INTRODUCTION

For the past several years, Kossuth County has had a scheduled maintenance program of bituminous seal coating. This program has been used to maintain the 467 miles of asphaltic concrete surfaced roads in Kossuth County.

Since most of the experience that Kossuth County had in seal coating was with cutback asphalt, it was decided to include the use of emulsified asphalt in Kossuth County's 1980 seal coat program.

Federal Demonstration Project Funds were requested from the Federal Highway Administration to study the use of emulsified asphalt and funding was granted under Demonstration Project No. 55, "Asphalt Emulsions for Highway Construction." Items studied were design and construction procedure, cost of alternate material, energy consumption and environmental considerations.

A construction contract was awarded to Everds Brothers, Inc. of Algona, Iowa, on July 1, 1980. There were four bidders on the 54.5 miles of seal coating that was let.

A map showing the location of the seal coating projects is shown in Appendix A, and a copy of the contract is shown in Appendix B.

The contractor started the project on July 11, 1980 and completed the project on August 1, 1980.

Construction inspection and follow-up inspections of the project were conducted by personnel of the Kossuth County Engineer's Office and testing of the materials, friction testing and road rater testing were conducted by the Material's Department of the Iowa Department of Transportation.

SUMMARY

Based on the results of this demonstration project, Kossuth County found that emulsified asphalt was an acceptable material-when-used-as-a binder bitumen for seal coating.

We found that we did not have to significantly alter our design procedure or our construction procedures when using the emulsified asphalt.

We found that there is a very definite cost benefit when using emulsified asphalt as compared to a cutback asphalt. It has also been our experi-

ence on succeeding projects that the cost saving is ever greater as the price of emulsified asphalt has decreased slightly while the cost of cutback asphalt has increased.

The emulsified asphalt seal coat that we constructed has performed very well and we have not experienced any problems to date. The friction coefficients that we obtained compared favorably with the projects on which we used cutback asphalt. We did not experience any bleeding, streaking, raveling, or loss of the cover aggregate on any of the projects.

The emulsified asphalt that we used completely satisfied our main objective which was to provide a waterproof road surface as well as a safe driving surface for the public use.