

March 2, 2007

Donna J. Crawford, Project Manager
Governmental Assistance Services
905 Joseph Drive
Lawrence, KS 66049

Dear Ms. Crawford,

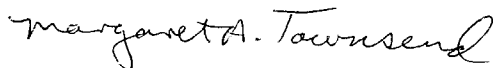
I am writing in regard to the Oskaloosa, Kansas sanitary sewer upgrade review. Based on the information submitted to me, the project appears to be designed appropriately for the upgrade process. Unless the clay pipe is very old, is undersized for the volume of storm water inflow, or there is reason to suspect potential failure of the pipe, the process described in your letter should address the issues.

The letter mentioned cured-in-place lining being used in some areas. I presume that the clay pipe has been evaluated and is generally considered stable for future use. If the pipe has not been evaluated, I would suggest that this be included as part of the project.

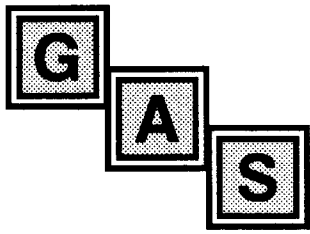
The soils in the area appear to be predominantly silt-clay loams, which suggests moderate runoff and moderate to low infiltration, unless the soil is very dry and cracked. This might need to be evaluated if excessive inflow from surface runoff results in standing water around the pipes. The standing water may enhance degradation of the pipes.

The above comments are based on a conversation with the applicant and also are based on information that the Kansas Geological Survey has on this proposed site. Other geologic conditions, not discussed here, might affect the stability or safe operation of the proposal. It is the responsibility of the applicant to produce the detailed site evaluation.

Sincerely,



Margaret A. Townsend
Hydrogeologist
Geohydrology Section



Governmental Assistance Services

905 Joseph Drive

Lawrence, Kansas 66049

785-832-2141 • Fax 785-832-1111

Toll Free 888-832-3335

e-mail: gasdonnaa@aol.com

February 21, 2007

Dr. William Harrison
Kansas Geological Survey
University of Kansas
1930 Constant Ave. – Campus West
Lawrence, KS 66047

RE: Environmental Review - Grant Submission for 2008 – Citywide Sanitary Sewer Upgrade,
Oskaloosa, Kansas

Dear Dr. Harrison:

In October 2007 the City of Oskaloosa, Kansas is planning to submit a grant to the Kansas Department of Commerce for \$400,000 to complete a \$1,144,109 citywide sanitary sewer improvements project

The city will be replacing failing infrastructure to reduce the amount of inflow & infiltration of storm water and ground water into the existing sewer system. Improvements will consist of rehabilitation and replacement of manholes and existing sanitary sewer mains. Some of the pipes can be improved with a cured-in-place lining.

The attached estimate of cost and the map depicting the scope of work is attached. Oskaloosa is in Township 9 & 10 South, Range 19 East, Sections 4, 5, 32 & 33.

The city is requesting comments in reference to all environmental concerns, especially on floodplain concerns.

I will appreciate all responses be sent to Governmental Assistance Services, 905 Joseph Dr., Lawrence, KS 66049.

If you have questions please call me at 888-832-3335.

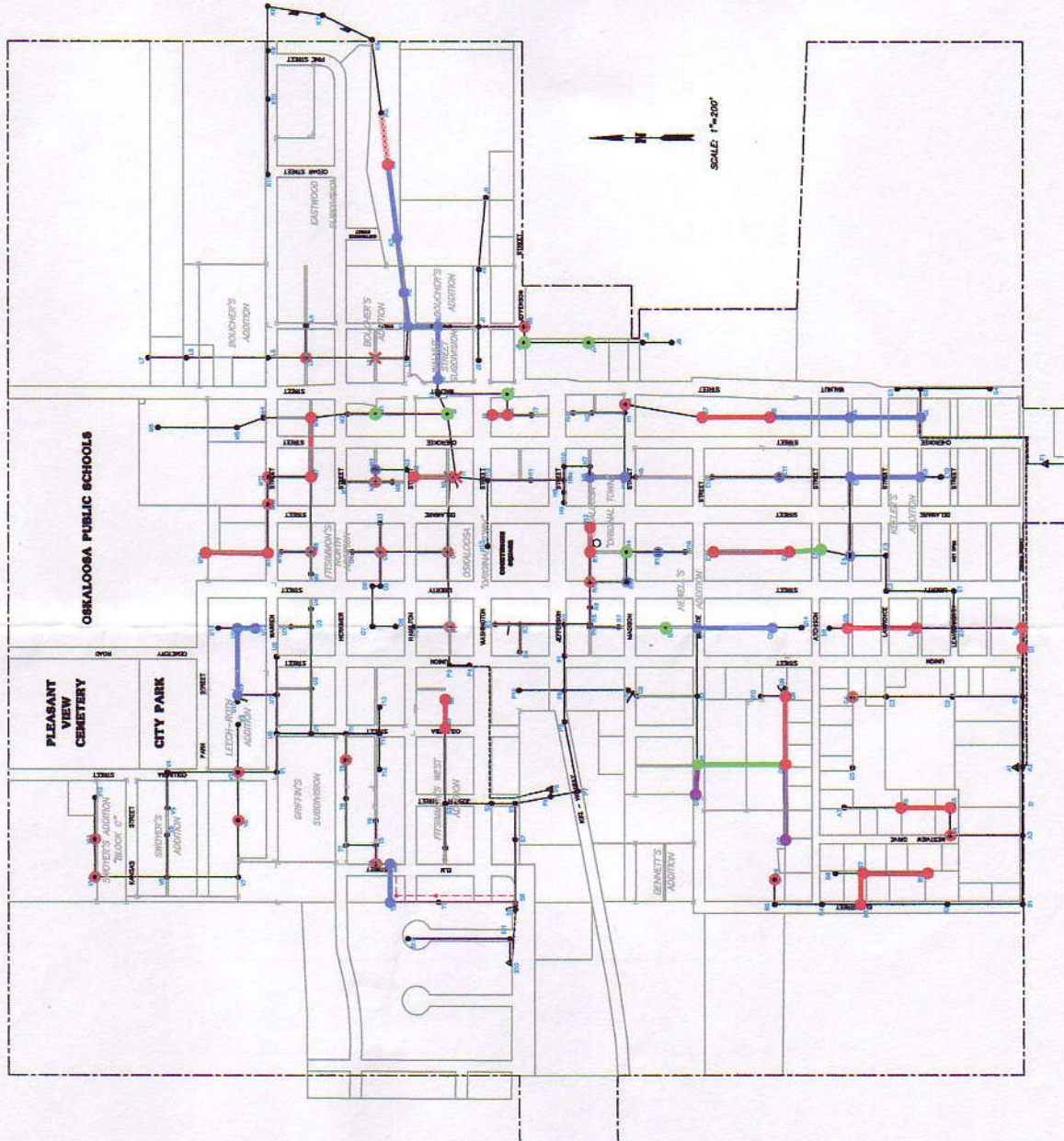
Sincerely,

Donna J. Crawford
Project Coordinator

Enc/ Estimate
Project Map
Topo Map

OSKALOOSA, KANSAS

SUMMARY OF SMOKE TEST RESULTS



LEGEND

- SANITARY SEWER MH/LS/CO ID
- SANITARY SEWER LINE
- SANITARY SEWER FORCE MAIN
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- SANITARY SEWER LIFT STATION
- DEPTH OF MANHOLE

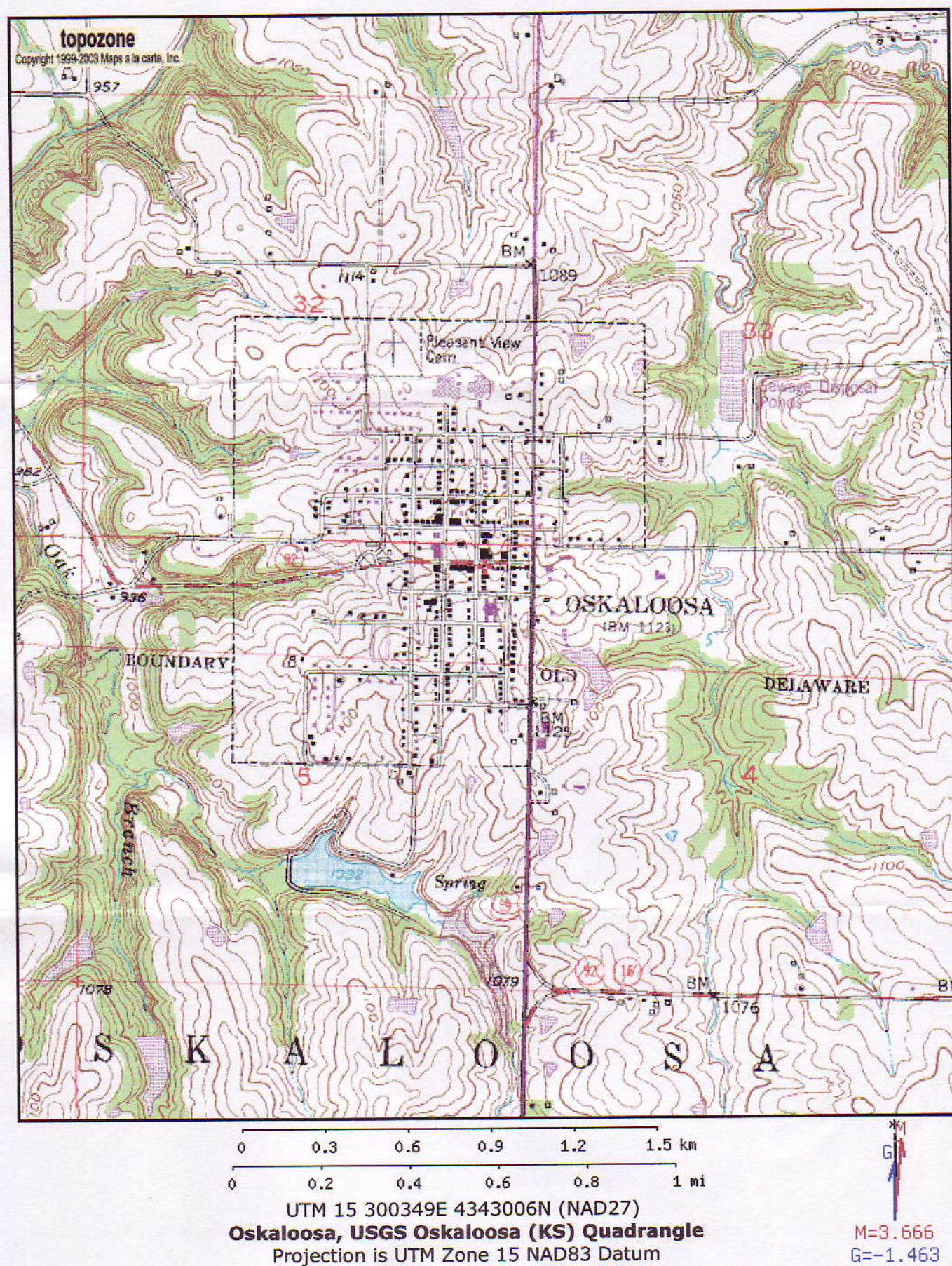
- PRIORITY 1**
 - INSTALL RIP-RAP IN CREEK CROSSING
 - SANITARY SEWER MAIN REPLACEMENT
 - MANHOLE REPLACEMENT
 - MANHOLE REHABILITATION
 - MANHOLE TOP OF RM ADJUSTMENT
- PRIORITY 2**
 - SANITARY SEWER MAIN REPLACEMENT
 - MANHOLE REPLACEMENT
 - MANHOLE REHABILITATION
 - MANHOLE TOP OF RM ADJUSTMENT
- PRIORITY 3**
 - SANITARY SEWER MAIN REPLACEMENT
 - MANHOLE REPLACEMENT
 - MANHOLE REHABILITATION
 - MANHOLE TOP OF RM ADJUSTMENT
- PRIORITY 4**
 - SANITARY SEWER MAIN REPLACEMENT
 - MANHOLE REPLACEMENT
 - MANHOLE REHABILITATION
 - MANHOLE TOP OF RM ADJUSTMENT

NOTE: SANITARY SEWER LINES ARE 8" CLAY UNLESS OTHERWISE SPECIFIED.

UPDATED: 12-21-99

NOTE: ALL ALLEYS ARE 10' WIDE UNLESS OTHERWISE NOTED.

TOWNSHIP 9 & 10 SOUTH
RANGE 19 EAST
SECTIONS 4, 5, 32, & 33

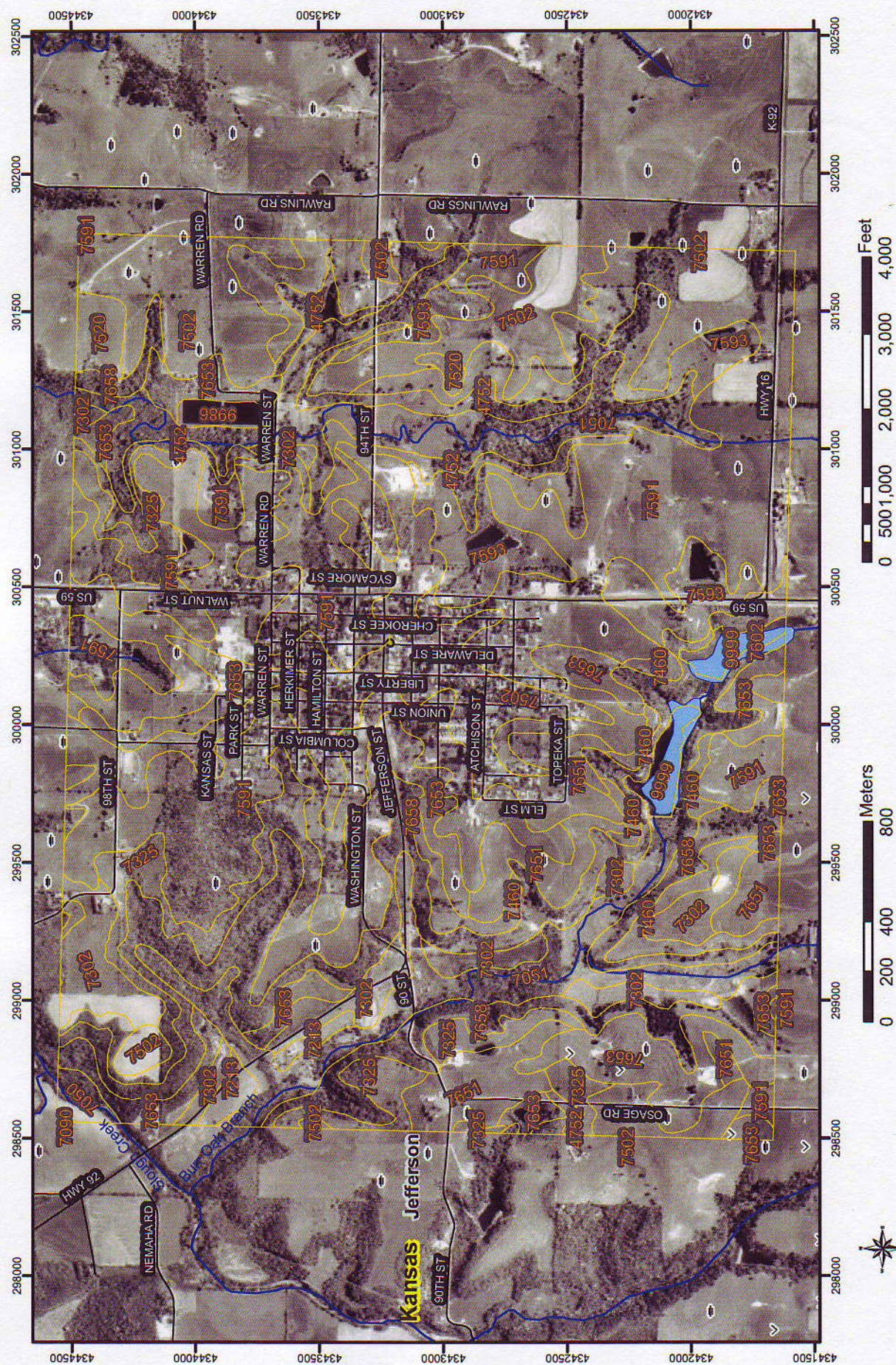


OSKALOOSA SANITARY SEWER COLLECTION SYSTEM ANALYSIS
Opinion of Probable Construction Costs

Priority	Item No.	Item Description	Quantity	Unit	Unit Price	Total Cost	Cumulative Cost
1	1.	Install Rip-Rap in Creek bottom MH K-4 and MH K-5 (in buffalo field)	1	L.S.	\$5,000.00	\$5,000.00	\$5,000.00
1	2.	Sanitary Sewer Main Replacement between MH B-7 and MH B-9	349	L.F.	\$92.50	\$32,282.50	\$37,282.50
1	3.	Sanitary Sewer Main Replacement between MH B-3 and MH B-7	162	L.F.	\$92.50	\$14,985.00	\$52,267.50
1	4.	Sanitary Sewer Main Replacement between MH G-6 and MH G-7	353	L.F.	\$92.50	\$32,652.50	\$84,920.00
1	5.	Sanitary Sewer Main Replacement between MH N-1 and MH N-2	224	L.F.	\$92.50	\$20,720.00	\$105,640.00
1	6.	Sanitary Sewer Main Replacement between MH E-6 and MH E-7	394	L.F.	\$92.50	\$36,445.00	\$142,085.00
1	7.	Sanitary Sewer Main Replacement between MH Q-6 and MH Q-8	353	L.F.	\$92.50	\$32,652.50	\$174,737.50
1	8.	Sanitary Sewer Main Replacement between MH D-4 and MH D-5	357	L.F.	\$92.50	\$33,022.50	\$207,760.00
1	9.	Sanitary Sewer Main Replacement between MH R-11 and CO R-12	128	L.F.	\$92.50	\$11,840.00	\$219,600.00
1	10.	Sanitary Sewer Main Replacement between MH M-3 and MH M-7	303	L.F.	\$92.50	\$28,027.50	\$247,627.50
1	11.	Sanitary Sewer Main Replacement between MH A-5 and MH A-6	256	L.F.	\$92.50	\$23,680.00	\$271,307.50
1	12.	Sanitary Sewer Main Replacement between MH M-13 and MH M-14	324	L.F.	\$92.50	\$29,970.00	\$301,277.50
1	13.	Sanitary Sewer Main Replacement between MH D-1 and MH D-2	105	L.F.	\$92.50	\$9,712.50	\$310,990.00
1	14.	Sanitary Sewer Main Replacement between MH S-5 and CO S-6	148	L.F.	\$92.50	\$13,690.00	\$324,680.00
1	15.	Sanitary Sewer Main Replacement between MH I-5 and CO I-6	89	L.F.	\$92.50	\$8,232.50	\$332,912.50
1	16.	Manhole Replacement (0'-7')	25	EA.	\$2,000.00	\$50,000.00	\$382,912.50
1	17.	Extra Vertical Depth	71.4	V.F.	\$150.00	\$10,710.00	\$393,622.50
1	18.	Cleanout Replacement	3	EA.	\$750.00	\$2,250.00	\$395,872.50
1	19.	Manhole Rehabilitation	20	EA.	\$1,500.00	\$30,000.00	\$425,872.50
1	20.	Raise Manhole to Grade	2	EA.	\$850.00	\$1,700.00	\$427,572.50
1	21.	Lift Station	1	L.S.	\$45,000.00	\$45,000.00	\$472,572.50
							\$472,572.50
2	22.	Sanitary Sewer Main Replacement between MH Q-4 and MH Q-6	459	L.F.	\$92.50	\$42,457.50	\$515,030.00
2	23.	Sanitary Sewer Main Replacement between MH E-5 and MH E-6	164	L.F.	\$92.50	\$15,170.00	\$530,200.00
2	24.	Manhole Replacement (0'-7')	2	EA.	\$2,000.00	\$4,000.00	\$534,200.00
2	25.	Extra Vertical Depth	10.0	V.F.	\$150.00	\$1,500.00	\$535,700.00
2	27.	Manhole Rehabilitation	7	EA.	\$1,500.00	\$10,500.00	\$546,200.00
							\$546,200.00
3	28.	Sanitary Sewer Main Replacement between MH I-8 and MH I-9	280	L.F.	\$92.50	\$25,900.00	\$572,100.00
3	29.	Sanitary Sewer Main Replacement between MH I-9 and MH K-1	150	L.F.	\$92.50	\$13,875.00	\$585,975.00
3	30.	Sanitary Sewer Main Replacement between MH K-1 and MH K-4	847	L.F.	\$92.50	\$78,347.50	\$664,322.50
3	31.	Sanitary Sewer Main Replacement between MH E-8 and MH E-9	365	L.F.	\$92.50	\$33,762.50	\$698,085.00
3	32.	Sanitary Sewer Main Replacement between MH G-1 and MH G-6	823	L.F.	\$92.50	\$76,127.50	\$774,212.50
3	33.	Sanitary Sewer Main Replacement between MH Q-11 and MH Q-13	394	L.F.	\$92.50	\$36,445.00	\$810,657.50
3	34.	Sanitary Sewer Main Replacement between MH H-4 and MH H-6	187	L.F.	\$92.50	\$17,297.50	\$827,955.00
3	35.	Sanitary Sewer Main Replacement between MH T-2 and MH T-3	200	L.F.	\$92.50	\$18,500.00	\$846,455.00
3	36.	Sanitary Sewer Main Replacement between MH U-9 and MH U-11	347	L.F.	\$92.50	\$32,097.50	\$878,552.50
3	37.	Sanitary Sewer Main Replacement between MH U-11 and CO U-13	94	L.F.	\$92.50	\$8,695.00	\$887,247.50
3	38.	Manhole Replacement (0'-7')	17	EA.	\$2,000.00	\$34,000.00	\$921,247.50
3	39.	Extra Vertical Depth	45.6	V.F.	\$150.00	\$6,840.00	\$928,087.50
3	40.	Cleanout Replacement	1	EA.	\$750.00	\$750.00	\$928,837.50
3	41.	Epoxy Coated Manhole Replacement (0'-7')	1	EA.	\$2,500.00	\$2,500.00	\$931,337.50
3	42.	Epoxy Coated Extra Vertical Depth	1.4	V.F.	\$300.00	\$420.00	\$931,757.50
3	43.	Manhole Rehabilitation	6	EA.	\$1,500.00	\$9,000.00	\$940,757.50
							\$940,757.50
4	44.	Sanitary Sewer Main Replacement between MH Q-4 and CO Q-5	155	L.F.	\$92.50	\$14,337.50	\$955,095.00
4	45.	Sanitary Sewer Main Replacement between MH Q-6 and MH Q-7	391	L.F.	\$92.50	\$36,167.50	\$991,262.50
4	46.	Manhole Replacement (0'-7')	1	EA.	\$2,000.00	\$2,000.00	\$993,262.50
4	47.	Cleanout Replacement	1	EA.	\$750.00	\$750.00	\$994,012.50

CONSTRUCTION SUBTOTAL = \$994,012.50
+ENGINEERING & INSPECTION = \$150,095.89
TOTAL PROJECT COST = \$1,144,108.39

oskaloosa



SOIL SURVEY OF JEFFERSON COUNTY, KANSAS

oskaloosa

MAP LEGEND

	Soil Map Units
	Cities
	Detailed Counties
	Detailed States
	Interstate Highways
	Roads
	Rails
	Water
	Hydrography
	Oceans
	Escarpment, bedrock
	Escarpment, non-bedrock
	Gulley
	Levee
	Slope
	Blowout
	Borrow Pit
	Clay Spot
	Depression, closed
	Eroded Spot
	Gravel Pit
	Gravelly Spot
	Gulley
	Lava Flow
	Landfill
	Marsh or Swamp
	Miscellaneous Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Slide or Slip
	Sinkhole
	Sodic Spot
	Spoil Area
	Stony Spot
	Very Stony Spot
	Perennial Water
	Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 15

Soil Survey Area: Jefferson County, Kansas
Spatial Version of Data: 3
Soil Map Compilation Scale: 1:24000

Map comprised of aerial images photographed on these dates:
1991

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend Summary

Jefferson County, Kansas

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4752	Sogn-Vinland complex, 3 to 25 percent slopes	75.9	3.0
7050	Kennebec silt loam, occasionally flooded	9.4	0.4
7051	Kennebec silt loam, frequently flooded	233.7	9.2
7090	Wabash silty clay loam, occasionally flooded	0.3	0.0
7213	Reading silt loam, moderately wet, very rarely flooded	13.2	0.5
7302	Martin silty clay loam, 3 to 7 percent slopes	104.0	4.1
7325	Martin-Oska silty clay loams, 3 to 6 percent slopes	167.5	6.6
7460	Oska silty clay loam, 3 to 6 percent slopes	50.5	2.0
7500	Pawnee clay loam, 1 to 3 percent slopes	0.8	0.0
7502	Pawnee clay loam, 3 to 6 percent slopes	456.4	17.9
7520	Pawnee soils, 3 to 7 percent slopes, eroded	18.6	0.7
7591	Shelby-Pawnee complex, 3 to 7 percent slopes	680.2	26.7
7593	Shelby-Pawnee complex, 7 to 12 percent slopes	156.6	6.1
7602	Sibleyville complex, 7 to 12 percent slopes	8.7	0.3
7651	Vinland complex, 3 to 7 percent slopes	94.8	3.7
7653	Vinland complex, 7 to 15 percent slopes	195.1	7.7
7658	Vinland-Rock outcrop complex, 15 to 45 percent slopes	250.1	9.8
9986	Miscellaneous water	8.6	0.3
9999	Water	23.5	0.9

1-6% sand 77% silt
16-24% clay

5% 58% silt 38% clay

32% sand, 37% silt
30% clay

30-40% sand
35% silt
23-27% clay

4.8-16% sand
50-60% silt 43% clay