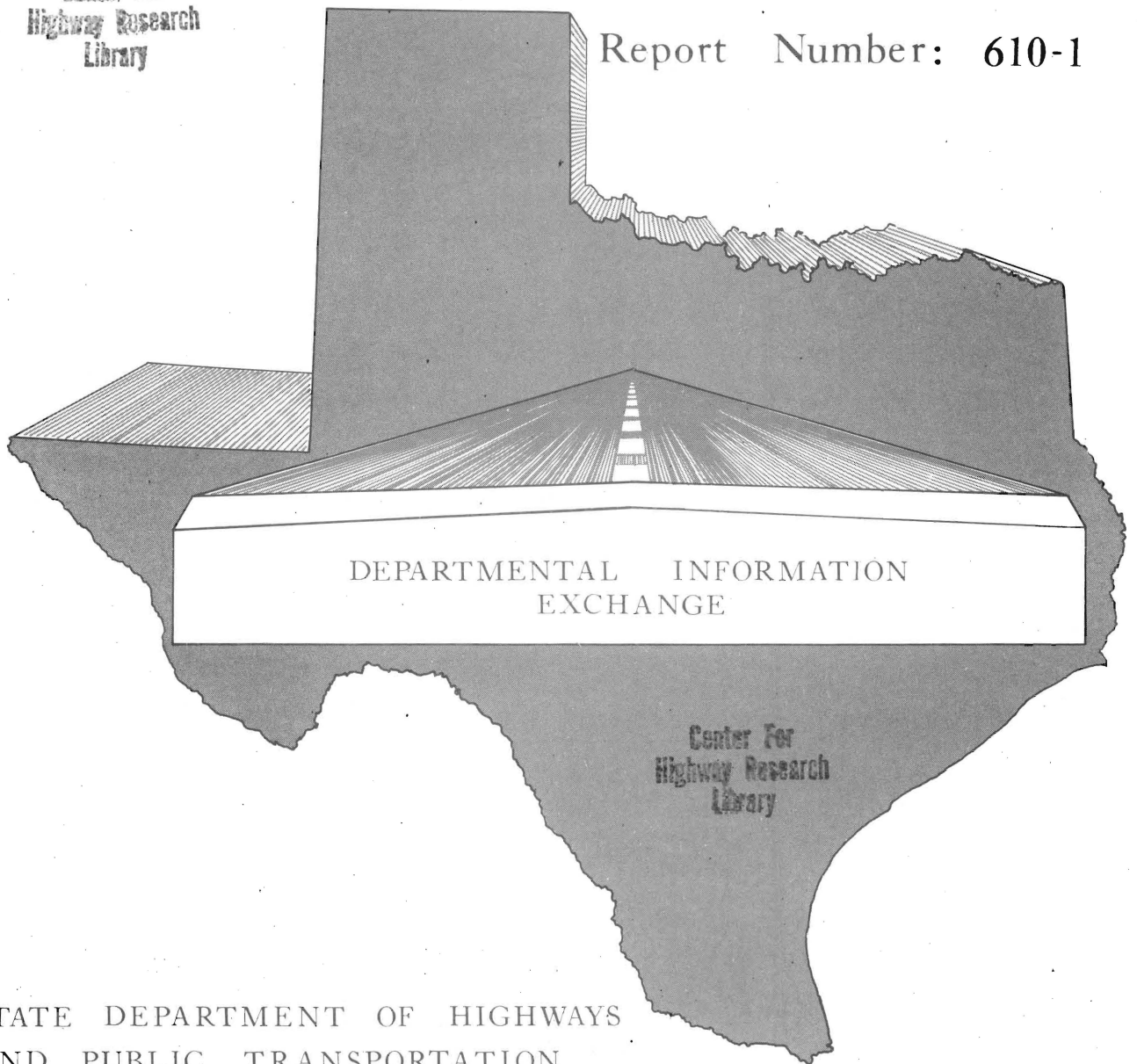


EXPERIMENTAL PROJECTS

PAVEMENT EDGE MAINTENANCE

Center For
Highway Research
Library

Report Number: 610-1



DEPARTMENTAL INFORMATION
EXCHANGE

Center For
Highway Research
Library

STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION



L006261

Pavement Edge Maintenance

Report No. 610-1



A Narrative Report

by

Warren N. Dudley

Supervising Research Engineer

District 20

October 1975

PAVEMENT EDGE MAINTENANCE

Historically, the use of a maintainer to pull shoulder material back into place has been the method by which channeling and loss of base material at the pavement edge has been controlled on narrow pavements. This treatment will often alleviate the symptom but does nothing toward curing the problem. During the interval between maintenance operations erosion at the pavement edge will often reach dangerous proportions due to rainfall washes and outer dual wheel damage. In an attempt to devise methods to cure this problem and to save operational expense due to continual maintenance a special study committee was appointed by District Engineer, Franklin C. Young, in District 20.

After considering many possible solutions the committee elected to experiment with road mixed asphalt stabilization of existing shoulder material. Purpose of the stabilization was to eliminate edge maintenance, not to widen the pavement. Selected for the experimental project was a one half mile section of 18 foot wide flexible base pavement on SH-63 in Jasper County. The site was selected because of its being one of the most expensive and most troublesome roads in the District for edge maintenance. It was estimated that edge maintenance consisting of blading and material replacement was costing approximately \$3300 per mile per year.

Work on the test section was done on March 10 and 12, 1975. Total cost of plowing out the 18" wide by 6" depth at the pavement edge, mixing and replacing the asphalt stabilized material, mixing grade cationic asphalt emulsion, traffic control, labor and equipment for the half mile test section cost \$2,108. As we gain experience with the overall operation this cost can be reduced. A typical section of the

original pavement and of the improved edge treatment is shown in Figure 1.

As a result of this operation, maintenance of the pavement edge has been eliminated, dangerous channels along the edge have been eliminated or moved away from the edge and a safer condition exists. After observing the performance of the test section for six months during a very heavy rainy season it is our plan to adopt this method into our routine maintenance operations.

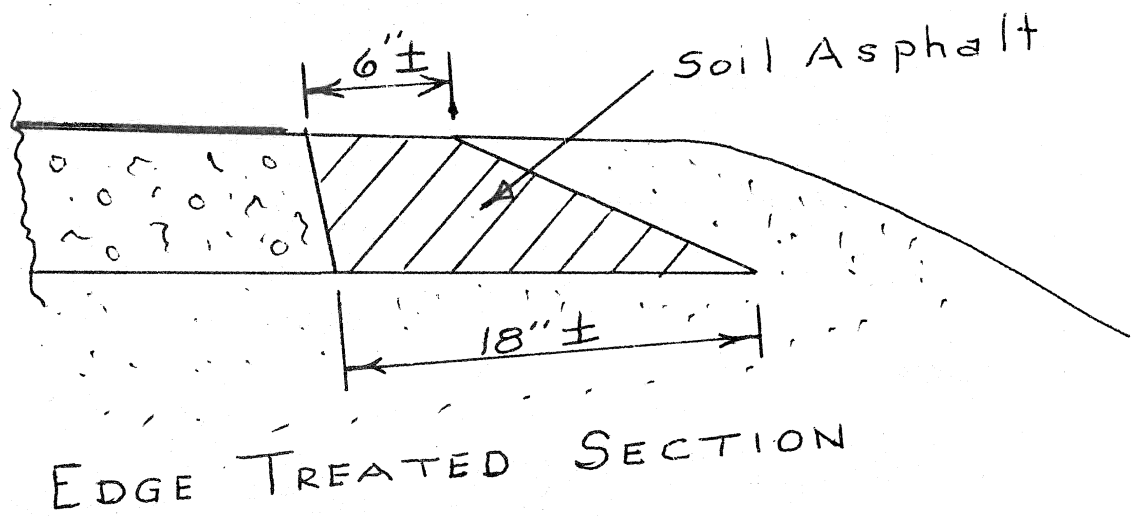
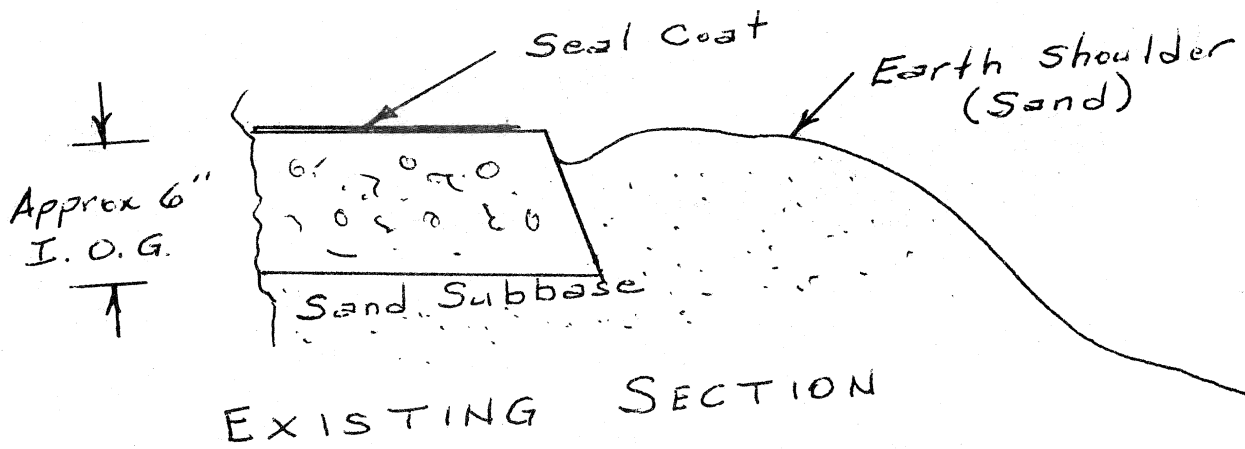


FIGURE 1

TEST SECTION SUMMARY

SH-63 East of Jasper
Both shoulders stabilized on 0.5 mile section
Width - 18 to 24 inches
Depth - 6 inches

Equipment Used

- 1 - Maintainer
- 1 - 5000 Ford Tractor with Pulver Mixer
- 1 - Sign Truck
- 1 - Truck and Trailer for Asphalt Delivery

Cost of Test Section

Labor	\$ 476.00
Equipment	394.00
Asphalt and Delivery	1,238.00
	<hr/>
Total	\$2,108.00

Remarks:

Cost of asphalt delivery and total unit cost can be reduced by using commercial freight and working longer sections.