KANSAS DEPARTMENT OF TRANSPORTATION

1. ROUTE-COUNTY NO. 75-89	7. SOUNDING NO. Core 1	12. SHEET 1 OF 3
2. BRIDGE STA. 170+92.25	8. PROJECT NO. K-668-01	13. BRIDGE NO. 75-89-22.39(601) SB 75-89-22.40(602) NB
3. DESCRIPTION US-75 over 46th Street		14. HOLE STA. 168+78.75, 120 ft Rt ℄
4. GEOLOGIST Chad Timken Randy Billinger	9. VERTICLE SCALE 1"=10'	15. DATE 8-22-00
5. DRILLER Rob Vervynck	10. RIG Mobile B-61	16. ELEVATION TOP OF HOLE 969.91
6. GROUND WATER ELEV. 965.41	11. TOTAL DEPTH OF HOLE 55.0 ft.	17. ELEVATION TOP OF ROCK 961.51

BIT TYPE & NO.	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION tsf	STANDARD PENETRATION OR CASING DRIVE BLOWS	ELEV.
			0.0	969.91				
	Mantle		8.4	961.51	Silty clay.			
	White Cloud Shale Member	Core 1, Core 2, Core 3	21.3	948.61	Sandstone, shaly, orangish grading to gray.	16.5	Sample 1	959.31
						35.1	Sample 2	950.71
		Core 4, Core 5, Core 6, Core 7, Core 8, Core 9, Core 10, Core 11			Shale, gray, sandy grading to clayey.	27.9	Sample 3	944.01
						31.7	Sample 4	942.11
					Thin limestone lenses 0' foot thick at 935.71, 931.6, & 929.3.	23.0	Sample 5	933.01
						14.0	Sample 6	928.31
						11.3	Sample 7	925.11
						15.2	Sample 8	917.31
			55.0	914.91	Total Depth Stop in Shale.			

960
950
940
930
920
910

US-75 over 46th Street.

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	Elevation	Depth	
Core Hole #1	969.91	0.00	Silty clay.
Sta. 168+78.75	961.51	8.40	Shale, weathered, tannish-brown.
120 ft. Rt. Project C.L.	960.91	9.00	Start coring.
Water Level 4.5 ft.			
Water Elevation 965.41			
Date Drilled 08/22/2000			
Core # 1	960.91	9.00	Sandstone, shaly, yellow-orange.
9.0 to 13.3 ft.			Some ironstone concretions.
Cut 4.3 ft.	956.61	13.30	End core 1.
Recovered 4.3 ft.			
RQD = 33%			Sample 1 9.9 to 10.5 Sandstone, yellow-orange.
Core # 2	956.61	13.30	Sandstone, thin shale partings, yellow-orange.
13.3 to 17.3 ft.	956.11	13.80	Sandstone, thin shale partings, gray.
Cut 4.0 ft.	953.41	16.50	Lost. Sandstone, gray.
Recovered 3.2 ft.	952.61	17.30	End core 2.
RQD = 10% of recovered core.			
Core # 3	952.61	17.30	Sandstone with thin shale partings, gray.
17.3 to 21.3 ft.	951.31	18.60	Sandstone, shaly, gray.
Cut 4.0 ft.	948.61	21.30	End core 3.
Recovered 4.0 ft.			
RQD = 50%			
			Sample 2 18.6 to 19.2 Sandstone, gray, shaly.
Core # 4	948.61	21.30	Shale, sandy, gray.
21.3 to 26.7	943.21	26.70	End core 4
Cut 5.4 ft.			
Recovered 5.0 ft.			
RQD = 78%			Sample 3 25.1 to 25.9 Shale, sandy, gray.
Core # 5	943.21	26.70	Shale, gray.
26.7 to 31.7	938.21	31.70	End core 5.
Cut 5.0 ft.			
Recovered 5.0 ft.			
RQD = 88%			Sample 4 27.2 to 27.8 Shale, gray.

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Core # 6	938.21	31.70	Shale, gray.
31.7 to 35.9	935.71	34.20	Limestone, light gray.
Cut 4.2 ft.	935.61	34.30	Shale, gray.
Recovered 4.0 ft.	934.01	35.90	End core 6.
RQD = 69%			
Core # 7	934.01	35.90	Shale, dark gray.
35.9 to 38.3	931.61	38.30	End core 7.
Cut 2.4 ft.			
Recovered 2.4 ft.			Sample 5 36.3 to 36.9 Shale, gray.
RQD = 79%			
Core # 8	931.61	38.30	Limestone, gray-brown.
38.3 to 42.8	931.51	38.40	Shale, gray.
Cut 4.5 ft.	929.31	40.60	Limestone, gray-brown.
Recovered 4.5 ft.	929.21	40.70	Shale, gray.
RQD = 76 %	927.11	42.80	End core 8.
			Sample 6 41.0 to 41.6 Shale, gray.
Core # 9	927.11	42.80	Shale, dark gray.
42.8 to 45.0	924.91	45.00	End core 9.
Cut 2.2 ft.			
Recovered 2.2 ft.			
RQD = 91 %			Sample 7 44.2 to 44.8 Shale, gray.
Core # 10	924.91	45.00	Shale, gray.
45.0 to 50.0	920.21	49.70	Limestone, gray-brown.
Cut 5.0 ft.	920.01	49.90	Shale, gray.
Recovered 4.9 ft.	919.91	50.00	End core 10.
RQD = 80 %			
			Sample 8 52.0 to 52.6 Shale, gray.
Core # 11	919.91	50.00	Shale, gray.
50.0 to 55.0	919.41	50.50	Fell out of core barrel.
Cut 5.0 ft.	914.91	55.00	End core 11. Total depth.
Recovered 0.5 ft.			

Kansas Department of Transportation

Report of sample of geology cores

Laboratory No. 00-3503

Date Reported. September 1, 2000

Date Received. August 23, 2000

Specification No -- Quantity ---

Source of material Project

Sample from Project

Submitted by Delmar Thompson, Lawrence Regional Geology Office

Identification marks Tags with Samples

Project or POV 75-89 K-6680-01

Type of construction Bridge foundation US-75 over 46th Street Core Hole 1

TEST RESULTS

Sample No.	Station	℄ Dist. f	Depth f	Description	tsf	Qu. kPa	Dry Unit Weight kg/m³	lbs/ft³	Moisture (% of Dry Wt.)
				T.H.E.= N/A					
S-1	168+78.75	120 Rt.	9.9-10.6	Sandstone, yellowish-orange	16.5	1580.4	1907	119	14.2
S-2	"	"	18.6-19.2	Sandstone, shaley, med. gray	35.1	3363.5	2176	135.8	9.2
S-3	"	"	25.1-25.9	Sandy shale, med. gray	27.9	2673.4	2099	131.0	10.7
S-4	"	"	27.2-27.8	Shale, medium gray	31.7	3033.4	2121	132.4	10.4
S-5	"	"	36.3-36.9	Shale, medium gray	23.0	2202.5	2090	130.5	11.2
S-6	"	"	41.0-41.6	Shale, gray	14.0	1332.9	2048	127.8	12.0
S-7	"	"	44.2-44.8	Shale, gray	11.3	1086.3	2052	128.1	12.2
S-8	"	"	52.0-52.6	Shale, medium gray	15.2	1456.8	2039	127.3	12.6

cc: L.S. Ingram
G.R. Koontz
D. Thompson
J.J. Brennan
Soil Section
File
18-3

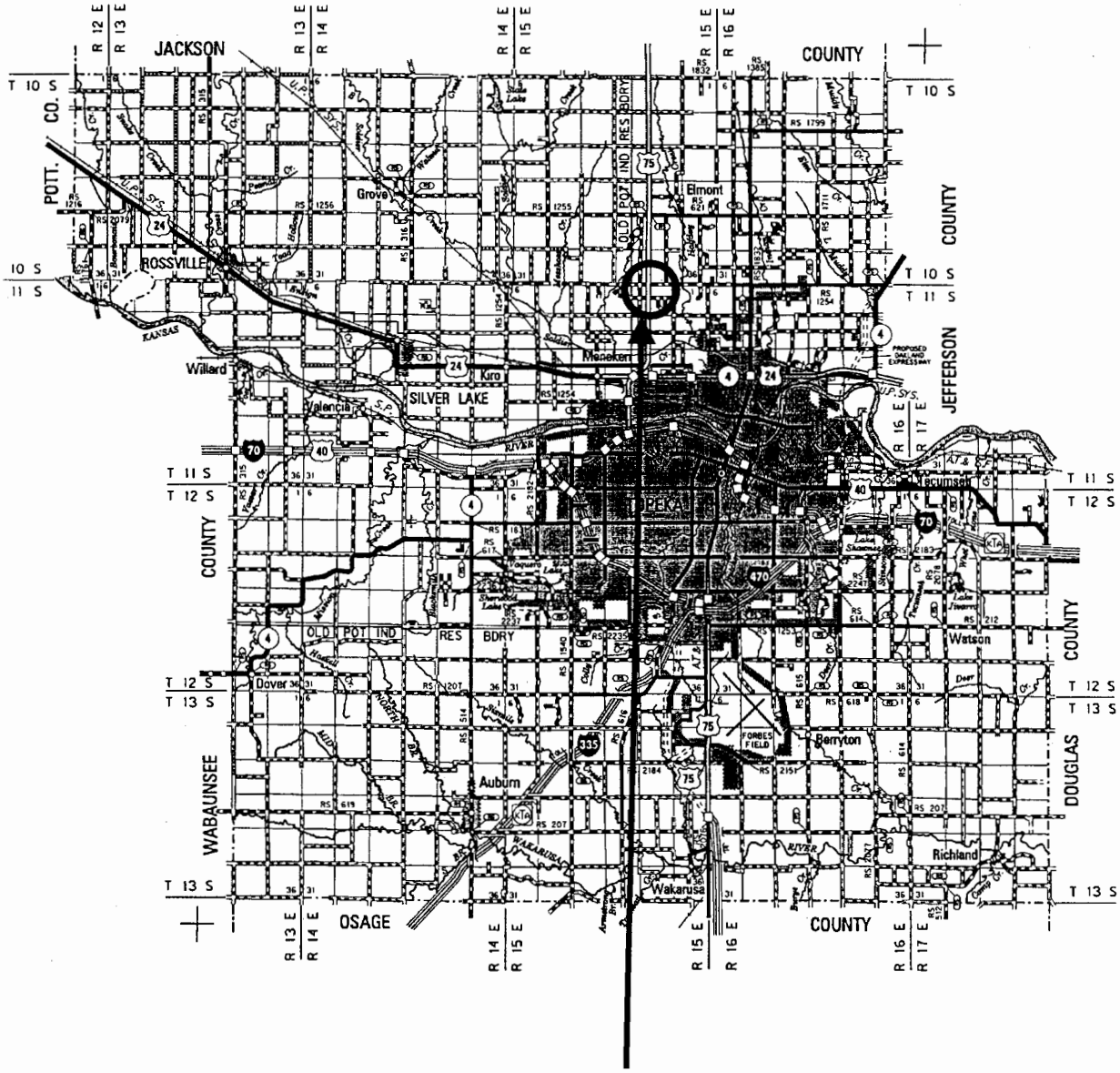
Reported by: [illegible]

Title James J. Brennan, Soils Engineer

Rev. 3-76

D.O.T. Form 623

2CA1



Project No. 75-89 K-6680-01
US-75 over 46th Street
Shawnee County

Sec. 35 T 10S R 15E

Sec 2 T 11S R 15E