Florida Department of
TRANSPORTATION

Open-Graded Crack Relief (OGCR)

Experimental Project Interim Report

FDOT Office	**State Materials Office**
District	**7**
County	**Hernando**
Financial Project	**431143-1-52-01**
Roadway ID	**08010000**
State Road No.	**45**
US Road No.	**41**
Report Date	**11/18/2016**

Project Description

District	7
County	Hernando
Financial Project	431143-1-52-01
Roadway ID	08010000
State Road No.	45
US Road No.	41
Lane(s) Tested	L1

Objective

The objective of this study is to evaluate the relative long-term performance and effectiveness of an open-graded crack relief(OGCR) layer in mitigating reflective cracking.

Background

In 2015, two test sections were constructed as part of a 0.951 mile milling and resurfacing project (FIN 431143-1-52-01) which was completed on November 6, 2015. The test sections are located in the Southbound passing lane (L1) of SR-45 /US-41 in Hernando County, between milepost 4.645 and milepost 5.422 . The section to the South (Section 1) received an OGCR and the section to the North (Section 2) received an overbuild as part of the structural layer.

Description

Each test section is 1,200 feet long. The design specified milling 3.25 inches of the existing asphalt and leaving 1.35 inches in place. The structure consists of 12 inches of Type B stabilization (LBR 40), 12 inches of Limerock base, about 1.4 inches remaining asphalt after milling, 1 inch OGCR or Overbuild, 2 inches SP-12.5, and 0.75 inch FC-5. Pavement performance is evaluated in terms of pavement deflection, cracking, rutting, and smoothness.

Project Location

District	7
County	Hernando
Financial Project	431143-1-52-01
Roadway ID	08010000
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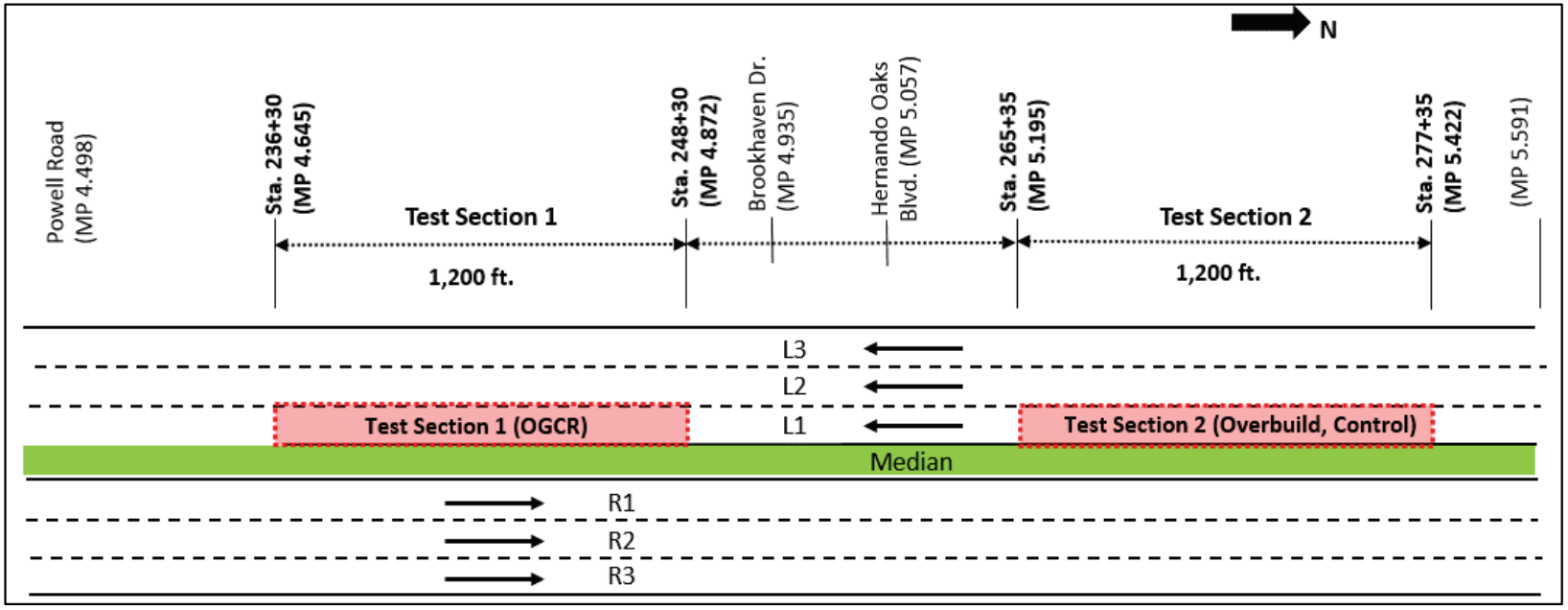
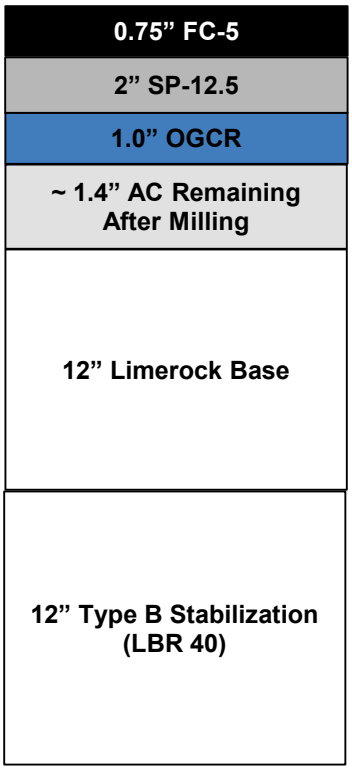
Project Layout



Pavement Thickness

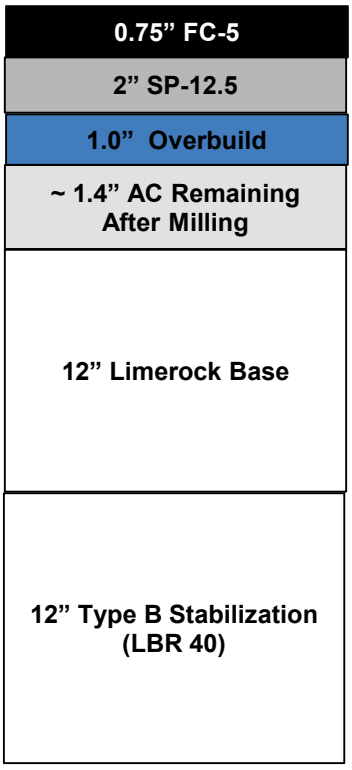
Section 1

Sta. 236+30 (EMP 4.645) Sta. 248+30 (BMP 4.872)

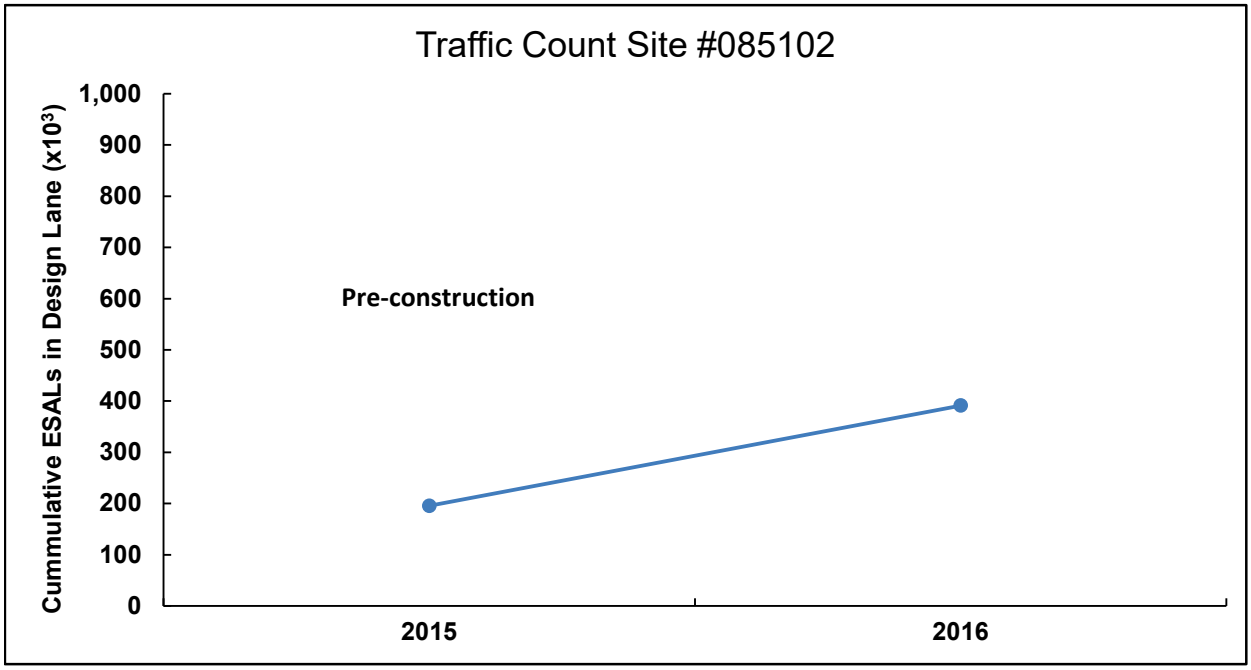


Section 2

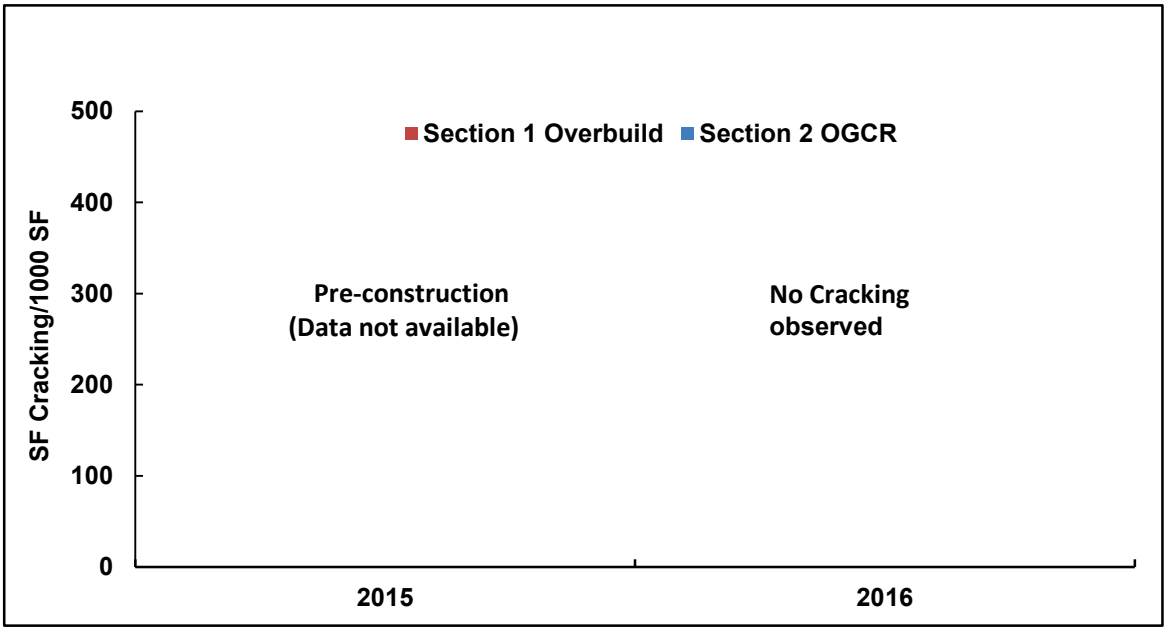
Sta. 265+35 (EMP 5.195) Sta. 277+35 (BMP 5.422)



Traffic

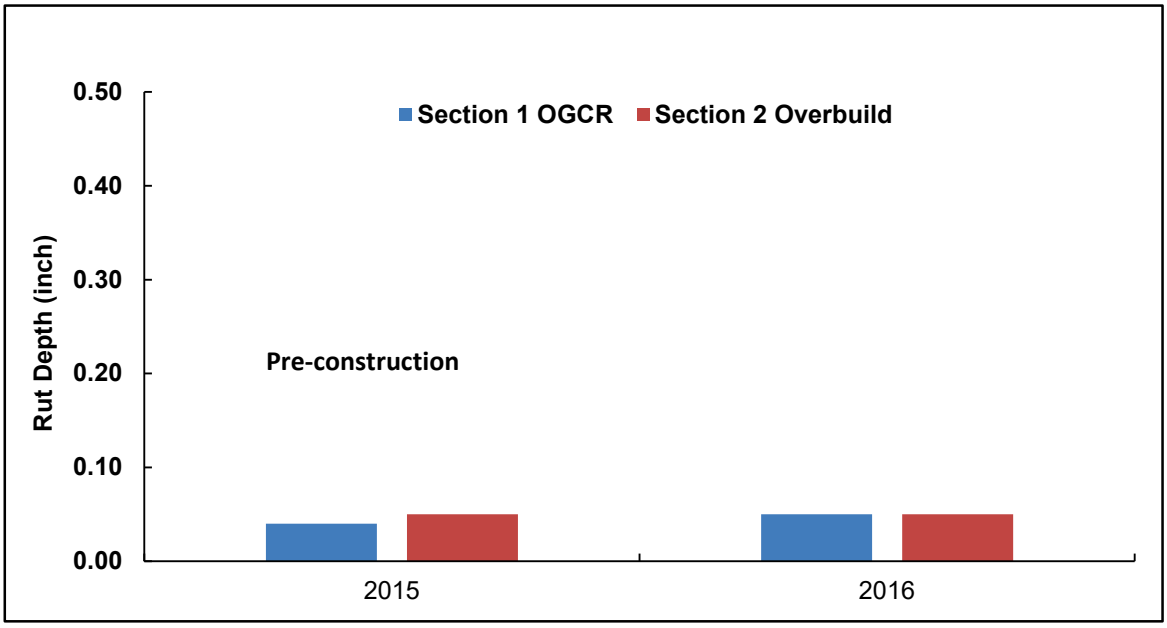

Traffic Count Site #085102
Cummulative ESALs in Design Lane (x10³)
1,000
900
800
700
600
500
400
300
200
100
0
Pre-construction
2015
2016

Cracking

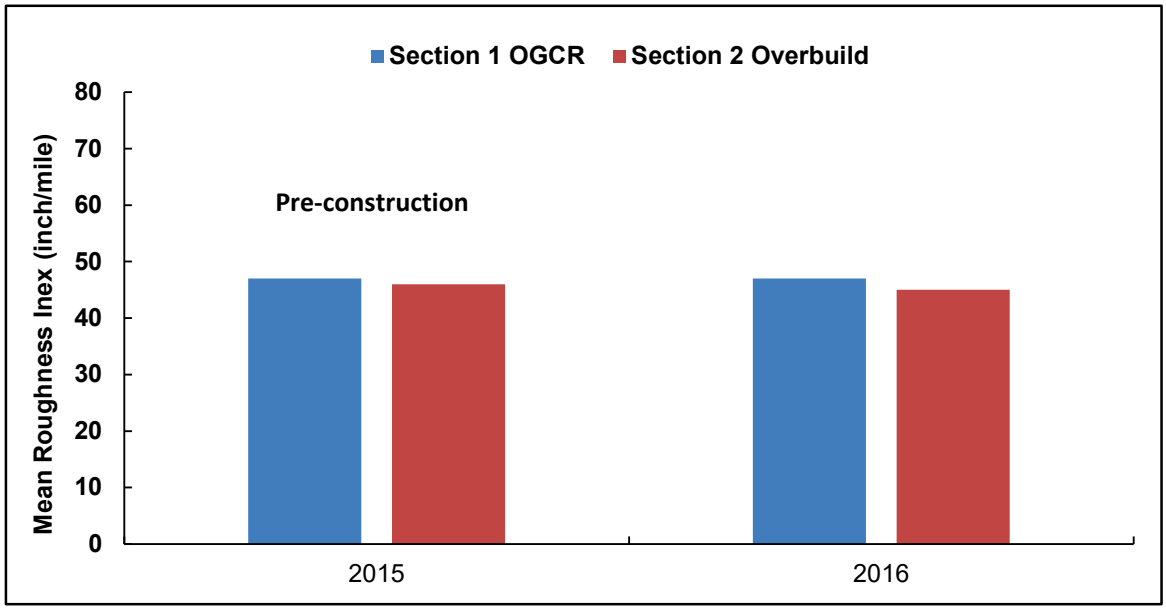


Note: No cracks were observed on either test section

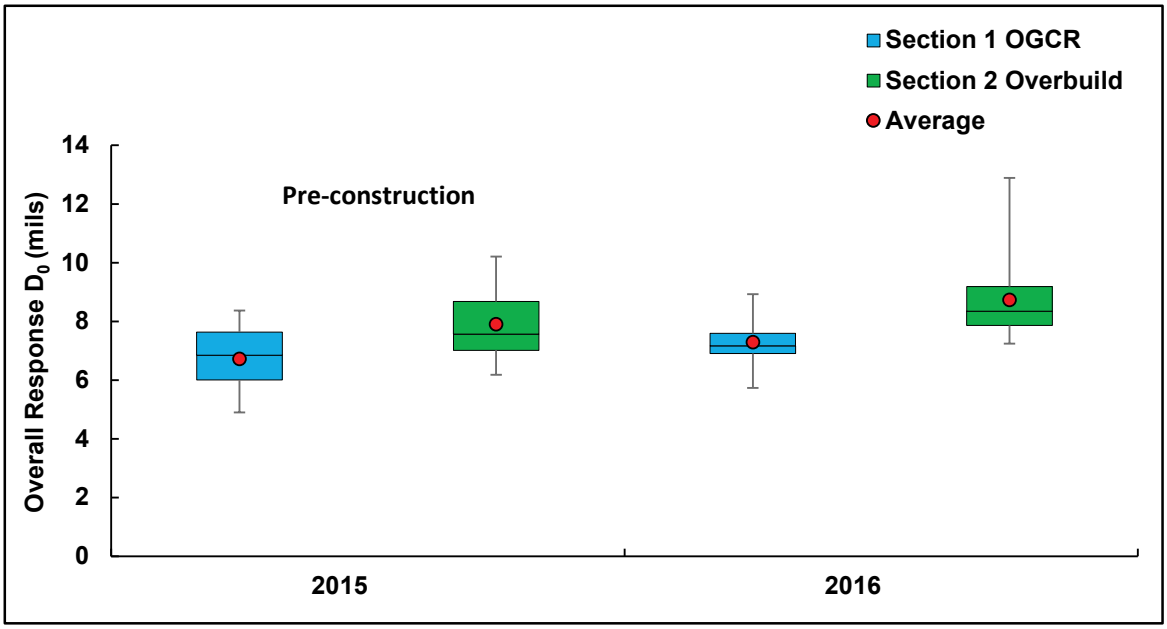
Rut Depth

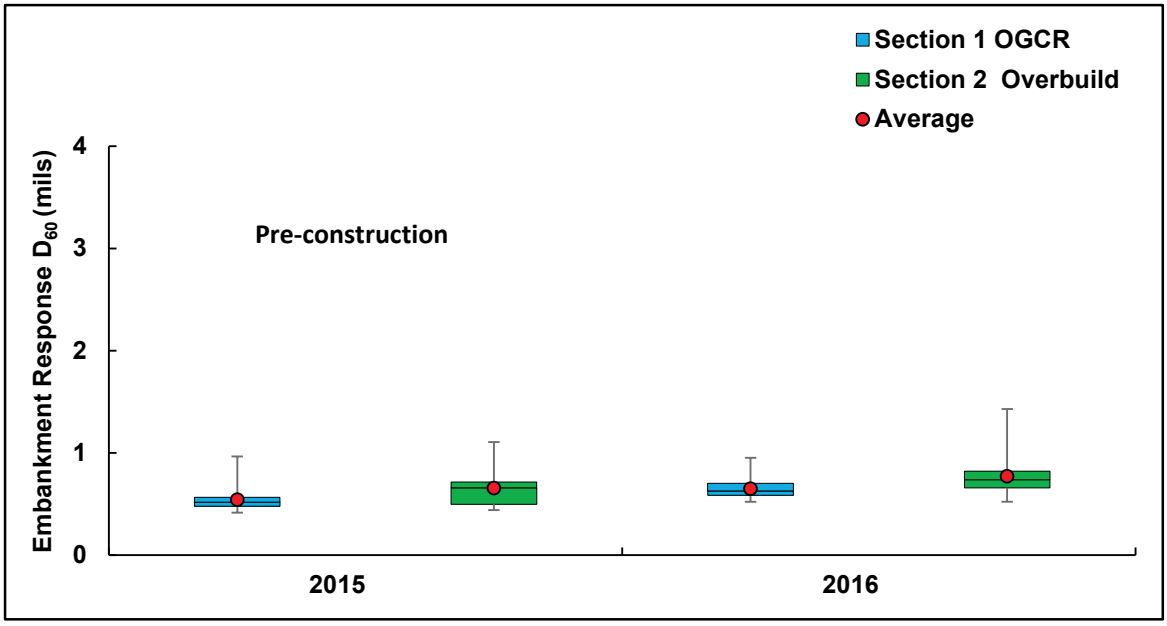

0.50
0.40
0.30
0.20
0.10
0.00
Rut Depth (inch)
Section 1 OGCR
Section 2 Overbuild
Pre-construction
2015
2016

Smoothness


Section 1 OGCR
Section 2 Overbuild
Mean Roughness Inex (inch/mile)
80
70
60
50
40
30
20
10
0
Pre-construction
2015
2016

Deflection





Key