

CONCRETE PAVEMENT

PROJECT REPORT



Project: 44th and Burlingame Intersection

Site: Wyoming, MI

Project Description: Intersection restoration utilizing a 4-inch concrete Whitetopping.

Project Information: Total area of pavement 4,807 syd's Milling and concrete placement

Owner: City of Wyoming

Contractor: WMRA, Inc.
Grandville Michigan
MCPA Member

Special Feature: Ultra-thin Whitetopping

Concrete Overlays

44th & Burlingame City of Wyoming

In August of 2001, The City of Wyoming constructed its first Whitetopping at the intersection of 44th Street and Burlingame. The concrete covered the entire intersection and extended back to the beginning of the stopping zones on both legs of 44th street.

The city was looking for a long lasting solution for a number of troubled intersections. The daily traffic estimates for 44th street are approaching 50,000 vehicles with 5% heavy commercial truck traffic and the existing, 7 to 9-inch thick, asphalt pavement along the 44th Street corridor was not living up to its promised design life, requiring perpetual maintenance. Constructing a conventional full depth pavement would have been costly and would have disrupted traffic for several months. Wyoming elected to reconstruct the intersection with a 4-inch concrete Whitetopping.

The project consisted of milling 4-inches of the existing rutted asphalt surface followed with the placement of 4800 square yards of 4-inch thick fiber reinforced concrete. The concrete was sawed into 4 foot by 4 foot panels using a 1/8th inch wide saw blade. These joints are not sealed. The construction activities were completed during night time operations. After milling, the surface of the remaining asphalt was swept and then blown off with a 185-Air Compressor. The concrete was placed directly on the cleaned asphalt and vibrated in place. Vibration produces ample cement grout to bond the concrete to the asphalt. A majority of the concrete was placed with a 12-foot wide slipform paver and the pours were laid out so hand set forms were not required. Traffic loops were sawed into the remaining asphalt base prior to concrete placement. Existing manholes were removed before milling and reset prior to concrete placement.

The entire project was completed in just three weeks.

