

# INTEROFFICE COMMUNICATION

TO: Nick Chaney, District 4 Planning and Engineering  
FROM: Ben Starker, Division of Engineering, Office of Pavement Engineering  
DATE: July 29, 2025  
SUBJECT: MAH-11-0.00 (PID 110642) FY 2027 Minor Rehabilitation Pavement Design

Our office has investigated the subject section to determine a rehabilitation strategy. The investigation consisted of non-destructive testing using the FWD, a review of project history, a field review, section PCR and coring.

This section was originally built using 9" of jointed reinforced concrete on 7.5" of subbase in 1968. The pavement was first overlaid in 1988 with 3.75" of asphalt concrete. In 2005, this section had 0.75" of AC milled and 1" of fine graded asphalt concrete placed over top. Most recently in 2014, this section had 2.25" of asphalt concrete milled and 3.25" asphalt concrete placed down.

The 2024 PCR for this section was between 83 and 87. The distresses present are raveling, patching, rutting, joint reflective cracking, intermediate transverse cracking, longitudinal cracking, and crack seal deficiency.

FWD measurements for this pavement indicated this pavement has sufficient structure for a 12- year design, thus a structural overlay is not needed. FWD measurements also showed that of the joints tested, 64.3% of the joints tested marginal for load transfer and 23.3% of the joints tested poor in the northbound direction. In the southbound direction, 72% of the joints tested marginal and 3% of the joints tested poor for load transfer. All these joints are candidates for Item 255 full depth rigid repairs, however visual inspection of the pavement noted that this quantity should be minimal. Coring validated that the concrete was intact and in good condition to perform Item 255 repairs. Coring in this section showed an average of 5.5" of AC on 9" of concrete in the northbound direction, and an average of 5" of AC on 10" of concrete in the southbound direction. The field review noted that the distress appears to be surface deep, but if there are spots in which the distress goes deeper, the district should elect to patch the planed surface where deterioration exists after planing. Due to the previous surface being 1.5" thick, the fine mill depth should be 0.75" deep to prevent as much scabbing as possible. The fine graded polymer AC overlay should be 1" thick due to the volume of trucks exceeding 1500 per day and should have 448 density acceptance. The following treatment is provided:

- 0.75" Item 897 Pavement Planing, Asphalt Concrete, Class A
- 1" Item 424 Fine Graded Polymer Asphalt Concrete, Type B, (448)
- Item 255 Full Depth Pavement Removal and Rigid Replacement

Attached are two Excel files with additional FWD data and another Excel file containing the core report for your information. Please do not hesitate to contact me if you have any questions or would like to discuss further.

BRS

C: B. Ross, P. Bierl, File