

KANSAS GEOLOGICAL SURVEY

1930 Constant Ave., Campus West
The University of Kansas
Lawrence, Kansas 66047-3726
phone 785-864-3965
fax 785-864-5317

Proposed Project for Application to the Kansas Department of Health and Environment for a
Loan from the Kansas Water Supply Loan Fund

Applicant: City of Lane
Water-Supply System Improvements

Contact Person: Mike Dalrymple, P.E.
Address: Kramer Engineering, P.A.
2348 SW Topeka Blvd.
Topeka, KS 66611-1286

Sent to the Kansas Geological Survey for environmental review.

Agency Review Comments:

The selection of membrane filtration treatment of the raw water supply along with chlorination is an appropriate approach to enhance the water treatment to address microorganisms that could potentially travel from surface water infiltration through the soils or from seepage from Pottawatomie Creek to the alluvial aquifer. The map associated with the letter requesting review indicates that the well is very close to the creek, suggesting that the well is most likely screened in the alluvial aquifer associated with the creek. There is no well listed in the online WWC-5 database for the location of the well on the map (Sec. 33, T18S-R21E) to confirm this. However, the lack of presence in the database suggests that the well was constructed before the requirement for filing of well logs in 1975. There could potentially be a concern with surface water seepage (such as during and after heavy rains) through macropores in the soil and then down the annulus of the well to the water table, especially if there was not a deep enough seal of the annular space or if the seal was not completely effective in preventing surface water entrance to the water table. This would especially be a concern during flooding of the well area by the creek.

In general, the long-term benefits of the improvements to the water-supply system, which involves not only the treatment improvements but also the replacement of the backup water-supply line, should offset any short-term adverse environmental impacts during construction.

Recommended Action:

- ☒ Clearance of project should be granted
- ☐ Clearance of project should not be granted
- ☐ Clearance of project should be delayed until the issues or questions have been clarified
- ☐ Clearance of project should not be delayed, but the applicant (in the application) should address or clarify the questions or concerns indicated above

Donald Whittlemore

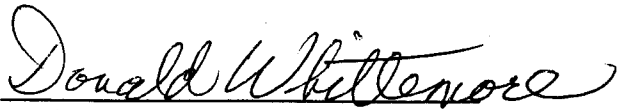
Reviewer's Name

Geohydrology Section, Kansas Geological Survey

Division/Agency

7/24/06

Date

A handwritten signature in cursive script that reads "Donald Whittlemore". The signature is written in dark ink and is positioned above the printed text "Reviewer's Signature".

Reviewer's Signature

The above discussion represents our best assessment based on the information that the Kansas Geological Survey has about this locality and/or proposed project at the time of this writing. Other geologic conditions, not discussed herein, or for which the Kansas Geological Survey has no knowledge, may affect the viability or safe operation of this facility or property. The information provided in this letter is from regional or county-wide studies and should not be used as a substitute for detailed site characterization by a licensed geologist or engineer. It is the responsibility of the applicant to provide any required site characterizations.



KRAMER ENGINEERING, P. A.

CONSULTING ENGINEERS • SURVEYORS

2348 SW TOPEKA BLVD • TOPEKA, KANSAS 66611 • 785-234-6600 • FAX 785-234-6611

June 21, 2006

Re: Water System Improvements
City of Lane, Kansas
Kansas Public Water Supply Loan Fund
KPWSLF Project No. 2407

Dear Addressee:

Enclosed for your comments are Intergovernmental Review Forms for the referenced project with attached project description and site location map. Please complete the transmittal form and return it to our office by July 22, 2006.

The City of Lane, Kansas, is preparing an application to the Kansas Department of Health and Environment for a loan from the Kansas Water Supply Loan Fund for the referenced project. The City has experienced sever water loss in the RWD #6 back-up supply line and wants to replace the 3,000 foot section as denoted on the site map, as well as provide treatment for the existing well water supply. This project will comply with appropriate state laws concerning the application.

If you have any questions about the review or the project, please contact me at 785-234-6600.

Sincerely,

KRAMER ENGINEERING, P.A.

Mike Dalrymple, P.E.
Vice President

MAD/cs

Enclosures

WATER SYSTEM IMPROVEMENTS
CITY OF LANE, KANSAS
(Revision to July 21, 2005 Notice)

KANSAS PUBLIC WATER SUPPLY LOAN FUND PROJECT NO. 2407

June 21, 2006

The City of Lane, Kansas, (City) serves an area of approximately 15 square miles in Franklin County located southeast of Ottawa. The City presently serves about 126 users with an estimated 300 persons directly served by the distribution system. The population of the City is projected to steadily grow over the next 20 years.

The existing water system consists of a single ground water well, chlorination building, distribution system, back-up water supply, and elevated water tower. The untreated water is withdrawn from the well and chlorinated at the chlorination building across the road from the well, as shown on the attached Site Location Map. The chlorinated water is stored in the elevated storage tank near the city park and is distributed to the customers through the water distribution system.

Improvements to the existing water system are being made so the City can comply with KDHE and EPA drinking water regulations for groundwater supplies under the influence of surface water (GWUI). The City currently uses its backup water supply connection with Franklin County RWD #6, but this connection was for supplemental purposes only and not long term total City water supply. On this RWD #6 water supply line, 3,000 feet of line needs to be replaced, and is now included in the project.

The City has decided to construct a membrane filtration plant with chlorine contact basin to treat its existing well water supply and replace 3,000 feet of their RWD #6 supply line. All plant improvements will be located in a building adjacent to the existing chlorination building on City owned property. The water line replacement is not on City owned property, but additional property and easements will not be needed for the project.

The opinion of probable project cost is \$ 415,000, which includes engineering, legal, testing, and inspection services, construction, equipment, materials, supplies, labor, and interest during construction all needed to complete the project. The City plans to finance the project with Kansas Public Water Supply Loan Funds administered by KDHE, and CDBG grant funds. Also, the City expects to increase water rates to repay any borrowed funds.

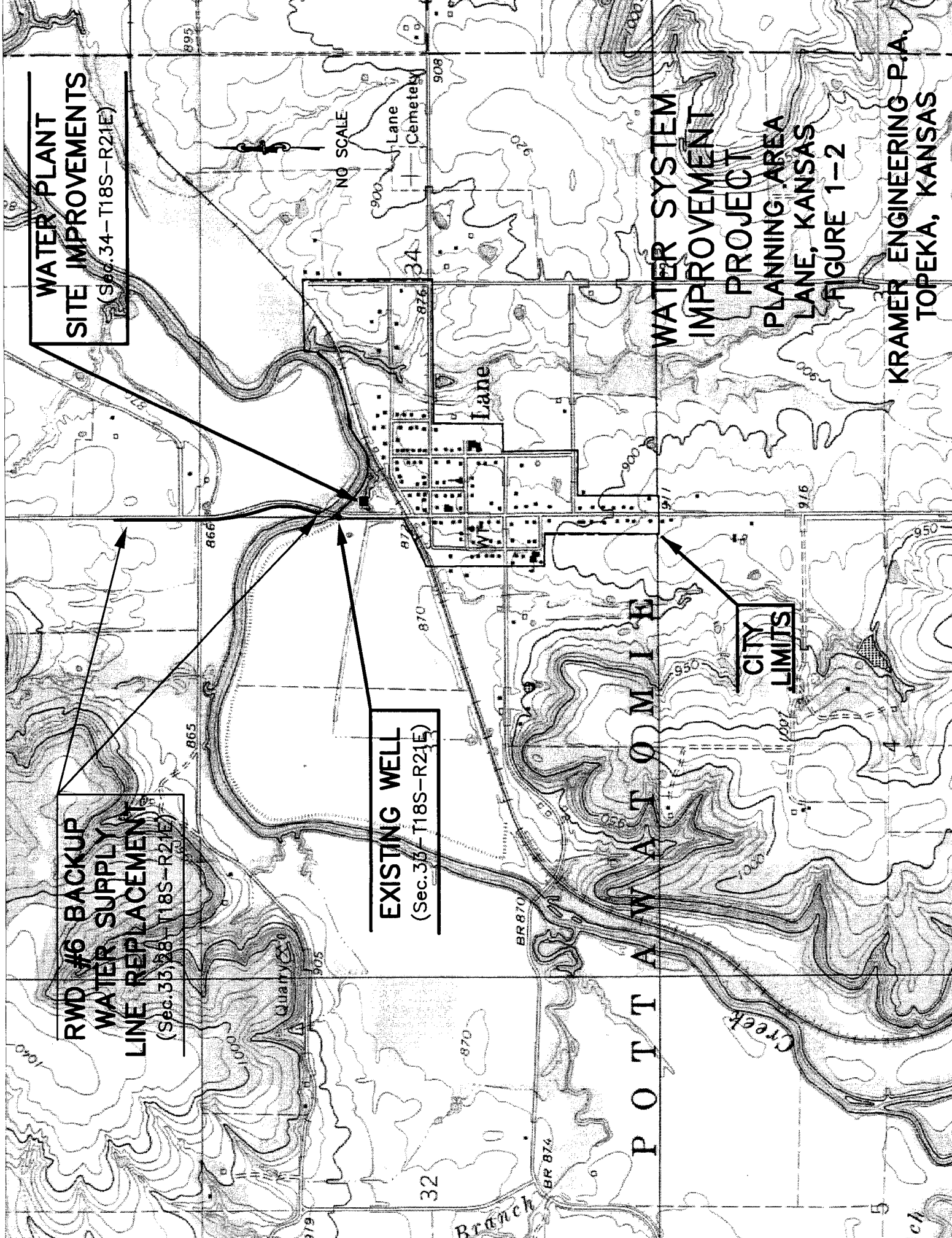
**WATER PLANT
SITE IMPROVEMENTS**
(Sec. 34-T18S-R21E)

**RWD #6 BACKUP
WATER SUPPLY
LINE REPLACEMENT**
(Sec. 33, 38-T18S-R21E)

EXISTING WELL
(Sec. 33-T18S-R21E)

**WATER SYSTEM
IMPROVEMENT
PROJECT
PLANNING AREA
LANE, KANSAS**
FIGURE 1-2

**KRAMER ENGINEERING P.A.
TOPEKA, KANSAS**



INTERGOVERNMENTAL REVIEW TRANSMITTAL FORM

Comments By: Kansas Geological Survey Transmittal Date June 21, 2006

Project Title: Water System Improvements, City of Lane, Kansas

Contact Person: Mike Dalrymple, P.E., Project Engineer

Return To: KRAMER ENGINEERING, P.A.
2348 SW Topeka Blvd.
Topeka, Kansas 66611-1286

This form provides notification and the opportunity for your agency to review and comment on the proposed project as required by Executed Order 12372. Please complete Parts I and II as appropriate. Your response by July 22, 2006 will be appreciated.

PART I - AGENCY REVIEW COMMENTS:

PART II - RECOMMENDED ACTION COMMENTS:

- ☐ Clearance of the project should be granted.
 - ☐ Clearance of the project should not be granted.
 - ☐ Clearance of the project should be delayed until the issues or questions have been clarified.
 - ☐ Clearance of the project should not be delayed, but the Applicant should (in final design and/or permit application) address and clarify the questions or concerns indicated above.
 - ☐ Request the opportunity to review final application prior to submission to the federal funding agency.
 - ☐ Request the State Process Recommendation in concurrence with above comments.
-

Reviewer's Name: _____

Date: _____