

1. Report No.		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle "RECYCLING ASPHALTIC PAVEMENT"				5. Report Date January, 1980	
				6. Performing Organization Code	
7. Author(s) Bobby R. Lindley				8. Performing Organization Report No. 527-2F	
9. Performing Organization Name and Address State Department of Highways and Public Transportation P.O. Box 150 Abilene, Texas 79604				10. Work Unit No.	
				11. Contract or Grant No. DOT-FH-15-222	
12. Sponsoring Agency Name and Address State Department of Highways and Public Transportation P. O. Box 5051 Austin, Texas 78763				13. Type of Report and Period Covered Final Report June, 1978 - January, 1980	
				14. Sponsoring Agency Code	
15. Supplementary Notes This document is produced by the Texas State Department of Highways and Public Transportation and the Federal Highway Administration. Demonstration Study 1-8D-77-527 "Recycling Asphalt Pavement" FHWA Demonstration Project 39, FHWA Experimental Project 064877003					
16. Abstract Work began on a complete rehabilitation project on Interstate 20 in Roscoe, Texas in July of 1977. 2.9 miles of the project was selected for recycling. Research report 527-1, "Recycling Asphaltic Concrete Pavement," (also published as FHWA-DP-39-11) presents the history of the selected section, construction procedures, mix plant operations, air quality control measures, energy comparisons, lab. sample reports, and various test results. This report briefly describes the performance of the section after its completion in June of 1978 to present as determined by visual inspection and core samples.					
17. Key Words Recycling asphalt pavement ACP Softening agent			18. Distribution Statement No restrictions This report available from National Technical Information Service, Springfield, VA 22161		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 3	22. Price

DEMONSTRATION PROJECT 1-8D-77-527
RECYCLING ASPHALTIC CONCRETE PAVEMENT

FINAL REPORT

This project was completed and the Contractor was released on June 16, 1978. Since that time it has carried approximately 11,000 vehicles per day. A total of some 6,270,000 vehicles have used this system and to the present time there are no signs of any type of failure. However, failure is never expected on any complete rehabilitation project of this type. The winter months have been normal to mild with very little severe icing experienced. The area had a severe flood after the project was completed and water stood to the shoulder level for several days with no effect on the serviceability of the system.

The appearance of this project is no different from a project using new materials. There is evidence of minor rutting in the surface mix in the right lane, but it does not extend into the asphalt stabilized base.

Cores were taken randomly from this project and tests were made to determine the quality of the material. The test reports are attached. They indicate asphalt that has hardened more than desirable. Corrections for hardening have been made on other projects since the completion of this project. Asphalt softening agents or higher penetration asphalts are being used, depending on test results of the existing salvaged asphalt.

With the continued demand for--and the lack of--petroleum products it seems even more practical to design and encourage recycling as a standard rehabilitation process. It is evident from this project that recycling is a viable construction procedure that conserves energy and natural road building materials. With the completion of other projects we will be able to perfect and improve the recycling process. The contracting industry will meet the challenge with equipment and methods developed explicitly for recycling of asphalt materials.

STATE DEPARTMENT OF
HIGHWAYS AND PUBLIC TRANSPORTATION
DIVISION OF MATERIALS AND TESTS
AUSTIN, TEXAS 78701

CHARGE \$80.00

GENERAL TEST REPORT

Contract/Reqn. No. _____ Control 30-3-0214-052708-807-1 No. _____
 Engineer _____ Project _____ Hwy. _____
 Contractor _____ District 8 County Nolan

 F79500275 &
 Laboratory No. F79500276 Date Received 9-24-79 Date Reported 9-27-79
 Material Recycle Pavement Code _____
 Producer J. H. Strain & Sons, Inc. Code _____
 Identification Marks See Below Spec. Item 3052
 Sampled From See Below Quantity _____ Units _____

EXTRACTION TEST RESULTS

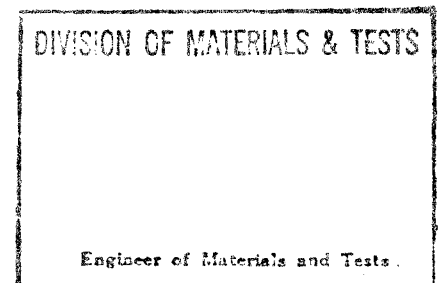
Size	F79500275 J-790562-N West Bound Lane (% by wt.)	F79500276 J-790565-N East Bound Lane (% by wt.)
Ret. 1 3/4"	0	0
Ret. No. 4	33.8	37.6
Ret. No. 40	67.1	68.5
Residual Bitumen	6.6	6.2

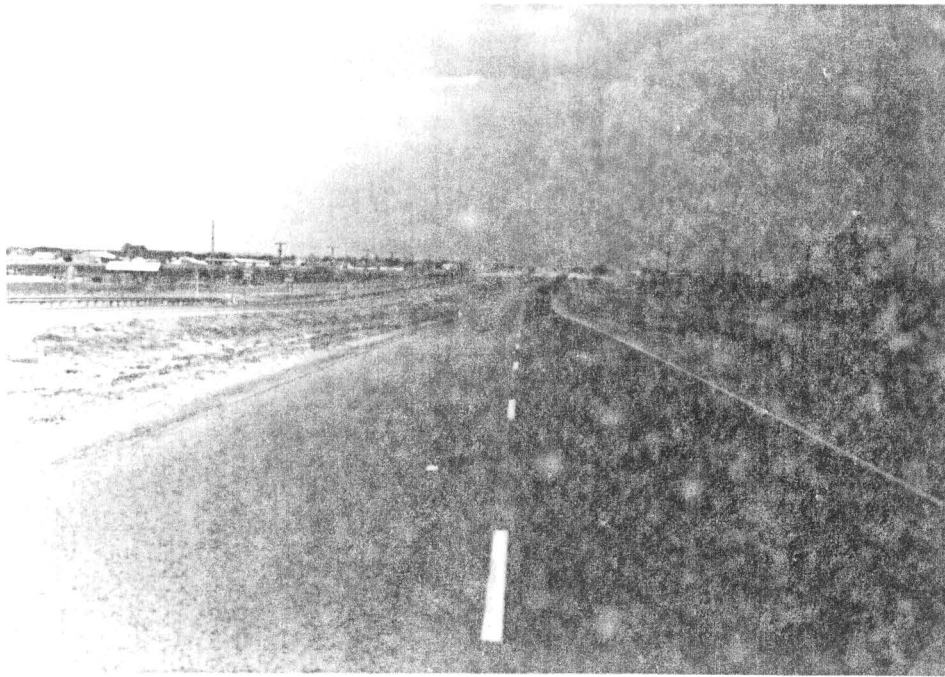
TEST RESULTS ON RESIDUAL BITUMEN

Viscosity @ 140°F., stokes	4404	8661
Penetration @ 77°F.	39	30
Ductility @ 77°F. cm.	141	108

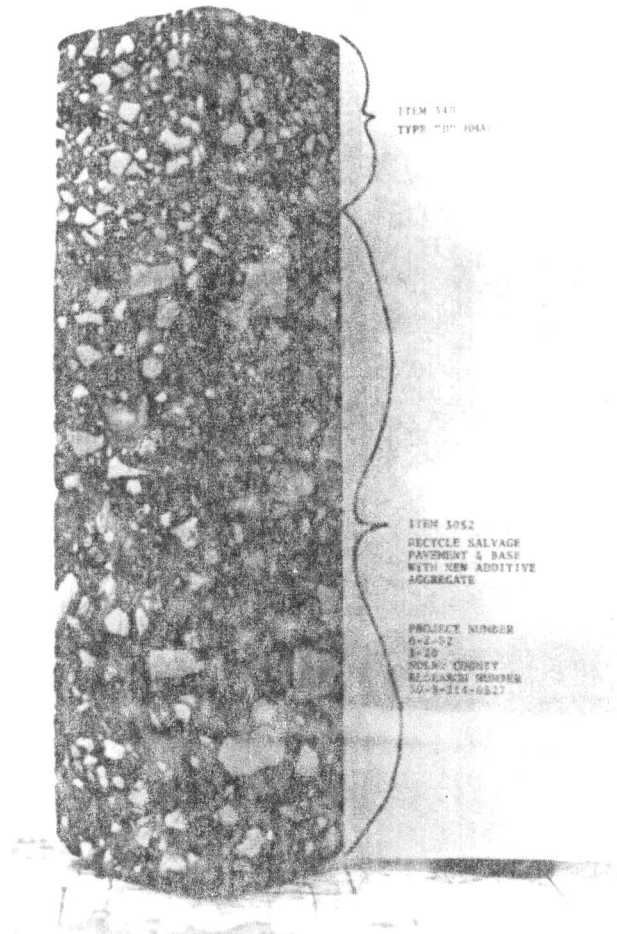
1 cc E. K. Lindley, Dist. 8

ja





View of Roadway



Cone Sample