

# KANSAS DEPARTMENT OF TRANSPORTATION



1. ROUTE-COUNTY NO. 004-089	2. SECTION <del>                    </del>	3. SHEET 1 OF 3
4. BRIDGE STA. 449+80.43	5. PROJECT NO. K-6252-01	6. BRIDGE NO. 335-89-25, 14
7. DESCRIPTION S.B. I-335 over E.B. K-4 & I-70		8. HOLE STA. 443+11, 18 RT
9. GEOLOGIST N. Croxton	10. VERTICLE SCALE 1"=5'	11. DATE 6-9-97
12. DRILLER H. Sunderland	13. RIG Mobile B-61	14. ELEVATION TOP OF HOLE 980.7
15. GROUND WATER ELEV. 971.7	16. TOTAL DEPTH OF HOLE 67' 3"	17. ELEVATION TOP OF ROCK 975.3

BIT TYPE & NO.	GEOLOGIC NAME	STRATIGRAPHIC COLUMN	DEPTH	ELEVATION	CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS	UNCONFINED COMPRESSION	STANDARD PENETRATION OR CASING DRIVE	
							BLOWS	ELEV.
			0°	980.7				
	Mantle		5' 4"	975.3	Silty clay			
	Longyear Diamond Calhoun Formation	Core 1	10' 5"	970.2	Shale, weathered, brown, Sandy, soft. some gray streaks 971 to 972.	8.5	971.1	
		Core 3			Sandstone, gray, shaly mica flakes, cross-bedded.	38.0	968.5	
		Core 4	16°	964.7	Shale, dark gray, sandy. thin sandstone laminations.	77.2	965.2	
		Core 5				20.7	963.4	
		Core 7	22' 4"	958.3		34.3	960.1	
		Core 6	23' 2"	957.5	Sandstone, gray shale, gray, sandy laminations	28.2	956.1	
		Core 8	29° 30'	951.7 950.6	Sandstone, dark gray shale, gray, sandy. Thin sandstone laminations.	3.8	953.5	
					540.6	951.1		
					46.8	947.9		

Sample other core  
from Larsh-Bursoak

DRILLING LOG (con't sheet)		SOUNDING NO. <u>CD #2</u>		PROJECT NO. <u>K-6252-01</u>		SHEET <u>2</u> OF <u>3</u>			
ELEVATION TOP OF HOLE <u>980.7</u>		GROUND WATER ELEV. <u>971.7</u>		TOTAL DEPTH OF HOLE <u>672</u>		ELEVATION TOP OF ROCK <u>975.3</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.	
Diamond Longyear	Calhoun Formation	[Stratigraphic Column Diagram]	40 <sup>A</sup>	945	Shale, gray, sandy. Thin sandstone laminations.	54.6		944 <sup>B</sup>	
				940	940.3		35.4		941 <sup>B</sup>
					Shale, dark gray, silty to clayey.		40.6		938 <sup>B</sup>
				935			64.4		936 <sup>B</sup>
							27.3		933 <sup>7</sup>
							16.9		930 <sup>7</sup>
							44.4		929 <sup>1</sup>
	Ervine Creek Member	[Stratigraphic Column Diagram]	50 <sup>7</sup>	930	930		447.3		926 <sup>3</sup>
				925	Limestone, gray, dense, fine to coarse grained. upper 1' shaly. Thick to massive bedded.		278.1		921 <sup>7</sup>
				920			290.2		918 <sup>4</sup>
				915	915.2		344.1		915 <sup>2</sup>
					shale, dark gray, firm.				
Larsh-Bursoak Member	[Stratigraphic Column Diagram]	67 <sup>2</sup>	910						

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology Cores

Laboratory No. 97-2223

Date Rep'td. June 17, 1997

Date Rec'd. June 11, 1997

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

Source of material Project

Sample from Project

Submitted by N. Croxton, Chanute Regional Geology Office

Identification marks Tags with samples

Project or POV 335-89 K-6252-01, Shawnee County, District 1

Type of construction New Bridge, SB I-335 over EB K-4 and I-70

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	<del>440-11</del> 443+11	18.2 Rt	92-96	Silty+Sandy Brn SH	8.498	121.1	14.0
#2	"	"	117-122	Grey+Tan Sandstone	38.004	118.7	13.7
#3	"	"	150-155	Grey Sandstone	77.200	118.2	14.3
#4	"	"	168-173	Dark Grey Sandy SH	20.683	130.2	10.5
#5	"	"	202-206	" " "	34.314	131.4	10.5
#6	"	"	241-246	Grey Shale	28.244	134.6	9.7
#7	"	"	268-272	Weathered Grey SH	3.809	121.8	13.1
#8	"	"	291-296	Grey Sandstone	540.573	158.1	2.8
#9	"	"	323-328	Gry Shale + SS	46.847	134.7	9.2
#10	"	"	354-359	Dk Grey Silty SH	54.564	132.9	9.6
#11	"	"	386-391	Gray Sandy Shale	35.444	134.6	9.4
#12	"	"	416-421	Dk Silty Shale	40.662	133.7	9.8
#13	"	"	442-447	Dk Gry Silty+Sndy SH	64.387	134.6	9.3
#14	"	"	465-470	Dk Gry Clayey SH	27.277	132.8	10.2
#15	"	"	495-500	Gry Clayey Shale	16.934	127.2	12.6
#16	"	"	510-516	Grey Limestone	441.437	159.2	3.3
#17	"	"	540-544	" "	447.297	156.8	2.8
#18	"	"	589-595	Lt Grey Limestone	278.097	152.1	4.1
#19	"	"	619-623	Lt Gry-Brn LS	290.214	146.0	5.4
#20	"	"	644-649	Lt Grey Limestone	344.141	155.6	3.0
#21	Sample broke while trimming, unable to do unconfined compression test.						

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

Reported by \_\_\_\_\_

Title James J. Brennan, Soils Engineer

Date: June 9, 1997

Project No. 004-089 K-6252-01

Location: N.B. I-335 over K-4 &amp; I-70

Bridge # 335-89-25.14

Core 1		Core 2		Core 3		Core 4		Core 5	
7 - 8.2		8.2 - 10.2		10.2 - 13.2		13.2 - 18.0		18.0 - 23.0	
975.0 - 972.5		972.5 - 970.5		970.5 - 967.5		967.5 - 962.7		962.7 - 957.7	
Cut	2.5	Cut	2.0	Cut	3.0	Cut	4.8	Cut	5.0
Recov.	0.5	Recov.	1.9	Recov.	2.7	Recov.	4.7	Recov.	5.0
RQD=	0%	RQD=	42%	RQD=	100%	RQD=	100%	RQD=	92%

Core 6		Core 7		Core 8		Core 9		Core 10	
23.0 - 28.0		28.0 - 33.0		33.0 - 38.0		38.0 - 43.0		43.0 - 47.5	
957.7 - 952.7		952.7 - 947.7		947.7 - 942.7		942.7 - 937.7		937.7 - 933.2	
Cut	5.0	Cut	5.0	Cut	5.0	Cut	5.0	Cut	4.5
Recov.	5.3	Recov.	5.0	Recov.	5.0	Recov.	4.5	Recov.	5.0
RQD=	79%	RQD=	?	RQD=	100%	RQD=	100%	RQD=	100%

Core 11		Core 12		Core 13		Core 14			
47.5 - 52.5		52.5 - 57.5		57.5 - 62.5		62.5 - 67.2			
933.2 - 928.2		928.2 - 923.2		923.2 - 918.2		918.2 - 913.5			
Cut	5.0	Cut	5.0	Cut	5.0	Cut	4.7		
Recov.	5.2	Recov.	5.0	Recov.	5.0	Recov.	4.7		
RQD=	100%	RQD=	100%	RQD=	100%	RQD=	100%		

QC4

~~Redacted~~

x-mas tree farm

MGL

# Kansas Department of Transportation

BUREAU OF MATERIALS AND RESEARCH

GEOTECHNICAL UNIT  
GEOLOGY SECTION  
TOPEKA, KANSAS

July 30 1997

7 boxes

Proj. No. 004-089 K-6252-01

Br. No. ~~335-89-25-14~~ 70-89-20.12(252)

~~335-89-25-14~~ ~~E.B. K-4 and I-70~~ Ramp AN-470W over E.B. K-4 & I-70

Sta. 449+80.43 ~~E~~ W.B. I-70

Shawnee County

MEMORANDUM TO: MR. G. DAVID COMSTOCK, P.E.  
CHIEF, BUREAU OF DESIGN

ATTENTION: MR. KEN HURST, P.E.  
ENGINEERING MANAGER, STATE BRIDGE OFFICE

SUBJECT: BRIDGE FOUNDATION GEOLOGY REPORT

Three copies of the above report are attached to this memorandum. An Engineering Geology Bridge Sheet has been drawn on the Microstation Workstation. This file has been placed on the Design file server witch under the filename 62522514.dgn. Two copies of the drill sounding logs are attached to this report.

If questions arise over the contents of this report, please do not hesitate to contact the Geology Section.

LON S. INGRAM, P.E.  
CHIEF, MATERIALS AND RESEARCH

*Lon S. Ingram*  
G.N. CLARK, P.E.  
GEOTECHNICAL ENGINEER

LSI:GNC:GRK:

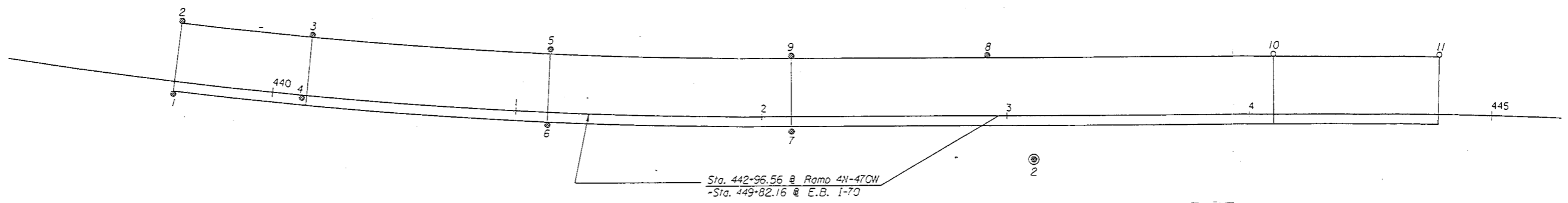
attachments

cc:

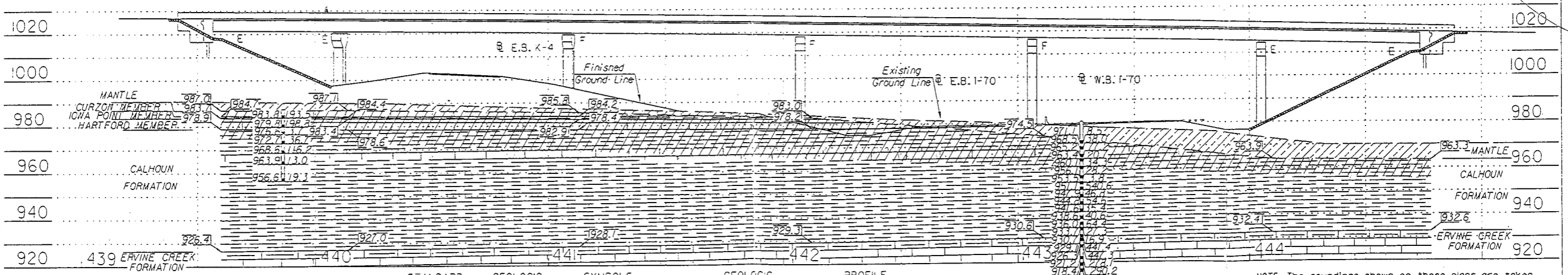
- District 1
- Bureau of Construction and Maintenance
- Regional Geology Offices
- Project File

n.  
E  
T 12 S R 16 W Sec. 2  
SW-NW-SE

FWS REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	4-89 K-6252-01	19		

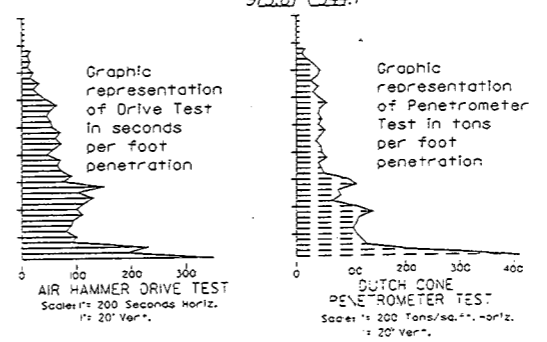


Sta. 442+96.56 @ Ramp 4N-470W  
-Sta. 449+82.16 @ E.B. I-70



STANDARD GEOLOGIC SYMBOLS			

SOUNDINGS	



NOTE: The soundings shown on these plans are taken from notes in the field and represent the best information available. The 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" = 20' Horiz. 1" = 20' Vert.

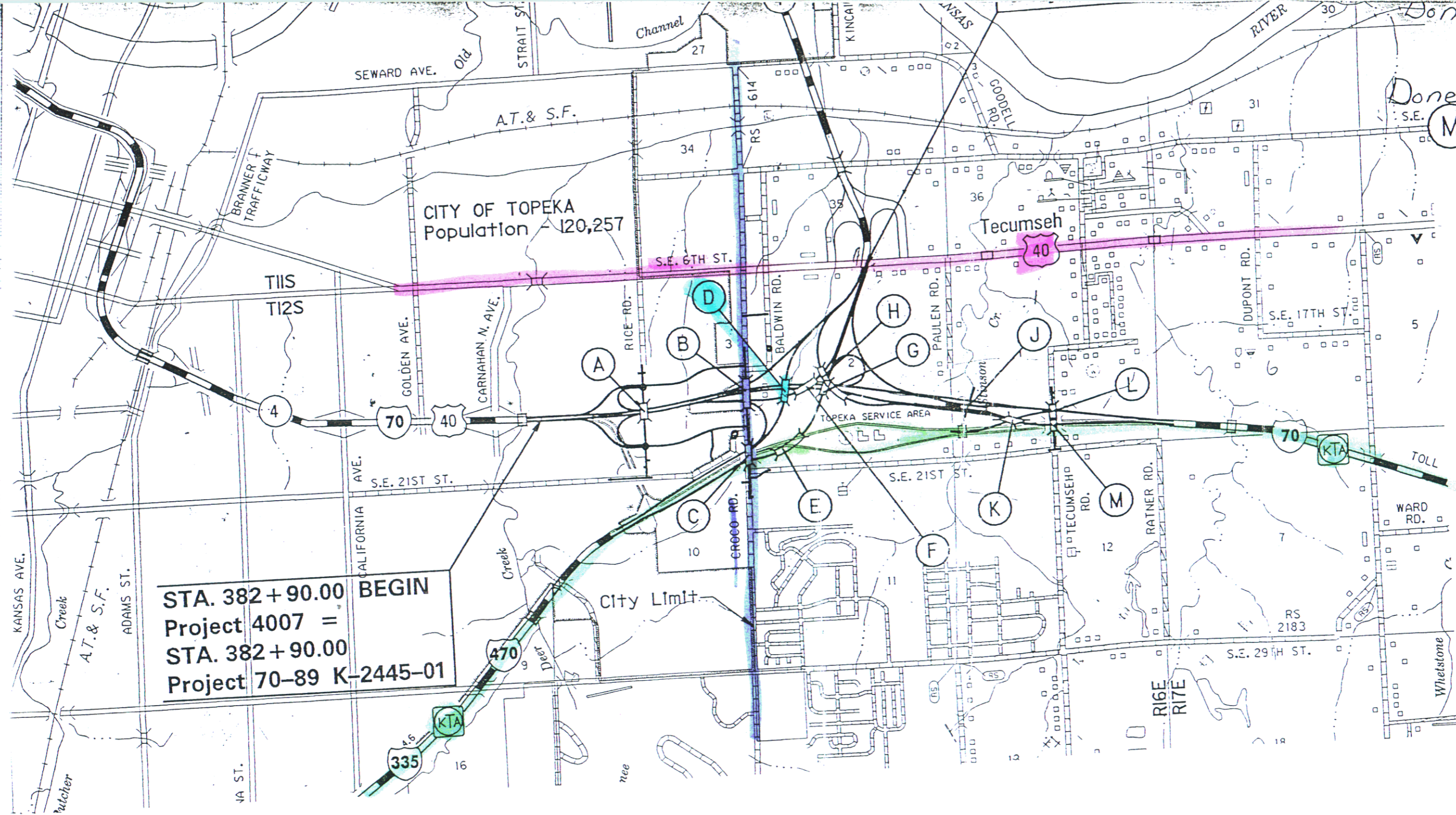
NO.	DATE	REVISIONS	BY	APP'D
3				
2				
1				

KANSAS DEPARTMENT OF TRANSPORTATION  
BR. NO. 70-89-20.12(252) STA. 449+80.43 @ WB I-70  
**ENGINEERING GEOLOGY**  
Ramp 4N-470W over EB K-4 & I-70  
PROJ. NO. 4-89 K-6252-01 SHAWNEE CO.

DESIGNED	DRAWN	QUANTITIES	TRACED
CHECKED	BY	CHECKED	CHECKED

DATE	BY	BY	BY	BY	BY

Drawn By: RJ CROW MFC 291.3861  
DWG File: usr77/geotech/62522514.dgn  
Plotted: \*\*\*\*\*SYTIME\*\*



**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. 70-89-2'  
 70'-125'-70' Cor  
 32'-0" Roadway

Note: (I) not u

PF  
 E  
 HN  
 AR  
 OV  
 D/

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