

INTEROFFICE COMMUNICATION

TO: Laura Wright, District 6 Planning and Engineering
FROM: Patrick Bierl, Division of Engineering, Office of Pavement Engineering
DATE: December 15, 2022
SUBJECT: MAD-40-0.00 (PID 101056) FY 2027 Pavement Recommendation

Our office has investigated the subject section to determine a rehabilitation strategy. The investigation consisted of pavement coring, a field review, a review of project history, and section PCR.

The early history on this section is unclear, however the available history indicates this section was rehabilitated in 1982 and again in 1990 with a 1.25" asphalt concrete overlay at a PCR of 69 to 73. This section was rehabilitated again in 1999 with a 1.5" mill and a 2" asphalt concrete overlay at a PCR of 61 to 67. This section was most recently in 2008 with a chip seal interlayer and a 1.5" asphalt concrete overlay at a PCR of 59 to 75. This section was chip sealed in 2019 at a PCR of 64 to 77.

The 2022 PCR was a 72 to 78 and the structural deducts were between 7.2 and 8.8. The major distresses were joint reflective cracking, intermediate transverse cracking, longitudinal cracking, pressure damage, and crack seal deficiency.

This section had pavement coring completed in August 2022 to help determine the appropriate rehabilitation strategy. Pavement cores representing the middle and edge of the driving lane were extracted at 0.5-mile intervals in both directions. The coring indicated a typical asphalt thickness of approximately 6 to 8" on top of 9" concrete for both the edge and middle cores. The cores also indicated broken or rubblized concrete was found in most of the locations cored.

Our field review disclosed this section had a chip sealed surface, minimal traffic volumes during the review, and had many areas where it was cracked significantly. Our office recommends an extensive rehabilitation repair scope. We recommend removing the entire existing asphalt concrete overlay, fracturing the existing concrete base with a multi-head breaker to be more uniformly broken, and overlaying the section with a minimum 6.5" of asphalt concrete. We recommend the following build-up for the overlay.

- 1.25" Item 441 Asphalt Concrete Surface Course, Type 1, (446)
- 2.25" Item 441 Asphalt Concrete Intermediate Course, Type 2 (446)
- 3" Item 301 Asphalt Concrete Base

Attached is one Excel file with additional pavement core data for your information. Please do not hesitate to contact me if you have any questions or need any additional information or advice.

PWB

C: G. Dennis, C. Landefeld, File