PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation
District Seven

US 92/SR 600/Gandy Boulevard
From 4th Street to West Shore Boulevard

Pinellas & Hillsborough Counties, Florida

Work Program Item Segment Number: 441250-1

ETDM Number: 14335

April 2025

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

PROFESSIONAL ENGINEER CERTIFICATION

PRELIMINARY ENGINEERING REPORT

Project: US 92/SR 600/Gandy Boulevard

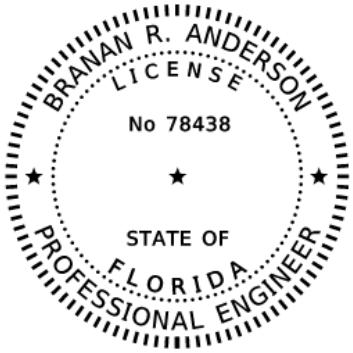
ETDM Number: 14335

WPI Segment Number: 441250-1-22-01

Federal Aid Project Number: N/A

This preliminary engineering report contains engineering information that fulfills the purpose and need for the Gandy Boulevard (US 92/SR 600) Project Development & Environment study from 4th Street in St. Petersburg, Pinellas County to West Shore Boulevard in Tampa, Hillsborough County, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Kisinger Campo and Associates, and that I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice for this project.



This item has been digitally signed and sealed by:

On the date adjacent to the seal

Printed copies of this document are not considered signed and sealed. The signature must be verified on any electronic copies.

Kisinger Campo and Associates Corp.

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Tampa, FL 33602

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1.0 PROJECT SUMMARY

1.1 Project Description

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) study to evaluate improvements to US 92/SR 600/Gandy Boulevard including roadway widening, bridge widening and/or replacement, new stormwater management facilities, and pedestrian and bicycle accommodations. The limits of the study are from US 92/SR 687/4th Street North in St. Petersburg (Pinellas County) to CR 587/South West Shore Blvd in Tampa (Hillsborough County), a distance of approximately 7.0 miles. The project study area and project limits are shown in **Figure 1.1**. The existing Gandy Blvd is a four-lane divided roadway with sidewalks and segments of shared-use paths. The project is located in Sections 7 and 8 of Township 30 South, Range 18 East, and Sections 15, 16, 17, 18, and 19 of Township 30 South, Range 17 East. Proposed improvements include a 4-lane to 6-lane controlled access elevated roadway, frontage roads and shared-use paths.

The U.S. Coast Guard (USCG) is a cooperating agency for this PD&E study. The draft Type 2 Categorical Exclusion Determination Form was reviewed by USCG, and coordination was completed regarding the project's future USCG bridge permit application. This is summarized and included in USCG Cooperating Agency Correspondence (Mar. 2023) located in the project file. USCG has determined that the project does not require a Navigational Impact Study nor is the project located over a federal navigational channel.

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14335. An ETDM *Programming Screen Summary Report* containing comments from the Environmental Technical Advisory Team (ETAT) was published on November 8, 2018. The ETAT evaluated the project's effects on various natural, physical, and social resources.

This study has been subdivided into three distinct segments for the purposes of concept development and build alternative analysis.

- **Segment 1** (Pinellas Segment) – From 4th Street North to the western terminus of the Gandy bridges over Old Tampa Bay
- **Segment 2** (Bay Segment) – Gandy bridges over Old Tampa Bay
- **Segment 3** (Hillsborough Segment) – From the eastern terminus of the Gandy bridges over Old Tampa Bay to West Shore Boulevard

This study provides engineering and environmental documentation and analysis to aid the Department in determining the type, preliminary design, and location of the improvements to Gandy Boulevard. An elevated viaduct and multiple overpasses along with the widening and/or replacement of the Gandy Boulevard over Old Tampa Bay bridges will be utilized to improve the current roadway conditions. In addition to addressing roadway capacity, this project will also address the need for pedestrian and bicycle accommodations with proposed shared-use paths on both sides of Gandy Blvd. Currently, short segments of on-street bicycle accommodations along the outside paved shoulders are present within Segment 1 and parallel shared-use path segments located near the existing right-of-way (R/W) within the study area. The project's proposed improvements require an estimated 11.78 acres of R/W to be acquired. The construction year is not currently identified since construction funding is currently not programmed for any segments within the FDOT Five-Year Work Program.

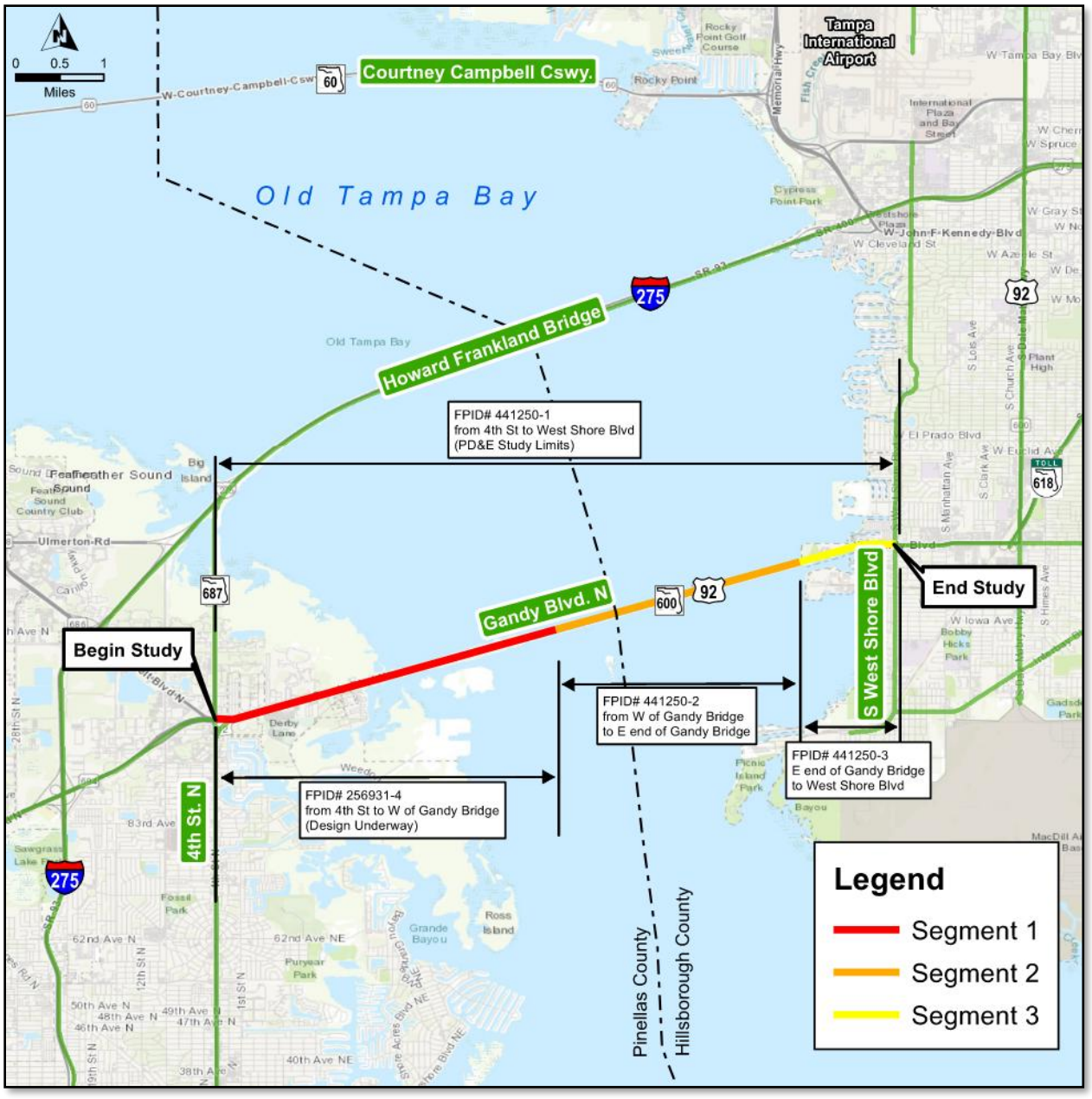


Figure 1.1: Project Location Map

1.2 Purpose & Need

The purpose of this project is to reduce traffic congestion and improve pedestrian and bicycle accommodations on Gandy Blvd.

This project is needed to address current and future traffic demand and to address pedestrian and bicycle accommodations with potential connectivity over Old Tampa Bay. According to Forward Pinellas (Metropolitan Planning Organization) Active Transportation Plan, construction of bike lanes and a trail from 4th Street to west of San Martin Blvd is planned. The Duke Energy/Pinellas Trail Loop from 28th Street to San Martin Blvd and the San Martin Blvd Trail from Macoma Drive (at Patica Road NE) to Gandy Blvd are also planned.

Transportation Demand: The US 92/SR 600/Gandy Blvd PD&E study was divided into three segments for the purposes of roadway capacity and pedestrian/bicycle analysis. Segment 1, from 4th Street to the west end of the Gandy bridges, operates at a level of service (LOS) D in the existing year 2020 and is forecasted to operate at LOS E in the design year 2050. Segment 2, encompassing the Gandy bridges over Old Tampa Bay, operates at LOS C in the existing year 2020 and is forecasted to operate near capacity at LOS D in the design year 2050. Segment 3, from the east end of the Gandy Bridges to West Shore Blvd, operates at LOS C in the existing year 2020 and is forecasted to operate at LOS C in the design year 2050. The 2020 Annual Average Daily Traffic (AADT) was compared to 2019 AADT within the project area, in order to determine any effects on traffic volumes, from the COVID-19 Pandemic. As a result, traffic volumes similar to pre-pandemic levels along the traffic corridor were used.

Multi-Modal: On the western side of the Gandy bridge, a sidewalk is present on the south side of the roadway from the vicinity of 99th Avenue North to approximately 0.25 miles east of San Fernando Drive. On the north side of the roadway a sidewalk is present from Oak Street to Brighton Bay Blvd NE. At Brighton Bay Blvd NE, a shared-use path begins and terminates in the vicinity of the west end of Gandy bridges over Old Tampa Bay. East of the Gandy bridges, sidewalks are present on both sides of the roadway from the vicinity of Gandy Park South to West Shore Blvd. There are no pedestrian or bicycle accommodations located on the Gandy bridges. This project will address the need for bicycle and pedestrian improvements along the US 92/SR 600/Gandy Blvd corridor.

Project Status: The project is included in the Forward Pinellas adopted 2050 Long Range Transportation Plan (LRTP) Cost Feasible Plan for the segment of Gandy Blvd from 4th Street to west of Gandy bridge to add one lane in each direction with preliminary engineering funds in 2024-2025 ($3.53 million) and 2036-2040 ($8.29 million), and the Gandy bridge segment for bridge replacement (4 to 6 lanes) is included for preliminary engineering funds in 2041-2050 ($64.68 million). Funding for design and right-of-way for Gandy Blvd from east of 4th Street to west of Gandy bridge is included in the Forward Pinellas 2024/25-2028/29 Transportation Improvement Program (TIP) for years 2024/2025 for a grade separated overpass at Brighton Bay Blvd. The State Transportation Improvement Program (STIP) includes preliminary engineering funds for 2024/2025 but there are no right-of-way or construction funds identified for Gandy Blvd from 4th Street to west of Gandy bridge. The project is also in the Hillsborough Transportation Planning Organization (TPO) 2050 LRTP Cost Feasible Projects for fiscal year 2036-2040 with preliminary engineering funds ($8.28 million) for the Gandy bridge segment. Additionally, the segment of Gandy Blvd from east of Gandy bridge to West Shore Blvd is included in the LRTP in fiscal years 2036-2040 with preliminary engineering funds ($2.98 million) and construction funds ($14.70 million). For these two segments, future phases of preliminary engineering and construction are outside of the five-year timeframe of the current Hillsborough TPO TIP and FDOT STIP for fiscal years 2024/25-2028/29.

1.3 Alternative Analysis Summary

The Florida Department of Transportation (FDOT) District 7 is considering one project Build Alternative to satisfy the purpose and need while also considering the No-Build (or no-action) Alternative. A single Build Alternative is being evaluated due to the existing R/W constraints and surrounding urban land uses including mixed use residential and commercial businesses. The Build Alternative evaluates a four lane and six lane typical section to satisfy the forecasted traffic demand while considering multi-modal accommodations for pedestrians and bicyclist connectivity and safety, including an east/west shared-use path connection over Old Tampa Bay.

1.4 Description of Preferred Alternative

The Build Alternative increases capacity and accommodates free-flow traffic movements by creating a controlled access facility from the begin project limit at 4th Street North to the east end of the Gandy bridges.

The Build Alternative was optimized from multiple design options and consists of six proposed typical sections. This consists of three typical sections along Segment 1 encompassing the Pinellas County side (**Figure 1.2**, **Figure 1.3**, and **Figure 1.4**), one typical section for Segment 2 consisting of a new bridge over Old Tampa Bay (**Figure 1.5**) and two typical sections along Segment 3 on the Hillsborough County side (**Figure 1.6** and **Figure 1.7**).

These proposed typical sections include an at-grade roadway, an elevated roadway on mechanically stabilized earth (MSE) walls, an elevated viaduct design and a new bridge structure, all with either two or three travel lanes in each direction varying in width from 11 to 12 feet, separated by guardrail and/or barrier wall. Paved inside shoulders vary from six to 10 feet in width and paved outside shoulders vary from 10 to 12 feet wide. The Build Alternative provides frontage roads with either one 15-foot lane or two 11-foot lanes with curb and gutter as well as a 12-foot shared use path in each direction. The frontage road system accommodates local traffic and maintains access to surrounding properties for vehicles, pedestrians, and bicyclists.

The outside shoulder width along the Gandy mainline was increased from 10 to 12 feet to provide opportunity for bus on shoulder operations in the future pending agreement with the Forward Pinellas MPO. The intent with the bus on shoulder operations is to provide a free flow movement using the outside shoulders to avoid congestion along the Gandy mainline in Pinellas County. This provision will be further evaluated in the design phase of the project.

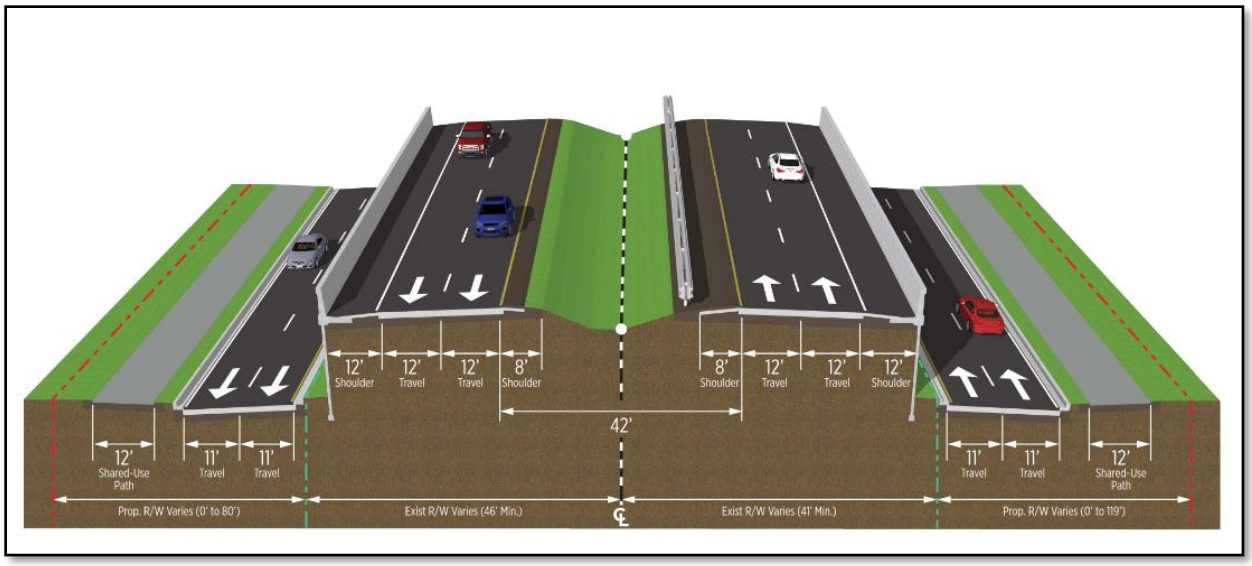


Figure 1.2: Pinellas Segment – 4th Street North to Brighton Bay Boulevard NE; San Martin Boulevard to East of San Fernando Drive

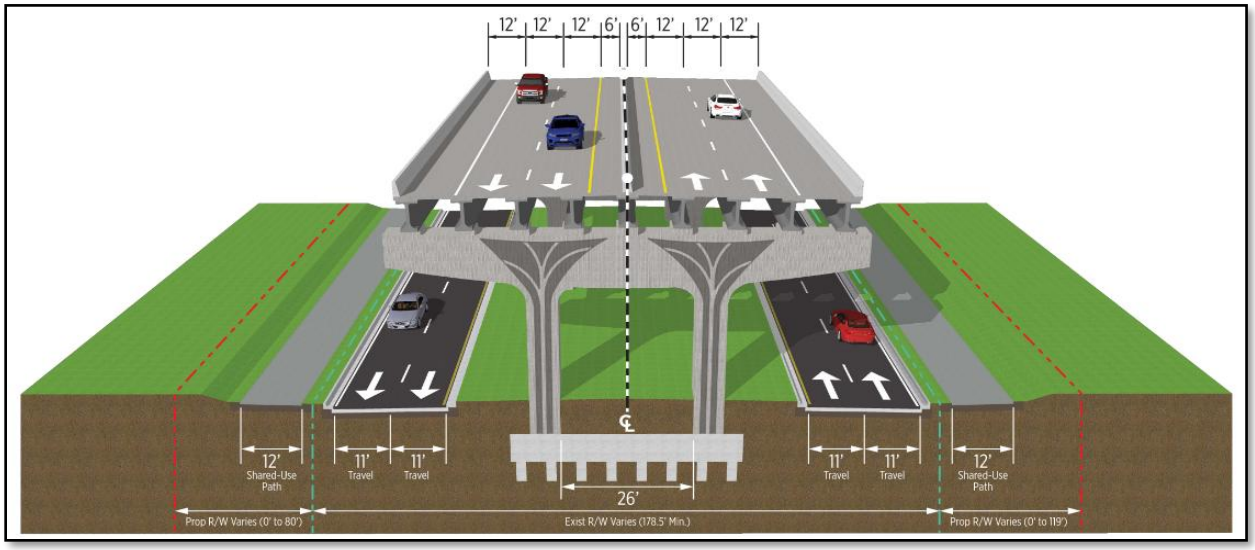


Figure 1.3: Pinellas Segment - Brighton Bay Boulevard NE to San Martin Boulevard

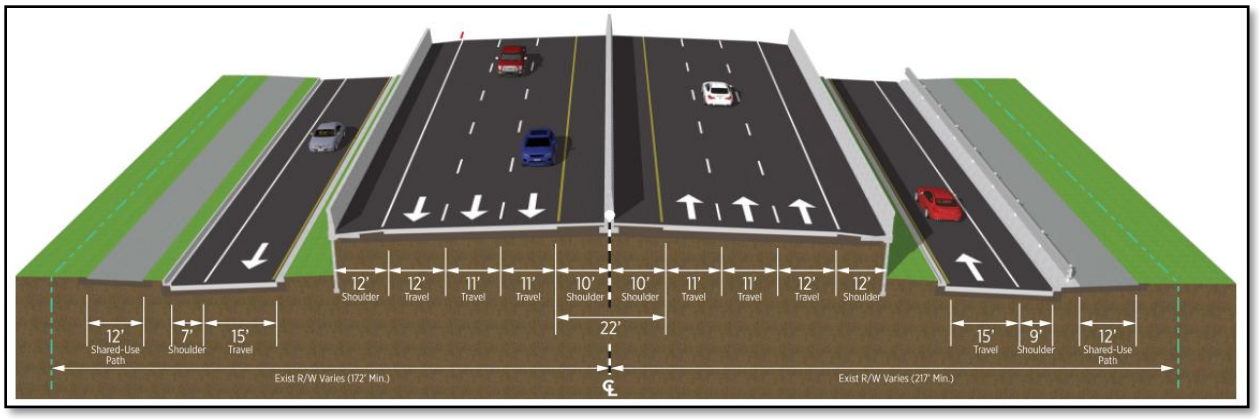


Figure 1.4: Pinellas Segment - San Fernando Drive to West End of Gandy bridges

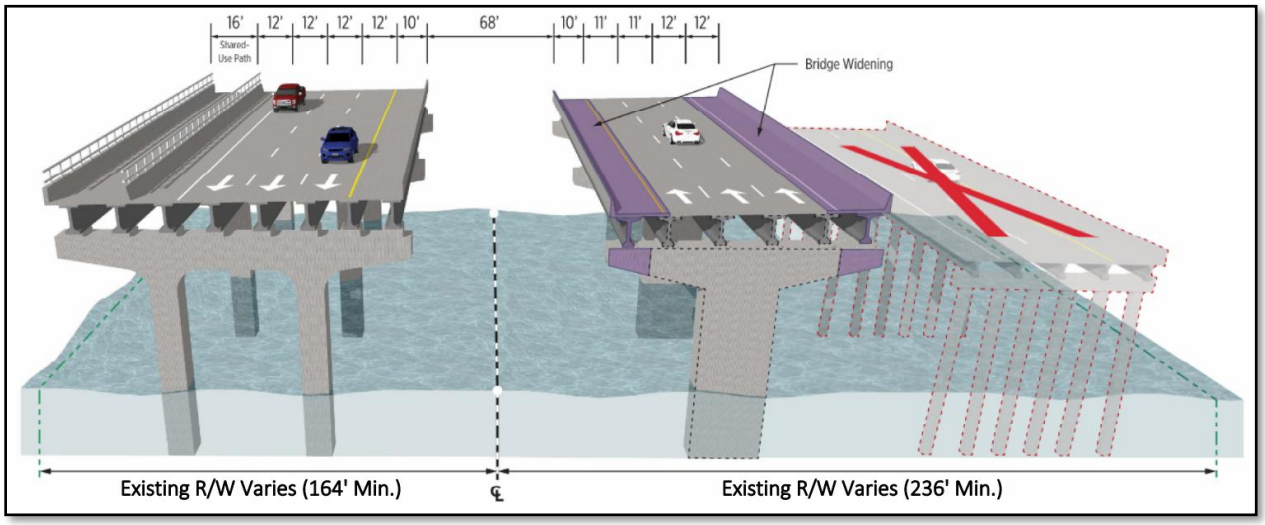


Figure 1.5: Bay Segment – Bridges over Old Tampa Bay

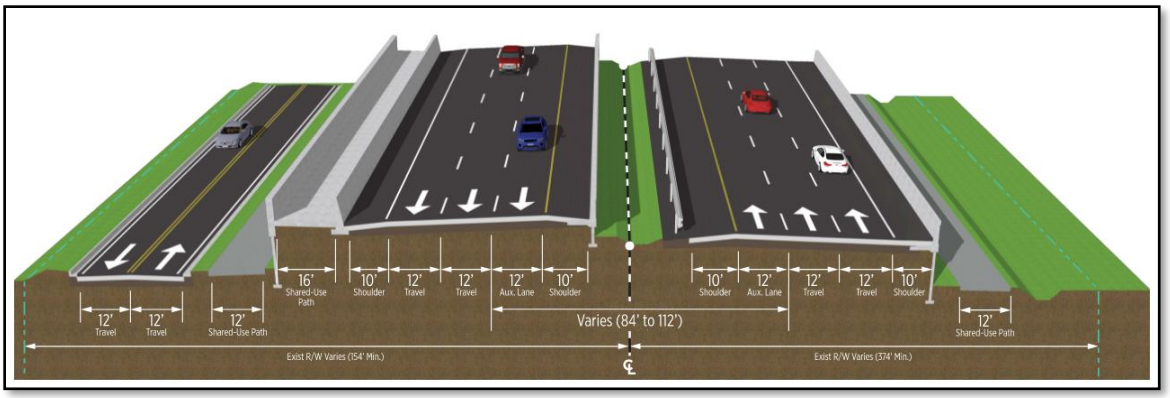


Figure 1.6: Hillsborough Segment – East End of Gandy bridges to West of Selmon Expressway Viaduct

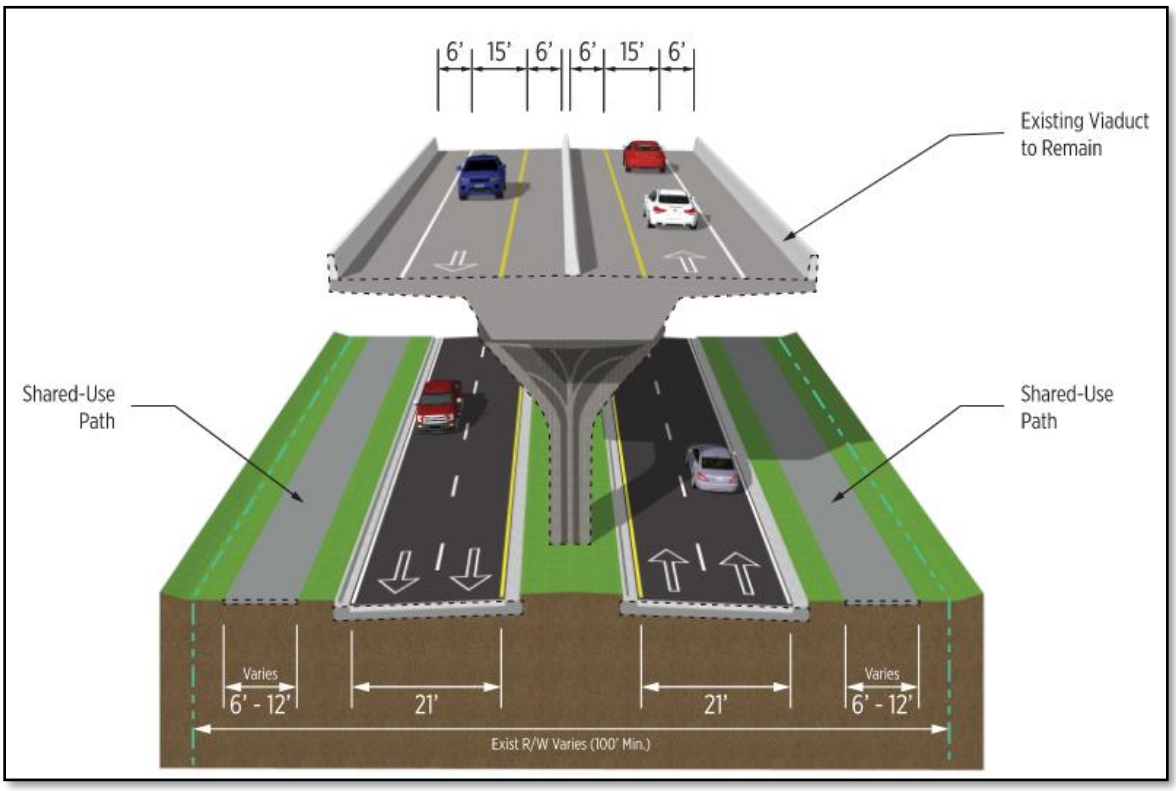


Figure 1.7: Hillsborough Segment – West of Selmon Expressway Viaduct to West Shore Boulevard

1.5 Commitments

1. FDOT will conduct public engagement during the design phase for the viaduct bridge pier aesthetics between Brighton Bay Blvd NE and San Martin Blvd.

2. FDOT will conduct submerged aquatic vegetation surveys during the seagrass growing season (June - September) in order to finalize impacts to these resources during the permitting process.

3. The NMFS Protected Species Construction Conditions, NOAA Fisheries Southeast Regional Office will be utilized during construction.

4. The most recent version of the USFWS Standard Protection Measures for the Eastern Indigo Snake will be utilized during construction.

5. A pre-construction survey by a qualified Permitted Monitor will occur for beach-nesting birds utilizing the current FWC *Imperiled Beach-Nesting Birds Species Conservation and Permitting Guidelines* and coordination with FWC to implement the appropriate conservation measures as needed prior to construction.

6. The USFWS and FWC Standard Manatee Construction Conditions for In-Water Work will be utilized during construction.

7. FDOT will provide mitigation for impacts to wood stork Suitable Foraging Habitat within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.

8. FDOT commits to reinitiating consultation during design and permitting with NMFS for the following species: sea turtles, smalltooth sawfish, giant manta ray, and gulf sturgeon; and providing the information necessary to determine the type, degree, and extent of impacts to listed species potentially adversely impacted by the proposed project. FDOT will develop mitigation measures in consultation with NMFS to offset unavoidable impacts. Completion of consultation and documentation of the project's compliance with the avoidance, minimization and mitigation will be provided by FDOT in a subsequent project re-evaluation prior to each segment advancing to construction.

9. In-water work will only be conducted from official sunrise until official sunset times. If nighttime in-water work is necessitated, FDOT will reinitiate consultation with the jurisdictional resource agencies to identify appropriate conservation measures and receive the necessary authorizations prior to commencement of nighttime in-water work.

10. Barge or other vessel anchorage will not be allowed in seagrass bed areas unless those areas are permitted for seagrass impacts.

11. The NMFS Vessel Strike Avoidance Measures, NOAA Fisheries Southeast Regional Office will be utilized during construction.

12. A ramp-up procedure will be utilized at the beginning of each pile-driving event, and a ramp-up procedure is also required for impact hammer proofing of any pipe piles installed with a vibratory hammer during construction within Old Tampa Bay.

13. FDOT commits to reinitiating consultation during design and permitting with NMFS for EFH; and providing the information necessary to determine the type, degree, and extent of impacts to EFH potentially adversely impacted by the proposed project. FDOT will develop mitigation measures in consultation with NMFS to offset unavoidable impacts. Completion of consultation and documentation of the project's compliance with the avoidance, minimization and mitigation requirements for the impacted resources will be provided by FDOT in a subsequent project re-evaluation prior to each segment advancing to construction.

14. The FDOT is committed to the construction of feasible and reasonable noise abatement measures at the noise impacted locations identified in Table 3-7 of the Noise Study Report contingent upon the following conditions: Detailed noise analysis during the final design process supports the need for, and the feasibility and reasonableness of providing the barriers as abatement; The detailed analysis confirms that the cost of a noise barrier would not exceed the cost effective criteria; All safety and engineering conflicts or issues related to construction of a noise barrier are resolved; and the residents/property owners benefitted by the noise barrier desire that a noise barrier be constructed.

2.0 EXISTING CONDITIONS

2.1 Roadway

Gandy Boulevard is an existing four-lane divided facility throughout the study limits and is classified as an urban principal arterial-other roadway. Gandy Boulevard is on the Strategic Intermodal System (SIS), Florida's high priority network of transportation facilities important to the state's economy and mobility.

The adjacent segment of Gandy Boulevard west of the begin project limit is an existing controlled access facility providing uninterrupted traffic flow with at grade frontage roads along the outside. This system connects to Interstate 275 (I-275) at an interchange approximately 1.75 miles west of 4th Street North.

The adjacent segment of Gandy Boulevard east of the Gandy bridges includes the Tampa Hillsborough Expressway Authority's Selmon Expressway (SR 618) extension with an elevated viaduct in the median as shown in **Figure 2.3.** The at grade frontage roads allow access to local businesses and residences while the viaduct provides uninterrupted flow to downtown Tampa.

The study was divided into three segments for the purpose of evaluating future traffic capacity needs and differences in existing roadway typical sections as shown in **Figure 1.1**.

Segment 1 – Pinellas Segment

Segment 1 (Pinellas Segment) begins at the western project limit at 4th Street North and extends 3.5 miles to the west end of the Gandy bridges over Old Tampa Bay in Pinellas County. The existing facility consists of a four-lane divided roadway with a varying median width (40 feet minimum), four 12-foot travel lanes, paved outside shoulders (four-foot minimum) designated for bicycle use on the south side, intermittent sidewalk segments, a 12-foot shared-use path on the north side, and open ditches along the outside. The existing R/W width varies with a minimum width of 172 feet as shown in **Figure 2.1**. There are numerous side street and driveway connections to the residences and businesses between 4th Street North and San Fernando Drive. The surrounding land changes from residential and business use to an undeveloped area along the causeway section for the remaining limits of Segment 1.

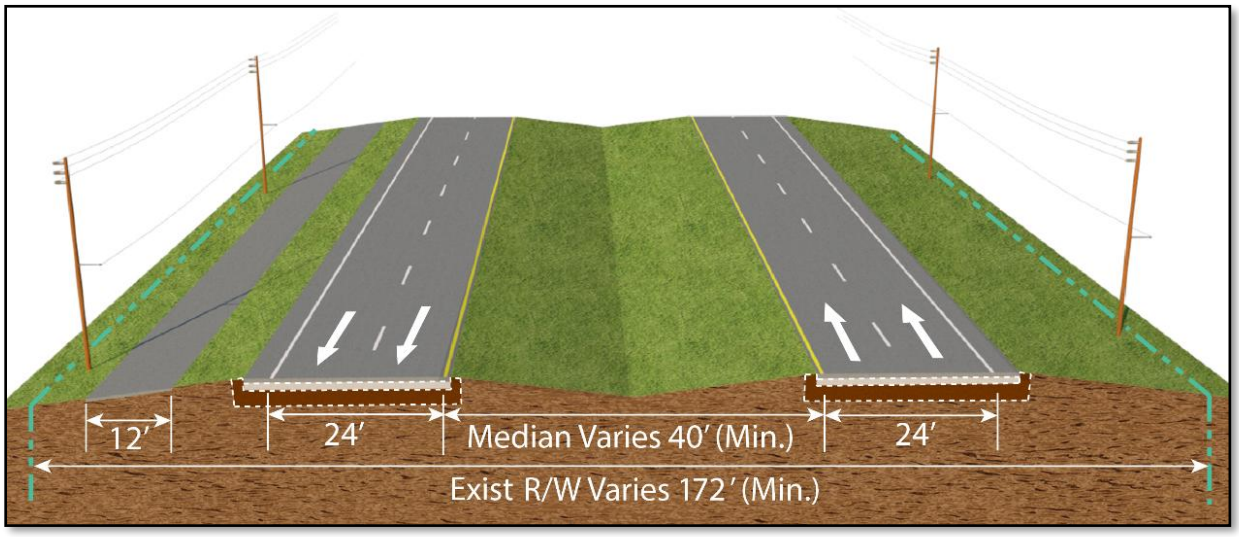


Figure 2.1: Existing Roadway Typical Section – Segment 1 – 4th St. N. to west end of Gandy bridges

Segment 2 – Bay Segment

Segment 2 (Bay Segment) includes the Gandy bridges over Old Tampa Bay. The existing eastbound bridge (#100300), constructed in 1975, and existing westbound bridge (#100585), constructed in 1996, extend approximately 2.5 miles. Both the existing eastbound and westbound bridges consist of two 12-foot travel lanes, a six-foot inside shoulder, and a ten-foot outside shoulder as shown in **Figure 2.2**. The bridges exist within a 400-foot-wide R/W corridor that spans Old Tampa Bay. The westbound bridge was designed to accommodate an additional travel lane by widening on both sides of the bridge. Currently, neither the eastbound or westbound bridge provides pedestrian or bicycle accommodations.

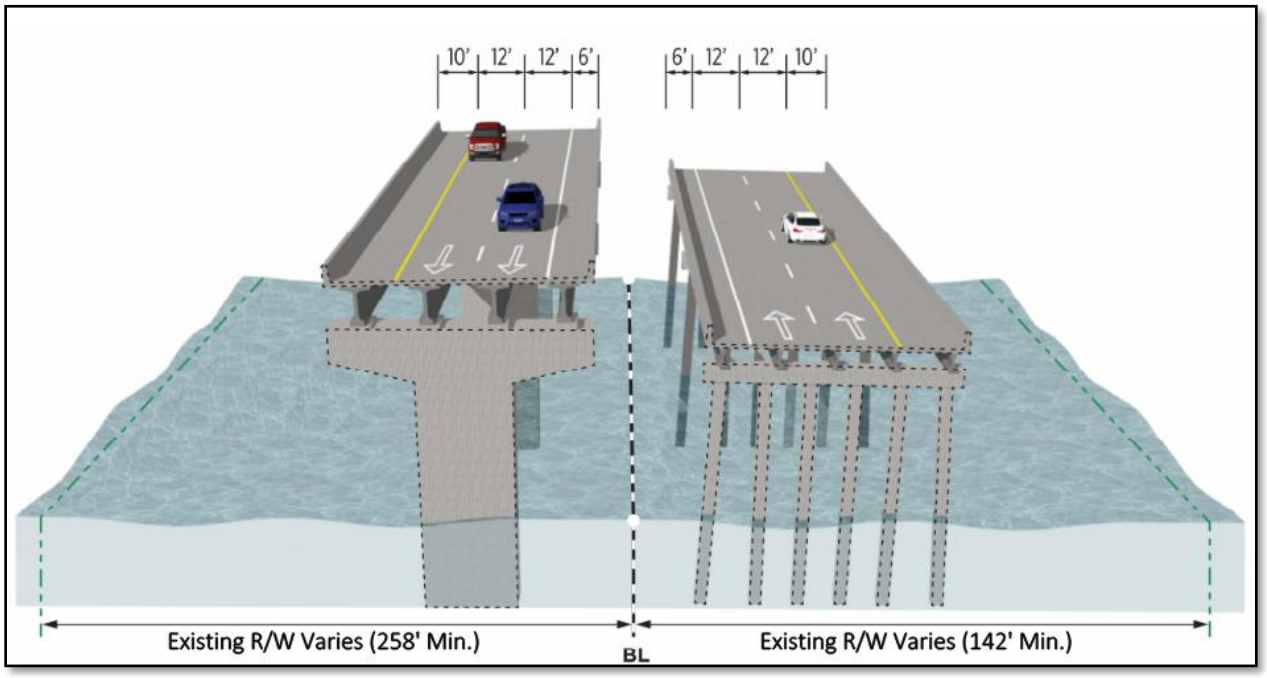


Figure 2.2: Existing Bridges Typical Section – Segment 2 – Gandy bridges

Segment 3 – Hillsborough Segment

Segment 3 (Hillsborough Segment) begins at the east end of the Gandy bridges over Old Tampa Bay and extends for approximately one mile to West Shore Boulevard in Hillsborough County. The existing facility consists of a four-lane divided roadway with a varying median width. At the east end of the Gandy bridges the roadway is transitioning with the two inside travel lanes servicing the Selmon Expressway (SR 618) near the Gandy Boat Ramp entrance. This transitional section consists of 11-foot travel lanes, varying paved inside shoulder widths, ten-foot paved outside shoulders, open ditches on the outside, and a 12-foot shared-use path on the south side. The inside travel lanes serve as the entrance and exit ramps to the Selmon Expressway elevated viaduct in the median. Auxiliary lanes are developed on the outside to continue the Gandy Blvd four-lane typical section at grade heading east towards West Shore Boulevard. The typical section transitions from open ditches to an urban curb and gutter section with ten-foot inside travel lanes, 11-foot outside travel lanes, and a 6 to 12-foot sidewalk/shared-use path on both sides. The median width varies with intermittent bridge piers to support the Selmon Expressway elevated viaduct. The existing R/W width varies with a minimum width of 100 feet as shown in **Figure 2.3**.

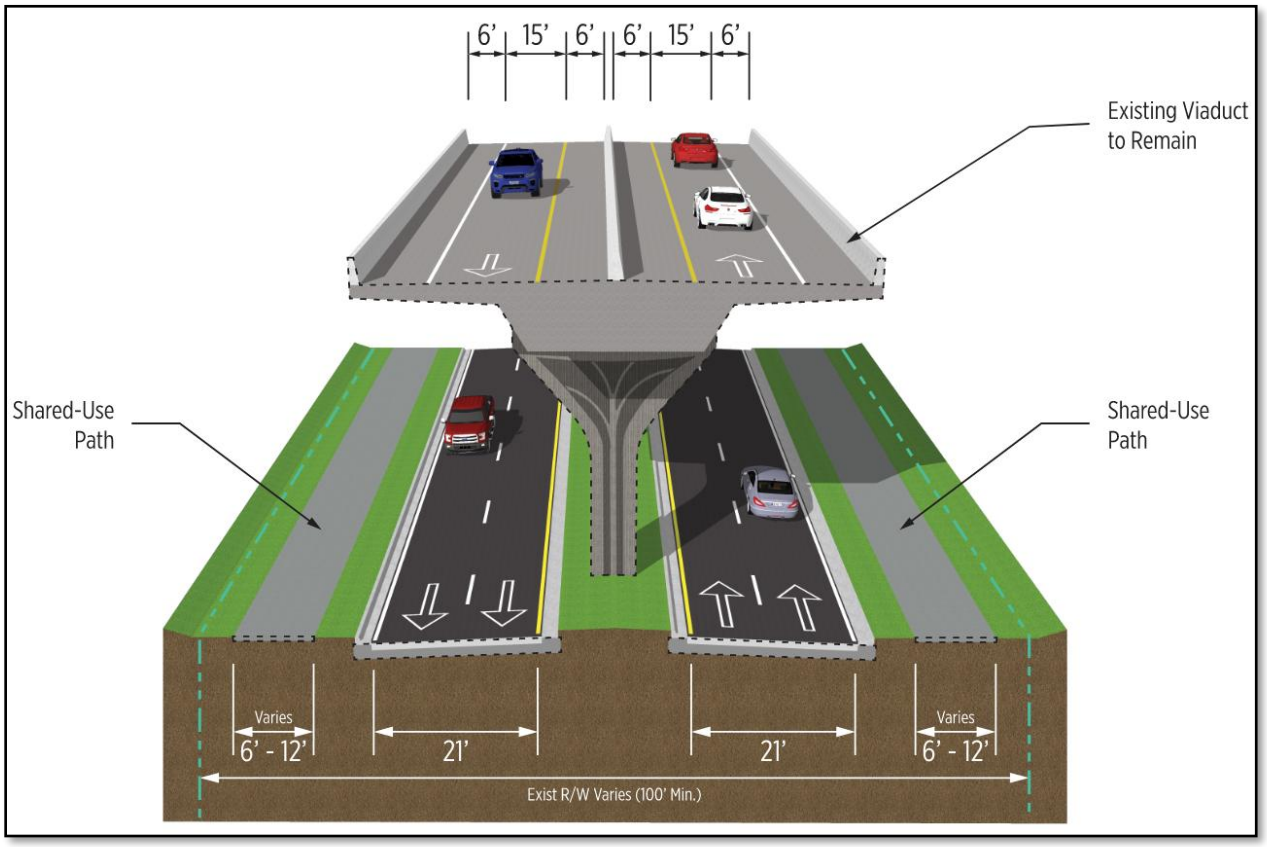


Figure 2.3: Existing Roadway Typical Section (Curb and Gutter) – Segment 3 – East end of Gandy bridges to West Shore Boulevard

2.2 Right-of-Way

The total existing R/W width varies from approximately 100 to 701 feet. The right side offset to the south R/W line from the roadway centerline varies from 41 to 366 feet while the left side offset to the north R/W line varies from 56 to 335 feet. This results in an offset typical section with the roadway centerline located within the southern portion of the existing R/W corridor. **Table 2.1** summarizes the existing R/W for this project. The *Preferred Alternative Concept Plans* shown in **Appendix A** depict the existing R/W along the entire project corridor.

Table 2.1: Existing Right-of-Way Widths

Segment	Baseline of Construction Station Range	Left Offset (ft)	Right Offset (ft)	Total Width (ft)
Segment 1	201+66.90 - 210+00.00	Varies (168 - 177)	Varies (156 - 198)	Varies (343 - 366)
	210+00.00 - 220+00.00	Varies (89 - 176)	Varies (126 - 168)	Varies (215 – 344)
	220+00.00 - 231+18.59	Varies (89 - 97)	Varies (86 - 126)	Varies (209 – 215)
	231+18.59 - 250+00.00	Varies (84 - 149)	Varies (86 - 96)	Varies (181 – 213)
	250+00.00 - 268+21.06	Varies (84 - 137)	Varies (62 - 96)	Varies (146 – 184)
	268+21.06 - 293+02.00	Varies (137 - 280)	Varies (62 - 118)	Varies (181 – 398)
	293+00.00 - 359+11.44	Varies (280 - 335)	Varies (118 - 360)	Varies (398 – 695)
	359+11.44 - 373+09.43	335	Varies (360 - 366)	Varies (695 – 701)
	373+09.43 - 390+20.76	209	200	409
Segment 2	390+20.76 - 526+61.63	Varies (164 - 394)	Varies (236 - 386)	Varies (400 – 780)
Segment 3	526+61.63 - 528+48.56	Varies (84 - 86)	Varies (13 - 85)	Varies (99 – 169)
	528+48.56 - 532+94.20	Varies (78 - 84)	Varies (80 - 85)	Varies (158 – 169)
	532+94.20 - 551+81.40	Varies (29 - 132)	Varies (112 - 78)	Varies (136 – 212)
	551+81.40 - 557+11.05	Varies (29 - 41)	Varies (112 - 151)	Varies (141 – 180)
	557+11.05 - 562+18.16	Varies (41 - 48)	Varies (101 - 124)	Varies (147 – 165)
	562+18.16 - 571+40.19	Varies (44 - 56)	Varies (44 - 101)	Varies (100 – 147)
	571+40.19 - 577+15.92	56	44	100

2.3 Roadway Classification & Context Classification

Gandy Boulevard has a functional classification of Urban Principal – Other Arterial. As defined in Section 200.4 of the *FDOT Design Manual* and in this project's *Context Classification Memo*, the existing context classification along this corridor is C3R – Suburban Residential and C3C – Suburban Commercial for Segment 1 and 3 in Pinellas and Hillsborough Counties, respectively. The *Context Classification Memo* is provided in **Appendix C**.

2.4 Adjacent Land Use

The existing Florida Land Use, Cover and Forms Classification System (FLUCFCS) land use map is provided in **Figure 2.4** (Segment 1) and **Figure 2.5** (Segment 2 and Segment 3). Most of the land use in the area surrounding the current project limits are inlets or arms of the bay that extend into the land and classified by the FLUCFCS as Bays and Estuaries (FLUCFCS 540) and transportation (FLUCFCS 810). The land use adjacent to the existing R/W corridor is developed with residential and commercial land uses consisting of various apartment complexes, condominiums and a mobile home park in Pinellas County. In Hillsborough County there is commercial and residential consisting of the US Marine Corps Reserve Center, condominiums and mobile homes.

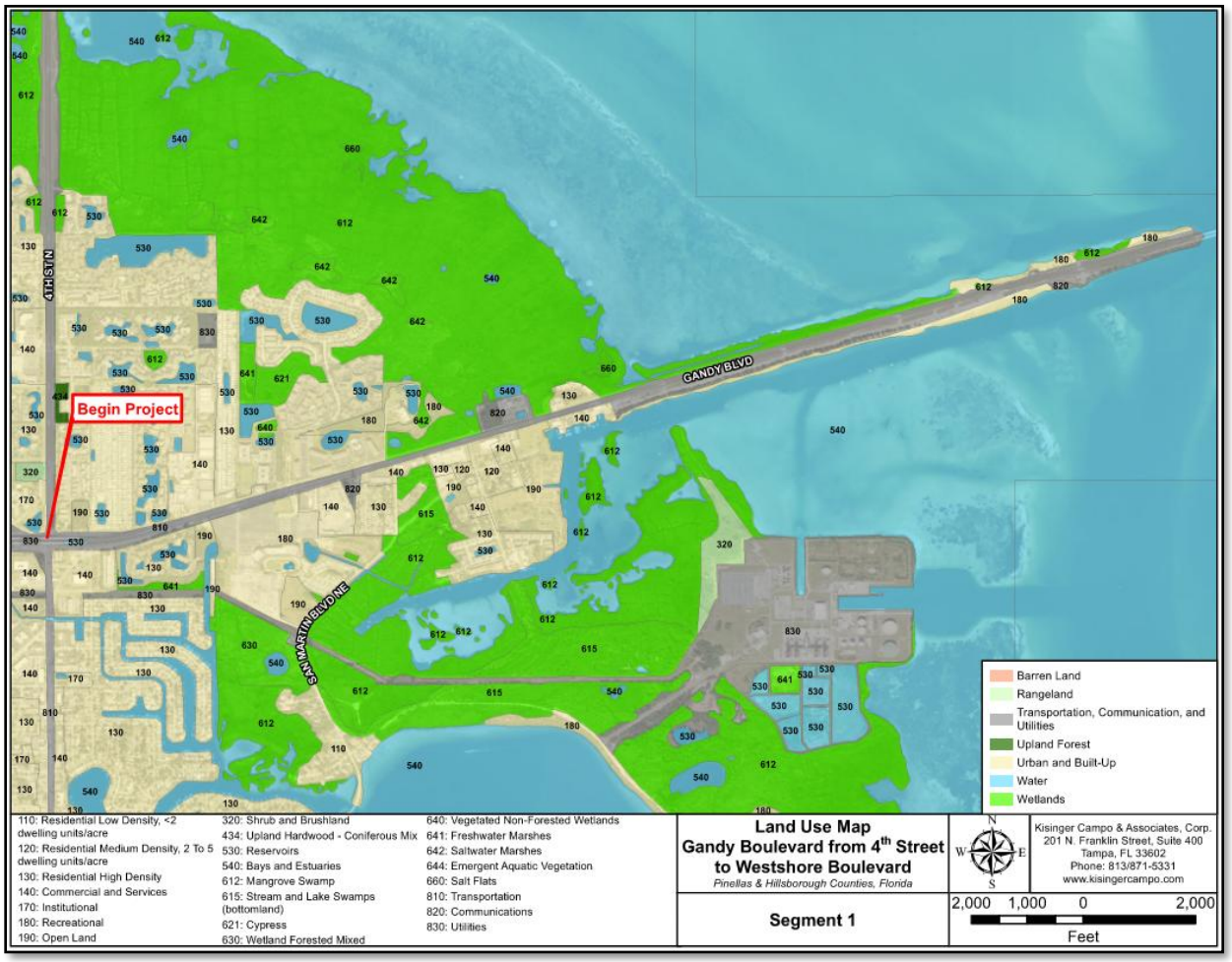


Figure 2.4: Existing Land Use Map – Segment 1

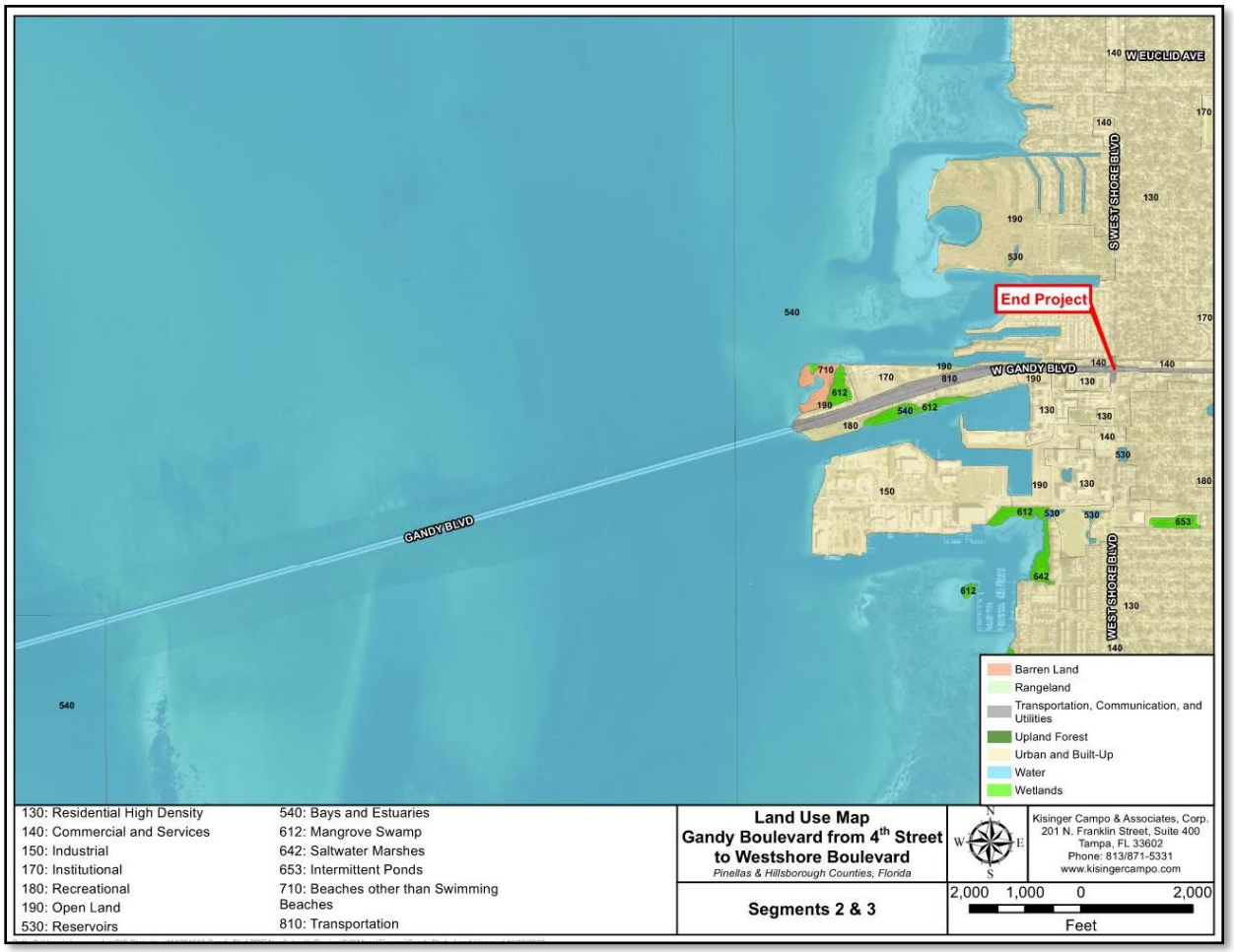


Figure 2.5: Existing Land Use Map – Segment 2 and Segment 3

2.5 Access Management Classification

The access management classification for this project is Class 3. For this classification, the State Highway Access Management Classification System and Standards (Rule 14-97) allows for full median openings and signalized intersections spaced at 2,640 feet, and directional median openings spaced at 1,320 feet. There are three existing signalized intersections within the project limits located at 4th Street North, Brighton Bay Boulevard NE, and West Shore Boulevard.

2.6 Design and Posted Speeds

The existing posted speed along Gandy Boulevard is 50 miles-per-hour (MPH). The existing posted speed along both the north and south frontage roads at the beginning of the project through the 4th Street North intersection is 40 MPH. The existing design speed for Gandy Boulevard from 4th Street North to the east end of the Gandy bridges is 55 MPH. The design speed reduces to 45 MPH heading east towards West Shore Boulevard where the Selmon Expressway elevated viaduct begins in the median.

2.7 Vertical and Horizontal Alignment

The horizontal geometry details for Segment 1 along Gandy Boulevard can be found in **Table 2.2**. Similarly, the details for Segment 2 are in **Table 2.3**, and for Segment 3 in **Table 2.4**.

The existing horizontal alignment along Gandy Boulevard for Segment 1 consists of two tangent sections measuring 1,364 feet and 17,834 feet, respectively. The two tangent sections are joined by an intersection point with a deflection angle of 17°17'39" (left). This point of intersection is located where Gandy Boulevard returns to an at-grade facility after grade separation over 4th Street North.

Segment 2 consist of one tangent section measuring 13,868 feet spanning over Old Tampa Bay.

The existing horizontal alignment along Gandy Boulevard for Segment 3 contains one horizontal curve as detailed in **Table 2.4**.

Table 2.2: Existing Horizontal Geometry for Segment 1 (Pinellas County)

Begin Station	Bearing Ahead	PI Equivalent Station (BK)	PI Equivalent Station (AH)	Bearing Ahead
190+02.33	S 89°54'48" E	203+66.40	291+65.68	N 72°47'33" E

Table 2.3: Existing Horizontal Geometry for Segment 2 (Pinellas/Hillsborough County)

Begin Station	Bearing Ahead	PI Equivalent Station (BK)	PI Equivalent Station (AH)	End Station
471+13.11	N 72° 48' 27" E	514+33.89	21+30.78	116+78.00

Table 2.4: Existing Horizontal Geometry for Segment 3 (Hillsborough County)

Baseline PI Station	Bearing		Degree of Curvature	Radius (ft)	Length (ft)
	Back	Ahead			
149+51.26	N 72° 47' 36" E	N 89° 12' 51" E	2° 00' 00.00"	2,865.00	899.62

The existing vertical geometry along Gandy Boulevard for Segment 1 is relatively flat. The elevation varies between seven and eight feet (NAVD 88) for most of this segment. There are four existing vertical curves in Segment 1. There is significant change in elevation at the border of Segments 1 and 2 as the profile climbs to meet the existing bridges in Segment 2.

Table 2.5: Existing Vertical Geometry for Segment 1 (Pinellas County)

VPI Station	Grade (%)		Vertical Curve		
	Back	Ahead	Length (ft)	K	Type
22+50.00	-0.302	0.429	300	410.4	Sag
26+00.00	0.429	0.000	400	932.4	Crest
33+77.25	0.000	2.000	400	200.0	Sag
41+18.75	2.000	0.000	1080	540.0	Crest

The existing vertical geometry along Gandy Boulevard for Segment 2 is relatively flat across Old Tampa Bay. The existing eastbound bridge (No. 100300) includes a minimum profile grade elevation of 10.2 at the west end and rises to elevation 14 (NAVD 88) for the majority of the bridge limits while the existing westbound bridge (No. 100585) includes a minimum profile grade elevation of 24 (NAVD 88). Both bridges feature large crest curves over the 65-foot navigable channel.

Table 2.6: Existing Vertical Geometry for Segment 2 (Pinellas/Hillsborough County)

VPI Station	Grade (%)		Vertical Curve		
	Back	Ahead	Length (ft)	K	Type
129+65.00	0.000	3.000	800	266.7	Sag
142+00.00	3.000	-3.000	1600	266.7	Crest
162+35.00	-3.000	0.000	800	266.7	Sag

The Segment 3 profile varies between elevation 14 and 24 (NAVD 88) to connect to the existing bridges in Segment 2. There are existing vertical curves that allow the profile to return to grade. Once the existing vertical geometry returns to grade, it settles between elevation six and eight (NAVD 88) for the remainder of the project to tie into West Shore Blvd.

Table 2.7: Existing Vertical Geometry for Segment 3 (Hillsborough County)

VPI Station	Grade (%)		Vertical Curve		
	Back	Ahead	Length (ft)	K	Type
181+41.25	0.000	-2.000	1080	540.0	Crest
194+47.25	-2.000	0.000	400	200.0	Sag

2.8 Pedestrian Accommodations

There is a fully connected five-foot or six-foot existing sidewalk on the south side of the roadway from the beginning of the project to approximately 1,750 feet east of the San Fernando Drive NE intersection. Existing crosswalks are present at the 4th Street North on-ramp and at the Derby Lane/Brighton Bay Boulevard NE intersection.

A five-foot sidewalk facility is present along the north side of the roadway from Oak Street NE to Brighton Bay Boulevard NE. In addition, an existing 12-foot shared-use path is offered to pedestrians and bicyclists from Brighton Bay Boulevard NE to 9,500 feet east of San Fernando Drive NE with crosswalks placed at

every property access on the north side of the roadway. On both sides of Gandy Boulevard from west of the Selmon Expressway viaduct to west of Bridge Street are 12-foot shared-use paths and from Bridge Street to West Shore Boulevard are six-foot sidewalks.

2.9 Bicycle Facilities

Within the Pinellas Segment, the existing paved shoulder on the south side of Gandy Boulevard from the beginning of the project to the west end of the Gandy bridges is designated for bicycle use. A 12-foot shared-use path is present on the north side from Brighton Bay Boulevard NE to the west end of the Gandy bridges. There are currently no designated bicycle accommodations across the Gandy bridge over Old Tampa Bay. There are 12-foot shared-use paths on both sides of Gandy Boulevard for portions of the Hillsborough Segment. The shared-use paths terminate at Bridge Street prior to the West Shore Boulevard intersection.

2.10 Transit Facilities

Within the project limits, Pinellas Suncoast Transit Authority (PSTA) currently operates two transit routes along Gandy Boulevard. Route 9 between 4th Street North and San Martin Boulevard runs along Gandy Boulevard and includes one bus stop at Goodwill Industries within the project limits. Route 100X between 4th Street North and West Shore Boulevard runs along Gandy Boulevard and does not include any bus stops within the project limits.

2.11 Pavement Condition

According to the Pavement Condition Survey for Pinellas County and Hillsborough County both dated October 4th, 2022, Gandy Boulevard pavement has average cracking ratings ranging from 7.5 to 10.0 and average ride ratings ranging from 7.2 to 8.5. Ratings less than 6.4 indicates the pavement is deficient. **Table 2.8** lists the pavement ratings for the project limits, excluding the existing bridge limits.

Table 2.8: Pavement Conditions

	Segment			Cracking Rating	Ride Rating
Roadway ID	Begin Milepost	End Milepost	Direction		
Gandy Blvd west of 4th St N to Brighton Bay Blvd NE					
15 241 000	0.000	2.245	Westbound	10.0	8.4
			Eastbound	10.0	8.5
Gandy Blvd from Brighton Bay Blvd NE to Gandy bridge					
15 090 000	7.645	9.992	Westbound	9.0	8.3
			Eastbound	7.5	8.2
Gandy Blvd from Gandy bridge to east of West Shore Blvd					
10 130 000	2.960	4.922	Westbound	10.0	7.6
			Eastbound	10.0	7.2
*Roadway ID 15 241 000 MP 2.245 = Roadway ID 15 090 000 MP 7.645					

2.12 Traffic Volumes and Operational Conditions

The initial development of Annual Average Daily Traffic (AADT) from the project counts followed the procedures published in FDOT's 2019 Project Traffic Forecasting Handbook. The daily counts were averaged and appropriate traffic factors, namely the Seasonal Factor (SF) and Axle Correction Factor (ACF), were applied to develop 2020 AADTs.

Traffic data was taken between November 2020 and January 2021 and the elevated section of the Selmon Expressway was under construction at the time of traffic data collection. The Existing Year (2020) AADTs are summarized in **Table 2.9**.

The K and D factors are the percentage of daily traffic volumes occurring during the peak hour and the proportion of traffic traveling in the peak direction, respectively. Design Hour Trucks (DHT) is the percentage of daily truck traffic during the design hour. The traffic factors used are summarized in **Table 2.10**.

Table 2.9: Existing Year (2020) AADTs

Location	2020 AADT
Gandy Blvd Elevated Section over 4th St N	24,500
4th St N south of Gandy Blvd	27,500
4th St N north of Gandy Blvd	22,500
North Frontage Rd west of 4th St N	12,750
South Frontage Rd west of 4th St N	12,750
North Frontage Rd east of 4th St N	11,500
South Frontage Rd east of 4th St N	11,500
Gandy Blvd west of Brighton Bay Blvd NE	47,000
Gandy Blvd west of Brighton Bay Blvd NE	41,500
Derby Ln Entrance	2,900
Brighton Bay Blvd NE	6,000
Gandy Blvd east of San Martin Blvd/Mangrove Cay Ln	36,500
San Martin Blvd	4,400
Mangrove Cay Ln	250
Gandy Blvd bridges	33,500
Gandy Blvd west of West Shore Blvd	38,500
Gandy Blvd east of West Shore Blvd	42,500
West Shore Blvd south of Gandy Blvd	17,000
West Shore Blvd north of Gandy Blvd	16,500

Table 2.10: Traffic Factors

Factors	Value
K-Factor	9.0%
D-Factor (Gandy Blvd and most side streets)	53.4%
• Brighton Bay Blvd NE north of Gandy Blvd	69.1%
• Derby Lane Entrance	77.7%
• Frontage Rd (as One-Way Pair)	62.0%
DHT	2.5%

Gandy Boulevard operates as a multilane highway facility within Segment 1 (Pinellas County) and Segment 3 (Hillsborough County). East of the 4th Street North overpass, Gandy Boulevard operates as a multilane highway due to the long distance between traffic signals and the number of driveways and stop-controlled cross-streets providing access to surrounding land uses. Brighton Bay Boulevard NE in Segment 1 is the only existing signalized intersection which interrupts mainline traffic throughout the project limits. The closest traffic signal to Brighton Bay Boulevard NE is located at the beginning of the project at 4th Street North where Gandy Boulevard is grade separated, uninterrupted flow. Other signalized intersections which interrupt mainline flow are located at the I-275 northbound off-ramp approximately 2.2 miles to the west of Brighton Bay Boulevard NE and the West Shore Boulevard intersection approximately 6.4 miles to the east, respectively. Therefore, *HCM 6th Edition, Chapter 12 Multilane Highway Segment* methodology was applied east of the 4th Street North overpass. **Table 2.11** shows the operation results for the multilane segments.

Table 2.11: Existing Year (2020) Multilane Segment Analysis

Gandy Blvd Segment	Eastbound Direction				Westbound Direction			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
From 4th St N ramps to Brighton Bay Blvd NE	21.6	C	26.9	D	23.5	C	19.0	C
From Brighton Bay Blvd NE to west end of Gandy bridge	17.3	B	20.0	C	18.3	C	15.6	B
From east end of Gandy bridge to West Shore Blvd	18.6	C	21.3	C	21.7	C	18.6	C

2.13 Intersection Layout and Traffic Control

There are 12 unsignalized intersections and three signalized intersections located at 4th St. N., Brighton Bay Blvd NE, and West Shore Blvd along Gandy Boulevard within the study area. The three signalized intersections and one unsignalized intersection at San Martin Blvd were evaluated using existing signal phasing/timing information obtained from Pinellas County and the City of Tampa. The unsignalized intersection at San Martin Blvd was included for operational analysis given the existing traffic volumes and demand. The intersection operations were analyzed using Synchro v11.1 and the Highway Capacity Manual (HCM). A target LOS of D is established for the study area. The existing condition analyses show the multilane highway facilities and the Gandy bridge operating at acceptable LOS but the intersections along Gandy Boulevard operate at unacceptable LOS with most movements operating at LOS E or F.

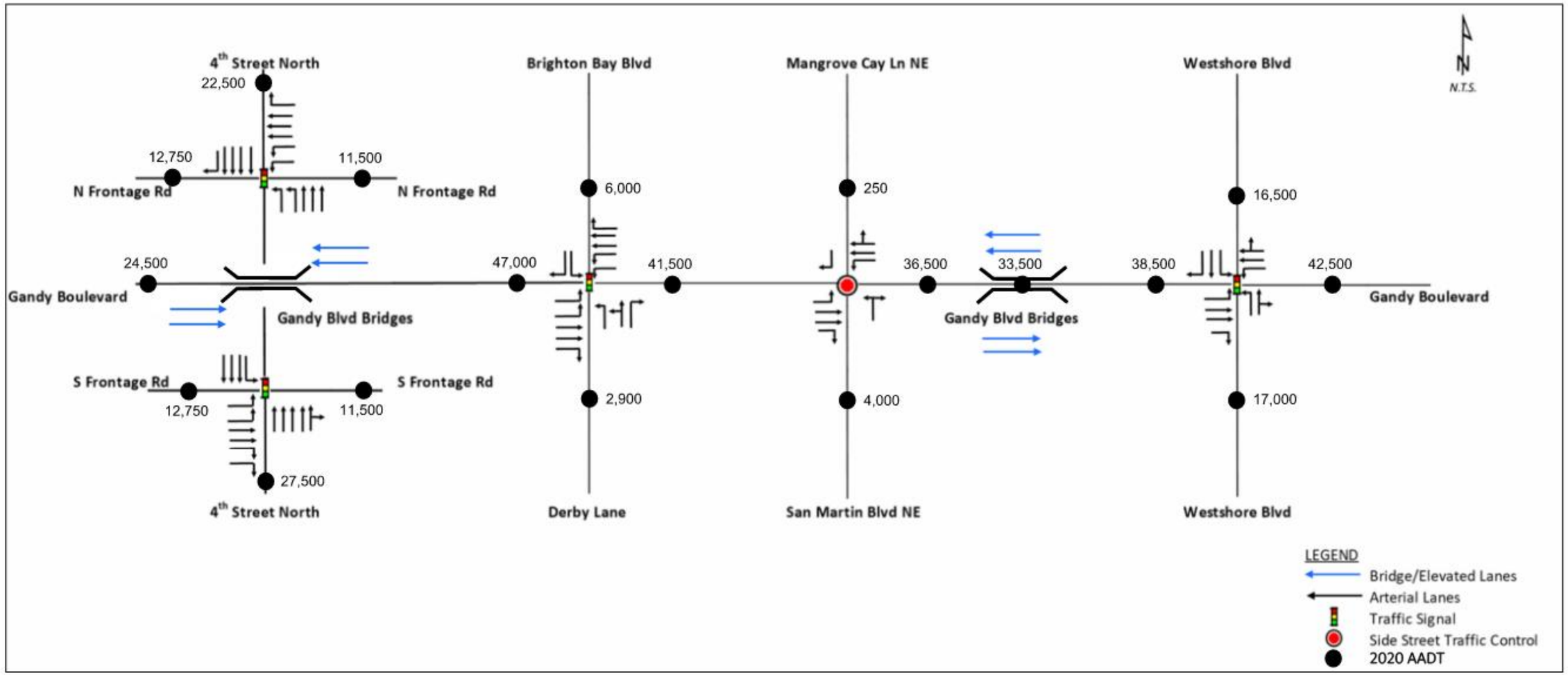


Figure 2.6: Existing Year (2020) Lane Geometry & AADT

The intersection at Brighton Bay Blvd NE is a key contributor to the degrading operations and congestion along Gandy Blvd. The westbound through movement at this intersection shows a queue of over 1,000 feet in the AM peak hour and the eastbound through movement shows a queue of approximately 900 feet during both peak hours. The northbound and southbound approaches of the unsignalized intersection of Gandy Boulevard and San Martin Boulevard experience excessive delays waiting for gaps on Gandy Boulevard to complete their movements. The complete traffic analysis for this project can be found within the *Project Traffic Analysis Report,* under separate cover.

2.14 Railroad Crossings

There are no existing railroad crossings within the project corridor.

2.15 Crash Data and Safety Analysis

A five-year historical crash analysis was performed in accordance with Part 2, Chapter 2 of the FDOT PD&E Manual for years 2015-2019. Crash data for Gandy Boulevard was obtained from the FDOT D7 Crash Data Management System, which pulls data from the FDOT Crash Analysis Reporting (CAR) Online.

The crash statistics were summarized for the number and type of crashes, number of fatalities and injuries, contributing causes, lighting conditions, pavement conditions, and crash location. **Table 2.12** provides a summary of the total crashes per year in the study area and the location of crashes. **Table 2.13** provides a summary of the crash severity.

Table 2.12: Number of Crashes

Year	Location			Total
	Segment 1	Segment 2	Segment 3	
2015	102	2	45	149
2016	88	4	40	132
2017	103	10	37	150
2018	105	10	62	177
2019	76	3	51	130
Total	**474**	**29**	**235**	**738**

Table 2.13: Crash Severity Summary

Location	Total Number of Crashes	Number of Fatal Crashes	Number of Fatalities	Number of Injury Crashes	Number of Injuries	Number of Property Damage Only (PDO) Crashes
Segment 1	474	4	4	182	275	288
Segment 2	29	2	2	12	15	15
Segment 3	235	2	2	94	148	139
Total	**738**	**8**	**8**	**288**	**438**	**442**

As shown in **Tables 2.12** and **2.13**, 738 crashes occurred in the Gandy Boulevard study area, of which eight were fatal crashes resulting in eight fatalities and 288 were injury crashes resulting in 438 injuries. The

remaining 442 crashes were property damage only (PDO). On average, the crash frequency for the Gandy Boulevard study area is 148 crashes per year.

Table 2.14 summarizes the types of crashes. The most predominant crash type for the study area is rear end with 334 crashes (45.3%) and it is the predominant crash type in all three segments. Other common crash types in the study area include angle crashes (17.9%) and hit fixed object (12.2%).

Table 2.15 indicates the common cause of crashes is operating a motor vehicle in a careless or negligent manner with 262 crashes (35.5%) followed by failure to yield the R/W with 151 crashes (20.5%).

Table 2.14: Crash Type Summary

Type of Crash	Location			Total	Percentage
	Segment 1	Segment 2	Segment 3		
Hit Fixed Object	56	9	25	90	12.2%
Rear End	230	12	92	334	45.3%
Sideswipe	28	4	25	57	7.7%
Single Vehicle	18	1	6	25	3.4%
Unknown	8	1	4	13	1.8%
Hit Non-Fixed Object	2	1	0	3	0.4%
Head On	6	0	4	10	1.4%
Angle	93	0	39	132	17.9%
Left Turn	16	0	33	49	6.6%
Run Off Road	4	1	2	7	0.9%
U-Turn	6	0	1	7	0.9%
Bike	4	0	0	4	0.5%
Pedestrian	3	0	2	5	0.7%
Right Turn	0	0	2	2	0.3%
Total	**474**	**29**	**235**	**738**	**100%**

Table 2.15: Cause of Crashes Summary

Cause of Crash	Location			Total	Percentage
	Segment 1	Segment 2	Segment 3		
Failed to Keep in Proper Lane	15	2	13	30	4.1%
Followed too Closely	3	0	52	55	7.5%
Failed to Yield Right-of-Way	104	0	47	151	20.5%
No Contributing Action	26	2	23	51	6.9%
Other Contributing Actions	35	2	8	45	6.1%
Improper Turn	11	0	8	19	2.6%
Operated MV in Careless or Negligent Manner	213	14	35	262	35.5%
Drove Too Fast for Conditions	5	2	7	14	1.9%
Ran off Roadway	4	0	3	7	0.9%
Ran Red Light	2	0	3	5	0.7%
Over-Correcting/Over-Steering	1	0	4	5	0.7%
Improper Backing	5	0	1	6	0.8%
N/A	30	4	16	50	6.8%
Improper Passing	4	1	7	12	1.6%
Swerved or Avoided : Due to Wind, Slippery Surface, MV Object, Non-Motorist in Roadway, etc	5	0	0	5	0.7%
Disregarded Other Traffic Sign	1	0	0	1	0.1%
Ran Stop Sign	3	0	0	3	0.4%
Operated MV in Erratic, Reckless or Aggressive Manner	3	1	5	9	1.2%
Wrong Side of Wrong Way	4	0	0	4	0.5%
Exceeded Posted Speed	0	1	3	4	0.5%
Total	**474**	**29**	**235**	**738**	**100%**

Table 2.16 shows 469 (63.6%) of the crashes occurred at daylight, **Table 2.17** shows 564 (76.4%) of the crashes occurred under clear conditions, and **Table 2.18** shows 646 (87.5%) of the crashes occurred on dry pavement.

Table 2.16: Lighting Condition

Lighting Condition	Location			Total	Percentage
	Segment 1	Segment 2	Segment 3		
Daylight	300	15	154	469	63.6%
Dark-Lighted	126	12	72	210	28.5%
Dusk	15	2	5	22	3.0%
Dark-Not Lighted	15	0	3	18	2.4%
Dark-Unknown Lighting	4	0	0	4	0.5%
Dawn	12	0	1	13	1.8%
Unknown	2	0	0	2	0.3%
Total	**474**	**29**	**235**	**738**	**100%**

Table 2.17: Weather Condition

Weather Condition	Location			Total	Percentage
	Segment 1	Segment 2	Segment 3		
Clear	341	20	203	564	76.4%
Cloudy	99	3	12	114	15.4%
Rain	32	6	20	58	7.9%
Fog, Smog, Smoke	1	0	0	1	0.1%
Other, Explain in Narrative	1	0	0	1	0.1%
Total	**474**	**29**	**235**	**738**	**100%**

Table 2.18: Pavement Condition

Weather Condition	Location			Total	Percentage
	Segment 1	Segment 2	Segment 3		
Dry	416	22	208	646	87.5%
Wet	56	7	27	90	12.2%
Unknown	1	0	0	1	0.1%
Mud, Dirt Gravel	1	0	0	1	0.1%
Total	**474**	**29**	**235**	**738**	**100%**

The intersection crash rates for the study area are listed in **Table 2.19**. The table shows that all three intersections have higher intersection crash rates than the statewide average.

Table 2.19: Intersection Crash Rate

Intersection	Total Crashes (2015-2019)	Crash Rate per Million Entering Vehicles	Statewide Average
Gandy Blvd at Brighton Bay Blvd NE	121	**1.361**	0.526
Gandy Blvd at San Martin Blvd/ Mangrove Cay	45	**0.597**	0.526
Gandy Blvd at West Shore Blvd	138	**1.321**	0.526

Table 2.20 summarizes the economic loss for the study area using the FDOT KABCO injury classification scale crash costs. The KABCO unit crash cost were taken from the 2023 FDOT Design Manual Table 122.6.2 and the costs are taken from the CAR system for analysis years 2015 to 2019. The crashes in the study area during the five-year period resulted in an estimated economic loss of approximately $158.1 million.

Table 2.20: 2015 – 2019 Crash Estimated Economic Loss

Crash Severity	Crash Cost	Number of Crashes	Economic Loss
Fatal (K)	$10,890,000	8	$87,120,000
Severe Injury (A)	$888,030	38	$33,745,140
Moderate Injury (B)	$180,180	103	$18,558,540
Minor Injury (C)	$103,950	147	$15,280,650
Property Damage Only (O)	$7,700	442	$3,403,400
Total		**738**	**$158,107,730**

2.16 Drainage

This project lies within the jurisdiction of the Southwest Florida Water Management District (SWFWMD) and discharges to Old Tampa Bay. It is also located within the area of the Tampa Bay Estuary Program (TBEP) and the Old Tampa Bay Water Quality Improvement Project, both of which are nutrient improvement projects and explained further in **Section 6.1.11**. The project has been divided into four existing drainage basins based on existing conditions including permitted stormwater management facilities, topography, and outfall locations.

Basin 1 is located at the western end of the project in Pinellas County (stations 201+00 to 214+26) and consists of the existing area that drains to a permitted FDOT stormwater pond located underneath the Gandy Boulevard bridge at the intersection with 4th Street North. This pond was permitted under SWFWMD Permit No. 11339.011 as Pond 1100-A1 and outfalls to the storm sewer system along 4th Street North which drains to Tinney Creek.

Basin 2 (stations 214+26 to 240+35) includes several existing permitted basins that were also permitted under SWFWMD Permit No. 11339.011 (Basins 1200, 12D, 12E, and "Outfall") along with additional area within the Gandy Boulevard R/W that also drains to Tinney Creek. The existing permitted Basin 1200 includes three treatment swales along the north side of Gandy Boulevard which will be impacted by the widening of Gandy Boulevard. The remainder of Basin 2, including the other permitted basins, is untreated in the existing condition.

Basin 3 extends through the bridge over Old Tampa Bay (stations 240+35 to 527+00). Within this basin, stormwater is generally collected in roadside ditches or sheet flows and discharges directly into Old Tampa Bay. Along the bridge, scuppers are present.

Basin 4 consists of the Hillsborough County portion of the project limits (stations 527+00 to 567+13). Within this basin, recent improvements to the Selmon Expressway Project conducted by the Tampa Hillsborough Expressway Authority (THEA) included routing most of the basin area to new ponds located outside the Gandy Boulevard PD&E project limits (Permit No. 11759.005). Additionally, there are three permitted retention swales within this basin (Permit No. 11339.000) which will be impacted by the widening of Gandy Boulevard.

There are five existing cross drains within the project limits which provide connectivity underneath Gandy Boulevard for ditches and wetland areas. The cross drains are summarized in **Table 2.21**.

Table 2.21: Summary of Existing Cross Drains

Structure No.	Station	Description
CD-1	214+49	5’ X 3’ CBC
CD-2	226+51	24” RCP
CD-3	247+41	24” RCP
CD-4	260+87	24” X 38” RCP
CD-5	566+33	24” RCP

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for Pinellas County (August 24th, 2021) and Hillsborough County (October 7th, 2021) indicate the entirety of the project lies within Zone AE and Zone VE of the 100-year floodplain with elevations ranging from 9 to 14 feet. These areas are associated with Old Tampa Bay and have a 1% probability of flooding every year with predicted flood water elevations that have been established. The flood zones within the project area are directly connected to Old Tampa Bay and therefore are tidally influenced.

The Operations Centers have indicated a flooding complaint and various maintenance issues within the ditches along the corridor. The maintenance office has addressed these issues. Additional information regarding existing drainage conditions will be documented in the *Pond Siting Report* and *Location Hydraulics Report* prepared for this project.

2.17 Soils and Geotechnical Data

The soil survey of Pinellas and Hillsborough Counties, Florida (dated 2020) published by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) have been reviewed within the project vicinity. **Table 2.22** and **Table 2.23** shows information regarding the soils and groundwater conditions along the project. The USDA and United States Geological Survey (USGS) Soil Survey and USGS Quadrangle Map for the project limits are shown in **Figure 2.7**.

Table 2.22: USDA NRCS Soil Survey Information for Pinellas County

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
10	EauGallie soils and Urban land	0.5-1.5	---	A/D	0-5	SP, SP-SM	A-3
					5-23	SM, SP-SM	A-2-4, A-3
					23-47	SP, SP-SM	A-2-4, A-3
					47-59	SC, SC-SM, SM	A-2-4, A-2-6
					59-80	SM, SP-SM	A-2-4, A-3
13	Immokalee soils and Urban Land	0.5-1.5	---	A/D	0-6	SP, SP-SM	A-3
					6-35	SP, SP-SM	A-3
					35-50	SM, SP-SM	A-2-4, A-3
					50-80	SP, SP-SM	A-3
14	Kesson fine sand, very frequently flooded	0-0.5	Very Brief	A/D	0-5	SP-SM	A-2-4, A-3
					5-26	SP, SP-SM	A-3
					26-42	SP-SM, SP	A-3
					42-80	SP, SP-SM	A-3
16	Matlacha and St. Augustine soils and Urban land	2.0-3.0	---	B	0-42	SP, SP-SM	A-3
					42-80	SM, SP-SM	A-3
17	Myakka soils and Urban land	0.5-1.5	---	A/D	0-4	SP, SP-SM	A-3
					4-22	SP, SP-SM	A-3
					22-36	SM, SP-SM	A-2-4, A-3
					36-80	SP, SP-SM	A-3
22	Pineda Soils and Urban Land	0.0-1.0	---	C/D	0-4	SP, SP-SM	A-3
					4-37	SP, SP-SM	A-3
					37-55	SC, SC-SM, SM	A-2-4, A-2-6
					55-80	SM, SP, SP-SM	A-2-4, A-3
30	Urban Land, 0 to 2 percent slopes	---	---	---	-	-	-
					-	-	-
31	Wabasso Soils and Urban land	0.5-1.5	---	C/D	0-5	SP, SP-SM	A-3
					5-26	SP, SP-SM	A-3
					26-36	SM, SP-SM	A-2-4, A-3
					36-50	SC, SC-SM	A-2-4, A-2-6
					50-80	SM, SP-SM	A-2-4, A-3
32	Wulfert muck, tidal, 0 to 1 percent slopes	0.0	Very Brief	A/D	0-35	PT	-
					35-80	SM, SP-SM	A-2-4, A-3
100	Waters of the Gulf of Mexico	0.0	12	N/A			

Table 2.23: USDA NRCS Soil Survey Information for Hillsborough County

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
45	St. Augustine-Urban land complex	1.5-3.0	---	A/D	0-3	SP, SP-SM	A-3
					3-80	SP-SM, SM	A-3, A-2-4
58	Wabasso-Urban land complex	0.5-1.5	---	C/D	0-21	SP, SP-SM	A-3
					21-31	SP-SM, SM	A-3, A-2-4
					31-48	SC, SM-SC	A-2-4, A-2-6
					48-80	SP-SM, SM	A-3, A-2-4
99	Water	0.0	12	N/A			
100	Waters of the Gulf of Mexico	0.0	12	N/A			

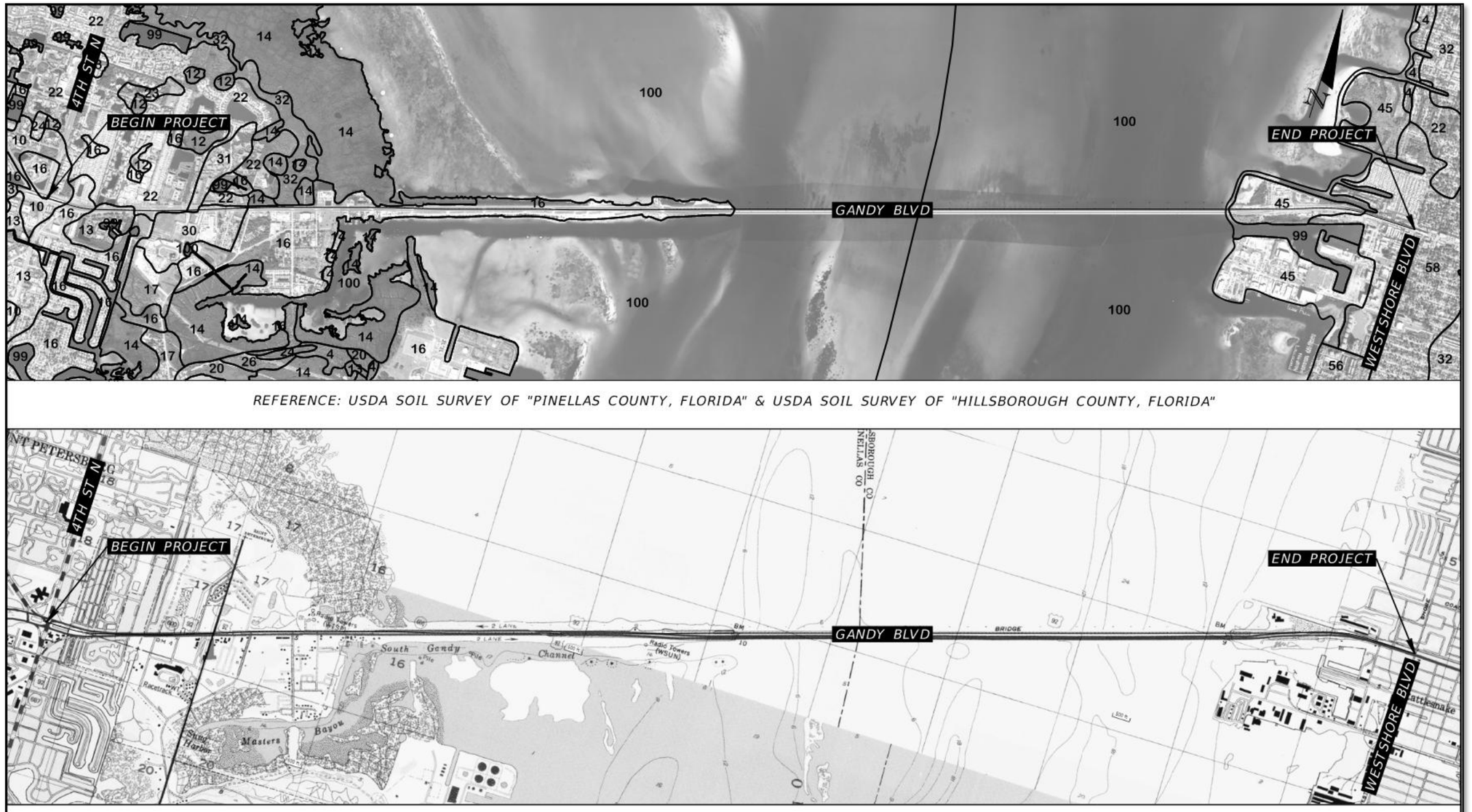


Figure 2.7: USDA and USGS Soil Survey and USGS Quadrangle Maps

The soils encountered along the project limits are Hydrologic Soil Group (HSG) A/D, B, and C/D. Group A soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission. Group B soils have a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture and have a moderate rate of water transmission. Group C soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture and have a slow rate of water transmission. Group D soils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high-water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission. If a soil is assigned to a dual HSG, the first letter is for drained areas and the second is for un-drained areas. Soils are only assigned a dual class if they are group D in their natural condition. According to the Soil Survey, there are 10 different soil types located along the project limits within Pinellas County and 4 different soil types located along the project limits within Hillsborough County. The groundwater depth varies from zero to three feet along the project per the NRCS Soil Survey information.

2.18 Utilities

Overhead electric lines owned by Tampa Electric Company were identified by the survey in Segment 1. These lines are usually more than 20 feet from the edge of pavement and cross the roadway sporadically. Florida Gas Transmission has a 4.5-inch pipeline within an easement located along the south side of the Pinellas County causeway area.

Segment 3 of the project contains a variety of utilities including a water line owned by the City of Tampa. The line ranges from eight to 12 inches and runs along the north side of the westbound edge of pavement. For a stretch of Segment 3, there is also a City of Tampa sanitary line that follows the water line's position. Along the south side of the eastbound edge of pavement there are multiple buried fiber-optic and buried telephone lines owned by AT&T, Charter, Frontier, and Verizon. Tampa Electric Company also has multiple lines that follow and cross the roadway corridor in this segment.

A list of utility owners within the project corridor was developed. The list is composed of those utility owners known to operate, or with plans to operate, utilities within the project corridor. **Table 2.24** shows the existing utility owners along the project's corridor.

Table 2.24: Existing Utilities

Utility Owner	Utility Description	Location	Utility Contact	Phone No.
AT&T	Transmission	Segment 1, 2, 3	Greg Jacobson	813-342-0512
CenturyLink	Buried Fiber	Segment 1, 2, 3	John Brugnoli	352-326-1698
Charter Communications (Spectrum)	Buried Fiber	Segment 1, 2, 3	Andrew Holtzhouse	727-329-2839
City of Tampa Sewer	Force Main	Segment 3	Eric Weiss	813-274-8070
City of Tampa Water	Water Main	Segment 3	Eric Weiss	813-274-8070
City of St. Petersburg	Reclaim Water, Water Main, Force Main,	Segment 1	Jeff Rzewnicki	727-892-5384
Duke Energy	Buried/Overhead Electric	Segment 1	Art Gilmore	727-893-9255
Fiberlight	Transmission	Segment 1, 2, 3	James Reece	214-205-7750
Florida Gas Transmission	Gas	Segment 1	Joe Sanchez	407-838-7171
Frontier Communications	Buried Fiber	Segment 1, 2, 3	Kyle Perkins	727-313-6167
WOW! (Knology)	Buried Fiber	Segment 1	Dave Hamlin	727-239-0156
MCI	Transmission	Segment 1, 2, 3	Michael Krol	813-410-4803
Tampa Airport Pipeline	ET Fuel	Segment 3	Calvin Lockhart	813-839-0426
Tampa Electric Company	Buried/Overhead Electric	Segment 3	Jason Payne	813-275-3428
TECO Peoples Gas	Gas	Segment 1, 3	Bolivar Feliz Nunez	813-275-3712
ZAYO	Buried Fiber	Segment 1	Mark Mathis	813-509-2405

Each utility owner was contacted to verify ownership or operation of any utilities, existing or proposed, within the study corridor. The owners were provided with aerial photography depicting the project corridor and were asked to indicate their existing and proposed utilities. There are both aerial and underground utility features along the Gandy Boulevard corridor including distribution and transmission power, fiber, public water and sewer, gas, and various communications conduit. Existing lighting are attached to utility poles from Brighton Bay Boulevard NE to the bridge. The remaining lighting along the project is LED.

2.19 Lighting

There is existing lighting along both sides of Gandy Boulevard within the project limits. The existing lighting between Brighton Bay Boulevard NE and the bridge is attached to utility poles with no arm. All other lighting within the project limits is LED and on conventional light poles.

2.20 Signs

There are six overhead traffic signs and two Arterial Dynamic Message Signs (ADMS) within the project limits. Two overhead span sign structures are located along the Gandy Boulevard westbound off-Ramp to 4th Street North. There are four overhead cantilever sign structures, one along the Gandy Boulevard eastbound on-Ramp from 4th Street North and three along eastbound Gandy Boulevard to the Selmon

Expressway. There are two overhead cantilever ADMSs, one along westbound Gandy Boulevard east of Brighton Bay Boulevard NE and one along eastbound Gandy Boulevard west of West Shore Boulevard.

2.21 Aesthetics Features

Old Tampa Bay and surrounding vegetation provide the Gandy Boulevard, frontage road, and shared-use path users with aesthetic views within the project limits. The Selmon Expressway viaduct consists of a pattern paying homage to the U.S. Navy's Blue Angels on the piers with LED lighting and decorative light poles along the outside. No other aesthetic features exist throughout the corridor.

2.22 Bridges and Structures

The existing condition of Gandy Boulevard leading up to the existing eastbound (No. 100300) and westbound (No. 100585) bridges over Old Tampa Bay utilizes major and minor intersection crossings with no current overpass bridge crossings.

The existing eastbound (No. 100300) and westbound (No. 100585) bridges over Old Tampa Bay currently are utilized in full capacity to allow motorists to travel between Pinellas County to Hillsborough County efficiently while allowing marine vessels to pass beneath both bridges with adequate vertical and horizontal clearance.

Bridge No. 100300 was built in 1975 and currently services two lanes of traffic with one ten-foot shoulder and one six-foot shoulder with an overall width of 42 feet and three-inches. The superstructure is comprised of 32-inch traffic barriers, an eight-inch concrete deck, and prestressed concrete girders. The substructure consists of end bents founded on 18-inch piles and a combination of intermediate pile bents and hammerhead-shaped piers founded on 24-inch concrete piles. The sufficiency rating is 86 and the health index is 77.82 according to the 2022 Inspection Report. Within the 2022 Inspection Report, it was noted that the deck, superstructure, and substructure obtained an NBI Rating of 7 (Good), 5 (Fair), and 6 (Satisfactory), respectively.

Vessel collision forces were not considered during the initial design of Bridge No. 100300 during the 1970s. A fender system is currently in place beneath Span 233, adjacent to Piers 233 and 234. In July of 2022, the west fender system was impacted by a tugboat and barge, causing deterioration and failure of numerous piles from Pile Cluster 38 to 47; however, no associated damage was noted to the bridge substructure elements.

The existing minimum vertical clearance at the main channel, beneath Span 233, is 43.9-feet. The existing navigable horizontal clearance between fender system is 64.9-feet. The bridge is under the maintenance responsibility of the FDOT, District 7 and the bridge has no unique architectural elements.

Bridge No. 100585 was built in 1996 and currently services two lanes of traffic with one ten-foot shoulder and one six-foot shoulder with an overall width of 43 feet and one inch. The superstructure is comprised of 32-inch f-shape traffic barriers, an eight-inch concrete deck, and prestressed concrete girders. Over the navigational channel, modifications to the standard prestressed concrete girders were designed to allow

for a variable girder depth. The substructure consists of end bents founded on 18-inch piles and hammerhead-shaped piers founded on four-foot, six-foot, or seven-foot drilled shafts. The current bridge is in good standing with a sufficiency rating of 99.1 and a health index of 87.07 according to the 2021 Inspection Report. Within the 2021 Inspection Report, it was also noted that the deck, superstructure, and substructure all obtain an NBI Rating of 7 (Good).

Bridge No. 100585 was designed to withstand vessel impacts applied in the transverse and longitudinal directions to the footing at the mean high water level. Vessel collision data is as follows:

- 2400 kips (transverse) or 1200 kips (longitudinal) for all foundations located between stations 142+50 and 157+50.
- 1400 kips (transverse) or 700 kips (longitudinal) for all foundations located between stations 127+50 and 142+50 and between stations 157+50 and 172+50.
- 700 kips (transverse) or 350 kips (longitudinal) for all foundations located between stations 120+00 and 127+50.
- 240 kips (transverse) or 120 kips (longitudinal) for all foundations located between stations 45+36 and 120+00 and between stations 172+50 and 181+23.

The existing minimum vertical clearance at the main channel is 43.92 feet. The horizontal clearance between the existing bridge fender is 65 feet. There has been no reported vessel collisions with Bridge No. 100585. The bridge is under the maintenance responsibility of the FDOT, District 7 and the bridge has no unique architectural elements.

3.0 PROJECT DESIGN CONTROLS & CRITERIA

3.1 Roadway Context Classification

As defined in the FDOT Florida Design Manual (FDM) Section 200.4 and in the *Context Classification Memo*, the existing context classification along this corridor is C3R –Suburban Residential and C3C – Suburban Commercial for the section of the corridor that is in Pinellas and Hillsborough Counties, respectively. Similarly, as outlined in the same section of the FDM and in this project's *Context Classification Memo,* the future context classification along this corridor is C3R – Suburban Residential in the Pinellas Segment and C4 – Urban General in the Hillsborough Segment. A major mixed residential development planned on the Hillsborough County side has triggered this segment's context classification change from C3C to C4. The project's *Context Classification Memo* is provided in **Appendix C**.

3.2 Design Control and Criteria

The design criteria for the proposed Gandy Boulevard will adhere to the FDOT FDM, effective January 2023. The design criteria used for this PD&E study are listed in **Table 3.1**, **Table 3.2** and **Table 3.3**. The Context Classification memorandum dated January 3, 2018, noted the existing Context Classification to be C3R/C3C for Pinellas/Hillsborough Counties with a future adjustment of C4 for Hillsborough County. The Context Classification of C3 will be used to control the design criteria of this project. This PD&E Study will evaluate Gandy Boulevard as a controlled access mainline, uninterrupted flow from Pinellas County to Hillsborough County. The controlled access changes to the mainline will be consistent with C3 controlling design criteria for the project and adjusting the design criteria to C4 Urban General in Hillsborough County for future conditions is not necessary.

Table 3.1: Design Criteria for Gandy Boulevard

	Design Element				Design Criteria	2023 FDM
General	Functional Classification				Urban Principal Arterial	Table 200.2.1 SLD
	SIS Facility Type				Yes	SLD
	Context Classification				C3R/C3C	FDOT Memo
	Design Speed Allowable Range (mph)				35 – 55	Table 201.5.1
	Design Speed SIS Minimum (mph)				50	Table 201.5.1
	Design Speed (mph)				55	-
	Design Vehicle				WB-62 FL	Section 201.6
Typical Section	Lane Width – Travel (ft)				12	Table 210.2.1
	Min Median Width Without Barrier (ft)				40	Table 210.3.1
	Shoulder Width	Travel (2-Lane)	Outside	Full (ft)	10	Table 210.4.1
				Paved (ft)	5	Table 210.4.1
			Inside	Full (ft)	8	Table 210.4.1
				Paved (ft)	4	Table 210.4.1
	Border Width (ft)				40	Table 210.7.1
	Clear Zone – Travel (ft)				30	Table 215.2.1
	Cross Slope – Travel Lanes (inside to out)				0.02 – 0.03	Figure 210.2.1
	Front Slopes				1:6	Figure 215.2.3
	Back Slopes				1:4	Figure 215.2.3
	Clear Zone Width (Thru) [ft]				30	Table 215.2.1
	Clear Zone Width (Aux. Turn) [ft]				18	Table 215.2.1
	Superelevation Transition (Min.) [ft]				100	Table 210.9.3
	Superelevation Transition Rate				1:225	Section 210.9.3
Horizontal	Min Stopping Sight Distance (ft)				495	Table 210.11.1
	Max Deflection Without Curve				0° 45’ 00”	Section 210.8.1
	Length of Curve		Desirable (ft)		825	Table 210.8.1
			Minimum (ft)		400	Table 210.8.1
	Max Curvature (e = NC)				9,949	Table 210.9.1
	Curve Degree (Max.)				6° 30’ 00”	Table 210.9.1
	Curve Radius (Min.) [ft]				881	Table 210.8.2
Vertical	Max Grade (Flat Terrain)				5%	Table 210.10.1
	Max Change in Grade Without Vertical Curve				0.50%	Table 210.10.2
	K Value		Crest Curve		185	Table 210.10.3
			Sag Curve		115	Table 210.10.3
	Length of Curve		Crest Curve		350	Table 210.10.4
			Sag Curve		250	Table 210.10.4
	Min. Clearance		Roadway over Roadway (ft)		16.5	Table 260.6.1
			Roadway over Railroad (ft)		23.5	Table 260.6.1
	Vertical Clearance – Under Signs (Min.) [ft]				17.5	Section 210.10.3

Note: Bridge design criteria matches Gandy Blvd criteria (Causeway-Frontage Crossings and Bridges over Old Tampa Bay)

Table 3.2: Design Criteria for Frontage Road

Design Element				Design Criteria	2023 FDM
General	Functional Classification			Urban Principal Art Other	-
	SIS Facility Type			-	-
	Context Classification			C3C	-
	Design Speed Allowable Range (mph)			35-55	Table 201.5.1
	Design Speed SIS Minimum (mph)			-	-
	Design Speed (mph)			35 / 45	
	Design Vehicle			WB-62 FL	Section 201.6
Typical Section	Lane Width – Travel (ft)			10 / 11	Table 210.2.1
	Min Median Width Without Barrier (ft)			22	Table 210.3.1
	Shoulder Width	Travel (2-Lane)	Outside	Full (ft)	10	Table 210.4.1
				Paved (ft)	5	Table 210.4.1
			Inside	Full (ft)	8	Table 210.4.1
				Paved (ft)	4	Table 210.4.1
	Bike Lane Width (ft)			7	Section 223.2.1.1
	Border Width (ft)			12 / 14	Table 210.7.1
	Clear Zone – Travel (ft)			14 / 24	Table 215.2.1
	Cross Slope – Travel Lanes (inside to out)			0.02	Figure 210.2.1
	Front Slopes			1:6	Table 215.2.3
	Back Slopes			1:4	Table 215.2.3
	Clear Zone Width (Aux. Turn) [ft]			10 / 14	Table 215.2.1
	Superelevation Transition (Min.) [ft]			100	Table 210.9.3
	Superelevation Transition Rate			1:100 / 1:150	Section 210.9.3
Horizontal	Min Stopping Sight Distance (ft)			250 / 360	Table 210.11.1
	Max Deflection Without Curve			2° 00’ 00” / 0° 45’ 00”	Section 210.8.1
	Length of Curve			Desirable (ft)	525 / 675	Table 210.8.1
				Minimum (ft)	400	Table 210.8.1
	Max Curvature (e = NC)			1,146 / 2,083	Table 210.9.2
	Curve Degree (Max.)			14° 15’ 00” / 8° 15’ 00”	Table 210.9.2
	Curve Radius (Min.) [ft]			402 / 694	Table 210.8.2
Vertical	Max Grade (Flat Terrain)			7% / 6%	Table 210.10.1
	Max Change in Grade Without Vertical Curve			0.90% / 0.70%	Table 210.10.2
	K Value			Crest Curve	47 / 98	Table 210.10.3
				Sag Curve	49 / 79	Table 210.10.3
	Length of Curve			Crest Curve	105 / 135	Table 210.10.4
				Sag Curve	105 / 135	Table 210.10.4
	Min. Clearance			Roadway over Roadway (ft)	16.5	Section 260.6.1
				Roadway over Railroad (ft)	23.5	Table 260.6.1
	Vertical Clearance – Under Signs (Min.) [ft]			17.5	Section 210.10.3
	Vertical Clearance – Under Bridge (Min.) [ft]			16.5	Table 260.6.1

Table 3.3: Design Criteria for Shared-Use Path

	Design Element	Design Criteria	2023 FDM
Shared-Use Path	Width of Pavement [ft]	14 (Max.)/12 (Std.) 10 (Min.)	Section 224.4
	Design Speed (mph) ≤4% Downgrade >4% Downgrade	 18 30	Section 224.9
	Maximum Cross Slope	0.02	Section 224.5
	Cross Slope Transition Length[ft]	75	Section 224.5
	Vertical Clearance [ft]	10	Section 224.8
	Minimum Stopping Sight Distance [ft] Uphill (Downhill)	118 (383)	Table 224.10.2
	Maximum Grade	5%	Section 224.6

4.0 ALTERNATIVES ANALYSIS

4.1 Previous Planning Studies

Previous PD&E Studies within the project area were evaluated. The Gandy Boulevard (SR 694) PD&E Study (FPID: 256931-1) was completed in 2002 for the Florida Department of Transportation (FDOT) which evaluated improvements to Gandy Boulevard from west of US 19 to east of 4th Street North in Pinellas County. The study focused on capacity and operational improvements, pedestrian and bicycle facilities, intersection control analysis, signalization, and grade separated bridge overpasses. This study primarily supported several segments in design, including the adjacent design segment (FPID: 256931-2) which connects to this PD&E study at 4th Street North.

The Selmon West Extension (FPID: 255822-1) included a State Environmental Impact Report (SEIR) completed in 2017 for THEA which focused on an elevated express lane viaduct concept along Gandy Boulevard with surface street improvements including safety and access management along the corridor. The Selmon West Extension project constructed an elevated viaduct in the median along Gandy Boulevard which connects the eastern terminus of the Gandy bridges over Old Tampa Bay to the existing western terminus of the Selmon Expressway. The typical section includes a single express lane in each direction on the bridge. The Selmon West Extension Project plays a vital role in creating a free flow connection between Hillsborough and Pinellas Counties.

The SR 600 (Gandy Connector) PD&E Study from 4th Street North to Dale Mabry Highway (FPID: 255822-1 & 409861-1) evaluated improvements along Gandy Boulevard excluding the Gandy bridge, and the Gandy Connector. A public hearing was held on March 14th, 2002. However, the Gandy Connector PD&E Study ended in 2002 prior to completion so the Gandy Connector did not obtain Location and Design Concept Acceptance (LDCA).

The Transportation Pilot Project, Resilient Tampa Bay, was prepared for the Tampa Bay Transportation Management Area including Forward Pinellas, Hillsborough MPO, and the Pasco MPO. The Tampa Bay Region is identified as one of the most vulnerable areas in the country to extreme weather events such as storm surge, flooding, and heavy precipitation. The project focuses on new federal requirements for updates to the MPO's future Long Range Transportation Plans (LRTP). These requirements focus on resiliency and reliability improvements to transportation systems and reducing and/or mitigating the stormwater impacts of surface transportation. The main objective of the Project is to provide adaptation strategies, or projects, for inclusion in each MPO's LRTP. The Gandy Boulevard arterial was identified as highly vulnerable to flooding from both a precipitation event and a Category 3 hurricane event. As a result, a project was listed with high priority to raise the profile of Gandy Boulevard to reduce storm threat to vulnerable infrastructure for approximately 8.35 miles of roadway, including the entire limits of this PD&E study.

A Life Cycle Cost Analysis (LCCA) was performed to determine when the existing eastbound Gandy bridge over Old Tampa Bay (Bridge No. 100300) should be replaced. The LCCA compared future replacements at 10 year intervals starting at 10 years from the current year, 2022. The analysis considered the cost of bridge rehabilitation projects for the existing and proposed bridge, routine maintenance, and bridge

replacement. These costs were developed into future value estimates depending on when each event was assumed to occur. Then, the costs were adjusted to present value estimates with the use of a Real Discount Rate Factor. The Real Discount Rate Factor reflects the opportunity value of time and accounts for both inflation and discounting. Ultimately, the LCCA determined the most cost effective solution is to include replacing the existing eastbound Gandy bridge with this PD&E study. According to the LCCA, delaying the existing eastbound replacement an extra 10 years would increase the present value cost over 1.4 million dollars. It is important to note that the calculated present total value cost does not account for the level of service.

4.2 No-Build (No-Action) Alternative

The No-Build Alternative remains viable throughout the study process. The No-Build alternative proposes no capacity or operational improvements to the existing Gandy Boulevard. Only routine roadway and bridge maintenance activities would be conducted along the limits of the project.

The No-Build alternative results in zero R/W and construction costs along with avoiding environmental impacts. However, it does not satisfy the purpose and need for this project.

The following are advantages and disadvantages associated with the No-Build Alternative:

Advantages of the No-Build Alternative

- No additional R/W to be acquired
- No design or construction costs
- No delays to motorists or inconveniences to property owners due to construction
- No impacts to the adjacent natural, physical, and social environment

Disadvantages of the No-Build Alternative

- No pedestrian and bicycle facilities over Old Tampa Bay
- Remain highly vulnerable to flooding from both precipitation and hurricane events
- Increased potential for crashes due to traffic congestion
- Increased traffic congestion and user costs associated with increased delays
- Increased vehicle emission pollutants due to higher levels of traffic congestion
- Increased bridge maintenance costs for the bridge infrastructure over Old Tampa Bay

The No-Build Alternative will remain a viable alternative throughout this PD&E study.

4.3 Transportation Systems Management and Operations Alternative (TSM&O)

The objective of Transportation Systems Management and Operations (TSM&O) is to identify strategies that reduce traffic congestion and prevent its occurrence in areas that are currently congested. These strategies are designed to modify travel behavior and increase system efficiency without costly infrastructure improvements. TSM&O options generally include traffic signal and intersection improvements, access management, and transit improvements.

The additional capacity required to meet the projected traffic volumes along Gandy Boulevard cannot be provided solely through the implementation of TSM&O improvements; however, access management is included as part of the build alternative.

4.4 Build Alternative(s)

The existing controlled access segment of Gandy Boulevard west of the begin study limit and the existing connection to the beginning of the Selmon Expressway viaduct near the east end of the study provide an opportunity to complete a regional free-flow traffic facility by constructing uninterrupted travel lanes within the project limits. The proposed build alternative accommodates free-flow traffic movements by creating a controlled access facility from the begin project limit at 4th Street North to the ramps connecting to the Selmon Expressway viaduct.

For the project limits in Pinellas County (Segment 1), two barrier separated continuous flow travel lanes are proposed in each direction with grade separation at major intersections and slip ramps connecting to proposed one-way two-lane frontage roads on each side. A third continuous flow travel lane is proposed in each direction through the causeway limits of the Pinellas Segment with ramps connecting to proposed one-lane frontage roads accommodating maintenance and waterfront access. The three continuous flow travel lanes in each direction are carried across Old Tampa Bay by widening the existing westbound bridge (No. 100585) to add an additional travel lane and on a new parallel three-lane bridge proposed on the north side. Within the Hillsborough County segment, one travel lane in each direction is proposed to connect to the existing Selmon Expressway viaduct ramps completing the free-flow connection. Two at-grade travel lanes are proposed in each direction from the Selmon Expressway ramps to the end project limit at West Shore Boulevard. A two-lane two-way frontage road is proposed on the north side of the Hillsborough County segment to provide access to A.J. Palonis Jr. Park and the U.S. Marine Corps Reserve Center.

Pedestrian/bicyclist connectivity is provided with proposed shared-use paths throughout the project to be consistent with the LRTP for Forward Pinellas and the Tampa Hillsborough Greenways and Trails Master Plan.

Within the Pinellas County Segment, several design alternative options were considered with various typical section adjustments to minimize R/W impacts to surrounding properties while balancing environmental impacts and construction cost. One design option provided the full width typical section described in **Section 4.4.1.1** below from the begin project limit to the west end of the Pinellas causeway.

This design option caused significant impacts to private property, including multifamily residential and commercial buildings.

A second design option was evaluated that proposed an elevated viaduct in the middle of the existing R/W to accommodate the two continuous flow travel lanes in each direction with an at-grade frontage roads providing access to adjacent properties and local traffic. This alternative minimized R/W impacts but required an elevated viaduct over one mile in length with high construction and maintenance costs.

A third, optimized, design option was developed for the Pinellas County segment that proposed the typical section described in **Section 4.4.1.1** throughout most of the Pinellas County segment except for a short segment of viaduct west of San Martin Boulevard that allowed impacts to existing multifamily residential and commercial structures to be avoided. The third design option balanced environmental, and R/W impacts while limiting construction and maintenance costs. This alternative was selected for further refinement and evaluation in this study as the Build Alternative.

For the remaining project limits, Segments 2 and 3, the Build Alternative includes a new three-lane bridge structure over Old Tampa Bay with pedestrian/bicyclist accommodations via a new shared-use path on the new proposed bridge across the bay. The Build Alternative also requires widening of the existing westbound Gandy bridge which is repurposed to accommodate the proposed eastbound travel way in the Build Alternative. The Hillsborough County segment, Segment 3, provides lane continuity between the Gandy bridges and the Selmon Expressway viaduct, access management improvements to surrounding properties, and pedestrian/bicyclist connectivity to both the north and south sides of Gandy Boulevard.

The Build Alternative mitigates flooding risks by elevating the proposed controlled access roadway and bridge structure profile above the Federal Emergency Management Agency's flood control elements for storm surge in the project area. The Transportation Pilot Project, Resilient Tampa Bay, identified Gandy Boulevard as a high priority project to be included within the MPO's future LRTP due to vulnerability to flooding during extreme weather events such as storm surge and heavy precipitation. The controls for elevating the roadway and bridge also considered the estimated seal level rise through the design year based on the National Oceanic and Atmospheric Administration's (NOAA) future forecasts and peak wave crest differentials during a Category 3 storm event. The flooding considerations and design controls for widening the existing westbound Gandy bridge (No. 100585) and constructing a new bridge to the north are discussed further in detail within **Section 6.1.4**.

4.4.1 Segment 1 Typical Sections

The Build Alternative for Segment 1 (Pinellas County Segment) includes three typical sections explained in **Section 4.4.1.1**, **Section 4.4.1.2,** and **Section 4.4.1.3**

4.4.1.1 Typical Section 1

Typical Section 1 is proposed from 4th Street North to Brighton Bay Boulevard NE and from east of San Martin Boulevard to approximately 3,000 feet east of San Fernando Drive. Typical Section 1 consists of an elevated controlled access facility with two 12-foot travel lanes in each direction, varying inside shoulder widths (four feet to eight feet paved), ten-foot paved outside shoulders, and a 46-foot depressed median separated by guardrail. The local traffic will be accommodated along eastbound and westbound one-way

frontage roads consisting of two 11-foot travel lanes with curb and gutter. Twelve-foot shared-use paths are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 4.1**. Typical Section 1 will require R/W acquisition to the south side of Gandy Boulevard approaching Brighton Bay Boulevard NE which varies from zero to 119 feet. The alignment shifts from the south to the north through the San Martin Boulevard intersection heading east where the R/W acquisition varies from zero to 80 feet.

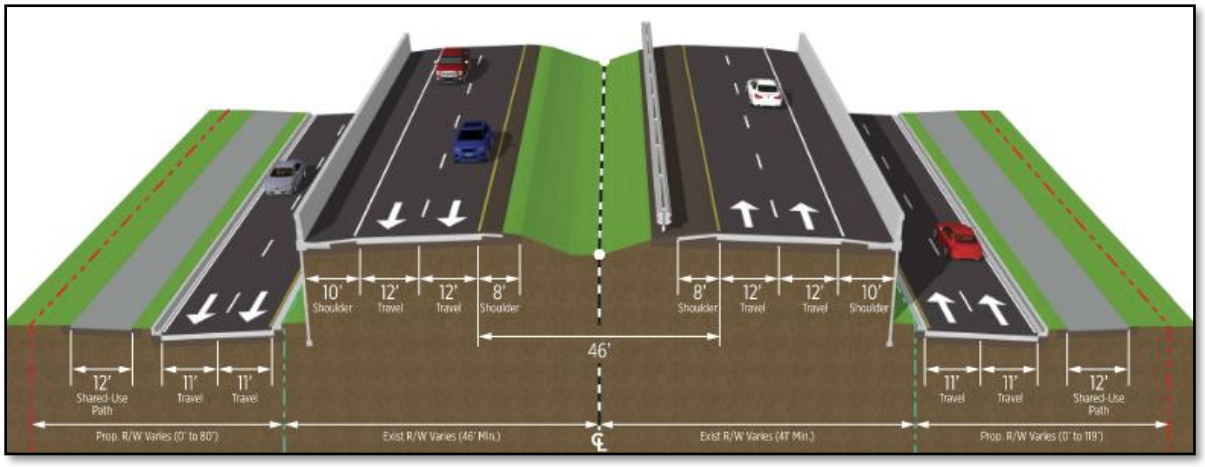


Figure 4.1: Pinellas Segment – 4th Street North to Brighton Bay Boulevard NE; San Martin Boulevard to East of San Fernando Drive

4.4.1.2 Typical Section 2

Typical Section 2 is proposed from west of Brighton Bay Boulevard NE to San Martin Boulevard and consists of a centered elevated viaduct with frontage roads on both sides. The viaduct consists of two 12-foot travel lanes in each direction separated by a concrete barrier wall with six-foot inside shoulders and ten-foot outside shoulders. The bridge concept could be widened to the outside if additional lanes are needed in the future. The eastbound and westbound frontage roads consist of two 11-foot travel lanes with curb and gutter. Twelve-foot shared-use paths are proposed along the outside of the frontage roads on both sides of the corridor as shown in **Figure 4.2**. Typical Section 2 will require R/W acquisition along the south side of Gandy Boulevard which varies from zero to 119 feet and along the north side of Gandy Boulevard varying from zero to 80 feet.

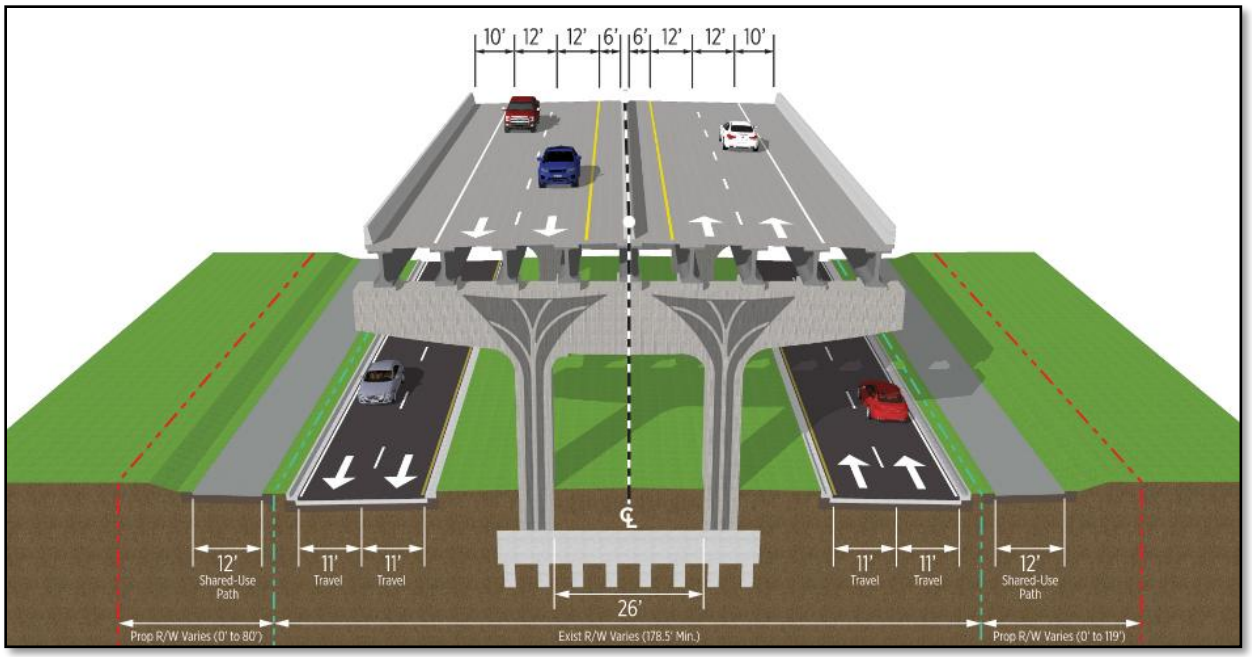


Figure 4.2: Pinellas Segment - Brighton Bay Boulevard NE to San Martin Boulevard

4.4.1.3 Typical Section 3

Typical Section 3 is proposed from East of San Fernando Drive to the west end of the Gandy bridges. An additional travel lane in either direction is developed from the direct connect access ramps from the local frontage roads creating a six-lane typical section throughout the causeway which continues east over the Gandy bridges. Typical Section 3 consists of an elevated controlled access roadway with three 12-foot travel lanes in each direction, ten-foot paved inside shoulders, and ten-foot paved outside shoulders with barrier wall in each direction. The median transitions from 46 feet to 22 feet with opposing travel lanes separated by median barrier wall. One-lane frontage roads are proposed on the outside of the controlled access roadway in each direction with a 15-foot travel lane, varying outside shoulder widths (seven feet to nine feet paved), curb and gutter, and a 12-foot shared-use path. One of the frontage roads will provide access to shared-use path parking and includes guardrail along the outside shoulder on the south side along the beach area. Typical Section 3 is proposed within the existing FDOT R/W as shown in **Figure 4.3**.

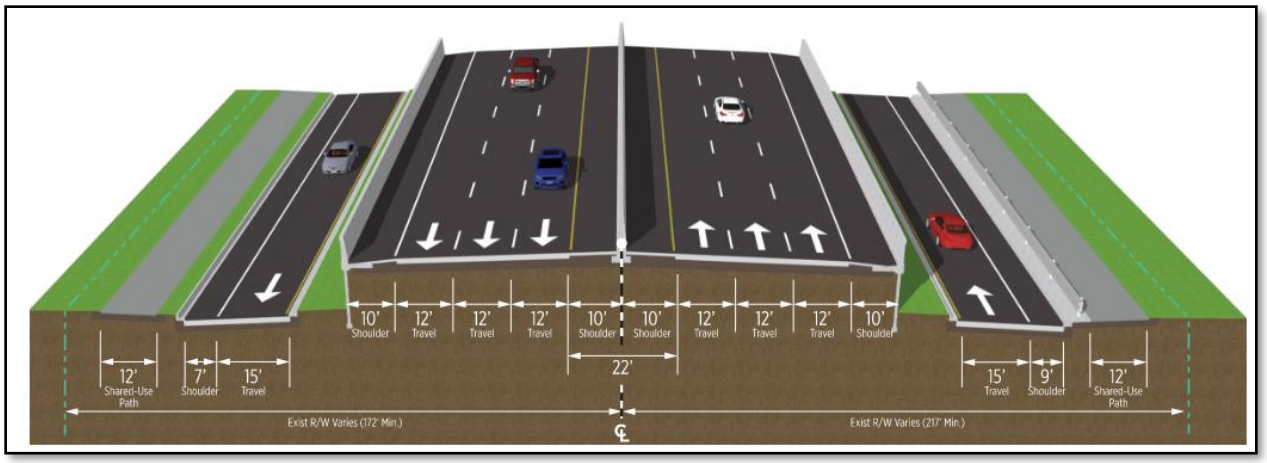


Figure 4.3: Pinellas Segment - San Fernando Drive to West End of Gandy bridges

4.4.2 Segment 2 Typical Section

The Build Alternative for Segment 2 (Bay Segment) includes one typical section explained in **Section 4.4.2.1**.

4.4.2.1 Typical Section 4

The Build Alternative for Segment 2 (Bay Segment) includes Typical Section 4 with three eastbound travel lanes, three westbound travel lanes, and a shared-use path on the north side of the westbound bridge. As part of the Build Alternative, the existing eastbound bridge (#100300) will be demolished. The existing westbound bridge (#100585) will be widened to both the north and south sides and placed into service as the eastbound bridge. The widened bridge (#100585) will consist of three 12-foot travel lane and ten-foot inside and outside shoulders. A new westbound bridge will be constructed on the north side of the widened bridge. The new westbound bridge will consist of three 12-foot travel lanes, ten-foot inside and outside shoulders, and a 12-foot shared-use path with 2-foot clear width on either side separated by barrier wall as shown in **Figure 4.4**. The typical section includes an 88-foot median with approximately 65 feet of separation between the two bridges for constructability. The proposed bridge improvements over Old Tampa Bay are within the existing FDOT R/W.

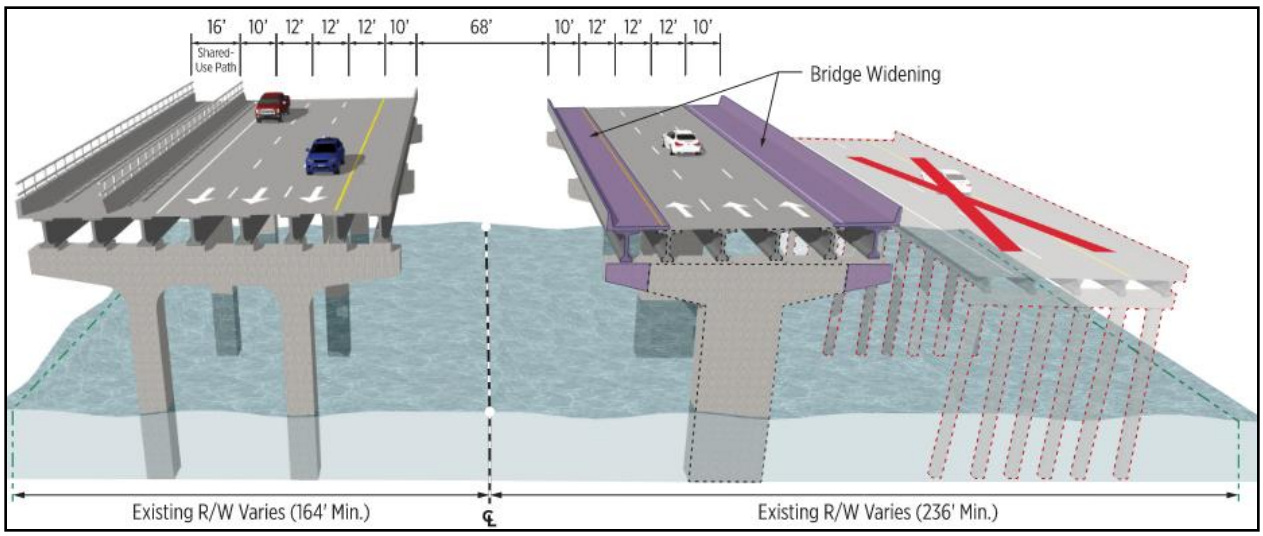


Figure 4.4: Bay Segment – Bridges over Old Tampa Bay

4.4.3 Segment 3 Typical Sections

The Build Alternative for Segment 3 (Hillsborough County Segment) provides a four-lane and six-lane divided facility with two separate typical sections explained in **Section 4.4.3.1** and **Section 4.4.3.2**.

4.4.3.1 Typical Section 5

The Build Alternative for Segment 3 (Hillsborough Segment) provides a four-lane and six-lane divided typical section. Typical Section 5 is a transitional typical section proposed between the east end of the Gandy bridges to approximately 1,800 feet west of Bridge Street where the Selmon Expressway two-lane elevated viaduct begins in the median. Typical Section 5 consists of three 12-foot travel lanes, ten-foot paved inside shoulders bordered with guardrail and barrier wall, and ten-foot paved outside shoulders with barrier wall in each direction. The inside travel lanes function as the general use lanes across the Gandy bridges and become auxiliary lanes to serve as the entrance and exit lanes for the Selmon Expressway viaduct in the median. A two-lane undivided frontage road is proposed on the north side to provide access to adjacent property. A 12-foot wide shared-use path is proposed on both sides of the roadway as shown in **Figure 4.5**.

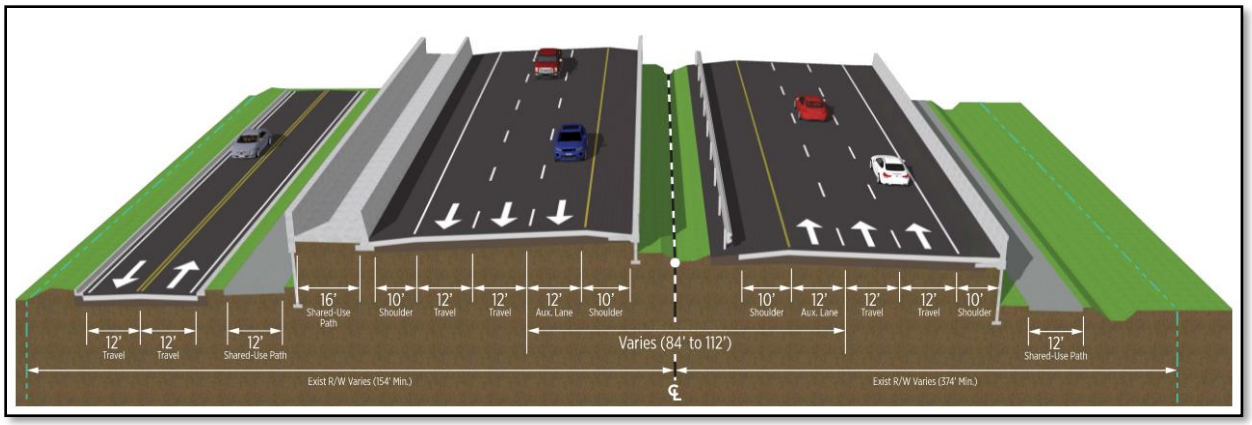


Figure 4.5: Hillsborough Segment – East end of the Gandy bridges to approximately 1,800 feet west of Bridge Street

4.4.3.2 Typical Section 6

Typical Section 6 is proposed from approximately 1,800 feet west of Bridge Street to West Shore Boulevard. The proposed improvements within the limits of Typical Section 6 are limited to intersection and access management improvements, and auxiliary lane development to connect the proposed relocated Gandy Boat Ramp turnout approximately 800 feet west of Bridge Street. The proposed typical section will match the existing roadway with a four-lane divided roadway, one ten-foot travel lane and one 11-foot travel lane in each direction. Typical Section 6 will accommodate the existing Selmon Expressway two-lane viaduct within the median with intermittent bridge piers (**Figure 4.6**). The Segment 3 improvements are proposed within the existing FDOT R/W.

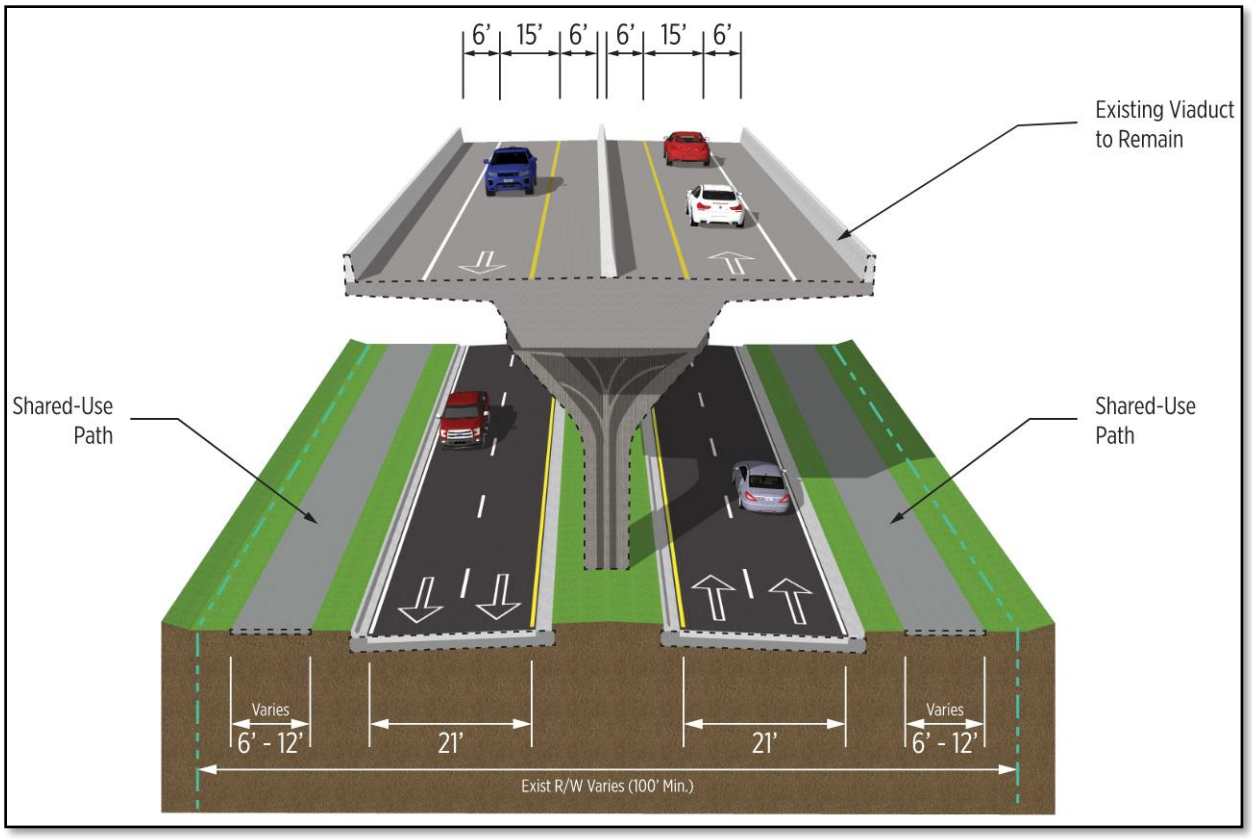


Figure 4.6: Hillsborough Segment – from 1,800 feet west of Bridge Street to West Shore Blvd.

4.4.4 Bridge Analysis

The Build Alternative proposes six new bridges along Gandy Boulevard. Five new bridges provide grade separation for the Gandy Boulevard free-flow lanes over side streets and frontage road crossings and one new bridge provides crossing for the three proposed westbound travel lanes and shared-use path over Old Tampa Bay. The *Preferred Alternative Concept Plans* shown in **Appendix A** identify the bridge locations discussed in this section. Span lengths for the five grade separated bridges were established based on intersection size, pier protection, pedestrian safety, and sight distance.

In addition to the new bridges, the Build Alternative includes proposed improvements to the existing westbound bridge over Old Tampa Bay (No. 100585) to accommodate an additional travel lane. The existing eastbound bridge over Old Tampa Bay (No. 100300) is proposed to be demolished.

4.4.4.1 Elevated Viaduct from Brighton Bay Boulevard NE to San Martin Boulevard

The proposed elevated viaduct consists of 14 spans with two spans crossing over major intersections at Brighton Bay Boulevard NE and San Martin Boulevard which extend 190 feet and 170 feet, respectively. The proposed condition allows for Florida I-Beams (FIBs) to be utilized throughout the elevated viaduct. The minimum vertical clearance of 16.5 feet will be met throughout the limits of the viaduct and any bridge foundation components encroaching within the clear zone will be protected for safety. Bridge

aesthetics were considered in developing the elevated viaduct concept and three pier options were analyzed. The three pier options considered were multi-column piers (**Figure 4.7**), hammerhead piers (**Figure 4.8**) and voided hammerhead piers (**Figure 4.9**).

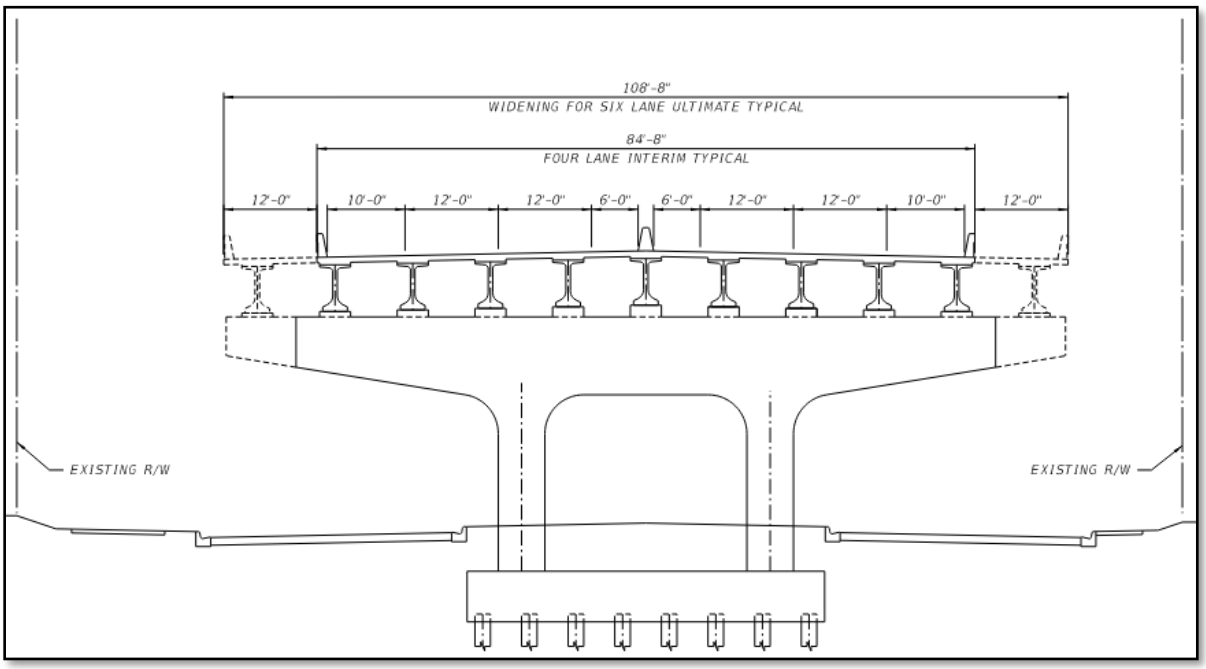


Figure 4.7: Multi-Column Elevation

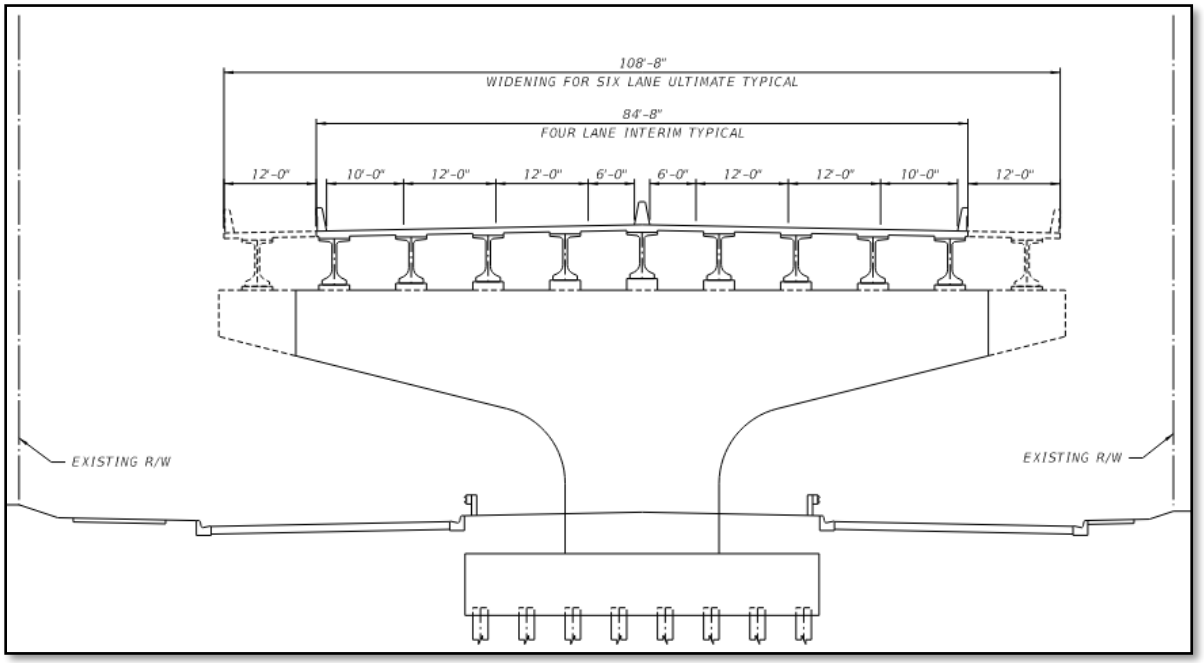


Figure 4.8: Hammerhead Elevation

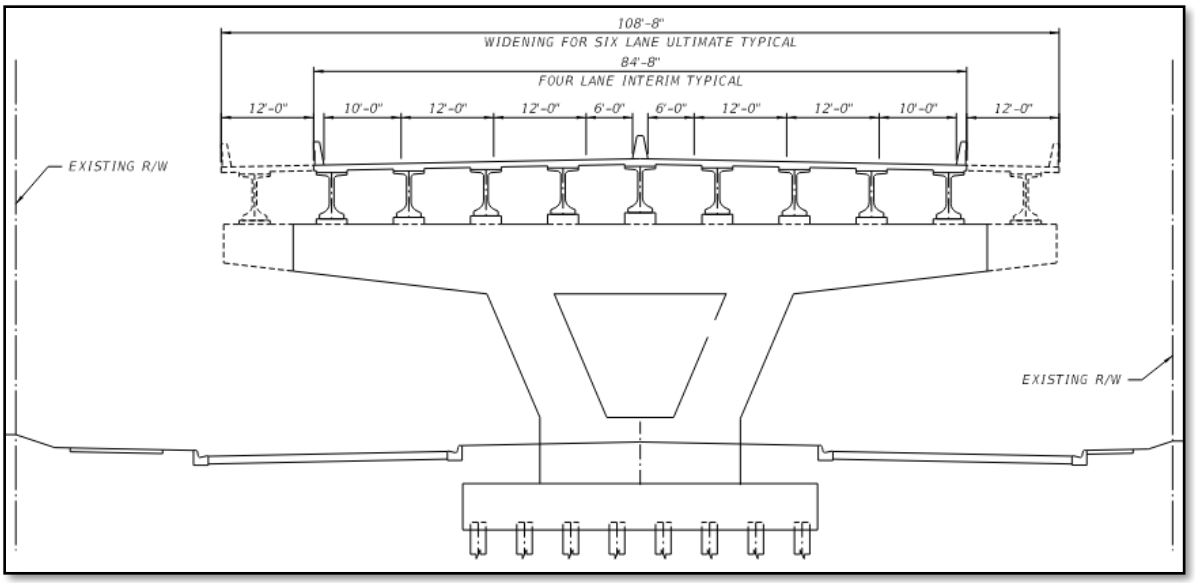


Figure 4.9: Voided Hammerhead Elevation

4.4.4.2 Gandy Boulevard over Causeway Frontage Crossing 1

The Gandy Boulevard frontage road crossing at the west end of the Pinellas Causeway consists of a pair of one-span bridges that extends 153 feet. The proposed condition allows for FIBs to be utilized. For vehicles traveling on the eastbound frontage road, this crossing allows access to facilities between the Grane Verandahs to Mangrove Cay Lane along the north side. For vehicles traveling on the westbound frontage road, this crossing allows access to the local businesses shown in **Appendix A** and the slip ramp to the eastbound mainline along the south side. The minimum vertical clearance of 16.5 feet will be met underneath the Causeway Frontage Crossings. Retaining wall abutments, pier foundations, and other bridge components encroaching within the clear zone will be protected for safety.

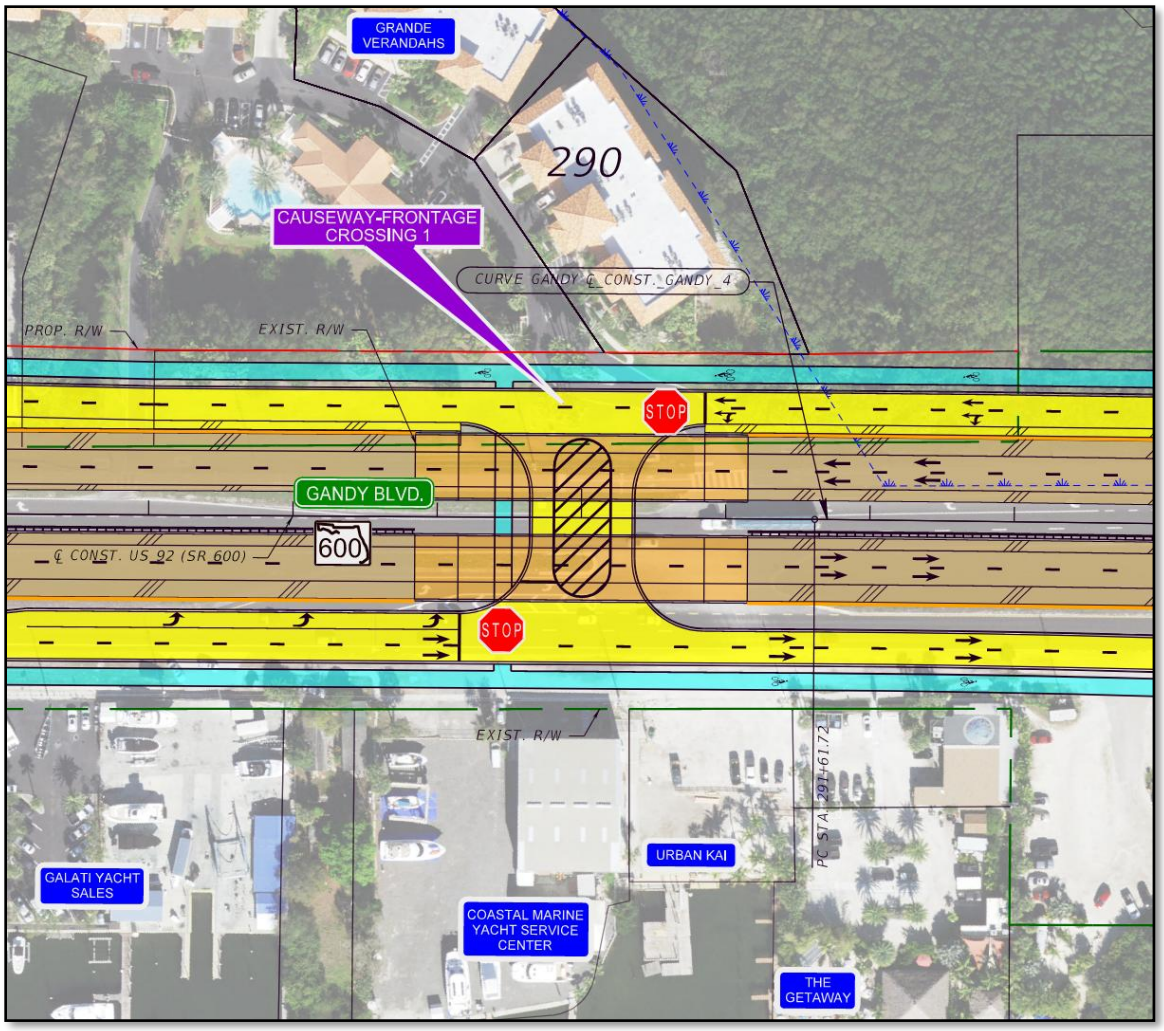


Figure 4.10: Causeway Frontage Crossing 1

4.4.4.3 Gandy Boulevard over Causeway Frontage Crossing 2

The Gandy Boulevard frontage road crossing near the center of the Pinellas Causeway consists of a single one-span bridge overpass that extends 150 feet shown in **Appendix A**. The proposed condition allows for FIBs to be utilized. Vehicles utilizing the eastbound frontage road will have the opportunity to cross under the Gandy Blvd mainline to return to local business and residences. Westbound vehicles will have the opportunity to access the on-street parking on the eastbound frontage road as well as access the slip ramp to the eastbound mainline. The minimum vertical clearance of 16.5 feet will be met underneath the Causeway Frontage Crossings. Retaining wall abutments, pier foundations, and other bridge components encroaching within the clear zone will be protected for safety.

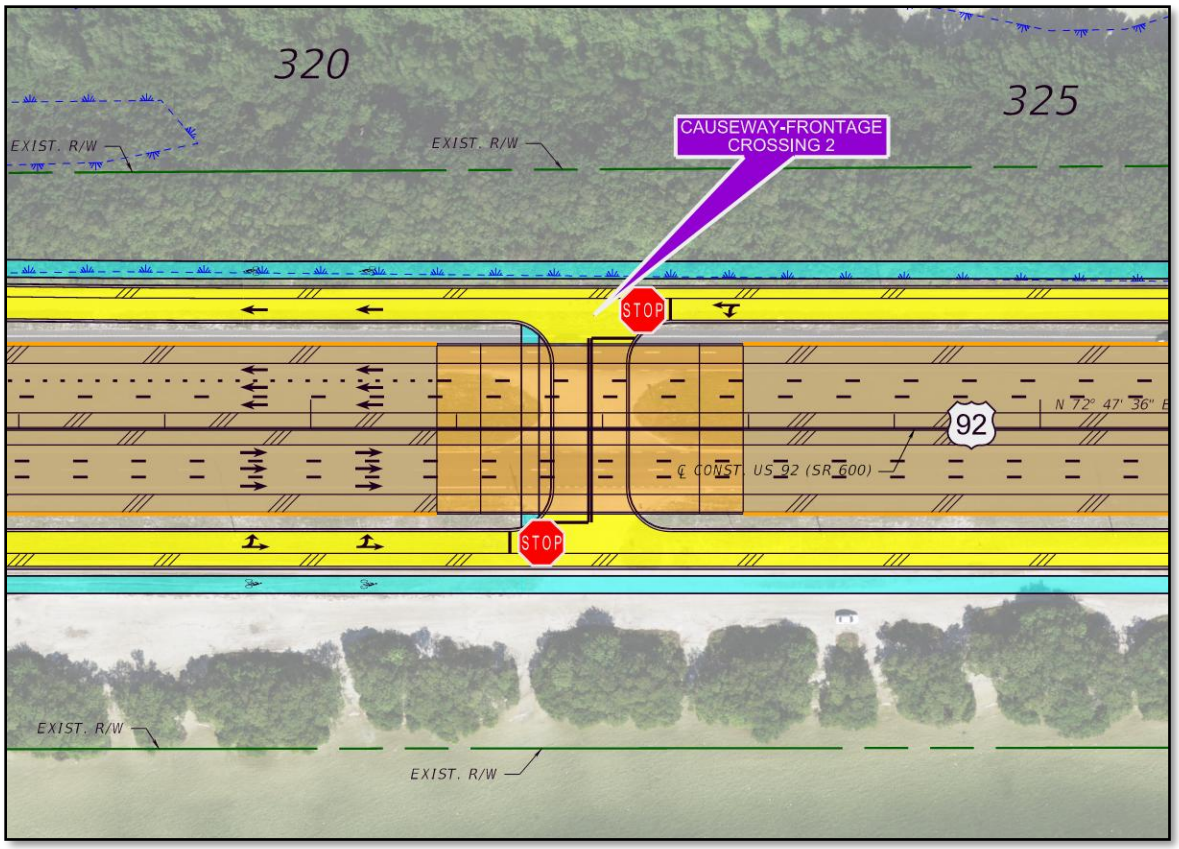


Figure 4.11: Causeway Frontage Crossing 2

4.4.4.4 Gandy Boulevard over Causeway Frontage Crossing 3

The Gandy Boulevard frontage road crossing near the center of the Pinellas Causeway consists of a single one-span bridge overpass that extends 100 feet. The proposed condition allows for FIBs to be utilized. This crossing serves as the final underpass of Gandy Blvd which allows vehicles traveling eastbound on the frontage road as well as vehicles from the parking area to return westbound to local facilities and ramps to the mainline, as shown in **Appendix A**. The minimum vertical clearance of 16.5 feet will be met underneath the Causeway Frontage Crossings. Retaining wall abutments, pier foundations, and other bridge components encroaching within the clear zone will be protected for safety.

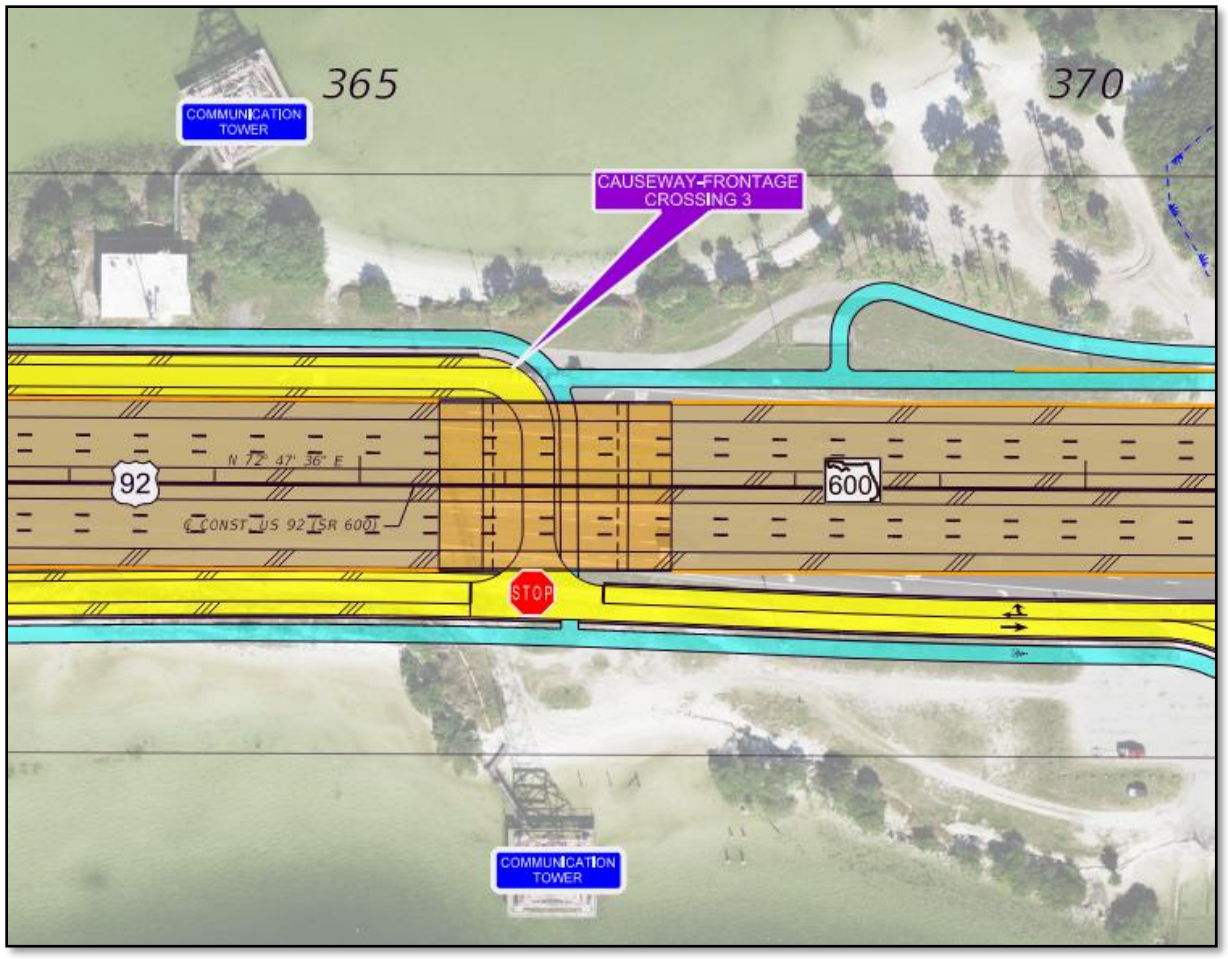


Figure 4.12: Causeway Frontage Crossing 3

4.4.4.5 Gandy Boulevard over Old Tampa Bay

The Build Alternative proposed improvements to the Gandy Boulevard crossing over Old Tampa Bay bridge include:

- Widening of the existing westbound bridge (No. 100585) and converting it to the proposed eastbound bridge.
- Demolishing and removing of the existing eastbound bridge (No. 100300), and
- Constructing a new westbound bridge

The proposed widened eastbound bridge (No. 100585) will utilize similar prestressed concrete girders and rest upon widened concrete pier caps. Vertical and horizontal clearances at the main channel will be increased from its current capacity due to removing the existing eastbound bridge (No. 100300). The ultimate condition carries three travel lanes with two ten-foot shoulders.

The proposed westbound bridge will be a 94-span bridge utilizing similar span lengths and pier locations as the proposed widened eastbound bridge (No. 100585). The superstructure will utilize similar prestressed concrete girders as the proposed widened eastbound bridge (No. 100585). The substructure will utilize both multi-column piers and hammerhead piers. The bridge will be founded on prestressed concrete piles. The ultimate condition carries three travel lanes with two ten-foot shoulders, and one barrier separated 12-foot shared-use path with 2-foot clear width on either side.

Careful consideration was taken when determining the offset of the proposed westbound bridge and the proposed widened eastbound bridge (No. 100585). Constructability and feasibility analyses were conducted to determine the appropriate clearance between the two bridge copings. The analyses considered barge placement, crane locations, crane sizes, construction sequencing, and other construction means and methods. Ultimately, the determined horizontal clearance between bridge copings will be a minimum of 65 feet. This clearance allows for a construction barge to fit between the adjacent bridge footings and two large cranes to work in tandem to maneuver the booms to pick up and place proposed piling for driving and place proposed girders on constructed pier caps. **Figure 4.13** shows the constructability assessment.

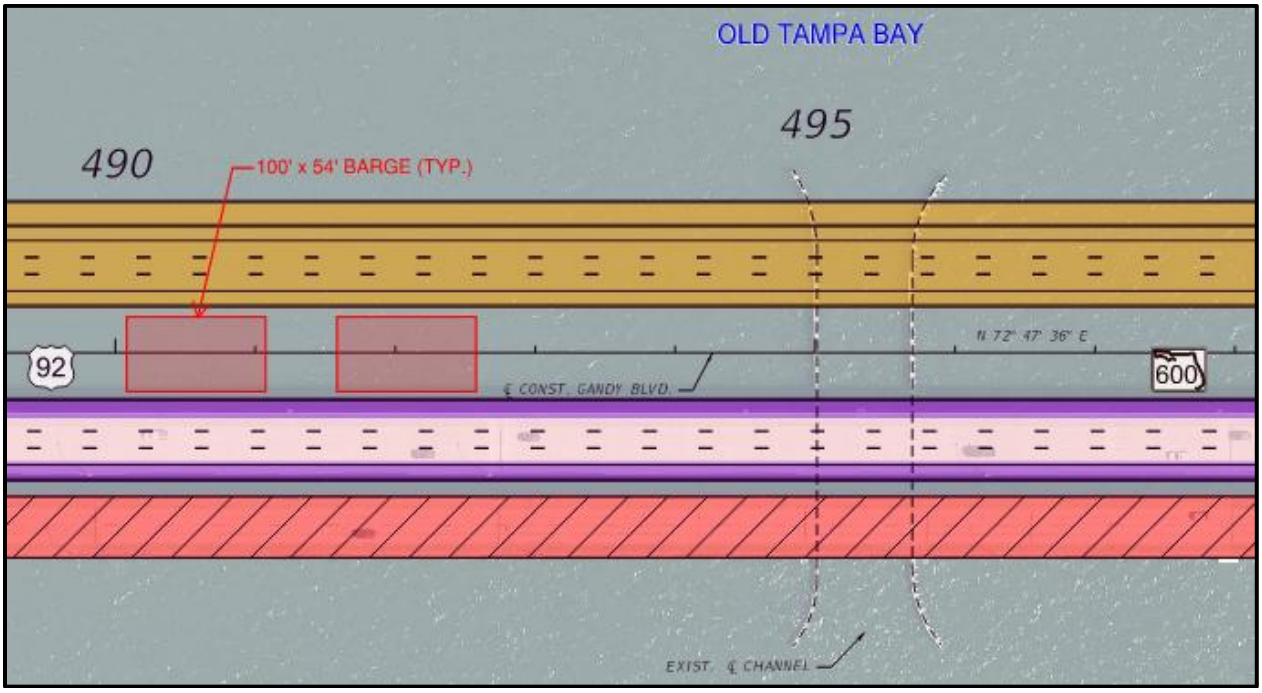


Figure 4.13: Constructability Assessment

4.5 Future Conditions

The traffic analysis findings conducted during the PD&E study are documented in the *Gandy Boulevard Project Traffic Analysis Report* (PTAR) (February 2023).

No-Build and Build AADTs were developed for Opening Year (2030) and Design Year (2050). The volumes were obtained by applying the respective recommended annual growth rates to the Existing Year (2020) recommended AADTs for both No-Build and Build Alternatives. The recommended linear growth rates are shown in **Table 4.1**.

Table 4.1: Recommended Annual Growth Rates

Gandy Boulevard	Annual Growth Rates (%)	
	No-Build	Build
Segment #1 – Pinellas County	1.6	2.7
Segment #2 – Gandy bridges	2.4	3.1
Segment #3 – Hillsborough County	2.0	2.5

In the case of the cross streets in Pinellas County, a linear growth rate of 0.3% is recommended, while the growth rate recommended for the cross streets in Hillsborough is 1.1%. The same growth rates are recommended for the No-Build and Build scenarios for the cross streets.

Future Years AADTs and Turning Movement Volumes

Future Year AADTs are shown in **Figure 4.14** and **Figure 4.15** for the No-Build and Build AADTs for the Opening Year (2030) and Design Year (2050), respectively for the study area. The AADTs were balanced and rounded in accordance with the American Association of State Highway and Transportation Officials (AASHTO) standards published in the 2019 Project Traffic Forecasting Handbook.

The K and D factors were applied to the Opening Year (2030) and Design Year (2050) AADTs to obtain the directional design hour volumes (DDHVs). The intersection turning volumes were determined by applying turning movement percentages derived from existing turning movement counts (TMCs) to the segment DDHVs. **Figure 4.16** shows the Opening Year (2030) No-Build AM and PM peak hour volumes and **Figure 4.17** shows the Design Year (2050) No-Build AM and PM peak hour volumes. **Figure 4.18** shows the Opening Year (2030) Build AM and PM peak hour volumes and **Figure 4.19** shows the Design Year (2050) Build AM and PM peak hour volumes.

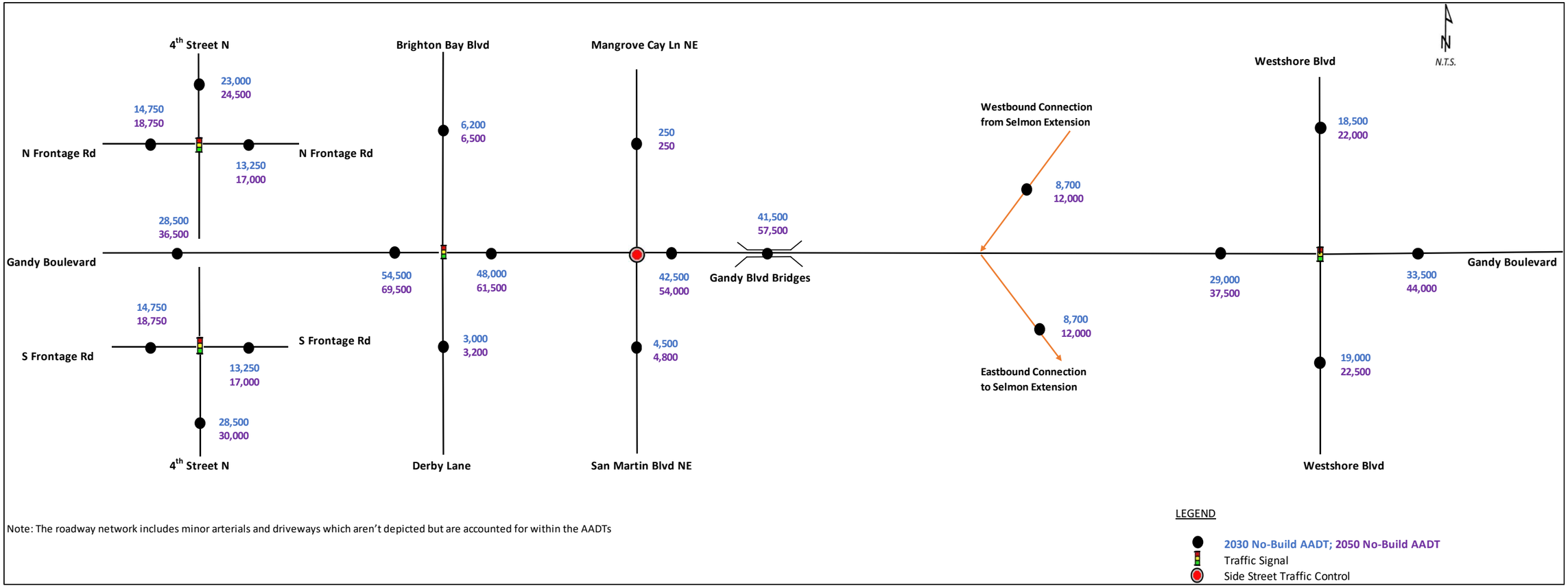
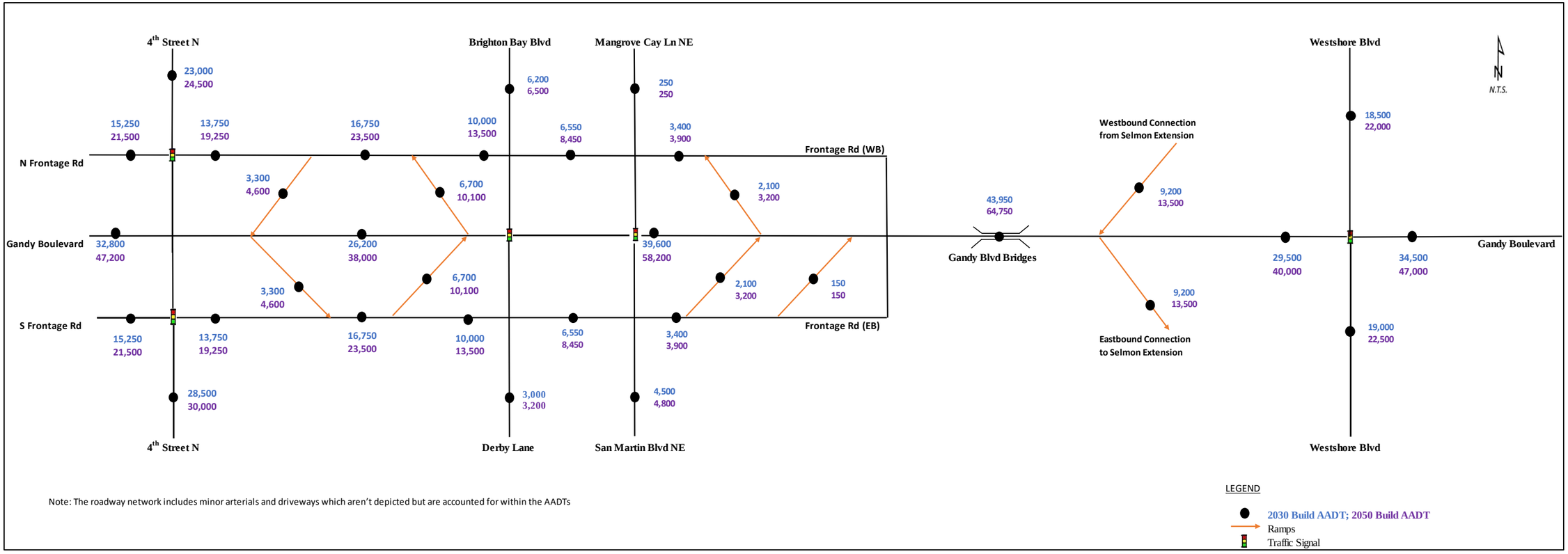
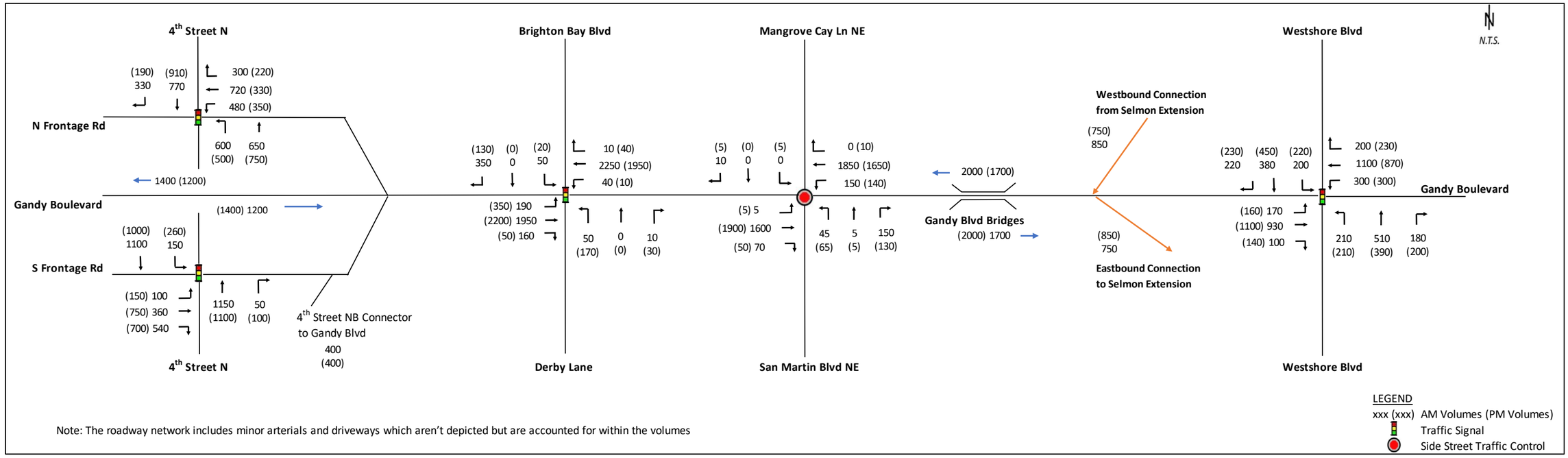


Figure 4.14: Opening Year (2030) and Design Year (2050) No-Build AADTs



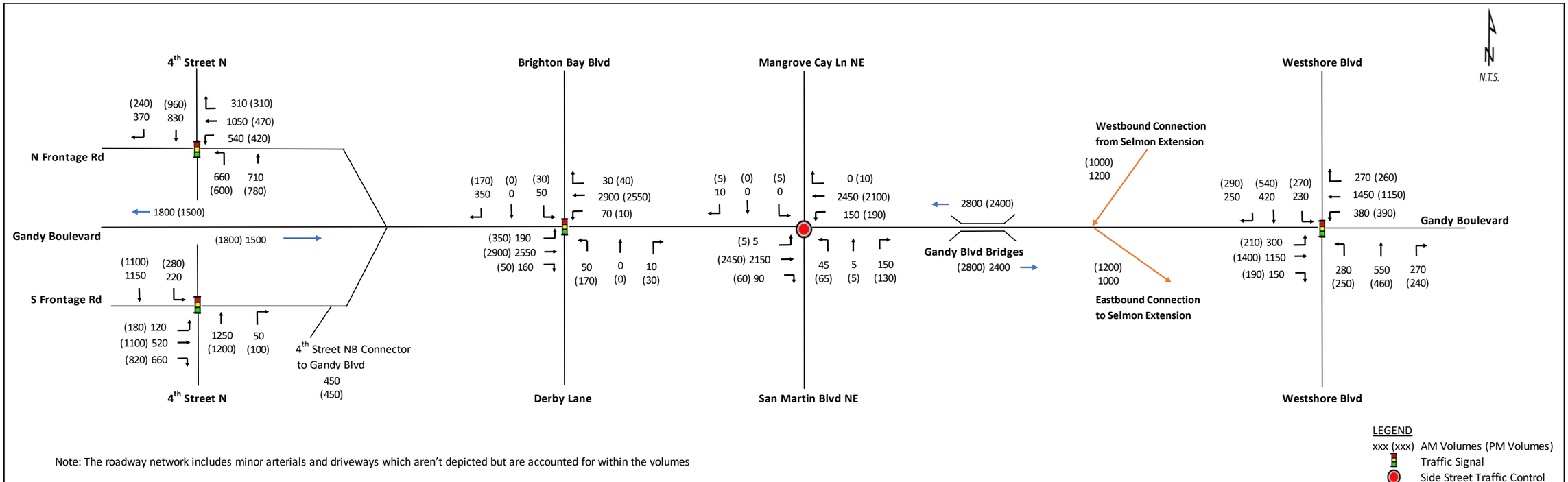
Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the AADTs

Figure 4.15: Opening Year (2030) and Design Year (2050) Build AADTs



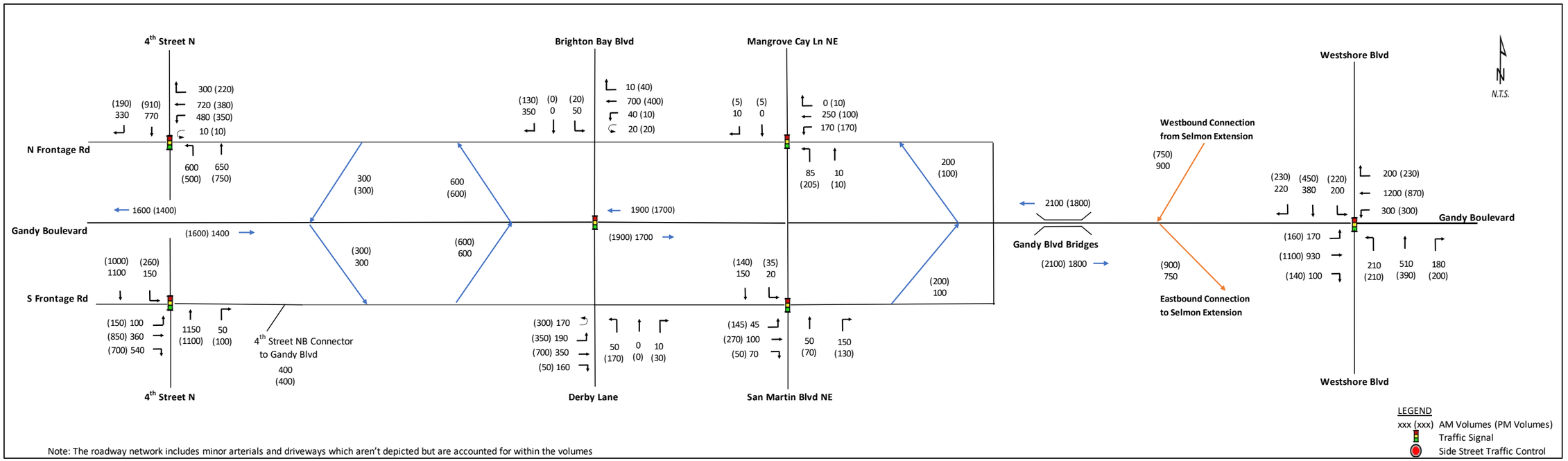
Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4.16: Opening Year (2030) No-Build Peak Hour Turning Movement Volumes



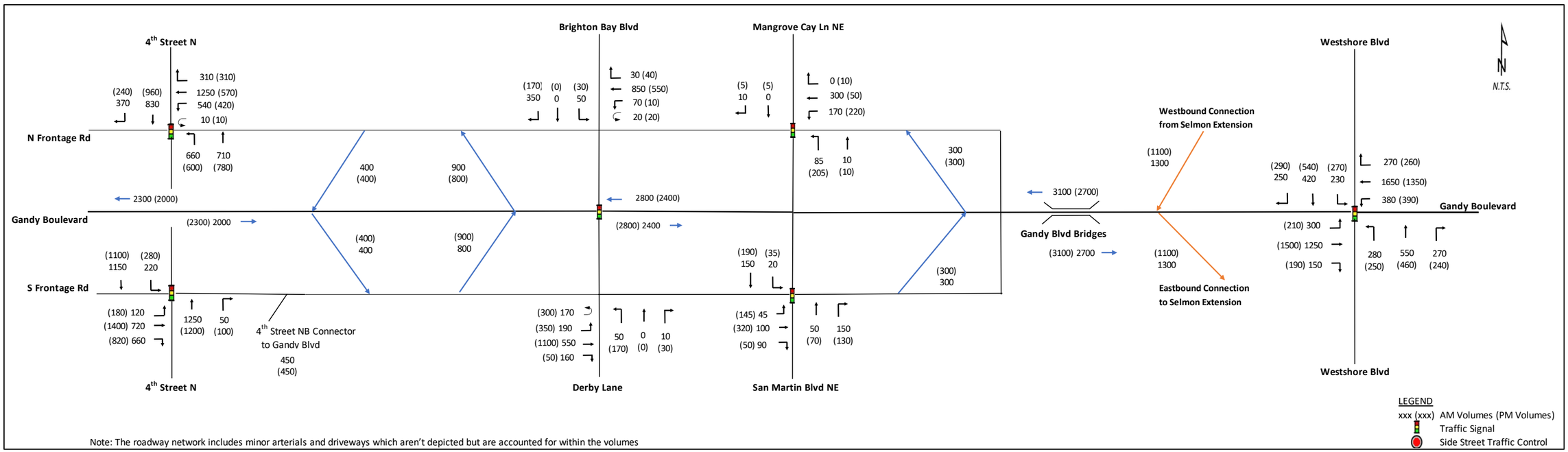
Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4.17: Design Year (2050) No-Build Peak Hour Turning Movement Volumes



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4.18: Opening Year (2030) Build Peak Hour Turning Movement Volumes



Note: The roadway network includes minor arterials and driveways which aren't depicted but are accounted for within the volumes

Figure 4.19: Design Year (2050) Build Peak Hour Turning Movement Volumes

Freeway Segments, Multilane Highways, and Ramps Analysis

The performance measures for the Build Alternative on freeway and multilane highway segments are included in **Table 4.2.** These measures, including Level of Service (LOS), are projected for the Design Year. Under the Build Alternative, the freeway and multilane highway segments along Gandy Boulevard are expected to operate at LOS D or better in Design Year 2050. The results of the ramp capacity analyses are shown in **Table 4.3.**

Table 4.2: Design Year (2050) Build Freeway and Multilane Highway Segment Analysis

Gandy Blvd Segment	Analysis Type	AM Peak Hour		PM Peak Hour	
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS
Eastbound Direction					
From Dr. Martin Luther King Jr. St. N off-ramp to Diverge Off-Ramp east of 4th St N	Freeway	20.3	C	23.4	C
Off-ramp east of 4th St N - Diverge	Freeway	21.7 Fr/ 16.4 Ramp	B	24.9 Fr/ 19.2 Ramp	B
From Off-ramp east of 4th St N to On-ramp west of Brighton Blvd NE	Freeway	16.3	B	19.3	C
Gandy Blvd On-ramp west of Brighton Bay Blvd NE - Merge	Freeway	25.3 Fr/ 19.3 Ramp	B	29.7 Fr/ 22.6 Ramp	C
From Merge On-ramp west of Brighton Bay Blvd NE to On-ramp east of San Fernando Dr*	Freeway	24.4	C	28.5	D
From On-ramp east of San Fernando Dr to Beach Access Frontage Rd On-ramp	Freeway	16.7	B	19.2	C
Access Frontage Rd On-ramp - Merge	Freeway	17.2 Fr/ 11.2 Ramp	B	19.9 Fr/ 13.3 Ramp	B
From Beach Access Road On-ramp Merge to east end of the Gandy Blvd bridges	Freeway	16.8	B	19.3	C
From east end of Gandy Blvd bridges to EB on-ramp to Selmon Expressway	Multilane Highway	19.7	C	22.6	C
From EB on-ramp to Selmon Expressway to West Shore Blvd	Multilane Highway	19.1	C	21.3	C
Westbound Direction					
From West Shore Blvd to EB Selmon Expressway On-ramp	Multilane Highway	25.1	C	21.7	C
From EB On-ramp to Selmon Expressway to east end of Gandy Blvd bridges	Multilane Highway	19.4	C	17.3	B
From east end of the Gandy Blvd bridges to Off-ramp east of San Fernando Dr	Freeway	19.1	C	16.6	B
From Off-ramp east of San Fernando Dr to Diverge Off-ramp west of Brighton Bay Blvd NE	Freeway	28.3	D	24.2	C
Off-ramp west of Brighton Bay Blvd NE - Diverge	Freeway	30.7 Fr/ 23.5 Ramp	C	26.2 Fr/ 19.8 Ramp	B
From Off-ramp west of Brighton Bay Blvd NE to On-ramp east of 4th St N	Freeway	19.2	C	16.2	B
On-ramp east of 4th St N – Merge	Freeway	24.2 Fr/ 18.4 Ramp	B	21.0 Fr/ 15.9 Ramp	B
From Merge On-ramp east of 4th St N to Dr. Martin Luther King Jr. St N On-ramp	Freeway	23.2	C	20.2	C

*Segment analyzed as a basic freeway segment because a third outside lane is added at the on-ramp's entrance to eastbound Gandy Boulevard.

The analysis limits for HCM freeway facilities methodology must begin and end with a basic freeway segment. Therefore, the basic freeway segment along Gandy Boulevard between Martin Luther King Jr. Street ramps and 4th Street North ramps was included in the analysis.

Table 4.3: Design Year (2050) Build Ramp Capacity Analysis

Ramp	Capacity (pc/h)	AM Peak Hour		PM Peak Hour	
		Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)	Demand Flow Rate (pc/h)	Under Capacity (UC) or Over Capacity (OC)
EB Gandy Blvd Off-Ramp east of 4th St N	2,000	432	UC	432	UC
EB Gandy Blvd On-ramp west of Brighton Bay Blvd NE	2,000	863	UC	971	UC
EB Gandy Blvd On-ramp east of San Martin Blvd	2,000	324	UC	324	UC
WB Gandy Blvd Off-ramp east of San Martin Blvd	2,000	324	UC	324	UC
WB Gandy Blvd Off-Ramp west of Brighton Bay Blvd NE	2,000	971	UC	863	UC
WB Gandy Blvd On-Ramp east of 4th St N	2,000	432	UC	432	UC

Intersections

Tables 4.4 and 4.5 show the intersection delay and LOS for Design Year 2050 Build operations during the AM and PM peak hours, respectively. **Table 4.6** shows the vehicle queue results for the intersection movements. HCM 6th Edition results are provided for the intersection of Gandy Boulevard and West Shore Boulevard. HCM 2000 results are provided for the signalized intersections on the Pinellas side because of the limitations of the HCM 6th Edition and HCM 2010 in analyzing clustered intersections, shared movements, or U-turns.

Table 4.4: Design Year (2050) Build Intersection Delay and LOS Results – AM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St N and North Frontage Rd*	Westbound	Left	42.6	D	52.7	D
		Through	61.0	E		
		Right	36.6	D		
	Northbound	Left	61.9	E	45.6	D
		Through	30.5	C		
	Southbound	Through	69.6	E	70.5	E
		Right	72.6	E		
				Intersection	**55.2**	**E**
4th St N and South Frontage Rd*	Eastbound	Left	42.6	D	31.2	C
		Through	29.7	C		
		Right	30.7	C		
	Northbound	Through/Right	42.9	D	42.9	D
	Southbound	Left	62.9	E	21.7	C
		Through	13.4	B		
				Intersection	**31.7**	**C**
Gandy Blvd Frontage Rd at Brighton Bay Blvd NE*	Eastbound	Left	48.7	D	29.6	C
		Through	20.6	C		
		Right	17.9	B		
	Westbound	Left	48.0	D	35.8	D
		Through	34.9	C		
		Right	22.7	C		
	Northbound	Left	44.6	D	43.5	D
		Thru/Right	38.1	D		
	Southbound	Left	38.9	D	36.7	D
		Thru/Right	36.4	D		
				Intersection	**33.5**	**C**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	13.7	B	13.7	B
	Northbound	Left/Thru	13.4	B	13.4	B
	Southbound	Thru/Right	11.6	B	11.6	B
				Intersection	**13.6**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	12.3	B	12.3	B
	Northbound	Thru/Right	12.5	B	12.5	B
	Southbound	Left/Thru	22.0	C	22.0	C
				Intersection	15.1	B
Gandy Blvd at West Shore Blvd	Eastbound	Left	246.7	F	106.5	F
		Through	81.4	F		
		Right	35.1	D		
	Westbound	Left	247.3	F	161.6	F
		Through	162.4	F		
		Right	35.9	D		
	Northbound	Left	208.7	F	168.7	F
		Through	201.4	F		
		Right	60.2	E		
	Southbound	Left	223.0	F	126.1	F
		Thru	111.8	F		
		Right	60.8	E		
				Intersection	**141.9**	**F**

*HCM2000 results provided.

Table 4.5: Design Year (2050) Build Intersection Delay and LOS Results – PM Peak Hour

Intersection	Approach	Movement	Delay (sec/veh)	LOS	Overall Approach	
					Delay (sec/veh)	LOS
4th St N and North Frontage Rd*	Westbound	Left	39.9	D	38.8	D
		Through	39.1	D		
		Right	36.6	D		
	Northbound	Left	49.7	D	38.0	D
		Through	29.1	C		
	Southbound	Through	102.7	F	92.1	F
		Right	49.6	D		
				Intersection	**55.0**	**D**
4th St N and South Frontage Rd*	Eastbound	Left	43.8	D	53.0	D
		Through	64.9	E		
		Right	34.8	C		
	Northbound	Through/Right	42.9	D	42.9	D
	Southbound	Left	143.1	F	41.9	D
		Through	15.3	B		
				Intersection	**47.4**	**D**
Gandy Blvd Frontage Rd at Brighton Bay Blvd NE*	Eastbound	Left	46.2	D	31.8	C
		Through	24.1	C		
		Right	15.4	B		
	Westbound	Left	52.3	D	37.2	D
		Through	36.9	D		
		Right	29.7	C		
	Northbound	Left	48.3	D	46.3	D
		Thru/Right	35.3	D		
	Southbound	Left	58.2	E	43.8	D
		Thru/Right	41.2	D		
				Intersection	**34.9**	**C**
WB Gandy Frontage Rd at Mangrove Cay*	Westbound	Left/Thru/Right	11.5	B	11.5	B
	Northbound	Left/Thru	15.6	B	15.6	B
	Southbound	Thru/Right	9.8	A	9.8	A
				Intersection	**13.2**	**B**
EB Gandy Frontage Rd at St Martin Blvd*	Eastbound	Left/Thru/Right	12.7	B	12.7	B
	Northbound	Thru/Right	10.7	B	10.7	B
	Southbound	Left/Thru	18.8	B	18.8	B
				Intersection	**13.7**	**B**
Gandy Blvd at West Shore Blvd	Eastbound	Left	216.1	F	126.7	F
		Through	114.6	F		
		Right	48.8	D		
	Westbound	Left	136.2	F	133.8	F
		Through	148.0	F		
		Right	43.6	D		
	Northbound	Left	140.2	F	165.8	F
		Through	222.0	F		
		Right	78.0	E		
	Southbound	Left	167.5	F	132.2	F
		Thru	143.0	F		
		Right	81.6	F		
				Intersection	**137.4**	**F**

*HCM2000 results provided.

Table 4.6: Design Year (2050) Build Intersection Vehicle Queues

Intersection	Movement	Storage (ft)	AM Peak Hour Queues (95th Percentile)		PM Peak Hour Queues (95th Percentile)	
			Vehicles	Feet	Vehicles	Feet
4th St N and North Frontage Rd	WB Left	500	---	282	---	218
	WB Through	1350	---	#498	---	192
	WB Right	500	---	73	---	73
	NB Left	690*	---	#440	---	#378
	NB Through	240	---	**287**	---	**309**
	SB Through	1150	---	#275	---	#346
	SB Right	300	---	#300	---	79
4th St N and South Frontage Rd	EB Left	350	---	73	---	104
	EB Through	350	---	307	---	**#826**
	EB Right	350	---	282	---	**386**
	NB Through/Right	1000	---	288	---	286
	SB Left	680**	---	m#255	---	m#301
	SB Through	240	---	**m244**	---	**m246**
Gandy Blvd Frontage Rd at Brighton Bay Blvd NE	EB Left	300	---	#182	---	298
	EB Through	1000	---	184	---	394
	EB Right	300	---	17	---	0
	WB Left/U-turn	300	---	56	---	29
	WB Through	1000	---	351	---	264
	WB Right	300	---	0	---	0
	NB Left	1000	---	36	---	104
	NB Thru/Right	950	---	0	---	0
	SB Left	400	---	73	---	57
	SB Thru/Right	400	---	143	---	21
WB Gandy Frontage Rd at Mangrove Cay	WB Left/Thru/Right	1000	---	97	---	63
	NB Left/Thru	140	---	48	---	140
	SB Thru/Right	220	---	0	---	9
EB Gandy Frontage Rd at St Martin Blvd	EB Left/Thru/Right	1000	---	38	---	112
	NB Thru/Right	1000	---	49	---	52
	SB Left/Thru	140	---	125	---	**156**
Gandy Blvd at West Shore Blvd	EB Left	625	32.5	**813**	33.8	**845**
	EB Through	1000	39.4	985	52.6	**1315**
	EB Right	265	7.8	195	10.1	253
	WB Left	500	40.2	**1005**	35.3	**883**
	WB Through	1000	69.1	**1728**	76.2	**1905**
	WB Right	200	12.8	**320**	16.0	**400**
	NB Left	388***	15.1	378	14.9	373
	NB Through	1000	51.3	**1283**	59.7	**1493**
	NB Right	575	16.1	403	20.6	515
	SB Left	300	13.2	**330**	13.4	**335**
	SB Thru	1000	31.0	775	39.2	980
	SB Right	225	15.1	**378**	19.6	**490**

*Includes left turn storage south of the intersection. ** Includes left turn storage north of the intersection.
#: 95th percentile volume exceeds capacity; queue may be longer. **###** means queue exceeds storage length. ***Average of both NB left turn storage lengths. m: Volume for 95th percentile queue is metered by upstream signal

The Design Year (2050) Build Alternative results shows that all the freeway segments, multilane highway segments, ramps, and all but one intersection on the Pinellas side operate at acceptable LOS D or better. The overall operations on the Pinellas side improve significantly when compared to the No-Build conditions. One new intersection is proposed on the Hillsborough side to accommodate access to the Gandy Boat Ramp and parking area on the south side and provide frontage road access to the US Marine Corps Reserve Center on the north side of Gandy Blvd. There are no other intersection improvements on the Hillsborough side as the project terminates at West Shore Blvd. West Shore Blvd is an off-system road, operated by the City of Tampa, where previous intersection improvements were implemented as part of THEA's Selmon Extension project. This project improved operations by adding turn lanes, increasing storage and queue lengths, centerline hardening, high emphasis crosswalks, and bicycle lane/keyhole improvements.

Gandy Boulevard Bridges Year of Failure Analysis

An additional analysis was performed to determine the year of failure of the existing four (4)-lane typical section (two lanes in each direction), or no-build alternative, to determine when the (6)-lane typical section, or build alternative, is needed over Old Tampa Bay. The capacity analysis used the *2020 Quality/Level of Service Handbook (Q/LOS)* Generalized Annual Average Daily Service Volume Tables (January 2020) for Florida's Urbanized Areas. The AADTs were grown for successive years using the selected growth rate for the bridges determined during the project traffic forecasting development. As previously mentioned, the State's LOS target is LOS D. Therefore, the Gandy Boulevard bridges were assumed to fail when the LOS degrades to LOS E.

The results of the year of failure analysis are summarized in **Table 4.7**, which indicate that the existing four-lane bridge section is expected to fail in Year 2051 based on the Q/LOS analysis.

Table 4.7: Gandy Boulevard Bridge Year of Failure Analysis

Analysis Year	AADT	LOS
2050	64,800	D
2051	66,800	E
2052	68,800	E
2053	71,000	E
2054	73,200	E
2055	75,400	F

*LOS D AADT threshold: 66,200; LOS E AADT threshold: 75,300

4.6 Comparative Alternatives Evaluation

The Alternative Evaluation Matrix is based on environmental effects, R/W needs, project costs, and engineering factors. The matrix quantifies considerations such as potential business and residential relocations, impacts to environmental resources, and the acres of R/W needed for roadway improvements and stormwater facilities. The matrix also quantifies potential impacts to archaeological/historic resources, noise sensitive sites, and threatened and endangered species. The Alternative Evaluation Matrix can be found in **Table 4.8**. The bottom portion of the evaluation matrix

includes a cost estimate for wetland mitigation, R/W acquisition, construction, design and construction engineering and inspection services. These estimates were based on 2022 unit costs.

Table 4.8: Alternative Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative
Estimated Project Impacts		
Potential Relocations		
Number of residential relocations	0	0
Number of business relocations	0	3
Utility Impacts		
Estimated number of utility impacts	0	16
Potential Environmental Effects		
Archaeological/Historic Resources (eligible)	0	3
Public parks, recreation areas, or wildlife refuges	0	4
Wetlands (acres)	0	6.71
Other Surface Waters (acres)	0	1.11
Potential for Federal and/or State Listed Species	None	Medium
Noise-Impacted Receptors[1]	0	159
Contamination sites (medium/high)	0/0	5/1
Right-of-Way Needs		
Right-of-way to be acquired for roadway (acres)	0	11.54
Right-of-way to be acquired for stormwater facilities (acres)	0	1.30
Total Right-of-Way Needs (acres)	**0.0**	**12.84**
Estimated Totals (2022 Costs)		
Design	$0	**$59,857,000**
Right-of-way for roadway widening[2]	$0	**$41,348,000**
Right-of-way for stormwater ponds and floodplain compensation[2]	$0	**$588,000**
Wetlands mitigation	$0	**$1,250,000**
Construction Engineering & Inspection	$0	**$59,857,000**
Construction cost for roadway, bridges, and ponds[3]	$0	**$598,568,000**
Preliminary Total Cost ($) (2022 Costs)	**$0**	**$761,468,000**

1. Number of impacted noise sensitive sites based on the Noise Study Report.
2. Right-of-way cost estimates were prepared in September 2022.
3. Construction costs were prepared using the FDOT LRE system in 2022.

4.7 Selection of the Preferred Alternative

The results of the Alternative Selection Process indicated the Build Alternative within the corridor is the recommended option for all segments. The Build Alternative addresses the existing and forecast traffic congestion within the project limits by reconstructing Gandy Boulevard to create a controlled access facility with uninterrupted free-flow travel lanes. These lanes connect the existing controlled access segment of Gandy Boulevard west of 4th Street North to the existing Selmon Expressway viaduct ramps near the east end of the project in Hillsborough County. They also provide frontage roads to accommodate local traffic accessing adjacent development.

The Build Alternative addresses the deficient bicycle and pedestrian accommodations with proposed 12-foot shared-use paths on both sides of the reconstructed roadway. These proposed shared-use paths are proposed from 4th Street North to the west end of the bridges over Old Tampa Bay and from the east end of the bridges over Old Tampa Bay to west of West Shore Boulevard. A single shared-use path is proposed on the westbound bridge over Old Tampa Bay. The Build Alternative provides pedestrian and bicycle network connectivity between Pinellas and Hillsborough counties by connecting the Pinellas Trail Loop west of 4th Street North to the South Gandy Park Trail at the east end of the project.

The elevated viaduct between Brighton Bay Boulevard NE and San Martin Boulevard balances R/W impacts with construction costs. If additional lanes are needed in the future, the bridge can be widened to the outside. Bridge aesthetics will be addressed during the design phase of the project, as applicable. The location of the frontage roads will allow for proper clearance to the bridge piers. Turn lanes within the intersections may require protection. Vertical clearance requirements will be met to the controlling low member.

The No-Build Alternative was not selected as the preferred alternative as it does not provide capacity, operational, or safety improvements. The No-Build Alternative would cause an increase in congestion and vehicle emissions, leave Gandy Blvd susceptible to flooding during precipitation and hurricane events, as well as not provide pedestrian and bicycle facilities over Old Tampa Bay.

5.0 PROJECT COORDINATION & PUBLIC INVOLVEMENT

5.1 Agency Coordination

Agency coordination for this project has occurred through the ETDM process (ETDM No.: 14355) and Environmental Screening Tool (EST). Numerous local, regional, state, and federal agencies were identified as having an interest in this project through jurisdictional review or expressed interest. These agencies were identified and contacted through the Advance Notification (AN) process at the outset of the project in accordance with PD&E Manual, Part 1, Chapter 3, Preliminary Environmental Discussion and Advance Notification. The AN Package was distributed by the Florida State Clearinghouse on February 27th, 2018, for the project. Coordination with agencies is summarized below:

- Presented a summary of the ongoing study to the Hillsborough Transportation Planning Organization (TPO) board, Citizens Advisory Committee, Technical Advisory Committee, and Bicycle Pedestrian Advisory Committee in June and August 2021.
- Presented to Forward Pinellas (the Pinellas County Planning Organization) Citizens Advisory Committee, Technical Coordination Committee, and Bicycle Metropolitan Pedestrian Advisory Committee in April 2021. The presentations included a summary of the project, existing conditions, and preliminary proposed typical sections.
- Met with the City of Tampa Parks and Recreation Department initially on December 12th, 2021, to discuss the city's planned improvements to A.J. Palonis Jr. Park along the causeway segment of Gandy Boulevard in Hillsborough County.
- Met with the Pinellas County Parks and Conservation Resources Department initially on September 30th, 2021, and again on September 6th, 2022, to discuss a potential agreement for the County to manage part of the area of the causeway segment in Pinellas County for waterfront recreational use. No agreement was reached, and the Pinellas causeway segment remains under the FDOT management for highway maintenance.
- On August 3rd, 2021, a pre-application meeting with the Southwest Florida Water Management District (SWFWMD) was held. Pond siting, anticipated wetland and water quality impacts, and mitigation options were discussed.
- Met with Tampa Bay Estuary Program staff on August 31st, 2021, to discuss use of the Tampa Bay Water Quality Improvement project to address treatment of nutrient loading from the proposed roadway runoff across basins that drain directly to the bay as discussed with SWFMWD.
- On March 21st, 2023, a meeting with the U.S. Coast Guard was held to discuss the project and to coordinate the USCG Bridge Permit, to be applied for during the design phase.

5.2 Public Involvement

A comprehensive Public Involvement Plan (PIP) was developed for this project and prepared under separate cover. The PIP outlines the strategies used to address public involvement and outreach over the course of the study. A project website, https://www.fdotd7studies.com/projects/gandy-4th-to-westshore/, was created to provide the public with project specific information and to give the public an opportunity to make comments and sign up for the project mailing list. A project newsletter was mailed out to all property owners within 300 feet of the centerline in June 2021 and is available on the project

website. Following the June 2021 kickoff newsletter, project website updates, February 2023 public hearing, and MPO meetings, several comments have been received from the public. All comments received have been in support of the project requesting improvements to bicycle and pedestrian safety, and vehicle safety for vehicles exiting a business along with comments regarding localized flooding concerns and requests to be added to the project mailing list. A Comments and Coordination Report has been prepared to fully document the public involvement activities conducted throughout the project.

5.3 Public Hearing

A public hearing was held at the Pinellas Park Performing Arts Center, 4951 78th Ave. N., Pinellas Park, FL 33781 on Tuesday February 28th, 2023, with an option to attend virtually. The public hearing was held to present information to and receive input from stakeholders and interested persons regarding the proposed improvements to Gandy Boulevard in Pinellas and Hillsborough Counties.

The hearing consisted of an open house from 5:30 p.m. to 6:30 p.m. and a formal presentation and public comment period beginning at 6:30 p.m., followed by resuming the open house until 7:30 p.m. FDOT staff and its consultants were available at the public hearing to discuss the project and answer questions. A separate group of FDOT staff was also available for the virtual attendees during the public hearing to answer any questions. A continuously running PowerPoint presentation describing the project and the proposed improvements to Gandy Boulevard was shown during the open house portion of the public hearing, and also available for the virtual attendees prior to the formal portion of the public hearing. Display boards were also available for review at the in-person public hearing location and for review online. A total of 82 people (excluding FDOT and project staff) signed in at the in-person public hearing, and a total of 42 people (excluding FDOT and project staff) signed in at the virtual portion of the public hearing. A total of 36 comments were received: 24 written comments, 11 verbal statements made during the formal portion, and 1 comment made directly to the court reporter.

All comments received are documented in the Comments and Coordination Report. Public comments received during the public hearing comment period were mainly regarding bicycle and pedestrian facilities and safety of its users, traffic operations, potential impacts to businesses, access management for business and residential properties along the project limits, and highway traffic noise. A majority of the comments received were in support of the project or had no opinion on the project's Preferred Alternative. The public comments were considered in the development and refinement of final Preferred Alternative.

Following the public hearing and based on coordination with PSTA, the outside shoulder width along the Gandy mainline was increased from 10 to 12 feet to provide opportunity for bus on shoulder operations in the future. The intent with the bus on shoulder operations is to provide a free flow movement using the outside shoulders to avoid congestion along the Gandy mainline in Pinellas County. This provision will be further evaluated in the design phase of the project.

An additional change following the public hearing included adjusting the northern alignment along the frontage road east/west of the Causeway Frontage Crossing 1 (See Appendix A – Preferred Alternative Concept Plans for location) to avoid impacts to the environmental preservation lands on the north side of the Gandy mainline (See Appendix A – "State Lands").

6.0 DESIGN FEATURES OF THE PREFERRED ALTERNATIVE

This section includes a description of design features of the Preferred Alternative, which may be a refinement of the Build Alternative described in **Section 4** as the result of public hearing comments. The *Preferred Alternative Concept Plans* illustrating the Preferred Alternative can be found in **Appendix A**.

6.1 Engineering Details of the Preferred Alternative

6.1.1 Typical Sections

There are six different typical sections established for the Preferred Alternative which have been developed based on various constraints along the three different corridor segments.

The Preferred Alternative for Segment 1 (Pinellas County Segment) includes three typical sections, Typical Section 1, Typical Section 2, and Typical Section 3.

Typical Section 1, shown in **Figure 6.1**, consists of a controlled access roadway with two 12-foot travel lanes in each direction, varying inside shoulders widths (four feet to eight feet paved), 12-foot paved outside shoulders, and a 42-foot depressed median separated by guardrail. Typical Section 1 provides a frontage road system for local traffic with two 11-foot lanes and curb and gutter along both the north and south sides of the mainline. A 12-foot shared-use path is proposed along the outside of both frontage roads. Typical Section 1 is proposed from 4th Street North to Brighton Bay Boulevard NE and from east of San Martin Boulevard to approximately 3,000 feet east of San Fernando Drive.

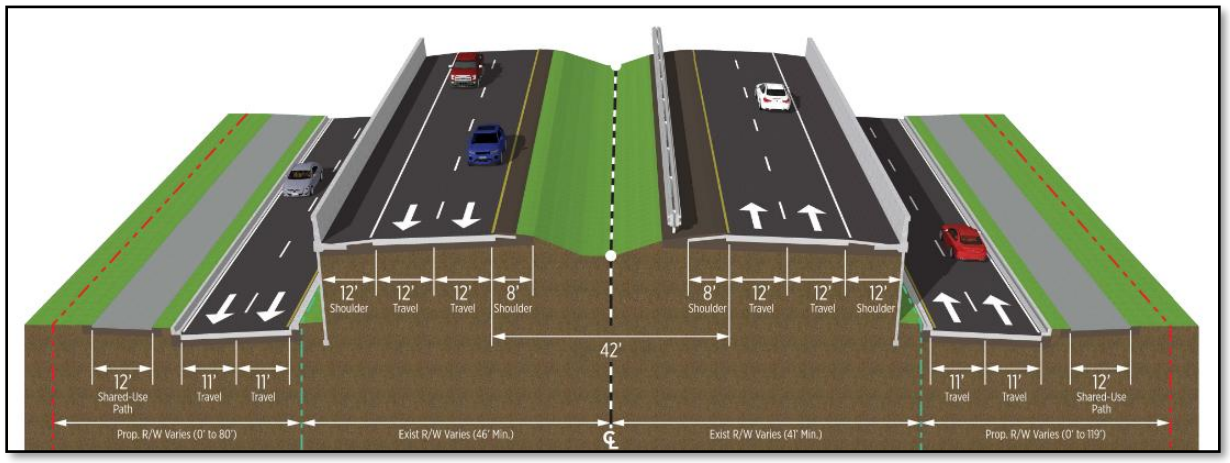


Figure 6.1: Pinellas Segment – MP 1.499 to MP 2.201 (Roadway ID: 15241000)

Typical Section 2, shown in **Figure 6.2**, consists of a viaduct with two 12-foot travel lanes in each direction separated by a concrete barrier wall with six-foot inside shoulders and 12-foot outside shoulders. Similar to Typical Section 1, it provides a frontage road system for local traffic with two 11-foot lanes, curb and gutter, and 12-foot shared-use paths along both sides of the mainline. Typical Section 2 is proposed from Brighton Bay Boulevard NE to east of San Martin Boulevard.

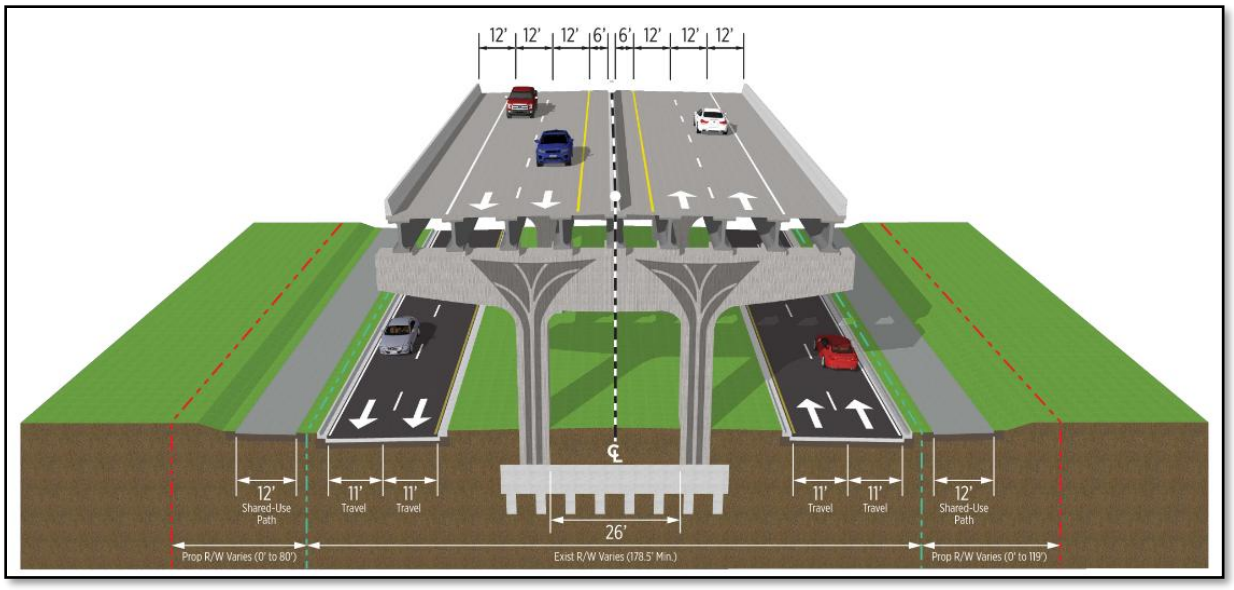


Figure 6.2: Pinellas Segment - MP 2.201 (Roadway ID: 1524100) to MP 7.992 (Roadway ID: 15090000)

Typical Section 3 is a six-lane modified version of the four-lane Typical Section 1 with three travel lanes in each direction, two inside lanes at 11 feet and the outside lane at 12 feet, and ten-foot wide inside shoulders sloped upward. The opposing travel lanes are separated by a barrier wall with a 22-foot median. The outside travel lanes develop from the direct connect access ramps from the local frontage roads which continue over the Gandy bridges. **Figure 6.3** depicts the Typical Section 3 configuration which is proposed from approximately 3,000 feet east of San Fernando Drive to the west end of the Gandy bridges.

Additional details of the proposed roadway typical sections for the Segment 1 Preferred Alternative are discussed in **Section 4.4.1**.

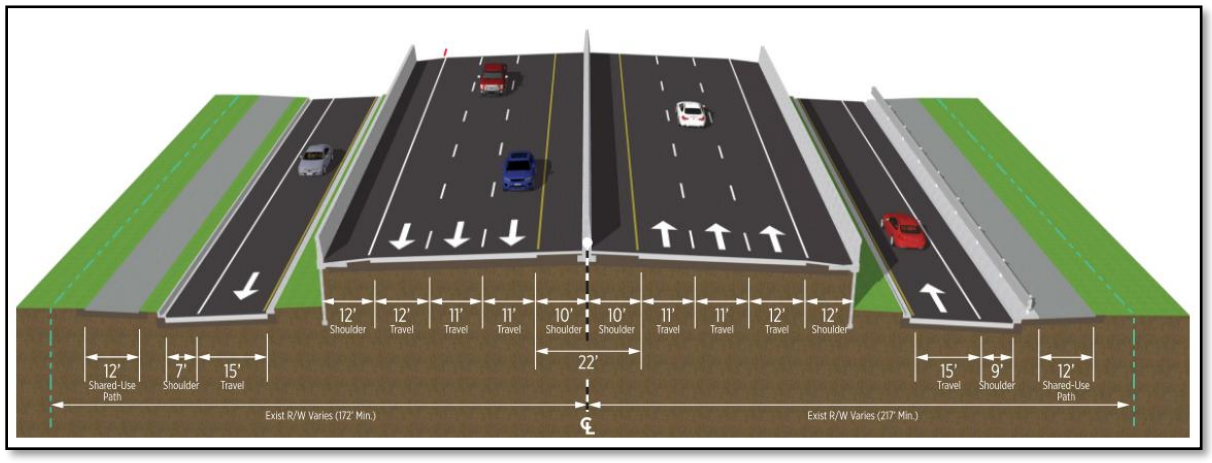


Figure 6.3: Pinellas Segment - MP 7.992 to MP 0.312 (Roadway ID: 15090000)

The Preferred Alternative for Segment 2 (Bay Segment) includes three travel lanes in each direction, varying in width from 11 to 12 feet, ten-foot inside shoulders, 12-foot outside shoulders, and a 16-foot shared-use path on the north side of the westbound bridge. To accomplish this configuration, the existing westbound bridge (#100585) will be widened to both the north and south sides, restriped to accommodate the lane width reduction, and will be placed into service as the eastbound bridge. A new westbound structure will be constructed on the north side of the widened bridge and will include the 12-foot shared-use path with 2-foot clear width on either side separated by a barrier wall. The existing eastbound bridge (#100300) will be demolished. **Figure 6.4** shows Typical Section 4 of the Preferred Alternative.

Additional details of the proposed roadway typical section for the Segment 2 Preferred Alternative are discussed in **Section 4.4.2**.

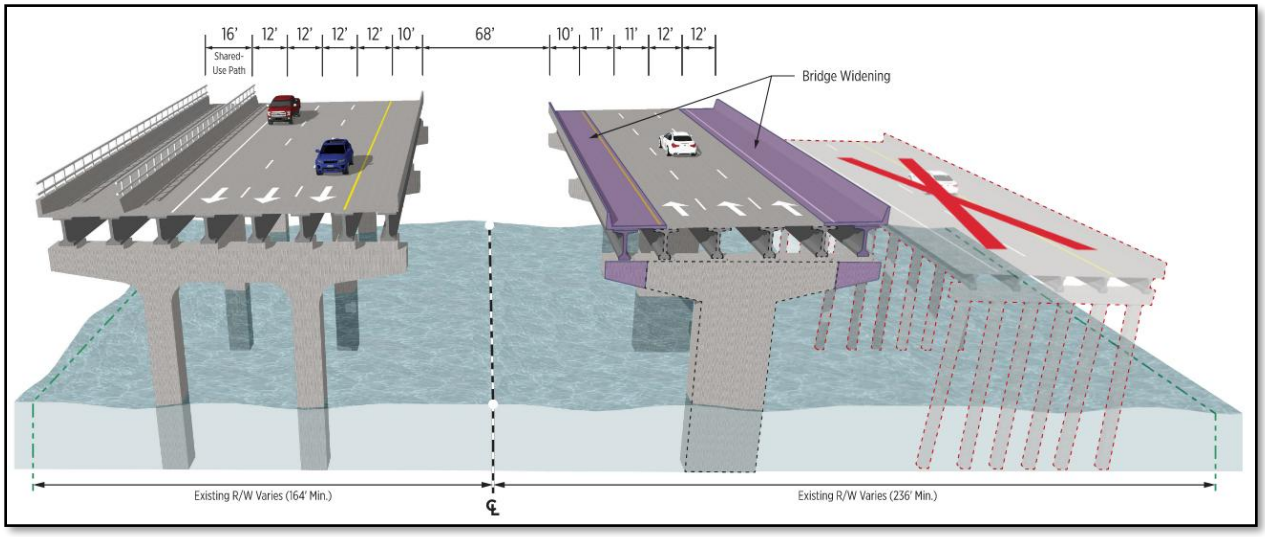


Figure 6.4: Bay Segment – For bridges over Old Tampa Bay

The Preferred Alternative for Segment 3 (Hillsborough County Segment) includes two typical sections, Typical Section 5, and Typical Section 6.

Typical Section 5, shown in **Figure 6.5**, is a transitional typical section with six-lanes proposed between the east end of the Gandy bridges to approximately 1,800 feet west of Bridge Street where the Selmon Expressway two-lane elevated viaduct begins in the median. Typical Section 5 consists of three 12-foot travel lanes in each direction, ten-foot paved inside shoulders bordered with guardrail and barrier wall, and ten-foot paved outside shoulders with barrier wall. The inside travel lanes function as the general use lanes across the Gandy bridges and become auxiliary lanes to serve as the entrance and exit lanes for the Selmon Expressway viaduct in the median. A two-lane undivided frontage road is proposed on the north side to provide access to adjacent property. A 12-foot wide shared-use path is proposed on both sides of the roadway as shown in **Figure 6.5**.

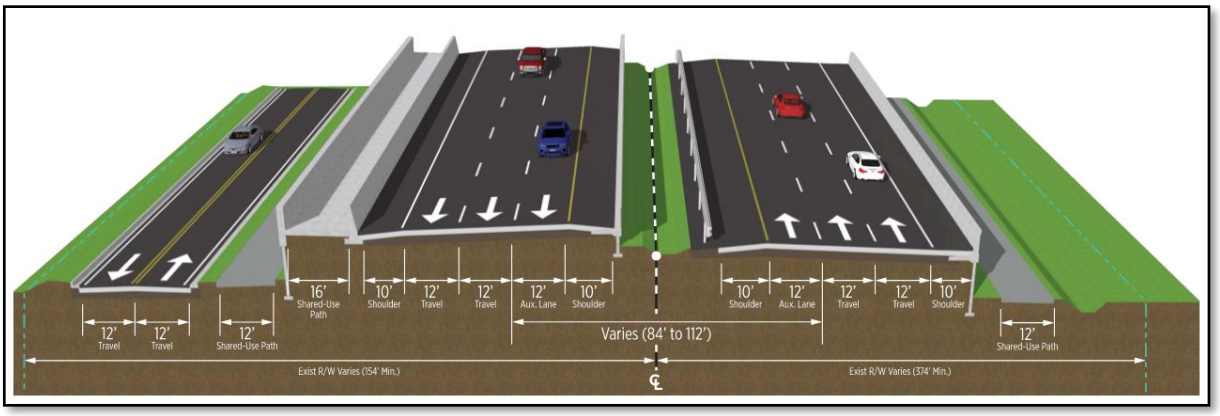


Figure 6.5: Hillsborough Segment – From east end of Gandy bridges to West Shore Boulevard

Typical Section 6 is proposed from approximately 1,800 feet west of Bridge Street to West Shore Boulevard. The proposed improvements within the limits of Typical Section 6 are limited to intersection and access management improvements, and auxiliary lane development to connect the proposed relocated Gandy Boat Ramp turnout approximately 800 feet west of Bridge Street. The proposed typical section will match the existing roadway with a four-lane divided roadway, one ten-foot travel lane and one 11-foot travel lane in each direction. Typical Section 6 will accommodate the existing Selmon Expressway two-lane viaduct in the median with intermittent bridge piers as shown in **Figure 6.6**. The Segment 3 improvements are proposed within the existing FDOT R/W.

The project's *Typical Section Package* is included in **Appendix D.**

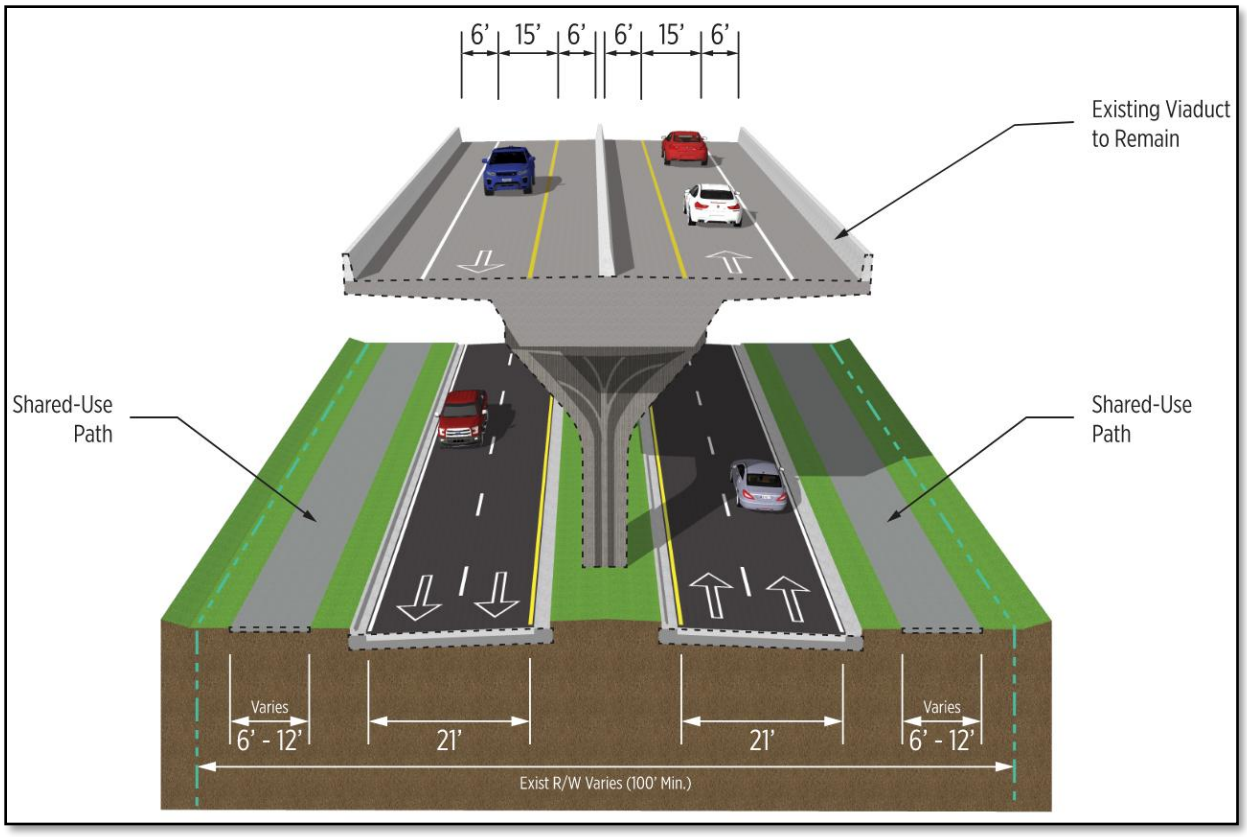


Figure 6.6: Hillsborough Segment – MP 2.960 to MP 3.228 (Roadway ID: 10130000)

6.1.2 Bridges and Structures

The preferred concept at each bridge location was decided based on span arrangement, intersection geometry, roadway and pedestrian safety, pier aesthetics, and R/W limitations. The elevated viaduct and Gandy Boulevard over Old Tampa Bay were discussed thoroughly to determine the preferred bridge concept. The preferred bridge locations for the three Causeway Frontage Crossings along Gandy Boulevard's centerline is necessary for north/south connectivity and frontage road access.

In addition to the new bridges, the Build Alternative includes proposed improvements to the existing westbound bridge over Old Tampa Bay (No. 100585) to accommodate an additional travel lane. The existing eastbound bridge over Old Tampa Bay (No. 100300) is proposed to be demolished.

6.1.2.1 Elevated Viaduct from Brighton Bay Boulevard NE to San Martin Boulevard

The preferred bridge concept for the elevated viaduct was based on two major intersection locations, pier aesthetics, pedestrian safety, sight distance, and R/W impacts. The elevated viaduct consists of fourteen spans with two spans crossing over major intersections at Brighton Bay Boulevard NE and San Martin Boulevard which extend 190 feet and 170 feet, respectively.

The Preferred Alternative provides the required level of service for future conditions along Gandy Boulevard. The alternative of streamlining through traffic over the Brighton Bay Boulevard NE intersection and San Martin Boulevard intersection proved to be the most beneficial alternative.

6.1.2.2 Gandy Boulevard over Causeway Frontage Crossing 1

The Gandy Boulevard frontage road crossing at the west end of the Pinellas Causeway consists of a pair of one-span bridges that extends 153 feet, as shown in **Appendix A**. The proposed condition allows for FIBs to be utilized.

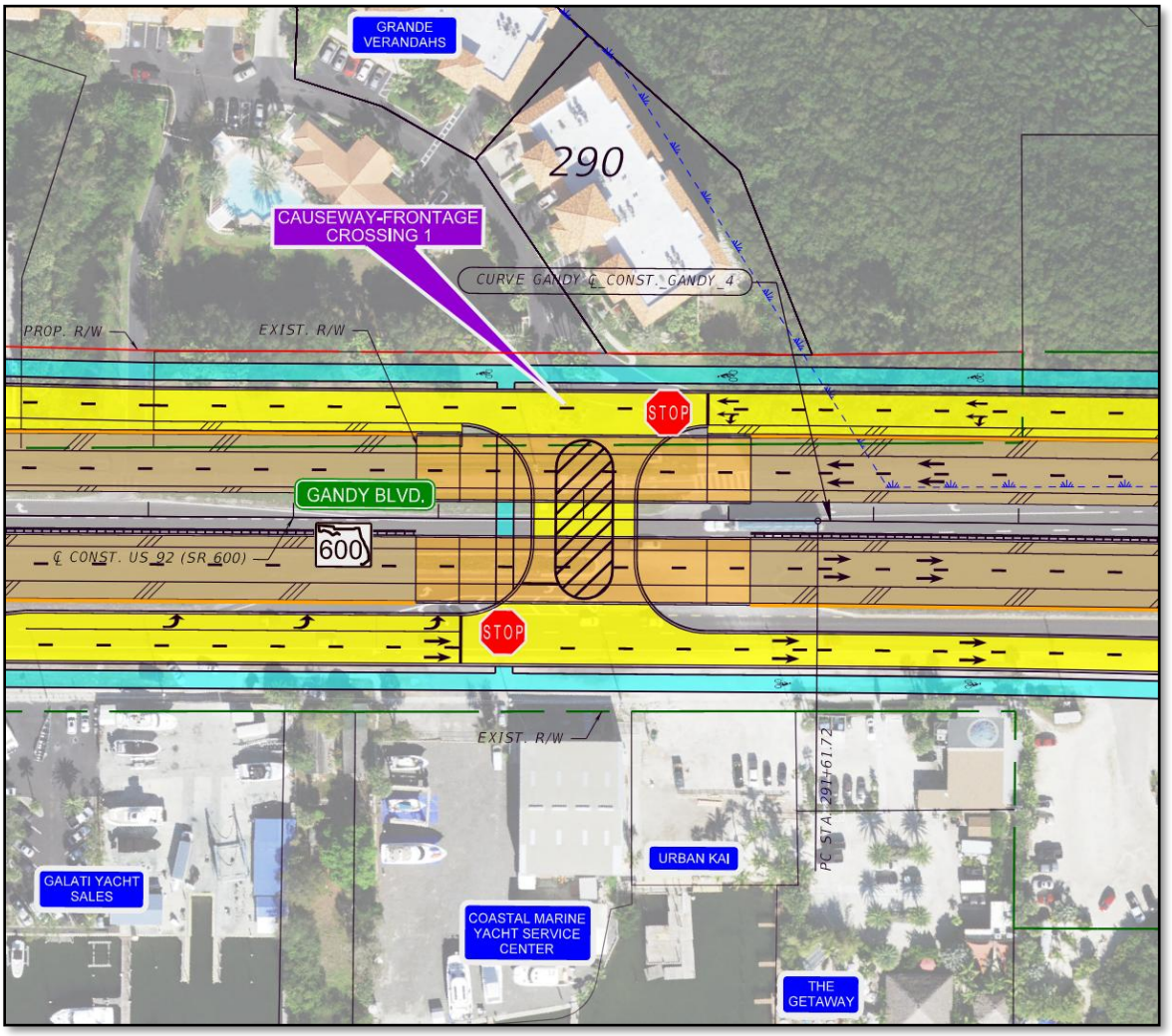


Figure 6.7: Causeway Frontage Crossing 1

6.1.2.3 Gandy Boulevard over Causeway Frontage Crossing 2

The Gandy Boulevard frontage road crossing at the west end of the Pinellas Causeway consists of a single one-span bridge that extends 150 feet, as shown in **Appendix A**. The proposed condition allows for FIBs to be utilized.

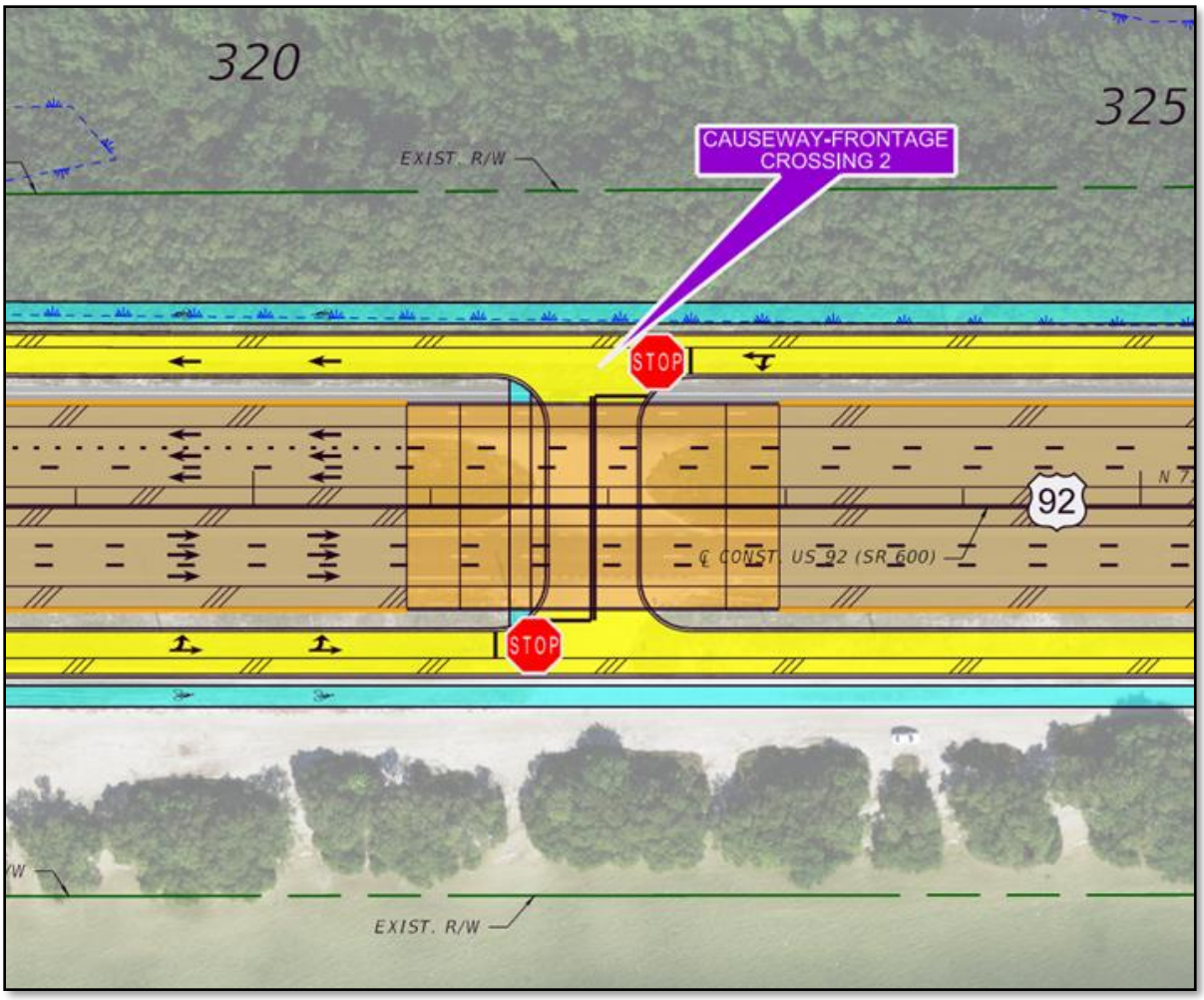


Figure 6.8: Causeway Frontage Crossing 2

6.1.2.4 Gandy Boulevard over Causeway Frontage Crossing 3

The Gandy Boulevard frontage road crossing at the west end of the Pinellas Causeway consists of a single one-span bridge that extends 100 feet. The proposed condition allows for FIBs to be utilized.

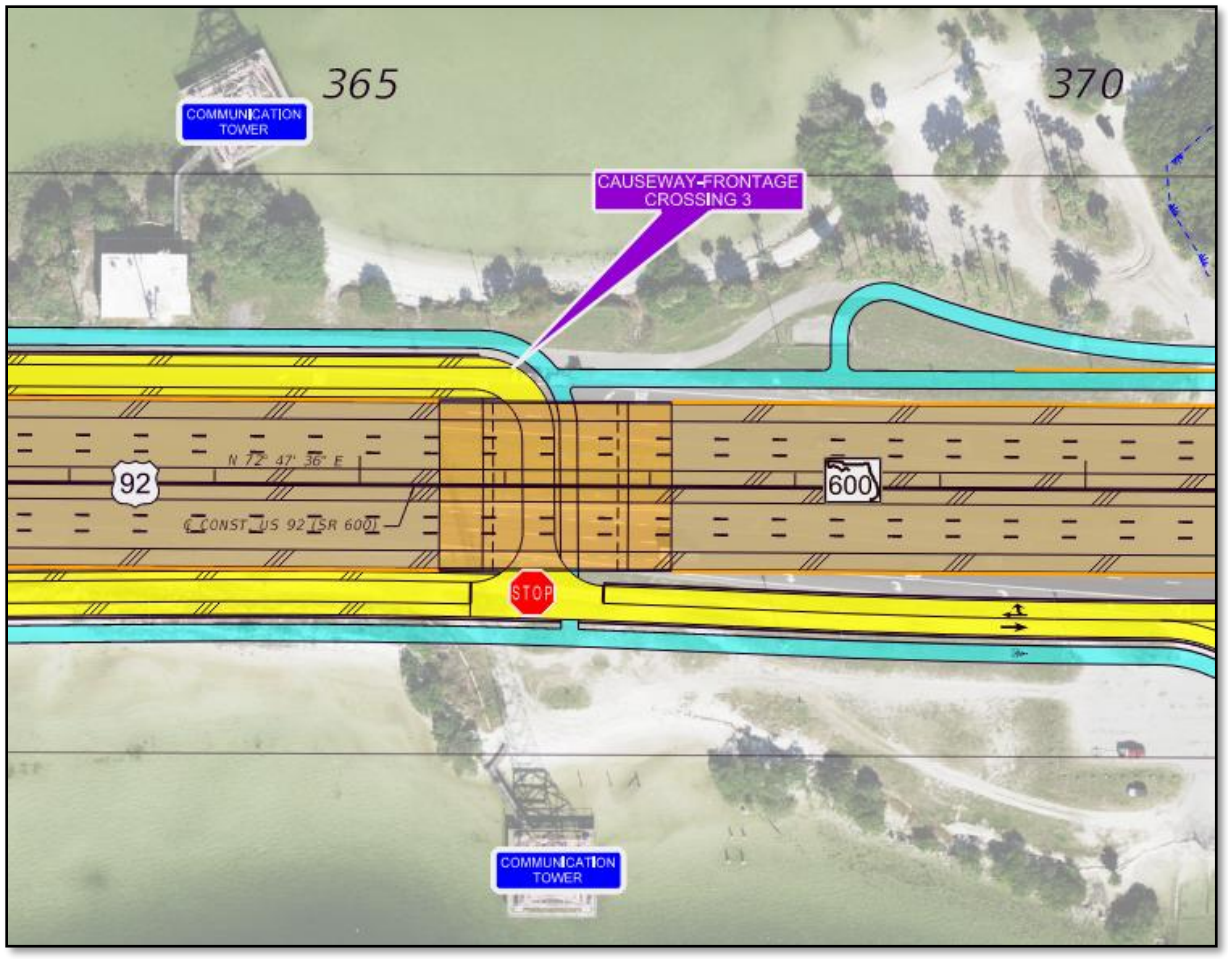


Figure 6.9: Causeway Frontage Crossing 3

6.1.2.5 Gandy Boulevard over Old Tampa Bay

The Preferred Alternative proposed improvements to the Gandy Boulevard crossing over Old Tampa Bay include:

- Widening of the existing westbound bridge (No. 100585) and converting it to the proposed eastbound bridge.
- Demolishing and removing of the existing eastbound bridge (No. 100300), and
- Constructing a new westbound bridge

The proposed widened eastbound bridge (No. 100585) will provide the required level of service for future conditions along Gandy Boulevard.

The proposed westbound bridge will also provide the required level of service for future conditions along Gandy Boulevard. The preferred bridge concept consists of 94-spans utilizing similar span lengths and pier locations as the proposed widened eastbound bridge (No. 100585). The proposed westbound bridge will have a minimum horizontal clearance of 65 feet between the adjacent bridge copings.

The preferred bridge concept for the proposed westbound bridge was established for constructability, allowing the contractor to place barges between the bridge footings and utilize large cranes on the placed barges. With this minimum horizontal clearance, two cranes will have the ability to work in tandem to pick up and place girders on proposed piers and pick up and place proposed concrete piles.

6.1.3 Right-of-Way and Relocations

The additional R/W to construct the Preferred Alternative impacts a total of 21 parcels resulting in three business relocations totaling 11.78 acres of proposed R/W. There are 20 parcels impacted with three business relocations in Pinellas County totaling 11.76 acres of proposed R/W. The proposed R/W along the south side of the proposed frontage road from east of 4th Street North to west of San Martin Boulevard with two business relocations east of Brighton Bay Boulevard NE and one stormwater pond is 6.22 acres. The proposed R/W on the north side of the proposed frontage road from west of Mangrove Cay Lane to approximatively 1,700 feet east of San Fernando Drive NE with one business relocation west of Causeway Frontage Crossing 1 is 5.54 acres. Hillsborough County has one parcel impact totaling 0.02 acres of proposed R/W.

6.1.4 Horizontal and Vertical Geometry

The proposed centerline horizontal alignment for Gandy Boulevard contains twelve horizontal curves within the project limits and is illustrated on the *Preferred Alternative Concept Plans* in **Appendix A**. The horizontal curves have a radius ranging from 2,843 to 23,389 feet with two curves requiring superelevation. **Table 6.1** lists the proposed horizontal curves for this project.

Table 6.1: Proposed Horizontal Geometry

Baseline PI Station	Bearing		Degree of Curvature	Radius (ft)	Length (ft)
	Back	Ahead			
200+00.00	-	S 89° 59' 54.20" E	-	-	-
211+54.24	S 89° 59' 54.20" E	N 73° 58' 29.82" E	2° 00' 55.18"	2,843.00[1]	795.24
					1,500.27
234+62.90	N 73° 58' 29.82" E	N 70° 39' 56.24" E	0° 24' 01.40"	14,310.00	826.53
					1,905.29
262+09.02	N 70° 39' 56.24" E	N 72° 48' 03.36" E	0° 14' 58.80"	22,949.00	855.27
					2,525.12
297+81.92	N 72° 48' 03.36" E	N 75° 53' 41.56" E	0° 14' 58.17"	22,965.00	1,240.10
307+12.53	N 75° 53' 41.56" E	N 72° 47' 36.15" E	0° 29' 57.20"	11,477.00	621.27
					2,631.00
338+72.32	N 72° 47' 36.15" E	N 74° 58' 46.67" E	0° 30' 03.49"	11,437.00	436.41
343+09.15	N 74° 58' 46.67" E	N 72° 47' 36.15" E	0° 30' 00.02"	11,459.00	437.25
					2,786.48
377+14.34	N 72° 47' 36.15" E	N 70° 49' 34.31" E	0° 14' 45.07"	23,305.00	800.15
385+14.49	N 70° 49' 34.31" E	N 72° 47' 36.15" E	0° 14' 45.07"	23,305.00	800.15
					14,977.25
544+82.47	N 72° 47' 36.15" E	N 69° 53' 59.79" E	0° 14' 41.89"	23,389.00	1,181.14
558+21.90	N 69° 53' 59.79" E	S 89° 12' 51.15" E	1° 24' 35.71"	4,063.76[2]	1,481.35
					1,134.64
577+90.17	S 89° 12' 51.15" E	S 88° 12' 18.61" E	0° 29' 53.61"	11,500.00	202.53
1. The horizontal curve with radius 2,843 ft requires a superelevation rate of 4.84%					
2. The horizontal curve with radius 4,064 ft requires a superelevation rate of 3.51%					

The proposed vertical alignment for the Gandy Boulevard mainline was established utilizing the 100-year floodplain elevations and projected sea level rise. The Gandy Boulevard floodplain zone and elevation controls are listed in **Table 6.2**. The NOAA have developed relative sea level rise projections for St. Petersburg released in 2022. There are five sea level scenarios that range from Low to High and the values are listed in **Table 6.3**. The low edge of the proposed pavement will be at the 100-year floodplain elevation plus one foot for projected sea level rise for the Gandy Boulevard mainline. Elevations will range from 10.0 to 12.0 feet within Segment 1 and Elevation 12.0 to 13.0 feet within Segment 3.

Table 6.2: Floodplain Elevations

Segment		100 Year Floodplain Elevation (Zone AE)
Begin Limits	End Limits	
West of 4th St. N.	West of Oak St NE	9.0
West of Oak St. NE	East of Kayak Launch	10.0
East of Kayak Launch	Gandy bridge	11.0
Gandy bridge	East of Gandy bridge	12.0
East of Gandy bridge	East of West Shore Blvd	11.0

Table 6.3: NOAA Sea Level Projections

Projection	Local Relative Sea Level (Feet)	
	Year 2050	Year 2060
High	1.55	2.30
Intermediate High	1.32	1.88
Intermediate	1.13	1.45
Intermediate Low	1.00	1.22
Low	0.86	1.02

The proposed Gandy bridge vertical alignment was established using the 100-year design wave crest elevation including the storm surge elevation and wind setup during a major hurricane event. The maximum water surface elevation in Tampa Bay during a major hurricane event is estimated to be 10.3 feet (North American Vertical Datum; NAVD88) with wave heights of 7.2 feet on top of the elevated water surface. The minimum elevation is 17.5 (NAVD88) plus an additional 1-foot of freeboard to account for the average sea level rise estimated over the life of the structure. The additional freeboard adjusts the design control elevation for the low bridge member to 18.5 (NAVD88), similar to the design controls for the Howard Franklin bridge to the north.

The existing westbound bridge (No. 100585) to be widened includes a relatively flat profile with a finished surface elevation of 24 (NAVD88). During a major hurricane event and the 18.5 (NAVD88) controlling elevation, the existing bridge poses a minimal flooding risk with no inundation of flood water.

6.1.5 Bicycle and Pedestrian Accommodations

The proposed typical section provides a 12-foot shared-use path along both sides of the roadway from 4th Street North to Culbreath Key Way on the north side and to Bridge Street on the south side. There are existing six-foot sidewalks from Culbreath Key Way on the north side and from Bridge Street on the south side to West Shore Boulevard. A 12-foot shared-use path with 2-foot clear width on either side is located on the outside/north side of the proposed westbound Gandy bridge. The shared-use path crosses Gandy Boulevard at five full median openings and crosses underneath Gandy Boulevard at each end of the bridges.

6.1.6 Multi-Modal Accommodations

Pinellas Suncoast Transit Authority (PSTA) Route 9 will utilize the frontage road system between 4th Street North and San Martin Boulevard as a substitute of Gandy Boulevard mainline. Route 100x along Gandy Boulevard between 4th Street North and Dale Mabry Highway will experience less delays traveling along the elevated section between the slip ramp west of Brighton Bay Boulevard NE to the east end of Gandy bridge. The outside shoulder width along the Gandy mainline was increased from 10 to 12 feet to provide opportunity for bus on shoulder operations in the future pending agreement with the Forward Pinellas MPO. The intent with the bus on shoulder operations is to provide a free flow movement using the outside shoulders to avoid congestion along the Gandy mainline in Pinellas County.

6.1.7 Access Management

Gandy Boulevard access is restricted to slip ramp access from 4th Street North to Frontage Road (Sta. 561+60) in the westbound direction and from 4th Street North to the east end of the Gandy bridge in the eastbound direction. The slip ramp configuration does not create weaving conditions on Gandy Boulevard. **Table 6.4** identifies the location of the nine slip ramps within the project limits.

Table 6.4: Slip Ramp Locations

Painted Nose (Theoretical gore) Location	Slip Ramp Description	Painted Nose (Theoretical gore) Location
Westbound Gandy Blvd		
213+06	Gandy Blvd Off-Ramp to Frontage Rd On-Ramp	215+64
226+51	Frontage Rd Off-Ramp to Gandy Blvd On-Ramp	229+51
299+43	Frontage Rd Off-Ramp to Gandy Blvd On-Ramp	307+08
337+79	Frontage Rd Off-Ramp to Gandy Blvd On-Ramp	343+64
546+78	Gandy Blvd Off-Ramp to begin THEA Viaduct	
Eastbound Gandy Blvd		
548+70	End THEA Viaduct to Gandy Blvd On-Ramp	532+35
312+83	Gandy Blvd Off-Ramp to Frontage Rd On-Ramp	302+47
238+24	Gandy Blvd Off-Ramp to Frontage Rd On-Ramp	225+02
217+72	Frontage Rd Off-Ramp to Gandy Blvd On-Ramp	216+29

Table 6.5 shows the access management plan for the Frontage Road system west of Gandy bridge and for Gandy Boulevard east of Gandy bridge.

Table 6.5: Access Management Plan

	Connection		Station	Median Opening
	North Side	South Side		
Frontage Rd System				
	4th St N	4th St N	200+91	Full/Signal
	Brighton Bay Blvd NE	Derby Ln	240+35	Full/Signal
	Mangrove Cay Ln	San Martin Blvd	257+53	Full/Signal
	Causeway Frontage Crossing 1		290+00	Full
	Causeway Frontage Crossing 2		321+91	Full
	Causeway Frontage Crossing 3		366+23	Full
Gandy Blvd		Frontage Rd	537+40	Directional Median Opening WB
	Frontage Rd	Frontage Rd	561+60	Full/Signal
	Culbreath Key Way		568+78	Directional Median Opening EB
		Bridge St	569+18	Directional Median Opening WB
	West Shore Blvd	West Shore Blvd	578+91	Full/Signal

6.1.8 Intersection and Interchange Concepts

The two signalized intersections between 4th Street North and West Shore Boulevard are identified on the *Preferred Alternative Concept Plans* in **Appendix A**. The two signalized intersections are shown at Brighton Bay Boulevard NE and San Martin Boulevard/Mangrove Cay Lane.

6.1.9 Intelligent Transportation System and TSMO Strategies

The concept plans have been developed to allow for the implementation of Intelligent Transportation System (ITS) and TSMO strategies and will be addressed further during the design phase of the project.

6.1.10 Utilities

Utility owners within the project corridor were provided with the concept plans for the Preferred Alternative and requested to provide utility conflict information for probable impact to existing and/or

proposed utility infrastructure. Various utility relocations are anticipated due to the proposed improvements such as grade separation of the Gandy Boulevard mainline, retaining wall systems, bridge structure foundations, signal poles, and other design elements. Most utility owners were unable to provide relocation costs. Utility relocation and impact costs have been estimated and shown below using historical costs working with the UAOs on other projects. Utility owners will provide relocation costs during the design phase of the project when the R/W limits and project impacts are confirmed.

Table 6.6: Utility Relocation Costs

Utility Owner	Utility Size	Relocation Cost	Utility Contact	Phone No.
AT&T	4-inch	$1,000,000	Greg Jacobson	813-342-0512
CenturyLink	3 x 1.25-inch	$1,000,000	John Brugnoli	352-326-1698
Charter Communications (Spectrum)	4-inch	$1,000,000	Andrew Holtzhouse	727-329-2839
City of Tampa Sewer	4 – 8-inch	$20,000	Eric Weiss	813-274-8070
City of Tampa Water	6 – 16-inch	$10,000	Eric Weiss	813-274-8070
City of St. Petersburg	Water: 2 – 24-inch Wastewater: 6 - 8-inch Non-potable: 4 - 8-inch	$500,000	Jeff Rzewnicki	727-892-5384
Duke Energy	N/A	$700,000	Art Gilmore	727-893-9255
Fiberlight	4-inch	$1,000,000	James Reece	214-205-7750
Florida Gas Transmission	4.5-inch	$3,000,000	Joe Sanchez	407-838-7171
Frontier Communications	4-inch	$1,000,000	Kyle Perkins	727-313-6167
WOW! (Knology)	2-inch	$200,000	Dave Hamlin	727-239-0156
MCI	2 x 1.25-inch	$1,000,000	Michael Krol	813-410-4803
Tampa Airport Pipeline	6-inch	$0	Calvin Lockhart	813-839-0426
Tampa Electric Company	2-inch	$100,000	Jason Payne	813-275-3428
TECO Peoples Gas	2 – 4-inch	$500,000	Bolivar Feliz Nunez	813-275-3712
ZAYO	3 x 1.25-inch	$0	Mark Mathis	813-509-2405
Total		**$11,030,000**		

6.1.11 Drainage and Stormwater Management Facilities

The proposed drainage basins are the same as the existing basins. All the basins ultimately outfall to the Old Tampa Bay, which is subject to Total Maximum Daily Load (TMDL) regulations established by the US EPA and TBEP to improve nutrient levels within the watershed area. Basins 1 and 2 discharge to Tinney Creek and both stormwater treatment and attenuation are required. These basins have proposed stormwater management facilities to meet these requirements. Basins 3 and 4 discharge directly to the Old Tampa Bay and are tidally influenced, so stormwater attenuation is not required. In lieu of traditional stormwater treatment methods, it is proposed that these basins utilize credits from the Old Tampa Bay Water Quality Improvement Project for Nitrogen mitigation. The Water Quality Improvement Project was conducted by FDOT to restore historic flow patterns within the Old Tampa Bay and created a ledger of mitigation credits that can be utilized by eligible FDOT projects to offset Nitrogen removal requirements.

Basin 1 is located at the western end of the project in Pinellas County (stations 201+00 to 214+26) and consists of the existing Basin 1. This basin drains to the existing permitted Pond 1100-A1. For the purpose of this study, the pond has been renamed Pond 1 and it is recommended that this pond be expanded within the existing FDOT R/W to accommodate the small amount of additional area that will be routed to it with the proposed Gandy Boulevard Improvements.

Basin 2 (stations 214+26 to 240+35) has the same limits as the existing Basin 2. Pond 2B is the recommended pond site for this basin to provide treatment and attenuation for the entirety of the Basin 2 area and to compensate for the volume lost in the existing permitted swales.

Basin 3 matches the limits of the existing Basin 3 (stations 240+35 to 527+00). In the proposed condition, stormwater runoff will still discharge directly into the bay and in lieu of a traditional stormwater management facility, mitigation credits from the Old Tampa Bay Water Quality Improvement Project will be used.

Basin 4 matches the limits of the existing Basin 4 (station 527+00 to 567+13). It is anticipated that a portion of this basin will continue to drain to the THEA ponds, while the remainder of the basin will utilize mitigation credits from the Old Tampa Bay Water Quality Improvement Project.

In both Basin 3 and Basin 4, locations for potential supplemental swales were identified that can be included in the final design as an optional method of nutrient removal. These can help offset the number of mitigation credits required. The Water Quality Improvement Project has sufficient credits available to meet the nutrient loading needs of Basin 3 and Basin 4 without use of the swales, if desired.

There are five existing cross drains within the project limits, which are summarized in **Section 2.16**. It is anticipated that cross drains 1 through 4 will need to be extended to accommodate the proposed widening of Gandy Boulevard. Cross drain 5 is not anticipated to require extension for this project.

Additional information regarding proposed drainage conditions is documented in the *Pond Siting Report* and *Location Hydraulics Report* prepared for this project. Additional coordination with the SWFWMD will be conducted during the design phase for the potential bus on shoulder use.

6.1.12 Floodplain Analysis

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for Pinellas County (August 24th, 2021) and Hillsborough County (October 7th, 2021) indicate that the entirety of the project lies within Zone AE and Zone VE of the 100-year floodplain with elevations ranging from nine to 14 feet. It is anticipated that floodplain impacts will occur due to proposed roadway fill and extension of the existing cross drains; however, since the floodplains are tidally influenced, floodplain compensation is not required, and no floodplain compensation areas have been identified as part of this study.

Replacement drainage structures for this project are limited to hydraulically equivalent structures which are not expected to increase the backwater surface elevations. The limitations to the hydraulic equivalency being proposed are basically due to restrictions imposed by the geometrics of design, existing development, cost feasibility, or practicability. An alternative encroachment location is not considered since it does not meet the project's purpose and need or is economically unfeasible. Since flooding

conditions in the project area are inherent in the topography or are a result of other outside contributing sources, and there is no practical alternative to eradicate flooding problems in any significant amount, existing flooding will continue, but will not increase as the result of the construction of this project. The proposed improvements will raise the controlled access Gandy mainline improving the flooding vulnerability during a major storm event. Therefore, the raised profile will reduce risk for interruption or termination of emergency service or emergency evacuation routes. It has been determined that this projects encroachment is not significant.

6.1.13 Transportation Management Plan

Careful consideration was taken when determining the offset of the proposed westbound bridge and the proposed widened eastbound bridge. Constructability and feasibility analyses were conducted to determine the appropriate clearance between the two bridge copings. The analyses considered barge placement, crane locations, crane sizes, construction sequencing, and other construction means and methods. Ultimately, the determined horizontal clearance between bridge copings will be a minimum of 65 feet. This clearance allows for a construction barge to fit between the adjacent bridge footings and two large cranes to work in tandem to maneuver the booms to pick up and place proposed piling for driving and place proposed girders on constructed pier caps. **Figure 6.10** shows the constructability assessment.

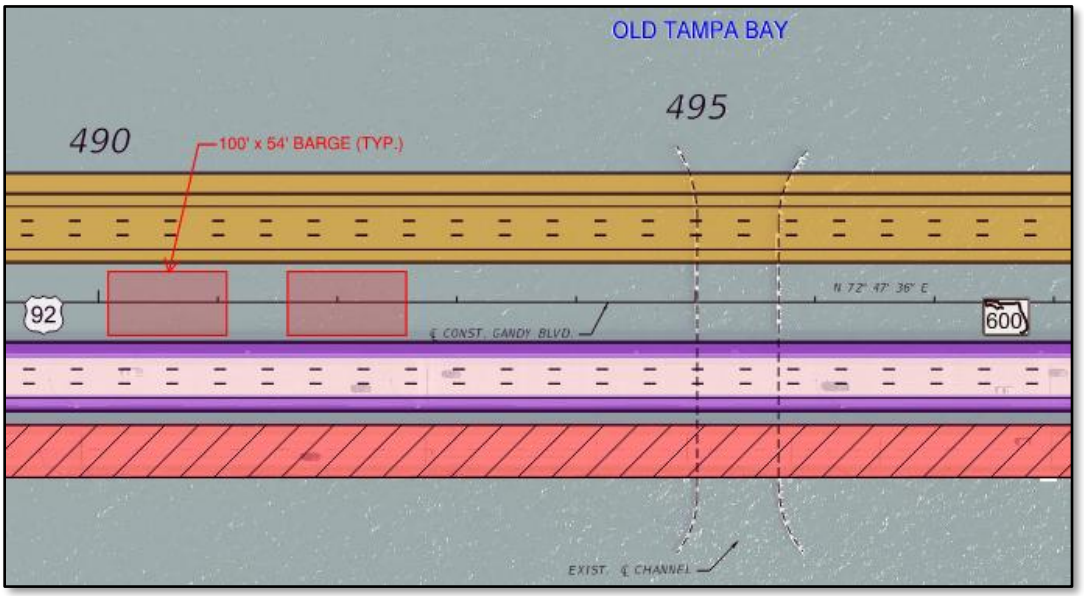


Figure 6.10: Constructability Assessment

Segment 1:

1. Construct eastbound Frontage Road from 4th Street North to Frontage Road crossover bridge. Construct westbound Frontage Road from Oak Street NE to Frontage Road crossover bridge. Construct all five at-grade median openings between Frontage Roads.
2. Temporary – Construct temporary connection from Gandy Boulevard from east end of 4th Street North bridge to eastbound Frontage Road. Construct temporary connection from eastbound

Frontage Road to existing eastbound Gandy bridge. Construct temporary connection from westbound Gandy bridge to westbound Frontage Road.

3. Shift traffic – Shift both eastbound and westbound traffic to Frontage Roads and temporary connections.
4. Construct Gandy Boulevard mainline from Brighton Bay Boulevard NE to Frontage Road crossover.
5. Construct slip ramp from east end of 4th Street North Bridge to eastbound Frontage Road.
6. Shift traffic – Shift eastbound traffic to slip ramp constructed in Step 5.
7. Temporary – Construct temporary connection in the median for westbound Gandy Boulevard from east end of bridge over 4th Street North to east of Oak Street NE.
8. Shift traffic – Shift westbound traffic to temporary connection construction in Step 7.
9. Construct westbound Frontage Road from Oak Street NE to 4th Street North.
10. Temporary – Construct temporary connection from westbound Frontage Road to Gandy Boulevard east of the 4th Street North bridge.
11. Shift traffic – Shift westbound traffic to westbound Frontage Road and temporary connection constructed in Step 10.
12. Construct Gandy Boulevard mainline from 4th Street North bridge to Brighton Bay Boulevard NE.
13. Construct viaduct bridge and Causeway Frontage Crossing bridges.
14. Temporary – Construct temporary connection from westbound Gandy bridge to the westbound Frontage Roads.
15. Shift traffic – Shift westbound traffic to temporary connection constructed in Step 14.
16. Construct Gandy Boulevard mainline between Frontage Road crossover and Gandy bridges.
17. Shift traffic – Shift all traffic to the final location.
18. Remove temporary connection from eastbound Frontage Road to existing Gandy bridge.

Segment 2:

1. Construct new westbound Gandy bridge.
2. Shift traffic – Shift westbound traffic from the existing bridge to new westbound Gandy bridge.
3. Widen existing westbound bridge.
4. Shift traffic – Shift eastbound traffic to the widened Gandy bridge constructed in Step 3 and demo existing eastbound bridge.

Segment 3:

1. Construct driveway connection on north side to US Marine Corps Reserve Center and new at-grade full median under the Selmon Expressway viaduct. Construct eastbound and westbound approaches to the intersection.
2. Shift traffic – Open new full median opening and direct traffic to driveway constructed in Step 1.
3. Construct westbound Gandy Boulevard mainline from Gandy bridges to east of Selmon Expressway viaduct.
4. Westbound Gandy bridge constructed (completed under Segment 2).
5. Shift traffic – Shift westbound traffic to new Gandy bridge.
6. Eastbound Gandy bridge constructed (completed under Segment 2).

7. Construct eastbound Gandy Boulevard between eastbound Gandy bridge and new full median opening.
8. Shift traffic – Shift all traffic to the final location.

The temporary traffic control plan will be developed during the design phase to safely and efficiently move vehicles, bicyclists, and pedestrians around the work zones.

6.1.14 Special Features

6.1.14.1 Mechanically Stabilized Earth (MSE) Walls

Wrap-around mechanically stabilized earth (MSE) walls are proposed at the begin and end bridge abutments at each of the proposed bridge locations. Each wrap-around MSE wall will be installed inside the R/W and is proposed to turn back along each side of the approach roadway as required to contain the embankment material.

In accordance with FDOT Structures Design Guidelines (SDG), the clear distance between the back face of the retaining wall and the front face of the proposed piles must be large enough to ensure the soil reinforcement need not be skewed more than 15 degrees from a position normal to the wall to clear the pile locations.

The required retained height for the permanent MSE walls is estimated based on the difference between the proposed vertical profile and the existing ground. Due to a significant separation in grade, a large quantity of MSE wall will be required within the project limits. In accordance with Section 3.12.3 of the Structures Design Guidelines, the top of the leveling pad will be set at a minimum of two feet below the proposed ground line. The leveling pad can then be stepped as the proposed ground elevation changes to keep the MSE wall area to a minimum.

6.1.15 Design Variations and Design Exceptions

Two design variations are anticipated in the project limits:

- A design variation for shoulder cross slope is proposed along the inside paved shoulder for Typical Section 3 within the Pinellas Segment. The inside shoulder cross slope is proposed to match the adjacent mainline travel lane and slope to the outside. This will eliminate an additional drainage trunk line underneath the median barrier wall which will reduce construction and maintenance costs. It is anticipated the proposed condition will not adversely impact the safety for motorists as it relates to stormwater runoff within these limits.
- A design variation for lane width is proposed for Typical Section 3 within the Pinellas Segment, Typical Section 4 along the eastbound bridge (#100585), and Typical Section 6 within the Hillsborough Segment. Due to the limited R/W along the Pinellas Causeway section and avoidance of additional environmentally sensitive areas, two 11-foot lanes along the inside and one 12-foot lane along the outside are proposed in each direction. The eastbound typical section with lane width reduction will extend across the existing bridge to be widened (#100585). The existing westbound bridge does not allow for additional widening beyond what is currently proposed.

Typical Section 6 proposes to maintain the existing inside lane width at 10 feet to avoid additional R/W impacts to surrounding properties.

- A design variation for median width is proposed for Typical Section 4 within the Pinellas Segment. Due to the limited R/W along the Pinellas Causeway section and avoidance of environmentally sensitive areas, a 22-foot median is proposed, barrier separated with 10-foot inside shoulders. The Gandy Blvd. mainline will be converted to a controlled access roadway with no provisions for median openings and median turn lanes requiring the standard median width.

6.1.16 Cost Estimates

The total estimated project costs for the Preferred Alternative are summarized in **Table 6.7**. The Preferred Alternative LRE Cost Estimate has been included within **Appendix B** which summarizes the construction cost for the project.

Table 6.7: Total Estimated Project Cost

Project Phases	Preferred Alternative
Estimated Total Project Costs (2024 Costs)	
Mitigation	
Wetland Mitigation	$1,213,000
Total Mitigation ($)	**$1,213,000**
Right-of-Way Cost	
Right-of-way acquisition for roadway	$41,348,000
Right-of-way acquisition for stormwater facilities	$588,000
Total Right-of-Way Cost ($)	**$41,936,000**
Construction Cost	
Construction cost for roadway	$67,897,000
Construction cost for drainage	$25,006,000
Construction cost for structures/bridge	$369,144,000
Construction cost for signing & pavement markings	$741,000
Construction cost for signalization	$4,072,000
Construction cost for lighting	$9,503,000
Construction cost for mobilization (10% contingency)	$47,636,000
Construction cost for maintenance of traffic (10% contingency)	$52,400,000
Project Unknowns (15% contingency)	$86,460,000
Total Construction Cost ($)	**$662,859,000**
Preliminary Estimate of Engineering Cost	
Design (10%)	$66,286,000
Construction Engineering & Inspection (10%)	$66,286,000
Total Preliminary Estimate of Engineering Cost ($)	**$132,572,000**
Preliminary Total Cost ($) (2024 Costs)	**$838,580,000**

6.2 Summary of Environmental Impacts of the Preferred Alternative

The Preferred Alternative has been evaluated for its impact on social and cultural makeup of the surrounding area, impacts to the environment, and its ability to meet the purpose and need of this project. **Table 6.8** summarizes the environmental impacts for the Preferred Alternative following the Public Hearing.

Table 6.8: Summary of Environmental Impacts

Evaluation Criteria	Preferred Alternative
Estimated Project Impacts	
Potential Relocations	
Number of residential relocations	0
Number of business relocations	3
Potential Environmental Effects	
Archaeological/Historic Resources (eligible)	6
Public parks, recreation areas, or wildlife refuges	1
Wetlands (acres)	6.58
Other Surface Waters (acres)	1.11
Potential for Federal and/or State Listed Species	Medium
Noise-Impacted Receptors[1]	159
Contamination sites (medium/high)	5/1
Right-of-Way Needs	
Right-of-way to be acquired for roadway (acres)	10.48
Right-of-way to be acquired for stormwater facilities (acres)	1.30
Total Right-of-Way Needs (acres)	**11.78**

6.2.1 Future Land Use

According to the Comprehensive Plan for Unincorporated Hillsborough County Florida Future Land Use and the Comprehensive Plan – Future Land Use & Quality Communities Element for Pinellas County, the study area is predominantly comprised of Residential, Urban Mixed Use, Community Mixed Use, Transitional Use and Preservation lands. The primary intent of the Future Land Use Map (FLUM), shown in **Figure 6.11** and **Figure 6.12**, is to guide future development to those locations where the servicing requirements and impacts of urbanization can be efficiently and cost effectively managed. The intended effect is to establish a direction and order for future development within unincorporated Hillsborough County and Pinellas County by discouraging those activities and actions which have promoted urban sprawl in the past. Since the majority of the project is located within the existing R/W and existing access to surrounding land uses will be maintained, there are no major land use changes associated with this project and it is consistent with the future land use map.

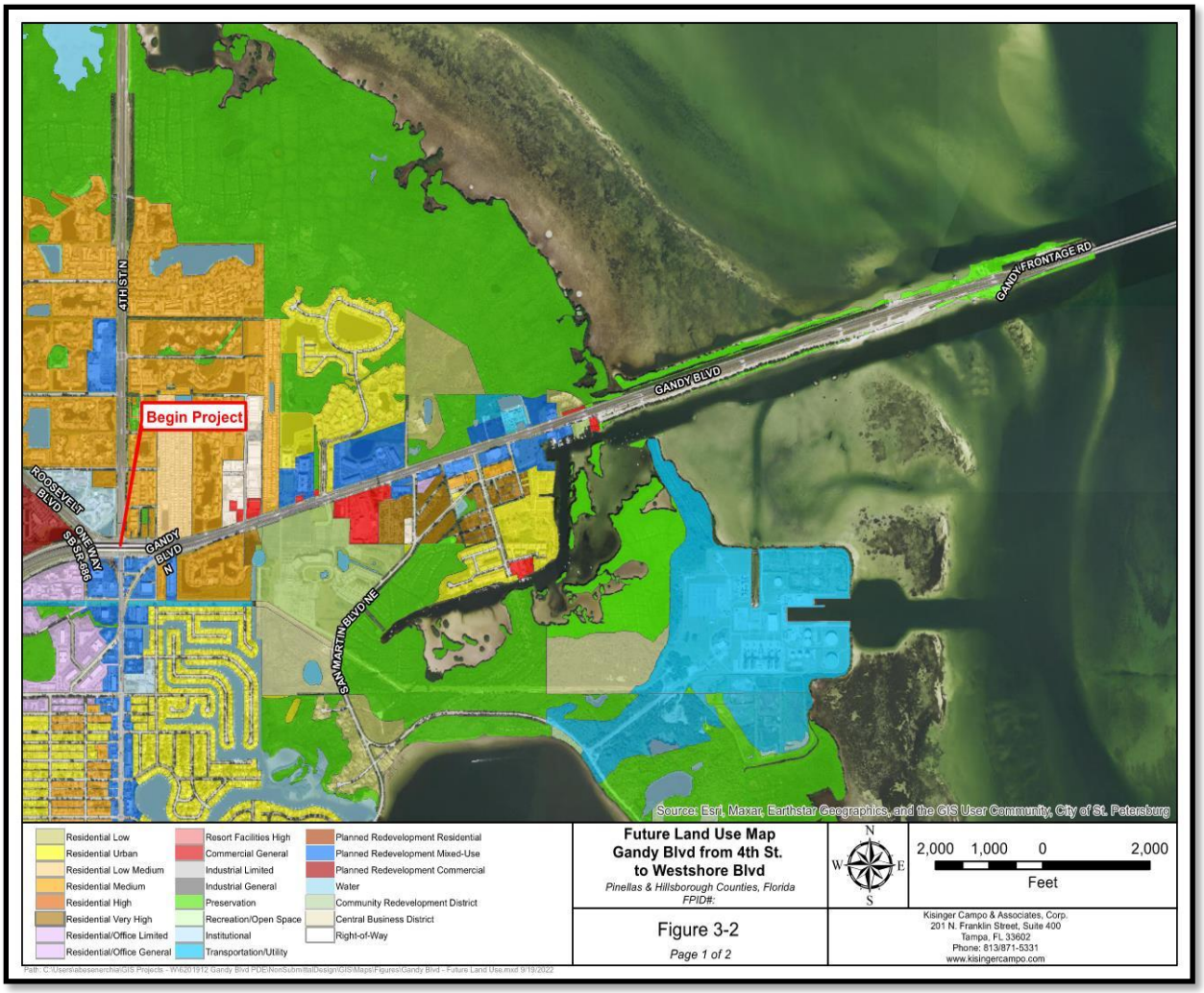


Figure 6.11: Future Land Use Map (Segment 1)

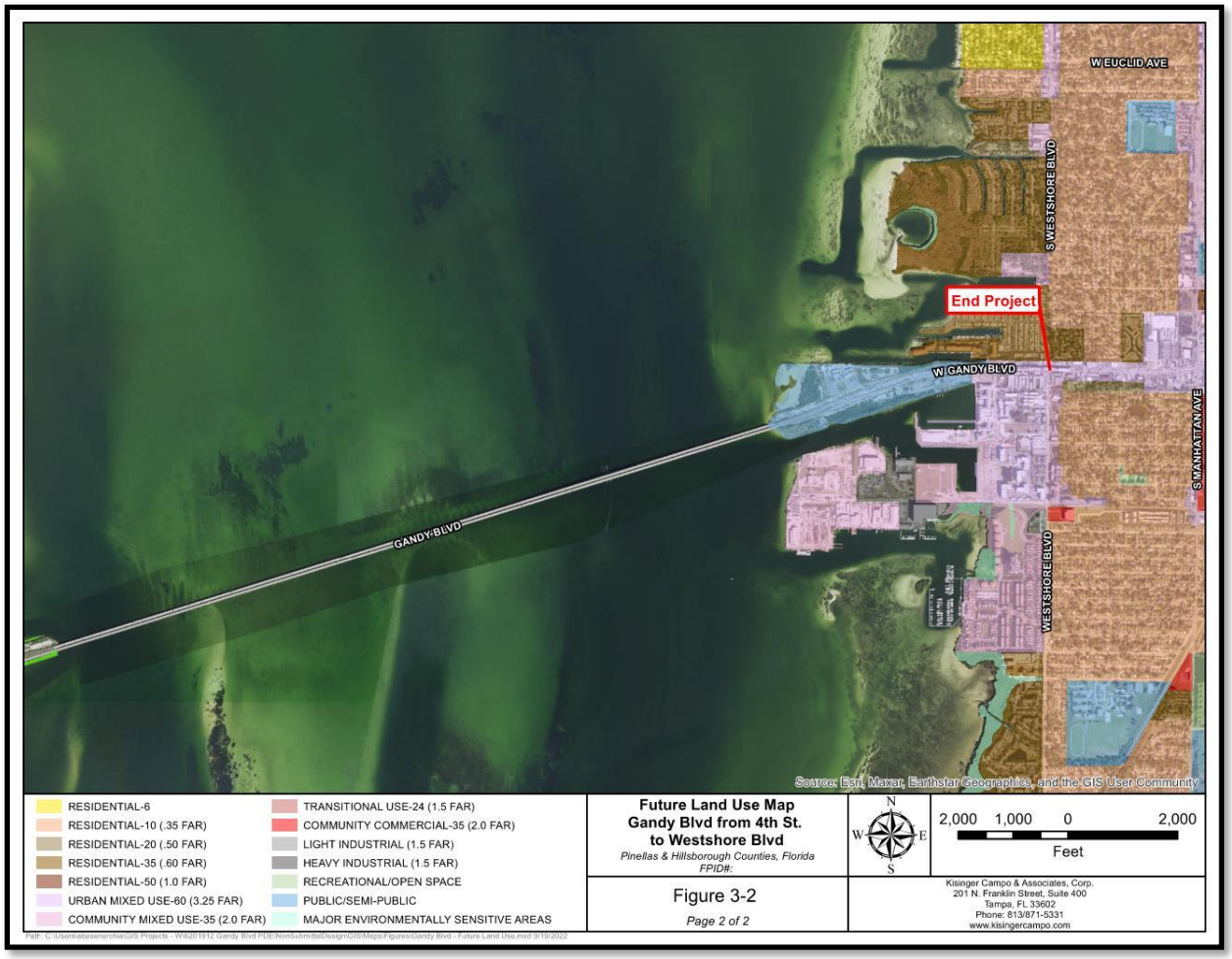


Figure 6.12: Future Land Use Map (Segment 2 and Segment 3)

6.2.2 Section 4(f)

The following evaluation was conducted pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, and 23 CFR Part 774.

There are three Section 4(f) resources within and adjacent to the project study area. The Gandy Blvd Preferred Alternative includes roadway and intersection improvements that will be constructed mostly within the existing FDOT R/W. Additional R/W will be required for improvements along Gandy Blvd and for one stormwater management facility site along the corridor in Pinellas County.

Based on supporting technical material located in the project file, the Preferred Alternative meets the requirements for a Section 4(f) No Use determination which has been made for the Tampa Bay Westshore Paddling Trail. Additionally, a historic Section 4(f) No Use determination has been made for the Derby Lane Historic District since the proposed acquisition is located on a non-contributing part of the historic district.

Furthermore, Section 4(f) has been determined Not Applicable for the Friendship Trail, Pinellas Trail Loop, A.J. Palonis Jr. Park, Gandy Park South, and W. Gandy Blvd Trail due to all of them being located on FDOT R/W and having a primary use designated as transportation. Information on each resource, description of the project's involvement with the resource and justification for the Not Applicable determination is located in the project file.

The FDOT acknowledges a late discovery prior to the public hearing of a potential impact to a potential Section 4(f) protected resource which was determined to also be state-owned conservation lands, the Gateway Project Upland Land Lease No. 3376. Following the public hearing, the preferred alternative was modified by incorporating a gravity wall in order to avoid impacts to this property. There will be no acquisition or occupation of land from the protected property, on either a temporary or permanent basis. Additionally, there are no meaningful proximity impacts to the protected property, and there will be no impacts to the access and usage of the protected property. The facility will not be used for construction, staging, storing, stockpiling, or any other purpose. Therefore, the project will have No Use of the Gateway Project Upland Lease No. 3376.

6.2.3 Cultural Resources

A Cultural Resource Assessment Survey (CRAS) (August 2022), prepared under separate cover, was completed to assess the project's involvement with cultural resources. The archaeological survey of the existing and proposed R/W identified no archaeological sites or archaeological occurrences. One previously recorded ineligible National Register of Historic Places (NRHP) archaeological site (8PI01888) is within the Gandy Boulevard R/W, but no evidence of this resource was found. The CRAS also identified and evaluated 44 historic buildings or structures within the Area of Potential Effects (APE). These resources include 19 previously recorded and 25 newly recorded historic resources. Within the APE, the Homes of Regency Cove (8HI13647) was recommended to be eligible for listing on the NRHP by the State Historic Preservation Officer (SHPO) on December 13th, 2016. There are three potentially eligible structures that contribute to this resource within the APE: 8HI13701, 8HI13702, and 8HI13703. The Yardage Unlimited (8PI00487) was also previously recommended eligible for NRHP listing on June 2nd, 1995. The project will not directly or indirectly impact the Homes of Regency Cove (8HI13647), its three contributing structures, or the Yardage Unlimited (8PI00487), and will not have an adverse effect on any of these resources. Furthermore, the Derby Lane Historic District (8PI12021) was recommended eligible for NRHP listing on May 30th, 2012, by SHPO. The project proposes improvements within the historic district boundary of Derby Lane (8PI12021), the improvements which includes adding a shared-use path will require the acquisition of approximately 98.3 feet of R/W. This R/W acquisition will remove part of the Derby Lane parking lot, which is a non-contributing feature of the NRHP-eligible historic district (8PI12021) and does not contain historic fabric associated with the historic dog track. The proposed work will be at grade and not impact the viewshed. Therefore, the proposed improvements will be consistent with the current appearance of the historic district and will not have an adverse effect on Derby Lane Historic District (8PI12021). In compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, SHPO found the CRAS complete and sufficient and provided concurrence on September 26th, 2022, with the CRAS recommendations and findings.

6.2.4 Wetlands

The project's involvement with wetlands and other surface waters was assessed and documented in the *Natural Resources Evaluation (NRE) Report (February 2023)* prepared for this study under separate cover. This project will impact wetlands and other surface waters that are regulated under State and Federal regulations. Proposed pond sites have been located to avoid wetland impacts.

An assessment was performed for wetlands and other surface waters in accordance with the Uniform Mitigation Assessment Method (UMAM) pursuant to Chapter 62-345, F.A.C., to determine the functional value provided by the wetlands and other surface waters and the amount of mitigation required to offset adverse impacts. Other surface waters classified as permitted reservoirs were not included in the assessment as mitigation will not be required for impacts to these other surface waters. The Preferred Alternative will directly impact approximately 6.71 acres of wetlands and 1.11 acres of other surface waters. Secondary impacts to adjacent wetlands are approximately 4.02 acres. The total project impacts result in a functional loss of 5.55 units for state and federal jurisdictional wetlands. Following the public hearing, modifications were made to the Preferred Alternative to address public comments and to avoid State Lands. This resulted in the Preferred Alternative having a direct impact to approximately 6.58 acres of wetlands and 1.11 acres of other surface waters. Secondary wetland impacts resulted in a total of 4.03 acres. The reduction in total wetland impact acreage also resulted in a functional loss total for the Preferred Alternative equaling 5.39 units of state and federal wetlands.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. The study area is located within the Tampa Bay Drainage Regulatory Basin. Currently, this basin has at least one mitigation bank (Tampa Bay Mitigation Bank) with credits available for both state and federal mitigation. In addition, the Old Tampa Bay Water Quality Improvement Project has available credits that may be used for mitigation of seagrass impacts for this project.

6.2.5 Protected Species and Habitat

The project corridor was evaluated for the presence of potentially occurring protected species in accordance with the Endangered Species Act (ESA) of 1973, as amended, and the Florida Endangered and Threatened Species Act, Section 379.2291, Florida Statutes (F.S.), and the FDOT PD&E Manual. The likelihood of each species occurring within the project corridor was evaluated based on historic ranges, literature review, aerial photography interpretation to identify suitable habitat, and field investigations. The proposed project has potential to involve several state and/or federally listed protected species and their habitat. These species and their anticipated involvement are identified in the NRE Report (February 2023) prepared for this study under separate cover. Following the public hearing, modifications were made to the Preferred Alternative to address public comments and to avoid State Lands. This did not result in a change to listed species effect determinations as documented in the NRE Report (February 2023). A complete list of listed species have been included in Table 6.9 and Table 6.10.

Table 6.9: Effect Determinations for Federally-Listed Species

Scientific Name	Common Name	Federal Listing Status	Effect Determination
Calidris canutus rufa	Red knot	Threatened	May affect, not likely to adversely affect
Charadrius melodus	Piping plover	Threatened	May affect, not likely to adversely affect
Laterallus jamaicensis	Eastern black rail	Threatened	No effect
Mycteria americana	Wood stork	Threatened	May affect, not likely to adversely affect
Trichechus manatus	West Indian manatee	Threatened	May affect, not likely to adversely affect
Crocodylus actus	American crocodile	Threatened	May affect, not likely to adversely affect
Caretta caretta	Loggerhead turtle	Threatened	May affect, not likely to adversely affect
Chelonia mydas	Green sea turtle	Endangered	May affect, not likely to adversely affect
Drymarchon couperi	Eastern indigo snake	Threatened	May affect, not likely to adversely affect
Lepidochelys kempii	Kemp's Ridley turtle	Endangered	May affect, not likely to adversely affect
Acipenser oxyrinchus desotoi	Gulf sturgeon	Threatened	May affect, not likely to adversely affect
Manta birostris	Giant manta ray	Threatened	May affect, not likely to adversely affect
Pristis pectinata	Smalltooth sawfish	Endangered	May affect, not likely to adversely affect
Bonamia gradiflora	Florida bonamia	Threatened	No effect
Campanula robinsiae	Brooksville bellflower	Endangered	No effect
Chionanthus pygmaeus	Pygmy fringe-tree	Endangered	No effect
Chrysopsis floridana	Florida golden aster	Endangered	No effect

Table 6.10: Effect Determinations for State-Listed Species

Scientific Name	Common Name	State Listing Status	Effect Determination
Athene cuniclaria floridana	Florida burrowing owl	Threatened	No adverse effect anticipated
Charadrius nivosus	Snowy plover	Threatened	No adverse effect anticipated
Egretta caerulea	Little blue heron	Threatened	No adverse effect anticipated
Egretta rufescens	Reddish egret	Threatened	No adverse effect anticipated
Egretta tricolor	Tricolored heron	Threatened	No adverse effect anticipated
Haematopus palliatus	American oystercatcher	Threatened	No adverse effect anticipated
Platalea ajaja	Roseate spoonbill	Threatened	No adverse effect anticipated
Rychops niger	Black skimmer	Threatened	No adverse effect anticipated
Sternula antillarum	Least tern	Threatened	No adverse effect anticipated
Gopherus polyphemus	Gopher tortoise	Threatened	No adverse effect anticipated
Calopogon multiflorus	Many-flowered grass-pink	Threatened	No effect anticipated
Centrosema Arenicola	Sand butterfly pea	Endangered	No effect anticipated
Lechea cernua	Nodding pinweed	Threatened	No effect anticipated
Linum carteri var. smallii	Small's flax	Endangered	No effect anticipated
Nemastylis floridana	Celestial lily	Endangered	No effect anticipated
Nolina atopocarpa	Florida beargrass	Threatened	No effect anticipated
Pteroglossaspis ecristata	Giant orchid	Threatened	No effect anticipated

Osprey nests were identified within the project area, they are not anticipated to interfere with project construction. If nest removal is deemed necessary, FDOT will remove nests during the non-nesting season.

Strategic Habitat Conservation Areas (SHCA) occur throughout the project corridor, however no regulatory action is required for impacts.

Consultation with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), and coordination with the FWC was initiated prior to the February 2023 public hearing. The USFWS concurrence was received on March 31, 2023, and a FWC letter agreeing with the determinations of effect was received on March 22, 2023. Due to specifics of the bridge design and potential shoreline armoring details not being known until the design phase and details on potential construction methods, Section 7 Consultation with NMFS has not been completed during the PD&E study.

The NMFS did find the NRE accurate and complete at this stage, but did request the implementation of "ramp-up" procedures during in-water pile driving. Therefore, FDOT has committed that a ramp-up procedure will be utilized at the beginning of each pile-driving event, and a ramp-up procedure is also required for impact hammer proofing of any pipe piles installed with a vibratory hammer during construction within Old Tampa Bay. With the project commitments, the project is not anticipated to result in a jeopardy opinion for any listed species.

Based on coordination with NMFS, FDOT commits to reinitiating consultation during design and permitting with NMFS for the following species: sea turtles, smalltooth sawfish, giant manta ray, and gulf sturgeon; and providing the information necessary to determine the type, degree, and extent of impacts to listed species potentially adversely impacted by the proposed project. FDOT will develop mitigation measures in consultation with NMFS to offset unavoidable impacts. Completion of consultation and documentation of the project's compliance with the avoidance, minimization and mitigation will be provided by FDOT in a subsequent project re-evaluation prior to each segment advancing to construction.

6.2.6 Essential Fish Habitat

Since Essential Fish Habitat (EFH) has been identified within the study area, an EFH Assessment was conducted in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and the FDOT PD&E Manual. The EFH Assessment is included in the NRE Report (*February 2023*) prepared for this study under separate cover. The Preferred Alternative will impact approximately 7.1 acres of wetlands and surface waters designated as EFH. The EFH habitats being directly impacted include 0.002 acres of seagrass, 0.388 acres of substrate, and 6.71 acres of mangrove swamps. Following the project's public hearing, modifications were made to the Preferred Alternative to address public comments and to avoid State Lands. The Preferred Alternative's EFH impact total was reduced due to a reduction in mangrove swamp impacts from 6.71 acres to 6.58 acres. As a result, the Preferred Alternative's revised EFH impact total is 6.97 acres. The potential impacts to EFH in the project area has been minimized through the removal of the previous bridge, along with utilizing existing filled causeways for bridge approaches and roadway. Compensatory mitigation for unavoidable impacts will be completed through the use of mitigation banks.

The proposed project will not have significant direct or indirect impacts to EFH, resulting in no representative species or life stages of a species being significantly impacted. Therefore, the FDOT has determined the project will have more than minimal, but less than substantial effects on EFH.

NMFS provided comments on the NRE. Since specifics of the bridge design and potential shoreline armoring details will not be known until the design phase along with potential construction methods, EFH Consultation with NMFS has not been completed during the PD&E study.

NMFS comment on the NRE stated "there will be a need to coordinate with NMFS staff regarding the selection of appropriate compensatory mitigation to offset impacts to mangrove and seagrass functional losses, once impacts" are finalized. FDOT commits to reinitiating consultation during design and permitting with NMFS for EFH; and providing the information necessary to determine the type, degree, and extent of impacts to EFH potentially adversely impacted by the proposed project. FDOT will develop mitigation measures in consultation with NMFS to offset unavoidable impacts. Completion of consultation

and documentation of the project's compliance with the avoidance, minimization and mitigation requirements for the impacted resources will be provided by FDOT in a subsequent project re-evaluation prior to each segment advancing to construction. With the project commitments, the project is not anticipated to result in significant adverse effects to the EFH of managed species. Consultation with NMFS will continue during the environmental permitting phase of the project.

6.2.7 Highway Traffic Noise

A Noise Study Report (NSR) (August 2023) was prepared under separate cover for this project.

A total of 469 receptors were evaluated within 25 common noise environments (CNEs). The receptors were evaluated for 457 residences, 7 recreational areas, 3 restaurants, a television studio, and a public meeting room. The results of the analysis show that the existing year 2020 exterior traffic noise levels range from 43.0 to 67.6 dB(A), and the interior traffic noise levels at the television station and a public meeting room are predicted to be 31.1 and 39.2 dB(A). In the future year 2050 for the Build Alternative, exterior traffic noise levels are predicted to range from 45.2 to 70.6 dB(A), and the interior levels at the television station and public meeting room are predicted to be 39.0 and 43.8 dB(A).

Based on these results, highway traffic noise levels do exceed the Noise Abatement Category (NAC) in the future with the proposed project improvements at 159 of the evaluated receptors. Compared to existing conditions, the proposed improvements are not expected to increase traffic noise levels more than 9.2 dB(A) at any receptor. As such, the project would not substantially increase highway traffic noise (i.e., 15 dB(A) or more).

Noise barriers were evaluated as potential abatement measures for all impacted noise sites and noise barriers were determined to be cost reasonable and feasible at the following locations:

- Vantage Point Apartments
- Gateway Mobile Home Park
- Sienna Bay Apartments

Additionally, noise barriers were determined to not be a feasible or reasonable traffic noise abatement method at 6 of the 9 impacted CNEs which include The Grande Verandahs, Peridot Palms, Tortuga Pointe, Marina Pointe Condominiums, Westshore Club II Condominiums, and Culbreath Key Bayside Condominiums Common Area.

The FDOT is committed to the construction of noise barriers at the three locations listed above, contingent upon the following:

- Detailed noise analysis during the final design process supports the need for, and the feasibility and reasonableness of providing the barriers as noise abatement;
- The detailed analysis confirms the cost of the noise barrier would not exceed the cost effective criteria;
- All safety and engineering conflicts or issues related to construction of a noise barrier are resolved;

- The resident/property owners benefited by the noise barrier desire that the noise barrier be constructed.

Final recommendations of the construction of abatement measures will be determined during the project's final design phase and will consider the results of design phase public involvement activities.

6.2.8 Contamination

A Level 1 contamination evaluation was completed for the study and a *Contamination Screening Evaluation Report (CSER) (February 2023)* was prepared under separate cover to document potential contamination concern along the project corridor.

Based on the methodologies performed as part of this study, 22 potential contamination sites were identified as having the potential for hazardous material or petroleum impacts. Of these 22 sites, 14 received an initial risk rating of Low, and six received an initial risk rating of Medium or High. Five sites were rated as Medium, and they operate as active gasoline stations except for one location that is now a vacant lot. The Medium rated sites are prior or ongoing fueling operations and must be reviewed again prior to the commencement of construction activities. One site was rated as High, and this site is an active gas station (Mobil-Whiteway #545) with ongoing groundwater remedial actions for a prior petroleum discharge in 1988. As a result, there is potential for benzene at the site. The presence of this material would require special handling, management, and removal during de watering activities, if required during construction.

For the Medium and High rated sites, Level II testing is recommended to verify or determine the extent of impacts. For the Medium and High rated sites, soil and groundwater samples are recommended to evaluate petroleum contamination within the existing or proposed R/W.

7.0 TECHNICAL DOCUMENTS

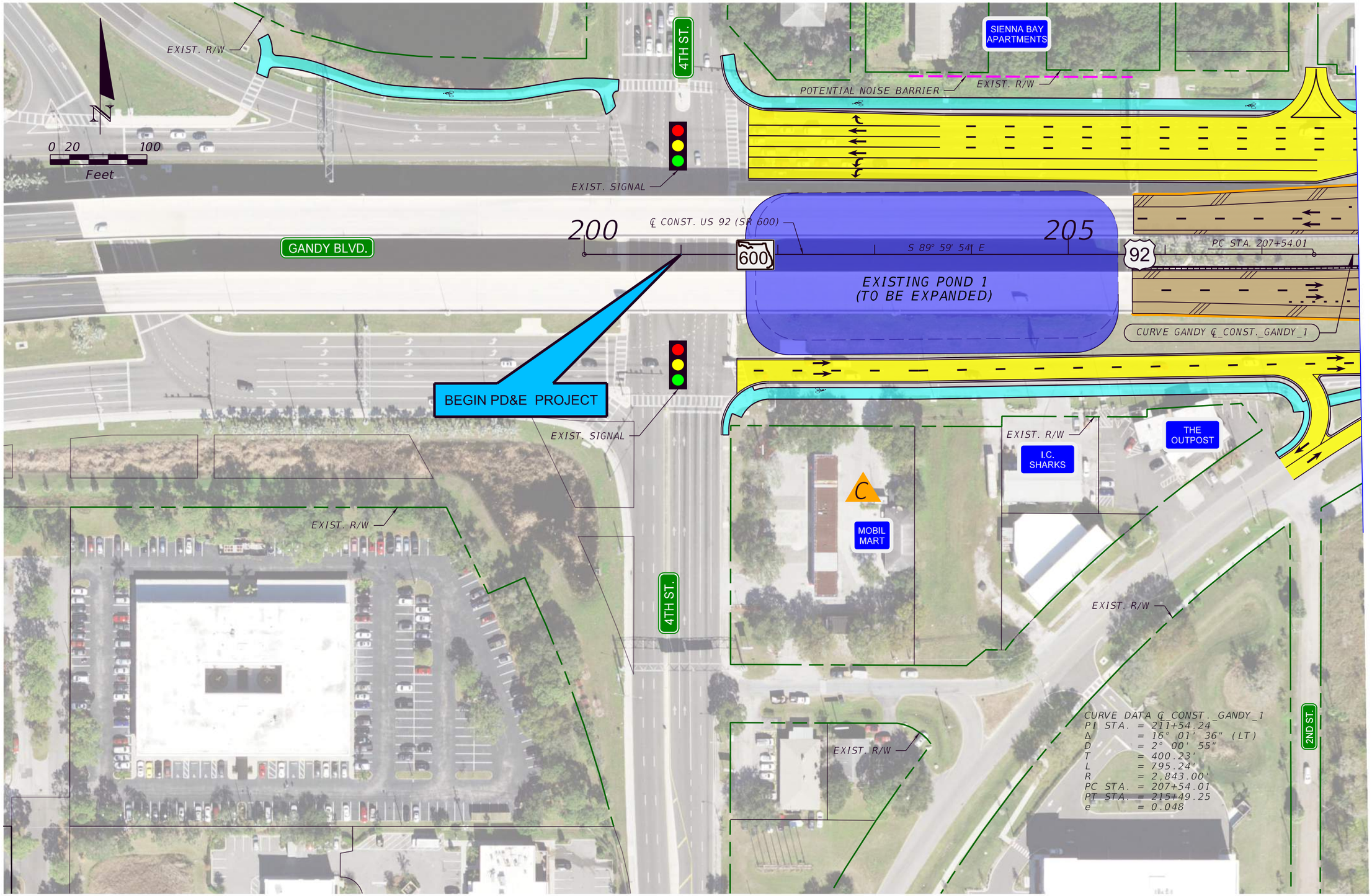
The purpose of the PD&E study is to evaluate engineering and environmental data and record information that will help the FDOT Office of Environmental Management (OEM) in determining the type, preliminary design, and location of the proposed improvements. The study was conducted to meet requirements of the National Environmental Policy Act (NEPA) and other related federal and state laws, rules, and regulations. The technical reports that have been completed during this study can be found below in **Table 7.1**.

Table 7.1: List of Technical Documents

Public Involvement	Dated
Public Involvement Plan	September 2022
Comments and Coordination Report	August 2023
Engineering	
Geotechnical Technical Report	November 2022
Project Traffic Analysis Report	January 2023
Pond Siting Report	February 2023
Utility Assessment Package	November 2022
Location Hydraulics Report	February 2023
Water Quality Impact Evaluation	October 2022
Environmental	
Type 2 Categorical Exclusion	March 2024
Contamination Screening Evaluation Report	September 2023
Cultural Resources Assessment Survey	August 2022
Natural Resources Evaluation	February 2023
Conceptual Stage Relocation Plan	July 2023
Noise Study Report	August 2023
Section 4(f)	October 2023

Appendix A
Preferred Alternative Concept Plans

AERIAL DATE: 2/3/2020



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
- PROPOSED BRIDGE WIDENING
- PROPOSED BRIDGE DEMOLITION
- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- BUSINESS RELOCATION

Kisinger Campo & Associates Corp.
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Tampa, Florida 33602
Engineer of Record: Branan Anderson, P.E.
P.E. No.: 78438

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (1)

SHEET NO. 01

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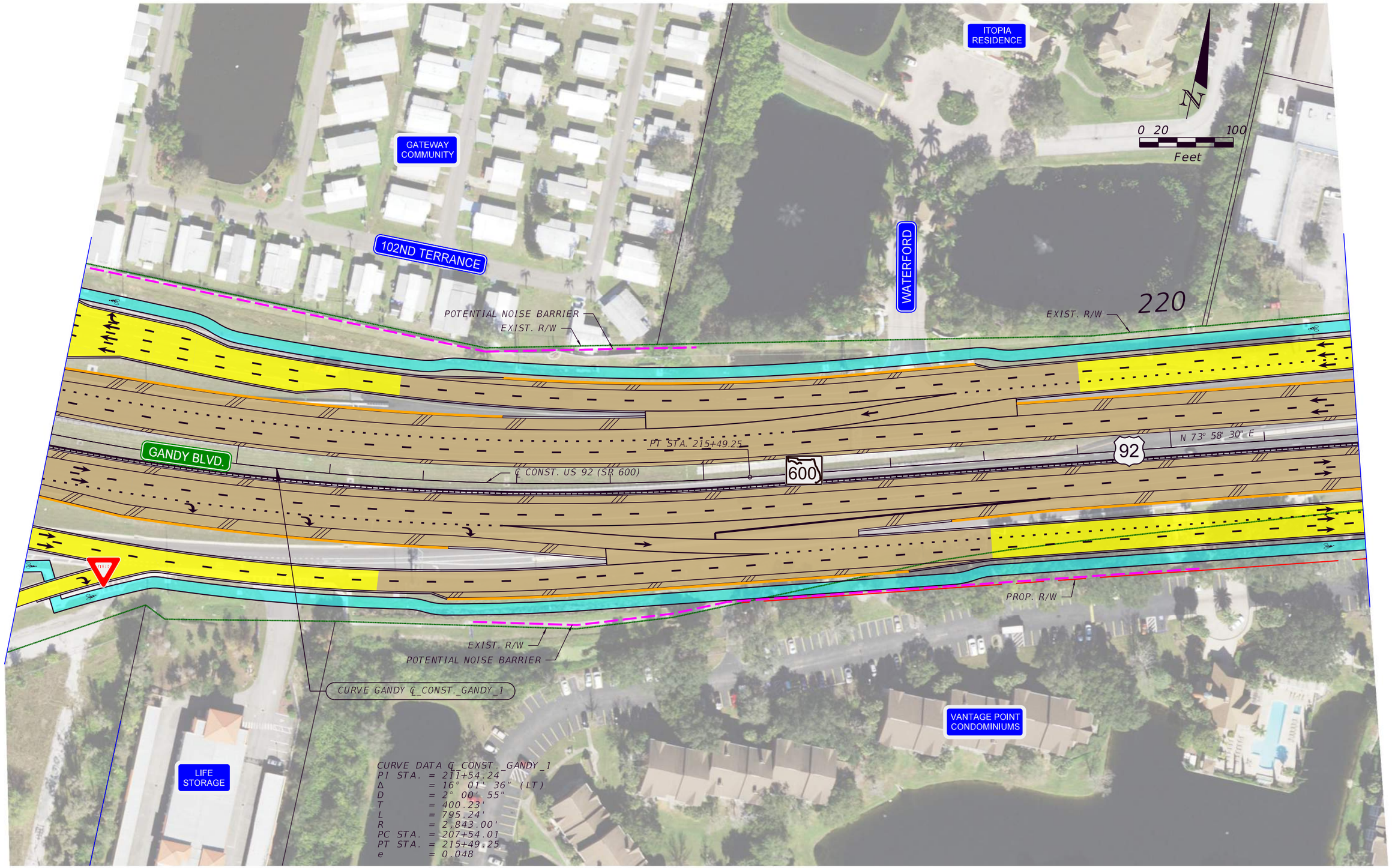

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PREFERRED ALTERNATIVE CONCEPT PLANS (2)

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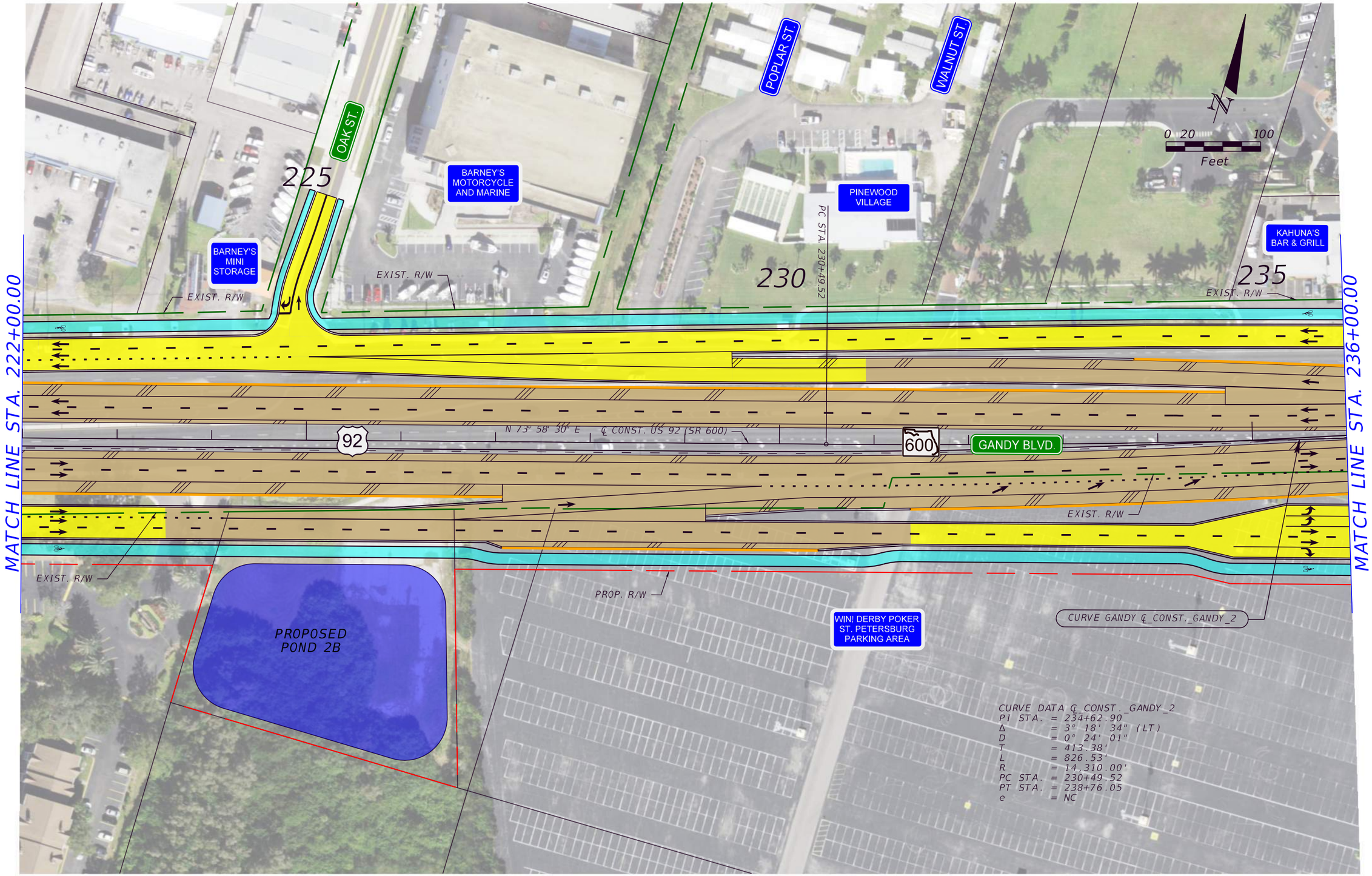

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- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
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PREFERRED ALTERNATIVE CONCEPT PLANS (3)

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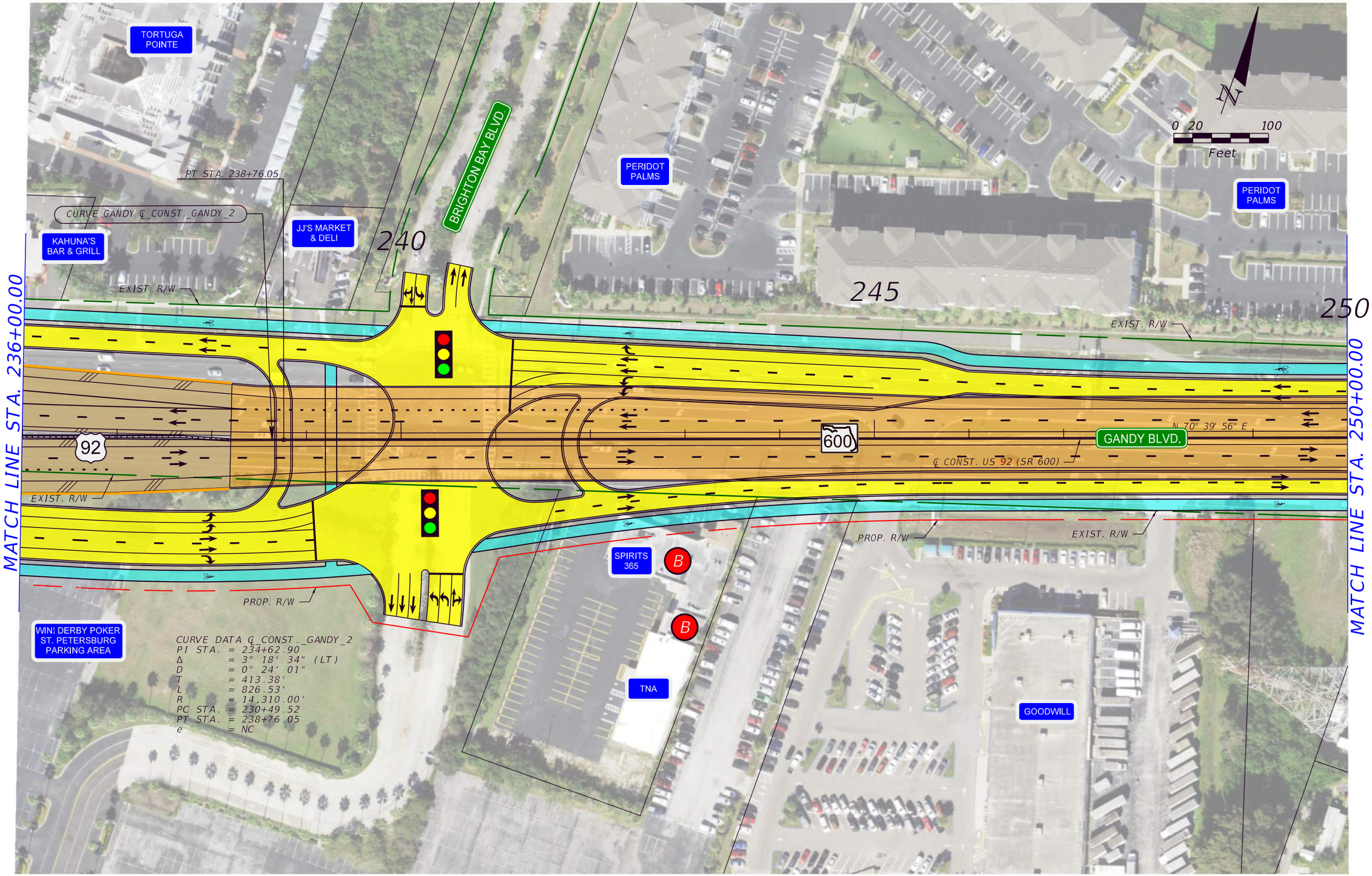

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- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
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- PROPOSED BRIDGE WIDENING
- PROPOSED BRIDGE DEMOLITION
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PREFERRED ALTERNATIVE CONCEPT PLANS (4)

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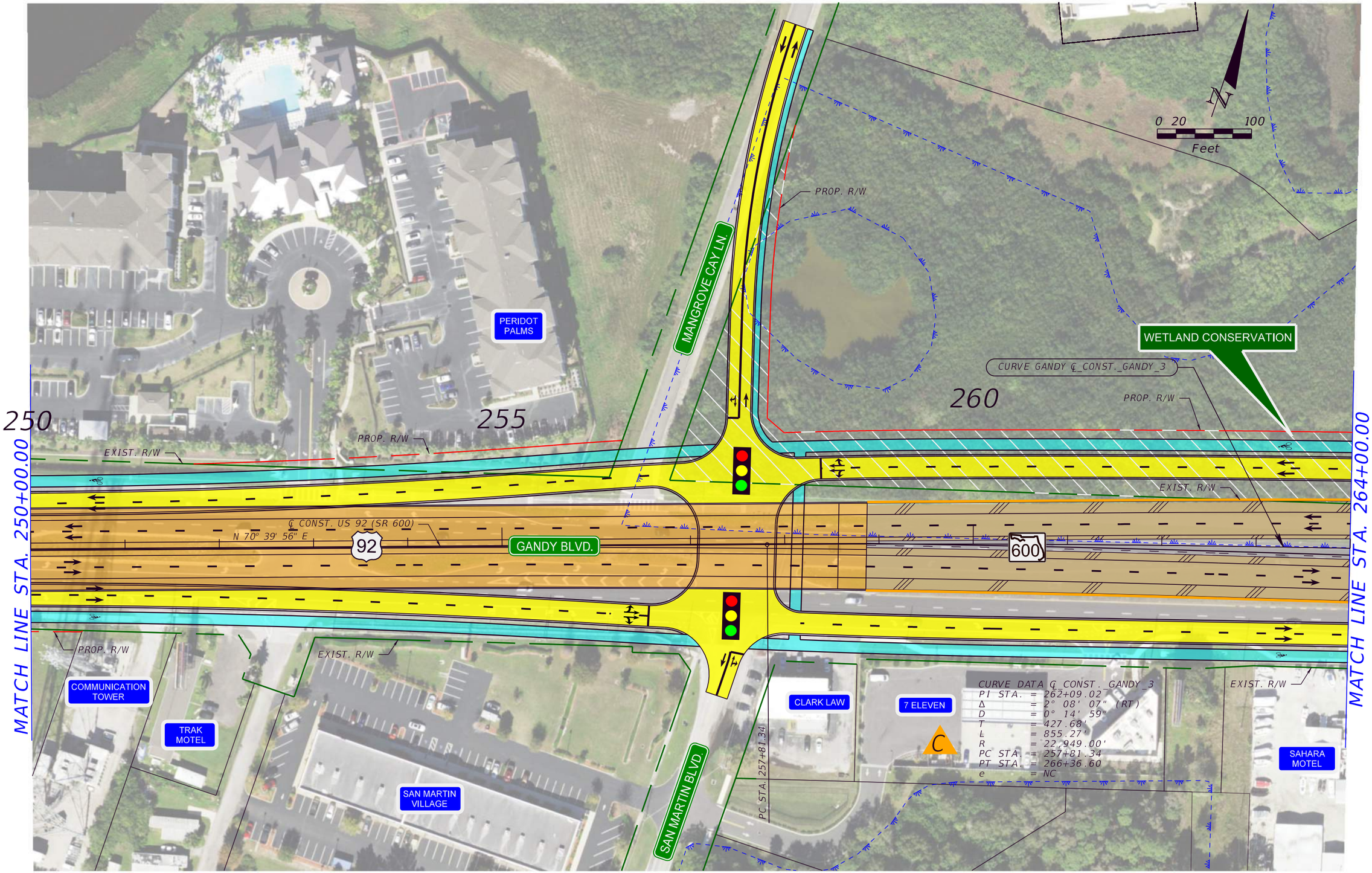

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- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE (C)
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
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- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- BUSINESS RELOCATION (B)

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PREFERRED ALTERNATIVE CONCEPT PLANS (5)

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MATCH LINE STA. 278+00.00

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WETLAND CONSERVATION

265

270

275

PROP. R/W

EXIST. R/W

92

600

℄ CONST. US 92 (SR 600)

N 72° 48' 03" E

GANDY BLVD.

PT STA. 266+36.60

SAHARA MOTEL

SNUG HARBOR RD.

VACANT

SAN FERNANDO DR.

CRAB SHACK RESTAURANT

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LEGEND

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PREFERRED ALTERNATIVE CONCEPT PLANS (6)

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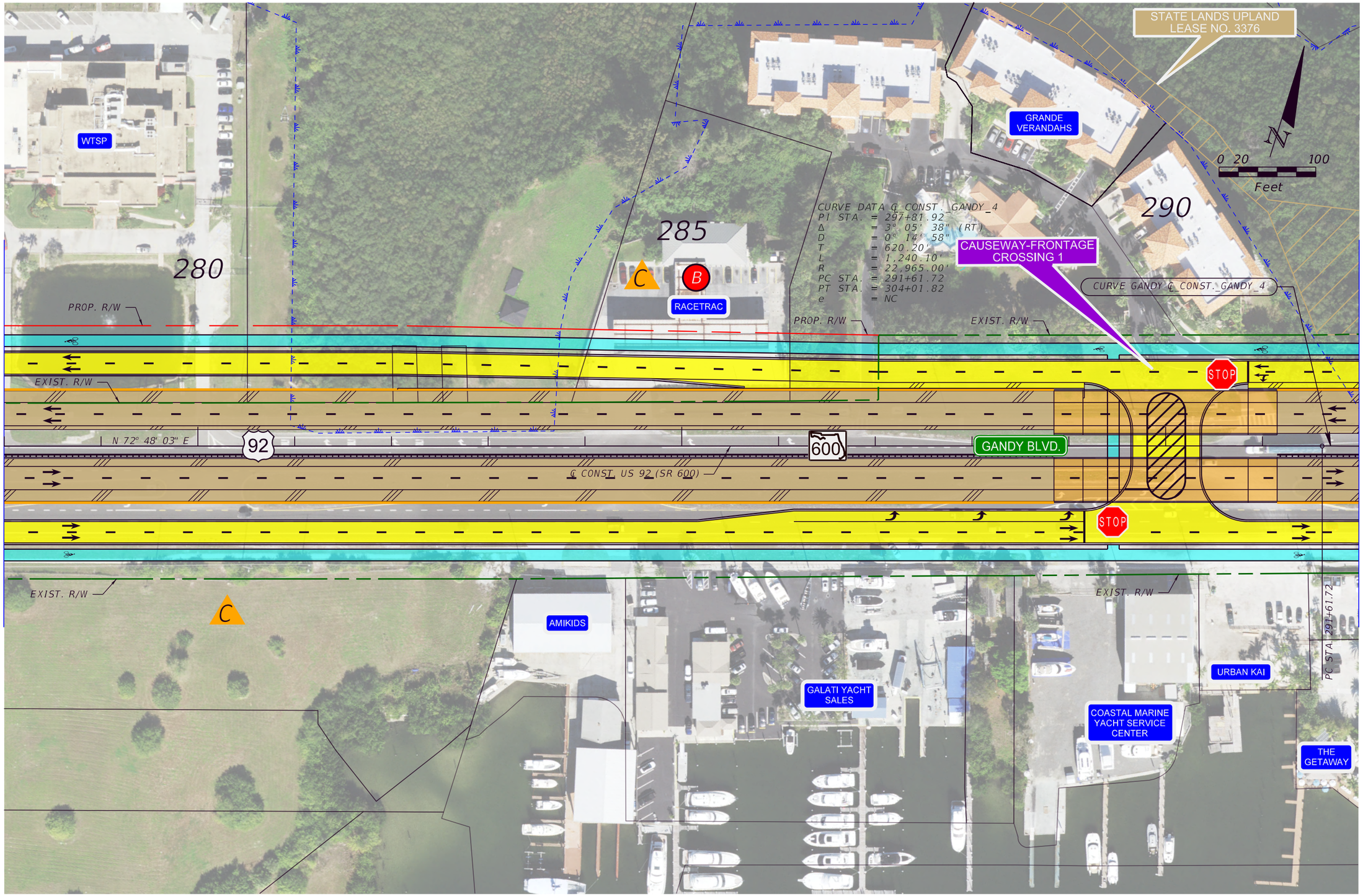

LEGEND

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- PROPOSED GRADE SEPARATION
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PREFERRED ALTERNATIVE CONCEPT PLANS (7)

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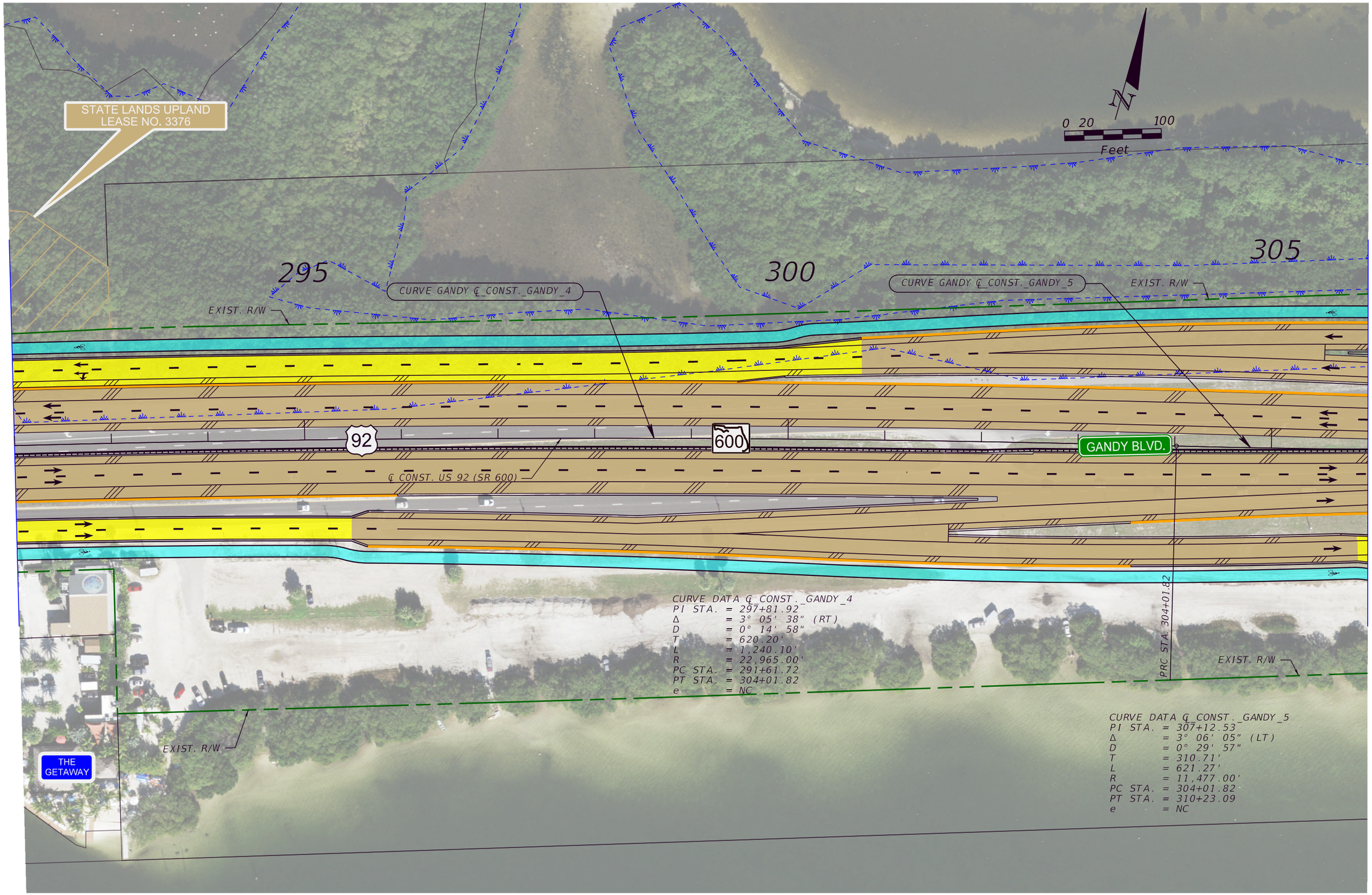

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- EXISTING WETLAND
- PROPOSED R/W LINE
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- EXISTING BRIDGE
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- PROPOSED MILLING & RESURFACING
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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (8)

SHEET NO. 08

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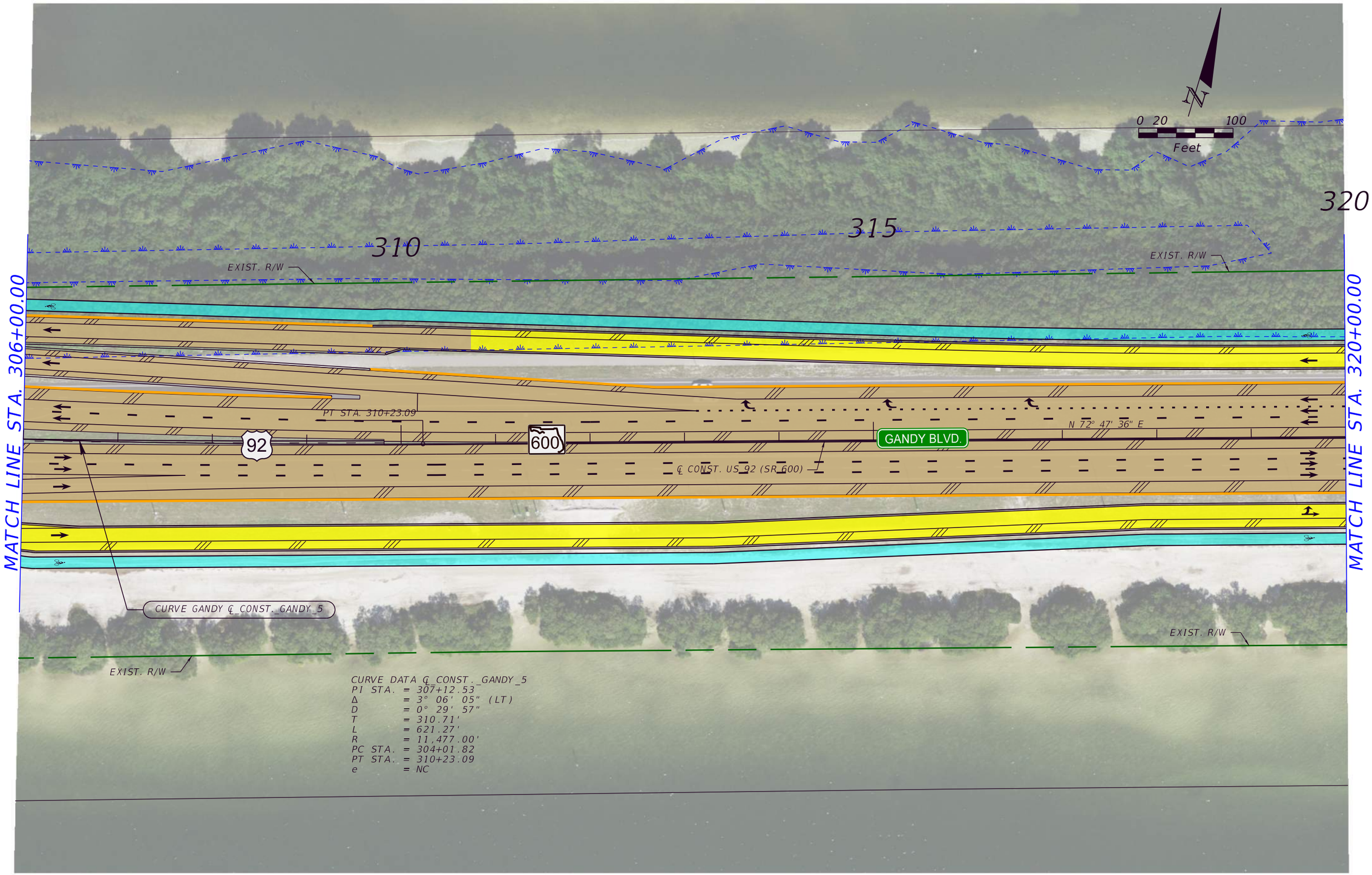
AERIAL DATE: 2/3/2020



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
- PROPOSED BRIDGE WIDENING
- PROPOSED BRIDGE DEMOLITION
- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- B BUSINESS RELOCATION

Kisinger Campo & Associates Corp.
201 N. Franklin Street, Suite 400
Tampa, Florida 33602
Engineer of Record: Branan Anderson, P.E.
P.E. No.: 78438

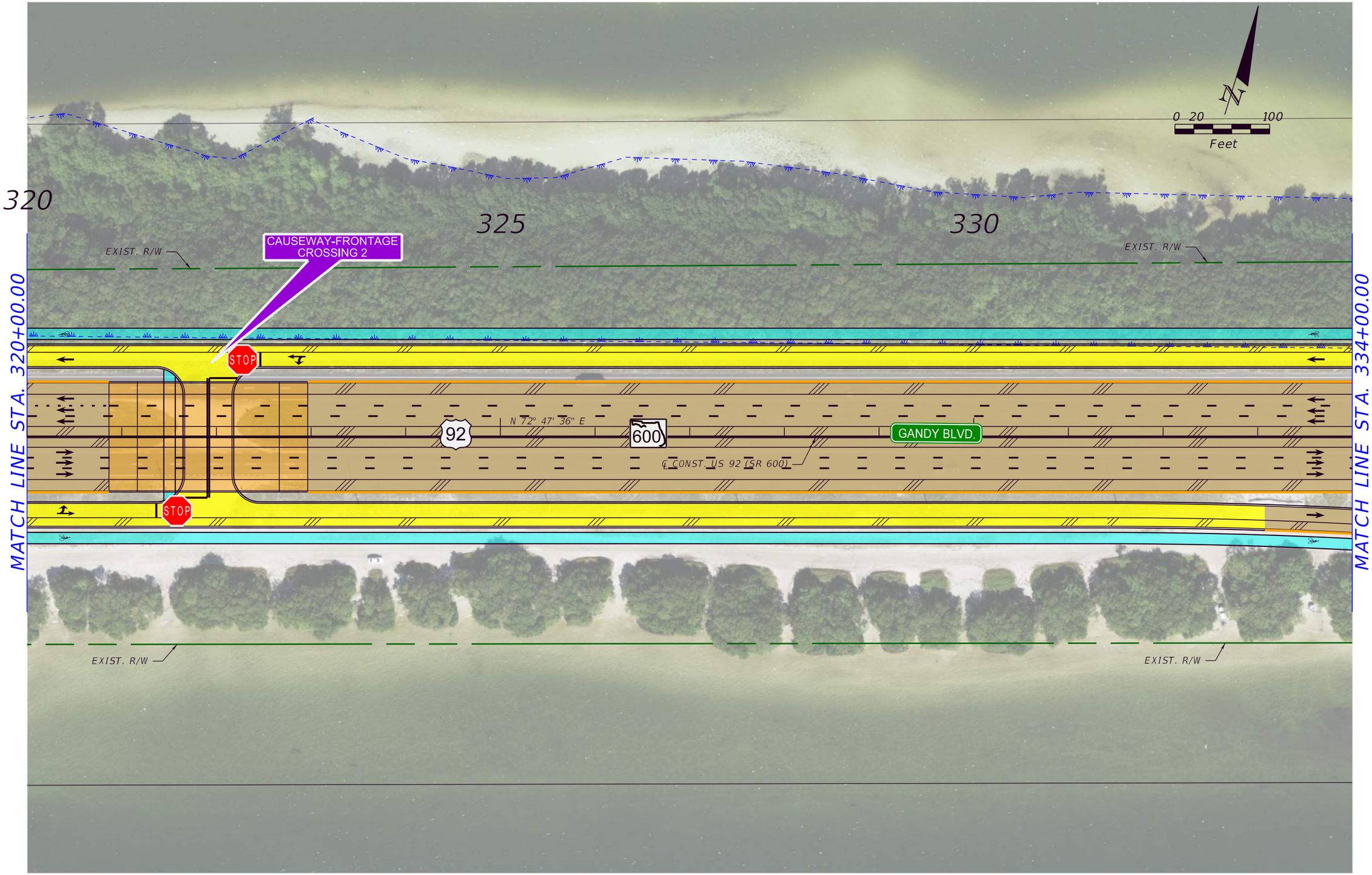
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (9)

SHEET NO. 09

AERIAL DATE: 2/3/2020



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LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
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- PROPOSED BRIDGE DEMOLITION
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (10)

SHEET NO. 10

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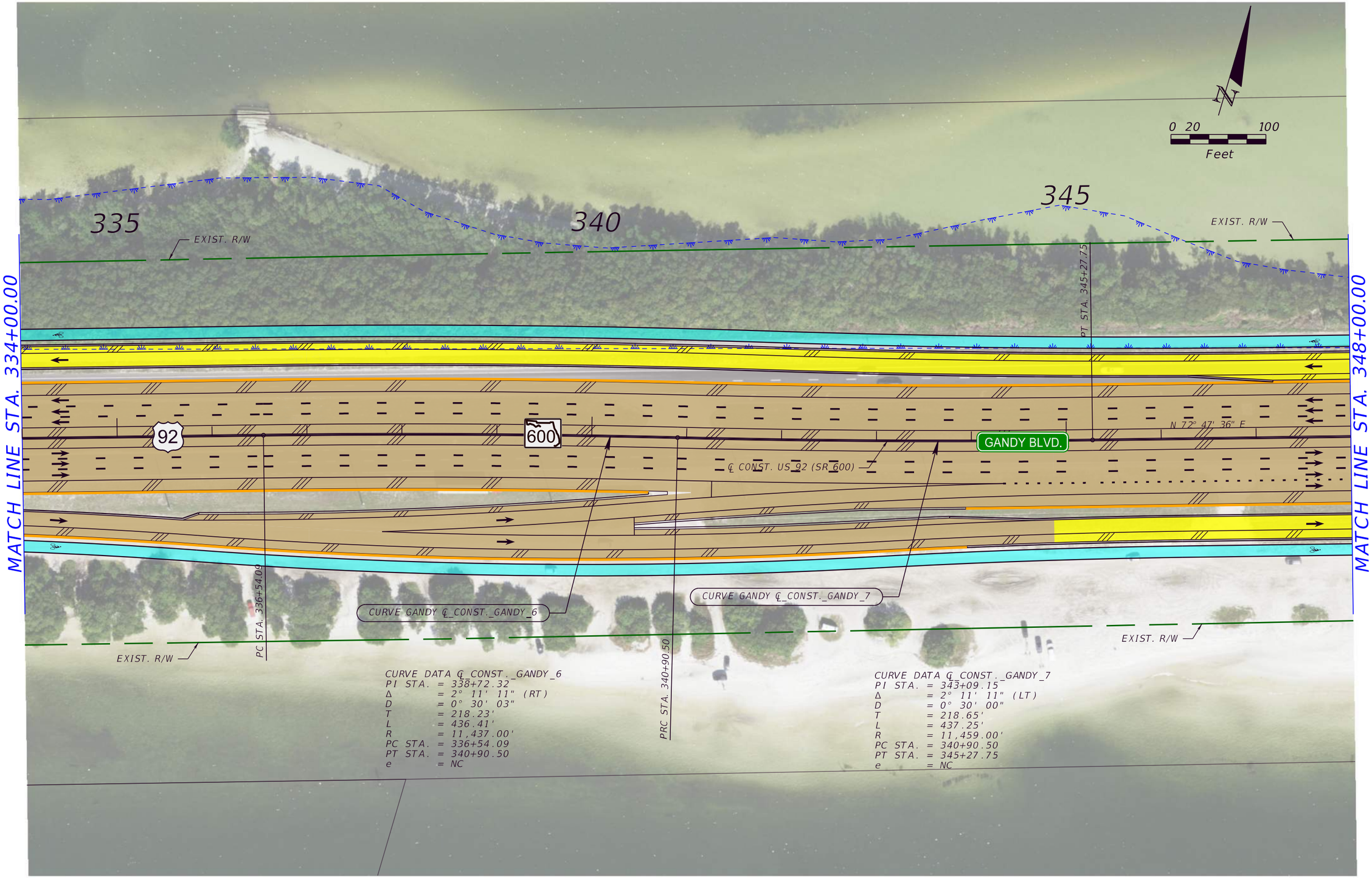
AERIAL DATE: 2/3/2020



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- C POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
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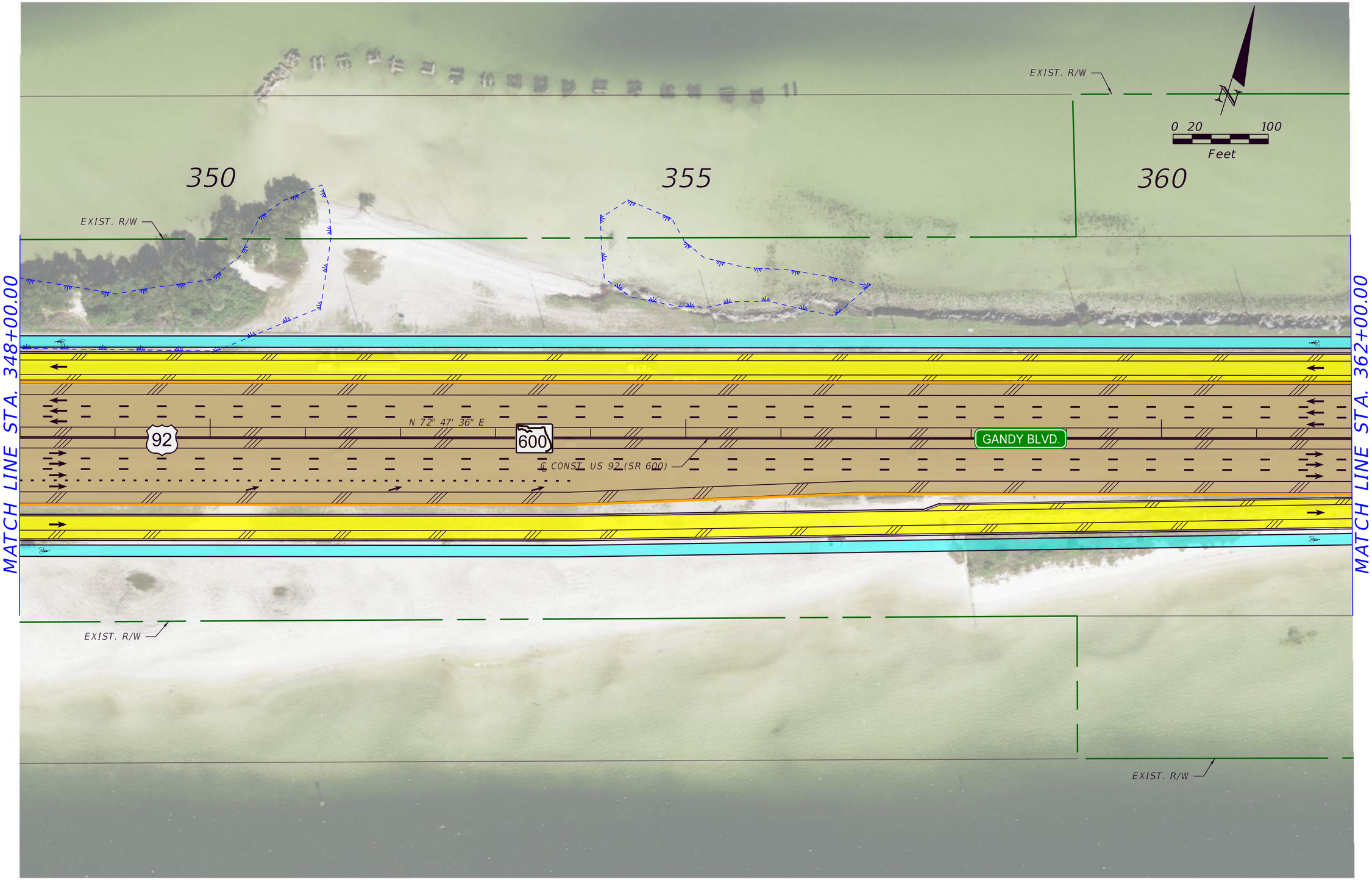
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (11)

SHEET NO. 11

AERIAL DATE: 2/3/2020



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
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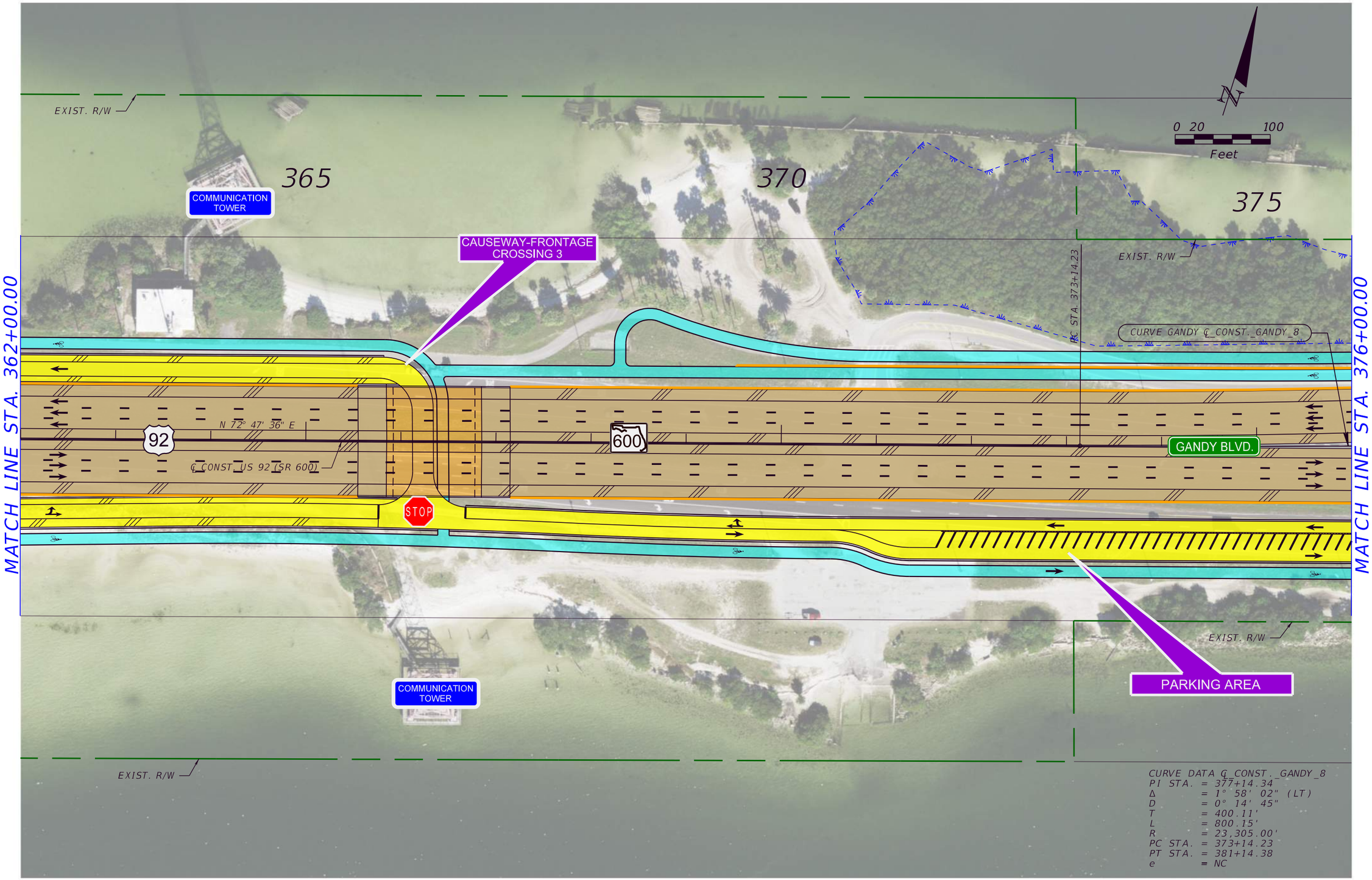
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (12)

SHEET NO. 12

AERIAL DATE: 2/3/2020



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Δ = 1° 58' 02" (LT)
D = 0° 14' 45"
T = 400.11'
L = 800.15'
R = 23,305.00'
PC STA. = 373+14.23
PT STA. = 381+14.38
e = NC

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- C POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
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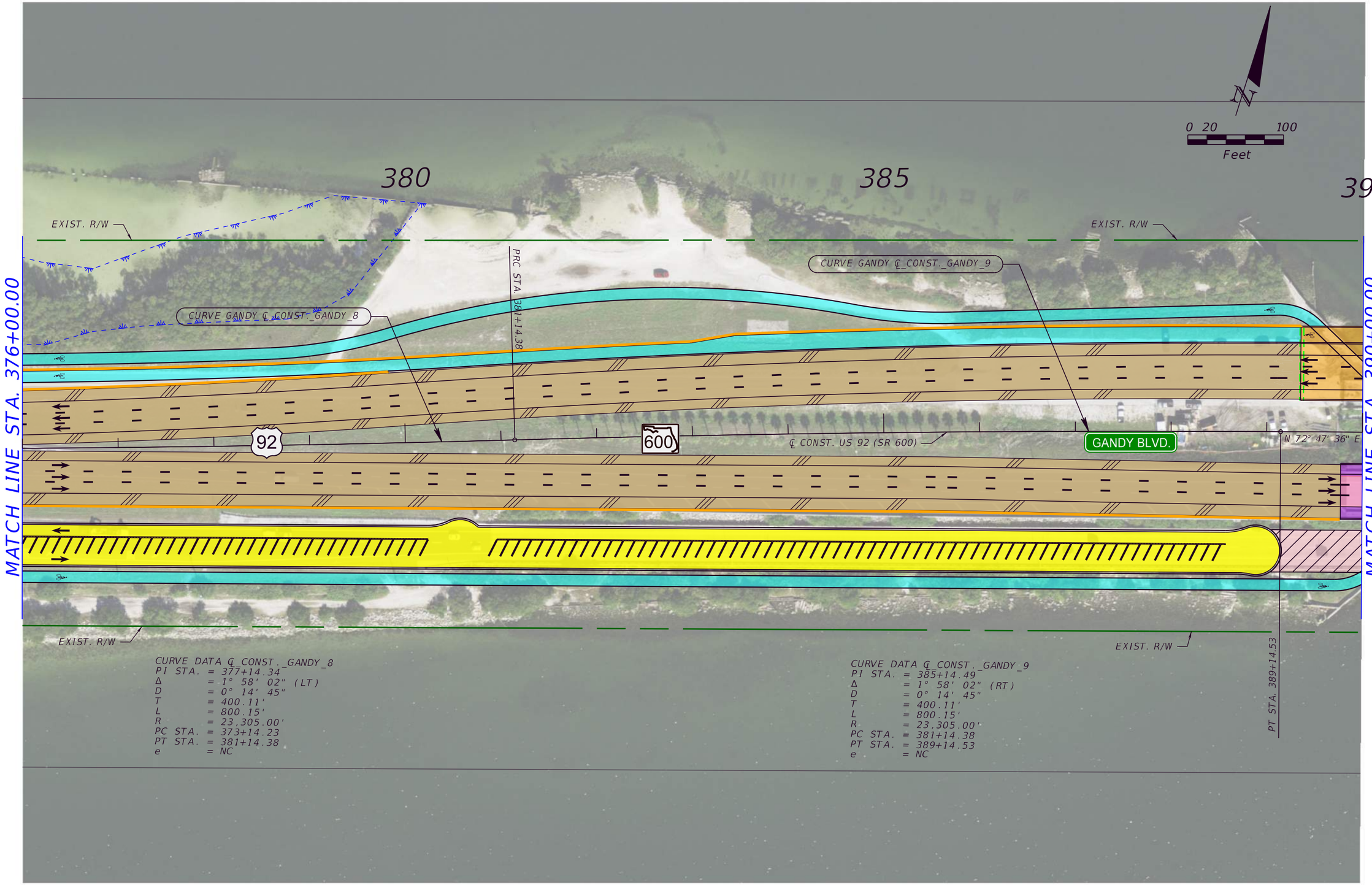
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (13)

SHEET NO. 13

AERIAL DATE: 2/3/2020



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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- PROPOSED BRIDGE
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (14)

SHEET NO. 14

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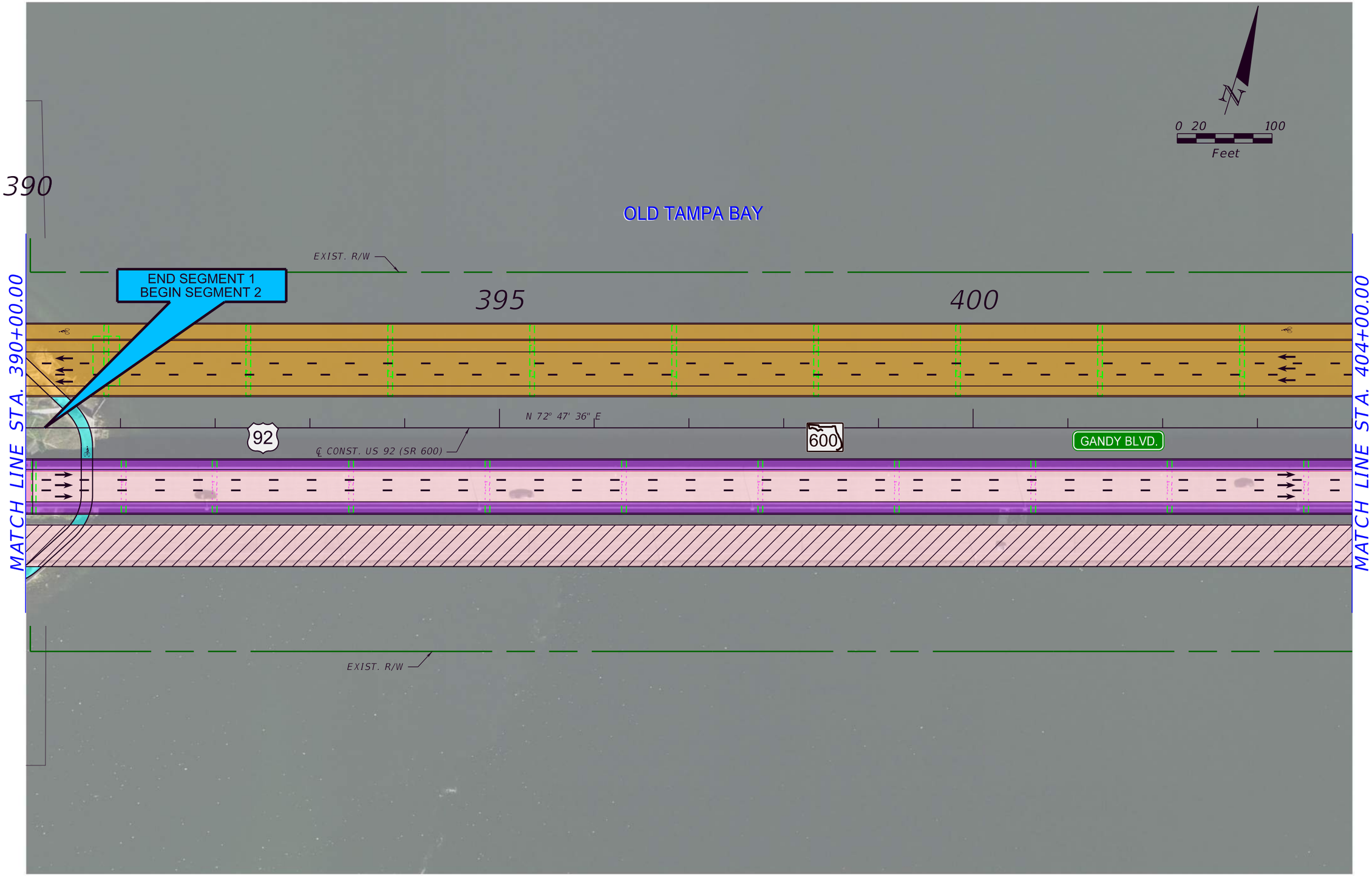

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (15)

SHEET NO. 15

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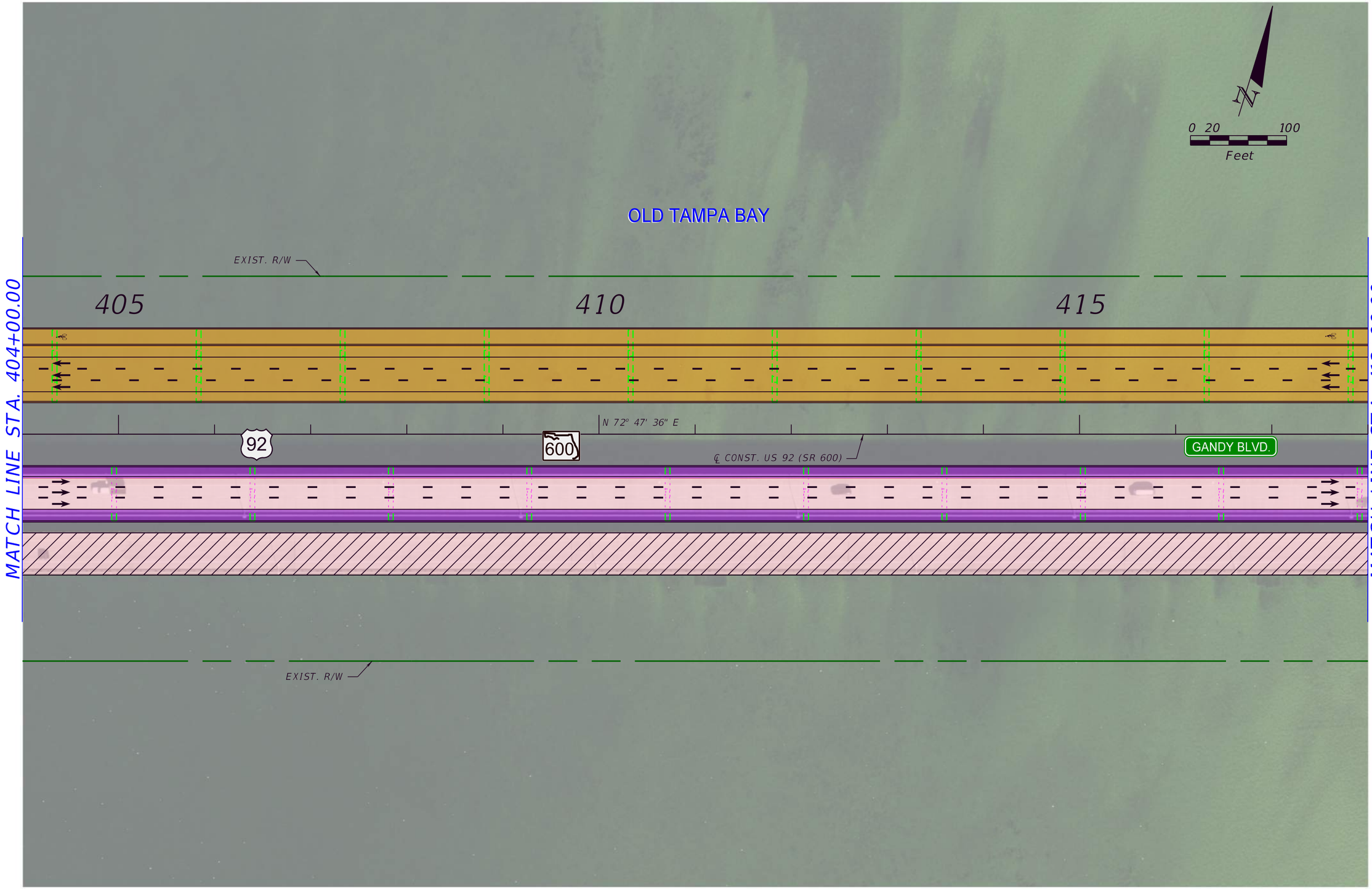

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (16)

SHEET NO. 16

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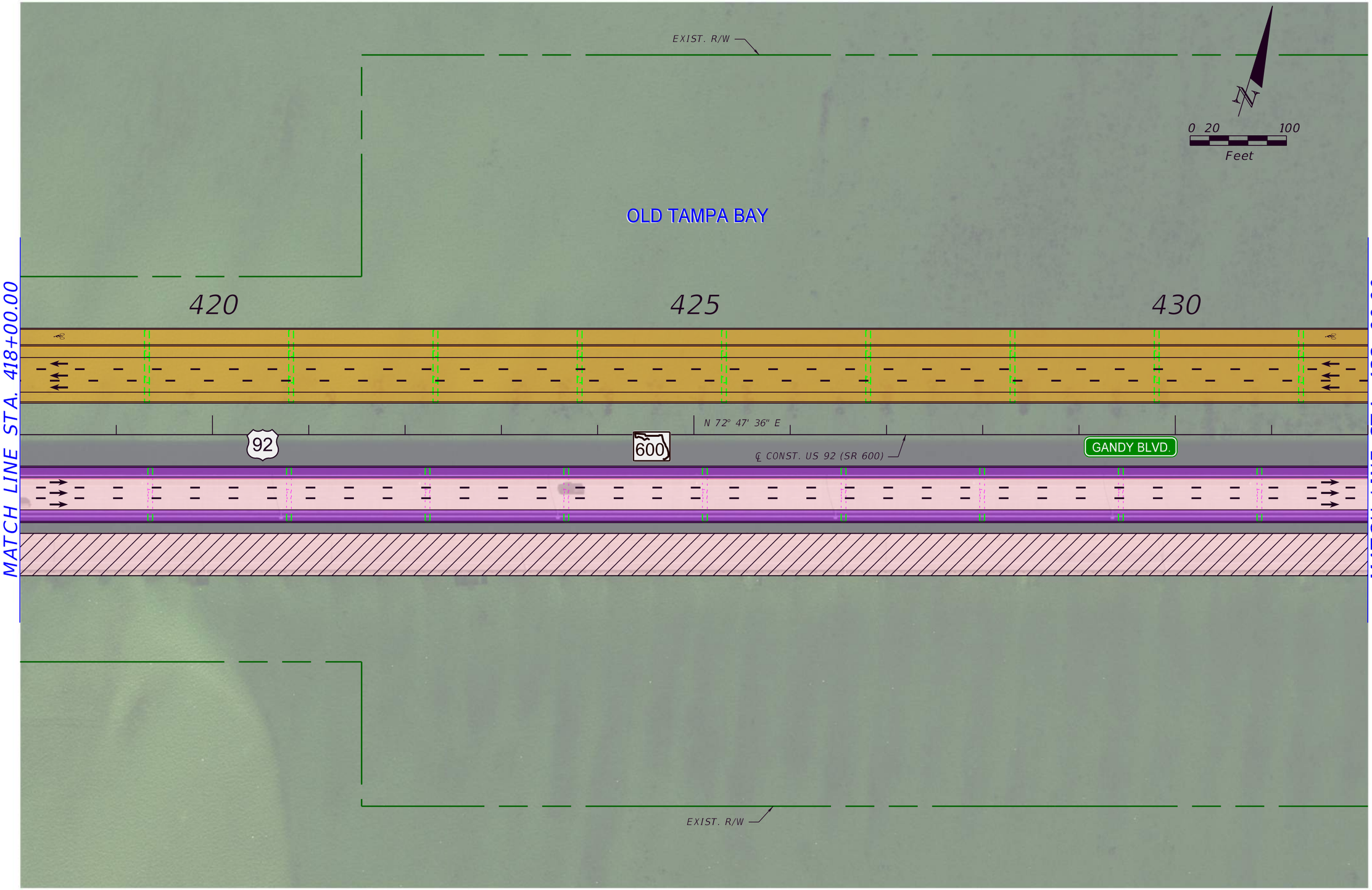

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	PINELLAS	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (17)

SHEET NO. 17

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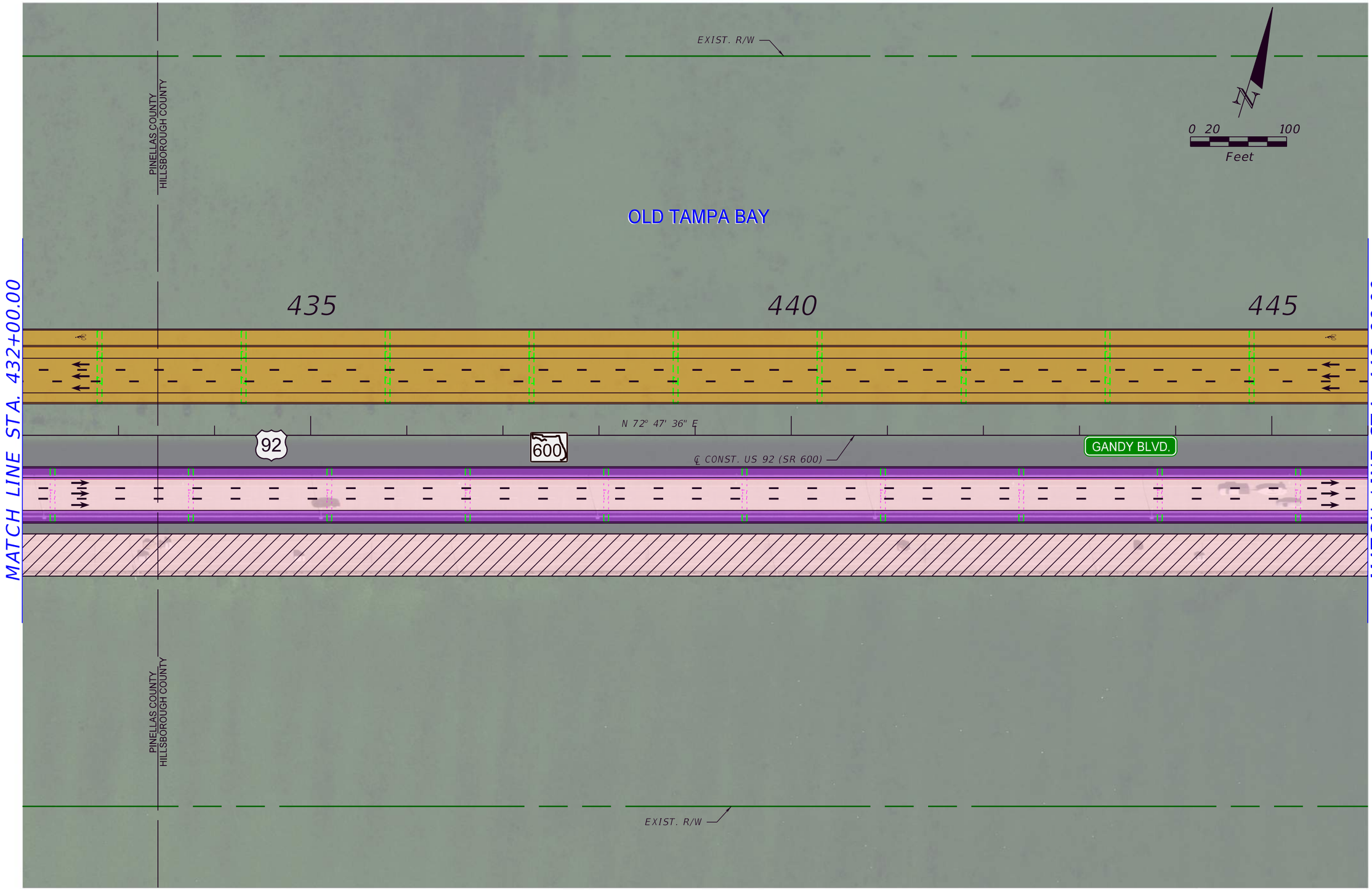

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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- PROPOSED BRIDGE
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (18)

SHEET NO. 18

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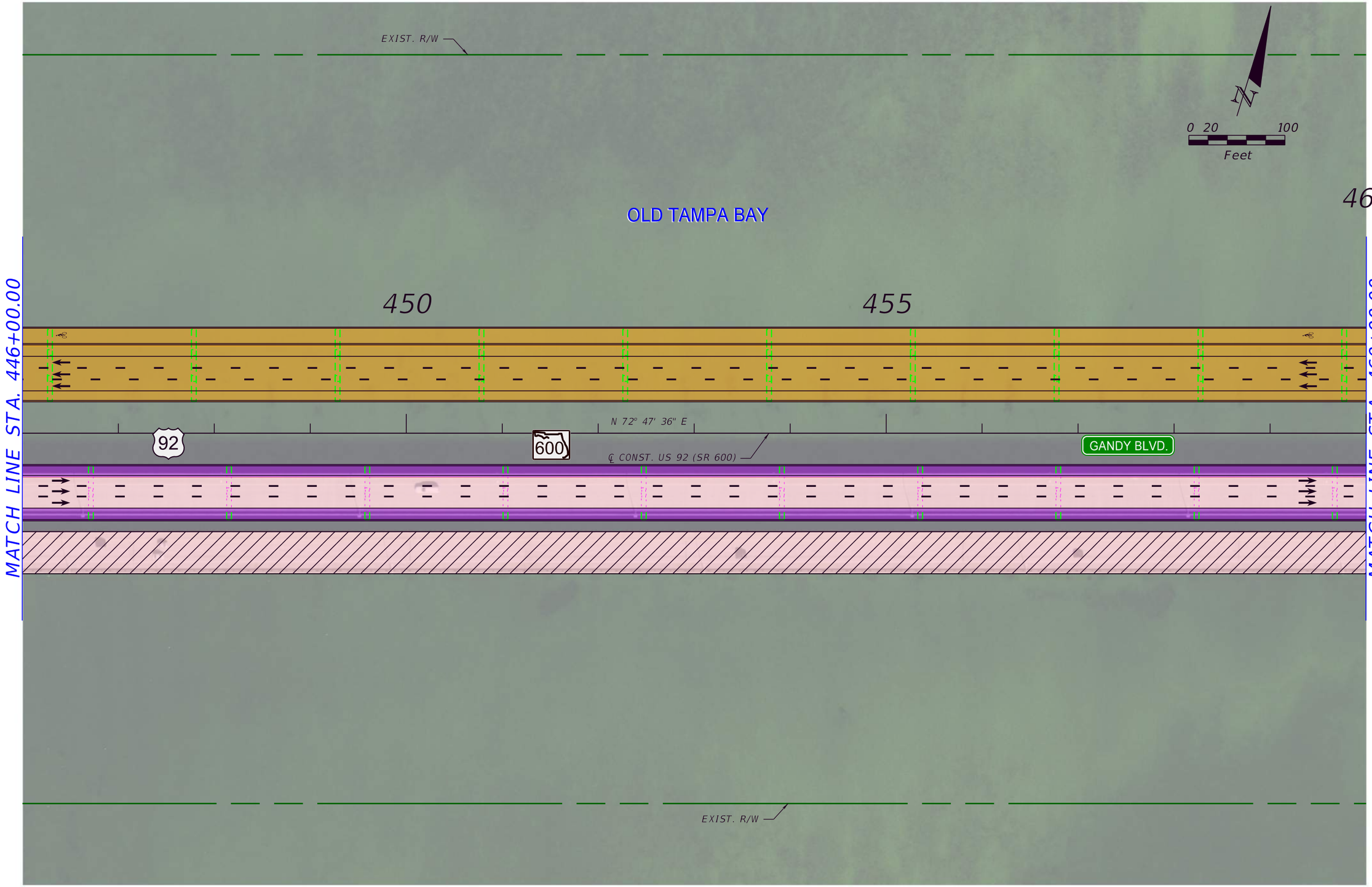

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (19)

SHEET NO. 19

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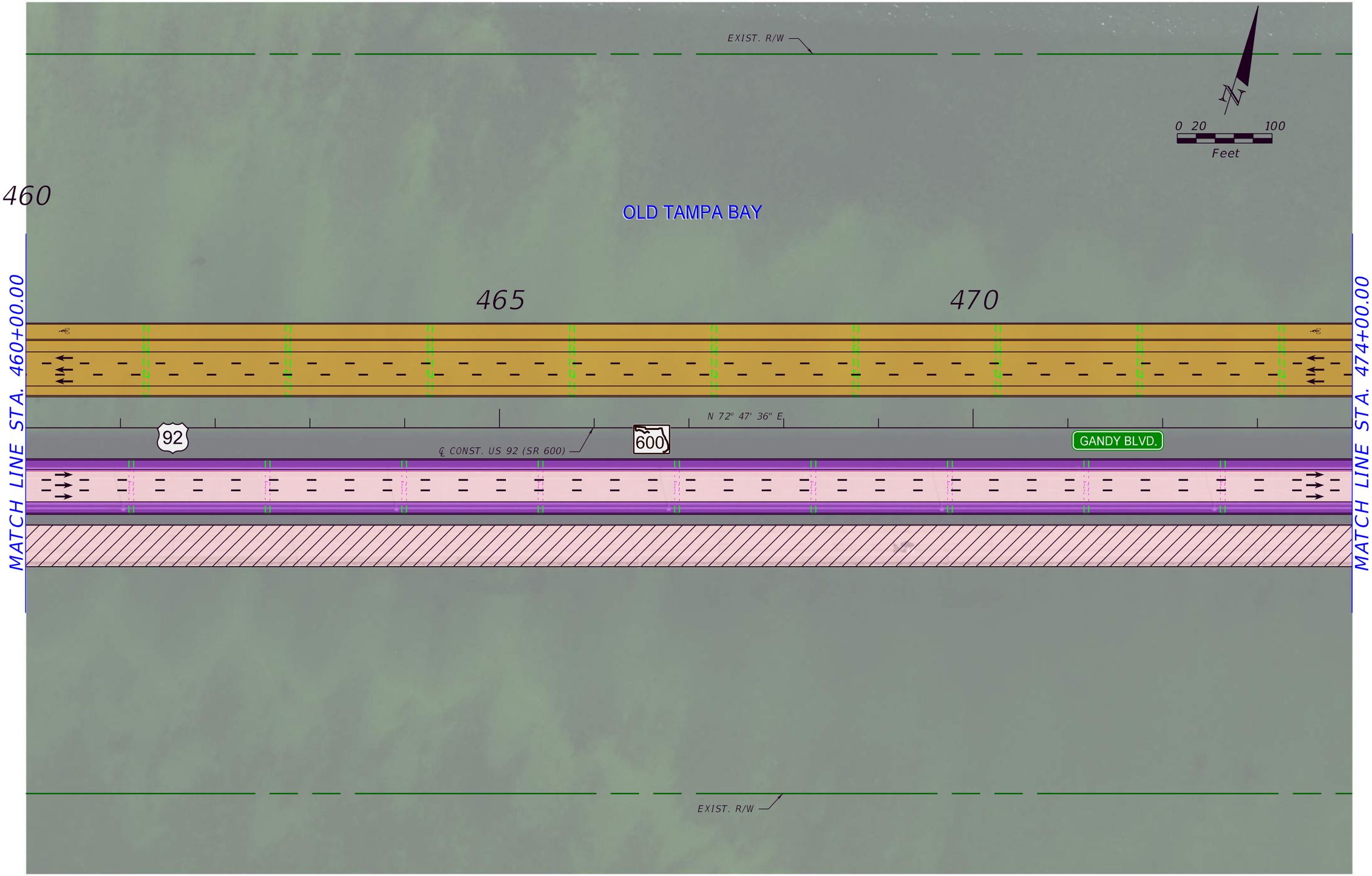

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- C POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
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- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (20)

SHEET NO. 20

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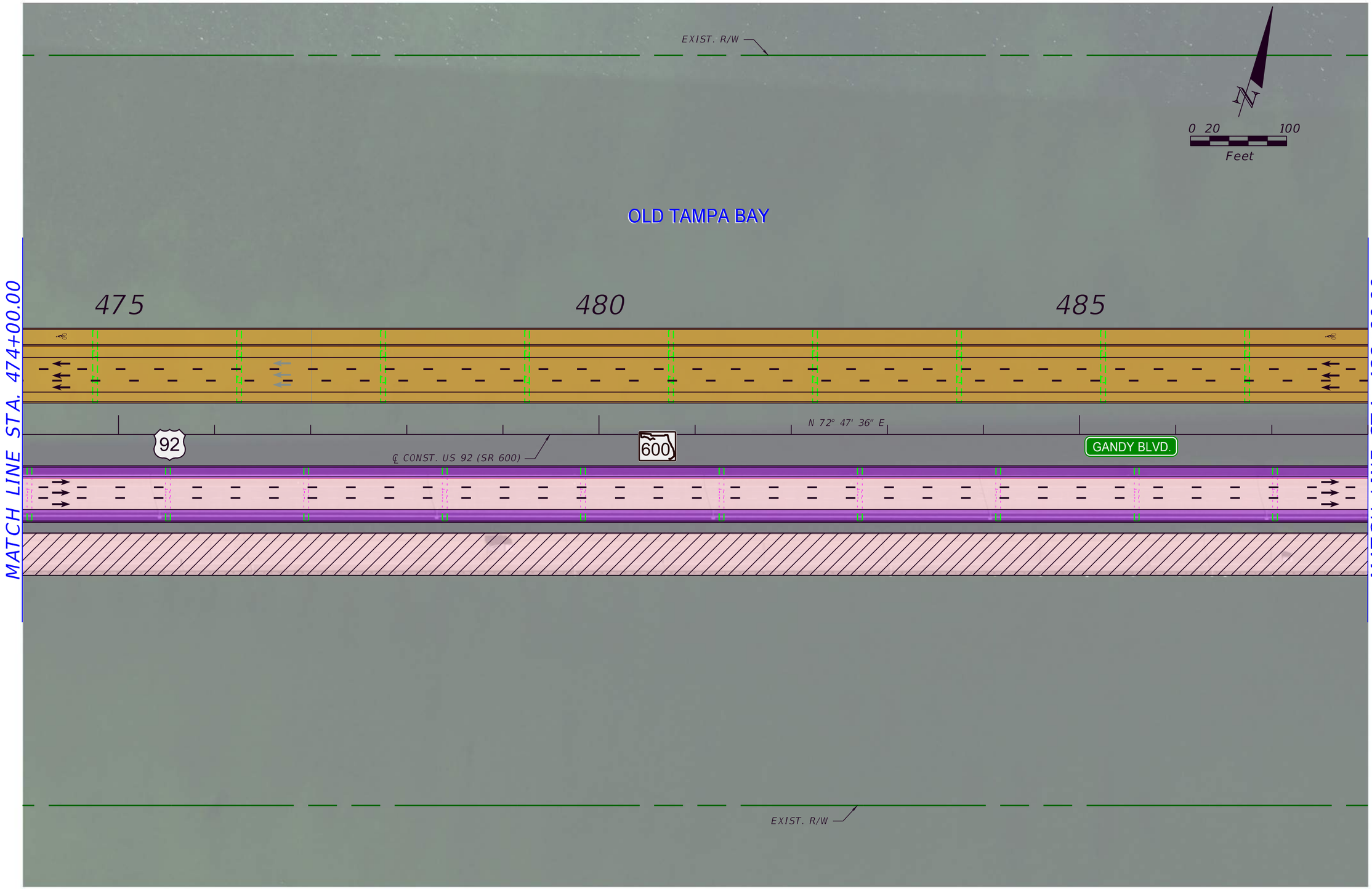

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (21)

SHEET NO. 21

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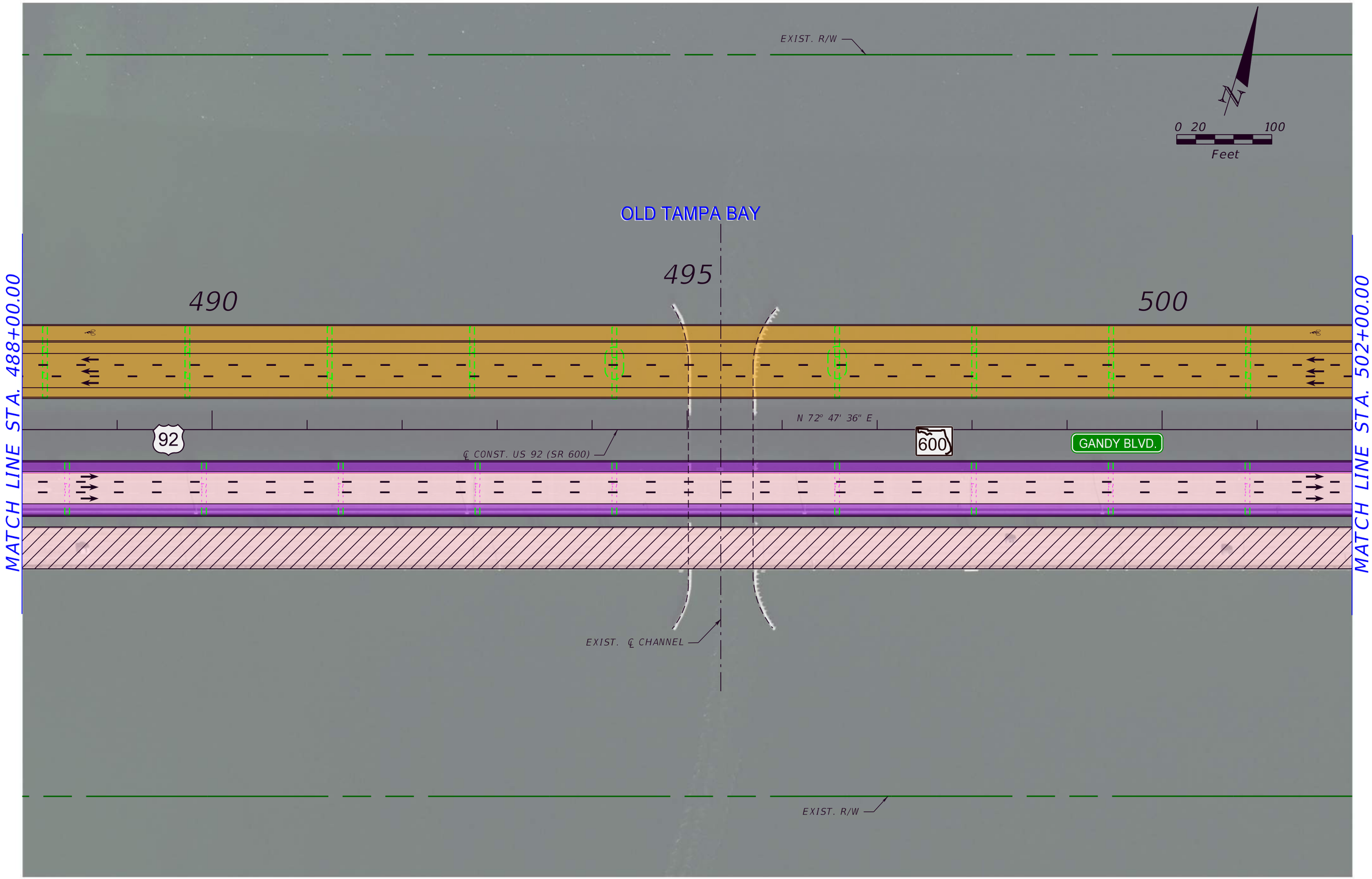

LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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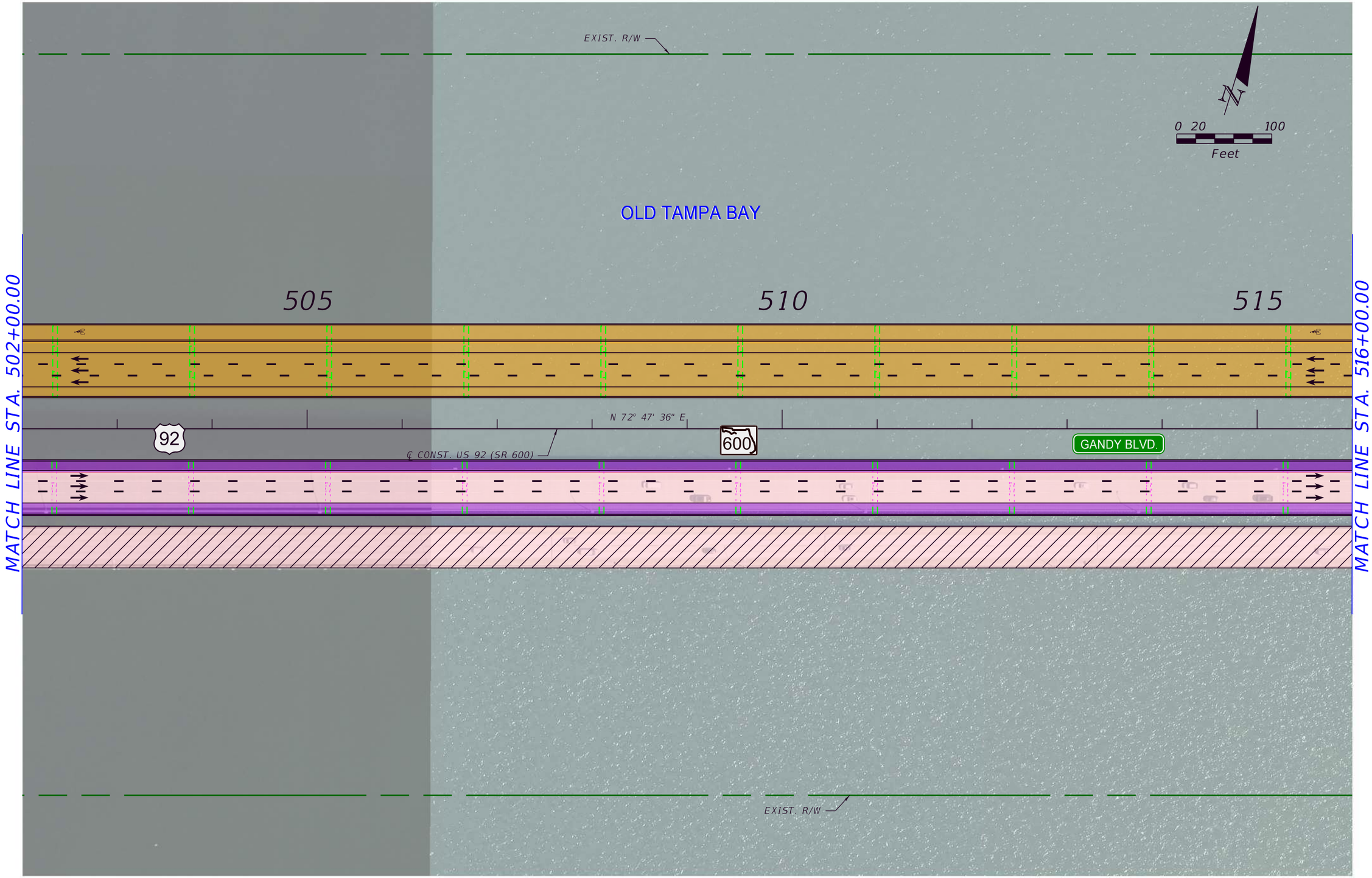
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (22)

SHEET NO. 22

AERIAL DATE: 6/7/2021



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
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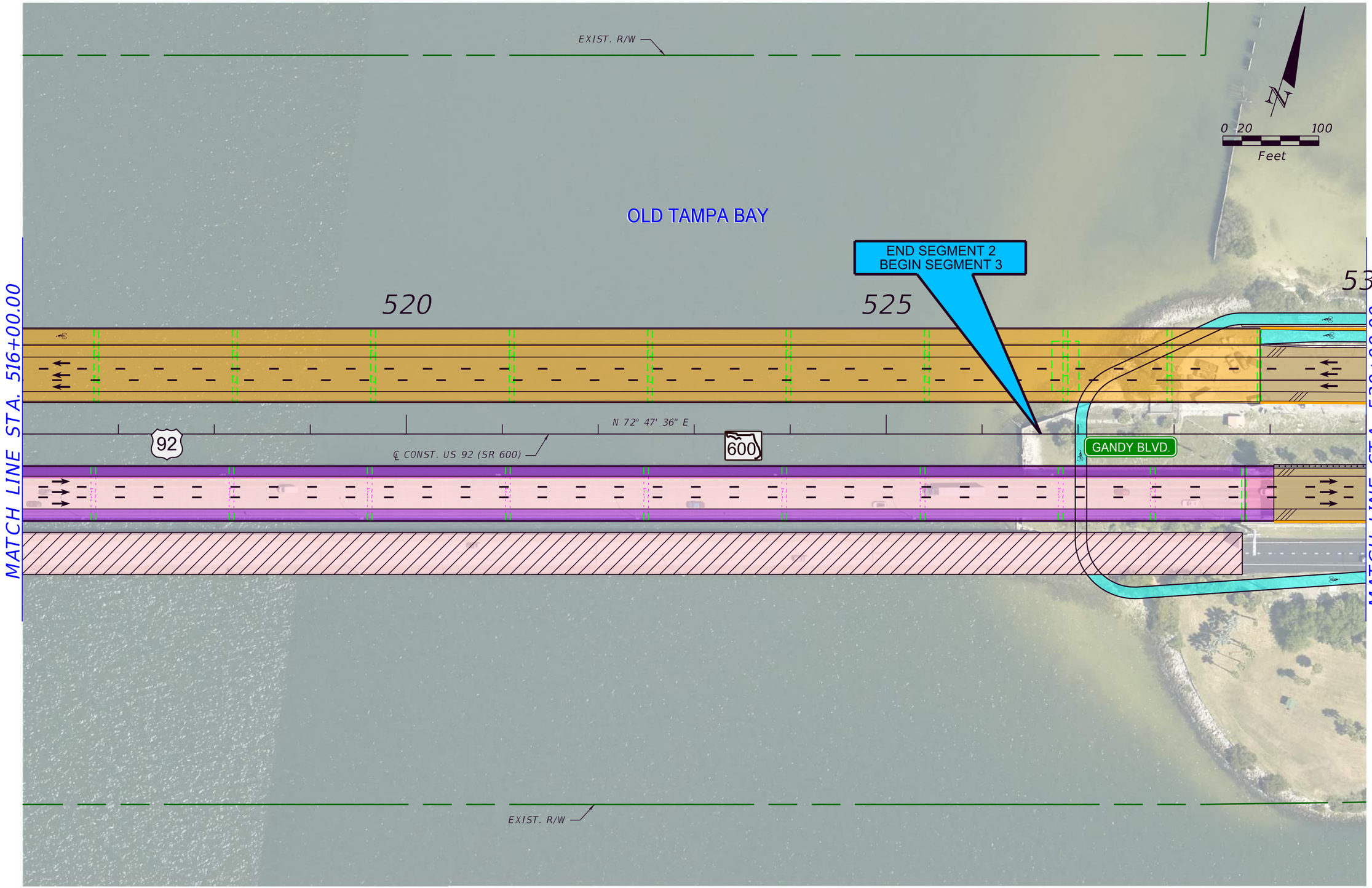
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (23)

SHEET NO. 23

AERIAL DATE: 6/7/2021



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
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SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (24)

SHEET NO. 24

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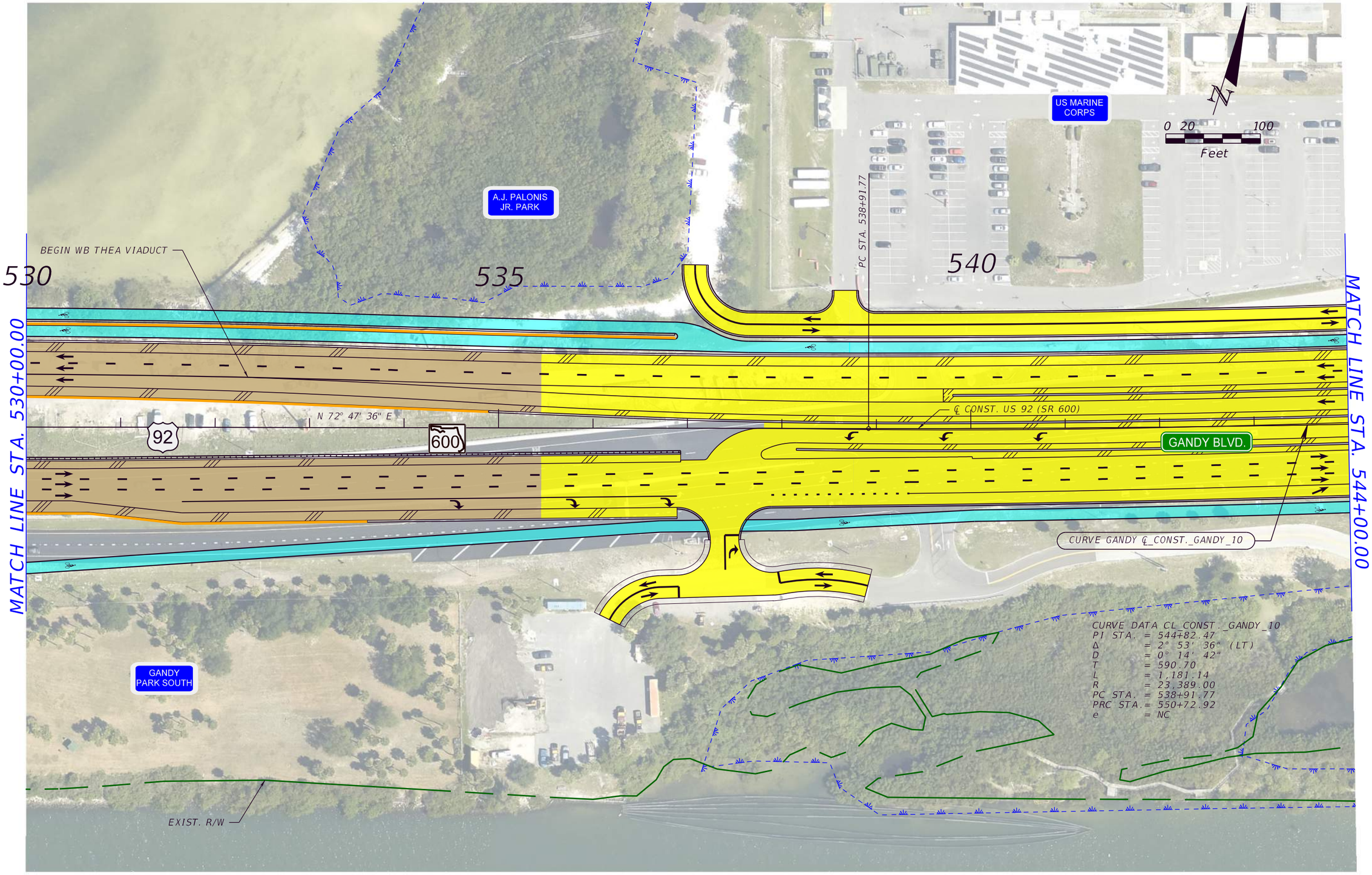
AERIAL DATE: 6/7/2021



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
- PROPOSED BRIDGE WIDENING
- PROPOSED BRIDGE DEMOLITION
- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- BUSINESS RELOCATION

Kisinger Campo & Associates Corp.
201 N. Franklin Street, Suite 400
Tampa, Florida 33602
Engineer of Record: Branan Anderson, P.E.
P.E. No.: 78438

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (25)

SHEET NO. 25

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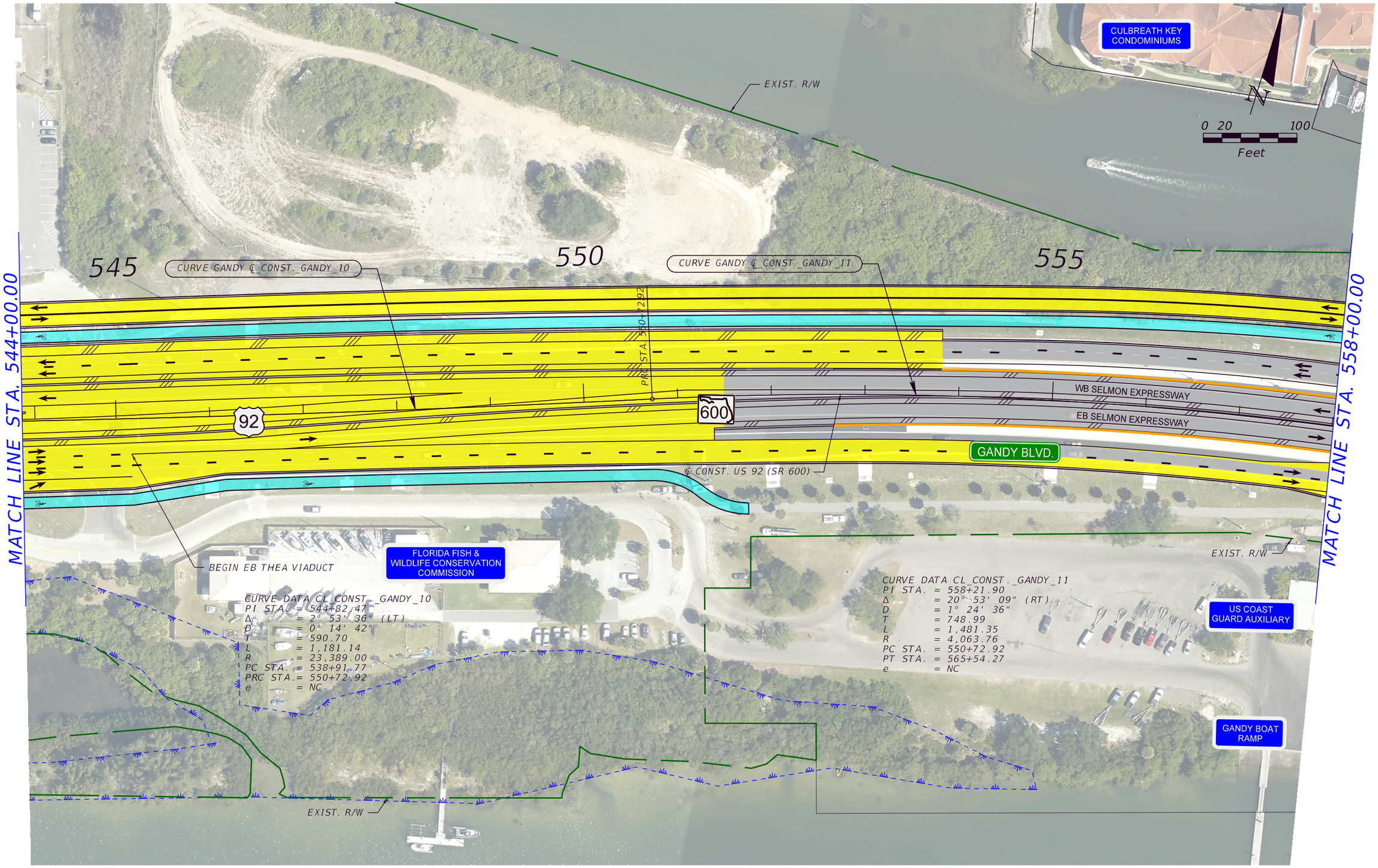
AERIAL DATE: 6/7/2021



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LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (26)

SHEET NO. 26

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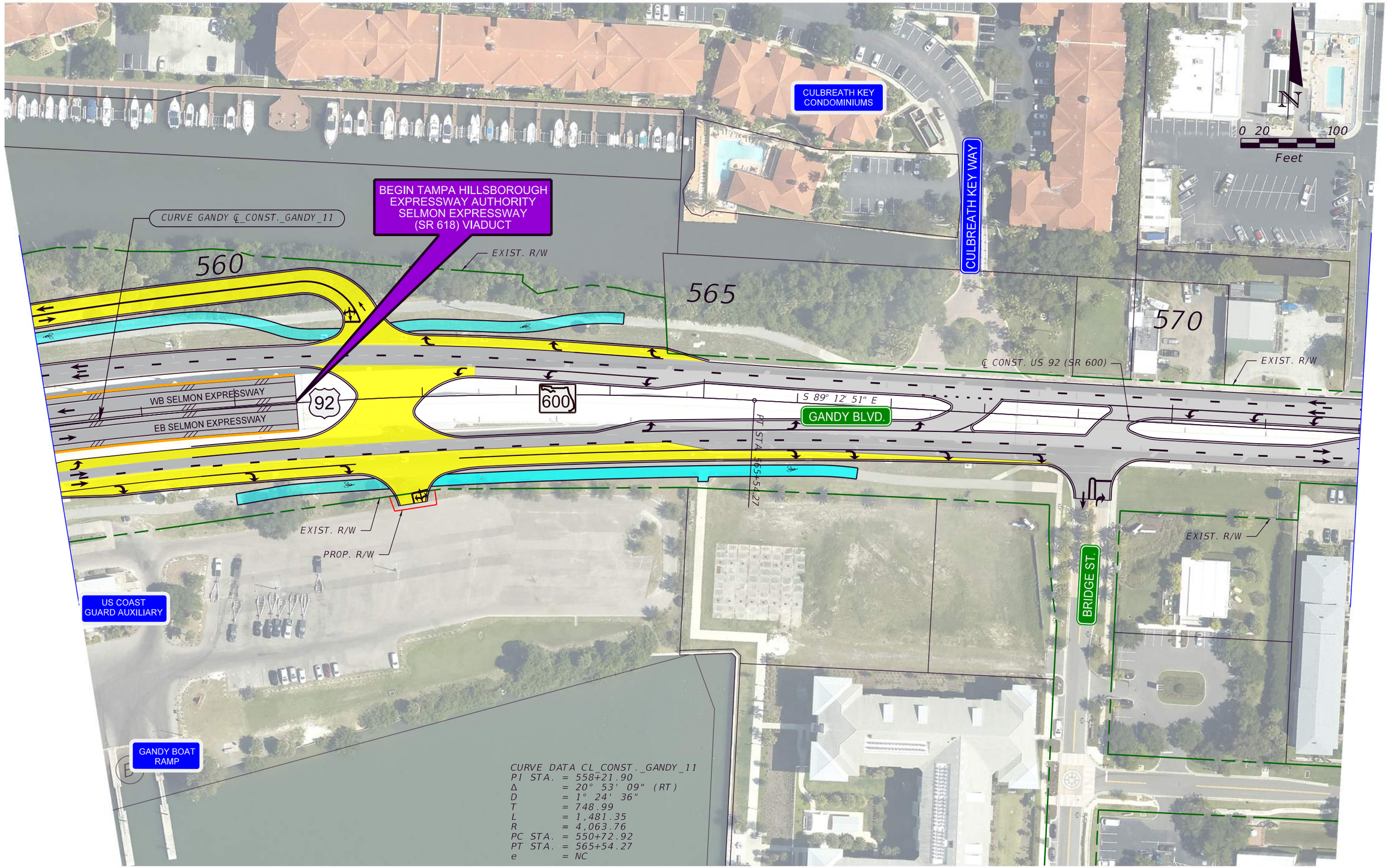
AERIAL DATE: 6/7/2021



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
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- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- BUSINESS RELOCATION

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (27)

SHEET NO. 27

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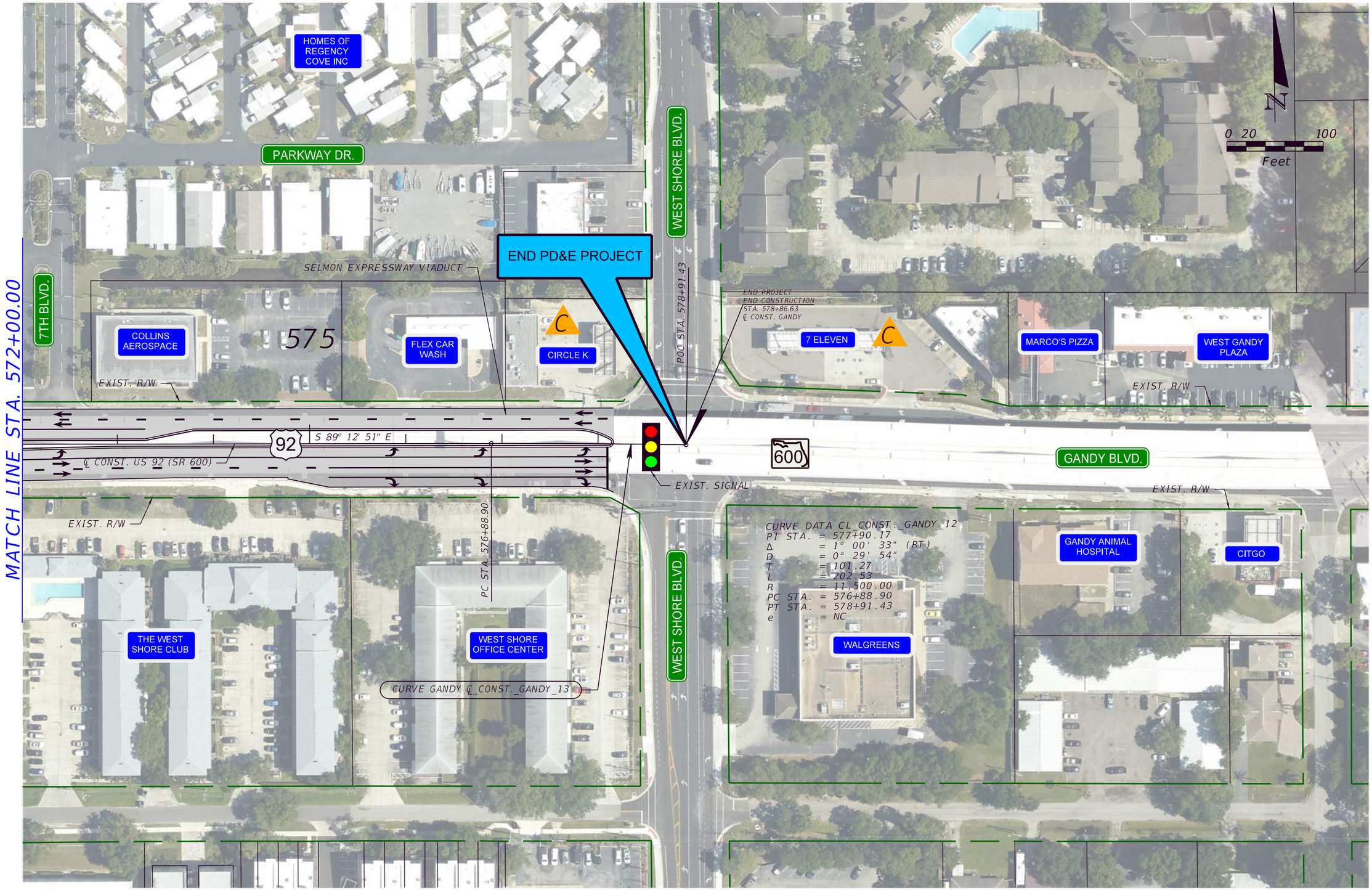
AERIAL DATE: 6/7/2021



LEGEND

- PARCEL LINE
- EXISTING R/W LINE
- EXISTING WETLAND
- PROPOSED R/W LINE
- PROPOSED RETAINING WALL
- POTENTIAL CONTAMINATION SITE
- PROPOSED ROADWAY
- PROPOSED GRADE SEPARATION
- PROPOSED BRIDGE
- PROPOSED SIDEWALK/ SHARED USE PATH
- PREFERRED POND SITES
- EXISTING BRIDGE
- PROPOSED BRIDGE WIDENING
- PROPOSED BRIDGE DEMOLITION
- PROPOSED MILLING & RESURFACING
- PROPOSED PAVEMENT REMOVAL
- BUSINESS RELOCATION

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P.E. No.: 78438

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 600	HILLSBOROUGH	441250-1-22-01

PREFERRED ALTERNATIVE CONCEPT PLANS (28)

SHEET NO. 28

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

Appendix B
Preferred Alternative Cost Estimate

Date: 11/13/2024 2:06:22 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 256931-4-52-01 **Letting Date:** 07/2035

Description: Alternative 3 (Hybrid): Reconstruction of SR 600 (Gandy Blvd) from 4th Street to West end of Gandy Bridge with controlled access for the Gandy mainline and frontage roads to service local demand.

District: 07 **County:** 15 PINELLAS **Market Area:** 08 **Units:** English

Contract Class: **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.578 MI

Project Manager: EYRA CASH

Version 11 Project Grand Total **$228,092,462.20**

Description: District 7 and OEM review. Final PER.

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 1.563 MI / 8,250 LF

Description: Construction of SR 600 (Gandy Blvd.) mainline from 4th Street to Pinellas Causeway section.

Special Conditions: Proposed Typical: 4-Lane Divided, 4-12' travel lanes, 42' median, 8' inside shoulders (4' paved), and 12' paved outside shoulders. Includes 10% additional pavement for auxiliary lanes and slip ramps. Includes elevated viaduct bridge from Brighton Bay Blvd. to east of San Martin Blvd., MSE Wall for mainline, lighting, and retention ponds.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	80.00 / 80.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.152
Top of Structural Course For Begin Section	25.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	2.00 % / 2.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.284
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.152
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	30.00

Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Alignment Number	4
Distance	0.152
Top of Structural Course For Begin Section	30.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Alignment Number	5
Distance	0.265
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Alignment Number	6
Distance	0.152
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	30.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Alignment Number	7
Distance	0.152
Top of Structural Course For Begin Section	30.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Alignment Number	8
Distance	0.152
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00

Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	30.29	AC	$43,950.00	$1,331,245.50
120-6	EMBANKMENT	272,832.45	CY	$12.91	$3,522,266.93

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.12	AC	$43,950.00	$137,124.00
	Comment: Includes area underneath SR 600 (Gandy Blvd.) elevated viaduct.				
	Earthwork Component Total				$4,990,636.43

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	80,666.67	SY	$15.43	$1,244,686.72
285-709	OPTIONAL BASE,BASE GROUP 09	45,210.00	SY	$28.90	$1,306,569.00
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	9,680.00	TN	$159.50	$1,543,960.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	1,760.00	TN	$200.90	$353,584.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	500.00	TN	$350.50	$175,250.00
	Comment: Includes area underneath elevated viaduct.				
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	100.00	LF	$175.90	$17,590.00
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	150.00	LF	$28.90	$4,335.00
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	8,500.00	LF	$40.80	$346,800.00
536-8-113	GUARDRL TRANS CONN TO RIGID BA, F&I, TR	4.00	EA	$1,989.00	$7,956.00
536-85-20	GUARDRAIL END TREAT-TRAILING ANCHORAGE	2.00	EA	$1,799.00	$3,598.00
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	2.00	EA	$3,505.00	$7,010.00

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	10.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,066.67	SY	$15.43	$124,468.72
285-709	OPTIONAL BASE,BASE GROUP 09	4,521.00	SY	$28.90	$130,656.90
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	968.00	TN	$159.50	$154,396.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	176.00	TN	$200.90	$35,358.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	6.25	GM	$1,300.50	$8,128.12
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.12	GM	$650.50	$2,029.56
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	6.25	GM	$6,300.30	$39,376.88
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.12	GM	$2,100.10	$6,552.31
	Roadway Component Total				$5,512,305.62

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	22,605.00	SY	$20.10	$454,360.50
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	1,815.00	TN	$159.50	$289,492.50
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	48.40	TN	$200.90	$9,723.56

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	500.00	LF	$355.90	$177,950.00
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	36,696.00	SF	$57.90	$2,124,698.40
	Comment: Includes the potential noise walls identified within the segment from 4th St. to Brighton Bay Blvd.				
570-1-2	PERFORMANCE TURF, SOD	43,500.00	SY	$6.43	$279,705.00
	Comment: Includes additional area underneath SR 600 (Gandy Blvd.) elevated viaduct.				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	21,450.00	LF	$2.20	$47,190.00
104-11	FLOATING TURBIDITY BARRIER	390.62	LF	$12.30	$4,804.63
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	390.62	LF	$5.99	$2,339.81
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$3,590.00	$7,180.00
104-18	INLET PROTECTION SYSTEM	10.00	EA	$160.50	$1,605.00
107-1	LITTER REMOVAL	37.88	AC	$42.30	$1,602.32
107-2	MOWING	37.88	AC	$64.50	$2,443.26
	Shoulder Component Total				$3,403,094.98

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	42.00
Performance Turf Width	30.00
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	4.00 / 8.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	11,605.00	SY	$20.10	$233,260.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	907.50	TN	$150.00	$136,125.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	440.00	TN	$200.90	$88,396.00
570-1-2	PERFORMANCE TURF, SOD	27,500.00	SY	$6.43	$176,825.00
	Median Component Total				$634,606.50

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	10.00	EA	$6,750.00	$67,500.00

430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,256.00	LF	$175.00	$219,800.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	544.00	LF	$163.50	$88,944.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	464.00	LF	$298.95	$138,712.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	63.00	EA	$3,700.00	$233,100.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	3,125.00	SY	$97.90	$305,937.50
570-1-1	PERFORMANCE TURF	1,100.00	SY	$2.50	$2,750.00

Retention Basin 1

Description	Value
Size	.5 AC
Multiplier	1
Depth	6.00
Description	Includes expanding existing pond in the median underneath the 4th Street bridges.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.50	AC	$43,950.00	$21,975.00
120-1	REGULAR EXCAVATION	4,840.00	CY	$22.86	$110,642.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$6,955.00	$6,955.00
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$13,300.00	$13,300.00
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$325.50	$18,228.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$580.00	$116,000.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	600.00	LF	$28.90	$17,340.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$5,490.50	$5,490.50
570-1-1	PERFORMANCE TURF	2,420.00	SY	$2.50	$6,050.00

Retention Basin 2

Description	Value
Size	2.5 AC
Multiplier	1
Depth	8.50
Description	Includes new pond west of Brighton Bay Blvd.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50	AC	$43,950.00	$109,875.00
120-1	REGULAR EXCAVATION	34,283.33	CY	$22.86	$783,716.92
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00	EA	$8,500.00	$8,500.00
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$13,300.00	$13,300.00
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$325.50	$18,228.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$580.00	$116,000.00
430-542-100	STRAIGHT CONC ENDW 42", SINGLE, 0 ROUND	2.00	EA	$10,900.00	$21,800.00
430-560-100	STRAIGHT CONC ENDW 60", SINGLE, 0 ROUND	2.00	EA	$17,000.00	$34,000.00

550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00	LF	$28.90	$38,581.50
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$5,490.50	$5,490.50
570-1-1	PERFORMANCE TURF	12,100.00	SY	$2.50	$30,250.00
	Drainage Component Total				$2,552,467.12

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	4.00	AS	$490.50	$1,962.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	38.00	AS	$1,650.00	$62,700.00
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	4.00	AS	$6,990.00	$27,960.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	10.00	AS	$7,900.00	$79,000.00
	Signing Component Total				$171,622.00

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	118

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	11,900.00	LF	$16.10	$191,590.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	60.00	EA	$1,300.50	$78,030.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	35,700.00	LF	$3.20	$114,240.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	60.00	EA	$780.90	$46,854.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-61-400	LIGHT POLE CMPLT,STD,F&I, 45'MH, 0'ARM L	60.00	EA	$9,100.50	$546,030.00
	Subcomponent Total				$976,744.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	4.00	EA	$21,090.00	$84,360.00
	Lighting Component Total				$1,061,104.00

BRIDGES COMPONENT

Bridge 001

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	2,020.00

Width (LF)	88.67
Type	Overpass Bridge
Cost Factor	1.60
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$120.00
Factored Cost per SF	$192.00
Final Cost per SF	**$193.05**
Basic Bridge Cost	**$34,389,772.80**
Description	SR 600 (GANDY BLVD.) EASTBOUND/WESTBOUND ELEVATED VIADUCT

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	197.04 CY	$689.50	$135,859.08
415-1-9	REINF STEEL- APPROACH SLABS	34,482.00 LB	$1.50	$51,723.00
	Bridge 001 Total			$34,577,354.88

Bridge 002

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	153.00
Width (LF)	44.67
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$120.00
Factored Cost per SF	$150.00
Final Cost per SF	**$163.83**
Basic Bridge Cost	**$1,025,176.50**
Description	SR 600 (GANDY BLVD.) EASTBOUND BRIDGE OVERPASS 1,400' EAST OF SAN FERNANDO DR. (FRONTAGE ROAD CROSSING NO. 1)

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	99.27 CY	$689.50	$68,446.67
415-1-9	REINF STEEL- APPROACH SLABS	17,372.25 LB	$1.50	$26,058.38
	Bridge 002 Total			$1,119,681.55

Bridge 003

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	153.00
Width (LF)	44.67
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$120.00
Factored Cost per SF	$150.00

Final Cost per SF	**$163.83**
Basic Bridge Cost	**$1,025,176.50**
Description	SR 600 (GANDY BLVD.) WESTBOUND BRIDGE OVERPASS 1,400' EAST OF SAN FERNANDO DR. (FRONTAGE ROAD CROSSING NO. 1)

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	99.27	CY	$689.50	$68,446.67
415-1-9	REINF STEEL- APPROACH SLABS	17,372.25	LB	$1.50	$26,058.38
	Bridge 003 Total				$1,119,681.55
	Bridges Component Total				$36,816,717.98

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	5,000.00	LF	$369.25	$1,846,250.00

Retaining Wall 1

Description	Value
Length	7,000.00
Begin height	10.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	140,000.00	SF	$44.62	$6,246,800.00

Retaining Wall 2

Description	Value
Length	7,000.00
Begin height	30.00
End Height	10.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	140,000.00	SF	$44.62	$6,246,800.00
	Retaining Walls Component Total				$14,339,850.00

Sequence 1 Total $69,482,404.63

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 1.553 MI 8,200 LF

Description: Construction of SR 600 (Gandy Blvd.) mainline from East of Pinellas Causeway section to West of Gandy Bridge.

Special Conditions: Proposed Typical: 6-Lane divided, 4-11' & 2-12' travel lanes, 22' median, 10' inside shoulders with median barrier wall, and 10' paved outside shoulders. Includes 10% additional pavement for auxiliary lanes and slip ramps. Includes two bridge overpasses for frontage road connectivity and beach access.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	90.00 / 90.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.114
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	12.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.152
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	30.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.152
Top of Structural Course For Begin Section	30.00
Top of Structural Course For End Section	12.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	4
Distance	0.511
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	12.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %

Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	5
Distance	0.152
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	30.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	6
Distance	0.152
Top of Structural Course For Begin Section	30.00
Top of Structural Course For End Section	12.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	7
Distance	0.189
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	12.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	8
Distance	0.095
Top of Structural Course For Begin Section	12.00
Top of Structural Course For End Section	25.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	33.88 AC	$43,950.00	$1,489,026.00
120-6	EMBANKMENT	314,529.49 CY	$12.91	$4,060,575.72

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.50 AC	$43,950.00	$65,925.00
	Comment: Includes additional area approaching the EB Bridge along the south side of the Causeway Segment.			

	Earthwork Component Total	$5,615,526.72

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	34.00 / 34.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	102,042.45	SY	$15.43	$1,574,515.00
285-709	OPTIONAL BASE,BASE GROUP 09	63,156.99	SY	$28.90	$1,825,237.01
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	13,629.96	TN	$159.50	$2,173,978.62
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	2,478.17	TN	$200.90	$497,864.35

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	200.00	TN	$350.50	$70,100.00
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	7,500.00	LF	$175.90	$1,319,250.00
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	150.00	LF	$28.90	$4,335.00
536-1-3	GUARDRAIL- ROADWAY, DOUBLE FACE	1,000.00	LF	$40.80	$40,800.00
536-8-113	GUARDRL TRANS CONN TO RIGID BA, F&I, TR	2.00	EA	$1,989.00	$3,978.00
536-85-20	GUARDRAIL END TREAT-TRAILING ANCHORAGE	2.00	EA	$1,799.00	$3,598.00
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	2.00	EA	$3,505.00	$7,010.00
706-1-3	RAISED PAVMT MARK, TYPE B	1,048.00	EA	$9.00	$9,432.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	12.42	GM	$1,300.50	$16,152.21
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	12.42	GM	$650.50	$8,079.21

	Roadway Component Total	$7,554,329.40

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	22,467.56	SY	$20.10	$451,597.96
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	1,803.96	TN	$159.50	$287,731.62
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	874.65	TN	$200.90	$175,717.18

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	200.00	LF	$355.90	$71,180.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	21,319.58	LF	$2.20	$46,903.08
104-11	FLOATING TURBIDITY BARRIER	388.25	LF	$12.30	$4,775.48
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	388.25	LF	$5.99	$2,325.62
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$3,590.00	$7,180.00
104-18	INLET PROTECTION SYSTEM	10.00	EA	$160.50	$1,605.00
107-1	LITTER REMOVAL	37.64	AC	$42.30	$1,592.17
107-2	MOWING	37.64	AC	$64.50	$2,427.78
	Shoulder Component Total				$1,053,035.90

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	10.00 / 10.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	18,823.19	SY	$24.50	$461,168.16

334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	1,503.30 TN	$159.50	$239,776.35
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	728.87 TN	$200.90	$146,429.98
	Median Component Total			$847,374.49

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	10.00	EA	$6,750.00	$67,500.00
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,248.00	LF	$175.00	$218,400.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	536.00	LF	$163.50	$87,636.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	464.00	LF	$298.95	$138,712.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	63.00	EA	$3,700.00	$233,100.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	3,106.00	SY	$97.90	$304,077.40
570-1-1	PERFORMANCE TURF	1,093.31	SY	$2.50	$2,733.28
	Drainage Component Total				$1,052,159.48

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	4.00	AS	$490.50	$1,962.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	38.00	AS	$1,650.00	$62,700.00
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	4.00	AS	$6,990.00	$27,960.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	10.00	AS	$7,900.00	$79,000.00
	Signing Component Total				$171,622.00

BRIDGES COMPONENT

Bridge 003

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	150.00
Width (LF)	116.67
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$120.00
Factored Cost per SF	$150.00
Final Cost per SF	**$164.10**
Basic Bridge Cost	**$2,625,075.00**
Description	SR 600 (GANDY BLVD.) BRIDGE OVERPASS; CAUSEWAY BEACH ACCESS (FRONTAGE ROAD CROSSING NO. 2)

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	259.27	CY	$689.50	$178,766.66
415-1-9	REINF STEEL- APPROACH SLABS	45,372.25	LB	$1.50	$68,058.38
	Bridge 003 Total				$2,871,900.05

Bridge 005

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	100.00
Width (LF)	116.67
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$120.00
Factored Cost per SF	$150.00
Final Cost per SF	**$171.16**
Basic Bridge Cost	**$1,750,050.00**
Description	SR 600 (GANDY BLVD.) BRIDGE OVERPASS - RECREATIONAL AREA; 2,300' WEST OF GANDY BRIDGES OVER OLD TAMPA BAY (FRONTAGE ROAD CROSSING NO. 2)

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	259.27	CY	$689.50	$178,766.66
415-1-9	REINF STEEL- APPROACH SLABS	45,372.25	LB	$1.50	$68,058.38
	Bridge 005 Total				$1,996,875.05
	Bridges Component Total				$4,868,775.10

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	20,000.00	LF	$369.25	$7,385,000.00

Retaining Wall 1

Description	Value
Length	3,750.00
Begin height	10.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	75,000.00	SF	$44.62	$3,346,500.00

Retaining Wall 2

Description	Value
Length	3,750.00
Begin height	30.00
End Height	10.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	75,000.00	SF	$44.62	$3,346,500.00

Retaining Wall 3

Description	Value
Length	3,750.00
Begin height	10.00
End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	75,000.00	SF	$44.62	$3,346,500.00

Retaining Wall 4

Description	Value
Length	3,750.00
Begin height	30.00
End Height	10.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	75,000.00	SF	$44.62	$3,346,500.00
	Retaining Walls Component Total				$20,771,000.00

Sequence 2 Total $41,933,823.09

Sequence: 3 NUU - New Construction, Undivided, Urban **Net Length:** 2.083 MI 11,000 LF

Description: Construction of Eastbound Frontage Road from 4th Street to Pinellas Causeway section. Includes the overpass traffic signals at Brighton Bay Blvd. & San Martin Blvd.

Special Conditions: Proposed Typical: 2-11' one way thru lanes with curb and gutter both sides and 12' shared use path. Conventional lighting will be used for Frontage Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 65.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.800
Top of Structural Course For Begin Section	8.00
Top of Structural Course For End Section	8.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	0 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.133
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.152
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	16.41	AC	$43,950.00	$721,219.50
120-6	EMBANKMENT	67,791.12	CY	$12.91	$875,183.36
	Earthwork Component Total				$1,596,402.86

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	11.00 / 11.00
Structural Spread Rate	220
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	33,195.02	SY	$15.43	$512,199.16
285-706	OPTIONAL BASE,BASE GROUP 06	26,888.46	SY	$37.50	$1,008,317.25
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,957.73	TN	$182.93	$541,057.55
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	2,218.30	TN	$181.50	$402,621.45

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-4-10	REMOVAL OF EXIST CONC	5,527.00	SY	$35.90	$198,419.30
	Comment: REMOVAL OF EXISTING SIDEWALKS				
400-0-11	CONC CLASS NS, GRAVITY WALL	1,152.00	CY	$995.50	$1,146,816.00
515-1-2	PIPE HANDRAIL - GUIDERAIL, ALUMINUM	1,000.00	LF	$75.10	$75,100.00
706-1-3	RAISED PAVMT MARK, TYPE B	281.00	EA	$9.00	$2,529.00

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	15.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,979.25	SY	$15.43	$76,829.83
285-706	OPTIONAL BASE,BASE GROUP 06	4,033.27	SY	$37.50	$151,247.62
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	443.66	TN	$182.93	$81,158.72
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	332.74	TN	$181.50	$60,392.31

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	8.33	GM	$1,300.50	$10,833.16
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.08	GM	$650.50	$1,353.04
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	8.33	GM	$6,300.30	$52,481.50
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	2.08	GM	$2,100.10	$4,368.21

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0

Off Road Bike Path Width L/R	6.00 / 6.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	19,555.24	SY	$15.43	$301,737.35
285-701	OPTIONAL BASE,BASE GROUP 01	14,666.43	SY	$21.90	$321,194.82
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,209.98	TN	$150.00	$181,497.00
339-1	MISCELLANEOUS ASPHALT PAVEMENT	40.33	TN	$350.50	$14,135.66
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	1,200.00	LF	$28.90	$34,680.00
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	1.00	EA	$3,505.00	$3,505.00
	Roadway Component Total				$5,182,473.96

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 27.25
Total Outside Shoulder Perf. Turf Width L/R	10.00 / 25.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	10,999.82	LF	$45.90	$504,891.74
520-1-10	CONCRETE CURB & GUTTER, TYPE F	10,999.82	LF	$45.90	$504,891.74
570-1-2	PERFORMANCE TURF, SOD	42,777.09	SY	$6.43	$275,056.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	100.00	SY	$70.80	$7,080.00
	Comment: Includes 6' sidewalk along 4th St. widening.				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	21,999.65	LF	$2.20	$48,399.23
104-11	FLOATING TURBIDITY BARRIER	520.82	LF	$12.30	$6,406.09
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	520.82	LF	$5.99	$3,119.71
104-15	SOIL TRACKING PREVENTION DEVICE	3.00	EA	$3,590.00	$10,770.00
104-18	INLET PROTECTION SYSTEM	107.00	EA	$160.50	$17,173.50
107-1	LITTER REMOVAL	25.25	AC	$42.30	$1,068.08
107-2	MOWING	25.25	AC	$64.50	$1,628.62
	Shoulder Component Total				$1,380,485.41

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	75.00	EA	$8,500.90	$637,567.50
425-1-451	INLETS, CURB, TYPE J-5, <10'	21.00	EA	$13,950.00	$292,950.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	11.00	EA	$6,500.00	$71,500.00
425-2-41	MANHOLES, P-7, <10'	11.00	EA	$6,750.00	$74,250.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	4,848.00	LF	$163.50	$792,648.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	424.00	LF	$298.95	$126,754.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	10,424.00	LF	$375.10	$3,910,042.40
570-1-1	PERFORMANCE TURF	633.32	SY	$2.50	$1,583.30
	Drainage Component Total				$5,907,296.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	42.00	AS	$490.50	$20,601.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,650.00	$8,250.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00	AS	$7,900.00	$39,500.00
	Signing Component Total				$68,351.00

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	2
Description	Signal at Brighton Bay Blvd./Derby Lane

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,500.00	LF	$16.10	$24,150.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	500.00	LF	$33.50	$16,750.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	2.00	PI	$9,299.00	$18,598.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	32.00	EA	$1,300.50	$41,616.00
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	2.00	AS	$3,999.20	$7,998.40
639-2-1	ELECTRICAL SERVICE WIRE, F&I	120.00	LF	$9.50	$1,140.00
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	8.00	EA	$85,900.00	$687,200.00
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	24.00	AS	$1,500.10	$36,002.40

653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	16.00	AS	$990.60	$15,849.60
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	24.00	EA	$321.00	$7,704.00
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	24.00	AS	$1,800.50	$43,212.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	16.00	EA	$399.10	$6,385.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	2.00	AS	$40,600.50	$81,201.00
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	8.00	EA	$270.50	$2,164.00

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	2
Description	Signal at Brighton Bay Blvd./Derby Lane

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,400.00	LF	$16.10	$22,540.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	600.00	LF	$33.50	$20,100.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	2.00	PI	$9,299.00	$18,598.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	44.00	EA	$1,300.50	$57,222.00
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	2.00	AS	$3,999.20	$7,998.40
639-2-1	ELECTRICAL SERVICE WIRE, F&I	120.00	LF	$9.50	$1,140.00
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	2.00	EA	$1,860.00	$3,720.00
649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	12.00	EA	$49,500.00	$594,000.00
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	40.00	AS	$1,500.10	$60,004.00
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	16.00	AS	$990.60	$15,849.60
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	40.00	EA	$321.00	$12,840.00
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	40.00	AS	$1,800.50	$72,020.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	16.00	EA	$399.10	$6,385.60
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	2.00	AS	$40,600.50	$81,201.00
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	8.00	EA	$270.50	$2,164.00

Signalization 3

Description	Value
Type	2 Lane Mast Arm
Multiplier	4
Description	Signals at San Martin Blvd.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,200.00	LF	$16.10	$51,520.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	800.00	LF	$33.50	$26,800.00

632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	4.00	PI	$9,299.00	$37,196.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	48.00	EA	$1,300.50	$62,424.00
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	4.00	AS	$3,999.20	$15,996.80
639-2-1	ELECTRICAL SERVICE WIRE, F&I	240.00	LF	$9.50	$2,280.00
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	16.00	EA	$80,200.50	$1,283,208.00
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	32.00	AS	$1,500.10	$48,003.20
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	32.00	AS	$990.60	$31,699.20
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	32.00	EA	$321.00	$10,272.00
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	32.00	AS	$1,800.50	$57,616.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	32.00	EA	$399.10	$12,771.20
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	4.00	AS	$40,600.50	$162,402.00
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	16.00	EA	$270.50	$4,328.00

Interconnect Subcomponent

Description	Value
Type	U
Length of Fiber Run	10,900.00
Number of Intersections	2
Percentage of Underpavement Conduit	25.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	8,175.00	LF	$16.10	$131,617.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	2,725.00	LF	$33.50	$91,287.50
633-1-122	FIBER OPTIC CABLE, F&I, UG,13-48	10,900.00	LF	$3.30	$35,970.00
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36"	3.00	EA	$2,590.50	$7,771.50
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	12.00	AS	$1,150.00	$13,800.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
635-3-11	JUNCTION BOX, FURNISH & INSTALL, AERIAL	19.00	EA	$990.50	$18,819.50

Signalizations Component Total $4,071,536.00

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	10,999.82	LF	$16.10	$177,097.10
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	2,183.30	LF	$33.50	$73,140.55

635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	73.00	EA	$1,300.50	$94,936.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	40,174.36	LF	$3.20	$128,557.95
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	73.00	EA	$780.90	$57,005.70

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-61-300	LIGHT POLE CMPLT,STD,F&I, 40'MH, 0'ARM L	73.00	EA	$6,990.00	$510,270.00
	Subcomponent Total				$1,041,007.80
	Lighting Component Total				$1,041,007.80

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	800.00	LF	$369.25	$295,400.00

Retaining Wall 1

Description	Value
Length	500.00
Begin height	4.00
End Height	4.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,000.00	SF	$44.62	$89,240.00

Retaining Wall 2

Description	Value
Length	300.00
Begin height	4.00
End Height	4.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,200.00	SF	$44.62	$53,544.00
	Retaining Walls Component Total				$438,184.00

Sequence 3 Total $19,685,737.03

Sequence: 4 NUU - New Construction, Undivided, Urban **Net Length:** 1.212 MI 6,400 LF

Description: Construction new one-way, 1-lane beach access road from West Causeway Access to SR 600 (Gandy Blvd.) eastbound on ramp along south side of Gandy mainline.

Special Conditions: Includes 12' shared use path.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	20.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.284
Top of Structural Course For Begin Section	9.00
Top of Structural Course For End Section	9.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.189
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.189
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	4
Distance	0.549
Top of Structural Course For Begin Section	8.00
Top of Structural Course For End Section	8.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	10.28	AC	$43,950.00	$451,806.00
120-6	EMBANKMENT	53,149.04	CY	$12.91	$686,154.11
	Earthwork Component Total				$1,137,960.11

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 9.00
Structural Spread Rate	220
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	20,735.64	SY	$15.43	$319,950.93
285-706	OPTIONAL BASE,BASE GROUP 06	17,066.37	SY	$37.50	$639,988.88
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,877.30	TN	$182.93	$343,414.49
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	1,407.98	TN	$181.50	$255,548.37

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$43,950.00	$87,900.00
	Comment: Items include additional length of Shared Use Path east of Frontage Road Crossing No. 3				
120-6	EMBANKMENT	6,700.00	CY	$12.91	$86,497.00
160-4	TYPE B STABILIZATION	6,667.00	SY	$15.43	$102,871.81
285-701	OPTIONAL BASE,BASE GROUP 01	4,000.00	SY	$21.90	$87,600.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	220.00	TN	$150.00	$33,000.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	9.70	GM	$1,300.50	$12,614.85

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	6.00 / 6.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,377.58	SY	$15.43	$175,556.06
285-701	OPTIONAL BASE,BASE GROUP 01	8,533.18	SY	$21.90	$186,876.64

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	703.99	TN	$150.00	$105,598.50
339-1	MISCELLANEOUS ASPHALT PAVEMENT	213.33	TN	$350.50	$74,772.16
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	6,400.00	LF	$28.90	$184,960.00
536-85-26	GUARDRAIL END TREATMENT-TYPE CRT	1.00	EA	$3,599.00	$3,599.00
	Roadway Component Total				$2,700,748.70

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 22.25
Total Outside Shoulder Perf. Turf Width L/R	10.00 / 20.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	6,399.89	LF	$45.90	$293,754.95
520-1-10	CONCRETE CURB & GUTTER, TYPE F	6,399.89	LF	$45.90	$293,754.95
570-1-2	PERFORMANCE TURF, SOD	21,332.96	SY	$6.43	$137,170.93

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	12,799.78	LF	$2.20	$28,159.52
104-11	FLOATING TURBIDITY BARRIER	303.02	LF	$12.30	$3,727.15
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	303.02	LF	$5.99	$1,815.09
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$3,590.00	$7,180.00
104-18	INLET PROTECTION SYSTEM	62.00	EA	$160.50	$9,951.00
107-1	LITTER REMOVAL	14.69	AC	$42.30	$621.39
107-2	MOWING	14.69	AC	$64.50	$947.50
	Shoulder Component Total				$777,082.49

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	44.00	EA	$8,500.90	$374,039.60
425-1-451	INLETS, CURB, TYPE J-5, <10'	13.00	EA	$13,950.00	$181,350.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	7.00	EA	$6,500.00	$45,500.00
425-2-41	MANHOLES, P-7, <10'	7.00	EA	$6,750.00	$47,250.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	2,816.00	LF	$163.50	$460,416.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	248.00	LF	$298.95	$74,139.60
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	6,064.00	LF	$375.10	$2,274,606.40
570-1-1	PERFORMANCE TURF	368.48	SY	$2.50	$921.20

	Drainage Component Total	$3,458,222.80

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	25.00	AS	$490.50	$12,262.50
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,650.00	$4,950.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	$7,900.00	$23,700.00
	Signing Component Total				$40,912.50

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	6,399.89	LF	$16.10	$103,038.23
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	835.14	LF	$33.50	$27,977.19
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	26.00	EA	$1,300.50	$33,813.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	21,705.07	LF	$3.20	$69,456.22
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	26.00	EA	$8,261.03	$214,786.78
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	26.00	EA	$780.90	$20,303.40
	Subcomponent Total				$469,374.82
	Lighting Component Total				$469,374.82

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	1,000.00
Begin height	4.00
End Height	4.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	4,000.00	SF	$44.62	$178,480.00
	Retaining Walls Component Total				$178,480.00

Sequence 4 Total	$8,762,781.42

Sequence: 5 NUU - New Construction, Undivided, Urban **Net Length:** 2.083 MI 11,000 LF

Description: Construction new westbound Frontage Road from East of 4th Street to Pinellas Causeway section.

Special Conditions: Proposed Typical: 2-11' one way thru lanes with curb and gutter both sides and 12' shared use path. Conventional lighting will be used for Frontage Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	65.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.931
Top of Structural Course For Begin Section	8.00
Top of Structural Course For End Section	8.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 0 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.152
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	16.41	AC	$43,950.00	$721,219.50
120-6	EMBANKMENT	61,793.46	CY	$12.91	$797,753.57
	Earthwork Component Total				$1,518,973.07

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	11.00 / 11.00
Structural Spread Rate	220
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	33,195.02	SY	$15.43	$512,199.16
285-706	OPTIONAL BASE,BASE GROUP 06	26,888.46	SY	$37.50	$1,008,317.25
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,957.73	TN	$182.93	$541,057.55
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	2,218.30	TN	$181.50	$402,621.45

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-4-10	REMOVAL OF EXIST CONC	820.00	SY	$35.90	$29,438.00
	Comment: Removal of sidewalks.				
400-0-11	CONC CLASS NS, GRAVITY WALL	1,152.00	CY	$995.50	$1,146,816.00
515-1-2	PIPE HANDRAIL - GUIDERAIL, ALUMINUM	1,000.00	LF	$75.10	$75,100.00
706-1-3	RAISED PAVMT MARK, TYPE B	281.00	EA	$9.00	$2,529.00

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	15.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,979.25	SY	$15.43	$76,829.83
285-706	OPTIONAL BASE,BASE GROUP 06	4,033.27	SY	$37.50	$151,247.62
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	443.66	TN	$182.93	$81,158.72
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	332.74	TN	$181.50	$60,392.31

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	8.33	GM	$1,300.50	$10,833.16
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.08	GM	$650.50	$1,353.04
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	8.33	GM	$6,300.30	$52,481.50
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	2.08	GM	$2,100.10	$4,368.21

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	6.00 / 6.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	19,555.24	SY	$15.43	$301,737.35

285-701	OPTIONAL BASE,BASE GROUP 01	14,666.43 SY	$21.90	$321,194.82
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,209.98 TN	$150.00	$181,497.00
	Roadway Component Total			$4,961,171.99

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	27.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	25.00 / 10.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	10,999.82	LF	$45.90	$504,891.74
520-1-10	CONCRETE CURB & GUTTER, TYPE F	10,999.82	LF	$45.90	$504,891.74
570-1-2	PERFORMANCE TURF, SOD	42,777.09	SY	$6.43	$275,056.69

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	21,999.65	LF	$2.20	$48,399.23
104-11	FLOATING TURBIDITY BARRIER	520.82	LF	$12.30	$6,406.09
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	520.82	LF	$5.99	$3,119.71
104-15	SOIL TRACKING PREVENTION DEVICE	3.00	EA	$3,590.00	$10,770.00
104-18	INLET PROTECTION SYSTEM	107.00	EA	$160.50	$17,173.50
107-1	LITTER REMOVAL	25.25	AC	$42.30	$1,068.08
107-2	MOWING	25.25	AC	$64.50	$1,628.62
	Shoulder Component Total				$1,373,405.41

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	75.00	EA	$8,500.90	$637,567.50
425-1-451	INLETS, CURB, TYPE J-5, <10'	21.00	EA	$13,950.00	$292,950.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	11.00	EA	$6,500.00	$71,500.00
425-2-41	MANHOLES, P-7, <10'	11.00	EA	$6,750.00	$74,250.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	4,848.00	LF	$163.50	$792,648.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	424.00	LF	$298.95	$126,754.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	10,424.00	LF	$375.10	$3,910,042.40
570-1-1	PERFORMANCE TURF	633.32	SY	$2.50	$1,583.30
	Drainage Component Total				$5,907,296.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	42.00	AS	$490.50	$20,601.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,650.00	$8,250.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00	AS	$7,900.00	$39,500.00
	Signing Component Total				$68,351.00

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	10,999.82	LF	$16.10	$177,097.10
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	2,183.30	LF	$33.50	$73,140.55
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	73.00	EA	$1,300.50	$94,936.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	40,174.36	LF	$3.20	$128,557.95
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	73.00	EA	$780.90	$57,005.70

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-61-300	LIGHT POLE CMPLT,STD,F&I, 40'MH, 0'ARM L	73.00	EA	$6,990.00	$510,270.00
	Subcomponent Total				$1,041,007.80
	Lighting Component Total				$1,041,007.80

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	500.00	LF	$369.25	$184,625.00

Retaining Wall 1

Description	Value
Length	500.00
Begin height	4.00
End Height	4.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,000.00	SF	$44.62	$89,240.00
	Retaining Walls Component Total				$273,865.00

Sequence 5 Total	$15,144,070.27

Sequence: 6 NUU - New Construction, Undivided, Urban **Net Length:** 1.136 MI 6,000 LF

Description: Construction new westbound one-way, 1-lane Frontage Road along the North side of Gandy Mainline connecting recreational area to westbound exit ramp.

Special Conditions: Includes 12' shared use path.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 20.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.947
Top of Structural Course For Begin Section	8.00
Top of Structural Course For End Section	8.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.189
Top of Structural Course For Begin Section	11.00
Top of Structural Course For End Section	11.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.64	AC	$43,950.00	$423,678.00
120-6	EMBANKMENT	42,525.75	CY	$12.91	$549,007.43
	Earthwork Component Total				$972,685.43

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	7.00 / 15.00
Structural Spread Rate	220
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	18,107.25	SY	$15.43	$279,394.87
285-706	OPTIONAL BASE,BASE GROUP 06	14,667.14	SY	$37.50	$550,017.75
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,613.38	TN	$182.93	$295,135.60
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	1,210.04	TN	$181.50	$219,622.26

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	9.09	GM	$1,300.50	$11,821.54

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	6.00 / 6.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,667.01	SY	$15.43	$164,591.96
285-701	OPTIONAL BASE,BASE GROUP 01	8,000.26	SY	$21.90	$175,205.69
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	660.02	TN	$150.00	$99,003.00
	Roadway Component Total				$1,794,792.68

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	22.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	20.00 / 10.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	6,000.19	LF	$45.90	$275,408.72
520-1-10	CONCRETE CURB & GUTTER, TYPE F	6,000.19	LF	$45.90	$275,408.72
570-1-2	PERFORMANCE TURF, SOD	20,000.64	SY	$6.43	$128,604.12

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	12,000.38	LF	$2.20	$26,400.84
104-11	FLOATING TURBIDITY BARRIER	284.10	LF	$12.30	$3,494.43
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	284.10	LF	$5.99	$1,701.76
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$3,590.00	$7,180.00

104-18	INLET PROTECTION SYSTEM	58.00	EA	$160.50	$9,309.00
107-1	LITTER REMOVAL	13.77	AC	$42.30	$582.47
107-2	MOWING	13.77	AC	$64.50	$888.17
	Shoulder Component Total				$728,978.23

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	41.00	EA	$8,500.90	$348,536.90
425-1-451	INLETS, CURB, TYPE J-5, <10'	12.00	EA	$13,950.00	$167,400.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	6.00	EA	$6,500.00	$39,000.00
425-2-41	MANHOLES, P-7, <10'	6.00	EA	$6,750.00	$40,500.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	2,640.00	LF	$163.50	$431,640.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	232.00	LF	$298.95	$69,356.40
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	5,688.00	LF	$375.10	$2,133,568.80
570-1-1	PERFORMANCE TURF	345.47	SY	$2.50	$863.68
	Drainage Component Total				$3,230,865.78

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	23.00	AS	$490.50	$11,281.50
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,650.00	$4,950.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	$7,900.00	$23,700.00
	Signing Component Total				$39,931.50

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	6,000.19	LF	$16.10	$96,603.06
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	782.98	LF	$33.50	$26,229.83
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	24.00	EA	$1,300.50	$31,212.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	20,349.51	LF	$3.20	$65,118.43
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	24.00	EA	$780.90	$18,741.60

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-61-300	LIGHT POLE CMPLT,STD,F&I, 40'MH, 0'ARM L	24.00	EA	$6,990.00	$167,760.00

Subcomponent Total	$405,664.92
Lighting Component Total	$405,664.92
Sequence 6 Total	$7,172,918.54

Sequence: 7 NUU - New Construction, Undivided, Urban **Net Length:** 0.284 MI 1,500 LF

Description: Sidestreet connections to Frontage Road access.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.284
Top of Structural Course For Begin Section	8.00
Top of Structural Course For End Section	8.00
Horizontal Elevation For Begin Section	6.00
Horizontal Elevation For End Section	6.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.72	AC	$43,950.00	$75,594.00
120-6	EMBANKMENT	7,643.11	CY	$12.91	$98,672.55
	Earthwork Component Total				$174,266.55

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	11.00 / 11.00
Structural Spread Rate	220
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,526.81	SY	$15.43	$69,848.68
285-706	OPTIONAL BASE,BASE GROUP 06	3,666.78	SY	$37.50	$137,504.25
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	403.35	TN	$182.93	$73,784.82
337-7-81	ASPH CONC FC,TRAFFIC B,FC-12.5,PG 76-22	146.67	TN	$181.50	$26,620.60

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	300.00	SY	$70.80	$21,240.00
	Comment: Includes area along east side of northern side street connection at San Martin Blvd.				
706-1-3	RAISED PAVMT MARK, TYPE B	38.00	EA	$9.00	$342.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt

Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.27	GM	$1,300.50	$2,952.14
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.57	GM	$650.50	$370.78
	Roadway Component Total				$332,663.29

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	17.25 / 17.25
Total Outside Shoulder Perf. Turf Width L/R	15.00 / 15.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,500.05	LF	$45.90	$68,852.30
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,500.05	LF	$45.90	$68,852.30
570-1-2	PERFORMANCE TURF, SOD	5,000.16	SY	$6.43	$32,151.03

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,000.10	LF	$2.20	$6,600.22
104-11	FLOATING TURBIDITY BARRIER	71.03	LF	$12.30	$873.67
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	71.03	LF	$5.99	$425.47
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,590.00	$3,590.00
104-18	INLET PROTECTION SYSTEM	15.00	EA	$160.50	$2,407.50
107-1	LITTER REMOVAL	3.44	AC	$42.30	$145.51
107-2	MOWING	3.44	AC	$64.50	$221.88
	Shoulder Component Total				$184,119.88

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	11.00	EA	$8,500.90	$93,509.90
425-1-451	INLETS, CURB, TYPE J-5, <10'	3.00	EA	$13,950.00	$41,850.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$6,500.00	$13,000.00
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$6,750.00	$13,500.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	664.00	LF	$163.50	$108,564.00

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	64.00	LF	$298.95	$19,132.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	1,424.00	LF	$375.10	$534,142.40
570-1-1	PERFORMANCE TURF	86.37	SY	$2.50	$215.92
	Drainage Component Total				$823,915.03

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	6.00	AS	$490.50	$2,943.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,650.00	$1,650.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$7,900.00	$7,900.00
	Signing Component Total				$12,493.00

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,500.05	LF	$16.10	$24,150.80
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	195.74	LF	$33.50	$6,557.29
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	6.00	EA	$1,300.50	$7,803.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	5,087.38	LF	$3.20	$16,279.62
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	6.00	EA	$780.90	$4,685.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
715-61-300	LIGHT POLE CMPLT,STD,F&I, 40'MH, 0'ARM L	6.00	EA	$6,990.00	$41,940.00
	Subcomponent Total				$101,416.11
	Lighting Component Total				$101,416.12

Sequence 7 Total $1,628,873.87

Date: 11/13/2024 2:06:24 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 256931-4-52-01 **Letting Date:** 07/2035

Description: Alternative 3 (Hybrid): Reconstruction of SR 600 (Gandy Blvd) from 4th Street to West end of Gandy Bridge with controlled access for the Gandy mainline and frontage roads to service local demand.

District: 07 **County:** 15 PINELLAS **Market Area:** 08 **Units:** English
Contract Class: **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.578 MI

Project Manager: EYRA CASH

Version 11 Project Grand Total **$228,092,462.20**
Description: District 7 and OEM review. Final PER.

Project Sequences Subtotal				**$163,810,608.85**
102-1	Maintenance of Traffic	10.00 %		$16,381,060.88
101-1	Mobilization	10.00 %		$18,019,166.97
Project Sequences Total				**$198,210,836.70**
Project Unknowns		15.00 %		$29,731,625.50
Design/Build		0.00 %		$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 11 Project Grand Total					**$228,092,462.20**

Date: 8/10/2023 12:31:06 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 441250-2-52-01 **Letting Date:** 01/2099

Description: US 92/SR 600/GANDY BLVD FR W OF GANDY BRIDGE TO E END OF GANDY BRIDGE

District: 07 **County:** 10 HILLSBOROUGH **Market Area:** 08 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.240 MI

Project Manager: Omar Chehab

Version 6 Project Grand Total **$426,665,287.57**

Description: FINAL PER Estimate - Post Public Hearing. Incorporates bus on shoulder provisions for Hillsborough/Pinellas MPO.

Sequence: 1 MIS - Miscellaneous Construction **Net Length:** 2.645 MI 13,966 LF

Description: Construct a new westbound SR 600 (Gandy Blvd.) bridge over Tampa Bay with (3) 12' travel lanes, 10' inside shoulder, 12' outside shoulder, and a shared use path along the north side of bridge.

Special Conditions: Includes removal of existing eastbound Gandy Bridge over Tampa Bay.

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
713-103-101	PERMANENT TAPE, WHITE,SOLID,6" CONC BR	5.25	GM	$38,100.30	$200,026.58
	Comment: Includes existing WB bridge re-striping				
713-103-131	PERMANENT TAPE, WHITE,SKIP/D,6" FOR CONC	10.58	GM	$11,800.90	$124,853.52
	Comment: Includes existing WB bridge re-striping				
713-103-201	PERMANENT TAPE, YELLOW,SOLID,6" CONC BR	5.25	GM	$37,400.80	$196,354.20
	Comment: Includes existing WB bridge re-striping				
	Roadway Component Total				$521,234.30

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	125

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	25,000.00	LF	$16.10	$402,500.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	125.00	EA	$1,300.50	$162,562.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	75,000.00	LF	$3.20	$240,000.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	125.00	EA	$9,800.00	$1,225,000.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	125.00	EA	$780.90	$97,612.50
	Subcomponent Total				$2,127,675.00

Lighting Component Total	$2,127,675.00

BRIDGES COMPONENT

Bridge 00001

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	13,966.00
Width (LF)	77.67
Type	High Level
Cost Factor	1.00
Structure No.	
Removal of Existing Structures area	624,708.50
Default Cost per SF	$160.00
Factored Cost per SF	$160.00
Final Cost per SF	**$174.60**
Basic Bridge Cost	**$173,558,275.20**
Description	SR 600 (GANDY BLVD.) PROPOSED WESTBOUND BRIDGE - EASTBOUND BRIDGE REMOVAL

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	624,708.50	SF	$50.00	$31,235,425.00
400-2-10	CONC CLASS II, APPROACH SLABS	172.60	CY	$689.50	$119,007.70
415-1-9	REINF STEEL- APPROACH SLABS	30,205.00	LB	$1.50	$45,307.50

Bridge X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
455-34-2	PRESTRESSED CONCRETE PILING, 14" SQ.	1,850.00	LF	$330.90	$612,165.00
	Comment: Fender system				
471-1-1	FENDER SYS,PLASTIC MARINE LUMBER,REINF	13.80	MB	$23,200.00	$320,160.00
	Comment: Fender system				
471-1-2	FENDER SYS,PLASTIC MARINE LUMBER, NR	13.80	MB	$21,900.50	$302,226.90
	Comment: Fender system				
471-3-3	POLYMERIC FENDER SYSTEM, 201-400 KIP-FT	1.00	LS	$1,798,120.68	$1,798,120.68
	Comment: Fender system				
510-1	NAVIGATION LIGHTS- FIXED BRIDGE, SYSTEM	1.00	LS	$72,595.69	$72,595.69
515-4-2	BULLET RAIL, DOUBLE RAIL	13,966.00	LF	$150.00	$2,094,900.00
521-6-11	CONC PARAPET, PED/BIKE, 27"	13,966.00	LF	$290.00	$4,050,140.00
550-10-354	FENCING, TYPE R, 8.1-10', W/PARTIAL ENCL	13,966.00	LF	$460.00	$6,424,360.00
	Comment: Fence to protect Bike/Ped along the bridge				

Bridge 00001 Total	$220,632,683.67
Bridges Component Total	$220,632,683.67

Sequence 1 Total	$223,281,592.97

Sequence: 2 MIS - Miscellaneous Construction **Net Length:** 2.645 MI 13,966 LF

Description: Widen the existing westbound SR 600 (Gandy Blvd.) bridge over Tampa Bay to provide (2) 11' travel lanes, and (1) 12' travel lane, 10' inside shoulder, and a 12' outside shoulder.

Special Conditions: Includes removal of a portion of the existing westbound Gandy Bridge.

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	125

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	25,000.00	LF	$16.10	$402,500.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	125.00	EA	$1,300.50	$162,562.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	75,000.00	LF	$3.20	$240,000.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	125.00	EA	$9,800.00	$1,225,000.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	125.00	EA	$780.90	$97,612.50
	Subcomponent Total				$2,127,675.00
	Lighting Component Total				$2,127,675.00

BRIDGES COMPONENT

Bridge 00002

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	13,966.00
Width (LF)	26.67
Type	High Level
Cost Factor	1.03
Structure No.	
Removal of Existing Structures area	140,823.83
Default Cost per SF	$160.00
Factored Cost per SF	$164.80
Final Cost per SF	**$164.95**
Basic Bridge Cost	**$61,383,586.66**
Description	SR 600 (GANDY BLVD.) WIDENING OF EXISTING EASTBOUND BRIDGE NO. 100585

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	140,823.83	SF	$50.00	$7,041,191.50
400-2-10	CONC CLASS II, APPROACH SLABS	59.27	CY	$689.50	$40,866.66
415-1-9	REINF STEEL- APPROACH SLABS	10,372.25	LB	$1.50	$15,558.38
	Bridge 00002 Total				$68,481,203.21
	Bridges Component Total				$68,481,203.21

Sequence 2 Total	$70,608,878.21

Sequence: 3 NDR - New Construction, Divided, Rural **Net Length:** 0.341 MI 1,800 LF

Description: Reconstruction for the SR 600 (Gandy Blvd.) west approach to the Gandy Bridge.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	95.00 / 125.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.341
Top of Structural Course For Begin Section	132.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	4 to 1 / 4 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.09	AC	$43,950.00	$399,505.50

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	272,246.18	CY	$12.91	$3,514,698.18

Earthwork Component Total $3,914,203.68

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	34.00 / 34.00
Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	22,405.97	SY	$15.43	$345,724.12
285-709	OPTIONAL BASE,BASE GROUP 09	13,867.70	SY	$28.90	$400,776.53
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	2,992.80	TN	$159.50	$477,351.60
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	544.15	TN	$200.90	$109,319.74

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,782.22	SY	$15.43	$166,369.65
	Comment: 12' Shared Use Path				
285-701	OPTIONAL BASE,BASE GROUP 01	6,830.54	SY	$21.90	$149,588.83
	Comment: 12' Shared Use Path				

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	533.72	TN	$150.00	$80,058.00
	Comment: 12' Shared Use Path				
515-4-2	BULLET RAIL, DOUBLE RAIL	800.00	LF	$150.00	$120,000.00
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	1,800.00	LF	$184.90	$332,820.00
521-6-11	CONC PARAPET, PED/BIKE, 27"	800.00	LF	$290.00	$232,000.00
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	1,100.00	LF	$355.90	$391,490.00
706-1-3	RAISED PAVMT MARK, TYPE B	230.00	EA	$9.00	$2,070.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.73	GM	$1,300.50	$3,550.36
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.36	GM	$650.50	$884.68
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	2.73	GM	$6,300.30	$17,199.82
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.36	GM	$2,100.10	$2,856.14
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	2.73	GM	$6,300.00	$17,199.00
	Roadway Component Total				$2,849,258.47

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	4,933.32	SY	$20.10	$99,159.73
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	396.11	TN	$159.50	$63,179.54
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	192.05	TN	$200.90	$38,582.84

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	1,425.00 SY	$96.90	$138,082.50

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,939.33	LF	$2.40	$11,854.39
104-11	FLOATING TURBIDITY BARRIER	89.95	LF	$12.62	$1,135.17
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	89.95	LF	$6.24	$561.29
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,607.30	$3,607.30
104-18	INLET PROTECTION SYSTEM	3.00	EA	$135.41	$406.23
107-1	LITTER REMOVAL	500.00	AC	$42.57	$21,285.00
107-2	MOWING	500.00	AC	$66.25	$33,125.00
	Shoulder Component Total				$410,979.00

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	10.00 / 10.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	4,133.10	SY	$20.10	$83,075.31
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	330.09	TN	$159.50	$52,649.36
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	160.04	TN	$200.90	$32,152.04
	Median Component Total				$167,876.71

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00	EA	$6,103.80	$18,311.40
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	288.00	LF	$138.88	$39,997.44
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	128.00	LF	$188.82	$24,168.96
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	112.00	LF	$265.06	$29,686.72
430-524-100	STRAIGHT CONC ENDW 24", SINGLE, 0 ROUND	2.00	EA	$2,884.97	$5,769.94
430-536-100	STRAIGHT CONC ENDW 36", SINGLE, 0 ROUND	1.00	EA	$5,700.35	$5,700.35

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00	EA	$2,806.58	$42,098.70
524-1-1	CONCRETE DITCH PAVT, NR, 3"	719.60	SY	$118.70	$85,416.52
570-1-1	PERFORMANCE TURF	253.30	SY	$5.00	$1,266.50
	Drainage Component Total				$252,416.53

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$444.66	$444.66
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,612.62	$14,513.58
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$5,767.19	$5,767.19
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	$9,213.87	$27,641.61
	Signing Component Total				$48,367.04

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	15

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,000.00	LF	$16.10	$48,300.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	15.00	EA	$1,300.50	$19,507.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,000.00	LF	$3.20	$28,800.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	15.00	EA	$9,800.00	$147,000.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	15.00	EA	$780.90	$11,713.50
	Subcomponent Total				$255,321.00
	Lighting Component Total				$255,321.00

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	2,500.00	LF	$369.25	$923,125.00

Retaining Wall 1

Description	Value
Length	2,500.00
Begin height	32.00
End Height	2.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

548-12	RET WALL SYSTEM, PERM, EX BARRIER	42,500.00 SF	$44.62	$1,896,350.00
	Retaining Walls Component Total			$2,819,475.00

Sequence 3 Total $10,717,897.43

Sequence: 4 NDR - New Construction, Divided, Rural **Net Length:** 0.352 MI 1,860 LF

Description: Parking lot construction for East Causeway Beach recreational use.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	75.00 / 75.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.352
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	6.40	AC	$43,950.00	$281,280.00
120-6	EMBANKMENT	3,320.63	CY	$12.91	$42,869.33
	Earthwork Component Total				$324,149.33

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	25.00 / 25.00
Structural Spread Rate	220
Friction Course Spread Rate	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,334.13	SY	$15.43	$159,455.63
285-706	OPTIONAL BASE,BASE GROUP 06	10,606.95	SY	$37.50	$397,760.62
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,136.75	TN	$182.93	$207,945.68

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-11	CONCRETE CURB & GUTTER, VAR HT TYPE F	3,800.00	LF	$44.50	$169,100.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2

Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.41	GM	$1,300.50	$1,833.71
	Roadway Component Total				$936,095.65

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	0
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,836.37	LF	$2.40	$11,607.29
104-11	FLOATING TURBIDITY BARRIER	88.08	LF	$12.62	$1,111.57
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	88.08	LF	$6.24	$549.62
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,607.30	$3,607.30
104-18	INLET PROTECTION SYSTEM	3.00	EA	$135.41	$406.23
107-1	LITTER REMOVAL	8.54	AC	$42.57	$363.55
107-2	MOWING	8.54	AC	$66.25	$565.78
	Shoulder Component Total				$18,211.34

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00	EA	$6,103.80	$18,311.40
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	288.00	LF	$138.88	$39,997.44
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	128.00	LF	$188.82	$24,168.96
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	112.00	LF	$265.06	$29,686.72
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00	EA	$2,806.58	$42,098.70
524-1-1	CONCRETE DITCH PAVT, NR, 3"	704.60	SY	$118.70	$83,636.02
570-1-1	PERFORMANCE TURF	248.02	SY	$5.00	$1,240.10
	Drainage Component Total				$239,139.34

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$444.66	$444.66
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,612.62	$14,513.58
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$5,767.19	$5,767.19
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	$9,213.87	$27,641.61
	Signing Component Total				$48,367.04

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	20

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,000.00	LF	$16.10	$64,400.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	20.00	EA	$1,300.50	$26,010.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	12,000.00	LF	$3.20	$38,400.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	20.00	EA	$9,800.00	$196,000.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	20.00	EA	$780.90	$15,618.00
	Subcomponent Total				$340,428.00
	Lighting Component Total				$340,428.00

Sequence 4 Total $1,906,390.70

Date: 8/10/2023 12:31:07 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 441250-2-52-01 **Letting Date:** 01/2099

Description: US 92/SR 600/GANDY BLVD FR W OF GANDY BRIDGE TO E END OF GANDY BRIDGE

District: 07 **County:** 10 HILLSBOROUGH **Market Area:** 08 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.240 MI

Project Manager: Omar Chehab

Version 6 Project Grand Total **$426,665,287.57**

Description: FINAL PER Estimate - Post Public Hearing. Incorporates bus on shoulder provisions for Hillsborough/Pinellas MPO.

Project Sequences Subtotal			**$306,514,759.31**
102-1	Maintenance of Traffic	10.00 %	$30,651,475.93
101-1	Mobilization	10.00 %	$33,716,623.52
Project Sequences Total			**$370,882,858.76**
Project Unknowns		15.00 %	$55,632,428.81
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 6 Project Grand Total					**$426,665,287.57**

Date: 8/10/2023 11:15:49 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 441250-3-52-01 **Letting Date:** 01/2099

Description: US 92/SR 600/GANDY BLVD FROM BRIDGE TO WESTSHORE BLVD

District: 07 **County:** 10 HILLSBOROUGH **Market Area:** 08 **Units:** English
Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.000 MI

Project Manager: PRD-CF-KCA

Version 6 Project Grand Total **$23,465,248.41**
Description: FINAL PER Estimate - Post Public Hearing.

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 0.450 MI / 2,376 LF

Description: SR 600 (Gandy Blvd.) from East End Bridge to Selmon Connector Ramps
Special Conditions: Includes 20% additional pavement for auxiliary lanes and median opening.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	150.00 / 150.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.307
Top of Structural Course For Begin Section	35.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	20.00
Horizontal Elevation For End Section	10.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	16.36	AC	$43,950.00	$719,022.00
120-1	REGULAR EXCAVATION	92,322.68	CY	$22.86	$2,110,496.46

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	93,883.60	CY	$12.91	$1,212,037.28

Earthwork Component Total $4,041,555.74

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00

Structural Spread Rate	440
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	23,232.00	SY	$15.43	$358,469.76
285-709	OPTIONAL BASE,BASE GROUP 09	13,020.48	SY	$28.90	$376,291.87
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	2,787.84	TN	$159.50	$444,660.48
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	506.88	TN	$200.90	$101,832.19

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	30,000.00	SY	$15.43	$462,900.00
	Comment: Includes additional auxiliary lane pavement on top of turnouts/crossovers 20%; 12' Shared Use Path				
285-701	OPTIONAL BASE,BASE GROUP 01	3,994.00	SY	$21.90	$87,468.60
	Comment: 12' Shared Use Path				
285-709	OPTIONAL BASE,BASE GROUP 09	15,000.00	SY	$28.90	$433,500.00
	Comment: Includes additional auxiliary lane pavement on top of turnouts/crossovers 20%				
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1.00	TN	$150.00	$150.00
	Comment: 12' Shared Use Path				
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	520.00	TN	$159.50	$82,940.00
	Comment: Includes additional auxiliary lane pavement on top of turnouts/crossovers 20%				
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	610.00	TN	$200.90	$122,549.00
	Comment: Includes additional auxiliary lane pavement on top of turnouts/crossovers 20%				
339-1	MISCELLANEOUS ASPHALT PAVEMENT	75.00	TN	$350.50	$26,287.50
515-4-2	BULLET RAIL, DOUBLE RAIL	800.00	LF	$150.00	$120,000.00
521-6-11	CONC PARAPET, PED/BIKE, 27"	800.00	LF	$290.00	$232,000.00
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	5,000.00	LF	$355.90	$1,779,500.00
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	800.00	LF	$28.90	$23,120.00
536-8-123	APPROACH TRANS CONN TO RIGID BA, F&I, ET	1.00	EA	$2,950.00	$2,950.00
536-85-20	GUARDRAIL END TREAT-TRAILING ANCHORAGE	1.00	EA	$1,799.00	$1,799.00
706-1-3	RAISED PAVMT MARK, TYPE B	138.00	EA	$9.00	$1,242.00

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,646.40	SY	$15.43	$71,693.95
285-709	OPTIONAL BASE,BASE GROUP 09	2,604.10	SY	$28.90	$75,258.49

334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	557.57 TN	$159.50	$88,932.42
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	101.38 TN	$200.90	$20,367.24

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.60	GM	$1,300.50	$4,681.80
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.90	GM	$650.50	$585.45
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	3.60	GM	$6,300.30	$22,681.08
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.90	GM	$2,100.10	$1,890.09
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	3.60	GM	$6,300.00	$22,680.00
	Roadway Component Total				$4,966,430.92

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	5,454.24	SY	$20.10	$109,630.22
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	435.60	TN	$159.50	$69,478.20
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	13.94	TN	$200.90	$2,800.55

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	950.00	SY	$20.10	$19,095.00
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	150.00	TN	$200.90	$30,135.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

104-10-3	SEDIMENT BARRIER	4,679.88 LF	$2.20	$10,295.74
104-11	FLOATING TURBIDITY BARRIER	85.22 LF	$12.30	$1,048.21
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	85.22 LF	$5.99	$510.47
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$3,590.00	$3,590.00
104-18	INLET PROTECTION SYSTEM	3.00 EA	$160.50	$481.50
107-1	LITTER REMOVAL	8.26 AC	$42.30	$349.40
107-2	MOWING	8.26 AC	$64.50	$532.77
	Shoulder Component Total			$247,947.06

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	10.00 / 10.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-703	OPTIONAL BASE,BASE GROUP 03	5,454.24	SY	$20.10	$109,630.22
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	435.60	TN	$159.50	$69,478.20
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	13.94	TN	$200.90	$2,800.55
	Median Component Total				$181,908.97

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-551	INLETS, DT BOT, TYPE E, <10'	3.00	EA	$6,750.00	$20,250.00
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	272.00	LF	$175.00	$47,600.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	120.00	LF	$163.50	$19,620.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	104.00	LF	$298.95	$31,090.80
430-524-100	STRAIGHT CONC ENDW 24", SINGLE, 0 ROUND	4.00	EA	$6,850.00	$27,400.00
430-536-100	STRAIGHT CONC ENDW 36", SINGLE, 0 ROUND	4.00	EA	$10,800.00	$43,200.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	14.00	EA	$3,700.00	$51,800.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	681.80	SY	$97.90	$66,748.22
570-1-1	PERFORMANCE TURF	239.99	SY	$2.50	$599.98
	Drainage Component Total				$308,309.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$490.50	$490.50
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,650.00	$14,850.00
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,990.00	$6,990.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	3.00	AS	$7,900.00	$23,700.00
	Signing Component Total				$46,030.50

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	15

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,000.00	LF	$16.10	$48,300.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	15.00	EA	$1,300.50	$19,507.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,000.00	LF	$3.20	$28,800.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	15.00	EA	$10,890.50	$163,357.50
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	15.00	EA	$780.90	$11,713.50
	Subcomponent Total				$271,678.50
	Lighting Component Total				$271,678.50

RETAINING WALLS COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-3	CONC TRAF RAIL BAR,JCT SLAB,32"V SHP	2,000.00	LF	$390.80	$781,600.00

Retaining Wall 1

Description	Value
Length	2,000.00
Begin height	25.00
End Height	10.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	35,000.00	SF	$44.62	$1,561,700.00
	Retaining Walls Component Total				$2,343,300.00

Sequence 1 Total $12,407,160.69

Sequence: 2 RSD - Resurfacing, Divided **Net Length:** 0.520 MI 2,746 LF

Description: Milling and Resurfacing from Selmon Connector Ramps to Westshore Blvd.

Special Conditions: Includes 20% additional pavement for auxiliary lanes and median openings.

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	21.00 / 21.00
Structural Spread Rate	220
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	12,812.80	SY	$3.70	$47,407.36
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	1,409.41	TN	$159.50	$224,800.90
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	512.51	TN	$200.90	$102,963.26

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,400.00	SY	$15.43	$129,612.00
	Comment: 12' Shared Use Path				
285-701	OPTIONAL BASE,BASE GROUP 01	5,400.00	SY	$21.90	$118,260.00
	Comment: 12' Shared Use Path				
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	446.00	TN	$150.00	$66,900.00
	Comment: 12' Shared Use Path				

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	20.00
Milling Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,562.56	SY	$3.70	$9,481.47
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	281.88	TN	$159.50	$44,959.86
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	102.50	TN	$200.90	$20,592.25

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2

Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.08	GM	$1,300.50	$2,705.04

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

	Roadway Component Total	$767,682.14

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	0
Friction Course Spread Rate	0
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	75.76	LF	$12.30	$931.85
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	75.76	LF	$5.99	$453.80
107-1	LITTER REMOVAL	5.51	AC	$42.30	$233.07
107-2	MOWING	5.51	AC	$64.50	$355.40

	Shoulder Component Total	$1,974.12

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	16.00	AS	$490.50	$7,848.00
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	14.00	AS	$1,650.00	$23,100.00
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$385.00	$770.00
700-1-60	SINGLE POST SIGN, REMOVE	13.00	AS	$65.90	$856.70
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$6,990.00	$13,980.00
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,090.00	$2,180.00

Signing Component Total	$48,734.70

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	**Value**
Multiplier (Number of Poles)	15

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,000.00	LF	$16.10	$48,300.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	15.00	EA	$1,300.50	$19,507.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,000.00	LF	$3.20	$28,800.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	15.00	EA	$10,890.50	$163,357.50
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	15.00	EA	$780.90	$11,713.50
	Subcomponent Total				$271,678.50

Lighting Component Total	$271,678.50

Sequence 2 Total	$1,090,069.46

Sequence: 3 NUU - New Construction, Undivided, Urban **Net Length:** 0.480 MI 2,534 LF

Description: Frontage Road access for USMC Reserve base

Special Conditions: Includes new intersection for the Gandy Boat ramp parking area and the frontage road.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.530
Top of Structural Course For Begin Section	10.00
Top of Structural Course For End Section	10.00
Horizontal Elevation For Begin Section	8.00
Horizontal Elevation For End Section	8.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.65	AC	$43,950.00	$204,367.50
120-6	EMBANKMENT	11,243.35	CY	$12.91	$145,151.65
	Earthwork Component Total				$349,519.15

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,211.46	SY	$15.43	$126,702.83
285-709	OPTIONAL BASE,BASE GROUP 09	6,758.40	SY	$28.90	$195,317.76
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	929.28	TN	$150.00	$139,392.00
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	557.57	TN	$199.10	$111,012.19

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	72.00	EA	$9.00	$648.00

Turnouts/Crossovers Subcomponent

Description	Value
Asphalt Adjustment	10.00
Stabilization Code	Y
Base Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	821.15	SY	$15.43	$12,670.34
285-709	OPTIONAL BASE,BASE GROUP 09	675.84	SY	$28.90	$19,531.78
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	92.93	TN	$150.00	$13,939.50
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	55.76	TN	$199.10	$11,101.82

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.84	GM	$1,300.50	$4,993.92
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.96	GM	$650.50	$624.48

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	6.00 / 6.00
Bike Path Structural Spread Rate	165
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,505.60	SY	$15.43	$69,521.41
285-701	OPTIONAL BASE,BASE GROUP 01	3,379.20	SY	$21.90	$74,004.48
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	278.78	TN	$150.00	$41,817.00
	Roadway Component Total				$821,277.51

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	10.00 / 10.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,534.40	LF	$45.90	$116,328.96

520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,534.40	LF	$45.90	$116,328.96
570-1-2	PERFORMANCE TURF, SOD	5,632.00	SY	$6.43	$36,213.76

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,599.97	LF	$2.20	$12,319.93
104-11	FLOATING TURBIDITY BARRIER	132.57	LF	$12.30	$1,630.61
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	132.57	LF	$5.99	$794.09
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$3,590.00	$3,590.00
104-18	INLET PROTECTION SYSTEM	28.00	EA	$160.50	$4,494.00
107-1	LITTER REMOVAL	6.43	AC	$42.30	$271.99
107-2	MOWING	6.43	AC	$64.50	$414.74
	Shoulder Component Total				$292,387.04

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	20.00	EA	$8,500.90	$170,018.00
425-1-451	INLETS, CURB, TYPE J-5, <10'	6.00	EA	$13,950.00	$83,700.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	3.00	EA	$6,500.00	$19,500.00
425-2-41	MANHOLES, P-7, <10'	3.00	EA	$6,750.00	$20,250.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,240.00	LF	$163.50	$202,740.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	112.00	LF	$298.95	$33,482.40
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	2,656.00	LF	$375.10	$996,265.60
570-1-1	PERFORMANCE TURF	161.21	SY	$2.50	$403.02
	Drainage Component Total				$1,526,359.03

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	11.00	AS	$490.50	$5,395.50
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,650.00	$3,300.00
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00	AS	$7,900.00	$15,800.00
	Signing Component Total				$24,495.50

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,799.98	LF	$16.10	$45,079.68
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	365.38	LF	$33.50	$12,240.23
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$1,300.50	$15,606.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,496.08	LF	$3.20	$30,387.46
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	12.00	EA	$10,960.50	$131,526.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	12.00	EA	$780.90	$9,370.80
	Subcomponent Total				$244,210.16
	Lighting Component Total				$244,210.17

Sequence 3 Total $3,258,248.40

Date: 8/10/2023 11:15:50 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 441250-3-52-01 **Letting Date:** 01/2099

Description: US 92/SR 600/GANDY BLVD FROM BRIDGE TO WESTSHORE BLVD

District: 07 **County:** 10 HILLSBOROUGH **Market Area:** 08 **Units:** English

Contract Class: 4 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 1.000 MI

Project Manager: PRD-CF-KCA

Version 6 Project Grand Total **$23,465,248.41**

Description: FINAL PER Estimate - Post Public Hearing.

Project Sequences Subtotal			**$16,755,478.55**
102-1	Maintenance of Traffic	10.00 %	$1,675,547.86
101-1	Mobilization	10.00 %	$1,843,102.64
Project Sequences Total			**$20,274,129.05**
Project Unknowns		15.00 %	$3,041,119.36
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 6 Project Grand Total					**$23,465,248.41**

LRE Cost Totals								
Segment 1			**Segment 2***			**Segment 3**			**Combined Segments**
Roadway	$	54,427,120.10	Roadway	$	1,799,690.62	Roadway	$	11,670,682.65	$ 67,897,493.37
Drainage	$	22,932,222.21	Drainage	$	239,139.34	Drainage	$	1,834,668.03	$ 25,006,029.58
Structures/Bridges	$	77,686,872.08	Structures/Bridges	$	289,113,886.88	Structures/Bridges	$	2,343,300.00	$ 369,144,058.96
Signing and Pavement Marking	$	573,283.00	Signing and Pavement Marking	$	48,367.04	Signing and Pavement Marking	$	119,260.70	$ 740,910.74
Signalization	$	4,071,536.00	Signalization	$	-	Signalization	$	-	$ 4,071,536.00
Lighting	$	4,119,575.46	Lighting	$	4,595,778.00	Lighting	$	787,567.17	$ 9,502,920.63

*Note: The cost breakdown represents each LRE's subcategory per area of discipline to support the Evaluation Matrix within the PER. The LRE's have been set up such that the Pinellas County Segment and the Gandy Bridge/Hillsborough County Segments could be phased, exclusive of eachother. As such, Sequence 3 has been removed from the Segment 2 LRE to eliminate interim phasing between segments and accurately capture the full limits of the PD&E Study.

Subtotal:	$	476,362,949.28
Mobilization (10%)	$	47,636,294.93
Subtotal:	$	523,999,244.21
Maintenance of Traffic (10%)	$	52,399,924.42
Subtotal:	$	576,399,168.63
Project Unknowns (15%)	$	86,459,875.29
Total Construction Cost	**$**	**662,859,043.92**
Design (10%)	$	66,285,904.39
CEI (10%)	$	66,285,904.39
Total Preliminary Estimate of Engineering Cost	**$**	**132,571,808.78**

Appendix C
Context Classification Memo

Florida Department of Transportation

RICK SCOTT
GOVERNOR

11201 N. McKinley Drive
Tampa, FL 33612-6456

MIKE DEW
SECRETARY

RMEMORANDUM

DATE: January 3, 2018

TO: Richard Moss, District Design Engineer
Ronald Chin, District Traffic Operations Engineer

FROM: Ed McKinney, District Planning & Environmental Administrator

DocuSigned by: Ed McKinney E991BC01D1C94D7...
3/8/2018 | 7:43 AM EST

COPIES: Lilliam Escalera, EMO Project Manager, PLEMO File

SUBJECT: Context Classification Determination for Item Segment 441250-1 US 92/SR 600/GANDY BLVD FROM E OF 4TH ST TO WESTSHORE BLVD

DS BS

The District Seven Planning & Environmental Management Office has reviewed the subject project location and has made the following determination.

Context Classification Summary Table	
Item Segment	441250-1
Primary Work Mix	PD&E/EMO Study
Roadway Name	US 92/SR 600/GANDY BLVD
Roadway Limits	FROM E OF 4TH ST TO WESTSHORE BLVD
Section No. & Milepost Limits	10130000 2.96 / 3.748 10130001 0 / 2.802 10130001 2.802 / 2.96 15090000 7.25 / 7.334 15090000 7.334 / 7.762 15090000 7.762 / 7.885 15090000 7.885 / 9.992 15090010 0 / 0.312 15091111 .0123/0.312
Context Classification (existing)	C3R (Pinellas) C3C (Hillsborough)
Context Classification (future)	C3R (Pinellas) C4 (Hillsborough)
Comments	On the Tampa side, a major mixed residential development is planned along Gandy Blvd, just west of West Shore Blvd. On the Pinellas side, significant 4-story apartment complexes are missed with smaller commercial development. Both Hillsborough and Pinellas include the re-built Gandy Bridge Trail as an important connection.

Additional documentation is provided below to support this determination. This context classification determination shall apply to the design phase of the subject project only and only information available at the time of this analysis was used to support this determination. Changes to the project scope, location and roadway limits may trigger a change in this determination. Any changes should be coordinated with the PLEMO Office.

DESIGN CONTROL	C3
Allowable Design Speed Range	35-55 mph
SIS Minimum Design Speed	50
Minimum Travel & Auxiliary Lane Width	35 mph: 10 ft 40-45 mph: 11 ft ≥ 50 mph: 12 ft
Two-Way Left Turn Lane	25-35 mph: 11 ft 40 mph: 12 ft
Median Width	Curbed & Flush 25-35 mph: 22 ft 40-45 mph: 22 ft High Speed Curbed 50-55, 30 ft
Sidewalk Width	6 ft

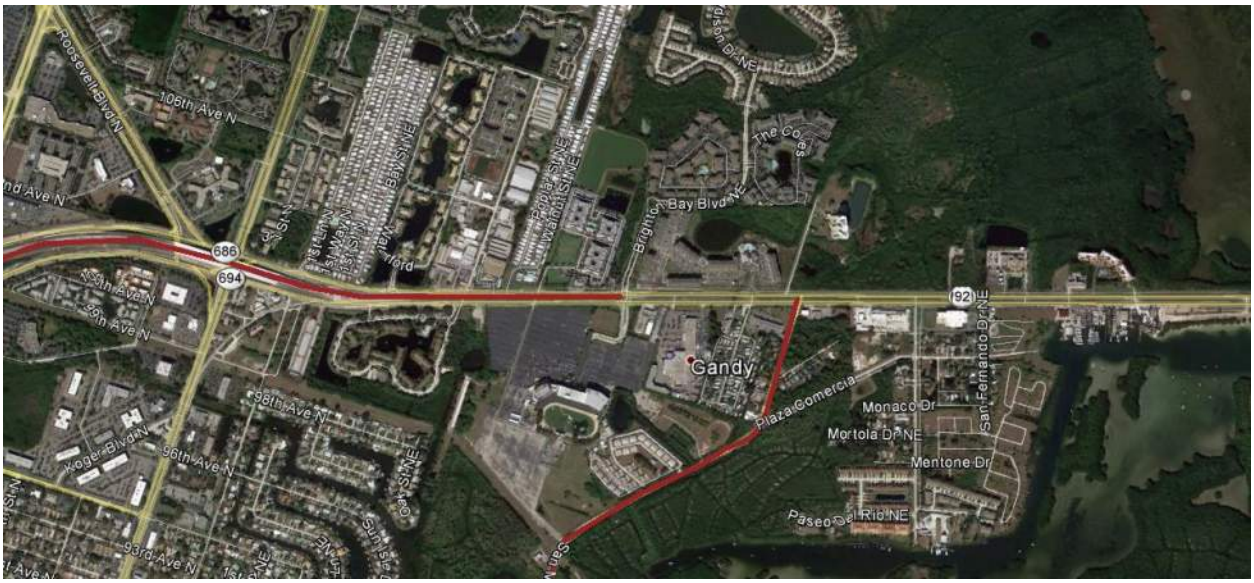
DESIGN CONTROL	C4
Allowable Design Speed Range	30-45 mph
SIS Minimum Design Speed	45
Minimum Travel & Auxiliary Lane Width	30-35 mph: 10 ft 40-45 mph: 11 ft ≥ 50 mph: 12 ft
Two-Way Left Turn Lane	25-35 mph: 11 ft 40 mph: 12 ft
Median Width	25-35 mph: 15.5 ft 40-45 mph: 22 ft
Sidewalk Width	6 ft

Primary Measures

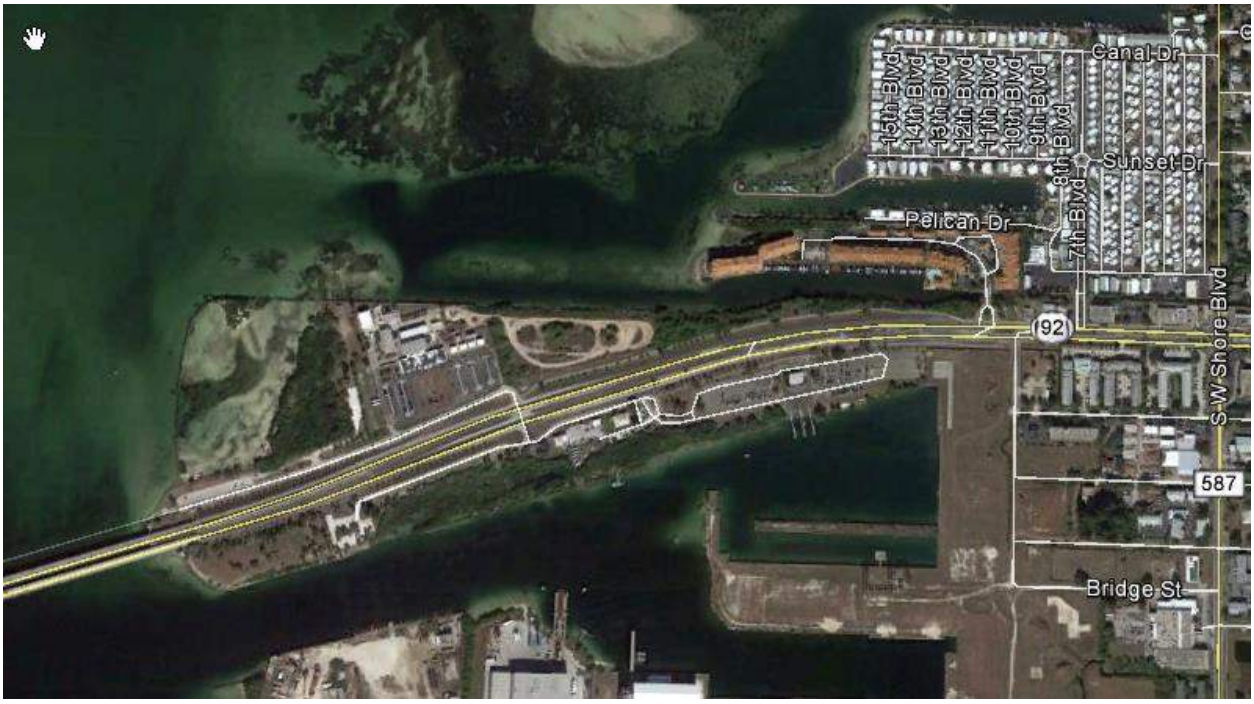
Land Use	Building Height	Building Placement	Fronting Uses	Location of Off-Street Parking	Roadway Connectivity		
					Intersection Density	Block Perimeter	Block Length
Description	Floor Levels	Description	Yes/No	Description	Intersections/ square mile	Feet	Feet
Commercial, Multi-family, Single-family	1-4, taller in new Westshore Marina District	Medium to no setback	No	Front, side	Pinellas: 19.52/sq mile	Pinellas: 3,924	Pinellas: 1,034 feet
					Hillsborough: 125/sq mile	Hillsborough: 3,649 feet	Hillsborough: 3,264 feet

Aerial Image (Google Earth) – Project limits: US 92/SR 600/GANDY BLVD FROM E OF 4TH ST TO WESTSHORE BLVD

Pinellas County



Hillsborough County



Existing Land Use/Zoning Summary

St Petersburg

Unincorporated Pinellas County

Zoning:

Commercial, Corridor Commercial Suburban, Neighborhood Suburban Multi-Family

City of Tampa:

Zoning:

Single-family residential, Planned Development, Planned Development- Alternative, Commercial

Future Land Use Summary

Future Land Use (Pinellas)

- Residential Urban/R-4, R-6
- Residential Medium/R-4
- Commercial General/C-2
- Residential Low Medium/ R-6
- Residential/Office/General/P-1
- Commercial Recreation/C-2, M-1

Future Land Use (Tampa)

- R-10 (.35 FAR)
- R-20 (.50 FAR)
- R-35 (.60 FAR)
- Urban Mixed Use-60 (3.25 FAR)
- Community Mixed Use-35 (2.0 FAR)

Street View Images

Tampa: Looking west

Tampa: Looking east

Pinellas: Looking east

Pinellas: Looking west

Appendix D
Typical Section Package

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID 256931-4-52-01

PINELLAS COUNTY (15090000, 150900010 & 15241000)

US 92 / SR 600 / SR 687 / SR 694 (GANDY BLVD.)

ADD LANES AND RECONSTRUCT FROM 4TH ST. N. TO W. OF GANDY BRIDGE

FDOT DISTRICT DESIGN ENGINEER

Digitally signed by: Allan J Urbonas
Date: 2024.03.01 11:39:11 -05'00'

CONCURRING WITH:
TYPICAL SECTION ELEMENTS
TARGET SPEED
DESIGN & POSTED SPEEDS

FDOT DISTRICT TRAFFIC OPERATIONS ENGINEER

Megan Arasteh for Ron Chin

DocuSigned by:
Megan Arasteh
1C809BD54DAF4F8...
03/08/2024 | 3:03 PM EST

CONCURRING WITH:
TARGET SPEED
DESIGN & POSTED SPEEDS

FDOT DISTRICT INTERMODAL SYSTEMS DEVELOPMENT MANAGER

Elizabeth Winters
Digitally signed by: Elizabeth Winters
DN: CN = Elizabeth Winters email = elizabeth.winters@dot.state.fl.us C = US O = FDOT OU = FDOT
Date: 2024.01.18 13:41:16 -05'00'

CONCURRING WITH:
CONTEXT CLASSIFICATION
TARGET SPEED

FDOT DISTRICT STRUCTURES DESIGN ENGINEER

Gautom Dey
Digitally signed by Gautom Dey
Date: 2024.01.18 16:40:44 -05'00'

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

FHWA TRANSPORTATION ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

LOCAL TRANSPORTATION ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

NOT USED

CONCURRING WITH:

NOT USED

CONCURRING WITH:

PROJECT LOCATION URL:	https://tinyurl.com/4mn4dh6r
PROJECT LIMITS:	BEGIN MP 1.499 TO MP 2.245 (1524100) MP 7.645 TO MP 9.992 (15090000) MP 0.000 TO MP 0.312 (15090010)
EXCEPTIONS:	NONE
BRIDGE LIMITS:	BR#1 MP 2.201 TO MP 2.245 (1524100) MP 7.645 TO MP 7.992 (15090000) BR#2 MP 8.562 TO MP 8.583 (15090000) BR#3 MP 9.166 TO MP 9.188 (15090000) BR#4 MP 0.028 TO MP 0.046 (15090010)

THE INFORMATION INCLUDED IN THIS PD&E TYPICAL SECTION PACKAGE IS BASED ON THE BEST AVAILABLE INFORMATION AND CRITERIA IS BASED ON THE FLORIDA DESIGN MANUAL AT THE DATE OF SUBMITTAL. THE PD&E TYPICAL SECTION PACKAGE IS SUBJECT TO CHANGE. THE PD&E TYPICAL SECTIONS ARE NOT SUITABLE FOR CONSTRUCTION.

APPROVED BY:

BRANAN R. ANDERSON
LICENSE
No 78438
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

Branan R Anderson
Digitally signed by Branan R Anderson
Date: 2023.11.15 16:27:50 -05'00'

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.

KISINGER CAMPO & ASSOCIATES CORP.
201 N FRANKLIN STREET, SUITE 400
TAMPA, FLORIDA 33602
BRANAN R. ANDERSON, P.E. 78438

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

INDEX OF SHEETS

SHEET NO.
1

$DATE$ $TIME$

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
(X)	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY		

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	( )	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
(X)	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

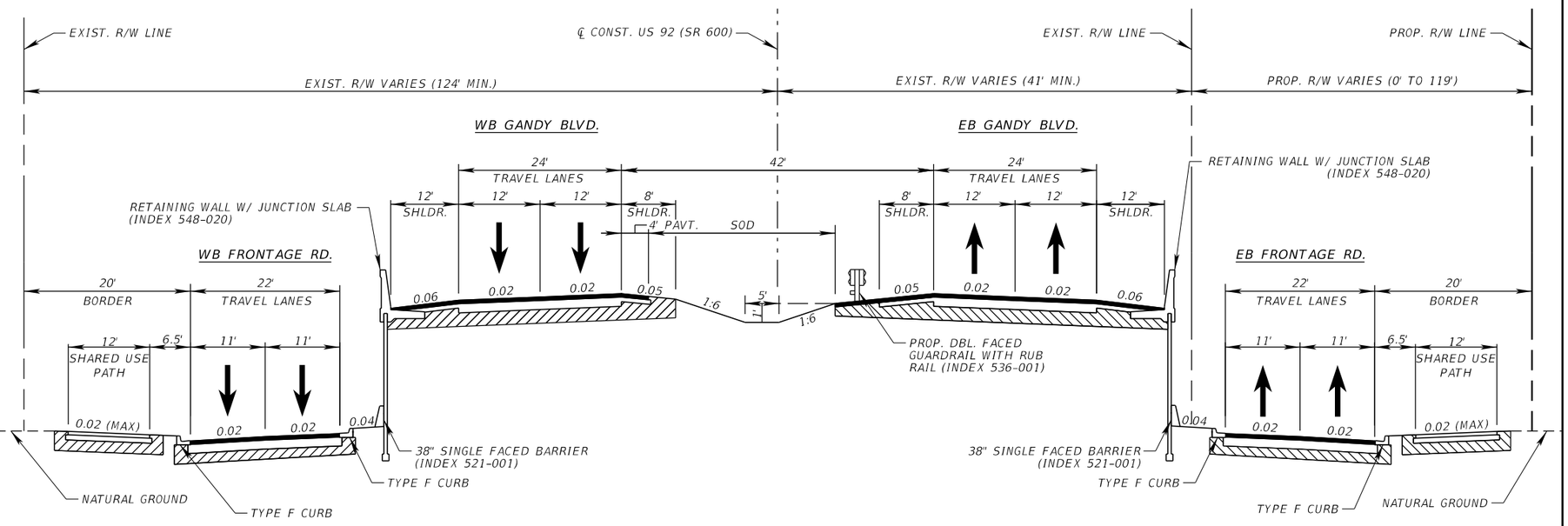
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 1



PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.
MP 1.499 TO MP 2.201 (15241000)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 47,000
ESTIMATED OPENING YEAR = 2030 AADT = 60,000
ESTIMATED DESIGN YEAR = 2050 AADT = 85,000
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 50 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

FRONTAGE RD.

POSTED SPEED: 40 MPH
DESIGN SPEED: 45 MPH
TARGET SPEED: 45 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	2

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
(X)	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY		

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	( )	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
(X)	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

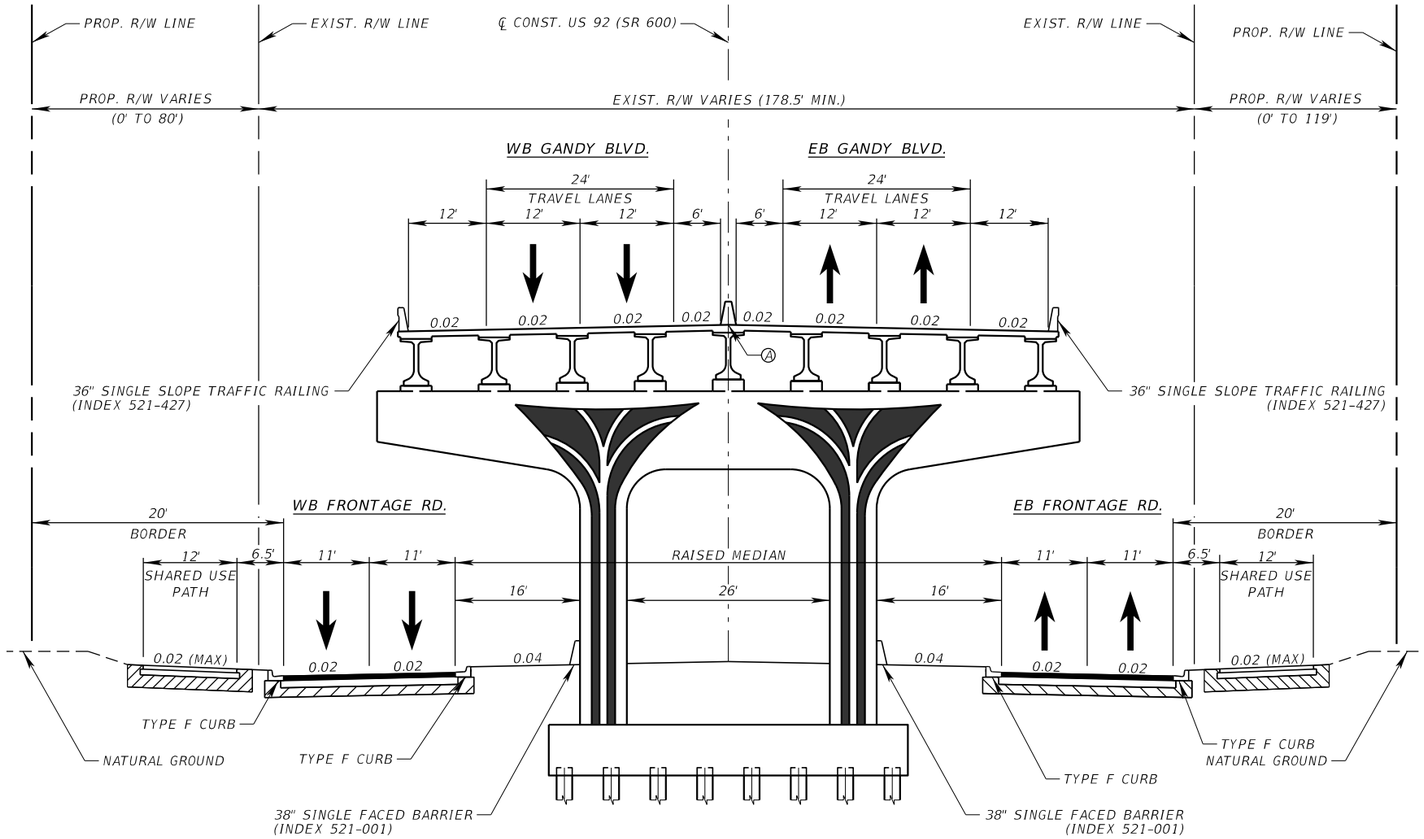
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 2



Ⓐ MEDIAN BARRIER WALL (INDEX 521-426)

PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.

MP 2.201 TO MP 2.245 (1524100)
MP 7.645 TO MP 7.992 (15090000)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 41,500
ESTIMATED OPENING YEAR = 2030 AADT = 53,000
ESTIMATED DESIGN YEAR = 2050 AADT = 74,900
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 50 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

FRONTAGE RD.

POSTED SPEED: 40 MPH
DESIGN SPEED: 45 MPH
TARGET SPEED: 45 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	3

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( ) C1 : NATURAL
( ) C2 : RURAL
( ) C2T : RURAL TOWN
(X) C3R : SUBURBAN RES.
( ) C3C : SUBURBAN COMM.
( ) C4 : URBAN GENERAL
( ) C5 : URBAN CENTER
( ) C6 : URBAN CORE
( ) N/A : L.A. FACILITY

FUNCTIONAL CLASSIFICATION

( ) INTERSTATE
( ) FREEWAY/EXPWY.
(X) PRINCIPAL ARTERIAL
( ) MINOR ARTERIAL
( ) MAJOR COLLECTOR
( ) MINOR COLLECTOR
( ) LOCAL

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

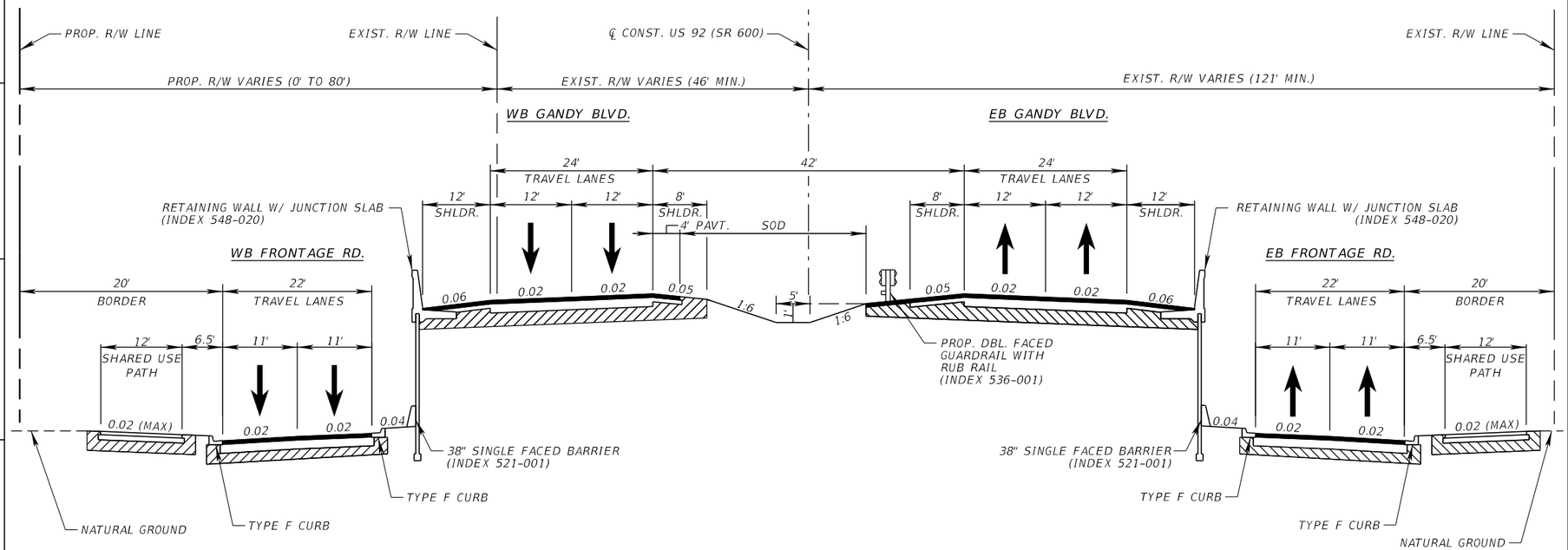
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 3



PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.
MP 7.992 TO MP 8.562 (15090000)
MP 8.583 TO MP 8.939 (15090000)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 47,000
ESTIMATED OPENING YEAR = 2030 AADT = 60,000
ESTIMATED DESIGN YEAR = 2050 AADT = 85,000
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 50 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

FRONTAGE RD.

POSTED SPEED: 40 MPH
DESIGN SPEED: 45 MPH
TARGET SPEED: 45 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	4

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	( )	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
(X)	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY		

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	( )	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
(X)	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

- (X) NATIONAL HIGHWAY SYSTEM
- (X) STRATEGIC INTERMODAL SYSTEM
- (X) STATE HIGHWAY SYSTEM
- ( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

- ( ) 1 - FREEWAY
- ( ) 2 - RESTRICTIVE w/Service Roads
- (X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

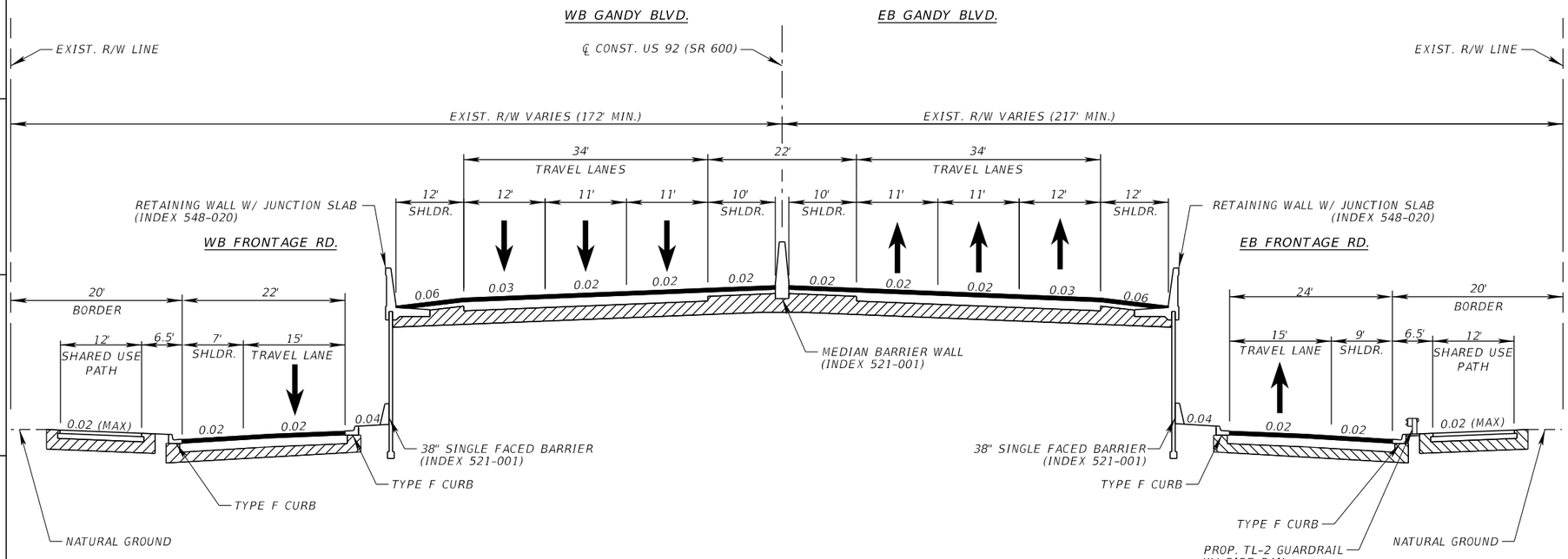
CRITERIA

- (X) NEW CONSTRUCTION / RECONSTRUCTION
- ( ) RESURFACING (LA FACILITIES)
- ( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

DESIGN VARIATION:
LANE WIDTH
SHOULDER CROSS SLOPE

TYPICAL SECTION No. 4



PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.
MP 8.939 TO MP 9.166 (15090000)
MP 9.188 TO MP 9.992 (15090000)
MP 0.000 TO MP 0.028 (15090010)
MP 0.046 TO MP 0.312 (15090010)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 41,500
ESTIMATED OPENING YEAR = 2030 AADT = 53,000
ESTIMATED DESIGN YEAR = 2050 AADT = 74,900
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 55 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

FRONTAGE RD.

POSTED SPEED: 30 MPH
DESIGN SPEED: 35 MPH
TARGET SPEED: 35 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	5

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( ) C1 : NATURAL
( ) C2 : RURAL
( ) C2T : RURAL TOWN
(X) C3R : SUBURBAN RES.
( ) N/A : L.A. FACILITY
( ) C3C : SUBURBAN COMM.
( ) C4 : URBAN GENERAL
( ) C5 : URBAN CENTER
( ) C6 : URBAN CORE

FUNCTIONAL CLASSIFICATION

( ) INTERSTATE
( ) FREEWAY/EXPWY.
(X) PRINCIPAL ARTERIAL
( ) MINOR ARTERIAL
( ) MAJOR COLLECTOR
( ) MINOR COLLECTOR
( ) LOCAL

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

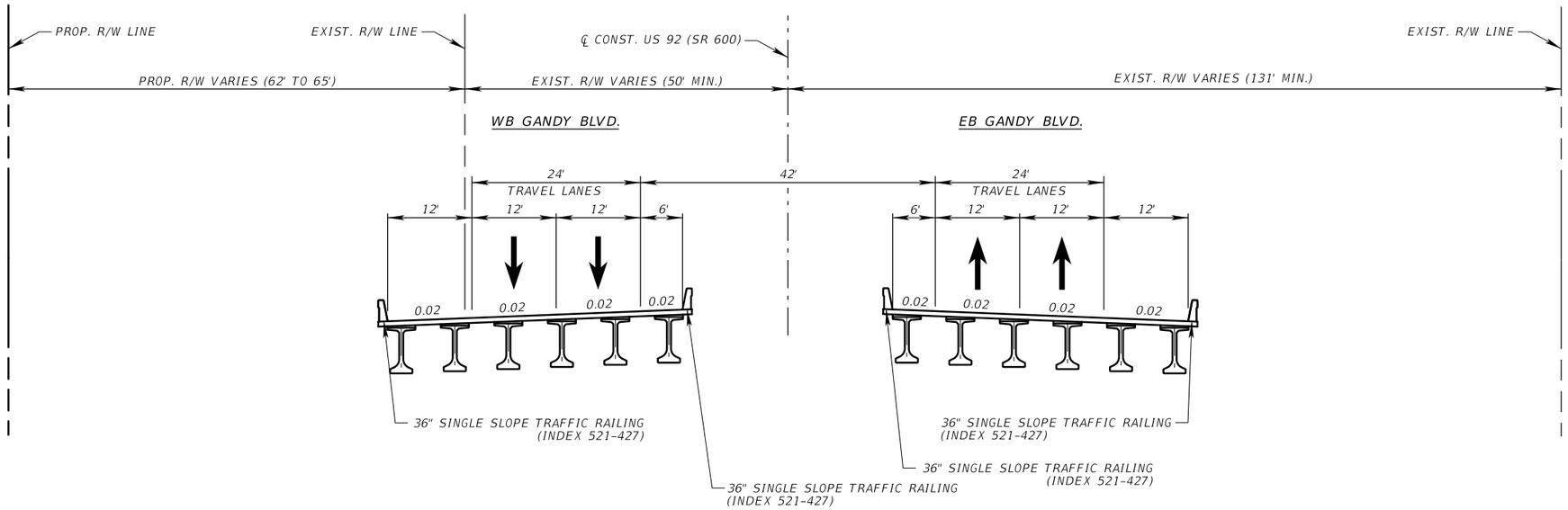
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 5



PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.
MP 8.562 TO MP 8.583 (15090000)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 41,500
ESTIMATED OPENING YEAR = 2030 AADT = 53,000
ESTIMATED DESIGN YEAR = 2050 AADT = 74,900
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 55 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	6

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( ) C1 : NATURAL
( ) C2 : RURAL
( ) C2T : RURAL TOWN
(X) C3R : SUBURBAN RES.
( ) C3C : SUBURBAN COMM.
( ) C4 : URBAN GENERAL
( ) C5 : URBAN CENTER
( ) C6 : URBAN CORE
( ) N/A : L.A. FACILITY

FUNCTIONAL CLASSIFICATION

( ) INTERSTATE
( ) FREEWAY/EXPWY.
(X) PRINCIPAL ARTERIAL
( ) MINOR ARTERIAL
( ) MAJOR COLLECTOR
( ) MINOR COLLECTOR
( ) LOCAL

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

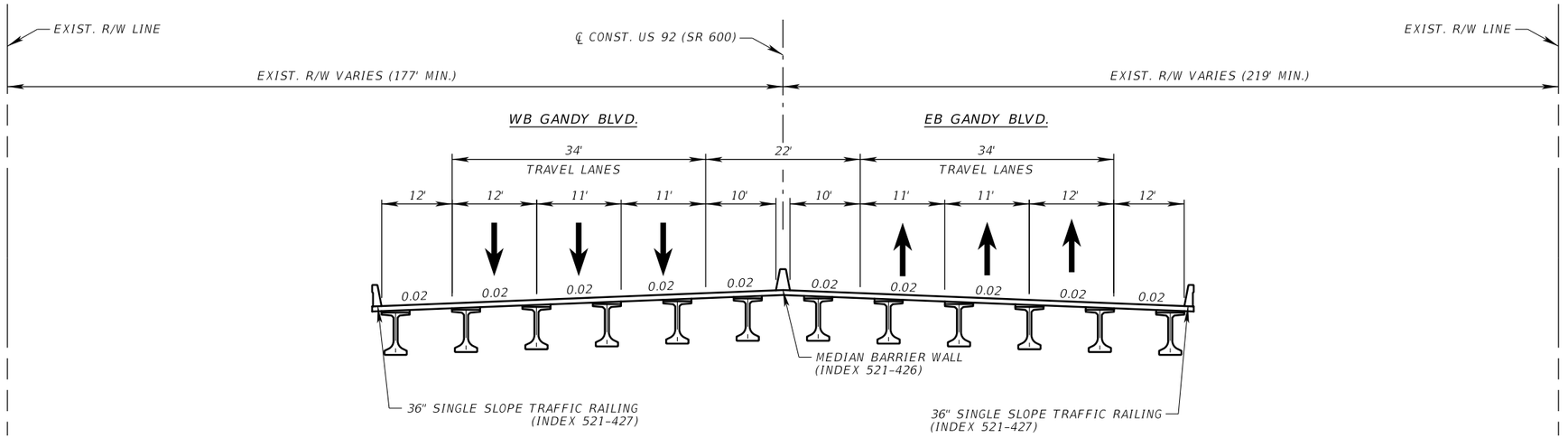
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

DESIGN VARIATION:
LANE WIDTH

TYPICAL SECTION No. 6



PINELLAS COUNTY SEGMENT - US 92 (SR 600) GANDY BLVD.

MP 9.166 TO MP 9.188 (15090000)
MP 0.028 TO MP 0.046 (15090010)

TRAFFIC DATA GANDY BLVD.

CURRENT YEAR = 2020 AADT = 41,500
ESTIMATED OPENING YEAR = 2030 AADT = 53,000
ESTIMATED DESIGN YEAR = 2050 AADT = 74,900
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 55 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
256931-4-52-01	7

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID 441250-2-52-01 & 441250-3-52-01

HILLSBOROUGH COUNTY (10130000 & 10130001)

US 92 / SR 600 / SR 687 / SR 694 (GANDY BLVD.)

ADD LANES AND RECONSTRUCT FROM 4TH ST. TO WEST SHORE BLVD.

FDOT DISTRICT DESIGN ENGINEER

FDOT DISTRICT TRAFFIC OPERATIONS ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS
TARGET SPEED
DESIGN & POSTED SPEEDS

CONCURRING WITH:
TARGET SPEED
DESIGN & POSTED SPEEDS

FDOT DISTRICT INTERMODAL SYSTEMS DEVELOPMENT MANAGER

FDOT DISTRICT STRUCTURES DESIGN ENGINEER

CONCURRING WITH:
CONTEXT CLASSIFICATION
TARGET SPEED

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

FHWA TRANSPORTATION ENGINEER

LOCAL TRANSPORTATION ENGINEER

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

CONCURRING WITH:
TYPICAL SECTION ELEMENTS

NOT USED

NOT USED

CONCURRING WITH:

CONCURRING WITH:

PROJECT LOCATION URL:	https://tinyurl.com/mteuupt3 (441250-2-52-01)
	https://tinyurl.com/bdzyzc67 (441250-3-52-01)
PROJECT LIMITS:	BEGIN MP 0.173 TO MP 2.960 (10130001) MP 2.960 TO END MP 3.748 (10130000)
EXCEPTIONS:	NONE
BRIDGE LIMITS:	BR#1 MP 0.173 TO MP 2.802 (10130001)

THE INFORMATION INCLUDED IN THIS PD&E TYPICAL SECTION PACKAGE IS BASED ON THE BEST AVAILABLE INFORMATION AND CRITERIA IS BASED ON THE FLORIDA DESIGN MANUAL AT THE DATE OF SUBMITTAL. THE PD&E TYPICAL SECTION PACKAGE IS SUBJECT TO CHANGE. THE PD&E TYPICAL SECTIONS ARE NOT SUITABLE FOR CONSTRUCTION.

APPROVED BY:

BRANAN R. ANDERSON
LICENSE
No 78438
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

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.

KISINGER CAMPO & ASSOCIATES CORP.
201 N FRANKLIN STREET, SUITE 400
TAMPA, FLORIDA 33602
BRANAN R. ANDERSON, P.E. 78438

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

INDEX OF SHEETS

SHEET NO.
1

$DATES $TIMES

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( ) C1 : NATURAL
( ) C2 : RURAL
( ) C2T : RURAL TOWN
( ) C3R : SUBURBAN RES.
( ) N/A : L.A. FACILITY
(X) C3C : SUBURBAN COMM.
( ) C4 : URBAN GENERAL
( ) C5 : URBAN CENTER
( ) C6 : URBAN CORE

FUNCTIONAL CLASSIFICATION

( ) INTERSTATE
( ) FREEWAY/EXPWY.
(X) PRINCIPAL ARTERIAL
( ) MINOR ARTERIAL
( ) MAJOR COLLECTOR
( ) MINOR COLLECTOR
( ) LOCAL

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

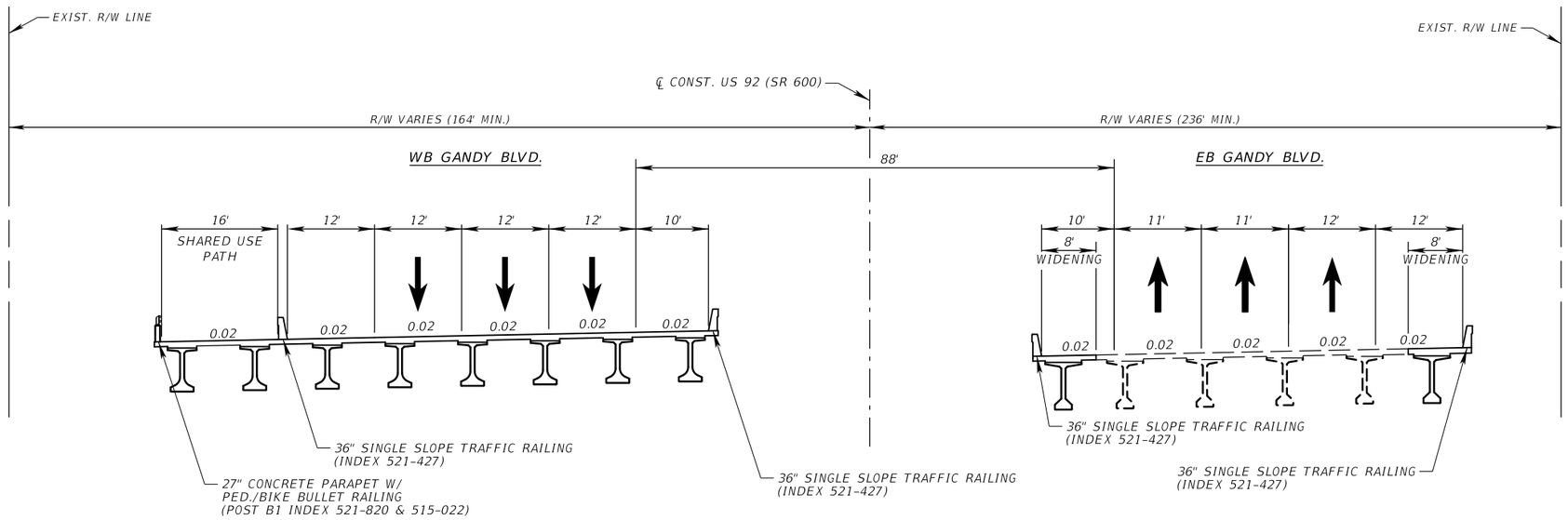
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

DESIGN VARIATION:
LANE WIDTH

TYPICAL SECTION No. 1



BAY SEGMENT
US 92 / SR 600 (GANDY BLVD.) OVER OLD TAMPA BAY
MP 0.173 TO MP 2.802 (10130001)

TRAFFIC DATA

CURRENT YEAR = 2020 AADT = 33,500
ESTIMATED OPENING YEAR = 2030 AADT = 44,000
ESTIMATED DESIGN YEAR = 2050 AADT = 64,500
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 55 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
441250-2-52-01	2

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9/26/2023 10:04:12 AM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( ) C1 : NATURAL
( ) C2 : RURAL
( ) C2T : RURAL TOWN
( ) C3R : SUBURBAN RES.
(X) C3C : SUBURBAN COMM.
( ) C4 : URBAN GENERAL
( ) C5 : URBAN CENTER
( ) C6 : URBAN CORE
( ) N/A : L.A. FACILITY

FUNCTIONAL CLASSIFICATION

( ) INTERSTATE
( ) FREEWAY/EXPWY.
(X) PRINCIPAL ARTERIAL
( ) MINOR ARTERIAL
( ) MAJOR COLLECTOR
( ) MINOR COLLECTOR
( ) LOCAL

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

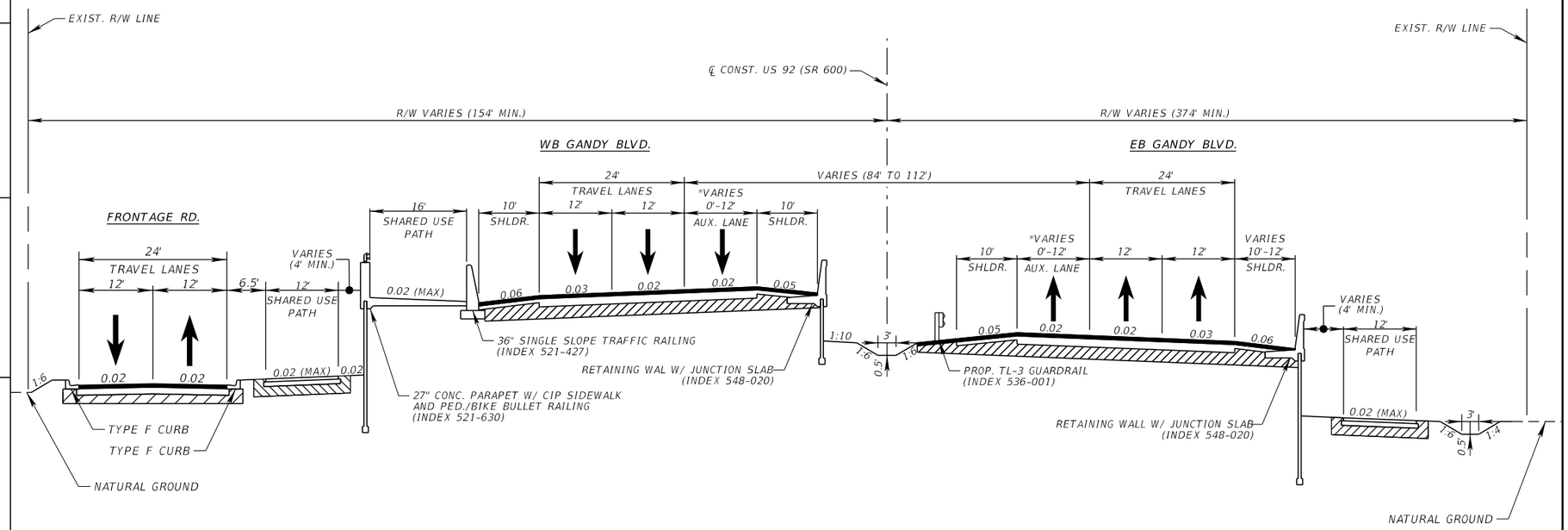
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

NONE

TYPICAL SECTION No. 2



HILLSBOROUGH COUNTY SEGMENT

US 92 / SR 600 (GANDY BLVD.)

MP 2.802 TO MP 2.960 (10130001)
MP 2.960 TO MP 3.228 (10130000)

TRAFFIC DATA

CURRENT YEAR = 2020 AADT = 38,500
ESTIMATED OPENING YEAR = 2030 AADT = 29,500
ESTIMATED DESIGN YEAR = 2050 AADT = 40,000
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 55 MPH
DESIGN SPEED: 55 MPH
TARGET SPEED: 55 MPH

* INSIDE TRAVEL LANES/AUXILIARY LANES SERVICE THE SELMON EXPRESSWAY VIADUCT.

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
441250-3-52-01	3

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9/12/2023 3:16:19 PM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

( )	C1 : NATURAL	( )	C3C : SUBURBAN COMM.
( )	C2 : RURAL	(X)	C4 : URBAN GENERAL
( )	C2T : RURAL TOWN	( )	C5 : URBAN CENTER
( )	C3R : SUBURBAN RES.	( )	C6 : URBAN CORE
( )	N/A : L.A. FACILITY		

FUNCTIONAL CLASSIFICATION

( )	INTERSTATE	( )	MAJOR COLLECTOR
( )	FREEWAY/EXPWY.	( )	MINOR COLLECTOR
(X)	PRINCIPAL ARTERIAL	( )	LOCAL
( )	MINOR ARTERIAL		

HIGHWAY SYSTEM

(X) NATIONAL HIGHWAY SYSTEM
(X) STRATEGIC INTERMODAL SYSTEM
(X) STATE HIGHWAY SYSTEM
( ) OFF-STATE HIGHWAY SYSTEM

ACCESS CLASSIFICATION

( ) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

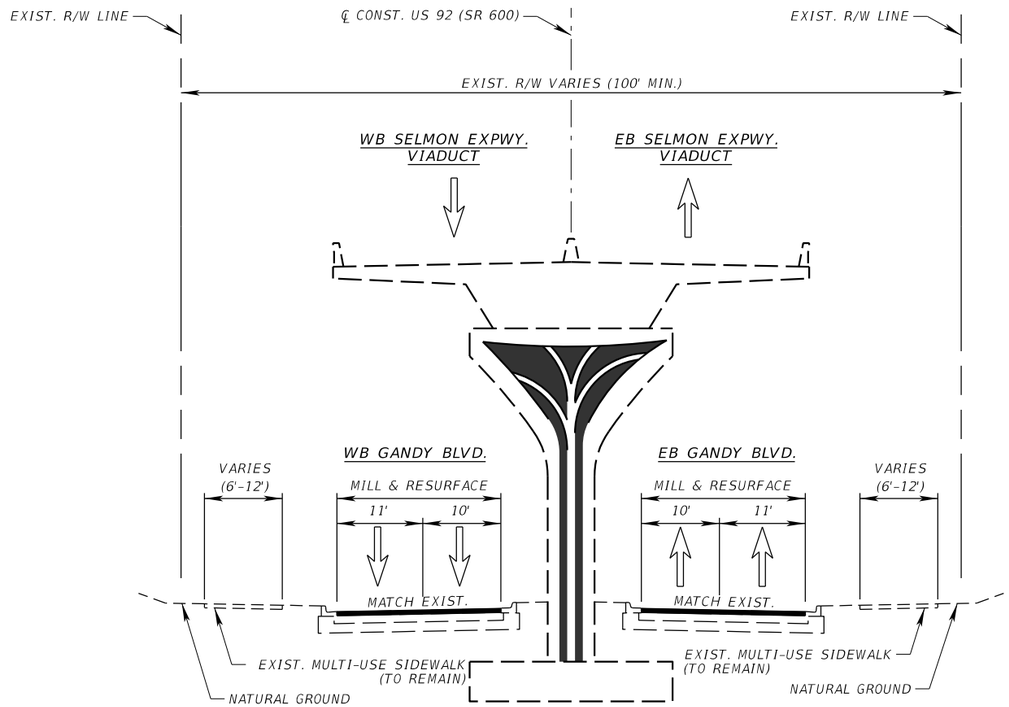
CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION
( ) RESURFACING (LA FACILITIES)
( ) RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

DESIGN VARIATION:
LANE WIDTH

TYPICAL SECTION No. 3



HILLSBOROUGH COUNTY SEGMENT
US 92 / SR 600 (GANDY BLVD.)
MP 3.228 TO MP 3.748 (10130000)

TRAFFIC DATA

CURRENT YEAR = 2020 AADT = 38,500
ESTIMATED OPENING YEAR = 2030 AADT = 29,500
ESTIMATED DESIGN YEAR = 2050 AADT = 40,000
K = 9% D = 53.4% T = 5.0% (24 HOUR)
DESIGN HOUR T = 2.5%
2045 TRUCK DDHV = 102

POSTED SPEED: 45 MPH
DESIGN SPEED: 45 MPH
TARGET SPEED: 45 MPH

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.
441250-3-52-01	4

9/12/2023 3:16:19 PM

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