TAMPA BAY EXPRESS

A NEW CHOICE FOR A BETTER COMMUTE

FDOT

I-275 (STATE ROAD 93) EXPRESS LANES

PROJECT DEVELOPMENT & ENVIRONMENT STUDY

From north of Dr. Martin Luther King, Jr. Boulevard (SR 574) to north of Bearss Avenue (SR 678/CR 582)

ETDM Number: 13854

Work Program Item Segment Number: 431821-1

HILLSBOROUGH COUNTY, FLORIDA

DRAFT PRELIMINARY ENGINEERING REPORT

Prepared for:

Florida Department of Transportation
District Seven

May 2016

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This preliminary engineering report contains detailed engineering information that fulfills the purpose and need for the I-275 (State Road (SR) 93) PD&E Study from north of Dr. Martin Luther King, Jr. Boulevard (SR 574) to north of Bearss Avenue (SR 678/County Road 582) in Hillsborough County, Florida.

This project evaluates capacity and operational improvements along Interstate 275 including the addition of express toll lanes in each direction.

Florida Department of Transportation
District Seven
Tampa, Florida

Prepared By:
Parsons Brinckerhoff, Inc.
Tampa, Florida

May 2016

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FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN

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Florida PE #50586

Parsons Brinckerhoff, Inc.

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) Study to evaluate the need for capacity and operational improvements along 9.57 miles of Interstate 275 (I-275)/State Road 93 (SR 93) from north of Dr. Martin Luther King, Jr. Boulevard/SR 574 (MLK Boulevard) to north of Bearss Avenue (SR 678/County Road 582) in Hillsborough County, Florida.

The objective of the PD&E Study is to assist FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, location, and conceptual design of the I-275 improvements to safely and efficiently accommodate future travel demand. This PD&E Study documents the need for the proposed improvements and the steps taken to develop and evaluate improvements including typical sections, special designation of travel lanes, and interchange enhancement alternatives. The anticipated social, physical, and natural environmental effects and costs of these improvements are identified. A matrix compares the alternatives on a variety of factors to identify the alternative that best balances the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

The PD&E Study satisfies applicable requirements, including the National Environmental Policy Act, to qualify this project for federal-aid funding of future development phases (design and construction). The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process. This project was designated as ETDM Project #13854. An ETDM Programming Screen Summary Report was republished on February 7, 2014, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. Based on ETAT comments, FHWA determined the Class of Action for this project as a Type 2 Categorical Exclusion.

This Preliminary Engineering Report (PER) is a component of the PD&E Study. This report documents the technical engineering information required to support the decisions made regarding the project alternatives. The PER was prepared in accordance with FDOT's *PD&E Manual*, Topic No. 650-000-001, Part 1, Chapter 4 and includes information to be used in the design phase of this project.

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AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADMS	Arterial Dynamic Message System
AN	Advance Notification
APE	Area of Potential Effect
BGEPA	Bald and Golden Eagle Protection Act
BT	Buried Telephone
BTL	Bus in Toll Lanes
CARS	Crash Analysis Reporting System
CCC	Chairs Coordinating Committee
CCTV	Closed Circuit Television
CFA	Cone Foraging Area
CI WW	Cast Iron Wastewater
CO	Carbon Monoxide
ConOps	Concept of Operations and Maintenance
CR	County Road
CRA	Community Redevelopment Area
CRAS	Cultural Resource Assessment Survey
CSER	Contamination Screening Evaluation Report
CSXT	CSX Transportation
DDHV	Directional Design Hour Volumes
DHV	Design Hour Volume
DHW	Design High Water
DMS	Dynamic Message Sign
EL	Express Lane
ESA	Endangered species Act
EST	Environmental Screening Tool
ETAT	Environmental Technical Advisory Team
ETDM	Efficient Transportation Decision Making
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FOC	Fiber Optic Cable
FRA	Federal Railroad Administration
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GIS	Geographic Information System
GM	Gas Main
GM-GC	Silty-Clayey Gravel
GUL	General Use Lane
HART	Hillsborough Area Regional Transit
HCM	Highway Capacity Manual
HDPE	High Density Polyethylene
HOV	High Occupancy Vehicle
I-275	Interstate 275
ITS	Intelligent Transportation System
Kv	Kilovolts
LA	Limited Access
LDCA	Location Design Concept Acceptance
LHR	Location Hydraulics Report
LOS	Level of Service
LRE	Long Range Estimates
LRTP	Long Range Transportation Plan
MBTA	Migratory Bird Treaty Act
MHW	Mean High Water
MLK	Dr. Martin Luther King, Jr.
MLW	Mean Low Water
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MTC	Marion Transit Center
MVDS	Microwave Vehicle Detector System
NAAQS	National Ambient Air Quality Standards

NAVD	National American Vertical Datum
N/A	Not Applicable
NB	Northbound
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
NRCS	Natural Resources Conservation Service
NSA	Noise Sensitive Area
NSR	Noise Study Report
OFW	Outstanding Florida Water
O/H	Overhead
PD&E	Project Development and Environment
PER	Preliminary Engineering Report
PIP	Public Involvement Plan
PPM	Plans Preparation Manual
PSEMP	Project Systems Engineering Management Plan
PVC	Polyvinyl Chloride
RCTO	Regional Concept of Traffic Operations
R/W	Right of Way
SB	Southbound
SC	Clayey Sand
SHPO	State Historic Preservation Office
SHSP	State Highway Safety Plan
SIS	Strategic Intermodal System
SLD	Straight Line Diagram
SM	Silty Sand
SMF	Stormwater Management Facility
SP	Poorly Graded SandSPUI Single Point Urban Interchange
SR	State Road
STIP	State Transportation Improvement Plan
SWFWMD	Southwest Florida Water Management District
TBARTA	Tampa Bay Area Regional Transportation Authority
TBRPM	Tampa Bay Regional Planning Model
TBRPM-ML	Tampa Bay Regional Planning Model Managed Lanes
TBX	Tampa Bay Express
TDP	Transit Development Plan
THEA	Tampa Hillsborough Expressway Authority
TIP	Transportation Improvement Plan
TIS	Tampa Interstate Study
TMCs	Turning Movement Counts
TSM	Transportation System Management
TSM&O	Transportation System Management and Operations
TTM	Traffic Technical Memorandum
TUDI	Tight Urban Diamond Interchange
U/G	Underground
UAO	Utility Agency Owner
UMAM	Uniform Mitigation Assessment Methodology
USACE	United States Army Corps of Engineers
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geologic Survey
v/c	Volume to Capacity Ratio
vphpl	Vehicles Per Hour Per Lane
WBID	Water Body Identification Number
WEBAR	Wetland Evaluation and Biological Assessment Report
WM	Water Main

1.0 SUMMARY OF PROJECT

1.1 Summary Statement

This Preliminary Engineering Report (PER) contains detailed engineering information that fulfills the purpose and need for the proposed capacity and operational improvements along 9.57 miles of Interstate 275 (I-275)/State Road 93 (SR 93) from north of Dr. Martin Luther King, Jr. Boulevard (SR 574) (MLK Boulevard) to north of Bearss Avenue (SR 678/County Road 582) in Hillsborough County, Florida.

The Project Development and Environment (PD&E) Study satisfies applicable requirements, including the Florida Department of Transportation (FDOT) *PD&E Manual* and the National Environmental Policy Act (NEPA), to qualify this project for federal-aid funding of future phases (design and construction). This PER is a component of the I-275 PD&E Study. This report documents the technical engineering information required to support the decisions made regarding the project alternatives. The PER was prepared in accordance with FDOT's *PD&E Manual*, Topic No. 650-000-001, Part 1, Chapter 4 and includes information to be used in the design phase of this project.

1.2 Preliminary Commitments and Recommendations

To assure adverse environmental and sociocultural impacts are avoided or minimized within the vicinity of the corridor and the multi-modal needs of the community are sufficiently addressed, FDOT will abide by standard protection measures and adhere to FDOT Procedure #700-011-035 for tracking commitments during all phases of project development and implementation.

Commitments will be provided after the public hearing process.

1.3 Description of Proposed Action

The proposed action evaluates the need to provide capacity and operational improvements along I-275 from north of MLK Boulevard to north of Bearss Avenue. This evaluation considers the operational and highway safety benefits of implementing capacity improvements and compares them to the cost savings and minimization of adverse impacts associated with a No-Build Alternative. An evaluation matrix was developed to compare the No-Build and Build Alternatives on a variety of factors. This process identifies the alternative that best balances the benefits (such as improved traffic operations and safety) with the impacts (such as environmental effects and construction costs).

The Build Alternative includes one tolled express lane in each direction of I-275. The preliminary proposed typical section contains one 11-foot express lane (EL), a 2-foot buffer, two 11-foot general use lanes (GULs), and one 12-foot GUL in each direction. The improvements would be constructed on the existing alignment, on the same existing horizontal and vertical geometries.

This PER documents the engineering and environmental analyses conducted to assess the environmental and sociocultural effects of implementing the No-Build and Build Alternatives.

The Tampa Bay Express (*TBX) Master Plan* provides guidance for developing improvements to the Tampa Bay interstate system and identifies specific freeway segments where it would be cost feasible to implement ELs. The *TBX Master Plan* identified a Starter Project and an Ultimate Project for this segment of I-275. The Starter Project includes one EL in each direction and the Ultimate Project includes two ELs in each direction. In order to accommodate two ELs in each direction the Ultimate Project would require complete reconstruction of the I-275 general use lanes, including replacing all the bridges along the project corridor, as well as right of way acquisition for the roadway and ponds/stormwater management facilities. Since the Starter Project involves only widening in lieu of reconstruction to accommodate one EL in each direction, implementing the Starter Project would create a lower overall impact to the natural, physical, and social environment, and would not require right of way acquisition. The Ultimate Project is not in the Hillsborough County Long Range Transportation Plan (LRTP). For these reasons, the Ultimate Project is no longer being considered as a viable alternative as part of this Study. When the Ultimate Project is included in the LRTP, it will be the subject of a future NEPA action due to very different impacts anticipated compared to the Starter Project. The Starter Project is the Build Alternative presented in this report.

2.0 INTRODUCTION

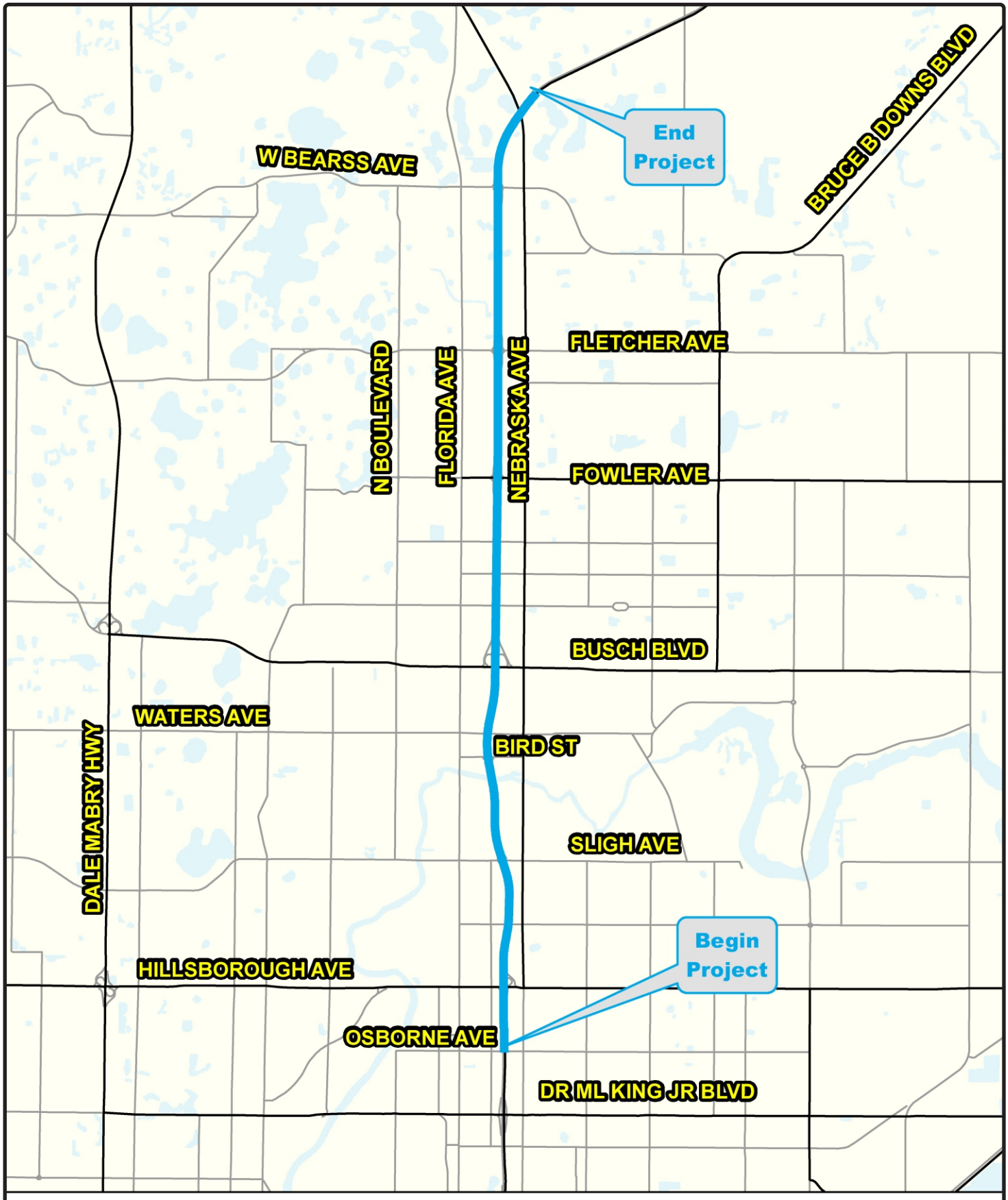
The I-275 project limits extend from I-275 from north of MLK Boulevard to north of Bearss Avenue (see **Figure 1**). North of the project limits, I-275 connects to I-75 in northern Hillsborough County. South of the project limits, I-275 turns to the west and travels through downtown Tampa in an east-west direction and then travels through Pinellas County and connects with I-75 in Manatee County. I-275 is a major north-south interstate that is an important connection to the regional and statewide transportation network linking Tampa Bay area to the remainder of the state and nation. I-275 provides access to numerous commercial and residential areas in Hillsborough County. I-275 is a designated evacuation route.

2.1 Project Development & Environment Study Process

Prior to the beginning of the PD&E Study phase, the project was entered in the Environmental Screening Tool (EST) of FDOT's Efficient Transportation Decision Making (ETDM) process. An ETDM Programming Screen Summary Report was published on February 7, 2014 as ETDM Project #13854. A Type 2 Categorical Exclusion class of action was assigned by the Federal Highway Administration (FHWA) during the programming screen phase of the ETDM process for the PD&E Study.

The objective of this PD&E Study is to help FDOT and FHWA reach a decision on the type, location, and conceptual design for the proposed improvements that maximize the corridor's capacity, and improve the overall safety and operating conditions of the facility within the project limits. Transportation improvements are needed along the I-275 study corridor from north of MLK Boulevard to north of Bearss Avenue in order to relieve capacity deficiencies, improve safety, and help alleviate future traffic congestion within the I-275 corridor. Alternative transportation improvements were evaluated based on several factors that include, but are not limited to: the proposed alternative's ability to meet transportation needs, socioeconomic and environmental impacts, engineering requirements, and cost estimates. In general terms, the process involves the following steps:

- Verification of the project's purpose and need developed during the ETDM screening process
- Gathering and analysis of detailed information regarding the natural and cultural features of the study area
- Development and evaluation of alternatives for meeting the project need
- Documentation of the entire process in a set of engineering and environmental reports
- Communication with the affected public and stakeholders through public meetings, community meetings, charrettes, as well as interaction with elected officials and agency representatives.
- Selection of a Preferred Alternative
- The PD&E Study process is designed to satisfy all applicable state and federal requirements, including the NEPA, in order for this project to qualify for federal-aid funding of subsequent project phases (design and construction).



I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

PROJECT LOCATION MAP

Figure No.
1

2.2 Project Background

The need for interstate system improvements within the Tampa Bay region has been extensively documented in the *Tampa Interstate Study* (TIS), several PD&E Studies, and the *TBX Master Plan*. The needs assessment identified eight segments within the I-275, I-4, and I-75 corridors as potential express lane projects. The *TBX Master Plan* evaluation of express lanes identified projects that can provide choices for drivers that will improve mobility on the interstate system in the Tampa Bay region and reduce the costs associated with traffic congestion. Development of the I-275 and I-4 corridors within the urban boundaries of Tampa has been guided by the TIS that provided concept plans for interstate improvements, including the recently completed I-4/Selmon Expressway Connector. The approved alternative in the *TIS Final Environmental Impact Statement* (FEIS) (January 1997) and Record of Decision (ROD) include GULs and separated ELs in each direction. The proposed I-275 improvements addressed in this study are consistent with the FEIS alternative and also continue the ELs north of MLK Boulevard to north of Bearss Avenue.

2.2.1 Tampa Bay Express Master Plan Overview

FDOT District Seven developed the *TBX Master Plan* which provides guidance for improvements to the Tampa Bay interstate system and identifies specific freeway segments where it would be cost feasible to implement express lanes. The *TBX Master Plan* evaluates the impacts of implementing ELs on the Tampa Bay interstate system on a system-wide basis rather than treating each corridor as a stand-alone project.

The I-275 PD&E Study incorporates the I-275 improvements that are proposed in the *TBX Master Plan* as the Starter Project. Further information on the projects is provided in the *TBX Master Plan* (August 2015).

2.3 Purpose of Report

This PER was prepared to document the engineering decisions as part of the PD&E Study and support the engineering decisions as the project moves into the future phases of design and construction. The PER was prepared in accordance with the FDOT *PD&E Manual*, Topic No. 650-000-001, Part 1, Chapter 4 and includes information to be used in the design phase of the project.

The purpose of the report is to document the engineering-related aspects associated with the proposed capacity improvement needed along I-275 from north of MLK Boulevard to north of Bearss Avenue in Hillsborough County. Separate reports were prepared to document environmental effects and public involvement efforts (**Section 9.0** lists the reports).

3.0 PURPOSE AND NEED FOR PROJECT

The purpose of the project is to provide an alternative to general use lanes during peak use period which in turn improves the corridor's capacity, overall safety and operating conditions of the facility within the project limits. Development of the I-275 corridor has been guided by the TIS that provided concept plans for interstate improvements in the Tampa Bay area, including I-275. The TIS FEIS Approved Alternative provides a roadway system that includes GULs and separated ELs.

Numerous transportation plans and studies by FDOT, the Tampa Bay Area Regional Transportation Authority (TBARTA), and Hillsborough County Metropolitan Planning Organization (MPO) identify the need for interstate improvements. Within the I-275, I-4, and I-75 corridors, eight segments were identified based on the needs assessment as potential EL projects. The I-275 segments in Pinellas County are from south of Gandy Boulevard to north of 4th Street North and the Howard Frankland Bridge segment beginning at 4th Street North. The I-275 segments in Hillsborough County are from south of the I-275/SR 60 interchange to north of MLK Boulevard, and then north to Bearss Avenue. The I-4 segment is from the I-4/I-275 junction to east of 50th Street, and then to Polk County Parkway in Polk County. The I-75 segments are from south of SR 674 to south of US 301, and then north to north of Bruce B. Downs Boulevard.

The evaluation of ELs by the TBX *Master Plan* identified projects that can provide new choices that will improve driver mobility on the interstate system in the Tampa Bay region and reduce the costs drivers pay due to traffic congestion.

The following sections summarize the need for the proposed improvements including area wide needs and project corridor needs.

3.1 Plan Consistency

The preliminary engineering (design) and construction are included in Fiscal Year 2021 FDOT's *SIS Funding Strategy Second Five Year Plan Fiscal Year (FY) 2020/2021 through FY 2024/2025* (July 2015).

The *Imagine 2040: Hillsborough Long Range Transportation Plan (LRTP) Summary Report* (adopted November 12, 2014, Amended March 2016) includes the Build Alternative (one express toll lane in each direction on I-275) in 2021-2025.

The project is being evaluated as part of several other express lane projects along the majority of I-275, I-75, and I-4 within the Tampa Bay region. If the express lanes are found to be feasible, FDOT will continue to work with the Hillsborough County MPO to ensure the project is consistent with Hillsborough County's Transportation Improvement Program (TIP) and the State Transportation Improvement Program (STIP).

As a SIS facility and part of the regional roadway network, I-275 is included as a priority corridor in the *Regional 2035 LRTP* developed by the West Central Florida MPOs Chairs Coordinating Committee (CCC) (adopted January 2010). I-275 is also included in the managed lanes network proposed within the TBARTA *Regional Transportation Master Plan* (Adopted June 14, 2013).

3.2 Regional Connectivity

I-275 is a north-south interstate highway that also serves as a major trade, tourism, and freight corridor. I-275 is part of Florida's SIS, which is comprised of facilities and services of statewide and interregional significance. The SIS is a statewide network of highways, railways, waterways, and transportation hubs that handle the bulk of Florida's passenger and freight traffic. This section of I-275 is in proximity to the I-275 connection with I-4; and to the north of the project limits, I-275 connects with I-75. Enhancing the capacity and preserving the operational integrity and regional functionality of I-275 is critical to mobility, as it is a vital link in the transportation network that connects the Tampa Bay region to the remainder of the state and the nation.

3.3 Safety Rates

Highway crashes are a primary cause of traffic incidents making safety critical to FDOT's mission to move goods and services. Based on crash data from the Florida Department of Highway Safety and Motor Vehicles, there were 2,379 crashes recorded in the project limits during the five-year period of 2009 through 2013, including 1,579 injuries and two fatalities. Rear end crashes, the most frequent type of crash, accounted for 54 percent of the total crashes. All other crash types each individually represent less than 10 percent of the total crashes.

The crash rate for I-275 within the project limits ranged from 0.37 to 3.95 per million vehicle miles, while the statewide average for this type of facility was 0.74. All but five of the 18 segments in the northbound direction exceed this statewide average crash rate for urban interstates. All but five of the 18 segments in the southbound direction exceed this statewide average crash rate. The higher crash rates in these areas may be due in large part to the closely spaced interchanges and profile and grade issues.

It is anticipated that safety will be enhanced with capacity improvements along the project limits. With the additional capacity, roadway congestion will be reduced, thereby reducing the crash potential.

3.4 Emergency Evacuation

I-275 is a critical evacuation route and is shown on the Florida Division of Emergency Management's evacuation route network. The proposed additional capacity will aid in emergency evacuation.

3.5 Future Population and Employment Growth

According to the Hillsborough County MPO's *Imagine 2040 LRTP* the population of Hillsborough County in 2010 was 1,229,226 and is anticipated to increase to 1,815,964 by 2040. This reflects a population growth of almost 48 percent over the next 25 years. Based on the LRTP, employment in 2010 was 711,400 and is projected to grow to 1,112,059 by 2040. This reflects 400,659 new employees, an increase of more than 56 percent. These socioeconomic projections are used in the Tampa Bay Regional Planning Model (TBRPM) to estimate future travel demand.

According to the *Imagine 2040 LRTP*, the anticipated growth is concentrated in existing job centers and potential transit station locations within the urban service area. Future residential areas near potential transit were based on comprehensive plan policies for transit-oriented development. Other job growth is anticipated to occur in existing and potential commercial centers. Increases in employment will occur in Westshore, around the University of South Florida, central downtown Tampa, and in the Brandon area. Future residential and employment densities are still expected to be highest in existing high density areas. Future population will be primarily concentrated within the neighborhoods surrounding Tampa's downtown urban core, the University of South Florida, and the potential transit line between these two areas.

I-275 is an important link for travelers in the Tampa Bay area as it provides regional accessibility to area tourist and recreational destinations and major employment/activity centers, and is a popular and convenient route for commuters and other work-related travel both north and south of the area. Normal traffic growth associated with increasing population in the Tampa Bay region, as well as traffic growth from increased development activity in downtown Tampa, further reinforce the need for improvements in the I-275 corridor. I-275 serves many of the regionally-recognized employment centers.

3.6 Current and Future Traffic

Portions of I-275 are already operating at the lowest level of mobility, with an unacceptable level of service (LOS) F. Level of service is a qualitative measure of traffic flow on a roadway. LOS ranges from LOS A (free flow) to LOS F (congestion). Based on the 2013 daily traffic volumes from the FDOT *Florida Traffic Online* (2013) traffic information database, the segment of I-275 from north of MLK Boulevard to north of Bearss Avenue already exceeds the capacity of existing interstate lanes. The highest volume portion is between Sligh Avenue and Bird Street with a volume of 150,500. The capacity is 130,600. The volume to capacity (v/c) ratio for this segment of I-275 is 1.15. A v/c ratio compares demand to how many vehicles a roadway can handle; a greater than 1.0 ratio means severe congestion.

According to the Tampa Bay Regional Planning Model Managed Lanes (TBRPM-ML), the vehicle demand on this segment of I-275 will surpass the existing capacity. By 2040, I-275 within the project limits is projected to have daily traffic volumes ranging from 165,300 to 224,600 and a capacity of 130,600. The v/c ratio is expected to range from 1.27 to 1.72. The proposed improvements are expected to improve the V/C ratio.

Without the proposed improvements, the operating conditions will continue to deteriorate and will operate at LOS F for the entire project limits by 2040. The adopted LOS standard for I-275 in this area is D based on current SIS criteria for interstates in urban areas.

3.7 Multi-Modal Service

Hillsborough Area Regional Transit (HART) operates existing transit service in Hillsborough County within the project limits. HART currently operates one Commuter Express route that travels on I-275 within the project limits for a portion of its service. Route 20X (Pasco/Lutz Target Express) travels between the Marion Transit Center (MTC) and Fletcher Avenue. The MetroRapid service operates on Nebraska Avenue. HART also operates flex service and circulator service near the project area. Future transit service (express routes) within

and adjacent to the project limits is listed in HART's Draft *Transit Development Plan* (TDP) 2015 Update FY2016 - FY2026.

Express lanes along the interstate could provide the infrastructure to support proposed and future enhanced or premium transit, such as Bus Rapid Transit (BRT) or Express Bus service, as well as multi-modal centers. HART is studying premium transit options within its service area and regionally. The Tampa-Hillsborough Expressway Authority (THEA) has also studied Bus in Toll Lanes (BTL), with express transit buses operating in interstate express lanes with other vehicles. FDOT's *Express Bus in Tampa Bay Express Lanes Study* (January 2015) evaluated premium express bus service along I-275 and I-75 generally from St. Petersburg to Wesley Chapel. The bus service would operate in the proposed tolled express lanes.

3.8 Access to Intermodal Facilities and Freight Activity Centers

I-275 is part of the highway network that provides access to regional intermodal facilities/freight activity centers such as the industrial parks/areas, South Central CSX Transportation (CSXT) Corridor, St. Petersburg Seaport, Gateway Triangle, Tampa International Airport, the Port of Tampa, and St. Petersburg-Clearwater International Airport. Improvements to I-275 will enhance access to activity centers in the area, and movement of goods and freight in the greater Tampa Bay region. I-275 is also identified on the regional freight network in the TBARTA *Regional Transportation Master Plan*.

4.0 EXISTING CONDITIONS

I-275 is a limited access freeway that runs in a north-south direction within the project limits. I-275 is part of the Federal Highway System (National Highway System) Interstate System, Florida's State Highway System, and the Strategic Intermodal System. I-275 is a six-lane divided highway with a posted speed that varies from 55 miles per hour (mph) to 65 mph. The limited access (LA) right of way (R/W) width along the corridor ranges from a minimum of 228 feet to 338 feet, with wider right of way at the interchanges. Within the project limits there are eight interchanges:

- MLK Boulevard
- Hillsborough Avenue
- Sligh Avenue
- Bird Street
- Busch Boulevard
- Fowler Avenue
- Fletcher Avenue
- Bearss Avenue

During the PD&E Study, many deficiencies were identified along the corridor, including horizontal and vertical alignment, horizontal and vertical clearances, border width, and level of service. The existing conditions and deficiencies are described in the following sections.

4.1 Existing Roadway Characteristics

4.1.1 Functional Classification and Access Management

I-275 is functionally classified as an Urban Interstate. I-275 is a designated major evacuation route in the Tampa Bay region. The access management classification is Class I, which consists exclusively of limited access facilities.

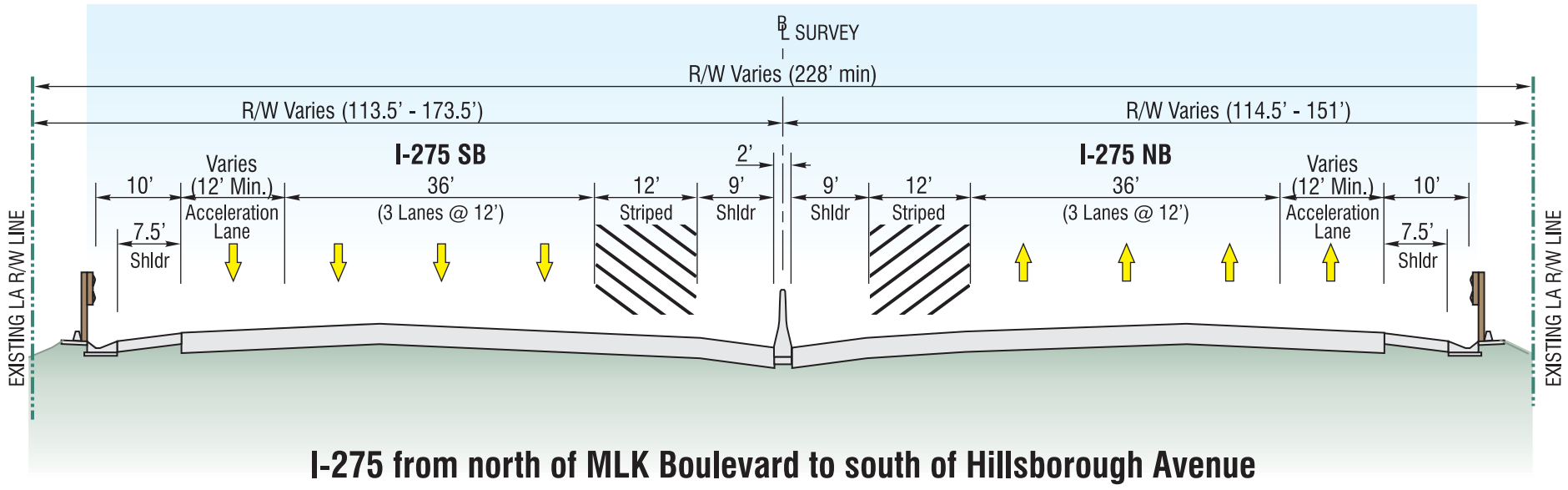
4.1.2 Typical Section

The project corridor is a six-lane divided typical section with some minor variations along the corridor. This segment of I-275 contains three existing typical sections along the project limits, which are shown in **Figure 2**.

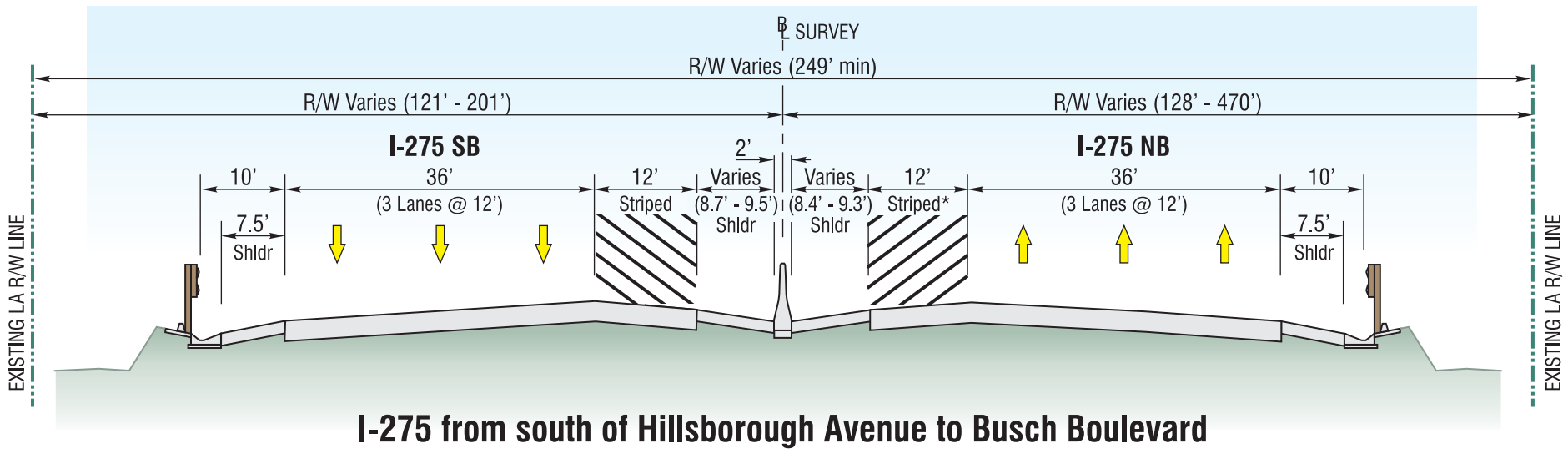
North of MLK Boulevard to south of Hillsborough Avenue: For each direction of travel, the typical section contains three 12-foot travel lanes, one 12-foot acceleration lane, a 12-foot striped out median/emergency pullover, a 10-foot outside shoulder, and a 9-foot inside shoulder. A 2-foot concrete separator divides the two directions of travel.

South of Hillsborough Avenue to Busch Boulevard: For each direction of travel, the typical section contains three 12-foot travel lanes, an inside 12-foot striped out lane median/emergency pullover, a 10-foot outside shoulder, and an inside shoulder varying from 8.7 feet to 9.5 feet. A 2-foot concrete separator divides the two directions of travel. From Hillsborough Avenue to Sligh Avenue, the northbound outside lane is used as an auxiliary lane.

Busch Boulevard to north of Bearss Avenue: For each direction of travel, the typical section contains three 12-foot travel lanes, a 10-foot outside shoulder, and a 9-foot inside shoulder. A 2-foot concrete separator divides the two directions of travel.

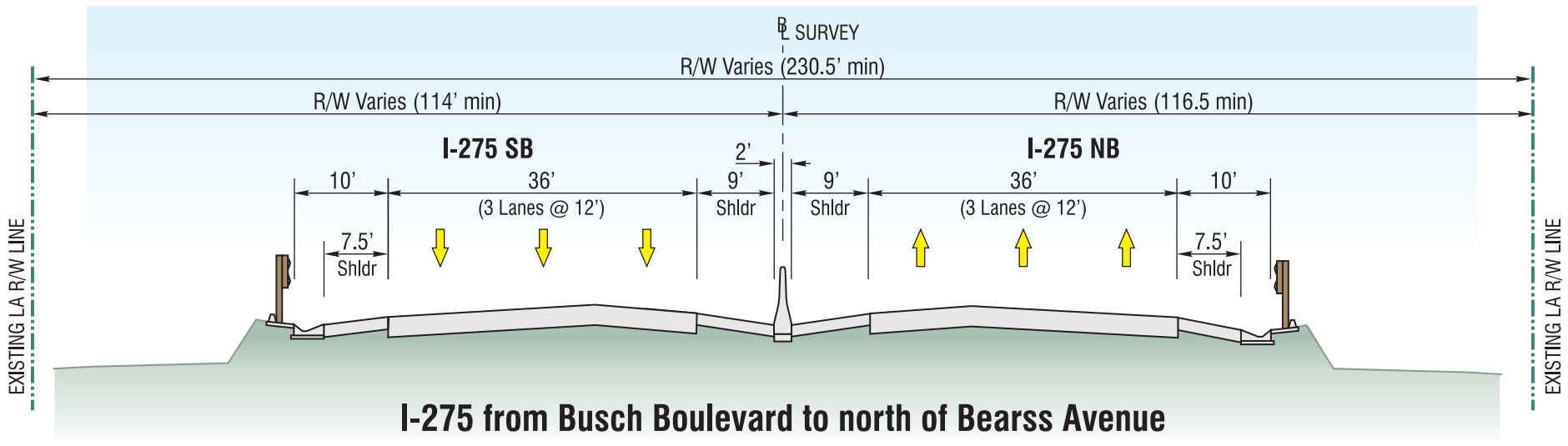


I-275 from north of MLK Boulevard to south of Hillsborough Avenue



I-275 from south of Hillsborough Avenue to Busch Boulevard

**Between Hillsborough Avenue and Sligh Avenue, the northbound median is used as a travel lane and is not striped out and the outside lane becomes an auxiliary lane.*



I-275 from Busch Boulevard to north of Bearss Avenue

NOTE: The wider right-of-way is at the interchanges.
NB=Northbound, SB=Southbound, LA R/W=Limited Access Right of Way.

4.1.3 Right of Way

The existing right of way along the I-275 mainline typically ranges from approximately 228 feet to 338 feet. However, the right of way is wider at the interchanges. The widest right of way point is approximately 1,400 feet at the Busch Boulevard interchange. The existing right of way along the corridor is shown on the concept plans in **Appendix A**.

4.1.4 Design and Posted Speeds

The posted speed limits and the design speed along I-275 range from 55 mph to 65 mph, as shown in **Table 1**.

Table 1: Posted Speeds Along I-275

From	To	Posted Speed	Design Speed
MLK Boulevard	Busch Boulevard	55 mph	60 mph
Busch Boulevard	Fletcher Avenue	60 mph	60 mph
Fletcher Avenue	Bearss Avenue	65 mph	60 mph

4.1.5 Pedestrian and Bicycle Facilities

Since I-275 is a limited access interstate facility, there are no existing or planned pedestrian or bicycle facilities on I-275. State law (Florida Statute 316.09) prohibits pedestrians and bicycles from using limited access facilities. Pedestrian and bicycle facilities exist along most of the cross roads and at the interchange ramp terminal intersections.

4.1.6 Multi-Modal Facilities

Hillsborough Area Regional Transit (HART) operates existing transit service in Hillsborough County within the project limits. HART currently operates one Commuter Express route that travels on I-275 within the project limits for a portion of its service. Route 20X (Pasco/Lutz Target Express) travels between the Marion Transit Center (MTC) and Fletcher Avenue. The MetroRapid service operates on Nebraska Avenue during the AM and PM peak periods. The MetroRapid service operates along Nebraska Avenue. HART also operates flex service and circulator service near the project area. Future transit service (express routes) within and adjacent to the project limits is listed in HART's Draft *Transit Development Plan* (TDP) 2015 Update FY2016 - FY2026.

4.1.7 Railroad Crossings

Within the project limits, there are two sets of actively-used freight railroad tracks crossing under I-275 (see **Section 4.2.3** for information about vertical clearances). Railroad Crossing Number 626892H is located south of Busch Boulevard at Railroad Milepost SY849.50. Railroad Crossing Number 624964C is located north of the Bearss Avenue interchange, just

north of US 41, at Railroad Milepost SR833.65. The rail lines at these two crossings each contain a single track. CSXT owns and operates these railroad lines.

4.1.8 Lighting

Median barrier mounted dual arm light poles exist along the entire project limits, including interchanges. Conventional lighting also exists on the Busch Boulevard interchange ramps.

4.1.9 Intersections/Interchanges and Signalization

There are eight interchanges within the project limits with intersections at the ramp termini with cross streets. The interchange characteristics are shown in **Table 2**.

Table 2: Existing Interchanges Along I-275

Location	Milepost	Type	Movements Provided	Number of Lanes on Cross Road	Traffic Signals	Maintaining Jurisdiction
MLK Boulevard[1]	1.441	Diamond	All Movements	4	2	City of Tampa
Hillsborough Avenue[1]	2.252	Diamond and Partial Clover Leaf	All Movements	4/6	1	City of Tampa
Sligh Avenue[1]	3.464	Diamond	All Movements	4	2	City of Tampa
Bird Street	4.293	Half Diamond	Southbound On-Ramp and Northbound Off-Ramp	4	2	City of Tampa
Busch Boulevard	5.010	Partial Cloverleaf	All Movements	6	2	City of Tampa
Fowler Avenue	6.511	Diamond	All Movements	4/6	2	City of Tampa
Fletcher Avenue	7.523	Diamond	All Movements	4	2	Hillsborough County
Bearss Avenue	8.812	Diamond	All Movements	4	2	Hillsborough County

Notes: [1] The ramp termini intersections on these cross roads are less than 300 feet away from the next nearest signalized intersection, which does not meet signal spacing standards.

4.1.10 Horizontal Alignment

As-built plans were reviewed and field reviews were conducted to identify existing horizontal clearance information. During the field review, several design elements were assessed as described below.

Border Width: Because of the densely developed areas around I-275 and the historic districts boundaries, the existing border width throughout the project limits does not meet the 94-foot minimum offset recommended per FDOT design criteria. There are no locations in the project limits where the border width meets the standard.

Roadside Slopes: The roadside slopes (front, back, and transverse) within the project limits either meet current FDOT design criteria or are properly protected in accordance with current standards. The typical front slope is 1:2 outside of clear zone.

Clear Zone: The clear zones, including mainline and interchange ramps, either meet current FDOT design criteria or are properly protected in accordance with current standards. The required clear zone for I-275 mainline is 36 feet.

Horizontal Clearance: The horizontal clearances to all fixed objects within the project limits either meet FDOT design criteria or possible hazards are properly protected per current standards.

The existing horizontal alignment within the project limits is summarized in **Table 3**. Within the project limits, I-275 contains 15 horizontal curves, all of which are based off the existing centerline. For a 60 mph design speed, FDOT requires a minimum horizontal curve length of 900 feet on freeways. All but four of the existing horizontal curves, with related super-elevation rates, meet the current minimum FDOT design criteria for a design speed of 60 mph. Three curves that do not meet the current minimum design criteria are between north of MLK Boulevard and Hillsborough Avenue and one curve is between Hillsborough Avenue and Yukon Street. The three curves south of Hillsborough Avenue each have a length less than 400 feet.

4.1.11 Vertical Alignment

The existing vertical alignment was obtained from I-275 as-built plans. Within the project limits, I-275 contains 102 vertical curves. For a 60 mph interstate design speed, FDOT requires a minimum vertical curve length of 1,800 feet for crest vertical curves within an interchange and 1,000 feet for crest vertical curves outside an interchange. Only one of the existing crest vertical curves (near Nebraska Avenue/US 41) meets the current minimum standard. For a 60 mph design speed, FDOT requires a minimum vertical curve length of 800 feet for sag vertical curves regardless of location. Only six vertical sag curves meet the 800-foot length standard. The existing vertical alignment within the project limits is summarized in **Table 4**.

Table 3: Existing Horizontal Alignment Data

Curve Name	Point of Curvature - Station	Point of Tangency - Station	Delta	Degree of Curvature	Tangent	Length	Curve Radius	Super-elevation Rate	Design Speed
South of MLK Boulevard to north of Hillsborough Avenue									
C25	777+02.52	779+33.94	2° 18' 50.91" (LT)	1° 0' 0.00"	115.72'	231.42'	5,729.58'	0.03	60 MPH
C26	794+48.77	797+78.80	3° 18' 00.94" (LT)	1° 0' 0.00"	165.06'	330.03'	5,729.58'	0.03	60 MPH
C27	800+40.23	803+67.73	3° 16' 29.85" (RT)	1° 0' 0.00"	163.79'	327.50'	5,729.58'	0.03	60 MPH
North of Hillsborough Avenue to south of Yukon Street									
C1	823+83.39	834+00.60	10° 10' 19.70" (RT)	1° 0' 0.00"	509.95'	1,017.21'	5,729.58'	0.03	60 MPH
C2	837+668.62	843+82.87	9° 12' 49.37" (LT)	1° 30' 0.00"	307.79'	614.25'	3,819.72'	0.043	60 MPH
C3	852+92.16	861+95.89	19° 17' 51.66" (LT)	2° 0' 0.00"	456.45'	904.26'	2,864.79'	0.055	60 MPH
C4	872+80.24	884+20.82	17° 06' 31.38" (RT)	1° 30' 0.00"	574.57'	1,140.58'	3,819.72'	0.043	60 MPH
C5	523+52.23	533+21.39	10° 29' 57.09" (LT)	1° 05' 0.00"	485.94'	969.16'	5,288.84'	0.032	60 MPH
C6	542+27.30	559+51.09	21° 32' 50.59" (RT)	1° 15' 0.00"	872.20'	1,723.79'	4,583.66'	0.036	60 MPH
South of Yukon Street to north of Busch Boulevard									
BL1	556+52.25	577+39.80	10° 52' 31.92" (LT)	1° 0' 0.00"	545.42'	1,087.55'	5,729.58'	0.03	60 MPH
North of Busch Boulevard to north of Fletcher Avenue									
I275SUR1	648+99.12	659+30.61	1° 43' 08.98" (RT)	0° 10' 0.00"	515.79'	1,031.49'	34,377.40'	N/C	60 MPH
I275SUR2	663+93.20	674+37.89	1° 44' 28.15" (LT)	0° 10' 0.00"	522.39'	1,044.65'	34,377.40'	N/C	60 MPH
I275SUR3	148+02.88	158+36.20	0° 30' 59.98" (LT)	0° 03' 00.00"	516.66'	1,033.32'	114,591.33'	N/C	60 MPH
North of Fletcher Avenue to north of Bearss Avenue									
C1A	226+56.20	249+76.64	34° 48' 24.00" (RT)	1° 30' 0.00"	1,197.27'	2,320.45'	3,819.72'	0.043	60 MPH
C1B	259+57.28	274+38.74	29° 37' 45.00" (RT)	2° 00' 0.00"	757.69'	1,481.46'	2'864.79'	0.062	65 MPH

Legend:

Curve lengths that do not meet the current 900-foot minimum required length.

Table 4: Existing Vertical Alignment Data

Curve Type	Begin Station	End Station	Profile Grade Line	Curve Length	Back Grade	Forward Grade	Cross Street Name
Crest	784+70	790+10	Left	540'	3.000%	-3.000%	Osborne Ave
	784+70	790+10	Right	540'	3.000%	-3.000%	Osborne Ave
Sag	792+60	795+60	Left	300'	-3.000%	-0.400%	N/A
	792+60	795+60	Right	300'	-3.000%	-0.400%	N/A
Sag	805+90	811+10	Left	520'	-0.400%	3.000%	N/A
	805+90	811+10	Right	520'	-0.400%	3.000%	N/A
Crest	811+10	817+10	Left	600'	3.000%	-3.000%	Hillsborough Ave
	811+10	817+10	Right	600'	3.000%	-3.000%	Hillsborough Ave
Sag	821+10	824+10	Left	300'	-3.000%	0.219%	N/A
	821+10	824+10	Right	300'	-3.000%	0.219%	N/A
Sag	830+70	833+70	Left	300'	0.219%	3.000%	N/A
	830+70	833+70	Right	300'	0.219%	3.000%	N/A
Crest	837+80	843+20	Left	540'	3.000%	-3.000%	Hanna St
	837+80	843+20	Right	540'	3.000%	-3.000%	Hanna St
Sag	845+25	848+25	Left	300'	-3.000%	0.507%	N/A
	845+25	848+25	Right	300'	-3.000%	0.507%	N/A
Sag	861+50	864+00	Left	250'	0.507%	3.000%	N/A
	861+50	864+00	Right	250'	0.507%	3.000%	N/A
Crest	864+65	870+35	Left	570'	3.000%	-3.000%	Sligh Ave
	864+65	870+35	Right	570'	3.000%	-3.000%	Sligh Ave
Sag	875+95	884+25	Left	830'	-3.000%	3.000%	N/A
	875+95	884+25	Right	830'	-3.000%	3.000%	N/A
Crest	884+25	525+25.75	Left	700'/800'*	3.000%	-3.000%	Broad St
	884+25	525+25.75	Right	700'/800'*	3.000%	-3.000%	Broad St
Sag	530+91.85	538+91.85	Left	800'	-2.120%	1.800%	N/A
	530+91.85	538+91.85	Right	800'	-2.120%	1.800%	N/A
Crest	542+50	547+50	Left	500'	1.800%	0.340%	Bird St
	542+50	547+50	Right	500'	1.800%	0.340%	Bird St
Crest	553+15.20	556+15.20	Left	300'	0.340%	-0.925%	Waters Ave
	553+15.20	556+15.20	Right	300'	0.340%	-0.925%	Waters Ave
Sag	560+50	563+50	Left	300'	-0.925%	0.947%	N/A
	560+50	563+50	Right	300'	-0.925%	0.947%	N/A
Crest	570+50	573+50	Left	300'	0.947%	1.055%	N/A
	570+50	573+50	Right	300'	0.947%	1.055%	N/A
Crest	578+95	585+45	Left	650'	1.055%	-3.000%	Busch Blvd/CSX
	578+95	585+45	Right	650'	1.055%	-3.000%	Busch Blvd/CSX
Sag	590+45.49	595+45.49	Left	500'	-3.000%	0.508%	N/A
	590+45.49	595+45.49	Right	500'	-3.000%	0.508%	N/A

Notes: *Two plan sets show different curve lengths of 700' and 800'

Legend:

Crest

Interchanges/Crest

Sag

Acronyms: LT=Left, RT=Right, N/A=Not Applicable

Table 4: Existing Vertical Alignment Data (continued)

Curve Type	Begin Station	End Station	Profile Grade Line	Curve Length	Back Grade	Forward Grade	Cross Street Name
Sag	596+29.47	603+29.47	Left	700'	0.508%	3.000%	N/A
	596+29.47	603+29.47	Right	700'	0.508%	3.000%	N/A
Crest	604+00	611+00	Left	700'	3.000%	-0.800%	Linebaugh Ave
	604+00	611+00	Right	700'	3.000%	-0.800%	Linebaugh Ave
Sag	614+47.27	619+47.27	Left	500'	-0.800%	0.300%	N/A
	614+47.27	619+47.27	Right	500'	-0.800%	0.300%	N/A
Crest	620+00	626+00	Left	600'	0.300%	-1.500%	Bougainvillea Ave
	620+00	626+00	Right	600'	0.300%	-1.500%	Bougainvillea Ave
Sag	629+65.18	634+65.18	Left	500'	-1.500%	0.100%	N/A
	629+65.18	634+65.18	Right	500'	-1.500%	0.100%	N/A
Sag	647+92.86	654+92.86	Left	700'	0.100%	3.000%	N/A
	647+92.86	654+92.86	Right	700'	0.100%	3.000%	N/A
Crest	656+75.55	666+75.55	Left	1,000'	3.000%	-3.000%	Fowler Ave
	656+75.55	666+75.55	Right	1,000'	3.000%	-3.000%	Fowler Ave
Sag	667+50.69	672+50.69	Left	500'	-3.000%	-0.300%	N/A
	667+50.69	672+50.69	Right	500'	-3.000%	-0.300%	N/A
Station Equation 677+00 = 115+30.72							
Sag	116+73.14	120+73.14	Left	400'	-0.300%	3.000%	N/A
	116+73.14	120+73.14	Right	400'	-0.300%	3.000%	N/A
Crest	121+75	130+75	Left	900'	3.000%	-2.500%	127th Ave
	121+75	130+75	Right	900'	3.000%	-2.500%	127th Ave
Sag	132+00	135+50	Left	350'	-2.500%	0.107%	N/A
	132+00	135+50	Right	350'	-2.500%	0.107%	N/A (Sink Hole NB)
Sag	142+50	146+50	Left	400'	0.107%	3.000%	N/A
	142+50	146+50	Right	400'	0.107%	3.000%	N/A
Crest	147+75	156+75	Left	900'	3.000%	-2.000%	Fletcher Ave
	147+75	156+75	Right	900'	3.000%	-2.000%	Fletcher Ave
Sag	160+00	165+00	Left	500'	-2.000%	0.564%	N/A
	160+00	165+00	Right	500'	-2.000%	0.564%	N/A
Crest	179+50	184+50	Left	500'	0.564%	-0.243%	N/A
	179+50	184+50	Right	500'	0.564%	-0.243%	N/A
Sag	198+00	202+00	Left	400'	-0.243%	0.050%	N/A
	198+00	202+00	Right	400'	-0.243%	0.050%	N/A
Sag	210+00	214+00	Left	400'	0.050%	3.000%	N/A
	210+00	214+00	Right	400'	0.050%	3.000%	N/A
Crest	216+25	226+25	Left	1,000'	0.03	-0.03	Bearss Ave
	216+25	226+25	Right	1,000'	0.03	-0.03	Bearss Ave
Sag	226+25	231+75	Left	550'	-3.000%	0.292%	N/A
	226+25	231+75	Right	550'	-3.000%	0.292%	N/A
Sag	242+50	247+50	Left	500'	-0.050%	3.000%	N/A
	242+50	247+50	Right	500'	-0.050%	3.000%	N/A
Crest	250+50	260+50	Left	1,000'	3.000%	-3.000%	US 41 (Nebraska Ave)/CSX
	250+50	260+50	Right	1,000'	3.000%	-3.000%	US 41 (Nebraska Ave)/CSX
Sag	262+75	267+75	Left	500'	-3.000%	-0.238%	N/A
	262+75	267+75	Right	500'	-3.000%	-0.238%	N/A
Sag	272+00	276+00	Left	400'	-0.238%	0.300%	N/A
	272+00	276+00	Right	400'	-0.238%	0.300%	N/A
Crest	281+50	286+50	Left	500'	0.003	-0.003	N/A
	281+50	286+50	Right	500'	0.003	-0.003	N/A

4.1.12 Drainage and Floodplains

4.1.12.1 Existing Drainage Conditions

The project is located mainly within the Hillsborough Bay Watershed which encompasses 1,282 square miles. The remaining area of the I-275 project lies within the Coastal Old Tampa Bay Watershed which spans 338 square miles. Both watersheds ultimately drain to Tampa Bay. Both Hillsborough Bay and Coastal Old Tampa Bay Watersheds are part of the larger regional Tampa Bay Watershed which encompasses 2,200 square miles. The drainage basins in the study area as delineated by the Southwest Florida Water Management District (SWFWMD) include the Hillsborough River, Sulphur Springs, Curiosity Creek, Chapman Lake Outlet, and Cypress Creek. The only major water body within the project limits is the Hillsborough River.

In the existing condition, stormwater runoff from I-275 is collected by roadside ditches and conveyed to a closed storm system along the west side of I-275. The storm drain system ultimately discharges to the Hillsborough River.

Based on the ETDM Programming Screen, portions of the Hillsborough River are an Outstanding Florida Water (OFW). However, additional treatment is not provided in the proposed ponds since they do not directly discharge to the Hillsborough River.

The project limits were evaluated for impairment as identified by the Florida Department of Environmental Protection (FDEP). FDEP has identified three basins within the project limits that are impaired according to their Water Body Identification Numbers (WBIDs). **Table 5** summarizes the impaired water bodies and the impairment.

Table 5: Verified Impaired Waters

Watershed	Water Body Identification	Name	Impairment			
			Mercury	Bacteria	Dissolved Oxygen	Nutrients
Hillsborough River	1443 E	Tampa Bay Tributaries	Mercury	N/A	Dissolved Oxygen	Chlorophyll-a
Hillsborough River	1443 E1	Hillsborough Reservoir	Mercury	N/A	Dissolved Oxygen	Nutrient (TSI)
Hillsborough River	1402	Cypress Creek	N/A	Fecal Coliform	Dissolved Oxygen	Chlorophyll-a

4.1.12.2 Stormwater Management

The original construction of I-275 within the study limits was not permitted with SWFWMD. However, improvements to the interstate between 1998 and 2011 have been permitted with SWFMWD. The permitted improvements include:

- I-275 from south of Busch Boulevard to south of Fletcher Avenue
- I-275 from south of Fletcher Avenue to north of US 41
- I-275 Safety Improvements
- I-275 from south of Hillsborough Avenue to north of Yukon Street
- I-275 from Floribraska Avenue to Osborne Avenue
- I-275 Northbound off-ramp to Fowler Avenue
- I-275 Widening from south of Fowler Avenue to south of Fletcher Avenue

Additional information regarding the permitted ponds associated with the improvements to I-275 are provided in the *Pond Feasibility Report (August 2015)*.

4.1.12.3 Floodplains

Information obtained from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) shows the project crosses through the limits of the 100-year floodplain at several locations along the project corridor. Segments where potential impacts to the 100-year floodplain could occur are shown on FEMA Map No. 12057C0214H and 12057C0204H. The FEMA maps are provided in Appendix C of the *Pond Feasibility Report (August 2015)*.

According to FEMA, the Hillsborough River is a regulated floodway at the I-275 bridge crossing. The base flood elevation North American Vertical Datum of 1988 (NAVD 88) for the Hillsborough River at the bridge crossing is 10.0 feet. There are no anticipated impacts to the floodway since the bridge over the Hillsborough River is not anticipated to be widened.

4.1.12.4 Existing Cross Drains

The *Location Hydraulics Report* (LHR) (March 2015) for this project identified 16 cross drains that traverse I-275 within the study limits. The cross drain sizes and locations were determined using existing drainage maps, Straight Line Diagrams (SLD's), SWFWMD permit research, and field investigations. Additional information on the existing cross drains is provided in the *LHR*. **Table 6** summarizes the existing cross drain data.

Table 6: Existing Cross Drains

Station (Center Line of Construction)	FDOT Milepost	Length (feet)	Size (inches)	Basin No.	Comment
1810+50	2.381	N/A	54 (2)	1	Connection to Storm Sewer
1827+25	2.703	N/A	30	2	Connection to Storm Sewer
1867+60	3.464	N/A	24	3	Connection to Storm Sewer
1887+70	3.845	N/A	24	4/5	Connection to Storm Sewer
1940+00	4.829	239	48	7	
1974+28	5.482	236	36	8	
1988+41	5.751	N/A	42	9	Connection to Storm Sewer
1994+71	5.870	N/A	42		Connection to Storm Sewer
2016+31	6.284	N/A	42		Connection to Storm Sewer
2021+46	6.381	263	36		
2047+95	6.884	207	24	10	
2060+69	7.131	N/A	30	11	Discharge to Sink Hole
2070+46	7.315	213	30	12	
2094+70	7.774	208	24	13	
2136+24	8.561	201	36	14	
2157+27	8.884	261	36	15	

4.1.12.5 Existing Bridges over Water Bodies

Within the project corridor, I-275 crosses the Hillsborough River which is the only major water body in the project area. The existing bridge (Bridge No. 100218) over the Hillsborough River was originally constructed in 1967 and later widened in 2009. The current bridge consists of five 60-foot spans with an overall bridge length of 300 feet as measured along the centerline of I-275. The overall out-to-out bridge width is 163 feet 1 inch. The Plan and Elevation Sheet and the Bridge Hydraulics Recommendations Sheet from the existing bridge plans are included in Appendix A of the *Pond Feasibility Report (August 2015)*.

4.1.12.6 Geotechnical Data

Soil surveys provide indications of what a soil may be useful for and can provide clues as to possible uses and potential environmental issues. Additionally, maps of the soil units provided in the surveys often show historical land features such as mines, borrow pits, railroads, etc. These can also be indications of areas of concern.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) *Soil Survey of Hillsborough County, Florida* issued May 1989 and the Web Soil Survey were reviewed for general climate and near surface soil information. The soils in the project area (500-foot buffer from corridor) are listed in **Table 7** and displayed in **Figure 3.**

According to the Soil Survey, the mean annual rainfall for Hillsborough County is approximately 50 inches with 60 percent falling in the summer months, June through September. The climate of the area is generally subtropical with an annual average temperature of about 73 degrees.

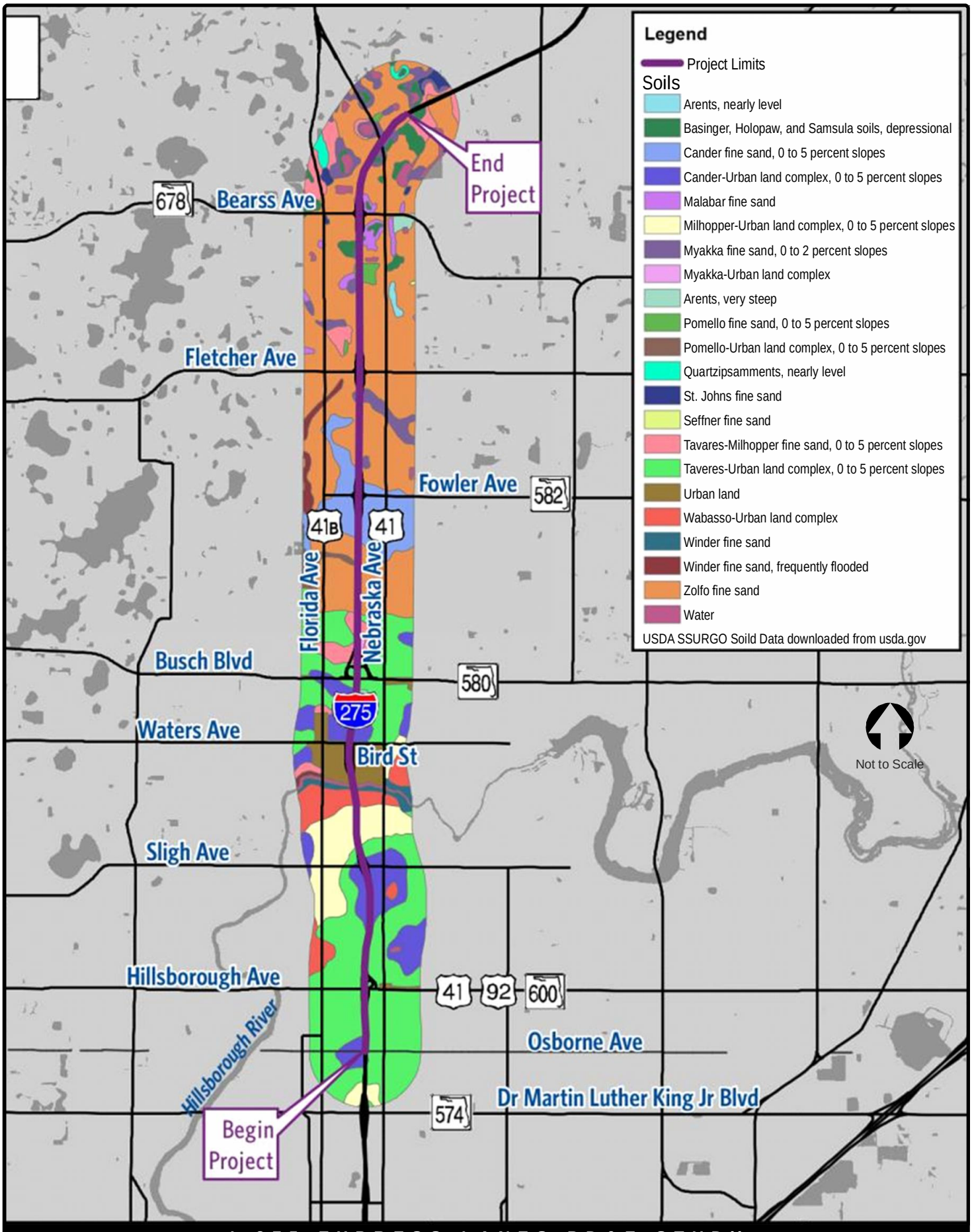
The general soil units can be described as follows. The Urban Land-Candler soils are nearly level to strongly sloping, excessively drained soils that are sandy throughout and have thin lamellae below 66 inches of the surface. Most areas have been modified for urban use. The Urban Land-Tavares soils consist of nearly level to sloping, moderately well drained soils that are sandy throughout. Most areas have been modified for urban use.

Topographic maps provide an understanding of previous land uses in the project corridor and identify areas that may show historical, natural and manmade features, which aid in determining potential environmental concerns.

The United States Geologic Survey (USGS) *7.5-Minute Sulphur Springs, Florida Quadrangle* topographic map (1987), and the *Tampa, Florida Quadrangle* topographic map (1998) were reviewed as part of this study.

Review of the *Sulphur Springs, Florida Quadrangle* topographic map shows the I-275 mainline in existence when it was last photo-revised in 1987. The area from the southern end of the quadrangle to Bearss Avenue is shown as an urban developed area and varies in elevation from -5 to +55 feet National Geodetic Vertical Datum of 1929 (NGVD 29). Several unnamed ponds, the Hillsborough River and a railroad corridor intersect the project corridor and are depicted on this topographic map.

Review of the *Tampa, Florida Quadrangle* topographic map, shows the mainline I-275 in existence. The area from Hillsborough Avenue to the northern end of the quadrangle is shown as urban developed land. Within the Tampa topographic map, the elevation is approximately 15-feet NGVD 29.



I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

SOILS MAP

Figure No.
3

Table 7: Summary of Soil Groups

Soil Name (Map Unit No.)	Depth (inches)	Classification		Permeability (inch/hour)	Seasonal High Water Table Depth (feet)	Hydro-logic Group
		AASHTO Group	USCS Group			
Arents	0 – 4 4 – 80	A-3 A-3	SP SP	6.0 – 20 6.0 – 20	3.5 – 6.0	A
Basinger, Holopaw, Samsula	0 – 7 7 – 28 28 – 42 42 – 80	A-3 A-3, A-2-4 A-3, A-2-4 A-3, A-2-4	SP SP, SP-SM SP, SP-SM SP, SP-SM	6.0 – 20 6.0 – 20 6.0 – 20 6.0 – 20	+2 – 1.0	D
Cander	0 – 6 6 – 72 72 – 80	A-3 A-3 A-3, A-2-4	SP, SP-SM SP, SP-SM SP-SM	6.0 – 20 6.0 – 20 6.0 – 20	>6.0	A
Malabar	0 – 12 12 – 30 30 – 50 50 – 66 66 – 80	A-3 A-3, A-2-4 A-3 A-2, A-4, A-6 A-3, A-2-4	SP, SP-SM SP, SP-SM SP-SP-SM SC, SM-SC, SM SP-SM, SM	6.0 – 20 6.0 – 20 6.0 – 20 <0.2 6.0 – 20	0 – 1.0	B/D
Millhopper	0 – 12 12 – 30 30 – 50 50 – 66 66 – 80	A-3 A-3, A-2-4 A-3 A-2, A-4, A-6 A-3, A-2-4	SP, SP-SM SP, SP-SM SP-SP-SM SC, SM-SC, SM SP-SM, SM	6.0 – 20 6.0 – 20 6.0 – 20 <0.2 6.0 – 20	0 – 5.0	B/D
Myakka	0 – 20 20 – 30 30 – 80	A-3 A-3, A-2-4 A-3	SP, SP-SM SP, SP-SM SP, SP-SM	6.0 – 20 0.6 – 6.0 6.0 – 20	0 – 1.0	B/D
Pomello	0 – 43 43 – 55 55 – 80	A-3 A-3, A-2-4 A-3	SP, SP-SM SP-SM, SM SP, SP-SM	>20 2.0 – 6.0 6.0 – 20	0 – 5.0	C
Quartz	0 – 12 12 – 29 29 – 46 46 – 80	A-3 A-3 A-3, A-2-4 A-3	SP, SP-SM SP, SP-SM SP-SM, SM SP, SP-SM	6.0 – 20 6.0 – 20 0.2 – 2.0 6.0 – 20	0 – 1.0	B/D
St. Johns	0 – 12 12 – 29 29 – 46 46 – 80	A-3 A-3 A-3, A-2-4 A-3	SP, SP-SM SP, SP-SM SP-SM, SM SP, SP-SM	6.0 – 20 6.0 – 20 0.2 – 2.0 6.0 – 20	0 – 1.0	B/D
Seffner	0 – 13 13 – 21 21 – 80	A-3, A-2-4 A-3, A-2-4 A-3, A-2-4	SP-SM, SP SP-SM, SP SP-SM, SP	6.0 – 20 6.0 – 20 6.0 – 20	1.5 – 3.5	C
Taveres	0 – 12 12 – 20 20 – 80	A-3, A-2-4 A-3, A-2-4 A-3	SP, SP-SM SM, SP-SM SP, SP-SM	6.0 – 20 0.6 – 6.0 6.0 – 20	0 – 5.0	B/D

Table 7: Summary of Soil Groups (continued)

Soil Name (Map Unit No.)	Depth (inches)	Classification		Permeability (inch/hour)	Seasonal High Water Table Depth (feet)	Hydro-logic Group
		AASHTO Group	USCS Group			
Wabasso	0 – 10 10 – 14 14 – 30 30 – 80	A-3, A-2-4 A-2-4 A-2-4, A-2-6 A-2-4	SP, SP-SM SM SC SM, SM-SC, SC	6.0 – 20 0.2 – 0.6 >0.2 >0.2	0 – 2.0	B/D
Winder	0 – 10 10 – 14 14 – 30 30 – 80	A-3, A-2-4 A-2-4 A-2-4, A-2-6 A-2-4	SP, SP-SM SM SC SM, SM-SC, SC	6.0 – 20 0.2 – 0.6 >0.2 >0.2	0 – 1.0	B/D
Zolfo	0 – 3 3 – 60 60 – 80	A-3, A-2-4 A-3, A-2-4 A-3, A-2-4	SP-SM SP-SM, SM SP-SM, SM	6.0 – 20 6.0 – 20 0.6 – 2.0	2.0 – 3.5	C

Acronyms: USCS Group: SP=poorly graded sand; SP-SM=poorly graded sand with silt; SM=silty sand, SC=clayey sand
AASHTO Group: A-1 through A-1=granular materials; A-4 through A-7=silt-clay materials

4.1.13 Crash Data

Crash data for I-275 from Columbus Drive to north of Bearss Avenue for the five-year period of 2009 to 2013 were obtained. These crash data from FDOT's Crash Analysis Reporting System (CARS) were compiled and analyzed.

A total of 2,379 crashes (1,082 northbound and 1,297 southbound) occurred along the I-275 corridor between 2009 and 2013. Two crashes resulted in two fatalities, 994 crashes resulted in 1,579 injuries, and 1,383 resulted in property damage only. The two fatalities happened in two crashes, both in the southbound direction. Aging road users was a factor in both crashes. Aging road users and intersection crashes are emphasis areas in Florida's State Highway Safety Plan (SHSP). The crash data cover through the year 2013. However, several fatalities associated with wrong way drivers were identified on I-275 in the year 2014. Updated crash data will be provided in future editions of this report.

Figure 4 and **Table 8** summarize the crashes by severity within the study area.

Figure 4: Crash Severity Summary

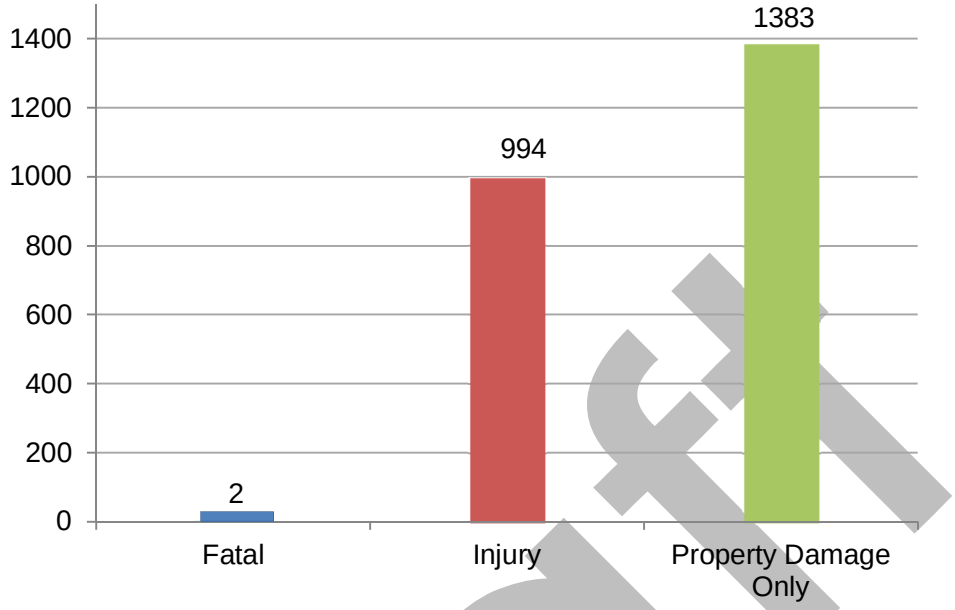


Table 8: Crash Severity Summary

Crash Severity	2009	2010	2011	2012	2013	Total
Fatal	1	0	1	0	0	2
Injury	193	232	216	166	187	994
Property Damage Only	306	323	244	259	251	1,383
Total	**500**	**555**	**461**	**425**	**438**	**2,379**

Rear end crashes represent about 54 percent of the total crashes. All other crash types each individually represent less than 10 percent of the total crashes. Careless Driving is the top contributing cause followed by Failing to Keep in Proper Lane. **Table 9** provides a summary of the types of crashes within the study area and **Table 10** provides a summary of the contributing cause.

Table 9: Crash Event Summary

Harmful Event	2009	2010	2011	2012	2013	Total
Rear End	275	331	230	211	231	1,278
Other/Unknown	15	24	55	52	37	183
Hit Guardrail	37	39	33	32	24	165
Hit Concrete Barrier Wall	35	35	22	31	36	159
Angle	31	47	35	25	18	156
Motor Vehicle in Transport	0	3	44	42	53	142
Hit Fixed Object	27	18	17	18	26	106
Sideswipe	57	36	0	0	0	93
Other Non-fixed Object	7	5	6	3	3	24
Overturned	5	6	5	1	1	18
Cargo Loss or Shift	6	1	3	3	2	15
Hit Attenuators	1	0	4	3	0	8
Ditch	0	5	0	0	0	5
Parked Motor Vehicle	0	0	2	0	3	5
Fell from Vehicle	0	2	1	1	0	4
Head On	0	1	0	1	2	4
Fire	1	1	1	1	0	4
Utility Pole/ Light Support	1	0	0	0	2	3
Hit Fence	1	0	1	0	0	2
Collision with Pedestrian	1	0	1	0	0	2
Bridge Overhead Structure	0	0	1	1	0	2
Rear to Side	0	1	0	0	0	1
Total	**500**	**555**	**461**	**425**	**438**	**2,379**

The geographic distribution of crashes along the corridor for each direction of travel is shown in **Figure 5** and **Figure 6**. There is a high concentration of crashes along the southern portion of the study corridor. In the southbound direction, the segment from Floribraska Avenue to Hillsborough Avenue has a high crash rate. In the northbound direction, the high-crash area between MLK Boulevard and Hillsborough Avenue is located in this same area as the southbound high-crash segment. The segment between Bird Street and Busch Boulevard is a high-crash segment in both directions.

Table 10: Contributing Cause Summary

Crash Contribution Cause	2009	2010	2011	2012	2013	Total
Careless Driving	302	361	243	235	265	1406
Other	57	51	47	46	58	259
No Contributing Action	32	38	80	64	44	258
Unknown	17	26	57	53	37	190
Failed to Keep in Proper Lane	81	60	0	0	0	141
Followed Too Closely	3	4	13	11	12	43
Failed to Yield Right of Way	3	5	6	10	5	29
Exceeded Safe Speed Limit	2	4	7		7	20
Alcohol-Under Influence	2	4	2	2	2	12
Improper Passing	1	1	3	1	5	11
Improper Turn	0	0	2	1	1	4
Disregarded Traffic Signal	0	1	0	2	1	4
Disregarded Other Traffic Control	0	0	1	0	0	1
Driving Wrong Side/Way	0	0	0	0	1	1
Total	**500**	**555**	**461**	**425**	**438**	**2379**

Figure 5: Total Crashes by Location on Northbound I-275

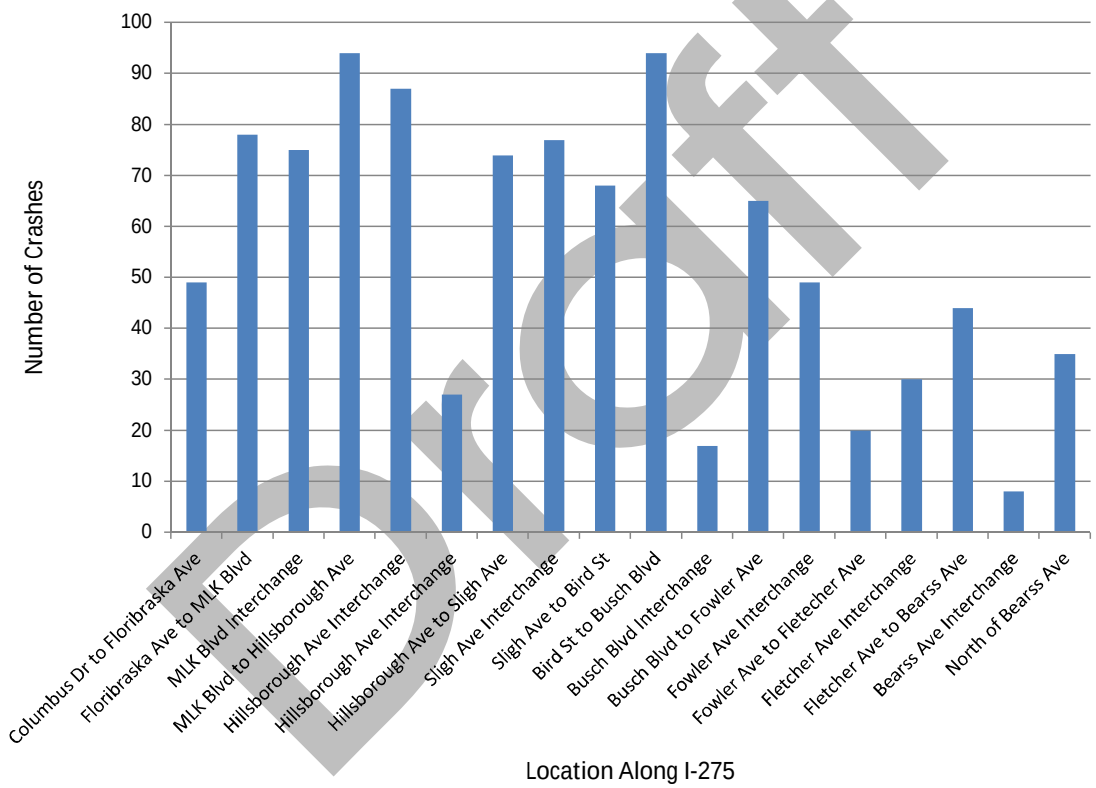
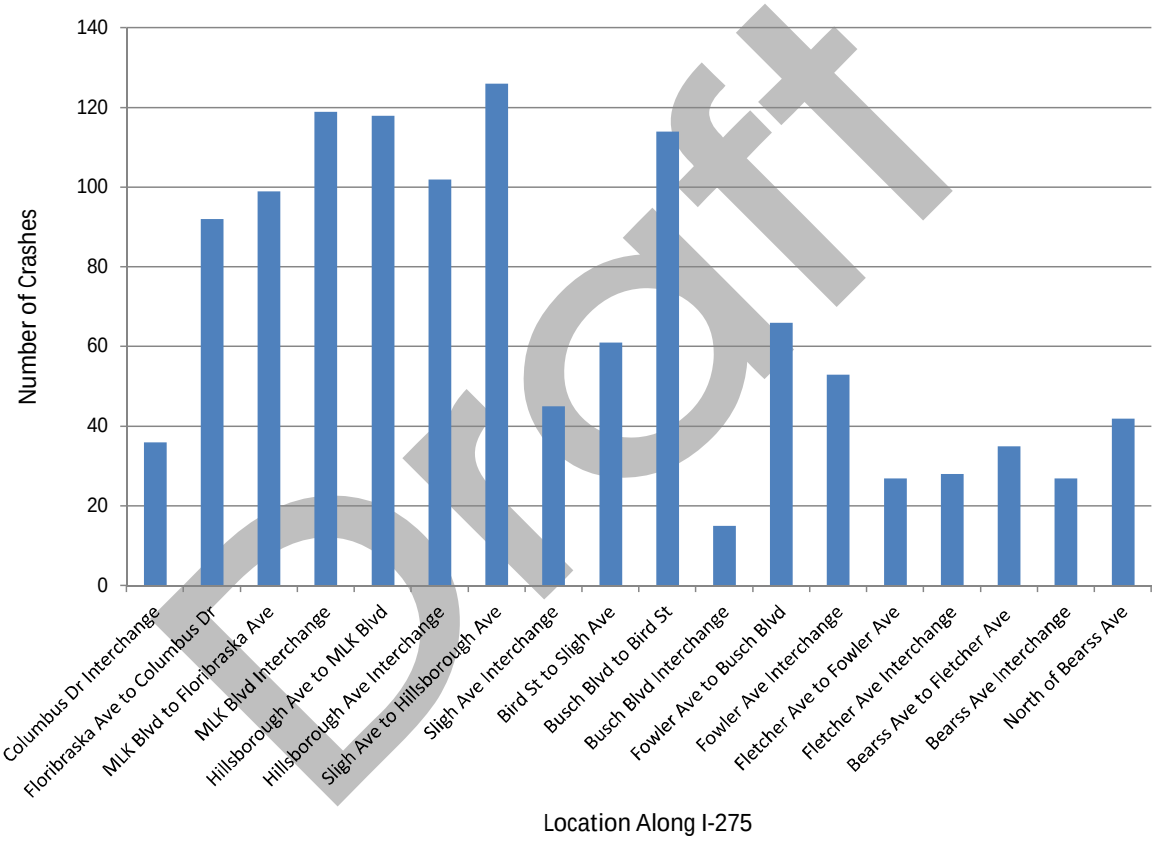


Figure 6: Total Crashes by Location on Southbound I-275



4.1.14 Existing Traffic and Level of Service

The complete analysis of existing traffic conditions can be found in the *Design Traffic Technical Memorandum* (July 2015).

The existing year 2012 AM and PM design hour traffic volumes for the I-275 mainline and ramps were reviewed. The existing year 2012 ramp terminal and cross street intersections turning movement volumes were estimated from the field collected turning movement counts consistent with the ramp design hour volumes. The ramp design hour traffic volumes were used as the control volumes in estimating the existing year 2012 ramp terminal intersection turning movement volumes. The turning movement volumes were smoothed to balance with the ramp volumes (control volumes) based on the field collected turning percentages. The estimated 2012 AM and PM peak hour traffic volumes were approved on September 25, 2014. The traffic volumes used in the simulation hours adjacent to the AM and PM peak hours were estimated by scaling down globally from the AM and PM peak hour volumes, based on the FDOT *Florida Traffic Online (2013)* website synopsis counts by using the weighted ratio of adjacent peak hour volumes to actual peak hour volumes.

The existing year 2012 design hour volumes were used in the CORSIM base year model development and calibration. The simulation analysis was conducted using the CORSIM (version 6.3) software. Calibration of traffic simulation models attempt to replicate local driving behavior and traffic patterns observed in the field and are used as the basis for development of models for analysis of future conditions. The CORSIM model was calibrated for both the AM and PM peak hours. The simulation analysis included the I-275 mainline travel lanes, ramp merge/diverge areas, and ramp terminal intersections.

The AM and PM peak hour CORSIM models developed for the I-275 project area were adequate to reflect existing year 2012 freeway traffic conditions. The CORSIM models were run ten times using different random seed numbers to account for potential variations between model runs. The results of the simulation were averaged out to ensure that the differences in the results were related to the geometric configuration of the network and control strategies, rather than the randomness of the simulation itself. Overall, multiple runs of the simulation prevent biases in the results due to the stochastic nature of the software. The results of the traffic simulation were used to estimate the traffic operations conditions at the freeway segments within the study area for the year 2012. Based on the results of the traffic simulation models, most of the freeway, ramp merge, and ramp diverge segments operate at lower speed and higher traffic density within the study area during AM and PM peak periods in each peak direction.

The existing year 2012 traffic conditions are summarized below.

I-275 Northbound – The overall I-275 northbound projected average speed is 51 mph for the design year 2040 PM peak hour traffic conditions within the study area. The projected speed is less than 40 mph for the I-275 northbound segments at Hillsborough Avenue on-ramp merge location for the existing year 2012 PM peak hour traffic conditions.

I-275 Southbound – The overall I-275 southbound projected average speed is 44 mph for the design year 2040 AM peak hour traffic conditions within the study area. The projected speed is less than 40 mph for the I-275 southbound segments at Fletcher Avenue, Fowler

Avenue and Busch Boulevard on-ramp merge locations for the design year 2040 AM peak hour traffic conditions.

4.1.15 Intelligent Transportation Systems

The existing Intelligent Transportation System (ITS) infrastructure along I-275 includes four closed circuit television (CCTV) cameras, three dynamic message signs (DMS), and 23 vehicle detectors on the I-275 northbound study segment. The detectors include both loop and microwave vehicle detector system (MVDS). There are eight CCTV cameras, four DMS signs, and 29 detectors on the I-275 southbound study segment. The detectors include both loop and MVDS. These ITS devices also include relevant camera lowering devices, encoders, cabling, uninterruptible power supplies, and structures; ITS cabinets with Ethernet communication equipment, media converters, device power supplies and surge suppression devices; conduit, fiber optic cable, and lightning protection system; and communication hubs at the I-275 and I-4 interchange, Busch Boulevard, and the I-275/I-75 Apex.

Two arterial dynamic message signs (ADMS) on Fowler Avenue east and west of I-275 were constructed and connected to I-275 fiber trunk line via wireless radio attached to the existing CCTV pole at the adjacent interchange. The ADMSs on MLK Boulevard located both east and west of I-275 were constructed and connected to the I-275 fiber trunk line via wireless radio attached to the existing CCTV pole at the adjacent interchange. New ITS facilities include two DMSs and 10 MVDS on I-275 from south of Hillsborough Avenue to north of Yukon Street.

4.1.16 Utilities

The existing utilities located within the project limits were identified as part of the PD&E Study. A list of the existing utility companies was obtained by utilizing the Florida Sunshine 811 design ticket. The list of existing utilities is summarized in **Table 11**.

Preliminary utility coordination was initiated to all utility agency owners (UAOs) through written communication to all of the utility contacts. The letters informed the UAOs of the PD&E Study and requested that they indicate their facilities on the concept plans and provide information regarding the location, type and size of their existing and proposed facilities within the project limits. The UAOs were requested to notify us if their facilities were located within the FDOT right of way or within an easement and to provide an order-of-magnitude estimate for relocating any facility affected by the proposed project.

Table 11: Utility Agency Owner Contacts

Utility Owner	Utility Owner	Address	Phone Number	Utility Type
AT&T	Steve Hamer (SDT for AT&T)	6304 Benjamin Rd Suite 501 Tampa, FL 33634	813-888-8300	Communications
Bright House Networks	Don Pullen	4145 S Falkenburg Rd Suite 4 Riverview, FL 33578	813-684-6100 Ext 34097	Communications
Fiberlight	Tim Green	6089 Johns Rd Suite 7 Tampa, FL 33634	813-877-7183	Communications
FPL Fibernet	Danny Haskett	9250 W Flagler St FN/GO Miami, FL 33174	305-552-2931	Communications
Level 3 Communications	Richard Simonton	380 S Lake Destiny Dr Orlando, FL 32810-622	407-462-0609	Communications
Verizon Business (formerly MCI)	Investigations@mci.com	2400 N Glennville Richardson, TX 75082	972-729-5005	Communications
XO Communications	Jeffrey Sbrocco	5904 Hampton Oaks Pkwy Suite A Tampa, FL 33610	813-301-4047	Communications
Frontier (formerly Verizon)	Michael Little	7701 E Telecom Pkwy Tampa, FL 33637	813-978-2161	Communications
TECO Distribution	Daniel Breznay	2200 E Sligh Ave Tampa, FL 33610	813-275-3428	Electricity
TECO Transmission	Daniel Breznay	2200 E Sligh Ave Tampa, FL 33610	813-275-3428	Electricity
Florida Gas Transmission	Joe Sanchez	2405 Lucien Wy, Suite 200 Maitland, FL 32751	407-838-7171	Natural Gas
TECO Peoples Gas	Chris Uria	1400 Channelside Dr Tampa, FL 33605	813-275-3731	Natural Gas
City of Tampa Water	Roy McKenzie	Tampa Water Division 306 E Jackson St Tampa, FL 33602	813-274-7104	Water
City of Tampa Wastewater	Jack Ferras	Tampa Wastewater Division 306 E Jackson St- 6N Tampa, FL 33602	813-274-8095	Wastewater

Fourteen existing UAOs were identified along the I-275 project corridor. The existing utilities include buried electric lines, copper and fiber optic cable, water, sewer, and reclaimed water mains. Depending on their location and depth, the proposed improvements may require adjustment of some of these existing utilities. The utility locations are summarized in **Table 12**. Also included are the estimated reimbursement costs if impacted.

Table 12: Utility Assessment – Existing Utilities and Relocation Costs

UAO	Type of Facility	Limits	Estimated Cost
AT&T	4" HDPE duct 1 duct in shared duct bank	South side of Sligh Ave North side of Bougainvillea Ave	$100,000
Bright House Networks	U/G Crossings O/H cables attached to TECO poles	Chelsea St Broad St Yukon St Linebaugh Ave Fletcher Ave Bearss Ave Throughout corridor on side streets, both sides of I-275	$119,577 Does not include aerial construction costs due to relocation of TECO poles
Fiberlight	E MLK Blvd – 1.25" Joint duct with Level 3 Bougainvillea Ave – two 1.5" within joint six 1.5" duct system	Crossing at MLK Blvd Crossing at Bougainvillea Ave	$25,000
FPL Fibernet	U/G FOC	Crossing I-275 on south side of Bearss Ave	$42,922
Level 3 Communications	Buried duct & FOC Buried duct & FOC	North & south sides of Bougainvillea Ave In CSXT R/W on east side of Nebraska Ave (under USDOT Permit—negotiate on a case by case basis depending on design)	$50,000 (Bougainvillea Ave Crossing)
Verizon Business (formerly MCI)	Buried FOC	CSXT R/W Bougainvillea Ave	$100,000
XO Communi-cations	Joint 16-way duct bank system 8—XO/FPL Fibernet 8—Level 3	Crossing I-275 on south side of Bougainvillea Ave	$60,000

Table 12: Utility Assessment – Existing Utilities and Relocation Costs (continued)

UAO	Type of Facility	Limits	Estimated Cost
Frontier (formerly Verizon)	9-4" conduit copper & FOC 7-4" conduit copper & FOC 2 buried cables 9-4" terracotta w/ FOC & copper cable 4-4" conduit 4-4" conduit w/ FOC & copper cable Buried copper cables & 1-1.25" HDPE w/ FOC 4-4" conduit w/ FOC & copper 6-4" PVC with 2-FOC & 4 copper cables 3-1.25" HDPE with 3-FOC 4-4" conduit 2 BT 1 BT	Crossing at Osborne Ave Crossing at Hillsborough Ave Crossing at Central Ave Crossing at Hanna Ave Crossing at Waters Ave Crossing at Fairbanks St Between Wood St & Fairbanks St Crossing at Yukon St Crossing at Busch Blvd Crossing at Bougainvillea Ave Crossing at Fowler Ave Crossing at Fletcher Ave Crossing at Bearss Ave	$15,000,000
TECO Distribution	13 Kv O/H crossings	North & south of Hillsborough Ave Bird St North of Waters Ave North of Bougainvillea Ave South of Fletcher Ave (double-conductor) Fletcher Ave	$700,000
TECO Transmission	138 Kv O/H 138 Kv O/H 69 Kv O/H 69 Kv O/H Fern St Sub-Station	Crossing at Hanna Ave Crossing north of Sligh Ave Crossing at Waters Ave Crossing south of Fletcher Ave	Cost depends on design and what work would be required. Could not provide one at this time.

Table 12: Utility Assessment – Existing Utilities and Relocation Costs (continued)

Florida Gas Transmission	14" natural gas GM	Crossing at Fletcher Ave	Global Settlement Agreement in place. Depends on impacts. Would need specific design impacts to provide cost and possible right of way
TECO Peoples Gas	2" & 4" steel GM 2" steel GM 2" steel GM 2" SEP GM	Crossing at Hanna Ave Crossing at Broad St Crossing north of Broad St Crossing north of Waters Ave	$131,500 – installation; $40,000 – removal/grout in place.
City of Tampa Water	12" WM 30" WM 12" & 42" WM 6" WM 8" & 24" WM 2" & 8" WM 8" steel-cased WM 6" WM 8" steel-cased WM 16" WM 12" WM	Crossing at Hillsborough Ave East side of I-275 from Osborne Ave to Hillsborough Ave Crossing at Hanna Ave Crossing at Broad St Crossing at Bird St Crossing at Waters Ave Crossing north of Busch Blvd Crossing at Bougainvillea Ave Crossing north of Bougainvillea Ave Crossing at Fowler Ave Crossing at Fletcher Ave	$2,907,237
City of Tampa Wastewater	Gravity Main Manholes 2" & 8" CI WW Gravity Main	Crossing at Hanna Ave East & west of I-275 on Broad St Crossing at Broad St Crossing at Waters Ave	$8,588,957
		Total	**$27,865,193**

Acronyms: HDPE=High Density Polyethylene, U/G=underground, O/H=overhead, FOC=fiber optic cable, PVC=Polyvinyl Chloride, BT= buried telephone, Kv=Kilovolts, GM=gas main, WM=water main, CI WW=cast iron wastewater

4.1.17 Pavement Conditions

A pavement survey was conducted within the project corridor in 2012. Each section of pavement is rated for cracking and ride on a scale of 0 to 10, with 0 being the worst and 10 being the best. A rating of 6.0 or less is deemed deficient. Except for the northern 0.5 mile, the majority of pavement within the project limits is concrete or rigid pavement.

Table 13 identifies the existing (year 2012) and projected (year 2019) pavement conditions for this portion of I-275. The existing pavement is generally in good condition.

Table 13: Pavement Conditions Survey

Begin Milepost Begin Limit	End Milepost End Limit	Condition Ratings	Year 2012 Left / Right	Year 2019 (Projected)
0.816 North of Floribraska Avenue	2.600 North of Hillsborough Avenue	Cracking	9.1 / 8.9	- / -
FPID # 258642-1-52-01 Contractor Unknown (2007)		Ride	7.8 / 8.0	- / -
2.265 North of Osborne Avenue	4.771 North of Yukon Street	Cracking	9.1 / 8.9	- / -
FPID # 258660-1-52-01 Contractor John Carlo Inc. (2007)		Ride	7.8 / 8.0	- / -
4.771 North of Yukon Street	7.281 North of 127th Avenue	Cracking	8.8 / 9.0	- / -
Contractor Unknown (2004)		Ride	7.4 / 7.5	- / -
7.281 North of 127th Avenue	8.569 North of Fletcher Avenue	Cracking	8.8 / 9.0	- / -
FPID # 258412-1-52-01 (2003) Contractor Unknown		Ride	7.4 / 7.5	- / -
8.569 North of Fletcher Avenue	9.402 North of US 41	Cracking	10.0 / 10.0	7.0 / 9.5
Contractor Unknown (2007)		Ride	7.8 / 7.8	7.9 / 8.0

Notes: FPID #'s from Straight Line Diagram.

Source: FDOT's Interstate System Pavement Condition Forecast Report, extracted 02/09/15.

Flexible Pavement

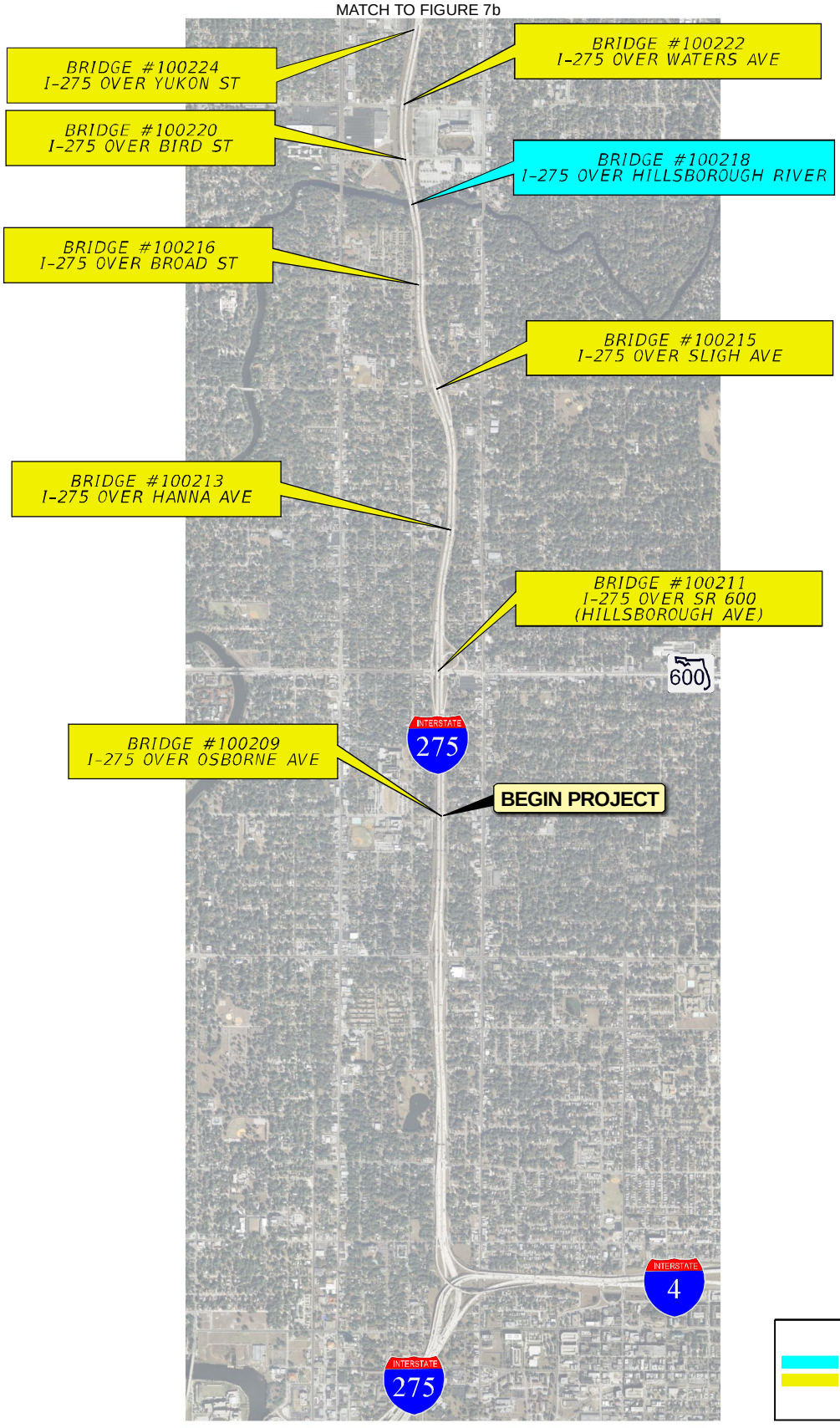
4.2 Existing Bridges and Structures

There are 18 bridges along the I-275 corridor. Existing bridge information is provided in **Table 14**; and the bridge locations are shown in **Figure 7 (a and b)**. Seventeen bridges span roadways, two bridges span both a roadway and railroad tracks, and two bridges span waterways. There are also 13 noise barriers along the corridor. The existing bridge typical sections are shown in **Figure 8** through **Figure 13**.

4.2.1 Type of Structure

Mainline bridges carry I-275 over other roadways, railroads, and water bodies. The superstructures for the existing mainline bridges consist of cast-in-place concrete slabs supported on steel girders or American Association of State Highway and Transportation Officials (AASHTO) beams. All bridge type substructures consist of various different configurations including: multi-column piers, pile bents, and drilled shaft bents.

MATCH TO FIGURE 7b



Not to Scale

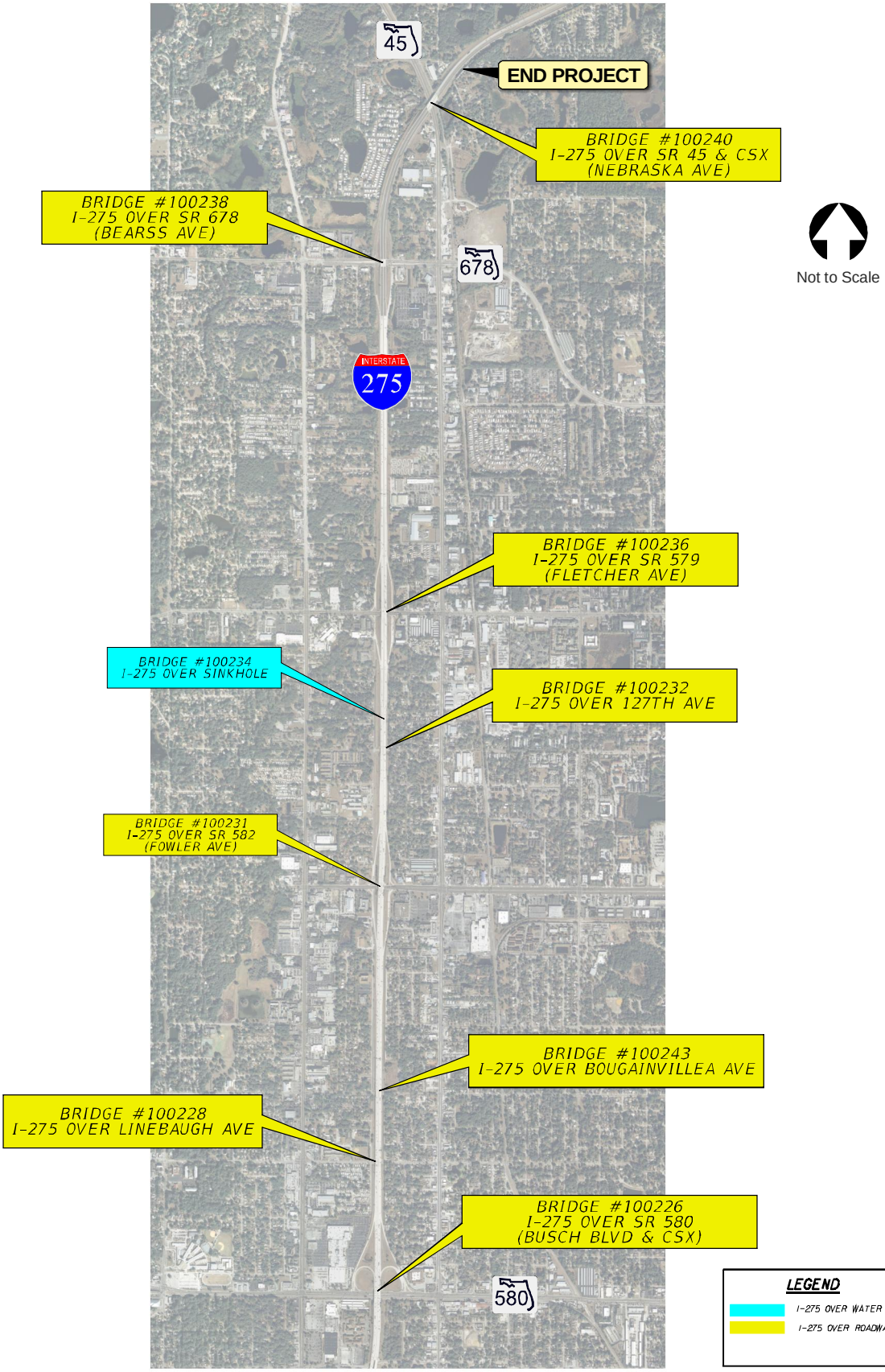
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

EXISTING STRUCTURES LOCATIONS

Figure No.
7a



Not to Scale

MATCH TO FIGURE 7a

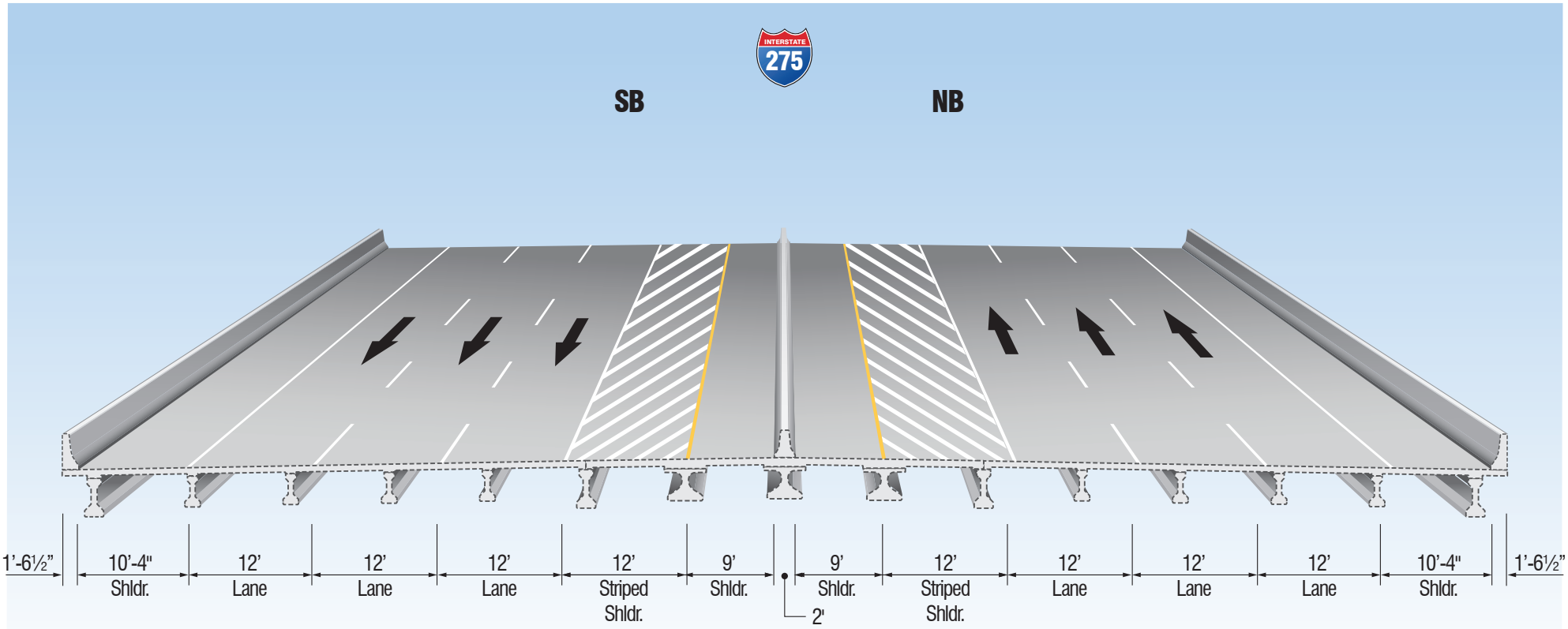
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

EXISTING STRUCTURES LOCATIONS

Figure No.
7b



NB=Northbound, SB=Southbound

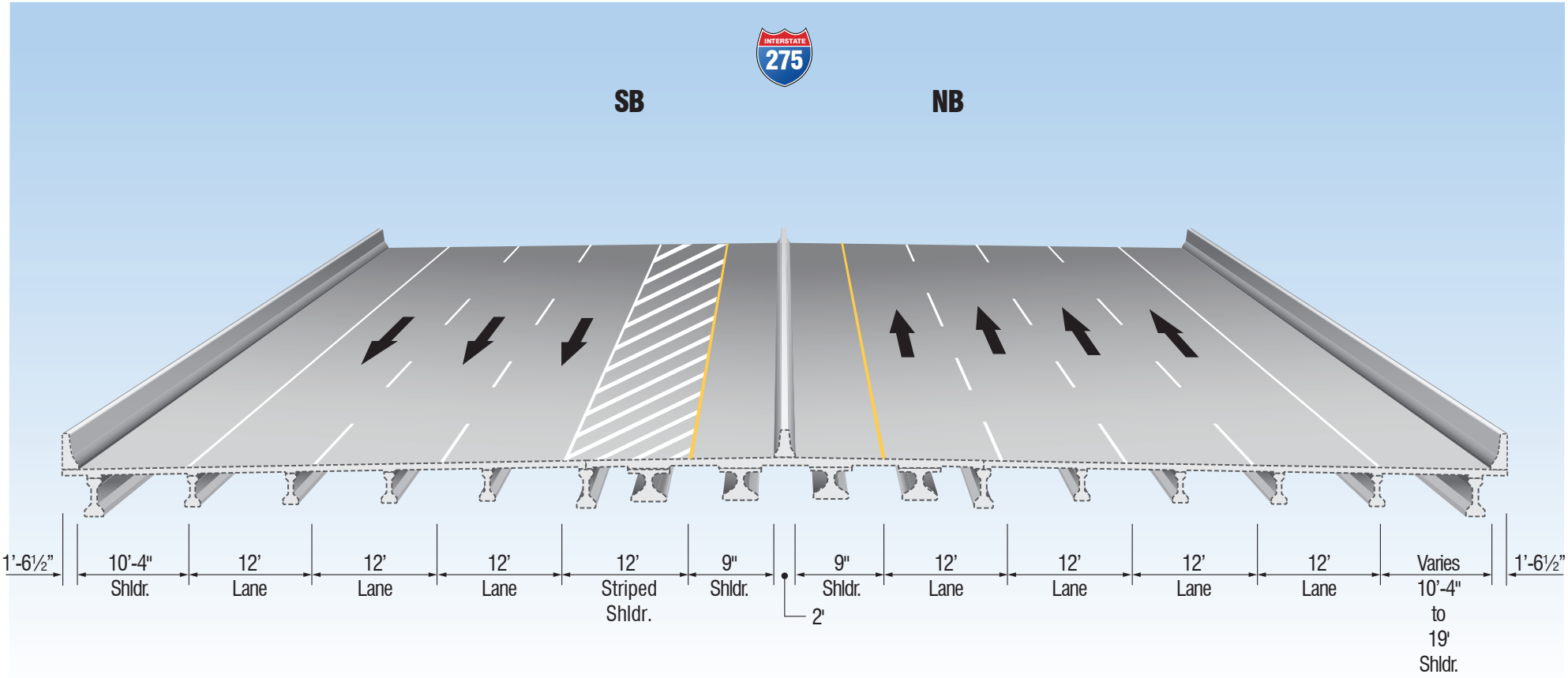
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 OVER OSBORNE AVENUE EXISTING BRIDGE TYPICAL SECTION

Figure No.
8



I-275 Typical Section over:

Hillsborough Avenue - Bridge No. 100211

Hanna Avenue - Bridge No. 100213

Sligh Avenue - Bridge No. 100215

Broad Street - Bridge No. 100216

NB=Northbound, SB=Southbound

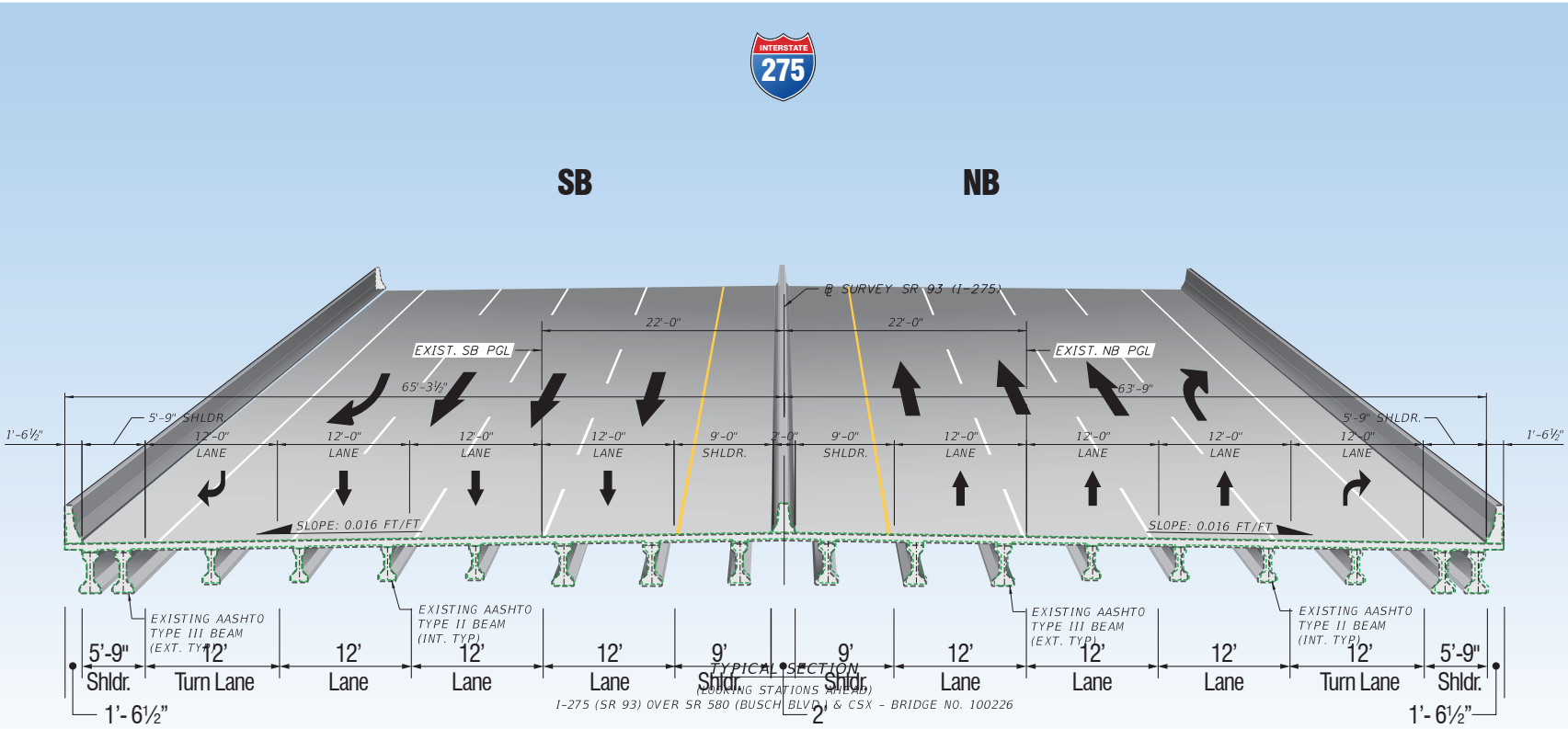
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

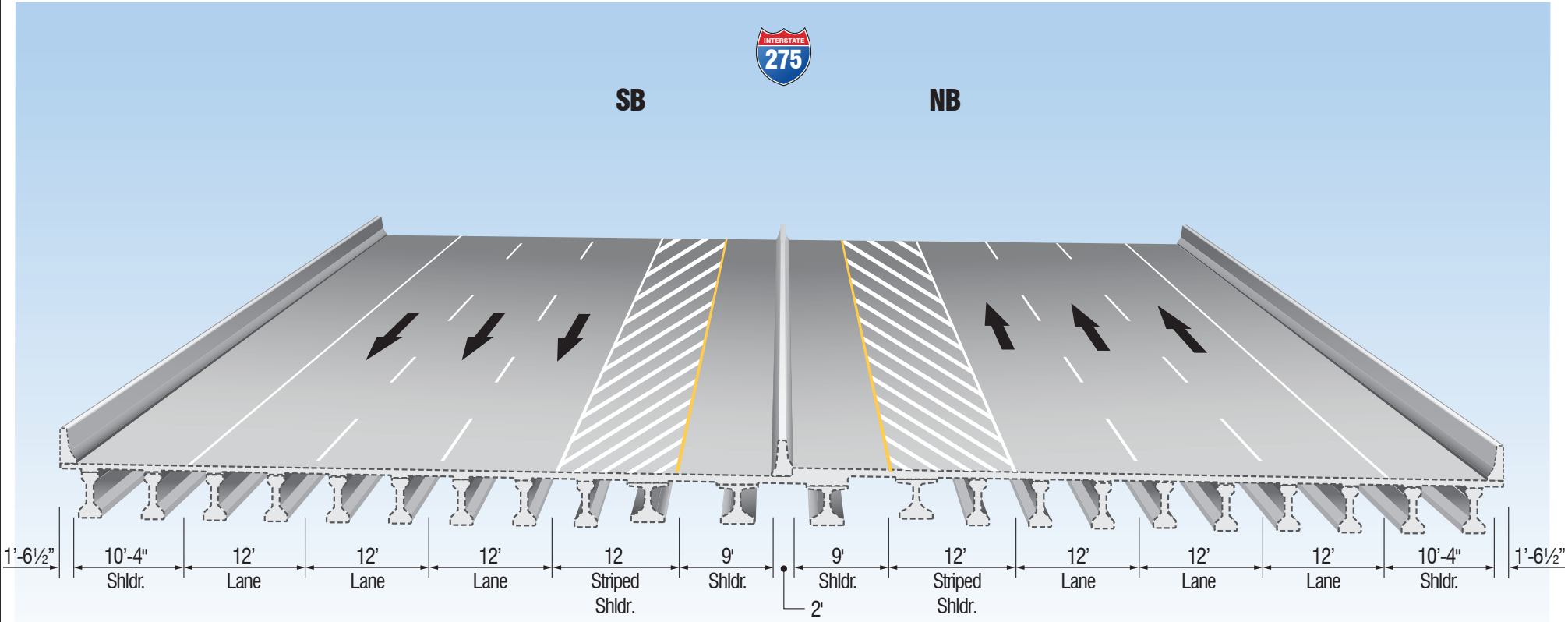
WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 Existing Bridge Typical Section (bridges from Hillsborough Avenue to Broad Street)

Figure No.
9



NB=Northbound, SB=Southbound



I-275 Typical Section over:

Bird Street - Bridge No. 100220
Waters Avenue - Bridge No. 100222
Yukon Street - Bridge No. 100224

NB=Northbound, SB=Southbound

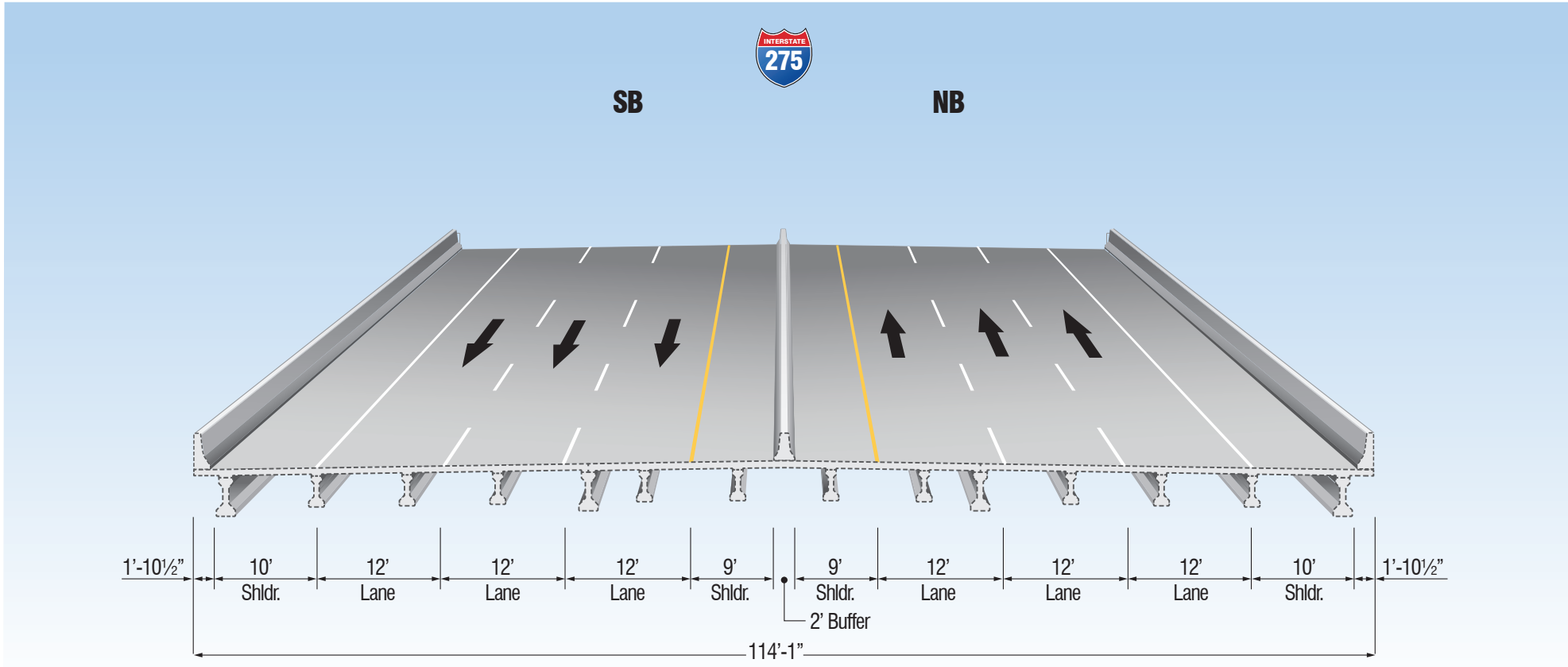
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 Existing Bridge Typical Section (bridges from Bird Street to Yukon Street)

Figure No.
11



I-275 Typical Section over:

Linebaugh Avenue - Bridge No. 100228
Bougainvillea Avenue - Bridge No. 100243
Fowler Avenue - Bridge No. 100231
127th Avenue - Bridge No. 100232
Fletcher Avenue - Bridge No. 100236
Bearss Avenue - Bridge No. 100238
Nebraska Avenue and CSX RR - Bridge No. 100240

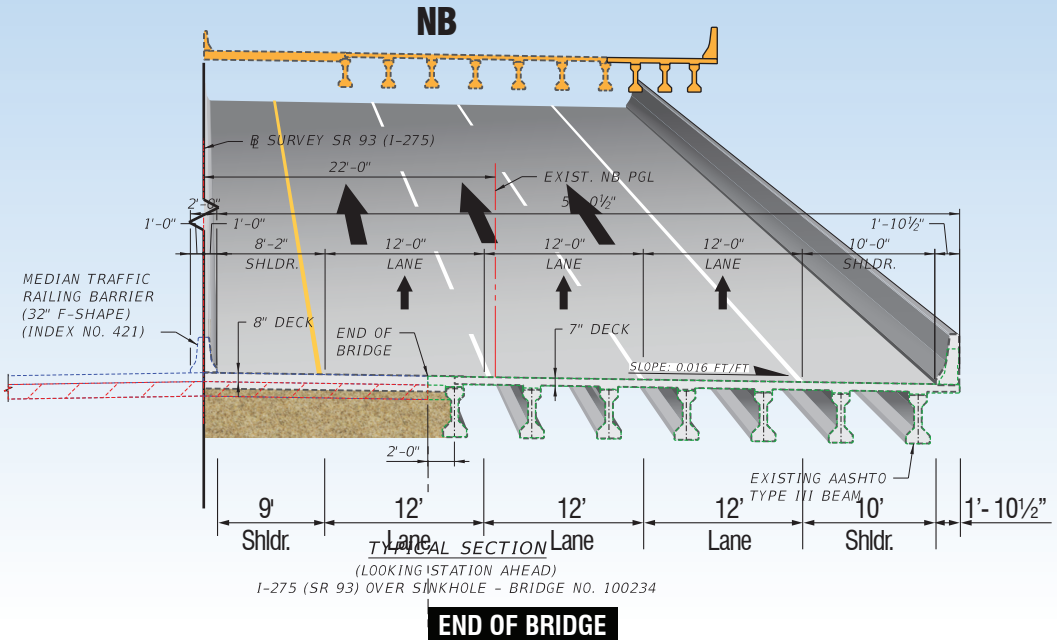
NB=Northbound, SB=Southbound

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 Existing Bridge Typical Section (bridges from Linebaugh Avenue to Nebraska Avenue)

Figure No.
12



NB=Northbound, SB=Southbound

4.2.2 Condition

Upon biannual bridge inspections, all bridges are given ratings to identify whether a bridge is structurally deficient or functionally obsolete. Sufficiency ratings range from 0 to 100, and they are used to indicate whether a bridge is sufficient to remain in service. **Table 14** shows the Sufficiency Ratings for all the bridges within the I-275 project corridor.

The existing bridges have Sufficiency Ratings ranging from 71.2 to 95.9 with Operating Load Rating Factors greater than 1.30 and Inventory Load Rating Factors greater than 1.0 for all but one bridge (Busch Boulevard and CSX railroad). Bridges with Operating Load or Inventory Load Ratings lower than 0.95 can be posted with vehicle weight limits. The replacement of bridges that have low Sufficiency or Load Ratings are addressed on a case-by-case basis.

4.2.3 Horizontal and Vertical Clearances

Fourteen of the 16 bridges over roadways do not meet the required minimum vertical clearance of 16.5 feet. The I-275 bridges over Busch Boulevard and US 41/Nebraska Avenue also span railroads. They meet the minimum vertical clearance of 16.5 feet over roadways, but do not meet the required minimum vertical clearance of 23.5 feet over railroads.

4.2.4 Span Arrangement

The span arrangement for each bridge is shown in **Table 14**.

4.2.5 Historical Significance

The Cultural Resources Assessment Report identified one bridge within the project (Bearss Avenue) with a historic construction date of 1964. The Advisory Council on Historic Preservation (ACHP) passed the Section 106 exemption for the majority of the interstate system in 2005, and it was agreed upon by the State of Florida. The I-275 corridor and its bridges are part of the exempted portions, therefore the Bearss Avenue bridge is exempt from consideration as a historic property.

4.2.6 Channel Impacts

The existing low member elevation is 24.7 feet and the Design High Water (DHW) is 9.3 feet. The Mean High Water (MHW) (tidal) is 1.6 feet and the Mean Low Water (MLW) (tidal) is 0.4 feet. There is scour in this area of the Hillsborough River, but the bridge is not scour critical.

Table 14: Existing Bridge Summary

Inter-change	Approx. Milepost	Location Description (Structures from South to North)	Structure Number	Year Built Year Widened	Structure Type	Skew Angle (Degrees)	Structure Length (feet)	Spans	Span Lengths (feet)	Width (ft)	Vertical Clearance (feet)	Horizontal Clearance (feet)	Structural Ratings		Date of Last Inspection	Sufficiency Rating
													Operating	Inventory		
	1.931	I-275 Over Osborne Avenue	100209	1966 2006 2010	AASHTO Type II, III & Florida I-Beam 36	No Skew	140.00	3	38.0, 64.0, 38.0	138.08	14.7	11.5	1.37	1.26	8/16/2012	85.6
	2.432	I-275 Over Hillsborough Avenue (SR 600)	100211	1966 2010	AASHTO Type II, III & Florida I-Beam 36	No Skew	204.00	4	42.0, 54.0, 66.0, 42.0	150.58	15.4	3.7	1.38	1.07	8/16/2012	84.9
	2.937	I-275 Over Hanna Avenue	100213	1966 2010	AASHTO Type II, III & Florida I-Beam 36	82, 83, 84, 85	145.75	3	41.0, 63.8, 40.9	138.08	14.4	14.1	1.38	1.06	7/19/2012	92.2
	3.444	I-275 Over Sligh Avenue	100215	1967 2006 2010	AASHTO Type II, III & Florida I-Beam 36	72, 72, 72, 72, 72	186.50	4	40.4, 52.0, 53.7, 40.4	138.08	14.5	4.9	1.36	1.05	7/31/2012	95.0
	3.832	I-275 Over Broad Street	100216	1967 2010	AASHTO Type II, III & Florida I-Beam 36	No Skew	134.86	3	33.4, 68.0, 33.4	138.08	13.9	10.2	1.36	1.22	7/19/2012	91.1
	4.100	I-275 Over Hillsborough River	100218	1967 2010	AASHTO Type III	79, 79, 79, 79, 79, 79	300.00	5	60, 60, 60, 60, 60	163.08	Water	Water	1.52	1.17	7/31/2012	76.3
	4.276	I-275 Over Bird Street	100220	1967 2010	AASHTO Type IV, II & Florida I-Beam 45	81, 81, 83, 83	173.51	3	37.25, 99.0, 37.25	139.75	14.3	8.0	1.34	1.19	7/11/2012	90.1
	4.464	I-275 Over Waters Avenue	100222	1967 2010	AASHTO Type II, III & Florida I-Beam 36	87, 86, 85, 85	146.42	3	37.5, 71.4, 37.5	139.75	15.5	10.0	1.46	1.03	7/10/2012	91.4
	4.719	I-275 Over Yukon Street	100224	1967 2010	AASHTO Type II, III & Florida I-Beam 36	59, 60, 60, 61, 62	257.92	4	70.0, 70.0, 76.7, 41.3	139.75	14.1	15.0	1.38	1.07	7/10/2012	92.4
	4.979	I-275 Over Busch Boulevard (SR 580) & CSX Railroad	100226	1967 2001	AASHTO Type III & IV	No Skew	273.00	4	64, 94, 65, 50	131.80	24.1 22.5 (RR)	5.5 11.6 (RR)	1.31	0.78	7/9/2012	71.2
	5.480	I-275 Over Linebaugh Avenue	100228	1967 2002	AASHTO Type II & III	No Skew	136.18	3	34.4, 67.25, 34.5	113.77	14.0	17.3	2.23	1.34	7/11/2012	78.0
	5.734	I-275 Over Bougainvillea Avenue	100243	1966 2002	AASHTO Type II & III	No Skew	133.00	3	33, 67.17, 32.83	113.77	14.4	18.4	2.23	1.34	5/19/2014	86.3
	6.492	I-275 Over Fowler Avenue (SR 582))	100231	1966 2001	AASHTO Type II & III	88, 88, 88, 88	143.75	3	34.75, 74.25, 34.75	114.00	15.4	9.0	2.06	1.69	5/19/2014	95.0
	7.006	I-275 Over 127th Avenue	100232	1967	AASHTO Type II & III	No Skew	130.33	3	31.5, 67.33, 31.5	41.70	15.4	8.0	1.94	1.72	2012	94.1
	7.124	I-275 Northbound Over Sinkhole	100234	1966 2002	AASHTO Type III	No Skew	76.90	1	76.9	56.80	Water	Water	2.03	1.78	5/19/2014	90.1
	7.510	I-275 Over Fletcher Avenue (SR 579))	100236	1966 2002	AASHTO Type II & III	No Skew	140.08	3	32, 75.08, 32	114.00	15.4	3.6	1.72	1.50	5/23/2014	94.0
	8.797	I-275 Over Bearss Ave (SR 678)	100238	1964 2002	AASHTO Type II & III	88, 88, 88, 88	152.50	3	39, 74.5, 39	114.00	14.4	8.2	1.94	1.72	5/23/2014	95.9
	9.402	I-275 Over Nebraska Avenue (SR 45) & CSX Railroad	100240	1964 2002	AASHTO Type III	52, 52, 52, 52, 52, 52, 52,	330.00	6	65.5, 54.5, 57.5, 49.0, 49.0, 54.5	102.16	23.6 22.6 (RR)	8.0 17.2 (RR)	1.86	1.12	5/23/2014	84.8

Key

Interchange Area

Sources:

1) Straight Line Diagram Inventories from FDOT District Seven

2) As-Built Plans and Bridge Inspection Reports from FDOT (various years)

Legend:

I-275 bridges over roadways

I-275 bridges over water bodies

Does not satisfy FDOT minimum vertical clearance requirements

Acronyms: N/A=Not Available, AASHTO=American Association of State Highway and Transportation Officials

4.2.7 Geotechnical Information

Soil boring information was not obtained for the assessment of bridges in this report. The environmental classification per bridge plans vary between slightly aggressive to extremely aggressive. For widening purposes, it is assumed that the widening can be accomplished by matching existing substructure foundations with either piles or drilled shafts. The existing soil boring information at the bridge sites can be found in the existing bridge plans.

4.2.8 Bridge Opening

The project limits do not contain any movable structures and therefore this section is not applicable to the project.

4.2.9 Ship Impact

The I-275 bridge over the Hillsborough River crosses a navigable waterway. This bridge is located downstream of the Rowlette Park dam and is in a tidal zone. There is no navigation channel at the bridge. No ship impact is included in the design of this bridge.

4.2.10 Other Existing Structures

The I-275 corridor contains 13 existing noise barriers. These are described in **Table 15**. The locations of the noise barriers are shown in **Appendix B**.

4.3 Environmental Characteristics

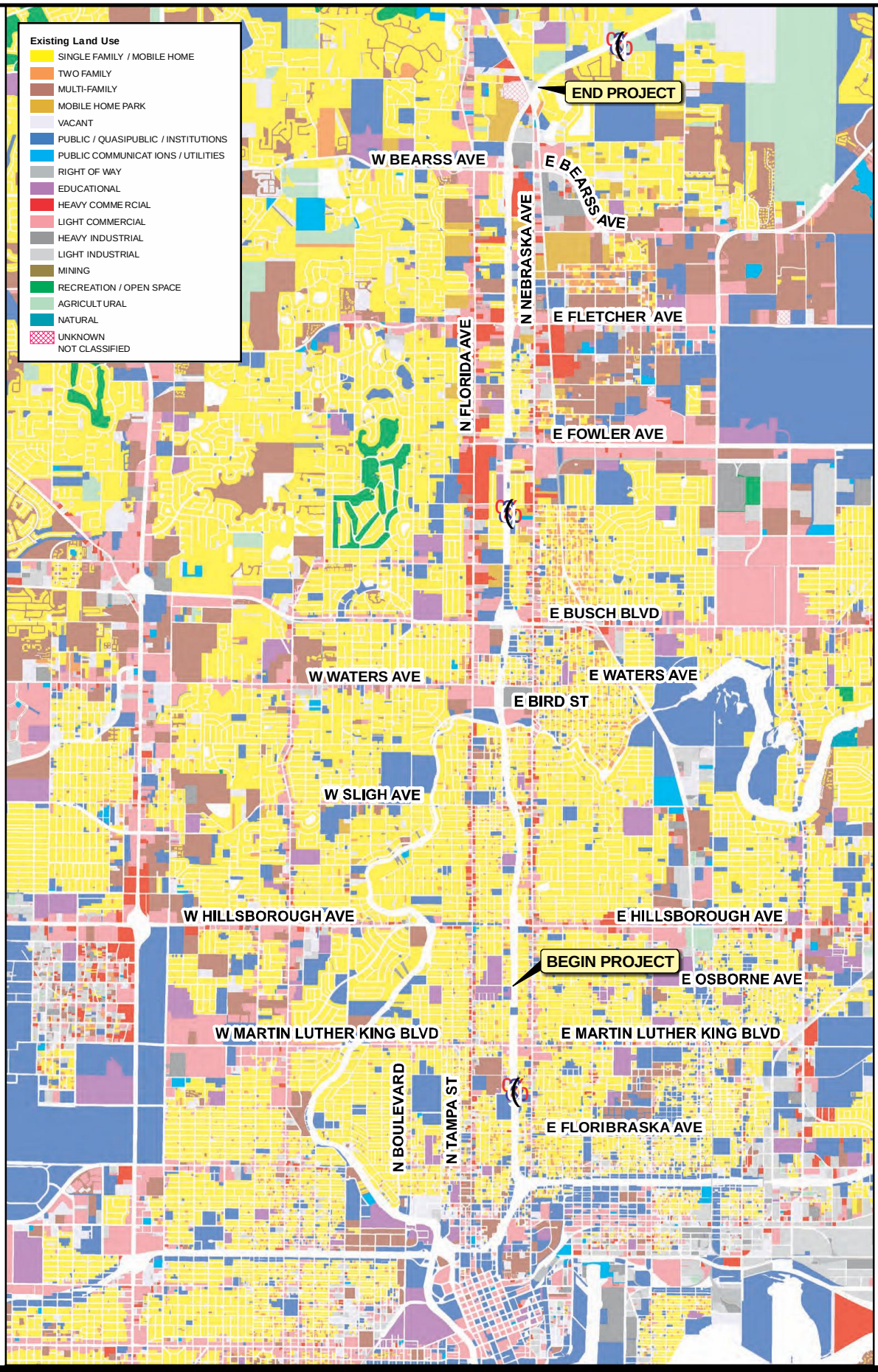
4.3.1 Land Use

Within 500 feet of the corridor, the major existing land uses consist of: high density residential, transportation, commercial/services, medium density residential, and public/semi-public. The area is densely developed with very little vacant land. The existing land use is shown in **Figure 14**. The southern section of the project between Osborne Avenue and Fowler Avenue lies within the city limits of the City of Tampa. The northern section of the project, from north of Fowler Avenue to north of North Nebraska Avenue, lies within unincorporated Hillsborough County.

The City of Tampa's *Comprehensive Plan* (April 2008) identifies both Florida Avenue and Nebraska Avenue as transit emphasis corridors with mixed use corridor villages that are suitable for redevelopment and intensification. The City of Tampa is investing in infrastructure improvements in the Tampa Community Redevelopment Area (CRA) between Columbus Drive and Hillsborough Avenue to encourage redevelopment in the area. The *East Tampa CRA Strategic Action Plan* (August 2011) recognizes Nebraska Avenue as a commercial corridor and transit corridor, and includes improvements to increase pedestrian safety for and enhance aesthetics.

Table 15: Existing Noise Barriers Along I-275

Barrier Identification Number	Location	Barrier Type	Height (feet)	Length (feet)	2005 Design Project (Metric Stationing)		2015 PD&E Study	
					Begin Station	End Station	Begin Station	End Station
B4R Segment 1	East of I-275 (North of Busch Blvd/South of Linebaugh Ave)	Ground Mounted	18 to 22	1,213	181+60	185+29	1962+45.62	1974+34.78
B4R Segment 2	East of I-275 (North of Linebaugh Ave/South of Bougainvillea Ave)	Ground Mounted	22	1,253	185+50	189+09	1975+18.68	1986+78.68
B5	East of I-275 (South of Fowler Ave)	Ground Mounted	16 to 18	2,964	191+00	199+89	1993+24.22	2022+39.41
B6	West of I-275 (South of Linebaugh Ave/North of Busch Blvd)	Ground Mounted	16 to 22	1,165	181+67	185+20	1962+57.86	1974+14.28
B7S	West of I-275 (South of Linebaugh Ave/North of Bougainvillea Ave)	Shoulder	8 to 14	1,686	184+85	190+05	1973+02.28	1990+10.73
B8	West of I-275 (North of Bougainvillea Ave/South of Fowler Ave)	Ground Mounted	18 to 22	1,582	189+62	194+44	1988+65.39	2004+55.38
B10/B11R South Segment	East of I-275 (North of Fowler Ave & South of 127th Ave)	Ground Mounted	20 to 22	1,080	35+16	38+48.5	2043+60.29	2054+40.29
B11R North Segment/B12	East of I-275 (North of Fowler Ave & North of 127th Ave)	Ground Mounted	18 to 22	1,510	38+69.6	40+60	2055+20.29	2070+20.08
B14	West of I-275 (North of Fowler Ave)	Ground Mounted	14 to 16	833	203+72	206+26	2035+07.70	2043+30.22
B16R	West of I-275 (South of Fletcher Ave)	Ground Mounted	18 to 22	1,719	38+76	43+90	2055+30.50	2072+18.92
B18	East of I-275 (North of Fletcher Ave)	Ground Mounted	16 to 20	1,242	47+26	51+00	2083+25.46	2095+61.46
B19	East of I-275 (South of Bearss Ave)	Ground Mounted	16	1,571	56+66	61+13	2114+07.82	2128+71.94
B2S2 PD&E Section 2	West of I-275 (North of Bearss Ave)	Ground Mounted	18 to 22	2,223	70+28	76+82	2158+73.98	2179+85.51



Not to Scale

I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

EXISTING LAND USE

Figure No.
14

Improvements to the Nebraska Avenue corridor will be guided by the City's *Nebraska-Hillsborough Corridor Master Plan* (September 2013), which was developed as a component of the City's InVision Tampa effort. The *Corridor Master Plan* includes recommendations for improving Nebraska Avenue, which generally focus on improving the corridor's interface with the surrounding neighborhoods.

The City of Tampa's Enterprise Zone is comprised of several geographic areas (some of which are within the project study area) that have been targeted by the State of Florida for economic development. The program promotes community revitalization and job creation within the Enterprise Zone through tax credits and refunds.

4.3.2 Cultural Features

A *Cultural Resource Assessment Survey* (CRAS) (September 2015) was prepared as part of the PD&E Study. The objective of the survey was to identify cultural resources within the project Area of Potential Effect (APE) and assess their eligibility for listing in the National Register of Historic Places according to the criteria set forth in 36 Code of Federal Regulations Section 60.4. The ETDM Programming Screen Summary Report for the project assigned a Moderate Degree of Effect for Historic and Archaeological Resources (ETDM Project #13854; FDOT 2014). The Environmental Screening Tool (EST) Geographic Information System (GIS) analysis identified 109 historic standing structures, four resource groups, and 11 archaeological sites within a 500-foot buffer of the project corridor. The EST GIS analysis identified four National Register–listed resources within a 500-foot buffer distance: Seminole Heights Historic District (8HI3294), Hampton Terrace Historic District (8HI6821), Captain William Parker Jackson House (8HI11581), and the William E. Curtis House (8HI3279). The Summary Report also specifically notes the presence of Tampa Fire House #7, an unrecorded historic building adjacent to the east side of I-275.

The CRAS resulted in the identification of 264 historic resources, 28 of which were previously recorded. There are a total of eight historic resources that are either National Register–listed or are considered National Register–eligible based on the current survey. Seminole Heights Historic District (8HI3294) and Captain William Parker Jackson House (8HI11581) are currently listed in the National Register. A segment of the T&GC Railroad/CSX Railroad (8HI10243) was previously documented in an area outside the current project APE, and was determined ineligible for inclusion in the National Register. However, because the segment within the current project APE retains its historic integrity, it is considered eligible for inclusion in the National Register based on the current survey. The five remaining historic resources have not been evaluated by SHPO, but all are considered eligible for listing in the National Register. An additional 23 historic resources within the current project APE that are not individually eligible are considered contributing to the Seminole Heights Historic District.

In addition to their National Register–listed status, Captain William Parker Jackson House (8HI11581) and Seminole Heights Historic District (8HI3294) are also locally designated historic resources within the City of Tampa. The Sulphur Springs Water Tower and the Sulphur Springs Gazebo, both of which are contributing features within the National Register–eligible Sulphur Springs Park Resource Group (8HI609), have been designated as local landmarks by the City of Tampa. A total of 233 historic resources are considered ineligible for inclusion within the National Register individually or as part of a historic district.

No newly recorded archaeological sites were identified during the current survey. One previously recorded archaeological site, Red Leaf (8HI5631), was identified within the current archaeological APE during past survey work. This site consists of low density lithic scatter and was previously determined by SHPO to be ineligible for listing in the National Register in 1995.

4.3.3 Natural and Biological Features

The natural and biological features in the project area are summarized below. Detailed information on the wetlands, surface waters, protected species, impact analyses, permitting and other pertinent information is provided in the *Draft Wetland Evaluation and Biological Assessment Report* (May 2015).

4.3.3.1 Wetlands

Pursuant to Presidential Executive Order 11990 entitled "Protection of Wetlands," (May 23, 1977) the United States Department of Transportation (USDOT) developed a policy, Preservation of the Nation's Wetlands (USDOT Order 5660.1A), dated August 24, 1978. In conjunction with this policy, as well as Part 2, Chapter 18 – Wetlands of the *PD&E Manual*, project alternatives were assessed to determine potential wetland impacts associated with construction of the proposed improvements.

On July 15, 2014, 13.71 acres of wetlands and 3.22 acres of surface waters were identified and mapped along the project corridor which crosses the Hillsborough River. Four wetlands were identified within the project right of way. Surface waters consist primarily of ditches that are located within the existing right of way. They have been previously disturbed by roadway construction, maintenance activities, and the invasion of nuisance and exotic species. The Uniform Mitigation Assessment Methodology (UMAM) analysis was completed for the identified wetlands.

Wetlands and surface waters that the proposed improvements will impact consist primarily of systems that are located within the project's right of way that have been disturbed through previous roadway construction and land use activities. Final determination of jurisdictional boundaries, in addition to mitigation requirements, will be coordinated between FDOT and permitting agencies during final design of the project.

4.3.3.2 Protected Species

This project was evaluated for impacts to wildlife and habitat resources, including protected species, in accordance with 50 Code of Federal Regulations Part 402 of the Endangered Species Act (ESA) of 1973, as amended, Chapters 5B-40: Preservation of Native Flora of Florida and 68A-27 Florida Administrative Code (FAC) Rules Relating to Endangered or Threatened Species, and Part 2, Chapter 27 - Wildlife and Habitat Impacts of the *PD&E Manual*.

Field surveys and database searches for protected species were conducted on July 15 and December 19, 2014. Three federally protected species, the wood stork (*Mycteria americana)*, the eastern indigo snake (*Drymarchon corais couperi*), and the West Indian manatee (*Trichechus manatus latirostris*) were determined to have likelihood for using project habitats. The bald eagle (*Haliaeetus leucocephalus*), which receives protection

under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA), and the osprey (*Pandion haliaetus*), which receives protection under the MBTA, also have the potential to occur within the project area. No listed species were observed within the project corridor during the field surveys.

The project corridor is located within the Core Foraging Area (CFA) of 11 documented wood stork colonies. The project "may affect but is not likely to adversely affect" this species.

The eastern indigo snake is designated as threatened by the US Fish and Wildlife Service (USFWS). There is limited suitable habitat for this species near the highly urbanized project corridor and FDOT will commit to the precaution measures. Therefore the project "may affect but is not likely to adversely affect" this species.

The Florida sandhill crane (*Grus canadensis pratensis*) is listed as threatened by the Florida Fish and Wildlife Conservation Commission (FWC). No sandhill cranes were observed in the project corridor. Current FWC protection measures provide protection for nesting sandhill cranes; no construction activities may occur within 125 meters of nest sites during the breeding season (January through August).

The gopher tortoise is listed as threatened by the FWC and is a candidate species for listing by the USFWS. FDOT will commit to conducting comprehensive surveys for gopher tortoises and their burrows during the project's final design phase. Until field surveys indicate otherwise, it has been determined that the project "may affect but is not likely to affect" the gopher tortoise.

In addition to faunal surveys, appropriate habitats were surveyed for protected flora. No federal or state-listed plant species were observed within the project area. Based on the results of the floral surveys, the project is not anticipated to adversely affect protected plant species.

Commitments to protect these species include but are not limited to protection measures employed during design and construction phases. Standard operating measures such as providing compensatory mitigation measures for impacts to foraging habitat and resurveying of suitable habitat areas prior to construction will also provide protection for species and habitat. If protected species are identified, coordination with the USFWS, FWC and/or the FDACS - Division of Plant Industry will be initiated to determine permit requirements or modifications to construction activities that may be required.

4.3.3.3 Permit Agency Coordination

Environmental permits, coordination and authorizations will likely be required for this project from the following agencies:

- US Army Corps of Engineers (USACE) – Section 404 Wetland Dredge and Fill Permit
- USFWS – Endangered Species Act (ESA) Section 7 Informal Coordination for impacts to wood stork suitable foraging habitat
- SWFWMD – Environmental Resource Permit
- FDEP – National Pollutant Discharge Elimination System Permit
- Hillsborough County Environmental Protection Commission – Wetlands permit

4.3.4 Contamination and Hazardous Waste

A Draft *Contamination Screening Evaluation Report* (CSER) (March 2015) was prepared for this project in accordance with the *PD&E Manual*, Part 2, Chapter 22. The CSER was prepared using standard environmental assessment practices of regulatory agencies, site reconnaissance, a literature review, and when necessary, personal interviews of individuals and business owners within the limits of the project. The screening included a review of ETAT summaries included in the ETDM Programming Screen. The study area for the CSER includes the limits of the mainline project and an approximate 300-foot area form the existing I-275 right of way fences.

Twenty-two sites that are known to or have the potential to contain contamination, hazardous materials, and/or other regulated substances were identified within the study area. Following *PD&E Manual* guidelines, the identified sites were each assigned a risk rating. Of the 22 mainline sites investigated, the following risk rankings have been applied: Two were ranked HIGH, six were ranked MEDIUM, 12 were ranked LOW, and two were ranked. The MEDIUM and HIGH sites are:

- Site No. 1 – BP Central #320 501 E Hillsborough Avenue (HIGH)
- Site No. 5 – Mobil S-S #22 – CNG/Starbucks 502 E Hillsborough Avenue (MEDIUM)
- Site No. 9 – Empire Service Station 813 E Sligh Avenue (Vacant) (MEDIUM)
- Site No. 10 – Sligh Food Mart 403 E Sligh Avenue (MEDIUM)
- Site No. 11 – Sunoco #307 810 E Sligh Avenue (MEDIUM)
- Site No. 13 – Racetrac #225 715 E Fowler Avenue (Vacant) (MEDIUM)
- Site No. 16 – BP Economy #116 309 E Fletcher Avenue (MEDIUM)
- Site No. 21 –Chevron-Bearss #192 (HIGH)

A Level 2 Contamination Assessment will likely be performed for the sites rated as having a MEDIUM or HIGH potential for contamination prior to beginning construction. The Level 2 Contamination Assessment would include field screening and the collection of soil and groundwater samples for laboratory analysis, where applicable. If the results of the testing indicate no evidence of soil or groundwater contamination, the rating of the site would likely be revised to LOW. Because of the nature of the businesses conducted or formerly conducted (e.g., spill incident sites), some sites could remain rated as having a MEDIUM potential, even if field-testing did not reveal the presence of contamination.

More detail on the 22 potential contamination sites is provided in the *Contamination Screening Evaluation Report (*May 2015).

4.3.5 Air Quality

The project is in an area that has been designated as attainment for all of the National Ambient Air Quality Standards (NAAQS) established by the Clean Air Act and subsequent amendments. Therefore, the Clean Air Act conformity requirements do not apply to this project. An air quality analysis, specifically an analysis of carbon monoxide (CO) concentrations, was performed using methodology established in the FDOT *PD&E Manual*, Part 2, Chapter 16. CO levels were predicted using FDOT's screening test *CO Florida 2004*.

4.3.6 Noise

A *Noise Study Report* (NSR) (October 2015) for the project was prepared as part of the PD&E Study as required by the FDOT *PD&E Manual*, Part 2, Chapter 17 (May 4, 2011) and in accordance with the Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772)—Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010).

The NSR evaluated 2,025 noise sensitive receptors (i.e., discrete representative locations on a property that has noise sensitive land uses) representing 1,719 noise sensitive land uses within 50 noise sensitive areas (NSAs):

- 1,588 receptors on residential properties
- 25 at places of worship
- 55 at four schools
- 27 in parks
- 19 at recreational areas
- 1 at a medical facility (an assisted living facility)
- 4 at hotels

Of the 2,025 evaluated receptors, 459 are predicted to be impacted by traffic noise with existing conditions.

5.0 PLANNING PHASE/CORRIDOR ANALYSIS

Recognizing I-275 as an important regional transportation facility in the Tampa Bay area, the need for proposed improvements to the existing I-275 corridor has been documented in past and present studies. This PD&E Study builds upon these previous studies.

FDOT's *Tampa Interstate Study* (TIS) *Master Plan* and the *Major Investment Study* (1989) covers approximately 37 miles of interstate improvements within the Tampa urban core. The TIS guides the development of the I-275 corridor. The approved *TIS Final Environmental Impact Statement* (FEIS) (January 1997) covered the I-275 corridor from the Howard Frankland Bridge to north of MLK Boulevard. The approved alternative in the *TIS FEIS* includes GULs and separated ELs in each direction. The proposed I-275 improvements within this PD&E Study are consistent with the FHWA-approved *TIS FEIS* concept. The proposed I-275 improvements addressed in this study also continue the express lanes north of MLK Boulevard to Bearss Avenue.

The *TBX Master Plan* identified corridors on which to implement express lanes to provide drivers with new choices to improve mobility in the Tampa area. This PD&E Study for I-275 is consistent with the TBX Master Plan with the exception of providing one express lane in each direction instead of two express lanes because of the major reconstruction and different anticipated impacts associated with two express lanes in each direction.

The Build Alternative is included in the *SIS Funding Strategy Second Five Year Plan FY 2020/2021 through FY 2024/2025* (July 2015). Projects on the Second Five Year Plan are planned to be funded in the five years beyond FDOT's Adopted Work Program. The *SIS Long Range Cost Feasible Plan 2024-2040* (2014 Edition) shows managed lanes on I-275 from north of MLK Boulevard to Bearss Avenue.

The project is also consistent with the TBARTA *Master Plan* which recommends managed lanes (express lanes) along I-275.

FDOT's *Express Bus in Tampa Bay Express Lanes Study* (January 2015) evaluated premium express bus service along I-275 and I-75 generally from St. Petersburg to Wesley Chapel. The bus service would operate in the proposed tolled express lanes. Three options for service frequencies were considered. The proposed express lanes along I-275 are consistent with the Express Bus Study.

Implementing an alternative corridor that would provide capacity equal to the existing I-275 would have large negative impacts on the natural, physical, and human environments within the study area. Therefore, alternative corridors are not applicable in this PD&E Study and I-275 is the only viable corridor. The intent of this PD&E Study is to maximize the existing I-275 within the existing right of way and minimize impacts on the surrounding communities.

6.0 PROJECT DESIGN STANDARDS

6.1 Highway Design Criteria

Design criteria for the proposed I-275 improvements are in conformance with the documents listed below, which are the current standards.

- *FDOT, Plans Preparation Manual (PPM) (2015)*
- *FDOT, Standard Specifications for Roadway and Bridge Construction, 2015*
- *FDOT, Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System Topic No. 625-010-003, 2013*
- *FHWA, MUTC-D, 2009 Edition*
- *AASHTO, A Policy on Geometric Design of Highways and Streets, 2004 Fifth Edition*
- *AASHTO, Guide for Design of High Occupancy Vehicle (HOV), 2004*.

The design speed for the existing I-275 corridor is 60 mph and the design speed for the proposed improvements is also 60 mph. The design criteria for the I-275 proposed improvements (shown in **Table 16)** are consistent with the *TBX Master Plan*.

Table 16: Roadway Design Criteria for I-275 Mainline

Design Criteria	Proposed Express Lane Master Plan Criteria			PPM (2015)		AASHTO (2004)		AASHTO (2011)	
	Desirable	Minimum	Comments	Minimum	Ref./Page #	Minimum	Ref./Page #	Minimum	Ref./Page #
Express Lanes									
Design Speed	700 mph	50 mph	Desirable - SIS Urbanized Freeway Minimum Non SIS Urban Freeway						
Minimum Design Speed (System Ramps)	50 mph	35 mph	Policy					35 mph	p. 10-89
Design Vehicle	SU-30/BUS-45	SU-30/BUS-45	Policy						
Mainline (Paved Buffer and Barrier Separated)									
Lane Width	12'	11'	Policy - requires Design Exception	12'	Table 2.1.2	12'	p. 504	12'	p. 4-7
Left Shoulder Width - Paved Buffer (Full/Paved)	12' / 10'	8' / 6'	Policy	14' / 10'	Table 2.3.1	10'	p. 505	10'	p. 4-10 & 4-11
Buffer from General Lanes (Paved Separation)	4'	4'	Policy						
Left Shoulder Width - Barrier Separated (Full/Paved)	6' / 6'	6' / 6'	2-Lane Barrier-Separated	6' / 6'	Table 2.3.1	10'	p. 505	10'	p. 4-10 & 4-11
Right Shoulder Width (Barrier Wall Separation)	10' / 10'	10' / 10'	Provides refuge for stalled vehicle	10' / 10'	Table 2.3.1	10'	p. 505	10'	p. 4-10 & 4-11
Profile	Match Existing General Lanes		Policy						
Single-Lane Slip Ramp/Scramble Lane									
Lane Width	15'	11'	Policy	15'	Table 2.1.3				
Left Shoulder Width	10'	2'	Policy	6' / 2'	Table 2.3.1	2'	p. 838	2	p. 10-102
Right Shoulder Width (Buffer)	4'	4'	Policy						
Single-Lane Ramp									
Lane Width	15'	11'	Combination of Minimum lane and shoulder width values allows Passing Stalled Vehicle On Tangent. See PPM Table 2.14.1	15'	Table 2.1.3				
Left Shoulder Width (Full/Paved)	6' / 2'	4' / 2'		6' / 2'	Table 2.3.1	2'	p. 838	2'	p. 10-102
Right Shoulder Width (Full/Paved)	6' / 4'	4' / 2'		6' / 4'	Table 2.3.1	8'	p. 838	8'	p. 10-102
Dual-Lane Ramp									
Lane Width	12'	11'	Combination of Minimum lane and shoulder width values allows Passing Stalled Vehicle On Tangent. See PPM Table 2.14.1	12'	Table 2.1.3				
Left Shoulder Width	8' / 4'	4' / 2'		8' / 4'	Table 2.3.1	4'	p. 840	4'	p. 10-102
Right Shoulder Width	12' / 10'	10' / 8'		12' / 10'	Table 2.3.1	6'	p. 840	6'	p. 10-102
General Lanes									
Design Speed	70 mph	50 mph		70 mph	Table 1.9.2	50 mph	p. 503	50 mph	p. 8-1
Design Vehicle	WB-62FL	WB-62FL		WB-62FL	Section 1.12	WB-62	Exhibit 2-1 p. 17		
Mainline									
Lane Width	12'	11'	Policy-provide one 12' wide lane in each direction Requires a Design Exception	12'	Table 2.1.1	12'	p. 504	12'	p. 4-7
Buffer from Managed Lanes	4'	4'	Policy						
Right Shoulder Width (Full/Paved)	12' / 10'	10' / 8'	Provides refuge for stalled vehicle full width and depth pavement within 1 mile each way of interchange for EMS	12' / 10'	Table 2.3.1	10'	p. 505	10'	p. 4-10 & 4-11
Other Critical Criteria									
Stopping Sight Distance	PPM Interstate	AASHTO		820 (2%)	Table 2.1.1	730	Exhibit 3-1 p. 112	771 (3%)	p. 3-5
Lane Balance at Exit Terminals	Desirable, Not Required		Policy						
Transit Corridors	44' including barriers		Policy						
Border Width	94'	10' from face of retaining wall	Minimum 10' for maintenance	94'	Table 2.5.3	80'-150'	p. 508	80'-150'	p. 8-5
Vertical Clearance - Roadway Over Transit	23' 6"	23' 3"		23' 6"	Table 2.10.1	23'	p. 522		
Vertical Clearance over Roadway	16' 6" (new)	16' (existing)		16' 6"	Table 2.10.1	16'	p. 506, 507, 763	16'	p. 8-4
Horizontal Clearances									
Bridge Piers & Abutments	Match approach road + shoulder width		Stopping Sight Distance to be met	CZ	Table 2.11.6				
Setbacks-discontinuous attachments to barriers			PPM Figure 7.1.2.1 (Toll gantries, luminaires, bridge piers, ITS, etc.)						

Note: The criteria listed in this table meets the criteria outlined in the AASHTO Guide for High-Occupancy Vehicle Facilities.

6.2 Design Exceptions and Variations

From time to time, it may be necessary to deviate from the standard criteria used in the design process. If deemed necessary, two specific deviations may occur: (1) Design Exception or (2) Design Variation. A Design Exception is required when the design criteria applied falls below the minimums established by AASHTO. A Design Variation is required when design criteria applied falls below FDOT established criteria and the deviation meets the minimums established by AASHTO.

The concept design plans were reviewed to identify potential design exceptions and variations for the proposed I-275 improvements using FDOT's design criteria for the 13 controlling design elements required by Chapter 23 of the *PPM*: design speed, lane widths, shoulder widths, bridge widths, structural capacity, vertical clearance, grades, cross slope, superelevation, horizontal alignment, vertical alignment, stopping sight distance, and horizontal clearance. The potential exceptions and variations are summarized in **Table 17**.

Table 17: Potential Design Exceptions and Variations

Design Element	Design Meets FDOT	Design Meets AASHTO
1. Design Speed	Yes	Yes
2. Lane Widths	No	No
3. Shoulder Widths (Full/Paved)	No	Yes
4. Bridge Widths	Yes	Yes
5. Structural Capacity	Yes	Yes
6. Vertical Clearance	No	No
7. Grades	Yes	Yes
8. Cross Slope (Min./Max.)	Yes	Yes
9. Superelevation	Yes	Yes
10. Horizontal Alignment	No	Yes
11. Vertical Alignment - K Value (Crest/Sag)	No	No
12. Stopping Sight Distance	No	Yes
13. Lateral Offset	Yes	Yes
Border Width	No	N/A

7.0 ALTERNATIVES ANALYSIS

The alternatives analysis considered engineering, environmental, socio-cultural, and economic factors. The proposed improvements should be designed to safely and efficiently accommodate the projected traffic volumes and benefit the overall public interest.

The following sections describe the No-Build and Build Alternative concepts for the project and the comparative analysis of the alternatives.

7.1 No-Build Alternative

The No-Build Alternative assumes that the existing conditions along the I-275 corridor would remain unchanged, except for currently planned and programmed projects already committed. The No-Build Alternative forms the basis of the comparative analysis for the Build Alternative.

The benefit of the No-Build Alternative is there would be no construction-related or short-term operational impacts that are associated with the Build Alternative. However, with the No-Build Alternative, traffic operating conditions are anticipated to worsen over time, further increasing delays and congestion. The No-Build Alternative will offer no benefits to the existing or anticipated future traffic congestion along I-275.

Distinct advantages and limitations associated with the No-Build Alternative are outlined below. These advantages and disadvantages, along with other established criteria, were used in the evaluation process with the Build Alternatives. The No-Build Alternative will remain a viable alternative through the PD&E Study. The final selection of an alternative will not be made until all impacts are considered and the public hearing comments have been evaluated.

7.1.1 Advantages

The advantages of the No-Build Alternative are:

- No impacts to traffic flow, and associated inconvenience to motorists due to construction activities
- No expenditures of funds for design or construction
- No impacts to the adjacent natural, physical, and human environments
- No disruption to existing land uses from construction activities

7.1.2 Disadvantages

The disadvantages of the No-Build Alternative are:

- Increase in traffic congestion and road user costs, unacceptable level of service and an increase in crashes associated with increased travel times (due to excessive delays) and traffic volumes

- Increase in crash potential due to congestion
- Increase in maintenance costs associated with roadway and structure deterioration
- Increase in emergency vehicle response time and an increase in evacuation time during weather emergencies as result of heavy congestion
- Increase in the levels of carbon monoxide and other pollutants due to increased traffic congestion

7.2 Transportation Systems Management and Operations

Transportation Systems Management and Operations (TSM&O) alternatives are low capital cost transportation improvements designed to maximize the efficiency of the existing facility by improving system and operations management. TSM&O options generally include traffic signal improvements, intersection/interchange improvements, constructing ramp-to-ramp auxiliary lanes, widening parallel arterial roadways, conducting ridesharing programs, implementing reversible flow roadways systems, improving the transit system, and implementing ITS technology.

Many TSM&O features already exist along the corridor. Although implementing additional TSM&O strategies would improve local operations on I-275, the projected traffic volumes in the design year of 2040 require widening of I-275 to provide the additional capacity to improve the levels of service. Therefore, the TSM&O is not a viable alternative and no further evaluation will be conducted during this study.

7.3 Build Alternative

The Build Alternative includes consideration of express lanes along I-275 from north of MLK Boulevard to north of Bearss Avenue. The improvements consist of widening I-275 from an existing six-lane divided interstate to an eight-lane divided interstate, consisting of one EL and three GULs in each direction. Vehicles can enter or exit the express lanes in two locations, between Busch Boulevard and Fowler Avenue and at the northern project limit north of Bearss Avenue. The Bearss Avenue interchange will be reconfigured; no other interchange configurations will change with the improvements. The concept plans showing the Build Alternative are provided in **Appendix A**.

From MLK Boulevard to north of Busch Boulevard, the improvements will consist primarily of restriping and shifting traffic to the recently constructed inside shoulders. Currently, the recently constructed northbound inside shoulder is a travel lane between Hillsborough Avenue and Sligh Avenue; and this segment also requires an outside auxiliary lane. The proposed improvements will construct an outside lane on the east side in this section to provide an outside northbound auxiliary lane with widening of the Hanna Avenue bridge.

On the segment from north of Busch Boulevard to north of Bearss Avenue widening will occur to the outside to provide the three GULs, and one EL in each direction. Ten of the 18 existing bridges will be widened (see **Section 7.7**).

Vehicles can enter or exit the express lanes in two locations, between Busch Boulevard and Fowler Avenue and at the northern project limit north of Bearss Avenue. At the access point between Busch Boulevard and Fowler Avenue, a 3,000-foot break in the buffer area between the general use lanes and the express lanes would allow vehicles to make the

transition. In these access points, the delineators are omitted and the pavement marking is skip-striped (dashed) to signify the access point to drivers. There will also be appropriate signage to warn drivers of the access points. Vehicles using the express lanes will pay a toll. The existing GUL entrance and exit ramps will remain the same. The express lanes can be used by most vehicles, including Bus Rapid Transit or Express Bus service. The exceptions are vehicles with more than two axles, commercial buses, and vehicles towing trailers.

Phase 1 of the project is a Staged Implementation that would construct one EL in each direction from north of MLK Boulevard to north of Busch Boulevard. Phase 1 could be built now and the remaining portion of the Build Alternative can be built when funding becomes available.

Similar to other managed lanes systems in effect, travelers who choose to pay for the express lanes will do so because the value of the trips they choose will exceed the value of the toll in effect for that trip. The initiation and use of transit on the express lanes addresses the needs of low-income and other transportation - disadvantaged groups. In addition, former general use lane users will shift voluntarily to the express lanes providing an overall degree of reduced congestion for the general use lanes.

7.4 Traffic Evaluation of Alternatives

7.4.1 Design Traffic Volumes

Future year 2020, 2030, and 2040 design hour traffic volumes were developed for the No-Build Alternative and the Build Alternative. These traffic volumes were provided for the I-275 mainline (GULs and ELs) locations and ramps. The key steps of the methodology followed are:

1. The Tampa Bay Regional Planning Model Managed Lanes (TBRPM-ML) time of day models for the No-Build Alternative and the Build Alternative were developed for the year 2035 Directional Design Hour Volumes (DDHV). The DDHV values obtained from the TBRPM-ML time of day model for each alternative were for the AM and PM peak periods and were used as the basis to develop future year design hour volumes. The AM period in the TBRPM-ML time of day model is for two and a half hours in the morning. The PM period is the TBRPM-ML time of day model is for three hours during the afternoon peak. The process for preparing peak hour traffic volumes requires the factoring of model projected peak period traffic volumes, based on the hourly distribution of traffic volumes across the day. From this diurnal distribution of traffic volumes, factors are developed which represent the percentages of peak hour traffic volumes during AM and PM peak periods. The TBRPM-ML AM period was adjusted to the AM peak hour by the diurnal factor of 0.41 obtained from the existing 2012 traffic counts within the I-275 study area. Similarly, the TBRPM-ML PM period was adjusted to the PM peak hour by the diurnal factor of 0.35.

2. In order to ensure reasonable growth patterns, the annual growth rates were calculated by comparing the existing DDHVs from the FDOT *Florida Traffic Online (2012)* website and the 2035 DDHVs from the TBRPM-ML model. An average growth rate was calculated for the I-275 study area and increase/decrease factors for each design year were estimated. A decrease factor of 0.6 was applied to I-275

(Hillsborough County) study area to convert the year 2035 model volumes to the year 2020 traffic volumes.

3. The estimated year 2020 traffic volumes were compared to the FDOT *Florida Traffic Online (2012)* website to ensure reasonableness, and adjustments were made if necessary.

4. It is anticipated that more traffic will use ELs during the peak hours than during the off-peak periods. Therefore, the peak-to-daily ratios on the ELs should be higher than those on the GULs. The traffic volumes were adjusted to yield reasonable peak-to-daily ratios. The capacity of the ELs was assumed to be 1,650 vehicles per hour per lane (vphpl), which will restrict traffic volumes to maintain LOS C/D in the ELs through the use of dynamic tolling. If travel demand on an express lane was greater than 1,650 vphpl, the excess volume was manually shifted to the GULs.

5. The 2020 DDHVs were increased by using expansion factors to develop the DDHVs for the years 2030 and 2040. The expansion factor from 2020 to 2030 is 1.2, and the expansion factor from 2020 to 2040 is 1.4, which is based on an interpolation/extrapolation between 2012 and 2035 traffic volumes.

In addition to the years 2020, 2030 and 2040 design hour volumes for the I-275 mainline and ramps corresponding to the design alternatives year 2035 DDHVs for the interchange cross streets were obtained from the TBRPM-ML model.

The future year mainline and ramp design hour traffic volumes were reviewed for reasonableness and revisions were made at some locations and rebalanced for the entire I-275 corridor. The future years 2020, 2030, and 2040 ramp terminal and cross street intersections turning movement counts for the design alternatives were estimated by applying growth rates to the field collected turning movement volumes. The growth rate for each ramp intersection turning movement was estimated consistent with the corresponding ramp volume growth rate obtained from the design hour volumes. The future year ramp design hour traffic volumes were used as the control volumes in estimating the future years 2020, 2030, and 2040 ramp terminal intersection turning movement volumes. The growth rates estimated from the year 2035 cross street DDHVs (TBRPM-ML) were used to estimate the future years 2020, 2030, and 2040 cross street through traffic volumes. The estimated design hour volumes were reviewed and approved on April 9, 2015.

7.4.2 CORSIM Operational Analyses

The design year 2040 No-Build Alternative CORSIM model link traffic volumes for the AM and PM peak hours were evaluated for the I-275 mainline segments. The CORSIM models were run ten times using different random seed numbers to account for potential variations between model runs. The results of the simulation were averaged out to ensure that the differences in the results were related to the geometric configuration of the network and control strategies, rather than the randomness of the simulation itself. Overall, multiple runs of the simulation prevent biases in the results due to the stochastic nature of the software. The results of the traffic simulation were used to estimate the traffic operations conditions at the freeway segments within the study area for the year 2040 No-Build traffic conditions.

Based on the results of the traffic simulation models, most of the I-275 freeway, ramp merge, and ramp diverge segments would operate at a lower speed and higher traffic

density within the study area for the design year 2040 AM and PM peak periods in the peak direction. The 2040 No-Build traffic conditions are summarized below.

I-275 Northbound – The overall I-275 northbound projected average speed is 38 mph for the design year 2040 PM peak hour traffic conditions within the study area. The projected speed is less than 25 mph for the I-275 segments between the Hillsborough Avenue interchange and the Sligh Avenue interchange for the design year 2040 PM peak hour traffic conditions.

I-275 Southbound – The overall I-275 southbound projected average speed is 14 mph for the design year 2040 AM peak hour traffic conditions within the study area. The projected speed is less than 25 mph for the I-275 segments between the Bearss Avenue interchange and the Bird Street interchange for the design year 2040 AM peak hour traffic conditions.

The Build Alternative includes one EL and three GULs in each direction. The year 2030 Build Alternative CORSIM model link traffic volumes for the AM and PM peak hours were evaluated for the I-275 mainline segments. The results of the traffic simulation were used to estimate the traffic operations conditions at the freeway segments within the study area for the year 2030 Build Alternative traffic conditions. The Build Alternative projected traffic conditions are summarized below.

I-275 ELs Northbound – The projected speed is more than 50 mph for the I-275 northbound ELs segments for the year 2030 AM and PM peak hour traffic conditions.

I-275 ELs Southbound – The projected speed is more than 50 mph for the I-275 southbound ELs segments for the year 2030 AM and PM peak hour traffic conditions.

I-275 GULs Northbound – The projected speed is more than 45 mph for the I-275 northbound GULs segments for the year 2030 AM peak hour traffic conditions. The projected speed is more than 45 mph for the I-275 northbound GULs segments for the PM peak hour traffic conditions except for the I-275 northbound segment south of the Hillsborough Avenue interchange and north of the I-275 on-ramp from Sligh Avenue.

I-275 GULs Southbound – Many of the I-275 southbound GULs segments are projected to operate at less than 40 mph for the year 2030 AM peak hour traffic conditions. The projected speed is more than 50 mph for the I-275 southbound GULs segments for the PM peak hour traffic conditions.

7.5 Alternatives Evaluation

The proposed I-275 eight-lane typical section includes six GULs (three in each direction) on the outside and two ELs (one in each direction) on the in-side. The design will also include accommodations for ingress and egress access points to the express lanes. The design speed is 60 mph.

Common features of the Build Alternative typical section are:

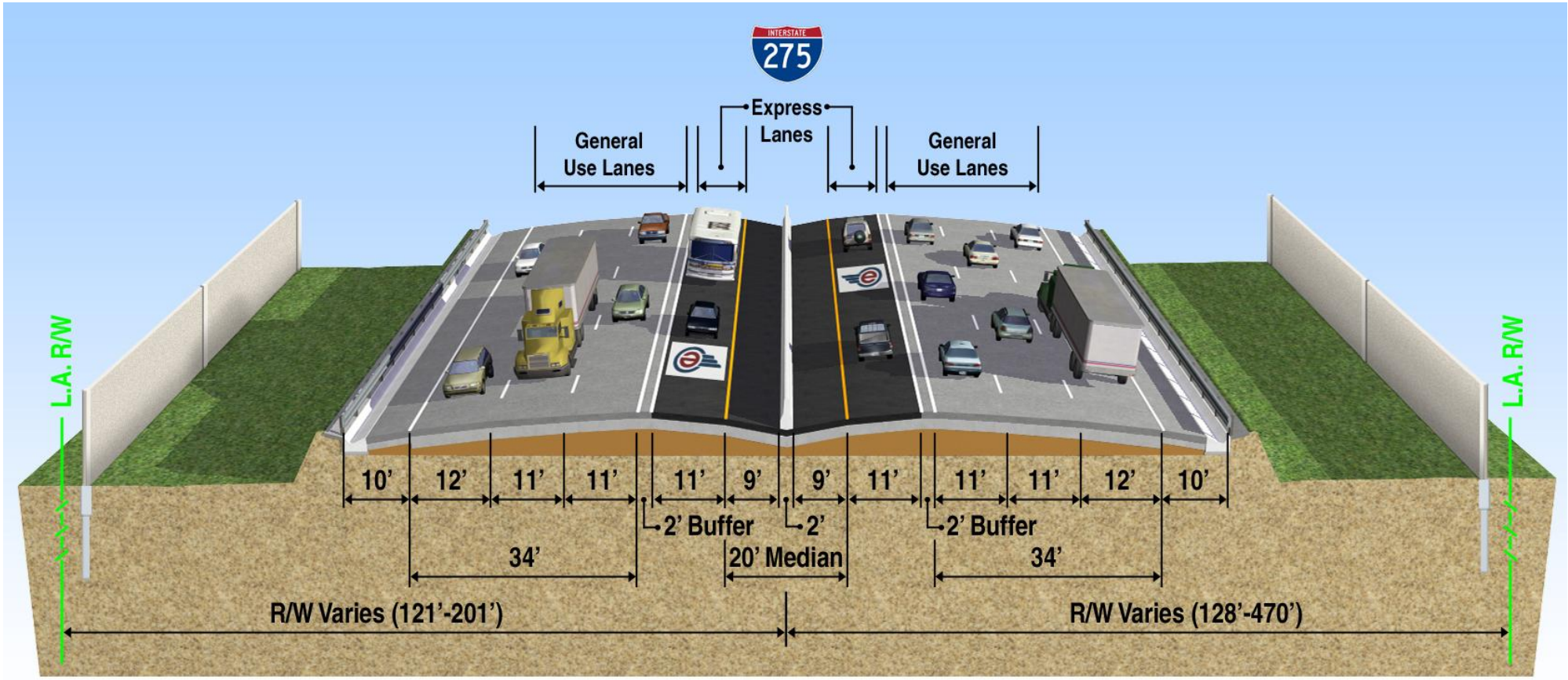
- Two 11-foot general use lanes and one 12-foot general use lane in each direction
- One 11-foot express lane in each direction
- 10-foot outside shoulders

- 9-foot inside shoulders
- 2-foot buffer with plastic delineators separating the general use lanes and the express lanes
- 2-foot concrete barrier separating the two directions of travel

The proposed I-275 mainline typical section is shown in **Figure 15**.

The proposed improvements include extending the existing acceleration and deceleration lanes on the I-275 mainline at the interchanges to improve traffic flow through the interchanges.

The proposed improvements also include two access points to the ELs, one between Busch Boulevard and Fowler Avenue and the other north of the project limits, north of Bearss Avenue. The express lanes can be used by most vehicles, including Bus Rapid Transit or Express Bus service. The exceptions are vehicles with more than two axles, commercial buses, and vehicles towing trailers.


INTERSTATE
275
Express
Lanes
General
Use Lanes
General
Use Lanes
L.A. R/W
L.A. R/W
10’
12’
11’
11’
11’
9’
9’
11’
11’
11’
12’
10’
2’ Buffer
2’
2’ Buffer
34’
20’ Median
34’
R/W Varies (121’-201’)
R/W Varies (128’-470’)

7.5.1 Interchange Build Alternatives

The Bearss Avenue interchange will be reconstructed as part of the proposed improvements. Improvements within the other interchanges will only be completed to accommodate the mainline widening of I-275, but the interchange configurations will not be altered.

The vertical and horizontal constraints at the existing bridges at the Bearss Avenue interchange cannot accommodate the proposed improvements. Bearss Avenue is a designated truck route, and as such, is a critical facility in the movement of goods and services. Thus, the Bearss Avenue interchange will be reconstructed. Two alternative interchange configurations are being considered, a single point urban interchange (SPUI) and a tight urban diamond interchange (TUDI). The bridge design in both alternatives will accommodate potential future widening of Bearss Avenue. Traffic operations and level of service were evaluated to compare the SPUI interchange with a TUDI interchange.

At this time, only the bridge over Bearss Avenue will be reconstructed as part of the proposed improvements on I-275; no improvements will be done on Bearss Avenue. In addition, the entrance and exit ramps will be reconstructed from the I-275 gores to about halfway to the Bearss Avenue intersection. The bridge reconstruction will accommodate future improvements to the interchange into the desired configuration and improvements on Bearss Avenue. Interchange and roadway improvements can be implemented in the future when funding is available.

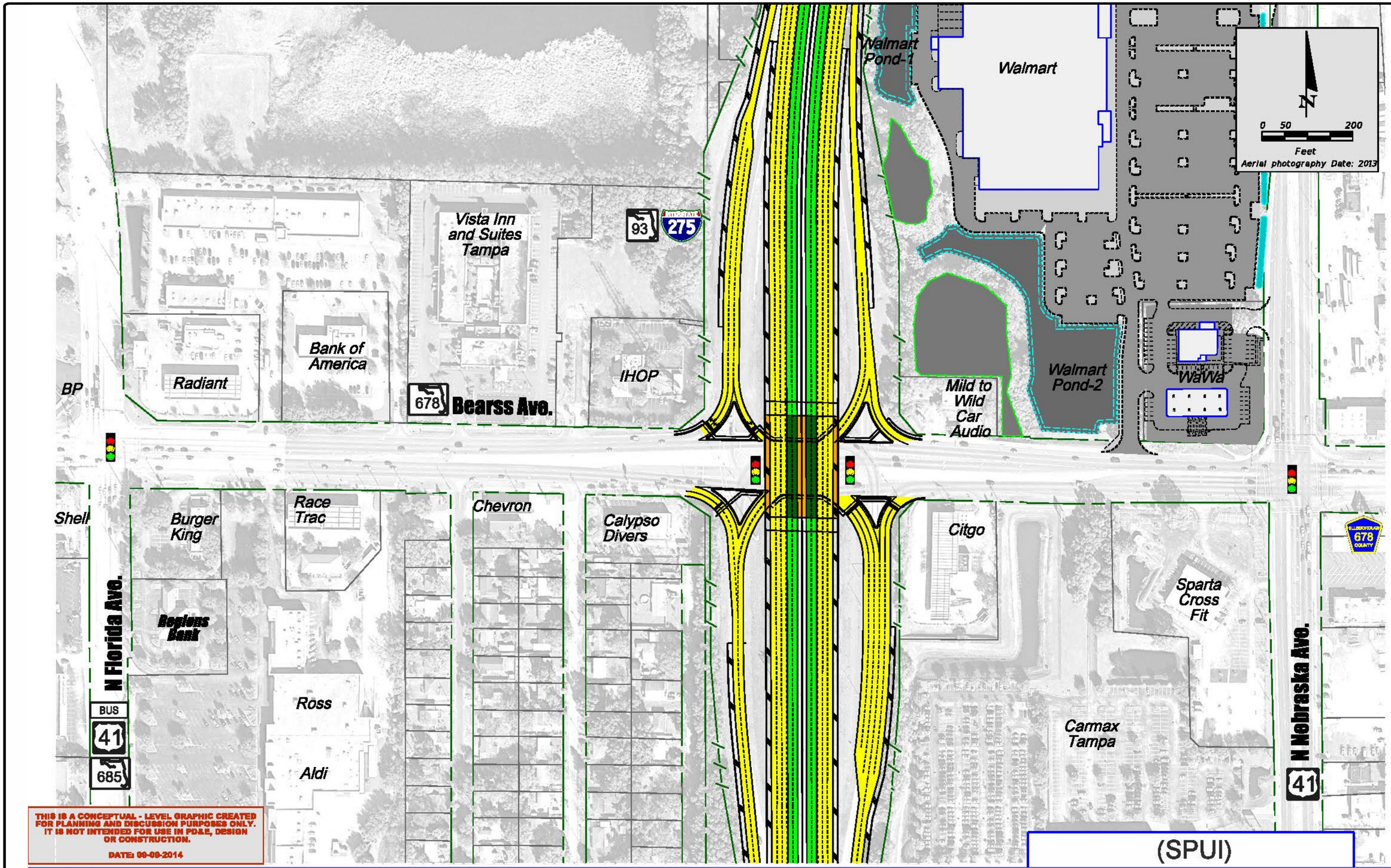
7.5.1.1 Bearss Avenue Single Point Urban Interchange

In the SPUI alternative, the I-275 bridge over Bearss Avenue is reconstructed. The intersections on Bearss Avenue between Florida Avenue and Nebraska Avenue are also reconstructed. The future configuration would have one traffic signal underneath the I-275 bridge to control through traffic on Bearss Avenue and left-turning traffic entering or exiting I-275 at the intersection. The turning movements of the I-275 ramps and all the traffic movements for the Bearss Avenue interchange would be executed in one central area. Since a SPUI has one signalized intersection, it allows for simpler signal phasing and operations. However, with a wide intersection, the SPUI would require longer yellow and red signal phases compared to a conventional intersection. The SPUI concept is shown in **Figure 16**.

One signalized intersection would provide further separation from the adjacent signalized intersections at Florida Avenue and Nebraska Avenue, which would increase the vehicle storage length for the three signalized intersections. The traffic signal at a SPUI can be efficiently coordinated with the adjacent signals.

7.5.1.2 Bearss Avenue Tight Urban Diamond Interchange

In the TUDI alternative, the existing ramps and bridges are reconstructed and the interchange configuration is modified. A TUDI has two closely spaced signalized intersections at the crossings of the ramp terminals with the side streets. The key operational aspect of a TUDI is signal coordination to ensure efficient progression of traffic because of the minimal storage for vehicles between the terminals.



I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

BEARSS AVENUE SPUI ALTERNATIVE

Figure No.
16

Other traffic flow parameters like saturation flow rate, clearance times, and turning speeds in a TUDI are the same as other conventional signalized intersections. Typically, a TUDI requires a four-phase signal operating plan with overlaps to accommodate the close spacing between both intersections. The TUDI concept is shown in **Figure 17**.

7.5.1.3 Single Point Urban Interchange Compared to Tight Urban Diamond Interchange

As part of the proposed improvements, only the Bearss Avenue bridge will be reconstructed and not the full interchange, but the new bridge will accommodate future reconfiguration of the interchange. Constructing only the bridge will not require right of way acquisition. FDOT has no plans to widen the state-owned portion of Bearss Avenue through the interchange. Hillsborough County has no plans to widen the county-owned portion of Bearss Avenue from Nebraska Avenue eastward. The estimated construction cost for the SPUI alternative is $19,704,070. The estimated construction cost for the TUDI alternative is $18,392,246.

A SPUI configuration moves large volumes of traffic very efficiently. In addition, the SPUI provides greater distance between the closely spaced intersections of Florida Avenue and Nebraska Avenue. This creates more turn lane and travel lane storage space for the intersections at the ramps, Florida Avenue, and Nebraska Avenue. The exceptionally high turning movement volumes at the Bearss Avenue interchange make it a good candidate for a SPUI. Signal control at a TUDI is less efficient for a location with significantly high turning movement volumes, such as the Bearss Avenue interchange. Providing adequate storage length is also challenging for a TUDI, particularly at the Bearss Avenue interchange with the closely spaced intersection of Florida Avenue and Nebraska Avenue.

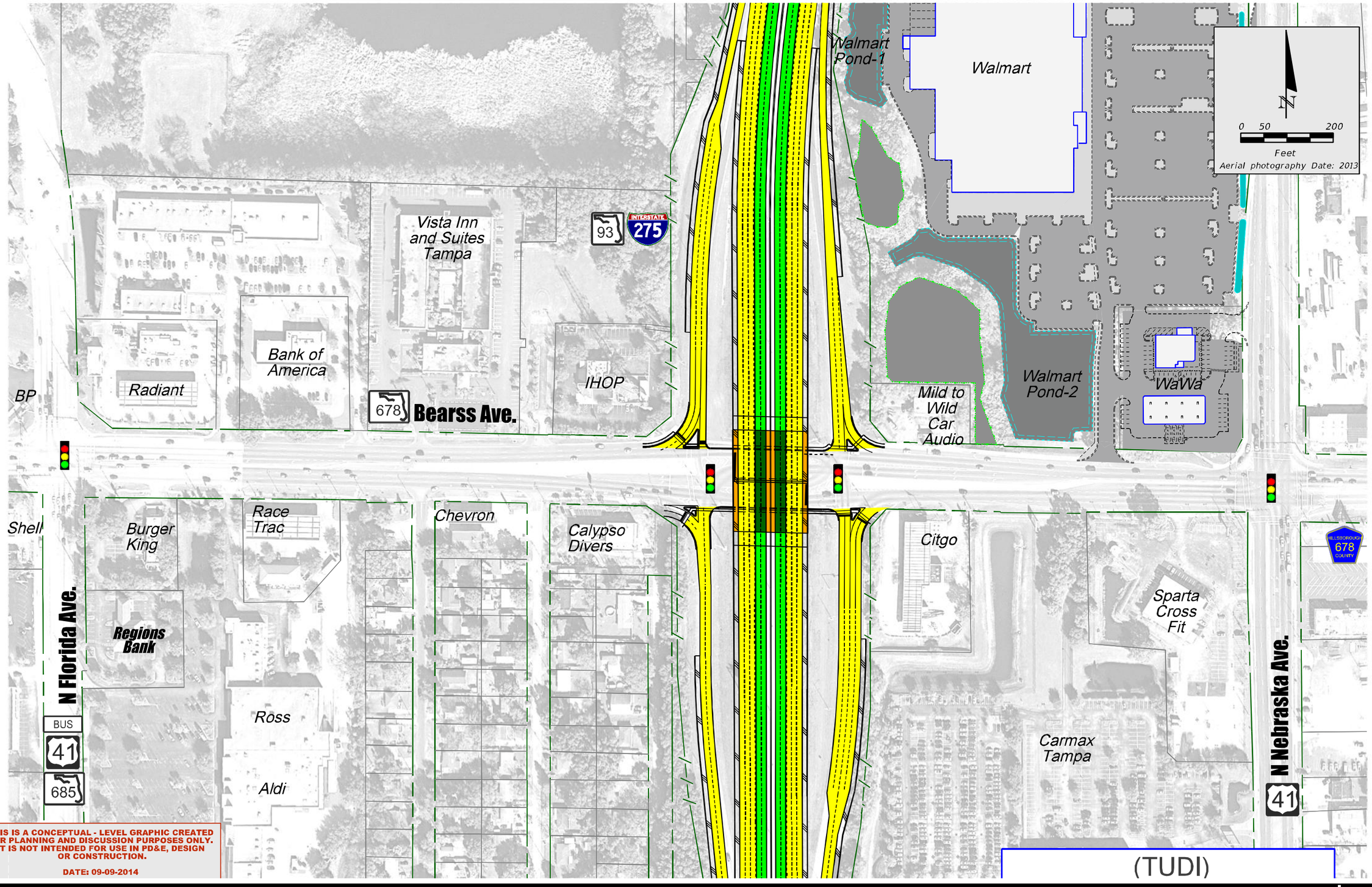
Although the SPUI bridge structure is more expensive to construct than the TUDI bridge structures, a SPUI more efficiently controls traffic at a location with high traffic volumes and intersection spacing like Bearss Avenue. Based on these factors, the SPUI alternative is the recommended interchange configuration for the Bearss Avenue interchange.

7.6 Horizontal and Vertical Alignment

Modifying the horizontal and vertical alignments to meet criteria would require complete reconstruction of I-275, at great cost. Thus, the existing horizontal and vertical alignments will be maintained in the Build Alternative to avoid right of way impacts. The horizontal alignment characteristics are shown in **Table 3** in **Section 4.1.10**. The existing vertical alignment characteristics are shown in **Table 4** in **Section 4.1.11**. Although some of the horizontal and vertical curves do not meet FDOT criteria, they will not be changed with the Build Alternative.

7.7 Bridge Analysis

To avoid right of way impacts on the community and the environment, and minimize construction costs, most of the existing bridges will not be replaced. Only the Bearss Avenue bridge will be replaced (see **Section 7.5.1**).



I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

BEARSS AVENUE TUDI ALTERNATIVE

Figure No.
17

In addition, nine of the 18 bridges will be widened to accommodate the additional lanes.

- Hanna Avenue (northbound bridge only)
- Busch Boulevard and the CSX railroad
- Linebaugh Avenue
- Bougainvillea Avenue
- Fowler Avenue
- 127th Avenue
- Sink Hole (northbound bridge only)
- Fletcher Avenue
- Nebraska Avenue/US 41

The widening will occur to the outside within the existing right of way. The proposed bridges are summarized in **Table 18**. The proposed bridge typical sections for the bridges to be widened are shown in **Figure 18** through **Figure 22**.

Table 18: Proposed Bridge Summary

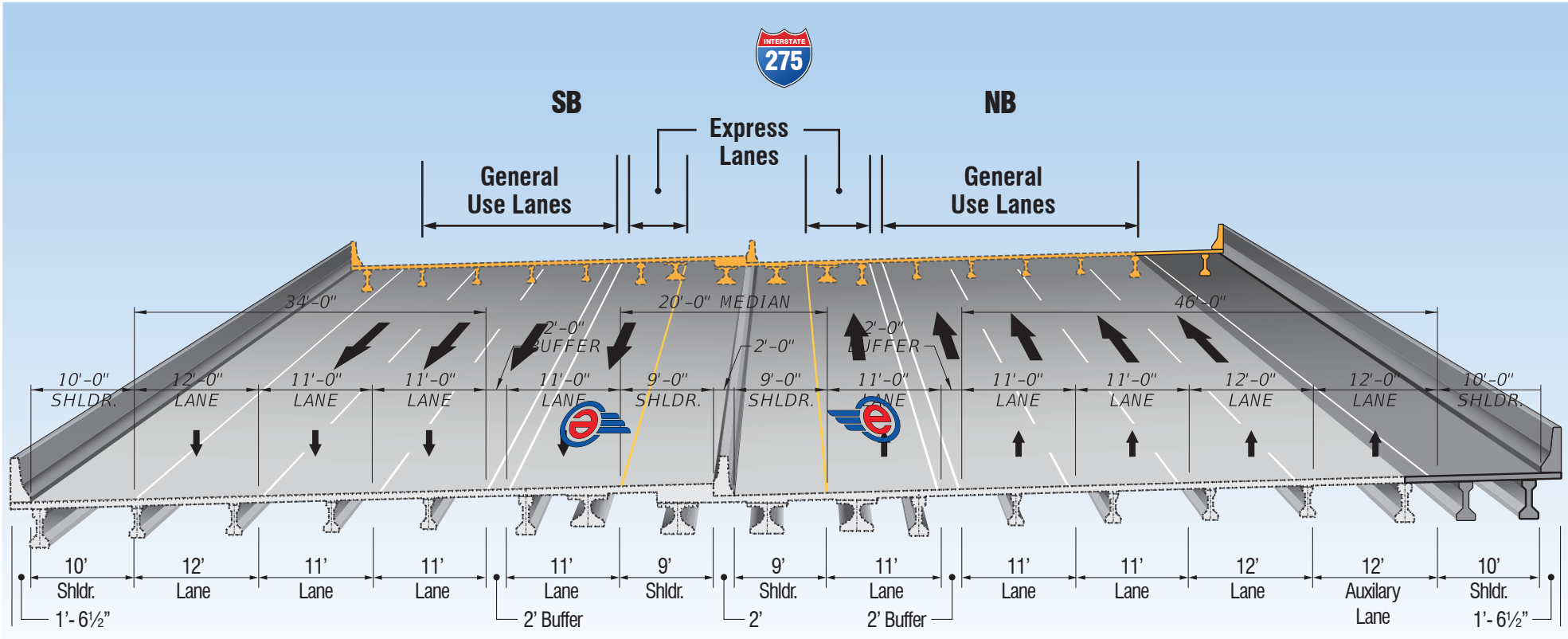
Alternative	Inter-change	Approx. Milepost	Location Description (Structures from South to North)	Structure Number	Existing Structure Type	Skew Angle (Degrees)	Structure Length (feet)	Spans	Span Lengths (feet)	Existing Vertical Clearance (feet)	Proposed Widening or Replacement Structure Type	Proposed Width (feet)	Proposed Vertical Clearance (feet)	Proposed Horizontal Clearance (feet)
		1.931	I-275 Over Osborne Avenue	100209	AASHTO Type II, III & Florida I-Beam 36	No Skew	140	3	38.0, 64.0, 38.0	14.7	***No Widening***	***138.08***	***14.7***	***11.5***
		2.432	I-275 Over Hillsborough Avenue (SR 600)	100211	AASHTO Type II, III & Florida I-Beam 36	No Skew	204	4	42.0, 54.0, 66.0, 42.0	15.4	***No Widening***	***150.58***	***15.4***	***3.7***
		2.937	I-275 Over Hanna Avenue	100213	AASHTO Type II, III & Florida I-Beam 36	82, 83, 84, 85	145.75	3	41.0, 63.8, 40.9	14.4	***Widened Florida I-Beam 36***	***149.58***	***14.4***	***14.1***
		3.444	I-275 Over Sligh Avenue	100215	AASHTO Type II, III & Florida I-Beam 36	72, 72, 72, 72, 72	186.5	4	40.4, 52.0, 53.7, 40.4	14.5	***No Widening***	***138.08***	***14.5***	***4.9***
		3.832	I-275 Over Broad Street	100216	AASHTO Type II, III & Florida I-Beam 36	No Skew	134.86	3	33.4, 68.0, 33.4	13.9	***No Widening***	***138.08***	***13.9***	***10.2***
		4.100	I-275 Over Hillsborough River	100218	AASHTO Type III	79, 79, 79, 79, 79, 79	300	5	60, 60, 60, 60, 60	Water	***No Widening***	***163.08***	***Water***	***Water***
		4.276	I-275 Over Bird Street	100220	AASHTO Type IV, II & Florida I-Beam 45	81, 81, 83, 83	173.51	3	37.25, 99.0, 37.25	14.3	***No Widening***	***139.75***	***14.3***	***8***
		4.464	I-275 Over Waters Avenue	100222	AASHTO Type II, III & Florida I-Beam 36	87, 86, 85, 85	146.42	3	37.5, 71.4, 37.5	15.5	***No Widening***	***139.75***	***15.5***	***10***
		4.719	I-275 Over Yukon Street	100224	AASHTO Type II, III & Florida I-Beam 36	59, 60, 60, 61, 62	257.92	4	70.0, 70.0, 76.7, 41.3	14.1	***No Widening***	***139.75***	***14.1***	***15***
		4.979	I-275 Over Busch Boulevard (SR 580) & CSX Railroad	100226	AASHTO Type III & IV	No Skew	273.00	4	64, 94, 65, 50	24.1 22.2 (RR)	***Widened Florida I-Beam 45***	***143.25***	***24.1*** ***22.2 (RR)***	***5.5*** ***11.6 (RR)***
		5.480	I-275 Over Linebaugh Avenue	100228	AASHTO Type II & III	No Skew	136.18	3	34.4, 67.25, 34.5	14.3	***Widened Florida I-Beam 36***	***125.56***	***14.3***	***17.3***
		5.734	I-275 Over Bougainvillea Avenue	100243	AASHTO Type II & III	No Skew	133.00	3	33, 67.17, 32.83	14.5	***Widened Florida I-Beam 36***	***125.56***	***14.5***	***18.4***
		6.492	I-275 Over Fowler Avenue (SR 582)	100231	AASHTO Type II & III	88, 88, 88, 88	143.75	3	34.75, 74.25, 34.75	15.4	***Widened Florida I-Beam 36***	***136.90***	***15.4***	***9.0***
		7.006	I-275 Over 127th Avenue	100232	AASHTO Type II & III	No Skew	130.33	3	31.5, 67.33, 31.5	14.5	***Widened Florida I-Beam 36***	***53.20***	***14.5***	***8.0***
		7.124	I-275 NB Over Sinkhole	100234	AASHTO Type III	No Skew	76.90	1	76.9	Water	***Widened Florida I-Beam 36***	***68.26***	***Water***	***Water***
		7.510	I-275 Over Fletcher Avenue (SR 579)	100236	AASHTO Type II & III	No Skew	140.08	3	32, 75.08, 32	15.3	***Widened Florida I-Beam 36***	***136.90***	***15.3***	***3.6***
		8.797	I-275 Over Bearss Avenue (SR 678)	100238	AASHTO Type II & III	No Skew	***225.0***	***1.0***	***225.0***	14.5	***New Bridge 96" Steel Plate Girder***	***162.69***	***16.5***	***32.0***
		9.402	I-275 Over Nebraska Avenue (SR 45) & CSX Railroad	100240	AASHTO Type III	52, 52, 52, 52, 52, 52,	330.00	6	65.5, 54.5, 57.5, 49.0, 49.0, 54.5	23.6 22.1 (RR)	***Widened Florida I-Beam 36***	***124.32***	***23.6*** ***22.1 (RR)***	***8.0*** ***17.2 (RR)***

Key

- Interchange Area
- Starter Project
- Interim Starter Project

Legend

- I-275 bridges over roadways
- I-275 bridges over water bodies
- Does not satisfy FDOT minimum vertical clearance requirements
- New bridge



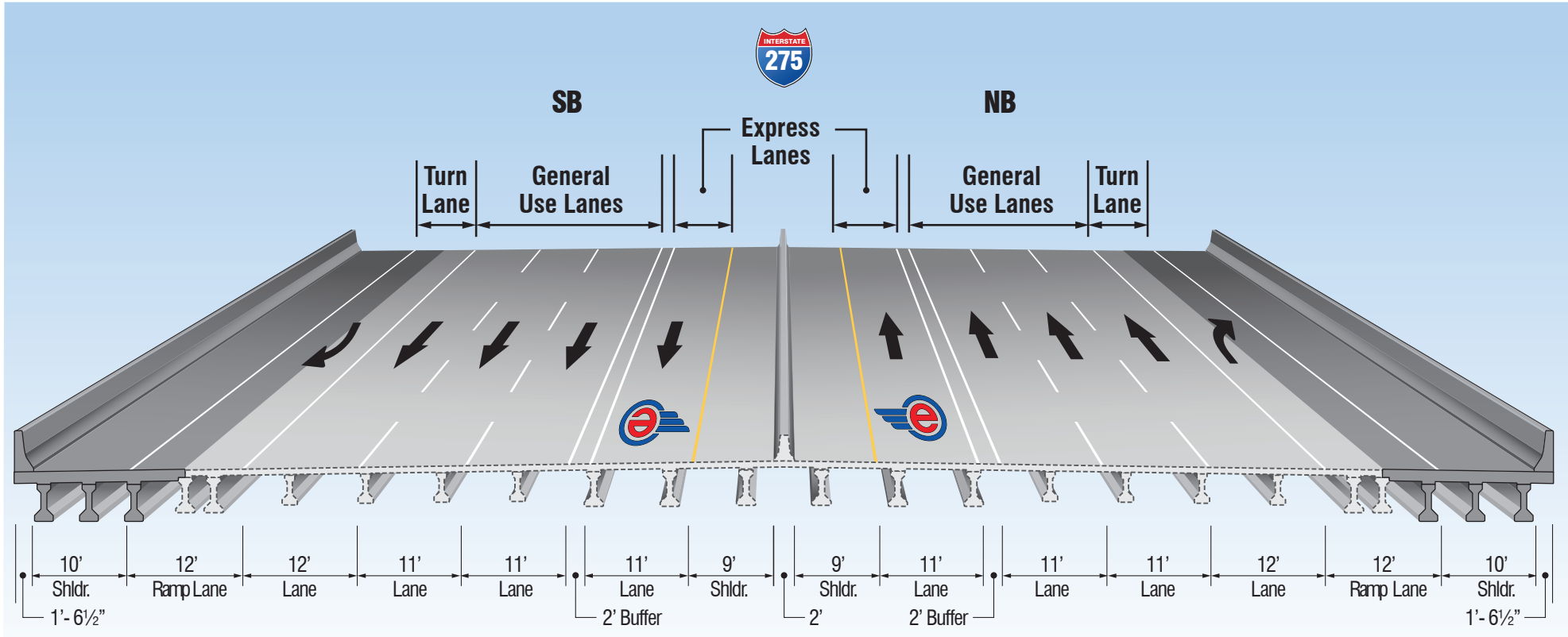
NB=Northbound, SB=Southbound

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 OVER HANNA AVENUE
PROPOSED BRIDGE TYPICAL SECTION

Figure No.
18



NB=Northbound, SB=Southbound

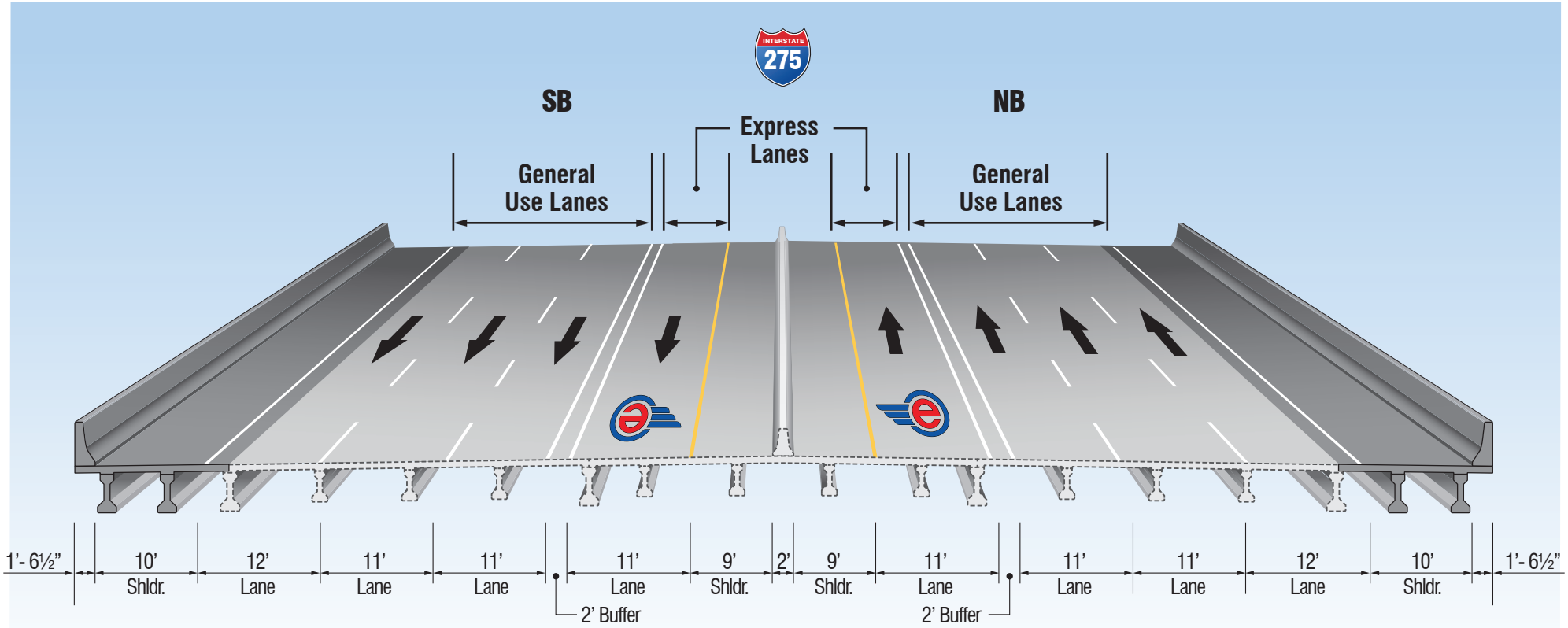
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 OVER BUSCH BOULEVARD
PROPOSED BRIDGE TYPICAL SECTION

Figure No.
19



I-275 Typical Section over:

Linebaugh Avenue - Bridge No. 100228
Bougainvillea Avenue - Bridge No. 100243
Fowler Avenue - Bridge No. 100231
127th Avenue - Bridge No. 100232
Fletcher Avenue - Bridge No. 100236
Nebraska Avenue and CSX RR - Bridge No. 100240

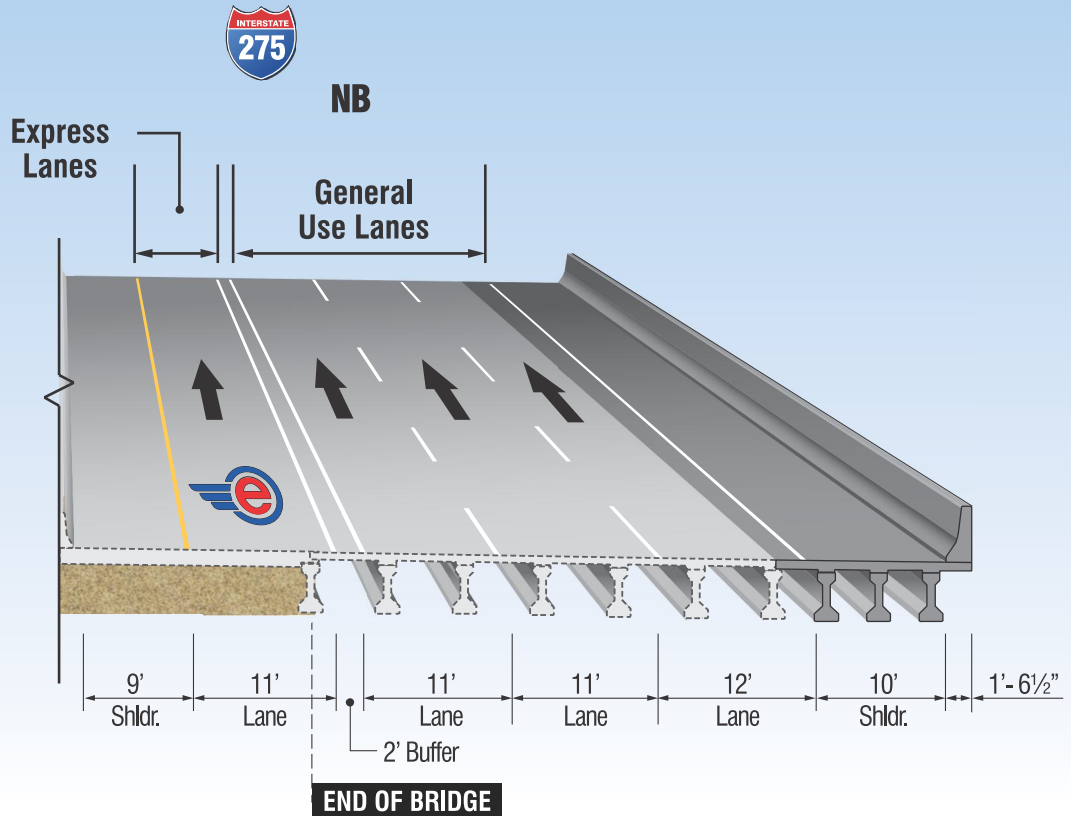
NB=Northbound, SB=Southbound

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 Proposed Bridge Typical Section (bridges from Linebaugh Avenue to Nebraska Avenue)

Figure No.
20



NB=Northbound, SB=Southbound

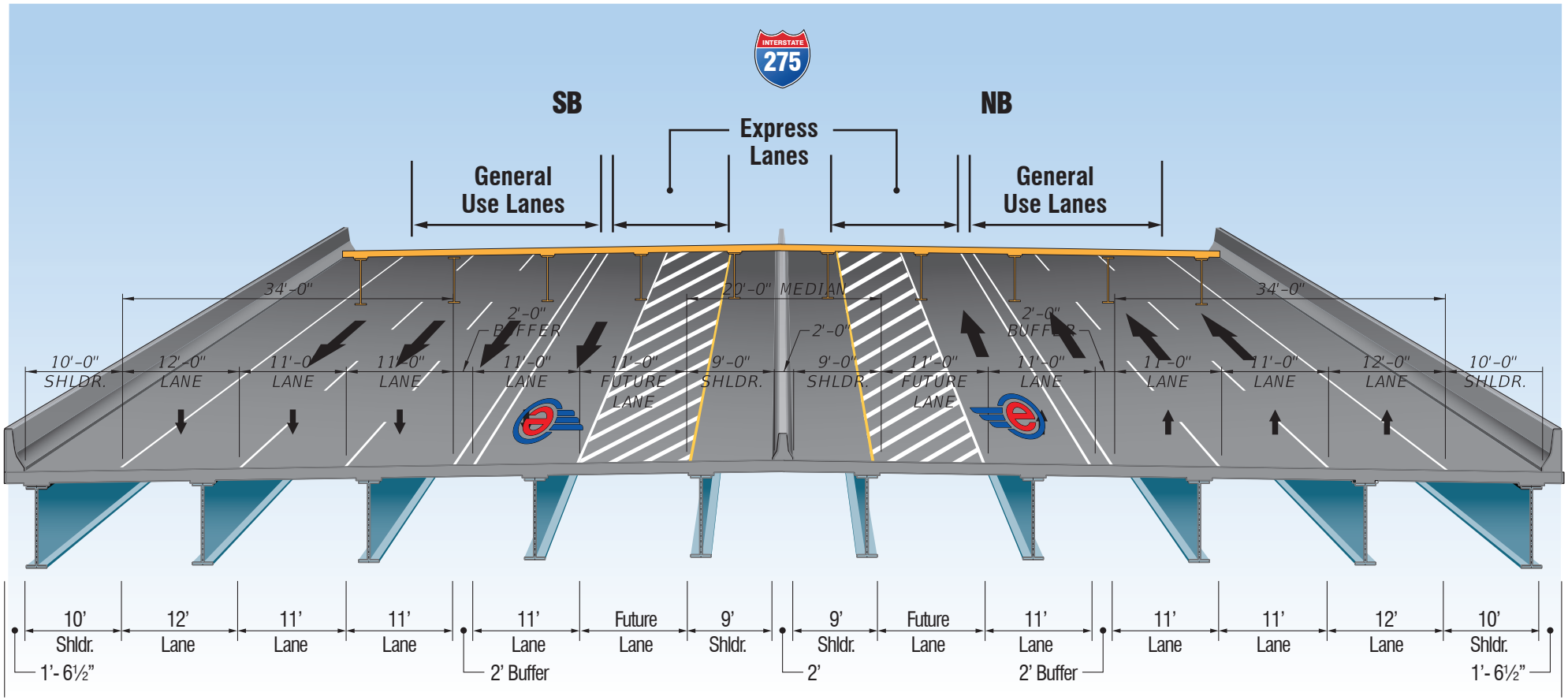
I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 OVER SINKHOLE PROPOSED BRIDGE TYPICAL SECTION

Figure No.
21



NB=Northbound, SB=Southbound

I-275 EXPRESS LANES PD&E STUDY

TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

I-275 OVER BEARSS AVENUE
PROPOSED BRIDGE TYPICAL SECTION

Figure No.
22

7.8 Evaluation Matrix

The alternatives were evaluated and compared for socio-economic, engineering, safety, costs, and environmental impacts. The recommended alternative is chosen based on the results of the engineering and environmental analyses and public input. Based on the comparison, the Recommended Alternative is the Build Alternative. The Build Alternative includes one EL and three GULs in each direction from north of MLK Boulevard to north of Bearss Avenue.

The Build Alternative effects were identified using the proposed right of way "footprint," base maps, and data collection performed for this PD&E Study. The construction cost estimates were developed using FDOT's Long Range Estimates (LRE) program. The comparative evaluation matrix, including impacts and costs, is shown in **Table 19**.

Table 19: Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative
Potential Relocations		
Number of Businesses and Residences	0	0
Potential Right of Way Impacts		
Additional Right of Way for Roadway (acres)	0	0
Additional Right of Way for Ponds (acres)	0	0
Potential Environmental Effects		
Archaeological/Historic Sites	0	265
Section 4(f) Sites	0	0
Noise Sensitive Sites[1]	468	653
Wetlands (acres)	0	0.64
Floodplains (acre-feet)	0	1.65
Surface Waters (acres)	0	0.09
Threatened & Endangered Species	None	Minimal
Contamination and Hazardous Material Sites (Sites ranked as Medium and High)	0	8
Estimated Costs		
Right of Way Acquisition	$0.00	$0.00
Wetland Mitigation ($118,912 per acre)[2]	$0.00	$0.08M
Roadway & Bridge Construction	$0.00	$190,010,816
Preliminary Engineering Design (15% of construction)	$0.00	$28,501,622
Construction Engineering & Inspection (15% of construction)	$0.00	$28,501,622
Preliminary Estimate of Total Costs	**$0.00**	**$247,094,060**

Notes: [1]Number of impacted sites based on the Noise Study Report.
[2]Wetlands mitigation per acre cost is from the 2018/2019 fiscal year cost per acre from the *Environmental Mitigation Payment Processing Handbook* (October 2013).

8.0 DESIGN DETAILS OF RECOMMENDED ALTERNATIVE

To be completed after the Public Hearing.

9.0 LIST OF TECHNICAL REPORTS

In addition to this Preliminary Engineering Report, numerous reports have been submitted or are being prepared in support of this I-275 PD&E Study. These reports are listed below.

9.1 Engineering Reports

- Design Traffic Technical Memorandum, July 2015
- Location Hydraulics Report, March 2015
- Pond Feasibility Report, August 2015
- Build Alternative Concept Design Plan Sets, December 2015 (included as **Appendices A** and **B** of this Preliminary Engineering Report)

9.2 Environmental Reports

- Type 2 Categorical Exclusion (to be completed after the public hearing)
- Noise Study Report, October 2015
- Air Quality Technical Memorandum, October 2015
- Contamination Screening Evaluation Report, March 2015
- Draft Wetland Evaluation and Biological Assessment Report, May 2015
- Cultural Resource Assessment Survey, September 2015

9.3 Public Involvement Reports

- Public Involvement Program, September 2014
- Public Hearing Scrapbook (to be completed after the public hearing)
- Public Hearing Transcript (to be completed after the public hearing)
- Comments and Coordination Report (to be completed after the public hearing)

10.0 LIST OF REFERENCES

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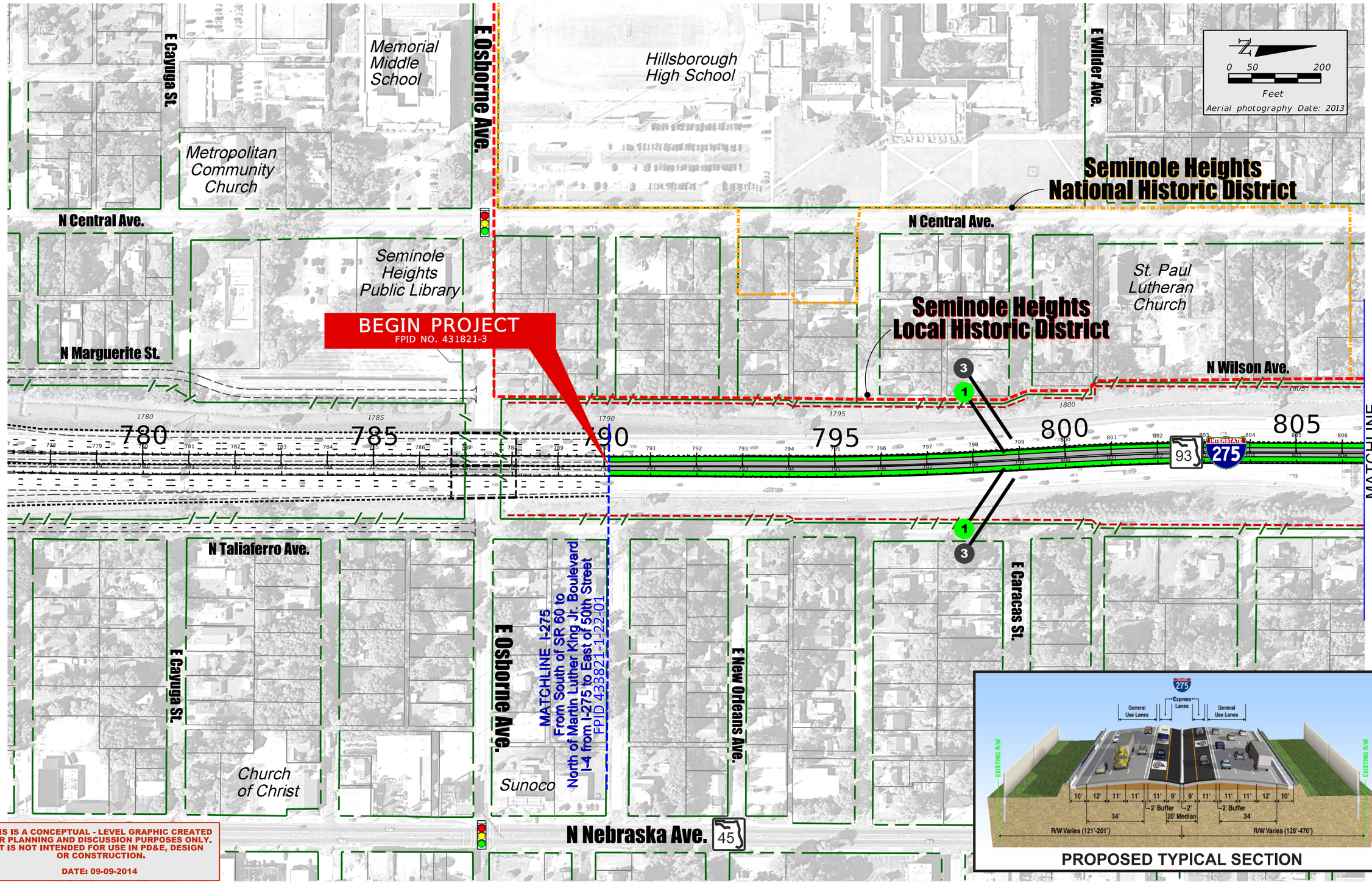
Appendix A
Build Alternative Concept Design Plans



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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
- POTENTIAL CONTAMINATION
- EXISTING RIGHT OF WAY
- EXISTING LA RIGHT OF WAY
- TIS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- HART BUS STOP
- TRAFFIC LIGHT
- EXISTING NOISE BARRIER
- POTENTIAL NOISE BARRIER
- METRO RAPID BUS STOP

TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (1 OF 15)

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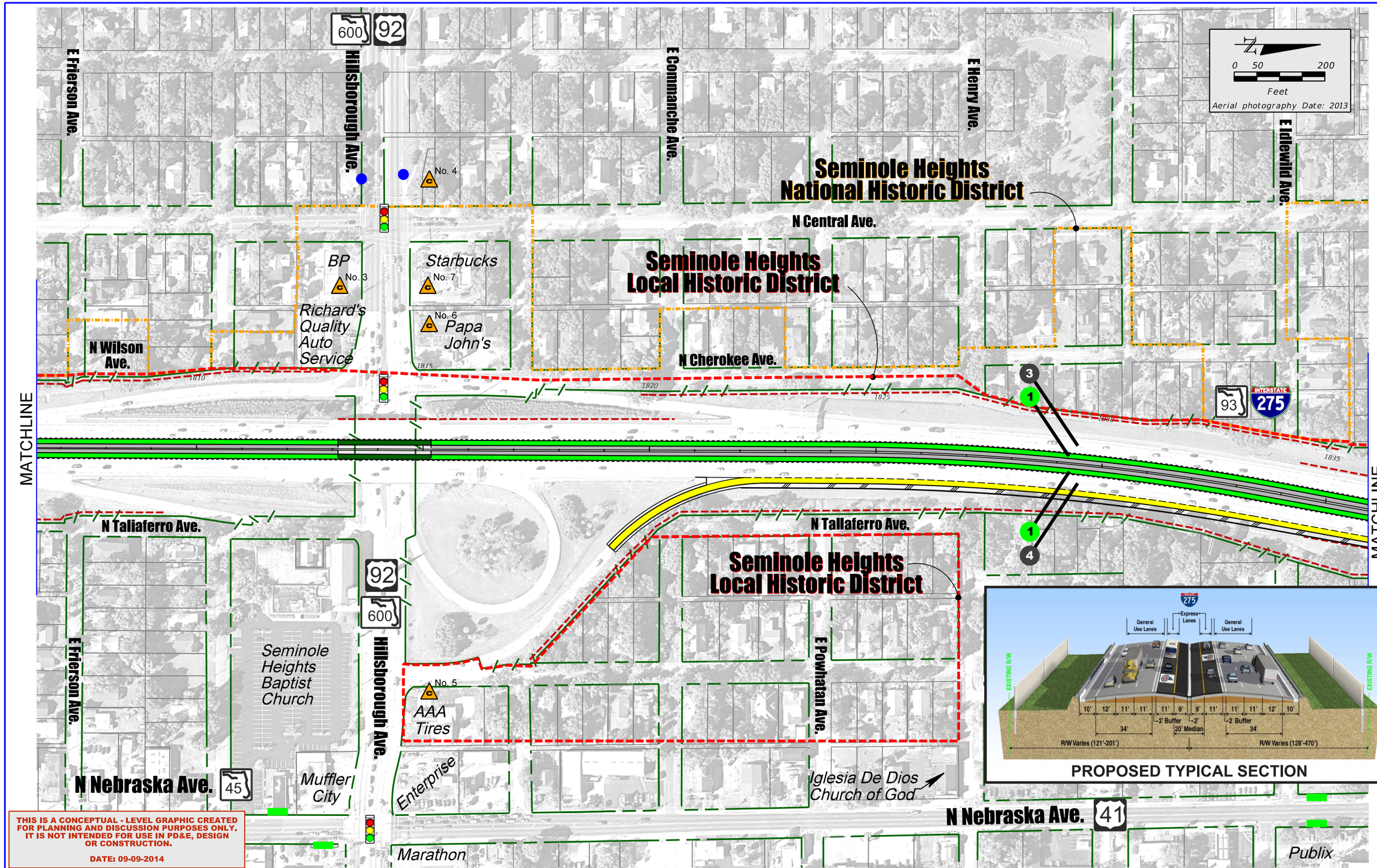

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DEPARTMENT OF TRANSPORTATION

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I-275 PD&E BUILD ALTERNATIVE
ONE LANE EACH DIRECTION

PLAN SHEET (2 OF 15)

SHEET NO. 2

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Seminole Heights Local Historic District

Seminole Heights National Historic District

Watermark Church

E Knollwood St.

E Hiawatha St.

N Central Ave.

All God's Kids Academy

Seminole Heights United Methodist Church

E Hanna Ave.

Seminole Heights Elementary School

E Fern St.

E North St.

E Lambright St.

E Knollwood St.

E Pocahontas Ave.

E Elm St.

MATCHLINE

TECO Fern St. Substation

N Taliaferro Ave.

93 INTERSTATE 275

1840 1845 1850 1855 1860 1865

3 1 4

N King St.

E Hanna Ave.

No. 8 Calvin's Transmissions

R&B Mechanic Shop

Alamo Motel

E North St.

E Lambright St.

N Harer St.

E Knollwood St.

E Elm St.

Sulfur Springs US Post Office

Vacant

N Nebraska Ave. 41

Tampa Fire Station #7

Cramer Auto Group

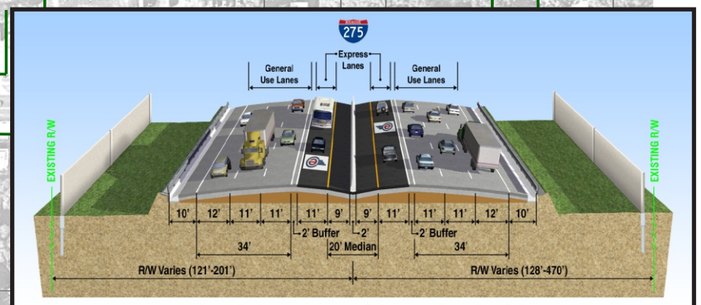
No. 9

No. 10

Swan Motel

0 50 200 Feet

Aerial photography Date: 2013



PROPOSED TYPICAL SECTION

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- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
- POTENTIAL CONTAMINATION
- EXISTING RIGHT OF WAY
- EXISTING LA RIGHT OF WAY
- TIS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- HART BUS STOP
- TRAFFIC LIGHT
- EXISTING NOISE BARRIER
- POTENTIAL NOISE BARRIER
- METRO RAPID BUS STOP

TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE
ONE LANE EACH DIRECTION

PLAN SHEET (3 OF 15)

SHEET NO. 3

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Christ Fellowship

Sligh Ave.

E Flora St.

E Hamilton Ave.

Dixon Ave.

Greater Faith Outreach Center

E Broad St.

Oaks at Riverview

Kirby St.

0 50 200

Feet

Aerial photography Date: 2013

Huracan Supermarket

No. 12

Sligh Petrol Mart

93 INTERSTATE 275

N Central Ave.

Ice Cold Air

Texaco Xpress Lube

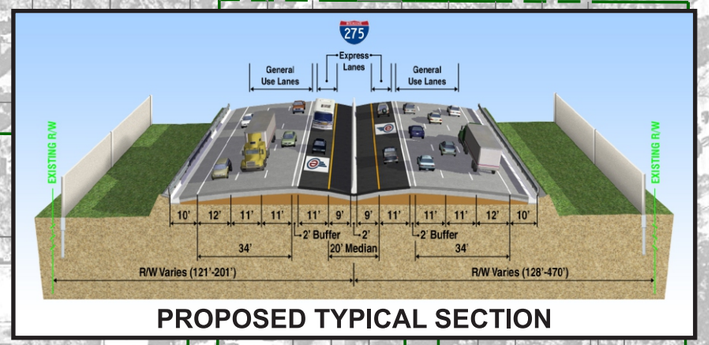
House of Meats

1870 1875 1880 1885 1890

MATCHLINE

MATCHLINE

N Huntley Ave.



PROPOSED TYPICAL SECTION

No. 11

No. 14

True Autocare Inc.

No. 13

Sunoco

Vacant

Sligh Ave.

E Norfolk St.

E Flora St.

Grover Cleveland Elementary School

E Hamilton Ave.

E Crenshaw St.

E Broad St.

E Patterson St.

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- EXISTING RIGHT OF WAY
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- TIS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
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- TRAFFIC LIGHT
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I-275 PD&E BUILD ALTERNATIVE
ONE LANE EACH DIRECTION

PLAN SHEET (4 OF 15)

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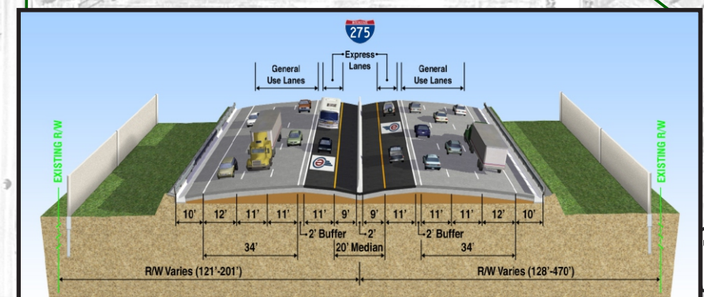
Riverview Terrace Playground
E Hanlon St.
N Branch Ave.
E Hollywood St.
HILLSBOROUGH RIVER
River Tower Park
E Bird St.
KFC
Golden Anchor Tavern
E Waters Ave.
0 50 200
Feet
Aerial photography Date: 2013
HILLSBOROUGH 584 COUNTY
Sears Outlet
Kmart
Besco Auto Service
N Seminole Ave.
3
1
1915
1920
1925
1910
1905
1900
93
INTERSTATE 275
N Central Ave.
MATCHLINE
MATCHLINE
N Lamar Ave.
Bay Area Imports
Vacant
Sulfur Springs Pool & Park
E Hanlon St.
E Hollywood St.
E Bird St.
Tampa Greyhound Track
E Waters Ave.
Anthony Auto Care
E Rampart St.



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I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (5 OF 15)

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MATCHLINE

MATCHLINE

Home Depot

Advance America

HART Yukon Transfer Center

Westchester Manor

Self Service Storage

CSX Railroad

E Busch Blvd.

580

0 50 200

Feet

Aerial photography Date: 2013

E Fairbanks St.

E Woods St.

E Seward St.

E Yukon St.

N Seminole Ave.

N Lamar Ave.

1930

1935

1940

1945

1950

93

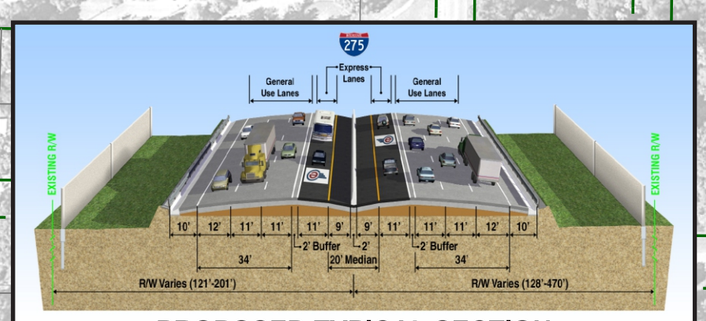
INTERSTATE 275

3

1

1

3



PROPOSED TYPICAL SECTION

N Taliaferro Ave.

E Woods St.

E Arctic St.

E Yukon St.

E Humphrey St.

E Skagway Ave.

CSX Railroad

E Busch Blvd.

580

Vacant

Tropical Car Wash

ABC Auto Traders

Mitchell Ave.

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- PROPOSED RIGHT OF WAY
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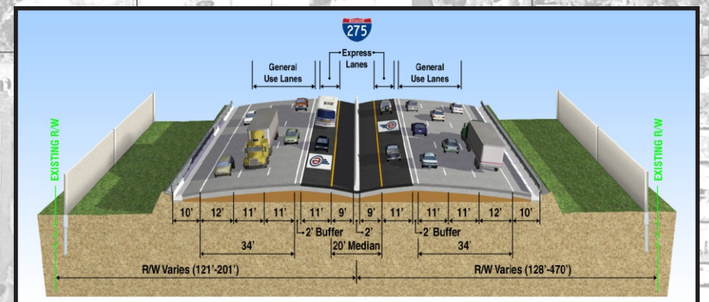

PROPOSED TYPICAL SECTION

Floriland Office Center

Most Holy Redeemer Inter-Parochial School

Most Holy Redeemer Catholic Church

Central Mobile Home Park

Jersey Mobile Home Park

TOLL GANTRY LOCATION

E Linebaugh Ave.

Althea Ave.

N Central Ave.

N Florence Ave.

N Tallaferro Ave.

SB-EXPRESS LANE
NB-EXPRESS LANE
ACCESS AREA

E Wilma St.

E Annie St.

Castle Court N

Orchid Ave.

E Linebaugh Ave.

McEwen Ave.

MATCHLINE

MATCHLINE

1955 1960 1965 1970 1975 1980

3 1 1 3

93 INTERSTATE 275

0 50 200
Feet
Aerial photography Date: 2013

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DATE: 09-09-2014

LEGEND

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- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
- POTENTIAL CONTAMINATION
- EXISTING RIGHT OF WAY
- EXISTING LA RIGHT OF WAY
- TIS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- HART BUS STOP
- TRAFFIC LIGHT
- EXISTING NOISE BARRIER
- POTENTIAL NOISE BARRIER
- METRO RAPID BUS STOP

TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (7 OF 15)

SHEET NO. 7

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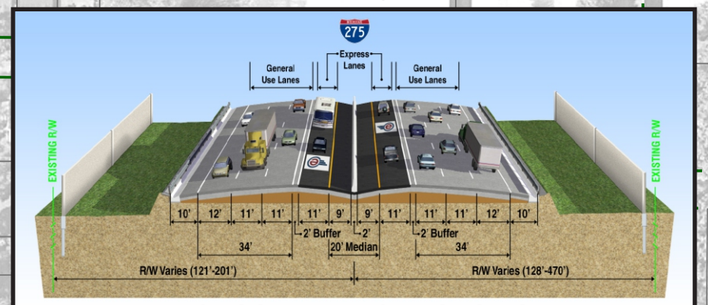

PROPOSED TYPICAL SECTION

0 50 200
Feet
Aerial photography Date: 2013

N Dixon Ave.

E Bougainvillea Ave.

E Seneca Ave.

E 109th Ave.

Brooks DeBartolo Collegiate High School

City Life Church

93 INTERSTATE 275

N Central Ave.

1985 1990 1995 2000 2005 2010

MATCHLINE

MATCHLINE

3 1 1 3

Exist. Pond

N Florence Ave.

N Annette Ave.

SB-EXPRESS LANE
NB-EXPRESS LANE
ACCESS AREA

E 112th Ave.

Camp Nebraska RV Park

Family Dollar

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
- POTENTIAL CONTAMINATION
- EXISTING RIGHT OF WAY
- EXISTING LA RIGHT OF WAY
- TIS RIGHT OF WAY
- PROPOSED RIGHT OF WAY
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- TRAFFIC LIGHT
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (8 OF 15)

SHEET NO. 8

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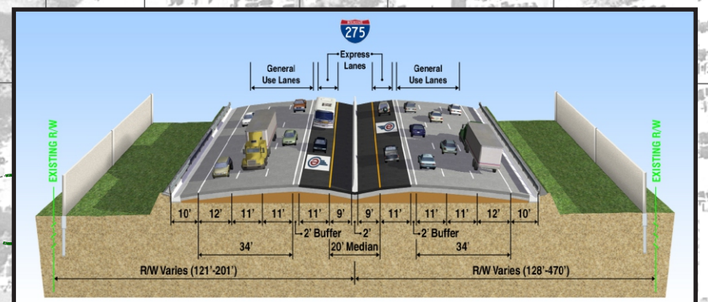

PROPOSED TYPICAL SECTION

THIS IS A CONCEPTUAL - LEVEL GRAPHIC CREATED FOR PLANNING AND DISCUSSION PURPOSES ONLY. IT IS NOT INTENDED FOR USE IN PD&E, DESIGN OR CONSTRUCTION.

DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (9 OF 15)

SHEET NO. 9

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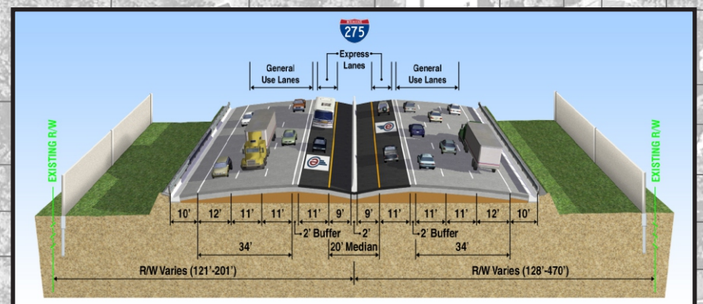

PROPOSED TYPICAL SECTION

0 50 200

Feet

Aerial photography Date: 2013

Frank D. Miles Elementary School

Step Ahead Academy

Royal Sun Park Assisted Living Facility

Chinese Christian Alliance Church

Boy Scouts of America

E 124th Ave.

E 127th Ave.

Hoffman Blvd.

E 131st Ave.

93

INTERSTATE 275

N Central Ave.

MATCHLINE

MATCHLINE

2045 2050 2055 2060 2065 2070

3

1

1

3

TOLL GANTRY LOCATION

Existing Sink Hole

TECO McFarland Substation

N Taliaferro Ave.

N Taliaferro Ave.

E 124th Ave.

E 126th Ave.

E 127th Ave.

Hoffman Blvd.

Lexington Blvd.

E 131st Ave.

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
- PROPOSED NON-INTERSTATE ROADWAY
- POTENTIAL CONTAMINATION
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TAMPA BAY EXPRESS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (10 OF 15)

SHEET NO. 10

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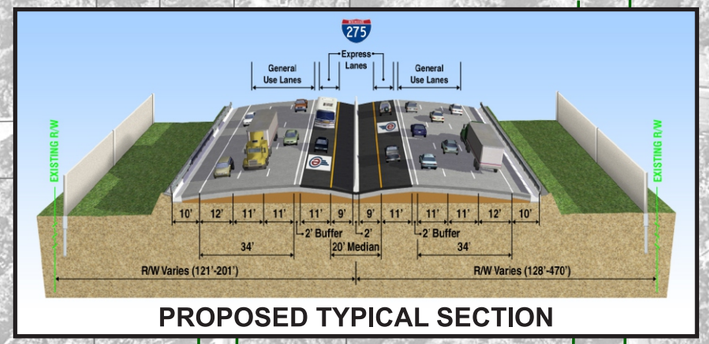

PROPOSED TYPICAL SECTION

Ed Morse Cadillac

Shooter's World

Oak Grove Apartments

0 50 200

Feet

Aerial photography Date: 2013

Central Professional Building

Cadillac Collision

BP

No. 18

Fletcher Ave.

Boy Scouts of America

Super 8 Motel

Fisker Jaguar Tampa

No. 20

E 137th Ave.

E 138th Ave.

N Central Ave.

93

INTERSTATE 275

3

1

2075 2080 2085 2090 2095 2100

MATCHLINE

MATCHLINE

Days Inn

St.Croix Professional Center

Hidden Oaks Mobile Home Park

No. 17

No. 19

Summit Ave.

Orange Ave.

Grove Ave.

E 137th Ave.

E Hollywood St.

Frontier Travel Park

Uncle Bob's Self Storage

Vacant

Salvation Army

Atlantic Automotive

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
- PROPOSED GENERAL USE LANE
- PROPOSED GENERAL USE LANE - BRIDGE
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (11 OF 15)

SHEET NO. 11

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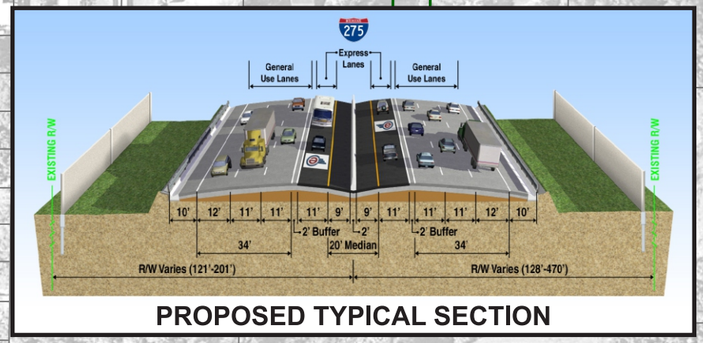

PROPOSED TYPICAL SECTION

0 50 200

Feet

Aerial photography Date: 2013

E 143rd Ave.

E 145th Ave.

April Lane

Gateway Christian Center

Christian Growth Fellowship

93 INTERSTATE 275

N Central Ave.

MATCHLINE

MATCHLINE

2105 2110 2115 2130 2135 2150

Suncoast Roofer Supply

Iglesius de Dios

Thrift Store

Grand Prix Tampa

Fountain Palms Apartment Homes

Chalet Village Mobile Home Park

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (12 OF 15)

SHEET NO. 12

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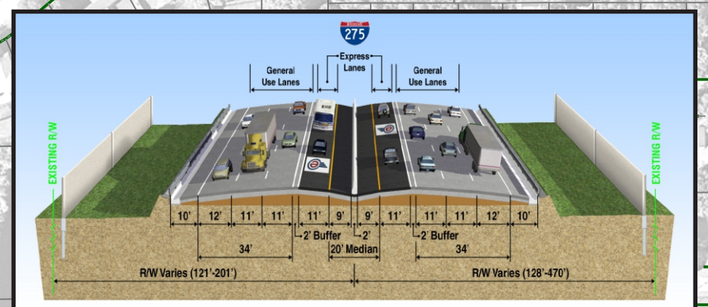

PROPOSED TYPICAL SECTION

Pine Crest Road

No. 23 Chevron

Calypso Divers

No. 24

Laurie Lane

Vista Inn and Suites Tampa

Bearss Ave.

IHOP

0 50 200

Feet

Aerial photography Date: 2013

MATCHLINE

MATCHLINE

Citgo

No. 22

No. 21 Mild to Wild Car Audio

Walmart Pond-1

Walmart

Walmart Pond-2

Carmax Tampa

Carmax Tampa

Sparta Cross Fit

WaWa

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (13 OF 15)

SHEET NO. 13

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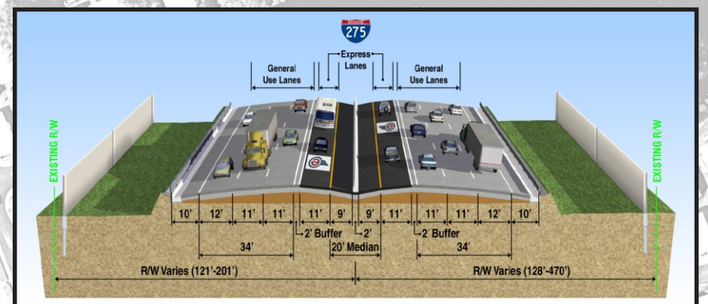

PROPOSED TYPICAL SECTION

0 50 200
Feet
Aerial photography Date: 2013

Lakeshore Villas

TOLL GANTRY LOCATION

93 INTERSTATE 275

N Nebraska Ave. 41

CSX Railroad

2160 2165 2170 2175 2180 2185

3 1 1 3

Landscape Lighting World

Castle Supply Company

All Around Equipment

MATCHLINE

MATCHLINE

Walmart Pond-1

Walmart

Sinclair Hills Road

N Nebraska Ave. 41

Country Club Automotive

W Lake Burrell Dr

CSX Railroad

W Lake Burrell Dr

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LEGEND

- PROPOSED EXPRESS LANE
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TAMPA BAY EXPRESS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE
ONE LANE EACH DIRECTION

PLAN SHEET (14 OF 15)

SHEET NO. 14

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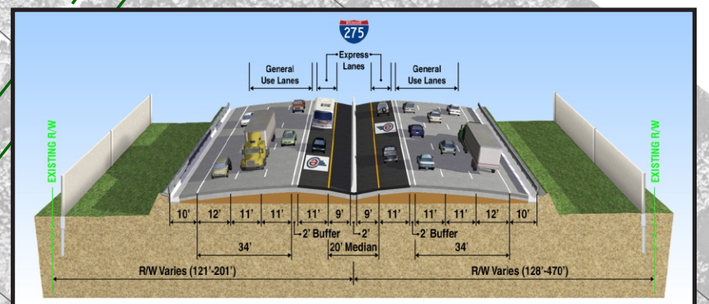

PROPOSED TYPICAL SECTION

0 50 200

Feet

Aerial photography Date: 2013

END PROJECT
FPID NO. 431821-3

SB-EXPRESS LANE BEGIN ACCESS AREA

NB-EXPRESS LANE END ACCESS AREA

N Nebraska Ave. (41)

CSX Railroad

Hayes Rd

Hanna Rd

North Tampa Business Center

93 INTERSTATE 275

W Lake Burrell Dr

MATCHLINE

2185 2190 2195 2200 2205 2210

3

3

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DATE: 09-09-2014

LEGEND

- PROPOSED EXPRESS LANE
- PROPOSED EXPRESS LANE - BRIDGE
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- PROPOSED GENERAL USE LANE - BRIDGE
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TAMPA BAY EXPRESS

FDOT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 93	HILLSBOROUGH	431821 1 22 01

I-275 PD&E BUILD ALTERNATIVE ONE LANE EACH DIRECTION

PLAN SHEET (15 OF 15)

SHEET NO. 15

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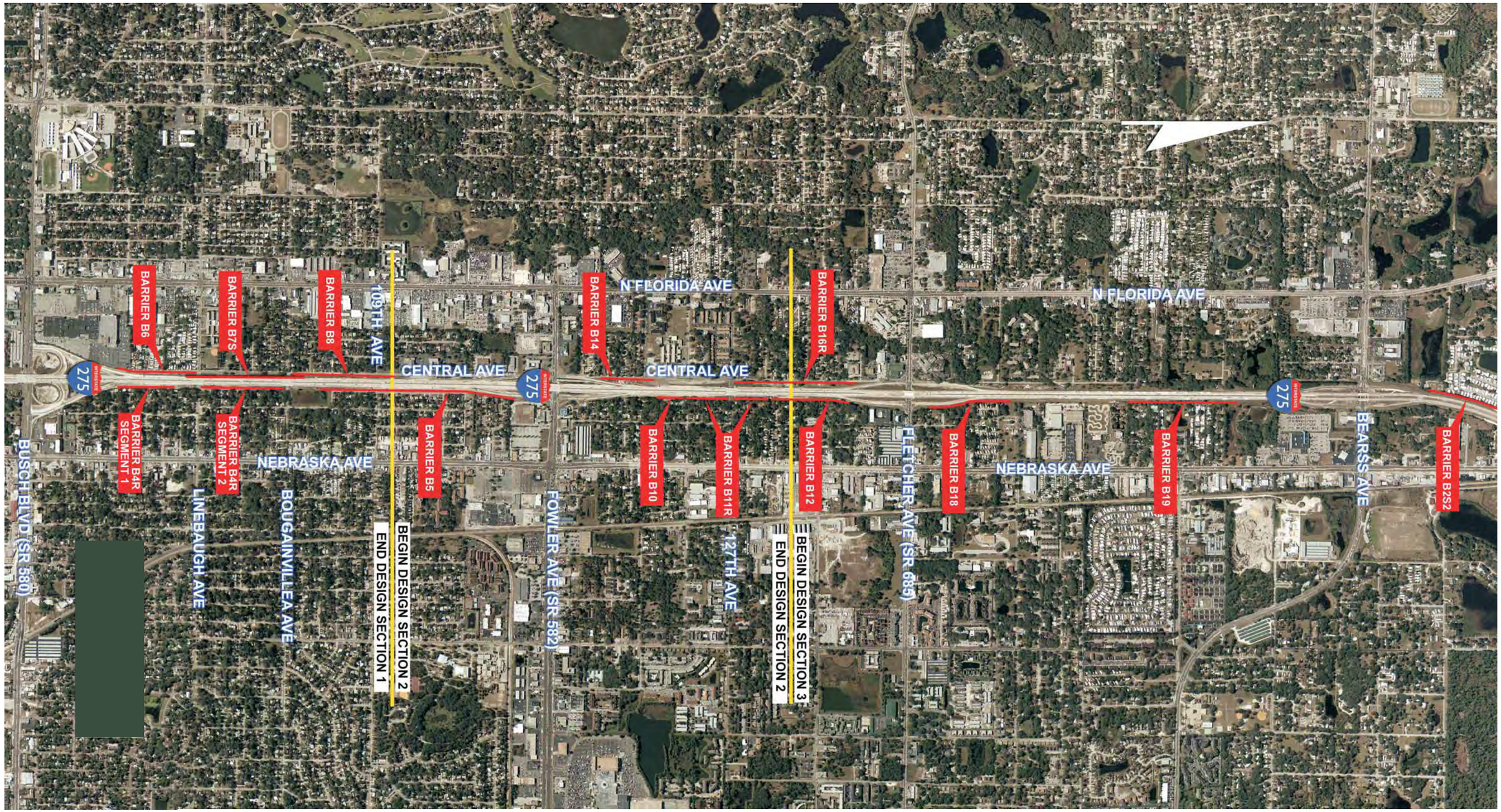
Appendix B
Location Map of Existing Noise Barriers



TAMPA BAY EXPRESS
A NEW CHOICE FOR A BETTER COMMUTE

WPI Segment No. 431821-1
HILLSBOROUGH COUNTY

Location Map of Existing Noise Barriers