UTILITY ASSESSMENT PACKAGE

Project Development and Environment (PD&E) Study SR A1A Over Sebastian Inlet – Bridge 880005

Bridge Replacement
Indian River County and Brevard County, Florida

Financial Project ID: 445618-1-22-02 Federal Aid Number: D420 075B ETDM Number: 14433

PREPARED FOR



Florida Department of Transportation District Four 3400 West Commercial Boulevard Fort Lauderdale, Florida 33309

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

November 2022

TECHNICAL REPORT COVERSHEET

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Florida Department of Transportation

District Four

Project Development and Environment (PD&E) Study

SR A1A Over Sebastian Inlet – Bridge 880005

Bridge Replacement

Indian River County and Brevard County, Florida

Limits of Project: MP 22.050 Roadway ID 88070000 to MP 0.300 of Roadway ID 70060000

Indian River and Brevard Counties, Florida

Financial Management Number: 445618-1

ETDM Number: 14433

Date: April 11, 2022

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

Clarke, Digitally signed by clarke, Dave Date: 2022.04.12 09:11.43 - 04'00'

Authorized Signature

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1.0 PROJECT SUMMARY

The Florida Department of Transportation (FDOT or Department) District Four is conducting a Project Development & Environment (PD&E) Study to evaluate the replacement of the Sebastian Inlet Bridge (No. 880005) crossing the Sebastian Inlet located at the Indian River County and Brevard County boundary (**Figure 1**).

The project development process, alternatives developed, and the associated social, economic, and environmental analyses follow the guidance provided in the Department's current version of the PD&E Manual and FDOT Design Manual (FDM). The project also satisfies state and federal processes and incorporates the requirements of the National Environmental Policy Act (NEPA). The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated December 14, 2016, and executed by the Federal Highway Administration (FHWA) and FDOT.

1.1 PROJECT DESCRIPTION

The Sebastian Inlet Bridge (bridge), also known as the James H. Pruitt Memorial Bridge, is a 1,548-feet long concrete structure constructed in 1964 to carry State Road (SR) A1A over the Sebastian Inlet. The bridge is located within FDOT and Sebastian Inlet District (SID) right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park (Park). The project limits extend approximately one mile along SR A1A from Mile Post (MP) 21.945 north to MP 22.665 of Roadway ID 88070000 in Indian River County continuing north from MP 0.00 north to MP 0.307 of Roadway ID 70060000 in Brevard County.

The bridge vertical clearance is 39-feet and horizontal clearance is 150-feet between the bridge fenders. The Inlet provides access for vessels between the Indian River Lagoon and the Atlantic Ocean and is approximately 525-feet wide at the bridge.

The existing bridge has two 12-foot travel lanes and 2-foot shoulders. Within the project limits, SR A1A has two 12-foot travel lanes. North and south of the bridge, paved shoulders are 2 to 4-feet wide. South of the bridge, shoulders are marked as designated bicycle lanes. There are currently no pedestrian or bicycle facilities located within the bridge approaches or on the bridge, creating a gap in the multimodal network along SR A1A. An 8-foot shared use path is located on the west side of SR A1A north and south of the bridge.

This project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14433. An ETDM Programming Screen Summary Report containing comments from the Environmental Technical Advisory Team (ETAT) was published on June 3, 2020. The ETAT evaluated the project's effects on natural, physical, cultural, social, and economic resources.





PROJECT LOCATION

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY SR-A1A OVER SEBASTIAN INLET - BRIDGE 880005 - BRIDGE REPLACEMENT INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA **FIGURE** 1



The bridge is recommended National Register of Historic Places (NRHP)-eligible under Criterion C in the area of Engineering for its high-integrity embodiment of a prestressed concrete bridge in Florida. The bridge is also situated within the Sebastian Inlet State Park, a Section 4(f) resource.

The project includes the evaluation of Build and Rehabilitation alternatives for the bridge and the No-Action (No-Build) alternative, replacement of the existing under deck observation/fishing piers, and the addition of bicycle and pedestrian facilities across the bridge. The underdeck observation/ fishing piers are located under the north and south portions of the bridge. Build alternatives will include evaluation of the bridge vertical clearance as required by the U.S. Coast Guard (USCG).

1.2 PURPOSE AND NEED

1.2.1 PROJECT PURPOSE

The primary purpose of this project is to address the structural and functional deficiencies of the existing James H. Pruitt Memorial Bridge (Bridge # 880005) over the Sebastian Inlet. The project will also address the gap in system linkage for bicyclists and pedestrians.

1.2.2 PROJECT NEED

The bridge was inspected by FDOT District Four on November 14, 2018, following Hurricane Florence. Based on this evaluation the bridge was rated as structurally deficient with a sufficiency rating of 51.6 and a health index of 79.8. FDOT's work program requires that structurally deficient bridges, once identified, have corrective actions (repair or replacement) initiated within six years. Structurally deficient bridges are not considered unsafe for public use unless the bridge is also closed. Bridges with a health index of less than 85 require repairs or replacement.

1.2.2.1 Modal Interrelationships

There are currently no pedestrian or bicycle facilities across the bridge, creating a gap in the multimodal network along SR A1A. North and south of the bridge, SR A1A includes a separated 8-foot shared use path on the west side of the roadway. South of the Inlet, 4-foot bike lanes are marked on both side of the roadway. North of the Inlet, shoulders are 2 to 4-feet wide and not marked as bike lanes.

The *Indian River County Bicycle and Pedestrian Plan* (IRCMPO, 2015) recommends sidewalks be added on both sides of SR A1A from Windsor Boulevard to the County Line at the Inlet to supplement the existing marked bike lanes. In addition, SR A1A has been designated as a segment of the East Coast Greenway which provides a multimodal connection from Maine to Florida along the east coast of the United States. The Florida Greenway Trails System Plan (FDEP, 2018) states that the East Coast Greenway strives to provide a "high quality, safe, and motor vehicle free trail experience" for the users along the route.



2.0 UTILITY ASSESSMENT

This is a preliminary evaluation of potential utility conflicts within the project corridor based on proposed improvements under the preferred alternative named Alternative 2 (East). The Preferred Alternative includes a new bridge alignment that is shifted to the east of the centerline of the existing bridge.

2.1 UTILITY AGENCIES/OWNES

The latest list of Utility Agency Owners (UAOs) and utility contacts data obtained from Sunshine State One Call of Florida (SSOCOF) Ticket No. 005108094 dated 01/05/2021 and No. 284106354 dated 10/11/2021 are summarized in **Table 1** below. Water-main, telecommunications (cable), and electric facilities have been identified within the study area based on the design ticket, desktop, and field reviews.

TABLE 1. EXISTING UTILITY AGENCIES/OWNERS

UAO	Utility	Contact Person	Phone Number	
AT&T Distribution Florida	Telecommunications	Luke Folkerts	321-953-6172	
Comcast	Cable TV	Anthony Springsteel	561-804-0973	
Florida Power & Light	Power – Distribution/Lighting	Rob Morris	772-223-4215	
Florida Power & Light	Power - Transmission	Beau Bentley	803-835-5982	
Indian River County	Traffic	Jeremy Trumble	772-226-1318	
Indian River County	Water and Sewer	John Boyer	772-226-1823	
Uniti Fiber	Telecommunications	Kenneth McGovern	904-506-7215	
Sebastian Inlet State Park	Water and Septic Tanks	Ken Torres	321-984-4853	

Eight (8) UAOs have operations within the project study area. All the utility companies contacted have responded. Five (5) of the 8 UAOs contacted responded that they have no facilities within the project limits and are listed below:

- Comcast
- Florida Power and Light Transmission
- Indian River Utilities
- Indian River Traffic
- Uniti Fiber



3.0 EXISTING UTILITIES AND POTENTIAL IMPACTS

3.1 AT&T DISTRIBUTION FLORIDA

AT&T operates the following facilities within the project limits:

South of the Sebastian Inlet, an existing buried telephone (BT) 25-pair copper with 1/4" to 1/3" diameter cables cross the Park's south parking lot at approximately station 824+50 and continues north on west side of SR A1A as a BT 25-pair copper cable and BT 50-pair copper cable to the end of the project limits at approximately station 850+00 (**Appendix A**).

North of the Sebastian Inlet, a BT 25-pair copper cable splits off to the west along the north Park entrance at approximately station 839+00 (**Appendix A**).

AT&T facilities will be impacted by the proposed bridge and roadway improvements.

3.2 FLORIDA POWER AND LIGHT

Florida Power & Light - Distribution operates the following facilities within the project limits:

South of the Sebastian Inlet Bridge, FPL has 1-phase 7.6kV overhead electric (OE) along the west side of SR A1A that continues north to the bridge. Electric utility service extends west into the Park via OE (**Appendix B**). Impacts to OE facilities (including poles) are anticipated due to proposed bridge, roadway, and pedestrian facilities.

North of the bridge, a 1-phase 7.6kV buried electric (BE) runs along the parking lot east to the Inlet Grill restaurant. The buried electric transitions to 1-phase 7.6kV OE that crosses SR A1A and continues north along the west side of SR A1A to the project limits (**Appendix B**).

Impacts to the BE and OE facilities are anticipated due to proposed bridge, roadway, and pedestrian facilities. Transformers attached to the existing poles will be removed. New ground level transformers will be installed.

3.3 SEBASTIAN INLET STATE PARK FACILITIES

Sebastian State Park operates the following facilities within the project limits:

A well water pump station that houses pumps, holding tanks, and an aerator supplies water to the north side of the Park. The well house is located on north of the Sebastian Inlet on the east side of SR A1A. The water supply line extends south from the pump station to an existing well head near station 826+50 where a supply lateral extends east to the Inlet Grill restaurant and public restrooms. At the restaurant, a second supply line extends west under the bridge and then north to the north Park ranger station (**Appendix C**).



The north well water pump station, water main, and well head may be impacted due to new bridge alignment and foundations.

Sanitary sewer is currently accommodated by septic systems with the Park north and south of the Sebastian Inlet. No impacts are anticipated to these facilities.

4.0 SUMMARY

Because the new bridge will be constructed in phases, the existing bridge will remain in place while the east portion of the new bridge is constructed. This new construction will include the shared use path, shoulder, and northbound travel lane. Once construction of the east portion of the new bridge is completed, traffic will be diverted to the newly constructed portion of the bridge. The existing bridge will then be demolished followed by construction of the west side of the bridge completing the new bridge.

Additional conflicts may be identified during final design due to proposed drainage, lighting, structural foundation (bridge, signs, gantries etc.), MOT, etc. Subsurface Utility Engineering (SUE) for verified vertical and horizontal (vvh) information on existing utilities is required to advance the utility coordination efforts. Obtaining vvh information will also help to guide the design phase to ensure that informed and intelligent decisions are made where practical to reduce potential utility relocations.

Overhead electric facilities may have to extend relocation beyond the project limits as well due to sudden change in alignment or impact to an existing pole that is relied on for structural support. Transformers will have to be installed at ground level and may require an easement granted to FPL.

The Park may have to reconstruct the north well water pump station and well head may be required due to the proposed bridge alignment shift to the east.

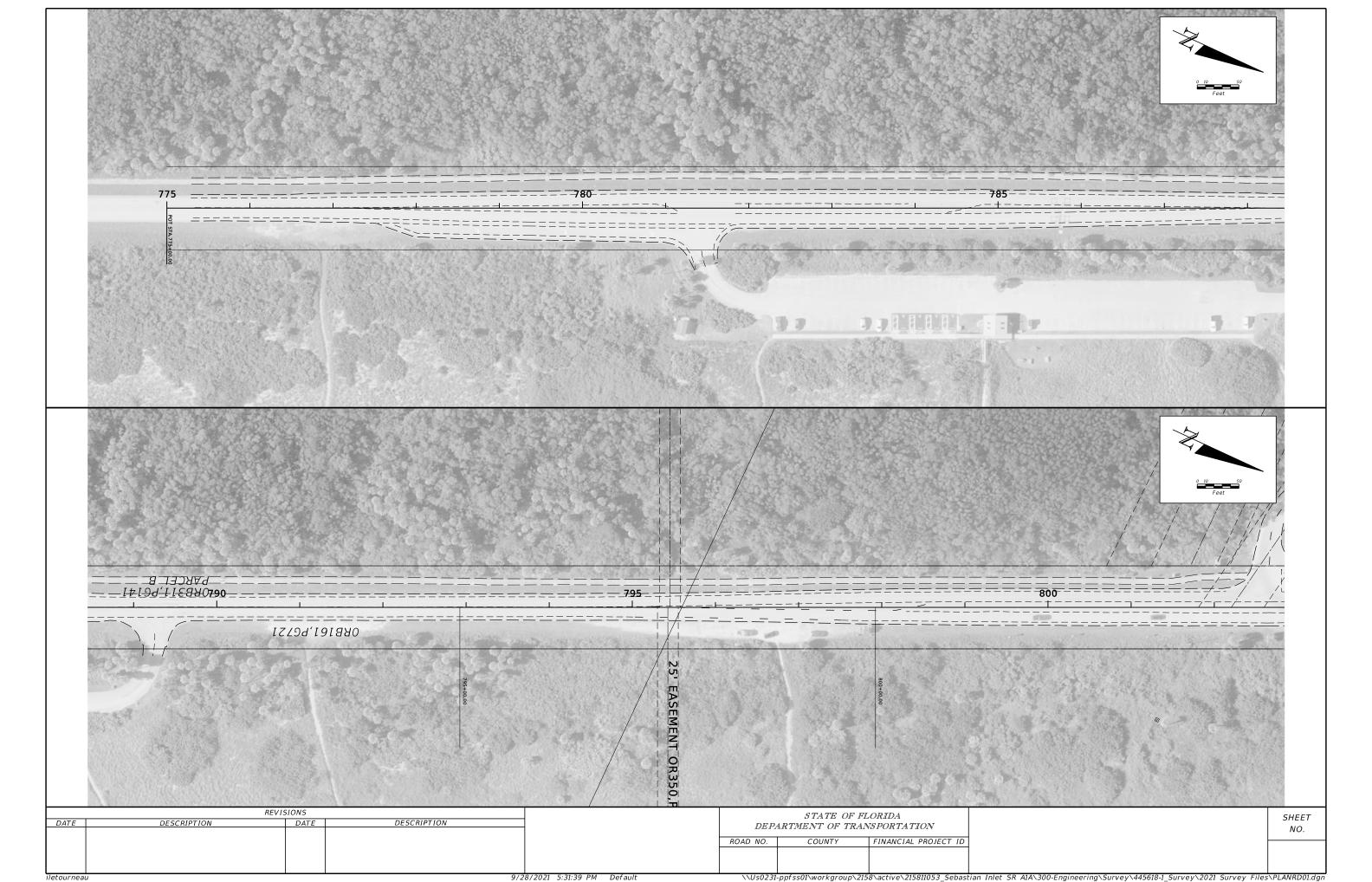
AT&T may have to relocate their lines upon verification of the verified vertical and horizontal information.

A probable opinion of potential utility impacts cost for each build alternative has been developed and provided in **Appendix D**.



APPENDIX A

Marked Utility Plans AT&T



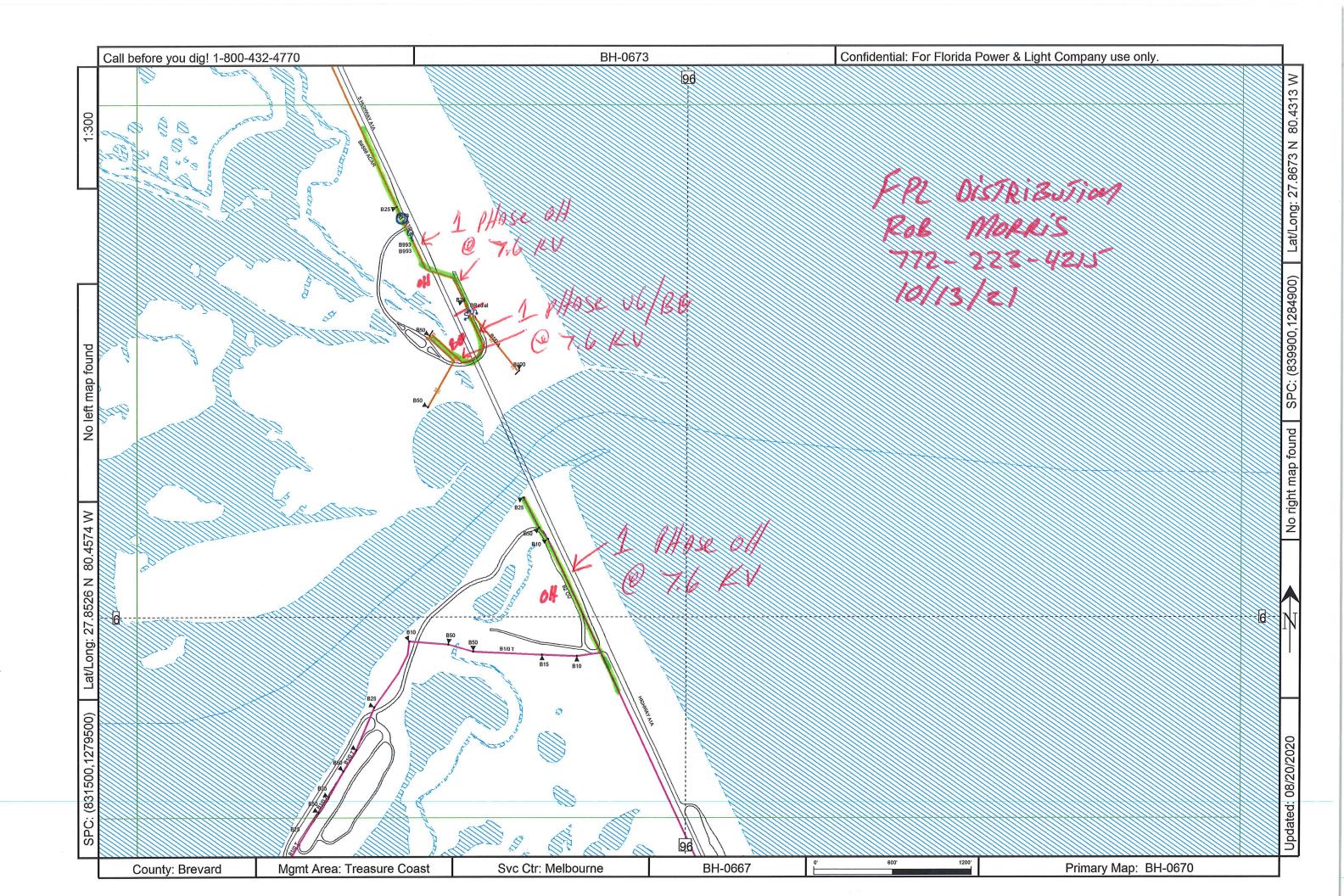


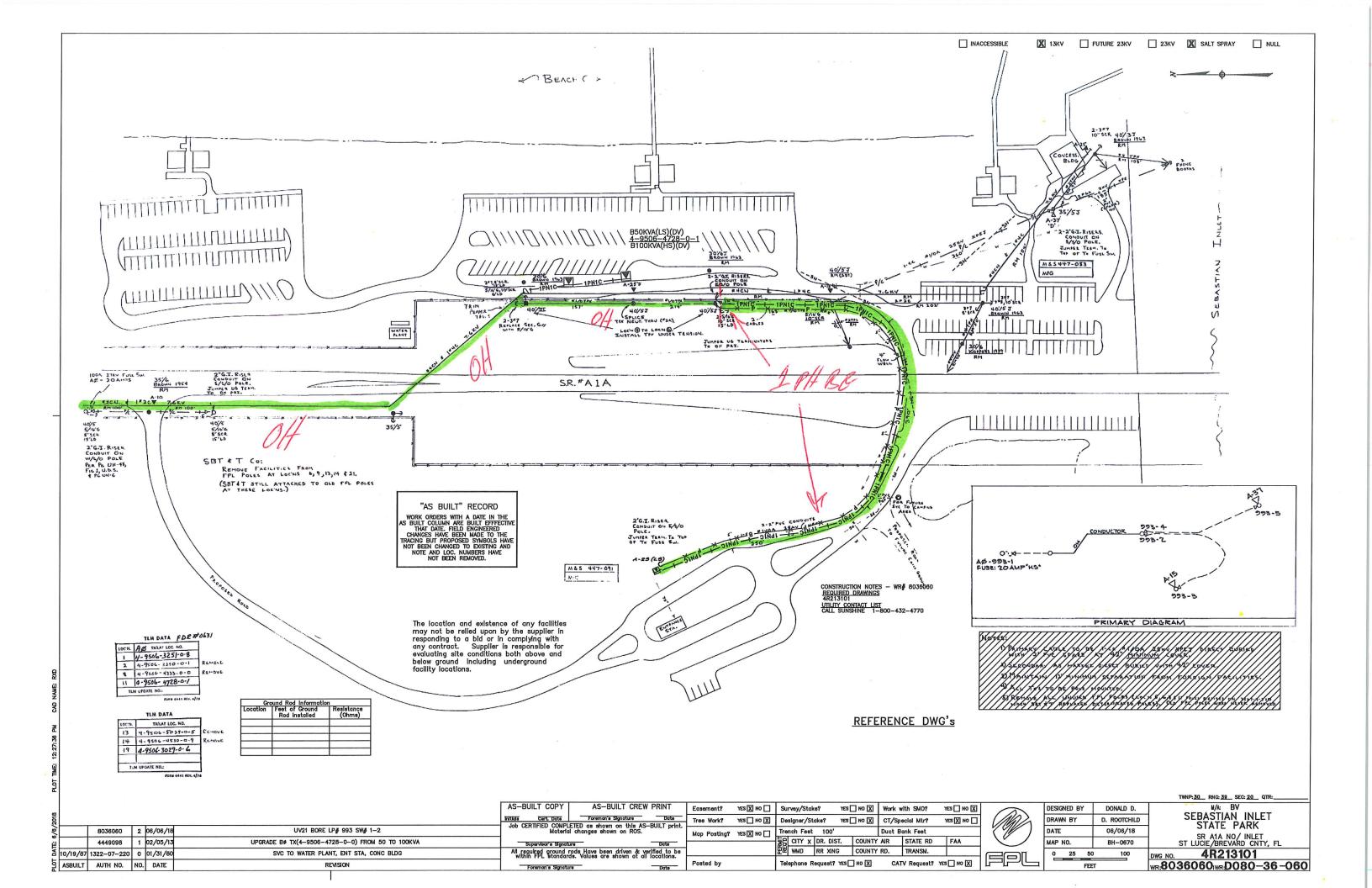




APPENDIX B

Marked Utility Plans FPL

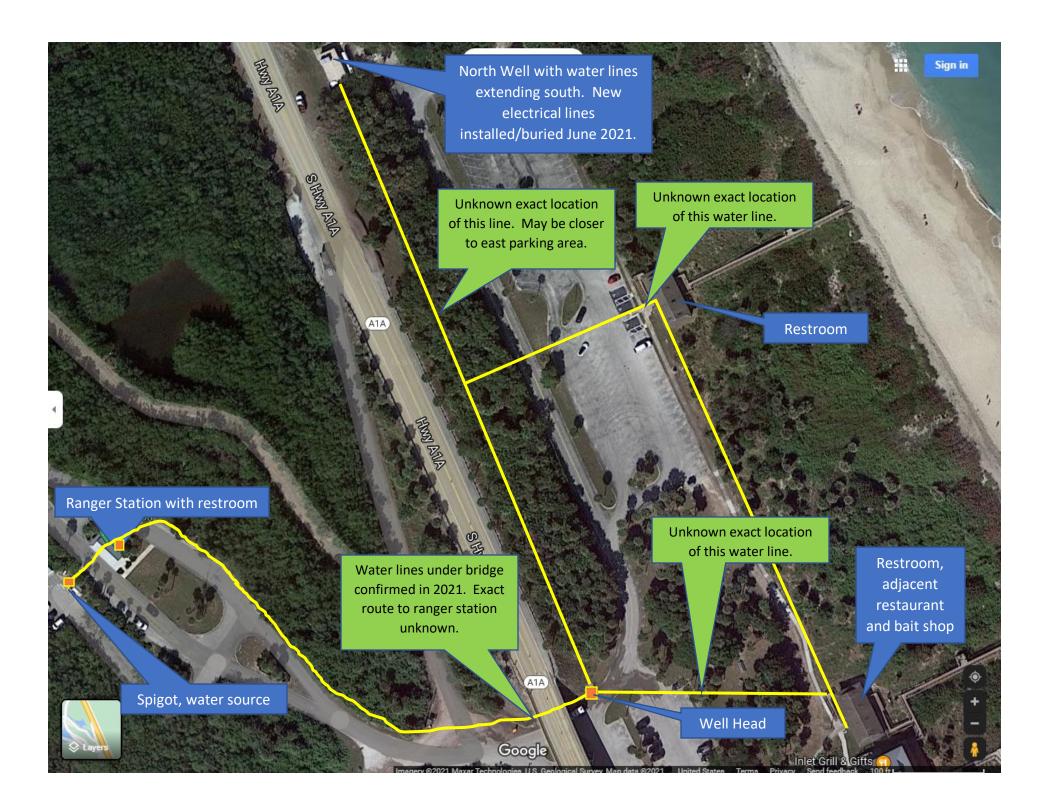






APPENDIX C

Marked Utility Plans
Sebastian Inlet State Park







APPENDIX D

Utility Impact Cost Estimate

		FLORIDA	DEPARTMENT OF TRANSPORTATION			
		U	TILITY IMPACT COST ESTIMATE			
		SR-A1A Over Sebastian Inlet	t Bridge – Bridge 880005 - Bridge Replacement PD&E Study			
		Indi	an River County & Brevard County			
			FM: 445618-1-22-02			
			Alternative 1 (Existing)			
Utility Agency Owner	Description	Area of conflict	Conflict with	Quantity	Unit Cost	Total Cost
AT&T Florida	BT-COP-50		Roadway widening	1,600 LF	\$100 /LF	\$160,000
AT&T FIORIUA	BT-COP-25		New Bridge Alignment	1,000 LF	\$100 / LF	\$160,000
					SUB-TOTAL	\$160,000
Sebastian Park	Water Main		Roadway widening	800 LF	\$200 /LF	\$160,000
Sepastiali Park	water main		New Bridge Alignment	800 LF	\$200 / LF	\$160,000
					SUB-TOTAL	\$160,000
DI Distribution	1-Phase OH 7.6 kV		Roadway widening	8 Poles	\$25,000 /Pole	\$720,000
FPL - Distribution			New Bridge Alignment	2,600 LF	\$200 OE	\$720,000
FDI Distribution	4l P5 7 C1V		Roadway widening	300 1 5	\$200 /15	¢60,000
FPL - Distribution	1-phase BE 7.6 kV		New Bridge Alignment	300 LF	\$200 /LF	\$60,000
					SUB-TOTAL	\$780,000
					TOTAL	64 400 000
TOTAL COST ESTIMATE					TOTAL	\$1,100,000

FLORIDA DEPARTMENT OF TRANSPORTATION

UTILITY IMPACT COST ESTIMATE

SR-A1A Over Sebastian Inlet Bridge – Bridge 880005 - Bridge Replacement PD&E Study

Indian River County & Brevard County

FM: 445618-1-22-02

Preferred Alternative 2 (East)

Utility Agency Owner	Description	Area of conflict	Conflict with	Quantity	Unit Cost	Total Cost
AT&T Florida	BT-COP-50 BT-COP-25		Roadway widening New Bridge Alignment	1,600 LF	\$100 /LF	\$160,000
					SUB-TOTAL	\$160,000
Sebastian Park	Water Main		Roadway widening New Bridge Alignment	1,600 LF	\$200 /LF	\$320,000
Sebastian Park	North Well House		Roadway widening New Bridge Alignment	1 LS	\$400,000/each	\$400,000
					SUB-TOTAL	\$720,000
FPL - Distribution	1-Phase OH 7.6 kV		Roadway widening New Bridge Alignment	8 Poles 2,600 LF	\$25,000 /Pole \$200 OE	\$720,000
FPL - Distribution	1-phase BE 7.6 kV		Roadway widening New Bridge Alignment	300 LF	\$200 /LF	\$60,000
					SUB-TOTAL	\$780,000
TOTAL COST ESTIMATE					TOTAL	\$1,660,000

PDE Study 4/5/2022

		FLORIDA	DEPARTMENT OF TRANSPORTATION				
		U	TILITY IMPACT COST ESTIMATE				
		SR-A1A Over Sebastian Inle	t Bridge – Bridge 880005 - Bridge Replacement PD&E StudyInlet				
		Inc	dian River County & Brevard County				
			FM: 445618-1-22-02				
			Alternative 3 (West)				
Utility Agency Owner	Description	Area of conflict	Conflict with	Quantity	Unit Cost	Total Cost	
AT&T Florida	BT-COP-50		Roadway widening	1,600 LF	\$100 /LF	\$160,000	
ATAT FIORIUA	BT-COP-25		New Bridge Alignment	1,000 EF	\$100 /LF	\$100,000	
					SUB-TOTAL	\$160,000	
Sebastian Park	Water Main	Water Main		Roadway widening	800 LF	\$200 /LF	\$160,000
Sepastian Fark			New Bridge Alignment	800 LF	3200 / LF	\$100,000 	
					SUB-TOTAL	\$160,000	
FPL - Distribution	1-Phase OH 7.6 kV	tion 1 Phase OH 7.6 kV		Roadway widening	8 Poles	\$25,000 /Pole	\$720,000
FPL - DISTRIBUTION			New Bridge Alignment	2,600 LF	\$200 OE	\$720,000	
FPL - Distribution	1 phase PE 7.6 kV		Roadway widening	300 LF	\$200 /LF	\$60,000	
FPL - DISTRIBUTION	1-phase BE 7.6 kV		New Bridge Alignment	300 LF	\$200 /LF	\$60,000	
					SUB-TOTAL	\$780,000	
TOTAL COST ESTIMATE					TOTAL	ć1 100 000	
TOTAL COST ESTIMATE					TOTAL	\$1,100,000	

PDE Study 4/18/2022