

KANSAS DEPARTMENT OF TRANSPORTATION



ROUTE-COUNTY NO. 75-89	SOUNDING NO. CD #1	SHEET 1 OF 2
BRIDGE STA. 182+28.50	PROJECT NO. K-7317-01	BRIDGE NO. 75-89-03.47 (269)
DESCRIPTION SB US-75 over BNSF Railway	HOLE STA. 182+88.85	Project 2
GEOLOGIST Randy Billinger	VERTICLE SCALE 1"=5'	DATE 5-22-2000
DRILLER Rob Vervynck	RIG Mobile B-61	ELEVATION TOP OF HOLE 1004.04
GROUND WATER ELEV. 999.04	TOTAL DEPTH OF HOLE 51.50	ELEVATION TOP OF ROCK 998.14

BIT TYPE & NO.	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION +5F	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV.
	Montle		0°	1004.04	Soil mantle. Silty clay, brown. Casing set to 5'.			
			5°	998.14				
	Severy Shale Fm	Core 1	12.4	991.64	Sandstone, shaly, weathered. Brown, yellow-brown Cross-bedded.	9.53		993.64
		Core 2		990	Sandstone, gray, shaly zones. Cross-bedded. Firm. Fine grained.	82.35		989.74
		Core 3		985		78.42		985.64
		Core 4	22.90	981.14				
			24.80	980	Sandstone, gray, coarse grained, hard	129.97		980.24
	Coal Creek LS. Mbr.	Core 5			Limestone, gray, shaly. shale break near the middle.	15.41		978.04
			28.80	975				
	Holt Sh. Mbr.	Core 6	30.4	973.64	Shale, black, fissile.	28.65		974.34
	DuBois LS. Mbr.	Core 7	33.20	970.84	Limestone & limy shale, gray.			
			35.00	970				
	Turner Creek Mbr.			969.04	Shale, gray, limy.			
	Sheldon LS Mbr.		37.5	966.54	Limestone. Upper part hard, light gray white. Lower part becoming shaly & gray-green.	302.34		966.34

NE 75-13-15E

DRILLING LOG (con't sheet)		SOUNDING NO. <u>CD 1</u>		PROJECT NO. <u>K-7317-01</u>		SHEET <u>2</u> OF <u>2</u>		
ELEVATION TOP OF HOLE <u>1004.04</u>		GROUND WATER ELEV. <u>999.04</u>		TOTAL DEPTH OF HOLE <u>51.50</u>		ELEVATION TOP OF ROCK <u>998.14</u>		
BIT TYPE & NO.	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV.
	Jones Point shale Mbr.	Core 8	37 ⁵	966 ⁵⁴	Shale, gray-green.			
			41 ⁵⁰	962 ⁵⁴				
	Curzon Ls. Mbr.	Core 9	42 ⁶	961 ⁴⁴	Limestone, gray, hard.	156.70	961 ⁶⁴	
			44 ⁴	960	Limestone, shaly, gray.			
		Core 10			Limestone, gray, hard.	307.19	957 ²⁴	
			49 ⁵⁰	955				
	Iowa Pt. Sh. Mbr.	Core 10	50 ⁶⁰	953 ⁴⁴	Shale, limy, dark gray.			
	Hartford Ls. Mbr.		51 ⁵⁰	952 ⁵⁴	Limestone, hard, gray.			

Southbound US-75 over BNSF Railway Bridge # 75-89-03.47 (269)
Shawnee County, Topeka

	<u>Elevation</u>	<u>Depth</u>	
Core Hole #1	1004.04	0.00	Casing set to 5.9 feet.
Sta. 182+88	998.14	5.90	Strated weathered sandstone, tan.
85 ft. lt. Project C.L.	997.04	7.00	Begin coring in sandstone. Severy Shale FM.
Water Level 5.0 ft.			
Water Elevation 999.04			
Date Drilled 05/22/2000			
Core # 1	997.04	7.00	Sandstone, cross-bedded, shaly, yellow-brown.
7.0 to 12.0	994.84	9.20	Sandstone, cross-bedded, yellow-brown, turning gray.
Cut 5.0	993.34	10.70	Sandstone, cross-bedded, yellow-brown, more gray.
Recovered 5.0	992.04	12.00	End core 1.
RQD = 4.5/5.0 = 90%			
			Sample 1 9.8 to 10.4 Sandstone, shaly, brown/gray.
Core # 2	992.04	12.00	Sandstone, brown, cross-bedded.
12.0 to 17.0	991.64	12.40	Sandstone, gray. Severy Shale FM.
Cut 5.0	987.04	17.00	End core 2.
Recovered 5.0			
RQD = 4.0/5.0 = 80%			Sample 2 13.8 to 14.3 Sandstone, gray, firm.
Core # 3	987.04	17.00	Sandstone, gray, firm. Severy Shale FM.
17.0 to 20.3	983.74	20.30	End core 3
Cut 3.3			
Recovered 2.7			
RQD = 100%			Sample 3 17.8 to 18.4 Sandstone, gray, firm.
lost 0.6			
Core # 4	983.74	20.30	Sandstone, shaly, gray, firm.
20.3 to 24.2	982.04	22.00	Sandstone, gray, firm. Severy Shale FM.
Cut 3.9	981.14	22.90	Sandstone, coarser, hard, gray.
Recovered 3.9	979.84	24.20	End core 4.
RQD = 83%			
			Sample 4 23.3 to 23.8 Sandstone, gray, hard.
Core # 5	979.84	24.20	Sandstone, coarser, hard, gray. Severy Shale FM.
24.2 to 28.2	979.24	24.80	Shale, gray, firm. Coal Creek Mbr.
Cut 4.0	978.84	25.20	Limestone, gray, shaly, fossiliferous.
Recovered 4.0	976.24	27.80	Shale, gray, firm.
RQD = 90%	976.04	28.00	Limestone, gray, shaly, fossiliferous.
	975.84	28.20	End core 5.
			Sample 5 25.6 to 26.0 Limestone.

Southbound US-75 over BNSF Railway Bridge # 75-89-03.47 (269)
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Core # 6	975.84	28.20	Limestone, gray, shaly, fossiliferous.	Coal Creek Mbr.
28.2 to 33.2	975.24	28.80	Shale, black, fissile.	Holt Mbr.
Cut 5.0	973.64	30.40	Limestone, gray, hard.	Du Bois Mbr.
Recovered 5.0	972.64	31.40	Limestone, shaly, muddy, gray.	
RQD = 4.3/5.0 = 86%	972.04	32.00	Shale, limy, gray.	
	970.94	33.10	Limestone, platy.	
	970.84	33.20	End core 6.	

Sample 6 29.2 to 29.7 Shale, black, fissile.

Core # 7	970.84	33.20	Shale, gray.	Turner Creek Mbr.
33.2 to 38.2	969.04	35.00	Limestone, light gray/white, hard.	Sheldon Mbr.
Cut 5.0	967.14	36.90	Limestone, shaly, gray-green.	
Recovered 4.8	966.54	37.50	Shale, gray-green.	Jones Point Mbr.
RQD = 86%	965.84	38.20	End core 7.	
lost 0.3 off top				

Sample 7 35.2 to 35.7 Limestone, light gray/white.

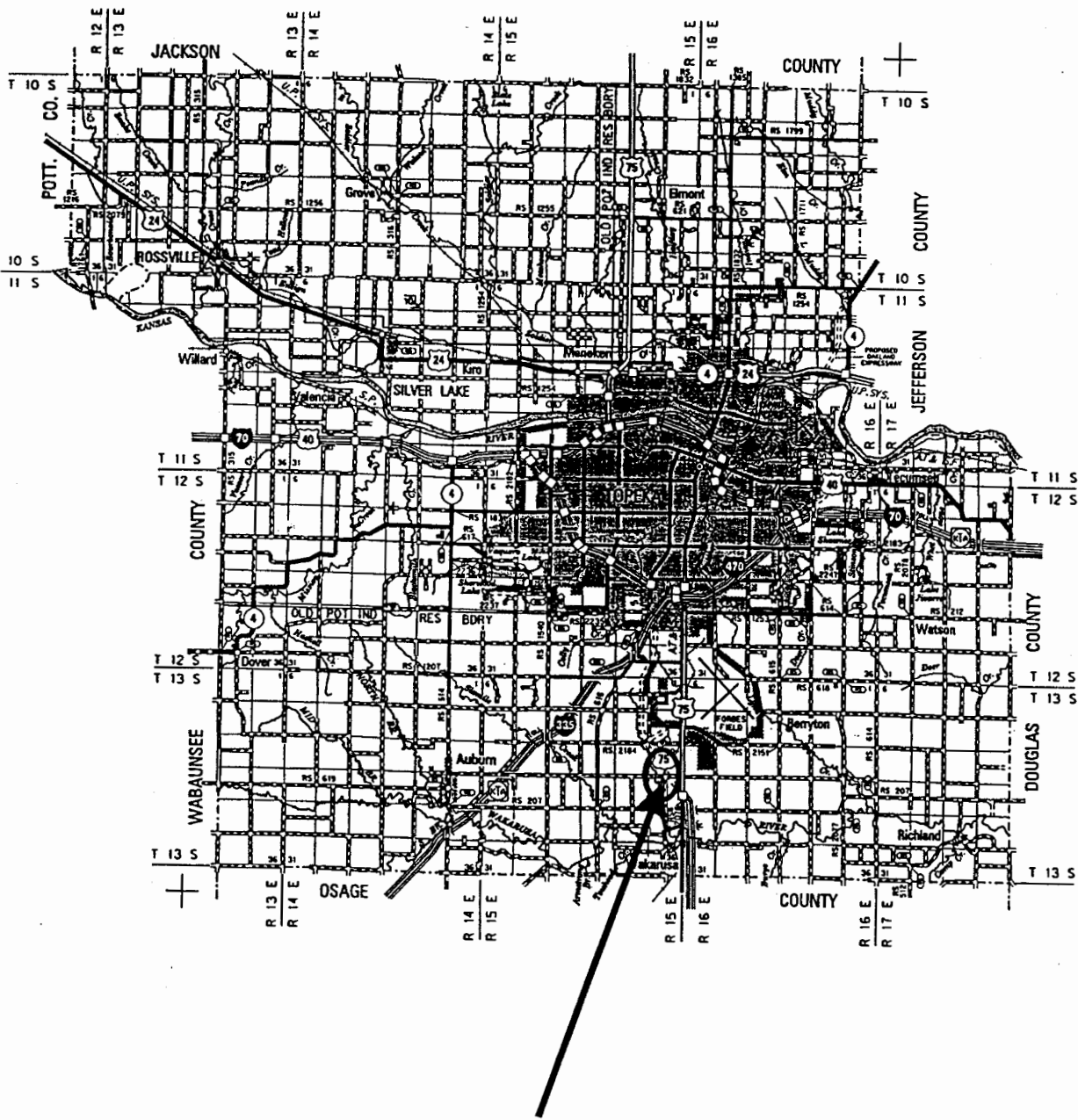
Core # 8	965.84	38.20	Shale, clayey, gray-green.	Jones Point Mbr.
38.2 to 43.0	962.54	41.50	Limestone, gray, hard.	Curzon Mbr
Cut 4.8	961.44	42.60	Limestone, shaly, very fossiliferous.	
Recovered 4.8	961.04	43.00	End core 8.	
RQD = 4.3/4.8 = 90%				

Sample 8 41.9 to 42.4 Limestone, gray.

Core # 9	961.04	43.00	Limestone, shaly, very fossiliferous.	
43.0 to 47.8	959.64	44.40	Limestone, hard, gray, fossiliferous.	
Cut 4.8	956.24	47.80	End core 9.	
Recovered 4.8				
RQD = 4.6/4.8 = 96%				

Sample 9 45.7 to 46.3 Limestone, hard, gray.

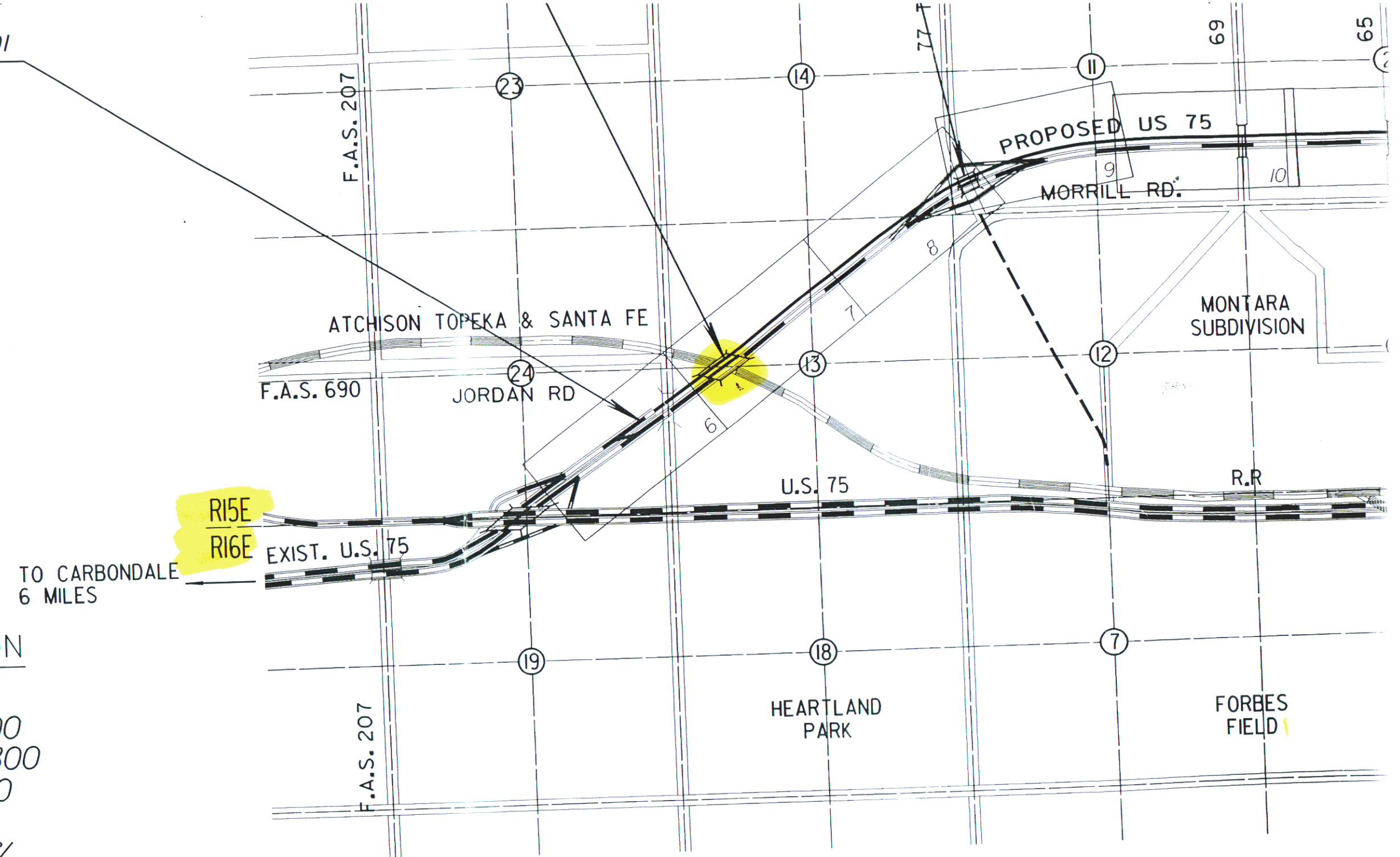
Core # 10	956.24	47.80	Limestone, hard, gray.	Curzon Mbr.
47.8 to 51.5	954.54	49.50	Shale, limy, very fossiliferous.	Iowa Point Mbr.
Cut 3.7	954.14	49.90	Shale, clayey, dark gray.	
Recovered 3.7	953.44	50.60	Limestone, hard, gray.	Hartford Mbr.
RQD = 2.9/3.7 = 78%	952.54	51.50	End core 10. End core hole 1.	
			Total depth. Stopped on limestone.	



Project 75-89 K-7317-01
 Bridge No. 75-89-03.47 (269)
 Southbound US-75 over the BNSF Railway
 Shawnee County

Sec. 25 - T 13 S - R 15 E

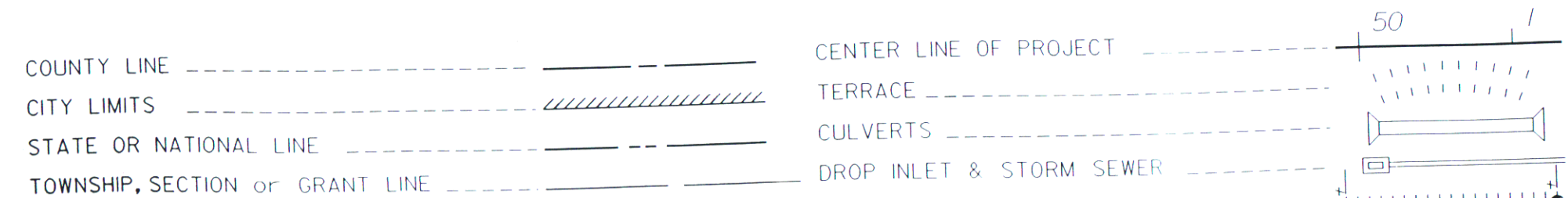
Sta. 165+00.00 on
 Proj. 75-89 K-3371-01



DESIGN DESIGNATION

AADT 1995	8,000
AADT 2015	13,800
DHV	1520
D	60%
T	5.5%
V	70 MPH
C of A	Full
Clear Zone	30

CONVENTIONAL SIGNS



TBS

GROSS LENGTH OF PROJECT 29,300

EXCEPTIONS	C
ADDITIONS	C