Experimental Project Report

County: Bradford and St. Johns
Section/Subsection No.: 28030-3508 and 78080-3423
State Road: 16 and 9(I-95)
Project Description: Ground Tire Rubber In Open Graded Friction Course

State Materials Office
Gainesville, Florida
OBJECTIVE:

The objective of this study is to evaluate the relative long-term field performance of pavement containing an open graded friction course (FC2) mixture with different levels of Ground Tire Rubber (GTR), from 5 to 17 percent, and a section containing 10 percent Dry Mix. The Bradford County project (Fig. 1) was constructed in April of 1989 on State Road 16, and consists of a control and five other sections that includes four GTR sections containing 5 to 17 percent GTR along with a section containing 10 percent Dry Mix, all located in the westbound lane. The St. Johns County project (Fig. 2) was constructed on state road 9(I-95) in September of 1990, and consists of two control sections (one in each direction, the northbound and the southbound traffic lane) and two test sections (each containing 10 percent of 80 mesh size GTR) in the northbound and southbound traffic lanes. Performance is evaluated in terms of Ride, Rutting and Cracking.

LOCATION AND DIAGRAM OF SECTION

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LOCATION AND DIAGRAM OF SECTION (CONT.)

PROJECT NO. 78080-3423
SR 9(I-95) ST.JOHNS COUNTY
(10% of 80 mesh size GTR in the North & Southbound Test Sections)

Fig. 2
Pavement Distress

Rutting

Cracking

Ride

Test Dates

09/16/91 10/19/92 09/21/93 09/29/94 10/20/95 10/23/96 10/01/97 12/01/98 10/04/99 06/11/01

000.0 002.0 004.0 006.0 008.0 010.0 012.0

cracking (ft.

0.00 1.00 2.00 3.00 4.00 5.00

rutting (in.

0.00 0.05 0.10 0.15 0.20 0.25 0.30

ride (psi)

0.00 1.00 2.00 3.00 4.00 5.00

Test Dates

09/16/91 10/19/92 09/21/93 09/29/94 10/20/95 10/23/96 10/01/97 12/01/98 10/04/99 06/11/01

000.0 002.0 004.0 006.0 008.0 010.0 012.0

cracking (ft.2)

0.00 1.00 2.00 3.00 4.00 5.00

rutting (in.)

0.00 0.05 0.10 0.15 0.20 0.25 0.30

ride (psi)