

Maintenance Resurfacing Project Technical Scope

2/28/2024

**434414-1: SR 514 from East of Babcock Street to US 1**

State Road Numbers: SR 514  
 Section Number: 70180000  
 County: Brevard  
 Project Limits: East of Babcock Street to US 1  
 Begin MP/End MP: 3.289 to 6.742  
 FM: 434414-1

1. Existing R/W Map Project Numbers:	70180_4137611 (2017) MP 3.90 to MP 5.26 70012_2376503 (2008) MP 4.68 to MP 1.07 70180-2506 (1996) MP 6.24 to MP 6.49 7018-PROJ_181 (1940) MP 0.00 to MP 5.49
2. Old Construction Project Numbers:	413761-1 (2021) MP 3.906 – MP 5.262; Add Lanes & Reconstruct 430136-1 (2011) MP 3.00 – MP 6.70; PD&E 426310-1 (2011) MP 6.43; Pine St. Southside Apron 426306-1 (2011) MP 6.05 – MP 6.12; Resurfacing 426304-1 (2011) MP 2.97 – MP 3.07; Resurfacing 426789-1 (2009) MP 6.54; FEC Crossing #272149-N surface. 409055-1 (2002) MP 6.54 – MP 6.64; RR Crossing 237625-1 (1998) MP 6.54; RR Crossing 237455-1 (1998) MP 2.60 – MP 6.70; Add Lanes & Reconstruct 237672-1 (1997) MP 3.22 – MP 6.70; Resurfacing 237204-1 (1989) MP 2.60 – MP 6.70; Resurfacing
3. Additional R/W required?	No
4. Level of Community Awareness Plan:	CAP Level 1
5. Agreements required?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Yes, including Local Funds.
6. Are there any bridges within the limits?	No
7. Are there any RR Crossings within the project limits or in the vicinity?	Yes, Crossing #272149N
8. Are there any Airports within 10 nautical miles?	Yes 2, Valkaria Airport and Melbourne Airport
9. Storm Water Management jurisdiction:	SJRWMD
10. Is the Project within CCCL ( <i>Coastal Construction Control Line</i> )?	Yes
11. Existing Utilities per Sunshine One Call:	Advanced Cable Communications DBA Blue AT&T (Distribution) AT&T Florida Brevard County Public Works Engineering Brighthouse Networks/Charter/Spectrum CenturyLink/Lumen City of Palm Bay Utilities Department Cogent Communications Florida City Gas Florida Power & Light (Distribution) Florida Power & Light (Transmission) Resurgence Infrastructure Group, LLC Uniti Fiber, LLC Verizon/MCI Zayo Group/ Formerly Lightwave, LLC
12. Any special MOT concerns?	Yes – RR crossing present within the project limits.  Corridor is a designated evacuation route. See here for more information:

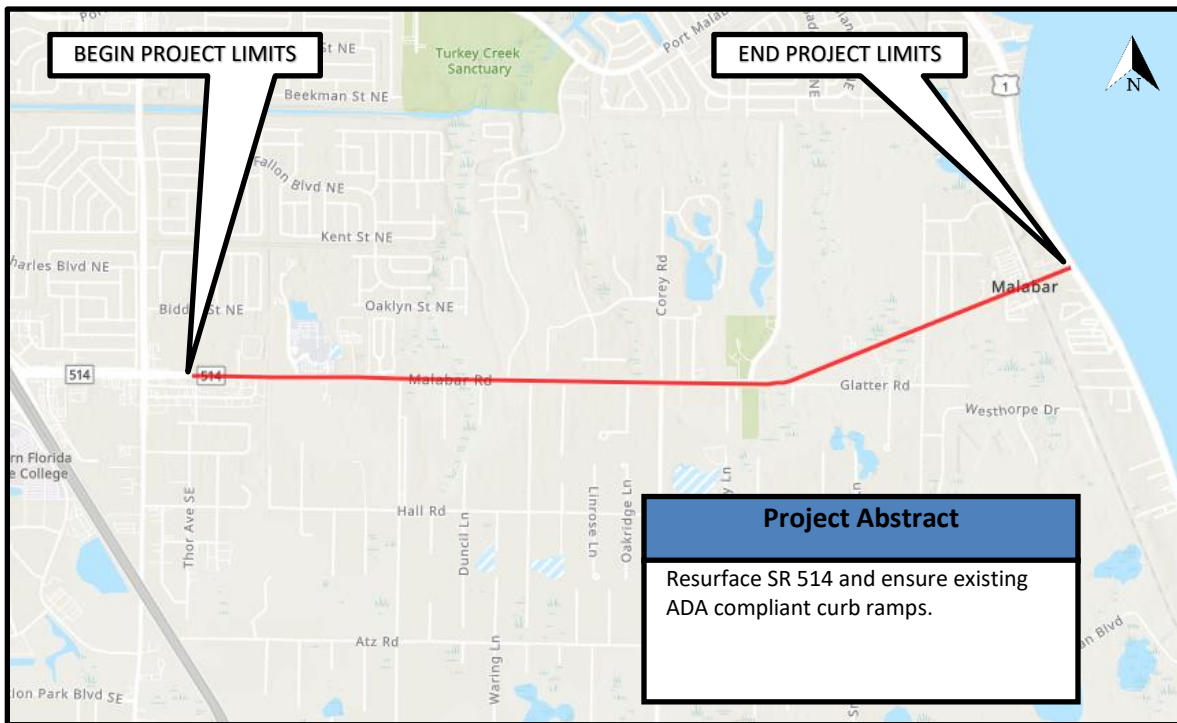
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	<a href="https://maps.floridadisaster.org/county/EVAC_BREVARD.pdf">https://maps.floridadisaster.org/county/EVAC_BREVARD.pdf</a>			
13. Any construction concerns?	Access to Health First Medical Group must be maintained at all times.			
14. Posted/Design Speed Limits (mph): Source: Design Speeds derived from FPID 430136-1-22-01 Typical Section Package (2017) and 413761-1-52-01 RGB Plans (2019)	<u>MP Range</u>	<u>Design</u>	<u>Posted</u>	<u>Target</u>
	3.289 – 4.087	45 mph	45 mph	45 mph
	4.087 – 4.135	55 mph	45 mph	45 mph
	4.135 – 5.084	55 mph	50 mph	50 mph
	5.084 – 5.974	55 mph	50 mph	50 mph
	5.974 – 6.129	55 mph	45 mph	45 mph
	6.129 – 6.332	40 mph	45 mph	45 mph
	6.332 – 6.742	40 mph	30 mph	30 mph
15. Design Criteria and Highway System:	SHS, FDM (2023), RRR			
	<u>Facility</u>	<u>Context Classification</u>		
	3.289 – 4.087	C3C		
	4.087 – 5.552	C3R		
	5.552 – 6.742	C3C		
16. Lump Sum or Pay Item?	Pay Item			
17. Proposed Design Schedule:	18-24 months			

**Agreements Required:**

None anticipated.

**Project Location Map:**



The Consultant is responsible for verifying all items in the proposed scope and shall review the project for conformance with all applicable criteria and standards.

**Intent and Nature of Project:**

The purpose of this project is to mill and resurface to restore the functional condition of the pavement on SR 514 from East of Babcock Street to US 1. This maintenance resurfacing project also includes reconstruction of curb ramps to be ADA compliant and signing & pavement markings.

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### Project Description:

- Project is located along SR 514 (also identified as Malabar Road) from East of Babcock Street to US 1 in Malabar, Florida within Brevard County.
- SR 514 is classified as an urban minor arterial and has Access Classification 03.
- The Tentative Work Program indicates the following efforts may be active within the immediate project vicinity:
  - FPID 450729-1: Resurfacing improvements from MP 2.480 to MP 3.347. Anticipated letting date Nov. 2025.
  - FPID 237650-6: SR 507 MP 0.013 to MP 2.503. Project is currently in ROW acquisition phase; \$40.6M in Right of Way funding required as of 03/24/2021.

### Typical Sections:

- SR 514 is a two-lane undivided urban arterial with 12-foot travel lanes usually separated by a double-yellow stripe and paved outside shoulders varying between 4-feet and 8-feet wide. A two-way left-turn lane is present sporadically within the project limits. Outside curb & gutter and 5-foot-wide sidewalk is present from the beginning of the project to MP 3.303. Sidewalk is also present on the northbound side of the project between MP 3.700 and MP 3.837. Parking is prohibited on both sides of the roadway between MP 2.64 and MP 6.70.
- Typical section modifications are not anticipated as part of the proposed scope of work.
- 2022 Traffic Data from FDOT GIS Open Data Hub:

Mile Post Limits	AADT	K (%)	D (%)	T (%)
3.102 – 5.384	19,100	9.0	53.9	4.8
5.384 – 6.247	12,900	9.0	53.9	4.8
6.247 – 6.742	13,600	9.0	53.9	9.1

### Roadway Scope Items:

- The most recent project was completed in 2021 as part of FPID 413761-1 between MP 3.906 and MP 5.262. An average of 1.5-inches of asphalt was milled, and 1.5-inches of FC-12.5 friction course was placed on the roadway in areas of new left turn lanes.
- Mill and resurface existing asphalt pavement along SR 514, rehabilitate the roadway sections that are in distress, and restore the final surface.
- MPSV data was collected March 27, 2023 and analyzed for cross slope correction. Cross slope correction is not part of this project.

### Drainage Scope Items:

- The primary goal for improvements along this corridor is to utilize the existing drainage system where feasible. No work proposed.

### Utility Scope Items:

- Utility coordination will be required to determine any necessary adjustments to avoid conflicts with the proposed construction.
- Quality Level A “QL A” utility information is anticipated in areas of potential conflicts.

### Multimodal Scope Items:

#### Transit:

- SCAT bus route 22 currently services the SR 514 corridor and has 4 bus stops within the project limits.

#### Bicycle facilities:

- No work proposed.

#### Pedestrian facilities:

- Reconstruct existing curb ramps that do not comply with minimum ADA criteria and ensure all ramps have detectable warning surfaces (DWS).

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### Railroad Facilities:

- A Railroad crossing (#272149N) is present at MP 6.59 within the project corridor. Coordinate with FEC regarding all potential impacts.
- Traffic Control within the Railroad right-of-way and its influence area is to be coordinated through the District Rail Coordinator.
- Verify Railroad Dynamic Envelope (RDE) markings are installed and/or restored in accordance with FDM and Standard Plans.

### **Permitting Scope Items:**

- Coordinate with FDOT, submitting a permit determination letter to the Environmental Permits Office, Attention District Five Permits Coordinator, for review and concurrence during the design process, considering the below descriptions of work and conditions.
  - This project is not anticipated to exceed one acre of soil disturbing activities and will not require NPDES coverage under the FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities.
- Wetlands were noted adjacent to the right-of-way and are not to be impacted. Any apparent wetland lines shown on the Concept are from the Florida Geographic Data Library and are for informational purposes only.
- There are floodplains adjacent to the project limits. The current scope of work is not anticipated to impact the floodplains, however if there are any changes this will need to be coordinated with the FDOT Environmental Permits Office for evaluation to determine if additional documentation must be provided.
- The following 4(f) resource location(s) have been identified within the project area, and a 4(f) evaluation will be required if any impacts are anticipated:
  - Malabar Scrub Sanctuary
  - Malabar Park
  - Town of Malabar Disc Golf

### **Environmental Scope Items**

- Complete an environmental assessment:
  - A protected species assessment is required for the project. The level of assessment should be commensurate with the scope of work. The assessment should focus on species applicable to the project area with consideration given to consultation areas, habitats, and known occurrence data.
  - A Cultural Resources Assessment is required and is to be conducted by Cultural Resources Professionals as outlined in 36 CFR Part 61 and set forth in the Professional Qualifications Standards section of the Secretary of the Interior's Standard and Guidelines for Archaeology and Historic Preservation.
  - The following contamination sites have been identified within the project limits. If the project includes work requiring excavation, dewatering, etc., a Contamination Assessment must be completed and should be coordinated with the FDOT Contamination Impact Coordinator.
    - H&M Trucking Inc., 1 Mile @ #10 Canal, Facility ID #8733306
    - FAA – Malabar, [No address provided], Facility ID #9100905
    - Langs Service, 1310 US Highway 1, Facility ID #9401935
    - Sunshine Food Mart #44, 1360 US Highway 1 & Hwy 514, Facility ID #8518221

### **Structural Scope Items:**

- No work proposed.

### **Traffic Operations (Includes Signing, Signals, ITS) Scope Items:**

#### Signing and Pavement Markings

- Signing and Pavement Marking shall be completed for the proposed improvements. The Engineer will prepare the Inventory all signing within the project limits including evaluation for compliance with FDOT Specifications, FDM, Standard Plans, MUTCD, FHWA, etc. criteria. Any existing signs or pavement markings that conflict with the proposed signs or pavement markings or non-compliant signs or pavement markings shall be addressed in the plans.

#### Signals (ITS)

- Signal detection is to be reestablished. Existing detection methods are provided within the table below.

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- The project includes 1 signalized intersection;

<b>MP 6.742- US-1/SR-5 (Diagonal Span Strain Poles)</b>	
<b>Detection</b>	Inductive Loops
<b>Backplates</b>	No Existing Backplates. Provide flexible retroreflective backplates.
<b>Left Turns</b>	NB Protected.
<b>Pedestrian Signals</b>	N/A
<b>Other</b>	N/A

- Traffic Monitoring Sites within the project limits have been reviewed and the following recommendations coordinated with the Data Collection Manager;

<b>MP</b>	<b>TMS Site No. &amp; Type</b>	<b>Recommendation</b>
<b>3.62</b>	700379; PTMS	Restore detection, reconstruct cabinet with pedestal mount
<b>5.64</b>	700127; PTMS	Restore detection, reconstruct cabinet with pedestal mount
<b>6.62</b>	701001; PTMS	Restore detection, reconstruct cabinet with pedestal mount

- Coordinate any signalization requirements including for lane closures/detours with Maintaining Agency.

**Intelligent Transportation Systems (ITS)**

- Any ITS items within the project limits shall be shown on plan sheets that are necessary for other work. Plan sheets are not necessary solely to show ITS elements. ITS Certification Memo will be required at Production. See District Design Memo 09-02. Existing components include CCTV camera, CV RSU, and fiber optic interconnect.

**Lighting Scope Items:**

- No work proposed.

**Landscaping Scope Items:**

- No work proposed.

**Survey Scope Items:**

- Obtain Design Survey. Total survey area will be determined by the Engineer based on the limits of disturbance and any adjustment required due to the proposed development.
  - Locate utilities as Quality Level B “QL B” and surface features including valve covers, meter boxes, manholes, etc. within the limits of survey locations.
  - Locate existing drainage structures within the limits of survey locations plus the nearest connecting structure beyond those limits. Pipe sizes, flow lines, material type, etc. are required.
  - Include items identified by the environmental assessment.

**Right of Way and Mapping Scope Items:**

- No work proposed.

**Geotechnical and Pavement Scope Items:**

- Pavement Coring Report and Resilient Modulus values are to be provided by FDOT District Materials Office.
- ESAL calculations to be provided by the FDOT District Planning Office.

**Design Documentation:**

- POP projects are exempt from Design Variation and Exception documentation other than for ADA curb ramp requirements. If compliance with ADA curb ramp requirements is determined to be technically infeasible within the POP limitations, a Design Variation will be required.
- Design Variation Memorandum
  - None
- Design Variation
  - None
- Design Exception
  - None

**Candidate Project Development Considerations (items not to be included in final design):**

- None