AIMRIGHT
TESTING & ENGINEERING

Construction Materials Testing • Special Inspections • Geotechnical Engineering

May 15, 2024

BKL, Inc. | 1623 E 6th St, Tulsa, OK 74120 | (918) 835-9588

Attn: Jayde Dzierba, P.E., dzierba@bklinc.com

Re: Geotechnical Exploration Report | Project No. 16060424
City of Tulsa Street Rehabilitation Maintenance Zone (MZ) 1072 | 2036N1072Z, 2036B0216Z
Various, Tulsa, OK

It has been a pleasure serving you on this project. AIMRIGHT is pleased to submit this Geotechnical Exploration Report for the referenced site. This report presents the findings of the geotechnical exploration depicted on the attached Boring Location Plan, Boring Log Summary, and Pavement Core Illustrations. Our Scope of Services did not include a survey of boring locations/elevations; preparation of recommendations, plans, or specifications; nor the identification and evaluation of environmental aspects of the project site.

AIMRIGHT located the borings in the field from locations designated by you. At the twenty-three (23) designated locations, the existing pavement section was cored with a 4-inch diameter barrel. The borings were advanced into the subsurface to depths of 3 feet or auger refusal using an ATV-mounted drill rig equipped with an automatic hammer and continuous flight augers.

Representative soil samples were obtained using a standard 2-inch outside diameter split-barrel sampler in general compliance with the Standard Penetration Testing (SPT) method of the American Society of Testing and Materials (ASTM) D1586 standard to evaluate the consistency and general engineering properties of the subsurface soils.

At regular intervals within the borings, split-spoon samples were visually classified based on texture and plasticity. During the drilling process, all encounters with groundwater, if any, were recorded. Upon completion of drilling, all borings were backfilled per OWRB requirements. The borings were backfilled with soil cuttings and topped with asphalt patch compound and/or concrete.

The samples obtained from the geotechnical exploration were transported to the AIMRIGHT laboratory where representative samples were selected for testing/measurement. The laboratory testing performed for this project consisted of Atterberg Limits (ASTM D4318), Moisture Content (ASTM D2216), Sieve Analysis – No. 200 Sieve Wash Method (ASTM D1140), and pavement thickness measurement (ASTM D3549, C174). The results are summarized on the Boring Log Summary.

The subsurface conditions illustrated on the Boring Log Summary represent an estimate of the subsurface conditions based on interpretation of the boring data using normally accepted geotechnical engineering judgments. The transitions between soil strata are less distinct than shown on the Boring Log Summary.

We appreciate the opportunity to provide geotechnical consultation services for this project. Please do not hesitate to contact us with any concerns or questions regarding this report.

Respectfully submitted,

AIMRIGHT Testing & Engineering, LLC
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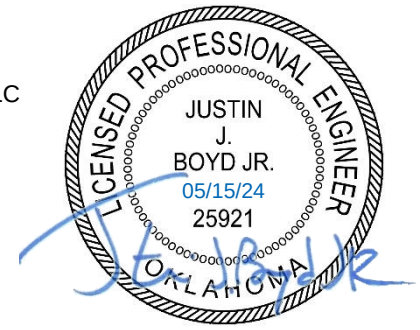

APPROXIMATE BORING LOCATIONS

BORING LOCATION PLAN

PROJECT NO.: 16060424

PROJECT: CoT Street Rehabilitation MZ 1072

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Location	Existing Asphalt Depth (in)	Existing Aggregate Base Depth (in)	Soil Test Boring Data		General Soil Strength Consistency	General Soil Color	General Soil Description	Unified Soil Classification System Group Symbol	In-place Moisture Content (%)	Finer than No. 200 Sieve (%)	Atterberg Limits		
			Depth (ft)	SPT N-Value							Liquid Limit (%)	Plastic Limit (%)	Plasticity Index
B-1	5.49	N/A	0 to 1.5	9	stiff	light & medium grayish brown	sandy lean clay	CL	21.9	50.8	39	19	20
			1.5 to 3	74	hard	light & medium grayish brown	lean clay						
B-2	5.63	2.00	0 to 1.5	8	stiff	dark brown	lean clay w/ sand	CL	20.8	76.8	42	20	22
			1.5 to 3	28	very stiff	light grayish brown	lean clay						
B-3	4.69	2.00	0 to 1.5	79	very hard	medium grayish brown	sandy lean clay	CL	14.3	62.7	29	21	8
			1.5 to 3	50/5.5	soft	light grayish brown	shale w/ sandstone fragments						
B-4	12.26	N/A	0 to 1.5	7	stiff	dark brown	sandy lean clay	CL	23.3	66.9	32	21	11
			1.5 to 3	7	stiff	dark brown	sandy lean clay						
B-5	4.85	N/A	0 to 1.5	9	stiff	dark brown	sandy lean clay	CL	20.1	65.8	29	20	9
			1.5 to 3	50/5.0	soft	medium grayish brown	shale w/ sandstone fragments						
B-6	9.24	N/A	0 to 1.5	26	very stiff	light grayish brown	lean clay	CL	15.7	86.0	30	20	10
			1.5 to 3	53	hard	light grayish brown	lean clay						
B-7	7.80	N/A	0 to 1.5	37	hard	medium grayish brown	sandy silty clay	CL-ML	19.1	58.6	27	22	5
			1.5 to 3	50/3.0	poorly cemented	medium grayish brown	sandstone w/ shale fragments						
B-8	8.40	2.00	0 to 1.5	33	hard	dark & medium grayish brown	sandy silty clay	CL-ML	17.9	67.9	28	21	7
			1.5 to 3	50/5.0	poorly cemented	medium & light grayish brown	sandstone w/ shale fragments						
B-9	8.93	4.00	0 to 1.5	20	medium dense	light grayish brown	aggregate base						
			1.5 to 3	11	stiff	medium brown	sandy silt	ML	21.4	64.3	27	24	3
B-10	6.64	4.50	0 to 1.5	12	stiff	light gray	sandy silty clay	CL-ML	18.0	83.7	25	18	7
			1.5 to 3	11	stiff	medium brown	lean clay						

BORING LOG SUMMARY

PROJECT NO.: 16060424

PROJECT: CoT Street Rehabilitation MZ 1072

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Location	Existing Asphalt Depth (in)	Existing Aggregate Base Depth (in)	Soil Test Boring Data		General Soil Strength Consistency	General Soil Color	General Soil Description	Unified Soil Classification System Group Symbol	In-place Moisture Content (%)	Finer than No. 200 Sieve (%)	Atterberg Limits		
			Depth (ft)	SPT N-Value							Liquid Limit (%)	Plastic Limit (%)	Plasticity Index
B-11	6.68	1.00	0 to 1.5	13	medium dense	light gray	aggregate base	SC-SM/GC-GM	9.4	19.7	17	11	6
			1.5 to 3	2	very loose	light gray	aggregate base						
B-12	7.24	5.00	0 to 1.5	25	medium dense	light gray	aggregate base						
			1.5 to 3	12	stiff	medium & light grayish brown	sandy silty clay	CL-ML	20.1	65.7	26	19	7
B-13	6.39	N/A	0 to 1.5	9	stiff	dark grayish brown	lean clay	CL			43	17	26
			1.5 to 3	14. 50/5.5	poorly cemented	medium and light brown	sandstone						
B-14	8.10	4.50	0 to 1.5	5	medium stiff	dark grayish brown	lean to fat clay	CL			48	16	32
			1.5 to 3	4	medium stiff	medium grayish brown	lean to fat clay						
B-15	7.46	5.50	0 to 1.5	7	stiff	dark grayish brown	lean clay	CL	20.9	96.8	35	18	17
			1.5 to 3	9	stiff	medium grayish brown	lean clay						
B-16	7.77	6.50	0 to 1.5	11	stiff	dark brown	lean to fat clay						
			1.5 to 3	5	medium stiff	medium grayish brown	fat clay	CH	22.0	91.8	50	16	34
B-17	7.58	6.00	0 to 1.5	10	stiff	dark grayish brown	lean clay	CL	23.9	91.2	39	15	24
			1.5 to 3	11	stiff	medium grayish brown	lean clay						
B-18	7.57	4.50	0 to 1.5	14	medium dense	light gray	aggregate base						
			1.5 to 3	13	medium dense	medium grayish brown	fat clay	CH	21.7	91.6	54	14	40
B-19	6.86	8.00	0 to 1.5	9	stiff	dark grayish brown	fat clay	CH	22.6	80.1	54	16	38
			1.5 to 3	5	medium stiff	medium grayish brown	lean to fat clay						
B-20	6.20	4.00	0 to 1.5	9	stiff	dark grayish brown	lean clay						
			1.5 to 3	15	very stiff	medium grayish brown	lean clay	CL	21.7	92.1	35	15	20

BORING LOG SUMMARY

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Location	Existing Asphalt Depth (in)	Existing Aggregate Base Depth (in)	Soil Test Boring Data		General Soil Strength Consistency	General Soil Color	General Soil Description	Unified Soil Classification System Group Symbol	In-place Moisture Content (%)	Finer than No. 200 Sieve (%)	Atterberg Limits		
			Depth (ft)	SPT N-Value							Liquid Limit (%)	Plastic Limit (%)	Plasticity Index
B-21	6.27	10.00	0 to 1.5	10	loose	light gray	aggregate base	SC-SM/GC-GM	9.6	18.9	17	11	6
			1.5 to 3	8	loose	light gray	aggregate base						
B-22	7.20	4.00	0 to 1.5	6	medium stiff	light & medium grayish brown	sandy lean clay	CL	15.9	54.9	25	17	8
			1.5 to 3	33	dense	light gray	aggregate base						
B-23	7.41	11.00	0 to 1.5	16	medium dense	light gray	aggregate base	SC-SM/GC-GM	10.3	18.4	18	13	5
			1.5 to 3	6	medium stiff	medium grayish brown	lean clay						

BORING LOG SUMMARY

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B-2

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PAVEMENT CORE ILLUSTRATIONS

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PAVEMENT CORE ILLUSTRATIONS

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PAVEMENT CORE ILLUSTRATIONS

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PAVEMENT CORE ILLUSTRATIONS

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PAVEMENT CORE ILLUSTRATIONS

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PAVEMENT CORE ILLUSTRATIONS

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