

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT



SUBSURFACE INVESTIGATION

STATE JOB NO. 070368

FEDERAL AID PROJECT NO. HRRR-0070(34)

HWY. 82 – HWY. 7 (REHAB) (S)

STATE HIGHWAY 335 SECTION 1

IN _____ UNION _____ COUNTY

LETTING OF NOVEMBER 2, 2016

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

February 10, 2014

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. 070368
Hwy. 82 – Hwy.7 (Rehab) (S)
Route 335 Section 1
Union County

Transmitted herewith is the requested Soil Survey, Strength Data and Resilient Modulus test results for the above referenced job. The project consists of rehabilitation approximately 8.6 mile of Highway 335. Samples were obtained in the travel lanes, and ditch line of the existing roadway. There were no paved shoulders within the project limits.


Based on laboratory results of samples obtained, the subgrade soils consist primarily of moderately plastic sandy clay. Isolated locations of highly plastic clay were encountered within the project limits. Cross-sections are not currently available, but it is assumed that the construction grade line will closely match that of the existing roadway. The subgrade soils are expected to provide a stable working platform with normal drying and compactive efforts if the weather is favorable during construction. If the embankment encroaches into the existing ditch line, undercut may be required. Undercut requirements will vary based on seasonal conditions but are anticipated to be no more than two feet. Further embankment and cut slope recommendations will be made when plans are further developed and cross-sections become available.

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 Little Rock.

2. Asphalt Concrete Hot Mix

Type	Asphalt Cement %	Mineral Aggregate %
Surface Course	5.3	94.7
Binder Course	4.3	95.7
Base Course	4.1	95.9


Michael C. Benson
Materials Engineer

MCB:pt:bjj

Attachment

cc: State Constr. Eng. – Master File Copy
District 7 Engineer
Planning 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 - 02/07/2014
 JOB NUMBER - 070368

SEQUENCE NO. - 1
 MATERIAL CODE - SSRVPS
 SPEC. YEAR - 2003
 SUPPLIER ID. - 1
 COUNTY/STATE - 70
 DISTRICT NO. - 07

JOB NAME - HWY.82 - HWY.7 (REHAB.) (S)

 * STATION LIMITS R-VALUE AT 240 psi *

BEGIN JOB - END JOB	LESS THAN 5
RESILIENT MODULUS	
STA.702+00	7396
STA.742+00	5735
STA.774+00	9367
STA.838+00	13573
STA.942+00	4885
STA.1006+00	9532

REMARKS - STA.1078+00 6668

AASHTO TESTS : T190

SOIL SURVEY MATERIALS DIVISION

JOB: 070368

DATE SAMPLED 1/8/14

COUNTY: UNION (70)

JOB NAME: HWY.82- HWY.7 (REHAB.) (S)

			PAVEMENT SOUNDINGS						
STA #	LOC.	SOIL #							
0702+00	18rt	RV102							
0742+00	16lt	RV103							
0774+00	19lt	RV104							
0838+00	17lt	RV105							
0942+00	18rt	RV106							
1006+00	18rt	RV107							
1078+00	18lt	RV108							
0702+00	05rt	S001	ACHMSC	8.0W	AGG.BASE	3.0			
0702+00	18rt	S002	ACHMSC	--	AGG.BASE	--			
0710+00	05lt	S003	ACHMSC	7.0W	AGG.BASE	3.0			
0710+00	16lt	S004	ACHMSC	--	AGG.BASE	--			
0718+00	05rt	S005	ACHMSC	9.5W	AGG.BASE	3.0			
0718+00	18rt	S006	ACHMSC	--	AGG.BASE	--			
0726+00	05lt	S007	ACHMSC	7.75W	AGG.BASE	3.0			
0726+00	16lt	S008	ACHMSC	--	AGG.BASE	--			
0734+00	05rt	S009	ACHMSC	12.0W	AGG.BASE	--			
0734+00	17rt	S010	ACHMSC	--	AGG.BASE	--			
0742+00	05lt	S011	ACHMSC	9.0W	AGG.BASE	7.0			
0742+00	16lt	S012	ACHMSC	--	AGG.BASE	--			
0750+00	05rt	S013	ACHMSC	9.75W	AGG.BASE	4.0			
0750+00	20rt	S014	ACHMSC	--	AGG.BASE	--			
0758+00	05lt	S015	ACHMSC	6.0W	AGG.BASE	8.0			
0758+00	16lt	S016	ACHMSC	--	AGG.BASE	--			
0766+00	05rt	S017	ACHMSC	9.0W	AGG.BASE	3.0			
0766+00	18rt	S018	ACHMSC	--	AGG.BASE	--			
0774+00	05lt	S019	ACHMSC	7.0W	AGG.BASE	3.0			
0774+00	19lt	S020	ACHMSC	--	AGG.BASE	--			
0782+00	08rt	S021	ACHMSC	8.0W	AGG.BASE	11.			
0782+00	24rt	S022	ACHMSC	--	AGG.BASE	--			
0790+00	05lt	S023	ACHMSC	4.5W	AGG.BASE	3.0			
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0798+00	05rt	S025	ACHMSC	5.5W	AGG.BASE	3.0			
0798+00	18rt	S026	ACHMSC	--	AGG.BASE	--			
0806+00	05lt	S027	ACHMSC	7.25W	AGG.BASE	6.0			
0806+00	18lt	S028	ACHMSC	--	AGG.BASE	--			
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0814+00	17rt	S030	ACHMSC	--	AGG.BASE	--			
0822+00	05lt	S031	ACHMSC	6.5W	AGG.BASE	4.0			
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0886+00	17lt	S048	ACHMSC	--	AGG.BASE	--				
0894+00	05rt	S049	ACHMSC	6.0W	AGG.BASE	8.0				
0894+00	17rt	S050	ACHMSC	--	AGG.BASE	--				
0902+00	05lt	S051	ACHMSC	8.0W	AGG.BASE	7.0				
0902+00	17lt	S052	ACHMSC	--	AGG.BASE	--				
0910+00	05rt	S053	ACHMSC	5.25W	AGG.BASE	8.0				
0910+00	18rt	S054	ACHMSC	--	AGG.BASE	--				
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0926+00	17rt	S058	ACHMSC	--	AGG.BASE	--				
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0935+00	17lt	S060	ACHMSC	--	AGG.BASE	--				
0942+00	05rt	S061	ACHMSC	10.5W	AGG.BASE	5.0				
0942+00	18rt	S062	ACHMSC	--	AGG.BASE	--				
0950+00	05lt	S063	ACHMSC	6.0W	AGG.BASE	3.0				
0950+00	19lt	S064	ACHMSC	--	AGG.BASE	--				
0958+00	05rt	S065	ACHMSC	6.5W	AGG.BASE	6.0				
0958+00	18rt	S066	ACHMSC	--	AGG.BASE	--				
0966+00	05lt	S067	ACHMSC	7.0W	AGG.BASE	3.0				
0966+00	20lt	S068	ACHMSC	--	AGG.BASE	--				
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0974+00	17rt	S070	ACHMSC	--	AGG.BASE	--				
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0990+00	20rt	S074	ACHMSC	--	AGG.BASE	--				
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0998+00	21lt	S076	ACHMSC	--	ACHMBC	--	ACHMSC	--	AGG.BASE	--
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1006+00	18rt	S078	ACHMSC	--	ACHMBC	--	ACHMSC	--	AGG.BASE	--
1016+00	05lt	S079	ACHMSC	5.5W	ACHMBC	--	ACHMSC	--	AGG.BASE	8.0
1016+00	17rt	S080	ACHMSC	--	ACHMBC	--	ACHMSC	--	AGG.BASE	--

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1030+00	18lt	S084	ACHMSC	--	AGG.BASE	--				
1038+00	05rt	S085	ACHMSC	4.75W	ACHMBC	--	ACHMSC	--	AGG.BASE	7.0
1038+00	17rt	S086	ACHMSC	--	ACHMBC	--	ACHMSC	--	AGG.BASE	--
1046+00	05lt	S087	ACHMSC	5.5	ACHMBC	2.0	ACHMSC	1.7	AGG.BASE	8.0
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1054+00	18rt	S090	ACHMSC	--	AGG.BASE	--				
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1062+00	20lt	S092	ACHMSC	--	ACHMBC	--	ACHMSC	--	AGG.BASE	--
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1070+00	15rt	S094	ACHMSC	--	AGG.BASE	--				
1078+00	05lt	S095	ACHMSC	6.0W	AGG.BASE	8.0				
1078+00	18lt	S096	ACHMSC	--	AGG.BASE	--				
1086+00	05rt	S097	ACHMSC	7.5W	ACHMBC	--	AGG.BASE	5.0		
1086+00	18rt	S098	ACHMSC	--	ACHMBC	--	AGG.BASE	--		
1094+00	06lt	S099	ACHMSC	4.0	ACHMBC	7.0	AGG.BASE	7.0		
1094+00	18lt	S100	ACHMSC	3.0	AGG.BASE	7.0				
1094+00	34lt	S101	ACHMSC	---	AGG.BASE	---				

SOIL SURVEY MATERIALS DIVISION

JOB: 070368

DATE SAMPLED: 1/8/14

COUNTY:UNION (70)

JOB NAME: HWY.82- HWY.7 (REHAB.) (S)

STA #	LOC.	DEPTH	COLOR	SOIL CLASS	FIELD			SOIL #	GRADATION %PASS.				
					MOIST.	L.L.	P.I.		#4	#10	#40	#80	#200
0702+00	18rt	0-5	GRAY	A-4(0)		21	03	RV102	92	90	88	82	62
0742+00	16lt	0-5	BR/GR	A-6(10)		33	19	RV103	94	92	90	87	67
0774+00	19lt	0-5	BR/GR	A-6(2)		28	13	RV104	86	81	79	73	46
0838+00	17lt	0-5	BR/GR	A-6(14)		34	21	RV105	99	99	97	93	78
0942+00	18rt	0-5	BR/GR	A-6(14)		32	16	RV106				100	94
1006+00	18rt	0-5	GRAY	A-6(11)		32	15	RV107	99	98	97	94	81
1078+00	18lt	0-5	BR/GR	A-6(6)		30	16	RV108	97	95	93	82	60
0702+00	05rt	0-5	BROW	A-6(15)	20.2	39	24	S001	98	97	95	89	70
0702+00	18rt	0-5	GRAY	A-6(7)	26.7	31	16	S002	100	98	97	90	64
0710+00	05lt	0-5	GRAY	A-6(6)	20.9	36	20	S003	100	100	99	92	51
0710+00	16lt	0-5	GRAY	A-2-4(1)	21.5	ND	NP	S004	100	99	99	89	25
0718+00	05rt	0-5	BR/GR	A-6(9)	21.6	30	14	S005	99	99	98	97	77
0718+00	18rt	0-5	BR/GR	A-4(3)	18.9	25	08	S006	99	99	98	96	66
0726+00	05lt	0-5	BR/GR	A-4(0)	14.2	ND	NP	S007	100	99	99	73	49
0726+00	16lt	0-5	BR/GR	A-4(0)	21.6	22	06	S008	100	100	99	79	49
0734+00	05rt	0-5	BR/GR	A-4(1)	19.7	26	10	S009	100	99	99	94	46
0734+00	17rt	0-5	BR/GR	A-6(5)	11.5	28	15	S010	100	99	99	96	58
0742+00	05lt	0-5	BR/GR	A-7-6(23)	28	49	32	S011	100	99	97	94	75
0742+00	16lt	0-5	BR/GR	A-6(10)	19.2	33	19	S012	93	90	88	84	68
0750+00	05rt	0-5	BR/GR	A-6(13)	23.6	40	24	S013	96	95	94	92	66
0750+00	20rt	0-5	BR/GR	A-6(9)	29.5	35	17	S014	99	98	96	94	65
0758+00	05lt	0-5	BR/GR	A-6(6)	21.9	29	15	S015	100	99	97	90	60
0758+00	16lt	0-5	BR/GR	A-6(10)	24.7	33	19	S016	98	97	96	90	66
0766+00	05rt	0-5	BR/GR	A-6(12)	23.7	40	25	S017	100	99	98	93	61
0766+00	18rt	0-5	BR/GR	A-6(10)	26.9	40	25	S018	100	94	93	85	54
0774+00	05lt	0-5	BR/GR	A-6(8)	23.6	35	21	S019	100	99	98	90	56
0774+00	19lt	0-5	BR/GR	A-6(2)	24.4	28	13	S020	91	90	88	76	42
0782+00	08rt	0-5	BROW	A-6(6)	23.6	35	18	S021	100	98	96	81	54
0782+00	24rt	0-5	BROW	A-2-4(0)	19.8	ND	NP	S022	90	90	89	79	32
0790+00	05lt	0-5	BROW	A-4(0)	8.4	22	07	S023	100	100	97	59	39
0790+00	18lt	0-5	BROW	A-4(0)	13.5	ND	NP	S024	99	99	96	55	36
0798+00	05rt	0-5	BROW	A-7-6(9)	15.6	41	22	S025	99	98	96	91	56
0798+00	18rt	0-5	BROW	A-6(7)	21.6	39	25	S026	99	99	98	82	47
0806+00	05lt	0-5	GRAY	A-6(6)	24.8	32	15	S027	97	94	91	88	60
0806+00	18lt	0-5	GRAY	A-4(0)	31.9	28	10	S028	97	91	86	80	37
0814+00	05rt	0-5	BROW	A-4(0)	5.7	ND	NP	S029	98	96	95	90	51
0814+00	17rt	0-5	BR/GR	A-6(7)	24.1	36	20	S030	97	96	94	86	54
0822+00	05lt	0-5	GRAY	A-6(16)	26.1	37	22	S031	99	99	98	97	80
0822+00	17lt	0-5	BR/GR	A-6(12)	22.7	35	21	S032	98	96	93	88	71
0830+00	05rt	0-5	BR/GR	A-6(12)	20.9	35	21	S033	99	97	95	92	69

0830+00	17rt	0-5	BR/GR	A-6(9)	21.7	33	18	S034	96	94	93	88	64
0838+00	05lt	0-5	GRAY	A-7-6(27)	17.6	51	33	S035	95	94	93	91	82
0838+00	17lt	0-5	BR/GR	A-7-6(29)	34.7	65	43	S036	100	99	98	93	69
0846+00	05rt	0-5	BROW	A-4(0)	12	20	07	S037	99	97	93	60	42
0846+00	19rt	0-5	BR/GR	A-6(1)	15.9	24	11	S038	100	98	94	59	41
0854+00	05lt	0-5	BR/GR	A-4(3)	13.3	22	10	S039	100	97	66	65	62
0854+00	17lt	0-5	BR/GR	A-2-6(0)	16.7	27	13	S040	93	86	79	34	29
0862+00	05rt	0-5	BR/GR	A-7-6(23)	24.7	52	33	S041	97	94	80	78	73
0862+00	20rt	0-5	BR/GR	A-7-6(20)	27.6	49	33	S042	89	85	82	75	68
0870+00	05lt	0-5	BR/GR	A-4(0)	15	ND	NP	S043	99	98	97	63	39
0870+00	17lt	0-5	BR/GR	A-2-6(0)	20.3	28	13	S044	95	93	91	53	28
0878+00	05rt	0-5	GRAY	A-4(0)	24.6	ND	NP	S045	97	93	88	66	44
0878+00	18rt	0-5	GRAY	A-4(0)	20.8	ND	NP	S046	95	93	91	73	46
0886+00	05lt	0-5	BROW	A-2-4(0)	8.7	ND	NP	S047	97	96	94	77	33
0886+00	17lt	0-5	BROW	A-6(4)	21.8	32	17	S048	99	97	95	79	48
0894+00	05rt	0-5	BROW	A-4(2)	25.4	27	10	S049	99	98	95	84	49
0894+00	17rt	0-5	BROW	A-7-6(9)	31.7	43	24	S050	99	99	98	87	53
0902+00	05lt	0-5	BROW	A-2-4(0)	11	ND	NP	S051	100	99	98	82	31
0902+00	17lt	0-5	GRAY	A-4(0)	18.8	ND	NP	S052	98	97	96	81	36
0910+00	05rt	0-5	GRAY	A-4(0)	10.5	ND	NP	S053	99	98	98	89	50
0910+00	18rt	0-5	GRAY	A-4(0)	17.6	ND	NP	S054	98	97	97	87	39
0918+00	05lt	0-5	BR/GR	A-4(1)	15.1	24	09	S055	99	97	94	87	42
0918+00	17lt	0-5	BROW	A-2-4(0)	15.3	ND	NP	S056	97	96	95	81	29
0926+00	05rt	0-5	BROW	A-6(4)	14.7	33	17	S057	98	97	96	90	44
0926+00	17rt	0-5	BROW	A-6(2)	20.7	29	12	S058	100	100	##	73	42
0935+00	05lt	0-5	BROW	A-6(2)	13.5	27	12	S059	100	99	99	69	46
0935+00	17lt	0-5	BR/GR	A-6(3)	18	33	20	S060	96	92	90	59	40
0942+00	05rt	0-5	BR/GR	A-6(14)	17.7	32	17	S061	100	100	##	100	90
0942+00	18rt	0-5	BR/GR	A-6(18)	21.3	36	20	S062	100	100	##	100	92
0950+00	05lt	0-5	BROW	A-6(8)	17.4	35	20	S063	100	99	99	80	58
0950+00	19lt	0-5	BROW	A-6(3)	23.4	34	18	S064	95	93	91	73	40
0958+00	05rt	0-5	BR/GR	A-4(0)	21.1	20	03	S065	100	99	98	95	67
0958+00	18rt	0-5	BR/GR	A-4(0)	20.9	21	04	S066	94	91	90	85	56
0966+00	05lt	0-5	GRAY	A-6(11)	18.5	31	15	S067	99	99	99	94	83
0966+00	20lt	0-5	GRAY	A-4(6)	21.1	27	10	S068	99	98	97	93	82
0974+00	06rt	0-5	GRAY	A-4(0)	10.5	18	03	S069	100	99	94	82	72
0974+00	17rt	0-5	GRAY	A-4(0)	19.9	17	02	S070	100	99	98	93	63
0982+00	05lt	0-5	GRAY	A-6(6)	19.2	26	11	S071	100	100	##	98	76
0982+00	18lt	0-5	GRAY	A-4(4)	21.9	24	08	S072	100	100	##	98	79
0990+00	05rt	0-5	GRAY	A-4(0)	19.6	15	NP	S073	100	100	##	96	77
0990+00	20rt	0-5	GRAY	A-4(0)	21.8	ND	NP	S074	100	100	99	92	66
0998+00	05lt	0-5	BR/GR	A-6(11)	22.4	30	15	S075	100	100	99	98	84
0998+00	21lt	0-5	GRAY	A-4(6)	11.5	27	10	S076	98	97	97	96	77
1006+00	05rt	0-5	BROW	A-6(14)	21.2	39	22	S077	98	97	97	95	73
1006+00	18rt	0-5	BR/GR	A-6(16)	25.2	39	21	S078	99	98	98	96	81
1016+00	05lt	0-5	GRAY	A-4(0)	33.3	ND	NP	S079	99	99	98	93	62
1016+00	17rt	0-5	GRAY	A-4(0)	36.9	ND	NP	S080	99	97	96	84	53

1022+00	05rt	0-5	GRAY	A-4(0)	12.3	20	04	S081	99	98	97	89	59
1022+00	16rt	0-5	BROW	A-4(0)	17.1	ND	NP	S082	99	98	97	87	54
1030+00	05lt	0-5	BR/GR	A-2-4(0)	16.7	ND	NP	S083	100	100	##	86	35
1030+00	18lt	0-5	GRAY	A-4(0)	17.9	ND	NP	S084	99	98	98	82	39
1038+00	05rt	0-5	GRAY	A-2-4(0)	23.8	ND	NP	S085	100	100	99	45	26
1038+00	17rt	0-5	BR/GR	A-2-4(0)	23.9	ND	NP	S086	100	99	99	44	27
1046+00	05lt	0-5	BR/GR	A-4(0)	21.3	21	05	S087	99	98	97	79	58
1046+00	17rt	0-5	GRAY	A-6(7)	22	28	13	S088	99	99	98	87	72
1054+00	05rt	0-5	GRAY	A-6(7)	20.5	29	15	S089	100	100	99	91	68
1054+00	18rt	0-5	BR/GR	A-6(8)	22.3	30	15	S090	99	99	98	91	71
1062+00	05lt	0-5	GRAY	A-4(2)	19.4	23	09	S091	100	100	99	84	57
1062+00	20lt	0-5	BR/GR	A-4(0)	21.3	ND	NP	S092	100	99	99	71	43
1070+00	05rt	0-5	BROW	A-4(0)	12.6	25	08	S093	100	100	99	51	37
1070+00	15rt	0-5	BR/GR	A-2-4(0)	17	ND	NP	S094	100	100	99	68	34
1078+00	05lt	0-5	BR/GR	A-4(3)	18.9	25	09	S095	100	98	97	84	59
1078+00	18lt	0-5	BR/GR	A-6(4)	21.1	27	11	S096	99	97	95	83	58
1086+00	05rt	0-5	BR/GR	A-4(5)	14.8	25	10	S097	100	100	99	98	72
1086+00	18rt	0-5	BR/GR	A-7-6(16)	20.9	45	27	S098	98	96	94	92	67
1094+00	06lt	0-5	GRAY	A-2-4(0)	13.5	ND	NP	S099	98	98	96	81	29
1094+00	18lt	0-5	BROW	A-2-4(0)	16.6	ND	NP	S100	100	98	96	79	35
1094+00	34lt	0-5	BR/GR	A-4(0)	22.5	ND	NP	S101	100	100	99	87	46

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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0702+00
Date Tested:	February 5, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140142	AASHTO Class:	A-4(0)
Sample ID:	RV102	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.95
Bottom	3.96
Average	3.96
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.01
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.01
Initial Area, Ao (sq. in):	12.24
Initial Volume, AoLo (cu. in):	98.06

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3282.40
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4. Soil Properties:

Optimum Moisture Content (%):	13.4
Maximum Dry Density (pcf):	115.5
95% of MDD (pcf):	109.7
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3282.40
Compaction Moisture content (%):	13.7
Compaction Wet Density (pcf):	127.55
Compaction Dry Density (pcf):	112.18
Moisture Content After Mr Test (%):	13.5

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

#VALUE!

7. Resilient Modulus, Mr:

7855(Sc)^-0.19166(S3)^0.45291

8. Comments

9. Tested By:

DEB _____

Date: February 5, 2014 _____

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/05/14 **Station No.:** 0702+00
Date Tested: February 5, 2014 **Location:** 18'RT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 Name: UNION
Sampled By: FAULKNER Depth: 0-5
Lab No.: 20140142 AASHTO Class: A-4(0)
Sample ID: RV102 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
DESIGNATION	S ₃	S _{cyclic}	P _{max}	P _{cyclic}	P _{contact}	S _{max}	S _{cyclic}	S _{contact}	H _{avg}	ε _r	M _r
UNIT	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.2	22.5	2.7	2.1	1.8	0.2	0.00095	0.00012	15,425
Sequence 2	6.0	4.0	47.0	44.3	2.7	3.8	3.6	0.2	0.00199	0.00025	14,561
Sequence 3	6.0	6.0	69.8	66.2	3.6	5.7	5.4	0.3	0.00314	0.00039	13,809
Sequence 4	6.0	8.0	93.5	87.5	6.0	7.6	7.2	0.5	0.00458	0.00057	12,495
Sequence 5	6.0	10.0	116.7	108.2	8.6	9.5	8.8	0.7	0.00702	0.00088	10,441
Sequence 6	4.0	2.0	24.9	22.2	2.7	2.0	1.8	0.2	0.00111	0.00014	13,062
Sequence 7	4.0	4.0	46.4	43.7	2.7	3.8	3.6	0.2	0.00250	0.00031	11,449
Sequence 8	4.0	6.0	67.6	64.8	2.8	5.5	5.3	0.2	0.00404	0.00050	10,507
Sequence 9	4.0	8.0	91.1	86.0	5.2	7.4	7.0	0.4	0.00556	0.00069	10,117
Sequence 10	4.0	10.0	114.2	106.5	7.7	9.3	8.7	0.6	0.00727	0.00091	9,579
Sequence 11	2.0	2.0	24.6	21.9	2.7	2.0	1.8	0.2	0.00152	0.00019	9,414
Sequence 12	2.0	4.0	45.4	42.6	2.8	3.7	3.5	0.2	0.00329	0.00041	8,472
Sequence 13	2.0	6.0	65.4	62.5	2.9	5.3	5.1	0.2	0.00528	0.00066	7,756
Sequence 14	2.0	8.0	87.0	82.6	4.4	7.1	6.7	0.4	0.00711	0.00089	7,602
Sequence 15	2.0	10.0	109.1	102.2	7.0	8.9	8.3	0.6	0.00904	0.00113	7,396

TESTED BY _____ DATE February 5, 2014
 REVIEWED BY _____ DATE _____

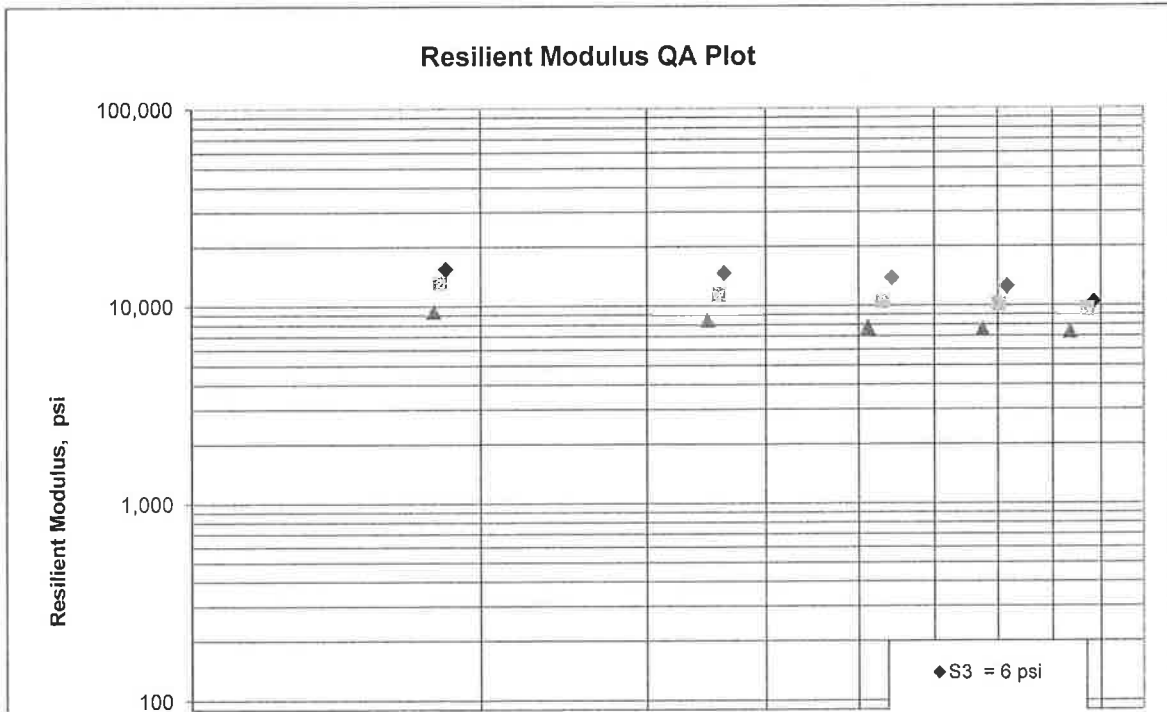
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0702+00
Date Tested:	February 5, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140142	AASHTO Class:	A-4(0)
Sample ID:	RV102	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 = 7,855$
 $K_2 = -0.19166$
 $K_5 = 0.45291$
 $R^2 = 0.97$



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0742+00
Date Tested:	February 5, 2014	Location:	16'LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140143	AASHTO Class:	A-6(10)
Sample ID:	RV103	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.99
Middle	3.97
Bottom	3.97
Average	3.98
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.05
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.05
Initial Area, Ao (sq. in):	12.35
Initial Volume, AoLo (cu. in):	99.38

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3062.80
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4. Soil Properties:

Optimum Moisture Content (%):	16.3
Maximum Dry Density (pcf):	106.3
95% of MDD (pcf):	101.0
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3062.80
Compaction Moisture content (%):	17.3
Compaction Wet Density (pcf):	117.43
Compaction Dry Density (pcf):	100.11
Moisture Content After Mr Test (%):	16.9

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

7. Resilient Modulus, Mr: 10270(Sc)^{-0.33984}(S3)^{0.21302}

8. Comments

9. Tested By: DEB

Date: February 5, 2014

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/05/14 **Station No.:** 0742+00
Date Tested: February 5, 2014 **Location:** 16'LT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 **Name:** UNION
Sampled By: FAULKNER **Depth:** 0-5
Lab No.: 20140143 **AAASHTO Class:** A-6(10)
Sample ID: RV103 **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 _{max} lbs	P _{cyclic} lbs	P _{cyclic} lbs	P _{contact} lbs							
Sequence 1	6.0	2.0	25.3	22.6	2.7	2.0	1.8	0.2	0.00125	0.00016	11,756		
Sequence 2	6.0	4.0	47.2	44.5	2.7	3.8	3.6	0.2	0.00275	0.00034	10,551		
Sequence 3	6.0	6.0	69.6	65.9	3.7	5.6	5.3	0.3	0.00474	0.00059	9,072		
Sequence 4	6.0	8.0	91.6	85.4	6.2	7.4	6.9	0.5	0.00738	0.00092	7,547		
Sequence 5	6.0	10.0	113.3	104.6	8.7	9.2	8.5	0.7	0.01022	0.00127	6,673		
Sequence 6	4.0	2.0	25.1	22.4	2.7	2.0	1.8	0.2	0.00132	0.00016	11,071		
Sequence 7	4.0	4.0	46.9	44.1	2.8	3.8	3.6	0.2	0.00303	0.00038	9,505		
Sequence 8	4.0	6.0	67.8	64.9	2.9	5.5	5.3	0.2	0.00520	0.00065	8,138		
Sequence 9	4.0	8.0	90.2	84.8	5.4	7.3	6.9	0.4	0.00779	0.00097	7,101		
Sequence 10	4.0	10.0	112.4	104.5	7.9	9.1	8.5	0.6	0.01069	0.00133	6,375		
Sequence 11	2.0	2.0	25.1	22.3	2.8	2.0	1.8	0.2	0.00161	0.00020	9,036		
Sequence 12	2.0	4.0	46.6	43.7	2.8	3.8	3.5	0.2	0.00357	0.00044	7,993		
Sequence 13	2.0	6.0	66.9	64.0	2.9	5.4	5.2	0.2	0.00594	0.00074	7,026		
Sequence 14	2.0	8.0	88.4	83.8	4.6	7.2	6.8	0.4	0.00870	0.00108	6,283		
Sequence 15	2.0	10.0	110.2	103.1	7.1	8.9	8.4	0.6	0.01172	0.00146	5,735		

TESTED BY DEB DATE February 5, 2014
 REVIEWED BY _____ DATE _____

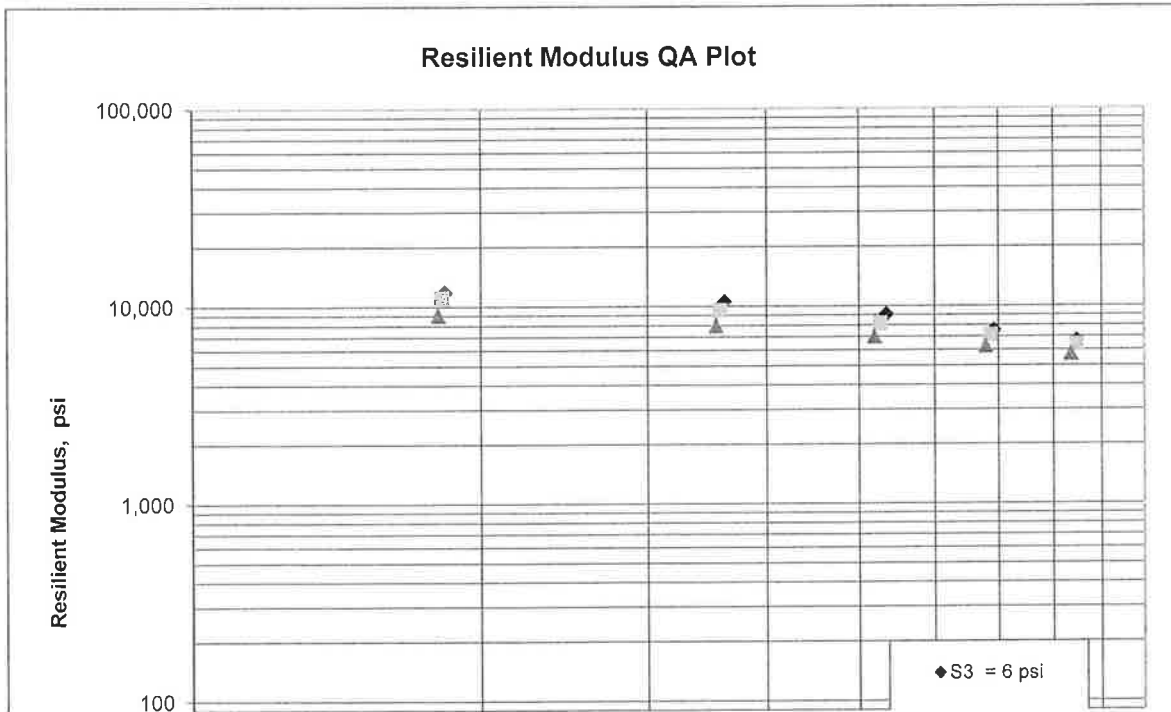
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0742+00
Date Tested:	February 5, 2014	Location:	16'LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140143	AASHTO Class:	A-6(10)
Sample ID:	RV103	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 = 10,270$
 $K_2 = -0.33984$
 $K_5 = 0.21302$
 $R^2 = 0.95$



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0774+00
Date Tested:	February 5, 2014	Location:	19'LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140144	AASHTO Class:	A-6(2)
Sample ID:	RV104	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.95
Bottom	3.97
Average	3.96
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.03
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.03
Initial Area, Ao (sq. in):	12.26
Initial Volume, AoLo (cu. in):	98.47

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3126.10
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4. Soil Properties:

Optimum Moisture Content (%):	15.4
Maximum Dry Density (pcf):	106.6
95% of MDD (pcf):	101.3
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3126.10
Compaction Moisture content (%):	16.1
Compaction Wet Density (pcf):	120.97
Compaction Dry Density (pcf):	104.19
Moisture Content After Mr Test (%):	16.0

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

#VALUE!

7. Resilient Modulus, Mr:

12275(Sc)^{-0.21073}(S3)^{0.25611}

8. Comments

9. Tested By:

DEB _____

Date: February 5, 2014 _____

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

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

Job No. 070368 Material Code SSRVPS
 Date Sampled: 02/05/14 Station No.: 0774+00
 Date Tested: February 5, 2014 Location: 19LT
 Name of Project: HWY.82 - HWY.7 (REHAB)(S)
 County: Code: 70 Name: UNION
 Sampled By: FAULKNER Depth: 0-5
 Lab No.: 20140144 AASHTO Class: A-6(2)
 Sample ID: RV104 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
DESIGNATION	S ₃	S _{cyclic}	P _{max}	P _{cyclic}	P _{contact}	S _{max}	S _{cyclic}	S _{contact}	H _{avg}	ε _r	M _r
UNIT	psi	psi	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi
Sequence 1	6.0	2.0	25.1	22.4	2.7	2.0	1.8	0.2	0.0086	0.00011	16,991
Sequence 2	6.0	4.0	46.9	44.1	2.8	3.8	3.6	0.2	0.0185	0.00023	15,615
Sequence 3	6.0	6.0	69.1	65.4	3.7	5.6	5.3	0.3	0.0300	0.00037	14,278
Sequence 4	6.0	8.0	92.1	85.9	6.1	7.5	7.0	0.5	0.0443	0.00055	12,693
Sequence 5	6.0	10.0	114.2	105.5	8.6	9.3	8.6	0.7	0.0601	0.00075	11,493
Sequence 6	4.0	2.0	24.9	22.2	2.7	2.0	1.8	0.2	0.0096	0.00012	15,199
Sequence 7	4.0	4.0	46.5	43.7	2.8	3.8	3.6	0.2	0.0208	0.00026	13,772
Sequence 8	4.0	6.0	67.5	64.8	2.8	5.5	5.3	0.2	0.0336	0.00042	12,615
Sequence 9	4.0	8.0	90.2	85.1	5.1	7.4	6.9	0.4	0.0481	0.00060	11,583
Sequence 10	4.0	10.0	112.9	105.2	7.7	9.2	8.6	0.6	0.0641	0.00080	10,749
Sequence 11	2.0	2.0	24.8	22.1	2.7	2.0	1.8	0.2	0.0119	0.00015	12,229
Sequence 12	2.0	4.0	46.1	43.4	2.7	3.8	3.5	0.2	0.0250	0.00031	11,348
Sequence 13	2.0	6.0	66.9	64.1	2.8	5.5	5.2	0.2	0.0395	0.00049	10,641
Sequence 14	2.0	8.0	88.4	84.0	4.4	7.2	6.9	0.4	0.0553	0.00069	9,954
Sequence 15	2.0	10.0	110.6	103.7	6.9	9.0	8.5	0.6	0.0725	0.00090	9,367

TESTED BY _____ DATE February 5, 2014
 REVIEWED BY _____ DATE _____

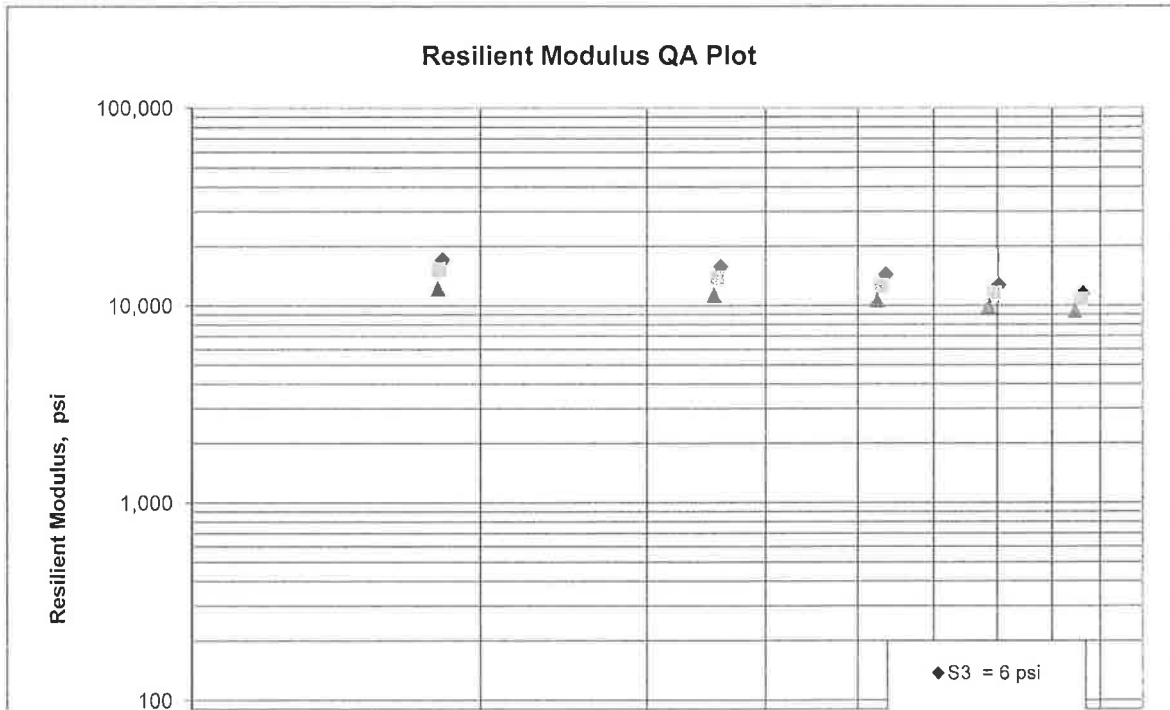
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0774+00
Date Tested:	February 5, 2014	Location:	19'LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140144	AASHTO Class:	A-6(2)
Sample ID:	RV104	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 = \underline{12,275}$
 $K_2 = \underline{-0.21073}$
 $K_5 = \underline{0.25611}$
 $R^2 = \underline{0.96}$



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0838+00
Date Tested:	February 5, 2014	Location:	17LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140145	AASHTO Class:	A-6(14)
Sample ID:	RV105	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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):	8.03
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.03
Initial Area, Ao (sq. in):	12.26
Initial Volume, AoLo (cu. in):	98.47

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3085.90
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4. Soil Properties:

Optimum Moisture Content (%):	16.3
Maximum Dry Density (pcf):	107.2
95% of MDD (pcf):	101.8
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3085.90
Compaction Moisture content (%):	17.3
Compaction Wet Density (pcf):	119.41
Compaction Dry Density (pcf):	101.80
Moisture Content After Mr Test (%):	17.3

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

#VALUE!

7. Resilient Modulus, Mr:

16217(Sc)^-0.13832(S3)^0.16681

8. Comments

9. Tested By:

DEB

Date: February 5, 2014

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/05/14 **Station No.:** 0838+00
Date Tested: February 5, 2014 **Location:** 17'LT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 **Name:** UNION
Sampled By: FAULKNER **Depth:** 0-5
Lab No.: 20140145 **AASHTO Class:** A-6(14)
Sample ID: RV105 **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
Sequence 1	6.0	2.0	25.0	22.4	2.6	2.0	1.8	0.2	0.00073	0.00009	20,072
Sequence 2	6.0	4.0	47.1	44.5	2.6	3.8	3.6	0.2	0.00150	0.00019	19,383
Sequence 3	6.0	6.0	69.7	66.2	3.5	5.7	5.4	0.3	0.00239	0.00030	18,163
Sequence 4	6.0	8.0	92.5	86.6	5.9	7.5	7.1	0.5	0.00349	0.00043	16,256
Sequence 5	6.0	10.0	114.6	106.1	8.5	9.3	8.6	0.7	0.00474	0.00059	14,640
Sequence 6	4.0	2.0	25.1	22.5	2.6	2.0	1.8	0.2	0.00079	0.00010	18,552
Sequence 7	4.0	4.0	47.1	44.4	2.7	3.8	3.6	0.2	0.00163	0.00020	17,850
Sequence 8	4.0	6.0	68.7	66.0	2.7	5.6	5.4	0.2	0.00256	0.00032	16,908
Sequence 9	4.0	8.0	91.6	86.4	5.2	7.5	7.0	0.4	0.00360	0.00045	15,740
Sequence 10	4.0	10.0	114.0	106.4	7.7	9.3	8.7	0.6	0.00479	0.00060	14,544
Sequence 11	2.0	2.0	24.9	22.2	2.7	2.0	1.8	0.2	0.00094	0.00012	15,499
Sequence 12	2.0	4.0	46.9	44.1	2.7	3.8	3.6	0.2	0.00190	0.00024	15,237
Sequence 13	2.0	6.0	68.2	65.4	2.8	5.6	5.3	0.2	0.00288	0.00036	14,876
Sequence 14	2.0	8.0	90.3	86.0	4.4	7.4	7.0	0.4	0.00393	0.00049	14,342
Sequence 15	2.0	10.0	112.6	105.8	6.8	9.2	8.6	0.6	0.00510	0.00064	13,573

TESTED BY _____ DATE February 5, 2014
 REVIEWED BY _____ DATE _____

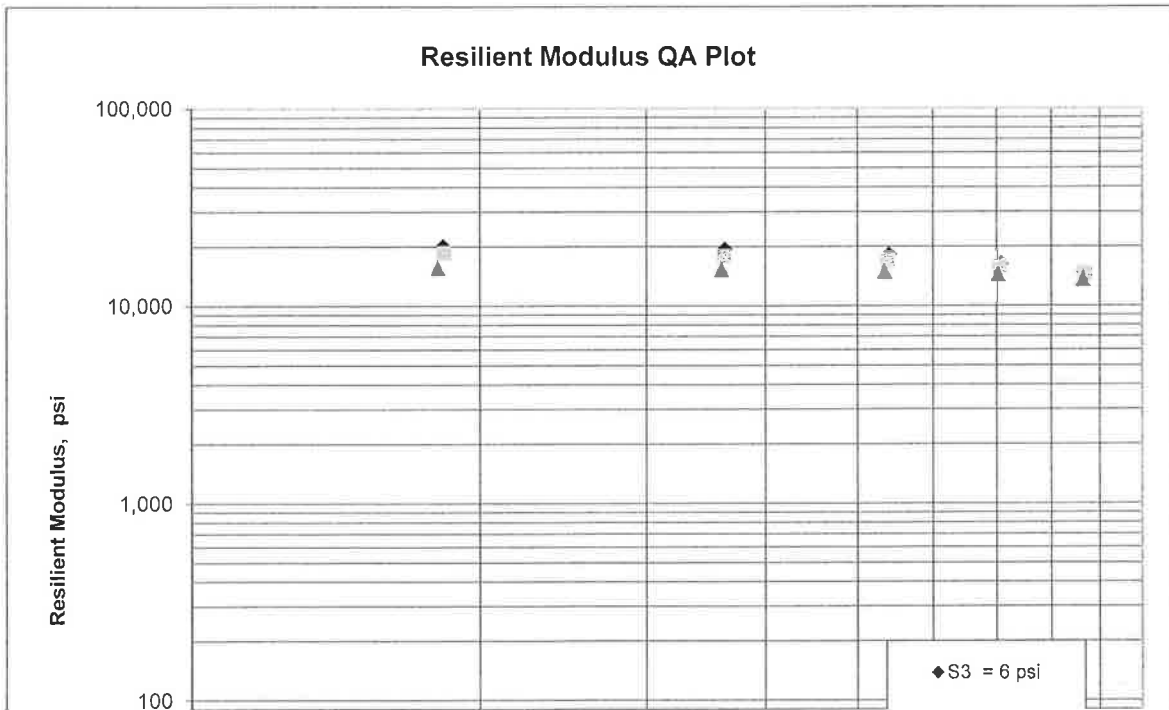
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/05/14	Station No.:	0838+00
Date Tested:	February 5, 2014	Location:	17'LT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140145	AASHTO Class:	A-6(14)
Sample ID:	RV105	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 = \underline{16,217}$
 $K_2 = \underline{-0.13832}$
 $K_5 = \underline{0.16681}$
 $R^2 = \underline{0.85}$



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	0942+00
Date Tested:	February 6, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140146	AASHTO Class:	A-6(14)
Sample ID:	RV106	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.96
Average	3.96
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8
Initial Area, Ao (sq. in):	12.22
Initial Volume, AoLo (cu. in):	97.77

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3241.40
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4. Soil Properties:

Optimum Moisture Content (%):	16.8
Maximum Dry Density (pcf):	105.5
95% of MDD (pcf):	100.2
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3241.40
Compaction Moisture content (%):	17.2
Compaction Wet Density (pcf):	126.32
Compaction Dry Density (pcf):	107.78
Moisture Content After Mr Test (%):	17.2

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

#VALUE!

7. Resilient Modulus, Mr:

12088(Sc)^{-0.48245}(S3)^{0.20443}

8. Comments

9. Tested By:

DEB _____

Date: February 6, 2014 _____

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/06/14 **Station No.:** 0942+00
Date Tested: February 6, 2014 **Location:** 18'RT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 **Name:** UNION
Sampled By: FAULKNER **Depth:** 0-5
Lab No.: 20140146 **AASHTO Class:** A-6(14)
Sample ID: RV106 **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 _{max} lbs	P _{cyclic} lbs	P _{cyclic} lbs	P _{contact} lbs							
Sequence 1	6.0	2.0	25.1	22.4	22.4	2.7	2.1	1.8	0.2	0.00120	0.00015	12,250	
Sequence 2	6.0	4.0	47.1	44.4	44.4	2.7	3.9	3.6	0.2	0.00277	0.00035	10,507	
Sequence 3	6.0	6.0	68.8	65.2	65.2	3.6	5.6	5.3	0.3	0.00494	0.00062	8,643	
Sequence 4	6.0	8.0	89.5	83.4	83.4	6.1	7.3	6.8	0.5	0.00816	0.00102	6,687	
Sequence 5	6.0	10.0	109.4	100.7	100.7	8.7	8.9	8.2	0.7	0.01182	0.00148	5,575	
Sequence 6	4.0	2.0	25.1	22.3	22.3	2.8	2.1	1.8	0.2	0.00133	0.00017	11,009	
Sequence 7	4.0	4.0	46.8	44.0	44.0	2.8	3.8	3.6	0.2	0.00297	0.00037	9,696	
Sequence 8	4.0	6.0	66.8	63.9	63.9	2.9	5.5	5.2	0.2	0.00545	0.00068	7,672	
Sequence 9	4.0	8.0	87.7	82.4	82.4	5.3	7.2	6.7	0.4	0.00856	0.00107	6,301	
Sequence 10	4.0	10.0	108.2	100.4	100.4	7.8	8.9	8.2	0.6	0.01232	0.00154	5,334	
Sequence 11	2.0	2.0	25.0	22.3	22.3	2.7	2.0	1.8	0.2	0.00151	0.00019	9,666	
Sequence 12	2.0	4.0	46.2	43.4	43.4	2.7	3.8	3.6	0.2	0.00351	0.00044	8,103	
Sequence 13	2.0	6.0	65.8	63.0	63.0	2.8	5.4	5.2	0.2	0.00622	0.00078	6,630	
Sequence 14	2.0	8.0	85.4	81.0	81.0	4.4	7.0	6.6	0.4	0.00949	0.00119	5,589	
Sequence 15	2.0	10.0	106.0	99.1	99.1	6.9	8.7	8.1	0.6	0.01328	0.00166	4,885	

TESTED BY _____ **DATE** February 6, 2014
REVIEWED BY _____ **DATE** _____

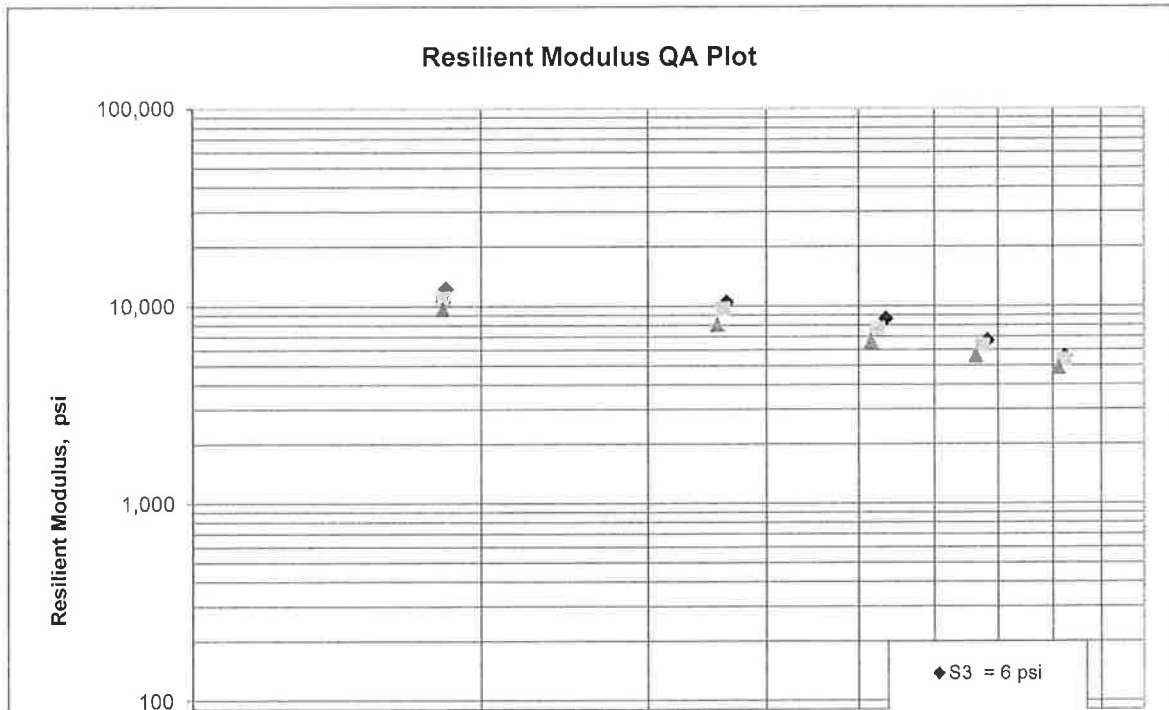
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	0942+00
Date Tested:	February 6, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140146	AASHTO Class:	A-6(14)
Sample ID:	RV106	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 =$	<u>12,088</u>
$K_2 =$	<u>-0.48245</u>
$K_5 =$	<u>0.20443</u>
$R^2 =$	<u>0.92</u>



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	1006+00
Date Tested:	February 6, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140147	AASHTO Class:	A-6(11)
Sample ID:	RV107	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.95
Middle	3.94
Bottom	3.95
Average	3.95
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.01
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.01
Initial Area, Ao (sq. in):	12.16
Initial Volume, AoLo (cu. in):	97.40

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3143.80
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4. Soil Properties:

Optimum Moisture Content (%):	16.6
Maximum Dry Density (pcf):	104.6
95% of MDD (pcf):	99.4
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3143.80
Compaction Moisture content (%):	17.1
Compaction Wet Density (pcf):	122.99
Compaction Dry Density (pcf):	105.03
Moisture Content After Mr Test (%):	17.1

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

7. Resilient Modulus, Mr: 13487(Sc)^{-0.22023}(S3)^{0.18077}

8. Comments

9. Tested By: DEB

Date: February 6, 2014

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/06/14 **Station No.:** 1006+00
Date Tested: February 6, 2014 **Location:** 18RT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 **Name:** UNION
Sampled By: FAULKNER **Depth:** 0-5
Lab No.: 20140147 **AASHTO Class:** A-6(11)
Sample ID: RV107 **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 ₃ psi	S _{cyclic} psi	P _{max} lbs	P _{cyclic} lbs	P _{contact} lbs	S _{max} psi	S _{cyclic} psi	S _{contact} psi	H _{avg} in	ε _r in/in	M _r psi
Sequence 1	6.0	2.0	24.9	22.2	2.7	2.1	1.8	0.2	0.0090	0.00011	16,280
Sequence 2	6.0	4.0	46.9	44.2	2.7	3.9	3.6	0.2	0.0195	0.00024	14,936
Sequence 3	6.0	6.0	68.9	65.4	3.5	5.7	5.4	0.3	0.00317	0.00040	13,572
Sequence 4	6.0	8.0	91.5	85.5	6.0	7.5	7.0	0.5	0.00478	0.00060	11,792
Sequence 5	6.0	10.0	112.7	104.2	8.5	9.3	8.6	0.7	0.00650	0.00081	10,561
Sequence 6	4.0	2.0	24.9	22.3	2.6	2.1	1.8	0.2	0.0100	0.00012	14,693
Sequence 7	4.0	4.0	46.5	43.8	2.7	3.8	3.6	0.2	0.00212	0.00026	13,618
Sequence 8	4.0	6.0	67.7	65.0	2.7	5.6	5.3	0.2	0.00341	0.00043	12,551
Sequence 9	4.0	8.0	90.0	84.8	5.1	7.4	7.0	0.4	0.00491	0.00061	11,394
Sequence 10	4.0	10.0	111.8	104.3	7.5	9.2	8.6	0.6	0.00667	0.00083	10,304
Sequence 11	2.0	2.0	24.8	22.2	2.6	2.0	1.8	0.2	0.00117	0.00015	12,487
Sequence 12	2.0	4.0	46.3	43.6	2.7	3.8	3.6	0.2	0.00247	0.00031	11,637
Sequence 13	2.0	6.0	67.2	64.4	2.8	5.5	5.3	0.2	0.00387	0.00048	10,978
Sequence 14	2.0	8.0	88.5	84.2	4.3	7.3	6.9	0.4	0.00544	0.00068	10,190
Sequence 15	2.0	10.0	109.8	103.0	6.7	9.0	8.5	0.6	0.00712	0.00089	9,532

TESTED BY _____ **DATE** February 6, 2014
REVIEWED BY _____ **DATE** _____

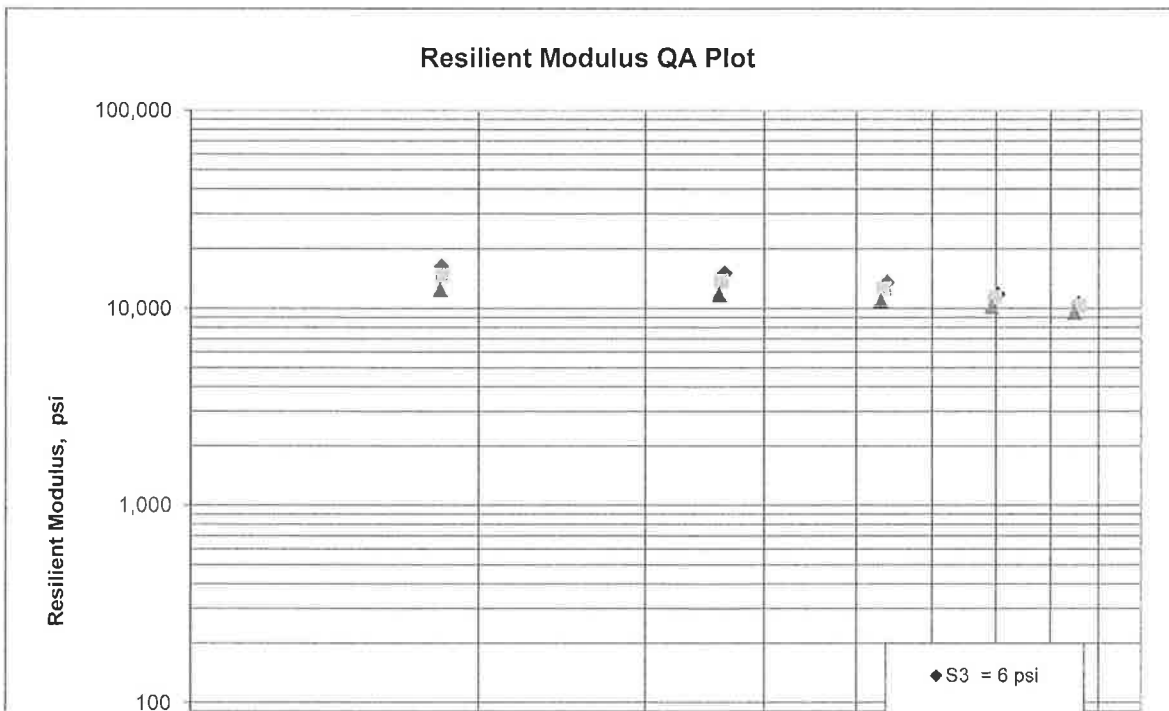
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	1006+00
Date Tested:	February 6, 2014	Location:	18'RT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140147	AASHTO Class:	A-6(11)
Sample ID:	RV107	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

$K_1 = 13,487$
 $K_2 = -0.22023$
 $K_5 = 0.18077$
 $R^2 = 0.91$



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

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

Job No.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	1078+00
Date Tested:	February 6, 2014	Location:	18'IT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140148	AASHTO Class:	A-6(6)
Sample ID:	RV108	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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	3.98
Middle	3.97
Bottom	3.98
Average	3.98
Membrane Thickness (in):	0.01
Height of Specimen, Cap and Base (in):	8.03
Height of Cap and Base (in):	0.00
Initial Length, Lo (in):	8.03
Initial Area, Ao (sq. in):	12.35
Initial Volume, AoLo (cu. in):	99.13

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3420.60
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4. Soil Properties:

Optimum Moisture Content (%):	13.2
Maximum Dry Density (pcf):	116.2
95% of MDD (pcf):	110.4
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3420.60
Compaction Moisture content (%):	13.9
Compaction Wet Density (pcf):	131.47
Compaction Dry Density (pcf):	115.43
Moisture Content After Mr Test (%):	13.5

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

#VALUE!

7. Resilient Modulus, Mr:

10136(Sc)^{-0.32990}(S3)^{0.39756}

8. Comments

9. Tested By:

DEB

Date: February 6, 2014

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

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

Job No. 070368 **Material Code** SSRVPS
Date Sampled: 02/06/14 **Station No.:** 1078+00
Date Tested: February 6, 2014 **Location:** 18"IT
Name of Project: HWY.82 - HWY.7 (REHAB)(S)
County: Code: 70 **Name:** UNION
Sampled By: FAULKNER **Depth:** 0-5
Lab No.: 20140148 **AASHTO Class:** A-6(6)
Sample ID: RV108 **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 ₃ psi	S _{cyclic} psi	P _{max} lbs	P _{cyclic} lbs	P _{contact} lbs	S _{max} psi	S _{cyclic} psi	S _{contact} psi	H _{avg} in	ε _r in/in	M _r psi
Sequence 1	6.0	2.0	25.4	22.8	2.6	2.1	1.8	0.2	0.00091	0.00011	16,204
Sequence 2	6.0	4.0	47.5	44.8	2.6	3.8	3.6	0.2	0.00199	0.00025	14,641
Sequence 3	6.0	6.0	69.9	66.3	3.6	5.7	5.4	0.3	0.00328	0.00041	13,137
Sequence 4	6.0	8.0	91.9	85.8	6.1	7.4	6.9	0.5	0.00515	0.00064	10,836
Sequence 5	6.0	10.0	112.9	104.2	8.7	9.1	8.4	0.7	0.00727	0.00091	9,327
Sequence 6	4.0	2.0	25.2	22.5	2.7	2.0	1.8	0.2	0.00105	0.00013	13,862
Sequence 7	4.0	4.0	46.7	44.0	2.7	3.8	3.6	0.2	0.00239	0.00030	11,988
Sequence 8	4.0	6.0	67.3	64.5	2.9	5.5	5.2	0.2	0.00403	0.00050	10,401
Sequence 9	4.0	8.0	89.0	83.5	5.4	7.2	6.8	0.4	0.00593	0.00074	9,158
Sequence 10	4.0	10.0	110.3	102.4	7.9	8.9	8.3	0.6	0.00810	0.00101	8,220
Sequence 11	2.0	2.0	24.8	22.1	2.7	2.0	1.8	0.2	0.00137	0.00017	10,475
Sequence 12	2.0	4.0	45.8	43.0	2.8	3.7	3.5	0.2	0.00304	0.00038	9,208
Sequence 13	2.0	6.0	65.1	62.2	2.9	5.3	5.0	0.2	0.00498	0.00062	8,123
Sequence 14	2.0	8.0	85.3	80.8	4.6	6.9	6.5	0.4	0.00725	0.00090	7,251
Sequence 15	2.0	10.0	105.8	98.6	7.1	8.6	8.0	0.6	0.00962	0.00120	6,668

TESTED BY _____ **DATE** February 6, 2014
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.	070368	Material Code	SSRVPS
Date Sampled:	02/06/14	Station No.:	1078+00
Date Tested:	February 6, 2014	Location:	18'IT
Name of Project:	HWY.82 - HWY.7 (REHAB)(S)		
County:	Code: 70	Name:	UNION
Sampled By:	FAULKNER	Depth:	0-5
Lab No.:	20140148	AASHTO Class:	A-6(6)
Sample ID:	RV108	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

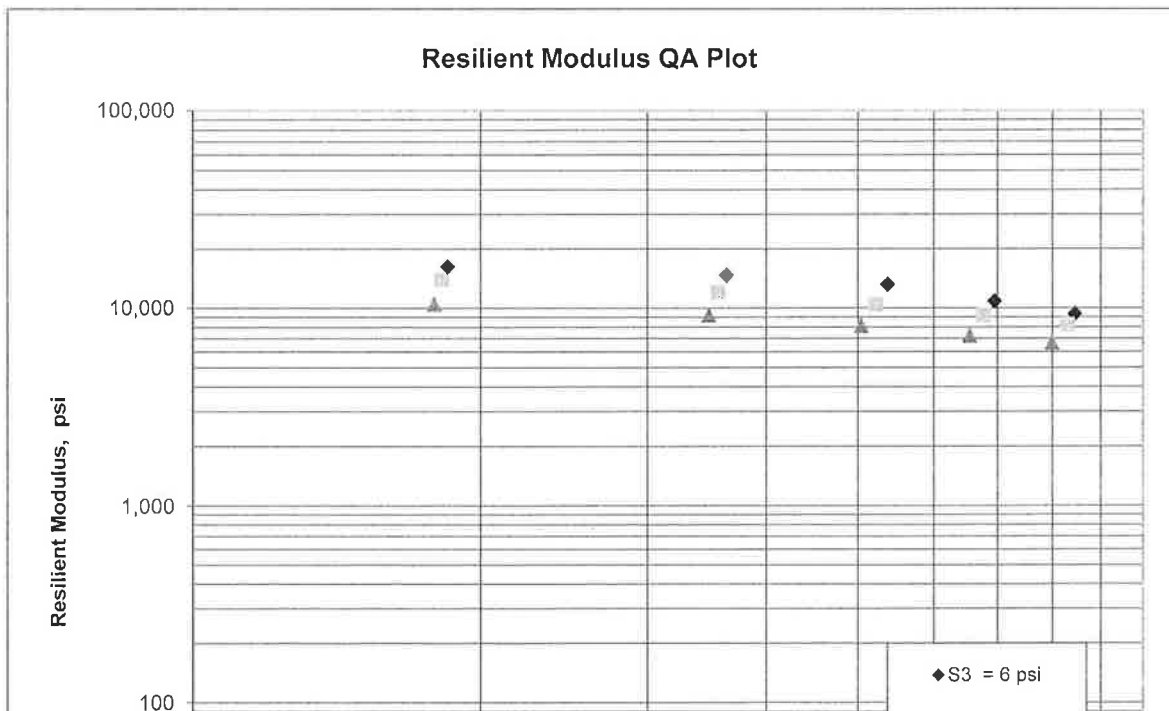
$$M_R = K_1 (S_c)^{K_2} (S_3)^{K_5}$$

$$K_1 = 10,136$$

$$K_2 = -0.32990$$

$$K_5 = 0.39756$$

$$R^2 = 0.96$$



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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 02/05/14	SEQUENCE NO.	- 7
JOB NUMBER	- 070368	MATERIAL CODE	- SSRVPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2003
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 70
SUPPLIER NAME	- STATE	DISTRICT NO.	- 07
NAME OF PROJECT	- HWY.82 - HWY.7 (REHAB.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- UNION COUNTY	DATE SAMPLED	- 01/08/14
SAMPLED BY	- FAULKNER/BOUGHNER	DATE RECEIVED	- 01/09/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/27/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20140059	- 20140060	- 20140061
SAMPLE ID	- S19	- S20	- S21
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 0774+00	- 0774+00	- 0782+00
LOCATION	- 051t	- 191t	- 08rt
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BR/GR	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 13 33.80	- 33 13 33.80	- 33 13 41.70
LONGITUDE DEG-MIN-SEC	- 92 43 49.50	- 92 43 49.70	- 92 43 49.80
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	100	-
	3/8 IN. -	93	-
	NO. 4 - 100	91	100
	NO. 10 - 99	90	98
	NO. 40 - 98	88	96
	NO. 80 - 90	76	81
	NO. 200 - 56	42	54
LIQUID LIMIT	- 35	- 28	- 35
PLASTICITY INDEX	- 21	- 13	- 18
AASHTO SOIL	- A-6(8)	- A-6(2)	- A-6(6)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 23.6	- 24.4	- 23.6
ACHMSC (IN)	- 7.0W	- --	- 8.0W
AGG.BASE CRS CL-5 (IN)	- 3.0	- --	- 11.0
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS

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

DATE	- 01/29/14	SEQUENCE NO.	- 21
JOB NUMBER	- 070368	MATERIAL CODE	- SSRVPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2003
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 70
SUPPLIER NAME	- STATE	DISTRICT NO.	- 07
NAME OF PROJECT	- HWY.82 - HWY.7 (REHAB.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- UNION COUNTY	DATE SAMPLED	- 01/08/14
SAMPLED BY	- FAULKNER/BOUGHNER	DATE RECEIVED	- 01/09/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/27/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20140101	- 20140102	- 20140103
SAMPLE ID	- S61	- S62	- S63
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 0942+00	- 0942+00	- 0950+00
LOCATION	- 05rt	- 18rt	- 051t
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BR/GR	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 33 15 46.20	- 33 15 46.20	- 33 15 51.30
LONGITUDE DEG-MIN-SEC	- 92 42 27.50	- 92 42 27.40	- 92 42 20.80
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 - 100	- 100	- 99
	NO. 40 - 100	- 100	- 99
	NO. 80 - 100	- 100	- 80
	NO. 200 - 90	- 92	- 58
LIQUID LIMIT	- 32	- 36	- 35
PLASTICITY INDEX	- 17	- 20	- 20
AASHTO SOIL	- A-6(14)	- A-6(18)	- A-6(8)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 17.7	- 21.3	- 17.4
ACHMSC (IN)	- 10.5W	- --	- 6.0W
AGG.BASE CRS CL-5 (IN)	- 5.0	- --	- 3.0
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS

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AASHTO TESTS : T24 T88 T89 T90 T265

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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
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MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 01/29/14 SEQUENCE NO. - 22
JOB NUMBER - 070368 MATERIAL CODE - SSRVPS
FEDERAL AID NO. - TO BE ASSIGNED SPEC. YEAR - 2003
PURPOSE - SOIL SURVEY SAMPLE SUPPLIER ID. - 1
SPEC. REMARKS - NO SPECIFICATION CHECK COUNTY/STATE - 70
SUPPLIER NAME - STATE DISTRICT NO. - 07
NAME OF PROJECT - HWY.82 - HWY.7 (REHAB.) (S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - UNION COUNTY DATE SAMPLED - 01/08/14
SAMPLED BY - FAULKNER/BOUGHNER DATE RECEIVED - 01/09/14
SAMPLE FROM - TEST HOLE DATE TESTED - 01/27/14
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	20140104	20140105	20140106
SAMPLE ID	S64	S65	S66
TEST STATUS	INFORMATION ONLY	INFORMATION ONLY	INFORMATION ONLY
STATION	0950+00	0958+00	0958+00
LOCATION	191t	05rt	18rt
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 15 51.30	33 15 57.80	33 15 57.70
LONGITUDE DEG-MIN-SEC	92 42 20.90	92 42 15.60	92 42 15.50
% PASSING			
2 IN.			
1 1/2 IN.			
3/4 IN.	100		100
3/8 IN.	97		98
NO. 4	95	100	94
NO. 10	93	99	91
NO. 40	91	98	90
NO. 80	73	95	85
NO. 200	40	67	56
LIQUID LIMIT	34	20	21
PLASTICITY INDEX	18	03	04
AASHTO SOIL	A-6(3)	A-4(0)	A-4(0)
UNIFIED SOIL			
% MOISTURE CONTENT	23.4	21.1	20.9
ACHMSC (IN)	--	6.5W	--
AGG.BASE CRS CL-5 (IN)	--	6.0	--

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MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/29/14	SEQUENCE NO.	- 32
JOB NUMBER	- 070368	MATERIAL CODE	- SSRVPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2003
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 70
SUPPLIER NAME	- STATE	DISTRICT NO.	- 07
NAME OF PROJECT	- HWY.82 - HWY.7 (REHAB.) (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- UNION COUNTY	DATE SAMPLED	- 01/08/14
SAMPLED BY	- FAULKNER/BOUGHNER	DATE RECEIVED	- 01/09/14
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 01/27/14
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20140134	- 20140135	- 20140136
SAMPLE ID	- S94	- S95	- S96
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1070+00	- 1078+00	- 1078+00
LOCATION	- 15rt	- 05lt	- 18lt
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 17 6.00	- 33 17 9.80	- 33 17 9.90
LONGITUDE DEG-MIN-SEC	- 92 40 53.70	- 92 40 45.60	- 92 40 45.70
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	-	-	- 100
NO. 4	- 100	- 100	- 99
NO. 10	- 100	- 98	- 97
NO. 40	- 99	- 97	- 95
NO. 80	- 68	- 84	- 83
NO. 200	- 34	- 59	- 58
LIQUID LIMIT	- ND	- 25	- 27
PLASTICITY INDEX	- NP	- 09	- 11
AASHTO SOIL	- A-2-4(0)	- A-4(3)	- A-6(4)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 17.0	- 18.9	- 21.1
ACHMSC (IN)	- --	- 6.0W	- --
AGG.BASE CRS CL-5 (IN)	- --	- 8.0	- --
	-	-	-
	-	-	-
	-	-	-
	-	-	-
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REMARKS - W=MULTIPLE LAYERS

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