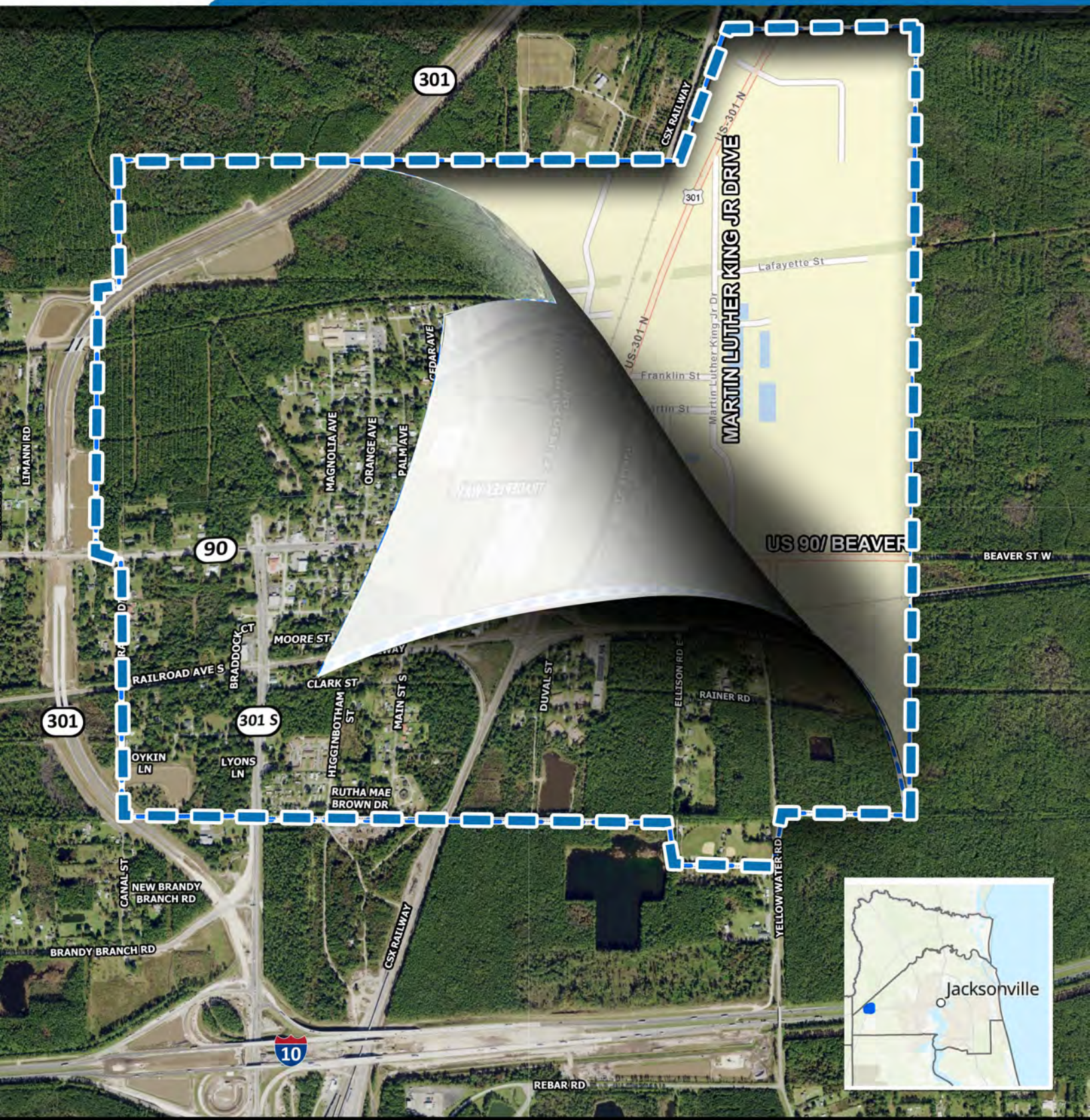
NORTH FLORIDA TPO

Town of Baldwin Stormwater Study
August 2022



TOWN OF BALDWIN
STORMWATER STUDY
(UPWP 5.18)

Final Report

Prepared For:

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August 29, 2022

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1. Executive Summary

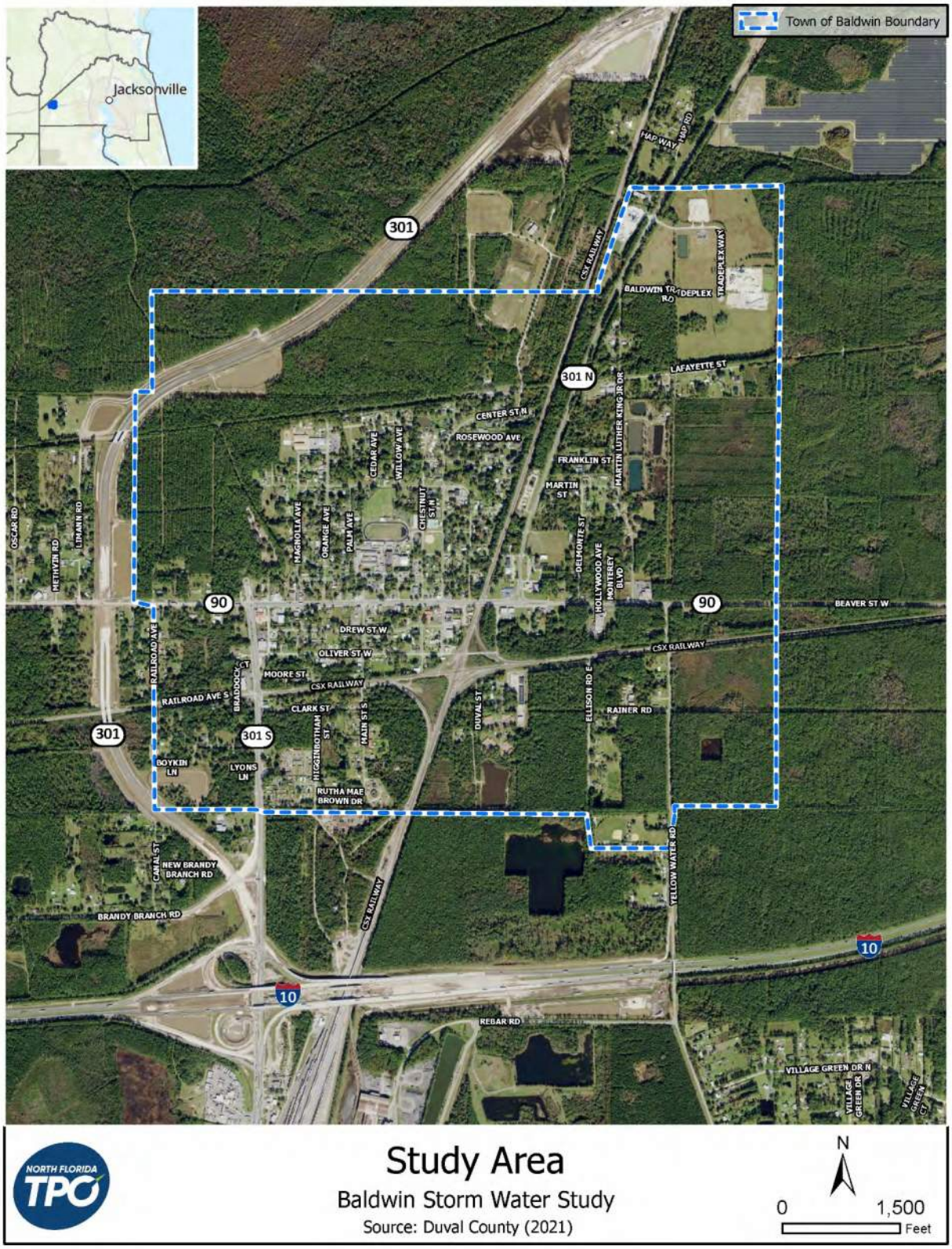
The North Florida TPO authorized this stormwater study to support the Town of Baldwin (hereafter referred to as "Town") by recommending infrastructure improvements to reduce future stormwater impacts. The study area (Figure 1) is the Town boundary located northeast of the Interstate-10 – US 301/SR 201/Baldwin Bypass interchange in Duval County, Florida. The proposed improvement alternatives include a maintenance schedule for the many stormwater ditch conveyances within the Town limits, coordination of outfall maintenance with entities such as FDOT and CSX, and possible pond sites to alleviate the flood impacts upstream of the culvert crossings identified as problematic.

The study area is partly rural with an urban area centered about the US 90/SR 10/US 301 intersection. The study area is bounded by US 301/SR 201/Baldwin Bypass to the west with the eastern boundary located approximately 1,700 feet east of Yellow Water Road. The northern boundary zigzags north of the Jacksonville-Baldwin Rail Trail and varies from approximately 1,841 feet at its easternmost point, to 1,262 feet at the CSX railroad, to 2,660 feet north of Baldwin Tradeplex Drive. The southern boundary is mostly defined by a drainage ditch that flows east to west along the dirt road connecting US 301 to Higginbotham Street, and north of the Plastic Concepts and Design facility.

The rural areas are comprised of a good growth of pine woods with underlying brush, weeds and grass. The site topography is rolling with a general slope of approximately 1% from southeast to northwest toward Baldwin Bay or Deep Creek via culvert crossings under US301/SR 201/Baldwin Bypass. The USDA Web Soil Survey indicates the predominant soils being Pelham and Pottsburg fine sands, which are classified as hydrologic soil group B/D and A/D, respectively. The secondary soils, classified as hydrologic soil groups C/D and B/D, include Boulogne fine sand and Surrency loamy fine sand in the depressional areas. The project information maps in Appendix A provide an overview of the location and site characteristics.

The existing stormwater runoff is conveyed by roadside ditches, side drains and FDOT culverts to the larger east-west ditches. The Town staff and residents have identified the major nuisance flooding areas. The top five problem locations have been evaluated for improvement alternatives. This report documents the study area review process, details Town input, describes the improvement alternatives and provides an opinion of probable cost.

Figure 1. Study Area



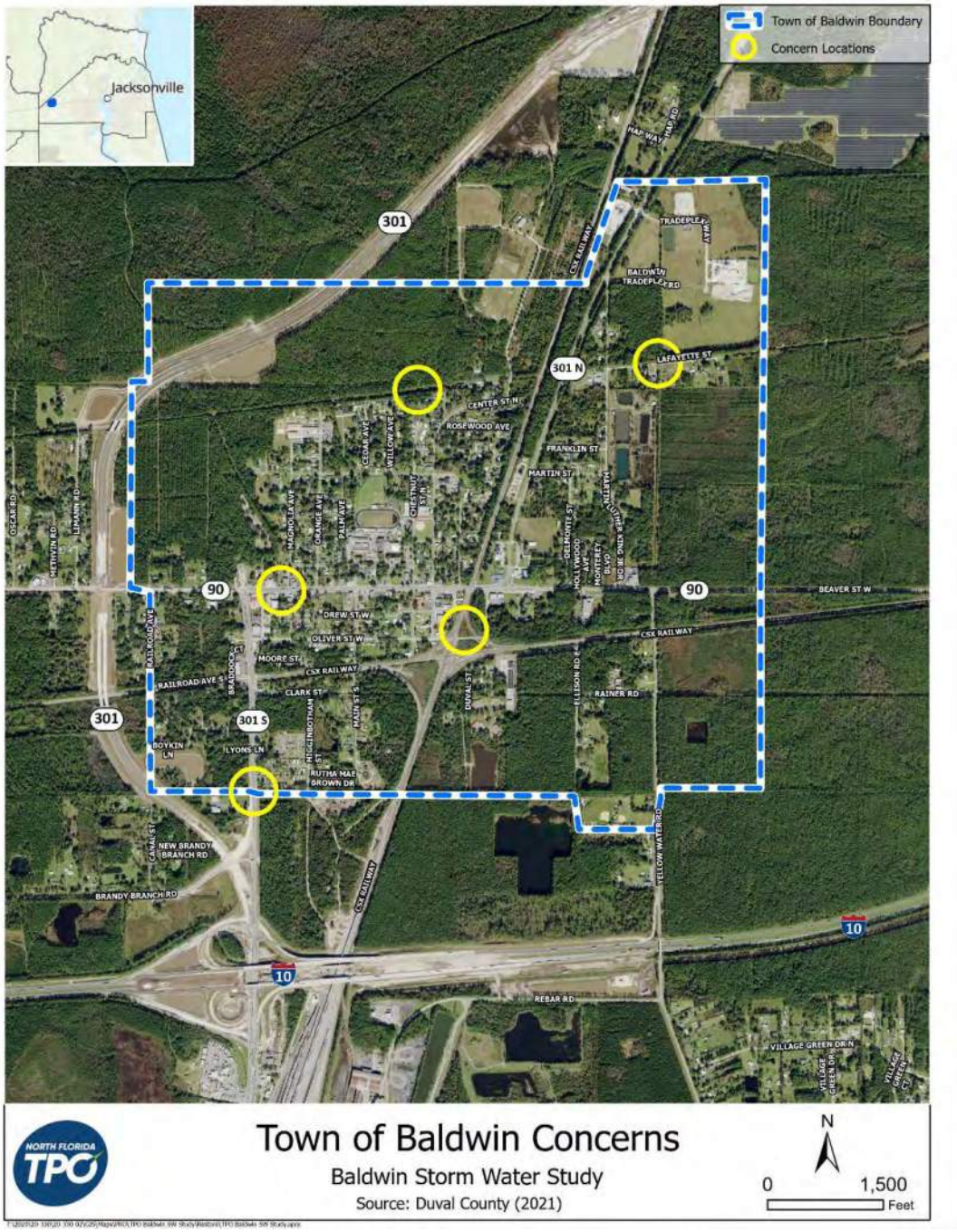
2. Agency Coordination

The study team met in-person with Town staff on two occasions, along with virtual progress/coordination meetings with Town and North Florida TPO staff. The first in-person meeting was with the Town Foreman, Roger Smith, of the Public Works Department. Mr. Smith showed the study team problematic locations regarding nuisance flooding and requiring the most maintenance. The locations included the culvert under US 301 (located east of SR 201/Baldwin Bypass) and three culverts along the Jacksonville-Baldwin Rail Trail near the Baldwin Station. Mr. Smith indicated all the culvert outfalls are slow to drain, which results in backwater flooding. In addition to clearing the outfalls of debris, the maintenance crews have had to cut additional ditches to promote positive drainage.

View of US 301 culvert outfall. The water surface elevation in the downstream channel is near the culvert top during a dry period. Note the aquatic vegetation growing on the water surface.

A follow-up field meeting was held with Mayor Sean Lynch. Mayor Lynch also showed members of the study team problematic locations. The first was the culvert under US 301 located east of US 301/SR 201/Baldwin Bypass. Mayor Lynch indicated the biggest problem is the Town's inability to maintain the outfall due to lack of access. Maintenance staff frequently must remove beaver dams in this ditch. The site visits also included the CSX pond located within the track interchange. The pond and outfall pipe are unmaintained, which results in flooding of the ditch back onto Duval Street. Figure 2 represents the concerns observed during field meetings.

Figure 2. Town of Baldwin Concerns



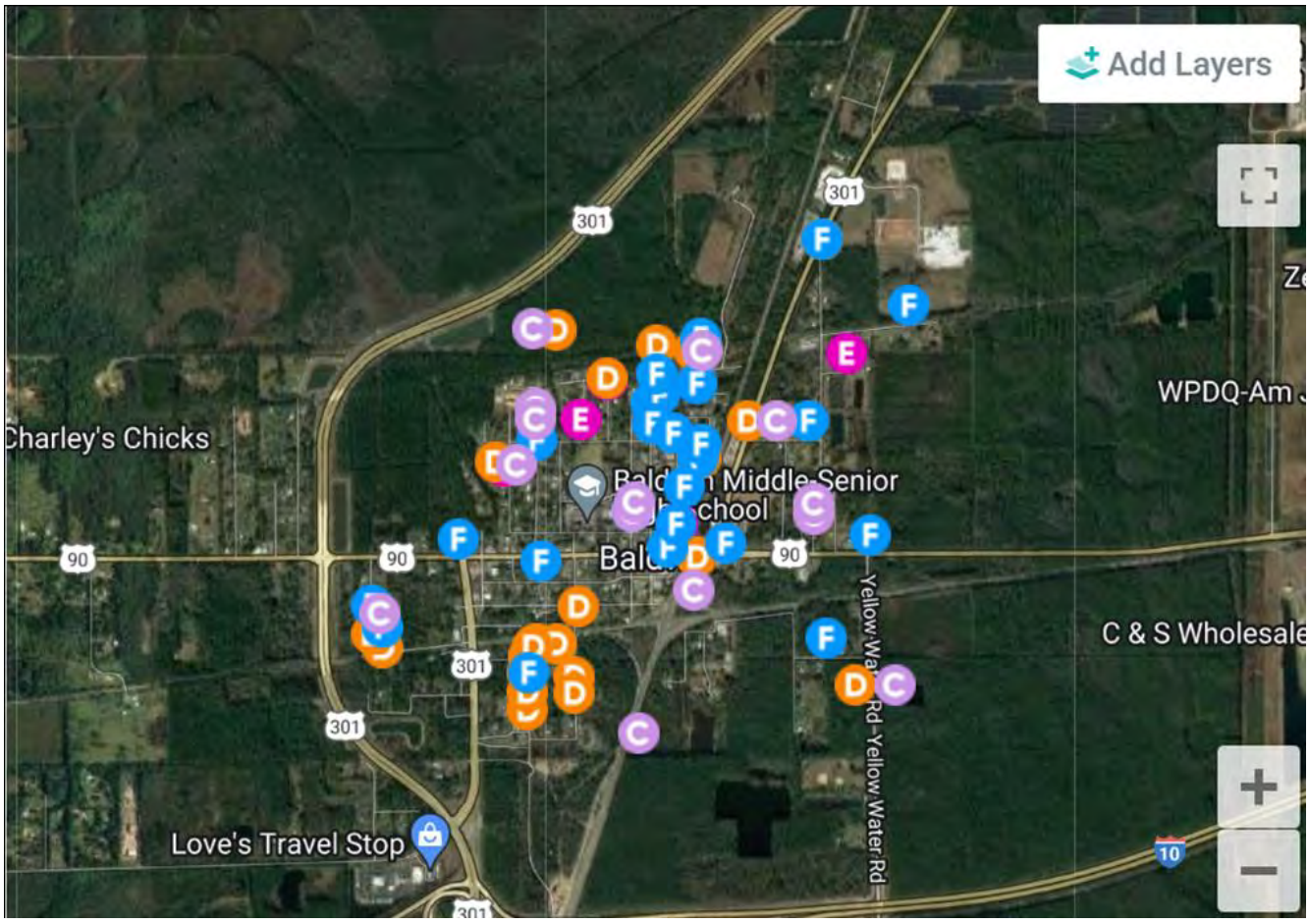
A lengthy discussion was held with Mayor Lynch on the benefits of potential improvements. The options discussed included new stormwater ponds and improved maintenance of the outfalls. Mayor Lynch indicated that the Town had no property or money to purchase pond sites and felt that the Town would benefit most by finding ways to coordinate the outfall maintenance with private property owners and the infrastructure stakeholders (FDOT and CSX). Neither the Town nor neighboring stakeholders have drainage easement rights to work beyond the public right-of-way. In addition, the conveyance capacity is controlled and impacted by downstream conditions. Field photos have been provided in Appendix B.

3. Public Involvement Summary

As part of this Study, the North Florida TPO in coordination with the Town conducted a survey to collect public input on flooding problems, drainage concerns and suggested improvements. An electronic survey was available for a five-week period, from January 25, 2022 to March 1, 2022. It was promoted via e-newsletters to approximately 3,000 regional contacts, social media advertisements and posted on the Town's website. The study and survey were also cited in the *Florida Times-Union's* traffic section.

To enhance public input and connect with individuals who may not have access to the electronic survey, a paper survey and a pre-addressed, stamped return envelope was mailed to approximately 575 residents and businesses within the study area. In addition, informational card-inserts were mailed with utility bills and paper surveys were available and distributed at the Baldwin Town Hall and Baldwin Market. The survey form, utility-insert and outreach materials are contained in Appendix C-1.

During the public involvement period, a total of 87 unique comments were collected from 41 people. The survey asked participants to place concerns on a map of the study area, describe the concerns and provide any additional comments. Of the 69 concerns placed on the map, most were described by survey participants as either ditch obstruction (36%) or flooding-ponded water on road (36%), followed by clogged culvert (20%) and erosion (5%).



Problem Areas Provided by Survey Respondents[1]

[1] Legend: C for clogged culvert, D for ditch obstruction, E for erosion, F for flooded or ponded roadway

Table 1 lists verbatim concerns provided by survey participants. Additional survey results are contained in Appendix C-2.

Table 1. Public Survey Comments

Comment Type	Comment
Clogged Culvert (C)	Clogged drains on Chestnut St.
	Clogged culvert.
	Ditch obstruction.
	Under driveway in front of 521.
	Clogged culvert.
	It's all clogged from north to south. But it's not even connected properly. It should connect out to Beaver. Even then it wouldn't work because all the culverts are clogged at least 90%. It has been a problem since I moved here. If you look at the drainage on Monterey Blvd. you will know how bad it is. Please help. Not only can the water from my street not drain but the one culvert going from west to east on front of my property is clear. It dumps water on me and has nowhere to go because everything is clogged.
	Clogged. Does not work. Nothing in this area flows the way it's supposed to. Should be connected to 90 and not just have ditch in half the street (in front of my house and property) but nowhere else. It's all wrong. Thank you for taking these comments into consideration. Please come look.
	Directly in front of 546 Martin St. water from clogged culvert under road floods my yard and several times in my garage and house.
	CSX clogged drains.
	Drain on CSX property blocked.
	Culverts under driveways never get cleaned out!!!
Ditch Obstruction (D)	Ditch obstruction.
	Ditch Obstruction.
	These ditches are always clogged CSX refuses to take care of them.
	Ditch clogged.
	This entire road has drainage problems. I live at 121 Monterey. I own the property at 165 Monterey. There is a culvert that is cleared running from Hollywood to in front of my property. All the culverts in from of the place I rent (121 Monterey) and the place I own (165 Monterey) are clogged. So, it goes from Hollywood over to me and then puddles and rises in my property. Make it so bad the culvert doesn't even connect to Beaver/90; nor does it extend to the north. There is an area between 121 and 99 Monterey with a culvert. It's clogged too, and the city is denying it's even theirs. I have been complaining to the town about this since I moved in. It's bad. When it rains hard, I am one of the only places that is fully flooded.
	Ditch needs to be cleaned out so it can drain freely. Water stays in ditch for multiple days after rain.
	Drain blocked and/or crushed.
	CSX drainage pond.
	Water does not drain properly-stands. Always mushy very difficult to mow.
	Ditch by the railroad tracks on south main street.
	Runoff from property has filled in ditch. Request that I be able to put in culvert.

Comment Type	Comment
	Ditch obstruction by rail trail.
	Standing water in ditch.
	The entire ditch on Magnolia Ave. doesn't drain well at all during rainy season.
	Ditch needs cleaning out all along the tracks. Water just sits and doesn't go anywhere. Culverts also clogged.
	The drainage ditch at 880 301 S. looks like it is full of dirt. On both sides of 301 S.
	The drainage ditch in front of 120 main St. S. is blocked and storm water fills the yard when it rains.
	Every time it rains my backyard (159 Orange St. E.) floods bad. My ditches get clogged. Please can it be fixed. P.S. Do we have to pay. Hope not.
	Ditch obstruction and flooding near 975 ML King Jr. Drive.
Erosion (E)	Flooding and erosion.
	No culverts to drain storm water into.
	Erosion of ditch on Pender St. Overgrowth over ditch - right side.
	Erosion on canal that joins my property and overgrown trees on canal.
	Dirt washing from under driveway and on top of culvert.
	Neighbors across street received driveway repairs. Mine did not get repaired and was heavily broken up. I had new driveway poured. And erosion is now washing out under drive again. Concrete was put in hole to patch but some is washing out. Continues to be problematic.
Flooded-ponded water on roadway (F)	Water goes over the road here when raining for more than an hour or two straight. The ditches are clogged or something that causes the water to just build up instead of drain.
	Pond will begin to back up into the yards around it.
	No ditch for storm water to drain into.
	Shoulder higher than road prevents water from draining into storm ditch.
	Flooding-ponded water on road-F on Rainer Rd. No ditches no drainage systems.
	Entire cul-de-sac becomes underwater with heavy rains and the ditches from the middle of Avon down through the fence and towards the train tracks remain flooded for weeks at times not moving. During hurricanes the water comes within 2-3 feet of our front patio at 163 Avon St.
	Floods with heavy rain.
	Floods with normal-heavy rain.
	Ponding along road during heavy rains.
	Water ponding in the road and backing up on private property.
	Water ponding in the road and backing up on private property.
	Pond water in road.
	Standing water in ditches.
	Standing water.
	Standing water in parking lot.
	Standing water at park.
	We have storm water in the road and in the yard. It takes days sometimes to drain when it rains a lot. A long time. It almost goes in my house from back door.
	Flooding on my property! Due to CSX not maintaining their drainage. Backup water has killed my trees!

Comment Type	Comment
	All the water runs off the bicycle trail into Lafayette St. and there is no place for it to run off.
	There is flooding all over the area from Maxville to Baldwin.
	Standing water due to no drainage. Cars stuck in yard.
	Railroad Ave. will flood so bad that the fire hydrant will be halfway underwater.
	Also, between our house and the neighbor's house, and both backyards become underwater during heavy rains.
	Sidewalk on the Corner of Main St. S. and Drew St. W. is continually under water when it rains.
	Flooding at 155 Avon St.
	My entire yard floods when it rains, the water runs down my street into my yard and floods my yard 12" deep. It also comes out of the sewer drains. I have videos of all this. Please help!
	The street and residential area becomes a lake or river during storms or hard rain resulting in property damage and dangerous to drive or walk in. Flooding is a major problem with poor drainage also rising water on the bike trail side of my property. Rising mosquito population due to standing water.
General Comments	Yellow Water creek and towards the ballfield is closed and overgrown; there is no good drainage from the area. Trees are overgrown and block vision unless I keep them cut back.
	While I don't live in the town limits, I can tell you the biggest issue is you have a canal on the south end and north end of town – both were designed to flow west into Deep Creek. I worked for the town 40 years ago and I have seen drainage deteriorate as these became more clogged so as these canals go, your drainage goes. I will be happy to show you feel free to contact me.

Prior to conducting the survey, the study team reviewed demographic conditions within the Town to identify potential underserved areas of the community. Based on 2019 American Community Survey data, the Town has higher percentages of individuals with disabilities than Duval County and Florida (17.7% for Baldwin versus 13.3% and 13.4%, respectively, for Duval County and Florida) and higher percentages of seniors with disabilities (54.4% for Baldwin versus 37.0% and 32.8%, respectively, for Duval County and Florida). Also, the Town has lower percentages of households with computers and with broadband internet than Duval County and Florida. The summary of demographic conditions is contained in Appendix C-3.

4. Environmentally Sensitive Areas and Flood Prone Areas

The Town drainage system is comprised of roadside ditches and side drains that convey stormwater to the larger ditches or canals which move stormwater beyond SR 201/Baldwin Bypass to the western outfalls of Baldwin Bay or Deep Creek.

The project area is mostly developed with wooded areas around the Town's boundary. The Town is crossed by several transportation routes. The SR 201/Baldwin Bypass forms the western boundary, while Interstate-10 is just outside the southern boundary. US 301/SR 200 splits the

southern and northern segments, as it combines with US 90/SR 10 for approximately 3,500 feet. Finally, the CSX Railroad runs east to west and north to south through the middle of Baldwin.

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps 12031C0305H and 12031C0315H (effective date of 06/03/2013) indicates no special flood hazard areas (SFHA) within the Town. Furthermore, there appears to be small areas of isolated wetlands located east of SR 201/Baldwin Bypass. Finally, Water Body Identification (WBID) 2245, Deep Creek, is on the verified list of impairments for lead. At this time, there are no water quality treatments required for such an impairment.

Four major drainage basins are associated with the major stormwater ditches flowing across the Town, which are detailed below and illustrated in Figure 3.

BASIN EAST drains the eastern side of the Town from a point south of US 90/SR 10. A drainage ditch conveys flows north under the Jacksonville-Baldwin Rail Trail via a triple pipe system (15-inch, 24-inch and 30-inch pipes). The ditch flows to two 8-feet by 4-feet box culverts under US 301/SR 200. Another culvert (of unknown size) conveys flows under the CSX railroad. From this point the stormwater is piped under SR 201/Baldwin Bypass via four 34-inch by 53-inch pipes. This basin outfalls to Baldwin Bay, and measures approximately 1,322 acres.

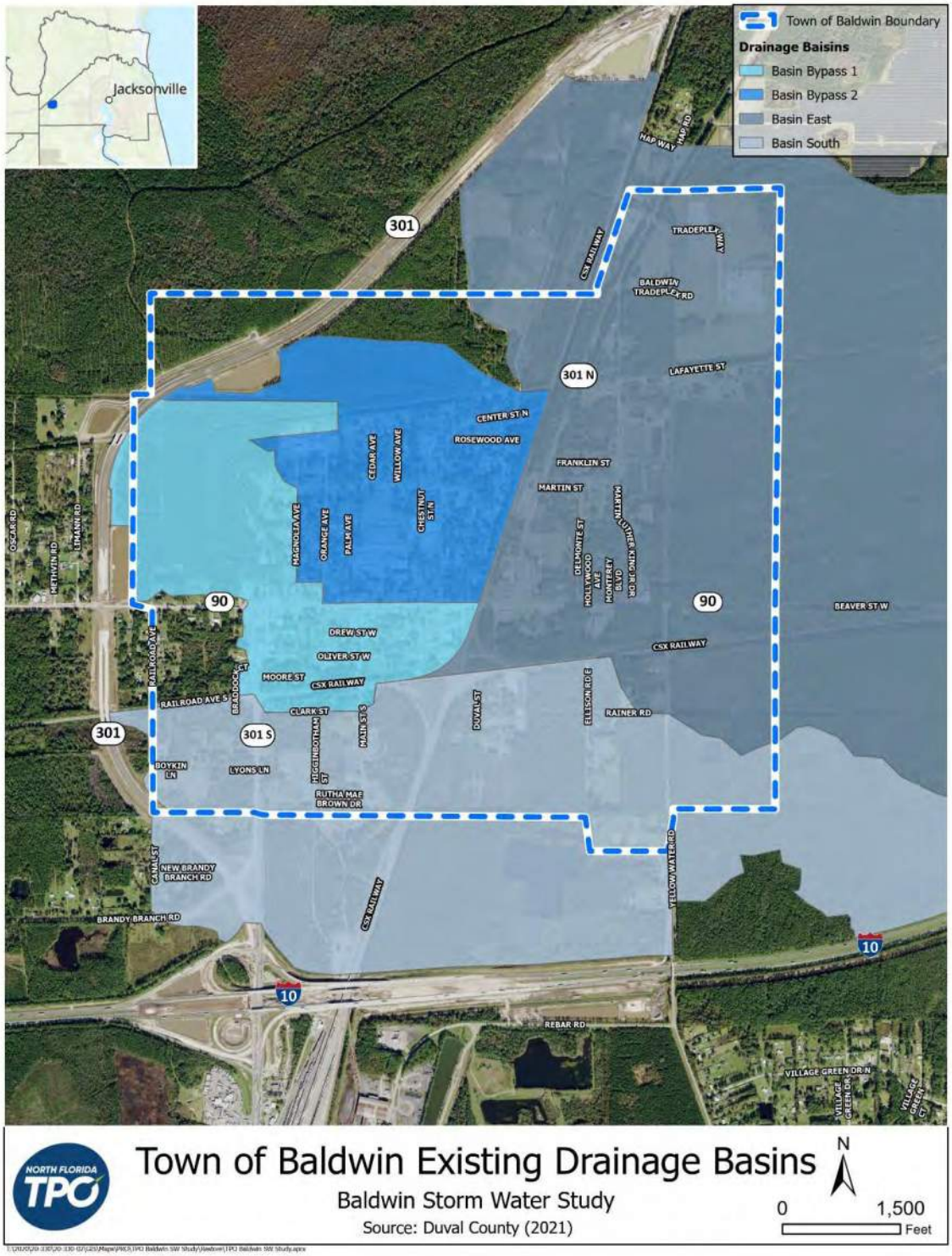
BASIN BYPASS 1 drains the eastern side of the Town. Its headwaters begin just south of the east-west line of the CSX railroad and drains through a 10-feet by 5-feet box culvert under US 90/SR 10, which empties into a north-flowing ditch that flows under the Jacksonville-Baldwin Rail Trail via three 48-inch pipes. Upon crossing the rail trail, the ditch combines with the main east-west ditch that flows under SR 201/Baldwin Bypass through three 9-feet by 7-feet box culverts. This basin outfalls to Deep Creek and measures approximately 206 acres.

BASIN BYPASS 2 drains the western side of the Town. Its headwaters begin from the roadside ditches located north of US 90/SR 10 and flow around the Baldwin Middle/Senior High School. Ditch flows are to the northwest to a crossing under the Jacksonville-Baldwin Rail Trail via two 36-inch pipes. Upon crossing the rail trail, the ditch turns west to flow under SR 201/Baldwin Bypass via three 9-feet by 7-feet box culverts. This basin outfalls to Deep Creek and measures approximately 212 acres.

BASIN SOUTH drains the southern section of the Town and is bounded by the east-west CSX railroad and Interstate-10. The drainage ditch is one of two Deep Creek tributaries, which convey flows west under the north-south CSX railroad (via a conveyance of unknown size). The ditch continues west to a 12-feet by 4-feet box culvert under US 301/SR 200. Just downstream of this crossing are two 9-feet by 5-feet concrete box culverts under SR 201/Baldwin Bypass. This basin outfalls to Deep Creek and measures approximately 728 acres.

The remaining drainage basins are small in comparison with flows toward and under SR 201/ Baldwin Bypass. These stormwater conveyance systems serve as the boundary conditions for the Town stormwater outflows. A review of the design data indicates the drainage areas extend beyond the Town and accommodations have been made for the land use and timing of stormwater flows. The downstream culverts have been sized to meet pre-development before constructing SR 201/Baldwin Bypass discharge criteria.

Figure 3. Existing Drainage Basins



The project information maps are included in Appendix A. The available resource data used to evaluate the stormwater flow patterns within the Town has been included in Appendix D. The drainage areas and flow patterns discussed in this section are included in the existing conditions drainage maps in Appendix E. Outfall maintenance was identified as the most impactful to Town drainage systems.

5. Recommended Improvements and Opinion of Probable Costs

The recommended improvements consider conversations with Town staff and survey results. Outfall maintenance was identified as the most impactful to Town drainage systems. The second improvement is more likely a flood control improvement and involves constructing stormwater ponds with control structures that divert the ditch flows for attenuation until the peak stage subsides.

The top five priority locations identified by Town staff are listed below:

1. The outfall ditch for the culvert under US 301/SR 200 does not drain and there is limited opportunity to maintain this location with private property owners downstream. Also, several survey comments cite ditch obstruction within 0.30 miles northeast of this location, along Higginbotham Street, Main Street South and Clark Steet.

2. The outfall ditch to the culvert under US 90/SR 10 sometimes backs up, with limited opportunity to maintain with private property owners downstream. Also, several survey comments mention clogged culvers, ditch obstruction, erosion and flooded locations throughout an area within one-half mile of this priority location.

3. The outfall ditch to the culvert under the Jacksonville-Baldwin Rail Trail (located between Willow Avenue and Center Steet) does not drain so there is limited opportunity to maintain the location with private property owners downstream. A few survey comments specifically cite ditch obstruction near this area of the rail trail and standing water at the skateboard park near this location. There are also several survey comments mentioning clogged culverts, ditch obstructions, erosion and flooded locations near the rail trail.

4. The outfall ditch to the culvert under Jacksonville-Baldwin Rail Trail at Lafayette Street (located east of Martin Luther King Drive) does not drain and there is limited opportunity for maintenance with private property owners downstream. Town staff created additional ditches to help with the flooding issues. At least one survey comment specifically confirmed that water runs from the trail onto Lafayette Street.

5. The stormwater pipes and pond located within the CSX Railroad right-of-way is unmaintained and flooding frequently occurs along Duval Street. This concern was also cited in the survey. Other survey comments cite flooding on nearby property or roadways, with one comment specifically mentioning lack of maintenance by CSX.

Priority locations are illustrated in Figures 4 and 5. Figure 5 shows priority locations with problem areas from the public survey. Appendix C-2 includes a priority location map for each type of survey problem area (clogged culvert, ditch obstruction, erosion and flooded roadways).

Figure 4. Priority Locations

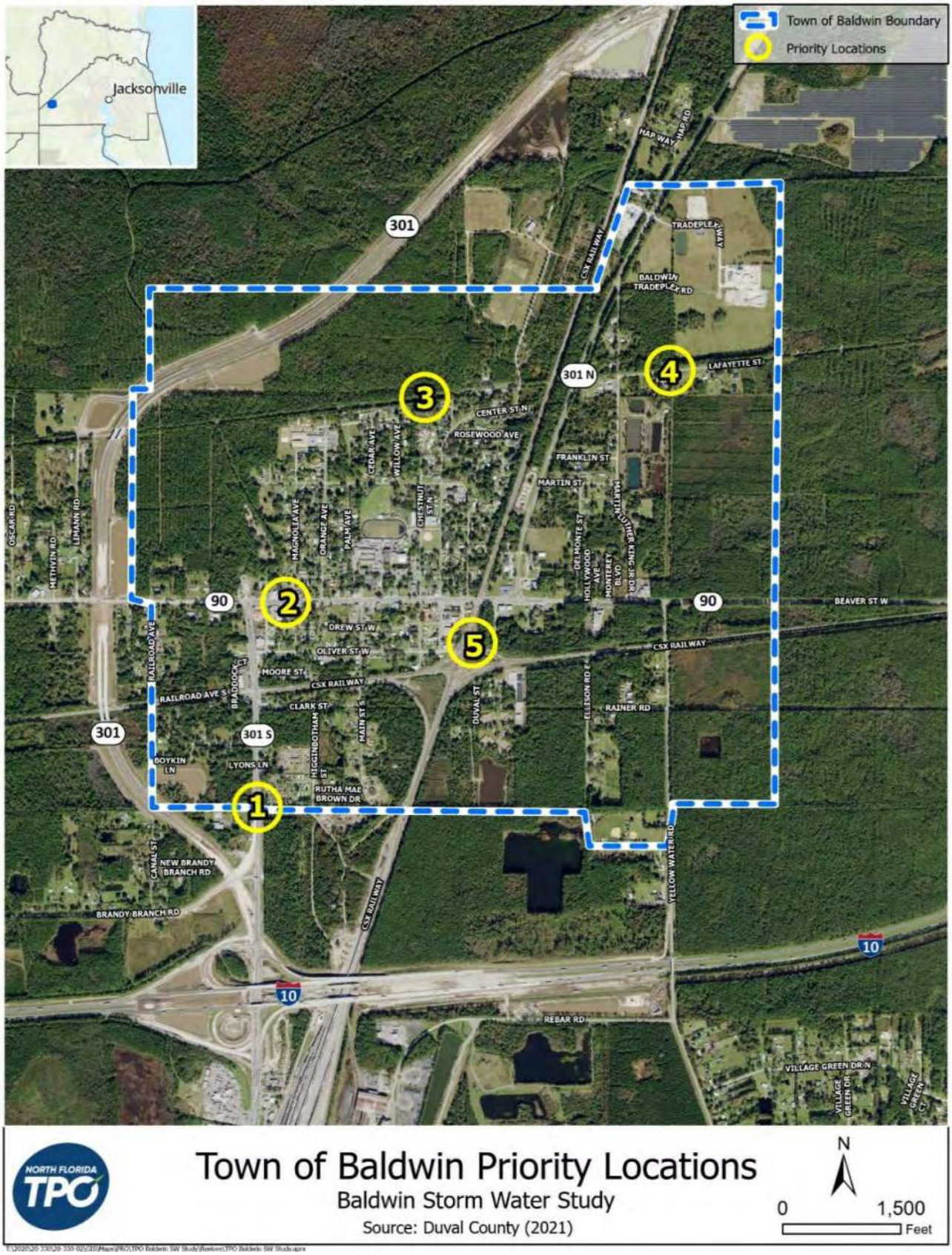
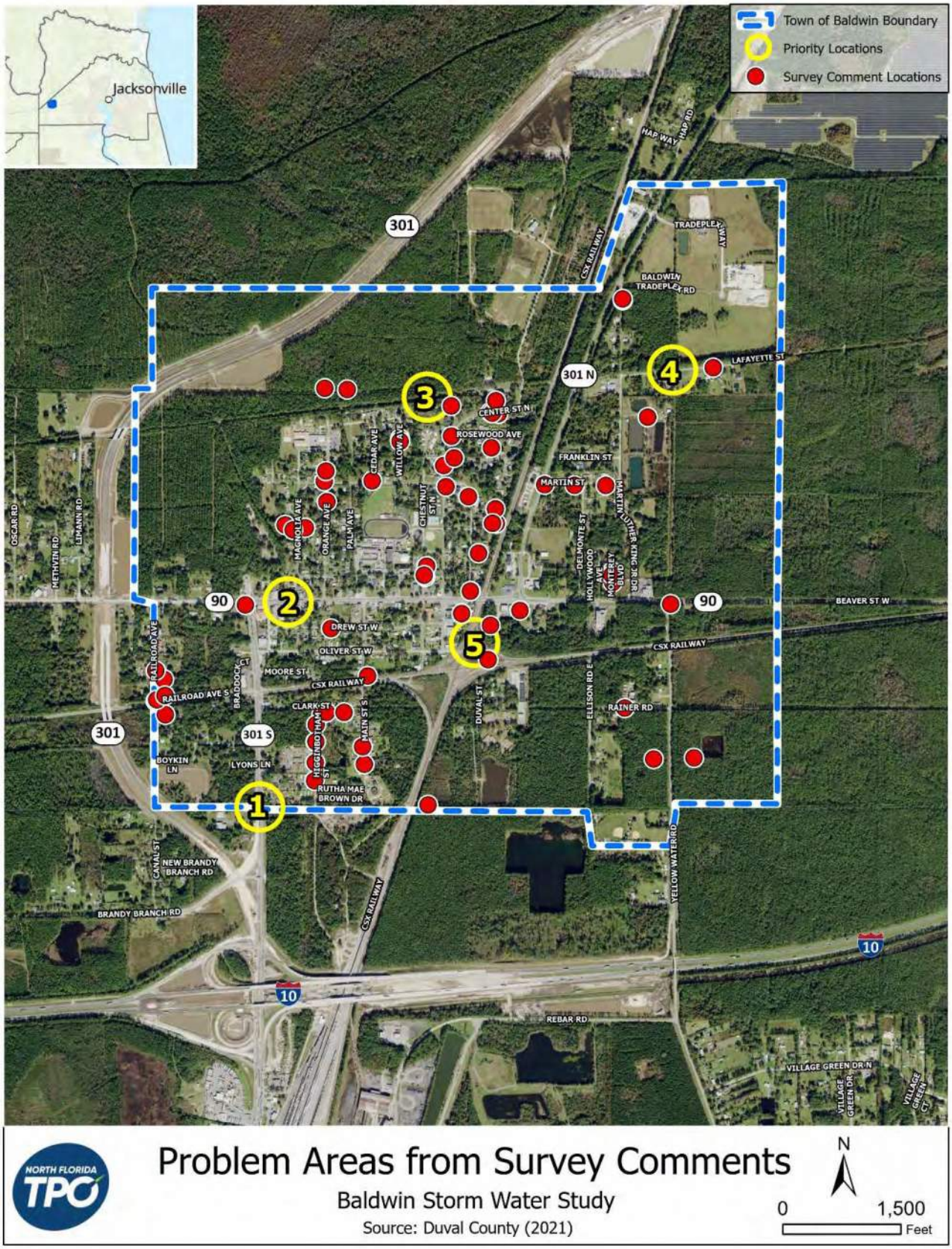


Figure 5. Priority Locations and Survey Problem Areas



5.1 Improvement Option #1 – Drainage Easements

Since the most common issue to effective stormwater flows relate to maintenance, or the inability to perform that maintenance, the first improvement option reviewed was acquiring drainage easements along the main ditches within the Town. The approach specified in the City of Jacksonville Land Development Procedures Manual was used to estimate easement widths. The guidelines call for an additional 5 feet on one side of the existing ditch top of bank, and an additional 20 feet on the opposite side for equipment access.

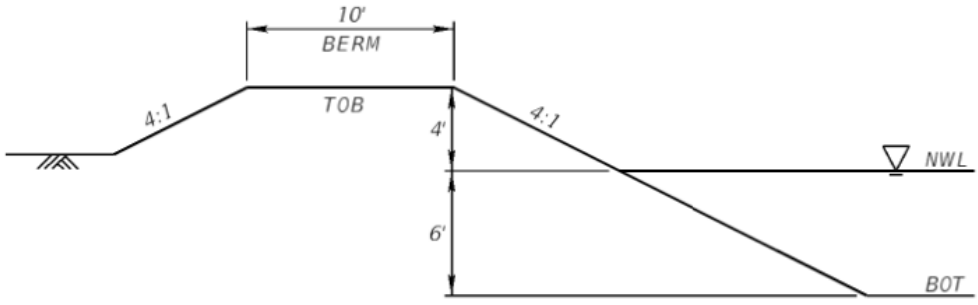
While all information available for review is GIS-based, the process included some judgement in the lengths and widths used to estimate property necessary. The potentially affected parcels were reviewed in the JAXGIS Duval Property site to determine the Just (Market) Value using 2022 data. The cost per acre was averaged for the parcels greater than 1.5 acres. The smaller parcels were analyzed by adding 20-percent to the market value.

Priority #1 was the longest ditch to maintain and thus the most expensive at $1.4 million. However, if the capacity were maintained it would benefit the ditch from Priority #5. The drainage easement cost of Priority #2 and Priority #3 are the cheaper options with an average cost of $135,000. Maintaining these ditches would benefit the Town the most, since so much stormwater flows toward the Jacksonville-Baldwin Rail Trail. Priority #4 is costly with only a limited portion of the Town's stormwater benefiting from maintaining this ditch.

5.2 Improvement Option #2 – Stormwater Ponds

The second possible improvement option involves constructing ponds to retain ditch flows until the peak stage has subsided. The Town does not own property located adjacent to the problem ditches. Therefore, a review of three pond options was based on pond site acquisition. The NRCS Soil Survey indicates that groundwater is most nearly at the existing ground surface, so wet detention ponds will be required. The normal water level (NWL) was set above the main ditch flow elevation. The bottom elevation was set six feet below the NWL, while the top of bank (TOB) was set at four feet above the NWL. To help visualize these configurations, a pond typical section is provided as Figure 6.

Figure 6. Pond Typical Section



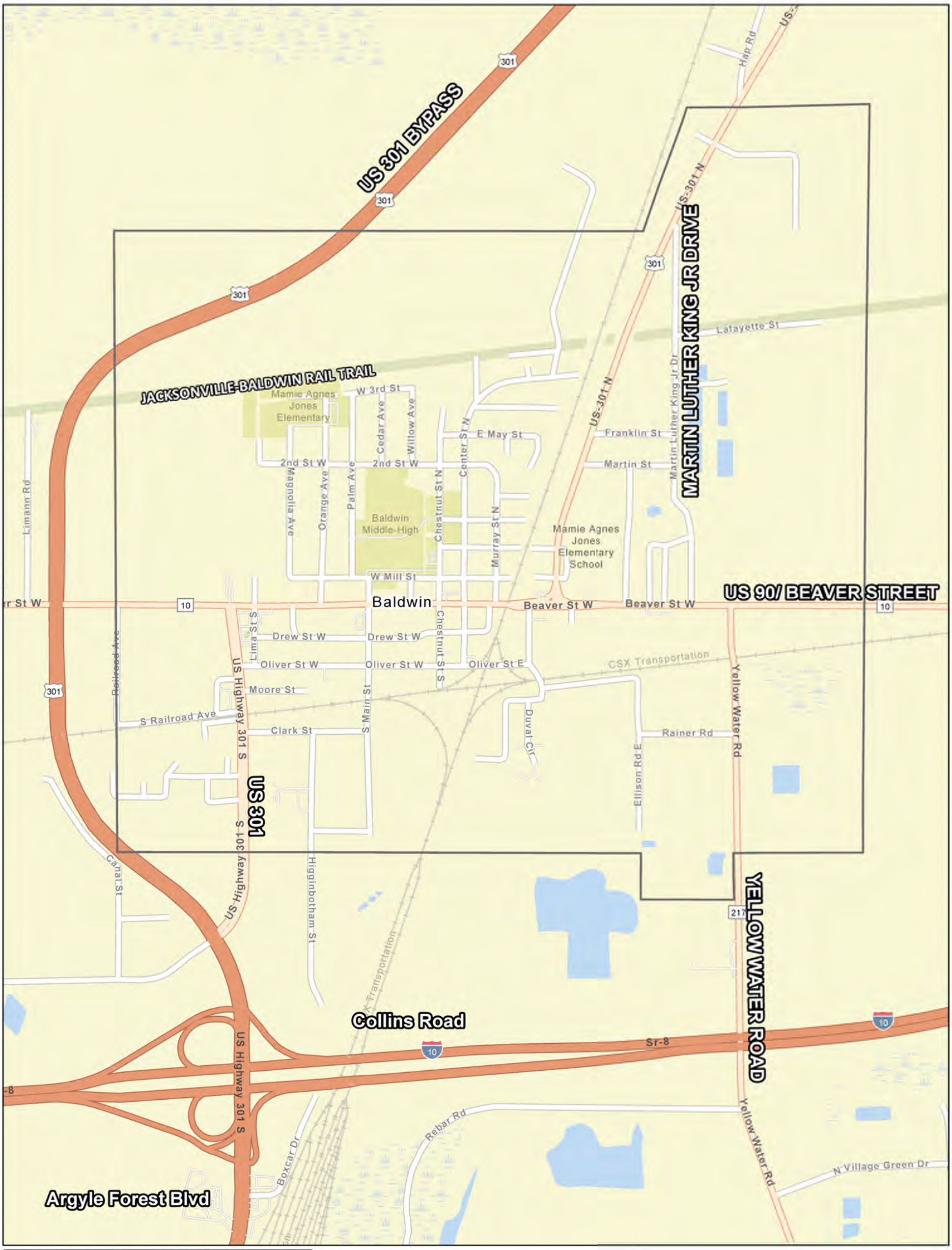
Three ponds have been sited at locations along the main ditches within the Town and near the problem ditches of Priorities #1, #2 and #4. The parcels were sited based on their access potential and where a grouping of vacant land was located along the main ditches. The selected parcels were reviewed in the JAXGIS Duval Property site to determine the Just (Market) Value using 2022 data. The cost per acre was averaged for the parcels greater than 1.5 acres. The smaller parcels were analyzed by adding 20-percent to the market value.

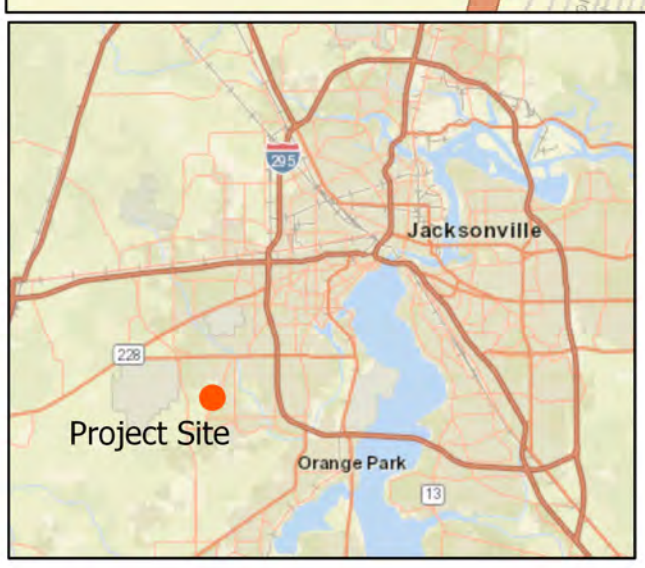
The first stormwater pond (SMF-1) would be located east of the US 301/SR 200 culvert of Priority #1. It is within the more developed area of Town and its probable cost is approximately $217,000. SMF-2 is located on a grouping of small parcels just off 2nd Street and would address Priority #2 and Priority #3. This pond is also within a mostly developed area, and its probable cost is $207,000. SMF-3 is located within a vacant parcel just south of Lafayette Street. This pond is located at the mid-point of the main south-north ditch and would address Priority #4. At a probable cost of $226,000, it would benefit only a small part of the Town's stormwater problems, since it drains toward Baldwin Tradeplex Drive.

The cost for stormwater ponds includes purchasing land, permitting through the St. Johns River Water Management District and maintaining the new system. However, the Town may gain stormwater credits to use elsewhere. The stormwater priority maps are included in Appendix F and the opinion of probable cost worksheets are included in Appendix G.

APPENDIX A

PROJECT INFORMATION MAPS





Town of Baldwin

Location Map

Source: ETM, Duval County

N W E S

0 1,200 2,400

Feet

England-Thims & Miller, Inc.
VISION • EXPERIENCE • RESULTS
14775 Old St. Augustine Road Jacksonville, FL 32258
904-642-8990 • Fax: 904-646-9485 • www.etminc.com

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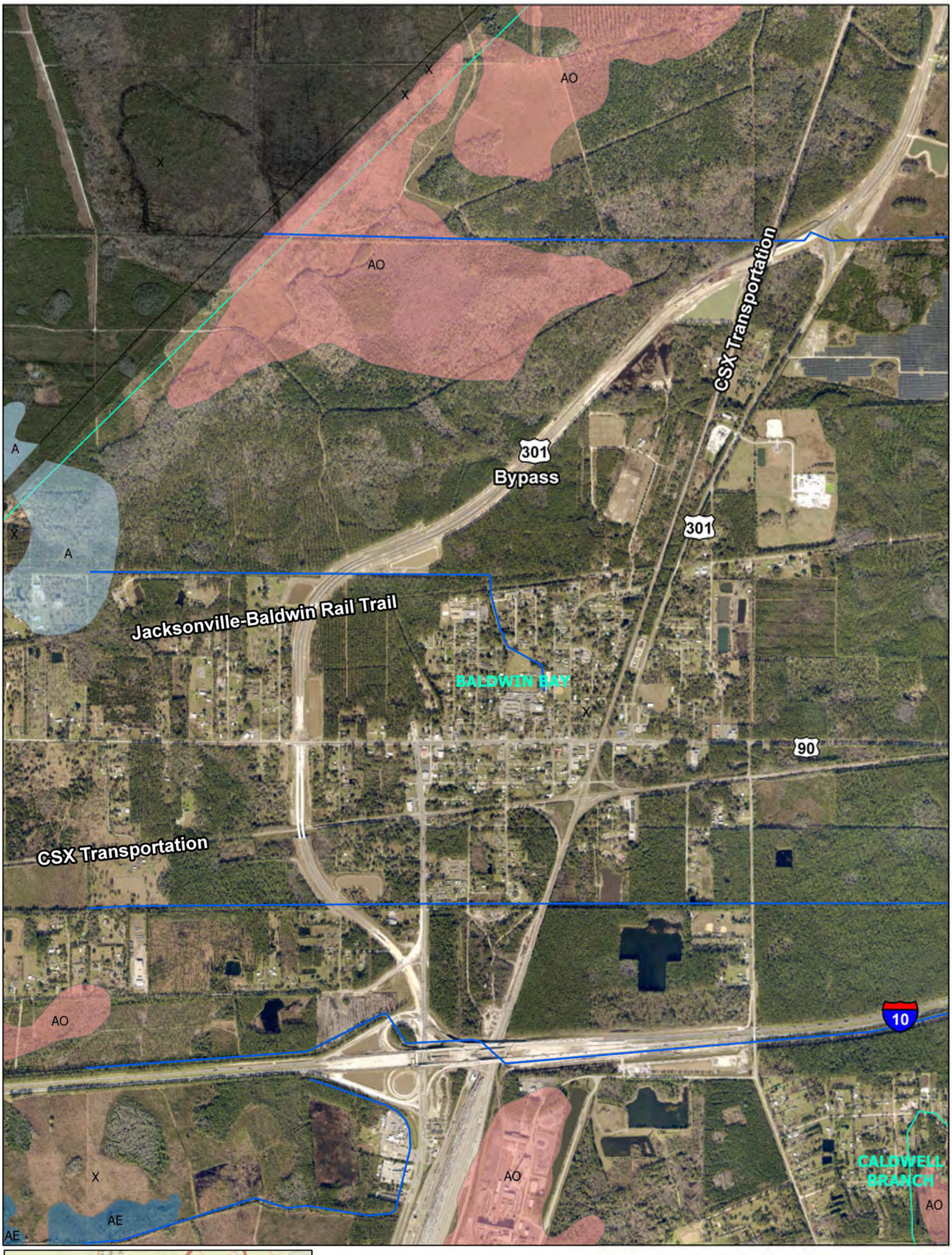

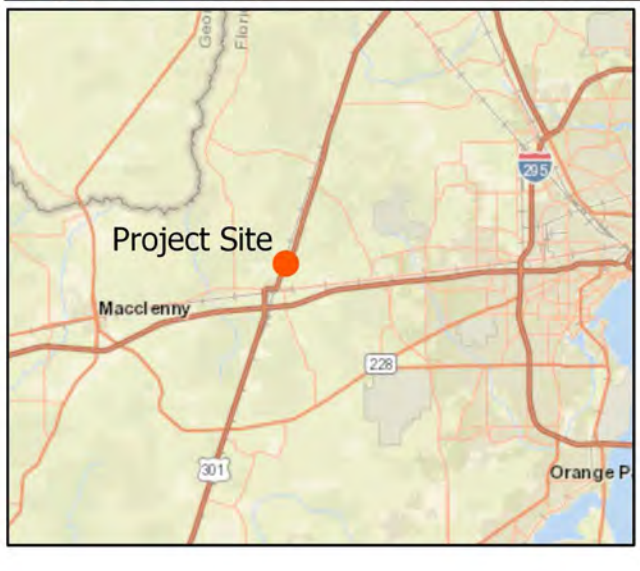

Baldwin Drainage Study

FEMA Map

Source: ETM, Duval County

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Feet

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Jacksonville-Baldwin Trail

301 Bypass

CSX Transportation

CSX Transportation

301

90

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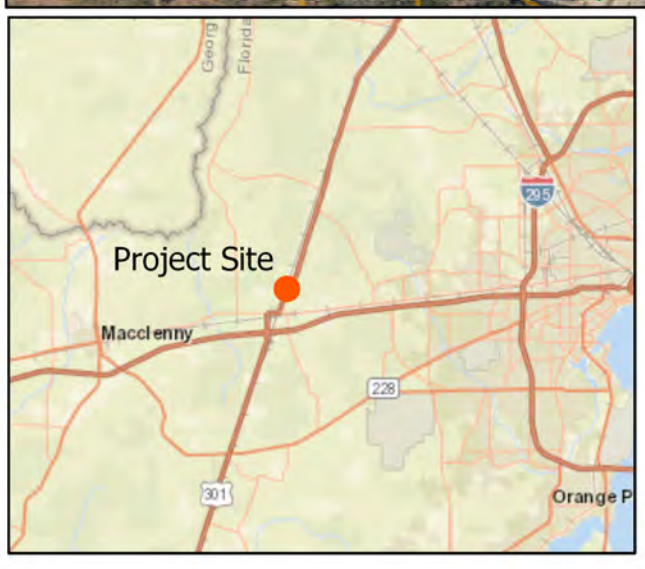

Baldwin Stormwater Study

NRCS Soils Map

Source: ETM, Duval County

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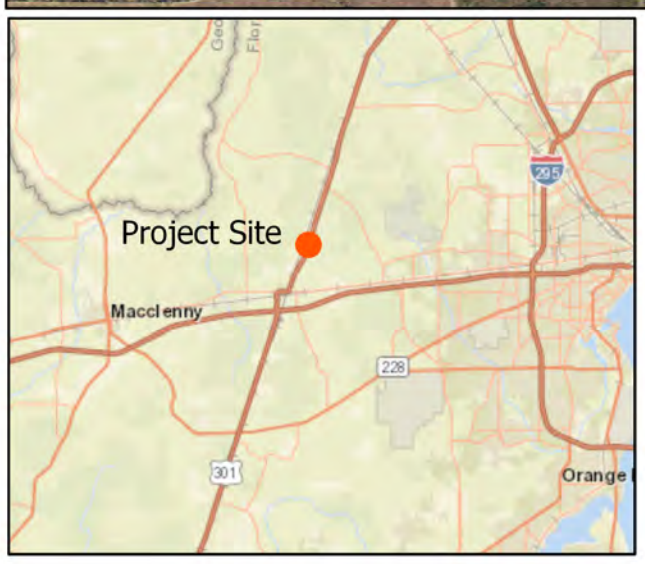

Baldwin Stormwater Study

WBID Map

Source: ETM, Duval County

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Feet

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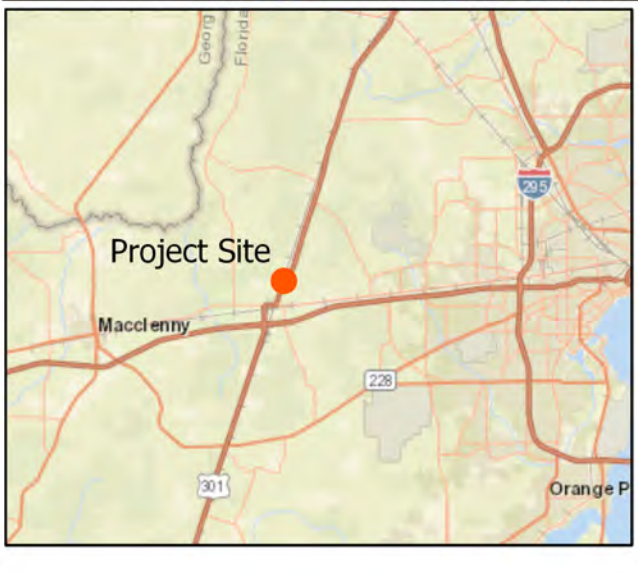

Baldwin Stormwater Study

Wetland Map

Source: ETM, Duval County

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APPENDIX B

FIELD PHOTOS

Field Visit Photographs

Date: December 10, 2021

FDOT CD-6 view of downstream channel and culvert.

FDOT CD-6: view of downstream channel conditions.

Existing culvert under Yellow Water Road (upstream).

Existing culvert under Yellow Water Road with a view of downstream culvert channel conditions.

Photo of FDOT pond on US 90/ SR 10/ Beaver Street near the 10-foot by 5-foot box culvert between Lima Street and Wesley Court.

This is a view from the downstream side of the culvert (north side of US 90/ SR 10/ Beaver Street) with the pond in the background.

This is a photo of the FDOT drainage structure (culvert inflow) conveying pond outflows and drainage from beyond Drew Street. Here is a view of the channel downstream of the 10-foot by 5-foot culvert.

Date: February 9, 2022

Escort: Roger Smith, Town Foreman

Priority #1

Main east-west ditch and culvert under US 301/ SR 200 that drains toward FDOT CD-2. The views are of the downstream channel conditions.

Priority #3

Culvert under Jacksonville-Baldwin Rail Trail (west of Baldwin Station/ Trailhead). View of downstream channel.

Priority #4

This photo was taken at the culvert under Jacksonville-Balwin Rail Trail at Lafayette Street. The view is looking south of the upstream channel conditions.

Date: February 28, 2022

Escort: Sean Lynch, Mayor

Priority #5

Unmaintained ditches and pond within CSX Railroad right-of-way.

APPENDIX C

PUBLIC SURVEY RESULTS

APPENDIX C-1

SURVEY FORM AND OUTREACH MATERIALS

Town of Baldwin Drainage Improvements

We Need Your Input!

To address flooding problems within the Town of Baldwin, the North Florida TPO is completing a stormwater study of the area. The study will identify drainage problems and assist the Town of Baldwin with ways to improve their existing stormwater systems.

The project team is interested in your ideas and concerns. You can complete this comment form and mail it back or submit your comments online at https://publicinput.com/Baldwinsurvey. **If you complete this paper survey, please return it in the envelope provided or you can drop it off at the following locations:**

- **Town Hall** – 10 US Hwy 90 West. Baldwin, FL 32234, (904) 266-5031,
- **Baldwin Market** – 190 Lima St S, Jacksonville, FL 32234, (904) 257-9350

Please return your comments by Monday, February 21, 2022.

If you want to receive further study information and are available to answer questions about problems you've identified, please fill in the contact information at the end of the survey.

Here are examples of common stormwater problems:

Ditch obstruction/ blockage

Flooding/ponded water in road

Erosion

Clogged/crushed storm culvert under road

Think about where you've seen these in Baldwin and mark the locations on the back of this form.

Please mark the location of problem spots on the map below. Label them with a number and describe the type of problem.

Check (✓) the type of problems you identified on the map:

___ Ditch obstruction/blockage
___ Erosion
___ Flooding/ponded water in road
___ Clogged/crushed storm culvert under road

Please describe the problems you marked on the map:

_____

_____

_____

_____

Thank you for your input!

Name: _____
Address: _____
Phone: _____
Email: _____

NORTH FLORIDA TPO

Town of Baldwin Drainage Improvements

We Need Your Input!

To address flooding problems within the Town of Baldwin, the North Florida TPO is completing a stormwater study of the area. The study will identify drainage problems and assist the Town of Baldwin with ways to improve their existing stormwater systems.

We need you to tell us where you see drainage problems like blocked ditches, soil erosion, flooded roads and clogged storm culverts under roads.

Submit your comments online at https://publicinput.com/Baldwinsurvey.

If you received a paper survey in the mail, you can return it in the accompanying envelope.

You can pick up paper surveys and drop off completed paper surveys at the following locations:

- **Town Hall** – 10 US Hwy 90 West. Baldwin, FL 32234, (904) 266-5031,
- **Baldwin Market** – 190 Lima St S, Jacksonville, FL 32234, (904) 257-9350

Please return surveys by Monday February 21, 2022.

jacksonville.com | The Florida Times-Union

TRAFFIC

Question about Jacksonville road project gets answered by FDOT action

Dan Scanlan
Florida Times-Union

Published 5:02 a.m. ET Feb. 9, 2022

Sometimes reader questions come to me just as what they want answered is no longer a problem.

Such is the case with a Florida Department of Transportation project that had one final road closure before it's basically done.

The question: "Do you know what is being done to the Collins Road/I-295 Southbound entrance? It’s closed," the reader asked.

The FDOT's answer is that the ramp from eastbound Collins to southbound I-295 reopened three weeks earlier than previously anticipated, part of a bigger project.

The road work is nowhere: Long-obstructed Arlington Road in Jacksonville seems to be getting nowhere

On the Road: An I-295 project would make big changes to Southside Jacksonville road

Road work: Jacksonville's I-10 is in for the long haul to widen lanes for safety, better traffic flow

"Crews were able to capture efficiencies and reduce the length of the overall closure to minimize inconvenience to the traveling public," FDOT spokeswoman Sara Pleasants said. "The ramp closed Jan. 5 to allow for construction of junction slab, curb inlets and barrier wall as part of the ongoing interchange improvement project."

We have tackled questions about this $6.4 million Northside interchange project before, designed to improve access to and from at I-295 and Collins. The project, beginning in

August 2020, saw improvements made to the interchange from just west of Parramore Road to Plantation Bay Drive.

The improvements included work on the ramp from southbound I-295: two right-turn lanes for westbound Collins, two through lanes to Parramore and two left-turn lanes for eastbound Collins. The project also added a lane from eastbound Collins to access the on-ramp to southbound I-295.

The redesign also reconfigures the access from eastbound Collins to northbound I-295 to the east as a median U-turn, which will make more room to stack cars awaiting the turn. It also sets up a two-phase intersection for better traffic flow, eliminates the sharp left turn at I-295 to help large trucks and adds ramps so bicyclists can move from the bike lane to the sidewalk more safely, the FDOT said.

Work at the intersection is expected to continue for several more weeks as crews complete grading, asphalt and final traffic signal implementation, as well as finishing touches on the ramp that was recently closed to traffic, the FDOT said.

Flooding survey open to Baldwin residents

The North Florida Transportation Planning Organization is conducting a stormwater study to address flood problems in Baldwin, and residents can access it at publicinput.com/Baldwinsurvey.

The study will identify drainage problems and assist the town in finding ways to improve its existing stormwater systems. That includes ditch obstruction and blockage, flooding and ponded water on area roads, clogged and crushed storm culverts under some streets, and erosion.

The project team is interested in residents' ideas and concerns, and will offer opportunities for community involvement throughout the study. Residents are also asked to mark the location of problem spots on the survey's interactive map and can add a comment if desired.

Jax River Jams road closures

Heads up, downtown drivers: Jax River Jams returns to downtown's Riverfront Plaza in April with live concerts every Thursday night.

The free concerts, presented by VyStar Credit Union, see gates open at 5 p.m. with opening acts at 5:30 and 7 p.m., and the headliner at 8:30 p.m.

Free concert series Jax River Jams lineup: Boys II Men, Carly Pearce, more headliners announced

That means road closures around the riverfront site at 2 Independent Drive beginning each Thursday morning and lasting through midnight on Hogan Street, from Bay Street to the Northbank Riverwalk and Laura Street from Bay to East Independent Drive. The Main Street bridge pedestrian ramp and Northbank Riverwalk from Hogan to the bridge will also be closed off, as will East Independent Drive from Hogan to Newnan streets.

Find the full schedule, which will include bands like the Spin Doctors, Sister Hazel and Boyz II men, at downtownjacksonville.org/jax-river-jams.

More detours

St. Augustine Boulevard and Cypress Road are closed to traffic through Feb. 21 for a St. Johns County drainage improvement project.

The project will replace a water main and improve storm drains. Residents in this area are able to get to and from their homes, county officials said, as flagmen and detour signs direct motorists around the project.

dscanlan@jacksonville.com, (904) 359-4549

Social Media Advertisement

APPENDIX C-2

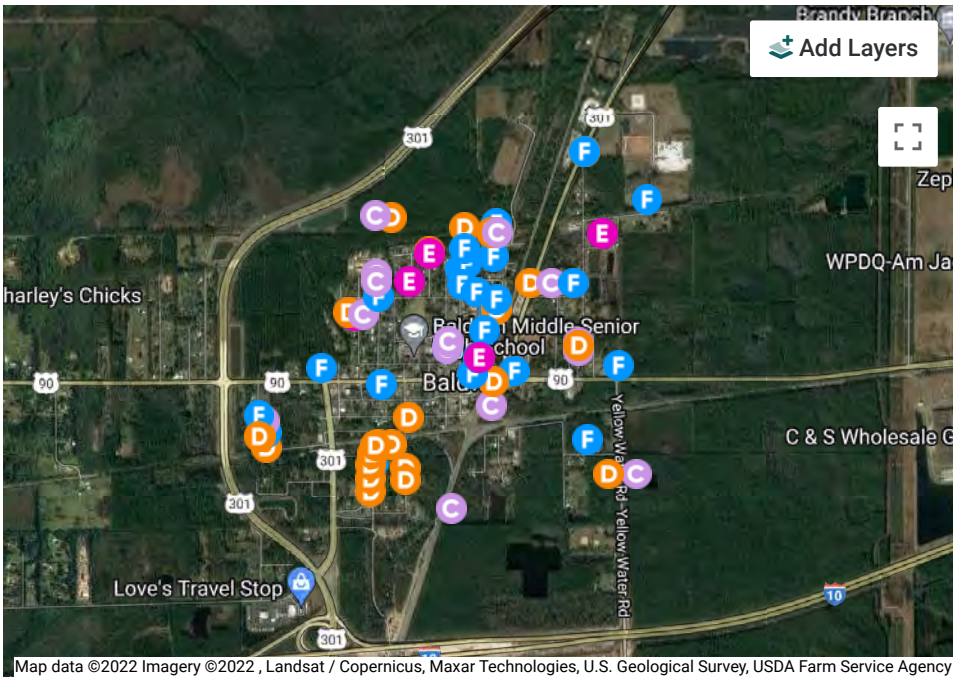
PUBLIC SURVEY RESULTS

Baldwin Stormwater Study

Project Engagement

VIEWS	PARTICIPANTS
478	41
RESPONSES	**COMMENTS**
0	87
SUBSCRIBERS	
42	

Mark the location of problem spots on the map below. If you are using a phone or tablet, tap the icon for the type of problem and then zoom in and tap the location on the map. You can then add a comment if desired. If you are on a desktop, you can drag and drop the icons to your desired location and add comments if desired.



Ditch by the railroad tracks on south main street

2 days ago

Runoff from property has filled in ditch. Request that I be able to put in culvert.

2 days ago

Standing water in ditches

2 days ago

Standing water

2 days ago

Standing water in parking lot

2 days ago

Ditch obstruction by rail trail

2 days ago

Standing water at park

2 days ago

Erosion of ditch on Pender St. Over growth over ditch - right side.

2 days ago

We have storm water in the road and in the yard. It takes days sometimes to drain when it rains a lot. A long time. It almost goes in my house from back door.

2 days ago

Erosion on canal that joins my property and overgrown trees on canal.

2 days ago

Flooding on my property! Due to CSX not maintaining their drainage. Backup water has killed my trees!

2 days ago

Standing water in ditch

2 days ago

Dirt washing from under driveway and on top of culvert

2 days ago

The entire ditch on Magnolia Ave. doesn't drain well at all during rainy season.

2 days ago

Culverts under driveways never get cleaned out!!!

2 days ago

All the water runs off the bicycle trail into Lafayette St. and there is no place for it to run off.

2 days ago

Water does not drain properly - stands. Always mushy very difficult to mow.

8 days ago

Drain on CSX property blocked

10 days ago

CSX clogged drains

10 days ago

Csx drainage pond

10 days ago

Clogged. Does not work. Nothing in this area flows the way it's supposed to. Should be connected to 90 and not just have ditch in half the street (in front of my house and property) but nowhere else. It's all wrong . Thank you for taking these comments into consideration. Please come look.

13 days ago

It's all glogged from north to south. But it's not even connected properly. It should connect out to Beaver. Even then it wouldn't work because all of the culverts are clogged atleast 90%. It has been a problem since I moved here. If you look at the drainage on Monterey Blvd you will know how bad it is. Please help. Not only can the water from my street not drain but the one culvert going from west to east on front of my property is clear. It dumps water on me and has nowhere to go because everything is clogged.

13 days ago

This entire road has drainage problems. I love at 121 Monterey. I own the property at 165 Monterey. There is a culvert that is cleared running from Hollywood to in front of my property. All of the culverts in from of the place I rent (121 Monterey) and the place I own (165 Monterey) are clogged. So it goes from Hollywood over to me and then puddles and rises in my property. Make it so bad the culvert doesn't even connect to Beaver/90; nor does it extend to the north. There is an area between 121 and 99 Monterey with a culvert. It's clogged too, and the city is denying it's even theirs. I have been complaining to the town about this since I moved in. It's bad. When it rains hard I am one of the only places that is fully flooded.

13 days ago

Ditch needs to be cleaned out so it can drain freely. Water stays in ditch for multiple days after rain.

14 days ago

Drain blocked and/or crushed

14 days ago

Ponding along road during heavy rains

14 days ago

Water ponding in the road and backing up on private property

14 days ago

Water ponding in the road and backing up on private property

14 days ago

Directly in front of 546 Martin St. water from clogged culvert under road floods my yard and several times in my garage and house.

14 days ago

Pond water in road

14 days ago

Floods with normal-heavy rain

20 days ago

Floods with heavy rain

20 days ago

Clogged culvert

20 days ago

Under drive way in front of 521

20 days ago

entire cul-de-sac becomes underwater with heavy rains and the ditches from the middle of Avon down through the fence and towards the train tracks remain flooded for weeks at times not moving. During hurricanes the water comes within 2-3 feet of our front patio at 163 Avon st.

one month ago

Flooding-ponded water on road-F on Rainer Rd. No ditches no drainage systems.

one month ago

Ditch clogged

one month ago

Ditch obstruction

one month ago

these ditches are always clogged csx refuses to take care of them

one month ago

Shoulder higher than road prevents water from draining into storm ditch.

one month ago

No ditch for storm water to drain into.

one month ago

No culverts to drain storm water into.

one month ago

Pond will begin to back up in to the yards around it.

one month ago

Water goes over the road here when raining for more than an hour or two straight. The ditches are clogged or something that causes the water to just build up instead of drain.

one month ago

Ditch Obstruction

one month ago

flooding and erosion

one month ago

Ditch obstruction

one month ago

Clogged culvert

one month ago

Clogged drains on Chestnut St.

one month ago

Please share any other comments about flooding or storm water drainage issues in Baldwin. Click "+ Add Files" below the comment box to upload a photo.

Implementing __?___ throughout the city, can help reduce storm water runoff, improve water quality and ___?__.

2 days ago

Will send photos tomorrow.

13 days ago

Neighbors across street received driveway repairs. Mine did not get repaired and was heavily broken up. I had new driveway poured. And erosion is now washing out under drive again. Concrete was put in hole to patch but some is washing out. Continues to be problematic.

14 days ago

Yellow Water creek and towards the ballfield is closed up and overgrown, no good drainage from the area. Trees are overgrown and block vision unless I keep them cut back.

14 days ago

Flooding at 155 Avon St.

14 days ago

My entire yard floods when it rains, the water runs down my street into my yard and floods my yard 12" deep. It also comes out of the sewer drains. I have videos of all this. Please help!

14 days ago

While I don't live in the town limits I can tell you the biggest issue is you have a canal on the south end and north end of town - both were designed to flow west into deep creek. I worked for the town 40 years ago and I have seen drainage deteriorate as these became more clogged so as these canals go, your drainage goes. I will be happy to show you feel free to contact me.

14 days ago

Every time it rains my backyard (159 Orange St. E.) floods bad. My ditches get clogged. Please can it be fixed. P.s. Do we have to pay. Hope not.

14 days ago

Ditch obstruction and flooding near 975 ML ling Jr. Drive.

14 days ago

The street and residential area becomes a lake or river during storms or hard rain resulting in property damage and dangerous to drive or walk in. Flooding is a major problem with poor drainage also rising water on the bike trail side of my property. Rising mosquito population due to standing water.

14 days ago

The drainage ditch in front of 120 main st s is blocked and storm water fills the yard when it rains

19 days ago

Sidewalk on the Corner of Main st s and drew st w is continually under water when it rains

19 days ago

The drainage ditch at 880 301s looks like it is full of dirt. On both sides of 301s.

20 days ago

Also, between our house and the neighbors house, and both backyards become underwater during heavy rains.

one month ago

Ditch needs cleaned out all along the tracks. Water just sits and doesn't go anywhere. Culverts also clogged.

one month ago

railroad ave will flood so bad that the fire hydrant will be half way Underwater

one month ago

Standing water due to no drainage. Cars stuck in yard

one month ago

There is flooding all over the area from Maxville to Baldwin.

one month ago

Please include your contact information if we may follow up with any questions. Please provide your email if you would like to receive study updates.

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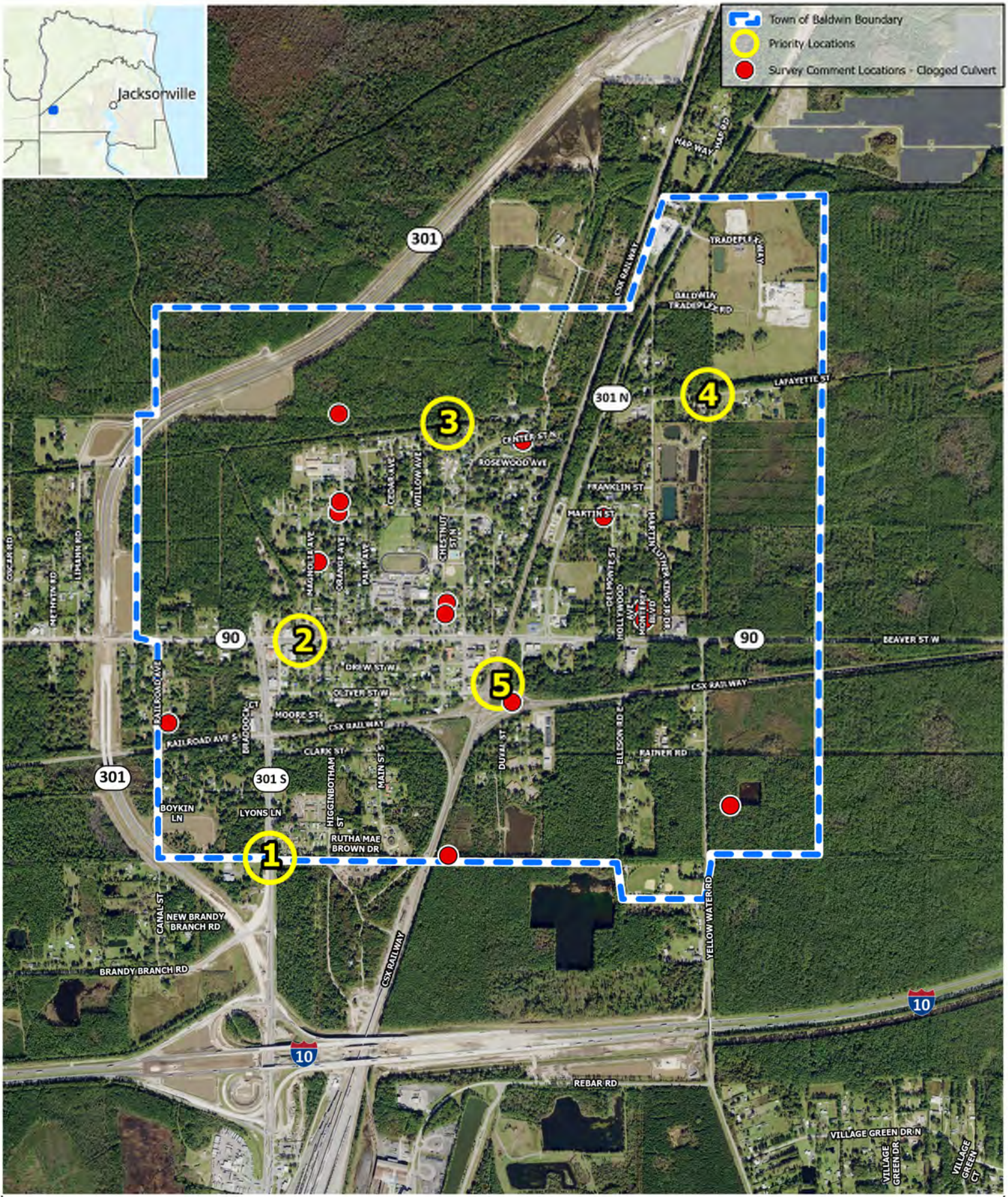

Survey Comments - Clogged Culvert

Baldwin Storm Water Study

Source: Duval County (2021)

N

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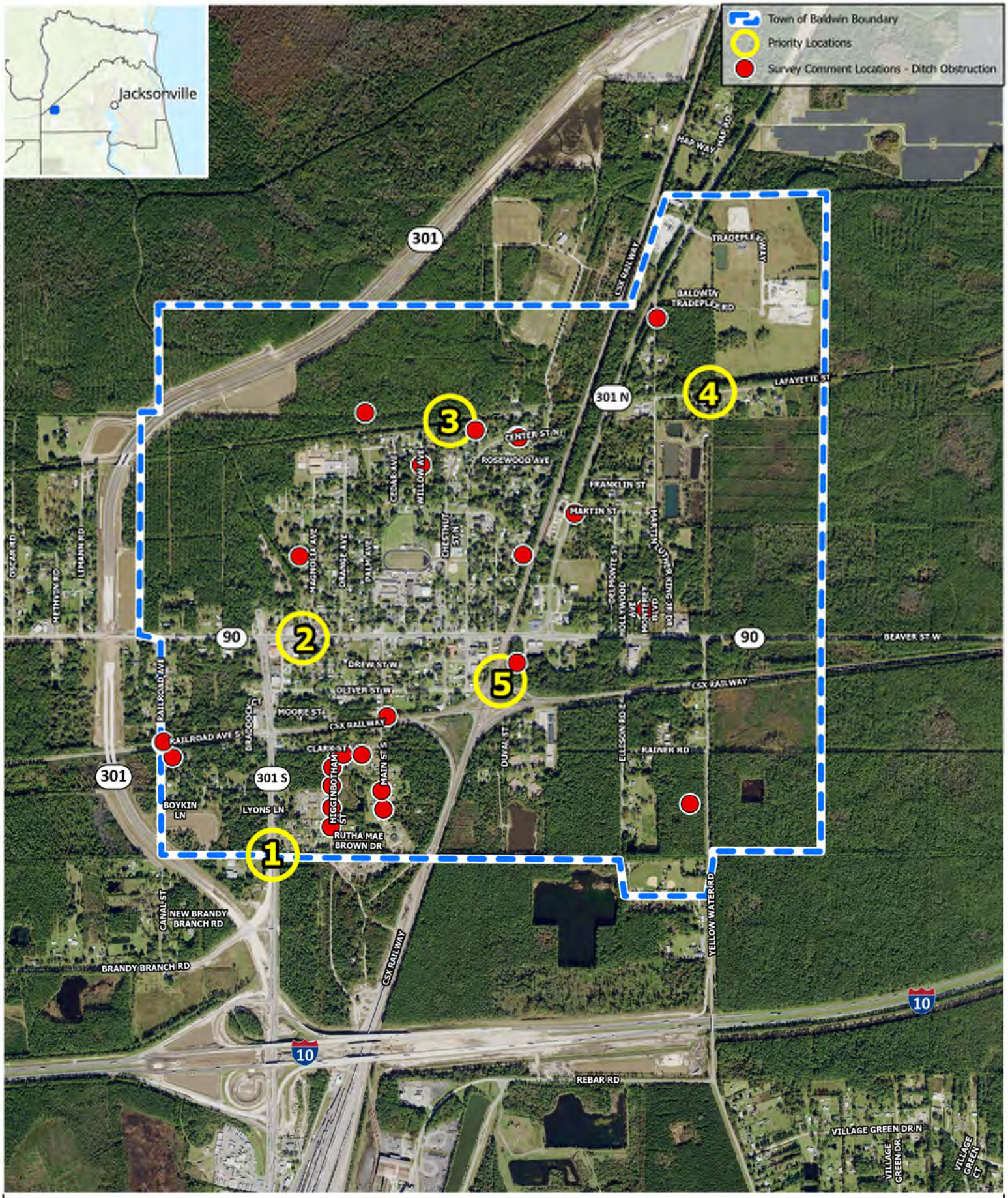

Survey Comments - Ditch Obstruction

Baldwin Storm Water Study

Source: Duval County (2021)

N

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Survey Comments - Erosion

Baldwin Storm Water Study

Source: Duval County (2021)

N

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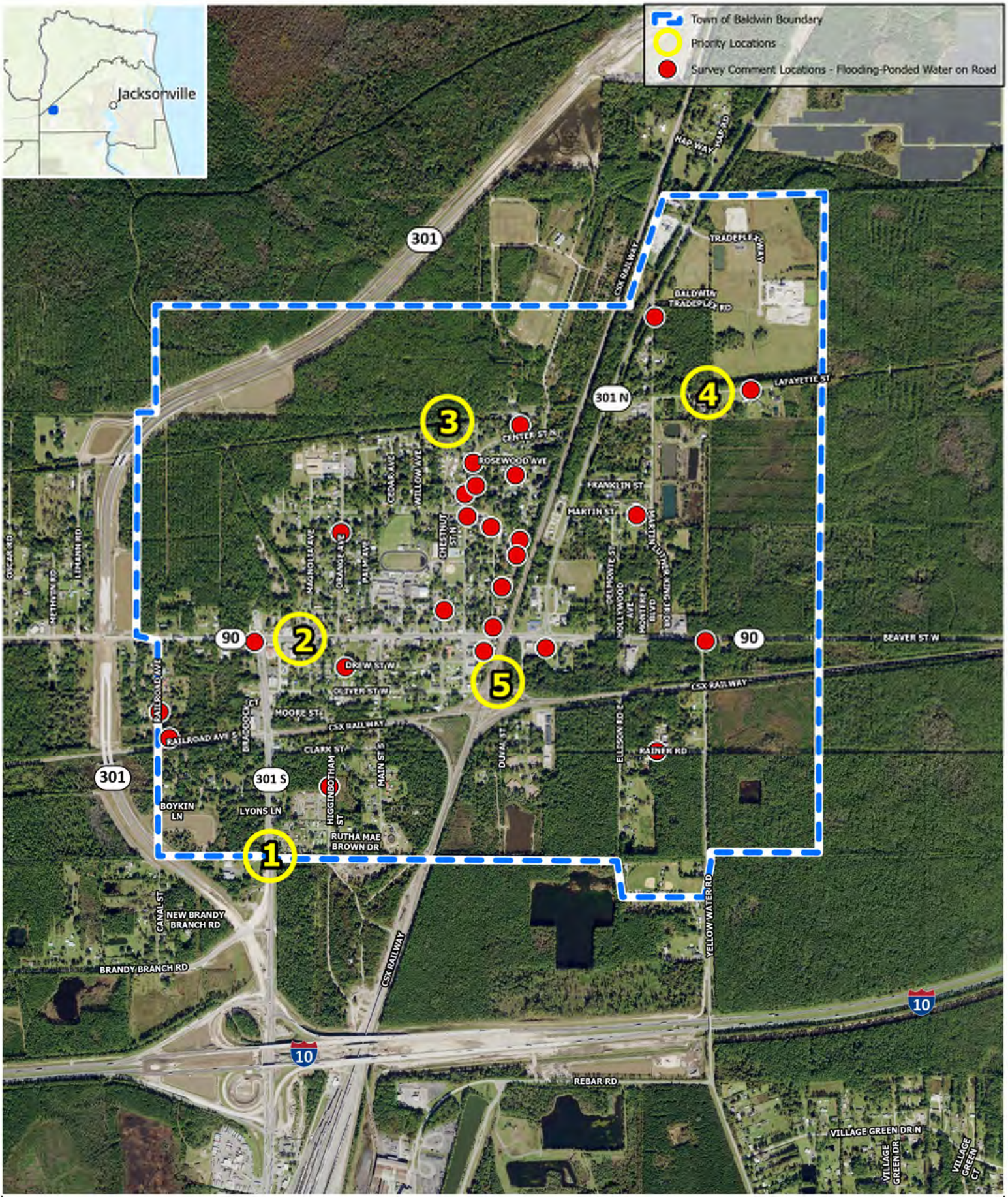


Survey Comments - Flooding

Baldwin Storm Water Study

Source: Duval County (2021)

N

0 1,500 Feet

APPENDIX C-3

DEMOGRAPHIC CONDITIONS

Demographic Conditions

To identify potential residents who may not have access to the electronic survey, the location of traditionally underserved areas of the community is evaluated through GIS mapping analysis. The data comes from the U.S. Census Bureau, American Community Survey (ACS) population and household estimates. The analysis uses Duval County census block group-level data except for disability status, which uses census tract-level data. Data sources are shown below.

- **Population Density:** 2019 ACS 5-Year Estimates, Table B01001, "Sex by Age"
- **Seniors (65 years old or above):** 2019 ACS 5-Year Estimates, Table B01001, "Sex by Age"
- **Low-income (households below poverty level):** 2019 ACS 5-Year Estimates, Table B17017, "Poverty Status in the Past 12 Months by Household Type by Age of Householder"
- **Minority and Hispanic/Latino:** 2019 ACS 5-Year Estimates, Table B03002, "Hispanic or Latino Origin by Race"
- **People with Disabilities:** 2019 ACS 5-Year Estimates, Table S1810, "Disability Characteristics"

Senior is defined as a person who is 65 years old or older. Low-income refers to households with income in the past 12 months below poverty level. Minority is defined as a person who is either Black/African American, Asian American, American Indian, Alaska Native, Native Hawaiian or other Pacific Islander, some other non-white race or two or more races. Hispanic/Latino is a person who is either Hispanic or Latino. People with disabilities refer to civilian noninstitutionalized persons with one or more of the following: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty and independent living difficulty.

The attached demographic maps show population density and percentages of population or households for seniors, low-income, minority and Hispanic/Latino and those with disabilities for either census block groups or tracts within the study area. Table 1 identifies average percentages for Florida, Duval County and Town of Baldwin. Demographic data for the study area shows that:

Population Density: Baldwin has a low population density, varying from 15 to 500 people per square mile, much lower than the overall density for Duval County.

Seniors (65 years old and over): The mapped percentages of seniors within the study area range between 9.0% and 15.0%, like the average percentages for Duval County and Baldwin at 13.7% and 10.3%, respectively.

Low-income (households below poverty level): Low-income households within the study area range from 8.0% to 26.0%. One block group, shown in blue on the map, covers a large amount of the study area and has between 16.0% and 26.0% of low-income households. The

percentage of households below poverty level in this block group are higher than the average percentages for Duval County and Baldwin, at 13.5% and 11.7%, respectively.

Minority and Hispanic/Latino: As shown on the attached map, percentages of minority and Hispanic/Latino persons within the study area range between 20.0% and 40.0%, like the average percentages for Duval County and Baldwin at 47.1% and 27.1%, respectively.

People with Disabilities: The mapped percentages of people with a disability within the study area range between 16.0% and 22.0% and generally reflect the average percentage for Baldwin at 17.7%. Baldwin's average percentage of people with a disability, at 17.7%, is 4.4% higher than Duval County's average, at 13.3%.

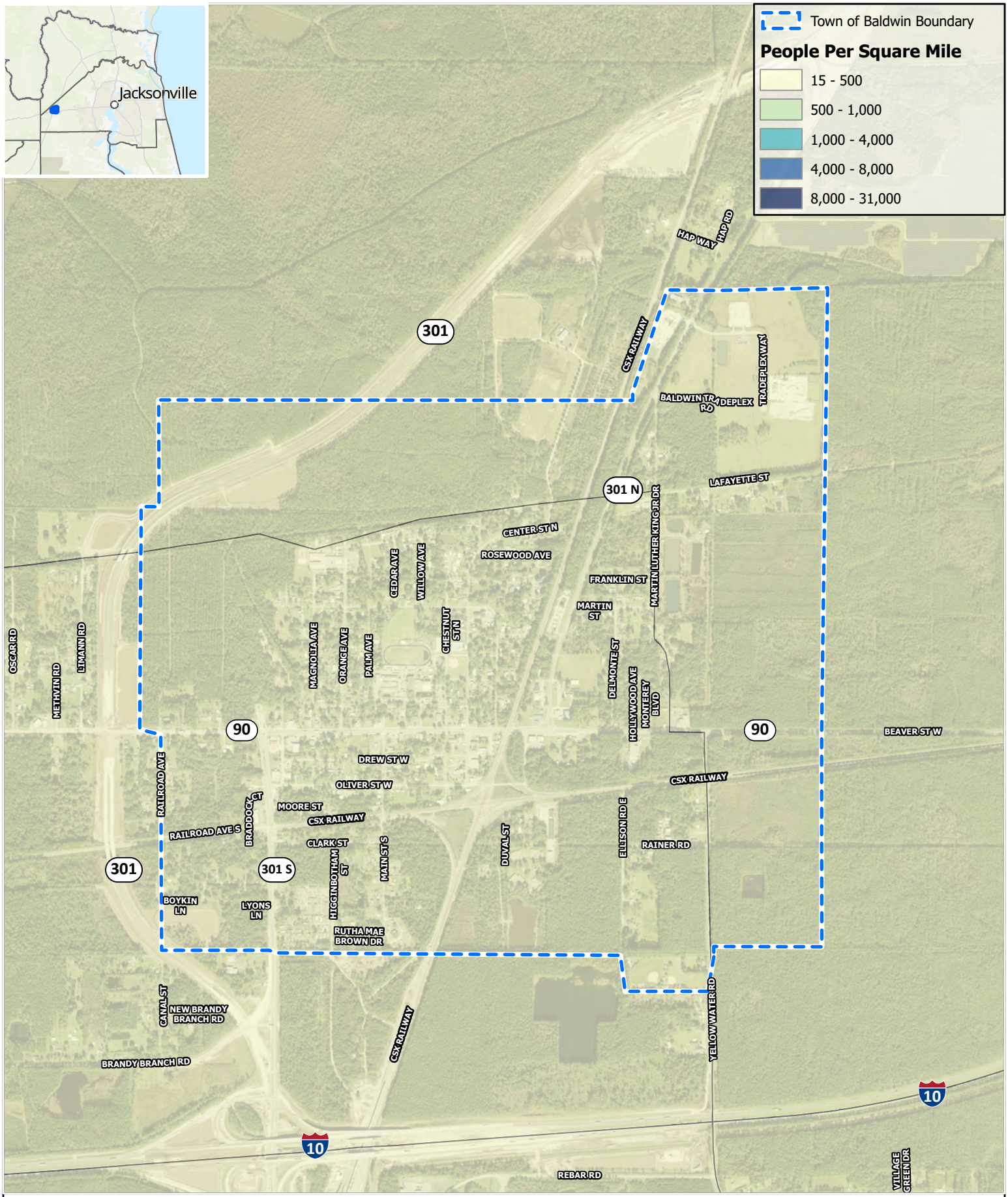
In addition, over one-half of Baldwin's seniors have a disability. Baldwin's average percentage of seniors with a disability is 54.4%. This is 17.4% higher than Duval County's average, at 37.0%.

Computer and Broadband Internet: Census ACS data also indicates that Baldwin's average percentages of households with a computer at 79.6% and households with a broadband internet subscription at 61.6% are both lower than Duval County's average percentages at 91.1% and 84.0%, respectively. Baldwin's average percentage of households with a computer is 11.5% lower than Duval County's average percentage. Baldwin's average percentage of households with a broadband internet subscription is 22.4% lower than Duval County's average.

Table 1. Baldwin Storm Water Study
Demographic Percentages

	Florida		Duval County		Town of Baldwin	
	Estimate	Percent	Estimate	Percent	Estimate	Percent
Population 65 years and over	4,205,428	20.1%	128,443	13.7%	169	10.3%
Households Below Poverty Level	1,029,407	13.3%	48,493	13.5%	69	11.7%
Minority and Hispanic/Latino Population	9,635,289	46.1%	441,156	47.1%	445	27.1%
Population with Disabilities	2,768,155	13.4%	121,762	13.3%	290	17.7%
Senior Population with a Disability	1,357,273	32.8%	46,408	37.0%	92	54.4%
Households with a Computer	7,080,989	91.5%	327,677	91.1%	468	79.6%
Households with a Broadband Internet Subscription	6,420,244	83.0%	301,922	84.0%	362	61.6%

Source: U.S. Census Bureau, 2019 American Community Survey, 5-Year Estimates



Population Density

Baldwin Storm Water Study

Source: Duval County (2021); U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B01001

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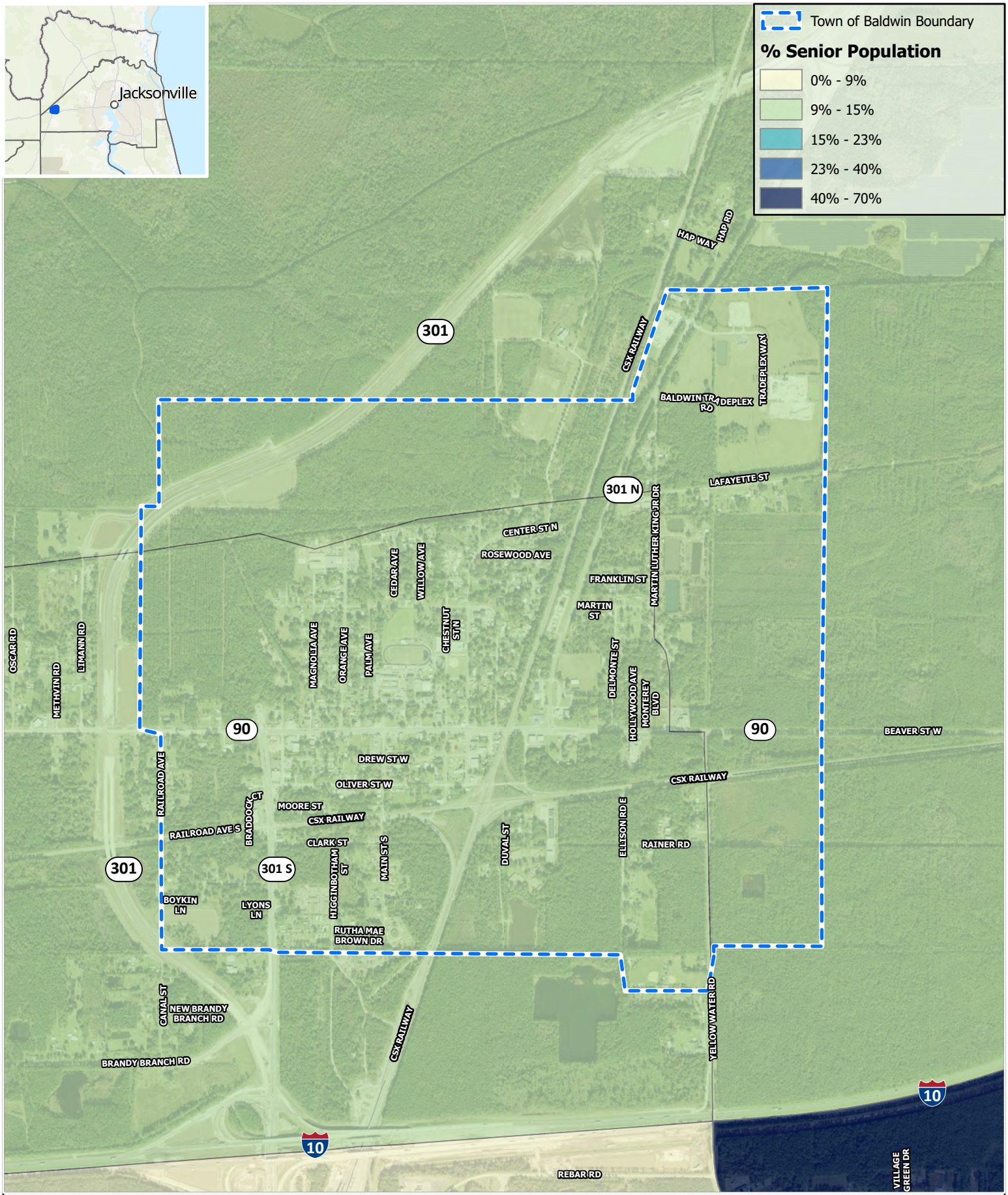

Percent Senior Population

Baldwin Storm Water Study

Source: Duval County (2021); U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B01001

N

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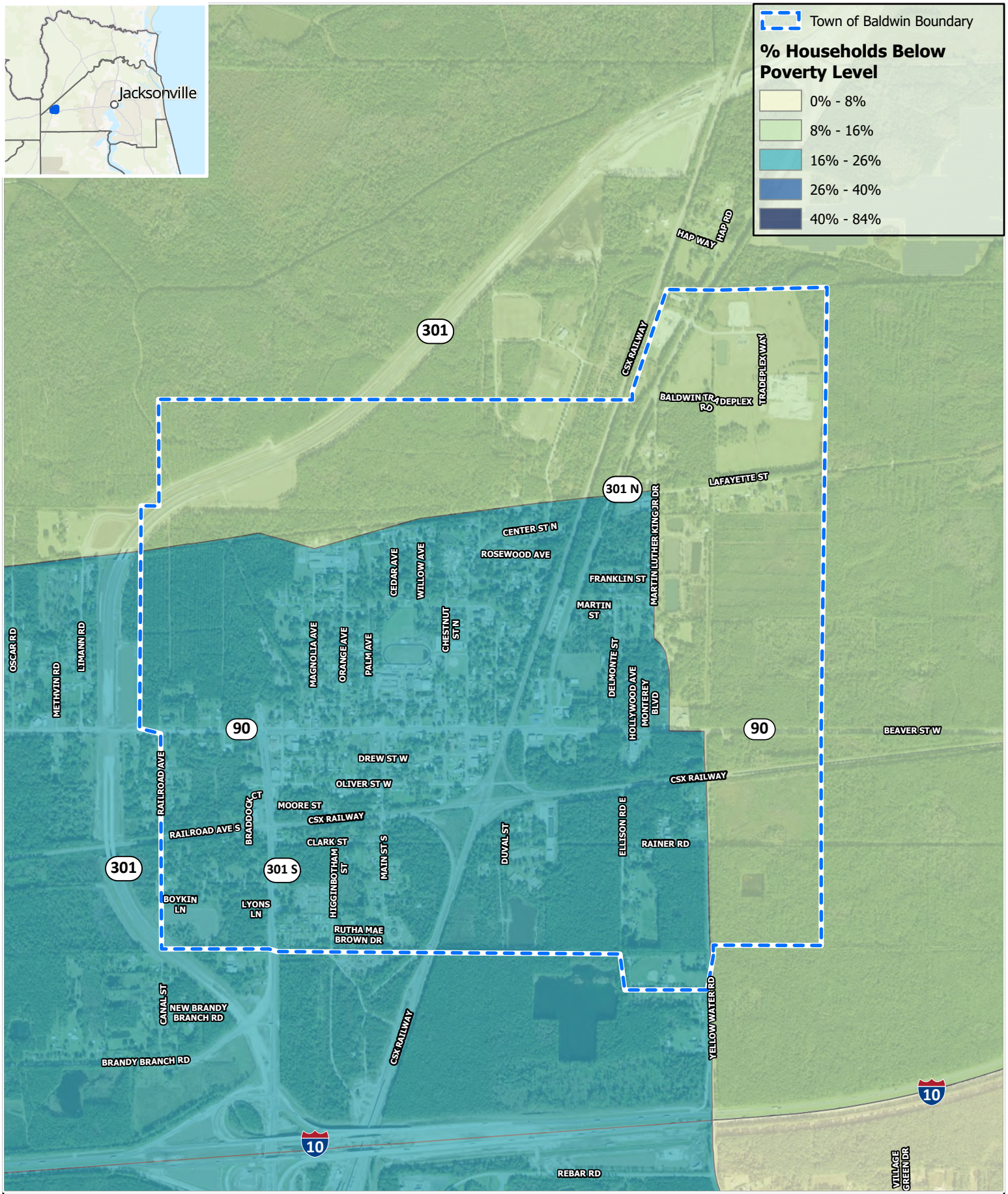

Percent Below Poverty Level

Baldwin Storm Water Study

Source: Duval County (2021); U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B17017

N

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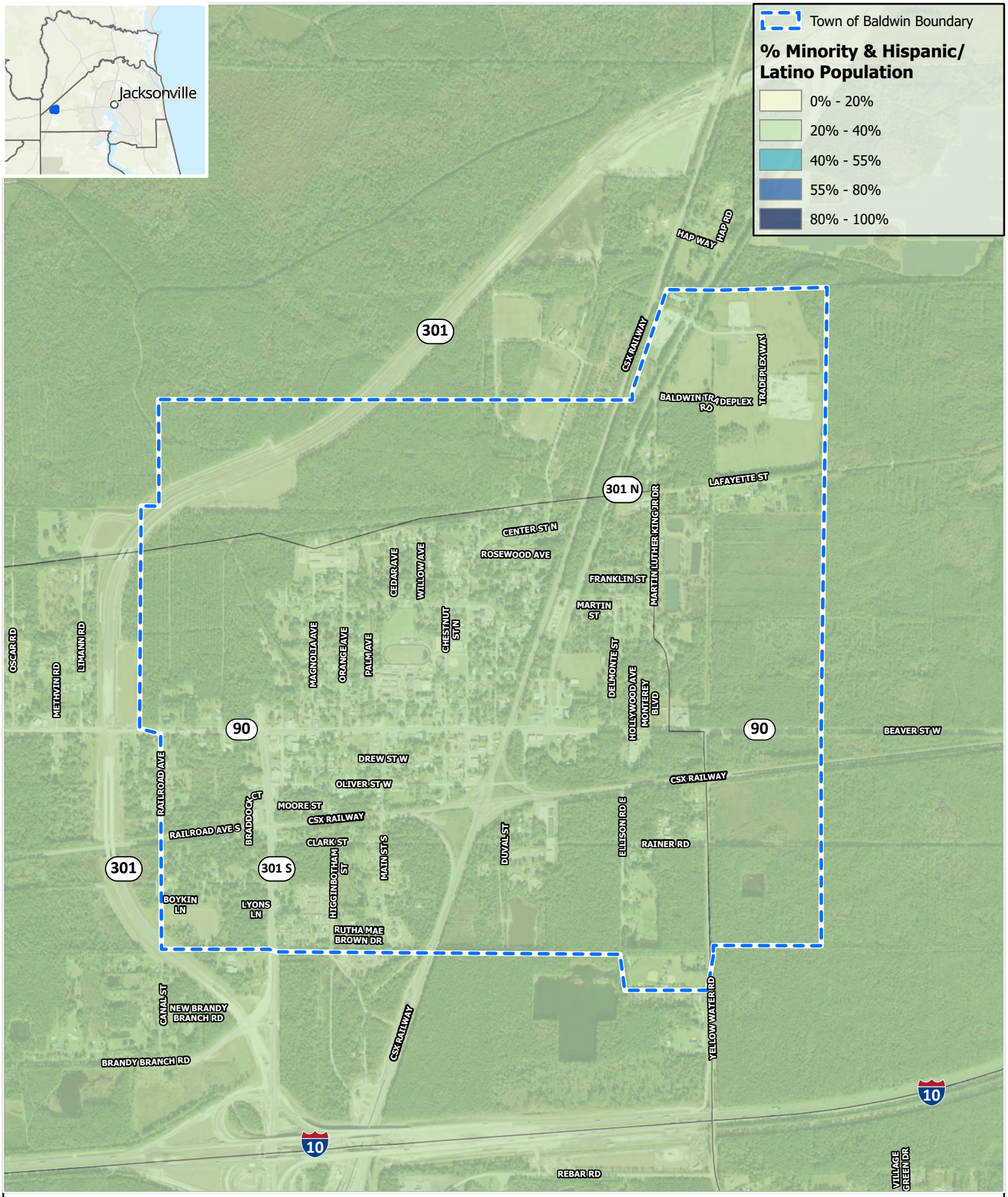

Percent Minority & Hispanic/Latino Population

Baldwin Storm Water Study

Source: Duval County (2021); U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B03002

N

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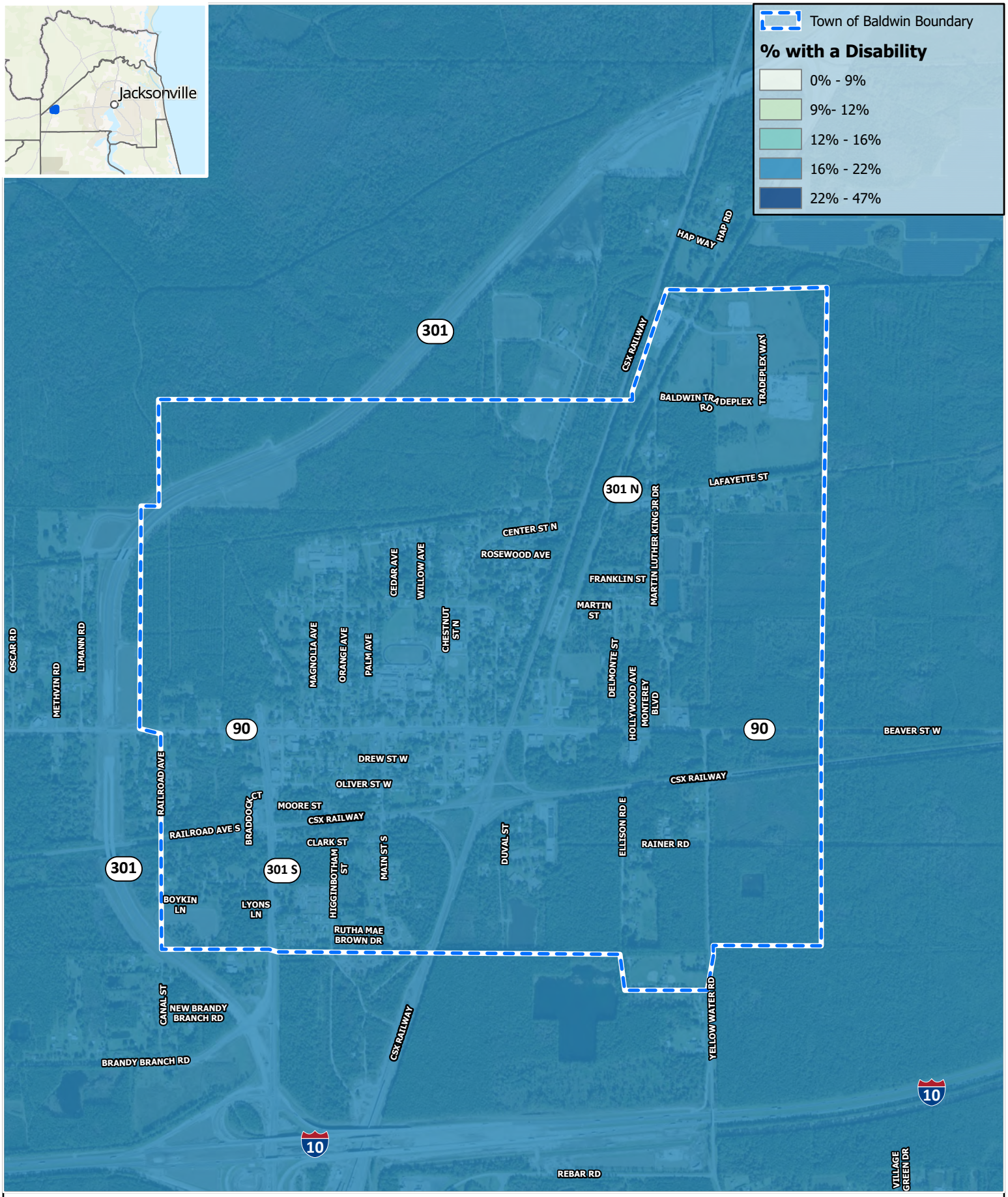


Percent with Disability

Baldwin Storm Water Study

Source: Duval County (2021); U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table S1810

N

0 1,500 Feet

APPENDIX D

RESOURCE DATA

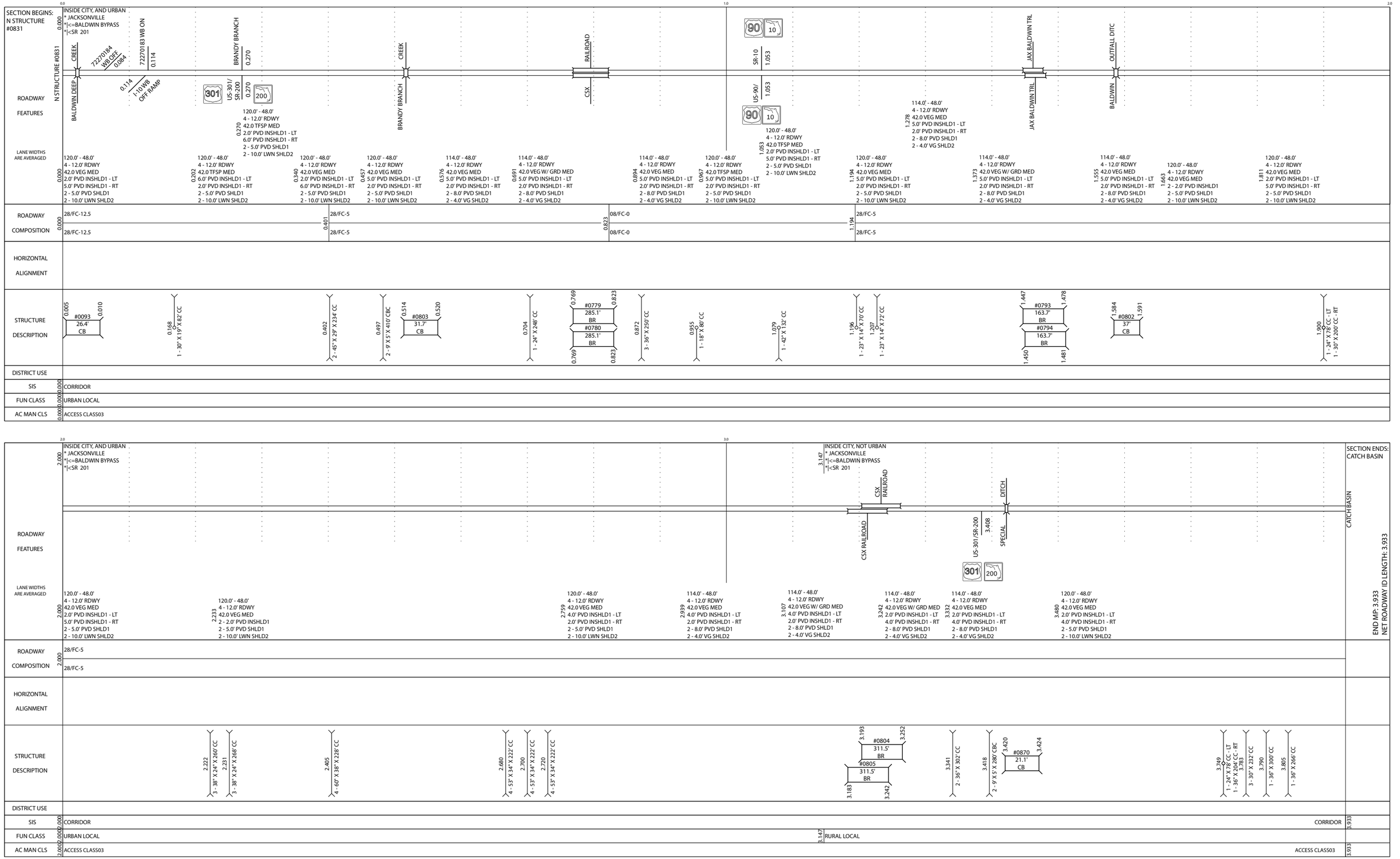
FDOT STRAIGHT LINE DIAGRAMS

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	01/25/2021	03/22/2021				
BY	PECS	PECS				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 201	DUVAL	02	72145000	1 OF 1



Version: 1.4.2.27 03/22/2021

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/20/2020	03/05/2020	1.302	1.922	01/25/2021 METRIC	03/26/2021 METRIC
BY	PECS	PECS				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02	US 90/US 301	SR 10/SR 200	DUVAL	02	72010000	1 OF 6

0.0 1.0 2.0

SECTION BEGINS NASSAU CO LINE

ROADWAY FEATURES

INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90

NASSAU CO LINE 0.000

121 CR-121/ BRANDY BRANCH 0.445

BRANDY BRANCH RD 0.445

BEARD RD 1.007

OSCAR RD 1.367

METHVIN RD 1.466

LIMANN RD 1.522

US-301 BYPASS 1.586

1.586

INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90
1.704

S RAILROAD AVE 1.704

INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10/SR 200
*|<US 90/US 301
1.922

LIMA ST N 1.978

301 200 US-301/ SR-200 1.922

1.922

LIMA ST S 1.978

2.000

LANE WIDTHS ARE AVERAGED

0.000 40.0' - 24.0'
2 - 12.0' RDWY
2 - 2.0' PVD SHLD1
2 - 6.0' LWN SHLD2

1.302 50.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 8.0' LWN SHLD2

1.405 62.0' - 24.0'
2 - 12.0' RDWY
12.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 8.0' LWN SHLD2

1.773 50.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 8.0' LWN SHLD2

1.882 68.0' - 24.0'
2 - 12.0' RDWY
14.0 PVD MED
2 - 11.0' PVD SHLD1
2 - 4.0' LWN SHLD2

1.922 66.0' - 48.0'
4 - 12.0' RDWY
14.0 PAVED TURN LANE (TWLTL/TURN) MED
2 - 2.0' C&G SHLD1

ASSOCIATED STATION EXCEPTION
SEE ROADWAY ID: 72140000
MP 8.354 TO MP 9.008

ROADWAY COMPOSITION

0.000 28/FC-12.5

1.405 28/FC-12.5 / 28/FC-12.5

1.541 08/FC-0 / 08/FC-0

1.631 28/FC-12.5 / 28/FC-12.5

1.773 28/FC-12.5

1.882 28/FC-12.5 / 28/FC-12.5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

B=S89°13'13"E

Δ=0°52'23.00"
D=0°05'
PC=1.053
PI=1.153
PT=1.252

B=N89°54'24"E

PI=1.729
Δ=0°24'12.00"

B=S89°41'24"E

STRUCTURE DESCRIPTION

0.449 1 - 8' X 4' X 70' CBC

0.984 1 - 24" X 52" CC

1.301 2 - 8' X 4' X 42' CBC

1.880 1 - 30" X 60" CC

DISTRICT USE

SIS

FUN CLASS 0.000 URBAN MINOR ART

1.931 URBAN PRIN ART OTHER

SPEED LIMIT 0.000 60MPH

1.199 50MPH

1.388 45MPH

AC MAN CLS 0.000 ACCESS CLASS04

ACCESS CLASS04

1.931 ACCESS CLASS06

2.0 3.0 4.0

INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10/SR 200
*|<US 90/US 301
2.000

ORANGE AVE 2.109

MAIN ST N 2.208

COLEMAN BLVD 2.291

N CHESTNUT ST 2.349

CENTER ST N 2.396

MURRAY ST 2.462

301 200 FROM US-301/ SR-200 2.564

TO US-301/ SR-200 2.590

US-301/ SR-200 2.576

2.576

INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90

DELMONTE ST 2.725

HOLLYWOOD AVE 2.771

MONTEREY BLVD 2.799

MLK DR 2.853

5086 3.135

3.199

INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90

UNSIGNED 3.940

ROADWAY FEATURES

2.000

WESLEY CT 2.056

MAIN ST S 2.208

S CHESTNUT ST 2.349

CENTER ST S 2.396

MURRAY ST 2.448

2.486 620661-E

DUVAL ST 2.528

2.576

YELLOW WATER RD 2.935

LANE WIDTHS ARE AVERAGED

ASSOCIATED STATION EXCEPTION
SEE ROADWAY ID: 72140000
MP 8.354 TO MP 9.008

2.000 66.0' - 48.0'
4 - 12.0' RDWY
14.0 PAVED TURN LANE (TWLTL/TURN) MED
2 - 2.0' C&G SHLD1

2.486 75.0' - 12.0'L+24.0'R
1 - 12.0'L + 2 - 12.0'R RDWY
17.0 TFSP MED
12.0' PVD SHLD1 - LT
6.0' PVD SHLD1 - RT
2 - 2.0' C&G SHLD2

2.697 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

3.122 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' WARN SHLD1
2 - 6.0' LWN SHLD2

3.940 73.0' - 24.0'
2 - 12.0' RDWY
27.0 VEG MED
2 - 2.0' PVD INSHLD1
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

ROADWAY COMPOSITION

2.000 28/FC-12.5 / 28/FC-12.5

2.697 28/FC-12.5

3.940 28/FC-12.5 / 28/FC-12.5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

Δ=1°39'04.00"
PI=2.057
B=N88°39'32"E

PI=2.291
Δ=1°55'32.00"
B=S89°24'56"E

Δ=0°23'45.00"
PI=2.487
B=S89°48'41"E

Δ=6°51'00.00"
D=45°00'
PC=3.523
PI=3.610
PT=3.696
B=N83°20'19"E

STRUCTURE DESCRIPTION

2.032 1 - 10' X 5' X 100' CBC

2.825 1 - 36" X 70' CC

3.280 1 - 36" X 70' CC

3.658 1 - 8' X 4' X 64' CBC

DISTRICT USE

SIS

FUN CLASS 2.000 URBAN PRIN ART OTHER

2.585 URBAN MINOR ART

SPEED LIMIT 2.000 45MPH

3.135 50MPH

3.324 60MPH

AC MAN CLS 2.000 ACCESS CLASS06

ACCESS CLASS06

2.649 ACCESS CLASS04

Version: 1.4.2.27 03/26/2021

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	02/20/2020	03/05/2020	1.302	1.922	01/25/2021 METRIC	03/26/2021 METRIC
BY	PECS	PECS				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02	US 90/US 301	SR 10/SR 200	DUVAL	02	72010000	2 OF 6

4.0 5.0 6.0

ROADWAY FEATURES

4.000 INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90

FROM WINN DIXIE PKWY 4.256
WINN DIXIE PKWY 4.290
TO WINN DIXIE PKWY 4.527
WINN DIXIE SRVC RD
ZEPHYR DIARY DR 4.459
BRANCH
BRANDY

LANE WIDTHS ARE AVERAGED

4.000 73.0' - 24.0'
2 - 12.0' RDWY
27.0 VEG MED
2 - 2.0' PVD INSHLD1
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

4.506 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

5.093 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' WARN SHLD1
2 - 6.0' LWN SHLD2

ROADWAY COMPOSITION

4.000 28/FC-12.5
28/FC-12.5

4.506 28/FC-12.5

HORIZONTAL ALIGNMENT

STRUCTURE DESCRIPTION

4.122 1 - 24' X 98' CC
4.350 3 - 30' X 120' CC
4.412 #9012 58.1' UP 4.423
5.180 1 - 36' X 58' CC
5.918 #0678 47.5' BR 5.927

DISTRICT USE

SIS

FUN CLASS 4.000 URBAN MINOR ART

SPEED LIMIT 4.000 60MPH

AC MAN CLS 4.000 ACCESS CLASS04

6.0 7.0 8.0

ROADWAY FEATURES

6.000 INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=BEAVER ST W
*|<SR 10
*|<US 90

OTIS RD 7.265
POPE-DUVAL PARK 7.231
WAGON RD 7.575
JACOBS LN 7.642
FROM SR-23 NB 7.980
SR-23/CECIL COMMERCE 7.998
23

LANE WIDTHS ARE AVERAGED

6.000 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' WARN SHLD1
2 - 6.0' LWN SHLD2

7.020 46.0' - 24.0'
2 - 12.0' RDWY
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

7.675 70.0' - 24.0'
2 - 12.0' RDWY
24.0 PVD MED
2 - 5.0' PVD SHLD1
2 - 6.0' LWN SHLD2

ROADWAY COMPOSITION

6.000 28/FC-12.5

7.675 28/FC-12.5
28/FC-12.5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED
Δ=0°37'56.00"
PI=6.662
B=N82°42'23"E
PI=7.017
Δ=0°55'00.00"
B=N83°37'45"E

STRUCTURE DESCRIPTION

6.825 1 - 30' X 70' CC
7.417 1 - 4' X 2' X 60' CBC

DISTRICT USE

SIS

FUN CLASS 6.000 URBAN MINOR ART

SPEED LIMIT 6.000 60MPH

AC MAN CLS 6.000 ACCESS CLASS04

	5 YR INV	SLD REV
DATE	08/31/2021	09/07/2021
BY	METRIC	METRIC

BMP	EMP	INV	SLD REV
0.000	13.587	02/02/2022 FDOT	02/23/2022 PECS
0.000	6.943	08/31/2021 METRIC	09/07/2021 METRIC

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
12	US 301	SR 200/SR 228	DUVAL	02	72140000	2 OF 4

4.0 5.0 6.0

ROADWAY FEATURES

4.000: INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

LANE WIDTHS ARE AVERAGED

4.000: 120.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
2 - 4.0' PVD SHLD1
2 - 12.0' LWN SHLD2

ROADWAY COMPOSITION

4.000: 28/FC-5
28/FC-5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

Δ=0°01'00.00"
PI=4.637
B=N18°55'54"E

Δ=0°00'30.00"
PI=5.745
B=N18°55'24"E

STRUCTURE DESCRIPTION

4.171 O 1 - 16' X 80' CC
4.225 O 1 - 10' X 5' X 84' CBC - LT
1 - 10' X 5' X 84' CBC - RT
4.930 O 1 - 16' X 78' CC
5.122 O 1 - 16' X 84' CC
5.311 O 1 - 16' X 76' CC
5.432 O 1 - 36" X 356' CC
1 - 36" X 80' CC
1 - 36" X 76' CC - RT
5.756 O 1 - 16' X 84' CC
5.948 O 1 - 16' X 88' CC

DISTRICT USE

SIS 4.000: CORRIDOR

FUN CLASS 4.000: URBAN PRIN ART OTHER

SPEED LIMIT 4.000: 65MPH

AC MAN CLS 4.000: ACCESS CLASS03

6.0 7.0 8.0

ROADWAY FEATURES

6.000: INSIDE CITY, AND URBAN
* JACKSONVILLE
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

TRAVEL AMERICA TS 7.118
722701B6 EB OFF 7.215
722701B5 EB ON 7.338
SR-8 10 8
SR-8
I-10/ 10 8
I-10/
BOXCAR DR 7.162
7.215 122.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
2 - 12.0' PVD SHLD1
2 - 5.0' LWN SHLD2

(MP 7.429 TO MP 7.851)
REALIGNMENT
SEE ROADWAY ID: 72140001
MP 0.000 TO MP 0.183

DELETED
(MP 7.429 TO MP 7.851)

7.851 INSIDE CITY, AND URBAN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301
7.860 INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301
LYONS LN 7.964
UNSIGNED 7.851

LANE WIDTHS ARE AVERAGED

6.000: 120.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
2 - 4.0' PVD SHLD1
2 - 12.0' LWN SHLD2

6.608: 127.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
18.0' PVD SHLD1 - LT
4.0' PVD SHLD1 - RT
5.0' LWN SHLD2 - LT
12.0' LWN SHLD2 - RT

6.787: 134.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
2 - 18.0' PVD SHLD1
2 - 5.0' LWN SHLD2

7.014: 129.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
13.0' WARN SHLD1 - LT
18.0' PVD SHLD1 - RT
2 - 5.0' LWN SHLD2

7.162: 123.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 3.0' PVD INSHLD1
13.0' WARN SHLD1 - LT
12.0' PVD SHLD1 - RT
2 - 5.0' LWN SHLD2

7.851: 88.0' - 48.0'
4 - 12.0' RDWY
20.0 CB&VEG MED
2 - 2.0' C&G INSHLD1
2 - 8.0' PVD SHLD1
2 - 2.0' C&G SHLD2

ROADWAY COMPOSITION

6.000: 28/FC-5
28/FC-5

7.851: 28/FC-5
28/FC-5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED
Δ=19°04'30.00"
D=2°00'
PC=6.098
PI=7.049
PT=7.348

B=N00°09'06"W

B=N00°09'06"W

STRUCTURE DESCRIPTION

6.300 O 1 - 16' X 78' CC
6.507 O 1 - 16' X 76' CC
6.763 O 1 - 16' X 78' CC
6.933 O 1 - 36" X 80' CC - LT
1 - 36" X 76' CC - RT
7.010 O 1 - 18" X 86' CC
7.098 O 1 - 15" X 106' CC
7.218 O 1 - 15" X 140' CC
7.377 #0830 26.4' UP 7.382
7.421 #0831 42.2' UP 7.429
7.871 O 1 - 12' X 4' X 122' CBC

DISTRICT USE

SIS 6.000: CORRIDOR — 7.429: CORRIDOR

FUN CLASS 6.000: URBAN PRIN ART OTHER — 7.851: URBAN PRIN ART OTHER

SPEED LIMIT 6.000: 65MPH — 6.050: 55MPH — 6.659: 45MPH — 6.800: 45MPH — 7.071: 45MPH — 7.851: 45MPH — 7.948: 35MPH

AC MAN CLS 6.000: ACCESS CLASS03 — 7.429: ACCESS CLASS03 — 7.851: ACCESS CLASS03

Version: 1.4.2.27 02/23/2022

	5 YR INV	SLD REV
DATE	08/31/2021	09/07/2021
BY	METRIC	METRIC

BMP	EMP	INV	SLD REV
0.000	13.587	02/02/2022 FDOT	02/23/2022 PECS
0.000	6.943	08/31/2021 METRIC	09/07/2021 METRIC

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
12	US 301	SR 200/SR 228	DUVAL	02	72140000	3 OF 4

8.0 9.0 10.0

ROADWAY FEATURES

8.000 INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

BOYKINS LN 8.010 · BURNEY LN 8.123 · CLARK ST 8.097 · 8.134 620652F · MOORE ST 8.181 · OLIVER ST W 8.233 · 8.354 US-90/SR-10

(MP 8.354 TO MP 9.008)
STATIONING EXCEPTION
SEE ROADWAY ID: 72010000
MP 1.922 TO MP 2.576

9.008 INSIDE CITY, AND URBAN
* BALDWIN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

US-90/SR-10 9.008 · GOLD ST E 9.121 · MARTIN ST 9.298 · FRANKLIN ST 9.364 · RR · CSX · 9.796 INSIDE CITY, NOT URBAN
* BALDWIN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301
MLK JR DR 9.819 · UNSIGNED 9.988

LANE WIDTHS ARE AVERAGED

8.000 88.0' - 48.0'
4 - 12.0' RDWY
20.0 CB&VEG MED
2 - 2.0' C&G INSHLD1
2 - 8.0' PVD SHLD1
2 - 2.0' C&G SHLD2

9.054 40.0' - 24.0'
2 - 12.0' RDWY
2 - 8.0' LWN SHLD1

9.008 53.0' - 24.0'
2 - 12.0' RDWY
25.0 CB&VEG MED
2 - 2.0' CRG INSHLD1
2 - 2.0' CRG SHLD1

9.392 36.0' - 24.0'
2 - 12.0' RDWY
2 - 6.0' PVD SHLD1

9.579 40.0' - 24.0'
2 - 12.0' RDWY
2 - 8.0' LWN SHLD1

ROADWAY COMPOSITION

8.000 28/FC-5
28/FC-5

9.008 28/FC-12.5
28/FC-12.5
9.054

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

Δ=6°18'00.00"
D=0°45'
PC=8.001
PI=8.134
PT=8.240
B=N06°27'06"W

PI=8.354
Δ=90°00'00.00"

Δ=90°00'00.00"
PI=9.008
B=N00°07'20"W

PC=9.087
PI=9.146
PT=9.205
Δ=18°42'00.00"
D=3°00'
B=N18°34'40"E

PC=9.480
PI=9.789
PT=10.095
Δ=11°54'00.00"
D=0°22'

STRUCTURE DESCRIPTION

9.540 #0026 205.9' BR 9.579

DISTRICT USE

SIS

FUN CLASS

8.000 URBAN PRIN ART OTHER 9.008

9.008 URBAN PRIN ART OTHER 9.796

9.796 RURAL PRIN ART OTHER

SPEED LIMIT

8.000 35MPH 9.008

9.008 35MPH 9.351

9.351 45MPH 9.600

9.600 55MPH 9.944

9.944 60MPH

AC MAN CLS

8.000 ACCESS CLASS03 8.354

8.354 ACCESS CLASS03 9.008

9.008 ACCESS CLASS03 9.710

9.710 CORRIDOR ACCESS MGT PLAN

10.0 11.0 12.0

ROADWAY FEATURES

10.000 INSIDE CITY, NOT URBAN
* BALDWIN
*|<=US-301
*|<SR 200
*|<US 301

10.087 INSIDE CITY, NOT URBAN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

SOLAR FIELD 10.275

(MP 10.275 TO MP 11.180)
REALIGNMENT
SEE ROADWAY ID: 72140002
MP 0.000 TO MP 0.426

DELETED
(MP 10.275 TO MP 11.180)

11.180 INSIDE CITY, NOT URBAN
* JACKSONVILLE
*|<=US-301
*|<SR 200
*|<US 301

LANE WIDTHS ARE AVERAGED

10.000 40.0' - 24.0'
2 - 12.0' RDWY
2 - 8.0' LWN SHLD1

11.180 114.0' - 48.0'
4 - 12.0' RDWY
40.0 VEG MED
2 - 2.0' PVD INSHLD1
2 - 5.0' PVD SHLD1
2 - 8.0' LWN SHLD2

ROADWAY COMPOSITION

10.000 28/FC-12.5

11.180 28/FC-5
28/FC-5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

B=N30°20'40"E

Δ=13°23'00.00"
D=0°30'
PC=10.692
PI=10.947
PT=11.199
B=N16°57'40"E

STRUCTURE DESCRIPTION

10.025 2 - 8' X 4' X 62' CBC

11.305 2 - 30" X 170' CC

DISTRICT USE

SIS

11.180 CORRIDOR

FUN CLASS

10.000 RURAL PRIN ART OTHER 11.180

11.180 RURAL PRIN ART OTHER 11.392

SPEED LIMIT

10.000 60MPH 11.180

11.180 60MPH 11.392

11.392 65MPH

AC MAN CLS

10.000 CORRIDOR ACCESS MGT PLAN 10.275

10.275 CORRIDOR ACCESS MGT PLAN 11.180

11.180 CORRIDOR ACCESS MGT PLAN

Version: 1.4.2.27 02/23/2022

FDOT DRAINAGE MAPS (SR 201)

BEGIN BRIDGE SB #720793
BEGIN BRIDGE NB #720794
STA. 178+77.27

NASSAU COUNTY

DUVAL COUNTY

STATION EQUATION:
STA. 134+51.13 (30.61 LT.) ℄ SURVEY SR 200 AH. =
STA. 330+10.84 ℄ CONST. SR 201 BK.

END BRIDGE SB #720793
END BRIDGE NB #720794
STA. 180+37.11

LIMIT OF CONSTRUCTION
STA. 103+65.00
℄ SURVEY SR 10

CR 119

CSX RAILROAD EAST-WEST

RAILS TO TRAILS

SR 10 (US 90)

BRIDGE CULVERT #720802
BEGIN STA. 186+40.70
END STA. 186+91.96

BALDWIN BAY

BEGIN BRIDGE SB #720804
BEGIN BRIDGE NB #720805
STA. 270+90.78

END BRIDGE SB #720804
END BRIDGE NB #720805
STA. 274+01.78

0 400 2000
Feet

CSX RAILROAD NORTH-SOUTH

SR 200 (US 301)

RANGE 23 EAST
RANGE 24 EAST

STATION EQUATION:
STA. 200+00.00 ℄ CONST. US 90 AH. =
STA. 108+90.00 ℄ SURVEY SR 10 BK.

END BRIDGE SB #720779
END BRIDGE NB #720780
STA. 145+32.50

BEGIN BRIDGE SB #720779
BEGIN BRIDGE NB #720780
STA. 142+76.50

BRIDGE CULVERT
BEGIN STA. 129+26.10
END STA. 129+55.76

END SR 200 (US 301)
BEGIN SR 201
STA. 116+25.83

NEW BRANDY BRANCH RD

SR 201

LIMIT OF CONSTRUCTION
STA. 145+54.00
℄ SURVEY SR 200

END PROJECT
END SB NEW CONSTRUCTION
STA. 327+06.73

END NB NEW CONSTRUCTION
STA. 317+67.63

END SR 201
BEGIN 200 (US 301)
STA. 282+42.93

LIMIT OF CONSTRUCTION
STA. 500+70.00 ℄ CONST.
BRANDY BRANCH RD.

STATION EQUATION:
STA. 175+00.00 ℄ CONST. US 301N AH. =
STA. 75+00.00 ℄ SURVEY SR 200 BK.

LIMIT OF CONSTRUCTION
STA. 69+04.36
℄ SURVEY SR 200

STATION EQUATION:
STA. 134+00.00 ℄ SURVEY SR 10 AH. =
STA. 225+10.02 ℄ CONST. US 90 BK.

LIMIT OF CONSTRUCTION
STA. 397+36.21
℄ SURVEY SR 200

TOWNSHIP 2 SOUTH
TOWNSHIP 3 SOUTH

SR 200 (US 301)

SR 8 (I-10)

BRIDGE CULVERT
BEGIN STA. 129+26.10
END STA. 129+55.76

BEGIN PROJECT
BEGIN NEW CONSTRUCTION
STA. 103+00.00

STATION EQUATION:
STA. 422+40.00 ℄ SURVEY SR 200 AH. =
STA. 17+51.49 ℄ CONST. US 301S BK.

LIMIT OF CONSTRUCTION
STA. 429+86.06 ℄ SURVEY SR 200

LIMIT OF CONSTRUCTION
STA. 140+61.75
℄ SURVEY SR 10

STATION EQUATION:
STA. 99+97.24 ℄ CONST. SR 201 AH. =
STA. 400+00.00 (35.88 LT.) ℄ SURVEY SR 200 BR.

DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. This sheet is in the plans for documentation and to assist construction personnel with drainage concerns.

BASIN A 13.10 Ac.
BASIN B 34.78 Ac.
BASIN C 15.22 Ac.
BASIN D 21.36 Ac.
BASIN E 32.90 Ac.
BASIN F 21.56 Ac.
137.74 Ac.
6.85 Ac.
W.D.A. A
W.D.A. B
W.D.A. C
W.D.A. D
W.D.A. E
W.D.A. F
CD-1
CD-2
CD-3
CD-4
CD-5
CD-6
CD-7A
CD-7B
CD-8
CD-9A
CD-9B
CD-9C
CD-10
CD-11
CD-12A
CD-12B
CD-13
CD-14
9.44 Ac.
22.74 Ac.
210.14 Ac.
213.08 Ac.
685.34 Ac.
25.58 Ac.
32.02 Ac.
17.39 Ac.
18.92 Ac.
736.62 Ac.
49.72 Ac.
251.33 Ac.
1,354.41 Ac.
100
150
200
250
300
500

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

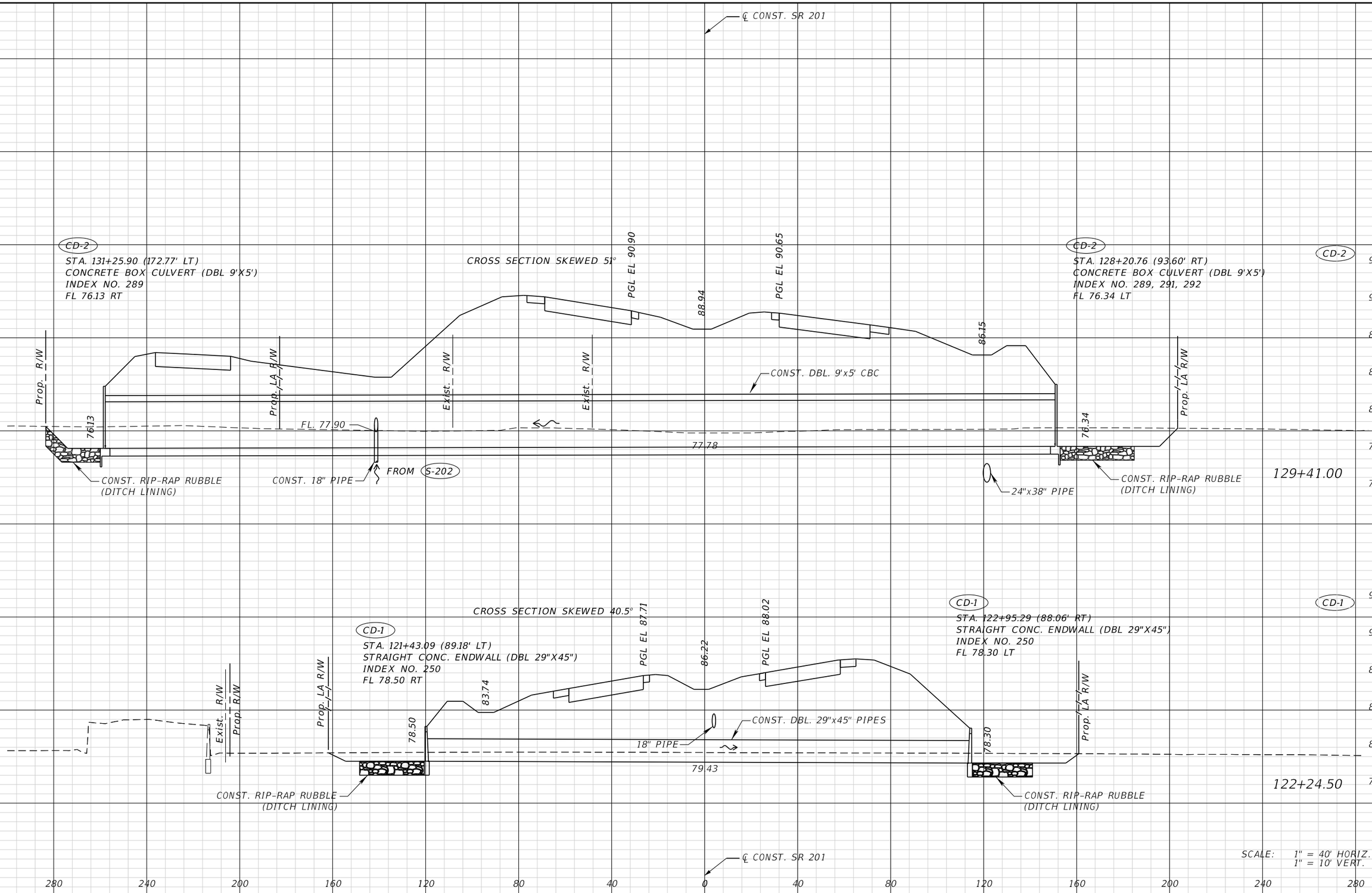
ENGINEER OF RECORD
JAMES A. HICKS III, P.E.
P.E. NO.: 72306
PARSONS TRANSPORTATION GROUP
1300 RIVERPLACE BLVD. SUITE 200
JACKSONVILLE, FL. 32207
CERTIFICATE OF AUTHORIZATION: 1838

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 201	DUVAL	209537-4-52-01

DRAINAGE MAP

SHEET NO. 2



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

Connelly & Wicker Inc.
10060 Skinner Lake Dr., Suite 500
Jacksonville, FL 32246
Phone 904.265.3030 Fax 904.265.3031
CA No. 3650 LA No. LC26000311
Engineer of Record:
William J. Hartland, P.E.
FL P.E. No. 48865

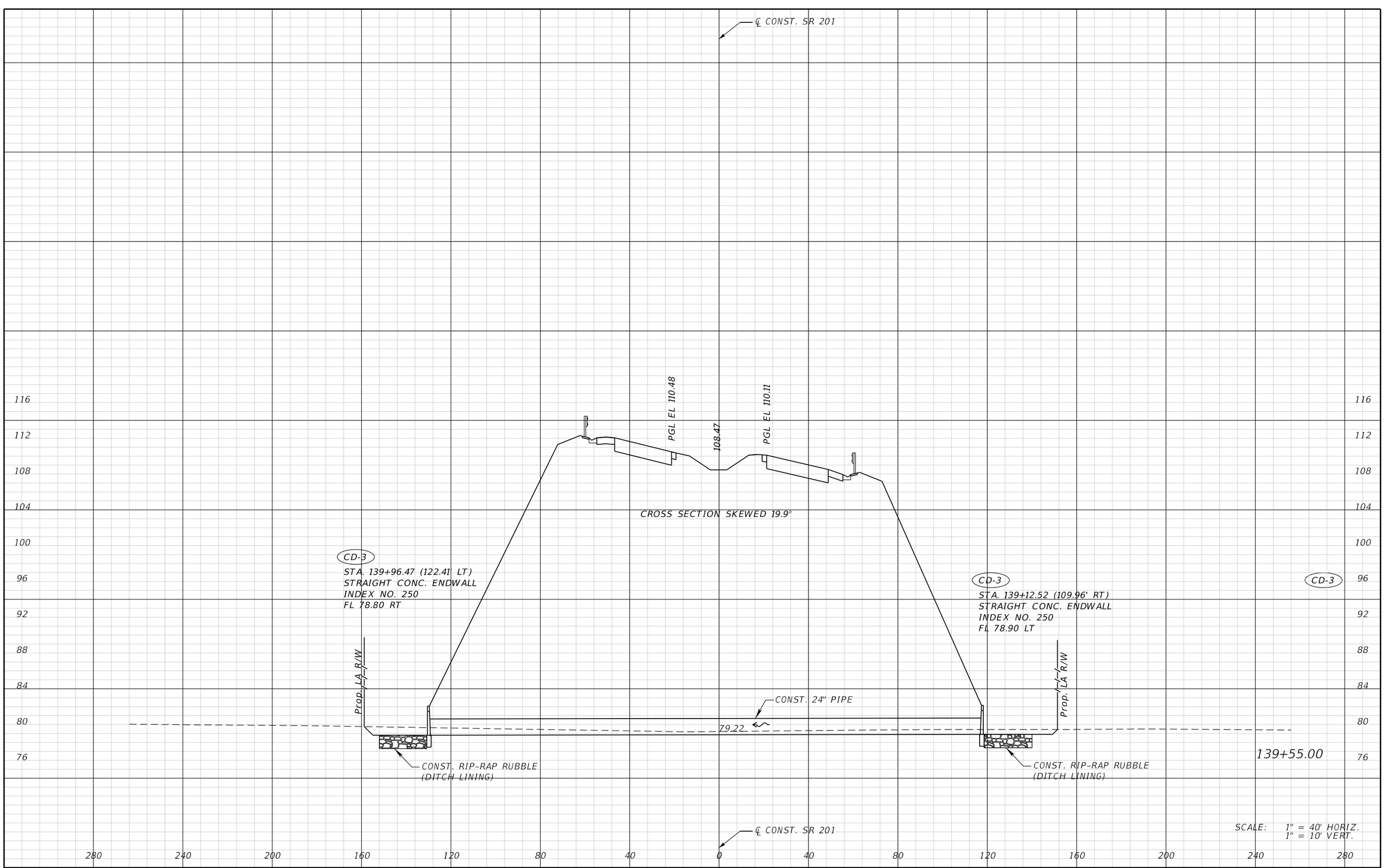
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 201	DUVAL	209537-4-52-01

DRAINAGE STRUCTURES

SHEET NO. 229

danny 1/21/2016 8:15:23 AM \\cwiad05\jobs\TRANSPORTATION\Projects\20953745201\drainage\DRXSRD04.DGN



SCALE: 1" = 40' HORIZ.
1" = 10' VERT.

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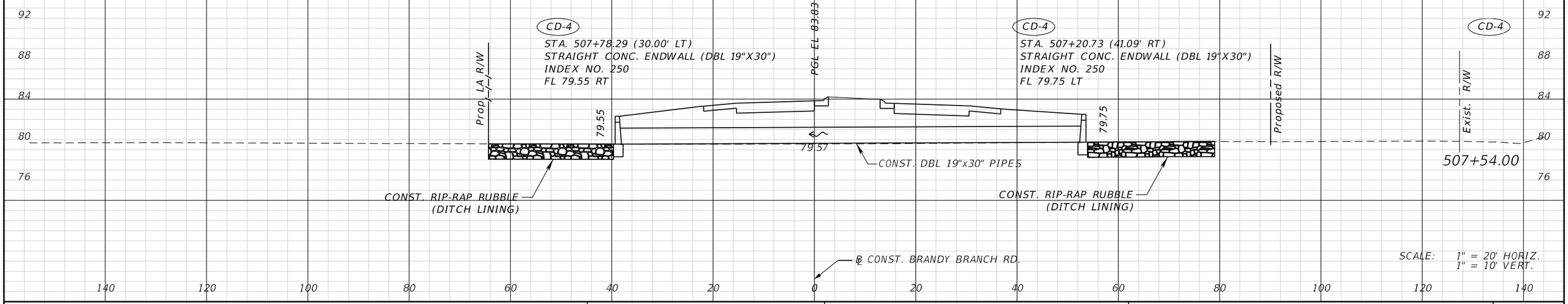
DRAINAGE STRUCTURES

SHEET NO. 230

℄ CONST. BRANDY BRANCH RD.

CROSS SECTION SKEWED 39°



SCALE: 1" = 20' HORIZ.
1" = 10' VERT.

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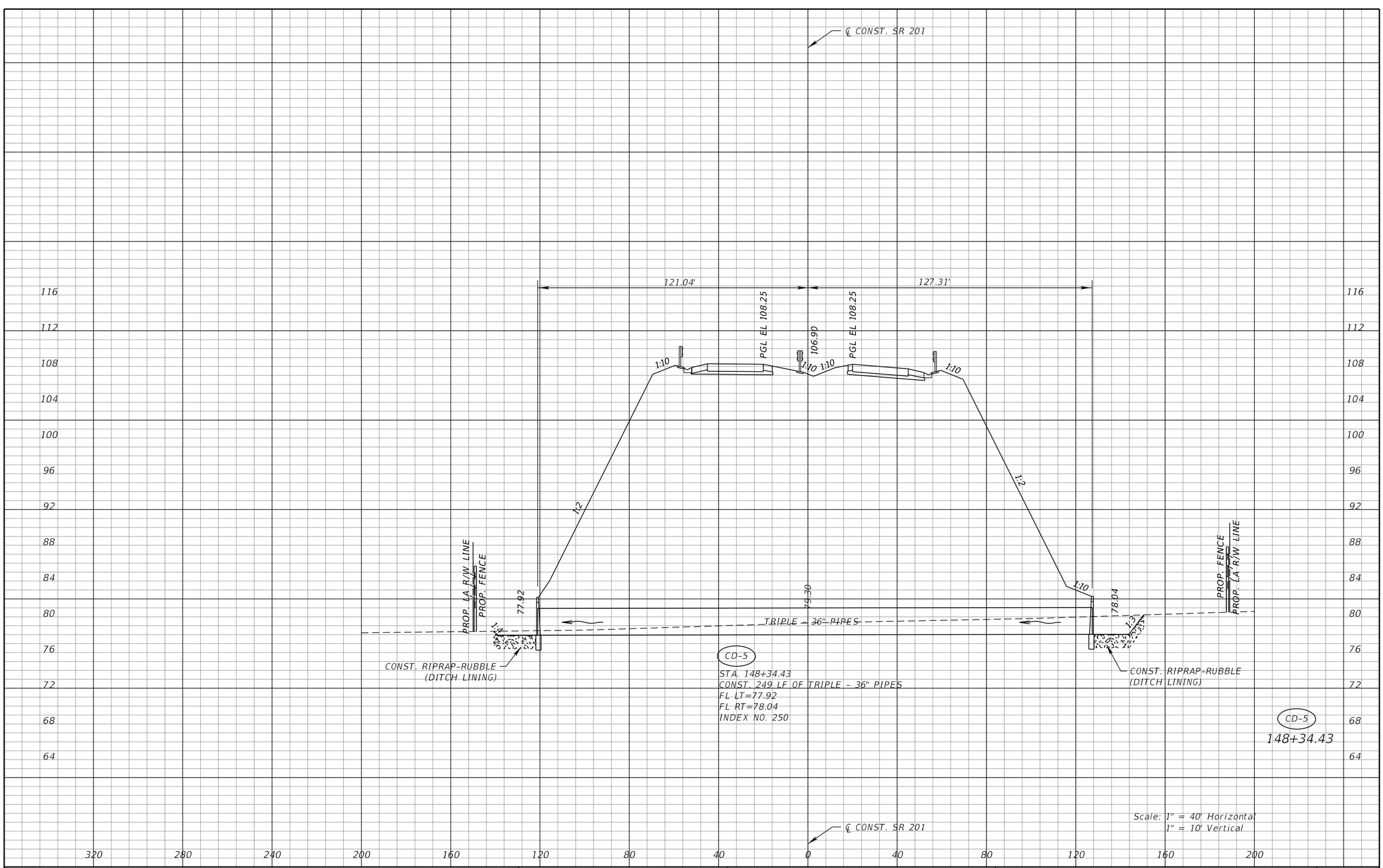
DRAINAGE STRUCTURES

SHEET NO. 231



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DEPARTMENT OF TRANSPORTATION

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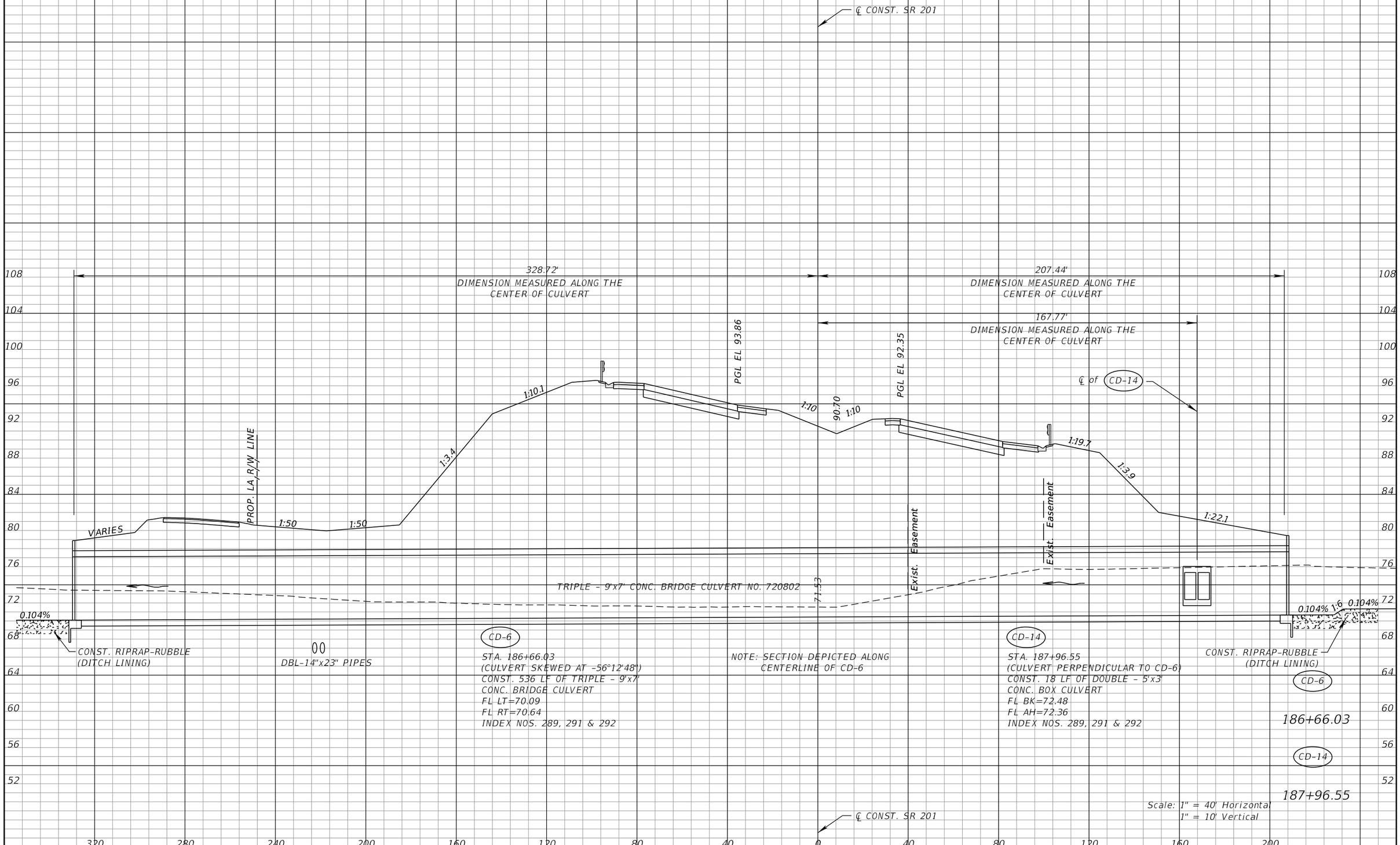
SR 201	DUVAL	209537-4-52-01

DRAINAGE STRUCTURES

SHEET NO.
232



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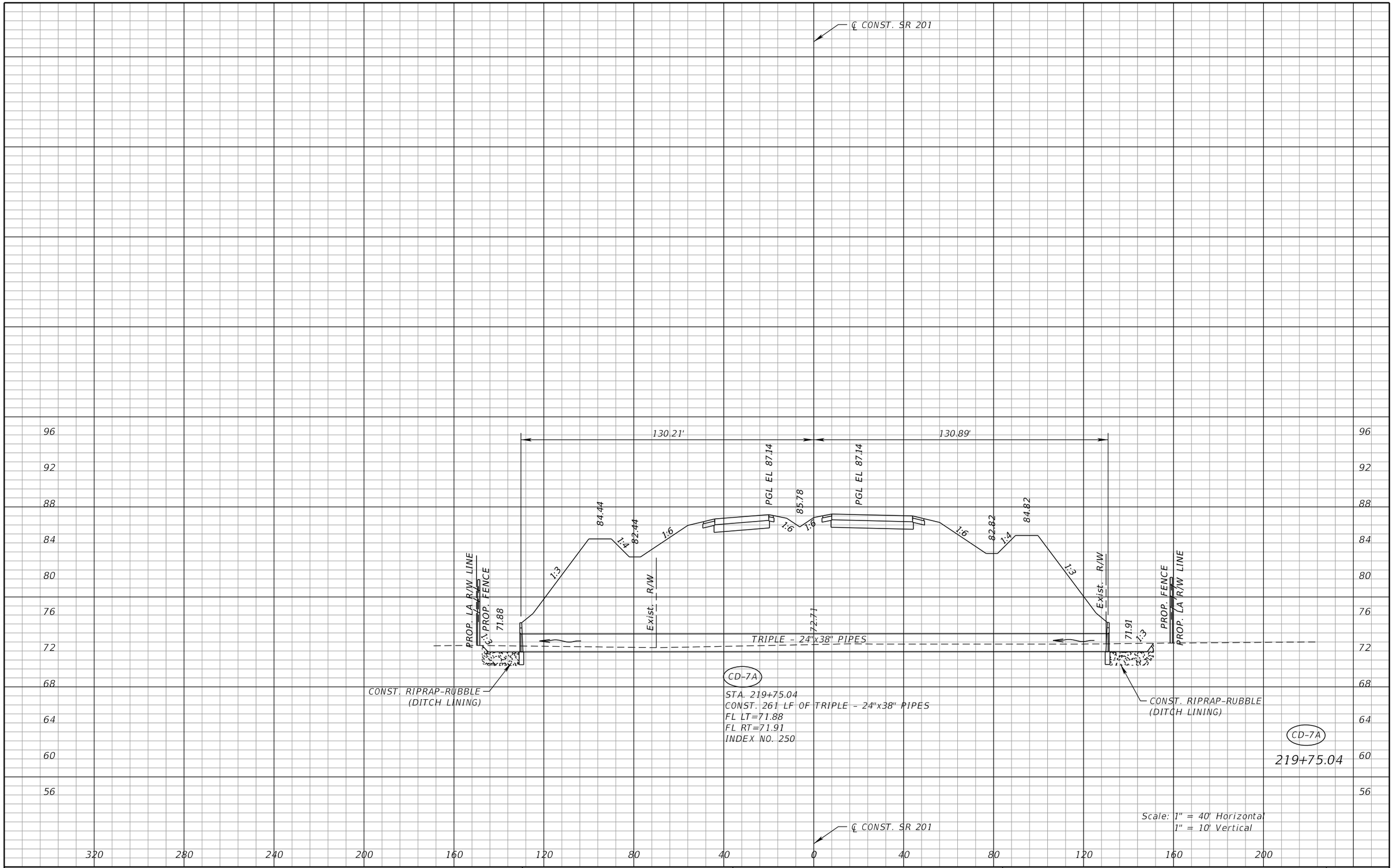
DRAINAGE STRUCTURES

SHEET NO. 233



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SR 201	DUVAL	209537-4-52-01

DRAINAGE STRUCTURES

SHEET NO.
234

p007579A 3/25/2016 6:22:24 PM P:\647700_FD2_SR200_BaldwinBypass\20953743201\drainage\DRXSRD02.DGN

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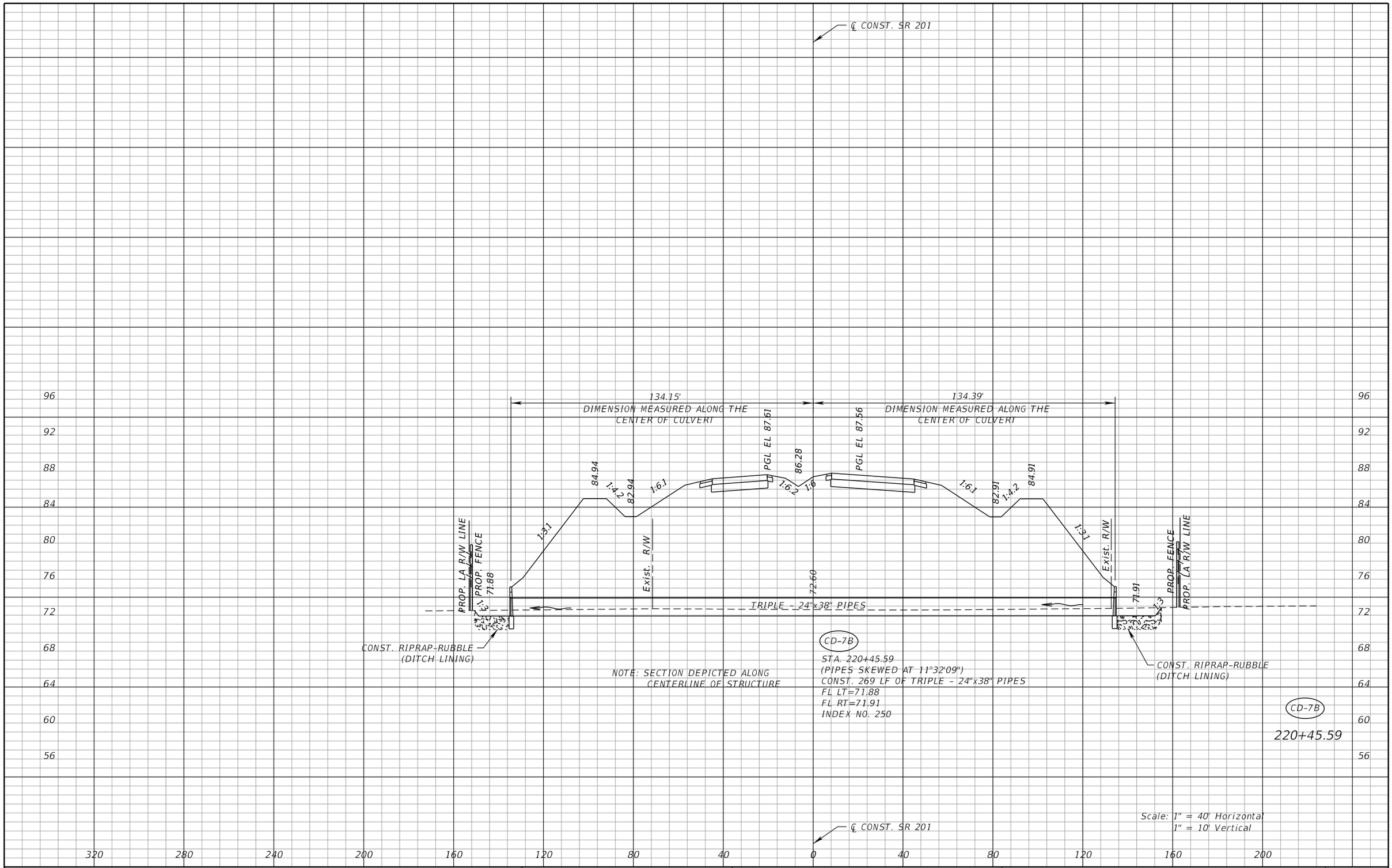

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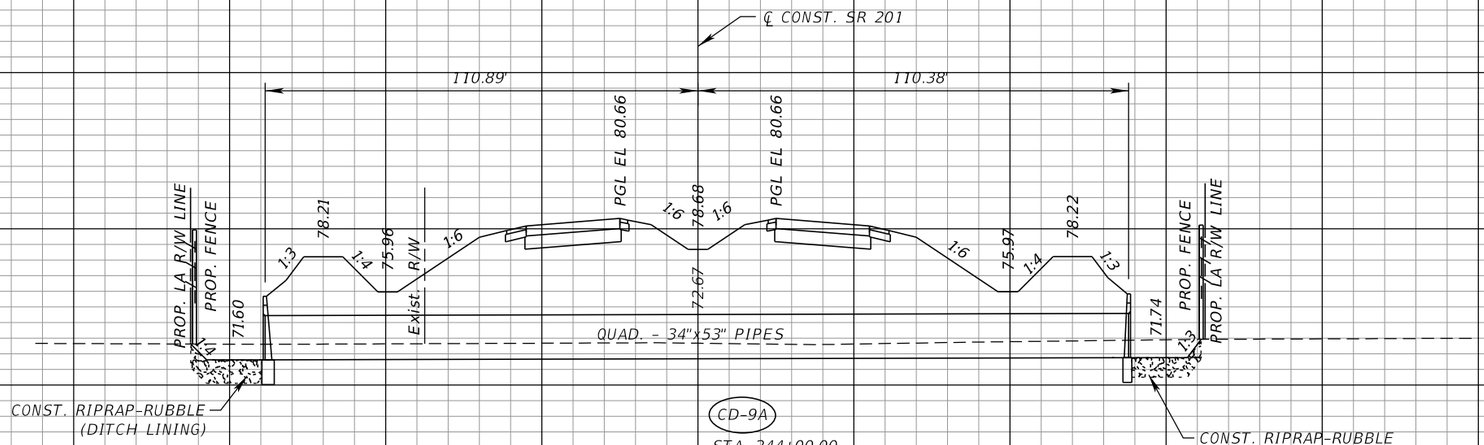
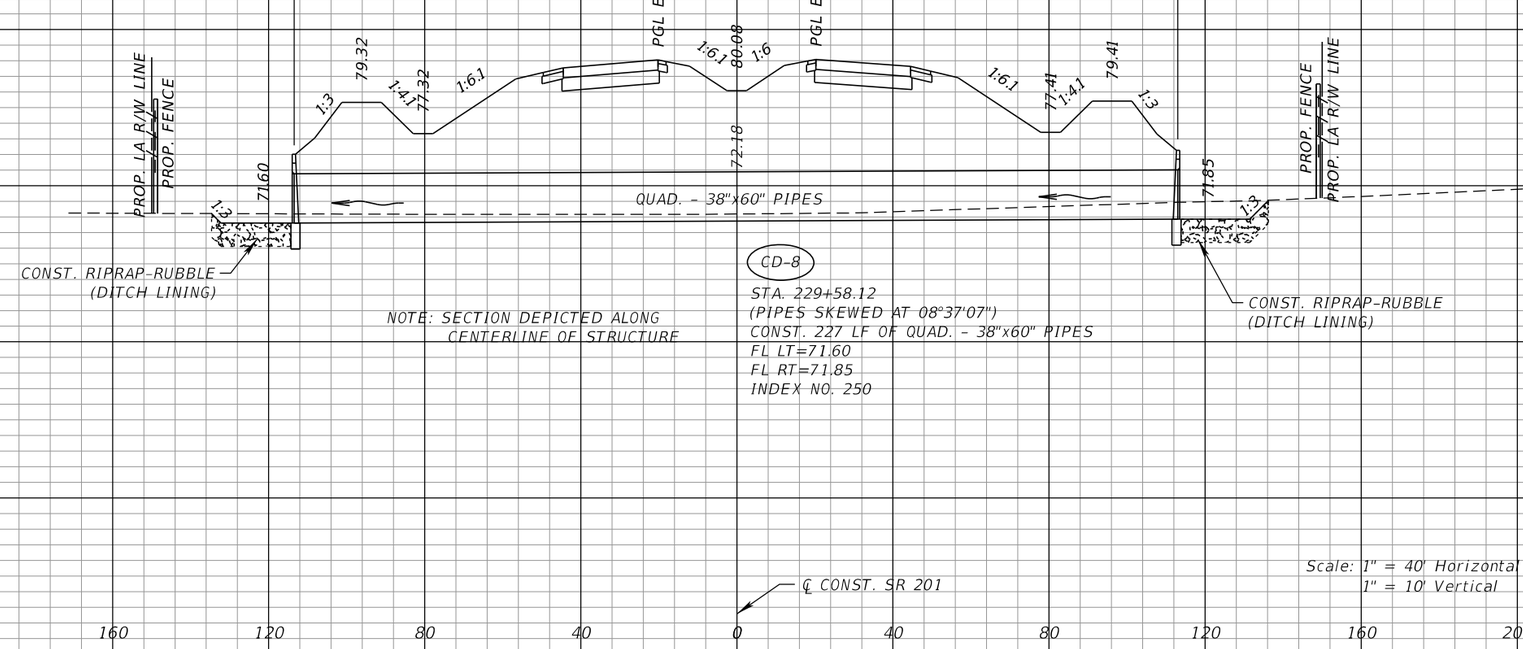
SR 201	DUVAL	209537-4-52-01

DRAINAGE STRUCTURES

SHEET NO.
235





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SR 201	DUVAL	209537-4-52-01

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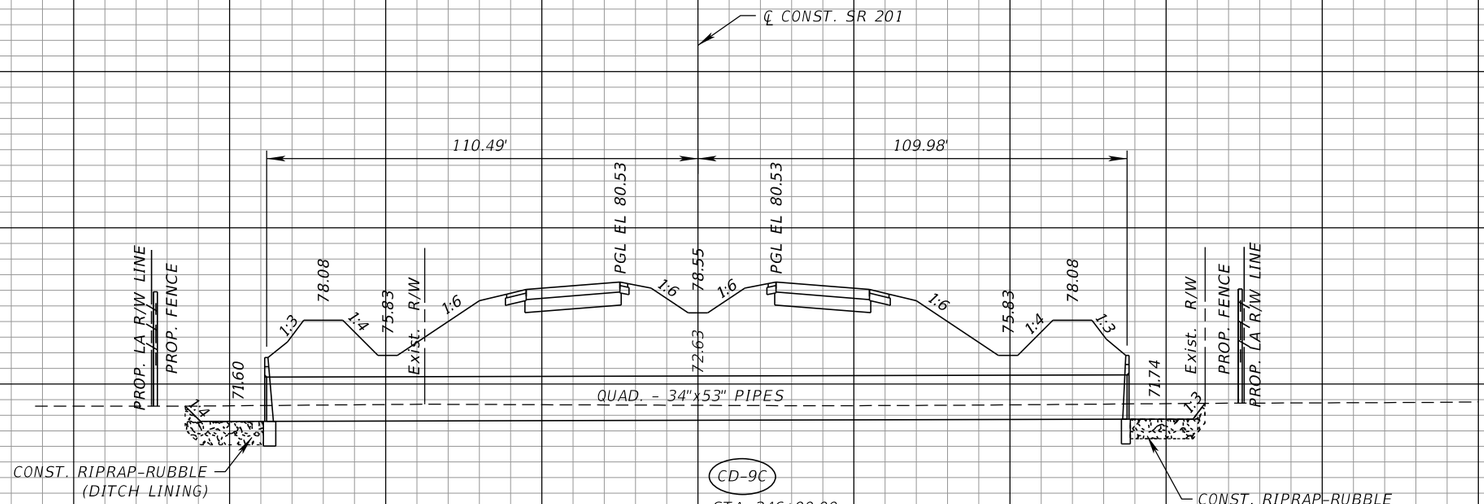

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 201	DUVAL	209537-4-52-01

DRAINAGE STRUCTURES

SHEET NO.
237

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USDA WEB SOIL SURVEY

United States Department of Agriculture

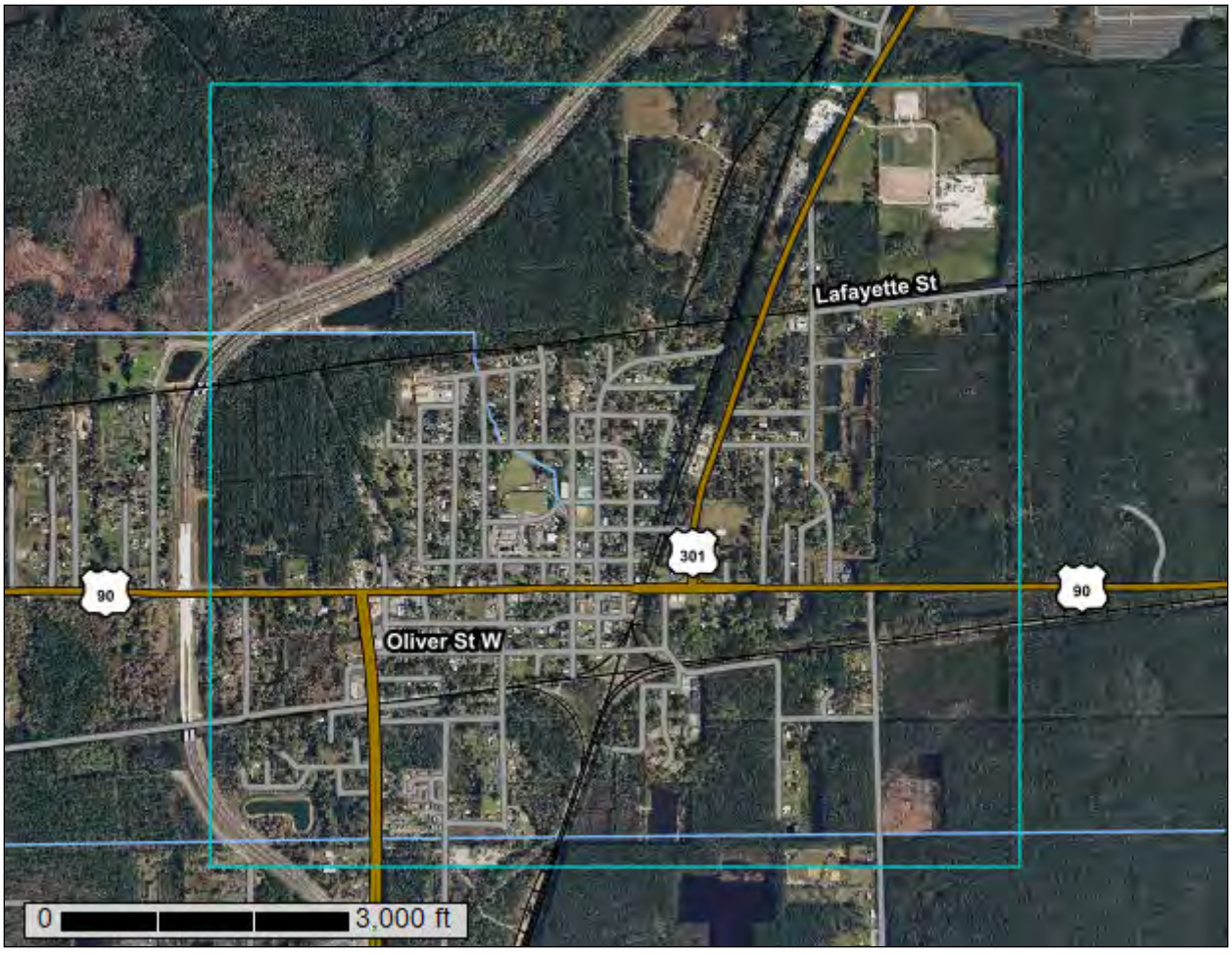
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Duval County, Florida

Town of Baldwin



June 7, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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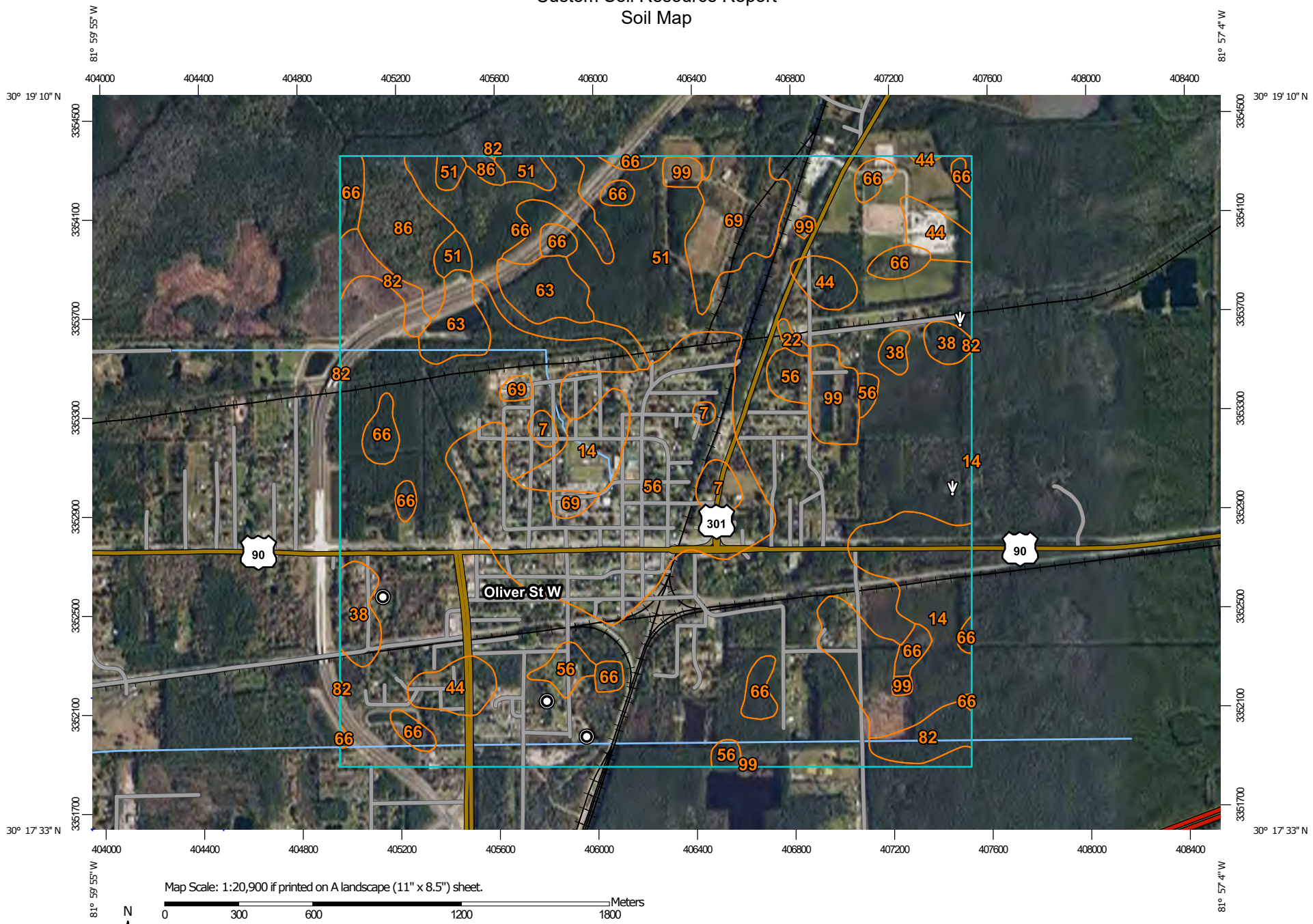
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Duval County, Florida
Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 20, 2021—Jul 29, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Arents, nearly level	12.2	0.8%
14	Boulogne fine sand, 0 to 2 percent slopes	110.6	7.0%
22	Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes	2.2	0.1%
38	Mascotte fine sand, 0 to 2 percent slopes	24.6	1.6%
44	Mascotte-Pelham complex, 0 to 2 percent slopes	38.0	2.4%
51	Pelham fine sand, 0 to 2 percent slopes	889.7	56.7%
56	Pottsburg fine sand, 0 to 2 percent slopes	205.3	13.1%
63	Sapelo fine sand, 0 to 2 percent slopes	36.3	2.3%
66	Surrency loamy fine sand, depressional, 0 to 2 percent slopes	113.0	7.2%
69	Urban land	46.0	2.9%
82	Pelham fine sand, ponded, 0 to 2 percent slopes	27.8	1.8%
86	Yulee clay, depressional, 0 to 2 percent slopes	38.5	2.5%
99	Water	24.7	1.6%
Totals for Area of Interest		**1,569.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Duval County, Florida

7—Arents, nearly level

Map Unit Setting

National map unit symbol: sssw
Elevation: 0 to 120 feet
Mean annual precipitation: 48 to 60 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 240 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Arents and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arents

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Altered marine deposits

Typical profile

AC - 0 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Forage suitability group not assigned (G153AA999FL)
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: No

Minor Components

Corolla

Percent of map unit: 6 percent

Landform: Rises on dunes on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

14—Boulogne fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: sst3
Elevation: 0 to 150 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Boulogne and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boulogne

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
Bh - 6 to 16 inches: fine sand
E - 16 to 31 inches: fine sand
B'h1 - 31 to 39 inches: fine sand
B'h2 - 39 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: No

Minor Components

Lynn haven

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: Yes

Pottsburg, high

Percent of map unit: 2 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Wesconnett

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G153AA145FL)
Hydric soil rating: Yes

22—Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: sstc
Elevation: 0 to 150 feet

Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Evergreen and similar soils: 63 percent
Wesconnett and similar soils: 33 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Evergreen

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material over sandy marine deposits

Typical profile

Oa - 0 to 11 inches: muck
A - 11 to 17 inches: fine sand
E - 17 to 26 inches: fine sand
Bh - 26 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.20 to 20.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Organic soils in depressions and on flood plains (G153AA645FL)
Other vegetative classification: Organic soils in depressions and on flood plains (G153AA645FL)
Hydric soil rating: Yes

Description of Wesconnett

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave

Parent material: Sandy marine deposits

Typical profile

A - 0 to 2 inches: fine sand
Bh - 2 to 32 inches: fine sand
E/Bh - 32 to 44 inches: fine sand
B'h - 44 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G153AA145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G153AA145FL)
Hydric soil rating: Yes

Minor Components

Leon

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: No

Pottsburg

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: No

Lynn haven

Percent of map unit: 1 percent
Landform: Flats on marine terraces

Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: Yes

Pamlico

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G153AA645FL)
Hydric soil rating: Yes

38—Mascotte fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2vt0w
Elevation: 0 to 180 feet
Mean annual precipitation: 40 to 62 inches
Mean annual air temperature: 55 to 79 degrees F
Frost-free period: 233 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Mascotte, non-hydric, and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mascotte, Non-hydric

Setting

Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 9 inches: fine sand
Eg - 9 to 16 inches: fine sand
Bh - 16 to 29 inches: fine sand
E'g - 29 to 36 inches: fine sand
Btg - 36 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 5 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Surrency

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Convex, concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

44—Mascotte-Pelham complex, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: ssv2
Elevation: 20 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Mascotte and similar soils: 65 percent
Pelham, non-hydric, and similar soils: 31 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mascotte

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 5 inches: fine sand
E - 5 to 15 inches: fine sand
Bh - 15 to 25 inches: loamy fine sand
BE - 25 to 28 inches: loamy fine sand
Btg - 28 to 58 inches: sandy clay loam
Cg - 58 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

Description of Pelham, Non-hydric

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 21 inches: fine sand
Btg1 - 21 to 60 inches: sandy clay loam
Btg2 - 60 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: No

Minor Components

Surrency

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

Pelham, hydric

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

51—Pelham fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tg56
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 63 inches
Mean annual air temperature: 57 to 79 degrees F
Frost-free period: 251 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Pelham and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham

Setting

Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
Eg - 6 to 26 inches: fine sand
Btg1 - 26 to 42 inches: sandy clay loam
Btg2 - 42 to 83 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 5.95 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D

Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: No

Minor Components

Unnamed
Percent of map unit: 13 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

Albany
Percent of map unit: 6 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Microfeatures of landform position: Rises
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Meggett
Percent of map unit: 3 percent
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G153AA341FL)
Hydric soil rating: Yes

Surrency
Percent of map unit: 3 percent
Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Convex, concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

56—Pottsburg fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: ssvg
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Pottsburg and similar soils: 91 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pottsburg

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 3 inches: fine sand
E - 3 to 57 inches: fine sand
Bh - 57 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)

Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: No

Minor Components

Evergreen
Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G153AA645FL)
Hydric soil rating: Yes

Lynn haven
Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: Yes

Hurricane
Percent of map unit: 2 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Wesconnett
Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G153AA145FL)
Hydric soil rating: Yes

Pottsburg, high
Percent of map unit: 1 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Mandarin

Percent of map unit: 1 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

63—Sapelo fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: ssvp
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Sapelo and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sapelo

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 23 inches: fine sand
Bh - 23 to 32 inches: fine sand
E' - 32 to 56 inches: fine sand
Btg - 56 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None

Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: No

Minor Components

Yonges

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G153AA341FL)
Hydric soil rating: Yes

Albany

Percent of map unit: 2 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G153AA131FL)
Hydric soil rating: No

Pelham, non-hydric

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: No

Pelham, hydric

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

Surrency

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

66—Surrency loamy fine sand, depressional, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: ssvs
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Surrency and similar soils: 92 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Surrency

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 14 inches: loamy fine sand
E - 14 to 26 inches: fine sand
Btg - 26 to 70 inches: fine sandy loam
Cg - 70 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

Minor Components

Lynn haven

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G153AA141FL)
Hydric soil rating: Yes

Pamlico

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains (G153AA645FL)
Hydric soil rating: Yes

Pelham, hydric

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

Yonges

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G153AA341FL)
Hydric soil rating: Yes

Stockade

Percent of map unit: 1 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G153AA345FL)
Hydric soil rating: Yes

69—Urban land

Map Unit Setting

National map unit symbol: ssvw
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G153AA999FL)
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: Unranked

Minor Components

Pelham, hydric

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: Yes

Leon

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: No

Ortega

Percent of map unit: 1 percent
Landform: Knolls on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: No

Albany

Percent of map unit: 1 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: No

Hurricane

Percent of map unit: 1 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: No

82—Pelham fine sand, ponded, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t1p2
Elevation: 0 to 280 feet
Mean annual precipitation: 38 to 56 inches
Mean annual air temperature: 51 to 81 degrees F

Frost-free period: 239 to 347 days
Farmland classification: Not prime farmland

Map Unit Composition

Pelham, ponded, and similar soils: 96 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham, Ponded

Setting

Landform: Drainageways, depressions
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Parent material: Sandy and/or loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 30 inches: fine sand
Btg - 30 to 82 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Other vegetative classification: North Florida Flatwoods (R153AY004FL), Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)
Hydric soil rating: Yes

Minor Components

Unnamed

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: No

Yonges

Percent of map unit: 1 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G153AA341FL)
Hydric soil rating: Yes

Bayboro, ponded

Percent of map unit: 1 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

86—Yulee clay, depressional, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: sswf
Elevation: 0 to 190 feet
Mean annual precipitation: 48 to 56 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 263 to 293 days
Farmland classification: Not prime farmland

Map Unit Composition

Yulee, depressional, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Yulee, Depressional

Setting

Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 14 inches: clay
Bg - 14 to 66 inches: sandy clay loam
Cg - 66 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained

Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: C/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G153AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G153AA345FL)
Hydric soil rating: Yes

Minor Components

Pelham, hydric

Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G153AA241FL)
Hydric soil rating: Yes

Yonges

Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G153AA341FL)
Hydric soil rating: Yes

Stockade

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear, concave
Across-slope shape: Concave
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G153AA345FL)
Hydric soil rating: Yes

99—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned (G153AA999FL)
Other vegetative classification: Forage suitability group not assigned (G153AA999FL)
Hydric soil rating: Unranked

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

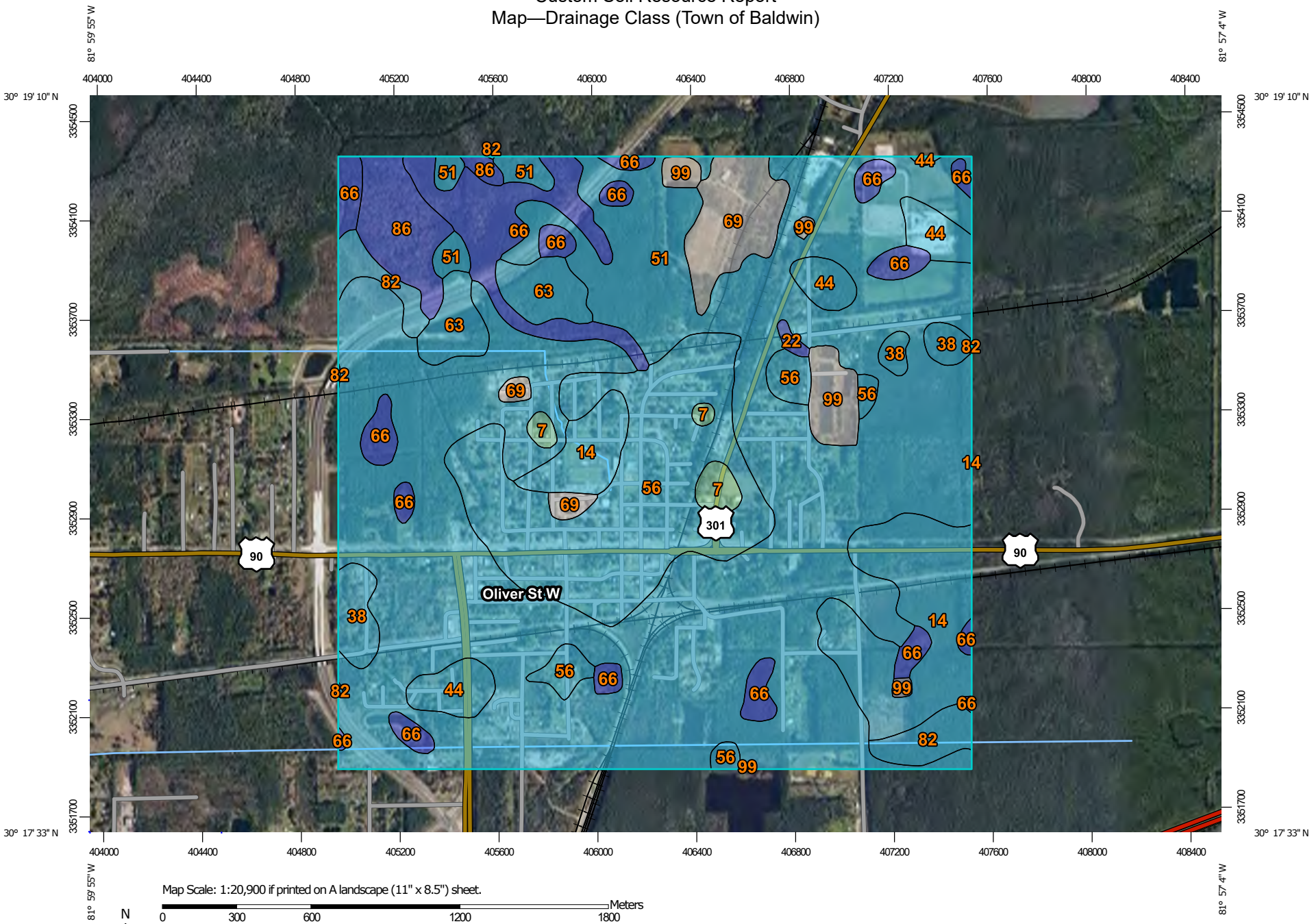
Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Drainage Class (Town of Baldwin)

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Custom Soil Resource Report
Map—Drainage Class (Town of Baldwin)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Duval County, Florida
Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 20, 2021—Jul 29, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Drainage Class (Town of Baldwin)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
7	Arents, nearly level	Somewhat poorly drained	12.2	0.8%
14	Boulogne fine sand, 0 to 2 percent slopes	Poorly drained	110.6	7.0%
22	Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes	Very poorly drained	2.2	0.1%
38	Mascotte fine sand, 0 to 2 percent slopes	Poorly drained	24.6	1.6%
44	Mascotte-Pelham complex, 0 to 2 percent slopes	Poorly drained	38.0	2.4%
51	Pelham fine sand, 0 to 2 percent slopes	Poorly drained	889.7	56.7%
56	Pottsburg fine sand, 0 to 2 percent slopes	Poorly drained	205.3	13.1%
63	Sapelo fine sand, 0 to 2 percent slopes	Poorly drained	36.3	2.3%
66	Surrency loamy fine sand, depressional, 0 to 2 percent slopes	Very poorly drained	113.0	7.2%
69	Urban land		46.0	2.9%
82	Pelham fine sand, ponded, 0 to 2 percent slopes	Poorly drained	27.8	1.8%
86	Yulee clay, depressional, 0 to 2 percent slopes	Very poorly drained	38.5	2.5%
99	Water		24.7	1.6%
Totals for Area of Interest			**1,569.0**	**100.0%**

Rating Options—Drainage Class (Town of Baldwin)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Hydrologic Soil Group (Town of Baldwin)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

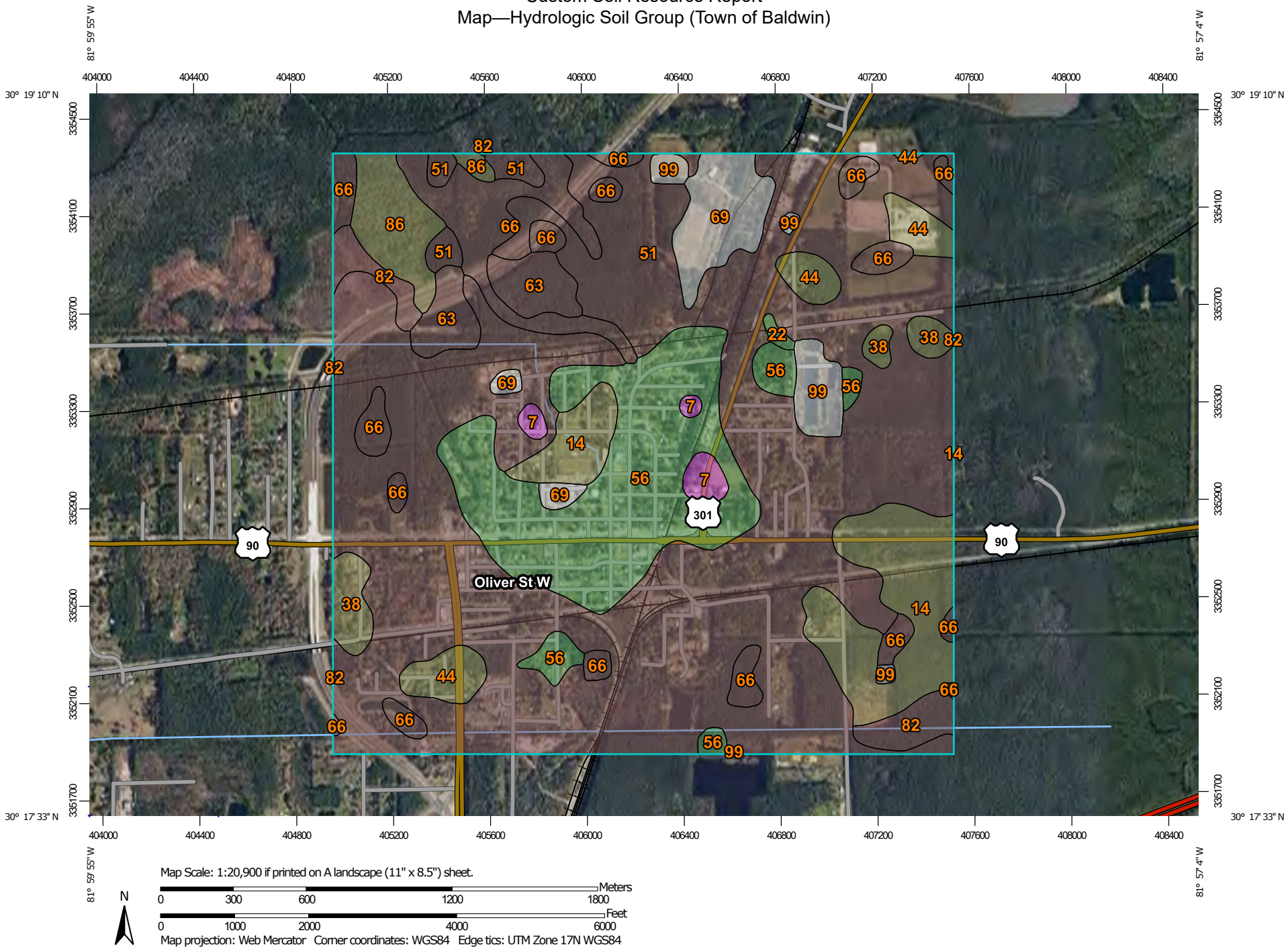
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group (Town of Baldwin)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Duval County, Florida
Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 20, 2021—Jul 29, 2021

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Table—Hydrologic Soil Group (Town of Baldwin)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
7	Arents, nearly level	A	12.2	0.8%
14	Boulogne fine sand, 0 to 2 percent slopes	C/D	110.6	7.0%
22	Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes	A/D	2.2	0.1%
38	Mascotte fine sand, 0 to 2 percent slopes	C/D	24.6	1.6%
44	Mascotte-Pelham complex, 0 to 2 percent slopes	C/D	38.0	2.4%
51	Pelham fine sand, 0 to 2 percent slopes	B/D	889.7	56.7%
56	Pottsburg fine sand, 0 to 2 percent slopes	A/D	205.3	13.1%
63	Sapelo fine sand, 0 to 2 percent slopes	B/D	36.3	2.3%
66	Surrency loamy fine sand, depressional, 0 to 2 percent slopes	B/D	113.0	7.2%
69	Urban land		46.0	2.9%
82	Pelham fine sand, ponded, 0 to 2 percent slopes	B/D	27.8	1.8%
86	Yulee clay, depressional, 0 to 2 percent slopes	C/D	38.5	2.5%
99	Water		24.7	1.6%
Totals for Area of Interest			**1,569.0**	**100.0%**

Rating Options—Hydrologic Soil Group (Town of Baldwin)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

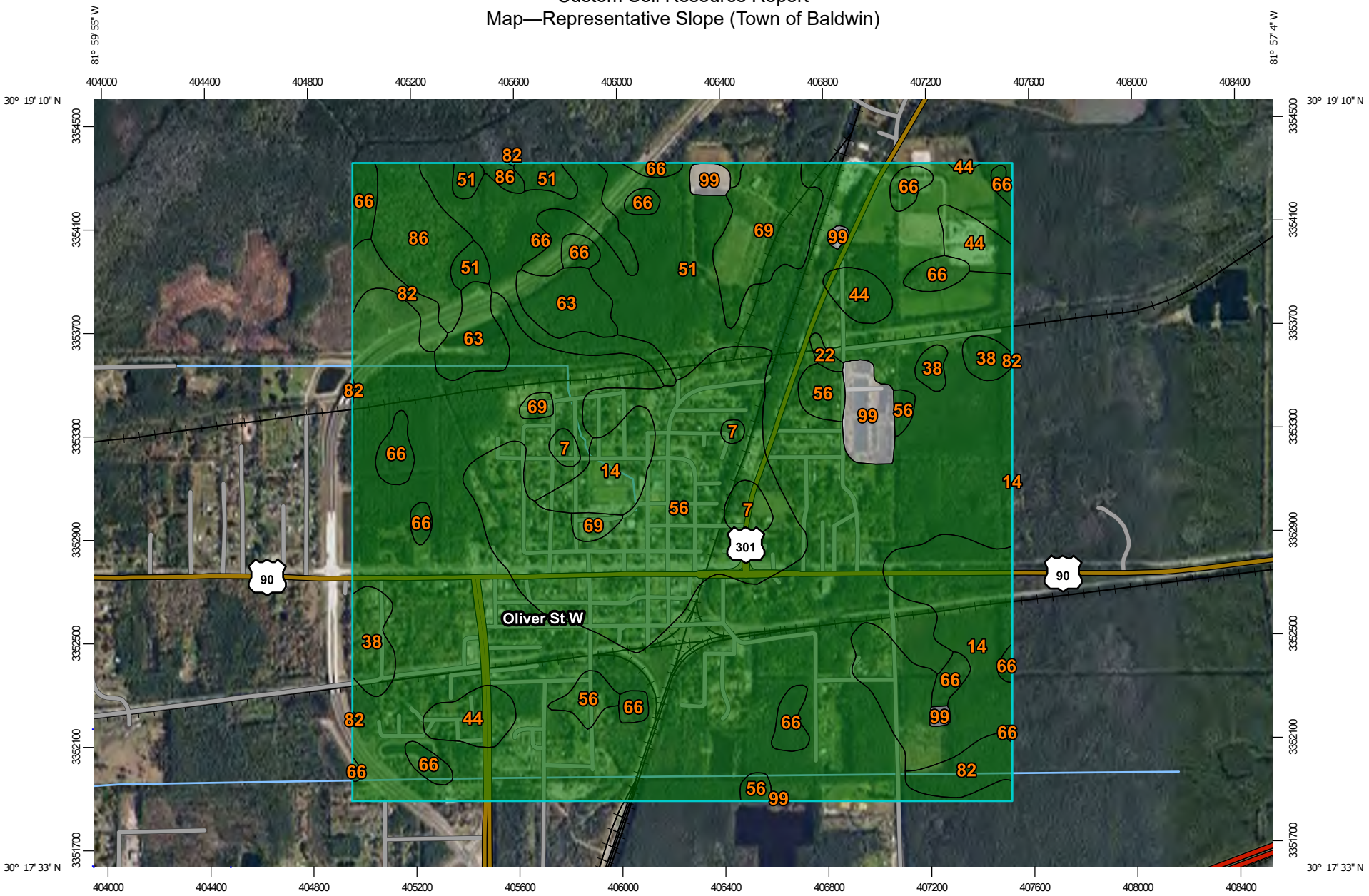
Representative Slope (Town of Baldwin)

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil

component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Representative Slope (Town of Baldwin)



Map Scale: 1:20,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 300 600 1200 1800

Feet: 0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Soil Rating Lines

- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Soil Rating Points

- 0 - 5
- 5 - 15
- 15 - 45
- 45 - 60
- 60 - 100
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Coordinate System: Web Mercator (EPSG:3857)

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Table—Representative Slope (Town of Baldwin)

Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
7	Arents, nearly level	1.0	12.2	0.8%
14	Boulogne fine sand, 0 to 2 percent slopes	1.0	110.6	7.0%
22	Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes	1.0	2.2	0.1%
38	Mascotte fine sand, 0 to 2 percent slopes	1.0	24.6	1.6%
44	Mascotte-Pelham complex, 0 to 2 percent slopes	1.0	38.0	2.4%
51	Pelham fine sand, 0 to 2 percent slopes	0.5	889.7	56.7%
56	Pottsburg fine sand, 0 to 2 percent slopes	1.0	205.3	13.1%
63	Sapelo fine sand, 0 to 2 percent slopes	1.0	36.3	2.3%
66	Surrency loamy fine sand, depressional, 0 to 2 percent slopes	1.0	113.0	7.2%
69	Urban land	1.0	46.0	2.9%
82	Pelham fine sand, ponded, 0 to 2 percent slopes	1.0	27.8	1.8%
86	Yulee clay, depressional, 0 to 2 percent slopes	0.9	38.5	2.5%
99	Water		24.7	1.6%
Totals for Area of Interest			**1,569.0**	**100.0%**

Rating Options—Representative Slope (Town of Baldwin)

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Water Features

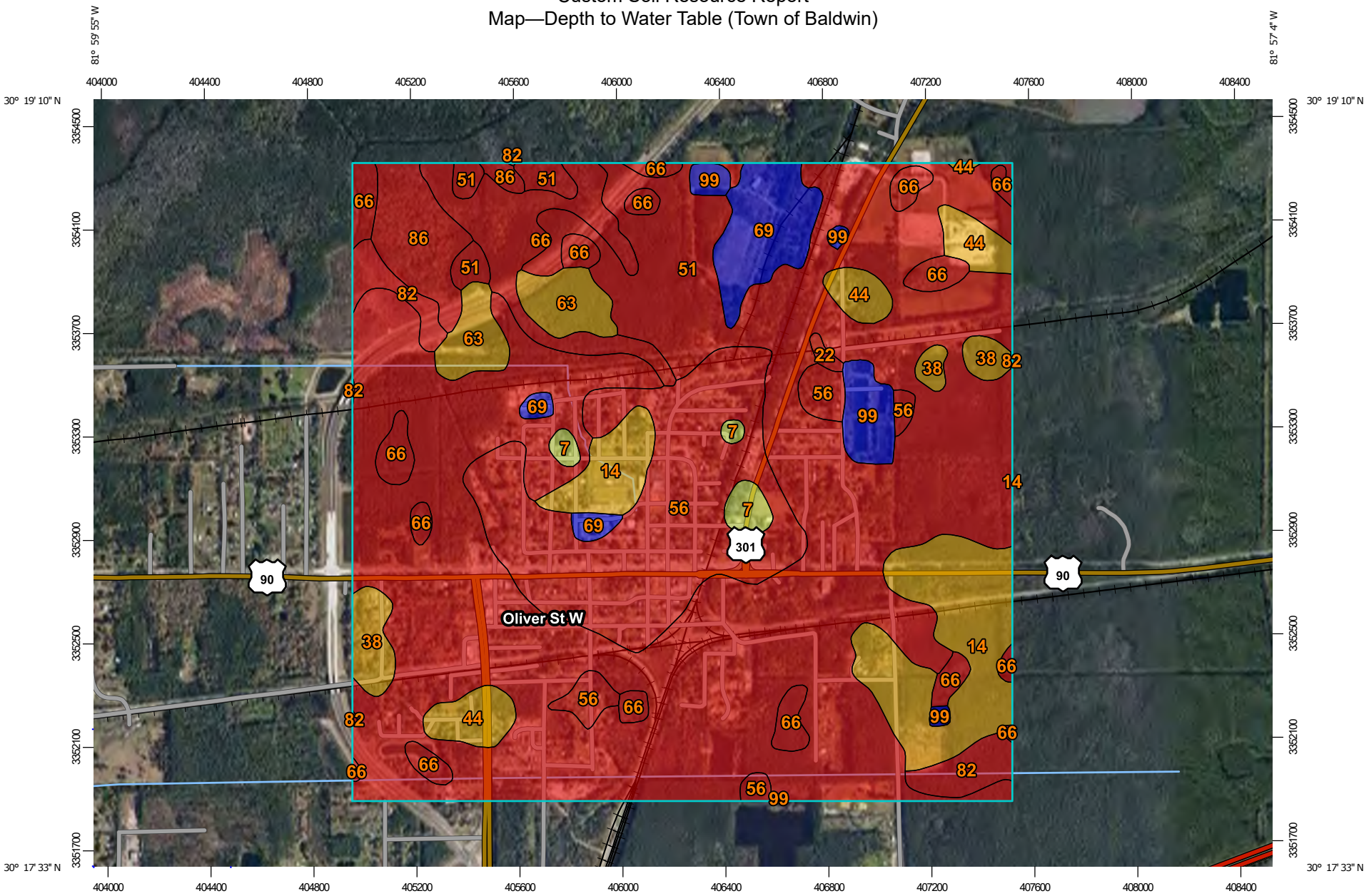
Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table (Town of Baldwin)

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
Map—Depth to Water Table (Town of Baldwin)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Lines

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Soil Rating Points

- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Table—Depth to Water Table (Town of Baldwin)

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
7	Arents, nearly level	69	12.2	0.8%
14	Boulogne fine sand, 0 to 2 percent slopes	31	110.6	7.0%
22	Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes	0	2.2	0.1%
38	Mascotte fine sand, 0 to 2 percent slopes	31	24.6	1.6%
44	Mascotte-Pelham complex, 0 to 2 percent slopes	31	38.0	2.4%
51	Pelham fine sand, 0 to 2 percent slopes	23	889.7	56.7%
56	Pottsburg fine sand, 0 to 2 percent slopes	23	205.3	13.1%
63	Sapelo fine sand, 0 to 2 percent slopes	31	36.3	2.3%
66	Surrency loamy fine sand, depressional, 0 to 2 percent slopes	0	113.0	7.2%
69	Urban land	>200	46.0	2.9%
82	Pelham fine sand, ponded, 0 to 2 percent slopes	0	27.8	1.8%
86	Yulee clay, depressional, 0 to 2 percent slopes	0	38.5	2.5%
99	Water	>200	24.7	1.6%
Totals for Area of Interest			**1,569.0**	**100.0%**

Rating Options—Depth to Water Table (Town of Baldwin)

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

References

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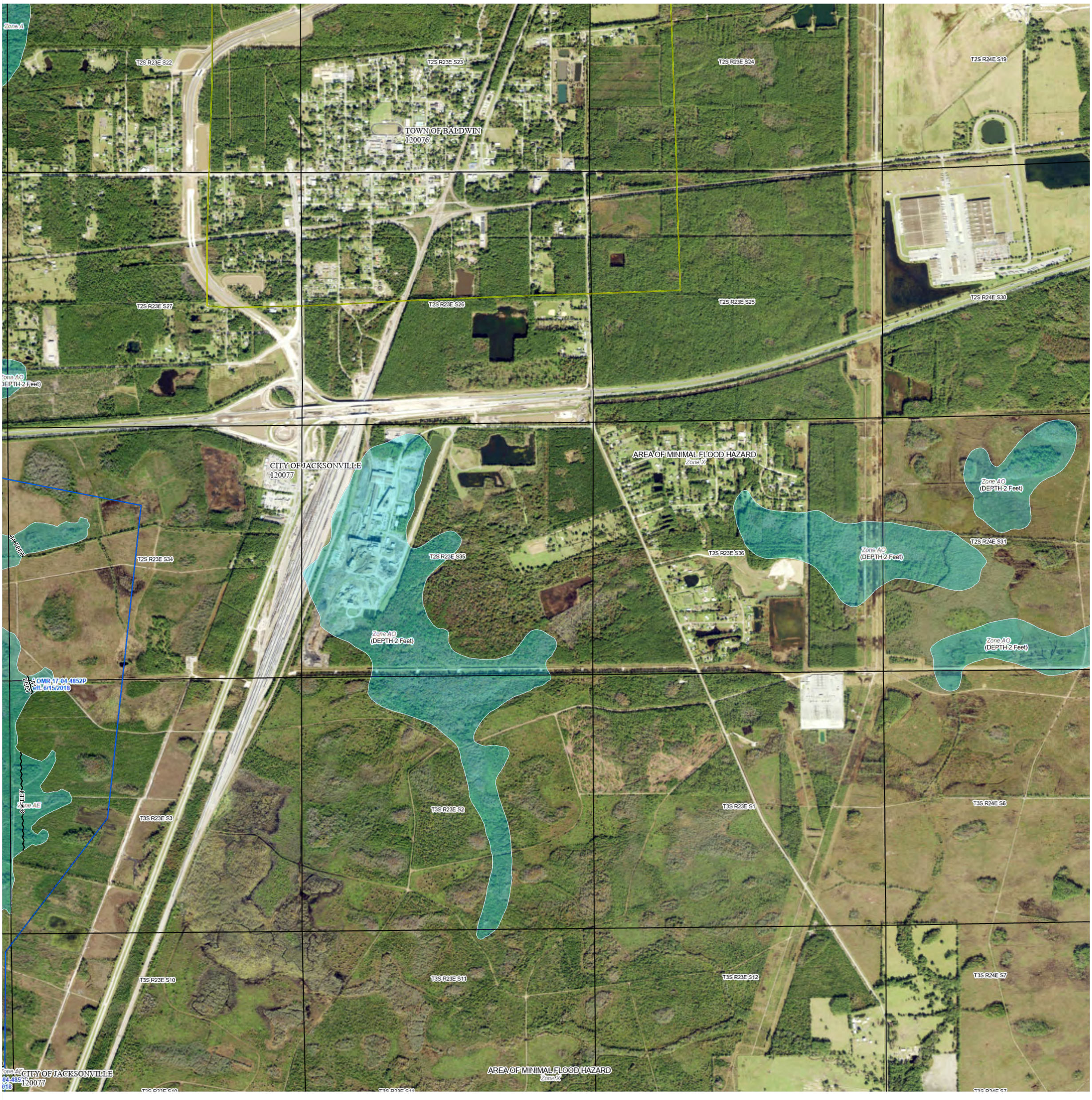
FEMA FIRMS

82°W 30°18'58.2"N



81°56'14.16"W 30°14'46.84"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **6/27/2022 6:27 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: NAVD88

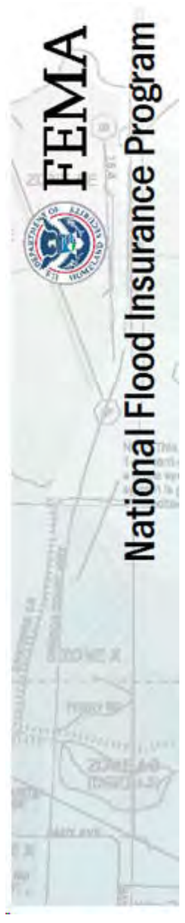
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

N

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 3,000 4,000 Feet

0 105 210 420 630 840 Meters



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

PANEL **315** OF **675**

Panel Contains:

COMMUNITY	NUMBER	PANEL
CITY OF JACKSONVILLE	120077	0315
TOWN OF BALDWIN	120076	0315

MAP NUMBER
12031C0315H
EFFECTIVE DATE
June 03, 2013

82°W 30°22'38.37"N

81°56'14.16"W 30°18'27.02"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes *Zone X*
- Area with Flood Risk due to Levee *Zone D*

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- Jurisdiction Boundary

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Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **6/27/2022 6:29 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

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SCALE

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

N

1 inch = 1,000 feet 1:12,000

0 500 1,000 2,000 3,000 4,000 Feet

0 105 210 420 630 840 Meters

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

PANEL 305 OF 675

Panel Contains:

COMMUNITY	NUMBER	PANEL
CITY OF JACKSONVILLE	120077	0305
TOWN OF BALDWIN	120076	0305

MAP NUMBER
12031C0305H
EFFECTIVE DATE
June 03, 2013

SECTION 5.6 OF THE COJ LDPM

ONE CITY. ONE JACKSONVILLE.

LAND DEVELOPMENT PROCEDURES MANUAL

Revised March 18, 2022

2. Size Schedule - A schedule showing the size and type crossing needed to gain entrance to each site shall appear in the site development plans.

   a. This may be accomplished by a note as to type and size needed appearing in the profile portion of the plan and profile sheet. A driveway culvert that is 32 feet or more in length will require drainage design (sizing) calculations that have been

      signed and sealed by a registered professional and require installation by a licensed underground utility contractor.

   b. A check is to be made to insure that the proposed ditch section has adequate depth to insure minimum cover.

5.6 DRAINAGE OUTFALL DITCHES AND CANALS

5.6.1 DRAINAGE RIGHTS-OF-WAY WIDTHS

To determine the required right-of-way or easement width over a ditch; determine the width of the top of the ditch, add 5 feet to one side and 20 feet to the other side for equipment access and consider extra radius or extra width at sharp turns to allow equipment turning. The total equals the minimum width required. When the top width of a ditch exceeds 100 feet, 35 feet should be added to each side.

5.6.2 DRAINAGE DITCH SIZES

All ditches shall be sized using accepted engineering practices. In all cases sufficient engineering data giving drainage area, velocity, and depth of flow is to be included in the drainage analysis.

5.6.3 DRAINAGE DITCH VELOCITIES

Unless unstable or highly erosive soil conditions indicate a lower design velocity, the maximum allowable velocity shall be 2 feet per second. Erosion protection may be required when the velocity exceeds 2 feet per second or the ditch slope exceeds 2 percent.

5.6.4 DRAINAGE DITCH SLOPE

The minimum required to provide for design flow.

5.6.5 ANALYSIS OF EXISTING OUTFALLS

Where an existing outfall is being utilized and the capacity to handle any additional runoff is in question, data to support the design shall be included in the drainage analysis.

5.6.6 CROSS SECTION DESIGN CRITERIA

5.6.6.1 GRADING ADJACENT TO CROSS SECTION

Areas adjacent to the ditches and canals shall be graded in such a manner as to preclude the entrance of excessive runoff except at locations where erosion protection is provided. Such locations shall be piped.

5.6.6.2 CROSS SECTION MAXIMUM SIDE SLOPES

The maximum side slope allowed shall be 2:1 or as soil conditions allow with the top ditch bank rounded off.

5.6.7 DITCH PROTECTION

5.6.7.1 DITCH ALIGNMENT CHANGES

Appropriate erosion protection shall be provided at changes in either or both horizontal or vertical alignment.

5.6.7.2 GRASSING AND MULCHING OR SOD

All ditches and earth embankments are to be grassed and mulched per City Standard Specifications. Sod may be required in some extreme circumstances. The Contractor is responsible for grass until a good stand has been rooted. An asphalt membrane to hold grass and mulch material will be acceptable. Topsoil or a mulch blanket may berequired.

5.6.8 UTILITY CROSSINGS

Where it is necessary for a utility to cross a drainage right-of-way, the following minimum requirements shall be adhered to:

1. Aerial crossing - minimum of 1.0-foot clearance above design high water.
2. Underground - minimum of a 2.5-foot clearance below the design invert of the canal.
3. Utilities shall be adequately permanently marked to protect against accidental damage during maintenance operation.
4. No supports for aerial crossings shall be allowed in the confines of the canal cut unless authorized by the City Engineer.
5. Conduit material for crossing shall be submitted for approval by the CityEngineer.

5.7 DEPENDENCE ON FUTURE DEVELOPMENT

When development is accomplished in phases, each individual unit constructed must provide the drainage improvements necessary for that unit. All runoff from each individual unit must be handled to a point of positive outfall. No design of an individual unit shall be dependent upon the ultimate installation of a future unit. When circumstances dictate, the developer must agree to accept the public water and provide temporary easements.

5.8 DETENTION / RETENTION BASINS (STORMWATER MANAGEMENT FACILITIES)

5.8.1 STORMWATER MANAGEMENT FACILITY GENERAL REQUIREMENTS

Detention/retention basins may be incorporated into a drainage system for the following reasons:

1. The outfall system is inadequate to handle post-development flows and revisions to the outfall are not practical.
2. Peak flow attenuation as required by state agencies.

JACKSONVILLE-BALDWIN RAIL TRAIL PLANS

4-031-05504G-ERP

1833

THIS CONTRACT PLAN SET INCLUDES:

RAILTRAIL PLANS
SIGNING AND PAVEMENT MARKINGS PLANS
ARCHITECTURAL PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT SET OF PLANS

INDEX OF RAILTRAIL PLANS

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, ROADWAY AND TRAFFIC DESIGN STANDARDS (BOOKLET DATED JANUARY, 1995).

REVISIONS

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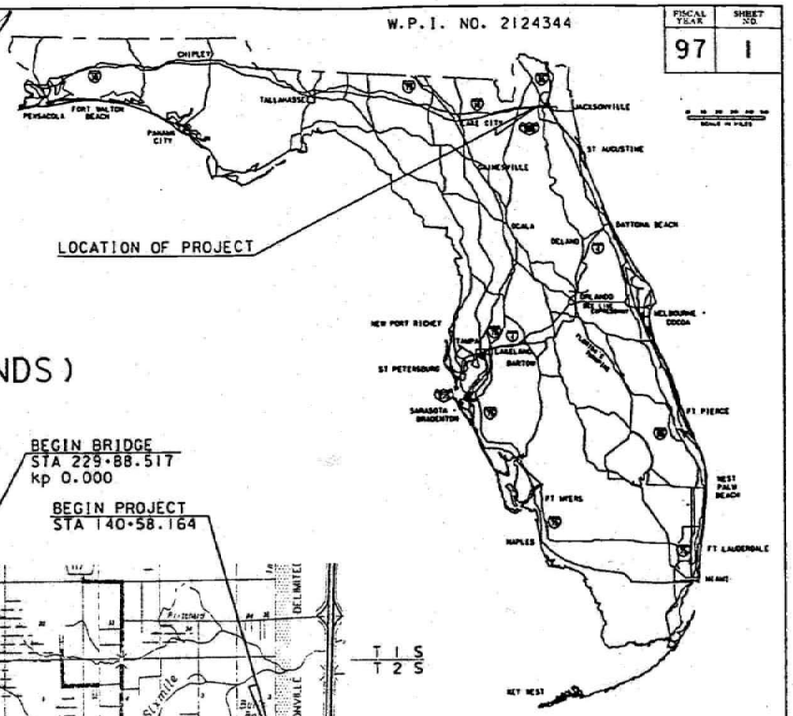
KEYSHT.PM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

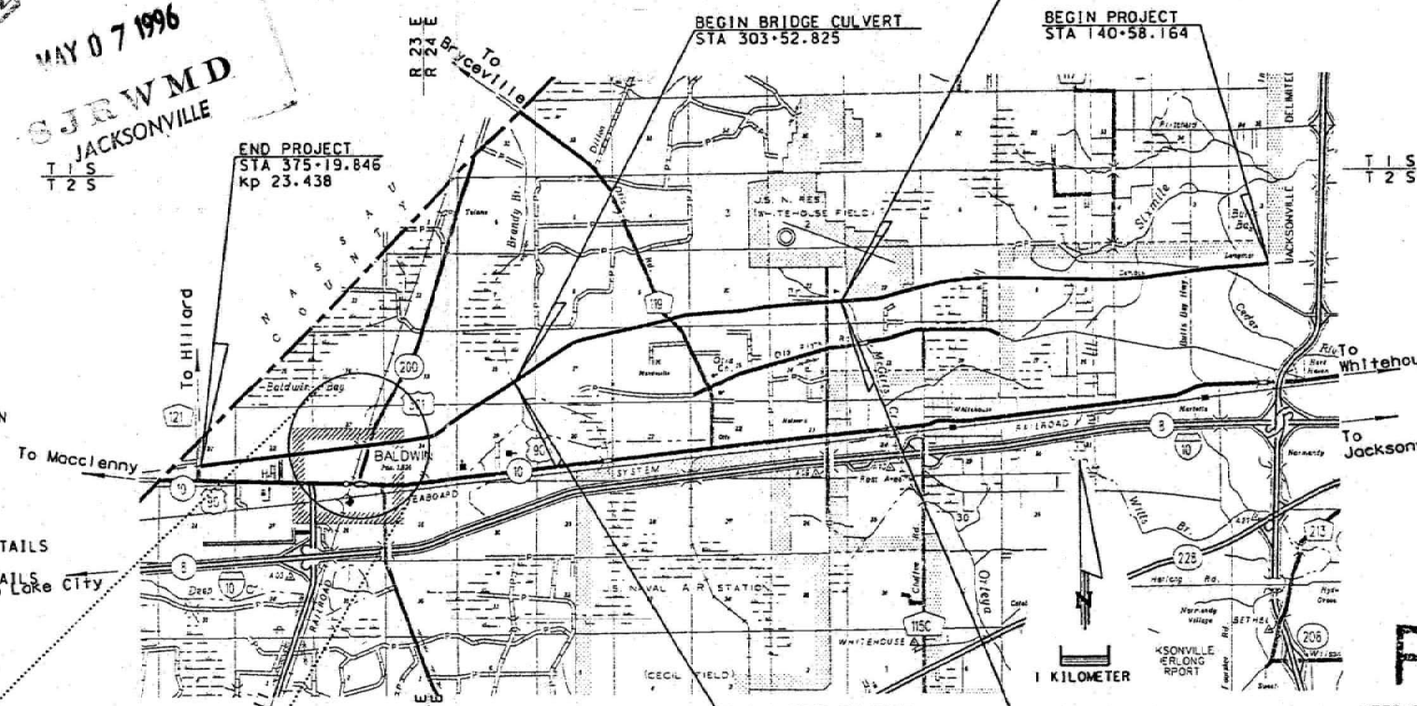
W.P.I. NO. 2124344

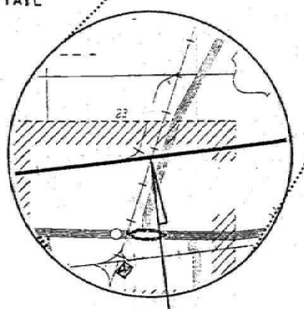
FISCAL YEAR	SHEET NO.
97	1



PLANS OF PROPOSED
STATE HIGHWAYS

STATE PROJECT NO. 72000-3014 (FEDERAL FUNDS)
DUVAL COUNTY
JACKSONVILLE/BALDWIN TRAIL





PROJECT STATIONS ARE FROM EAST TO WEST.

LENGTH OF PROJECT	METERS
ROADWAY	23438.722
BRIDGES	22.960
NET LENGTH OF PROJ.	23461.682
EXCEPTIONS	0.000
GROSS LENGTH OF PROJ.	23461.682

FDOT PROJECT MANAGER : FREDDIE E. WRIGHT

RAILTRAIL PLANS
ENGINEER OF RECORD
STEVE KINCAID P.E.
LOCHRANE ENGINEERING, INC.
408 W. UNIVERSITY AVE.
SUITE 306
GAINESVILLE, FLORIDA 32601
(352) 338-1846

PLANS PREPARED BY :

LOCHRANE ENGINEERING, INC.
Consulting Engineers - Surveyors
408 W. UNIVERSITY AVENUE, SUITE 306 GAINESVILLE, FLORIDA 32601 (352) 338-1846

PHASE IV

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERERED WHEN OBTAINING SCALED DATA. GOVERNING SPECIFICATIONS: STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, DATED 1996, SUPPLEMENTS AND SPECIAL PROVISIONS THERETO IF NOTED IN THE CONTRACT SPECIFICATIONS FOR THIS PROJECT.

NOTE: THIS IS A METRIC UNIT PROJECT.

REVISIONS		
DATE	BY	DESCRIPTION

RAILTRAIL PLANS APPROVED BY: _____

DATE: _____

P.E. NO.: _____

SUMMARY OF DRAINAGE STRUCTURES

STATE PROJ. NO. 72000-3614 | SHEET NO. 11

QUANT	STR. NO.	INDEX NO.	STATION	TYPE	BARRELS	SIZE (MM) RISE	SIZE (MM) SPAN	SIZE (MM) DIA.	LENGTH (M)	INV. EL. UPSTREAM	INV. EL. DOWNSTREAM	CROSS DRAIN PIPE (RCP) 300 & 450	600	900	1200	STORM SEWER PIPE (RCP) 365 & 575	375	450	600	750	900	MITERED END SECTION SD 365 & 575	CD 450	SD 450	CD 600	SD 750	CD 750	SD 900	CD 900	MANHOLE P-8 <3000	MANHOLE J-7 <3000	DITCH BOTTOM INLET C <3000	CLASS I CONC. ENDWALLS M³	CLASS II CONC. CULVERTS M³	REINF. STEEL KG	SOD M²	REMARKS
P	* 1	272	140+66.01	MES, Pipe	1			600	13.5	7.28	6.75								13.5						1								0.65			23.41	
F																																						
P	* 2	200 & 201	140+64.88	Pipe, Manhole	1			600	2.8	6.85	6.75								2.8											1								
F																																						
P	* 2	200 & 201	140+64.88	Pipe	1			750	9.9	6.60	6.59									9.9																	
F																																						
P	* 3	200 & 201	140+63.99	Pipe	2			600	2.9	6.89	6.74								5.8																		
F																																						
P	* 3	200 & 201	140+63.99	Pipe, Manhole	1			375	8.1	6.93	6.90						8.1														1						
F																																						
P	* 3	200 & 201	140+63.99	Pipe	2			900	35.4	6.44	6.42										70.8																
F																																						
P	* 4	200 & 201	141+00.00	Manhole, Pipe	2			900	109.9	6.42	6.34										209.8										1						
F																																						
P	* 5	232	141+12.26	DBI, Pipe	1			450	86.8	6.31	6.17							86.8														1					
F																																						
P	* 6	232	141+12.81	DBI, Pipe	1			450	67.1	6.21	6.11							67.1														1					
F																																						
P	* 7	200 & 201	141+80.00	Manhole, Pipe	1			450	69.4	6.11	6.00							69.4														1					
F																																						
P	* 8	232	141+98.92	DBI, Pipe	1			450	56.7	6.17	6.00							56.7														1					
F																																						
P	* 9	200 & 201	142+10.92	Manhole, Pipe	2			900	58.0	6.34	6.00										116.0										1						
F																																						
P	* 10	272	142+49.93	MES				450															1										0.34			18.39	
F																																						
P	* 11	272	142+76.02	MES				450															1										0.34			18.39	
F																																						
P	* 12	272	142+90.52	Double MES, Pipe	2			900	4.3	6.00	6.00										8.6								2				1.06			28.43	
F																																						
P	* 13	200 & 201	142+90.52	Manhole, Pipe	2			900	3.2	6.00	6.00										6.4										1						
F																																						
P	* 14	272	142+90.52	Double MES				900																					2				1.06			28.43	
F																																						
P	** 15	200 & 201	149+18.58	Manhole, Pipe	1			750	3.8	5.90	5.65									3.8										1						
F																																						
P	** 15	280	149+18.58	Pipe Extension	1			600	5.3	5.88	5.80								5.3																		
F																																						
P	** 16	250	149+88.60	Pipe, Endwalls	1			600	7.4	6.25	6.10		7.4																					3.42			44.00	
F																																						
P	** 17	280	157+26.76	Pipe Extension	1			900	1.0	12.08	12.08			1.0																								
F																																						
P	** 17	280	157+26.76	Pipe Extension	1			900	1.0	12.09	12.08			1.0																								
F																																						
P	** 18	280	163+20.75	Pipe Extension	1	300	450		2.7	15.83	15.80	2.7																									
F																																						
P	19	280, 281, 290	167+55.20	Box. Culvert	1	1800	2400		10.01	11.23	11.20																							45.897	2827	116.00	
F																																						
P	** 20	200 & 201	170+05.88	Pipe	1	300	450		6.7	15.81	15.80	6.7																									
F																																						
P	21	250	186+50.00	Pipe	2			900	8.69	18.69	18.67			17.38																				8.76			152.00	
F																																						
P	22	250	189+00.00	Pipe	2			900	8.69	20.90	20.90			17.38																				8.76			152.00	
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P	*	For details see Visitor Center Utility/Grading Plan Sheet, Westend and Eastend Trailhead Grading Plan Sheets.																																				
F																																						
P	**	For details see the Miscellaneous Drainage Structure Details Sheet																																				
F																																						

TOTALS — P-PLAN QUANTITY / F-FINAL QUANTITY

REVISIONS																							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC. Consulting Engineers + Surveyors

SUMMARY OF DRAINAGE STRUCTURES

SUMMARY OF DRAINAGE STRUCTURES

STATE PROJ. NO.	SHEET NO.
72000-3614	12

QUANT	STR. NO.	INDEX NO.	STATION	TYPE	BARRELS	SIZE (MM) RISE	SIZE (MM) SPAN	SIZE (MM) DIA.	LENGTH (M)	INV. EL. UPSTREAM	INV. EL. DOWNSTREAM	CROSS DRAIN PIPE (RCP) 300 x 450	CROSS DRAIN PIPE (RCP) 600	CROSS DRAIN PIPE (RCP) 900	CROSS DRAIN PIPE (RCP) 1200	STORM SEWER PIPE (RCP) 365 x 575	STORM SEWER PIPE (RCP) 375	STORM SEWER PIPE (RCP) 450	STORM SEWER PIPE (RCP) 600	STORM SEWER PIPE (RCP) 750	STORM SEWER PIPE (RCP) 900	MITERED END SECTION SD 365 x 575	MITERED END SECTION CO 450	MITERED END SECTION SO 450	MITERED END SECTION CO 600	MITERED END SECTION CO 750	MITERED END SECTION SO 750	MITERED END SECTION CO 900	MANHOLE P-8 <3000	MANHOLE J-7 <3000	DITCH BOTTOM INLET C <3000	CLASS I CONC. ENDWALLS M³	CLASS II CONC. CULVERTS M³	REINF. STEEL KG	SOD M²	REMARKS
P	** 23	280	267+35.70	PIPE	1			600	1.80	25.8	25.8		1.80																							
F																																				
P	24	280, 281, 290	303+57.00	BRIDGE CULVERT	4	1200	1800		14.01	22.15	22.14																						62.549	4466	140.00	
F																																				
P	25	250	329+94.63	PIPE	2			600	8.69	24.93	24.92		17.38																			4.32			98.00	
F																																				
P	26	250	339+12.00	PIPE	1			600	8.88	24.42	24.46		8.88																			3.42			84.00	
F																																				
P	27	250	339+36.30	PIPE	1			600	11.04	24.33	24.22		11.04																			3.42			84.00	
F																																				
P	* 28	200 & 201	340+57.30	MANHOLE, PIPE	1			450	8.3	23.66	23.64							8.3											1							
F																																				
P	* 29	273	340+60.34	MES, PIPE	1			450	6.6	24.90	23.66							6.6						1								0.65			8.00	
F																																				
P	* 30	200 & 201	340+63.28	MANHOLE, PIPE	1			450	55.2	23.64	23.56							55.2											1							
F																																				
P	* 31	232	341+18.52	DBI, PIPE	1			450	37.8	23.56	23.50							37.8													1					
F																																				
P	* 32	232	341+56.34	DBI, PIPE	1			450	54.5	23.50	23.40							54.5													1					
F																																				
P	* 33	232 & 280	342+10.89	DBI, PIPE	1			375	4.8	23.44	23.43						4.8														1					
F																																				
P	* 34	272	342+23.60	PIPE, MES	1			600	9.5	23.25	23.20								9.5						1							0.41			20.07	
F																																				
P	35	250	347+55.00	CONC. PIPE	2			900	11.17	23.06	23.05			22.34																		8.76			152.00	
F																																				
P	36	250	352+35.00	CONC. PIPE	3			1200	12.00	22.63	22.54				36.00																	19.58			266.00	
F																																				
P	37	250	361+00.00	CONC. PIPE	1			600	8.69	23.41	23.43		8.69																			3.42			84.00	
F																																				
P	* 38	272	372+92.59	MES, PIPE	1			750	44.1	21.60	21.56									44.1						1						0.84			25.92	
F																																				
P	* 39	272	373+24.20	MES, PIPE	1	365	575		20.8	21.84	21.80					20.8						1										0.41			20.07	
F																																				
P	* 40	200 & 201	373+30.71	MANHOLE, PIPE	1			750	59.4	21.56	21.51									59.4									1							
F																																				
P	* 41	232	373+46.54	DBI, PIPE	1	365	575		52.5	21.94	21.84					52.5															1					
F																																				
P	* 42	200 & 201	373+90.00	MANHOLE, PIPE	1			750	90.0	21.51	21.42									90.0									1							
F																																				
P	* 43	232	373+98.80	DBI, PIPE	1	365	575		62.7	22.06	21.94					62.7															1					
F																																				
P	* 44	232	374+60.25	DBI						22.06																					1					
F																																				
P	* 45	200 & 201	374+80.00	MANHOLE, PIPE	1			750	25.0	21.42	21.40									25.0									1							
F																																				
P	* 46	272	375+07.39	MES							21.40															1						0.84			25.92	
F																																				
P	** 47	273 & 280	375+09	PIPE, MES	2			750	6.6	21.3	21.3									13.2												1.88			20.00	
F																																				
TOTALS				P-PLAN QUANTITY								9.4	55.2	59.1	36.0	136.0	12.9	442.4	36.9	245.4	411.6	1	2	1	2	2	2	4	7	5	9	72.3	108.5	7293	1581	
				F-FINAL QUANTITY																																

* For details see Visitor Center Utility/Grading Plan Sheet, Westend and Eastend Trailhead Grading Plan Sheets.

** For details see the Miscellaneous Drainage Structure Details Sheet

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

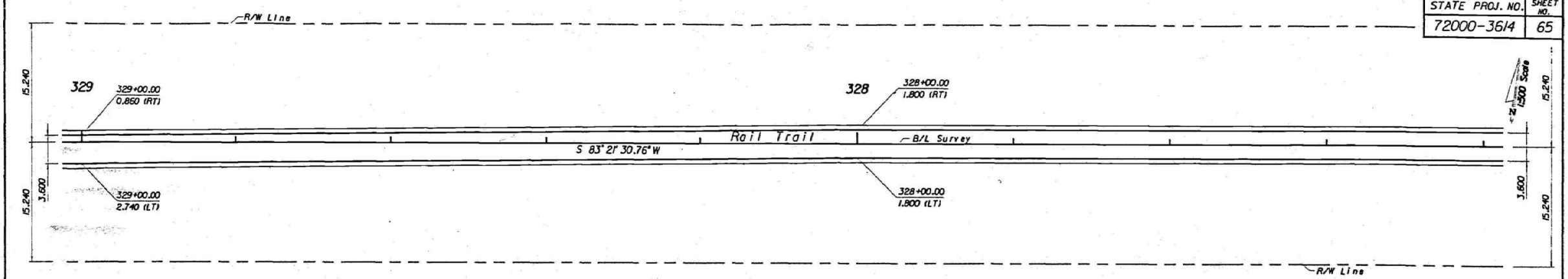
FLORIDA DEPARTMENT OF TRANSPORTATION

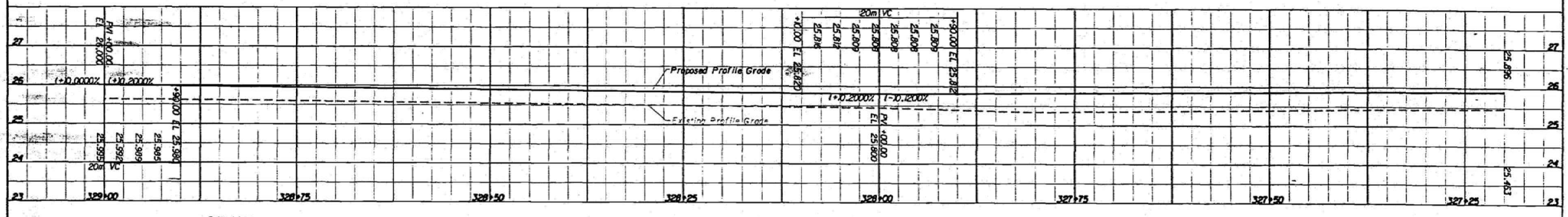
LOCHRANE ENGINEERING, INC. Consulting Engineers • Surveyors

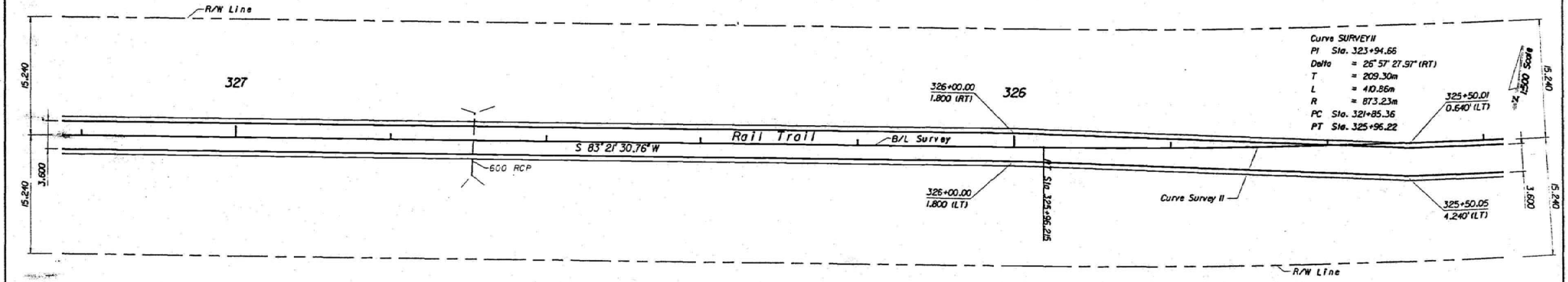
SUMMARY OF DRAINAGE STRUCTURES

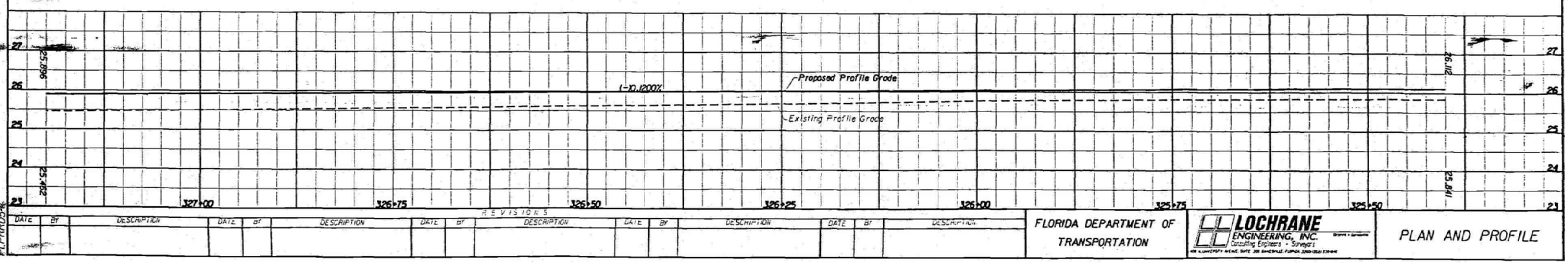
SUMDR002.DGN

STATE PROJ. NO.	SHEET NO.
72000-3614	65









REVISIONS															
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

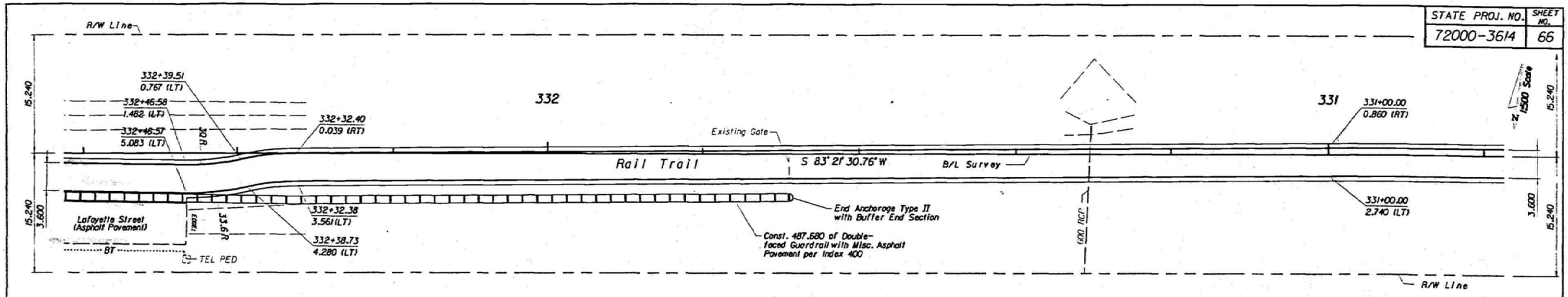
PLPRR054

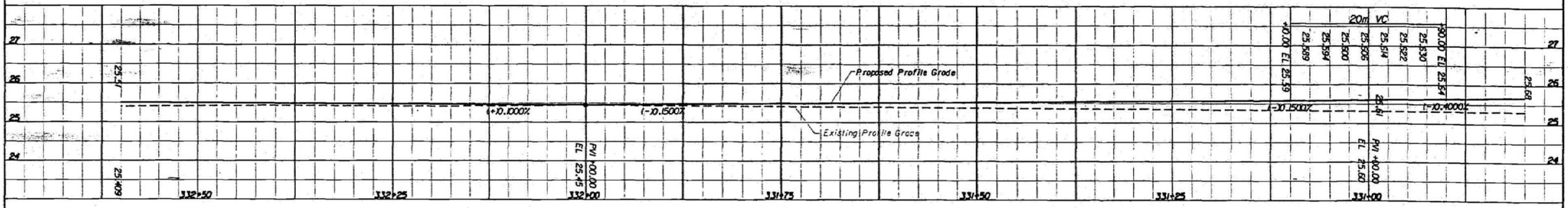
FLORIDA DEPARTMENT OF TRANSPORTATION

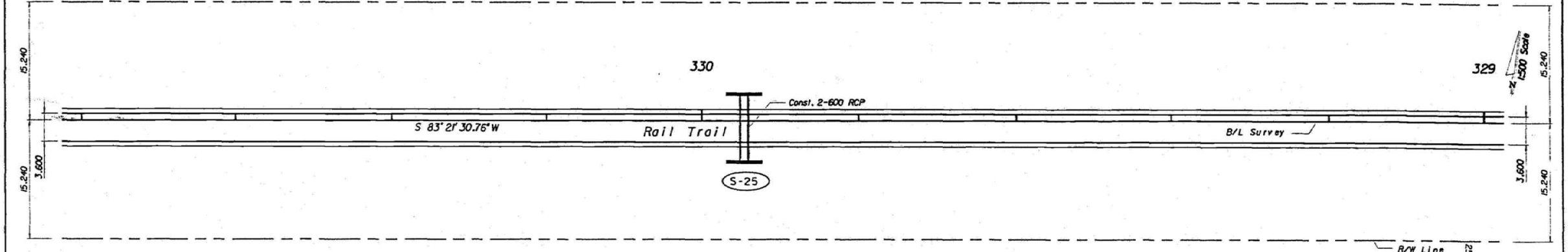
LOCHRANE ENGINEERING, INC.
Consulting Engineers · Surveyors

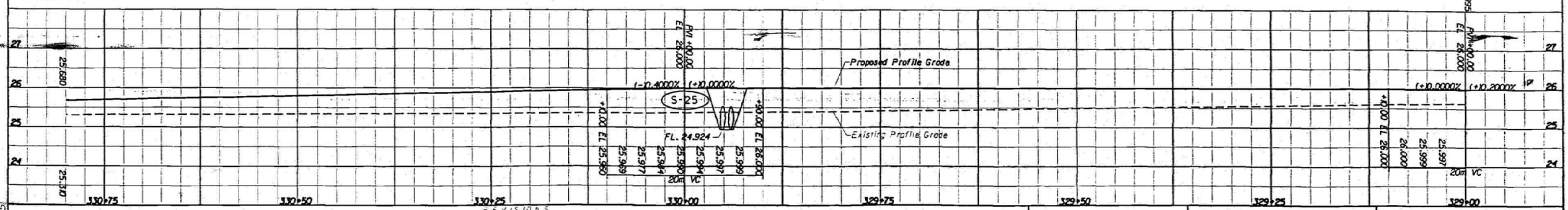
PLAN AND PROFILE

STATE PROJ. NO.	SHEET NO.
72000-3614	66









REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

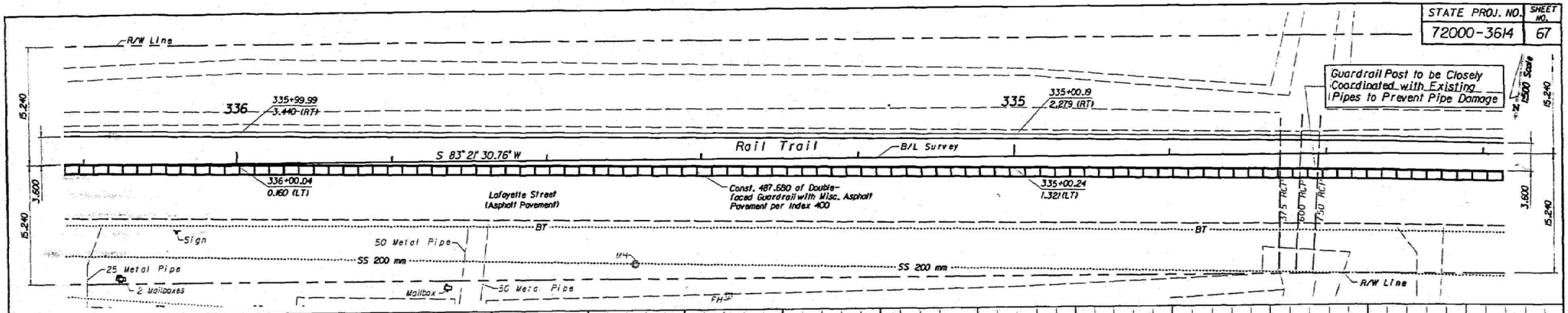
FLORIDA DEPARTMENT OF TRANSPORTATION

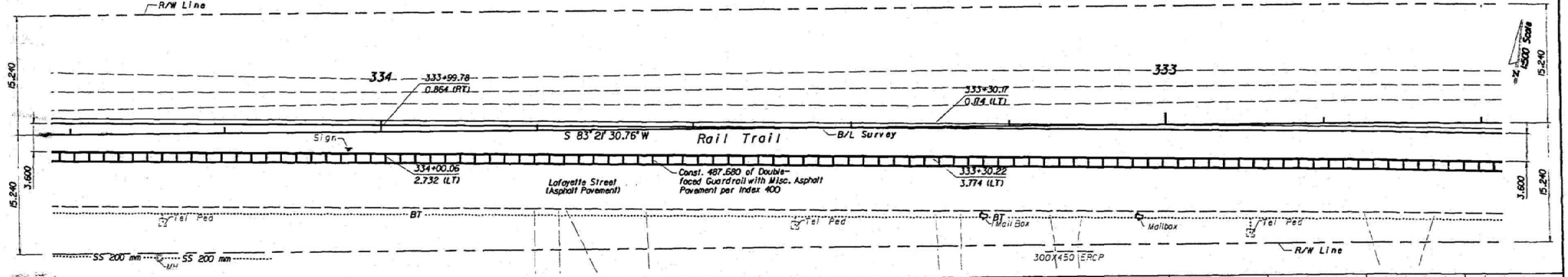
LOCHRANE ENGINEERING, INC.
Consulting Engineers • Surveyors

PLAN AND PROFILE

PLPRRD55

STATE PROJ. NO.	SHEET NO.
72000-3614	67





REVISIONS													
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

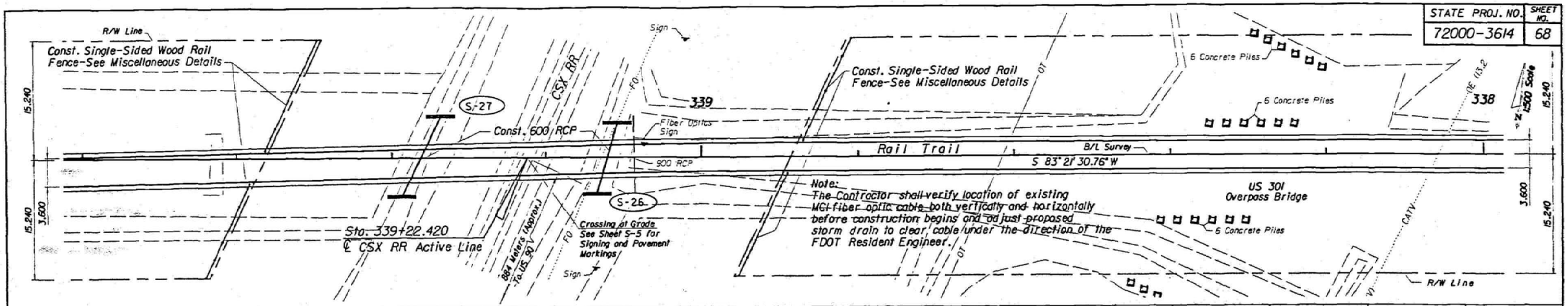
PLPRRD58

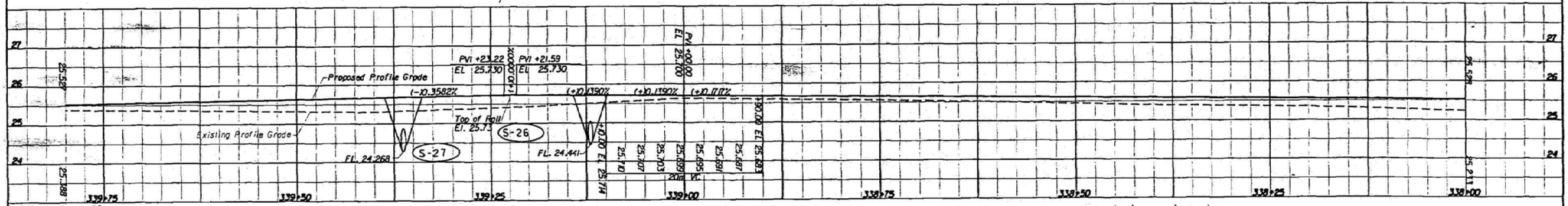
FLORIDA DEPARTMENT OF TRANSPORTATION

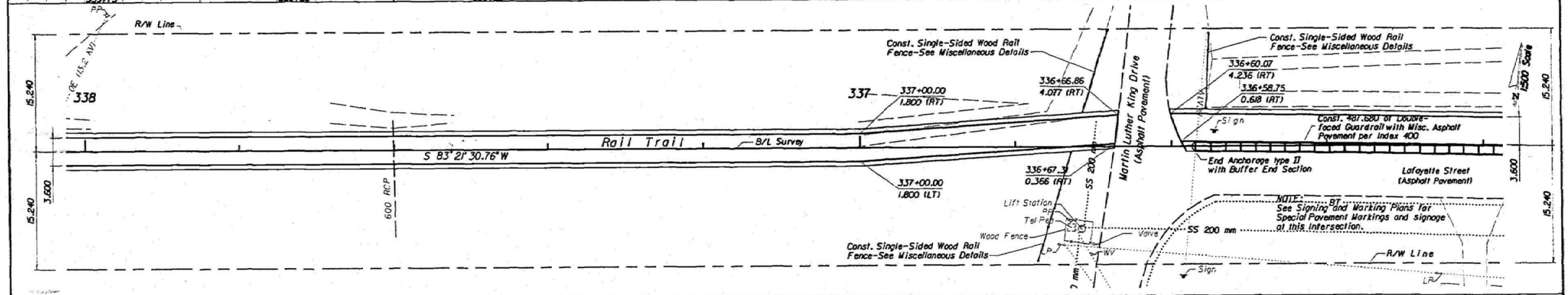
LOCHRANE ENGINEERING, INC.
Consulting Engineers · Surveyors

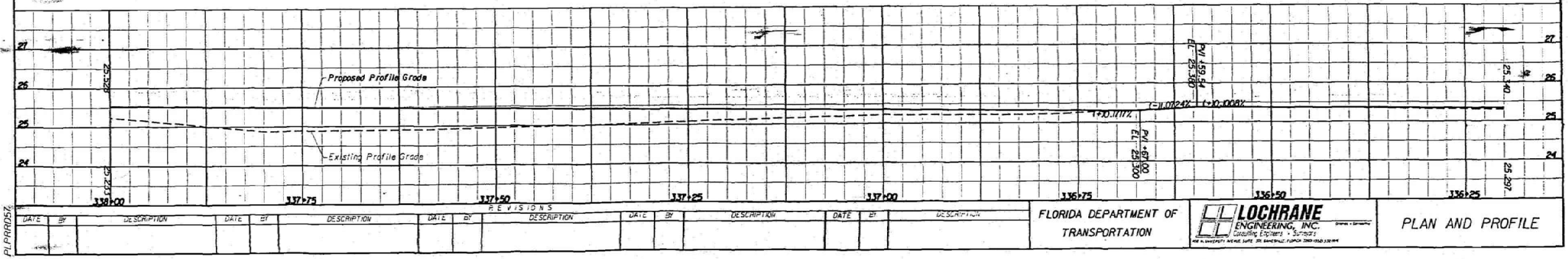
PLAN AND PROFILE

STATE PROJ. NO.	SHEET NO.
72000-3614	68









REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
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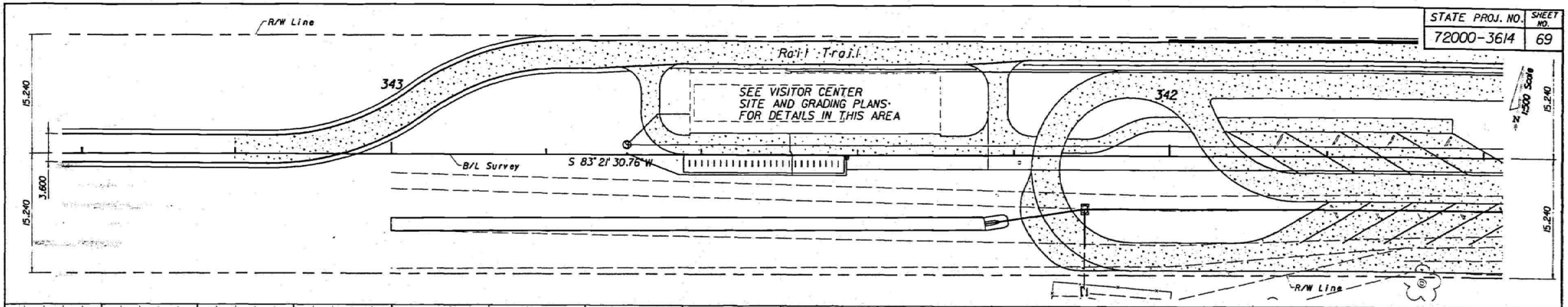
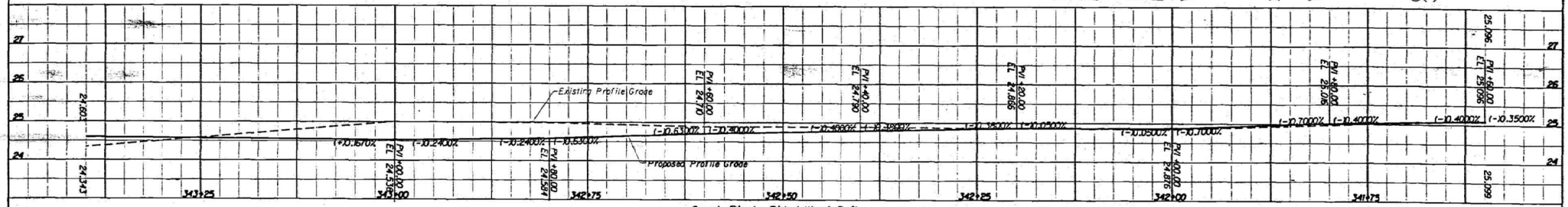
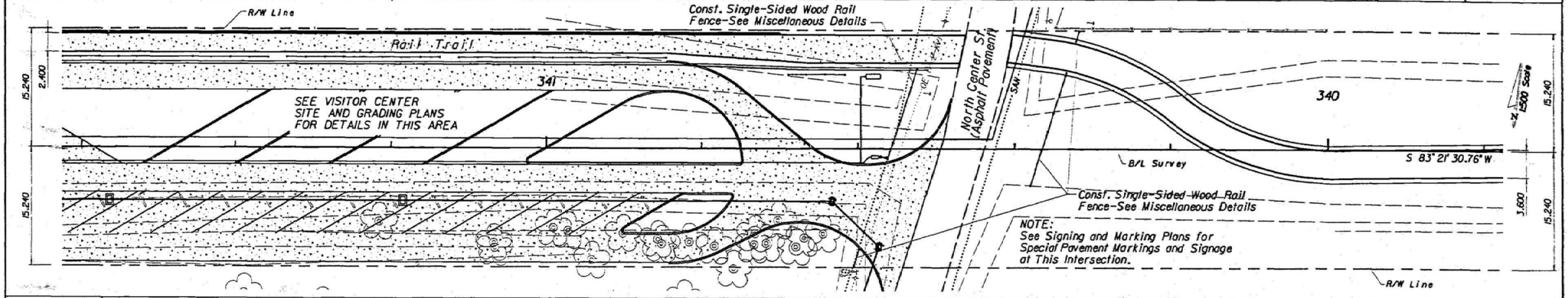
PLAN AND PROFILE

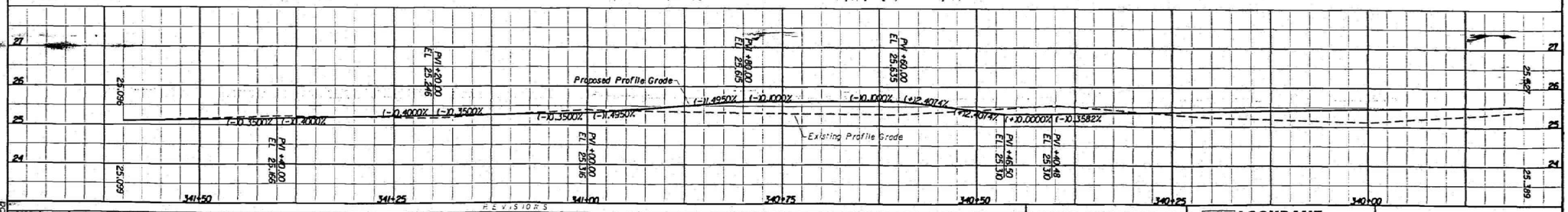
PLPRO57

STATE PROJ. NO.	SHEET NO.
72000-3614	69









REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

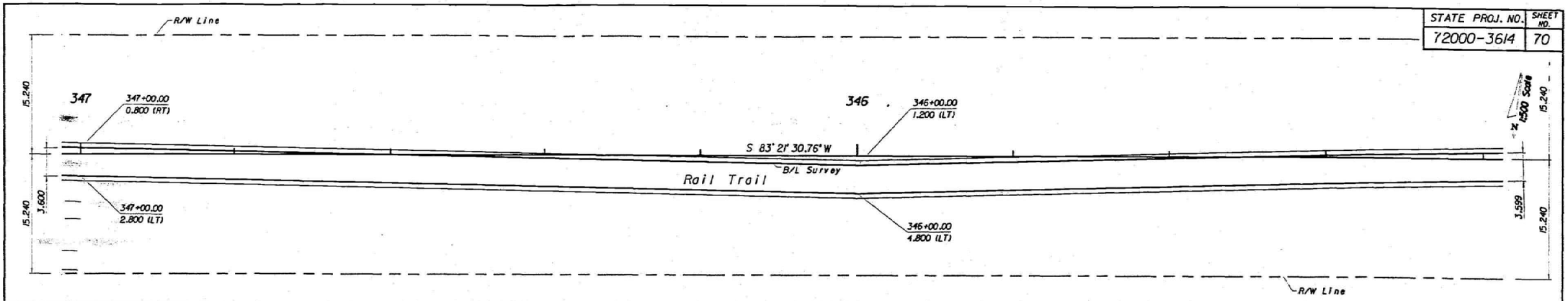
FLORIDA DEPARTMENT OF TRANSPORTATION

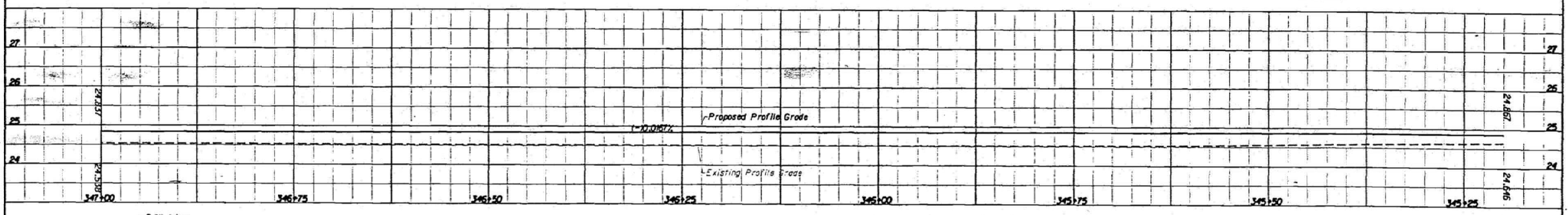
LOCHRANE ENGINEERING, INC.
Consulting Engineers · Surveyors

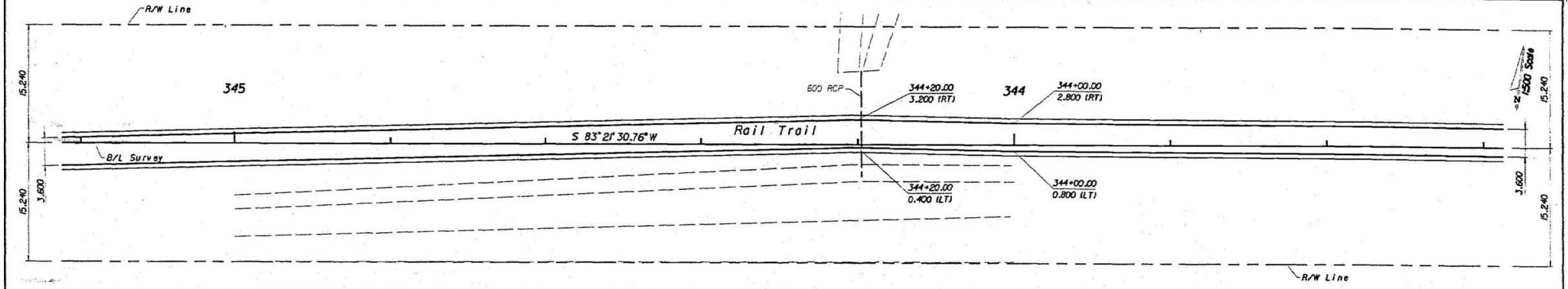
PLAN AND PROFILE

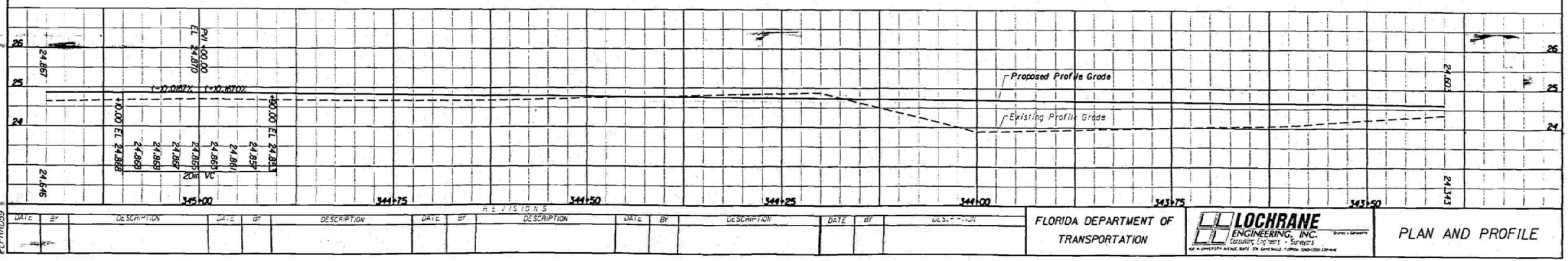
PLPR058

STATE PROJ. NO.	SHEET NO.
72000-3614	70









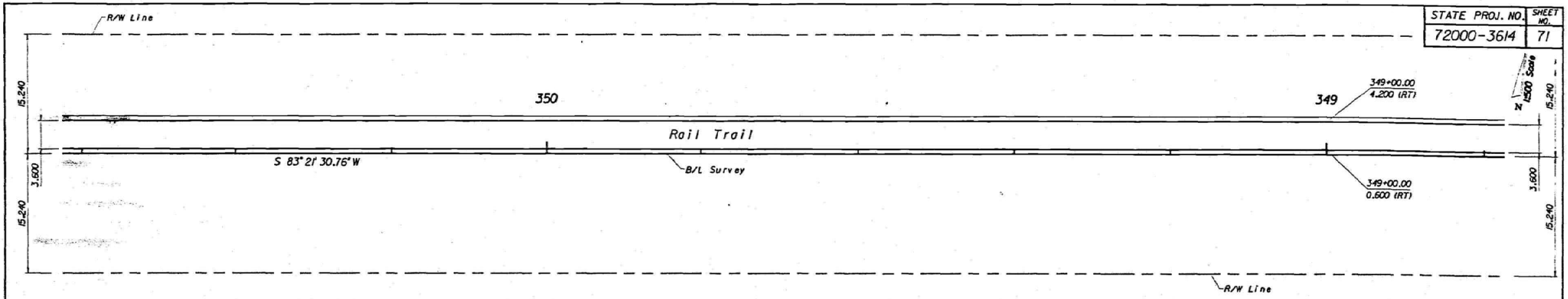
REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

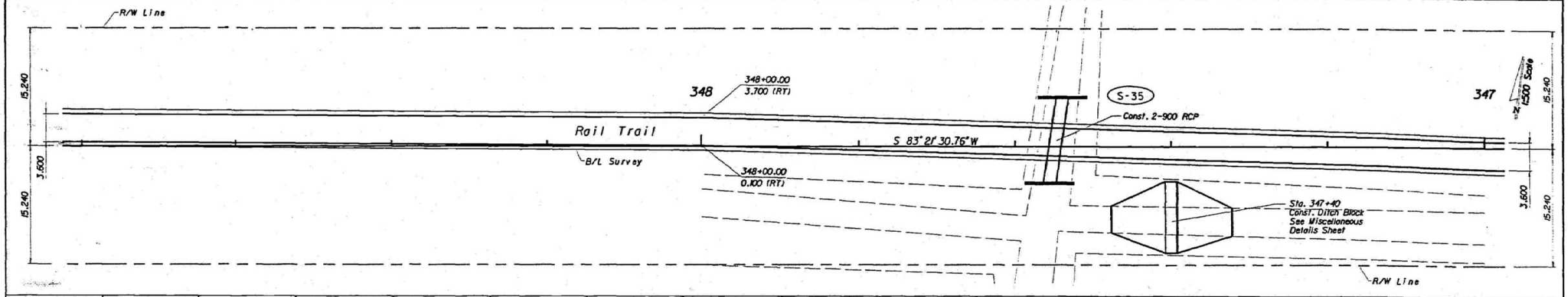
FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
Consulting Engineers + Surveyors

PLAN AND PROFILE

STATE PROJ. NO.	SHEET NO.
72000-3614	71





REVISIONS															
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

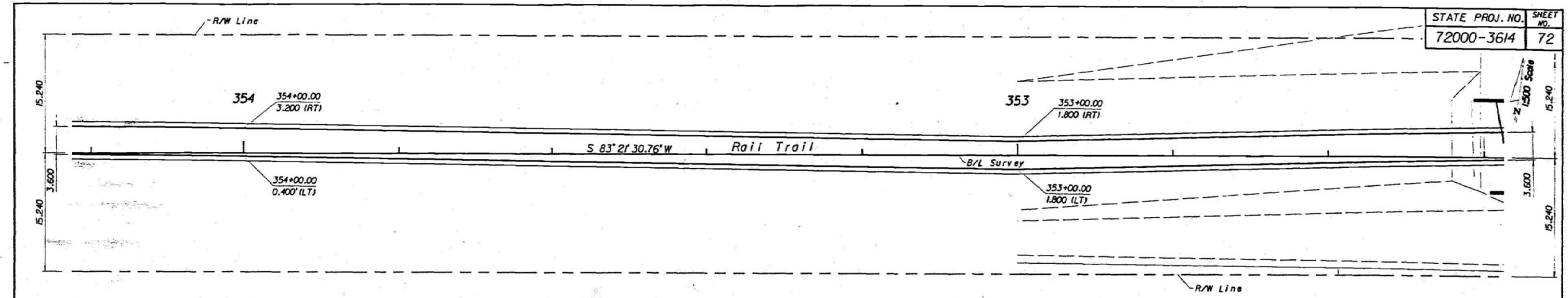
FLPRRDGA

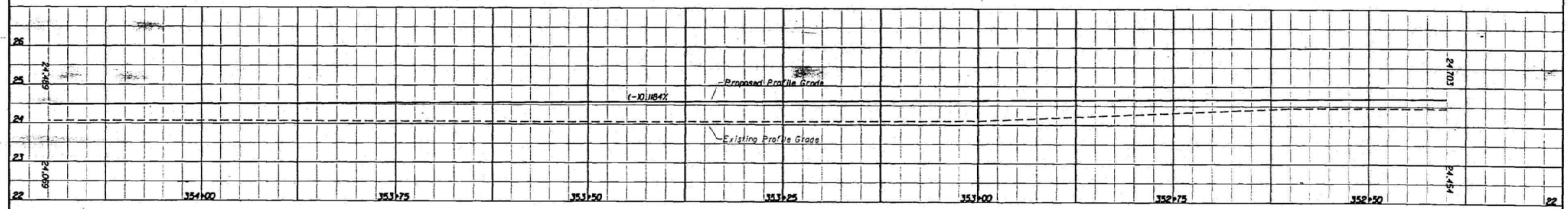
FLORIDA DEPARTMENT OF TRANSPORTATION

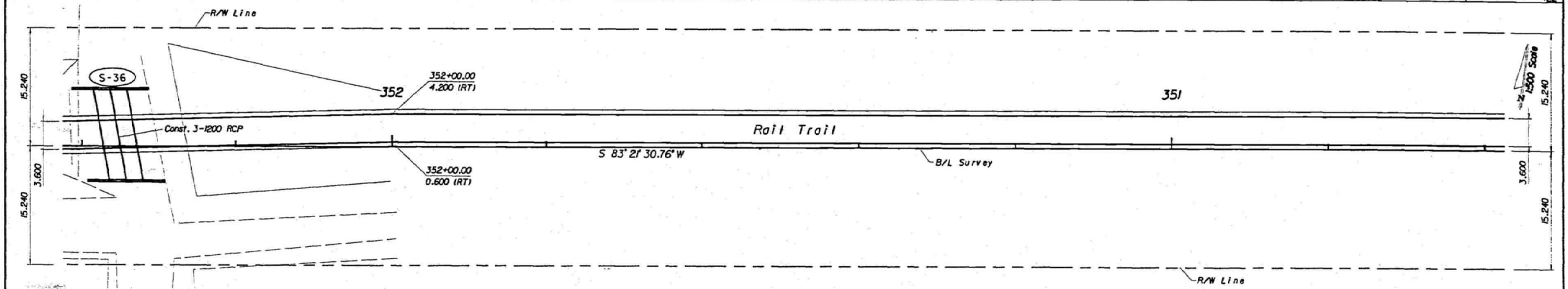
LOCHRANE ENGINEERING, INC.
Consulting Engineers - Surveyors

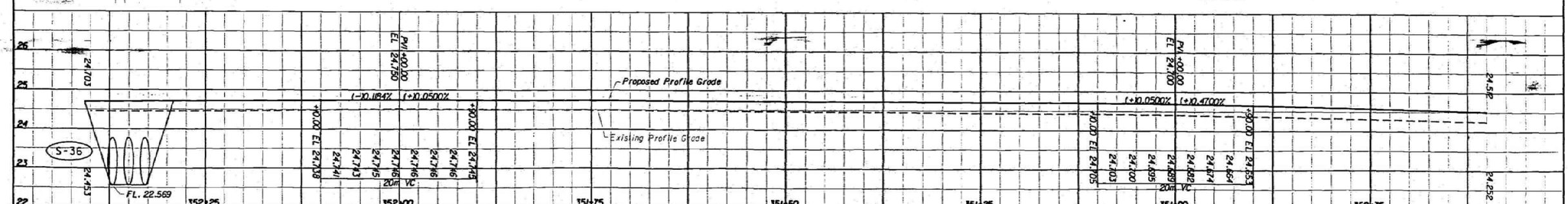
PLAN AND PROFILE

STATE PROJ. NO.	SHEET NO.
72000-3614	72









REVISIONS															
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	

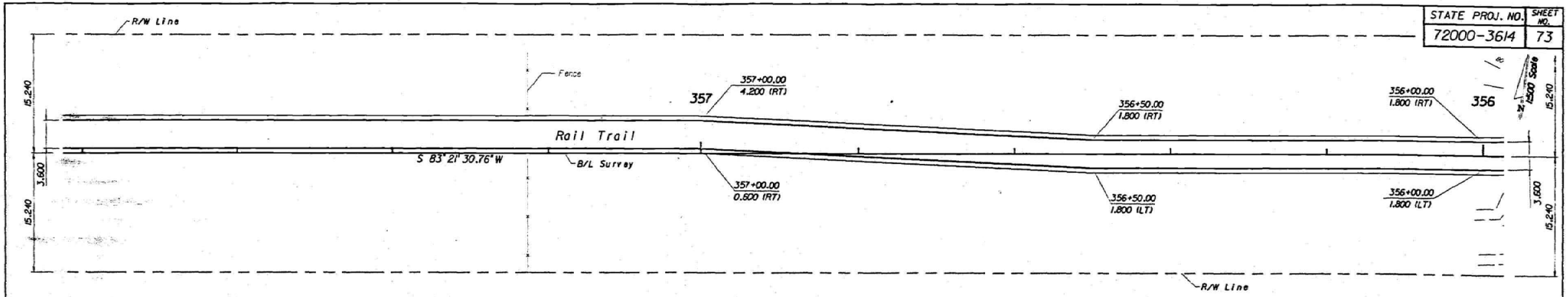
FLORIDA DEPARTMENT OF TRANSPORTATION

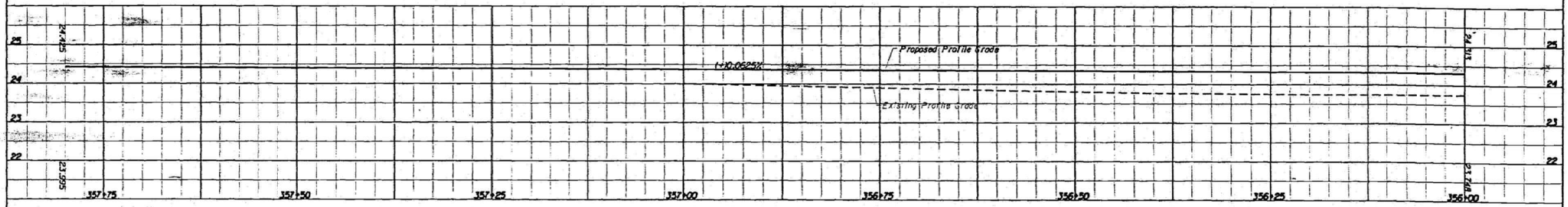
LOCHRANE ENGINEERING, INC.
Consulting Engineers - Surveyors

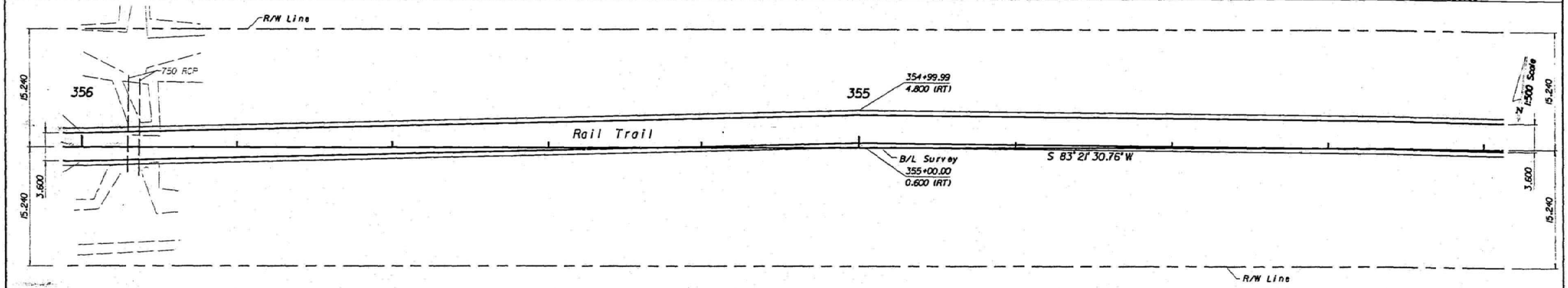
PLAN AND PROFILE

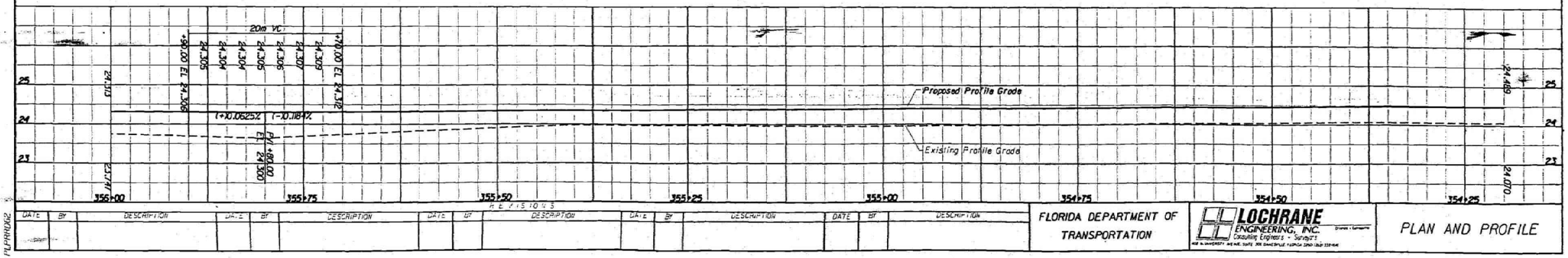
PLPARD61

STATE PROJ. NO.	SHEET NO.
72000-3614	73









DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

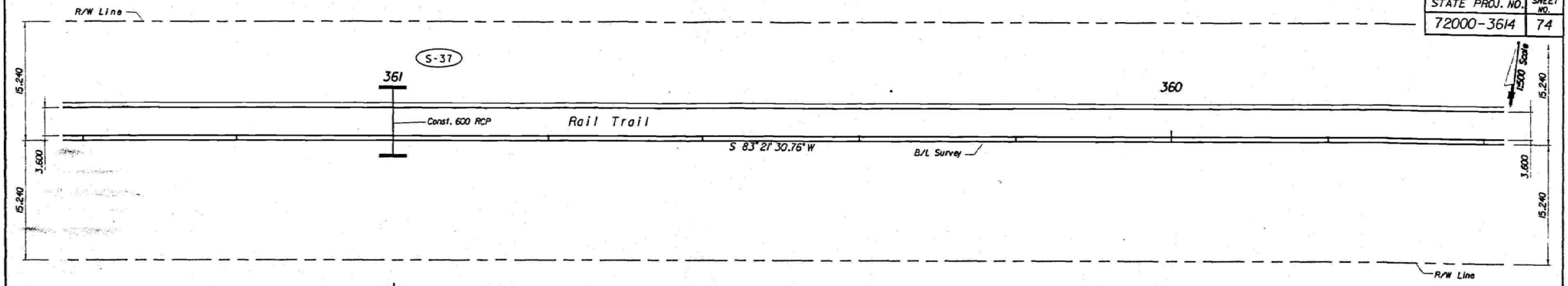
FLORIDA DEPARTMENT OF TRANSPORTATION

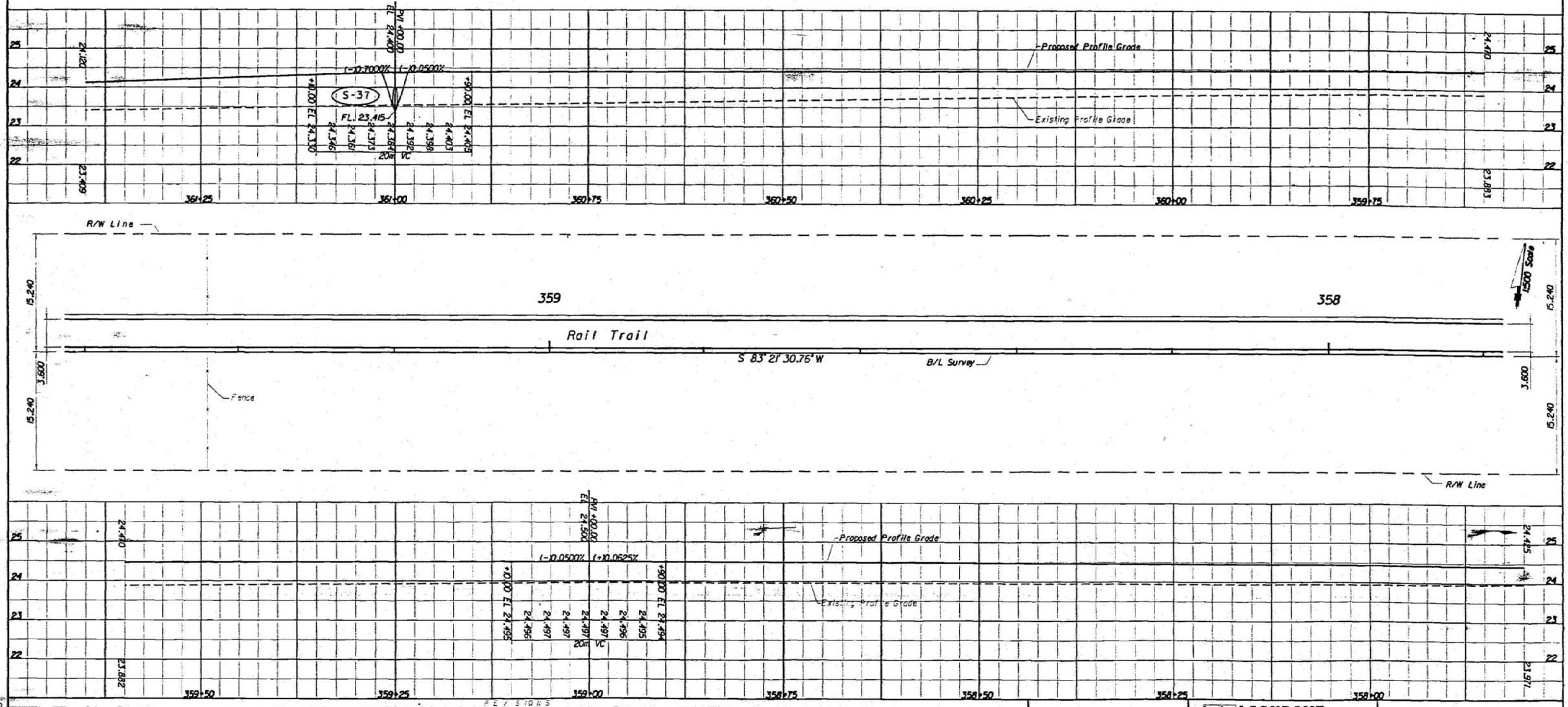
LOCHRANE ENGINEERING, INC.
Consulting Engineers + Surveyors

PLAN AND PROFILE

TUPRR062

STATE PROJ. NO.	SHEET NO.
72000-3614	74





DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

REVISIONS

PLPRR063

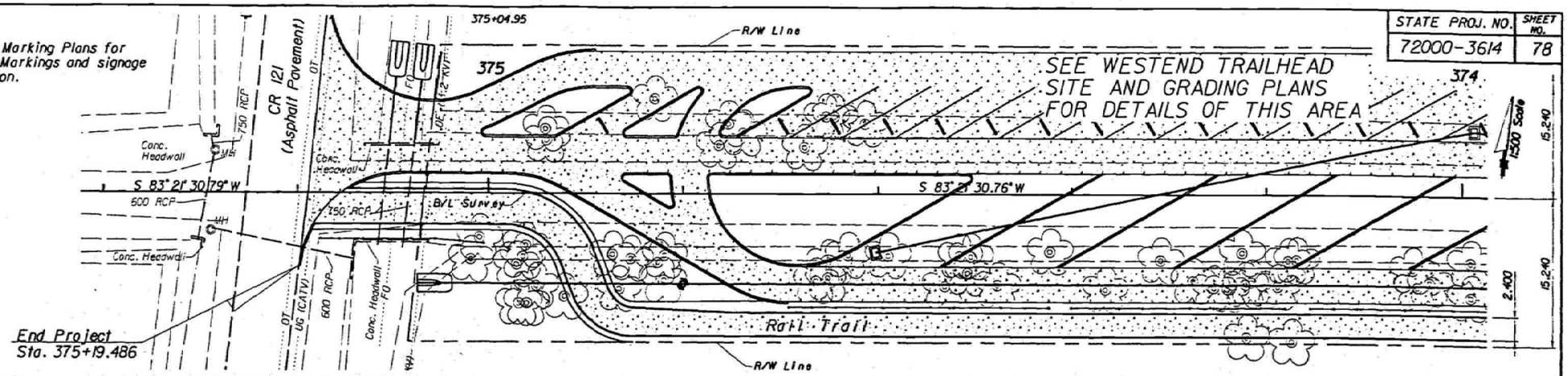
FLORIDA DEPARTMENT OF TRANSPORTATION

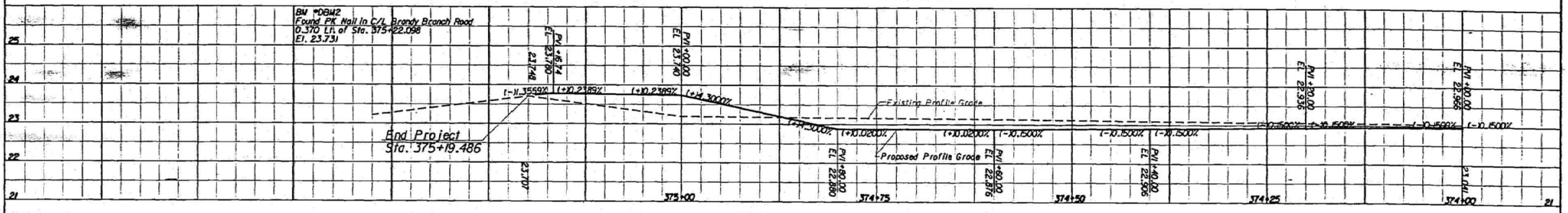
LOCHRANE ENGINEERING, INC.
Consulting Engineers · Surveyors

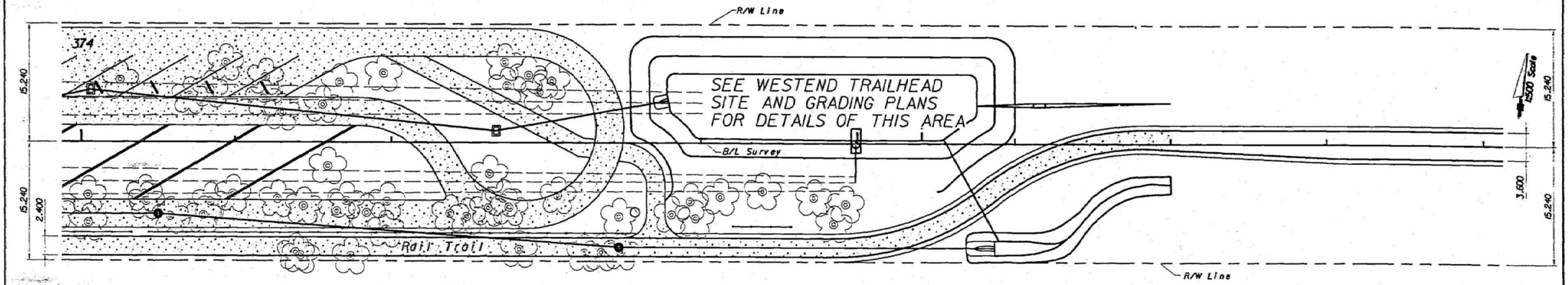
PLAN AND PROFILE

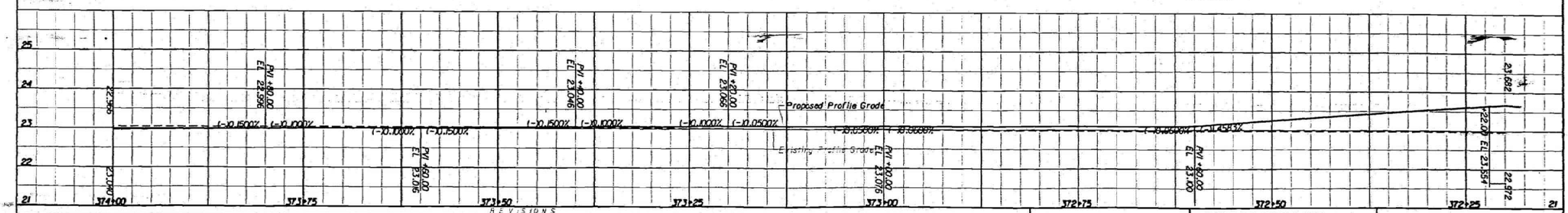
STATE PROJ. NO.	SHEET NO.
72000-3614	78

NOTE:
See Signing and Marking Plans for Special Pavement Markings and signage at this Intersection.









REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
Consulting Engineers · Surveyors

PLAN AND PROFILE

PLPROFGT

STATE PROJ. NO.	SHEET NO.
72000-3614	81

1:400 Scale

Backflow Preventer

Chain Link Fence

Const. Double-sided Wood Rail Fence - See Misc. Details Sheet

Horse Trailer Sod Parking See Misc. Details Sheet

Const. Gravity Wall with Aluminum Handrail per Index 520

Sta. 340+70.00 Begin Gravity Wall (See Cross Sections)

Const. Single-Sided Wood Rail Fence - See Misc. Details

Hose Bibb-Locate Adjacent to Water Trough

+84.432 12.240 (RT)

+66.432 11.040 (RT)

+46.101 14.640 (RT)

Guy

Manhole

R/W Line

+84.375 11.040 (RT)

0.2 Transition

Concrete

+46.883 11.040 (RT)

341

Concrete

+89.88 5.996 (RT)

Remove Existing Berm

+75.077 7.648 (RT)

See Note 1

+47.878 6.485 (RT)

+81.478 7.036 (RT)

Sod

+66.411 0.416 (RT)

340

0.2 Transition

SAN

Sod

Sod

+02.354 1.206 (LT)

Type D Curb

Const. Single-Sided Wood Rail Fence - See Misc. Details

B/L Survey

+74.751 1.628 (LT)

+02.104 2.139 (LT)

+73.236 2.139 (LT)

+82.453 5.743 (LT)

+76.45 5.739 (LT)

Type D Curb

Concrete

+90.015 10.106 (LT)

+76.02 6.492 (LT)

Sod

See Note 1

+89.765 11.039 (LT)

+84.167 12.039 (LT)

+72.442 0.500 (LT)

Water Trough-Sta. 340+58 See General Note No. 20

R/W Line

+16.724 14.921 (LT)

Light Pole

+84.167 14.641 (LT)

0.2 Transition

Light Pole

+77.639 13.099 (LT)

+80.428 14.955 (LT)

2-Water Valves

Const. Single-Sided Wood Rail Fence - See Misc. Details

For Trees to Remain - See Grading Plan

0.2 Transition

+57.102 23.863 (LT)

OE (15.2 KV)

North Center Street (Asphalt Pavement)

LEGEND

Concrete Pavement and Sidewalk

NOTE:

1. Const. 1.2 rolled sod adjacent to trail and curbing within this area. Remainder of this area is to be pine bark.
2. Const. 1.2 rolled sod adjacent to trail, sidewalk and drives.
3. See Grading Plan for drainage system, including structure numbers.

REVISIONS															
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PLAN0901.DGN

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC. Consulting Engineers • Surveyors

VISITOR CENTER SITE PLAN

STATE PROJ. NO.	SHEET NO.
72000-3614	82

1:400 Scale

Const. Kiosk-See Misc. Details Sht 98 for location. See Signing and Pavement Marking Plans Sheet 5-9.

Sta. 342+00.00
End Gravity Wall
(See Cross Sections)

Const. Gravity Wall with Aluminum Handrail per Index 520

Const. Double - Sided Wood Rail Fence - See Misc. Details

Handicapped Parking - See Misc. Details Sheet

Const. Double - Sided Wood Rail Fence - See Mics. Details

Concrete Pavement - See Misc. Details Sheet

R/W Line

Visitor Center-See Note 1 & 2

Seed and Mulch (See Note 1)

Pump Station

Hose Bibb

Water Fountain-(See Note 3)

Conc. Sidewalk

B/L Survey

Bicycle Rack- See Misc. Details Sheet

Light Pole

Top of Exist. Ditch

Loading Zone

Concrete

Sod

Standard Parking - See Misc. Details Sheet

50" Water Oak

LEGEND

Concrete Pavement and Sidewalk

NOTE:

1. Const. 1.2 rolled sod adjacent to trail, sidewalks and drives.
2. See Grading Plan for drainage system, including structure numbers.
3. Cost of Water Fountain to be paid for in Pay Item 2770-105-104.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PLANRD04.DGN

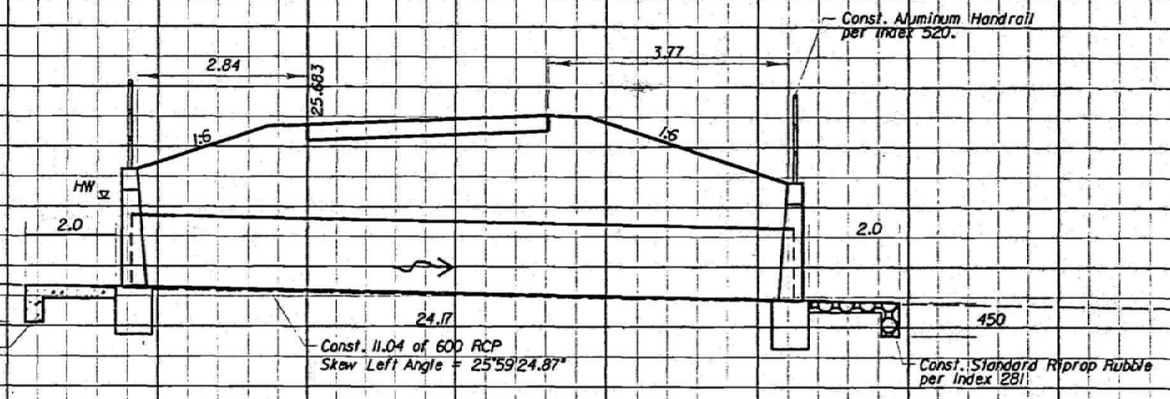
FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC. Consulting Engineers + Surveyors

VISITOR CENTER SITE PLAN

STATE PROJ. NO.	SHEET NO.
72000-3614	94

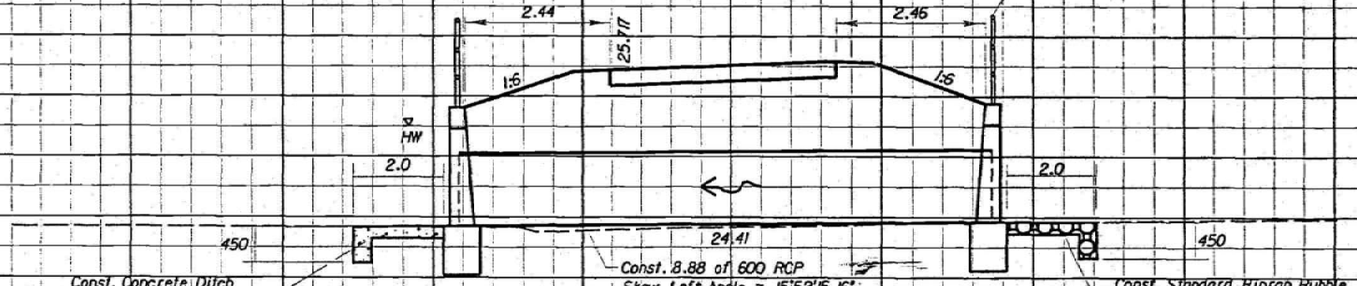
B/L SURVEY



S-27
Sta. 339+38.45
5.03 Lt. (Face of Endwall)
Index No. 250
Fl 24.33

S-27
Sta. 339+33.48
5.11 Rt (Face of Endwall)
Index No. 250
Fl 24.22

S-27
Sta. 339+36.30



S-26
Sta. 339+13.35
4.53 Lt. (Face of Endwall)
Index No. 250
Fl 24.42

S-26
Sta. 339+10.73
4.28 Rt. (Face of Endwall)
Index No. 250
Fl 24.46

S-26
Sta. 339+12.00

B/L SURVEY

Scale: 1:100 Horiz.
1:50 Vert.

REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

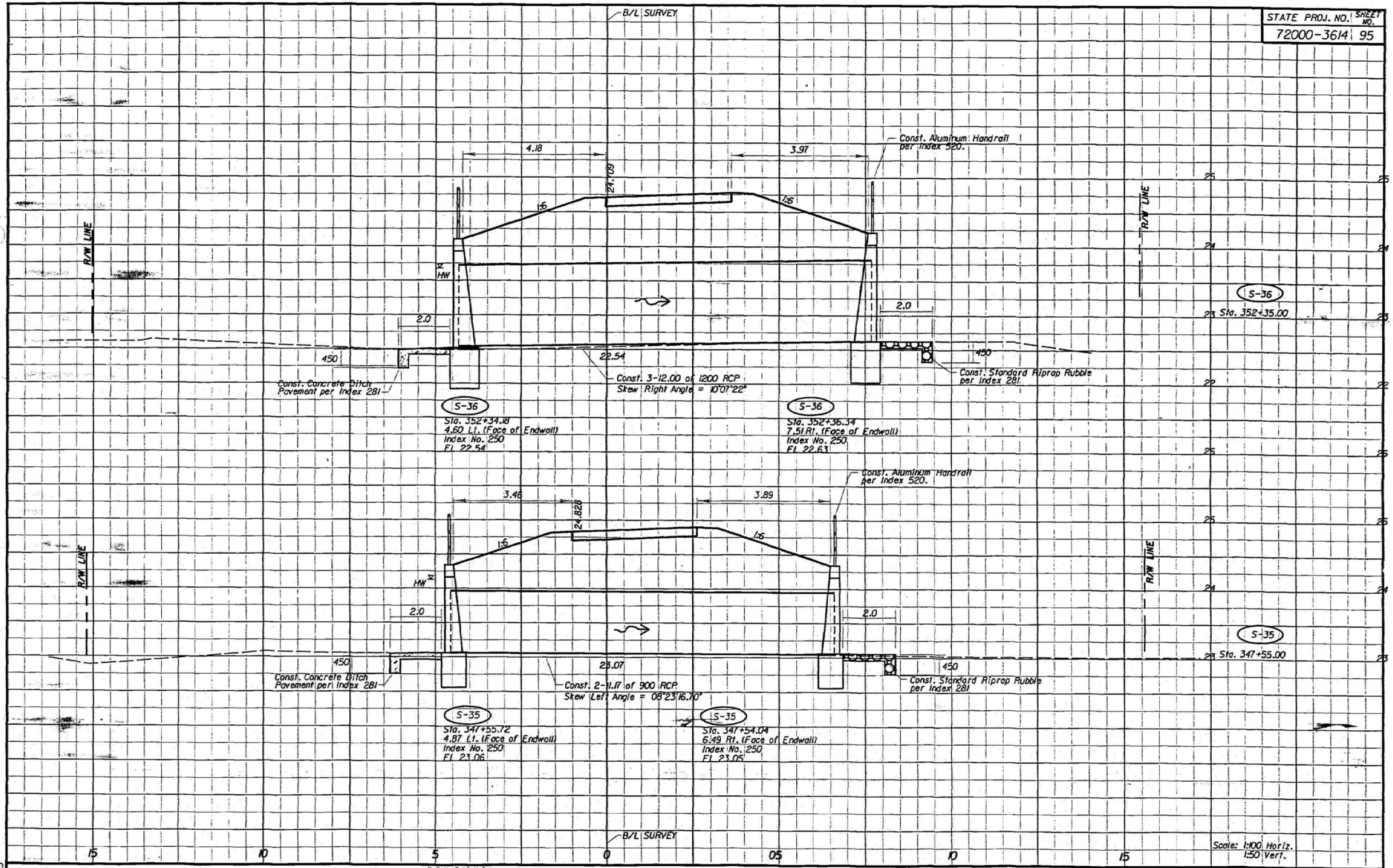
FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
Consulting Engineers - Surveyors

DRAINAGE STRUCTURES

DRSTR004

STATE PROJ. NO.	SHEET NO.
72000-3614	95



Scale: 1:100 Horiz.
1:50 Vert.

DRSTR005

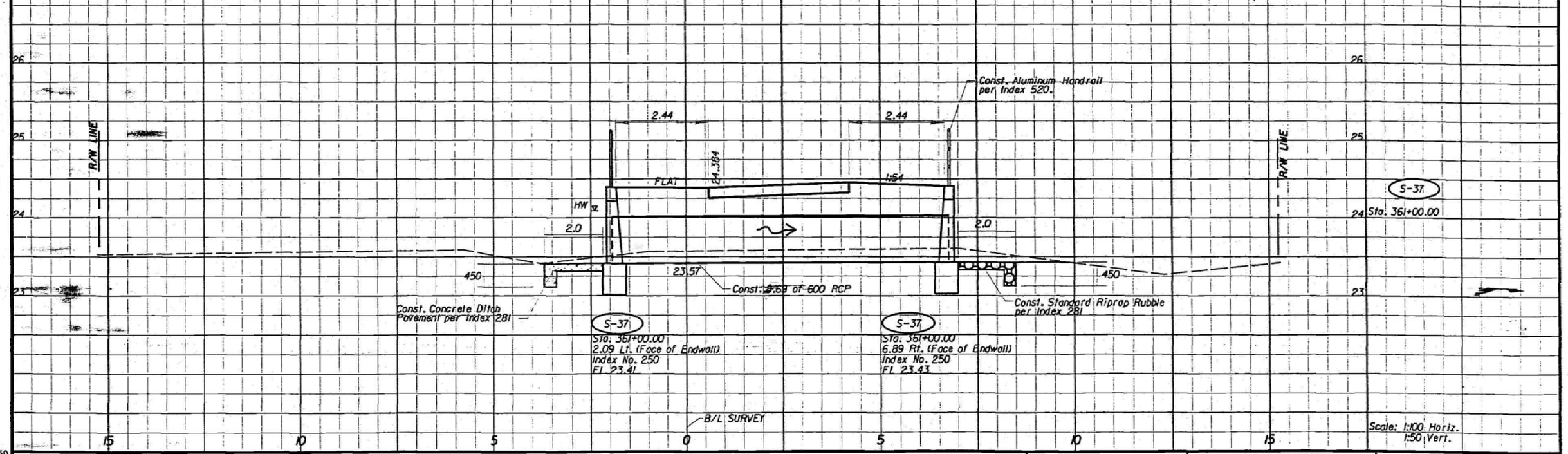
REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
Consulting Engineers - Surveyors

DRAINAGE STRUCTURES

STATE PROJ. NO.	SHEET NO.
72000-3614	96



Scale: 1:100 Horiz.
1:50 Vert.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

LOCHRANE ENGINEERING, INC.
Consulting Engineers • Surveyors

DRAINAGE STRUCTURES

DRSTRD06

APPENDIX E

EXISTING CONDITION DRAINAGE MAPS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

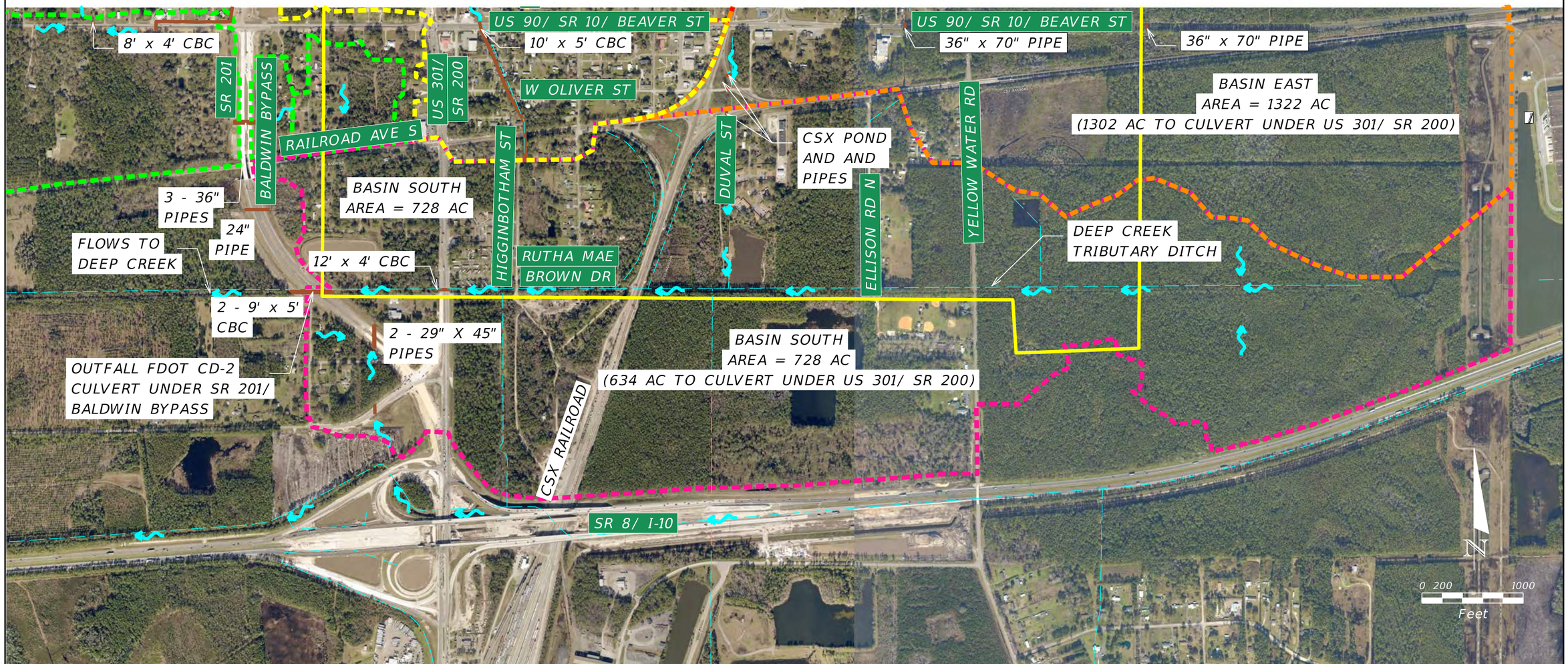
ETM VISION • EXPERIENCE • RESULTS
England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
Registry - 2584 LC - 0000316
MICHELLE ANTONIA DONNELLY, P.E. Lic. No. NUMBER 66100

TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

EXISTING CONDITIONS DRAINAGE MAP

SHEET NO. 1



REVISIONS			
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TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

EXISTING CONDITIONS DRAINAGE MAP

SHEET NO. 2

APPENDIX F

PRIORITY ISSUE MAPS

OUTFALL FDOT CD-9A/9B/9C
CULVERT UNDER SR 201/
BALDWIN BYPASS

BALDWIN BAY

N

0 200 1000
Feet

4 - 34" x 53"
PIPES

2 - 8' x 4'
CBC

OUTFALL FDOT CD-6
CULVERT UNDER SR 201/
BALDWIN BYPASS

3- 9' x 7'
CBC

2 - 30"
PIPES

JACKSONVILLE-BALDWIN
RAIL TRAIL

3 - 48"
PIPES

3RD ST W

2 - 36"
PIPES

ISSUE #3
24" PIPE

2ND ST W

CENTER ST N

US 301/ SR 200

24" PIPES

PALMETTO AVE

ISSUE #5
24" PIPE

LAFAYETTE ST

2 - 24"
PIPES

ISSUE #4
15" PIPE (W)
24" PIPE (C)
30" PIPE (E)

24" PIPE

OSCAR RD

SR 201

BALDWIN BYPASS

ISSUE #2
10' x 5' CBC

ORANGE AVE

GOLD ST

US 90/ SR 10/ BEAVER ST

US 90/ SR 10/ BEAVER ST

36" x 70" PIPE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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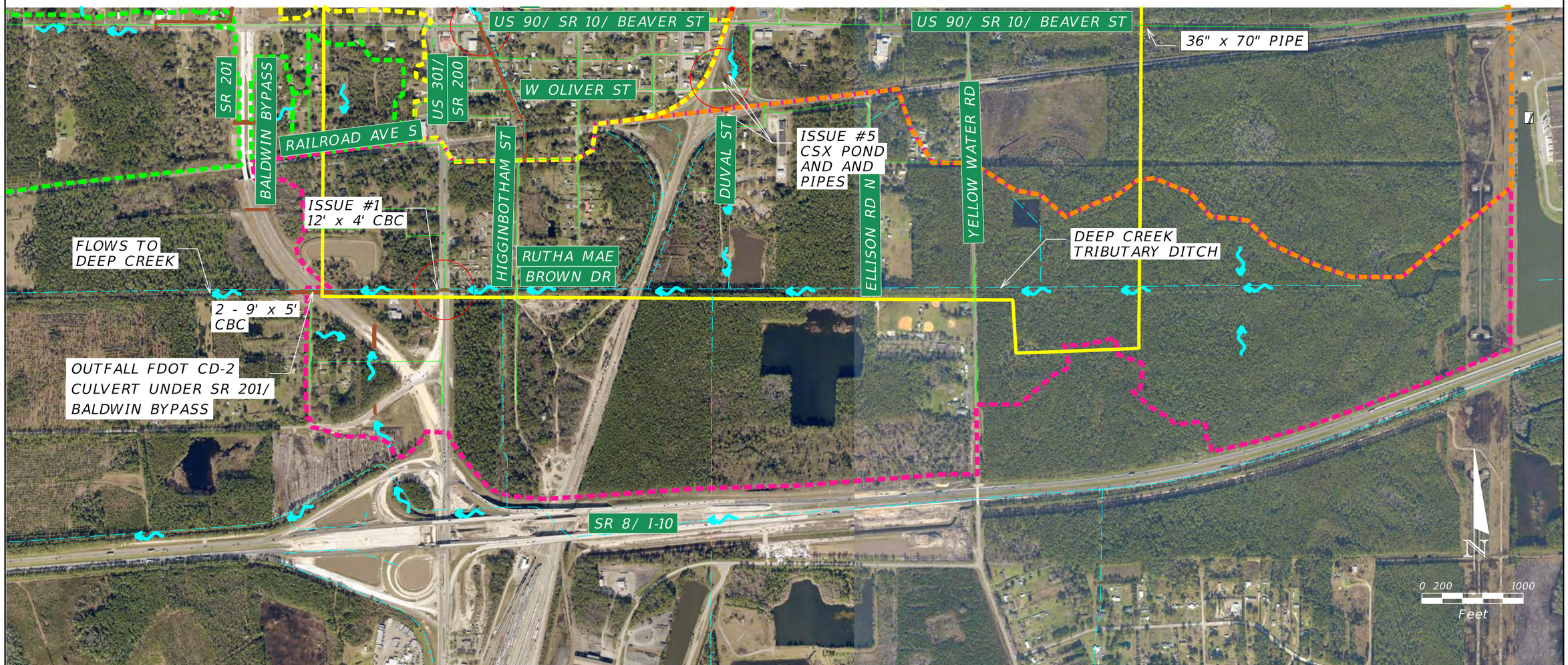
TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY DRAINAGE ISSUES

SHEET NO. 1



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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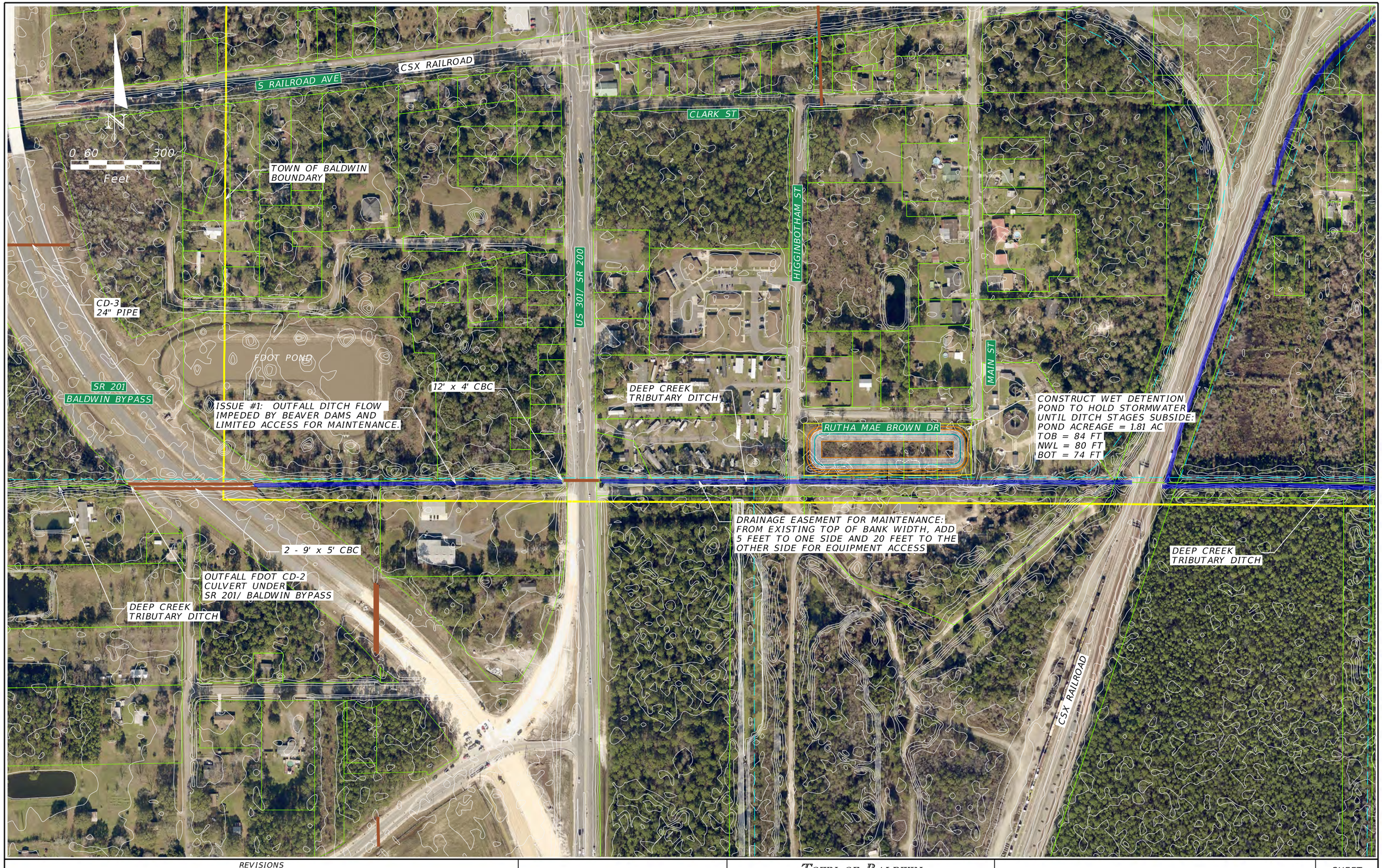
TOWN OF BALDWIN STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY DRAINAGE ISSUES

SHEET NO. 2



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ETM VISION • EXPERIENCE • RESULTS
England-Thims & Miller, Inc.
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TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY ISSUE #1

SHEET NO. 1

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

England-Thims & Miller, Inc.
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TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY ISSUE #1

SHEET NO. 2

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ETM
VISION • EXPERIENCE • RESULTS
England-Thims & Miller, Inc.
14775 Old St. Augustine Road
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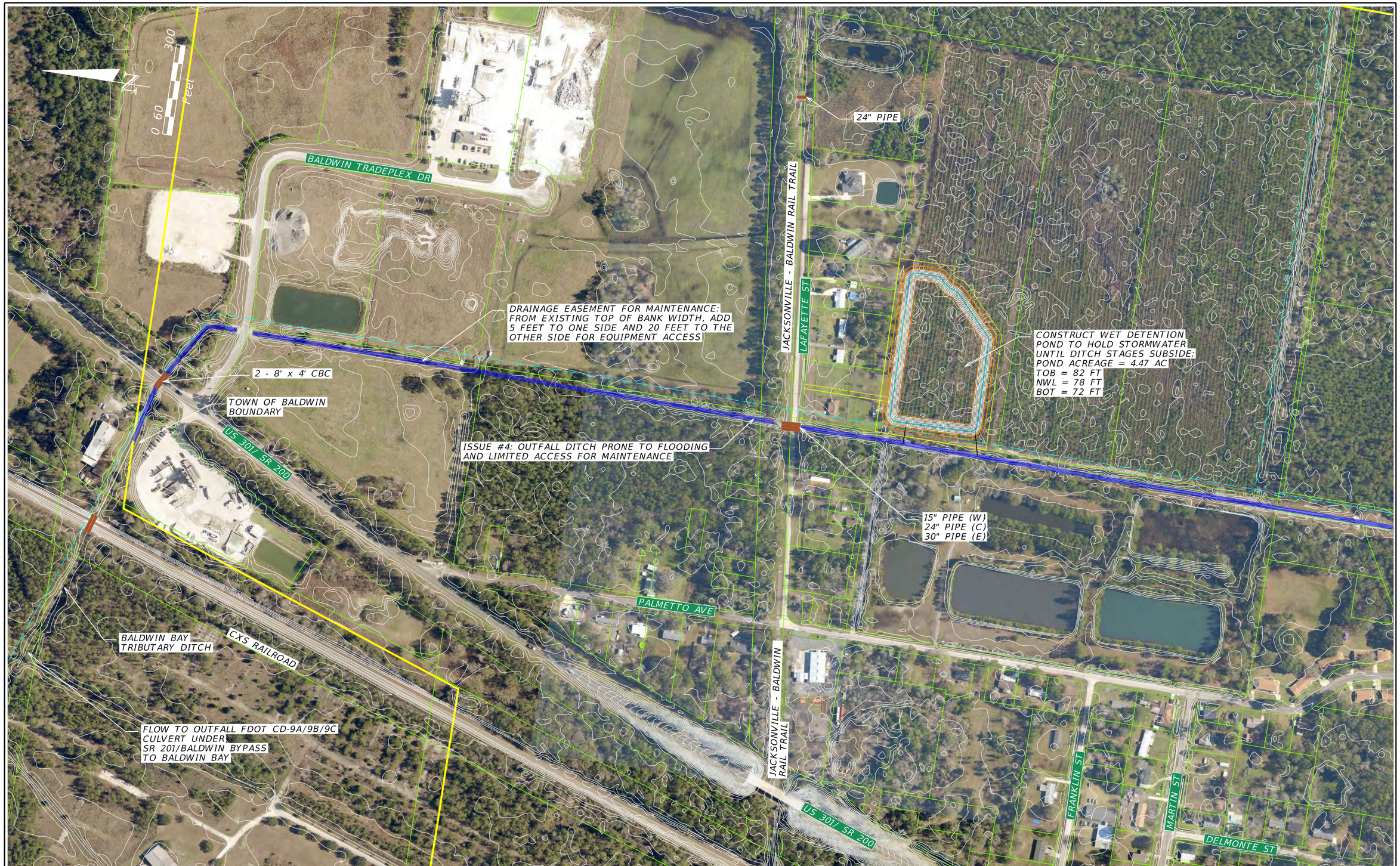
TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY ISSUES #2 & 3

SHEET NO. 1



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ETM
VISION • EXPERIENCE • RESULTS
England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
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TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY ISSUE #4

SHEET NO. 1

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
Registry - 2584 LC - 0000316
VISION • EXPERIENCE • RESULTS
MICHELLE ANTONIA DONNELLY, P.E. Lic. No. NUMBER 66100

TOWN OF BALDWIN
STORMWATER STUDY

DATE	COUNTY	PROJECT NO.
JUNE 2022	DUVAL	20-330-02

PRIORITY ISSUE #5

SHEET NO. 1

APPENDIX G

OPINION OF PROBABLE COST WORKSHEETS

Town of Baldwin Stormwater Study - Drainage Easement Alternatives and Parcel Ownership

Ditch/ Drainage Easement Information						JAX GIS Duval Property Information							Opinion of Probable Cost
Ditch Location/ Description/ Outfall	Priority Issue #	Length (ft)	Approx. Top Width (TW) (ft)	Drainage Easement Required (sf)	Drainage Easement Required (ac)	Parcel #	Parcel Ownership	Property Address	Parcel Acreage	2022 In Progress/ Just (Market) Value	Price per Acre	20% of Just (Market) Value	Approximate Cost for Easement Acquisition*
Ditch to Outfall FDOT CD-2/ East-West Ditch Along Southern Town Boundary	1	7660	54	413,640	9.5	000606 0050	Charles W Bostwick Revocable Trust	N/A	46.68	$47,580.00	$1,019.28		$1,411,113.19
						000886 0010	A 880 US HWY 301 LLC	880 US 301, Baldwin, FL	4.58	$800,800.00	$174,847.16		
						000875 0100	Ernie L Crawford	0 Canal St, Baldwin, FL	1.27	$12,285.00		$2,457.00	
Ditch from US 90/ SR 10 to Outfall FDOT CD-6/ East-West Ditch Along JAX-Baldwin RT	2	2720	44	119,680	2.7	000409 0000	Joshua Phillip Braddock	124 Magnolia Ave, Baldwin, FL	0.45	$140,533.00		$28,106.60	$157,474.80
						000413 0000	Joyce F Braddock Living Trust	0 Magnolia Ave, Baldwin, FL	0.52	$26,400.00		$5,280.00	
						000463 0000	Jason D Dempsey	202 Magnolia Ave, Baldwin, FL	0.33	$131,193.00		$26,238.60	
						000462 0000	Alexander Richard Glen Estate	230 Magnolia Ave, Baldwin, FL	0.58	$163,464.00		$32,692.80	
						000452 0000	Delvin L Johnson	274 Magnolia Ave, Baldwin, FL	0.83	$53,428.00		$10,685.60	
						000401 0000	Linda L Thompson	316 Magnolia Ave, Baldwin, FL	1.04	$163,488.00		$32,697.60	
						000453 0000	Laverne M Thomas	426 Magnolia Ave, Baldwin, FL	1.24	$183,917.00		$36,783.40	
						000156 0000	Baldwin Piney Grove Cemetery	0 First St, Baldwin, FL	2.3	$60,000.00	$26,086.96		
						000051 0000	Baldwin Piney Grove Cemetery	0 First St, Baldwin, FL	2.57	$36,300.00	$14,124.51		
						000456 0010	Charles W Agin ET AL	0 US 90 Hwy, Baldwin, FL	15.22	$398,629.00	$26,191.13		
						000052 0070	JMC Duval County Properties LLC	0 US 90 Hwy, Baldwin, FL	16.78	$223,242.00	$13,304.05		
East -West Ditch Along JAX-Baldwin RT to Outfall FDOT CD-6	3	3300	44	145,200	3.3	000158 0020	Oak Street Southern Wood LLC	0 Oak Ave, Baldwin, FL	54.51	$556,473.00	$10,208.64		$114,536.29
						000422 0000	Wilton M & Marian O Stokes Trust	0 Pecan Ave, Baldwin, FL	6.56	$101,550.00	$15,480.18		
						000456 0010	Charles W Agin ET AL	0 US 90 Hwy, Baldwin, FL	15.22	$398,629.00	$26,191.13		
						000052 0070	JMC Duval County Properties LLC	0 US 90 Hwy, Baldwin, FL	16.78	$223,242.00	$13,304.05		
						000087 1050	JMC Duval County Properties LLC	1095 US 90, Baldwin, FL	2.78	$9,835.00	$3,537.77		
South-North Ditch East of Martin Luther King Dr (Palmetto Ave) to Outfall FDOT CD-9A/ 9B/ 9C	4	4920	40	196,800	4.5	000663 0000	Charles W Bostwick Revocable Trust	0 Beaver St, Baldwin, FL	8.46	$8,460.00	$1,000.00		$357,111.01
						000450 0000	Stokes Trust	0 US 90 Hwy, Baldwin, FL	7.1	$160,398.00	$22,591.27		
						000448 0000	Stokes Trust	0 Broad St, Baldwin, FL	1.27	$44,540.00		$8,908.00	
						000165 0005	Luis Cauich Artemio Ruiz	615 MLK Jr Dr, Baldwin, FL	20.48	$183,224.00	$8,946.48		
						000103 0000	Michael J Liddell	822 Lafayette St, Baldwin, FL	1.06	$136,412.00		$27,282.40	
						000109 0000	Charles W Bostwick Revocable Trust	0 MLK Jr Dr, Baldwin, FL	13.97	$249,300.00	$17,845.38		
						000478 1300	Baldwin Tradeplex Inc	0 Tradeplex Way, Baldwin, FL	8.57	$456,291.00	$53,242.82		
						000478 0500	Trevor Daniel Townsend Irrevocable Trust	0 Tradeplex Way, Baldwin, FL	5.01	$217,800.00	$43,473.05		
						000090 0500	VCNA Prestige Florida Holdings LLC	900 US 301 Hwy, Baldwin, FL	3.95	$400,005.00	$101,267.09		
North-South Ditch along CSX RR R/W to Outfall FDOT CD-2	5	1590	33	52,470	1.2	000732 0000	Annie Pearl Sapp Estate	395 Duval St, Baldwin, FL	0.11	$61,404.00		$12,280.80	$174,917.41
						000732 0010	Osie L Edwards	415 Duval St, Baldwin, FL	0.23	$37,733.00		$7,546.60	
						000734 0010	Linda G Williams	425 Duval St, Baldwin, FL	0.23	$139,010.00		$27,802.00	
						000488 0000	Maer Homes LLC	0 Duval St, Baldwin, FL	5.41	$62,748.00	$11,598.52		
						000488 0020	Baldwin Groves Apts Inc	510 Duval Circle St, Baldwin, FL	7	$1,981,200.00	$283,028.57		
						000488 0010	Maer Homes LLC	0 Duval St, Baldwin, FL	7.01	$43,870.00	$6,258.20		

* Cost includes adjustment of market value by factor of 2.5 (for appraisals, legal descriptions, and attorney fees)

Town of Baldwin Stormwater Study - Pond Site Alternatives and Parcel Ownership

Pond Information				JAX GIS Duval Property Information							Opinion of Probable Cost
Outfall / Ditch Location/ Description	Priority Issue #	Pond Number/Detail		Parcel #	Parcel Ownership	Property Address	Acreage	Total Acreage Required	2022 In Progress/ Just (Market) Value	Price per Acre	20% of Just (Market) Value	Approximate Cost for Pond Acquisition*
Ditch to Outfall FDOT CD-2/ East-West Ditch Along Southern Town Boundary	1	SMF-1	Higginbotham St at Rutha Mae Brown Drive	000531 0150	Rufus Hal Ruis	0 Rutha Mae Brown Dr Baldwin, FL 32234	1.51	2.52	$36,604.00			$216,940.00
				000531 0170			0.5		$25,312.00			
				000531 0180			0.51		$24,860.00			
Ditch from US 90/ SR 10 to Outfall FDOT CD-6/ East-West Ditch Along JAX-Baldwin RT	2	SMF-2	South of 2nd Street W, near Mamie Agnes Jones Elementary	000472 0000	Kimberly K. Combs	N/A	0.25	1.50	$16,434.00			$206,085.00
				000471 0000		N/A	0.25		$13,200.00			
				000470 0000		N/A	0.25		$13,200.00			
				000469 0000		N/A	0.25		$13,200.00			
				000468 0000		N/A	0.25		$13,200.00			
				000467 0000		N/A	0.25		$13,200.00			
South-North Ditch East of Martin Luther King Dr (Palmetto Ave) to Outfall FDOT CD-9A/ 9B/ 9C	4	SMF-3	South of Lafayette Street	000481 0200	Jeffery Alan Robbins	0 Beaver St, Baldwin, FL	12.92	4.53	$86,115.00	$19,009.93		$226,267.50
				000478 0000	Bobby Singletary	0 Lafayette St, Baldwin, FL	0.59	0.10	$21,960.00		$4,392.00	

* Cost includes adjustment of market value by factor of 2.5 (for appraisals, legal descriptions, and attorney fees)