Noise Study Report

Addendum No. 2

Florida Department of Transportation

District One

SR 710 Widening and Extension

From US 441 to the L-63N Canal

Okeechobee County, Florida

FPID Number: 419344-3-32-01

June 2024

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

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Executive Summary

The Florida Department of Transportation (FDOT), District One, is preparing final design plans for the realignment and extension of SR 710 in Okeechobee County. The project includes a new four-lane divided roadway on new alignment from US 441 to SR 710 just west of the L-63N Canal Bridge and widening the existing two-lane SR 710 roadway from just west of the L-63N Canal Bridge to CR 714.

A Project Development and Environment (PD&E) study was completed for SR 710 and FDOT's Office of Environmental Management (OEM) granted Location and Design Concept Acceptance (LDCA) for the SR 710 PD&E Study on March 16, 2017. As part of the PD&E Study, a traffic noise study was conducted (Final Noise Study Report completed in 2012) that determined that no noise sensitive sites would be impacted by the proposed improvements. As part of the ongoing design phase, a more detailed traffic noise study was performed and documented in a Noise Study Report Addendum (NSRA) in 2019. This NSRA is an update to the 2019 NSRA due to proposed design changes. The proposed changes include approximately one mile of the SR 710 being realigned to avoid impacts to the Okeechobee Utility Authority wellfield.

This study was conducted based on the methodology described in the latest version of the FDOT PD&E Manual, the *Traffic Noise Modeling and Analysis Practitioners Handbook* and in accordance with *Title 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.* FHWA's Traffic Noise Model (TNM) Version 2.5 (February 2004) was used to predict traffic noise levels and to analyze the effectiveness of noise barriers, if warranted. The TNM 2.5 model Is FHWA's latest approved noise model and was the noise model that was used in both the 2012 PD&E and the 2019 NSRA.

This study found that design year (2051) traffic noise levels are predicted to range from 48.8 dB(A) to 62.3 dB(A) at exterior noise sensitive sites along the corridor. Therefore, design year traffic noise levels for the Build Alternative are not predicted to approach or exceed the Noise Abatement Criteria (NAC) at any noise sensitive sites along the project corridor.

1.0 Introduction

The Florida Department of Transportation (FDOT), District One, completed a Project Development and Environment (PD&E) study for SR 710 from US 441 in Okeechobee County to County Road (CR) 714 (SW Martin Highway) in Martin County (FPID# 419344-2-22-01). As part of the PD&E, a noise study was performed and documented in a Noise Study Report (NSR) completed in 2012. On March 16, 2017, the FDOT's Office of Environmental Management (OEM) granted Location and Design Concept Acceptance (LDCA) for the SR 710 PD&E study. As a commitment made during the 2012 PD&E study, a design-phase noise study was performed and documented in a Noise Study Report Addendum (NSRA) dated 2019. This current NSRA, prepared by RS&H (under contract with FDOT), is an update to the 2019 NSRA due to proposed design changes and to confirm the commitments made in the 2012 PD&E study NSR.

The current design concept differs from the previous concept (2019) in that approximately one mile of the new SR 710 is being realigned to avoid impacts to the Okeechobee Utility Authority wellfield. The proposed project improvements are described in **Section 1.1**. **Section 1.2** provides a summary of the results from the 2012 PD&E Noise study and the 2019 NSRA. **Section 1.3** provides the design changes made after the 2019 NSRA. **Section 1.4** provides insight into the alterations in noise regulations that have occurred since the completion of the PD&E study. The methodology and results of this noise study analysis are summarized in **Sections 2.0** and **3.0**, respectively.

1.1 Project Description

In order to accommodate future projected traffic volumes, improve safety and enhance the emergency evacuation capabilities of SR 710, the existing two-lane undivided arterial roadway is proposed to be improved to a four-lane divided roadway from SR 70 in Okeechobee County to CR 714 (SW Martin Highway) in Martin County, Florida. In addition, a new four-lane divided roadway extension of SR 710 is proposed from the vicinity of the current terminus at SR 70 to US 441 (SR 15 / South Parrott Avenue). The extension of SR 710 is proposed to improve mobility and connectivity within the regional transportation network and to provide for a multi-modal connection to the planned industrial park adjacent to Okeechobee County Airport. The design segment associated with this report extends from US 441 to the bridge over the L-63N Canal (located approximately one mile south of SR 70). The new extension will serve as a bypass route to address traffic congestion at the intersection of SR 70 and US 441 and will also help to reduce truck traffic through the City of Okeechobee.

The project begins with a new intersection on US 441 located approximately one mile north of the existing SR 70 and US 441 intersection. The new extension traverses southeasterly to connect with existing SR 710 at the L-63N Canal (see **Figure 3-1**). The total project length is approximately

3.864 miles. The SR 710 extension will include two lanes in each direction with curb along both the median and outside lanes, minor design modifications were added and are discussed in **Section 1.3**. The posted speed will be 45 mph. The posted speed will reduce to 40 mph near the new intersection at US 441. The SR 710 extension will include 7-foot bicycle lanes, a 6-foot sidewalk along the south side of the roadway, and a 10-foot shared use path along the north side of the roadway. The SR 710 extension will have new signals at the intersections with US 441, SR 70, and SE 40th Avenue. The proposed roadway alignment is depicted in **Figure 3-1**.

1.2 Summary of PD&E and 2019 Design Noise Study Results

As part of the 2012 PD&E study, a traffic noise study was conducted in accordance with FDOT's PD&E Manual and a NSR, dated March 2012, was completed. The 2012 PD&E and 2019 Noise Studies evaluated all noise sensitive sites along the proposed SR 710 alignment and predicted design year traffic noise levels. Noise sensitive land uses included the Okeechobee Health Care Center (Activity Category C of the Noise Abatement Criteria (NAC)) and multiple residential areas (Activity Category B of the NAC). The majority of the properties along the proposed alignment are undeveloped and are not considered noise sensitive.

1.2.1 Okeechobee Health Care Facility

The Okeechobee Health Care Center is located east of US 441 and north of the proposed SR 710 alignment. The PD&E and 2019 Noise Studies predicted design year noise levels associated with the project would not approach or exceed the NAC for Activity Category C at this location. Existing noise levels measured and reported in the PD&E and 2019 Noise Studies were compared and noise levels were not predicted to substantially increase above existing conditions (i.e.: increase more than 15 dB(A)). The representative sites used in the analysis are identified in **Figure 3-2**.

1.2.2 Residential Sites

There are several scattered and isolated residences, as well as small neighborhood communities, along the proposed SR 710 new alignment. None of the residences were predicted to approach or exceed the NAC for residential land use with the design year proposed conditions in the PD&E and 2019 Noise Studies. In addition, no residential sites were predicted to experience a substantial increase above existing conditions as a result of this project.

1.2.3 Noise Abatement Considerations

Noise barriers were not evaluated or recommended since no impacts were predicted for the noise sensitive sites within the project limits of the PD&E and 2019 Noise Studies. The PD&E and 2019 Noise Studies stated that there was no further commitment regarding the consideration of noise barriers during the design phase of the project.

1.3 Design Improvements

The current concept proposed differs from the prior 2019 concept in that approximately one mile of the new SR 710 is being realigned to avoid impacts to the Okeechobee Utility Authority wellfield. Starting approximately 150 feet east of Taylor Creek, the centerline of the road shifts north of the prior alignment, before converging with the original alignment east of the proposed Pond 2 site. There is no change in the proposed roadway typical section. The maximum difference between the two alignments is 275 feet, occurring near Station 536+00. For a comparison of the original and realigned roadway design see **Figure 3-1**.

1.4 Changes in Noise Regulations

Since the completion of the 2012 PD&E NSR, the FDOT has updated the PD&E Manual to accommodate the changes related to FHWA's National Environmental Policy Act (NEPA) delegation to FDOT, and has an effective date of July 1, 2023. However, the basic policies and procedures used in the identification of noise impacts remain the same. Therefore, there have not been any changes to FDOT's or FHWA's policies or regulations that would change the number of impacted residences or the consideration of noise abatement measures for any sites impacted by design year traffic noise from the proposed improvements to SR 710.

2.0 Methodology

This study was conducted based on the methodology described in the latest version of the FDOT PD&E Manual, the *Traffic Noise Modeling and Analysis Practitioners Handbook*, and in accordance with *Title 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The noise study involved the following procedures to determine changes in noise impacts along the project corridor and to evaluate the feasibility and reasonableness of warranted noise abatement measures at impacted noise sensitive sites:

- A review of the 2012 PD&E Noise Study Report to identify all potentially impacted noise sensitive sites and any commitments concerning noise abatement within the project limits (**Section 1.2**);
- A review of the current project design to determine if any major changes in the proposed project occurred since the date of the approved environmental document (**Section 1.3**);
- A review of all state and federal requirements related to the traffic noise impact assessment (**Section 1.4**);
- A review of the existing land use to determine if additional noise sensitive sites have been built or permitted since the completion of the 2012 PD&E noise study between when the NSR was completed (i.e., March 2012) and the Date of Public Knowledge (DOPK) of March 16, 2017 (see **Section 3.1**); and
- Prediction of future design year traffic noise levels, assessment of traffic noise impacts and, consideration of abatement measures, if warranted (**Section 3.1**).

The following sections describe the noise metrics, traffic noise model, traffic data, and the noise abatement criteria used in this noise analysis.

2.1 Noise Metrics

Noise levels documented in this report represent the hourly equivalent sound level [Leq(h)]. Leq(h) is the steady-state sound level, which contains the same amount of acoustic energy as the actual time-varying sound level over a 1-hour period. Leq(h) is measured in A-weighted decibels [dB(A)], which closely approximate the human frequency response. Sound levels of typical noise sources and environments are provided in **Table 2-1** as a frame of reference.

The public reaction to noise levels is usually a function of location (i.e., urban, suburban, or rural), time of day, fluctuations, duration, and the individual listening. Under normal conditions, a change in noise level of at least 3 dB(A) is required for the average person to perceive a difference. Examples of the magnitude of individual change in either traffic volume, vehicle speed, or distance from the noise source to the receptor, necessary to result in a 3 dB(A) increase include:

- A doubling in hourly traffic volumes with no change in speed;
- An increase in vehicular speed of 15 miles per hour (mph); or

- A reduction in the distance by half between the receptor and the noise source (e.g., vehicle traffic).

Table 2-1 Sound Levels of Typical Noise Sources and Environments

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL dB(A)	COMMON INDOOR ACTIVITIES
	---110---	Rock Band
Jet Fly-over at 1000 ft		
	---100---	
Gas Lawn Mower at 3 ft		
	---90---	
Diesel Truck at 50 ft, at 50 mph		Food Blender at 1 m (3 ft)
	---80---	Garbage Disposal at 1 m (3 ft)
Noise Urban Area (Daytime)		
Gas Lawn Mower at 100 ft	---70---	Vacuum Cleaner at 10 ft
Commercial Area		Normal Speech at 3 ft
Heavy Traffic at 300 ft	---60---	
		Large Business Office
Quiet Urban Daytime	---50---	Dishwasher Next Room
Quiet Urban Nighttime	---40---	Theater, Large Conference Room
Quiet Suburban Nighttime		(Background)
	---30---	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall
	---20---	(Background)
	---10---	
Lowest Threshold of Human Hearing	---0---	
		Lowest Threshold of Human Hearing

Source: California Dept. of Transportation Technical Noise Supplement, Oct. 1998, Page 18.

2.1.1 Traffic Noise Modeling and Traffic Data

FHWA's Traffic Noise Model (TNM) Version 2.5 (February 2004) was used to predict future traffic noise levels and to analyze the effectiveness of noise barriers. The TNM 2.5 model was also used in the 2012 PD&E noise study and the 2019 NSRA. This model estimates the acoustic intensity at noise sensitive receptor sites from a series of roadway segments (the source). Model-predicted noise levels are influenced by several factors, such as vehicle speed and distribution of vehicle types. Noise levels are also affected by characteristics of the source-to-receptor site path, including the effects of intervening barriers, structures (houses, buildings, etc.), ground surface type (hard or soft), and topography.

Noise receptor sites adjacent to the proposed SR 710 alignment, representing the noise sensitive land uses, were used as inputs to the TNM 2.5 to predict noise levels associated with the future

design year (2051) conditions. Traffic noise levels were predicted at the edge of the residence (or other noise sensitive site) closest to the nearest primary roadway. The horizontal and vertical roadway geometry and ground elevations used in the TNM were based on the latest proposed design plans and cross sections as well as available design survey and LiDAR data. The relevant pages from the design plans (i.e., plan view sheets) are included in **Appendix B**.

No commitment was made to reevaluate noise abatement measures in the PD&E and 2019 Noise Studies; only to evaluate noise sensitive land uses permitted between the Final Noise Study Report and the Date of Public Knowledge (DOPK). No additional qualifying noise sensitive sites were identified in the 2019 NSRA. Per the FDOT PD&E Manual, the FDOT is not responsible for providing noise abatement for noise sensitive land uses permitted for construction after the DOPK.

The peak hour traffic volumes and percentage of cars, medium trucks, heavy trucks, buses, and motorcycles for the future design year build conditions, as well as the level of service (LOS) C volumes for SR 710 Extension and US 441 are included in **Appendix A** from the 2019 noise study. Additionally, for the SR 710 segment that has been realigned, an updated traffic data set has been developed using new design year forecasts and current LOS C volumes from FDOT's 2023 Multimodal Quality/Level of Service Handbook's generalized service volume tables. The updated traffic data is also provided in **Appendix A**. The traffic volumes used to predict noise levels included the least of either the traffic capacity of the roadway at LOS C or the projected traffic demand of the roadway. These traffic volumes can be expected to produce the noisiest traffic conditions likely to occur during the design year.

2.2 Noise Abatement Criteria

Table 2-2 presents the NAC for land use categories established by the FHWA. Maximum noise threshold levels, or criteria levels, have been established for five of the seven activity categories. These criteria determine when an impact occurs and when consideration of noise abatement is required. Noise abatement measures must be considered when predicted noise levels approach or exceed the NAC levels or when a substantial noise increase occurs. A substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 dB(A) or more as a result of the transportation improvement project. The FDOT defines "approach" as within 1.0 dB(A) of the FHWA criteria.

Noise sensitive receptor sites include properties where frequent exterior human use occurs and where a lowered noise level would be of benefit. This includes residential land use (Activity Category B); a variety of nonresidential land uses not specifically covered in Category A or B including parks and recreational areas, medical facilities, schools, and places of worship (Activity Category C); and commercial and developed properties including offices, hotels, and restaurants with exterior areas of use (Activity Category E). Noise sensitive sites also include interior use areas

where no exterior activities occur for facilities such as auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, recording studios, schools, and television studios (Activity Category D). Categories F and G, which include commercial and developed properties without exterior areas of use, do not have noise abatement criteria levels. Category F includes land uses such as industrial and retail facilities that are not considered noise sensitive. Category G includes undeveloped lands.

The noise sensitive areas being evaluated for noise impacts fall within Activity Category B, C and D. As described in the following section, noise abatement measures, in the form of noise barriers, must be considered when predicted design year noise levels approach or exceed this NAC level.

Table 2-2 Noise Abatement Criteria [Hourly A-Weighted Sound Level-decibels (dB(A))]

Activity Category	Activity Leq(h)[1]		Evaluation Location	Description of Activity Category
	FHWA	FDOT		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	66	Exterior	Residential
C[2]	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[2]	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	_	_	_	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	_	_	_	Undeveloped lands that are not permitted.

(Based on Table 1 of 23 CFR Part 772)

[1] The Leq(h) Activity Criteria values are for impact determination only, and are not a design standard for noise abatement measures.

[2] Includes undeveloped lands permitted for this activity category.

Note: FDOT defines that a substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, the requirement for abatement consideration will be followed.

2.3 Noise Abatement Measures

Per federal regulation (23 CFR 772) and FDOT's *PD&E Manual*, when traffic noise associated with a proposed project is predicted to approach [i.e., 1 dB(A)] or exceed the NAC at a noise sensitive site, noise abatement must be considered. The most common and effective noise abatement measure is the construction of a noise barrier. Noise barriers reduce noise by blocking the sound path between a roadway and a noise sensitive area. To be effective, noise barriers must be long, continuous (i.e., with no intermittent openings), and have sufficient height to block the path between the noise source and the receptor site. Evaluated noise abatement measures, in the form of a noise barrier, must be considered reasonable and feasible to be recommended for design and construction.

For noise abatement measures to be recommended for further consideration in the design phase of the project, they must be determined to be both feasible and reasonable. A range of factors is used to evaluate the feasibility and reasonableness of noise abatement measures. Feasibility deals with engineering considerations, including the ability to construct a noise barrier using standard construction methods and techniques as well as the ability of the noise barrier to provide a reduction of at least 5 dB(A) to the impacted receptor sites. For example, given the topography of a particular location, can the minimum noise reduction [5 dB(A)] be achieved given certain access, drainage, utility, safety, and maintenance requirements? In addition, for a noise barrier to be considered acoustically feasible, at least two impacted receptor sites must achieve at least a 5 dB(A) reduction.

Once a noise barrier is determined to be feasible, the reasonableness of a noise barrier is evaluated. Reasonableness implies that common sense and good judgment were applied in a decision related to noise abatement. The following three reasonable factors must be collectively achieved in order for the noise barrier to be deemed reasonable: the cost effectiveness of the noise barrier, the achievement of the noise reduction design goal, and the consideration of the viewpoints of the benefited property owners and residents. To be deemed reasonable, the noise barrier needs to be below FDOT's reasonable cost criterion which is described below, must attain FDOT's noise reduction design goal of 7 dB(A) at one or more impacted receptor sites, and be supported by a majority of the benefited receptor sites.

When determining the cost reasonableness of a conceptual noise barrier design for a residential area, $42,000 per benefited receptor is looked upon as the limit using the standard construction cost of $30.00 per square foot. A benefited receptor site is defined as a noise sensitive site that will obtain a minimum of 5.0 dB(A) of noise reduction as a result of the construction of a noise barrier regardless of whether or not they are identified as impacted. Only benefited receptor sites are included in the calculation of reasonable cost for a noise barrier.

If the noise abatement measure has been determined to be reasonable and feasible, the viewpoint of the impacted and benefited property owners must be considered. During the Final Design phase of the project, a more detailed process is implemented to include noise abatement workshops and/or public surveys, to determine the wishes of the benefited receptor sites. Each benefited receptor, including both the owner and resident, is given the opportunity to provide input regarding their desires to have the proposed noise abatement measure constructed. The goal of this process is to obtain a response for or against the noise barrier from a majority of benefited receptors (property owners and tenants) that respond to the survey. If not supported by a majority of the survey respondents, a noise barrier or abatement measure will not be deemed reasonable.

3.0 Traffic Noise Analysis

3.1 Predicted Noise Levels and Abatement Analysis

The following section describes the traffic noise analysis performed and the potential impacts associated with the proposed design changes and to fulfill the prior commitments related to 1) the evaluation of new noise sensitive land uses that might be impacted by design year (2051) traffic noise associated with the project, as well as 2) the re-evaluation of previously evaluated noise sensitive land uses that might be potentially impacted by traffic noise due to design changes to the horizontal and vertical geometry of the project. In addition, it describes the analysis performed to determine if land uses and traffic noise impacts have changed along the project corridor and to determine if any additional locations warrant consideration of noise abatement measures.

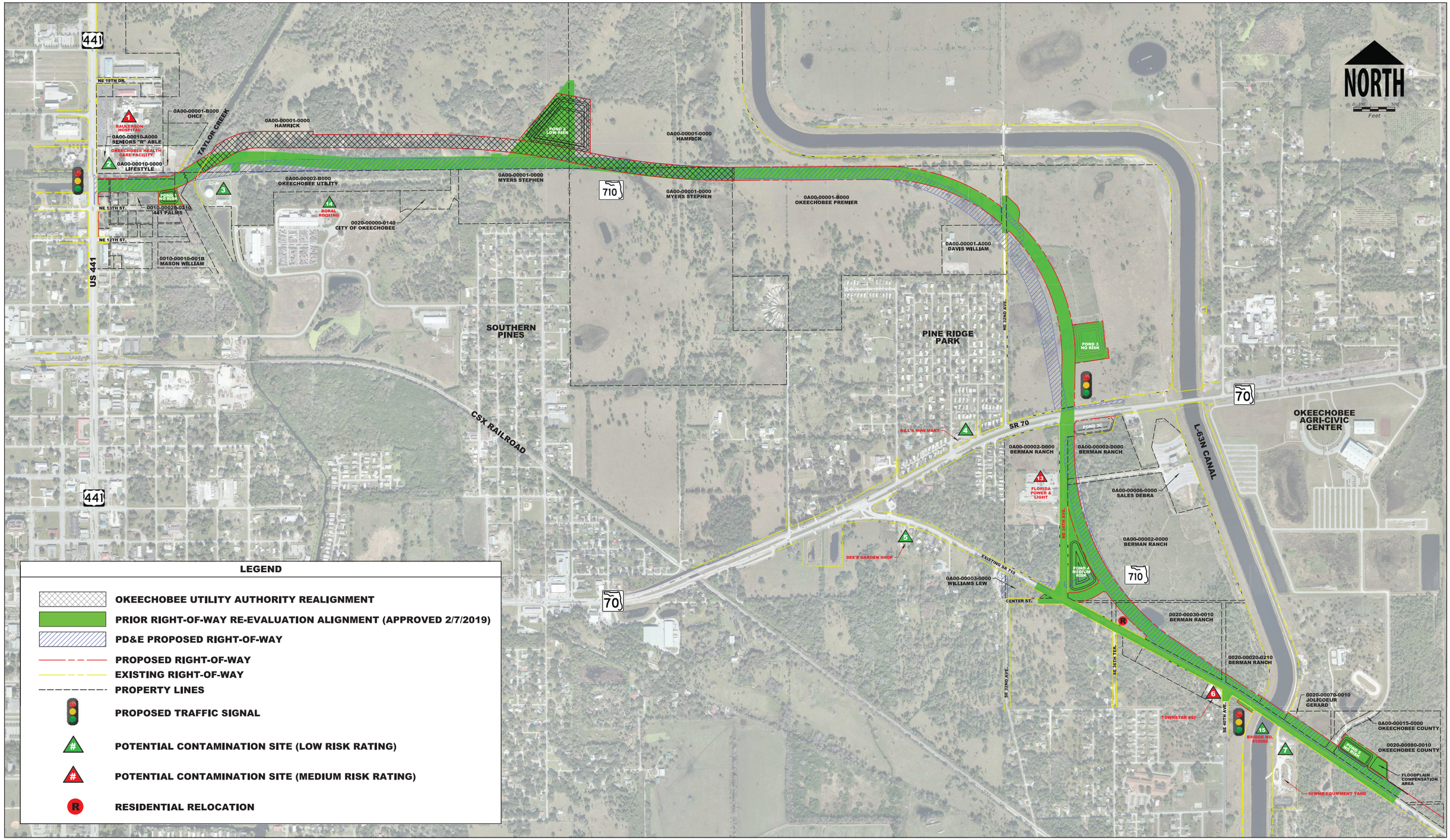
A review of the project area did not identify any additional noise sensitive sites from the 2019 Design Noise Study. A field review was conducted in January 2018 to identify all noise sensitive sites located along the corridor. Additionally, a search for Okeechobee County building permits was conducted for properties along the corridor to identify any new permitted developments that are potentially noise sensitive. No new building permits were issued after the DOPK, except for the Okeechobee Health Care Facility (see **Figure 3-2**). This facility appeared to be under construction for expansion during the most recent field review, in January 2018. Since the permit was issued prior to the DOPK, this facility was assessed for noise impacts as part of the 2019 design phase traffic noise study. Site plans for the facility expansion are provided in **Appendix C**. Multiple outdoor seating areas were identified at the Okeechobee Health Care Facility and were evaluated as noise sensitive receptor sites in this study. For informational purposes only, interior noise levels were also evaluated. FDOT policy does not require the assessment of interior noise levels when exterior noise levels are evaluated.

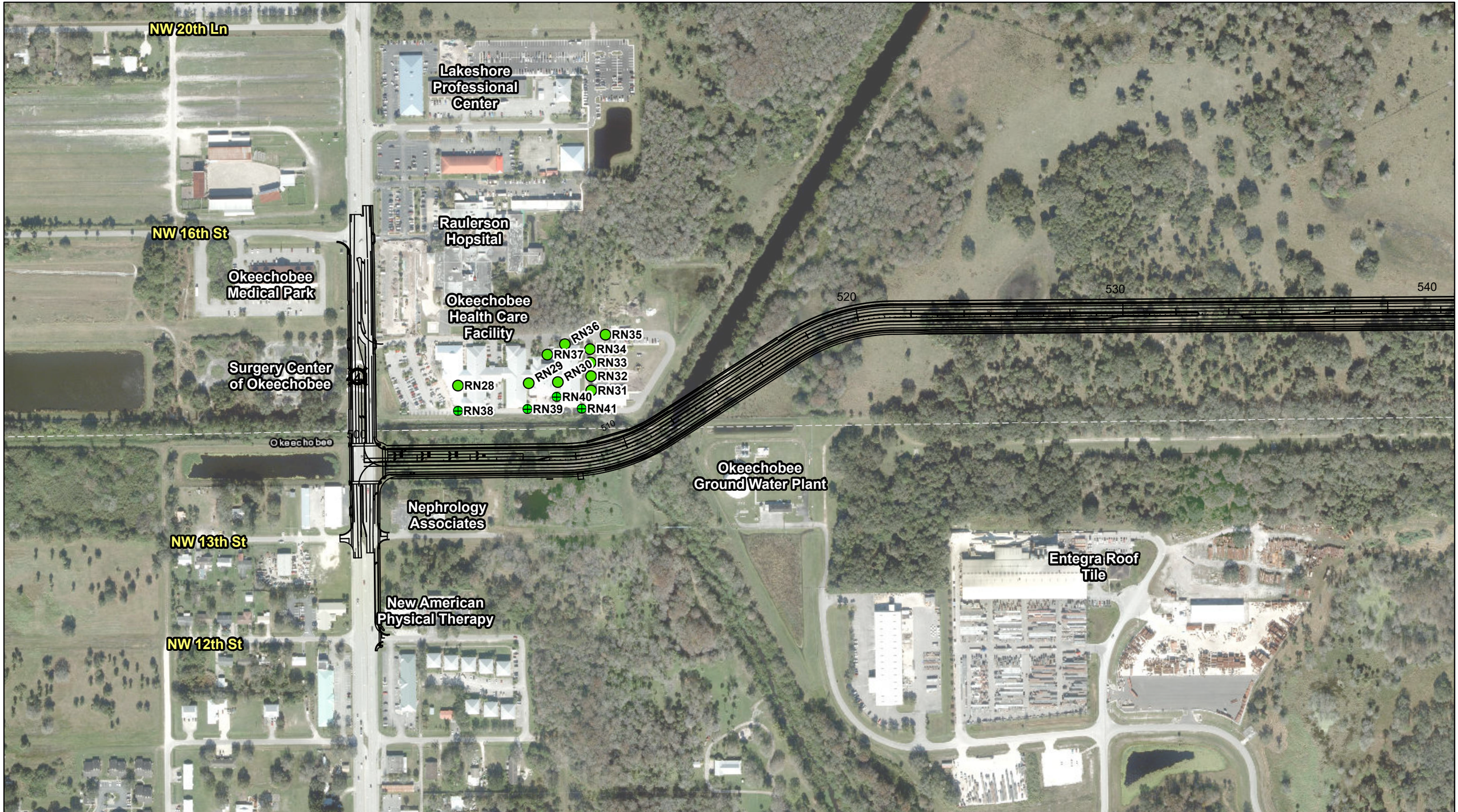
The results table, **Table 3-1**, identifies the representative noise sensitive sites assessed for traffic noise impacts, the type and number of noise sensitive sites represented, and general location. Station numbers are also provided in **Table 3-1** to facilitate locating receptor sites on **Figure 3-2**. **Table 3-1** includes the predicted future design year (2051) noise levels associated with the latest design concept. Each representative receptor site was given a unique designation (e.g., RN28) to represent the name of the noise sensitive area/site in which the receptor is located. The same noise sensitive sites evaluated in the 2019 Noise Studies were also evaluated in the latest design phase.

With the latest design concept, the predicted design year (2051) noise levels at the Okeechobee Health Care Facility exterior areas of use range from 48.8 dB(A) to 60.0 dB(A), below the NAC of 66 dB(A) for Activity Category C; therefore, are not considered impacted by the project and do

not require the consideration of noise abatement measures. Additionally, consistent with the PD&E phase noise study results, no sites are predicted to experience a substantial increase in noise levels (i.e.: increase more than 15 dB(A) over existing) as a result of the project. The predicted interior noise levels at the facility range from 34.1 dB(A) to 38.3 dB(A), below the NAC of 51 dB(A) for Activity Category D; therefore, are not considered impacted by the project and do not require the consideration of noise abatement measures. The predicted design year (2051) noise levels at the remaining single-family residences along the project corridor range from 49.0 dB(A) to 62.3 dB(A), below the NAC of 66.0 dB(A) for Activity Category B; therefore, are not considered impacted by the project and do not require the consideration of noise abatement measures.

Figure 3-1 Design Comparison Map





SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

Figure 3-2:
Noise Evaluation Map
Sheet 1

FDOT

SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

Figure 3-2:
Noise Evaluation Map
Sheet 2

SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

Figure 3-2:
Noise Evaluation Map
Sheet 3

SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

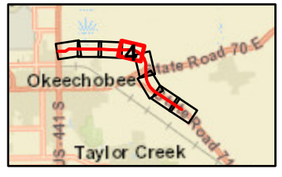


Figure 3-2:
Noise Evaluation Map
Sheet 4

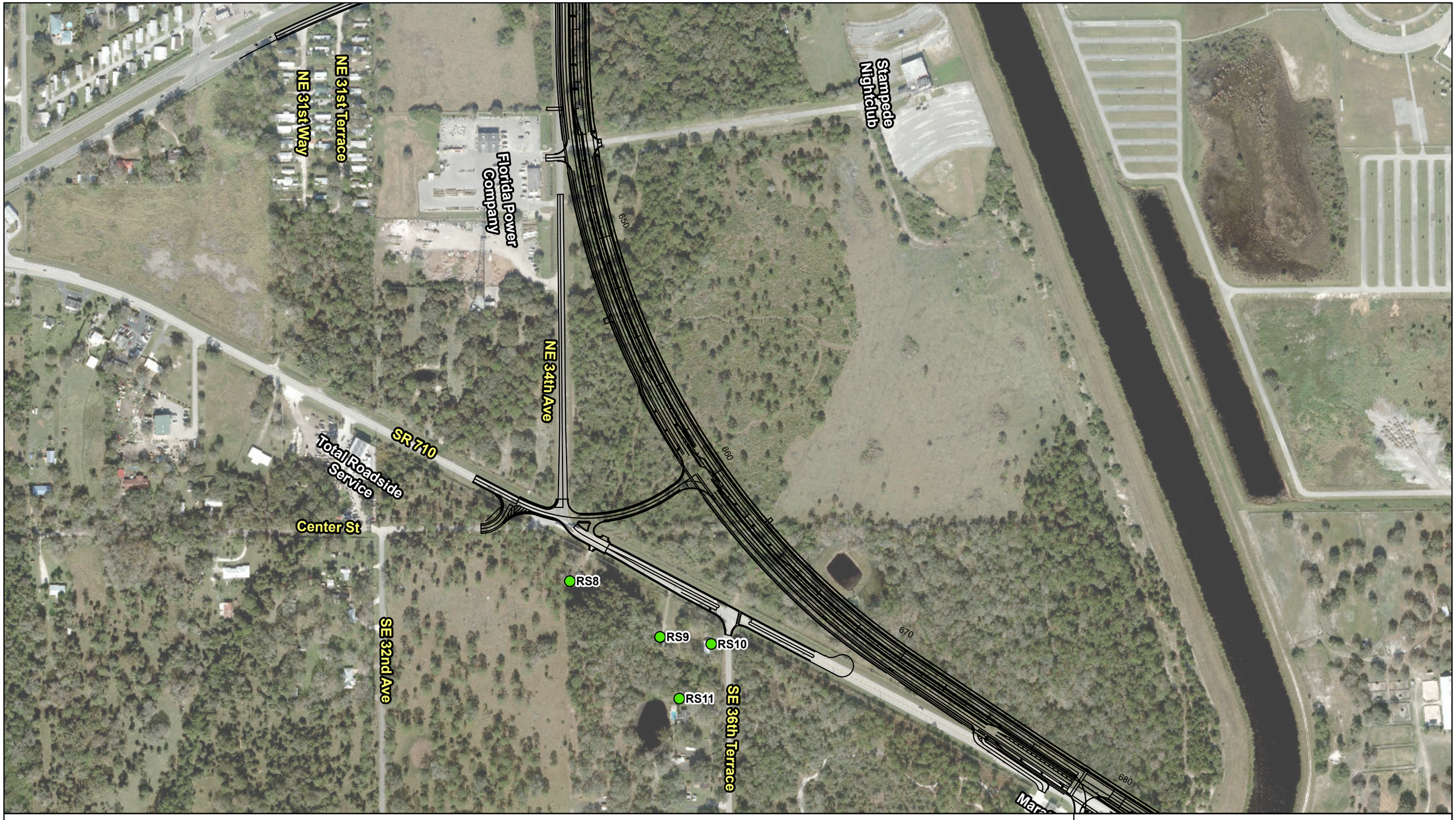
SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

Figure 3-2:
Noise Evaluation Map
Sheet 5



SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

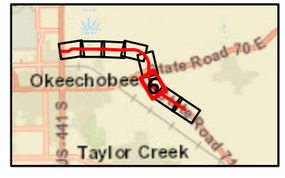
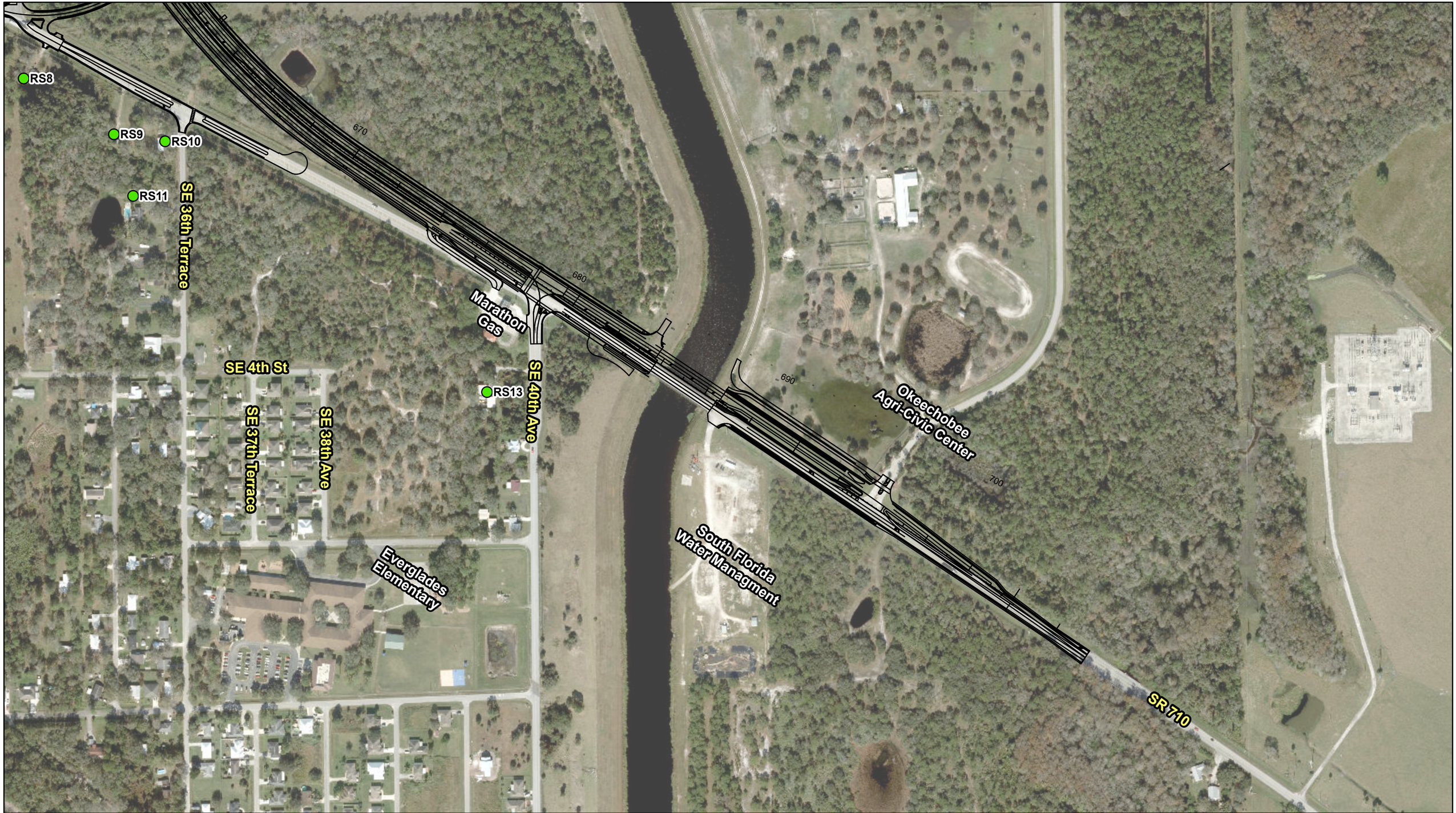


Figure 3-2:
Noise Evaluation Map
Sheet 6



SR 710 Extension
Okeechobee County, Florida
Project Number 41934433201
Date: October 2023

Legend

- Exterior Noise Receptor
- Interior Noise Receptor

0 240 480 Feet

Figure 3-2:
Noise Evaluation Map
Sheet 7

Table 3-1 Representative Noise Sensitive Receptor Sites and Noise Impact Analysis Results - Based on Revised 2023 Design Concept

Name of Noise Sensitive Site/Area [Noise Abatement Activity Category - FDOT's Noise Abatement Criteria Category dB(A)]	Representative Noise Receptor Site Designation	Number of Noise Sensitive Sites Represented (Description)	Approximate Station Number	TNM Predicted Design Year (2051) Noise Levels dB(A) with Proposed Roadway Design Concept	Noise Abatement Criteria Status
Okeechobee Health Care Facility - [NAC C - 66 dB(A)]	RN28	1 (Medical Facility - Outdoor Area of Use)	503+00	60.0	Below
	RN29	1 (Medical Facility - Outdoor Area of Use)	506+00	50.2	Below
	RN30	1 (Medical Facility - Outdoor Area of Use)	509+00	51.6	Below
	RN31	1 (Medical Facility - Outdoor Area of Use)	509+00	58.5	Below
	RN32	1 (Medical Facility - Outdoor Area of Use)	509+00	56.8	Below
	RN33	1 (Medical Facility - Outdoor Area of Use)	509+00	55.6	Below
	RN34	1 (Medical Facility - Outdoor Area of Use)	509+00	54.7	Below
	RN35	1 (Medical Facility - Outdoor Area of Use)	510+00	54.7	Below
	RN36	1 (Medical Facility - Outdoor Area of Use)	508+00	48.8	Below
	RN37	1 (Medical Facility - Outdoor Area of Use)	507+00	49.5	Below
			Minimum	48.8	---
			Maximum	60.0	---
			Average	54.0	---
		Total Number of Receptor Sites Equal to or Greater than 66.0 dB(A)		0	---
Okeechobee Health Care Facility - [NAC D - 51 dB(A)]	RN38	1 (Medical Facility -Interior)	507+00	38.3	Below
	RN39	1 (Medical Facility -Interior)	509+00	37.0	Below
	RN40	1 (Medical Facility -Interior)	508+00	34.1	Below
	RN41	1 (Medical Facility -Interior)	508+00	36.8	Below
			Minimum	34.1	---
			Maximum	38.3	---
			Average	36.6	---
		Total Number of Receptor Sites Equal to or Greater than 51.0 dB(A)		0	---
Single Family Residences - [NAC B - 66 dB(A)]	RS36	1 (Single Family Residential)	558+00	49.0	Below
	RS37	1 (Single Family Residential)	607+00	55.7	Below
	RS38	1 (Single Family Residential)	618+00	53.9	Below
	RS39	1 (Single Family Residential)	622+00	52.9	Below
	RS55	1 (Single Family Residential)	618+00	53.0	Below
	RS8	1 (Single Family Residential)	660+00	55.4	Below
	RS9	1 (Single Family Residential)	663+00	56.9	Below
	RS10	1 (Single Family Residential)	665+00	59.7	Below
	RS11	1 (Single Family Residential)	665+00	54.7	Below
	RS13	1 (Single Family Residential)	679+00	62.3	Below
			Minimum	49.0	---
			Maximum	62.3	---
			Average	55.4	---
		Total Number of Receptor Sites Equal to or Greater than 66.0 dB(A)		0	---

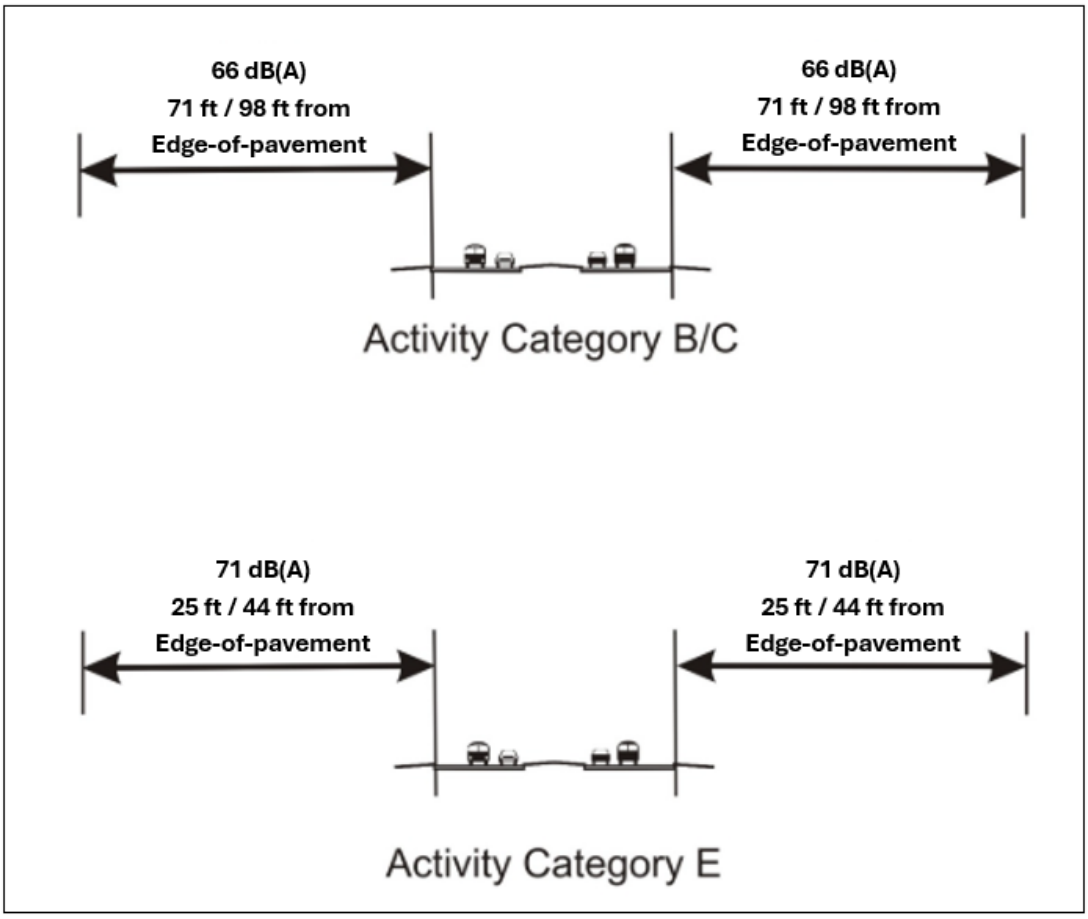
X:\P\Noise_Studies\SR 710\Report\Tables\[Table_3-1_Results table_May 2024.xlsx]Table3-1_ReceiverTable

3.2 Noise Impact Contours

To aid in promoting land use compatibility, generalized future noise impact contours for the properties in the immediate vicinity of the project have been developed for NAC B/C and E (i.e., residential, other sensitive land uses, and sensitive commercial land uses, respectively). Updated noise impact contours were developed since the proposed typical section was modified after the PD&E noise analysis. These contours represent the approximate distance from the edge of the nearest proposed travel lane of SR 710 to the limits of the area predicted to approach [i.e., within 1 dB(A)] or exceed the NAC in the design year 2051. These contours do not consider any shielding of noise provided by structures between the receptor site and the proposed travel lanes. Two typical sections are proposed along the project limits, and both were evaluated. Typical Section No. 1, proposed from Station 500+00 to Station 523+00, has a posted speed of 40 mph, while Typical Section No. 2, proposed from Station 523+00 to Station 684+01, has a posted speed of 50 mph. Both typical sections provide four 12-foot-wide travel lanes and a 30-foot-wide median. The distances between the proposed edge of the outside travel lane and the noise contour line for both typical sections are presented in **Table 3-2** and the following contour distance diagram. To minimize the potential for incompatible land use, noise sensitive land uses should be located beyond this distance.

Table 3-2 Design Year Noise Abatement Criteria Contour Distances

Distance from Nearest Proposed SR 710 Travel Lane to Noise Contour Line (Typical Section No. 1/Typical Section No. 2)	
66 dB(A) – Activity Category B/C	71 dB(A) – Activity Category E
71 ft/ 98 ft	25 ft/ 44 ft



Contour Distance Diagram

4.0 Conclusions

A traffic noise study was performed to update the 2019 Design Noise Study, as part of the commitments made during the SR 710 PD&E study, during the final design phase of the SR 710 Extension project from US 441 to the L-63 Canal. The potential for traffic noise impacts were re-evaluated to reflect the 2023 design concept and the proposed design changes. The noise study was performed in accordance with 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (July 13, 2010) and the FDOT PD&E Manual. Design year (2051) traffic noise levels for the Build Alternative are not predicted to approach or exceed the NAC at any noise sensitive sites along the project corridor. Therefore, the consideration of noise abatement measures was not warranted for any properties along the project limits. While the predicted traffic noise levels have changed due to the alignment changes, the findings presented in the PD&E NSR remain valid.

5.0 Construction Noise and Vibration

During construction of the project, there is the potential for noise impacts to be substantially greater than impacts resulting from normal traffic operations due to the use of heavy equipment to build roadways. Vibration impacts may also be a result of project construction. The early identification of potential noise/vibration sensitive sites along the project corridor is important in minimizing noise and vibration impacts during the construction phase. A list of typical construction noise and vibration sensitive sites can be found in the FDOT PD&E Manual.

There are noise and vibration sensitive sites along the project corridor as shown in **Figure 3-2**. The majority of the noise sensitive locations represent residential areas bordering the roadway. The Okeechobee Health Care Facility is also potentially sensitive to vibration impacts. Construction noise and vibration impacts to these sites will be minimized by adherence to the controls listed in the latest edition of the FDOT *Standard Specifications for Road and Bridge Construction*.

If unanticipated noise and/or vibration issues arise during the construction process, the Project Engineer, in concert with the District Noise Specialist and the Contractor, will investigate additional methods of controlling these impacts.

6.0 References

23 CFR Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise", Federal Register, Vol. 75, No. 133, Tuesday, July 13, 2010; pages 39834-39839.

Federal Highway Administration Report FHWA-HEP-10-025, "Highway Traffic Noise: Analysis and Abatement Guidance", June 2010 (revised December 2010); 76 pages.

Federal Highway Administration Report FHWA-PD-96-009, "FHWA Traffic Noise Model, Version 1.0 User's Guide", January 1998; 192 pages + supplements.

Federal Highway Administration Report FHWA-HEP-06-015, "FHWA Highway Construction Noise Handbook: Final Report". August 2006; 185 pages.

"A Method to Determine Reasonableness and Feasibility of Noise Abatement at Special Use Locations", Roger L. Wayson and John M. MacDonald, University of Central Florida; Updated July 22, 2009; 64 pp. Available from: Florida Department of Transportation, Environmental Management Office, 605 Suwannee Street, M.S. 37, Tallahassee, FL 32399-0450.

Florida Department of Transportation. "Highway Traffic Noise", Part 2, Chapter 18. Project Development and Environment Manual, Florida Department of Transportation, Tallahassee, July 1, 2023.

Florida Department of Transportation Plans Preparation (Topic No. 625-000-007) Manual Volume 1, Chapter 32, "Noise Walls and Perimeter Walls", January 2017; 16 pages.

Florida Department of Transportation "Standard Specifications for Road and Bridge Construction," FY 2024-25.

APPENDIX A

Approved Traffic Data for Noise Analysis

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	SR 710
Road Name:	SR 710 Extension
Project Description:	
Segment Description:	SR 710 East of US 441 (STA 500+00 to STA 523+00)
Section Number:	
Mile Post To/From:	(new alignment)

Existing Facility:		D =	**58.10%**	%
		T24 =	**22.69%**	% of 24 Hour Volume
Year:	**2024**	Tpeak =	**11.34%**	% of Design Hour Volume
		MT =	**4.51%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**0**	HT =	**6.55%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1**	B =	**0.28%**	% of Design Hour Volume
Posted Speed:	**0**	MC =	**0.30%**	% of Design Hour Volume

No Build Alternative (Design Year):		D =	**58.10%**	%
		T24 =	**22.69%**	% of 24 Hour Volume
Year:	**2051**	Tpeak =	**11.34%**	% of Design Hour Volume
		MT =	**4.51%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**0**	HT =	**6.55%**	% of Design Hour Volume
Demand Peak Hour Volume:	**1**	B =	**0.28%**	% of Design Hour Volume
Posted Speed:	**0**	MC =	**0.30%**	% of Design Hour Volume

Build Alternative (Design Year):		D =	**58.10%**	%
		T24 =	**22.69%**	% of 24 Hour Volume
Year:	**2051**	Tpeak =	**11.34%**	% of Design Hour Volume
		MT =	**4.51%**	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	**1700**	HT =	**6.55%**	% of Design Hour Volume
Demand Peak Hour Volume:	**981**	B =	**0.28%**	% of Design Hour Volume
Posted Speed:	**40**	MC =	**0.30%**	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Katharine Willis (Print Name) Katharine Willis (Signature) Date: 2/14/2024

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Brittany Nichols (Print Name) DocuSigned by: Brittany Nichols 3491A225DF874E... (Signature) Date: 02/14/2024 | 3:28 PM EST

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	US 441 to SR 70
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	45

D =	55.00%	%
T24 =	20.00%	% of 24 Hour Volume
Tpeak =	10.00%	% of Design Hour Volume
MT =	2.78%	% of Design Hour Volume
HT =	7.05%	% of Design Hour Volume
B =	0.18%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	918
Posted Speed:	45

D =	55.00%	%
T24 =	20.00%	% of 24 Hour Volume
Tpeak =	10.00%	% of Design Hour Volume
MT =	2.78%	% of Design Hour Volume
HT =	7.05%	% of Design Hour Volume
B =	0.18%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	SR 70 to Old SR 710
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:		D =	55.00%	%
Year:	2013	T24 =	20.00%	% of 24 Hour Volume
		Tpeak =	10.00%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	0	MT =	2.78%	% of Design Hour Volume
Demand Peak Hour Volume:	1	HT =	7.05%	% of Design Hour Volume
Posted Speed:	45	B =	0.18%	% of Design Hour Volume
		MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):		D =	0.00%	%
Year:	0	T24 =	0.00%	% of 24 Hour Volume
		Tpeak =	0.00%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	0	MT =	0.00%	% of Design Hour Volume
Demand Peak Hour Volume:	0	HT =	0.00%	% of Design Hour Volume
Posted Speed:	0	B =	0.00%	% of Design Hour Volume
		MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):		D =	55.00%	%
Year:	2040	T24 =	20.00%	% of 24 Hour Volume
		Tpeak =	10.00%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	1740	MT =	2.78%	% of Design Hour Volume
Demand Peak Hour Volume:	1168	HT =	7.05%	% of Design Hour Volume
Posted Speed:	45	B =	0.18%	% of Design Hour Volume
		MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick — Print Name; Signature — Date: 04/25/2018

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson — Print Name; Signature — Date: 6/18/2018

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	Old SR 710 to SE 40th Ave
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013	D =	55.00%	%
		T24 =	20.00%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	0	Tpeak =	10.00%	% of Design Hour Volume
Demand Peak Hour Volume:	1	MT =	2.78%	% of Design Hour Volume
Posted Speed:	45	HT =	7.05%	% of Design Hour Volume
		B =	0.18%	% of Design Hour Volume
		MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0	D =	0.00%	%
		T24 =	0.00%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	0	Tpeak =	0.00%	% of Design Hour Volume
Demand Peak Hour Volume:	0	MT =	0.00%	% of Design Hour Volume
Posted Speed:	0	HT =	0.00%	% of Design Hour Volume
		B =	0.00%	% of Design Hour Volume
		MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040	D =	55.00%	%
		T24 =	20.00%	% of 24 Hour Volume
LOS C Peak Hour Directional Volume:	1740	Tpeak =	10.00%	% of Design Hour Volume
Demand Peak Hour Volume:	1468	MT =	2.78%	% of Design Hour Volume
Posted Speed:	45	HT =	7.05%	% of Design Hour Volume
		B =	0.18%	% of Design Hour Volume
		MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	SE 40th Ave to South
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	55

D =	58.00%	%
T24 =	50.00%	% of 24 Hour Volume
Tpeak =	25.00%	% of Design Hour Volume
MT =	6.95%	% of Design Hour Volume
HT =	17.62%	% of Design Hour Volume
B =	0.45%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	1296
Posted Speed:	55

D =	58.00%	%
T24 =	50.00%	% of 24 Hour Volume
Tpeak =	25.00%	% of Design Hour Volume
MT =	6.95%	% of Design Hour Volume
HT =	17.62%	% of Design Hour Volume
B =	0.45%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	SR 70 West of SR 710
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	45

D =	55.00%	%
T24 =	13.00%	% of 24 Hour Volume
Tpeak =	6.50%	% of Design Hour Volume
MT =	2.52%	% of Design Hour Volume
HT =	3.86%	% of Design Hour Volume
B =	0.10%	% of Design Hour Volume
MC =	0.79%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	1295
Posted Speed:	45

D =	55.00%	%
T24 =	13.00%	% of 24 Hour Volume
Tpeak =	6.50%	% of Design Hour Volume
MT =	2.52%	% of Design Hour Volume
HT =	3.86%	% of Design Hour Volume
B =	0.10%	% of Design Hour Volume
MC =	0.79%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	SR 70 East of SR 710
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	45

D =	55.00%	%
T24 =	13.00%	% of 24 Hour Volume
Tpeak =	6.50%	% of Design Hour Volume
MT =	2.52%	% of Design Hour Volume
HT =	3.86%	% of Design Hour Volume
B =	0.12%	% of Design Hour Volume
MC =	0.79%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	1223
Posted Speed:	45

D =	55.00%	%
T24 =	13.00%	% of 24 Hour Volume
Tpeak =	6.50%	% of Design Hour Volume
MT =	2.52%	% of Design Hour Volume
HT =	3.86%	% of Design Hour Volume
B =	0.12%	% of Design Hour Volume
MC =	0.79%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpron _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	Old SR 710 East of NE 34th Ave
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	35

D =	55.00%	%
T24 =	16.04%	% of 24 Hour Volume
Tpeak =	8.02%	% of Design Hour Volume
MT =	2.23%	% of Design Hour Volume
HT =	5.65%	% of Design Hour Volume
B =	0.15%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	297
Demand Peak Hour Volume:	612
Posted Speed:	35

D =	55.00%	%
T24 =	16.04%	% of 24 Hour Volume
Tpeak =	8.02%	% of Design Hour Volume
MT =	2.23%	% of Design Hour Volume
HT =	5.65%	% of Design Hour Volume
B =	0.15%	% of Design Hour Volume
MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick — Print Name; Signature — Date: 04/25/2018

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson — Print Name; Signature — Date: 6/18/2018

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	US 441 North of SR 710 Ext.
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	35

D =	55.00%	%
T24 =	9.72%	% of 24 Hour Volume
Tpeak =	4.86%	% of Design Hour Volume
MT =	2.27%	% of Design Hour Volume
HT =	2.29%	% of Design Hour Volume
B =	0.31%	% of Design Hour Volume
MC =	0.51%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	1311
Posted Speed:	35

D =	55.00%	%
T24 =	9.72%	% of 24 Hour Volume
Tpeak =	4.86%	% of Design Hour Volume
MT =	2.27%	% of Design Hour Volume
HT =	2.29%	% of Design Hour Volume
B =	0.31%	% of Design Hour Volume
MC =	0.51%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	US 441 South of SR 710 Ext.
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:

Year:	2013
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	1
Posted Speed:	35

D =	55.00%	%
T24 =	9.72%	% of 24 Hour Volume
Tpeak =	4.86%	% of Design Hour Volume
MT =	2.27%	% of Design Hour Volume
HT =	2.29%	% of Design Hour Volume
B =	0.24%	% of Design Hour Volume
MC =	0.51%	% of Design Hour Volume

No Build Alternative (Design Year):

Year:	0
LOS C Peak Hour Directional Volume:	0
Demand Peak Hour Volume:	0
Posted Speed:	0

D =	0.00%	%
T24 =	0.00%	% of 24 Hour Volume
Tpeak =	0.00%	% of Design Hour Volume
MT =	0.00%	% of Design Hour Volume
HT =	0.00%	% of Design Hour Volume
B =	0.00%	% of Design Hour Volume
MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):

Year:	2040
LOS C Peak Hour Directional Volume:	1740
Demand Peak Hour Volume:	1350
Posted Speed:	35

D =	55.00%	%
T24 =	9.72%	% of 24 Hour Volume
Tpeak =	4.86%	% of Design Hour Volume
MT =	2.27%	% of Design Hour Volume
HT =	2.29%	% of Design Hour Volume
B =	0.24%	% of Design Hour Volume
MC =	0.51%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 04/25/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

TRAFFIC DATA FOR NOISE STUDIES - SUMMARY OUTPUT
FDOT DISTRICT 1

Federal Aid Number(s):	
FPID Number(s):	419344-2-22-01
State/Federal Route No.:	
Road Name:	SR 710 Extension
Project Description:	Build
Segment Description:	SE 40th Ave (South of SR 710 Ext.)
Section Number:	1
Mile Post To/From:	(new alignment)

Existing Facility:		D =	55.00%	%
		T24 =	16.04%	% of 24 Hour Volume
Year:	2013	Tpeak =	8.02%	% of Design Hour Volume
		MT =	2.23%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	0	HT =	5.65%	% of Design Hour Volume
Demand Peak Hour Volume:	1	B =	0.15%	% of Design Hour Volume
Posted Speed:	35	MC =	1.20%	% of Design Hour Volume

No Build Alternative (Design Year):		D =	0.00%	%
		T24 =	0.00%	% of 24 Hour Volume
Year:	0	Tpeak =	0.00%	% of Design Hour Volume
		MT =	0.00%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	0	HT =	0.00%	% of Design Hour Volume
Demand Peak Hour Volume:	0	B =	0.00%	% of Design Hour Volume
Posted Speed:	0	MC =	0.00%	% of Design Hour Volume

Build Alternative (Design Year):		D =	55.00%	%
		T24 =	16.04%	% of 24 Hour Volume
Year:	2040	Tpeak =	8.02%	% of Design Hour Volume
		MT =	2.23%	% of Design Hour Volume
LOS C Peak Hour Directional Volume:	312	HT =	5.65%	% of Design Hour Volume
Demand Peak Hour Volume:	493	B =	0.15%	% of Design Hour Volume
Posted Speed:	35	MC =	1.20%	% of Design Hour Volume

I certify that the above information is accurate and appropriate for use with the traffic noise analysis.

Prepared By: Brian Kirkpatrick _____ Date: 06/15/2018
Print Name Signature

I have reviewed and concur that the above information is appropriate for use with the traffic noise analysis.

FDOT Reviewer: Christopher Simpson _____ Date: 6/18/2018
Print Name Signature

APPENDIX B

Referenced Roadway Design Plans 2023

CONTRACT PLANS COMPONENTS

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS
LIGHTING PLANS
STRUCTURE PLANS

INDEX OF ROADWAY PLANS

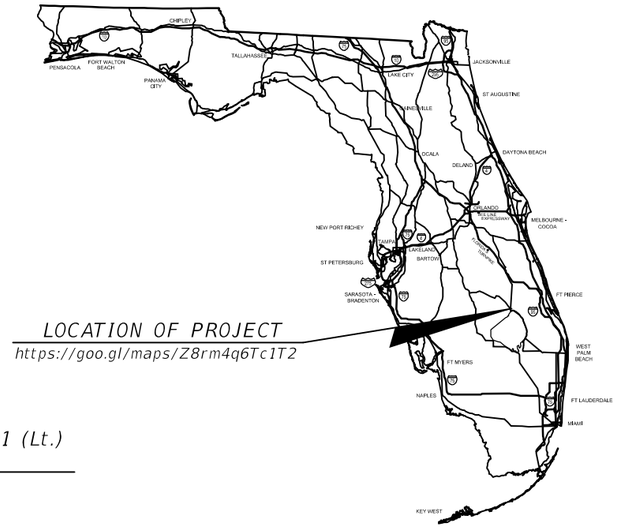
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

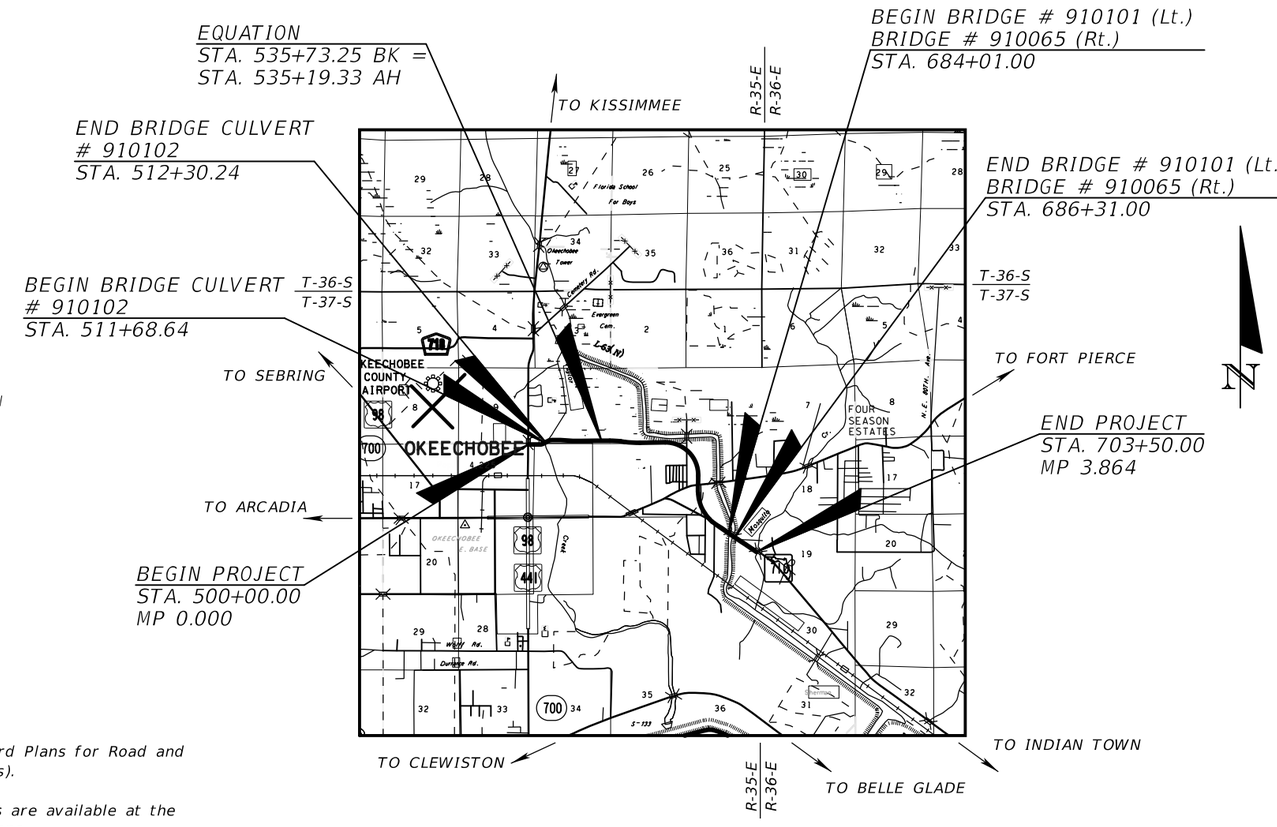
CONTRACT PLANS

FINANCIAL PROJECT ID 419344-3-52-01

OKEECHOBEE COUNTY (91060)

STATE ROAD NO. 710





GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2018-19 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: IR546-010-01

Standard Plans for Bridge Construction are included in the Structures Plans Component.

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2018 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

ROADWAY PLANS ENGINEER OF RECORD:

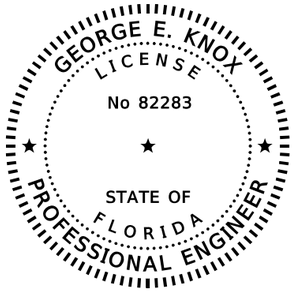
GEORGE E. KNOX, P.E.
P.E. NO.: 82283
WANTMAN GROUP, INC.
2910 MAGUIRE ROAD, SUITE 2008
OCOEE, FLORIDA 34761
(407) 581-1221 PHONE
(407) 581-1222 FAX
VENDOR NO. 65-0271367
CONTRACT NO. C-9643
CERTIFICATE OF AUTHORIZATION NO. 6091

FDOT PROJECT MANAGER:

MICHAEL JOHNSON, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
	21	1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



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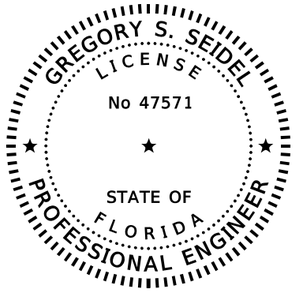
WANTMAN GROUP, INC.
2910 MAGUIRE ROAD, SUITE 2008
OCOEE, FL 34761
CERTIFICATE OF AUTHORIZATION: 6091
GEORGE E. KNOX, P.E. NO. 82283

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
15-28	TYPICAL SECTION
29-32	TYPICAL SECTION DETAILS
36-38	PROJECT LAYOUT
39	GENERAL NOTES
40-76	PLAN AND PROFILE
77-93	ROADWAY PLAN
94-98	SIDE STREET PROFILES
99-105	SPECIAL DETAILS
106-117	INTERSECTION DETAIL
222-372	CROSS SECTIONS
373-380	DRIVEWAY CROSS SECTIONS
425-503	TEMPORARY TRAFFIC CONTROL PLAN
504-522	UTILITY ADJUSTMENTS
SQ-1 - SQ-9	SUMMARY OF QUANTITIES
CTL-1 - CTL-5	PROJECT CONTROL



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ON THE DATE ADJACENT TO THE SEAL.

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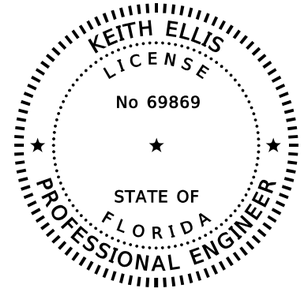
THE BALMORAL GROUP
165 LINCOLN AVENUE
WINTER PARK, FL 32789
CERTIFICATE OF AUTHORIZATION: 26123
GREGORY S. SEIDEL, P.E. NO. 47571

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
4-12	DRAINAGE MAP
13	PROPOSED DRAINAGE STRUCTURES
14	EXISTING DRAINAGE STRUCTURES
216	OUTFALL DETAIL
217-221	POND DETAILS
381-400	POND CROSS SECTIONS



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FLA. DEPT. OF TRANSPORTATION
MATERIALS OFFICE
DISTRICT I
801 N. BROADWAY AVE.
BARTOW, FL 33830
KEITH ELLIS, P.E. NO. 69869

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
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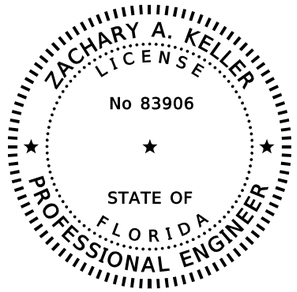

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ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

WANTMAN GROUP, INC.
3111 W DOCTOR M.L.K. Jr BLVD #375
TAMPA, FL 33607
CERTIFICATE OF AUTHORIZATION: 6091
ANDREW D. ROBB, P.E. NO. 57577

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
33-34	SUMMARY OF DRAINAGE STRUCTURES
35	OPTIONAL MATERIALS TABULATION
118-210	DRAINAGE STRUCTURES
211-215	DRAINAGE DETAILS
401-403	STORMWATER POLLUTION PREVENTION PLAN
404-424	EROSION CONTROL PLAN

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

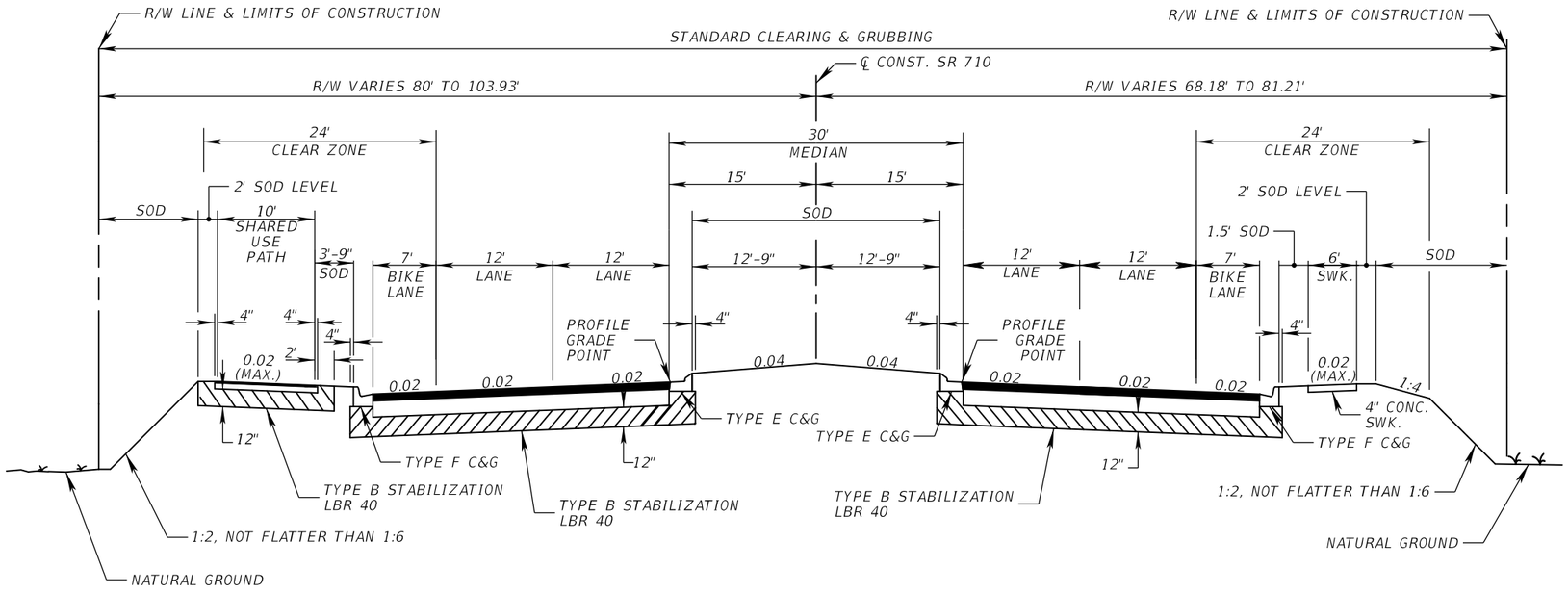
GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

SIGNATURE SHEET (01)

SHEET NO. 2



TYPICAL SECTION NO. 1
SR 710
STA. 500+00.00 TO STA. 523+00.00

NEW CONSTRUCTION

OPTIONAL BASE GROUP 11 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (3")
AND FRICTION COURSE FC-9.5 (1") PG 76-22

SHARED USE PATH

OPTIONAL BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC A) (1 ½")

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 8,700
ESTIMATED OPENING YEAR = 2023 AADT = 10,000
ESTIMATED DESIGN YEAR = 2038 AADT = 14,190
K = 9.0% D = 56.2% T = 20.9% (24 HOUR)
DESIGN HOUR T = 10.5%
DESIGN SPEED = 40 MPH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

TYPICAL SECTION (01)

SHEET NO. 15

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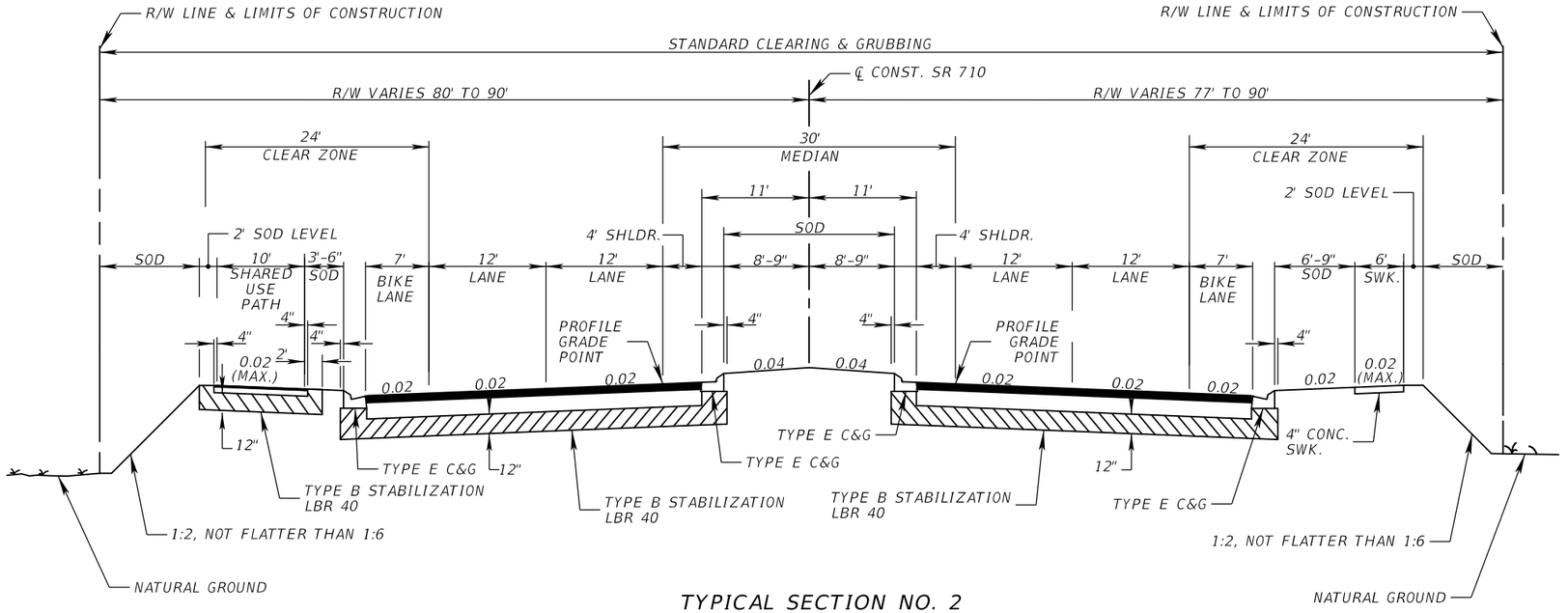

TYPICAL SECTION NO. 2
SR 710
STA. 523+00.00 TO STA. 579+33.80 BK
STA. 578+01.32 AH TO STA. 684+01.00

NEW CONSTRUCTION

OPTIONAL BASE GROUP 11 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (3")
AND FRICTION COURSE FC-9.5 (1") PG 76-22

SHARED USE PATH

OPTIONAL BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC A) (1 ½")

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 8,700
ESTIMATED OPENING YEAR = 2023 AADT = 10,000
ESTIMATED DESIGN YEAR = 2038 AADT = 14,190
K = 9.0% D = 56.2% T = 20.9% (24 HOUR)
DESIGN HOUR T = 10.5%
DESIGN SPEED = 50 MPH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

TYPICAL SECTION (02)

SHEET NO. 16

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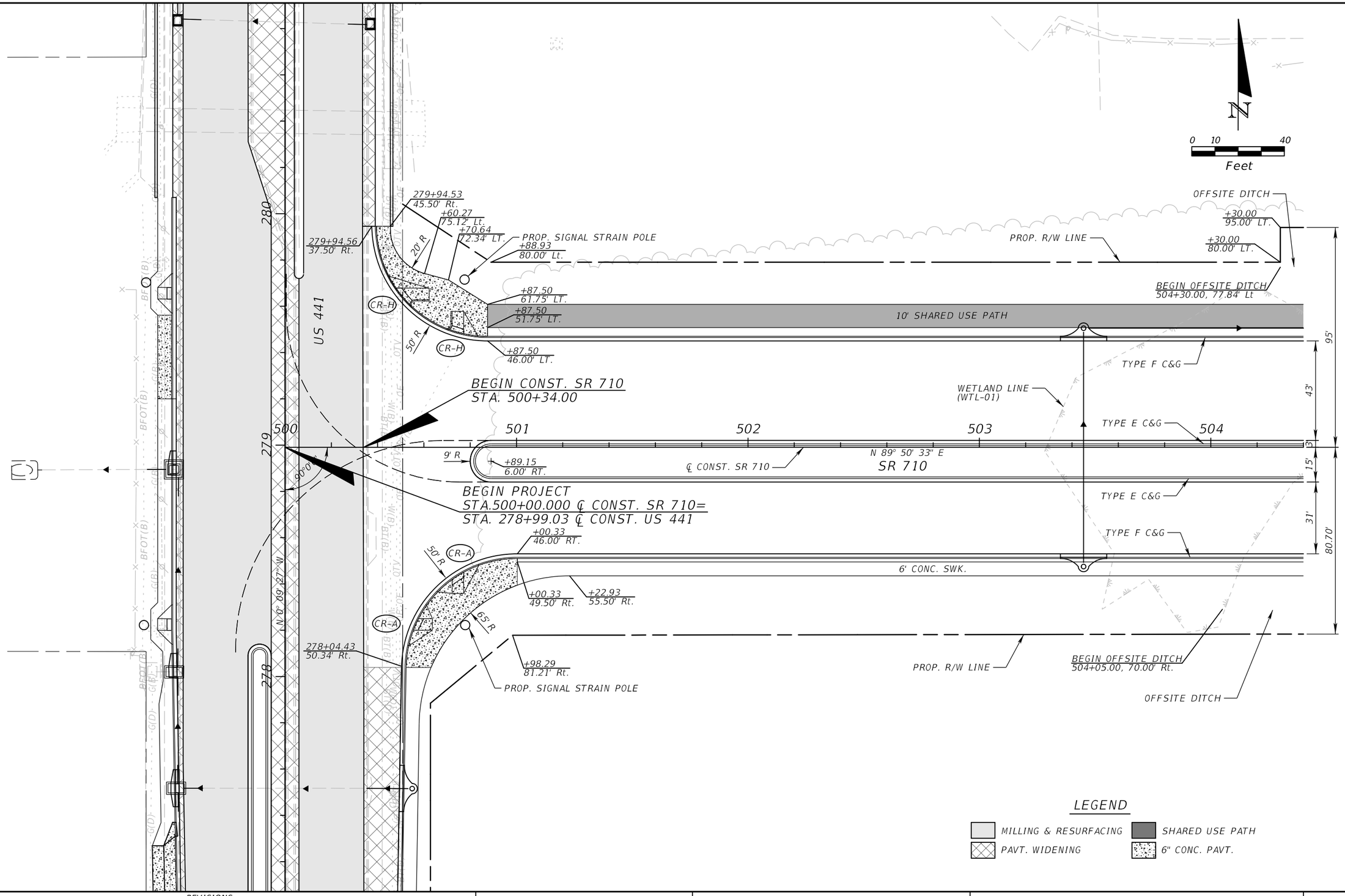

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 40

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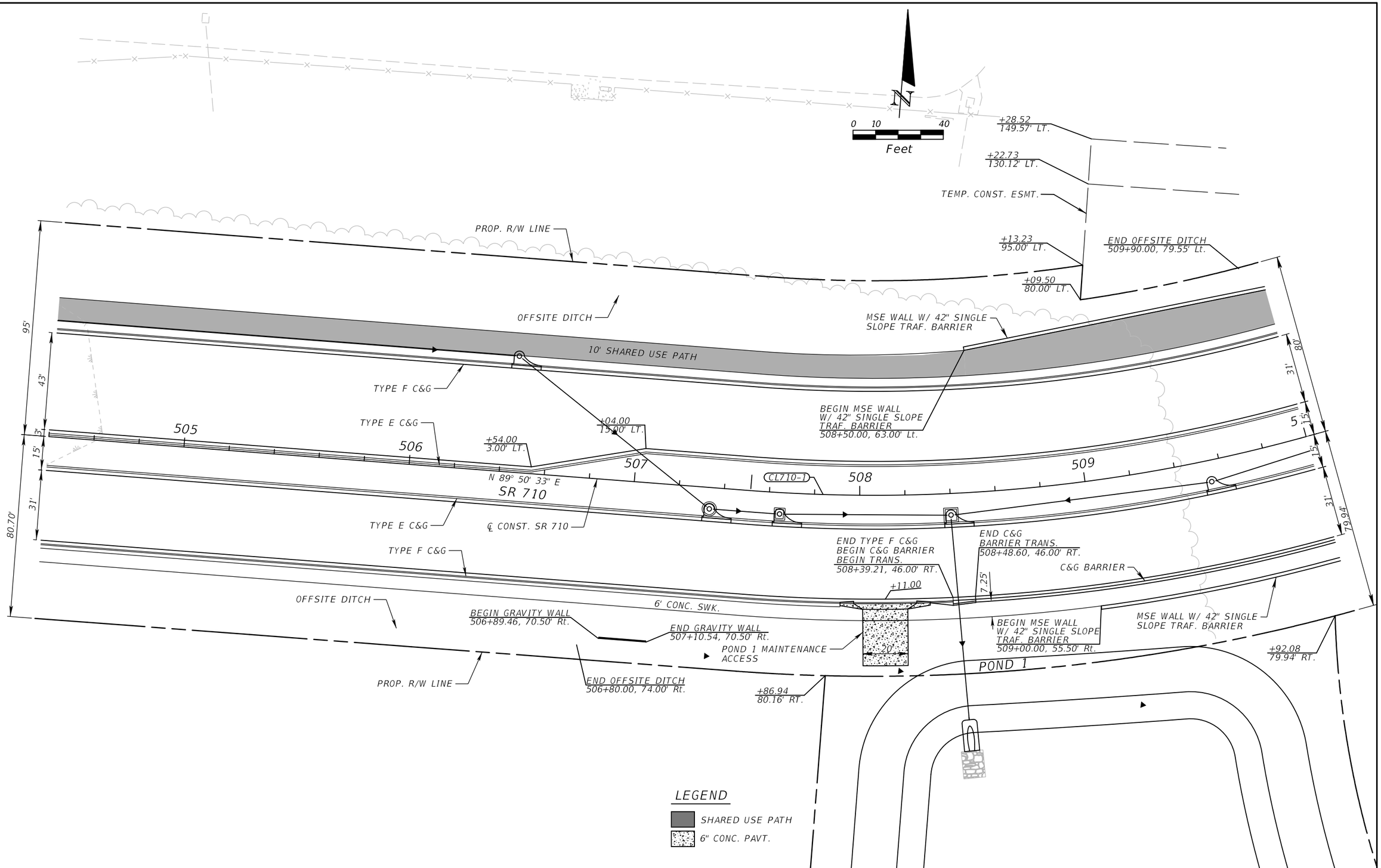

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 41

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0 10 40
Feet

TEMP. CONST. ESMT.

TAYLOR CREEK

PROP. R/W LINE

+37.00
99.24' LT.

+03.26
94.57' LT.

END TYPE F C&G
BEGIN C&G BARRIER
BEGIN TRANS.
512+02.32, 46.00' LT.

+27.91
80.00' LT.

+85.64
80.00' LT.

+34.95
64.36' LT.

+89.88
63.00' LT.

11.25'

11.25'

14.75'

MSE WALL W/
42" SINGLE SLOPE
TRAF. BARRIER

SHARED USE PATH

80'

31'

CD-1A 14'X12'
BOX CULVERT

TYPE F
C&G

END C&G.
BARRIER TRANS.
512+12.32 46.00' LT.

CD-1B TRIPLE 12'X14'
BRIDGE CULVERT

C&G BARRIER

TYPE E C&G

BEGIN BRIDGE
CULVERT #910102
511+68.64

10

15'

CL710-1

511

512

513

514

515

N 57° 50' 01" E

℄ CONST. SR 710

SR 710

15'

31'

79.94'

℄ CULVERT BOX
510+72.86

END BRIDGE
CULVERT #910102
512+30.24

END C&G BARRIER TRANS.
BEGIN TYPE F C&G
512+93.70, 46.00' RT.

WETLAND LINE
(WTL-05A)

TYPE E C&G

TYPE F C&G

END C&G BARRIER
BEGIN C&G BARRIER TRANS.
512+83.70, 46.00' RT.

+80.00
49.50' RT.

6' CONC. SWK.

+73.10
60.12' RT.

C&G BARRIER

MSE WALL W/
42" SINGLE SLOPE
TRAF. BARRIER

+60.85
69.62' RT.

END MSE WALL
W/ 42" SINGLE SLOPE
TRAF. BARRIER
513+70.00, 55.50' RT.

WETLAND LINE
(SW-02)

+38.86
68.18' RT.

+42.25
80.00' RT.

+58.12
80.00' RT.

PROP. R/W LINE

EXIST. R/W LINE

TAYLOR CREEK

LEGEND

SHARED USE PATH

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO.
42

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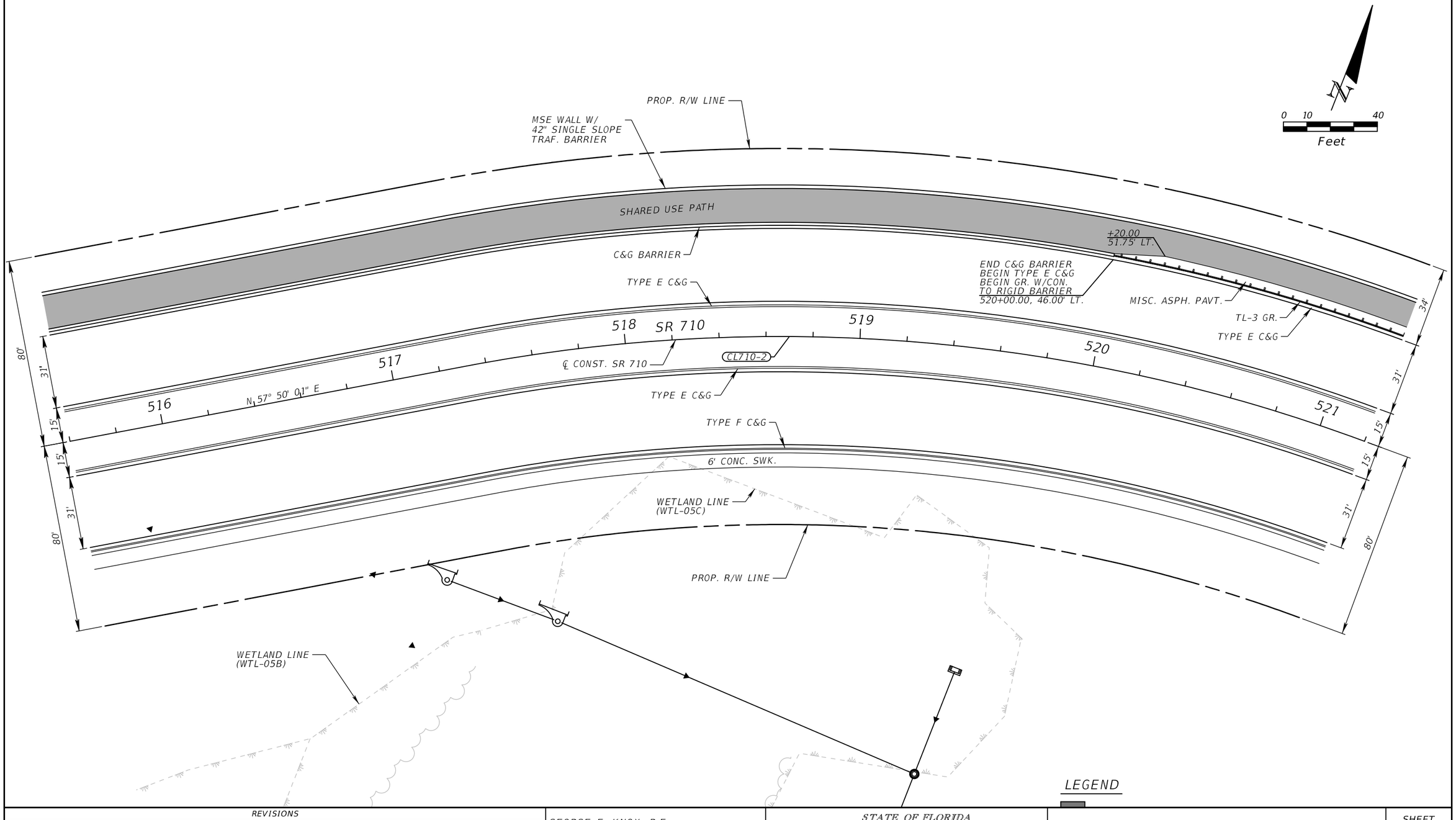

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 43

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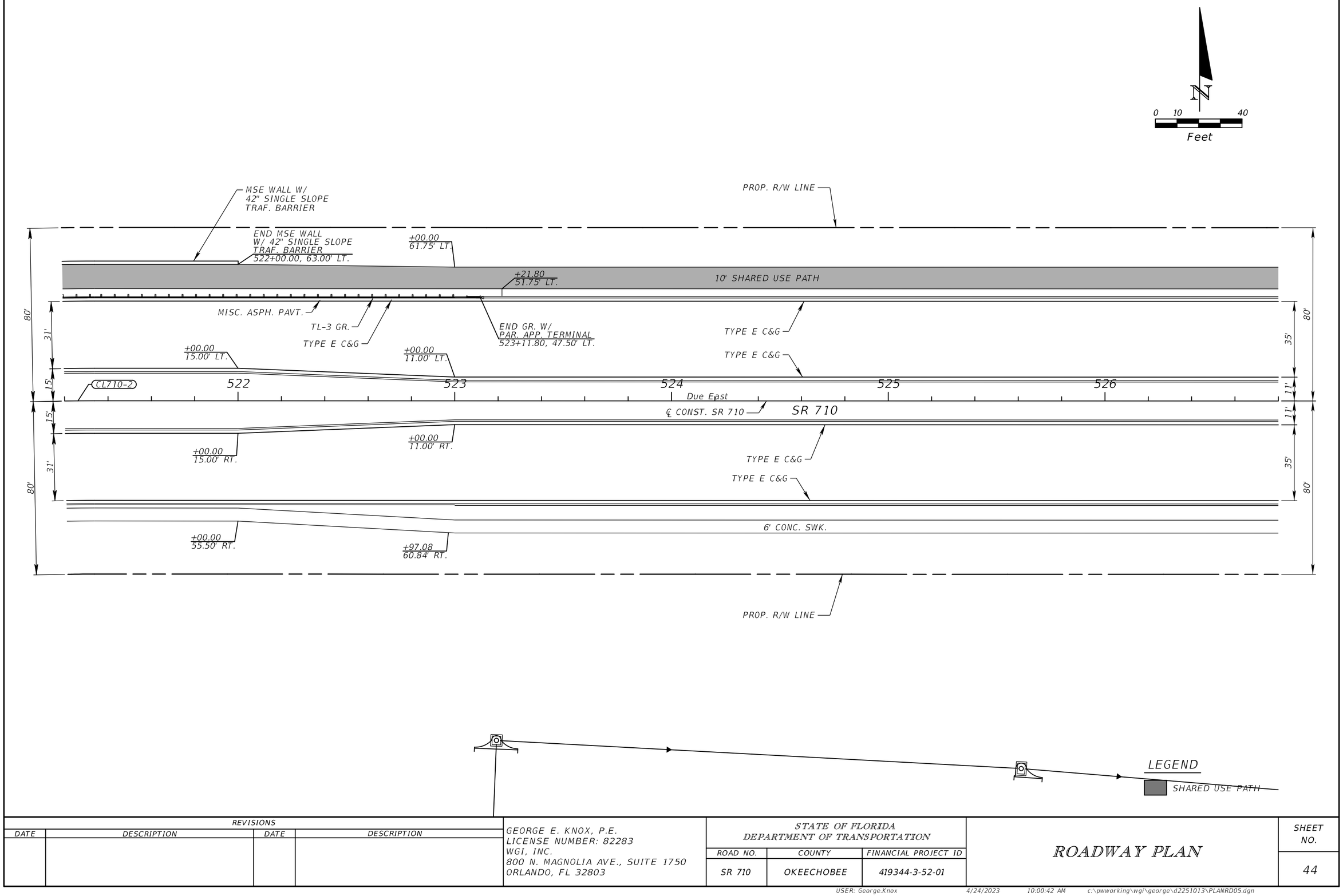

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 44

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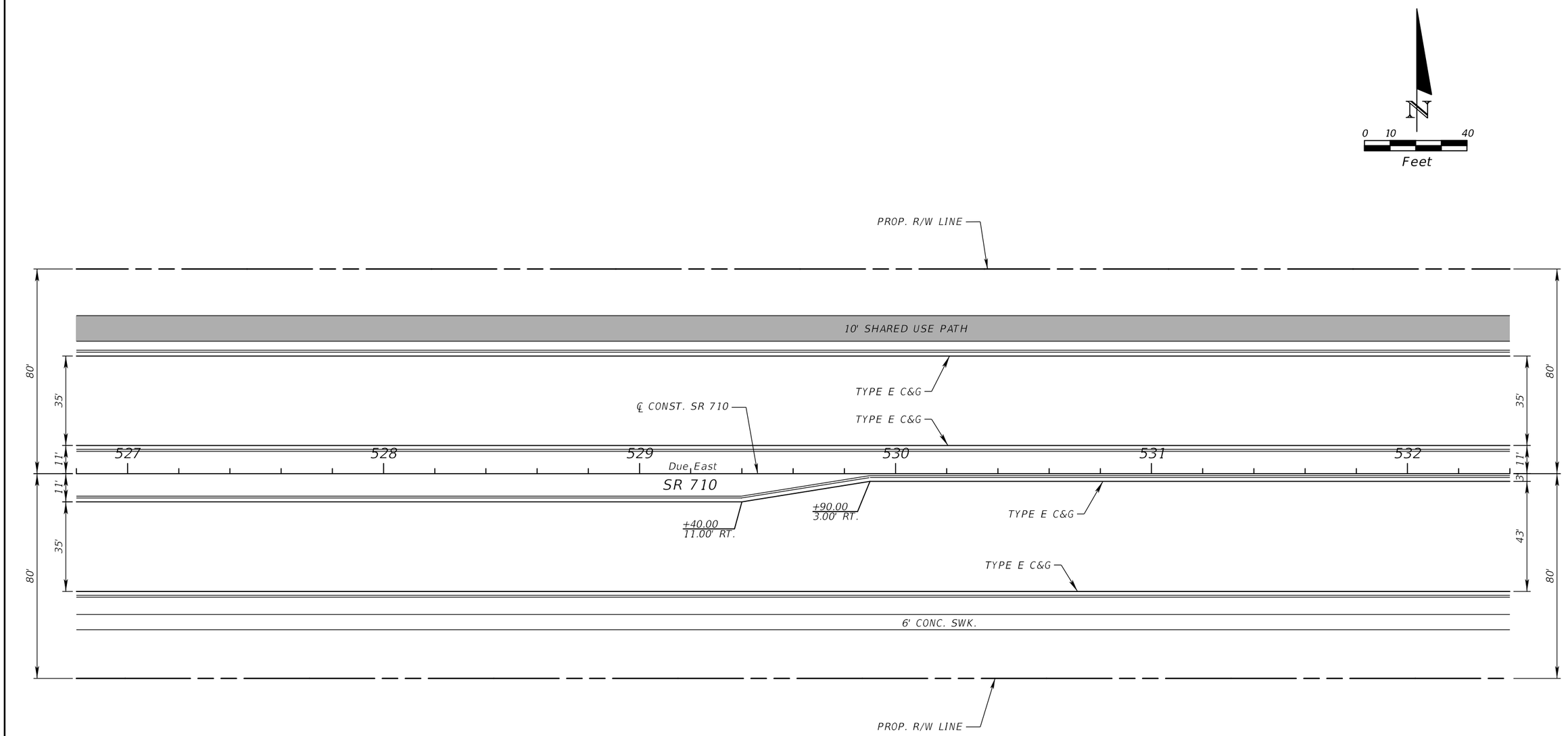

LEGEND

SHARED USE PATH

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 45

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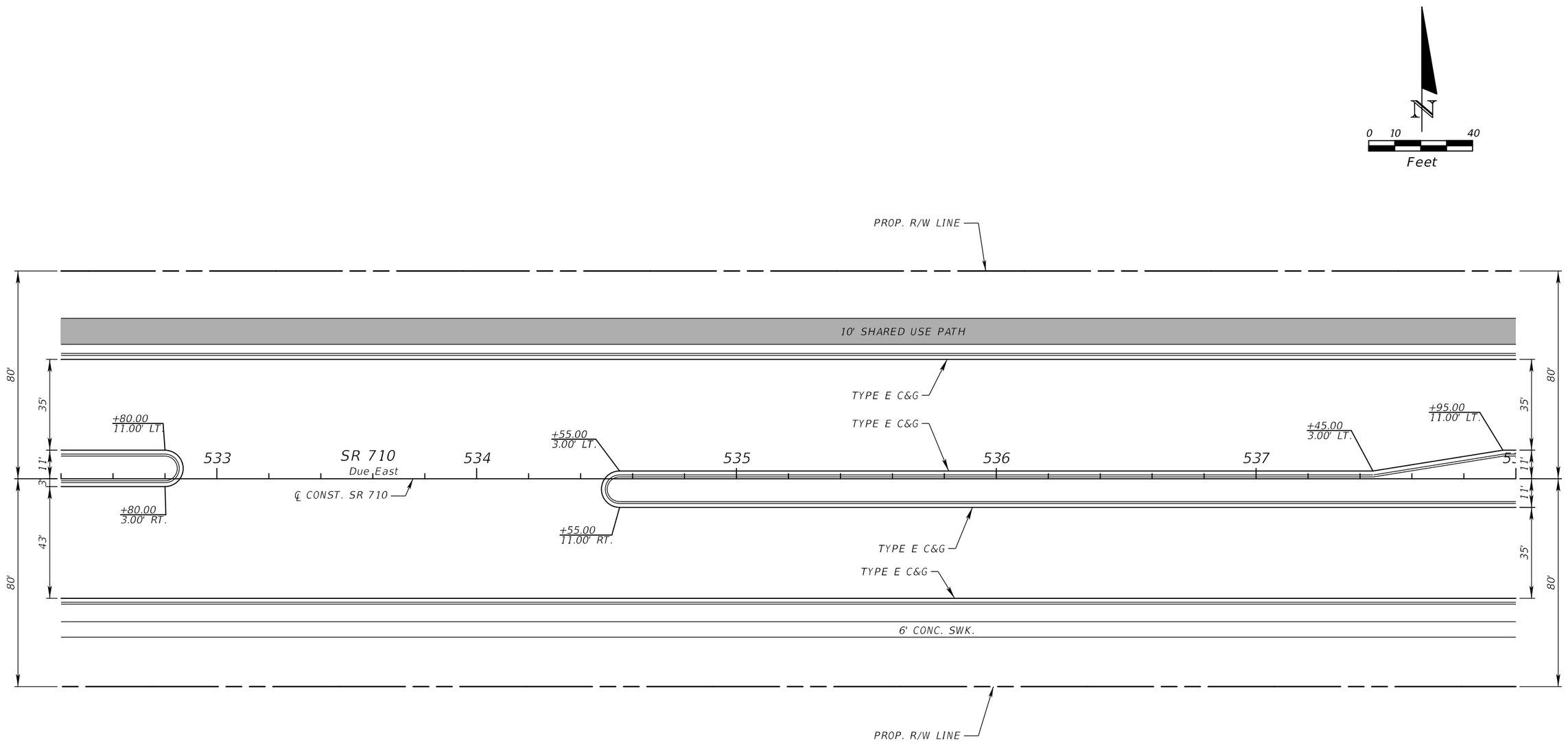

LEGEND

SHARED USE PATH

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

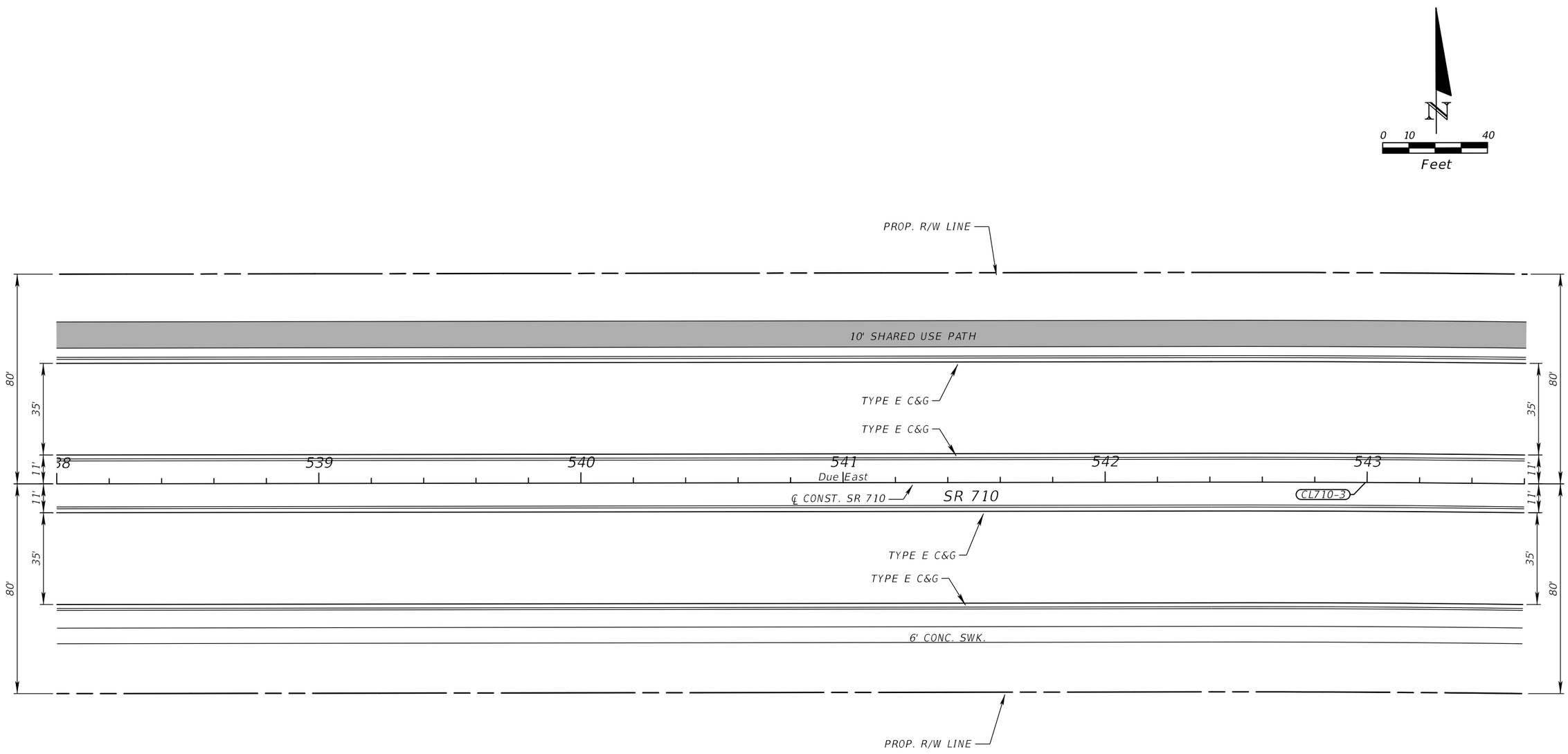
GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 46



LEGEND

SHARED USE PATH

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 47

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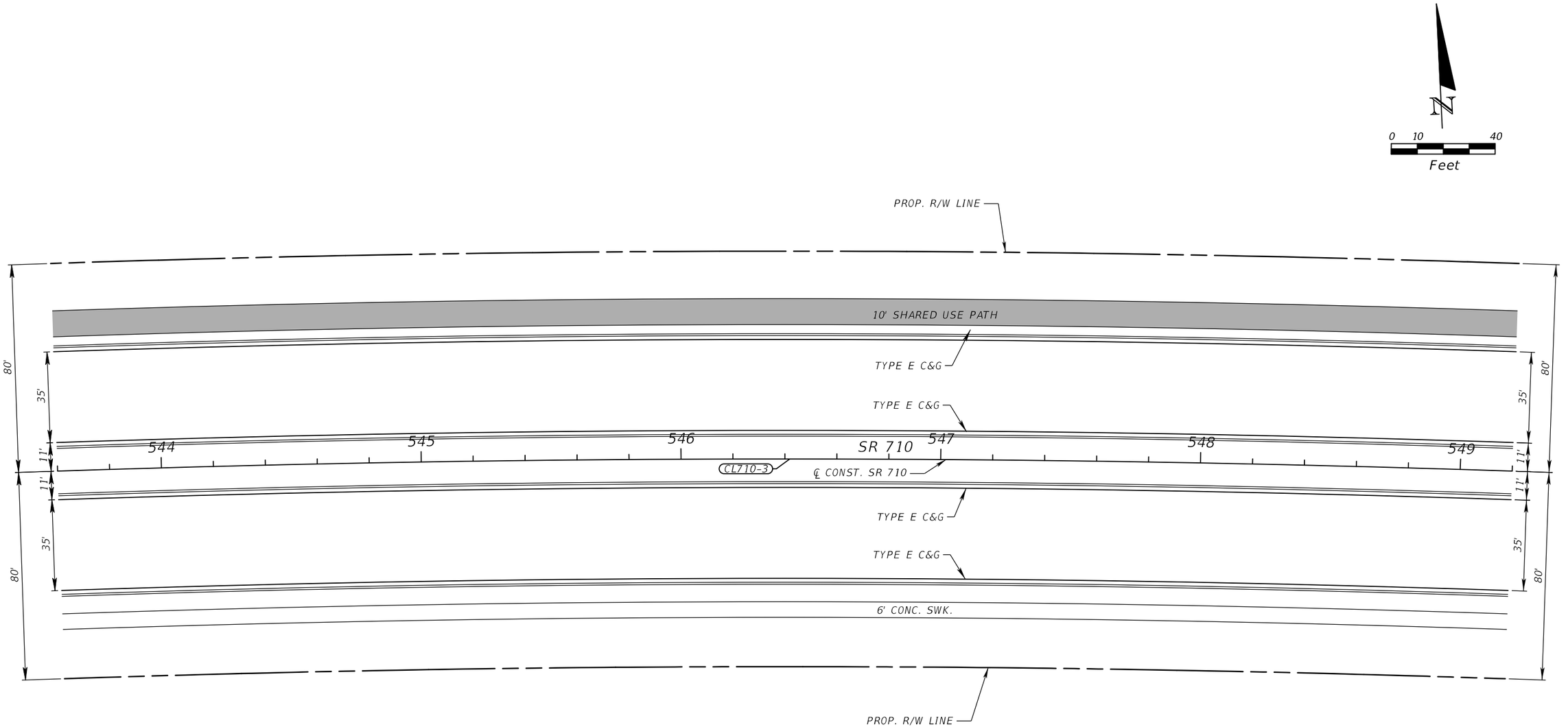


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

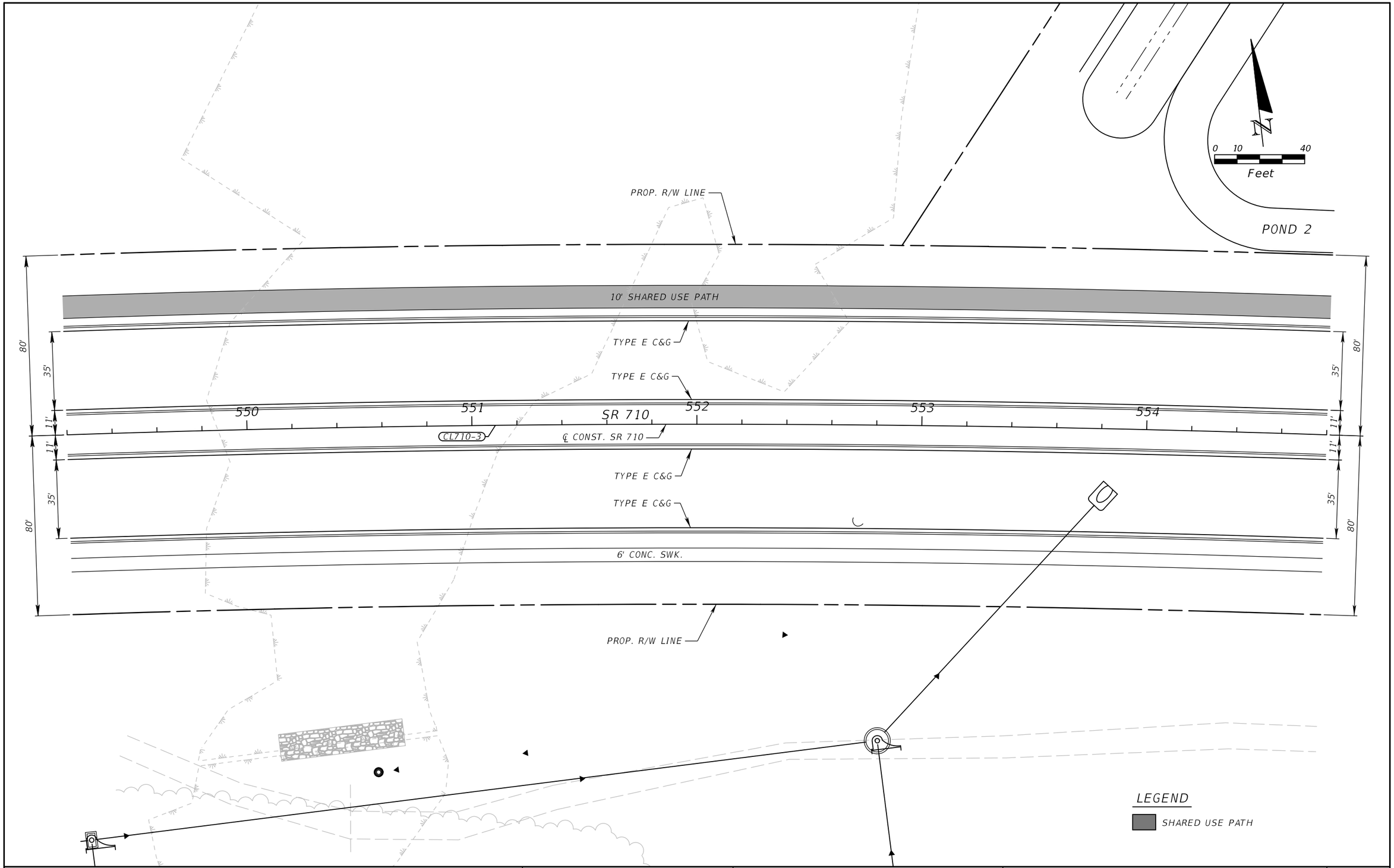
GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 48



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

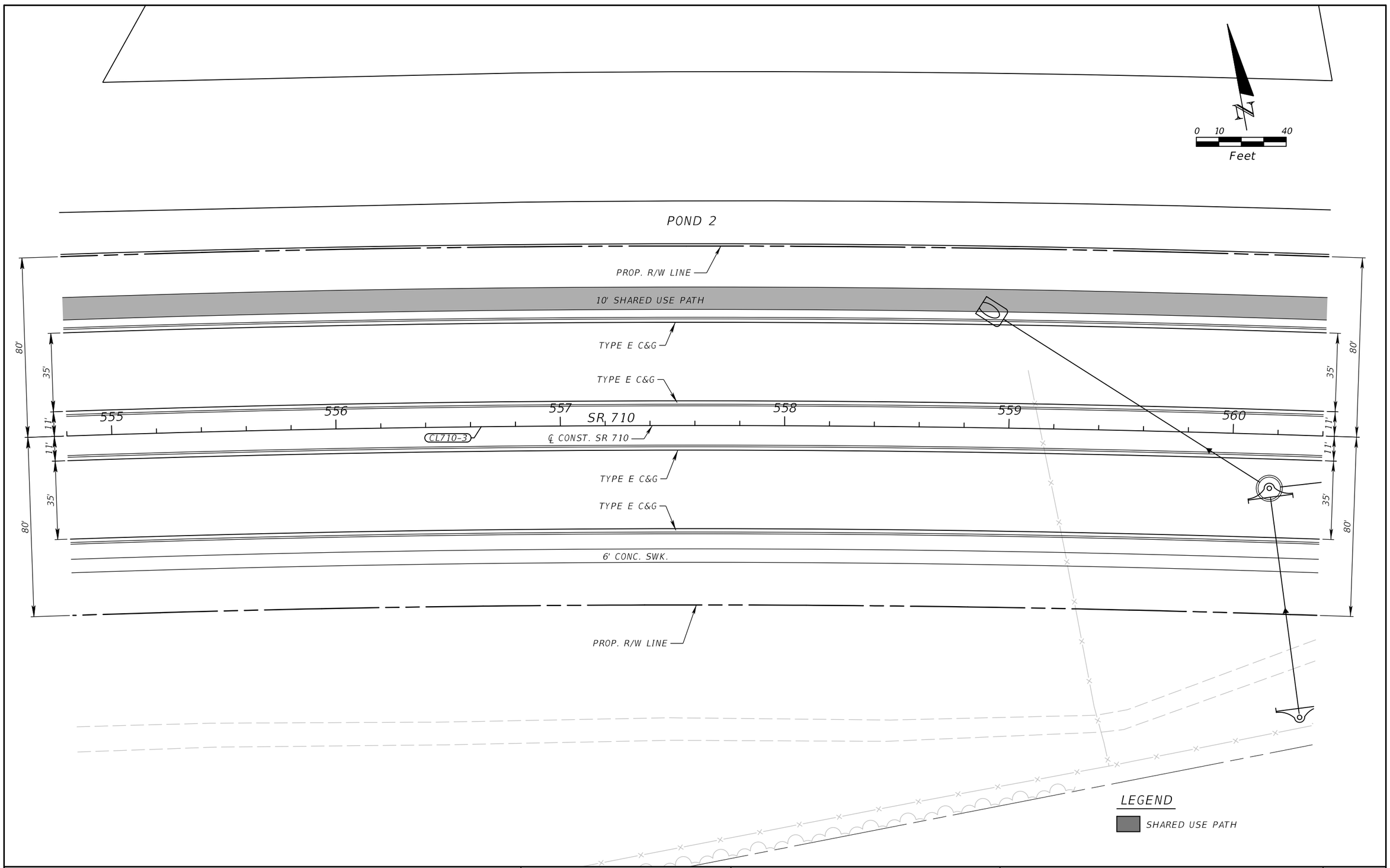
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 49

USER: George.Knox 4/24/2023 10:01:17 AM c:\pwworking\wgi\george\d2251013\PLANRD10.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

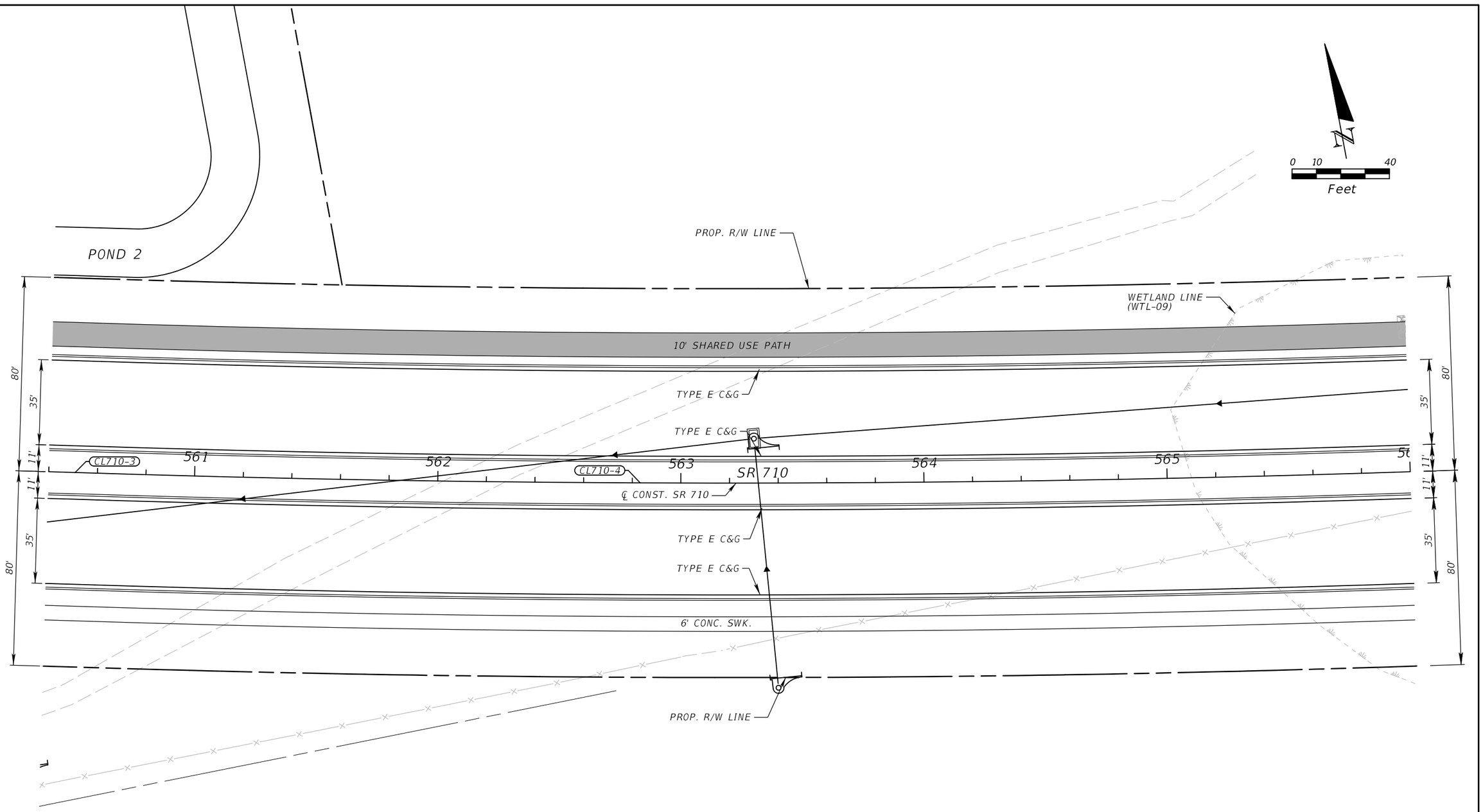
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 50

USER: George.Knox 4/24/2023 10:01:25 AM c:\pwworking\wgi\george\d2251013\PLANRD11.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 51

USER: George.Knox 4/24/2023 10:01:32 AM c:\pwworking\wgi\george\d2251013\PLANRD12.dgn

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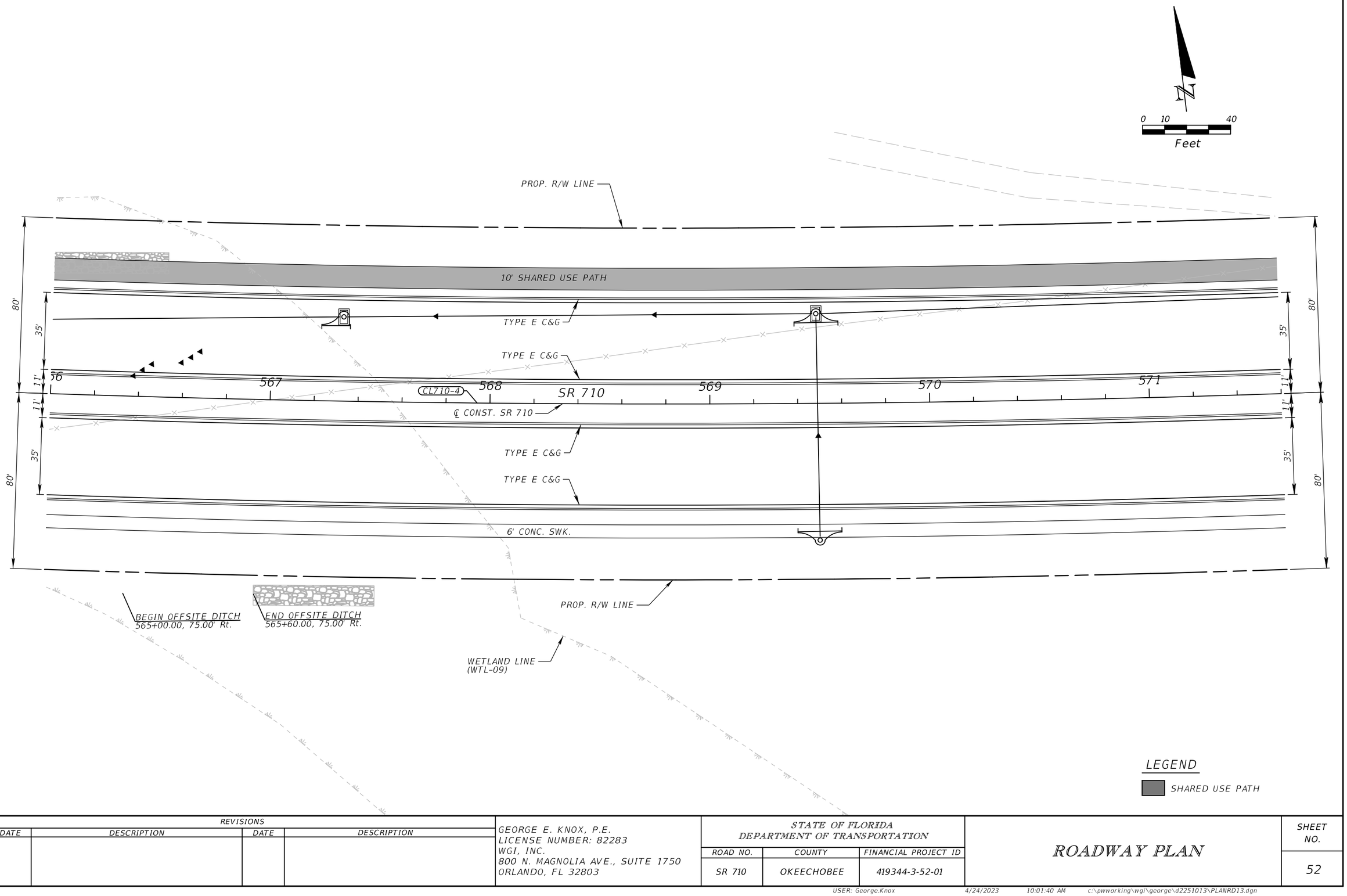

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

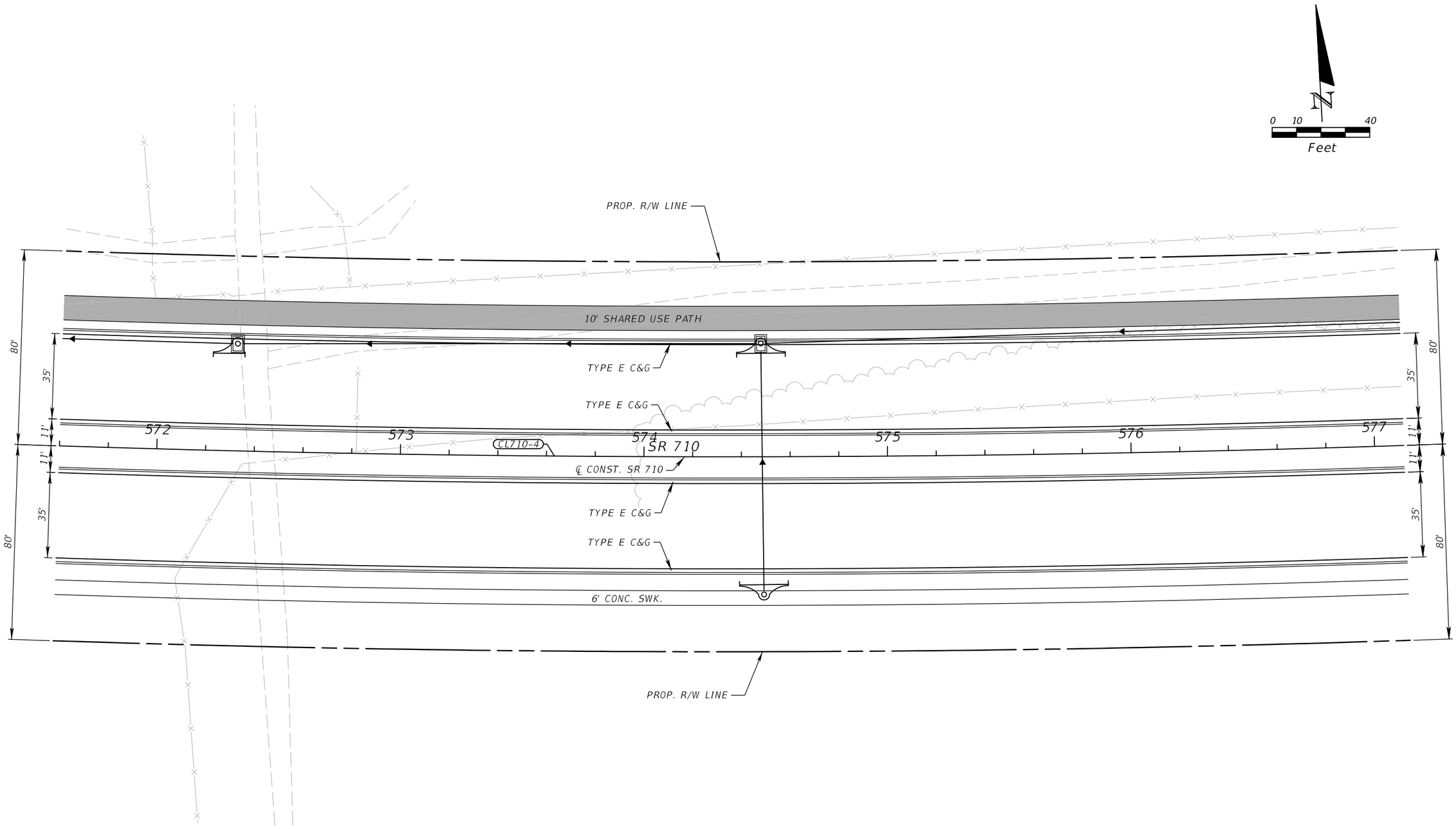
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 52

USER: George.Knox 4/24/2023 10:01:40 AM c:\pwworking\wgi\george\d2251013\PLANRD13.dgn



LEGEND

SHARED USE PATH

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

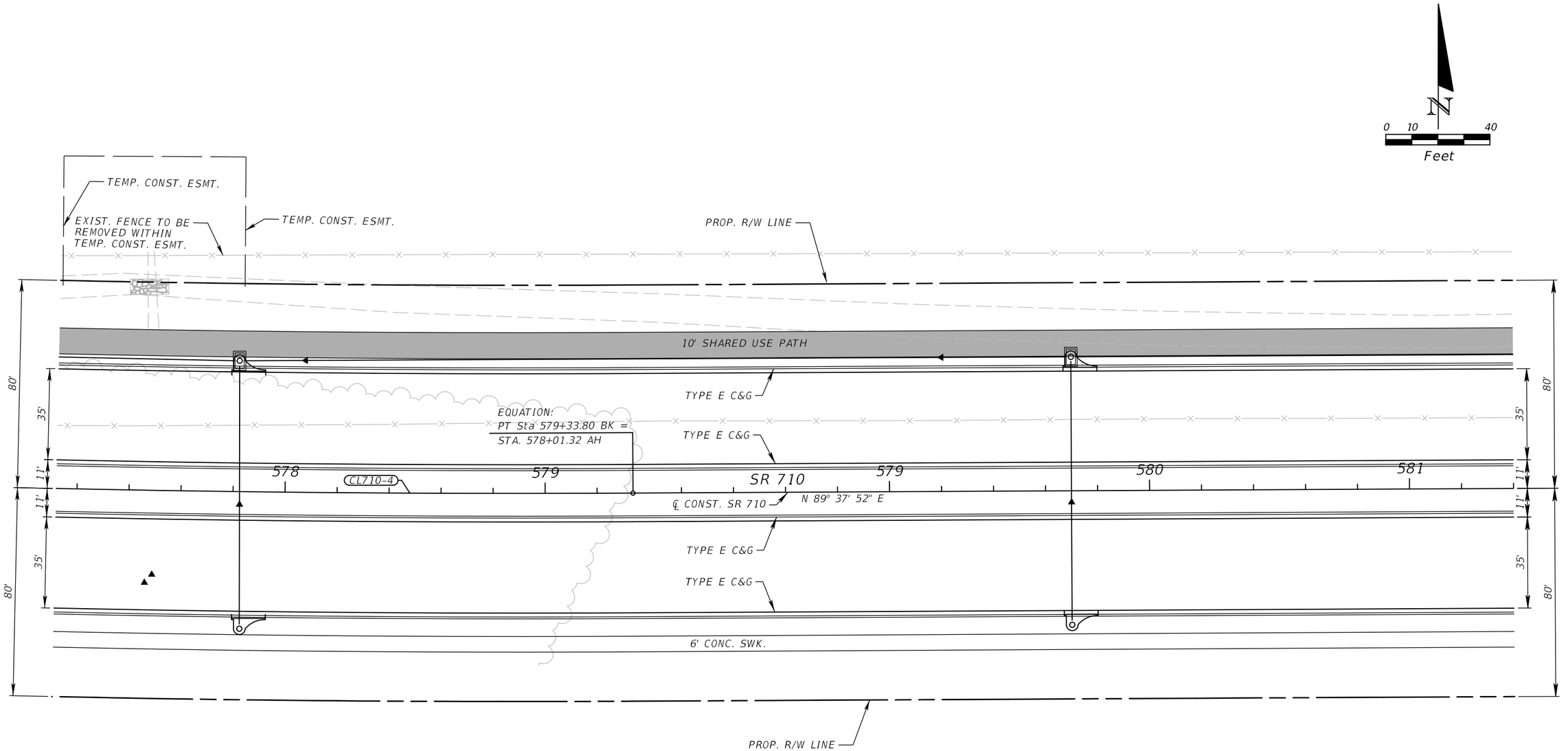
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 53

USER: George.Knox 4/24/2023 10:01:48 AM c:\pwworking\wgi\george\d2251013\PLANRD14.dgn



LEGEND

SHARED USE PATH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 54

USER: George.Knox 4/24/2023 10:01:55 AM c:\pwworking\wgi\george\d2251013\PLANRD15.dgn

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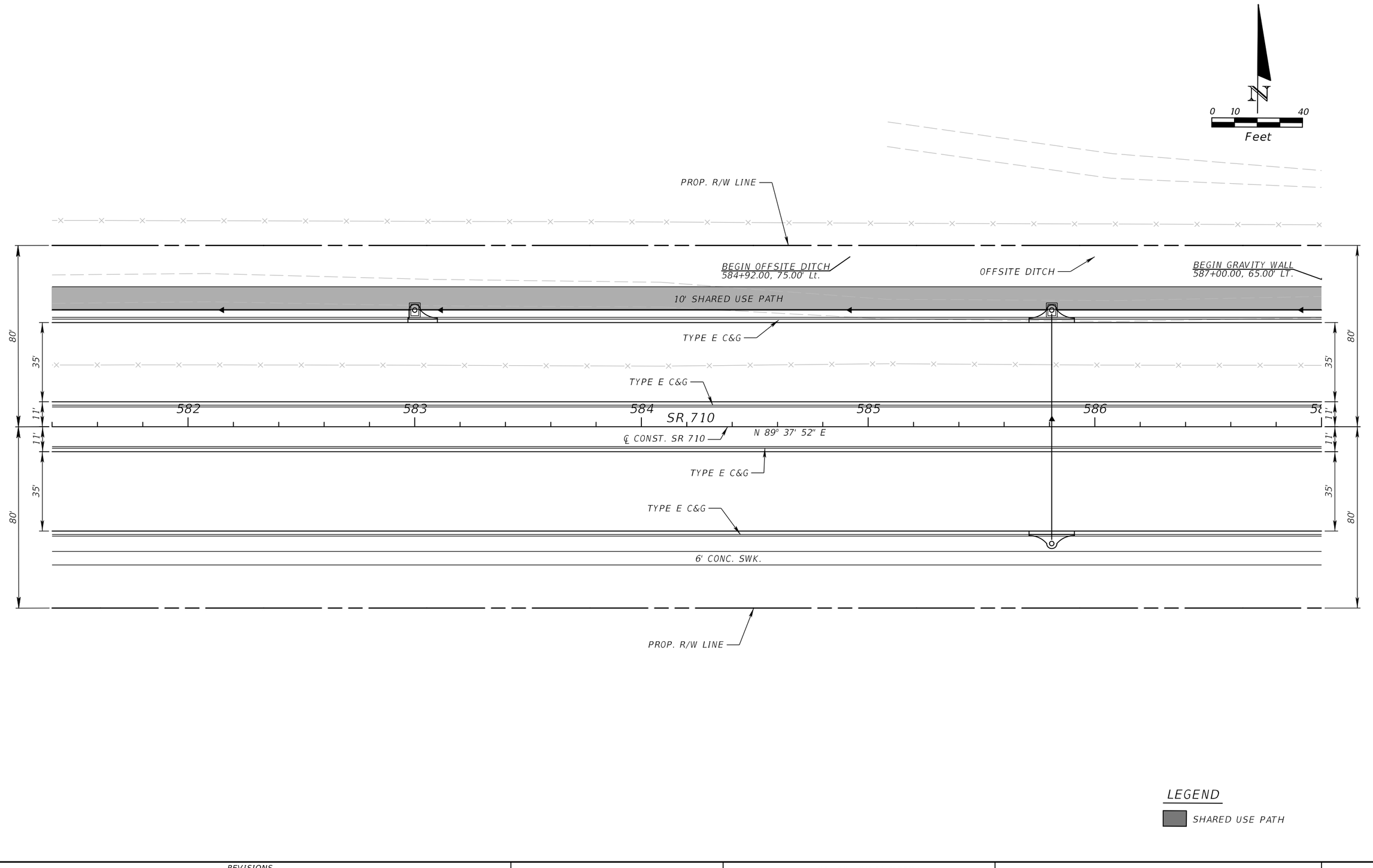


REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

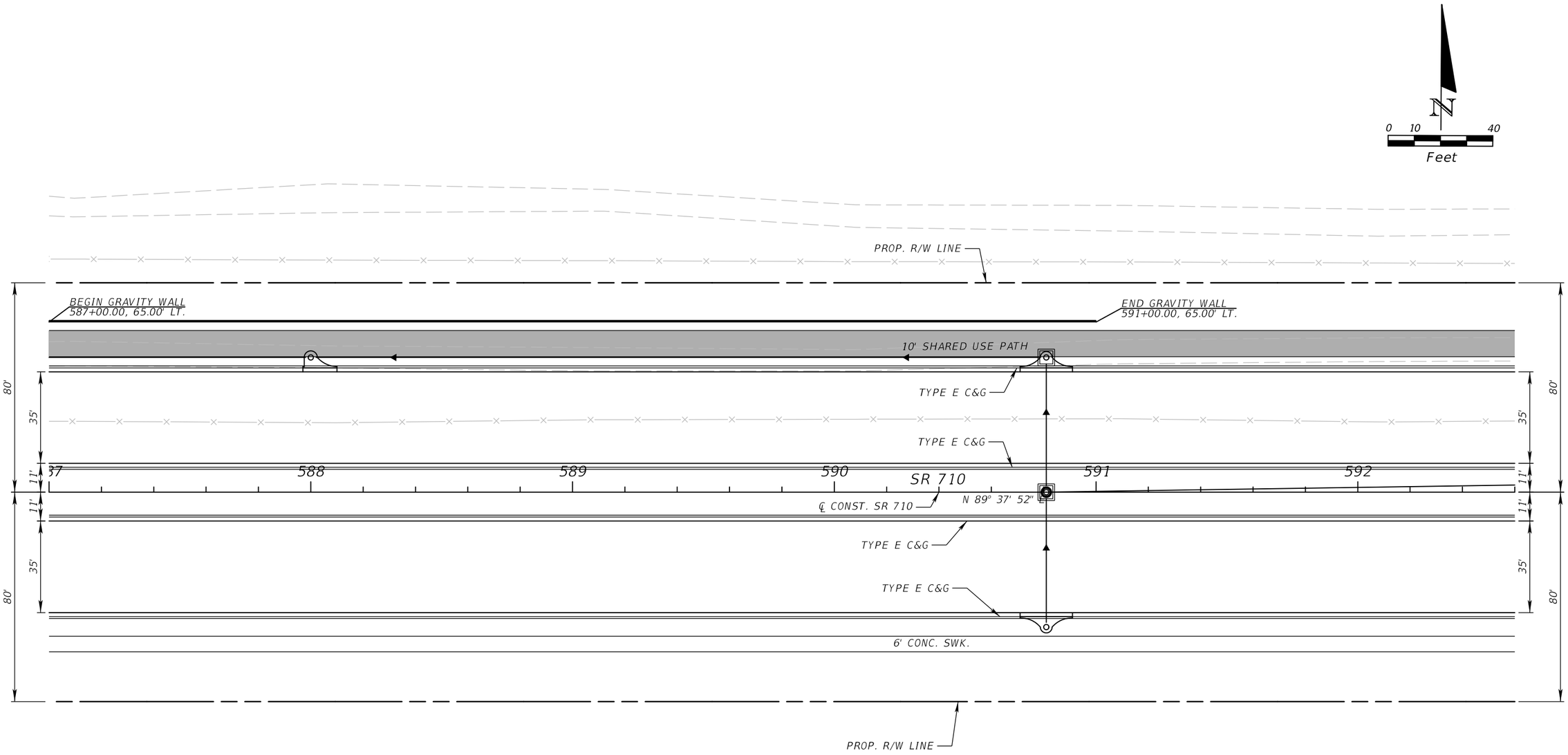
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 55

USER: George.Knox 4/24/2023 10:02:03 AM c:\pwworking\wgi\george\d2251013\PLANRD16.dgn



LEGEND

SHARED USE PATH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

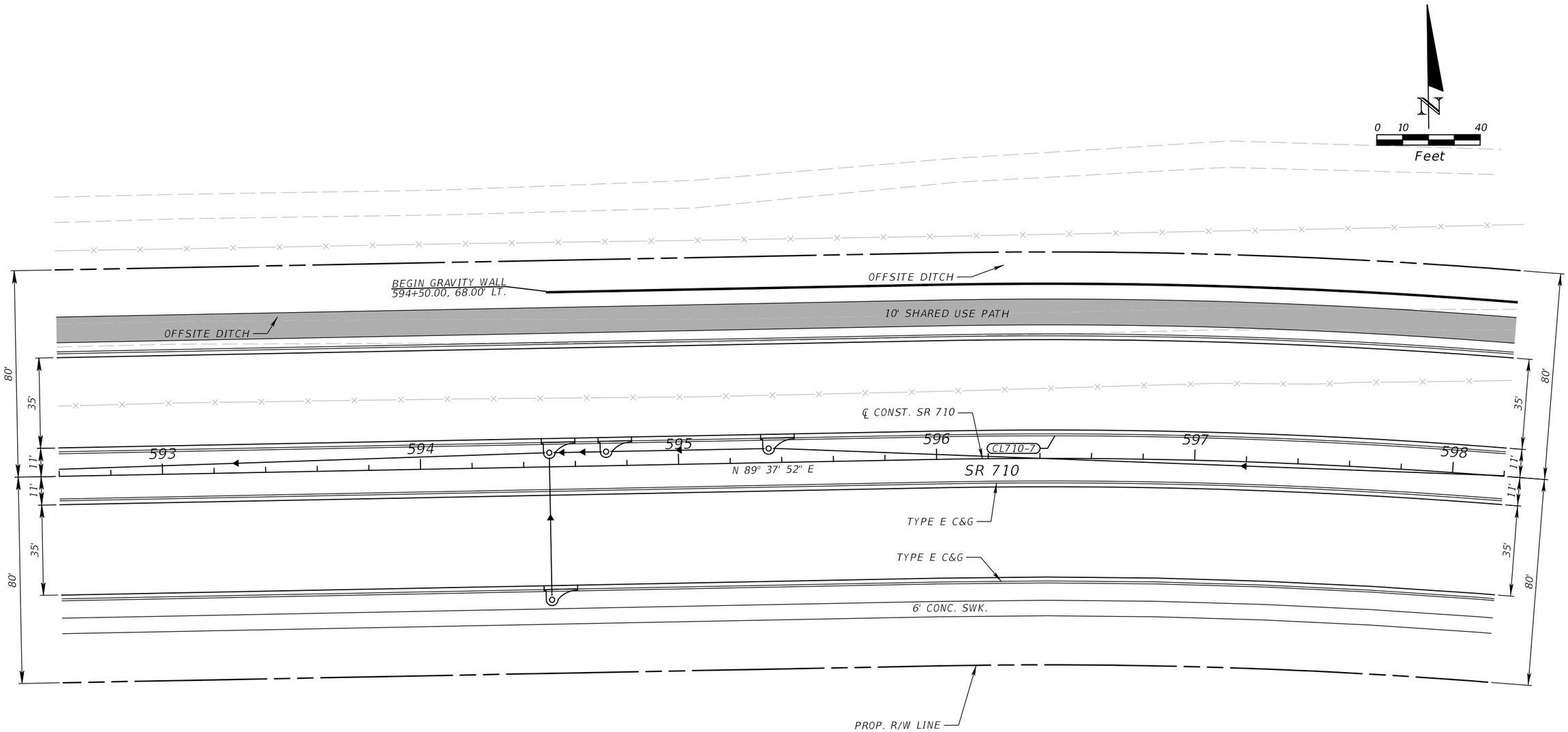
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 56

USER: George.Knox 4/24/2023 10:02:11 AM c:\pwworking\wgi\george\d2251013\PLANRD17.dgn



LEGEND

SHARED USE PATH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

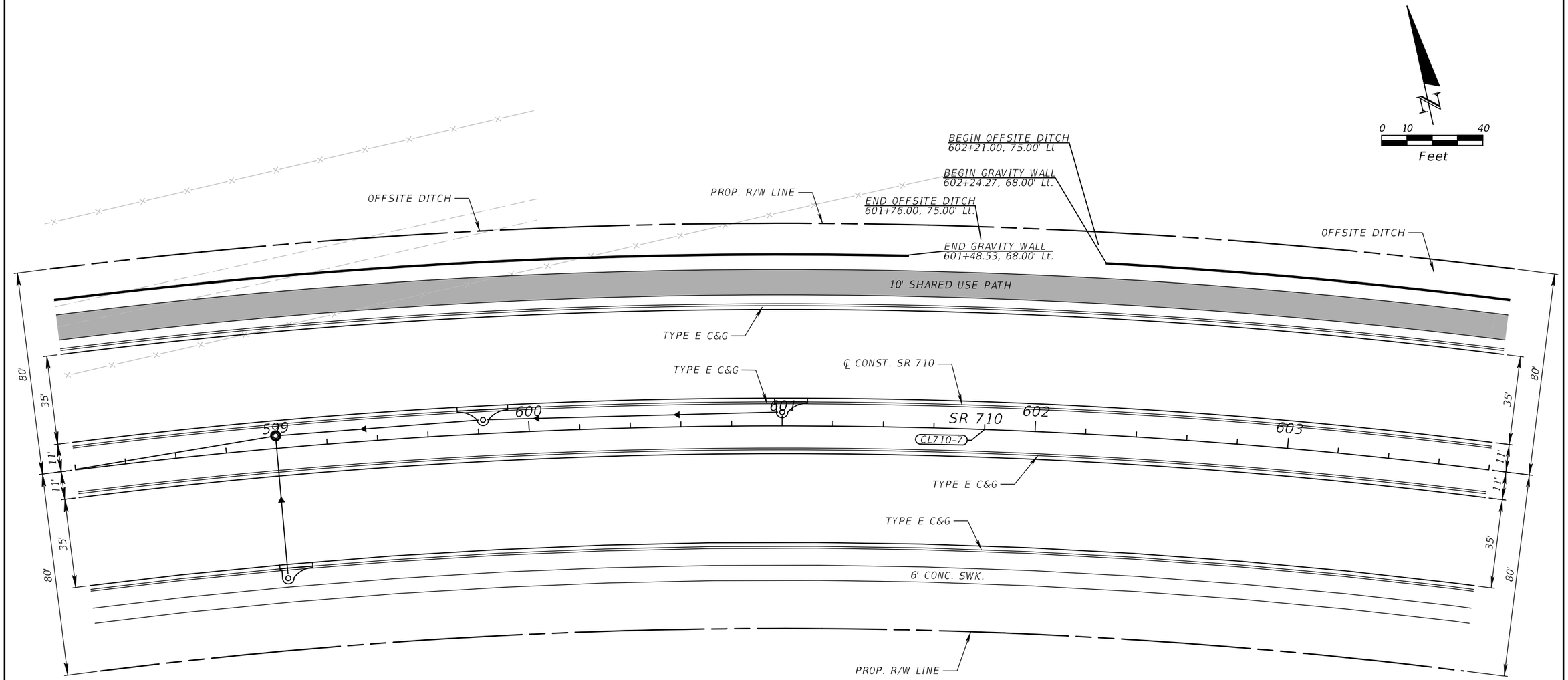
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 57

USER: George.Knox 4/24/2023 10:02:18 AM c:\pwworking\wgi\george\d2251013\PLANRD18.dgn



LEGEND

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

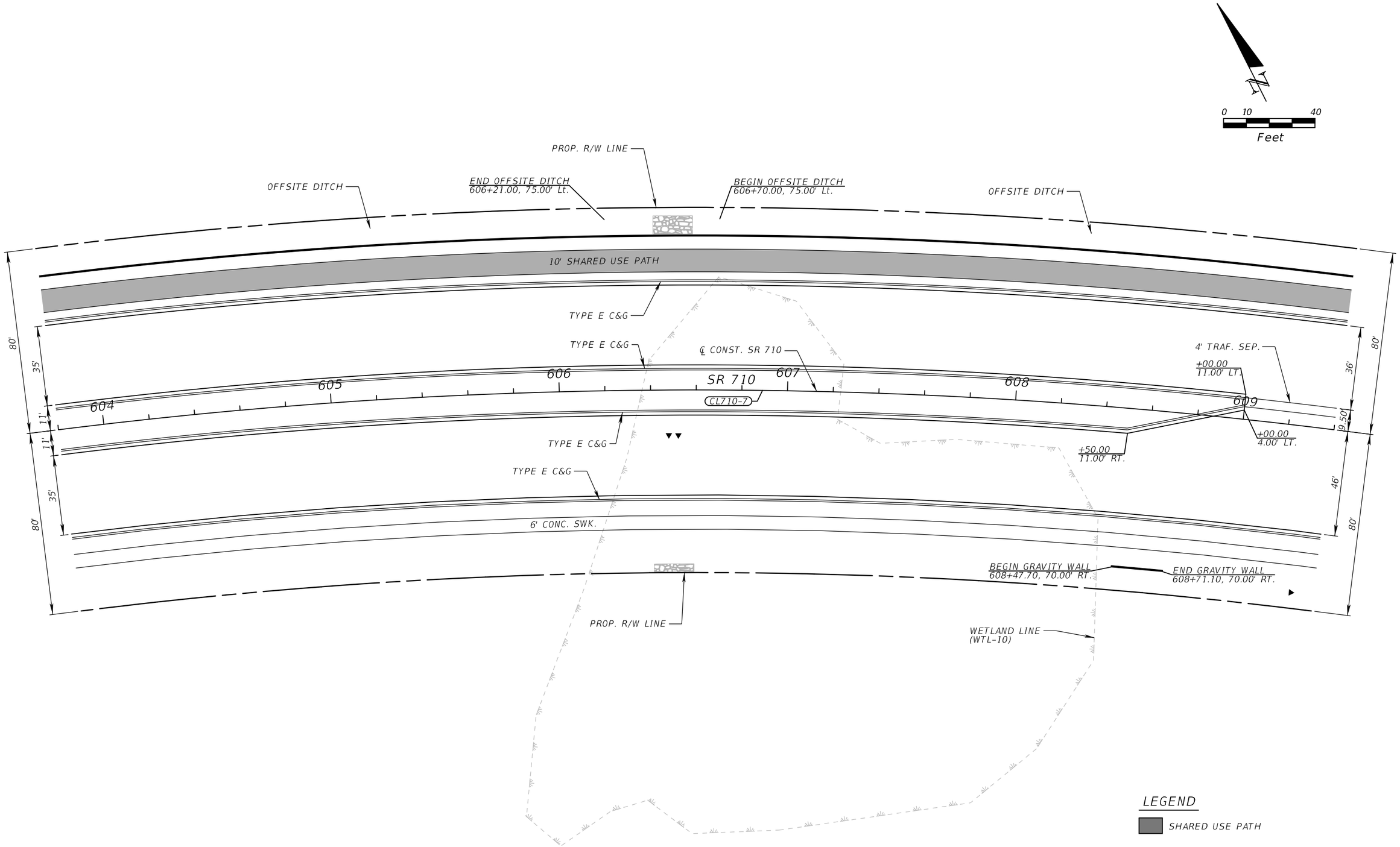
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 58

USER: George.Knox 4/24/2023 10:02:26 AM c:\pwworking\wgi\george\d2251013\PLANRD19.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

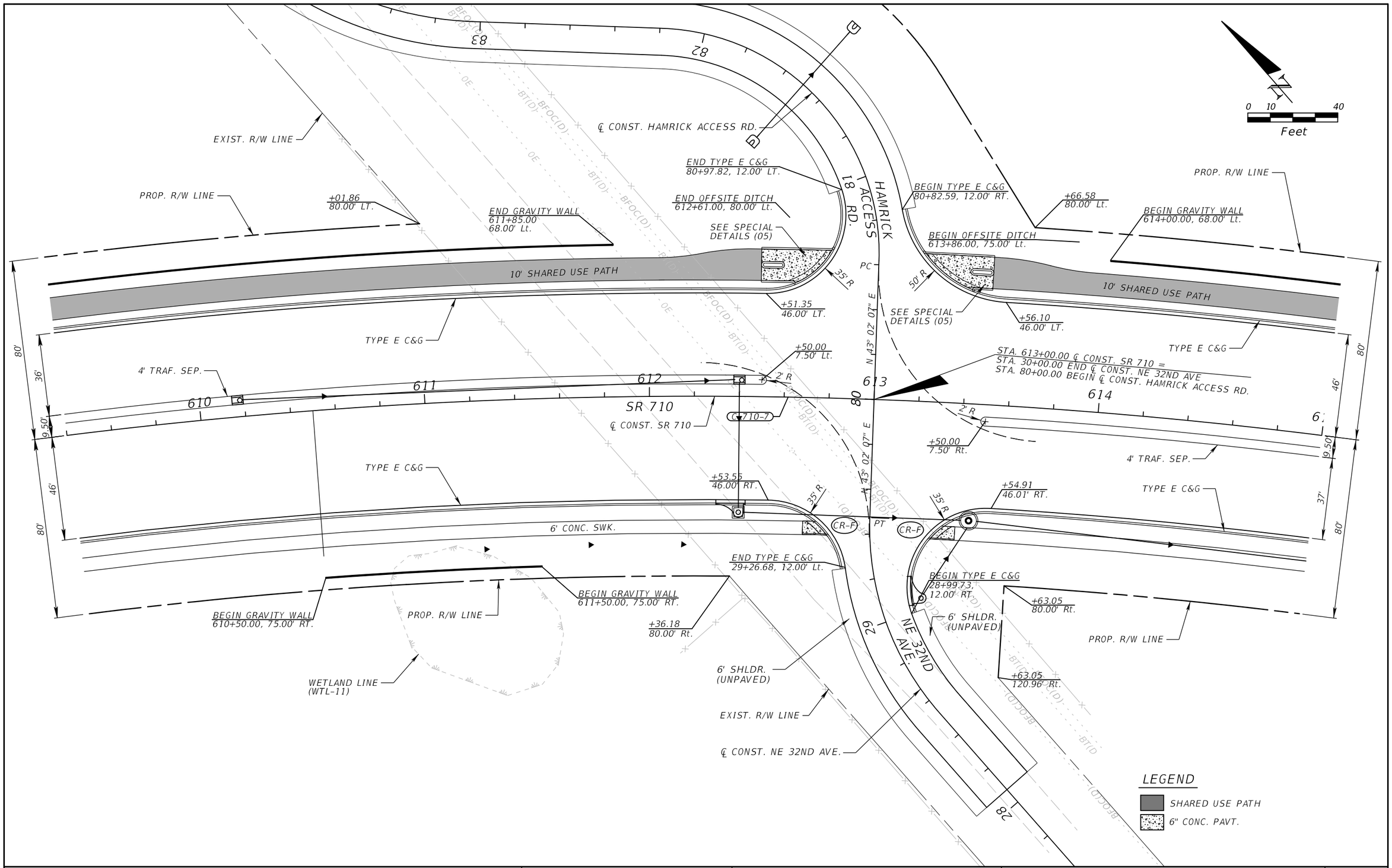
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 59

USER: George.Knox 4/24/2023 10:02:33 AM c:\pwworking\wgi\george\d2251013\PLANRD20.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

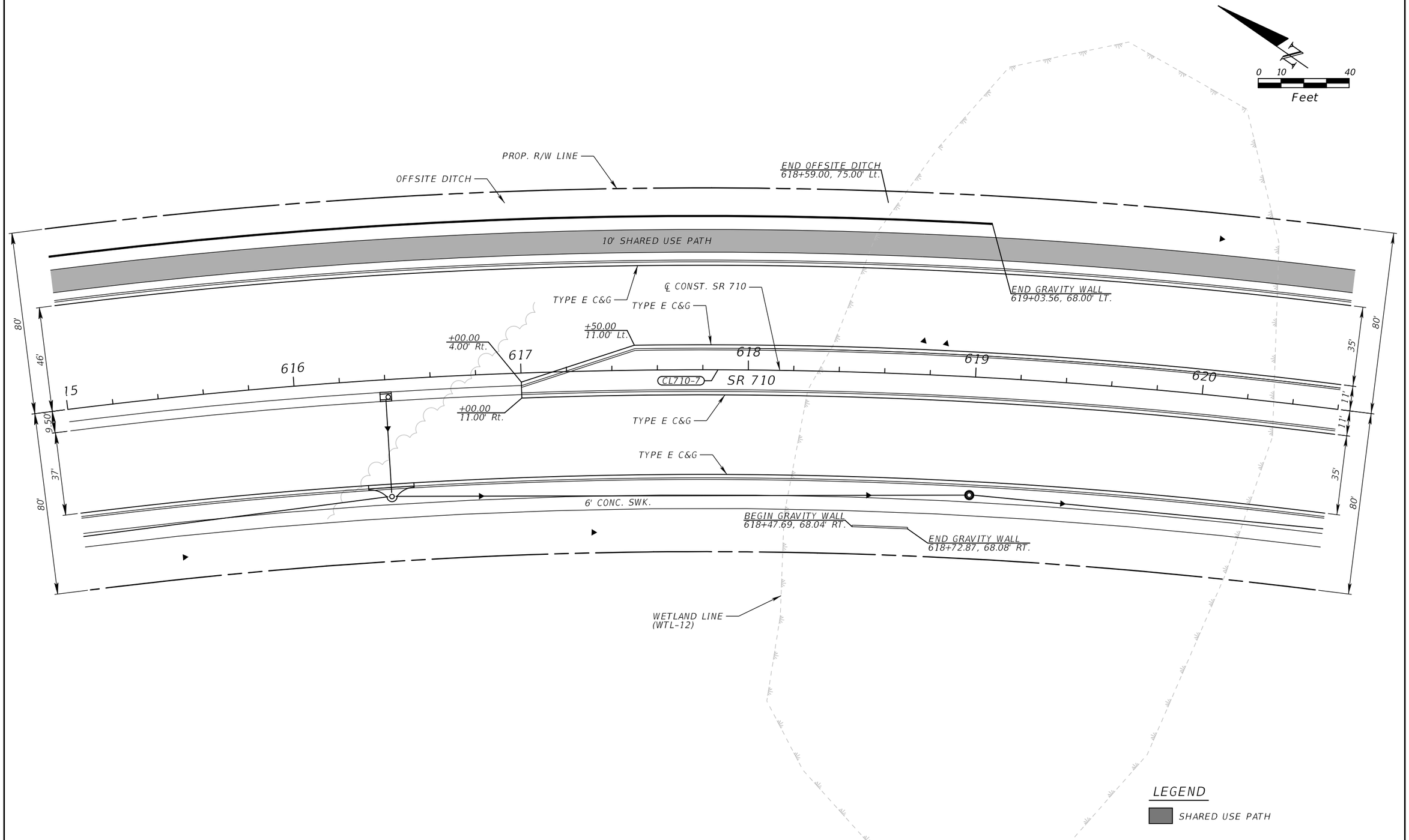
GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 60



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

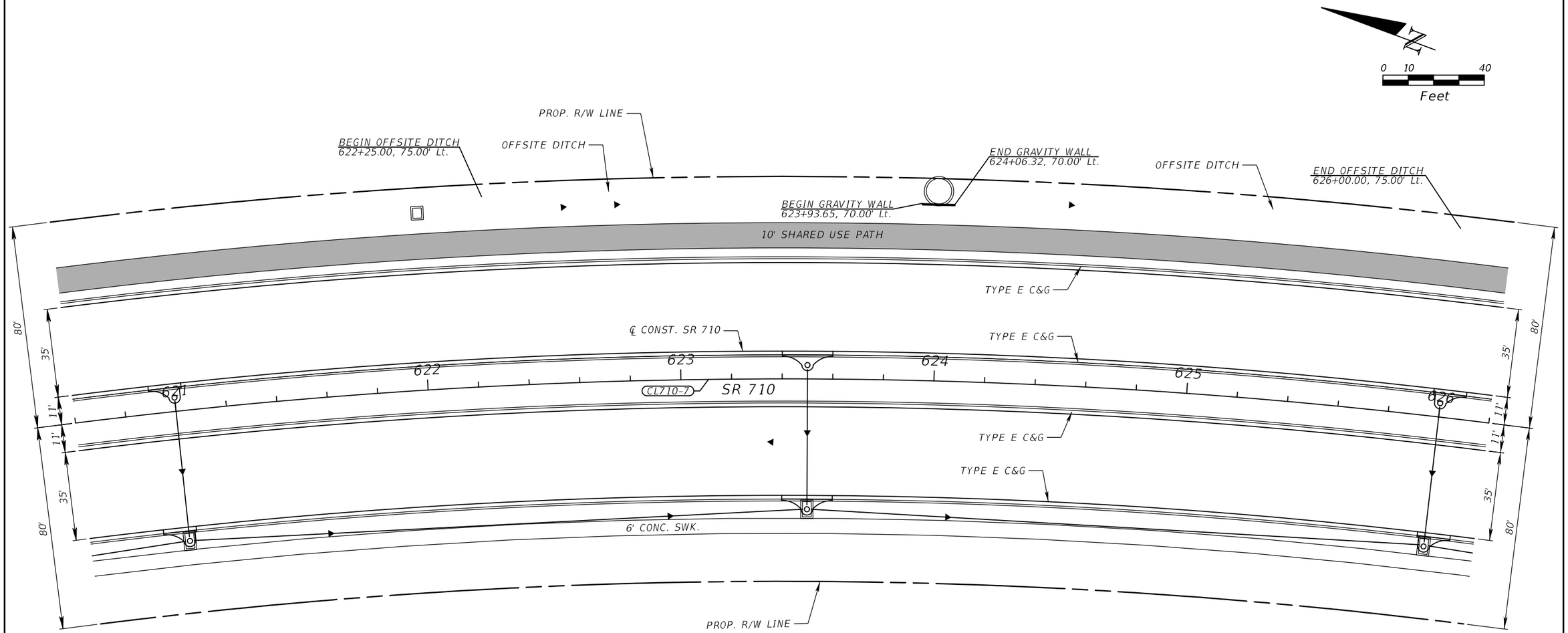
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 61

USER: George.Knox 4/24/2023 10:02:48 AM c:\pwworking\wgi\george\d2251013\PLANRD22.dgn



LEGEND

SHARED USE PATH

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

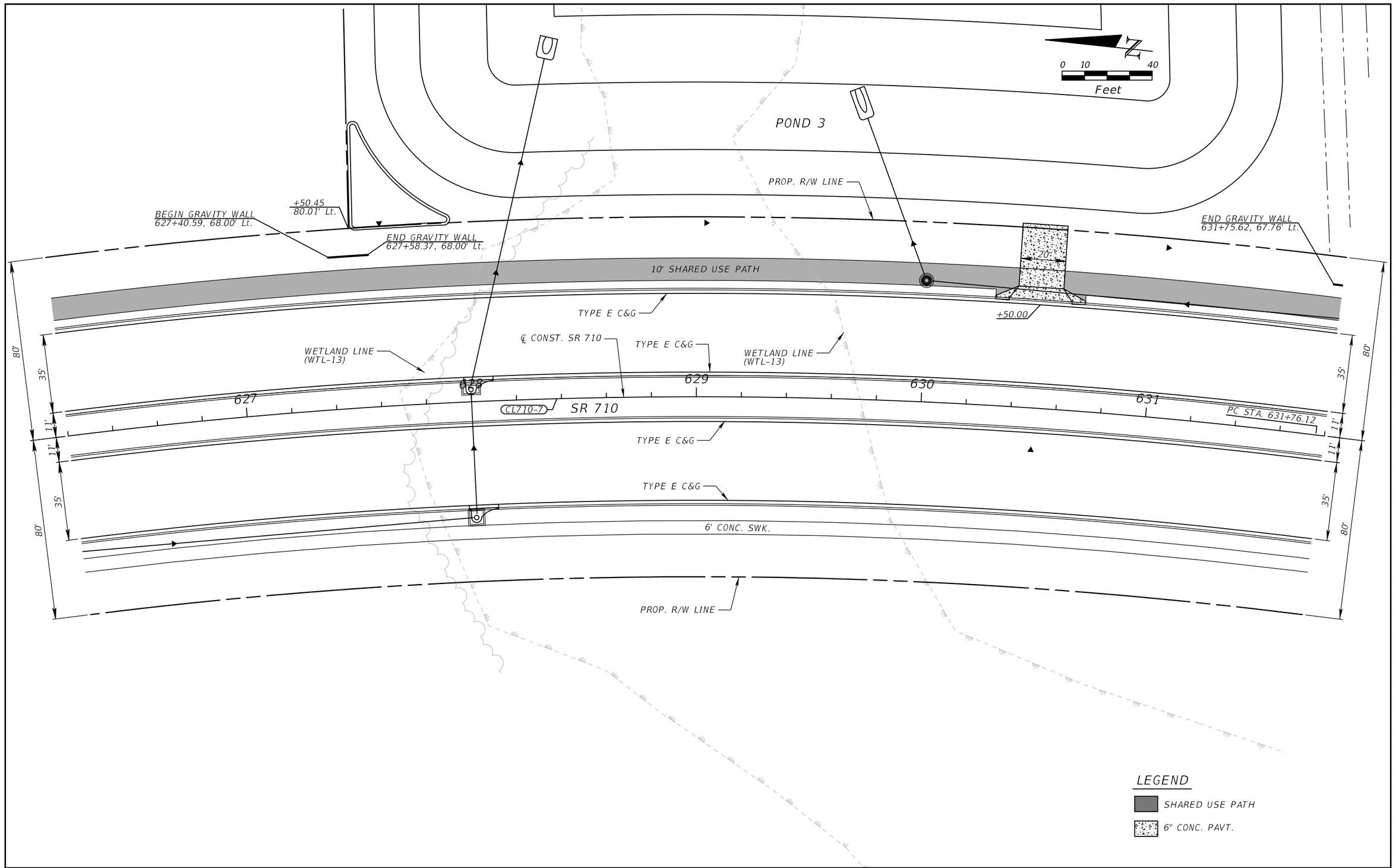
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 62

USER: George.Knox 4/24/2023 10:02:55 AM c:\pwworking\wgi\george\d2251013\PLANRD23.dgn



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

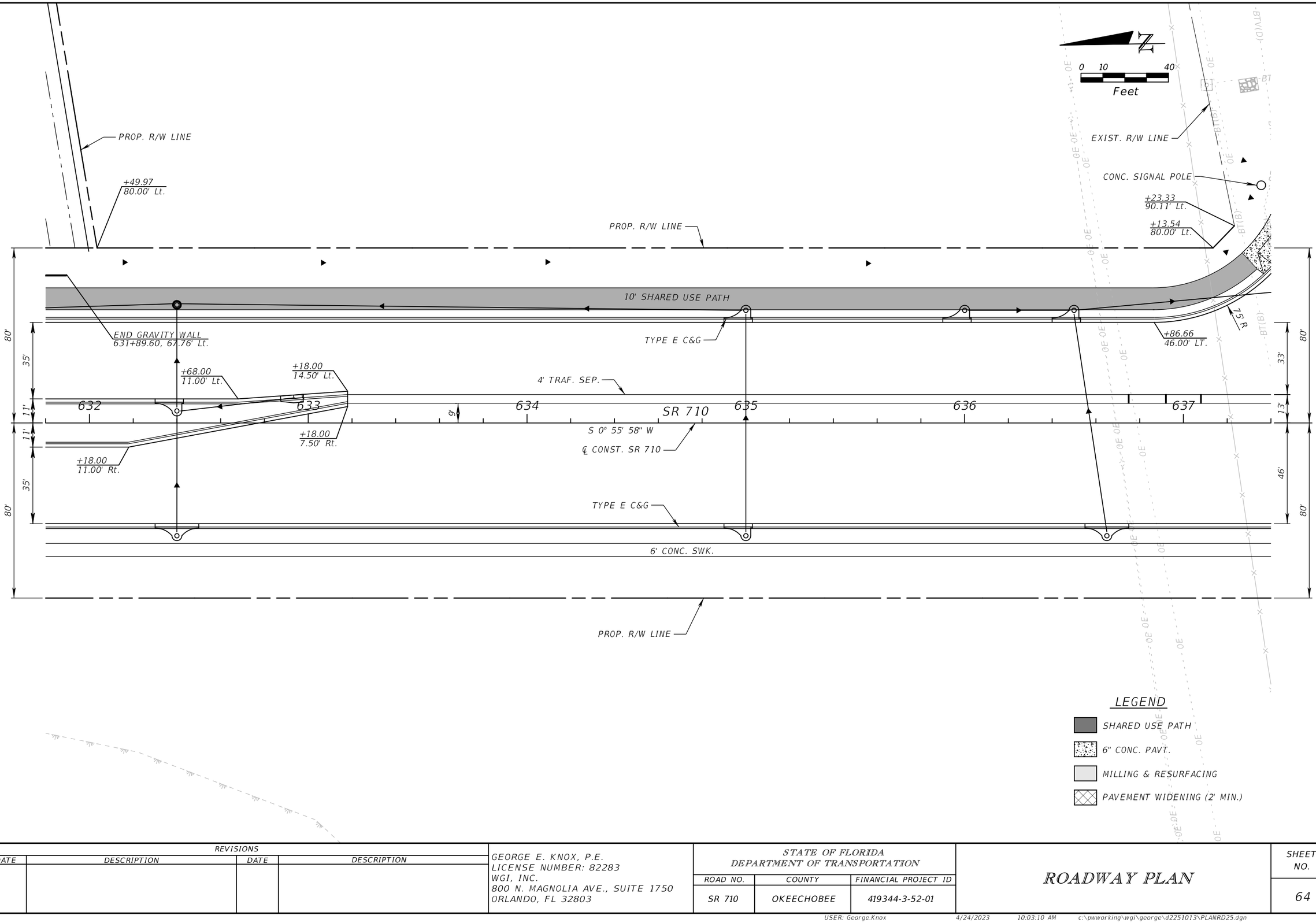
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 63

USER: George.Knox 4/24/2023 10:03:02 AM c:\pwworking\wgi\george\d2251013\PLANRD24.dgn



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

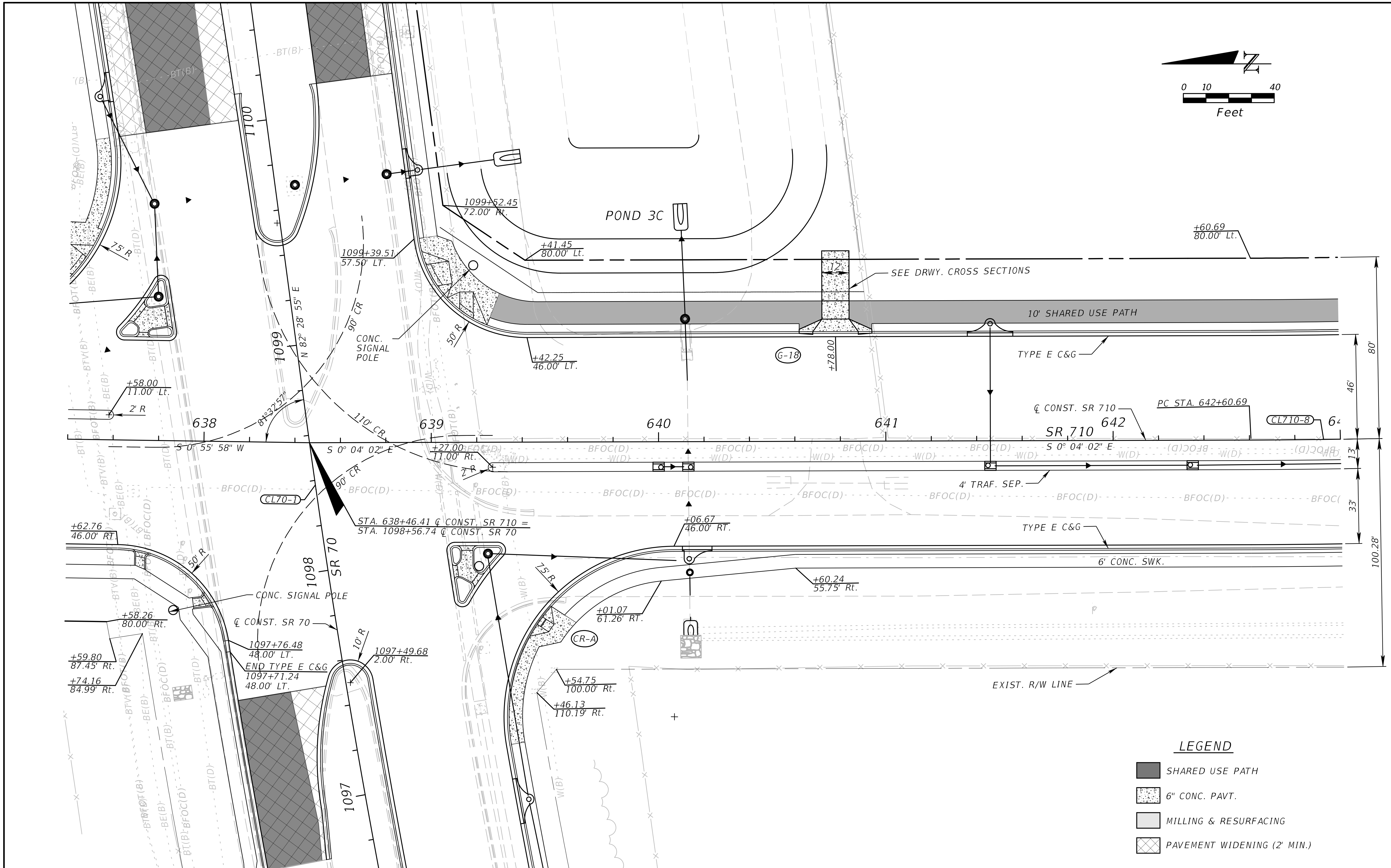
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 64

USER: George.Knox 4/24/2023 10:03:10 AM c:\pwworking\wgi\george\d2251013\PLANRD25.dgn



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 65

USER: George.Knox 4/24/2023 10:03:18 AM c:\pwworking\wgi\george\d2251013\PLANRD26.dgn

0 10 40
Feet

PROP. R/W LINE
+29.69
81.21' LT.
MATCH EXIST.
+06.44
80.00' LT.
+42.04
+54.40
81.21' LT.
MATCH EXIST.
+78.46
80.00' LT.
SEE SPECIAL
DETAILS (05)
SEE SPECIAL
DETAILS (05)
10' SHARED USE PATH
10' SHARED USE PATH
NE 4TH TRL.
35' R
35' R
80'
46'
+93.67
46.00' LT.
+90.42
46.00' LT.
TYPE E C&G
TYPE E C&G
TYPE E C&G
STA. 646+73.29 ℄ CONST. SR 710 =
STA. 51+61.83 END ℄ CONST. FPL ACCESS RD.
13
644
645
646
647
648
SR 710
+92.00
11.00' Lt.
+92.00
7.50' RT.
TYPE E C&G
35'
11'
11'
13'
33'
80'
CL710-B
℄ CONST. SR 710
4' TRAF. SEP.
+92.00
14.50' RT.
+38.55
11.00' Rt.
90° 4'
℄ CONST. FPL ACCCESS RD.
TYPE E C&G
35'
+32.12
46.00' RT.
TYPE E C&G
SEE SPECIAL
DETAILS FOR
DRWY. CROSS
SLOPE TRANS.
+95.45
+11.80
46.00' Rt.
CR-F
50' R
50' R
51
PT STA. 51+03.33
N 81° 40' 52" E
BEGIN M&R
NE 34th AVE.
23+12.61
6' CONC. SWK.
+38.55
61.00' Rt.
CR-F
CLFPL1
+12.61
9.37' Rt.
+38.55
55.75' Rt.
END TYPE E C&G
50+61.83, 12.00' Lt.
NE 34TH AVE.
23
N 0° 04' 02" W
END TYPE E C&G
50+70.50, 12.00' RT.
+12.61
12.18' Lt.
FPL ACCESS RD.
PC STA. 50+31.32
℄ CONST. NE 34TH AVE.
STA. 23+38.83
℄ CONST. NE 34TH AVE.
EXIST. R/W LINE
50+26.00
12.00' LT.
MATCH EXIST.
50+26.00
12.00' RT.
MATCH EXIST.
50

LEGEND
- SHARED USE PATH
- 6" CONC. PAVT.
- MILLING & RESURFACING (M&R)
- PAVT. REMOVAL

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 66

USER: George.Knox 4/24/2023 10:03:26 AM c:\pwworking\wgi\george\d2251013\PLANRD27.dgn

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0 10 40
Feet

PROP. R/W LINE
10' SHARED USE PATH
TYPE E C&G
℄ CONST. SR 710
TYPE E C&G
649 650 651 652 653 654
SR 710 CL710-8
80' 35' 11' 11' 35' 80'
6' CONC. SWK.
6' CONC. SWK.
+30.00
80.00' Rt.
+00.00
20'
PROP. R/W LINE
EXIST. R/W LINE
℄ CONST. NE 34TH AVE.
NE 34TH AVE.
N 0° 04' 02" W
22
21
POND 4

LEGEND
SHARED USE PATH
6" CONC. PAVT.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

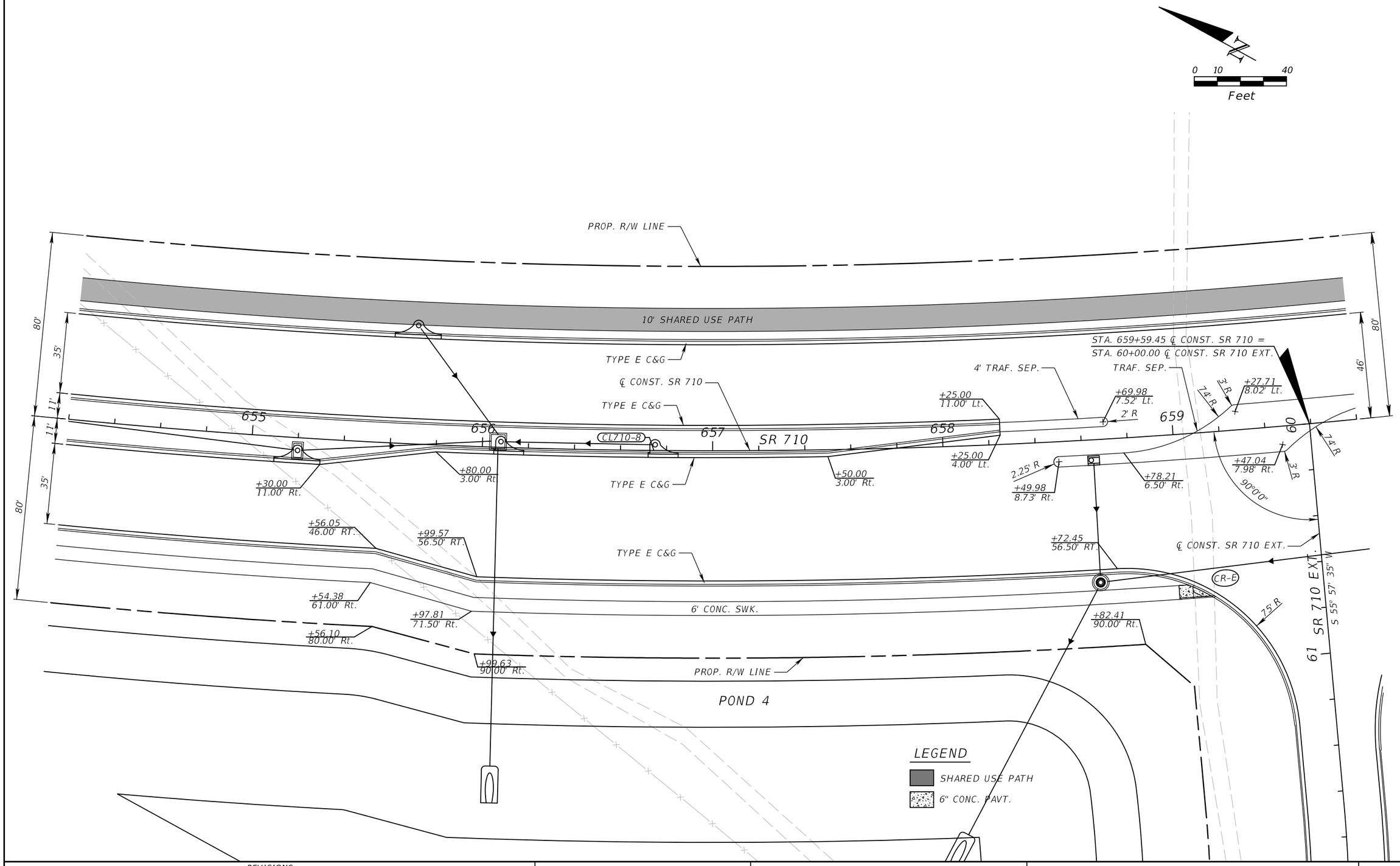
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 67

USER: George.Knox 4/24/2023 10:03:35 AM c:\pwworking\wgi\george\d2251013\PLANRD28.dgn



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 68

USER: George.Knox 4/24/2023 10:03:43 AM c:\pwworking\wgi\george\d2251013\PLANRD29.dgn

0 10 40
Feet

PROP. R/W LINE

WETLAND LINE
(WTL-15)

12'

10' SHARED USE PATH

80'

35'

11'

4' TRAF. SEP.

+29.98
8.77' Lt.

2.25' R

660

4' TRAF. SEP.

+95.31
6.50' Lt.

2' R

+37.46
7.50' RT.

+55.00
4.00' Rt.

661

+25.00
3.00' Lt.

662

+55.00
11.00' Rt.

+70.31

TYPE E C&G

℄ CONST. SR 710

TYPE E C&G

663

+00.00
3.00' Lt.

664

+50.00
11.00' Lt.

665

11'

35'

80'

SR 710

CL710-8

TYPE E C&G

TYPE E C&G

+69.86
46.00' RT.

CR-E

100' R

6' CONC. SWK.

6' CONC. SWK.

+36.51
90.00' Rt.

PROP. R/W LINE

35'

90'

LEGEND

SHARED USE PATH

6" CONC. PAVT.

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

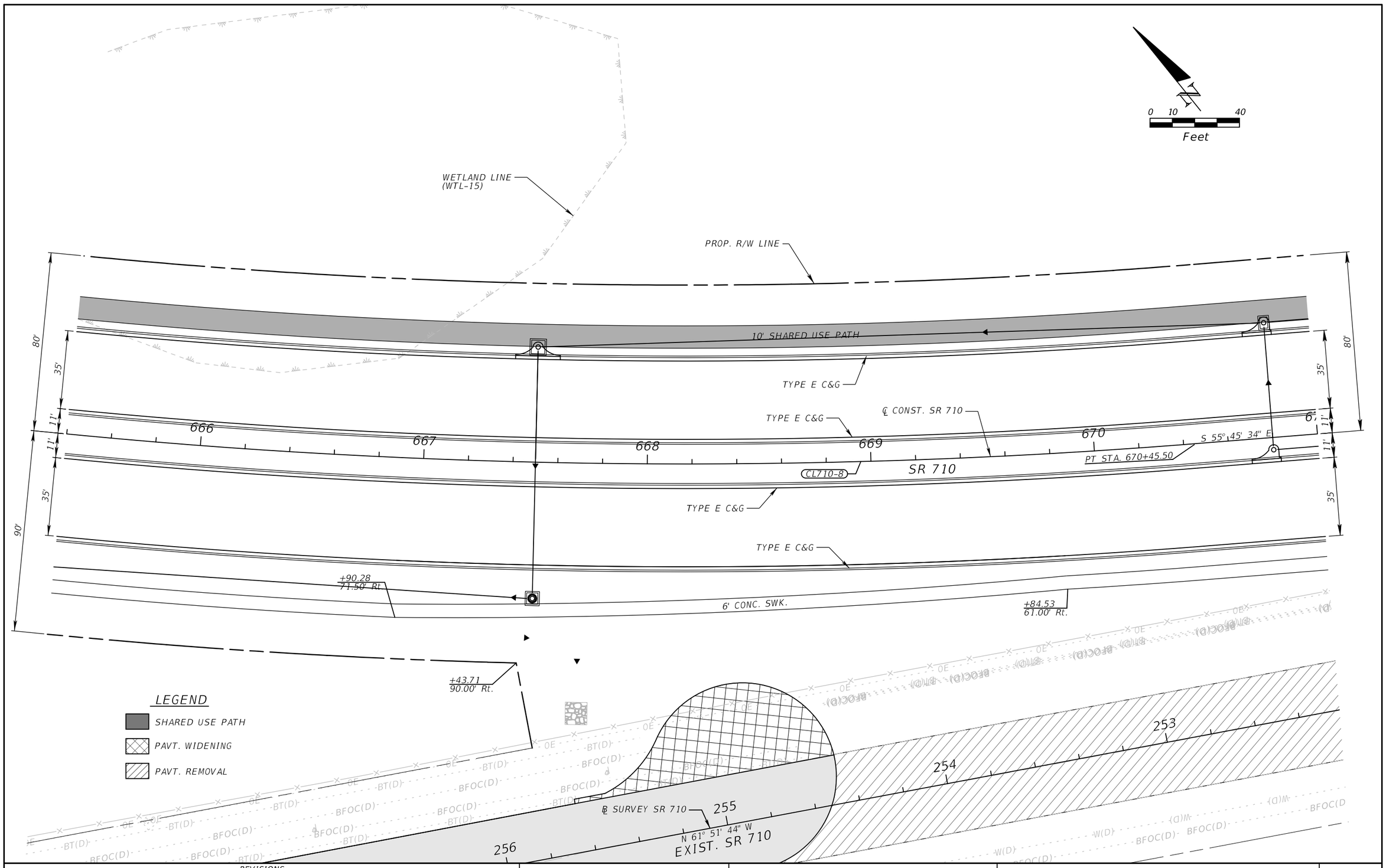
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO.
69

USER: George.Knox 4/24/2023 10:03:50 AM c:\pwworking\wgi\george\d2251013\PLANRD30.dgn



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

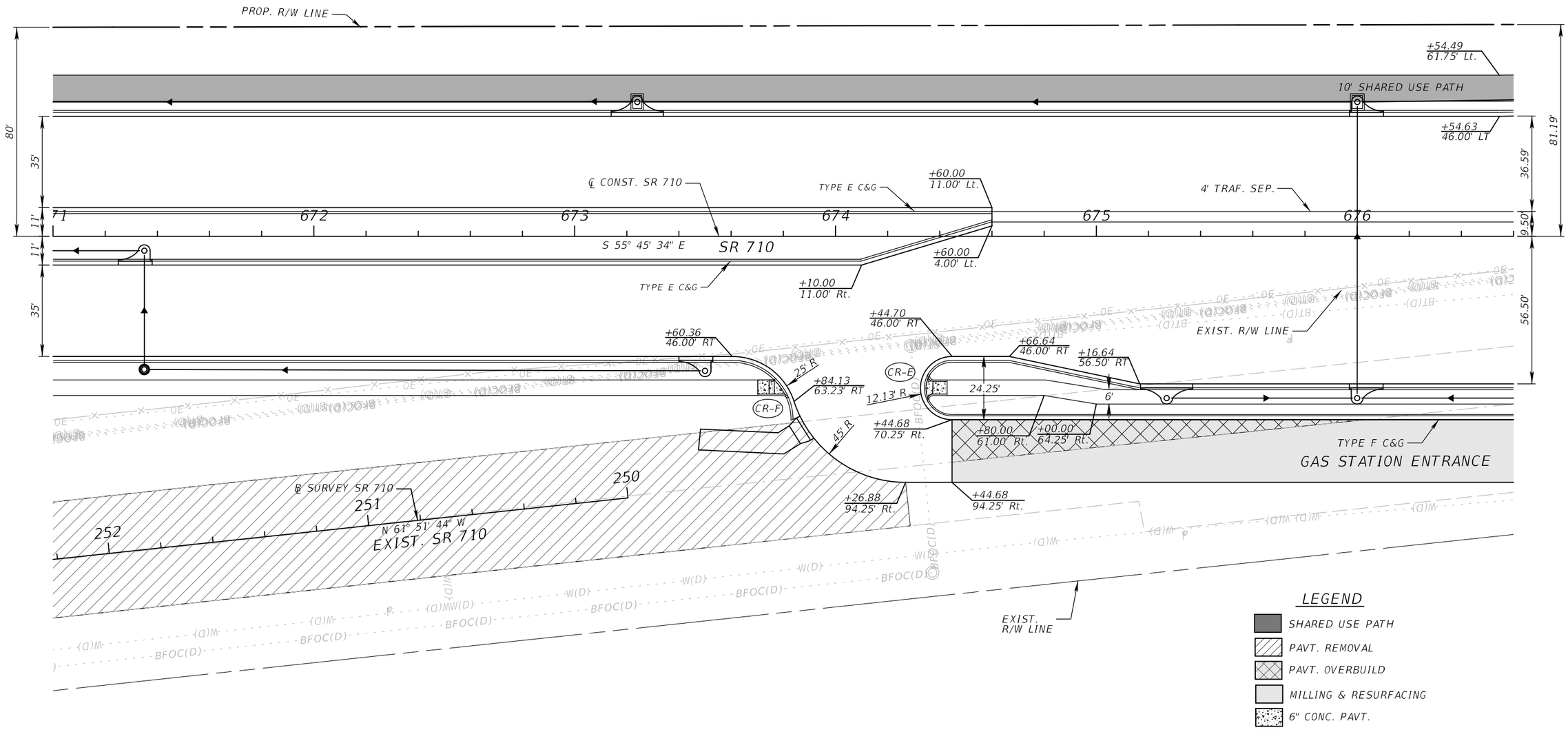
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 70

USER: George.Knox 4/24/2023 10:03:58 AM c:\pwworking\wgi\george\d2251013\PLANRD31.dgn



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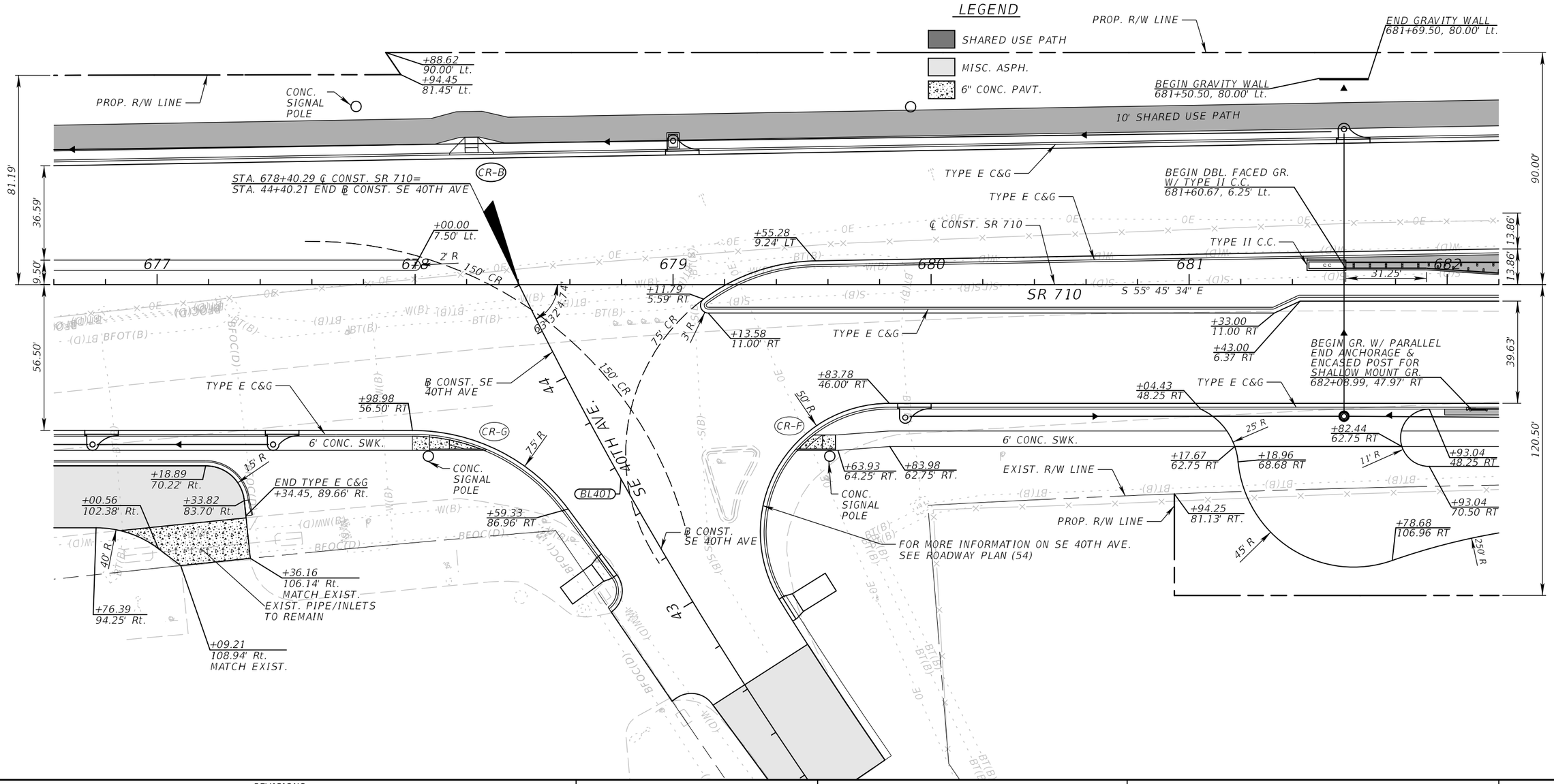
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 71

USER: George.Knox 4/24/2023 10:04:06 AM c:\pwworking\wgi\george\d2251013\PLANRD32.dgn



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LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
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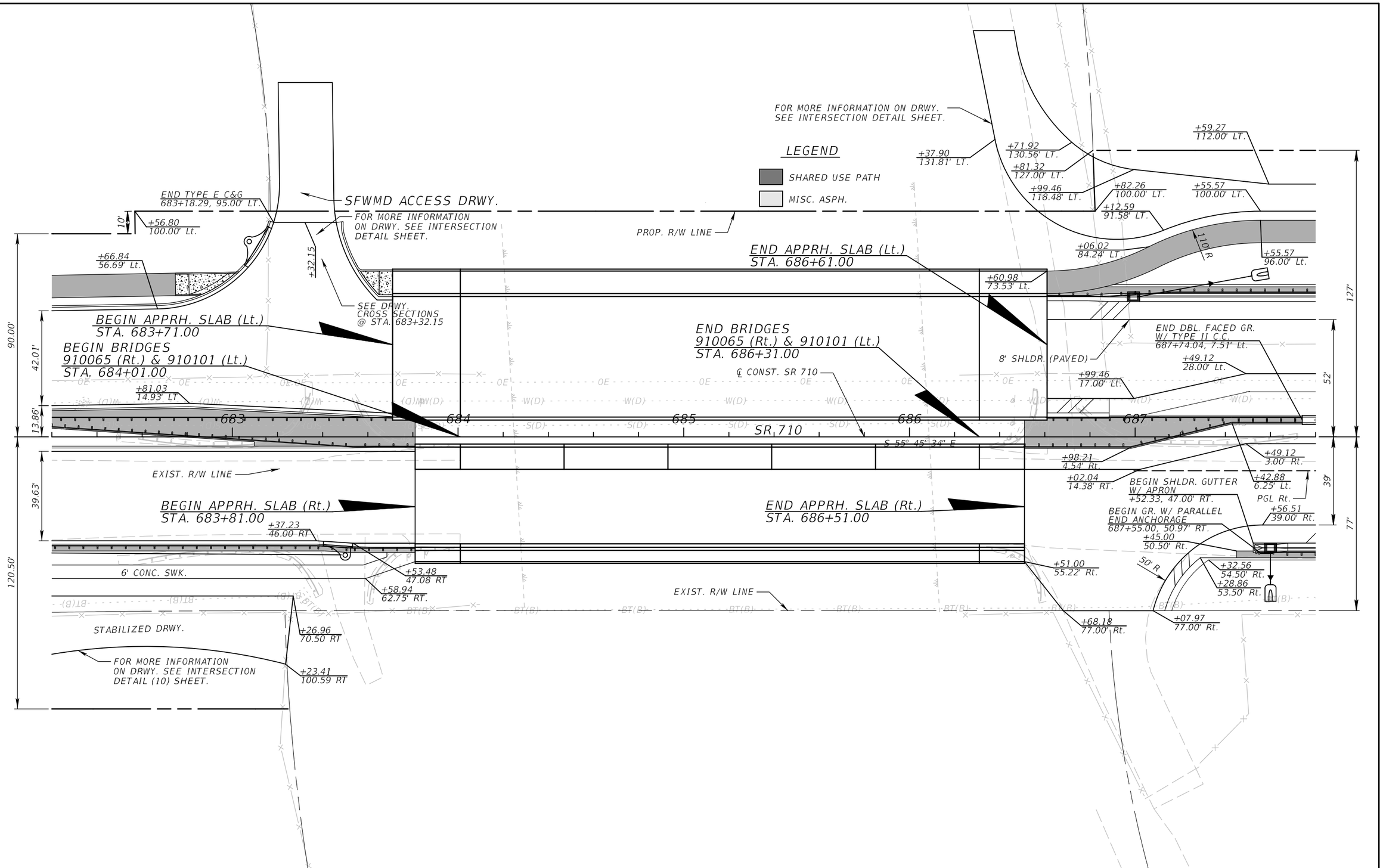
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 72

USER: George.Knox 4/24/2023 10:04:14 AM c:\pwworking\wgi\george\d2251013\PLANRD33.dgn



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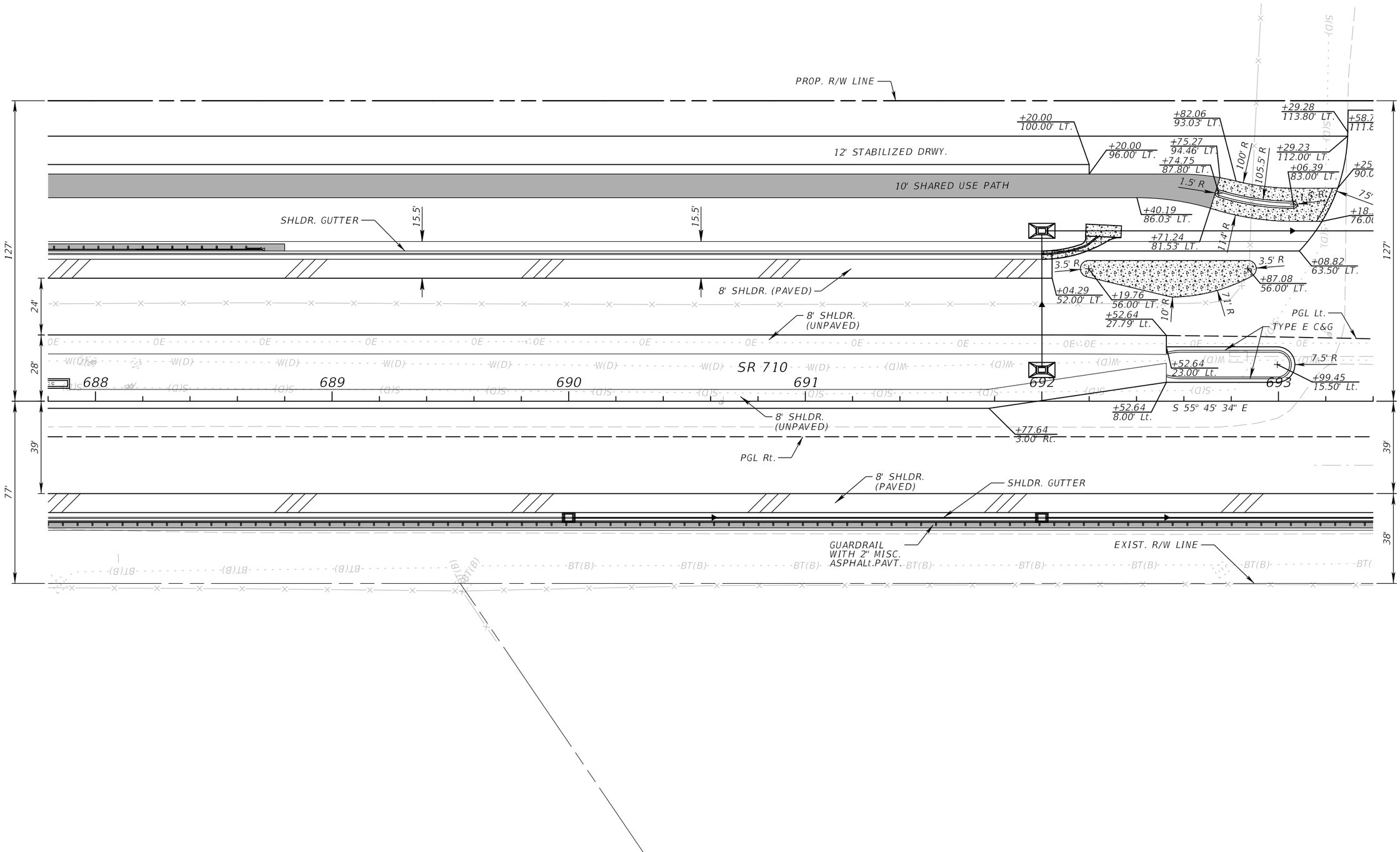
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 73

USER: George.Knox 4/24/2023 10:04:22 AM c:\pwworking\wgi\george\d2251013\PLANRD34.dgn



REVISIONS			
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LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
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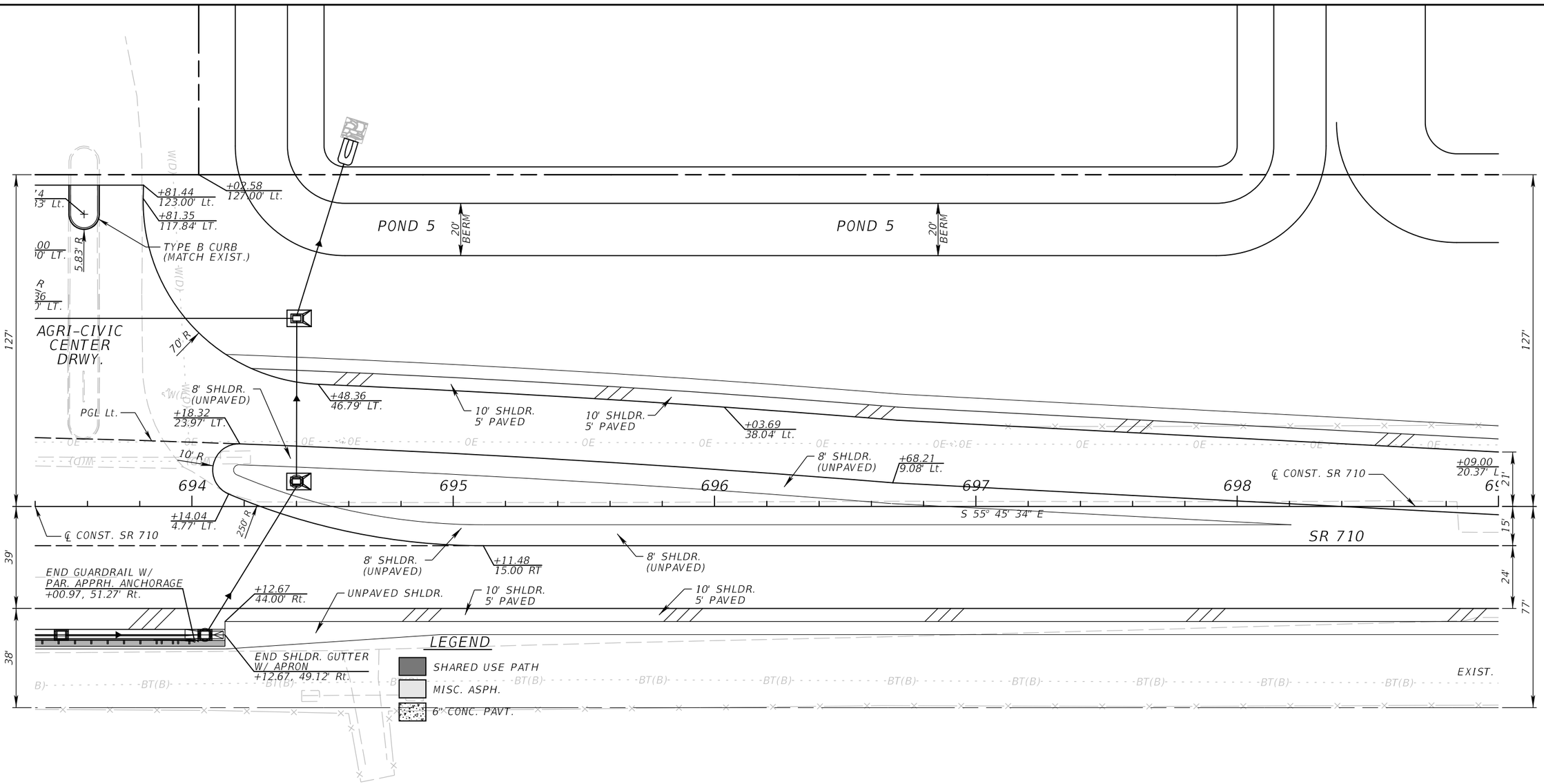
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 74



REVISIONS			
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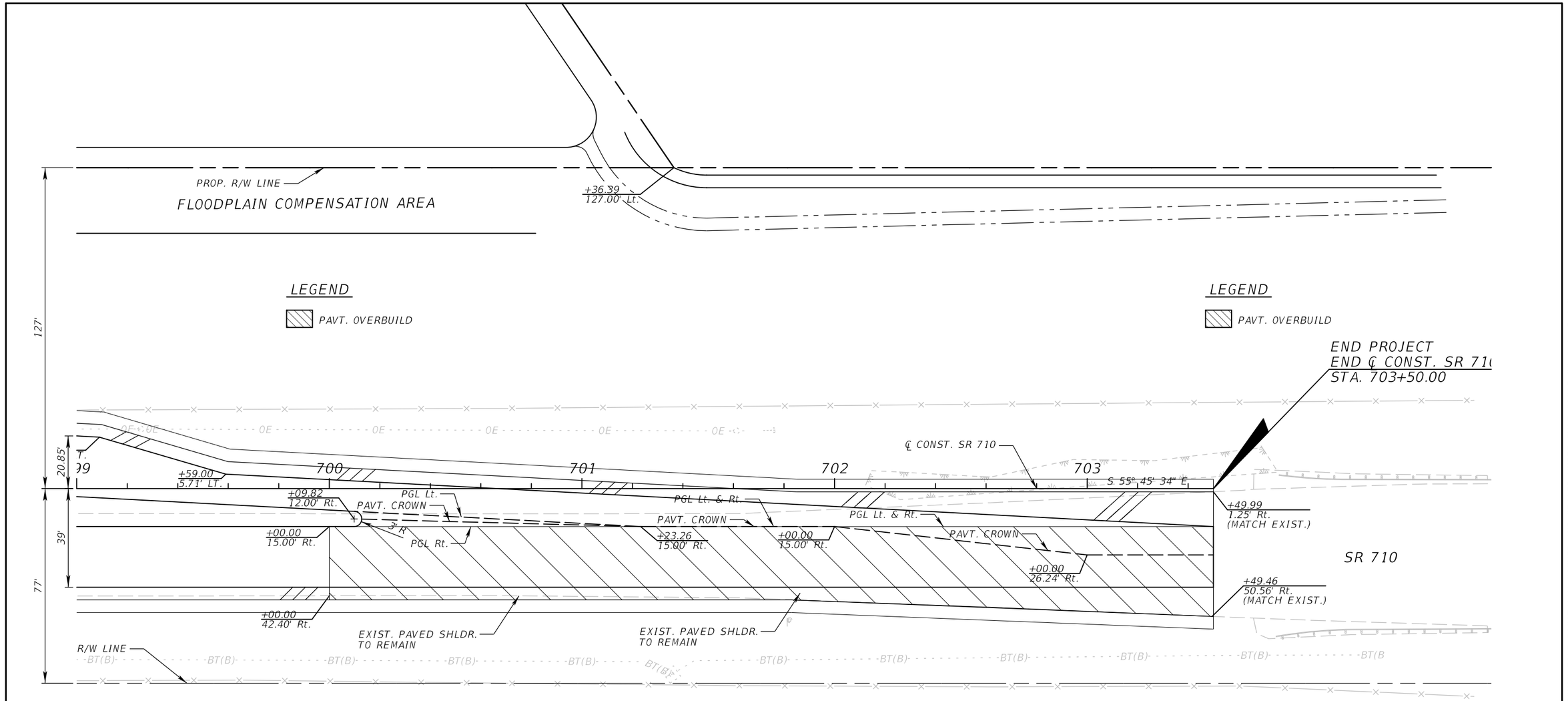
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 75

USER: George.Knox 4/24/2023 10:04:37 AM c:\pwworking\wgi\george\d2251013\PLANRD36.dgn



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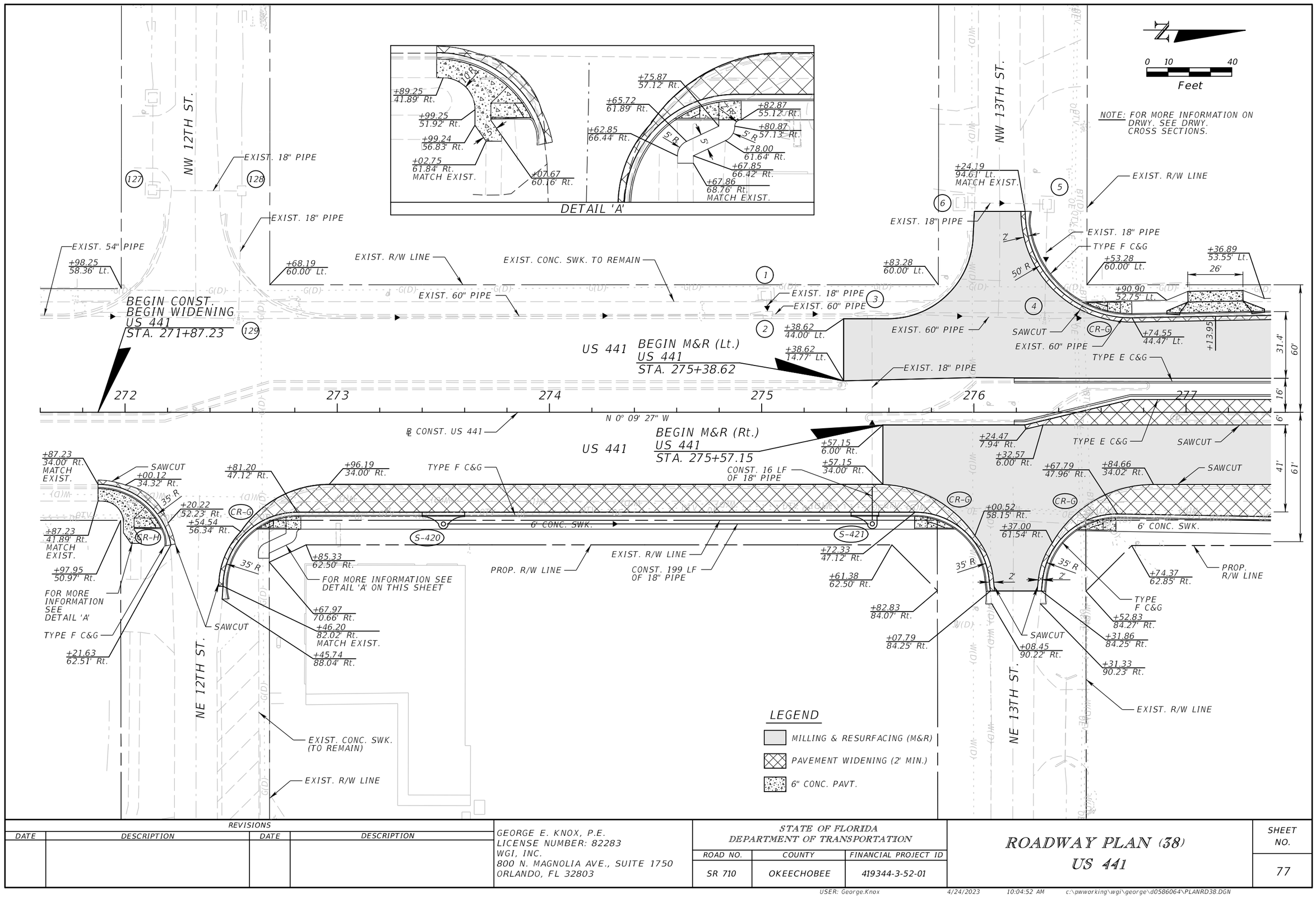
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN

SHEET NO. 76

USER: George.Knox 4/24/2023 10:04:45 AM c:\pwworking\wgi\george\d2251013\PLANRD37.dgn



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WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (38)
US 441

SHEET NO. 77

USER: George.Knox 4/24/2023 10:04:52 AM c:\pwworking\wgi\george\d0586064\PLANRD38.DGN

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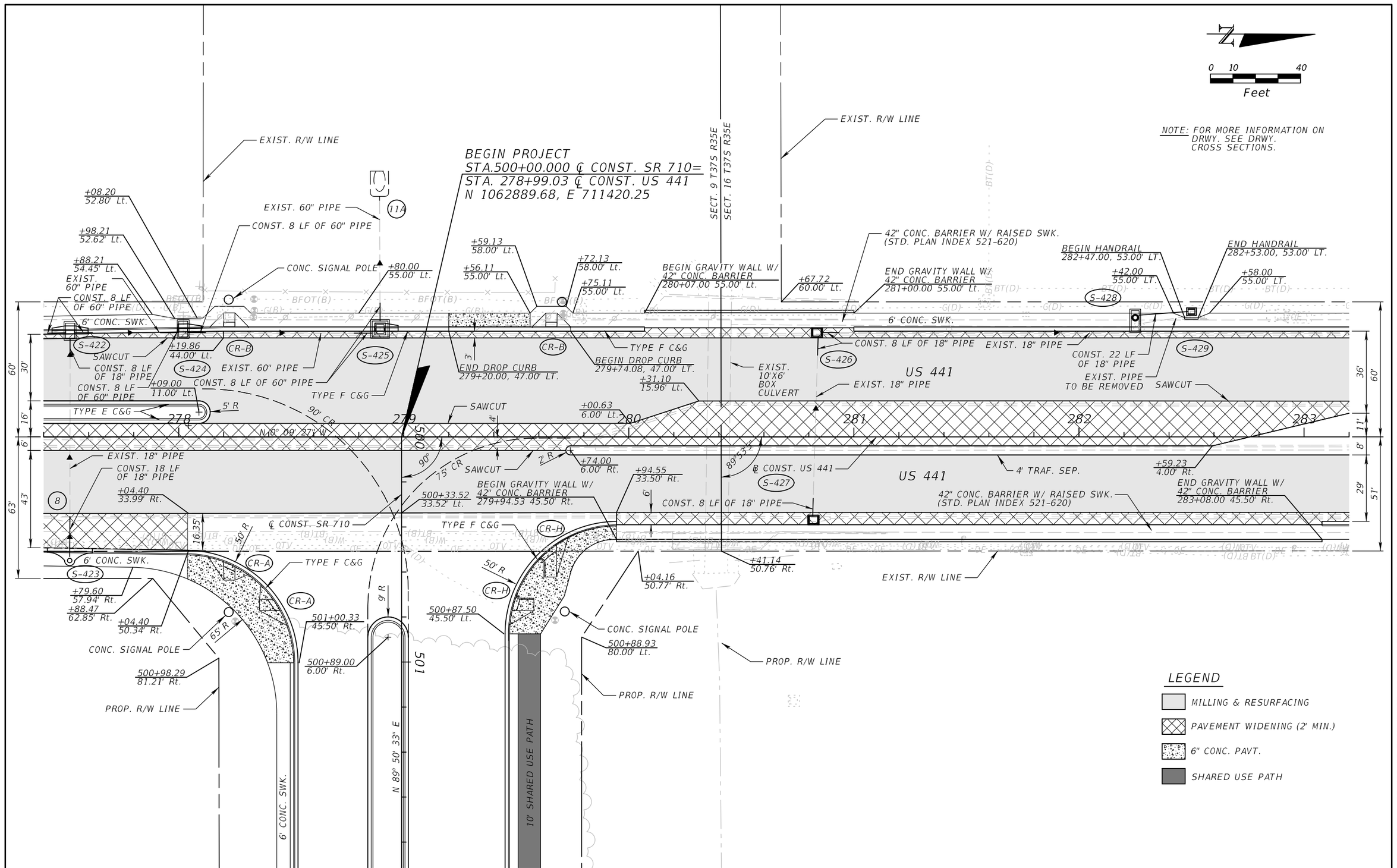

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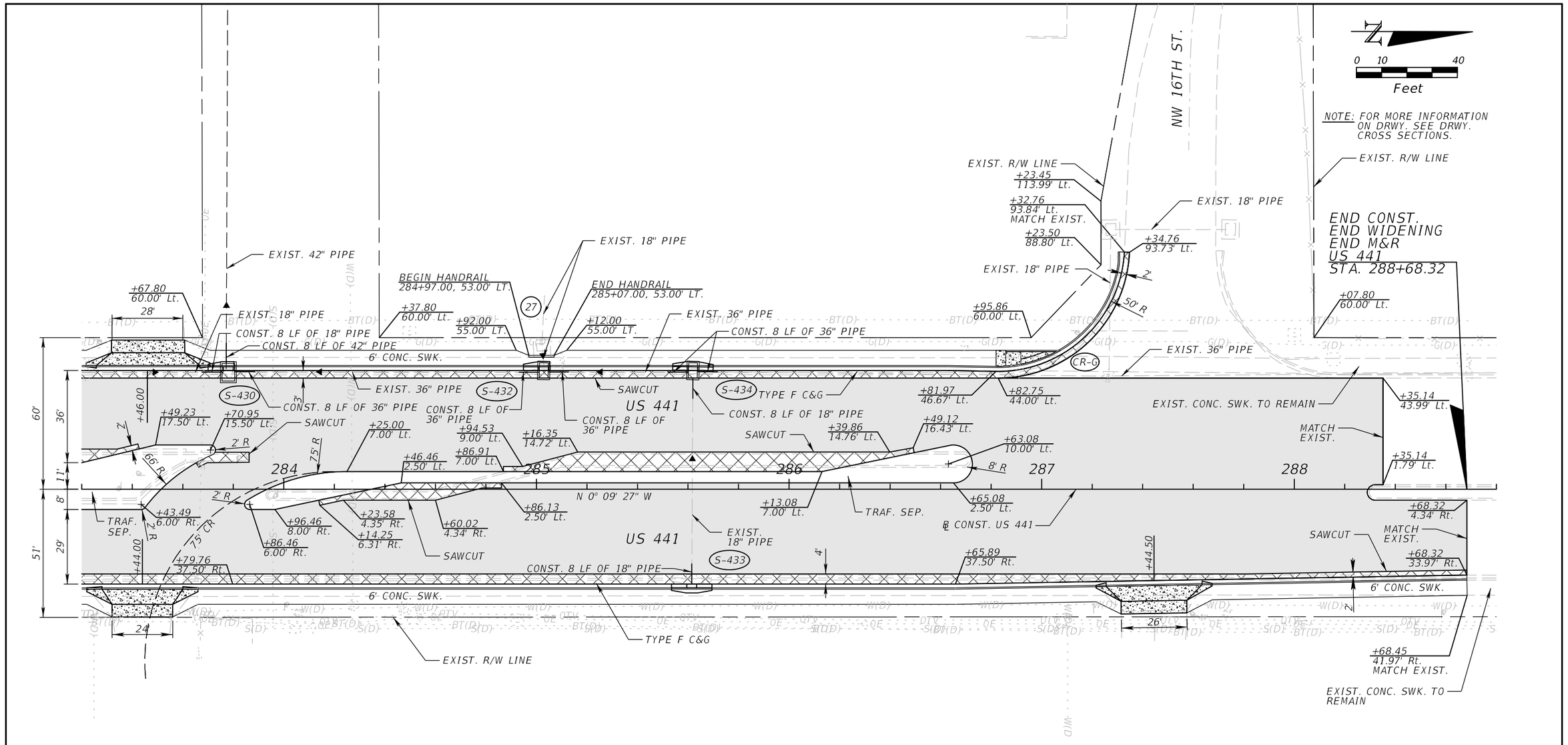
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (39)
US 441

SHEET NO. 78

USER: George.Knox 4/24/2023 10:04:59 AM c:\pwworking\wgi\george\d0586064\PLANRD39.DGN



LEGEND

- MILLING & RESURFACING (M&R)
- PAVEMENT WIDENING (2' MIN.)
- 6" CONC. PAVT.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (40)
US 441

SHEET NO. 79

USER: George.Knox 4/24/2023 10:05:06 AM c:\pwworking\wgi\george\d0586064\PLANRD40.DGN

CURVE DATA CL32ND1
PI STA. = 29+02.45
Δ = 43° 21' 59" (RT)
D = 45° 50' 12"
T = 49.70
L = 94.61
R = 125.00
PC STA. = 28+52.75
PT STA. = 29+47.36
e = NC

CURVE DATA CLHAMRICK1
PI STA. = 81+61.75
Δ = 90° 00' 00" (LT)
D = 57° 17' 45"
T = 100.00
L = 157.08
R = 100.00
PC STA. = 80+61.75
PT STA. = 82+18.83
e = NC

CURVE DATA CLHAMRICK2
PI STA. = 83+68.27
Δ = 46° 38' 01" (RT)
D = 38° 11' 50"
T = 64.65
L = 122.09
R = 150.00
PC STA. = 83+03.62
PT STA. = 84+25.71
e = NC

BEGIN CONST.
NE 32ND AVE.
STA. 28+07.35

END CONST.
NE 32ND AVE.
STA. 29+54.50

END CONST.
HAMRICK ACCESS RD.
STA. 84+25.71

BEGIN CONST.
HAMRICK ACCESS RD.
STA. 80+45.48

STA. 612+00.00 ℄ CONST. SR 710 =
STA. 30+00.00 END ℄ CONST. NE 32ND AVE =
STA. 80+00.00 BEGIN ℄ CONST.
HAMRICK ACCESS RD.

CONST. 24" PIPE
4' TRAF. SEP.
S-513A
S-260
GRAVITY WALL
WETLAND BOUNDARY
CONST. 18" PIPE
5' CONC. SWK.
SR 710
PROP. R/W LINE
TYPE E C&G
10' SHARED USE PATH
℄ CONST. SR 710
S-514
S-263
CONST. 24" PIPE
6' SHLDR. (UNPAVED)
+07.35
12.00' Lt.
PT STA. 29+47.36
612+36.18
80.00' Rt.
℄ CONST. 32ND
+26.31
12.00' LT.
28
29
24'
N 0° 19' 51" W
NE 32ND AVE.
+07.35
12.00' Rt.
PC STA. 28+52.75
CL32ND1
+99.73
12.00' RT.
S-258
CR-F
35' R
612+53.55
46.00' RT.
S-262
6' SHLDR. (UNPAVED)
613+63.05
120.96' Rt.
CONST.
18" PIPE
CONST.
30" PIPE
CR-F
S-259
N 43° 02' 07" E
80
613+63.05
80.00' Rt.
PROP. R/W LINE
CONST. 24" PIPE
CONST. 36" PIPE
5' CONC. SWK.
613+54.91
46.01' RT.
TYPE E C&G
SR 710
4' TRAF. SEP.
614
SEE CURB RAMP
DETAIL SHEET
TYPE E C&G
613+56.10
46.00' LT.
50' R
612+51.35
46.00' LT.
35' R
SEE CURB RAMP
DETAIL SHEET
S-264
PT STA. 82+18.83
PC STA. 80+61.75
+97.82
12.00' LT.
81
82
HAMRICK ACCESS RD.
N 46° 57' 53" W
PROP. R/W LINE
6' SHLDR. (UNPAVED)
+82.59
12.00' RT.
CLHAMRICK1
+18.83
50.00' Rt.
CONST. 80 LF
OF 18" PIPE
S-265
613+66.58
80.00' Lt.
+20.71
50.00' Rt.
10' SHARED USE PATH
611+01.86
80.00' Lt.
PT STA. 84+25.71
+25.71
12.00'
Lt.
6' SHLDR. (UNPAVED)
84
24'
CLHAMRICK2
+25.71
12.00'
Rt.
N 0° 19' 51" W
+95.84
27.58' Rt.
83
PC STA. 83+03.62
℄ CONST. HAMRICK
ACCESS RD.
EXIST. R/W LINE

0 10 40
Feet

LEGEND
6" CONC. PAVT.
SHARED USE PATH

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REVISIONS			
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GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (41)
NE 32ND AVE. / HAMRICK ACCESS RD.

SHEET NO. 80

USER: George.Knox 4/24/2023 10:05:13 AM c:\pwworking\wgi\george\d0586064\PLANRD41.DGN

CURVE DATA RETURN-2
PI STA. = 11+68.82
Δ = 92° 53' 50" (RT)
D = 95° 29' 35"
T = 63.11
L = 97.28
R = 60.00
PC STA. = 11+05.71
PT STA. = 12+02.99

CURVE DATA RETURN-1
PI STA. = 10+62.61
Δ = 53° 41' 30" (RT)
D = 57° 17' 45"
T = 50.61
L = 93.71
R = 100.00
PC STA. = 10+12.00
PT STA. = 11+05.71

0 10 40
Feet

SR 70

END TYPE F C&G
STA. 12+08.99
EL. 24.81

RETURN-2

SAWCUT

12

N 63° 24' 59" E

PT STA. 12+02.99

0.68%

60' R

LOW POINT
11+28.14
EL. 24.27

11+95.56
22.79' RT.

EXIST. R/W LINE

EXIST. 36" PIPE

S-481

EXIST. 36" PIPE

2.3%

110.2'

℄ CONST. SR 70 CURB RETURN

EXIST. 36" PIPE

CAP INLET

100' R

10+45.67
18.61' RT.

RETURN-1

EXIST. R/W LINE

PC STA. 10+12.00

N 83° 10' 21" W

10

BEGIN TYPE F C&G
STA. 10+00.00
EL. 24.65

EXIST. SR 710

LEGEND

PAVEMENT WIDENING (2' MIN.)

S-481
STA. 11+41.20 (35.00 RT.)
CONST. INLET J-2
J-BOT. (3.5'X5')
INDEX NO. 425-010, 425-020
FL. 15.81 (EXIST.)

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (42)
SR 70

SHEET NO. 81

USER: George.Knox 4/24/2023 10:05:21 AM c:\pwworking\wgi\george\d0586064\PLANRD41B.DGN

CURVE DATA CL70-1
PI STA. = 1091+68.42
Δ = 21° 37' 12" (RT)
D = 1° 31' 29"
T = 717.47
L = 1,417.88
R = 3,757.54
PC STA. = 1084+50.95
PT STA. = 1098+68.82
e = NC

NE 31ST AVE.

EXIST. R/W LINE

+32.05
82.17' Lt.

+85.56
81.70' Lt.

EXIST. R/W LINE

+73.00
75.14' Lt.

BEGIN CONST.
BEGIN M&R (Rt.)
SR 70
STA. 1086+66.00

1086 1087 ℄ CONST. SR 70 1088 1089 1090 10

SR 70

CL70-1

+66.00
19.95' Rt.
MATCH EXIST.

+66.00
48.47' Rt.
MATCH EXIST.

28.60'

MATCHLINE STA. 1091+00.00
SEE ROADWAY PLAN (44)

+29.67
67.40' Rt.

+27.66
71.39' Rt.

+69.21
71.55' Rt.

EXIST. R/W LINE

+99.15
75.00' Rt.

+89.58
74.97' Rt.

+70.25
117.17' Rt.

+39.39
81.37' Rt.

+21.56
124.84' Rt.

NE 31ST WAY

NE 31ST TERR.

LEGEND

MILLING & RESURFACING (M&R)

0 10 40
Feet

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (43)
SR 70

SHEET NO. 82

USER: George.Knox 4/24/2023 10:05:27 AM c:\pwworking\wgi\george\d0586064\PLANRD42.DGN

CURVE DATA CL70-1
PI STA. = 1091+68.42
Δ = 21° 37' 12" (RT)
D = 1° 31' 29"
T = 717.47
L = 1,417.88
R = 3,757.54
PC STA. = 1084+50.95
PT STA. = 1098+68.82
e = NC

NE 32ND AVE.

+38.81
85.18' Lt.

EXIST. R/W LINE

BEGIN WIDENING (Rt.)
SR 70
STA. 1094+00.00

℄ CONST. SR 70

1091
1092
1093
1094
1095
1096

SR 70

CL70-1

MATCHLINE STA. 1091+00.00
SEE ROADWAY PLAN (43)

28.19'

+00.00
21.01' Rt.
MATCH EXIST.

+50.00
12.00' Rt.

+41.97
12.00' Rt.

+17.00
12.00' RT.

SAWCUT

+00.00
49.22' Rt.
MATCH EXIST.

+06.62
49.31' Rt.

SAWCUT

SAWCUT

S-451A

SAWCUT

SAWCUT

MATCHLINE STA. 1096+20.00
SEE ROADWAY PLAN (45)

BEGIN SWK.
(MATCH EXIST.)
+97.43, 59.25' Rt.

5' CONC. SWK.

+50.00
65.00' Rt.

6' CONC. SWK.

S-450 +41.96
73.27' Rt.

+43.48
68.50' Rt.

S-451

EXIST. CONC. SWK. TO REMAIN

EXIST. R/W LINE

CONST. 100 LF OF 18" PIPE

TYPE E C&G

CONST. 174 LF
OF 18" PIPE

LEGEND

MILLING & RESURFACING (M&R)

PAVEMENT WIDENING (2' MIN.)

OVERBUILD

N

0 10 40
Feet

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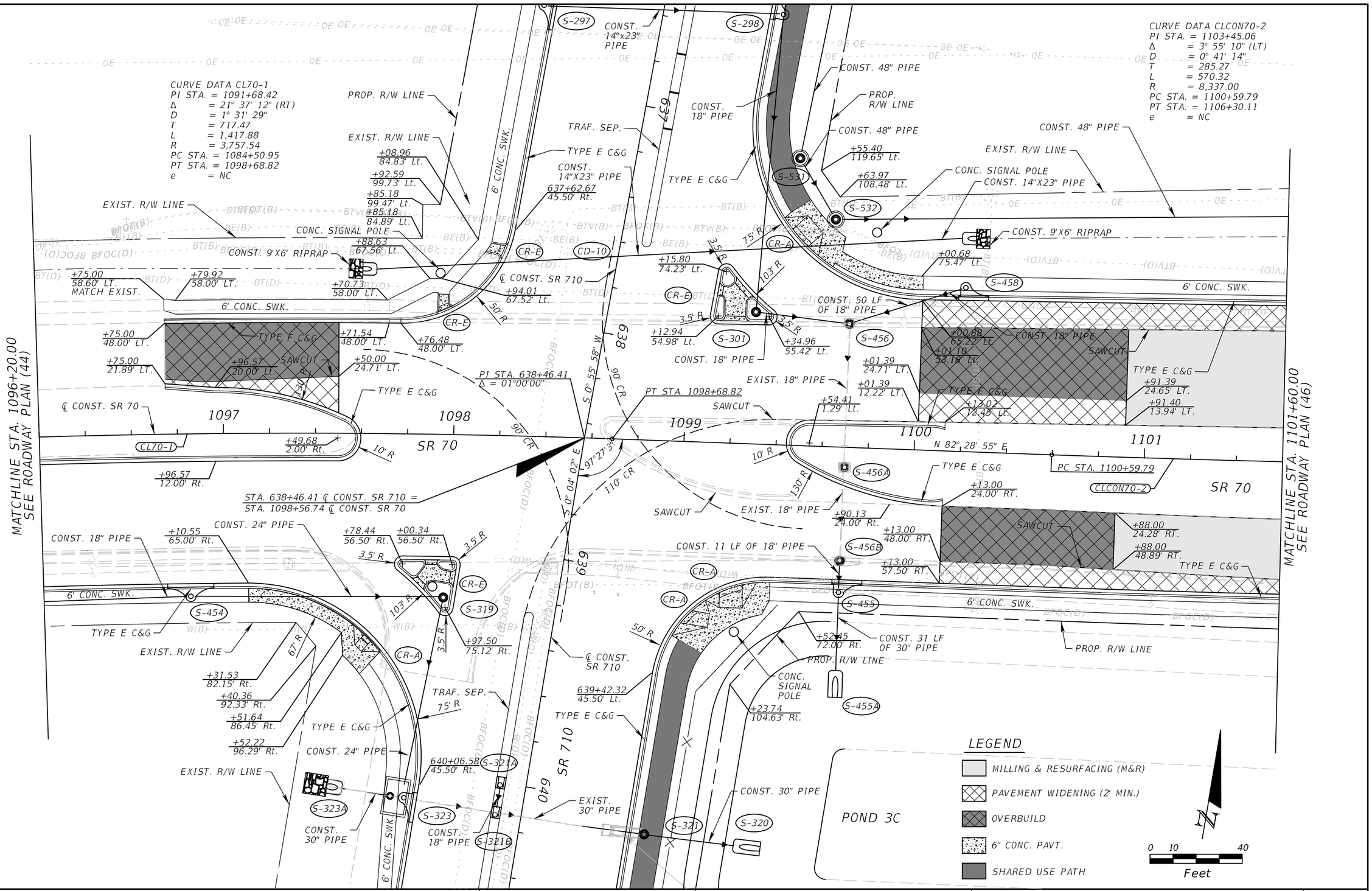
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (44)
SR 70

SHEET NO. 83

USER: George.Knox 4/24/2023 10:05:33 AM c:\pwworking\wgi\george\d0586064\PLANRD43.DGN



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SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (45)
SR 70

SHEET NO. 84

USER: George.Knox 4/24/2023 10:05:40 AM c:\pwworking\wgi\george\d0586064\PLANRD44.DGN

CURVE DATA CLCON70-2
PI STA. = 1103+45.06
Δ = 3° 55' 10" (LT)
D = 0° 41' 14"
T = 285.27
L = 570.32
R = 8,337.00
PC STA. = 1100+59.79
PT STA. = 1106+30.11
e = NC

CURVE DATA CLCON70-3
PI STA. = 1109+15.38
Δ = 3° 55' 10" (RT)
D = 0° 41' 14"
T = 285.27
L = 570.32
R = 8,337.00
PC STA. = 1106+30.11
PT STA. = 1112+00.43
e = NC

EXIST. STRUCTURES & PIPE TO BE REMOVED
+92.59 124.46' Lt.
CONST. 48" PIPE
CONST. 144 LF OF 48" PIPE
CONST. 146 LF OF 48" PIPE
CONST. 451 LF OF 48" PIPE
S-533
S-534
S-535
+40.00 78.25' Lt.
+60.42 73.00' Lt. MATCH EXIST.
EXIST. CONC. SWK. TO REMAIN
CONST. 71 LF OF 18" PIPE
CONST. 76 LF OF 18" PIPE
+89.92 72.25' LT.
S-462
+10.09 72.25' LT.
6' CONC. SWK.
S-461
END WIDENING (Lt.)
END M&R (Lt.)
SR 70
STA. 1104+60.42
S-460
EXIST. STRUCTURE & PIPE TO BE REMOVED
CONST. 12 LF OF 18" PIPE
S-462A
+09.99 68.00' Lt.
+60.42 55.46' Lt.
MATCH EXIST.
TYPE E C&G
+60.44 27.00' Lt.
SAWCUT
+60.42 27.00' Lt.
SAWCUT
+60.44 15.00' Lt.
PRC STA. 1106+30.11
1102
℄ CONST. SR 70
1103
EXIST. 18" PIPE
1104
S-462B
+60.42 15.00' Lt.
1105
1106
1107
CLCON70-2
CLCON70-3
END WIDENING (Rt.)
END M&R (Rt.)
SR 70
STA. 1103+60.51
+60.50 27.00' Rt.
MATCH EXIST.
TYPE E C&G
S-463
+60.51 55.50 Rt
68
EXIST. 24" PIPE
EXIST. 36" PIPE
CONST. 8 LF OF 36" PIPE
6' CONC. SWK.
+60.50 72.76' Rt. MATCH EXIST.
+18.20 67.75' Rt.
+41.83 80.84' Rt.
EXIST. 36" PIPE
EXIST. R/W LINE
EXIST. R/W LINE
EXIST. R/W LINE
65
POND 3C

MATCHLINE STA. 1101+60.00 SEE ROADWAY PLAN (45)
MATCHLINE STA. 1107+20.00 SEE ROADWAY PLAN (47)

LEGEND
MILLING & RESURFACING (M&R)
PAVEMENT WIDENING (2' MIN.)

N
0 10 40
Feet

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (46)
SR 70

SHEET NO. 85

USER: George.Knox 4/24/2023 10:05:46 AM c:\pwworking\wgi\george\d0586064\PLANRD45.DGN

CURVE DATA CLCON70-3
PI STA. = 1109+15.38
Δ = 3° 55' 10" (RT)
D = 0° 41' 14"
T = 285.27
L = 570.32
R = 8,337.00
PC STA. = 1106+30.11
PT STA. = 1112+00.43
e = NC

EXIST. R/W LINE

+97.34
101.20' Lt.

CONST. 48" PIPE

S-536

+65.88
117.93' Lt.

+01.46
117.86' Lt.

CONST. 170 LF OF 48" PIPE

S-537

CONST. 15'X20' RIPRAP

+01.46
80.00' Lt.

END PROJECT
SR 70
STA. 1112+09.50

℄ CONST. SR 70

1108 1109 1110 1111 1112 11

SR 70

CLCON70-3

PT STA. 1112+00.43

MATCHLINE STA. 1107+20.00
SEE ROADWAY PLAN (46)

EXIST. R/W LINE

N

0 10 40
Feet

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ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (47)
SR 70

SHEET NO. 86

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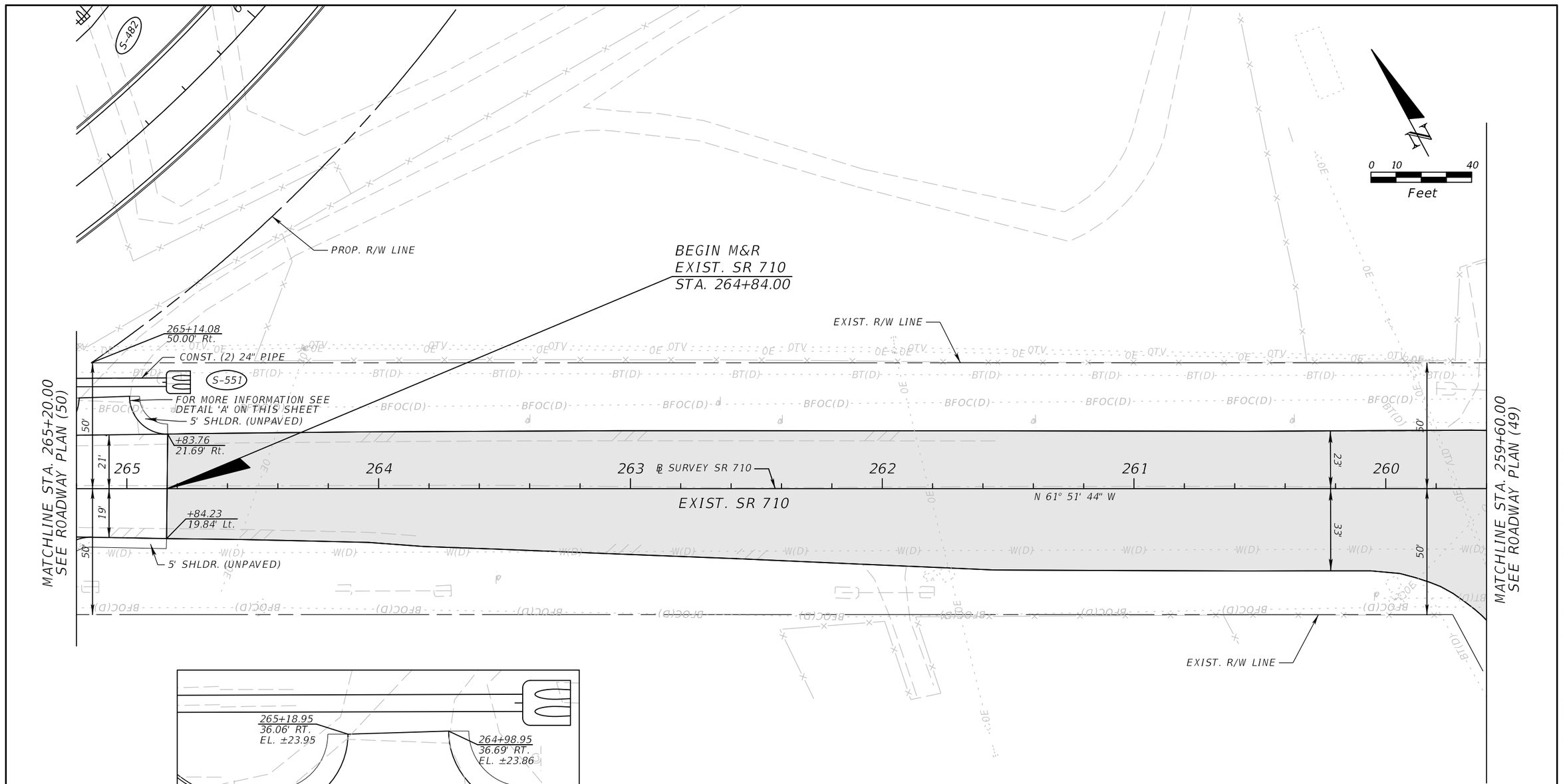

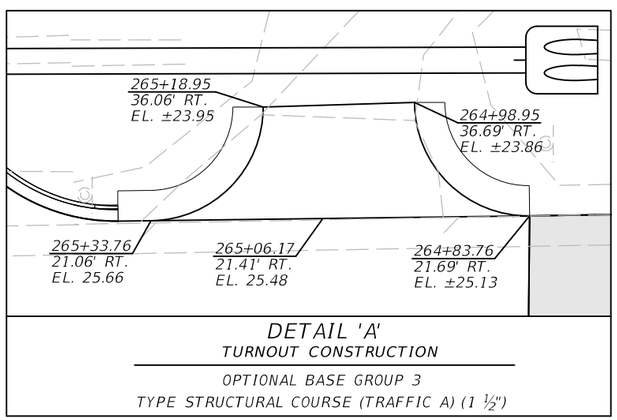

DETAIL 'A'
TURNOUT CONSTRUCTION

OPTIONAL BASE GROUP 3
TYPE STRUCTURAL COURSE (TRAFFIC A) (1 ½")

LEGEND

MILLING & RESURFACING (M&R)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (48)
EXIST. SR 710

SHEET NO. 87

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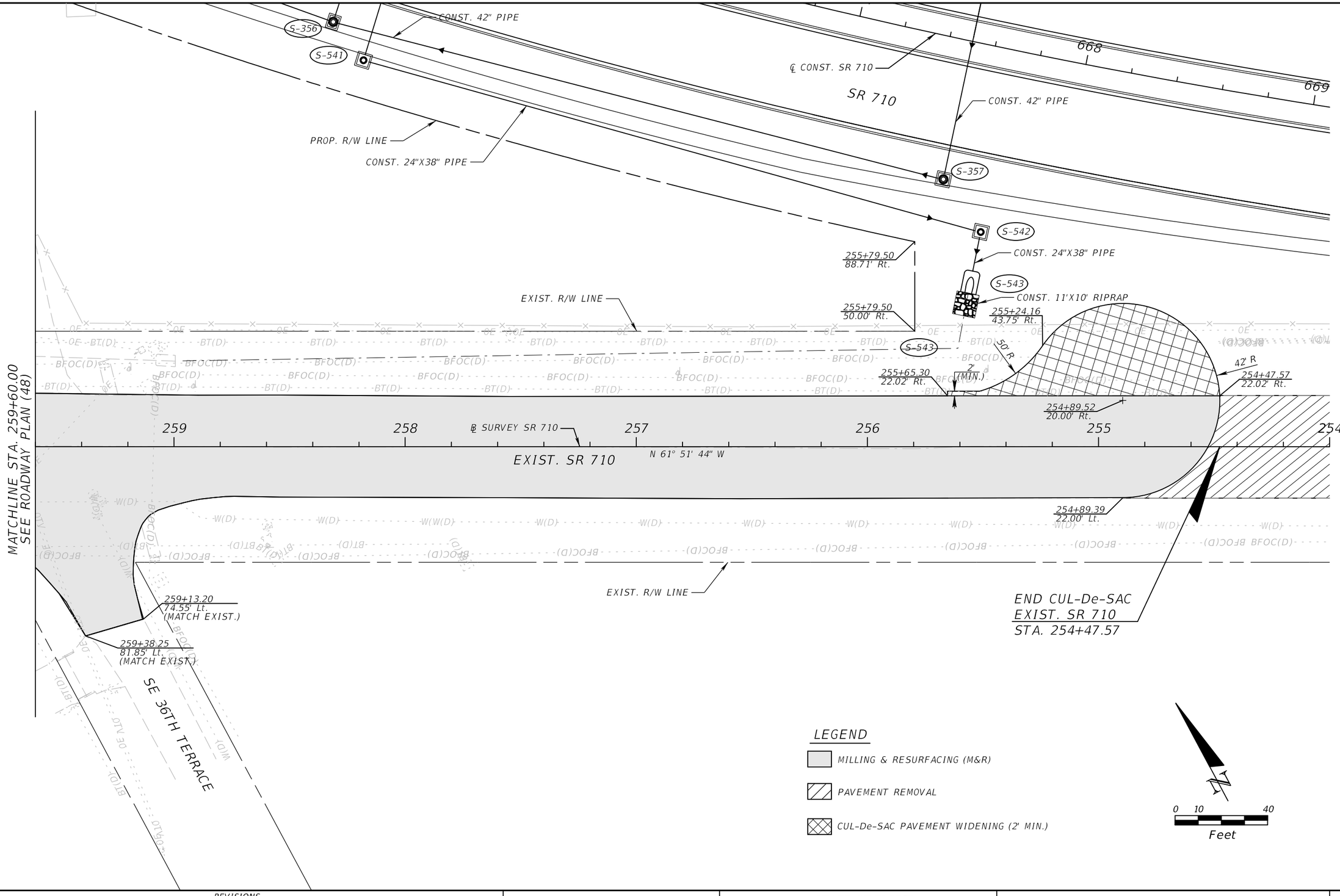

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (49)
EXIST. SR 710

SHEET NO. 88

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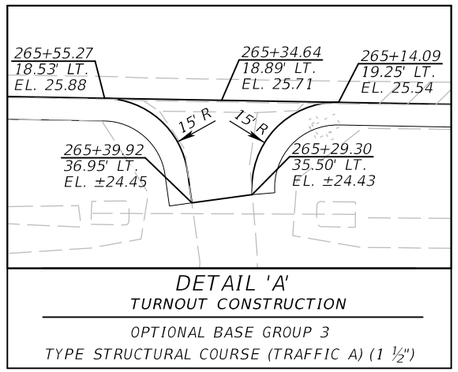

DETAIL 'A'
TURNOUT CONSTRUCTION

OPTIONAL BASE GROUP 3
TYPE STRUCTURAL COURSE (TRAFFIC A) (1 ½")

END CONST.
BEGIN M&R
EXIST. SR 710
STA. 268+66.02

STA. 67+70.94 ℄ CONST. SR 710 EXT. =
STA. 268+66.02 ℄ SURVEY SR 710

STA. 268+88.00 ℄ SURVEY SR 710 =
STA. 61+95.38 ℄ CONST. CENTER ST.

EXIST. R/W LINE

END M&R
EXIST. SR 710
STA. 270+50.00

270+50.00
15.92' Rt.

31.65'

270

EXIST. SR 710

N 61° 51' 44" W

269

90°0'0"

270+50.00
15.74' Lt.

269+50.32
11.94' LT.

50' R

8' SHLDR.
(5' PAVED)

S-553

EXIST. R/W LINE

EXIST. FENCE TO REMAIN

END TYPE A FENCE
MATCH EXIST.
61+44.85, 25.79' LT.

CONST. 60 LF OF 18" PIPE

61+40.85
12.97' LT.

6' SHLDR. (UNPAVED)

PROP. R/W LINE

60+46.35
27.50' Lt.

BEGIN TYPE A FENCE
MATCH EXIST.
60+45.36, 26.55' LT

℄ CONST. CENTER ST.

N 89° 54' 11" E

EXIST. FENCE TO REMAIN

EXIST. R/W LINE

60+20.00
12.00' Lt.

24'

60

CENTER ST.

PC STA. 60+20.00

CENTERST-1

6' SHLDR. ((UNPAVED)

60+20.00
12.00' Rt.
MATCH EXIST.

N 28° 8' 16" E

125' R

8' SHLDR.
(5' PAVED)

S-554

PT STA. 61+27.80

61+01.71
12.00' RT.

61

268+66.02
15.79' Rt.

8' SHLDR.
(5' PAVED)

66+64.24
26.13' Rt.

℄ CONST.
SR 710 EXT.

268+66.02
12.00' Lt.

℄ SURVEY SR 710

66+84.69
12.00' LT.

67
268

66+25.83
26.13' Lt.

EXTREV-1

75' R

BL34-1

EXIST. STRUCTURES &
PIPES TO BE REMOVED

CONST. (2) 348 LF
OF 24" PIPE

S-550

40' R

11+60.00
26.13' Lt.

℄ CONST. NE 34TH AVE.

MATCHLINE STA. 12+20.00
SEE ROADWAY PLAN (52)

33'

12

NE 34TH AVE.

N 0° 4' 2" W

END CONST.
BEGIN M&R
NE 34TH AVE.
STA. 11+60.00

PROP. R/W LINE

BEGIN TYPE F C&G
+53.52, 15.00' Rt.

65+41.21
60.00' Rt.

PT STA. 11+34.82

50' R

MATCHLINE STA. 64+20.00
SEE ROADWAY PLAN (51)

TYPE F
C&G

32'

S-480

65

SR 710 EXT.

64+88.98
26.13' Lt.

3.5' R

57.4' R

45' R

20'

25' R

3.5' R

5' SHLDR.
(UNPAVED)

65+30.92
26.13' Lt.

TYPE E C&G

64+97.88
26.13' Lt.

150' R

BEGIN TYPE F C&G
+38.11, 21.00' Rt.

266

10+63.52
26.13' Lt.

143' R

℄ SURVEY SR 710

5' SHLDR.
(UNPAVED)

40'

266+97.12
16.63' Lt.

266+29.32
17.57' Lt.

STA. 65+79.46 X CONST. SR 710 EXT. =
STA. 10+92.26 X CONST. NE 34TH AVE.

EXIST. STRUCTURES &
PIPE TO BE REMOVED

266+59.34
26.13' Lt.

STA. 265+94.17 ℄ SURVEY SR 710 =
PC STA. 10+00.00 ℄ CONST. NE 34TH AVE.

MATCHLINE STA. 265+20.00
SEE ROADWAY PLAN (48)

FOR MORE INFORMATION SEE
DETAIL 'A' ON THIS SHEET

EXIST. R/W LINE

0 10 40
Feet

CURVE DATA BL34-1
PI STA. = 10+74.80
Δ = 61° 47' 42" (RT)
D = 45° 50' 12"
T = 74.80
L = 134.82
R = 125.00
PC STA. = 10+00.00
PT STA. = 11+34.82

CURVE DATA EXTREV-1
PI STA. = 65+01.85
Δ = 62° 10' 41" (RT)
D = 10° 16' 05"
T = 336.46
L = 605.55
R = 558.00
PC STA. = 61+65.39
PT STA. = 67+70.94

CURVE DATA CENTERST1
PI STA. = 60+79.81
Δ = 61° 45' 54" (LT)
D = 57° 17' 45"
T = 59.81
L = 107.80
R = 100.00
PC STA. = 60+20.00
PT STA. = 61+27.80

LEGEND

MILLING & RESURFACING (M&R)

PAVEMENT REMOVAL

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

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LICENSE NUMBER: 82283
WGI, INC.
800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (50)
SR 710 EXTENSION

SHEET NO. 89

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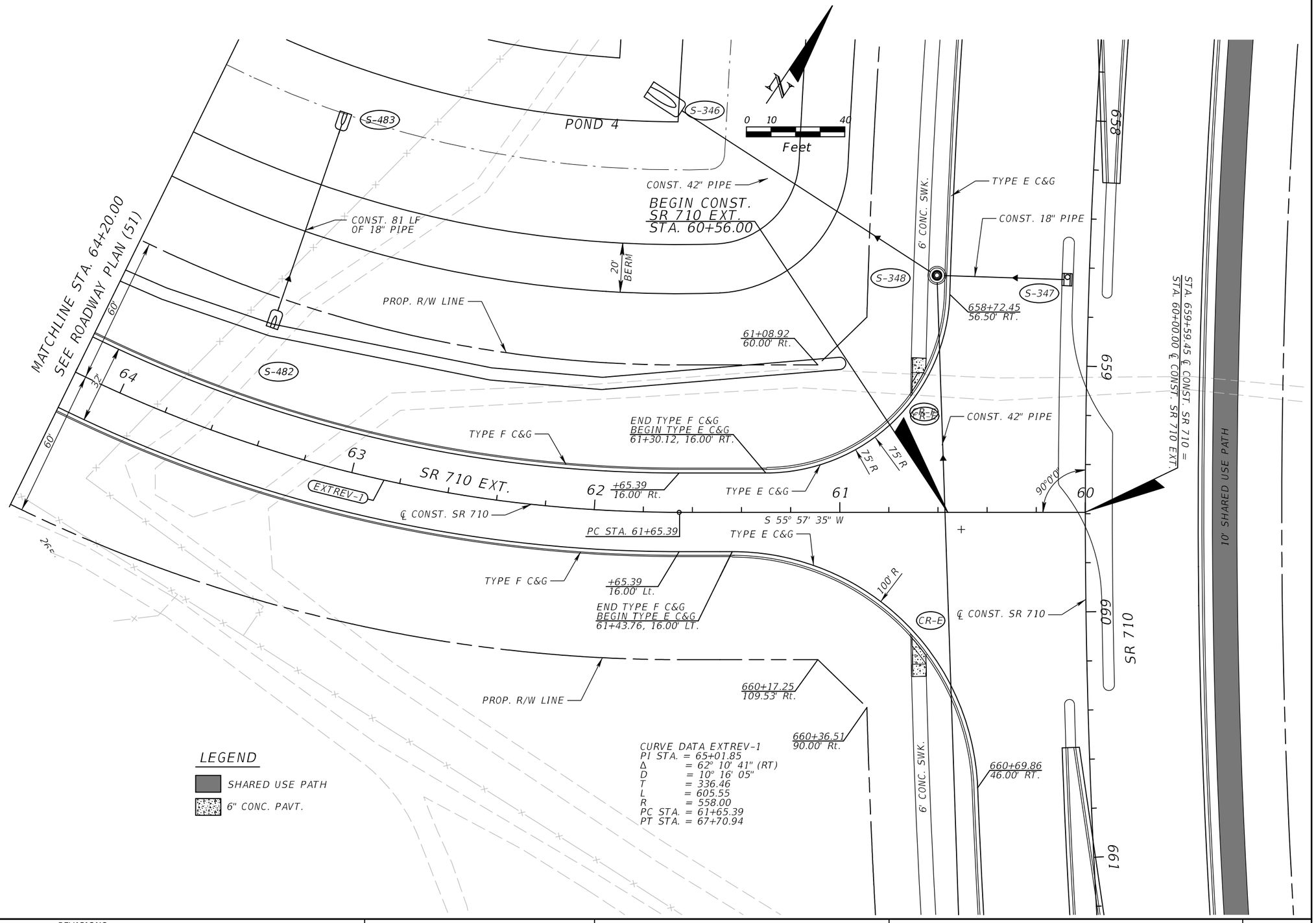

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (51)
SR 710 EXTENSION

SHEET NO. 90

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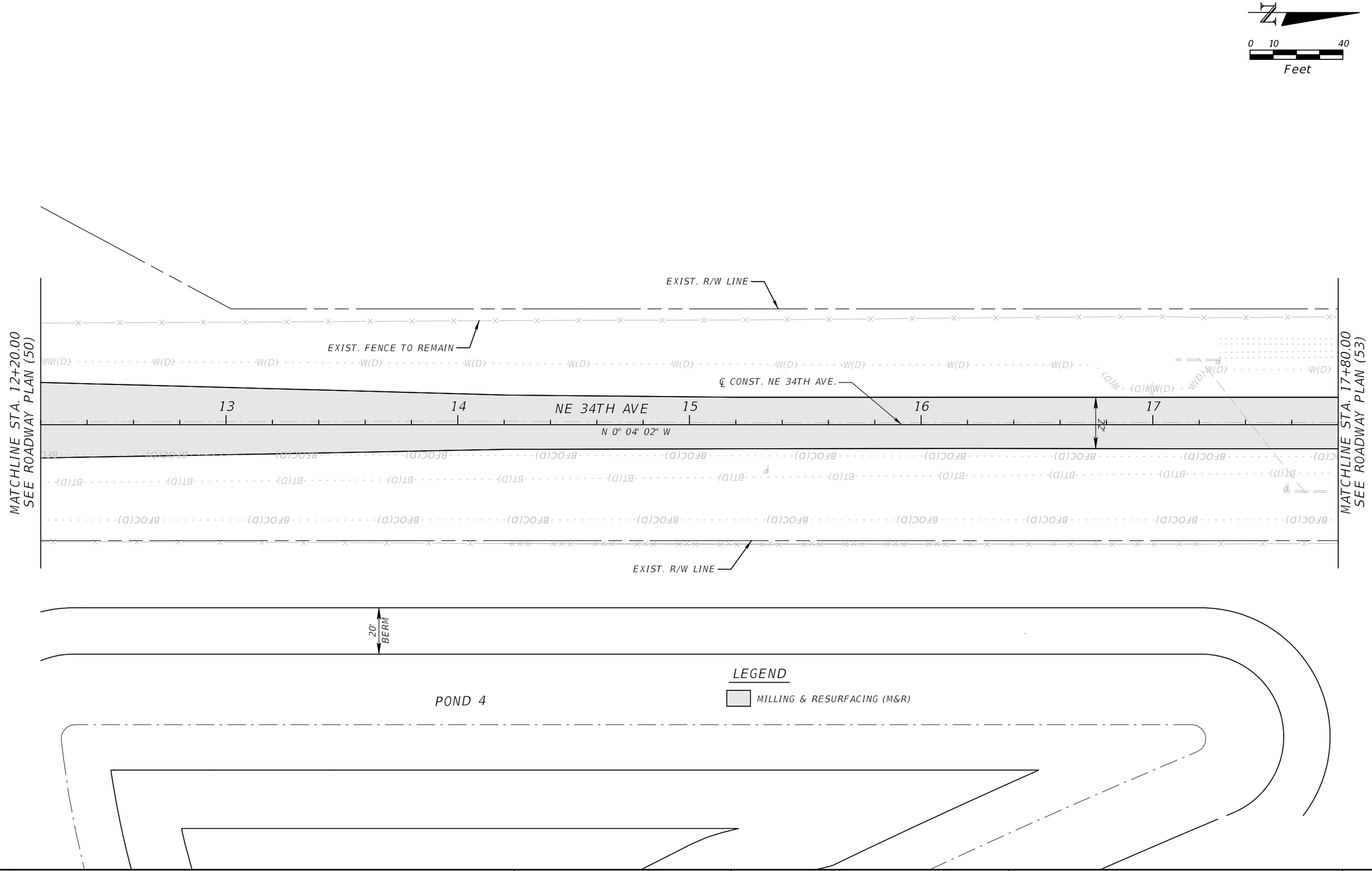

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ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (52)
NE 34TH AVE.

SHEET NO. 91

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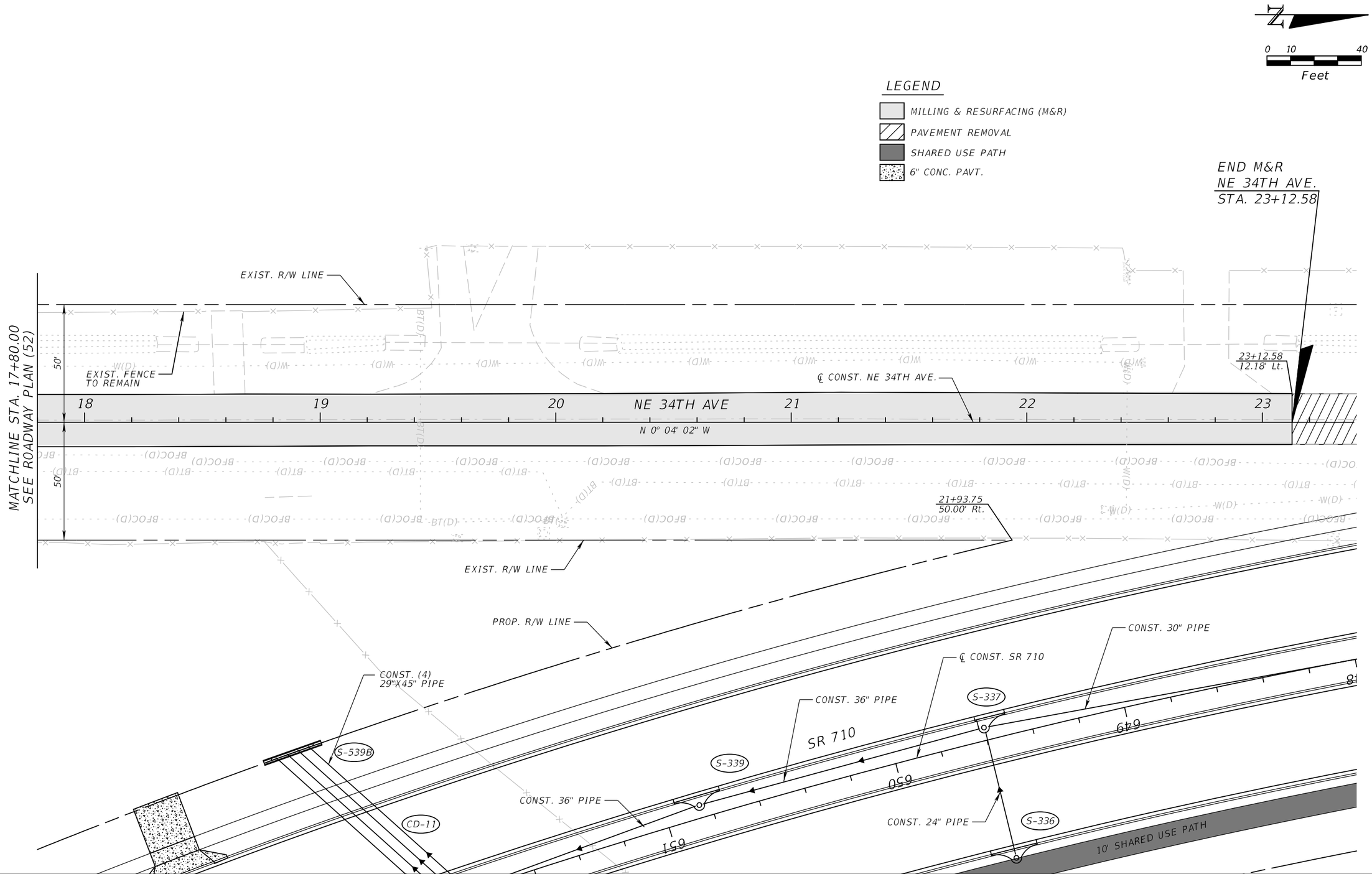

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

GEORGE E. KNOX, P.E.
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800 N. MAGNOLIA AVE., SUITE 1750
ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (53)
NE 34TH AVE.

SHEET NO. 92

USER: George.Knox 4/24/2023 10:06:35 AM c:\pwworking\wgi\george\d0586064\PLANRD51.DGN

CURVE DATA BL401
PI STA. = 43+28.91
Δ = 8° 21' 40" (RT)
D = 3° 44' 59"
T = 111.69
L = 222.98
R = 1,528.00
PC STA. = 42+17.22
PT STA. = 44+40.21

END CONST.
SE 40TH AVE.
STA. 43+77.21

BEGIN M&R
SE 40TH AVE.
STA. 42+07.26

END M&R
BEGIN CONST.
SE 40TH AVE.
STA. 42+62.00

END TYPE E C&G
+12.75, 29.09' Lt.

EXIST. R/W LINE

+07.29, 12.00' Lt.
MATCH EXIST.

+62.00
14.59' Lt.

+71.74
27.14' Lt.

+71.81
24.90' Lt.

+23.56
19.85' Lt.

+55.60
23.60' Lt.

10' R

42

PC STA. 42+17.22

43

N 0° 11' 12" W

SE 40TH AVE.

℄ CONST. SE
40TH AVE.

44

BL401

S-375

S-376

+83.12
29.00' Rt.

+07.20, 29.00' Rt.
MATCH EXIST.

+62.00
29.00' Rt.

TYPE
E C&G

CONC. SIGNAL POLE

50' R

EXIST. R/W LINE

679+83.47
45.50' Rt.

CR-F

S-378

6' CONC. SWK.

CONST. 18" PIPE

GAS STATION ENTRANCE

CONST. 18" PIPE

CONST. 42" PIPE

CONST. 24" PIPE

S-369

CONST. 24" PIPE

S-371

EXIST. R/W LINE

S-372

CONST. 24" PIPE

6' CONC. SWK.

TYPE E
C&G

CR-G

679+16.12
56.00' Rt.

75' R

150' CR

75' CR

SR 710

679

677

678

CONST. 42" PIPE

10' SHARED USE PATH

S-368

TRAF. SEP.

CONC. SIGNAL POLE

EXIST. R/W LINE

STA. 678+40.35 ℄ CONST. SR 710 =
STA. 44+40.21 ℄ CONST. SE 40TH AVE.

S-374

CONST. 42" PIPE

TYPE
E C&G

PROP. R/W LINE

N

0 10 40
Feet

LEGEND

- MILLING & RESURFACING (M&R)
- SHARED USE PATH
- 6" CONC. PAVT.
- PAVEMENT WIDENING (2' MIN.)

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ORLANDO, FL 32803

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 710	OKEECHOBEE	419344-3-52-01

ROADWAY PLAN (54)
SE 40TH AVE.

SHEET NO. 93

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APPENDIX C

Referenced Okeechobee Health Care Facility Design Plans

Exhibit 2.1

Application 170117-10

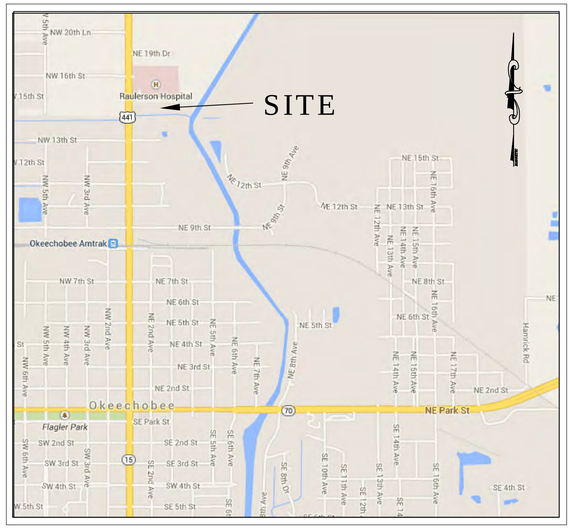
Construction Plans

Of

Okeechobee Healthcare Facility
West Wing Expansion
Seniors "R" Able, Inc.

Lying In Sec. 9, Township 37 South, Range 35 East
Okeechobee County, Florida

VICINITY MAP



LOCATION MAP

SCALE: N.T.S.

INDEX OF SHEETS

Survey Data

GEOMATICS SERVICES Inc.
PROFESSIONAL SURVEYORS & MAPPERS
1934 TUCKER COURT, FORT PIERCE, FLORIDA
(772) 419-8383 FAX (772) 408-4208
CERTIFICATE OF AUTHORIZATION LB# 7673

ELEVATIONS SHOWN HEREON ARE IN FEET RELATIVE TO THE NATIONAL GEODETIC VERTICAL DATUM (NGVD), 1929 ADJUSTMENT.

TRADEWINDS SURVEYORS
200 S.W. 3rd Avenue
Okeechobee, FL. 34974
Tel: (863) 763-2887
Fax: (863) 763-4342
Email: kab.twps@yahoo.com

Kenneth A. Breaux, Jr. (PSM 4820)

Steven L. Dobbs Engineering, LLC
Consulting Engineers
1062 Jakes Way - Okeechobee, FL 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00029206

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA, IT'S THE LAW
Sunshine State One Call 811 of Florida, Inc.

ENGINEERS PROJECT No. 2014-042
OKEECHOBEE HEALTHCARE FACILITY

Exhibit 2.1

Application 170117-10

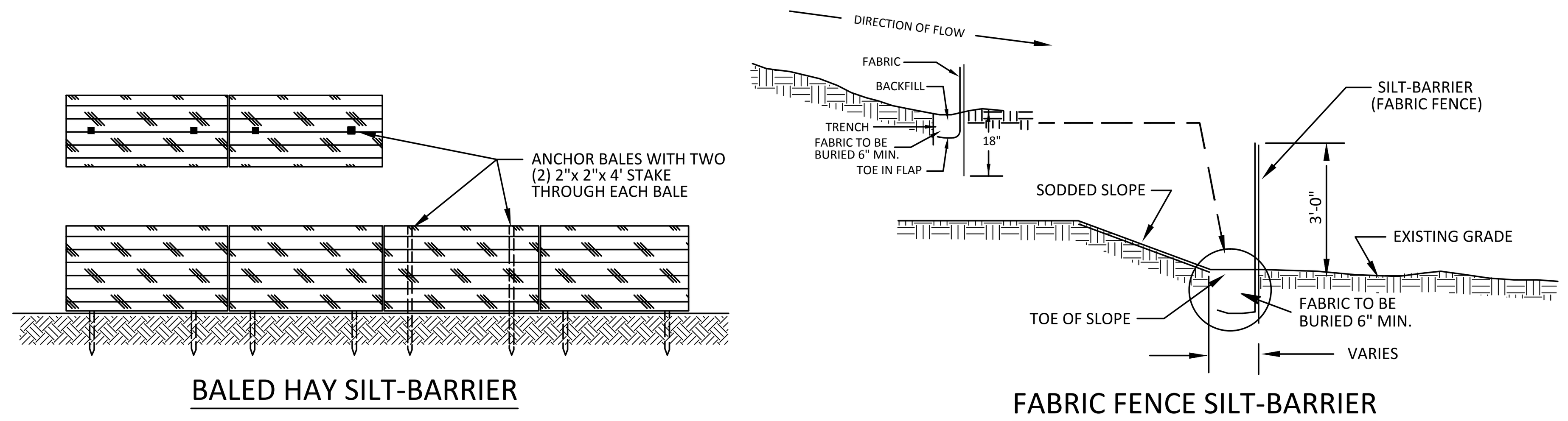
Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032306

No.	DATE	BY	REVISIONS
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

OVERALL PLAN & KEY SHEET

JOB No.: **2014-042**
SHEET **02** OF **14**



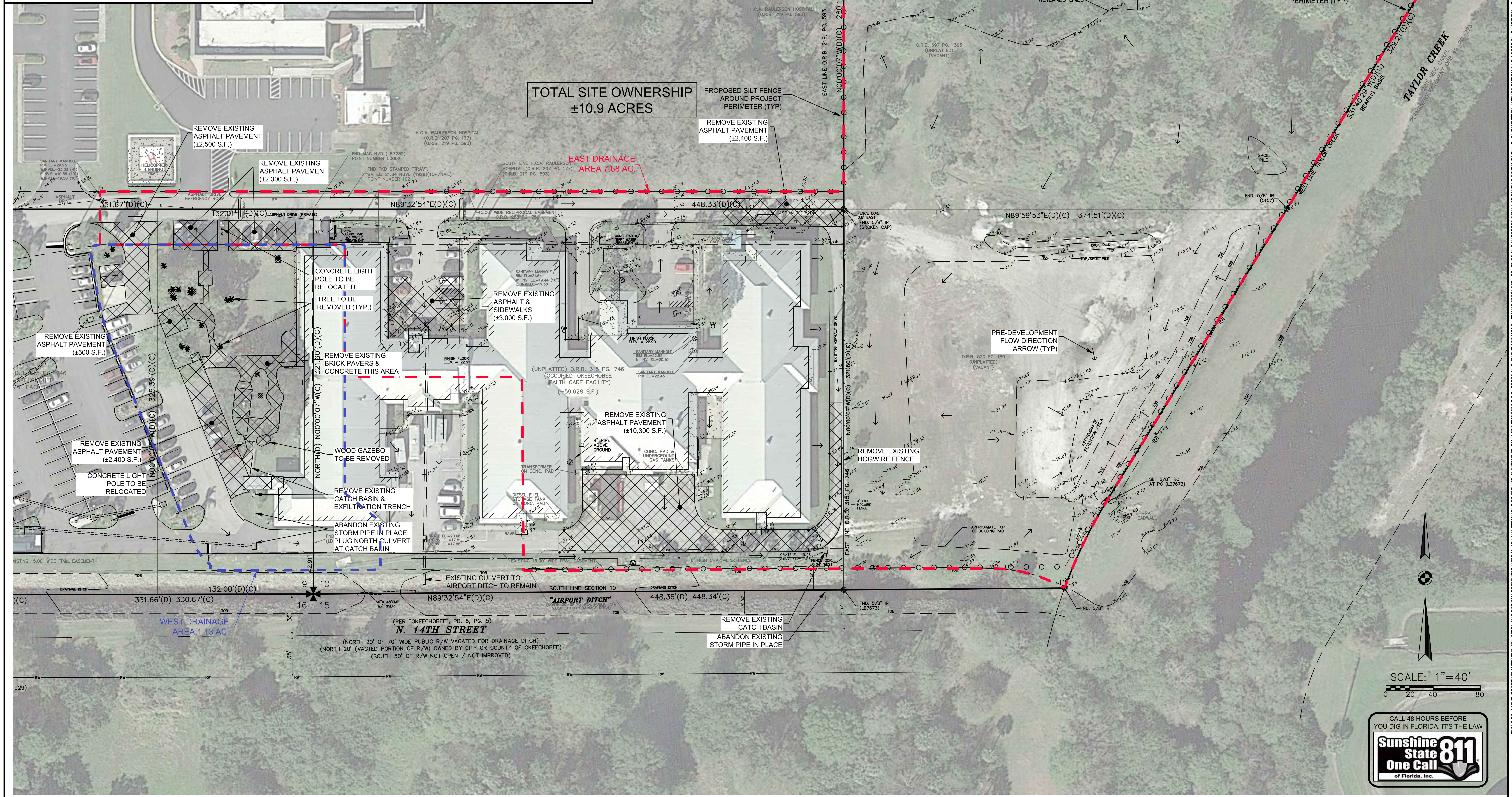
PERIMETER EROSION AND SEDIMENT CONTROL

NOTES:

1. CONTRACTOR IS REQUIRED TO PREVENT ANY SEDIMENT TRANSPORT FROM THE PROJECT SITE ON TO ADJACENT PROPERTY. INSTALLATION OF EITHER BALED HAY HAY OR FABRIC FENCE TYPE SILT BARRIER IS ACCEPTABLE. THE BARRIER MUST REMAIN IN PLACE UNTIL UPLAND VEGETATION IS ESTABLISHED.
2. BEFORE REMOVING SILT BARRIER, CONTRACTOR SHALL COLLECT AND DISPOSE OF ANY ACCUMULATED SILT.

SILT FENCE DETAIL

N.T.S.



Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, FL 34974
Phone: (863) 824-7644

No.	DATE	BY	REVISIONS
1	03-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility West Wing Expansion

OKEECHOBEE, FLORIDA

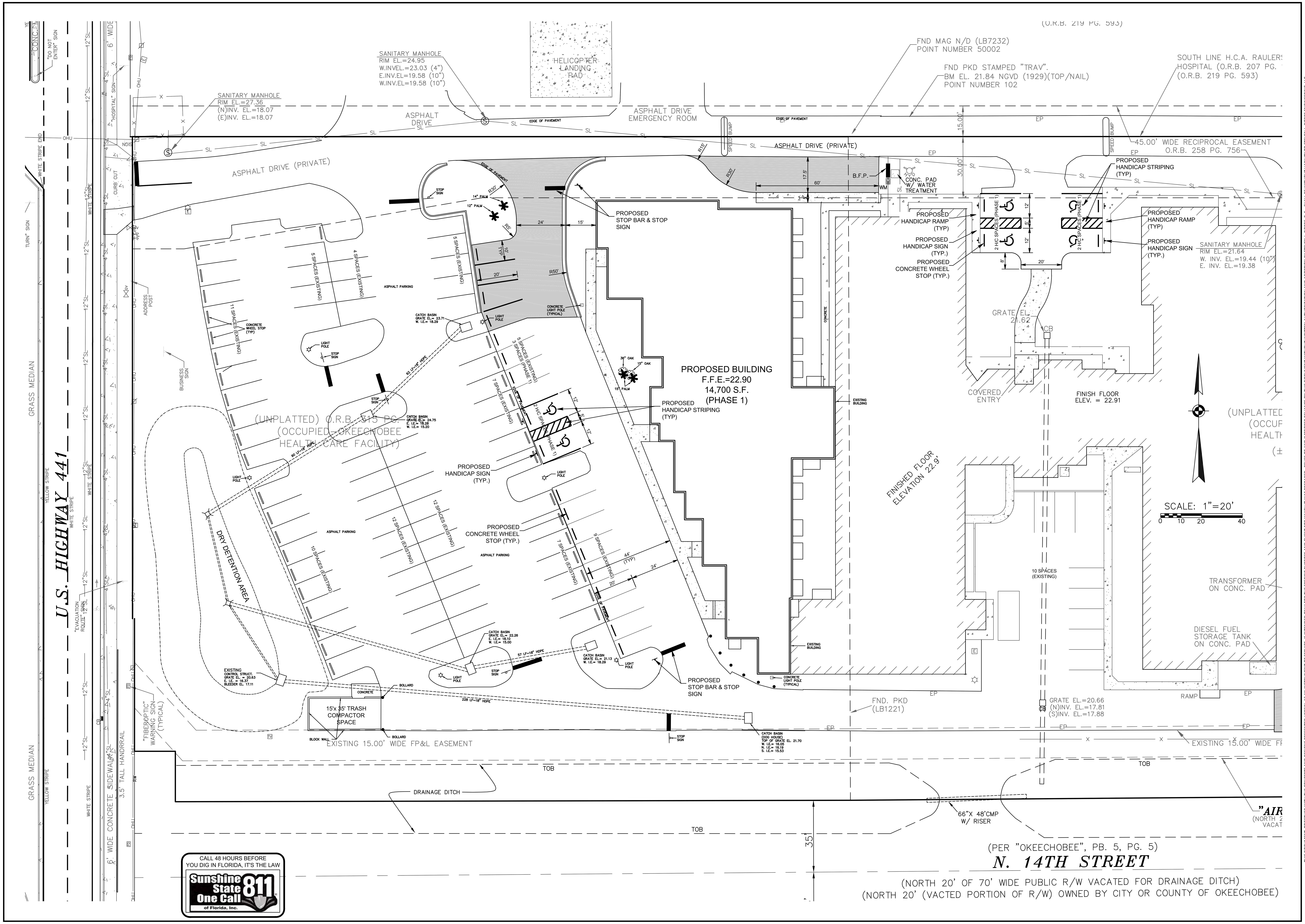
EXISTING CONDITIONS & DEMOLITION PLAN

JOB No.: 2014-042

SHEET 03 OF 14

Exhibit 2.1

Application 170117-10



Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00029206

No.	DATE	BY	REVISIONS
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility West Wing Expansion
OKEECHOBEE, FLORIDA

HORIZONTAL CONTROL, STRIPING and SIGNAGE PLAN (WEST VIEW)

JOB No.: 2014-042
SHEET 04 OF 14

Exhibit 2.1

Application 170117-10

PROPOSED STOP BAR & STOP SIGN (PHASE 2)

PROPOSED STOP BAR & STOP SIGN

5' CONC. SIDEWALK (PHASE 2)

5' CONC. SIDEWALK (PHASE 1)

9 SPACES (PHASE 1)

9 SPACES (PHASE 2)

8 SPACES (PHASE 1)

10 SPACES (PHASE 1)

PROPOSED BUILDING
FFE=22.90
16,000 S.F.
(PHASE 2)

O.R.B. 520 PG. 180
(UNPLATTED)
(VACANT)

9 SPACES (PHASE 2)

CONC. PAD W/ "BFP" WATER TREATMENT

7' HIGH ALUM. CAGE FENCE

5 SPACES (EXISTING)

1 SPACES (EXISTING)

FINISH FLOOR
ELEV. = 22.90

SANITARY MANHOLE
RIM EL.=22.52
N. INV. EL.=20.10

SANITARY MANHOLE
RIM EL.=22.45

EXISTING ASPHALT DRIVE

_ATTED) O.R.B. 315 PG. 746
OCCUPIED–OKEECHOBEE
HEALTH CARE FACILITY)
(±59,628 S.F.)

4" PIPE ABOVE GROUND

CONC. PAD & UNDERGROUND GAS TANKS

PROPOSED BUILDING
FFE=22.90
2,600 S.F.
(PHASE 2)

PROPOSED BUILDING
FFE=22.90
7,200 S.F.
(PHASE 1)

COVERED CONNECTION TO EXISTING BUILDING
31'

LOADING DOCK

RIP–RAP HEADWALL

6' HIGH CHAIN–LINK FENCE

WIDE FP&L EASEMENT

DRAINAGE DITCH

"AIRPORT DITCH"
(NORTH 20' OF 70' WIDE PUBLIC R/W
VACATED FOR DRAINAGE DITCH)

TOB

SCALE: 1"=20'
0 10 20 40

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA, IT'S THE LAW
Sunshine State One Call 811 of Florida, Inc.

Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032306

No.	DATE	BY	REVISIONS
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

HORIZONTAL CONTROL, STRIPING and SIGNAGE PLAN (SOUTH EAST VIEW)

JOB No.: 2014-042
SHEET 05 OF 14

Exhibit 2.1

Application 170117-10

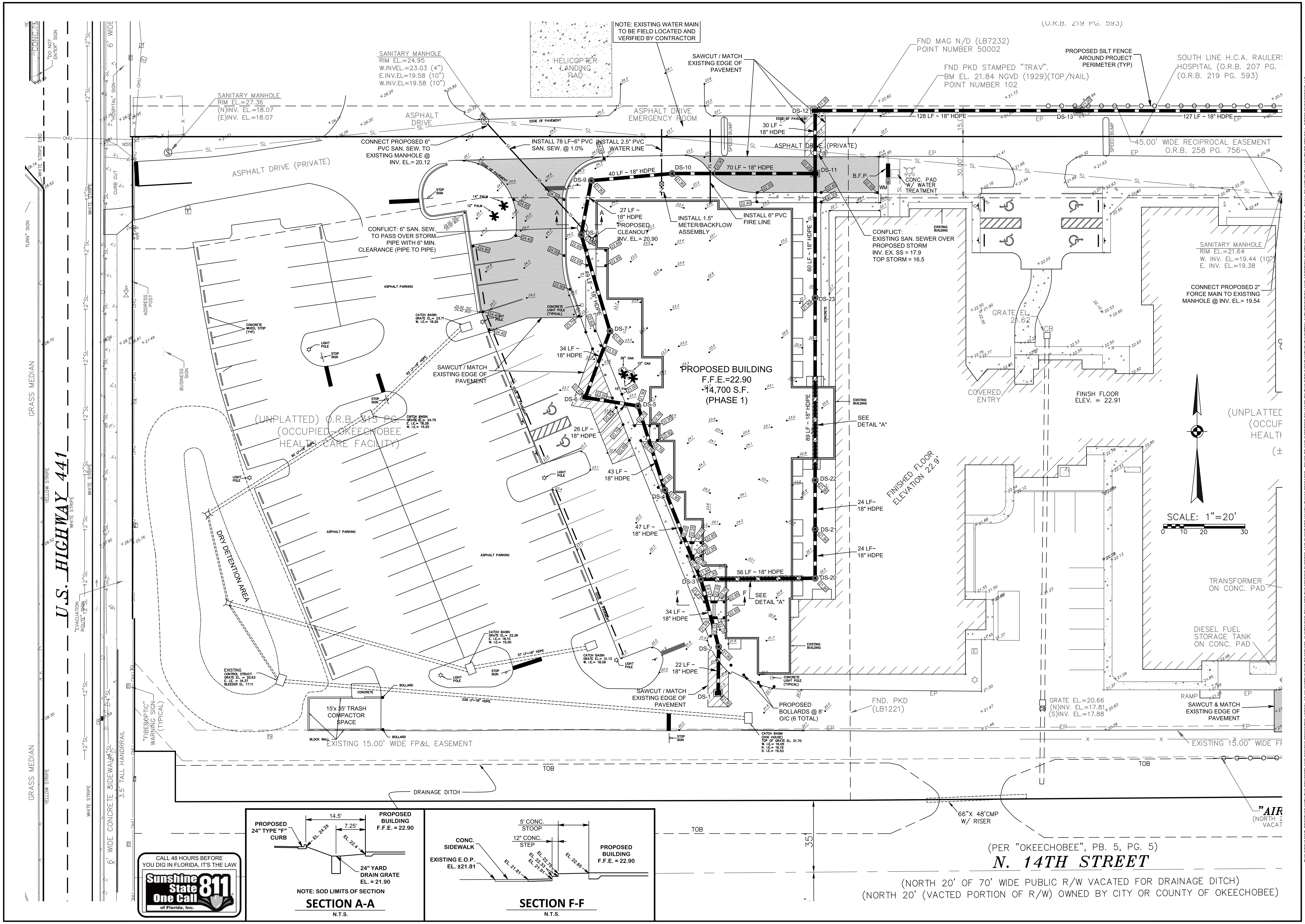
Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032306

No.	DATE	BY	REVISIONS
2	02-15-17	CMB	ADDED AREA OF EXISTING WETLAND IMPACT
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

HORIZONTAL CONTROL, STRIPING and SIGNAGE PLAN (NORTH EAST VIEW)

JOB No.: 2014-042
SHEET
06 OF 14


NOTE: EXISTING WATER MAIN TO BE FIELD LOCATED AND VERIFIED BY CONTRACTOR
HELICOPTER LANDING PAD
SANITARY MANHOLE
RIM EL.=24.95
W.INVEL.=23.03 (4")
E.INV.EL=19.58 (10")
W.INV.EL=19.58 (10")
SANITARY MANHOLE
RIM EL.=27.36
(N)INV. EL.=18.07
(E)INV. EL.=18.07
ASPHALT DRIVE
ASPHALT DRIVE EMERGENCY ROOM
SAWCUT / MATCH EXISTING EDGE OF PAVEMENT
FND MAG N/D (LB7232)
POINT NUMBER 50002
FND PKD STAMPED "TRAV".
BM EL. 21.84 NGVD (1929)(TOP/NAIL)
POINT NUMBER 102
PROPOSED SILT FENCE AROUND PROJECT PERIMETER (TYP)
SOUTH LINE H.C.A. RAULERSON HOSPITAL (O.R.B. 207 PG. (O.R.B. 219 PG. 593)
45.00' WIDE RECIPROCAL EASEMENT
O.R.B. 258 PG. 756
CONNECT PROPOSED 6" PVC SAN. SEW. TO EXISTING MANHOLE @ INV. EL.= 20.12
INSTALL 78 LF~6" PVC SAN. SEW. @ 1.0%
INSTALL 2.5" PVC WATER LINE
ASPHALT DRIVE (PRIVATE)
30 LF ~ 18" HDPE
128 LF ~ 18" HDPE
127 LF ~ 18" HDPE
40 LF ~ 18" HDPE
70 LF ~ 18" HDPE
B.F.P.
CONC. PAD W/ WATER TREATMENT
27 LF ~ 18" HDPE
PROPOSED CLEANOUT INV. EL.= 20.90
INSTALL 1.5" METER/BACKFLOW ASSEMBLY
INSTALL 6" PVC FIRE LINE
CONFLICT: 6" SAN. SEW. TO PASS OVER STORM PIPE WITH 6" MIN. CLEARANCE (PIPE TO PIPE)
CONFLICT: EXISTING SAN. SEWER OVER PROPOSED STORM
INV. EX. SS = 17.9
TOP STORM = 16.5
SANITARY MANHOLE
RIM EL.=21.64
W. INV. EL.=19.44 (10")
E. INV. EL.=19.38
CONNECT PROPOSED 2" FORCE MAIN TO EXISTING MANHOLE @ INV. EL.= 19.54
60 LF ~ 18" HDPE
34 LF ~ 18" HDPE
SAWCUT / MATCH EXISTING EDGE OF PAVEMENT
PROPOSED BUILDING
F.F.E.=22.90
14,700 S.F.
(PHASE 1)
GRATE EL.= 21.62
COVERED ENTRY
FINISH FLOOR ELEV. = 22.91
(UNPLATTED) O.R.B. 315 PG.
(OCCUPIED OKEECHOBEE HEALTH CARE FACILITY)
26 LF ~ 18" HDPE
89 LF ~ 18" HDPE
SEE DETAIL "A"
43 LF ~ 18" HDPE
FINISHED FLOOR ELEVATION 22.9'
24 LF~ 18" HDPE
47 LF ~ 18" HDPE
24 LF~ 18" HDPE
SCALE: 1"=20'
56 LF ~ 18" HDPE
SEE DETAIL "A"
34 LF ~ 18" HDPE
TRANSFORMER ON CONC. PAD
DIESEL FUEL STORAGE TANK ON CONC. PAD
U.S. HIGHWAY 441
GRASS MEDIAN
DRY DETENTION AREA
22 LF ~ 18" HDPE
SAWCUT / MATCH EXISTING EDGE OF PAVEMENT
PROPOSED BOLLARDS @ 8' O/C (6 TOTAL)
FND. PKD (LB1221)
GRATE EL.=20.66
(N)INV. EL.=17.81
(S)INV. EL.=17.88
RAMP
SAWCUT & MATCH EXISTING EDGE OF PAVEMENT
15'x35' TRASH COMPACTOR SPACE
EXISTING 15.00' WIDE FP&L EASEMENT
TOB
DRAINAGE DITCH
66"X 48"CMP W/ RISER
(PER "OKEECHOBEE", PB. 5, PG. 5)
N. 14TH STREET
(NORTH 20' OF 70' WIDE PUBLIC R/W VACATED FOR DRAINAGE DITCH)
(NORTH 20' (VACTED PORTION OF R/W) OWNED BY CITY OR COUNTY OF OKEECHOBEE)
CALL 48 HOURS BEFORE YOU DIG IN FLORIDA, IT'S THE LAW
Sunshine State One Call 811 of Florida, Inc.
PROPOSED 24" TYPE "F" CURB
PROPOSED BUILDING F.F.E. = 22.90
24" YARD DRAIN GRATE EL. = 21.90
NOTE: SOD LIMITS OF SECTION
SECTION A-A
N.T.S.
5' CONC. STOOP
12" CONC. STEP
CONC. SIDEWALK
EXISTING E.O.P. EL. ±21.81
PROPOSED BUILDING F.F.E. = 22.90
SECTION F-F
N.T.S.

Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644

No.	DATE	BY	REVISIONS
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility West Wing Expansion
OKEECHOBEE, FLORIDA

PAVING, GRADING, DRAINAGE and UTILITY PLAN (WEST VIEW)

JOB No.: 2014-042
SHEET 07 OF 14

Exhibit 2.1

Application 17011

Page 8 of 11

NOTE: EXISTING WATER MAIN TO BE FIELD LOCATED AND VERIFIED BY CONTRACTOR

PROPOSED SILT FENCE AROUND PROJECT PERIMETER (TYP)

SAWCUT & MATCH EXISTING EDGE OF PAVEMENT

INSTALL FIRE HYDRANT ASSEMBLY

INSTALL 513 LF (TOTAL)~6" PVC FIRE LINE

127 LF ~ 18" HDPE

99 LF ~ 18" HDPE

86 LF ~ 18" HDPE

86 LF ~ 18" HDPE

86 LF ~ 18" HDPE

47 LF ~ 18" HDPE

48 LF ~ 18" HDPE

47 LF ~ 18" HDPE

65 LF ~ 18" HDPE

30 LF ~ 18" HDPE

82 LF ~ 18" HDPE

30 LF ~ 18" HDPE

42 LF ~ 18" HDPE

65 LF ~ 18" HDPE

91 LF ~ 18" HDPE

378 LF ~ 18" HDPE

106 LF ~ 18" HDPE

117 LF ~ 18" HDPE

80 LF ~ 18" HDPE

158 LF ~ 18" HDPE

DS-14 DS-15 DS-16 DS-17 DS-18 DS-19 DS-31 DS-30 DS-29 DS-28 DS-27 DS-26 DS-25 DS-24 DS-38 DS-39 DS-35 DS-37 DS-34 DS-36 DS-33 DS-32

5' CONC. SIDEWALK (PHASE 2)

PROPOSED CLEANOUT INV. EL.= 17.10

INSTALL 110 LF~6" PVC SAN. SEW. @ 1.0%

PROPOSED CONTROL STRUCTURE CS-1 (SEE DETAIL)

5' CONC. SIDEWALK (PHASE 1)

CONFLICT: 6" SAN. SEW. TO PASS UNDER STORM PIPE WITH 12" MIN. CLEARANCE (PIPE TO PIPE)

PROPOSED PRIVATE LIFT STATION GRATE EL.= 22.00 N.E. INV. EL.= 16.00 S. INV. EL.= 19.00

NOTE: TIE ALL ROOF DRAINS INTO UNDERGROUND DRAINAGE STRUCTURES

PROPOSED BUILDING FFE=22.90 16,000 S.F. (PHASE 2)

INSTALL 174 LF~6" PVC SAN. SEW. @ 1.0%

O.R.B. 520 PG. 180 (UNPLATTED) (VACANT)

CUT 6" HOLE @ EXISTING GRADE TO DRAIN LOW AREA ±17.50

POST DEVELOPMENT FLOW DIRECTION ARROW (TYP)

INSTALL 206 LF~8" PVC SAN. SEW.

INSTALL 312 LF~2" PVC FORCE MAIN

CONFLICT: 2" FORCE MAIN TO PASS UNDER STORM PIPE, FIRE LINE & WATER LINE WITH 12" MIN. CLEARANCE (PIPE TO PIPE)

INSTALL 388 LF~2" C900 WATER MAIN

CONC. PAD W/ BFP" WATER TREATMENT

7' HIGH ALUM. CAGE FENCE

FINISH FLOOR ELEV. = 22.90

SANITARY MANHOLE RIM EL.=22.52 N. INV. EL.=20.10

SANITARY MANHOLE RIM EL.=22.45

EXISTING ASPHALT DRIVE

5' CONC. SIDEWALK (PHASE 2)

5' CONC. SIDEWALK (PHASE 1)

CONFLICT: 6" FIRE LINE TO PASS UNDER GRAVITY SEWER WITH 12" MIN. CLEARANCE (PIPE TO PIPE)

PROPOSED CLEANOUT INV. EL.= 20.90

INSTALL FIRE HYDRANT ASSEMBLY

PROPOSED BUILDING FFE=22.90 7,200 S.F. (PHASE 1)

LOADING DOCK

21 LF ~ 18" HDPE

COVERED CONNECTION TO EXISTING BUILDING

PROPOSED BUILDING FFE=22.90 2,600 S.F. (PHASE 2)

4" PIPE ABOVE GROUND

CONC. PAD & UNDERGROUND GAS TANKS

36 LF ~ 18" HDPE

SEE DETAIL "A"

RIP-RAP HEADWALL

18" HDPE INV. EL. 16.50

PROPOSED ROCK ENDWALL (SEE DETAIL)

PROPOSED SILT FENCE AROUND PROJECT PERIMETER (TYP)

DRAINAGE DITCH

6' HIGH CHAIN-LINK FENCE

WIDE FP&L EASEMENT

TOB

20.00'

"AIRPORT DITCH"
(NORTH 20' OF 70' WIDE PUBLIC R/W VACATED FOR DRAINAGE DITCH)

ATTED) O.R.B. 315 PG. 746
OCCUPIED-OKEECHOBEE
HEALTH CARE FACILITY)
(±59,628 S.F.)

RAULERSON
07 PG. 177)
5)

MENT

OLE

4 (10'
3

2"
NG
54

OBEE)

SECTION E-E
N.T.S.

12' 32' 5' SIDEWALK

BACKFILL & SOD TO NATURAL GROUND (TYPICAL)

EL. 21.44 EL. 21.00 EL. 22.04 EL. 22.14

1:4

SCALE: 1"=20'
0 10 20 40

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Okeechobee, Fl 34974
Phone: (863) 824-7644
FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032306

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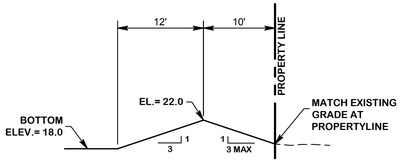
Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

PAVING, GRADING, DRAINAGE and UTILITY PLAN (SOUTH EAST VIEW)

JOB No.: 2014-042
SHEET 08 OF 14

Exhibit 2.1

Application 170117-10



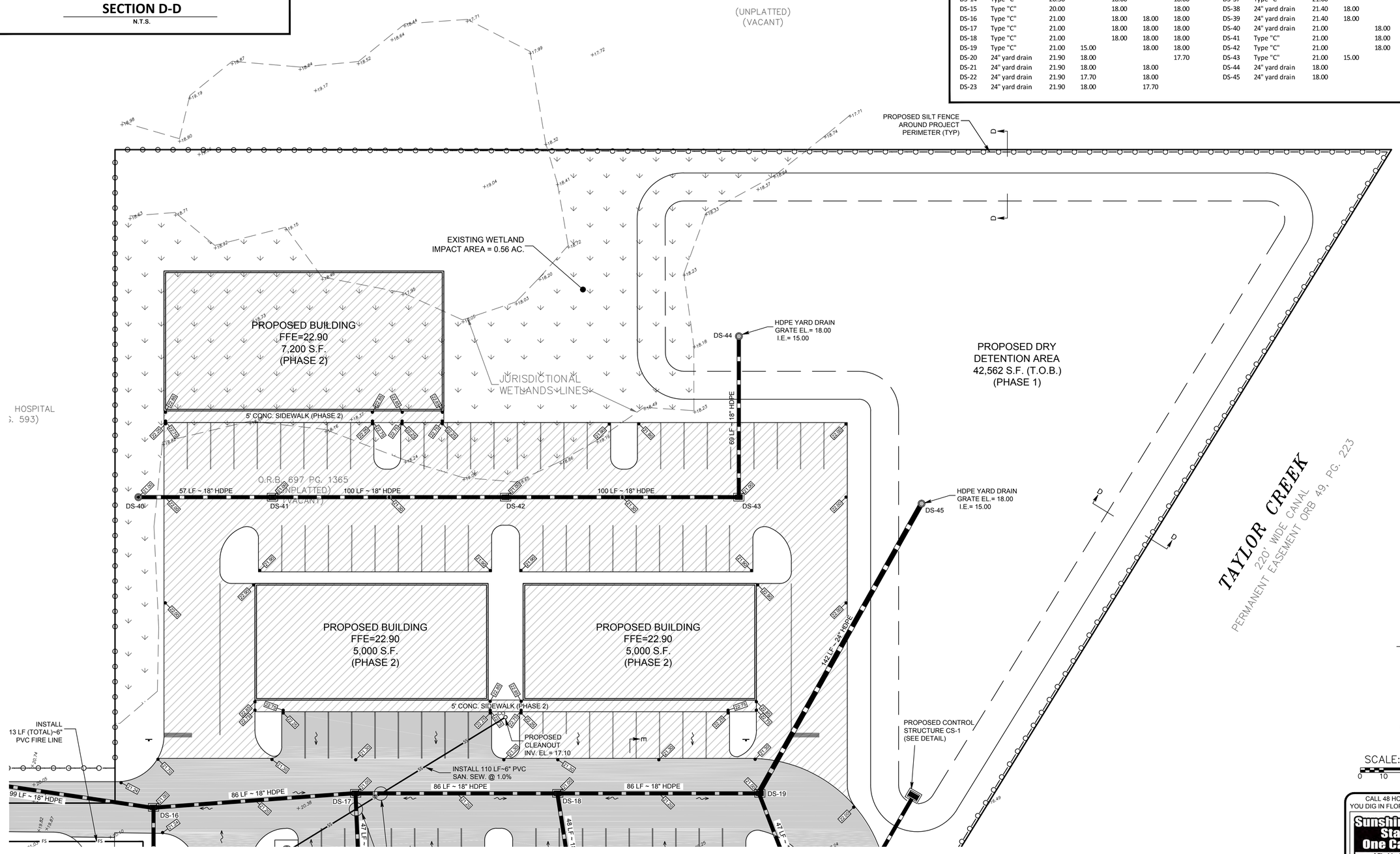
NOTE: SOD LIMITS OF
DRY DETENTION AREA

DRY DETENTION AREA
SECTION D-D

N.T.S.

Okeechobee Health Care Facilty
East Wing Expansion
Drainage Structure Elevation Chart (All Elevations in NGVD '29)

Structure	Type	Rim EL	North Inv	East Inv	South Inv	West inv	Structure	Type	Rim EL	North Inv	East Inv	South Inv	West inv
DS-1	Type "C"	21.80	18.00				DS-24	Type "C"	21.40		18.00		
DS-2	24" yard drain	21.90	18.00		18.00		DS-25	Type "C"	21.40	17.70	18.00		18.00
DS-3	24" yard drain	21.90	18.00	17.70	18.00		DS-26	Type "C"	21.40		18.00		18.00
DS-4	24" yard drain	21.90	18.00		18.00		DS-27	Type "C"	21.40	15.00			18.00
DS-5	24" yard drain	21.90			18.00	18.00	DS-28	Type "E"	19.40		15.00	15.00	
DS-6	Type "C"	23.40	18.00	18.00			DS-29	24" yard drain	21.00	18.00		18.00	
DS-7	24" yard drain	21.90	18.00		18.00		DS-30	24" yard drain	21.00	18.00		18.00	
DS-8	24" yard drain	21.90	18.00		18.00		DS-31	24" yard drain	21.40	18.00		18.00	
DS-9	24" yard drain	21.90		18.00	18.00		DS-32	24" yard drain	21.40			17.70	
DS-10	24" yard drain	21.90		18.00		18.00	DS-33	24" yard drain	21.40	18.00			
DS-11	Type "C"	22.20	15.00		18.00	18.00	DS-34	24" yard drain	21.00	18.00	18.00		18.00
DS-12	Type "C"	21.80		18.00	15.00		DS-35	24" yard drain	21.00	18.00	18.00	18.00	
DS-13	Type "C"	21.00		18.00		18.00	DS-36	Type "C"	21.00				18.00
DS-14	Type "C"	20.50		18.00		18.00	DS-37	Type "C"	21.00				18.00
DS-15	Type "C"	20.00		18.00		18.00	DS-38	24" yard drain	21.40	18.00			
DS-16	Type "C"	21.00		18.00	18.00	18.00	DS-39	24" yard drain	21.40	18.00			
DS-17	Type "C"	21.00		18.00	18.00	18.00	DS-40	24" yard drain	21.00		18.00		
DS-18	Type "C"	21.00		18.00	18.00	18.00	DS-41	Type "C"	21.00		18.00		18.00
DS-19	Type "C"	21.00	15.00		18.00	18.00	DS-42	Type "C"	21.00		18.00		18.00
DS-20	24" yard drain	21.90	18.00			17.70	DS-43	Type "C"	21.00	15.00			18.00
DS-21	24" yard drain	21.90	18.00		18.00		DS-44	24" yard drain	18.00			15.00	
DS-22	24" yard drain	21.90	17.70		18.00		DS-45	24" yard drain	18.00			15.00	
DS-23	24" yard drain	21.90	18.00		17.70								



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FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032926

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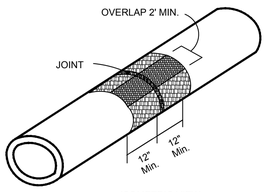
Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

PAVING, GRADING, DRAINAGE and UTILITY PLAN (NORTH EAST VIEW)

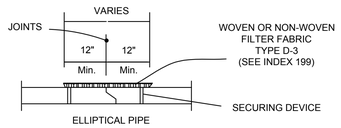
JOB No.: 2014-042
SHEET
09 OF 14

Exhibit 2.1

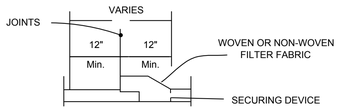
Application 170117-10



ISOMETRIC VIEW



ELLIPTICAL PIPE

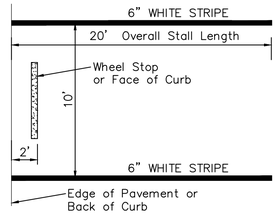


ROUND PIPE
PIPE SECTIONS

COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS

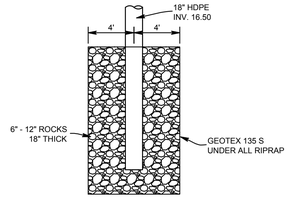
FOR ALL PIPE TYPES

FILTER FABRIC JACKET

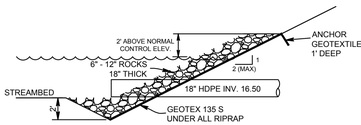


TYPICAL PARKING STALL

FOR PAVED AREAS

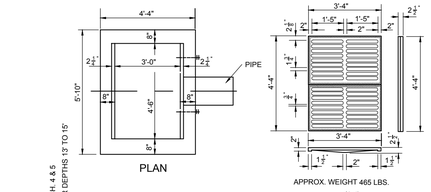


PLAN VIEW
N.T.S.



CROSS SECTION OF RIPRAP PLACEMENT

N.T.S.

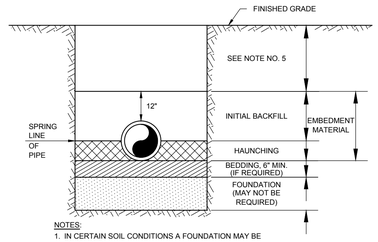


RECOMMENDED MAXIMUM PIPE SIZE:
3'-0" WALL-24" PIPE

NOTICE:
1.) STEEL GRATES ARE REQUIRED ON INLETS WITH TRAVERSABLE SLOTS AND ON INLETS WHERE BICYCLE TRAFFIC IS ANTICIPATED.

2.) ALL INLETS WILL BE CAST TO PROVIDE A 18" SUMP BELOW LOWEST CULVERT INVERT

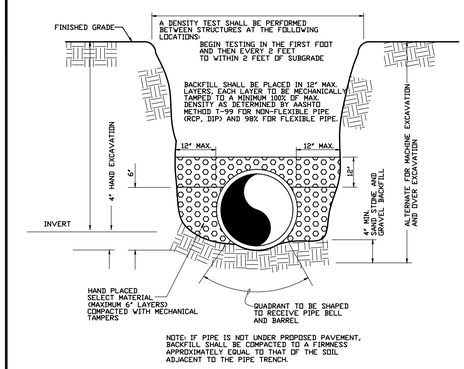
PRE-CAST TYPE 'E' CATCH BASIN



NOTES:

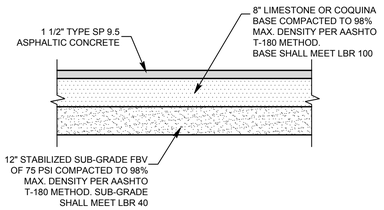
1. IN CERTAIN SOIL CONDITIONS A FOUNDATION MAY BE REQUIRED.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE.
3. HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL SHALL BE HAND PLACED TO 12" ABOVE THE TOP OF PIPE. THE SOIL SHALL BE COMPACTED.
5. BACKFILL SHALL BE COMPACTED TO 100% OF MAX. DENSITY AS PER AASHTO T-99, TO A POINT 30" BELOW PROPOSED PROFILE GRADE OR EXISTING GRADE. THE FINAL 30" OF BACKFILL SHALL BE COMPACTED TO 98% OF MAX. DENSITY AS PER AASHTO T-180.
6. DENSITY TEST SHALL BE PREFORMED AT AREAS DETERMINED BY THE UTILITIES ENGINEER OR PERMIT AGENCY HAVING JURISDICTION, AT THE CONTRACTOR'S EXPENSE.

BACKFILLING REQUIREMENTS

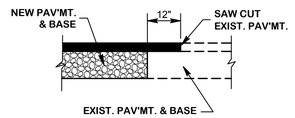


TYPICAL TRENCH DETAIL

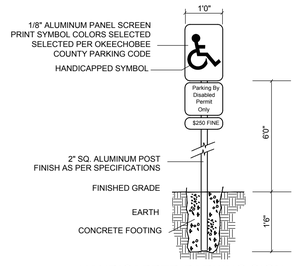
N.T.S.



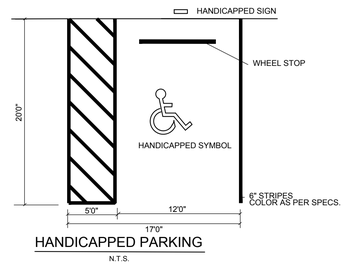
PAVEMENT SECTION



SAW CUT DETAIL



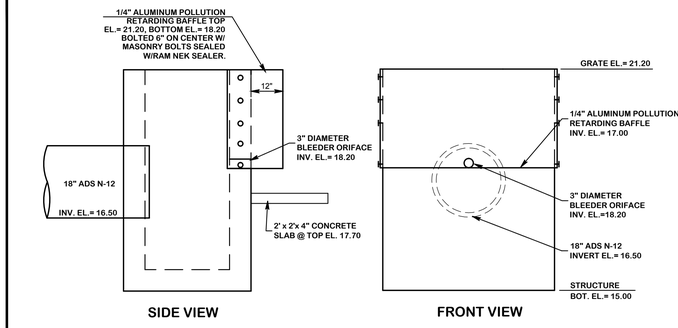
HANDICAPPED PARKING SIGN
N.T.S.



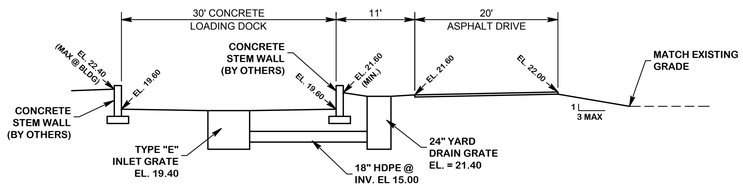
HANDICAPPED PARKING
N.T.S.

Note: All Paved Parking Stalls are to be double striped.

HANDICAPPED PARKING SIGNAGE/STRIPING DETAIL

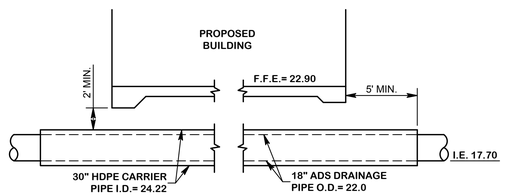


CONTROL STRUCTURE CS-1
TYPE "C" INLET (MODIFIED)



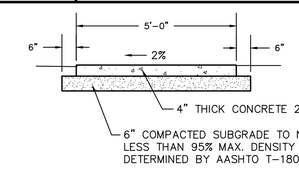
SECTION C-C

N.T.S.



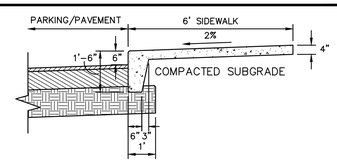
DETAIL "A"

N.T.S.



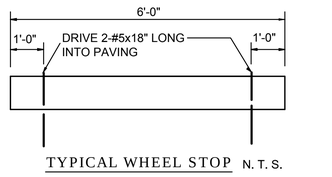
TYPICAL SIDEWALK DETAIL

N.T.S.

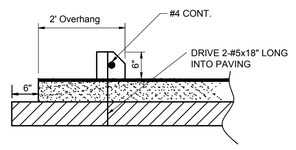


MONOLITHIC CURB / SIDEWALK (TYPICAL AT PARKING)

N.T.S.

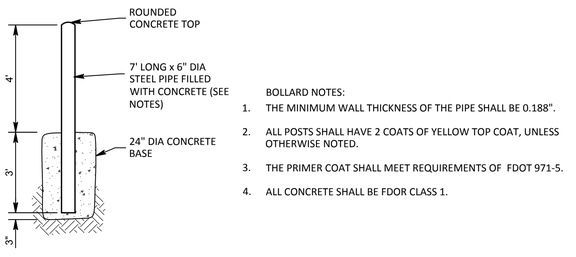


TYPICAL WHEEL STOP N. T. S.



TYPICAL WHEELSTOP DETAIL

N. T. S. FOR PAVED AREAS

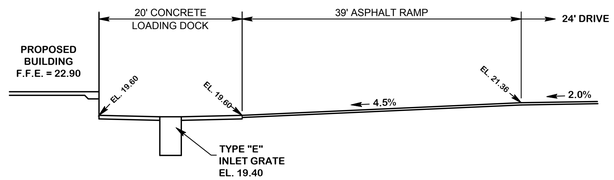


BOLLARD NOTES:

1. THE MINIMUM WALL THICKNESS OF THE PIPE SHALL BE 0.188".
2. ALL POSTS SHALL HAVE 2 COATS OF YELLOW TOP COAT, UNLESS OTHERWISE NOTED.
3. THE PRIMER COAT SHALL MEET REQUIREMENTS OF FDOT 971-5.
4. ALL CONCRETE SHALL BE FDOR CLASS 1.

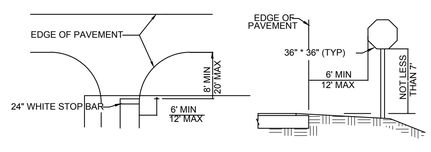
BOLLARD DETAIL

N.T.S.



SECTION B-B

N.T.S.



STOP SIGN LOCATION DETAIL

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Sunshine State One Call of Florida, Inc. 811

Steven L. Dobbs Engineering, LLC
1062 JAKES WAY
Okeechobee, Fl 34974
Phone: (863) 824-7644

FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032306

No.	DATE	BY	REVISIONS
1	01-27-17	CMB	REVISED PER COMMENTS

Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

DETAILS

JOB No.: 2014-042
SHEET 10 OF 14

GENERAL NOTES

1. Contractor is responsible for checking actual site conditions before starting construction.

2. Any discrepancies on the drawings shall be brought to the attention of the engineer before commencing work.

3. Contractor shall obtain all required building permits before commencing work.

4. Contractor shall be responsible for location of all existing utilities. The contractor shall contact all concerned utilities at least 48 hours in advance for construction operations.

5. No field changes or deviations from design to be made without prior approval of the engineer.

6. All construction shall be completed in accordance with the applicable ordinances of Glades County, Florida.

7. Contractor shall supply density tests to engineer on all sub-grade and base. Tests shall be prepared per AASHTO T-180 method.

8. Slope grades from elevations shown to existing grade at property line.

9. Engineer shall be notified at least 48 hours in advance for any inspection.

10. All traffic control devices shall be in accordance with M.U.T.C.D. Standards.

11. Erosion and sedimentation control techniques shall be incorporated during construction as follows:
(1) silt screens shall be maintained at the project perimeter.
(2) No off-site discharges shall occur during construction. In the event discharge is required, hay bales and/or turbidity curtains shall be incorporated at the discharge point as necessary to control turbidity.

EROSION AND SEDIMENTATION CONTROL NOTES

Construction activities can result in the generation of significant amounts of pollutants which may reach surface or ground waters. One of the primary pollutants of surface waters is sediment due to erosion. Excessive quantities of sediment which reach water bodies of floodplains have been shown to adversely affect their physical, biological and chemical properties. Transported sediment can obstruct stream channels, reduce hydraulic capacity of water bodies of floodplains, reduce the design capacity of culverts and other works, and eliminate ethic invertebrates and fish spawning substrates by siltation. Excessive suspended sediments reduce light penetration and therefore, reduce primary productivity.

MINIMUM STANDARDS:

1. Sediment basin and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-distributing activity and shall be made functional before unslope land disturbance takes place.

2. All sediment control measures are to be adjusted to meet field conditions at the time of construction and be constructed prior to any grading or disturbance of existing surface material on balance of site. Perimeter sediment barriers shall be constructed to prevent sediment or trash from flowing or floating on to adjacent properties.

3. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain undisturbed for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left undisturbed for more than one year.

4. During construction of the project, soil stockpiles shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as soil intentionally transported from the project site.

5. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the Reviewer, is uniform, mature enough to survive and will inhibit erosion.

6. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

ENGINEER OF RECORD INSPECTION REQUIREMENTS

	F.B.V.		DENSITY		L.B.R.		THICKNESS	
	MAX. SPACING		MAX. SPACING		MAX. SPACING		MAX. SPACING	
	LINEAR FEET	SQUARE FEET	LINEAR FEET	SQUARE FEET	LINEAR FEET	SQUARE FEET	LINEAR FEET	SQUARE FEET
COMPACTED OR STABILIZED GRADE	200	5,000	200	5,000	200	5,000	300	10,000
ROCK BASE	----	----	300	10,000	300	10,000	300	10,000
SHELL ROCK	----	----	300	10,000	----	----	300	10,000
ASPHALT	----	----	----	----	----	----	PER INSP.	PER INSP.

ALL TESTING SHALL BE TAKEN IN A STAGGERED SAMPLING PATTERN FROM A POINT 12" INSIDE THE LEFT EDGE OF THE ITEM TESTED, TO THE CENTER, TO A POINT INSIDE OF THE RIGHT EDGE

EROSION AND SEDIMENTATION CONTROL NOTES - (continued)

7. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The sediment basin shall be designed and constructed to accommodate the anticipated sediment loading from the land-disturbing activity. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area to be served by the basin.

8. After any significant rainfall, sediment control structures will be inspected for integrity. Any damaged devices shall be corrected immediately.

9. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

10. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

11. Sediment will be prevented from entering any storm drain system, ditch or channel. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

12. Before temporary or newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

13. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

14. When a live watercourse must be crossed by construction vehicles, a temporary stream crossing constructed of nonerodible material shall be provided.

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

16. Periodic inspection and maintenance of all sediment control structures must be provided to ensure intended purpose is accomplished. The Developer, owner and/or contractor shall be continually responsible for all sediment leaving the property. Sediment control measures shall be in working condition at the end of each working day.

17. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
A. No more than 500 linear feet of trench may be opened at one time.
B. Excavated material shall be placed on the uphill side of trenches.
C. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
D. Restabilization shall be accomplished in accordance with these regulations.

18. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by tracking onto the paved surface, where sediment is transported onto a public road surface with curbs and gutters, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land-distributing activities.

19. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, in the opinion of the Reviewer. Disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

20. Properties and waterways downstream from construction site shall be protected from sediment disposition and erosion.

21. Phased projects should be cleared in conjunction with construction of each phase.

22. Erosion control design and construction shall follow the requirements in Index Nos. 101, 102 and 103 of FDOT Roadway and Traffic Design Standards.

23. The Reviewer may approve modifications or alter plans to these erosion control criteria due to site specific conditions.

ENGINEER OF RECORD INSPECTION REQUIREMENTS
CONTRACTOR TO CALL CONTRACT ENGINEER OF RECORD
48 HOURS ADVANCE FOR FOLLOWING INSPECTIONS:
1. PRECONSTRUCTION MEETING
2. DRAINAGE PIPE (UNCOVERED)
3. PAVEMENT SUBGRADE
4. PAVEMENT BASE
5. FINAL

Earthwork and Drainage Specifications

1. **Clearing and Grubbing:** Clearing and grubbing shall be performed within the limits of the project work in accordance with Section 110, Florida Department of Transportation (FDOT) Specifications. This item shall include, but is not limited to, the complete removal and legal disposal of all trees, brush, stumps, roots, grass, weeds, rubbish and other undesirable material to a depth of 18 inches below natural ground or proposed finished grade, whichever is lower. The areas to be cleared generally consist of the entire site with the exception of areas specifically noted on the landscape plans as preserve areas or as areas to remain un-cleared. Care shall be taken to insure that no preserve areas or wetland areas are impacted by the clearing operation. Prior to initiating the clearing operation, all adjacent wetland and preserve areas shall be marked and flagged in accordance with the City of Okeechobee and South Florida Water Management District (SFWMD) requirements All such areas immediately adjacent to the clearing operation shall also be protected by the installation of temporary silt barriers in accordance with the requirements of The City of Okeechobee and the SFWMD. Further erosion control shall be accomplished by seeding and mulching all disturbed areas as soon as they are at final grade, per the specifications for seeding and mulching found elsewhere on this sheet.

   All material shall be removed from the site and shall be legally disposed of in accordance with all local, state and federal requirements.

2. **Earthwork and Grading:** All earthwork and grading shall be performed as required to achieve the final grades, typical sections and elevations shown on the plans. In all other respects, materials and construction methods for earthwork, embankment, excavation and grading shall conform to the requirements of FDOT Specifications, Section 120. Any plastic or otherwise undesirable material within 36 inches of finished road grade shall be removed and replaced with suitable material. The contractor shall also refer to the Soils Report, if available. The specifications and recommendations included in that report shall be considered as a part of these plans and specifications. Should there be any conflict between that document and any requirements of these drawings or specifications, the most restrictive requirement shall govern.

3. **Paving Improvements:** All areas proposed for paving shall be constructed in accordance with the design grades and typical sections shown on the drawings, and in conformance to the requirements of the City of Okeechobee and Florida Department of Transportation.
   - **A. Asphalt:** Prime Coat and tack coat for base course and between lifts of asphalt shall conform to the requirements of Sections 300-1 through 300-7 of the FDOT Specifications. Prime Coat shall be applied at a rate of 0.25 gallons per square yard and tack coat at a rate of 0.10 gallons per square yard, unless otherwise approved by the Engineer.

     Asphalt surface course thickness and material shall be as shown on the typical sections and shall in all ways conform to the requirements of FDOT.

   - **B. Base:** Limerock base material shall be compacted to 98% of maximum density per AASHTO T-180. All limerock shall meet the minimum requirements of FDOT Section 911. As an alternate, cemented coquina conforming to FDOT Section 915 may be substituted and shall be subject to the compaction specifications detailed above and included in the Soils Engineer's report.

   - **C. Sub-grade**: Sub-grade shall be compacted to 98% of maximum density per AASHTO T-180, and stabilized to a minimum FBV of 50psi. Sub-grade shall be thoroughly rolled with a pneumatic tired roller prior to scheduling any sub-grade inspection.

   - **D. Valley Gutter/ F-Curb/D-Curb/Flush Curb:** Shall be constructed per the typical section by extruding machine or forms as shown on the plans. Minimum concrete compressive strength shall be 3,000psi after 28 days. Sub-grade shall be moistened at the time concrete is placed to insure a uniformly damp surface. Ready-mix concrete shall have a slump of between 2 and 4 inches. No water shall be added to increase workability. Test cylinders shall be made for the strength testing of each batch of concrete for at least 7 and 28 day testing.

   - **E. Sod:** A minimum of a two-foot wide strip of sod, or as otherwise shown on the plans, shall be placed along the back of curb of all constructed pavement to aid in prevention of erosion and soil stability. Sod shall be placed in conformance to FDOT Section 570, 575 and 981. Generally, the sodding requirements shall be as specified on the landscape plans, prepared by Others.

   - **F. Seed, Fertilize and Mulch:** All disturbed areas shall be stabilized with seed, fertilizer and mulch upon completion and acceptance by Engineer of final grading. Seed, fertilizer and mulch shall be in conformance to FDOT Sections 570, 575 and 981. The Contractor is responsible for establishing a stand of grass sufficient to prevent erosion prior to removal of the temporary silt fences. This applies only to those areas not covered by the sodding specified in the landscape plans, prepared by Others.

   - **G. Testing:** The Contractor shall secure the services of an approved independent testing laboratory to conduct all required testing on sub-grade, base, asphalt and concrete. Locations required for these tests shall be as required by the City of Okeechobee, and/or in the case of the turn-lane improvements as required by the City of Okeechobee. At a minimum, testing shall be as recommended by FDOT. Should any tests fail, contractor shall at his own expense, repair the deficiencies and retest the work until compliance with the specifications is demonstrated.

   - **H. Traffic Control:** The installation of Traffic Control Devices shall be in conformance to the requirements of the Manual of Uniform Traffic Control Devices, The City of Okeechobee. Maintenance of traffic During Construction shall be as required by FDOT.

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Earthwork and Drainage Specifications - (continued)

4. **Drainage Improvements:** All labor, materials and construction methods shall be in conformance to the minimum engineering and construction standards of the City of Okeechobee and FDOT Specifications. Trench excavation and back-filling operations shall meet or exceed the requirements of FDOT Specifications, Section 125. The Contractor shall provide the necessary back-fill compaction testing required to demonstrate compliance with this section. The pipe trench shall be dry when pipe is laid and the pipe shall be bedded per the details and per FDOT specifications.

   The Contractor shall comply with Chapter 90-96, Laws of Florida, which requires the Contractor performing trench excavations over five feet in depth comply with all applicable trench safety standards and shoring requirements as set forth in the Occupational Safety and Health Administration's (OSHA) excavation and safety standards, 29 C.F.R. 19926.650, Sub-part P and incorporated as the State of Florida standard, as revised and/or updated. The cost of compliance with this requirement shall be included as a separate line item on the Contractor's bid. Otherwise, Contractor certifies that the cost of compliance is included in the unit cost of all items of work to which this requirement applies.

   - **A. Reinforced Concrete Pipe (RCP):** RCP shall conform to the requirements of ASTM Specifications C-76, Class III, Wall Thickness "B", latest revision. All joints shall be soil-tight. Pipe gasket shall conform to FDOT Specifications, Section 942.

   - **B. Corrugated Metal Pipe (CMP):** All CMP shall be Steel, round, helical-wound corrugated pipe conforming to AASHTO-M 36 and FDOT Section 943. Pipe ends at joints shall be reformed to a minimum of 2 annular corrugations for the complete band width. All joints shall be soil-tight. All connecting bands shall be corrugated annular coupling bands. A Neoprene gasket of at least 7 inches wide by 3/8 inch thick shall be used for all pipes of 36-inch diameter and smaller. Larger pipe sizes require gaskets of at least 10-1/2 inches in width. All CMP shall be installed at maximum lengths to reduce the number of joints.

   - **C. Corrugated Aluminum Pipe (CAP):** All CAP shall be aluminum alloy, round, helical-wound corrugated pipe conforming to AASHTO-M 196 and FDOT Section 945. Pipe ends at joints shall be reformed to a minimum of 2 annular corrugations for the complete band width. All joints shall be soil-tight. All connecting bands shall be corrugated annular coupling bands. A Neoprene gasket of at least 7 inches wide by 3/8 inch thick shall be used for all pipes of 36-inch diameter and smaller. Larger pipe sizes require gaskets of at least 10-1/2 inches in width. All CAP shall be installed at maximum lengths to reduce the number of joints.

   - **D. Corrugated High Density Polyethylene Pipe (HDPE):** All HDPE Pipe shall be resin conforming to ASTM D3350 minimum cell classification 435400C, round, only annular corrugations and conforming to FDOT Section 948-2.3. All joints shall be soil-tight. All connecting bands shall be corrugated annular coupling bands. A Neoprene gasket of at least 7 inches wide by 3/8 inch thick shall be used for all pipes of 36-inch diameter and smaller. Larger pipe sizes require gaskets of at least 10-1/2 inches in width. All HDPE shall be installed at maximum lengths to reduce the number of joints.

   - **E. Contech A-2000 PVC drainage pipe (A-2000):** All A-2000 corrugated pipe with a smooth interior shall conform to the requirements of ASTM Designation F949 & F794 Dual Wall Corrugated Profile (DWCP) Pipe. Pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions or other injurious defects. Pipe shall be manufactured to 46 psi stiffness when tested in accordance with ASTM Test Method D2412. There shall be no evidence of splitting, cracking or breaking when the pipe is tested per ASTM Test Method D2412 and F949 section 7.5. The pipe shall be made of PVC compound having a minimum cell classification of 12454B as defined in ASTM Specification D1784.

   - **F. PVC Drainage Pipe:** PVC Drainage Pipe shall be C-900 with push-on joints (no glued joints) and shall be as specified for sanitary sewer construction, except that it shall be white in color. Any portion of the PVC storm pipe that may be exposed to sunlight, such as its outlet to the detention pond, shall be painted to protect it from UV light.

   - **G. Inlets, Manholes, and Junction Boxes:** All drainage inlets, manholes, and junction boxes shall be precast concrete conforming to ASTM C-478 and 64T. All concrete shall have not less than 4000-psi compressive strength at 28 days. Structure sections shall be joined with a mastic sealing compound. The remaining space shall be filled with the cement mortar and finished so as to produce a smooth continuous surface inside and outside the wall sections. All openings in precast structures shall be cast at the time of manufacture. Holes for piping shall be six inches larger than the outside diameter of the proposed pipe. All spaces between the manhole and the pipe shall be completely filled with mortar and finished smooth. Mortar used for concrete structures shall conform to M C-270. Mortar material shall be mixed one part Type 2 Portland cement to two parts aggregate by volume. Portland cement shall conform to ASTM C-144 and aggregate shall conform to ASTM C-144. The CONTRACTOR shall furnish the ENGINEER with shop drawings of all precast structures for his approval prior to fabrication. Shop drawings shall show all dimension, reinforcing steel and specifications. Storm Manholes shall be constructed with a traffic bearing cast-iron slotted grate.

   - **H. Trench Backfill** shall be as shown in the Drainage Details. In addition, testing under paved areas shall be as follows: One test location midway between structures and one test location adjacent to each structure. Engineer may request additional locations. Testing in each location shall begin in the first foot above the culvert with tests every two feet to within two feet of the sub-grade. Density shall be to 100 percent of maximum as determined by AASHTO T-99.

   - **I. Control Structures:** Shall be constructed per the above specifications for Inlets, Manholes, and Junction Boxes except that the structures shall include the bleeders and weirs as shown on the detail.

   - **J. Rip-Rap Energy Dissipaters:** Shall be constructed per the details and as shown on the drawings at the control structures CS-1B and CS-2B, the downstream bubble-up structures. The rubble shall be of material and placed in accordance to FDOT Section 530-2.3 (material) and FDOT Section 530-3.3 (Construction Methods). Should broken concrete be used as the rubble, it shall be free from reinforcing bars or wire mesh. The contractor shall use care in the placement of the stone so that it is not dropped on thew fabric in such a fashion that tears the fabric. The fabric shall be as specified in FDOT Section 985 and shall be of the woven design and as specified for use with riprap per Table 1 of this section. The bedding stone shall be of the type typically used for drainfield rock and shall meet the requirements of FDOT for drainfield rock.

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FLORIDA CERTIFICATE OF AUTHORIZATION No. 00032926

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Okeechobee Healthcare Facility
West Wing Expansion
OKEECHOBEE, FLORIDA

GENERAL NOTES & SPECIFICATIONS

JOB No.: 2014-042
SHEET 14 OF 14