



KANSAS

DEPARTMENT OF TRANSPORTATION

CONSTRUCTION MATERIALS INVENTORY/ GEOGRAPHIC INFORMATION SYSTEM DEVELOPMENT PROJECT FOR POTTAWATAMIE COUNTY, KANSAS

Report Number: K-TRAN: KU-06-5

By: Evan Franseen, Ph.D., Galen Worhtington
The University of Kansas, Kansas Geological Survey

R
E
S
E
A
R
C
H

Introduction

In the past 50 years, both Federal and State agencies have produced printed county inventories that contained information regarding the quality, quantity, and location of various natural resources that could be useful in the construction of roads and buildings. The United States Geological Survey (USGS) has printed material inventories in 20 Kansas counties from 1947 to 1959. State of Kansas agencies, including the Kansas Department of Transportation (KDOT), produced 36 county construction material inventories from 1963 to 1982. Some USGS county inventories overlapped with KDOT publications. These inventories proved to be of great utility to state transportation employees, geologists, and private industry. Despite the age of some of the documents they remain a handy reference tool today.

Project Description

During the winter and spring of 2006 a search was conducted for KDOT project records, geological literature and KGS and US Army Corp of Engineer core holdings. Information was collected on the location and type of some 120 commercial quarries, both active and abandoned. Over 100 individual sites were located where geological workers had measured and described sections of rock outcrops.

KDOT records contained geological plan and profile information on over 60 highway miles and 12 bridge construction sites. Field geologists visited many of these sites during the spring, summer, and fall of 2006 to confirm the original geological findings, pinpoint sites more precisely with GPS technology, and to photograph key locations. In areas where geological research was more sparse, a limited rotary wire-line drilling program collected nearly 400 feet of core. At the KGS headquarters in Lawrence, Kansas, field geologists with student assistants worked with website development experts to digitize and place point data online. GIS specialists, cartographic experts, and Data Access/Support Center personnel (DASC) labored to place a variety of interactive mapping tools and geographical-based overlays alongside the current digital geology map for Pottawatomie County.

Project Results

The long range goal is now to build upon this pilot study in future projects to create updated interactive computer-based material inventories for all Kansas counties, with the priority of developing CMIs for counties where the need for information is determined to be most critical.

Report Information

For technical information on this report, please contact: Evan Franseen, Kansas Geological Survey, The University of Kansas, 1930 Constant Avenue, Lawrence, Kansas, 66047; Phone: 785-864-3965; fax: 785-864-5317 e-mail: evanf@kgs.ku.edu.

For a copy of the full report, please contact: KDOT Library; 700 SW Harrison Street, Topeka, Kansas 66603-3754; Phone: 785-291-3854; Fax: 785-291-3717; e-mail: library@ksdot.org.