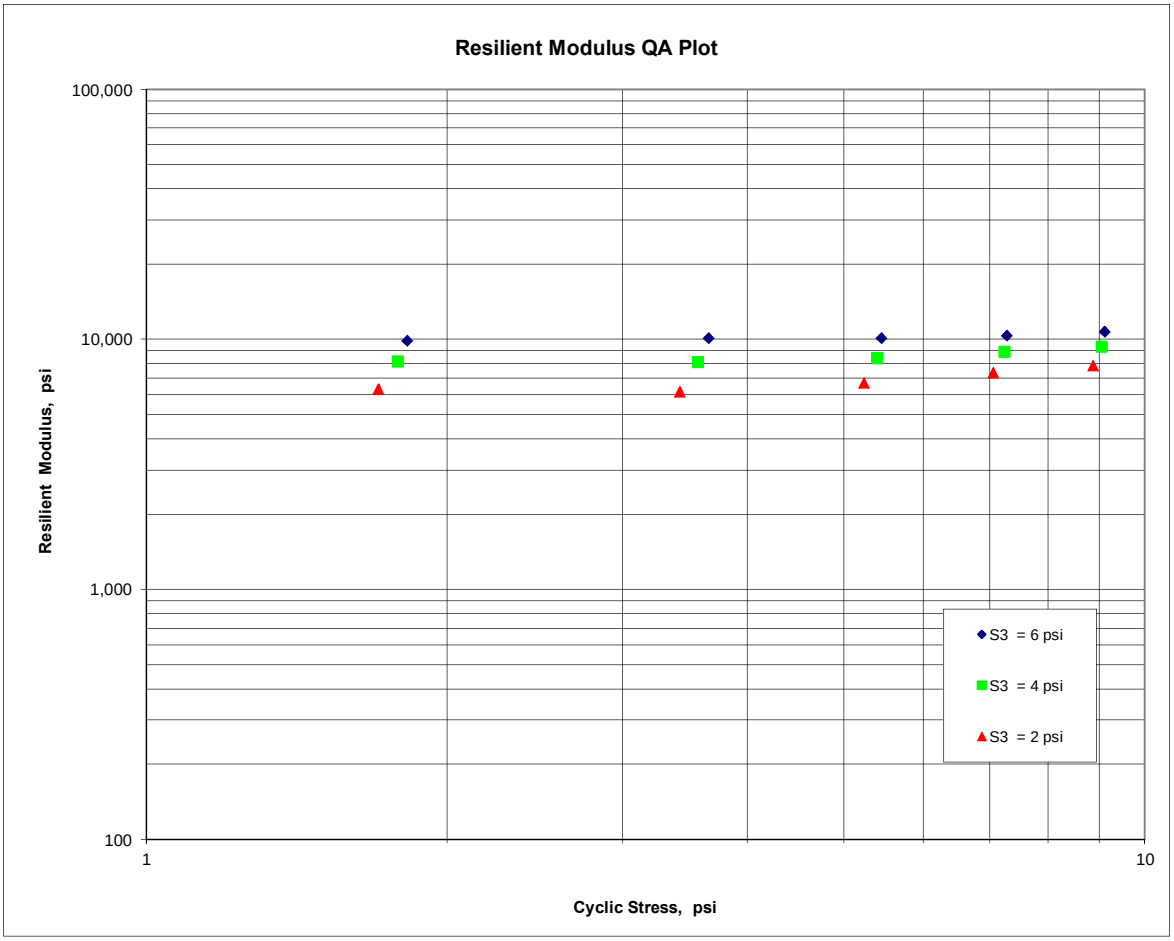
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-15 (2-3ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.5% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,632
K2 =	0.08698
K5 =	0.35941
R^2 =	0.95

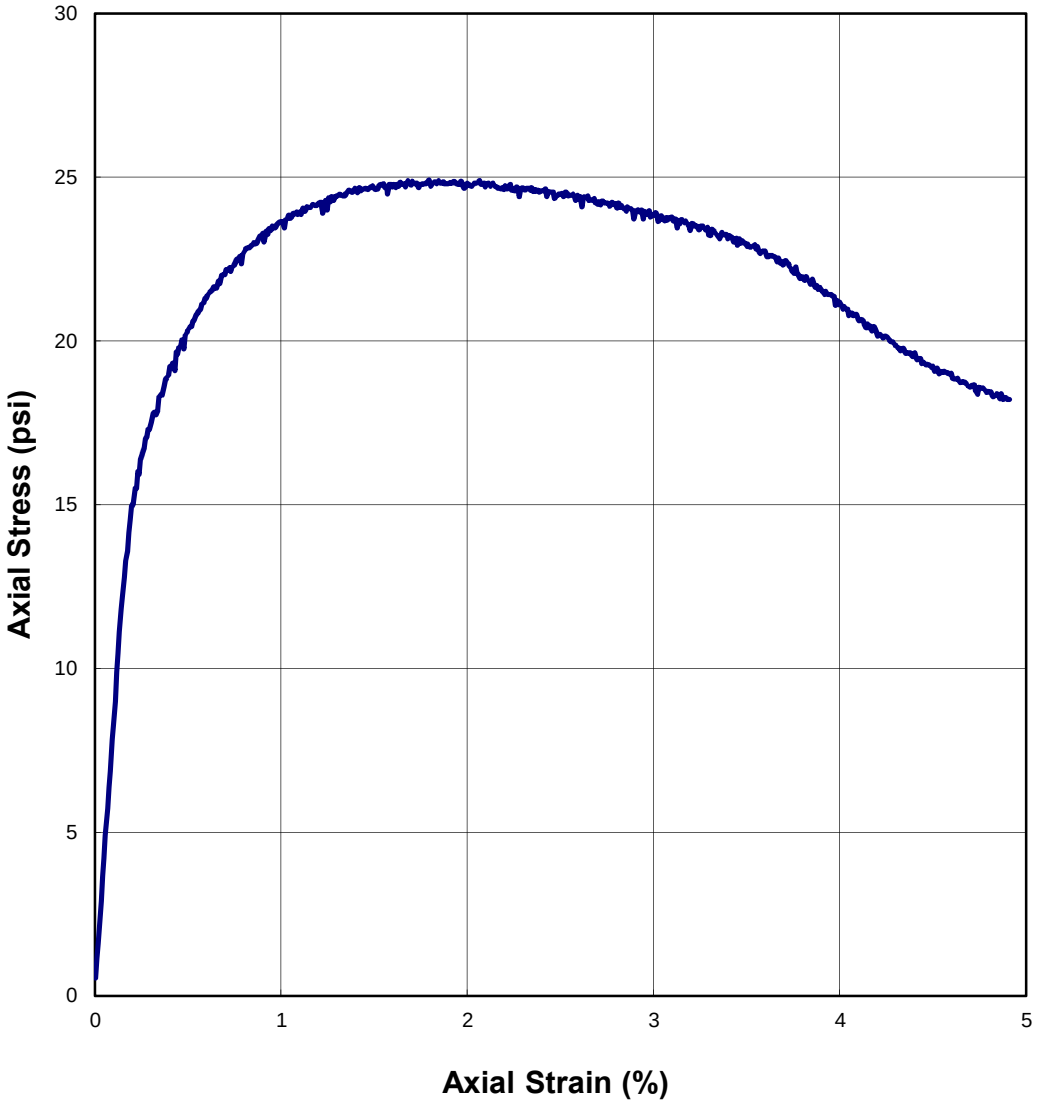


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-15 (2-3ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.5% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99

Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-16N

SOURCE OF MATERIAL: Boring B-16N (0-1ft.)

1.	*SAMPLING DATE:*	5/14/2013
2.	*SAMPLE NUMBER:*	B-16N
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.69
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.9
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1268.12
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1268.12
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	7.2
	MAX. DRY DENSITY, pcf	128.9
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	7.2
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	7.0
	COMPACTION DRY DENSITY, γ_d, pcf	122.1
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	7.2
	COMPACTION LEVEL ACHIEVED	94.7%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	50
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-16N (0-1ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 7.2% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.2	11.8	1.4	2.0	1.8	0.2	0.00074	0.00076	0.00075	0.00013	13,872
			97	13.2	11.8	1.4	2.0	1.8	0.2	0.00074	0.00075	0.00075	0.00013	13,906
			98	13.3	11.9	1.4	2.1	1.8	0.2	0.00074	0.00075	0.00075	0.00013	13,989
			99	13.3	11.9	1.4	2.0	1.8	0.2	0.00075	0.00075	0.00075	0.00013	13,865
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00075	0.00075	0.00075	0.00013	13,920
	COLUMN AVERAGE			13.2	11.9	1.4	2.0	1.8	0.2	0.00074	0.00075	0.00075	0.00013	13,911
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	50

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-16N Material Source: Boring B-16N (0-1ft.)

SEQUENCE 2	6.0	4.0	96	26.0	23.6	2.4	4.0	3.6	0.4	0.00149	0.00148	0.00149	0.00026	13,932
			97	26.0	23.6	2.5	4.0	3.6	0.4	0.00148	0.00149	0.00149	0.00026	13,893
			98	25.9	23.5	2.4	4.0	3.6	0.4	0.00148	0.00149	0.00149	0.00026	13,887
			99	26.0	23.6	2.4	4.0	3.6	0.4	0.00148	0.00149	0.00148	0.00026	13,947
			100	26.0	23.5	2.4	4.0	3.6	0.4	0.00147	0.00149	0.00148	0.00026	13,929
	COLUMN AVERAGE			26.0	23.5	2.4	4.0	3.6	0.4	0.00148	0.00149	0.00149	0.00026	13,918
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	26
SEQUENCE 3	6.0	6.0	96	38.8	35.0	3.8	6.0	5.4	0.6	0.00231	0.00233	0.00232	0.00041	13,250
			97	38.7	35.0	3.7	6.0	5.4	0.6	0.00231	0.00233	0.00232	0.00041	13,241
			98	38.8	35.1	3.7	6.0	5.4	0.6	0.00231	0.00232	0.00232	0.00041	13,292
			99	38.8	35.0	3.8	6.0	5.4	0.6	0.00231	0.00233	0.00232	0.00041	13,257
			100	38.7	35.0	3.7	6.0	5.4	0.6	0.00231	0.00232	0.00232	0.00041	13,235
	COLUMN AVERAGE			38.7	35.0	3.7	6.0	5.4	0.6	0.00231	0.00233	0.00232	0.00041	13,255
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	22
SEQUENCE 4	6.0	8.0	96	51.6	46.6	5.0	8.0	7.2	0.8	0.00311	0.00311	0.00311	0.00055	13,167
			97	51.7	46.6	5.0	8.0	7.2	0.8	0.00311	0.00311	0.00311	0.00055	13,158
			98	51.7	46.7	5.0	8.0	7.2	0.8	0.00310	0.00312	0.00311	0.00055	13,190
			99	51.7	46.7	5.0	8.0	7.2	0.8	0.00311	0.00312	0.00311	0.00055	13,168
			100	51.7	46.7	5.0	8.0	7.2	0.8	0.00311	0.00311	0.00311	0.00055	13,194
	COLUMN AVERAGE			51.7	46.7	5.0	8.0	7.2	0.8	0.00311	0.00311	0.00311	0.00055	13,175
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 5	6.0	10.0	96	64.7	58.4	6.3	10.0	9.0	1.0	0.00383	0.00380	0.00382	0.00067	13,432
			97	64.7	58.4	6.3	10.0	9.0	1.0	0.00384	0.00380	0.00382	0.00067	13,420
			98	64.7	58.4	6.3	10.0	9.0	1.0	0.00382	0.00381	0.00382	0.00067	13,425
			99	64.8	58.5	6.3	10.0	9.0	1.0	0.00383	0.00381	0.00382	0.00067	13,446
			100	64.7	58.4	6.3	10.0	9.0	1.0	0.00382	0.00382	0.00382	0.00067	13,413
	COLUMN AVERAGE			64.7	58.4	6.3	10.0	9.0	1.0	0.00383	0.00381	0.00382	0.00067	13,427
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	13

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-16N Material Source: Boring B-16N (0-1ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.7	2.1	1.8	0.3	0.00084	0.00083	0.00084	0.00015	12,336
			97	13.5	11.7	1.8	2.1	1.8	0.3	0.00084	0.00084	0.00084	0.00015	12,244
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00084	0.00084	0.00084	0.00015	12,301
			99	13.5	11.8	1.8	2.1	1.8	0.3	0.00084	0.00084	0.00084	0.00015	12,340
			100	13.5	11.7	1.8	2.1	1.8	0.3	0.00083	0.00083	0.00083	0.00015	12,371
	COLUMN AVERAGE			13.5	11.7	1.8	2.1	1.8	0.3	0.00084	0.00083	0.00084	0.00015	12,318
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	49
SEQUENCE 7	4.0	4.0	96	25.6	23.2	2.4	4.0	3.6	0.4	0.00173	0.00173	0.00173	0.00030	11,775
			97	25.6	23.2	2.5	4.0	3.6	0.4	0.00173	0.00173	0.00173	0.00030	11,754
			98	25.7	23.2	2.5	4.0	3.6	0.4	0.00172	0.00173	0.00173	0.00030	11,805
			99	25.6	23.2	2.4	4.0	3.6	0.4	0.00173	0.00172	0.00173	0.00030	11,780
			100	25.6	23.2	2.4	4.0	3.6	0.4	0.00173	0.00173	0.00173	0.00030	11,785
	COLUMN AVERAGE			25.6	23.2	2.5	4.0	3.6	0.4	0.00173	0.00173	0.00173	0.00030	11,780
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	18
SEQUENCE 8	4.0	6.0	96	38.4	34.7	3.7	5.9	5.4	0.6	0.00262	0.00263	0.00262	0.00046	11,623
			97	38.5	34.8	3.7	5.9	5.4	0.6	0.00262	0.00263	0.00263	0.00046	11,616
			98	38.5	34.7	3.7	5.9	5.4	0.6	0.00262	0.00262	0.00262	0.00046	11,622
			99	38.5	34.8	3.7	5.9	5.4	0.6	0.00262	0.00262	0.00262	0.00046	11,631
			100	38.5	34.7	3.7	5.9	5.4	0.6	0.00262	0.00262	0.00262	0.00046	11,616
	COLUMN AVERAGE			38.5	34.7	3.7	5.9	5.4	0.6	0.00262	0.00263	0.00262	0.00046	11,622
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6
SEQUENCE 9	4.0	8.0	96	51.4	46.4	5.0	7.9	7.2	0.8	0.00351	0.00351	0.00351	0.00062	11,617
			97	51.5	46.5	5.0	7.9	7.2	0.8	0.00352	0.00351	0.00352	0.00062	11,603
			98	51.4	46.4	5.0	7.9	7.2	0.8	0.00347	0.00354	0.00351	0.00062	11,621
			99	51.6	46.5	5.0	8.0	7.2	0.8	0.00352	0.00348	0.00350	0.00062	11,669
			100	51.5	46.5	5.0	7.9	7.2	0.8	0.00346	0.00353	0.00349	0.00061	11,672
	COLUMN AVERAGE			51.5	46.5	5.0	7.9	7.2	0.8	0.00350	0.00352	0.00351	0.00062	11,636
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00003	0.00002	0.00001	0.00000	32

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-16N Material Source: Boring B-16N (0-1ft.)

SEQUENCE 10	4.0	10.0	96	64.4	58.1	6.3	9.9	9.0	1.0	0.00429	0.00425	0.00427	0.00075	11,934
			97	64.5	58.1	6.3	9.9	9.0	1.0	0.00429	0.00425	0.00427	0.00075	11,944
			98	64.4	58.1	6.3	9.9	9.0	1.0	0.00429	0.00425	0.00427	0.00075	11,940
			99	64.5	58.1	6.3	9.9	9.0	1.0	0.00429	0.00425	0.00427	0.00075	11,953
			100	64.4	58.1	6.3	9.9	9.0	1.0	0.00428	0.00427	0.00427	0.00075	11,936
	COLUMN AVERAGE			64.4	58.1	6.3	9.9	9.0	1.0	0.00429	0.00426	0.00427	0.00075	11,942
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	8
SEQUENCE 11	2.0	2.0	96	13.6	11.4	2.2	2.1	1.8	0.3	0.00099	0.00098	0.00099	0.00017	10,165
			97	13.7	11.5	2.2	2.1	1.8	0.3	0.00100	0.00097	0.00099	0.00017	10,263
			98	13.6	11.5	2.2	2.1	1.8	0.3	0.00099	0.00097	0.00098	0.00017	10,239
			99	13.7	11.5	2.2	2.1	1.8	0.3	0.00099	0.00097	0.00098	0.00017	10,261
			100	13.7	11.5	2.2	2.1	1.8	0.3	0.00100	0.00097	0.00099	0.00017	10,282
	COLUMN AVERAGE			13.7	11.5	2.2	2.1	1.8	0.3	0.00100	0.00097	0.00098	0.00017	10,242
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	46
SEQUENCE 12	2.0	4.0	96	25.1	22.6	2.4	3.9	3.5	0.4	0.00210	0.00209	0.00210	0.00037	9,484
			97	25.1	22.6	2.5	3.9	3.5	0.4	0.00210	0.00209	0.00209	0.00037	9,476
			98	25.0	22.6	2.4	3.9	3.5	0.4	0.00210	0.00209	0.00210	0.00037	9,464
			99	25.0	22.5	2.5	3.9	3.5	0.4	0.00211	0.00208	0.00209	0.00037	9,449
			100	25.0	22.5	2.5	3.9	3.5	0.4	0.00210	0.00208	0.00209	0.00037	9,460
	COLUMN AVERAGE			25.0	22.6	2.5	3.9	3.5	0.4	0.00210	0.00209	0.00209	0.00037	9,467
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	14
SEQUENCE 13	2.0	6.0	96	37.7	33.9	3.7	5.8	5.2	0.6	0.00318	0.00316	0.00317	0.00056	9,405
			97	37.6	33.9	3.8	5.8	5.2	0.6	0.00317	0.00316	0.00317	0.00056	9,391
			98	37.6	33.9	3.7	5.8	5.2	0.6	0.00318	0.00316	0.00317	0.00056	9,390
			99	37.7	33.9	3.8	5.8	5.2	0.6	0.00318	0.00316	0.00317	0.00056	9,408
			100	37.7	34.0	3.7	5.8	5.2	0.6	0.00318	0.00316	0.00317	0.00056	9,414
	COLUMN AVERAGE			37.7	33.9	3.7	5.8	5.2	0.6	0.00318	0.00316	0.00317	0.00056	9,402
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-16N Material Source: Boring B-16N (0-1ft.)

SEQUENCE 14	2.0	8.0	96	50.6	45.6	5.0	7.8	7.0	0.8	0.00414	0.00411	0.00412	0.00072	9,708
			97	50.6	45.6	5.0	7.8	7.0	0.8	0.00413	0.00411	0.00412	0.00072	9,715
			98	50.7	45.6	5.0	7.8	7.0	0.8	0.00413	0.00411	0.00412	0.00072	9,722
			99	50.6	45.6	5.0	7.8	7.0	0.8	0.00413	0.00411	0.00412	0.00072	9,710
			100	50.7	45.7	5.0	7.8	7.0	0.8	0.00413	0.00411	0.00412	0.00072	9,731
	COLUMN AVERAGE			50.6	45.6	5.0	7.8	7.0	0.8	0.00413	0.00411	0.00412	0.00072	9,717
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	10
SEQUENCE 15	2.0	10.0	96	63.5	57.2	6.3	9.8	8.8	1.0	0.00501	0.00499	0.00500	0.00088	10,046
			97	63.6	57.2	6.3	9.8	8.8	1.0	0.00501	0.00499	0.00500	0.00088	10,048
			98	63.5	57.2	6.3	9.8	8.8	1.0	0.00500	0.00500	0.00500	0.00088	10,039
			99	63.5	57.1	6.3	9.8	8.8	1.0	0.00501	0.00499	0.00500	0.00088	10,041
			100	63.5	57.2	6.3	9.8	8.8	1.0	0.00500	0.00500	0.00500	0.00088	10,048
	COLUMN AVERAGE			63.5	57.2	6.3	9.8	8.8	1.0	0.00500	0.00499	0.00500	0.00088	10,044
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	4

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

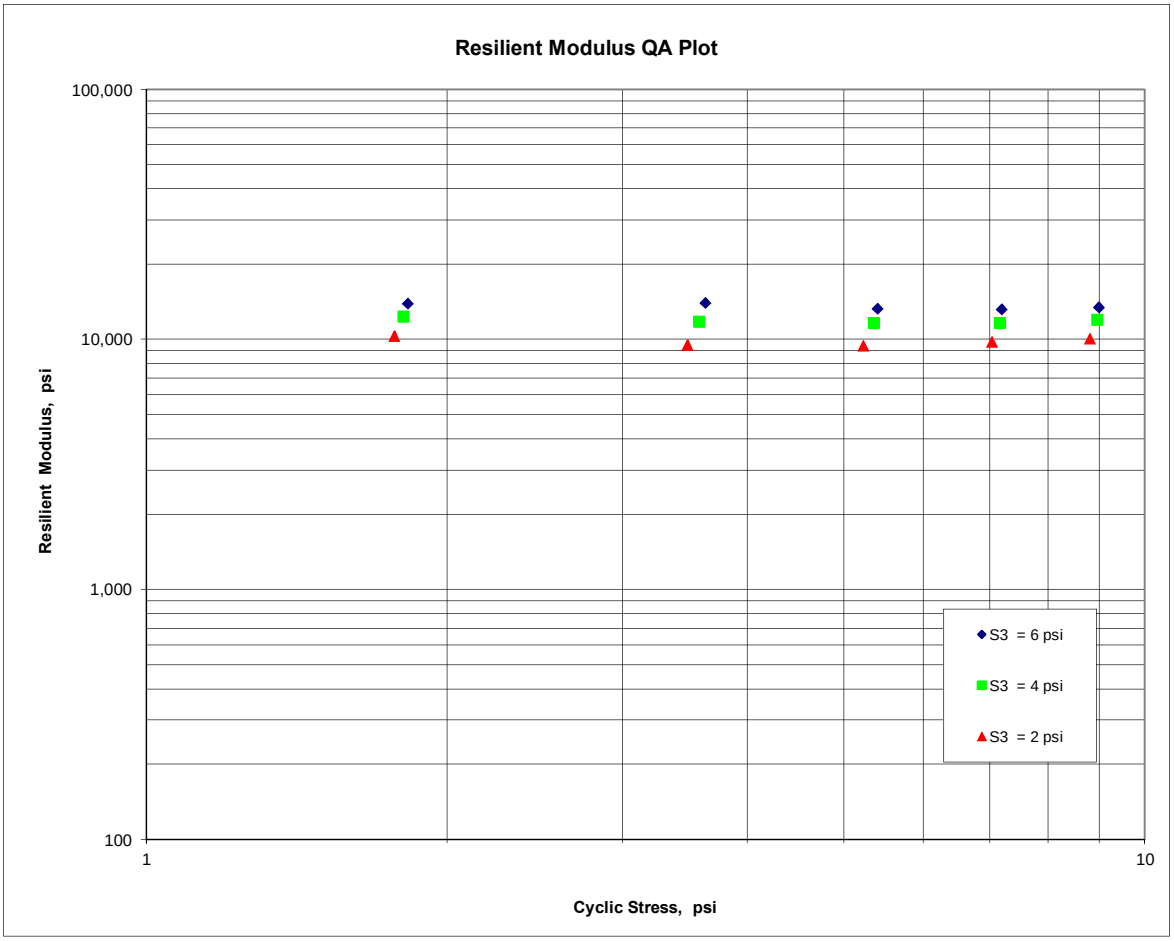
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-16N (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 7.2% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	8,242
K2 =	-0.02482
K5 =	0.29552
R^2 =	0.97

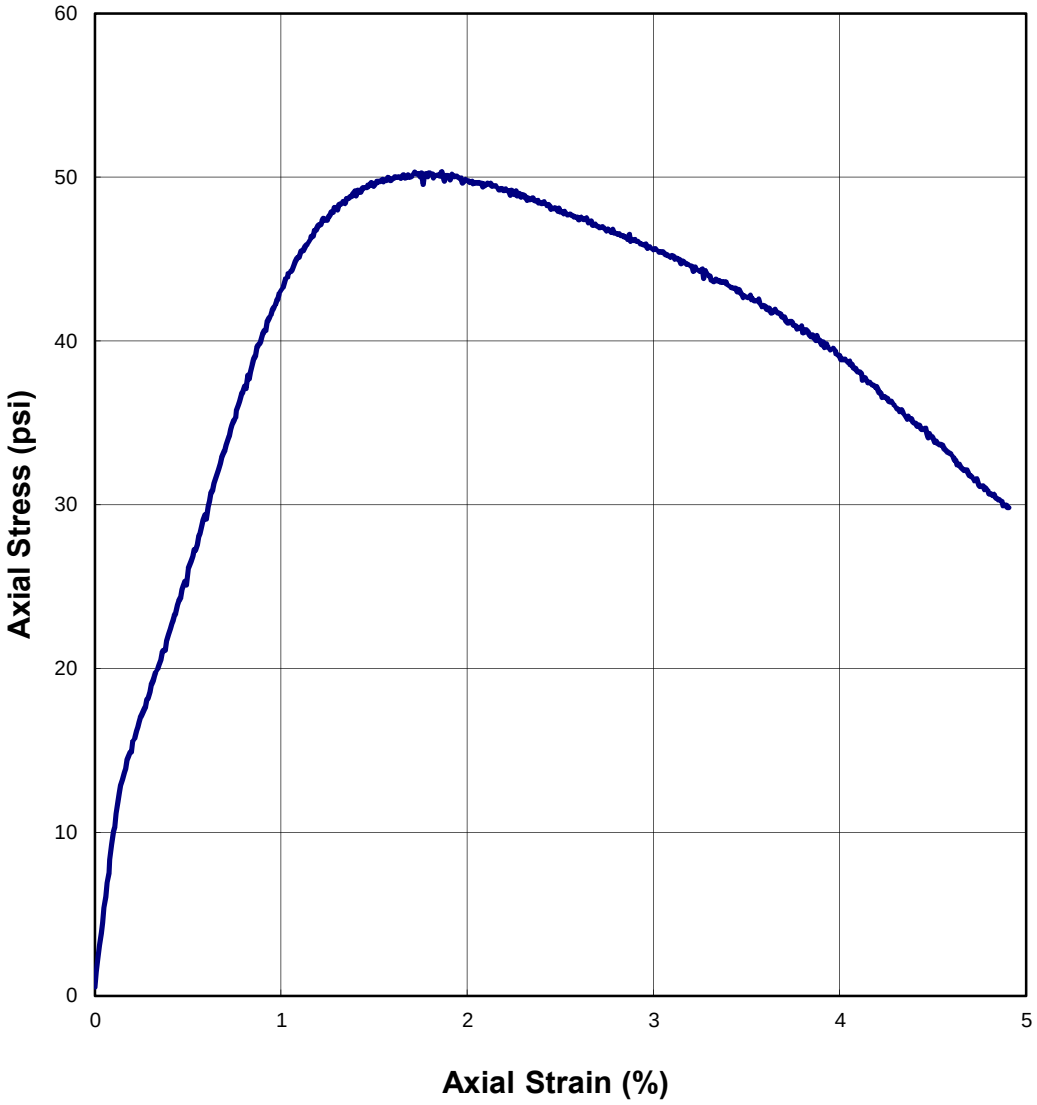


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-16N (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 7.2% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-23

SOURCE OF MATERIAL: Boring B-23 (0-1ft.)

1.	*SAMPLING DATE:*	5/7/2013
2.	*SAMPLE NUMBER:*	B-23
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.78
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.8
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.7
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1155.27
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1155.27
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	13.8
	MAX. DRY DENSITY, pcf	109.1
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	13.8
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	13.6
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	102.7
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	13.8
	COMPACTION LEVEL ACHIEVED	94.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	24
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-23 (0-1ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 13.8% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	___._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	12.9	11.5	1.4	2.0	1.8	0.2	0.00134	0.00137	0.00135	0.00023	7,550
			97	12.9	11.5	1.4	2.0	1.8	0.2	0.00134	0.00136	0.00135	0.00023	7,572
			98	12.9	11.5	1.4	2.0	1.8	0.2	0.00134	0.00135	0.00134	0.00023	7,613
			99	12.9	11.5	1.4	2.0	1.8	0.2	0.00134	0.00135	0.00135	0.00023	7,584
			100	12.9	11.6	1.4	2.0	1.8	0.2	0.00135	0.00135	0.00135	0.00023	7,594
	COLUMN AVERAGE			12.9	11.5	1.4	2.0	1.8	0.2	0.00134	0.00136	0.00135	0.00023	7,583
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	24

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-23 Material Source: Boring B-23 (0-1ft.)

SEQUENCE 2	6.0	4.0	96	25.6	23.2	2.4	3.9	3.6	0.4	0.00267	0.00269	0.00268	0.00046	7,673
			97	25.6	23.1	2.4	3.9	3.5	0.4	0.00267	0.00269	0.00268	0.00046	7,649
			98	25.5	23.1	2.4	3.9	3.5	0.4	0.00266	0.00270	0.00268	0.00046	7,638
			99	25.5	23.1	2.5	3.9	3.5	0.4	0.00267	0.00269	0.00268	0.00046	7,631
			100	25.5	23.1	2.5	3.9	3.5	0.4	0.00267	0.00270	0.00268	0.00046	7,613
	COLUMN AVERAGE			25.5	23.1	2.4	3.9	3.5	0.4	0.00267	0.00269	0.00268	0.00046	7,641
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	22
SEQUENCE 3	6.0	6.0	96	37.8	34.0	3.7	5.8	5.2	0.6	0.00410	0.00418	0.00414	0.00072	7,290
			97	37.8	34.1	3.7	5.8	5.2	0.6	0.00411	0.00417	0.00414	0.00072	7,300
			98	37.8	34.1	3.7	5.8	5.2	0.6	0.00411	0.00417	0.00414	0.00072	7,293
			99	37.8	34.1	3.7	5.8	5.2	0.6	0.00410	0.00418	0.00414	0.00072	7,301
			100	37.8	34.1	3.7	5.8	5.2	0.6	0.00411	0.00417	0.00414	0.00072	7,292
	COLUMN AVERAGE			37.8	34.1	3.7	5.8	5.2	0.6	0.00411	0.00417	0.00414	0.00072	7,295
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5
SEQUENCE 4	6.0	8.0	96	50.0	45.0	5.0	7.7	6.9	0.8	0.00555	0.00563	0.00559	0.00097	7,134
			97	50.2	45.1	5.0	7.7	6.9	0.8	0.00555	0.00563	0.00559	0.00097	7,152
			98	50.3	45.3	5.0	7.7	6.9	0.8	0.00555	0.00563	0.00559	0.00097	7,176
			99	50.1	45.1	5.0	7.7	6.9	0.8	0.00554	0.00564	0.00559	0.00097	7,148
			100	50.1	45.1	5.0	7.7	6.9	0.8	0.00555	0.00562	0.00559	0.00097	7,156
	COLUMN AVERAGE			50.2	45.1	5.0	7.7	6.9	0.8	0.00555	0.00563	0.00559	0.00097	7,153
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	15
SEQUENCE 5	6.0	10.0	96	62.6	56.3	6.3	9.6	8.6	1.0	0.00690	0.00695	0.00692	0.00120	7,202
			97	62.7	56.4	6.3	9.6	8.6	1.0	0.00689	0.00695	0.00692	0.00120	7,217
			98	62.6	56.3	6.3	9.6	8.6	1.0	0.00690	0.00694	0.00692	0.00120	7,212
			99	62.6	56.3	6.3	9.6	8.6	1.0	0.00690	0.00694	0.00692	0.00120	7,210
			100	62.6	56.3	6.3	9.6	8.6	1.0	0.00690	0.00694	0.00692	0.00120	7,209
	COLUMN AVERAGE			62.6	56.3	6.3	9.6	8.6	1.0	0.00690	0.00694	0.00692	0.00120	7,210
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-23 Material Source: Boring B-23 (0-1ft.)

SEQUENCE 6	4.0	2.0	96	12.6	10.9	1.8	1.9	1.7	0.3	0.00174	0.00172	0.00173	0.00030	5,563
			97	12.6	10.8	1.8	1.9	1.7	0.3	0.00174	0.00172	0.00173	0.00030	5,556
			98	12.6	10.8	1.8	1.9	1.7	0.3	0.00174	0.00172	0.00173	0.00030	5,566
			99	12.7	10.9	1.8	1.9	1.7	0.3	0.00173	0.00172	0.00173	0.00030	5,586
			100	12.6	10.9	1.8	1.9	1.7	0.3	0.00174	0.00171	0.00172	0.00030	5,590
	COLUMN AVERAGE			12.6	10.9	1.8	1.9	1.7	0.3	0.00174	0.00172	0.00173	0.00030	5,572
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	15
SEQUENCE 7	4.0	4.0	96	25.1	22.6	2.4	3.8	3.5	0.4	0.00373	0.00369	0.00371	0.00064	5,412
			97	25.1	22.7	2.4	3.9	3.5	0.4	0.00373	0.00369	0.00371	0.00064	5,413
			98	25.2	22.7	2.5	3.9	3.5	0.4	0.00372	0.00369	0.00371	0.00064	5,429
			99	25.1	22.7	2.5	3.9	3.5	0.4	0.00372	0.00369	0.00370	0.00064	5,420
			100	25.2	22.7	2.4	3.9	3.5	0.4	0.00372	0.00368	0.00370	0.00064	5,439
	COLUMN AVERAGE			25.1	22.7	2.4	3.9	3.5	0.4	0.00372	0.00369	0.00371	0.00064	5,423
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 8	4.0	6.0	96	37.8	34.1	3.7	5.8	5.2	0.6	0.00546	0.00545	0.00545	0.00094	5,542
			97	37.8	34.1	3.8	5.8	5.2	0.6	0.00546	0.00545	0.00545	0.00094	5,534
			98	37.8	34.1	3.7	5.8	5.2	0.6	0.00546	0.00544	0.00545	0.00094	5,541
			99	37.7	33.9	3.8	5.8	5.2	0.6	0.00546	0.00544	0.00545	0.00094	5,515
			100	37.7	33.9	3.7	5.8	5.2	0.6	0.00546	0.00544	0.00545	0.00094	5,518
	COLUMN AVERAGE			37.8	34.0	3.7	5.8	5.2	0.6	0.00546	0.00544	0.00545	0.00094	5,530
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	13
SEQUENCE 9	4.0	8.0	96	50.7	45.6	5.0	7.8	7.0	0.8	0.00703	0.00704	0.00704	0.00122	5,746
			97	50.9	45.8	5.0	7.8	7.0	0.8	0.00704	0.00705	0.00705	0.00122	5,766
			98	50.7	45.7	5.0	7.8	7.0	0.8	0.00704	0.00704	0.00704	0.00122	5,753
			99	50.7	45.6	5.0	7.8	7.0	0.8	0.00705	0.00704	0.00704	0.00122	5,744
			100	50.8	45.7	5.0	7.8	7.0	0.8	0.00704	0.00704	0.00704	0.00122	5,757
	COLUMN AVERAGE			50.7	45.7	5.0	7.8	7.0	0.8	0.00704	0.00704	0.00704	0.00122	5,753
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	9

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-23 Material Source: Boring B-23 (0-1ft.)

SEQUENCE 10	4.0	10.0	96	63.7	57.4	6.3	9.8	8.8	1.0	0.00881	0.00881	0.00881	0.00152	5,775
			97	63.5	57.2	6.2	9.7	8.8	1.0	0.00880	0.00880	0.00880	0.00152	5,763
			98	63.5	57.3	6.3	9.7	8.8	1.0	0.00880	0.00880	0.00880	0.00152	5,768
			99	63.6	57.4	6.2	9.8	8.8	1.0	0.00880	0.00879	0.00880	0.00152	5,786
			100	63.4	57.2	6.3	9.7	8.8	1.0	0.00880	0.00880	0.00880	0.00152	5,759
	COLUMN AVERAGE			63.5	57.3	6.2	9.7	8.8	1.0	0.00880	0.00880	0.00880	0.00152	5,770
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00001	0.00000	11
SEQUENCE 11	2.0	2.0	96	12.5	10.4	2.1	1.9	1.6	0.3	0.00254	0.00252	0.00253	0.00044	3,628
			97	12.5	10.3	2.2	1.9	1.6	0.3	0.00255	0.00252	0.00253	0.00044	3,607
			98	12.5	10.3	2.2	1.9	1.6	0.3	0.00255	0.00253	0.00254	0.00044	3,602
			99	12.6	10.4	2.2	1.9	1.6	0.3	0.00255	0.00252	0.00253	0.00044	3,641
			100	12.5	10.3	2.1	1.9	1.6	0.3	0.00255	0.00252	0.00253	0.00044	3,617
	COLUMN AVERAGE			12.5	10.3	2.2	1.9	1.6	0.3	0.00255	0.00252	0.00253	0.00044	3,619
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 12	2.0	4.0	96	22.7	20.3	2.4	3.5	3.1	0.4	0.00523	0.00518	0.00521	0.00090	3,451
			97	22.7	20.3	2.4	3.5	3.1	0.4	0.00523	0.00518	0.00520	0.00090	3,460
			98	22.8	20.3	2.4	3.5	3.1	0.4	0.00522	0.00517	0.00520	0.00090	3,466
			99	22.7	20.3	2.4	3.5	3.1	0.4	0.00523	0.00518	0.00521	0.00090	3,456
			100	22.9	20.4	2.5	3.5	3.1	0.4	0.00523	0.00518	0.00520	0.00090	3,478
	COLUMN AVERAGE			22.8	20.3	2.4	3.5	3.1	0.4	0.00523	0.00518	0.00520	0.00090	3,462
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 13	2.0	6.0	96	34.6	30.8	3.7	5.3	4.7	0.6	0.00758	0.00753	0.00755	0.00131	3,616
			97	34.6	30.9	3.7	5.3	4.7	0.6	0.00758	0.00754	0.00756	0.00131	3,624
			98	34.9	31.2	3.7	5.3	4.8	0.6	0.00757	0.00753	0.00755	0.00131	3,656
			99	34.7	31.0	3.7	5.3	4.8	0.6	0.00757	0.00754	0.00755	0.00131	3,634
			100	34.8	31.1	3.7	5.3	4.8	0.6	0.00757	0.00752	0.00755	0.00131	3,654
	COLUMN AVERAGE			34.7	31.0	3.7	5.3	4.8	0.6	0.00758	0.00753	0.00755	0.00131	3,637
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	18

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-23 Material Source: Boring B-23 (0-1ft.)

SEQUENCE 14	2.0	8.0	96	48.3	43.3	4.9	7.4	6.6	0.8	0.01000	0.00996	0.00998	0.00173	3,849
			97	48.2	43.3	4.9	7.4	6.6	0.8	0.00999	0.00998	0.00998	0.00173	3,849
			98	48.4	43.5	4.9	7.4	6.7	0.8	0.00998	0.00997	0.00998	0.00173	3,865
			99	48.4	43.4	4.9	7.4	6.7	0.8	0.00999	0.00995	0.00997	0.00173	3,861
			100	48.3	43.3	4.9	7.4	6.6	0.8	0.00998	0.00996	0.00997	0.00173	3,853
	COLUMN AVERAGE			48.3	43.4	4.9	7.4	6.7	0.8	0.00999	0.00996	0.00998	0.00173	3,855
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	7
SEQUENCE 15	2.0	10.0	96	60.5	54.3	6.2	9.3	8.3	1.0	0.01228	0.01228	0.01228	0.00212	3,918
			97	60.4	54.2	6.2	9.3	8.3	1.0	0.01227	0.01227	0.01227	0.00212	3,915
			98	60.4	54.2	6.2	9.3	8.3	1.0	0.01227	0.01227	0.01227	0.00212	3,916
			99	60.5	54.3	6.2	9.3	8.3	1.0	0.01227	0.01227	0.01227	0.00212	3,919
			100	60.4	54.2	6.2	9.3	8.3	1.0	0.01226	0.01226	0.01226	0.00212	3,921
	COLUMN AVERAGE			60.4	54.2	6.2	9.3	8.3	1.0	0.01227	0.01227	0.01227	0.00212	3,918
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00001	0.00000	2

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

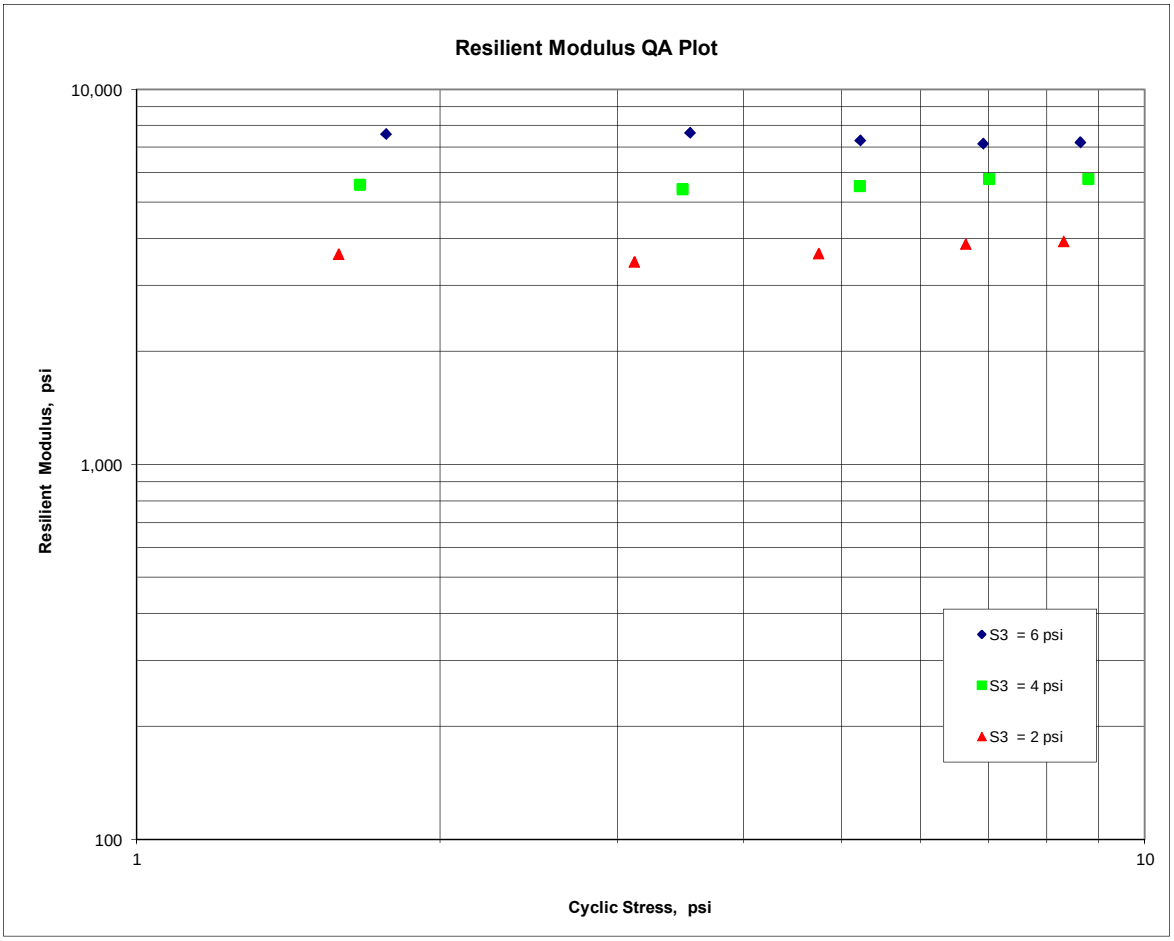
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-23 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 13.8% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	2,334
K2 =	0.01505
K5 =	0.62500
R^2 =	0.99

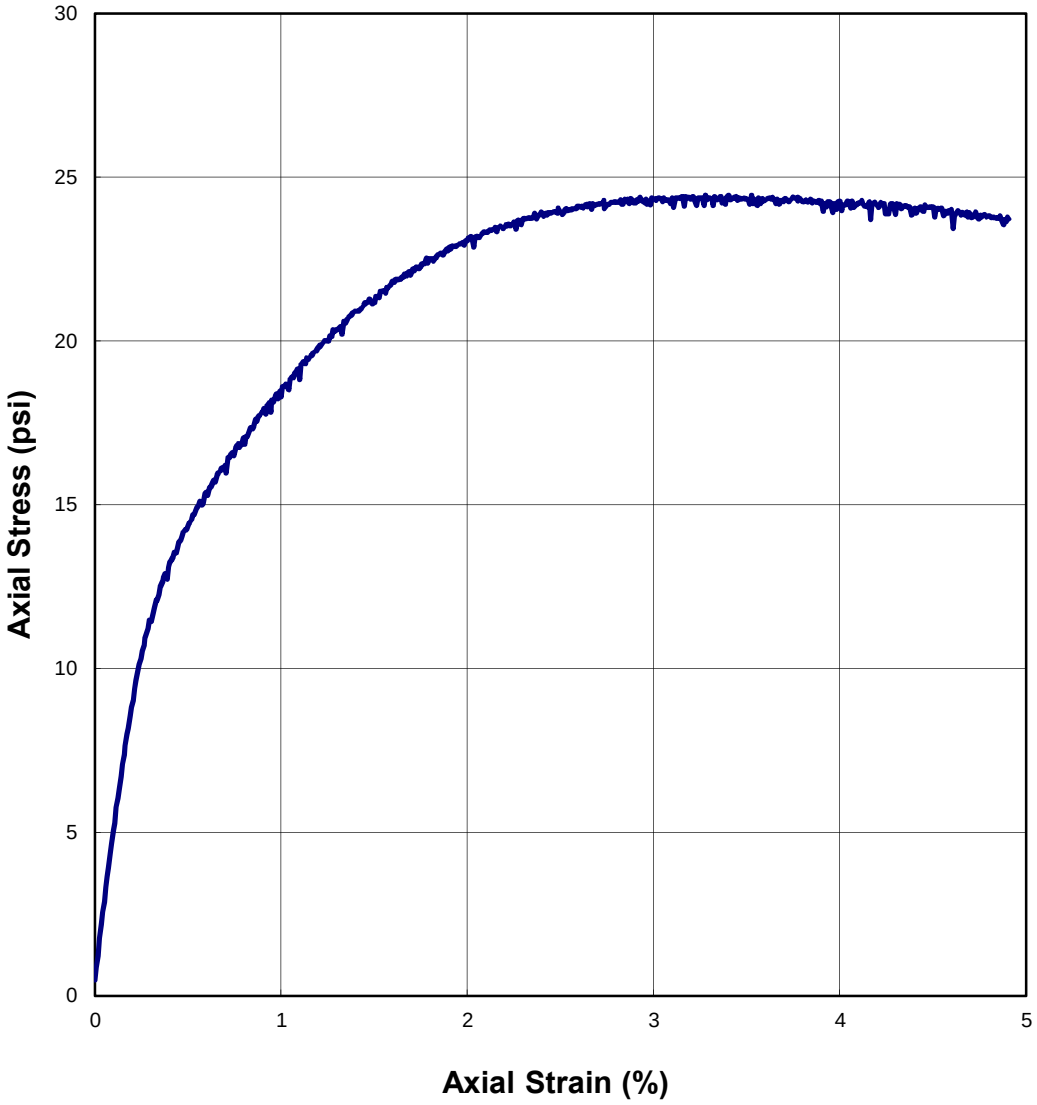


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-23 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 13.8% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-28-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-31

SOURCE OF MATERIAL: Boring B-31 (0-1ft.)

1.	*SAMPLING DATE:*	5/21/2013
2.	*SAMPLE NUMBER:*	B-31
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.70
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.0
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1236.00
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1236.00
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	8.7
	MAX. DRY DENSITY, pcf	123.9
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	8.7
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	8.6
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	117.1
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	8.7
	COMPACTION LEVEL ACHIEVED	94.5%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	38
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-31-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-31 (0-1ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 8.7% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-31-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.3	11.9	1.4	2.1	1.8	0.2	0.00084	0.00091	0.00087	0.00015	11,963
			97	13.3	12.0	1.4	2.1	1.8	0.2	0.00084	0.00090	0.00087	0.00015	12,064
			98	13.3	12.0	1.4	2.1	1.8	0.2	0.00084	0.00090	0.00087	0.00015	12,082
			99	13.4	12.0	1.4	2.1	1.8	0.2	0.00084	0.00090	0.00087	0.00015	12,023
			100	13.3	11.9	1.4	2.1	1.8	0.2	0.00084	0.00090	0.00087	0.00015	11,969
	COLUMN AVERAGE			13.3	11.9	1.4	2.1	1.8	0.2	0.00084	0.00090	0.00087	0.00015	12,020
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	54

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-31 Material Source: Boring B-31 (0-1ft.)

SEQUENCE 2	6.0	4.0	96	26.2	23.7	2.5	4.0	3.7	0.4	0.00163	0.00176	0.00170	0.00030	12,273
			97	26.3	23.8	2.5	4.0	3.7	0.4	0.00163	0.00176	0.00170	0.00030	12,318
			98	26.2	23.8	2.5	4.0	3.7	0.4	0.00163	0.00176	0.00169	0.00030	12,332
			99	26.3	23.8	2.5	4.0	3.7	0.4	0.00162	0.00176	0.00169	0.00030	12,332
			100	26.2	23.7	2.4	4.0	3.7	0.4	0.00162	0.00176	0.00169	0.00030	12,335
	COLUMN AVERAGE			26.2	23.8	2.5	4.0	3.7	0.4	0.00163	0.00176	0.00169	0.00030	12,318
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	26
SEQUENCE 3	6.0	6.0	96	39.2	35.5	3.7	6.0	5.5	0.6	0.00245	0.00261	0.00253	0.00044	12,316
			97	39.2	35.4	3.7	6.0	5.5	0.6	0.00245	0.00260	0.00253	0.00044	12,303
			98	39.2	35.4	3.7	6.0	5.5	0.6	0.00244	0.00261	0.00253	0.00044	12,300
			99	39.3	35.5	3.7	6.0	5.5	0.6	0.00244	0.00261	0.00252	0.00044	12,355
			100	39.2	35.5	3.8	6.0	5.5	0.6	0.00244	0.00261	0.00253	0.00044	12,311
	COLUMN AVERAGE			39.2	35.5	3.7	6.0	5.5	0.6	0.00244	0.00261	0.00253	0.00044	12,317
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	22
SEQUENCE 4	6.0	8.0	96	52.3	47.3	5.0	8.1	7.3	0.8	0.00320	0.00338	0.00329	0.00058	12,625
			97	52.4	47.4	5.0	8.1	7.3	0.8	0.00320	0.00337	0.00329	0.00058	12,658
			98	52.3	47.3	5.0	8.1	7.3	0.8	0.00320	0.00338	0.00329	0.00058	12,625
			99	52.4	47.4	5.0	8.1	7.3	0.8	0.00320	0.00338	0.00329	0.00058	12,643
			100	52.4	47.3	5.0	8.1	7.3	0.8	0.00321	0.00337	0.00329	0.00058	12,620
	COLUMN AVERAGE			52.4	47.3	5.0	8.1	7.3	0.8	0.00320	0.00337	0.00329	0.00058	12,634
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	16
SEQUENCE 5	6.0	10.0	96	65.7	59.3	6.3	10.1	9.1	1.0	0.00387	0.00404	0.00396	0.00069	13,160
			97	65.7	59.3	6.3	10.1	9.1	1.0	0.00388	0.00404	0.00396	0.00069	13,156
			98	65.7	59.3	6.3	10.1	9.1	1.0	0.00387	0.00403	0.00395	0.00069	13,163
			99	65.7	59.4	6.3	10.1	9.1	1.0	0.00387	0.00403	0.00395	0.00069	13,192
			100	65.7	59.3	6.3	10.1	9.1	1.0	0.00388	0.00402	0.00395	0.00069	13,170
	COLUMN AVERAGE			65.7	59.3	6.3	10.1	9.1	1.0	0.00387	0.00403	0.00395	0.00069	13,168
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	14

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-31 Material Source: Boring B-31 (0-1ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.8	2.1	1.8	0.3	0.00097	0.00102	0.00100	0.00018	10,256
			97	13.6	11.8	1.8	2.1	1.8	0.3	0.00097	0.00103	0.00100	0.00018	10,368
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00097	0.00103	0.00100	0.00018	10,298
			99	13.5	11.7	1.8	2.1	1.8	0.3	0.00097	0.00103	0.00100	0.00018	10,237
			100	13.5	11.8	1.8	2.1	1.8	0.3	0.00097	0.00103	0.00100	0.00018	10,332
	COLUMN AVERAGE			13.5	11.7	1.8	2.1	1.8	0.3	0.00097	0.00103	0.00100	0.00018	10,298
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	54
SEQUENCE 7	4.0	4.0	96	25.8	23.4	2.5	4.0	3.6	0.4	0.00195	0.00207	0.00201	0.00035	10,203
			97	25.8	23.3	2.5	4.0	3.6	0.4	0.00195	0.00207	0.00201	0.00035	10,191
			98	25.9	23.4	2.5	4.0	3.6	0.4	0.00195	0.00207	0.00201	0.00035	10,221
			99	25.8	23.3	2.4	4.0	3.6	0.4	0.00195	0.00207	0.00201	0.00035	10,185
			100	25.8	23.3	2.5	4.0	3.6	0.4	0.00194	0.00207	0.00201	0.00035	10,190
	COLUMN AVERAGE			25.8	23.4	2.5	4.0	3.6	0.4	0.00195	0.00207	0.00201	0.00035	10,198
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	14
SEQUENCE 8	4.0	6.0	96	38.9	35.2	3.7	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,500
			97	38.9	35.1	3.8	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,479
			98	38.9	35.2	3.7	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,514
			99	38.8	35.1	3.7	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,474
			100	38.9	35.2	3.7	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,494
	COLUMN AVERAGE			38.9	35.2	3.7	6.0	5.4	0.6	0.00284	0.00304	0.00294	0.00052	10,492
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 9	4.0	8.0	96	52.2	47.1	5.0	8.0	7.3	0.8	0.00364	0.00387	0.00376	0.00066	11,004
			97	52.2	47.1	5.0	8.0	7.3	0.8	0.00364	0.00388	0.00376	0.00066	10,996
			98	52.1	47.1	5.0	8.0	7.3	0.8	0.00364	0.00387	0.00376	0.00066	11,005
			99	52.2	47.2	5.0	8.0	7.3	0.8	0.00365	0.00387	0.00376	0.00066	11,009
			100	52.2	47.1	5.0	8.0	7.3	0.8	0.00365	0.00386	0.00375	0.00066	11,014
	COLUMN AVERAGE			52.2	47.1	5.0	8.0	7.3	0.8	0.00365	0.00387	0.00376	0.00066	11,006
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-31 Material Source: Boring B-31 (0-1ft.)

SEQUENCE 10	4.0	10.0	96	65.5	59.2	6.3	10.1	9.1	1.0	0.00438	0.00458	0.00448	0.00079	11,585
			97	65.3	59.0	6.3	10.1	9.1	1.0	0.00439	0.00458	0.00448	0.00079	11,551
			98	65.4	59.0	6.3	10.1	9.1	1.0	0.00439	0.00458	0.00448	0.00079	11,558
			99	65.4	59.1	6.3	10.1	9.1	1.0	0.00439	0.00456	0.00448	0.00079	11,584
			100	65.4	59.1	6.3	10.1	9.1	1.0	0.00439	0.00458	0.00448	0.00079	11,572
	COLUMN AVERAGE			65.4	59.1	6.3	10.1	9.1	1.0	0.00439	0.00457	0.00448	0.00079	11,570
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	15
SEQUENCE 11	2.0	2.0	96	13.5	11.3	2.2	2.1	1.7	0.3	0.00120	0.00124	0.00122	0.00021	8,152
			97	13.5	11.3	2.2	2.1	1.7	0.3	0.00120	0.00124	0.00122	0.00021	8,124
			98	13.4	11.2	2.2	2.1	1.7	0.3	0.00119	0.00125	0.00122	0.00021	8,076
			99	13.5	11.3	2.2	2.1	1.7	0.3	0.00119	0.00124	0.00122	0.00021	8,186
			100	13.5	11.4	2.2	2.1	1.8	0.3	0.00119	0.00124	0.00122	0.00021	8,200
	COLUMN AVERAGE			13.5	11.3	2.2	2.1	1.7	0.3	0.00119	0.00124	0.00122	0.00021	8,148
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	50
SEQUENCE 12	2.0	4.0	96	25.1	22.6	2.5	3.9	3.5	0.4	0.00247	0.00256	0.00252	0.00044	7,878
			97	25.0	22.6	2.5	3.9	3.5	0.4	0.00247	0.00257	0.00252	0.00044	7,866
			98	25.1	22.6	2.5	3.9	3.5	0.4	0.00247	0.00256	0.00252	0.00044	7,895
			99	25.1	22.6	2.4	3.9	3.5	0.4	0.00246	0.00257	0.00252	0.00044	7,896
			100	25.0	22.6	2.5	3.9	3.5	0.4	0.00246	0.00257	0.00251	0.00044	7,881
	COLUMN AVERAGE			25.1	22.6	2.5	3.9	3.5	0.4	0.00247	0.00256	0.00251	0.00044	7,883
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 13	2.0	6.0	96	38.0	34.3	3.8	5.9	5.3	0.6	0.00354	0.00369	0.00361	0.00063	8,323
			97	38.0	34.3	3.7	5.9	5.3	0.6	0.00354	0.00369	0.00361	0.00063	8,322
			98	38.0	34.3	3.7	5.9	5.3	0.6	0.00353	0.00368	0.00361	0.00063	8,343
			99	38.1	34.4	3.7	5.9	5.3	0.6	0.00353	0.00368	0.00361	0.00063	8,361
			100	38.0	34.3	3.7	5.8	5.3	0.6	0.00354	0.00368	0.00361	0.00063	8,328
	COLUMN AVERAGE			38.0	34.3	3.7	5.9	5.3	0.6	0.00354	0.00368	0.00361	0.00063	8,335
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-31 Material Source: Boring B-31 (0-1ft.)

SEQUENCE 14	2.0	8.0	96	51.2	46.2	5.0	7.9	7.1	0.8	0.00443	0.00458	0.00450	0.00079	9,008
			97	51.2	46.2	5.0	7.9	7.1	0.8	0.00442	0.00457	0.00450	0.00079	9,016
			98	51.3	46.3	5.0	7.9	7.1	0.8	0.00442	0.00457	0.00450	0.00079	9,036
			99	51.2	46.2	5.1	7.9	7.1	0.8	0.00441	0.00458	0.00450	0.00079	9,012
			100	51.3	46.2	5.0	7.9	7.1	0.8	0.00441	0.00458	0.00450	0.00079	9,023
	COLUMN AVERAGE			51.3	46.2	5.0	7.9	7.1	0.8	0.00442	0.00458	0.00450	0.00079	9,019
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	11
SEQUENCE 15	2.0	10.0	96	64.5	58.2	6.4	9.9	9.0	1.0	0.00523	0.00536	0.00530	0.00093	9,640
			97	64.6	58.3	6.3	10.0	9.0	1.0	0.00523	0.00537	0.00530	0.00093	9,655
			98	64.5	58.1	6.4	9.9	9.0	1.0	0.00522	0.00536	0.00529	0.00093	9,639
			99	64.7	58.4	6.3	10.0	9.0	1.0	0.00523	0.00537	0.00530	0.00093	9,662
			100	64.5	58.2	6.3	9.9	9.0	1.0	0.00523	0.00536	0.00530	0.00093	9,642
	COLUMN AVERAGE			64.6	58.2	6.3	9.9	9.0	1.0	0.00523	0.00536	0.00530	0.00093	9,648
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

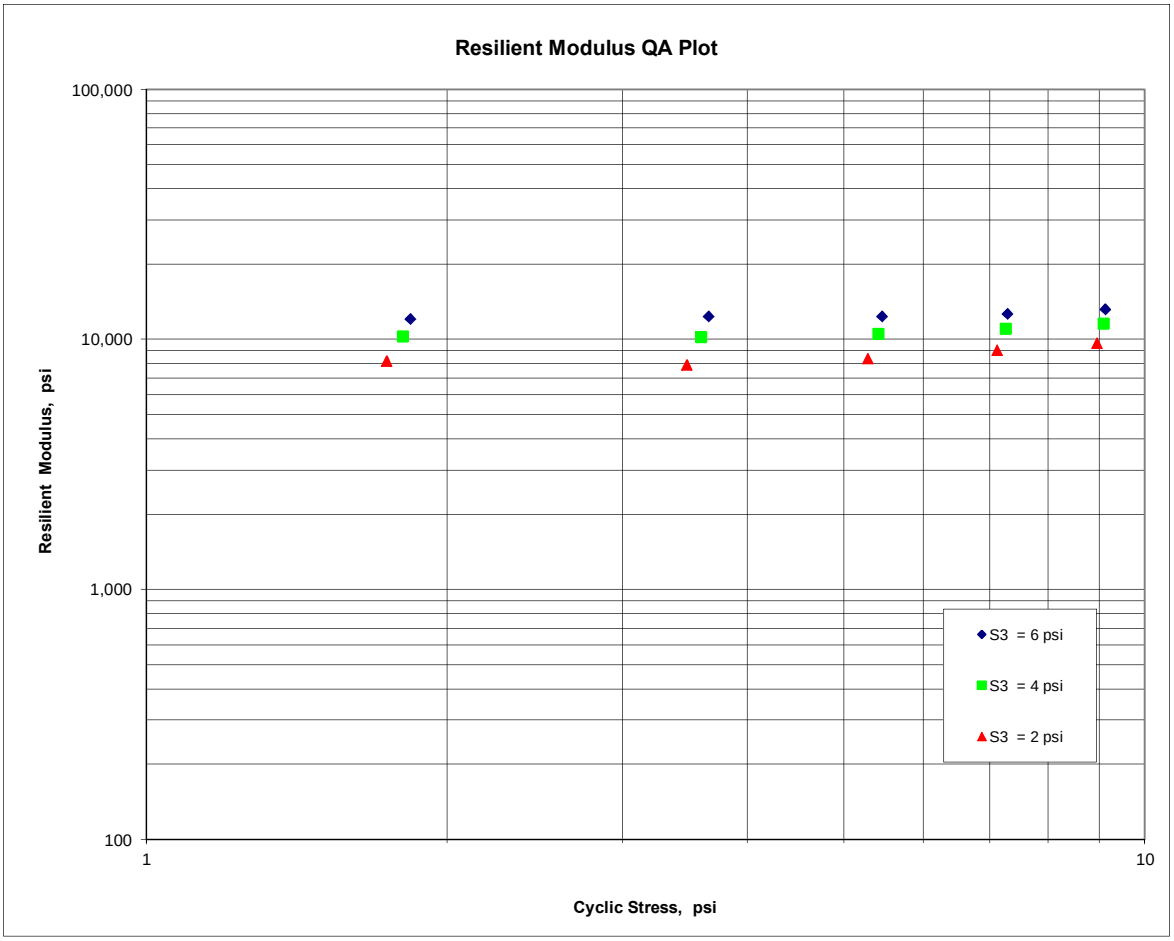
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-31 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 8.7% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	6,060
K2 =	0.07294
K5 =	0.33621
R^2 =	0.96

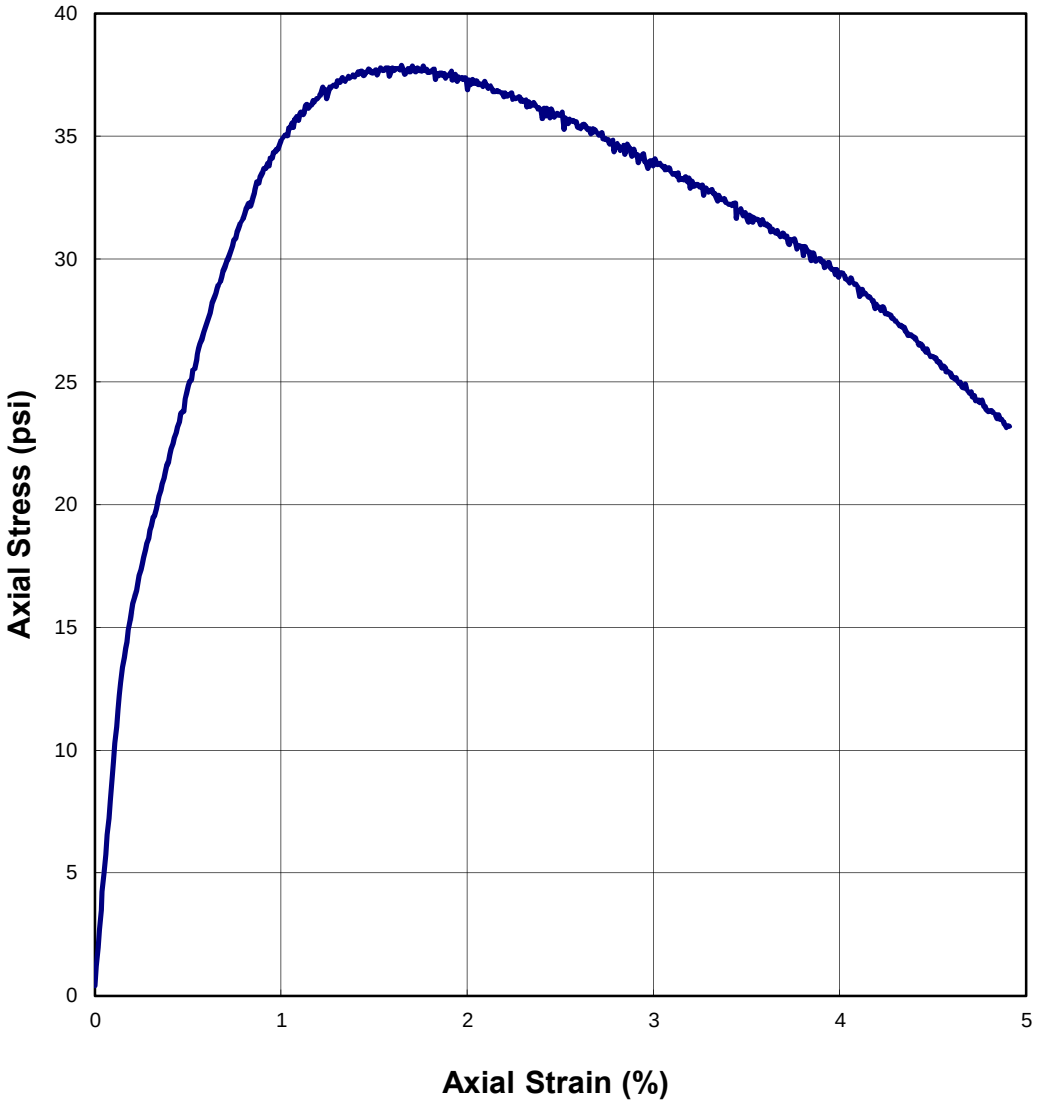


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-31 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 8.7% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-35

SOURCE OF MATERIAL: Boring B-35 (0-1ft.)

1.	*SAMPLING DATE:*	5/7/2013
2.	*SAMPLE NUMBER:*	B-35
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.75
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.4
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1167.63
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1167.63
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	12.3
	MAX. DRY DENSITY, pcf	112.4
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	12.3
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	12.3
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	105.9
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	12.3
	COMPACTION LEVEL ACHIEVED	94.2%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	22
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-35 (0-1ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 12.3% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	___._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.3	11.9	1.4	2.0	1.8	0.2	0.00117	0.00124	0.00120	0.00021	8,697
			97	13.3	11.9	1.4	2.0	1.8	0.2	0.00118	0.00123	0.00120	0.00021	8,707
			98	13.3	11.9	1.4	2.0	1.8	0.2	0.00117	0.00124	0.00121	0.00021	8,665
			99	13.2	11.8	1.4	2.0	1.8	0.2	0.00118	0.00124	0.00121	0.00021	8,668
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00118	0.00123	0.00120	0.00021	8,727
	COLUMN AVERAGE			13.3	11.9	1.4	2.0	1.8	0.2	0.00118	0.00123	0.00121	0.00021	8,693
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	26

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (0-1ft.)

SEQUENCE 2	6.0	4.0	96	26.2	23.8	2.5	4.0	3.7	0.4	0.00230	0.00239	0.00234	0.00041	8,966
			97	26.2	23.7	2.5	4.0	3.6	0.4	0.00229	0.00238	0.00233	0.00041	8,969
			98	26.3	23.8	2.5	4.0	3.7	0.4	0.00229	0.00238	0.00234	0.00041	8,997
			99	26.2	23.7	2.5	4.0	3.6	0.4	0.00229	0.00238	0.00233	0.00041	8,960
			100	26.2	23.8	2.5	4.0	3.6	0.4	0.00229	0.00238	0.00234	0.00041	8,961
	COLUMN AVERAGE			26.2	23.8	2.5	4.0	3.6	0.4	0.00229	0.00238	0.00234	0.00041	8,970
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	15
SEQUENCE 3	6.0	6.0	96	39.2	35.5	3.8	6.0	5.4	0.6	0.00340	0.00352	0.00346	0.00060	9,043
			97	39.3	35.5	3.8	6.0	5.5	0.6	0.00340	0.00352	0.00346	0.00060	9,055
			98	39.4	35.6	3.7	6.0	5.5	0.6	0.00340	0.00352	0.00346	0.00060	9,091
			99	39.3	35.5	3.7	6.0	5.5	0.6	0.00340	0.00353	0.00346	0.00060	9,053
			100	39.2	35.5	3.7	6.0	5.5	0.6	0.00340	0.00353	0.00346	0.00060	9,046
	COLUMN AVERAGE			39.3	35.5	3.8	6.0	5.5	0.6	0.00340	0.00352	0.00346	0.00060	9,057
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	19
SEQUENCE 4	6.0	8.0	96	52.5	47.4	5.1	8.1	7.3	0.8	0.00440	0.00455	0.00447	0.00078	9,357
			97	52.4	47.3	5.1	8.1	7.3	0.8	0.00440	0.00455	0.00447	0.00078	9,342
			98	52.5	47.4	5.1	8.1	7.3	0.8	0.00440	0.00455	0.00447	0.00078	9,350
			99	52.5	47.4	5.0	8.1	7.3	0.8	0.00440	0.00453	0.00447	0.00078	9,366
			100	52.5	47.4	5.1	8.1	7.3	0.8	0.00440	0.00454	0.00447	0.00078	9,356
	COLUMN AVERAGE			52.5	47.4	5.1	8.1	7.3	0.8	0.00440	0.00454	0.00447	0.00078	9,354
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	9
SEQUENCE 5	6.0	10.0	96	65.6	59.3	6.4	10.1	9.1	1.0	0.00528	0.00544	0.00536	0.00093	9,758
			97	65.7	59.3	6.4	10.1	9.1	1.0	0.00528	0.00544	0.00536	0.00093	9,758
			98	65.6	59.2	6.3	10.1	9.1	1.0	0.00527	0.00544	0.00535	0.00093	9,767
			99	65.6	59.3	6.4	10.1	9.1	1.0	0.00526	0.00544	0.00535	0.00093	9,769
			100	65.8	59.4	6.4	10.1	9.1	1.0	0.00527	0.00545	0.00536	0.00093	9,785
	COLUMN AVERAGE			65.7	59.3	6.4	10.1	9.1	1.0	0.00527	0.00544	0.00536	0.00093	9,768
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	11

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (0-1ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.8	2.1	1.8	0.3	0.00145	0.00149	0.00147	0.00026	7,026
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00146	0.00149	0.00147	0.00026	6,971
			98	13.3	11.6	1.8	2.0	1.8	0.3	0.00145	0.00149	0.00147	0.00026	6,941
			99	13.4	11.6	1.8	2.1	1.8	0.3	0.00145	0.00149	0.00147	0.00026	6,966
			100	13.4	11.6	1.8	2.1	1.8	0.3	0.00145	0.00150	0.00147	0.00026	6,952
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00145	0.00149	0.00147	0.00026	6,971
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	33
SEQUENCE 7	4.0	4.0	96	25.8	23.3	2.5	4.0	3.6	0.4	0.00288	0.00294	0.00291	0.00051	7,078
			97	25.8	23.3	2.4	4.0	3.6	0.4	0.00287	0.00294	0.00291	0.00051	7,088
			98	25.8	23.3	2.5	4.0	3.6	0.4	0.00288	0.00294	0.00291	0.00051	7,084
			99	25.8	23.3	2.5	4.0	3.6	0.4	0.00288	0.00294	0.00291	0.00051	7,075
			100	25.7	23.2	2.5	3.9	3.6	0.4	0.00287	0.00294	0.00290	0.00051	7,060
	COLUMN AVERAGE			25.8	23.3	2.5	4.0	3.6	0.4	0.00288	0.00294	0.00291	0.00051	7,077
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 8	4.0	6.0	96	39.0	35.2	3.7	6.0	5.4	0.6	0.00410	0.00420	0.00415	0.00072	7,493
			97	38.9	35.2	3.7	6.0	5.4	0.6	0.00410	0.00421	0.00416	0.00072	7,466
			98	39.0	35.3	3.8	6.0	5.4	0.6	0.00411	0.00421	0.00416	0.00072	7,479
			99	38.9	35.2	3.7	6.0	5.4	0.6	0.00411	0.00422	0.00416	0.00072	7,462
			100	39.0	35.3	3.7	6.0	5.4	0.6	0.00411	0.00420	0.00416	0.00072	7,484
	COLUMN AVERAGE			39.0	35.2	3.8	6.0	5.4	0.6	0.00411	0.00421	0.00416	0.00072	7,477
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	13
SEQUENCE 9	4.0	8.0	96	52.2	47.2	5.1	8.0	7.2	0.8	0.00513	0.00529	0.00521	0.00091	7,987
			97	52.2	47.2	5.1	8.0	7.2	0.8	0.00513	0.00529	0.00521	0.00091	7,993
			98	52.2	47.2	5.1	8.0	7.2	0.8	0.00513	0.00529	0.00521	0.00091	7,992
			99	52.2	47.2	5.1	8.0	7.2	0.8	0.00514	0.00529	0.00521	0.00091	7,985
			100	52.2	47.1	5.1	8.0	7.2	0.8	0.00514	0.00528	0.00521	0.00091	7,978
	COLUMN AVERAGE			52.2	47.2	5.1	8.0	7.2	0.8	0.00513	0.00529	0.00521	0.00091	7,987
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (0-1ft.)

SEQUENCE 10	4.0	10.0	96	65.2	58.8	6.4	10.0	9.0	1.0	0.00617	0.00633	0.00625	0.00109	8,301
			97	65.2	58.8	6.4	10.0	9.0	1.0	0.00617	0.00632	0.00625	0.00109	8,308
			98	65.3	59.0	6.4	10.0	9.1	1.0	0.00617	0.00633	0.00625	0.00109	8,329
			99	65.1	58.7	6.4	10.0	9.0	1.0	0.00616	0.00633	0.00624	0.00109	8,301
			100	65.1	58.7	6.4	10.0	9.0	1.0	0.00617	0.00632	0.00625	0.00109	8,296
	COLUMN AVERAGE			65.2	58.8	6.4	10.0	9.0	1.0	0.00617	0.00633	0.00625	0.00109	8,307
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	13
SEQUENCE 11	2.0	2.0	96	13.0	10.8	2.2	2.0	1.7	0.3	0.00199	0.00202	0.00200	0.00035	4,768
			97	13.0	10.8	2.2	2.0	1.7	0.3	0.00200	0.00201	0.00201	0.00035	4,758
			98	13.0	10.8	2.1	2.0	1.7	0.3	0.00200	0.00201	0.00201	0.00035	4,772
			99	13.0	10.9	2.2	2.0	1.7	0.3	0.00200	0.00202	0.00201	0.00035	4,770
			100	13.1	10.9	2.2	2.0	1.7	0.3	0.00200	0.00201	0.00201	0.00035	4,801
	COLUMN AVERAGE			13.0	10.9	2.2	2.0	1.7	0.3	0.00200	0.00202	0.00201	0.00035	4,774
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 12	2.0	4.0	96	24.3	21.8	2.5	3.7	3.4	0.4	0.00395	0.00401	0.00398	0.00069	4,845
			97	24.4	22.0	2.5	3.7	3.4	0.4	0.00395	0.00402	0.00398	0.00069	4,864
			98	24.3	21.9	2.5	3.7	3.4	0.4	0.00396	0.00401	0.00398	0.00069	4,842
			99	24.3	21.8	2.5	3.7	3.4	0.4	0.00395	0.00401	0.00398	0.00069	4,839
			100	24.3	21.8	2.5	3.7	3.4	0.4	0.00397	0.00400	0.00398	0.00069	4,838
	COLUMN AVERAGE			24.3	21.9	2.5	3.7	3.4	0.4	0.00396	0.00401	0.00398	0.00069	4,845
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	11
SEQUENCE 13	2.0	6.0	96	37.2	33.4	3.8	5.7	5.1	0.6	0.00543	0.00553	0.00548	0.00095	5,384
			97	37.2	33.4	3.8	5.7	5.1	0.6	0.00542	0.00554	0.00548	0.00095	5,382
			98	37.3	33.5	3.8	5.7	5.1	0.6	0.00541	0.00554	0.00547	0.00095	5,400
			99	37.2	33.4	3.8	5.7	5.1	0.6	0.00542	0.00554	0.00548	0.00095	5,381
			100	37.2	33.4	3.8	5.7	5.1	0.6	0.00541	0.00554	0.00548	0.00095	5,390
	COLUMN AVERAGE			37.2	33.4	3.8	5.7	5.1	0.6	0.00542	0.00554	0.00548	0.00095	5,387
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	8

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (0-1ft.)

SEQUENCE 14	2.0	8.0	96	50.1	45.1	5.1	7.7	6.9	0.8	0.00674	0.00687	0.00681	0.00118	5,844
			97	50.2	45.2	5.1	7.7	6.9	0.8	0.00675	0.00688	0.00681	0.00119	5,848
			98	50.2	45.2	5.1	7.7	6.9	0.8	0.00674	0.00688	0.00681	0.00119	5,851
			99	50.1	45.1	5.1	7.7	6.9	0.8	0.00674	0.00687	0.00680	0.00118	5,846
			100	50.3	45.3	5.1	7.7	7.0	0.8	0.00674	0.00689	0.00681	0.00119	5,864
	COLUMN AVERAGE			50.2	45.1	5.1	7.7	6.9	0.8	0.00674	0.00688	0.00681	0.00119	5,851
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	8
SEQUENCE 15	2.0	10.0	96	63.1	56.8	6.3	9.7	8.7	1.0	0.00824	0.00835	0.00829	0.00144	6,045
			97	63.4	57.1	6.3	9.7	8.8	1.0	0.00822	0.00835	0.00828	0.00144	6,082
			98	63.3	57.0	6.3	9.7	8.8	1.0	0.00823	0.00833	0.00828	0.00144	6,075
			99	63.4	57.1	6.3	9.7	8.8	1.0	0.00822	0.00832	0.00827	0.00144	6,086
			100	63.4	57.1	6.3	9.7	8.8	1.0	0.00821	0.00832	0.00827	0.00144	6,096
	COLUMN AVERAGE			63.3	57.0	6.3	9.7	8.8	1.0	0.00822	0.00833	0.00828	0.00144	6,077
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00001	0.00000	19

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

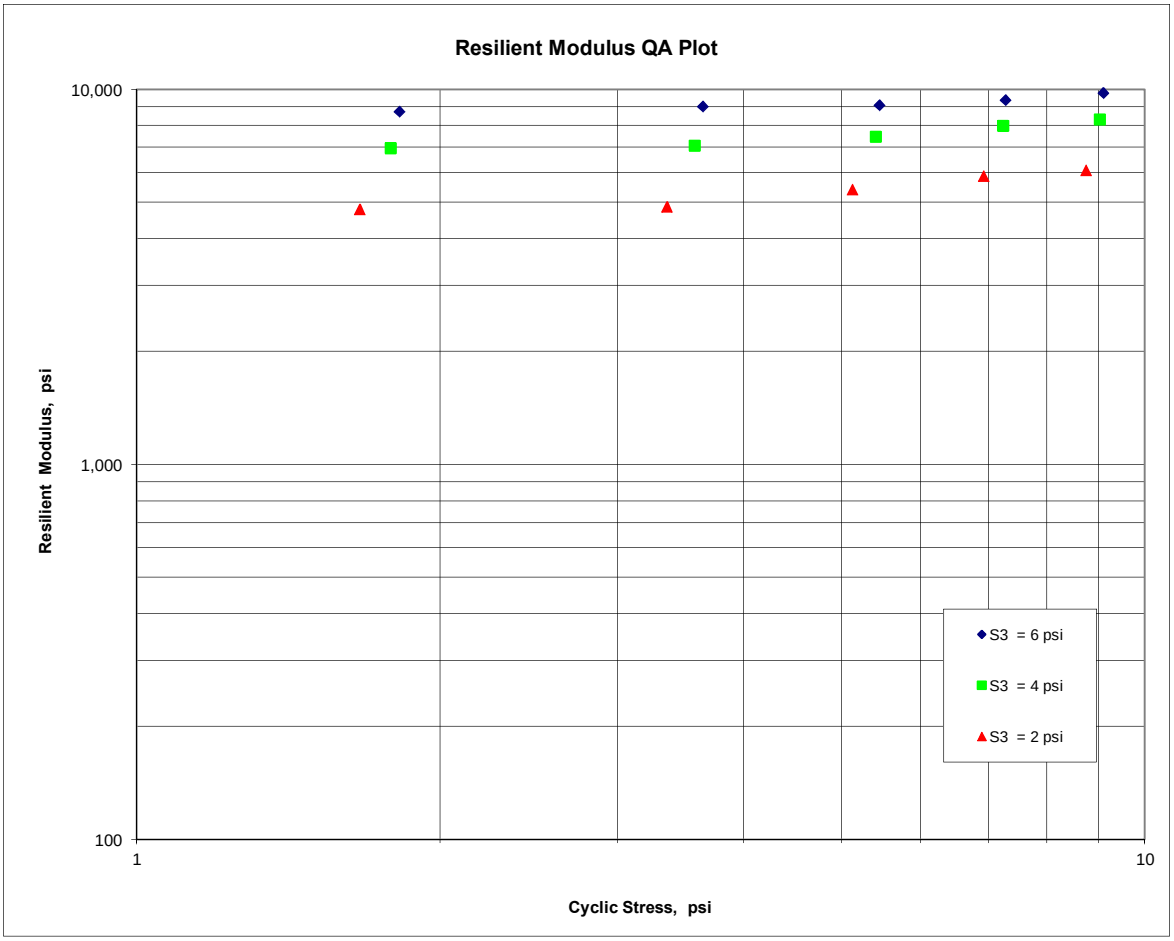
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-35 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 12.3% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	3,256
K2 =	0.11093
K5 =	0.48155
R^2 =	0.98

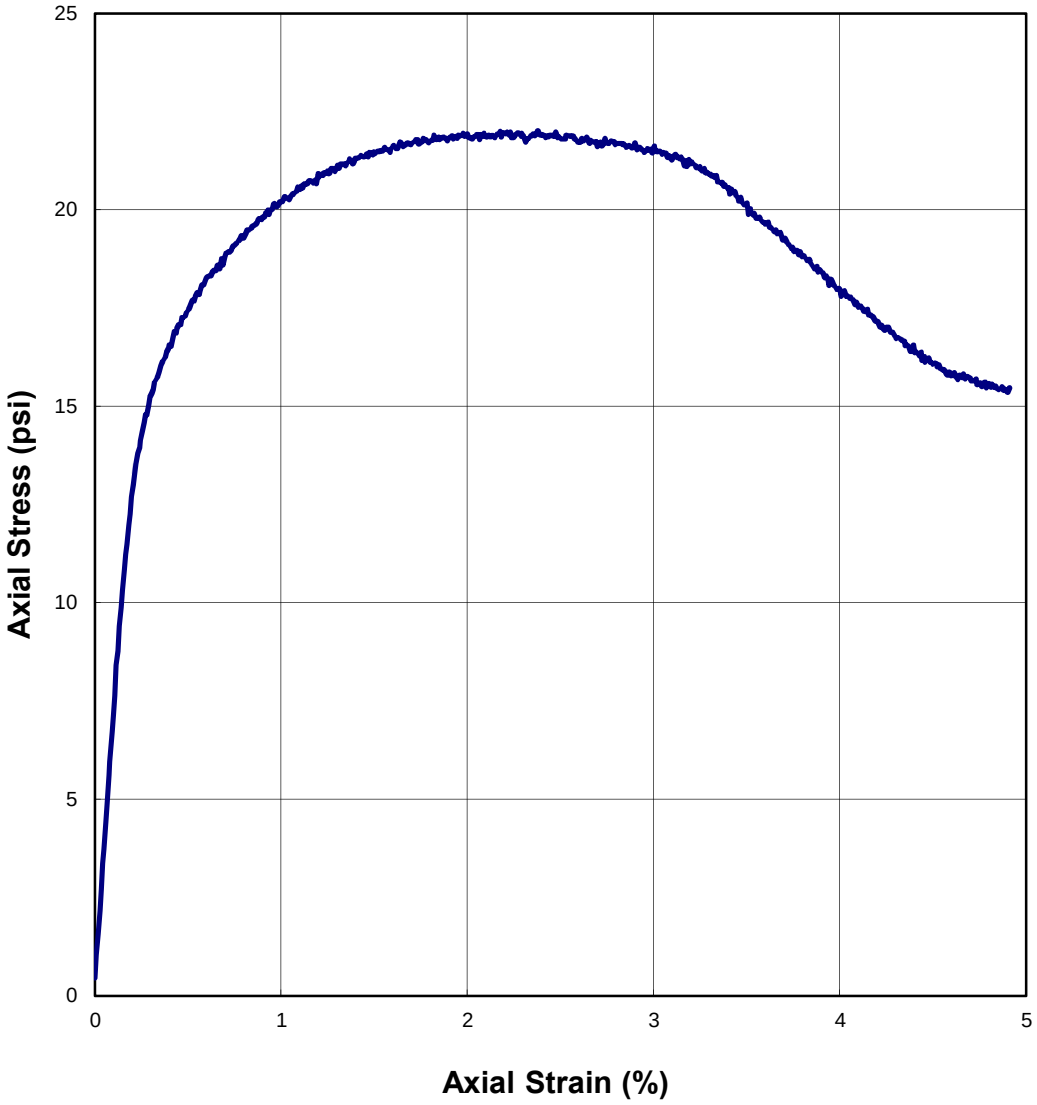


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-35 (0-1ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 12.3% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia
PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004
DATE RECEIVED: 05-15-2013
QUANTITY (REPRESENTED): N.A.
IDENTIFICATION MARKS: B-35
SOURCE OF MATERIAL: Boring B-35 (1-2ft.)

1.	*SAMPLING DATE:*	5/2/2013
2.	*SAMPLE NUMBER:*	B-35
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.69
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.0
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1156.57
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1156.57
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	9.7
	MAX. DRY DENSITY, pcf	114.3
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	9.7
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	9.4
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	108.7
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	9.7
	COMPACTION LEVEL ACHIEVED	95.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	23
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-20-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-35 (1-2ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 9.7% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-20-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	__._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.1	11.7	1.4	2.0	1.8	0.2	0.00111	0.00117	0.00114	0.00020	8,954
			97	13.1	11.7	1.4	2.0	1.8	0.2	0.00111	0.00116	0.00114	0.00020	8,970
			98	13.1	11.7	1.4	2.0	1.8	0.2	0.00112	0.00116	0.00114	0.00020	8,986
			99	13.0	11.6	1.4	2.0	1.8	0.2	0.00112	0.00115	0.00114	0.00020	8,968
			100	13.0	11.7	1.4	2.0	1.8	0.2	0.00112	0.00115	0.00113	0.00020	9,019
	COLUMN AVERAGE			13.1	11.7	1.4	2.0	1.8	0.2	0.00112	0.00116	0.00114	0.00020	8,979
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	25

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (1-2ft.)

SEQUENCE 2	6.0	4.0	96	25.9	23.5	2.4	4.0	3.6	0.4	0.00215	0.00226	0.00220	0.00039	9,342
			97	25.9	23.5	2.5	4.0	3.6	0.4	0.00215	0.00225	0.00220	0.00039	9,333
			98	26.0	23.5	2.4	4.0	3.6	0.4	0.00216	0.00224	0.00220	0.00039	9,371
			99	25.9	23.5	2.4	4.0	3.6	0.4	0.00216	0.00224	0.00220	0.00039	9,349
			100	26.0	23.5	2.5	4.0	3.6	0.4	0.00215	0.00224	0.00220	0.00039	9,370
	COLUMN AVERAGE			26.0	23.5	2.4	4.0	3.6	0.4	0.00215	0.00225	0.00220	0.00039	9,353
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	17
SEQUENCE 3	6.0	6.0	96	38.9	35.2	3.8	6.0	5.4	0.6	0.00316	0.00329	0.00322	0.00057	9,555
			97	38.9	35.1	3.8	6.0	5.4	0.6	0.00316	0.00329	0.00322	0.00057	9,536
			98	38.9	35.1	3.8	6.0	5.4	0.6	0.00316	0.00329	0.00322	0.00057	9,529
			99	38.9	35.1	3.8	6.0	5.4	0.6	0.00316	0.00329	0.00323	0.00057	9,526
			100	38.9	35.1	3.8	6.0	5.4	0.6	0.00315	0.00329	0.00322	0.00057	9,549
	COLUMN AVERAGE			38.9	35.1	3.8	6.0	5.4	0.6	0.00316	0.00329	0.00322	0.00057	9,539
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 4	6.0	8.0	96	52.0	47.0	5.0	8.0	7.2	0.8	0.00408	0.00425	0.00416	0.00073	9,872
			97	52.1	47.1	5.0	8.0	7.2	0.8	0.00408	0.00426	0.00417	0.00073	9,876
			98	52.0	47.0	5.0	8.0	7.2	0.8	0.00408	0.00426	0.00417	0.00073	9,849
			99	52.0	47.0	5.0	8.0	7.2	0.8	0.00408	0.00426	0.00417	0.00073	9,852
			100	52.1	47.0	5.1	8.0	7.2	0.8	0.00408	0.00426	0.00417	0.00073	9,875
	COLUMN AVERAGE			52.0	47.0	5.0	8.0	7.2	0.8	0.00408	0.00426	0.00417	0.00073	9,865
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	13
SEQUENCE 5	6.0	10.0	96	65.3	58.9	6.4	10.0	9.1	1.0	0.00489	0.00513	0.00501	0.00088	10,289
			97	65.3	58.9	6.4	10.0	9.1	1.0	0.00490	0.00512	0.00501	0.00088	10,288
			98	65.3	58.9	6.3	10.0	9.1	1.0	0.00489	0.00513	0.00501	0.00088	10,293
			99	65.3	59.0	6.3	10.0	9.1	1.0	0.00489	0.00513	0.00501	0.00088	10,295
			100	65.2	58.8	6.4	10.0	9.1	1.0	0.00489	0.00512	0.00501	0.00088	10,278
	COLUMN AVERAGE			65.3	58.9	6.3	10.0	9.1	1.0	0.00489	0.00513	0.00501	0.00088	10,289
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (1-2ft.)

SEQUENCE 6	4.0	2.0	96	13.2	11.4	1.8	2.0	1.8	0.3	0.00129	0.00132	0.00131	0.00023	7,642
			97	13.2	11.4	1.8	2.0	1.8	0.3	0.00130	0.00132	0.00131	0.00023	7,634
			98	13.1	11.4	1.8	2.0	1.8	0.3	0.00129	0.00132	0.00131	0.00023	7,618
			99	13.2	11.4	1.8	2.0	1.7	0.3	0.00130	0.00132	0.00131	0.00023	7,596
			100	13.2	11.4	1.8	2.0	1.7	0.3	0.00129	0.00132	0.00131	0.00023	7,604
	COLUMN AVERAGE			13.2	11.4	1.8	2.0	1.8	0.3	0.00130	0.00132	0.00131	0.00023	7,619
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	20
SEQUENCE 7	4.0	4.0	96	25.4	23.0	2.4	3.9	3.5	0.4	0.00258	0.00265	0.00261	0.00046	7,683
			97	25.4	22.9	2.5	3.9	3.5	0.4	0.00258	0.00265	0.00261	0.00046	7,658
			98	25.4	23.0	2.4	3.9	3.5	0.4	0.00258	0.00265	0.00262	0.00046	7,680
			99	25.3	22.8	2.5	3.9	3.5	0.4	0.00257	0.00265	0.00261	0.00046	7,652
			100	25.4	23.0	2.4	3.9	3.5	0.4	0.00259	0.00264	0.00261	0.00046	7,682
	COLUMN AVERAGE			25.4	22.9	2.4	3.9	3.5	0.4	0.00258	0.00265	0.00261	0.00046	7,671
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	15
SEQUENCE 8	4.0	6.0	96	38.4	34.7	3.8	5.9	5.3	0.6	0.00373	0.00384	0.00378	0.00067	8,015
			97	38.5	34.7	3.8	5.9	5.3	0.6	0.00372	0.00384	0.00378	0.00066	8,031
			98	38.4	34.6	3.8	5.9	5.3	0.6	0.00373	0.00383	0.00378	0.00066	8,010
			99	38.4	34.7	3.7	5.9	5.3	0.6	0.00373	0.00384	0.00378	0.00067	8,019
			100	38.5	34.7	3.8	5.9	5.3	0.6	0.00373	0.00383	0.00378	0.00066	8,029
	COLUMN AVERAGE			38.4	34.7	3.8	5.9	5.3	0.6	0.00373	0.00384	0.00378	0.00066	8,021
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	9
SEQUENCE 9	4.0	8.0	96	51.7	46.6	5.0	7.9	7.2	0.8	0.00467	0.00484	0.00475	0.00084	8,588
			97	51.6	46.6	5.0	7.9	7.2	0.8	0.00466	0.00484	0.00475	0.00084	8,574
			98	51.7	46.7	5.0	8.0	7.2	0.8	0.00467	0.00483	0.00475	0.00084	8,600
			99	51.5	46.5	5.0	7.9	7.2	0.8	0.00466	0.00484	0.00475	0.00084	8,561
			100	51.6	46.6	5.0	7.9	7.2	0.8	0.00466	0.00483	0.00475	0.00083	8,589
	COLUMN AVERAGE			51.6	46.6	5.0	7.9	7.2	0.8	0.00466	0.00483	0.00475	0.00084	8,583
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	15

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (1-2ft.)

SEQUENCE 10	4.0	10.0	96	64.8	58.5	6.4	10.0	9.0	1.0	0.00550	0.00570	0.00560	0.00098	9,137
			97	64.8	58.4	6.4	10.0	9.0	1.0	0.00550	0.00569	0.00560	0.00098	9,133
			98	64.8	58.4	6.4	10.0	9.0	1.0	0.00549	0.00570	0.00559	0.00098	9,140
			99	64.8	58.5	6.3	10.0	9.0	1.0	0.00549	0.00569	0.00559	0.00098	9,149
			100	64.8	58.4	6.3	10.0	9.0	1.0	0.00549	0.00569	0.00559	0.00098	9,141
	COLUMN AVERAGE			64.8	58.5	6.4	10.0	9.0	1.0	0.00549	0.00570	0.00559	0.00098	9,140
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6
SEQUENCE 11	2.0	2.0	96	13.1	10.9	2.2	2.0	1.7	0.3	0.00157	0.00159	0.00158	0.00028	6,034
			97	13.1	11.0	2.2	2.0	1.7	0.3	0.00158	0.00158	0.00158	0.00028	6,068
			98	13.1	10.9	2.2	2.0	1.7	0.3	0.00158	0.00159	0.00158	0.00028	6,043
			99	13.2	11.0	2.2	2.0	1.7	0.3	0.00158	0.00159	0.00158	0.00028	6,069
			100	13.1	10.9	2.1	2.0	1.7	0.3	0.00158	0.00159	0.00159	0.00028	6,027
	COLUMN AVERAGE			13.1	10.9	2.2	2.0	1.7	0.3	0.00158	0.00159	0.00158	0.00028	6,048
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	19
SEQUENCE 12	2.0	4.0	96	24.5	22.0	2.5	3.8	3.4	0.4	0.00315	0.00319	0.00317	0.00056	6,062
			97	24.4	22.0	2.4	3.8	3.4	0.4	0.00315	0.00319	0.00317	0.00056	6,062
			98	24.5	22.1	2.4	3.8	3.4	0.4	0.00315	0.00320	0.00318	0.00056	6,076
			99	24.5	22.1	2.5	3.8	3.4	0.4	0.00316	0.00320	0.00318	0.00056	6,085
			100	24.5	22.0	2.5	3.8	3.4	0.4	0.00315	0.00320	0.00318	0.00056	6,066
	COLUMN AVERAGE			24.5	22.0	2.5	3.8	3.4	0.4	0.00315	0.00320	0.00318	0.00056	6,070
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	10
SEQUENCE 13	2.0	6.0	96	37.3	33.6	3.8	5.7	5.2	0.6	0.00443	0.00451	0.00447	0.00079	6,573
			97	37.5	33.7	3.8	5.8	5.2	0.6	0.00443	0.00451	0.00447	0.00079	6,593
			98	37.3	33.6	3.8	5.7	5.2	0.6	0.00442	0.00451	0.00447	0.00079	6,579
			99	37.3	33.6	3.8	5.7	5.2	0.6	0.00442	0.00451	0.00446	0.00078	6,580
			100	37.4	33.6	3.7	5.8	5.2	0.6	0.00442	0.00452	0.00447	0.00079	6,586
	COLUMN AVERAGE			37.4	33.6	3.8	5.7	5.2	0.6	0.00442	0.00451	0.00447	0.00079	6,582
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	8

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-35 Material Source: Boring B-35 (1-2ft.)

SEQUENCE 14	2.0	8.0	96	50.4	45.4	5.1	7.8	7.0	0.8	0.00538	0.00554	0.00546	0.00096	7,273
			97	50.4	45.3	5.1	7.8	7.0	0.8	0.00538	0.00554	0.00546	0.00096	7,263
			98	50.4	45.3	5.1	7.7	7.0	0.8	0.00538	0.00554	0.00546	0.00096	7,254
			99	50.5	45.4	5.1	7.8	7.0	0.8	0.00537	0.00554	0.00546	0.00096	7,279
			100	50.4	45.3	5.1	7.8	7.0	0.8	0.00538	0.00554	0.00546	0.00096	7,265
	COLUMN AVERAGE			50.4	45.3	5.1	7.8	7.0	0.8	0.00538	0.00554	0.00546	0.00096	7,267
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	9
SEQUENCE 15	2.0	10.0	96	63.5	57.1	6.4	9.8	8.8	1.0	0.00629	0.00649	0.00639	0.00112	7,818
			97	63.6	57.2	6.4	9.8	8.8	1.0	0.00630	0.00648	0.00639	0.00112	7,838
			98	63.4	57.1	6.4	9.8	8.8	1.0	0.00629	0.00649	0.00639	0.00112	7,810
			99	63.6	57.2	6.4	9.8	8.8	1.0	0.00629	0.00649	0.00639	0.00112	7,834
			100	63.6	57.2	6.4	9.8	8.8	1.0	0.00629	0.00649	0.00639	0.00112	7,837
	COLUMN AVERAGE			63.5	57.2	6.4	9.8	8.8	1.0	0.00629	0.00649	0.00639	0.00112	7,827
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12

TESTED BY RLB DATE 05-20-2013

Boudreau Engineering, Inc.

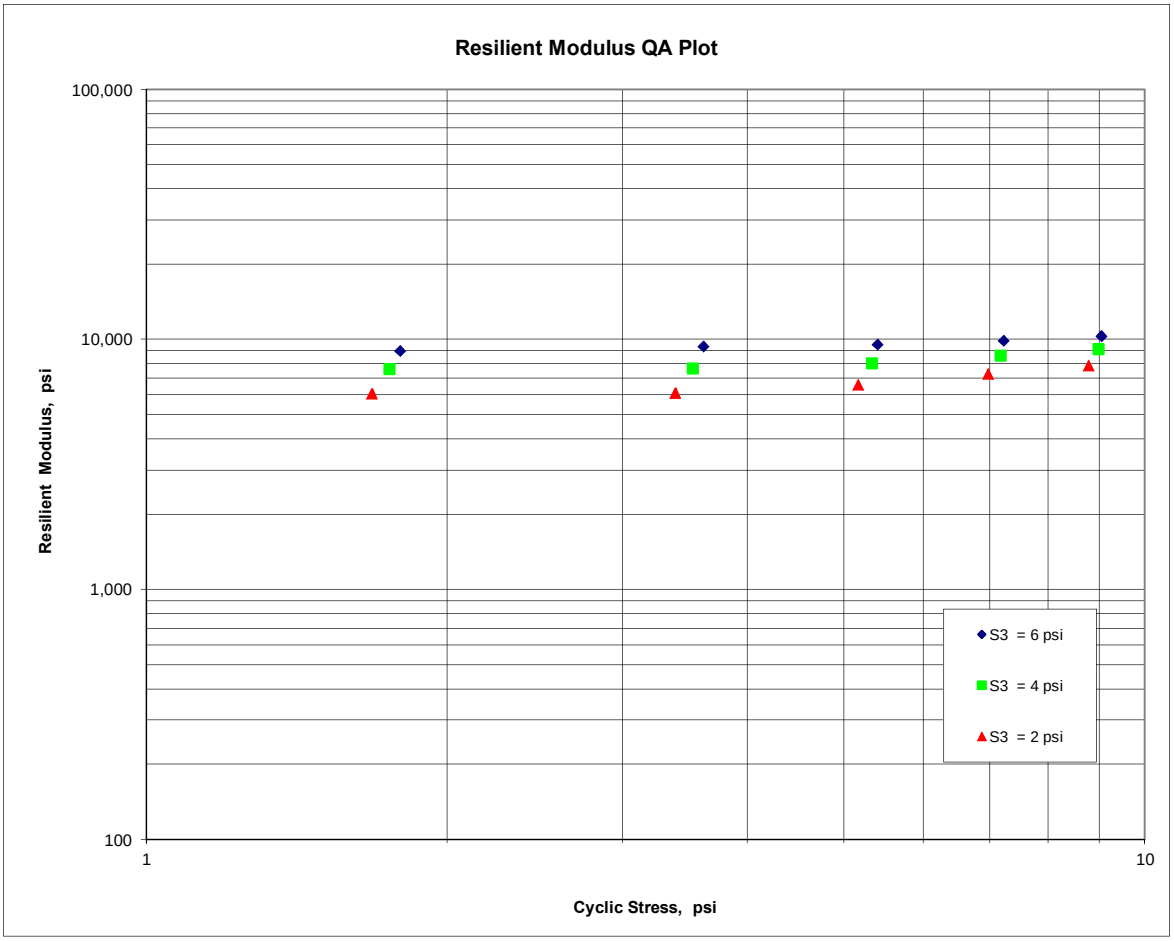
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-35 (1-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 9.7% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,526
K2 =	0.11415
K5 =	0.31432
R^2 =	0.94

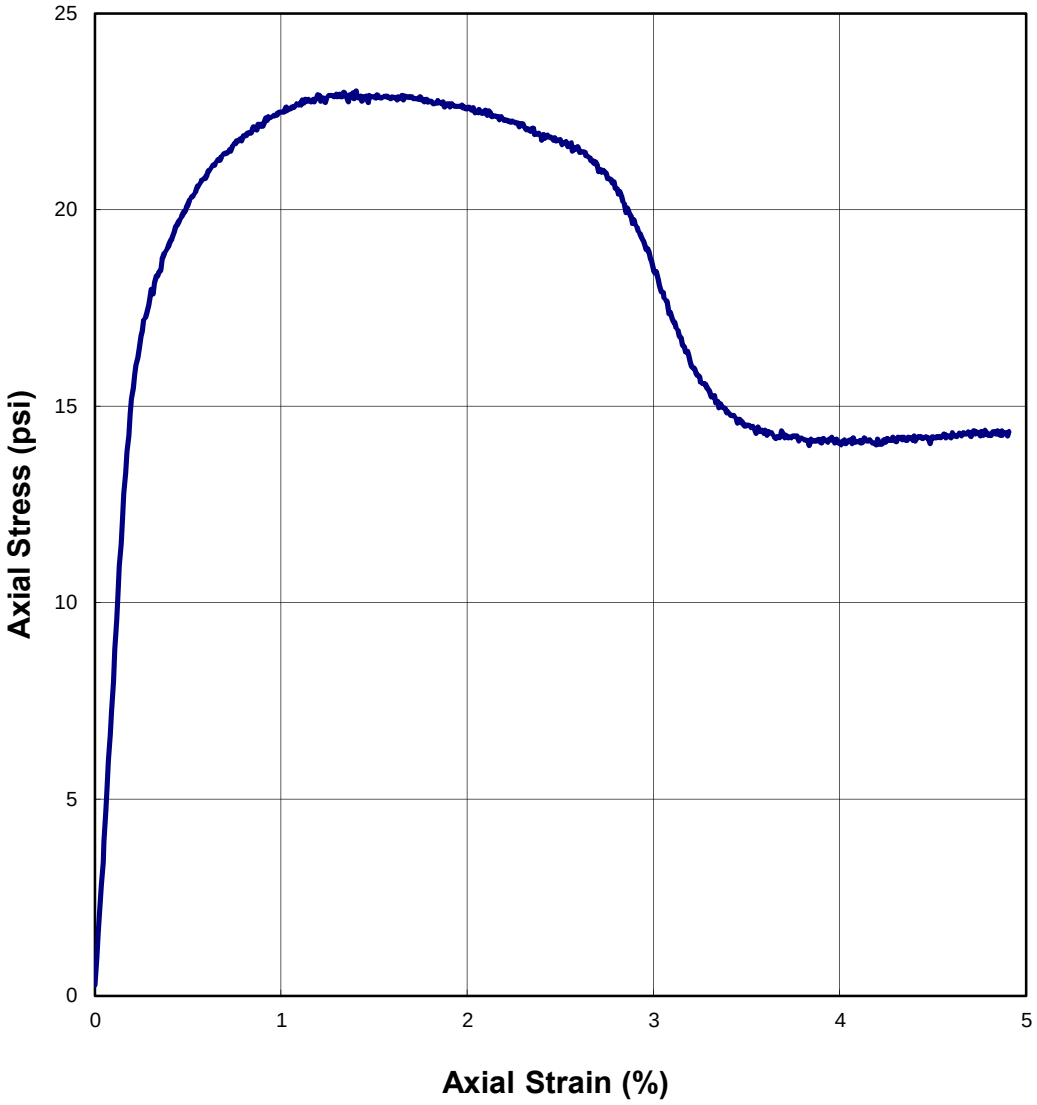


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-35 (1-2ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 9.7% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-20-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-43

SOURCE OF MATERIAL: Boring B-43 (7-15ft.)

1.	*SAMPLING DATE:*	5/2/2013
2.	*SAMPLE NUMBER:*	B-43
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.65
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.6
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1243.92
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1243.92
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.4
	MAX. DRY DENSITY, pcf	122.1
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.4
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	10.3
	COMPACTION DRY DENSITY, $\gamma_{d,}$ *pcf*	117.4
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.4
	COMPACTION LEVEL ACHIEVED	96.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	24
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-21-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-43 (7-15ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.4% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-21-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	___._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.3	12.0	1.4	2.1	1.8	0.2	0.00104	0.00100	0.00102	0.00018	10,276
			97	13.3	11.9	1.4	2.1	1.8	0.2	0.00105	0.00099	0.00102	0.00018	10,246
			98	13.3	11.9	1.4	2.1	1.8	0.2	0.00104	0.00100	0.00102	0.00018	10,243
			99	13.3	12.0	1.4	2.1	1.8	0.2	0.00104	0.00099	0.00102	0.00018	10,267
			100	13.2	11.8	1.4	2.0	1.8	0.2	0.00103	0.00100	0.00102	0.00018	10,146
	COLUMN AVERAGE			13.3	11.9	1.4	2.1	1.8	0.2	0.00104	0.00099	0.00102	0.00018	10,236
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	52

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (7-15ft.)

SEQUENCE 2	6.0	4.0	96	26.1	23.7	2.5	4.0	3.7	0.4	0.00201	0.00193	0.00197	0.00035	10,495
			97	26.2	23.7	2.5	4.1	3.7	0.4	0.00202	0.00192	0.00197	0.00035	10,519
			98	26.2	23.7	2.4	4.0	3.7	0.4	0.00201	0.00193	0.00197	0.00035	10,514
			99	26.2	23.7	2.5	4.0	3.7	0.4	0.00202	0.00191	0.00197	0.00035	10,519
			100	26.1	23.7	2.4	4.0	3.7	0.4	0.00201	0.00193	0.00197	0.00035	10,486
	COLUMN AVERAGE			26.2	23.7	2.5	4.0	3.7	0.4	0.00201	0.00193	0.00197	0.00035	10,507
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	15
SEQUENCE 3	6.0	6.0	96	39.1	35.4	3.8	6.0	5.5	0.6	0.00305	0.00292	0.00298	0.00053	10,346
			97	39.0	35.3	3.7	6.0	5.5	0.6	0.00305	0.00292	0.00299	0.00053	10,322
			98	39.1	35.3	3.7	6.0	5.5	0.6	0.00305	0.00291	0.00298	0.00053	10,349
			99	39.0	35.3	3.8	6.0	5.4	0.6	0.00304	0.00293	0.00299	0.00053	10,309
			100	39.1	35.4	3.8	6.0	5.5	0.6	0.00305	0.00292	0.00298	0.00053	10,351
	COLUMN AVERAGE			39.1	35.3	3.8	6.0	5.5	0.6	0.00305	0.00292	0.00298	0.00053	10,335
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	19
SEQUENCE 4	6.0	8.0	96	52.2	47.1	5.1	8.1	7.3	0.8	0.00402	0.00384	0.00393	0.00070	10,461
			97	52.2	47.2	5.1	8.1	7.3	0.8	0.00401	0.00385	0.00393	0.00070	10,481
			98	52.2	47.1	5.1	8.1	7.3	0.8	0.00402	0.00385	0.00393	0.00070	10,459
			99	52.2	47.2	5.1	8.1	7.3	0.8	0.00401	0.00386	0.00393	0.00070	10,469
			100	52.2	47.1	5.0	8.1	7.3	0.8	0.00401	0.00383	0.00392	0.00069	10,479
	COLUMN AVERAGE			52.2	47.1	5.1	8.1	7.3	0.8	0.00401	0.00385	0.00393	0.00070	10,470
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	10
SEQUENCE 5	6.0	10.0	96	65.4	59.1	6.3	10.1	9.1	1.0	0.00489	0.00467	0.00478	0.00085	10,788
			97	65.4	59.1	6.3	10.1	9.1	1.0	0.00488	0.00469	0.00479	0.00085	10,770
			98	65.4	59.1	6.3	10.1	9.1	1.0	0.00489	0.00469	0.00479	0.00085	10,761
			99	65.4	59.0	6.3	10.1	9.1	1.0	0.00489	0.00468	0.00479	0.00085	10,761
			100	65.4	59.1	6.3	10.1	9.1	1.0	0.00489	0.00468	0.00478	0.00085	10,783
	COLUMN AVERAGE			65.4	59.1	6.3	10.1	9.1	1.0	0.00489	0.00468	0.00479	0.00085	10,773
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	13

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (7-15ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.8	2.1	1.8	0.3	0.00118	0.00113	0.00116	0.00020	8,868
			97	13.5	11.7	1.8	2.1	1.8	0.3	0.00119	0.00112	0.00115	0.00020	8,844
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00118	0.00113	0.00116	0.00020	8,849
			99	13.5	11.7	1.8	2.1	1.8	0.3	0.00118	0.00113	0.00115	0.00020	8,848
			100	13.6	11.8	1.8	2.1	1.8	0.3	0.00118	0.00112	0.00115	0.00020	8,932
	COLUMN AVERAGE			13.5	11.7	1.8	2.1	1.8	0.3	0.00118	0.00113	0.00115	0.00020	8,868
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	37
SEQUENCE 7	4.0	4.0	96	25.8	23.4	2.4	4.0	3.6	0.4	0.00239	0.00231	0.00235	0.00042	8,686
			97	25.8	23.3	2.5	4.0	3.6	0.4	0.00241	0.00229	0.00235	0.00042	8,658
			98	25.8	23.3	2.4	4.0	3.6	0.4	0.00240	0.00230	0.00235	0.00042	8,668
			99	25.7	23.2	2.4	4.0	3.6	0.4	0.00240	0.00230	0.00235	0.00042	8,623
			100	25.8	23.3	2.5	4.0	3.6	0.4	0.00240	0.00230	0.00235	0.00042	8,656
	COLUMN AVERAGE			25.8	23.3	2.5	4.0	3.6	0.4	0.00240	0.00230	0.00235	0.00042	8,658
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	23
SEQUENCE 8	4.0	6.0	96	38.8	35.1	3.7	6.0	5.4	0.6	0.00355	0.00341	0.00348	0.00062	8,800
			97	38.9	35.1	3.8	6.0	5.4	0.6	0.00355	0.00341	0.00348	0.00062	8,811
			98	38.8	35.1	3.8	6.0	5.4	0.6	0.00356	0.00341	0.00348	0.00062	8,789
			99	38.8	35.0	3.8	6.0	5.4	0.6	0.00355	0.00342	0.00348	0.00062	8,774
			100	38.8	35.1	3.7	6.0	5.4	0.6	0.00356	0.00340	0.00348	0.00062	8,794
	COLUMN AVERAGE			38.8	35.1	3.8	6.0	5.4	0.6	0.00355	0.00341	0.00348	0.00062	8,794
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	14
SEQUENCE 9	4.0	8.0	96	52.1	47.1	5.1	8.0	7.3	0.8	0.00457	0.00438	0.00448	0.00079	9,169
			97	52.3	47.2	5.1	8.1	7.3	0.8	0.00457	0.00438	0.00447	0.00079	9,209
			98	52.1	47.0	5.1	8.0	7.3	0.8	0.00456	0.00439	0.00447	0.00079	9,172
			99	52.2	47.1	5.1	8.1	7.3	0.8	0.00457	0.00438	0.00448	0.00079	9,182
			100	52.1	47.1	5.0	8.0	7.3	0.8	0.00457	0.00438	0.00448	0.00079	9,177
	COLUMN AVERAGE			52.1	47.1	5.1	8.1	7.3	0.8	0.00457	0.00438	0.00448	0.00079	9,182
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	16

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (7-15ft.)

SEQUENCE 10	4.0	10.0	96	65.0	58.7	6.3	10.0	9.1	1.0	0.00547	0.00526	0.00536	0.00095	9,548
			97	65.0	58.6	6.4	10.0	9.1	1.0	0.00549	0.00525	0.00537	0.00095	9,525
			98	65.0	58.7	6.4	10.0	9.1	1.0	0.00548	0.00524	0.00536	0.00095	9,550
			99	65.1	58.8	6.4	10.1	9.1	1.0	0.00548	0.00526	0.00537	0.00095	9,552
			100	65.1	58.8	6.4	10.1	9.1	1.0	0.00548	0.00524	0.00536	0.00095	9,565
	COLUMN AVERAGE			65.0	58.7	6.3	10.0	9.1	1.0	0.00548	0.00525	0.00537	0.00095	9,548
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	14
SEQUENCE 11	2.0	2.0	96	13.5	11.3	2.2	2.1	1.8	0.3	0.00141	0.00136	0.00139	0.00025	7,129
			97	13.6	11.4	2.2	2.1	1.8	0.3	0.00142	0.00136	0.00139	0.00025	7,164
			98	13.6	11.4	2.2	2.1	1.8	0.3	0.00141	0.00137	0.00139	0.00025	7,181
			99	13.6	11.4	2.2	2.1	1.8	0.3	0.00142	0.00136	0.00139	0.00025	7,179
			100	13.6	11.4	2.2	2.1	1.8	0.3	0.00142	0.00135	0.00139	0.00025	7,190
	COLUMN AVERAGE			13.6	11.4	2.2	2.1	1.8	0.3	0.00142	0.00136	0.00139	0.00025	7,168
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	24
SEQUENCE 12	2.0	4.0	96	25.1	22.7	2.4	3.9	3.5	0.4	0.00294	0.00283	0.00289	0.00051	6,854
			97	25.1	22.7	2.4	3.9	3.5	0.4	0.00294	0.00283	0.00289	0.00051	6,855
			98	25.1	22.7	2.5	3.9	3.5	0.4	0.00294	0.00283	0.00289	0.00051	6,850
			99	25.1	22.6	2.4	3.9	3.5	0.4	0.00294	0.00284	0.00289	0.00051	6,840
			100	25.1	22.7	2.4	3.9	3.5	0.4	0.00294	0.00283	0.00289	0.00051	6,867
	COLUMN AVERAGE			25.1	22.7	2.4	3.9	3.5	0.4	0.00294	0.00283	0.00289	0.00051	6,853
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	10
SEQUENCE 13	2.0	6.0	96	38.1	34.3	3.8	5.9	5.3	0.6	0.00426	0.00410	0.00418	0.00074	7,162
			97	38.2	34.4	3.8	5.9	5.3	0.6	0.00426	0.00410	0.00418	0.00074	7,193
			98	38.1	34.4	3.7	5.9	5.3	0.6	0.00426	0.00410	0.00418	0.00074	7,182
			99	38.2	34.4	3.8	5.9	5.3	0.6	0.00425	0.00411	0.00418	0.00074	7,185
			100	38.2	34.5	3.8	5.9	5.3	0.6	0.00426	0.00410	0.00418	0.00074	7,193
	COLUMN AVERAGE			38.2	34.4	3.8	5.9	5.3	0.6	0.00426	0.00410	0.00418	0.00074	7,183
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (7-15ft.)

SEQUENCE 14	2.0	8.0	96	51.4	46.4	5.1	7.9	7.2	0.8	0.00531	0.00511	0.00521	0.00092	7,769
			97	51.4	46.3	5.1	7.9	7.2	0.8	0.00531	0.00512	0.00521	0.00092	7,756
			98	51.4	46.4	5.1	7.9	7.2	0.8	0.00531	0.00512	0.00521	0.00092	7,759
			99	51.4	46.3	5.1	7.9	7.2	0.8	0.00532	0.00511	0.00522	0.00092	7,749
			100	51.2	46.2	5.1	7.9	7.1	0.8	0.00532	0.00510	0.00521	0.00092	7,733
	COLUMN AVERAGE			51.4	46.3	5.1	7.9	7.2	0.8	0.00532	0.00511	0.00521	0.00092	7,753
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	13
SEQUENCE 15	2.0	10.0	96	64.4	58.1	6.3	9.9	9.0	1.0	0.00629	0.00604	0.00616	0.00109	8,224
			97	64.2	57.9	6.4	9.9	8.9	1.0	0.00629	0.00603	0.00616	0.00109	8,202
			98	64.3	58.0	6.3	9.9	9.0	1.0	0.00629	0.00603	0.00616	0.00109	8,217
			99	64.4	58.0	6.4	9.9	9.0	1.0	0.00630	0.00603	0.00616	0.00109	8,217
			100	64.4	58.0	6.4	10.0	9.0	1.0	0.00628	0.00603	0.00616	0.00109	8,231
	COLUMN AVERAGE			64.4	58.0	6.4	9.9	9.0	1.0	0.00629	0.00603	0.00616	0.00109	8,218
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	11

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

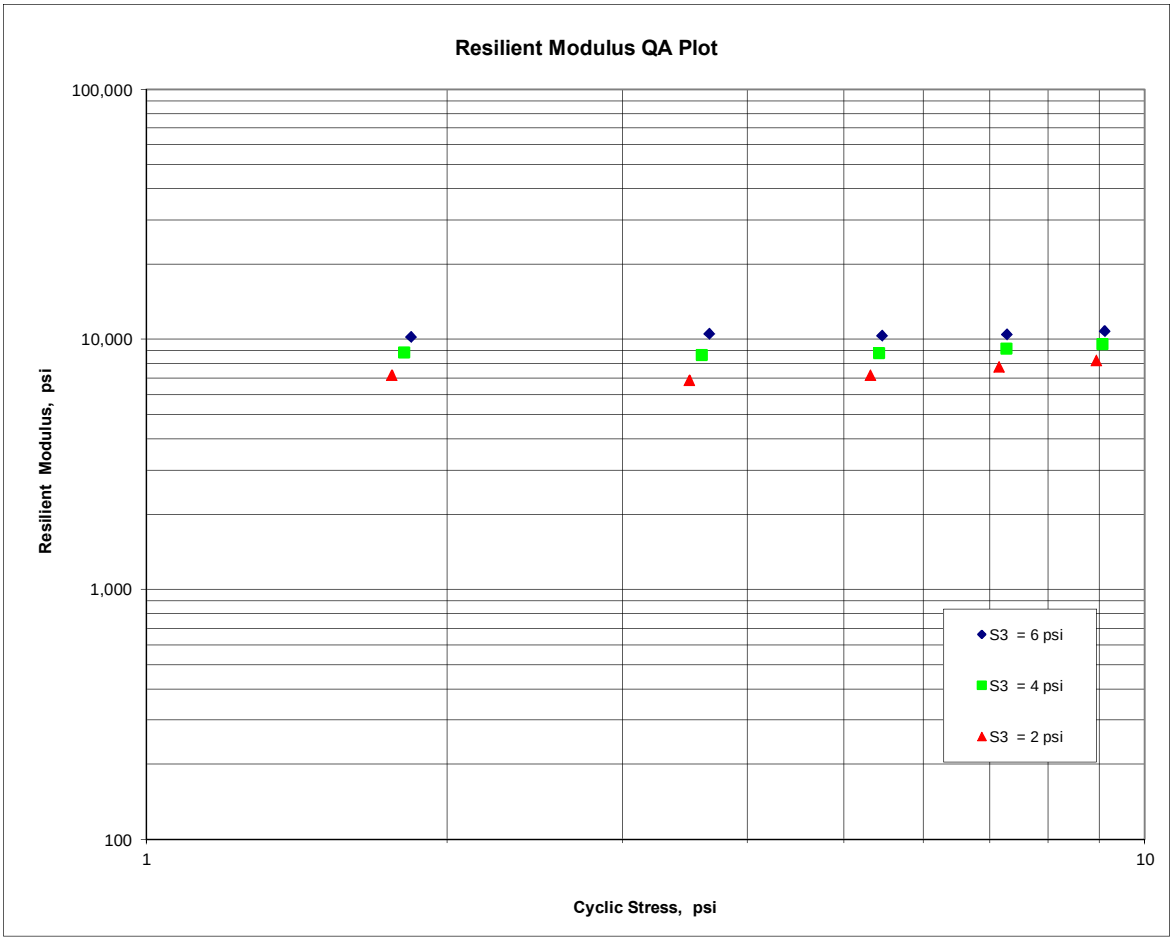
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-43 (7-15ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.4% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	5,522
K2 =	0.04998
K5 =	0.30783
R^2 =	0.94

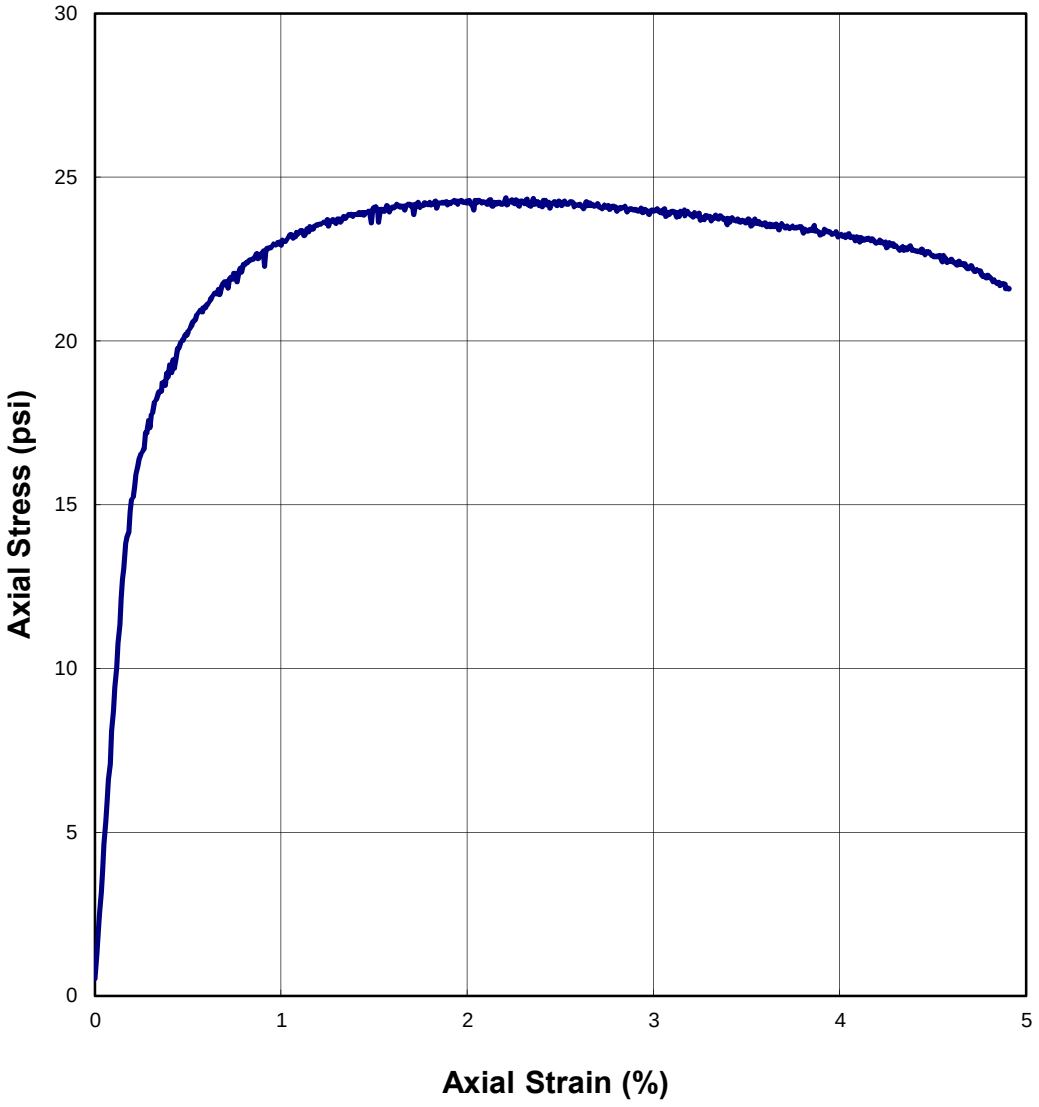


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-43 (7-15ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.4% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-43

SOURCE OF MATERIAL: Boring B-43 (15-16ft.)

1.	*SAMPLING DATE:*	5/2/2013
2.	*SAMPLE NUMBER:*	B-43
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.70
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	37.1
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1168.29
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1168.29
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.1
	MAX. DRY DENSITY, pcf	115.8
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.1
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	9.8
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	108.9
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.1
	COMPACTION LEVEL ACHIEVED	94.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	26
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-21-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-43 (15-16ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.1% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-21-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	__._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00109	0.00108	0.00019	9,671
			97	13.3	11.9	1.4	2.0	1.8	0.2	0.00105	0.00109	0.00107	0.00019	9,711
			98	13.2	11.8	1.4	2.0	1.8	0.2	0.00106	0.00109	0.00108	0.00019	9,618
			99	13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00108	0.00107	0.00019	9,720
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00109	0.00107	0.00019	9,673
	COLUMN AVERAGE			13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00109	0.00107	0.00019	9,679
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	40

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (15-16ft.)

SEQUENCE 2	6.0	4.0	96	26.2	23.8	2.4	4.0	3.7	0.4	0.00204	0.00209	0.00206	0.00036	10,098
			97	26.3	23.8	2.5	4.0	3.7	0.4	0.00204	0.00210	0.00207	0.00036	10,076
			98	26.2	23.7	2.5	4.0	3.6	0.4	0.00204	0.00209	0.00207	0.00036	10,062
			99	26.1	23.7	2.5	4.0	3.6	0.4	0.00203	0.00209	0.00206	0.00036	10,060
			100	26.2	23.8	2.4	4.0	3.7	0.4	0.00203	0.00210	0.00207	0.00036	10,089
	COLUMN AVERAGE			26.2	23.7	2.5	4.0	3.6	0.4	0.00204	0.00210	0.00207	0.00036	10,077
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 3	6.0	6.0	96	39.2	35.5	3.8	6.0	5.4	0.6	0.00298	0.00307	0.00303	0.00053	10,267
			97	39.2	35.4	3.8	6.0	5.4	0.6	0.00298	0.00307	0.00303	0.00053	10,259
			98	39.2	35.4	3.8	6.0	5.4	0.6	0.00299	0.00307	0.00303	0.00053	10,248
			99	39.2	35.5	3.8	6.0	5.5	0.6	0.00299	0.00308	0.00304	0.00053	10,244
			100	39.2	35.5	3.7	6.0	5.5	0.6	0.00297	0.00308	0.00303	0.00053	10,271
	COLUMN AVERAGE			39.2	35.4	3.8	6.0	5.4	0.6	0.00298	0.00308	0.00303	0.00053	10,258
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	12
SEQUENCE 4	6.0	8.0	96	52.5	47.4	5.1	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,663
			97	52.5	47.4	5.1	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,659
			98	52.5	47.4	5.1	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,662
			99	52.4	47.3	5.0	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,640
			100	52.4	47.3	5.1	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,636
	COLUMN AVERAGE			52.4	47.4	5.1	8.1	7.3	0.8	0.00383	0.00397	0.00390	0.00068	10,652
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	13
SEQUENCE 5	6.0	10.0	96	65.8	59.4	6.4	10.1	9.1	1.0	0.00458	0.00476	0.00467	0.00082	11,156
			97	65.8	59.4	6.4	10.1	9.1	1.0	0.00460	0.00475	0.00468	0.00082	11,137
			98	65.9	59.5	6.4	10.1	9.1	1.0	0.00459	0.00475	0.00467	0.00082	11,165
			99	65.8	59.5	6.4	10.1	9.1	1.0	0.00459	0.00475	0.00467	0.00082	11,156
			100	65.8	59.4	6.4	10.1	9.1	1.0	0.00458	0.00476	0.00467	0.00082	11,153
	COLUMN AVERAGE			65.8	59.5	6.4	10.1	9.1	1.0	0.00459	0.00476	0.00467	0.00082	11,153
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	10

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (15-16ft.)

SEQUENCE 6	4.0	2.0	96	13.4	11.6	1.8	2.1	1.8	0.3	0.00120	0.00122	0.00121	0.00021	8,399
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00121	0.00122	0.00122	0.00021	8,390
			98	13.3	11.6	1.8	2.1	1.8	0.3	0.00121	0.00121	0.00121	0.00021	8,353
			99	13.5	11.7	1.8	2.1	1.8	0.3	0.00121	0.00121	0.00121	0.00021	8,451
			100	13.5	11.7	1.8	2.1	1.8	0.3	0.00121	0.00122	0.00121	0.00021	8,480
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00121	0.00122	0.00121	0.00021	8,415
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	51
SEQUENCE 7	4.0	4.0	96	25.7	23.3	2.5	4.0	3.6	0.4	0.00239	0.00243	0.00241	0.00042	8,467
			97	25.7	23.3	2.5	4.0	3.6	0.4	0.00239	0.00243	0.00241	0.00042	8,453
			98	25.7	23.3	2.5	4.0	3.6	0.4	0.00239	0.00243	0.00241	0.00042	8,458
			99	25.8	23.3	2.4	4.0	3.6	0.4	0.00240	0.00244	0.00242	0.00042	8,462
			100	25.7	23.2	2.5	4.0	3.6	0.4	0.00240	0.00243	0.00241	0.00042	8,434
	COLUMN AVERAGE			25.7	23.3	2.5	4.0	3.6	0.4	0.00239	0.00243	0.00241	0.00042	8,455
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	13
SEQUENCE 8	4.0	6.0	96	38.8	35.1	3.8	6.0	5.4	0.6	0.00346	0.00354	0.00350	0.00061	8,780
			97	38.8	35.1	3.8	6.0	5.4	0.6	0.00345	0.00354	0.00350	0.00061	8,788
			98	38.9	35.1	3.7	6.0	5.4	0.6	0.00346	0.00353	0.00350	0.00061	8,798
			99	38.9	35.1	3.8	6.0	5.4	0.6	0.00347	0.00355	0.00351	0.00061	8,781
			100	39.0	35.2	3.8	6.0	5.4	0.6	0.00346	0.00353	0.00350	0.00061	8,821
	COLUMN AVERAGE			38.9	35.1	3.8	6.0	5.4	0.6	0.00346	0.00354	0.00350	0.00061	8,794
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	17
SEQUENCE 9	4.0	8.0	96	52.2	47.1	5.1	8.0	7.2	0.8	0.00437	0.00448	0.00443	0.00078	9,328
			97	52.1	47.1	5.1	8.0	7.2	0.8	0.00437	0.00447	0.00442	0.00078	9,337
			98	52.2	47.1	5.1	8.0	7.2	0.8	0.00437	0.00448	0.00443	0.00078	9,331
			99	52.1	47.0	5.1	8.0	7.2	0.8	0.00438	0.00447	0.00442	0.00078	9,324
			100	52.2	47.1	5.1	8.0	7.2	0.8	0.00437	0.00448	0.00442	0.00078	9,334
	COLUMN AVERAGE			52.1	47.1	5.1	8.0	7.2	0.8	0.00437	0.00448	0.00442	0.00078	9,331
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	5

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (15-16ft.)

SEQUENCE 10	4.0	10.0	96	65.4	59.0	6.4	10.1	9.1	1.0	0.00515	0.00529	0.00522	0.00092	9,913
			97	65.4	59.0	6.4	10.0	9.1	1.0	0.00515	0.00530	0.00523	0.00092	9,893
			98	65.4	59.0	6.4	10.0	9.1	1.0	0.00514	0.00529	0.00522	0.00091	9,909
			99	65.3	59.0	6.4	10.0	9.1	1.0	0.00514	0.00530	0.00522	0.00091	9,907
			100	65.4	59.0	6.4	10.0	9.1	1.0	0.00514	0.00530	0.00522	0.00092	9,907
	COLUMN AVERAGE			65.4	59.0	6.4	10.0	9.1	1.0	0.00515	0.00530	0.00522	0.00092	9,906
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	8
SEQUENCE 11	2.0	2.0	96	13.4	11.2	2.2	2.1	1.7	0.3	0.00148	0.00148	0.00148	0.00026	6,625
			97	13.4	11.2	2.2	2.1	1.7	0.3	0.00147	0.00148	0.00148	0.00026	6,637
			98	13.3	11.1	2.2	2.0	1.7	0.3	0.00147	0.00148	0.00148	0.00026	6,607
			99	13.3	11.2	2.1	2.0	1.7	0.3	0.00149	0.00147	0.00148	0.00026	6,622
			100	13.3	11.1	2.2	2.0	1.7	0.3	0.00148	0.00147	0.00147	0.00026	6,603
	COLUMN AVERAGE			13.3	11.1	2.2	2.0	1.7	0.3	0.00148	0.00147	0.00148	0.00026	6,619
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	14
SEQUENCE 12	2.0	4.0	96	24.8	22.4	2.5	3.8	3.4	0.4	0.00296	0.00298	0.00297	0.00052	6,593
			97	24.8	22.3	2.5	3.8	3.4	0.4	0.00296	0.00298	0.00297	0.00052	6,581
			98	24.9	22.4	2.5	3.8	3.4	0.4	0.00296	0.00299	0.00298	0.00052	6,597
			99	24.8	22.4	2.5	3.8	3.4	0.4	0.00296	0.00299	0.00297	0.00052	6,592
			100	24.8	22.4	2.5	3.8	3.4	0.4	0.00297	0.00297	0.00297	0.00052	6,595
	COLUMN AVERAGE			24.8	22.4	2.5	3.8	3.4	0.4	0.00296	0.00298	0.00297	0.00052	6,591
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	6
SEQUENCE 13	2.0	6.0	96	37.8	34.1	3.8	5.8	5.2	0.6	0.00417	0.00423	0.00420	0.00074	7,105
			97	37.8	34.0	3.8	5.8	5.2	0.6	0.00417	0.00423	0.00420	0.00074	7,107
			98	37.8	34.0	3.8	5.8	5.2	0.6	0.00417	0.00422	0.00419	0.00074	7,107
			99	37.8	34.0	3.8	5.8	5.2	0.6	0.00417	0.00423	0.00420	0.00074	7,095
			100	37.8	34.0	3.7	5.8	5.2	0.6	0.00417	0.00423	0.00420	0.00074	7,106
	COLUMN AVERAGE			37.8	34.0	3.8	5.8	5.2	0.6	0.00417	0.00423	0.00420	0.00074	7,104
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-43 Material Source: Boring B-43 (15-16ft.)

SEQUENCE 14	2.0	8.0	96	50.9	45.8	5.1	7.8	7.0	0.8	0.00511	0.00520	0.00516	0.00090	7,787
			97	50.8	45.7	5.1	7.8	7.0	0.8	0.00512	0.00520	0.00516	0.00090	7,770
			98	50.9	45.8	5.1	7.8	7.0	0.8	0.00512	0.00519	0.00516	0.00090	7,779
			99	50.9	45.8	5.1	7.8	7.0	0.8	0.00511	0.00519	0.00515	0.00090	7,797
			100	50.9	45.8	5.1	7.8	7.0	0.8	0.00511	0.00521	0.00516	0.00090	7,782
	COLUMN AVERAGE			50.9	45.8	5.1	7.8	7.0	0.8	0.00512	0.00520	0.00516	0.00090	7,783
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	10
SEQUENCE 15	2.0	10.0	96	64.1	57.7	6.4	9.9	8.9	1.0	0.00596	0.00607	0.00602	0.00106	8,408
			97	64.2	57.8	6.4	9.9	8.9	1.0	0.00597	0.00607	0.00602	0.00106	8,419
			98	64.1	57.8	6.4	9.9	8.9	1.0	0.00596	0.00608	0.00602	0.00106	8,411
			99	64.2	57.8	6.4	9.9	8.9	1.0	0.00596	0.00608	0.00602	0.00106	8,420
			100	64.2	57.8	6.4	9.9	8.9	1.0	0.00595	0.00608	0.00602	0.00106	8,426
	COLUMN AVERAGE			64.2	57.8	6.4	9.9	8.9	1.0	0.00596	0.00608	0.00602	0.00106	8,417
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	7

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

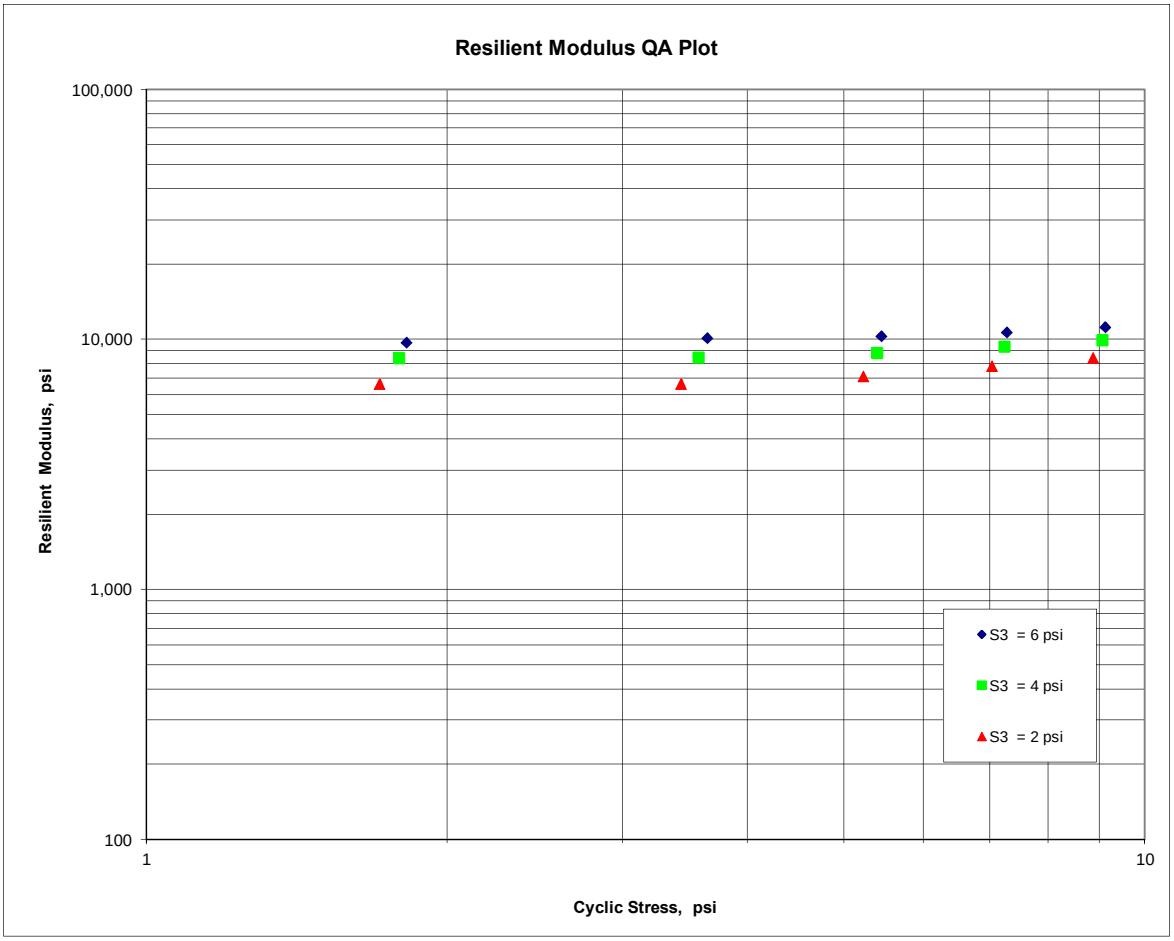
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-43 (15-16ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.1% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,950
K2 =	0.10747
K5 =	0.31510
R^2 =	0.95

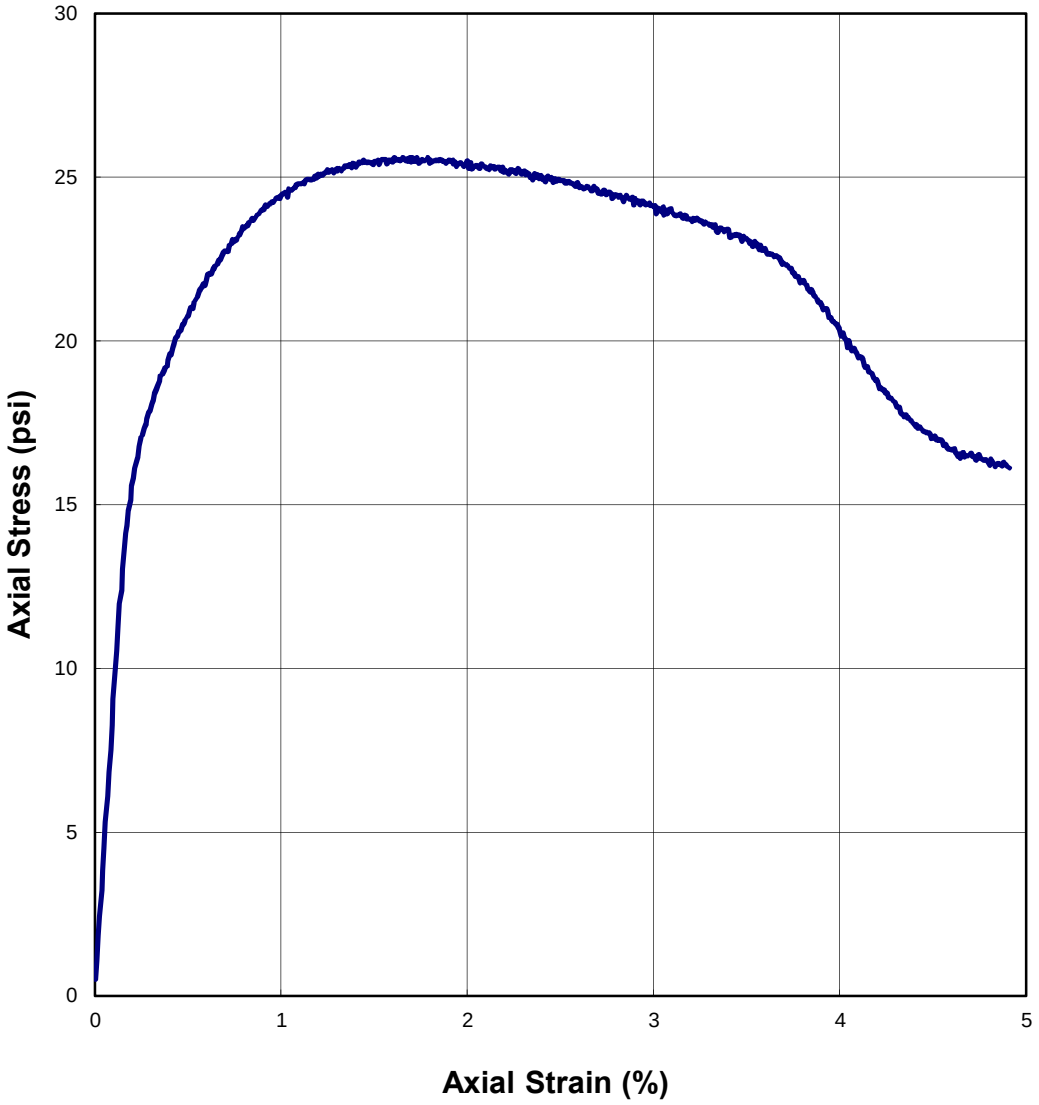


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-43 (15-16ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.1% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-28-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-51

SOURCE OF MATERIAL: Boring B-51 (0-8ft.)

1.	*SAMPLING DATE:*	5/22/2013
2.	*SAMPLE NUMBER:*	B-51
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.67
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.7
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1229.14
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1229.14
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	11.5
	MAX. DRY DENSITY, pcf	120.2
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	11.5
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	11.4
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	114.4
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	11.5
	COMPACTION LEVEL ACHIEVED	95.2%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	22
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-31-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-51 (0-8ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 11.5% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-31-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.3	11.9	1.4	2.0	1.8	0.2	0.00090	0.00092	0.00091	0.00016	11,431
			97	13.2	11.8	1.4	2.0	1.8	0.2	0.00089	0.00092	0.00091	0.00016	11,368
			98	13.2	11.8	1.4	2.0	1.8	0.2	0.00089	0.00092	0.00091	0.00016	11,397
			99	13.2	11.8	1.4	2.0	1.8	0.2	0.00089	0.00092	0.00091	0.00016	11,376
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00090	0.00092	0.00091	0.00016	11,441
	COLUMN AVERAGE			13.2	11.8	1.4	2.0	1.8	0.2	0.00089	0.00092	0.00091	0.00016	11,403
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	32

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (0-8ft.)

SEQUENCE 2	6.0	4.0	96	26.1	23.6	2.5	4.0	3.6	0.4	0.00172	0.00180	0.00176	0.00031	11,751
			97	26.1	23.6	2.4	4.0	3.7	0.4	0.00172	0.00180	0.00176	0.00031	11,744
			98	26.0	23.5	2.5	4.0	3.6	0.4	0.00172	0.00180	0.00176	0.00031	11,717
			99	26.0	23.6	2.5	4.0	3.6	0.4	0.00173	0.00180	0.00176	0.00031	11,715
			100	26.1	23.7	2.5	4.0	3.7	0.4	0.00173	0.00179	0.00176	0.00031	11,769
	COLUMN AVERAGE			26.1	23.6	2.5	4.0	3.6	0.4	0.00172	0.00180	0.00176	0.00031	11,739
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	23
SEQUENCE 3	6.0	6.0	96	39.0	35.2	3.7	6.0	5.4	0.6	0.00257	0.00268	0.00262	0.00046	11,748
			97	39.0	35.3	3.7	6.0	5.4	0.6	0.00257	0.00269	0.00263	0.00046	11,750
			98	39.0	35.2	3.7	6.0	5.4	0.6	0.00257	0.00268	0.00262	0.00046	11,761
			99	39.0	35.2	3.7	6.0	5.4	0.6	0.00257	0.00269	0.00263	0.00046	11,729
			100	39.0	35.3	3.7	6.0	5.4	0.6	0.00257	0.00269	0.00263	0.00046	11,751
	COLUMN AVERAGE			39.0	35.2	3.7	6.0	5.4	0.6	0.00257	0.00268	0.00263	0.00046	11,748
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 4	6.0	8.0	96	52.1	47.0	5.0	8.0	7.3	0.8	0.00336	0.00351	0.00344	0.00061	11,985
			97	52.1	47.0	5.0	8.0	7.3	0.8	0.00337	0.00350	0.00344	0.00061	11,987
			98	52.0	47.0	5.1	8.0	7.3	0.8	0.00337	0.00351	0.00344	0.00061	11,960
			99	52.1	47.0	5.0	8.0	7.3	0.8	0.00337	0.00351	0.00344	0.00061	11,964
			100	52.1	47.1	5.0	8.0	7.3	0.8	0.00337	0.00351	0.00344	0.00061	11,997
	COLUMN AVERAGE			52.1	47.0	5.0	8.0	7.3	0.8	0.00337	0.00351	0.00344	0.00061	11,978
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	16
SEQUENCE 5	6.0	10.0	96	65.3	59.0	6.3	10.1	9.1	1.0	0.00410	0.00426	0.00418	0.00074	12,345
			97	65.2	58.9	6.3	10.1	9.1	1.0	0.00410	0.00427	0.00418	0.00074	12,332
			98	65.2	58.8	6.3	10.1	9.1	1.0	0.00411	0.00426	0.00419	0.00074	12,299
			99	65.2	58.9	6.3	10.1	9.1	1.0	0.00410	0.00426	0.00418	0.00074	12,337
			100	65.3	58.9	6.3	10.1	9.1	1.0	0.00410	0.00426	0.00418	0.00074	12,331
	COLUMN AVERAGE			65.2	58.9	6.3	10.1	9.1	1.0	0.00410	0.00426	0.00418	0.00074	12,329
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (0-8ft.)

SEQUENCE 6	4.0	2.0	96	13.4	11.6	1.8	2.1	1.8	0.3	0.00106	0.00108	0.00107	0.00019	9,474
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00106	0.00107	0.00107	0.00019	9,515
			98	13.4	11.6	1.8	2.1	1.8	0.3	0.00106	0.00108	0.00107	0.00019	9,474
			99	13.4	11.6	1.8	2.1	1.8	0.3	0.00107	0.00107	0.00107	0.00019	9,477
			100	13.4	11.6	1.8	2.1	1.8	0.3	0.00106	0.00108	0.00107	0.00019	9,469
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00106	0.00108	0.00107	0.00019	9,482
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	19
SEQUENCE 7	4.0	4.0	96	25.6	23.2	2.4	4.0	3.6	0.4	0.00212	0.00218	0.00215	0.00038	9,434
			97	25.6	23.2	2.4	4.0	3.6	0.4	0.00213	0.00217	0.00215	0.00038	9,448
			98	25.5	23.0	2.5	3.9	3.6	0.4	0.00212	0.00216	0.00214	0.00038	9,401
			99	25.6	23.1	2.5	3.9	3.6	0.4	0.00212	0.00217	0.00215	0.00038	9,415
			100	25.6	23.1	2.5	4.0	3.6	0.4	0.00212	0.00217	0.00214	0.00038	9,446
	COLUMN AVERAGE			25.6	23.1	2.5	3.9	3.6	0.4	0.00212	0.00217	0.00215	0.00038	9,429
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	21
SEQUENCE 8	4.0	6.0	96	38.6	34.9	3.8	6.0	5.4	0.6	0.00305	0.00317	0.00311	0.00055	9,815
			97	38.6	34.9	3.7	6.0	5.4	0.6	0.00306	0.00316	0.00311	0.00055	9,806
			98	38.7	34.9	3.7	6.0	5.4	0.6	0.00306	0.00317	0.00311	0.00055	9,822
			99	38.7	34.9	3.8	6.0	5.4	0.6	0.00306	0.00316	0.00311	0.00055	9,838
			100	38.6	34.9	3.7	6.0	5.4	0.6	0.00305	0.00317	0.00311	0.00055	9,816
	COLUMN AVERAGE			38.6	34.9	3.7	6.0	5.4	0.6	0.00306	0.00317	0.00311	0.00055	9,819
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 9	4.0	8.0	96	51.8	46.8	5.0	8.0	7.2	0.8	0.00386	0.00399	0.00392	0.00069	10,433
			97	51.7	46.7	5.0	8.0	7.2	0.8	0.00385	0.00399	0.00392	0.00069	10,420
			98	51.7	46.7	5.0	8.0	7.2	0.8	0.00386	0.00399	0.00392	0.00069	10,405
			99	51.8	46.8	5.0	8.0	7.2	0.8	0.00385	0.00399	0.00392	0.00069	10,434
			100	51.8	46.7	5.0	8.0	7.2	0.8	0.00386	0.00399	0.00392	0.00069	10,424
	COLUMN AVERAGE			51.8	46.7	5.0	8.0	7.2	0.8	0.00386	0.00399	0.00392	0.00069	10,423
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (0-8ft.)

SEQUENCE 10	4.0	10.0	96	64.8	58.5	6.3	10.0	9.0	1.0	0.00458	0.00477	0.00467	0.00082	10,953
			97	64.8	58.5	6.3	10.0	9.0	1.0	0.00458	0.00477	0.00468	0.00082	10,947
			98	64.8	58.5	6.3	10.0	9.0	1.0	0.00458	0.00476	0.00467	0.00082	10,958
			99	64.7	58.4	6.3	10.0	9.0	1.0	0.00458	0.00476	0.00467	0.00082	10,935
			100	64.8	58.5	6.3	10.0	9.0	1.0	0.00458	0.00476	0.00467	0.00082	10,961
	COLUMN AVERAGE			64.8	58.4	6.3	10.0	9.0	1.0	0.00458	0.00476	0.00467	0.00082	10,951
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	10
SEQUENCE 11	2.0	2.0	96	13.3	11.2	2.2	2.1	1.7	0.3	0.00132	0.00133	0.00132	0.00023	7,413
			97	13.3	11.1	2.2	2.1	1.7	0.3	0.00131	0.00133	0.00132	0.00023	7,380
			98	13.3	11.1	2.2	2.0	1.7	0.3	0.00132	0.00133	0.00132	0.00023	7,345
			99	13.3	11.1	2.2	2.1	1.7	0.3	0.00131	0.00132	0.00132	0.00023	7,373
			100	13.2	11.1	2.2	2.0	1.7	0.3	0.00131	0.00133	0.00132	0.00023	7,330
	COLUMN AVERAGE			13.3	11.1	2.2	2.1	1.7	0.3	0.00131	0.00133	0.00132	0.00023	7,368
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	32
SEQUENCE 12	2.0	4.0	96	24.8	22.3	2.4	3.8	3.4	0.4	0.00265	0.00267	0.00266	0.00047	7,352
			97	24.8	22.4	2.4	3.8	3.5	0.4	0.00264	0.00267	0.00266	0.00047	7,365
			98	24.8	22.4	2.4	3.8	3.5	0.4	0.00264	0.00268	0.00266	0.00047	7,368
			99	24.8	22.3	2.5	3.8	3.4	0.4	0.00265	0.00267	0.00266	0.00047	7,337
			100	24.8	22.4	2.5	3.8	3.5	0.4	0.00264	0.00268	0.00266	0.00047	7,359
	COLUMN AVERAGE			24.8	22.3	2.4	3.8	3.5	0.4	0.00264	0.00267	0.00266	0.00047	7,356
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 13	2.0	6.0	96	37.9	34.1	3.8	5.8	5.3	0.6	0.00367	0.00374	0.00370	0.00065	8,057
			97	37.9	34.1	3.8	5.8	5.3	0.6	0.00367	0.00375	0.00371	0.00065	8,051
			98	37.9	34.1	3.8	5.8	5.3	0.6	0.00366	0.00374	0.00370	0.00065	8,071
			99	37.9	34.2	3.8	5.9	5.3	0.6	0.00366	0.00374	0.00370	0.00065	8,081
			100	37.8	34.0	3.7	5.8	5.3	0.6	0.00366	0.00374	0.00370	0.00065	8,046
	COLUMN AVERAGE			37.9	34.1	3.8	5.8	5.3	0.6	0.00367	0.00374	0.00370	0.00065	8,061
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	15

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (0-8ft.)

SEQUENCE 14	2.0	8.0	96	50.7	45.7	5.0	7.8	7.1	0.8	0.00447	0.00462	0.00454	0.00080	8,804
			97	50.7	45.7	5.0	7.8	7.1	0.8	0.00447	0.00460	0.00453	0.00080	8,816
			98	50.7	45.6	5.1	7.8	7.0	0.8	0.00446	0.00461	0.00454	0.00080	8,803
			99	50.7	45.7	5.1	7.8	7.1	0.8	0.00446	0.00461	0.00454	0.00080	8,813
			100	50.7	45.7	5.0	7.8	7.0	0.8	0.00446	0.00461	0.00453	0.00080	8,812
	COLUMN AVERAGE			50.7	45.7	5.1	7.8	7.0	0.8	0.00447	0.00461	0.00454	0.00080	8,809
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	6
SEQUENCE 15	2.0	10.0	96	63.5	57.2	6.4	9.8	8.8	1.0	0.00526	0.00547	0.00536	0.00095	9,331
			97	63.6	57.3	6.3	9.8	8.8	1.0	0.00526	0.00547	0.00536	0.00095	9,352
			98	63.5	57.2	6.4	9.8	8.8	1.0	0.00525	0.00547	0.00536	0.00095	9,336
			99	63.6	57.2	6.4	9.8	8.8	1.0	0.00525	0.00547	0.00536	0.00095	9,338
			100	63.5	57.1	6.3	9.8	8.8	1.0	0.00525	0.00546	0.00536	0.00094	9,334
	COLUMN AVERAGE			63.5	57.2	6.3	9.8	8.8	1.0	0.00525	0.00547	0.00536	0.00095	9,338
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	8

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

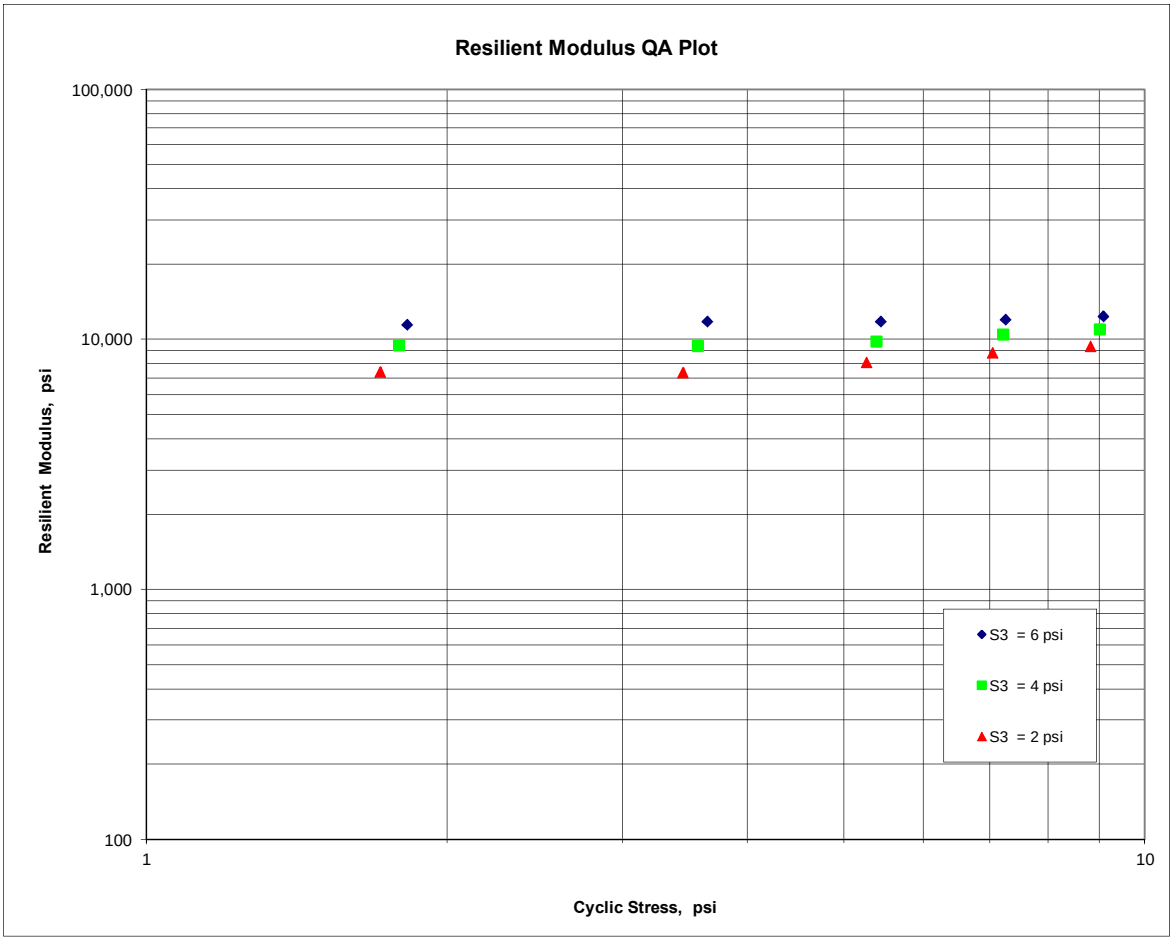
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-51 (0-8ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.5% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	5,582
K2 =	0.09340
K5 =	0.33135
R^2 =	0.94

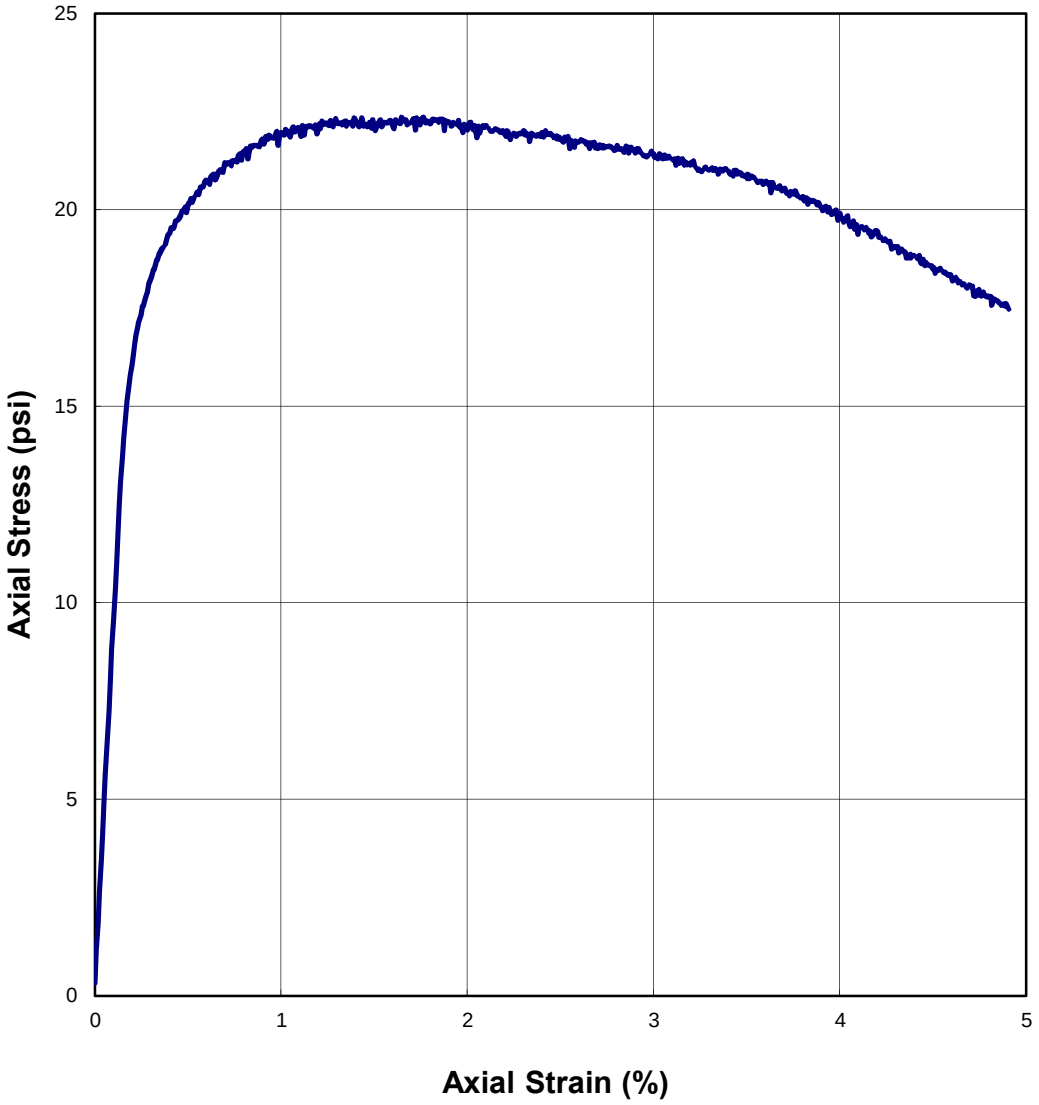


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-51 (0-8ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.5% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-28-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-51

SOURCE OF MATERIAL: Boring B-51 (8-9ft.)

1.	*SAMPLING DATE:*	5/22/2013
2.	*SAMPLE NUMBER:*	B-51
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.66
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.7
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.7
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1197.27
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1197.27
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	10.6
	MAX. DRY DENSITY, pcf	118.2
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	10.6
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	10.4
	COMPACTION DRY DENSITY, $\gamma_{d,}$ *pcf*	112.4
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	10.6
	COMPACTION LEVEL ACHIEVED	95.1%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	22
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-31-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-51 (8-9ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 10.6% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-31-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.2	11.8	1.4	2.0	1.8	0.2	0.00107	0.00104	0.00105	0.00019	9,784
			97	13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00103	0.00104	0.00018	9,934
			98	13.2	11.8	1.4	2.0	1.8	0.2	0.00106	0.00104	0.00105	0.00018	9,839
			99	13.3	11.9	1.4	2.1	1.8	0.2	0.00106	0.00103	0.00105	0.00018	9,926
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00103	0.00104	0.00018	9,930
	COLUMN AVERAGE			13.3	11.9	1.4	2.0	1.8	0.2	0.00106	0.00103	0.00105	0.00018	9,883
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	68

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (8-9ft.)

SEQUENCE 2	6.0	4.0	96	26.2	23.7	2.5	4.0	3.7	0.4	0.00204	0.00200	0.00202	0.00036	10,243
			97	26.1	23.7	2.5	4.0	3.6	0.4	0.00205	0.00199	0.00202	0.00036	10,219
			98	26.2	23.8	2.5	4.0	3.7	0.4	0.00203	0.00200	0.00202	0.00036	10,280
			99	26.2	23.7	2.5	4.0	3.7	0.4	0.00204	0.00199	0.00201	0.00036	10,278
			100	26.1	23.7	2.5	4.0	3.6	0.4	0.00204	0.00199	0.00202	0.00036	10,233
	COLUMN AVERAGE			26.2	23.7	2.5	4.0	3.7	0.4	0.00204	0.00200	0.00202	0.00036	10,250
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	27
SEQUENCE 3	6.0	6.0	96	39.3	35.5	3.8	6.1	5.5	0.6	0.00304	0.00296	0.00300	0.00053	10,330
			97	39.1	35.3	3.8	6.0	5.4	0.6	0.00303	0.00295	0.00299	0.00053	10,293
			98	39.2	35.5	3.8	6.1	5.5	0.6	0.00303	0.00296	0.00300	0.00053	10,334
			99	39.1	35.3	3.8	6.0	5.4	0.6	0.00303	0.00296	0.00300	0.00053	10,287
			100	39.2	35.4	3.8	6.0	5.5	0.6	0.00303	0.00296	0.00299	0.00053	10,321
	COLUMN AVERAGE			39.2	35.4	3.8	6.0	5.5	0.6	0.00303	0.00296	0.00300	0.00053	10,313
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	22
SEQUENCE 4	6.0	8.0	96	52.3	47.2	5.1	8.1	7.3	0.8	0.00394	0.00389	0.00392	0.00069	10,518
			97	52.3	47.2	5.1	8.1	7.3	0.8	0.00394	0.00388	0.00391	0.00069	10,534
			98	52.3	47.2	5.1	8.1	7.3	0.8	0.00394	0.00389	0.00391	0.00069	10,531
			99	52.3	47.2	5.1	8.1	7.3	0.8	0.00394	0.00389	0.00392	0.00069	10,523
			100	52.4	47.3	5.1	8.1	7.3	0.8	0.00394	0.00389	0.00391	0.00069	10,547
	COLUMN AVERAGE			52.3	47.2	5.1	8.1	7.3	0.8	0.00394	0.00389	0.00391	0.00069	10,531
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 5	6.0	10.0	96	65.5	59.1	6.4	10.1	9.1	1.0	0.00478	0.00472	0.00475	0.00084	10,870
			97	65.6	59.2	6.4	10.1	9.1	1.0	0.00478	0.00471	0.00475	0.00084	10,877
			98	65.5	59.2	6.4	10.1	9.1	1.0	0.00477	0.00472	0.00475	0.00084	10,878
			99	65.5	59.2	6.4	10.1	9.1	1.0	0.00477	0.00472	0.00474	0.00084	10,882
			100	65.6	59.2	6.4	10.1	9.1	1.0	0.00477	0.00471	0.00474	0.00084	10,896
	COLUMN AVERAGE			65.5	59.2	6.4	10.1	9.1	1.0	0.00478	0.00472	0.00475	0.00084	10,881
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	10

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (8-9ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.8	2.1	1.8	0.3	0.00125	0.00124	0.00125	0.00022	8,170
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00126	0.00124	0.00125	0.00022	8,086
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00126	0.00125	0.00125	0.00022	8,159
			99	13.4	11.6	1.8	2.1	1.8	0.3	0.00125	0.00124	0.00125	0.00022	8,120
			100	13.4	11.6	1.8	2.1	1.8	0.3	0.00126	0.00124	0.00125	0.00022	8,144
	COLUMN AVERAGE			13.4	11.6	1.8	2.1	1.8	0.3	0.00126	0.00124	0.00125	0.00022	8,136
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	33
SEQUENCE 7	4.0	4.0	96	25.8	23.3	2.5	4.0	3.6	0.4	0.00251	0.00245	0.00248	0.00044	8,202
			97	25.7	23.3	2.5	4.0	3.6	0.4	0.00250	0.00246	0.00248	0.00044	8,183
			98	25.7	23.2	2.5	4.0	3.6	0.4	0.00251	0.00246	0.00248	0.00044	8,163
			99	25.8	23.3	2.5	4.0	3.6	0.4	0.00252	0.00245	0.00248	0.00044	8,200
			100	25.8	23.4	2.5	4.0	3.6	0.4	0.00251	0.00245	0.00248	0.00044	8,216
	COLUMN AVERAGE			25.8	23.3	2.5	4.0	3.6	0.4	0.00251	0.00245	0.00248	0.00044	8,193
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	20
SEQUENCE 8	4.0	6.0	96	39.0	35.2	3.8	6.0	5.4	0.6	0.00361	0.00356	0.00358	0.00063	8,563
			97	38.9	35.1	3.7	6.0	5.4	0.6	0.00362	0.00356	0.00359	0.00063	8,539
			98	39.0	35.2	3.8	6.0	5.4	0.6	0.00362	0.00355	0.00358	0.00063	8,566
			99	38.9	35.1	3.8	6.0	5.4	0.6	0.00362	0.00355	0.00359	0.00063	8,546
			100	38.9	35.1	3.8	6.0	5.4	0.6	0.00362	0.00356	0.00359	0.00063	8,536
	COLUMN AVERAGE			38.9	35.1	3.8	6.0	5.4	0.6	0.00362	0.00356	0.00359	0.00063	8,550
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	14
SEQUENCE 9	4.0	8.0	96	52.1	47.1	5.1	8.0	7.3	0.8	0.00454	0.00448	0.00451	0.00080	9,109
			97	52.1	47.0	5.1	8.0	7.3	0.8	0.00453	0.00449	0.00451	0.00080	9,096
			98	52.1	47.0	5.1	8.0	7.2	0.8	0.00453	0.00448	0.00451	0.00080	9,100
			99	52.2	47.1	5.1	8.0	7.3	0.8	0.00454	0.00447	0.00450	0.00080	9,131
			100	52.1	47.1	5.0	8.0	7.3	0.8	0.00454	0.00448	0.00451	0.00080	9,117
	COLUMN AVERAGE			52.1	47.1	5.1	8.0	7.3	0.8	0.00454	0.00448	0.00451	0.00080	9,110
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	14

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (8-9ft.)

SEQUENCE 10	4.0	10.0	96	65.2	58.8	6.4	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00094	9,600
			97	65.2	58.8	6.4	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00095	9,586
			98	65.3	58.9	6.4	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00094	9,608
			99	65.3	59.0	6.3	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00095	9,616
			100	65.2	58.8	6.4	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00095	9,592
	COLUMN AVERAGE			65.2	58.9	6.4	10.1	9.1	1.0	0.00538	0.00532	0.00535	0.00095	9,601
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 11	2.0	2.0	96	13.4	11.3	2.2	2.1	1.7	0.3	0.00155	0.00153	0.00154	0.00027	6,396
			97	13.4	11.2	2.2	2.1	1.7	0.3	0.00156	0.00153	0.00154	0.00027	6,351
			98	13.5	11.3	2.2	2.1	1.7	0.3	0.00155	0.00153	0.00154	0.00027	6,395
			99	13.5	11.3	2.2	2.1	1.7	0.3	0.00156	0.00153	0.00154	0.00027	6,359
			100	13.5	11.3	2.2	2.1	1.7	0.3	0.00155	0.00153	0.00154	0.00027	6,384
	COLUMN AVERAGE			13.5	11.3	2.2	2.1	1.7	0.3	0.00155	0.00153	0.00154	0.00027	6,377
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	21
SEQUENCE 12	2.0	4.0	96	25.1	22.7	2.5	3.9	3.5	0.4	0.00310	0.00304	0.00307	0.00054	6,441
			97	25.2	22.7	2.5	3.9	3.5	0.4	0.00310	0.00304	0.00307	0.00054	6,444
			98	25.1	22.6	2.5	3.9	3.5	0.4	0.00310	0.00304	0.00307	0.00054	6,428
			99	25.2	22.7	2.5	3.9	3.5	0.4	0.00311	0.00304	0.00308	0.00054	6,436
			100	25.1	22.6	2.5	3.9	3.5	0.4	0.00310	0.00306	0.00308	0.00054	6,418
	COLUMN AVERAGE			25.1	22.7	2.5	3.9	3.5	0.4	0.00310	0.00304	0.00307	0.00054	6,434
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	11
SEQUENCE 13	2.0	6.0	96	38.3	34.5	3.8	5.9	5.3	0.6	0.00430	0.00425	0.00428	0.00076	7,038
			97	38.2	34.4	3.8	5.9	5.3	0.6	0.00430	0.00425	0.00427	0.00076	7,025
			98	38.2	34.4	3.8	5.9	5.3	0.6	0.00431	0.00425	0.00428	0.00076	7,025
			99	38.3	34.5	3.8	5.9	5.3	0.6	0.00430	0.00426	0.00428	0.00076	7,033
			100	38.3	34.6	3.8	5.9	5.3	0.6	0.00430	0.00425	0.00428	0.00076	7,049
	COLUMN AVERAGE			38.2	34.5	3.8	5.9	5.3	0.6	0.00430	0.00425	0.00428	0.00076	7,034
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	10

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-51 Material Source: Boring B-51 (8-9ft.)

SEQUENCE 14	2.0	8.0	96	51.1	46.0	5.1	7.9	7.1	0.8	0.00529	0.00521	0.00525	0.00093	7,654
			97	51.1	46.0	5.1	7.9	7.1	0.8	0.00529	0.00521	0.00525	0.00093	7,653
			98	51.2	46.1	5.1	7.9	7.1	0.8	0.00529	0.00521	0.00525	0.00093	7,664
			99	51.2	46.2	5.1	7.9	7.1	0.8	0.00528	0.00522	0.00525	0.00093	7,670
			100	51.2	46.2	5.1	7.9	7.1	0.8	0.00529	0.00521	0.00525	0.00093	7,679
	COLUMN AVERAGE			51.2	46.1	5.1	7.9	7.1	0.8	0.00529	0.00521	0.00525	0.00093	7,664
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	11
SEQUENCE 15	2.0	10.0	96	64.4	58.0	6.4	9.9	8.9	1.0	0.00626	0.00617	0.00622	0.00110	8,139
			97	64.0	57.6	6.4	9.9	8.9	1.0	0.00625	0.00617	0.00621	0.00110	8,100
			98	64.2	57.9	6.4	9.9	8.9	1.0	0.00624	0.00617	0.00620	0.00110	8,138
			99	64.0	57.6	6.4	9.9	8.9	1.0	0.00625	0.00617	0.00621	0.00110	8,096
			100	64.2	57.8	6.4	9.9	8.9	1.0	0.00626	0.00616	0.00621	0.00110	8,122
	COLUMN AVERAGE			64.2	57.8	6.4	9.9	8.9	1.0	0.00625	0.00617	0.00621	0.00110	8,119
	STANDARD DEV.			0.2	0.2	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	20

TESTED BY RLB DATE 05-31-2013

Boudreau Engineering, Inc.

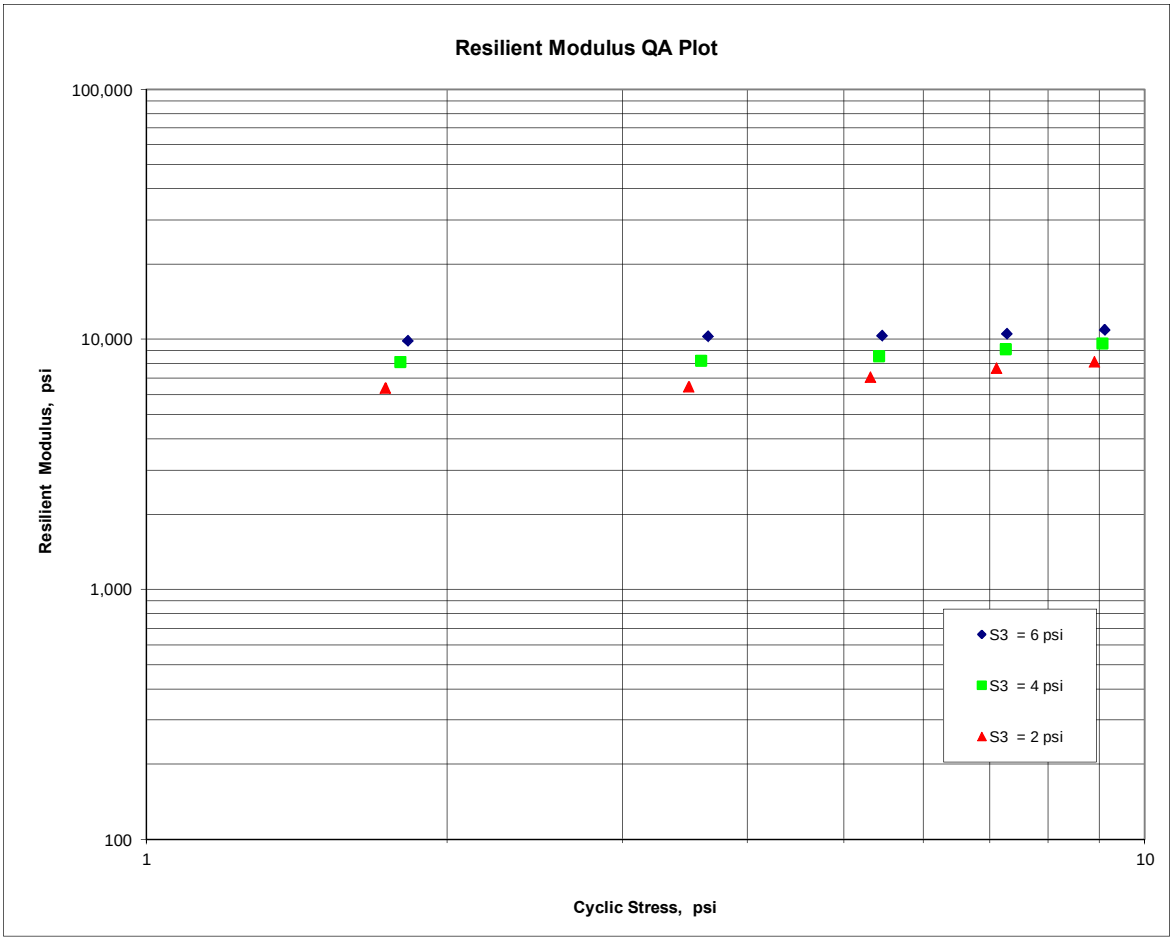
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-51 (8-9ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.6% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	4,768
K2 =	0.10187
K5 =	0.33670
R^2 =	0.95

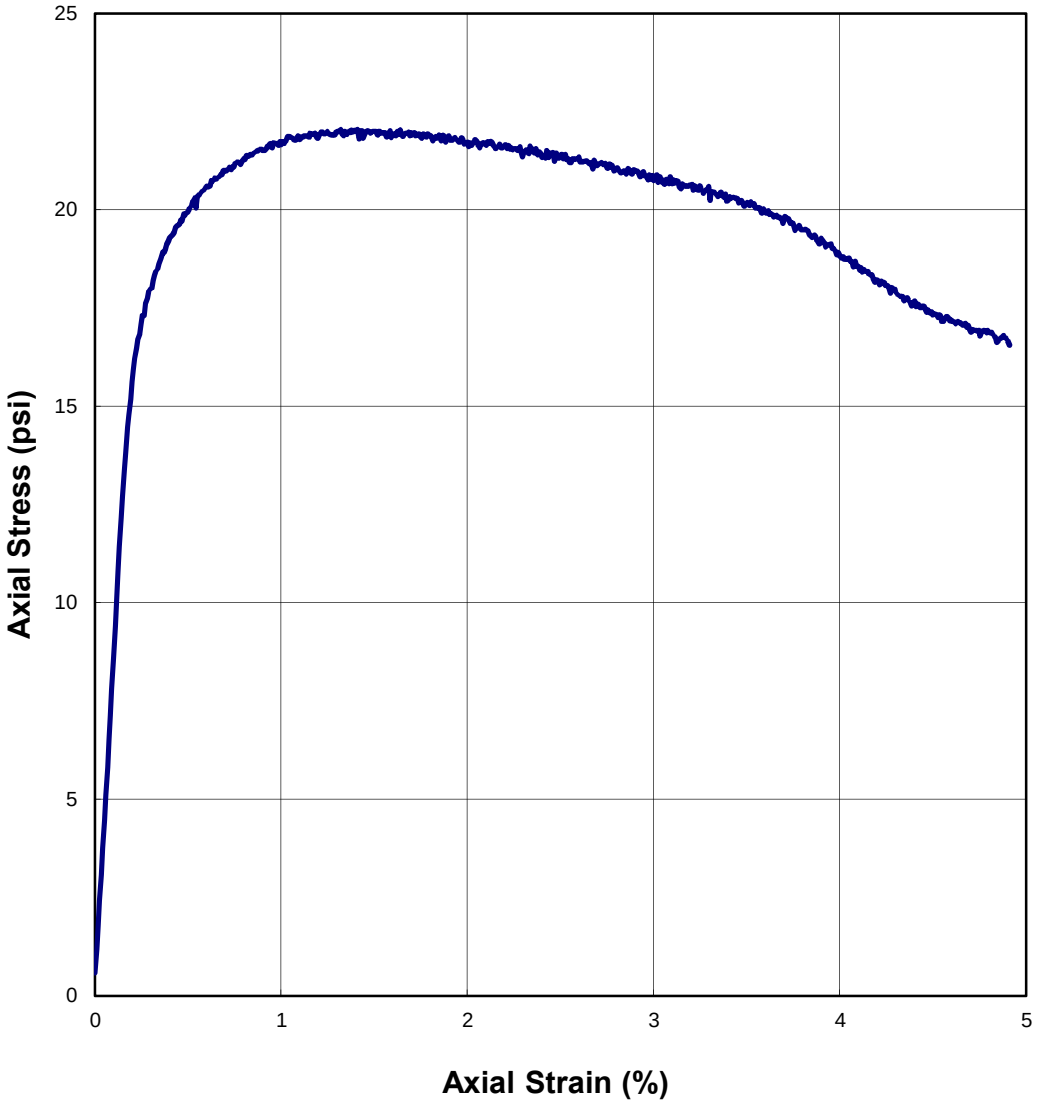


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-51 (8-9ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 10.6% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-31-2013



Boudreau Engineering, Inc.

AASHTO T 307-99
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials
(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-58

SOURCE OF MATERIAL: Boring B-58 (8-16ft.)

1.	*SAMPLING DATE:*	5/2/2013
2.	*SAMPLE NUMBER:*	B-58
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.63
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.6
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.5
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1250.23
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1250.23
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	11.8
	MAX. DRY DENSITY, pcf	122.1
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	11.8
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	11.7
	COMPACTION DRY DENSITY, $\gamma_{d,}$ *pcf*	116.8
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	11.8
	COMPACTION LEVEL ACHIEVED	95.7%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	31
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-21-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-58 (8-16ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 11.8% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-21-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	____._	____._	_	____._	____._	____._	____._	____._	____._	_._____	_._____	_._____	_._____	____.
SEQUENCE 1	6.0	2.0	96	13.2	11.8	1.4	2.0	1.8	0.2	0.00084	0.00087	0.00085	0.00015	12,025
			97	13.3	11.8	1.4	2.0	1.8	0.2	0.00084	0.00087	0.00086	0.00015	12,049
			98	13.2	11.8	1.4	2.0	1.8	0.2	0.00085	0.00086	0.00085	0.00015	12,095
			99	13.3	11.9	1.4	2.0	1.8	0.2	0.00084	0.00087	0.00086	0.00015	12,054
			100	13.3	11.9	1.4	2.0	1.8	0.2	0.00085	0.00087	0.00086	0.00015	12,023
	COLUMN AVERAGE			13.2	11.8	1.4	2.0	1.8	0.2	0.00084	0.00087	0.00086	0.00015	12,049
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	29

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (8-16ft.)

SEQUENCE 2	6.0	4.0	96	26.0	23.5	2.4	4.0	3.6	0.4	0.00161	0.00169	0.00165	0.00029	12,394
			97	25.9	23.5	2.5	4.0	3.6	0.4	0.00161	0.00170	0.00166	0.00029	12,333
			98	25.9	23.5	2.5	4.0	3.6	0.4	0.00161	0.00170	0.00166	0.00029	12,323
			99	26.1	23.6	2.5	4.0	3.6	0.4	0.00161	0.00171	0.00166	0.00029	12,370
			100	26.0	23.5	2.5	4.0	3.6	0.4	0.00161	0.00169	0.00165	0.00029	12,395
	COLUMN AVERAGE			26.0	23.5	2.5	4.0	3.6	0.4	0.00161	0.00170	0.00166	0.00029	12,363
	STANDARD DEV.			0.1	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	34
SEQUENCE 3	6.0	6.0	96	38.7	34.9	3.8	6.0	5.4	0.6	0.00251	0.00263	0.00257	0.00046	11,827
			97	38.7	35.0	3.7	6.0	5.4	0.6	0.00251	0.00262	0.00256	0.00045	11,875
			98	38.8	35.0	3.7	6.0	5.4	0.6	0.00251	0.00263	0.00257	0.00046	11,873
			99	38.7	35.0	3.8	6.0	5.4	0.6	0.00251	0.00262	0.00256	0.00045	11,877
			100	38.7	35.0	3.7	6.0	5.4	0.6	0.00251	0.00262	0.00257	0.00046	11,872
	COLUMN AVERAGE			38.7	35.0	3.7	6.0	5.4	0.6	0.00251	0.00262	0.00256	0.00046	11,865
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	21
SEQUENCE 4	6.0	8.0	96	51.6	46.5	5.1	8.0	7.2	0.8	0.00340	0.00350	0.00345	0.00061	11,740
			97	51.6	46.6	5.0	8.0	7.2	0.8	0.00340	0.00350	0.00345	0.00061	11,739
			98	51.6	46.6	5.0	8.0	7.2	0.8	0.00340	0.00351	0.00345	0.00061	11,737
			99	51.7	46.6	5.0	8.0	7.2	0.8	0.00341	0.00350	0.00345	0.00061	11,752
			100	51.6	46.6	5.0	8.0	7.2	0.8	0.00340	0.00349	0.00345	0.00061	11,763
	COLUMN AVERAGE			51.6	46.6	5.0	8.0	7.2	0.8	0.00340	0.00350	0.00345	0.00061	11,746
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 5	6.0	10.0	96	64.6	58.3	6.3	10.0	9.0	1.0	0.00422	0.00430	0.00426	0.00076	11,897
			97	64.5	58.2	6.3	10.0	9.0	1.0	0.00421	0.00431	0.00426	0.00076	11,885
			98	64.7	58.3	6.3	10.0	9.0	1.0	0.00421	0.00431	0.00426	0.00076	11,914
			99	64.7	58.4	6.3	10.0	9.0	1.0	0.00422	0.00431	0.00426	0.00076	11,920
			100	64.6	58.3	6.3	10.0	9.0	1.0	0.00421	0.00430	0.00425	0.00076	11,926
	COLUMN AVERAGE			64.6	58.3	6.3	10.0	9.0	1.0	0.00422	0.00430	0.00426	0.00076	11,908
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	17

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (8-16ft.)

SEQUENCE 6	4.0	2.0	96	13.5	11.7	1.8	2.1	1.8	0.3	0.00096	0.00096	0.00096	0.00017	10,596
			97	13.5	11.7	1.8	2.1	1.8	0.3	0.00096	0.00097	0.00096	0.00017	10,573
			98	13.5	11.8	1.8	2.1	1.8	0.3	0.00096	0.00097	0.00096	0.00017	10,655
			99	13.4	11.6	1.8	2.1	1.8	0.3	0.00094	0.00097	0.00096	0.00017	10,581
			100	13.5	11.7	1.8	2.1	1.8	0.3	0.00095	0.00097	0.00096	0.00017	10,573
	COLUMN AVERAGE			13.5	11.7	1.8	2.1	1.8	0.3	0.00095	0.00097	0.00096	0.00017	10,596
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	34
SEQUENCE 7	4.0	4.0	96	25.7	23.3	2.5	4.0	3.6	0.4	0.00191	0.00195	0.00193	0.00034	10,486
			97	25.7	23.2	2.5	4.0	3.6	0.4	0.00192	0.00195	0.00194	0.00034	10,432
			98	25.7	23.2	2.4	4.0	3.6	0.4	0.00191	0.00195	0.00193	0.00034	10,458
			99	25.6	23.2	2.5	4.0	3.6	0.4	0.00191	0.00195	0.00193	0.00034	10,460
			100	25.7	23.3	2.5	4.0	3.6	0.4	0.00191	0.00196	0.00193	0.00034	10,462
	COLUMN AVERAGE			25.7	23.2	2.5	4.0	3.6	0.4	0.00191	0.00195	0.00193	0.00034	10,460
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	19
SEQUENCE 8	4.0	6.0	96	38.5	34.8	3.8	5.9	5.4	0.6	0.00286	0.00294	0.00290	0.00051	10,434
			97	38.5	34.8	3.7	5.9	5.4	0.6	0.00286	0.00293	0.00289	0.00051	10,456
			98	38.5	34.7	3.8	5.9	5.4	0.6	0.00286	0.00293	0.00289	0.00051	10,453
			99	38.5	34.8	3.8	6.0	5.4	0.6	0.00286	0.00293	0.00290	0.00051	10,447
			100	38.5	34.8	3.7	5.9	5.4	0.6	0.00286	0.00293	0.00290	0.00051	10,444
	COLUMN AVERAGE			38.5	34.8	3.7	5.9	5.4	0.6	0.00286	0.00293	0.00290	0.00051	10,447
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	8
SEQUENCE 9	4.0	8.0	96	51.5	46.4	5.0	8.0	7.2	0.8	0.00380	0.00388	0.00384	0.00068	10,530
			97	51.5	46.5	5.0	7.9	7.2	0.8	0.00381	0.00387	0.00384	0.00068	10,531
			98	51.5	46.5	5.0	8.0	7.2	0.8	0.00381	0.00387	0.00384	0.00068	10,536
			99	51.5	46.5	5.0	8.0	7.2	0.8	0.00380	0.00388	0.00384	0.00068	10,538
			100	51.5	46.5	5.0	8.0	7.2	0.8	0.00380	0.00388	0.00384	0.00068	10,532
	COLUMN AVERAGE			51.5	46.5	5.0	8.0	7.2	0.8	0.00380	0.00387	0.00384	0.00068	10,533
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	3

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (8-16ft.)

SEQUENCE 10	4.0	10.0	96	64.3	58.0	6.3	9.9	9.0	1.0	0.00470	0.00477	0.00473	0.00084	10,651
			97	64.3	58.0	6.3	9.9	9.0	1.0	0.00470	0.00477	0.00474	0.00084	10,650
			98	64.3	58.0	6.3	9.9	9.0	1.0	0.00470	0.00477	0.00474	0.00084	10,655
			99	64.3	58.0	6.3	9.9	9.0	1.0	0.00470	0.00477	0.00474	0.00084	10,654
			100	64.4	58.0	6.3	9.9	9.0	1.0	0.00469	0.00478	0.00473	0.00084	10,663
	COLUMN AVERAGE			64.3	58.0	6.3	9.9	9.0	1.0	0.00470	0.00477	0.00474	0.00084	10,655
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	5
SEQUENCE 11	2.0	2.0	96	13.6	11.5	2.2	2.1	1.8	0.3	0.00112	0.00113	0.00113	0.00020	8,854
			97	13.7	11.6	2.2	2.1	1.8	0.3	0.00112	0.00114	0.00113	0.00020	8,892
			98	13.7	11.5	2.2	2.1	1.8	0.3	0.00113	0.00113	0.00113	0.00020	8,849
			99	13.7	11.5	2.2	2.1	1.8	0.3	0.00113	0.00114	0.00113	0.00020	8,840
			100	13.6	11.4	2.2	2.1	1.8	0.3	0.00113	0.00113	0.00113	0.00020	8,832
	COLUMN AVERAGE			13.7	11.5	2.2	2.1	1.8	0.3	0.00113	0.00113	0.00113	0.00020	8,853
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	23
SEQUENCE 12	2.0	4.0	96	25.1	22.7	2.5	3.9	3.5	0.4	0.00231	0.00232	0.00232	0.00041	8,511
			97	25.2	22.7	2.4	3.9	3.5	0.4	0.00231	0.00232	0.00231	0.00041	8,553
			98	25.1	22.7	2.5	3.9	3.5	0.4	0.00231	0.00232	0.00232	0.00041	8,517
			99	25.1	22.7	2.4	3.9	3.5	0.4	0.00231	0.00233	0.00232	0.00041	8,532
			100	25.2	22.7	2.5	3.9	3.5	0.4	0.00230	0.00232	0.00231	0.00041	8,540
	COLUMN AVERAGE			25.2	22.7	2.5	3.9	3.5	0.4	0.00231	0.00232	0.00232	0.00041	8,531
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17
SEQUENCE 13	2.0	6.0	96	37.9	34.2	3.8	5.9	5.3	0.6	0.00341	0.00348	0.00344	0.00061	8,627
			97	37.9	34.2	3.7	5.9	5.3	0.6	0.00342	0.00346	0.00344	0.00061	8,638
			98	38.0	34.2	3.8	5.9	5.3	0.6	0.00341	0.00347	0.00344	0.00061	8,647
			99	38.0	34.3	3.7	5.9	5.3	0.6	0.00342	0.00347	0.00344	0.00061	8,659
			100	38.0	34.2	3.8	5.9	5.3	0.6	0.00342	0.00346	0.00344	0.00061	8,646
	COLUMN AVERAGE			38.0	34.2	3.8	5.9	5.3	0.6	0.00342	0.00347	0.00344	0.00061	8,643
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	12

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (8-16ft.)

SEQUENCE 14	2.0	8.0	96	50.8	45.7	5.0	7.8	7.1	0.8	0.00444	0.00453	0.00448	0.00080	8,876
			97	50.8	45.7	5.1	7.8	7.1	0.8	0.00444	0.00452	0.00448	0.00080	8,878
			98	50.8	45.8	5.1	7.8	7.1	0.8	0.00443	0.00452	0.00448	0.00079	8,893
			99	50.9	45.9	5.0	7.9	7.1	0.8	0.00444	0.00452	0.00448	0.00080	8,902
			100	50.9	45.8	5.0	7.9	7.1	0.8	0.00444	0.00452	0.00448	0.00079	8,899
	COLUMN AVERAGE			50.8	45.8	5.0	7.8	7.1	0.8	0.00444	0.00452	0.00448	0.00080	8,890
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	12
SEQUENCE 15	2.0	10.0	96	63.5	57.2	6.4	9.8	8.8	1.0	0.00541	0.00545	0.00543	0.00096	9,155
			97	63.6	57.2	6.3	9.8	8.8	1.0	0.00540	0.00546	0.00543	0.00096	9,172
			98	63.7	57.3	6.3	9.8	8.9	1.0	0.00541	0.00545	0.00543	0.00096	9,185
			99	63.5	57.2	6.4	9.8	8.8	1.0	0.00540	0.00546	0.00543	0.00096	9,167
			100	63.6	57.3	6.3	9.8	8.8	1.0	0.00540	0.00546	0.00543	0.00096	9,176
	COLUMN AVERAGE			63.6	57.2	6.3	9.8	8.8	1.0	0.00540	0.00546	0.00543	0.00096	9,171
	STANDARD DEV.			0.1	0.1	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	11

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

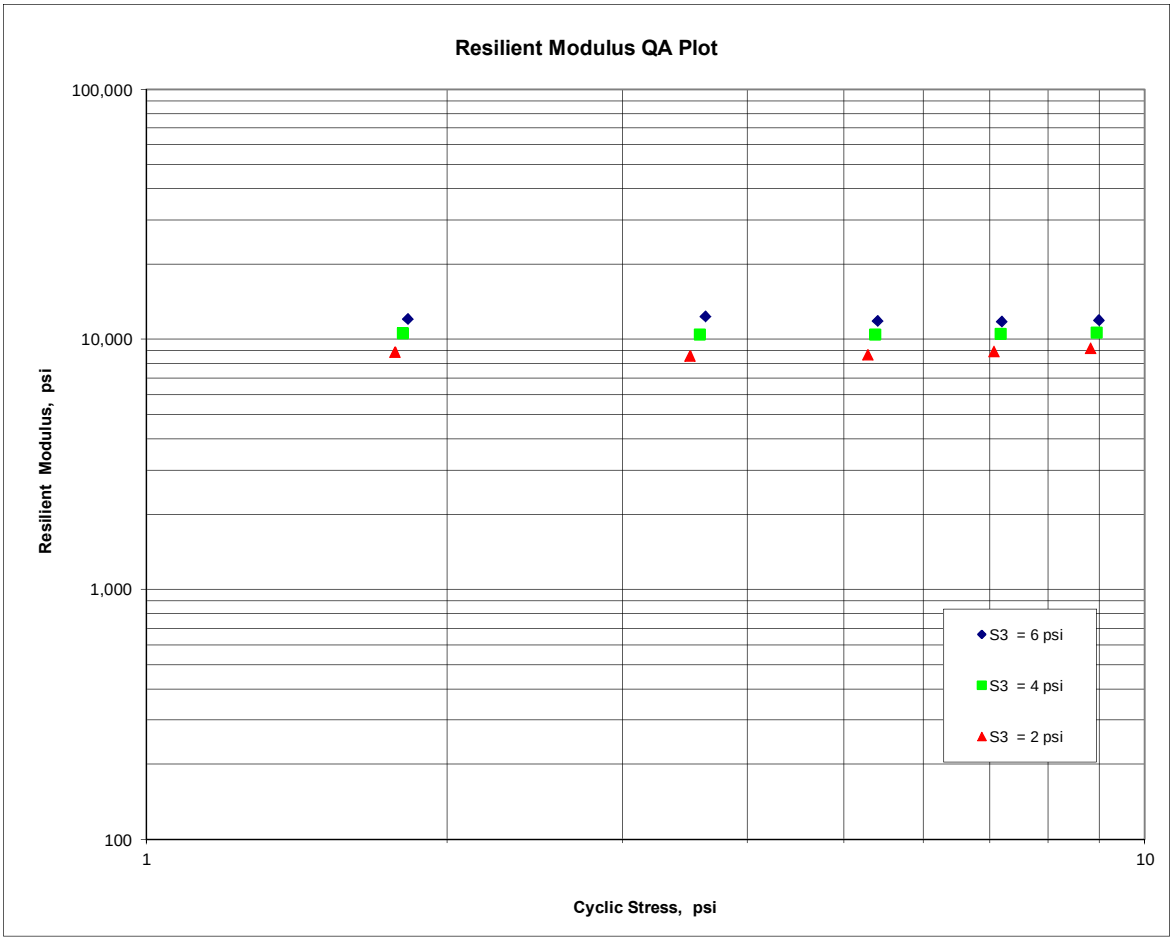
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-58 (8-16ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.8% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	7,232
K2 =	0.00143
K5 =	0.27719
R^2 =	0.98

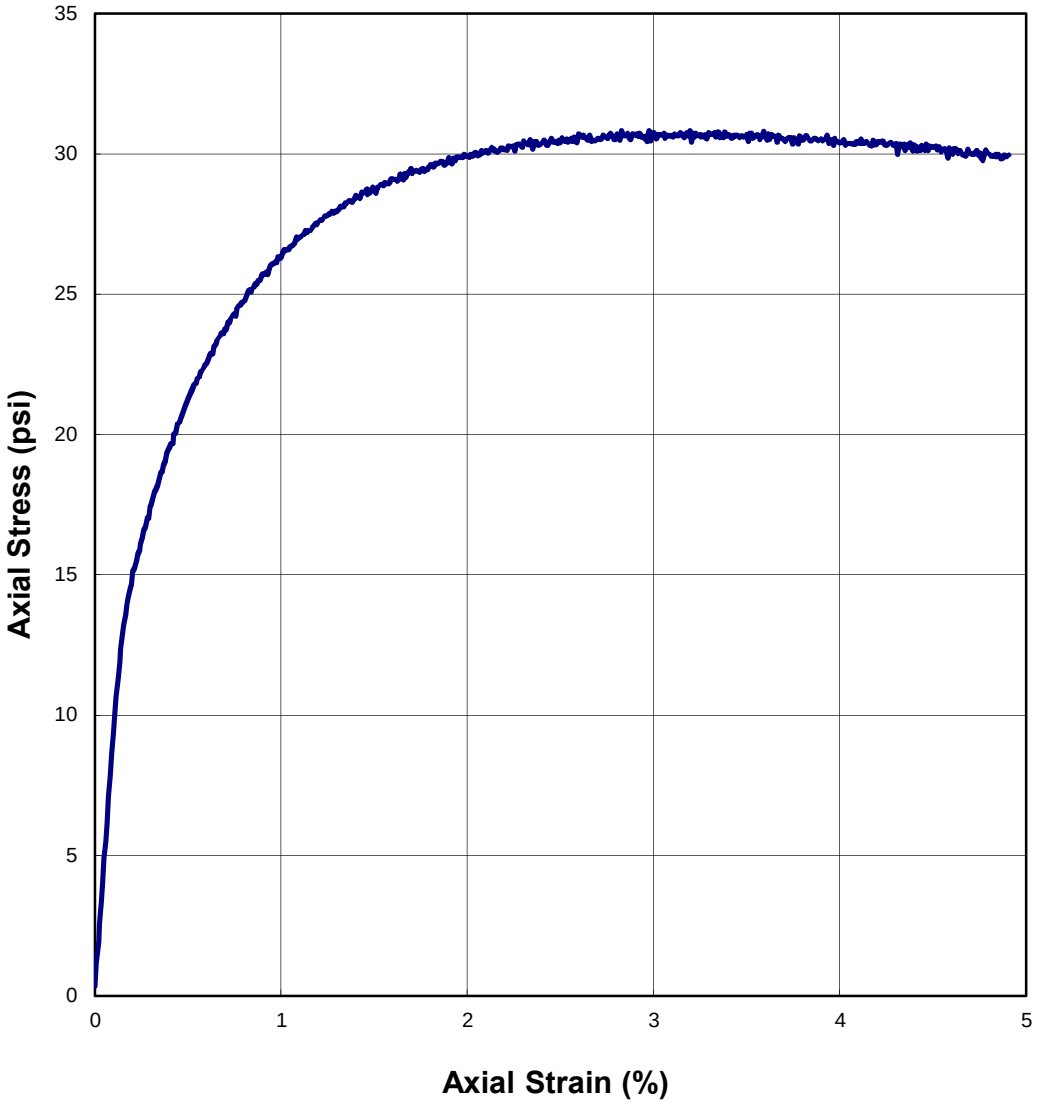


Boudreau Engineering, Inc.

AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-58 (8-16ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.8% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013



Boudreau Engineering, Inc.

AASHTO T 307-99

Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

(RECOMPACTED / THINWALL TUBE SAMPLES)

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

PROJECT NAME: IM-AL 06(900) I-10 Interchange
PROJECT NO.: Thompson #1321230004

DATE RECEIVED: 05-15-2013

QUANTITY (REPRESENTED): N.A.

IDENTIFICATION MARKS: B-58

SOURCE OF MATERIAL: Boring B-58 (16-17ft.)

1.	*SAMPLING DATE:*	5/2/2013
2.	*SAMPLE NUMBER:*	B-58
3.	*LAYER TYPE* (1 - Subgrade, 2 - Base/Subbase)	1
4.	*MATERIAL TYPE* (Type 1 or Type 2)	2
5.	*APPROX. DISTANCE FROM TOP OF SUBGRADE TO SAMPLE, ft (for tube samples)*	N/A
6.	*TEST INFORMATION*	
	PRECONDITIONING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - GREATER THAN 5% PERM. STRAIN? (Y = YES OR N = NO)	N
	TESTING - NUMBER OF LOAD SEQUENCES COMPLETED (0 - 15)	15
7.	*SPECIMEN INFO .:*	
	SPECIMEN DIAM., inch	
	TOP	2.9
	MIDDLE	2.9
	BOTTOM	2.9
	AVERAGE	2.9
	MEMBRANE THICKNESS (1), inch	0.01
	MEMBRANE THICKNESS (2), inch	0.01
	NET DIAM., inch	2.9
	HEIGHT OF SPECIMEN, CAP AND BASE, inch	5.63
	HEIGHT OF CAP AND BASE, inch	0.0
	INITIAL LENGTH, Lo , inch	5.6
	INITIAL AREA, Ao , in^2	6.5
	INITIAL VOLUME Ao Lo , in^3	36.4
	INITIAL WEIGHT , grams (for tube samples)	N/A
8.	*SOIL SPECIMEN WEIGHT(for remolded samples)* :	
	INITIAL WEIGHT OF CONTAINER AND WET SOIL, grams	1243.84
	FINAL WEIGHT OF CONTAINER AND WET SOIL, grams	0.00
	WEIGHT OF WET SOIL USED , grams	1243.84
9.	*SOIL PROPERTIES .:*	
	For Remolded Samples:	
	IN SITU MOISTURE CONTENT (NUCLEAR), %	N/A
	IN SITU WET DENSITY (NUCLEAR), pcf	N/A
	or	
	OPTIMUM MOISTURE CONTENT, %	11.9
	MAX. DRY DENSITY, pcf	121.2
	For Tube Samples:	
	IN SITU MOISTURE CONTENT , %	N/A
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	N/A
	WET DENSITY, pcf	N/A
	DRY DENSITY, pcf	N/A
10.	*SPECIMEN PROPERTIES (for remolded samples):*	
	COMPACTION MOISTURE CONTENT, %	11.9
	MOISTURE CONTENT AFTER RESILIENT MODULUS TESTING, %	11.7
	COMPACTION DRY DENSITY, $\gamma_{d,}$ pcf	116.4
	TARGET DRY DENSITY, % γ_d 96 *TARGET MOISTURE CONTENT, %*	11.9
	COMPACTION LEVEL ACHIEVED	96.0%
11.	*QUICK SHEAR TEST*	
	STRESS - STRAIN PLOT ATTACHED (Y = YES, N = NO)	Y
	TRIAXIAL SHEAR MAXIMUM STRENGTH (MAX. LOAD/X-SECTION AREA), psi	33
	SPECIMEN FAIL DURING TRIAXIAL SHEAR? (Y = YES, N = NO)	Y
12.	*TEST DATE*	05-21-2013

13. GENERAL REMARKS:

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

AASHTO T307-99 REPORT FORM X1.1
Resilient Modulus of Subgrade Soils and Untreated Base/Subbase Materials

1. ***PROJECT NO(S):*** Thompson #1321230004
2. ***PROJECT NAME:*** IM-AL 06(900) I-10 Interchange
3. ***SOURCE OF MATERIAL:*** Boring B-58 (16-17ft.)
4. ***REMOLDING TARGETS:*** 96% Maximum Dry Density at 11.9% Moisture Content
5. ***LAYER TYPE (1 - subgrade, 2 - base/subbase)*** 1
6. ***MATERIAL TYPE (Type 1 or Type 2)*** 2
7. ***TEST DATE*** 05-21-2013
8. ***RESILIENT MODULUS TESTING***

LABORATORY: Boudreau Engineering, Inc.
Lawrenceville, Georgia

COLUMN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PARAMETER	*Chamber Confining Pressure*	*Nominal Maximum Axial Stress*	*Cycle No.*	*Actual Applied Max. Axial Load*	*Actual Applied Cyclic Load*	*Actual Applied Contact Load*	*Actual Applied Max. Axial Stress*	*Actual Applied Cyclic Stress*	*Actual Applied Contact Stress*	*Recov. Def. LVDT #1 Reading*	*Recov. Def. LVDT #2 Reading*	*Average Recov Def. LVDT 1 and 2*	*Resilient Strain*	*Resilient Modulus*
DESIGNATION	S_3	S_{cyclic}	c_1	P_{max}	P_{cyclic}	$P_{contact}$	S_{max}	S_{cyclic}	$S_{contact}$	H_1	H_2	H_{avg}	ε_r	M_r
UNIT	psi	psi	---	lbs	lbs	lbs	psi	psi	psi	in	in	in	in/in	psi
PRECISION	___._	___._	_	____._	___._	___._	___._	___._	___._	_._____	_._____	_._____	_._____	___.
SEQUENCE 1	6.0	2.0	96	13.2	11.9	1.4	2.0	1.8	0.2	0.00073	0.00070	0.00072	0.00013	14,453
			97	13.2	11.8	1.4	2.0	1.8	0.2	0.00072	0.00069	0.00071	0.00013	14,549
			98	13.2	11.8	1.4	2.0	1.8	0.2	0.00073	0.00070	0.00071	0.00013	14,474
			99	13.2	11.8	1.4	2.0	1.8	0.2	0.00073	0.00070	0.00072	0.00013	14,385
			100	13.2	11.8	1.4	2.0	1.8	0.2	0.00072	0.00070	0.00071	0.00013	14,454
	COLUMN AVERAGE			13.2	11.8	1.4	2.0	1.8	0.2	0.00073	0.00070	0.00071	0.00013	14,463
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	59

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (16-17ft.)

SEQUENCE 2	6.0	4.0	96	25.8	23.4	2.5	4.0	3.6	0.4	0.00141	0.00136	0.00138	0.00025	14,755
			97	25.9	23.4	2.5	4.0	3.6	0.4	0.00141	0.00136	0.00138	0.00025	14,760
			98	25.8	23.4	2.5	4.0	3.6	0.4	0.00140	0.00136	0.00138	0.00025	14,743
			99	25.8	23.4	2.4	4.0	3.6	0.4	0.00140	0.00137	0.00138	0.00025	14,706
			100	25.9	23.4	2.5	4.0	3.6	0.4	0.00141	0.00136	0.00139	0.00025	14,706
	COLUMN AVERAGE			25.9	23.4	2.5	4.0	3.6	0.4	0.00141	0.00136	0.00138	0.00025	14,734
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	26
SEQUENCE 3	6.0	6.0	96	38.4	34.7	3.8	5.9	5.4	0.6	0.00220	0.00213	0.00217	0.00039	13,925
			97	38.4	34.7	3.7	5.9	5.4	0.6	0.00220	0.00214	0.00217	0.00039	13,909
			98	38.4	34.7	3.7	5.9	5.4	0.6	0.00221	0.00214	0.00217	0.00039	13,922
			99	38.4	34.6	3.7	5.9	5.4	0.6	0.00220	0.00214	0.00217	0.00039	13,903
			100	38.5	34.7	3.8	6.0	5.4	0.6	0.00219	0.00214	0.00217	0.00039	13,946
	COLUMN AVERAGE			38.4	34.7	3.7	5.9	5.4	0.6	0.00220	0.00214	0.00217	0.00039	13,921
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	17
SEQUENCE 4	6.0	8.0	96	51.1	46.1	5.0	7.9	7.1	0.8	0.00302	0.00296	0.00299	0.00053	13,435
			97	51.2	46.1	5.0	7.9	7.1	0.8	0.00302	0.00296	0.00299	0.00053	13,453
			98	51.2	46.1	5.0	7.9	7.1	0.8	0.00302	0.00295	0.00299	0.00053	13,445
			99	51.1	46.1	5.0	7.9	7.1	0.8	0.00302	0.00295	0.00298	0.00053	13,465
			100	51.1	46.1	5.0	7.9	7.1	0.8	0.00302	0.00296	0.00299	0.00053	13,449
	COLUMN AVERAGE			51.1	46.1	5.0	7.9	7.1	0.8	0.00302	0.00295	0.00299	0.00053	13,449
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	11
SEQUENCE 5	6.0	10.0	96	64.0	57.7	6.3	9.9	8.9	1.0	0.00377	0.00371	0.00374	0.00066	13,439
			97	64.0	57.7	6.3	9.9	8.9	1.0	0.00377	0.00371	0.00374	0.00066	13,442
			98	64.0	57.7	6.3	9.9	8.9	1.0	0.00377	0.00370	0.00374	0.00066	13,443
			99	64.0	57.7	6.3	9.9	8.9	1.0	0.00378	0.00370	0.00374	0.00066	13,450
			100	64.0	57.7	6.3	9.9	8.9	1.0	0.00378	0.00369	0.00373	0.00066	13,455
	COLUMN AVERAGE			64.0	57.7	6.3	9.9	8.9	1.0	0.00377	0.00370	0.00374	0.00066	13,446
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	6

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (16-17ft.)

SEQUENCE 6	4.0	2.0	96	13.4	11.6	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,776
			97	13.4	11.6	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,808
			98	13.5	11.7	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,846
			99	13.5	11.7	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,828
			100	13.5	11.7	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,833
	COLUMN AVERAGE			13.4	11.7	1.8	2.1	1.8	0.3	0.00080	0.00078	0.00079	0.00014	12,818
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	27
SEQUENCE 7	4.0	4.0	96	25.5	23.0	2.5	3.9	3.6	0.4	0.00163	0.00159	0.00161	0.00029	12,488
			97	25.5	23.1	2.4	3.9	3.6	0.4	0.00163	0.00158	0.00161	0.00029	12,498
			98	25.5	23.0	2.5	3.9	3.6	0.4	0.00163	0.00158	0.00160	0.00028	12,501
			99	25.5	23.1	2.4	3.9	3.6	0.4	0.00163	0.00158	0.00161	0.00029	12,496
			100	25.5	23.0	2.5	3.9	3.6	0.4	0.00163	0.00158	0.00160	0.00028	12,503
	COLUMN AVERAGE			25.5	23.0	2.5	3.9	3.6	0.4	0.00163	0.00158	0.00161	0.00029	12,497
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	6
SEQUENCE 8	4.0	6.0	96	38.2	34.4	3.7	5.9	5.3	0.6	0.00248	0.00241	0.00244	0.00043	12,269
			97	38.1	34.4	3.7	5.9	5.3	0.6	0.00248	0.00242	0.00245	0.00044	12,224
			98	38.2	34.5	3.7	5.9	5.3	0.6	0.00247	0.00242	0.00245	0.00043	12,277
			99	38.1	34.4	3.7	5.9	5.3	0.6	0.00246	0.00243	0.00245	0.00043	12,249
			100	38.1	34.4	3.7	5.9	5.3	0.6	0.00247	0.00242	0.00244	0.00043	12,268
	COLUMN AVERAGE			38.2	34.4	3.7	5.9	5.3	0.6	0.00247	0.00242	0.00245	0.00043	12,257
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	21
SEQUENCE 9	4.0	8.0	96	50.9	45.9	5.0	7.9	7.1	0.8	0.00334	0.00326	0.00330	0.00059	12,113
			97	50.9	45.9	5.0	7.9	7.1	0.8	0.00334	0.00326	0.00330	0.00059	12,125
			98	50.9	45.9	5.0	7.9	7.1	0.8	0.00334	0.00325	0.00330	0.00059	12,141
			99	50.9	45.8	5.0	7.9	7.1	0.8	0.00334	0.00326	0.00330	0.00059	12,095
			100	51.0	45.9	5.0	7.9	7.1	0.8	0.00333	0.00326	0.00329	0.00059	12,147
	COLUMN AVERAGE			50.9	45.9	5.0	7.9	7.1	0.8	0.00334	0.00326	0.00330	0.00059	12,124
	STANDARD DEV.			0.0	0.1	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	21

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (16-17ft.)

SEQUENCE 10	4.0	10.0	96	63.6	57.3	6.3	9.8	8.9	1.0	0.00418	0.00410	0.00414	0.00074	12,053
			97	63.5	57.2	6.3	9.8	8.8	1.0	0.00418	0.00410	0.00414	0.00074	12,036
			98	63.5	57.2	6.3	9.8	8.8	1.0	0.00417	0.00410	0.00413	0.00073	12,052
			99	63.5	57.2	6.3	9.8	8.9	1.0	0.00417	0.00410	0.00413	0.00073	12,064
			100	63.5	57.2	6.3	9.8	8.9	1.0	0.00417	0.00410	0.00413	0.00073	12,055
	COLUMN AVERAGE			63.5	57.2	6.3	9.8	8.9	1.0	0.00417	0.00410	0.00414	0.00073	12,052
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00000	0.00000	0.00000	10
SEQUENCE 11	2.0	2.0	96	13.6	11.5	2.2	2.1	1.8	0.3	0.00091	0.00091	0.00091	0.00016	10,954
			97	13.6	11.5	2.2	2.1	1.8	0.3	0.00091	0.00090	0.00091	0.00016	10,999
			98	13.7	11.5	2.2	2.1	1.8	0.3	0.00092	0.00090	0.00091	0.00016	11,008
			99	13.6	11.4	2.2	2.1	1.8	0.3	0.00092	0.00091	0.00091	0.00016	10,903
			100	13.6	11.5	2.2	2.1	1.8	0.3	0.00093	0.00089	0.00091	0.00016	10,988
	COLUMN AVERAGE			13.6	11.5	2.2	2.1	1.8	0.3	0.00092	0.00090	0.00091	0.00016	10,970
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	43
SEQUENCE 12	2.0	4.0	96	25.0	22.6	2.5	3.9	3.5	0.4	0.00193	0.00188	0.00190	0.00034	10,334
			97	25.0	22.6	2.5	3.9	3.5	0.4	0.00192	0.00189	0.00190	0.00034	10,319
			98	25.0	22.5	2.4	3.9	3.5	0.4	0.00192	0.00189	0.00191	0.00034	10,305
			99	25.1	22.6	2.5	3.9	3.5	0.4	0.00192	0.00188	0.00190	0.00034	10,352
			100	25.0	22.5	2.5	3.9	3.5	0.4	0.00192	0.00188	0.00190	0.00034	10,309
	COLUMN AVERAGE			25.0	22.6	2.5	3.9	3.5	0.4	0.00192	0.00188	0.00190	0.00034	10,324
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00000	0.00000	0.00000	19
SEQUENCE 13	2.0	6.0	96	37.5	33.7	3.8	5.8	5.2	0.6	0.00293	0.00287	0.00290	0.00052	10,135
			97	37.5	33.7	3.7	5.8	5.2	0.6	0.00292	0.00287	0.00290	0.00051	10,138
			98	37.5	33.8	3.7	5.8	5.2	0.6	0.00293	0.00286	0.00289	0.00051	10,167
			99	37.6	33.8	3.7	5.8	5.2	0.6	0.00293	0.00286	0.00290	0.00051	10,174
			100	37.5	33.7	3.8	5.8	5.2	0.6	0.00294	0.00287	0.00290	0.00052	10,125
	COLUMN AVERAGE			37.5	33.8	3.7	5.8	5.2	0.6	0.00293	0.00287	0.00290	0.00051	10,148
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00001	0.00001	0.00000	0.00000	21

Project Name: IM-AL 06(900) I-10 Interchange Identification Marks: B-58 Material Source: Boring B-58 (16-17ft.)

SEQUENCE 14	2.0	8.0	96	50.2	45.2	5.0	7.8	7.0	0.8	0.00389	0.00381	0.00385	0.00068	10,225
			97	50.1	45.1	5.0	7.8	7.0	0.8	0.00389	0.00381	0.00385	0.00068	10,211
			98	50.1	45.1	5.0	7.8	7.0	0.8	0.00389	0.00381	0.00385	0.00068	10,211
			99	50.2	45.2	5.0	7.8	7.0	0.8	0.00388	0.00382	0.00385	0.00068	10,226
			100	50.1	45.1	5.0	7.8	7.0	0.8	0.00389	0.00382	0.00385	0.00068	10,196
	COLUMN AVERAGE			50.2	45.1	5.0	7.8	7.0	0.8	0.00389	0.00381	0.00385	0.00068	10,214
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	12
SEQUENCE 15	2.0	10.0	96	62.7	56.3	6.3	9.7	8.7	1.0	0.00478	0.00471	0.00475	0.00084	10,341
			97	62.7	56.4	6.3	9.7	8.7	1.0	0.00477	0.00471	0.00474	0.00084	10,351
			98	62.7	56.4	6.3	9.7	8.7	1.0	0.00478	0.00471	0.00475	0.00084	10,348
			99	62.6	56.3	6.3	9.7	8.7	1.0	0.00478	0.00471	0.00474	0.00084	10,337
			100	62.7	56.3	6.3	9.7	8.7	1.0	0.00478	0.00470	0.00474	0.00084	10,350
	COLUMN AVERAGE			62.7	56.3	6.3	9.7	8.7	1.0	0.00478	0.00471	0.00474	0.00084	10,346
	STANDARD DEV.			0.0	0.0	0.0	0.0	0.0	0.0	0.00000	0.00001	0.00000	0.00000	6

TESTED BY RLB DATE 05-21-2013

Boudreau Engineering, Inc.

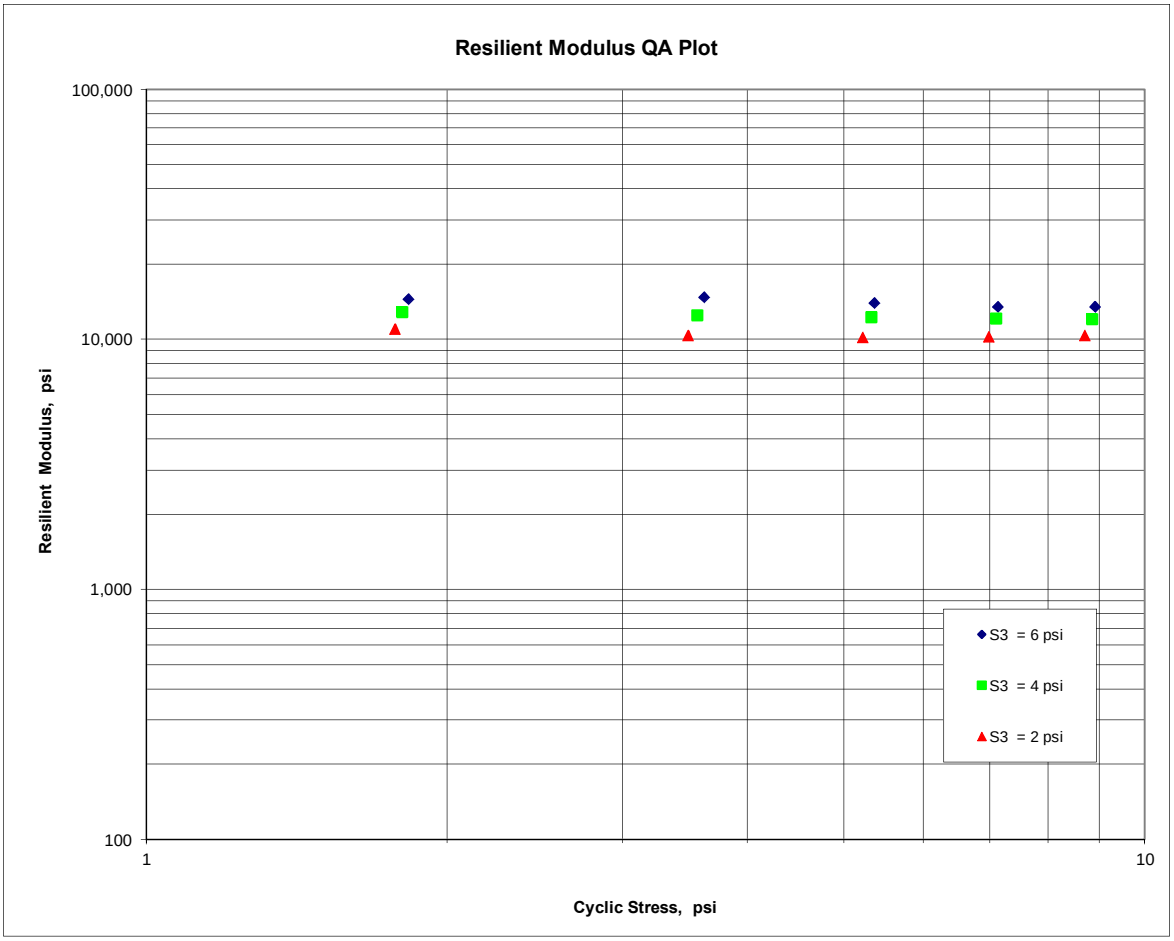
AASHTO T307-99

FIGURE 1 - Logarithmic Plot of Resilient Modulus (M_R) vs Cyclic Stress (S_C)

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-58 (16-17ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.9% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013

$$M_R = K1\,(S_C)^{K2}\,(S_3)^{K5}$$

K1 =	9,204
K2 =	-0.04516
K5 =	0.26918
R^2 =	0.98

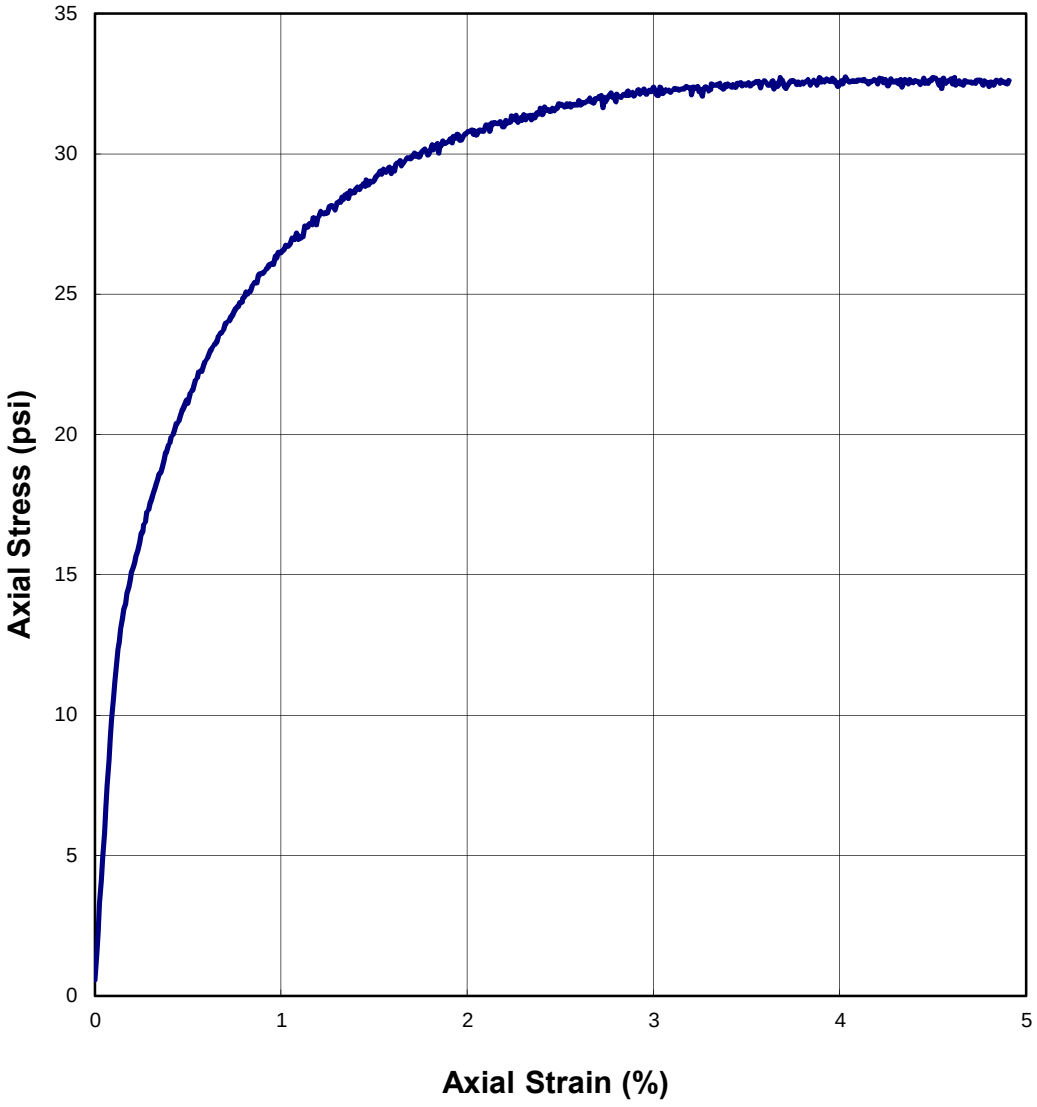


Boudreau Engineering, Inc.

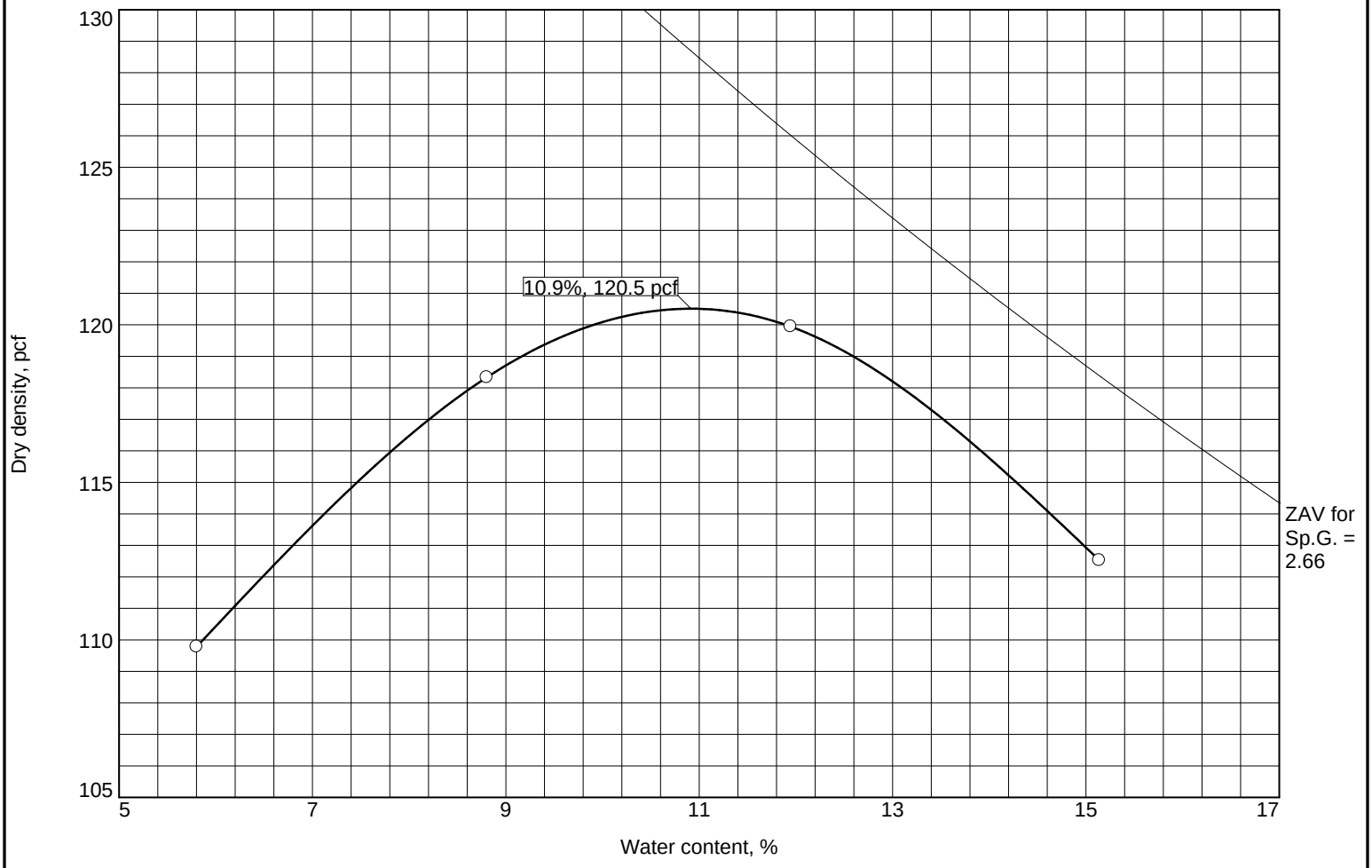
AASHTO T307-99

FIGURE 2 - Quick Shear Stress vs Strain

1. PROJECT NO(S):	Thompson #1321230004
2. PROJECT NAME:	IM-AL 06(900) I-10 Interchange
3. SOURCE OF MATERIAL:	Boring B-58 (16-17ft.)
4. REMOLDING TARGETS:	96% Maximum Dry Density at 11.9% Moisture Content
5. LAYER TYPE (1 - subgrade, 2 - base/subbase)	1
6. MATERIAL TYPE (Type 1 or Type 2)	2
7. TEST DATE	05-21-2013



COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0.0	SM	A-2-4(0)	6.1	2.66	NP	NP	0.0	22.2

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 120.5 pcf Optimum moisture = 10.9 %	Red, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-6

Remarks:
Specific Gravity Assumed
Date: 5/6/13 - Depth - 0.0' - 2.0'

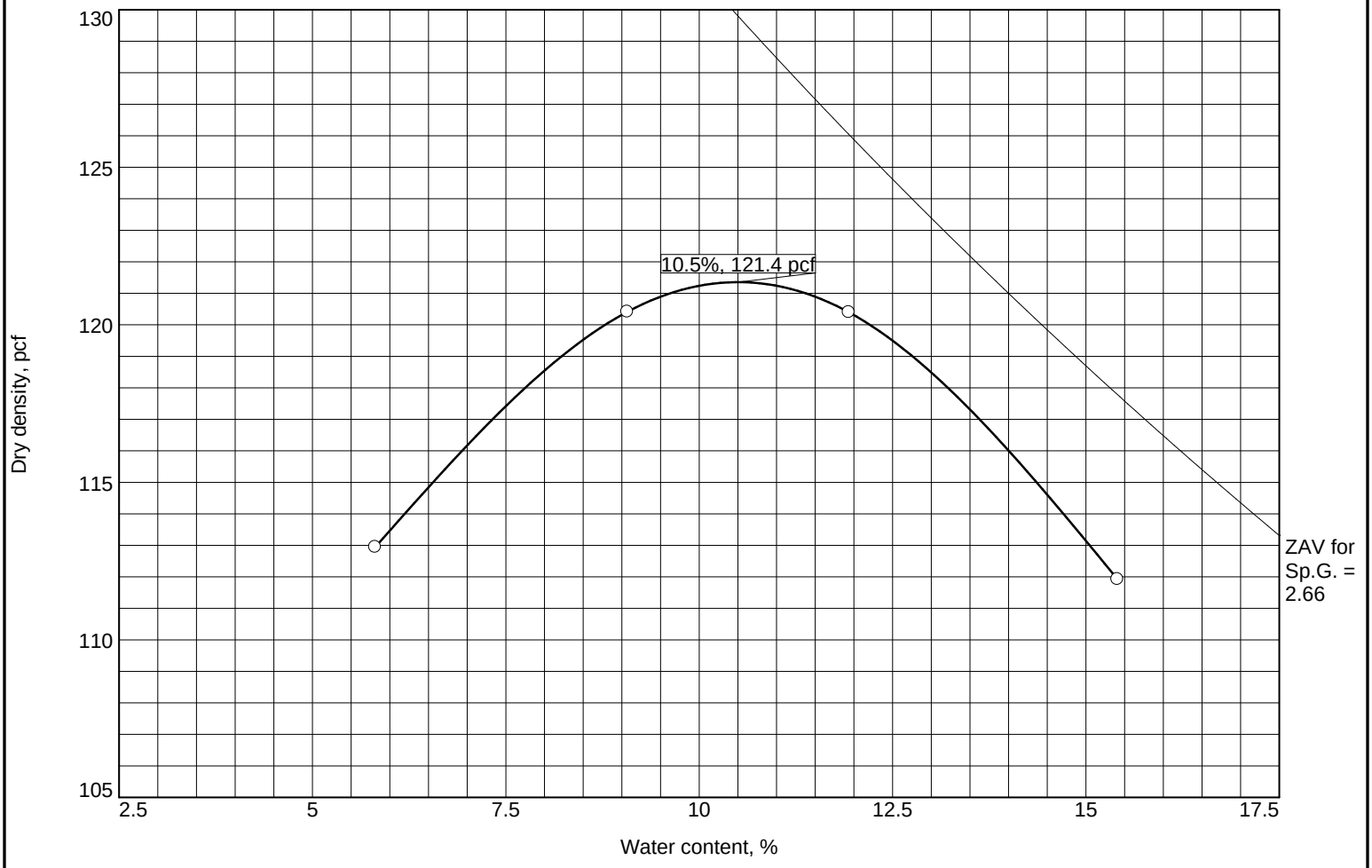
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0.0	SM	A-2-4(0)	2.0	2.66	NP	NP	0.0	22.3

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 121.4 pcf Optimum moisture = 10.5 %	Dark brown, fine grained, SILTY SAND, with trace shell

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-15

Remarks:
Specific Gravity Assumed
Date: 5/6/13 - Depth - 2.0' - 3.0'

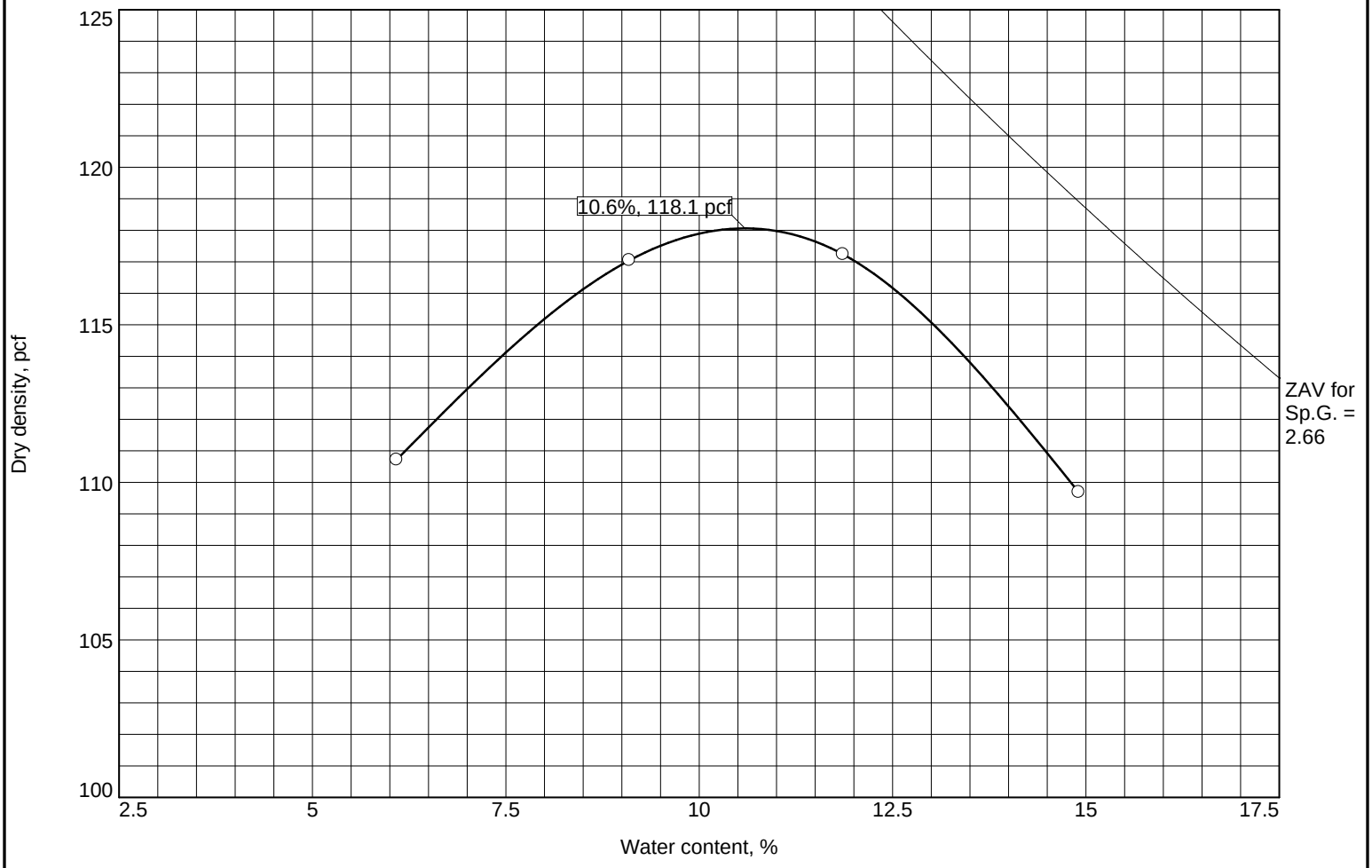
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
2.0	SM	A-2-4(0)	2.0	2.66	NP	NP	0.0	20.6

TEST RESULTS

Maximum dry density = 118.1 pcf

Optimum moisture = 10.6 %

MATERIAL DESCRIPTION

Dark brown, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-15

Remarks:

Specific Gravity Assumed
Date: 5/6/13 - Depth - 0.0' - 2.0'

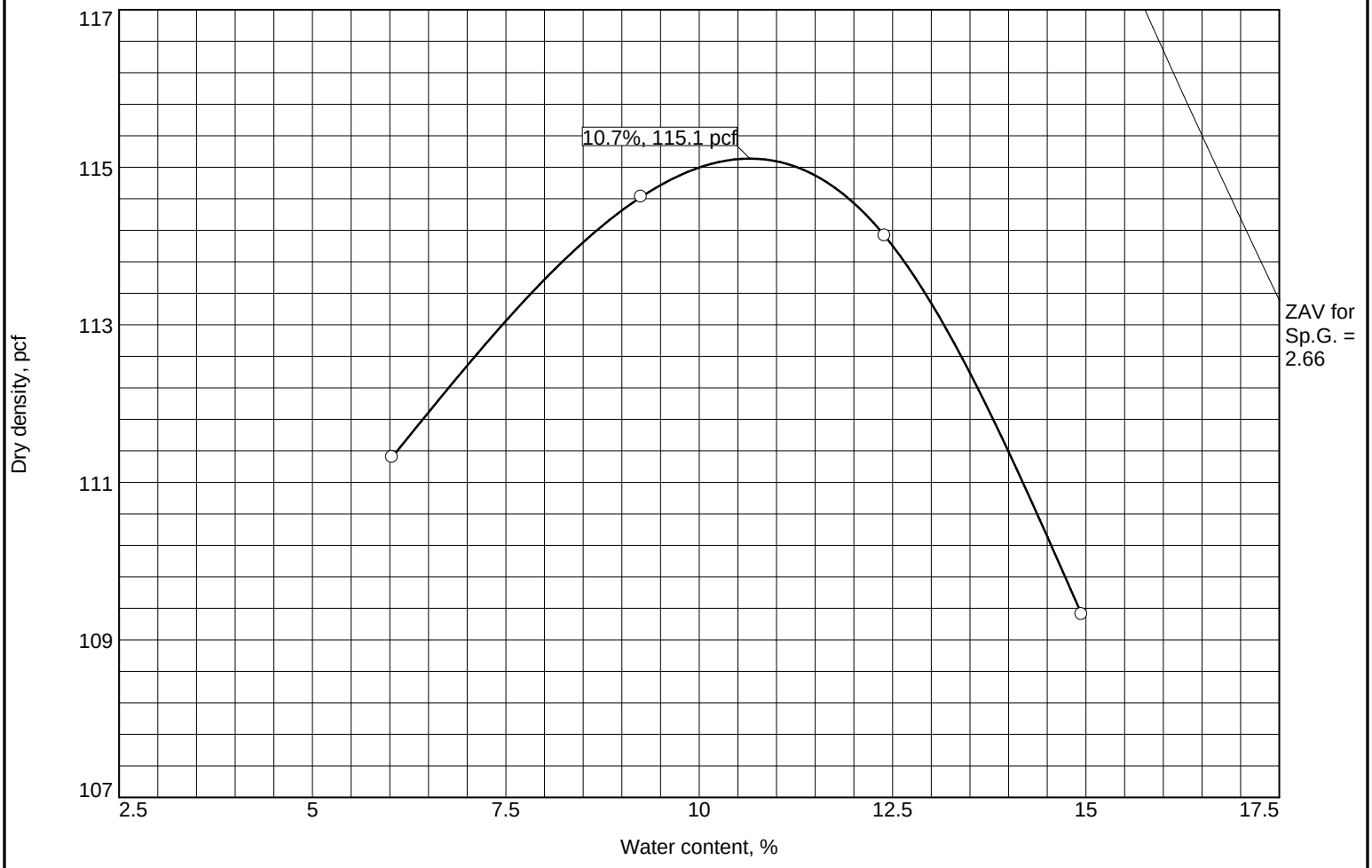
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0.0	SM	A-2-4(0)	3.2	2.66	NP	NP	7.3	15.4

TEST RESULTS

Maximum dry density = 115.1 pcf

Optimum moisture = 10.7 %

MATERIAL DESCRIPTION

Fine grained, light brown, with trace GRAVEL

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-16

Remarks:

Specific Gravity Assumed
Date: 5/7/13 - Depth - 0.0' - 1.0'

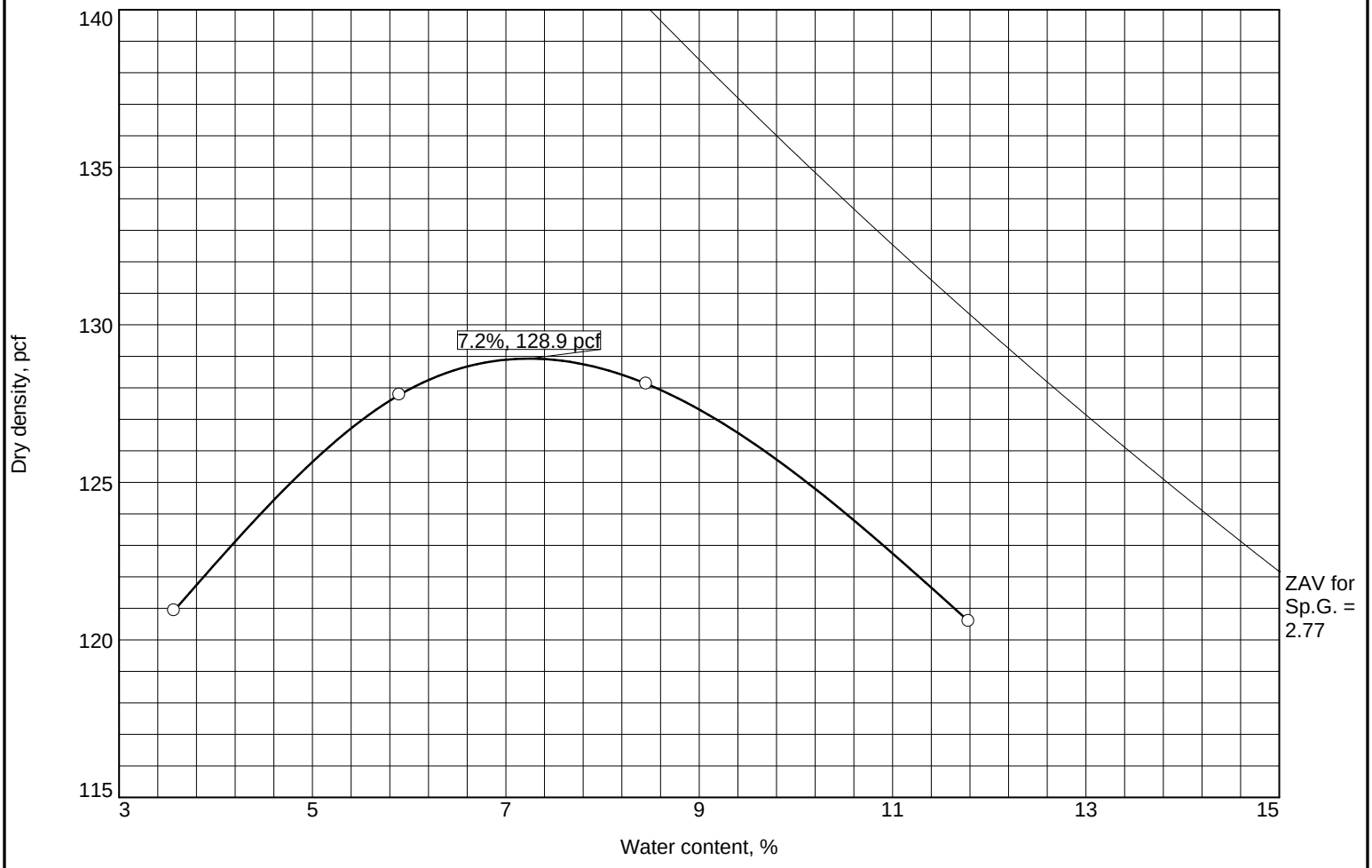
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: ASTM D 698-00a Method C Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	3.2	2.77	NP	NP	0.0	17.7

TEST RESULTS

Maximum dry density = 128.9 pcf

Optimum moisture = 7.2 %

MATERIAL DESCRIPTION

Fine grained, Reddish brown, with trace SHELL

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-16N

Remarks:

Specific Gravity Assumed
Date: 5/14/13 - 0.0' - 1.0'
New - Rev 1

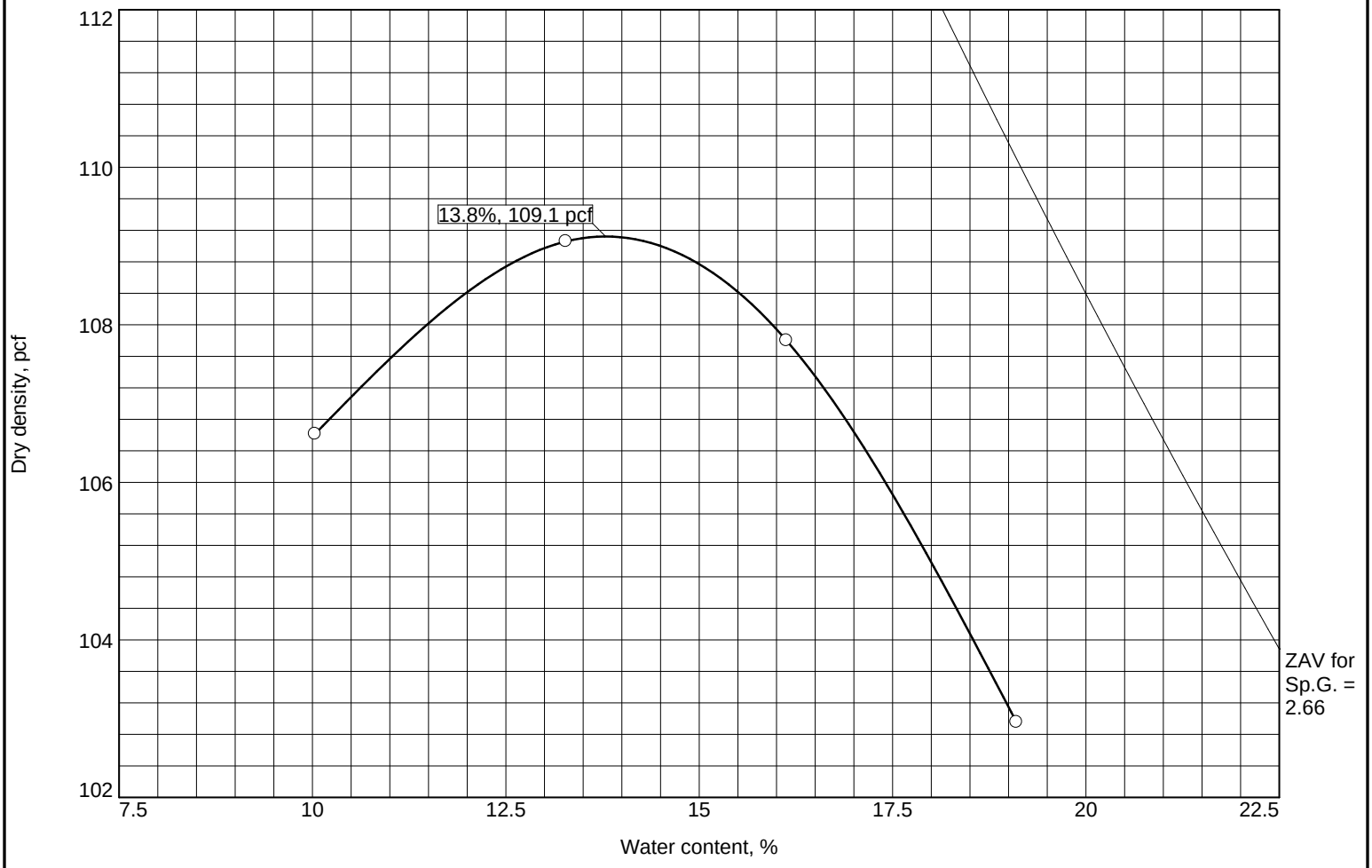
Thompson Engineering

Mobile, Alabama

Figure

Tested By: M.Davis **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	7.2	2.66	NP	NP	21.3	19.6

TEST RESULTS

Maximum dry density = 109.1 pcf

Optimum moisture = 13.8 %

MATERIAL DESCRIPTION

Fine to coarse grained, dark brown, with some SHELL

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-23

Remarks:

Specific Gravity Assumed
Date: 5/7/13 - Deoth - 0.0' - 1.0'

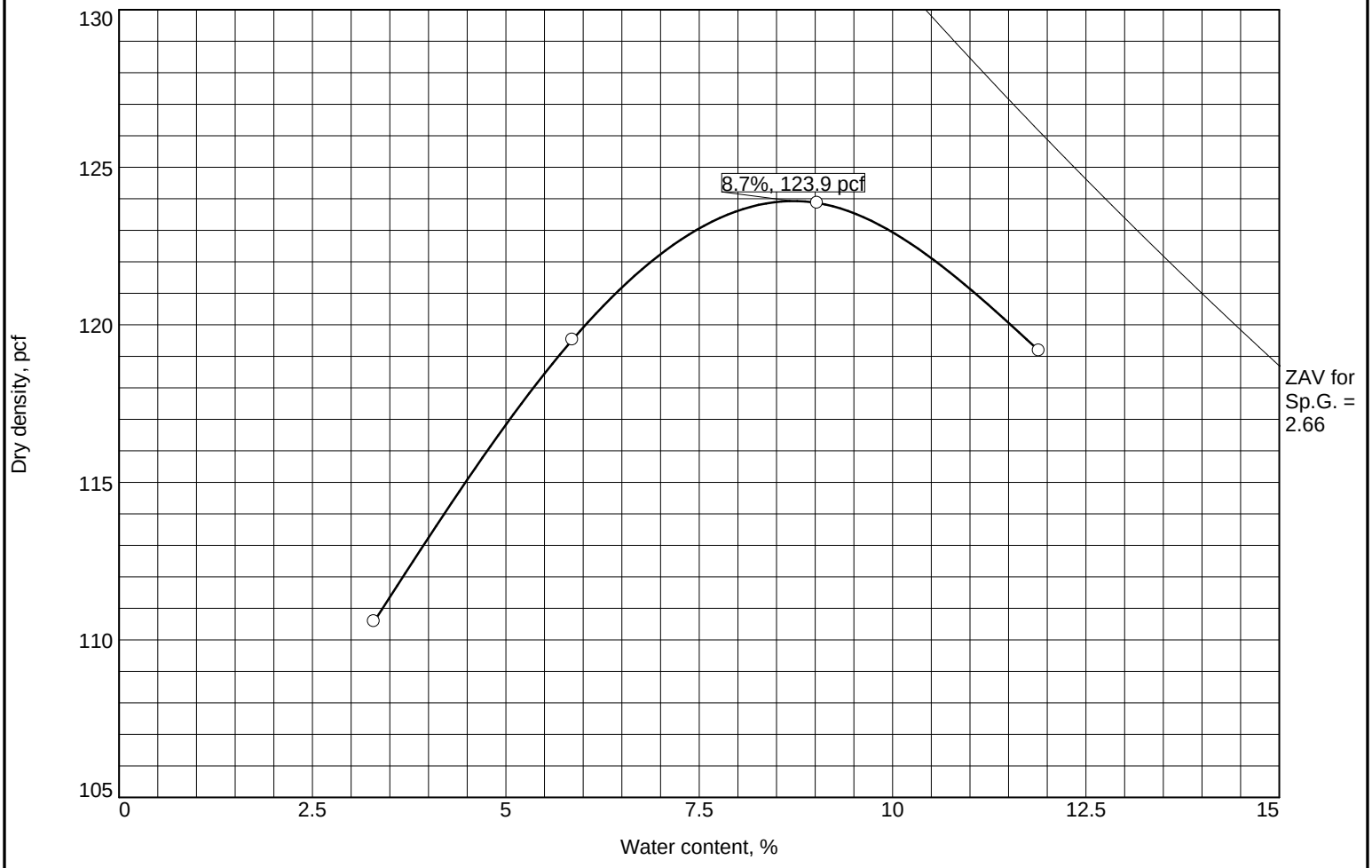
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method D Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
1.0	A-2-4	A-2-4(0)	5.2	2.66	NP	NP	0.0	22.6

TEST RESULTS

Maximum dry density = 123.9 pcf

Optimum moisture = 8.7 %

MATERIAL DESCRIPTION

Dark brown, fine grained, SILTY SAND, with GRAVEL

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-31

Remarks:

Specific Gravity Assumed

Date: 5/21/13 - Lab # 6601 - 0.0' - 1.0'

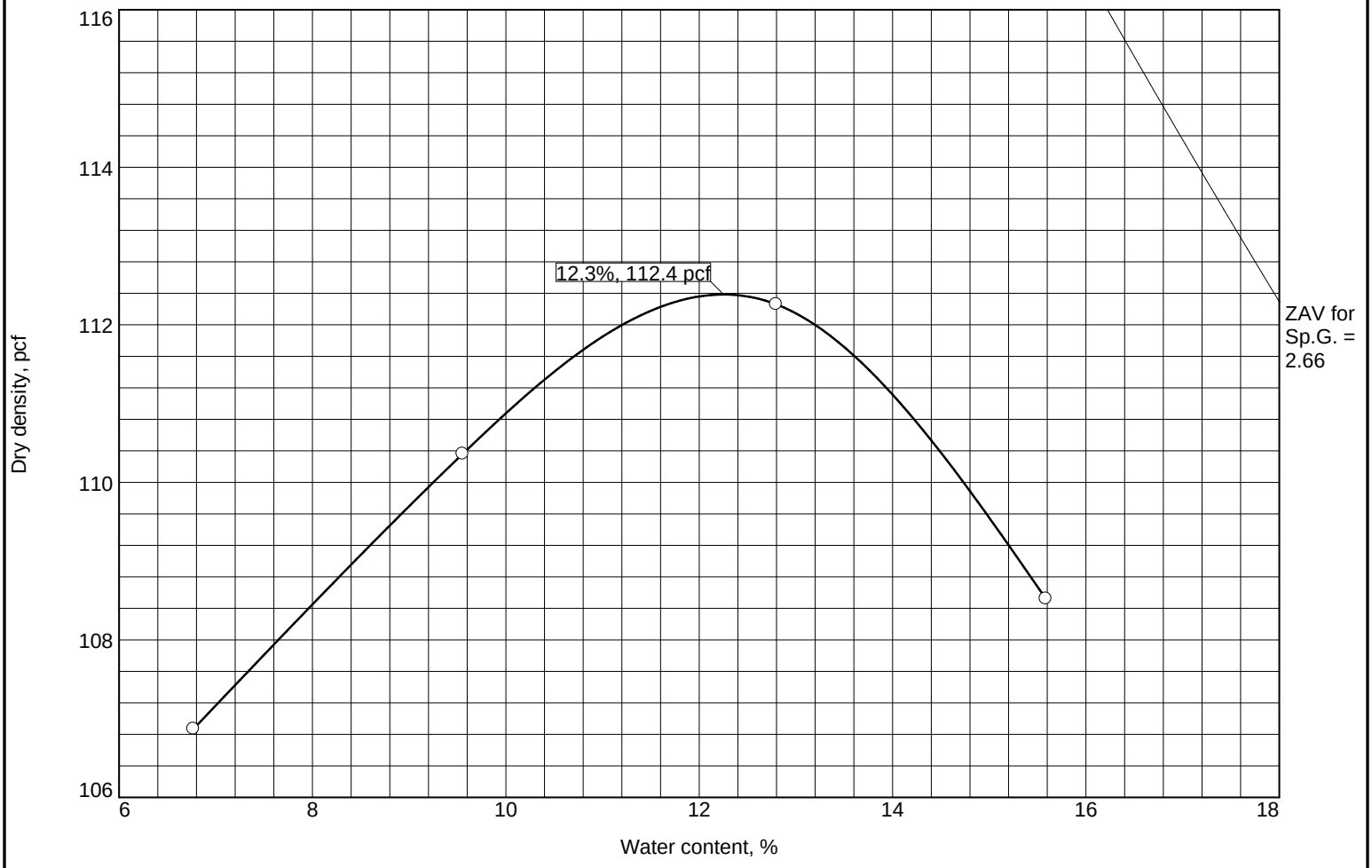
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak & L.Stokes **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0	SM	A-2-4(0)	9.3	2.66	NP	NP	0.0	20.9

TEST RESULTS

Maximum dry density = 112.4 pcf

Optimum moisture = 12.3 %

MATERIAL DESCRIPTION

Brown, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-35

Remarks:

Specific Gravity Assumed
Date: 5/7/13 - Depth - 0.0' - 1.0'

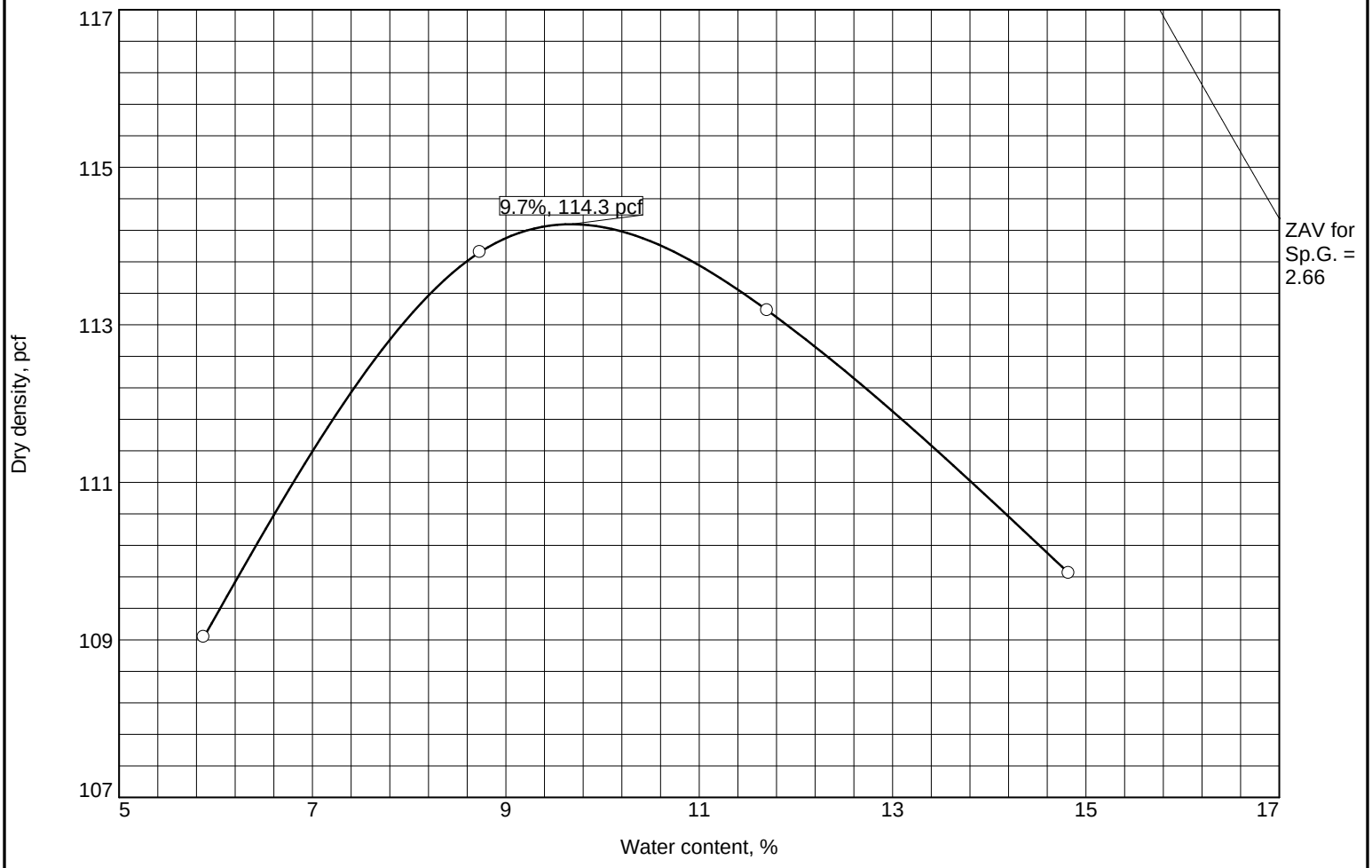
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
1.0	SM	A-2-4(0)	9.3	2.66	NP	NP	0.2	21.0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 114.3 pcf Optimum moisture = 9.7 %	Gray, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-35

Remarks:
Specific Gravity Assumed
Date: 5/2/13 - Depth - 1.0' - 2.0'

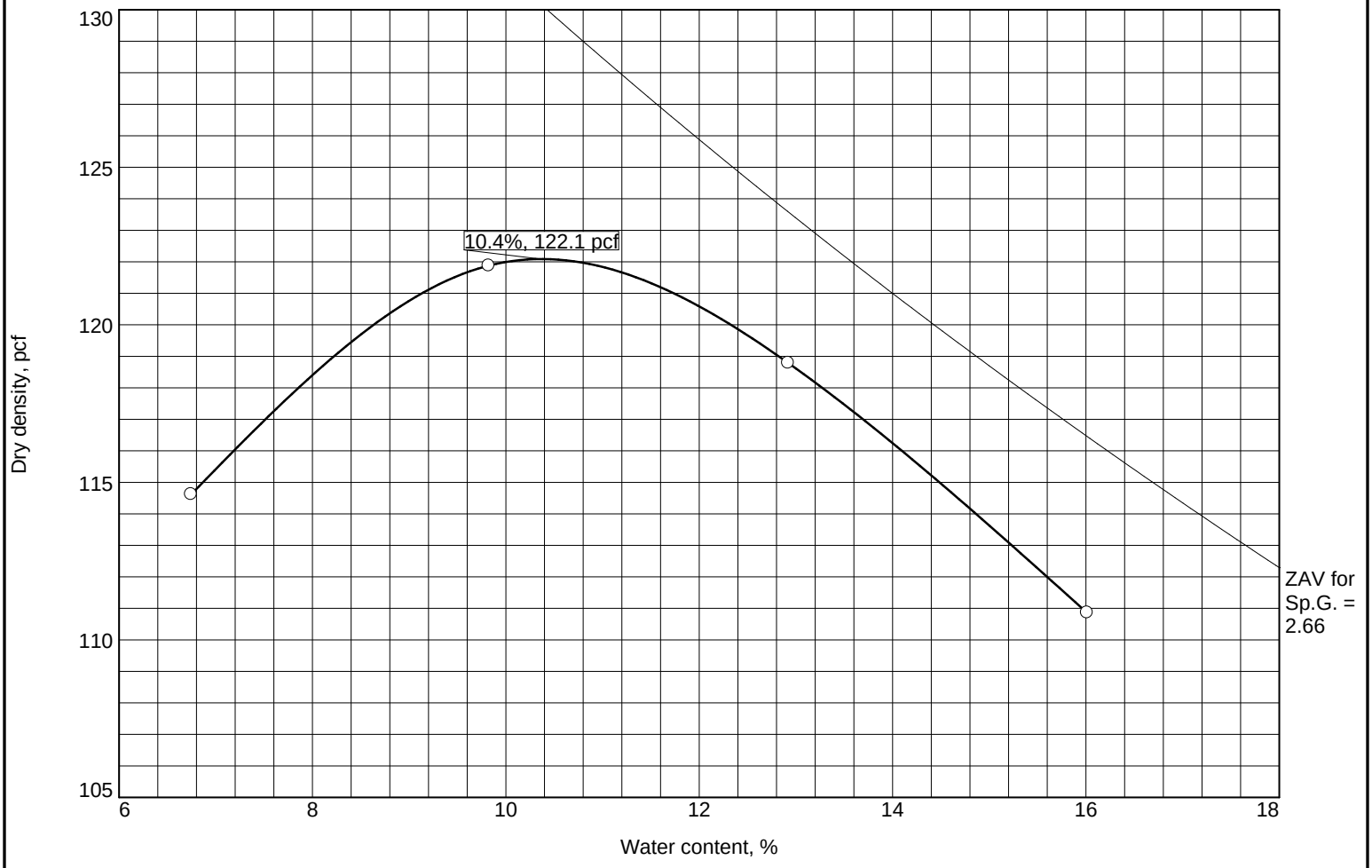
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: ASTM D 698-07 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
7.0	SM	A-2-4(0)	6.8	2.66	NP	NP	0.0	27.7

TEST RESULTS

Maximum dry density = 122.1 pcf

Optimum moisture = 10.4 %

MATERIAL DESCRIPTION

Dark brown and red, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-43

Remarks:

Specific Gravity Assumed
Date: 5/2/13 - Depth - 7.0' - 15.0'

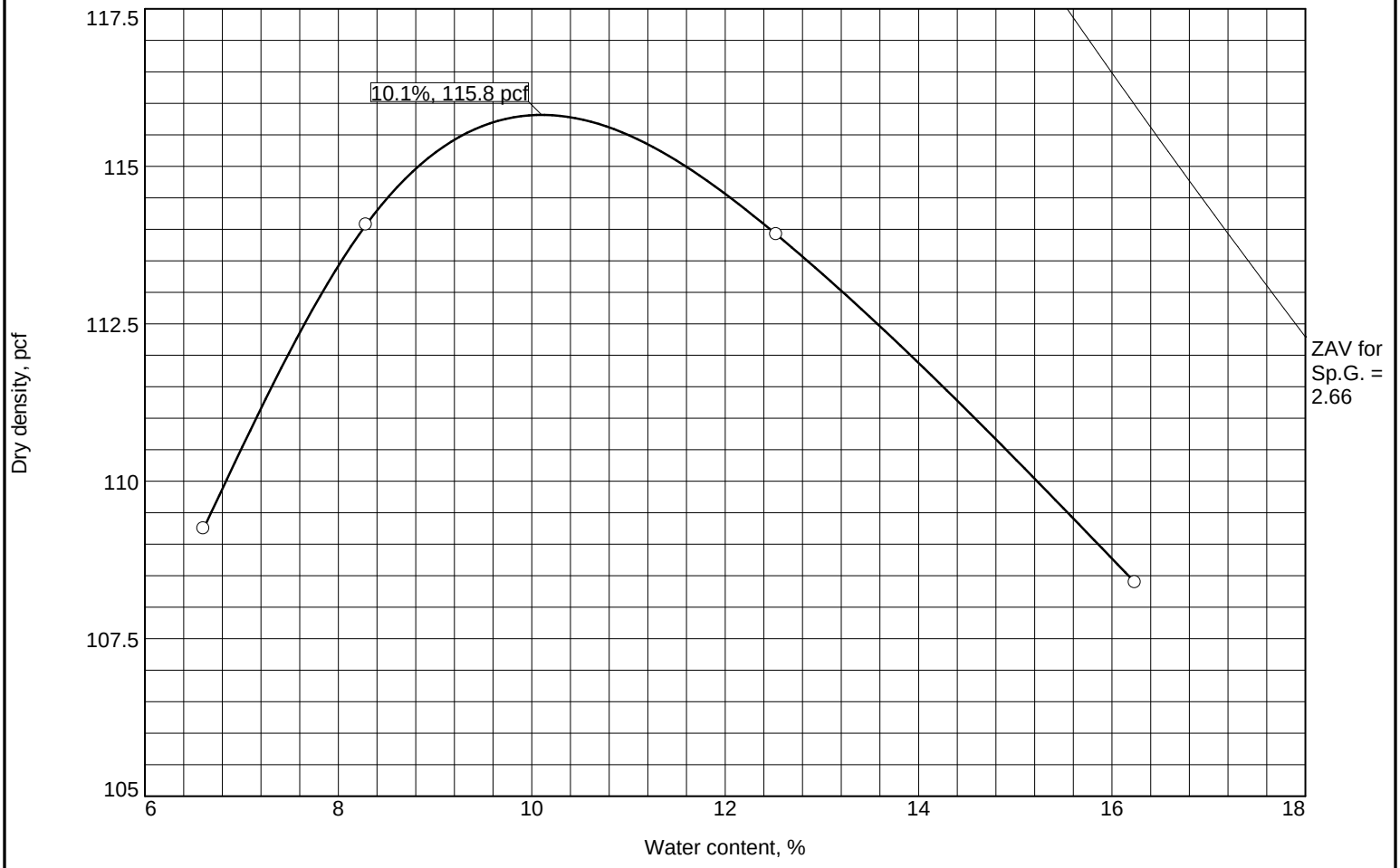
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B. Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
15.0	SM	A-2-4(0)	4.8	2.66	NP	NP	0.0	17.3

TEST RESULTS

Maximum dry density = 115.8 pcf

Optimum moisture = 10.1 %

MATERIAL DESCRIPTION

Dark brown, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-43

Remarks:

Specific Gravity Assumed
Date; 5/2/13 - Depth - 15.0' - 16.0'

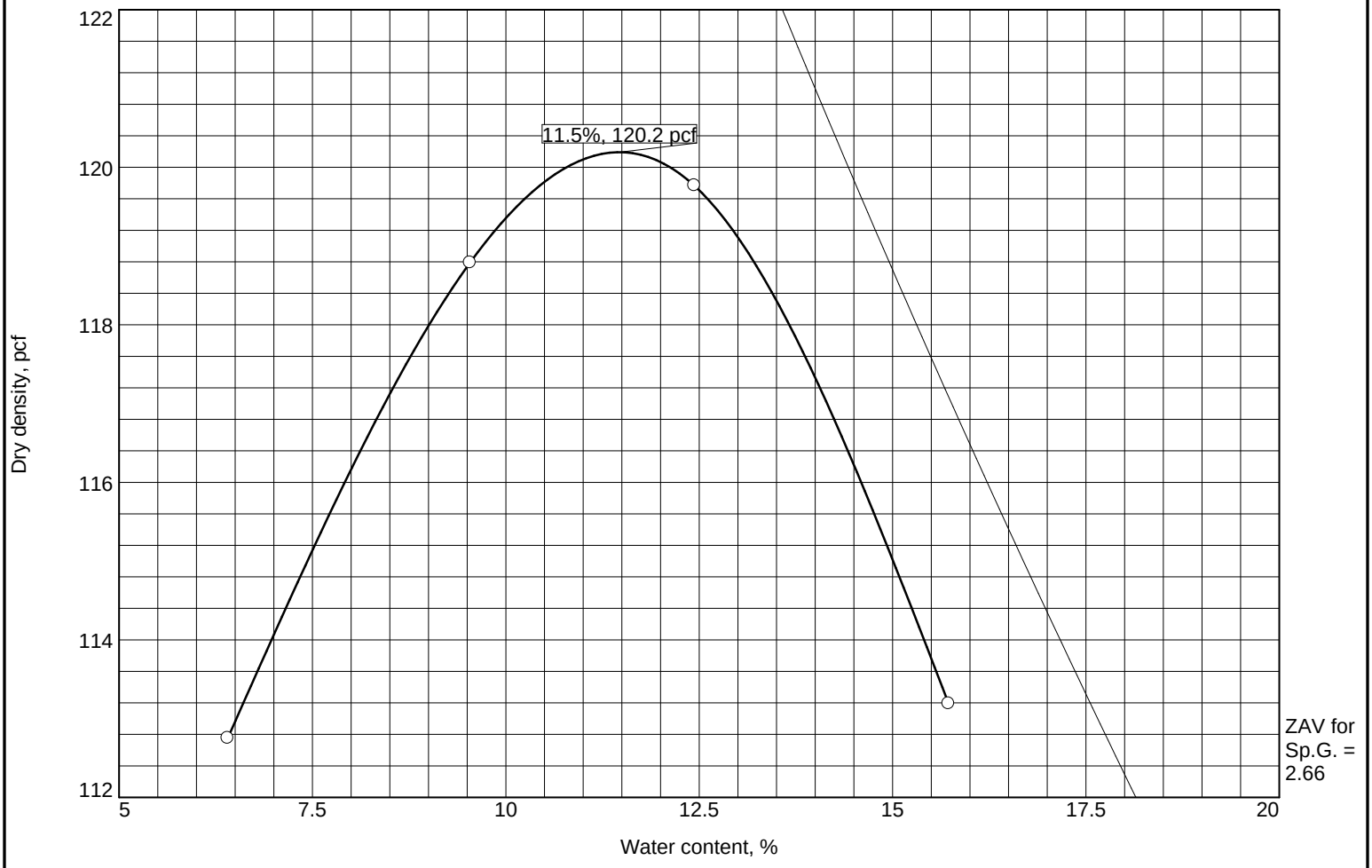
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0.0	A-2-4	A-2-4(0)	4.4	2.66	NP	NP	0.0	25.0

TEST RESULTS

Maximum dry density = 120.2 pcf

Optimum moisture = 11.5 %

MATERIAL DESCRIPTION

Reddish brown, fine to maedium grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-51

Remarks:

Specific Gravity Assumed
Date: 5/22/13 - 0.0' - 8.0'
Lab # 6601

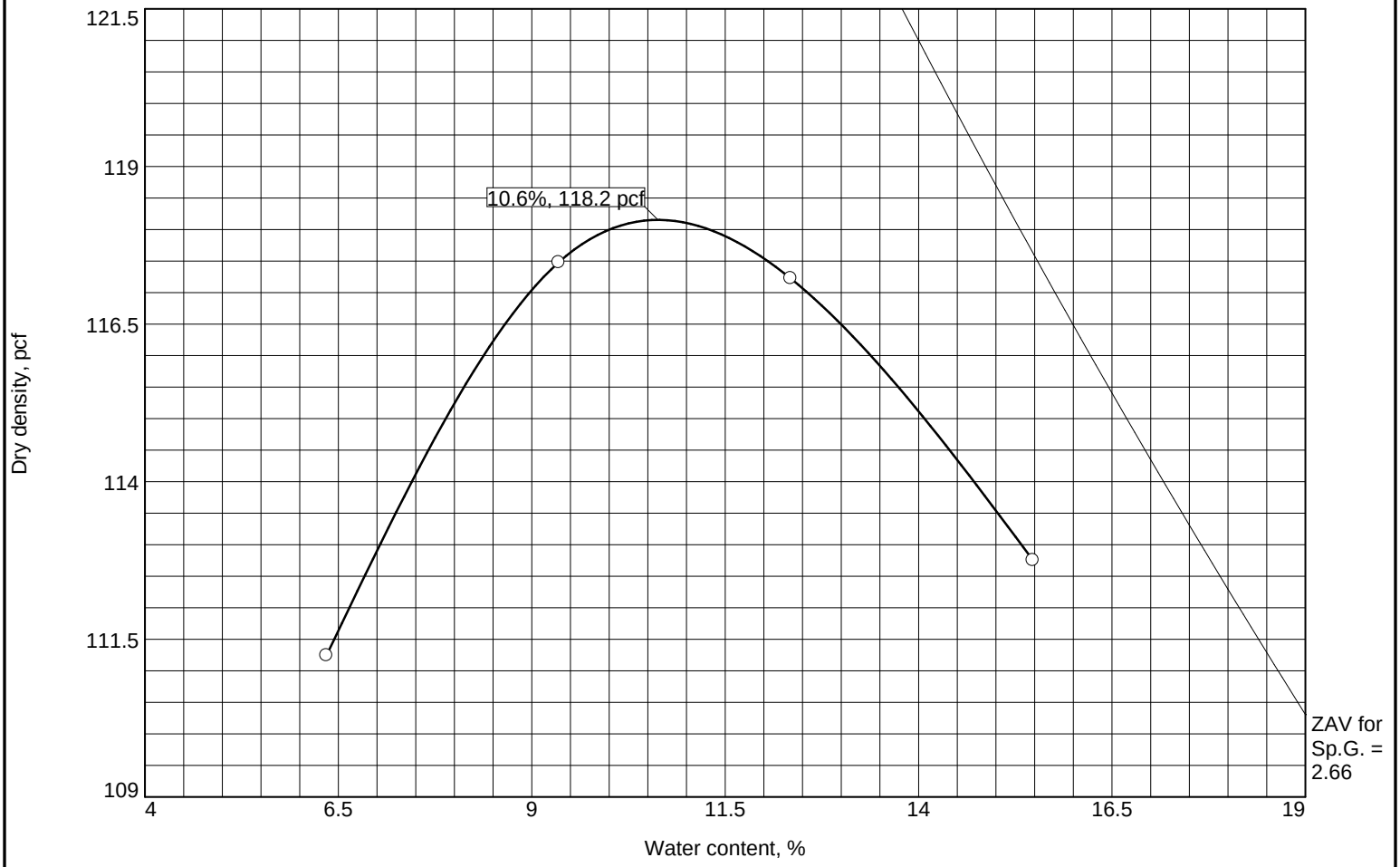
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak & L.Stokes **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
8.0	SM	A-2-4(0)	7.4	2.66	NP	NP	0.0	24.1

TEST RESULTS

Maximum dry density = 118.2 pcf

Optimum moisture = 10.6 %

MATERIAL DESCRIPTION

Reddish brown, fine to medium grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-51

Remarks:

Specific Gravity Assumed
Date: 5/22/13 - 8.0' - 9.0'
Lab # 6601

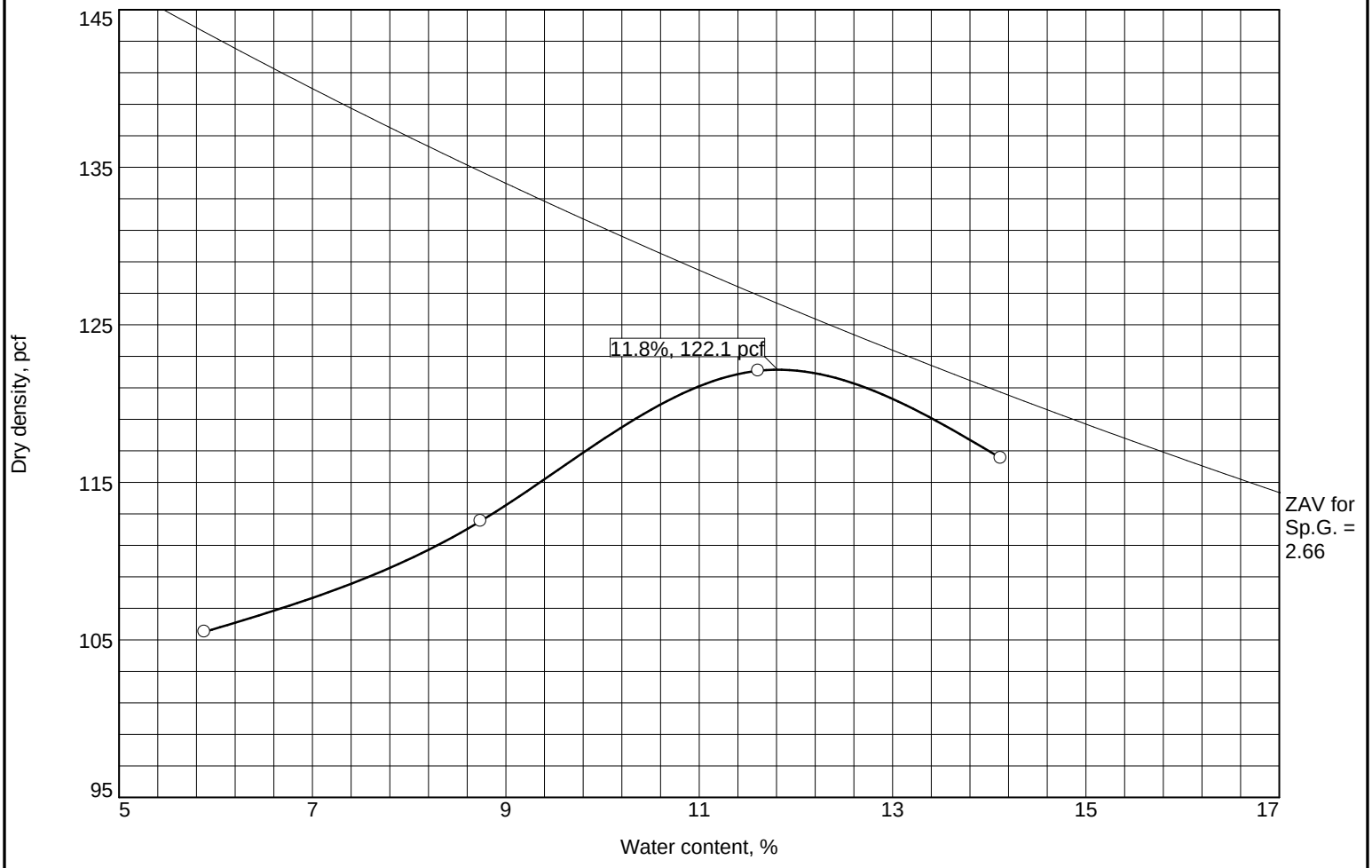
Thompson Engineering

Mobile, Alabama

Figure

Tested By: L.Stokes **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
8.0	SC	A-2-4(0)	15.5	2.66	22	10	0.0	34.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 122.1 pcf Optimum moisture = 11.8 %	Red, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-58

Remarks:
Specific Gravity Assumed
Date: 5/2/13 - Depth - 8.0' - 16.0'

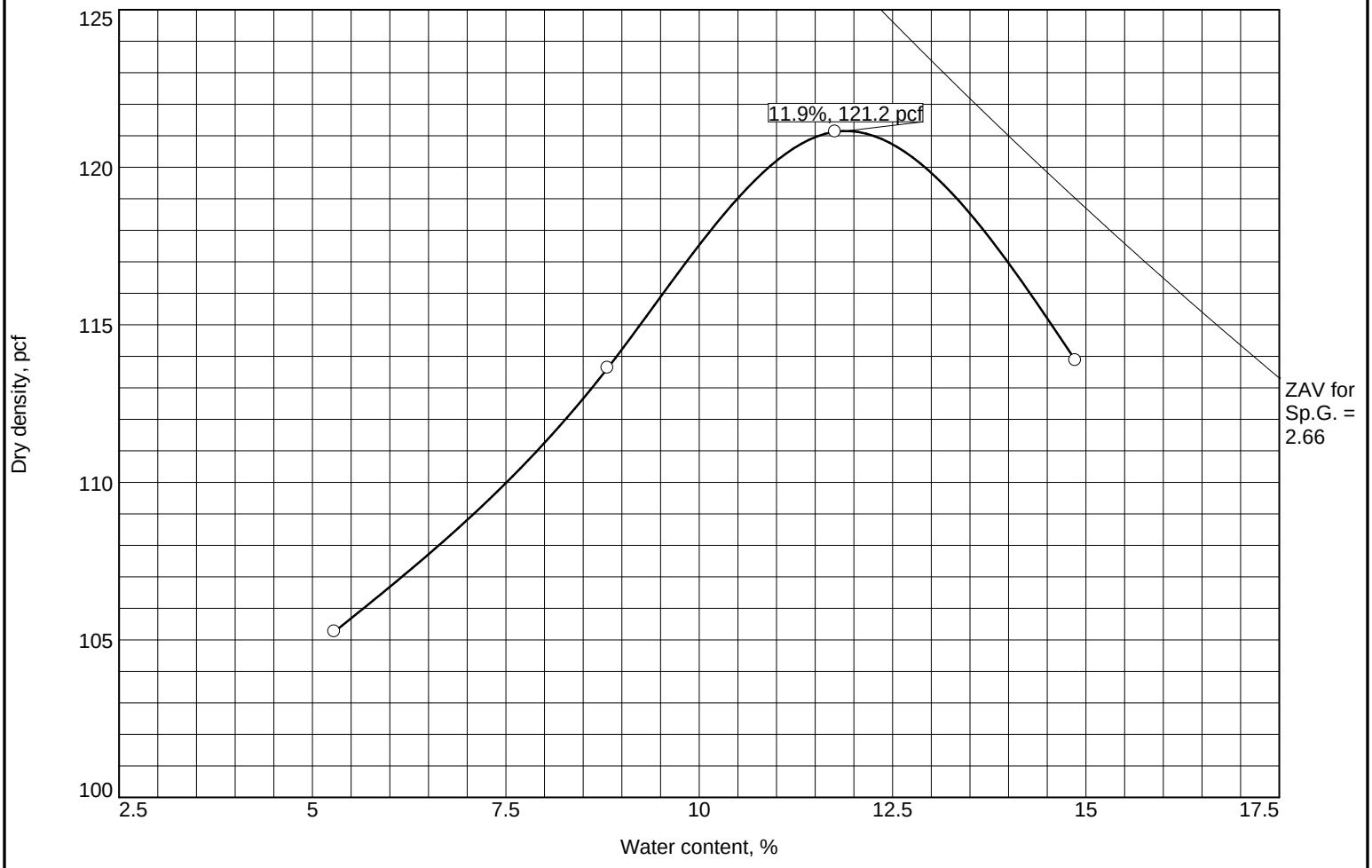
Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

COMPACTION TEST REPORT



Test specification: AASHTO T 99 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
17.0	SC	A-2-4(0)	6.1	2.66	21	9	0.0	32.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 121.2 pcf Optimum moisture = 11.9 %	Red, fine grained, SILTY SAND

Project No. 13-2123-0004 **Client:** ALDOT

Project: DPI-AL06(900) I-10 Interchange Modifications, Texas St. to West of Tunnel

○ **Source of Sample:** MR **Sample Number:** B-58

Remarks:
Specific Gravity Assumed
Date: 5/2/13 - Depth - 16.0' - 17.0'

Thompson Engineering

Mobile, Alabama

Figure

Tested By: B.Hak **Checked By:** R.Byrd

APPENDIX D

- **Total Chlorides and Total Sulfates**
- **Resistivity / pH**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-75480-1
Client Project/Site: Thompson Engineering - IM-AL-06 / I-10

For:
Thompson Engineering Inc
2970 Cottage Hill Rd.
Suite 190
Mobile, Alabama 36606

Attn: Mr. Steve O'Hearn

Authorized for release by:
6/18/2013 2:25:24 PM
Stephanie Chaffe, Report Production Representative
stephanie.chaffe@testamericainc.com

Designee for

Mike Nance, Project Manager II
mike.nance@testamericainc.com

Case Narrative

Client: Thompson Engineering Inc
Project/Site: Thompson Engineering - IM-AL-06 / I-10

TestAmerica Job ID: 400-75480-1

Job ID: 400-75480-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-75480-1

Comments
No additional comments.

Receipt
The samples were received on 6/4/2013 4:27 PM; the samples arrived in good condition, properly preserved and, where required, on ice.

Except:

No sample collection time is listed on the COC.

GC Semi VOA
Method(s) 9056: The following sample(s) were diluted due to black color: BR-12-Sample #7 (400-75480-2), BR-1-Sample #3 (400-75480-5). Elevated reporting limits (RL) are provided.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Client Sample Results

Client: Thompson Engineering Inc
Project/Site: Thompson Engineering - IM-AL-06 / I-10

TestAmerica Job ID: 400-75480-1

Client Sample ID: BR-12-Sample #3

Lab Sample ID: 400-75480-1
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 88.3

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<11		11		mg/Kg	☼		06/07/13 12:02	1
Sulfate	**58**		23		mg/Kg	☼		06/07/13 12:02	1

Client Sample ID: BR-12-Sample #7

Lab Sample ID: 400-75480-2
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 80.2

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<61		61		mg/Kg	☼		06/07/13 12:25	5
Sulfate	**130**		120		mg/Kg	☼		06/07/13 12:25	5

Client Sample ID: BR-12-Sample #12

Lab Sample ID: 400-75480-3
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 84.1

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<12		12		mg/Kg	☼		06/07/13 12:48	1
Sulfate	<24		24		mg/Kg	☼		06/07/13 12:48	1

Client Sample ID: BR-12-Sample #16

Lab Sample ID: 400-75480-4
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 85.2

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<12		12		mg/Kg	☼		06/07/13 13:11	1
Sulfate	<23		23		mg/Kg	☼		06/07/13 13:11	1

Client Sample ID: BR-1-Sample #3

Lab Sample ID: 400-75480-5
Date Collected: 06/04/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 79.0

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<63		63		mg/Kg	☼		06/07/13 15:29	5
Sulfate	**140**		130		mg/Kg	☼		06/07/13 15:29	5

Client Sample ID: BR-1-Sample #6

Lab Sample ID: 400-75480-6
Date Collected: 06/04/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 80.6

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<12		12		mg/Kg	☼		06/07/13 15:52	1
Sulfate	<25		25		mg/Kg	☼		06/07/13 15:52	1

Client Sample Results

Client: Thompson Engineering Inc
Project/Site: Thompson Engineering - IM-AL-06 / I-10

TestAmerica Job ID: 400-75480-1

Client Sample ID: BR-1-Sample #11
Date Collected: 06/04/13 00:00
Date Received: 06/04/13 16:27

Lab Sample ID: 400-75480-7
Matrix: Solid
Percent Solids: 80.9

Method: 9056 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<12		12		mg/Kg	☼		06/07/13 16:15	1
Sulfate	<25		25		mg/Kg	☼		06/07/13 16:15	1

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 400-181782/1-A
Matrix: Solid
Analysis Batch: 182063

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10		10		mg/Kg			06/07/13 13:34	1
Sulfate	<20		20		mg/Kg			06/07/13 13:34	1

Lab Sample ID: LCS 400-181782/2-A
Matrix: Solid
Analysis Batch: 182063

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	101		mg/Kg		101	80 - 120		
Sulfate			100	99.5		mg/Kg		100	80 - 120		

Lab Sample ID: LCSD 400-181782/3-A
Matrix: Solid
Analysis Batch: 182063

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	100		mg/Kg		100	80 - 120	1	15
Sulfate			100	98.8		mg/Kg		99	80 - 120	1	15

Lab Sample ID: 400-75480-7 MS
Matrix: Solid
Analysis Batch: 182063

Client Sample ID: BR-1-Sample #11
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<12		121	119		mg/Kg	☼	92	80 - 120		
Sulfate	<25		121	145		mg/Kg	☼	103	80 - 120		

Lab Sample ID: 400-75480-7 MSD
Matrix: Solid
Analysis Batch: 182063

Client Sample ID: BR-1-Sample #11
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<12		123	123		mg/Kg	☼	93	80 - 120	3	15
Sulfate	<25		123	147		mg/Kg	☼	103	80 - 120	1	15

Lab Chronicle

Client: Thompson Engineering Inc
Project/Site: Thompson Engineering - IM-AL-06 / I-10

TestAmerica Job ID: 400-75480-1

Client Sample ID: BR-12-Sample #3

Lab Sample ID: 400-75480-1
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		1	182063	06/07/13 12:02	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Client Sample ID: BR-12-Sample #7

Lab Sample ID: 400-75480-2
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		5	182063	06/07/13 12:25	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Client Sample ID: BR-12-Sample #12

Lab Sample ID: 400-75480-3
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		1	182063	06/07/13 12:48	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Client Sample ID: BR-12-Sample #16

Lab Sample ID: 400-75480-4
Date Collected: 06/03/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		1	182063	06/07/13 13:11	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Client Sample ID: BR-1-Sample #3

Lab Sample ID: 400-75480-5
Date Collected: 06/04/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		5	182063	06/07/13 15:29	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Lab Chronicle

Client: Thompson Engineering Inc
Project/Site: Thompson Engineering - IM-AL-06 / I-10

TestAmerica Job ID: 400-75480-1

Client Sample ID: BR-1-Sample #6

Lab Sample ID: 400-75480-6

Date Collected: 06/04/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		1	182063	06/07/13 15:52	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Client Sample ID: BR-1-Sample #11

Lab Sample ID: 400-75480-7

Date Collected: 06/04/13 00:00
Matrix: Solid
Date Received: 06/04/13 16:27
Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			181782	06/07/13 08:05	VC	TAL PEN
Soluble	Analysis	9056		1	182063	06/07/13 16:15	VC	TAL PEN
Total/NA	Analysis	Moisture		1	182095	06/11/13 15:41	LEC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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CHAIN-OF-CUSTODY

PAGE ___ OF ___

JOB NO.: 13-2123-0004

CLIENT: ALDOT / THOMPSON ENGINEERING

PROJECT: IM-AL-06 I-10 INTERCHANGE MODIFICATIONS

TESTS ASSIGNED

LAB USE ONLY LAB I.D.	DATE	TIME	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	TOTAL SULFATES		TOTAL CHLORIDES							REMARKS
	6/3	PM		✓	BR-12 - SAMPLE #3	1	✓		✓							
	6/3	PM		✓	BR-12 - SAMPLE #7	1	✓		✓							
	6/3	PM		✓	BR-12 - SAMPLE #12	1	✓		✓							
	6/3	PM		✓	BR-12 - SAMPLE #16	1	✓		✓							
	6/4	PM			BR-1 - SAMPLE #3	1	✓		✓							
	6/4	PM			BR-1 - SAMPLE #6	1	✓		✓							
	6/4	PM			BR-1 - SAMPLE #11	1	✓		✓							

SAMPLED BY AND TITLE: (SIGNATURE)	DATE/TIME	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
DRILLER HELPER	6-4-13 16:20			[illegible]

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY LAB: (SIGNATURE)	DATE/TIME
[illegible]	6-4-13 16:20				[illegible]	6-4-13 16:20

REMARKS 400-75480 NCM65651

SAMPLE SHIPPED VIA: ☐UPS ☐BUS ☐OTHER

AIR/BUS BILL NUMBER: No Ice

DISTRIBUTION: ORIGINAL - ACCOMPANIES SHIPMENT. COPY 1 - COORDINATOR FIELD FILES. COPY 2 - CLIENT

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ENGINEERING

June 2013

CLIENT: ALDOT **JOB #:** 13-2123-0004

PROJECT: DPI-AL06(900) I-10 Interchange Modifications **LAB #:** 6548

REPORT OF: Resistivity (AASHTO T288) and pH (AASHTO T289)

SAMPLE I.D.	SAMPLE DESCRIPTION	Resistivity Ohms-cm	pH
BR-1/S-2, S-3 & S-4	Composite Sample	1,042	6.0
BR-1/S-6, S-7, S-8 & S-9	Composite Sample	5,468	6.4
BR-1/ S-10, S-11, & S-12	Composite Sample	4,427	7.0
BR-12/S-2 & S-3	Composite Sample	11,000	5.9
BR-12/S6, S-7, & S-8	Composite Sample	9,000	6.2
BR-12/S-11, S-12, & S-14	Composite Sample	8,000	5.9
BR-12/S-14, S-15, S-16 & S-17	Composite Sample	12,000	6.8

MATERIALS ENGINEERING LABORATORY