ARKANSAS DEPARTMENT OF TRANSPORTATION



SUBSURFACE INVESTIGATION

STATE HIGHWAY	316	SECTION	1
COFFE	E CREEK & DR	AINAGE DITCH STRS. &	APPRS. (S)
FEDERAL AID PROJE	CT NO.	NHPP-0054(23)	
STATE JOB NO.		110643	

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 STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

May 8, 2017

TO:

Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT:

Job No. 110643

Coffee Creek & Drainage Ditch Strs. & Apprs. (S)

Route 316 Section 1

Phillips 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 bridges crossing Coffee Creek & Drainage Ditch on Highway 316. Samples were obtained in the existing travel lanes and ditch line. There were no paved shoulders within the project limits.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of moderately plastic fine sandy clay. Cross-sections are not currently available, but it is assumed that the construction grade line will closely match that of the existing roadway. The subgrade soils are expected to provide a stable working platform with normal drying and compactive efforts, if the weather is favorable during construction.

Additional earthwork recommendations will be made upon request when plans are further developed.

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 at the river ports in Helena.

2. Asphalt Concrete Hot Mix

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	4.0	96.0

Michael C. Benson Materials Engineer

MCB:pt:bjj Attachment

CC:

State Constr. Eng. – Master File Copy

District 1 Engineer

System Information and Research Div.

G. C. File

MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY STRENGTH TEST REPORT ***

DATE - 05/01/2017

SEQUENCE NO. - 1

JOB NUMBER - 110643 MATERIAL CODE - SSRV

SPEC. YEAR = 2014

SUPPLIER ID. - 1

COUNTY/STATE - 54

DISTRICT NO. - 01

JOB NAME - COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S)

BEGIN JOB = END JOB

RESILIENT MODULUS

STA. 111+90 9218 STA. 136+90 7857

REMARKS -

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AASHTO TESTS : T190

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

Job No. Date Sampled: Date Tested: Name of Project: County:	110643 3/28/17 April 28, 2017 COFFEE CREEK & DRAINAGE DITCH STRS. Code: 54 Name: PHILLIPS	Material Code Station No.: Location: & APPRS. (S)	SSRVPS 111+90 18LT
Sampled By: Lab No.: Sample ID: LATITUDE:	THORNTON/TAYLOR 20171253 RV327	Depth: AASHTO Class: Material Type (1 or LONGITUDE:	0-5 A-4(6) 2):
1. Testing Inform	nation	-	
i. resulig illioni	Preconditioning - Permanent Strain > 5% (Y Testing - Permanent Strain > 5% (Y=Yes or Number of Load Sequences Completed (0-15)	N=No)	N N 15
2. Specimen Info	ormation:		
3. Soil Specimen	Specimen Diameter (in): Top Middle Bottom Average Membrane Thickness (in): Height of Specimen, Cap and Base (in): Height of Cap and Base (in): Initial Length, Lo (in): Initial Area, Ao (sq. in): Initial Volume, AoLo (cu. in): Weight: Weight:		3.96 3.96 3.95 3.96 0.01 8.02 0.00 8.02 12.22 98.01
4. Soil Properties			
	Optimum Moisture Content (%): Maximum Dry Density (pcf): 95% of MDD (pcf): In-Situ Moisture Content (%):		15.2 107.8 102.4 N/A
5. Specimen Pro	perties:		
	Wet Weight (g): Compaction Moisture content (%): Compaction Wet Density (pcf): Compaction Dry Density (pcf): Moisture Content After Mr Test (%):		3087.60 15.2 120.03 104.19 15.2
6. Quick Shear T	est (Y=Yes, N=No, N/A=Not Applicable):		#VALUE!
7. Resilient Mode	ulus, Mr:	9626	6(Sc)^-0.12737(S3)^0.30439
8. Comments			
9. Tested By:	GW	Date: April 28, 2017	

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

SSRVPS 111+90 18LT Material Code Station No.: Location: April 28, 2017 3/28/17 110643 Date Sampled: Date Tested: Job No.

COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S) Name of Project:

PHILLIPS Name: Code: 54 County:

0-5
Material Type (1 or 2): 2
LONGITUDE: THORNTON/TAYLOR 20171253 Sampled By: Lab No.:

RV327 LATITUDE: Sample ID:

Resilient	Modulus				M.	psi	15,411	14,524	13,729	12,881	12,419	13,364	12,313	11,634	11,219	10,999	10,999	10,165	9,603	9,332	0 218
Res	Wo						15	14	13	12	12	13	12	11	1	10	10	10	ဝ်	6	O
Resilient	Strain				చ్	in/in	0.00012	0.00025	0.00040	0.00056	0.00072	0.00014	0.00029	0.00046	0.00063	0.00081	0.00016	0.00035	0.00055	0.00075	70000
Average	Recov Def.	LVD71	and 2		H _{avg}	Ŀ.	0.00097	0.00203	0.00319	0.00448	0.00576	0.00111	0.00235	0.00371	0.00509	0.00646	0.00132	0.00281	0.00440	0.00600	0.00756
Actual	Applied	Contact	Stress		Scontact	psi	0.2	0.2	0.3	0.5	0.7	0.2	0.2	0.2	0.4	9.0	0.2	0.2	0.2	0.4	9
Actual	Applied	Cyclic	Stress		Scyclic	psi	1.9	3.7	5.5	7.2	8.9	1.8	3.6	5.4	7.1	8.9	1.8	3.6	5.3	7.0	۸ ۲
Actual	Applied	Мах.	Axial	Stress	S _{max}	psi	2.1	3.9	5.7	7.7	9.6	2.1	3.8	5.6	7.5	9.5	2.0	3.8	5.5	7.3	03
Actual	Applied	Contact	Load		Pcontact	sql	2.5	2.5	3.5	5.9	8.4	2.6	2.7	2.7	5.1	9.7	2.7	2.8	2.8	4.4	œ
Actual	Applied	Cyclic Load			P _{cyclic}	sql	22.8	44.9	66.7	88.0	109.1	22.5	44.2	65.7	6.98	108.3	22.1	43.5	64.4	85.3	1063
Actual	Applied	Max. Axial Cyclic Load	PeoT		Р _{шах}	sql	25.3	47.5	70.2	94.0	117.4	25.1	46.9	68.4	92.0	115.9	24.8	46.3	67.2	89.7	113.1
Nominal	Maximum	Axial	Stress		Scyclic	psi	2.0	4.0	0.0	8.0	10.0	2.0	4.0	0.9	8.0	10.0	2.0	4.0	0.9	8.0	10.0
Chamber	Confining	Pressure			လိ	psi	0.9	0.9	0.9	0.9	0.9	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0
		PARAMETER			DESIGNATION	TINO	Sequence 1	Sequence 2	Sednence 3	Sequence 4	Sequence 5	Sequence 6	Sequence 7	Sequence 8	Sednence 9	Sequence 10	Sequence 11	Sequence 12	Sequence 13	Sequence 14	Sequence 15

April 28, 2017	
DATE	DATE
GW	
TESTED BY	REVIEWED BY

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

Job No.

110643

Material Code SSRVPS

Date Sampled:

3/28/17

Station No.: 111+90

Date Tested:

Location: 18LT

April 28, 2017

County:

Name of Project: COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S)

Name: PHILLIPS

Sampled By:

Code: 54 THORNTON/TAYLOR

Depth: 0-5

Lab No .:

20171253

AASHTO Class: A-4(6)

Sample ID:

RV327

Material Type (1 or 2): 2

LATITUDE:

LONGITUDE:

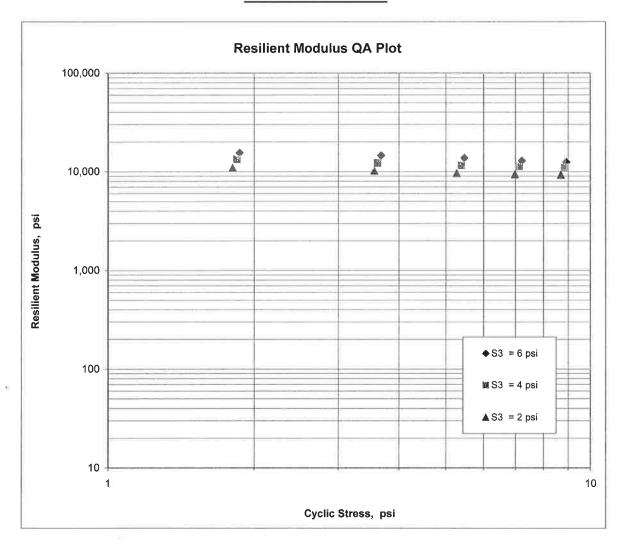
$$M_R = K1 (S_C)^{K2} (S_3)^{K5}$$

$$K1 = 9,626$$

$$K2 = -0.12737$$

$$K5 = 0.30439$$

$$R^2 = 0.99$$



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

Job No. Date Sampled: Date Tested: Name of Project:	110643 3/28/17 April 28, 2017 COFFEE CREEK & DRAINAGE DITCH STRS. 6	Material Code Station No.: Location: & APPRS. (S)	SSRVPS 136+90 18LT
County: Sampled By: Lab No.: Sample ID: LATITUDE:	Code: 54 Name: PHILLIPS THORNTON/TAYLOR 20171254 RV328	Depth: AASHTO Class: Material Type (1 LONGITUDE:	0-5 A-6(10) or 2):
1. Testing Inforn	nation:		
	Preconditioning - Permanent Strain > 5% (Y= Testing - Permanent Strain > 5% (Y=Yes or N Number of Load Sequences Completed (0-15	I=No)	N N 15
2. Specimen Info	ormation:		
	Specimen Diameter (in):		
	Тор		3.94
	Middle		3.94
	Bottom		3.94
	Average		3.94
	Membrane Thickness (in):		0.01 8.03
	Height of Specimen, Cap and Base (in): Height of Cap and Base (in):		0.00
	Initial Length, Lo (in):		8.03
	Initial Area, Ao (sq. in):		12.12
	Initial Volume, AoLo (cu. in):		97.31
	,		
3. Soil Specimer			
	Weight of Wet Soil Used (g):		3019.00
4. Soil Properties	s.		
4. Con i Toperdo	Optimum Moisture Content (%):		15.1
	Maximum Dry Density (pcf):		106.7
	95% of MDD (pcf):		101.4
	In-Situ Moisture Content (%):		N/A
5. Specimen Pro	nartice:		
5. Specimen Pro	Wet Weight (g):		3019.00
	Compaction Moisture content (%):		15.3
	Compaction Wet Density (pcf):		118.21
	Compaction Dry Density (pcf):		102.53
	Moisture Content After Mr Test (%):		15.2
6. Quick Shear T	est (Y=Yes, N=No, N/A=Not Applicable):		#VALUE!
7. Resilient Mod	ulus, Mr:	8	396(Sc)^-0.12997(S3)^0.28570
8. Comments			
9. Tested By:	GW	Date: April 28, 2017	

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

SSRVPS 136+90 18LT Material Code Station No.: Location: April 28, 2017 110643 3/28/17 Date Sampled: Date Tested: Job No.

COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S) Name of Project:

Name: PHILLIPS Code: 54 County:

0-5
Material Type (1 or 2): 2
LONGITUDE: THORNTON/TAYLOR 20171254 RV328 Sampled By: Sample ID: Lab No.:

-	I A TITIDE.	
	I	

lient	nlus					j.	12,666	12,142	11,498	10,753	10,356	11,579	10,647	10,015	9,515	9,302	36	0.1	13	89	57
Resilient	Modulus				M	psi	12,6	12,	11,	10,	10,	11,	10,6	10,(9,5	9,3	9,436	8,601	8,213	7,889	7,857
Resilient	Strain				٦	in/in	0.00015	0.00030	0.00048	0.00067	0.00087	0.00016	0.00034	0.00054	0.00076	0.00097	0.00019	0.00042	0.00065	0.00090	0.00113
Average	Recov Def.	LVDT 1	and 2		Havg	ü	0.00117	0.00242	0.00383	0.00541	0.00700	0.00128	0.00275	0.00436	0.00609	0.00776	0.00156	0.00337	0.00525	0.00724	0.00908
Actual	Applied	Contact	Stress		Scontact	psi	0.2	0.2	0.3	0.5	0.7	0.2	0.2	0.2	0.4	9.0	0.2	0.2	0.2	0.3	0.5
Actual	Applied	Cyclic	Stress		Scyclic	psi	1.8	3.7	5.5	7.2	9.0	1.8	3.6	5.4	7.2	9.0	1.8	3.6	5.4	7.1	8.9
Actual	Applied	Мах.	Axial	Stress	S _{max}	psi	2.1	3.9	5.8	7.7	9.7	2.1	3.9	5.7	7.6	9.6	2.1	3.8	5.6	7.4	9.4
Actual	Applied	Contact	Load		P _{contact}	sql	2.8	2.8	3.6	0.9	8.4	2.8	2.8	2.8	5.0	7.5	2.7	2.7	2.7	4.1	9.9
Actual	Applied	Cyclic Load			P _{cyclic}	sql	22.3	44.3	66.5	87.8	109.4	22.3	44.1	62.9	87.4	108.9	22.2	43.7	65.1	86.1	107.6
Actual	Applied	Max. Axial	Load		Рах	sql	25.1	47.1	70.0	93.8	117.8	25.1	46.9	68.7	92.5	116.3	24.9	46.4	67.7	90.3	114.2
Nominal	Maximum	Axial	Stress		S _{cyclic}	psi	2.0	4.0	0.9	8.0	10.0	2.0	4.0	0.9	8.0	10.0	2.0	4.0	0.9	8.0	10.0
Chamber	Confining	Pressure			Š	psi	0.9	0.9	0.9	0.9	0.9	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	2.0
		PARAMETER			DESIGNATION	UNIT	Sequence 1	Sequence 2	Sequence 3	Sequence 4	Sequence 5	Sequence 6	Sequence 7	Sequence 8	Sednence 9	Sequence 10	Sequence 11	Sequence 12	Sequence 13	Sequence 14	Sequence 15

April 28, 2017	
DATE	DATE
GW	
TESTED BY	REVIEWED BY

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

Job No. 110643 **Material Code SSRVPS**

Date Sampled:

3/28/17

Station No.: 136+90

Date Tested:

Location: 18LT

Name of Project:

April 28, 2017

County:

COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S) Code: 54

Name: PHILLIPS

Sampled By:

THORNTON/TAYLOR

Depth: 0-5

Lab No.:

20171254

AASHTO Class: A-6(10)

Sample ID:

RV328

Material Type (1 or 2): 2

LONGITUDE:

LATITUDE:

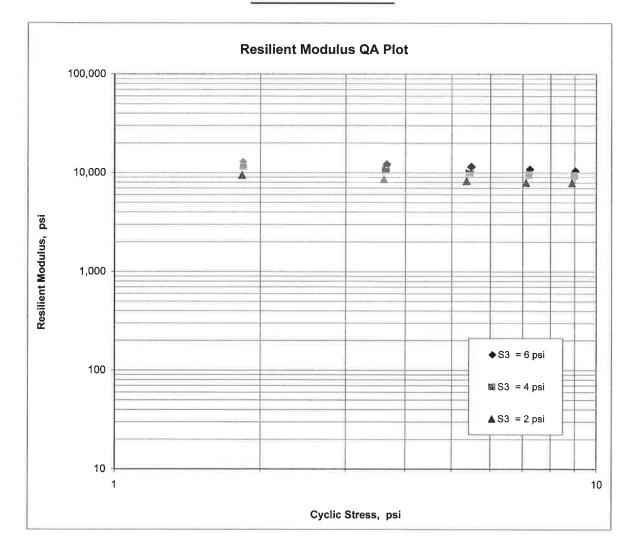
$$M_R = K1 (S_C)^{K2} (S_3)^{K5}$$

$$K1 = 8,396$$

$$K2 = -0.12997$$

$$K5 = 0.28570$$

$$R^2 = 0.99$$



Arkansas State Highway Transporation Department

JOB NAME: COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S)

Materials Division

COUNTY NO. 54 **DATE TESTED** 4/28/2017

Michael Benson, Materials Engineer

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	<i>LAB</i> #:	%MOISTURE
111+90	18 LT	0-5	BROWN	100	(5.00	1 8		93	28	07	A-4(6)	RV327	
136+90	18 LT	0-5	BR/GR	100	72.10	Marie 1	No.	96	31	11	A-6(10)	RV328	
105+00	06 RT	0-5	BROWN	100	15.6 15.6		17/4	97	35	14	A-6(14)	S339	24.5
105+00	20 RT	0-5	BROWN	100	100		Heal.	97	34	13	A-6(13)	S340	24
111+00	06 LT	0-5	GRAY	100			(1)	96	31	10	A-4(9)	S341	28.5
111+00	18 LT	0-5	GRAY	100				96	28	07	A-4(6)	S342	24.7
131+00	06 RT	0-5	BROWN	100		200	Partie.	98	30	09	A-4(9)	S343	22.2
131+00	18 RT	0-5	BROWN	100	3 7			95	34	11	A-6(10)	S344	19
136+00	06 LT	0-5	BR/GR	99	98	96	89	68	30	12	A-6(6)	S345	29.9
136+00	18 LT	0-5	BR/GR	100	jul.	1886	8 2VIII 2 15	97	33	12	A-6(12)	S346	20.9

JOB NAM	JOB:
JOB NAME: COFFEE CREEK & DRAINAGE DITCH STRS. & APPRS. (S)	110643
Materials Division	Arkansas State Highway Transporation Department

*DATE TESTED*4/28/2017

COUNTY NO. 54	Y NO.	54		Michael Benson, Materials Engineer
STA.# LOC.	LOC.			PAVEMENT SOUNDINGS
105+00 06 RT	06 RT	ACHMSC	SOIL CEMENT	
		3.5	2.0	
105+00	20 RT	ACHMSC	SOIL CEMENT	
		ŗ	Ē	
111+00	06 LT	ACHMSC	SOIL CEMENT	
		3.5	3.5	
111+00	18 LT	ACHMSC		
		1		
131+00	06 RT	ACHMSC 3.5		
131+00	18 RT	ACHMSC		
		(II)		
136+00	06 LT	ACHMSC 3.0	SOIL CEMENT	ACHMSC 2.25
136+00	18 LT	ACHMSC	SOIL CEMENT	ACHMSC

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comments:

MICHAEL BENSON, MATERIALS ENGINEER

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

JOB NUMBER - 110 FEDERAL AID NO TO PURPOSE - SOI SPEC. REMARKS - NO SUPPLIER NAME - STA NAME OF PROJECT - O PROJECT ENGINEER - N PIT/QUARRY - ARKAN LOCATION - PHILL	BE ASSIGNED L SURVEY SAMP SPECIFICATION TE COFFEE CREEK & OT APPLICABLE ISAS LIPS, COUNTY CON/TAYLOR HOLE	CHECK DRAINAGE DITC	MATER SPEC. SUPPL COUNT DISTR H STRS. & APPRS. DATE DATE DATE DATE	NCE NO 1 IAL CODE - SSRVPS YEAR - 2014 IER ID 1 Y/STATE - 54 ICT NO 01 (S) SAMPLED - 03/27/17 RECEIVED - 03/31/17 TESTED - 04/28/17
LAB NUMBER SAMPLE ID TEST STATUS STATION LOCATION DEPTH IN FEET MAT'L COLOR MAT'L TYPE LATITUDE DEG-MIN-	- 105+00 - 06 RT - 0-5 - BROWN - 34	MATION ONLY - 0	105+00 20 RT 0-5 BROWN 34 28 3.80	- 20171247 - S341 - INFORMATION ONLY - 111+00 - 06 LT - 0-5 - GRAY - 34 28 4.00
3/4	IN IN IN IN 4 - 100 10 - 40 - 80 -	56 6.60	90 56 6.70 100 97	90 55 59.70
LIQUID LIMIT PLASTICITY INDEX AASHTO SOIL UNIFIED SOIL % MOISTURE CONTENT ACHMSC SOIL CEMENT	- 35 - 14 - A-6(- 24 (IN) - 3.5 (IN) - 2.0	.5 -	34 13 A-6(13) 24.0	= 31 = 10 = A-4(9) = 28.5 - 3.5 - 3.5

REMARKS -

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AASHTO TESTS : T24 T88 T89 T90 T265

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MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 05/03 JOB NUMBER - 1106 FEDERAL AID NO TO BE PURPOSE - SOIL SPEC. REMARKS - NO SE SUPPLIER NAME - STATE NAME OF PROJECT - COE PROJECT ENGINEER - NO PIT/QUARRY - ARKANSE LOCATION - PHILLE SAMPLED BY - THORNTO SAMPLE FROM - TEST HO MATERIAL DESC SOIL	A3 E ASSI SURVE PECIFI E FFEE C I APPL AS PS, CO N/TAYL DLE	Y SAMPLE CATION CHECK REEK & DRAINAGE DI ICABLE UNTY OR			MATERI SPEC. SUPPLI COUNTY DISTRI APPRS. (DATE S DATE R DATE I	AL YEA ER /ST CT (S)	PLED -	SS: 20 1 54 01 03 03	/27/17
LAB NUMBER SAMPLE ID TEST STATUS STATION LOCATION DEPTH IN FEET MAT'L COLOR MAT'L TYPE	-	20171248 S342 INFORMATION ONLY 111+00 18 LT 0-5 GRAY	-	131+00 06 RT 0-5 BROWN		- -	131+00 18 RT 0-5 BROWN	ΙΤΑ	
LATITUDE DEG-MIN-SI LONGITUDE DEG-MIN-SI		34 28 4.00 90 55 59.70	#	34 28 90 55	3.80 35.70	-		28 55	3.80 35.70
1 1/2 3 3/4 3 3/8 3 NO. NO.	EN EN 4 - LO - 40 - 30 -	100	-	100 98		-	100 95		
LIQUID LIMIT	_	28	-	30		=	34		
PLASTICITY INDEX	_	07	_	09		-	11	2.1	
AASHTO SOIL UNIFIED SOIL	_	A-4 (6)	***	A-4(9)			A-6(10) }	
% MOISTURE CONTENT	_	24.7	-	22.2		-	19.0)	
ACHMSC (IN) -		_	3.5		_			
	***		-			-			
	===		_			-			
	=0 =0		_			20			
	***		_			-			
	===		-						
	77/2		-			=== 1 =================================			
	4		_			-			
DEMARKS			_						
REMARKS =									

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AASHTO TESTS : T24 T88 T89 T90 T265

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MICHAEL BENSON, MATERIALS ENGINEER

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

SPEC. REMARKS - NO SUPPLIER NAME - STA NAME OF PROJECT - C PROJECT ENGINEER - N PIT/QUARRY - ARKAN	643 BE ASSIGNED L SURVEY SAMI SPECIFICATION TE OFFEE CREEK OT APPLICABLE SAS IPS, COUNTY ON/TAYLOR	N CHECK & DRAINAGE DI	TCH STRS. & A	MATERIAL CODE - SPEC. YEAR - SUPPLIER ID COUNTY/STATE - DISTRICT NO APPRS. (S) DATE SAMPLED DATE RECEIVED	- 2014 - 1 - 54 - 01
MATERIAL DESC SOI LAB NUMBER SAMPLE ID TEST STATUS STATION LOCATION DEPTH IN FEET MAT'L COLOR MAT'L TYPE LATITUDE DEG-MIN- LONGITUDE DEG-MIN-	- 20173 - S345 - INFON - 136+0 - 06 LT - 0-5 - BR/GN	RMATION ONLY 00 F R 28 4.20	- 20171252 - S346 - INFORMATIO - 136+00 - 18 LT - 0-5 - BR/GR - 34 28	- ON ONLY - - - - -	
% PASSING 2 1 1/2 3/4 3/8 NO. NO.	IN IN IN IN 100 4 - 99 10 - 98 40 - 96 80 - 89		- - - - 100 - - - 97	- - - - - - -	2
LIQUID LIMIT PLASTICITY INDEX AASHTO SOIL UNIFIED SOIL % MOISTURE CONTENT ACHMSC SOIL CEMENT ACHMSC	- 30 - 12 - A-6 - 2 (IN) - 3. (IN) - 4. (IN) - 2.	9.9 0 0	- 33 - 12 - A-6(12) - 20.9 		
DEMARKS			=	=0 =1 =0	

REMARKS -

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AASHTO TESTS : T24 T88 T89 T90 T265

MICHAEL BENSON, MATERIALS ENGINEER

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

JOB NUMBER - 11 FEDERAL AID NO TO	BE ASSIGNED IL SURVEY SAMPLE SPECIFICATION (ATE COFFEE CREEK & NOT APPLICABLE NSAS LIPS, COUNTY HOLE	CHECK DRAINAGE DITCH S'	DATE SAMPLED DATE RECEIVE DATE TESTED	E - RV - 2014 - 1 - 54 - 01 - 03/27/17 D - 03/31/17
LAB NUMBER SAMPLE ID TEST STATUS STATION LOCATION DEPTH IN FEET MAT'L COLOR MAT'L TYPE LATITUDE DEG-MIN LONGITUDE DEG-MIN	- 111+90 - 18 LT - 0-5 - BROWN - -SEC - 34 2	- RV3 ATION ONLY - INI - 136 - 18 - 0-5 - BR7	FORMATION ONLY - 6+90 - LT -	
% PASSING 2 1 1/ 3/ 3/ NO. NO. NO.	IN 2 IN 4 IN 8 IN 4 - 100 10 - 40 -	10		
LIQUID LIMIT PLASTICITY INDEX AASHTO SOIL UNIFIED SOIL % MOISTURE CONTEN	- 28 - 07 - A-4(6)	- 3 - 1 - A 		

REMARKS -

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AASHTO TESTS : T24 T88 T89 T90 T265

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