

1930 Constant Avenue
Lawrence, KS 66047-3724
January 16, 2008

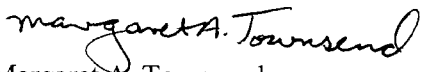
Shawn Wilson, P. E.
Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114-3319

Dear Mr. Wilson:

I was asked to review the City of Atchison's plans for a new headworks pump station and force main improvement project. I looked at the NRCS soils maps for the area and found that most of the soils are Kennebec silty clay loams. These soils are classified as prone to occasional or frequent flooding. Based on the limited information provided to me I presume that the sanitary force main pipe will be buried deep enough and far enough from the river to prevent exposure during a severe flood event. Other than making sure that the soils issues are looked at during the planning stages, I have no other concerns on the project and feel that it should go forward.

The above comments are based on regional geologic conditions and limited information available to the KGS at the time of writing and cannot be used in substitute for a detailed site characterization. Other geologic conditions, not discussed here, or for which the KGS has no knowledge, may affect the viability or safe operation of this facility or property. Geotechnical engineering and design are outside the purview of the KGS. It is the responsibility of the applicant to produce any detailed site characterizations, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,


Margaret A. Townsend
Geohydrology Section



January 2, 2008

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

Dear Dr. Harrison:

The City of Atchison, Kansas is in the process of applying for SRF funding to finance the North Headworks Pump Station and Force Main Improvements project. Please review the enclosed materials and provide written comments/clearance within 30 days.

Improvements at the North Headworks pump station include placement of four new dry pit/submersible pumps. The two new dry weather pumps will convey dry weather flows ranging up to 4.7 MGD to the treatment plant. The two new wet weather pumps will convey wet weather flows up to 8.8 MGD to the treatment plant.

The project also includes replacement of approximately 8,150 linear feet of sanitary sewer force main located between the North Headworks pump station and the wastewater treatment plant (see Figure 1 enclosed). The existing 20-inch cast iron pipe has a history of breakages and is beyond its useful life. This project will abandon the existing section of cast iron force main and place a new 24-inch HDPE force main.

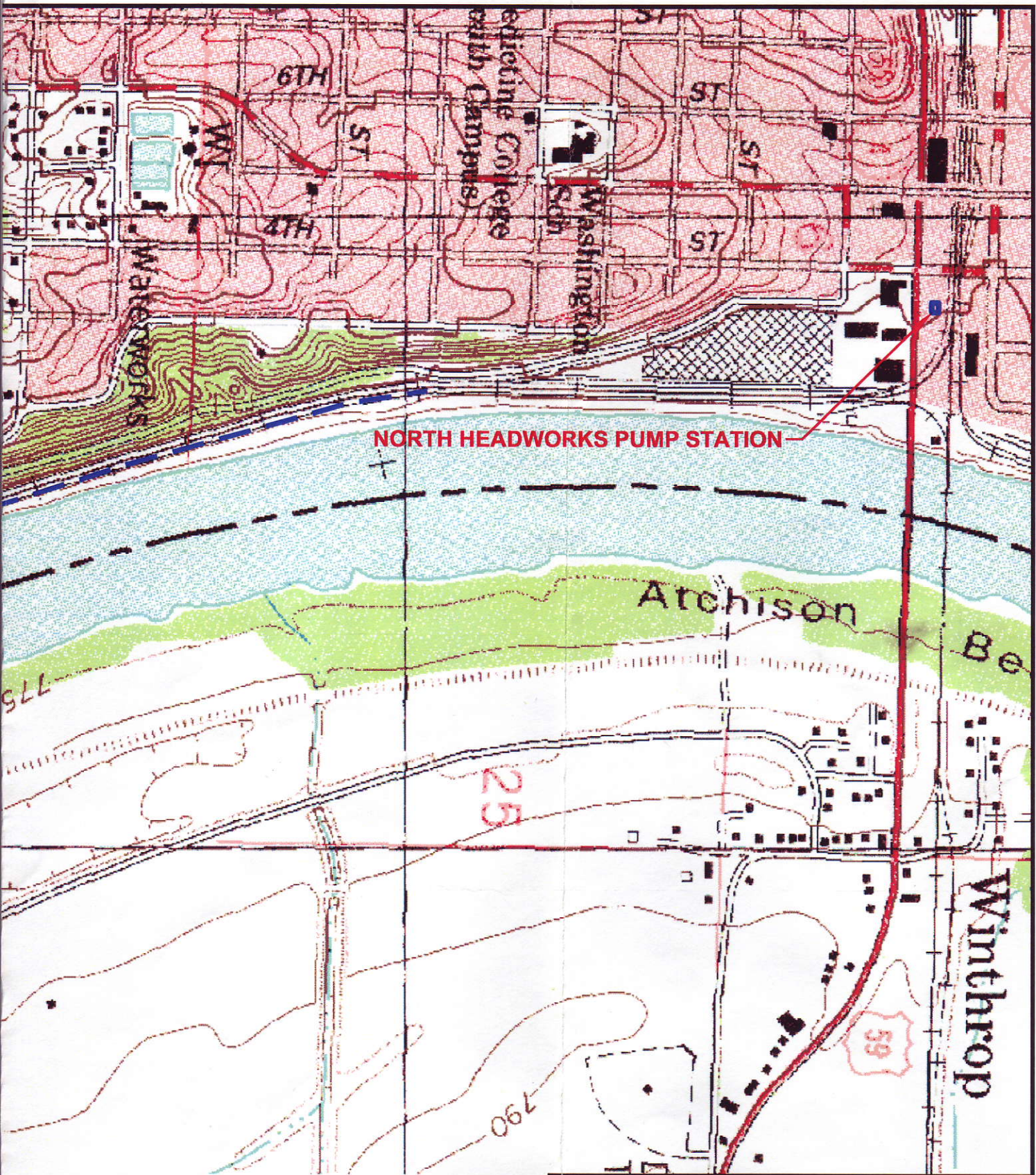
Approximately 5,500 feet of the force main alignment is in or directly adjacent to Union Pacific railroad facilities including a main line and several secondary spurs. The remainder of the alignment is in an existing utility right of way located in a fallow field on or near a gravel access road. This alignment will not affect agricultural land, jurisdictional wetlands, or known sensitive fish or wildlife habitats.

The force main alignment is located in Section 7, Township 6 South, Range 21 East of the 6th Principal Meridian in Atchison County, Kansas.

Sincerely,

Shawn Wilson, P.E.

Enclosure

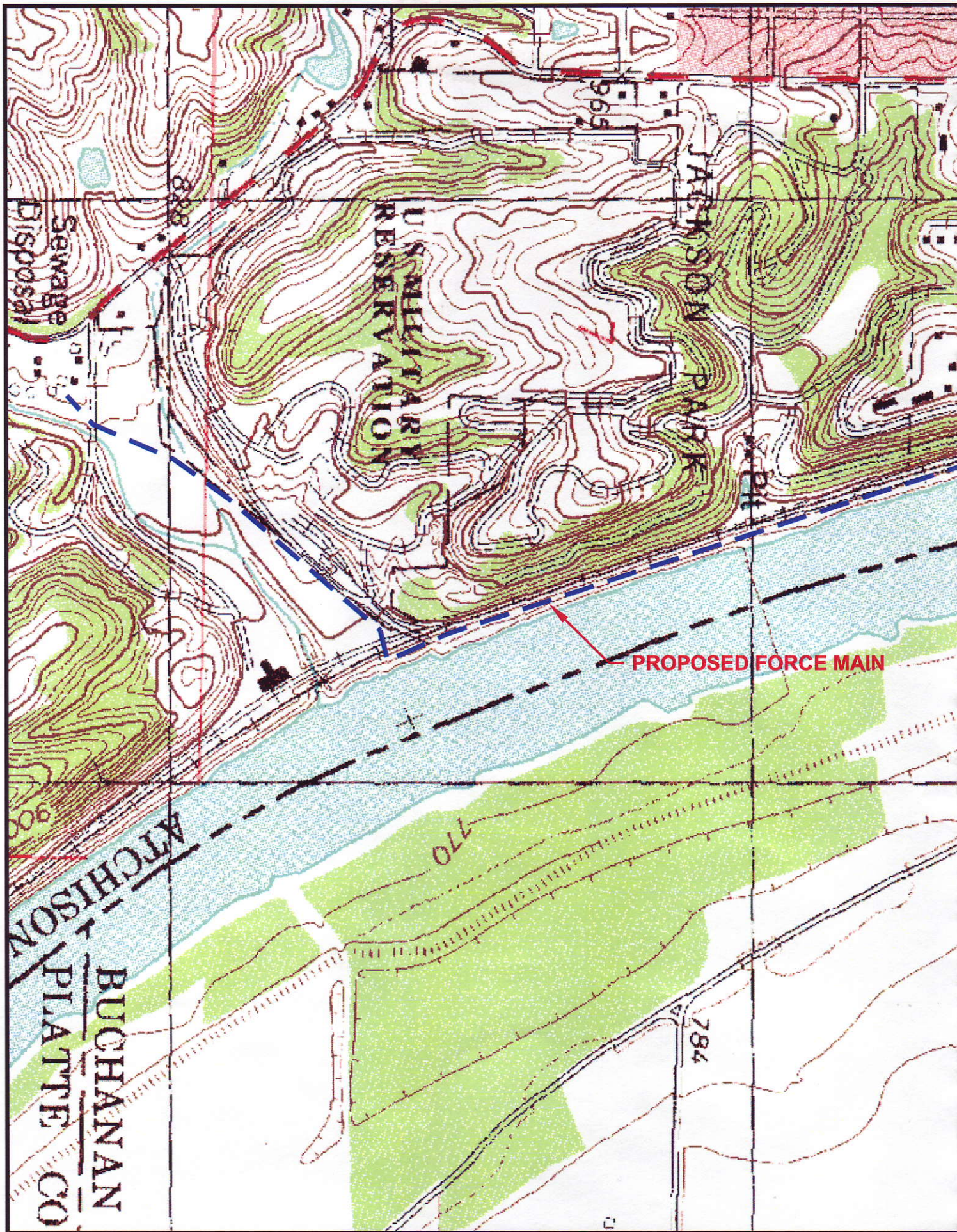


0 2000' 4000'
SCALE IN FEET



Burns &
McDonnell
SINCE 1898

Figure 1
NORTH HEADWORKS
PUMP STA. & FORCE MAIN
IMPROVEMENT PROJECT



MAP LEGEND

MAP INFORMATION

Area of Interest (AOI)	
	Area of Interest (AOI)
Soils	
	Soil Map Units
Special Point Features	
	Blowout
	Borrow Pit
	Clay Spot
	Closed Depression
	Gravel Pit
	Gravelly Spot
	Landfill
	Lava Flow
	Marsh
	Mine or Quarry
	Miscellaneous Water
	Perennial Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Severely Eroded Spot
	Sinkhole
	Slide or Slip
	Sodic Spot
	Spoil Area
	Story Spot

	Very Stony Spot
	Wet Spot
	Other
Special Line Features	
	Gully
	Short Steep Slope
	Other
Political Features	
Municipalities	
	Cities
	Urban Areas
Water Features	
	Oceans
	Streams and Canals
Transportation	
	Rails
Roads	
	Interstate Highways
	US Routes
	State Highways
	Local Roads
	Other Roads

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 15N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Atchison County, Kansas
Survey Area Data: Version 4, Dec 14, 2007

Soil Survey Area: Buchanan County, Missouri
Survey Area Data: Version 7, Nov 1, 2007

Soil Survey Area: Platte County, Missouri
Survey Area Data: Version 7, Nov 1, 2007

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 1991; 1997

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

Atchison County, Kansas (KS005)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7051	Kennebec silt loam, frequently flooded	6.6	0.3%
7052	Kennebec-Colo silt loams, occasionally flooded	217.5	9.2%
7541	Sharpsburg silty clay loam, 4 to 8 percent slopes	0.6	0.0%
7851	Judson silt loam, 1 to 5 percent slopes	32.4	1.4%
7912	Armster clay loam, 12 to 20 percent slopes	162.3	6.9%
7951	Gosport silty clay loam, 25 to 45 percent slopes	270.4	11.5%
7959	Knox-Gosport complex, 10 to 30 percent slopes	207.0	8.8%
7970	Palermo silty clay loam, 18 to 30 percent slopes	405.9	17.3%
7971	Palermo-Knox complex, 10 to 18 percent slopes	205.7	8.7%
9999	Water	100.9	4.3%
Buchanan County, Missouri (MO021)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
13530	Haynie-Onawa complex, 0 to 2 percent slopes, rarely flooded	10.4	0.4%
13546	Levasy silty clay loam, 0 to 2 percent slopes, rarely flooded	27.4	1.2%
13553	Modale silt loam, 0 to 2 percent slopes, rarely flooded	8.2	0.3%
13568	Onawa silty clay, 0 to 2 percent slopes, rarely flooded	131.6	5.6%
13577	Sarpy loamy fine sand, 1 to 4 percent slopes, rarely flooded	3.9	0.2%
13602	Haynie silt loam, 0 to 2 percent slopes, rarely flooded	440.7	18.7%
99001	Water	104.7	4.5%
Platte County, Missouri (MO165)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
13602	Haynie silt loam, 0 to 2 percent slopes, rarely flooded	3.6	0.2%
99001	Water, greater than 40 acres	11.9	0.5%
Totals for Area of Interest (AOI)		2,351.7	100.0%