

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5201		
					LOCATION: Station 235+64.0, Lt. 1		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011535	EASTING: 16599493	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 01/28/25		END DATE: 01/28/25	
SURFACE ELEVATION: 1115.3 ft		RIG: 7513	METHOD: 3 1/4" HSA		SURFACING: Concrete		WEATHER: Clear & 40

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
		FILL: FAT CLAY (CH), trace Sand, dark brown, moist					
			5	2-4-7 (11) 12"		27	
				TW 9"	2		
			10	2-4-3 (7) 9"			
1102.3		LEAN CLAY (CL), trace Sand, gray, moist, soft to very stiff (ALLUVIUM)					
13.0			15	TW 21"	2.5		Mud rotary started at 15 feet.
			20	2-3-3 (6) 14"		33	
			25	0-2-2 (4) 10"		38	LL=44, PL=21, PI=23 Gravel= 0% Sand= 1% Clay= 27% Silt= 73%
			30	4-4-5 (9) 9"		37	
1082.3		CLAYEY SAND (SC), fine to medium-grained, gray, wet, medium dense (GLACIAL OUTWASH)					
33.0			35	10-9-10 (19) 3"			
1078.3		POORLY GRADED GRAVEL (GP), fine to coarse-grained, brown and gray, wet, medium dense (GLACIAL OUTWASH)					
37.0				3-5-8 (13) 6"			P200=5%

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5201		
					LOCATION: Station 235+64.0, Lt. 1		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011535	EASTING: 16599493	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 01/28/25		END DATE: 01/28/25	
SURFACE ELEVATION: 1115.3 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete WEATHER: Clear & 40	

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1073.3		POORLY GRADED GRAVEL (GP), fine to coarse-grained, brown and gray, wet, medium dense (GLACIAL OUTWASH) SANDY LEAN CLAY (CL), with Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)					
42.0							
			45	4-5-5 (10) 7"		14	
			50	9-4-7 (11) 11"		7	
			55	4-6-9 (15) 14"		19	LL=35, PL=13, PI=22 Gravel= 3% Sand= 27% Clay= 30% Silt= 40%
			60	3-4-5 (9) 10"		24	
			65	4-6-7 (13) 11"		20	
			70	6-8-10 (18) 12"		20	
			75	5-10-9 (19) 11"		21	LL=29, PL=12, PI=17 Gravel= 3% Sand= 35% Clay= 26% Silt= 36%
				18-30-27 (57) 0"			

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5201		
					LOCATION: Station 235+64.0, Lt. 1		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011535	EASTING: 16599493	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 01/28/25	END DATE: 01/28/25		
SURFACE ELEVATION: 1115.3 ft		RIG: 7513	METHOD: 3 1/4" HSA	SURFACING: Concrete	WEATHER: Clear & 40		

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1027.3		SANDY LEAN CLAY (CL), with Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)	85	6-8-10 (18) 15"		22	Groundwater level obscured due to mud rotary drilling method.
88.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, very stiff to hard (GLACIAL TILL)	90	9-24-18 (42) 12"		20	
			95	10-18-19 (37)		21	
1015.3			100	11-12-16 (28) 10"		22	
100.0		END OF BORING					
		Boring then backfilled with auger cuttings					
			105				
			110				
			115				

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5202		
					LOCATION: Station 236+01, Lt. 1		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011569	EASTING: 16599508	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/26/25		END DATE: 02/26/25	
SURFACE ELEVATION: 1115.6 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete	
						WEATHER: Clear & 50	
Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1114.4		CONCRETE					
1.2		AIR					
			5				
			10				
1102.6		Overburden soil, blind drilled to 25 feet					
13.0			15				
			20				
1090.6		LEAN CLAY (CL), trace Sand, light gray, moist, soft (ALLUVIUM)	25				
25.0			30	2-2-1 (3) 16"		35	LL=44, PL=18, PI=26
1082.6		CLAYEY SAND (SC), fine to medium-grained, trace Gravel, brown, wet, very dense (GLACIAL OUTWASH)	35	32-50-50/5" (REF) 14"		17	P200=16%
33.0							
1077.6		LEAN CLAY (CL), with Sand, trace Gravel, gray, moist, very stiff (GLACIAL TILL)		7-8-9 (17) 9"		22	
38.0							

Continued on next page

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5202		
					LOCATION: Station 236+01, Lt. 1		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011569	EASTING: 16599508	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/26/25	END DATE: 02/26/25		
SURFACE ELEVATION: 1115.6 ft		RIG: 7513	METHOD: 3 1/4" HSA	SURFACING: Concrete	WEATHER: Clear & 50		
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1072.6		LEAN CLAY (CL), with Sand, trace Gravel, gray, moist, very stiff (GLACIAL TILL)					
43.0		CLAYEY SAND (SC), fine to medium-grained, trace Gravel, gray, moist, medium dense (GLACIAL TILL)	45	11-12-18 (30) 7"		20	
1067.6		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)	50	TW 22"	2.5		Gravel= 8% Sand= 26% Clay= 18% Silt= 47% LL=24, PL=17, PI=7
			55	8-17-10 (27) 8"		18	
			60	5-7-10 (17) 10"		21	
			65	15-23-24 (47) 9"		21	P200=61%
			70	5-5-9 (14) 10"		21	
			75	5-7-10 (17) 14"		18	LL=35, PL=14, PI=21
				13-11-14 (25) 10"		24	Gravel= 2% Sand= 30% Clay= 39% Silt= 30%

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See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5202					
					LOCATION: Station 236+01, Lt. 1					
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet					
					NORTHING: 7011569	EASTING: 16599508				
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/26/25		END DATE: 02/26/25				
SURFACE ELEVATION: 1115.6 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete		WEATHER: Clear & 50		
Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks			
		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)								
			85	4-6-10 (16) 16"		19				
			90	8-5-13 (18) 15"		24				
			95	7-10-15 (25) 13"		24				
			100	9-10-13 (23) 15"		22				
1012.6		SHALE, tan, moist, highly weathered, soft	105	33-50/1" (REF) 9"		23				
103.0							Auger met refusal at 108 feet			
1007.6		LIMESTONE, gray, moderately weathered, moderately hard to hard, very fine-grained, slightly fractured	110							
108.0										
1002.6		SHALE, dark gray, moist, moderately weathered, soft, unfractured	115	83	99				MC=6% q _u =153 tsf DD=152 pcf Groundwater level obscured due to mud rotary drilling method. MC=11% q _u =117 tsf DD=129 pcf	
113.0										
997.6		END OF CORING								
118.0										
Boring then backfilled with auger cuttings				RQD %	Recovery %	Drilling Rate (min/ft)	Bit Pressure (psi)	Water Pressure (psi)	Water Return %	Remarks

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5203		
					LOCATION: Station 236+52, Lt. 3		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011616	EASTING: 16599528	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/06/25	END DATE: 02/10/25		
SURFACE ELEVATION: 1115.6 ft		RIG: 7513	METHOD: 3 1/4" HSA	SURFACING: Concrete	WEATHER: Clear & 20		

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1114.8		CONCRETE					
0.8		AIR					
			5				
			10				
1105.3		Overburden soil, blind drilled to 13.5 feet					Started mud rotary at 10 feet.
10.3							
1102.1		SANDY SILT (ML), gray, moist, very soft (ALLUVIUM)	15	4-4-5 (9) 18"		39	
13.5							
			20	0-0-0 15"			Gravel= 0% Sand= 21% Clay= 18% Silt= 61%
			25	0-0-0 15"			
1087.6		POORLY GRADED SAND with SILT (SP-SM), fine to medium-grained, gray, wet, medium dense (ALLUVIUM)	30	5-5-7 (12) 18"			
28.0							
1082.6		CLAYEY SAND (SC), fine to medium-grained, with Gravel, gray, moist, medium dense to dense (GLACIAL OUTWASH)	35	28-33-14 (47) 10"		17	Gravel= 44% Sand= 42% Silt & Clay= 14%
33.0							
				12-11-11 (22) 8"			

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5203		
					LOCATION: Station 236+52, Lt. 3		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011616	EASTING: 16599528	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/06/25		END DATE: 02/10/25	
SURFACE ELEVATION: 1115.6 ft		RIG: 7513	METHOD: 3 1/4" HSA		SURFACING: Concrete		WEATHER: Clear & 20

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1062.6		CLAYEY SAND (SC), fine to medium-grained, with Gravel, gray, moist, medium dense to dense (GLACIAL OUTWASH)	45	4-10-14 (24) 5"			LL=36, PL=13, PI=23 Gravel= 5% Sand= 30% Clay= 30% Silt= 35%
			50	4-8-8 (16) 7"			
53.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)	55	4-4-7 (11) 7"			
60			4-6-10 (16) 6"				
65			4-5-8 (13) 15"		20		
70			5-6-9 (15) 13"				
75			5-9-20 (29) 10"				
			9-13-12 (25) 17"				

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5203		
					LOCATION: Station 236+52, Lt. 3		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011616	EASTING: 16599528	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/06/25		END DATE: 02/10/25	
SURFACE ELEVATION: 1115.6 ft		RIG: 7513	METHOD: 3 1/4" HSA		SURFACING: Concrete		WEATHER: Clear & 20

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, stiff to very stiff (GLACIAL TILL)					
			85	4-5-9 (14) 16"			
			90	5-6-10 (16) 13"			
			95	11-12-18 (30) 18"		21	LL=32, PL=15, PI=17 Gravel= 3% Sand= 19% Silt= 51% Clay= 27%
			100	13-12-10 (22) 16"			
1012.6							
103.0		SHALE, light brown, moist, decomposed, very soft	105	50/1" (REF) 6"			
1007.0							
108.6		END OF BORING	110	50/1" (REF) 4"			Water level obscured due to mud rotary drilling method.
		Boring then backfilled with auger cuttings	115				

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5204		
					LOCATION: Station 236+93, Lt. 2		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011653	EASTING: 16599345	
DRILLER: MB/AR		LOGGED BY: N. Techau		START DATE: 01/29/25		END DATE: 01/29/25	
SURFACE ELEVATION: 1115.6 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete WEATHER: Clear & 30	

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1115.4 0.2		CONCRETE FILL: FAT CLAY (CH), trace organic, dark brown, moist		4-6-8 (14) 9"			
			5	4-4-5 (9) 3"	3	26	
				TW 19"		32	LL=55, PL=21, PI=34 DD=88 pcf Gravel= 0% Sand= 1% Clay= 41% Silt= 58%
			10	2-2-3 (5) 15"			
1102.1 13.5		SANDY LEAN CLAY (CL), brown and gray, moist, medium to stiff (ALLUVIUM)	15	2-4-7 (11) 14"		27	Mud rotary started at 15 feet.
				TW 18"	2	29	DD=94 pcf
1095.6 20.0		CLAYEY SAND (SC), fine-grained, brown and gray, wet, very loose (ALLUVIUM)	20				
			25	1-1-2 (3) 10"		38	
1090.6 25.0		POORLY GRADED SAND (SP), fine to medium-grained, gray and brown, wet, loose (ALLUVIUM)		4-5-3 (8) 11"		29	Gravel= 0% Sand= 96% Silt & Clay= 4%
1083.6 32.0		POORLY GRADED SAND with CLAY (SP-SC), fine to medium-grained, brown and gray, wet, dense (GLACIAL OUTWASH)		11-15-22 (37) 10"		17	Gravel= 8% Sand= 85% Silt & Clay= 7%
1080.6 35.0		CLAYEY SAND (SC), fine to medium-grained, gray, moist, medium dense (GLACIAL TILL)		5-8-8 (16) 12"		18	

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5204		
					LOCATION: Station 236+93, Lt. 2		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011653	EASTING: 16599345	
DRILLER: MB/AR		LOGGED BY: N. Techau		START DATE: 01/29/25	END DATE: 01/29/25		
SURFACE ELEVATION: 1115.6 ft		RIG: 7513	METHOD: 3 1/4" HSA	SURFACING: Concrete	WEATHER: Clear & 30		

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1070.6		CLAYEY SAND (SC), fine to medium-grained, gray, moist, medium dense (GLACIAL TILL)		5-6-8 (14) 10"			LL=36, PL=14, PI=22 P200=34%
45.0		SANDY LEAN CLAY (CL), with Sand, gray, moist, very stiff to hard (GLACIAL TILL)	45				
			50	8-16-20 (36) 10"		19	
			55	9-15-20 (35) 14"		18	
			60	11-9-14 (23) 14"		21	LL=34, PL=13, PI=21 Gravel= 6% Sand= 28% Clay= 30% Silt= 36%
			65	27-22-18 (40)		23	
			70	4-10-23 (33) 16"		22	LL=36, PL=14, PI=22 P200=60%
			75	5-7-10 (17) 16"		21	
				8-9-11 (20) 16"		21	

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: BR5204		
					LOCATION: Station 236+93, Lt. 2		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011653	EASTING: 16599345	
DRILLER: MB/AR		LOGGED BY: N. Techau		START DATE: 01/29/25		END DATE: 01/29/25	
SURFACE ELEVATION: 1115.6 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete WEATHER: Clear & 30	

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
		SANDY LEAN CLAY (CL), with Sand, gray, moist, very stiff to hard (GLACIAL TILL)					
			85	5-7-9 (16) 16"		23	LL=38, PL=14, PI=24 Gravel= 2% Sand= 28% Clay= 37% Silt= 34%
			90	5-7-10 (17)		21	
			95	8-12-14 (26)		21	
			100	9-14-16 (30)			
1012.6							
103.0		SHALE, light brown, moist, highly weathered	105	50/6" (REF) 8"			Water level obscured due to mud rotary drilling method.
1011.6		END OF BORING					
104.0		Boring then backfilled with auger cuttings					
			110				
			115				

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: SB5201		
					LOCATION: Station 235+45, Rt. 20		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011510	EASTING: 16599503	
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/04/25		END DATE: 02/06/25	
SURFACE ELEVATION: 1115.0 ft		RIG: 7513	METHOD: 3 1/4" HSA		SURFACING: Asphalt		WEATHER: Clear & 16

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1112.0		FILL: FAT CLAY (CH), trace Sand, dark brown, moist		4-5-6 (11) 7"			
3.0		FILL: FAT CLAY (CH), trace Sand, dark gray, moist	5	4-5-7 (12) 10"		35	
1107.0				3-3-4 (7) 5"		28	
8.0		LEAN CLAY (CL), with to trace Sand, dark gray, moist, medium to stiff (ALLUVIUM)	10	4-3-7 (10) 10"		24	Switched to mud rotary at 10 feet
			15	TW 22"			
			20	1-3-5 (8) 11"		32	
			25	TW 8"			
1088.0		POORLY GRADED SAND with CLAY (SP-SC), fine to coarse-grained, gray and brown, wet, loose to medium dense (ALLUVIUM)	30	4-4-5 (9) 7"			P200=12%
27.0			35	17-10-8 (18) 5"		13	
1077.0		CLAYEY GRAVEL with SAND (GC), gravelly, gray, moist, medium dense (GLACIAL TILL)		5-10-7 (17) 6"		17	LL=40, PL=17, PI=23 Gravel= 33%
38.0							

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Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: SB5201			
					LOCATION: Station 235+45, Rt. 20			
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet			
					NORTHING: 7011510	EASTING: 16599503		
DRILLER: MB/AR		LOGGED BY: R. Gabler		START DATE: 02/04/25	END DATE: 02/06/25			
SURFACE ELEVATION: 1115.0 ft		RIG: 7513	METHOD: 3 1/4" HSA	SURFACING: Asphalt	WEATHER: Clear & 16			
Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)		Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1070.0 45.0		CLAYEY GRAVEL with SAND (GC), gravelly, gray, moist, medium dense (GLACIAL TILL)		45	4-8-9 (17) 13"		17	Sand= 21% Clay= 19% Silt= 27%
		END OF BORING						Water observed at 24.0 feet while drilling.
		Boring then backfilled with auger cuttings						
				50				
				55				
				60				
				65				
				70				
				75				

Project Number B2411087 Geotechnical Evaluation US 59 over Stream Bridge Replacement Pottawattamie, Iowa					BORING: SB5202		
					LOCATION: Station 237+28, Rt. 22		
					DATUM: NAD 1983 StatePlane Iowa South FIPS 1402 Feet		
					NORTHING: 7011667	EASTING: 16599569	
DRILLER: MB/AR		LOGGED BY: N. Techau		START DATE: 01/31/25		END DATE: 01/31/25	
SURFACE ELEVATION: 1115.4 ft		RIG: 7513		METHOD: 3 1/4" HSA		SURFACING: Concrete WEATHER: Clear & 30	

Elev./Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q _p tsf	MC %	Tests or Remarks
1113.9		CONCRETE					
1.5		FILL: LEAN CLAY (CL), trace Sand, dark brown, moist		7-6-7 (13) 7"		28	
1110.4		FILL: FAT CLAY (CH), trace Sand, gray to dark gray, moist	5	7-4-3 (7) 4"			
5.0				TW 7"		34	LL=57, PL=27, PI=30 Gravel= 1% Sand= 5% Clay= 33% Silt= 62%
			10	4-5-4 (9) 9"			
1100.4		SILT (ML), with Sand, brown, moist, stiff (ALLUVIUM)	15	3-3-4 (7) 12"		27	
1095.4				TW 21"			
20.0		POORLY GRADED SAND (SP), fine to medium-grained, brown, moist, loose to very loose (ALLUVIUM)	20				
			25	3-4-5 (9) 10"			P200=5% Switched to mud rotary at 25 feet
1085.4			30	3-1-1 (2) 9"		24	
30.0		POORLY GRADED SAND (SP), fine to medium-grained, with Gravel, gray, moist, medium dense (GLACIAL OUTWASH)					
1080.4			35	7-10-14 (24) 8"		14	
35.0		SANDY LEAN CLAY (CL), with Gravel, gray, moist, very stiff (GLACIAL TILL)					
1075.4				9-12-12 (24) 11"			LL=31, PL=14, PI=17
40.0							

Continued on next page

See Descriptive Terminology sheet for explanation of abbreviations

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