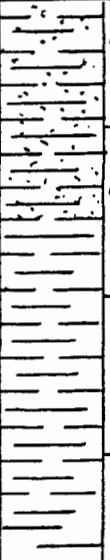
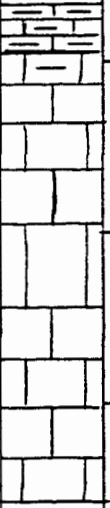
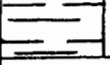


Sample other core
from Larsh-Burnsack

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.
Longyear Diamond	Calhoun Formation		40 ⁴	945	Shale, gray, sandy. Thin sandstone laminations.	54.6		944 ⁸
						35.4		941 ⁶
				940	940.3			
					Shale, dark gray, silty to clayey.	40.6		938 ⁶
				935		64.4		936 ⁰
						27.3		933 ⁷
				930	930	16.9		930 ⁷
						441.4		929 ¹
	Ervine Creek Member		50 ⁷	925	Limestone, gray, dense, fine to coarse grained. upper 1' shaly. Thick to massive bedded.	447.3		926 ³
				920		278.1		921 ⁷
						290.2		918 ⁴
				915	915.2	344.1		915 ²
					shale, dark gray, firm.			
				910				
	Larsh-Burnsack Member		65 ⁵ 67 ²					

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology CoresLaboratory No. 97-2223Date Rep'td. June 17, 1997Date Rec'd. June 11, 1997Specification No. AASHTO T 208-92 Quantity - - -Source of material ProjectSample from ProjectSubmitted by N. Croxton, Chanute Regional Geology OfficeIdentification marks Tags with samplesProject or POV 335-89 K-6252-01, Shawnee County, District 1Type 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	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 & 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

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 4N-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


G.N. CLARK, P.E.
GEOTECHNICAL ENGINEER

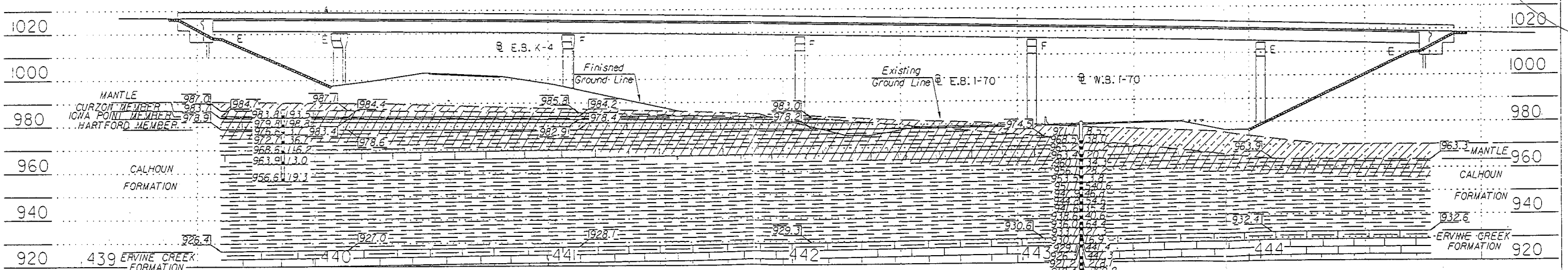
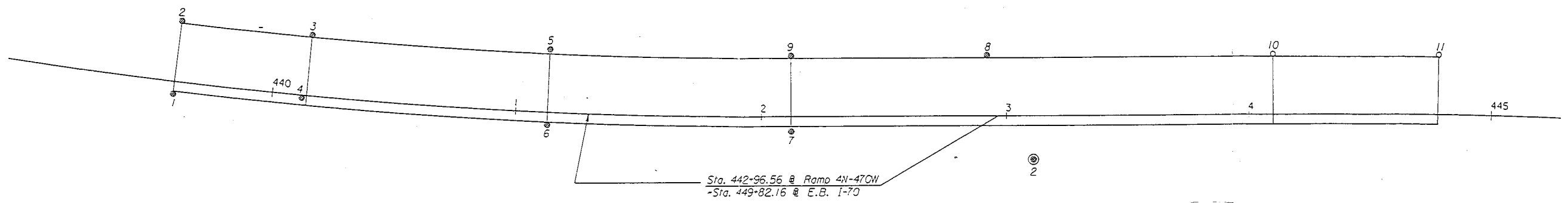
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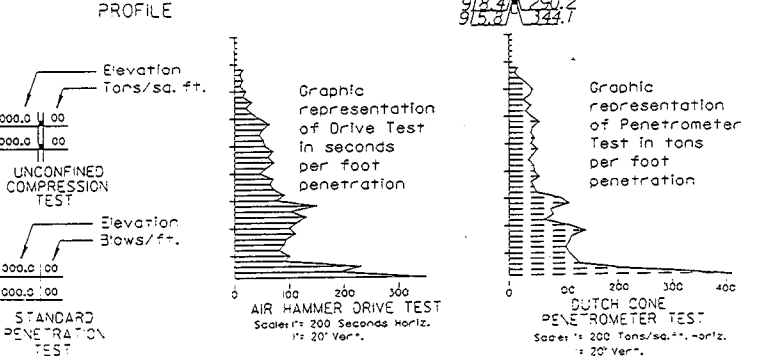
District 1
Bureau of Construction and Maintenance
Regional Geology Offices
Project File

1.
E
T 12 S R 16 W Sec. 2
SW-NW-SE



STANDARD GEOLOGIC SYMBOLS			
	Clay		Weathered Shale
	Silty Clay		Sandstone
	Silty Shale		Shaly Sandstone
	Silty		Shaly Limestone
	Sand		Sandy Limestone
	Gravel		Cypselus
	Boulders		Cypselus Shale

SOUNDINGS	
	Coredrill
	Power auger
	Hand tools
	Air hammer
	Dutch cone penetrometer
	Unconfined compression
	Standard penetration
	Water level



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
1				
2				
3				

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 70-89-20.12(252) STA. 449+80.43 @ WB I-70

ENGINEERING GEOLOGY

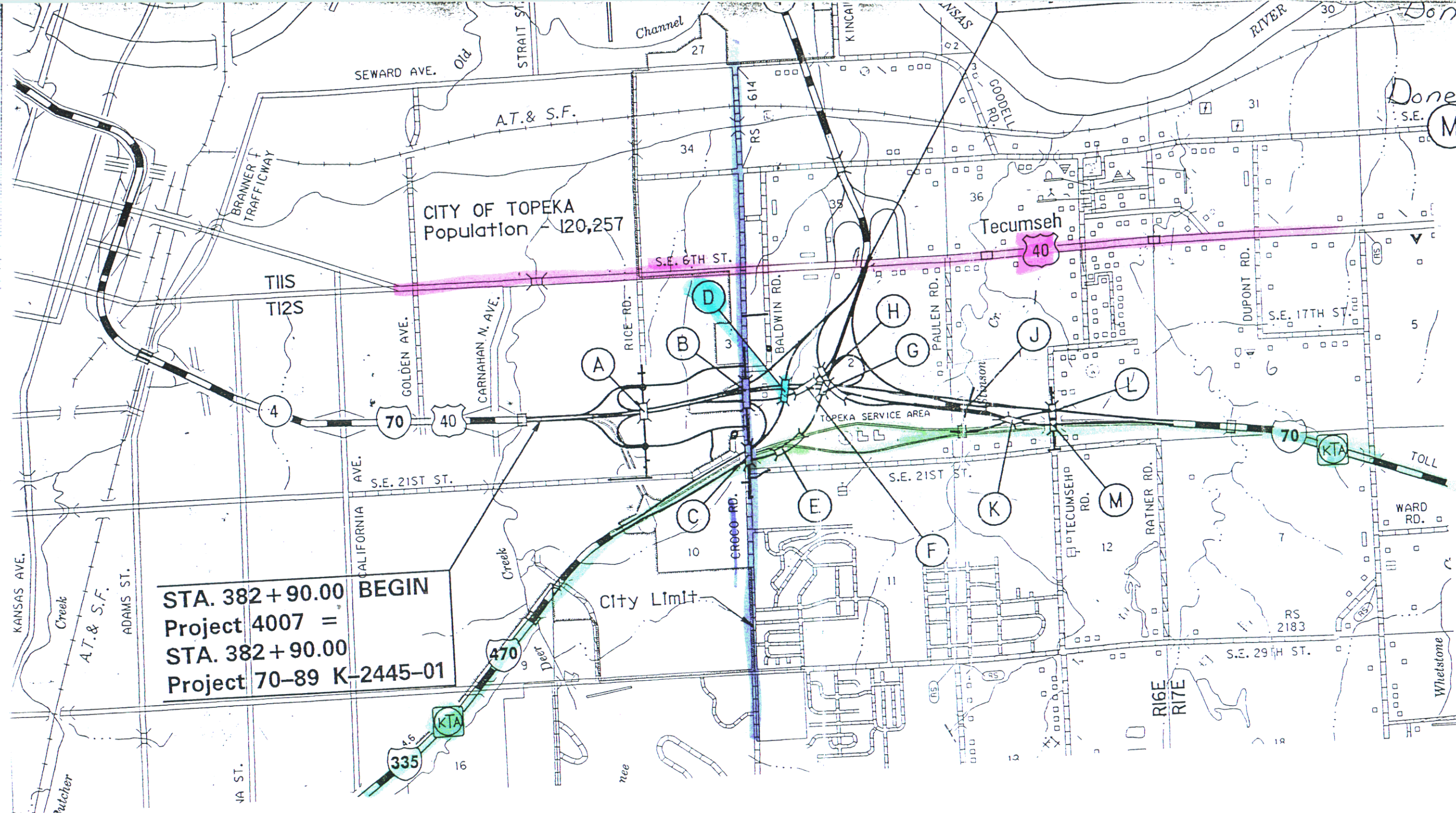
Ramp 4N-470W over EB 4-4 & -70

PROJ. NO. 4-89 K-6252-01 SHAWNEE CO.

DESIGNED	DRAWN	QUANTITIES	TRACED
CHECKED	CHECKED	CHECKED	CHECKED

Drawn By: RJ CROW MRC 291-3861
 File: us77/geotech/62522514.dgn
 Plotted: *****SYTIME**

Drawn By: RJ CROW MRC 291-3861
 File: us77/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