Kansas Department of Transportation

MEMO TO: Jim L. Kowach, P.E., Chief, Bureau of Design

FROM: Delmar Thompson, P.G.
Regional Geologist, Lawrence

DATE: December 17, 2003

SUBJECT: Bridge Foundation Investigation During Construction
Project 99-75 K-6421-01
K-99 over Rock Creek at Westmoreland
Bridge No. 99-75-14.56(037)
Pottawatomie County

At the request of Gerald Haug, Construction Engineer, Wamego, the Lawrence Regional Geology Office was called to observe a series of Investigative Core Holes to be done in accordance to KDOT Special Provisions to the Standard Specifications, 1990 Edition, Section 706 at the above bridge site. The purpose of these Core Holes is to obtain a core of the foundations material from 1200 mm (4 ft.) above the top of the plan tip elevation to 1800 mm (6 ft.) below the plan tip elevation. Two core holes were taken at the pier locations on the bridge in the above project.

Pier 1, Station 22+373.550

The Investigative Core Hole take at Pier 1, Station 22+373.000 found the a very soft shale zone in the Easly Creek Formation approximately 1 meter below the bottom elevation of the proposed drilled shaft. To avoid possible settlement of the drilled shaft, it is recommended that the bottom of the drilled shaft socket be raised 1.4 meters (4.6 feet) to elevation 333.8 and set on the lower limestone of the Crouse Limestone. This will allow approximately 3.3 meters (10.8 feet) of embedment into the Blue Rapids Shale and Crouse Limestone Formations and set the bottom of the drilled shafts approximately 2.4 meters (7.9 feet) above the weak shale zone.

Pier 2, Station 22+402.050

No change will be required for the drilled shafts rock socket elevations on this pier.

If questions arise over the contents of this memo, please contact the Lawrence Regional Geology Office.

LSI:AJG:RWH:DLT:
c: Bureau of Construction and Maintenance
Mr. Ken Hurst, Eng. Manager, State Br. Office
District I
Lawrence Regional Geology Office
Project File

Proj. File