CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CFX Contract Number: 001844
CFX Project Number: 528-307

EXISTING CONDITIONS TECHNICAL MEMORANDUM

SR 528 & DALLAS BLVD INTERCHANGE

Martin Andersen Beachline Expressway

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

Submitted By:

Signature: _____

Gregory S. Seidel, P.E.
The Balmoral Group, LLC
March 31, 2023

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Appendix

Project Information

Project Name: State Road (SR) 528 & Dallas Blvd Interchange

Projects Limits: The project area covers SR 528 and the existing CFX right-of-way (R/W) from the Econlockhatchee River bridge to approximately ¾ mile east of Dallas Blvd. The project limits also contain the intersection and small areas of Dallas Blvd and Starry Street in the Wedgefield neighborhood, located within Orange County.

County: Orange

Proposed Activity: This PD&E Study will analyze and evaluate the completion of the Dallas Blvd interchange by adding a westbound off-ramp and eastbound on-ramp to SR 528 to provide enhanced access and mobility to the Wedgefield community of eastern Orange County.

Responsible Agency: Central Florida Expressway Authority (CFX)

Planning Organization: CFX

Phase: Project Development & Environment (PD&E) Study

Project Contact Information:

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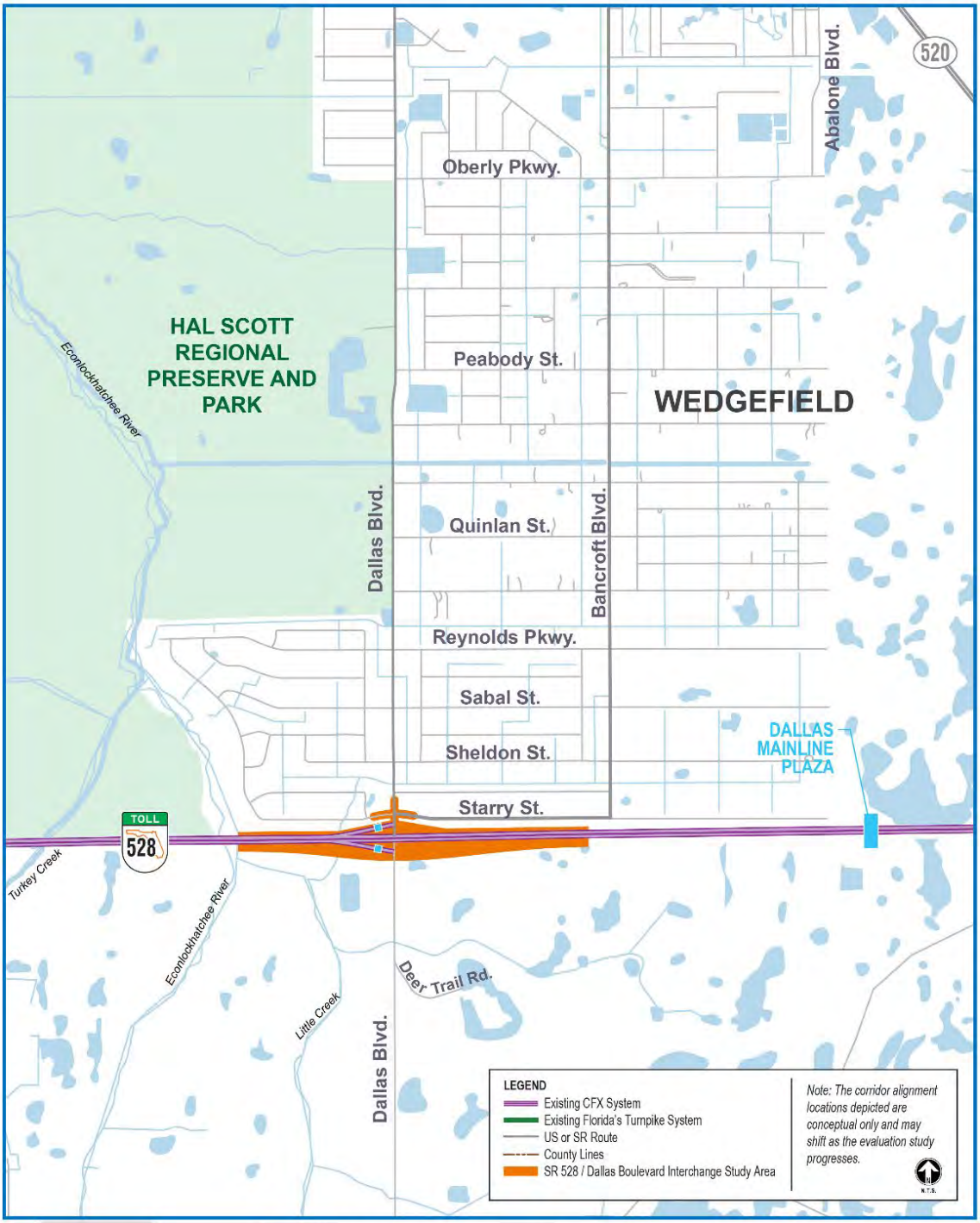
Project Location Map



Project Background & Description

Background

In December 2022, CFX began a Project Development and Environment (PD&E) Study of the State Road (SR) 528 & Dallas Blvd Interchange. The study is evaluating the completion of the Dallas Blvd interchange by adding a westbound off-ramp and eastbound on-ramp to SR 528 to provide enhanced access and mobility to the Wedgefield community of eastern Orange County.

Study Description

Currently, the Dallas Blvd interchange (Exit 24) on State Road (SR) 528 (Martin B. Andersen Beachline Expressway) is a half interchange – consisting of a westbound on-ramp and an eastbound off-ramp. The completion to a full interchange, by adding a westbound off-ramp and eastbound on-ramp, has been identified as a need to provide enhanced access and mobility to the Wedgefield community of eastern Orange County. Currently, residents within Wedgefield must travel north in the subdivision to access SR 520 and then travel south to access SR 528 in the eastbound direction – a distance that can range from approximately seven to thirteen miles – and vice versa when travelling westbound on SR 528. Therefore, this PD&E Study will analyze and evaluate the completion of the Dallas Blvd interchange (Exit 24) by adding a westbound off-ramp and eastbound on-ramp.

Study Goals

The general objective of this study is to provide documented information necessary for the CFX to reach a decision on the type, design, and location of the completion of the existing SR 528 Dallas Blvd interchange.

The goals of the SR 528/Dallas Blvd Interchange PD&E Study include:

- Identify transportation mobility options and programs that could meet future demand.
- Complete a full interchange for SR 528 at Dallas Blvd.
- Enhance mobility for the area's current and future development.
- Identify a Preferred Alternative design concept that is consistent with the current and future goals of CFX.
- Ensure that conceptual designs accommodate current and future capacity improvements.
- Provide consistency with local plans and policies.
- Promote regional connectivity.

Scope

The CONSULTANT will analyze the existing facility and conditions for deficiencies and shall prepare an Existing Conditions Technical Memorandum that documents key engineering and environmental features within the study area.

The CONSULTANT shall document the existing roadway characteristics within the project limits. The CONSULTANT will review and document available plans, pavement reports, existing R/W, tax and maintenance maps and other readily available data. This effort should include obtaining

the design plans for any adjacent project(s) being advanced by CFX, FDOT District 5, and Orange County. The CONSULTANT should have detailed knowledge of the various projects that make up the overall improvement.

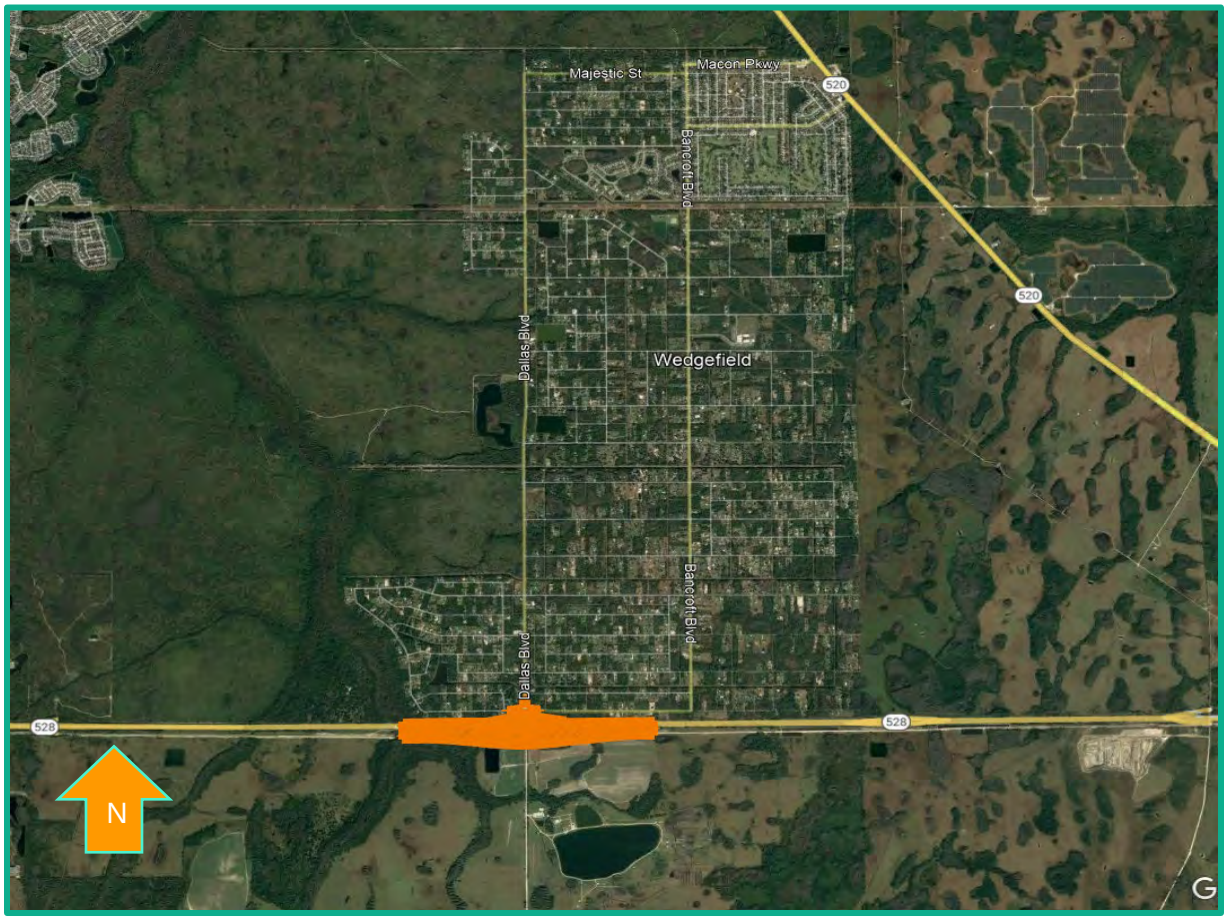
Data shall be provided by all disciplines in the creation of the basic Existing Conditions Technical Memorandum. All data collection and documentation efforts should be performed in accordance with the CFX PD&E Guidance for a Level 1 PEIR.

General Existing Conditions of Project Area

The project area, as defined within the PD&E Study, is the location where alternative concepts are being considered for the completion of a full interchange to SR 528 and roadway improvements to Dallas Blvd that will provide full access. For consistency in studying the existing and anticipated conditions of the area surrounding the PD&E Study Area, a half mile radius of the general existing conditions surrounding the project area are used, unless specifically called out. The entirety of the project area falls within unincorporated Orange County.

The project area covers SR 528 and the existing CFX R/W from the Econlockhatchee River Bridge to approximately ¾ mile east of Dallas Blvd. The project limits also contain the intersection and small areas of Dallas Blvd and Starry Street in the Wedgefield neighborhood, located within Orange County.

Figure 1- Project Area Regional Context



Roadway – Existing Conditions

Roadway - Existing Conditions

Existing Roadway Network

State Road (SR) 528 (Martin B. Andersen Beachline Expressway) is a rural four lane divided, east-west expressway within the project limits. In general, SR 528 is a crucial roadway network connecting residents and visitors to the Orlando International Airport and the east coast beaches, cities, and Cape Canaveral. Within the project limits, SR 528 has a half diamond interchange at Dallas Blvd which provides regional connectivity to the Wedgefield neighborhood. The interchange consists of a westbound off-ramp and eastbound on-ramp. The bridge substructure for SR 528 consists of piers partially embedded by a concrete slope pavement embankment. The embankment abuts the road. There is no eastbound re-entry onto SR 528, as well as no access from westbound SR 528. Outside of the existing interchange, access to and from this community is circumvented by the use of SR 520 which is seven miles east of the Dallas Blvd interchange, and then another seven miles north until you reach the entrance into Wedgefield. SR 528 is grade separated at this crossing.

The Brightline High-Speed Rail travels parallel to SR 528 and is also grade separated at Dallas Blvd. The crossing over Dallas Blvd is located approximately 600 feet south of the SR 528 crossing.

Dallas Blvd is a two-lane undivided, north-south roadway serving the Wedgefield neighborhood. Dallas Blvd crosses under SR 528 and the Brightline railway. Within the project limits, Dallas Blvd intersects Starry Street approximately 300 feet north of the westbound on-ramp. These two roads intersect at a all way stop controlled intersection. Dallas Blvd to the south of the SR 528 eastbound off-ramp turns into a private, gated road.

Starry Street is a two-lane undivided, east-west roadway serving single residential homes in the Wedgefield neighborhood. Starry Street dead ends at both termini.

Roadway Design Controls

The design controls are functional classification, context classification, and design speed. These three elements establish the geometric and operational characteristics and criteria of the roadway. The functional classification is based on vehicular travel characteristics and the degree of access provided to adjacent properties. Context Classification establishes design criteria based on environmental conditions and the surrounding land use in order to harmonize the roadway characteristics and features with the intended land uses (i.e. existing and planned). Design Speed is a principal design control that regulates the selection of many of the project standards and criteria used for design. **Tables 1, 2** and **3** list out the classifications and design speed as determined by the consultant using all available data and documentation.

Table 1 - Roadway Functional Classification

Roadway Name	Urban or Rural	Functional Class	Divided or Undivided
SR 528	Rural	Principal Arterial	Divided
Dallas Blvd	Rural	Collector	Undivided
Starry Street	Rural	Local	Undivided

Table 2 - Roadway Context Classification

Roadway Name	FDOT Context Class
SR 528	Limited Access
Dallas Blvd	N/A
Starry Street	N/A

*FDOT Context Class only applicable for arterials and collectors on the SHS
*N/A = not applicable

Table 3 - Roadway Speeds

Roadway Name	Design Speed (mph)	Posted Speed (mph)
SR 528	70	70
Dallas Blvd^	45	40
Starry Street^	55	50

^ Where design speed could not be determined by existing plans, it was assumed to be 5 mph greater than the current posted speed

Access Classification

Under Florida Statutes 335.18 the legislature authorized FDOT to develop rules to administer the "State Highway System Access Management Act". These rules regulate access to the state highway system in order to preserve the functional integrity of the system. FDOT uses seven access classifications numbered one thru seven as defined in Rule 14-97. In general, as the access classification increases so does the number of access points and connections to the facility. On the other hand, speed is inversely related, and as the access classification increases the speed on the facility decreases. **Table 4** lists the access classification as determined by the consultant using all available data and documentation.

Table 4 - Access Classification

Roadway Name	Access Classification
SR 528	Access Class 1, Area Type 4
Dallas Blvd	N/A
Starry Street	N/A

*FDOT Access Classification only applicable for SHS
N/A = not applicable

Existing Roadway Characteristics

The following sections discuss the characteristics of primary roadways in the project area. SR 528 features were determined using As-Builts from CFX Project No. 528-131. All other roadways and their features were determined using information and measurements collected from site visits and the Orange County Property Appraisers website. **Tables 5 - 8** summarize the existing roadway characteristics.

Typical Section

Table 5 - Typical Section

Roadway Name	No. of Lanes (Width)	Median Width	Outside Paved Shoulder Width	Inside Paved Shoulder Width	Roadside Ditch (Y or N)	Curb & Gutter (Y or N)	Pedestrian Facility (Y or N)	Bicycle Facility (Y or N)	R/W Width (ft)
SR 528	4 (12')	40	10'	4'	Y	N	N	N	300' Min
Dallas Blvd	2 (11')^	N/A	0*	N/A	N	N	N	Y*	105'
Starry Street	2 (12')^	N/A	N/A	N/A	N	N	N	N	60'

^ Field measurements
*Outside paved shoulder is present at the limits of project; edge lines delineate shoulder
N/A = Not Applicable

Pavement Condition

Table 6 - Existing Roadway Pavement Conditions

Roadway Name	Pavement Type	Pavement Condition	Description/ Comments
SR 528	FC-5	Good	No apparent pavement failures
Dallas Blvd	Asphalt (Grade Unknown)	Fair	Minor raveling along edge of pavement. 2-inch average drop off measured. Notable amount of silt build-up particularly near the SR 528 overpass.
Starry Street	Asphalt (Grade Unknown)	Fair	Minor delamination noted on west leg at Dallas Blvd

Horizontal Alignment

Table 7 - Horizontal Alignment

Roadway Name	Alignment Description	Deflection Angle	No. of Curves	Curve Radius (ft)	Curve Length (ft)	Comments
SR 528	Straight	N/A	N/A	N/A	N/A	No apparent shifts in alignment
Dallas Blvd	Straight	8°50' ^	N/A	N/A	N/A	No apparent shifts in alignment. High skew/ lane shift observed at intersection.
Starry Street	Curved	N/A	4 (Two per Approach)	800' (+/-)	150' (+/-)	Sharp curvatures observed on approach to intersection (both approaches).

Note: Evaluation limits based on proposed concepts provided by CFX

N/A = not applicable, ^ Deflection angle through intersection only

Horizontal Stopping Sight Distance

Based on information collected from the field as well as existing aerial imagery there were no horizontal obstructions to sight distance. There are no known intersection related sight distance issues.

Vertical Alignment

Terrain is relatively flat along Dallas Blvd and Starry Street. SR 528 is grade separated over Dallas Blvd. The lowest vertical clearance over the roadway is 14'-5" as determined by existing overhead "Low Clearance" warning sign.

Vertical Stopping Sight Distance

Based on information collected from the site visit as well as contours generated from GIS there were no vertical obstructions to sight distance. No intersection sight distance issues have been identified.

Cross Slope & Superelevation

Cross slopes for all facilities were observed as having normal crown conditions. No super-elevated segments were observed.

Intersections

SR 528 intersects at a half diamond interchange at Dallas Blvd. An eastbound off-ramp and westbound on-ramp are present. The off-ramp is stop controlled. Dallas Blvd and Starry Street intersect 300 feet from the westbound off-ramp (uncontrolled). This intersection is All Way Stop Controlled.

Drainage – Existing Conditions

Drainage - Existing Conditions

Hydrology

The study area, depicted on **Figure 2**, consists of open basins that are part of the Econlockhatchee River, Rdd Primary Canal #1, and Little Creek Watershed. Rdd Primary Canal #1 and the Little Creek Watersheds ultimately discharges southwest to Little Creek. Little Creek in turn discharges northwest to the Econlockhatchee River. The project is located within the Econlockhatchee River WBID 2991, Ditches WBID 3052, and Little Creek WBID 3054.

This project is located within the jurisdiction of the SJRWMD. WBID 2991 has a verified impairment for E-coli but none of the WBIDs are impaired for nutrients. The Econlockhatchee River is an Outstanding Florida Water (OFW). While the study area is also within the Econlockhatchee River Hydrologic basin, it does not contain any portions of the Econlockhatchee River Riparian Habitat Protection Zone. The Econlockhatchee River Hydrologic Basin has additional requirements to meet SJRWMD criteria related to peak discharge rates for both the mean annual and 25-year storm events, as well as providing floodplain compensation for any locations with upstream drainage area of one square mile or more.

Along SR 528 from the Econlockhatchee River Bridge to approximately Station 1439+30 roadway runoff sheetflows to either barrier wall inlets on the outside of the mainline or median inlets that discharge without treatment to roadside ditches that outfall to the Econlockhatchee River.

Between about Station 1439+30 to Station 1447+00 SR 528 runoff sheetflows from the road to ditches that drain to an existing 36” cross drain (CD-1). CD-1 conveys water from north to south and connects to the Econlockhatchee River floodplain on either side. Downstream of CD-1 is S-300. S-300 is a triple 42” cross drain proposed to be under the Brightline Railroad as part of the All Aboard Florida Project, Contract C02, that is currently under construction. The S-300 basin includes the discharge from Pond 403-1B and Pond 403-1A as Pond 403-1A outfalls to CD-1. The S-300 basin is 80.65 acres and extends to north of Starry Street.

East of Dallas Blvd and south of SR 528 is a 20.0 acres area identified as EX A-1 in the All Aboard Florida Project that flows to existing double 29”x45” pipes that cross Dallas Blvd and ultimately discharges to S-300. A 39.0 acres area identified as EX A-2 is conveyed from south of the Brightline Railroad to the same double 29”x45” pipes.

The area east of Dallas Blvd and north of SR 528 either flows west towards a 19”x30” that crosses Dallas Blvd just north of the on-ramp or north towards 18” pipes that cross Starry Street.

There are two existing stormwater management facilities within the project limits that provide treatment and attenuation, existing ponds 403-1A and 403-1B. Both were constructed in 2007 as part of the SR 528 Dallas Mainline Toll Plaza and Dallas Ramp Toll Plaza project, CFX Project No. 528-403, and both are located within the Dallas Blvd Ramps infield areas.

Basin 403-1A is 6.66 acres and begins at about Station 1447+00 along SR 528 and ends near Station 1458+00. The roadway runoff from SR 528 is collected by curb and gutter and conveyed to Pond 403-1A through a stormsewer system. Pond 403-1A is located between the westbound on-ramp and SR 528 westbound mainline and was originally constructed as a dry pond to treat

the widening of the Dallas Blvd westbound on-ramp and toll facility. As part of the SR 528 over Econlockhatchee River project, CFX Project No. 528-131, Pond 403-1A was modified to a wet detention pond to provide compensatory treatment for the road and bridge improvements over the Econlockhatchee River. Pond 403-1A currently provides the 0.88 ac-ft of treatment for 2.02 acres of impervious area that the pond is required to treat.

Basin 403-1B is 3.69 acres and treats the existing 0.71 acre of impervious area from the Dallas Blvd eastbound off-ramp and toll facility. Pond 403-1B is a dry retention facility that discharges through a control structure to the other side of the ramp. See **Table 8** for a Summary of the Existing Treatment Facilities.

Table 8 - Summary of Existing Treatment Facilities

Contract	Treatment Facility	Treatment Method	Treatment Criteria	Basin Area (ac)	Required Treatment (ac-ft)	Provided Treatment (ac-ft)	Discharge Location
528-403	Pond 403-1B	Dry Retention	0.5" x basin area + 0.5" x basin area for online + 50% to OFW	3.69	0.45	0.45	S-300
528-131	Pond 403-1A	Wet Detention	2.5" x impervious area + 50% to OFW	6.66	0.88	0.88	CD-1

Existing FDEP and SJRWMD Permits for the project corridor were researched to obtain stormwater and environmental design information and are summarized in **Table 9**.

Table 9 - SJRWMD ERP Summary

CFX Project Name	SJRWMD Permit No.	Date Issued	Description
528-403	114678-1	7/7/2008	SR 528 Mainline Toll Plaza and Dallas Ramp Toll Plaza. Pond 403-1A and 403-1B Constructed.
528-131	114678-2	10/13/2016	SR 528 Over the Econlockhatchee River. Pond 403-1A modified to a wet detention pond.
All Aboard Florida Contract C02	136255-6	12/20/2017	Construction of a stormwater management system for All Aboard Florida East-West Railway PE02 CFX SJRWMD Segment

Figure 2- Project Area FIRM Map

Floodplains

The Federal Emergency Management Agency (FEMA) has determined the 100-year floodplain limits in the vicinity of the project limits in the form of Flood Insurance Rate Maps (FIRM). On **Figure 2**, the 100-year floodplain limits are presented from Orange County Unincorporated Areas panel 12095C05000F effective 9/25/2009, with a Letter of Map Revision (LOMR) 16-04-8268P, effective 9/22/2017, that includes the Econlockhatchee Bridge.

The 100-year floodplain crosses the SR 528 R/W in the location of the Econlockhatchee bridge and CD-1 that connects the floodplain on either side of the road. At the bridge, the Econlockhatchee River has an established base flood elevation (BFE) of 59 feet NAVD88. As part of the Brightline (All Aboard Florida) permit the floodplain within the area of the Econlockhatchee River was permitted through the traversing works criteria. As such, the water elevation must not rise more than 1’ in the 100-year event at the location of the bridge, nor can it increase more than 0.1’ 500’ upstream of the crossing.

Utilities & Railroad – Existing Conditions

Utilities & Railroad - Existing Conditions

Utilities

Existing Utility Agency Owner (UAO) Assessment

The UAOs in the study area were determined using a variety of sources. First, a Sunshine 811 Design Ticket was made to identify the utility providers and operators registered in the area. Next, a site visit was performed to visually identify marked utilities and the providers. These utility providers were then contacted to establish the proper personnel to assist with locating and identifying existing and planned utilities in the area. Lastly, plans, permits and/or mapping of the utilities were requested for review including any R/W or easement agreements along the affected corridors. UAO dispositions will be requested and documented at a later date as part of the design phase for this project. Cost and scheduling estimates associated with any relocation efforts will be documented as part of the design phase. The UAOs identified on the project are summarized in **Table 10**. The responses and other correspondence from the UAOs are provided in **Appendix B**. A description of all existing and planned utilities per UAO is listed below.

Table 10 - List of Utility Owner Contact Information

Utility Owner	Contact	Email/ Phone	FACILITIES
AT&T Distribution	Alan Reynolds	AR2916@att.com	Buried Copper and Fiber (Telephone)
AT&T Transmission	Kenneth Wagner Craig Petrie	SWagner@pea-inc.com CPetrie@pea-inc.com	High-Capacity Buried Fiber
Charter	John “Smitty” Smith	John.Smith5@charter.com	***Pending***
Duke Energy Distribution	Leonardo Gonzalez	Leonardo.Gonzalez@duke-energy.com	Buried Electric for 2 street light poles
Duke Energy Transmission	Aric Rogers	ARogers@pike.com DefTransmissionGOV@duke-energy.com	No Facilities
Orange County Utilities (OCU)	Jose Hernandez Christina Crosby	Jose.Hernandez2@ocfl.net Christina.Crosby@ocfl.net	No Facilities (Possible Water, Sewer, Reclaim in the future)
Orlando Utilities Commission (OUC)	Robert Scheuerle	RScheuerle@ouc.com	***Pending***
Sprint / T-Mobile Wireless	Jon Baker	Jon.Baker@t-mobile.com	Buried Fiber
Sprint / CenturyLink / Lumen / Embarq	Marlon Brown	Marlon.N.Brown@lumen.com	No Facilities

AT&T (Distribution)
AT&T Distribution (AT&T-D) has facilities running north-south on the east side of Dallas Blvd. There are 2 buried fiber optic lines (24 and 48 FOC). There are also 2 buried copper lines (50 pr and 105 pr). AT&T-D also has facilities running east-west along the north side of SR 528. The westerly line is out of service. The easterly line is buried fiber optic (12 FOC).

AT&T D is anticipating relocating the four lines running north-south and the 12 BFOC running east on the north side of SR 528. The rough estimate Mr. Alan Reynolds proposed for the relocation of these facilities will be between $100,000 and $150,000. He also stated it would be at least a six-month process from design to construction.

AT&T (Transmission)
AT&T Transmission (AT&T-T) has facilities along the north side of the project near the existing R/W. This fiber is a high-capacity line containing 2-2" HDPE buried conduit. There are also two manholes within the same line. This conduit does cross under Dallas Blvd to the north. There are no known crossings under SR 528.

The facilities for AT&T-T are not in conflict with the proposed construction for this CFX project.

Charter
No Response.

Duke Energy (Distribution)
Duke Energy is not the main electric service provider for this area. Duke Energy does have facilities within the project limits. They have a small amount of buried electric supplying power to two wooden street light poles. This line is a 120/240V buried electric. It runs parallel along the west side of Dallas Blvd. The line does change to aerial heading south beyond the project limits.

The facilities for Duke Energy (Distribution) are not in conflict with this project. However, due to a possible reconfiguration of this interchange, Duke Energy may remove these light poles as part of a new lighting design.

Duke Energy (Transmission)
Duke Energy (Transmission) has no facilities within the project limits.

Orange County Utilities (OCU)
OCU has no facilities within the project limits. However, they do have jurisdiction for water, sewer and water reclaim for this area.

Orlando Utilities Commission (OUC)
PENDING OUC has electric facilities within the project.

Sprint / T-Mobile Wireless
Sprint / T-Mobile has multiple buried fibers along the project corridor. One BFOC runs parallel along the northern portion of westbound SR 528. This fiber continues along SR 528 until heading northeast to the existing R/W along the eastbound entrance ramp. It then runs south on the west side of Dallas Blvd, and crosses Dallas Blvd once south of the current interchange. This BFOC then runs south along the east side of Dallas Blvd passing through the hand hole on the southeast corner of Dallas Blvd and the exit ramp.

The second BFOC runs along the south side of SR 528 heading east until the current eastbound exit ramp. Then this fiber runs along the south side of the exit ramp. It crosses Dallas Blvd in a southeasterly direction into a hand hole on the southeast corner of Dallas Blvd and the exit ramp.

From the southeast hand hole, another BFOC heads northeast parallel to the current R/W until it reaches the eastbound lanes of SR 528. This line continues east along the south side of eastbound SR 528.

All of these facilities will require relocation. The work will be extensive because the splice points for the current BFOC lines are approximately 2 miles apart. The relocation will include this length of each fiber to their respective splice points. Mr. Baker is not able to provide a cost estimate due to the large nature of this relocation. He stated this would take at least a month to prepare accordingly.

Sprint / CenturyLink / Embarq / Lumen

Sprint / CenturyLink / Embarq / Lumen has no facilities within the project limits.

Utility Impacts

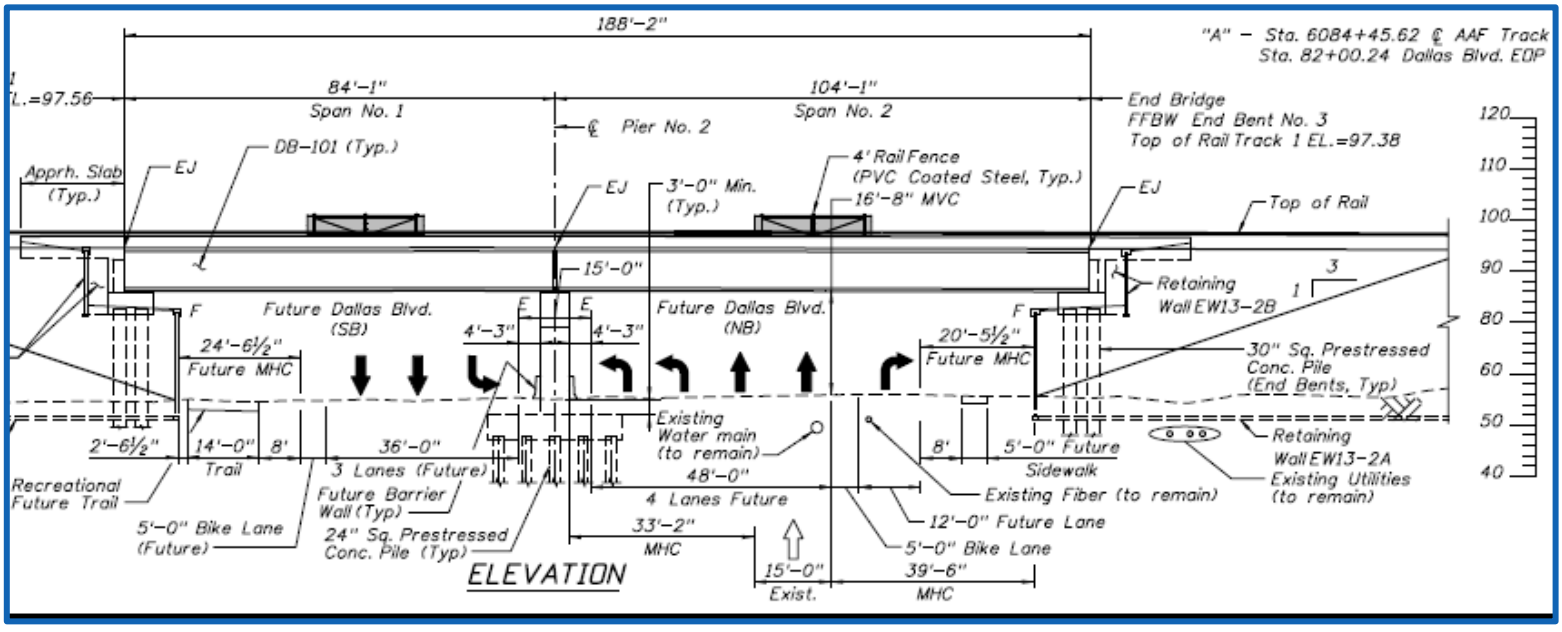
Given the relocation of a mainline and the construction of new bridges, ramps and improvements to Dallas Blvd, utility relocation is anticipated for utility providers. Cost and scheduling as well as any UAO dispositions and agreements pertaining to the relocation of any facilities will be further investigated as part of the Utility Assessment Technical Memorandum and the design phase for this project. Listed providers in **Table 10** should be contacted as part of the ongoing utility coordination efforts

Railroad

Along the southern border of the Project Area, within the CFX Limited Access right-of-way, easement has been granted (see **Figure 3**) to All Aboard Florida (AAF), now known as the Brightline Railway. New elevated double tracks have been constructed and are planned to be operational for Brightline High Speed Rail in 2023 (see **Appendix A – Photo Log**). The newly constructed railroad bridge over Dallas Blvd has been built to accommodate future roadway capacity for development of the 50,000+ acres south of SR 528, anticipated to develop by 2045. **Figure 4** depicts the cross section of the AAF Bridge over Dallas Blvd and the lane capacity that could be built in the future with a bridge clearance of 16 feet 8 inches from the Dallas Blvd roadway. The railroad tracks and the bridge are not anticipated to cause any adverse impact to the development or construction of a Preferred Alternative interchange for SR 528 & Dallas Blvd.

Figure 3 - Rail Easement in CFX R/W

Figure 4 - Railroad Bridge Over Dallas Blvd



Environmental – Existing Conditions

Environmental - Existing Conditions

A review was conducted of existing conditions related to Environmental Resources for the project. Below is a summary of findings.

Wetlands and Other Surface Waters

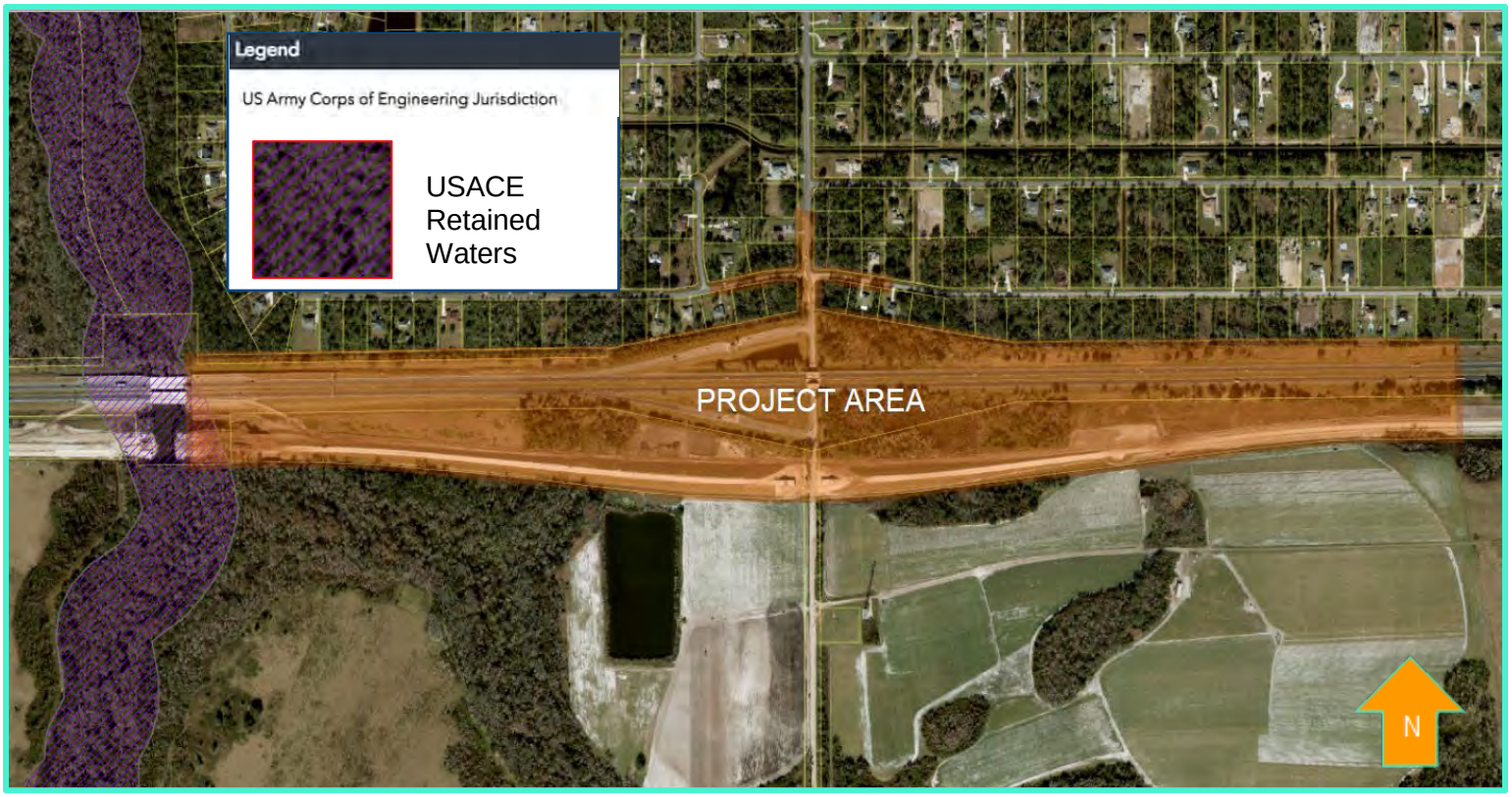
An assessment of wetlands and surface waters was conducted within the project study area utilizing the National Wetland Inventory (NWI) data (see **Figure 5**). Three wetland types were identified to overlap with some portion of the project area: freshwater emergent wetland, freshwater forested/shrub wetland, and riverine wetland. The riverine wetlands near the western limits of the project area are part of the Econlockhatchee River System, which is designated as an Outstanding Florida Water.

Figure 5: National Wetlands Inventory

Water Resources

The riverine wetlands near the western limits of the project area are part of the Econlockhatchee River System, which is designated as an Outstanding Florida Water. Design of the project will ensure that coordination with and proper permitting through FDEP is performed. A review was conducted of existing conditions related to natural resources for the project. The project will meet all applicable SJRWMD criteria related to water quality. The project is currently a non-federal action receiving no federal monies; therefore, concurrence from the EPA is not required according to the Safe Drinking Water Act. Best Management Practices (BMPs) to control erosion, sediment release, and storm water runoff to minimize adverse impacts on surface water resources will be implemented during design, permitting and construction. Determination has been made that the USACE retained waters associated with the Econlockhatchee River at the western project area limits are within 300' of the project, therefore the Project will be subject to FDEP State 404 Program Permitting (**Figure 6**).

Figure 6 – USACE Retained Waters – 404 Permitting



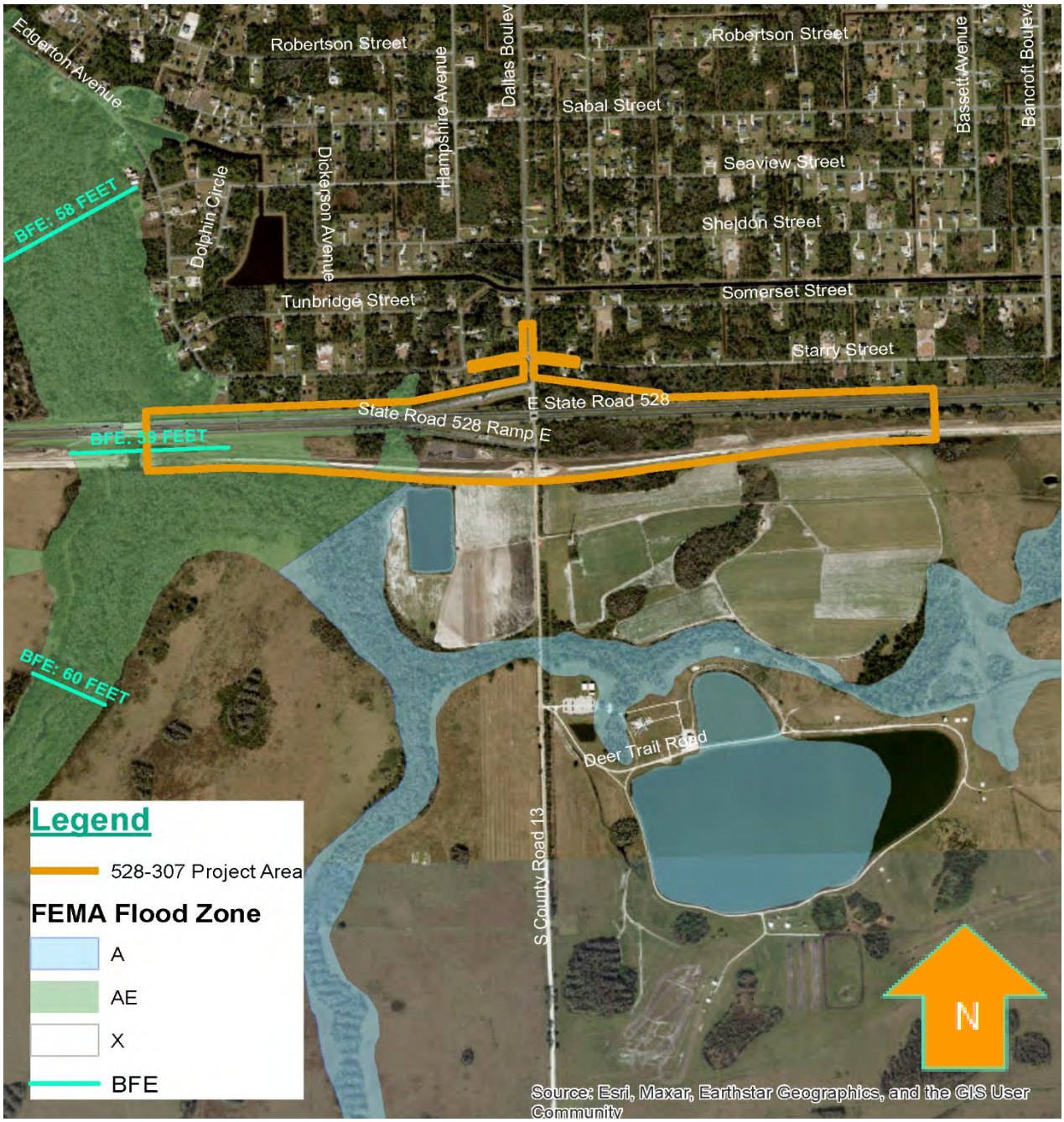
Wild and Scenic Rivers

The Econlockhatchee River is not designated as a Wild or Scenic River; therefore, the proposed project would have no impact on Wild and Scenic Rivers.

Floodplains

Approximately 27 acres of the ±145-acre project site (18.6%) are classified as being within the Federal Emergency Management Agency (FEMA) Flood Zone AE, within the Special Flood Hazard Areas, where an established Base Flood Elevation (BFE) has been determined (**Figure 7**). The remaining approximately 133 acres of the project site are classified as being within FEMA Flood Zone X, areas of minimal flood hazard. There are no FEMA Regulatory Floodway within the project study area (**Figure 7**).

Figure 7 – FEMA Floodplain Map



Coastal Barrier Resources

The proposed project would not be involved with coastal barrier resources and therefore would have no impact on Coastal Barrier Resources.

Protected Species and Habitat

A database review of potential species occurring within the project study area and immediate vicinity was conducted. Results of the database review are summarized below.

Based on a review of the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper, there is no USFWS designated critical habitat within the project study area. Areas identified by Florida Fish and Wildlife Conservation Commission (FWC) as Strategic Habitat Conservation Areas (SHCA) are located within the project study area. SHCAs are undeveloped natural areas identified by FWC as areas that could provide potential habitat to native plant and wildlife species and, therefore, may be considered for acquisition as conservation lands. However, these areas have no regulatory implications and have not been and may never be acquired for conservation.

Based on Florida Natural Areas Inventory (FNAI) Biodiversity Matrix and USFWS IPaC (Information for Planning and Consultation) data, no listed plant or wildlife species have been documented in the project area.

Listed species with the potential to occur based on analysis using USFWS IPaC tool included Audubon's Crested Caracara (Polyborus plancusaudubonii), Eastern Black Rail (Laterallus jamaicensis), Everglade Snail Kite (Rostrhamus sociabilis plumbeus), Red-cockaded Woodpecker (Picoides borealis), Wood Stork (Mycteria Americana), and Eastern Indigo Snake (Drymarchon couperi). The project site lies within the Core Foraging Area (CFA) for Florida wood storks. There are no known wading bird rookeries or bald eagle nests within the project study area or within one (1) mile of the project site, based on spatial datasets from FWC.

Table 11 lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on potential habitat presence and documented occurrences of the species within various databases. A Low ranking indicates that suitable habitat is not likely within the proposed project site (based on USFWS habitat range spatial coverage) and the species has not been documented within one (1) mile of the proposed project site. A Moderate ranking indicates that either suitable habitat is within the proposed project site, or the species has been documented within 1 mile of the proposed project site. A High ranking indicates suitable habitat exists within the proposed project site and the species has been documented within 1 mile of the proposed project site.

Table 11: Listed Species with the Potential to Occur Within the Project Site

Common Name	Scientific Name	Status	Documented (<1 mile)	Habitat Present	Likelihood of Occurrence
Avian					
Audubon's Crested Caracara	*Polyborus plancus audubonii*	FT, ST	No	Yes	Moderate
Eastern Black Rail	*Laterallus jamaicensis*	FT, ST	No	Yes	Moderate
Everglade Snail Kite	*Rostrhamus sociabilis plumbeus*	FE, SE	No	Yes	Moderate
Red-cockaded Woodpecker	*Picoides borealis*	FE, SE	No	Yes	Moderate
Wood Stork	*Mycteria americana*	FT, ST	No	Yes	Moderate
Reptilian					
Eastern Indigo Snake	*Drymarchon couperi*	FT, ST	No	Yes	Moderate

Legend:
FE - Federally Endangered; FT - Federally Threatened
SE - State Endangered; ST - State Threatened
Note: Coordination is not required with FWC for federally listed species

Federal Listed Fauna

Birds

Audubon's Crested Caracara

Audubon's crested caracara (caracara) is listed as threatened by USFWS and FWC. Caracaras are large, boldly patterned raptors, with a crest and unusually long legs. Caracaras are year-round residents in Florida. The species has been reported from the Kissimmee, Caloosahatchee and Upper St. Johns River basins, and the Kissimmee prairie. The crested caracara is strongly associated with open habitats, preferring large expanses of pastures, grasslands, or prairies with numerous shallow ponds and sloughs and single or small clumps of cabbage palms, live oaks, and cypress. The caracara is an opportunistic feeder with a broad diet consisting of carrion and live prey, including invertebrates associated with carrion and dung in pastures. They forage in a wide variety of habitats including pastures, along roads, wetlands and agricultural lands including citrus groves. This species has not been documented within one (1) mile of the project study area.

Eastern Black Rail

The eastern black rail is listed as threatened by the USFWS. Black rails are small blackish-gray birds with bright red eyes that live in a wide range of wetland habitats. Eastern black rail habitat can be tidally or non-tidally influenced, and range in salinity from salty to brackish to freshwater marshes.

This species requires dense overhead cover and soils that are moist to saturated and interspersed with very shallow water. According to FNAI Biodiversity Matrix data, the eastern black rail has not been documented within one (1) mile of the project study area.

Everglade Snail Kite

The Everglades snail kite is listed as endangered by USFWS and FWC. This species is a mid-sized raptor that can reach a length of 14.2-15.4 inches. Males are slate gray with red eyes and orange legs, which turn more reddish during breeding season. Females are brown with red eyes and yellow to orange legs, with varying amounts of white streaking on the face, neck, and chest. Snail kites have a highly specific diet, which is made up almost exclusively of apple snails (*Pomacea paludosa*). Snail kites typically prefer large, open, freshwater marshes and shallow lakes (< 4 ft. deep) with a low- density of emergent vegetation and typically nest in low trees or shrubs over water (commonly willow, wax myrtle, pond apple, or buttonbush, but also in non-woody vegetation like cattail or sawgrass).

The project site is located within the USFWS consultation area for the snail kite; however, the species has not been documented within one (1) mile of the project site.

Red-Cockaded Woodpecker

The red-cockaded woodpecker (RCW) is listed as endangered by USFWS and FWC. The RCW is a black and white bird that can reach lengths of 9 inches and a weight of 1.8 ounces. RCWs have a large white patch located on their cheek, a black head and neck, a white belly, and a barred black and white back. The red-cockaded, which is only found on the male, consists of a small red streak above the cheek and is rarely visible. RCWs inhabit open, mature pine woodlands that have a diversity of grass and shrub species. Preferred habitat includes longleaf pine flatwoods in north and central Florida and mixed longleaf pine and slash pine in south- central Florida. The RCW creates cavities within the longleaf pine tree and relies on the tree's production of resin to protect them from predators. Development of longleaf pine habitat as well as fire exclusion in this fire-dependent ecosystem has led to a large decrease in populations of RCWs. According to FNAI Biodiversity Matrix data, the RCW has not been documented within one (1) mile of the project study area.

Wood Stork

The wood stork is listed as threatened by USFWS and FWC. The wood stork is a large, long legged wading bird that reaches a length of 35-45 inches with a wingspan of 60-65 inches. Wood storks are typically found in marshes, cypress swamps, and mangrove swamps, but their presence in artificial ponds, seasonally flooded roadside or agricultural ditches, and managed impoundments has become common. Wood stork breeding areas extend from South Florida through Georgia and along the coastal areas of South Carolina. Wood storks are known to nest with other wading bird species, including white ibis, tricolored herons, snowy egrets, and great blue herons. Foraging habitat consists of nearly any calm, shallow water area (between 4 and 10 inches) or wetland depression that concentrates fish and is not overgrown with dense, aquatic vegetation. Some examples of foraging habitat include freshwater marshes, stocked ponds, shallow ditches, narrow tidal creeks, shallow tidal pools, and depressional areas of cypress heads and swamp sloughs.

No wood storks have been documented within one (1) mile of the project study area; however, there is suitable foraging habitat within the wetlands in the project study area and the project study area is within the core foraging area of the Lawne Lake and Eagle Nest Park nesting colonies.

Reptiles

Eastern Indigo Snake
The eastern indigo snake is listed as threatened by USFWS and FWC. This species is a very large, stout-bodied, shiny black snake and is widespread but uncommon in Florida. These snakes require large tracts of land for survival and are typically restricted to xeric habitats on pine-oak sandhills.

Indigo snakes forage in hydric habitats, often along wetland ecotones. In south Florida, preferred habitat for the eastern indigo snake includes a diverse assemblage including pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, and xeric sandhill communities (*Eastern Indigo Snake Programmatic Effect Determination Key (South Florida) – Revised July 2017*). Eastern indigo snakes are often found in strong association with gopher tortoises but are also known to use the burrows of armadillos, cotton rats, and land crabs (in coastal areas). No indigo snakes have been documented within one (1) mile of the project study area.

State Listed Fauna

With the exception of Audubon's Crested Caracara, all the above-described Federal Listed species with potential habitat impacts near the project area are also found to have likely habitat impacts based on FNAI's Biodiversity Matrix. These species are listed in the following sections; habitat descriptions and project study area preference are all described above.

Birds

The following bird species are listed as threatened or endangered by FWC:
Eastern Black Rail (threatened)
According to FNAI Biodiversity Matrix data, the eastern black rail has not been documented within one (1) mile of the project study area.

Everglades Snail Kite (threatened)
The project site is located within the USFWS consultation area for the snail kite; however, the species has not been documented within one (1) mile of the project site.

Red-Cockaded Woodpecker (endangered)
According to FNAI Biodiversity Matrix data, the RCW has not been documented within one (1) mile of the project study area.

Wood Stork (threatened)
No wood storks have been documented within one (1) mile of the project study area; however, there is suitable foraging habitat within the wetlands in the project study area and the project study area is within the core foraging area of the Lawne Lake and Eagle Nest Park nesting colonies.

Reptiles

The following reptile species are listed as threatened or endangered by FWC:

Eastern Indigo Snake (threatened)
No eastern indigo snakes have been documented within one (1) mile of the project study area according to the FNAI Biodiversity Matrix data

Non-Listed Species

Florida Black Bear
The Florida black bear was removed from the FWC list of state-threatened species in August 2012; however, the Florida black bear remains protected under other rules and regulations, primarily through the Florida Black Bear Conservation Rule 68A-4.009 (F.A.C.) and the FWC Florida Black Bear Management Plan. Based on these regulations, pursuing, hunting, molesting, capturing, killing, or attempting those actions, whether or not such actions result in possession of the bear is unlawful. In addition, Rule 68A-4.009, F.A.C., generally prohibits anyone from possessing, injuring, shooting, wounding, trapping, collecting, or selling bears or their parts or attempting to engage in such actions without prior authorization from FWC. Black Bear Management Units (BMU) have also been established based on the seven geographically distinct bear subpopulations in Florida. The project study area is located within the Central BMU.

Black bears are adaptable and inhabit a variety of forested habitats including seasonally inundated pine flatwoods, tropical hammocks, hardwood swamps and xeric sand pine-scrub oak communities. Based on a review of GIS databases, there are no black bear nuisance reports or road kills reported within one (1) mile of the project site.

Structures – Existing Conditions

Structures - Existing Conditions

Existing Structures

There are 2 existing bridges within the project limits:

- **Bridge No. 750058**
- **Bridge No. 750213**

Bridge information pertinent to the study was compiled from National Bridge Inventory Data and field verified. A description of each bridge is provided below.

Bridge Descriptions

SR 528 Westbound (Bridge No. 750058)

The existing bridge was constructed in 1967 and consists of three spans, 16'-0", 48'-0", and 16'-0", with AASHTO Type II prestressed concrete girders and a 7-inch concrete deck superstructure. The vertical clearance over Dallas Blvd is 14.6 feet. The existing bridge provides two 12'-0" travel lanes with 4'-0" inside shoulder and 10'-0" outside shoulder over Dallas Blvd which consist of two 10'-0" asphalt roadway with unpaved shoulders. The total width of the SR 528 bridge deck from edge to edge is 42.5 feet. The inspection report dated July 2022 states that the bridge has a sufficiency rating of 91.5. The inspection report also indicated the Health Index rating is 92.57. The deck, superstructure, and substructure are indicated to be in fair to good condition.

SR 528 Eastbound (Bridge No. 750213)

The existing bridge was constructed in 1967 and consists of three spans, 16'-0", 48'-0", and 16'-0", with AASHTO Type II prestressed concrete girders and a 7-inch concrete deck superstructure. The vertical clearance over Dallas Blvd is 14.6 feet. The existing bridge provides two 12'-0" travel lanes with 4'-0" inside shoulder and 10'-0" outside shoulder over Dallas Blvd which consist of two 10'-0" asphalt roadway with unpaved shoulders. The total width of the SR 528 bridge deck from edge to edge is 42.5 feet. The inspection report dated July 2022 states that the bridge has a sufficiency rating of 91.6. The inspection report also indicated the Health Index rating is 94.49. The deck, superstructure, and substructure are indicated to be in satisfactory to good condition.

Traffic – Existing Conditions

Traffic – Existing Conditions

Traffic Counts

Traffic counts are provided as **Appendix C**.

Traffic Control

Signalization

There is no signalization along SR 528 as it is a limited access facility. Signalization is not present at the intersections within the Dallas Blvd interchange.

The SR 528 eastbound off-ramp intersection at Dallas Blvd is a three-leg unsignalized intersection with stop control along the ramp approach. The off-ramp is one-way eastbound with two lanes approaching the intersection from the ramp toll plaza. At the intersection, the ramp has a left turn lane controlled by a STOP (R1-1) sign and a right turn lane controlled by a YIELD (R1-2) sign. Turns are prohibited from Dallas Blvd as the off-ramp is one-way.

The SR 528 westbound on-ramp intersection at Dallas Blvd is a three-leg unsignalized intersection. The on-ramp is one-way westbound departing the intersection with two lanes to the ramp toll plaza. Traffic control at the intersection involves motorists yielding R/W when turning left onto the ramp from Dallas Blvd. Turn lanes are not provided on Dallas Blvd at the intersection.

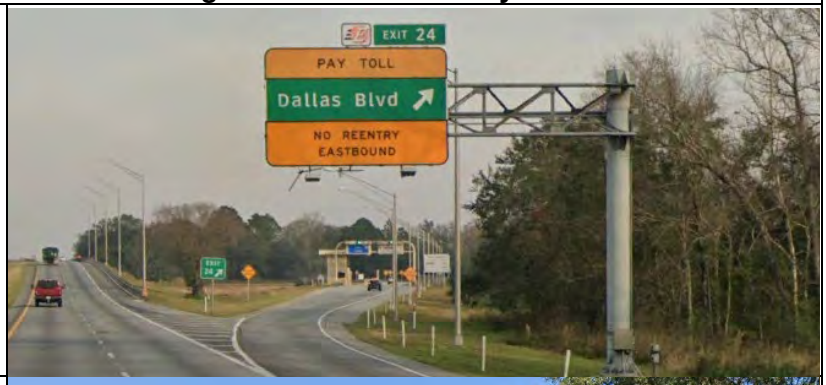
The intersection of Dallas Blvd at Starry Street to the north of the interchange is a four-leg all-way stop-controlled intersection with STOP signs on each leg of the intersection. There are no turn lanes on Dallas Blvd or Starry Street at the intersection.

Traffic Signs

There are two overhead sign structures present on SR 528 within project limits. One of the structures (75A081) is a cantilever sign structure with an exit guide sign for the Dallas Blvd interchange. The other structure (75S865) is a Dynamic Message Sign (DMS) gantry west of the interchange. In addition, there are two overhead sign structures west of project limits with exit guide signs related to the Dallas Blvd interchange (75A079 and 75A080).

On Dallas Blvd, there are two overhead span wire sign assemblies in advance of the SR 528 overpass, one northbound (75C070) and one southbound (75C071), with warning signs informing motorists of the low bridge clearance (14’-5”).

The overhead sign structure inventory is provided on **Figure 8**. Existing signing within the project area including single post and multi-post regulatory, warning and guide sign assemblies are included in **Appendix D.**

Figure 8 – Overhead Sign Structure Inventory	
Structure No. 75A081	
Structure No. 75C070	
Structure No. 75C071	
Structure No. 75S865	

Crash Data Analysis

Crash data was reviewed for the primary roads identified. The 2017-2022 crash period was selected due to the irregularity of traffic during 2020 as a result of the pandemic. Crash data was sourced from the Signal4 Analytics database. Crash data was evaluated based on environmental conditions, lighting conditions, road surface conditions, severity and frequency, and weather. The results are located in **Appendix E**.

Lighting – Existing Conditions

Lighting – Existing Conditions

Lighting

Existing conventional lighting for the partial interchange was field verified from the end of the westbound on-ramp transition to just west of the bridge over Dallas Blvd. Twenty-three (23) light poles with 400W HPS fixtures and 15' arms at a 45' mounting height are along the mainline at an average spacing of 235', ten (10) light poles with 250W fixtures and 15' arms at a 35' mounting height are along the westbound on-ramp at an average spacing of 130', and ten (10) light poles with 250W fixtures and 15' arms at a 35' mounting height are along the eastbound off-ramp at an average spacing of 135' (**Figure 9**). These fixtures will need to be upgraded to LED to meet current CFX criteria.

Figure 9 – Westbound On-Ramp Lighting

Additionally, the existing overhead sign structure at the eastbound off-ramp gore has two (2) sign fixtures that will need to be upgraded to LED (**Figure 10**).

Figure 10 – Eastbound Off-Ramp Sign Fixtures

There are two (2) bridge mounted underdeck fixtures over the Dallas Blvd travel lanes at a mounting height of 16.5' (**Figure 11**). The surface mounted conduit runs to the SW corner of the eastbound bridge and appears to connect to the eastbound mainline lighting circuit. These underdeck fixtures will need to be converted to LED pier mounted fixtures to meet current CFX criteria. Per current CFX preferences, a remote driver cabinet will be required for the sign fixtures but not for the underdeck fixtures.

Figure 11 – Bridge-Mounted Underdeck Fixtures

Load center 'A' is located adjacent to the toll building along the westbound on-ramp with a physical address of 12101 SR 528, Orlando FL 32833 (see **Figure 12**). Cabinet information references job number 1262-11 and a manufactured date of 11/01/11. Load center 'B' is located adjacent to the toll building along the eastbound off-ramp with a physical address of 12100 SR 528, Orlando FL 32832. Duke Energy is the power company within project limits.

Figure 12 – Load Center Location

Intelligent Transportation Systems – Existing Conditions

Intelligent Transportation Systems – Existing Conditions

Intelligent Transportation Systems (ITS)

The ITS infrastructure within the project limits consists of fiber optic trunkline cable on both the north and south sides of the road beyond the outside limits of the paved shoulders. Electrical power service conductors are also present to power the device locations. The existing ITS devices include Closed Circuit Television (CCTV) cameras, Traffic Monitoring Stations (TMS), Dynamic Message Signs (DMS) and Data Collection Sensors (DCS). Toll plazas are present on the eastbound exit ramp and westbound entrance ramp and there is a load center on Dallas Blvd, north of SR 528. **Table 12** is a tabulation of the ITS devices:

Table 12 - ITS Device Inventory

Device No.	MM	Direction/ Location	Side of Roadway	Device Type	Comments
1	23.2	EB SR 528 Mainline	Rt.	CCTV	Figure 13
2	23.2	EB SR 528 Mainline	Rt.	TMS	Mounted to Device No. 1 pole. Figure 14
3	23.2	EB SR 528 Mainline	N/A	DMS	Figure 15
4	23.2	WB SR 528 Mainline	N/A	DMS	Figure 16
5	23.2	WB SR 528 Mainline	N/A	DCS	Mounted to DMS sign structure. Figure 16
6	23.3	WB SR 528 Mainline	Lt.	CCTV	Figure 17
7	23.3	WB SR 528 Mainline	Lt.	TMS	Mounted to Device No. 6 pole. Figure 17
8	23.5	EB SR 528 Mainline	Rt.	DCS	Mounted to cantilever sign structure. Figure 18
9	23.5	EB SR 528 Mainline	Rt.	TMS	Mounted to cantilever sign structure upright. Figure 19
10	23.8	WB SR 528 Mainline	Lt.	CCTV	Figure 20
11	24.5	WB SR 528 Mainline	Lt.	CCTV	Figure 21

ITS Photo Log

Figure 13 – Device 1 (TMS, MM 23.2)

Figure 14 – Device 2 (CCTV MM 23.2)

Figure 15 – Device 3 (Eastbound DMS, MM 23.2)

Figure 16 – Device 4 & 5 (Westbound DMS & DCS, MM 23.2)

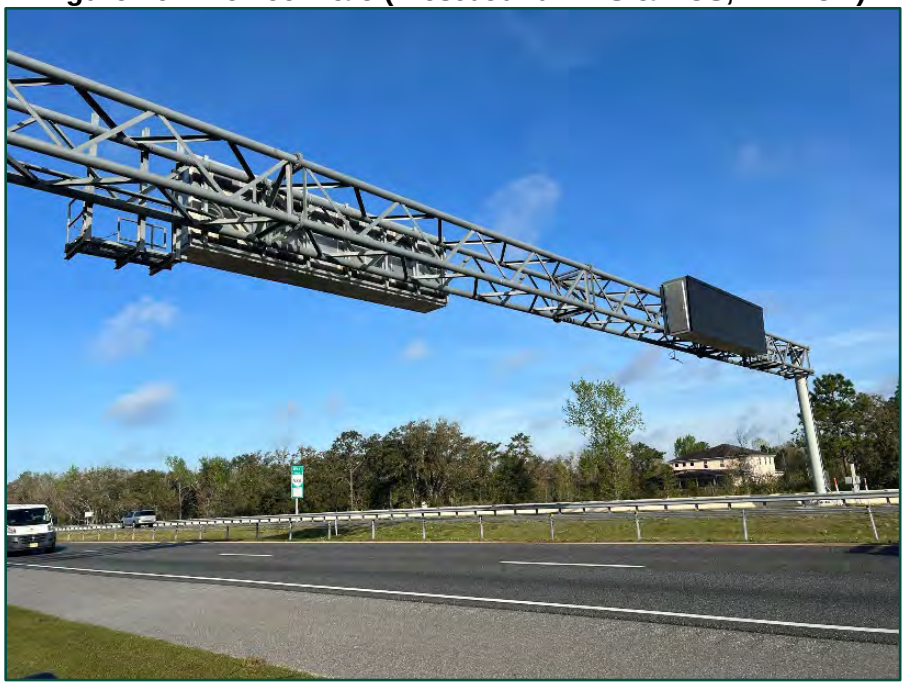


Figure 17 – Devices 6 & 7 (CCTV and TMS, MM 23.3)

Figure 18 – Device 8 (TMS, MM 23.5)

Figure 19 – Device 9 (DCS, MM 23.5)

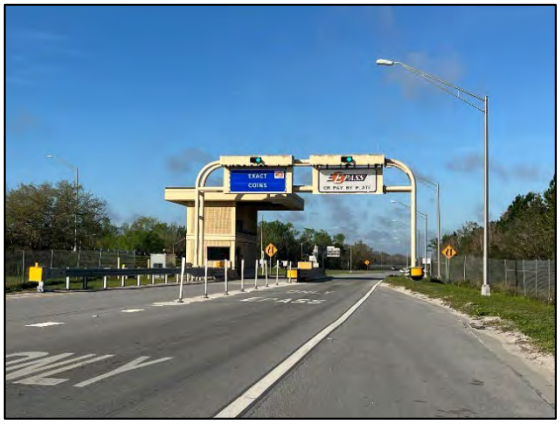
Figure 20 – Device 10 (CCTV, MM 23.8)

Figure 21 – Device 11 (CCTV, MM 24.5)

Toll Plazas

Figure 22 - Toll Plaza - Eastbound Exit

Figure 23 - Toll Plaza - Westbound Entrance



Load Center

Figure 24 - Load Center

Geotechnical – Existing Conditions

Geotechnical – Existing Conditions

Geotechnical

Available documents, including the USGS Quadrangle Map, the Natural Resources Conservation Service Orange County Soil Survey and current plans were reviewed. The following observations were noted:

- Natural ground surface topography varies from +55 to +70 feet NGVD.
- Land use is primarily residential north of SR 528 and undeveloped to the south.
- The newly constructed Brightline Railroad is also located south of the interchange.
- Near surface soils are primarily poorly drained sand soils.
- Groundwater depth is generally within 1 to 3 feet of natural grade.
- Review of available plans indicate the bridges were originally supported on 18-inch precast piles extending about 80 feet below natural grade.
- Geotechnical considerations include exploration for any highly compressible organic muck soils, evaluation of variable groundwater conditions and deep Standard Penetration Test (SPT) borings for bridge foundation design.
- Bridges should be supported on a deep driven pile substructure due to Karst environment and likely high Factored Loads required.
- Wet stormwater ponds will likely be required due to the near surface groundwater levels.

The Existing Geotechnical Conditions Technical Memorandum is provided as **Appendix F.**

Appendix A – Photo Log

SR 528 & Dallas Blvd PD&E –Photo Log

SR 528 Bridges over Dallas Blvd
(facing north)

SR 528 Bridges over Dallas Blvd
(facing south)

SR 528 Bridges over Dallas Blvd
(facing north)

SR 528 Bridges over Dallas Blvd
(facing northeast)

SR 528 & Dallas Blvd PD&E –Photo Log

Dallas Blvd, southern extent of LA R/W
(facing south)

SR 528 eastbound exit ramp to Dallas Blvd
(facing west)

SR 528 Eastbound Exit Intersection with Dallas Blvd
(facing north)

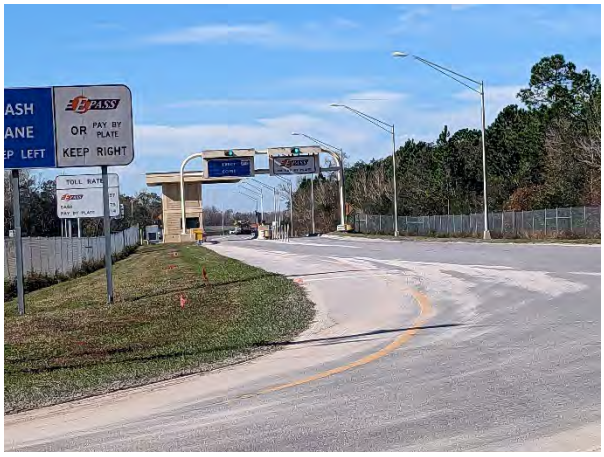
22’6” (270”) pavement width of Dallas Blvd under SR 528 Bridges

SR 528 & Dallas Blvd PD&E –Photo Log

Western Project Area Extent – Starry St
(facing east)

Eastern Project Area Extent – Starry St
(facing west)

Signage on Dallas Blvd at Ramp to SR 528 at entrance to Wedgefield area
(facing north)



Ramp from Dallas Blvd to Westbound SR 528
(facing west)

SR 528 & Dallas Blvd PD&E –Photo Log

Upstream of double 29” x 45” ERCP on the east side of Dallas Blvd just across from the existing off-ramp
(facing southwest)

Downstream of double 29” x 45” ERCP on the west side of Dallas Blvd just south of the off-ramp
(facing west)

Pond 403-1A and control structure within the infield of the existing on-ramp and SR 528 westbound. Vegetation in skimmer.
(facing east)

Pond 403-1B and control structure within the infield of the existing off-ramp and SR 528 eastbound. Vegetation in skimmer.
(facing east)

SR 528 & Dallas Blvd PD&E –Photo Log

Downstream of 36” RCP Cross Drain at Station 1444+00 BL SR 528. 14” of water observed. (facing northeast)

Upstream of 36” RCP Cross Drain at Station 1444+00 BL SR 528. (facing northeast)

Upstream of 19” x 45” ERCP crossing Dallas Blvd just north of the on-ramp. (Facing northwest)

Inside pipe on upstream side of 19” x 45” ERCP crossing Dallas Blvd just north of the on-ramp. Good condition. 2” of silt. (facing west)

SR 528 & Dallas Blvd PD&E –Photo Log

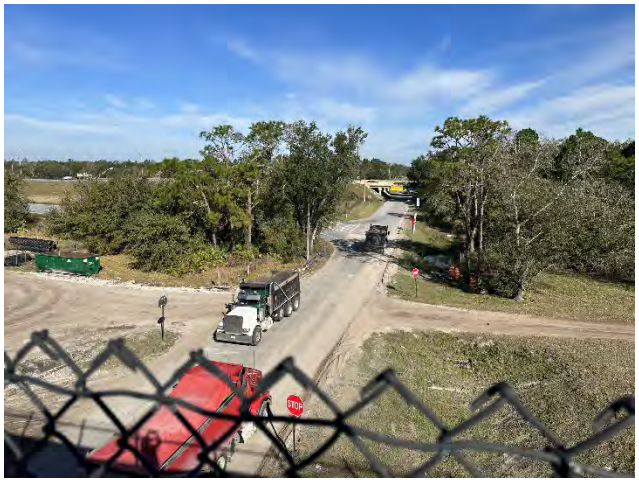
Downstream of 19” x 45” ERCP crossing Dallas Blvd just north of the on-ramp.
(facing east)

Upstream of 18” RCP crossing Starry Street at approximately Station 1464+50 BL SR 528 east of the Dallas Boulevard and Starry Street Intersection. MES cracked.
(facing east)

Inside pipe on upstream side of 18” RCP crossing Starry Street. Okay condition.
(facing north)

Downstream of 18” RCP crossing Starry Street at approximately Station 1464+50 BL SR 528 east of the Dallas Boulevard and Starry Street Intersection. MES cracked.
(facing southwest)

SR 528 & Dallas Blvd PD&E –Photo Log



Dallas Blvd at Brightline
(facing north)

SR 528 Approaching Bridges over Dallas Blvd
(facing east)

SR 528 and Westbound On-Ramp from Dallas Blvd
(facing west)

Backside of SR 528 On-Ramp at Dallas Blvd
(facing east)

SR 528 & Dallas Blvd PD&E –Photo Log

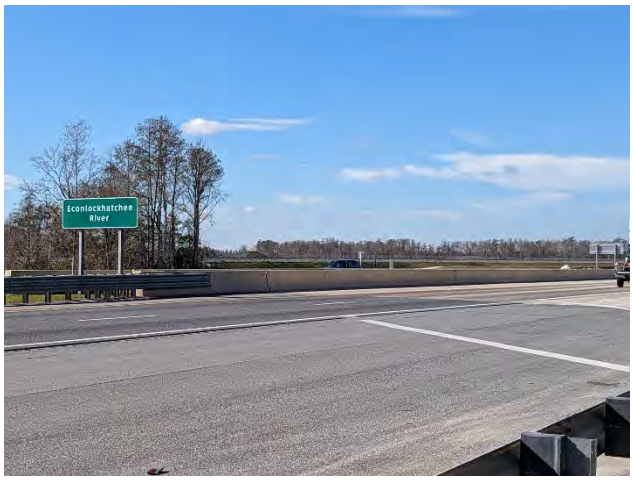
Brightline Bridge over Dallas Blvd
(facing northeast)

Brightline Bridge over Dallas Blvd from southern extent of LA R/W
(facing north)

Brightline Bridge over Dallas Blvd
(facing west)

Brightline Bridge over Dallas Blvd
(facing southwest)

SR 528 & Dallas Blvd PD&E –Photo Log



Western Project Area Boundary -
Econ River Bridge
(facing southwest)

SR 528 Bridge over Econ River
(facing west)

SR 528 Bridge & Econ River
(facing west)

Eastern limits of Hal Scott Regional Park &
Preserve
(facing northwest)

Appendix B – Utilities Sunshine 811 Correspondence

Brian Herman

From: Sunshine 811 Exactix <no-reply@exactix.sunshine811.com>
Sent: Wednesday, February 8, 2023 10:42 AM
To: Brian Herman
Subject: SSOCOF CONFRM 2023/02/08 #00000 039302986-000 NORM DSGN NEW

CONFRM 00000 CALL SUNSHINE 02/08/23 10:42:27ET 039302986-000 DESIGN GRID DESIGN ONLY Ticket : 039302986 Rev:000 Taken: 02/08/23 10:41ET

State: FL Cnty: ORANGE GeoPlace: ORLANDO
CallerPlace: ORLANDO
Subdivision: N/A Lot: N/A

Address :
Street : SR 528 TOLL
Cross 1 : DALLAS BLVD
Within 1/4 mile: Y

Locat: DESIGN ONLY. LOCATE AT THE INTERSECTION OF DALLAS BLVD AND SR 528 TOLL.
APPROX. 1500 FT ALONG SR 528 IN BOTH DIRECTIONS AND 1000 FT IN BOTH DIRECTIONS ALONG DALLAS BLVD AND UP TO STARRY ST.
:
Remarks : DESIGN ONLY
IN RESPONSE TO RECEIPT OF A DESIGN TICKET, SSOCOF PROVIDES THE ORIGINATOR OF THE DESIGN TICKET WITH A LIST OF SSOCOF MEMBERS IN THE VICINITY OF THE DESIGN PROJECT. SSOCOF DOES NOT NOTIFY SSOCOF MEMBERS OF THE RECEIPT BY SSOCOF OF A DESIGN TICKET. IT IS THE SOLE RESPONSIBILITY OF THE DESIGN ENGINEER TO CONTACT SSOCOF MEMBERS TO REQUEST INFORMATION ABOUT THE LOCATION OF SSOCOF MEMBERS'
UNDERGROUND FACILITIES. SUBMISSION OF A DESIGN TICKET WILL NOT SATISFY THE REQUIREMENT OF CHAPTER 556, FLORIDA STATUTES, TO NOTIFY SSOCOF OF AN INTENT TO EXCAVATE OR DEMOLISH. THAT INTENT MUST BE MADE KNOWN SPECIFICALLY TO SSOCOF IN THE MANNER REQUIRED BY LAW. IN AN EFFORT TO SAVE TIME ON FUTURE CALLS, SAVE YOUR DESIGN TICKET NUMBER IF YOU INTEND TO BEGIN EXCAVATION WITHIN 90 DAYS OF YOUR DESIGN REQUEST. THE DESIGN TICKET CAN BE REFERENCED, AND THE INFORMATION ON IT CAN BE USED TO SAVE TIME WHEN YOU CALL IN THE EXCAVATION REQUEST.
*** LOOKUP BY MANUAL ***
:
Grids : 2826A8105A 2826A8105B 2826A8105C 2826A8106D 2827D8105A
Grids : 2827D8105B 2827D8105C 2827D8106D

Work date: 02/08/23 Time: 10:34ET Hrs notc: 000 Category: 6 Duration: UNKNOWN Due Date : 02/10/23 Time: 23:59ET Exp Date : 03/10/23 Time: 23:59ET Work type: DESIGN Boring: N White-lined: N
Ug/Oh/Both: U Machinery: N Depth: UNK Permits: N N/A Done for : DESIGN

Company : COMPREHENSIVE ENGINEERING SERVICES INC Type: CONT Co addr : 201 S. ORANGE AVE.
Co addr2: SUITE 1300
City : ALTAMONTE SPRINGS State: FL Zip: 32701
Caller : BRIAN HERMAN Phone: 407-423-1600 Ext: 241
BestTime: 8-5
Mobile : 850-694-0607
Fax : 407-423-9614
Email : BHERMAN@CESCIVIL.COM

Submitted: 02/08/23 10:41ET Oper: BRI Chan: WEB Mbrs :
ATTF01 KEVIN TALECKI / MIKE GAMBOA 610-200-3365
ATT / T

2901 W BUSCH BLVD.
SUITE 711
TAMPA, FL 33618
Level 1: NO
Level 2: NO
Level 3: YES, FEES WILL VARY
Level 4: NO

COC547 KATHERINE ENNIS 321-433-8797
CITY OF COCOA
351 SHEARER BLVD
COCOA, FL 32922
Level 1: EMAILED DRAWINGS ONLY - NO CHARGE
Level 2: $50.00 PER HOUR
Level 3: $50.00 PER HOUR
Level 4: SERVICES NOT PROVIDED BY MEMBER

CVCFTV JOHN SMITH 407-532-8520
CHARTER COMMUNICATIONS
3767 ALL AMERICAN BLVD
ORLANDO, FL 32810
Level 1: $91.50 PER HR / 2 HR MINIMUM REQUEST WILL NEED TO BE IN WRITING
Level 2: $91.50 PER HR / 2 HR MINIMUM REQUEST WILL NEED TO BE IN WRITING
Level 3: $55.54 PER HOUR / 2 HOUR MINIMUM
Level 4: SERVICES NOT PROVIDED BY MEMBER

FPC322 DUKE'S CUSTOMER SERVICE CEN 407-629-1010
DUKE ENERGY
1150 GREENWOOD BLVD
LAKE MARY, FL 32746
Level 1: SERVICES NOT PROVIDED BY MEMBER
Level 2: SERVICES NOT PROVIDED BY MEMBER
Level 3: SERVICES NOT PROVIDED BY MEMBER
Level 4: SERVICES NOT PROVIDED BY MEMBER

OCE979 WILL HAWTHORNE 407-690-5337
CENTRAL FLORIDA EXPRESSWAY AUTHORITY FAX 407-690-5011
4974 ORL TOWER RD
ORLANDO, FL 32807
Level 1: SERVICES NOT PROVIDED BY MEMBER
Level 2: SERVICES NOT PROVIDED BY MEMBER
Level 3: SERVICES NOT PROVIDED BY MEMBER
Level 4: SERVICES NOT PROVIDED BY MEMBER

OUC582 JUAN DIAZ 407-434-4143
ORLANDO UTILITIES COMMISSION
6003 PERSHING AVE
ORLANDO, FL 32822
Level 1: NO CHARGE
Level 2: SERVICES NOT PROVIDED BY MEMBER
Level 3: SERVICES NOT PROVIDED BY MEMBER
Level 4: NOT AVAILABLE

SBF02 DINO FARRUGGIO G27896@ATT.
AT & T/ DISTRIBUTION
6628 LAKESIDE RD
WEST PALM BEACH, FL 33411
Level 1: CONTACT MEMBER DIRECTLY G27896@ATT.COM
Level 2: CONTACT MEMBER DIRECTLY G27896@ATT.COM

Level 3: CONTACT MEMBER DIRECTLY G27896@ATT.COM
Level 4: CONTACT MEMBER DIRECTLY G27896@ATT.COM
USSP01 JON BAKER 352-409-5095
SPRINT
360 S LAKE DESTINY SUITE A
ORLANDO, FL 32810
Level 1: CONTACT MARK CALDWELL FOR FEE INFORMATION.
Level 2: CONTACT MARK CALDWELL FOR FEE INFORMATION.
Level 3: CONTACT MARK CALDWELL FOR FEE INFORMATION.
Level 4: CONTACT MARK CALDWELL FOR FEE INFORMATION.

Appendix C – Traffic Counts

Existing and Historical Annual Average Weekday Mainline Traffic Volumes

Location	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Year 2021
Boggy Creek Road to Tradeport Drive	90,780	94,310	92,200	98,510	104,530	110,540	109,140	113,060	118,800	81,130	100,530
Tradeport Drive to SR 436 (Semoran Boulevard)	78,680	80,840	80,730	83,820	91,280	98,740	109,020	113,680	118,300	81,510	100,830
SR 436 (Semoran Boulevard) to Goldenrod Road	67,700	68,610	71,910	73,760	79,710	85,770	93,500	99,670	100,710	74,680	86,000
Goldenrod Road to Narcoossee Road	68,710	69,920	73,700	75,190	81,920	89,020	97,000	103,400	105,750	75,340	86,600
Narcoossee Road to SR 417 (Central FL GreeneWay)	55,910	54,280	58,270	60,730	65,110	70,470	76,630	81,510	84,590	60,920	71,530
SR 417 (Central FL GreeneWay) to Sunbridge Parkway / Innovation Way	46,880	48,430	49,230	53,510	56,120	60,710	64,640	70,090	70,270	54,990	63,240
Sunbridge Parkway/ Innovation Way to Dallas Boulevard	42,190	41,910	43,390	46,460	49,590	52,470	56,090	59,730	61,120	47,340	57,190
Dallas Boulevard to SR 520	38,730	38,360	39,190	40,890	45,530	46,880	50,590	54,080	55,040	42,330	52,180

Notes:

1. SR 528 under construction in the Year 2013 for bridge deck replacements at Tradeport Drive, Daetwyler Drive and Via Flora Drive.
2. SR 528 under construction in the Years 2015-2016 for the Airport Mainline Toll Plaza removal and roadway widening from Boggy Creek Road to SR 436.
3. SR 528 Innovation Way interchange construction and ICP interchange removal in Years 2017-2018.
4. 2018-2021 AAWT volumes based on adopted seasonal factors, utilizing the 2016 and 2017 toll plaza transaction data.
5. SR 528 under construction in the Years 2020-2021 for SR 436 interchange reconstruction.

Existing and Historical Annual Average Weekday Ramp Terminal Traffic Volumes

Ramp Location	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Year 2021
Exit 19 : Sunbridge Parkway / Innovation Way											
Eastbound Off-Ramp	2,780	3,710	4,020	4,740	4,830	4,920	5,700	5,620	5,570	4,510	4,760
Westbound On-Ramp	3,050	3,950	4,500	4,260	4,840	5,410	6,120	5,760	5,470	4,270	4,530
Westbound On-Loop Ramp	------	------	------	------	------	------	------	890	880	760	760
Eastbound On-Ramp	560	580	750	890	900	1,020	1,200	920	860	800	860
Westbound Off-Ramp	580	560	690	780	850	1,030	1,090	1,070	1,050	880	970
Exit 24 : Dallas Boulevard											
Eastbound Off-Ramp	1,600	1,620	1,870	1,950	1,970	2,610	2,690	2,780	2,520	2,360	2,540
Westbound On-Ramp	1,860	1,930	2,150	2,270	2,210	2,930	2,960	3,070	2,860	2,620	2,790
Exit 31 : SR 520											
Eastbound Off-Ramp	4,460	4,480	4,240	4,520	4,590	4,600	6,130	5,040	5,060	4,020	4,720
Westbound On-Ramp	3,820	3,920	3,730	3,610	3,820	3,820	5,220	3,860	3,820	3,130	3,500

Notes:

1. SR 528 under construction in the Year 2013 for bridge deck replacements at Tradeport Drive, Daetwyler Drive and Via Flora Drive.
2. SR 528 under construction in the Years 2015-2016 for the Airport Mainline Toll Plaza removal and roadway widening from Boggy Creek Road to SR 436.
3. SR 528 Innovation Way interchange construction and ICP interchange removal in Years 2017-2018.
4. 2018-2021 AAWT volumes based on adopted seasonal factors, utilizing the 2016 and 2017 toll plaza transaction data.
5. SR 528 under construction in the Years 2020-2021 for SR 436 interchange reconstruction.

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 9960 - ORANGE COUNTY BEACHLINE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	23500 S	0	0	10.50	55.50	2.80
2020	48500 F	0	0	10.50	56.20	6.70
2019	54252 C	E 26423	W 27829	10.50	57.90	4.50
2018	50875 C	E 24851	W 26024	9.50	58.20	4.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 2136 - RAMP FROM SR-528 EB TO DALLAS BLVD.

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	3900 S	0	0	9.50	99.90	2.80
2020	3800 F	0	0	9.50	99.90	6.70
2019	4000 C E	4000	0	9.50	99.90	4.50
2018	3200 S	0	0	9.00	99.90	4.30
2017	3000 F	0	0	9.00	99.90	2.60
2016	2700 C E	2700	0	9.00	99.90	3.70
2015	1900 F	0	0	9.00	99.90	5.20
2014	1800 C E	1800		9.00	99.90	4.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 2137 - RAMP FROM DALLAS BLVD. TO SR-528 WB

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	2800 S	0	0	9.50	99.90	2.80
2020	2700 F	0	0	9.50	99.90	6.70
2019	2800 C	W 2800	0	9.50	99.90	4.50
2018	3400 S	0	0	9.00	99.90	4.30
2017	3200 F	0	0	9.00	99.90	2.60
2016	2900 C	W 2900	0	9.00	99.90	3.70
2015	2100 F	0	0	9.00	99.90	5.20
2014	2000 C	W 2000		9.00	99.90	4.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8220 - DALLAS BLVD., N OF SR-528/BEACHLINE - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	3400 C	N 1600	S 1800	9.50	53.20	4.10
2020	2900 T	N 1500	S 1400	9.50	53.00	6.40
2019	3100 S	N 1600	S 1500	9.50	52.60	3.80
2018	3100 F	N 1600	S 1500	9.50	53.20	4.30
2017	3100 C	N 1600	S 1500	9.50	52.60	3.90
2016	3200 V	0	0	9.50	52.50	5.70
2015	3100 R	0	0	9.50	53.20	4.40
2014	3000 T			9.50	53.20	3.80
2013	3000 S	0	0	9.50	53.30	4.10
2012	3000 F	0	0	9.50	52.90	3.60
2011	3000 C	N 0	S 0	9.50	52.70	3.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

COUNTY: 75
STATION: 8220
DESCRIPTION: DALLAS BLVD., N OF SR-528/BEACHLINE - OFF SYSTEM
START DATE: 03/15/2021
START TIME: 1200

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	4	7	1	2	14	1	1	0	2	4	18
0100	4	4	3	5	16	0	0	2	1	3	19
0200	2	2	1	4	9	2	0	0	2	4	13
0300	5	0	0	0	5	5	2	2	5	14	19
0400	2	3	1	1	7	4	6	8	13	31	38
0500	1	2	1	6	10	12	24	30	28	94	104
0600	8	6	10	4	28	33	51	42	39	165	193
0700	17	11	11	11	50	62	59	46	47	214	264
0800	9	19	26	31	85	51	45	34	36	166	251
0900	14	24	14	21	73	31	31	37	21	120	193
1000	20	28	21	23	92	21	21	39	31	112	204
1100	20	21	15	20	76	20	26	19	17	82	158
1200	26	25	28	20	99	22	28	26	23	99	198
1300	20	24	26	22	92	29	13	23	17	82	174
1400	17	25	22	28	92	26	18	28	14	86	178
1500	31	33	39	34	137	18	21	19	24	82	219
1600	38	42	53	53	186	21	22	22	23	88	274
1700	54	57	36	53	200	28	32	21	21	102	302
1800	45	34	24	32	135	24	18	15	21	78	213
1900	22	30	21	20	93	19	9	17	13	58	151
2000	15	9	15	20	59	10	16	13	4	43	102
2100	14	12	7	7	40	9	7	4	7	27	67
2200	14	5	6	11	36	6	4	3	4	17	53
2300	7	10	7	3	27	0	0	2	2	4	31
24-HOUR TOTALS:					1661					1775	3436

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	830	95	700	214	700	264
P.M.	1630	217	1215	106	1630	322
DAILY	1630	217	700	214	1630	322

GENERATED BY SPS 5.0.55P

COUNTY: 75
STATION: 8220
DESCRIPTION: DALLAS BLVD., N OF SR-528/BEACHLINE - OFF SYSTEM
START DATE: 03/16/2021
START TIME: 1200

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	2	4	3	4	13	1	0	1	2	4	17
0100	3	3	2	2	10	1	0	0	1	2	12
0200	6	5	3	0	14	1	2	1	3	7	21
0300	0	1	0	0	1	2	5	2	5	14	15
0400	2	1	0	2	5	13	8	6	15	42	47
0500	2	5	3	7	17	15	19	28	24	86	103
0600	8	6	5	9	28	29	38	50	49	166	194
0700	6	12	7	13	38	47	53	55	49	204	242
0800	13	14	21	10	58	42	44	35	42	163	221
0900	16	16	29	15	76	40	41	41	36	158	234
1000	16	17	14	24	71	28	24	24	26	102	173
1100	16	20	11	37	84	23	22	26	18	89	173
1200	22	12	24	16	74	32	32	33	26	123	197
1300	19	20	28	27	94	22	31	29	24	106	200
1400	22	36	27	32	117	26	28	18	21	93	210
1500	41	33	37	40	151	20	26	22	25	93	244
1600	30	44	48	49	171	25	19	20	26	90	261
1700	46	57	53	49	205	28	23	34	22	107	312
1800	44	26	26	34	130	20	25	20	13	78	208
1900	26	23	20	30	99	13	14	16	13	56	155
2000	20	21	13	15	69	10	15	10	16	51	120
2100	12	10	15	12	49	9	4	11	6	30	79
2200	10	10	11	7	38	1	7	3	4	15	53
2300	9	4	10	5	28	0	3	0	3	6	34
24-HOUR TOTALS:					1640					1885	3525

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	845	71	645	204	715	244
P.M.	1645	205	1200	123	1645	316
DAILY	1645	205	645	204	1645	316

GENERATED BY SPS 5.0.55P

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8355 - STARRY ST/BANCROFT BLVD, S OF MEREDITH PKWY - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	4400 S	N 2200	S 2200	9.50	53.20	4.10
2020	4400 F	N 2200	S 2200	9.50	53.00	6.40
2019	4600 C	N 2300	S 2300	9.50	52.60	3.80
2018	3000 R	N 1500	S 1500	9.00	53.20	4.30
2017	3000 T	N 1500	S 1500	9.00	52.60	3.90
2016	3000 S	N 1500	S 1500	9.00	52.50	13.50
2015	3000 F	N 1500	S 1500	9.00	53.20	15.20
2014	3000 C	N 1500	S 1500	9.00	53.20	10.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Roadway Count Summary

Start Date	5-Oct-21	Start Time	00:00
Stop Date	6-Oct-21	Stop Time	24:00
County	Orange	Station ID	8188
Location	Dallas Bv : Starry St to S.R. 528 (150 Ft. S. of Starry St)		

5-Oct-21 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	2	3	0	3	10	13	36	31	23	24	31
30	5	4	3	3	4	15	21	42	19	24	20	23
45	2	2	2	1	3	11	18	25	34	31	22	23
00	2	1	3	4	2	16	17	30	29	27	29	36
Hr Total	16	9	11	8	12	52	69	133	113	105	95	113

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	27	39	37	68	92	77	51	32	35	11	14	15
30	43	40	76	75	96	87	52	31	30	15	11	4
45	43	51	59	86	97	54	42	24	23	16	9	9
00	28	39	78	79	88	58	37	37	18	14	10	3
Hr Total	141	169	250	308	373	276	182	124	106	56	44	31

24 Hour Total	2,796				
AM Peak Hour Begins	11:45	AM Peak Volume	149	AM Peak Hour Factor	0.87
PM Peak Hour Begins	16:00	PM Peak Volume	373	PM Peak Hour Factor	0.96

5-Oct-21 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	6	07	08	09	10	11
15	2	1	4	6	10	41	75	95	48	33	36	25
30	4	2	6	4	21	47	90	74	47	28	38	35
45	0	2	5	7	35	65	110	78	42	32	29	36
00	1	4	9	14	42	89	101	75	53	35	35	29
Hr Total	7	9	24	31	108	242	376	322	190	128	138	125

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	35	33	29	27	26	34	28	17	15	11	2	7
30	31	30	27	19	24	33	11	13	10	6	4	0
45	37	32	26	35	41	33	14	15	6	4	3	13
00	28	44	28	35	46	22	15	13	8	5	2	1
Hr Total	131	139	110	116	137	122	68	58	39	26	11	21

24 Hour Total	2,678				
AM Peak Hour Begins	6:15	AM Peak Volume	396	AM Peak Hour Factor	0.90
PM Peak Hour Begins	16:30	PM Peak Volume	154	PM Peak Hour Factor	0.84

5-Oct-21 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	3	7	6	13	51	88	131	79	56	60	56
30	9	6	9	7	25	62	111	116	66	52	58	58
45	2	4	7	8	38	76	128	103	76	63	51	59
00	3	5	12	18	44	105	118	105	82	62	64	65
Hr Total	23	18	35	39	120	294	445	455	303	233	233	238

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	62	72	66	95	118	111	79	49	50	22	16	22
30	74	70	103	94	120	120	63	44	40	21	15	4
45	80	83	85	121	138	87	56	39	29	20	12	22
00	56	83	106	114	134	80	52	50	26	19	12	4
Hr Total	272	308	360	424	510	398	250	182	145	82	55	52

24 Hour Total	5,474				
AM Peak Hour Begins	6:30	AM Peak Volume	493	AM Peak Hour Factor	0.94
PM Peak Hour Begins	16:00	PM Peak Volume	510	PM Peak Hour Factor	0.92

Roadway Count Summary

Start Date	6-Oct-21	Start Time	00:00
Stop Date	7-Oct-21	Stop Time	24:00
County	Orange	Station ID	8188
Location	Dallas Bv : Starry St to S.R. 528 (150 Ft. S. of Starry St)		

6-Oct-21 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	2	1	4	16	11	29	28	32	19	27
30	6	1	0	5	4	10	18	20	30	18	25	18
45	5	2	5	0	3	12	18	30	28	23	21	21
00	5	2	2	2	8	14	29	20	29	28	33	23
Hr Total	18	7	9	8	19	52	76	99	115	101	98	89

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	31	24	43	72	66	75	43	40	27	16	6	5
30	24	24	56	63	103	70	43	29	21	26	14	6
45	32	40	52	72	115	69	55	31	26	15	12	8
00	33	36	57	82	92	51	40	48	11	16	5	7
Hr Total	120	124	208	289	376	265	181	148	85	73	37	26

24 Hour Total	2,623					
AM Peak Hour Begins	12:00	AM Peak Volume	120	AM Peak Hour Factor		0.91
PM Peak Hour Begins	16:15	PM Peak Volume	385	PM Peak Hour Factor		0.84

6-Oct-21 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	2	8	9	38	72	85	66	34	21	39
30	2	1	6	7	26	49	99	71	38	37	35	31
45	2	3	2	8	33	68	105	73	40	32	36	30
00	0	2	8	12	45	92	102	68	39	53	24	29
Hr Total	8	7	18	35	113	247	378	297	183	156	116	129

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	24	27	37	23	35	37	31	27	15	8	5	3
30	29	31	37	45	44	32	22	17	11	11	3	4
45	35	33	33	43	31	33	24	15	15	7	19	0
00	39	40	29	37	40	20	16	14	10	12	5	1
Hr Total	127	131	136	148	150	122	93	73	51	38	32	8

24 Hour Total	2,796					
AM Peak Hour Begins	6:15	AM Peak Volume	391	AM Peak Hour Factor		0.93
PM Peak Hour Begins	15:15	PM Peak Volume	160	PM Peak Hour Factor		0.89

6-Oct-21 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	3	4	9	13	54	83	114	94	66	40	66
30	8	2	6	12	30	59	117	91	68	55	60	49
45	7	5	7	8	36	80	123	103	68	55	57	51
00	5	4	10	14	53	106	131	88	68	81	57	52
Hr Total	26	14	27	43	132	299	454	396	298	257	214	218

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	55	51	80	95	101	112	74	67	42	24	11	8
30	53	55	93	108	147	102	65	46	32	37	17	10
45	67	73	85	115	146	102	79	46	41	22	31	8
00	72	76	86	119	132	71	56	62	21	28	10	8
Hr Total	247	255	344	437	526	387	274	221	136	111	69	34

24 Hour Total	5,419					
AM Peak Hour Begins	6:15	AM Peak Volume	485	AM Peak Hour Factor		0.93
PM Peak Hour Begins	16:15	PM Peak Volume	537	PM Peak Hour Factor		0.91

Roadway Count Summary

Start Date	7-Oct-21	Start Time	00:00
Stop Date	8-Oct-21	Stop Time	24:00
County	Orange	Station ID	8188
Location	Dallas Bv : Starry St to S.R. 528 (150 Ft. S. of Starry St)		

7-Oct-21 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	2	1	0	1	9	11	32	26	35	35	31
30	2	5	2	3	5	14	26	32	27	24	36	24
45	5	2	4	1	5	14	13	26	43	34	25	27
00	3	0	3	2	4	11	24	27	24	22	31	23
Hr Total	15	9	10	6	15	48	74	117	120	115	127	105

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	28	39	95	80	82	47	51	31	15	17	12
30	27	40	44	71	81	81	53	56	25	10	18	7
45	47	39	53	81	112	83	46	28	22	16	9	12
00	33	46	63	90	75	52	41	17	20	16	8	13
Hr Total	145	153	199	337	348	298	187	152	98	57	52	44

24 Hour Total	2,831				
AM Peak Hour Begins	12:00	AM Peak Volume	145	AM Peak Hour Factor	0.77
PM Peak Hour Begins	15:45	PM Peak Volume	363	PM Peak Hour Factor	0.81

7-Oct-21 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	4	2	11	52	75	77	58	41	31	34
30	4	0	4	7	21	47	92	66	49	41	40	34
45	1	2	2	5	33	67	98	77	66	37	38	53
00	0	3	7	15	51	93	111	80	46	40	32	24
Hr Total	6	6	17	29	116	259	376	300	219	159	141	145

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	27	43	30	35	20	56	23	18	10	9	13	3
30	33	27	36	26	44	42	23	10	11	10	17	2
45	22	27	45	47	63	32	22	16	12	11	12	0
00	30	40	38	49	49	35	17	11	12	16	9	3
Hr Total	112	137	149	157	176	165	85	55	45	46	51	8

24 Hour Total	2,959				
AM Peak Hour Begins	6:15	AM Peak Volume	378	AM Peak Hour Factor	0.85
PM Peak Hour Begins	16:15	PM Peak Volume	212	PM Peak Hour Factor	0.84

7-Oct-21 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	3	5	2	12	61	86	109	84	76	66	65
30	6	5	6	10	26	61	118	98	76	65	76	58
45	6	4	6	6	38	81	111	103	109	71	63	80
00	3	3	10	17	55	104	135	107	70	62	63	47
Hr Total	21	15	27	35	131	307	450	417	339	274	268	250

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	71	69	130	100	138	70	69	41	24	30	15
30	60	67	80	97	125	123	76	66	36	20	35	9
45	69	66	98	128	175	115	68	44	34	27	21	12
00	63	86	101	139	124	87	58	28	32	32	17	16
Hr Total	257	290	348	494	524	463	272	207	143	103	103	52

24 Hour Total	5,790				
AM Peak Hour Begins	6:15	AM Peak Volume	473	AM Peak Hour Factor	0.88
PM Peak Hour Begins	16:15	PM Peak Volume	562	PM Peak Hour Factor	0.80

Roadway Count Summary

Start Date	5-Oct-21	Start Time	00:00
Stop Date	7-Oct-21	Stop Time	24:00
County	Orange	Station ID	8188
Location	Dallas Bv : Starry St to S.R. 528 (150 Ft. S. of Starry St)		

5-Oct-21 — Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	2	2	0	3	12	12	32	28	30	26	30
30	4	3	2	4	4	13	22	31	25	22	27	22
45	4	2	4	1	4	12	16	27	35	29	23	24
00	3	1	3	3	5	14	23	26	27	26	31	27
Hr Total	16	8	10	7	15	51	73	116	116	107	107	102

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	32	30	40	78	79	78	47	41	31	14	12	11
30	31	35	59	70	93	79	49	39	25	17	14	6
45	41	43	55	80	108	69	48	28	24	16	10	10
00	31	40	66	84	85	54	39	34	16	15	8	8
Hr Total	135	149	219	311	366	280	183	141	96	62	44	34

24 Hour Total	2,750				
AM Peak Hour Begins	12:00	AM Peak Volume	135	AM Peak Hour Factor	0.83
PM Peak Hour Begins	16:00	PM Peak Volume	366	PM Peak Hour Factor	0.85

5-Oct-21 — Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	3	5	10	44	74	86	57	36	29	33
30	3	1	5	6	23	48	94	70	45	35	38	33
45	1	2	3	7	34	67	104	76	49	34	34	40
00	0	3	8	14	46	91	105	74	46	43	30	27
Hr Total	7	7	20	32	112	249	377	306	197	148	132	133

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	29	34	32	28	27	42	27	21	13	9	7	4
30	31	29	33	30	37	36	19	13	11	9	8	2
45	31	31	35	42	45	33	20	15	11	7	11	4
00	32	41	32	40	45	26	16	13	10	11	5	2
Hr Total	123	136	132	140	154	136	82	62	45	37	31	12

24 Hour Total	2,811				
AM Peak Hour Begins	6:15	AM Peak Volume	388	AM Peak Hour Factor	0.93
PM Peak Hour Begins	16:15	PM Peak Volume	170	PM Peak Hour Factor	0.94

5-Oct-21 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	3	5	6	13	55	86	118	86	66	55	62
30	8	4	7	10	27	61	115	102	70	57	65	55
45	5	4	7	7	37	79	121	103	84	63	57	63
00	4	4	11	16	51	105	128	100	73	68	61	55
Hr Total	23	16	30	39	128	300	450	423	313	255	238	235

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	61	65	72	107	106	120	74	62	44	23	19	15
30	62	64	92	100	131	115	68	52	36	26	22	8
45	72	74	89	121	153	101	68	43	35	23	21	14
00	64	82	98	124	130	79	55	47	26	26	13	9
Hr Total	259	284	351	452	520	416	265	203	141	99	76	46

24 Hour Total	5,561				
AM Peak Hour Begins	6:15	AM Peak Volume	482	AM Peak Hour Factor	0.94
PM Peak Hour Begins	16:15	PM Peak Volume	534	PM Peak Hour Factor	0.87

Roadway Count Summary

Start Date	28-Sep-21	Start Time	00:00
Stop Date	29-Sep-21	Stop Time	24:00
County	Orange	Station ID	8189
Location	Starry St: Division Bv to Bancoft Bv (2300 Ft E. Division)		

28-Sep-21 — East for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	0	1	0	1	5	11	6	0	6
30	2	2	0	0	0	1	3	7	15	4	7	9
45	2	4	4	0	2	1	3	9	9	2	8	17
00	0	0	1	2	1	4	7	7	10	1	4	8
Hr Total	5	7	6	2	4	6	14	28	45	13	19	40

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	10	14	5	11	12	20	29	10	11	8	6	4
30	7	15	10	9	14	26	13	10	11	4	3	2
45	5	12	12	16	26	34	18	10	5	1	7	1
00	6	8	14	16	18	25	12	5	7	7	6	5
Hr Total	28	49	41	52	70	105	72	35	34	20	22	12

24 Hour Total	729				
AM Peak Hour Begins	8:00	AM Peak Volume	45	AM Peak Hour Factor	0.75
PM Peak Hour Begins	17:15	PM Peak Volume	114	PM Peak Hour Factor	0.84

28-Sep-21 — Westbound for Lane 2

End Time	00	01	02	03	04	05	6	07	08	09	10	11
15	1	0	0	1	2	3	9	21	13	12	6	7
30	1	1	1	0	2	5	10	21	20	10	5	7
45	0	0	0	2	4	7	17	37	18	10	8	10
00	1	0	0	3	1	14	22	20	17	14	10	4
Hr Total	3	1	1	6	9	29	58	99	68	46	29	28

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	5	7	6	9	11	8	10	5	4	3	3	2
30	8	2	10	10	3	4	6	7	3	1	3	2
45	6	8	8	12	8	11	2	5	2	4	1	0
00	9	11	7	11	8	12	4	3	3	3	2	0
Hr Total	28	28	31	42	30	35	22	20	12	11	9	4

24 Hour Total	649				
AM Peak Hour Begins	6:45	AM Peak Volume	101	AM Peak Hour Factor	0.68
PM Peak Hour Begins	15:15	PM Peak Volume	44	PM Peak Hour Factor	0.92

28-Sep-21 — Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	1	1	3	3	10	26	24	18	6	13
30	3	3	1	0	2	6	13	28	35	14	12	16
45	2	4	4	2	6	8	20	46	27	12	16	27
00	1	0	1	5	2	18	29	27	27	15	14	12
Hr Total	8	8	7	8	13	35	72	127	113	59	48	68

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	15	21	11	20	23	28	39	15	15	11	9	6
30	15	17	20	19	17	30	19	17	14	5	6	4
45	11	20	20	28	34	45	20	15	7	5	8	1
00	15	19	21	27	26	37	16	8	10	10	8	5
Hr Total	56	77	72	94	100	140	94	55	46	31	31	16

24 Hour Total	1,378				
AM Peak Hour Begins	7:30	AM Peak Volume	132	AM Peak Hour Factor	0.72
PM Peak Hour Begins	17:15	PM Peak Volume	151	PM Peak Hour Factor	0.84

Roadway Count Summary

Start Date	29-Sep-21	Start Time	00:00
Stop Date	30-Sep-21	Stop Time	24:00
County	Orange	Station ID	8189
Location	Starry St: Division Bv to Bancoft Bv (2300 Ft E. Division)		

29-Sep-21 East for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	0	0	1	0	0	3	11	12	7	1	7
30	2	2	0	0	1	1	3	13	15	3	6	3
45	4	0	2	0	1	0	3	9	8	10	5	8
00	0	0	1	2	1	1	8	8	4	6	6	8
Hr Total	7	2	3	3	3	2	17	41	39	26	18	26

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	9	8	13	14	9	30	23	5	17	6	4	7
30	9	7	9	14	18	27	21	10	12	5	5	4
45	10	6	14	18	13	25	13	17	6	10	5	0
00	5	7	9	16	20	26	18	12	10	11	2	3
Hr Total	33	28	45	62	60	108	75	44	45	32	16	14

24 Hour Total	749				
AM Peak Hour Begins	7:30	AM Peak Volume	44	AM Peak Hour Factor	0.73
PM Peak Hour Begins	17:00	PM Peak Volume	108	PM Peak Hour Factor	0.90

29-Sep-21 Westbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	2	3	2	7	19	10	17	5	20
30	0	1	1	0	2	3	13	18	23	9	11	4
45	1	0	0	4	3	10	16	27	20	13	11	9
00	0	0	0	4	3	11	23	17	12	12	9	10
Hr Total	1	3	1	10	11	26	59	81	65	51	36	43

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	4	6	4	9	11	10	12	6	5	4	2	2
30	10	8	12	17	4	14	9	9	7	2	4	1
45	8	5	12	9	8	7	7	6	6	7	1	2
00	6	6	12	8	10	9	8	6	6	3	2	0
Hr Total	28	25	40	43	33	40	36	27	24	16	9	5

24 Hour Total	713				
AM Peak Hour Begins	6:45	AM Peak Volume	87	AM Peak Hour Factor	0.81
PM Peak Hour Begins	14:30	PM Peak Volume	50	PM Peak Hour Factor	1.04

29-Sep-21 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	2	0	3	3	2	10	30	22	24	6	27
30	2	3	1	0	3	4	16	31	38	12	17	7
45	5	0	2	4	4	10	19	36	28	23	16	17
00	0	0	1	6	4	12	31	25	16	18	15	18
Hr Total	8	5	4	13	14	28	76	122	104	77	54	69

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	13	14	17	23	20	40	35	11	22	10	6	9
30	19	15	21	31	22	41	30	19	19	7	9	5
45	18	11	26	27	21	32	20	23	12	17	6	2
00	11	13	21	24	30	35	26	18	16	14	4	3
Hr Total	61	53	85	105	93	148	111	71	69	48	25	19

24 Hour Total	1,462				
AM Peak Hour Begins	6:45	AM Peak Volume	128	AM Peak Hour Factor	0.89
PM Peak Hour Begins	17:00	PM Peak Volume	148	PM Peak Hour Factor	0.90

Roadway Count Summary

Start Date	30-Sep-21	Start Time	00:00
Stop Date	01-Oct-21	Stop Time	24:00
County	Orange	Station ID	8189
Location	Starry St: Division Bv to Bancoft Bv (2300 Ft E. Division)		

30-Sep-21 East for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	2	1	0	2	1	3	4	13	10	9	8
30	4	2	2	2	1	1	5	8	10	1	6	8
45	2	0	4	1	1	3	2	9	11	5	8	8
00	1	1	0	2	1	0	5	6	17	6	5	16
Hr Total	10	5	7	5	5	5	15	27	51	22	28	40

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	18	16	16	11	14	24	30	16	14	5	2	6
30	6	17	8	10	18	24	20	15	12	15	4	8
45	9	9	16	28	21	20	10	20	8	4	4	2
00	8	9	16	24	23	25	13	8	6	3	2	4
Hr Total	41	51	56	73	76	93	73	59	40	27	12	20

24 Hour Total	841				
AM Peak Hour Begins	8:00	AM Peak Volume	51	AM Peak Hour Factor	0.75
PM Peak Hour Begins	17:15	PM Peak Volume	99	PM Peak Hour Factor	0.83

30-Sep-21 Westbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	5	0	1	1	3	6	17	15	19	6	4
30	1	1	4	0	2	5	13	19	16	9	14	7
45	2	0	0	1	2	7	14	29	14	11	11	11
00	1	0	0	5	4	12	22	21	24	13	9	7
Hr Total	9	6	4	7	9	27	55	86	69	52	40	29

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	6	10	10	13	9	9	16	6	4	3	1	4
30	12	6	5	8	6	12	10	6	4	4	2	1
45	9	2	12	17	10	16	6	3	5	1	0	5
00	6	1	12	11	13	10	7	12	1	2	6	0
Hr Total	33	19	39	49	38	47	39	27	14	10	9	10

24 Hour Total	727				
AM Peak Hour Begins	6:45	AM Peak Volume	87	AM Peak Hour Factor	0.75
PM Peak Hour Begins	17:15	PM Peak Volume	54	PM Peak Hour Factor	0.84

30-Sep-21 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	8	7	1	1	3	4	9	21	28	29	15	12
30	5	3	6	2	3	6	18	27	26	10	20	15
45	4	0	4	2	3	10	16	38	25	16	19	19
00	2	1	0	7	5	12	27	27	41	19	14	23
Hr Total	19	11	11	12	14	32	70	113	120	74	68	69

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	24	26	26	24	23	33	46	22	18	8	3	10
30	18	23	13	18	24	36	30	21	16	19	6	9
45	18	11	28	45	31	36	16	23	13	5	4	7
00	14	10	28	35	36	35	20	20	7	5	8	4
Hr Total	74	70	95	122	114	140	112	86	54	37	21	30

24 Hour Total	1,568				
AM Peak Hour Begins	8:15	AM Peak Volume	121	AM Peak Hour Factor	0.74
PM Peak Hour Begins	17:15	PM Peak Volume	153	PM Peak Hour Factor	0.83

Roadway Count Summary

Start Date	28-Sep-21	Start Time	00:00
Stop Date	30-Sep-21	Stop Time	24:00
County	Orange	Station ID	8189
Location	Starry St: Division Bv to Bancoft Bv (2300 Ft E. Division)		

28-Sep-21 East for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	1	1	0	1	0	2	7	12	8	3	7
30	3	2	1	1	1	1	4	9	13	3	6	7
45	3	1	3	0	1	1	3	9	9	6	7	11
00	0	0	1	2	1	2	7	7	10	4	5	11
Hr Total	7	5	5	3	4	4	15	32	45	20	22	35

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	12	13	11	12	12	25	27	10	14	6	4	6
30	7	13	9	11	17	26	18	12	12	8	4	5
45	8	9	14	21	20	26	14	16	6	5	5	1
00	6	8	13	19	20	25	14	8	8	7	3	4
Hr Total	34	43	47	62	69	102	73	46	40	26	17	15

24 Hour Total	773				
AM Peak Hour Begins	8:00	AM Peak Volume	45	AM Peak Hour Factor	0.84
PM Peak Hour Begins	17:15	PM Peak Volume	105	PM Peak Hour Factor	0.96

28-Sep-21 Westbound for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	1	2	3	7	19	13	16	6	10
30	1	1	2	0	2	4	12	19	20	9	10	6
45	1	0	0	2	3	8	16	31	17	11	10	10
00	1	0	0	4	3	12	22	19	18	13	9	7
Hr Total	4	3	2	8	10	27	57	89	67	50	35	33

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	5	8	7	10	10	9	13	6	4	3	2	3
30	10	5	9	12	4	10	8	7	5	2	3	1
45	8	5	11	13	9	11	5	5	4	4	1	2
00	7	6	10	10	10	10	6	7	3	3	3	0
Hr Total	30	24	37	45	34	41	32	25	17	12	9	6

24 Hour Total	696				
AM Peak Hour Begins	6:45	AM Peak Volume	92	AM Peak Hour Factor	0.74
PM Peak Hour Begins	14:45	PM Peak Volume	45	PM Peak Hour Factor	0.89

28-Sep-21 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	3	1	2	3	3	10	26	25	24	9	17
30	3	3	3	1	3	5	16	29	33	12	16	13
45	4	1	3	3	4	9	18	40	27	17	17	21
00	1	0	1	6	4	14	29	26	28	17	14	18
Hr Total	12	8	7	11	14	32	73	121	112	70	57	69

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	17	20	18	22	22	34	40	16	18	10	6	8
30	17	18	18	23	21	36	26	19	16	10	7	6
45	16	14	25	33	29	38	19	20	11	9	6	3
00	13	14	23	29	31	36	21	15	11	10	7	4
Hr Total	64	67	84	107	102	143	106	71	56	39	26	22

24 Hour Total	1,469				
AM Peak Hour Begins	7:30	AM Peak Volume	124	AM Peak Hour Factor	0.78
PM Peak Hour Begins	17:15	PM Peak Volume	149	PM Peak Hour Factor	0.93

Appendix D – Sign Inventory

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

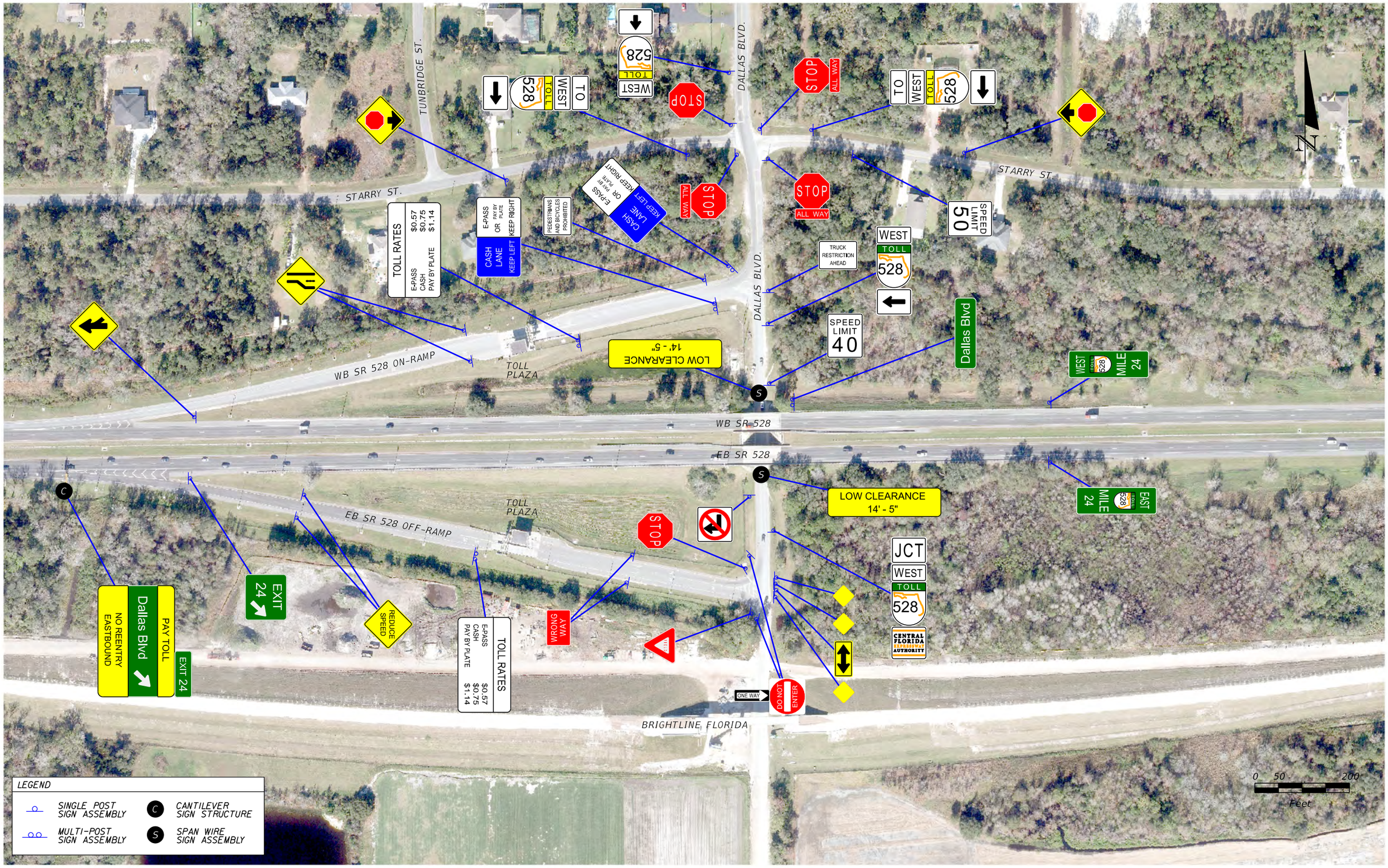
ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

EXISTING SIGNING

SHEET NO. 1

EHerbert 2/22/2023 3:29:20 PM



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

EXISTING SIGNING

SHEET NO. 2

EHerbert 2/22/2023 3:29:24 PM

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

EXISTING SIGNING

SHEET NO. 3

EHerbert 2/22/2023 3:29:28 PM

Appendix E – Crash Data

SR 528 Beachline Expressway at Dallas Boulevard Interchange
CRASH DATA

Crash data was obtained from FDOT's Crash Analysis Reporting System (CARS) and University of Florida's Signal Four Analytics software. Crash data was reviewed for the period from 2017 to 2022. A total of 156 long form crashes were obtained and reviewed for the study area. The predominant crash types are Motor Vehicle in Transport (45 Front to Rear, 15 Sideswipe, 6 Angle, 6 Other, 1 Rear to Side), Cable Barrier, and Other Non-Collision. A summary of the crash types is shown below in Table 1.

Table 1: Crash Totals by Type

Crash Type	SR 528 Mainline and Ramps	Dallas Boulevard	TOTAL	%
Motor Vehicle in Transport	71	2	73	47%
Cable Barrier	17	0	17	11%
Other Non-Collision	12	3	15	10%
Guardrail Face	12	0	12	8%
Ditch	7	3	10	6%
Guardrail End	6	0	6	4%
Concrete Traffic Barrier	5	0	5	3%
Tree (Standing)	2	1	3	2%
Parked Motor Vehicle	2	0	2	1%
Overturn/Rollover	2	0	2	1%
Other Non-Fixed Object	2	0	2	1%
Thrown or Falling Object	1	0	1	<1%
Traffic Sign Support	1	0	1	<1%
Jackknife	1	0	1	<1%
Work Zone/Maintenance Equipment	1	0	1	<1%
Impact Attenuator/Crash Cushion	1	0	1	<1%
Ran into Water/Canal	0	1	1	<1%
Utility Pole/Light Support	0	1	1	<1%
Animal	1	0	1	<1%
Other Fixed Object	1	0	1	<1%

Of the 156 total crashes, 3 (2%) crashes resulted in 3 fatalities and 54 (35%) crashes resulted in injuries. The total number of persons who received non-fatal injuries as part of these crash incidents was 92. The fatal crashes are summarized at the end of this section. Crash injury severities at the interchange are provided in Table 2.

Table 2: Crash Totals by Injury Severity

Crash Severity	SR 528 Mainline and Ramps	Dallas Boulevard	TOTAL	%
Fatal	2	1	3	2%
Incapacitating Injury	9	2	11	7%
Non-Incapacitating Injury	20	1	21	14%
Possible Injury	20	2	22	14%
No Injury	94	5	99	63%

Thirty-four (22%) of the total crashes occurred on wet pavement and 63 (40%) crashes occurred at night (includes dusk and dawn). Crash totals of roadway and lighting conditions are presented in Tables 3 and 4.

Table 3: Crash Totals by Roadway Condition

Roadway Condition	SR 528 Mainline and Ramps	Dallas Boulevard	TOTAL	%
Wet Pavement with Injuries	12	1	13	8%
Wet Pavement with No Injuries	21	0	21	14%
Dry Pavement with Injuries	39	5	44	28%
Dry Pavement with No Injuries	72	5	77	49%

Table 4: Crash Totals by Lighting Condition

Lighting Condition	SR 528 Mainline and Ramps	Dallas Boulevard	TOTAL	%
Daylight with Injuries	35	2	37	24%
Daylight with No Injuries	54	2	56	36%
Nighttime with Injuries	16	4	20	13%
Nighttime with No Injuries	40	3	43	27%

The three fatal crashes reported in the crash history are described below:

Saturday, April 6, 2019, at 1:00 PM: A westbound vehicle on SR 528 approaching mile marker 24 (MP 23.404) lost control for unknown reasons and entered the median, striking a cable barrier twice before coming to rest. The driver was the sole occupant of the vehicle and suffered fatal injuries because of the crash. No impairment was found with regard to the driver. The weather was clear and the road surface dry at the time of the crash. The collision occurred under daylight lighting conditions.

Wednesday, July 29, 2020, at 7:15 PM: An eastbound vehicle on SR 528 near mile marker 23 (MP 22.485) performed an unknown maneuver and struck the rear of a parked vehicle in the median, causing the eastbound vehicle to strike the cable barrier and overturn. The driver of the eastbound vehicle was the sole occupant and suffered fatal injuries as a result of the crash. The parked vehicle was occupied by four persons each receiving incapacitating injuries from the collision. No toxicology tests were performed to determine if impairment was found regarding the drivers of either vehicle. The weather was rainy and the road surface wet at the time of the crash. The collision occurred under daylight lighting conditions.

Monday, February 15, 2021, at 1:06 AM: A southbound vehicle on Dallas Boulevard ran the stop sign at the Starry Street intersection and departed the roadway onto the west shoulder, overcorrected and then departed the east side of the roadway, striking a fence and a tree before coming to rest. The driver of the vehicle and two passengers each received incapacitating injuries, and one passenger suffered fatal injuries from the crash. The driver was found to be operating under the influence of alcohol and drugs (BAC = 0.09) and was arrested for DUI and vehicular homicide. The weather was clear and the road surface dry at the time of the crash. The collision occurred under nighttime (not lighted) lighting conditions.

Form 750-020-05k
TRAFFIC ENGINEERING
September 2020

State of Florida Department of Transportation

COLLISION SUMMARY

General Information

Section/Roadway ID:	-	State Road:	SR 528 Beachline Expressway
Intersecting Route:	Dallas Boulevard Interchange	Study Period:	1/1/2017 To: 12/31/2022
Milepost:	-	Data by:	ELH
County:	Orange	Date:	Wednesday, February 22, 2023

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Contributing Cause
				Fatal	Injury					
1	2/23/17	Thursday	12:53 AM	0	1	$2,000	Off Road	Night	Wet	Careless Driving
2	3/10/17	Friday	4:03 PM	0	0	$1,500	Rear End	Day	Dry	Hit & Run
3	3/11/17	Saturday	7:36 PM	0	0	$6,000	Off Road	Night	Dry	Failed To Keep In Proper Lane
4	3/26/17	Sunday	7:23 AM	0	0	$6,000	Off Road	Day	Dry	Careless Driving
5	3/27/17	Monday	8:38 AM	0	0	$4,100	Sideswipe	Day	Dry	Careless Driving
6	3/27/17	Monday	10:35 AM	0	0	$800	Off Road	Day	Dry	Hit & Run
7	4/25/17	Tuesday	6:20 AM	0	0	$3,600	Sideswipe	Night	Dry	Failed To Keep In Proper Lane
8	5/8/17	Monday	12:41 AM	0	3	$60,000	Rear End	Night	Dry	DUI
9	5/15/17	Monday	9:51 AM	0	0	$5,400	Other	Day	Dry	Careless Driving
10	5/17/17	Wednesday	6:17 AM	0	0	$6,000	Off Road	Night	Dry	Careless Driving
11	5/22/17	Monday	11:19 PM	0	2	$6,500	Rear End	Night	Wet	Careless Driving
12	6/14/17	Wednesday	9:20 AM	0	0	$4,090	Off Road	Day	Dry	Other
13	6/15/17	Thursday	2:12 PM	0	0	$3,500	Off Road	Day	Wet	Exceeded Speed
14	8/5/17	Saturday	9:57 PM	0	3	$8,000	Rear End	Night	Wet	Careless Driving
15	8/18/17	Friday	7:00 AM	0	0	$1,900	Off Road	Night	Unknown	Hit & Run
16	9/26/17	Tuesday	6:51 AM	0	0	$7,500	Off Road	Night	Dry	Hit & Run
17	9/30/17	Saturday	12:00 AM	0	1	$12,500	Rear End	Night	Dry	DUI
18	10/28/17	Saturday	10:35 PM	0	1	$12,000	Other	Night	Wet	Careless Driving
19	11/14/17	Tuesday	12:54 AM	0	0	$2,000	Off Road	Night	Dry	Other
20	12/6/17	Wednesday	3:22 PM	0	0	$4,300	Angle	Day	Dry	Failed to Yield ROW
21	1/23/18	Tuesday	3:17 AM	0	0	$200	Rear End	Night	Wet	Hit & Run
22	2/20/18	Tuesday	12:00 PM	0	0	$1,010	Off Road	Day	Dry	Other
23	3/25/18	Sunday	11:00 AM	0	0	$4,800	Rollover	Day	Dry	Careless Driving
24	4/7/18	Saturday	9:18 AM	0	0	$800	Sideswipe	Day	Dry	Hit & Run
25	4/13/18	Friday	4:30 PM	0	0	$3,000	Sideswipe	Day	Dry	Hit & Run
26	4/16/18	Monday	8:30 AM	0	0	$5,100	Rear End	Day	Dry	Careless Driving
27	4/16/18	Monday	5:25 PM	0	0	$1,500	Sideswipe	Day	Dry	Other
28	4/17/18	Tuesday	11:44 AM	0	1	$6,000	Off Road	Day	Dry	Failed To Keep In Proper Lane
29	5/19/18	Saturday	1:51 PM	0	1	$3,000	Off Road	Day	Wet	Other
30	5/21/18	Monday	1:11 PM	0	0	$3,200	Off Road	Day	Wet	Other
31	5/21/18	Monday	2:28 PM	0	0	$750	Rear End	Day	Wet	Followed Too Closely
32	5/29/18	Tuesday	9:51 AM	0	0	$6,000	Sideswipe	Day	Dry	Other
33	6/4/18	Monday	10:59 AM	0	0	$4,500	Off Road	Day	Dry	Other
34	6/8/18	Friday	6:05 PM	0	0	$5,010	Off Road	Night	Wet	Exceeded Speed
35	7/2/18	Monday	2:42 PM	0	1	$6,000	Rollover	Day	Dry	Careless Driving
36	7/29/18	Sunday	11:15 AM	0	0	$9,000	Rear End	Day	Dry	Careless Driving
37	8/2/18	Thursday	3:42 PM	0	1	$5,900	Off Road	Day	Dry	Careless Driving
38	8/6/18	Monday	8:25 AM	0	1	$4,000	Off Road	Day	Dry	Other
39	8/8/18	Wednesday	7:12 AM	0	0	$5,000	Off Road	Night	Dry	Careless Driving
40	8/24/18	Friday	10:18 AM	0	0	$3,500	Other	Day	Dry	Other

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Contributing Cause
				Fatal	Injury					
41	8/24/18	Friday	1:33 PM	0	0	$5,500	Sideswipe	Day	Dry	Improper Lane Change
42	9/1/18	Saturday	10:10 PM	0	1	$14,250	Rear End	Night	Dry	Careless Driving
43	9/10/18	Monday	9:10 PM	0	0	$2,800	Off Road	Night	Wet	Careless Driving
44	9/17/18	Monday	3:12 AM	0	0	$1,500	Other	Night	Dry	Other
45	9/21/18	Friday	3:27 PM	0	0	$8,000	Rear End	Day	Dry	Careless Driving
46	9/22/18	Saturday	6:16 AM	0	1	$13,000	Off Road	Night	Dry	Other
47	10/4/18	Thursday	12:42 PM	0	0	$500	Other	Day	Dry	Hit & Run
48	10/5/18	Friday	6:13 AM	0	0	$6,000	Off Road	Night	Dry	Careless Driving
49	10/11/18	Thursday	9:30 AM	0	0	$4,912	Other	Day	Wet	Careless Driving
50	10/25/18	Thursday	10:24 AM	0	1	$17,800	Off Road	Day	Dry	Failed To Keep In Proper Lane
51	12/4/18	Tuesday	10:19 PM	0	0	$31,000	Off Road	Night	Dry	Failed To Keep In Proper Lane
52	12/30/18	Sunday	6:31 PM	0	0	$10,000	Rear End	Night	Wet	Other
53	12/30/18	Sunday	6:37 PM	0	0	$12,250	Other	Night	Wet	Careless Driving
54	2/10/19	Sunday	4:45 AM	0	1	$20,000	Off Road	Night	Wet	Other
55	2/17/19	Sunday	7:59 PM	0	1	$4,000	Off Road	Night	Dry	Careless Driving
56	2/22/19	Friday	3:17 AM	0	0	$2,000	Off Road	Night	Wet	Other
57	2/26/19	Tuesday	11:29 AM	0	0	$2,000	Other	Day	Dry	Other
58	3/7/19	Thursday	8:24 AM	0	3	$15,500	Rear End	Day	Dry	Careless Driving
59	3/7/19	Thursday	8:55 AM	0	0	$5,832	Rear End	Day	Dry	Careless Driving
60	3/25/19	Monday	1:37 PM	0	1	$5,200	Off Road	Day	Dry	Other
61	4/6/19	Saturday	1:00 PM	1	0	$17,500	Off Road	Day	Dry	Other
62	4/17/19	Wednesday	7:39 AM	0	1	$6,500	Rear End	Day	Dry	Careless Driving
63	5/4/19	Saturday	3:30 AM	0	0	$5,000	Off Road	Night	Wet	Unknown
64	5/5/19	Sunday	2:48 PM	0	0	$7,000	Off Road	Day	Wet	Careless Driving
65	5/9/19	Thursday	10:50 PM	0	1	$1,500	Sideswipe	Night	Dry	Other
66	5/13/19	Monday	8:43 AM	0	1	$10,500	Rollover	Day	Dry	Careless Driving
67	5/17/19	Friday	11:07 AM	0	2	$12,400	Other	Day	Dry	Failed To Keep In Proper Lane
68	5/17/19	Friday	11:49 AM	0	1	$10,010	Rear End	Day	Dry	Careless Driving
69	5/24/19	Friday	4:16 PM	0	4	$11,000	Rear End	Day	Dry	Careless Driving
70	5/27/19	Monday	5:50 PM	0	0	$400	Backed Into	Day	Dry	Hit & Run
71	6/18/19	Tuesday	12:00 PM	0	1	$4,600	Off Road	Day	Dry	Careless Driving
72	6/20/19	Thursday	4:28 PM	0	0	$1,500	Sideswipe	Day	Dry	Hit & Run
73	6/24/19	Monday	2:39 AM	0	2	$7,000	Rear End	Night	Dry	Other
74	7/14/19	Sunday	9:00 PM	0	1	$1,200	Other	Night	Dry	Other
75	7/28/19	Sunday	11:25 PM	0	0	$1,000	Other	Night	Dry	Careless Driving
76	8/16/19	Friday	11:30 PM	0	0	$8,500	Off Road	Night	Dry	Failed To Keep In Proper Lane
77	8/26/19	Monday	2:07 PM	0	0	$6,000	Off Road	Day	Wet	Other
78	8/26/19	Monday	3:24 PM	0	0	$16,000	Other	Day	Wet	Careless Driving
79	9/9/19	Monday	5:18 AM	0	0	$3,000	Off Road	Night	Dry	Hit & Run
80	9/9/19	Monday	5:47 AM	0	2	$8,000	Rear End	Day	Dry	Careless Driving
81	9/9/19	Monday	8:03 AM	0	2	$8,500	Rear End	Day	Dry	Careless Driving
82	9/30/19	Monday	2:33 AM	0	5	$11,000	Rear End	Night	Dry	Careless Driving
83	10/28/19	Monday	5:15 PM	0	0	$4,500	Off Road	Day	Wet	Other
84	10/29/19	Tuesday	12:39 PM	0	0	$4,750	Other	Day	Dry	Other
85	11/16/19	Saturday	10:10 AM	0	0	$5,500	Right Turn	Day	Dry	Failed to Yield ROW
86	12/1/19	Sunday	4:20 AM	0	0	$2,000	Off Road	Night	Dry	Careless Driving
87	12/5/19	Thursday	7:34 PM	0	0	$2,500	Off Road	Night	Dry	Other
88	12/23/19	Monday	4:42 AM	0	0	$18,000	Sideswipe	Night	Wet	Careless Driving

No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Contributing Cause
				Fatal	Injury					
89	12/31/19	Tuesday	12:15 PM	0	1	$6,500	Off Road	Day	Dry	Other
90	2/17/20	Monday	9:25 AM	0	0	$5,200	Rear End	Day	Dry	Careless Driving
91	2/29/20	Saturday	9:04 PM	0	0	$1,250	Off Road	Night	Dry	Failed To Keep In Proper Lane
92	5/11/20	Monday	7:14 PM	0	0	$1,050	Other	Night	Dry	Other
93	5/11/20	Monday	11:30 PM	0	0	$12,000	Off Road	Night	Dry	Failed To Keep In Proper Lane
94	5/15/20	Friday	1:08 PM	0	0	$3,500	Off Road	Day	Dry	Hit & Run
95	5/19/20	Tuesday	9:40 PM	0	0	$19,000	Rear End	Night	Dry	Careless Driving
96	5/29/20	Friday	9:02 AM	0	1	$4,500	Sideswipe	Day	Dry	Other
97	6/2/20	Tuesday	12:35 AM	0	0	$6,100	Off Road	Night	Dry	Careless Driving
98	7/7/20	Tuesday	1:40 PM	0	1	$4,900	Rear End	Day	Dry	Failed To Keep In Proper Lane
99	7/29/20	Wednesday	7:15 PM	1	4	$36,500	Other	Day	Wet	Careless Driving
100	8/26/20	Wednesday	6:58 AM	0	0	$6,000	Off Road	Day	Dry	Hit & Run
101	8/27/20	Thursday	11:10 PM	0	2	$10,000	Off Road	Night	Wet	Exceeded Speed
102	9/7/20	Monday	10:06 PM	0	0	$4,500	Off Road	Night	Dry	Hit & Run
103	9/30/20	Wednesday	9:28 PM	0	0	$7,000	Rear End	Night	Dry	Careless Driving
104	10/29/20	Thursday	2:45 PM	0	1	$18,000	Off Road	Day	Dry	Improper Lane Change
105	11/20/20	Friday	5:30 PM	0	4	$9,325	Rear End	Day	Wet	Careless Driving
106	12/1/20	Tuesday	4:21 PM	0	3	$17,000	Rear End	Day	Dry	Careless Driving
107	12/14/20	Monday	7:52 AM	0	0	$2,100	Off Road	Day	Dry	Careless Driving
108	1/4/21	Monday	4:41 AM	0	0	$2,000	Off Road	Night	Dry	Hit & Run
109	2/15/21	Monday	1:06 AM	1	3	$35,000	Off Road	Night	Dry	DUI
110	4/26/21	Monday	5:40 PM	0	0	$6,000	Off Road	Day	Dry	Careless Driving
111	5/1/21	Saturday	5:01 PM	0	0	$4,000	Off Road	Day	Dry	Careless Driving
112	5/28/21	Friday	5:00 PM	0	0	$7,300	Rear End	Day	Dry	Careless Driving
113	6/18/21	Friday	7:18 AM	0	0	$10,000	Off Road	Day	Dry	Careless Driving
114	6/29/21	Tuesday	5:41 PM	0	0	$10,750	Rear End	Day	Dry	Careless Driving
115	7/2/21	Friday	4:55 PM	0	0	$2,500	Sideswipe	Day	Wet	Improper Lane Change
116	7/8/21	Thursday	5:20 PM	0	0	$5,500	Sideswipe	Day	Wet	Careless Driving
117	7/10/21	Saturday	2:35 PM	0	0	$600	Rear End	Day	Dry	Other
118	8/7/21	Saturday	6:30 PM	0	0	$16,000	Off Road	Day	Wet	Careless Driving
119	8/21/21	Saturday	12:27 AM	0	2	$2,500	Off Road	Night	Dry	Careless Driving
120	8/21/21	Saturday	2:40 PM	0	1	$800	Off Road	Day	Dry	Other
121	9/13/21	Monday	3:03 PM	0	3	$20,300	Off Road	Day	Wet	Careless Driving
122	9/13/21	Monday	3:03 PM	0	1	$11,000	Rear End	Day	Dry	Careless Driving
123	9/26/21	Sunday	12:03 PM	0	3	$23,250	Sideswipe	Day	Dry	Careless Driving
124	11/6/21	Saturday	5:40 PM	0	0	$10,000	Off Road	Night	Dry	Careless Driving
125	11/12/21	Friday	6:20 PM	0	0	$12,225	Rear End	Night	Dry	Careless Driving
126	11/16/21	Tuesday	5:02 AM	0	0	$2,500	Animal	Night	Dry	Animal
127	12/12/21	Sunday	2:57 AM	0	1	$5,500	Rear End	Night	Dry	Careless Driving
128	12/25/21	Saturday	3:31 PM	0	0	$6,000	Rear End	Day	Dry	Improper Lane Change
129	1/1/22	Saturday	11:05 PM	0	1	$11,500	Sideswipe	Night	Dry	Hit & Run
130	1/5/22	Wednesday	7:50 PM	0	0	$18,000	Rear End	Night	Dry	Careless Driving
131	2/12/22	Saturday	3:58 PM	0	0	$3,201	Off Road	Day	Dry	Other
132	3/6/22	Sunday	9:30 PM	0	0	$12,050	Other	Night	Dry	Failed To Keep In Proper Lane
133	3/10/22	Thursday	8:57 PM	0	0	$2,000	Off Road	Night	Dry	DUI
134	3/18/22	Friday	6:51 PM	0	1	$1,200	Off Road	Night	Dry	Failed To Keep In Proper Lane
135	3/22/22	Tuesday	1:57 PM	0	2	$9,000	Rear End	Day	Dry	Careless Driving
136	4/4/22	Monday	2:33 AM	0	0	$5,000	Off Road	Night	Dry	Hit & Run

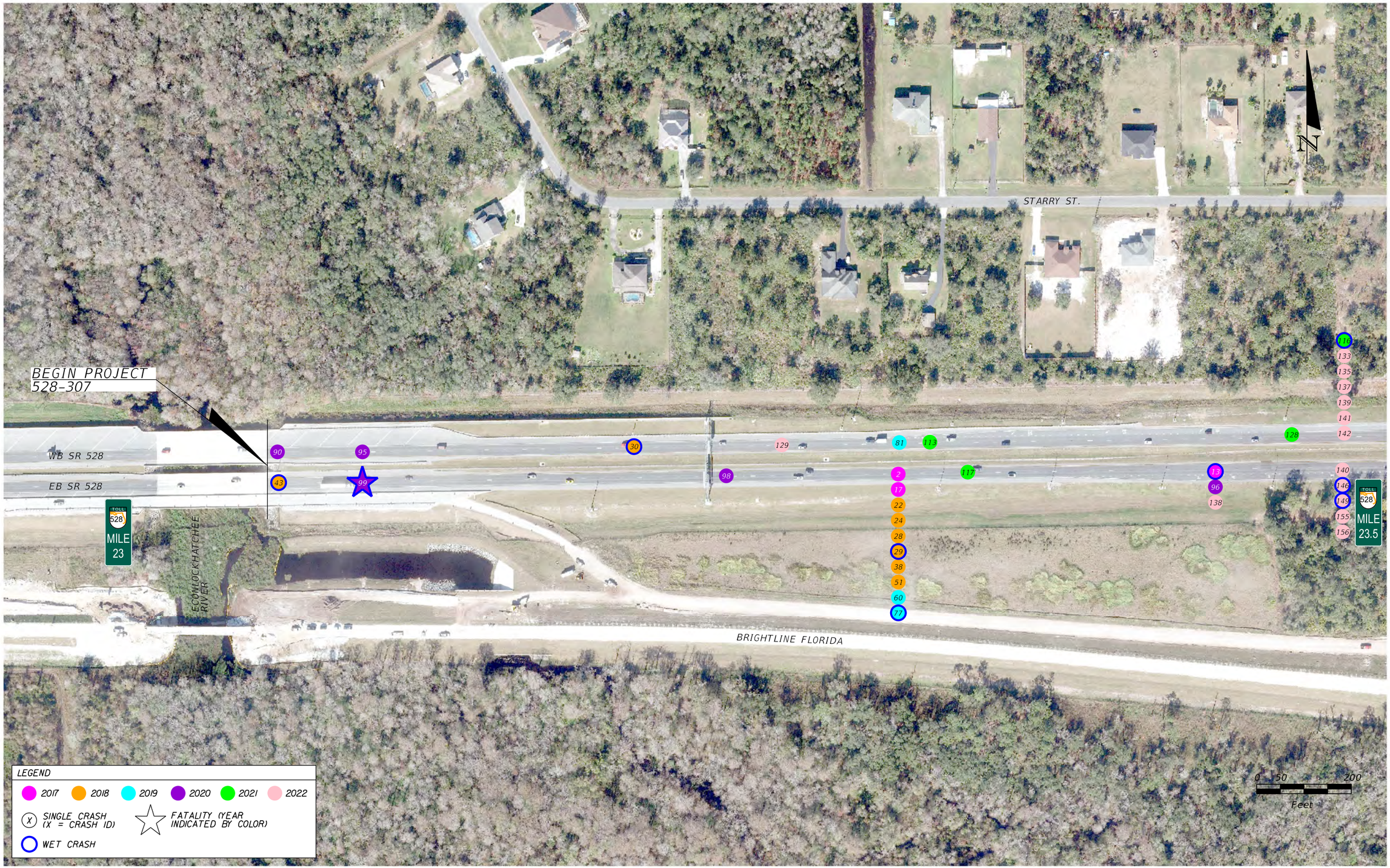
No.	Date	Day	Time	Severity		Property Damage	Crash Type	Day / Night	Wet / Dry	Contributing Cause
				Fatal	Injury					
137	4/13/22	Wednesday	2:00 AM	0	0	$5,000	Off Road	Night	Dry	Other
138	4/26/22	Tuesday	12:19 PM	0	1	$1,000	Off Road	Day	Dry	Improper Passing
139	5/13/22	Friday	4:53 PM	0	1	$2,500	Rear End	Day	Dry	Careless Driving
140	5/26/22	Thursday	6:05 PM	0	0	$7,000	Rear End	Day	Dry	Careless Driving
141	5/28/22	Saturday	6:00 AM	0	0	$4,500	Off Road	Night	Dry	Careless Driving
142	6/1/22	Wednesday	7:46 AM	0	0	$4,000	Rear End	Day	Dry	Careless Driving
143	6/7/22	Tuesday	7:02 PM	0	0	$9,500	Sideswipe	Day	Dry	Failed To Keep In Proper Lane
144	6/12/22	Sunday	5:31 PM	0	1	$11,500	Off Road	Day	Wet	Careless Driving
145	6/28/22	Tuesday	3:18 PM	0	0	$20,000	Off Road	Day	Dry	Careless Driving
146	8/14/22	Sunday	5:00 PM	0	1	$5,500	Sideswipe	Day	Wet	Hit & Run
147	8/29/22	Monday	1:31 PM	0	2	$10,000	Rear End	Day	Dry	Careless Driving
148	9/2/22	Friday	3:22 PM	0	1	$1,000	Off Road	Day	Dry	Other
149	9/8/22	Thursday	7:30 PM	0	0	$9,500	Rear End	Night	Wet	Careless Driving
150	9/16/22	Friday	1:51 PM	0	0	$6,250	Rear End	Day	Wet	Hit & Run
151	9/20/22	Tuesday	2:15 PM	0	1	$11,000	Off Road	Day	Wet	Careless Driving
152	9/24/22	Saturday	3:37 AM	0	0	$17,100	Off Road	Night	Dry	Failed To Keep In Proper Lane
153	10/4/22	Tuesday	5:35 PM	0	0	$6,000	Rear End	Night	Dry	Careless Driving
154	11/4/22	Friday	10:45 AM	0	1	$5,750	Off Road	Day	Dry	Other
155	11/12/22	Saturday	7:08 AM	0	0	$2,000	Sideswipe	Day	Dry	Hit & Run
156	11/12/22	Saturday	7:40 AM	0	0	$10,000	Rear End	Day	Dry	Careless Driving
TOTAL				**3**	**92**	**$1,192,565**				

Total No.	Fatal	Injury	PDO	Rear End	Head-on	Angle	Left Turn	Right Turn	Sideswipe	Backed Into	Bicycle / Pedestrian	Other
156	3	54	99	44	0	1	0	1	18	1	0	91
PERCENT	2%	35%	63%	28%	0%	1%	0%	1%	12%	1%	0%	58%

Contrib. Cause	Day	Night	PAVEMENT CONDITION			Exceeded Speed	DUI	Careless Driving	Improper Lane Change	Failed to Yield ROW	Disregarded Control Devices	Other
			Wet	Dry	Unknown							
TOTAL	93	63	34	121	1	3	4	71	4	2	0	72
PERCENT	60%	40%	22%	78%	1%	2%	3%	46%	3%	1%	0%	46%

Total Vehicles Entering/ADT:	**n/a**	Collision Rate:	**n/a**	PER M.E.V.

Source: FDOT Crash Analysis Reporting System and University of Florida's Signal Four Analytics



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CRASH DATA

SHEET NO. 1

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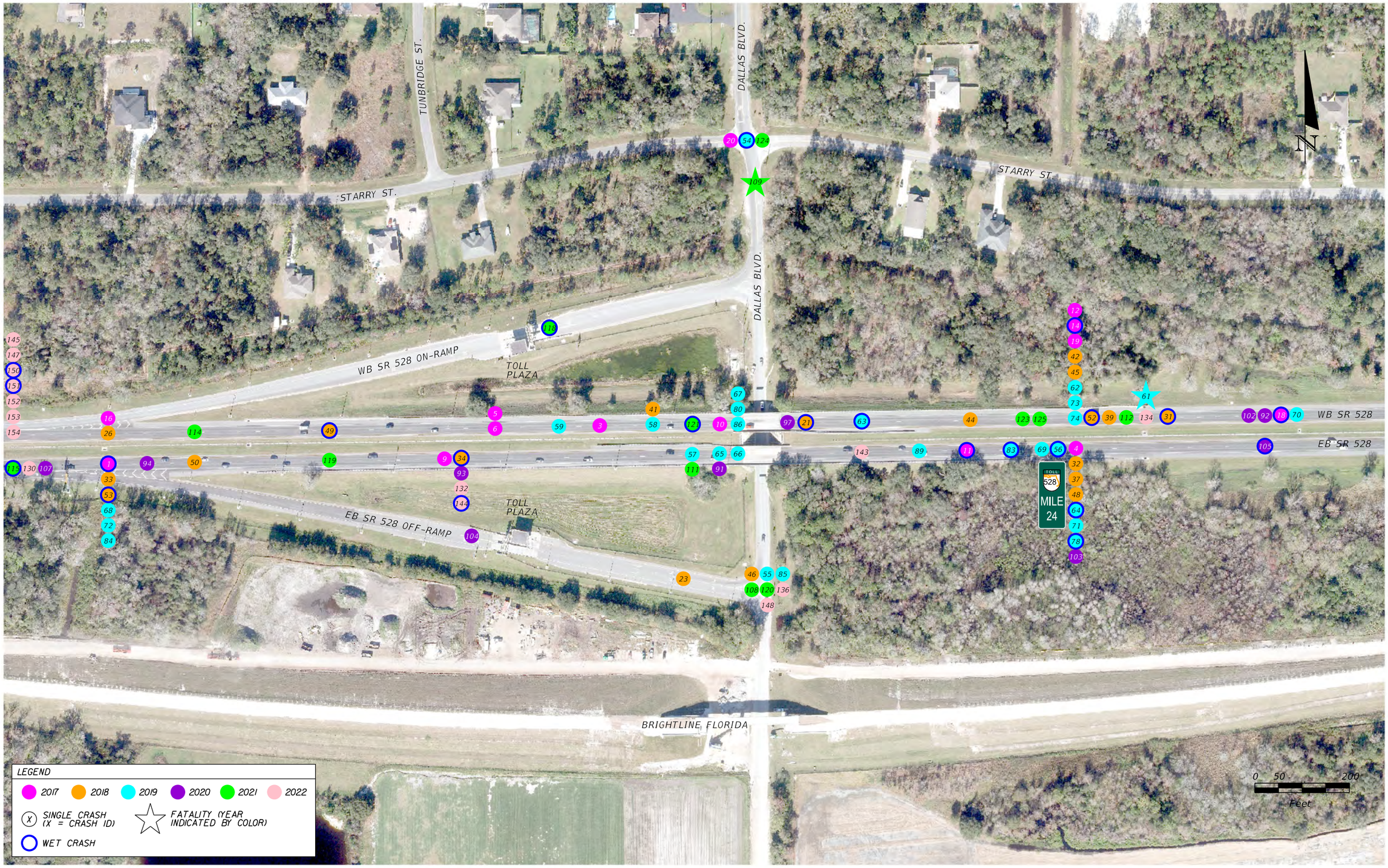

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CRASH DATA

SHEET NO. 2

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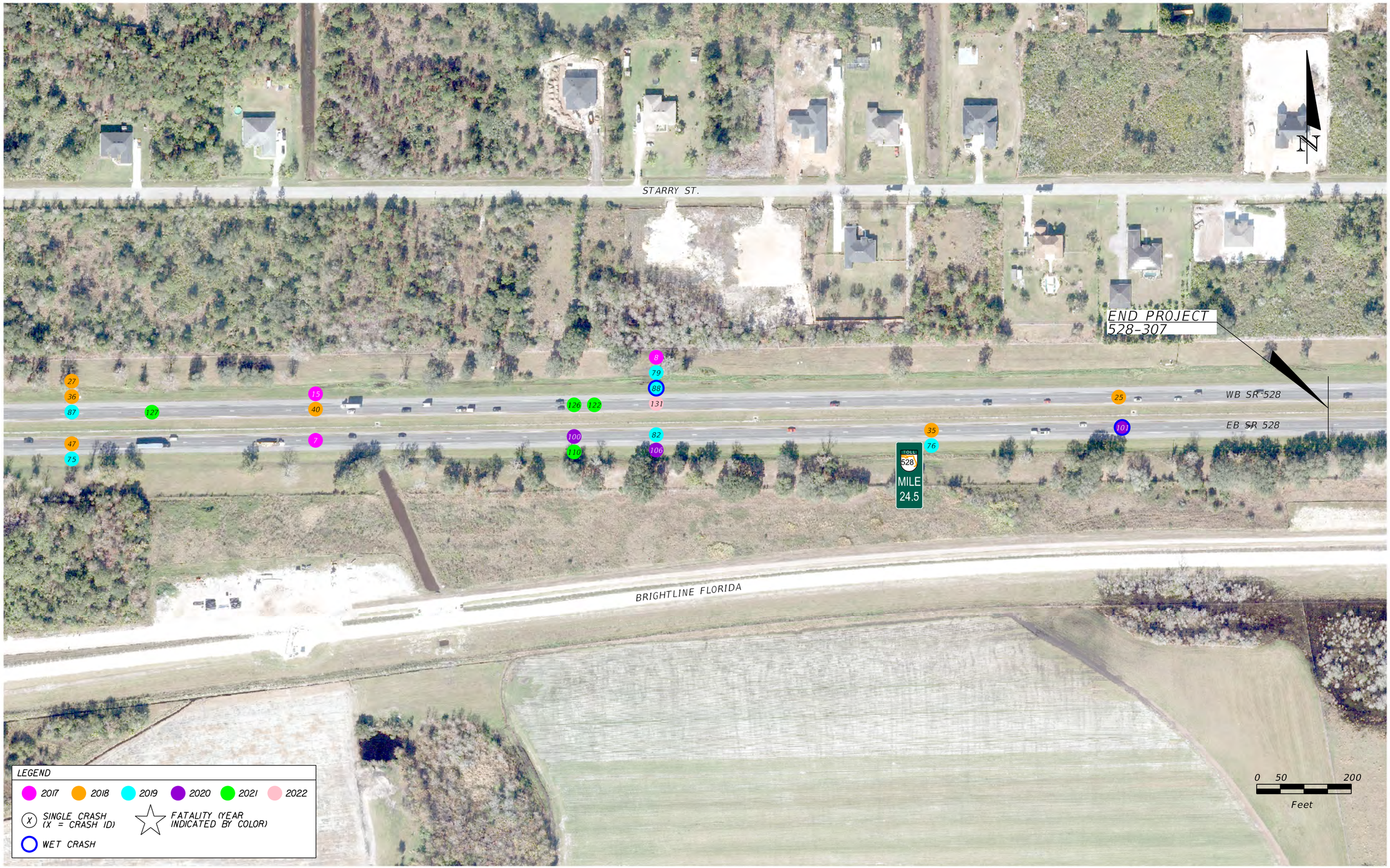


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300
Orlando, FL 32801-3442

SR 528 INTERCHANGE AT DALLAS BLVD

ROAD NO.	PROJECT NO.
SR 528	528-307

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CRASH DATA

SHEET NO. 3

EHerbert 2/22/2023 10:52:38 AM

Appendix F – Existing Geotechnical Conditions Technical Memorandum

Geotechnical and Environmental Consultants, Inc.

TECHNICAL MEMORANDUM

February 9, 2023

From: Daniel C. Stanfill, P.E. and Richard P. McCormick, P.G.

To: Mr. Bronce L. Stephenson, MPA
Lead Planner

Subject: Existing Geotechnical Conditions Technical Memorandum
SR 528 AT DALLAS BOULEVARD INTERCHANGE
CFX Project No. 528-307
GEC Project No. 5228G

Based on TWO No. 4 under Contract Number 001844 dated December 1, 2022, Geotechnical and Environmental Consultants, Inc. (GEC) is pleased to present this Existing Geotechnical Conditions Memorandum for the SR 528 at Dallas Boulevard Interchange. GEC has reviewed available documents, the USGS Quadrangle Map, the NRCS Orange County Soil Survey and current plans to prepare this Memorandum. The attached **Figure 1** shows the USGS Quadrangle Map and NRCS Soil Survey for the project location. The following observations are noted.

- Natural ground surface topography varies from +55 to +70 feet NGVD.
- Land use is primarily residential north of SR 528 and undeveloped to the south.
- The newly constructed Brightline Railroad is also located south of the interchange.
- Near surface soils are primarily poorly drained sand soils.
- Groundwater depth is generally within 1 to 3 feet of natural grade.
- Review of available plans indicate the bridges were originally supported on 18-inch precast piles extending about 80 feet below natural grade.
- Geotechnical considerations include exploration for any highly compressible organic muck soils, evaluation of variable groundwater conditions and deep Standard Penetration Test (SPT) borings for bridge foundation design.
- Bridges should be supported on a deep driven pile substructure due to Karst environment and likely high Factored Loads required.
- Wet stormwater ponds will likely be required due to the near surface groundwater levels.

USE OF THIS MEMORANDUM

GEC has prepared this memorandum for the exclusive use of our client, The Balmoral Group, and CFX and for application to our client's project. GEC will not be held responsible for any other party's interpretation or use of this report's data or recommendations without our written authorization.

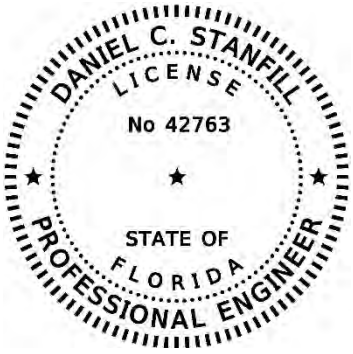
GEC has performed the services described in this report in a manner consistent with that level of care and skill ordinarily exercised by members of our profession currently practicing in Central Florida. No other representation is made or implied in this document.

The conclusions and recommendations should be disregarded if the final project design differs from the project description in this report. If such changes are contemplated, GEC should be retained to review the new plans to assess the applicability of this report in light of proposed changes.

We appreciate the opportunity to work with The Balmoral Group and CFX on this project. If you have any questions concerning this report, or if we may be of further assistance, please contact us.

Sincerely,

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.



Richard P. McCormick, P.G.
Chief Geologist
Florida License No. 2096

Daniel C. Stanfill, P.E.
Senior Vice President
Florida License No. 42763

This Report has been digitally signed and sealed by Daniel C. Stanfill, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ATTACHMENTS

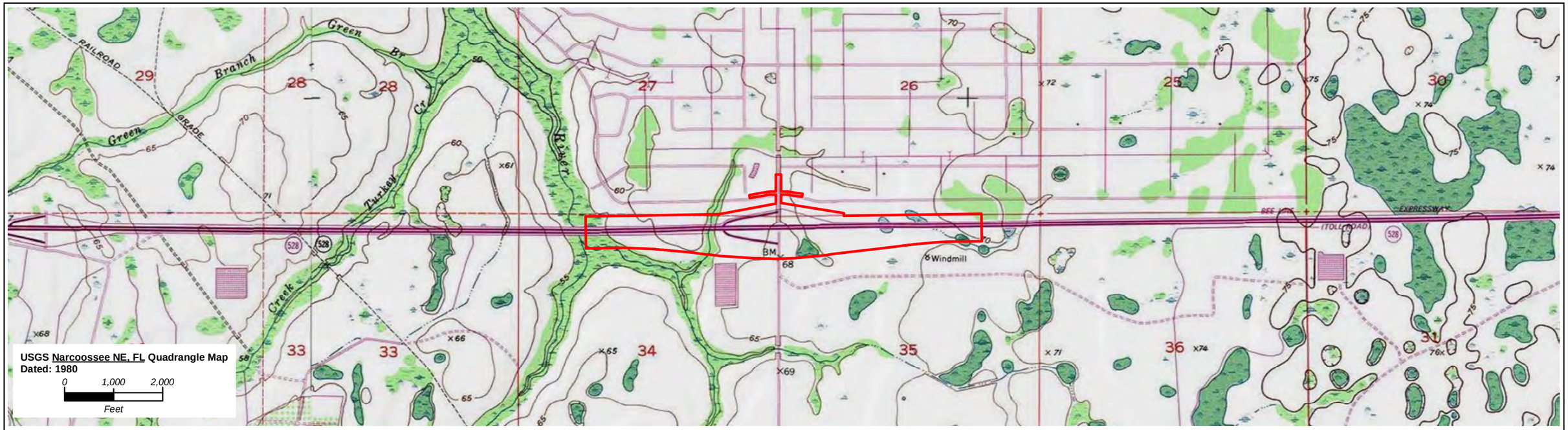


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FIGURE 1

	DANIEL C. STANFILL, P.E. P.E. LICENSE NUMBER 42763 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC. 919 LAKE BALDWIN LANE ORLANDO, FL 32814	STATE OF FLORIDA DEPARTMENT OF TRANSPORATATION			USGS QUADRANGLE AND NRCS SOIL SURVEY MAPS	SHEET NO.
		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
		SR 528	ORANGE	528-307		

T:\J5228GE SR 528 at Dallas Boulevard Interchange PD&E_Balmoral\7 CADD Files\ArcGIS\5228G QUAD.mxd 2/8/2023