

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT



SUBSURFACE INVESTIGATION

STATE JOB NO. CA1002

FEDERAL AID PROJECT NO. ACNHPP-0047(51)

MANILA – EAST (WIDENING) (S)

STATE HIGHWAY 18 SECTION 6

IN MISSISSIPPI 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

January 30, 2012

TO: Mr. Michael D. Fugett, Engineer of Roadway Design

SUBJECT: Job No. 100655
Manila – East (S)
Route 18, Section 6
Mississippi County

Transmitted herewith is the requested Soil Survey, Strength Data, and Resilient Modulus test results for the above referenced job. The project consists of widening approximately 1.8 miles of Highway 18 from two lanes to five lanes. Samples were obtained in the travel lanes, shoulder and along the proposed centerline of construction. Locations were measured from centerline of construction and should be noted as such on the logs.

Based on laboratory results of samples obtained, the subgrade soils consist primarily of moderate to highly plastic clayey sands to sandy clays with varying amounts of gravel. The soils are expected to provide a stable working platform with normal drying and compactive efforts if the weather during construction is favorable. Plans indicate that widening will occur over irrigation ditches. Where the grade line closely matches that of the existing ground, all soft unstable organic material will need to be undercut to a maximum depth of two feet prior to embankment construction.

Based on currently available cross sections the embankments on this project will be less than 15 feet in height except for the bridge approach embankments. Due to the seismic considerations for this location, the bridge approach embankments will be discussed after the subsurface investigation is complete. The remaining embankments should be constructed with upgraded granular material utilizing the 3:1 slopes indicated in the cross sections.

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 the river ports near Hickman.
2. Asphalt Concrete Hot Mix

<u>Type</u>	<u>Asphalt Cement %</u>	<u>Mineral Aggregate %</u>
Surface Course	5.4	94.6
Binder Course	4.2	95.8
Base Course	3.9	96.1


Michael C. Benson
Materials Engineer

MCB:pt:bjj
Attachment

cc: State Constr. Eng. – Master File Copy
District 10 Engineer
Planning Div. – Jared Wiley
G. C. File

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

DATE - 01/10/2012
JOB NUMBER - 100655

SEQUENCE NO. - 1
MATERIAL CODE - SSRVPS
SPEC. YEAR - 2003
SUPPLIER ID. - 1
COUNTY/STATE - 47
DISTRICT NO. - 10

JOB NAME - MANILA-EAST(S)

* STATION LIMITS R-VALUE AT 240 psi *

BEGIN JOB - END JOB LESS THAN 5

RESILIENT MODULUS
STA.1228+00 10850
STA.1300+00 10894

REMARKS -

-
AASHTO TESTS : T190

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

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

Job No.	100655	Material Code	SSRVPS
Date Sampled:	1/06/2012	Station No.:	1300+00
Date Tested:	January 6, 2012	Location:	50' LT CL
Name of Project:	MANIA - EAST (S)		
County:	Code: 47	Name:	MISSISSIPPI
Sampled By:		Depth:	0-5
Lab No.:	20113470	AASHTO Class:	A-7-6(16)
Sample ID:	RV1297	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	3.96
Bottom	3.96
Average	3.96
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):	12.28
Initial Volume, AoLo (cu. in):	98.47

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3045.10
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4. Soil Properties:

Optimum Moisture Content (%):	19.7
Maximum Dry Density (pcf):	103.4
95% of MDD (pcf):	98.2
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3045.10
Compaction Moisture content (%):	17.9
Compaction Wet Density (pcf):	117.83
Compaction Dry Density (pcf):	99.94
Moisture Content After Mr Test (%):	17.9

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

7. Resilient Modulus, Mr: 13303(Sc)^-0.14274(S3)^0.15339

8. Comments _____

9. Tested By: DEB **Date:** January 6, 2012

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

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

Job No. 100655 Material Code SSRVPS
 Date Sampled: 1/06/2012 Station No.: 1300+00
 Date Tested: January 6, 2012 Location: 50' LT CL
 Name of Project: MANIA - EAST (S)

County: Code: 47 Name: MISSISSIPPI
 Sampled By: Depth: 0-5
 Lab No.: 20113470 AASHTO Class: A-7-6(16)
 Sample ID: RV1297 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. LVD T 1 and 2		Resilient Strain		Resilient Modulus	
			S ₃	P _{max}	P _{cyclic}	P _{contact}	P _{max}	P _{cyclic}	P _{contact}	S _{max}	S _{cyclic}	S _{contact}	H _{avg}	ε _r	M _r					
UNIT	psi	psi	lbs	lbs	lbs	lbs	lbs	psi	psi	psi	in	in/in	psi							
Sequence 1	6.0	2.0	25.2	22.5	2.7	2.1	0.2	0.0092	0.0011	16,085										
Sequence 2	6.0	4.0	47.4	44.7	2.7	3.9	0.2	0.0194	0.0024	15,047										
Sequence 3	6.0	6.0	70.0	66.4	3.6	5.7	0.3	0.0303	0.0038	14,326										
Sequence 4	6.0	8.0	93.5	87.5	6.1	7.6	0.5	0.0434	0.0054	13,177										
Sequence 5	6.0	10.0	116.3	107.7	8.6	9.5	0.7	0.0577	0.0072	12,198										
Sequence 6	4.0	2.0	25.1	22.4	2.7	2.0	0.2	0.0099	0.0012	14,830										
Sequence 7	4.0	4.0	47.0	44.2	2.7	3.8	0.2	0.0209	0.0026	13,827										
Sequence 8	4.0	6.0	68.6	65.8	2.8	5.6	0.2	0.0327	0.0041	13,133										
Sequence 9	4.0	8.0	92.1	86.8	5.3	7.5	0.4	0.0458	0.0057	12,369										
Sequence 10	4.0	10.0	115.3	107.5	7.8	9.4	0.6	0.0598	0.0075	11,732										
Sequence 11	2.0	2.0	25.1	22.3	2.8	2.0	0.2	0.0111	0.0014	13,104										
Sequence 12	2.0	4.0	46.9	44.1	2.8	3.8	0.2	0.0231	0.0029	12,452										
Sequence 13	2.0	6.0	68.4	65.5	2.9	5.6	0.2	0.0360	0.0045	11,882										
Sequence 14	2.0	8.0	90.9	86.4	4.5	7.4	0.4	0.0497	0.0062	11,358										
Sequence 15	2.0	10.0	114.2	107.3	6.8	9.3	0.6	0.0643	0.0080	10,894										

TESTED BY: DEB DATE: January 6, 2012
 REVIEWED BY: _____ DATE: _____

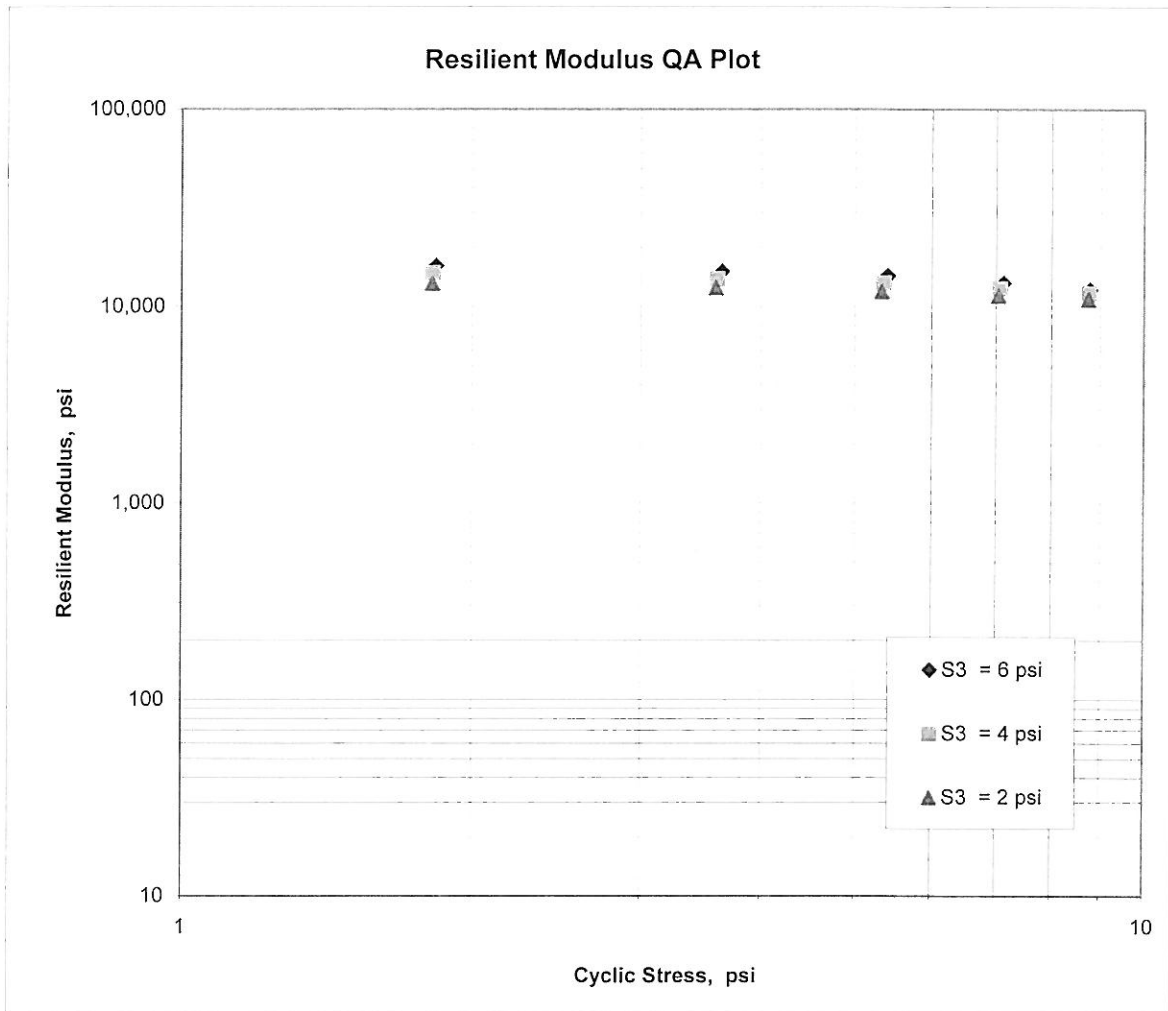
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION

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

Job No.	100655	Material Code SSRVPS
Date Sampled:	1/06/2012	Station No.: 1300+00
Date Tested:	January 6, 2012	Location: 50' LT CL
Name of Project:	MANIA - EAST (S)	
County:	Code: 47	Name: MISSISSIPPI
Sampled By:		Depth: 0-5
Lab No.:	20113470	AASHTO Class: A-7-6(16)
Sample ID:	RV1297	Material Type (1 or 2): 2
LATITUDE:		LONGITUDE:

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

$K_1 = \underline{13,303}$
 $K_2 = \underline{-0.14274}$
 $K_5 = \underline{0.15339}$
 $R^2 = \underline{0.95}$



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

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

Job No.	100655	Material Code	SSRVPS
Date Sampled:	1/06/2012	Station No.:	1228+00
Date Tested:	January 6, 2012	Location:	50' LT CL
Name of Project:	MANIA - EAST (S)		
County:	Code: 47	Name:	MISSISSIPPI
Sampled By:		Depth:	0-5
Lab No.:	20113469	AASHTO Class:	A-4(4)
Sample ID:	RV1296	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	3.97
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):	12.32
Initial Volume, AoLo (cu. in):	98.80

3. Soil Specimen Weight:

Weight of Wet Soil Used (g):	3169.50
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4. Soil Properties:

Optimum Moisture Content (%):	111.5
Maximum Dry Density (pcf):	15
95% of MDD (pcf):	14.3
In-Situ Moisture Content (%):	N/A

5. Specimen Properties:

Wet Weight (g):	3169.50
Compaction Moisture content (%):	13.9
Compaction Wet Density (pcf):	122.23
Compaction Dry Density (pcf):	107.31
Moisture Content After Mr Test (%):	13.9

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

7. Resilient Modulus, Mr: 12748(Sc)^-0.15653(S3)^0.24162

8. Comments _____

9. Tested By: DEB **Date:** January 6, 2012

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

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

Job No. 100655 Material Code SSRVPS
 Date Sampled: 1/06/2012 Station No.: 1228+00
 Date Tested: January 6, 2012 Location: 50' LT CL
 Name of Project: MANIA - EAST (S)

County: Code: 47 Name: MISSISSIPPI
 Sampled By: Depth: 0-5
 Lab No.: 20113469 AASHTO Class: A-4(4)
 Sample ID: RV1296 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	25.4	22.7	2.8	2.1	1.8	0.2	0.00084	0.00010	17,662
Sequence 2	6.0	4.0	47.9	45.1	2.8	3.9	3.7	0.2	0.00177	0.00022	16,574
Sequence 3	6.0	6.0	71.1	67.4	3.6	5.8	5.5	0.3	0.00283	0.00035	15,541
Sequence 4	6.0	8.0	95.1	88.9	6.1	7.7	7.2	0.5	0.00402	0.00050	14,388
Sequence 5	6.0	10.0	118.9	110.3	8.6	9.7	9.0	0.7	0.00531	0.00066	13,528
Sequence 6	4.0	2.0	25.5	22.8	2.7	2.1	1.9	0.2	0.00092	0.00011	16,115
Sequence 7	4.0	4.0	47.6	44.8	2.8	3.9	3.6	0.2	0.00198	0.00025	14,731
Sequence 8	4.0	6.0	69.6	66.8	2.8	5.6	5.4	0.2	0.00317	0.00040	13,715
Sequence 9	4.0	8.0	93.6	88.3	5.3	7.6	7.2	0.4	0.00445	0.00056	12,914
Sequence 10	4.0	10.0	117.5	109.7	7.8	9.5	8.9	0.6	0.00581	0.00072	12,303
Sequence 11	2.0	2.0	25.3	22.6	2.7	2.1	1.8	0.2	0.00110	0.00014	13,356
Sequence 12	2.0	4.0	47.2	44.5	2.7	3.8	3.6	0.2	0.00233	0.00029	12,410
Sequence 13	2.0	6.0	68.9	66.1	2.8	5.6	5.4	0.2	0.00368	0.00046	11,695
Sequence 14	2.0	8.0	91.7	87.2	4.5	7.4	7.1	0.4	0.00507	0.00063	11,207
Sequence 15	2.0	10.0	115.4	108.5	6.9	9.4	8.8	0.6	0.00651	0.00081	10,850

TESTED BY: DEB DATE: January 6, 2012
 REVIEWED BY: _____ DATE: _____

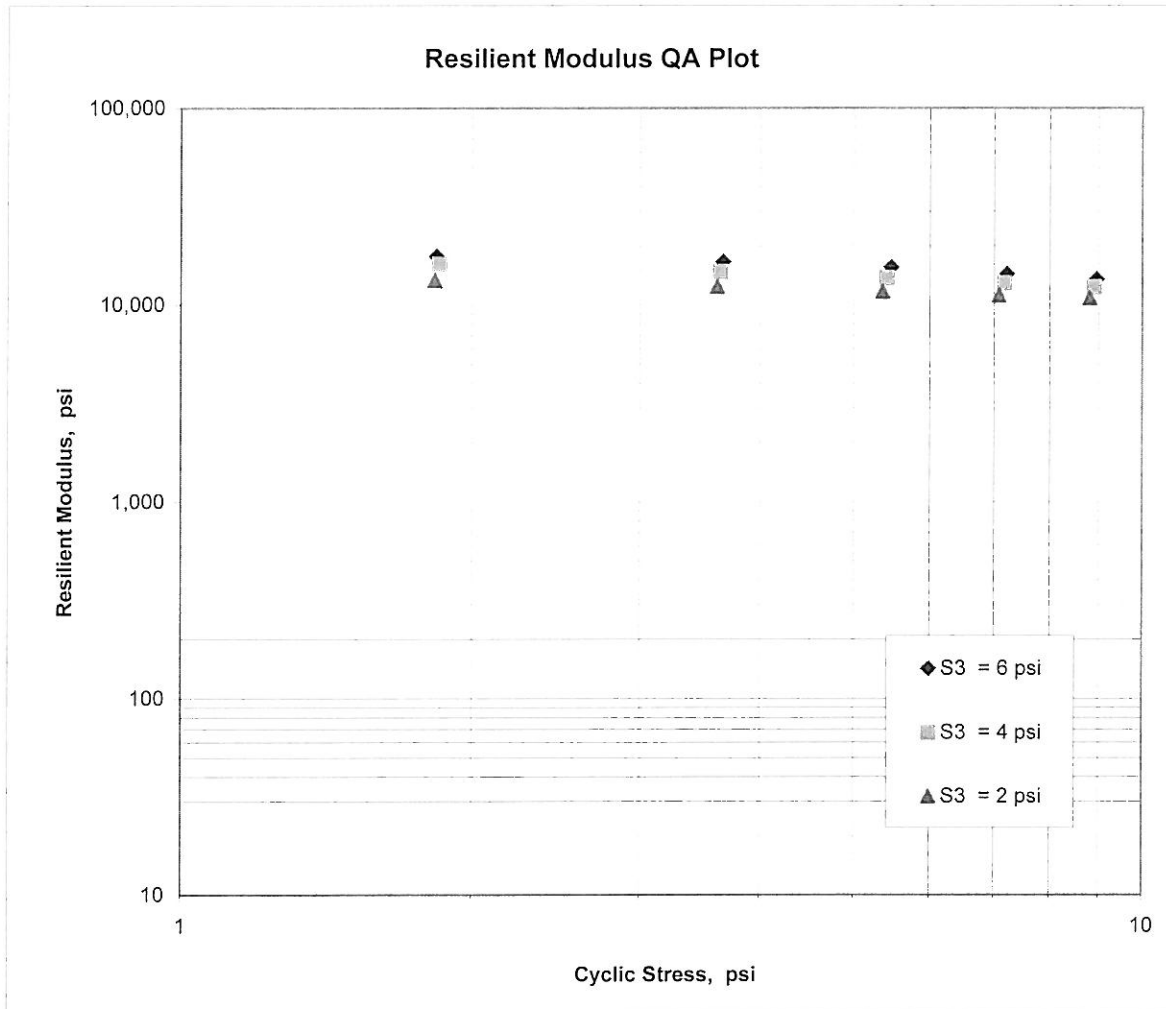
**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
MATERIALS DIVISION**

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

Job No.	100655	Material Code	SSRVPS
Date Sampled:	1/06/2012	Station No.:	1228+00
Date Tested:	January 6, 2012	Location:	50' LT CL
Name of Project:	MANIA - EAST (S)		
County:	Code: 47	Name:	MISSISSIPPI
Sampled By:		Depth:	0-5
Lab No.:	20113469	AASHTO Class:	A-4(4)
Sample ID:	RV1296	Material Type (1 or 2):	2
LATITUDE:		LONGITUDE:	

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

K1 = 12,748
 K2 = -0.15653
 K5 = 0.24162
 R² = 0.98



JOB: 100655

Arkansas State Highway Transportation Department

JOB NAME: MANILA-EAST(S)

Materials Division

COUNTY NO. 47 DATE TESTED 12/27/2011

Michael Benson, Materials Engineer

STA.#	LOC.	DEPTH	COLOR						L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				#4	#10	#40	#80	#200					
				S	I	E	V	E	S				
1228+00	50'LTCL	0-5	BROWN	100	99	93	84	69	27	9	A-4(4)	RV1296	
1300+00	CL	0-5	BROWN	100	99	95	84	77	42	22	A-7-6(16)	RV1297	
1220+00	5LT	0-5	BROWN	100	93	81	68	49	20	4	A-4 (0)	S1265	17.1
1220+00	16LT	0-5	BROWN	100	91	79	58	41	19	7	A-4 (0)	S1266	16.5
1224+00	15RT	0-5	BROWN	100	97	91	59	38	ND	NP	A-4 (0)	S1267	21.6
1228+00	25LT	0-5	BROWN	100	99	89	72	58	25	5	A-4 (1)	S1268	20.1
1228+00	50LT	0-5	BROWN	100	98	93	84	69	24	7	A-4 (2)	S1269	21.1
1232+00	CL	0-5	BR/GR	100	91	75	59	52	30	19	A-6 (6)	S1270	24
1236+00	5LT	0-5	BR/GR	100	97	69	35	26	ND	NP	A-2-4(0)	S1271	24.9
1236+00	20LT	0-5	BR/GR	100	99	87	65	57	25	14	A-6 (4)	S1272	28.3
1242+00	CL	0-5	BROWN	100	99	94	87	83	39	15	A-6 (13)	S1273	28.2
1246+00	35LT	0-5	BR/GR	100	99	88	67	58	33	18	A-6 (7)	S1274	24
1246+00	50LT	0-5	BROWN	100	98	92	82	79	36	21	A-6 (15)	S1275	23.4
1250+00	3 LT	0-5	BROWN	100	97	87	72	69	39	20	A-6 (12)	S1276	23.4
1254+00	10LT	0-5	BROWN	100	93	81	65	58	33	21	A-6 (9)	S1277	19.3
1254+00	25LT	0-5	BR/GR	100	94	75	50	40	26	11	A-6 (1)	S1278	28.6
1258+00	2'RT	0-5	BROWN	100	98	91	74	60	37	15	A-6 (7)	S1279	26
1262+00	16LT	0-5	BR/GR	100	97	89	71	62	34	17	A-6 (4)	S1280	26.4
1262+00	30LT	0-5	BROWN	100	91	67	41	31	27	9	A-2-4(0)	S1281	23
1266+00	15LT	0-5	BROWN	100	94	82	60	48	30	15	A-6 (4)	S1282	23
1270+00	16RT	0-5	BR/GR	100	97	76	49	40	27	16	A-6 (2)	S1283	28.6
1270+00	40RT	0-5	GR/BR	100	92	75	57	51	33	21	A-6 (7)	S1284	24.2
1282+00	CL	0-5	BROWN	100	96	83	67	58	26	7	A-4 (2)	S1285	24.9
1286+00	2RT	0-5	GRAY	100	90	75	68	62	28	13	A-6 (5)	S1286	25.5
1289+80	CL	0-5	BROWN	100	97	80	60	51	36	18	A-6 (6)	S1287	21.7
1296+00	31RT	0-5	BR/GR	100	94	79	60	52	38	25	A-6 (9)	S1288	27.3

comments: LOCATIONS MEASURED FROM C.L. CONST.

Tuesday, January 10, 2012

STA.#	LOC.	DEPTH	COLOR	#4	#10	#40	#80	#200	L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				S	I	E	V	E					
1296+00	47RT	0-5	GRAY	100	90	72	52	43	30	17	A-6 (3)	S1289	20.6
1300+00	CL	0-5	BROWN	100	98	90	80	75	42	25	A-7-6(17)	S1290	27.6
1304+00	20RT	0-5	BROWN	100	99	86	69	60	33	15	A-6 (6)	S1291	18
1304+00	CL	0-5	BROWN	100	77	49	26	19	25	9	A-2-4(0)	S1292	28.2
1308+00	CL	0-5	BROWN	100	94	78	60	46	27	7	A-4 (1)	S1293	22.9
1312+00	25RT	0-5	BROWN	100	100	87	61	44	20	5	A-4 (0)	S1294	26.6
1312+00	40RT	0-5	BR/GR	100	97	79	48	29	19	4	A-2-4(0)	S1295	19.2

PAVEMENT SOUNDINGS

STA.#	LOC.						
1220+00	5LT	ACHMSC	AGG BASE CRS CL-5				
		1.75	16				
1220+00	16LT	ACHMSC	AGG BASE CRS CL-5				
		6.25	18.				
1224+00	15RT	ACHMSC	AGG BASE CRS CL-5				

1228+00	25LT	ACHMSC	PCCP	AGGBASE CRS CL-5			
		1.75	8.0	---			
1228+00	50LT	ACHMSC	PCCP	AGGBASE CRS CL-5			
		---	---	---			
1232+00	CL	ACHMSC	PCCP	AGGBASE CRS CL-5			
		---	---	20.0			
1236+00	5LT	ACHMSC	PCCP				
		1.75	8.75				
1236+00	20LT	ACHMSC	PCCP				
		---	---				
1242+00	CL	ACHMSC	PCCP				
		---	---				
1246+00	35LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		2.75	8.25	---			
1246+00	50LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		---	---	10.0			
1250+00	3 LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		---	---	---			
1254+00	10LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		---	---	17.0			
1254+00	25LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		1.25	7.00	---			
1258+00	2'RT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		---	---	---			
1262+00	16LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		1.25	8.00	---			
1262+00	30LT	ACHMSC	PCCP	AGG BASE CRS CL-5			
		---	---	15.0			

comments: LOCATIONS MEASURED FROM C.L. CONST.

PAVEMENT SOUNDINGS

STA.# LOC.

1266+00	15LT	ACHMSC	PCCP	AGG BASE CRS CL-5
		---	---	---
1270+00	16RT	ACHMSC	PCCP	AGG BASE CRS CL 5
		1.75	8.50	---
1270+00	40RT	ACHMSC	PCCP	AGG BASE CRS CL 5
		---	---	24.0
1282+00	CL	ACHMSC	PCCP	AGG BASE CRS CL 5
		---	---	---
1286+00	2RT	ACHMSC	PCCP	AGG BASE CRS CL-7
		3.00	---	---
1289+80	CL	ACHMSC	PCCP	AGG BASE CRS CL-7
		---	---	13.
1296+00	31RT	ACHMSC	PCCP	AGG BASE CRS CL-7
		---	9.0	20.0
1296+00	47RT	AGG BASE CRS CACHMSC	PCCP	PCCP
		28.0	---	---
1300+00	CL	AGG BASE CRS CACHMSC	PCCP	PCCP
		---	1.75	8.50
1304+00	20RT	AGG BASE CRS CACHMSC	PCCP	PCCP
		---	---	---
1304+00	CL	ACHMSC	PCCP	AGG. BASE CRS CL-5
		---	---	---
1308+00	CL	ACHMSC	PCCP	AGG. BASE CRS CL-5
		---	---	---
1312+00	25RT	ACHMSC	PCCP	AGG. BASE CRS CL-5
		1.75	8.5	2.0
1312+00	40RT	AGG BASE CRS C		
		20		

comments: LOCATIONS MEASURED FROM C.L. CONST.

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 1
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113438	- 20113439	- 20113440
SAMPLE ID	- S1265	- S1266	- S1267
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1220+00	- 1220+00	- 1224+00
LOCATION	- 5LT	- 16LT	- 15RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 51 31.10	- 35 51 30.90	- 35 51 27.90
LONGITUDE DEG-MIN-SEC	- 90 08 34.50	- 90 08 34.60	- 90 08 31.90
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	-	-	-
NO. 4	- 100	- 100	- 100
NO. 10	- 93	- 91	- 97
NO. 40	- 81	- 79	- 91
NO. 80	- 68	- 58	- 59
NO. 200	- 49	- 41	- 38
LIQUID LIMIT	- 20	- 19	- ND
PLASTICITY INDEX	- 4	- 7	- NP
AASHTO SOIL	- A-4 (0)	- A-4 (0)	- A-4 (0)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 17.1	- 16.5	- 21.6
ACHMSC (IN)	- 1.75	- 6.25	- ---
AGG BASE CRS CL-5 (IN)	- 16	- 18.	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	-	01/03/12	SEQUENCE NO.	-	2
JOB NUMBER	-	100655	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	-	47
SUPPLIER NAME	-	STATE	DISTRICT NO.	-	10
NAME OF PROJECT	-	MANILA-EAST(S)			
PROJECT ENGINEER	-	NOT APPLICABLE			
PIT/QUARRY	-	ARKANSAS			
LOCATION	-	MISSISSIPPI COUNTY	DATE SAMPLED	-	12/06/11
SAMPLED BY	-	D.KRAFT, T.FRAZIER	DATE RECEIVED	-	12/09/11
SAMPLE FROM	-	TESTHOLE	DATE TESTED	-	12/27/11
MATERIAL DESC.	-	SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS			

LAB NUMBER	-	20113441	-	20113442	-	20113443
SAMPLE ID	-	S1268	-	S1269	-	S1270
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY
STATION	-	1228+00	-	1228+00	-	1232+00
LOCATION	-	25LT	-	50LT	-	CL
DEPTH IN FEET	-	0-5	-	0-5	-	0-5
MAT'L COLOR	-	BROWN	-	BROWN	-	BR/GR
MAT'L TYPE	-		-		-	
LATITUDE DEG-MIN-SEC	-	35 51 24.80	-	35 51 25.10	-	35 51 21.70
LONGITUDE DEG-MIN-SEC	-	90 08 28.90	-	90 08 28.50	-	90 08 26.00
% PASSING						
	2	IN.	-	-	-	-
	1 1/2	IN.	-	-	-	-
	3/4	IN.	-	-	-	-
	3/8	IN.	-	-	-	-
	NO. 4	-		100	-	100
	NO. 10	-		98	-	91
	NO. 40	-		93	-	75
	NO. 80	-		84	-	59
	NO. 200	-		69	-	52
LIQUID LIMIT	-	25	-	24	-	30
PLASTICITY INDEX	-	5	-	7	-	19
AASHTO SOIL	-	A-4 (1)	-	A-4 (2)	-	A-6 (6)
UNIFIED SOIL	-		-		-	
% MOISTURE CONTENT	-	20.1	-	21.1	-	24.0
ACHMSC	(IN)	-		1.75	-	---
PCCP	(IN)	-		8.0	-	---
AGGBASE CRS CL-5	(IN)	-		---	-	20.0
		-			-	
		-			-	
		-			-	
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 3
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113444	- 20113445	- 20113446
SAMPLE ID	- S1271	- S1272	- S1273
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1236+00	- 1236+00	- 1242+00
LOCATION	- 5LT	- 20LT	- CL
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BR/GR	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 51 19.00	- 35 51 19.10	- 35 51 15.50
LONGITUDE DEG-MIN-SEC	- 90 08 22.60	- 90 08 22.50	- 90 08 16.60
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 - 97	- 99	- 99
	NO. 40 - 69	- 87	- 94
	NO. 80 - 35	- 65	- 87
	NO. 200 - 26	- 57	- 83
LIQUID LIMIT	- ND	- 25	- 39
PLASTICITY INDEX	- NP	- 14	- 15
AASHTO SOIL	- A-2-4(0)	- A-6 (4)	- A-6 (13)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 24.9	- 28.3	- 28.2
ACHMSC	(IN) - 1.75	- ---	- ---
PCCP	(IN) - 8.75	- ---	- ---
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 4
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	-	20113447	-	20113448	-	20113449
SAMPLE ID	-	S1274	-	S1275	-	S1276
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY
STATION	-	1246+00	-	1246+00	-	1250+00
LOCATION	-	35LT	-	50LT	-	3 LT
DEPTH IN FEET	-	0-5	-	0-5	-	0-5
MAT'L COLOR	-	BR/GR	-	BROWN	-	BROWN
MAT'L TYPE	-		-		-	
LATITUDE DEG-MIN-SEC	-	35 51 13.80	-	35 51 13.90	-	35 51 11.50
LONGITUDE DEG-MIN-SEC	-	90 08 12.20	-	90 08 12.00	-	90 08 8.20
% PASSING						
	2	IN.	-		-	
	1 1/2	IN.	-		-	
	3/4	IN.	-		-	
	3/8	IN.	-		-	
	NO. 4	-		100	-	100
	NO. 10	-		99	-	97
	NO. 40	-		88	-	87
	NO. 80	-		67	-	72
	NO. 200	-		58	-	69
LIQUID LIMIT	-	33	-	36	-	39
PLASTICITY INDEX	-	18	-	21	-	20
AASHTO SOIL	-	A-6 (7)	-	A-6 (15)	-	A-6 (12)
UNIFIED SOIL	-		-		-	
% MOISTURE CONTENT	-	24.0	-	23.4	-	23.4
ACHMSC	(IN)	-		2.75	-	---
PCCP	(IN)	-		8.25	-	---
AGG BASE CRS CL-5	(IN)	-		---	-	10.0
		-			-	
		-			-	
		-			-	
		-			-	
		-			-	
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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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	- 01/03/12	SEQUENCE NO.	- 5
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113450	- 20113451	- 20113452
SAMPLE ID	- S1277	- S1278	- S1279
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1254+00	- 1254+00	- 1258+00
LOCATION	- 10LT	- 25LT	- 2'RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BR/GR	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 51 9.60	- 35 51 9.70	- 35 51 7.50
LONGITUDE DEG-MIN-SEC	- 90 08 3.90	- 90 08 3.90	- 90 07 59.80
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	NO. 4 - 100	NO. 4 - 100
	NO. 10 - 93	NO. 10 - 94	NO. 10 - 98
	NO. 40 - 81	NO. 40 - 75	NO. 40 - 91
	NO. 80 - 65	NO. 80 - 50	NO. 80 - 74
	NO. 200 - 58	NO. 200 - 40	NO. 200 - 60
LIQUID LIMIT	- 33	- 26	- 37
PLASTICITY INDEX	- 21	- 11	- 15
AASHTO SOIL	- A-6 (9)	- A-6 (1)	- A-6 (7)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 19.3	- 28.6	- 26.0
ACHMSC (IN)	- ---	- 1.25	- ---
PCCP (IN)	- ---	- 7.00	- ---
AGG BASE CRS CL-5 (IN)	- 17.0	- ---	- ---
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 6
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	-
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113453	- 20113454	- 20113455	
SAMPLE ID	- S1280	- S1281	- S1282	
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY	
STATION	- 1262+00	- 1262+00	- 1266+00	
LOCATION	- 16LT	- 30LT	- 15LT	
DEPTH IN FEET	- 0-5	- 0-5	- 0-5	
MAT'L COLOR	- BR/GR	- BROWN	- BROWN	
MAT'L TYPE	-	-	-	
LATITUDE DEG-MIN-SEC	- 35 51 5.80	- 35 51 6.00	- 35 51 4.00	
LONGITUDE DEG-MIN-SEC	- 90 07 55.50	- 90 07 55.30	- 90 07 51.10	
% PASSING	2 IN. -	-	-	
	1 1/2 IN. -	-	-	
	3/4 IN. -	-	-	
	3/8 IN. -	-	-	
	NO. 4 - 100	- 100	- 100	
	NO. 10 - 97	- 91	- 94	
	NO. 40 - 89	- 67	- 82	
	NO. 80 - 71	- 41	- 60	
	NO. 200 - 62	- 31	- 48	
LIQUID LIMIT	- 34	- 27	- 30	
PLASTICITY INDEX	- 17	- 9	- 15	
AASHTO SOIL	- A-6 (4)	- A-2-4 (0)	- A-6 (4)	
UNIFIED SOIL	-	-	-	
% MOISTURE CONTENT	- 26.4	- 23.0	- 23.0	
ACHMSC (IN)	- 1.25	- ---	- ---	
PCCP (IN)	- 8.00	- ---	- ---	
AGG BASE CRS CL-5 (IN)	- ---	- 15.0	- ---	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	
	-	-	-	

REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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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 - 01/03/12 SEQUENCE NO. - 7
JOB NUMBER - 100655 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 - 47
SUPPLIER NAME - STATE DISTRICT NO. - 10
NAME OF PROJECT - MANILA-EAST(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - MISSISSIPPI COUNTY DATE SAMPLED - 12/06/11
SAMPLED BY - D.KRAFT, T.FRAZIER DATE RECEIVED - 12/09/11
SAMPLE FROM - TESTHOLE DATE TESTED - 12/28/11
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20113456	-	20113457	-	20113458	
SAMPLE ID	-	S1283	-	S1284	-	S1285	
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY	
STATION	-	1270+00	-	1270+00	-	1282+00	
LOCATION	-	16RT	-	40RT	-	CL	
DEPTH IN FEET	-	0-5	-	0-5	-	0-5	
MAT'L COLOR	-	BR/GR	-	GR/BR	-	BROWN	
MAT'L TYPE	-	-	-	-	-	-	
LATITUDE DEG-MIN-SEC	-	35 51 1.70	-	35 51 1.60	-	35 50 55.90	
LONGITUDE DEG-MIN-SEC	-	90 07 47.10	-	90 07 47.30	-	90 07 34.20	
% PASSING	2 IN.	-	-	-	-	-	
	1 1/2 IN.	-	-	-	-	-	
	3/4 IN.	-	-	-	-	-	
	3/8 IN.	-	-	-	-	-	
	NO. 4	-	100	-	100	-	100
	NO. 10	-	97	-	92	-	96
	NO. 40	-	76	-	75	-	83
	NO. 80	-	49	-	57	-	67
	NO. 200	-	40	-	51	-	58
LIQUID LIMIT	-	27	-	33	-	26	
PLASTICITY INDEX	-	16	-	21	-	7	
AASHTO SOIL	-	A-6 (2)	-	A-6 (7)	-	A-4 (2)	
UNIFIED SOIL	-	-	-	-	-	-	
% MOISTURE CONTENT	-	28.6	-	24.2	-	24.9	
ACHMSC	(IN)	-	1.75	-	---	-	---
PCCP	(IN)	-	8.50	-	---	-	---
AGG BASE CRS CL 5	(IN)	-	---	-	24.0	-	---
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-

REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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AASHTO TESTS : T24 T88 T89 T90 T265

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 8
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/28/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113459	- 20113460	- 20113461
SAMPLE ID	- S1286	- S1287	- S1288
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1286+00	- 1289+80	- 1296+00
LOCATION	- 2RT	- CL	- 31RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BROWN	- BR/GR
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 50 53.90	- 35 50 52.00	- 35 50 48.80
LONGITUDE DEG-MIN-SEC	- 90 07 30.00	- 90 07 26.10	- 90 07 19.90
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 - 90	- 97	- 94
	NO. 40 - 75	- 80	- 79
	NO. 80 - 68	- 60	- 60
	NO. 200 - 62	- 51	- 52
LIQUID LIMIT	- 28	- 36	- 38
PLASTICITY INDEX	- 13	- 18	- 25
AASHTO SOIL	- A-6 (5)	- A-6 (6)	- A-6 (9)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 25.5	- 21.7	- 27.3
ACHMSC	(IN) - 3.00	- ---	- ---
PCCP	(IN) - ---	- ---	- 9.0
AGG BASE CRS CL-7	(IN) - ---	- 13.	- 20.0
	-	-	-
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE - 01/03/12 SEQUENCE NO. - 9
JOB NUMBER - 100655 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 - 47
SUPPLIER NAME - STATE DISTRICT NO. - 10
NAME OF PROJECT - MANILA-EAST(S)
PROJECT ENGINEER - NOT APPLICABLE
PIT/QUARRY - ARKANSAS
LOCATION - MISSISSIPPI COUNTY DATE SAMPLED - 12/06/11
SAMPLED BY - D.KRAFT, T.FRAZIER DATE RECEIVED - 12/09/11
SAMPLE FROM - TESTHOLE DATE TESTED - 12/29/11
MATERIAL DESC. - SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS

LAB NUMBER	-	20113462	-	20113463	-	20113464
SAMPLE ID	-	S1289	-	S1290	-	S1291
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-	INFORMATION ONLY
STATION	-	1296+00	-	1300+00	-	1304+00
LOCATION	-	47RT	-	CL	-	20RT
DEPTH IN FEET	-	0-5	-	0-5	-	0-5
MAT'L COLOR	-	GRAY	-	BROWN	-	BROWN
MAT'L TYPE	-		-		-	
LATITUDE DEG-MIN-SEC	-	35 50 48.70	-	35 50 47.10	-	35 50 45.50
LONGITUDE DEG-MIN-SEC	-	90 07 2.00	-	90 07 15.50	-	90 07 11.10
% PASSING	2	IN. -	-	-	-	-
	1 1/2	IN. -	-	-	-	-
	3/4	IN. -	-	-	-	-
	3/8	IN. -	-	-	-	-
	NO. 4	- 100	-	100	-	100
	NO. 10	- 90	-	98	-	99
	NO. 40	- 72	-	90	-	86
	NO. 80	- 52	-	80	-	69
	NO. 200	- 43	-	75	-	60
LIQUID LIMIT	-	30	-	42	-	33
PLASTICITY INDEX	-	17	-	25	-	15
AASHTO SOIL	-	A-6 (3)	-	A-7-6 (17)	-	A-6 (6)
UNIFIED SOIL	-		-		-	
% MOISTURE CONTENT	-	20.6	-	27.6	-	18.0
AGG BASE CRS CL-5	(IN) -	28.0	-	---	-	---
ACHMSC	(IN) -	---	-	1.75	-	---
PCCP	(IN) -	---	-	8.50	-	---
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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AASHTO TESTS : T24 T88 T89 T90 T265

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 10
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/29/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	- 20113465	- 20113466	- 20113467
SAMPLE ID	- S1292	- S1293	- S1294
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 1304+00	- 1308+00	- 1312+00
LOCATION	- CL	- CL	- 25RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- BROWN	- BROWN	- BROWN
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 50 45.70	- 35 50 45.01	- 35 50 44.80
LONGITUDE DEG-MIN-SEC	- 90 07 11.10	- 90 07 6.30	- 90 07 1.50
% PASSING	2 IN. -	-	-
	1 1/2 IN. -	-	-
	3/4 IN. -	-	-
	3/8 IN. -	-	-
	NO. 4 - 100	- 100	- 100
	NO. 10 - 77	- 94	- 100
	NO. 40 - 49	- 78	- 87
	NO. 80 - 26	- 60	- 61
	NO. 200 - 19	- 46	- 44
LIQUID LIMIT	- 25	- 27	- 20
PLASTICITY INDEX	- 9	- 7	- 5
AASHTO SOIL	- A-2-4 (0)	- A-4 (1)	- A-4 (0)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 28.2	- 22.9	- 26.6
ACHMSC	(IN) - ---	- ---	- 1.75
PCCP	(IN) - ---	- ---	- 8.5
AGG. BASE CRS CL-5	(IN) - ---	- ---	- 2.0
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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AASHTO TESTS : T24 T88 T89 T90 T265
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 11
JOB NUMBER	- 100655	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	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/29/11
MATERIAL DESC.	- SOIL SURVEY - R VALUE- PAVEMENT SOUNDINGS		

LAB NUMBER	-	20113468	-	-
SAMPLE ID	-	S1295	-	-
TEST STATUS	-	INFORMATION ONLY	-	-
STATION	-	1312+00	-	-
LOCATION	-	40RT	-	-
DEPTH IN FEET	-	0-5	-	-
MAT'L COLOR	-	BR/GR	-	-
MAT'L TYPE	-		-	-
LATITUDE DEG-MIN-SEC	-	35 50 44.20	-	-
LONGITUDE DEG-MIN-SEC	-	90 07 1.50	-	-
% PASSING	2 IN.	-	-	-
	1 1/2 IN.	-	-	-
	3/4 IN.	-	-	-
	3/8 IN.	-	-	-
	NO. 4	- 100	-	-
	NO. 10	- 97	-	-
	NO. 40	- 79	-	-
	NO. 80	- 48	-	-
	NO. 200	- 29	-	-
LIQUID LIMIT	-	19	-	-
PLASTICITY INDEX	-	4	-	-
AASHTO SOIL	-	A-2-4 (0)	-	-
UNIFIED SOIL	-		-	-
% MOISTURE CONTENT	-	19.2	-	-
AGG BASE CRS CL-5 (IN)	-	20	-	-
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.

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AASHTO TESTS : T24 T88 T89 T90 T265

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

MICHAEL BENSON, MATERIALS ENGINEER

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

DATE	- 01/03/12	SEQUENCE NO.	- 1
JOB NUMBER	- 100655	MATERIAL CODE	- RV
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2003
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- MANILA-EAST(S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 12/06/11
SAMPLED BY	- D.KRAFT, T.FRAZIER	DATE RECEIVED	- 12/09/11
SAMPLE FROM	- TESTHOLE	DATE TESTED	- 12/27/11
MATERIAL DESC.	- SOIL SURVEY - RESISTANCE R-VALUE ACTUAL RESULTS		

LAB NUMBER	-	20113469	-	20113470	-
SAMPLE ID	-	RV1296	-	RV1297	-
TEST STATUS	-	INFORMATION ONLY	-	INFORMATION ONLY	-
STATION	-	1228+00	-	1300+00	-
LOCATION	-	50'LTCL	-	CL	-
DEPTH IN FEET	-	0-5	-	0-5	-
MAT'L COLOR	-	BROWN	-	BROWN	-
MAT'L TYPE	-		-		-
LATITUDE DEG-MIN-SEC	-	35 51 25.10	-	35 50 47.10	-
LONGITUDE DEG-MIN-SEC	-	90 08 28.50	-	90 07 15.50	-
% PASSING	2	IN.	-		-
	1 1/2	IN.	-		-
	3/4	IN.	-		-
	3/8	IN.	-		-
	NO. 4	-	100	100	-
	NO. 10	-	99	99	-
	NO. 40	-	93	95	-
	NO. 80	-	84	84	-
	NO. 200	-	69	77	-
LIQUID LIMIT	-	27	-	42	-
PLASTICITY INDEX	-	9	-	22	-
AASHTO SOIL	-	A-4 (4)	-	A-7-6 (16)	-
UNIFIED SOIL	-		-		-
% MOISTURE CONTENT	-		-		-
	-		-		-
	-		-		-
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REMARKS - LOCATIONS MEASURED FROM C.L. CONST.
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