

CONCRETE PAVEMENT

PROJECT REPORT



Project: Intersections at 28 Mile Road and Campground, 29 Mile Road and Campground, and 29 Mile Road and Mound Road.

Site: Macomb County

Project

Description: Cold-mill existing permanent deformations (rutting, shoving) in failed pavement area to depth of 4 to 6 inches below existing surface at three intersections in Macomb County. PCC pavement bonded to the existing asphalt pavement to create a composite pavement section. Approximately 2100 square meters of concrete overlay.

Owner: Road Commission of Macomb County

Contractor: Florence Cement Company, Troy, Michigan

Special

Feature: Ultra-thin Whitetopping



Concrete Overlays

Macomb County

In July of 2000, the Road Commission of Macomb County was faced with the task of repairing three intersections in the northwest part of the county that were again experiencing severe rutting. These intersections were located a short distance from a gravel pit and received heavy truck traffic on a daily basis.

The County decided to construct concrete overlays at the intersections. According to Camille Deeb, county engineer "We had severe rutting problems at the intersection, so that was the approach we used to solve it." These intersections included: Campground Road and 28 Mile Road, 29 Mile Road from Campground Road to the West and 29 Mile Road and Mound.

The design called for a four inch concrete overlay. The overlay was thickened to six inches at specific locations in the intersections that received greater loads due to stopping motion of the trucks. Contraction joints were cut in four feet intervals both transverse and longitudinally. The County specified a standard concrete mix with polypropylene fibers included to help minimize the potential for shrinkage cracks.

The project was completed over one weekend. The contractor began milling the rutted pavement sections on a Friday morning. The first overlay was constructed on Friday afternoon, immediately cured and sawed within 5 hours. All overlay sections were completed by the following day. The intersections were open to the public on Monday morning.

The County is extremely pleased with the outcome of the project and plan to monitor its performance over the next five years. "We are looking at other roads where there is severe rutting in the asphalt and that we have continually milled and microsurfaced", said Deeb. "We are looking forward to getting at least ten years out of our concrete overlays.

