

Candidate Project Pavement Only Project (POP)

January 8, 2024

To: Lavenia Toole, PE
 From: Felicia Pannell, PE

RE: SR 555 from S of Avenue A SW to S of SR 600 (US 17/92) TECHNICAL POP Memo

State Road Number: SR 555
 Section Number: 16030-000 and 16030-201
 County: Polk County
 Project Limits: SR 555 from S of Avenue A SW to S of SR 600 (US 17/92)
 Begin MP/End MP: 0.434 (16030201) to 32.824 (16030000)
 Station Equation: 0.497 (16030201) = 29.132 (16030000)
 Project Length: 3.755 miles
 FPID No.: 450875-1
 Work Mix: 0226 Pavement Only Resurfacing (Flex)

1. Existing R/W Map Project Numbers:	16030-2503, 16030-2557
2. Old Construction Project Numbers:	197297-2 RRR (2011) MP 27.733 to MP 30.55 197332-2 RRR with shoulder construction (2006) MP 30.614 to MP 32.792
3. Proposed projects within the same limits (such as safety, sidewalk or drainage projects):	440339-1 Sidewalk Construction (2022) MP 30.613 to MP 32.087 447874-1 Intersection Safety Improvements at SR 544 (MP 30.703)
4. Adjacent Projects:	435071-1 RRR (2017) MP 28.500 to MP 29.069
5. Additional R/W Required?	No
6. Level of Community Awareness Plan:	Level 1
7. Are there any bridges within the limits?	Yes, BR #0312 (MP 32.041 to MP 32.060) CB # 0084 (MP 32.685 to MP 32.690)
8. Are there any RR Crossings within the project limits or in the vicinity?	No
9. Are there any Airports within 5-miles?	No
10. Storm Water Management Jurisdiction:	South Florida Water Management District
11. AADT:	28,000 AADT (2021); Truck %= 8.3
12. Number of Existing Utilities:	11 Utilities: ATT – Communication Lines, Fiber; Centurlink – Fiber; Charter Communications – Cable; City of Lake Alfred – Sewer, Force Main, Water; City of Winter Haven – Sewer, Water, Fiber; Crown Castle – Fiber; Florida Public Utilities – Gas; Frontier – CATV, Communication; Tampa Electric Company – Electric; Uniti – Fiber; Zayo Group – Fiber;
13. Posted/Design Speed Limits:	Design/Posted/Target Speeds: 40 mph (MP 0.434 to MP 0.497) 40 mph (MP 29.132 to MP 31.980) 50 mph (MP 31.980 to MP 32.130)

	55 mph (MP 32.130 to MP 32.824)
14. SIS Facility?/Context Classification:	No/C4, C3C
15. Resilient Modulus:	13,000 psi

Project Location Map:



Typical Section Discussion:

- The Target Speed and Context Meetings were held on May 27, 2022. Lane width changes were proposed to be changed from MP 30.795 NB to MP 31.065 NB and from MP 30.761 SB to MP 31.075 SB and are noted in the typical discussion section below. The target speeds were also set, which changed some of our design and posted speeds:
 - Typicals 1-4 – MP 0.434 (16030201) to 31.980 (16030000): The design speed was set to 40 mph to match the target speed and the posted speed will need to be reduced from 45 mph to 40 mph from MP 30.090 to MP 31.980 to match the target speed.

- Typical 5 - MP 31.980 to MP 32.130: The design speed was set to 50 mph to match the target speed and the posted speed will need to be increased from 45 mph to 50 mph throughout these limits to match the target speed.
- Typical 6 - MP 32.130 to MP 32.824: The design speed was set to 55 mph to match the target speed and the posted speed will need to be increased from 45 mph to 55 mph from MP 32.130 to MP 32.186 to match the target speed. The existing posted speed of 55 mph will match the target speed of 55 mph for the remainder of the project limits.
- Typical section discussion:
 - Typical 1 - MP 0.434 to 0.497 (16030201) and MP 29.132 to MP 30.450 (16030000): 4-lane section with a 10-ft two-way left turn lane in the median. The travel lanes are 11 ft wide with Type F curb and gutter. There is sidewalk adjacent to the curb on both sides.
 - Typical 2 - MP 30.450 to MP 30.870: 5 lane section with a 0-16.9 ft raised concrete median. The travel lanes are 11-12 ft with Type F curb and gutter. Sidewalk on both sides.
 - Typical 3 - MP 30.870 to MP 30.930 and MP 31.140 to MP 31.980: 4 lane section with a 12-17 ft two-way left turn lane in the median. The travel lanes are 11-12 ft wide with Type F curb and gutter. There is a sidewalk on both sides.
 - Typical 4 - MP 30.930 to MP 31.140: 4-lane section existing typical has a 14-ft two-way left turn lane and 10-ft travel lanes. At the context meeting it was determined to change the two-way left turn lane to 12-ft with 10.5 ft travel lanes. There is an outside 4 ft paved shoulder with sidewalk on both sides.
 - Typical 5 – MP 31.980 to MP 32.130: 4-lane divided section with a 16-20 ft raised median and type E curb and gutter. The travel lanes are 12 ft wide with Type F curb and gutter on the outside. There is a sidewalk on both sides.
 - Typical 6 – MP 32.130 to MP 32.824: 4 lane divided section with a 16-20 ft raised median and Type F curb and gutter. The travel lanes are 12 ft wide with 4-ft outside paved shoulders. There is no existing sidewalk.

Pavement Design Assumptions for LRE:

- Design will need to prepare the pavement design for this project. Any pavement design used in this estimate is for budget purposes only.

Mainline Milling and Resurfacing:

- MP 29.069 to MP 32.130: For budget purposes, the LRE assumes the mainline should be milled 3" and resurfaced with 1 ½" of SP-12.5 (Traffic C, PG 76-22) and 1 ½" of FC-12.5 (Traffic C, PG 76-22).
- MP 32.130 to MP 32.824: For budget purposes, the LRE assumes the mainline pavement should be milled 3 ¼" and resurfaced with 2 ½" SP-12.5 (Traffic C, PG 76-22) and ¾" FC-5 (Traffic C, PG 76-22). Refer to Figures 4.2 and 4.3 of the FPDm for the placement limits of FC-5.

Turn Lanes, Shoulder, and Side Street Milling and Resurfacing:

- MP 29.069 to MP 32.130: For budget purposes, the LRE assumes the turn lanes should be milled 1 ½" and resurfaced with 1 ½" of FC-12.5 (Traffic C, PG 76-22).
- MP 32.130 to MP 32.824: For budget purposes, the LRE assumes the outside paved shoulder and turn lanes from are recommended to be milled 2 ¼" and resurfaced with 1 ½" SP-12.5 (Traffic C, PG 76-22), and ¾" FC-5 (Traffic C, PG 76-22).
- For budget purposes, the LRE assumes the side streets to be milled 1 ½" and resurfaced with 1 ½" Type FC-12.5 (Traffic C, PG 76-22).