

Project Development & Environment (PD&E) Study for Replacement of the Northbound Howard Frankland Bridge (I-275/SR 93) and Regional Transit Corridor Evaluation

Existing and Future Conditions Technical Memorandum

**Work Program Item Segment No. : 422799 1
Hillsborough & Pinellas Counties**

Prepared for:

**Florida Department of Transportation
District Seven**



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SECTION 1 INTRODUCTION

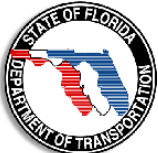
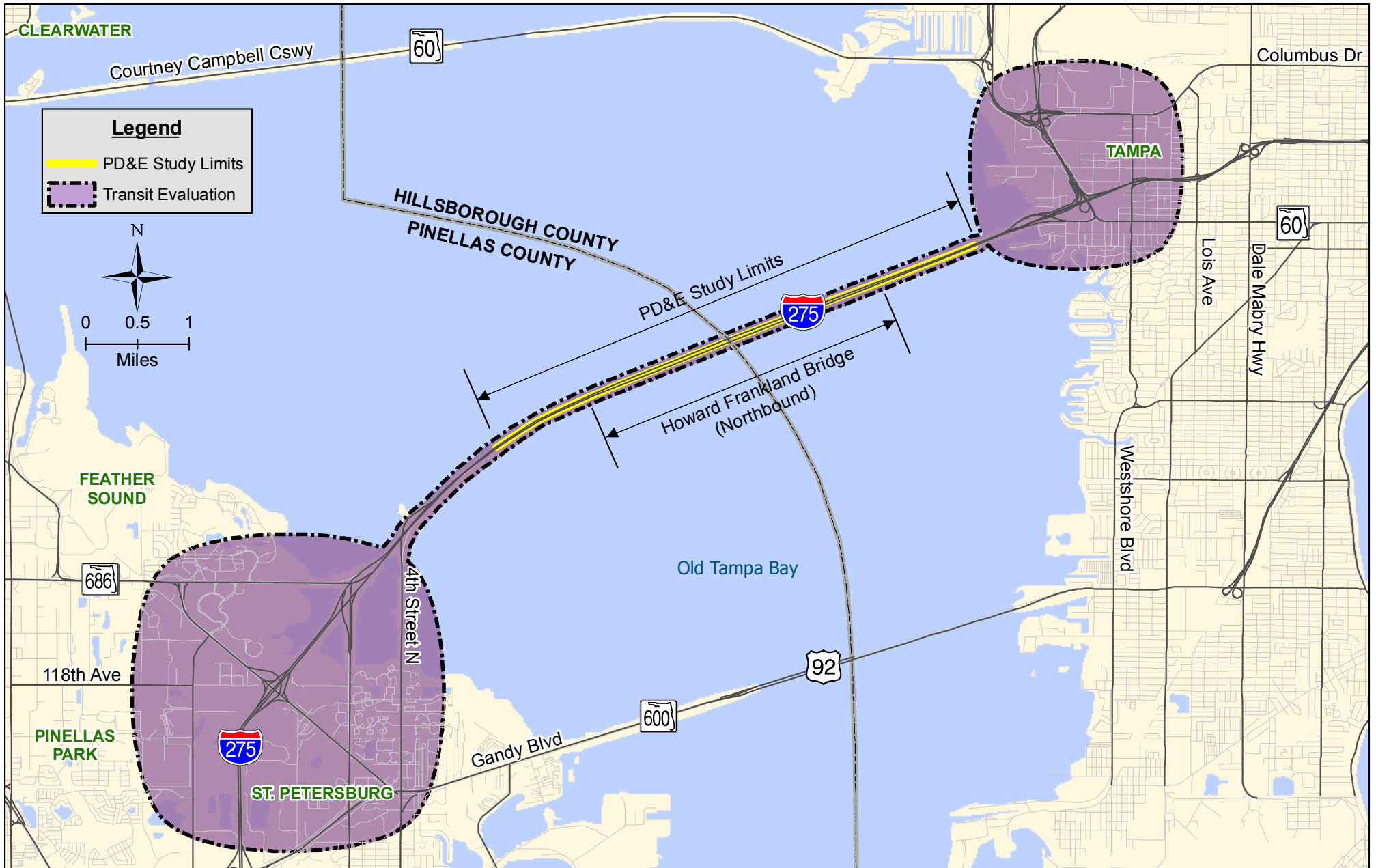
The purpose of this project is to conduct a Project Development and Environment (PD&E) study for replacement of the northbound I-275 Howard Frankland Bridge (HFB) and a Regional Corridor Transit Evaluation for the I-275 HFB corridor between Gateway area in Pinellas County to Westshore area in Hillsborough County.

1.1 DESCRIPTION OF PROJECT STUDY AREA

The study limits for the PD&E study include the I-275 bridge over Old Tampa Bay and bridge approaches. The study limits for the transit evaluation are from the Pinellas County Gateway area to the Hillsborough County Westshore area. **Figure 1-1** illustrates the project study area.

1.2 PURPOSE OF THIS TECHNICAL MEMORANDUM

The purpose of this technical memorandum is to document the existing and future conditions for the HFB corridor. This compilation of existing and future conditions will support the layout of the alternative modal alignment work in later phases of this study, and ultimately assist in the development of transportation alternatives within the corridor. Additionally, the information includes all data necessary to perform adequate evaluation of the location and design of a transportation facility, such as the replacement of the HFB.



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Study Area Map

Figure 1-1

SECTION 2 METHODOLOGY

This section provides a brief description of the methodology utilized to develop an inventory of existing conditions through the collection of available data and the generation of new sources relevant to the HFB PD&E study and Regional Transit Corridor Evaluation. General categories that include mapping, land use, socioeconomic characteristics, environmental conditions, utilities, and transportation facilities and services are included in this section. This information will be utilized to begin preliminary assessments of the study corridor from an engineering and transit evaluation standpoint. This activity consists of collecting various information and materials relative to the performance of engineering and transit alternatives analyzes within the study area.

Specific references within this section will include the following: field reviews; existing data, planning reports and studies; aerial mapping, which will include aerial photography and digital photogrammetry of the corridor; survey work (confirmation and bathymetric/hydrographic); current traffic data; schedules, system maps, system performance, and master plans of existing Pinellas Suncoast Transit Authority (PSTA) and Hillsborough Area Regional Transit Authority (HART) transit operations; major neighborhood/socioeconomic characteristics and linkage systems; and environmental characteristics.

2.1 BASE MAPPING, SURVEYING, AND AERIAL PHOTOGRAPHY FOR STUDY AREA

Existing and future conditions in the study area were initially mapped from Geographic Information System (GIS) data and recent aerial photography and photo-imaging from various sources, including internet mapping/aerial sources. Initial base maps files also were collected from Florida Department of Transportation (FDOT) District Seven, the Metropolitan Planning Organizations (MPOs) and Counties.

In addition to the maps generated for early project initiation activities, new mapping has been developed from current aerial photographs and survey work performed for the PD&E study and transit evaluation. The entire corridor has been flown to collect new aerial photography. The base maps and aerials were developed in May 2011 and are contained in **Appendix A**. The survey work used in development of the base maps, performed specifically for the HFB PD&E study, is described below.

Survey tasks include the following "confirmation surveys":

Horizontal Bridge Clearance

Determine horizontal clearance between the northbound and southbound bridges based on the survey of identifiable structural features on the inside gutter, (or other point to be determined) of each bridge.

The inside of each bridge will be surveyed utilizing Global Positioning System (GPS) survey techniques to determine horizontal location of the inside gutter (or other to be determined point) of each bridge at one thousand (1,000') foot intervals.

Vertical Bridge Clearance

Determine the vertical clearance of the northbound and southbound bridges crossing the existing Old Tampa Bay channel based on the survey of identifiable structural features on the deck at the peak of each bridge and at the edges of the fender system that represent the channel location.

The peak of each bridge will be surveyed utilizing GPS survey techniques to determine vertical location of the peak of each bridge and at the edges of the fender system that represent the channel location.

Horizontal Navigational Clearance

Verify the existing horizontal navigational clearances at the channel for each bridge.

Bridge Deck Elevations (Northbound Bridge)

Determine the deck elevations of the northbound bridge based on the survey of identifiable structural features associated with the deck of said bridge.

The deck of the northbound bridge will be surveyed utilizing GPS survey techniques to determine deck elevations at one thousand (1,000') foot intervals.

Bathymetric/Hydrographic Survey

"Stream Bed Profile" Bathymetric Survey: Perform a bathymetric survey of one (1) profile line centered between the northbound and southbound bridges.

Depth data will be collected at twenty-five (25') foot intervals along the calculated centerline of the two bridges extending from the western shoreline east to the eastern shoreline.

Bridge Fender Location

Determine the horizontal and vertical location of the bridge fender system encompassing both the northbound and southbound bridges through the use of GPS survey techniques.

General Requirements

All horizontal survey data will be related to the Florida State Plane Coordinate System, North American Datum (NAD) of 1983, unless an alternate coordinate system is required by existing bridge plans or project requirements.

All vertical survey data will be related to the North American Vertical Datum of 1988, unless an alternate vertical datum is required by existing bridge plans or project requirements.

2.2 COORDINATION WITH PINELLAS AA, HART AA AND OTHER EXISTING PLANNING DATA

Coordination was conducted with the study teams for the Pinellas AA and the HART AA related to data previously collected for those studies. Information was collected on transportation facilities and services, socioeconomic characteristics, and future transit alternatives.

Detailed reviews were conducted of all previous reports regarding transportation plans and issues and economic development in the HFB corridor area. Specific focus was placed on the MPOs' recently adopted 2035 Long Range Transportation Plans (LRTPs), the Tampa Bay Area Regional Transportation Authority (TBARTA) Master Plan, recent Transit Development Plans (TDPs), and current comprehensive plans.

2.3 FIELD REVIEWS OF EXISTING CONDITIONS

Field reviews of current corridor transportation facilities were conducted in early 2011. Information obtained from the Pinellas AA field reviews also will be used in the HFB existing conditions assessment. Field reviews also were used to identify and describe the pattern of land uses and general characteristics along the corridor. This information will be used to provide an assessment of the existing conditions for use in developing the initial conceptual alternatives to be studied.

Future field review efforts for the PD&E study will be conducted to collect additional engineering and environmental data.

2.4 LAND USE CHARACTERISTICS

Existing land use characteristics along the project corridor were determined utilizing a variety of resources including the National Wetlands Inventory (NWI), the Natural Resources Conservation Service's (NRCS) Soil Surveys for Pinellas and Hillsborough Counties, U.S. Geological Survey (USGS) topographical maps, recent aerial photographs, and land use mapping and GIS data from the Southwest Florida Water Management District (SWFWMD), 2006. Future land use was identified using future land use and zoning GIS data from City of St. Petersburg, city of Pinellas Park, Pinellas County, City of Tampa and Hillsborough County.

2.5 SOCIOECONOMIC DATA

Socioeconomic data for population, employment, and households was obtained by Traffic Analysis Zone (TAZ), from the FDOT travel demand model Tampa Bay Regional Planning Model (TBRPM) and the Tampa Bay Regional Transit Model (TBRTM). The base year for the regional model is 2006. The 2035 estimates by TAZ were developed by FDOT District Seven, Pinellas County MPO, and Hillsborough County MPO for used in development of the 2035 L RTPs.

2.6 ENVIRONMENTAL CONDITIONS

Environmental conditions were identified for the study area to be used in the assessment of environmental impacts for the transit evaluation and for the HFB replacement PD&E study. Information was obtained from review of the FDOT's Efficient Transportation Decision Making (ETDM) Planning Screen Summary Reports for the Gateway to Hillsborough County Line (Project #12256) and for the Westshore to Pinellas Rail Corridor (Project #12736).

2.7 UTILITIES

Utility information for the transit corridor evaluation will be collected once the station locations for the HFB transit linkage are defined. The transit corridor would run from Hillsborough County's proposed Westshore station (with service connection to downtown Tampa) to Pinellas County's proposed Gateway station. An electronic Sunshine State One Call ticket will be requested to determine potential utilities within the project study area. Once received, contact may be necessary with local utility companies to request general information regarding facilities within the project study area.

2.8 TRANSPORTATION FACILITIES

Current and planned major transportation facilities were identified for each sub-area by review of existing mapping, field review, review of the regional travel model networks, and from the 2035 L RTPs for Pinellas and Hillsborough County.

2.9 TRAFFIC DATA

Existing traffic volumes on the transportation facilities in the study area were based on the FDOT's 2010 Florida Traffic Information & Highway Data DVD. In addition, traffic data was collected from the Pinellas and Hillsborough MPOs.

2.10 TRANSIT DATA

Existing transit service information and data were collected from PSTA, HART, National Transit Database (NTD), and the Florida Transit Information System (FTIS). Information on future transit plans were obtained through coordination with the Pinellas AA and the HART AA study teams, as well as through review of the PSTA and HART Transit Development Plans (TDP).

SECTION 3 EXISTING AND FUTURE CONDITIONS BY SUB-AREA

For the purpose of this analysis, the corridor has been divided into two sub-areas. The sub-areas are an aggregation of Traffic Analysis Zones (TAZ) from the FDOT regional travel demand model. The sub-areas include the Gateway area in Pinellas County and the Westshore area in Hillsborough County. Sub-areas are connected by the Howard Frankland Bridge.

The balance of this section provides a definition of each sub-area, and a summary description of the existing and future characteristics for land use, population and employment, and environmental conditions.

3.1 PINELLAS COUNTY SUB-AREA DEFINITION

The Pinellas County sub-area is located in the Gateway area of Pinellas County. The sub-area is defined as an area generally bounded by Ulmerton Road/St. Petersburg – Clearwater International Airport on the north, 4th Street North/Old Tampa Bay on the east, just north of the I-275/Gandy Boulevard Interchange on the south, and 34th Street North on the west. The Pinellas County sub-area is generally presented on **Figure 3-1** with a dashed shape.

3.2 HILLSBOROUGH COUNTY SUB-AREA DEFINITION

The Hillsborough County sub-area is located in the Westshore area of Hillsborough County. The sub-area is defined by an area generally bounded by Spruce Street/Tampa International Airport to north, North Lois Avenue to the east, just to the south of Kennedy Boulevard (West Azeele Street) to the south, and along the waters of Old Tampa Bay to the west. The Hillsborough County sub-area is presented generally on **Figure 3-2** with a dashed shape.

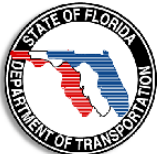
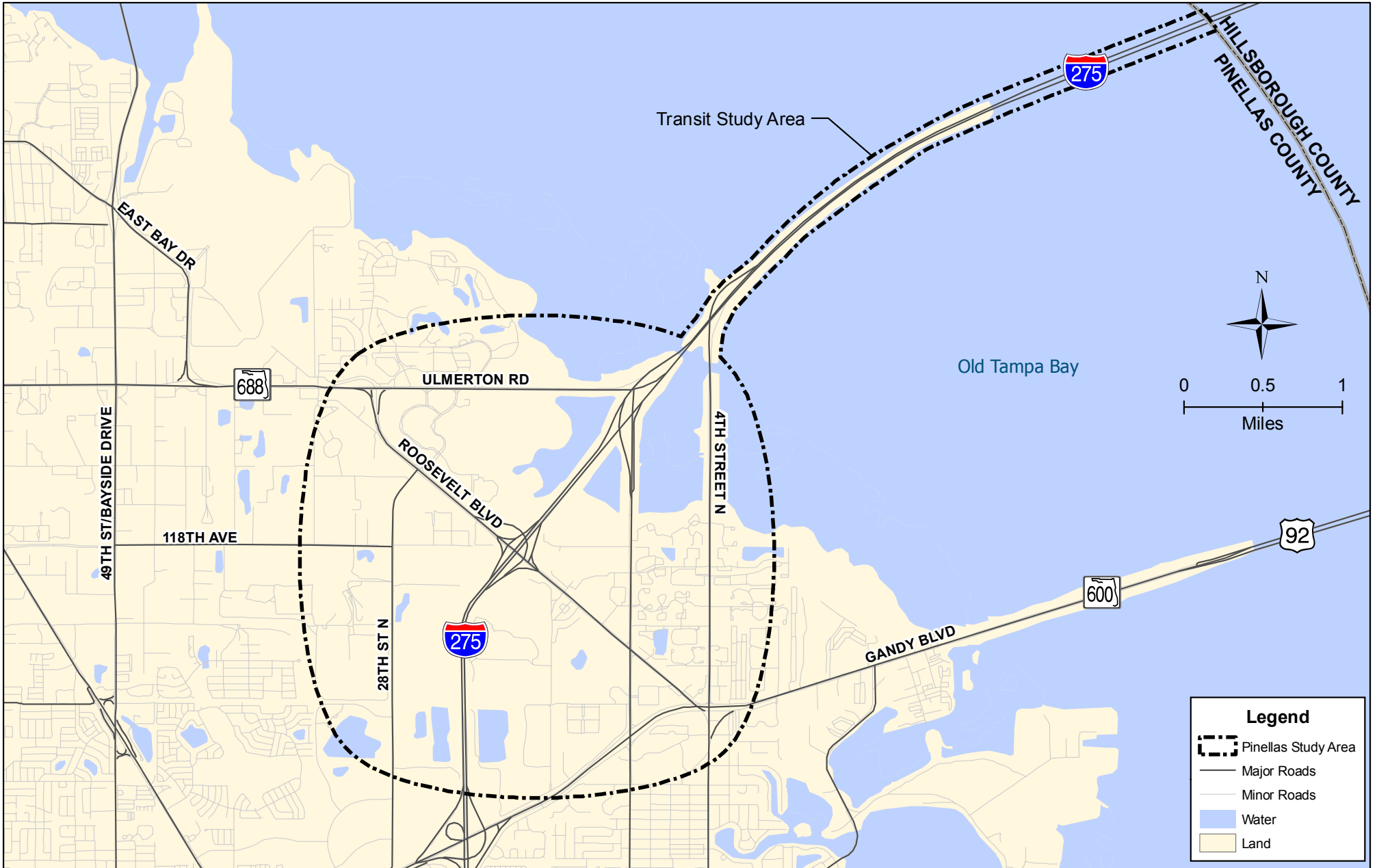
3.3 LAND USE

This section describes the existing and planned land use for the study's sub-areas.

3.3.1 Existing Land Use

Existing land use along the project corridor was determined utilizing a variety of resources including the NWI, the NRCS Soil Surveys for Pinellas and Hillsborough Counties, USGS topographical maps, recent aerial photographs, and land use mapping and GIS data from the SWFWMD (2006). Existing land use maps for the Pinellas County sub-area and the Hillsborough County sub-area are provided in **Figures 3-3** and **3-4**, respectively.

The Pinellas County sub-area is primarily developed with some natural areas remaining near the east along Old Tampa Bay. Most of the natural areas are located around and to the east of the I-275 interchanges at 4th Street North and SR 688 (Ulmerton Road). According to the Florida Land Use, Cover and Forms Classification System (FLUCFCS) data from SWFWMD (2006), land uses within this sub-area include residential, commercial, industrial, recreation/open land, water, wetlands and transportation and utilities (landfill), among a few others with minimal coverage in the study area. The majority of the land use within this sub-area consists of utilities, commercial, residential and industrial.



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Pinellas County Sub-Area Map

Figure 3-1



COURTNEY CAMPBELL CSWY

589

60



0 0.25 0.5
Miles

Legend

- Hillsborough Study Area
- Major Roads
- Minor Roads
- Water
- Land

Old Tampa Bay

W SPRUCE ST

LOIS AVE

DALE MABRY HWY

Transit Study Area

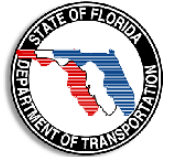
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WESTSHORE BLVD

HENDERSON BLVD

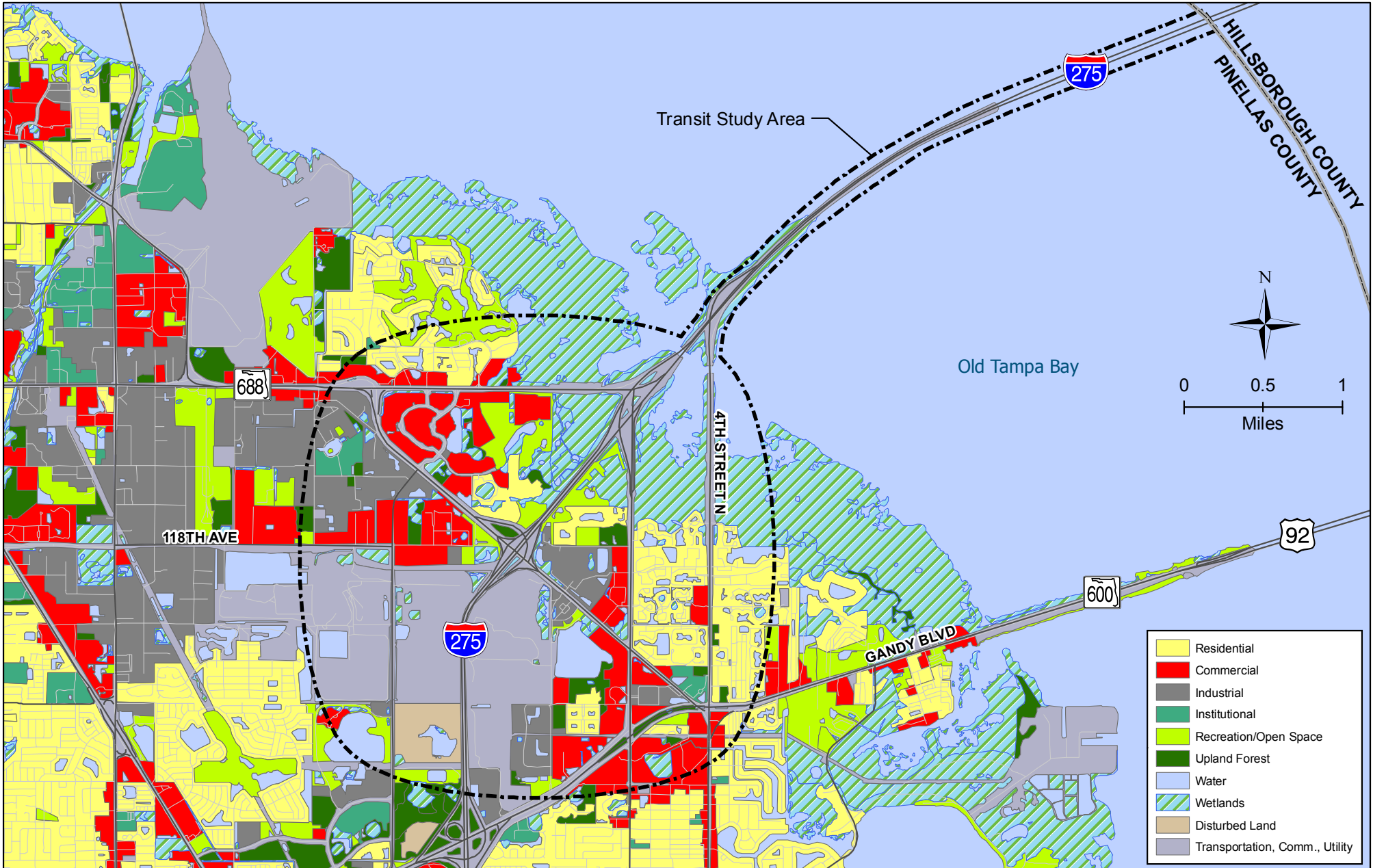
HILLSBOROUGH COUNTY
PINELLAS COUNTY



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**Hillsborough County
Sub-Area Map**

Figure 3-2

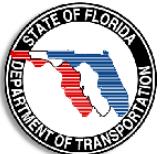
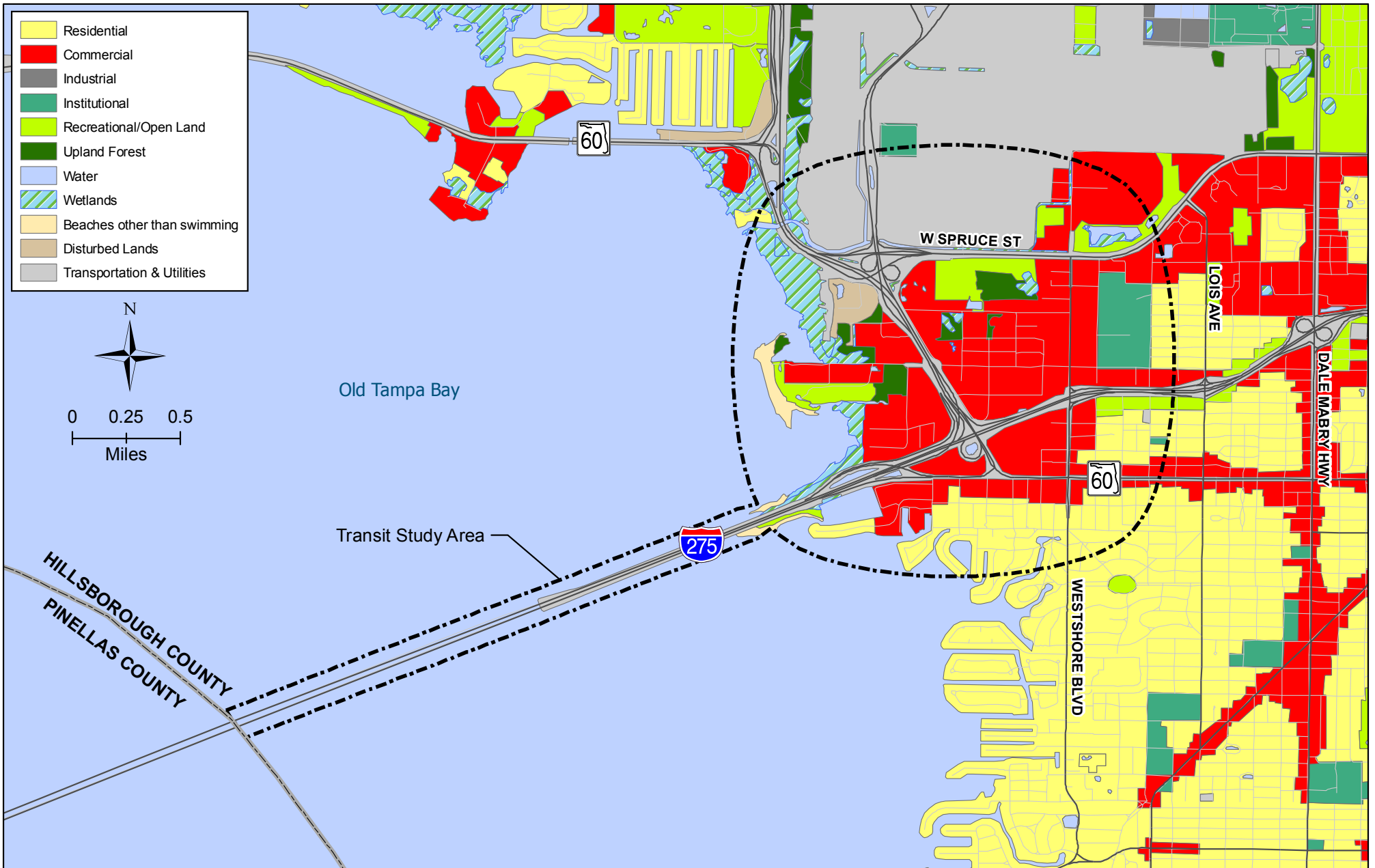


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Pinellas County 2006 Existing Land Use Map

Source: SWFWMD

Figure 3-3



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**Hillsborough County 2006
Existing Land Use Map**

Source: SWFWMD

Figure 3-4

The Hillsborough County sub-area is primarily developed with minimal natural areas located to the west near Old Tampa Bay. According to the Florida Land Use, Cover and Forms Classification System (FLUCFCS) data from SWFWMD (2006), land uses within this sub-area include residential, commercial, institutional (high school), recreation/open land, wetlands and transportation, among a few others with minimal coverage in the study area. The majority of the land use within this sub-area is commercial and residential.

3.3.2 Future Land Use

Future land use was identified using future land use and zoning GIS data from City of St. Petersburg, City of Pinellas Park, Pinellas County, City of Tampa and Hillsborough County. Future land use maps for the Pinellas County sub-area and the Hillsborough County sub-area are provided in **Figures 3-5** and **3-6**, respectively.

According to GIS data from the City of St. Petersburg and Pinellas County, the Pinellas County sub-area will consist of the following land use classifications: residential, industrial, commercial, multi-use redevelopment, preservation, institutional and transportation and utilities. The predominant land uses will consist of residential and industrial land uses with a few areas of multi-use redevelopment. The largest potential multi-use redevelopment will be located at the 240-acre historic Toytown landfill site located southeast of the Roosevelt Blvd and I-275 interchange.

According to GIS data from the City of Tampa and Hillsborough County, the Hillsborough County sub-area will consist of the following land use classifications: residential, regional mixed use, municipal airport compatibility, public/semi-public, right of way, recreational/open space, and environmentally sensitive areas. The future land use within the Hillsborough County sub-area will be consistent with existing land uses mainly includes a mix of commercial and residential land uses within the study area and high concentrations of residential land use directly to the south and the east.

3.4 SOCIOECONOMIC CHARACTERISTICS

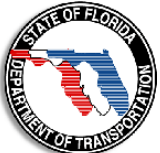
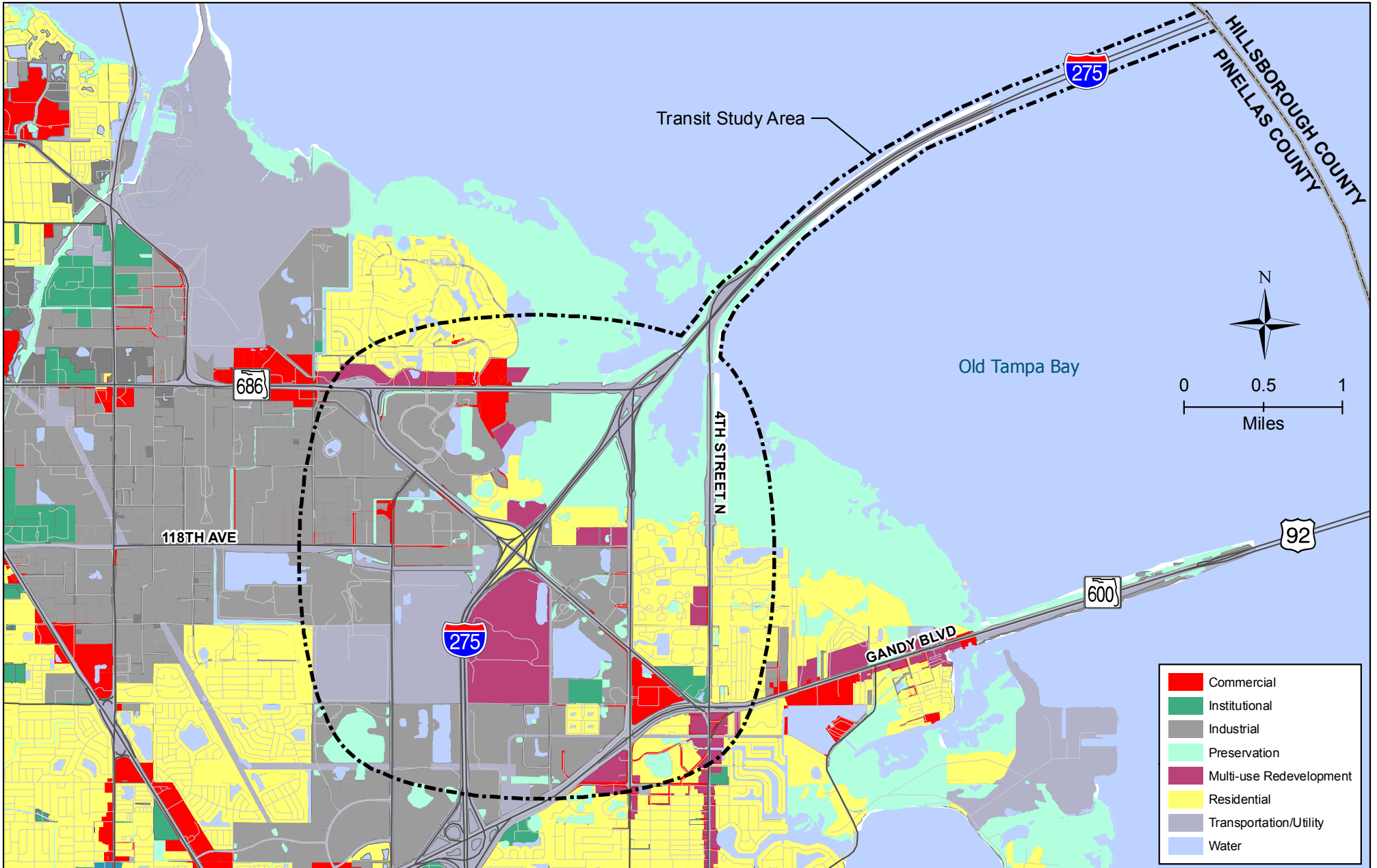
This section describes the existing and future socioeconomic characteristics of the study area. Information is presented on the communities that are Census Designated Places (CDP), population, dwelling units, and employment within the study's sub-areas.

3.4.1 Census Data Characteristics

The communities within the study area are as follows:

- Feather Sound
- City of Pinellas Park
- City of St. Petersburg
- City of Tampa

The following data (**Table 3-1**) was obtained from the United States Census Bureau for year 2000 about these communities:

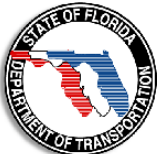
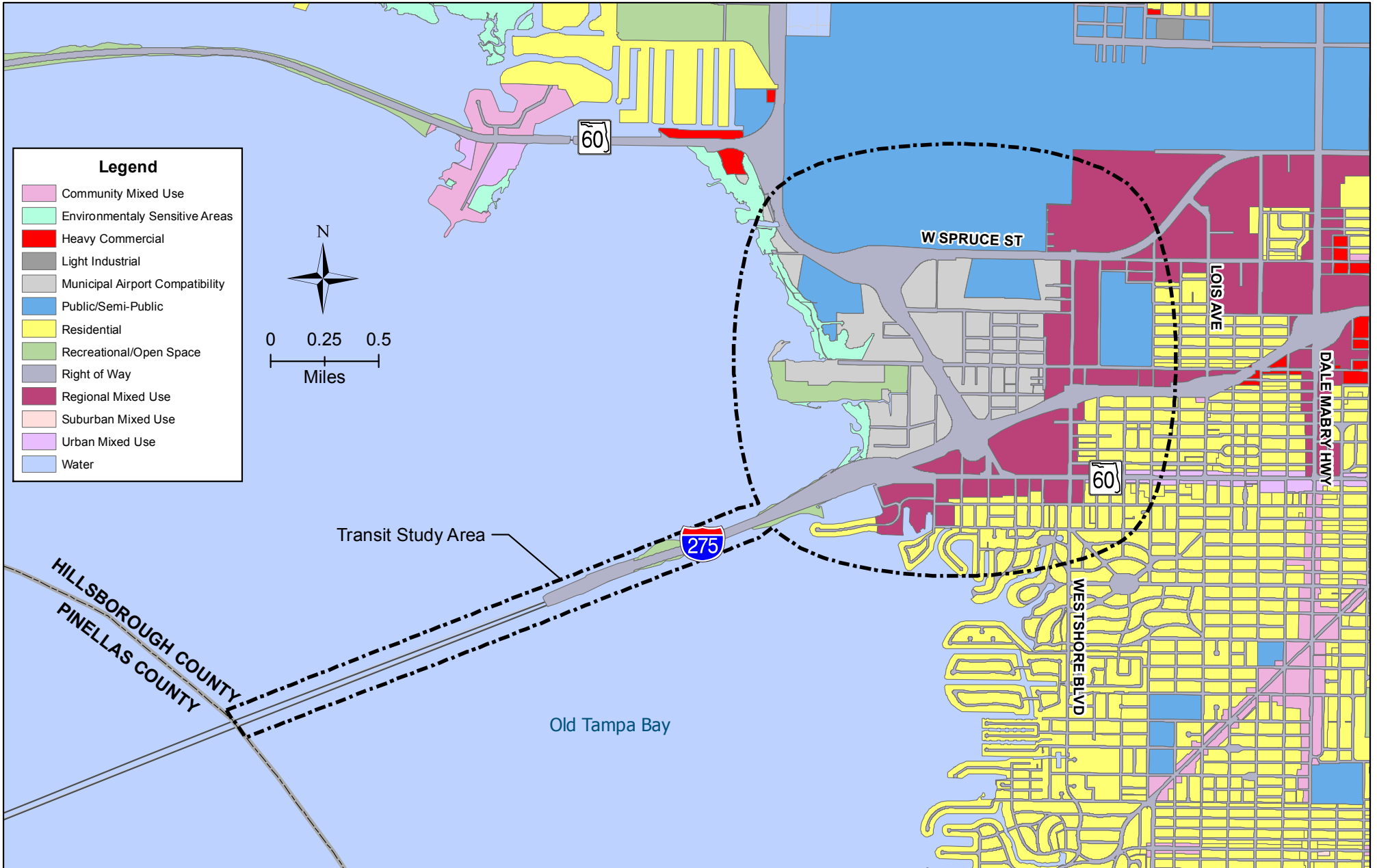


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**Pinellas County
Future Land Use Map**

Source: City of St. Petersburg
City of Pinellas Park, Pinellas County

Figure 3-5



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**Hillsborough County
Future Land Use Map**

Source: City of Tampa
Hillsborough County

Figure 3-6

Table 3-1 2000 Census Data

Community	Population	Percent Hispanic	Households	Family Size	Families	Median Age	Population Over 65
Feather Sound	3,597	4%	1,909	2.54	944	38.6	320
Pinellas Park	45,658	6%	19,444	2.84	12,157	40.2	9,390
St Petersburg	248,232	4%	109,663	2.88	61,584	39.3	43,173
Tampa	303,447	19%	124,758	3.07	71,220	34.7	37,953
Total	600,934	-	255,774	-	145,905	-	90,836

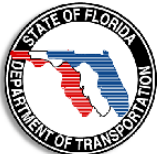
All of the communities are Census Designated Places (CDP). The predominant land uses along the corridor are residential, office, and commercial areas. However, land use within the PD&E study limits is mostly recreational and transportation. The existing right-of-way, within the PD&E Study limits, is 1,320’ north and south of the centerline of survey of I-275. A map showing the CDP areas surrounding the study limits is shown in **Figure 3-7**.

3.4.2 Population and Employment Characteristics

As documented in the Draft Pinellas AA Existing Conditions Memorandum, Pinellas County is the most densely populated county in Florida. There is little undeveloped land remaining within the County. Pinellas AA Study Area as illustrated in **Figure 3-8**. The elongated shape of the County, paired with well developed beach front communities along the Gulf Coast, promotes a population distribution pattern with long distances between multiple activity centers. This creates a challenge for travelers trying to reach destinations within the peninsular County and to neighboring counties.

As documented in the Draft HART AA Purpose and Need Technical Memorandum, Hillsborough County’s study area (for the adjacent HART AA study) has some of the most dense residential and employment area with the Northeast Corridor between USF and downtown Tampa. The Hart AA Study Area is illustrated in **Figure 3-9**. The West Corridor encompasses only 2% of the County’s land area, but contains 4% of Hillsborough’s population and 16% of its employment. The Downtown Core is a major employment center. In total, the combined study area is home to 24% of the County’s residents and 42% of its jobs, while occupying only 11% of its land area.

A summary of the population and dwelling units for the Pinellas County and Hillsborough County sub-areas, obtained from the regional travel model’s TAZ data, is presented in **Table 3-2**. Information for 2006, 2025, and 2035 is presented. The TAZ employment data for these time periods for the sub-areas is presented in **Table 3-3**.



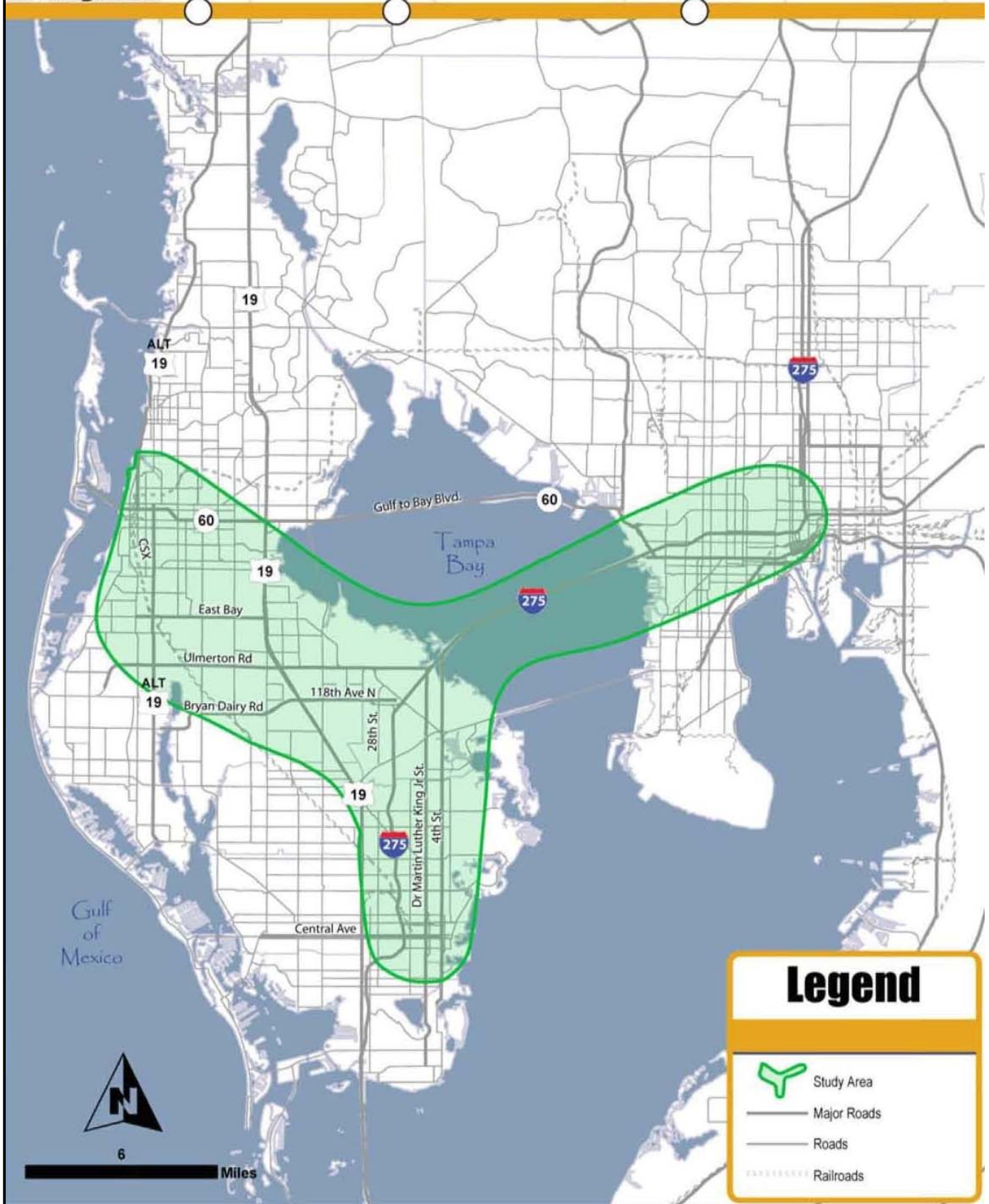
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Census Designated Places

Figure 3-7

Source: US Census Bureau, UF

Pinellas Alternatives Analysis Study Area

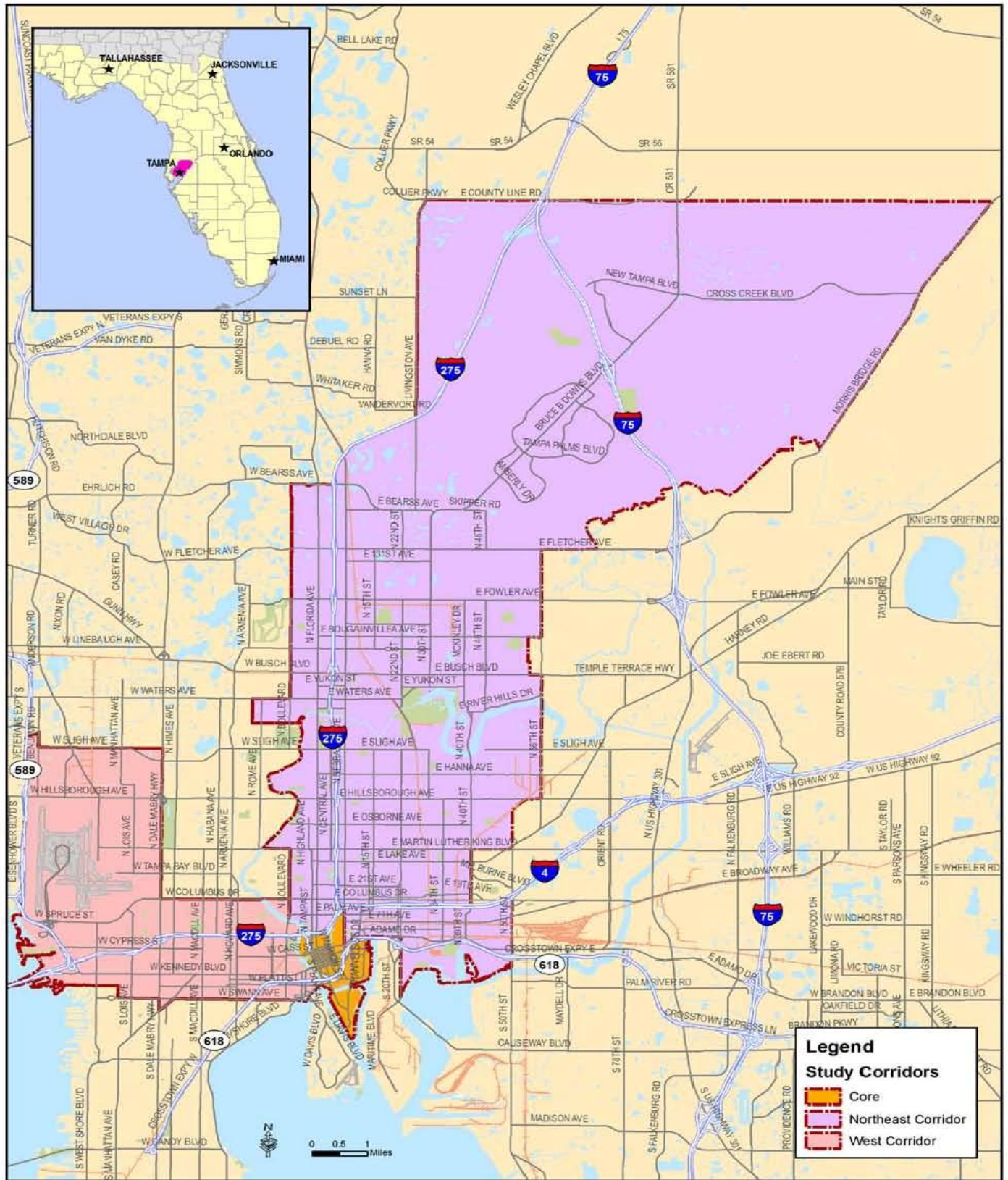


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Pinellas AA Study Area

Source: Pinellas Alternative Analysis Study

Figure 3-8



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**HART AA
 Study Area**

Source: HART Alternative Analysis Study

Figure 3-9

Table 3-2 Existing and Future Population and Dwelling Units

Total	Population and Dwelling Units					
	2006		2025		2035	
	Dwelling Units	Population	Dwelling Units	Population	Dwelling Units	Population
Hillsborough Sub-area Total	2,142	3,910	3,253	6,921	4,468	9,605
Pinellas Sub-area Total	11,312	18,315	14,614	23,109	17,570	27,418
Grand Total	13,454	22,225	17,867	30,030	22,038	37,023

Table 3-3 Existing and Future Employment

Total	Industrial Employment	Commercial Employment	Service Employment	Total Employment
Hillsborough Sub-area Total 2006	4,846	9,661	40,076	54,583
Pinellas Sub-area Total 2006	8,363	3,177	34,040	45,580
2006 Total	13,209	12,838	74,116	100,163
Hillsborough Sub-area Total 2025	4,340	14,383	48,346	67,069
Pinellas Sub-area Total 2025	10,708	6,673	40,005	57,386
2025 Total	15,048	21,056	88,351	124,455
Hillsborough Sub-area Total 2035	4,571	16,036	53,439	74,046
Pinellas Sub-area Total 2035	11,719	8,543	43,653	63,915
2035 Total	16,290	24,579	97,092	137,961

3.5 ENVIRONMENTAL CONDITIONS

The ETDM Planning Summary Report for the Pinellas County project screening, ETDM Project No. 12256 – Gateway to Hillsborough County Line, was published on April 13, 2010. The ETDM Planning Summary Report, ETDM Project No. 12736 – Westshore to Pinellas County Rail Corridor, was published on May 7, 2010. The ETDM Environmental Screening Tool (EST) allows regulatory agencies to provide comments on numerous environmental issues that may occur as a result of the proposed project and assign specific degrees of effect on each issue. The definitions for the degrees of effect are shown in **Table 3-4**. Each category is assigned a potential degree of effect with comments from respective regulatory agencies, and these comments and degrees of effect are then summarized by the lead agency responsible for running the EST. For these projects, the lead agencies were the Pinellas and Hillsborough County MPOs for their respective segments.

Table 3-4 ETDM Degrees of Effect Definitions

Color Code	Degree of Effect	Definition	
		ETAT	Public Involvement
Purple	Not Applicable/ No Involvement	There is no presence of the issue in relationship to the Project, or the issue is irrelevant in relationship to the proposed transportation action.	
Light Blue	None (after 12/5/2005)	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect level is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
Blue	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
Green	Minimal (after 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Log-cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
Yellow	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderate amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during Project Development.
Orange	Substantial	The project has substantial adverse effects, but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during Project Development. Substantial interaction will be required during Project Development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during Project Development to address community concerns.
Red	Dispute Resolution (Programming)	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary of effect.	

A brief summary of the environmental issues evaluated during the EST are provide below.

Air Quality

Pinellas and Hillsborough Counties are in attainment of National Ambient Air Quality Standards (NAAQS) in accordance with the Clean Air Act. The development of improved transit helps reduce the number of vehicles and vehicle miles traveled, which in turn may have a positive effect on air quality.

Coastal and Marine

This project is located in watersheds that are included in the Tampa Bay Estuary Watershed, which was designated as nationally significant in 1990. The waters of Pinellas County are designated as Aquatic Preserve and Outstanding Florida Waters (OFW). Potential Essential Fish Habitat (EFH), such as seagrasses, mangroves and salt marshes has been identified within the project study area.

Contaminated Sites

Numerous contaminated sites have been identified within the 500-foot buffer of the study area identified in the ETDM screening. These sites include landfills, Resource Conservation and Recovery Act (RCRA) sites, brownfields, and biomedical waste sites. Potential impacts to contaminated sites will need to be evaluated once station locations and potential alternatives have been identified.

Farmlands

According to the NRCS, there are no Prime and Unique Farmland soils within any of the project buffers.

Floodplains

The SWFWMD and United States Environmental Protection Agency (USEPA) noted that large percentages of the study areas are located in FEMA flood zones A, AE and VE.

Infrastructure

According to the EST, infrastructure within the project study area includes monitoring equipment and devices associated with the Toytown landfill, SWFWMD gauges, Albert Whitted Airport, St. Petersburg Fire and Rescue Station, St. Petersburg Water Treatment Facility and wireless antennas.

Navigation

United States Coast Guard (USCG) permits will be required for crossings over Old Tampa Bay. Navigation issues will be minimal if existing horizontal and vertical clearances are maintained.

Special Designations

Watersheds within the Tampa Bay Estuary Watershed are designated as waters of national significance and waters within Pinellas County are part of the Pinellas County Aquatic Preserve and designated as Outstanding Florida Waters (OFW), which provide a higher level of protection. Tampa Bay is a priority water body in the SWFWMD's Surface Water Improvement and Management (SWIM) Program.

Water Quality and Quantity

The project is located within the Pinellas County Aquatic Preserve. There are also water bodies identified on the 303(d) list of impaired waters for various pollutants failing to meet water quality

standards. Proper permitting with federal, state and local agencies will be needed for stormwater treatment.

Wetlands

Wetlands mainly associated with Old Tampa Bay are located within the study area. There are also small pockets of palustrine wetland located inshore. The majority of the wetlands include mangrove swamps, salt marshes and seagrass areas. An Environmental Resource Permit and Section 404 Dredge and Fill permit will be needed prior to construction.

Wildlife and Habitat

Habitats within the project area include mangrove swamps, salt water marshes, seagrasses, and other marine and estuarine habitats that play a vital role for numerous water dependent species. According to comments in the EST, the project is located in the U.S. Fish and Wildlife Service (USFWS) consultation area for the West Indian manatee and the piping plover. Fish, sea turtles, numerous water-dependent avian species and other listed and protected species have the potential to occur within the study area.

Historic and Archaeological Sites

Numerous archaeological sites, resource groups, historic standing structures, and National Register of Historic Places (NRHP) properties are located within the project Area of Potential Effect (APE).

Recreation Areas

Two public conservation lands, Weeden Island Preserve (Pinellas County) and Diamond Back Tract (Hillsborough County), are identified within the study area. There are also other parks, schools, trails and other recreation areas located within or adjacent to the study area.

Section 4(f) Potential

There are Section 4(f) resources including Weeden Island Preserve, Diamond Back Tract, other parks and recreational facilities, and also the Pinellas County Aquatic Preserve within the study area.

Aesthetics

The majority of the project will likely be located within existing transportation right of way. The transit envelope over Old Tampa Bay will be evaluated as part of the PD&E study being conducted for the northbound I-275 bridge replacement. The transit component will likely be associated with the new northbound bridge over Old Tampa Bay.

Economic

Numerous commercial, industrial and residential developments are located within the study limits. Transit will provide a greater link between Pinellas and Hillsborough Counties. According to future land use data, the areas of Pinellas and Hillsborough Counties are slated for future urban and multi-use redevelopment within the study area.

Land Use

The lands within the study limits are primarily developed except in the Toytown area in Pinellas County and include land uses such as commercial, residential, and industrial. Minimal changes to existing land use are anticipated. A more detailed description of existing and future land uses are provided above in **Section 3-3**.

Mobility

The I-275 corridor and many of the roadways within the existing transportation network operate or are predicted in the future to operate at failing Levels of Service (LOS). This project would enhance existing bus, pedestrian and bicycle modes of transportation within the study and surrounding areas.

Relocation

The project is anticipated to use existing transportation right of way wherever feasible. This will help reduce and/or eliminate the number of potential relocations.

Social

The EST screening identified Developments of Regional Impacts (DRIs), group care facilities, civic centers, community centers, cultural centers, religious facilities, health care facilities, parks, schools, veteran facilities and resource centers within the vicinity of the study corridor. This project would support alternative modes of transportation to access these facilities.

Secondary and Cumulative Impacts

Impacts to wildlife and habitats, water quality, and function of wetlands may result as part of construction and operation of the proposed facility. Proper Best Management Practices (BMP) and locations of staging areas would be evaluated during permitting and need to be managed throughout construction. Federal, state and local permitting criteria would need to be adhered to for this project to avoid secondary impacts.

The summary degrees of effect for these projects are summarized in **Table 3-5**.

3.6 UTILITIES

Utility information for the transit corridor evaluation will be collected once the potential station locations for the HFB transit linkage, which would run from Hillsborough County's proposed Westshore station (service connection to downtown Tampa) to Pinellas County's proposed Gateway station, are defined.

Table 3-5 ETDM Summary Degrees of Effect

Evaluation Issue	ETDM Summary Degree of Effects ⁽³⁾		Reviewing Agencies	
	ETDM No. 12256 Pinellas County ⁽¹⁾	ETDM No. 12736 Hillsborough County ⁽²⁾		
Natural	Air Quality	1 - Enhanced	1 - Enhanced	USEPA
	Coastal and Marine	4 - Substantial	4 - Substantial	SWFWMD, NMFS
	Contaminated Sites	3 - Moderate	3 - Moderate	FDEP, SWFWMD, USEPA
	Farmlands	0 - None	0 - None	NRCS
	Floodplains	4 - Substantial	4 - Substantial	SWFWMD, USEPA
	Infrastructure	3 - Moderate	4 - Substantial	SWFWMD, FHWA
	Navigation	3 - Moderate	3 - Moderate	USCG, USACE
	Special Designations	4 - Substantial	4 - Substantial	USEPA, SWFWMD
	Water Quality and Quantity	4 - Substantial	4 - Substantial	FDEP, USEPA, SWFWMD
	Wetlands	4 - Substantial	4 - Substantial	USFWS, USACE, SWFWMD, NMFS, FDEP, USEPA
	Wildlife and Habitat	3 - Moderate	3 - Moderate	SWFWMD, USFWS, FWC
Cultural	Historic and Archaeological Sites	4 - Substantial	3 - Moderate	FDOS, SWFWMD, Miccosukee Tribe
	Recreation Areas	3 - Moderate	2 - Minimal	SWFWMD, FDEP, USEPA
	Section 4(f) Potential	3 - Moderate	3 - Moderate	NPS
Community	Aesthetics	2 - Minimal	2 - Minimal	Pinellas MPO
	Economic	3 - Moderate	1 - Enhanced	Pinellas MPO, Hillsborough MPO
	Land Use	3 - Moderate	3 - Moderate	FDCA, Pinellas MPO, Hillsborough MPO
	Mobility	4 - Substantial	4 - Substantial	Pinellas MPO, FHWA, Hillsborough MPO
	Relocation	2 - Minimal	2 - Minimal	Pinellas MPO, Hillsborough MPO
	Social	2 - Minimal	2 - Minimal	Pinellas & Hillsborough MPO, FDCA, USEPA
Secondary and Cumulative Effects	3 - Moderate	3 - Moderate	SWFWMD	

(1) ETDM No. 12256 Planning Summary Report Published on 04/13/2010

(2) ETDM No. 12736 Planning Summary Report Published on 05/07/2010

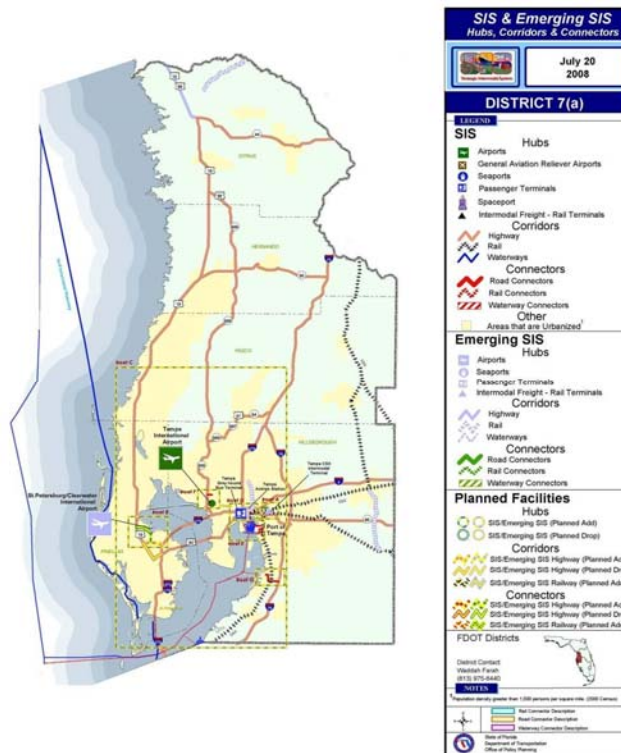
(3) For Definitions of Degrees of Effect, see Table 3-4.

SECTION 4 STUDY AREA TRANSPORTATION FACILITIES

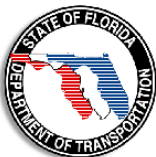
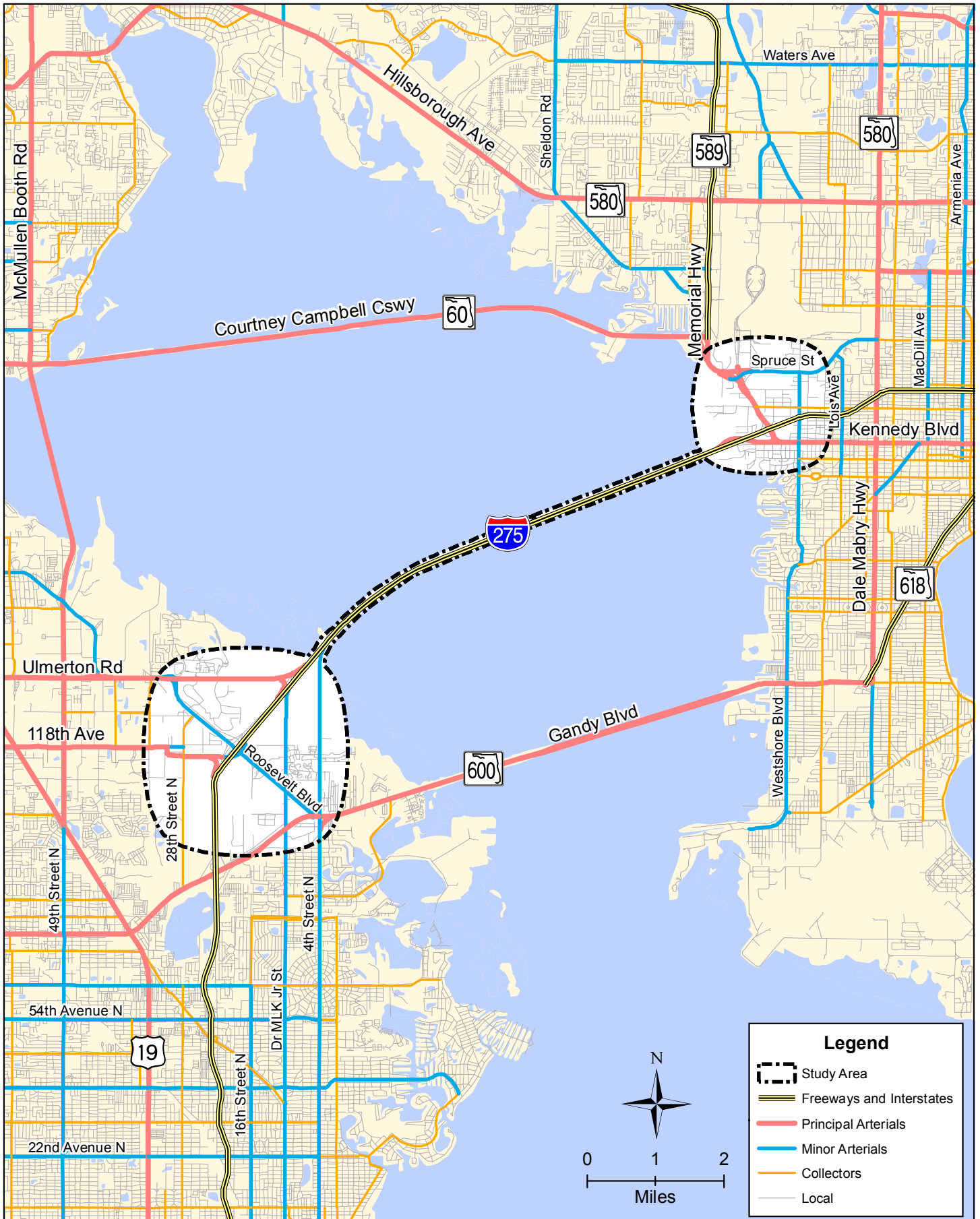
The study area includes an interstate freeway (I-275), principal arterials, minor arterials, collectors, and local roads. FDOT’s roadway classification for transportation facilities within and around the study area is illustrated in **Figure 4-1**.

Several transportation facilities within the study area meet FDOT’s adopted criteria and thresholds to be included in the Florida’s Strategic Intermodal System (SIS). The SIS and Emerging SIS are shown below. FDOT defines the SIS as follows: Transportation system that is made up of facilities and services of statewide and interregional significance (**strategic**); Contains all forms of transportation for moving people and goods, including linkages that provide for smooth and efficient transfers between modes and major facilities (**intermodal**); and, Integrates individual facilities, services, forms of transportation (modes) and linkages into a single, integrated transportation network (**system**). The current designated SIS is a network of high-priority transportation facilities which includes the state’s largest and most significant commercial airports, spaceports, seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways, and highways. Transportation facilities within the study area on the current SIS include:

- I-275
- Tampa International Airport
- Veterans Expressway (SR 589) (Memorial Highway)
- Gandy Boulevard (SR 694)
- Roosevelt Boulevard (SR 686)
- St. Petersburg-Clearwater International Airport (Emerging SIS intermodal connector)
- 118th Avenue (Future SR 692)



Source: FDOT SIS & Emerging SIS Plan



**Howard Frankland Bridge (I-275/SR 93)
Replacement PD&E Study
Regional Transit Corridor Evaluation**
WPI Segment No. 422799 1
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Roadway Classifications Study Area

Figure 4-1

Source: FDOT, FGDL

The Howard Frankland Bridge/I-275 is the primary transportation facility in the corridor, providing the link between the sub-areas that would connect the proposed transit systems at the stations in the Gateway and Westshore areas. The HFB has extensive use of travel for trip destinations between the Gateway area and the Westshore area. As part of the alternatives screening process for the Pinellas AA, travel destination demand levels between Gateway and Hillsborough were generated. Approximately 26% of all existing travel destinations that utilize the HFB are between Gateway and the Westshore area. Approximately 12% of the destination demand is between Gateway and Tampa International Airport, and 62% of the destination demand is between Gateway and points beyond Westshore in Tampa. **Figure 4-2** illustrates the travel demand levels between Gateway and the locations in Hillsborough.

The balance of this section details the existing conditions of the major roadway segments, traffic volumes, LOS and planned improvements in the study's sub-areas.

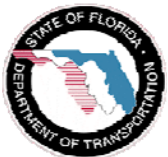
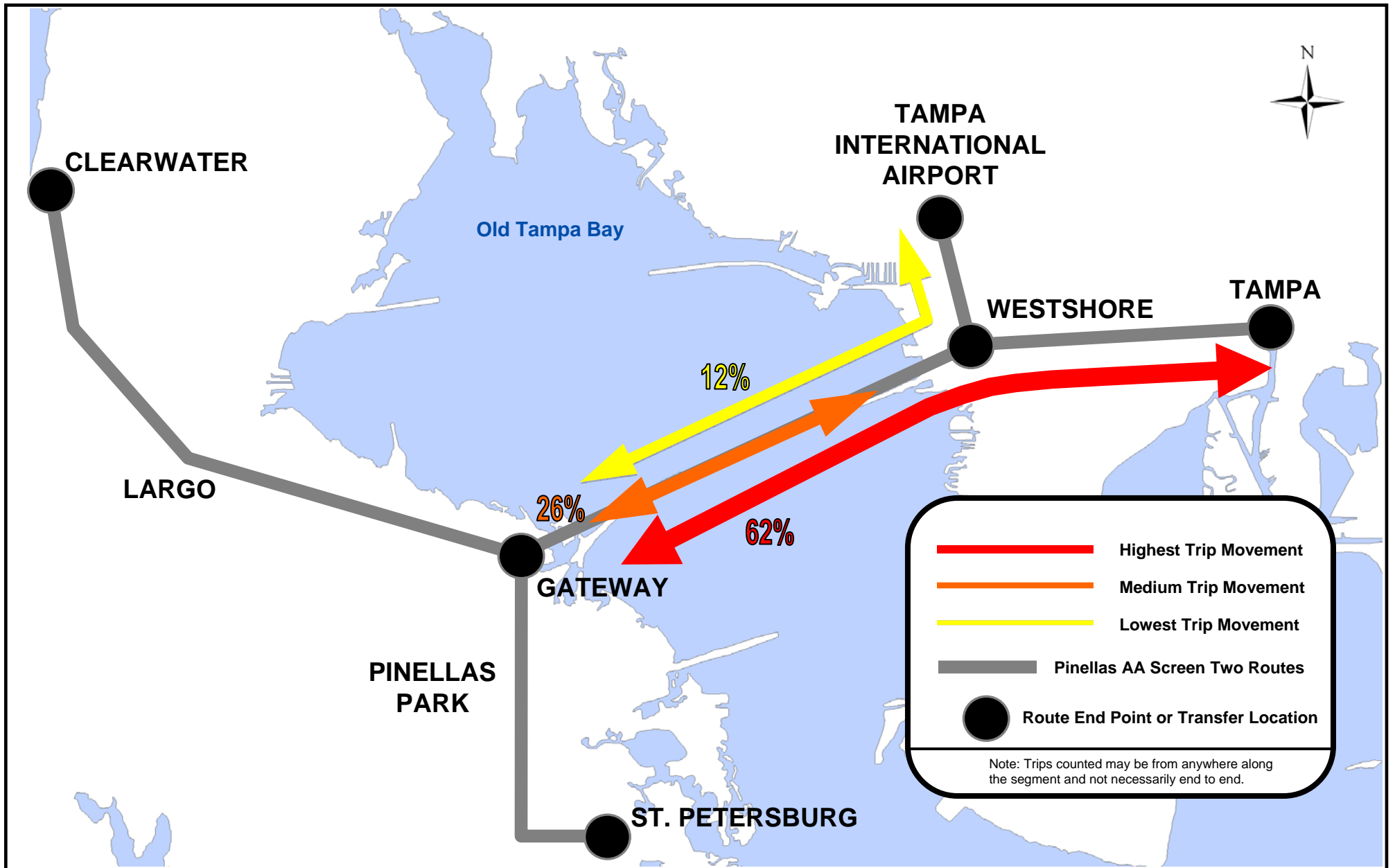
4.1 PINELLAS COUNTY SUB-AREA ROADWAYS

The existing major north-south roadway corridors within the Pinellas County sub-area include I-275, 4th Street North, Dr. Martin Luther King Jr. Street North (9th Street North) and 28th Street North.

- I-275 is a major interstate that connects Pinellas County with Hillsborough County to the north via Howard Frankland Bridge and Pinellas to Manatee County to the south via the Sunshine Skyway Bridge. The number of lanes on I-275 varies from six to eight lanes, but is eight lanes across the HFB, with a four lane segment between the Kennedy Boulevard southbound on and northbound off ramps, and the SR 60 northbound on and southbound off ramps.
- 4th Street North is a four to six lane minor arterial that runs in a north-south direction and connects Downtown St. Petersburg to I-275. This facility also provides a connection to Roosevelt Boulevard in the Gateway area near Gandy Boulevard.
- Dr. Martin Luther King Jr. Street North (9th Street North) is a four to six lane divided minor arterial that runs in a north-south direction between 83rd Avenue North and I-275. This facility also intersects other major facilities such as Gandy Boulevard and Roosevelt Boulevard.
- 28th Street North is a minor arterial that runs in the north-south direction and connects to Roosevelt Boulevard North (SR 686) and Gandy Boulevard (SR 694).

The existing major east-west roadway corridors in the Pinellas County sub-area are Ulmerton Road (SR 688), Gandy Boulevard (SR 694), 83rd Avenue North, Roosevelt Boulevard North (SR 686) and 118th Avenue.

- Ulmerton Road (SR 688) runs in the east-west direction and is a four to six lane urban principal arterial that connects Indian Rocks Beach on the west to the Gateway area and I-275 to the east.
- Gandy Boulevard (SR 694) is a principal arterial that connects Pinellas County to Hillsborough County in the east-west direction via the Gandy Bridge to 4th Street North.
- 83rd Avenue North is a minor arterial that runs in the east-west direction and connects to Gandy Boulevard (SR 694), 4th Street North and Dr. Martin Luther King Jr. Street North (9th Street North).



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 Regional Transit Corridor Evaluation
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Destination Demand Levels

Source: Pinellas AA Project Advisory Committee Meeting, March 14, 2011

Figure 4-2

- Roosevelt Boulevard North (SR 686) is an urban minor arterial that runs in the east-west direction and connects Belleair Beach to the west to Ulmerton Road/Gateway area and I-275 to the east. East of I-275, Roosevelt Boulevard ends at Gandy Boulevard which connects to South Tampa area and Lee Roy Selmon Expressway in Hillsborough County. Roosevelt Boulevard is the primary access to the St. Petersburg/Clearwater International Airport, the area's major transportation facility.
- 118th Avenue (Future SR 692) is a 6-lane divided urban principal arterial that runs in the east-west direction providing connections to Pinellas Park and I-275

Traffic volumes reported as Average Annual Daily Traffic (AADT) and LOS for existing traffic conditions was collected for the major roadway segments in the Pinellas County sub-area is presented in **Table 4-1**. AADT is defined as the total volume of traffic on a highway segment for one year, divided by the number of days in the year. The LOS was documented in the *2009 FDOT Quality/Level of Service Handbook*, Generalized LOS Tables (Table 1). LOS refers to a measure of congestion that compares actual or projected traffic volume with the maximum capacity of the intersection or road in question. LOS is rated from A (free-flowing traffic) to F (gridlock). An acceptable LOS is D or above. Segments of the sub-area currently operating at unacceptable LOS include SR 686 from I-275 to Ulmerton Road, 118th Avenue N. from 34th Street N to 31st Ct. N., and SR 694 from I-275 to Dr. Martin Luther King Jr. Street N. (9th Street).

Planned roadway improvements and future new transportation facilities for Pinellas County are documented in the 2035 LRTP developed by the Pinellas County Metropolitan Planning Organization. **Figure 4-3** presents the Pinellas County 2035 LRTP – Cost Feasible projects. **Table 4-2** lists the approved future roadway segments in the sub-area.

Table 4-1 Existing Conditions – Pinellas County Segments

Roadway	Segment	2010 AADT*	LOS based on AADT**
I-275	Gandy Boulevard to SR 686 (Roosevelt Boulevard N)	113,500	C
	SR 686 (Roosevelt Boulevard N) to Dr. MLK Jr. Street N (9th Street)	88,500	C
	Dr. MLK Jr. Street N (9th Street) to 4th Street N	126,500	C
	4th Street N to Pinellas County Line	139,000	D
SR 686 (Roosevelt Boulevard N)	Gandy Boulevard to Dr. MLK Jr. Street N (9th Street)	17,200	B
	Dr. MLK Jr. Street N (9th Street) to I-275	36,000	D
	I-275 to 28th Street N	62,000	E
	28th Street N to SR 688 (Ulmerton Road)	43,500	E
SR 688 (Ulmerton Road)	SR 686 (Roosevelt Boulevard N) to I-275	35,000	B
	West of SR 686 (Roosevelt Boulevard N)	41,500	D
Dr. MLK Jr. Street N (9th Street)	83rd Avenue N to Gandy Boulevard	21,500	C
	Gandy Boulevard to SR 686 (Roosevelt Boulevard N)	NA	NA
	SR 686 (Roosevelt Boulevard N) to I-275	8,430**	C
4th Street N	South of Gandy Boulevard	34,000	C
	Gandy Boulevard to I-275	23,000	B
118th Avenue N	34th Street N to 31st Ct N	33,635**	F
	31st Ct N to 28th Street N	15,565**	C
28th Street N	Gateway Centre Parkway to 118th Avenue N	NA	NA
	118th Avenue N to SR 686 (Roosevelt Boulevard N)	13,843**	B
SR 694 (Gandy Boulevard)	I-275 to Dr. MLK Jr. Street N (9th Street)	48,500	E
	Dr. MLK Jr. Street N (9th Street) to 4th Street N	26,500	B

NA - Not Available

*2010 Florida Traffic Online Counts

**LOS Data Source: 2009 FDOT Quality/Level of Service Handbook, Generalized LOS Tables (Table 1)

MAJOR ROAD NETWORK

Cost Feasible Projects
2015 - 2035

Legend

- Road Projects
- Intersections
- Project Reference
- Roads

Gulf of Mexico

Tampa Bay

2035 Long Range
Transportation Plan



Pinellas County MPO

Project C36
I-275 from Sunshine Skyway to Gandy
Existing Lanes 4, 6, 8 Freeway
Adding 2 special lanes

Plot Date: October 7, 2009
C:\Transportation MPO
Mapping\Project Files
LRTP Costfea
ProjectsFinal.mxd



**Howard Frankland Bridge (I-275/SR 93)
Replacement PD&E Study
Regional Transit Corridor Evaluation**
WPI Segment No. 422799 1
Pinellas & Hillsborough Counties

**Pinellas County
2035 LRTP – Cost
Feasible Projects**
Source: Pinellas MPO – 2035 LRTP

Figure 4-3

Table 4-2 Future Conditions – Pinellas County Segments

Roadway	Segment	Planned Improvements	2035 AADT*	LOS based on AADT**
I-275	Gandy Boulevard to SR 686 (Roosevelt Boulevard N)		184,000	F
	SR 686 (Roosevelt Boulevard N) to Dr. MLK Jr. Street N (9th Street)		170,000	F
	Dr. MLK Jr. Street N (9th Street) to 4th Street N	8 Lane to 12 Lane Frwy from East of SR 688 (Ulmerton Rd) to 4th Street N	231,000	D
	4th Street N to Pinellas County Line	Replacement of NB Bridge	256,000	F
SR 686 (Roosevelt Boulevard N)	Gandy Boulevard to Dr. MLK Jr. Street N (9th Street)	4 Lanes to 6 Lanes Divided	45,300	F
	Dr. MLK Jr. Street N (9th Street) to I-275		53,000	F
	I-275 to 28 th Street N		77,000	F
	28 th Street N to SR 688 (Ulmerton Road)		58,000	F
SR 688 (Ulmerton Road)	SR 686 (Roosevelt Boulevard N) to I-275	4 Lane Div/6 Lane Div to 6 Lane Div from west of I-275 to west of 38th Street	55,000	D
	West of SR 686 (Roosevelt Boulevard N)		87,000	F
Dr. MLK Jr. Street N (9th Street)	83rd Avenue N to Gandy Boulevard		35,000	E
	Gandy Boulevard to SR 686 (Roosevelt Boulevard N)		37,000	F
	SR 686 (Roosevelt Boulevard N) to I-275		19,000	C
4th Street N	South of Gandy Boulevard		44,000	D
	Gandy Boulevard to I-275		41,000	F
118th Avenue N	34th Street N to 31st Ct N		50,000	F
	31st Ct N to 28th Street N		43,100	F
28th Street N	Gateway Centre Parkway to 118th Avenue N		22,100	C
	118th Avenue N to SR 686 (Roosevelt Boulevard N)		31,000	D
SR 694 (Gandy Boulevard)	I-275 to Dr. MLK Jr. Street N (9th Street)	4 Lane Div/6 Lane Div to 6 Lanes Div from 28th Street (Extended) to 9th Street N and finally from W. of Grand Ave to W. of 9th Street n to a 4 Lane Partially Controlled Access	76,000	F/E
	Dr. MLK Jr. Street N (9th Street) to 4th Street N	4 Lane Div to 6 Lane Partially Controlled Access	43,000	B

NA - Not Available

*2035 Cost Affordable TBRPM V7.0 Future Year 2035_CA Model

**LOS Data Source: 2009 FDOT Quality/Level of Service Handbook, Generalized LOS Tables (Table 1)

4.2 HILLSBOROUGH COUNTY SUB-AREA ROADWAYS

The existing major north-south roadway corridors within the Hillsborough County sub-area include SR 60 (Memorial Highway), the Veterans Expressway, Westshore Boulevard and Lois Avenue.

- SR 60 (Memorial Highway) is a principal arterial that connects from Kennedy Boulevard from the I-275 northbound ramps, and provides access to the Tampa International Airport and connects to the Veterans Expressway and SR 60 (Courtney Campbell Causeway) linking Hillsborough and Pinellas Counties.
- Veteran Expressway (SR 589) is a 6-lane major north-south toll interstate/expressway extending from SR 60 west of the Tampa International Airport to SR 597 (Dale Mabry Highway).
- Westshore Boulevard is a four to six lane urban minor arterial that runs in the north- south direction and connects many minor roads also, onto the I-275 ramp and ultimate connections to the Tampa International Airport.
- Lois Avenue is a four to six lane urban minor arterial that runs in the north-south direction and connects Kennedy Boulevard and to Spruce Street.

The existing major east-west roadway corridors in the sub-area are I-275, Kennedy Boulevard, Spruce Street and Cypress Street.

- I-275 is a major interstate that connects Hillsborough County with Pinellas County to the south via Howard Frankland Bridge and Pasco County to the east/north. The number of lanes on I-275 varies from six to eight lanes, with a four lane segment between the Kennedy Boulevard southbound on and northbound off ramps, and the SR 60 northbound on and southbound off ramps.
- Kennedy Boulevard is a four to six lane minor arterial that connects I-275 to SR 60 (Memorial Highway), up to Westshore Boulevard and also connects to Lois Avenue.
- Spruce Street is a six to eight lane urban major arterial that connects Westshore Boulevard to the Tampa International Airport and onto SR 60 (Memorial Highway) and provides connectivity to the Veterans Expressway and to SR 60 (Courtney Campbell Causeway) linking Hillsborough and Pinellas Counties.
- Cypress Street is a four lane divided minor arterial that provides connections to Westshore Boulevard, Tampa International Airport and I-275.

Traffic volumes reported as AADT and LOS for existing traffic conditions was collected for the major roadway corridors in the Hillsborough County sub-area is presented in **Table 4-3**. An acceptable LOS is D or above. Segments of the sub-area currently operating an unacceptable LOS (E or F) include I-275 segments SR 60 – Memorial Highway – Westshore Boulevard – Lois Avenue, and SR 60 from Westshore Boulevard to I-275.

Planned roadway improvements and future new transportation facilities for Hillsborough County are documented in the 2035 LRTP developed by the Hillsborough County MPO. **Figure 4-4** presents the Hillsborough County 2035 LRTP – Cost Feasible projects. **Table 4-4** lists the approved future roadway segments in the sub-area.

Table 4-3 Existing Conditions – Hillsborough County Segments

Roadway	Segment	2010 AADT*	LOS based on AADT**
I-275	Hillsborough County Line to Ramps to/from SR 60	139,000	D
	Ramps to/from SR 60 to Memorial Highway (SR 60) (Kennedy Boulevard)	76,000	E
	Memorial Highway SR 60 (Kennedy Boulevard) to Westshore Boulevard	134,000	F
	Westshore Boulevard to Lois Avenue	171,000	F
SR 60 (Kennedy Boulevard)	Lois Avenue - Westshore Boulevard	45,000	D
	Westshore Boulevard to I-275	52,500	E
SR 60 (Memorial Highway)	I-275 to Spruce Street	128,000	D
Veterans Expressway	Spruce Street to SR 60	NA	NA
Westshore Boulevard	Swann Avenue to Azeele Street	NA	NA
	Azeele Street to SR 60 (Kennedy Boulevard)	24,724	D
	SR 60 (Kennedy Boulevard) to I-275	43,436	D
	I-275 to Cypress Street	35,118	F
	Cypress Street to Spruce Street	29,500	D
Cypress Street	Westshore Boulevard to Manhattan Avenue	NA	NA
	Westshore Boulevard to Hubert Avenue	NA	NA
Spruce Street	Memorial Highway to Westshore Boulevard	40,500	B
	Westshore Boulevard to Manhattan Avenue	NA	NA

NA - Not Available

*2010 Florida Traffic Online Counts

**LOS Data Source: 2009 FDOT Quality/Level of Service Handbook, Generalized LOS Tables (Table 1)

Table 4-4 Future Conditions – Hillsborough County Segments

Roadway	Segment	Planned Improvements	2035 AADT*	LOS based on AADT**
I-275	Hillsborough County Line to Ramps to/from SR 60	8 lanes planned after 2014	256,000	F
	Ramps to/from SR 60 to Memorial Highway/SR 60 (W Kennedy Boulevard)		166,000	E
	Memorial Highway/SR 60 (Kennedy Boulevard) to Westshore Boulevard		299,000	F
	Westshore Boulevard to Lois Avenue	8 lanes planned by 2014	334,000	F
SR 60 (Kennedy Boulevard)	Lois Avenue - Westshore Boulevard	Enhanced 6 lanes planned after 2014	53,000	E
	Westshore Boulevard to I-275		75,000	F
Memorial Highway	I-275 to Spruce Street	10 lanes planned by 2014	232,000	F
Veterans Expressway	Spruce Street to SR 60	10 lanes planned by 2014	266,000	F
Westshore Boulevard	Swann Avenue to Azelee Street	4 lanes divided to 6 lanes divided	40,000	D
	Azelee Street to SR 60 (Kennedy Boulevard)		51,000	E
	SR 60 (Kennedy Boulevard) to I-275		68,000	F
	I-275 to Cypress Street		61,000	F
	Cypress Street to Spruce Street		58,000	F
Cypress Street	Westshore Boulevard to Manhattan Avenue		26,000	D
	Westshore Boulevard to Hubert Avenue		35,000	E
Spruce Street	Memorial Highway to Westshore Boulevard		70,000	F
	Westshore Boulevard to Manhattan Avenue		47,000	C

NA - Not Available

*2035 Cost Affordable TBRPM V7.0 Future Year 2035_CA Model

**LOS Data Source: 2009 FDOT Quality/Level of Service Handbook, Generalized LOS Tables (Table 1)

SECTION 5 TRANSIT SERVICE

The project study area is served by existing transit service in both Pinellas and Hillsborough counties. Transit service in Pinellas County is provided by the PSTA. Transit service in Hillsborough County is provided by HART. In addition to the existing transit services provided the PSTA and HART, TBARTA provides commute options within the study area. The commute options provided by TBARTA within the study area are: carpool, vanpool, ride the bus, bike, walk and telework. This section provides an overview of the existing and planned future transit service in the study area (and from both the Pinellas AA and HART AA as it relates to the HFB PD&E and transit evaluation).

5.1 PSTA EXISTING TRANSIT SERVICE

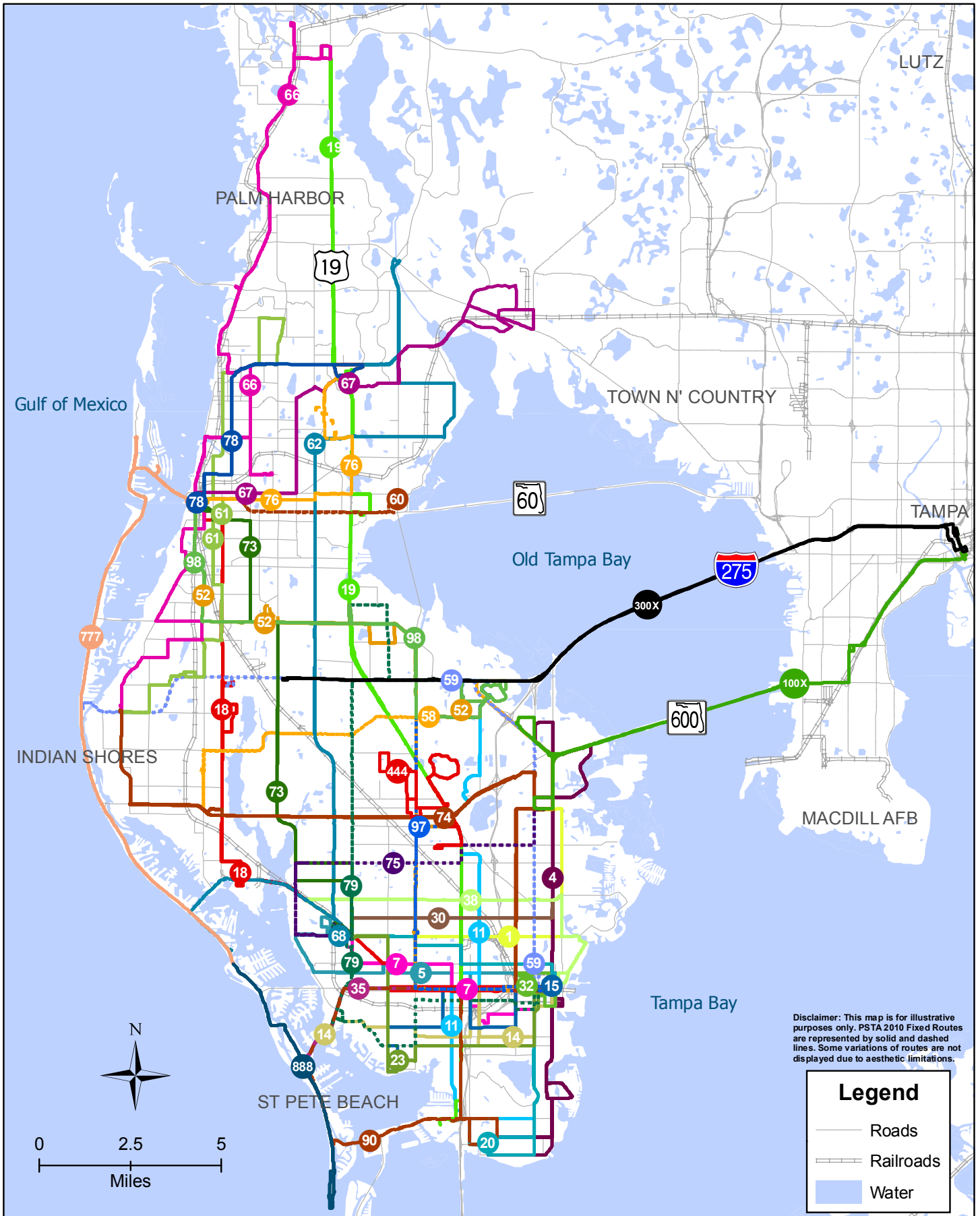
The primary transit service provider in Pinellas County in the sub-area is PSTA. The current PSTA bus system serves 21 of the 24 communities in Pinellas County. Additional service is provided to unincorporated areas. PSTA currently operates 37 routes, which include: 29 local routes, two shuttle/circulator routes, one trolley service, three commuter routes, and two commuter express routes to Tampa. PSTA's current fixed-route system can be generally categorized as a hub-and-spoke system with three major hubs: downtown St. Petersburg, Central Plaza, and downtown Clearwater. PSTA provides three Park-n-Rides lots for passengers who do not live near bus routes. **Figure 5-1** presents the existing PSTA transit system routes. **Figure 5-2** shows the PSTA routes which travel within the Pinellas sub-area.

PSTA's bus system operates seven days a week, including holidays. The hours of revenue service operation for the majority of the bus routes is from 5:30 A.M. to 8:30 P.M. on weekdays, with additional service on some routes as early as 4:55 A.M. to as late as 11:55 P.M. Weekend and holidays service for the majority of routes is from 6:00 A.M. to 7:00 P.M. However, a few routes start as early as 5:30 A.M. and run as late as 9:00 P.M. In general, headways for bus operations range from 15 to 75 minutes during the A.M. and P.M. peak periods, with the average service frequency of 30 minutes. Headways during the off-peak periods range from 30 to 60 minutes on average. Weekend service frequencies primarily operate on 60 minute headways, with some of the routes operating at 30 minute intervals.

PSTA has a total of 191 transit vehicles. According to the PSTA Transit Development Plan (TDP) for FY 2011 – 2020, the PSTA weekday peak fleet requirement was 157 buses in FY 2009. On Saturdays, the vehicle requirement was 94 buses, while Sunday and holiday service required 60 buses in FY 2009.

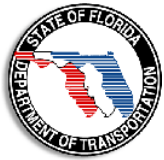
In addition to the PSTA transit service, some local service is provided by other companies in Pinellas County. A summary of these transit services is as follows:

- Downtown Looper and Central Avenue Shuttle, operated by City of St. Petersburg
- Jolley Trolley, operated by Clearwater Jolley Trolley and serving Clearwater, Dunedin, Palm Harbor, and Tarpon Springs
- Gulfport/St. Pete Beach Connector Trolley, operated by City of Gulfport Leisure Services Department
- East Lake Shuttle, privately operated and connecting service at the Shoppes of Boot Ranch to PSTA Route 62



Legend

- Roads
- Railroads
- Water



**Howard Frankland Bridge (I-275/SR 93)
Replacement PD&E Study
Regional Transit Corridor Evaluation**
WPI Segment No. 422799 1
Pinellas & Hillsborough Counties

**PSTA
2010 Fixed Routes**

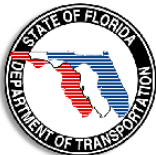
Source: PSTA, Jacobs

Figure 5-1



Disclaimer: This map is for illustrative purposes only. PSTA 2010 Fixed Routes are represented by solid and dashed lines. Some variations of routes are not displayed due to aesthetic limitations.

Legend	
	Roads
	Railroads
	Water



**Howard Frankland Bridge (I-275/SR 93)
Replacement PD&E Study
Regional Transit Corridor Evaluation**
WPI Segment No.: 422799 1
Pinellas & Hillsborough Counties

**PSTA 2010 Fixed Routes
Pinellas County Sub-Area**

Source: PSTA

Figure 5-2

5.1.1 Local Routes

PSTA currently operates 29 local service routes on weekdays, 26 on Saturdays, and 21 on Sundays. The service span for most of the local routes is approximately 15 hours per day, from 4:55 A.M. to 11:55 P.M. Peak period headways range from 15 minutes to 75 minutes, with an average frequency of 30 minutes. Off-peak headways average from 30 to 60 minutes.

5.1.2 Commuter Routes

PSTA currently operates three commuter service routes. Route 90 provides limited peak period only service from the St. Petersburg Beaches to downtown St. Petersburg. Limited peak period service connecting Downtown St. Petersburg and Downtown Clearwater to the Gateway Activity Center is provided by Routes 97 and 98, respectively.

5.1.3 Express Routes

Routes 100x and 300x provide express service to Tampa. Route 100x utilizes the Howard Frankland Bridge in its routing. Route 100x operates primarily in the peak periods, with limited off-peak service as follows: Gateway Mall, 4 Street N, Certegy, Goodwill Park N Ride, Dale Mabry Highway, Lee Roy Selmon Crosstown Expressway, Britton Plaza Station, Downtown Tampa, Marion Transit Center. Route 300x utilizes the SR 600/Gandy Bridge and provides primarily peak period limited stop service, with some limited off-peak service as follows: Ulmerton Road Park N Ride, Ulmerton Road, Stonybrook Drive Park N Ride, Downtown Tampa, Marion Transit Center

5.1.4 Shuttle / Circulator Routes

PSTA currently operates two shuttle/circulator routes. Route 32 is the Downtown St. Petersburg Circulator and operates as follows: : Williams Park (Downtown St. Petersburg), Sunshine Senior Center, Mirror Lake Area, St. Anthony's Hospital, John Knox Apartments, Greyhound Bus Terminal, Tropicana Field, Graham Park, Bayfront Medical Center, All Children's Hospital, Suncoast Medical Center, Publix Supermarket. Route 444 is a shuttle that operates in the Pinellas Park area linking areas of Pinellas Park to Shoppes at Park Place and connections to additional PSTA routes.

5.1.5 Demand Response and Paratransit Service

PSTA provides demand response transportation service (DART) for people who, because of their disability, are unable to independently access the regular PSTA fixed route bus service. The PSTA's DART service allows users to choose their transportation provider from a pre-approved list of DART providers.

5.1.6 Existing Ridership and Performance Indicators

PSTA attracted over 11.8 million riders on their system in FY 2009. This ridership declined from FY 2008, which had over 12.5 million riders. The ridership and route miles declined in this time period can be attributable to the declining economy and high unemployment. Prior to FY 2009, PSTA fixed route and paratransit ridership experienced a period of growth from FY 2004 to FY 2008. **Table 5-1** presents the PSTA passenger trips as well as other general performance indicators related to the system performance from FY 2004 to FY 2009. PSTA ridership analysis shows a 2010 ridership increase from 2009. As of September 2010, PSTA reported year-to-date ridership (passenger trips) of over 12.5 million riders, which is an increase of over 5% from FY 2009.

Table 5-1 PSTA System Performance Indicators

General Indicators	2004	2005	2006	2007	2008	2009	% Change 2004-2009	% Change 2008-2009
Service Area Population	896,651	881,868	881,705	858,947	863,796	883,631	-1.45%	2.30%
Service Area Size (square miles)	258	226	226	229	230	240	-6.98%	4.35%
Passenger Trips	9,701,063	10,088,460	11,021,266	11,298,312	12,522,259	11,865,520	22.31%	-5.24%
Passenger Miles	47,241,080	47,880,667	54,078,055	55,361,459	60,392,080	61,548,553	30.29%	1.91%
Vehicle Miles	8,715,022	9,131,150	9,666,071	10,247,622	10,642,730	9,922,956	13.86%	-6.76%
Revenue Miles	7,956,137	8,298,058	8,550,652	8,969,837	9,283,243	8,710,429	9.48%	-6.17%
Vehicle Hours	578,974	596,726	624,991	659,152	697,568	650,622	12.37%	-6.73%
Revenue Hours	548,137	563,770	582,734	609,291	646.808	606,001	10.56%	-6.31%
Route Miles	1,045.70	1,006.00	1,011.40	1,006.00	1,011.00	912.9	-12.70%	-9.70%
Total Operating Expense	\$35,486,360	\$38,502,575	\$40,680,470	\$48,418,229	\$50,351,319	\$50,049,702	41.04%	-0.60%
Total Operating Expense (of 1984 \$)	\$18,710,556	\$19,635,632	\$20,097,960	\$23,258,359	\$23,292,512	\$23,235,237	41.04%	-0.60%
Total Maintenance Expense	\$7,329,443	\$7,492,728	\$7,037,064	\$9,034,677	\$8,019,467	\$7,875,767	7.45%	-1.79%
Total Maintenance Expense (of 1984 \$)	\$3,864,526	\$3,821,159	\$3,476,622	\$4,339,931	\$3,709,804	\$3,656,272	7.45%	-1.79%
Total Capital Expense	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Vehicles Available for Maximum Service	176	180	197	205	205	205	16.48%	0%
Vehicles Operated in Maximum Service	141	147	161	171	171	170	20.57%	-0.58%
Spare Ratio (%)	24.82	22.45	22.36	19.88	19.88	20.59	-17.06%	3.55%
Total Gallons Consumed	2,179.191	2,254,116	2,326,791	2,533,579	2,672,656	2,430,921	11.55%	-9.04%
Total Energy Consumed (KW-Hours)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source: FDOT / Florida Transit Information System (www.ftis.org)

5.2 HART EXISTING TRANSIT SERVICE

The primary transit service in Hillsborough County is provided by HART. The current HART bus system serves the unincorporated areas of Hillsborough County, and the cities of Tampa and Temple Terrace. HART provides the following public transportation services: local fixed route and express bus service, in-town trolleys (Green Line & Purple Line), TECO Line Streetcar, vanpools and guaranteed ride home service, Flexible service, and Demand Responsive/Paratransit service. HART provides 23 Park-n-Ride lots throughout the service area for passengers who do not live near bus routes.

HART currently operates 47 routes, which include: 32 local routes, 13 commuter express routes, and two flex service routes. **Figure 5-3** presents the existing HART transit system routes. **Figure 5-4** shows the HART routes which travel within the Hillsborough County sub-area.

HART's bus system operates seven days a week, including holidays. The hours of revenue service operation for the majority of the bus routes is from 5:00 A.M. to 10:00 P.M. on weekdays, with additional service on some routes as early as 4:00 A.M. to as late as 1:15 A.M. Weekend and holidays service for the majority of routes is from 6:00 A.M. to 9:00 P.M. However, a few routes start as early as 5:00 A.M. and run as late as 11:00 P.M. In general, headways for bus operations range from range from 15 to 60 minutes during the A.M. and P.M. peak periods, with the average service frequency of 15 to 30 minutes. Headways during the off-peak periods range from 20 to 120 minutes, with the average service frequency from 30 to 60 minutes. Weekend service frequencies primarily operate on 60 minute headways, with some of the most utilized routes operating at 30 minute or shorter intervals.

According to the National Transit Database (NTD) and the Florida Transit Information System (FTIS), HART had a total of 242 transit vehicles in FY 2009, of which 197 operated in maximum service. HART also has 36 HARTPlus vans, of which 30 operate during normal service levels.

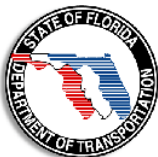
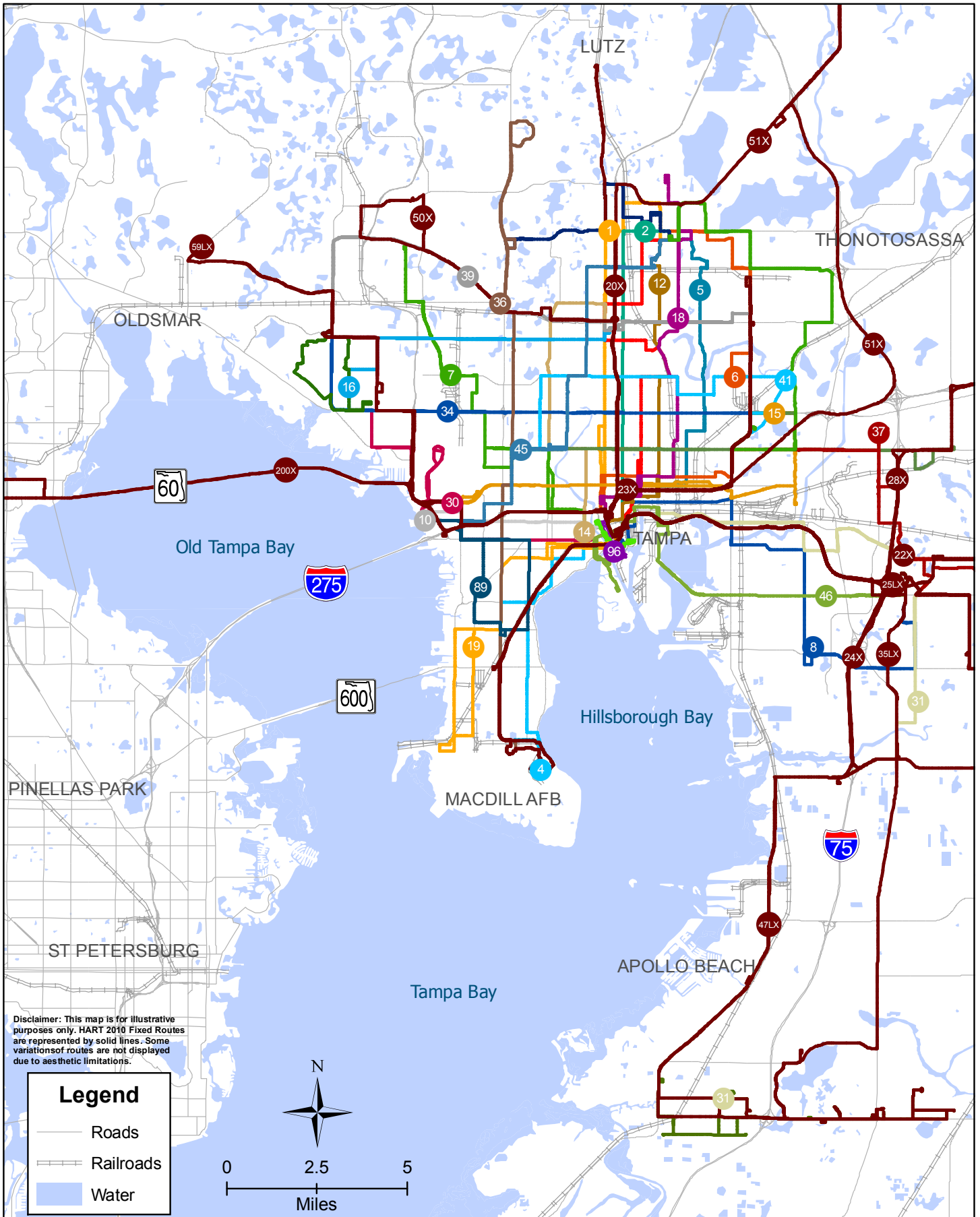
In addition to the HART transit service, Sunshine Line, operated by Hillsborough County Sunshine Line, provides door-to-door transportation and bus passes for elderly, low income and disabled persons, including Hillsborough Healthcare clients, who do not have or cannot afford their own transportation.

5.2.1 Local Routes

HART currently operates 32 local service routes on week days, 20 on Saturdays, and 17 on Sundays. The service span for most of the local routes is approximately 20 hours per day, from 4:00 A.M. to 12:00 A.M. Peak period headways range from 15 minutes to 60 minutes, with an average frequency of 30 minutes. Off-peak headways average from 30 to 60 minutes.

5.2.2 HART Flex Services

HART Flex service is an on-demand, door-to-door, van-based service that serves areas of Hillsborough County currently not served or under served by HART. It provides transit service to areas where street networks and population density are not suited for traditional fixed route service. HART Flex service operates in a defined area, where a vehicle can make a safe curbside stop, or operate along a set route where the vehicle can deviate as time permits. HART currently operates two flex routes, one in Brandon and one in South Hillsborough County.

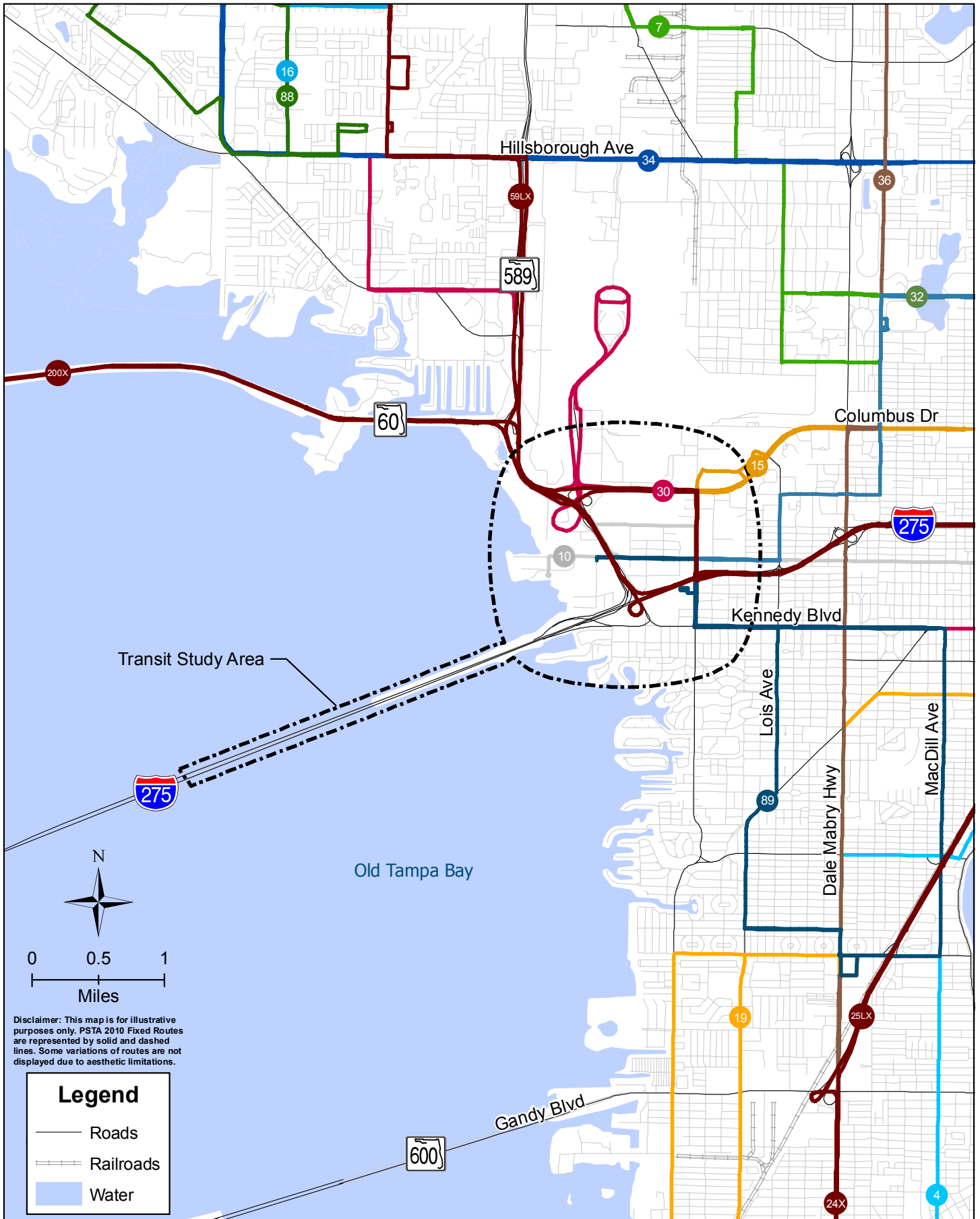


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Regional Transit Corridor Evaluation**
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Pinellas & Hillsborough Counties

**HART
2010 Fixed Routes**

Figure 5-3

Source: HART, Parsons Brinkerhoff



Disclaimer: This map is for illustrative purposes only. PSTA 2010 Fixed Routes are represented by solid and dashed lines. Some variations of routes are not displayed due to aesthetic limitations.

Legend

- Roads
- Railroads
- Water

5.2.3 Express Routes

HART operates a network of commuter express routes and park-n-rides lots in the lower density areas of Hillsborough County. Currently, 13 express routes operate a limited number of peak travel hours with limited stop service. Park-n-Ride lots help extend the HART network range of service by providing passengers a location to drive and park their cars during the day and connect with existing HART routes. Currently, Route 200x provides express service between Hillsborough County and Pinellas County (Clearwater).

5.2.4 Shuttle / Circulator Routes

Currently, HART operates five local routes as circulators.

5.2.5 Demand Response and Paratransit Service

HART provides paratransit services within three-quarter miles of any local route or bus stop for people who are unable to use the fixed route system because of a disability.

5.2.6 Existing Ridership and Performance Indicators

HART attracted over 13.7 million riders on their system in FY 2009. This ridership showed a slight increase (0.6%) from FY 2008, which had over 13.6 million riders. Prior to fiscal year 2009, HART fixed route in paratransit ridership also experienced a period of growth from fiscal year 2004 to fiscal year 2008. **Table 5-2** presents the HART passenger trips as well as other general performance indicators related to the system performance from FY 2004 to FY 2009.

5.3 PLANNED FUTURE TRANSIT SERVICE IN THE CORRIDOR

Several studies are currently in process that are planning for future transit service in, around and/or connecting to the HFB corridor. A brief description of these ongoing transit planning efforts are described below.

5.3.1 TBARTA Master Plan

TBARTA is charged with developing and implementing a Regional Transportation Master Plan (Master Plan) for Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota Counties. The Master Plan was adopted unanimously by the TBARTA Board on May 22, 2009. The TBARTA Act requires that the Master Plan be updated every two years to ensure the vision continues to reflect the region's needs and desires for a balanced transportation system that will improve mobility of passengers and freight. The first update of the Master Plan currently underway and is due by July 1, 2011. The inaugural Master Plan focused on regional transit as a major missing technical component of existing regional plans to that date.

In 2009, the County MPOs around the region and the Citrus County Board of County Commissioners adopted several key elements of the TBARTA Mid-Term (2035) Network into their respective 2035 Cost Affordable Long Range Transportation Plans (LRTPs).

Priority projects are those that were defined by the TBARTA Board to move forward with further detailed study through a partnership with FDOT. The HFB PD&E and Transit Corridor Evaluation, as well as the Pinellas AA are included in the priority projects. **Figure 5-5** illustrates the TBARTA Mid-Term Regional Network.

Table 5-2 HART System Performance Indicators

General Indicators	2004	2005	2006	2007	2008	2009	% Change 2004-2009	% Change 2008-2009
Service Area Population	578,252	578,252	578,252	578,252	821,306	821,306	42.03%	0%
Service Area Size (square miles)	254	254	254	254	243	243	-4.33%	0%
Passenger Trips	10,378,296	11,656,197	12,497,722	12,853,744	13,640,288	13,728,212	32.28%	0.64%
Passenger Miles	50,301,719	54,729,173	61,365,545	63,274,495	69,112,757	65,284,790	29.79%	-5.54%
Vehicle Miles	7,861,389	8,252,669	8,848,781	9,418,217	9,386,924	9,741,168	23.91%	3.77%
Revenue Miles	6,999,242	7,388,835	7,689,245	8,357,632	8,267,212	8,522,367	21.76%	3.09%
Vehicle Hours	608,486	640,480	679,780	709,178	699,933	717,852	17.97%	2.56%
Revenue Hours	565,405	600,772	620,368	662,564	651,504	662,344	17.15%	1.66%
Route Miles	891.7	898.7	902.5	904	972.5	978.16	9.70%	0.58%
Total Operating Expense	\$41,358,112	\$45,918,000	\$50,392,769	\$54,942,429	\$56,069,367	\$63,342,039	53.16%	12.97%
Total Operating Expense (of 1984 \$)	\$21,806,499	\$23,417,368	\$24,896,267	\$26,392,347	\$25,937,681	\$29,406,115	53.16%	12.97%
Total Maintenance Expense	\$9,730,883	\$10,350,055	\$11,957,027	\$12,255,186	\$11,655,195	\$14,129,549	45.20%	21.23%
Total Maintenance Expense (of 1984 \$)	\$5,130,710	\$5,278,345	\$5,907,303	\$5,886,946	\$5,391,691	\$6,559,548	45.20%	21.23%
Total Capital Expense	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Vehicles Available for Maximum Service	216	222	231	239	243	242	12.04%	-0.41%
Vehicles Operated in Maximum Service	182	183	197	202	195	197	8.24%	1.03%
Spare Ratio (%)	18.68	21.31	17.26	18.32	24.62	22.84	22.28%	-7.20%
Total Gallons Consumed	1,966,461	2,114,957	2,023,153	2,168,358	2,133,990	2,165,082	10.10%	1.46%
Total Energy Consumed (KW-Hours)	634,200	621,600	644,000	623,000	686,000	613,349	-3.29%	-10.59%

Source: FDOT / Florida Transit Information System (www.ftis.org)

5.3.2 Pinellas Alternatives Analysis

The Pinellas AA study is an ongoing study that will identify transit options to improve Pinellas County's quality of life. The Pinellas AA study area as illustrated in **Figure 3-8**. The study is examining fixed-guideway transit service connecting major residential, employment, and activity centers in Pinellas County to Hillsborough County. The evaluation of fixed-guideway options in the study are designed to connect people and places and offer transportation options that are safe, sustainable, affordable, and efficient. The purpose of the Pinellas AA is to:

- Encourage economic development and community revitalization
- Engage the public in an open dialogue about transit needs and desires
- Promote the sustainability of the community
- Connect to assets in the Tampa Bay Region and the Central Florida Super Region
- Provide Mobility Options for Future Riders

A key objective of the HFB study is to provide a link for the Pinellas AA system to Hillsborough County. This linkage would run from Hillsborough County's proposed Westshore station (service connection to downtown Tampa) to Pinellas County's proposed Gateway station. These stations would not serve as termini, but would allow uninterrupted transit movements from the St. Petersburg and Clearwater areas across the Howard Frankland Bridge corridor to and through Tampa's Central Business District (and vice versa).

5.3.3 HART Alternatives Analysis

HART is currently conducting an AA to evaluate a range of alternative ways to address transportation problems and needs in a study area that contains two corridors that converge on downtown Tampa. The two corridors include the Northwest Corridor that extends about 10 miles from downtown Tampa to the Pasco County Line and the West Corridor, which extends about five miles from downtown Tampa to the Westshore Business District. The HART AA study area as illustrated in **Figure 3-9**.

The purpose of AA was to identify an alternative that will provide the study area with enhanced transportation choices, additional transportation capacity, improved accessibility for residents and employees, higher transit mode share, support economic and community development, improved system efficiency, and intermodal connectivity.

In February 2011, the HART AA Study Summary of Findings and Recommendations Executive Summary identified a locally preferred alternative (LPA) for the Northeast and West Corridors. The recommended LPA for the Northeast Corridor is a light rail service between Downtown Tampa and New Tampa. The LPA would serve New Tampa, Tampa Palms, University of South Florida and surrounding medical facilities, East Tampa, and Downtown Tampa. The light rail alignment is approximately 17.5 miles in length via Fowler Avenue. The recommended LPA for the West Corridor is a light rail service between Downtown Tampa, the West Shore Business District and Tampa International Airport. The system would serve the West Shore Business District, West Tampa, and Downtown Tampa. The light rail alignment is approximately nine miles in length via the Interstate and Trask Street.

5.3.4 Westshore Intermodal Center

A partnership among FDOT, the Hillsborough MPO, TBARTA, and the Westshore Alliance is currently developing the Westshore Intermodal Study and Strategic Transportation Plan. The purpose of this study is to identify and develop an intermodal site in the Westshore area. The study boundaries are

Hillsborough Avenue to the north, Himes Avenue to the east, Kennedy Boulevard to the south, and Old Tampa Bay to the west. A key objective of the HFB study is to connect with the Westshore intermodal station that is identified in this study.

APPENDIX A

Aerial Photography

Conceptual Design Plans

Northbound Howard Frankland Bridge Replacement

PD&E Study

I-275/SR 93

From North of 4th Street North
to South of Kennedy Boulevard

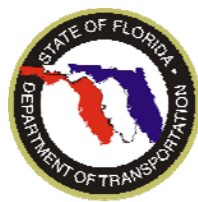
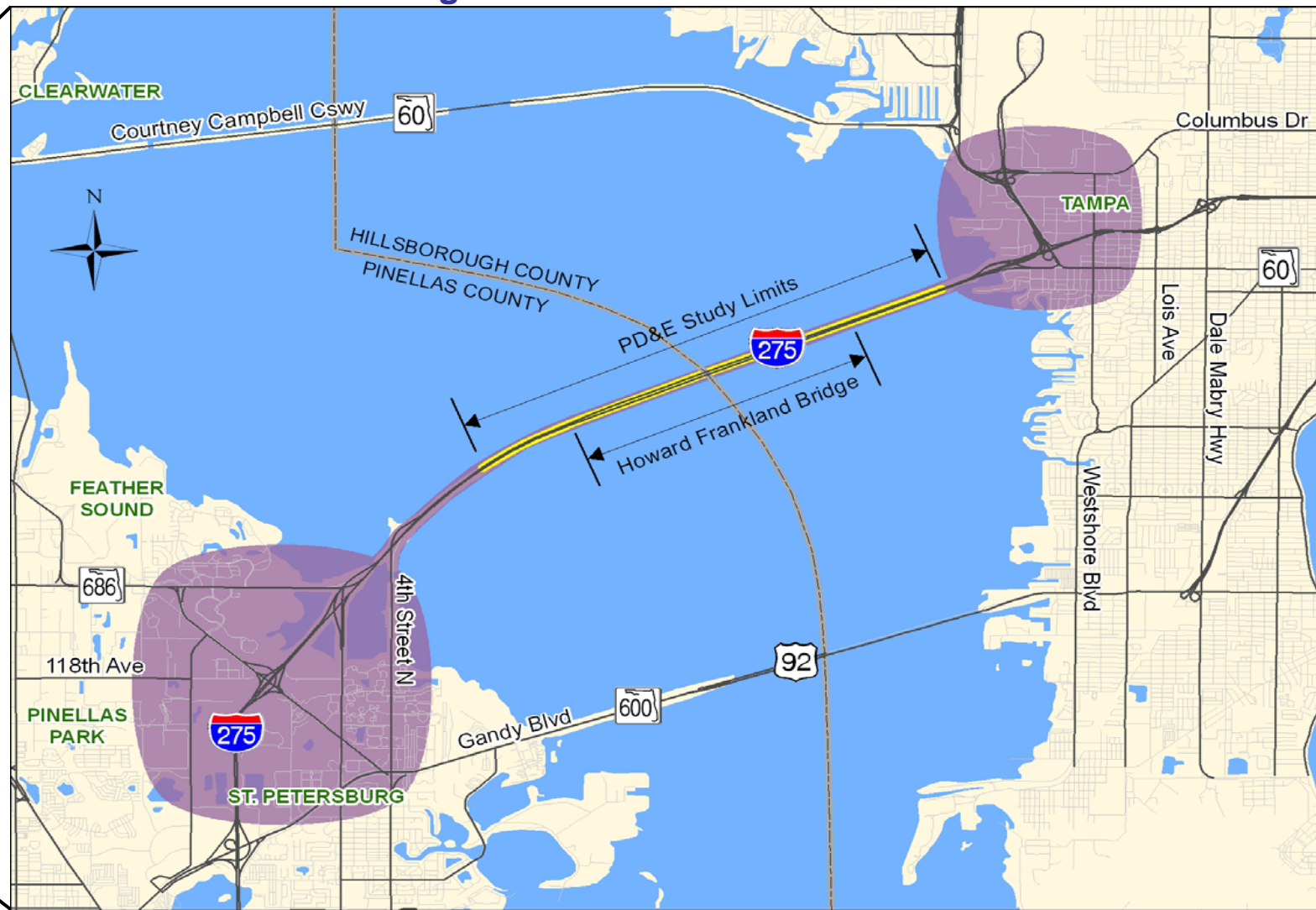
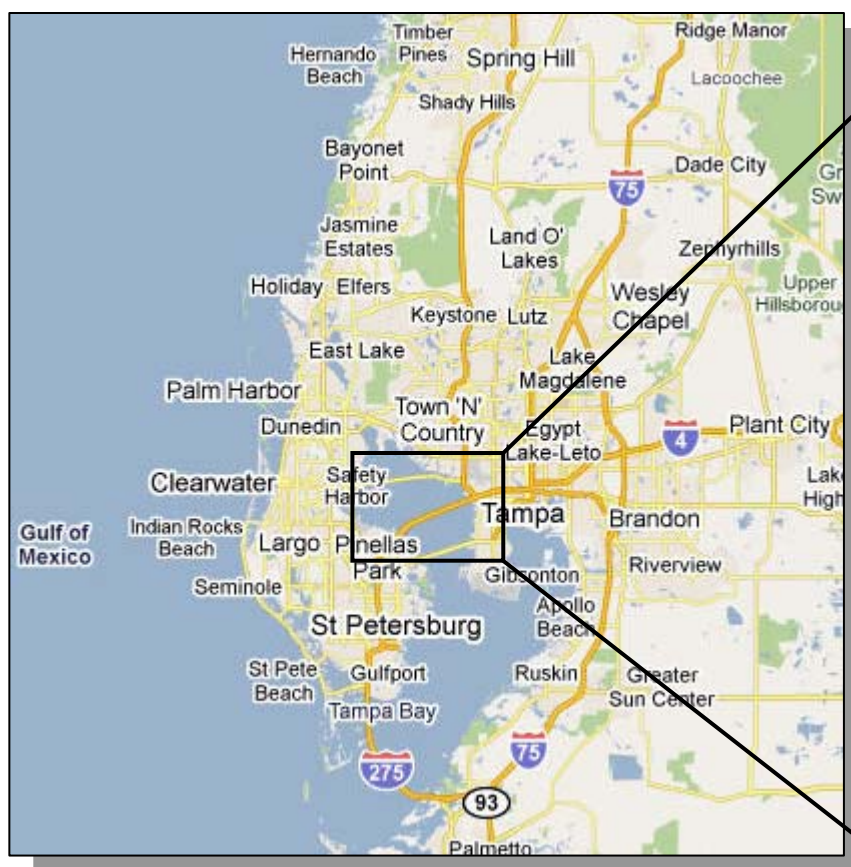
WPI Segment No.: 422799-1

Pinellas and Hillsborough Counties



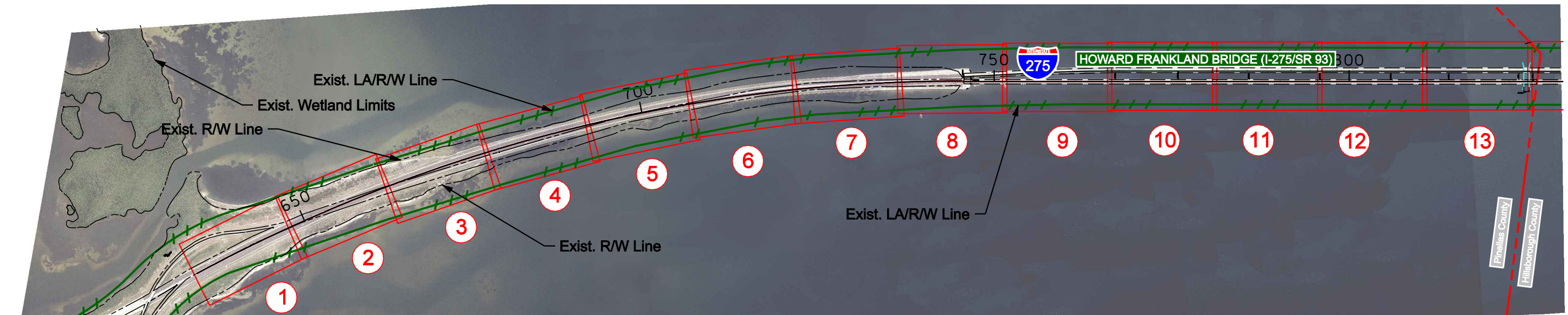
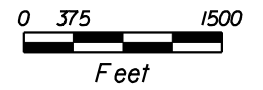
Project Location

INDEX OF CONCEPTUAL PLANS	
SHEET NO.	SHEET DESCRIPTION
I	Base Map Layout
1 thru 25	Base Maps



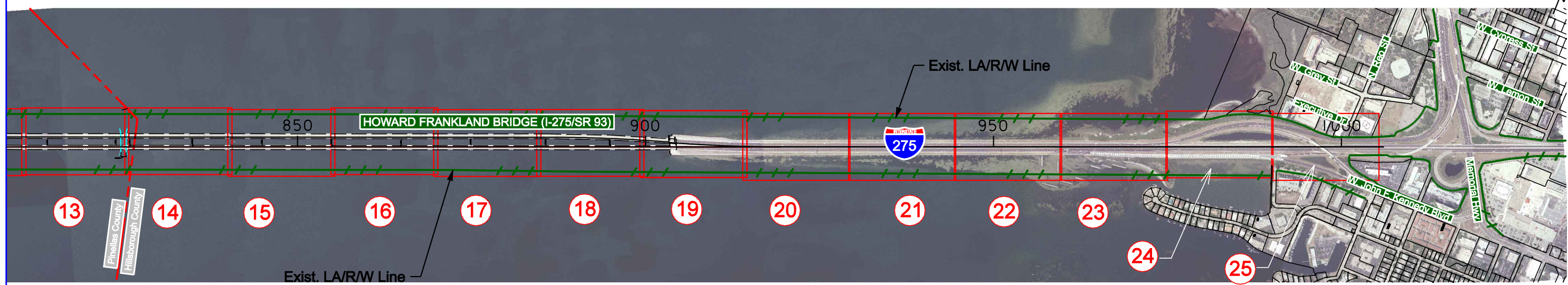
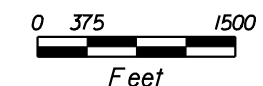
Prepared For:
Florida Department of Transportation
District Seven

FDOT Project Manager: Kirk Bogen, P.E.



Curve BLS1
 P.I. STA. 690+44.45
 $\Delta = 28^\circ 17' 40''$ (RT)
 $D = 00^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C. STA. 633+10.18
 P.T. STA. 745+44.70

DATE OF AERIAL: JUNE 2011



X - Concept Plan Sheet Number

DATE OF AERIAL: JUNE 2011

REVISIONS				American Consulting Engineers of Florida, LLC. 2818 Cypress Ridge Blvd, Suite 200 Wesley Chapel, Florida 33544 Phone: (813) 435-2600 Fax: (813) 435-2601 Certificate of Authorization No. 9302 Jeffrey S. Novotny, P.E. No. 51083	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/SR. 93) PD&E STUDY	SHEET NO. I
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY		
					I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04	



LEGEND	EXISTING RIGHT OF WAY	 Feet DATE OF AERIAL: JUNE 2011	American Consulting Engineers of Florida, LLC. 2818 Cypress Ridge Blvd, Suite 200 Wesley Chapel, Florida 33544 Phone: (813) 435-2600 Fax: (813) 435-2601 Certificate of Authorization No. 9302 Jeffrey S. Novotny, P.E. No. 51083	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/S.R. 93) PD&E STUDY BASE MAPS	SHEET NO. 1
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID					
I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04					

Curve BLS1
 P.I. STA. 690+44.45
 $\Delta = 28^\circ 17' 40''$ (RT)
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 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C. STA. 633+10.18
 P.T. STA. 745+44.70

EXIT RAMP TO 4TH STREET NORTH

650



655

660

800'

OLD TAMPA BAY

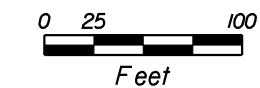
OLD TAMPA BAY

Exlst LA R/W Line

Exlst LA R/W Line

LEGEND

- EXISTING RIGHT OF WAY
- EXISTING LIMITED ACCESS RIGHT OF WAY



DATE OF AERIAL: JUNE 2011

American Consulting Engineers of Florida, LLC.
 2818 Cypress Ridge Blvd, Suite 200
 Wesley Chapel, Florida 33544
 Phone: (813) 435-2600 Fax: (813) 435-2601
 Certificate of Authorization No. 9302
 Jeffrey S. Novotny, P.E. No. 51083

STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
 (I-275/SR. 93) PD&E STUDY

BASE MAPS

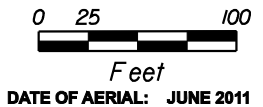
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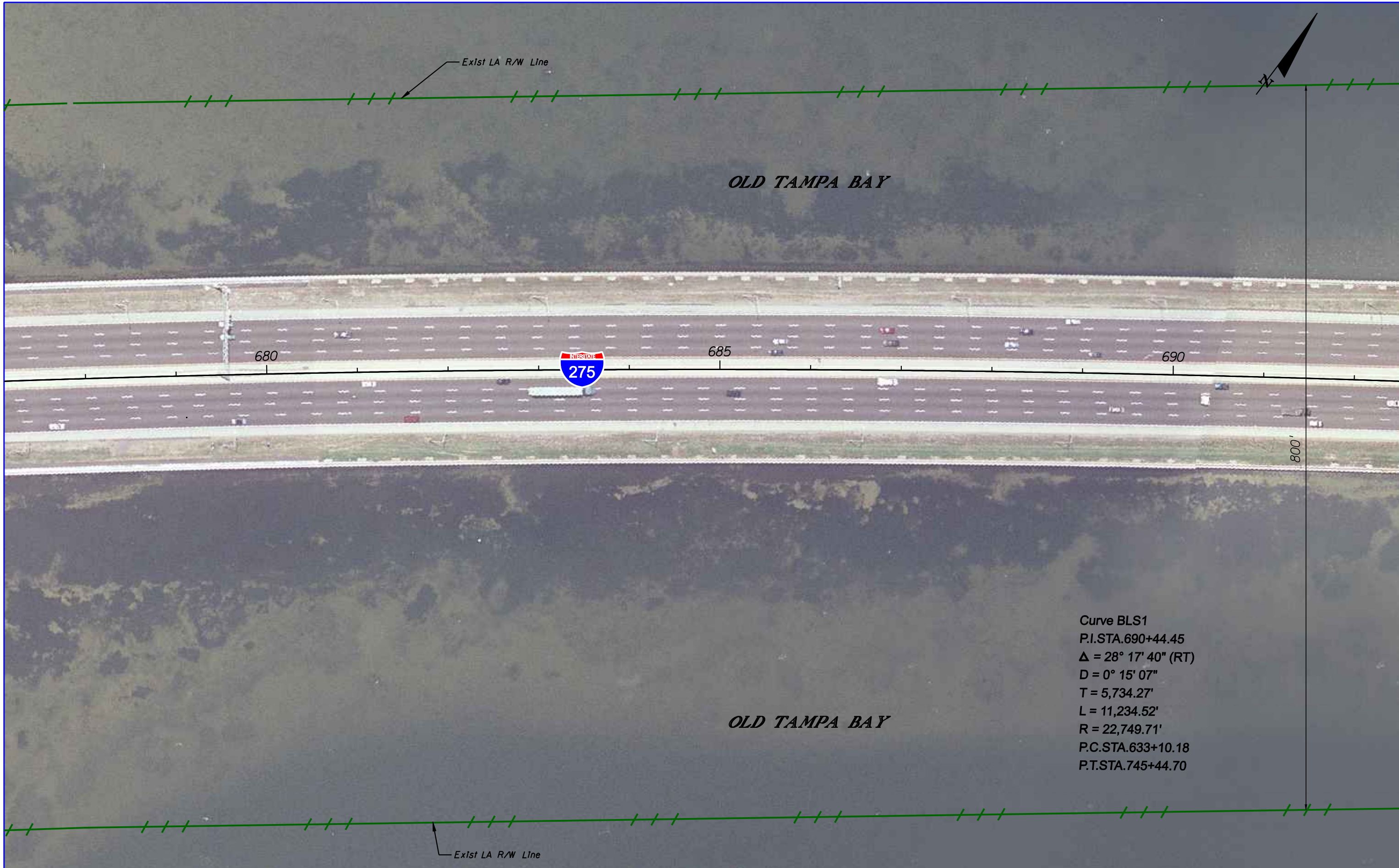
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Curve BLS1
 P.I.STA.690+44.45
 $\Delta = 28^\circ 17' 40''$ (RT)
 $D = 0^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C.STA.633+10.18
 P.T.STA.745+44.70

LEGEND	EXISTING RIGHT OF WAY	American Consulting Engineers of Florida, LLC. 2818 Cypress Ridge Blvd, Suite 200 Wesley Chapel, Florida 33544 Phone: (813) 435-2600 Fax: (813) 435-2601 Certificate of Authorization No. 9302 Jeffrey S. Novotny, P.E. No. 51083	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/S.R. 93) PD&E STUDY BASE MAPS	SHEET NO. 3	
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID					
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04					







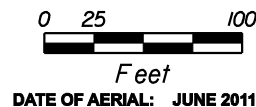
Curve BLS1
 P.I.STA.690+44.45
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 $D = 0^\circ 15' 07''$
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 P.T.STA.745+44.70

LEGEND	---	EXISTING RIGHT OF WAY	American Consulting Engineers of Florida, LLC. 2818 Cypress Ridge Blvd, Suite 200 Wesley Chapel, Florida 33544 Phone: (813) 435-2600 Fax: (813) 435-2601 Certificate of Authorization No. 9302 Jeffrey S. Novotny, P.E. No. 51083	STATE OF FLORIDA		NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/S.R. 93) PD&E STUDY	SHEET NO. 4					
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID										
I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04										



Curve BLS1
 P.I.STA.690+44.45
 $\Delta = 28^\circ 17' 40''$ (RT)
 $D = 0^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
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 P.C.STA.633+10.18
 P.T.STA.745+44.70

LEGEND	 EXISTING RIGHT OF WAY
	 EXISTING LIMITED ACCESS RIGHT OF WAY

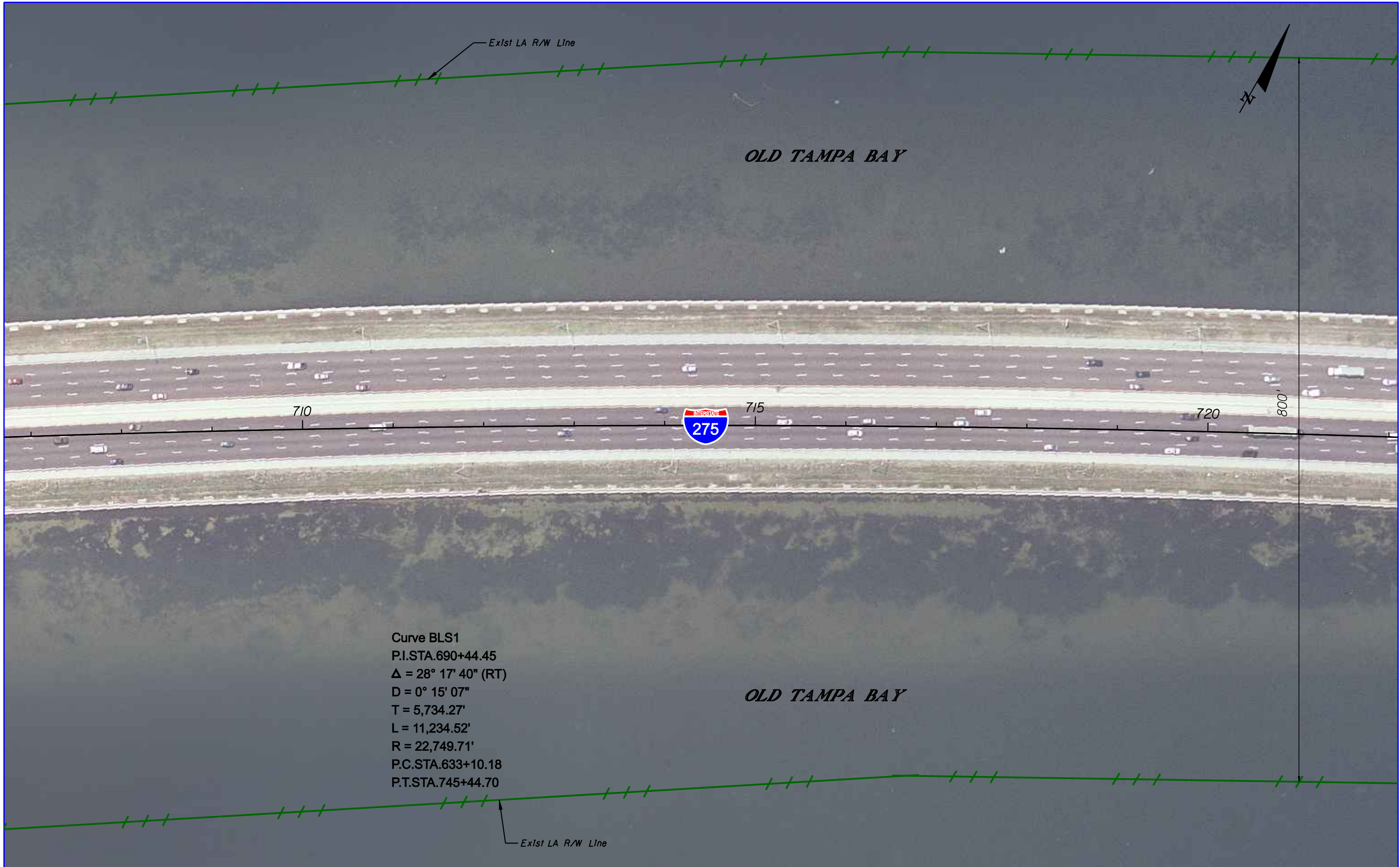


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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

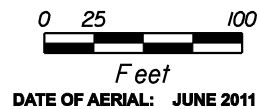
NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/S.R. 93) PD&E STUDY
BASE MAPS

SHEET NO. 5



Curve BLS1
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 $D = 0^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C.STA.633+10.18
 P.T.STA.745+44.70

LEGEND	EXISTING RIGHT OF WAY
	EXISTING LIMITED ACCESS RIGHT OF WAY



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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

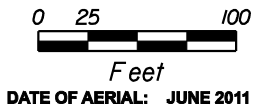
NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT (I-275/S.R. 93) PD&E STUDY
BASE MAPS

SHEET NO. 6



Curve BLS1
 P.I.STA.690+44.45
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 $D = 0^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C.STA.633+10.18
 P.T.STA.745+44.70

LEGEND		EXISTING RIGHT OF WAY
		EXISTING LIMITED ACCESS RIGHT OF WAY

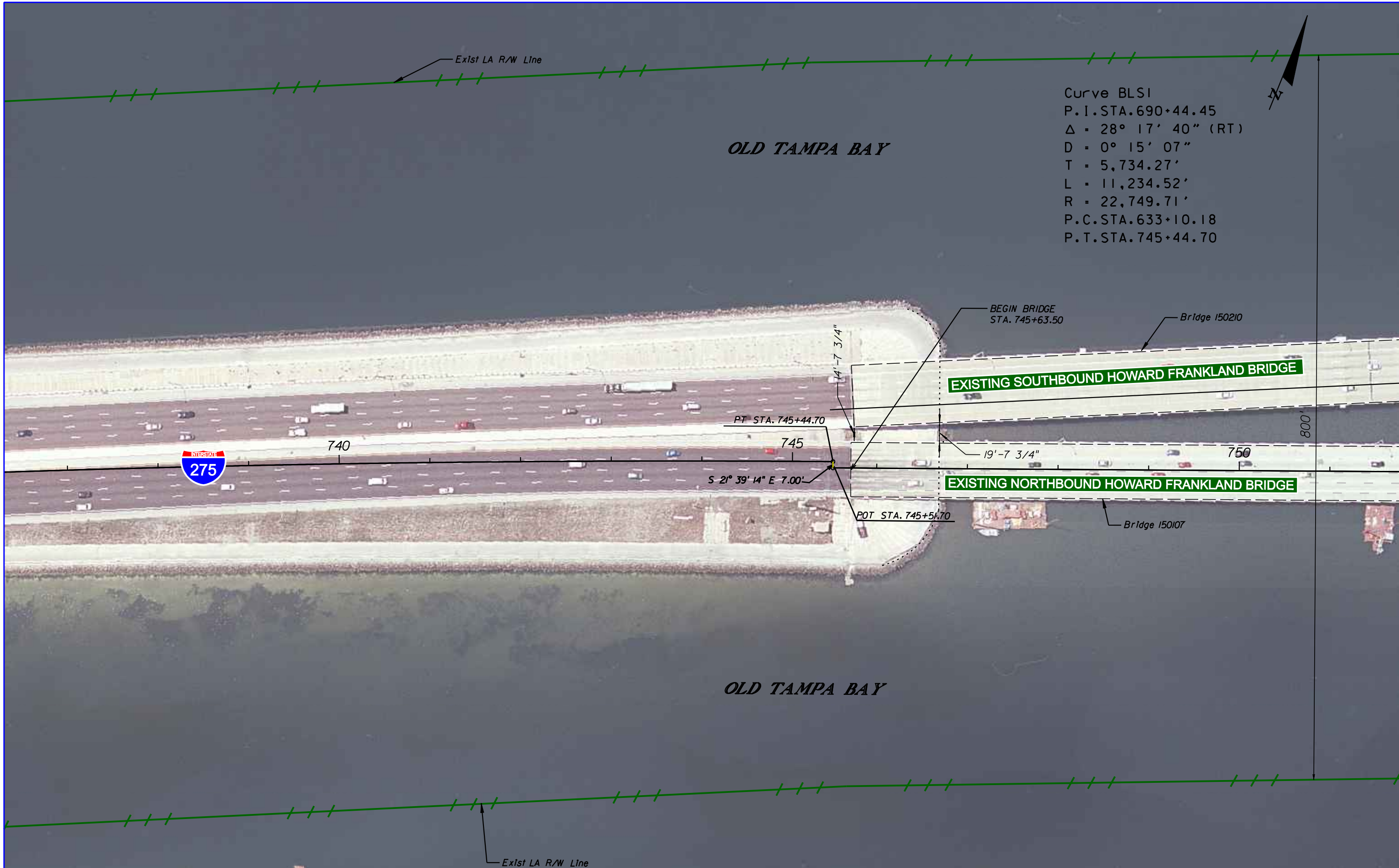


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1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

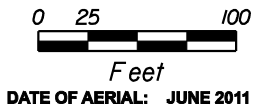
NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
 (I-275/S.R. 93) PD&E STUDY
BASE MAPS

SHEET NO.
7



Curve BLS1
 P.I. STA. 690+44.45
 $\Delta = 28^\circ 17' 40''$ (RT)
 $D = 0^\circ 15' 07''$
 $T = 5,734.27'$
 $L = 11,234.52'$
 $R = 22,749.71'$
 P.C. STA. 633+10.18
 P.T. STA. 745+44.70

LEGEND	EXISTING RIGHT OF WAY
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NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
 (I-275/S.R. 93) PD&E STUDY
BASE MAPS

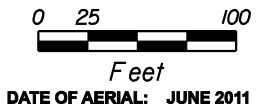
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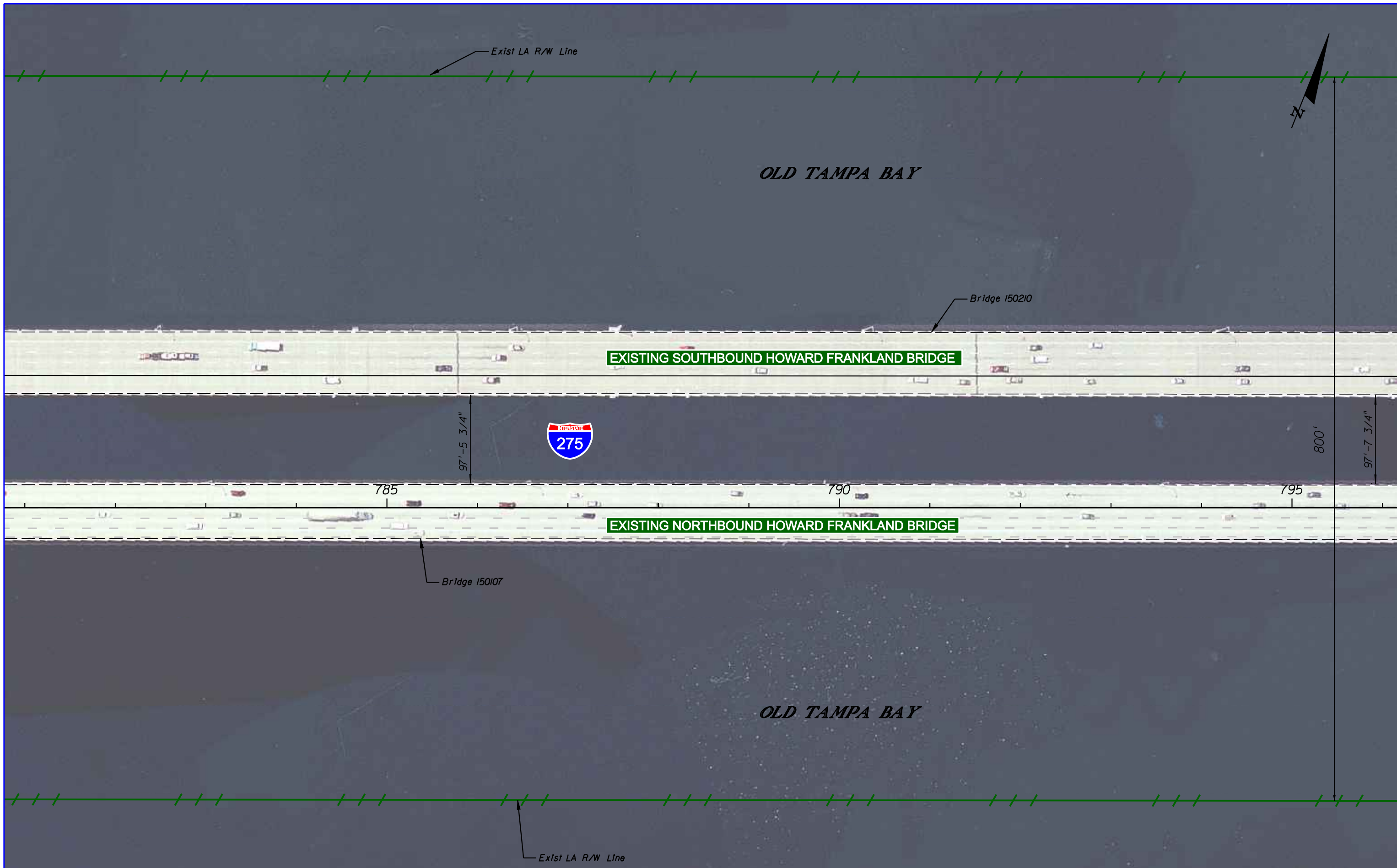


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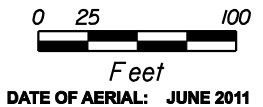


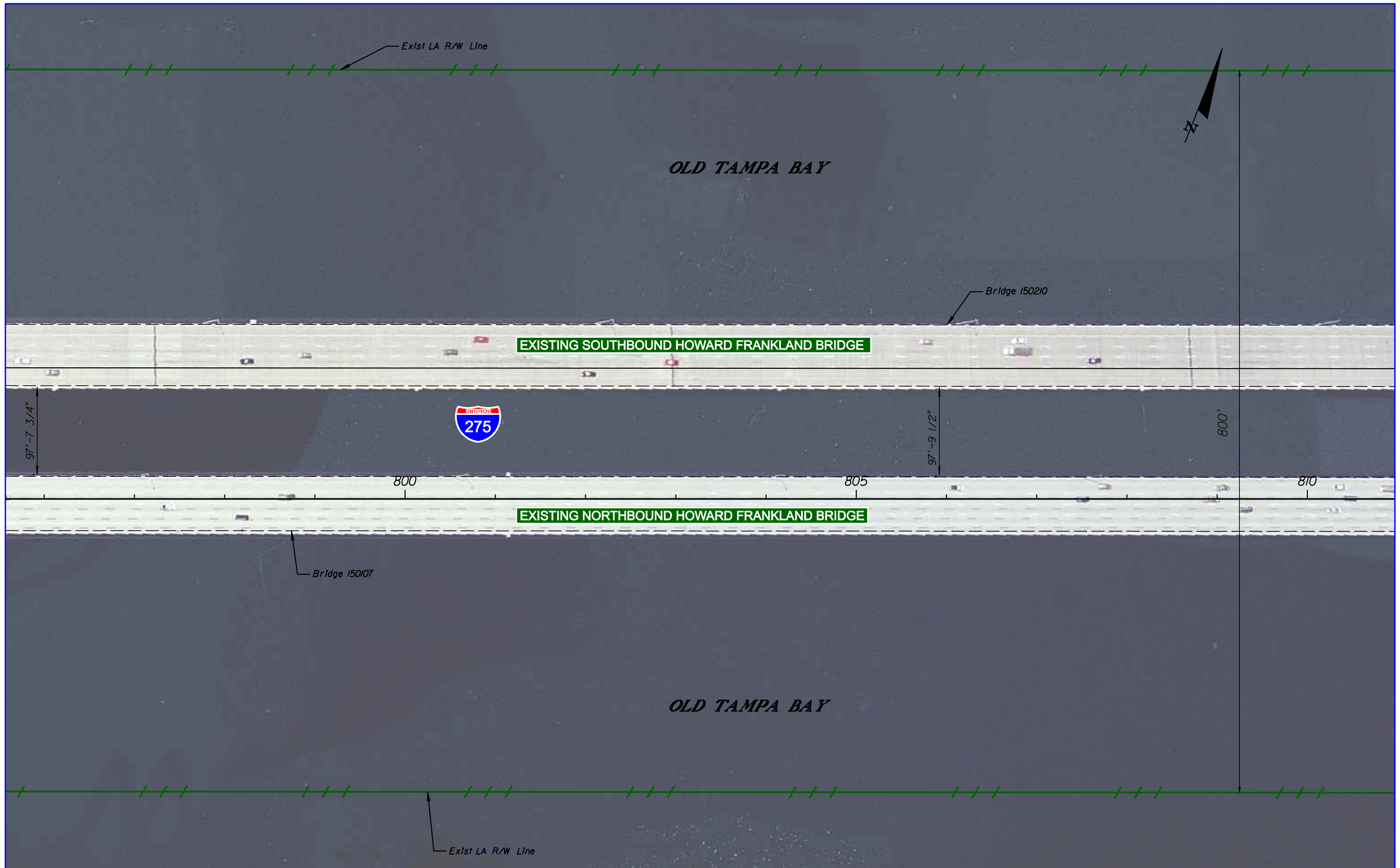
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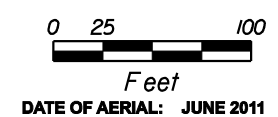


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ROAD NO.	COUNTY	FINANCIAL PROJECT ID									
I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04									





LEGEND		EXISTING RIGHT OF WAY
		EXISTING LIMITED ACCESS RIGHT OF WAY



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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
 (I-275/S.R. 93) PD&E STUDY

BASE MAPS

SHEET NO.
12

Exist LA R/W Line

OLD TAMPA BAY



Bridge 150210

Exist. Fender

EXISTING SOUTHBOUND HOWARD FRANKLAND BRIDGE

97'-8"



815

820

800'

97'-11"

825

EXISTING NORTHBOUND HOWARD FRANKLAND BRIDGE

Bridge 150107

75'-0" Min.

OLD TAMPA BAY

Exist LA R/W Line

LEGEND

- EXISTING RIGHT OF WAY
- EXISTING LIMITED ACCESS RIGHT OF WAY

0 25 100



Feet

DATE OF AERIAL: JUNE 2011

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STATE OF FLORIDA
 DEPARTMENT OF TRANSPORTATION

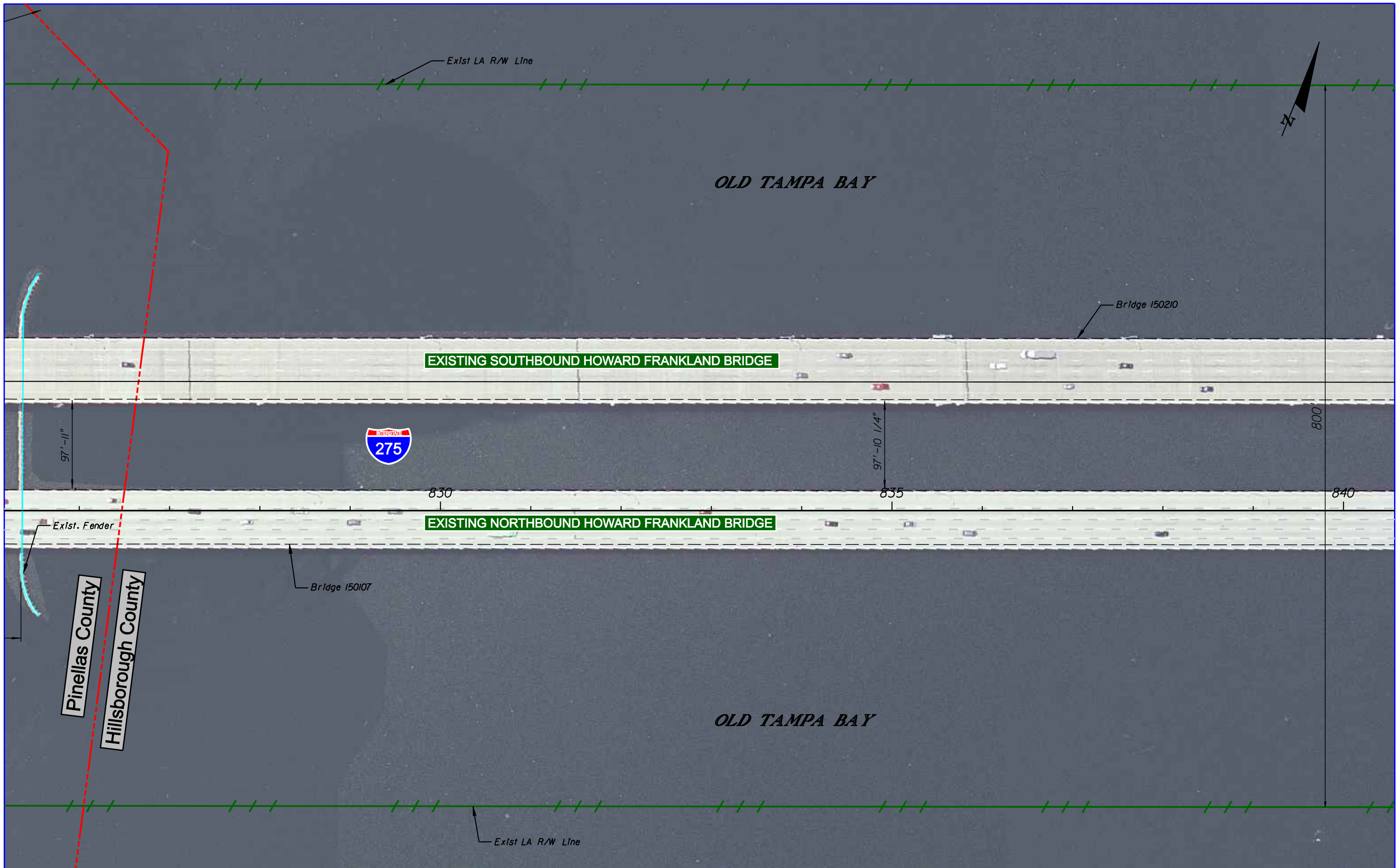
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04

NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
 (I-275/S.R. 93) PD&E STUDY

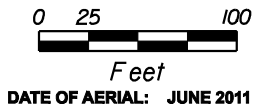
BASE MAPS

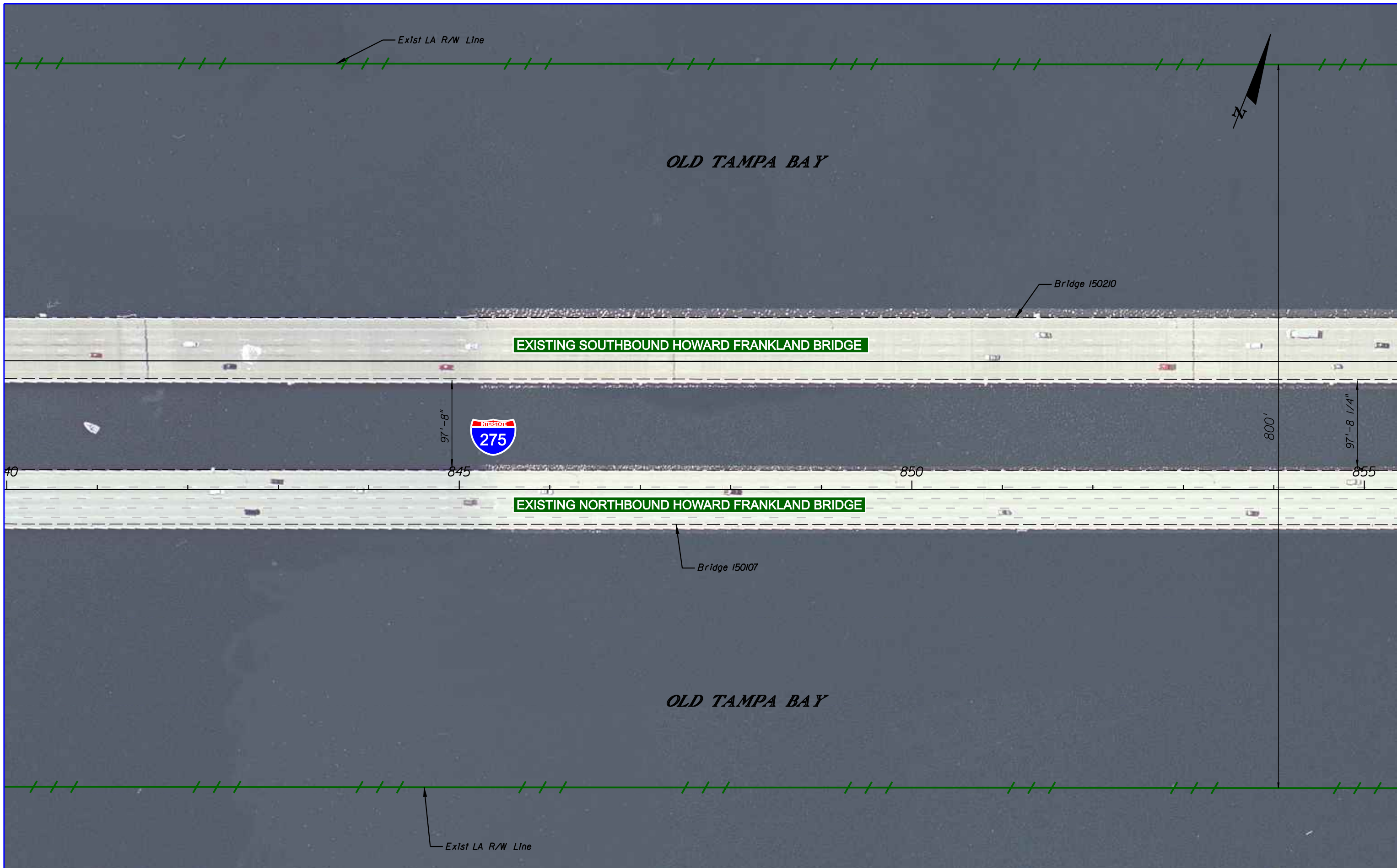
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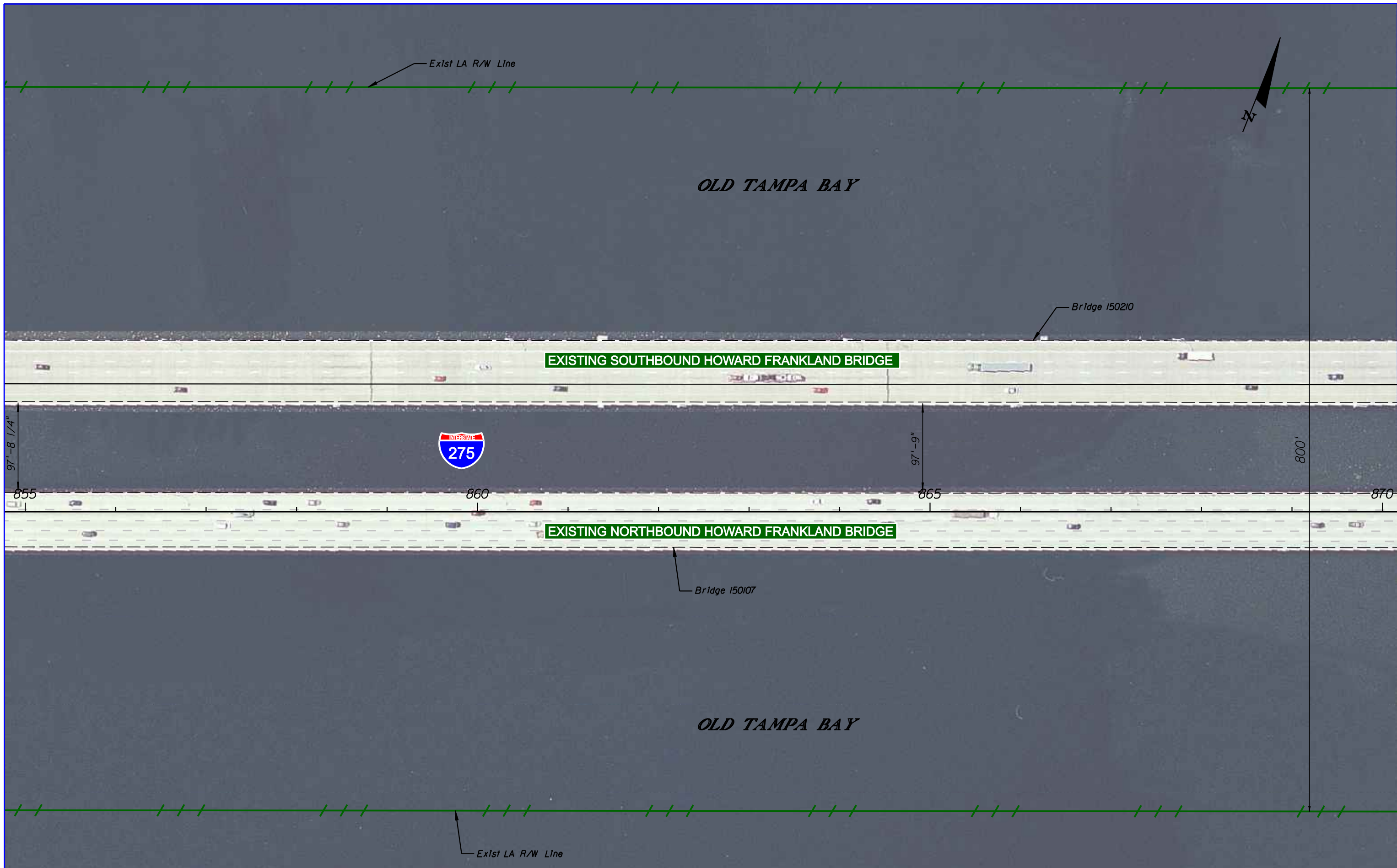


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ROAD NO.	COUNTY	FINANCIAL PROJECT ID							
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04							

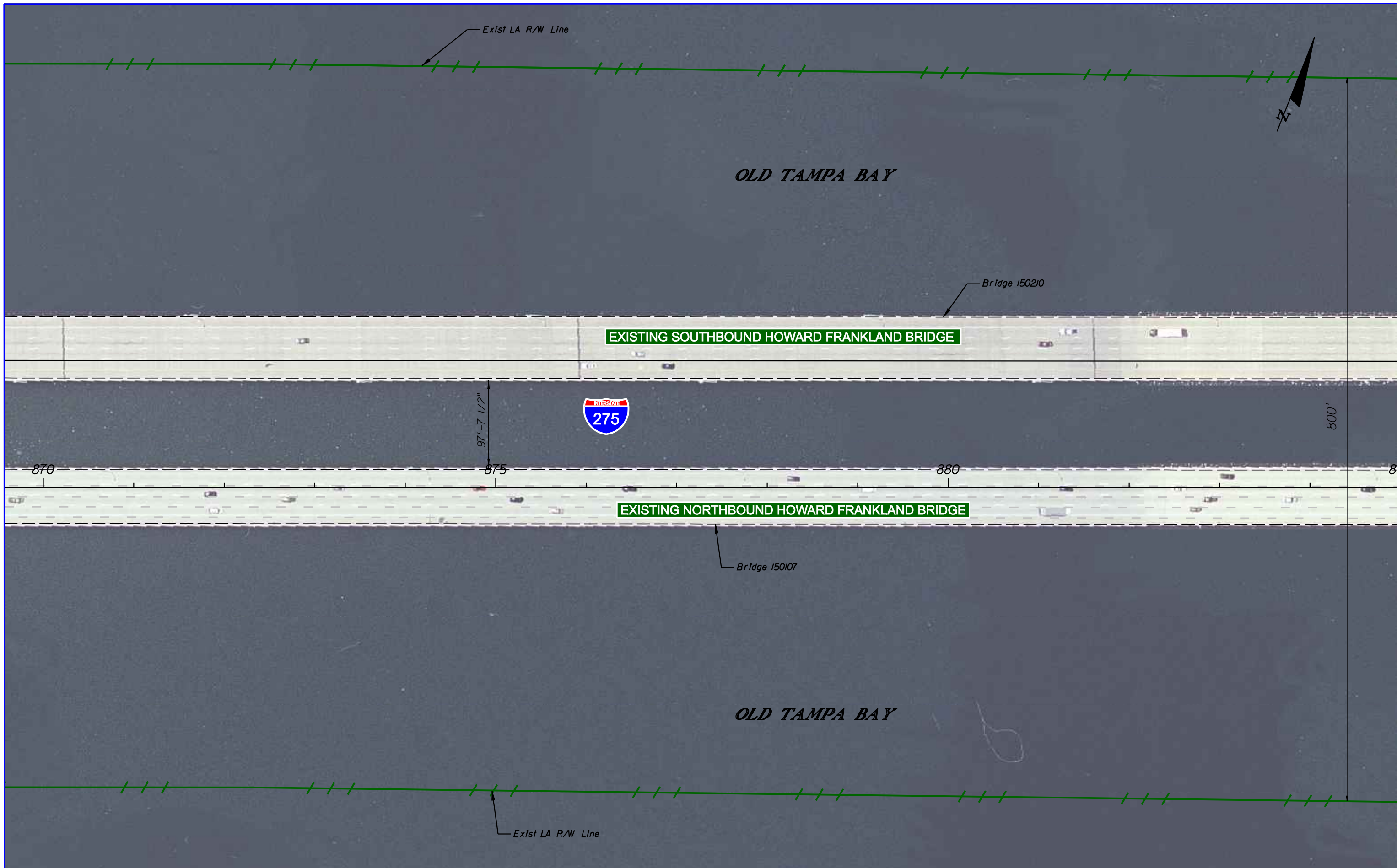




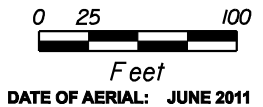
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I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04						

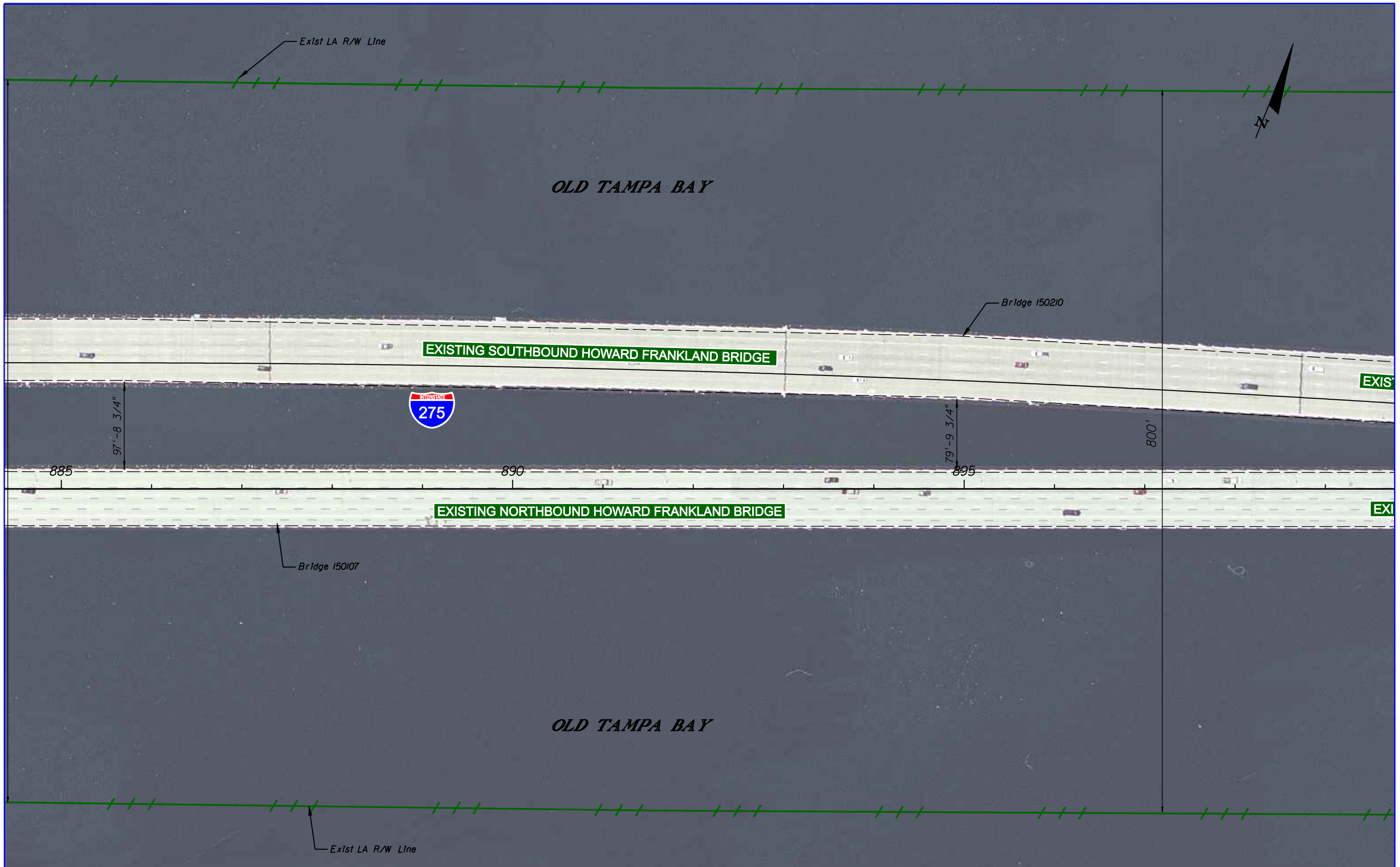


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	EXISTING LIMITED ACCESS RIGHT OF WAY			<table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>I-275</td> <td>PINELLAS & HILLSBOROUGH</td> <td>422799-1-12-04</td> </tr> </tbody> </table>	ROAD NO.		COUNTY	FINANCIAL PROJECT ID
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I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04						



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	EXISTING LIMITED ACCESS RIGHT OF WAY		ROAD NO. COUNTY FINANCIAL PROJECT ID I-275 PINELLAS & HILLSBOROUGH 422799-1-12-04	17		





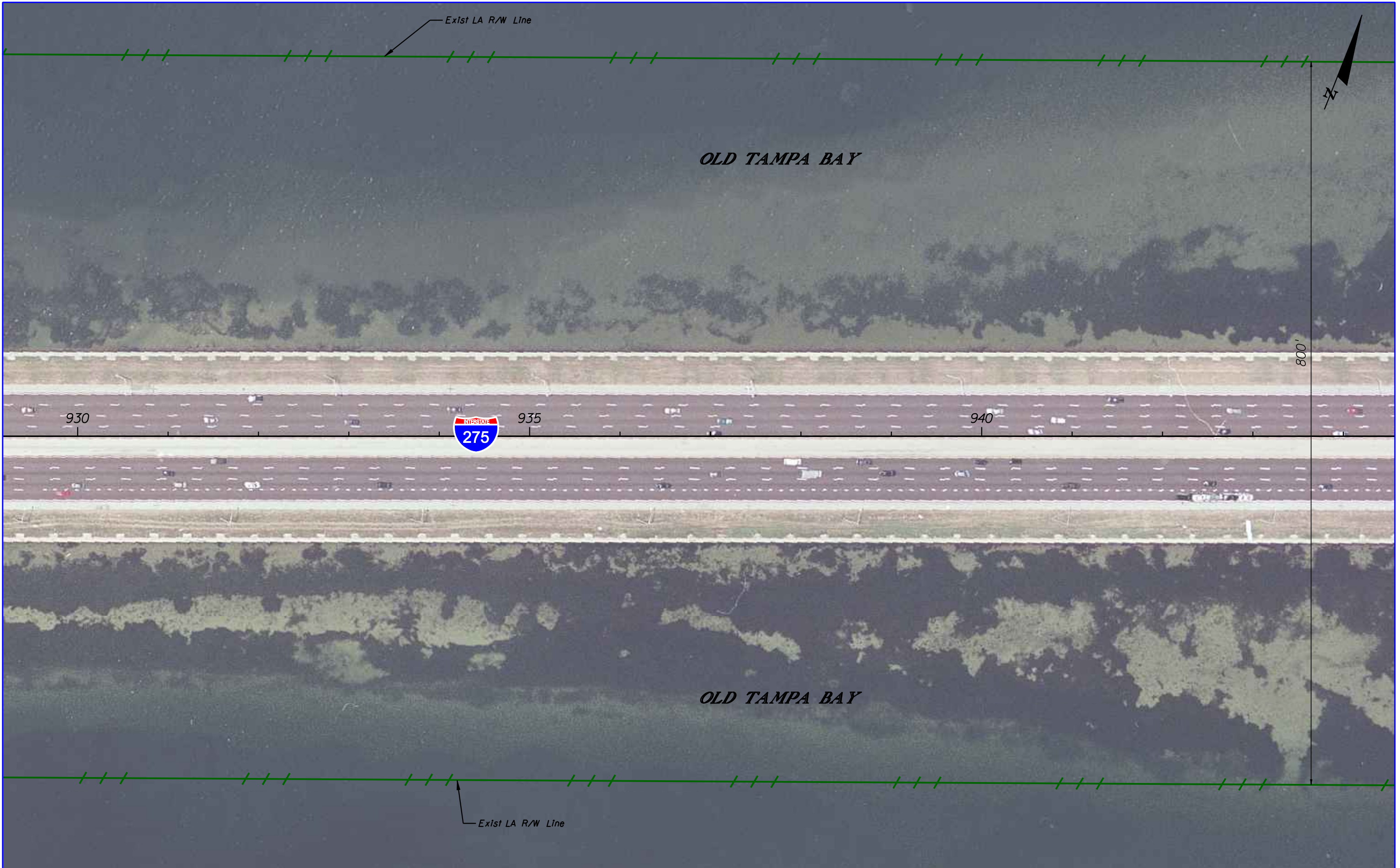
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID						
1-275	PINELLAS & HILLSBOROUGH	422799-1-12-04						



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ROAD NO.	COUNTY	FINANCIAL PROJECT ID						
I-275	PINELLAS & HILLSBOROUGH	422799-1-12-04						



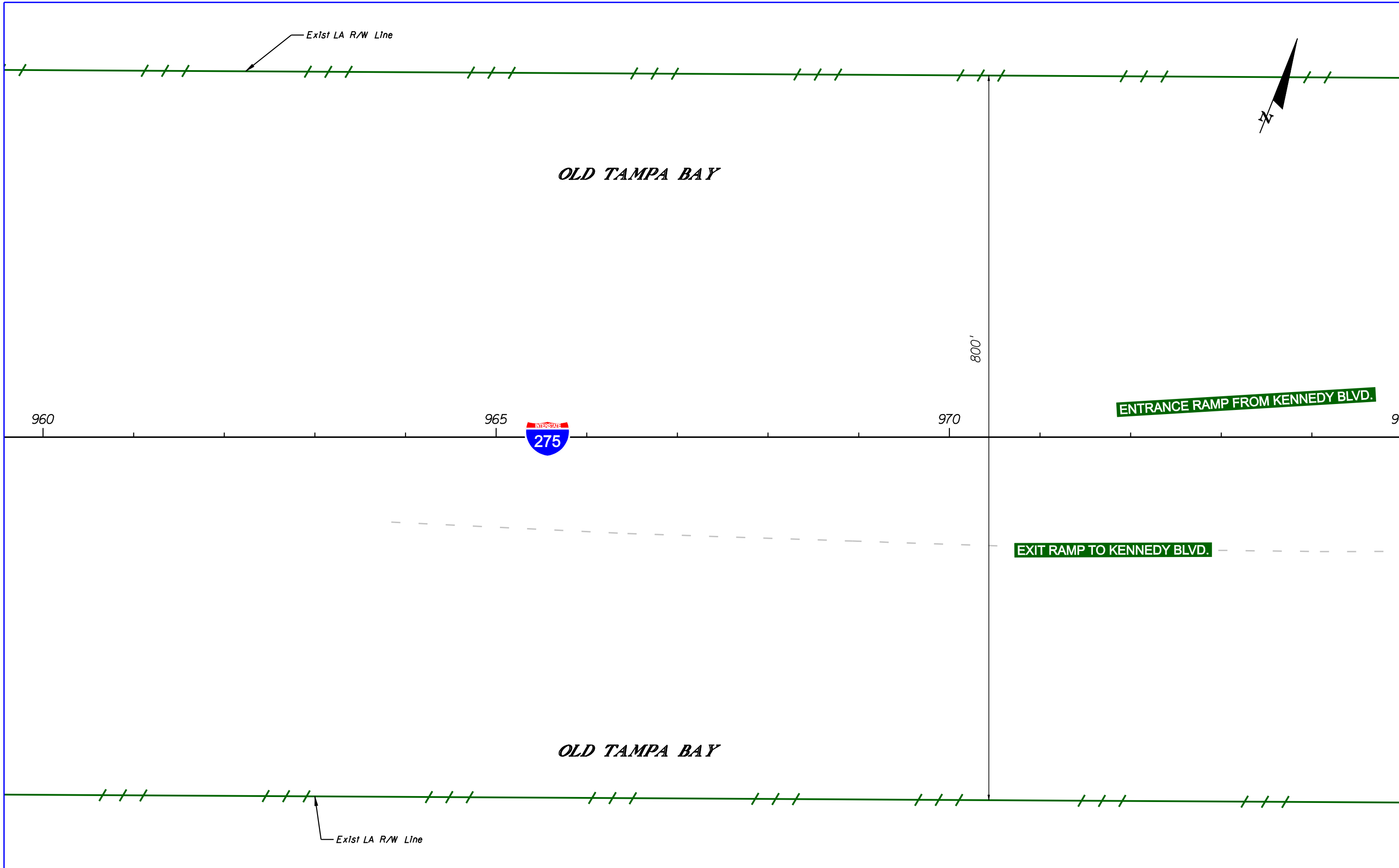
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OLD TAMPA BAY

Exist LA R/W Line

ENTRANCE RAMP FROM KENNEDY BLVD. / MEMORAL HWY/SR 60

800'

975

980



985

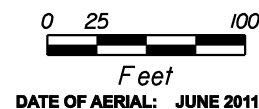
990

EXIT RAMP TO KENNEDY BLVD.

OLD TAMPA BAY

Exist LA R/W Line

LEGEND		EXISTING RIGHT OF WAY
		EXISTING LIMITED ACCESS RIGHT OF WAY



American Consulting Engineers of Florida, LLC.
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NORTHBOUND HOWARD FRANKLAND BRIDGE REPLACEMENT
(I-275/S.R. 93) PD&E STUDY
BASE MAPS

SHEET NO.
24



LEGEND

- EXISTING RIGHT OF WAY
- EXISTING LIMITED ACCESS RIGHT OF WAY

0 25 100
Feet
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BASE MAPS

SHEET NO.
25