ARKANSAS DEPARTMENT OF TRANSPORTATION



SUBSURFACE INVESTIGATION

STATE JOB NO.								
FEDERAL AID PROJ	ECT NO.	STPF-0012(32)						
	WEST C	OF RIVER BLU	JFF RDEAST (PASSING I	LANE) (S)				
STATE HIGHWAY		16	SECTION	12				
IN		C	LEBURNE		COUNTY			

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

November 5, 2015

TO:

Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT:

050315

West of River Bluff Rd. - East (Passing Lanes) (S)

Route 16 Section 12 Cleburne County

Transmitted herewith are the requested Soil Survey, Strength Data, and Resilient Modulus test results for the above referenced job. The project consists of adding a west bound passing line on Highway 16. Samples were obtained in the existing travel lanes and ditch line.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of low plasticity sandy clay. The subgrade soils are expected to provide a stable working platform with conventional processing if the weather is favorable during construction. Rock was encountered at several locations within the project limits. Table 1 below lists the station, location and depth to rock.

Table 1 Depth of Rock

Station	Location from center line	Depth (ft.)	
255+00	6', 21' RT	3.5, 2.2	
271+00	21' RT	3.5	
287+00	18' RT	2.5	
295+00	6', 18' LT	4.5, 2.0	
303+00	6', 18' RT	4.5, 2.8	

Based on currently available cross sections the construction grade line closely matches that of the existing roadway. The maximum embankment height is approximately 9 feet. Prior to embankment construction, all soft unstable organic material should be removed from the existing ditch line, anticipated to be no more than two feet of undercut. The embankment may be constructed using locally available material utilizing the 3:1 slope configuration shown in the cross sections.

The proposed cut slopes are acceptable as shown.

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 Pearson.

2. Asphalt Concrete Hot Mix

	PG 64-22	
Туре	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	4.0	96.0

	PG 70-22	
Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.4	95.6
Base Course	3.9	96.1

	PG 76-22	
Туре	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.2	94.8
Binder Course	4.4	95.6
Base Course	3.9	96.1

MCB:pt:bjj Attachment

CC:

State Constr. Eng. – Master File Copy District 5 Engineer

System Information and Research Div.

G. C. File

Michael C. Benson Materials Engineer JOB NAME: WEST OF RIVER BLUFF RD - EAST (PASSING LANES)(S)

Materials Division

COUNTY NO. 12 DATE TESTED 10/26/2015

Michael Benson, Materials Engineer

STA.#	LOC.	DEPTH	COLOR	# 4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
311+00	21' LT	0-5	BROWN	94	92	90	78	<i>E S</i> 42	18	2	A-4(O)	RV555	
255+00	06' RT	0-3.5Z	BR/GR	93	84	79	68	56	24	10	A-4(3)	S539	15.6
255+00	21 RT	0-2.2Z	BROWN	98	92	88	72	60			NO TEST	S540	10.3
263+00	06' LT	0-5	BROWN	94	89	85	74	39	ND	NP	A-4(0)	S541	11.9
263+00	18' LT	0-5	BROWN	100	99	98	89	47	24	80	A-4(1)	S542	13.1
271+00	06' RT	0-5	BROWN	94	87	81	78	65	34	16	A-6(8)	S543	18
271+00	21' RT	0-3.5Z	BROWN	99	96	94	92	78	28	12	A-6(7)	S544	5.3
279+00	06' LT	0-5	RD/BR	95	89	83	63	51	26	10	A-4(2)	S545	18.6
279+00	18' LT	0-5	RD/BR	79	71	65	49	36	ND	NP	A-4(0)	S546	4.9
287+00	06' RT	0-5	BR/GR	96	91	63	59	55	24	07	A-4(1)	S547	18.4
287+00	18' RT	0-2.5Z	BR/GR	80	76	72	50	42	25	6	A-4(0)	S548	10.7
295+00	06' LT	0-4.5Z	BROWN	98	95	89	72	63	38	12	A-6(6)	S549	27.8
295+00	18' LT	2.0Z	BROWN	98	95	89	69	58	34	14	A-6(6)	S550	8.2
303+00	06' RT	0-4.5Z	BROWN	99	97	95	71	46	23	6	A-4(0)	S551	15.3
303+00	18' RT	0-2.8Z	BROWN	96	91	88	66	42	ND	NP	A-4(0)	S552	4.5
311+00	06' LT	0-5	BROWN	97	93	89	71	50	19	6	A-4(0)	S553	18.8
311+00	21' LT	0-5	BROWN	64	53	48	34	27	24	6	A-2-4(0)	S554	7.6

DATE TESTED 10/26/2015

Arkansas State Highway Transporation Department

JOB: 050315JOB NAME: WEST OF RIVER BLUFF RD - EAST (PASSING LANES)(S)

Materials Division

Michael Benson, Materials Engineer COUNTY NO. 12

JOI # VIS	100			
#.177	707			PAVEMENT SOUNDINGS
255+00	21 RT	ACHMSC	ACHMBC	
		1	1	
255+00	06' RT	ACHMSC 10.5W	ACHMBC 2.5	
263+00	18' LT	ACHMSC		
263+00	06' LT	ACHMSC 7.0W	ACHMBC 2.0	
271+00	21' RT	ACHMSC		
271+00	06' RT	ACHMSC 10.0W		
279+00	18' LT	ACHMSC	ACHMBC	AGG.BASE CRS.CL7
279+00	17,90	ACHIMSC 8.0W	ACHMBC 2.0	AGG.BASE CRS.CL7
287+00	18' RT	ACHMSC	AGG. BASE CRS CL-7	
287+00	06' RT	ACHIMSC 7.5W	ACHMBC 2.5	AGG.BASE CRS.CL7 3.0
295+00	18' LT	ACHMSC	AGG. BASE CRS CL-7	
295+00	17,90	ACHMSC 7.0W	AGG. BASE CRS CL-7	
303+00	18' RT	ACHMSC	ACHMBC	AGG. BASE CRS CL-7
303+00	06' RT	ACHMSC 8.5W	ACHMBC	AGG. BASE CRS CL-7 3.0
311+00	06' LT	ACHMSC 7.0W	ACHMBC 2.0	AGG. BASE CRS CL-7. 3.0

Monday, November 02, 2015

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS MATERIALS DIVISION MICHAEL BENSON, MATERIALS ENGINEER *** SOIL SURVEY STRENGTH TEST REPORT ***

DATE - 11/04/2015

SEQUENCE NO. - 1

JOB NUMBER - 050315

MATERIAL CODE - SSRVPS

SPEC. YEAR - 2014

SUPPLIER ID. - 1

COUNTY/STATE - 12

DISTRICT NO. - 05

JOB NAME - WEST OF RIVER BLUFF RD - EAST (PASSING LANES)(S)

BEGIN JOB - END JOB

20

RESILIENT MOCULUS STA.311+00

6881

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: Date Tested: Name of Project:	50315 10/29/15 October 29, 2015 WEST OF PIWER BLUEF BOAD (DASSING LANE)	Material Code Station No.: Location:	SSRVPS 311+00 21'LT	
County: Sampled By: Lab No.: Sample ID: LATITUDE:	WEST OF RIVER BLUFF ROAD (PASSING LANE) Code: 12 Name: CLEBURNE FAULKNER 20153343 RV555	Depth: AASHTO Class: Material Type (1 or 2 LONGITUDE:	·):	0-5 A-4(0) 2
1. Testing Infor	mation:			
	Preconditioning - Permanent Strain > 5% (Y=Yes Testing - Permanent Strain > 5% (Y=Yes or N=No Number of Load Sequences Completed (0-15)	or N= No))	e ²	N N 15
2. Specimen Inf	ormation:			
	Specimen Diameter (in):			
	Тор			3.96
	Middle			3.95
	Bottom			3.95
	Average Membrana Thickness (in)			3.95
	Membrane Thickness (in): Height of Specimen, Cap and Base (in):			0.01
	Height of Cap and Base (in):			8.03
	Initial Length, Lo (in):			0.00
	Initial Area, Ao (sq. in):			8.03
	Initial Volume, AoLo (cu. in):			12.20 97.97
2 0-110				01.01
3. Soil Specimer	Section 17 has a Commission of the Commission of			
	Weight of Wet Soil Used (g):			3284.80
4. Soil Propertie	s:			
	Optimum Moisture Content (%):			14.1
	Maximum Dry Density (pcf):			115.6
	95% of MDD (pcf):			109.8
	In-Situ Moisture Content (%):			N/A
5. Specimen Pro	perties:			
	Wet Weight (g):			3284.80
	Compaction Moisture content (%):			14.0
	Compaction Wet Density (pcf):			127.75
	Compaction Dry Density (pcf):			112.06
	Moisture Content After Mr Test (%):			13.8
6. Quick Shear T	est (Y=Yes, N=No, N/A=Not Applicable):			#VALUE!
7. Resilient Modu	ulus, Mr:	7380(S	Sc)^-0.19288(S	53)^0.46064
8. Comments			ran as h	
9. Tested By:	GW, DT Date:	October 29, 2015		
	Date.	October 28, 2015		

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

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

SSRVPS 311+00

21'LT

0-5

Depth:

Material Code Station No.: Location: October 29, 2015 10/29/15 50315 Date Sampled: Date Tested: Job No.

WEST OF RIVER BLUFF ROAD (PASSING LANE)(S) CLEBURNE Name: Code: 12 FAULKNER Name of Project: County:

20153343 RV555 Sample ID: LATITUDE: Sampled By: Lab No.:

Material Type (1 or 2): 2 LONGITUDE LONGITUDE:

Resilient	Modulus				Σ	psi	14,825	13,755	12,788	11,521	10,875	12.196	10.647	9,809	9,457	8,996	9:261	7.977	7.341	7.074	101
Resilient	Strain				ž	in/in	0.00012	0.00026	0.00043	0.00062	0.00082	0.00015	0.00034	0.00054	0.00075	0.00098	0.00019	0.00044	0.00070	0.00096	
Average	Recov Def.	LVDT 1	and 2		H	u	0.00099	0.00213	0.00343	0.00501	0.00659	0.00119	0.00270	0.00437	0.00602	0.00784	0.00155	0.00351	0.00562	0.00774	
Actual	Applied	Contact	Stress	-1111	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	
Actual	Applied	Cyclic	Stress		Scyclic	psi	1.8	3.6	5.5	7.2	8.9	1.8	3.6	5.3	7.1	8.8	6.	3.5	5.1	8.9	-
Actual	Applied	Мах.	Axial	Stress	Smax	psi	2.1	3.9	5.8	7.7	9.6	2.0	3.8	5.6	7.5	9.4	2.0	3.7	5.4	7.2	
Actual	Applied	Contact	Load		Pcontact	sql	2.8	2.9	3.7	6.2	9.8	2.8	2.8	2.9	5.2	7.8	.2.8	2.8	2.9	4.5	0
Actual	Applied	Cyclic Load			Pcyclic	sql	22.2	44.4	9.99	87.7	109.0	22.1	43.8	65.1	86.4	107.2	21.8	42.5	62.7	83.1	000
Actual	Applied	Max. Axial	Load		Р шах	sql	25.0	47.3	70.2	93.8	117.5	24.9	46.6	6.79	91.7	115.0	. 24.5	45.3	9.59	97.8	
Nominal	Maximum	Axial	Stress		Scyclic	psi	2.0	4.0	6.0	8.0	10.0	2.0	4.0	0.9	8.0	10.0	2.0	4.0	0.9	8.0	0 0 7
Chamber	Confining	Pressure			တ်	psi	0.9	0.9	6.0	0.9	0.9	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	0
		PARAMETER			DESIGNATION	LIND	Sequence 1	Sequence 2	Sequence 3	Sequence 4	Sequence 5	Sequence 6	Sequence 7	Sequence 8	Sequence 9	Sequence 10	Sequence 11	Sequence 12	Sequence 13	Sequence 14	Secretary 15

GW, DI REVIEWED BY TESTED BY

DATE

DATE

October 29, 2015

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIALS DIVISION

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

Job No.

50315

Material Code SSRVPS

Date Sampled:

10/29/15

Station No.: 311+00

Date Tested:

October 29, 2015

Location: 21'LT

Name of Project: WEST OF RIVER BLUFF ROAD (PASSING LANE)(S)

County:

Code: 12

Name: CLEBURNE

Sampled By:

FAULKNER

Depth: 0-5

Lab No .:

Sample ID:

20153343 RV555

AASHTO Class: A-4(0) Material Type (1 or 2): 2

LATITUDE:

LONGITUDE:

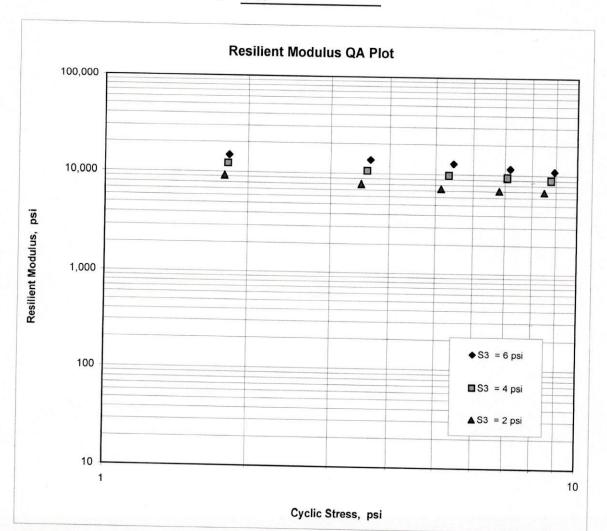
 $M_R = K1 (S_C)^{K2} (S_3)^{K5}$

K1 = 7,380

K2 = -0.19288

K5 = 0.46064

 $R^2 = 0.99$



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

m.m.n.	POIL	SURVEY / PAVEMENT	S	OUNDING TEST	REPORT :	* * *
DATE - 10/30	/15					
JOB NUMBER - 05031	, <u>1</u>					NO 1
FEDERAL AID NO TO BE		CNED				CODE - SSRVPS
		EY SAMPLE			SPEC. YE	AR - 2014
SPEC. REMARKS - NO SP	BOTE	SAMPLE			SUPPLIER	ID 1
SUPPLIER NAME - STATE	ECIF.	CATION CHECK			COUNTY/S	TATE - 12
					D.T.G.T.D.T.G.	
NAME OF PROJECT - WES	I. OŁ	RIVER BLUFF RD -	EAS	ST (PASSING	LANES) (S)	
PROJECT ENGINEER - NOT PIT/QUARRY - ARKANSAS		JICABLE				
LOCATION - CLEBURNI	E, CC	DUNTY			DATE SAM	IPLED - 10/15/15
SAMPLED BY - B. JORDAN	, BAT	TES			DATE REC	EIVED - 10/21/15
SAMPLE FROM - TEST HOI					DATE TEC	TED - 10/26/15
MATERIAL DESC SOIL	SURVI	EY - R VALUE- PAV	EME	ENT SOUNDING	S	10/20/15
LAB NUMBER	_					
SAMPLE ID	-	20153327 S539		S540		
TEST STATUS					-	S541
		255+00	-	INFORMATION	ONLY -	INFORMATION ONLY
LOCATION	_		_	255+00		263+00
		06' RT 0-3.5Z	_	21 RT	_	06' LT
MAT'L COLOR		BR/GR	-	0-2.2Z	-	0-5
MAT'L TYPE	_	DR/GR	-	BROWN		BROWN
LATITUDE DEG-MIN-SEC		35 36 54 50	_		-	
LONGITUDE DEG-MIN-SEC	_			35 26 54		35 26 55.10
	_	91 57 26.20		91 57 26	6.20	91 57 16.60
			_		_	
1 1/2 IN			_			
3/4 IN			-		_	100
3/8 IN		100	-	100	_	100
NO. 4		93	-	98	_	99
NO. 10	_	84	-	92	-	94
NO. 40	-	79	-	88	_	89
NO. 80	-	68	_	72	-	85
NO. 200	-	56		60		74
LIQUID LIMIT						39
LIQUID LIMIT			_		-	ND
PLASTICITY INDEX			-		_	NP
AASHTO SOIL	-	A-4(3)	-	NO TEST	-	A-4(0)
UNIFIED SOIL	70.		-		-	
% MOISTURE CONTENT	-	15.6	-	10.3	-	11.9
ACHMSC (IN) -	10.5W	_			
ACHMBC (IN		2.5	_			7.0W
	-	82 C. S. C.	-	musta:	0	2.0
	-		-		_	
	-		_		-	
	-		-		-	
	-		-		=	
	_		-		-	
	5		-		_	

REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

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

***	SOIL	SURVEY / PAVEMENT	SC	OUNDING TEST	r report	* * *		
SPEC. REMARKS - NO S SUPPLIER NAME - STAT NAME OF PROJECT - WE PROJECT ENGINEER - NO PIT/QUARRY - ARKANS LOCATION - CLEBUR SAMPLED BY - B. JORDA	15 E ASS: SURVI PECIF: E ST OF T APPI AS NE, CC	EY SAMPLE CATION CHECK RIVER BLUFF RD - LICABLE DUNTY			DATE SA	L CODE EAR R ID. STATE T NO. S) MPLED CCEIVEI	E - S - 2 - 1 - 1 - 0	SSRVPS 014 2 5 0/15/15 0/21/15
SAMPLE FROM - TEST HO		7V D 1771111 D311			DATE TE	STED	- 1	0/26/15
STATION LOCATION DEPTH IN FEET MAT'L COLOR MAT'L TYPE LATITUDE DEG-MIN-SE	- - - - - - - -	20153330 S542 INFORMATION ONLY 263+00 18' LT 0-5 BROWN		20153331 S543 INFORMATIO 271+00 06' RT 0-5 BROWN	ON ONLY	- S54- INFO 271- 21' 0-3 BROV	4 ORMAT +00 RT .5Z WN	ION ONLY
LONGITUDE DEG-MIN-SE	EC -	91 57 16.60		91 57	7.70	9:	L 57	7.70
1 1/2 1 3/4 3 3/8 1 NO. NO. 1 NO. 4 NO. 8	IN IN 4 - 0 - 10 - 10 -			100 94 87 81 78 65		- - - - - - - - - - - - - - - - - - -	9 5 1 2	
LIQUID LIMIT PLASTICITY INDEX AASHTO SOIL UNIFIED SOIL	-		1 1 1	34 16 A-6(8)		- 28 - 12 - A-6	5(7)	
% MOISTURE CONTENT	-	13.1	_	18.0		-	5.3	
ACHMSC (:	IN) - - -		-	10.0W			-	
	100		_		à	-		
	_		-		,	-		
	_		_			-		
	-		_			-		
	_		_					

REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

AASHTO TESTS : T24 T88 T89 T90 T265

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

		POTT	SURVEY / PAVEMENT	SC	OUNDING TEST	T REPORT	***
SPEC. REMARKS SUPPLIER NAME NAME OF PROJECT PROJECT ENGINE PIT/QUARRY - LOCATION -	O TO BE - SOIL S - NO SPI - STATE T - WEST ER - NOT ARKANSAS CLEBURNE B.JORDAN	ASSIBURVI	EY SAMPLE CATION CHECK RIVER BLUFF RD - LICABLE	EAS	T (PASSING	MATERIAL SPEC. YE SUPPLIED COUNTY/S DISTRICT LANES) (S DATE SAI DATE RES	R ID 1 STATE - 12
			EY - R VALUE- PAV	EME	NT SOUNDING	DATE IE	- 10/26/15
LAB NUMBER SAMPLE ID TEST STATUS STATION LOCATION DEPTH IN FEE MAT'L COLOR MAT'L TYPE		-	20153333 S545 INFORMATION ONLY 279+00 06' LT 0-5	-	20153334 S546	ON ONLY -	20153335 S547 INFORMATION ONLY 287+00 06' RT 0-5 BR/GR
		-	New York Control of the Control of t	-			
LONGITUDE DE			35 26 47.80 91 57 .60	-	35 26 4 91 57	47.80 - .50	35 26 42.40 91 56 53.60
% PASSING LIQUID LIMIT PLASTICITY II AASHTO SOIL	1 1/2 IN 3/4 IN 3/8 IN NO. 4 NO. 10 NO. 40 NO. 80 NO. 200		100 95 89 83 63 51 26 10 A-4(2)		100 93 79 71 65 49 36 ND NP A-4(0)		100 99 96 91 63 59 55 24
UNIFIED SOIL		_	A-4(2)	_	A-4 (0)	_	A-4(1)
% MOISTURE CO	ONTENT	-	18.6	-	4.9	-	18.4
ACHMSC ACHMBC AGG.BASE CRS.CI	(IN (IN .7 (IN) -	8.0W 2.0 				7.5W 2.5 3.0
		-		-		-	
		-					

REMARKS - W=MULITPLE LAYERS, Z=AUGER REFUSAL

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

		- 50	ЛΤГ	SURVEY /	PAVEMENT	SC	OUNDING TES	ST REPOR	T *	**	
DATE	- 10/	27/	15								
	JOB NUMBER - 050315						SEQUENCE NO 4				
FEDERAL AID NO TO BE ASSIGNED							CODE - SS				
PURPOSE - SOIL SURVEY SAMPLE					SPEC.	YE.	AR - 20	14			
					SUPPLI	ER	ID 1				
SIIDDI.TED NAME	SPEC. REMARKS - NO SPECIFICATION CHECK					COUNTY	/S'	TATE - 12			
SUPPLIER NAME - STATE NAME OF PROJECT - WEST OF RIVER BLUFF RD - EAST (PASSING					DICTO	OTT.	170				
DROTECT ENGINEER	– w	EST	OF.	RIVER BLU	JFF RD -	EAS	T (PASSING	LANES)	(S)		
PROJECT ENGINEER			APPI	JICABLE							
	ARKAN										
LOCATION - (CLEBU	RNE,	CC	UNTY				DATE S	SAM	PLED - 10	/15/15
SAMPLED BY - B				TES				DATE H	REC	EIVED - 10	/21/15
SAMPLE FROM - 7								חתיים יו	TES	TED - 10	/26/15
MATERIAL DESC		L SU	JRVI	EY - R V	ALUE- PAV	EME	ENT SOUNDIN	IGS			20,15
LAB NUMBER			-	20153336		-	20153337		_	20153338	
SAMPLE ID			_				S549			S550	
TEST STATUS			_		TON ONLY			ONT ONT 17			
STATION			_	287+00	TON ONLI	_		ON ONLY		INFORMATIO	ON ONLY
LOCATION			_			_	295+00		_	295+00	
DEPTH IN FEET			_			_	06' LT		_	18' LT	
MAT'L COLOR				NAME OF TAXABLE PARTY.		_	0-4.5Z		_	2.0Z	
MAT'L TYPE			-	BR/GR		-	BROWN		-	BROWN	
LATITUDE DEG-	MIN-S	SEC	-	35 26	42.30	_	35 26	37.10	-	35 26	27 20
LONGITUDE DEG-	MIN-S	SEC	-	91 56	53.70			46.50		91 56	
% PASSING 2		IN.	_							72 30	10.40
1	1/2					_			-		
	3/4			100		_			-		
	3/8			87		_	100		0		
	NO.			80		-	100		_	-100	
	NO.					-	98		_	98	
	NO.		-	76		-	95		_	95	
			-	72		-	89		_	89	
	NO.		-	50		-	72		-	69	
	NO. 2	00	-	42			63			58	
LIQUID LIMIT			_	25		_	38		_	34	
PLASTICITY INDI	EX		-	6		_	12		_	14	
AASHTO SOIL			_	A-4(0)		-	A-6(6)		_	A-6(6)	
UNIFIED SOIL			-			_	(- ,		_	A-0(6)	
% MOISTURE CONT	rent		_	10.7			27.8		-	8.2	
ACHMSC		(IN)	-			_	7.0W				
AGG. BASE CRS CL-	7	(IN)	-			_	3.0		_		
			-			-			_		
			-			-			_		
			-			-			-		
			_			-			-		
			_			-			-		
			_			-			-		
			_			_			-		

REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

AASHTO TESTS : T24 T88 T89 T90 T265

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

^	** SOIL	SURVEY / PAVEMENT	T SOUNDING TE	ST REPORT	***
DATE - 10 JOB NUMBER - 05 FEDERAL AID NO TO	/27/15 0315 BE ASSIL SURVE SPECIFI ATE WEST OF NOT APPI NSAS URNE, CO DAN, BAT HOLE IL SURVE	CY SAMPLE CATION CHECK RIVER BLUFF RD - LICABLE OUNTY TES	EAST (PASSIN VEMENT SOUNDI - 20153340	SEQUENCE MATERIAL SPEC. YE SUPPLIER COUNTY/S DISTRICT G LANES) (S) DATE SAM DATE REC DATE TES	NO 5 CODE - SSRVPS AR - 2014 ID 1 TATE - 12 NO 05 IPLED - 10/15/15 EIVED - 10/21/15 TED - 10/26/15
TEST STATUS			- S552		S553
STATION	S ==	INFORMATION ONLY	- INFORMAT	ION ONLY -	INFORMATION ONLY
LOCATION	_	303+00	303+00	-	311+00
DEPTH IN FEET		06' RT	- 18' RT	_	06' LT
MAT'L COLOR	_	0-4.5Z BROWN	0-2.8Z	_	0-5
MAT'L TYPE	-	BROWN	_ BROWN		BROWN
LATITUDE DEG-MIN-	-SEC -	35 26 31 20	- - 35 26	21 10	25 26 24 22
LONGITUDE DEG-MIN-					35 26 24.20 91 56 36.20
% PASSING 2	IN		30	40.90	51 56 36.20
	IN		-	-	
	IN	100	-		
	IN	99		_	100
	4 -	99	100 - 96		99
NO.		97	91	_	97
	40 -	95	_ 88	-	93
	80 -	71	- 66	· ·	89 71
NO.	200 -	46	42	7	50
LIQUID LIMIT	_	23	MD		
PLASTICITY INDEX			- ND - NP	_	19
		A-4(0)	- A-4(0)		6
UNIFIED SOIL	_	(0)	A-4(0)		A-4 (0)
% MOISTURE CONTENT	_	15.3	4.5	<u>-</u>	18.8
ACHMSC	(IN) -	8.5W			
ACHMBC	(IN) -			_	7.0W
AGG. BASE CRS CL-7	(IN) -	3.0			2.0
	-			_	3.0
	-		- 4	-	
	=		_	-	
	-		(1)		
	-		14-1		
	_				

REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

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

D.	OIL SORVEY / PAVEMENT SOUNDING TEST	REPORT ***	
SPEC. REMARKS - NO SPEC SUPPLIER NAME - STATE	ASSIGNED URVEY SAMPLE CIFICATION CHECK OF RIVER BLUFF RD - EAST (PASSING)	SEQUENCE NO 6 MATERIAL CODE - SS SPEC. YEAR - 20 SUPPLIER ID 1 COUNTY/STATE - 12 DISTRICT NO 05 LANES)(S)	14
LOCATION - CLEBURNE	, COUNTY	DATE SAMPLED - 10	/15/15
SAMPLED BY - B.JORDAN,	BATES	DATE RECEIVED - 10	
SAMPLE FROM - TEST HOLE			
	URVEY - R VALUE- PAVEMENT SOUNDING	S S S S S S S S S S S S S S S S S S S	/26/15
LAB NUMBER		5	
	- 20153342 -	— a ar	
SAMPLE ID	- S554 -	_	
TEST STATUS	- INFORMATION ONLY -	·	
STATION	- 311+00 -	-	
LOCATION	- 21' LT -	-	
DEPTH IN FEET	- 0-5	-	
MAT'L COLOR	- BROWN	-	
MAT'L TYPE	-	_	
LATITUDE DEG-MIN-SEC		- ·	
LONGITUDE DEG-MIN-SEC	- 91 56 36.10		
% PASSING 2 IN. 1 1/2 IN.	· · · · · · · · · · · · · · · · · · ·	-	
in the state of th		-	
	- 100 -	-	
3/8 IN.			
NO. 4	200400	=	
NO. 10		_	
NO. 40		_	
NO. 80		- 2	
NO. 200	- 27		
LIQUID LIMIT	- 24 -	_	
PLASTICITY INDEX	- 6 -	-	
AASHTO SOIL	- A-2-4(0) -	-	
UNIFIED SOIL	-	-	
% MOISTURE CONTENT	- 7.6	-	
	_		
	-	7 P	
	-	_	
	- =		
	=	-	
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	- E	-	
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REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

AASHTO TESTS : T24 T88 T89 T90 T265

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

	OIL SORVEY / PAVEMENT SOUNDING TEST	REPORT ***	
DATE - 10/30/ JOB NUMBER - 050315 FEDERAL AID NO TO BE PURPOSE - SOIL S SPEC. REMARKS - NO SPE SUPPLIER NAME - STATE	ASSIGNED URVEY SAMPLE CIFICATION CHECK OF RIVER BLUFF RD - EAST (PASSING APPLICABLE , COUNTY BATES	SEQUENCE NO MATERIAL CODE - SPEC. YEAR - SUPPLIER ID COUNTY/STATE - DISTRICT NO LANES)(S) DATE SAMPLED - DATE RECEIVED -	RV 2014 1 12 05 10/15/15 10/21/15
MATERIAL DESC SOIL S	URVEY - RESISTANCE R-VALUE ACTUAL	DATE TESTED -	10/26/15
LAB NUMBER	ONVET RESISTANCE REVALUE ACTUAL	RESULTS	
	- 20153343 -	:=:	
SAMPLE ID	- RV555 _		
TEST STATUS	- INFORMATION ONLY -	-	
STATION	- 311+00 -	-	
LOCATION	- 21' LT -	-	
DEPTH IN FEET	- 0-5	-	
MAT'L COLOR	- BROWN	-	
MAT'L TYPE	_	-	
LATITUDE DEG-MIN-SEC	- 35 26 24.30 _	-	
LONGITUDE DEG-MIN-SEC		-	
% PASSING 2 IN.	_	_	
1 1/2 IN.	-	-	
3/4 IN.	- 100 -	-	
3/8 IN.	- 97 -	- 7	
NO. 4	- 94	-	
NO. 10	- 92	-	
NO. 40	- 90	-	
NO. 80	- 78 -	-	
NO. 200		-	
	12		
LIQUID LIMIT	- 18 _	-	
PLASTICITY INDEX	- 2 -	-	
AASHTO SOIL	- A-4(O) -	-	
UNIFIED SOIL	-	_	
% MOISTURE CONTENT	_		
	9	: - :	
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	1777	_	

REMARKS - W=MULTIPLE LAYERS, Z=AUGER REFUSAL

AASHTO TESTS : T24 T88 T89 T90 T265