

# ALDEN ROAD RECONSTRUCTION

## MCHEMRY COUNTY DIVISION OF TRANSPORTATION



### CHALLENGE

*Design a roadway with a deteriorated subgrade.*

Alden Road in McHenry County is a rural collector roadway, approximately ten miles long, that is located between Nelson Road and State Line Road. Due to constant maintenance requirements, the subgrade was determined to be inadequate for the roadway.

McHenry County asked HLR to develop a Phase I study for the roadway improvements. The project included significant coordination with geotechnical firms and subgrade stabilization applications to investigate possible alternatives.

### RESULTS

*Phase I of the project is scheduled to be complete Fall 2010.*

Benefits of the proposed project will include:

- New culverts and re-graded ditches
- Stabilized Roadway

ESTIMATED  
CONSTRUCTION BUDGET  
\$25 Million

### SOLUTION

HLR began the Phase I with a detailed survey of the roadway, ditches, culverts, buildings, and other pertinent information. A Location Drainage Study was submitted to the County for approval and included tributary drainage delineation, hydrologic evaluation using HEC-HMS, existing and proposed culvert hydraulics using HY-8, ditch design and right-of-way needs. The culverts and drainage conveyance systems will be improved as part of the project.

The Phase I study also investigated possible solutions for subgrade stabilizations with recommendations from geotechnical firms and investigations into newly available stabilization products on the market. HLR's coordination with McHenry County included a summary of findings and a recommendation for subgrade stabilizations based on conditions found in different sections of the roadway.

The public involvement process for this project has been extensive. In response to the first Public Hearing, a project newsletter has been developed updating residents of the progress of the project. The first two issues of the newsletter have been mailed. A Stakeholders Group was assembled to gain insight and ideas from residents, areas businesses and public officials. Once the proposed design has been refined, it will be presented to the Stakeholders Group and then to the public at another public hearing.

*Improvements designed include:*

- Project Development Report.
- Proposed culvert design.
- Proposed ditch re-grading.
- Stabilized roadway subgrade.
- New pavement design.