



WHITETOPPING - THE RIGHT CHOICE

Project Report #5

Washington County, Iowa

In 1977 Washington County, Iowa was faced with the problem of what to do with a 9.0-mile section of an old asphalt pavement that was worn out and needed repair.

After studying all the options, it was decided to resurface this county road with Portland cement concrete (PCC). The only surface preparation for the asphalt surface was to clean it with a power broom. Nothing was done with the wheel ruts or chuckholes other than to fill them with PCC as the road was paved. This approach had two beneficial results. First, we had no expense in surface preparation of the old asphalt, and second, the PCC had the additional thickness in the wheel ruts and edges where additional strength was needed.

To determine the CY quantity of the concrete, a computer program was developed by Washington County to figure these quantities. The old asphalt road had to be cross sectioned to determine the CY quantity. Elevations were taken at centerline, edge of pavement, wheel ruts, quarter points and wherever the asphalt was distorted.

The elevations were placed in the highway department's computer and the printout showed a minimum design of 5 in. thickness at the center and 7 in. thickness at the edges. The new PCC resurfacing was designed with a 2 in. crown.

The projects were let with two bid items for the resurfacing-furnishing concrete and placing the concrete. The bid item for furnishing included a CY

quantity based on the estimated quantities from the computer printout. The contractor was paid on the actual CY placed from batched quantities.

Initially there was concern that the existing asphalt surface needed a perfect profile by placing an asphalt leveling course or by milling. The cost estimation for the asphalt leveling course was a minimum of \$25/ton. Since two tons of asphalt is equivalent in volume to one CY of concrete, this equated to \$50/CY if asphalt were used to level the paving surface.

Since the concrete furnished was bid at \$28.70/CY, a large savings was realized by using concrete. There was also the advantage of additional thickness in the wheel ruts and edges where it was needed. The bid item for placing was by the SY which paid for placing, overhead labor and profit.

After twelve years and 2,000 vehicles/day, there have been no maintenance dollars spent on this road. Whitetopping was definitely the right choice for Washington County.

Since the first project, we have done three other projects totaling 21 miles. We highly recommend whitetopping to anyone.

(By Robert G. Huber, County Engineer)

This article first appeared as a guest editorial in ACPA's Concrete Pavement Progress - July/August 1989. Additional information may be obtained by contacting the Iowa Concrete Paving Association at (515) 278-0606.

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