

ARKANSAS DEPARTMENT OF TRANSPORTATION



SUBSURFACE INVESTIGATION

STATE JOB NO. 101111

FEDERAL AID PROJECT NO. NHPP-55-1(148)

HWY.148 – SO. OF HWY. 61 (S)

STATE HIGHWAY I-55 SECTION 12

IN MISSISSIPPI COUNTY

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.



ARKANSAS DEPARTMENT OF TRANSPORTATION

ARDOT.gov | IDriveArkansas.com | Lorie H. Tudor, P.E., Director

MATERIALS DIVISION

11301 West Baseline Road | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2185 | Fax: 501.569.2368

March 9, 2021

TO: Mr. Trinity Smith, Engineer of Roadway Design

SUBJECT: Job No. 101111
Hwy. 148 – So. Of Hwy. 61 (S)
Route 55 Section 12
Mississippi County

Attached is the requested soil survey test results. The proposed project is to rubblize and overlay approximately 4.43 miles of Interstate 55. Selected locations within the project limits include full depth reclamation. Samples were taken at these locations in the existing travel lanes.

The subgrade soils in full depth reclamation areas consist of silts and moderate to highly plastic clay. Soils are highly variable and generally poor quality. Soil stabilization should be anticipated in all full depth reclamation areas. Soil stabilization quantities should be based on 16 inches depth. Due to the variable nature of the subgrade soils, the most appropriate additive should be determined during construction. Quantities should be based on 6% additive (by dry wt.). It is recommended that Soils Stabilization Cement and Soil Stabilization Lime be included in the contract as separate bid items.

Listed below is the additional information requested for use in developing the plans:

1. The Qualified Products List (QPL) indicates that Aggregate Base Course (Class CL-7) is available from commercial producers located at the river port near Amorel.

2. Asphalt Concrete Hot Mix for **PG 76-22**

<u>Type</u>	<u>Asphalt Cement %</u>	<u>Mineral Aggregate %</u>
Surface Course	5.0	95.0
Binder Course	4.2	95.8
Base Course	3.8	96.2


Jonathan A. Annable
Materials Engineer

JAA:yz:bjj
Attachment

cc: State Constr. Eng. – Master File Copy
District 10 Engineer
System Information and Research
G. C. File

JOB: 101111

Arkansas State Highway Transportation Department

JOB NAME: HWY 148 - SO. OF HWY 61 (S)

Materials Division

COUNTY NO. 47 DATE TESTED 3/2/2021

Jonathan Annable, Materials Engineer

STA.#	LOC.	DEPTH	COLOR	#					L.L.	P.I.	SOIL CLASS	LAB #:	%MOISTURE
				#4	#10	#40	#80	#200					
367+00	49 RT	0-5	GRAY	100	99	85	64	58	25	12	A-6(4)	S10	22.9
379+00	37 RT	0-5	GRAY	98	98	85	65	62	29	16	A-6(7)	S11	28.6
379+00	49 LT	0-5	GRAY		100	92	83	80	48	31	A-7-6(24)	S12	25.2
391+00	37 LT	0-5	GRAY	99	98	53	27	23	ND	NP	A-2-4(0)	S13	19.1
391+00	49 RT	0-5	GRAY	99	99	69	40	30	ND	NP	A-2-4 (0)	S14	25.9
403+00	49 LT	0-5	BR/GR	100	99	85	74	69	27	13	A-6(6)	S15	23.4
415+00	37 LT	0-5	GRAY	99	97	87	72	65	21	8	A-4(2)	S16	22.2
415+00	49 RT	0-5	BR/GR	99	98	94	88	80	24	9	A-4(5)	S17	21.6
485+00	49 LT	0-5	GRAY	99	95	92	81	72	28	12	A-6(6)	S18	27.8
500+00	37 LT	0-5	GRAY	100	99	97	92	81	28	11	A-6(7)	S19	23.3
500+00	49 RT	0-5	GRAY	99	98	95	89	81	26	11	A-6(7)	S20	23.9
510+00	49 LT	0-5	GRAY	99	99	97	92	80	28	11	A-6(7)	S21	23
289+00	37 LT	0-5	GRAY	100				93	ND	NP	A-4(0)	S5	24.6
289+00	49 RT	0-5	GRAY	99	99	75	54	46	ND	NP	A-4(0)	S6	24.5
300+00	37 RT	0-5	GRAY	99	99	84	58	31	ND	NP	A-2-4(0)	S7	22.5
300+00	49 LT	0-5	GRAY	99	99	97	90	75	ND	NP	A-4(0)	S8	18.7
367+00	37 LT	0-5	BR/GR	100	99	81	59	49	22	7	A-4(1)	S9	20.1

comments: W=MULTIPLE LAYERS

Wednesday, March 3, 2021

JOB: 101111

JOB NAME: HWY 148 - SO. OF HWY 61 (S)

**Arkansas State Highway Transportation Department
Materials Division**

DATE TESTED
3/2/2021

COUNTY NO. 47

Jonathan Annable, Materials Engineer

STA.# LOC.

PAVEMENT SOUNDINGS

289+00	37 LT	PCCP	AGG. BASE CRS. CL-7	
		10.25	6.0	
289+00	49 RT	PCCP	AGG. BASE CRS. CL-7	
		9.5	6.0	
300+00	37 RT	PCCP	AGG. BASE CRS. CL-7	
		10.0	4.0	
300+00	49 LT	PCCP	AGG. BASE CRS. CL-7	
		9.75	2.0	
367+00	37 LT	PCCP	AGG. BASE CRS. CL-7	
		10.0	6.0	
367+00	49 RT	PCCP	AGG. BASE CRS. CL-7	
		10.0	5.0	
379+00	37 RT	PCCP	AGG. BASE CRS. CL-7	
		10.25	1.0	
379+00	49 LT	PCCP	AGG. BASE CRS. CL-7	
		9.75	1.0	
391+00	37 LT	PCCP	AGG. BASE CRS. CL-7	
		10.5	6.0	
391+00	49 RT	PCCP	AGG. BASE CRS. CL-7	
		10.5	5.0	
403+00	49 LT	PCCP	AGG. BASE CRS. CL-7	
		9.5	3.0	
415+00	37 LT	PCCP	AGG. BASE CRS. CL-7	
		10.0	6.0	
415+00	49 RT	PCCP	AGG. BASE CRS. CL-7	
		10.0	5.0	
485+00	49 LT	PCCP	AGG. BASE CRS. CL-7	
		9.75	2.0	
500+00	37 LT	PCCP	AGG. BASE CRS. CL-7	
		10.0	6.0	
500+00	49 RT	ASHMSC	AGG. BASE CRS. CL-7	
		---	6.0	
510+00	49 LT	ASHMSC	AGG. BASE CRS. CL-7	
		5.25W	10.0	2.0

comments: W=MULTIPLE LAYERS

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

JONATHAN A. ANNABLE, MATERIALS ENGINEER

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

DATE	- 03/02/21	SEQUENCE NO.	- 2
JOB NUMBER	- 101111	MATERIAL CODE	- SSPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- HWY 148 - SO. OF HWY 61 (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 02/02/21
SAMPLED BY	- THORNTON/ BATES/ MCKINNEY	DATE RECEIVED	- 02/05/21
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 03/02/21
MATERIAL DESC.	- SOIL SURVEY PAVEMENT SOUNDINGS		

LAB NUMBER	- 20210278	- 20210279	- 20210280
SAMPLE ID	- S8	- S9	- S10
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 300+00	- 367+00	- 367+00
LOCATION	- 49 LT	- 37 LT	- 49 RT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BR/GR	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 49 28.20	- 35 50 26.00	- 35 50 25.80
LONGITUDE DEG-MIN-SEC	- 89 57 52.00	- 89 57 11.90	- 89 57 11.00
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	- 100	-	-
NO. 4	- 99	- 100	- 100
NO. 10	- 99	- 99	- 99
NO. 40	- 97	- 81	- 85
NO. 80	- 90	- 59	- 64
NO. 200	- 75	- 49	- 58
LIQUID LIMIT	- ND	- 22	- 25
PLASTICITY INDEX	- NP	- 7	- 12
AASHTO SOIL	- A-4 (0)	- A-4 (1)	- A-6 (4)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 18.7	- 20.1	- 22.9
PCCP (IN)	- 9.75	- 10.0	- 10.0
AGG. BASE CRS. CL-7 (IN)	- 2.0	- 6.0	- 5.0
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

JONATHAN A. ANNABLE, MATERIALS ENGINEER

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

DATE	- 03/02/21	SEQUENCE NO.	- 3
JOB NUMBER	- 101111	MATERIAL CODE	- SSPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- HWY 148 - SO. OF HWY 61 (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 02/02/21
SAMPLED BY	- THORNTON/ BATES/ MCKINNEY	DATE RECEIVED	- 02/05/21
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 03/02/21
MATERIAL DESC.	- SOIL SURVEY PAVEMENT SOUNDINGS		

LAB NUMBER	- 20210281	- 20210282	- 20210283
SAMPLE ID	- S11	- S12	- S13
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 379+00	- 379+00	- 391+00
LOCATION	- 37 RT	- 49 LT	- 37 LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- GRAY	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 50 36.10	- 35 50 36.50	- 35 50 46.70
LONGITUDE DEG-MIN-SEC	- 89 57 4.00	- 89 57 5.40	- 89 56 57.80
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	- 100	-	-
3/8 IN.	- 99	-	- 100
NO. 4	- 98	-	- 99
NO. 10	- 98	- 100	- 98
NO. 40	- 85	- 92	- 53
NO. 80	- 65	- 83	- 27
NO. 200	- 62	- 80	- 23
LIQUID LIMIT	- 29	- 48	- ND
PLASTICITY INDEX	- 16	- 31	- NP
AASHTO SOIL	- A-6(7)	- A-7-6(24)	- A-2-4(0)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 28.6	- 25.2	- 19.1
PCCP (IN)	- 10.25	- 9.75	- 10.5
AGG. BASE CRS. CL-7 (IN)	- 1.0	- 1.0	- 6.0
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

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
MATERIALS DIVISION

JONATHAN A. ANNABLE, MATERIALS ENGINEER

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

DATE	- 03/02/21	SEQUENCE NO.	- 4
JOB NUMBER	- 101111	MATERIAL CODE	- SSPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- HWY 148 - SO. OF HWY 61 (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 02/02/21
SAMPLED BY	- THORNTON/ BATES/ MCKINNEY	DATE RECEIVED	- 02/05/21
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 03/02/21
MATERIAL DESC.	- SOIL SURVEY PAVEMENT SOUNDINGS		

LAB NUMBER	- 20210284	- 20210285	- 20210286
SAMPLE ID	- S14	- S15	- S16
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	- INFORMATION ONLY
STATION	- 391+00	- 403+00	- 415+00
LOCATION	- 49 RT	- 49 LT	- 37 LT
DEPTH IN FEET	- 0-5	- 0-5	- 0-5
MAT'L COLOR	- GRAY	- BR/GR	- GRAY
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 50 46.40	- 35 50 57.40	- 35 51 7.50
LONGITUDE DEG-MIN-SEC	- 89 56 56.80	- 89 56 51.10	- 89 56 43.60
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	- 100	-	- 100
NO. 4	- 99	- 100	- 99
NO. 10	- 99	- 99	- 97
NO. 40	- 69	- 85	- 87
NO. 80	- 40	- 74	- 72
NO. 200	- 30	- 69	- 65
LIQUID LIMIT	- ND	- 27	- 21
PLASTICITY INDEX	- NP	- 13	- 8
AASHTO SOIL	- A-2-4 (0)	- A-6 (6)	- A-4 (2)
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 25.9	- 23.4	- 22.2
PCCP (IN)	- 10.5	- 9.5	- 10.0
AGG. BASE CRS. CL-7 (IN)	- 5.0	- 3.0	- 6.0
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS
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ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT - LITTLE ROCK, ARKANSAS
MATERIALS DIVISION

JONATHAN A. ANNABLE, MATERIALS ENGINEER

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

DATE	- 03/02/21	SEQUENCE NO.	- 6
JOB NUMBER	- 101111	MATERIAL CODE	- SSPS
FEDERAL AID NO.	- TO BE ASSIGNED	SPEC. YEAR	- 2014
PURPOSE	- SOIL SURVEY SAMPLE	SUPPLIER ID.	- 1
SPEC. REMARKS	- NO SPECIFICATION CHECK	COUNTY/STATE	- 47
SUPPLIER NAME	- STATE	DISTRICT NO.	- 10
NAME OF PROJECT	- HWY 148 - SO. OF HWY 61 (S)		
PROJECT ENGINEER	- NOT APPLICABLE		
PIT/QUARRY	- ARKANSAS		
LOCATION	- MISSISSIPPI COUNTY	DATE SAMPLED	- 02/02/21
SAMPLED BY	- THORNTON/ BATES/ MCKINNEY	DATE RECEIVED	- 02/05/21
SAMPLE FROM	- TEST HOLE	DATE TESTED	- 03/02/21
MATERIAL DESC.	- SOIL SURVEY PAVEMENT SOUNDINGS		

LAB NUMBER	- 20210290	- 20210291	-
SAMPLE ID	- S20	- S21	-
TEST STATUS	- INFORMATION ONLY	- INFORMATION ONLY	-
STATION	- 500+00	- 510+00	-
LOCATION	- 49 RT	- 49 LT	-
DEPTH IN FEET	- 0-5	- 0-5	-
MAT'L COLOR	- GRAY	- GRAY	-
MAT'L TYPE	-	-	-
LATITUDE DEG-MIN-SEC	- 35 52 20.60	- 35 52 30.10	-
LONGITUDE DEG-MIN-SEC	- 89 55 52.60	- 89 55 48.00	-
% PASSING			
2 IN.	-	-	-
1 1/2 IN.	-	-	-
3/4 IN.	-	-	-
3/8 IN.	- 100	- 100	-
NO. 4	- 99	- 99	-
NO. 10	- 98	- 99	-
NO. 40	- 95	- 97	-
NO. 80	- 89	- 92	-
NO. 200	- 81	- 80	-
LIQUID LIMIT	- 26	- 28	-
PLASTICITY INDEX	- 11	- 11	-
AASHTO SOIL	- A-6(7)	- A-6(7)	-
UNIFIED SOIL	-	-	-
% MOISTURE CONTENT	- 23.9	- 23.0	-
ASHMSC (IN)	- ---	- 5.25W	-
PCCP (IN)	- 9.75	- 10.0	-
AGG. BASE CRS. CL-7 (IN)	- 6.0	- 2.0	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

REMARKS - W=MULTIPLE LAYERS
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AASHTO TESTS : T24 T88 T89 T90 T265
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