

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT



**SUBSURFACE INVESTIGATION**

STATE JOB NO. 020573

FEDERAL AID PROJECT NO. STPF-0021(34)

DITCH NO. 43 – ARKANSAS CITY (S)

STATE HIGHWAY 4 & 4S SECTION 17 & 17S

IN DESHA COUNTY

LETTING OF APRIL 12, 2017

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**

January 23, 2015

**TO:** Mr. Trinity Smith, Engineer of Roadway Design

**SUBJECT:** Job No. 020573  
Arkansas City – West (Sel. Secs.) (S)  
Route 4 Section 17  
Desha County

Transmitted herewith is the requested Soil Survey, Strength Data and Resilient Modulus test results for the above referenced job. The project consists of reconstructing selected sections of Highway 4. Samples were obtained in the existing travel lanes, shoulders, and ditch line.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of highly plastic clay with some sand. Cross-sections are not currently available, but it is assumed the construction grade line will closely match that of the existing roadway. Soil stabilization may be required to establish a stable working platform; stabilization with lime is the most appropriate remediation technique. It is recommended that the addition of 7% lime (by dry weight) mixed to a depth of 16 inches be used for quantity estimation purposes. However; if the Engineer determines stabilization is necessary, field trials or local experience may dictate that a stable working platform can be achieved at a lower lime content.

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 port near McGehee.
2. Asphalt Concrete Hot Mix

<u>Type</u>	<u>Asphalt Cement %</u>	<u>Mineral Aggregate %</u>
Surface Course	5.2	94.8
Binder Course	4.5	95.5
Base Course	3.9	96.1

  
Michael C. Benson  
Materials Engineer

MCB:pt:bjj  
Attachment

cc: State Constr. Eng. – Master File Copy  
District 2 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 - 01/23/2015  
JOB NUMBER - 020573

SEQUENCE NO. - 1  
MATERIAL CODE - SSRVPS  
SPEC. YEAR - 2014  
SUPPLIER ID. - 1  
COUNTY/STATE - 21  
DISTRICT NO. - 02

JOB NAME - ARKANSAS CITY - WEST (SEL.SECS.) (S)

\*\*\*\*\*  
\* STATION LIMITS R-VALUE AT 240 psi \*  
\*\*\*\*\*

BEGIN JOB - END JOB LESS THAN 5

RESILIENT MODULUS

STA.394+00	5891
STA.474+00	8186
STA.602+00	9362
STA.634+00	9081

-----  
REMARKS -

-  
AASHTO TESTS : T190

JOB: 020573

Arkansas State Highway Transportation Department

JOB NAME: ARKANSAS CITY - WEST (SEL.SECs.) (S)

Materials Division

Michael Benson, Materials Engineer

COUNTY NO. 21 DATE TESTED 12/23/2014

STA.#	LOC.	DEPTH	COLOR						L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				#4	#10	#40	#80	#200					
				S	I	E	V	E	S				
330+50	27RT	0-5	GRAY	86	83	78	75	75	71	44	A-7-6(34)	RV1086	
394+00	27RT	0-5	BROWN	100				97	49	29	A-7-6(31)	RV1087	
474+00	25RT	0-5	BROWN	99	98	95	93	86	38	23	A-6(19)	RV1088	
546+00	27LT	0-5	BROWN	100				94	54	32	A-7-6(33)	RV1089	
602+00	26RT	0-5	BROWN	98	97	96	91	87	31	16	A-6(12)	RV1090	
634+00	28RT	0-5	BROWN	84	83	80	78	77	55	34	A-7-6(26)	RV1091	
426+00	06RT	0-5	GRAY	100				95	70	38	A-7-5(43)	S1000	40.4
426+00	14RT	0-5	GRAY	100				92	56	33	A-7-6(34)	S1001	32.8
426+00	27RT	0-5	GRAY	100				97	71	39	A-7-5(46)	S1002	44.4
434+00	06LT	0-5	GRAY	100				96	55	32	A-7-6(35)	S1003	34.9
434+00	14LT	0-5	BR/GR	100				95	53	27	A-7-6(30)	S1004	32.9
434+00	27LT	0-5	GRAY	94	92	85	81	77	44	22	A-7-6(17)	S1005	27.5
442+00	06RT	0-5	BROWN	98	96	92	90	88	55	29	A-7-6(28)	S1006	29.1
442+00	14RT	0-5	BROWN	99	98	96	90	77	38	20	A-6(14)	S1007	21
442+00	27RT	0-5	BROWN	96	92	87	82	76	41	20	A-7-6(15)	S1008	24
450+00	06LT	0-5	GRAY	100				92	54	30	A-7-6(31)	S1009	35.8
450+00	14LT	0-5	BR/GR	98	96	94	93	89	45	24	A-7-6(23)	S1010	25.4
450+00	27LT	0-5	BR/GR	97	95	93	91	89	47	23	A-7-6(22)	S1011	38.5
458+00	06RT	0-5	BROWN	100				97	64	35	A-7-5(41)	S1012	40.2
458+00	14RT	0-5	BR/GR	100				94	49	29	A-7-6(29)	S1013	27
458+00	26RT	0-5	BR/GR	95	94	90	87	85	53	33	A-7-6(29)	S1014	30.7
466+00	06LT	0-5	GRAY	100				98	60	38	A-7-6(42)	S1015	31.5
466+00	14LT	0-5	GRAY	100				92	52	34	A-7-6(33)	S1016	26.9
466+00	27LT	0-5	GRAY	100				94	50	31	A-7-6(31)	S1017	25.7
474+00	06RT	0-5	GRAY	100				94	52	31	A-7-6(32)	S1018	30.3
474+00	13RT	0-5	GRAY	100				90	46	29	A-7-6(27)	S1019	28.8

comments: W=MULTIPLE LAYERS, X=STRIPPED

Thursday, January 22, 2015

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E					
474+00	25RT	0-5	BROWN	96	94	90	86	72	37	22	A-6(14)	S1020	22.9
482+00	06LT	0-5	BROWN	100				99	58	34	A-7-6(39)	S1021	29.5
482+00	13LT	0-5	BR/GR	100	97	92	89	88	45	24	A-7-6(22)	S1022	31.5
482+00	28LT	0-5	BROWN	98	95	92	90	88	52	25	A-7-6(25)	S1023	32.4
490+00	06RT	0-5	BROWN	99	97	94	91	86	48	26	A-7-6(24)	S1024	29.2
490+00	13RT	0-5	BROWN	97	93	86	82	80	36	18	A-6(13)	S1025	23.9
490+00	26RT	0-5	BROWN	96	94	91	88	83	48	30	A-7-6(25)	S1026	26.8
498+00	06LT	0-5	BROWN	100				97	50	29	A-7-6(31)	S1027	30
498+00	14LT	0-5	BROWN	100				96	48	30	A-7-6(31)	S1028	26.6
498+00	26LT	0-5	BROWN	100				95	48	28	A-7-6(29)	S1029	26
506+00	06RT	0-5	GRAY	100				99	75	41	A-7-5(50)	S1030	42.3
506+00	13RT	0-5	GRAY	95	90	83	79	78	51	27	A-7-6(22)	S1031	35.2
506+00	28RT	0-5	GRAY	100				94	64	40	A-7-6(43)	S1032	28
514+00	06LT	0-5	GRAY	100				94	66	41	A-7-6(44)	S1033	38.7
514+00	14LT	0-5	GRAY	98	96	93	91	89	54	33	A-7-6(32)	S1034	28.1
514+00	25LT	0-5	BR/GR	100				92	54	33	A-7-6(33)	S1035	29.9
522+00	06RT	0-5	GRAY	100				96	66	45	A-7-6(48)	S1036	25.6
522+00	14RT	0-5	GRAY	100				94	58	35	A-7-6(37)	S1037	27.7
522+00	25RT	0-5	BROWN	100				92	59	40	A-7-6(40)	S1038	25.5
530+00	06LT	0-5	BROWN	100				94	50	32	A-7-6(34)	S1039	28.9
530+00	14LT	0-5	BROWN	100				94	50	31	A-7-6(31)	S1040	22.8
530+00	32RT	0-5	BROWN	100				97	46	27	A-7-6(28)	S1041	25.8
538+00	05RT	0-5	GRAY	100				95	59	39	A-7-6(41)	S1042	
538+00	13RT	0-5	GRAY	100				96	46	26	A-7-6(27)	S1043	26.4
538+00	26RT	0-5	BROWN	100				96	56	35	A-7-6(37)	S1044	22.8
546+00	06LT	0-5	BROWN	100				98	48	33	A-7-6(34)	S1045	28.6
546+00	14LT	0-5	BROWN	100				97	70	46	A-7-6(49)	S1046	25.6
546+00	27LT	0-5	BROWN	100				97	47	25	A-7-6(27)	S1047	23.7

comments: W=MULTIPLE LAYERS, X=STRIPPED

Thursday, January 22, 2015

STA.#	LOC.	DEPTH	COLOR						L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE	
				#4	#10	#40	#80	#200						
				S	I	E	V	E	S					
554+00	05RT	0-5	GRAY	100				97		49	26	A-7-6(28)	S1048	38.7
554+00	14RT	0-5	BROWN	97	95	90	85	80		52	31	A-6(16)	S1049	25.9
554+00	26RT	0-5	BROWN	100				93		49	27	A-7-6(28)	S1050	22.8
562+00	06LT	0-5	GRAY	100				93		72	38	A-7-5(47)	S1051	35.7
562+00	14LT	0-5	BROWN	100				96		60	37	A-7-6(40)	S1052	29.7
562+00	27LT	0-5	BROWN	100				97		54	33	A-7-6(36)	S1053	27.7
570+00	06RT	0-5	BROWN	100				93		64	36	A-7-6(42)	S1054	22
570+00	14RT	0-5	BROWN	100				91		42	22	A-7-6(21)	S1055	25.8
570+00	28RT	0-5	BROWN	100				97		43	20	A-7-6(22)	S1056	24.6
578+00	05LT	0-5	GRAY	100				98		72	41	A-7-5(48)	S1057	40.6
578+00	13LT	0-5	GRAY	100				92		50	25	A-7-6(26)	S1058	35.8
578+00	25LT	0-5	GRAY	100				91		69	42	A-7-6(46)	S1059	37.5
586+00	05RT	0-5	BROWN	100				92		69	40	A-7-6(43)	S1060	42.5
586+00	14RT	0-5	BROWN	96	94	87	83	85		46	26	A-7-6(23)	S1061	21.6
586+00	24RT	0-5	BROWN	100				92		46	28	A-7-6(27)	S1062	20.1
594+00	05LT	0-5	GRAY	100				94		53	37	A-7-6(37)	S1063	37.3
594+00	13LT	0-5	BROWN	100				92		44	17	A-7-6(18)	S1064	35.1
594+00	23LT	0-5	GRAY	93	90	92	89	86		67	40	A-7-6(40)	S1065	31.9
602+00	06RT	0-5	GRAY	100				93		67	40	A-7-6(46)	S1066	41.1
602+00	13RT	0-5	GRAY	100				97		62	39	A-7-6(43)	S1067	25.8
602+00	26RT	0-5	BROWN	100				93		58	36	A-7-6(39)	S1068	28
610+00	06LT	0-5	GRAY	100				93		75	48	A-7-6(55)	S1069	39.7
610+00	14LT	0-5	GRAY	100				93		61	38	A-7-6(40)	S1070	32.6
610+00	26LT	0-5	GRAY	100				93		70	48	A-7-6(93)	S1071	31.9
618+00	06RT	0-5	BROWN	100				96		58	34	A-7-6(37)	S1072	31.1
618+00	14RT	0-5	BROWN	97	92	90	87	84		55	20	A-7-5(21)	S1073	29
618+00	24RT	0-5	BROWN	100				96		73	59	A-7-6(62)	S1074	26.6
626+00	06LT	0-5	GRAY	100				97		72	44	A-7-6(50)	S1075	42.9

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E					
626+00	14LT	0-5	GRAY	98	94	86	82	79	53	31	A-7-6(25)	S1076	32.1
626+00	26LT	0-5	GRAY	100	93	86	78	71	71	67	A-7-6(17)	S1077	30.6
634+00	06RT	0-5	BROWN	100				95	64	46	A-7-6(48)	S1078	38.7
634+00	14RT	0-5	BROWN	90	81	66	64	61	35	21	A-6(7)	S1079	17.7
634+00	28RT	0-5	BROWN	96	94	91	88	87	54	33	A-7-6(31)	S1080	32.8
642+00	05LT	0-5	GRAY	100				94	71	47	A-7-6(50)	S1081	36
642+00	13LT	0-5	GRAY	99	96	90	86	85	51	34	A-7-6(30)	S1082	34.2
642+00	24LT	0-5	GRAY	99	97	90	89	86	50	29	A-7-6(26)	S1083	31
650+00	06RT	0-5	GRAY	100				90	55	35	A-7-6(34)	S1084	23.2
650+00	14RT	0-5	GRAY	100				94	57	20	A-7-5(25)	S1085	23
330+50	05RT	0-5	GRAY	100				92	65	35	A-7-5(38)	S964	43.9
330+50	13RT	0-5	GRAY	95	91	89	88	87	64	37	A-7-6(36)	S965	32.3
330+50	27RT	0-5	GRAY	96	92	87	84	82	81	50	A-7-5(46)	S966	45.1
338+00	05LT	0-5	GRAY	100				97	75	42	A-7-5(49)	S967	48.2
338+00	14LT	0-5	BR/GR	96	91	85	83	81	68	36	A-7-5(33)	S968	45.6
338+00	26LT	0-5	BROWN	100				99	43	22	A-7-6(24)	S969	43.8
346+00	05RT	0-5	GRAY	100				99	72	41	A-7-5(49)	S970	39.5
346+00	14RT	0-5	BR/GR	100				98	74	37	A-7-5(46)	S971	31.8
346+00	26RT	0-5	BR/GR	94	92	89	86	83	84	42	A-7-5(42)	S972	25.6
354+00	06LT	0-5	BR/GR	99	97	92	88	86	59	31	A-7-6(30)	S973	22.6
354+00	14LT	0-5	BR/GR	98	98	96	85	76	40	21	A-6(14)	S974	26.8
354+00	28LT	0-5	BR/GR	99	97	92	92	85	37	17	A-6(15)	S975	24.2
362+00	05RT	0-5	GRAY	100				98	60	33	A-7-6(38)	S976	32.3
362+00	14RT	0-5	GRAY	100				96	58	31	A-7-6(35)	S977	27.4
362+00	27RT	0-5	GRAY	100				98	62	33	A-7-6(39)	S978	32.7
370+00	05LT	0-5	GRAY	100				96	35	15	A-6(15)	S979	25
370+00	14LT	0-5	BROWN	97	96	93	90	87	38	19	A-6(16)	S980	22.9
370+00	28LT	0-5	BROWN	100				98	32	12	A-6(12)	S981	25.7

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E					
378+00	05RT	0-5	BROWN	100				95	31	11	A-6(10)	S982	13.8
378+00	14RT	0-5	BROWN	98	90	79	72	59	26	11	A-6(4)	S983	14.5
378+00	26RT	0-5	BROWN	99	98	96	84	85	40	24	A-6(16)	S984	23
386+00	05LT	0-5	BROWN	100				98	34	15	A-6(15)	S985	25.2
386+00	14LT	0-5	BROWN	100				94	30	12	A-6(10)	S986	21.7
386+00	26LT	0-5	BROWN	100				95	33	14	A-6(13)	S987	24.8
394+00	06RT	0-5	BROWN	99	98	96	93	88	34	18	A-6(15)	S988	22
394+00	14RT	0-5	BROWN	98	96	91	74	63	31	18	A-6(8)	S989	20.7
394+00	27RT	0-5	BROWN	100	99	98	91	86	35	19	A-6(15)	S990	20.1
402+00	06LT	0-5	BROWN	99	98	96	92	85	46	28	A-7-6(24)	S991	25.5
402+00	14LT	0-5	BROWN	99	99	97	94	86	47	31	A-7-6(27)	S992	24.8
402+00	27LT	0-5	BROWN	100	99	98	94	86	44	29	A-7-6(25)	S993	24.7
410+00	06RT	0-5	GRAY	100	99	99	95	86	60	39	A-7-6(36)	S994	31.6
410+00	14RT	0-5	BR/GR	98	95	93	90	80	52	33	A-7-6(27)	S995	29.2
410+00	29RT	0-5	BR/GR	96	95	94	92	87	63	42	A-7-6(39)	S996	36.3
418+00	06LT	0-5	GRAY	100				98	60	36	A-7-6(40)	S997	39.1
418+00	14LT	0-5	BROWN	100				95	65	44	A-7-6(47)	S998	33.5
418+00	32LT	0-5	GRAY	100				96	62	42	A-7-6(45)	S999	30.4



JOB: 020573

Arkansas State Highway Transportation Department

DATE TESTED

JOB NAME: ARKANSAS CITY - WEST (SEL. SECS.) (S)

Materials Division

12/23/2014

COUNTY NO. 21

Michael Benson, Materials Engineer

STA.# LOC.

PAVEMENT SOUNDINGS

426+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		17.0W	5.75	--				
426+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		2.5	--	4.0				
426+00	27RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		--	--	--				
434+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		18.5W	3.0	--				
434+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		3.0	--	3.0				
434+00	27LT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		--	--	--				
442+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		12.5	7.0	--				
442+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		5.0	--	3.0				
442+00	27RT	ACHMSC	PCCP	AGG BASE CRS CL-5				
		--	--	--				
450+00	06LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		7.0	2.25	10.0	4.0	--		
450+00	14LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		4.5W	--	--	--	3.0		
450+00	27LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		--	--	--	--	--		
458+00	06RT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		14.0W	3.0	2.0	6.0	--		
458+00	14RT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		6.5	--	--	--	3.0		
458+00	26RT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		--	--	--	--	--		
466+00	06LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		7.5W	2.0	4.5	8.5	--		
466+00	14LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5		
		4.75W	--	--	--	3.0		

Comments: W=MULTIPLE LAYERS, X=STRIPPED

Thursday, January 22, 2015

STA.#	LOC	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5
466+00	27LT	ACHMSC	ACHMBC	ACHMSC	PCCP	AGG BASE CRS CL-5
474+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
474+00	13RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
474+00	25RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
482+00	06LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
482+00	13LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
482+00	28LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
490+00	06RT	ACHMSC	AGG BASE CRS CL-5			
490+00	13RT	ACHMSC	AGG BASE CRS CL-5			
490+00	26RT	ACHMSC	AGG BASE CRS CL-5			
498+00	06LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
498+00	14LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
498+00	26LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
506+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
506+00	13RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
506+00	28RT	ACHMSC	PCCP	AGG BASE CRS CL-5		
514+00	06LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
514+00	14LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	
514+00	25LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5	

Comments: W=MULTIPLE LAYERS, X=STRIPPED

522+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		14.0W	6.0	--	
522+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		6.25W	--	6.0	
522+00	26RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		--	--	--	
530+00	06LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		13.0W	5.0	--	--
530+00	14LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		2.25	--	3.5	3.0
530+00	32RT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		--	--	--	--
538+00	06RT	ACHMSC	AGG BASE CRS CL-5		
		15.5W	--		
538+00	13RT	ACHMSC	AGG BASE CRS CL-5		
		5.0W	6.0		
538+00	26RT	ACHMSC	AGG BASE CRS CL-5		
		--	--		
546+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		13.0W	4.5	--	
546+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		5.0	--	3.0	
546+00	27LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		--	--	--	
554+00	05RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		16.0W	6.0	--	
554+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		8.5W	--	5.0	
554+00	26RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		--	--	--	
562+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		13.0W	5.5	--	
562+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		5.0W	--	3.0	
562+00	27LT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		--	--	--	
570+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5	
		13.5W	4.5	--	

Comments: W=MULTIPLE LAYERS, X=STRIPPED

570+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		4.5	--	5.0
570+00	28RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
578+00	05LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		15.5W	6.0	--
578+00	13LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		5.0	--	3.0
578+00	25LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
586+00	05RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		17.5W	4.5	--
586+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		7.5W	--	3.0
586+00	24RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
594+00	05LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		18.75W	3.5	--
594+00	13LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		5.25W	--	3.0
594+00	23LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
602+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		17.5W	4.5	--
602+00	13RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		5.0W	--	3.0
602+00	26RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
610+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		12.5W	4.5	--
610+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		4.75W	--	4.0
610+00	26LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
618+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		18.0W	5.0	--
618+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		5.75W	--	3.0

Comments: W=MULTIPLE LAYERS, X=STRIPPED

618+00	24RT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		--	--	--	--
626+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		15.0W	5.0W	--	--
626+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		6.5W	--	4.0	--
626+00	26LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		--	--	--	--
634+00	06RT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		19.5W	6.5W	--	--
634+00	14RT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		2.0	--	4.0	3.0
634+00	28RT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		--	--	--	--
642+00	05LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		10.0W	6.0	--	--
642+00	13LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		5.0W	--	4.0	--
642+00	24LT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		--	--	--	--
650+00	06RT	ACHMSC	AGG BASE CRS CL-5	AGG BASE CRS CL-5	--
		8.0W	6.0	--	--
650+00	14RT	ACHMSC	AGG BASE CRS CL-5	AGG BASE CRS CL-5	--
		4.5	4.0	--	--
330+50	05RT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5
		5.0	13.5	4.0	--
330+50	13RT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5
		3.0	--	--	6.0
330+50	27RT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5
		--	--	--	--
338+00	05LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		17.0W	7.0	--	--
338+00	14LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		3.5	--	--	--
338+00	26LT	ACHMSC	PCCP	ACHMBC	AGG BASE CRS CL-5
		--	--	--	--
346+00	05RT	ACHMSC	PCCP	AGG BASE CRS CL-5	--
		18.5W	4.5	--	--

Comments: W=MULTIPLE LAYERS, X=STRIPPED

346+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		2.75	--	4.0
346+00	26RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
354+00	06LT	ACHMSC	AGG BASE CRS CL-5	
		10.25W	--	
354+00	14LT	ACHMSC	AGG BASE CRS CL-5	
		4.25W	5.0	
354+00	28LT	ACHMSC	AGG BASE CRS CL-5	
		--	--	
362+00	05RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		11.5W	7.0	--
362+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		4.0	--	6.0
362+00	27RT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
370+00	05LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		12.5W	4.5	--
370+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		4.75W	--	3.0
370+00	28LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
378+00	05RT	ACHMSC	AGG BASE CRS CL-5	
		11.5W	14.0	
378+00	14RT	ACHMSC	AGG BASE CRS CL-5	
		2.5	4.0	
378+00	26RT	ACHMSC	AGG BASE CRS CL-5	
		--	--	
386+00	05LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		9.75W	6.0	--
386+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		5.0W	--	4.0
386+00	26LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		--	--	--
394+00	06RT	ACHMSC	AGG BASE CRS CL-5	
		13.5W	5.0	
394+00	14RT	ACHMSC	AGG BASE CRS CL-5	
		4.0	4.0	

Comments: W=MULTIPLE LAYERS, X=STRIPPED

394+00	27RT	ACHMSC	ACHMSC	AGG BASE CRS CL-5			
			--				
402+00	06LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		14.0W	3.0X	--			
402+00	14LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		3.5	--	3.0			
402+00	27LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
			--	--			
410+00	06RT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		13.5W	4.0	--			
410+00	14RT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		3.0	--	3.0			
410+00	29RT	ACHMSC	PCCP	AGG BASE CRS CL-5			
			--	--			
418+00	06LT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5		
		12.0	5.0X	4.0			
418+00	14LT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5		
		3.0	--	--			
418+00	32LT	ACHMSC	ACHMBC	PCCP	AGG BASE CRS CL-5		
			--	--			

Comments: W=MULTIPLE LAYERS, X=STRIPPED

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	01/13/15	<b>Station No.:</b>	394+00
<b>Date Tested:</b>	January 13, 2015	<b>Location:</b>	27'RT
<b>Name of Project:</b>	ARKANSAS CITY WEST (SEL. SEC) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b> DESHA	
<b>Sampled By:</b>	FAULKNER	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143857	<b>AASHTO Class:</b>	A-7-6(31)
<b>Sample ID:</b>	RV1087	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

**1. Testing Information:**

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

**2. Specimen Information:**

Specimen Diameter (in):	
Top	3.94
Middle	3.93
Bottom	3.94
Average	3.94
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.04
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.04
Initial Area, Ao (sq. in):	12.09
Initial Volume, AoLo (cu. in):	97.21

**3. Soil Specimen Weight:**

Weight of Wet Soil Used (g):	3040.00
------------------------------	---------

**4. Soil Properties:**

Optimum Moisture Content (%):	20.3
Maximum Dry Density (pcf):	100.7
95% of MDD (pcf):	95.7
In-Situ Moisture Content (%):	N/A

**5. Specimen Properties:**

Wet Weight (g):	3040.00
Compaction Moisture content (%):	20.9
Compaction Wet Density (pcf):	119.15
Compaction Dry Density (pcf):	98.55
Moisture Content After Mr Test (%):	20.9

**6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable):**

#VALUE!

**7. Resilient Modulus, Mr:**

9131(S<sub>c</sub>)<sup>-0.25054</sup>(S<sub>3</sub>)<sup>0.17990</sup>

**8. Comments**

\_\_\_\_\_

\_\_\_\_\_

**9. Tested By:**

CS/DT \_\_\_\_\_

**Date:** January 13, 2015



**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

**Job No.** 020573      **Material Code** SSRVPS  
**Date Sampled:** 01/13/15      **Station No.:** 394+00  
**Date Tested:** January 13, 2015      **Location:** 27RT  
**Name of Project:** ARKANSAS CITY WEST (SEL. SEC) (S)  
**County:** Code: 21      **Name:** DESHA  
**Sampled By:** FAULKNER      **Depth:** 0-5  
**Lab No.:** 20143857      **AASHTO Class:** A-7-6(31)  
**Sample ID:** RV1087      **Material Type (1 or 2):** 2  
**LATITUDE:**      **LONGITUDE:**

PARAMETER	Chamber Confining Pressure	Nominal Maximum Axial Stress	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	Average Recov Def. LVDT 1 and 2	Resilient Strain	Resilient Modulus
	S <sub>3</sub> psi	S <sub>cyclic</sub> psi	P <sub>max</sub> lbs	P <sub>cyclic</sub> lbs	P <sub>contact</sub> lbs	S <sub>max</sub> psi	S <sub>cyclic</sub> psi	S <sub>contact</sub> psi	H <sub>avg</sub> in	ε <sub>r</sub> in/in	M <sub>r</sub> psi
Sequence 1	6.0	2.0	25.0	22.2	2.8	2.1	1.8	0.2	0.00142	0.00018	10,412
Sequence 2	6.0	4.0	46.8	44.0	2.8	3.9	3.6	0.2	0.00287	0.00036	10,192
Sequence 3	6.0	6.0	68.6	65.0	3.6	5.7	5.4	0.3	0.00468	0.00058	9,227
Sequence 4	6.0	8.0	90.4	84.3	6.1	7.5	7.0	0.5	0.00721	0.00090	7,768
Sequence 5	6.0	10.0	110.6	102.1	8.5	9.1	8.4	0.7	0.01041	0.00129	6,521
Sequence 6	4.0	2.0	24.9	22.2	2.7	2.1	1.8	0.2	0.00157	0.00019	9,407
Sequence 7	4.0	4.0	46.5	43.7	2.8	3.8	3.6	0.2	0.00335	0.00042	8,663
Sequence 8	4.0	6.0	67.1	64.3	2.9	5.6	5.3	0.2	0.00534	0.00066	8,000
Sequence 9	4.0	8.0	89.0	83.9	5.2	7.4	6.9	0.4	0.00776	0.00097	7,185
Sequence 10	4.0	10.0	110.0	102.3	7.7	9.1	8.5	0.6	0.01073	0.00133	6,336
Sequence 11	2.0	2.0	24.7	22.0	2.8	2.0	1.8	0.2	0.00172	0.00021	8,497
Sequence 12	2.0	4.0	46.0	43.2	2.8	3.8	3.6	0.2	0.00370	0.00046	7,770
Sequence 13	2.0	6.0	66.7	63.8	2.8	5.5	5.3	0.2	0.00592	0.00074	7,167
Sequence 14	2.0	8.0	87.7	83.4	4.3	7.3	6.9	0.4	0.00845	0.00105	6,560
Sequence 15	2.0	10.0	108.6	101.8	6.8	9.0	8.4	0.6	0.01149	0.00143	5,891

TESTED BY \_\_\_\_\_ DATE January 13, 2015  
 REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION

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

Job No. 020573  
Date Sampled: 01/13/15  
Date Tested: January 13, 2015  
Name of Project: ARKANSAS CITY WEST (SEL. SEC) (S)  
County: Code: 21 Name: DESHA  
Sampled By: FAULKNER  
Lab No.: 20143857  
Sample ID: RV1087  
LATITUDE:

Material Code SSRVPS  
Station No.: 394+00  
Location: 27'RT  
Depth: 0-5  
AASHTO Class: A-7-6(31)  
Material Type (1 or 2): 2  
LONGITUDE:

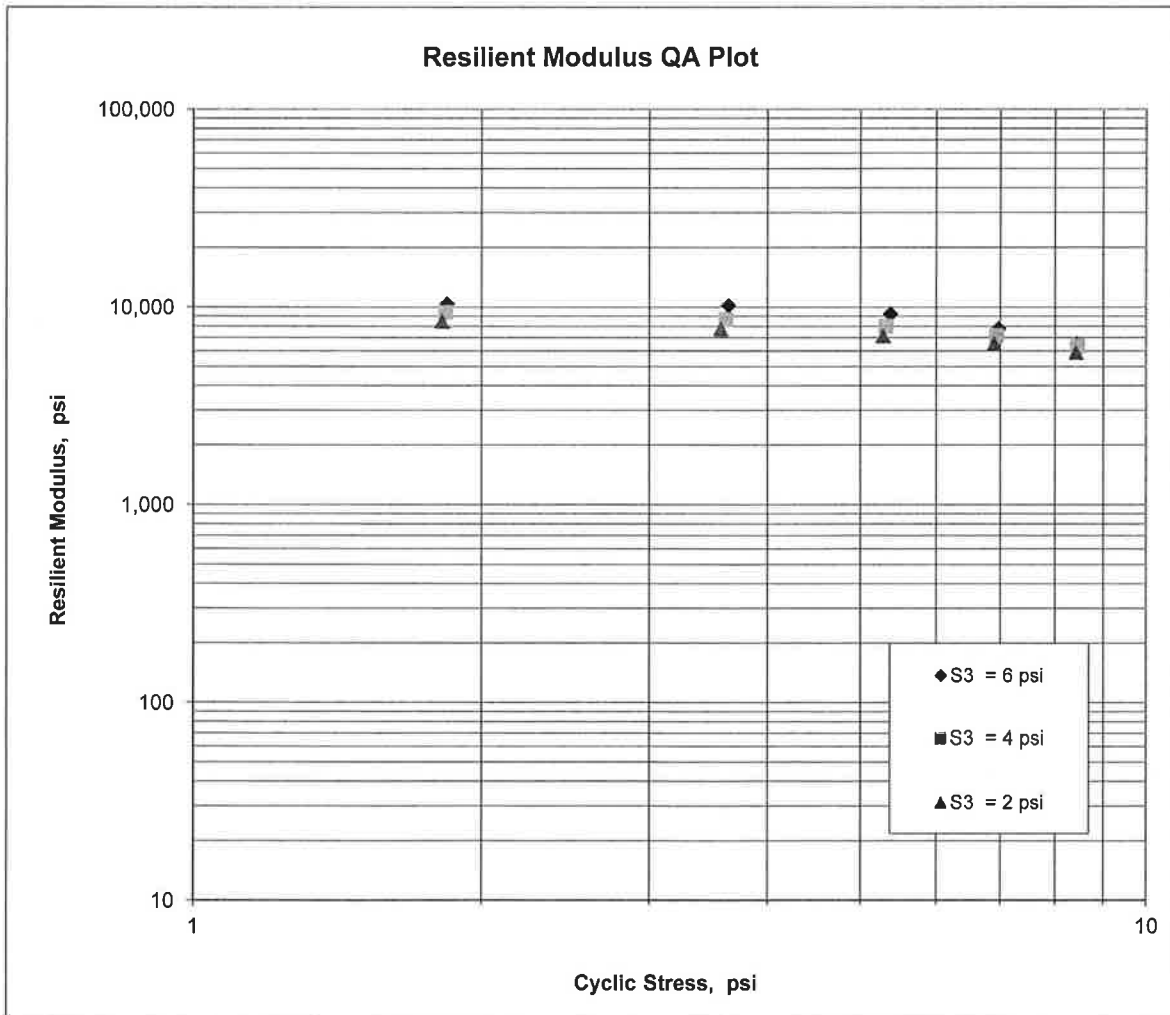
$$M_R = K_1 (S_C)^{K_2} (S_3)^{K_5}$$

$$K_1 = 9,131$$

$$K_2 = -0.25054$$

$$K_5 = 0.17990$$

$$R^2 = 0.86$$



**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/07/2015	<b>Station No.:</b>	474+00
<b>Date Tested:</b>	January 7, 2015	<b>Location:</b>	25'RT
<b>Name of Project:</b>	ARKANSAS CITY - WEST (SEL.SEC.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b> DESHA	
<b>Sampled By:</b>	FAULKNER	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143858	<b>AASHTO Class:</b>	A-6(19)
<b>Sample ID:</b>	RV1088	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

**1. Testing Information:**

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

**2. Specimen Information:**

Specimen Diameter (in):	
Top	3.97
Middle	3.98
Bottom	3.97
Average	3.97
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.02
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.02
Initial Area, Ao (sq. in):	12.33
Initial Volume, AoLo (cu. in):	98.87

**3. Soil Specimen Weight:**

Weight of Wet Soil Used (g):	3127.10
------------------------------	---------

**4. Soil Properties:**

Optimum Moisture Content (%):	17.3
Maximum Dry Density (pcf):	107.1
95% of MDD (pcf):	101.7
In-Situ Moisture Content (%):	N/A

**5. Specimen Properties:**

Wet Weight (g):	3127.10
Compaction Moisture content (%):	17.3
Compaction Wet Density (pcf):	120.51
Compaction Dry Density (pcf):	102.74
Moisture Content After Mr Test (%):	17.0

**6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable):**

#VALUE!

**7. Resilient Modulus, Mr:**

10771(S<sub>c</sub>)<sup>-0.18896</sup>(S<sub>3</sub>)<sup>0.18097</sup>

**8. Comments**

\_\_\_\_\_

\_\_\_\_\_

**9. Tested By:**

DEB \_\_\_\_\_

**Date:** January 7, 2015

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/07/2015	<b>Station No.:</b>	474+00
<b>Date Tested:</b>	January 7, 2015	<b>Location:</b>	25 <sup>RT</sup>
<b>Name of Project:</b>	ARKANSAS CITY - WEST (SEL.SE.C.) (S)	<b>Depth:</b>	0-5
<b>County:</b>	Code: 21 Name: DESHA	<b>AASHTO Class:</b>	A-6(19)
<b>Sampled By:</b>	FAULKNER	<b>Material Type (1 or 2):</b>	2
<b>Lab No.:</b>	20143858	<b>LONGITUDE:</b>	
<b>Sample ID:</b>	RV1088		
<b>LATITUDE:</b>			

PARAMETER	Chamber Confining Pressure	Nominal Maximum Axial Stress	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	Average Recov Def. LVDT 1 and 2	Resilient Strain	Resilient Modulus
	S <sub>3</sub>	S <sub>cyclic</sub>	P <sub>max</sub>	P <sub>cyclic</sub>	P <sub>contact</sub>	S <sub>max</sub>	S <sub>cyclic</sub>	S <sub>contact</sub>	H <sub>avg</sub>	ε <sub>r</sub>	M <sub>r</sub>
UNIT	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.3	22.6	2.7	2.1	1.8	0.2	0.00111	0.00014	13,292
Sequence 2	6.0	4.0	47.3	44.6	2.7	3.8	3.6	0.2	0.00234	0.00029	12,382
Sequence 3	6.0	6.0	69.8	66.0	3.8	5.7	5.4	0.3	0.00376	0.00047	11,433
Sequence 4	6.0	8.0	92.4	86.2	6.2	7.5	7.0	0.5	0.00553	0.00069	10,129
Sequence 5	6.0	10.0	114.0	105.3	8.8	9.2	8.5	0.7	0.00761	0.00095	9,001
Sequence 6	4.0	2.0	25.1	22.4	2.7	2.0	1.8	0.2	0.00119	0.00015	12,196
Sequence 7	4.0	4.0	47.0	44.2	2.8	3.8	3.6	0.2	0.00253	0.00032	11,350
Sequence 8	4.0	6.0	68.2	65.4	2.8	5.5	5.3	0.2	0.00409	0.00051	10,406
Sequence 9	4.0	8.0	91.0	85.6	5.3	7.4	6.9	0.4	0.00582	0.00073	9,568
Sequence 10	4.0	10.0	113.0	105.2	7.7	9.2	8.5	0.6	0.00777	0.00097	8,807
Sequence 11	2.0	2.0	25.1	22.4	2.7	2.0	1.8	0.2	0.00146	0.00018	9,958
Sequence 12	2.0	4.0	46.8	44.0	2.8	3.8	3.6	0.2	0.00293	0.00037	9,777
Sequence 13	2.0	6.0	67.7	64.8	2.8	5.5	5.3	0.2	0.00455	0.00057	9,260
Sequence 14	2.0	8.0	89.6	85.2	4.4	7.3	6.9	0.4	0.00636	0.00079	8,720
Sequence 15	2.0	10.0	111.5	104.5	7.0	9.0	8.5	0.6	0.00830	0.00104	8,186

TESTED BY DEB DATE January 7, 2015  
 REVIEWED BY \_\_\_\_\_ DATE \_\_\_\_\_

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/07/2015	<b>Station No.:</b>	474+00
<b>Date Tested:</b>	January 7, 2015	<b>Location:</b>	25'RT
<b>Name of Project:</b>	ARKANSAS CITY - WEST (SEL.SEC.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b>	DESHA
<b>Sampled By:</b>	FAULKNER	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143858	<b>AASHTO Class:</b>	A-6(19)
<b>Sample ID:</b>	RV1088	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

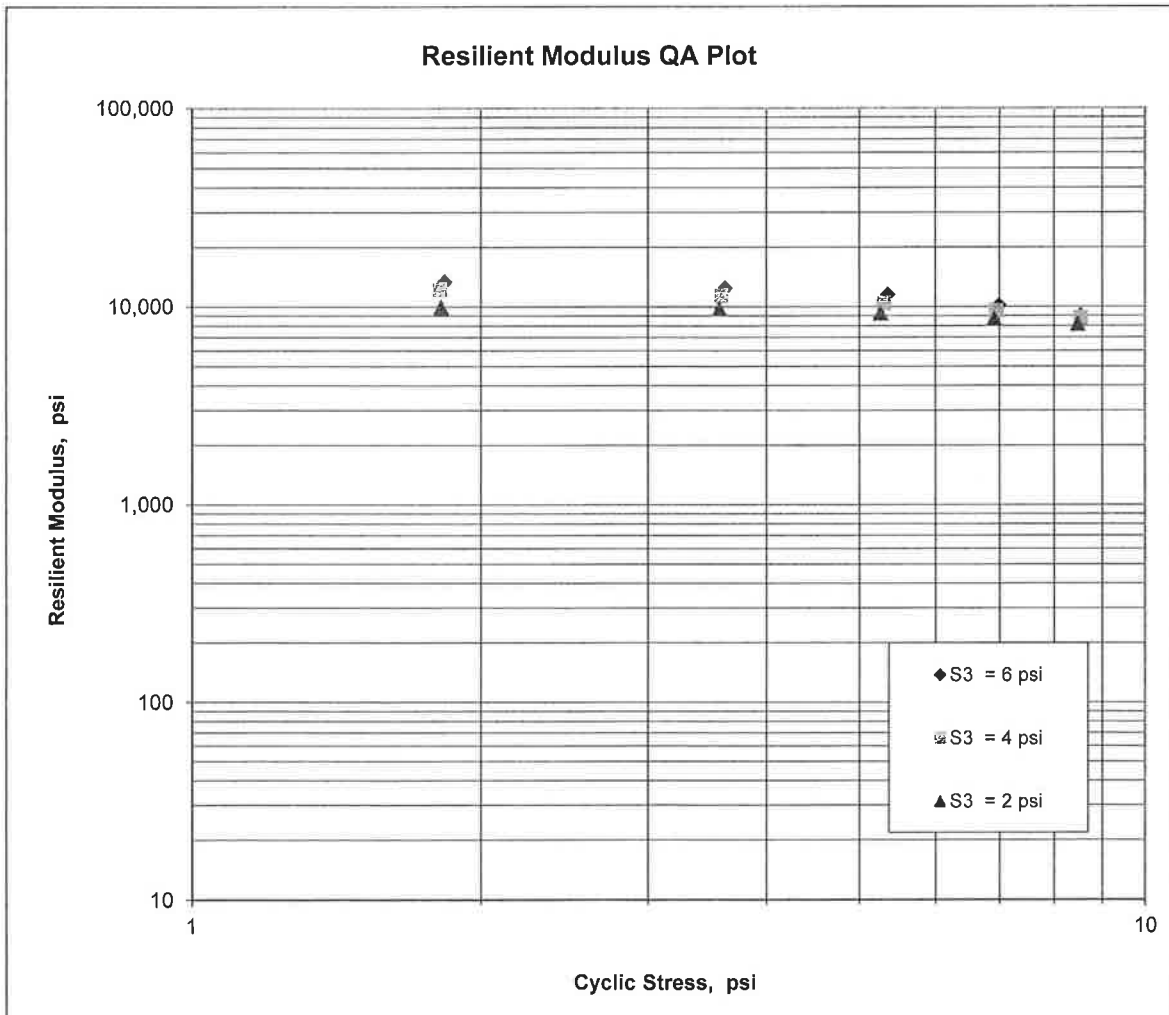
$$M_R = K_1 (S_C)^{K_2} (S_3)^{K_5}$$

$$K_1 = 10,771$$

$$K_2 = -0.18896$$

$$K_5 = 0.18097$$

$$R^2 = 0.89$$



**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/9/15	<b>Station No.:</b>	602+00
<b>Date Tested:</b>	January 9, 2015	<b>Location:</b>	26'RT
<b>Name of Project:</b>	ARKANSAS CITY- WEST (SEL. SECS.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b> DESHA	
<b>Sampled By:</b>	faulkner	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143860	<b>AASHTO Class:</b>	A-6(12)
<b>Sample ID:</b>	RV1090	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

**1. Testing Information:**

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

**2. Specimen Information:**

Specimen Diameter (in):	
Top	3.96
Middle	3.95
Bottom	3.95
Average	3.95
Membrane Thickness (in):	0.00
Height of Specimen, Cap and Base (in):	8.04
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.04
Initial Area, Ao (sq. in):	12.27
Initial Volume, AoLo (cu. in):	98.69

**3. Soil Specimen Weight:**

Weight of Wet Soil Used (g):	3123.20
------------------------------	---------

**4. Soil Properties:**

Optimum Moisture Content (%):	16.4
Maximum Dry Density (pcf):	108.6
95% of MDD (pcf):	103.2
In-Situ Moisture Content (%):	N/A

**5. Specimen Properties:**

Wet Weight (g):	3123.20
Compaction Moisture content (%):	15.8
Compaction Wet Density (pcf):	120.58
Compaction Dry Density (pcf):	104.13
Moisture Content After Mr Test (%):	15.8

**6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable):**

#VALUE!

**7. Resilient Modulus, Mr:**

12284(S<sub>c</sub>)<sup>-0.17959</sup>(S<sub>3</sub>)<sup>0.17839</sup>

**8. Comments**

\_\_\_\_\_

\_\_\_\_\_

**9. Tested By:**

CLSDT \_\_\_\_\_

**Date:** January 9, 2015

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

**AAASHTO T 307-99 - RESILIENT MODULUS OF SUBGRADE SOILS  
RECOMPACTED SAMPLES**

**Job No.** 020573      **Material Code** SSRVPS  
**Date Sampled:** 1/9/15      **Station No.:** 602+00  
**Date Tested:** January 9, 2015      **Location:** 26RT  
**Name of Project:** ARKANSAS CITY- WEST (SEL. SECS.) (S)  
**County:** Code: 21      **Name:** DESHA  
**Sampled By:** faulkner      **Depth:** 0-5  
**Lab No.:** 20143860      **AAASHTO Class:** A-6(12)  
**Sample ID:** RV1090      **Material Type (1 or 2):** 2  
**LATITUDE:**      **LONGITUDE:**

PARAMETER	Chamber Confining Pressure	Nominal Maximum Axial Stress	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	Average Recov Def. LVDT 1 and 2	Resilient Strain	Resilient Modulus
	S <sub>3</sub>	S <sub>cyclic</sub>	P <sub>max</sub>	P <sub>cyclic</sub>	P <sub>contact</sub>	S <sub>max</sub>	S <sub>cyclic</sub>	S <sub>contact</sub>	H <sub>avg</sub>	ε <sub>r</sub>	M <sub>r</sub>
DESIGNATION	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.2	22.7	2.6	2.1	1.8	0.2	0.00100	0.00012	14,886
Sequence 2	6.0	4.0	47.2	44.5	2.8	3.8	3.6	0.2	0.00202	0.00025	14,396
Sequence 3	6.0	6.0	69.7	66.0	3.7	5.7	5.4	0.3	0.00323	0.00040	13,395
Sequence 4	6.0	8.0	92.6	86.4	6.2	7.5	7.0	0.5	0.00476	0.00059	11,894
Sequence 5	6.0	10.0	114.5	105.9	8.7	9.3	8.6	0.7	0.00663	0.00082	10,465
Sequence 6	4.0	2.0	25.0	22.3	2.7	2.0	1.8	0.2	0.00107	0.00013	13,617
Sequence 7	4.0	4.0	47.0	44.2	2.8	3.8	3.6	0.2	0.00228	0.00028	12,728
Sequence 8	4.0	6.0	68.4	65.6	2.9	5.6	5.3	0.2	0.00361	0.00045	11,913
Sequence 9	4.0	8.0	91.4	86.1	5.3	7.4	7.0	0.4	0.00510	0.00063	11,056
Sequence 10	4.0	10.0	113.6	106.0	7.7	9.3	8.6	0.6	0.00679	0.00085	10,214
Sequence 11	2.0	2.0	25.0	22.3	2.6	2.0	1.8	0.2	0.00123	0.00015	11,911
Sequence 12	2.0	4.0	46.8	44.1	2.7	3.8	3.6	0.2	0.00256	0.00032	11,266
Sequence 13	2.0	6.0	67.9	65.1	2.8	5.5	5.3	0.2	0.00399	0.00050	10,688
Sequence 14	2.0	8.0	89.7	85.3	4.4	7.3	6.9	0.4	0.00560	0.00070	9,978
Sequence 15	2.0	10.0	112.0	105.1	6.9	9.1	8.6	0.6	0.00736	0.00091	9,362

**TESTED BY** \_\_\_\_\_ **CLS/DT** \_\_\_\_\_ **DATE** January 9, 2015  
**REVIEWED BY** \_\_\_\_\_ **DATE** \_\_\_\_\_

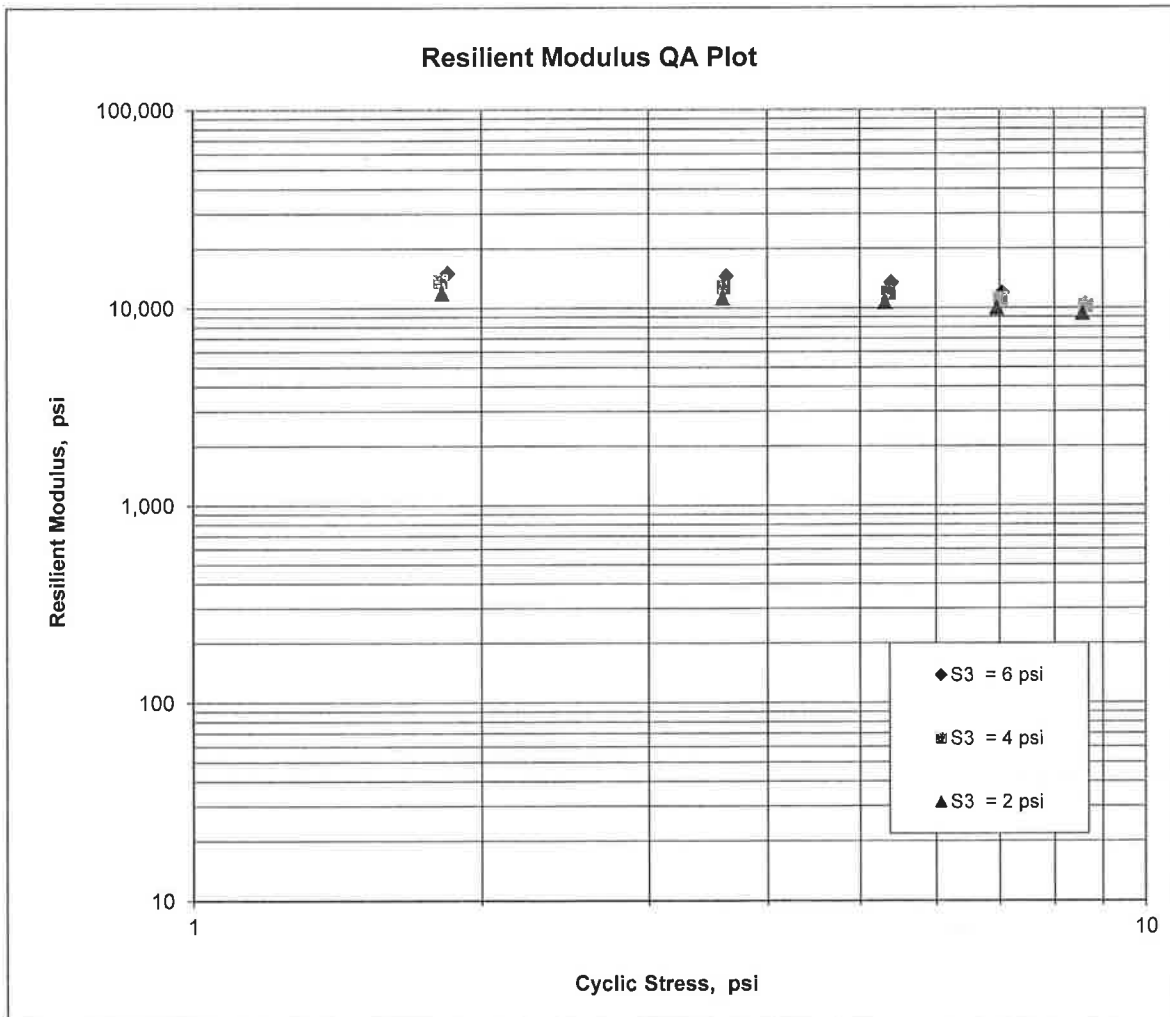
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/9/15	<b>Station No.:</b>	602+00
<b>Date Tested:</b>	January 9, 2015	<b>Location:</b>	26'RT
<b>Name of Project:</b>	ARKANSAS CITY- WEST (SEL. SECS.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b>	DESHA
<b>Sampled By:</b>	faulkner	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143860	<b>AASHTO Class:</b>	A-6(12)
<b>Sample ID:</b>	RV1090	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

$$M_R = K_1 (S_C)^{K_2} (S_3)^{K_5}$$

$K_1 = \underline{12,284}$   
 $K_2 = \underline{-0.17959}$   
 $K_5 = \underline{0.17839}$   
 $R^2 = \underline{0.90}$





**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/9/15	<b>Station No.:</b>	634+00
<b>Date Tested:</b>	January 9, 2015	<b>Location:</b>	28'RT
<b>Name of Project:</b>	ARKANSAS CITY- WEST (SEL. SECS.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b> DESHA	
<b>Sampled By:</b>	faulkner	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143861	<b>AASHTO Class:</b>	A-7-6(26)
<b>Sample ID:</b>	RV1091	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

**1. Testing Information:**

Preconditioning - Permanent Strain > 5% (Y=Yes or N= No)	N
Testing - Permanent Strain > 5% (Y=Yes or N=No)	N
Number of Load Sequences Completed (0-15)	15

**2. Specimen Information:**

Specimen Diameter (in):	
Top	3.96
Middle	3.97
Bottom	3.96
Average	3.96
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.04
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.04
Initial Area, Ao (sq. in):	12.27
Initial Volume, AoLo (cu. in):	98.69

**3. Soil Specimen Weight:**

Weight of Wet Soil Used (g):	2873.20
------------------------------	---------

**4. Soil Properties:**

Optimum Moisture Content (%):	22.5
Maximum Dry Density (pcf):	96.1
95% of MDD (pcf):	91.3
In-Situ Moisture Content (%):	N/A

**5. Specimen Properties:**

Wet Weight (g):	2873.20
Compaction Moisture content (%):	22.6
Compaction Wet Density (pcf):	110.93
Compaction Dry Density (pcf):	90.48
Moisture Content After Mr Test (%):	22.6

**6. Quick Shear Test (Y=Yes, N=No, N/A=Not Applicable):**

#VALUE!

**7. Resilient Modulus, Mr:**

12432(Sc)<sup>-0.16856</sup>(S3)<sup>0.09866</sup>

**8. Comments**

\_\_\_\_\_

\_\_\_\_\_

**9. Tested By:**

AB/DT \_\_\_\_\_

**Date:** January 9, 2015

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

**Job No.** 020573      **Material Code** SSRVPS  
**Date Sampled:** 1/9/15      **Station No.:** 634+00  
**Date Tested:** January 9, 2015      **Location:** 28<sup>RT</sup>  
**Name of Project:** ARKANSAS CITY- WEST (SEL. SECS.) (S)  
**County:** Code: 21      **Name:** DESHA  
**Sampled By:** faulkner      **Depth:** 0-5  
**Lab No.:** 20143861      **AASHTO Class:** A-7-6(26)  
**Sample ID:** RV1091      **Material Type (1 or 2):** 2  
**LATITUDE:**      **LONGITUDE:**

PARAMETER	Chamber Confining Pressure	Nominal Maximum Axial Stress	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	Average Recov Def. LVDT 1 and 2	Resilient Strain	Resilient Modulus
			P <sub>max</sub>	P <sub>cyclic</sub>								
DESIGNATION	S <sub>3</sub>	S <sub>cyclic</sub>	lbs	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
UNIT	psi	psi										
Sequence 1	6.0	2.0	25.1	22.4	2.7	2.0	1.8	0.2	0.00112	0.00014	13,113	
Sequence 2	6.0	4.0	46.7	44.0	2.7	3.8	3.6	0.2	0.00229	0.00028	12,604	
Sequence 3	6.0	6.0	69.0	65.4	3.7	5.6	5.3	0.3	0.00363	0.00045	11,781	
Sequence 4	6.0	8.0	91.9	85.8	6.2	7.5	7.0	0.5	0.00528	0.00066	10,641	
Sequence 5	6.0	10.0	113.5	104.8	8.7	9.2	8.5	0.7	0.00717	0.00089	9,573	
Sequence 6	4.0	2.0	25.0	22.2	2.7	2.0	1.8	0.2	0.00116	0.00014	12,513	
Sequence 7	4.0	4.0	46.7	44.0	2.8	3.8	3.6	0.2	0.00244	0.00030	11,818	
Sequence 8	4.0	6.0	67.9	65.1	2.8	5.5	5.3	0.2	0.00384	0.00048	11,107	
Sequence 9	4.0	8.0	90.8	85.6	5.2	7.4	7.0	0.4	0.00541	0.00067	10,360	
Sequence 10	4.0	10.0	112.9	105.1	7.7	9.2	8.6	0.6	0.00721	0.00090	9,555	
Sequence 11	2.0	2.0	24.9	22.2	2.7	2.0	1.8	0.2	0.00126	0.00016	11,577	
Sequence 12	2.0	4.0	46.4	43.7	2.7	3.8	3.6	0.2	0.00261	0.00032	10,952	
Sequence 13	2.0	6.0	67.6	64.8	2.8	5.5	5.3	0.2	0.00410	0.00051	10,352	
Sequence 14	2.0	8.0	89.5	85.2	4.4	7.3	6.9	0.4	0.00573	0.00071	9,731	
Sequence 15	2.0	10.0	111.7	104.8	6.9	9.1	8.5	0.6	0.00756	0.00094	9,081	

**TESTED BY** \_\_\_\_\_ **AB/DT** \_\_\_\_\_ **DATE** January 9, 2015  
**REVIEWED BY** \_\_\_\_\_ **DATE** \_\_\_\_\_

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
MATERIALS DIVISION**

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

<b>Job No.</b>	020573	<b>Material Code</b>	SSRVPS
<b>Date Sampled:</b>	1/9/15	<b>Station No.:</b>	634+00
<b>Date Tested:</b>	January 9, 2015	<b>Location:</b>	28'RT
<b>Name of Project:</b>	ARKANSAS CITY- WEST (SEL. SECS.) (S)		
<b>County:</b>	<b>Code:</b> 21	<b>Name:</b>	DESHA
<b>Sampled By:</b>	faulkner	<b>Depth:</b>	0-5
<b>Lab No.:</b>	20143861	<b>AASHTO Class:</b>	A-7-6(26)
<b>Sample ID:</b>	RV1091	<b>Material Type (1 or 2):</b>	2
<b>LATITUDE:</b>		<b>LONGITUDE:</b>	

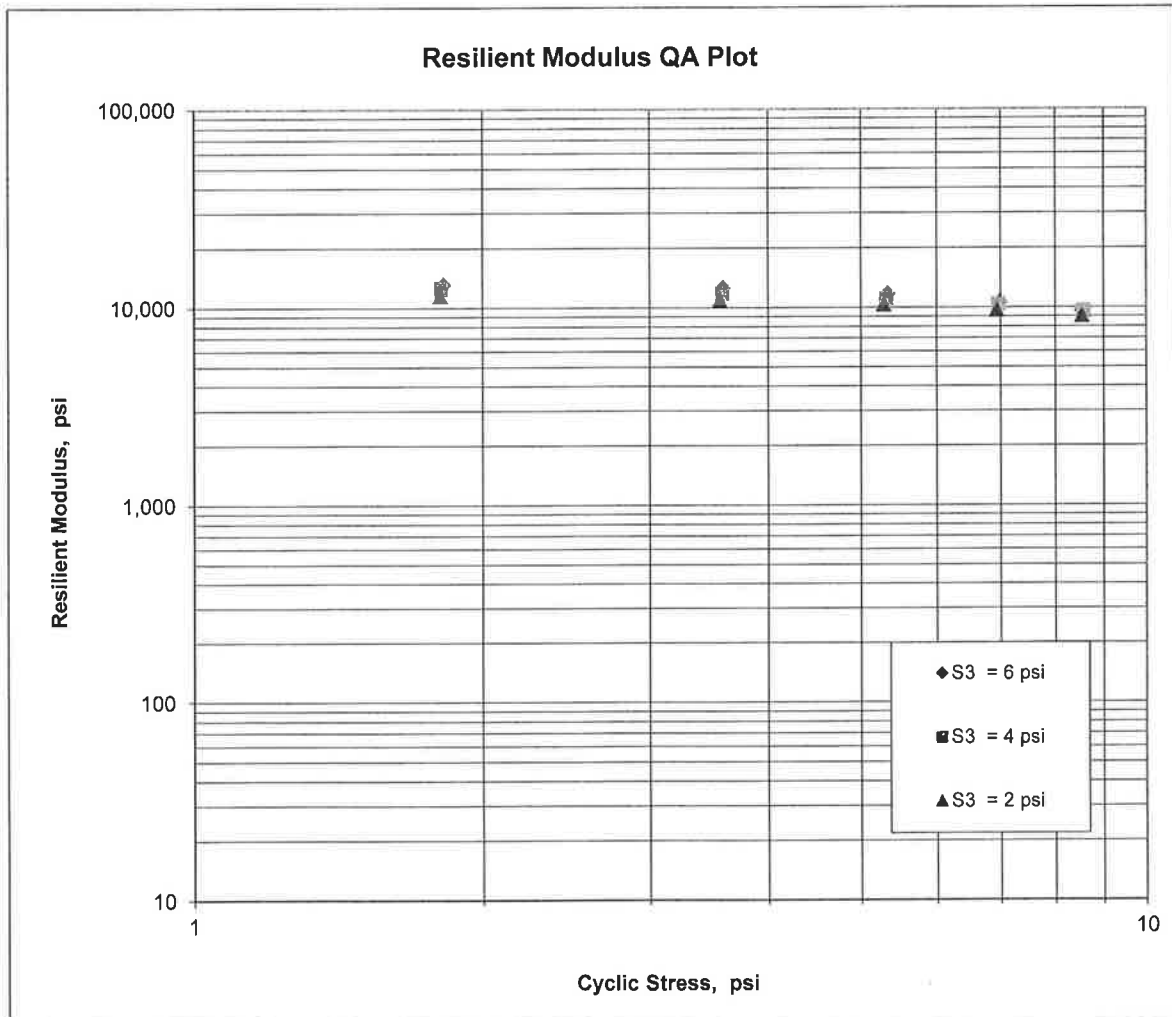
$$M_R = K_1 (S_C)^{K_2} (S_3)^{K_5}$$

$$K_1 = 12,432$$

$$K_2 = -0.16856$$

$$K_5 = 0.09866$$

$$R^2 = 0.89$$



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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 12/31/14 SEQUENCE NO. - 1  
JOB NUMBER - 020573 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 - 21  
SUPPLIER NAME - STATE DISTRICT NO. - 02  
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL. SECS.) (S)  
PROJECT ENGINEER - NOT APPLICABLE  
PIT/QUARRY - ARKANSAS  
LOCATION - DESHA, COUNTY DATE SAMPLED - 11/25/14  
SAMPLED BY - S. FAULKNER DATE RECEIVED - 11/26/14  
SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20143734	-	20143735	-	20143736	
SAMPLE ID	-	S964	-	S965	-	S966	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	330+50	-	330+50	-	330+50	
LOCATION	-	05RT	-	13RT	-	27RT	
DEPTH IN FEET	-	0-5	-	0-5	-	0-5	
MAT'L COLOR	-	GRAY	-	GRAY	-	GRAY	
MAT'L TYPE	-	-	-	-	-	-	
LATITUDE DEG-MIN-SEC	-	33 36 21.80	-	33 36 21.70	-	33 36 21.60	
LONGITUDE DEG-MIN-SEC	-	91 18 48.30	-	91 18 48.30	-	91 18 48.40	
% PASSING	2	IN.	-	-	-	-	
	1 1/2	IN.	-	-	-	-	
	3/4	IN.	-	100	-	-	
	3/8	IN.	-	99	-	100	
	NO. 4	-	100	95	-	96	
	NO. 10	-	-	91	-	92	
	NO. 40	-	-	89	-	87	
	NO. 80	-	-	88	-	84	
	NO. 200	-	92	87	-	82	
LIQUID LIMIT	-	65	-	64	-	81	
PLASTICITY INDEX	-	35	-	37	-	50	
AASHTO SOIL	-	A-7-5(38)	-	A-7-6(36)	-	A-7-5(46)	
UNIFIED SOIL	-	-	-	-	-	-	
% MOISTURE CONTENT	-	43.9	-	32.3	-	45.1	
ACHMSC	(IN)	-	5.0	-	3.0	-	--
ACHMBC	(IN)	-	13.5	-	--	-	--
PCCP	(IN)	-	4.0	-	--	-	--
AGG. BASE CRS CL-5	(IN)	-	--	-	6.0	-	--
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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	- 12/30/14	SEQUENCE NO.	= 2
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143737	- 20143738	- 20143739
SAMPLE ID	- S967	- S968	- S969
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 338+00	- 338+00	- 338+00
LOCATION	- 05LT	- 14LT	- 26LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 22.20	- 33 36 22.30	- 33 36 22.40
LONGITUDE DEG-MIN-SEC	- 91 18 39.30	- 91 18 39.30	- 91 18 39.30
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	100	-
	NO. 4 - 100	96	100
	NO. 10 -	91	-
	NO. 40 -	85	-
	NO. 80 -	83	-
	NO. 200 - 97	81	99
LIQUID LIMIT	- 75	- 68	- 43
PLASTICITY INDEX	- 42	- 36	- 22
AASHTO SOIL	- A-7-5(49)	- A-7-5(33)	- A-7-6(24)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 48.2	- 45.6	- 43.8
ACHMSC	(IN) - 17.0W	- 3.5	- --
PCCP	(IN) - 7.0	- --	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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 - 12/31/14 SEQUENCE NO. - 3  
JOB NUMBER - 020573 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 - 21  
SUPPLIER NAME - STATE DISTRICT NO. - 02  
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL. SECS.) (S)  
PROJECT ENGINEER - NOT APPLICABLE  
PIT/QUARRY - ARKANSAS  
LOCATION - DESHA, COUNTY DATE SAMPLED - 11/25/14  
SAMPLED BY - S. FAULKNER DATE RECEIVED - 11/26/14  
SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	20143740	20143741	20143742
SAMPLE ID	S970	S971	S972
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	346+00	346+00	346+00
LOCATION	05RT	14RT	26RT
DEPTH IN FEET	0-5	0-5	0-5
MAT'L COLOR	GRAY	BR/GR	BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	33 36 22.00	33 36 21.90	33 36 21.70
LONGITUDE DEG-MIN-SEC	91 18 29.70	91 18 29.80	91 18 29.80
% PASSING		5	
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	-	-	100
NO. 4	100	100	94
NO. 10	-	-	92
NO. 40	-	-	89
NO. 80	-	-	86
NO. 200	99	98	83
LIQUID LIMIT	72	74	84
PLASTICITY INDEX	41	37	42
AASHTO SOIL	A-7-5(49)	A-7-5(46)	A-7-5(42)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	39.5	31.8	25.6
ACHMSC (IN)	18.5W	2.75	--
PCCP (IN)	4.5	--	--
AGG BASE CRS CL-5 (IN)	--	4.0	--
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14		SEQUENCE NO.	- 4
JOB NUMBER	- 020573		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	- 21
SUPPLIER NAME	- STATE		DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECONDS) (S)			
PROJECT ENGINEER	- NOT APPLICABLE			
PIT/QUARRY	- ARKANSAS			
LOCATION	- DESHA, COUNTY		DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER		DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE		DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS			

LAB NUMBER	- 20143743	- 20143744	- 20143745
SAMPLE ID	- S973	- S974	- S975
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 354+00	- 354+00	- 354+00
LOCATION	- 06LT	- 14LT	- 28LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BR/GR	- BR/GR	- BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 21.90	- 33 36 22.00	- 33 36 22.10
LONGITUDE DEG-MIN-SEC	- 91 18 20.40	- 91 18 20.40	- 91 18 20.40
% PASSING	2 IN.	-	-
	1 1/2 IN.	-	-
	3/4 IN.	-	- 100
	3/8 IN.	- 100	- 99
	NO. 4	- 99	- 99
	NO. 10	- 97	- 97
	NO. 40	- 92	- 94
	NO. 80	- 88	- 92
	NO. 200	- 86	- 85
LIQUID LIMIT	- 59	- 40	- 37
PLASTICITY INDEX	- 31	- 21	- 17
AASHTO SOIL	- A-7-6(30)	- A-6(14)	- A-6(15)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 22.6	- 26.8	- 24.2
ACHMSC (IN)	- 10.25W	- 4.25W	- --
AGG BASE CRS CL-5 (IN)	- --	- 5.0	- --
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 5
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143746	- 20143747	- 20143748
SAMPLE ID	- S976	- S977	- S978
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 362+00	- 362+00	- 362+00
LOCATION	- 05RT	- 14RT	- 27RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 22.20	- 33 36 22.10	- 33 36 22.00
LONGITUDE DEG-MIN-SEC	- 91 18 11.20	- 91 18 11.20	- 91 18 11.10
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 98	- 96	- 98
LIQUID LIMIT	- 60	- 58	- 62
PLASTICITY INDEX	- 33	- 31	- 33
AASHTO SOIL	- A-7-6(38)	- A-7-6(35)	- A-7-6(39)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 32.3	- 27.4	- 32.7
ACHMSC (IN)	- 11.5W	- 4.0	- --
PCCP (IN)	- 7.0	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 6.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED  
-  
-  
-  
-

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	- 12/30/14	SEQUENCE NO.	= 10
JOB NUMBER	- 020573	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	= 21
SUPPLIER NAME	- STATE	DISTRICT NO.	= 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECs.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143761	- 20143762	- 20143763
SAMPLE ID	- S991	- S992	- S993
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 402+00	- 402+00	- 402+00
LOCATION	- 06LT	- 14LT	- 27LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 21.60	- 33 36 21.70	- 33 36 21.80
LONGITUDE DEG-MIN-SEC	- 91 17 24.10	- 91 17 24.10	- 91 17 24.10
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. - 100	- 100	-
	NO. 4 - 99	- 99	- 100
	NO. 10 - 98	- 99	- 99
	NO. 40 - 96	- 97	- 98
	NO. 80 - 92	- 94	- 94
	NO. 200 - 85	- 86	- 86
LIQUID LIMIT	- 46	- 47	- 44
PLASTICITY INDEX	- 28	- 31	- 29
AASHTO SOIL	- A-7-6(24)	- A-7-6(27)	- A-7-6(25)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 25.5	- 24.8	- 24.7
ACHMSC (IN)	- 14.0W	- 3.5	- --
PCCP (IN)	- 3.0X	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 11
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143764	- 20143765	- 20143766
SAMPLE ID	- S994	- S995	- S996
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 410+00	- 410+00	- 410+00
LOCATION	- 06RT	- 14RT	- 29RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BR/GR	- BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 21.30	- 33 36 21.20	- 33 36 21.10
LONGITUDE DEG-MIN-SEC	- 91 17 14.50	- 91 17 14.40	- 91 17 14.40
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	- 100
	3/8 IN. -	- 100	- 97
	NO. 4 - 100	- 98	- 96
	NO. 10 - 99	- 95	- 95
	NO. 40 - 99	- 93	- 94
	NO. 80 - 95	- 90	- 92
	NO. 200 - 86	- 80	- 87
LIQUID LIMIT	- 60	- 52	- 63
PLASTICITY INDEX	- 39	- 33	- 42
AASHTO SOIL	- A-7-6(36)	- A-7-6(27)	- A-7-6(39)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 31.6	- 29.2	- 36.3
ACHMSC (IN)	- 13.5W	- 3.0	- --
PCCP (IN)	- 4.0	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED



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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 13
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL. SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S. FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143770	- 20143771	- 20143772
SAMPLE ID	- S1000	- S1001	- S1002
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 426+00	- 426+00	- 426+00
LOCATION	- 06RT	- 14RT	- 27RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 21.00	- 33 36 20.90	- 33 36 20.80
LONGITUDE DEG-MIN-SEC	- 91 16 55.40	- 91 16 55.40	- 91 16 55.40
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 95	- 92	- 97
LIQUID LIMIT	- 70	- 56	- 71
PLASTICITY INDEX	- 38	- 33	- 39
AASHTO SOIL	- A-7-5(43)	- A-7-6(34)	- A-7-5(46)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 40.4	- 32.8	- 44.4
ACHMSC (IN)	- 17.0W	- 2.5	- --
PCCP (IN)	- 5.75	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 4.0	- --

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED





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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 12/30/14 SEQUENCE NO. - 15  
JOB NUMBER - 020573 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 - 21  
SUPPLIER NAME - STATE DISTRICT NO. - 02  
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SEC.) (S)  
PROJECT ENGINEER - NOT APPLICABLE  
PIT/QUARRY - ARKANSAS  
LOCATION - DESHA, COUNTY DATE SAMPLED - 11/25/14  
SAMPLED BY - S.FAULKNER DATE RECEIVED - 11/26/14  
SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20143776	-	20143777	-	20143778
SAMPLE ID	-	S1006	-	S1007	-	S1008
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY
STATION	-	442+00	-	442+00	-	442+00
LOCATION	-	06RT	-	14RT	-	27RT
DEPTH IN FEET	-	0-5	-	0-5	-	0-5
MAT'L COLOR	-	BROWN	-	BROWN	-	BROWN
MAT'L TYPE	-		-		-	
LATITUDE DEG-MIN-SEC	-	33 36 20.70	-	33 36 20.70	-	33 36 20.50
LONGITUDE DEG-MIN-SEC	-	91 16 37.00	-	91 16 37.00	-	91 16 37.00
% PASSING	2	IN.	-		-	
	1 1/2	IN.	-		-	
	3/4	IN.	-		-	
	3/8	IN.	-	100	-	100
	NO. 4		-	98	-	96
	NO. 10		-	96	-	92
	NO. 40		-	92	-	87
	NO. 80		-	90	-	82
	NO. 200		-	88	-	76
LIQUID LIMIT	-	55	-	38	-	41
PLASTICITY INDEX	-	29	-	20	-	20
AASHTO SOIL	-	A-7-6(28)	-	A-6(14)	-	A-7-6(15)
UNIFIED SOIL	-		-		-	
% MOISTURE CONTENT	-	29.1	-	21.0	-	24.0
ACHMSC	(IN)	12.5	-	5.0	-	--
PCCP	(IN)	7.0	-	--	-	--
AGG BASE CRS CL-5	(IN)	--	-	3.0	-	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/31/14	SEQUENCE NO.	- 16
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143779	- 20143780	- 20143781
SAMPLE ID	- S1009	- S1010	- S1011
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 450+00	- 450+00	- 450+00
LOCATION	- 06LT	- 14LT	- 27LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BR/GR	- BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 20.70	- 33 36 20.80	- 33 36 20.90
LONGITUDE DEG-MIN-SEC	- 91 16 27.40	- 91 16 27.40	- 91 16 27.40
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	- 100	-
	3/8 IN. -	- 99	- 100
	NO. 4 - 100	- 98	- 97
	NO. 10 -	- 96	- 95
	NO. 40 -	- 94	- 93
	NO. 80 -	- 93	- 91
	NO. 200 - 92	- 89	- 89
LIQUID LIMIT	- 54	- 45	- 47
PLASTICITY INDEX	- 30	- 24	- 23
AASHTO SOIL	- A-7-6(31)	- A-7-6(23)	- A-7-6(22)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 35.8	- 25.4	- 38.5
ACHMSC (IN)	- 7.0	- 4.5W	- --
ACHMBC (IN)	- 2.25	- --	- --
ACHMSC (IN)	- 10.0	- --	- --
PCCP (IN)	- 4.0	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 17
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECs.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143782	- 20143783	- 20143784
SAMPLE ID	- S1012	- S1013	- S1014
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 458+00	- 458+00	- 458+00
LOCATION	- 06RT	- 14RT	- 26RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BR/GR	- BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 20.30	- 33 36 20.30	- 33 36 20.20
LONGITUDE DEG-MIN-SEC	- 91 16 17.90	- 91 16 17.90	- 91 16 17.90
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	100
	3/8 IN. -	-	97
	NO. 4 - 100	100	95
	NO. 10 -	-	94
	NO. 40 -	-	90
	NO. 80 -	-	87
	NO. 200 - 97	94	85
LIQUID LIMIT	- 64	- 49	- 53
PLASTICITY INDEX	- 35	- 29	- 33
AASHTO SOIL	- A-7-5 (41)	- A-7-6 (29)	- A-7-6 (29)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 40.2	- 27.0	- 30.7
ACHMSC (IN)	- 14.0W	- 6.5	- --
ACHMBC (IN)	- 3.0	- --	- --
ACHMSC (IN)	- 2.0	- --	- --
PCCP (IN)	- 6.0	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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	- 12/31/14	SEQUENCE NO.	- 18
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143785	- 20143786	- 20143787
SAMPLE ID	- S1015	- S1016	- S1017
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 466+00	- 466+00	- 466+00
LOCATION	- 06LT	- 14LT	- 27LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 20.30	- 33 36 20.40	- 33 36 20.50
LONGITUDE DEG-MIN-SEC	- 91 16 8.50	- 91 16 8.50	- 91 16 8.50
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 98	- 92	- 94
LIQUID LIMIT	- 60	- 52	- 50
PLASTICITY INDEX	- 38	- 34	- 31
AASHTO SOIL	- A-7-6(42)	- A-7-6(33)	- A-7-6(31)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 31.5	- 26.9	- 25.7
ACHMSC (IN)	- 7.5W	- 4.75W	- --
ACHMBC (IN)	- 2.0	- --	- --
ACHMSC (IN)	- 4.5	- --	- --
PCCP (IN)	- 8.5	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 19
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECs.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143788	- 20143789	- 20143790
SAMPLE ID	- S1018	- S1019	- S1020
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 474+00	- 474+00	- 474+00
LOCATION	- 06RT	- 13RT	- 25RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 20.10	- 33 36 20.00	- 33 36 19.90
LONGITUDE DEG-MIN-SEC	- 91 15 58.80	- 91 15 58.80	- 91 15 58.80
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	- 100
	3/8 IN. -	-	- 98
	NO. 4 - 100	- 100	- 96
	NO. 10 -	-	- 94
	NO. 40 -	-	- 90
	NO. 80 -	-	- 86
	NO. 200 - 94	- 90	- 72
LIQUID LIMIT	- 52	- 46	- 37
PLASTICITY INDEX	- 31	- 29	- 22
AASHTO SOIL	- A-7-6(32)	- A-7-6(27)	- A-6(14)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 30.3	- 28.8	- 22.9
ACHMSC (IN)	- 13.0W	- 4.25	- --
PCCP (IN)	- 6.5	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 4.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED  
 -  
 -  
 -  
 -

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	- 12/30/14	SEQUENCE NO.	- 20
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143791	- 20143792	- 20143793
SAMPLE ID	- S1021	- S1022	- S1023
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 482+00	- 482+00	- 482+00
LOCATION	- 06LT	- 13LT	- 28LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 20.00	- 33 36 20.00	- 33 36 20.20
LONGITUDE DEG-MIN-SEC	- 91 15 49.20	- 91 15 49.30	- 91 15 49.30
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	100
	NO. 4 - 100	100	98
	NO. 10 -	97	95
	NO. 40 -	92	92
	NO. 80 -	89	90
	NO. 200 - 99	88	88
LIQUID LIMIT	- 58	- 45	- 52
PLASTICITY INDEX	- 34	- 24	- 25
AASHTO SOIL	- A-7-6(39)	- A-7-6(22)	- A-7-6(25)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 29.5	- 31.5	- 32.4
ACHMSC (IN)	- 14.5W	- 2.0	- --
PCCP (IN)	- 5.25	- --	- --
ACHMBC (IN)	- --	- 3.0	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED





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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 22
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	-	20143797	-	20143798	-	20143799	
SAMPLE ID	-	S1027	-	S1028	-	S1029	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	498+00	-	498+00	-	498+00	
LOCATION	-	06LT	-	14LT	-	26LT	
DEPTH IN FEET	-	0-5	-	0-5	-	0-5	
MAT'L COLOR	-	BROWN	-	BROWN	-	BROWN	
MAT'L TYPE	-		-		-		
LATITUDE DEG-MIN-SEC	-	33 36 19.70	-	33 36 19.70	-	33 36 19.90	
LONGITUDE DEG-MIN-SEC	-	91 15 30.40	-	91 15 30.40	-	91 15 30.40	
% PASSING	2	IN.	-		-		
	1 1/2	IN.	-		-		
	3/4	IN.	-		-		
	3/8	IN.	-		-		
	NO. 4	-	100		-	100	
	NO. 10	-			-		
	NO. 40	-			-		
	NO. 80	-			-		
	NO. 200	-	97		-	95	
LIQUID LIMIT	-	50	-	48	-	48	
PLASTICITY INDEX	-	29	-	30	-	28	
AASHTO SOIL	-	A-7-6(31)	-	A-7-6(31)	-	A-7-6(29)	
UNIFIED SOIL	-		-		-		
% MOISTURE CONTENT	-	30.0	-	26.6	-	26.0	
ACHMSC	(IN)	-	13.25	-	1.75	-	--
PCCP	(IN)	-	4.5	-	--	-	--
ACHMBC	(IN)	-	--	-	2.0	-	--
AGG BASE CRS CL-5	(IN)	-	--	-	4.0	-	--
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 23
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SEC.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143800	- 20143801	- 20143802
SAMPLE ID	- S1030	- S1031	- S1032
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 506+00	- 506+00	- 506+00
LOCATION	- 06RT	- 13RT	- 28RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.50	- 33 36 19.40	- 33 36 19.30
LONGITUDE DEG-MIN-SEC	- 91 15 21.00	- 91 15 21.00	- 91 15 21.00
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	- 100	-
	3/8 IN. -	- 98	-
	NO. 4 - 100	- 95	- 100
	NO. 10 -	- 90	-
	NO. 40 -	- 83	-
	NO. 80 -	- 79	-
	NO. 200 - 99	- 78	- 94
LIQUID LIMIT	- 75	- 51	- 64
PLASTICITY INDEX	- 41	- 27	- 40
AASHTO SOIL	- A-7-5(50)	- A-7-6(22)	- A-7-6(43)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 42.3	- 35.2	- 28.0
ACHMSC (IN)	- 17.75W	- 4.5	- --
PCCP (IN)	- 5.0	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 4.0	- --
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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	- 12/30/14	SEQUENCE NO.	- 26
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143809	- 20143810	- 20143811
SAMPLE ID	- S1039	- S1040	- S1041
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 530+00	- 530+00	- 530+00
LOCATION	- 06LT	- 14LT	- 32RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.60	- 33 36 19.60	- 33 36 19.80
LONGITUDE DEG-MIN-SEC	- 91 14 53.00	- 91 14 53.00	- 91 14 53.00
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 34	- 94	- 97
LIQUID LIMIT	- 50	- 50	- 46
PLASTICITY INDEX	- 32	- 31	- 27
AASHTO SOIL	- A-7-6(34)	- A-7-6(31)	- A-7-6(28)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 28.9	- 22.8	- 25.8
ACHMSC	(IN) - 13.0W	- 2.25	- --
PCCP	(IN) - 5.0	- --	- --
ACHMBC	(IN) - --	- 3.5	- --
AGG BASE CRS CL-5	(IN) - --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 12/31/14 SEQUENCE NO. - 27  
JOB NUMBER - 020573 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 - 21  
SUPPLIER NAME - STATE DISTRICT NO. - 02  
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SECS.) (S)  
PROJECT ENGINEER - NOT APPLICABLE  
PIT/QUARRY - ARKANSAS  
LOCATION - DESHA, COUNTY DATE SAMPLED - 11/24/14  
SAMPLED BY - S.FAULKNER DATE RECEIVED - 11/26/14  
SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20143812	-	20143813	-	20143814	
SAMPLE ID	-	S1042	-	S1043	-	S1044	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	538+00	-	538+00	-	538+00	
LOCATION	-	05RT	-	13RT	-	26RT	
DEPTH IN FEET	-	0-5	-	0-5	-	0-5	
MAT'L COLOR	-	GRAY	-	GRAY	-	BROWN	
MAT'L TYPE	-		-		-		
LATITUDE DEG-MIN-SEC	-	33 36 19.30	-	33 36 19.20	-	33 36 19.10	
LONGITUDE DEG-MIN-SEC	-	91 14 43.90	-	91 14 43.90	-	91 14 43.90	
% PASSING	2	IN.	-		-		
	1 1/2	IN.	-		-		
	3/4	IN.	-		-		
	3/8	IN.	-		-		
	NO. 4	-	100	-	100	-	100
	NO. 10	-		-		-	
	NO. 40	-		-		-	
	NO. 80	-		-		-	
	NO. 200	-	95	-	96	-	96
LIQUID LIMIT	-	59	-	46	-	56	
PLASTICITY INDEX	-	39	-	26	-	35	
AASHTO SOIL	-	A-7-6(41)	-	A-7-6(27)	-	A-7-6(37)	
UNIFIED SOIL	-		-		-		
% MOISTURE CONTENT	-		-	26.4	-	22.8	
ACHMSC	(IN)	-	15.5W	-	5.0W	-	--
AGG BASE CRS CL-5	(IN)	-	--	-	6.0	-	--
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	
		-		-		-	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 28
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SEC.) (S)			
PROJECT ENGINEER - NOT APPLICABLE			
PIT/QUARRY - ARKANSAS			
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS			

LAB NUMBER	- 20143815	- 20143816	- 20143817
SAMPLE ID	- S1045	- S1046	- S1047
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 546+00	- 546+00	- 546+00
LOCATION	- 06LT	- 14LT	- 27LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.10	- 33 36 19.20	- 33 36 19.40
LONGITUDE DEG-MIN-SEC	- 91 14 33.60	- 91 14 33.60	- 91 14 33.60
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 98	- 94	- 97
LIQUID LIMIT	- 48	- 70	- 47
PLASTICITY INDEX	- 33	- 46	- 25
AASHTO SOIL	- A-7-6(34)	- A-7-6(49)	- A-7-6(27)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 28.6	- 25.6	- 23.7
AACHMSC (IN)	- 13.0W	- 5.0	- --
PCCP (IN)	- 4.5	- --	- --
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED





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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 30
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECs.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143821	- 20143822	- 20143823
SAMPLE ID	- S1051	- S1052	- S1053
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 562+00	- 562+00	- 562+00
LOCATION	- 06LT	- 14LT	- 27LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.20	- 33 36 19.20	- 33 36 19.40
LONGITUDE DEG-MIN-SEC	- 91 14 15.00	- 91 14 15.00	- 91 14 15.00
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 99	- 96	- 97
LIQUID LIMIT	- 72	- 60	- 54
PLASTICITY INDEX	- 38	- 37	- 33
AASHTO SOIL	- A-7-5(47)	- A-7-6(40)	- A-7-6(36)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 35.7	- 29.7	- 27.7
AACHMSC	(IN) - 13.0W	- 5.0W	- --
PCCP	(IN) - 5.5	- --	- --
AGG BASE CRS CL-5	(IN) - --	- 3.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 31
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/24/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143824	- 20143825	- 20143826
SAMPLE ID	- S1054	- S1055	- S1056
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 570+00	- 570+00	- 570+00
LOCATION	- 06RT	- 14RT	- 28RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.00	- 33 36 18.90	- 33 36 18.80
LONGITUDE DEG-MIN-SEC	- 91 14 5.50	- 91 14 5.50	- 91 14 5.60
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 -	-	-
	NO. 40 -	-	-
	NO. 80 -	-	-
	NO. 200 - 98	- 91	- 97
LIQUID LIMIT	- 64	- 42	- 43
PLASTICITY INDEX	- 36	- 22	- 20
AASHTO SOIL	- A-7-6(42)	- A-7-6(21)	- A-7-6(22)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 22.0	- 25.8	- 24.6
ACHMSC	(IN) - 13.5W	- 4.5	- --
PCCP	(IN) - 4.5	- --	- --
AGG BASE CRS CL-5	(IN) - --	- 5.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 12/30/14 SEQUENCE NO. - 32  
JOB NUMBER - 020573 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 - 21  
SUPPLIER NAME - STATE DISTRICT NO. - 02  
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SECS.) (S)  
PROJECT ENGINEER - NOT APPLICABLE  
PIT/QUARRY - ARKANSAS  
LOCATION - DESHA, COUNTY DATE SAMPLED - 11/24/14  
SAMPLED BY - S.FAULKNER DATE RECEIVED - 11/26/14  
SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20143827	-	20143828	-	20143829	
SAMPLE ID	-	S1057	-	S1058	-	S1059	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	578+00	-	578+00	-	578+00	
LOCATION	-	05LT	-	13LT	-	25LT	
DEPTH IN FEET	-	0-5	-	0-5	-	0-5	
MAT'L COLOR	-	GRAY	-	GRAY	-	GRAY	
MAT'L TYPE	-		-		-		
LATITUDE DEG-MIN-SEC	-	33 36 19.10	-	33 36 19.20	-	33 36 19.30	
LONGITUDE DEG-MIN-SEC	-	91 13 55.90	-	91 13 55.90	-	91 13 55.90	
% PASSING	2	IN.	-		-		
	1 1/2	IN.	-		-		
	3/4	IN.	-		-		
	3/8	IN.	-		-		
	NO. 4	-	100		-	100	
	NO. 10	-			-		
	NO. 40	-			-		
	NO. 80	-			-		
	NO. 200	-	98		-	94	
LIQUID LIMIT	-	72	-	50	-	69	
PLASTICITY INDEX	-	41	-	25	-	42	
AASHTO SOIL	-	A-7-5(48)	-	A-7-6(26)	-	A-7-6(46)	
UNIFIED SOIL	-		-		-		
% MOISTURE CONTENT	-	40.6	-	35.8	-	37.5	
ACHMSC	(IN)	-	15.5W	-	5.0	-	--
PCCP	(IN)	-	6.0	-	--	-	--
AGG BASE CRS CL-5	(IN)	-	--	-	3.0	-	--

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED









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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/30/14	SEQUENCE NO.	- 37
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143842	- 20143843	- 20143844	
SAMPLE ID	- S1072	- S1073	- S1074	
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY	
STATION	- 618+00	- 618+00	- 618+00	
LOCATION	- 06RT	- 14RT	- 24RT	
DEPTH IN FEET	- 0-5	- 0-5	- 0-5	
MAT'L COLOR	- BROWN	- BROWN	- BROWN	
MAT'L TYPE	-	-	-	
LATITUDE DEG-MIN-SEC	- 33 36 19.00	- 33 36 18.80	- 33 36 18.80	
LONGITUDE DEG-MIN-SEC	- 91 13 8.40	- 91 13 8.50	- 91 13 8.50	
% PASSING				
2 IN.	-	-	-	
1 1/2 IN.	-	-	-	
3/4 IN.	-	-	-	
3/8 IN.	-	- 100	-	
NO. 4	- 100	- 97	- 100	
NO. 10	-	- 94	-	
NO. 40	-	- 90	-	
NO. 80	-	- 87	-	
NO. 200	- 96	- 86	- 96	
LIQUID LIMIT	- 58	- 55	- 73	
PLASTICITY INDEX	- 34	- 20	- 59	
AASHTO SOIL	- A-7-6(37)	- A-7-5(21)	- A-7-6(62)	
UNIFIED SOIL	-	-	-	
% MOISTURE CONTENT	- 31.1	- 29.0	- 26.6	
ACHMSC (IN)	- 18.0W	- 5.75W	- --	
PCCP (IN)	- 5.0	- --	- --	
AGG BASE CRS CL-5 (IN)	- --	- 3.0	- --	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED



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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 12/31/14	SEQUENCE NO.	- 38
JOB NUMBER	- 020573	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	- 21
SUPPLIER NAME	- STATE	DISTRICT NO.	- 02
NAME OF PROJECT	- ARKANSAS CITY - WEST (SEL.SECS.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20143845	- 20143846	- 20143847
SAMPLE ID	- S1075	- S1076	- S1077
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 626+00	- 626+00	- 626+00
LOCATION	- 06LT	- 14LT	- 26LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 36 19.00	- 33 36 19.10	- 33 36 19.20
LONGITUDE DEG-MIN-SEC	- 91 12 59.30	- 91 12 59.30	- 91 12 59.30
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	100	100
	NO. 10 -	98	93
	NO. 40 -	94	86
	NO. 80 -	86	78
	NO. 200 - 97	82	71
		79	
LIQUID LIMIT	- 72	- 53	- 71
PLASTICITY INDEX	- 44	- 31	- 67
AASHTO SOIL	- A-7-6(50)	- A-7-6(25)	- A-7-6(17)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 42.9	- 32.1	- 30.6
ACHMSC	(IN) - 15.0W	- 6.5W	- --
PCCP	(IN) - 5.0W	- --	- --
AGG BASE CRS CL-5	(IN) - --	- 4.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED  
 -  
 -  
 -  
 -



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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 12/30/14 SEQUENCE NO. - 40  
 JOB NUMBER - 020573 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 - 21  
 SUPPLIER NAME - STATE DISTRICT NO. - 02  
 NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SECs.) (S)  
 PROJECT ENGINEER - NOT APPLICABLE  
 PIT/QUARRY - ARKANSAS  
 LOCATION - DESHA, COUNTY DATE SAMPLED - 11/25/14  
 SAMPLED BY - S.FAULKNER DATE RECEIVED - 11/26/14  
 SAMPLE FROM - TEST HOLE DATE TESTED - 12/23/14  
 MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20143851	-	20143852	-	20143853
SAMPLE ID	-	S1081	-	S1082	-	S1083
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY
STATION	-	642+00	-	642+00	-	642+00
LOCATION	-	05LT	-	13LT	-	24LT
DEPTH IN FEET	-	0-5	-	0-5	-	0-5
MAT'L COLOR	-	GRAY	-	GRAY	-	GRAY
MAT'L TYPE	-		-		-	
LATITUDE DEG-MIN-SEC	-	33 36 23.40	-	33 36 23.50	-	33 36 23.60
LONGITUDE DEG-MIN-SEC	-	91 12 41.60	-	91 12 41.60	-	91 12 41.70
% PASSING						
	2	IN.	-		-	
	1 1/2	IN.	-		-	
	3/4	IN.	-		-	
	3/8	IN.	-		-	
			-	100	-	100
	NO. 4	-		99	-	99
	NO. 10	-		96	-	97
	NO. 40	-		90	-	90
	NO. 80	-		86	-	89
	NO. 200	-		85	-	86
LIQUID LIMIT	-	71	-	51	-	50
PLASTICITY INDEX	-	47	-	34	-	29
AASHTO SOIL	-	A-7-6(50)	-	A-7-6(30)	-	A-7-6(26)
UNIFIED SOIL	-		-		-	
% MOISTURE CONTENT	-	36.0	-	34.2	-	31.0
ACHMSC	(IN)	-		5.0W	-	--
PCCP	(IN)	-		6.0	-	--
AGG BASE CRS CL-5	(IN)	-		4.0	-	--
		-			-	
		-			-	
		-			-	
		-			-	
		-			-	
		-			-	
		-			-	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED

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	- 12/31/14	SEQUENCE NO.	= 41
JOB NUMBER	- 020573	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	= 21
SUPPLIER NAME	- STATE	DISTRICT NO.	= 02
NAME OF PROJECT - ARKANSAS CITY - WEST (SEL.SECS.) (S)			
PROJECT ENGINEER - NOT APPLICABLE			
PIT/QUARRY - ARKANSAS			
LOCATION	- DESHA, COUNTY	DATE SAMPLED	- 11/25/14
SAMPLED BY	- S.FAULKNER	DATE RECEIVED	- 11/26/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 12/23/14
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS			

LAB NUMBER	- 20143854	- 20143855	-	
SAMPLE ID	- S1084	- S1085	-	
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	-	
STATION	- 650+00	- 650+00	-	
LOCATION	- 06RT	- 14RT	-	
DEPTH IN FEET	- 0-5	- 0-5	-	
MAT'L COLOR	- GRAY	- GRAY	-	
MAT'L TYPE	-	-	-	
LATITUDE DEG-MIN-SEC	- 33 36 27.70	- 33 36 27.60	-	
LONGITUDE DEG-MIN-SEC	- 91 12 33.80	- 91 12 33.70	-	
% PASSING	2 IN. -	-	-	
	1 1/2 IN. -	-	-	
	3/4 IN. -	-	-	
	3/8 IN. -	-	-	
	NO. 4 - 100	- 100	-	
	NO. 10 -	-	-	
	NO. 40 -	-	-	
	NO. 80 -	-	-	
	NO. 200 - 90	- 94	-	
LIQUID LIMIT	- 55	- 57	-	
PLASTICITY INDEX	- 35	- 20	-	
AASHTO SOIL	- A-7-6 (34)	- A-7-5 (25)	-	
UNIFIED SOIL	-	-	-	
% MOISTURE CONTENT	- 23.2	- 23.0	-	
AACHMSC (IN)	- 8.0W	- 4.5	-	
AGG BASE CRS CL-5 (IN)	- 6.0	- 4.0	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	

REMARKS - W=MULTIPLE LAYERS, X=STRIPPED  
-  
-  
-  
-



