

KANSAS DEPARTMENT OF TRANSPORTATION



1. ROUTE-COUNTY NO. 004-089	7. SOUNDING NO. CD No 1	8. SHEET 1 OF 1
2. BRIDGE STA. 51+42	4. PROJECT NO. K-6252-01	6. BRIDGE NO. 70-89-19.92(000)
3. DESCRIPTION CROCO ROAD OVER I-70		9. HOLE STA. 48+62, 48 RT E
5. GEOLOGIST R. BILLINGER	2. VERTICLE SCALE 1" = 10'	10. DATE 5-12-97
5. DRILLER H. SUNDERLAND	11. RIG MOBILE - B-61	12. ELEVATION TOP OF HOLE 1000.8
6. GROUND WATER ELEV. 980.9	13. TOTAL DEPTH OF HOLE 53.1	14. ELEVATION TOP OF ROCK 989.5

BIT TYPE & NO.	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV.
					TOP HOLE ELEV. = 1000.8			
4" CASING	MANTLE JONES POINT SH MBR		11.3	990	CLAY, DARK BROWN TO TAN-YELLOW, SILTY			
			13.2	987.5	987.5 SHALE, YEL-TAN TO GRY-GRN, WTHD	101.703		
	TOPEKA LS. FM CURZON LS MBR		22.0	980	LIMESTONE, GRY, HARD, MASSIVE FOSSILIFEROUS, WEATHERED TO BRN COLOR AT TOP	80.994		
			23.0	977.8	977.8 SHALE, GRY LIMEY FIRM	102.623		
			27.7	973.1	LIMESTONE, GRY, HARD, MASSIVE	13.900		
				970	973.1	90.975		
				970	SHALE, DRK GRY, FIRM	35.094		
				970	SANDY W/ SS BEDS	33.701		
				969.5 to 968.7, 965.4 to 962.0	⊕ 969.5 to 968.7, 965.4 to 962.0	26.484		
				960	⊕ 955.1 to 952.0	49.613		
				960	COAL STRAK @ 972.1	68.209		
				950		32.296		
				950		61.603		
				950		12.657		
				950		21.345		
				950		36.774		
			53.1	947.7	947.7 TD.			

CORE DESCRIPTION

PROJECT 4-89 K-6252-01
BRIDGE NO. 70-89-19.92 (000)
CROCO ROAD OVER I-70
SHAWNEE COUNTY

5-12-97 CORE DRILL NO 1

TOP HOLE ELEV. = 1000.8

STATION 48+62, 48' RT \perp CROCO ROAD

ABUTMENT # 1 - RT

WATER LEVEL = 980.9

PUSHED CASING TO 13⁰

1000.8 0⁰-11³ MANTLE

989.5 11³-12³ SHALE, VERY WEATHERED, SOFT

988.5 12³-13¹ SHALE, SLIGHTLY FIRMER, YEL-TAN TO GRY-GRN

987.7 13¹ TO SIS

CORE No 1 987.7 13¹-13² SHALE, GRY-GRN, WITHD. (JONES POINT)

13¹-18¹ 987.6 13²-14⁹ LS, BRN TO GRY-BRN, WITHD. BUT HARD

CUT 5⁰ 985.9 14⁹-18¹ LS, GRAY, HARD, MASSIVE, FOSSILIFEROUS

REC 5⁰ 982.7 18¹ TO SIS (CURZON)

RQD = 100%

CORE No 2 982.7 18¹-22⁰ LS, HARD, GRY, MASSIVE, NO BREAKS (CURZON)

18¹-23¹ 978.8 22⁰-22³ SHALE, GRAY FIRM (IOWA POINT)

CUT 5⁰ 978.0 22⁸-23⁰ SHALE, GRAY, LIMEX

REC 5⁰ 977.8 23⁰-23¹ LS, GRAY, HARD (HARTFORD)

RQD = 100%

CORE No 3 977.7 23¹-27² LS, GRAY, HARD, MASSIVE (NO BREAKS) (HARTFORD)

23¹-28¹ 973.6 27²-27⁷ LS, DRK-GRY, HARD, MASSIVE, SHALEY, FOSSIL.

CUT 5⁰ 973.1 27⁷-28¹ SHALE, DRK GRY, VERY FIRM (CALHOUN)

REC 5⁰ 972.7 28¹ TO SIS

RQD = 100%

CORE DESCRIPTION		PROJECT 7-89 K-6252-01	
CD No 1 CONT:		BRIDGE NO 70-89-19.92 (000)	
		CROCO RD OVER I-70	
		SHAWNEE COUNTY	
CORE No 4	972.7 28 ¹ -28 ⁷	SHALE, DARK GRY, VERY FIRM	(CALHOUN)
28 ¹ -33 ¹	972.1 28 ⁷ -28 ⁸	COAL BED, BLK	
CUT 5°	972.0 28 ⁸ -29 ⁴	SHALE, DRK GRY	
REC 5°	971.4 29 ⁴ -31 ³	SHALE, DRK GRY, SANDY	
RQD=100%	969.5 31 ³ -32 ¹	SS, SHALEY, GRY	
	968.7 32 ¹ -33 ¹	SHALE, VERY SANDY	
	967.7 33 ¹ -TD	S/S	
CORE No 5	967.7 33 ¹ -34 ³	SHALE, VERY SANDY, DRK GRY	
33 ¹ -38 ¹	966.5 34 ³ -35 ⁰	SHALE, DRK GRY, SILTY	
CUT 5°	965.8 35 ⁰ -35 ⁴	SHALE, VERY SANDY W/ INCREASE IN SAND AT BASE	
REC 5°	965.4 35 ⁴ -37 ⁷	SS, GRY MICACEOUS	
RQD=88%	963.1 37 ⁷ -38 ⁰	SS, W/ SHALEY LENSES	
	962.8 38 ⁰ -38 ¹	SS, HARD	
	962.7 38 ¹ -TD	S/S	
CORE No 6	962.7 38 ¹ -38 ⁸	SS, HARD	(CALHOUN)
38 ¹ -43 ¹	962.0 38 ⁸ -43 ¹	SHALE, SANDY, DARK GRY	
CUT 5°	957.7 43 ¹ -TD	S/S	
REC 5°			
RQD=100%			
CORE No 7	957.7 43 ¹ -43 ⁷	SHALE, SANDY	
43 ¹ -48 ¹	957.1 43 ⁷ -44 ⁴	SHALE, MINOR SAND	
CUT 5°	956.4 44 ⁴ -44 ⁵	LS STRINGER, GRY	
REC 5°	956.3 44 ⁵ -45 ⁷	SHALE, DRK GRY	
RQD=100%	955.1 45 ⁷ -48 ¹	SS, SHALEY, GRY	
	952.7 48 ¹ -TD	S/S	
CORE No 8	952.7 48 ¹ -48 ⁸	SANDSTONE	
48 ¹ -53 ¹	952.0 48 ⁸ -53 ¹	SHALE, DRK GRY, PLATEY	
CUT 5°	947.7 53 ¹ -TD	S/S	(CALHOUN)
REC 4°			
RQD=88%			

TD = 53¹ = 9477

CORE DATA

PROJECT 4-89K-6252-01
 BRIDGE No 70-89-19.92 (000)
 CROCO ROAD OVER I-70
 SHAWNEE COUNTY

6-1-97 CORE DRILL No 1 TOP HOLE ELEV. = 1000.8

STA 48+62, 48' RT & CROCO ROAD

ABUT #1-RT

CORE #	DEPTH	ELEV	CUT	REC	%	RQD
1	13'	987.7	5°	5°	100	100
2	18'	982.7	5°	5°	100	100
3	23'	977.7	5°	5°	100	100
4	28'	972.7	5°	5°	100	100
5	33'	967.7	5°	5°	100	88
6	38'	962.7	5°	5°	100	100
7	43'	957.7	5°	5°	100	100
8	48'	952.7	5°	4°	94	88
TOTAL	53'	947.7	40°	39°	99	

DATE 6/2/97

PROJECT 4-89 K-6252-01

BRIDGE NO. 70-89-19.92(001)

CROCO ROAD OVER I-70

SHAWNEE COUNTY

CORE SAMPLE DEPTHS & ELEVATIONS

LAB NO 97-1619

CD NO 1 STA 48+62, 48' RT & CROCO ROAD

TOP HOLE ELEV: 1000.8

SAMPLE NO.	ELEVATIONS	DEPTH	BU T.S.F.
S # 1	987.4 - 986.4	13 ^H - 14 ^L	101.703
S # 2	984.6 - 983.9	16 ^L - 16 ^S	80.494
S # 3	981.2 - 980.2	19 ^L - 20 ^L	102.623
S # 4	978.8 - 978.3	22 ^L - 22 ^S	13.900
S # 5	977.0 - 976.1	23 ^S - 24 ^L	90.975
S # 6	971.9 - 971.4	28 ^L - 29 ^S	35.094
S # 7	969.2 - 968.2	31 ^L - 32 ^L	33.701
S # 8	966.3 - 965.8	34 ^S - 35 ^L	26.484
S # 9	964.6 - 964.0	36 ^L - 36 ^S	49.613
S # 10	961.8 - 961.0	39 ^S - 39 ^S	68.209
S # 11	958.4 - 957.9	42 ^L - 42 ^L	32.296
S # 12	956.2 - 955.7	44 ^L - 45 ^L	61.603
S # 13	953.9 - 953.2	46 ^S - 47 ^L	12.657
S # 14	951.6 - 950.9	49 ^S - 49 ^S	21.345
S # 15	949.2 - 948.3	51 ^L - 52 ^S	36.774

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology Cores

Laboratory No. 97-1619

Date Rep'td. May 21, 1997

Date Rec'd. May 15, 1997

Specification No. AASHTO T 208-92 Quantity - - -

Source of material Project

Sample from Project

Submitted by Delmer Thompson, Lawrence Geology Office

Identification marks Tags with samples

Project or POV 004-089 K6252-01, Shawnee County, District 1

Type of construction Bridge # 19.92, CrocoRd. over I-70, core hole # 1 at Abut. # 1

TEST RESULTS

Sample No.	Station	Dist.ft. CL	Depth ft.	Description	Qu. t.s.f.	Sample p.c.f. by Dry Wt.	Moisture (% of Dry Wt.)
1	48+62	48 Rt.	134-144	LS, Weathered	101.703	154.6	4.0
2	"	"	162-169	LS, gray, hard	80.994	153.5	3.8
3	"	"	196-206	LS, gray, massive	102.623	156.2	2.8
4	"	"	220-225	Sh, gray, firm	13.900	129.1	10.4
5	"	"	238-247	LS, Lt. gry, massive	90.975	157.8	2.5
6	"	"	2885-2945	SH, Dk. gray	35.094	134.7	9.6
7	"	"	3195-3255	SH, Sandy, gray	33.701	129.8	10.0
8	"	"	345-350	SH, Silty, Dk. gry.	26.484	133.7	9.0
9	"	"	3615-3675	Sandstone	49.613	119.3	16.4
10	"	"	390-398	SH, Sandy, Dk. gry.	68.209	136.1	8.6
11	"	"	424-429	SH, Sandy, Dk. gry.	32.296	132.8	9.8
12	"	"	4455-451	Sh, gray	61.603	133.5	9.8
13	"	"	469-476	Sandstone	12.657	134.2	9.2
14	"	"	492-499	SH, Dk. gray	21.345	134.0	9.6
15	"	"	516-525	SH, Dk. gray	36.774	136.7	8.9

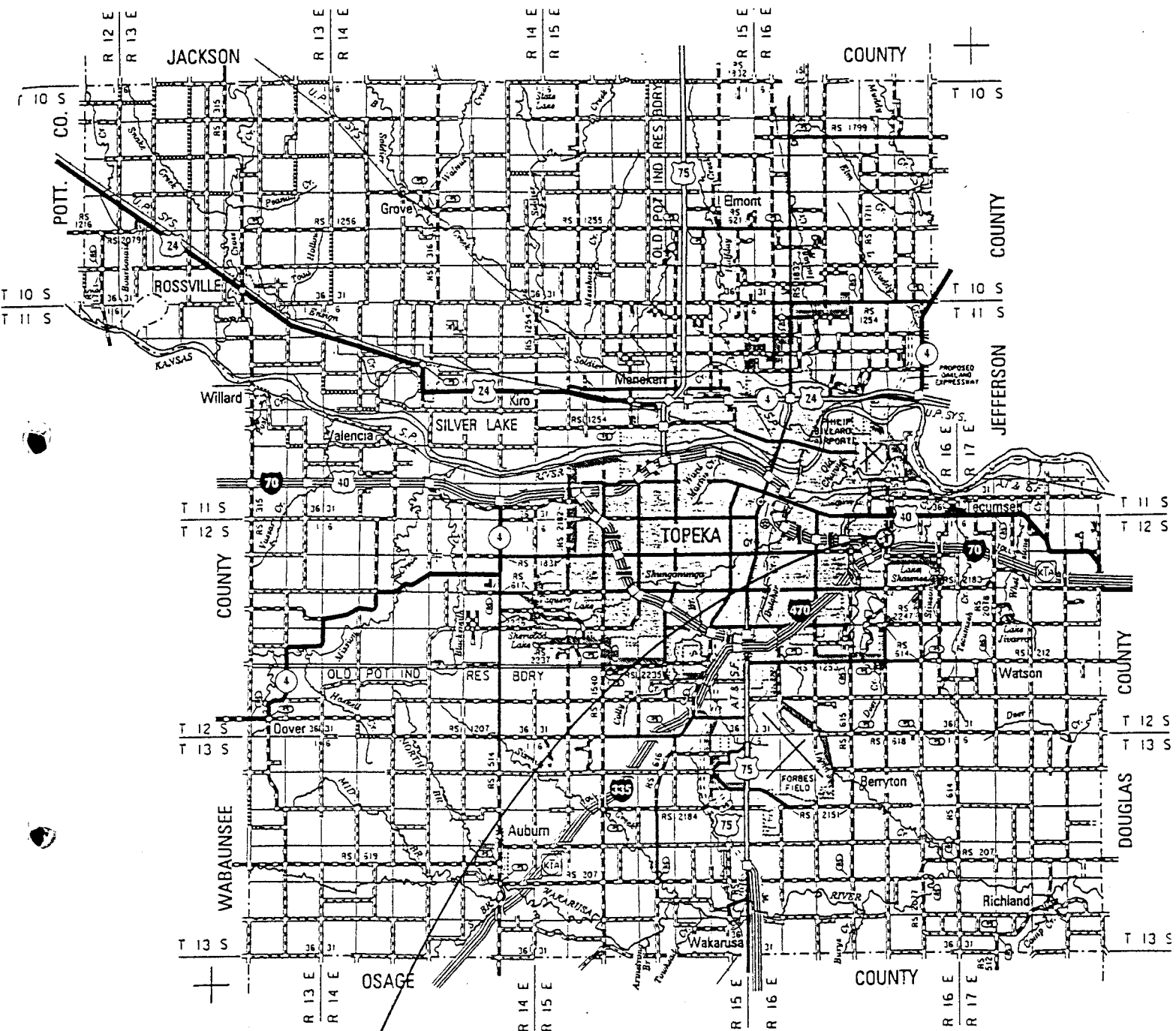
cc: L.S. Ingram
G.R. Koontz
D. Thompson
J.J. Brennan
Soil Section
File

Reported by *Maurice Hunt for*

Title James J. Brennan, Soils Engineer

QC4

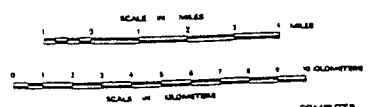
Croco Rd over I-70



Project 004-089-6252-01
 Bridge No. 70-89-19.92(000)
 Croco Road over I-70
 Sta. 51+42.16
 Shawnee County

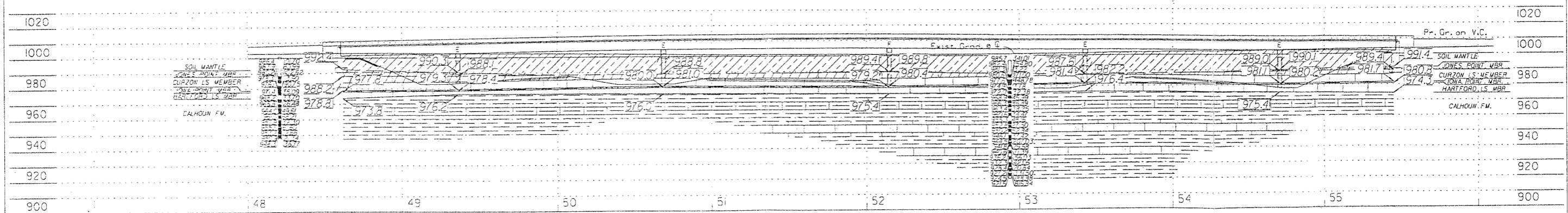
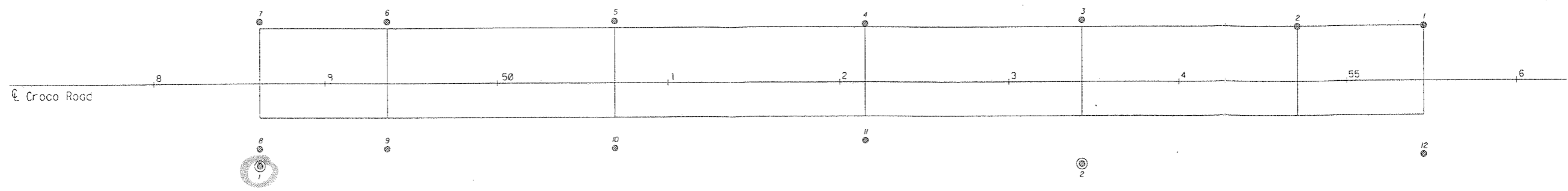
GENERAL HIGHWAY MAP
SHAWNEE COUNTY
 KANSAS

PREPARED BY THE
 KANSAS DEPARTMENT OF TRANSPORTATION
 BUREAU OF TRANSPORTATION PLANNING
 IN COOPERATION WITH THE
 U. S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

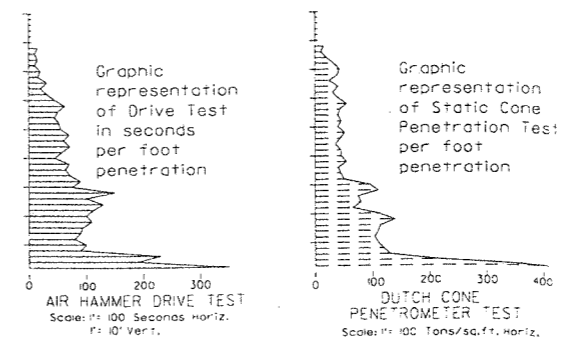
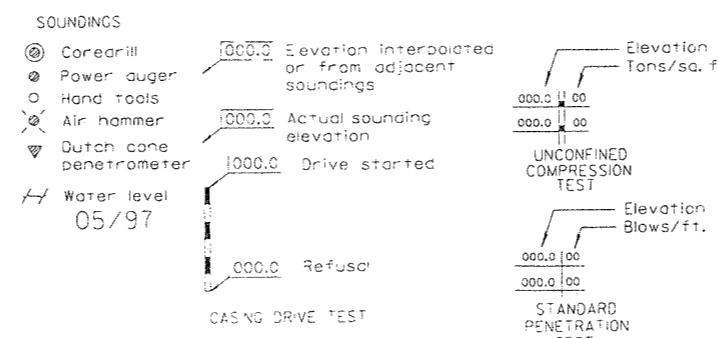


DATE	BY	REVISION

Plot Date : 05/13/97
 Plot File : \\S:\CROW\MRC\291_3861
 Server File : \\S:\CROW\MRC\291_3861
 Server : wjch



STANDARD GEOLOGIC SYMBOLS		GEOLOGIC PROFILE	
	Clay		Limestone
	Silty Clay		Cherty Limestone
	Silt		Shaly Limestone
	Sand		Sandy Limestone
	Gravel		Weathered or Broken Limestone
	Boulders		Cyclops
	Caliche		Siltstone
	Silty Clayey Sand		Sandy Limestone
	Limy Sand		Cyclopsiferous Sand
	Black or Fissile Sand		Coc
	Sandy Sand		
	Cyclopsiferous Sand		



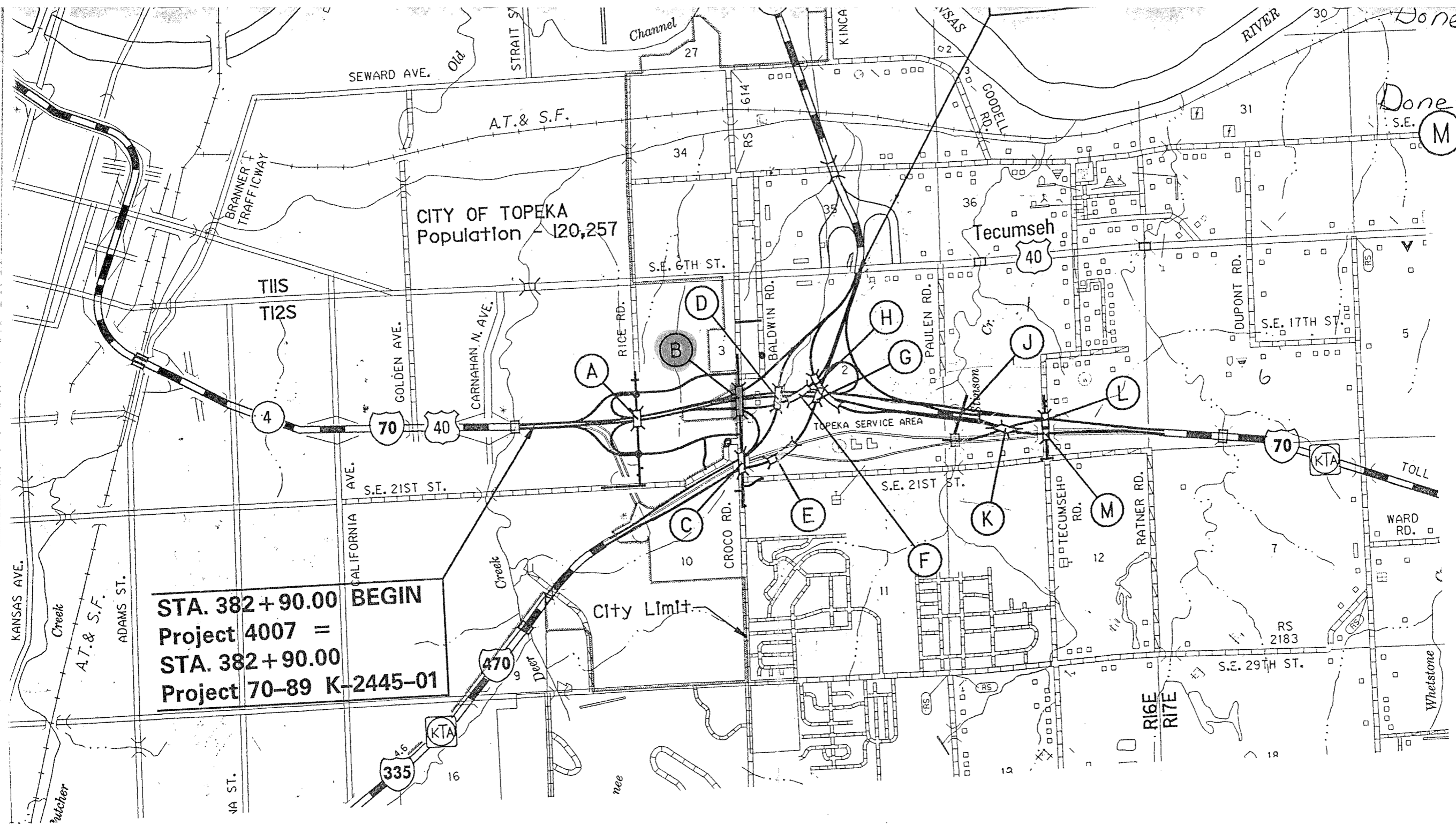
NOTE: Soundings shown on these plans are taken from notes obtained in the field and represent the best information available. Logs of these soundings are in the files of the Kansas Department of Transportation and are available at their offices at Topeka, Kansas for inspection by interested and qualified bidders.

SCALE: 1" = 30' Horiz. 1" = 30' Vert.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION
 BR. NO. 70-89-19.92(0001) STA. 439+56.70 & I-70
 STA. 51+42.16 & Croco Road
ENGINEERING GEOLOGY
 Croco Road over I-70
 PROJ. NO. 70-89 K-6252-01 SHAWNEE COUNTY

SHEET NO.	OF	SCALE	APP'D
DESIGN	DETAILS	QUANTITIES	TRACED



STA. 382 + 90.00 BEGIN
Project 4007 =
STA. 382 + 90.00
Project 70-89 K-2445-01

32'-0" Roadway

STA. 521 + 16.57
 Tecumseh Road
 Br. No. 70-89-21
 70'-125'-70' Con
 32'-0" Roadway

Note: (I) not u

PF
 F
 HN
 AR
 OV
 DA

Sheets see Sheet No. 2
 out See Sheet No.

GROSS LENGTH OF PROJECT	10,936.33 FT.	2.071 MILES
EXCEPTIONS	FT.	MILES
ADDITIONS	FT.	MILES

RECOM. FOR APPROVAL-DATE

CHIEF, BUREAU OF DESIGN
 KANSAS DEPARTMENT OF TRANSPORTATION

APPROVED - DATE

3-125-16E

2-125-16E



RICE / CROCO NORTH

4N-70W

335S-70E

Core hole
(48+62)

Core #2

Core

Core hole here
(450+07)

I-70

70W-4N

Core hole here
(53+43)

Core hole here
(442+81-74)

70W-335S

core #1
(2050+17, 155 LT.
= 439+36, 64 LT.)

4N-70E

N.B. I-335

S.B. I-335

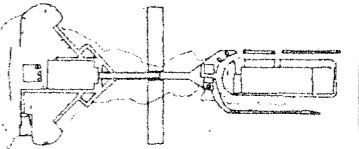
St. Street

Croco Road

Core hole here
(65+85)

Core hole here

SERVICE AREA



Turnpike

Core hole here

St. Street

WEST

12180

12185

12190

12195

12200

12205

12210

12215

12220

12225

12230

2025

2030

2035

2040

2045

3040

3045

3050

3055

3060

EA