ARKANSAS DEPARTMENT OF TRANSPORTATION



SUBSURFACE INVESTIGATION

STATE JOB NO. 070418								
FEDERAL AID PROJE	CT NO	NHPP-0006(38)						
	HALFWAY	CREEK STR. & APPRS	s. (S)					
STATE HIGHWAY	160	SECTION	9					
IN BRADLEY								

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.



ARKANSAS DEPARTMENT OF TRANSPORTATION

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MATERIALS DIVISION

11301 West Baseline Road | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2185 | Fax: 501.569.2368

September 12, 2019

TO:

Mr. Rick Ellis, Bridge Engineer

SUBJECT:

Job No. 070418

Halfway Creek Str. & Apprs. (S)

Bradley County
Route 160 Section 9

Transmitted herewith are a brief summary of the geology and site conditions, summary of percent material passing #200 sieve and Atterberg Limits test results (for liquefaction susceptibility analysis), D50 scour analysis, and the logs of the borings conducted for the structure and approaches of the above referenced project. The samples obtained by the Standard Penetration Tests were brought to the laboratory and visually classified by experienced lab personnel to confirm the field identifications.

This project consists of replacing the Highway 160 Bridge, over Halfway Creek, southeast of the town of Hermitage. The new bridge will be constructed to the north of the existing. Two of the four requested borings were inaccessible due to unfavorable field conditions. The two borings that were obtained were offset and drilled in the existing roadway. The obtained borings are anticipated to represent uniform site conditions and should be adequate to design the proposed pile foundations.

Embankment analyses included global stability with seismic design consideration utilizing a horizontal acceleration coefficient of 0.107, as provided by Bridge Design. The proposed embankment configuration provides for a satisfactory Factor of Safety for seismic and static conditions. If you have any questions concerning these recommendations, please contact the Geotechnical Section.

Michael C. Benson Materials Engineer

MCB:rpt:mlg

cc: State Construction Engineer - Master File Copy

District 7 Engineer

G.C. File

GEOLOGY AND SITE CONDITIONS Job No. 070418

Halfway Creek Str. & Apprs. (S) Bradley County Route 160 Section 9

Site Conditions

The existing bridge is a five span structure over Halfway Creek. The existing bridge is constructed of precast concrete deck with timber pilings and concrete caps supporting the deck. The guardrail is composed of steel with concrete posts. Concrete has been placed on the abutment slopes to reduce erosion. Overhead power lines parallel the north side of the roadway. Halfway Creek is a south flowing blackwater creek. Vegetation adjacent to the bridge consists of grasses. The area north and south of the bridge is moderately to heavily wooded. The area northeast of the bridge has been clear-cut and is heavily vegetated with brush.

Site Geology

The job site is located on alluvial deposits. Alluvial deposits at the job site are composed of sands and clays. The alluvial deposits are approximately 15 feet thick and are underlain by Paleogene age sediment.

The Paleogene deposits at the job site are represented by the Cockfield Formation, the uppermost formation of the Claiborne Group. The Cockfield is composed of unconsolidated, sand, silt, clay, lignite and some glauconite. The Claiborne is up to 1500 feet thick in Arkansas.

Scour Potential

The banks of the channel (See Figures 1 and 2) consists of silty sand (SM) based on the scour sample taken at the site. Silty Sand is a highly scourable grain size; however, the banks are well vegetated and the stream at base-flow conditions is slow flowing. Concrete has been placed under the bridge ends to prevent erosion.

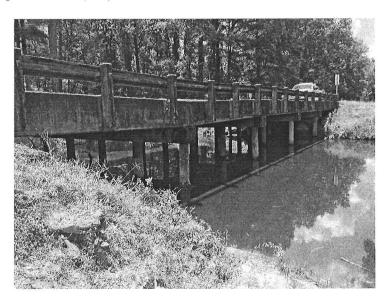


Figure 1. Bridge over Halfway Creek looking southwest.



Figure 2. Bridge over Halfway Creek looking north.

Subsurface Conditions

Based on the results of the borings, the subsurface stratigraphy may be generalized as follows:

0 to 9 Feet:

Consists of moist, soft, brown sandy clay.

9 to 15 Feet:

Consists of moist to wet, loose to medium dense, brown silty sand.

15 to 20 Feet:

Consists of moist, stiff, dark gray clay. (Cockfield Formation)

20 to 75 Feet:

Varies from moist, stiff to hard, dark gray clay to medium dense to very

dense, gray silt to silty sand.

35 to 75 Feet:

Varies from moist, very stiff to hard, gray clay to medium dense to very dense, gray silt to silty sand. Some samples in this zone contained a

notable amount of lignite.

75 to 101.5 Feet:

Varies from moist, very stiff to hard, gray clay to very dense, gray sand.

Lab Test Summary

Project Number: Project Name: 070418

Halfway Creek Str. & Apprs. (S)

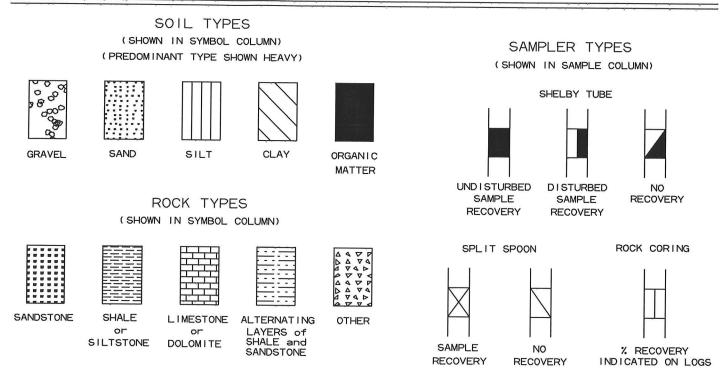
Station	Location	Depth (ft.)	Plastic Limit	Liquid Limit	Plasticity Index	% Passing No. 200	Unified Soil Classification
210+35	30' Rt Const. C.L.	4.5	NT			58	
210+35	30' Rt Const. C.L.	9.5	NT			34	
210+35	30' Rt Const. C.L.	15	22	55	33	99	СН
210+35	30' Rt Const. C.L.	20	20	44	24	96	CL
210+35	30' Rt Const. C.L.	25	25	47	22	99	CL
210+35	30' Rt Const. C.L.	30	22	44	22	99	CL
210+35	30' Rt Const. C.L.	35	NP			97	ML
210+35	30' Rt Const. C.L.	40	NP			98	ML
210+35	30' Rt Const. C.L.	45	24	31	7	99	ML
210+35	30' Rt Const. C.L.	50	NP			85	ML
210+35	30' Rt Const. C.L.	55	19	40	21	100	CL
210+35	30' Rt Const. C.L.	60	29	77	48	93	СН
210+35	30' Rt Const. C.L.	65	24	62	38	99	СН
210+35	30' Rt Const. C.L.	70	23	58	35	98	СН
210+35	30' Rt Const. C.L.	75	16	39	23	95	CL
210+35	30' Rt Const. C.L.	80	18	47	29	96	CL
210+35	30' Rt Const. C.L.	85	20	54	34	98	СН
210+35	30' Rt Const. C.L.	90	18	56	38	97	СН
210+35	30' Rt Const. C.L.	95	17	57	40	99	СН
210+35	30' Rt Const. C.L.	100	17	55	38	95	СН

D₅₀ AGGREGATE ANALYSIS FOR SCOUR CALCULATIONS

Job No. 070418

Creek Name	Station	Sample Type	Location	Depth (ft.)	Plastic Limit	Liquid Limit	Soil Description	Aggregate Size (D50) (in.)
Halfway Creek	209+80	Creek Bank	12' RT Const. C.L.	N/A	Non Plastic	N/A	SM Silty Sand	Less than 0.0029

LEGEND



TERMS DESCRIBING CONSISTENCY OR CONDITION

GRANU	LAR SOIL		CLAY	CLA	Y-SHALE	SHALE					
"N" Value	<u>Density</u>	"N" Value	Consistency	"N" Value	Consistency	"N" Value	Consistency				
0-4 5-10 11-30 31-50 Over 50	Very Loose Loose Medium Dense Dense Very Dense	0-1 2-4 5-8 9-15 16-30 31-60 Over 60	Very Soft Soft Medium Stiff Stiff Very Stiff Hard Very Hard	0-1 2-4 5-8 9-15 16-30 31-60 Over 60	Very Soft Soft Medium Stiff Stiff Very Stiff Hard Very Hard	More than Penetration	on /s: Medium Hard 2'				

- 1. Ground water elevations indicated on boring logs represent ground water elevations at date or time shown on boring log. Absence of water surface implies that no ground water data is available but does not necessarily mean that ground water will not be encountered at locations or within the vertical reaches of these borings.
- 2. Borings represent subsurface conditions at their respective locations for their respective depths. Variations in conditions between or adjacent to boring locations may be encountered.
- 3. Terms used for describing soils according to their texture or grain size distribution are in accordance with the Unified Soil Classification System.

Standard Penetration Test – Driving a 2.0" O.D., 1-3/8" I.D. sampler a distance of 1.0 foot into undisturbed soil with a 140-pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6.0 inches to seat into undisturbed soil, and then perform the test. The number of hammer blows for seating the spoon and performing the test are recorded for each 6 inches of penetration on the drill log. The field "N" Value (N_f) can be obtained by

adding the bottom two numbers for example: $\frac{6}{8-9} \Rightarrow 8+9=17 blows/ft$. The "N" Value corrected to 60% efficiency (N₆₀) can be obtained by multiplying N_f by the hammer correction factor published on the boring log.

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33	1				17		57			9			
		\triangle		CH						15-18			
$ \dashv$													
- $+$			Moist, Very Stiff to Hard, Dark Brown Fat Clay	_									
	11		with Trace Lignite										
100	11				17		55			9			
		\times		CH	17		55			13-17			
	Y		Boring Terminated						\dashv	.5 ,1		-	
			•										
105													
KEMA	KKS:	* [NT = not tested due to insufficient sample.										



ARKANSAS DEPARTMENT OF TRANSPORTATION

ARDOT.gov | IDriveArkansas.com | Scott E. Bennett, P.E., Director

MATERIALS DIVISION

11301 West Baseline Road | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2185 | Fax: 501.569.2368

April 16, 2018

TO:

Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT:

Job No. 070418

Halfway Creek Str. & Apprs. (S)

Route 160 Section 9
Bradley County

Transmitted herewith is the requested Soil Survey, strength data and Resilient Modulus test results for the above referenced job. The project consists of replacing the existing bridge crossing Halfway Creek on Highway 160. Samples were taken in the existing travel lanes and ditch line. The shoulders are not paved within the project limits.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of moderately plastic sandy clay. The subgrade soils are expected to provide a stable working platform with conventional processing if the weather is favorable during construction. If embankment encroaches into the existing ditch line undercut will be required. Undercut may vary based on seasonal conditions but is anticipated to be no more than two feet. There were no slides observed within the project limits.

The detour alignment crosses land that has been logged and due to recent flooding there is debris from the logging activities and standing water within the project limits. The water should be drained and all soft unstable organic material should be undercut prior to detour construction. The undercut may be backfilled with locally available unspecified material.

Listed below is the additional information requested for use in developing the plans:

1. The Qualified Products List (QPL) indicates that Aggregate Base Course (Class CL-7) is available from commercial producers located in the vicinity of Bismarck.

2. Asphalt Concrete Hot Mix

Туре	Asphalt Cement %	Mineral Aggrega
Surface Course	5.3	94.7
Binder Course	4.4	95.6
Base Course	4.0	96.0

Michael C. Benson Materials Engineer ate %

MCB:pt:bjj Attachment

CC:

State Constr. Eng. - Master File Copy

District 7 Engineer

System Information and Research Div.

G. C. File

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY STRENGTH TEST REPORT ***

DATE - 04/02/2018 SEQUENCE NO. = 1

JOB NUMBER - 070418 MATERIAL CODE - SSRV

SPEC. YEAR = 2014

SUPPLIER ID. - 1

COUNTY/STATE - 06

DISTRICT NO. = 07

JOB NAME - HALFWAY CREEK STR. & APPRS. (S)

* STATION LIMITS R-VALUE AT 240 psi

BEGIN JOB - END JOB 12

RESILIENT MODULUS

STA. 099 + 00 8514

REMARKS =

-

AASHTO TESTS : T190

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS RECOMPACTED SAMPLES

Job No. Date Sampled:	070418 2/12/18	Material Code Station No.:	SSRVPS 099+00	
Date Tested:	March 2, 2018	Location:	21'RT	
Name of Project:	HALFWAY CREEK STR. & APPRS. (S)	Lucation.	211(1	
County:	Code: 6 Name: BRADLEY			
Sampled By:	THORNTON/FRAZIER	Depth:		0-5
Lab No.:	20180315	AASHTO Class:		A-4 (0)
Sample ID:	RV63	Material Type (1		2
LATITUDE:		LONGITUDE:	,-	
1. Testing Inform				
	Preconditioning - Permanent Strain > 5% (N
	Testing - Permanent Strain > 5% (Y=Yes or	•		N
	Number of Load Sequences Completed (0-	15)		15
2. Specimen Inf				
	Specimen Diameter (in):			
	Тор			3.95
	Middle			3.95
	Bottom			3.95
	Average			3.95
	Membrane Thickness (in):			0.01
	Height of Specimen, Cap and Base (in):			8.01
	Height of Cap and Base (in):			0.00
	Initial Length, Lo (in):			8.01
	Initial Area, Ao (sq. in):			12.18
	Initial Volume, AoLo (cu. in):			97.56
3. Soil Specime	n Weight:			
	Weight of Wet Soil Used (g):			3391.20
4. Soil Propertie				
	Optimum Moisture Content (%):			9.9
	Maximum Dry Density (pcf):			122.4
	95% of MDD (pcf):			116.3
	In-Situ Moisture Content (%):			N/A
5. Specimen Pro				
	Wet Weight (g):			3391.20
	Compaction Moisture content (%):			9.8
	Compaction Wet Density (pcf):			132.44
	Compaction Dry Density (pcf):			120.62
	Moisture Content After Mr Test (%):			9.7
6. Quick Shear	Test (Y=Yes, N=No, N/A=Not Applicable):			#VALUE!
7. Resilient Mod	lulus, Mr:	6	6675(Sc)^-0.04992	(S3)^0.50897
8. Comments				
9. Tested By:	G.WENDLAND	Date: March 2, 2018		

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS RECOMPACTED SAMPLES

SSRVPS 00+660 21'RT Material Code Station No.: Location: March 2, 2018 2/12/18 070418 Date Sampled: Date Tested: Job No.

Name of Project: HALFWAY CREEK STR. & APPRS. (S)
County: Code: 6 Name: BRADLEY

Sampled By: THORNTON/FRAZIER

Lab No.: 20180315

Sample ID: RV63

Material Type (1 or 2): 2 LONGITUDE:

LATITUDE:

A-4(0)

AASHTO Class:

Depth:

0-5

	Chamber	Nominal	Actual	Actual	Actual	Actual	Actual	Actual	Average	Resilient	Resilient
	Confining	Maximum	Applied	Applied	Applied	Applied	Applied	Applied	Recov Def.	Strain	Modulus
PARAMETER	Pressure	Axial	_	Cyclic Load	Contact	Мах.	Cyclic	Contact	LVDT 1		
		Stress	Load		Load	Axial	Stress	Stress	and 2		
						Stress					
DESIGNATION	Š	Scyclic	Р _{шах}	Pcyclic	Pcontact	S _{max}	Scyclic	Scontact	Havg	ઝું	M
TINO	psi	psi	sql	sql	lbs	psi	psi	psi	u	in/in	psi
Sequence 1	0.9	2.0	25.0	22.4	2.5	2.0	1.8	0.2	0.00088	0.00011	16,778
Sequence 2	6.0	4.0	47.1	44.5	2.5	3.9	3.7	0.2	0.00182	0.00023	16,098
Sequence 3	0.9	6.0	9.69	66.3	3.3	5.7	5.4	0.3	0.00284	0.00035	15,368
Sequence 4	6.0	8.0	93.3	87.6	5.7	7.7	7.2	0.5	0.00387	0.00048	14,884
Sequence 5	6.0	10.0	116.7	108.5	8.2	9.6	8.9	0.7	0.00497	0.00062	14,359
Sequence 6	4.0	2.0	24.6	22.1	2.5	2.0	1.8	0.2	0.00110	0.00014	13,179
Sequence 7	4.0	4.0	46.0	43.3	2.7	3.8	3.6	0.2	0.00226	0.00028	12,606
Sequence 8	4.0	6.0	67.1	64.4	2.8	5.5	5.3	0.2	0.00348	0.00043	12,161
Seguence 9	4.0	8.0	8.06	85.6	5.1	7.5	7.0	0.4	0.00465	0.00058	12,101
Sequence 10	4.0	10.0	114.4	106.8	7.7	9.4	8.8	9.0	0.00586	0.00073	11,985
Sequence 11	2.0	2.0	23.7	50.9	2.8	1.9	1.7	0.2	0.00153	0.00019	8,964
Sequence 12	2.0	4.0	44.2	41.3	2.8	3.6	3.4	0.2	0.00312	0.00039	8,711
Sequence 13	2.0	6.0	64.2	61.3	2.9	5.3	5.0	0.2	0.00473	0.00059	8,514
Sequence 14	2.0	8.0	86.7	82.3	4.4	7.1	6.8	0.4	0.00608	0.00076	8,902

TESTED BY ..WENDLAND DATE March 2, 2018
REVIEWED BY DATE

9,192

0.00091

0.00732

9.0

8.4

9.0

6.8

102.3

109.1

10.0

2.0

Sequence 15

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

AASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS RECOMPACTED / THINWALL TUBE SAMPLES

Job No.

070418

Material Code SSRVPS

Date Sampled:

2/12/18

Station No.: 099+00

Date Tested:

March 2, 2018

Location: 21'RT

County:

Name of Project: HALFWAY CREEK STR. & APPRS. (S)

Name: BRADLEY

Sampled By:

Code: 6 THORNTON/FRAZIER

Depth: 0-5

AASHTO Class: A-4 (0)

Lab No.:

20180315

Material Type (1 or 2): 2

Sample ID:

RV63

LATITUDE:

LONGITUDE:

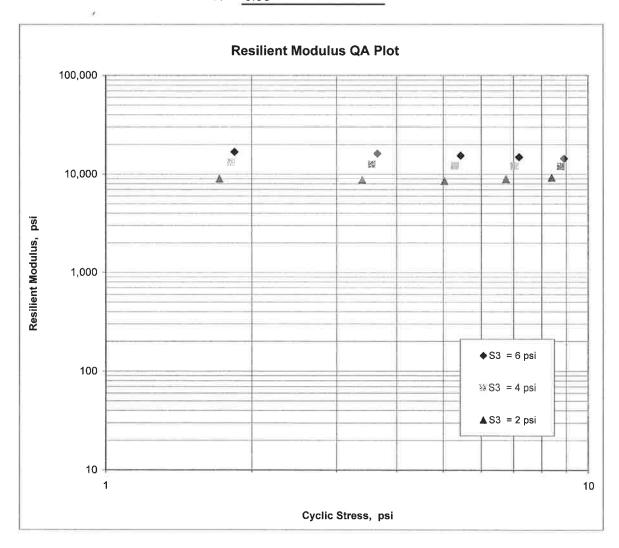
$$M_R = K1 (S_C)^{K2} (S_3)^{K5}$$

K1 = 6,675

K2 = -0.04992

K5 = 0.50897

 $R^2 = 0.98$



JOB: 070418

Arkansas State Highway Transporation Department

JOB NAME: HALFWAY CREEK STR. & APPRS. (S)

Materials Division

COUNTY NO. 6 DATE TESTED 3/29/2018

comments: W=MULTIPLE LAYERS

Michael Benson, Materials Engineer

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	<i>P.I.</i>	SOIL CLASS	<i>LAB</i> #:	%MOISTURE
099+00	21 RT	0-5	BROWN	82	76	70	57	E S 42	ND	NP	A-4(0)	RV63	
099+00	05 RT	0-5	BR/GR	95	89	79	62	48	20	7	A-4(0)	S57	13
099+00	12 RT	0-5	BROWN	94	82	68	51	38	19	7	A-4(0)	S58	11.9
099+00	21 RT	0-5	BROWN	61	54	48	36	26	ND	NP	A-2-4(0)	S59	8.8
105+00	05 LT	0-5	BROWN	91	83	73	57	44	27	14	A-6(2)	S60	14.2
105+00	12 LT	0-5	BROWN	95	91	83	63	49	25	12	A-6(2)	S61	17.1
105+00	21 LT	0-5	BR/GR	92	86	79	61	46	19	5	A-4(0)	S62	15.4

DATE TESTED

3/29/2018

Arkansas State Highway Transporation Department

Materials Division

JOB: 070418
JOB NAME: HALFWAY CREEK STR. & APPRS. (S)

Michael Benson, Materials Engineer

PAVEMENT SOUNDINGS AGG. BASE CRS. CL-7 ACHMBC ACHMBC ACHIMBC ACHIMBC ACHIMBC 1.0 ACHIMSC 3.0W ACHIMSC 5.0W ACHMSC 4.0W ACHIMSC ACHIMSC 4.25W COUNTY NO. 05 RT 12 RT 21 RT 05 LT 12 LT STA.# LOC. 00+660 00+660 105+00 00+660 105+00

AGG. BASE CRS. CL-7

ACHIMBC

ACHMSC

21 LT

105+00

Monday, April 02, 2018

W=MULTIPLE LAYERS comments:

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

*** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 03/29/3 JOB NUMBER - 070418 FEDERAL AID NO TO BE A PURPOSE - SOIL SU SPEC. REMARKS - NO SPEC SUPPLIER NAME - STATE NAME OF PROJECT - HALFU PROJECT ENGINEER - NOT A PIT/QUARRY - ARKANSAS LOCATION - BRADLEY, SAMPLED BY - THORNTON/S SAMPLE FROM - TEST HOLE MATERIAL DESC SOIL S	ASSI JRVE ZIFI VAY APPI COU FRAZ	Y SAMPLE CATION CHECK CREEK STR. & APPR LICABLE UNTY ZIER			MATERI SPEC. SUPPLI COUNTY DISTRI DATE S DATE R DATE I	AL YEA ER /ST CT	NO 1 CODE - S AR - 2 ID 1 FATE - 0 NO 0 PLED - 0 FEIVED - 0 FED - 0	SRVPS 014 6 7 2/12/18 2/14/18
LAB NUMBER	_	20180309	-	20180310		_	20180311	
SAMPLE ID	_	S57	2,944	250			S59	
TEST STATUS	_				ON ONLY			ION ONLY
STATION	_		-	099+00		_	099+00	
LOCATION	-	05 RT	-	12 RT		-	21 RT	
DEPTH IN FEET	-	0-5	_	0-5		_	0-5	
MAT'L COLOR	-	BR/GR	-	BROWN		_	BROWN	
MAT'L TYPE	-	22 00 6 70	1	22		-	00 00	6 70
LATITUDE DEG-MIN-SEC		33 20 6.70	1.55	33 20		-	33 20	
LONGITUDE DEG-MIN-SEC	-	92 07 48.20		92 07	48.10		92 07	48.10
% PASSING 2 IN.			-			-		
1 1/2 IN.		4.0.0	_			_	4.0.0	
3/4 IN.		100 99	_	100		-	100 76	
3/8 IN. NO. 4	_	95	-	100 94		$\dot{\tau}$	61	
	_	89	-	82		20	54	
NO. 40		79	_	68			48	
NO. 80	_	62	_	51		-	36	
NO. 200	-	48		38			26	
LIOUID LIMIT	_	20	_	19		-	ND	
PLASTICITY INDEX	-	7	-	7		-	NP	
AASHTO SOIL	_	A-4(0)	-	A-4(0)		-	A-2-4 (0)
UNIFIED SOIL	_		-			_		
% MOISTURE CONTENT	-	13.0	_	11.9			8.8	
ACHMSC (IN) –	4.OW	-	3.0W		-		
ACHMBC (IN) -	1.5	-			-		
AGG. BASE CRS. CL-7 (IN)	6.0	_	5.0		_		
	_		_			_		
	-		-			-		
	-		-			-		
	_		_			_		
	-		_			_		
REMARKS - W=MULTIPLE L	AYEI	RS						

AASHTO TESTS : T24 T88 T89 T90 T265

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 03/29/18 JOB NUMBER - 070418 SEQUENCE NO. - 2 MATERIAL CODE - SSRVPS FEDERAL AID NO.- TO BE ASSIGNED SPEC. YEAR - 2014 PURPOSE - SOIL SURVEY SAMPLE SUPPLIER ID. - 1 SPEC. REMARKS - NO SPECIFICATION CHECK COUNTY/STATE - 06 SUPPLIER NAME - STATE DISTRICT NO. - 07 NAME OF PROJECT - HALFWAY CREEK STR. & APPRS. (S) PROJECT ENGINEER - NOT APPLICABLE PIT/QUARRY - ARKANSAS LOCATION - BRADLEY, COUNTY DATE SAMPLED - 02/12/18 SAMPLED BY - THORNTON/FRAZIER DATE RECEIVED - 02/14/18 SAMPLE FROM - TEST HOLE DATE TESTED - 03/29/18 MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS LAB NUMBER - 20180312 - S60 - 20180313 - 20180314 - S61 - S62 - 20180313 SAMPLE ID - INFORMATION ONLY - INFORMATION ONLY - INFORMATION ONLY - 105+00 - 105+00 - 105+00 - 12 LT - 21 LT - 0-5 - 0-5 TEST STATUS STATION LOCATION - 05 LT - 0-5 _ 0-5 - 0-5 DEPTH IN FEET - BROWN _ BROWN _ BR/GR MAT'L COLOR MAT'L TYPE LATITUDE DEG-MIN-SEC - 33 20 7.60 - 33 20 7.70 - 33 20 7.80 LONGITUDE DEG-MIN-SEC - 92 07 41.30 92 07 41.20 92 07 41.20 % PASSING 2 IN. -1 1/2 IN. -100 100 3/4 IN. -98 3/8 IN. - 100 97 NO. 4 - 91 NO. 10 - 83 95 92 91 86 NO. 40 - 73 83 79 NO. 80 - 57 NO. 200 - 44 = 63 - 61 49 46 **-**0 25 19 - 27 LIOUID LIMIT PLASTICITY INDEX
AASHTO SOIL - 14 = 12 5 - 14 - A-6(2) A-6(2) A-4(0)UNIFIED SOIL % MOISTURE CONTENT - 14.2 17.1 15.4 (IN) - 5.0WACHMSC - 4.25W AGG. BASE CRS. CL-7 (IN) 7.0 ----6.0

REMARKS - W=MULTIPLE LAYERS

-

AASHTO TESTS : T24 T88 T89 T90 T265

:

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY / PAVEMENT SOUNDING TEST REPORT ***

DATE - 0 JOB NUMBER - 0 FEDERAL AID NO T PURPOSE - S SPEC. REMARKS - N SUPPLIER NAME - S NAME OF PROJECT - PROJECT ENGINEER - PIT/QUARRY - ARK LOCATION - BRA SAMPLED BY - THOP SAMPLE FROM - TES MATERIAL DESC S	O BE ASS OIL SURV O SPECIF TATE HALFWAY NOT APF CANSAS ADLEY, CO	EY SAME ICATION CREEK LICABLE OUNTY AZIER	I CHECK STR. & APPR	ss. (s)	SEQUENCE NO 1 MATERIAL CODE - RV SPEC. YEAR - 2014 SUPPLIER ID 1 COUNTY/STATE - 06 DISTRICT NO 07 DATE SAMPLED - 02/12/18 DATE RECEIVED - 02/14/18 DATE TESTED - 03/29/18 ACTUAL RESULTS
LAB NUMBER	_	20180	315	_	<i>a</i> .
SAMPLE ID		RV63		_	-
TEST STATUS	_	INFOR	MATION ONLY	_	
STATION	_	099+0	0	-	鉴!
LOCATION	-	21 RT	ı	-	=:
DEPTH IN FEET	-	0-5		_	<u>s</u> e; 200
MAT'L COLOR	_	BROWN	ſ	_	
MAT'L TYPE	~			_	_
LATITUDE DEG-MI	N-SEC -	33	20 6.70	_	₹ 56
LONGITUDE DEG-MI	N-SEC -	92	07 48.10		
% PASSING 2	IN			22	2
	/2 IN			:#	= :
	/4 IN			3.55	=
	/8 IN			-	嘉
	. 4 -			=	a
NO	. 10 -	76		. 	-
NC	. 40 -	70			
NO	. 80 -	57		2=	프
NO	. 200 -	42			
LIQUID LIMIT	_	ND			_
PLASTICITY INDEX	_			.=	
AASHTO SOIL	_		(0)	-	22
UNIFIED SOIL	_		/	2	÷
% MOISTURE CONTE	NT -			::	=
	_			==:a ==:.	- -
	_			<u>=</u> 0	_
	-			= 0;	-
	-			 20	-
	_			= 0	-
	_			40	- -
	_			-0.0	_
	-			= 0	-

REMARKS - W=MULTIPLE LAYERS

-

AASHTO TESTS : T24 T88 T89 T90 T265

: