

FINAL DRAFT

Utility Assessment Package

State Road 414 Expressway Extension
Project Development and Environment Study
From US 441 to SR 434
Orange County and Seminole County, Florida

CFX Project Number: 414-227

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Acronyms and Abbreviations

BE	buried electric
BFO	buried fiber optic
BT	buried telephone
BTV	buried television
CATV	cable tv
CFX	Central Florida Expressway Authority
DBC	direct buried cable
DIP	ductile iron pipe
FDOT	Florida Department of Transportation
FM	force main
HDPE	high-density polyethylene
HP	high pressure
I-4	Interstate 4
mph	mile(s) per hour
OE	overhead electric
OFOC	overhead fiber optic cable
OT	overhead telephone
OTV	overhead television
PD&E	Project Development and Environment
ROW	right-of-way
RWM	reclaimed water main
SR 414	State Road 414
SR 429	State Road 429
SR 434	State Road 434
UAM	Utility Accommodation Manual
UAO	Utility Agency Owner
US 441	U.S. Highway 441
WM	water main

1. Project Overview

1.1 Project Background and Description

The Central Florida Expressway Authority is conducting the State Road 414 Expressway Extension Project Development and Environment Study to evaluate alternatives for a proposed grade-separated expressway extension of the tolled SR 414 (John Land Apopka Expressway). The existing SR 414 Expressway provides regional connectivity from State Road 429 and U.S. Highway 441 in Apopka and extends south and east to SR 414 (Maitland Boulevard) just east of U.S. Highway 441. Figure 1-1 presents the Regional Location Map. The study limits extend along the existing SR 414 (Maitland Boulevard) corridor from US 441 (Orange Blossom Trail) to State Road 434 (Forest City Road). Figure 1-2 presents the Project Location Map. The approximate 2.3-mile-long study corridor generally runs along the boundary of Orange County and Seminole County and is located within the cities of Maitland (Orange County) and Altamonte Springs (Seminole County). Both CFX and the Florida Department of Transportation own portions of SR 414 within the project study limits. CFX owns and operates the SR 414 (John Land Apopka Expressway) from SR 429 to just east of US 441, and FDOT owns and operates SR 414 (Maitland Boulevard) from just east of US 441 to U.S. Highway 17/U.S. Highway 92. The existing SR 414 (Maitland Boulevard) is a four-lane divided urban principal arterial with three major signalized intersections at Bear Lake Road/Rose Avenue, Eden Park Road and Magnolia Homes Road, and an unsignalized intersection at Gateway Drive between the grade-separated intersections of SR 414/US 441 and SR 414/ SR 434. A minor grade-separated overpass exists over the Little Wekiva Canal and an access road between the Lake Lotus Park and Ride lot and Lake Lotus Park.

The PD&E Study is evaluating alternatives for a proposed grade-separated SR 414 Expressway Extension to provide system linkage between the western terminus of the SR 414 (John Land Apopka Expressway) and Interstate 4. The SR 414 Expressway Extension includes alternatives for a facility with up to two lanes in each direction from US 441 to SR 434. Project alternatives involve various configurations of grade-separated express lanes on SR 414 (Maitland Boulevard) to provide needed capacity between US 441 and SR 434 while maintaining the existing local access lanes. Alternatives considered include reversible, bi-directional and convertible express lanes along the project corridor to avoid right-of-way acquisition needs.

Prior to the PD&E Study, CFX completed the SR 414 Reversible Express Lanes Schematic Report that included an assessment of tolled, directional express lanes within the median of SR 414 (CFX 2019). The Report recommended a two-lane, reversible, grade-separated viaduct in the median of SR 414. The Report also found that a single lane bi-directional express lane would require a 75 percent wider bridge and was not considered viable.

The proposed improvements also include reconfiguring the existing at-grade SR 414 (Maitland Boulevard) to accommodate the SR 414 toll facility while maintaining two SR 414 local access lanes in each direction. The study will involve analysis of intersection improvements, bridge modifications at Lake Bosse and Little Wekiva Canal, stormwater management facilities, pedestrian and bicycle needs and access management modifications. The No-Build Alternative is a viable option throughout the study.

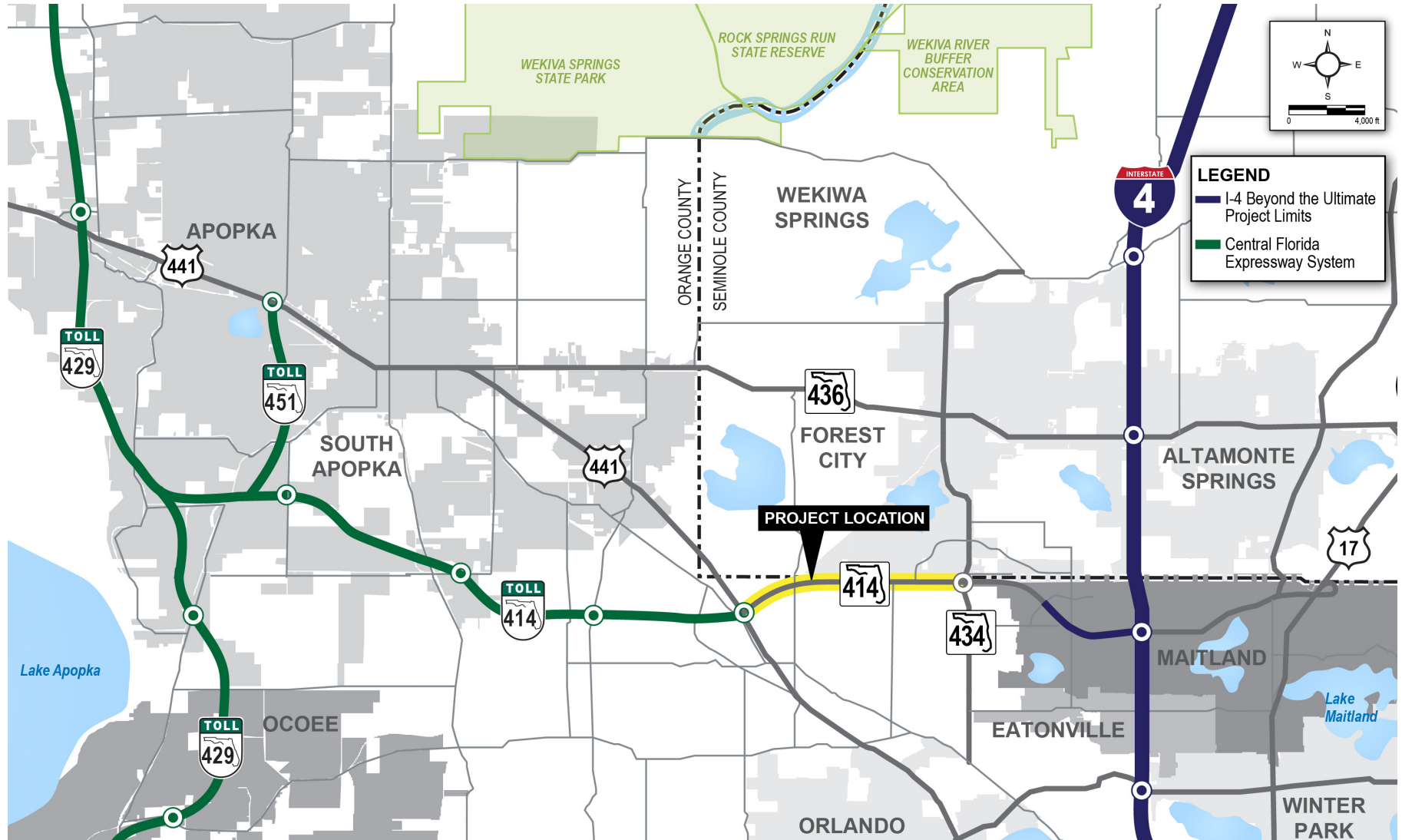


Figure 1-1. Regional Location Map

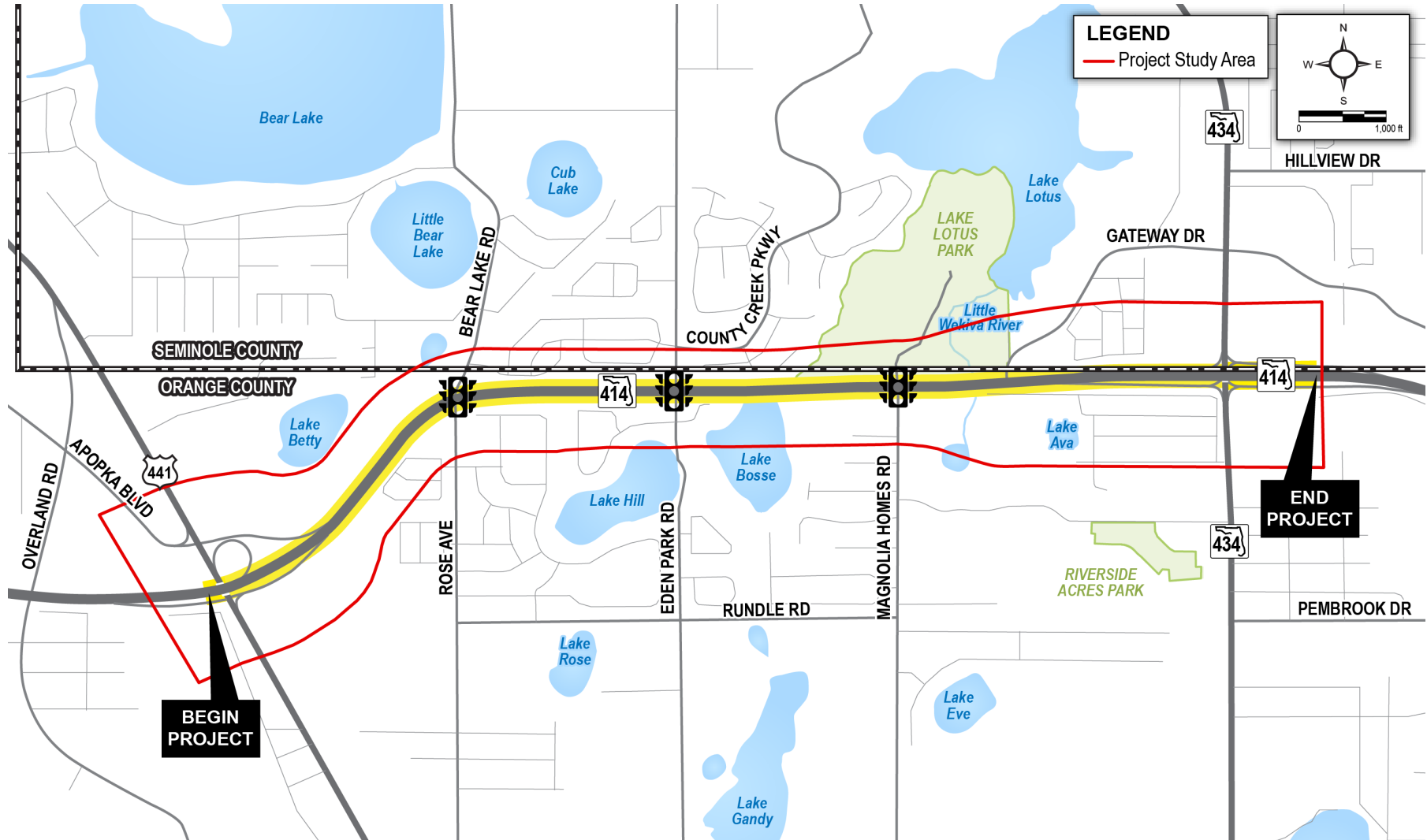


Figure 1-2. Project Location Map

1.2 Purpose and Need

The purpose of the SR 414 Expressway Extension PD&E Study is to provide needed capacity on SR 414 and improve system connectivity between SR 429 and I-4 to meet future traffic needs. The 2.3-mile-long project corridor of SR 414 is an arterial connecting two limited-access facilities. The proposed project will complete the limited-access gap between US 441 and SR 434 and provide limited-access regional connectivity between SR 429 and I-4. The proposed grade-separated SR 414 Expressway Extension will separate the through traffic from the local traffic, allowing for greater mobility and reduced congestion for both facilities. The proposed improvements are to 1) accommodate anticipated transportation demand, 2) improve safety, 3) improve system connectivity/linkage and 4) support multimodal opportunities.

1.3 Report Purpose

As defined in FDOT's *Utility Accommodation Manual* (FDOT 2017), a utility is all active, deactivated or out-of-service electric transmission lines, telephone lines, telegraph lines, other communication services lines, pole lines, ditches, sewers, water mains, heat mains, gas mains, pipelines, gasoline tanks and pumps owned by the Utility Agency Owner. Conflicts with utilities affect both the cost and schedule of a project, and also have the ability to influence the selection of the Preferred Alternative. FDOT must consider the potential for encountering utilities within the limits of the project, including associated pond sites and other offsite improvements. Identification of utilities within the project area is included in this Utility Assessment Package. The information can be used to avoid major utility conflicts and in choosing corridors or alternatives to carry forward. The goal of this effort is to assist with the development of concept plans that avoid conflicts with major utility facilities. While it is important to determine all utility facilities within the study limits, the focus is to identify the utility facilities that could: a) impact development of the Preferred Alternative, b) entail lengthy or drawn-out coordination efforts, c) be cost-prohibitive to relocate, or d) rise beyond the level of ordinary utility coordination.

1.4 Alternatives Considered

Alternatives were evaluated for environmental and operational constraints. An at-grade alternative within the median of SR 414 (Maitland Boulevard) was eliminated because while it provided uninterrupted travel, traffic from the local cross streets would not be able to cross SR 414 (Maitland Boulevard). Another alternative considered included an adjacent corridor to SR 414 (Maitland Boulevard). However, because SR 414 (Maitland Boulevard) is mostly developed, this alternative was not viable. Finally, an alternative that included individual overpasses at each of the existing intersections was also considered. However, because of the limited spacing between each intersection, this alternative was not feasible and was, therefore, eliminated.

Viable alternatives were developed and presented for public input at the Alternatives Public Workshop held on February 10, 2021. These viable alternatives included roadway concepts for the SR 414 Expressway Extension project, including the elevated expressway and the at-grade local access lanes. The viable alternatives were updated after the Alternatives Public Meeting to reflect ongoing alternatives refinements that avoid and minimize environmental impacts.

1.4.1 Preferred Alternative

As a result of the alternatives analyses conducted for the project, a Preferred Alternative was identified for further analysis and public input. The Preferred Alternative involves an elevated SR 414 Expressway

Extension toll facility to serve regional traffic and at-grade SR 414 (Maitland Boulevard) local access lanes (non-tolled) from US 441 to SR 434. The proposed SR 414 Expressway Extension typical section for the Preferred Alternative includes the elevated SR 414 facility in the median, as four 12-foot-wide express lanes (two lanes per direction) separated by a median barrier wall. The Preferred Alternative also includes maintaining the existing SR 414 (Maitland Boulevard) access lanes at-grade with two lanes per direction on either side and below the SR 414 Expressway Extension. The at-grade portion of the facility on SR 414 (Maitland Boulevard) will maintain the existing pavement width (60 feet) but shifts and restripes the existing lanes to provide a 7-foot-wide buffered bike lane east of Bear Lake Road. Using these recommendations to minimize ROW and ongoing traffic analysis, the Preferred Alternative will be further evaluated as the study progresses. As part of the Preferred Alternative, operational improvements at intersections are anticipated to accommodate the elevated SR 414 Expressway Extension while maintaining local access at cross streets. In addition, impacts to environmental resources including social, cultural, natural and physical will be considered as the Preferred Alternative is further developed.

1.4.2 No-Build Alternative

The No-Build Alternative for the study area assumes previously programmed improvements are built including widening SR 414 to six lanes (at-grade with no elevated expressway) from US 441 to SR 434 as noted in MetroPlan Orlando's *2045 Metropolitan Transportation Plan Cost Feasible Plan*, Revised June 9, 2021. The No-Build Alternative is not funded in the FDOT 5-Year Work Program, adopted July 2020 and is no longer programmed. Consistency with local transportation plans is being coordinated during the PD&E Study. The previously programmed improvements to SR 414 (Maitland Boulevard) do not meet the future traffic needs through the year 2045 nor the purpose and need for the project to accommodate future transportation demand or improve system connectivity. An at-grade widening of SR 414 (Maitland Boulevard) to six lanes would preclude a four-lane expressway within the median (at two lanes per direction) or require substantial ROW impacts. Similarly, widening at-grade SR 414 (Maitland Boulevard) to six lanes combined with a two-lane SR 414 Elevated Expressway, within the median (one lane per direction) would result in ROW impacts and affect the ability to maximize the use of the existing median to accommodate infrastructure such as utilities and drainage needs. Therefore, the No-Build Alternative is not the Preferred Alternative. However, the No-Build Alternative shall remain under consideration throughout the PD&E Study for public input and to provide a comparison to the Preferred Alternative.

2. Methodology

The process to discover utilities during the PD&E phase consists of three stages: PD&E Request Package, UAO Coordination, and Utility Assessment Package.

The PD&E Request Package consists of the concept plans overlay on an aerial background. A request was made for each UAO to provide information for above- and below-ground utility facilities within the PD&E project area for both existing and planned utility facilities. Also included was a request that each UAO provide information pertaining to any existing easements or other property interests that may be affected by the project. The contacted UAOs were requested to review the concept plans and identify their major utility facilities and other obstructions or encroachments within or adjacent to the project. Refer to Appendix A for a sample of the request letter sent to each UAO and Appendix B for the latest concept plans.

Each UAO was to identify both existing and planned utility installations in, or adjacent to, the project limits. The UAOs were requested to respond in writing and delineate their facilities and any property interests on the concept plans, in accordance with Chapter 14-46, Florida Administrative Code and the UAM.

The UAO Coordination stage included meetings with the UAOs to discuss utility impacts related to the project alternatives. The meetings included discussions for timelines for new installations (none identified) or relocations that are anticipated to be unavoidable, potential relocation costs, any easements or property interests that could be affected. The information provided by the UAOs were used in preparing this Utility Assessment Package.

3. Utility Agency Owners

Table 3-1 lists the UAOs contacted as part of the SR 414 Expressway Extension PD&E Study.

Table 3-1. Utility Agency Owners

Utility Agency Owner	Contact	Utility Type
AT&T	Nancy Spence 770-918-5424	Fiber Communication Lines
AT&T/Distribution	Alan Reynolds 407-351-8180 ar2916@att.com	Telephone
Black & Veatch Orlando 1F	Janeiry Rivas 407-419-3606 rivasj@overlandcontracting.com	Fiber
Central Florida Expressway Authority	Carnot Evans 321-354-9757 cevans@dewberry.com	Fiber
CenturyLink (Lumen, Terra Technologies, and Embarq)	Robert Godek 407-374-0465 Rob.m.godek@centurylink.com Heather Blackburn Heather.blackburn@lumen.com Eric Walls 407-907-9284 ewalls@terratechllc.net relocations@centurylink.com	Fiber, Telephone
Charter Communications	Timothy Ross Timothy.Ross@charter.com Tracey Domostoy Tracey.domostoy@charter.com	Fiber, Telephone, Cable Television
City of Altamonte Springs	Franklin Cabrera 407-571-8344 FRcabrera@altamonte.org Brett Blackadar 407-571-8338 BBlackadar@altamonte.org	Fiber, Water, Electric, Sewer
City of Winter Park	Jason Riegler/ For Water & Wastewater jriegler@cityofwinterpark.org 407-599-3355	Water, Electric, Sewer
Comcast Communication/ Prev.LK CNTY CBLV	Scott Osebold Scott_Osebold@comcast.com Wade Mathews 352-516-3824 Wade.mathews@cable.comcast.com CENFLR-NFL_Construction@comcast.com	CATV

Table 3-1. Utility Agency Owners

Utility Agency Owner	Contact	Utility Type
Duke Energy- Distribution	Stephanie Olmo 407-905-3376 Stephanie.olmo@duke-energy.com Sam Kaiser Sam.kaiser@duke-energy.com defdistributiongo@duke-energy.com	Electric- Distribution
Duke Energy Fiber	Mark Hurst 727-820-5208 Mark.hurst@duke-energy.com	Fiber
Duke Energy- Transmission	Scott Vanvelzor 813-909-1241 svanvelzor@pike.com Nick Brana 407-942-9727 Nick.Brana@Duke-Energy.com defttransmissiongov@duke-energy.com	Electric- Transmission
Lake Apopka Natural Gas	Mingo Colon 407-656-2734 Mcolon@langd.org	Gas
MCI (Verizon)	Brandon Cole Bcole8@yahoo.com	Fiber
Orange County Public Works	Roger Smith 407-836-7804 Roger.smith@ocfl.com	Fiber, Traffic Signals
Orange County Utilities	Christina Crosby Christina.Crosby@ocfl.net	Water
Orange County Utilities- Waste Water		Wastewater
Seminole County Traffic Engineering	John Brown 407-665-5644 JBrown02@seminolecountyfl.gov	Signalization
Seminole County	Matthew Clark (UAO Rep.) 407-665-2118 Mclark02@seminolecountyfl.gov Paul Zimmerman (UAO Rep.) 407-665-2040 pzimmerman@seminolecountyfl.gov David McBroom (UAO Field Rep.) 407-416-1575 dmcbbroom@seminolecountyfl.gov	Reclaimed Water, Water, Sewer
TECO Peoples Gas- Orlando	Joan Domning 813-275-3783 jdomning@tecoenergy.com	Gas
Zayo Group	Henry Klobucar 406-490-6138 Henry.klobucar@zayo.com	Fiber

Table 3-1. Utility Agency Owners

Utility Agency Owner	Contact	Utility Type
	Dean Pate Dean.pate@zayo.com Tess Bentayou Tedss.bentayou@zayo.com	

4. Existing Utility Descriptions

Existing utility facilities include power, gas, water, wastewater and communications. A preliminary plan overlay on an aerial background was sent to all identified UAOs within the project area. The plan set was provided for their use in documenting their facilities. Appendix C provides information received from the various UAOs.

Based on the initial utility coordination effort, no proposed utility facilities were identified within the existing or proposed ROW. The general location of the existing utility facilities described in Table 4-1 are based on the UAOs' response and their accompanied documents. Exact locations of the existing utilities and the extent of impacts will be determined during the design phase of this project. Coordination with the UAOs during the design phase will assist in minimizing relocation adjustments and disruptions of service to the public.

Table 4-1 summarizes the existing facilities within the project corridor. All stations provided are approximate.

Table 4-1. Existing Utilities

Utility Agency Owner	Utility Type	Description
AT&T/Distribution	Telephone	4" buried conduit, 1-100 pair cable along west side of US 441 4" buried conduit, 1200 pair cable along east side of US 441 4" buried conduit with 48 fiber along west side of Rose Avenue/Bear Lake Road 1200 pair and 12 fiber direct buried cable along east side of Rose Avenue/Bear Lake Road Overhead 200 pair and 48 fiber cable along east side of Rose Avenue/Bear Lake Road 4" buried conduit with 144 fiber along east side of Eden Park Road 50 pair and 48 fiber cable buried along east side of Gateway Drive 25 pair and 12 fiber cable beneath bridge between Gateway Drive and Forest City Road 2-4" buried conduit, 2-144 fiber cables, and 2-600 pair, 3-1200 pair, and 2-1800 pair cables along west side of Forest City Road
Black & Veatch Orlando 1F	Fiber	No UAO response from two contact attempts
CFX	Fiber	Existing facilities source: 414-211 As-Built Construction Plans
CenturyLink (Lumen) CenturyLink (Embarq)	Fiber, Telephone	2" HDPE, 144 fiber along east side of Forest City Road 1.25" HDPE, 24 fiber along SR 414 from northeast corner of Forest City Road intersection

Table 4-1. Existing Utilities

Utility Agency Owner	Utility Type	Description
Charter Communications	Fiber, Telephone, CATV	Overhead TV along north side of Orange Blossom Trail Buried fiber east side of Orange Blossom Trail Overhead TV along east side of Rose Avenue Buried TV at southeast Rose Avenue intersection Overhead TV along south side of SR 414 at Rose Avenue Buried TV along west side of Magnolia Homes Road Buried TV along west side of Magnolia Homes Road, the adjacent to SR 414 Overhead TV on the west side of Forest City Road Buried TV on the west side of Forest City Road Buried fiber on the east side of Forest City Road
City of Altamonte Springs	Fiber, Water, Electric, Sewer	Reclaimed water main, A-FIRST (Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment), that runs from Apopka Boulevard to SR 414 and connects through the Seminole-Wekiva Trail, reaching an above-ground connection and later extending below the median on SR 414 until a right-turn bend northbound beneath Eden Park Drive
Comcast Communication Prev. LK CNTY CBLV	CATV	No existing utilities within project
Duke Energy-Distribution	Electric-Distribution (12.4 kV)	Overhead electric on east side of Orange Blossom Trail Buried electric on east side of Orange Blossom Trail Overhead electric on the south side of SR 414 Overhead electric on the east side of Rose Avenue Overhead electric on east side of Bear Lake Road Overhead electric on east side of Eden Park Road Overhead electric along east side of Orange Blossom Trail Buried electric along east side of Orange Blossom Trail Overhead electric along south side of SR 414 Overhead electric along east side of Rose Avenue Overhead electric on east side of Rose Avenue Overhead electric on the east side of Rose Avenue (to be replaced/modified) Overhead electric along east side of Bear Lake Road Overhead electric on east side of Eden Park Road Overhead electric on east side of Eden Park Road (to be replaced/modified) Overhead electric on the east side of Eden Park Road Overhead electric on west side of Magnolia Homes Road Overhead electric on west side of Magnolia Homes Road Buried electric from northwest corner of SR 414 and Magnolia Home Road north Overhead electric midway between Gateway Drive and Forest City Road (to be replaced/modified) Buried electric on west side of Forest City Road

Table 4-1. Existing Utilities

Utility Agency Owner	Utility Type	Description
Duke Energy-Transmission	Electric-Transmission	Overhead electric on the south side of SR 414 to east of US 441 Overhead electric crossing SR 414 between US 441 and Rose Avenue/Bear Lake Road Overhead electric along north side of SR 414 east of US 441 to Bear Lake Road
Lake Apopka Natural Gas	Gas	4" HP steel gas runs along west side of Apopka Boulevard 2" steel gas runs along east side of Apopka Boulevard 2" steel gas runs along south side of Winfield Street 1.5" steel gas along south side of Joyann Street 2" steel has along Forest City Road
MCI (Verizon)	Telephone	No UAO response from two contact attempts
Orange County Utilities Orange County Utilities- Waste Water	Water, Wastewater	16" DIP force main crossing SR 414 west of Orange Blossom Trail intersection 16" PVC force main crosses SR 414 on the west side of Orange Blossom Trail 12" PVC, 6" DIP and 16" DIP water mains crossing SR 414 on the east side of Orange Blossom Trail 2-8" PVC and 12" PVC water mains below SR 414 east of Orange Blossom Trail 3-8" DIP, 3-6" DIP and 5-8" PVC water mains below SR 414 east of Orange Blossom Trail 12" PVC and 24" steel water mains along west side of SR 414 and then extends on the east side of the roadway, connecting to a 16" HDPE WM at Rose Avenue 16" HDPE water main on the west side of Rose Avenue 6" PVC force main crosses eastbound travelway of SR 414 from Tealwood Cover neighborhood, running below the median 10" PVC along west side of Magnolia Homes Avenue 3" AC water main along south side of Oranole Road
Seminole County	Reclaimed Water, Water, Sewer	10" PVC water main along west side of SR 414 with an aboveground connection where the Seminole-Wekiva Trail sidewalk meets SR 414; connects at northwest intersection of Bear Lake Road and extends north
Seminole County Traffic Engineering	Signalization Fiber (Single mode 24/12 fiber)	Along the south side of SR 414 between Rose Avenue and Magnolia Homes Road Traverses under SR 414 on the west side of Magnolia Homes Road intersection Along the north side of SR 414 between Magnolia Homes Road and Forest City Road Traverses under SR 414 on the west side of Forest City Road intersection
Zayo Group	Telephone	Buried unknown fiber along the west side of Forest City Road

Notes:

CATV = cable television

DBC = direct buried cable

DIP = ductile iron pipe

HDPE = high-density polyethylene

HP= high pressure

PVC = polyvinyl chloride

5. Build Impacts

5.1 Background

Table 5-1 lists the estimated impacts itemized by location and estimated relocation costs to utility facilities resulting from the Preferred Alternative. The estimated impacts are based on the data provided by the UAO listed in Table 4-1. Actual utility impacts will be verified during the design phase when a detailed survey is completed and subsurface utility information is available.

5.2 Cost Estimate

Conservative utility relocation estimates were requested as part of the utility coordination process, and subsequent follow-up with the UAOs. The total combined estimated cost for relocations including contingency regardless of the UAOs' potential for reimbursement is \$2.3 million (refer to Table 5-1 for the utility impacts from Preferred Alternative by location).

5.3 UAO Follow-Up

Additional meetings were held with some impacted owners as part of the utility coordination process.

Follow-up coordination with the city of Altamonte Springs has been held to outline initial options for relocation of the A-FIRST pipeline. Options evaluated include relocation in the existing SR 414 (Maitland Boulevard) median, relocation to the northern side of the SR 414 (Maitland Boulevard) median and relocation outside of the SR 414 (Maitland Boulevard) ROW. A preferred relocation option has not been selected and this relocation should be coordinated early in the final design process. Additionally, the city of Altamonte Springs requested that during relocation the pipeline operations be maintained.

Also, follow-up coordination was held with Duke Energy Transmission to determine design constraints resulting from the existing 230 kilovolt overhead transmission line crossing SR 414 (Maitland Boulevard) and the adjacent facilities. As a result of this coordination, the proposed ponds in the Preferred Alternative were modified to meet the Guidelines for Encroachment provided by Duke Energy. This design is based on approximated easement locations provided by Duke Energy. Preliminary calculations from the lowest conductor crossing SR 414 (Maitland Boulevard) to the proposed expressway profile show adequate vertical clearance and, therefore, this potential conflict may result in avoidance. Encroachment approval and constructability constraints are subject to change and should be coordinated early in the final design process.

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
AT&T Florida						
BT, BFO	Transverse	Crossing SR 414 west side Orange Blossom Trail (US 441)	4" Conduit 100 Pair Cable 12, 24, & 48 Fiber Cables	500 feet	No anticipated impacts	\$0
BT	Transverse	Crossing SR 414 east side Orange Blossom Trail (US 441)	4" Conduit 1200 Pair Cable	500 feet	No anticipated impacts	\$0
BT, BFO	Transverse	Crossing SR 414 west side Bear Lake Road/Rose Avenue	4" Conduit 48 BFO	200 feet	No anticipated impacts	\$0
OFOC, OT	Transverse	Crossing SR 414 east side Bear Lake Road/Rose Avenue	48 BFO 200 Pair Cable	200 feet	New overhead construction	\$16,000
BT, BFO	Transverse	Crossing SR 414 east side Bear Lake Road/Rose Avenue along ROW limit	400 Pair & 1200 Pair Cables 12 BFO	200 feet	No anticipated impacts	\$0
BT, BFO	Transverse	Crossing SR 414 east side Eden Park Road	4" Conduit 144 BFO	150 feet	No anticipated impacts	\$0
BT, BFO	Transverse	Crossing SR 414 east side Gateway Drive	48 BFO 50 Pair Cables	150 feet	No anticipated impacts	\$0
BT, BFO	Transverse	Crosses SR 414 100' west of bridge ending at STA. 1569+50	12 BFO 25 Pair Cable	300 feet	No anticipated impacts	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
BT, BFO	Transverse	Crossing SR 414 west side Forest City Road	2-4" Conduits 24 BFO 2-144 BFO 2-600 Pair, 3-1200 Pair, & 2-1800 Pair Cables	450 feet	No anticipated impacts	\$0
Lumen (fka CenturyLink)						
BFO	Transverse	Crossing SR 414 east side Forest City Road	2" HDPE 144 BFO	450 feet	No anticipated Impacts	\$0
BFO	Adjacent	Runs along north side of SR 414, beginning at Forest City Road	1.25" HDPE 24 BFO	900 feet	No anticipated impacts	\$0
Charter Communications						
OTV	Transverse	Runs north until SR 414 east side of Orange Blossom Trail. Ends at intersection crossing	Unknown	±50 feet	No anticipated impacts	\$0
BFO	Transverse	Crossing SR 414 east side of Orange Blossom Trail	Unknown	500 feet	No anticipated impacts	\$0
OTV	Transverse	Runs north along east side of Rose Avenue	Unknown	±50 feet	No anticipated impacts	\$0
BTV	Transverse	Curves around the southeast corner at the intersection of Rose Avenue and SR 414	Unknown	±50 feet	No anticipated impacts	\$0
OTV	Adjacent	Runs along the south side of SR 414 from the Rose Avenue intersection	Unknown	1200 feet	No anticipated impacts	\$0
OTV	Transverse	Runs along west side of Magnolia Homes Road and ends at the intersection of SR 414	Unknown	±50 feet	No anticipated impacts	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
BTV	Transverse/Adjacent	Crosses SR 414 on the west side of Magnolia Homes Road and then runs adjacent to SR 414 for another 250 feet	Unknown	Total 500 feet	No anticipated impacts	\$0
OTV	Adjacent	Runs adjacent to SR 414 on the south side of the roadway until the Forest City Road intersection	Unknown	600 feet	No anticipated impacts	\$0
OTV	Transverse	Runs along west side of Forest City Road to the southwest corner at the SR 414 intersection	Unknown	±50 feet	No anticipated impacts	\$0
BTV	Transverse	Crosses SR 414 on the west side of Forest City Road and continues from the southwest corner northbound	Unknown	450 feet	No anticipated impacts	\$0
BFO	Transverse	Crosses SR 414 continuously on the east side of Forest City Road	Unknown	450 feet	No anticipated impacts	\$0
City of Altamonte Springs						
RWM	Adjacent	Runs parallel beneath SR 414, crossing US 441 Connects to 24" PVC that follows the length of the Seminole-Wekiva Trail	24" HDPE	550 feet	No impacts anticipated	\$0
RWM	Transverse	Extends from the south side of the Seminole-Wekiva Trail into the median of SR 414 Connects to 24" PVC that runs beneath the median on SR 414	24" PVC	100 feet	No impacts anticipated	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
RWM	Adjacent	Runs beneath median on SR 414 from Seminole-Wekiva Trail for 2850 feet until 90° bend	24" PVC	2850 feet	New construction requires relocation	\$427,500 (assumes relocation within existing ROW)
RWM	Transverse	Crosses westbound SR 414 from median to north side of the roadway Connects 24" PVC pipes adjacent to SR 414	24" PVC with 42" Steel Casing	50 feet (with steel casing)	No impacts anticipated	\$0
RWM	Adjacent	Runs along the north side of SR 414 before 90° bend, extending RWM north on Eden Park Drive 42" Steel casing from NW corner to NE corner at Eden Park Drive intersection	24" PVC with 42" Steel Casing	800 feet 100 feet (Steel casing only)	No impacts anticipated	\$0
Duke Energy (Distribution)						
OE	Transverse	Runs along east side Orange Blossom Trail to the southeast corner of the SR 414 intersection	12.4 kV	±50 feet	No impacts anticipated	\$0
BE	Transverse	Crosses SR 414 on the east side of Orange Blossom Trail through the Seminole-Wekiva Trail	12.4 kV	500 feet	No impacts anticipated	\$0
OE	Adjacent	Runs along the south side of SR 414 from the southeast corner of the Orange Blossom Trail intersection	12.4 kV	1700 feet	No impacts anticipated	\$0
OE	Transverse	Runs along the east side of Rose Avenue and connects to the southeast corner of SR 414 intersection	12.4 kV	±50 feet	No impacts anticipated	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
OE	Transverse	Crosses SR 414 on the east side of Rose Avenue (to be replaced/modified)	12.4 kV	200 feet	New overhead construction	\$65,500
OE	Transverse	Runs along east side of Bear Lake Road until the northwest corner at the SR 414 intersection	12.4 kV	±50 feet	No impacts anticipated	\$0
OE	Transverse	Runs along east side of Eden Park Road to the southeast corner at the intersection of SR 414	12.4 kV	±50 feet	No impacts anticipated	\$0
OE	Transverse	Crosses SR 414 from the southeast corner through the northeast corner on the east side of Eden Park Road (to be replaced/modified)	12.4 kV	150 feet	New overhead construction	\$35,500
OE	Transverse	Extends from the northeast corner on the east side of Eden Park Road north from the SR 414 intersection	12.4 kV	±50 feet	No impacts anticipated	\$0
OE	Transverse	Runs along west side of Magnolia Homes Road and ends at the southwest corner of the SR 414 intersection	12.4 kV	±50 feet	No impacts anticipated	\$0
OE	Transverse	Crosses SR 414 on the west side of Magnolia Homes Road to the northwest corner of the intersection (to be replaced/modified)	12.4 kV	150 feet	New overhead construction	\$33,500
BE	Transverse	Extends from the northwest corner of SR 414 and Magnolia Home Road north	12.4 kV	±50 feet	No anticipated impacts	\$0
OE	Transverse	Crosses SR 414 midway between the intersections of Gateway Drive and Forest City Road (to be replaced/modified)	12.4 kV	200 feet	New overhead construction	\$56,000

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
BE	Transverse	Crosses SR 414 west side of Forest City Road	12.4 kV	450 feet	No impacts anticipated	\$0
Duke Energy (Transmission)						
OE	Adjacent	Runs along south side of SR 414 and connects to OE 230kV	230 kV	1,900 feet	No anticipated impacts	\$0
OE	Transverse	Crosses SR 414 and connects to three OE utility lines running northeast across Bear Lake Road	230kV	1,100 feet	New construction proximity to OE requires further coordination in design. Survey of existing facilities and coordination with Duke Energy during design may result in avoidance (refer to Appendix C).	\$1,172,500
OE (3)	Adjacent	Runs along north side of SR 414 east of US 441 to Bear Lake Road	230kV	2,000 feet	No anticipated impacts	\$0
Lake Apopka Natural Gas						
Gas	Transverse (Offset from SR 414)	Runs along west side of Apopka Boulevard	4" HP Steel	None	No impacts anticipated	\$0
Gas	Transverse (Offset from SR 414)	Runs along east side of Apopka Boulevard	2" Steel	None	No impacts anticipated	\$0
Gas	Adjacent (Offset from SR 414)	Begins at bridge end and runs along south side of Winfield Street, connects to 2" steel along west side of Forest City Road	2" Steel	100 feet (adjacent to SR 414)	No impacts anticipated	\$0
Gas	Adjacent (Offset from SR 414)	Runs along south side of Joyann Street, connects to 2" steel along west side of Forest City Road	1.5" Steel	None	No impacts anticipated	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
Gas	Transverse	Runs along Forest City Road, connected to 2" steel and 1.5" steel on side streets	2" Steel	None	No impacts anticipated	\$0
Orange County Utilities						
FM	Transverse	Crosses SR 414 approx. 250' west of the intersection of Orange Blossom Trail	16" DIP	1000 feet	No impacts anticipated	\$0
FM	Transverse	Crosses SR 414 on the west side of Orange Blossom Trail	16" PVC	±900 feet	No impacts anticipated	\$0
WM	Transverse	Crosses SR 414 on the east side of Orange Blossom Trail	12" PVC (beneath SR 414) 6" DIP 16" DIP	±900 feet	No impacts anticipated	\$0
WM	Adjacent (beneath SR 414)	Runs below SR 414 travelway east of Orange Blossom Trail intersection in a series of connected water mains	2-8" PVC (offset approx. 8 feet from each other) 12" PVC (1000 feet)	1300 feet	No impacts anticipated	\$0
WM	Transverse (beneath SR 414)	Runs below SR 414 travelway east of Orange Blossom Trail intersection in a series of laterals	3-8" DIP 3-6" DIP 5-8" PVC	Varies	No impacts anticipated	\$0
WM	Transverse/Adjacent	Runs along west side of SR 414, crosses travelway, and extends on the east side of SR 414, connecting to 16" HDPE water main at the Rose Avenue intersection	12" PVC 24" Steel	800 feet (PVC) 156 feet (steel WM)	No impacts anticipated	\$0
WM	Transverse	Runs along west side of Rose Avenue, connecting to 12" PVC water main at the southwest corner on SR 414	16" HDPE	±50 feet	No impacts anticipated	\$0

Table 5-1. Utility Impacts from Preferred Alternative by Location

Utility Type	Transverse or Adjacent	General Location	Size	Approx. Length	Impacts	Cost Estimate
FM	Transverse	Crosses eastbound travelway of SR 414 from Tealwood Cover neighborhood, connecting to median	6" PVC	±100 feet	No impacts anticipated	\$0
FM	Transverse	Runs along west side Magnolia Homes Avenue and crosses travel way to southeast corner at SR 414 intersection	10" PVC	±50 feet	No impacts anticipated	\$0
WM	Adjacent (Offset from SR 414)	Runs along south side of Oranole Road, offset from SR 414	3" AC	1600 feet	No impacts anticipated	\$0
Seminole County						
WM	Adjacent	Runs along west side of SR 414 with above grade interconnect piping adjacent to the sidewalk; connects at northwest intersection of Bear Lake Road and extends north	10" PVC	1100 feet	Potential impacts to interconnect piping	\$120,000
Zayo Group						
BFO	Transverse	Runs along the west side Forest City Road under SR 414	Unknown	200 feet	No anticipated impacts	\$0

Notes:

BE = buried electric

BFO = buried fiber optic

BT = buried telephone

BTV = buried television

FM = force main

OE = overhead electric

OFOC = overhead fiber optic cable

OT = overhead telephone

OTV = overhead television

RWM = reclaimed water main

WM = water main

6. Mitigation Recommendations

Mitigation measures should consider the following:

- The accurate location of all underground facilities to confirm a clear or conflict determination
- The accurate location of all aerial facilities to confirm a clear or conflict determination
- An innovative design approach to avoid the utility facilities and minimize impacts
- The Utility Work by Highway Contractor Agreement option for unavoidable relocation of the water and sewer facilities
- Minimizing the duration of unavoidable service disruptions
- Allowing service disruption only during periods of no or minimum usage
- Maintaining utility connections in temporary locations
- Installing alternative or new facilities before disconnecting the existing facilities
- Completion of the necessary utility work prior to the start of roadway construction, or prioritize the utility work to avoid the first phases of roadway construction
- Removing Occupational Safety and Health Administration crane conflicts; utilize low overhead construction techniques

7. References

Central Florida Expressway Authority (CFX). 2019. *Final Technical Memo SR 414 (Maitland Blvd.) Reversible Express Lanes Schematic*. Prepared by Dewberry. July.

Central Florida Expressway Authority (CFX). 2022. *Typical Section Technical Memorandum*. Prepared for Central Florida Expressway Authority. Submitted by: Jacobs Engineering Group Inc.

Florida Department of Transportation (FDOT). 2017. *2017 Utility Accommodation Manual*. Effective July 30, 2017. https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/programmanagement/utilities/docs/uam/uam2017.pdf?sfvrsn=d97fd3dd_0

MetroPlan Orlando. 2017. *2040 Long Range Transportation Plan*. June 11, 2014, Amended May 10, 2017.

MetroPlan Orlando. 2021. *Transportation Improvement Program*. Adopted: July 7.

Appendix A

Sample UAO Contact Letter

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

October 1, 2020

RE: ADJUSTMENT OF UTILITIES – STATE STATUTES CHAPTER 337.403

Project: State Road (SR) 414 Expressway Extension PD&E Study
Description: State Road (SR) 414 Expressway Extension (US 441 to SR 434)
County: Seminole and Orange Counties, Florida
CFX Project: #414-227
Contract: #001590

INITIAL UTILITY DISTRIBUTION

The Central Florida Expressway Authority (CFX) is conducting a Project Development & Environment Study for State Road (SR) 414 Expressway Extension (US 441 to SR 434) in Seminole and Orange Counties, Florida. The study limits extend along the existing SR 414 (Maitland Boulevard) corridor from US 441 (Orange Blossom Trail) to SR 434 (Forest City Road). See attached Figure 1, Regional Project Location Map, and Figure 2, Study Area Map.

In order to determine the best alternative for this project, our project team needs to determine the locations of all existing, out-of-service, and future utility facilities within and adjacent to the project limits. Please identify your company's utility facilities inside the existing SR 414 right-of-way lines and outside the right-of-way lines (at least 300 feet from the existing right-of-way) and depict their location on the attached/enclosed base maps. It is important that your response (hard copy or electronic) be provided to our office by **October 31, 2020**.

Please provide with your response the following information:

- Provide marked plans or electronic files to show the areas where your company's utility facilities are approximately located along the project corridors or easements. Indicate the limits of any easements and if the easement is owned by your company or FDOT.
- Provide a description of the utility facilities marked on the base maps, include the type, size, material, and if aerial or underground.
- Also indicate on the base maps if you have any future planned utility installations within the project limits (inside and/or outside the right-of-way lines).

Your input and continued cooperation on this project is essential. Should you have any questions, do not hesitate to contact me directly at 407-496-4600 or email phil.jacoby@jacobs.com.

Sincerely,

JACOBS ENGINEERING, INC.

Phil Jacoby, PE
Engineering Lead

Cc: Sunsera Dalton, PE, Jacobs Engineering
Carnot Evans, PE, Dewberry Engineers
Will Hawthorne, PE, Central Florida Expressway Authority

4974 ORL TOWER RD. ORLANDO, FL 32807 | PHONE: (407) 690-5000 | FAX: (407) 690-5011

Attached: (1) Regional Location Map (Figure 1)
(1) Study Area Map (Figure 2)
(1) Aerial Basemaps

Appendix B

Roadway Concept Plans

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

PREFERRED ALTERNATIVE
CONCEPT PLANS

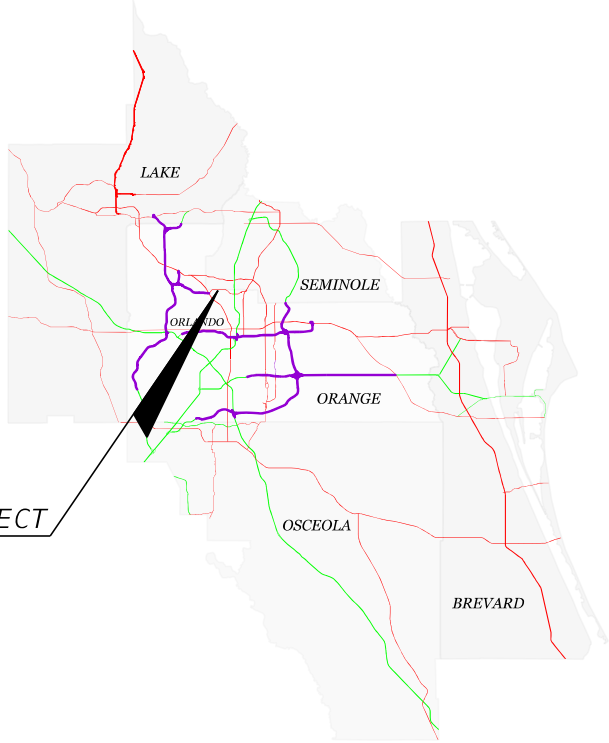
SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

STATE ROAD NO. 414
CFX PROJECT NUMBER: 414-227

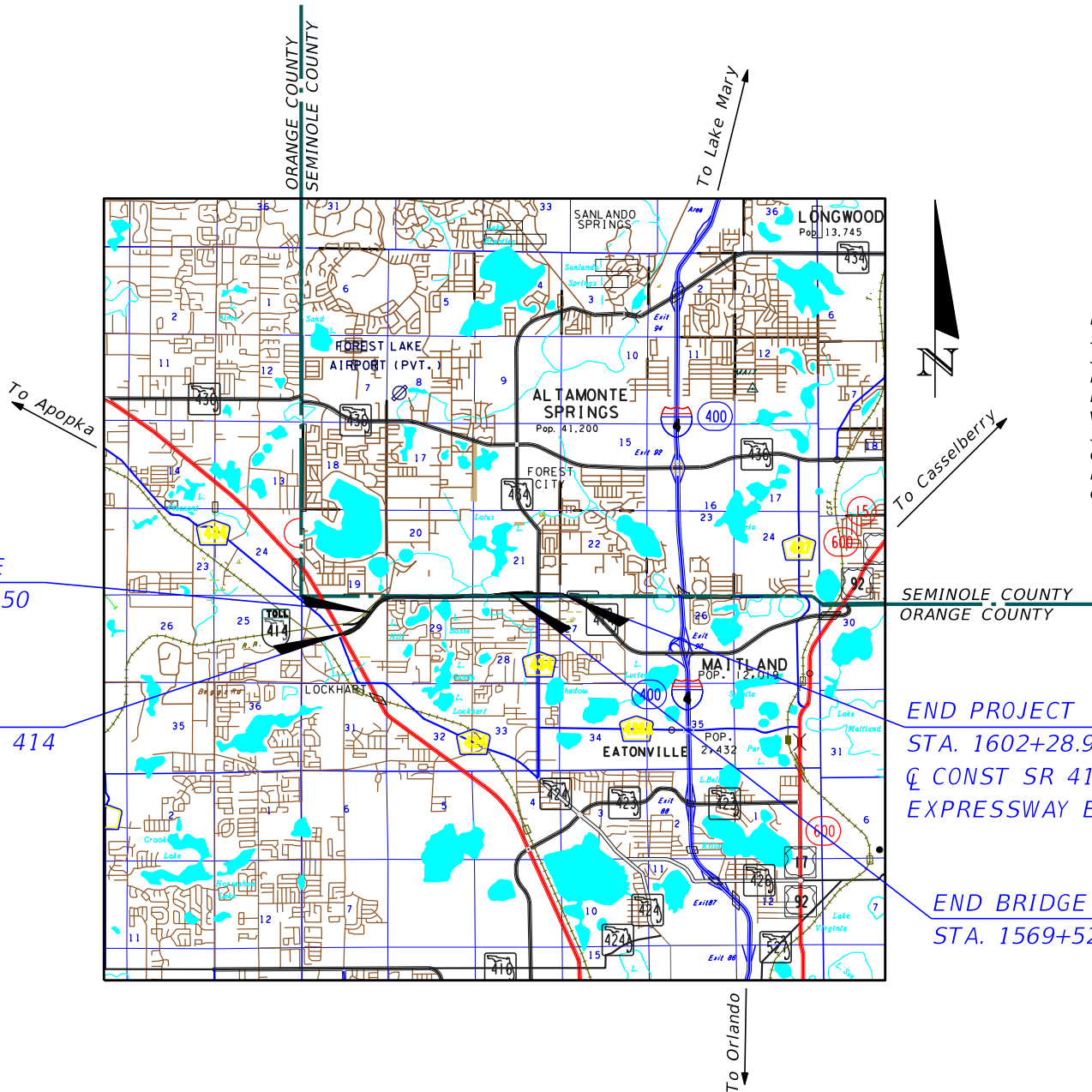
INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
001	KEY SHEET
	TYPICAL SECTIONS (UNDER SEPARATE COVER)
002	PROJECT LAYOUT
003 - 005	CURVE & COORDINATE DATA
006 - 011	SR 414 ELEVATED PLAN SHEETS
012 - 017	SR 414 AT-GRADE PLAN SHEETS
018 - 024	PROFILE SHEETS

DRAFT CONCEPT
NOT FOR CONSTRUCTION
AUGUST 2021



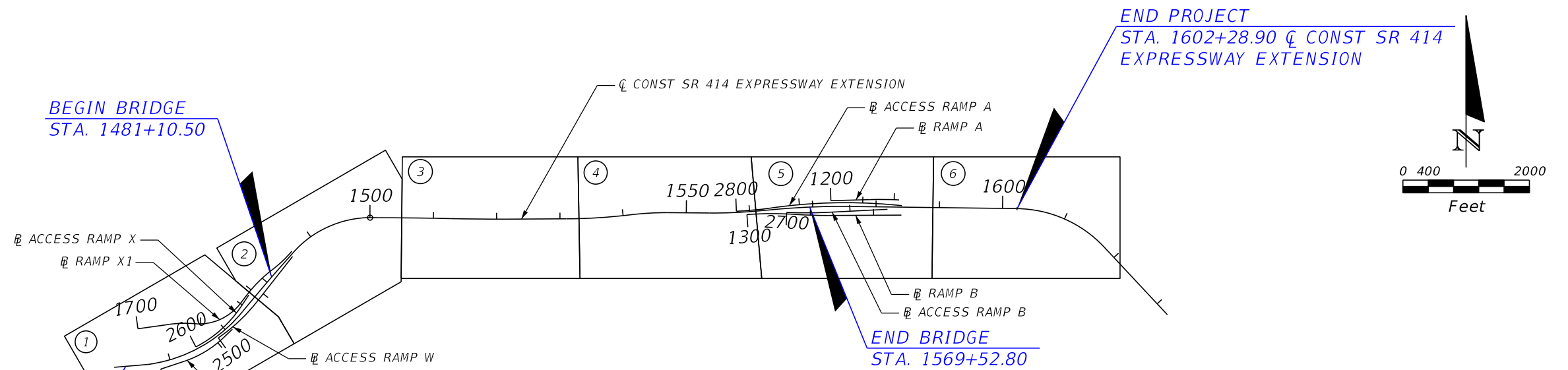
LOCATION OF PROJECT



CENTRAL FLORIDA EXPRESSWAY AUTHORITY
GOVERNING BOARD

- | | |
|--------------------|---|
| BUDDY DYER | CHAIRMAN, CITY OF ORLANDO MAYOR |
| SEAN PARKS | VICE CHAIRMAN, LAKE COUNTY REPRESENTATIVE |
| JERRY DEMINGS | TREASURER, ORANGE COUNTY MAYOR |
| BRANDON ARRINGTON | OSCEOLA COUNTY REPRESENTATIVE |
| LEE CONSTANTINE | SEMINOLE COUNTY REPRESENTATIVE |
| VICTORIA SIPLIN | ORANGE COUNTY REPRESENTATIVE |
| JAY MADARA | GOVERNOR'S APPOINTEE |
| CURT SMITH | BREVARD COUNTY REPRESENTATIVE |
| RAFAEL E. MARTINEZ | GOVERNOR'S APPOINTEE |
| CHRISTOPHER MAIER | GOVERNOR'S APPOINTEE |

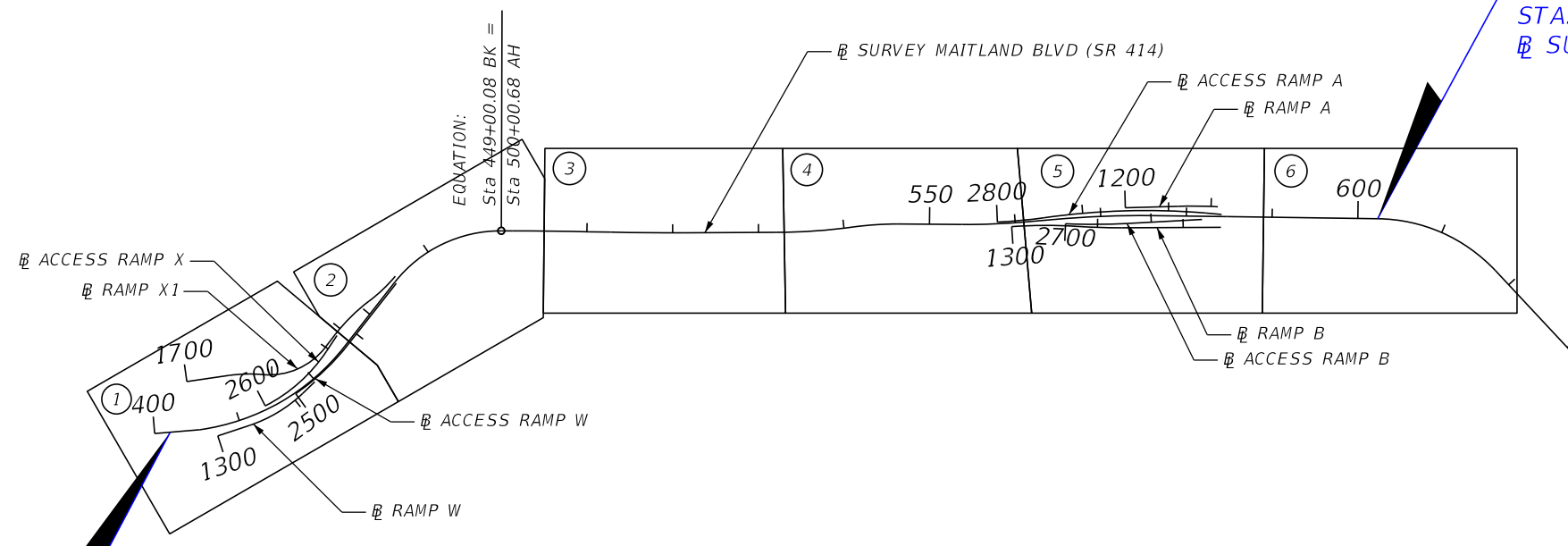
CFX PROJECT MANAGER:
WILL HAWTHORNE, P.E.



SR 414 ELEVATED

BEGIN PROJECT
STA. 1452+90.59 CL CONST SR 414
EXPRESSWAY EXTENSION

END PROJECT
STA. 1602+28.90 CL CONST SR 414
EXPRESSWAY EXTENSION =
STA. 602+28.92
CL SURVEY MAITLAND BLVD



SR 414 AT-GRADE

BEGIN PROJECT
STA. 1452+90.59 CL CONST SR 414
EXPRESSWAY EXTENSION =
STA. 401+80.00 CL SURVEY MAITLAND BLVD
EXPRESSWAY EXTENSION

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.

SR 414

PROJECT NO.

414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

PROJECT LAYOUT

SHEET
NO.

002

CURVE AND COORDINATE DATA											
CHAIN	CURVE NO.	PC STA.	PT STA.	D	L	R	Direction	Design Speed	e _{max}	Superelev.	DESIGN NOTES
					LF	LF	LT/RT	mph	5%/10%	(ft./ft.)	
BL_SR414_PROP EXPRESSWAY	BL_SR414_PROP_3	1456+39.26	1459+58.55	2° 12' 13"	319.29	2600.00	LT	55 mph	10%-Rural	0.055	MATCH EXISTING 'e' ON BRIDGE
		COMPOUND CURVE									
	BL_SR414_PROP_4	1459+58.55	1473+95.17	2° 29' 59"	1436.61	2292.00	LT	50 mph	10%-Rural	0.049	
		REVERSE CURVE									
	BL_SR414_PROP_5	1473+95.17	1481+66.28	0° 16' 22"	771.11	21000.00	RT	50 mph	10%-Rural	NC	
	BL_SR414_PROP_8	1486+15.76	1500+15.52	3° 30' 00"	1399.76	1637.00	RT	50 mph	10%-Rural	0.065	AT BEAR LAKE RD/ROSE AVE
	BL_SR414_PROP_11	1501+27.07	1510+30.33	0° 06' 40"	903.26	51556.20	RT	50 mph	10%-Rural	NC	
	BL_SR414_PROP_14	1512+74.87	1521+34.87	0° 09' 53"	860.00	34768.27	LT	50 mph	10%-Rural	NC	
	BL_SR414_PROP_17	1530+98.79	1540+96.33	0° 41' 14"	997.53	8337.00	LT	50 mph	10%-Rural	NC	
		REVERSE CURVE									
	BL_SR414_PROP_18	1540+96.33	1546+96.60	1° 15' 00"	600.27	4584.00	RT	50 mph	10%-Rural	0.026	CURVE LENGTH CONSTRAINED BY PROPOSED PIER PLACEMENT WITHIN EXISTING BRIDGE MEDIAN
	BL_SR414_PROP_21	1553+63.52	1561+14.05	0° 43' 15"	750.53	7950.00	LT	50 mph	10%-Rural	RC	
	BL_SR414_PROP_24	1564+56.36	1576+02.56	0° 30' 00"	1146.19	11459.16	RT	50 mph	10%-Rural	NC	
	BL_SR414_PROP_27	1602+31.22	1617+69.55	3° 00' 00"	1538.33	1909.86	RT	50 mph	10%-Rural	0.06	MATCH EXISTING ROADWAY

NOTE: SHADING OF ADJACENT CURVES INDICATES COMPOUND CURVES OR REVERSE CURVES.

CURVE AND COORDINATE DATA

CHAIN	CURVE NO.	PC STA.	PT STA.	D	L	R	Direction	Design Speed	e _{max}	Superelev.	DESIGN NOTES
					LF	LF	LT/RT	mph	5%/10%	(ft./ft.)	
BL_SR414	BL_SR414_3	405+28.67	425+19.62	2° 12' 13"	1990.95	2600.00	LT	55 mph	10% - Rural	0.055	OVER US 441
EXISTING											
MAITLAND BLVD.	BL_SR414_6	434+73.95	449+00.08	3° 38' 52"	1426.13	1570.72	RT	45 mph	5% - Urban	RC	AT BEAR LAKE RD/ROSE AVE
STA EON 449+00.08 BK = 500+00.68 AH											
	BL_SR414_9	501+27.16	510+30.43	0° 06' 40"	903.26	51556.20	RT	45 mph	5% - Urban	NC	
	BL_SR414_12	512+74.96	521+34.96	0° 09' 53"	860.00	34768.27	LT	45 mph	5% - Urban	NC	
	BL_SR414_15	532+09.25	541+20.01	0° 50' 53"	910.07	6755.80	LT	45 mph	5% - Urban	NC	
		REVERSE CURVE									
	BL_SR414_16	541+20.01	546+31.40	1° 38' 13"	511.38	3500.00	RT	45 mph	5% - Urban	NC	
	BL_SR414_19	553+78.79	561+00.00	0° 45' 00"	721.21	7639.44	LT	45 mph	5% - Urban	NC	
	BL_SR414_22	564+56.98	576+03.17	0° 30' 00"	1146.19	11459.16	RT	45 mph	5% - Urban	NC	
	BL_SR414_27	602+31.84	617+70.17	3° 00' 00"	1538.33	1909.86	RT	50 mph	10% - Rural	0.060	MATCH EXISTING ROADWAY

NOTE: SHADING OF ADJACENT CURVES INDICATES COMPOUND CURVES OR REVERSE CURVES.

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.

SR 414

PROJECT NO.

414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

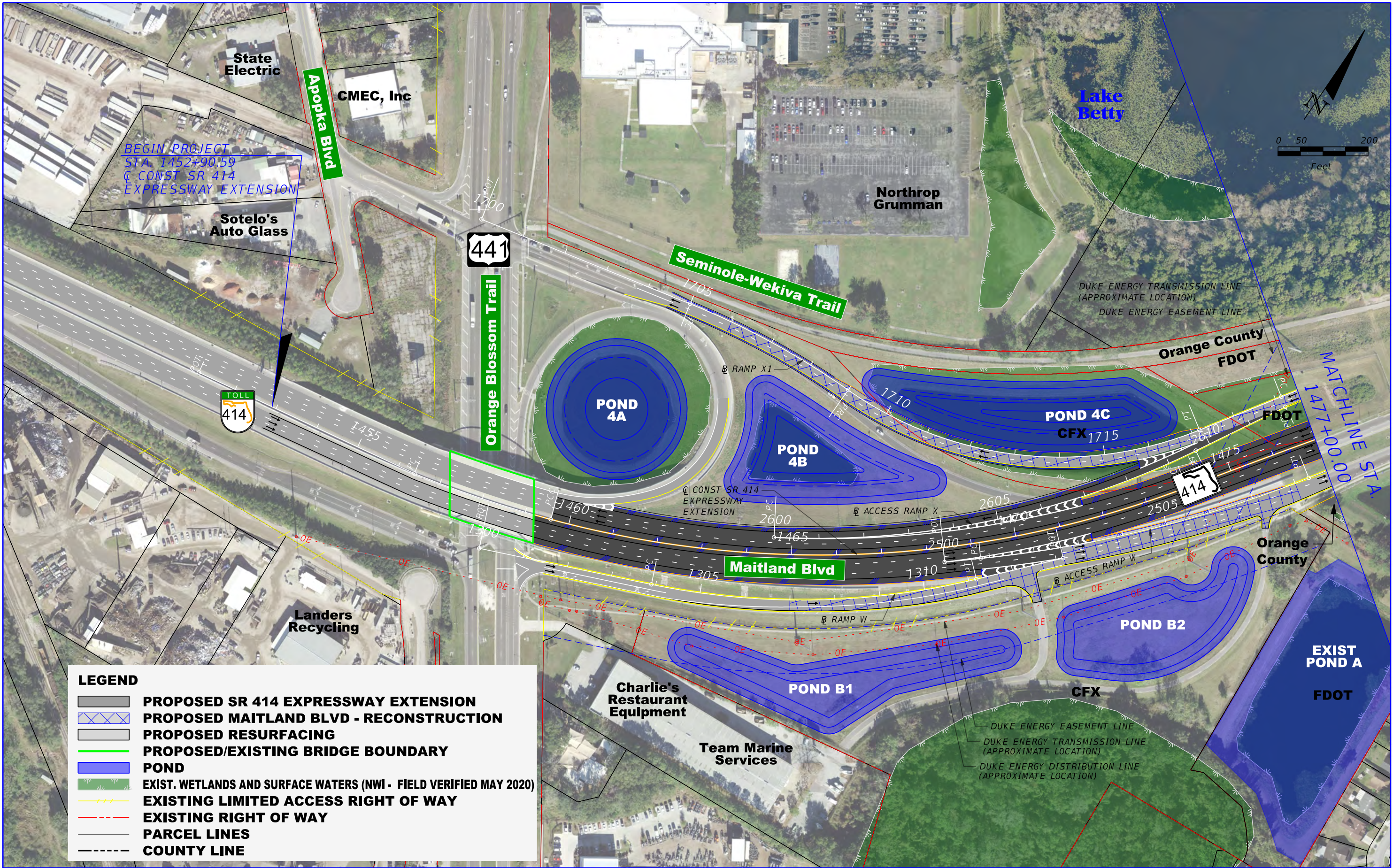
CURVE & COORDINATE DATA

SHEET
NO.

004

CURVE AND COORDINATE DATA											
CHAIN	CURVE NO.	PC STA.	PT STA.	D	L	R	Direction	Design Speed	e _{max}	Superelev.	DESIGN NOTES
					LF	LF	LT/RT	mph	5%/10%	(ft./ft.)	
RAMP A_ACC	RAMPA_ACC_1	2800+00.00	2805+45.18	1° 00' 00"	545.18	5730.00	LT	45 mph	5%-Urban	NC	CONNECTS TO AT-GRADE 45 MPH
		REVERSE CURVE									
	RAMPA_ACC_2	2805+45.18	2824+36.14	0° 41' 14"	1890.96	8337.00	RT	50 mph	10%-Rural	NC	
RAMP B_ACC	RAMPB_ACC_1	2700+00.00	2707+17.87	0° 45' 00"	717.87	7639.00	LT	50 mph	10%-Rural	RC	
RAMP W_ACC	RAMPW_ACC_1	2500+80.30	2508+32.53	2° 07' 19"	752.23	2700.00	LT	50 mph	10%-Rural	0.043	
RAMP X_ACC	RAMPX_ACC_1	2600+00.00	2609+65.89	2° 59' 59"	965.89	1910.00	LT	50 mph	10%-Rural	0.057	
RAMP A	RAMPA_3	1206+14.56	1210+46.50	1° 00' 00"	431.93	5730.00	RT	40 mph	5%-Urban	NC	
RAMP B	RAMPB_1	1300+00.00	1307+58.33	1° 00' 00"	758.33	5730.00	RT	40 mph	5%-Urban	NC	
		REVERSE CURVE									
	RAMPB_2	1307+58.33	1312+82.19	0° 45' 00"	523.87	7639.00	LT	40 mph	5%-Urban	NC	
RAMP W	RAMPW_3	1303+90.27	1311+17.40	3° 30' 00"	727.13	1637.00	LT	45 mph	5%-Urban	RC	
RAMP X1	RAMPX1_3	1704+99.54	1708+99.96	3° 16' 27"	400.41	1750.00	RT	45 mph	5%-Urban	RC	
		REVERSE CURVE									
	RAMPX1_4	1708+99.96	1717+17.94	6° 59' 45"	817.99	819.00	LT	45 mph	5%-Urban	0.030	
	RAMPX1_7	1719+14.15	1724+64.15	2° 45' 02"	550.00	2083.00	RT	45 mph	5%-Urban	NC	
		REVERSE CURVE									
	RAMPX1_8	1724+64.15	1728+89.15	2° 59' 59"	425.00	1910.00	LT	45 mph	5%-Urban	RC	

NOTE: SHADING OF ADJACENT CURVES INDICATES COMPOUND CURVES OR REVERSE CURVES.



LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED/EXISTING BRIDGE BOUNDARY
- POND
- EXIST. WETLANDS AND SURFACE WATERS (NWI - FIELD VERIFIED MAY 2020)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

PROJECT NO.
414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 ELEVATED
PLAN SHEET (1)

SHEET
NO.

006



PRELIMINARY - SUBJECT TO CHANGE	ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E. P.E. LICENSE NO. 60883		<div>SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434</div> <div>CENTRAL FLORIDA EXPRESSWAY AUTHORITY</div>	SR 414 ELEVATED PLAN SHEET (2)		SHEET NO.
	JACOBS ENGINEERING GROUP INC. 200 S. ORANGE AVENUE, STE 900 ORLANDO, FL 32801; PHONE (407) 903-5001 CERTIFICATE OF AUTHORIZATION No. 000072					007
	ROAD NO. SR 414			PROJECT NO. 414-227		



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

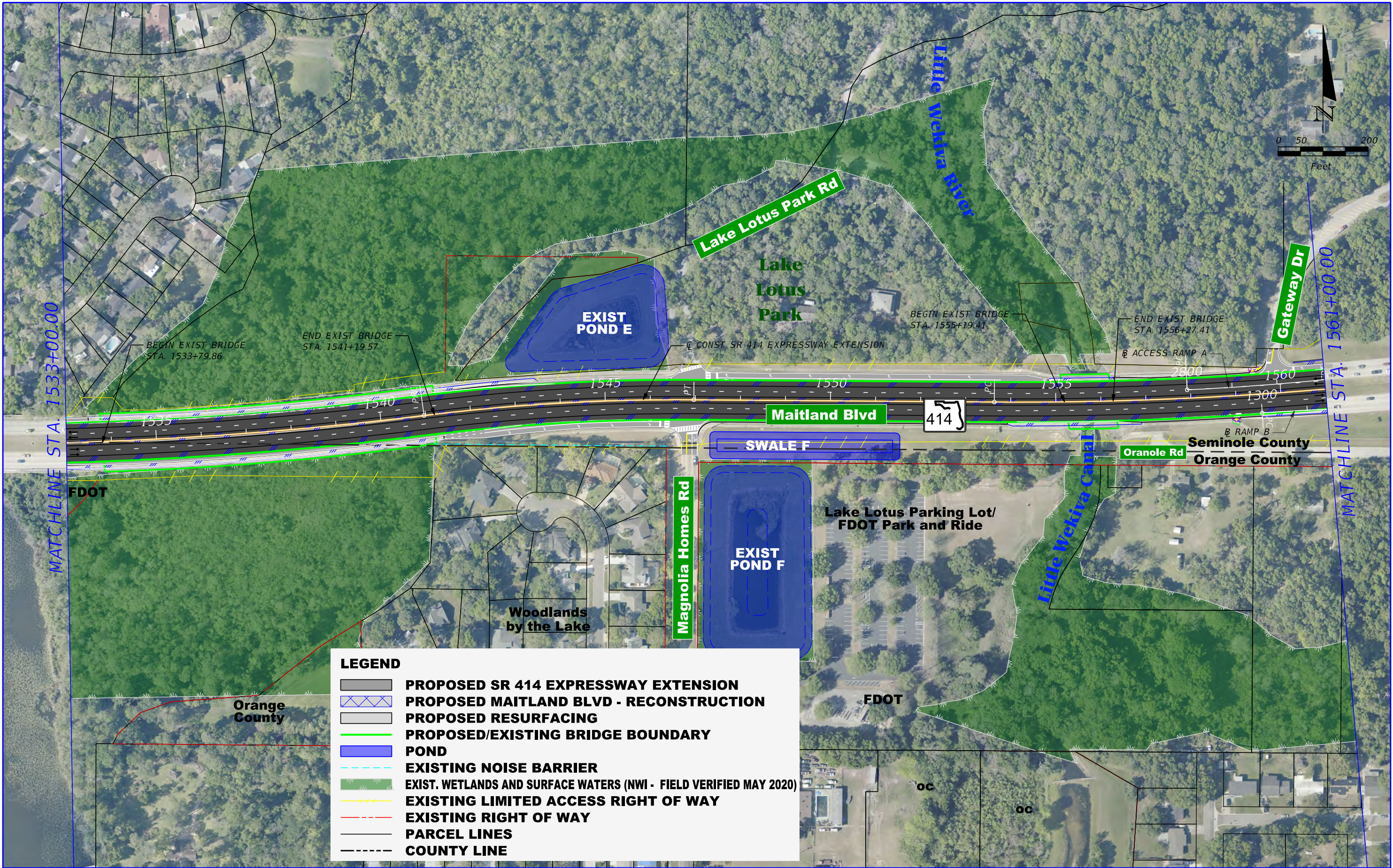
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414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 ELEVATED
PLAN SHEET (3)

SHEET
NO.

008



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRISTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

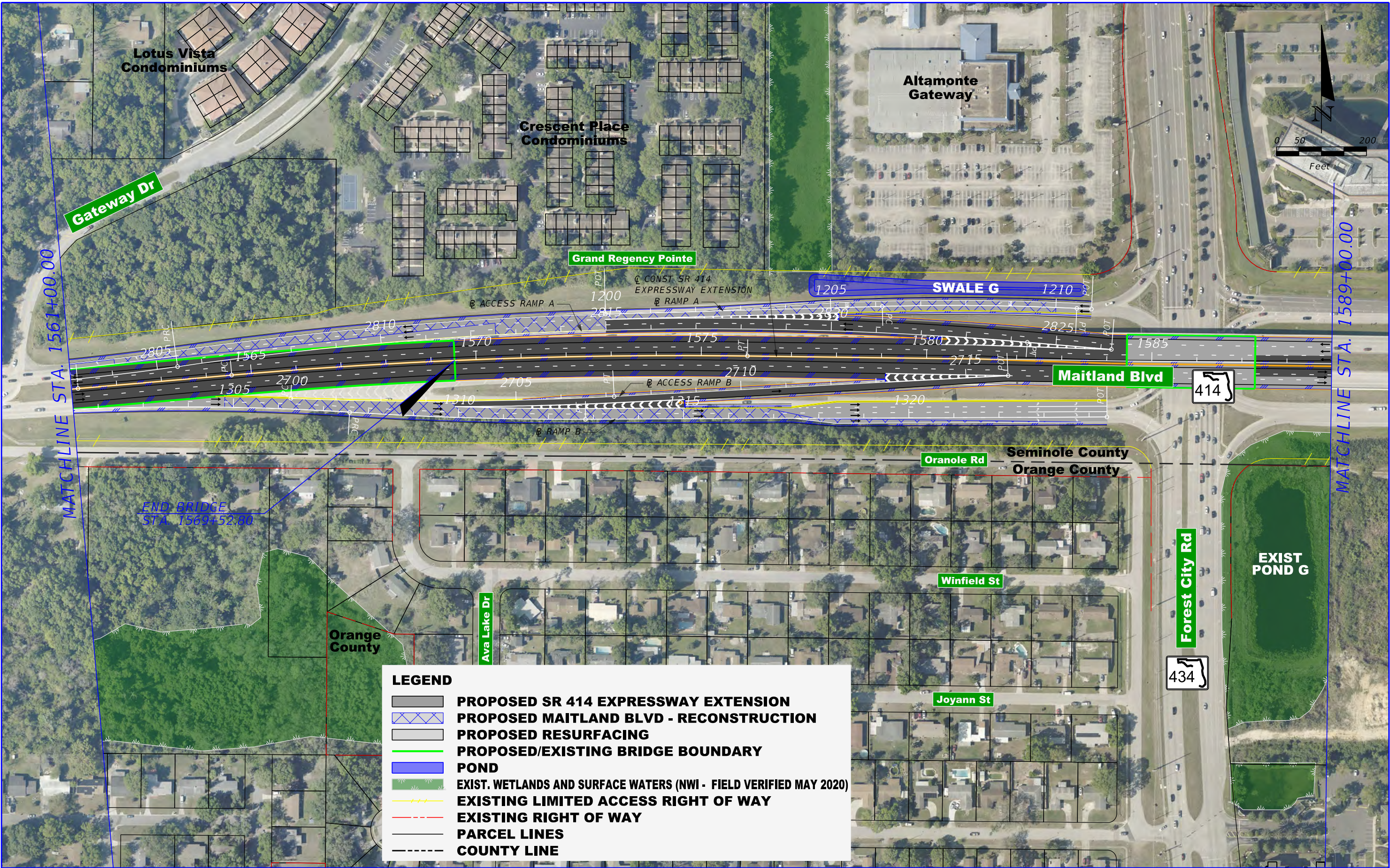
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414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 ELEVATED
PLAN SHEET (4)

SHEET
NO.

009



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

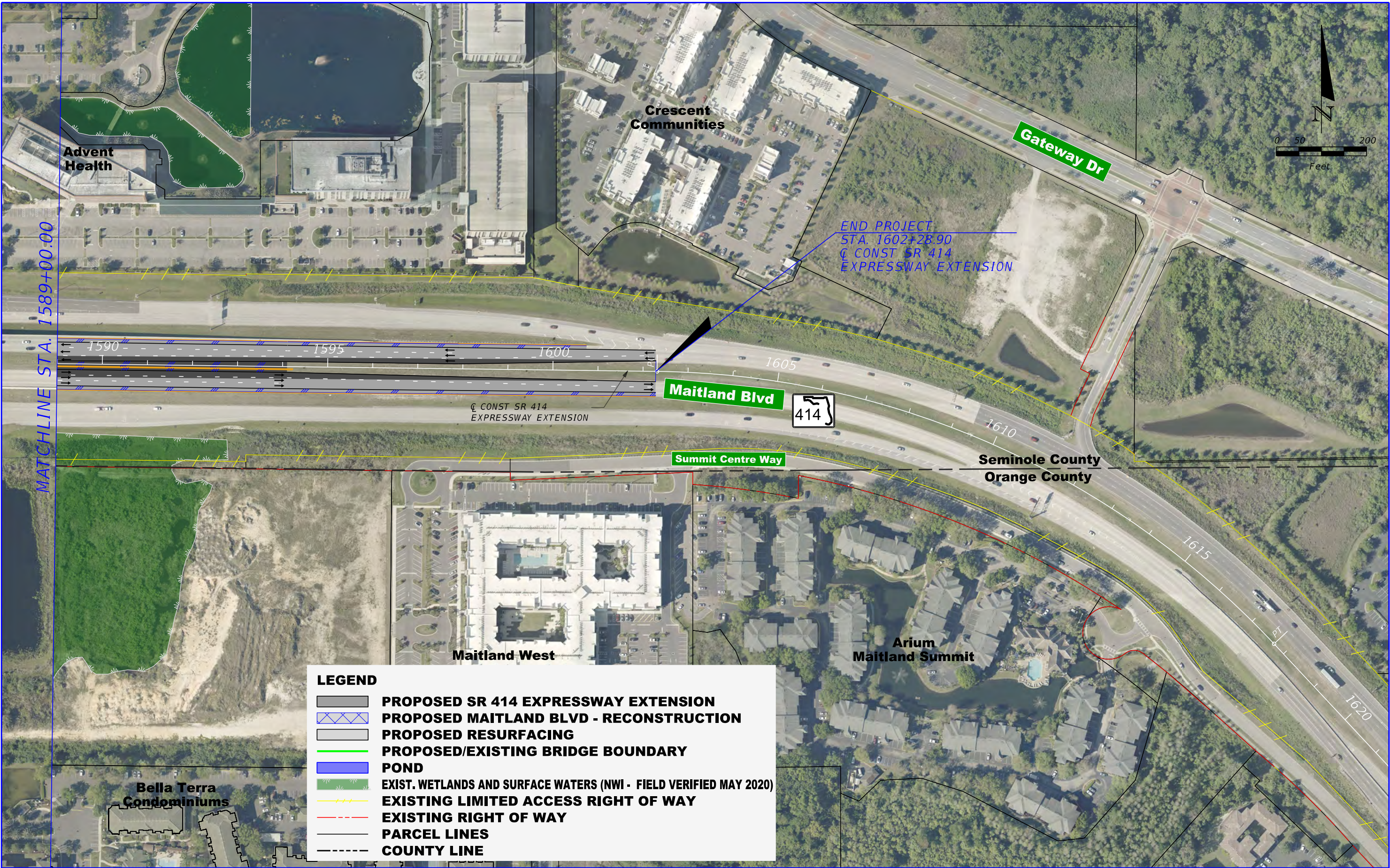
PROJECT NO.
414-227

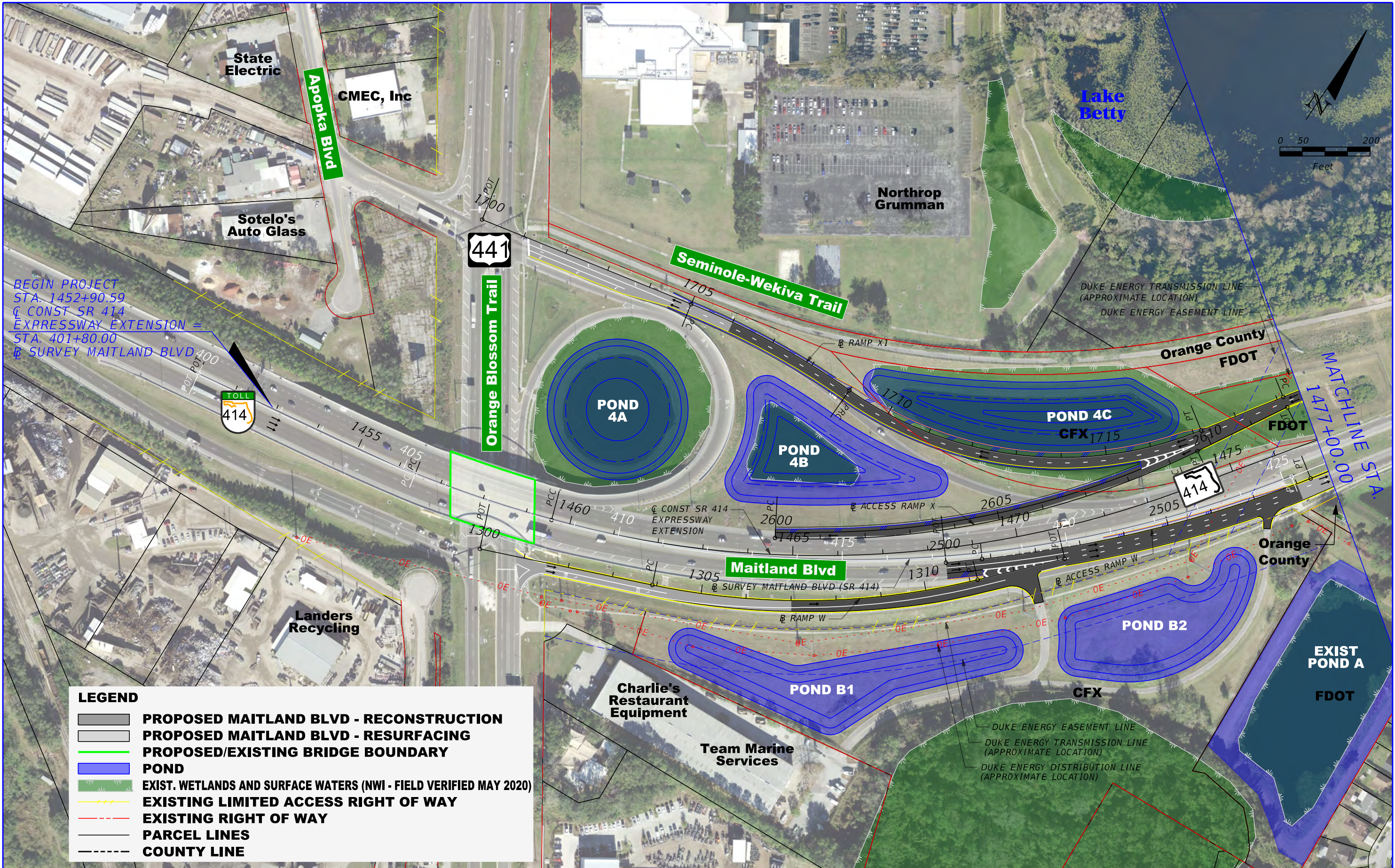
CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

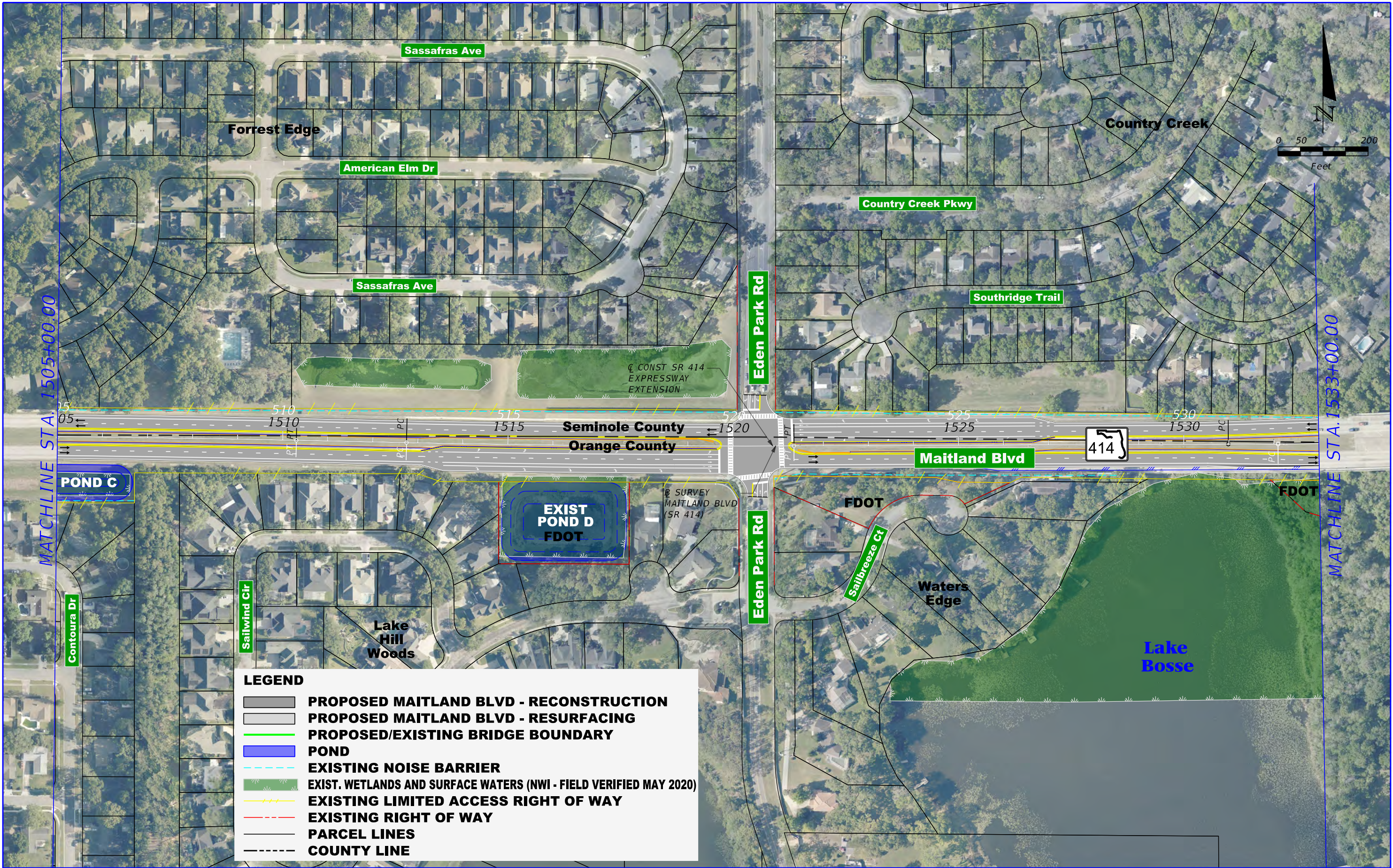
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PLAN SHEET (5)

SHEET
NO.

010







PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

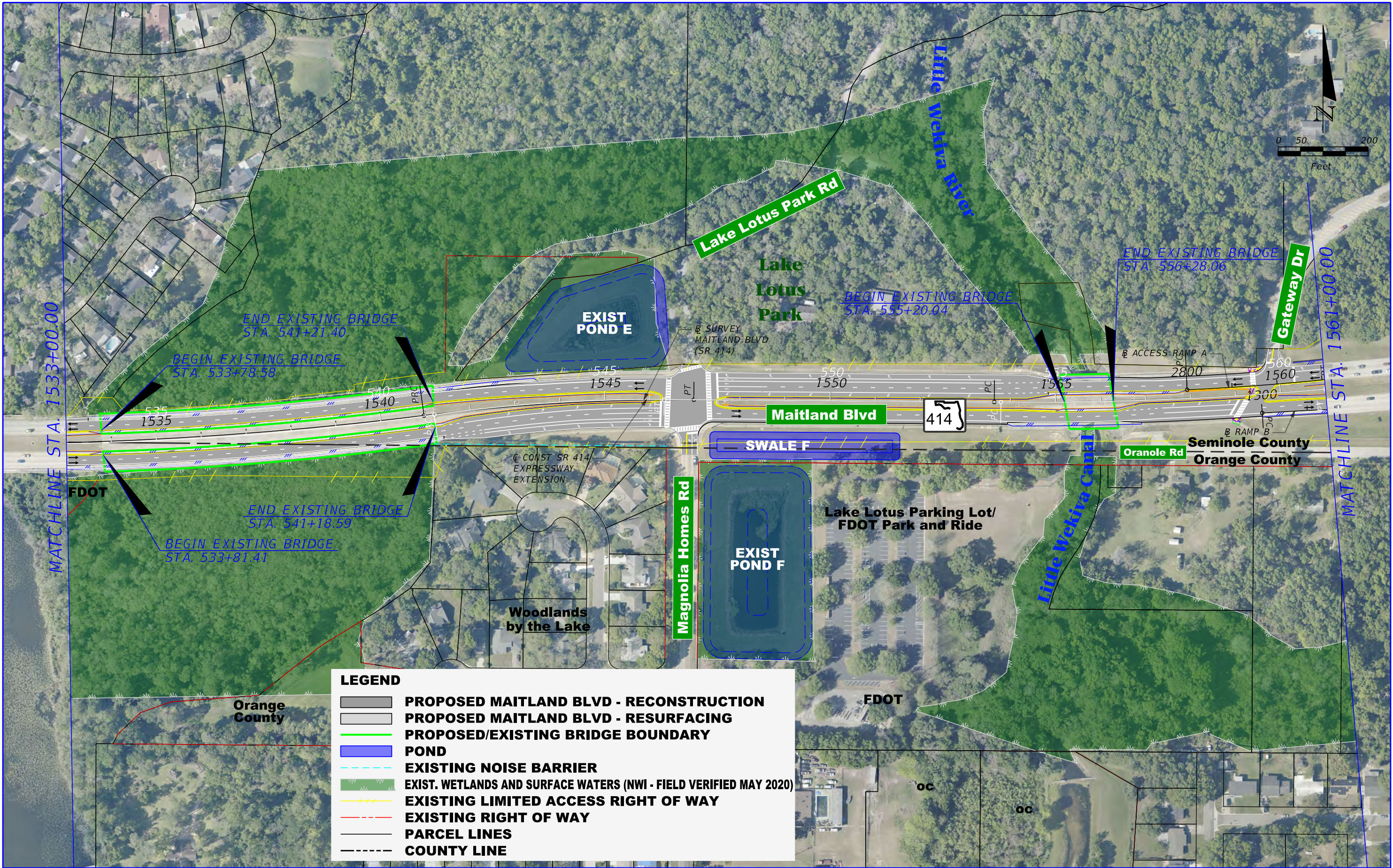
PROJECT NO.
414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

*SR 414 AT-GRADE
PLAN SHEET (3)*

SHEET
NO.

014



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 AT-GRADE
PLAN SHEET (4)

SHEET
NO.

015



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

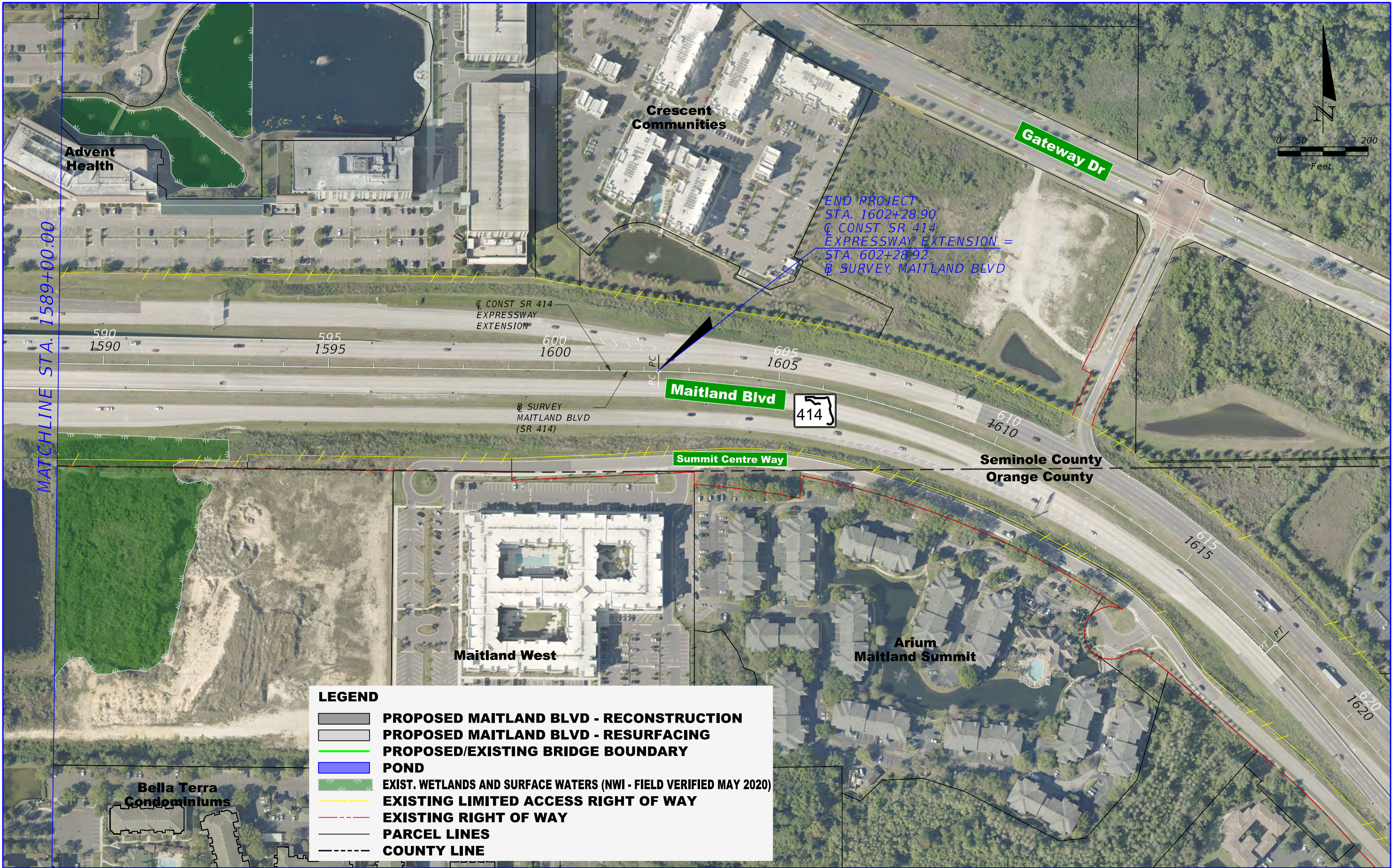
PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

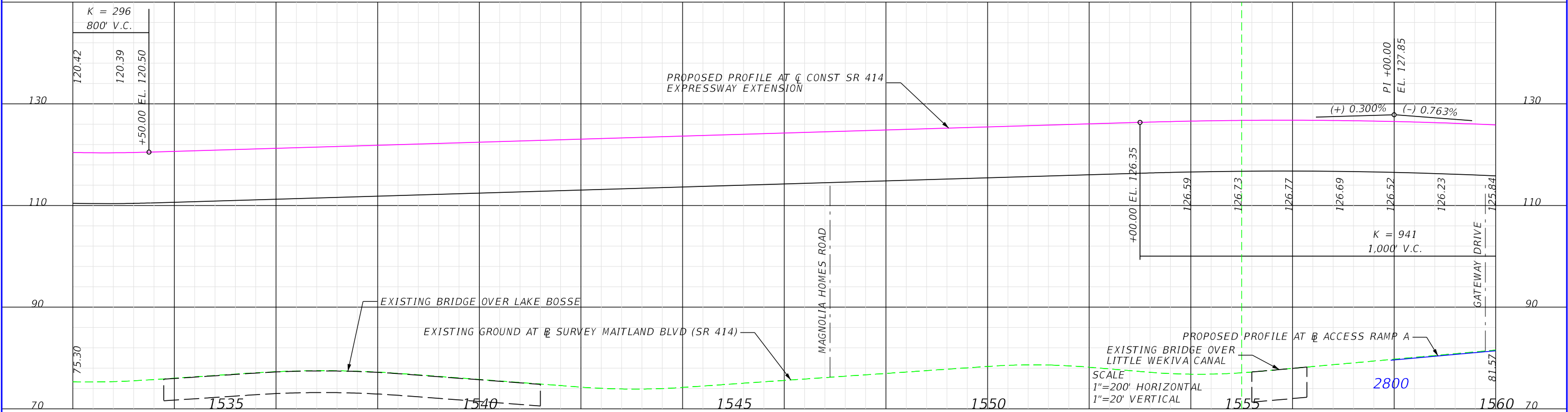
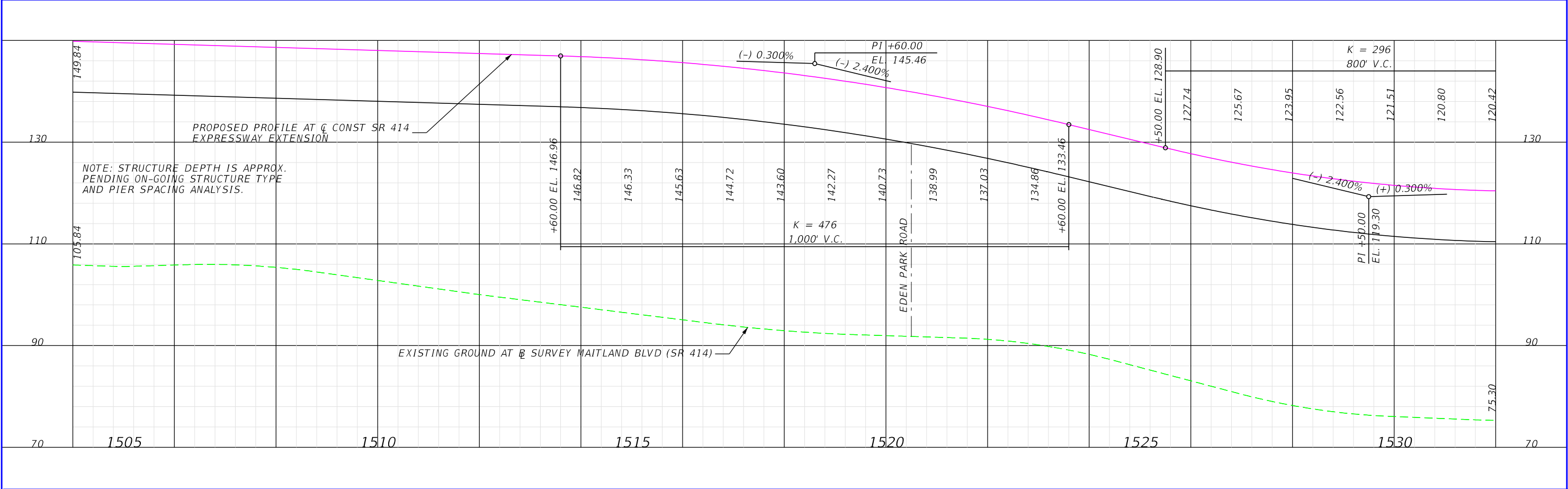
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PLAN SHEET (5)

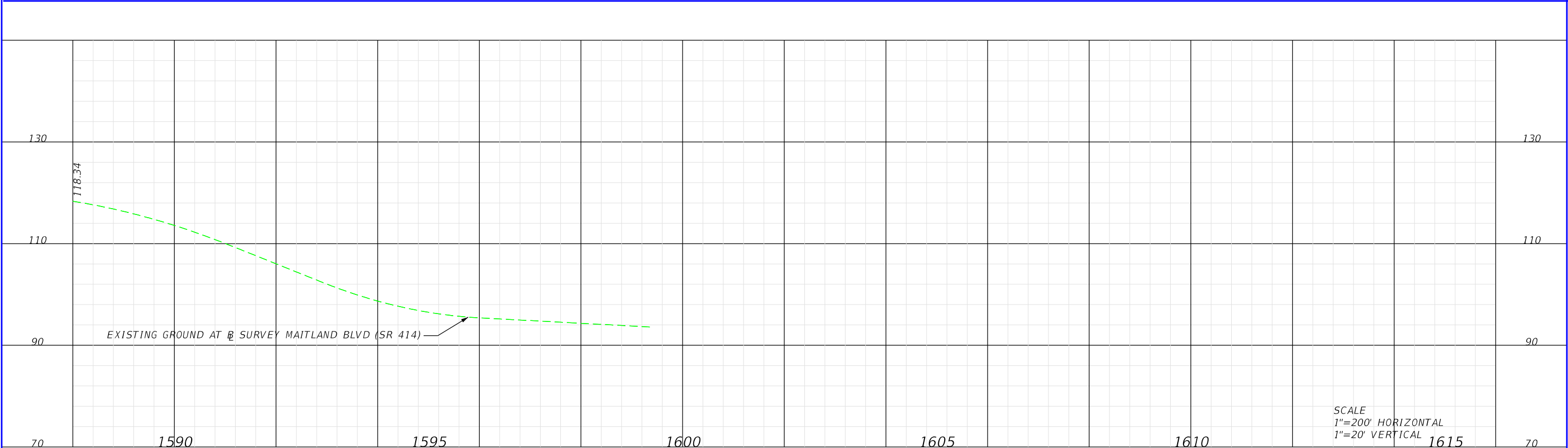
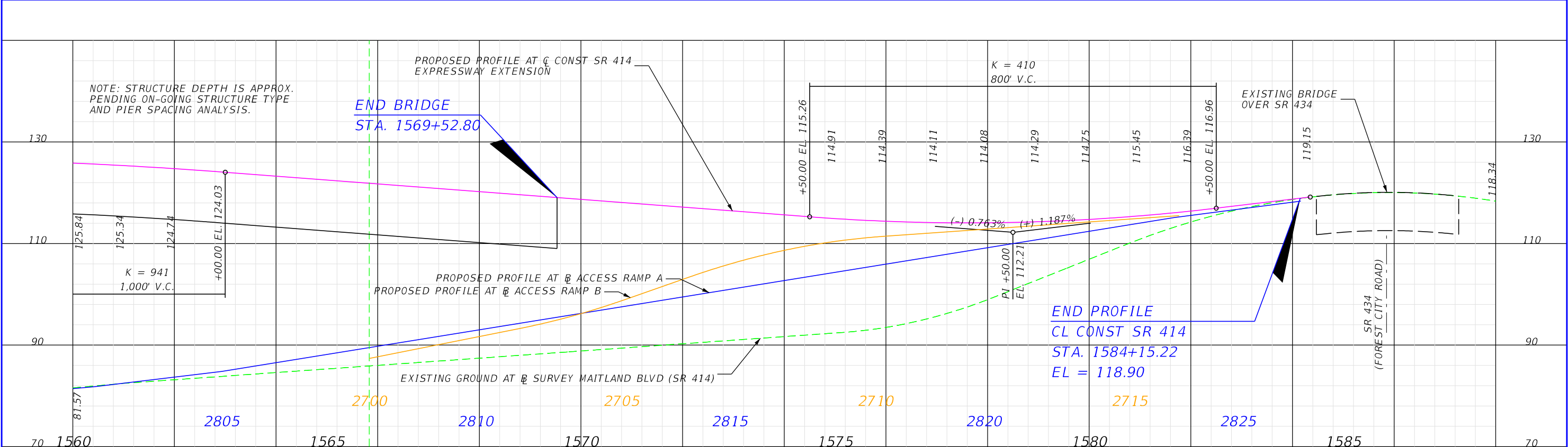
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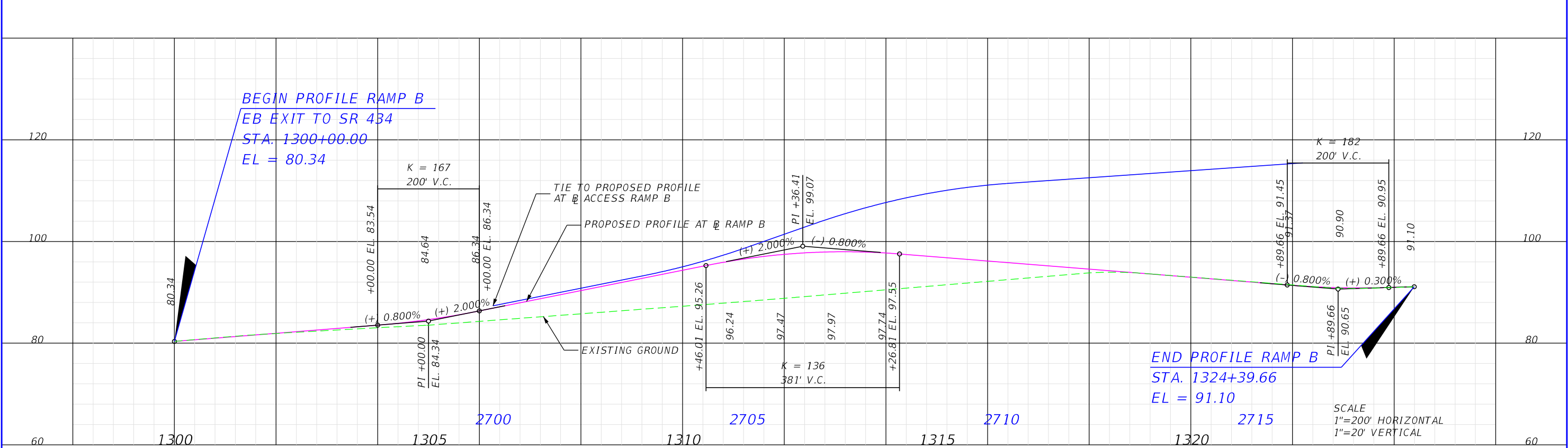
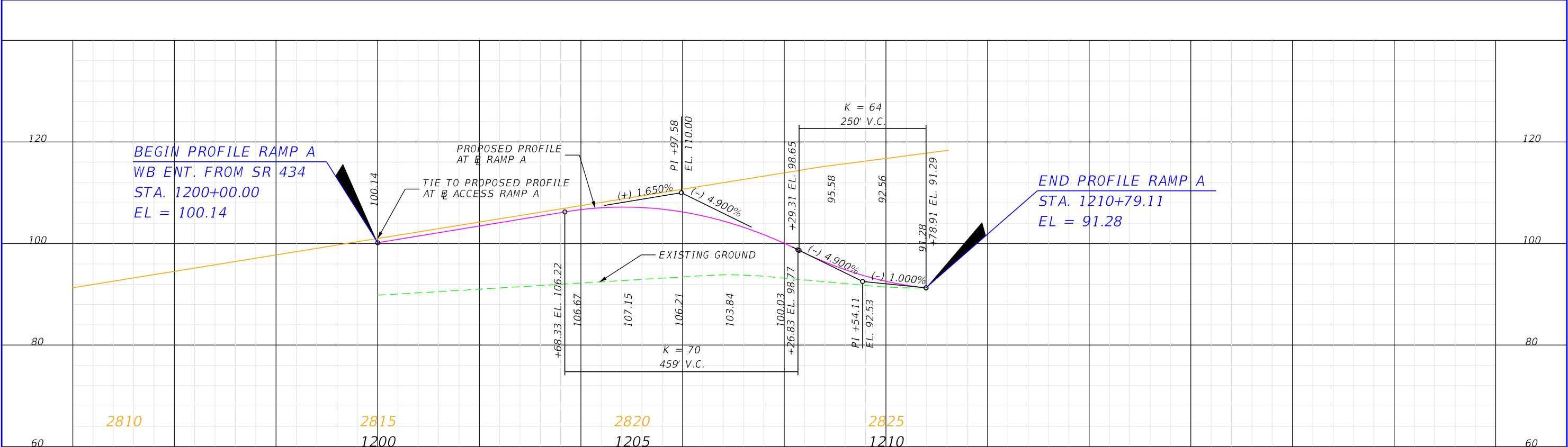
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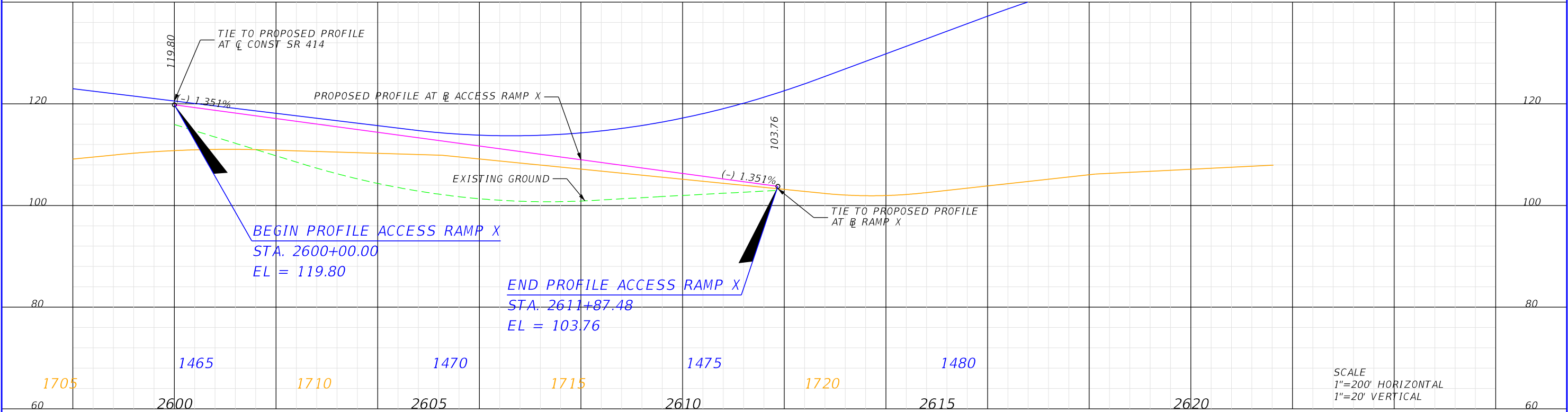
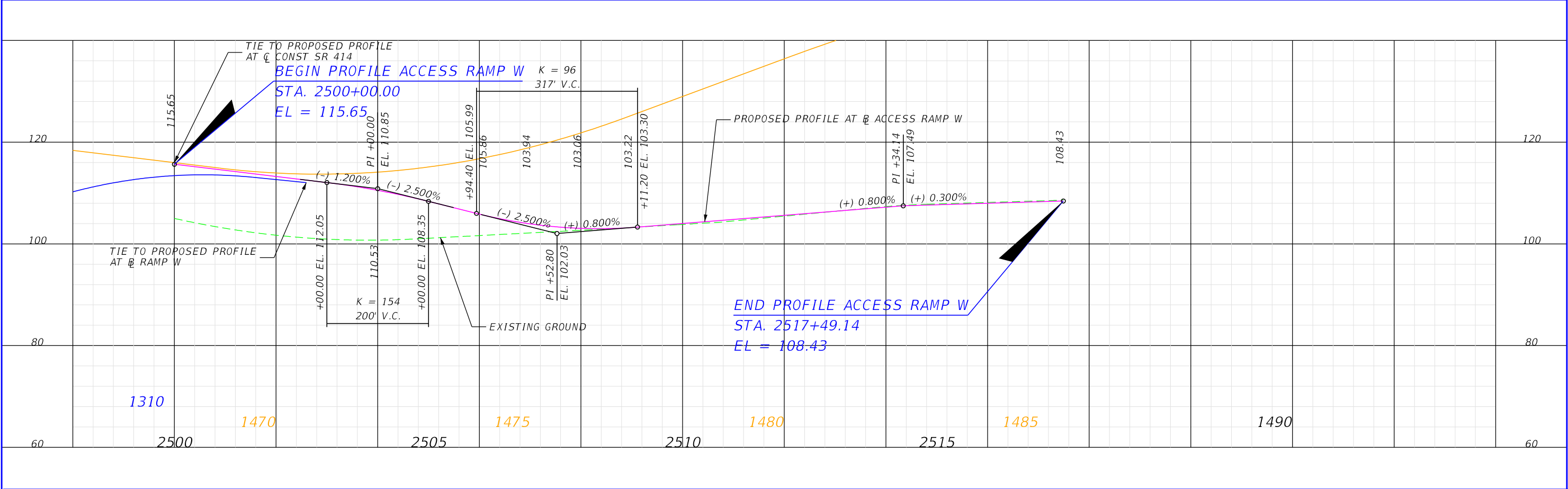


PRELIMINARY - SUBJECT TO CHANGE	ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E. P.E. LICENSE NO. 60883		SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434	<div>CENTRAL FLORIDA EXPRESSWAY AUTHORITY</div>	SR 414 AT-GRADE PLAN SHEET (6)	SHEET NO.
	JACOBS ENGINEERING GROUP INC. 200 S. ORANGE AVENUE, STE 900 ORLANDO, FL 32801; PHONE (407) 903-5001 CERTIFICATE OF AUTHORIZATION No. 000072					017
	ROAD NO. SR 414		PROJECT NO. 414-227			









SCALE
1"=200' HORIZONTAL
1"=20' VERTICAL

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

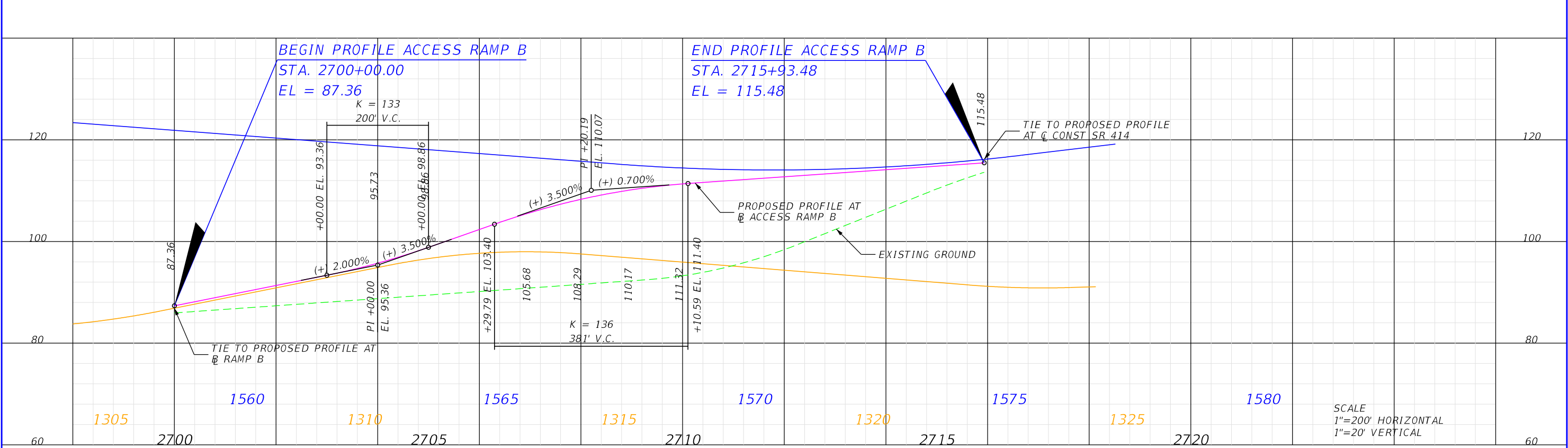
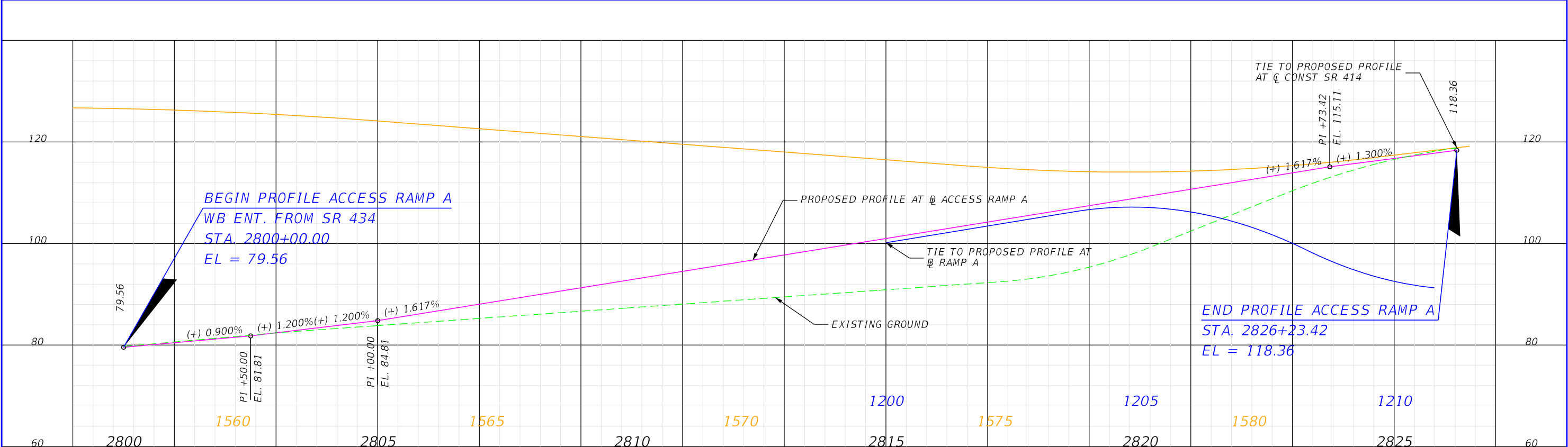
PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

ACCESS RAMPS X AND W
PROFILE SHEET (6)

SHEET
NO.

023



Appendix C

Utility Agency Owner Responses

Utility Agency Owner Responses

- AT&T
- Black & Veatch (Orlando 1F) – no response
- Central Florida Expressway Authority
- CenturyLink
- Charter Communications
- City of Altamonte Springs
- Comcast Communication (Previously LK CNTY CBLV)
- Duke Energy- Distribution
- Duke Energy- Transmission
- Lake Apopka Natural Gas
- MCI (Verizon) – no response
- Orange County Utilities/Orange County Wastewater
- Seminole County
- Zayo Group

AT&T



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

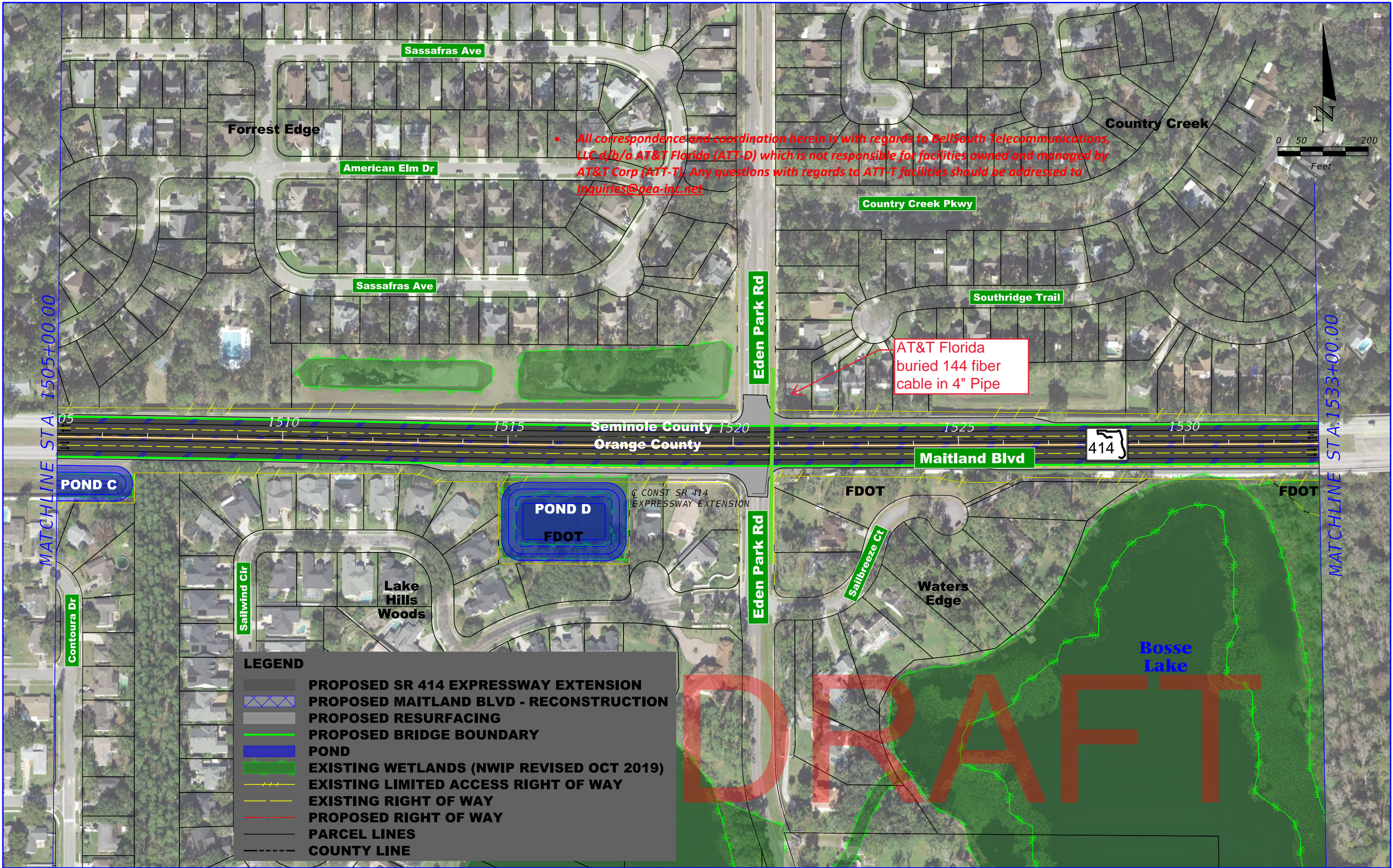
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (2)

SHEET
NO.



• All correspondence and coordination herein is with regards to BellSouth Telecommunications, LLC d/b/a AT&T Florida (ATT-D) which is not responsible for facilities owned and managed by AT&T Corp (ATT-T). Any questions with regards to ATT-T facilities should be addressed to Inquiries@pea-inc.net

AT&T Florida
buried 144 fiber
cable in 4" Pipe

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

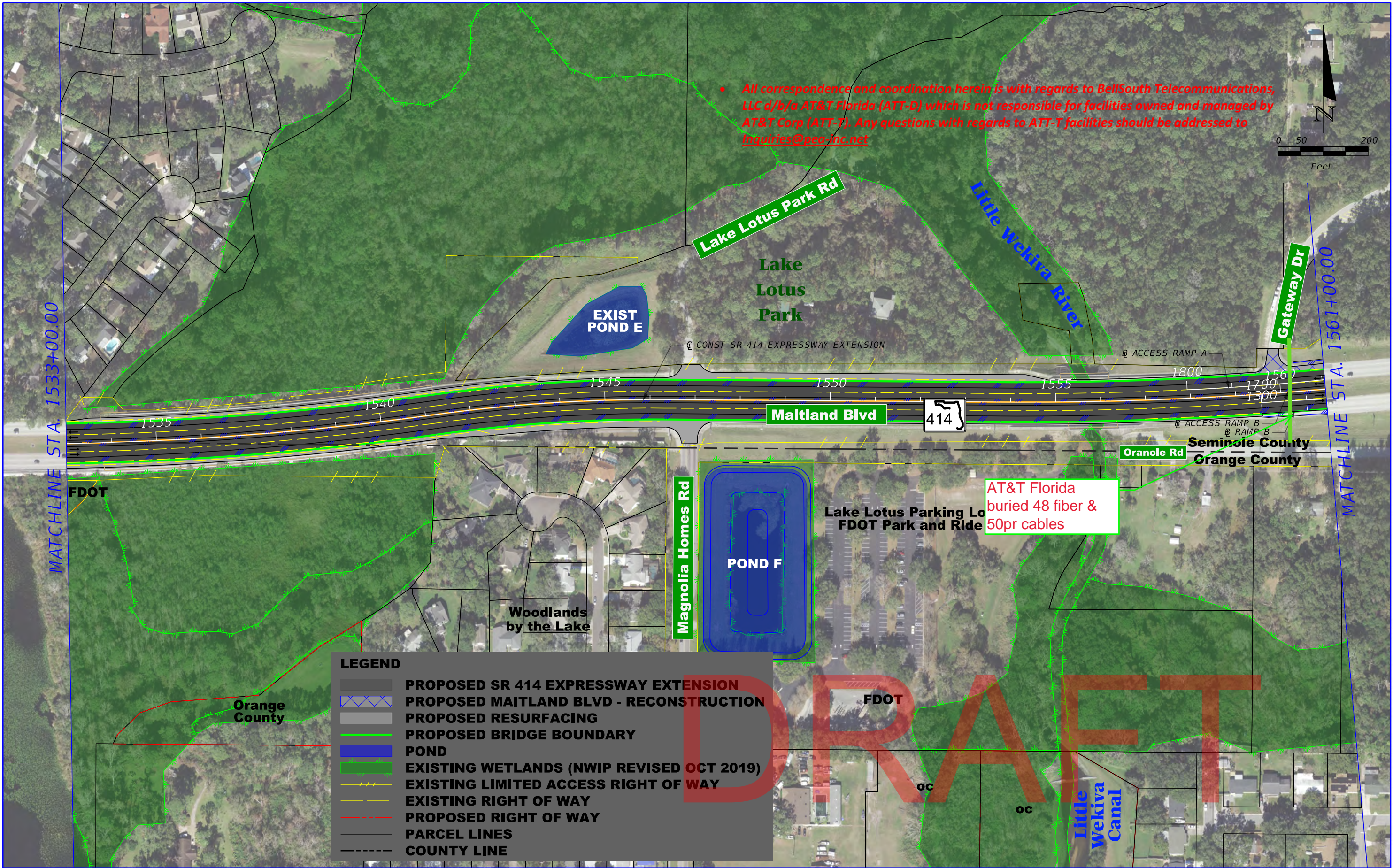
ROAD NO.
SR 414

PROJECT NO.
414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (3)

SHEET
NO.



• All correspondence and coordination herein is with regards to BellSouth Telecommunications, LLC d/b/a AT&T Florida (ATT-D) which is not responsible for facilities owned and managed by AT&T Corp (ATT-T). Any questions with regards to ATT-T facilities should be addressed to Inquiries@pea-inc.net



MATCHLINE STA. 1533+00.00

MATCHLINE STA. 1561+00.00

LEGEND

PROPOSED SR 414 EXPRESSWAY EXTENSION

PROPOSED MAITLAND BLVD - RECONSTRUCTION

PROPOSED RESURFACING

PROPOSED BRIDGE BOUNDARY

POND

EXISTING WETLANDS (NWIP REVISED OCT 2019)

EXISTING LIMITED ACCESS RIGHT OF WAY

EXISTING RIGHT OF WAY

PROPOSED RIGHT OF WAY

PARCEL LINES

COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

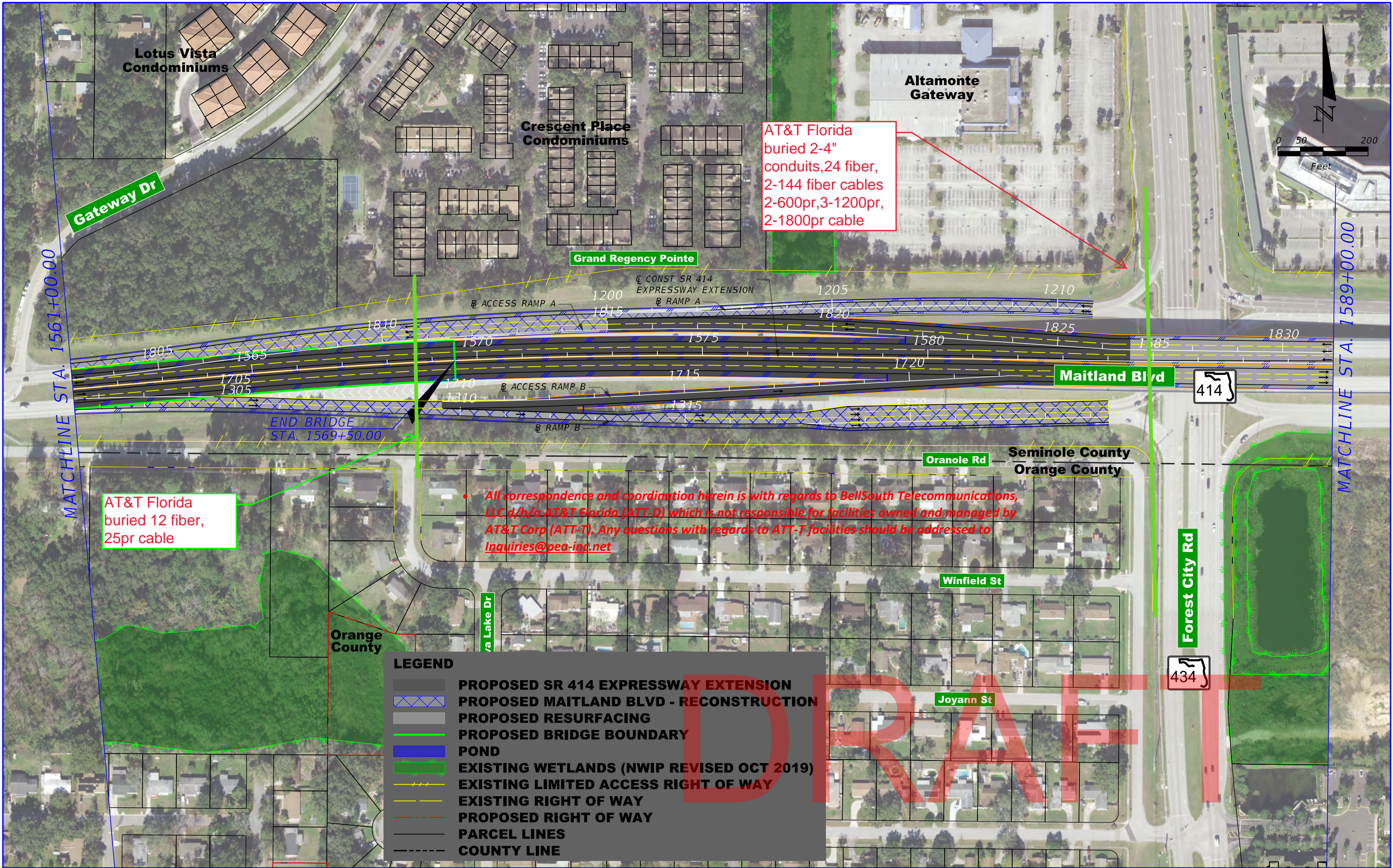
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434	
ROAD NO.	PROJECT NO.
SR 414	414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (4)

SHEET NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

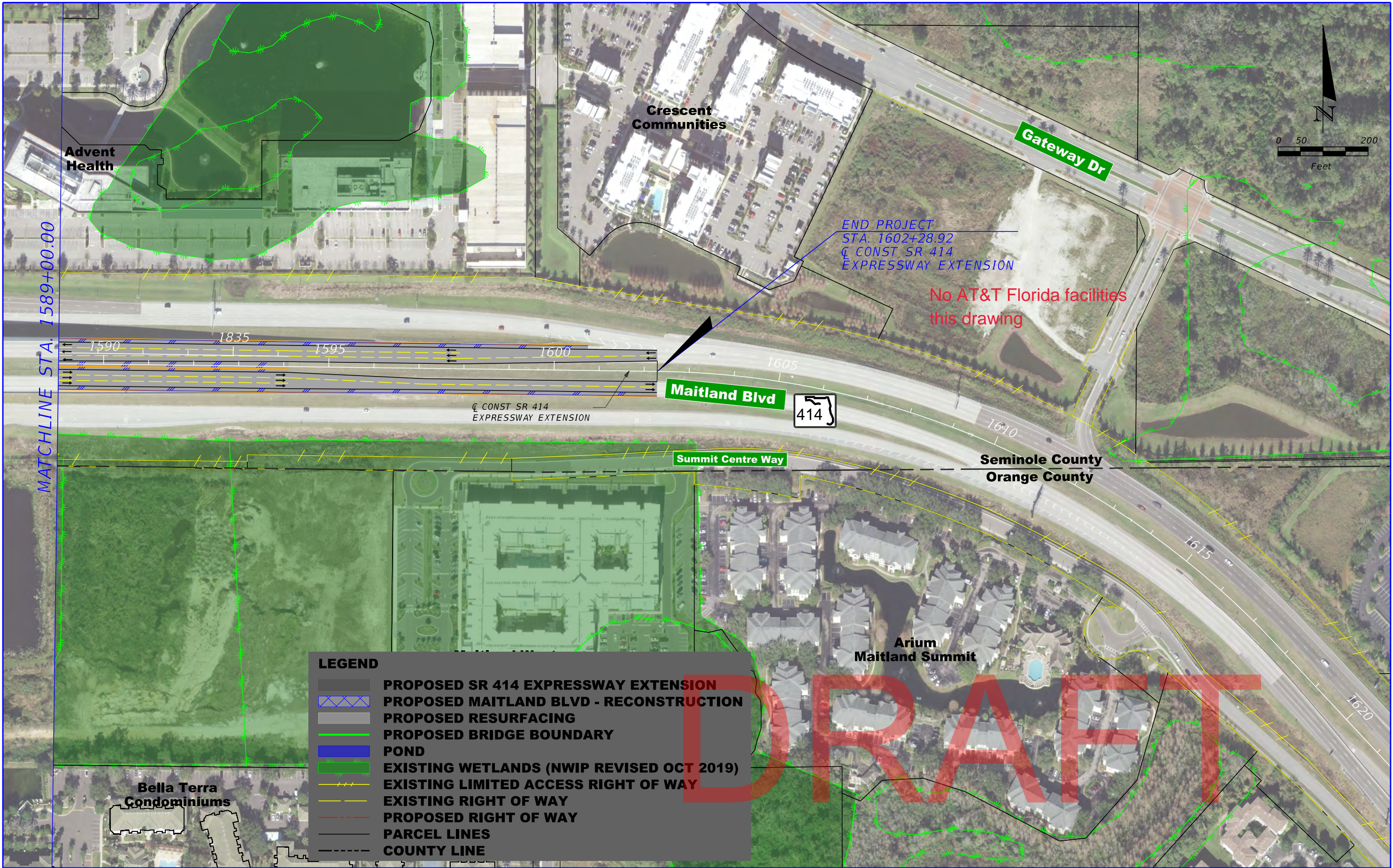
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (5)

SHEET
NO.



MATCHLINE STA. 1589+00.00

Crescent Communities

Advent Health

Gateway Dr

END PROJECT
STA. 1602+28.92
Q CONST SR 414
EXPRESSWAY EXTENSION

No AT&T Florida facilities
this drawing

Maitland Blvd

414

Q CONST SR 414
EXPRESSWAY EXTENSION

Summit Centre Way

Seminole County
Orange County

Arium
Maitland Summit

Bella Terra
Condominiums

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

DRAFT

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (6)

SHEET
NO.

Central Florida Expressway Authority

ORLANDO-ORANGE COUNTY
EXPRESSWAY AUTHORITY

CONTRACT PLANS

STATE ROAD NUMBER 414
MAITLAND BOULEVARD EXTENSION
CONTRACT NO. 414-211

FIBER OPTIC NETWORK PLANS



LOCATION OF PROJECT

INDEX OF FIBER OPTIC NETWORK PLANS

SHEET NO.	SHEET DESCRIPTION
FO-1	KEY SHEET
FO-2 - FO-3	TABULATION OF QUANTITIES
FO-4	GENERAL NOTES
FO-5	UTILITY CONTACTS
FO-6	FIBER OPTIC LEGEND
FO-7 - FO-8	FIBER OPTIC TYPICAL SECTIONS
FO-9	FIBER OPTIC TRENCHING DETAILS
FO-10	FIBER OPTIC DIRECTIONAL BORE DETAILS
FO-11	FIBER OPTIC ROUTE MARKER DETAILS
FO-12 - FO-13	CONDUIT BRIDGE ATTACHMENT DETAILS
FO-14 - FO-17	FIBER OPTIC MANHOLE DETAILS
FO-18	FIBER OPTIC MANHOLE COVER DETAILS
FO-19 - FO-34	FIBER OPTIC NETWORK PLANS
FO-35	DYNAMIC MESSAGE SIGNS (DMS) DETAIL
FO-36	DYNAMIC MESSAGE SIGNS (DMS) OVERHEAD SIGN DETAIL
FO-37	DYNAMIC MESSAGE SIGNS (DMS) DMS BACKWALL
FO-38 - FO-39	DYNAMIC MESSAGE SIGNS (DMS) WIRING DETAIL
FO-40	DYNAMIC MESSAGE SIGNS (DMS) CONTROLLER CABINET DETAIL
FO-41	BRIDGE HANGER DETAIL

FIBER OPTIC NETWORK SHOP DRAWINGS
TO BE SUBMITTED TO:
RODGER P. SCHMIDT, P.E.
2420 LAKEMONT AVENUE, SUITE 450
ORLANDO, FL 32814
(407) 702-6800

PLANS PREPARED BY:

PARSONS
2420 LAKEMONT AVE., Suite 450, ORLANDO, FL 32814
PHONE: (407) 702-6800
CERTIFICATE OF AUTHORIZATION NO. 1838
VENDOR NO. 36-098-270

PLANS PREPARED FOR:
ORLANDO-ORANGE COUNTY EXPRESSWAY AUTHORITY

CHAIRMAN	ALLAN E. KEEN
VICE CHAIRMAN	ORLANDO L. EVORA
SECRETARY/TREASURER	ARTHUR J. LEE
EX-OFFICIO MEMBER	RICHARD T. CROTTY
EX-OFFICIO MEMBER	NORANNE DOWNS, P.E.
EXECUTIVE DIRECTOR	MICHAEL SNYDER, P.E.

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2006, AND OOCEA
GENERAL AND TECHNICAL SPECIFICATIONS
DATED AUGUST 2000,
AS AMENDED BY CONTRACT DOCUMENTS.

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

FIBER OPTIC NETWORK PLANS
ENGINEER OF RECORD: RODGER P. SCHMIDT, P.E.

DATE: _____
P.E. NO.: 40234

APPROVED FOR CONSTRUCTION
MARCH 2007

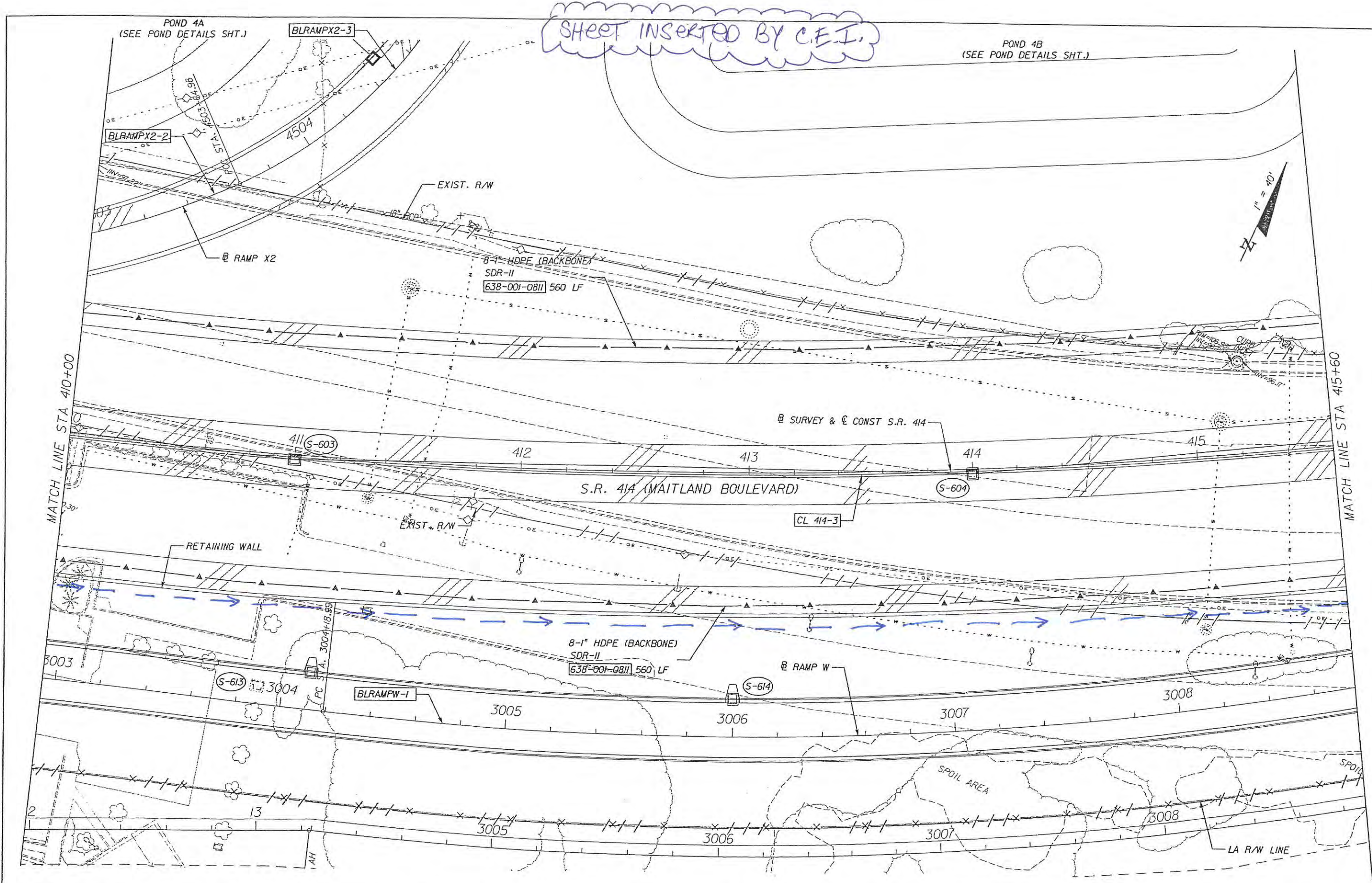
OOCEA PROJECT MANAGER: JOSEPH A. BERENIS, P.E.
PBS&J PROJECT MANAGER: GLENN M. PRESSIMONE, P.E.

FISCAL YEAR	SHEET NO.
07	FO-1

SHEET INSERTED BY C.E.I.




SHEET INSERTED BY C.E.I.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

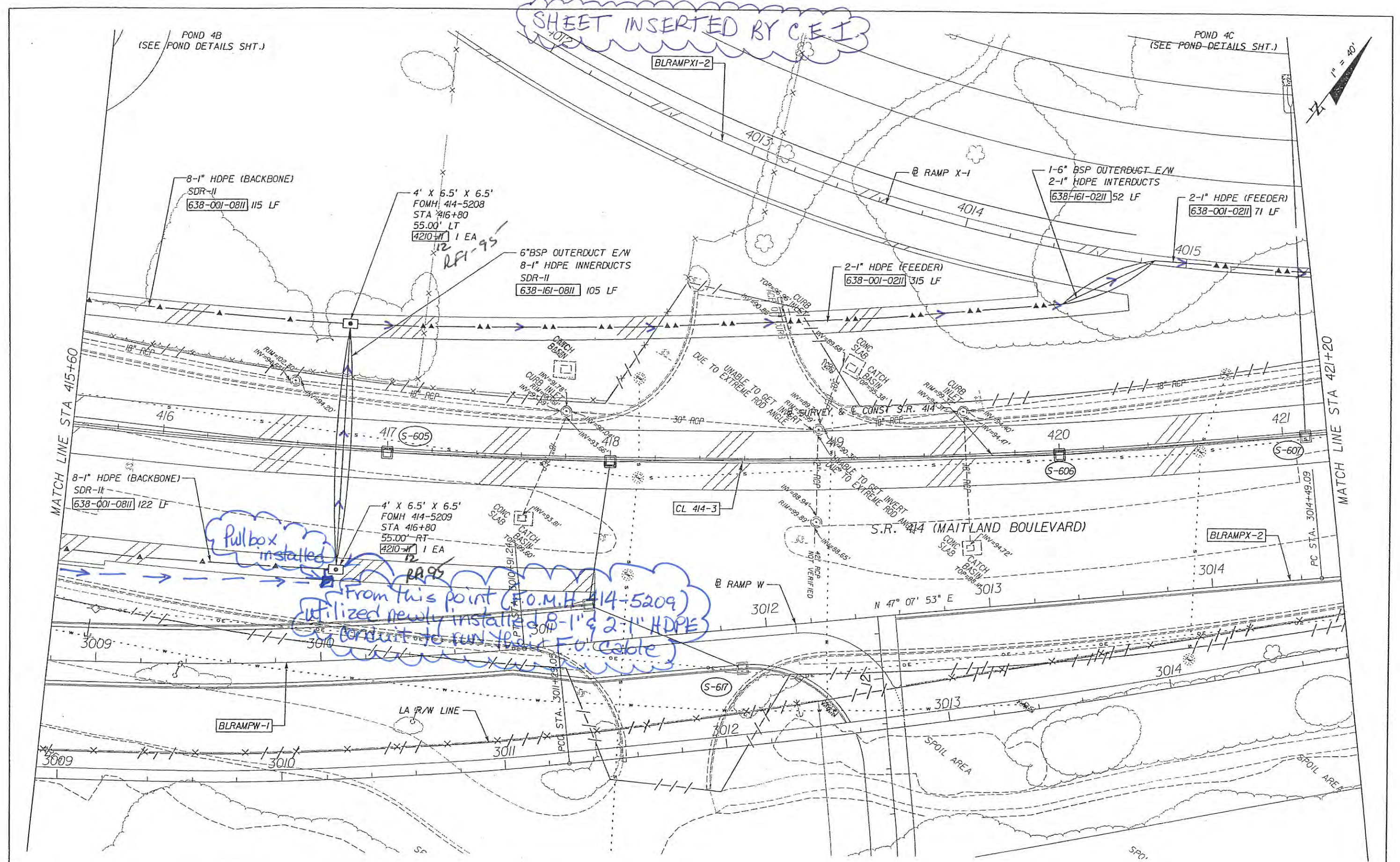
RODGER P. SCHWIDT, P.E.
P.E. LICENSE NO. 40234
PARSONS
2420 LAKEMONT AVE., SUITE 450 ORLANDO, FL 32814
PHONE: (407) 702-6800 / FAX: (407) 702-6950
CERTIFICATE OF AUTHORIZATION NO. 1838

CONTRACT No. 414-211



S.R. 414
FIBER OPTIC NETWORK

SHEET NO.
FO-29A



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

RODGER P. SCHMIDT, P.E.
P.E. LICENSE NO. 40234

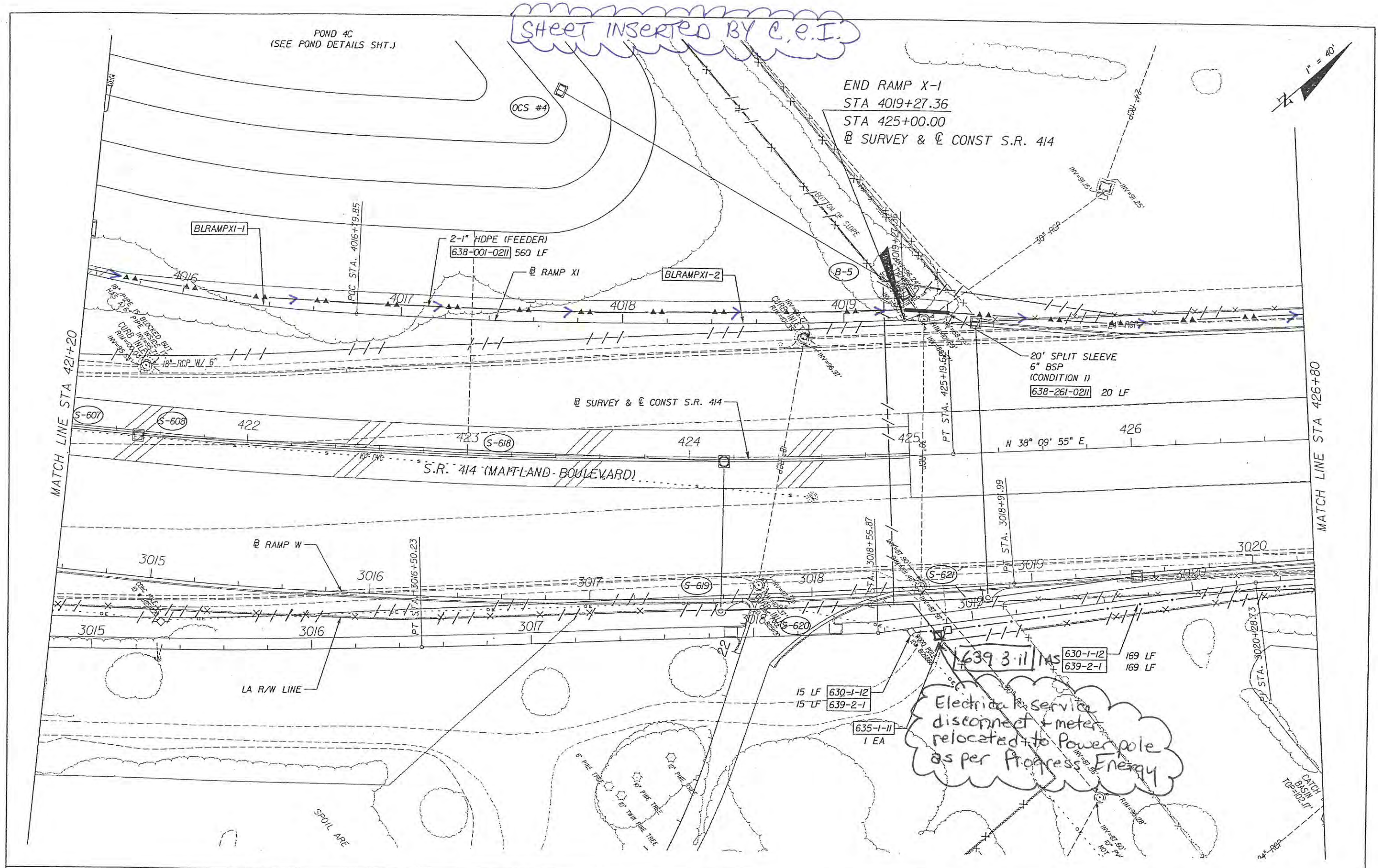
PARSONS
2420 LAKE MONT AVE., SUITE 450 ORLANDO, FL 32814
PHONE: (407) 702-6800 / FAX: (407) 702-6950
CERTIFICATE OF AUTHORIZATION NO. 1838

CONTRACT No. 414-211

EXPRESSWAY AUTHORITY

S.R. 414
FIBER OPTIC NETWORK

SHEET NO.
FO-30A



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

RODGER P. SCHWIDT, P.E.
P.E. LICENSE NO. 40234

PARSONS
2420 LAKEWONT AVE., SUITE 450 ORLANDO, FL 32814
PHONE: (407) 702-6800 / FAX: (407) 702-6950
CERTIFICATE OF AUTHORIZATION NO. 1838

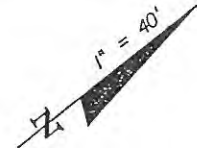
CONTRACT No. 414-211

EXPRESSWAY AUTHORITY

S.R. 414
FIBER OPTIC NETWORK

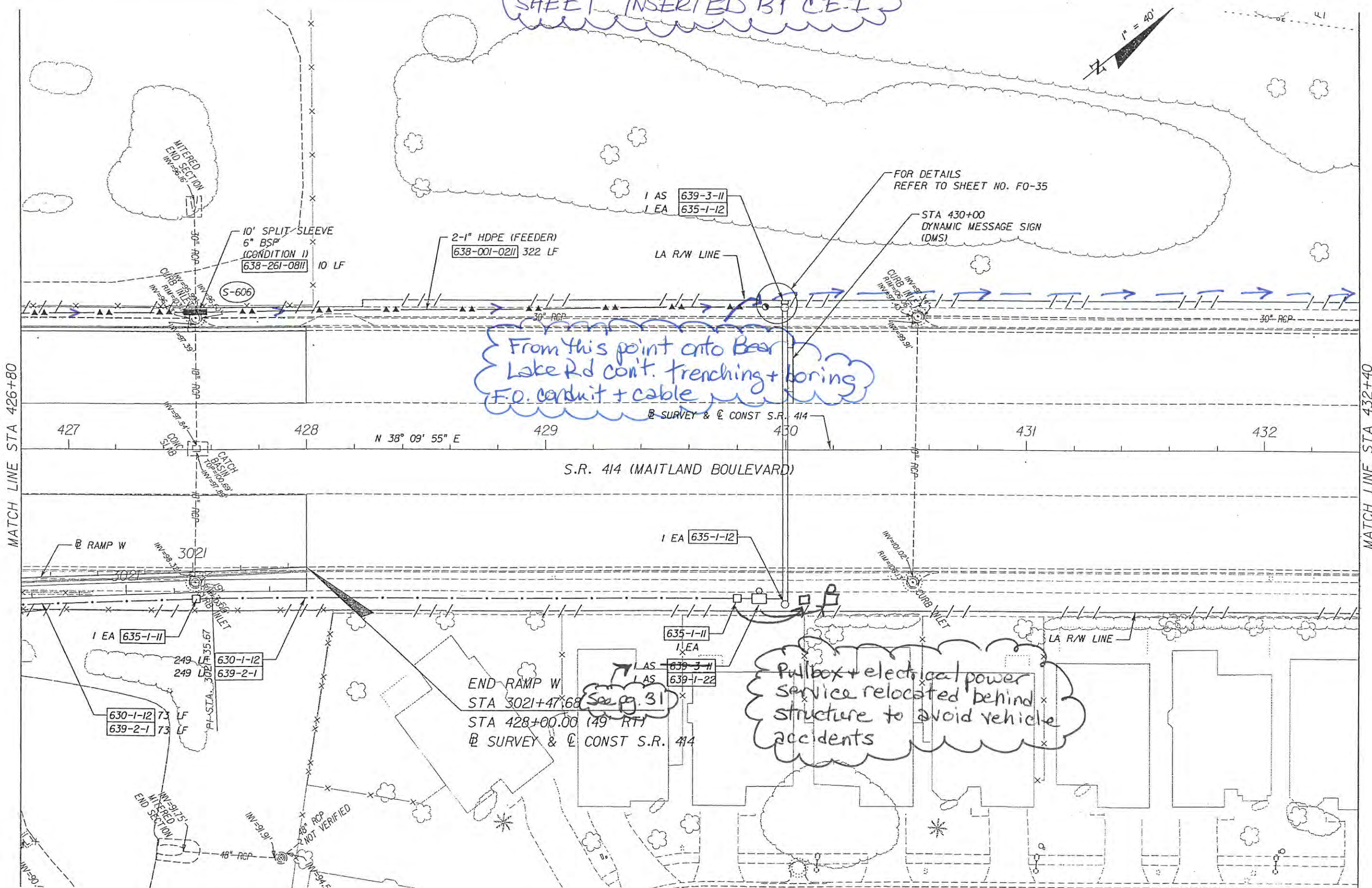
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FO-31A

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MATCH LINE STA 426+80

MATCH LINE STA 432+40



From this point onto Bear Lake Rd cont. trenching + boring F.O. conduit + cable

Pullbox + electrical power service relocated behind structure to avoid vehicle accidents

See pg. 31

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

RODGER P. SCHMIDT, P.E.
P.E. LICENSE NO. 40234
PARSONS
2420 LAKEMONT AVE., SUITE 450 ORLANDO, FL 32814
PHONE: (407) 702-6800 / FAX: (407) 702-6950
CERTIFICATE OF AUTHORIZATION NO. 1838

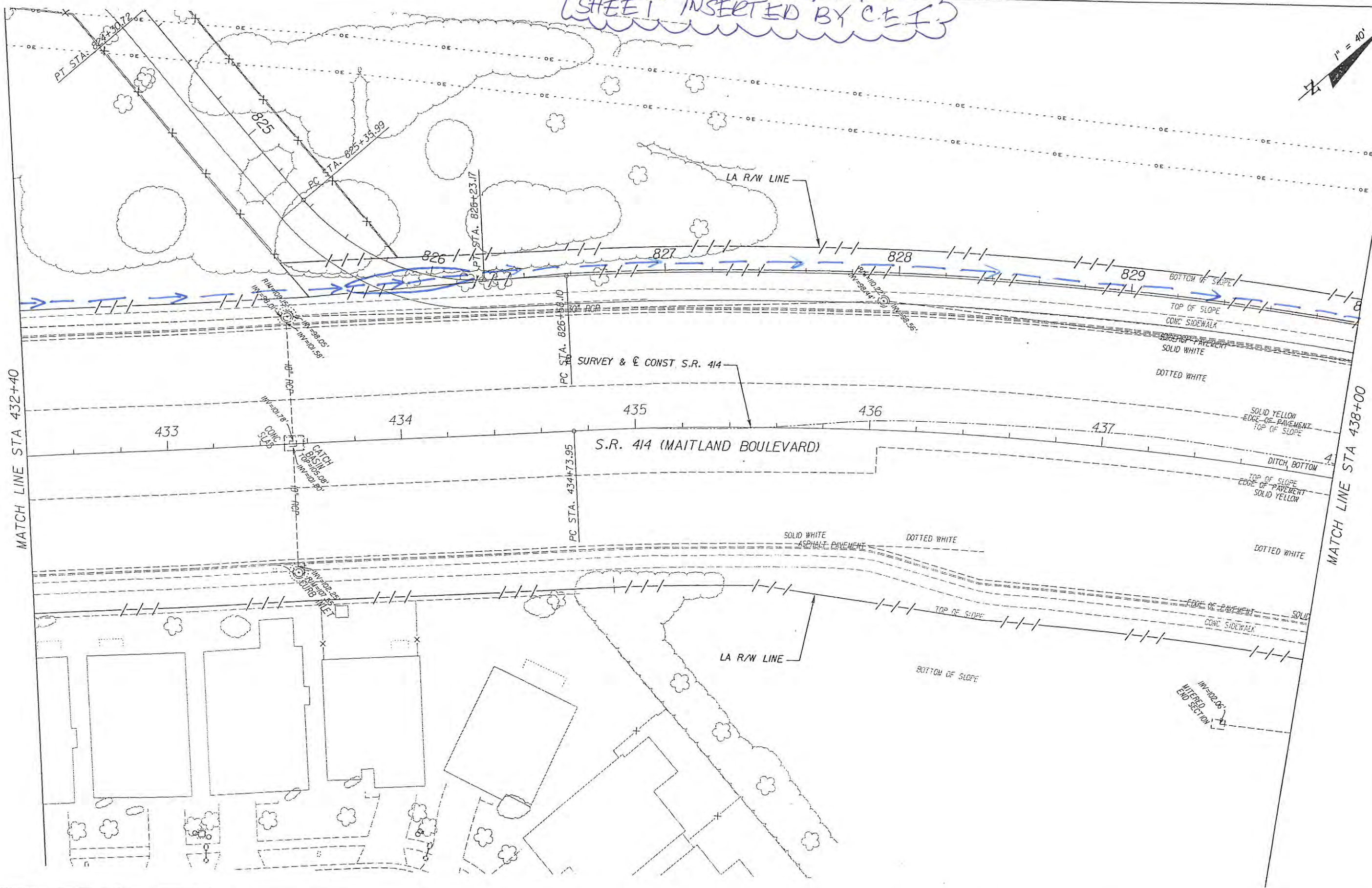
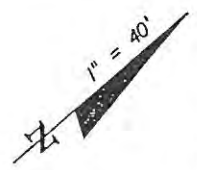
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S.R. 414
FIBER OPTIC NETWORK

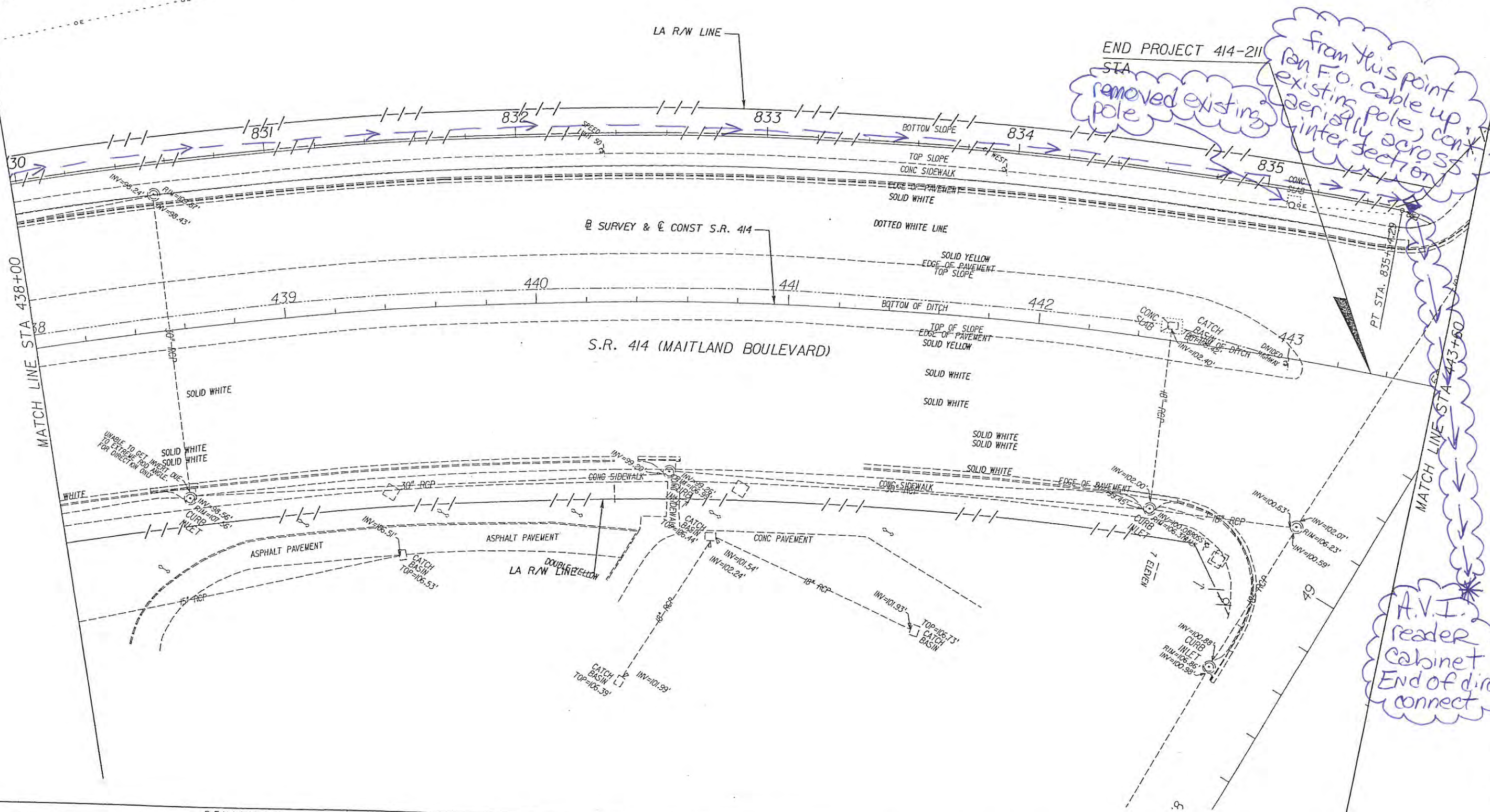
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REVISIONS						DATE	BY	DESCRIPTION	RODGER P. SCHMIDT, P.E. P.E. LICENSE NO. 40234 PARSONS 2420 LAKEMONT AVE., SUITE 450 ORLANDO, FL 32814 PHONE: (407) 702-6800 / FAX: (407) 702-6950 CERTIFICATE OF AUTHORIZATION NO. 1838	CONTRACT No. 414-211		S.R. 414 FIBER OPTIC NETWORK	SHEET NO. FO-33A
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION								

SHEET INSERTED BY C.E.I.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

RODGER P. SCHMIDT, P.E.
P.E. LICENSE NO. 40234
PARSONS
2420 LAKEMONT AVE., SUITE 450 ORLANDO, FL 32814
PHONE: (407) 702-6800 / FAX: (407) 702-6950
CERTIFICATE OF AUTHORIZATION NO. 1838

CONTRACT No. 414-211



S.R. 414
FIBER OPTIC NETWORK

SHEET NO.

FO-34A

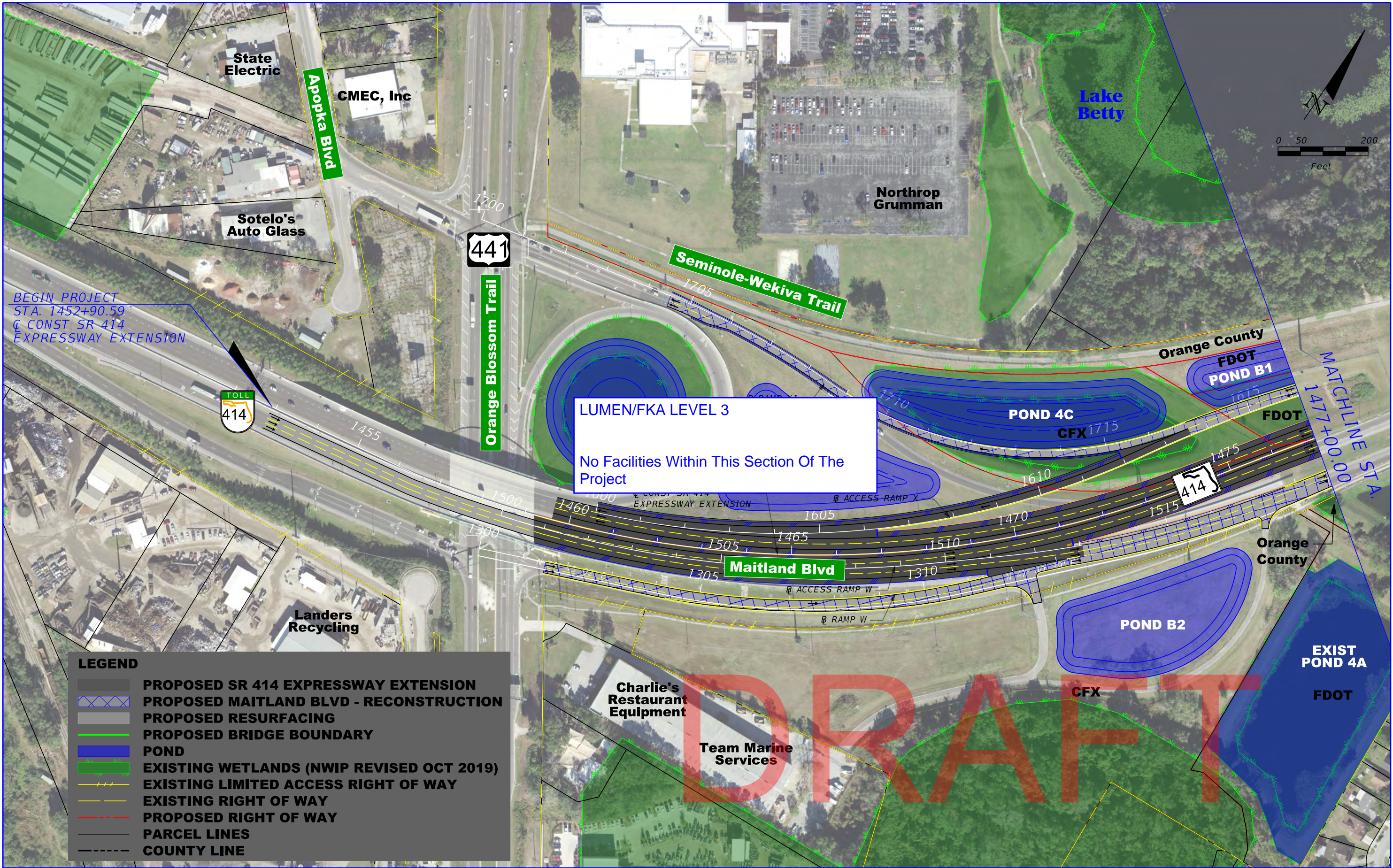
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CenturyLink





PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

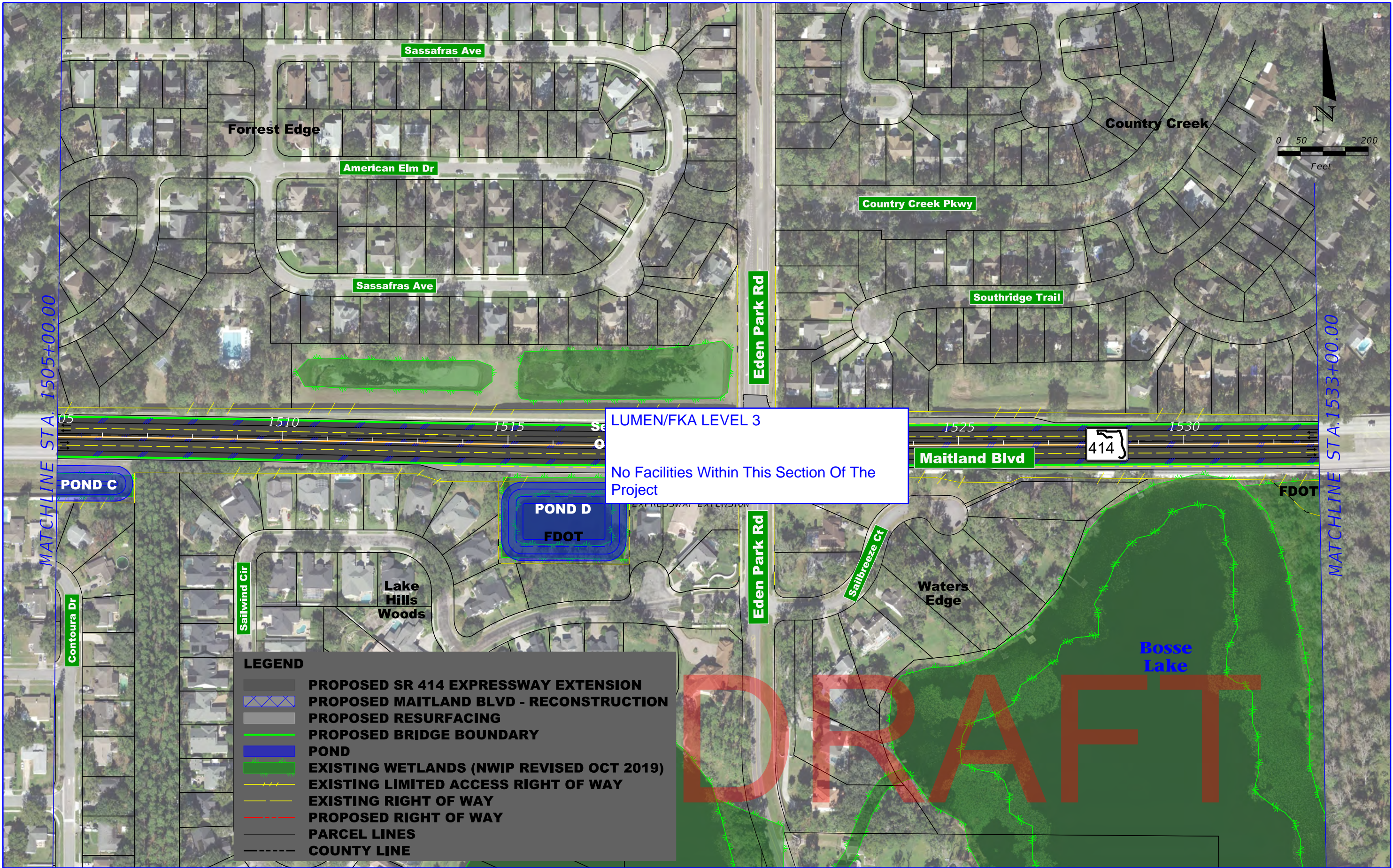
ROAD NO.
SR 414

PROJECT NO.
414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (2)

SHEET
NO.



LUMEN/FKA LEVEL 3

No Facilities Within This Section Of The Project

DRAFT

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

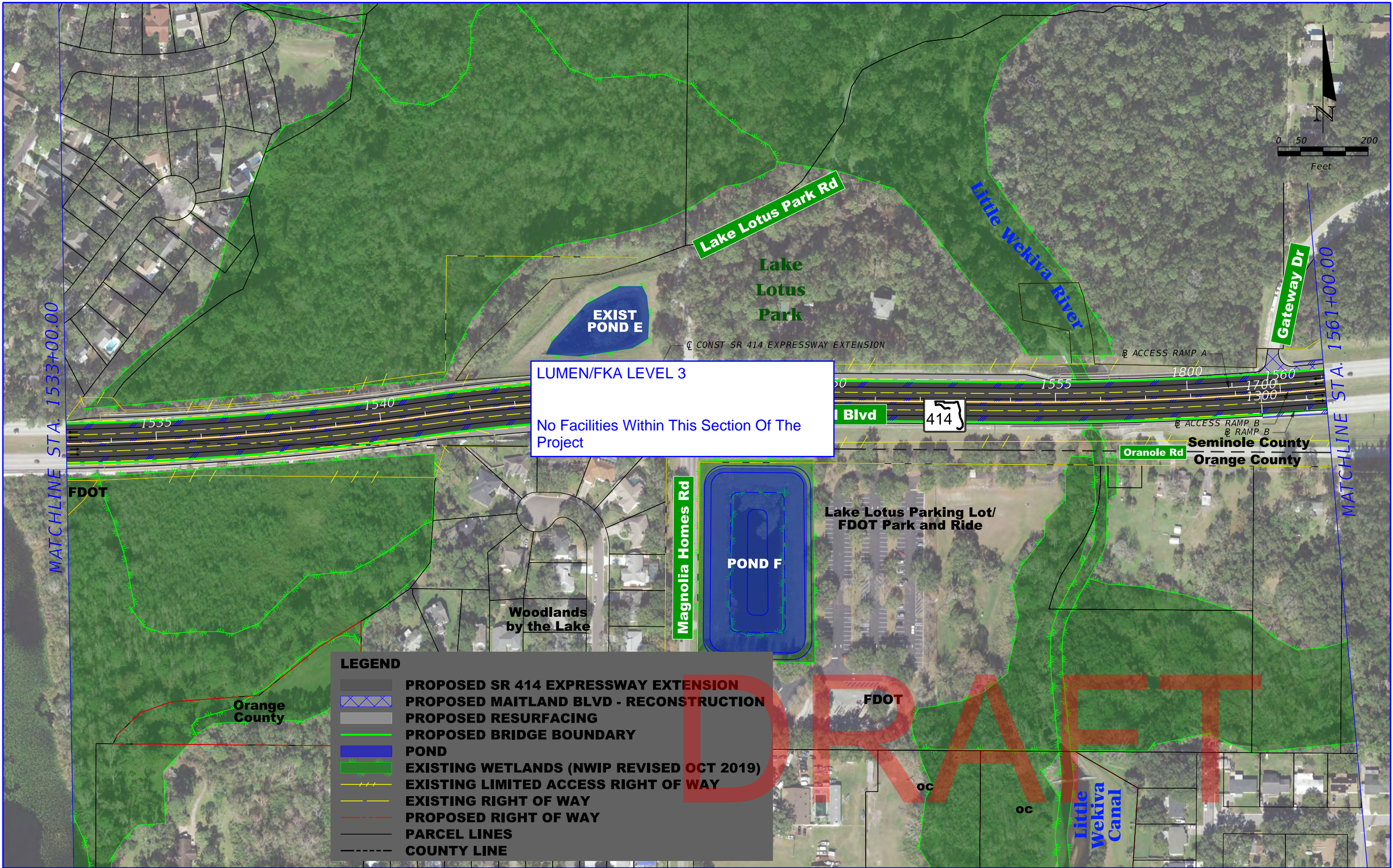
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434	
ROAD NO.	PROJECT NO.
SR 414	414-227

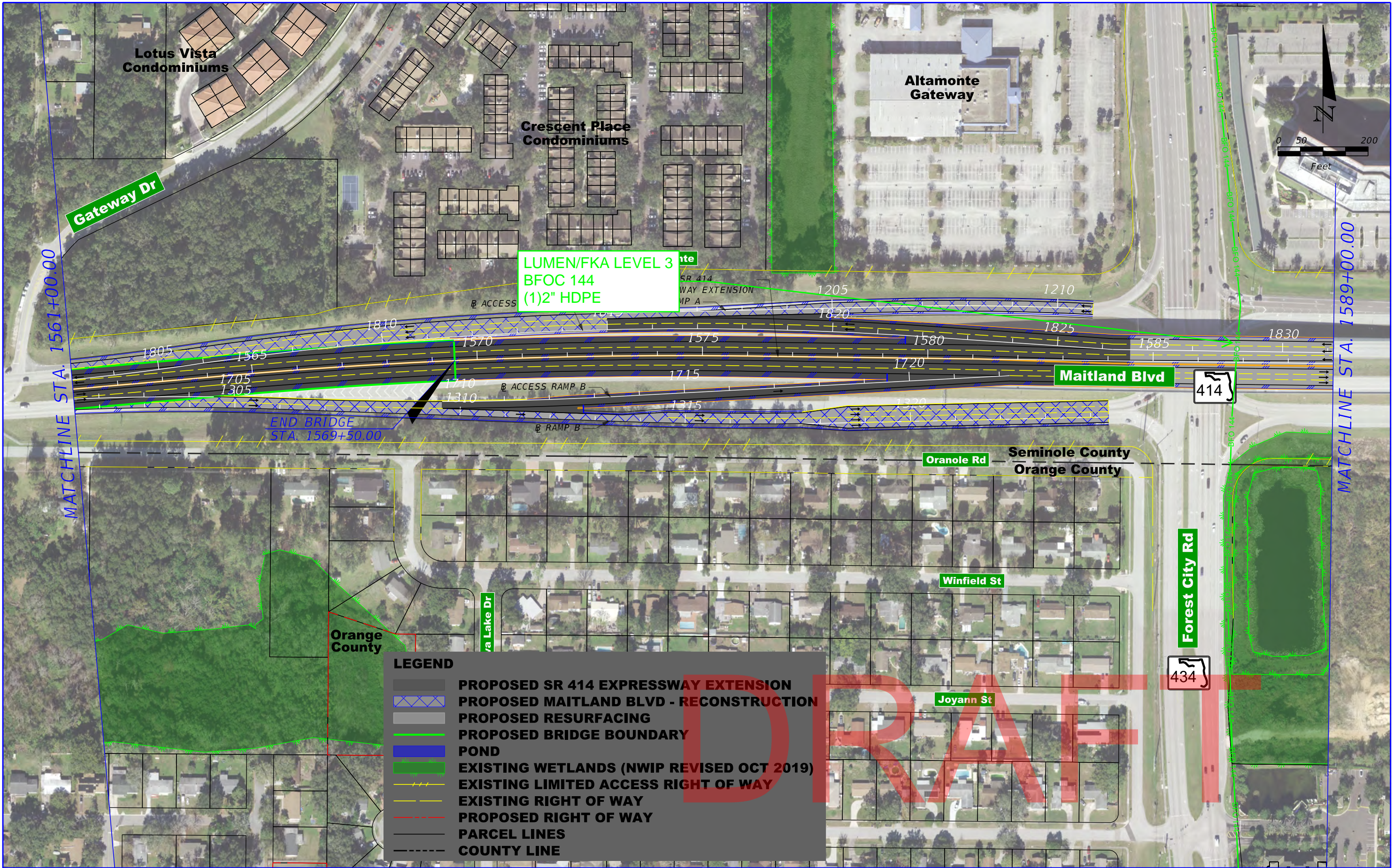
CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

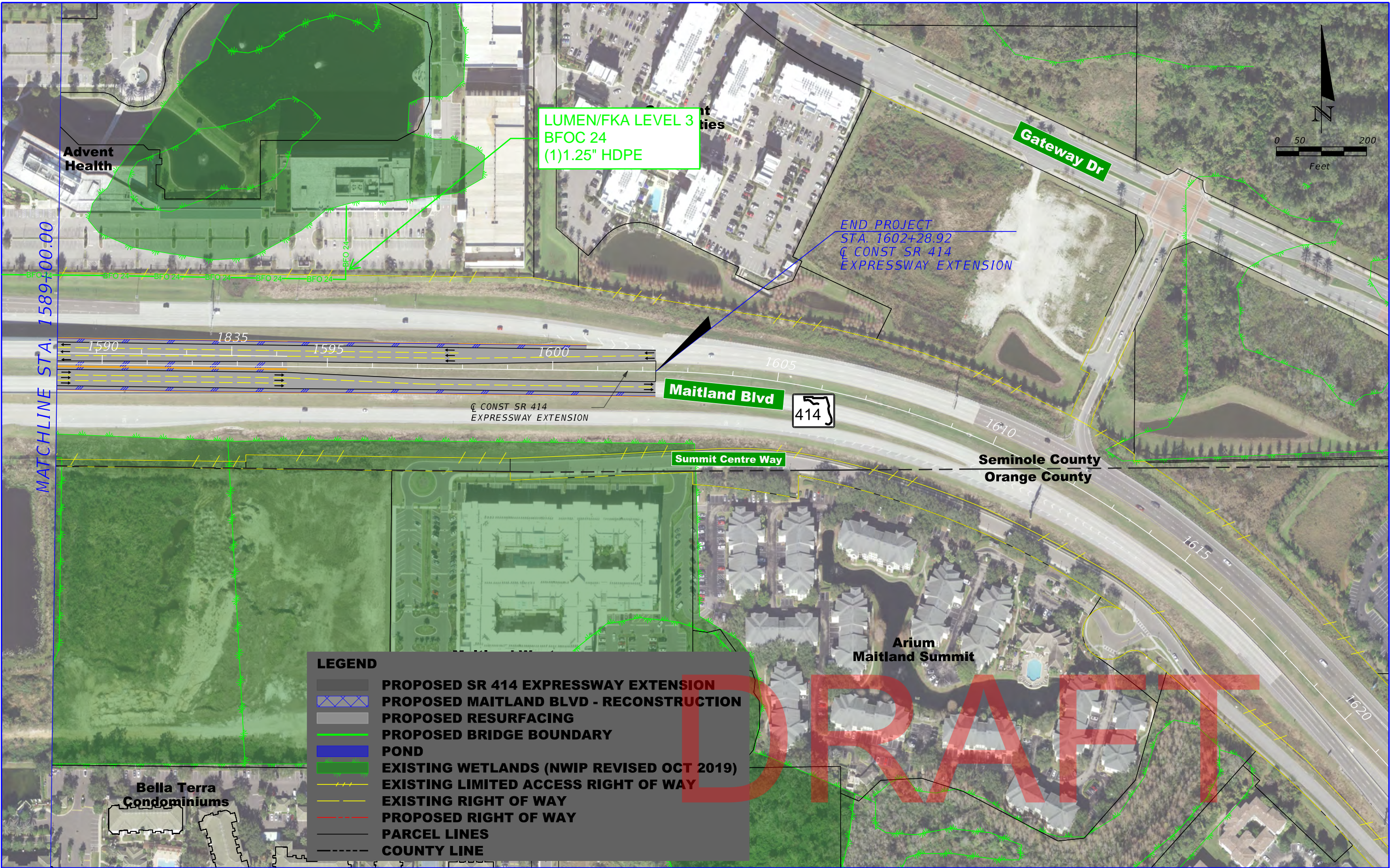
SR 414 EXPRESSWAY
PLAN SHEET (3)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE	ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E. P.E. LICENSE NO. 60883		SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434	<div>CENTRAL FLORIDA EXPRESSWAY AUTHORITY</div>	SR 414 EXPRESSWAY PLAN SHEET (4)	SHEET NO.
	JACOBS ENGINEERING GROUP INC. 200 S. ORANGE AVENUE, STE 900 ORLANDO, FL 32801; PHONE (407) 903-5001 CERTIFICATE OF AUTHORIZATION No. 000072					
	ROAD NO. SR 414		PROJECT NO. 414-227			





LUMEN/FKA LEVEL 3
BFOC 24
(1)1.25" HDPE

END PROJECT
STA. 1602+28.92
Q CONST SR 414
EXPRESSWAY EXTENSION

Maitland Blvd



Summit Centre Way

Seminole County
Orange County

Arium
Maitland Summit

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

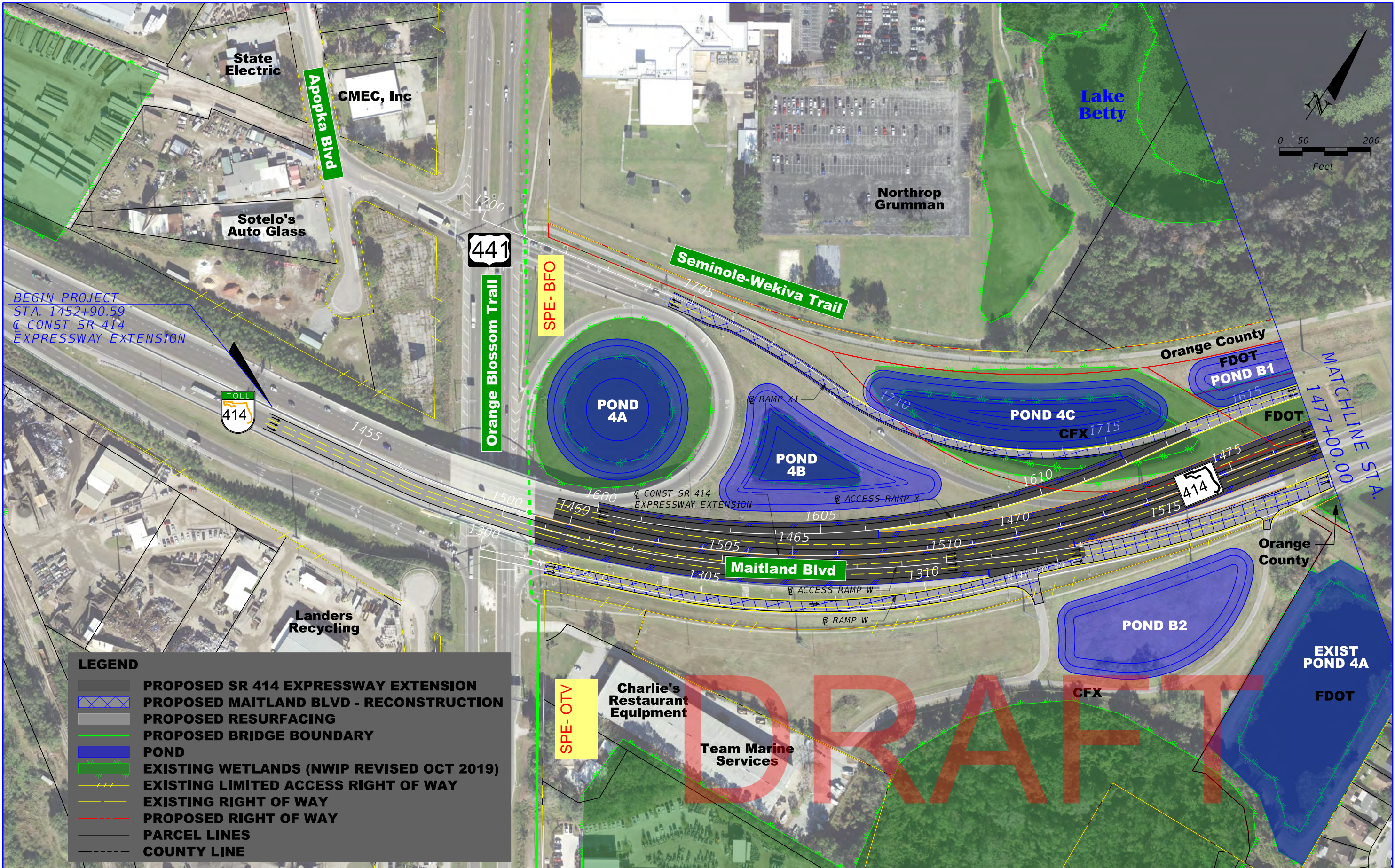
ROAD NO.	PROJECT NO.
SR 414	414-227



SR 414 EXPRESSWAY
PLAN SHEET (6)

SHEET
NO.

Charter Communications





PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

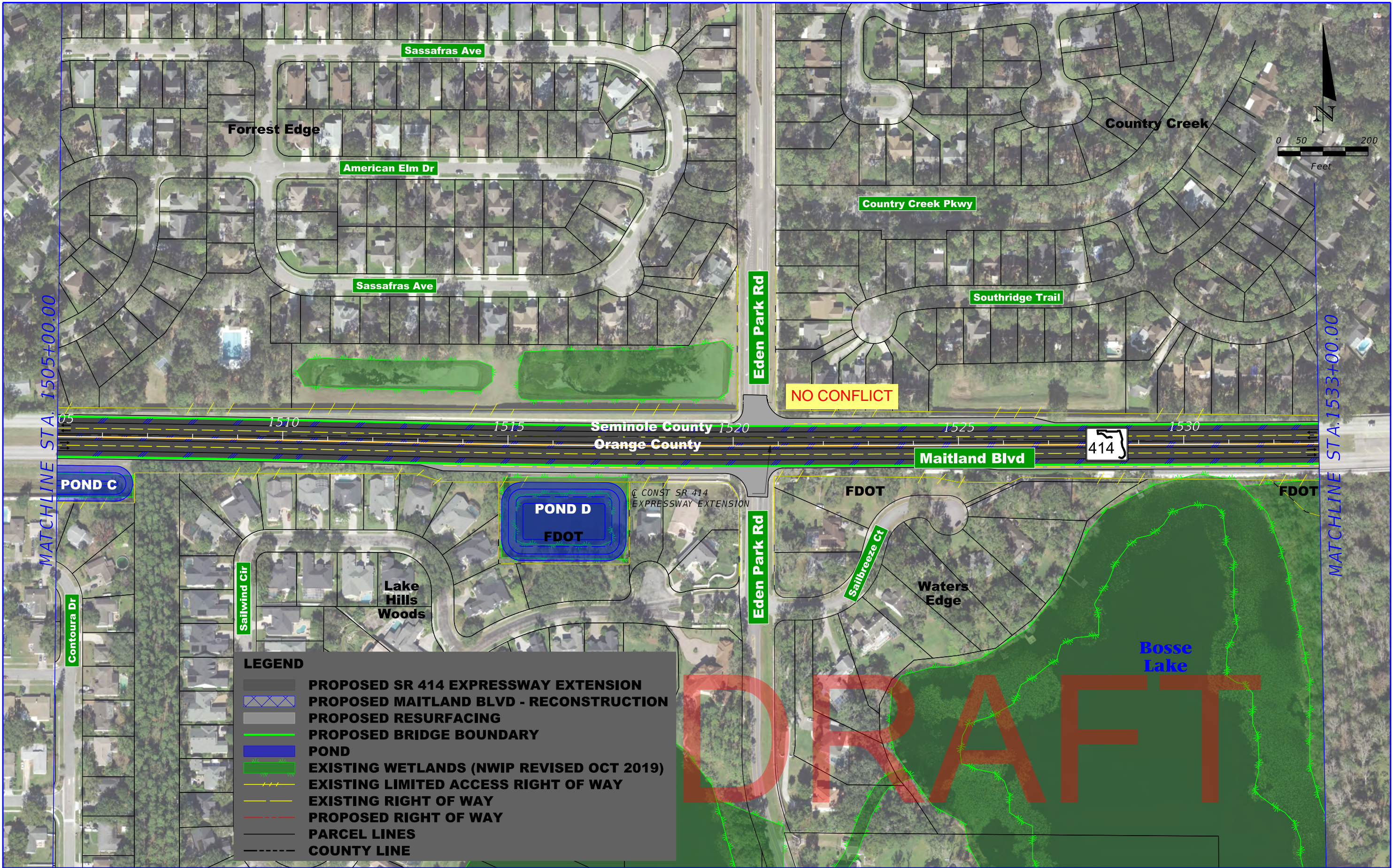
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (2)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

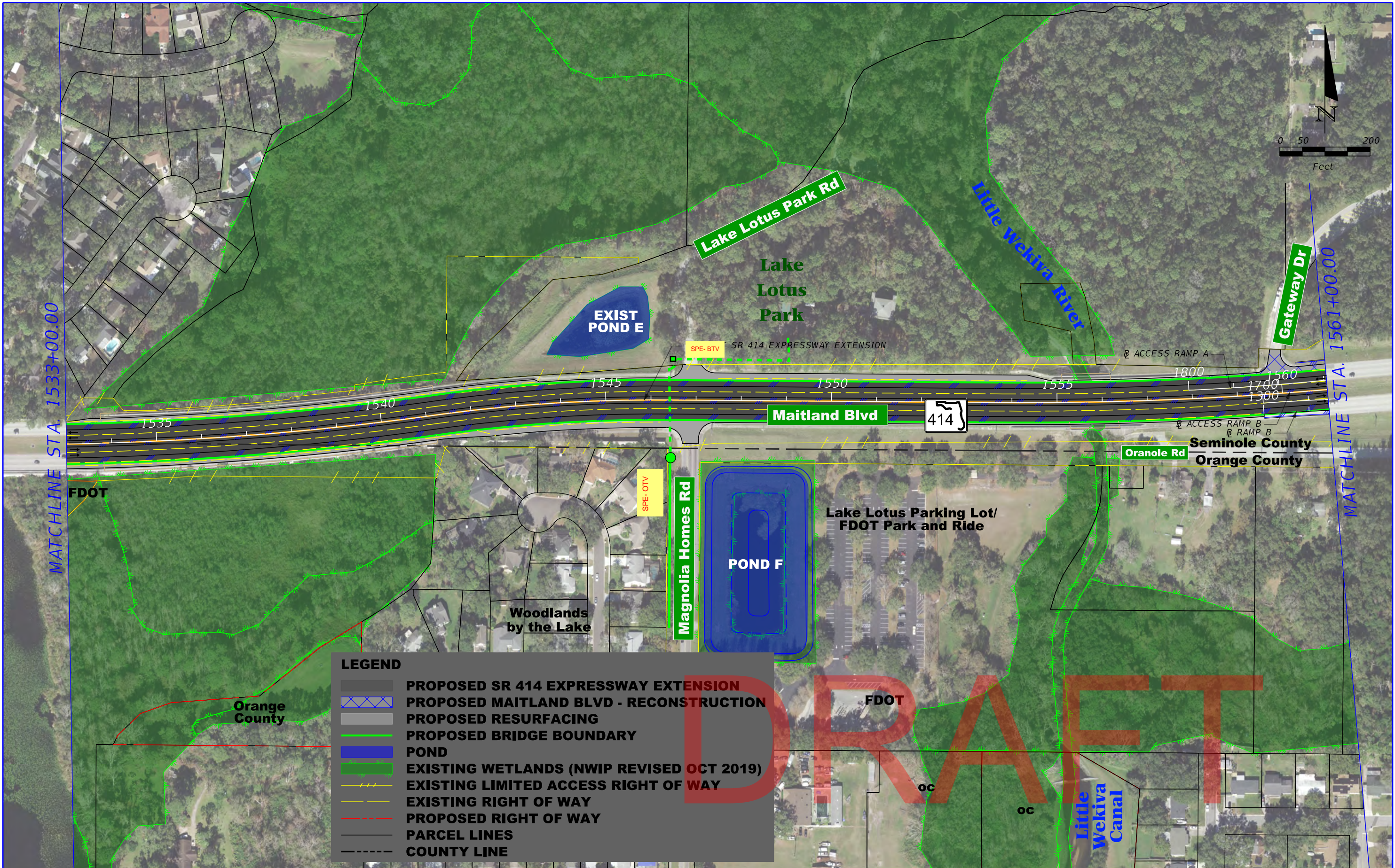
SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.	PROJECT NO.
SR 414	414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (3)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRISTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

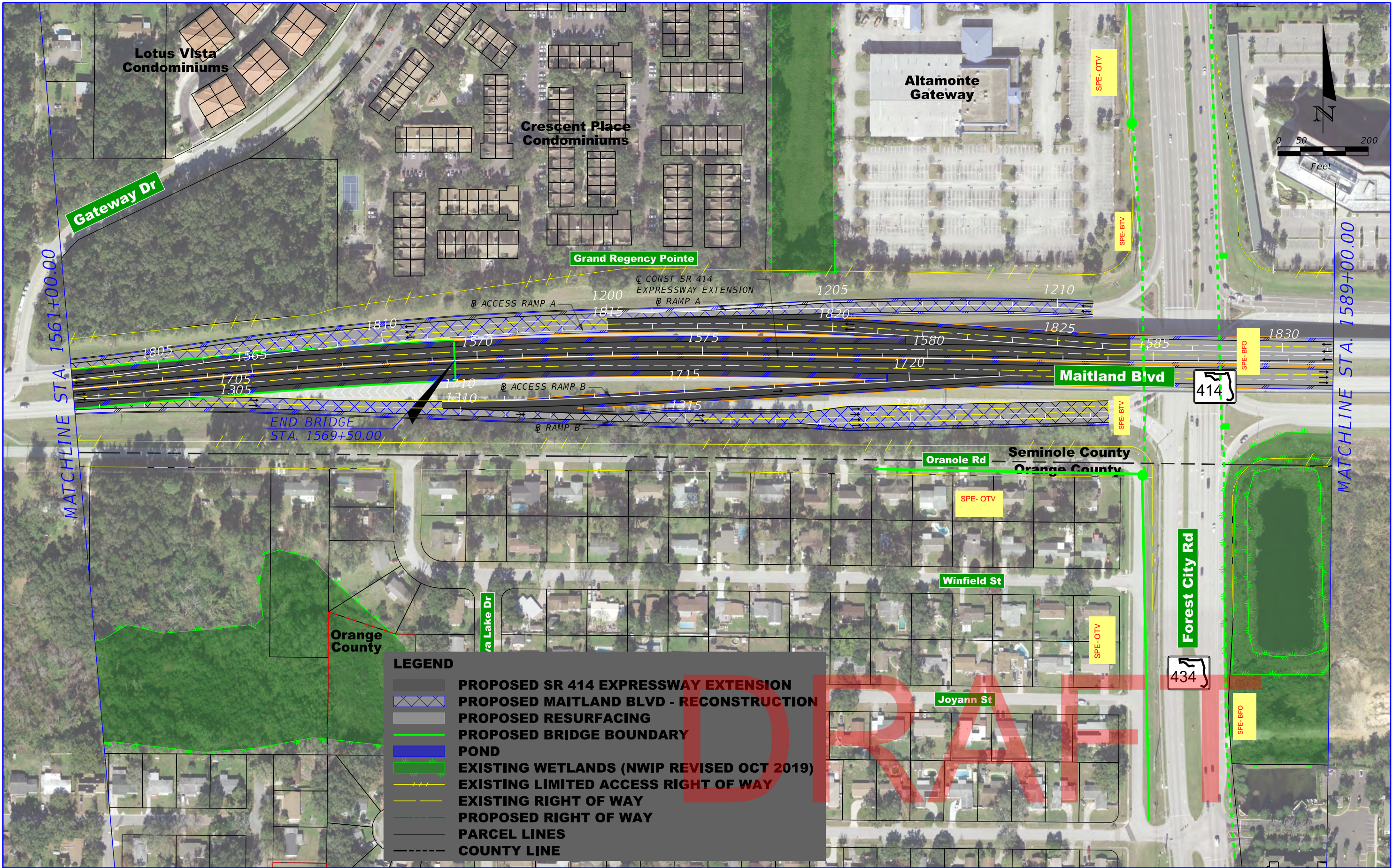
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (4)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

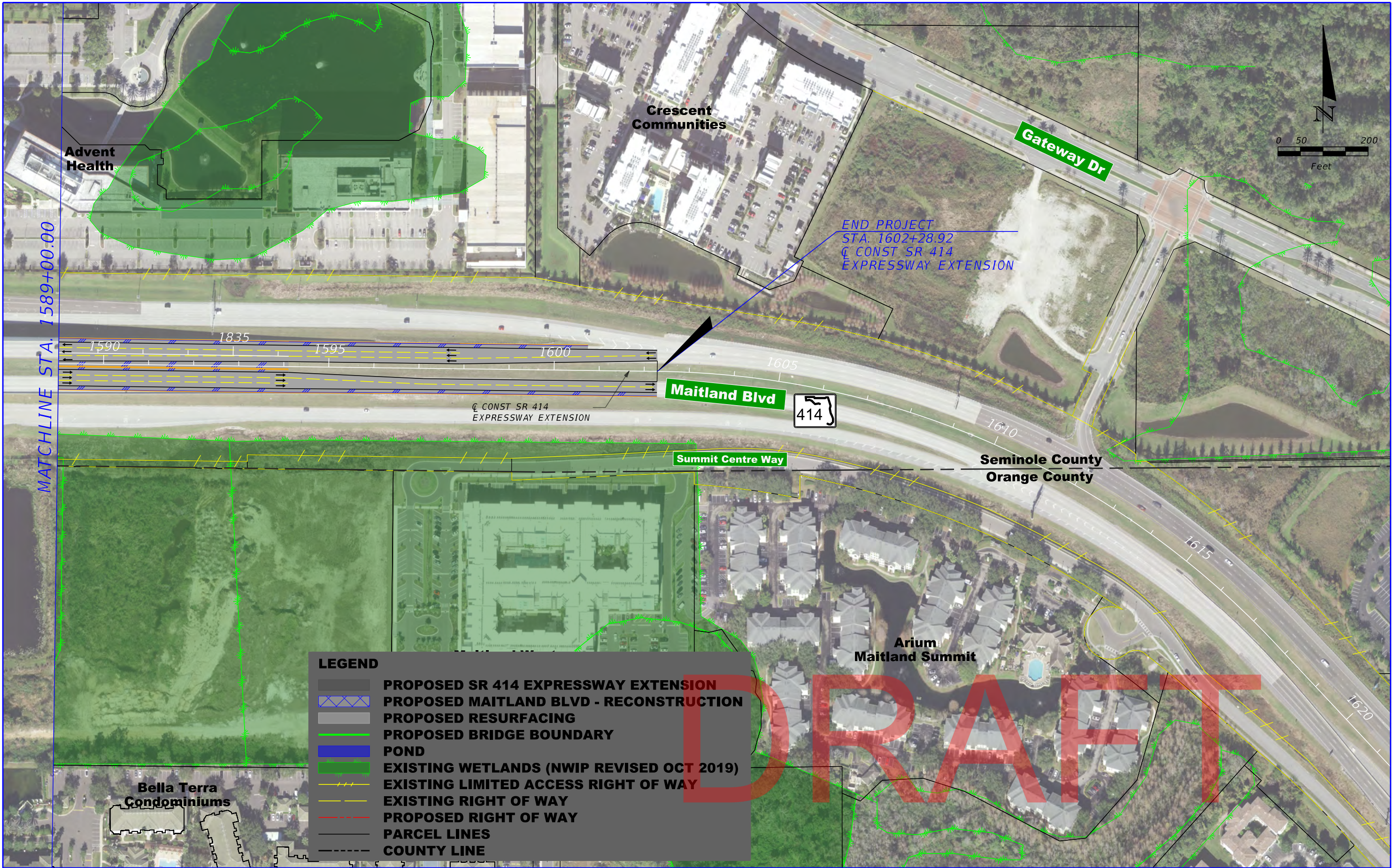
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (5)

SHEET
NO.



MATCHLINE STA. 1589+00.00

Crescent Communities

Advent Health

Gateway Dr

END PROJECT
STA. 1602+28.92
Q CONST SR 414
EXPRESSWAY EXTENSION

Maitland Blvd

414

Q CONST SR 414
EXPRESSWAY EXTENSION

Summit Centre Way

Seminole County
Orange County

Arium
Maitland Summit

Bella Terra
Condominiums

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

DRAFT

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.	PROJECT NO.
SR 414	414-227

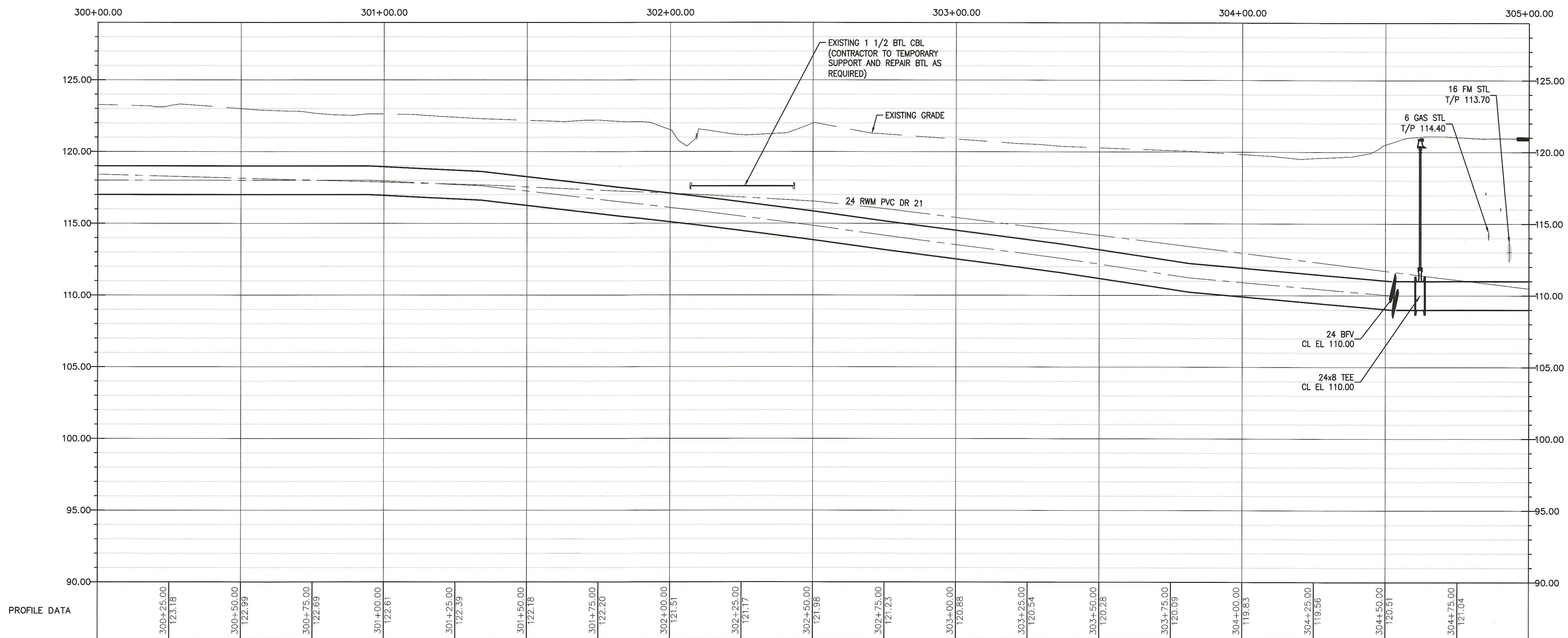
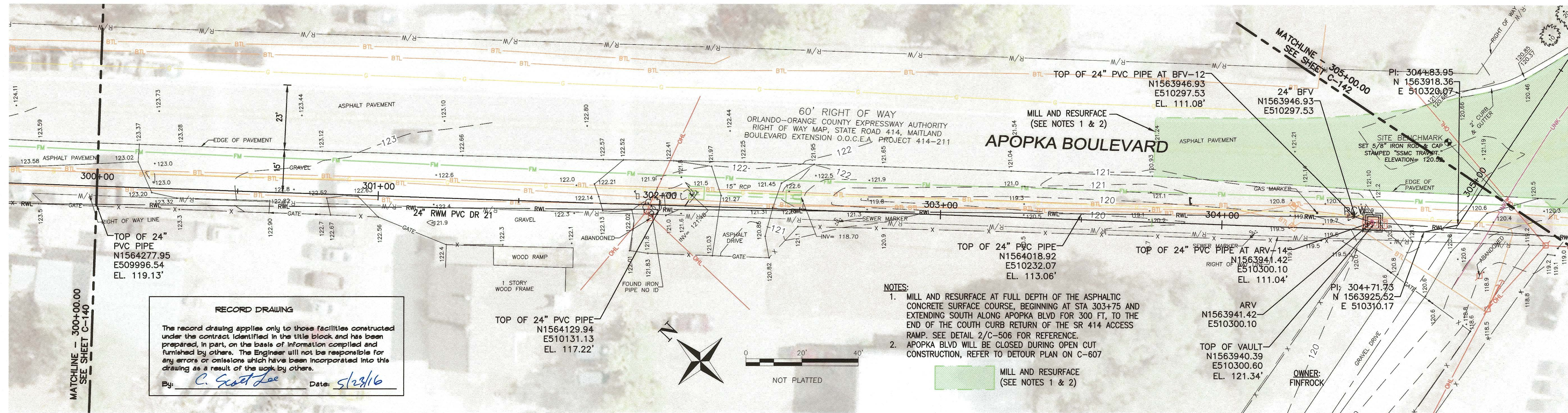
CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (6)

SHEET
NO.

City of Altamonte Springs

PATH/FILENAME: X:\ALTIMONTE SPRINGS\60303931\ALTIMONTE-APPOKA_RWL\000_CAD\CIVIL-SITE\C-UP-ALDWG
LAST UPDATE: Thursday, May 19, 2016 4:04:29 PM
PLOT DATE: Thursday, May 19, 2016 4:04:29 PM
PLOTTER: ahgimrk
ANSI D - 19-May-16

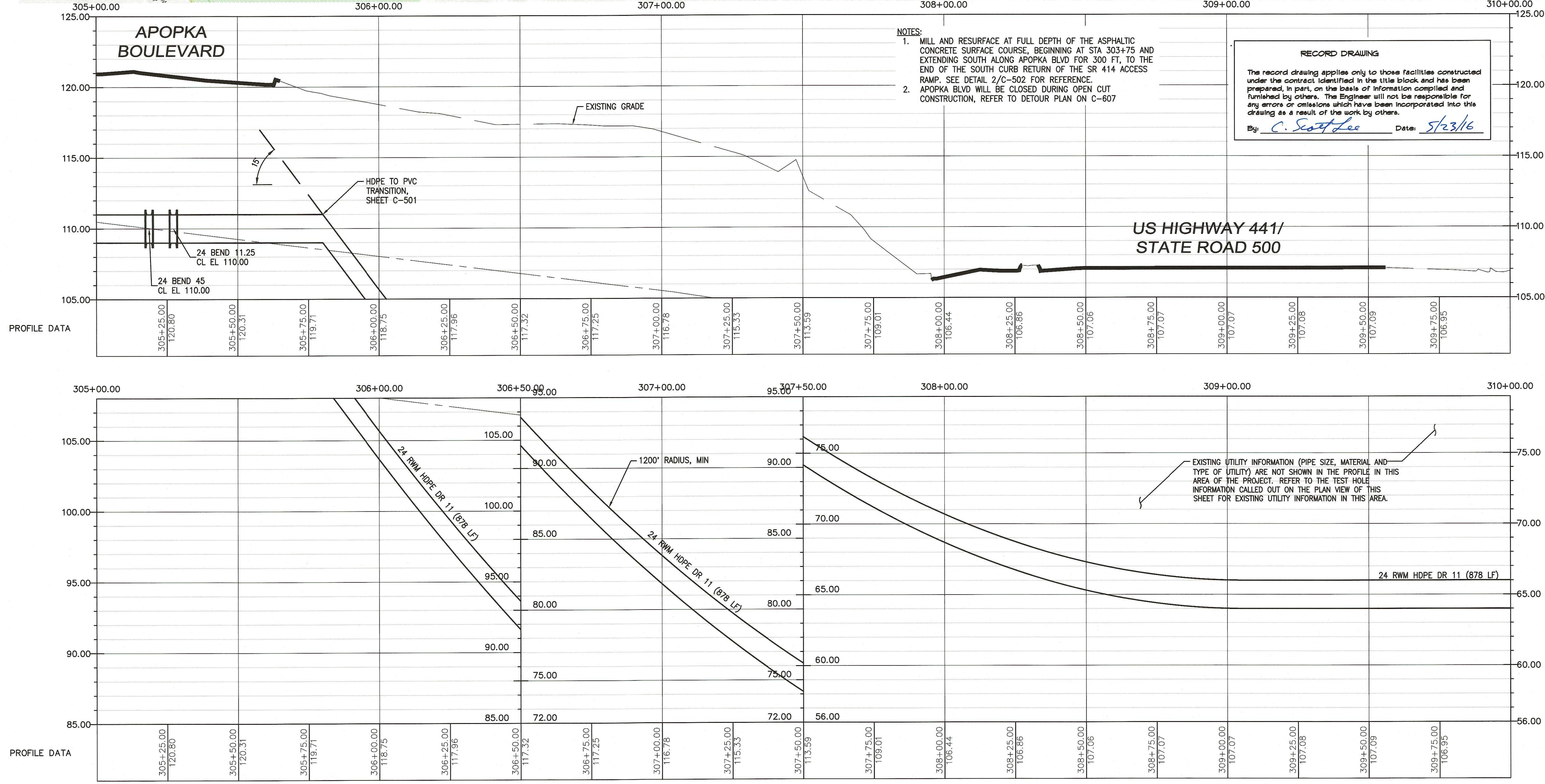


* THE PLAN VIEW TAKES PRECEDENCE OVER THE PROFILE VIEW. REFER TO THE PLAN VIEW FOR FITTING LOCATIONS, COORDINATES, ELEVATIONS, ETC.

REVISIONS	
DATE	DESCRIPTION
1 5/23/14	QRR CAS ADDENDUM No. 2
MARK	MADE BY CHECKED
AECOM	
ALTIMONTE SPRINGS	
C. SCOTT LEE, P.E. FL PROFESSIONAL LICENSE NO. 37305	
ALTIMONTE SPRINGS TO APOKA RECLAIMED WATER PIPELINE	
PLAN AND PROFILE STATION 300+00 THRU 305+00	
CIVIL	
PROJECT NO: 60303931	
CAD DWG FILE: -	
DESIGNED BY: NAU	
DRAWN BY: QRR	
DEPT CHECK: NAU	
PROJ CHECK: DSB	
DATE: APRIL 2014	
SCALE: AS NOTED	
C-141	
SHEET OF	

2016-006 (46)

PATH/FILENAME: X:\ALAMONTE SPRINGS\60303931-ALAMONTE-APOPKA-RWL-CAD\CIVIL-SITE\C-UP-N.DWG
LAST UPDATE: Thursday, May 19, 2016 3:01:40 PM
PLOT DATE: Thursday, May 19, 2016 4:05:30 PM
PLOTTER: c:\windows\system32\cmd.exe
ANSI D - 19-May-16



- NOTES:**
- MILL AND RESURFACE AT FULL DEPTH OF THE ASPHALTIC CONCRETE SURFACE COURSE, BEGINNING AT STA 303+75 AND EXTENDING SOUTH ALONG APOPKA BLVD FOR 300 FT, TO THE END OF THE SOUTH CURB RETURN OF THE SR 414 ACCESS RAMP. SEE DETAIL 2/C-502 FOR REFERENCE.
 - APOPKA BLVD WILL BE CLOSED DURING OPEN CUT CONSTRUCTION, REFER TO DETOUR PLAN ON C-607

RECORD DRAWING

The record drawing applies only to those facilities constructed under the contract identified in the title block and has been prepared, in part, on the basis of information compiled and furnished by others. The Engineer will not be responsible for any errors or omissions which have been incorporated into this drawing as a result of the work by others.

By: *C. Scott Lee* Date: *5/23/16*

REVISIONS			
MARK	DATE	MADE BY	DESCRIPTION
1	5/23/16	QRR	ADDENDUM No. 2

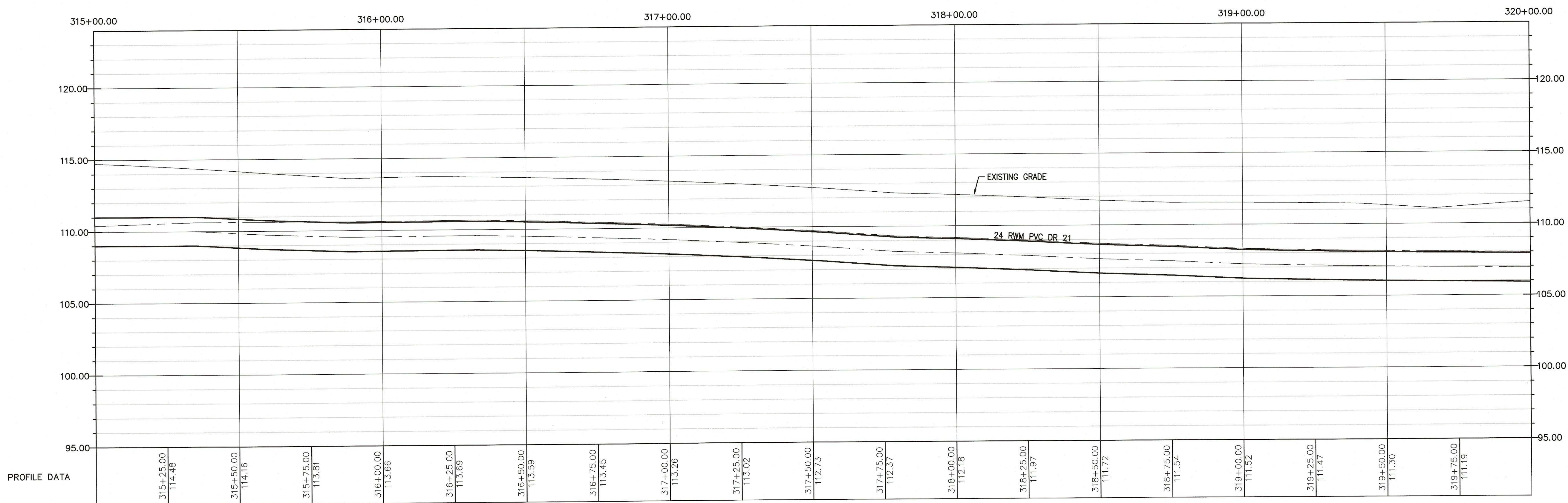
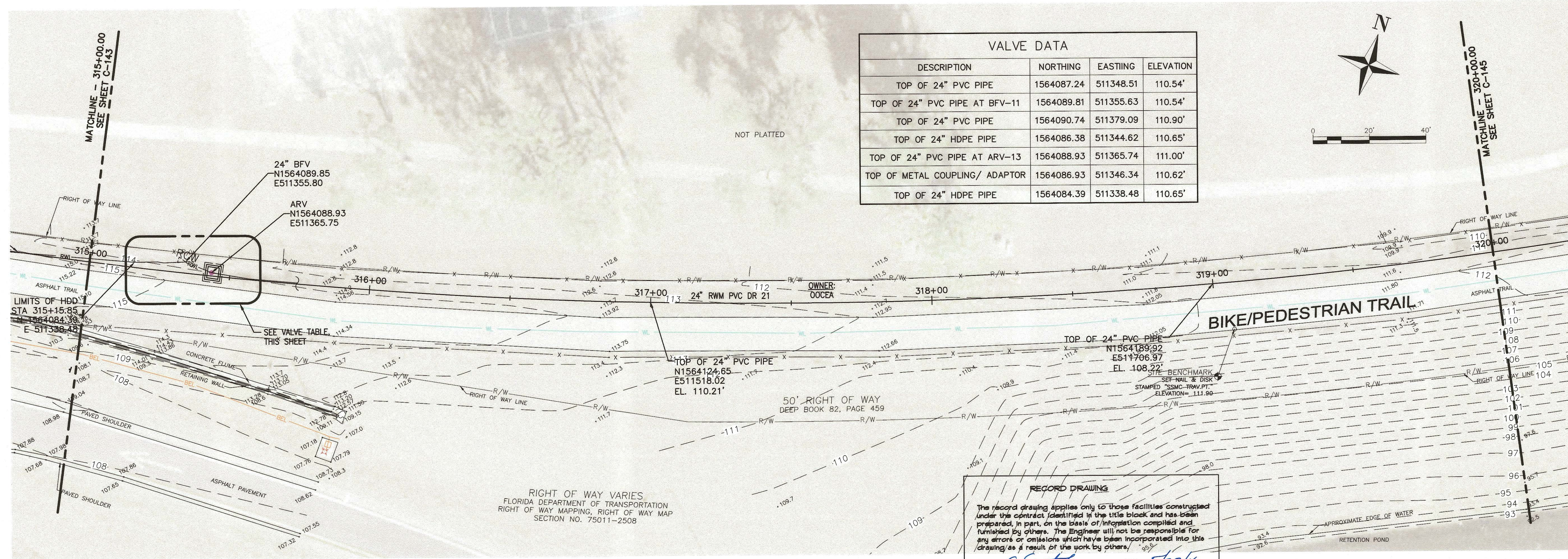
PROJECT INFORMATION			
PROJECT NO.	CAD FILE	DESIGNED BY	DRAWN BY
60303931	-	NAU	QRR
DEPT CHECK:		NAU	DSB
DATE:		APRIL 2014	
SCALE:		AS NOTED	

C-142

SHEET OF

2016-004 (47)

PATH/FILENAME: X:\ALTIMONTE SPRINGS\60303931_ ALTIMONTE-APPOKA_RWA\000_CAD\CIVIL-SITE\C-UP-N.DWG
LAST UPDATE: Thursday, May 19, 2016 3:01:40 PM
PLOT DATE: Thursday, May 19, 2016 4:07:39 PM
PLOTTED: ohlgmink
ANSI D - 19-May-16



* THE PLAN VIEW TAKES PRECEDENCE OVER THE PROFILE VIEW. REFER TO THE PLAN VIEW FOR FITTING LOCATIONS, COORDINATES, ELEVATIONS, ETC.

RECORD SET	CSL	KRA	05/2016	DATE	MARK	DESCRIPTION
CONFORMED SET	CAS	QRR	07/2014	MADE BY	CHECKED	REVISIONS
BID SET	CAS	QRR	04/2014	DATE	MARK	DESCRIPTION

AECOM

CERTIFICATE OF AUTHORIZATION NO. EB-8115

Altamonte Springs

C. SCOTT LEE, PE
FL PROFESSIONAL LICENSE NO. 37365

ALTIMONTE SPRINGS TO APOKA
RECLAIMED WATER PIPELINE

PLAN AND PROFILE STATION
315+00 THRU 320+00

CIVIL

PROJECT NO: 60303931

CAD DWG FILE: -

DESIGNED BY: NAU

DRAWN BY: QRR

DEPT CHECK: NAU

PROJ CHECK: DSB

DATE: APRIL 2014

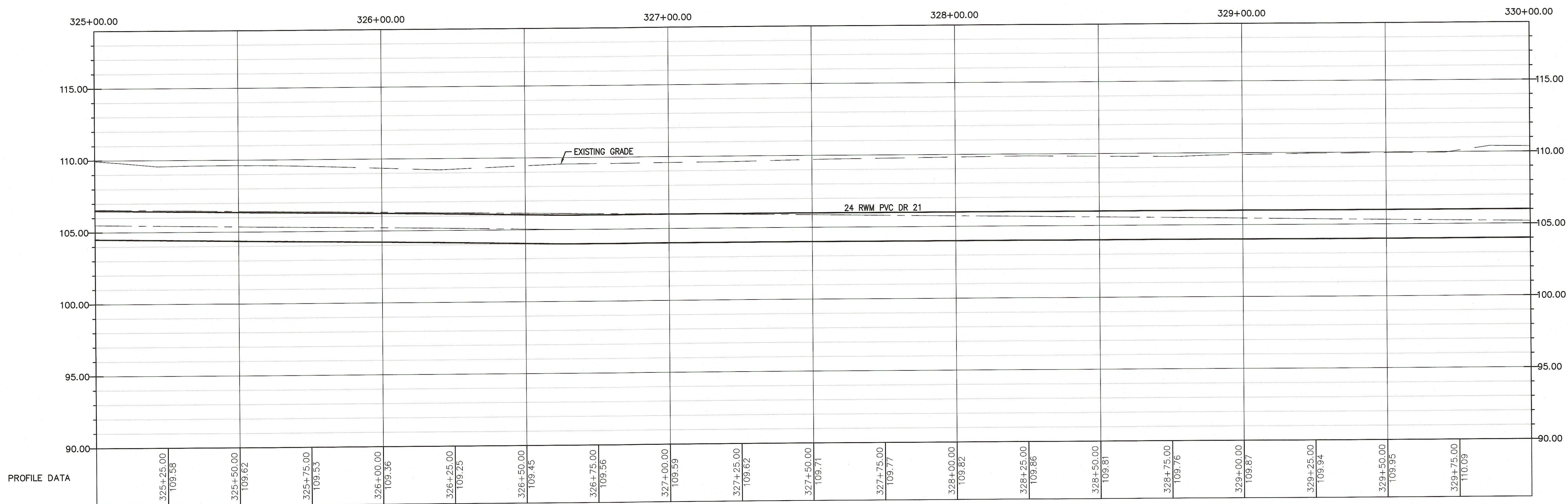
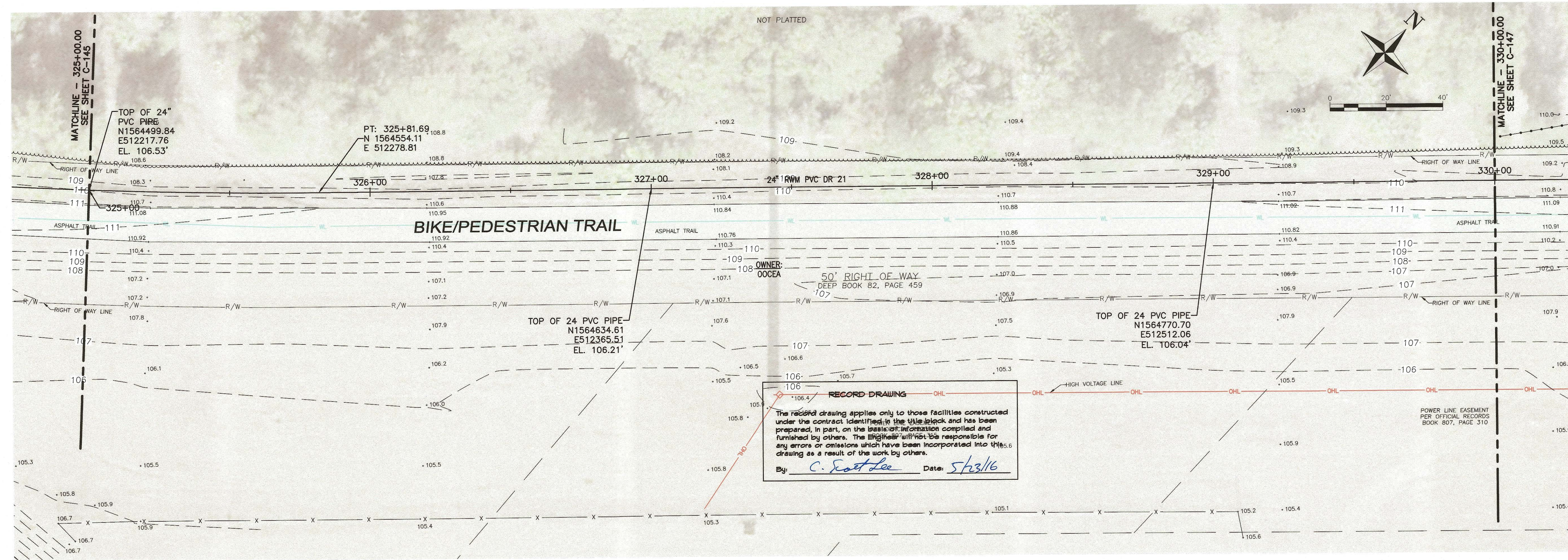
SCALE: AS NOTED

C-144

SHEET OF

2016-006 (49)

PATH/FILENAME: X:\ALTIMONTE SPRINGS\60303931_ ALTIMONTE-APPOKA_RWA\000_CAD\DWG-SITE\C-UP-NUMG
LAST UPDATE: Thursday, May 19, 2016 3:01:40 PM PLOT DATE: Thursday, May 19, 2016 4:59:53 PM
PLOTTED: chg/mrk
ANSI D - 19-May-16



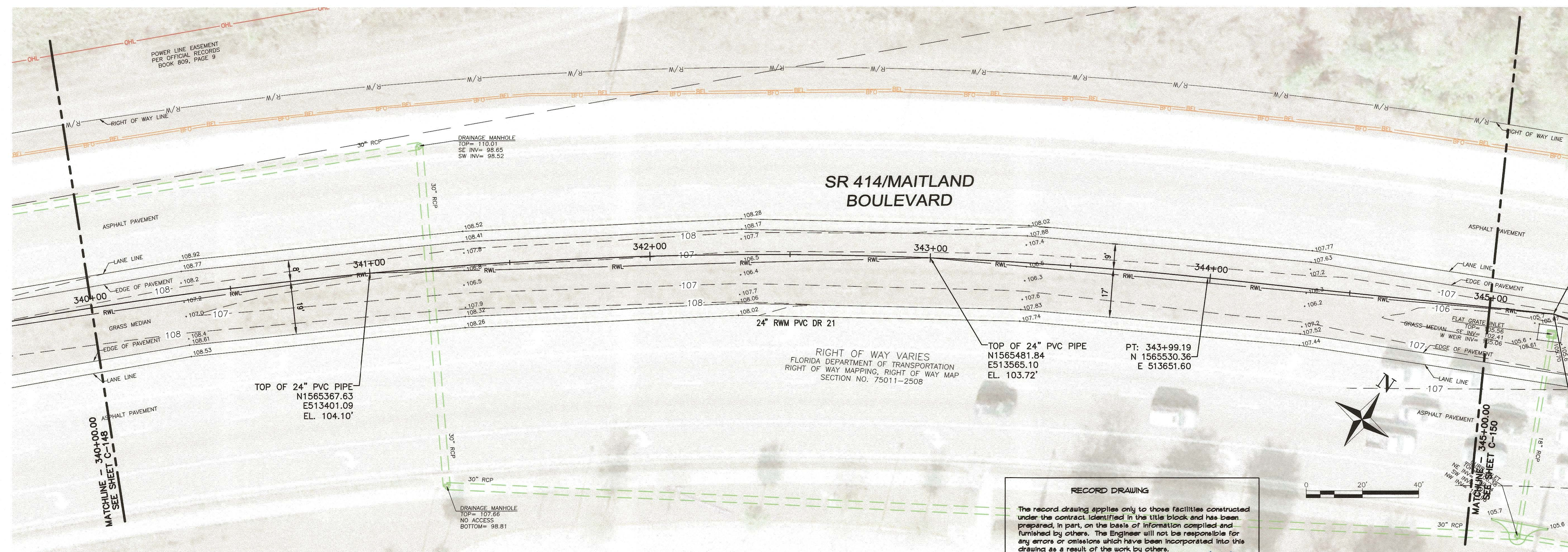
* THE PLAN VIEW TAKES PRECEDENCE OVER THE PROFILE VIEW. REFER TO THE PLAN VIEW FOR FITTING LOCATIONS, COORDINATES, ELEVATIONS, ETC.

RECORD SET		CONFORMED SET		BID SET		DESCRIPTION	
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05/20/16	07/2014	07/2014	04/2014			MADE BY	CHECKED
						MARK	

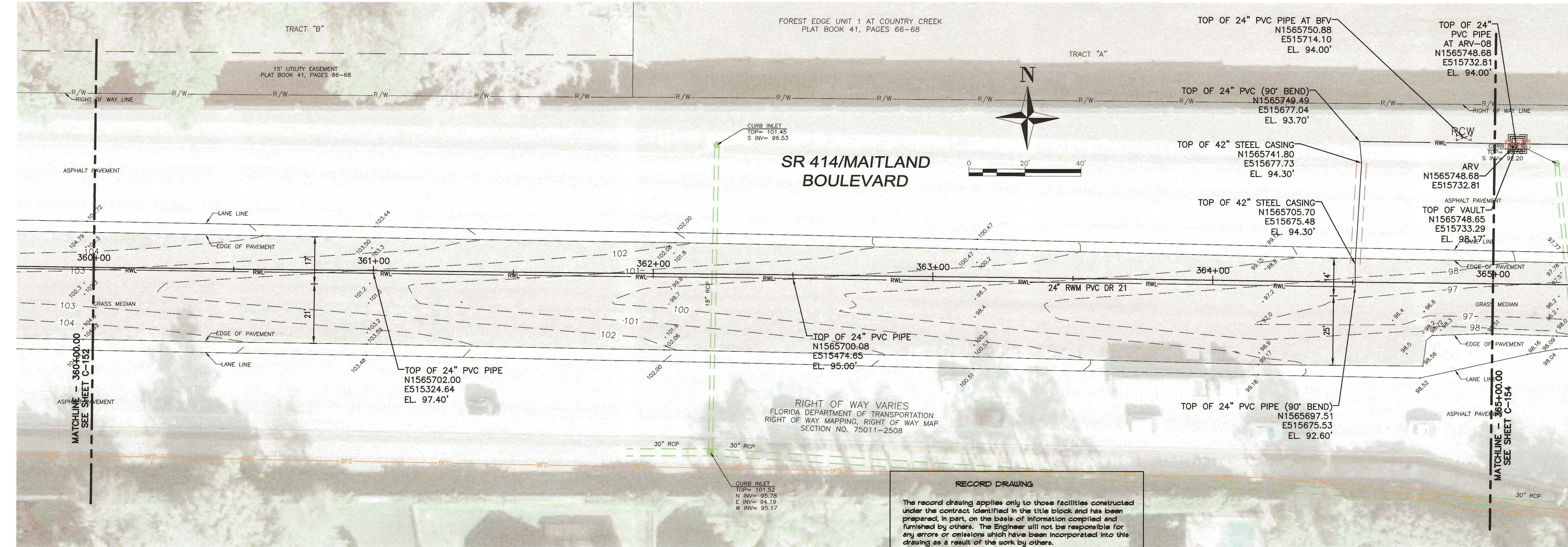
AECOM		Altamonte Springs	
CERTIFICATE OF AUTHORIZATION NO. EB-8115		C. SCOTT LEE, P.E. FL PROFESSIONAL LICENSE NO. 37305	

ALTIMONTE SPRINGS TO APOKA RECLAIMED WATER PIPELINE		PLAN AND PROFILE STATION 325+00 THRU 330+00		CIVIL	
PROJECT NO: 60303931		CAD DWG FILE: -		DESIGNED BY: NAU	
DRAWN BY: QRR		DEPT CHECK: NAU		DATE: APRIL 2014	
SCALE: AS NOTED		C-146		SHEET OF	

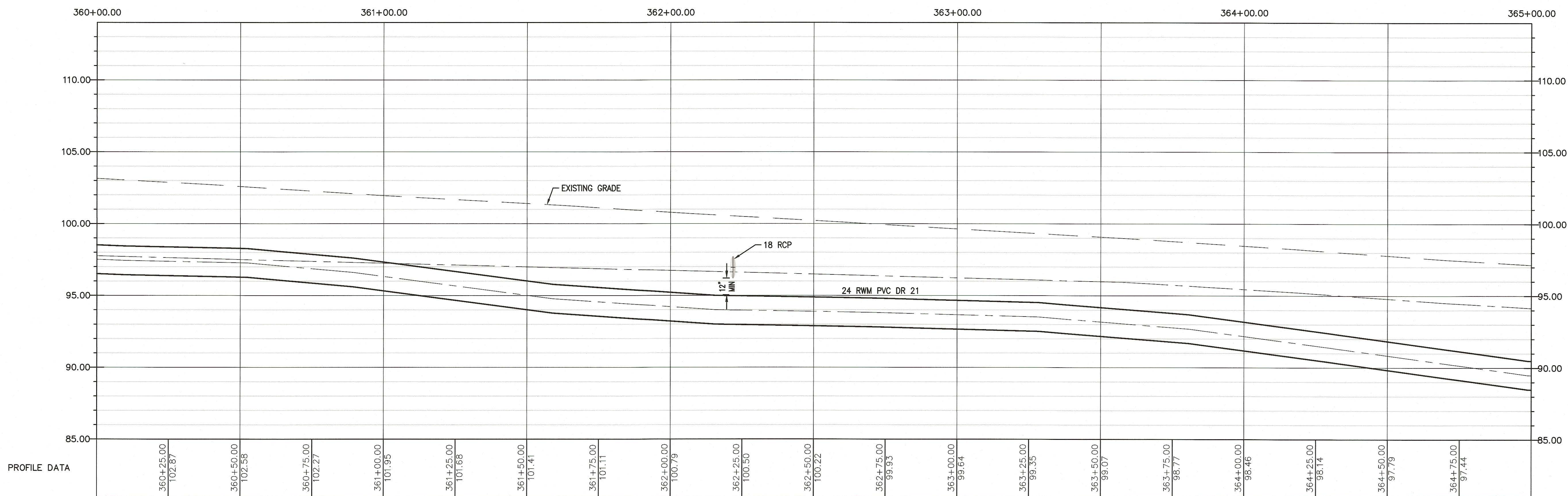
2016-006 (51)



PATH/FILENAME: X:\ALAMONTE SPRINGS\60303931\ALAMONTE-APOPKA_RWL\000_CAD\CIVIL-SITE\C-UP-N.DWG
LAST UPDATE: Thursday, May 19, 2016 3:01:40 PM
PLOT DATE: Thursday, May 19, 2016 4:17:06 PM
PLOTTER: dimgmik
ANSI D - 19-May-16



RECORD DRAWING
The record drawing applies only to those facilities constructed under the contract identified in the title block and has been prepared, in part, on the basis of information compiled and furnished by others. The Engineer will not be responsible for any errors or omissions which have been incorporated into this drawing as a result of the work by others.
By: C. Scott Lee Date: 5/25/16

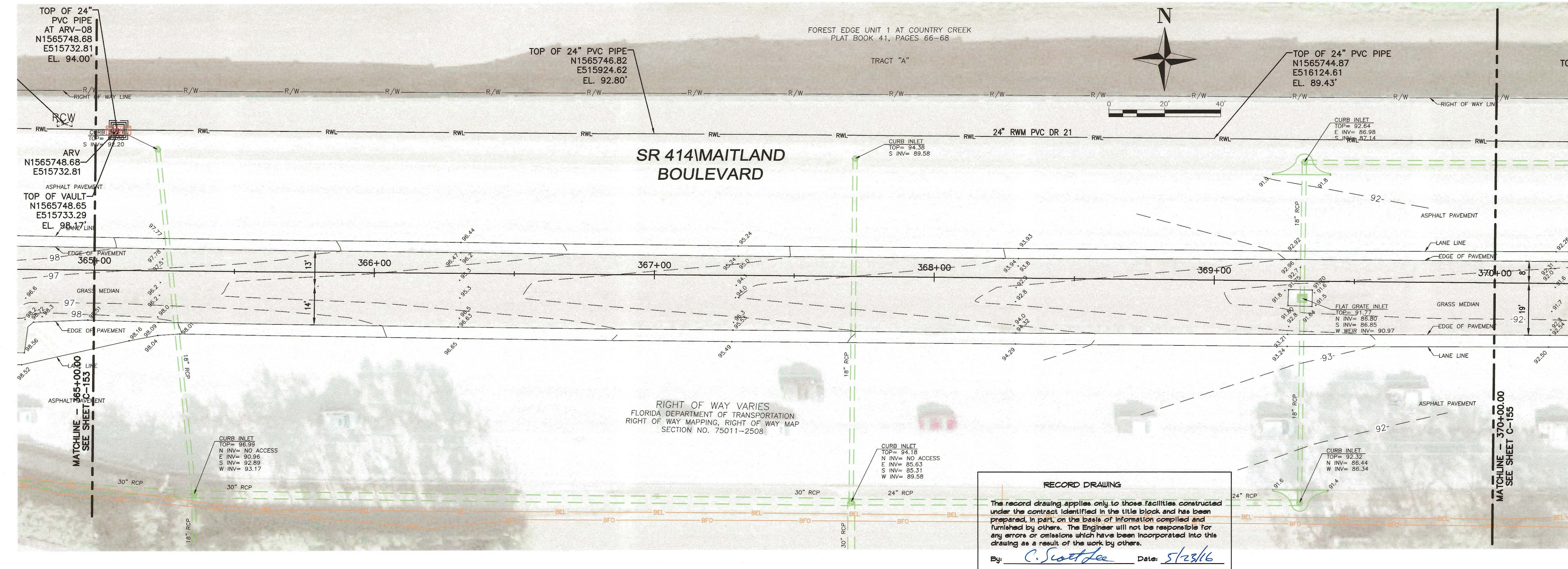


* THE PLAN VIEW TAKES PRECEDENCE OVER THE PROFILE VIEW. REFER TO THE PLAN VIEW FOR FITTING LOCATIONS, COORDINATES, ELEVATIONS, ETC.

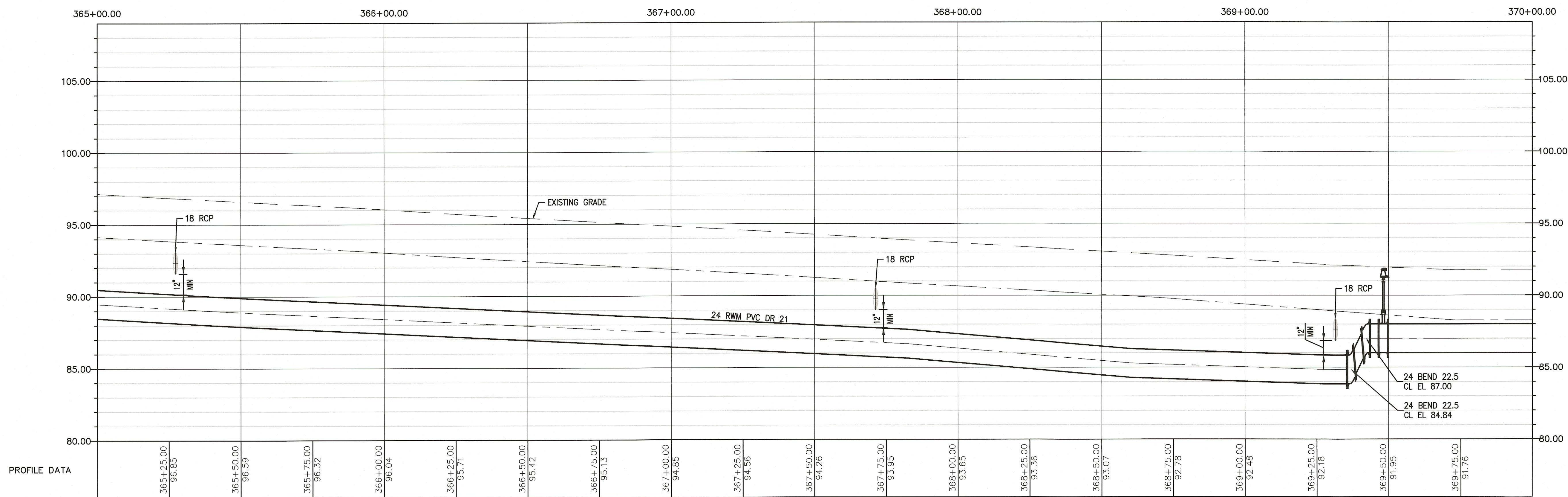
RECORD SET		CONFORMED SET		BID SET		REVISIONS	
KRA	CSL	QRR	CAS	QRR	CAS	MARK	DATE
05/2016		07/2014		04/2014		MADE BY	CHECKED
AECOM						Altamonte Springs	
CERTIFICATE OF AUTHORIZATION NO. EE-8115						C. SCOTT LEE, P.E. FL. PROFESSIONAL LICENSE NO. 37065	
ALAMONTE SPRINGS TO APOPKA RECLAIMED WATER PIPELINE PLAN AND PROFILE STATION 360+00 THRU 365+00 CIVIL							
PROJECT NO: 60303931 CAD DWG FILE: - DESIGNED BY: NAU DRAWN BY: QRR DEPT CHECK: NAU PROJ CHECK: DSB DATE: APRIL 2014 SCALE: AS NOTED							
C-153 SHEET OF							

2016-006 (58)

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LAST UPDATE: Thursday, May 19, 2016 3:01:40 PM
PLOT DATE: Thursday, May 19, 2016 4:18:04 PM
PLOTTER: ohlgrink
ANSI D - 19-May-16



RECORD DRAWING
The record drawing applies only to those facilities constructed under the contract identified in the title block and has been prepared, in part, on the basis of information compiled and furnished by others. The Engineer will not be responsible for any errors or omissions which have been incorporated into this drawing as a result of the work by others.
By: *C. Scott Lee* Date: *5/23/16*



* THE PLAN VIEW TAKES PRECEDENCE OVER THE PROFILE VIEW. REFER TO THE PLAN VIEW FOR FITTING LOCATIONS, COORDINATES, ELEVATIONS, ETC.

RECORD SET				CONFORMED SET				BID SET				REVISIONS	
KRA	CSL	QRR	CAS	KRA	CSL	QRR	CAS	KRA	CSL	QRR	CAS	DATE	DESCRIPTION
05/2016				07/2014				04/2014					

AECOM
CERTIFICATE OF AUTHORIZATION NO. EB-8115
Altamonte Springs

**ALAMONTE SPRINGS TO APOPKA
RECLAIMED WATER PIPELINE**
**PLAN AND PROFILE STATION
365+00 THRU 370+00**
CIVIL

PROJECT NO: 60303931
CAD DWG FILE: -
DESIGNED BY: NAU
DRAWN BY: QRR
DEPT CHECK: NAU
PROJ CHECK: DSB
DATE: APRIL 2014
SCALE: AS NOTED

C-154
SHEET OF

2016-006 (59)

Comcast Communications

Green, Jamie

From: Baker, Michael
Sent: Wednesday, October 7, 2020 10:11 AM
To: 'Osebold, Scott'
Subject: RE: CFX Project No. 414-227: Request for utility information for SR 414 Expressway Extension PD&E Study

Good morning,

Thank you for your response. If we have any further questions we will contact you.

Thank you,

Michael S. Baker

Jacobs

Transportation Planner | People & Places Solutions
352-272-0740 mobile | Michael.Baker3@jacobs.com
200 S. Orange Ave., Suite 900 | Orlando, FL 32801 | USA
www.jacobs.com

Schedule: M – TH 8:00 – 5:00 | F 8:00 – 12:00

From: Osebold, Scott <Scott_Osebold@comcast.com>
Sent: Monday, October 5, 2020 2:44 PM
To: Baker, Michael <Michael.Baker3@jacobs.com>
Cc: Dalton, Sunserea/ORL <Sunserea.Dalton@jacobs.com>; Jacoby, Phillip <Phillip.Jacoby@jacobs.com>; [CENFLR-LAC Construction] <CENFLR-LAC_Construction@comcast.com>
Subject: [EXTERNAL] RE: CFX Project No. 414-227: Request for utility information for SR 414 Expressway Extension PD&E Study

Michael, no Comcast facilities within project limits.

From: Baker, Michael <Michael.Baker3@jacobs.com>
Sent: Monday, October 5, 2020 1:59 PM
Cc: Dalton, Sunserea/ORL <Sunserea.Dalton@jacobs.com>; Jacoby, Phillip <Phillip.Jacoby@jacobs.com>
Subject: [EXTERNAL] CFX Project No. 414-227: Request for utility information for SR 414 Expressway Extension PD&E Study

Attention: Utility Agency Owner Representative

The Central Florida Expressway Authority (CFX) is conducting a Project Development & Environment Study for State Road (SR) 414 Expressway Extension (US 441 to SR 434) in Seminole and Orange Counties, Florida. The study limits extend along the existing SR 414 (Maitland Boulevard) corridor from US 441 (Orange Blossom Trail) to SR 434 (Forest City Road).

Per the attached utility contact letter, please provide information on your agency's utility information by October 31, 2020. The following link will take you to a folder where you can download the Aerial Basemaps, Figure 1 (Regional Location Map) and Figure 2 (Study Area Map).

https://jacobsengineering-my.sharepoint.com/:f:/g/personal/michael_baker3_jacobs_com/EvJAL5x3yU9GITiXGFkHh5cBz4LuD5yNJbVM3Jqt4Yr6yg?email=CENFLR-NFL_Construction%40comcast.com&e=4b0aGa

Please confirm receipt of this request by reply to email and let us know if the information needs distributed to a different agency representative. If you have any questions, please do not hesitate on contacting me and thank you for your time on this effort.

Thank you.

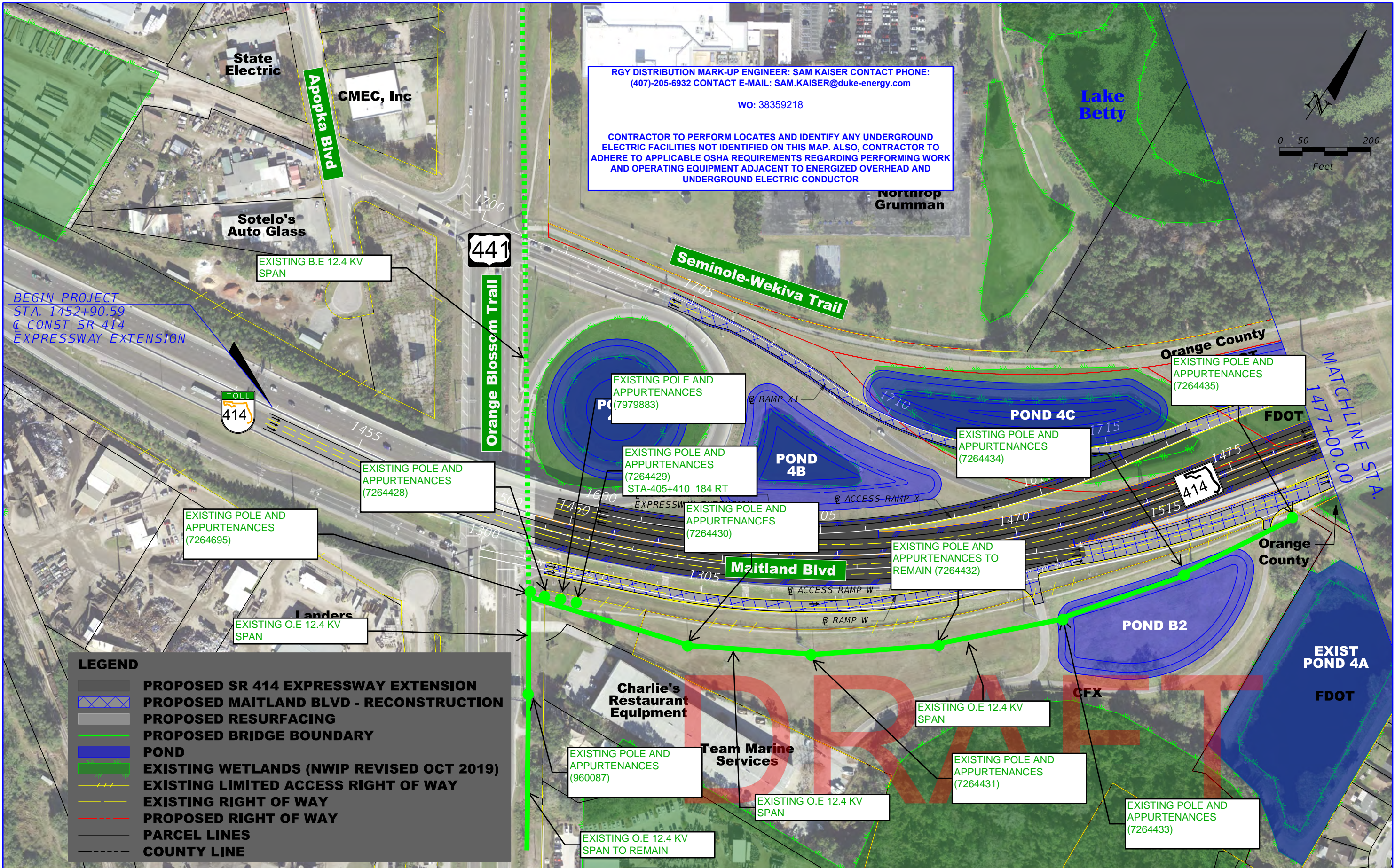
Michael S. Baker
Jacobs

Transportation Planner | People & Places Solutions
352-272-0740 mobile | Michael.Baker3@jacobs.com
200 S. Orange Ave., Suite 900 | Orlando, FL 32801 | USA
www.jacobs.com

*Schedule: **M – TH 8:00 – 5:00 | F 8:00 – 12:00***

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Duke Energy - Distribution



RGY DISTRIBUTION MARK-UP ENGINEER: SAM KAISER CONTACT PHONE: (407)-205-6932 CONTACT E-MAIL: SAM.KAISER@duke-energy.com
WO: 38359218

CONTRACTOR TO PERFORM LOCATES AND IDENTIFY ANY UNDERGROUND ELECTRIC FACILITIES NOT IDENTIFIED ON THIS MAP. ALSO, CONTRACTOR TO ADHERE TO APPLICABLE OSHA REQUIREMENTS REGARDING PERFORMING WORK AND OPERATING EQUIPMENT ADJACENT TO ENERGIZED OVERHEAD AND UNDERGROUND ELECTRIC CONDUCTOR

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

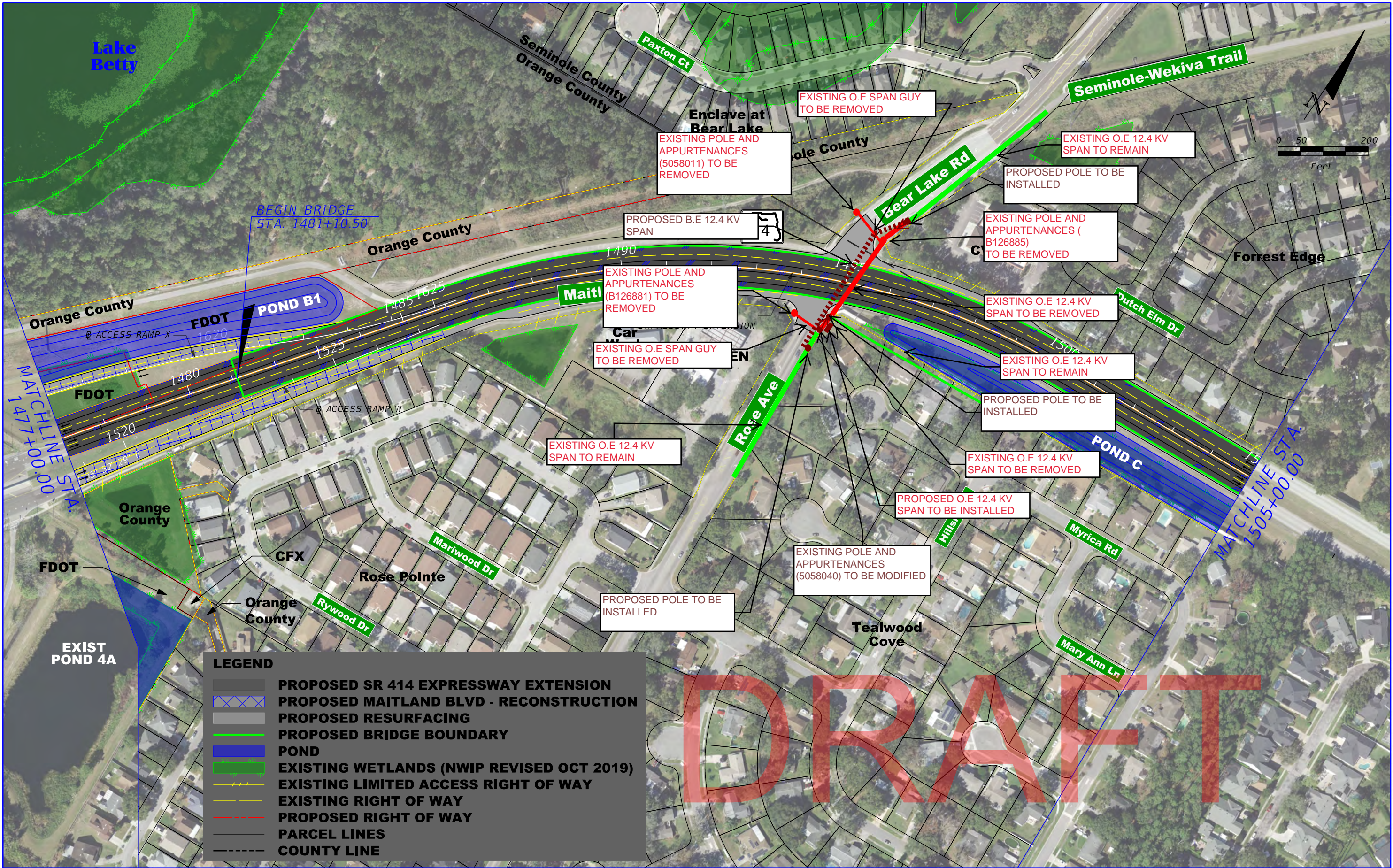
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (1)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883
JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

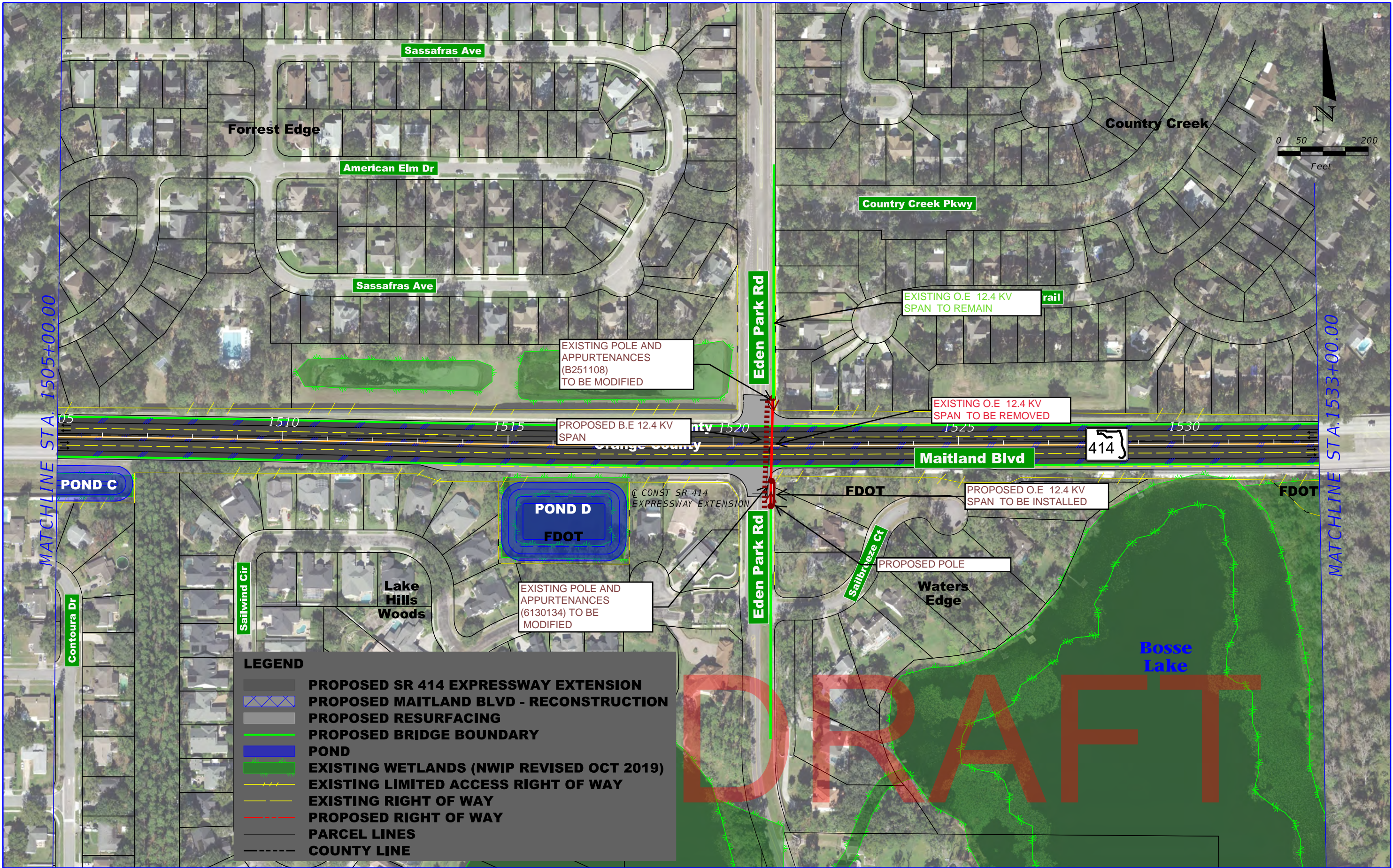
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (2)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

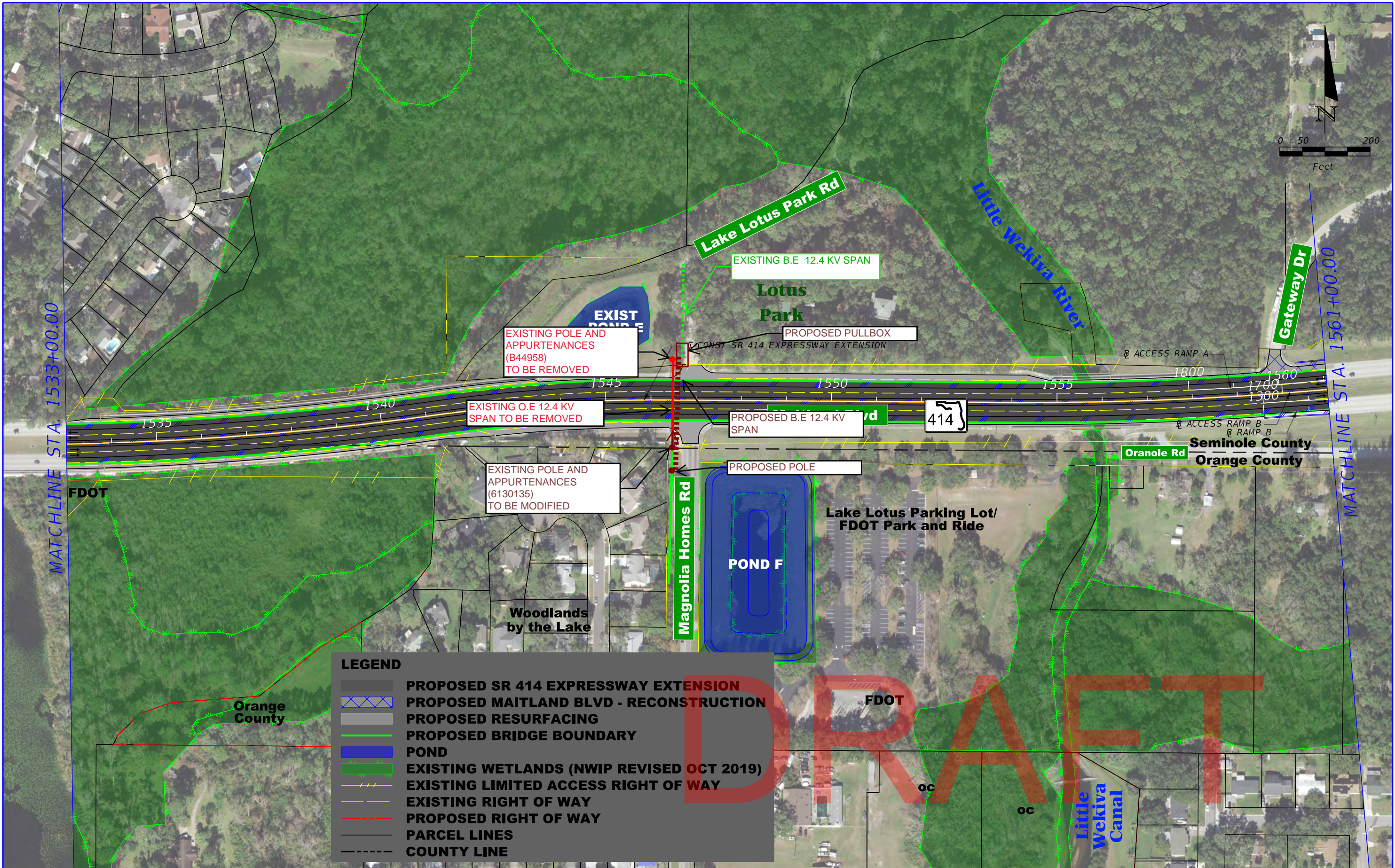
SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.	PROJECT NO.
SR 414	414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (3)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

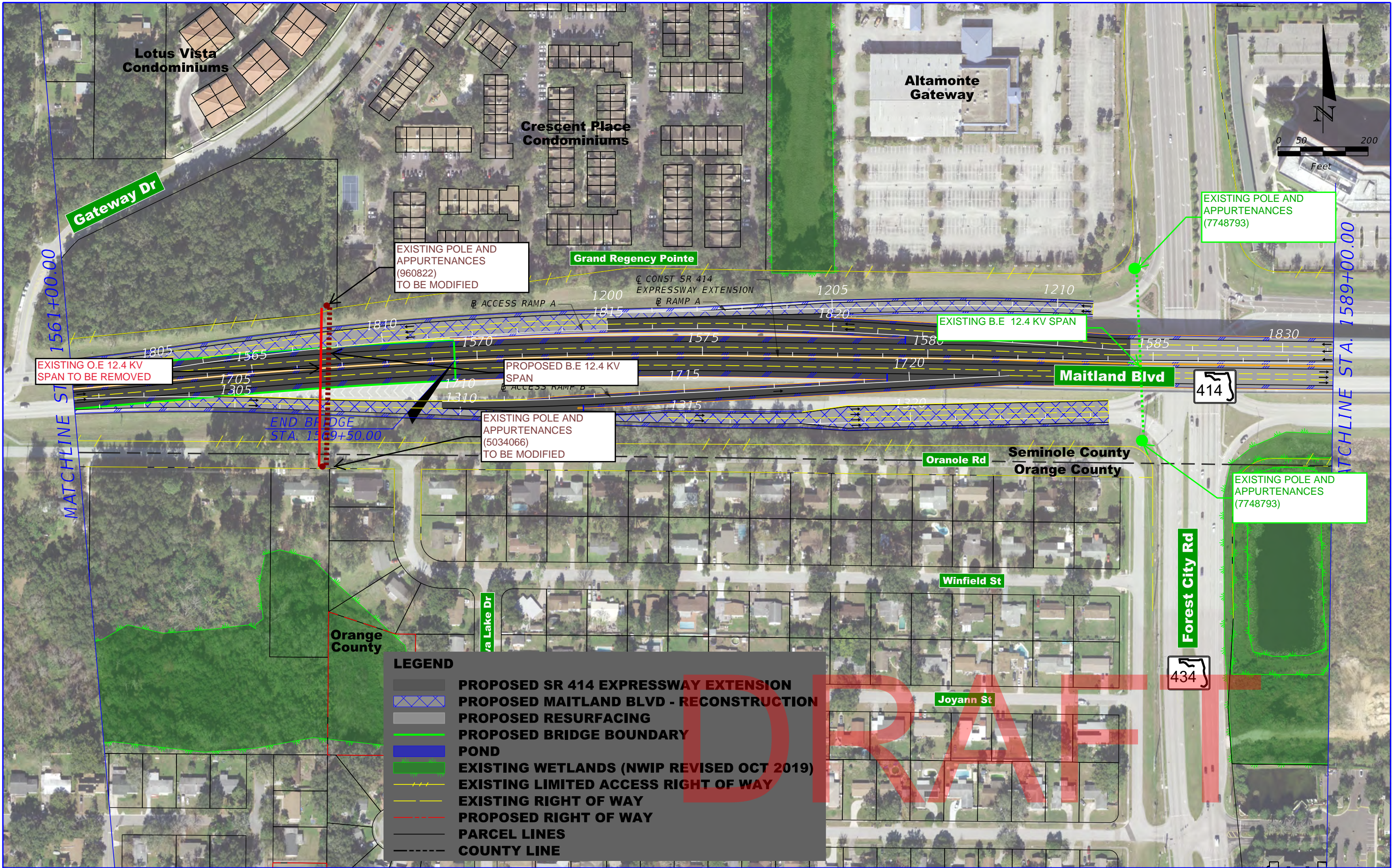
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (4)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

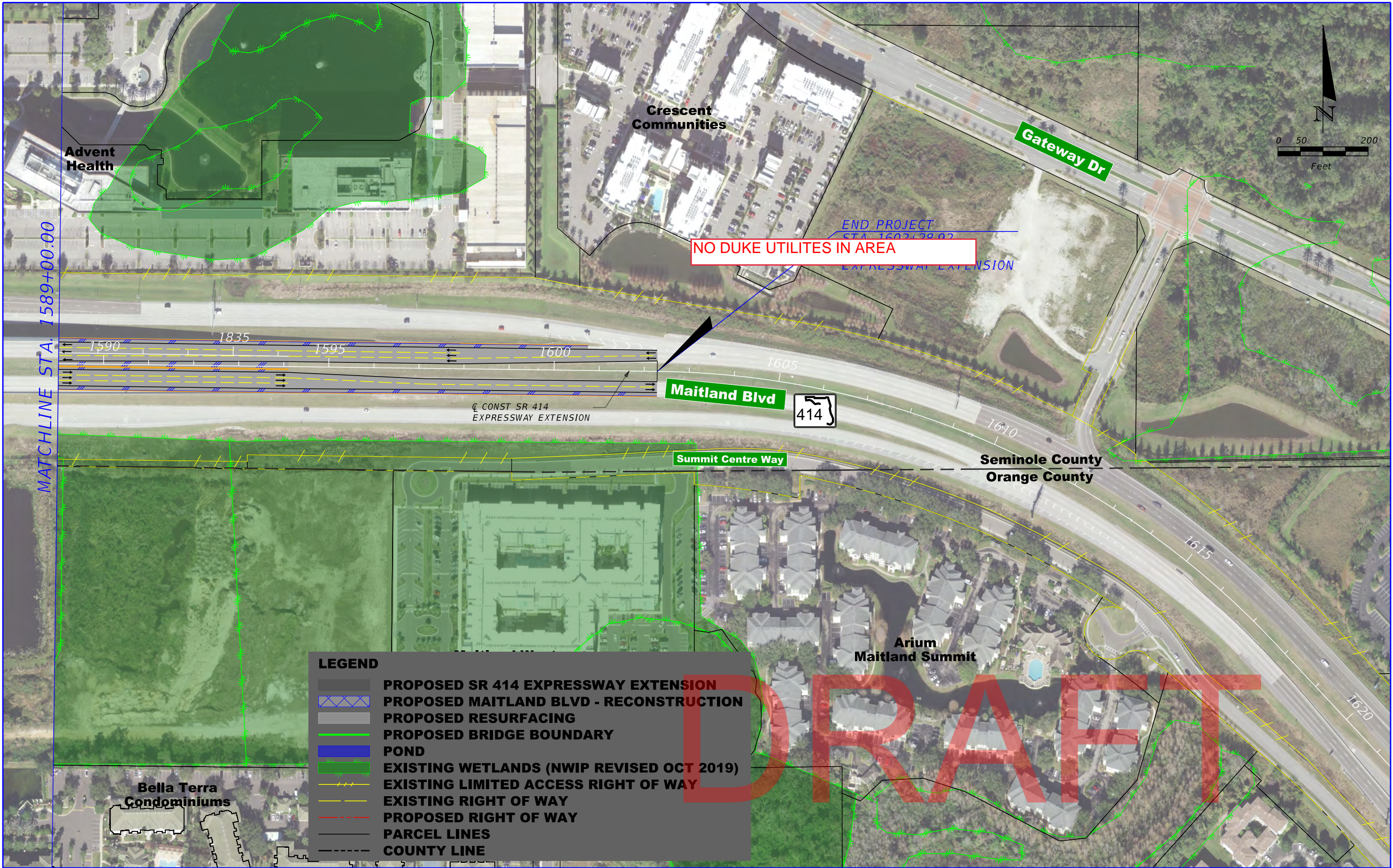
ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (5)

SHEET
NO.



MATCHLINE STA. 1589+00.00

Crescent Communities

Gateway Dr

NO DUKE UTILITES IN AREA

END PROJECT
STA. 1602+29.02
EXPRESSWAY EXTENSION

Maitland Blvd

414

Q CONST SR 414
EXPRESSWAY EXTENSION

Summit Centre Way

Seminole County
Orange County

Arium
Maitland Summit

Bella Terra
Condominiums

LEGEND

- PROPOSED SR 414 EXPRESSWAY EXTENSION
- PROPOSED MAITLAND BLVD - RECONSTRUCTION
- PROPOSED RESURFACING
- PROPOSED BRIDGE BOUNDARY
- POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

DRAFT

PRELIMINARY - SUBJECT TO CHANGE

ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
P.E. LICENSE NO. 60883

JACOBS ENGINEERING GROUP INC.
200 S. ORANGE AVENUE, STE 900
ORLANDO, FL 32801; PHONE (407) 903-5001
CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.
SR 414

PROJECT NO.
414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (6)

SHEET
NO.

Duke Energy - Transmission

USE GUIDELINES FOR ENCROACHMENTS INVOLVING TRANSMISSION EASEMENTS

Duke Energy has a property interest called an easement (or sometimes a right-of-way) in land that you own or are considering purchasing. This easement grants Duke Energy the right to use the easement area for purposes described in the easement document that is filed and recorded in the county's recorder office. This property interest stays with the land when it is bought and sold and generally is perpetual in duration. A series of easements often form a corridor in which the transmission facilities are located and access up and down the corridor is part of the reason Duke Energy obtains these rights.

Broadly stated, easements allow Duke Energy to use another person's property to construct, operate, maintain, repair, and replace electrical facilities for the transmission of high voltage power. The landowner may continue to use the easement area so long as the use is not inconsistent with the easement document or Duke Energy's use of the easement. Any incompatible use by the landowner is called an encroachment. Where an encroachment is under construction, Duke Energy will request that it be stopped and removed; where an encroachment is already installed, Duke Energy will request that it be removed. Where a landowner fails to cooperate, Duke Energy will seek legal recourse to remove the encroachment.

Electricity is a public service and subject to state and federal regulations with which Duke Energy must comply. Any use by the landowner that does or could create regulatory issues is an encroachment. Power lines in the transmission easement are uninsulated and electricity is a dangerous instrumentality. Any landowner use that increases the danger to the landowner, the public or Duke Energy in its use of the easement is also an encroachment.

Over years of designing, constructing, operating, repairing, upgrading and maintaining electric facilities in transmission easements, Duke Energy has developed an understanding of the types of uses by landowners that do, or potentially can, interfere with the easement's purposes and Duke Energy's ability to provide safe and reliable service. This guidance, which supersedes all prior versions, provides a brief overview of types of things that do, or can, interfere with Duke Energy's easement rights and thereby create encroachments.

This overview cannot address all possible situations and is intended to provide general guidance. Please contact the Asset Protection Specialist if you have additional questions or concerns about the use of the easements. Please discuss any proposed activity in the transmission easements with Duke Energy to avoid creating an encroachment or interference. The Asset Protection Specialist can assist and help avoid a subsequent need by the landowner to revise plans or remove obstructions from the easements. Engineering plans may be required by Duke Energy to fully understand any proposed use by the landowner.

By providing these guidelines, Duke Energy does not waive any rights it has in its easements or under the law. Duke Energy's concurrence that a proposed use does not constitute an interference with its easement rights does not mean that requirements of local, county, state or federal governments or other agencies with governing authority have been met.

The following are not permitted in Duke Energy's transmission easements as they interfere with Duke Energy's use of the easements for transmission of electricity by, among other things, interfering with full use the easement, interfering with existing facilities, interfering with access to the facilities, interfering with future expansion in the easement, increasing the danger to the public or those who may be required to work in the easement, creating regulatory violations and generally, making the transmission of electricity more dangerous, costly and/or unreliable: Examples include but are not limited to:

- Permanent or temporary structures and buildings, including for example, permanent or manufactured/mobile homes (and home additions and extensions), garages, sheds, satellite systems, intersections, cul-de-sacs, entrances, streets, swimming pools (any associated equipment and decking), playground equipment, graves, billboards, dumpsters, signs, wells, deer stands, retaining walls, septic systems or tanks (whether above or below ground).
- Mounding or stockpiling any material, such as spoils, dirt, logs, construction or building material, wrecked or disabled vehicles, (e.g. may create clearance and access issues and/or increases dangers in using the easement).
- Transformers, telephone/cable pedestals and associated equipment (unless specifically addressed in a joint use agreement), fire hydrants, manholes, water valves, water meters, backflow preventers & irrigation heads, (e.g. may increase the likelihood of safety hazards & access issues).

- Attachments to Duke Energy structures in the easement; (unless specifically addressed in a joint use agreement).
- Streets, roads, driveways, sewer/water lines, other utility lines or any underground facilities that run in parallel to the centerline in the easement or cross in one contiguous segment from outside edge of easement to opposing outside edge of easement, at any angle that is less than 30 degrees or greater than 90 degrees as measured from the centerline. No portion of such facility shall be located within 25 feet of Duke Energy's facilities (unless specifically addressed in a joint use agreement.)
- Fences or utilities that cross the easement in multiple segments in a non-continuous alignment from outside edge of easement to opposing outside edge of easement at any angle of less than 30 degrees or greater than 90 degrees as measured from the centerline. This generally creates an interference as the ability to access and utilize the full easement and reach facilities in the easement is substantially impaired. If a fence crosses the easement at an angle greater than or equal to 30 degrees and less than or equal to 90 degrees with the centerline, a gate (16 feet wide at each crossing) shall be installed by the landowner, per Duke Energy's specifications. Duke Energy will supply a lock. The landowner is required to install the Duke Energy lock on the gate to ensure access. The lock can be interlocked with the landowner's lock. Fences and gates that exceed 10 feet in height are prohibited because they create a clearance issue and are an interference. Fences that inhibit Duke Energy's access because they lack a gate that is at least 16 feet wide, interfere with Duke Energy's easement use.
- Grading (cuts or fill) in the easement that is closer than 25 feet to transmission facilities i.e. poles, towers, guys and anchors and/or slopes greater than 4:1 no matter where located or that otherwise change clearances or topography.
- Parking or lighting facilities which affect clearances, access or Duke Energy's ability to make full use of its easement.
- Placement of combustible materials and/or the purposeful burning of anything within the easement are inconsistent with electric facilities, the transmission of power and create safety hazards and system reliability issues.
- Any water feature in the easement, such as a detention and retention pond, stream or lake. Where a structure outside the easement causes erosion or directs storm water toward the easement or the electric facilities or access to or around the electric facilities, such structure will interfere with Duke Energy's use and must be altered to eliminate that effect.
- Incompatible vegetation above ground transmission lines - Vegetation within or outside of the transmission easement that will mature to a height or size that will pose a grow-in, fall-in, or blowing-together threat to the transmission conductor (typical maximum mature height greater than 15 feet within the transmission easement depending on location and voltage).
- Incompatible vegetation underground transmission lines - Vegetation within or outside of the transmission easement that is capable of posing a threat (e.g., root systems, etc.) to the underground transmission conductor by a) causing damage to the underground pipes / cables or b) reducing the moisture in the soil, thus altering the thermal properties of the surrounding soil / backfill and thereby negatively impacting the cable ampacity rating (typical maximum mature height within the easement - greater than 3 feet depending on location and voltage).
- Incompatible vegetation for safe and reliable operation and access on all transmission lines - Vegetation that will limit or block access, limit the safe and reliable operation, emergency restoration, or maintenance of the transmission facilities, limit the full use of the transmission easement for its intended purposes or vegetation which is typically within a horizontal distance of 25 feet of any Duke Energy facilities (towers, poles, guy wires, guy anchors, manholes, dip-poles, substation equipment, etc.).

As discussed, these guidelines are not exhaustive and there may be other interferences on a case-by-case basis depending on individual circumstances. Certain conditions such as line voltage, line criticality, frequency of required access and structure type may require heightened restrictions in the easements to provide safe and reliable service.

If you have additional questions or plan any activity not mentioned above, please contact customer service and ask for your local Transmission Asset Protection Specialist.

DUKE ENERGY TRANSMISSION RGB NOTES:

- 1) Contact: George Baxter @ (727) 483-3242
- 2) Notifications to DET:

A. When requesting outages, the contractor must follow the following guidelines:

i. The roadway contractor must provide an outage package indicating: the scope of work, start to finish schedule, type of equipment utilized, contractor team contact information, design drawings and other information as identified by DET as necessary. Outage initiation requires a minimum of 28-days from the approval of the outage package. In cases where multiple transmission lines are impacted by the project,

ii. In cases where multiple transmission lines are impacted by the project, DET will only allow one circuit out of service at any given time.

iii. If at any time a de-energized line will need to be placed back into service, such as a system emergency (e.g. hurricane, loss of another transmission line, and/or extreme load, etc.) DET will ask the roadway contractor, within a two-hour period, to shut down any construction that would restrict DET construction crews from placing the de-energized line back into service.

iv. Typically, any de-energizing of any DET lines can only occur during the following time periods: October 1st to November 15th, and March 1st to April 15th. Any additional required de-energized time periods needed throughout the project will need to be coordinated with the UAO representative previously listed.

v. Typically an outage cannot exceed a two-week duration; a new request may be required if additional outage time is needed.

vi. DET can NOT guarantee that the roadway contractor will get the approval for the outage; it is the contractor's responsibility to follow up with the above-listed contact.

vii. If for any reason the outage was approved but can't be accomplished, the DET will reserve the right to cancel the outage with 2-hours advance notification.

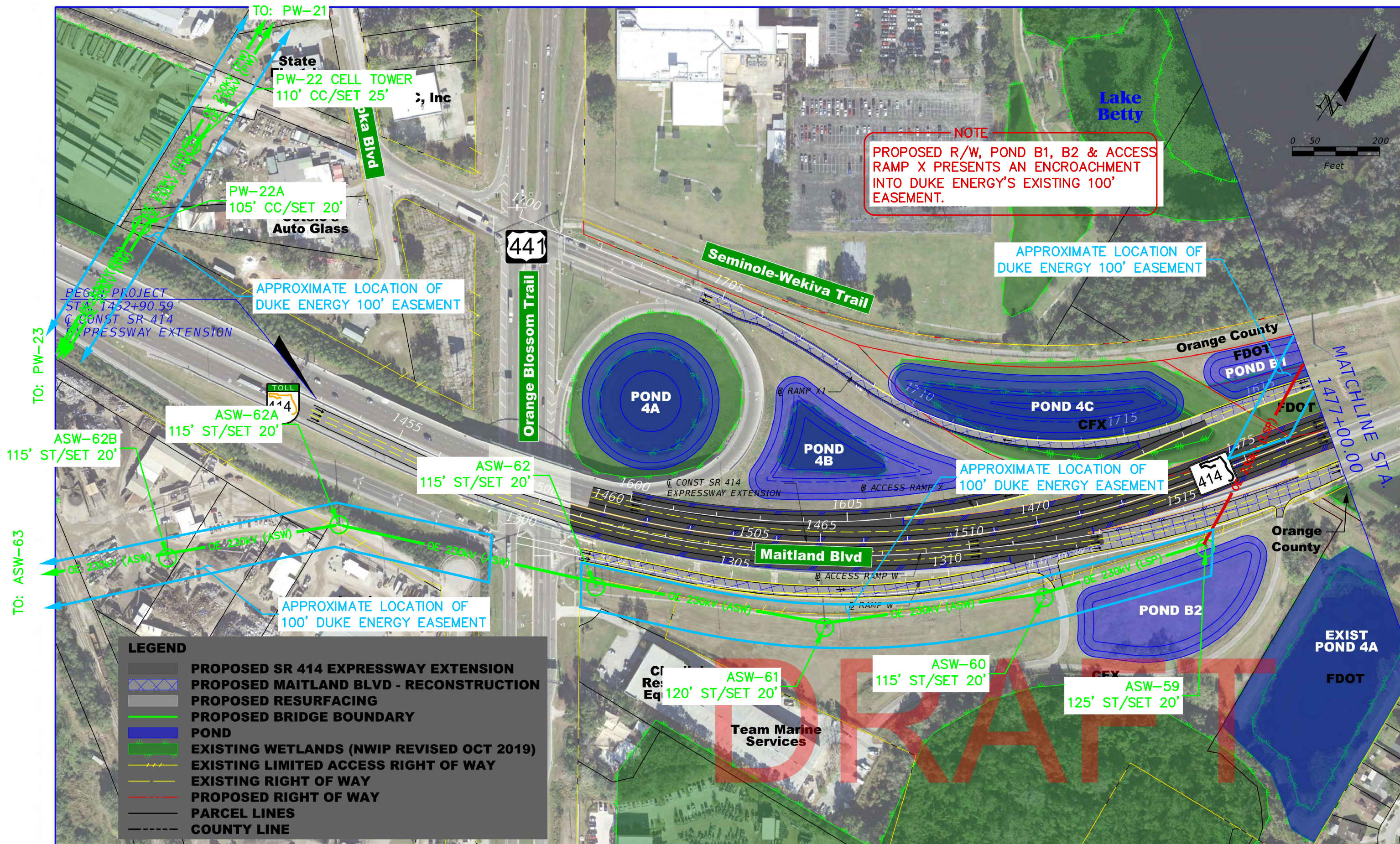
viii. In cases where multiple transmission lines are impacted by the project, DET will only allow one circuit out of service at any given time.

ix. A responsible representative from the roadway contractor's staff will attend all daily and necessary pre-job briefing meetings conducted by DET.

x. An outage request that is reimbursable to DET may require payment prior to the initiative of the outage.
- 3) This project is to be constructed in the vicinity of energized 69kV & 230kV OH transmission.
- 4) When doing any work or task under or near any DET facilities, all NESC & OSHA guidelines must be adhered to.
- 5) Any relocation of existing or proposed DET facilities beyond what is described in this document that is required to accommodate construction will require notice sufficient to cover analysis, design, material logistics & mobilization/demobilization.
- 6) When the roadway contractor is excavating around DET facilities, they shall provide at least a 15-foot horizontal clearance to the facility; if this cannot be met, a notification must be sent to the UAO Field representative previously listed to arrange for a field meeting.
- 7) The roadway contractor is prohibited from stacking material (soils, fill dirt, gravel, etc.) under or near energized overhead power lines.
- 8) No grading is allowed within any DET easement without prior approval from Duke Energy Asset Protection.
- 9) The road plans and/or survey provided did not reflect existing DET facility locations. Transmission facilities as shown on marked RGB plans are approximate and require additional field surveying for accuracy.
- 10) Upon completion of adjustment of this utility's facilities-any additional adjustment of this utility's same facilities that is required due to deviation by the FDOT or its roadway contractor from the below referenced roadway plan date provided to this utility will be conveyed to the FDOT and/or its roadway contractor for consideration to mitigate the conflict or for review by the FDOT for reimbursement. Upon agreement with the FDOT, this utility will proceed with the design and construction of the additional adjustment within the standard work schedule of this utility

THESE NOTES SHALL APPLY TO ALL RGB SHEETS CONTAINED WITHIN THIS DUKE ENERGY TRANSMISSION RGB SUBMITTAL

ROAD NO.	COUNTY	FPID	PLAN STAGE	PLAN STAGE DATE	UCS: 22-038
SR 414	Seminole & Orange	n/a	P&D study	December 5, 2006	THOR: n/a
					6/10/2021



PRELIMINARY - SUBJECT TO CHANGE

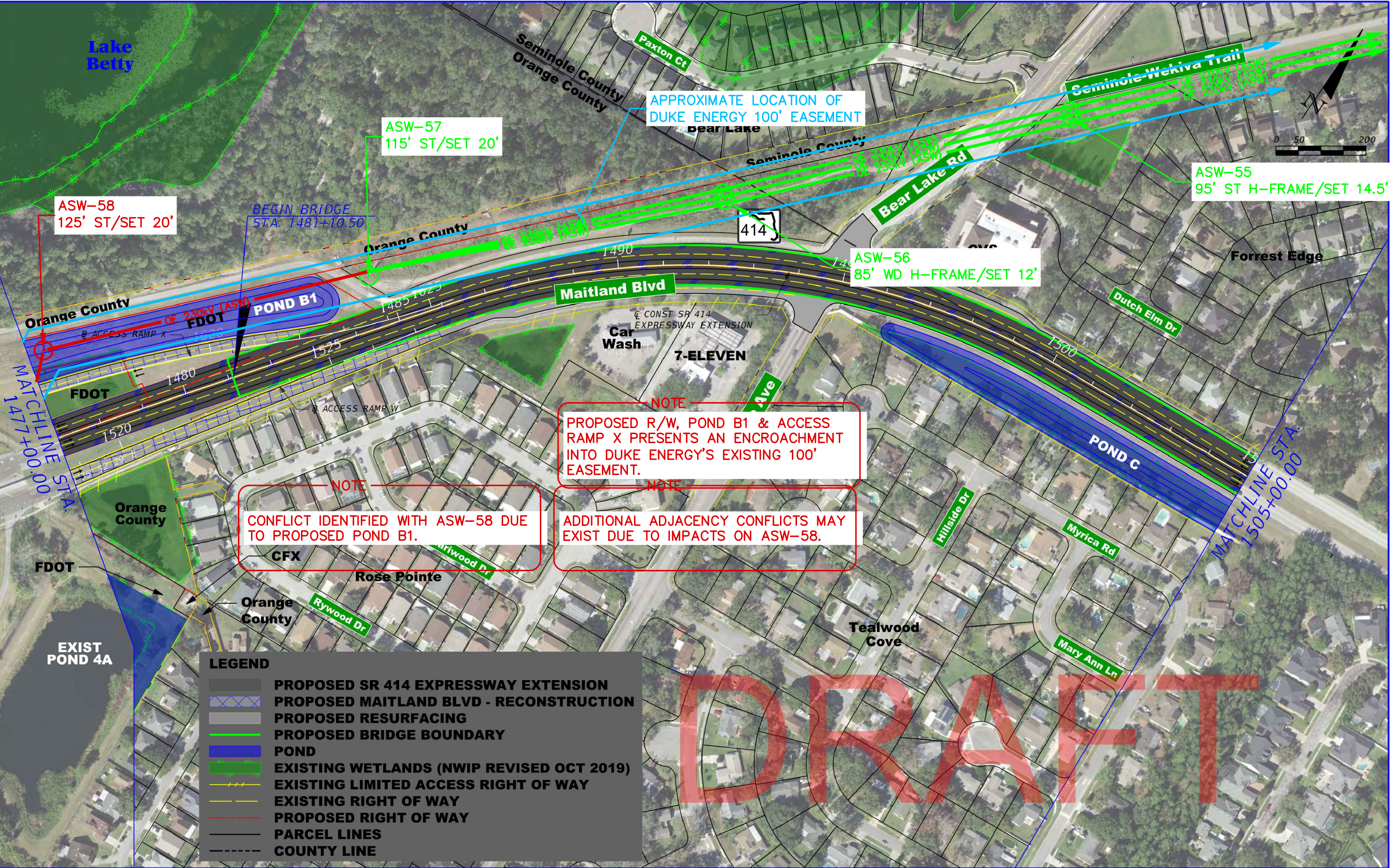
ENGINEER OF RECORD: KRYSTAL H. BURNS, P.E.
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JACOBS ENGINEERING GROUP INC.
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CERTIFICATE OF AUTHORIZATION No. 000072

SR 414 MAITLAND BLVD.
EXPRESSWAY EXTENSION
US 441 TO SR 434
ROAD NO. SR 414
PROJECT NO. 414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (1)

SHEET
NO.



TO: ASW-55

PRELIMINARY - SUBJECT TO CHANGE

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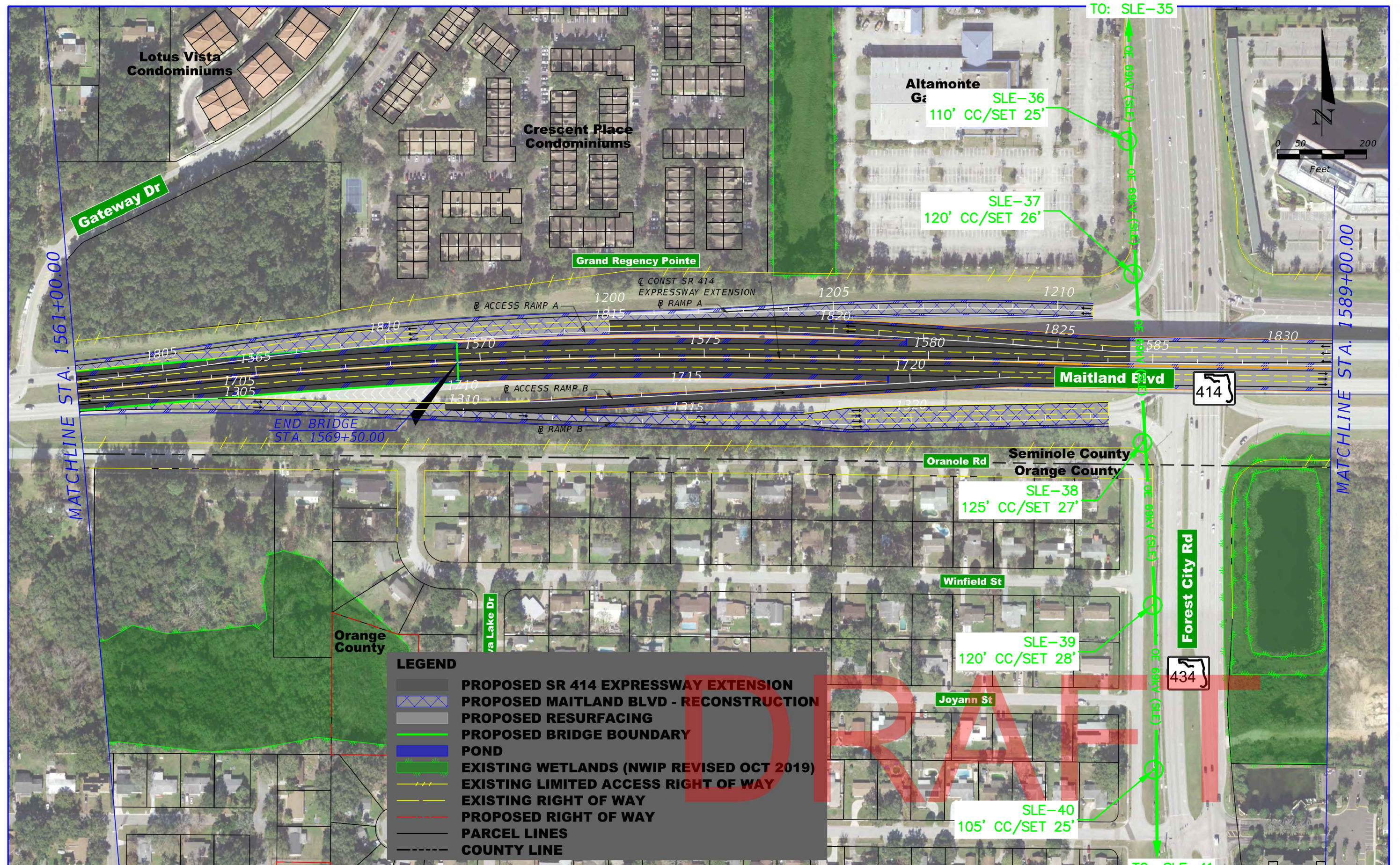
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SR 414 MAITLAND BLVD. EXPRESSWAY EXTENSION US 441 TO SR 434	
ROAD NO.	PROJECT NO.
SR 414	414-227



SR 414 EXPRESSWAY
PLAN SHEET (2)

SHEET
NO.



PRELIMINARY - SUBJECT TO CHANGE

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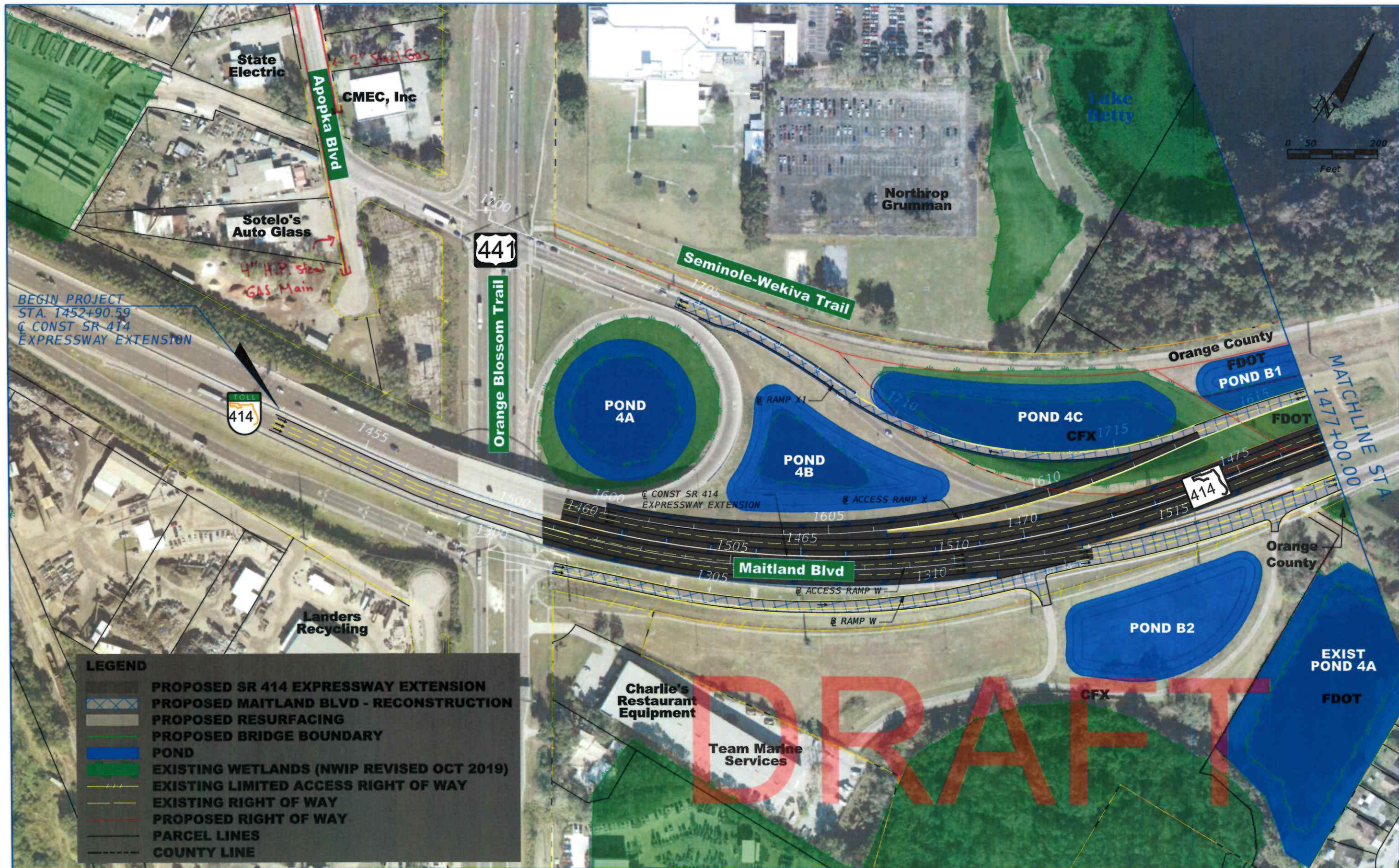
ROAD NO.	PROJECT NO.
SR 414	414-227

**CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY**

SR 414 EXPRESSWAY
PLAN SHEET (5)

SHEET
NO.

Lake Apopka Natural Gas



PRELIMINARY - SUBJECT TO CHANGE

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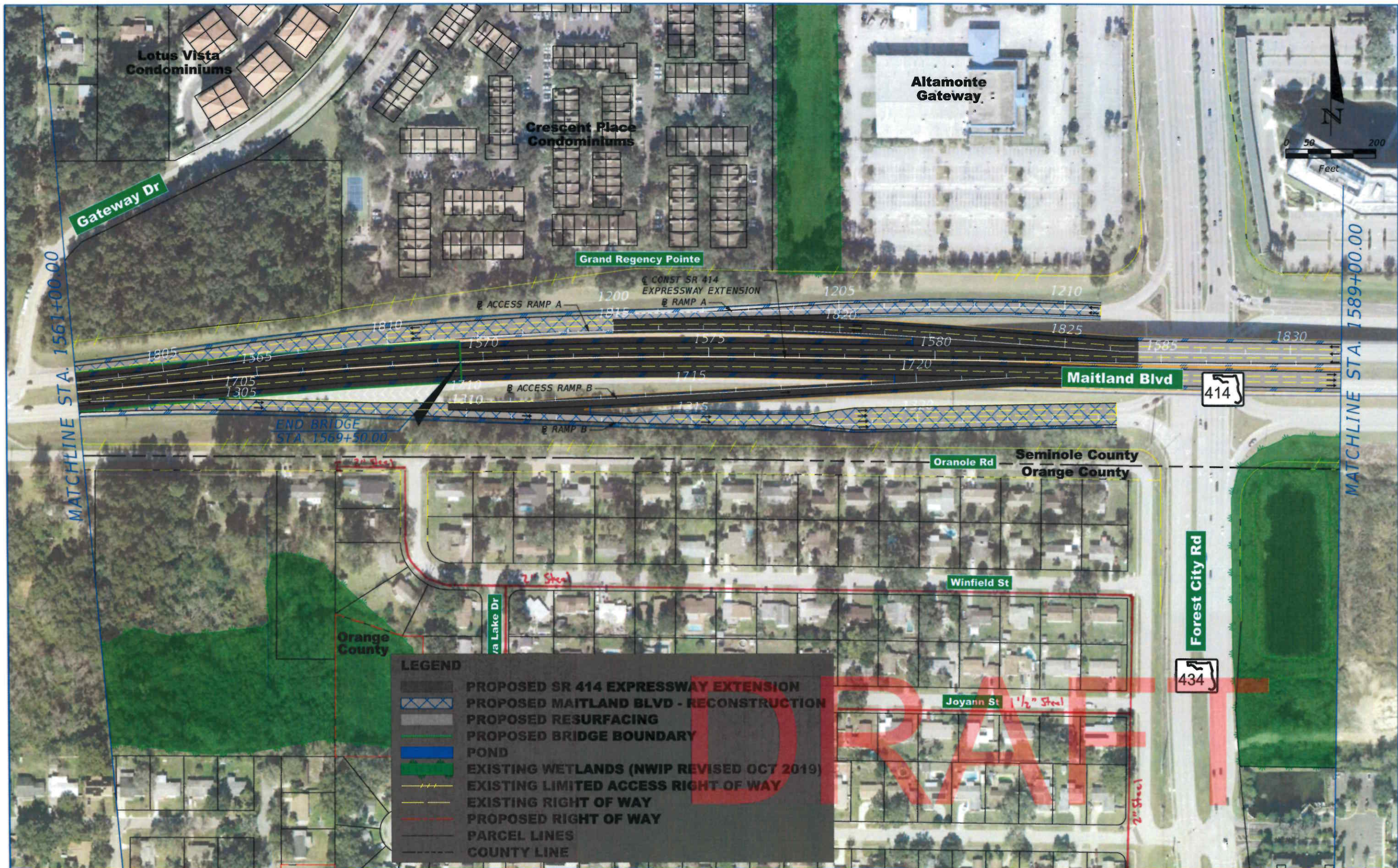
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EXPRESSWAY EXTENSION
US 441 TO SR 434

ROAD NO.	PROJECT NO.
SR 414	414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (1)

SHEET
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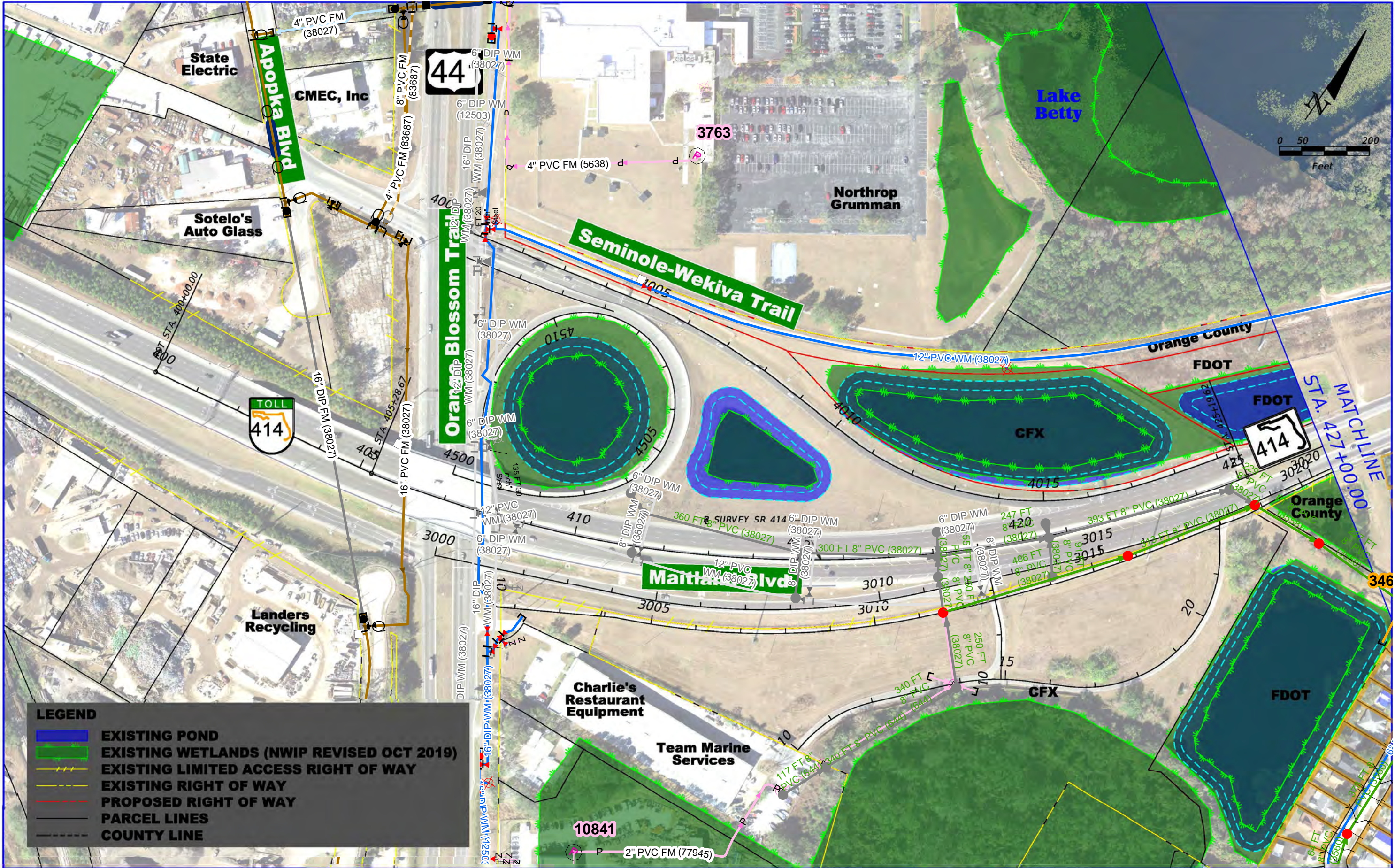
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CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
PLAN SHEET (5)

SHEET
NO.

Orange County Utilities/ Orange County
Wastewater



LEGEND

- EXISTING POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

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SR 414	414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (1)

SHEET NO.



PRELIMINARY - SUBJECT TO CHANGE

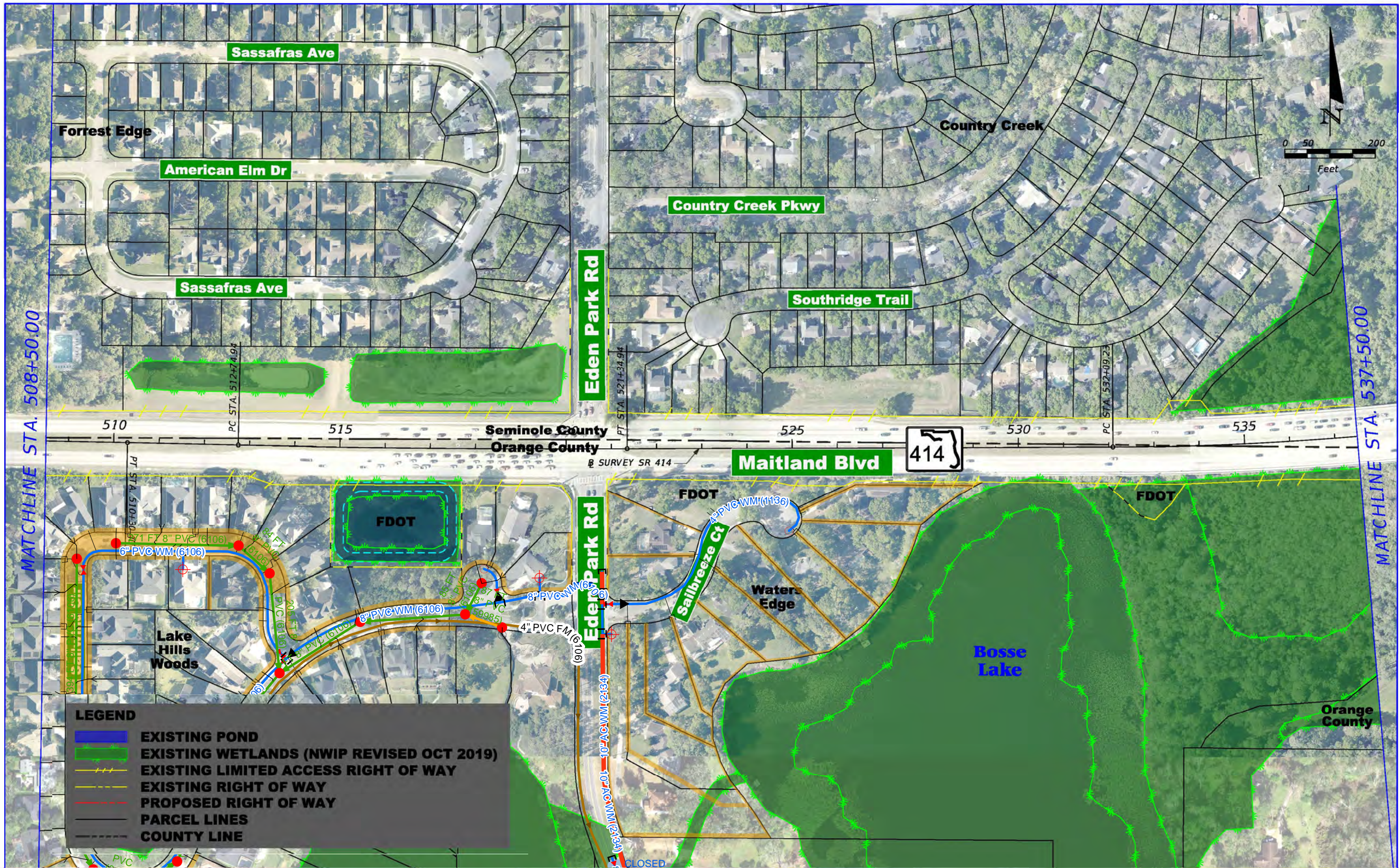
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CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (2)

SHEET NO.



LEGEND

- EXISTING POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

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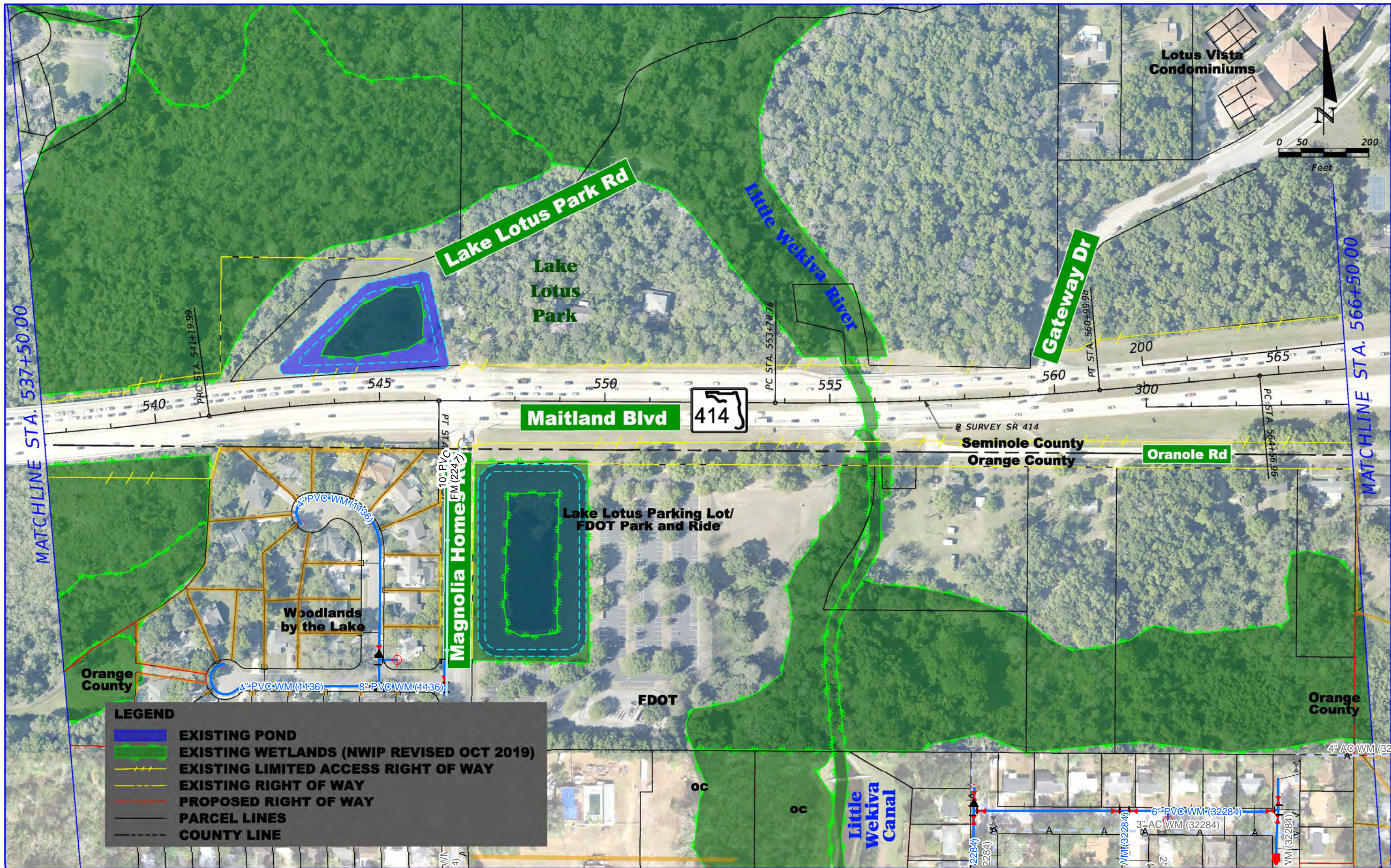
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EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (3)

SHEET
NO.



LEGEND

- EXISTING POND
- EXISTING WETLANDS (NWIP REVISED OCT 2019)
- EXISTING LIMITED ACCESS RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PARCEL LINES
- COUNTY LINE

PRELIMINARY - SUBJECT TO CHANGE

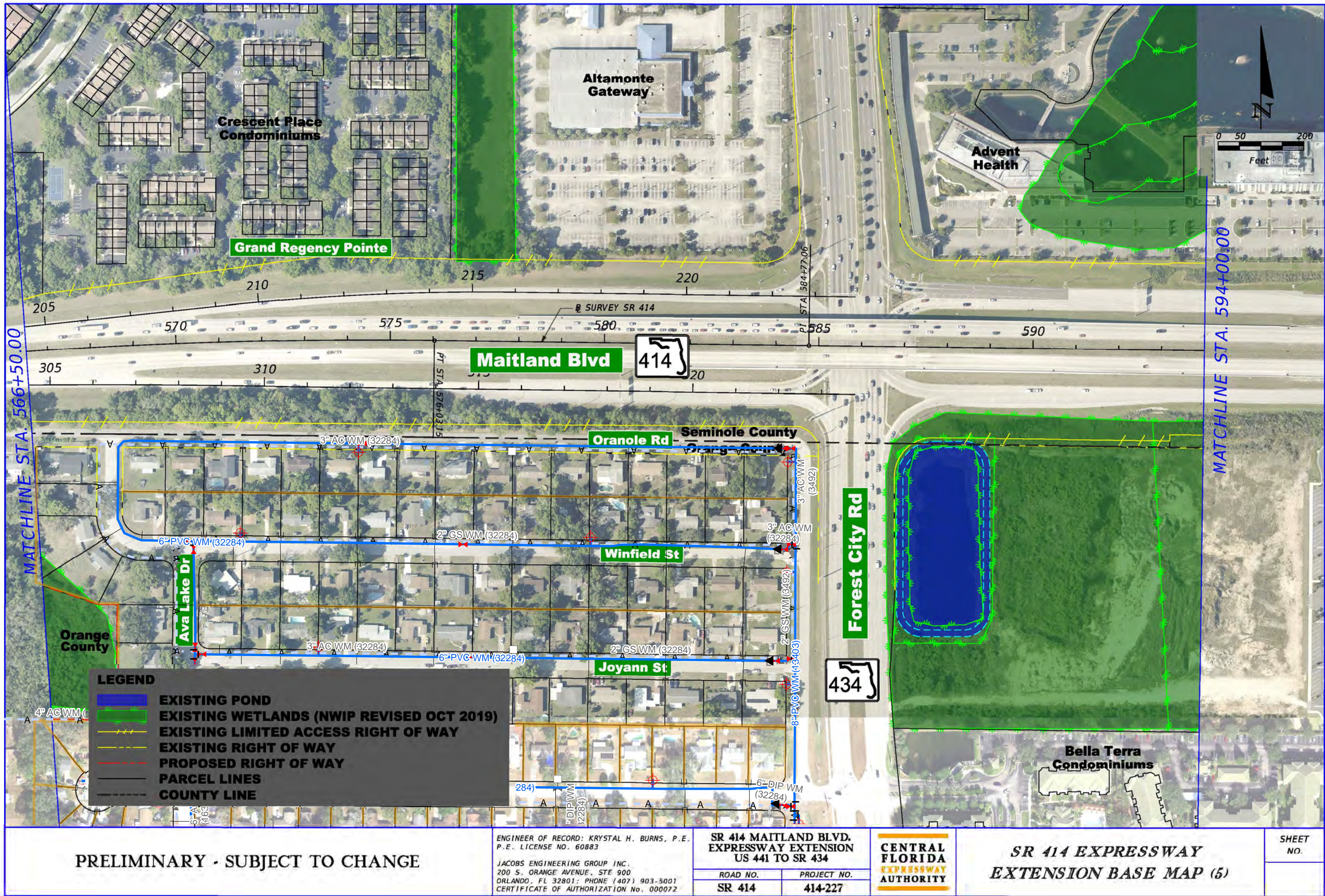
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SR 414 EXPRESSWAY
EXTENSION BASE MAP (4)

SHEET NO.



PRELIMINARY - SUBJECT TO CHANGE

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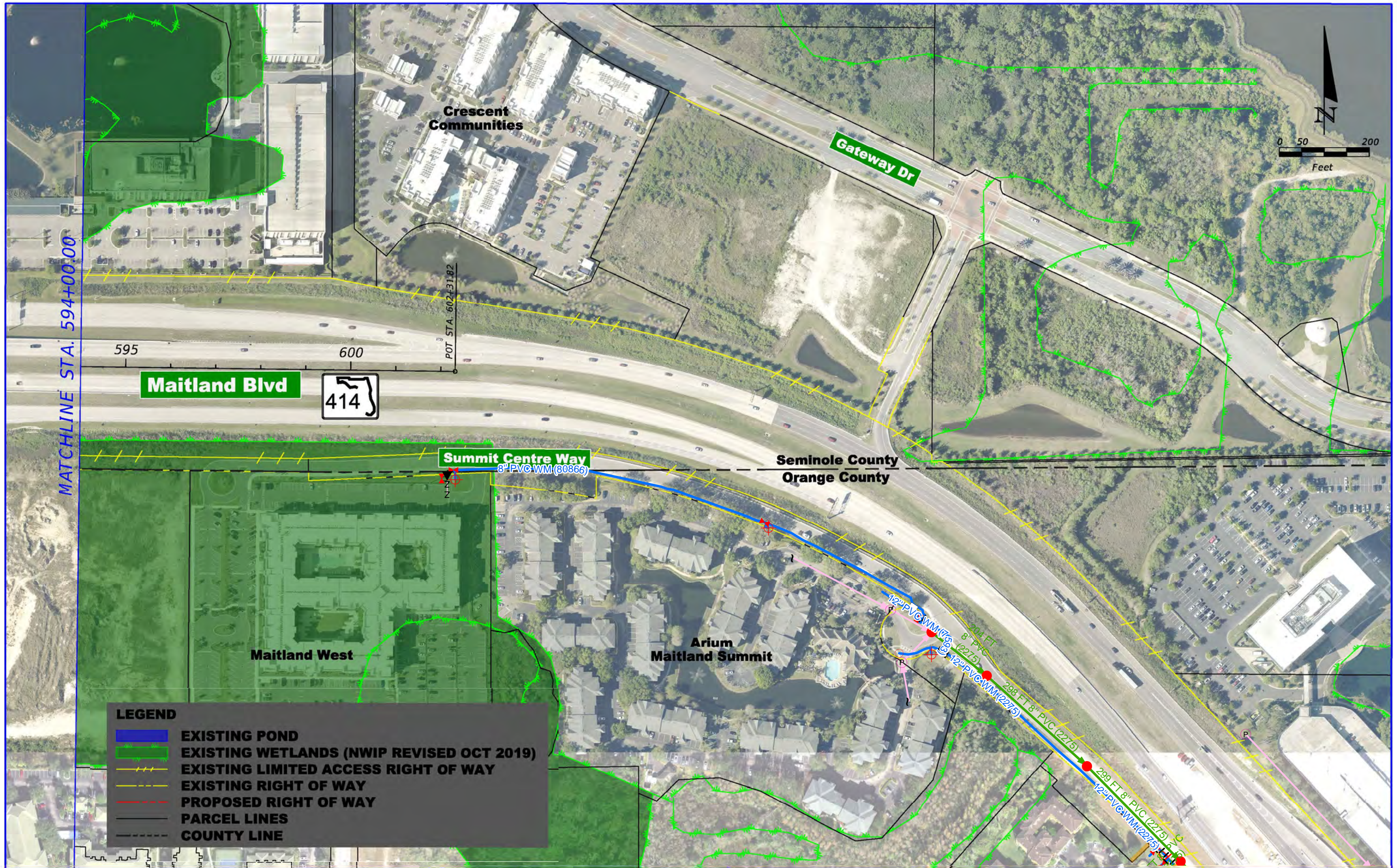
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SR 414	414-227

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (5)

SHEET
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FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (6)

SHEET
NO.

Seminole County



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FLORIDA
EXPRESSWAY
AUTHORITY

SR 414 EXPRESSWAY
EXTENSION BASE MAP (2)

SHEET
NO.

Zayo Group

