

# PRELIMINARY ENGINEERING REPORT

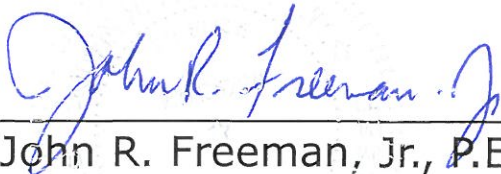
Florida Department of Transportation  
District One

## **I-75 at SR 951 Ultimate Interchange Collier County, Florida**

ETDM Number 13101  
Financial Management No. 425843-2-22-01  
Federal Aid Project No. 0754 161 I

This preliminary engineering report contains detailed engineering information that fulfills the purpose and need for project: *I-75 at SR 951 Ultimate Interchange Project Development and Environment Study*. The environmental document is a Type 2 Categorical Exclusion (July 2014).

Date 7/29/2014



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John R. Freeman, Jr., P.E., PTOE



## Professional Engineer Certificate

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Kittelson & Associates, Inc., an Oregon corporation, authorized to operate as an engineering business, Certificate of Authorization #7524, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for:

**Financial Management No.:** 425843-2-22-01

**Federal Aid Project No.:** 0754 161 I

**Project:** I-75 at SR 951 Ultimate Interchange Project Development and Environmental Study

**County:** Collier

**FDOT Project Manager:** Aaron Kaster

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I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

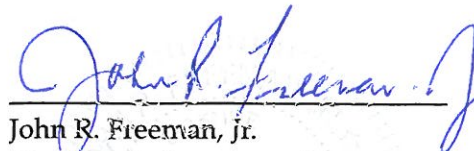
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## Appendices

The following appendices are available as electronic documents on the attached DVD.

**Appendix A** Recommended Preferred Alternative Plans

**Appendix B** Approved Typical Section Package

**Appendix C** Construction Cost Estimate

**Appendix D** Design Variations

**Appendix E** Value Engineering Report

**Appendix F** Planning Consistency

## Abbreviations

ac – Acre	L RTP – Long Range Transportation Plan
AN – Advance Notification	NAAQS – Clean Air Act National Ambient Air Quality Standards
BOD – Biological Oxygen Demand	MPO – Metropolitan Planning Organization
CAT – Collier Area Transit	NAC – Noise Abatement Criteria
CBC - Concrete Box Culvert	NB – Northbound
C.F.R. – Code of Federal Regulations	NEPA – National Environmental Policy Act
CO – Carbon Monoxide	NMFS – National Marine Fisheries Service
CRAS – Cultural Resource Assessment Survey	NPDES – National Pollution Discharge Elimination System
CSE R – Contamination Screening Evaluation Report	NRCS – Natural Resources Conservation Service
CWA – Clean Water Act	NRHP – National Register of Historic Places
dB – Decibel	NWI – National Wetland Inventory
dBA – A-weighted Decibel	PARCLO – Partial Cloverleaf
DCA – Department of Community Affairs	PER – Preliminary Engineering Report
DCIA - Directly Connected Impervious Area	PIP – Public Involvement Program
DDHV – Directional Design Hour Volumes	PPM – Plans Preparation Manual
DFIRM - Digital Flood Insurance Rate Maps	RCP – Reinforced Concrete Pipe
DO – Dissolve Oxygen	RCW - Red-Cockaded Woodpecker
EB – Eastbound	ROW – Right-of-way
EFH – Essential Fish Habitat	SB – Southbound
EMC - Event mean concentrations	SFWMD – South Florida Water Management District
ERP – Environmental Resource Permit	SHPO – State Historic Preservation Officer
EST – Environmental Screening Tool	SIS – State Intermodal System
ETDM – Efficient Transportation Decision Making	STIP – State Transportation Improvement Plan
F.A.C. – Florida Administrative Code	SWIM - Surface Water Improvement & Management
F.S. – Florida Statutes	SWPPP – Stormwater Pollution Prevention Plan
FDEP – Florida Department of Environmental Protection	TD - Transportation Disadvantaged System
FDOT – Florida Department of Transportation	TIP – Transportation Improvement Plan
FEMA – Federal Emergency Management Agency	TMDL – Total Maximum Daily Load
FFWCC – Florida Fish and Wildlife Conservation Commission	TN – Total Nitrogen
FIB – Florida-I Beam	TNM – Traffic Noise Model
FIRM – Flood Insurance Rate Map	TP - Total Phosphorus
FMC – Fishery Management Councils	USACE – United States Army Corps of Engineers
FMSF - Florida Master Site File	USCG – United States Coast Guard
GIS – Geographic Information System	USEPA – United States Environmental Protection Agency
IJR – Interchange Justification Report	USFWS – United States Fish and Wildlife Service
IMR – Interchange Modification Report	VE – Value Engineering
kV – Kilovolt	WB - Westbound
LOS – Level of Service	WBID – Water Body Identification
LRE – Long Range Estimate	

## Executive Summary

The Florida Department of Transportation (FDOT) has completed a Project Development and Environment (PD&E) study to evaluate the proposed reconfiguration of the Interstate 75 (I-75) interchange at State Road (SR) 951 in Collier County. SR 951 is known locally as Collier Boulevard. The total project length is approximately 1.6 miles along I-75 and 6,800 feet along Collier Boulevard. The project limits and proposed construction segments are shown in Figure 1. The proposed improvements also include capacity enhancements for the arterial intersection between SR 951 and SR 84, known locally as Davis Boulevard.

### Existing Conditions

The I-75 interchange at SR 951 is located at the eastern edge of the Naples metropolitan urban area in Collier County, Florida, as illustrated in Figure 2. This interchange is the last eastbound exit off I-75 prior to the toll-plaza for the Alligator Alley. I-75 is a limited access freeway designated as a Rural Primary Arterial-Interstate up to milepost 50.076, east of Collier Boulevard and as an Urban Primary Arterial-Interstate thereon. I-75 is two-lanes wide in each travel direction. I-75 is part of the National Highway System, Strategic Intermodal System (SIS), and State Highway System. I-75 is an emergency evacuation route, which can also be operated as a one-way facility, either in the southbound direction from Fort Myers or northbound from Fort Lauderdale. Along I-75 tangents, the limited access right-of-way is approximately 322 feet wide.

SR 951 (Collier Boulevard) between the SR 84 (Davis Boulevard) intersection and approximately 700 feet north of the I-75 northbound ramp terminal is designated as an Urban Other Principal Arterial and is part of the State Highway System. SR 951 features four through lanes in each travel direction through the interchange area. CR 951 (Collier Boulevard) is a Collier County facility outside those limits and features three through lanes in each travel direction. The local name of Collier Boulevard will be used within this report when referring to either SR 951 or CR 951. The right-of-way width along Collier Boulevard varies between 225 and 200 feet.

SR 84 (Davis Boulevard) is designated as an Urban Minor Arterial and is part of the State Highway System. The local name of Davis Boulevard will be used in this report when referring to SR 84. The eastern leg of the Collier Boulevard and Davis Boulevard intersection is Beck Boulevard. West of the intersection with Collier Boulevard the typical right-of-way width along Davis Boulevard is 150-foot wide. Davis Boulevard typically features three through lanes in each travel direction. Beck Boulevard is two-lanes wide in each travel direction.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT

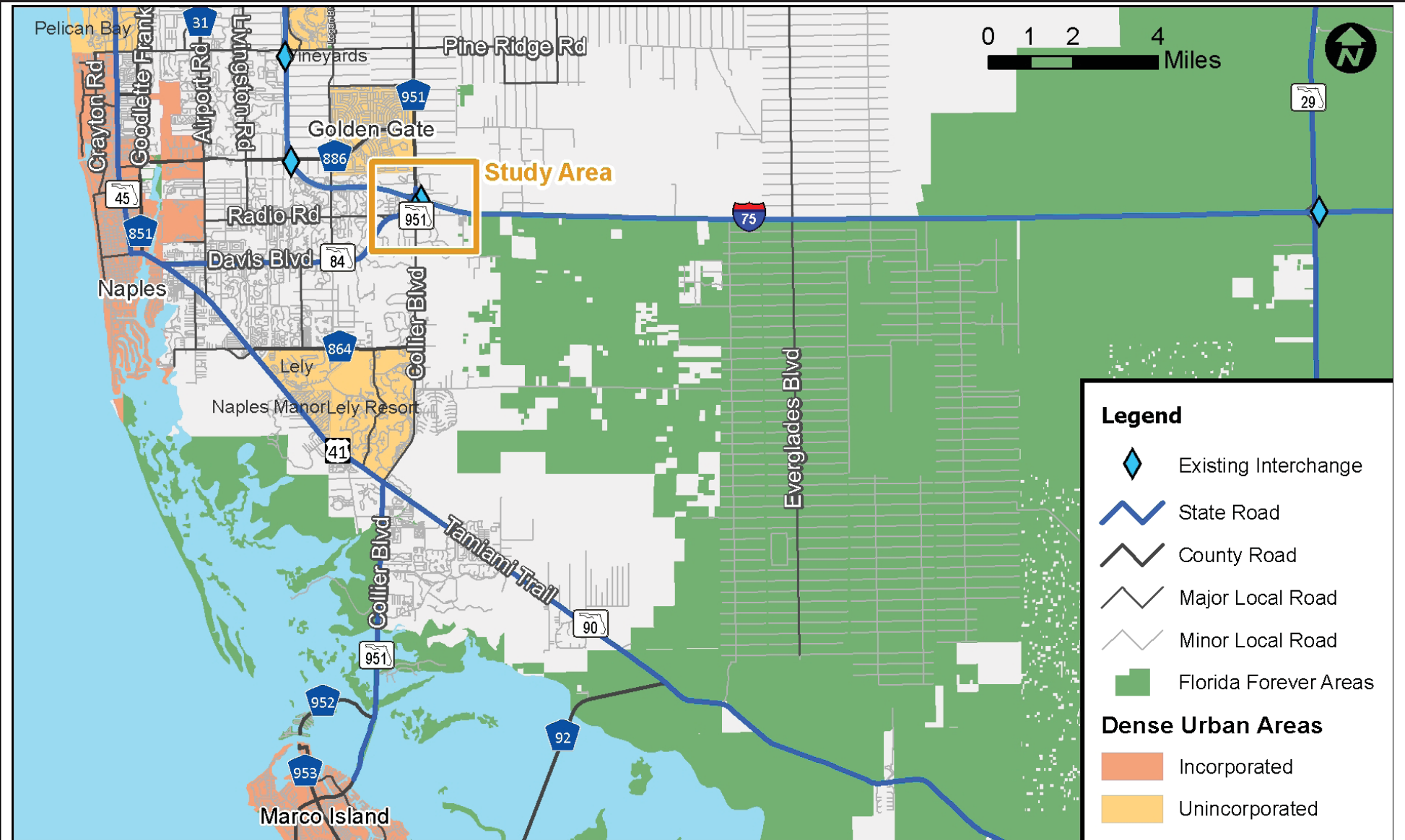


Project Location and Termini **FIGURE**



# I-75 AT SR 951 ULTIMATE INTERCHANGE

## PRELIMINARY ENGINEERING REPORT



Study Area Vicinity

FIGURE

## **Need for Project**

The need for the project is based on anticipated impacts to the I-75 mainline operations, safety, and freight mobility created by poor interchange traffic operations. The following sections address the three main need factors in further detail.

The greater Naples metropolitan area is accessible from Fort Lauderdale and the east coast of Florida via I-75 and two arterials Collier Boulevard and Davis Boulevard. Collier Boulevard connects large residential centers north and south of I-75, such as Golden Gate unincorporated community and Marco Island. Davis Boulevard begins at US 41 near the heart of Naples, connecting commercial and industrial uses surrounding the Naples Municipal Airport to residential areas northeast of the interchange.

Interchange area traffic patterns indicate a strong desire for Collier Boulevard travelers from locations south of I-75 to access the interstate and drive north. License plate surveys conducted for this project further indicate a strong desire for eastbound travelers on Davis Boulevard to drive north along Collier Boulevard to destinations in the northeast residential areas of the county. The multi-directional travel needs within the interchange area are increasing the traffic operation strain on the Collier Boulevard and Davis Boulevard intersection as well as the I-75 ramp terminal intersections. The purpose of this project is to enhance 2035 design year traffic operations by maintaining an acceptable level of service (LOS) at the interchange ramp terminals and the Collier Boulevard and Davis Boulevard major intersection.

The need for the project is based on the primary criteria of adverse impacts to the I-75 mainline and interchange operations and the secondary criteria of safety, and freight mobility created by poor interchange traffic operations.

### ***Primary Criteria***

#### ***Capacity/Transportation Demand***

Daily traffic volumes along all facilities within the I-75 and Collier Boulevard interchange vicinity are expected to increase over the next 23 years at an average of 12% per year. Table 1 summarizes the average annual daily traffic (AADT) volumes and growth forecast for each facility. On average, I-75 mainline traffic volumes are anticipated to increase at rates between 11- and 17-percent per year. With this in mind, Collier County and FDOT have recently completed construction projects to increase capacity on both I-75 off-ramps and the northbound on-ramp at Collier Boulevard, widen Collier Boulevard between Davis Boulevard and the Golden Gate Canal Bridge from 4 to 8 lanes, and widen Davis Boulevard between Radio Road to Collier Boulevard from 2 to 6 lanes. FDOT is also designing the I-75 mainline 6-lane widening from west of the Collier Boulevard to the Golden Gate Parkway interchange. The completed and planned improvements outlined above have been considered as the “No-build” condition and will increase operational capacity; however, even with these improvements the interchange configuration will not adequately serve the 2035 design year forecasted traffic. Table 2 summarizes the existing and future LOS operations for the three main signalized intersections along Collier Boulevard at Davis Boulevard, the I-75 southbound ramps terminal, and the I-75 northbound ramps terminal.

**Table 1** No-Build Scenario Daily Traffic Volumes Comparison

Roadway Segment	2011 AADT Count	2035 AADT Forecast	Overall Growth	Average Annualized Growth '11-'35
I-75 west of Collier Blvd	30,000	78,400	261%	11%
I-75 east of Collier Blvd	14,500	57,500	397%	17%
I-75 SB Off-ramp	10,000	18,400	184%	8%
I-75 SB On-ramp	1,700	7,800	459%	19%
I-75 NB Off-ramp	1,800	9,000	500%	21%
I-75 NB On-ramp	9,900	19,300	195%	8%
Collier Blvd south of Davis Blvd	30,000	49,700	166%	7%
Collier Blvd between Davis Blvd and I-75	41,500	75,800	183%	8%
Collier Blvd north of I-75	22,500	53,800	239%	10%
Davis Blvd west of Collier Blvd	21,500	37,500	174%	7%
Davis Blvd east of Collier Blvd	5,900	17,100	290%	12%

SB = southbound, NB = northbound

**Table 2** No-Build Scenario Traffic Operations Comparison

Intersection	2011 AM Peak Hour*	2011 PM Peak Hour*	2035 AM Peak Hour	2035 PM Peak Hour
Collier Blvd at Davis Blvd	C	C	F	F
Collier Blvd at I-75 SB Ramps	B	B	F	F
Collier Blvd at I-75 NB Ramps	A	B	D	C

\* - traffic operations are based on 2011 counts and recently completed improvements.

As outlined in Table 2, the Collier Boulevard intersections at Davis Boulevard and the two I-75 ramp terminals presently operate above the locally adopted LOS D standard. The forecasted traffic increase will result in 2035 peak hour operations at the Collier Boulevard intersections with Davis Boulevard and the southern I-75 ramp terminal at LOS F, if no additional roadway improvements are made.

### **Secondary Criteria**

#### **Safety: Enhance Safety Conditions**

Crash statistics between 2006 and 2011 were obtained from the FDOT Safety Office. The 2011 data is a partial year as reconstruction of this area commenced in the second half of 2011 and was completed in early 2014. An analysis of mainline I-75 (between milepost 49.978 and milepost 51.928) and the three signalized intersections along Collier Boulevard within the interchange vicinity includes 175 total crashes of which 95 resulted in injuries. Two fatalities were reported along I-75 during the analysis period. Neither fatal crash data indicates a specific contributing factor that led to the incident.

Nearly 42% of the intersection incidents were rear-end collisions. High traffic congestion and close spacing of signalized intersections along Collier Boulevard leads to long delays and vehicle queues contributing to the rear-end crash rate. I-75 mainline crashes were split between approximately 30% rear-end collisions and 17% collisions with fixed objects.

The Collier Boulevard and Davis Boulevard intersection crash activity exceeded the state average for similar facilities during 2007 and 2008. The years of 2006, 2009 and 2010 were below the state average for similar facilities at this intersection. The Collier Boulevard and I-75 northbound ramps terminal intersection crash activity exceeds the state averages for similar facilities during 2007 while the other four years were below the average. I-75 transitions as a facility from an urban to a rural environment just east of the interchange with Collier Boulevard. The crash statistics along I-75 mainline are lower than similar urban facilities for all years analyzed; however, if compared with rural facilities, the statistics for years 2006, 2007, and 2009 exceed the state average. Given the transitional nature of the interchange location, no definitive significant crash activity can be noted along I-75 mainline.

The completed capacity improvements along Collier Boulevard will increase operational capacity and reduce congestion, which in turn is anticipated to improve safety conditions at the interchange terminals and the adjacent Davis Boulevard intersection. However, an increase in traffic volumes at these locations brings a reciprocal increase in potential crashes. The proposed ultimate I-75 interchange configuration at Collier Boulevard would reduce congestion, reduce vehicular conflict thru enhanced channelization, and contribute to a safer environment for all roadway users.

### ***Social Demands or Economic Development: Enhance Freight Mobility and Economic Competitiveness***

The segments of Collier Boulevard from Davis Boulevard to I-75 and Davis Boulevard from Radio Road to Collier Boulevard, including the I-75 and Collier Boulevard interchange, are currently identified as “freight mobility hot spots” in the Collier Metropolitan Planning Organization’s (MPO) 2035 Long Range Transportation Plan (LRTP). The proposed interchange improvement is anticipated to enhance the mobility of goods by alleviating future congestion at the interchange and surrounding freight network.

The 2035 LRTP designates I-75 (a major north-south and east-west arterial on the SIS) as a Tier One regional freight corridor. Both Collier and Davis Boulevards are designated as Tier Two regional freight connectors by the virtue of connecting major freight activity centers to I-75. All three facilities studied as part of the ultimate I-75 and Collier Boulevard interchange configuration are located within the Gateway Freight Activity Center. The adopted Collier County Future Land Use Map information and data obtained from the Lee-Collier Regional Transportation Model traffic analysis zones (TAZ) forecast high employment growth in the study interchange’s vicinity. Employment activity for the TAZs located within a quarter mile of the study interchange is estimated to grow at 14.4% per year between 2007 and 2035.



Examples of future employment generators adjacent to the interchange are the City Gate Development of Regional Impact (DRI), a future industrial park that recently (2011) built its internal roadway system in the northeast quadrant of the interchange, and Collier Consumer Square, with side grading and infrastructure improvements for new commercial retail areas north and south of Magnolia Pond Drive.

The proposed ultimate interchange improvement would facilitate access to a Tier One regional SIS facility—I-75—and enhance the local freight mobility between the planned industrial and commercial developments in the interchange vicinity.

## Recommend Build Alternative

Public input on the viable alternatives and their evaluation was requested during the October 25, 2012 Public Information Workshop. Alternative 1 emerged as the preferred study alternative based on lower project costs and nearly equal traffic operations performance and impacts to the surrounding area and environment. Figure 3 illustrates the recommended preferred alternative. The concept plans for the recommended alternative is provided under a different cover. The signed Typical Section Package is included in Appendix A.

## Project Planning Consistency

Table 3 shows the planned project cost elements and the implementation schedule for the completion of the improvement.

**Table 3** Funding Summary

Phase	Estimate Cost	Time Frame (Fiscal Year)	Funding Source
Preliminary Engineering (Final Design)	\$5,575,120	2015	State and Federal
Right-of-way	\$7,898,656	2019	State and Federal
Construction	\$82,280,000	2031-2035	State and Federal
<b>TOTAL</b>	<b>\$95,753,776</b>		

Sources: Adopted Collier MPO 2013/14-2017/18 TIP, Approved FDOT STIP, Adopted Collier MPO 2035 LRTP and FDOT's SIS 2040 Cost Feasible Plan.

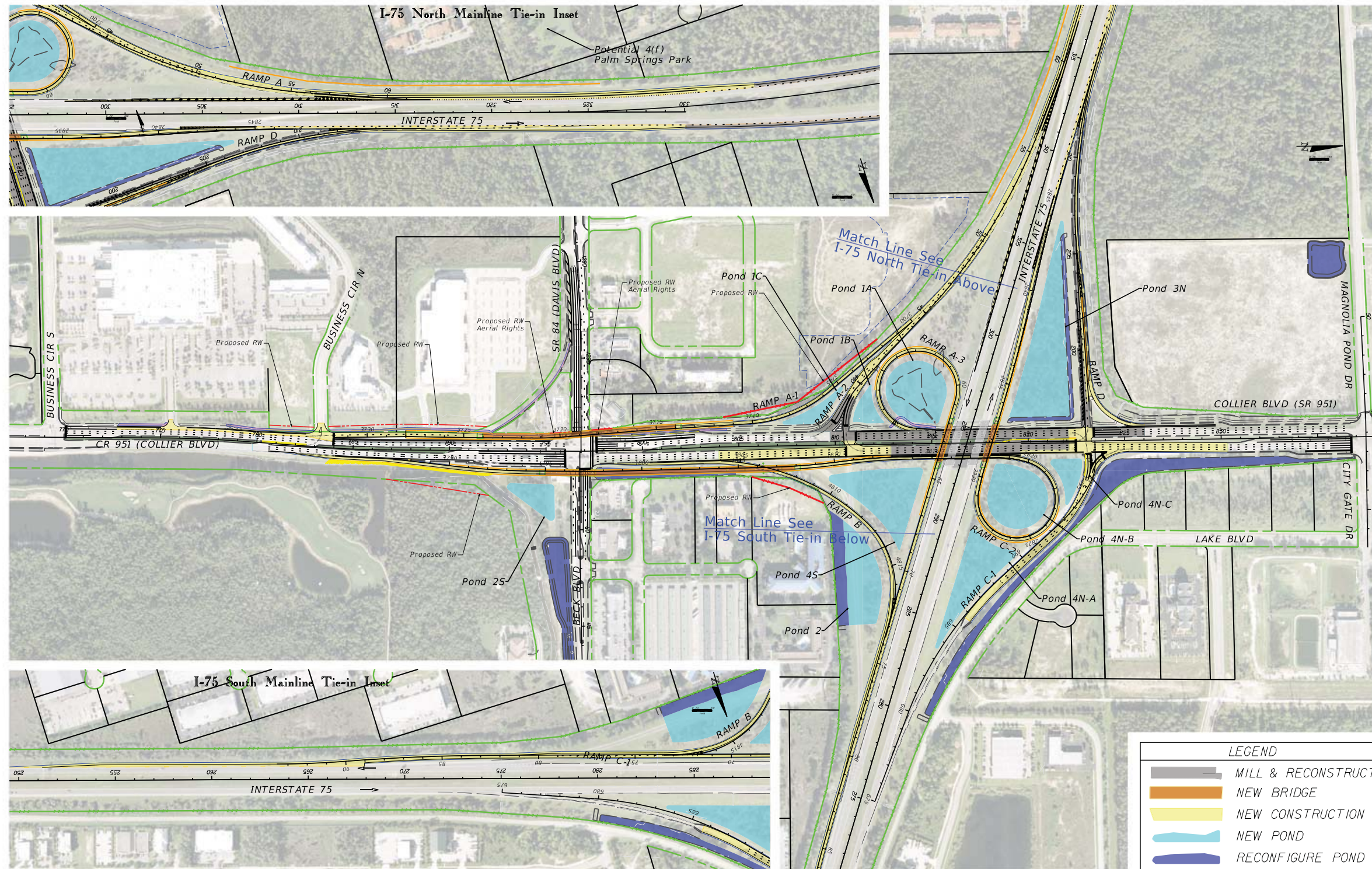
Improvements at the I-75 and Collier Boulevard interchange is consistent with the FDOT Strategic Intermodal System (SIS) 2040 Cost Feasible Plan (CFP), the FDOT State Transportation Improvement Program (STIP) for fiscal years 2014-2017, and the Collier Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP) for fiscal years 2014-2019 and 2035 Long Range Transportation Plan (LRTP).

## Project Cost Estimate

Construction costs were estimated for the recommended preferred alternative using the FDOT Long Range Estimate (LRE) program for the year 2014. The most recent LRE report is provided in Appendix C.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Recommended Preferred Alternative **FIGURE**



## **Environmental Considerations**

### ***Cultural Environment***

#### ***Cultural Resources***

No new cultural resources were identified within the project site for the I-75 at SR 951 Ultimate Interchange as the result of background research and archaeological and historical field survey. A full record of the archaeological and historical evaluation can be found in the Cultural Resource Assessment Survey Technical Memorandum. Concurrence of this report was received from FHWA and the State Historic Preservation Officer (SHPO) on March 7, 2013.

#### ***Historic Sites/District***

No new historic sites were identified within the pond sites for the I-75 at SR 951 Ultimate Interchange project, as detailed in the Cultural Resource Assessment Survey Technical Memorandum.

### ***Physical Environment***

#### ***Recreation Areas***

Only one public land exists within the study limits. Palm Springs Public Park is located within the study limits, west of the I-75 at SR 951 interchange, and between I-75 and Palm Lake Drive. This recreational park is owned and operated by the Collier County Department of Parks and Recreation. The recommended preferred alternative will not impact these public lands.

#### ***Noise Sensitive Sites***

The results of the noise analysis indicate that 34 noise sensitive sites, primarily residences, are predicted to experience noise levels either approaching or exceeding the FHWA noise abatement criteria. These sites are generally located south of the I-75 mainline and west of the interchange with Collier Boulevard.

Abatement is possible through the construction of a noise barrier. This barrier would be approximately 1,931 feet long and 22 feet high and would run along the southern limited access right-of-way line for I-75. Additional detail is available in the *Noise Study Report*.

#### ***Potential Contamination Sites***

A Contamination Screening Evaluation Report (CSER) was prepared as part of the PD&E Study, in accordance with FHWA's Technical Advisory T 6640.8A, dated October 30, 1987, and in accordance with the FDOT's PD&E Manual, Part 2, Chapter 22. The recommended preferred alternative could potentially impact one "High" ranked site and two "Medium" ranked contamination sites.

No new real right-of-way is required from any of the contamination sites. Air-rights will be required over the corner of two gas station properties. This proposed project contains no known significant contamination.

## **Natural Environment**

### **Wetland Potential Impacts**

The recommended preferred alternative is anticipated to directly impact 11.0 acres. These wetlands have a moderate Uniform Mitigation Assessment Method (UMAM) score of 4.48 units reflecting the disturbed nature of the wetlands. All wetland impacts resulting from the construction of this project will be mitigated pursuant to mitigation requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. s. 1344. Final wetland impacts and mitigation requirements will be determined during the permitting phase of this project.

### **Water Quality**

The recommended preferred alternative was evaluated for potential impacts to surface water and groundwater resources within the project study area. The proposed stormwater facility design will include, at a minimum, the water quantity requirements for water quality impacts as required by SFWMD in Chapter 40E-4, F.A.C. ; therefore, no further mitigation for water quality impacts will be required.

### **Floodplain Potential Impacts**

The recommended preferred alternative will not require any floodplain compensation since sufficient floodplain storage will be provided in the interchange stormwater ponds as demonstrated in the floodplain impact analysis documented in Location Hydraulics Report. The proposed project will also not require any additional cross-drains or box culverts as all drainage flows will be accommodated by the proposed condition.

### **Threatened and Endangered Species Potential Impacts**

The corridor survey efforts did not identify any listed floral or faunal species within the project corridor. While no protected species were observed, listed species were reported to occur within close proximity of the study limits, according to database and literature research or have United States Fish and Wildlife Service (USFWS) Consultation Areas overlapping the study limits.

The potential for occurrence of listed species within the study limits was based on federal and state protected species lists, the vegetative communities present, and surrounding land uses. Many species previously documented on species lists to occur in Collier County were excluded as potential to occur within the study limits due to a lack of suitable habitat, hydrology, or geology.

Species specific surveys were conducted for the red-cockaded woodpecker (*Piccodeas borealis*) and the Florida bonneted bat (*Eumops floridanus*). No red-cockaded woodpeckers or evidence of these occurrences were observed during a cavity tree survey. Potential roost areas, including trees containing cavities, abandoned structures, and bridges, were inspected for bat occupancy and presence of guano. No bat houses, bats or evidence thereof were observed within the study area.

FDOT coordinated with USFWS regarding the recommended preferred alternative and on May 8, 2013 the USFWS concurred with the FDOT's determination that the proposed project may affect but is not likely to adversely affect any resources protected under the Endangered Species Act of 1973, as amended.



In summary, the proposed project “may affect, but is not likely to adversely affect” the following federally-listed species:

- Florida panther
- Florida scrub jay
- Wood stork
- American alligator
- Eastern indigo snake
- Red-cockaded woodpecker
- Florida bonneted bat

The proposed project will have “no effect” on the following federally-listed species:

- Snail kite

The proposed project is not likely to adversely affect any state-listed species, including wading birds, Big Cypress fox squirrel, and gopher tortoise, or any other protected species, including the bald eagle and Florida black bear.

## **Social Environment**

### **Section 4(f)**

FDOT prepared a Section 4(f) Determination of Applicability (DOA) and submitted it to FHWA for review on October 21, 2013. The DOA outlined the potential impacts the recommended preferred alternative would have on the Palm Springs Park, a recreational facility owned and operated by the Collier County Department of Parks and Recreation. The park is geared toward the immediate community and offers few amenities. No right-of-way is required from the park. All access and functionality is maintained and aesthetics are not altered. No constructive use of the park is anticipated.

FHWA provided concurrence on November 7, 2013 that the Palm Springs Park is protected as a Section 4(f) property, however, the project does not incorporate any portion of this park permanently or temporarily into a transportation use. Therefore, “the proposed project will not use property from the Palm Springs Park and Section 4(f) does not apply.”

### **Relocation Potential**

The recommended preferred alternative will not require full parcel right-of-way acquisitions, residential or business relocations.

### **Social**

This project has developed without regard to race, color, national origin, age, sex, religion, disability, or family status. No minority or low-income populations have been identified that would be adversely impacted by the proposed project, as determined above. Therefore, in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a, no further Environmental Justice analysis is required. No comment was received during this study regarding conflicts with Title VI of the Civil Rights Act of 1964 or related statutes. Furthermore, the project is not anticipated to negatively affect community resources important to elderly persons, disabled individuals, non-drivers, transit-dependent individuals, or minorities.

# 1 Summary of Project

## 1.1 SUMMARY

This preliminary engineering report (PER) contains detailed engineering information fulfilling the purpose and need for project *I-75 at SR 951 Ultimate Interchange Project Development and Environment Study*. This PER was prepared in accordance with the Florida Department of Transportation's (FDOT's) *Project Development and Environment (PD&E) Manual Part 1, Chapter 4*, as amended on November 21, 2011. This project extends along approximately 1.6 miles of I-75 and 6,800 feet along Collier Boulevard. The proposed improvements also include the arterial intersection between Collier Boulevard and Davis Boulevard. The environmental documentation is a Type 2 Categorical Exclusion.

## 1.2 COMMITMENTS

Florida Department of Transportation (FDOT or Department) is committed to appropriate design standards and specifications in the conduct of this PD&E Study and development of design concepts documented herein. In addition to following the provisions detailed in the *Standard Specifications for Road and Bridge Construction*, FDOT is committed to the following measures:

1. The Florida Department of Transportation is committed to the construction of feasible and reasonable noise abatement measures at the Tuscan Isles community contingent upon the following conditions:
  - a. Detailed noise analyses during the final design process supports the need, feasibility and reasonableness of providing abatement;
  - b. Cost analysis indicates that the cost of the noise barrier will not exceed the cost reasonable criterion;
  - c. Community input supporting types, heights, and locations of the noise barrier is provided to the District Office; and
  - d. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved
2. Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S. to satisfy all mitigation requirements of Part IV. Chapter 373, F.S. and 33 U.S.C. s.1344.
3. During construction, the Department will consider the following avoidance measurement associated with threatened or endangered species:
  - a. Eastern indigo snake: USFWS's most current version of the Standard Protection Measures for Eastern Indigo Snake will be adhered to during construction of the project.
  - b. Gopher tortoise: Due to the presence of gopher tortoise habitat within the project footprint, a gopher tortoise survey in appropriate habitat within construction limits (including roadway footprint and stormwater management sites) will be performed prior to construction. FDOT will secure any relocation permits needed for this species during the design and construction phases of the project.

- c. Wood stork: FDOT is committed to providing mitigation for the wood stork that is acceptable to the USFWS and FDOT. The details of this mitigation will be finalized during the final design and permitting phase of the project.

### **1.3 RECOMMENDATIONS**

The Department recommends the following improvements to the I-75 interchange access to SR 951 (Collier Boulevard) in Collier County. These improvements have been identified through the conduct of a public involvement program, interagency coordination, environmental studies, and engineering evaluation:

1. Reconstruct the existing diamond ramps to configure a Partial Cloverleaf interchange with 200-foot radii loop ramps in the southwest and northeast quadrants.
2. Construct a new ramp connection from Collier Boulevard northbound to the proposed northeast quadrant loop ramp with a flyover structure at Beck Boulevard and the new I-75 southbound on-ramp in the southeast quadrant.
3. Construct a new ramp connection from the I-75 southbound off-ramp to the intersection of Collier Boulevard and Business Circle South. The proposed ramp would include a structure over Davis Boulevard.

### **1.4 DESCRIPTION OF PROPOSED ACTION**

The recommended preferred alternative for the I-75 at SR 951 (Collier Boulevard) interchange proposes to reconstruct the I-75 southbound on- and off-ramp connections and the northbound on-ramp connection to the mainline lanes. The southbound and northbound off-ramps would be reconstructed to create additional infield space to install single-lane, 200-foot radius loop ramps in the southwest and northeast quadrants.

The northeast quadrant loop ramp would be connected to and accessible only by a direct flyover ramp from northbound Collier Boulevard with a starting point south of the Davis Boulevard intersection. This single-lane flyover ramp would carry traffic over Beck Boulevard and a reconstructed I-75 southbound on-ramp.

A single-lane flyover ramp extension would carry I-75 southbound traffic over Davis Boulevard to a new signalized intersection at Collier Boulevard and Business Circle South. This ramp would extend along the western side of Collier Boulevard.

No reconstruction of the Collier and Davis Boulevards intersection is anticipated. However, the traffic signals would be replaced to add new signal heads and mast arms. A new traffic signal is required at the intersection of Collier Boulevard and Business Circle North. The half-signal that controls only the southbound Collier Boulevard movement south of Davis Boulevard will be removed. The I-75 southbound ramp terminal intersection traffic signal mast arm and poles will require relocation or replacement. No traffic signal pole replacement is anticipated at the I-75 northbound ramp terminal intersection; however, signal heads would be adjusted or replaced along Collier Boulevard. Reconstruction of the I-75 mainline bridges is not anticipated.

## 2 Existing Conditions

The existing conditions at the I-75 and Collier Boulevard are based on the design plans prepared for the reconstruction of Collier Boulevard, Davis Boulevard and I-75 ramps. These improvements were completed in later 2013 and are illustrate in Figure 4.

### 2.1 TYPICAL SECTIONS

There are few locations where typical sections apply within the study corridor due to the varying numbers of auxiliary turn lanes and multitude of transitions between the local intersections and Interstate ramp terminals. However, Collier Boulevard was recently widened to eight lanes, four in each direction of travel, between the intersection with Davis Boulevard and City Gate Boulevard. Davis Boulevard was also recently widened to six lanes from west of Radio Road to Collier Boulevard.

I-75 features four mainline lanes, two in each direction of travel. All four ramps accessing Collier Boulevard are single lane-entrances and –exit, to or from the mainline.

### 2.2 EXISTING RIGHT-OF-WAY

Right-of-way widths vary throughout the study area due to the wider roadway cross-sections near intersections. Limited access right-of-way is defined along I-75, the ramps, and Collier Boulevard north of Davis Boulevard and south of Magnolia Pond Drive. The Collier Boulevard limited access right-of-way width varies between approximately 250 feet north of Davis Boulevard and approximately 325 feet near the ramp terminal intersections. Along I-75 tangents, the limited access right-of-way is approximately 322 feet wide. The existing right-of-way along the western leg of the Davis Boulevard intersection was fully utilized with the improvements described earlier and is the narrowest along any study roadway segment at 100 feet.

### 2.3 ROADWAY CLASSIFICATION

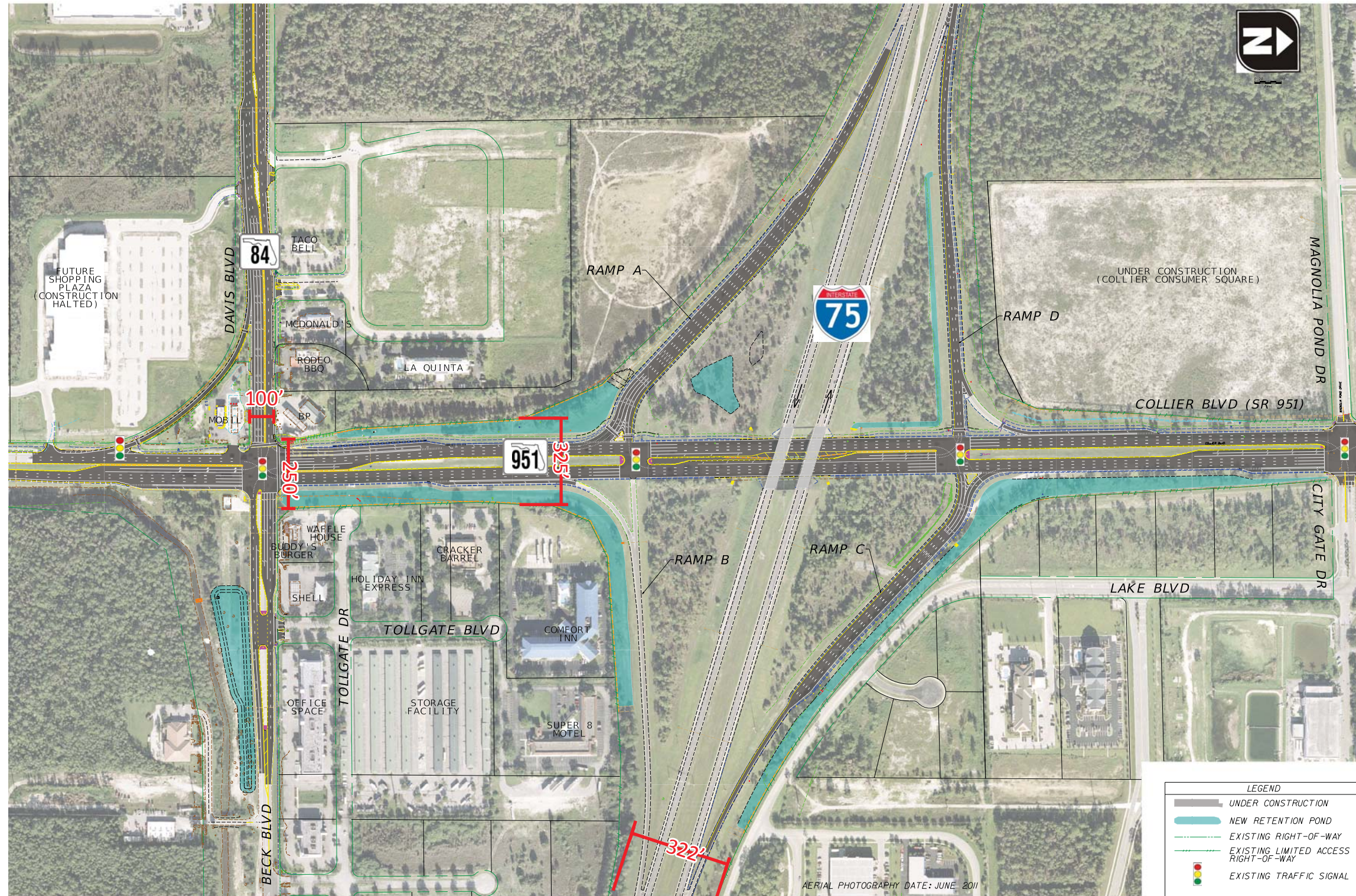
I-75 is a limited access freeway designated as a Rural Primary Arterial-Interstate up to milepost 50.076, east of Collier Boulevard and as an Urban Primary Arterial-Interstate thereon. I-75 is part of the National Highway System, Strategic Intermodal System (SIS), and State Highway System. I-75 is an emergency evacuation route, which can also be operated as a one-way facility, either in the southbound direction from Fort Myers or northbound from Fort Lauderdale.

SR 951 (Collier Boulevard) is designated as an Urban Other Principal Arterial between the SR 84 (Davis Boulevard) intersection and approximately 700 feet north of the I-75 northbound ramp terminal and is part of the State Highway System. CR 951 (Collier Boulevard) is a Collier County facility outside those limits.

SR 84 (Davis Boulevard) is designated as an Urban Minor Arterial and is part of the State Highway System. The eastern leg of the Collier Boulevard and Davis Boulevard intersection is Beck Boulevard, a local street.



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Capacity Improvements Underway in the Study Area **FIGURE**



## 2.4 EXISTING LAND USES

The zoning map for Collier County indicates land use consists of a combination of commercial (C-2, C-3, C-4), industrial (I), planned unit development (PUD), and residential. A list of businesses abutting the study corridor includes:

- Southwest interchange quadrant
  - McDonald's
  - Dunkin' Donuts
  - Davis Crossings (under construction)
  - Mobil gas station
  - BP gas station
- Southeast interchange quadrant
  - Waffle House
  - Buddy's Burger (closed)
  - Shell gas station
  - Days Inn And Suites
  - Cracker Barrel
  - Comfort Inn
- Northwest interchange quadrant
  - Collier Consumer Square (under construction)
- Northeast interchange quadrant
  - Spring Hill Suites (part of City Gate Commerce Center)
  - Fairfield Inn Suite (part of City Gate Commerce Center)
  - Additional undeveloped light industrial or commercial City Gate Commerce Center lots

A review of the Future Land Use map for properties adjacent to the interchange indicates that future plans are consistent with the existing land uses. Approved PUDs are expected to develop the existing cleared land adjacent to the interchange.

## 2.5 HORIZONTAL AND VERTICAL ALIGNMENT

The I-75 mainline alignment runs in a northwestern direction within the study area at an approximate bearing N 73° 00' 33" W. The vertical alignment is generally flat with no significant gain in elevation within the 1.6 mile study corridor. An overpass is built at Collier Boulevard featuring a symmetrical vertical curve, 2,100 feet long. Both the uphill and downhill grades have a

rate of 2.16 percent. The sag vertical curve east of Collier Boulevard is 800 feet long. The sag vertical curve west of Collier Boulevard is 910 feet long.

Collier Boulevard runs in the south-north direction. The principal horizontal alignment has a bearing of N 0° 29' 26" W. The alignment features small transitions of less than 1.5-degree not requiring superelevation. The topography of the study area is flat. The Collier Boulevard vertical alignment is also flat hovering at approximately 16-foot elevation with small vertical grades of approximately 0.3 percent.

Davis Boulevard alignment starts at the Collier Boulevard intersections with an west-east bearing of approximately S 89° 43' 23" E, then curves to the southwest direction to a bearing of N 30° 17' 04" E. The transition between the two main bearings is done via a 2-degree, approximately 3000-foot long curve. The vertical alignment is flat with small transitions between upward and downward grades of 0.3 percent.

## **2.6 PEDESTRIAN ACCOMMODATIONS**

A 10-foot wide multi-use path was recently constructed on west side of Collier Boulevard throughout the entire length of the study corridor. No sidewalk is present on the east side of Collier Boulevard. Concrete, 5-foot wide sidewalks are built on both sides of Davis Boulevard. Crossings at the ramp terminal intersections and the Davis Boulevard intersection are facilitated by the traffic signals with countdown pedestrian signal heads and activation buttons. Pedestrians are not allowed on or along I-75.

## **2.7 BICYCLE FACILITIES**

Four-foot wide bicycle lanes are marked on both Collier and Davis Boulevard on curbed sections. Bicycles can also use a five-foot wide paved shoulder on uncurbed sections of Collier Boulevard. The 10-foot wide multi-use path on the west side of Collier Boulevard can be used by both cyclists and pedestrians. Bicycles are not allowed on or along I-75.

## **2.8 LIGHTING**

Lighting of the study area is achieved in two ways: high mast interchange lighting at the ramps and infield area and luminaire mounted 400 watt high pressure sodium street lighting along Collier Boulevard.

## **2.9 INTERSECTION LAYOUTS**

The following intersections along Collier Boulevard were included in the analysis of the proposed interchange improvement:

- Business Circle South (signalized)
- Business Circle North (unsignalized)
- Davis Boulevard (signalized)
- I-75 SB ramps and Collier Boulevard (signalized)
- I-75 NB ramps and Collier Boulevard (signalized)
- Magnolia Pond Drive (signalized)

## **2.10 TRAFFIC SIGNALS**

Mast arm mounted traffic signals are provided at the following intersections along Collier Boulevard: Business Circle South, Davis Boulevard, I-75 SB ramps, I-75 NB ramps, and Magnolia Pond Drive. A half-signal, controlling only the southbound through movements on Collier Boulevard was installed at the end of the Davis Boulevard right-turn by-pass lane to Collier Boulevard. This signal is synchronized with the Davis Boulevard intersection.

Interconnect conduit is installed along Collier Boulevard between the four signal cabinets starting at Davis Boulevard and ending at Magnolia Pond Drive.

## **2.11 POSTED SPEEDS**

I-75 mainline is designed and posted at a speed limit of 70 mph. Both Collier Boulevard and Davis Boulevard are designed and posted at a speed limit of 45 mph.

## **2.12 RAILROAD CROSSING**

No railroad facilities exist within the study area.

## **2.13 STRUCTURAL AND OPERATIONAL CONDITIONS OF THE PAVEMENT**

Collier Boulevard, Davis Boulevard and the I-75 eastbound off-ramp and both westbound ramps were repaved in later 2013.

## **2.14 DRAINAGE SYSTEM INVENTORY**

The I-75 at Collier Boulevard Interchange study area is located in the Naples Bay Watershed encompassing 120 square miles and draining ultimately to Naples Bay. The Naples Bay Surface Water Improvement & Management (SWIM) Plan report (SFWMD - January 2007) shows the Naples Bay Watershed as part of the larger regional Big Cypress Basin encompassing 1,200 square miles. The study area is contained within the Santa Barbara, City Gate, and Henderson North sub-basins as delineated by SFWMD which are all considered "open" basins. See Figure 5 for existing drainage features.

There are two large drainage canals traversing through the study area named the Golden Gate Main Canal (Water Body Identification-WBID 3278S) and the I-75 Canal/Henderson Creek Canal (WBID 3278V). The I-75 Canal running along the north side of I-75 east of the interchange flows southwestward under I-75 through an 8-foot-by-8-foot concrete box culvert (CBC) and westward along Beck Boulevard toward Collier Boulevard. The I-75 Canal becomes the Henderson Creek Canal at Collier Boulevard and continues southwestward flowing into Rookery Bay.



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Existing Drainage Features FIGURE



The Golden Gate Main Canal flows westward to the Gordon River/Naples Bay. Both of these canals are part of the Naples Bay Watershed Canal System. Canal levels are controlled by SFWMD during storm events with control structures along the canals to provide regional flood control. The Golden Gate Main Canal is verified by the FDEP as water quality impaired for Dissolved Oxygen (DO) and Iron, but no Total Maximum Daily Load (TMDL) currently exists. The Henderson Creek Canal is verified by the FDEP as water quality impaired for Dissolved Oxygen, but no TMDL currently exists. Both canals are listed on FDEP 303(d) list of impaired water bodies.

The southwest, northwest, and northeast quadrants of the interchange generally outfall to the north into the Golden Gate Main Canal. The southwest and northwest quadrants generally drain westward via I-75 ditches to the 4-foot-by-8-foot CBC (CD-1) under I-75 just west of the SR 951 interchange. This box culvert conveys these flows to a larger ditch from the south under I-75 northward under Magnolia Pond Drive to the Golden Gate Main Canal. The northeast quadrant drains northward via ditches along the northbound I-75 off-ramp and Collier Boulevard through a 30-inch reinforced concrete pipe (RCP) (CD-8) culvert at City Gate Drive and a 24-inch RCP (CD-9) culvert at City Gate Boulevard and into the Golden Gate Main Canal.

The southeast quadrant of the interchange generally outfalls to the south via an existing ditch along the I-75 southbound on-ramp and Collier Boulevard that flows under Beck Boulevard via a 30-inch RCP (CD-10) culvert into Henderson Creek Canal. The aforementioned Collier Boulevard Widening Project (County Project #60092) includes the addition of six dry linear detention ponds inside the existing roadway right-of-way to treat widened Collier Boulevard and the widened interchange ramps. Runoff from widened Collier Boulevard and widened interchange ramps will sheet flow off the roadway into the dry linear ponds or roadside ditches.

## 2.15 TRAFFIC DATA

A detailed and extensive data collection effort occurred in April 2011. The following traffic data types were collected:

- 72-hour classification counts
- 24-hour bi-directional volume counts
- Four-hour peak period (two-hour AM/two-hour PM) turning movement counts at:
  - Business Circle South and Collier Boulevard
  - Davis Boulevard and Collier Boulevard
  - I-75 SB ramps and Collier Boulevard
  - I-75 NB ramps and Collier Boulevard
  - Magnolia Pond Drive and Collier Boulevard
  - City Gate Boulevard and Collier Boulevard
  - Golden Gate Parkway and Collier Boulevard
  - I-75 SB ramps and Golden Gate Parkway
  - I-75 NB ramps and Golden Gate Parkway



- License Plate Origin and Destination Survey – License plate surveys were conducted for three consecutive hours during the AM Peak Hour (6 AM to 9 AM) and PM Peak Hour (4 PM to 7 PM) for the following traffic paths:
  - Davis Boulevard EB to Collier Boulevard NB to I-75 NB and I-75 SB
  - Collier Boulevard NB to I-75 NB to Golden Gate Parkway exit ramp
  - Golden Gate Parkway entrance ramp to I-75 SB to Collier Boulevard SB to Davis Boulevard WB

Balanced existing AM and PM peak-hour turning-movement volumes are summarized in Figure 6 and Figure 7. A more detailed description of all traffic data sources and the process applied to balance the volumes presented herein are documented in the *Project Traffic Report (PTR)*. Table 4 summarizes the existing level of service (LOS) in the ramp influence areas along I-75 during the peak AM and PM peak hours.

**Table 4** Existing 2010 Peak-Hour Interchange Ramp Termini Operating Conditions

Ramp	AM Peak Hour			PM Peak Hour		
	LOS	Speed (mph)	Density (pc/ln/mi)	LOS	Speed (mph)	Density (pc/ln/mi)
NB Diverge Ramp from I-75 to Collier Blvd	A	57.8	4.2	A	57.4	6.1
NB Merge Ramp from Collier Blvd to I-75	A	63.8	7.1	A	63.7	9.0
SB Diverge Ramp from I-75 to Collier Blvd	B	55.6	11.6	B	55.3	12.6
SB Merge Ramp from Collier Blvd to I-75	A	63.5	3.1	A	64.1	1.8

\*pc/ln/mi = Passenger Cars per Lane per Mile

## 2.16 CRASH DATA AND SAFETY ANALYSIS

Crash statistics on the state highway system were obtained from the FDOT statewide crash database for years 2006 through 2011. The 2011 data is a partial year as reconstruction of this area commenced in the second half of 2011 and was completed in early 2014. Table 5 through Table 8 summarize the crash types by year for the I-75 freeway mainline and three main signalized intersections along Collier Boulevard at Davis Boulevard, the I-75 southbound ramp terminal, and the I-75 northbound ramp terminal.

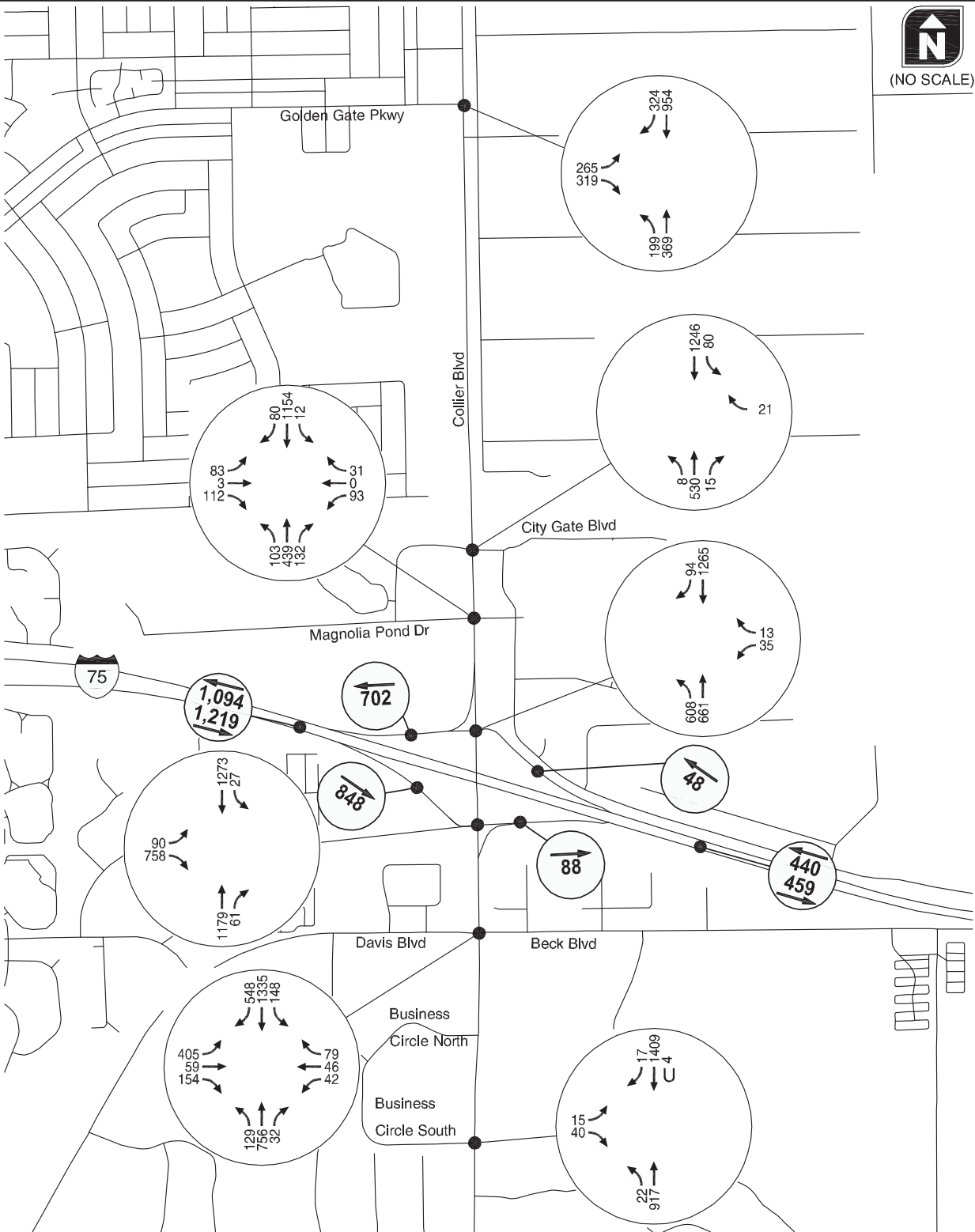
Table 5 indicates that 64 crashes occurred along mainline I-75 between mile marker 101 and mile marker 103 (milepost 49.978 and milepost 51.928) during the six years summarized. Of the total crashes, 36 resulted in injuries and two were fatal crashes. One-third of crashes do not have a defined crash type. Approximately 30% of the total crashes were rear-end collisions and 17% were crashes with fixed objects. One fatal crash occurred in the median as a motorcyclist ran off the road. The second fatal crash was a rear-end incident between two vehicles along the southbound lanes. Neither fatal crash data indicates a specific contributing factor that led to the incident.

# I-75 AT SR 951 ULTIMATE INTERCHANGE

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(NO SCALE)

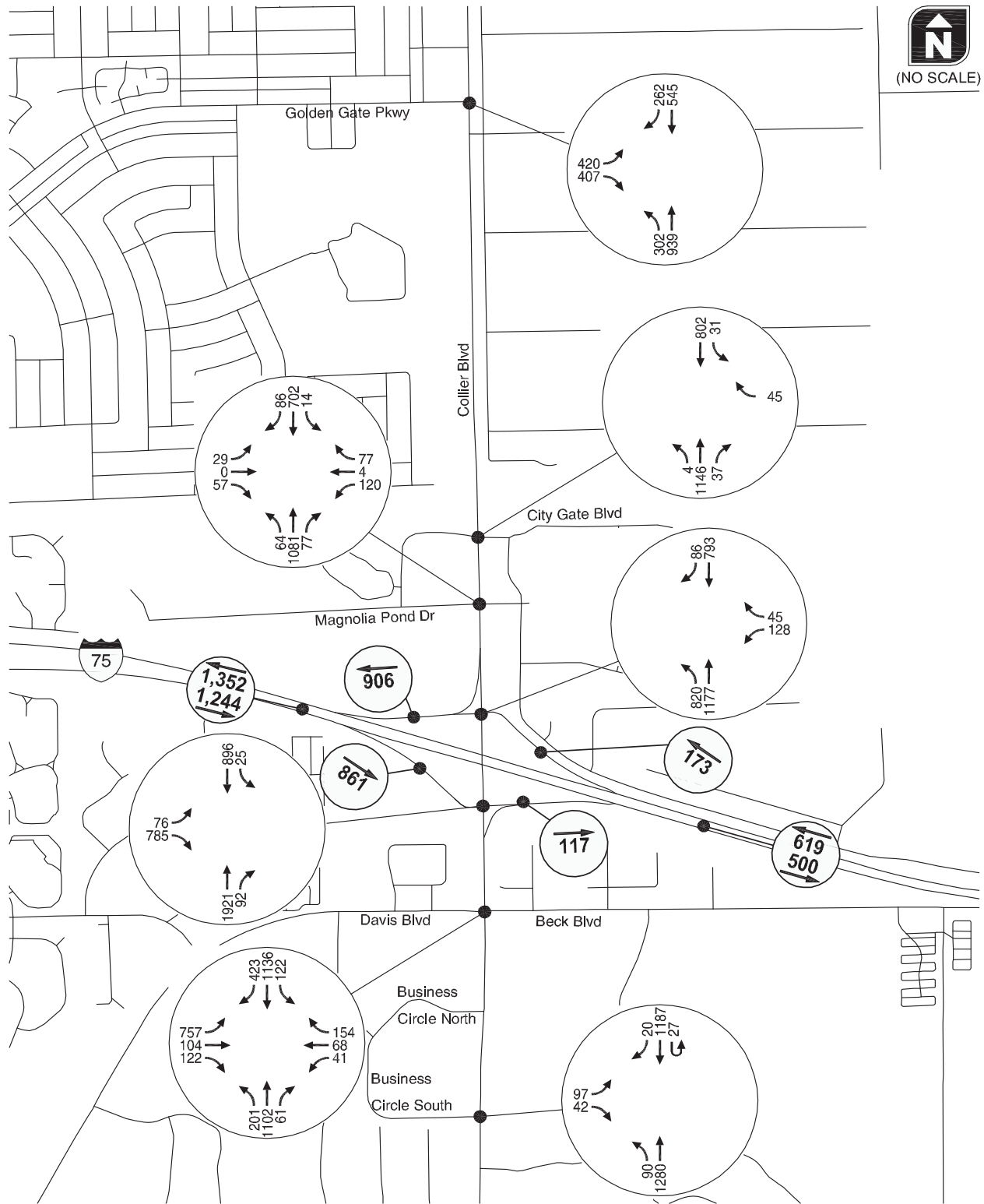


Existing AM Peak Hour Turning Movement Volumes

FIGURE

# I-75 AT SR 951 ULTIMATE INTERCHANGE

## PRELIMINARY ENGINEERING REPORT



Existing PM Peak Hour Turning Movement Volumes **FIGURE**



**Table 5** I-75 Freeway Mainline Crash Statistics

		Analysis Year						Total	Average	Percent
		2006	2007	2008	2009	2010	2011			
Type of Crash	Rear-end	6	6	0	6	1	0	19	3.17	29.7%
	Angle	1	0	0	1	1	0	3	0.50	4.7%
	Left-turn	0	0	1	0	1	0	2	0.33	3.1%
	Sideswipe	1	3	0	1	0	0	5	0.83	7.8%
	Head On	0	0	0	0	0	0	0	0.00	0.0%
	Right-turn	0	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	1	1	1	2	5	1	11	1.83	17.2%
	Pedestrian	0	0	0	0	0	0	0	0.00	0.0%
	Bicycle	0	0	0	0	0	0	0	0.00	0.0%
	Parked Car	0	0	0	0	0	0	0	0.00	0.0%
	Other	6	3	6	7	2	0	24	4.00	37.5%
	<b>Total Crashes</b>	<b>15</b>	<b>13</b>	<b>8</b>	<b>17</b>	<b>10</b>	<b>1</b>	<b>64</b>	<b>10.67</b>	<b>100.0%</b>
Crash Severity	Injury	10	8	2	9	6	1	36	6.00	56.3%
	Fatal	0	0	1	1	0	0	2	0.33	3.1%

Over the six years analyzed, there were a total of 125 intersection crashes between the three major signalized intersections outlined above. No fatalities were reported at these locations between 2006 and 2011; however, 65 crashes resulted in injuries. The majority of the crashes were rear-end collisions, which are expected at signalized intersections. It is noteworthy there have been no pedestrian or bicycle crashes at these three intersections over the six-year period.

**Table 6** Collier Boulevard and Davis Boulevard Intersection Crash Statistics

		Analysis Year						Total	Average	Percent
		2006	2007	2008	2009	2010	2011			
Type of Crash	Rear-end	0	4	5	4	4	2	19	3.17	33.9%
	Angle	2	3	4	1	0	0	10	1.67	17.9%
	Left-turn	0	1	0	0	2	0	3	0.50	5.4%
	Sideswipe	1	3	1	2	0	0	7	1.17	12.5%
	Head On	0	0	0	0	0	0	0	0.00	0.0%
	Right-turn	1	1	1	1	0	1	5	0.83	8.9%
	Fixed Object	1	0	0	0	0	0	1	0.17	1.8%
	Pedestrian	0	0	0	0	0	0	0	0.00	0.0%
	Bicycle	0	0	0	0	0	0	0	0.00	0.0%
	Parked Car	0	0	0	0	0	1	1	0.17	1.8%
	Other	2	4	2	0	1	1	10	1.67	17.9%
	<b>Total Crashes</b>	<b>7</b>	<b>16</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>56</b>	<b>9.33</b>	<b>100%</b>
Crash Severity	Injury	3	5	4	5	4	4	25	4.17	44.6%
	Fatal	0	0	0	0	0	0	0	0.00	0.0%

**Table 7** Collier Boulevard I-75 southbound ramp Intersection Crash Statistics

		Analysis Year						Total	Average	Percent
		2006	2007	2008	2009	2010	2011			
Type of Crash	Rear-end	3	2	2	3	2	7	19	3.17	48.7%
	Angle	3	2	1	0	2	1	9	1.50	23.1%
	Left-turn	3	1	1	0	0	0	5	0.83	12.8%
	Sideswipe	0	0	1	0	0	0	1	0.17	2.6%
	Head On	0	0	0	0	0	0	0	0.00	0.0%
	Right-turn	0	0	0	0	0	1	1	0.17	2.6%
	Fixed Object	0	1	0	0	0	1	2	0.33	5.1%
	Pedestrian	0	0	0	0	0	0	0	0.00	0.0%
	Bicycle	0	0	0	0	0	0	0	0.00	0.0%
	Parked Car	0	0	0	0	0	0	0	0.00	0.0%
	Other	0	0	1	0	0	1	2	0.33	5.1%
	<b>Total Crashes</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>11</b>	<b>39</b>	<b>6.50</b>	<b>100%</b>
Crash Severity	Injury	8	2	3	3	1	6	23	3.83	59.0%
	Fatal	0	0	0	0	0	0	0	0.00	0.0%

**Table 8** Collier Boulevard and I-75 northbound ramp Intersection Crash Statistics

		Analysis Year						Total	Average	Percent
		2006	2007	2008	2009	2010	2011			
Type of Crash	Rear-end	4	6	0	3	1	1	15	2.50	50.0%
	Angle	0	0	2	0	1	0	3	0.50	10.0%
	Left-turn	1	1	0	0	0	0	2	0.33	6.7%
	Sideswipe	0	0	0	0	0	0	0	0.00	0.0%
	Head On	0	0	0	0	1	0	1	0.17	3.3%
	Right-turn	0	0	0	0	0	0	0	0.00	0.0%
	Fixed Object	1	1	0	0	0	0	2	0.33	6.7%
	Pedestrian	0	0	0	0	0	0	0	0.00	0.0%
	Bicycle	0	0	0	0	0	0	0	0.00	0.0%
	Parked Car	0	0	0	0	0	0	0	0.00	0.0%
	Other	0	4	1	1	0	1	7	1.17	23.3%
	<b>Total Crashes</b>	<b>6</b>	<b>12</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>30</b>	<b>5.00</b>	<b>100%</b>
Crash Severity	Injury	3	4	2	3	3	2	17	2.83	56.7%
	Fatal	0	0	0	0	0	0	0	0.00	0.0%

## 2.17 UTILITIES

A list of known utility providers within the project area and contact information is included in Table 9.

**Table 9** Utility Operators within the Project Area

Contact	Company/Provider	Phone	Address
Brian Whaley	Centurylink	239-269-0176 (Cell)	3940 Prospect Ave Suite 101 Naples, FL 34104
William Case	CenturyLink Consultant THE ASH GROUP, INC	813-290-8899 x201	4902 Eisenhower Blvd, Suite 380 Tampa, Florida 33634-6323
Stephen Sarabia	Collier County Stake & Locates	239-252-5924	4420 Mercantile Ave, Naples, FL 34109
Pam Wilson	Collier County Traffic Ops	239-252-8260	2885 S Horseshoe Dr, Naples FL, 34104
James Gammell	Collier County Wastewater Department	239-252-6886	6027 Shirley St, Naples FL, 34109
Howard Brogdon	Collier County Water Department	239-252-5252	8005 Vanderbilt Beach Rd Extension, Naples FL, 34120
Mark Cook	Comcast	239-432-1805	12641 Corporate Lakes Dr, Ft. Meyers FL, 33913
David Burnside	FDOT District One	239-961-3310	12821 Commerce Lakes Dr, Suite 11, Fort Meyers, FL 33913
Greg Coker	Florida Power & Light	941-723-4430	1253 12th Ave E, Palmetto FL 34221
Danny Haskett	FPL Fibernet LLC	305-552-2931	9250 W Flagler St Miami, FL 33174
Brock Daniels	TECO Peoples Gas	239-690-5517	5901 Enterprise Pkwy, Ft. Meyers FL 33905
Mike Reber	US Metropolitan Telecom LLC	239-325-4105 ext. 261	24017 Production Circle, Bonita Springs FL, 34135

Major utility facilities within the project corridor include:

- A 48-inch water main running in the center of Collier Boulevard within the interchange ramp terminals (Collier County Water Department)
- A 36-inch water main running along Davis Boulevard and west side of Collier Boulevard (Collier County Water Department)
- A 20-inch water main running along the east side of Collier Boulevard north of I-75 and crosses the northbound off-ramp (Collier County Water Department)
- A water pumping station in the southeast corner of the Collier Boulevard and Beck Boulevard intersection (Collier County Water Department)
- A 12-inch force main running along the west side of Collier Boulevard north of Davis Boulevard to Magnolia Pond Drive (Collier County Wastewater Department)
- Multiple buried fiberoptic conduits crossing Collier Boulevard or running along the west side north of Davis Boulevard (CenturyLink)
- An 8-inch gas main crossing Collier Boulevard south of Davis Boulevard (TECO Peoples Gas)
- Multiple overhead electric transmission lines crossing or running along the west side of Collier Boulevard north of Davis Boulevard (Florida Power & Light)
- An overhead cable line crossing Collier Boulevard south of Davis Boulevard (Comcast)

## 2.18 SOILS AND GEOTECHNICAL DATA

Collier County lies within the Southern or Distal Physiographic Zone. The dominant geomorphic features in the county include the Immokalee Rise, the Big Cypress Spur, and the Southwestern Slope. The remainder of the county falls within the Gulf Coastal Barrier Chain and Lagoons, Reticulated Coastal Swamps, and the Ten Thousand Islands. The study area is located in western Collier County within the Southwestern Slope physiographic region. The Southwestern Slope is at an elevation below about 25 feet above mean sea level (msl) between the Gulf of Mexico and the western edges of the Immokalee Rise and the Big Cypress Spur. Drainage is to the southwest. Most of this area has a thin mantle of sand, which generally becomes thicker to the north, overlying an eroded Tamiami Formation limestone surface.

The near surface geologic deposits and formations from youngest to oldest in Collier County include: Holocene Sediment (Qh), Undifferentiated sediments (Qu), Shelly sediments (TQsu), the Tamiami Formation (Tt), the Miami Limestone (Qm), the Peace River Formation (Thp), and the Arcadia Formation (Tha).

The Surficial Aquifer System occurs just below land surface (bls) and extends to a depth of approximately 150 feet bls in the project area. Two sub-aquifers exist within the Surficial Aquifer System: the shallow, unconfined Water Table aquifer and the deeper, semi-confined Lower Tamiami aquifer. The base of the Lower Tamiami aquifer is generally characterized by low permeable, phosphatic, clayey dolosilts and sands of the upper Hawthorn Group. The Hawthorn Group is considered the confining unit between the Surficial Aquifer System and the underlying Floridan Aquifer System. The Hawthorn Group also contains the two productive water-bearing units (Sandstone and Mid-Hawthorn Aquifers) of the Intermediate System. The often artesian Florida Aquifer System is generally not used for consumption in the project area because of the high chloride and sulfate concentrations.

The Soil Survey indicates there are three mapping units located the study area. The Pineda-Boca-Hallandale series are soils of urban land and in urban areas. They are generally characterized as nearly level, poorly drained, sandy soils having a loamy subsoil or sandy substratum over limestone bedrock. The general soil description is presented in Table 10, as described in the Soil Survey.

Based on the regulatory documentation reviewed for various sites located along the project corridor, Tierra infers the average depth to water ranges from 3 to 5 feet bls and the groundwater gradient is estimated to be to the southwest towards the Gulf of Mexico. However, the groundwater flow direction at a specific property could be locally influenced and differ from the regional flow direction.

Typically, soils in the study area would be expected to have a shallow layer of undifferentiated soils down to approximately 2 to 5 feet bls, followed by fine to medium grained sands generally underlain by unconsolidated shell beds, marls, and/or sandy limestone.



**Table 10** Summary of USDA Soil Survey Mapped Units

COLLIER COUNTY, FLORIDA									
USDA Map Symbol and Soil Name	Soil Classification				pH	Seasonal High Water Table		Risk of Corrosion	
	Depth (in)	USCS	AASHTO	Permeability (in/hr)		Depth (feet)	Months	Uncoated Steel	Concrete
(11) Hallandale	0-3	SP, SP-SM	A-3	6.0 - 20.0	5.1-6.5	0.5-1.5	June-Sept	High	Low
	3-12	SP, SP-SM	A-2.4, A-3	6.0 - 20.0	5.6-8.4				
	12-16	LIMESTONE		2.0 - 20.0					
(14) Pineda, limestone substratum	0-4	SP, SP-SM	A-3	6.0 - 20.0	5.6-6.5	0.0-1.0	June-Nov	High	Low
	4-30	SP, SP-SM	A-3	6.0 - 20.0	5.6-6.5				
	30-55	SC, SC-SM, SM	A-2.4, A-2.6	0.1 - 0.2	6.6-7.8				
	55-59			2.0 - 20.0					
(21) Boca	0-4	SP, SP-SM	A-2.4, A-3	6.0 - 20.0	5.1-8.4	0.5-1.5	Jan, Feb, June-Dec	High	Moderate
	4-26	SP, SP-SM	A-2.4, A-3	6.0 - 20.0	5.1-8.4				
	26-30	SC, SC-SM	A-2, A-4, A-6	0.6 - 2.0	5.1-8.4				
	30-34			2.0 - 20.0					

## 2.19 ACCESS MANAGEMENT

Collier and Davis Boulevards have restrictive median access and are designated as Access Class 5.

## 2.20 STRUCTURES

The two existing structures, I-75 Northbound over Collier Boulevard (Bridge No. 030195) and I-75 Southbound over Collier Boulevard (Bridge No. 030196), will remain and will not require replacement or modification for the ultimate interchange improvement alternatives presented in this study. Collier Boulevard was recently widened underneath the bridges. These improvements include reconstruction of the mainline I-75 bridge spill slopes to retaining walls. Both I-75 bridges were constructed in 1984 to accommodate two lanes of traffic along I-75 in each direction. The superstructure of each bridge consists of American Association of State Highway and Transportation Officials (AASHTO) Type IV prestressed concrete beams with 7-inch composite reinforced concrete decks. The superstructures of the bridges are supported on concrete end bents founded on 18-inch square prestressed concrete piles using both plumb and battered piles. The concrete piers are founded on square concrete footings supported by 18-inch square prestressed concrete piles. The bridges cross over Collier Boulevard at an approximate skew of 17 degrees with two equal spans of 103 feet for a total bridge length of 206 feet.

The minimum vertical clearance of the existing bridges is 16 feet 4.2 inches, which does not meet the minimum clearance requirement of 16 feet 6 inches as per the FDOT Plans Preparation Manual (PPM) Table 2.10.1. A variation was approved for the bridge over southbound Collier Boulevard since it does not meet the PPM minimum vertical clearance at the profile grade point, but does meet the AASHTO minimum of 16 feet. The northbound Collier Boulevard lanes were lowered during the current improvements to provide the minimum 16 feet 6 inches under the I-75 bridge spans as per the PPM Table 2.10.1. According to the latest bridge inspection reports, dated March 8, 2011, the sufficiency ratings are 97.3 (out of a possible 100) for both bridges.

### **3 Planning Phase Analysis**

The proposed I-75 and SR 951 Interchange project was evaluated through the ETDM planning screen and programming screen (ETDM #13101). The ETDM Programming Summary Report was published on 6/30/2011. No environmental factors were flagged for Dispute Resolution. The Purpose and Need for the project was accepted by FHWA on 1/20/2011.

The objective of this project is to enhance operational capacity and overall traffic operations at the I-75 and Collier Boulevard. The existing grade-separated, diamond interchange is surrounded by commercial land uses. The proposed interchange reconfiguration can incorporate the newly completed enhancements at the Davis Boulevard and Collier Boulevard intersection, as well as complement the roadway capacity improvements to Collier and Davis Boulevards. Constructing a new interchange at a different location would result in additional environmental impacts and overall prohibitive costs. Multiple interchange forms and intersection configurations were analyzed on the current interchange footprint and are detailed in Section 5.4.

## 4 Project Design Standards

Improvements to the I-75 ramps are subject to standards adopted by both the FHWA and FDOT. The development of the viable alternatives was guided by the following documents:

- A Policy on Geometric Design of Highways and Streets (American Association of State Highway and Transportation Officials, AASHTO 2011) “AASHTO Greenbook”
- Plans Preparation Manual (PPM) (FDOT, 2013)
- Roadway Design Standards (FDOT, 2013 English)

### Roadways Design Criteria and Standards

The viable alternatives incorporate project elements with various design requirements. Table 11 presents the roadway design criteria established for each design element. These criteria were developed based on the design controls approved as part of the Typical Section Package. In summary, the I-75 ramps were considered under the I-75 mainline functional classification of Urban Principal Arterial. Collier Boulevard and Davis Boulevard were considered Urban Other Principal Arterials. Additional information about the individual facilities design controls are listed on the approved Typical Section Package in Appendix A.

**Table 11** Roadway Design Criteria and Standards

Design Element	Design Standard	Sources
<b>Design Vehicle</b>	WB67	2011 AASHTO page 2-5
<b>Design Year</b>	2035	FDOT Scope of Service
<b>Design Speed</b> I-75 Loop Ramps I-75 Ramps (other)/Arterial	25 mph minimum 45 mph	2011 AASHTO, pages 10-89 and 10-90 PPM Table 1.9.1
<b>Maximum Degree of Curve</b> I-75 Ramps/Arterials	8°15'	PPM Table 2.8.3 ( $e_{Max} = 0.05$ )
<b>Length of Horizontal Curve</b> I-75 Ramps/Arterials	Desirable - 675 ft. (15V) Minimum – 400 ft.	2011 AASHTO Table 3-1 PPM Table 2.8.2a
<b>Superelevation Transition</b> Tangent Curve <b>Maximum Superelevation</b> I-75 Ramps/Arterials	80% desirable, 50 % minimum 20% desirable, 50% maximum  0.05	PPM Section 2.9
<b>Maximum Profile Grade</b> I-75 Ramps Arterial	5% 6%	PPM Table 2.6.1
<b>Clear Zone (Min. from edge of travel way)</b> I-75 Ramps  Arterial (curb & gutter) To Bridge Piers and Abutments	14 ft. (single-lane) 24 ft. (multi-lane) 4 ft. 16 ft.	PPM Table 2.11.9, Table 2.11.11., and Table 2.11.6
<b>Crest Vertical Curve</b> I-75 Ramps/Arterial	K=98, Min. Length 360 ft	PPM Table 2.8.5 and 2011 AASHTO Table 3-34
<b>Sag Vertical Curve</b> I-75 Ramps/Arterial	K=79, Min. Length 360 ft	PPM Table 2.8.6 and 2011 AASHTO Table 3-36



Design Element	Design Standard		Sources
<b>Minimum Vertical Clearance</b> Bridges Overhead Signs	16'-6" 17'-6"		PPM Table 2.10.1 and 2.10.2, Figure 2.10.1
<b>Lane Widths</b> Arterial/Multi-Lanes Ramp One Lane Ramps	12 ft. – Tangent 15 ft. – Tangent		PPM Table 2.1.1 and 2.1.3
<b>Median Width</b> Arterial	22 ft. desirable, 19.5 ft. minimum		PPM Table 2.2.1
<b>Shoulder Width (Left)</b> I-75 Ramps	Total 6 ft. (1-lane) 8 ft. (2-lane)	Paved 2 ft. (1-lane) 4 ft. (2-lane)	PPM Table 2.3.1
<b>Shoulder Width (Right)</b> I-75 Ramps	Total 6 ft. (1-lane) 12 ft. (2-lane)	Paved 4 ft. (1-lane) 10 ft. (2-lane)	PPM Table 2.3.1
<b>Shoulder Width – Bridge Structures – Inside</b> One Lane Ramp Two Lanes Ramp	6 ft. 6 ft.		PPM Figure 2.0.1
<b>Shoulder Width – Bridge Structures – Outside</b> One Lane Ramp Two Lanes Ramp	6 ft. 10 ft.		PPM Figure 2.0.1
<b>Roadway Cross Slopes</b> Roadways Inside Shoulder Outside Shoulder	0.02 to 0.03 (for 3 <sup>rd</sup> lane) 0.05 0.06		PPM Figure 2.1.1 and Table 2.3.1
<b>Minimum Stopping Sight Distance</b> I-75 Ramps/Arterials	360 ft.		2011 AASHTO Table 3-1 PPM Table 2.7.1
<b>Border Width</b> I-75 Ramps Arterial	94 ft. 33 ft.(from shoulder) or 12 ft. (from curb gutter)		PPM Tables 2.5.1, 2.5.2, and 2.5.3



## 5 Alternative Interchange Analysis

### 5.1 NO-BUILD ALTERNATIVE

Three capacity improvement projects were completed on Collier Boulevard, Davis Boulevard, and three of the four I-75 ramps. These improvements are considered to be part of the study's No-Build interchange condition.

Collier Boulevard was widened to eight lanes, four in each direction of travel, between the intersection with Davis Boulevard and City Gate Boulevard. Davis Boulevard was widened to six lanes from west of Radio Road to Collier Boulevard. Collier Boulevard and Davis Boulevard intersection turn lane improvements include:

- A second southbound left-turn lane
- A third eastbound left-turn lane
- An eastbound right-turn bypass lane to southbound Collier Boulevard
- A second westbound left-turn lane

The Collier Boulevard south intersection leg with the I-75 northbound on-ramp was widened to include a third northbound left-turn lane.

Both I-75 off-ramps at Collier Boulevard were widened to make full use of the additional capacity being added along the arterial. As such, the southbound off-ramp is five lanes wide with three right-turn lanes toward southbound Collier Boulevard and two northbound left-turn lanes. The I-75 northbound off-ramp was widened to four lanes, two per turning direction, at the Collier Boulevard intersection. The northbound I-75 on-ramp was widened to three lanes for consistency with the new three left-turn lanes off Collier Boulevard.

#### Advantages of the No-Build Alternative

- No additional right-of-way would be acquired.
- No final design, right-of-way or construction costs.
- No delays to motorists or inconveniences to property owners during construction.
- No construction impacts to the adjacent natural, physical and social environment.

#### Limitations of the No-Build Alternative

- Increased traffic congestion and user costs associated with increased delays.
- Increased potential for crashes due to congested lanes and intersections.
- Incompatibility with the Comprehensive Plans of Collier County.
- Increased emergency vehicle response times.
- Increased vehicle emission pollutants due to growing traffic congestion.

## 5.2 TRANSPORTATION SYSTEMS MANAGEMENT

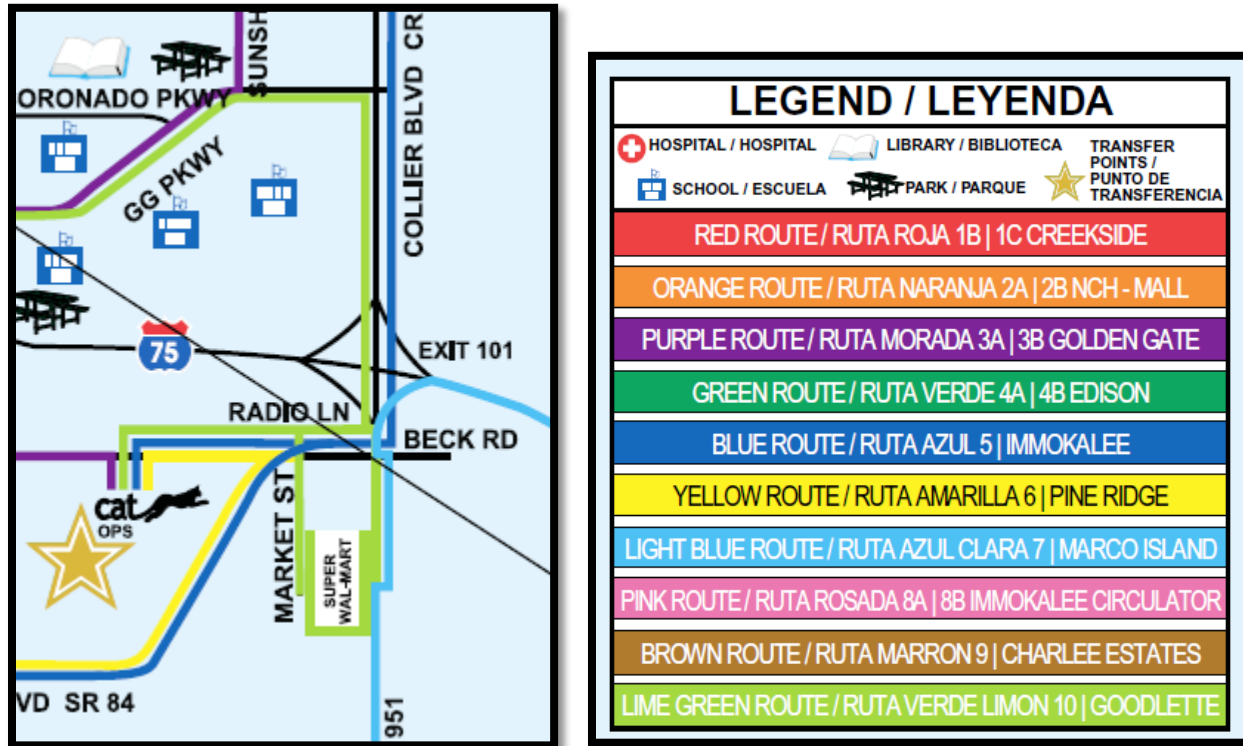
As noted above, the interchange area has recently completed an extensive capacity improvement process maximizing the available right-of-way along Davis Boulevard and widening Collier Boulevard under the I-75 overpasses to the extent possible without reconstructing the existing bridges. These measures are consistent with transportation system management and operations improvements considered for a no-build alternative.

In addition to the recent intersection improvements at Davis Boulevard and Collier Boulevard, the study also analyzed the potential for further turn lane and through lane construction at this location. Peak hour traffic operations indicate this intersection is a bottleneck to traffic needing to reach the I-75 interchange ramps. As such, the intersection was analyzed with four left-turn lanes on the Davis Boulevard intersection leg and five through lanes along Collier Boulevard. These at-grade improvements failed to improve the traffic operations to a volume-to-capacity (v/c) ratio lower than 1.0 due to the imbalance in volumes destined for the interchange ramps. This volume imbalance does not allow for all five through lanes to be fully utilized, causing them not to reach their full capacity potential. In addition to the traffic operational shortfall, the at-grade improvement option would have geometric design flaws. The four left-turn lanes along Davis Boulevard would not accommodate the project design vehicle; that is, two WB-67 trucks could not turn side-by-side.

The transportation system management and operations assessments indicate further at-grade improvements of the Collier and Davis Boulevards intersection are impractical; therefore, the viable alternatives include flyover ramps separating the major interchange traffic flows from the intersection and extending the current investment's design life.

## 5.3 MULTI-MODAL ALTERNATIVES

The Collier County Alternative Transportation Modes (ATM) Department oversees the public transit system, Collier Area Transit (CAT), and the Transportation Disadvantaged System (TD). CAT provides transit service seven days a week to Immokalee, Marco Island, Golden Gate, and the Naples area. The CAT operations center is located just west of the project study area on Radio Road. The graphic below shows the transit routes in the project study area. Three of the ten CAT routes cross or use the I-75 and Collier Boulevard interchange. These are described below.



Green Route 4 operates from 6 AM to 7 PM with 1.5 hour headways. The route originates at the CAT operations center with a stop in the Wal-Mart Super Center on Collier Boulevard and north on Collier Boulevard to Golden Gate Parkway. It then goes west to US 41 and Goodlette-Frank Road and as far north as Pine Ridge Road.

Blue Route 5 operates from 3:45 AM to 8 PM with headways varying from 1 hour to 2.5 hours. This route also originates at the CAT operations center westward to the Collier County Government Center on US 41 via Davis Boulevard and northward on Collier Boulevard to Golden Gate Boulevard then eastward toward Immokalee.

Light Blue Route 7 mostly serves Marco Island but in the morning has an Immokalee to Marco Island express route departing at 6:00 AM and then an evening return trip departing Marco Island at 5:00 PM for Immokalee. This express route travels on Collier Boulevard to I-75 before heading east and does not stop within the study area.

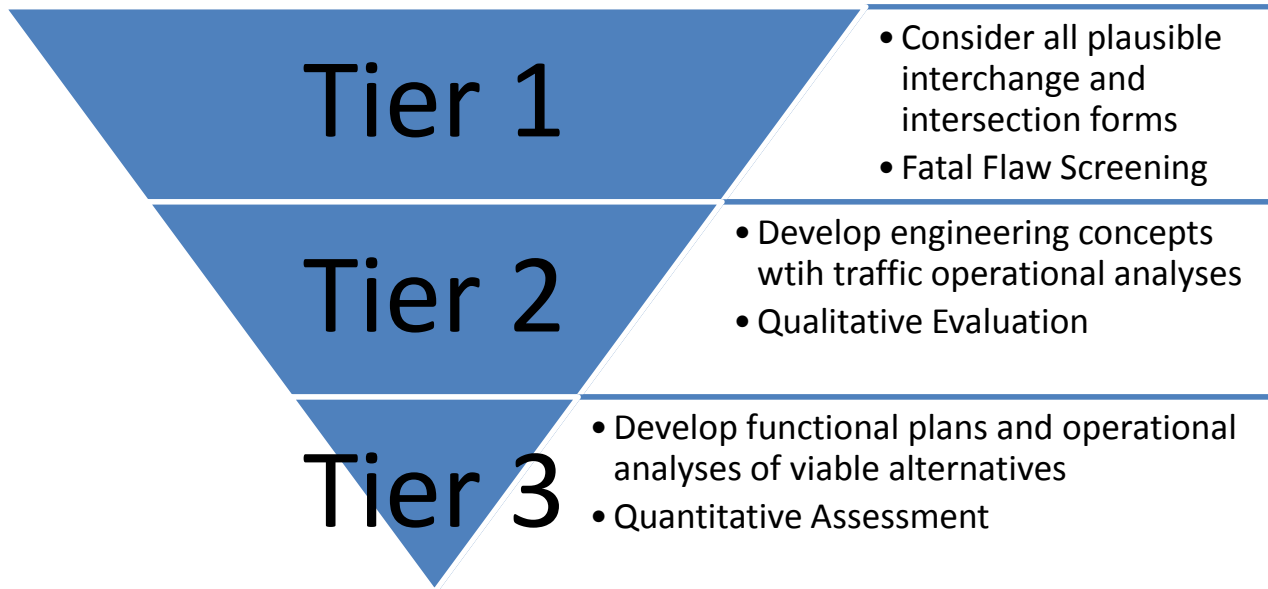
The Collier County MPO 2035 LRTP indicates additional improvements to transit services within the study area. However, the highest planned bus service headway in this suburban area would be 30 minutes for one out of five routes. The average bus service headway is 60 minutes. This level of transit service would not be sufficient to affect the mode shift for travelers within the study area; therefore, multimodal alternatives to interchange capacity improvements would not meet the future traffic demands.

## 5.4 ALTERNATIVES DEVELOPMENT AND EVALUATION

FHWA guidelines for evaluating transportation improvements pursuant to the National Environmental Policy Act (NEPA) suggest all possible alternatives be considered during the course of a study. An encompassing yet structured process detailed in the Institute of Transportation Engineers (ITE) *Freeway and Interchange Geometric Design Handbook* was used to screen over 80 system alternatives at the I-75 and Collier Boulevard interchange.

The overall PD&E study process followed three screening tiers to produce a recommended preferred alternative. The result of the first two screening tiers was to advance three viable alternatives to the latter quantitative engineering and environmental investigation in the comparative evaluation matrix. Figure 8 summarizes the three tier screening process based on Figure 4-13. Project Solution Process of the *Freeway and Interchange Geometric Design Handbook* (1).

**Figure 8** General Description of PD&E Study Screening Tiers





### 5.4.1 Tier 1 Screening

Tier 1 is the broadest screening step in the evaluation phasing. It considered all plausible interchange and intersection forms appropriate for the suburban setting of the I-75 and Collier Boulevard interchange. Due to the close proximity between the interchange and the Collier and Davis Boulevards intersection, the intersection was included in the screening matrix. Urban major highway interchange forms include:

- Diamond
- No-build
- Compressed
- Displaced Crossover Diamond (DCD, also known as Diverging Diamond Interchange or DDI)
- ParClo A
- ParClo B

Six interchange variations were identified for the I-75 and Collier Boulevard interchange based on the above typical forms. They are:

- No-Build Existing Diamond
- ParClo A (loops in the northeast and southwest quadrants)
- Single Loop ParClo (loop in the northeast quadrant)
- DCD with a north-to-northwest flyover
- Diamond with a north-to-northwest and a southeast-to-south flyovers
- Single Loop ParClo with a north-to-northwest flyover (loop in the southwest quadrant)

Flyover ramps were added to the basic interchange forms due to the dominant design hour traffic movements at Collier Boulevard northbound to I-75 northbound and the reciprocal I-75 southbound to Collier Boulevard southbound. Figure 9 illustrates the preliminary PM peak 2035 directional design hour volumes (DDHV) for the interchange movements and Collier Boulevard. The ParClo B interchange form (exit traffic loops off the freeway mainline) did not fit the I-75 and Collier Boulevard traffic demands and therefore was not considered in the Tier 1 screening.

Existing peak hour turning movement counts indicate a high demand volume for the Davis Boulevard eastbound left-turn and Collier Boulevard southbound right-turn at the intersection of these facilities. The close proximity of this intersection to the I-75 interchange, approximately 1200 feet, makes any future solution for the intersection an integral part of the interchange system. High capacity at-grade and grade separated intersection alternatives were considered for the Collier Boulevard and Davis Boulevard location as follows:

- Improved signalized intersection with additional through and turning lanes
- Crossover Displaced Left-turn Intersection (CDLTI)
- Parallel Flow Intersection
- Single-point Urban Interchange (SPUI)
- Tight-urban Diamond Interchange (TUDI)
- Center Turning Overpass Intersection (CTO)
- Exit Only Two-level Intersection (EX2LI)
- Entrance Only Two-level Intersection (EN2LI)
- Echelon Interchange (EI)

In addition to the above intersection forms, two other options are northbound and southbound flyover ramps over the Davis Boulevard and Collier Boulevard intersection. These flyovers serve the major through traffic from Collier Boulevard northbound to travel north on I-75 and the reciprocal movement in the southbound direction. Illustrations of the high capacity intersection concepts are available in the Viable Interchange System Alternatives Screening Technical Memorandum, dated January 6, 2012.

Table 12 illustrates the Tier 1 Alternative Concept Matrix combining the interchange and intersection forms listed above. The fatal flaw screen at this evaluation step considered two primary factors:

- Ability to functionally build the interchange and intersection forms given their close proximity
- Ability to accommodate the design year (2035) design hour preliminary forecasted traffic

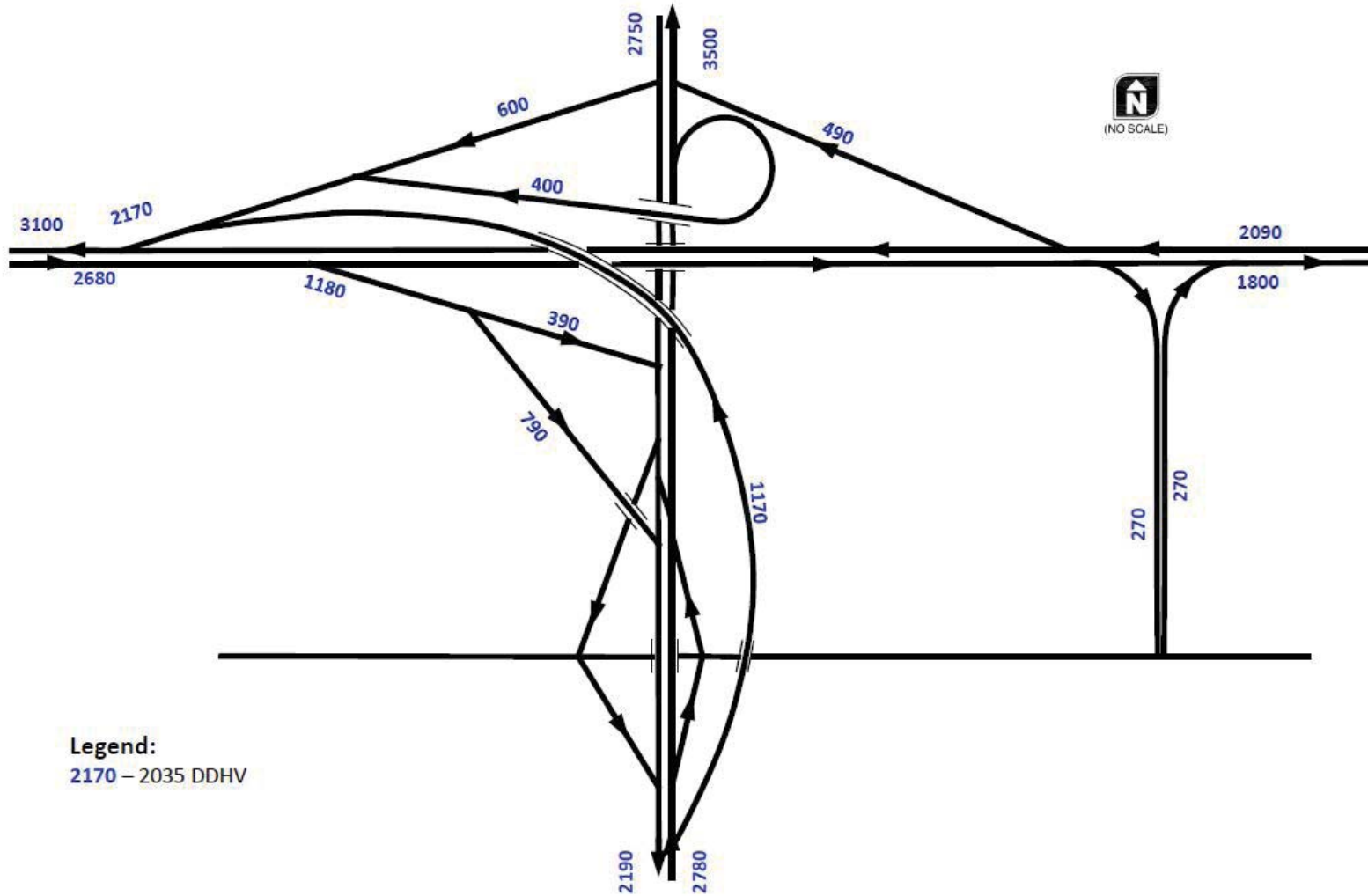
Five system configurations with good potential to accommodate the design year traffic demand were developed into single-line functional design sketches for discussion and further evaluation purposes. These sketches comprise the following system combinations:

- I-75 ParClo A interchange with an Exit Only Two-Level intersection (EX2LI) at Davis Boulevard
- I-75 Displaced Crossover Diamond interchange with a Crossover Displaced Left-turn Lane intersection (CDLTI) at Davis Boulevard and a northbound-to-northbound flyover ramp from Collier Boulevard to I-75
- I-75 Compressed Diamond interchange with a SPUI interchange at Davis Boulevard, a northbound-to-northbound flyover, and a southbound braided ramp from/to Collier Boulevard to/from I-75

- I-75 ParClo A interchange with a SW quadrant only on-ramp and the existing intersection at Davis Boulevard with a northbound-to-northbound and a southbound-to-southbound flyover ramp from/to Collier Boulevard to/from I-75
- I-75 ParClo A interchange with northbound and southbound Collier Boulevard flyover lanes at the Davis Boulevard intersection

The preliminary single-line concept alternatives were updated to better incorporate the current capacity improvements at the Davis Boulevard and Collier Boulevard intersection. Specifically, the at-grade CDLTI concept intersection was removed because it does not provide a significant traffic operational advantage over the existing at-grade design and would increase the intersection's size. The Davis Boulevard and Collier Boulevard concepts focus on grade-separated high capacity north-south solutions such as the EX2LI, SPUI, and flyover ramps. A total of six preliminary concept alternatives were developed as single-line functional design sketches on the aerial photography base map to be evaluated qualitatively in Tier 2.

# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Preliminary PM Peak 2035 Directional Design Hour Volumes

FIGURE



**Table 12** Tier 1 Alternative Concepts Matrix

			Intersections													
			At Grade							Grade Separated						
			No Build	Improved Lanes	CDLTI/4-Leg	CDLTI/3-Leg	CDLTI/2-Leg	Parallel Flow	SPUI	TUDI	CTO	EX2LI	EN2LI	Echelon	Ramp NB Over SR 84 to I-75 NB	Ramp SB over SR 84 from SB I-75
Interchange	2 Level	No Build Diamond	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		ParClo A	x	x	p	p	p	p	p	p	p	p	x	x	p	p
		Single Loop/NE	x	p	p	p	p	p	p	p	x	x	x	x	p	p
		DCD w/ NB-NB Flyover	x	x	x	x	p	x	x	x	x	x	x	x	p	p
	3 Level	Diamond w/ NB-NB Flyover & SB-SB Ramp	x	x	p	p	p	p	p	p	x	p	x	x	p	p
SW Loop w/ NB-NB Flyover	x	p	p	p	p	p	p	p	p	p	p	p	x	p	p	

Cells populated with "x" reflect a fatal flaw in either constructability or ability to process the design year design hour forecasted traffic.

Cells populated with "p" reflect a plausible system configuration.

Cells highlighted in yellow represent plausible system configurations with moderate potential to accommodate the design year traffic demand.

Cells highlighted in green represent plausible system configurations with good potential to accommodate the design year traffic demand.

### **5.4.2 Tier 2 Screening**

The second screening tier qualitatively compares the preliminary concept alternatives using key evaluation criteria and ranks the alternatives based on assessments from the aerial base map, available right-of-way, economic uses, and environmental features.

Six preliminary concept alternatives were evaluated at this stage as follows:

- I-75 ParClo A interchange with an Exit Only Two-Level intersection at Davis Boulevard
- I-75 ParClo A interchange with a northbound Collier Boulevard flyover at the Davis Boulevard intersection
- I-75 ParClo A interchange with northbound and southbound Collier Boulevard flyover lanes at the Davis Boulevard intersection
- I-75 ParClo interchange with a SW quadrant only on-ramp and northbound-to-northbound and southbound-to-southbound flyover ramps from/to Collier Boulevard to/from I-75
- I-75 Displaced Crossover Diamond (DCD) with northbound-to-northbound and southbound-to-southbound flyover ramps from/to Collier Boulevard to/from I-75
- I-75 Compressed Diamond with a SPUI interchange at Davis Boulevard, a northbound-to-northbound flyover, and a southbound braided ramp from/to Collier Boulevard to/from I-75

Ten evaluation criteria were used to screen the above mentioned alternatives. They are briefly described below.

#### **Traffic Operations**

Critical movement analyses were performed based on preliminary 2035 design year design hour volumes. This high level analysis technique allowed the study team to judge the potential LOS at key intersections in the system. These intersections would be located along Collier Boulevard at Davis Boulevard and the ramp terminals. Signal phasing was taken into consideration as it can affect future traffic operations and the physical ability to accommodate queues on high demand approaches.

#### **Construction Costs**

Relative magnitude of construction costs were inferred from the number and complexity of structures each alternative requires. The single-line functional diagrams provide relative lengths and height of structures being the basis of this estimate. Overall roadway construction or reconstruction area was also deduced from the single-line diagrams and included in the construction cost comparison.

#### **Extent of Davis Boulevard (SR 84)/Collier Boulevard (SR 951) Reconstruction**

As noted in the Tier 1 discussion, the intersection at Davis Boulevard and Collier Boulevard is being currently improved to accommodate future traffic. This is a collaborative project between Collier County and FDOT and a significant local investment in the I-75 and Collier Boulevard

interchange area. Future interchange improvements should be able to leverage this capacity project and use as much of the intersection construction as possible; therefore, preliminary concept alternatives limiting the reconstruction requirement of the Davis Boulevard and Collier Boulevard intersection are preferred.

### **Maintenance of Traffic**

Maintenance of traffic comparisons relate the extent each alternative would require detours, lane closures, and temporary total closures of the project area. The team compared the ability to use the current pavement cross-sections and relative need for temporary pavement during construction based on the single-line sketches.

### **Improvements Phasing**

Implementation flexibility of future capacity improvements may reduce overall project cost and could allow the FDOT to address interchange capacity needs as they arise. Phasing of system components construction is another evaluation criterion that is useful in evaluating whether the preliminary concept alternatives can be divided into multiple phases and constructed sequentially with little or no reconstruction of the previous phase. It also considers how each alternative leverages the existing Davis Boulevard and Collier Boulevard intersection capacity improvement.

### **Multimodal Accommodations**

Pedestrian and bicycle facilities are currently built or planned in the study area. This criterion evaluates how each preliminary concept alternative may accommodate pedestrian and bicycle traffic. This includes maintaining or reconstructing the multi-use path along Collier Boulevard within the interchange area.

### **Right-of way Needs**

Right-of-way needs address the requirement for additional roadway right-of-way or easements based on visual inspection of the single-line design sketches. New right-of-way or easements along occupied business properties would likely have a higher cost and therefore are less desirable.

### **Social & Economic Impact**

The area south of the interchange is currently developed with commercial and traveler service uses. Impacts to those businesses by the preliminary concept alternatives could include temporary business interruptions, business relocations, and visual impediments. The relative impact to business was inferred from the single-line design sketches.

### **Drainage Impact**

The current capacity improvements at the Davis Boulevard and Collier Boulevard intersection are adding new stormwater drainage features along the Collier Boulevard right-of-way and in the I-75 interchange infield. This evaluation criterion assessed the ability of the preliminary concept alternatives to maintain or reuse the new drainage infrastructure. Construction or relocation of stormwater ponds and major drainage outfalls was not desirable.

## Environmental Impact

Wetland areas exist within the southwest quadrant infield and along other sections of the interchange area. Encroachment of these areas was not desirable, nor was disturbance of the potential contaminated sites surrounding the Davis Boulevard and Collier Boulevard intersection's west side. The environmental impacts of the preliminary concept alternatives were determined based on the single-line design sketches.

Table 13 summarizes the qualitative grading in general terms such as *good*, *moderate*, or *poor* of each preliminary concept alternative for all 10 evaluation criteria.

**Table 13** Tier 2 Qualitative Evaluation Considerations

Interchange Type	ParClo A	ParClo A	ParClo A	SW Loop w/NB FO	DCD w/FO	Diamond w/FO
Intersection Type	EX2LI	NB FO	NB/SB FO	NB/SB FO	NB/SB FO	SPUI
Evaluation Considerations	Alternatives Assessment					
Traffic Operations	High	Adequate	High	Adequate	Adequate	Adequate
Construction Costs	Medium	Low	Medium-Low	Medium-High	Medium-High	High
Extent of SR 84/SR 951 Reconstruction	Total	Moderate	Extensive	Extensive	Extensive	Total
Maintenance of Traffic	Extensive	Minimal	Minimal	Minimal	Extensive	Extensive
Improvements Phasing	Poor	Good	Good	Poor	Moderate-Good	Poor
Multimodal Accommodations	Poor	Moderate	Moderate-Good	Good	Moderate-Good	Poor
Right-of-Way Needs	High	Low-Moderate	Moderate	Moderate	Low	High
Social & Economic Impact	High	Low-Moderate	Moderate	Moderate-High	Moderate-High	High
Drainage Impact	High	Moderate	Moderate	Low	Low-Moderate	Moderate-High
Environmental Impact	Most	Moderate-Least	Moderate	Moderate-Most	Least	Most

DCD – Displaced Crossover Diamond  
 SPUI – Single Point Urban Interchange  
 NB FO - Northbound Collier Boulevard flyover at the Davis Boulevard intersection

NB/SB FO - Northbound and southbound Collier Boulevard flyover lanes at the Davis Boulevard intersection  
 EX2LI - Exit Only Two-level Intersection  
 ParClo – Partial Cloverleaf Interchange



Following the general grading of the preliminary concepts as shown in Table 13, each alternative was assigned a numerical score from 5 to 10. A value of 10 was assigned to the best fitting alternative in each evaluation criteria, generally corresponding to *high or good* grades. A value of 5 was assigned to the worst fitting alternative in each evaluation criteria, generally corresponding to *low or poor* grades. Preliminary concept alternatives with *middle or moderate* grades were assigned values between 5 and 10 using engineering judgment based on the available information on the aerial base maps and the single-line functional design sketches. This ranking process is outlined in the *Freeway and Interchange Geometric Design Handbook* on pages 139 and 140.

Next, each evaluation criteria was assigned a scoring weight reflecting the local needs, constraints, and interchange socio-economic context. All weights add up to a 100. The intent of the evaluation criteria score weights was to create a balanced ranking addressing both the design needs and the socioeconomic and environmental constraints. The 10 evaluation criteria weights are as follows:

- Traffic Operations, 10 points
- Construction Costs, 15 points
- Extent of SR 84/SR 951 Reconstruction, 15 points
- Maintenance of Traffic, 5 points
- Improvements Phasing, 10 points
- Multimodal Accommodations, 5 points
- Right-of-Way Needs, 15 points
- Social & Economic Impact, 10 points
- Drainage Impact, 5 points
- Environmental Impact, 10 points

Table 14 summarizes the results of the weighted scores for all six preliminary concept alternatives. The maximum score for any alternative is 1000, which represents a score of 10 in all 10 evaluation criteria. The preliminary concept alternatives scored between 610 and 935.

Two ParClo A interchange alternatives ranked in the top three weighted scores. These two alternatives have the same interchange elements except for the southbound flyover ramp from I-75 to Collier Boulevard southbound. The reason the I-75 ParClo A interchange alternative with only the northbound Collier Boulevard flyover at Davis Boulevard intersection received the top score is the lower construction cost and narrower footprint. However, this alternative could be the early phase of its sister I-75 ParClo A interchange with northbound and southbound Collier Boulevard flyovers at the Davis Boulevard intersection. As such the more comprehensive top three viable alternatives are:

- Alternative 1: I-75 ParClo A interchange with northbound and southbound Collier Boulevard flyover lanes at the Davis Boulevard intersection
- Alternative 2: I-75 ParClo with a SW quadrant only loop on-ramp and northbound-to-northbound and southbound-to-southbound flyover ramps from/to Collier Boulevard to/from I-75
- Alternative 3: I-75 Displaced Crossover Diamond with northbound-to-northbound and southbound-to-southbound flyover ramps from/to Collier Boulevard to/from I-75



**Table 14** Tier 2 Qualitative Alternatives Ranking Matrix

Interchange Type		ParClo A		ParClo A		ParClo A		Single Loop SW/NB FO		DCD w/FO		Diamond w/FO	
Intersection Type		EX2LI		NB FO		NB/SB FO		NB/SB FO		NB/SB FO		SPUI	
Evaluation Considerations	Scale Value	Rating	Weighted Value <sup>1</sup>	Rating	Weighted Value <sup>1</sup>	Rating	Weighted Value <sup>1</sup>	Rating	Weighted Value <sup>1</sup>	Rating	Weighted Value <sup>1</sup>	Rating	Weighted Value <sup>1</sup>
		(5-10)		(5-10)		(5-10)		(5-10)		(5-10)		(5-10)	
Traffic Operations	10	10	100	8	80	10	100	8	80	8	80	8	80
Construction Costs	15	8	120	10	150	9	135	7	105	7	105	6	90
Extent of SR 84/SR 951 Reconstruction	15	5	75	10	150	9	135	9	135	7	105	5	75
Maintenance of Traffic	5	5	25	10	50	9	45	8	40	7	35	5	25
Improvements Phasing	10	6	60	10	100	10	100	6	60	9	90	6	60
Multimodal Accommodations	5	6	30	8	40	9	45	10	50	9	45	7	35
Right-of-Way Needs	15	6	90	9	135	8	120	8	120	10	150	6	90
Social & Economic Impact	10	6	60	10	100	9	90	8	80	8	80	6	60
Drainage Impact	5	6	30	8	40	8	40	10	50	9	45	7	35
Environmental Impact	10	6	60	9	90	8	80	7	70	10	100	6	60
<b>Score:</b>	<b>-100</b>		<b>650</b>		<b>935</b>		<b>890</b>		<b>790</b>		<b>835</b>		<b>610</b>

### 5.4.3 Tier 3 Screening

#### Viable Alternative 1

Alternative 1 combines a classic Partial Cloverleaf (ParClo) A interchange form with two flyover ramp connections to and from Collier Boulevard south of the Davis Boulevard intersection. As such, the approximately 2,500 peak hour vehicles traveling to and from I-75 do not go through the Collier Boulevard and Davis Boulevard signalized intersection, extending the design life of this busy location. A separated exit lane would be added to northbound Collier Boulevard under the I-75 overpasses and could be constructed within the existing width under the existing structures.

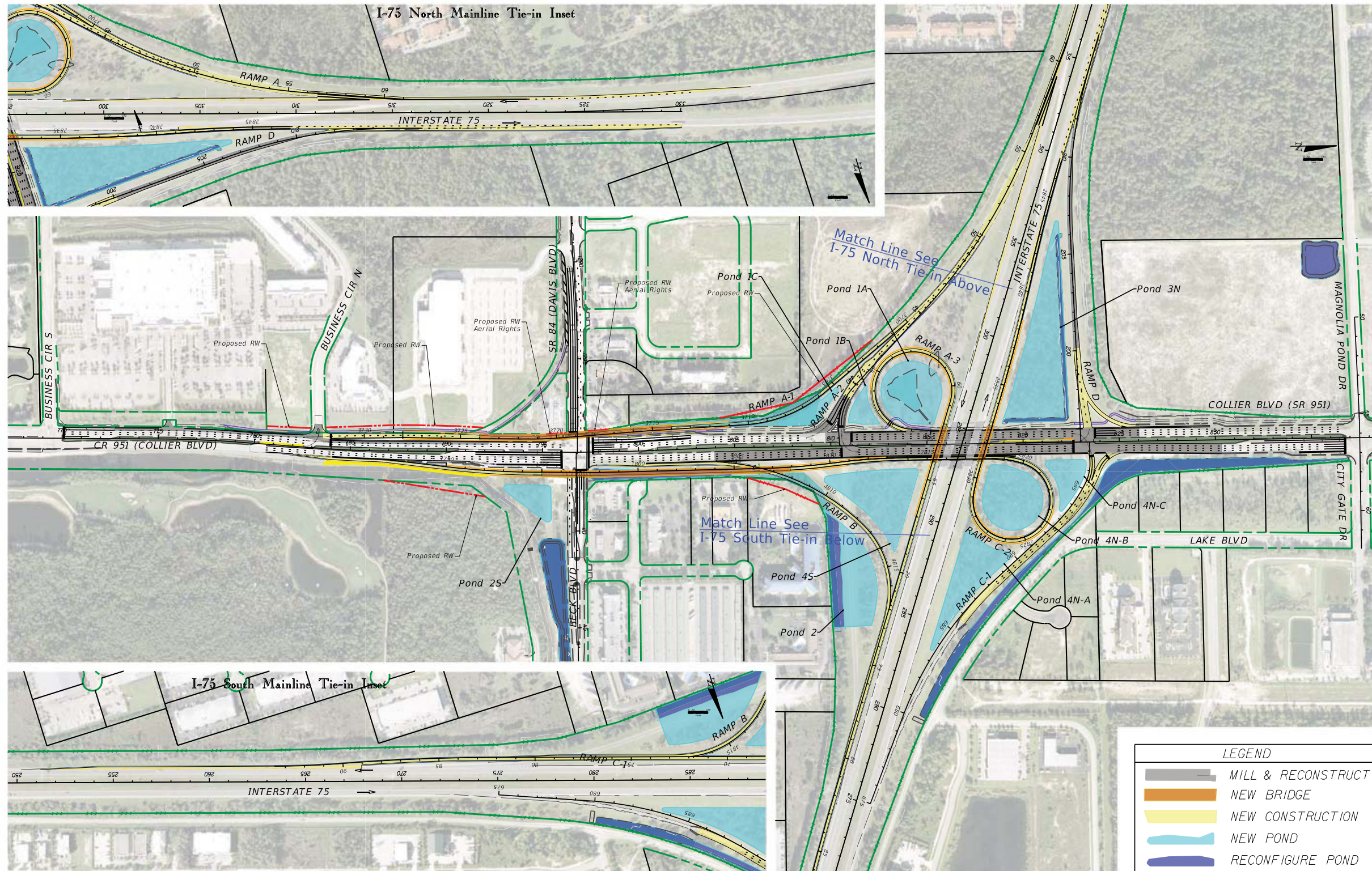
The proposed ParClo A interchange, shown in Figure 10, would include two new loop ramps in the southwest and northeast quadrants of the interchange. Two new bridges would provide acceleration lanes to I-75 and would be built south and north of the existing I-75 overpasses. The I-75 southbound on-ramps from southbound and northbound Collier Boulevard first merge to one lane joining the I-75 mainline southeast of the current interchange gore. The proposed I-75 northbound on-ramp gore will be rebuilt in the approximate same location as the existing gore and will provide a parallel merge auxiliary lane to mainline I-75. The southbound off-ramp gore would be rebuilt to provide a parallel two-lane exit. Both southbound and northbound off-ramps would be relocated to accommodate the new loop ramps.

The profile grade along Collier Boulevard will be maintained during the process of milling and resurfacing the roadway. It is particularly important to maintain the current maximum elevation along southbound Collier Boulevard due to the limited vertical clearance available under the I-75 overpasses. The new southwest quadrant loop ramp profile will start at the southbound Collier Boulevard outside lane tie-in elevations and would rise at approximately 4% toward the new Collier Boulevard overpass structure. A 900-foot-long vertical crest curve would be provided along the new ramp overpass. The ramp profile descends toward the I-75 southbound mainline gore at approximately 3.5%. The new northeast quadrant loop ramp profile will start at the northbound Collier Boulevard outside lane tie-in elevations and would rise at approximately 3.5% toward the new Collier Boulevard overpass structure. A 900-foot-long vertical crest curve would be provided along the new ramp overpass. The ramp profile descends toward the I-75 northbound mainline gore at approximately 3%. Example profiles can be found in the concept plan set.

Two flyovers would convey Collier Boulevard traffic over Beck Boulevard and Davis Boulevard to the proposed northbound loop on-ramp and from the southbound off-ramp respectively. These flyovers would connect with Collier Boulevard at the Business Circle North intersection, south of Davis Boulevard. The northbound flyover ramp profile starts along the Collier Boulevard northbound outside lane and climbs at approximately 4.5% toward a new structure over Beck Boulevard. A 500-foot-long crest vertical curve is provided at the top of the flyover. From this point the profile descends at an approximate rate of 0.3% toward the I-75 southbound on-ramp. Once the flyover structure is clear of the on-ramp passing underneath, it descends at approximately 4.5% in order to reach the existing grade along Collier Boulevard south of the existing I-75 mainline overpasses.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Alternative 1 Conceptual Plan FIGURE



The southbound flyover ramp profile starts along the main section of the I-75 southbound off-ramp. It begins climbing toward the Davis Boulevard overpass structure approximately 600 south of the roadway at an approximate rate of 4.5%. The vertical crest curve over Davis Boulevard would be approximately 550 feet. The downward slope toward the southern tie-in with Collier Boulevard would be approximately 4%.

### **Viable Alternative 2**

Alternative 2, shown in Figure 11, is a combination of a new loop ramp in the southwest quadrant of the interchange and a high-level flyover ramp from northbound Collier Boulevard to northbound I-75. The profile of the southwest quadrant loop ramp would be identical to the profile described for Alternative 1.

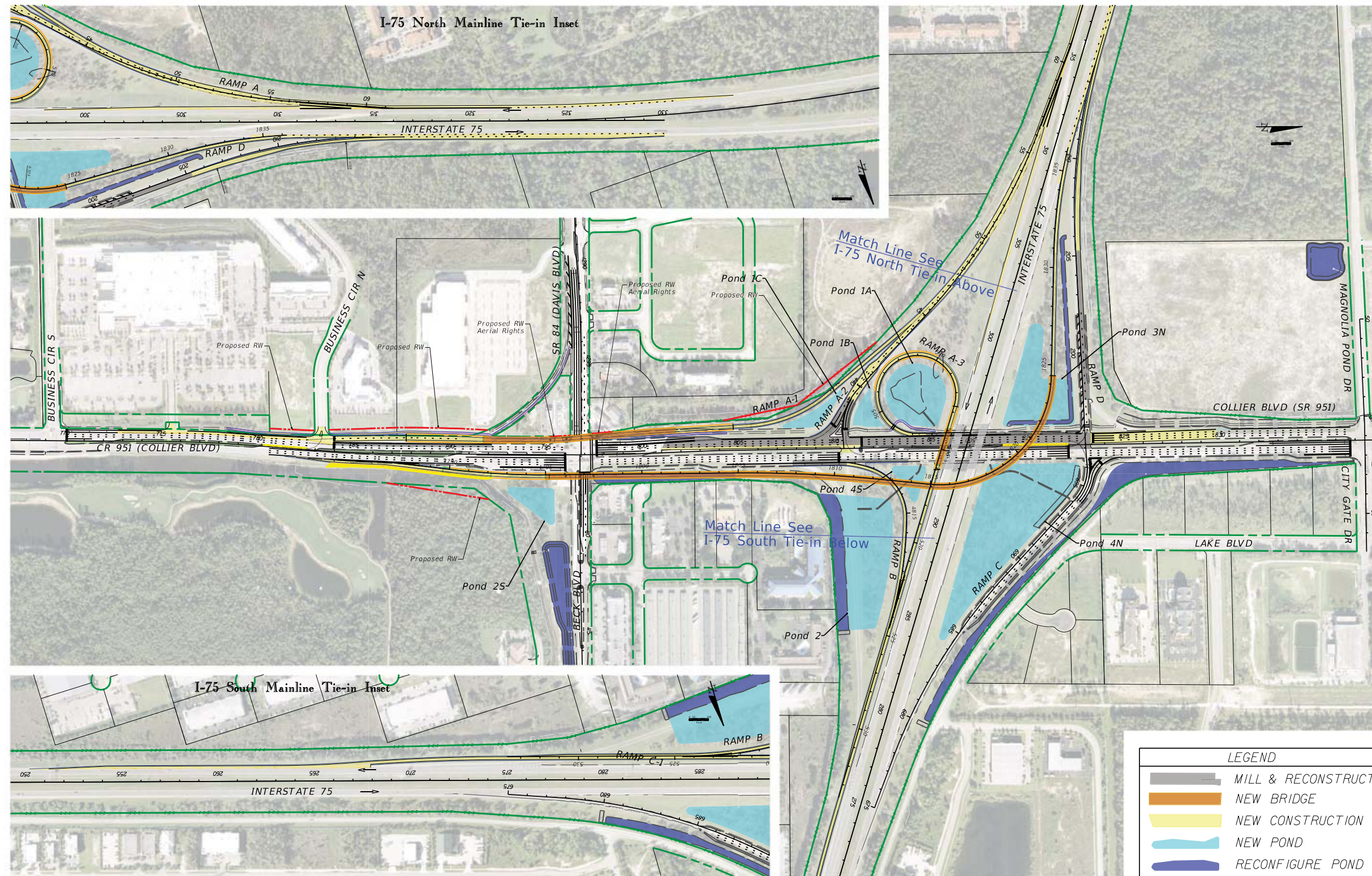
The northbound high volume traffic movement exits Collier Boulevard south of Davis Boulevard and travels over Beck Boulevard, then turns northwest over I-75 and Collier Boulevard to touch down directly along the I-75 northbound mainline. The profile of this ramp starts along the Collier Boulevard northbound outside lane and climbs at approximately 4.5% toward a new structure over Beck Boulevard. A 600-foot-long crest vertical curve is provided at the top of the flyover. From this point the profile descends toward a long 750-foot sag vertical curve. The final climb over I-75 ascends at approximately 4.5% and ends with a 600-foot-long crest vertical curve. The ramp descends at approximately 4% to the gore location along I-75 northbound mainline. Example profiles can be found in Appendix A in the concept plan set.

The southbound off-ramp gore at I-75 would be rebuilt to a standard two-lane exit and the ramp relocated around the proposed loop ramp in the southwest quadrant. Traffic destined to southbound Collier Boulevard would exit prior to the terminal intersection and travel south over the Davis Boulevard signalized intersection and join Collier Boulevard at a new proposed signalized intersection at Business Circle North. The southbound flyover ramp profile starts along the main section of the I-75 southbound off-ramp. It begins climbing toward the Davis Boulevard overpass structure approximately 600 feet north of this roadway at an approximate rate of 4.5%. The vertical crest curve over Davis Boulevard would be approximately 550 feet. The downward slope toward the southern tie-in with Collier Boulevard would be approximately 4%.

The southbound I-75 on-ramp gore would be rebuilt further southeast of the existing location to provide new merge and acceleration space for the proposed loop ramp and existing on-ramp in the southeast quadrant. Traffic on the loop ramp would cross over Collier Boulevard on a new structure constructed parallel to and south of the exiting I-75 structures.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Alternative 2 Conceptual Plan **FIGURE**



### **Viabile Alternative 3**

Alternative 3, shown in Figure 12, improves upon the current diamond interchange form by reconfiguring the ramp terminals to a Displaced Crossover Diamond (DCD) and adding a high-level flyover ramp from northbound Collier Boulevard to northbound I-75. The DCD interchange configuration improves the ramp terminal operations by removing the conflict between left-turning traffic and the opposite through vehicles and allowing a simplified, two-phase signal operation. To do so, northbound Collier Boulevard traffic crosses over to the left side of the roadway at the southbound I-75 ramp terminal. Northbound I-75 on-ramp traffic is channelized to the left in a free-flowing slip lane away from intersection and conflict with the Collier Boulevard southbound traffic. Through the northbound I-75 ramp terminal intersection, the northbound Collier Boulevard traffic crosses back to the right of the roadway and resumes its normal driving side. The opposite traveling shift occurs in the southbound Collier Boulevard direction, with this traffic crossing to the driver's left at the northbound I-75 ramp terminal and resuming right-side driving at the southbound I-75 ramp terminal.

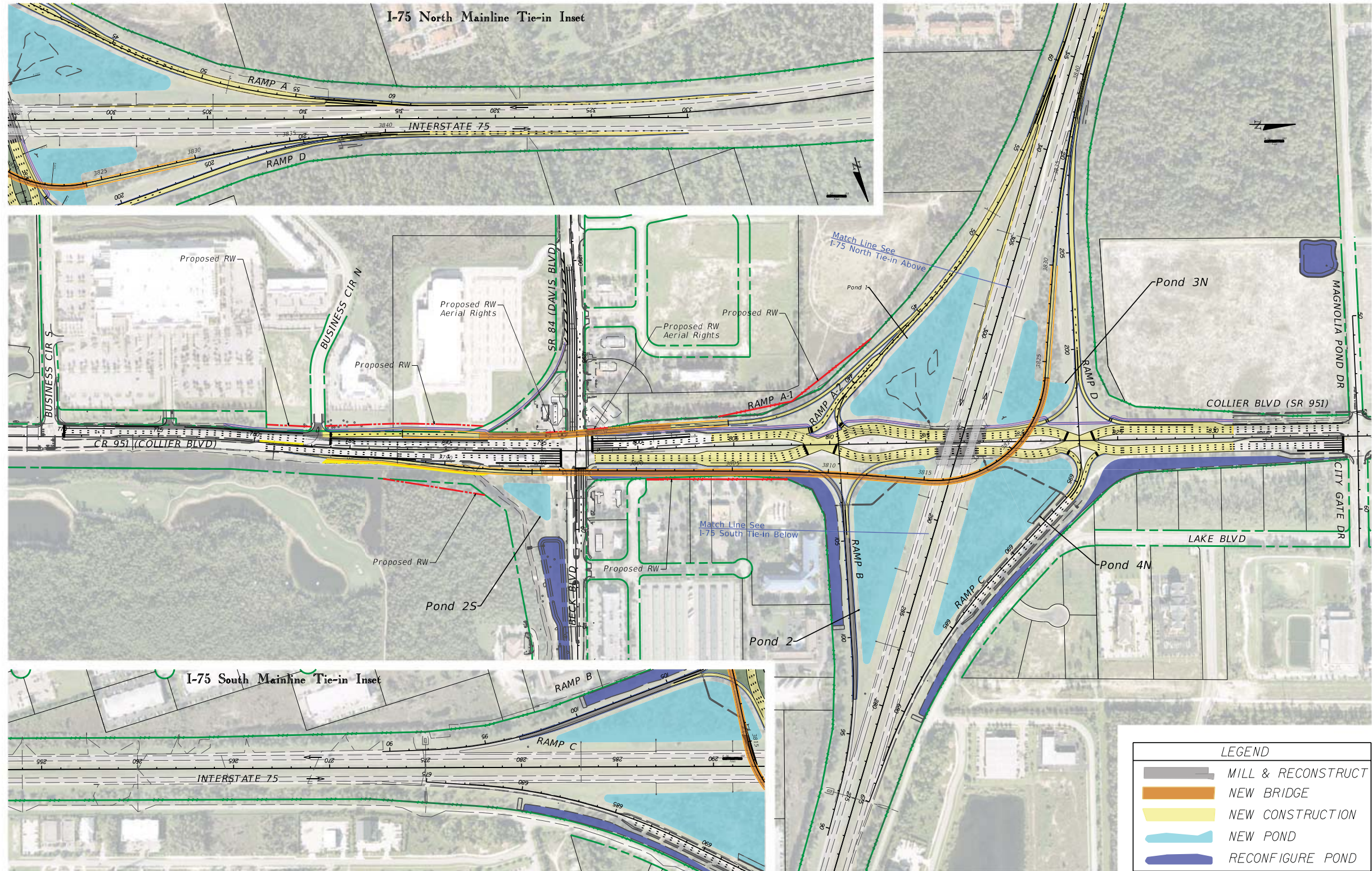
The heaviest traffic movements from Collier Boulevard to I-75 travel over the Davis Boulevard signalized intersection, thereby preserving additional capacity for the at-grade movements. The I-75 northbound traffic exits Collier Boulevard south of Davis Boulevard/Beck Boulevard and crosses over the latter road, then continues over I-75 on the high-level flyover on-ramp.

Similar to Alternative 2, the profile of this ramp starts along the Collier Boulevard northbound outside lane and climbs at approximately 4.5% toward a new structure over Beck Boulevard. A 500-foot long crest vertical curve is provided at the top of the flyover. From this point the profile descends toward a 600-foot long sag vertical curve. The final climb over I-75 ascends at approximately 4% and ends with a 600-foot long crest vertical curve. The ramp descends at approximately 4.75% to the gore location along the I-75 northbound mainline. Example profiles can be found in Appendix A in the concept plan set.

Southbound Collier Boulevard exits the I-75 southbound off-ramp and travels over the Davis Boulevard intersection to a new signalized intersection at Business Circle North. The southbound flyover ramp profile starts along the main section of the I-75 southbound off-ramp. It begins climbing toward the Davis Boulevard overpass structure approximately 600 feet north of this roadway at an approximate rate of 4.5%. The vertical crest curve over Davis Boulevard would be approximately 550 feet. The downward slope toward the southern tie-in with Collier Boulevard would be approximately 4%.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Alternative 3 Conceptual Plan **FIGURE**



## Typical Sections

The viable alternatives share much of the existing Collier and Davis Boulevards' cross-sections, as they try to maximize the use of the current improvements. A general typical section does not apply to long stretches of either Collier or Davis Boulevards due to the constant turning lanes and intersection geometry adjustments to the cross-section. However, the section of Collier Boulevard crossing under the I-75 overpass bridges features a typical section for approximately 400 feet. Each viable alternative uses the existing paved area in different ways. Figure 13 and Figure 14 illustrate the Collier Boulevard typical sections for the viable alternatives within the restrictive cross-section under the I-75 overpasses.

## Interchange/Intersections

Three basic interchange forms are proposed with the viable alternatives. Alternative 1 is the Partial Cloverleaf (ParClo) A with the two 200-foot radius ramps in the southwest and northeast quadrant. This interchange form removes most of on-ramp traffic from the terminal intersections allowing for simpler, more efficient traffic signal operations. The I-75 southbound ramp terminal traffic signal could operate with two phases only, one for the Collier Boulevard through traffic and the second for the off-ramp traffic. The I-75 northbound ramp terminal traffic signal could operate with three phases. In addition to the Collier Boulevard through and northbound off-ramp traffic, this signal requires a protective phase for the Collier Boulevard northbound left traffic destined to northbound I-75. This movement primarily serves traffic originating from Davis Boulevard, as it does not have access to the proposed I-75 northeast quadrant loop ramp.

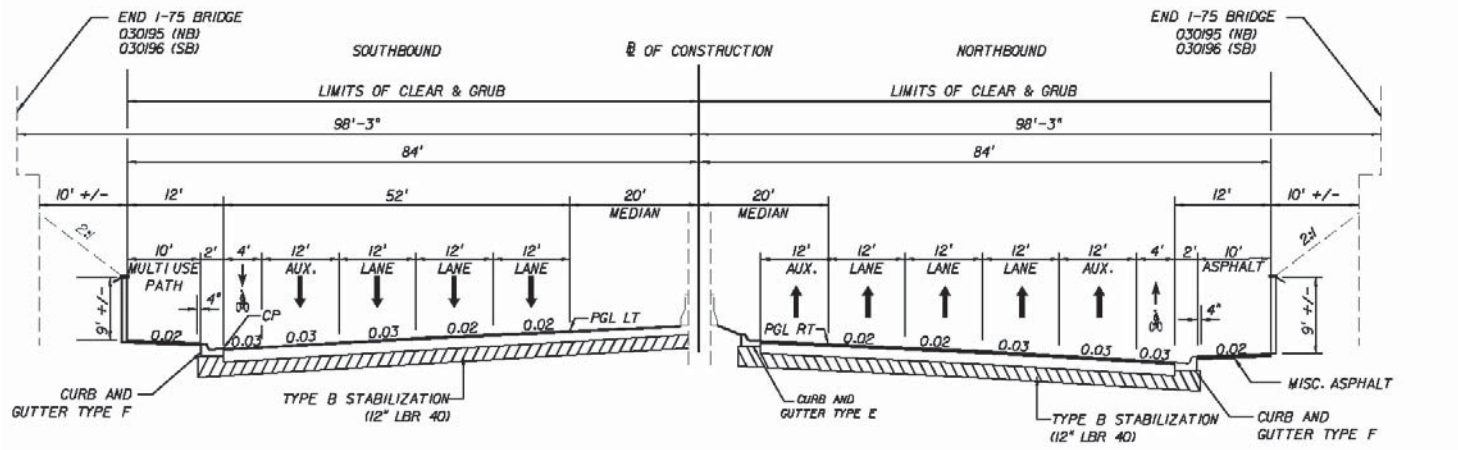
Alternative 2 proposes a ParClo interchange with a 200-foot loop ramp in the southwest quadrant only. The Collier Boulevard northbound movement to I-75 northbound would be carried by a high-level flyover ramp with a radius of approximately 575 feet. Ramp terminal intersections traffic signals would be operate similarly to Alternative 1.

Alternative 3 proposes a Displaced Crossover Diamond (DCD) or Diverging Diamond Interchange with a high-level flyover ramp for the Collier Boulevard northbound movement to I-75 northbound movement. The flyover ramp is required in addition to the high capacity ramp terminal intersections due to the limited cross-sections available under the I-75 overpasses. Northbound traffic would require at least two on-ramp lanes under the I-75 overpass which is not feasible without a bridge replacement or removal of the multi-use path. Also, the DCD interchange configuration would not operate efficiently if the Collier Boulevard northbound flyover ramp at Davis Boulevard is terminated at the I-75 southbound entrance ramp terminal.

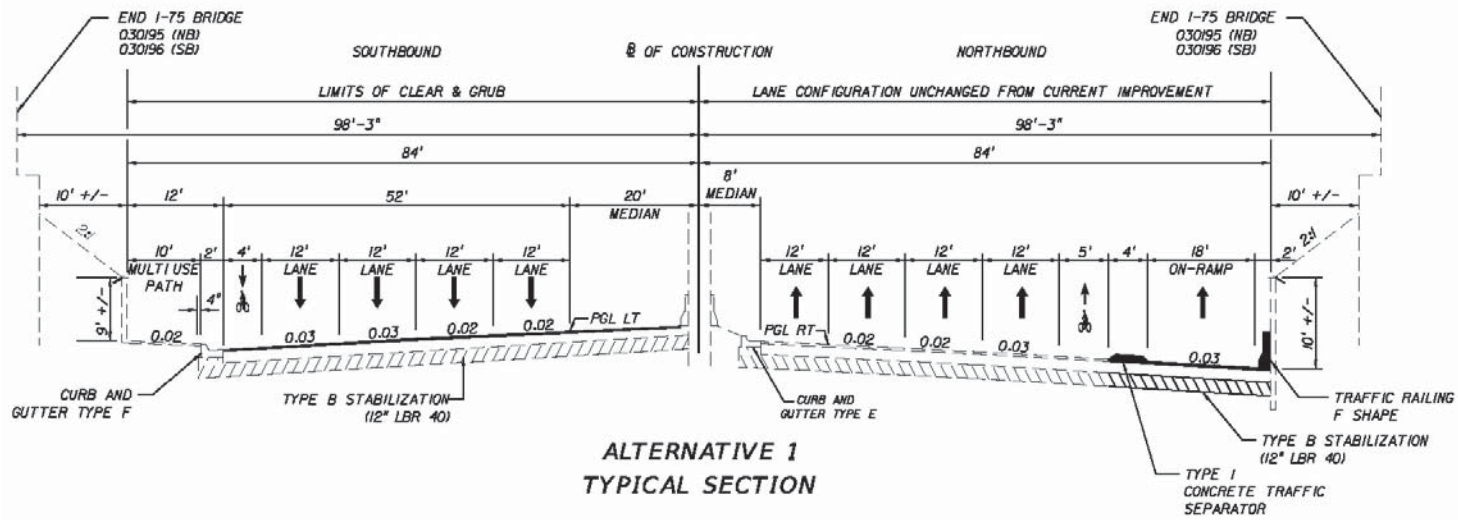
Traffic from the flyover ramp would have to weave over four through lanes in order to reach the I-75 northbound on-ramp left-turn lanes. As a result, the Collier Boulevard flyover at Davis Boulevard needs to be carried above the interchange and terminated directly along I-75 to the northbound mainline.

# I-75 AT SR 951 ULTIMATE INTERCHANGE

## PRELIMINARY ENGINEERING REPORT



**NO-BUILD COLLIER BLVD (SR 951)  
TYPICAL SECTION**



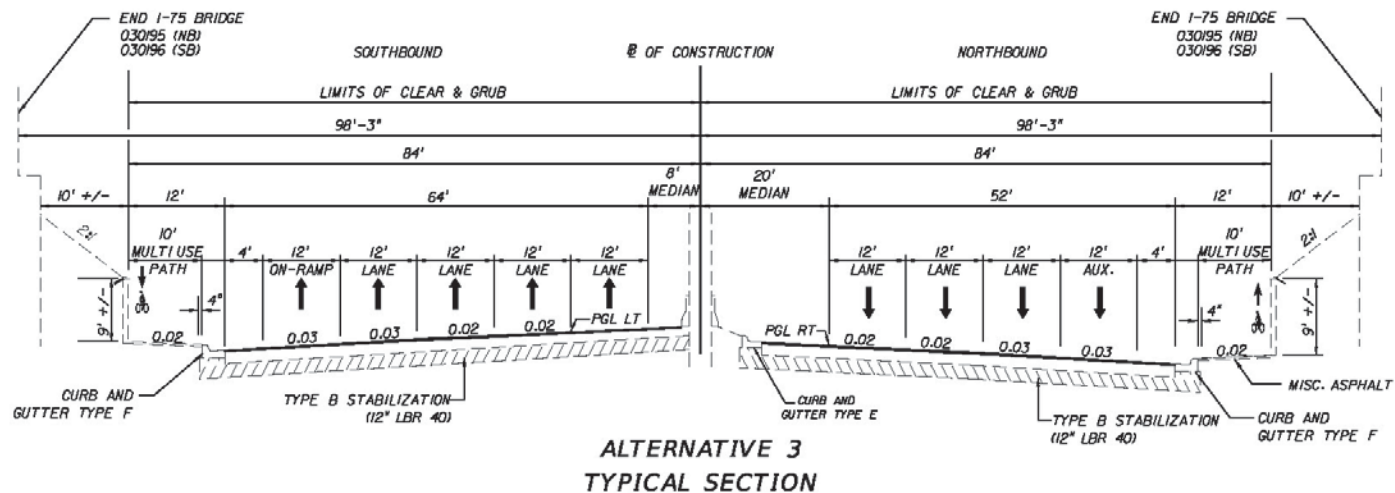
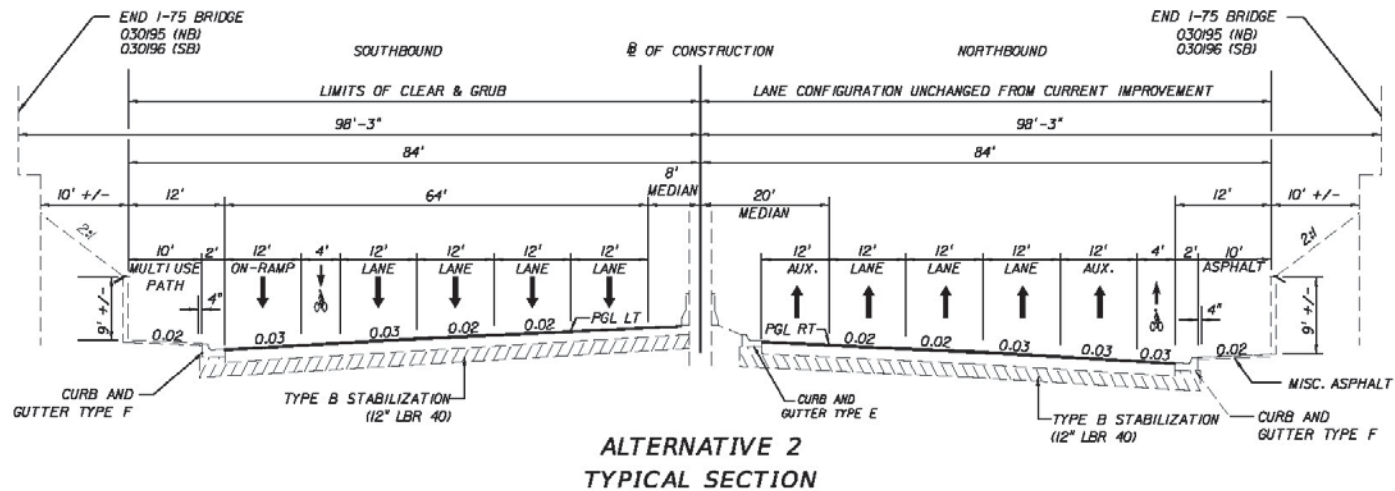
**ALTERNATIVE 1  
TYPICAL SECTION**

No-build and Alternative 1 Typical Sections Under I-75

FIGURE

# I-75 AT SR 951 ULTIMATE INTERCHANGE

## PRELIMINARY ENGINEERING REPORT



Alternatives 2 and 3 Typical Sections Under I-75

FIGURE

A new signalized intersection is proposed with all three viable alternatives. This would be located at the Business Circle North and the terminus for the southbound flyover ramp from southbound I-75 off-ramp to Collier Boulevard. Adding this signalized intersection allows for off-ramp traffic to merge onto Collier Boulevard without the need for a long weaving section. The intersection would operate on three phases: one for the southbound Collier Boulevard, one of the southbound off-ramp traffic, and a third for the Collier Boulevard northbound left-turn onto Business Circle North. Collier Boulevard northbound through traffic will continue to be uninterrupted as no Business Circle North left-turn movement to Collier Boulevard would be provided.

### **Bicycle and Pedestrian Accommodations**

Current improvements to Collier Boulevard include bicycle lanes and a 10-foot wide multi-use path along the west side of the road from the intersection with Business Circle South and Magnolia Pond Drive. These facilities would be maintained or reconstructed as necessary in all three viable alternatives. The multi-use path will serve pedestrians as well as bicyclists. Signalized crosswalks would be installed at intersections with side-streets and ramps. A detailed discussion of the maintenance of bicycle and pedestrians traffic is given later in this report for the preferred alternative.

Alternative 3 does not include bicycle lanes between the two ramp terminal intersections due to the displaced travel directions; however, it adds another 10-foot wide multi-use path on the east side of Collier Boulevard to mitigate the lack of on-street lanes.

### **Multimodal Accommodations**

As noted in the No-Build discussion, there is limited existing transit service in the study area and future transit plans do not call for intensive transit activities within this area. The existing three transit routes traversing the interchange area will benefit from the improved level of service provided by the build alternatives. If further expansion of the express system is considered along Collier Boulevard and I-75, this would be best served by the directional ramps to and from I-75.

### **Right-of-Way**

New right-of-way will be required to build any of the three viable alternatives. The new areas are needed to accommodate the southbound and northbound flyover ramps at the Collier Boulevard and Davis Boulevard intersection. The new ramps envelope was kept to a minimum through the use of a Border Width variation. Right-of-way was required to accommodate the construction and maintenance of the new roadway facilities, approximately 35 feet away from the proposed travel lanes. Air-rights would be required on the southwest and northwest corners of Collier Boulevard and Davis Boulevard intersection, without the need for business relocation or additional physical right-of-way. Expansion of stormwater retention facilities can be accommodated within existing right-of-way for the three viable alternatives. Table 15 summarizes the potential right-of-way impacts per alternative.



**Table 15** Viable Alternatives Potential Right-of-way Impacts

Right-of-Way (RW) Impacts	No-build	Alternative 1	Alternative 2	Alternative 3
ROW to be Acquired (acres)	0	1.79	1.50	1.64
Parcels Impacted	0	8	7	11

Alternative 2 has the least right-of-way impacts, both in terms of parcels impacted and new area required.

### Cost Estimates

FDOT District One used the Long Range Estimating (LRE) system to compile construction costs estimates for the three viable alternatives. The LRE system includes components for the roadway, structural, and drainage elements of the proposed interchange improvements. FDOT staff used the conceptual alternatives layouts and elevation estimates for major structural elements to compile the preliminary costs estimates. The opinion of probable costs summarized in Table 16 reflects present day costs, is not adjusted for future inflation, and is rounded to the nearest \$100,000 due to the planning level estimate. Appendix C includes the detailed cost estimates worksheets.

Design costs for the viable alternatives were estimated as 10% of the total construction costs. The Construction Engineering and Inspection fees were estimated as 15% of total construction costs.

Potential right-of-way costs were estimate by FDOT District One based on the areas and number of parcels previously outlined.

**Table 16** Viable Alternatives Opinion of Probable Cost

Cost Considerations	Estimated Total Project Costs (present day \$ in millions)			
	No-build	Alternative 1	Alternative 2	Alternative 3
Design	\$0	\$3.7	\$5.3	\$5.4
Wetland Mitigation	\$0	\$0.5	\$0.5	\$0.5
ROW Acquisition	\$0	\$2.6	\$2.2	\$2.5
Construction Cost (Roadway Elements)	\$0	\$11.4	\$12.3	\$15.7
Construction Cost (Structures / Bridges / Noise Wall)	\$0	\$23.8	\$38.9	\$36.3
Construction Cost (Drainage / Stormwater Elements)	\$0	\$3.1	\$3.3	\$3.5
Construction Engineering & Inspection	\$0	\$5.6	\$8.0	\$8.1
<b>Preliminary Estimate of Total Project Cost</b>	<b>\$0</b>	<b>\$50.7</b>	<b>\$70.5</b>	<b>\$72.0</b>

Alternative 1 has the lowest probable cost of the three viable alternatives due to a lower construction costs estimate for roadway reconstruction and fewer new structures.

## Traffic Operations

Future traffic operations were estimated at all signalized intersections along the Collier Boulevard study corridor, including the ramp terminals. The future operations of these intersections is a good indication of how the interchange will function during the 2035 design year, as these locations can become bottlenecks in the system. Table 17 and Table 18 summarize the design year estimated traffic operations and compare the alternatives along three major performance measures: intersection control delay (seconds), level of service (LOS), and volume-to-capacity ratio (v/c).

**Table 17** Design Year 2035 AM Peak Hour Intersection Traffic Operations

Intersection	Performance Measures	No-Build Alternative	Build Alternative 1	Build Alternative 2	Build Alternative 3
Collier Blvd at Business Circle North	Delay	N/A	20.0	20.0	21.1
	LOS	N/A	B	B	C
	v/c	N/A	0.88	0.88	0.92
Collier Blvd at Davis Boulevard	Delay	86.4	46.2	46.2	46.1
	LOS	F	D	D	D
	v/c	1.15	0.93	0.93	0.87
Collier Blvd at I-75 SB Ramps	Delay	137.4	12.9	12.9	18.7
	LOS	F	B	B	B
	v/c	1.44	0.70	0.70	0.87
Collier Blvd at I-75 NB Ramps	Delay	41.4	20.5	20.5	26.8
	LOS	D	C	C	C
	v/c	1.01	0.81	0.81	0.88

**Table 18** Design Year 2035 PM Peak Hour Intersection Traffic Operations

Intersection	Performance Measures	No-Build Alternative	Build Alternative 1	Build Alternative 2	Build Alternative 3
Collier Blvd at Business Circle North	Delay	N/A	17.2	17.2	19.5
	LOS	N/A	B	B	B
	v/c	N/A	0.90	0.90	0.90
Collier Blvd at Davis Blvd	Delay	85.5	55.0	55.0	52.2
	LOS	F	D	D	D
	v/c	1.19	0.95	0.95	0.95
Collier Blvd at I-75 SB Ramps	Delay	137.4	13.6	13.6	16.5
	LOS	F	B	B	B
	v/c	1.37	0.66	0.66	0.87
Collier Blvd at I-75 NB Ramps	Delay	26.9	19.6	19.6	26.8
	LOS	C	B	B	C
	v/c	0.95	0.71	0.71	0.93

As shown in Table 17, the No-Build alternative is estimated to fail during the 2035 design year AM peak hour at the Collier Boulevard and Davis Boulevard intersection and at the Collier Boulevard and I-75 southbound ramps terminal. Similar results are reported in Table 18 for the 2035 PM peak hour.

All three viable alternatives would improve the traffic operations of the key intersections along Collier Boulevard at Davis Boulevard, the I-75 southbound ramps terminal, and I-75 northbound ramps terminal. Alternative 3 achieves the lowest delay at the Collier Boulevard and Davis Boulevard intersection. Alternatives 1 and 2 achieve the lowest v/c ratio at the Collier Boulevard and I-75 ramp terminals intersections. All intersections for all three viable alternatives are estimated to operate within the standard LOS levels.

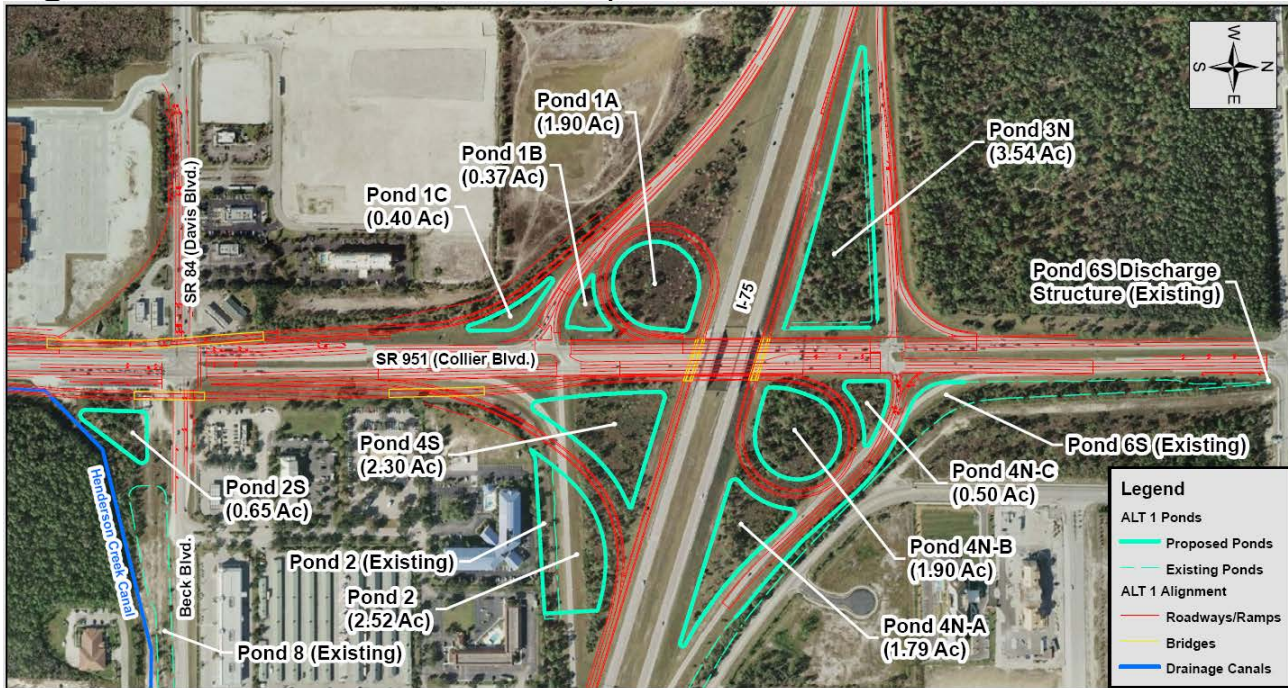
### **Design Variations**

All three viable alternatives would require the same design variations. One design variation is related to the Border Width in order to minimize business and private property impacts. The second variation is related to the I-75 southbound off-ramp fly-over at Davis Boulevard. The down slope of this ramp is shored up on retaining wall, which will be placed approximately 8.5 feet away from the outside travel lane on southbound Collier Boulevard. This distance is narrower than the FDOT PPM standard 16 feet horizontal clearance to bridge piers and abutments. A design variation from the horizontal clearance is required in order to minimize lateral shifts in the ramp horizontal alignment and reduce business impacts. Both variations apply to all viable alternatives and are not a differentiating factor in the evaluation.

### **Preliminary Drainage**

The proposed stormwater management facilities for the Alternative 1 ultimate interchange configuration include ten shallow dry-detention ponds all located in the interchange infield areas or existing right-of-way and three exfiltration trenches located within Collier Boulevard right-of-way. The ponds are sized to treat all impervious/pavement areas (existing and proposed) contained within each pond basin. Runoff will be conveyed to the ponds through sheet flow off the roadway and paved shoulders or ditch flow. Figure 15 illustrates the proposed stormwater pond locations.

**Figure 15** Alternative 1 Proposed Pond Sites



**Table 19** Alternative 1 Proposed Ponds Summary

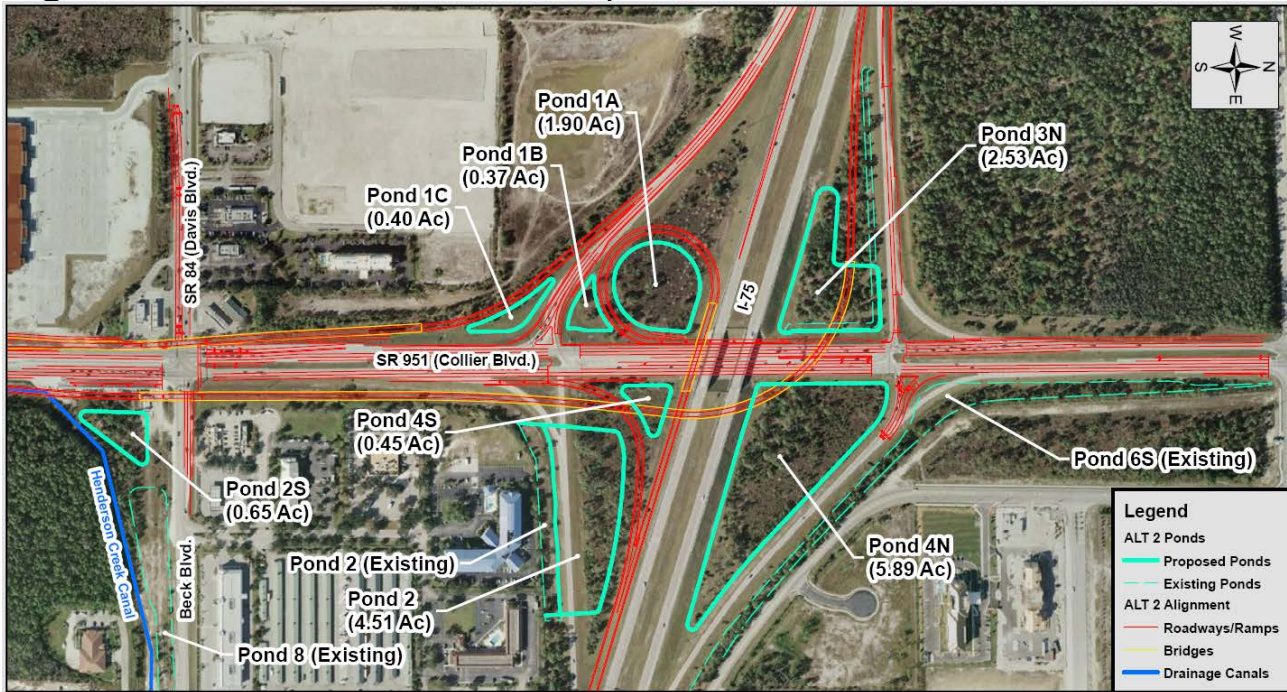
Pond	Pond Area (Ac)	Pond Bottom Elevation (Ft, NGVD)	Pond Storage Depth (Ft)	Pond Berm Elevation (Ft, NGVD)	Outfall Canal
1A	1.90	11.0	1.0	13.0	Golden Gate Main
1B	0.37	11.0	1.0	13.0	Golden Gate Main
1C	0.40	11.0	1.0	13.0	Golden Gate Main
*2	2.52	10.4	1.0	12.8	Henderson Creek
2S	0.65	9.0	2.0	12.0	Henderson Creek
3N	3.54	10.0	1.0	12.5	Golden Gate Main
4S	2.30	10.0	1.0	13.0	Henderson Creek
4N-A	1.79	9.9	1.1	13.0	Golden Gate Main
4N-B	1.90	9.9	1.1	13.0	Golden Gate Main
4N-C	0.50	9.9	1.1	13.0	Golden Gate Main

\*Utilize remaining portion of Existing Pond 2 (Collier Boulevard).

The proposed stormwater management facilities for the Alternative 2 ultimate interchange configuration include eight shallow dry-detention ponds all located in the interchange infield areas or existing roadway right-of-way and three exfiltration trenches located within Collier Boulevard right-of-way. The ponds are sized to treat all impervious/pavement areas (existing and proposed) contained within each pond basin. Runoff will be conveyed to the ponds through sheet flow off the roadway and paved shoulders or ditch flow. Figure 16 illustrates the proposed stormwater pond locations.



**Figure 16** Alternative 2 Proposed Pond Sites



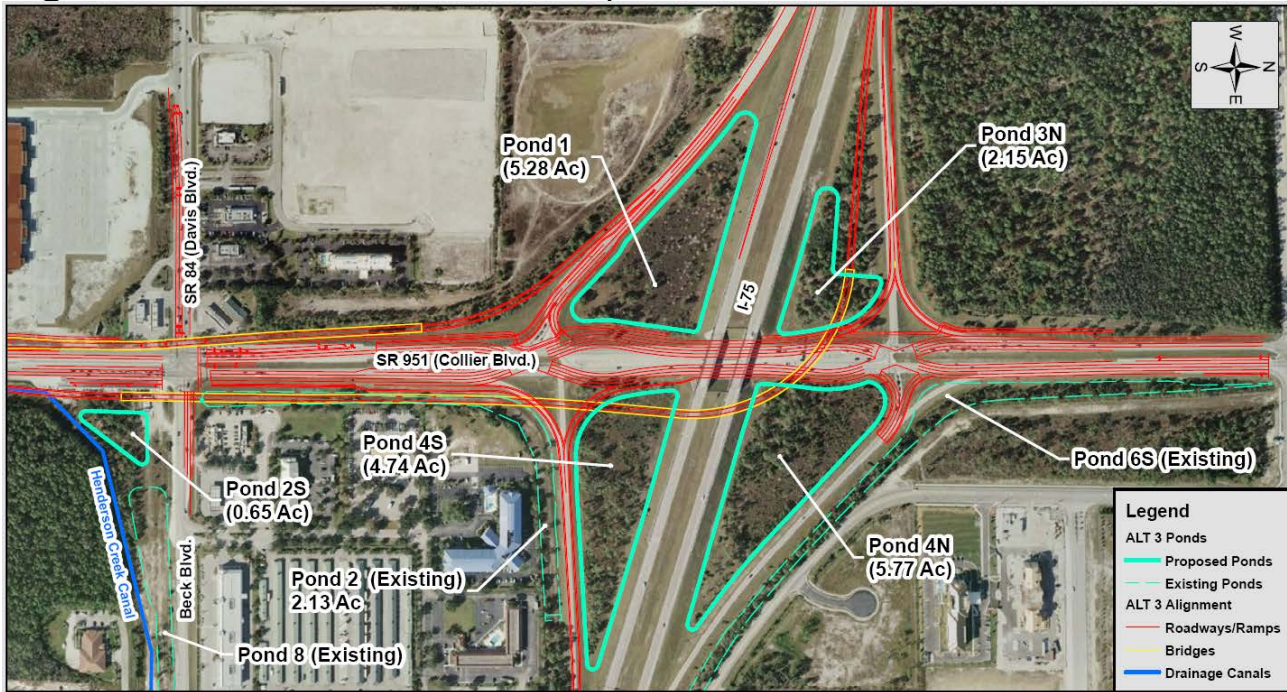
**Table 20** Alternative 2 Proposed Ponds Summary

Pond	Pond Area (Ac)	Pond Bottom Elevation (Ft, NGVD)	Pond Storage Depth (Ft)	Pond Berm Elevation (Ft, NGVD)	Outfall Canal
1A	1.90	11.0	1.0	13.0	Golden Gate Main
1B	0.37	11.0	1.0	13.0	Golden Gate Main
1C	0.40	11.0	1.0	13.0	Golden Gate Main
*2	4.51	10.4	1.0	12.8	Henderson Creek
2S	0.65	9.0	2.0	12.0	Henderson Creek
3N	2.53	10.0	1.0	12.5	Golden Gate Main
4S	0.45	10.0	1.0	13.0	Henderson Creek
4N	5.89	10.0	1.0	12.5	Golden Gate Main

\*Utilize remaining portion of Existing Pond 2 (Collier Boulevard).

The proposed stormwater management facilities for the Alternative 3 ultimate interchange configuration include six shallow dry-detention ponds all located in the interchange infield areas or existing roadway right-of-way and three exfiltration trenches located within Collier Boulevard right-of-way. The ponds are sized to treat all impervious/pavement areas (existing and proposed) contained within each pond basin. Runoff will be conveyed to the ponds through sheet flow off the roadway and paved shoulders or ditch flow. Figure 17 illustrates the proposed stormwater pond locations.

**Figure 17** Alternative 3 Proposed Pond Sites



**Table 21** Alternative 3 Proposed Ponds Summary

Pond	Pond Area (Ac)	Pond Bottom Elevation (Ft, NGVD)	Pond Storage Depth (Ft)	Pond Berm Elevation (Ft, NGVD)	Outfall Canal
1	5.28	10.0	1.0	12.5	Golden Gate Main
*2(Exist.)	2.13	10.4	1.0	12.8	Henderson Creek
2S	0.65	9.0	2.0	12.0	Henderson Creek
3N	2.15	10.0	1.0	12.5	Golden Gate Main
4S	4.74	10.0	1.0	13.0	Henderson Creek
4N	5.77	10.0	1.0	12.5	Golden Gate Main

\*Utilize remaining portion of Existing Pond 2 (Collier Boulevard).

For basin hydrology, water quality, pond sizing, and exfiltration trench calculations for all viable alternatives please review the *Pond Siting Report*.

A pollutant loading analysis was completed to compare proposed conditions to existing conditions for Total Nitrogen (TN) and Total Phosphorus (TP) loading in kilograms per year using the Harper method which is consistent with the FDEP Stormwater Quality Applicants Handbook (Draft) dated March 2010. Event mean concentrations (EMC) values used in the analysis are consistent with the FDOT District One memorandum (2011) on EMC values for roadway land uses. Existing TN and TP loadings are calculated based on 0% Directly Connected Impervious Area (DCIA), and proposed TN and TP loadings are calculated based on 100% DCIA. Annual runoff volumes are calculated based on an annual rainfall depth of 53 inches/year. Required removal efficiency for TN and TP is





calculated based on proposed loading being equal to existing loading levels. Actual removal efficiencies provided by the proposed dry detention ponds are estimated assuming an infiltration depth of 1-foot below pond bottom as retention volume. The provided retention volume is converted to a retention depth over the corresponding basin and is used with a % Directly Connected Impervious Area (DCIA) and Non Directly Connected Impervious Area (NDCIA) curve number to determine the mean annual mass removal efficiency for the pond. Final TN and TP loadings (kg/yr) are calculated from the proposed loadings (to ponds) minus the removal efficiency (%) provided by the ponds. See Table 22 and Table 23 below for a pollutant loading summary for each outfall canal.

**Table 22** Pollutant Loadings to Henderson Creek Canal

<b>Pollutant</b>	<b>ALT 1</b>	<b>ALT 2</b>	<b>ALT 3</b>
<b>Total Nitrogen (TN)</b>			
Existing Loading (kg/yr)	56.28	56.08	64.75
Final Loading (kg/yr)	39.16	35.10	31.60
<b>Total Phosphorus (TP)</b>			
Existing Loading (kg/yr)	7.42	7.40	8.52
Final Loading (kg/yr)	5.30	4.75	4.28

**Table 23** Pollutant Loadings to Golden Gate Main Canal

<b>Pollutant</b>	<b>ALT 1</b>	<b>ALT 2</b>	<b>ALT 3</b>
<b>Total Nitrogen (TN)</b>			
Existing Loading (kg/yr)	<b>35.41</b>	<b>34.47</b>	<b>34.47</b>
Final Loading (kg/yr)	<b>9.72</b>	<b>13.55</b>	<b>13.02</b>
<b>Total Phosphorus (TP)</b>			
Existing Loading (kg/yr)	<b>4.32</b>	<b>4.20</b>	<b>4.20</b>
Final Loading (kg/yr)	<b>1.32</b>	<b>1.83</b>	<b>1.76</b>

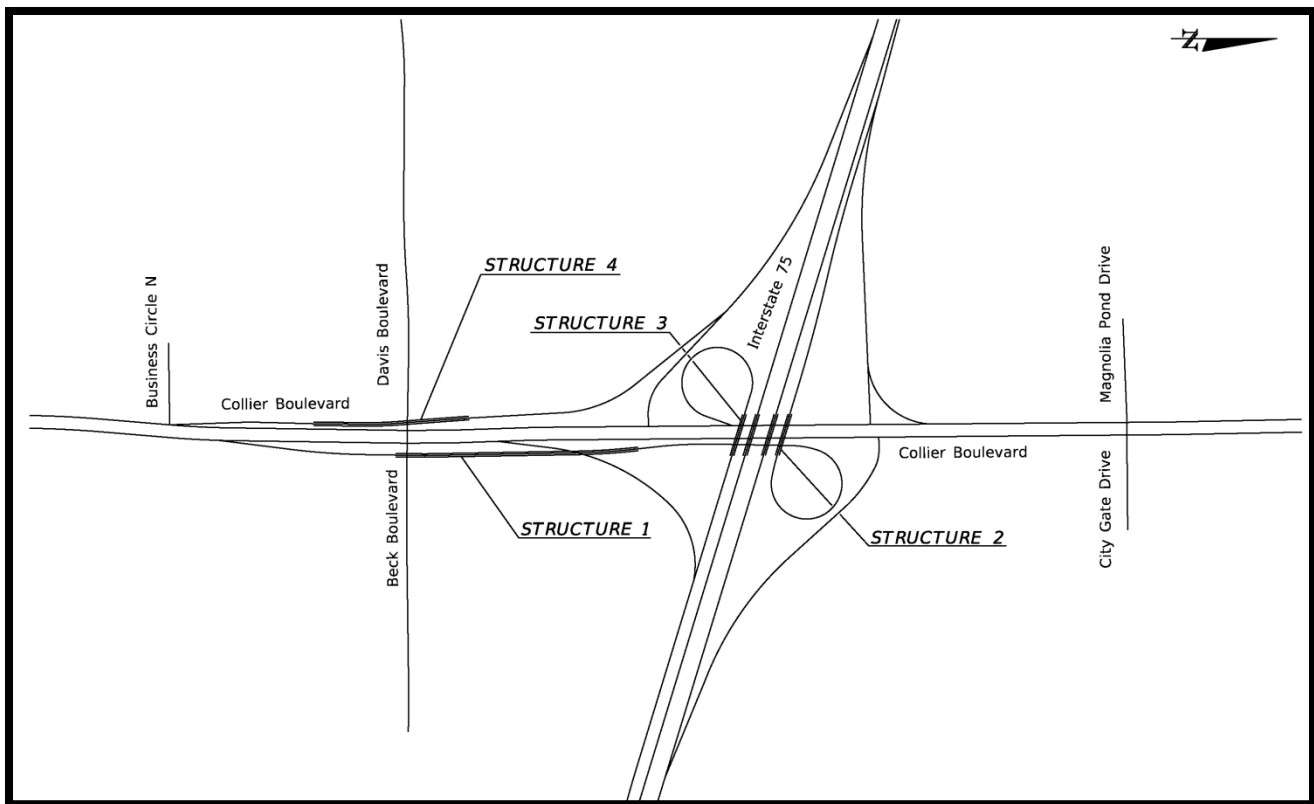
Pollutant loadings TN and TP from the proposed dry ponds (Final Loadings) into both the Henderson Creek Canal and the Golden Gate Main Canal are less than those under existing conditions for all three alternatives. Also, effective removal efficiencies for the ponds always exceed the required removal efficiencies as shown in calculations.

## Bridge Analysis

All three viable alternatives required no modifications to the two existing mainline structures carrying I-75 traffic over Collier Boulevard but will require new locations for ramp bridge structures.

Alternative 1 consists of four new ramp structures, as identified in Figure 18. Structure 1 was evaluated as both a 1291-foot elevated viaduct from beginning to end and also as two separate structures with an earth embankment plug separating the bridge over Beck Boulevard and the bridge over Ramp B. The first option—the elevated viaduct—was chosen as the preferred structure in order to maintain the visibility of businesses to the east of the viaduct while traveling along Collier Boulevard. Structures 2 and 3 over Collier Boulevard will span parallel to the existing mainline I-75 bridges; however, the new bridges are anticipated to clear span Collier Boulevard due to a 48-inch water line located within the median of Collier Boulevard. Structure 4 will be an elevated viaduct accommodating a multi-use trail underneath the bridge and also spanning over Davis Boulevard.

**Figure 18** Viable Alternative 1 Proposed Structures

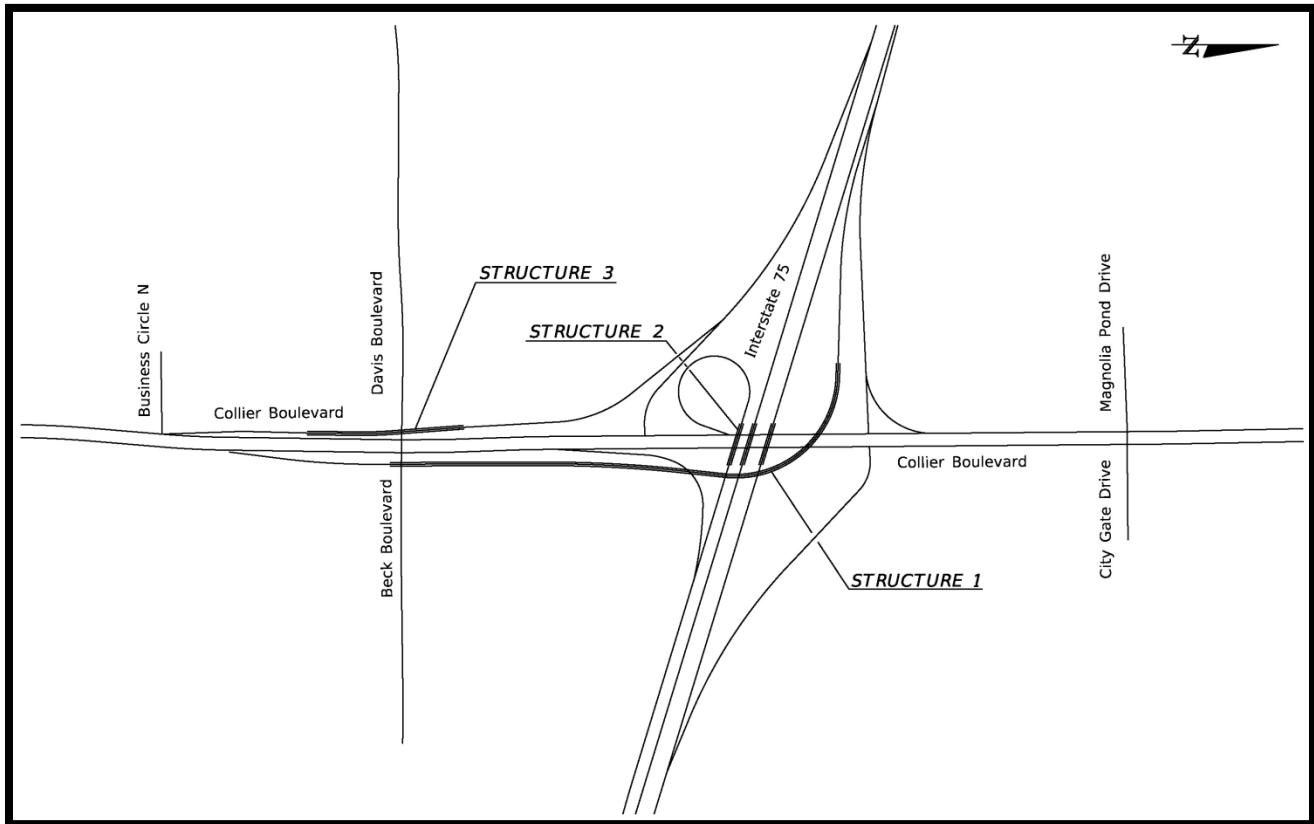


Alternative 2 consists of three new ramp structures including a flyover structure carrying I-75 northbound ramp traffic on northbound Collier Boulevard over Beck Boulevard, Ramp B-2, I-75, and Collier Boulevard. This structure may also be separated into two structures with an earth embankment plug; however, due to similar issues stated in Alternative 1 for Structure 1, the



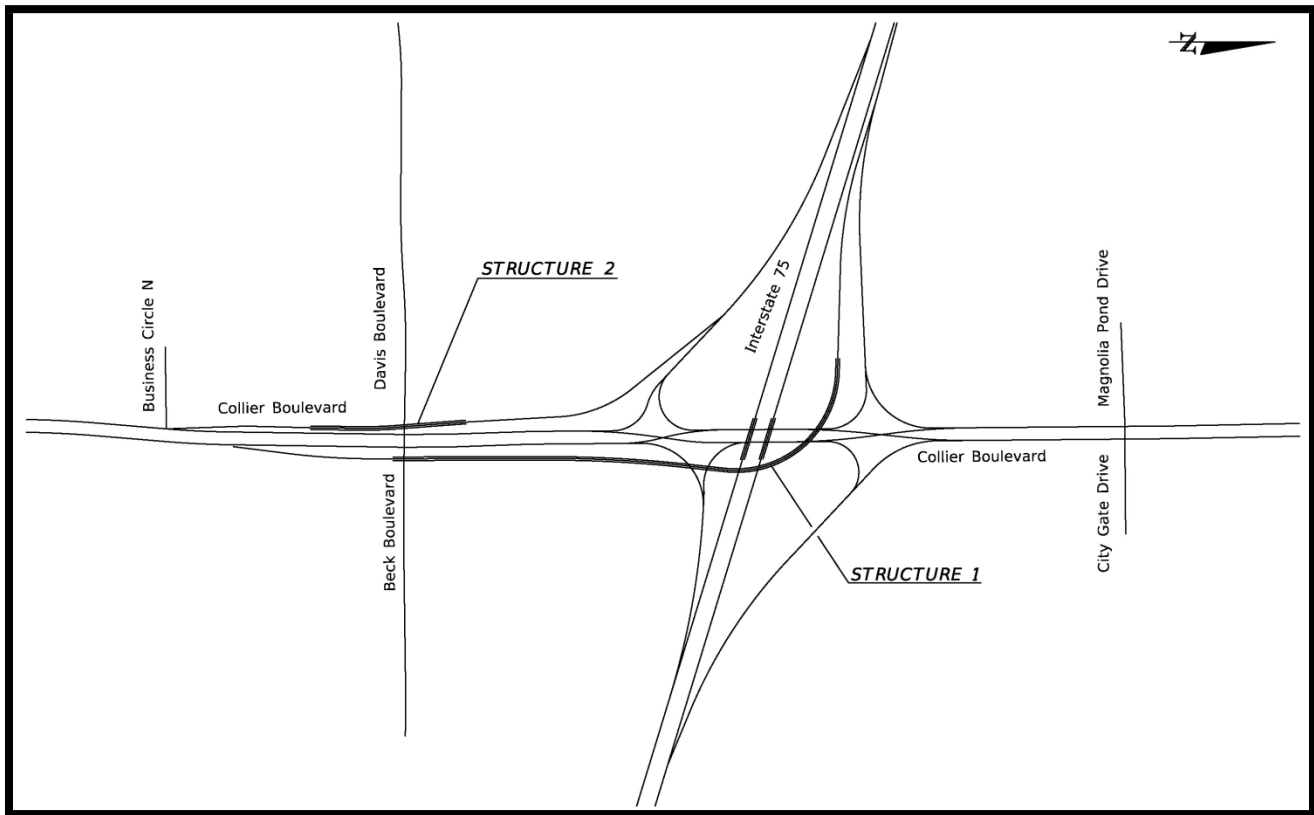
preferred structure is a fully elevated viaduct from south of Beck Boulevard onto northbound I-75. Structures 2 and 3 for this alternative are identical to Structures 3 and 4, respectively, in Alternative 1. The proposed general location of the structures is illustrated in Figure 19.

**Figure 19** Viable Alternative 2 Proposed Structures



Alternative 3 consists of only two new structures for the interchange improvement. Structure 1 is a flyover structure that will carry I-75 northbound ramp traffic on northbound Collier Boulevard over Beck Boulevard, Ramp B-2, I-75 and Collier Boulevard. Similar to Structure 1 in both Alternative 1 and 2, the preferred structure will be a fully elevated viaduct in lieu of structures separated by an earth embankment plug blocking existing businesses along Collier Boulevard. Structure 2 for this alternative is identical to Structure 4 and 3 in Alternatives 1 and 2, respectively. The proposed general location of the structures is illustrated in Figure 20.

**Figure 20** Viable Alternative 3 Proposed Structures



## 5.5 EVALUATION MATRIX

As outlined in section 5.4, the PD&E Study followed a three tier approach to recommending a preferred ultimate interchange configuration alternative. The Evaluation Matrix shown as Table 24 is the third and final step comparing the No-Build option and the viable Build alternatives along the following criteria:

- Traffic operations: intersection LOS and delay during the 2035 design hour. This criterion indicates how well each interchange option serves the design year traffic demand. Since intersections are bottlenecks in the traffic flow system, they were chosen as focus areas for this comparison.
- Business impacts: number of potential relocations. Businesses are located close to the study roadways. This criterion lists the potential number of business relocations as a result of implementing each interchange option.
- Residential impacts: number of potential relocations. This criterion lists the potential number of residential relocations as a result of implementing each interchange option.
- Archeological and historical impacts: probability of discovering sites. Electronic records of archeological and historical sites were reviewed to determine the likelihood of such new sites being discovered within the footprint of each alternative.

- Noise sensitive impacts: number of potential sites. Capacity improvements to the I-75 ramps could increase noise levels on adjacent land uses. This criterion lists the potential number of sites that could experience future noise impacts.
- Wetlands: potential areas impacted. This criterion measures the potential wetland area displaced by each interchange alternative. The measurement includes potential impacts from new stormwater detention/retention ponds.
- Floodplains: potential areas impacted. This criterion measures the total floodplain area that could be displaced as a result of each alternative.
- Threatened and endangered species: potential impact to species of concern. Known threatened species were observed in the project vicinity. The likelihood of impacts to habitat was set based on this knowledge but no specific current observations.
- Hazardous material impacts: number of potential sites. This criterion lists the number and risk ranking of contaminated sites each alternative could disturb.
- Right-of-way impacts: potential acquisition areas required. Right-of-way impacts were compared as total area required and the number of individual property owner affected.
- Estimated total project costs. Potential project costs include project phases such as right-of-way, wetland mitigation, design, construction, and construction engineering and inspection.

The alternatives evaluation matrix summarizes the traffic operations, social, business, environmental impacts, and project costs for the No-Build and three viable Build interchange alternatives.

**Table 24** Viable Alternatives Evaluation Matrix

Evaluation Criteria	Alternative			
	No-Build	1	2	3
<b>Traffic Operations Performance</b>				
2035 Peak Hour Intersection LOS				
SR 84 at SR 951	F	D	D	D
I-75 SB Ramps at SR 951	F	B	B	B
I-75 NB Ramps at SR 951	D	C	C	C
2035 Peak Hour Intersection Delay (seconds/vehicle)				
SR 84 at SR 951	86.4	46.2	46.2	46.1
I-75 SB Ramps at SR 951	137.4	12.9	12.9	18.7
I-75 NB Ramps at SR 951	41.4	20.5	20.5	26.8
<b>Business Impacts</b>				
Number of Business Relocations	None	None	None	None
<b>Residential Impacts</b>				
Number of Residential Relocations	None	None	None	None
<b>Environmental Impacts</b>				
Archeological/Historical Sites	None	Low	Low	Low
Noise Sensitive Sites	29	36	36	35
Wetlands (acres)	0	11	11	12
Floodplains (acres)	0	24.84	21.78	18.03
Threatened and Endangered Species	N/A	Medium	Medium	Medium
Hazardous Material sites (High / Medium Risk)	0 / 0	1 / 2	1 / 2	1 / 2
<b>Right-of-Way (RW) Impacts</b>				
RW to be Acquired for Roadway (acres)	0	1.79	1.50	1.64
Parcels Impacted	0	8	7	11
RW to be acquired for Stormwater Facilities (acres)	0	0	0	0
<b>Estimated Total Project Costs (present day \$ in millions)</b>				
Design	\$0	\$3.7	\$5.3	\$5.4
Wetland Mitigation	\$0	\$0.5	\$0.5	\$0.5
RW Acquisition	\$0	\$2.6	\$2.2	\$2.5
Construction Cost (Roadway Elements)	\$0	\$11.4	\$12.3	\$15.7
Construction Cost (Structures / Bridges)	\$0	\$23.8	\$38.9	\$36.3
Construction Cost (Drainage / Stormwater Elements)	\$0	\$3.1	\$3.3	\$3.5
Construction Engineering & Inspection	\$0	\$5.6	\$8.0	\$8.1
<b>Preliminary Estimate of Total Project Cost</b>	<b>\$0</b>	<b>\$50.7</b>	<b>\$70.5</b>	<b>\$72.0</b>

The evaluation matrix was presented to the public for their input during an October 25, 2012 Public Information Workshop. Alternative 1 emerged as the preferred study alternative based on lower project costs and nearly equal traffic operations performance and impacts to the surrounding area and environment.



## 6 Design Details of Recommended Alternative

### 6.1 TYPICAL SECTION PACKAGE

Concept elements described by the approved typical section package include:

- New or rebuilt I-75 ramps
- Approximately 400 feet of Collier Boulevard under the I-75 overpasses,
- New ramp bridges

The approved interchange alternative typical section package is shown Appendix A. The main roadway design elements include:

- 12-foot-wide travel lane for cross-sections with two or more lanes
- 15-foot-wide travel lanes for one lane ramps

Shoulder, front, and back slopes differ based on the available right-of-way and height of the roadway profile. Single lane ramp sections requiring barrier wall protection instead of a guardrail would follow the example set in the bridge typical section.

### 6.2 INTERSECTION CONCEPTS AND SIGNAL ANALYSIS

The recommended preferred interchange alternative implements a new signalized intersection at the Business Circle North and Collier Boulevard intersection. This is the terminus for the southbound flyover ramp from the southbound I-75 off-ramp to Collier Boulevard. The traffic signal heads for the ramp and southbound Collier Boulevard would need to have optically programmed shielding to remove any confusion since both movements are oriented in the same direction. The signal could operate with three phases, two for Collier Boulevard traffic and one for the Business Circle North movement.

The mast arm mounted traffic signal at Collier Boulevard and Davis Boulevard needs to be replaced due to potential conflicts between the existing poles and the proposed flyover structures. Additional traffic signal heads should be installed on the structures for the Davis and Beck Boulevard approaches to increase their visibility. The signal timing plan needs to be updated due to the reduction in through traffic along Collier Boulevard; however, the signal phasing could continue to be the same as is now.

The Collier Boulevard and I-75 southbound ramp terminal intersection traffic signal operation would be simplified to two phases: one for the through movements on Collier Boulevard and a second for the ramp turning movements. The northbound traffic signal mast arm and pole should be relocated due to conflicts with the northbound flyover proposed structures.

The Collier Boulevard and I-75 northbound ramp terminal intersection traffic signal could maintain its phasing plan since the same turning movements would be accommodated; however, the northbound left-turn traffic would be less than before the implementation of the northwest quadrant loop ramp. No mast arm poles relocations are anticipated at this location.

A 95th-percentile queue evaluation was performed for the recommended preferred alternative to assist with designing turn lanes at the intersections proposed for improvement. The 95th-percentile queue lengths were evaluated for the 2035 design year using Synchro 7's and are summarized in.

**Table 25** Design Year 95th-Percentile Intersections Queue Lengths

Intersection	Eastbound		Westbound		Northbound		Southbound	
	Left	Right	Left	Right	Left	Right	Left	Right
	AM Peak Hour							
Collier Blvd at Business Cir. N		50			50			
Collier Blvd at Davis Blvd.	610	720	110	320	210	30	260	390
Collier Blvd at I-75 SB Ramps	340	330						
Collier Blvd at I-75 NB Ramps			360	190	220			
PM Peak Hour								
Collier Blvd at Business Cir. N		40			40			
Collier Blvd at Davis Blvd.	710	600	150	510	330	40	170	430
Collier Blvd at I-75 SB Ramps	360	290						
Collier Blvd at I-75 NB Ramps			380	210	210			

## 6.3 DESIGN TRAFFIC VOLUME

Traffic operation analyses were performed in accordance with the project scope of work and the *Interchange Modification Report (IMR) Methodology Letter of Understanding (MLOU)* approved by FDOT District One and FHWA on November 1, 2011. Detailed descriptions and full results of the traffic analyses are documented in the *Project Traffic Report (PTR)* and summarized in the approved IMR. The operational performance for the Collier Boulevard at I-75 interchange area was evaluated using methodologies consistent with the *Highway Capacity Manual (HCM) 2000*. The use of HCM 2000 methodologies was agreed to in the MLOU as the FDOT standard practice at the time the project was initiated. The design control LOS standard for the I-75 ramp terminal intersections and Collier Boulevard is D.

### 6.3.1 Traffic Factors and Characteristics

The design year traffic factors and characteristics were determined by applying methods described within the Chapter 3 of the FDOT *Project Traffic Forecasting Handbook* to traffic data collected from FDOT sources and the field. For the purposes of this study, it was determined to develop one set of K, D, and T factors to apply to the opening-, mid-, and design-year AADT to evaluate peak-hour conditions. Traffic factors represent the following: K: the ratio of AADT volume occurring during the peak hour, D: directional distribution factor, and T: the percentage of trucks volume in the AADT. All legs of the I-75 at Collier Boulevard interchange are defined as urban facilities for the

purposes of evaluating the traffic factors for the PD&E Study. I-75 immediately east of the interchange influence area (east of the I-75 toll booths) would then be defined as a rural facility. A summary of all proposed design-year traffic factors are provided in Table 26.

**Table 26** Recommended Design-Year Traffic Factors

Facility	Basic No. of Lanes	K <sub>30</sub>	D <sub>30</sub>	T <sub>24</sub>	DHT
I-75 Urban	6	9.4	53.6	14.1%	7.0%
I-75 Rural	4	12.4	56.5	11.4%	6.0%
Collier Blvd	8	10.2	56.0	11.0%	6.0%
All Other Arterials	NA	10.2	56.0	11.0%	6.0%

Table 27 summarizes the Directional Design-Hour Volumes (DDHV) for the No-Build and viable Build alternatives. These volumes were calculated by applying the design-year traffic factors (K and D displayed in Table 26) to the forecasted AADTs. This process is documented within the *Project Traffic Report*.

The *Interchange Modification Report (IMR)* was completed in September 2013 for this project and approved by Chad Thompson, the FHWA Florida Division Programs Operations Engineer on October 6, 2013.

**Table 27** Design Year AADT and DDHV Forecasts

Roadway Segment	2035 Build AADT	2035 Build DDHV
I-75		
West of Collier Blvd	84,600	4,260
East of Collier Blvd	56,000	2,820
I-75 Ramps		
NB Off Ramp	8,800	900
NB On Ramp	21,400	2,180
SB Off Ramp	21,500	2,190
SB On Ramp	7,800	800
Collier Boulevard		
South of Business Circle South	49,800	2,840
Business Circle South to Davis Blvd	52,500	3,000
I-75 NB Ramps to Magnolia Pond Dr	54,500	3,110
Magnolia Pond Dr to City Gate Blvd	31,100	1,780
Davis Boulevard		
West of Collier Blvd	36,300	2,070
East of Collier Blvd	18,900	1,080

### 6.3.2 Level of Service Analysis

The future traffic operations of the signalized intersections were previously shown in Table 17 and Table 18. All intersections will operate at LOS D or better in the 2035 design year. Figure 21 illustrates the AM and PM peak hours intersection turning movement volumes and individual segment volumes.

The design year operating conditions for the merge and diverge points along I-75 were evaluated using the freeways module in HCS+ Version 5.5. As indicated in Table 28, each freeway ramp influence area operates acceptably at LOS D or above during the AM and PM peak hours with the implementation of the recommended preferred alternative.

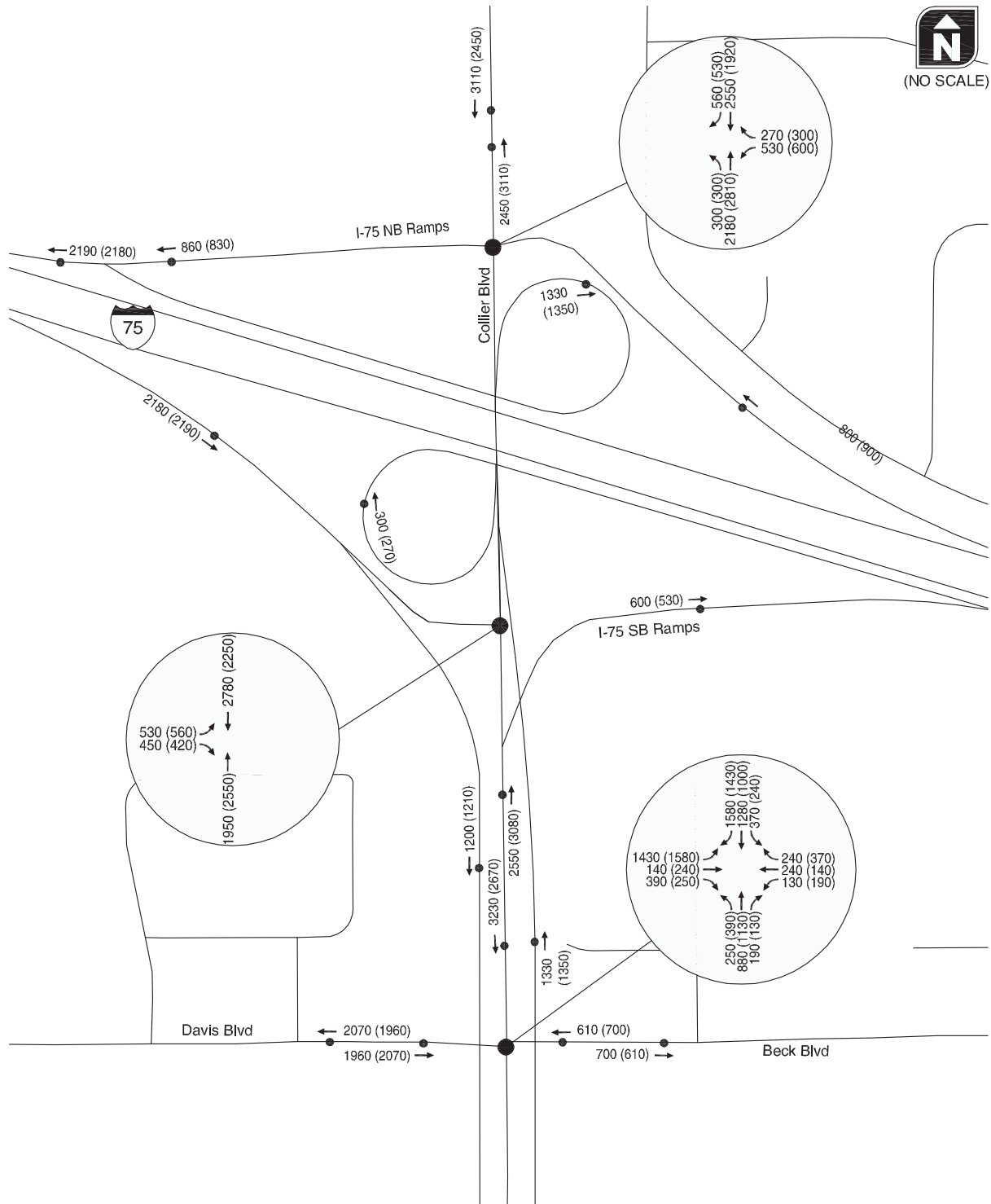
**Table 28** Future 2035 Peak-Hour Interchange Ramp Termini Operating Conditions

Ramp	AM Peak Hour			PM Peak Hour		
	LOS	Speed (mph)	Density (pc/ln/mi)	LOS	Speed (mph)	Density (pc/ln/mi)
NB Diverge Ramp from I-75 to Collier Blvd	C	58.9	25.4	D	58.5	30.8
NB Merge Ramp from Collier Blvd to I-75	C	62.2	20.2	C	61.4	22.5
SB Diverge Ramp from I-75 to Collier Blvd	D	58.9	31.1	D	58.9	28.9
SB Merge Ramp from Collier Blvd to I-75	C	60.1	25.5	C	61.8	20.6

\*pc/ln/mi = Passenger Cars per Lane per Mile



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Design Peak Hour Traffic Volumes **FIGURE**

## 6.4 RIGHT-OF-WAY NEEDS AND RELOCATION

The recommended preferred interchange alternative could potentially impact ten property parcels of which two parcels are for air-rights only. In total, there are six unique property owners potentially affected by the project. Approximately 1.86 acres of property would be needed for the project. The air rights required on the northwest and southwest quadrants of the Davis and Collier boulevards intersection total approximately 1,063 square feet. Table 29 summarized the potential impacts by parcel.

**Table 29** Potentially Affected Properties

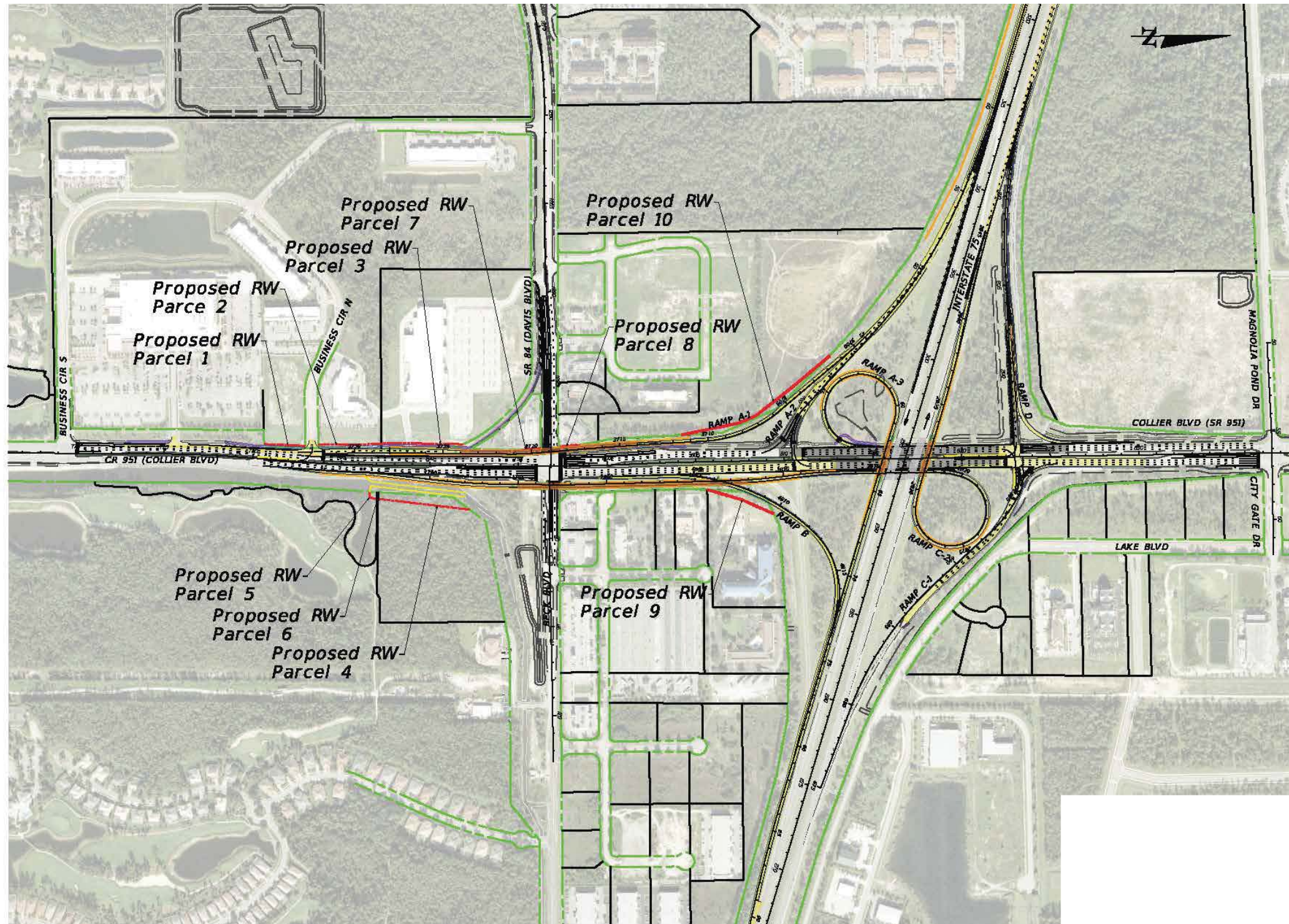
Map Number	County Tax Parcel ID Number	Property Owner	Parent Tract Size	Take Area
1	59712001380	BENDERSON TR, RANDALL	2.91 acres	0.09 acres
2	59712001487	BENDERSON TR, RANDALL	3.98 acres	0.18 acres
3	34690080008	DAVIS CROSSINGS VIII LLC ET AL	15.28 acres	0.29 acres
4	00398880204	ABERCIA, RALPH	10.00 acres	0.54 acres
5	32720000222	FOREST GLEN GOLF & CC	195.03 acres	0.01 acres
6	32720000329	FOREST GLEN GOLF & CC	NA	>0.01 acres
7	34740160001	W CORP HOLDINGS OF COLLIER INC	0.79 acres	0.01 acres*
8	00297440004	951 HOLDINGS CORP	0.92 acres	0.02 acres*
9	76885010003	VOCISANO CO-TR, ROBERT	5.83 acres	0.30 acres
10	21968001120	BENDERSON TR, RANDALL	31.63 acres	0.45 acres

\* These impacts reflect air-rights only. No physical property would be required at these locations.

Figure 22 illustrates the locations of the proposed right-of-way acquisitions. No relocations are expected as a result of implementing the recommended preferred alternative.



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Potential Right-of-way Impacts

FIGURE



## 6.5 COSTS ESTIMATES

The probable project costs are broken down in Table 30. These values represent present day estimates, are not adjusted for inflation, and are rounded to the nearest \$100,000 to reflect the planning level estimate.

**Table 30** Recommended Preferred Alternative Opinion of Probable Cost

Roadway Subtotal		\$9,800,000
Structures Subtotal		\$16,200,000
Stormwater Subtotal		\$2,400,000
Utility Relocations		\$300,000
Noise Wall Construction		\$1,300,000
<b>Construction Subtotal</b>		<b>\$30,000,000</b>
Maintenance of Traffic	10%	\$3,000,000
Mobilization	10%	\$3,300,000
Project Unknowns	15%	\$5,400,000
<b>INITIAL CONTINGENCY AMOUNT (DO NOT BID)</b>		\$150,000
Project Construction Grand Total		<b>\$41,850,000</b>
Final Design Fees	10%	\$4,200,000
C.E.I.	15%	\$6,300,000
Right-of-way Acquisition		\$2,900,000
Wetland Mitigation		\$500,000
<b>Project Grand Total Cost</b>		<b>\$55,750,000</b>

## 6.6 SCHEDULE AND PLANNING CONSISTENCY

Table 31 summarizes planning consistency for the I-75 and SR 951 Interchange Improvement with the FDOT State Transportation Improvement Program (STIP) for fiscal years 2014-2017 and the Collier County Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP) for fiscal years 2014-2018.

### **FDOT**

The full PD&E project limits are included in the approved FDOT STIP document for preliminary engineering in fiscal year 2015. The project is also shown in the FDOT Five Year Work Program 2014-2019 for preliminary engineering in fiscal year 2015 and the Tentative Five Year Work Program for right-of-way in fiscal year 2019.

### **Collier County MPO**

The I-75 and SR 951 Interchange Improvement is included in the Cost Feasible Plan (CFP) of the Collier County MPO's 2035 Long Range Transportation Plan (LRTP) for preliminary engineering and construction. The project is included in the currently adopted TIP for preliminary engineering (final design) in fiscal year 2014/15. The project is also included in the proposed FY2014/15 thru FY2018/19 TIP for right-of-way in fiscal year 2018/19.



**Table 31** STIP and TIP Consistency

Phase	Currently Approved TIP	Currently Approved STIP	TIP/STIP \$	TIP/STIP FY	Comments
PE (Final Design)	Y	Y	\$5,575,120	FY 2014/15	Project shown in Collier MPO FY 2014 - 2019 TIP and FDOT 5-year work program
R/W	Y	Y	\$7,898,656	FY 2018/19	Project shown in Collier MPO FY 2014 - 2019 TIP and FDOT 5-year work program
Construction	N	N	\$0	N/A	Project shown in LRTP Cost Feasible Plan in fiscal years 2030/2031 - 2034/2035 at \$82.280 million.

**Project Funding**

The project is currently funded for the preliminary engineering phase using a combination of state and federal funds. The construction phase is not currently funded in the FDOT's Adopted Five Year Work Program. Documentation of funding can be found in the adopted Collier County TPO's Fiscal Year 2014-2016 TIP, the FDOT STIP for FY 2014-2017 and the Collier MPO's 2035 LRTP. The right-of-way phase is currently funded in the FDOT's Tentative Five-Year Work Program in FY 2019. The TIP and STIP will be updated to include this funding in October 2014 subsequent to the adoption of the Five-Year Work Program. Although construction is not yet funded in the FDOT's Adopted Five-Year Work Program, the Collier MPO 2035 LRTP was amended to include construction in FY 2031-2035. Based on recent guidance by FHWA dated January 2013, Planning Consistency Requirements have been met for this project as the next phase for the entire PD&E project limits are reflected in the STIP/TIP, i.e. design. This project is also funded in the TPO's 2035 LRTP CFP with the exception of right-of-way. District One Planning Office staff will coordinate the needed LRTP amendments when appropriate. Table 32 summarizes the planned implementation schedule of this project.

**Table 32** Funding Summary

Phase	Estimate Cost	Time Frame (Fiscal Year)	Funding Source
Preliminary Engineering (Final Design)	\$5,575,120	2015	State and Federal
Right-of-way	\$7,898,656	2019	State and Federal
Construction	\$82,280,000	2031-2035	State and Federal
<b>TOTAL</b>	<b>\$95,753,776</b>		

Sources: Adopted Collier MPO 2013/14-2017/18 TIP, Approved FDOT STIP, Adopted Collier MPO 2035 LRTP and FDOT's SIS 2040 Cost Feasible Plan.

**6.7 PEDESTRIAN AND BICYCLE FACILITIES**

As noted in the alternatives evaluation section of this report, the recommended preferred interchange alternative would maintain pedestrian and bicycle connectivity through the project length by reconstructing the multi-use path as necessary along the Ramp A-1 structure over Davis Boulevard. Signalized crosswalks would be installed at intersections with side-streets and ramps. In addition to the multi-use path, cyclists would be able to use bike lanes along Collier Boulevard.

Section 6.9 discusses the maintenance of bicycle and pedestrian traffic along the project during the construction sequence of the interchange.

## 6.8 UTILITY IMPACTS

Underground communication facilities are impacted by the southwest loop construction and the southbound flyover ramp abutment along Collier Boulevard. A list of major known utility facilities potentially affected by these roadway elements includes:

- A 36-inch water main running along Davis Boulevard and west side of Collier Boulevard (Collier County Water Department)
- A 20-inch water main running along west side of Collier Boulevard, crosses to the east side of Collier Boulevard just south of Davis Boulevard and extends north past I-75 and the northbound off-ramp (Collier County Water Department)
- A 12-inch force main running along the west side of Collier Boulevard north of Davis Boulevard to Magnolia Pond Drive (Collier County Wastewater Department)
- Multiple buried fiberoptic conduits crossing Collier Boulevard or run along the west side north of Davis Boulevard (CenturyLink)
- Multiple overhead electric transmission lines crossing or running along the west side of Collier Boulevard north of Davis Boulevard (Florida Power & Light)
- An overhead cable line crossing Collier Boulevard south of Davis Boulevard (Comcast)

Potentially affected facilities and the potential cost for relocating them are listed in Table 33.

**Table 33** Potential Utility Adjustment Costs

Company	Facility	Estimated Cost	Notes
COLLIER COUNTY TRAFFIC OPERATIONS	ITS underground fiberoptic cable	\$11,100	Information provided by the operator (Rick Bossert)
FLORIDA POWER & LIGHT	~2,000' of underground electric cables and 7 poles	~\$130,000	Cost estimated based on existing utility information and FDOT pay items
COLLIER COUNTY WATER DEPARTMENT	~1,000' of 20" water main ~500' of 36" water main	~\$150,000 ~\$100,000	Information about the 20" main provided by the operator (Nathan Beals). Cost estimate for the 36" main inferred from operator information.
COLLIER COUNTY WASTEWATER DEPARTMENT	~500' of 12" force main Sewer	~\$100,000	Information provided by the operator (Nathan Beals)
COMCAST	~3,500' Overhead and underground TV cables	~\$50,000	Cost estimated based on existing utility information and FDOT pay items
CenturyLink	Multiple 4" underground fiberoptic conduits, ~3,100'	~\$50,000	Cost estimated based on existing utility information and FDOT pay items

Costs associated with the relocation of potable or wastewater facilities will likely be the responsibility of the Collier County utility operator since they are located within the roadway right-of-way.

A major 48-inch water main running along the median of Collier Boulevard to a point approximately 400 feet north of Davis Boulevard is not expected to be impacted by the recommended preferred alternative. The water main turns west and extends onto private property at the above mentioned location. In order to avoid any potential conflicts with the I-75 southbound flyover ramp, the structure abutment was moved north to clear span over the water main.

A water well pumping station in the southeast quadrant of the Collier Boulevard and Davis Boulevard was also avoided by starting the northbound flyover ramp south of its location and clear spanning over it.

## 6.9 TEMPORARY TRAFFIC CONTROL PLAN AND PROJECT PHASING

Mid-year 2025 traffic operations for the no-build and recommended preferred interchange alternatives are detailed in the PTR. Table 34 summarizes the traffic signal operations during the AM and PM peak hours and shows that volume-to-capacity ratios at the Collier Boulevard intersections with Davis Boulevard and I-75 southbound ramps could exceed 1.0. A ratio higher than 1.0 indicates that individual cycle failures are expected to occur, which may impact adjacent intersections and could compound over time. For this reason, it is recommended to consider the improvement of this intersection prior to 2025.

**Table 34** Mid-Year 2025 AM and PM Peak Hour Intersection Traffic Operations

Intersection	Performance Measures	AM Peak Hour		PM Peak Hour	
		No-Build Alternative	Preferred Alternative	No-Build Alternative	Preferred Alternative
Collier Blvd at Business Circle North	Delay	N/A	14.8	N/A	12.8
	LOS	N/A	B	N/A	B
	v/c	N/A	0.72	N/A	0.71
Collier Blvd at Davis Blvd	Delay	46.9	39.4	43.7	47.4
	LOS	D	D	D	D
	v/c	1.02	0.73	0.94	0.83
Collier Blvd at I-75 SB Ramps	Delay	59.7	12.3	55.8	12.6
	LOS	E	B	E	B
	v/c	1.12	0.53	1.07	0.49
Collier Blvd at I-75 NB Ramps	Delay	31.7	16.9	20.1	17.5
	LOS	C	B	C	B
	v/c	0.79	0.60	0.76	0.52

Since the Davis Boulevard and I-75 southbound ramp terminal intersections are forecast to approach capacity first, it is recommended that all elements of the ultimate interchange alternative should be implemented at the same time. Construction of improvements could follow the sequences described below.

### Construction Sequence 1

Reconstruction of the existing off-ramps could begin first to create the additional space needed for the northeast and southwest quadrant loop ramps. The off-ramps would have to be relocated to

their ultimate location further right from the current alignment. The relocation could take place while traffic continues to use the current ramp.

Construction along Collier Boulevard may require temporary restriping of through lanes down to 10 or 11 feet, but the additional widening construction would take place outside of the existing travel way. The southbound on-ramp would also have to be reconstructed at this stage prior to constructing the northbound tie-in grade for the Collier Boulevard northbound flyover ramp. The retaining walls along this grade would remove access to the existing I-75 southbound on-ramp.

The existing multi-use path along the west side of Collier Boulevard would be reconstructed in the vicinity of Business Circle N and realigned to provide the space necessary for the construction of the Ramp A-1 southern tie-in. The path will be built further west and connected to the existing Davis Boulevard eastbound right-turn bypass. This traffic lane is to be repurposed into a multi-use bicycle and pedestrian facility. The right-turn by-pass will also serve as a temporary construction detour for bicycle and pedestrian traffic during the construction of the Ramp A-1 southbound flyover at Davis Boulevard.

### **Construction Sequence 2**

Once the off-ramps are relocated, the construction of the southwest loop ramp can commence. This ramp needs to be operational before the connection between the Collier Boulevard northbound flyover ramp and the northeast loop ramp can be constructed. At-grade portions of the northbound Ramp C-2 can also be constructed under the I-75 mainline structures. This new roadway section requires that the Collier Boulevard northbound left-turn to the I-75 northbound on-ramp be reduced to two lanes.

A temporary multi-use path would be constructed along the east side of Collier Boulevard between the Davis Boulevard intersection and the I-75 northbound ramps terminal intersection. Bicycle and pedestrian traffic will cross Collier Boulevard at a new temporary cross walk along the south leg of the Collier and Davis Boulevards intersection. Bicycle and pedestrian traffic will continue to use the temporary path on the east side of Collier Boulevard until the structure for the southbound I-75 off-ramp fly-over is completed. Temporary pedestrian signals will be provided at the Davis Boulevard and Collier Boulevard and the I-75 northbound ramp and Collier Boulevard intersections to facilitate multi-use path users crossing Collier Boulevard.

Construction of Ramp A-1 the southbound off-ramp flyover may require night-time only closures and detours for the installation of the bridge super-structure over Davis Boulevard. The proposed signalized intersection at Business Circle North would be built in conjunction with the southbound flyover ramp. Access to Business Circle South may be closed for portions of the construction; however, nearby detour options exist via the Business Circle South intersection at Collier Boulevard and the Market Street intersection at Davis Boulevard.



### Construction Sequence 3

When the southbound ramps connections are completed, construction resources could then be used to build the northbound off-ramp flyover at Davis Boulevard along the eastern side of Collier Boulevard. Construction of the bridge at Beck Boulevard may require the closure of one side of the road at a time; however, access could stay open by shifting all traffic on the remaining side of the road.

Bicycle and pedestrian traffic would be shifted back along the west side of Collier Boulevard along the reconstructed multi-use path.

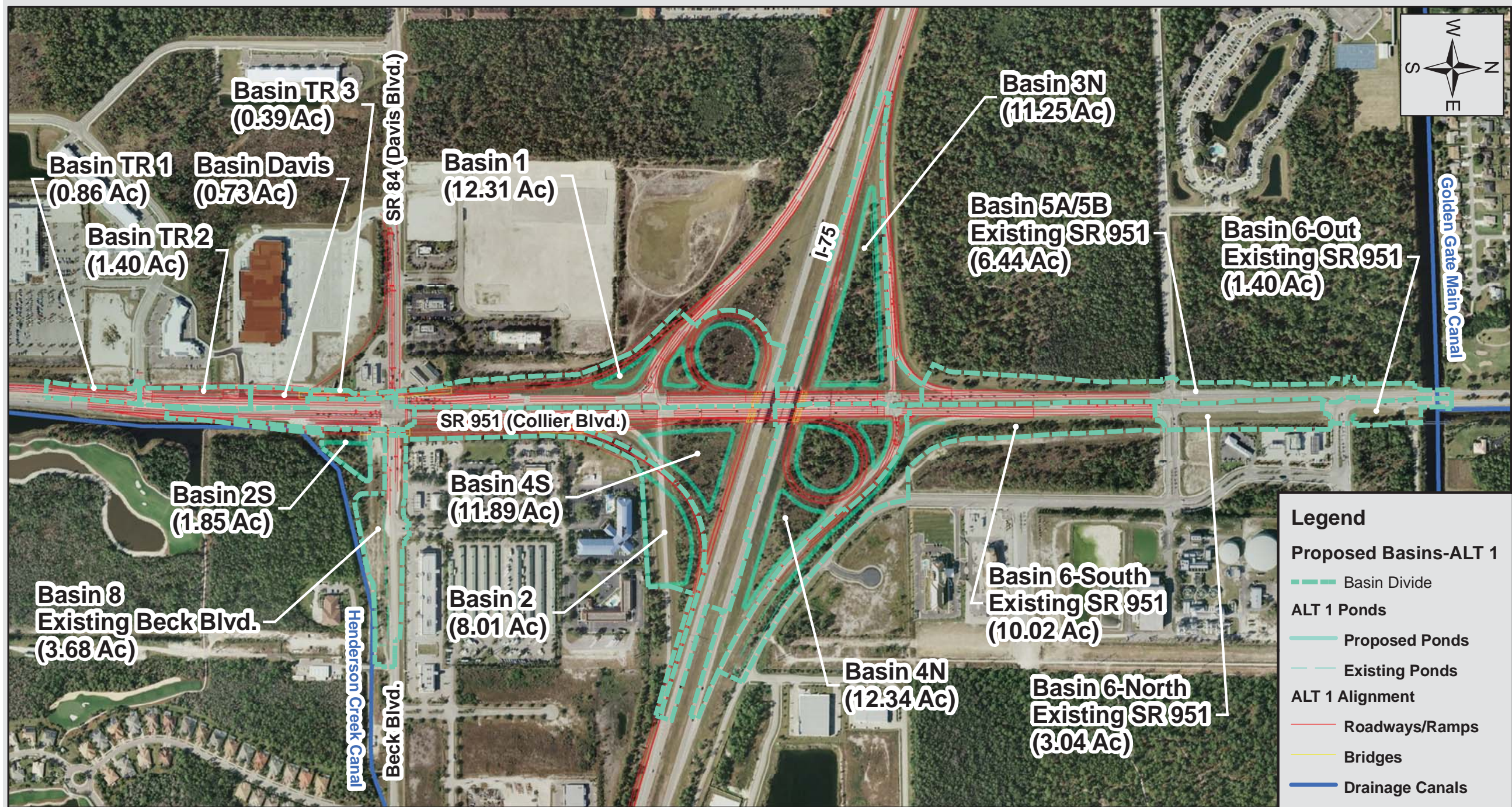
## 6.10 DRAINAGE

Shallow dry-detention ponds are proposed to serve the preferred interchange configuration. Since all proposed ponds are located within existing right-of-way or interchange infields, alternate pond sites outside of existing right-of-way were not considered in the pond siting analysis and are not provided in this report. This one pond site per basin approach was approved by FDOT District One for this study. Three exfiltration trenches are also proposed to treat and attenuate runoff from portions of Collier Boulevard and proposed fly-over ramps. All proposed stormwater management facilities will use the Henderson Creek Canal to the south and the Golden Gate Main Canal to the north for drainage outfalls. Several existing linear dry ponds serving Collier Boulevard and Beck Boulevard are incorporated into the interchange ponds. Figure 23 illustrates the drainage basins outlines within the study area.

All proposed dry ponds are conceptually designed to provide recovery of treatment volumes through infiltration and attenuate additional post-development runoff from the 25-year, 3-day storm. Proposed ponds will provide sufficient pollutant removal efficiency to enable a reduction of TN and TP loading into the Henderson Creek Canal and the Golden Gate Main Canal from current levels. Please see Appendix "A" of the Pond Siting Report for the pond and trench sizing and water quality calculations.



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Drainage Basins Map

FIGURE



### **Basin 1**

Basin 1 includes portions of Collier Boulevard, the I-75 southbound off-ramp, and the I-75 southbound loop ramp. Runoff from this 12.31 acre basin will be treated in Ponds 1A, 1B, and 1C located in the southwest quadrant of the interchange. These three ponds will be connected via pipe and outfall through a piped discharge structure in Pond 1A northward into the remaining infield area and I-75 ditch. The three ponds will provide 0.99 acre-feet (Ac-Ft) of required treatment volume and 0.66 Ac-Ft of required attenuation volume for Basin 1.

### **Basin 2**

Basin 2 includes portions of Collier Boulevard, northbound fly-over ramp, and southbound on-ramp. Runoff from this 8.01 acre basin will be treated in Pond 2 located in the southeast quadrant of the interchange adjacent to the I-75 southbound on-ramp. Pond 2 is an expansion of the existing Pond 2 constructed with the Collier Boulevard widening project. Pond bottom and berm elevations will match existing Pond 2 elevations. Pond 2 will outfall to the south into Henderson Creek Canal via a piped discharge structure consistent with the existing Pond 2. The pond will provide 0.52 Ac-Ft of required treatment volume and 0.29 Ac-Ft of required attenuation volume for Basin 2.

### **Basin 2S**

Basin 2S includes portions of Collier Boulevard and the fly-over ramp over Beck Boulevard. Runoff from this 1.85 acre basin will be treated in Pond 2S located in the southeast quadrant of the Collier Boulevard/Davis Boulevard intersection and adjacent to the Henderson Creek Canal. Pond 2S will outfall into Henderson Creek Canal via a piped discharge structure. The pond will provide 0.12 Ac-Ft of required treatment volume and 0.26 Ac-Ft of required attenuation volume for Basin 2S.

### **Basin 3N**

Basin 3N includes portions of Collier Boulevard, the I-75 mainline, and the I-75 northbound (loop) on-ramp. Runoff from this 11.25 acre basin will be treated in Pond 3N located in the northwest quadrant of the interchange and between the I-75 northbound on-ramps. Pond 3N will outfall via the existing infield discharge weir/endwall at the west end of the pond into the I-75 ditch. The pond will provide 0.70 Ac-Ft of required treatment volume and 0.46 Ac-Ft of required attenuation volume for Basin 3N. Pond 3N bottom elevation is consistent with the bottom elevation of the existing infield storage area/ditch.

### **Basin 4S**

Basin 4S includes portions of Collier Boulevard, the I-75 mainline, and I-75 northbound loop-ramp. Runoff from this 11.89 acre basin will be treated in Pond 4S located in the southeast quadrant of the interchange adjacent to mainline I-75 and Collier Boulevard. Pond 4S will outfall via a piped discharge structure south to the Henderson Creek Canal. The pond will provide 0.74 Ac-Ft of required treatment volume and 0.12 Ac-Ft of required attenuation volume for Basin 4S.

### **Basin 4N**

Basin 4N includes portions of Collier Boulevard, the I-75 northbound off-ramp, and the I-75 northbound on-ramp (loop). Runoff from this 12.34 acre basin will be treated in Ponds 4N-A, 4N-B, and 4N-C located in the northeast quadrant of the interchange. Pond 4N-A will be connected to Pond 4N-B and Pond 4N-C and existing Pond 6-South via pipes.

The three proposed ponds will outfall via the existing Pond 6-South discharge structure located along Collier Boulevard at City Gate Drive, which will need to be modified to serve all four ponds. Pond 4N-A will provide additional storage volume to compensate for the existing Pond 6-South volume lost due to the portion of the existing pond to be filled in as part of the I-75 northbound off-ramp improvements. The proposed ponds will provide 0.77 Ac-Ft of required treatment volume and 0.50 Ac-Ft of required attenuation volume for Basin 4N. For pond sites where the available right-of-way area (infield) is larger than required per pond sizing calculations, the pond site is maximized to best fit the interchange configuration. All pond sizes fit within the existing right-of-way.

### **Basin TR1**

Basin TR1 (Trench 1) includes portions of southbound Collier Boulevard south of Davis Boulevard. Runoff from this 0.86 acre basin will be treated by a proposed 18-inch exfiltration trench (121 LF) retrofitted to the existing trench system in the median of Collier Boulevard outfalling into Henderson Creek Canal. The proposed exfiltration trench is located along the west side of Collier Boulevard under the proposed sidewalk. The additional exfiltration trench will provide the 0.03 Ac-Ft of required treatment volume and 0.01 Ac-Ft of required attenuation volume for Basin TR1.

### **Basin TR2**

Basin TR2 (Trench 2) includes portions of the Davis Boulevard fly-over ramp from I-75 and southbound Collier Boulevard. Runoff from this 1.40 acre basin will be treated by a proposed 18-inch exfiltration trench (409 LF) retrofitted to the existing trench system in the median of Collier Boulevard outfalling into Henderson Creek Canal. The proposed exfiltration trench is located along the west side of Collier Boulevard under the proposed sidewalk. The additional exfiltration trench will provide the 0.06 Ac-Ft of required treatment volume and 0.07 Ac-Ft of required attenuation volume for Basin TR2.

### **Basin TR3**

Basin TR3 (Trench 3) includes a portion of the Davis Boulevard fly-over ramp from southbound I-75. Runoff from this 0.39 acre basin will be treated by a proposed double 18-inch exfiltration trench (157 LF) connected via pipe to the existing storm sewer system on the west side of Collier Boulevard outfalling into Henderson Creek Canal. The proposed exfiltration trench is located along the west side of Collier Boulevard under the proposed sidewalk. The additional exfiltration trench will provide the 0.04 Ac-Ft of required treatment volume and 0.06 Ac-Ft of required attenuation volume for Basin TR3.

### **Basin Davis**

Basin Davis includes a portion of southbound Collier Boulevard and proposed fly-over ramp draining to the existing Davis Boulevard storm sewer system currently draining Ramp A and widened Davis Boulevard. Runoff from this 0.73 acre basin will be piped westward and treated by the existing wet-detention pond that serves Davis Boulevard located on Market Street west of the study area. Due to the removal of Ramp A with the Alternative 1 improvements, impervious (pavement) area draining to the Davis Boulevard system will be reduced by 0.25 acres.



## Henderson Creek Canal Realignment

Due to the right-of-way needs for the Collier Boulevard northbound fly-over ramp over Beck Boulevard, the Henderson Creek Canal will need to be realigned to the east for approximately 600 linear feet. The realigned portion of the canal will need to match the existing channel section and conveyance capacity so as to not adversely affect channel hydraulics upstream or downstream. Hydraulic modeling and analysis of the canal in the vicinity of the realignment area may be necessary for the 100-year, 3-day event to ensure this realignment does not adversely affect canal flood stages or existing floodplains. Additional right-of-way will need to be acquired for the proposed canal realignment. Please see Figure 24 for a graphical representation of the canal realignment and additional right-of-way required.

## 6.11 STRUCTURES ANALYSIS

The implementation of the recommended I-75 at Collier Boulevard ultimate interchange improvement alternative will require no modifications to the two existing bridge structures but will require four new locations for ramp bridge structures. The purpose of the bridge analysis is to establish the typical sections, geometry, horizontal and vertical clearances, and structure types for the ramp bridges. The analysis was prepared in accordance with the requirements of Chapter 26.8 "Bridge Analysis" of the FDOT PPM dated January 1, 2013.

The proposed improvements to the I-75 and Collier Boulevard ultimate interchange will require four new ramp bridge structures. Viable span configurations and superstructure and substructure types will be identified for all four bridges. The following factors are considered in the identification of the proposed bridge concepts for the ramp bridges:

- Environmental and site considerations
- Vertical and horizontal clearances (existing and proposed)
- Vertical and horizontal geometry
- Typical section
- Aesthetic level for bridge and bridge approaches
- Bridge deck drainage considerations
- Conceptual geotechnical data
- Impacts to adjacent properties and right-of-way

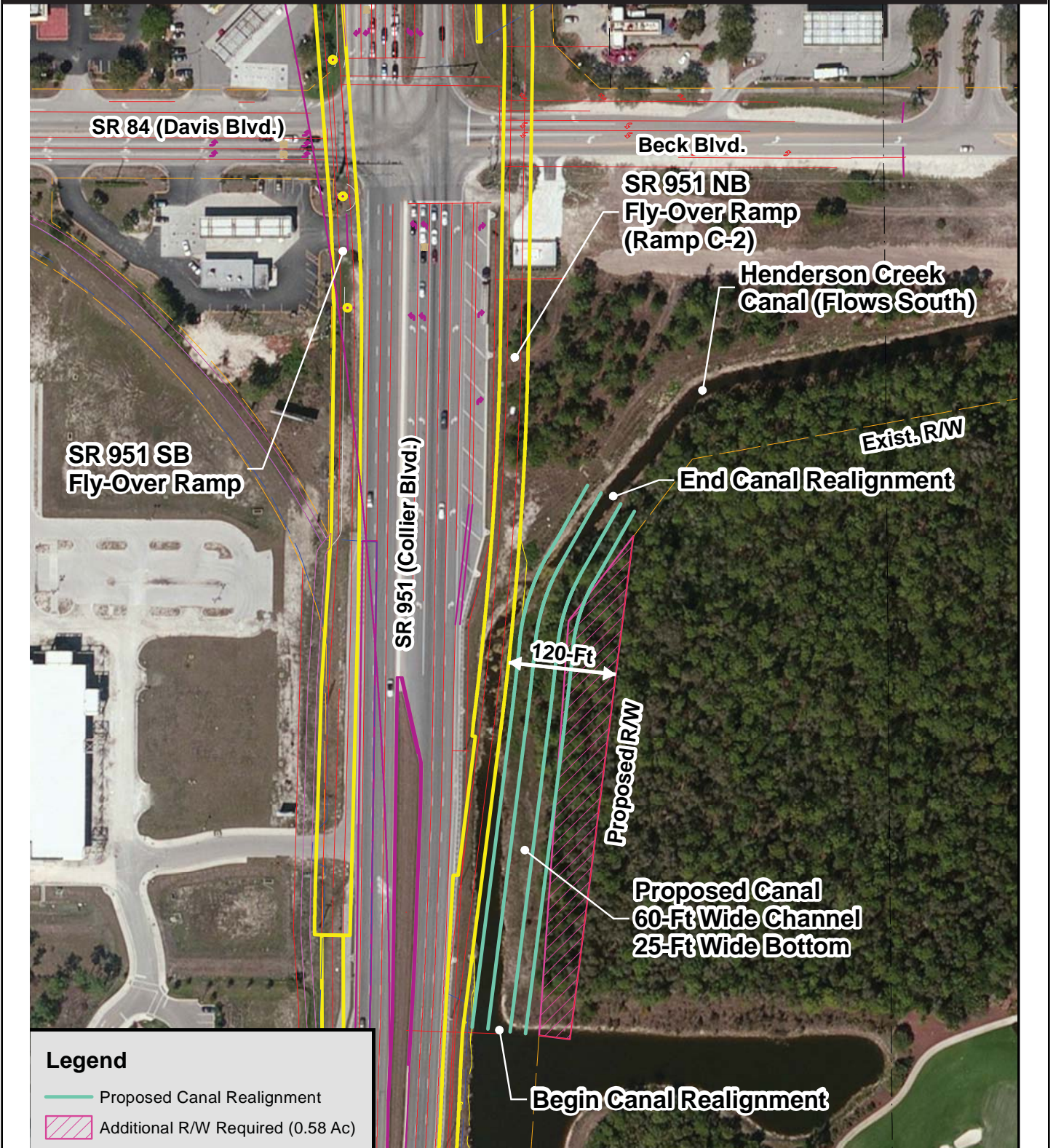
The proposed improvements will not modify the existing I-75 mainline overpass structures over Collier Boulevard. The Department will call on the designer to maintain the currently approved minimum vertical clearance under the I-75 overpass structures 030195 and 030196 and southbound Collier Boulevard to no less than 16 feet 4.2 inches.

## Spill Slopes vs. Retaining Walls

Grade separated structures generally are candidates for either end spans or retaining walls holding back the adjoining roadway embankment. Factors contributing to the best alternative determination include cost, geotechnical information, geometry, and other site and structural considerations. MSE walls will be used at the new structures in order to minimize right-of-way impacts and structure lengths.

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Henderson Creek Canal Realignment Concept

FIGURE



## **STRUCTURE 1 – RAMP C-2 NORTHBOUND OVER BECK BOULEVARD AND RAMP B**

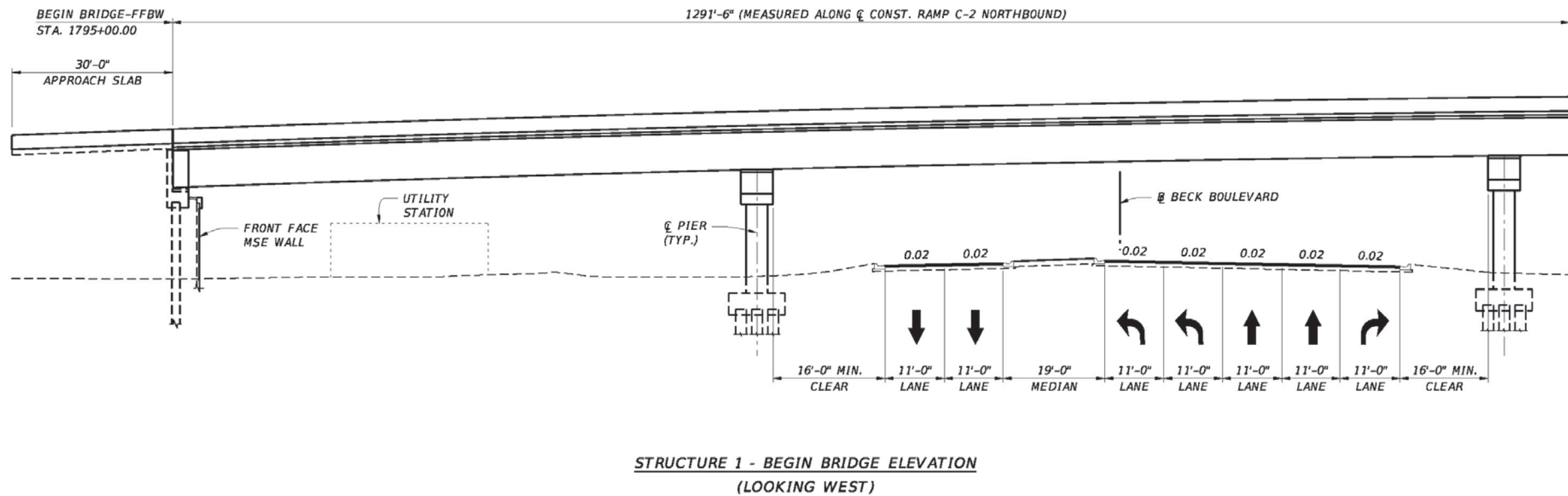
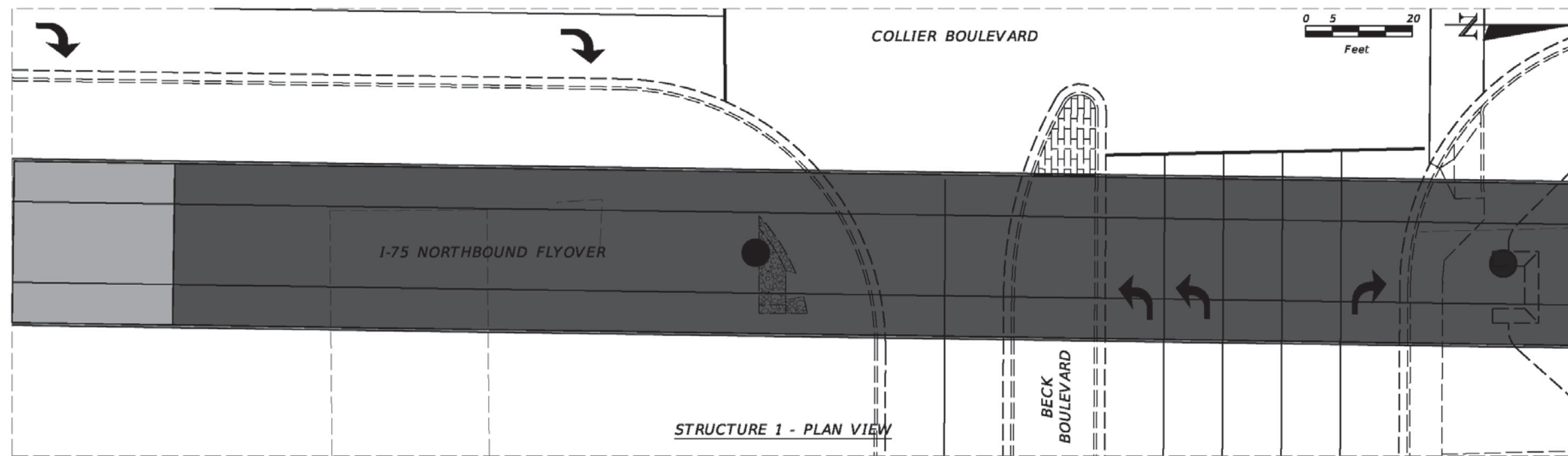
A single-lane ramp bridge will be required to carry traffic over Beck Boulevard and Ramp B for the northbound I-75 on-ramp movement. The proposed ramp bridge will accommodate a 15-foot lane, 6-foot inside and outside shoulder, and 1-foot 6-inch traffic railing barriers along the edges of the bridge deck as shown in Appendix A. The overall out-to-out width of the bridge will be 30 feet 1 inch. The slope of the proposed bridge will be 2 percent downward toward the outside shoulder. The shoulder widths will be designed to adequately contain spread water on the bridge. Bridge deck runoff will flow along the traffic railings to the end of the bridge where it will be collected into the roadway drainage systems.

The overall bridge length will be set to span from south of Beck Boulevard to north of Ramp B along a curved alignment. A 1291-foot fully elevated viaduct structure was chosen in lieu of two shorter bridges with an earth plug embankment between the structures. The bridge alternatives consisted of one bridge spanning Beck Boulevard, the second structure spanning Ramp B, and an earth plug embankment between the two structures. The viaduct alternative was chosen since it allows the existing businesses (Waffle House, Holiday Inn Express, and Cracker Barrel) to the east of the Ramp C-2 alignment to remain visible to the traveling public instead of potentially being blocked by the earth plug embankment. The begin bridge was set based on the need to span the Collier County water pump station south of Beck Boulevard. The second span accommodates Beck Boulevard and maintains a minimum horizontal clearance of 16 feet, as per PPM Table 2.11.6, from the edge of the outside travel lanes in each direction along Beck Boulevard to the face of the adjacent pier caps. The end bridge location was set to accommodate Ramp C-2 spanning over Ramp B. See Figure 25 and Figure 26 for the Bridge Elevation views. Based on the skew at the intersection of the two ramp alignments, a straddle bent is needed in order to provide the minimum horizontal clearance of 14 feet, as per PPM Table 2.11.6. The proposed profile of the ramp bridge will be set to accommodate a minimum vertical clearance of 16 feet 6 inches over Beck Boulevard and Ramp B, as per the PPM Table 2.10.1.

Viable superstructure options include a cast-in-place concrete deck with prestressed concrete Florida I Beams (FIB), Florida U Beams, steel girders, or a combination of these alternatives. All elements of the bridge will be designed to meet the criteria for Level One aesthetics as per the PPM Chapter 26.9.4, which may include color pigments in the concrete and texturing of concrete surfaces. Further coordination with FDOT during the BDR phase of the project will be needed to determine the correct level of aesthetics.

Viable foundation alternatives include prestressed concrete piles, steel H-piles, steel pipe piles, and drilled shafts. Shallow foundations were eliminated from further consideration due to their susceptibility to variable settlement issues. The final selection of the foundations will be based on pile capacities, driving conditions, pile lengths, and economy of pile sizes which will be determined during the design phase of the project.

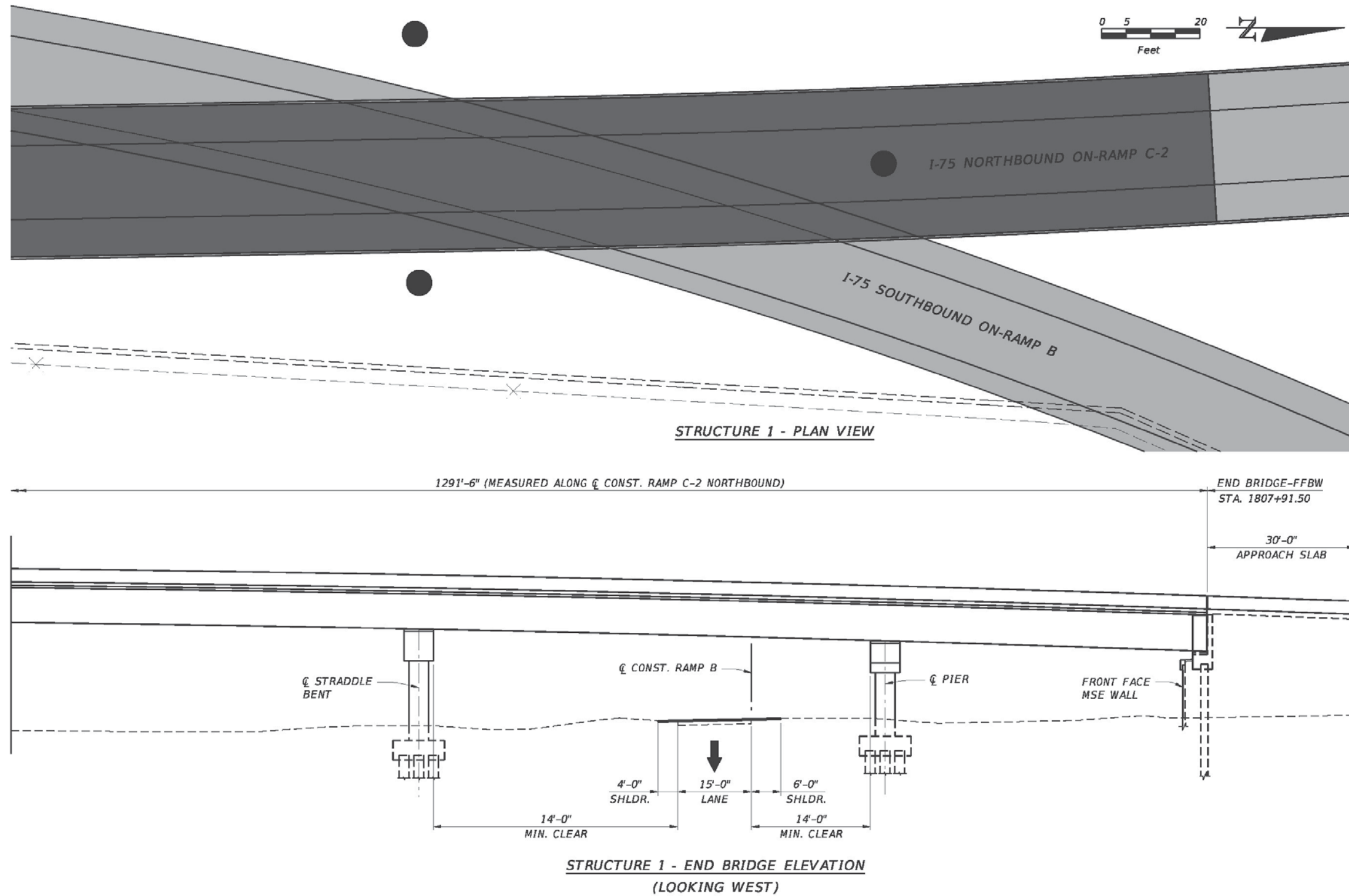
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Structure 1 Profile Southern Section FIGURE



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Structure 1 Profile Northern Section FIGURE

## **STRUCTURE 2 – RAMP C-2 AND STRUCTURE 3 – RAMP A-3 OVER Collier Boulevard**

Single-lane ramp bridges will be needed to carry traffic over Collier Boulevard onto I-75 northbound and over Collier Boulevard onto I-75 southbound. Both of these ramp structures will have the same typical section and bridge length. The proposed ramp bridges will accommodate a 15-foot lane, 6-foot inside and outside shoulders, and 1-foot 6-inch traffic railing barriers along the edges of the bridge deck, as shown in Appendix A. The overall out-to-out width of the bridges will be 30 feet 1 inch. The slope of the proposed bridges will be 2 percent downward toward the outside shoulder. The shoulder widths will be designed to adequately contain spread water on the bridge. Bridge deck runoff will flow along the traffic railings to the end of the bridges where it will be collected into the roadway drainage systems.

The proposed ramp bridges will span Collier Boulevard in a tangent alignment parallel to the existing mainline I-75 bridges with an approximate 17-degree skew. A total bridge length of 206 feet will be set to match the existing bridges and will span the ultimate typical section of Collier Boulevard. The proposed profiles of the ramp bridges will be set to accommodate a minimum vertical clearance of 16 feet 6 inches for each of the bridges, as per the PPM Table 2.10.1. The horizontal clearance under the bridge to each of the abutment retaining walls will be set to match the existing mainline bridges.

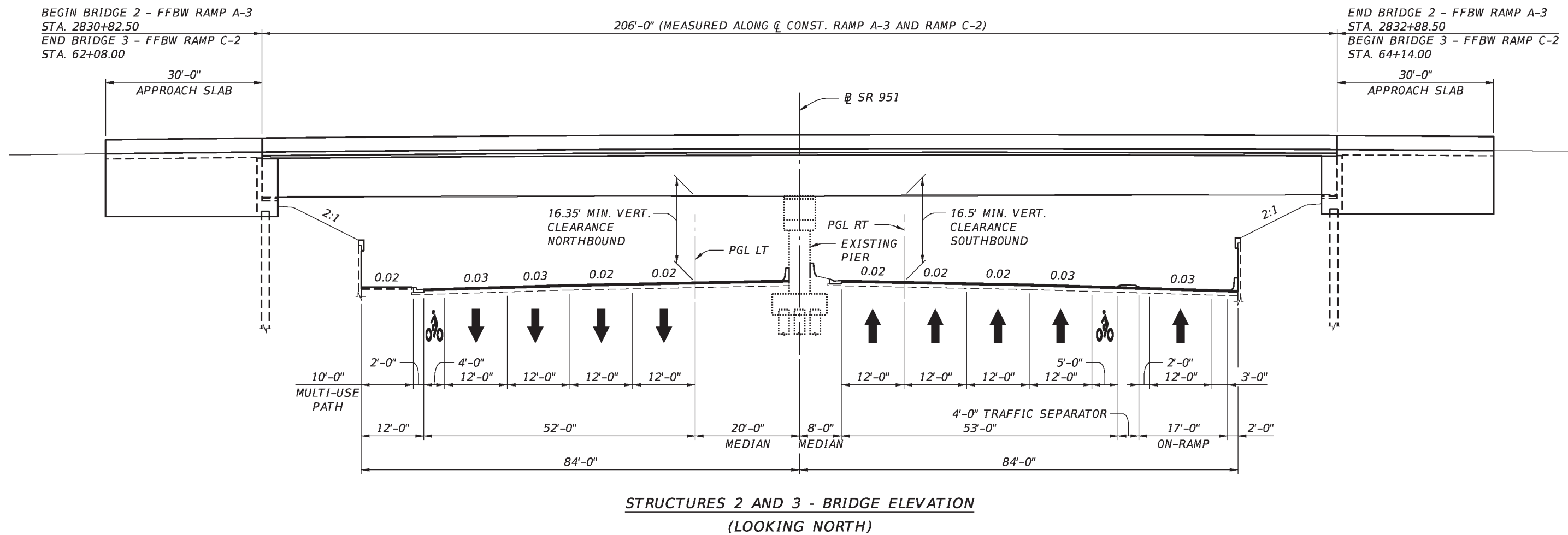
The horizontal clearance for the outside lanes of southbound Collier Boulevard traffic meets the minimum requirement of 16 feet from the edge of the travel lane to the abutment wall, as per PPM Table 2.11.6. The inside lanes for southbound and northbound Collier Boulevard traffic both meet the 6-foot minimum horizontal clearance, as per PPM Table 2.11.6. However, northbound Collier Boulevard does not meet the minimum horizontal clearances, as per the PPM Table 2.11.6; therefore, an F-shaped barrier has been placed in front of the abutment wall for protection. The recommended alternative for this site will clear span Collier Boulevard due to an existing 48-inch water line located within the median at the centerline of Collier Boulevard that would conflict with a median pier required for a two span bridge configuration. Relocation of the existing 48-inch water line would be expensive and pose multiple constructability issues in relation to the proposed roadway. In final design, offset pier footings may be an alternative to accommodate a two span bridge configuration not impacting the 48-inch water line. The two span option may also lead to cost savings due to a lower profile for the ramp bridges reducing embankment and superstructure costs. See Figure 27 for the Bridge Elevation view.

Viable superstructure options include prestressed concrete Florida I Beams (FIB), Florida U Beams, and steel girders with a cast-in-place concrete deck. All elements of the bridge will be designed to meet the criteria for Level One aesthetics, as per the PPM Chapter 26.9.4, which may include color pigments in the concrete and texturing of concrete surfaces. Further coordination with FDOT during the BDR phase of the project will be needed to determine the correct level of aesthetics.

Based on notes and borings from the existing bridge plans, the environmental classification was identified as non-coastal with a hard limestone (caprock) layer in the vicinity of the bridges that may require pre-coring. Viable foundation alternatives include prestressed concrete piles, steel H-piles, steel pipe piles, and drilled shafts. Shallow foundations were eliminated from further consideration due to their susceptibility to variable settlement issues. The final selection of the foundations will be based on pile capacities, driving conditions, pile lengths, and economy of pile sizes, which will be determined during the design phase of the project.

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Structure 2 and 3 Bridge Elevation Over Collier Boulevard FIGURE

#### **STRUCTURE 4 – RAMP A-1 SOUTHBOUND OVER DAVIS BOULEVARD**

A single-lane ramp bridge will be required to carry traffic over Davis Boulevard for the southbound I-75 off-ramp movement to southbound Collier Boulevard. The proposed ramp bridge will accommodate a 15-foot lane, 6-foot inside and outside shoulder, and 1-foot 6-inch traffic railing barriers along the edges of the bridge deck, as shown in Appendix A. The overall out-to-out width of the bridge will be 30-feet 1-inch. The slope of the proposed bridge will be 2 percent downward toward the outside shoulder. The shoulder widths will be designed to adequately contain spread water on the bridge. Bridge deck runoff will flow along the traffic railings to the end of the bridge where it will be collected into the roadway drainage systems.

The overall bridge length will be set to span from north of Davis Boulevard to south of Davis Boulevard along a curved alignment at an approximate skew of 6 degrees with Davis Boulevard. The begin bridge span was set based on the location of a 48-inch water line and the alignment of the multi-use path on the west side of Collier Boulevard. In the event of a pipe failure or a maintenance issue, an Mechanically Stabilized Earth (MSE) wall placed on top of the pipe will not allow easy access to the pipe for repair; therefore, it was determined the 48-inch pipe will be accommodated within the first span of the bridge.

At the approximate midpoint of the structure, the spans will be set to accommodate the typical section of Davis Boulevard. A minimum horizontal clearance of 16 inches, as per PPM Table 2.11.6, from the edge of the outside travel lanes in each direction along Davis Boulevard to the face of the adjacent pier caps will be provided. The end bridge location was set to accommodate the multi-use path alignment as it crosses over Davis Boulevard and then continues under the bridge until the right-of-way allows it to shift further west of the bridge. The proposed profile of the ramp bridge will be set to accommodate a minimum vertical clearance of 16 feet 6 inches over Davis Boulevard, as per the PPM Table 2.10.1. See Figure 28 through Figure 30 for the Bridge Elevation views.

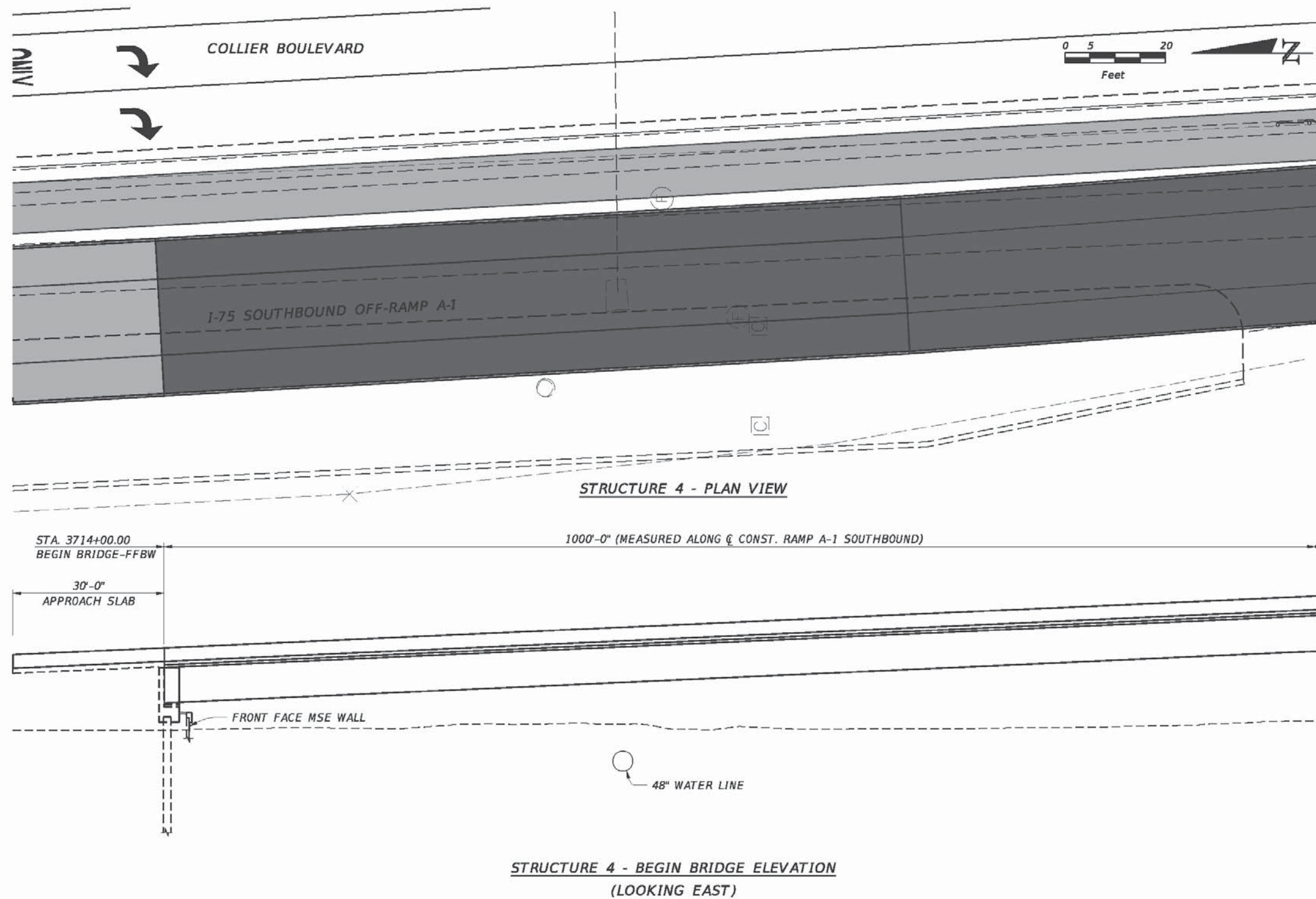
Portions of Structure 4 superstructure would hang over the existing right-of-way limits on the northwest and southwest quadrants of the Davis and Collier boulevards intersection. Air rights would be required from the property owners as described in Section 6.4. All piers can be accommodated within the existing right-of-way.

Viable superstructure options include a cast-in-place concrete deck with prestressed concrete Florida I Beams (FIB), Florida U Beams, and steel girders, or a combination of these alternatives. All elements of the bridge will be designed to meet the criteria for Level One aesthetics, as per the PPM Chapter 26.9.4, which may include color pigments in the concrete and texturing of concrete surfaces. Further coordination with FDOT during the BDR phase of the project will be needed to determine the correct level of aesthetics.

Viable foundation alternatives include prestressed concrete piles, steel H-piles, steel pipe piles, and drilled shafts. Shallow foundations were eliminated from further consideration due to their susceptibility to variable settlement issues. The final selection of the foundations will be based on pile capacities, driving conditions, pile lengths, and economy of pile sizes which will be determined during the design phase of the project.

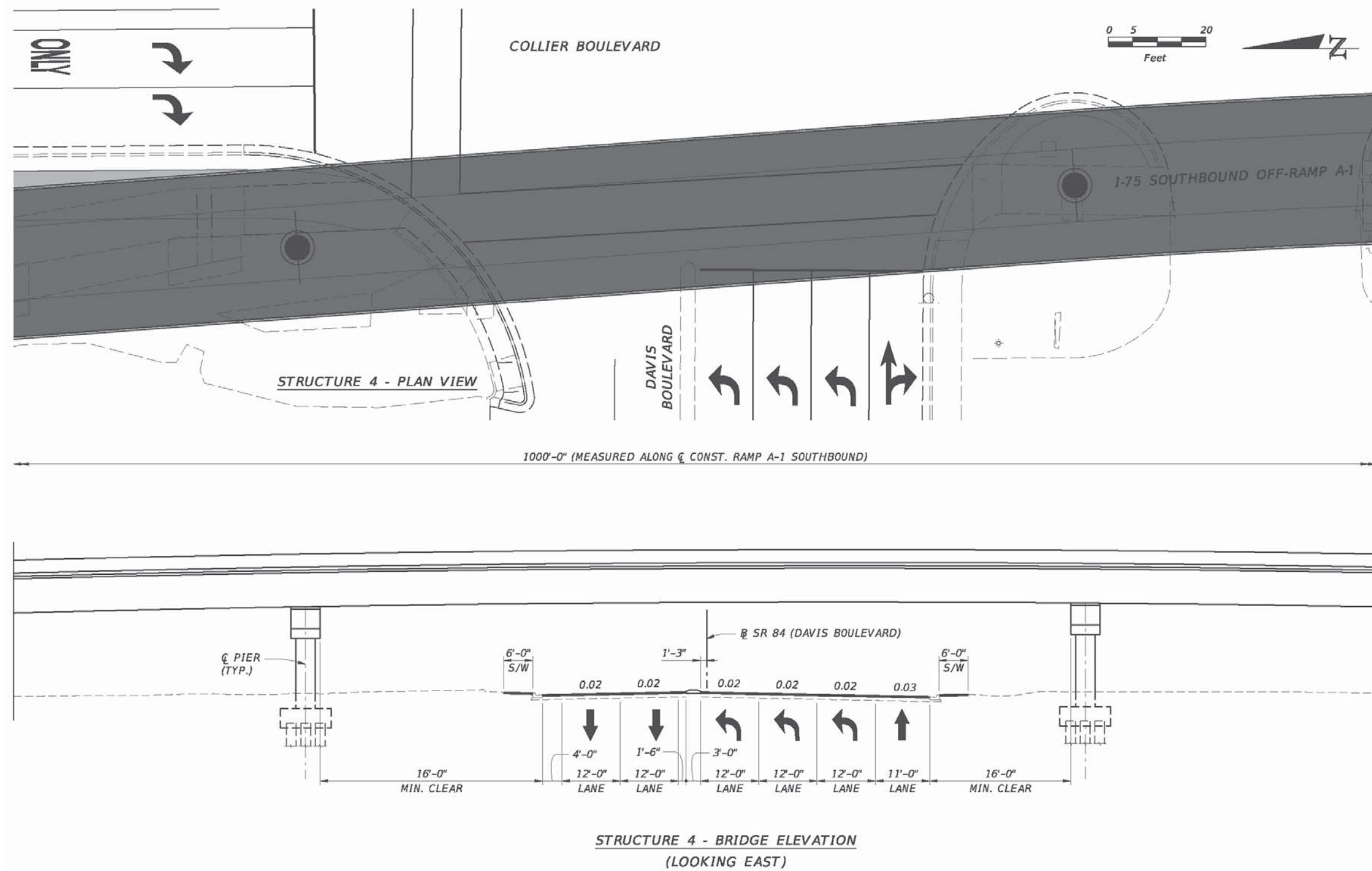


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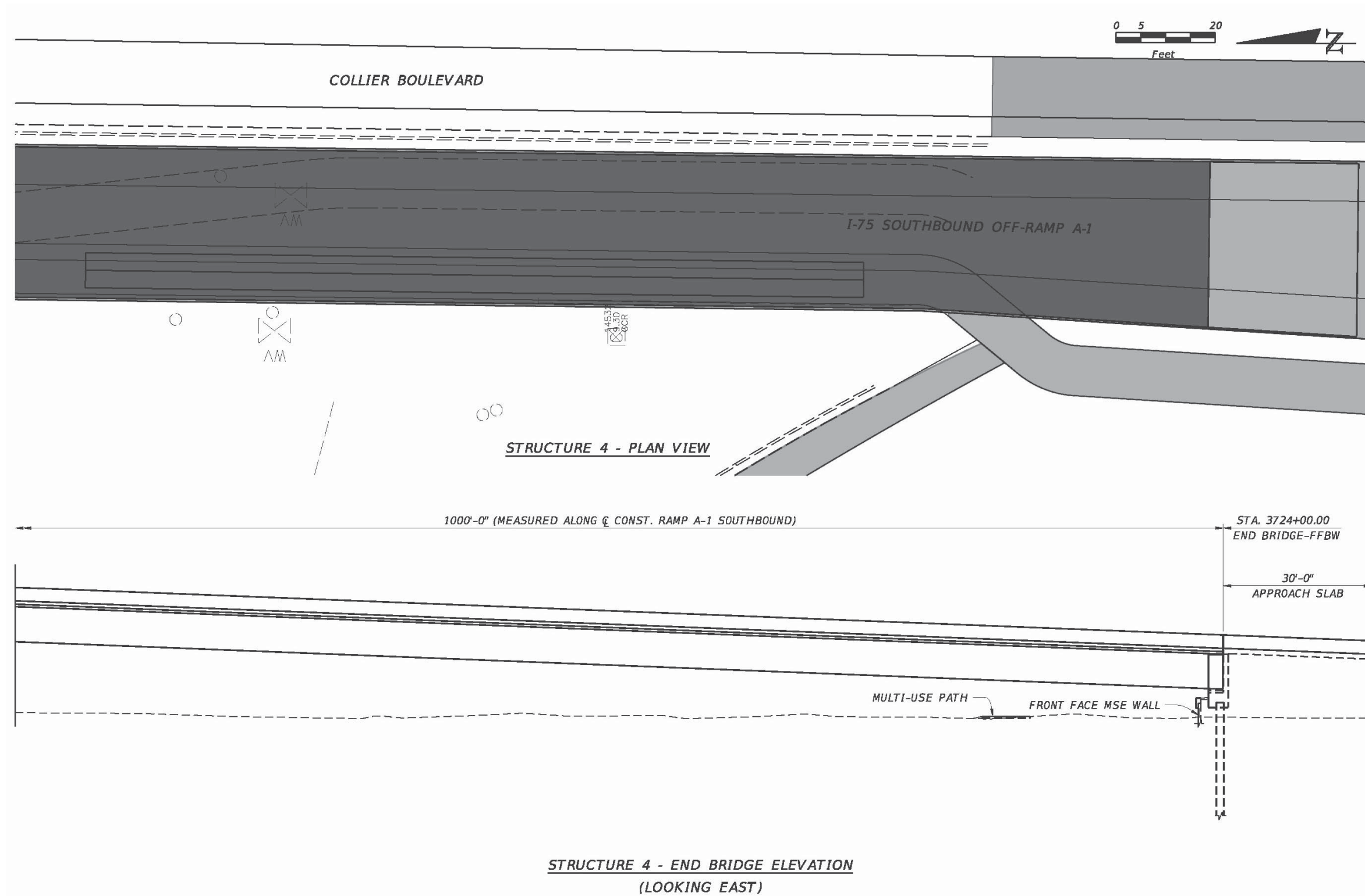
Structure 4 Begin Bridge Elevation FIGURE

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Structure 4 Bridge Elevation over Davis Boulevard FIGURE

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Structure 4 End Bridge Elevation FIGURE

## 6.12 ACCESS MANAGEMENT

Collier and Davis Boulevards will be maintained as Access Class 5 arterials with raised medians and controlled access. A new traffic signal is proposed at the intersection of Collier Boulevard and Business Circle North. This intersection is currently unsignalized. However, a partial traffic signal at the merge point between the Davis Boulevard eastbound right-turn by-pass lane and Collier Boulevard will be removed. A right-in-right-out commercial driveway will also be closed north of Business Circle North. All other existing access points to Collier Boulevard will remain as-is.

The proposed access management plan was shared with the public at the public information workshop on October 25, 2012 and the public hearing on December 10, 2013.

## 6.13 DESIGN VARIATIONS

An existing vertical clearance design variation was approved by the FDOT District One Design Engineer for the Collier Boulevard widening project, Collier County project ID 60092 on September 29, 2009. The variation documents the vertical clearance along Collier Boulevard southbound under the I-75 overpass structures 030195 and 030196 will be maintained at 16 feet 4.2 inches, meeting the AASHTO Green Book standard of 16 feet. The alternatives presented by this study would maintain the Collier Boulevard cross section in the southbound direction, thereby not requiring a variation for this design element.

The ultimate interchange configuration could be developed mostly within the existing right-of-way; however, new ramp construction or reconstruction places the future edge of the ramps closer to the existing right-of-way than required by the standard border width. As such, a design variation from the Border Width granted on January 30, 2014 for the recommended preferred alternative in order to minimize business and private property impacts. A copy of the variation application is included in Appendix D.

The I-75 southbound off-ramp features a structure over Davis Boulevard and a business driveway for the Mobil gas station on the southwest corner of the Collier Boulevard intersection. This structure profile touches down to ground level approximately 400 feet north of the new signalized intersection. The down slope is shored up on retaining wall, which will be placed approximately 8.5 feet away from the outside travel lane on southbound Collier Boulevard. This distance is narrower than the FDOT PPM standard 16 feet horizontal clearance to bridge piers and abutments. A design variation from the horizontal clearance was granted on February 25, 2014 for the recommended preferred alternative in order to minimize lateral shifts in the ramp horizontal alignment and reduce business impacts. A copy of the variation application is included in Appendix D.

## 6.14 HORIZONTAL ALIGNMENT

The proposed ParClo A loop ramps in the southwest and northeast quadrants of the interchange will feature a 200-foot radius in order to reduce the construction footprint. The northeast quadrant loop terminates with an approximately 1,500-foot long acceleration lane, which becomes an additional I-75 northbound through lane. The second I-75 northbound on-ramp gore will be rebuilt



in the approximate same location as the existing gore and will provide a parallel merge auxiliary lane to mainline I-75.

The proposed design offsets the slow rolling speed along the southwest quadrant loop with an approximately 2,800-foot long acceleration lane. This lane is longer than the standard FDOT acceleration lane in order to allow heavy vehicles to reach freeway driving speeds. The I-75 southbound on-ramps from southbound and northbound Collier Boulevard first merge to one lane joining the I-75 mainline southeast of the current interchange gore. The southbound off-ramp gore would be rebuilt to provide a parallel two-lane exit. Both southbound and northbound off-ramps would be relocated to accommodate the new loop ramps.

## 6.15 VERTICAL ALIGNMENT

Vertical profile grade along Collier Boulevard will be maintained during the process of milling and resurfacing. The new southwest quadrant loop ramp profile will start at the southbound Collier Boulevard outside lane tie-in elevations and would rise at approximately 4% toward the new Collier Boulevard overpass structure. A 900-foot-long vertical crest curve would be provided along the new ramp overpass. The ramp profile descends toward the I-75 southbound mainline gore at approximately 3.5%. The new northeast quadrant loop ramp profile will start at the northbound Collier Boulevard outside lane tie-in elevations and would rise at approximately 3.5% toward the new Collier Boulevard overpass structure. A 900-foot-long vertical crest curve would be provided along the new ramp overpass. The ramp profile descends toward the I-75 northbound mainline gore at approximately 3%. Example profiles can be found in the concept plan set included as Appendix A.

Two flyovers would convey Collier Boulevard traffic over Beck Boulevard and Davis Boulevard to the proposed northbound loop on-ramp and from the southbound off-ramp respectively. These flyovers would connect with Collier Boulevard at the Business Circle North intersection, south of Davis Boulevard. The northbound flyover ramp profile starts along the Collier Boulevard northbound outside lane and climbs at approximately 4.5% toward a new structure over Beck Boulevard. A 500-foot-long crest vertical curve is provided at the top of the flyover. From this point the profile descends at an approximate rate of 0.3% toward the I-75 southbound on-ramp. Once the flyover structure is clear of the on-ramp passing underneath, it descends at approximately 4.5% in order to reach the existing grade along Collier Boulevard south of the existing I-75 mainline overpasses.

## 6.16 ENVIRONMENTAL IMPACTS

### 6.16.1 Cultural Environment

#### Cultural Resources

A *Cultural Resource Assessment Technical Memorandum* prepared in accordance with the procedures contained in 36 CFR Part 800, including background research and a field survey coordinated with FHWA and the State Historic Preservation Officer (SHPO), was performed for the project.

As the result of background research and archaeological and historical field survey, no new cultural resources were identified within the pond sites for the I-75 at SR 951 Ultimate Interchange project. A full record of the archaeological and historical evaluation can be found in the *Cultural Resource Assessment Survey Technical Memorandum*. Concurrence of this report was received from FHWA and the State Historic Preservation Officer (SHPO) on March 7, 2013

#### **Historic Sites/District**

As the result of background research and historical field survey performed for the *Cultural Resource Assessment Technical Memorandum*, no new historic sites were identified within the pond sites for the I-75 at SR 951 Ultimate Interchange project.

### **6.16.2 Physical Environment**

#### **Recreation Areas**

Only one public land exists within the study limits. Palm Springs Public Park is located within the study limits, west of the I-75/SR 951 interchange, and between I-75 and Palm Lake Drive. This recreational park is owned and operated by the Collier County Department of Parks and Recreation.

#### **Noise Sensitive Sites**

An assessment of noise impacts was conducted for this project according to Title 23, Code of Federal Regulations (C.F.R.), Section 772: Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010), Part II, Chapter 17 of FDOT's Project Development and Environment Manual (May 24, 2011) and Chapter 335.17, Florida Statutes. This assessment also adheres to current FHWA traffic noise analysis guidelines contained in FHWA-HEP-10-025: Highway Traffic Noise: Analysis and Abatement Guidance (January 2011).

Currently traffic noise levels throughout the project study area are below the Federal Highway Administration (FHWA) Noise Abatement Criteria. One exception is at the Tuscan Isles apartment complex where one end unit is affected by traffic noise. However, with construction completed, the No-Build Alternative (includes widening Collier Boulevard and Davis Boulevard, and ramp improvements at I-75), more noise sensitive sites are expected to be affected by traffic noise. It is predicted the noise level increases related to these improvements will average 4.4 dB(A) with a range of 0.6 dB(A) to 6.7 dB(A) throughout the study corridor. The majority of impacts will occur at the Tuscan Isles complex, where a total of 16 units will be affected, and the adjacent Palm Springs neighborhood and park. Additionally, increased noise levels are also predicted for businesses with outside eating areas near the Collier Boulevard/Davis Boulevard intersection.

Traffic noise levels are predicted to increase over the existing conditions ranging between 1.0 dB(A) along Collier Boulevard to 8.5 dB(A) at noise sensitive sites located closer to the I-75 mainline. While this range of increase is not considered substantial, 34 noise sensitive sites are predicted to experience noise levels either approaching or exceeding the FHWA noise abatement criteria.

Consequently, abatement measures were evaluated for the two Activity Category B areas, Palm Springs Subdivision and Tuscan Isles the Palm Springs Park (a Category C site); and at the

unoccupied Buddy’s Burgers, a Category E site. Due to limited right of way, the only abatement measure analyzed for this project is the construction of sound barriers. Of the evaluated four barriers, only one meets the reasonableness and feasibility requirements: the Tuscan Isles sound barrier. This barrier would be approximately 1,931 feet long and 22 feet high. This barrier is required for all viable alternatives. Additional detail is available in the *Noise Study Report*.

Based on the noise analysis performed for and documented in the *Noise Study Report*, there appear to be no solutions available to mitigate the noise impacts at two impacted residences in the Palm Springs Neighborhood nor at four units in the Tuscan Isle Apartment complex. Abatement is also not reasonable at the Palm Springs Park nor is it feasible at Buddy’s Burgers’ outdoor tables site.

The Florida Department of Transportation is committed to the construction of feasible and reasonable noise abatement measures at the Tuscan Isles community as summarized in Table 35 contingent upon the following conditions:

- Detailed noise analyses during the final design process supports the need, feasibility and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier is provided to the District Office; and
- Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

**Table 35** Feasible and Reasonable Sound Barrier Summary

Noise Barrier	Number of Impacted Sites	Number of Benefited Noise Sites	Avg. Noise Reduction (dB(A))	Total System Wall Length	Feasible Wall Height	Estimated Barrier Cost
Tuscan Isles	29	33	6.3	1,931	22	\$1,274,460

**Potential Contamination Sites**

The FirstSearch database report identified 25 contamination sites with potential impacts to the corridor. Seven sites were determined to be located over 300 feet from the project corridor and were considered to be out of the project limits.

Historical research, review of environmental record databases, site reconnaissance, and detailed file reviews for 32 facilities and/or properties located in and around the study area were performed for sites presenting the potential for finding petroleum contamination or hazardous materials, and therefore may impact the proposed improvements for this project. They are illustrated in Figure 31. Of the 32 mainline sites, the following risk rankings have been applied: two “High” ranking sites, three “Medium” ranking site, 14 “Low” ranking sites, and 13 sites ranked "No" for potential contamination.

The recommended proposed alternative could potentially impact one “High” ranked site and two “Medium” ranked sites. Further detail about potential contamination sites and mitigation measures can be found in the *Level I Contamination Screening Evaluation Report*.

This proposed project contains no known significant contamination.



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Potential Petroleum and Hazardous Sites

FIGURE



### **6.16.3 Natural Environment**

#### **Wetland Potential Impacts**

The recommended preferred alternative is estimated to impact approximately 11 acres of wetland areas. Figure 5 illustrates the wetland areas within the study area. Fifteen wetlands and seven surface waters were identified within the study area. These wetlands were classified, and characterized utilizing FLUCFCS codes, and USFWS National Wetland Inventory (NWI) (Cowardin, et al. 1979) codes. As a result of this study, the project team determined there are no practicable alternatives to completely avoid wetland impacts. Wetland impacts include the proposed stormwater detention/retention system (pond areas). Further detail about potential wetland impacts, mitigation concepts, and permitting can be found in the *Wetlands Evaluation Report*.

All wetland impacts resulting from the construction of this project will be mitigated pursuant to mitigation requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. s. 1344. Preliminary mitigation alternatives have been explored. These options are described below. Final wetland impacts and mitigation requirements will be determined during the permitting phase of this project.

Final determination of jurisdictional wetlands areas and mitigation requirements will occur between the FDOT and the regulatory agencies during the final design phase of this project. It is anticipated that mitigation to offset wetland impacts resulting from construction of this project, will satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.'s 1344.

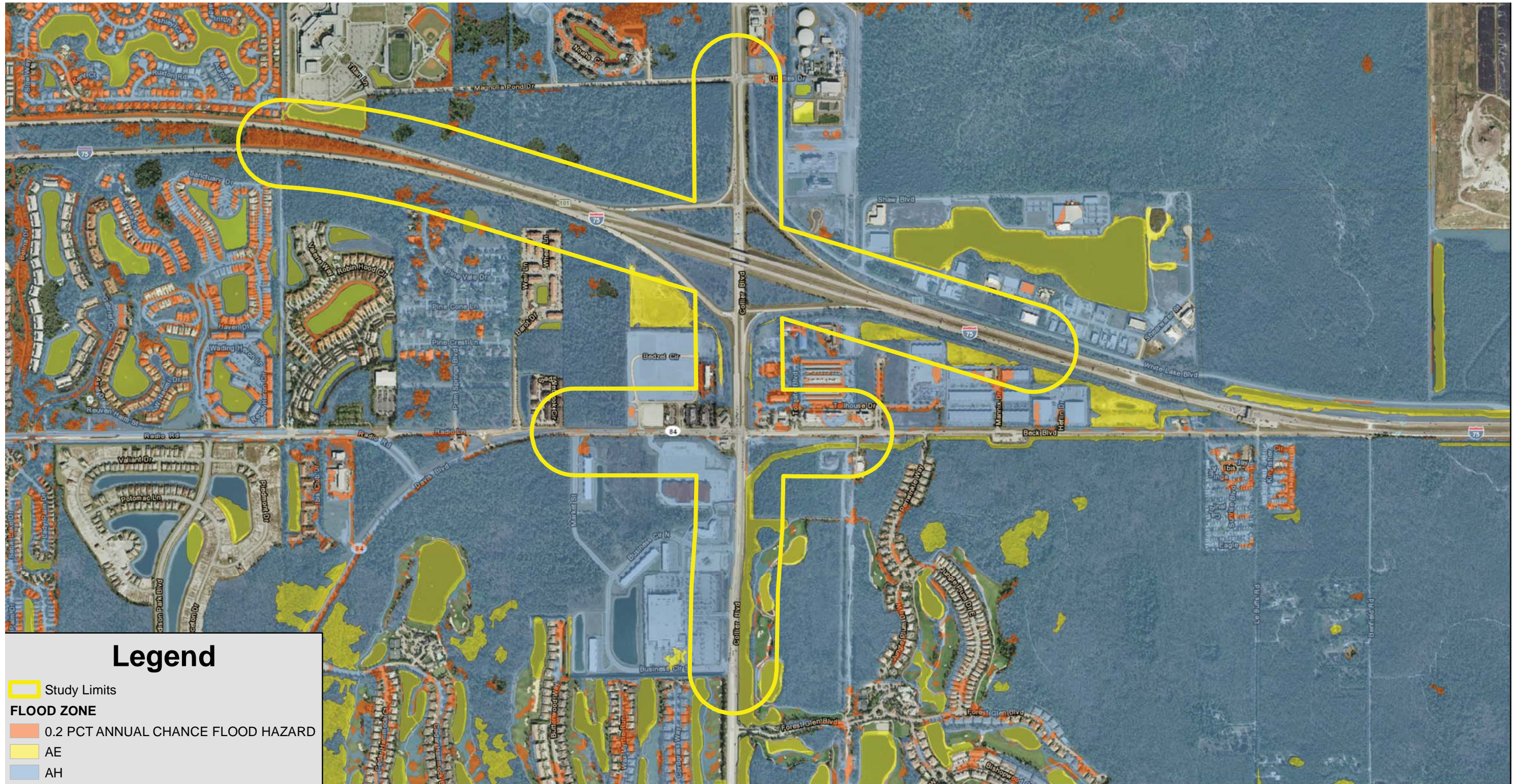
#### **Floodplain Potential Impacts**

Floodplain areas were identified within the study corridor using the Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (DFIRM) GIS data dated 2011 obtained from Collier County GIS database. The FEMA DFIRM maps indicate the four interchange infields are classified as Special Flood Zone "AH" and many adjacent areas surrounding the interchange are also classified as Special Flood Zone "AH," including portions of Toll Gate Commerce Center and City Gate. Special Flood Zone "AH" is defined by FEMA as areas with a 1% annual chance of shallow flooding (100-year), usually in the form of a pond, with an average depth ranging from 1 to 3 feet. The DFIRM maps also indicate all pavement areas associated with Collier Boulevard and I-75. Interchange entrance/exit ramps are classified as Special Flood Zone "X," which is defined by FEMA as area of minimal flood hazard and usually depicted as above the 500-year flood level. Figure 32 illustrates the DFIRM floodplain limits in the interchange vicinity. Expanding the interchange footprint would impact the approximately 24.84 acres of floodplain areas.

The proposed project will not require any floodplain compensation since sufficient floodplain storage will be provided in the interchange stormwater ponds as demonstrated in the floodplain impact analysis documented in *Location Hydraulics Report*. The proposed project will also not require any additional cross-drains or box culverts as all drainage flows will be accommodated by the proposed condition. Extensions of several existing cross-drains under the interchange ramps and two box-culverts under mainline I-75 will be necessary to accommodate the proposed project. The Collier Boulevard northbound fly-over ramp over Davis Boulevard will require realignment of approximately 600 linear feet of the Henderson Creek Canal eastward to accommodate the ramp requiring 0.27 acres of additional right-of-way.



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Study Area Floodplain Areas FIGURE



## Threatened and Endangered Species Potential Impacts

Based on the findings obtained during corridor survey efforts, no listed floral or faunal species were observed within the project corridor. While no protected species were observed, listed species were reported to occur within close proximity of the study limits, according to database and literature research or have USFWS Consultation Areas overlapping the study limits.

The potential for occurrence of listed species within the study limits was based on federal and state protected species lists, the vegetative communities present, and surrounding land uses. Many species previously documented to occur in Collier County were excluded as potential to occur within the study limits due to a lack of suitable habitat, hydrology, or geology. Literature research indicates three reptile, nine avian, three mammal, and six plant species may occur within the study limits. The likelihood of occurrence for each of the listed species potentially in the project vicinity was evaluated. The likelihood of impacting threatened species habitat was ranked as medium for all three viable alternatives. The potential for habitat impacts reflects the documented presence of protected species in the project vicinity.

The *Endangered Species Biological Assessment* notes that the project “may affect, but is not likely to adversely affect” the following federally-listed species: Florida panther, Florida scrub jay, wood stork, American alligator, eastern indigo snake, Florida bonneted bat and red-cockaded woodpecker. This project will have “no effect” on the federally-listed snail kite.

The red-cockaded woodpecker (RCW) is listed as endangered by the USFWS and FFWCC. There is suitable habitat for red-cockaded woodpeckers within the regional area, but minimal suitable habitat within and adjacent to the existing right-of-way. A cavity tree survey was conducted in February 2013 yielding the observation of two potential cavity trees. However, only one potential cavity tree was located within the half-mile survey buffer, approximately 0.44 miles to the southwest of the project area. This cavity tree is unlikely to be active due to the vegetation growing around the tree trunk. The second potential RCW cavity tree was located outside the half-mile survey buffer, approximately 0.51 miles to the northeast of the project area. There are multiple RCW observations historically documented within a half-mile of the project area. However, no RCW or evidence of these occurrences was observed during the cavity tree survey.

The Florida bonneted bat (*Eumops floridanus*) is listed as endangered by the USFWS and FFWCC. The study limits fall entirely within the USFWS Florida bonneted bat consultation area. A specific survey was conducted on January 14, 2014 to confirm the presence or absence of Florida bonneted bat roosts within the study area. No bat houses, bats or evidence thereof were observed within the study area. Therefore, based on the surrounding development, lack of species observations, and no proposed impacts to bat houses, it is anticipated that this project may affect, but is not likely to adversely affect the Florida bonneted bat.

The proposed project is not likely to adversely affect any state-listed species, including wading birds, big cypress fox squirrel, and gopher tortoise, or any other protected species, including the bald eagle and Florida black bear.

## **6.16.4 Social Resources**

### **Section 4(f)**

In accordance with Section 4(f) of the US Department of Transportation Act of 1966, as set forth in the Title 49, USC Section 1653 (f), amended and re-codified in Title 49, USC, Section 303, and expanded in Title 23, USC, Section 138, the project study area was evaluated for potential Section 4(f) resources and effects. Palm Springs Park is located west of the I-75 and SR 951 interchange, and between I-75 and Palm Lake Drive. This recreational facility is owned and operated by the Collier County Department of Parks and Recreation and is the only public land within the study limits.. The park is geared toward the immediate community and offers few amenities. No right-of-way is required from the park for construction of the proposed improvement. All access and functionality is maintained and aesthetics are not altered. Therefore, no constructive use of the park is anticipated.

On October 21, 2013, a Section 4(f) Determination of Applicability (DOA) was submitted to FHWA for review, requesting concurrence that Section 4(f) would not apply to the Palm Springs Park. Note that the conservation easement was not included in the DOA since the property is no longer publicly owned and encumbered with a conservation easement and therefore, a Section 4(f) DOA is not warranted for this parcel. On November 7, 2013, FHWA provided concurrence that the Palm Springs Park is protected as a Section 4(f) property, however, the project does not incorporate any portion of this park permanently or temporarily into a transportation use. Therefore, "the proposed project will not use property from the Palm Springs Park and Section 4(f) does not apply.

## **6.16.5 Infrastructure**

### **Utility Impacts**

The recommended preferred alternative may impact the following facilities: a 36-inch water main running along Davis Boulevard and west side of Collier Boulevard (Collier County Water Department), a 20-inch water main running along west side of Collier Boulevard, crosses to the east side of Collier Boulevard just south of Davis Boulevard and extends north past I-75 and the northbound off-ramp (Collier County Water Department), a 12-inch force main running along the west side of Collier Boulevard north of Davis Boulevard to Magnolia Pond Drive (Collier County Wastewater Department), multiple buried fiberoptic conduits crossing Collier Boulevard or run along the west side north of Davis Boulevard (CenturyLink), multiple overhead electric transmission lines crossing or running along the west side of Collier Boulevard north of Davis Boulevard (Florida Power & Light), and an overhead cable line crossing Collier Boulevard south of Davis Boulevard (Comcast).

## **6.17 VALUE ENGINEERING**

A Value Engineering Study was performed for the recommended preferred alternative the week of October 28 to November 1, 2013. The Value Engineering Report (VER) identifies four focus areas for potential project cost savings:

- A. Ramp C-2 Bridge
- B. Ramp A-1 Bridge
- C. Retention Ponds
- D. Interchange Configuration



The value engineering team outlined five recommendations based on the project areas studied. The following summarizes the recommendations and the Department's resolutions.

**VER Recommendation 1**

Use a two span Florida I-beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.

District One accepted this recommendation with the contingency that further evaluations will be required during the initial design phase. Consideration should be given to the bridge length over Davis Boulevard. This recommendation has an estimated savings of \$3.8 million.

**VER Recommendation 2**

Use a single span bridge over Davis Boulevard with Florida I-beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multi-use path.

District One declined this recommendation due to the severance damages for loss of site circulation on adjacent businesses.

**VER Recommendation 3**

Utilize the original PD&E Study is the most viable option for stormwater management.

District One accepted this recommendation, which does not change the estimated project cost.

**VER Recommendation 4A**

Revise the proposed interchange layout by eliminating both the northbound and southbound flyover bridges.

District One declined this recommendation due to the higher economic impact this alternative would have on vehicle delay. A traffic operational analysis and cost of delay calculation shows that the additional delay experienced at the Davis Boulevard and Collier Boulevard intersection would be higher than the VER estimated savings of \$20.4 million.

**VER Recommendation 4A**

Revise the proposed interchange layout by eliminating both the southbound flyover bridge.

District One declined this recommendation due to the higher economic impact this alternative would have on vehicle delay. A traffic operational analysis and cost of delay calculation shows that the additional delay experienced at the Davis Boulevard and Collier Boulevard intersection would be higher than the VER estimated savings of \$12.6 million.

A copy of the VER and the District One Director's signed resolution form are included in Appendix E.

## **6.18 RESULTS OF PUBLIC INVOLVEMENT PROGRAM**

### **6.18.1 Public Involvement Plan**

A Public Involvement Plan was created for this project outlining community outreach efforts, and presents the approach used throughout this project to involve the general public, public officials, the media, and government agencies throughout the project process.

The project team employed several outreach techniques geared towards reaching the affected public and the community at-large. Public outreach techniques included meetings with the Collier County MPO, a project website ([www.i75-951interchange.com](http://www.i75-951interchange.com)), project newsletters, small group and agency meetings, mailings to local, state and federal agencies and property owners/tenants in the study area, distribution of flyers to local businesses, display of project materials at local public library, display advertisements in Naples Daily News and press releases to local media outlets.

This Public Involvement Plan is in compliance with “Project Development and Environment Manual” Section 339.155, Florida Statute, Executive Orders 11990 and 11988, CEQ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, and 23 CFR 711.

### **6.18.2 ETDM Screening**

The proposed I-75 and SR 951 Interchange project was screened through the ETDM process as ETDM #13101. Members of the Environmental Technical Advisory Team (ETAT) submitted responses through the Environmental Screening Tool (EST) from January 19, 2011 to March 25, 2011. The ETAT is comprised of individuals from local, state and federal agencies who review the project purpose and need and seek to identify potential issues at the beginning of the study process. Comments were submitted electronically through the EST and are included in the Final Programming Screen Summary Report. Comments from agencies and responses from the ETDM coordinator are located in the ETAT Review and Other AN Comments Received sections of the Final Programming Screen Summary Report. This report published on June 30, 2011

### **6.18.3 Advance Notification**

To provide open communication and agency and public input early in the project process, as part of the ETDM process, the FDOT provided an Advance Notification (AN) package to state, federal and local agencies and other interested parties on December 10, 2010. This package defined the project and its anticipated issues and/or impacts. This process is required pursuant to Presidential Executive Order 12372 and Gubernatorial Executive Order 95-359.

### **6.18.4 Newsletters**

Newsletters were prepared in English only to inform the public of upcoming opportunities for comment and review of project materials. An original property owners list was developed from information in the property appraiser’s website for Collier County. This list was updated as requests were received by citizens to be added to the list, either through the project website.

The first newsletter issue was published and distributed on November 16, 2011. It informed the public and elected and appointed officials of the start of the project and included a discussion of the

study overview, process, and schedule. The newsletter also stressed the need for public input and provided information on points of contact within the department regarding citizen comments and concerns.

The second issue was mailed in October 2012. It presented an overview of the study progress, a brief description of the viable alternatives, and served as notification of the public information workshop.

The final newsletter issue was published in November 2013 announcing the Public Hearing event details.

### **6.18.5 Public Information Workshop**

The Alternatives Public Meeting was held on Thursday, October 25, 2012 at New Hope Ministries Center, Naples, Florida – from 5:00 pm to 7:00 pm. The meeting was conducted to present the interchange and intersection alternatives being evaluated and to obtain input from elected and appointed officials, property owners/ tenants, business owners/operators, and other interested parties.

The meeting was advertised through several methods, including:

- Direct mail notifications to approximately 200 property owners / tenants
- Notification letters and emails to approximately 70 state and local elected and appointed public officials and other agencies
- Display advertisement in the October 14th edition of the Naples Daily News
- Notification on the project website

The meeting was held from 5:00 pm to 7:00 pm and conducted in open house format. Throughout the meeting, FDOT staff and members of the study team were on hand to discuss the project and answer questions. Aerial display boards and other project-specific information were also on display for review.

A presentation was shown on a continuous loop and included content related to the topics listed below. Following the meeting, the presentation slides were posted to the project website to provide the public with access to this content.

- Project purpose and need
- Interchange Alternatives
- An intersection upgrade concept
- Roadway concepts
- On-going environmental evaluations
- An evaluation matrix
- Project schedule
- Contact Information

In attendance were approximately thirty-five (35) members of the public, along with one (1) elected official, Donna Fiala, Collier County Commissioner. Also in attendance were seven (7) FDOT staff, six (6) County staff, and five (5) members of the study team.

A comment form was developed to record written comments and questions. A total of eight (8) comment forms were received during the public comment period, which was open until Monday, November 5, 2012.

### **6.18.6 Public Hearing**

The Public Hearing was held on Tuesday, December 10, 2013 at New Hope Ministries Center, Naples, Florida – from 5:00 pm to 7:00 pm. The meeting was conducted to present the proposed improvements to the I-75 and SR 951 interchange, to present the results of the environmental studies for the proposed improvements, to allow interested citizens and public officials the opportunity to present information or comment on the proposed improvements, and to develop a record of public views and participation.

An open house session began at 5:00 pm during which project team members were available to interact with the public and answer questions. The open house session was followed by a formal hearing presentation beginning at approximately 6:00 pm, and included content related to the topics listed below:

- An overview of the project including an explanation of the limits and why the project is needed
- Details of the preferred alternative
- No-build alternative advantages and disadvantages
- Environmental and socioeconomic effects concerning the preferred alternative
- Estimated project costs
- Next steps and comment instructions
- Compliance details

Following the formal hearing presentation, at approximately 6:30 pm, there was a fifteen (15) minute intermission. During the intermission, members of the study team were on hand to discuss the project and answer additional questions. The intermission also gave attendees a chance to fill out speaker cards and comment forms.

Public testimony at the microphone began at approximately 6:45 pm. A total of one (1) speaker gave his public testimony at the microphone. The Court Reporter documented this testimony for the public hearing record.

In attendance were approximately thirty-four (34) members of the public, four (4) FDOT staff, and five (5) members of the study team.

A comment form was developed to record written comments and questions. A total of three (3) written comments were received during the public comment period, which was open until Friday, December 20, 2013.



## 7 List of Technical Reports

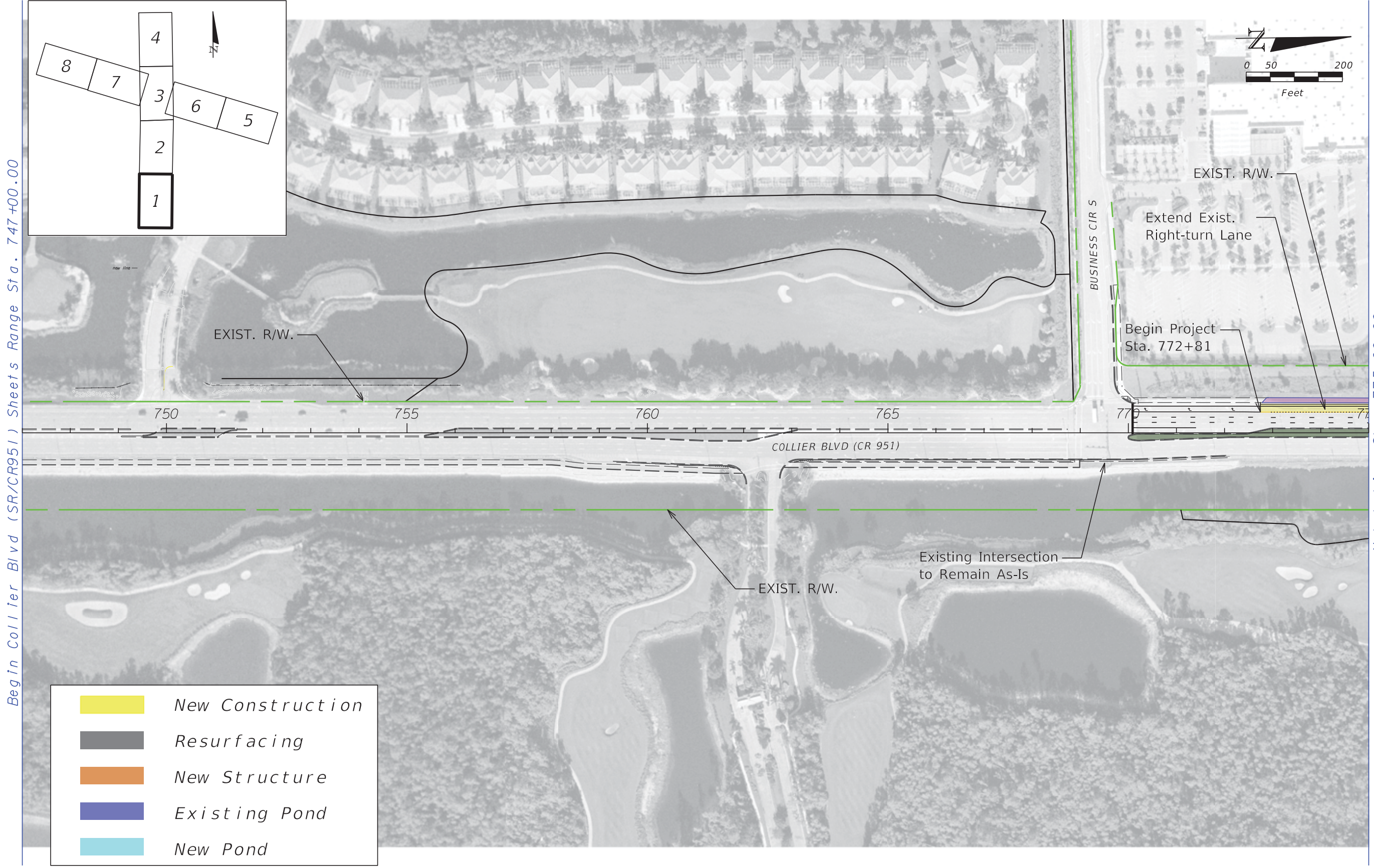
The purpose of the PD&E study is to evaluate engineering and environmental data and document information that will assist FDOT and the Federal Highway Administration (FHWA) in determining the type, preliminary design and location of the proposed improvements. The study was conducted in order to meet the requirements of the National Environmental Policy Act (NEPA) and other related federal and state laws, rules and regulations. The technical reports completed during this study are listed below.

- Conceptual Design Plans – November 2013
- Viable Interchange System Alternatives Screening Technical Memorandum – January 2012
- Project Traffic Report – July 2013
- Interchange Modification Report – September 2013
- Air Quality Report – May 2013
- Contamination Screening Evaluation – February 2013
- Cultural Resources Assessment Survey – February 2013
- Location Hydraulics Report – November 2013
- Wetlands Evaluation Report – February 2014
- Endangered Species Biological Assessment – March 2014
- Noise Study Report – June 2013
- Pond Siting Report – November 2013
- Utility Assessment Package – July 2013
- Horizontal Clearance along Collier Boulevard Technical Memorandum- February 2014
- Border Width Variation – January 2014



**Appendix A**  
Recommended Preferred  
Alternative Plans

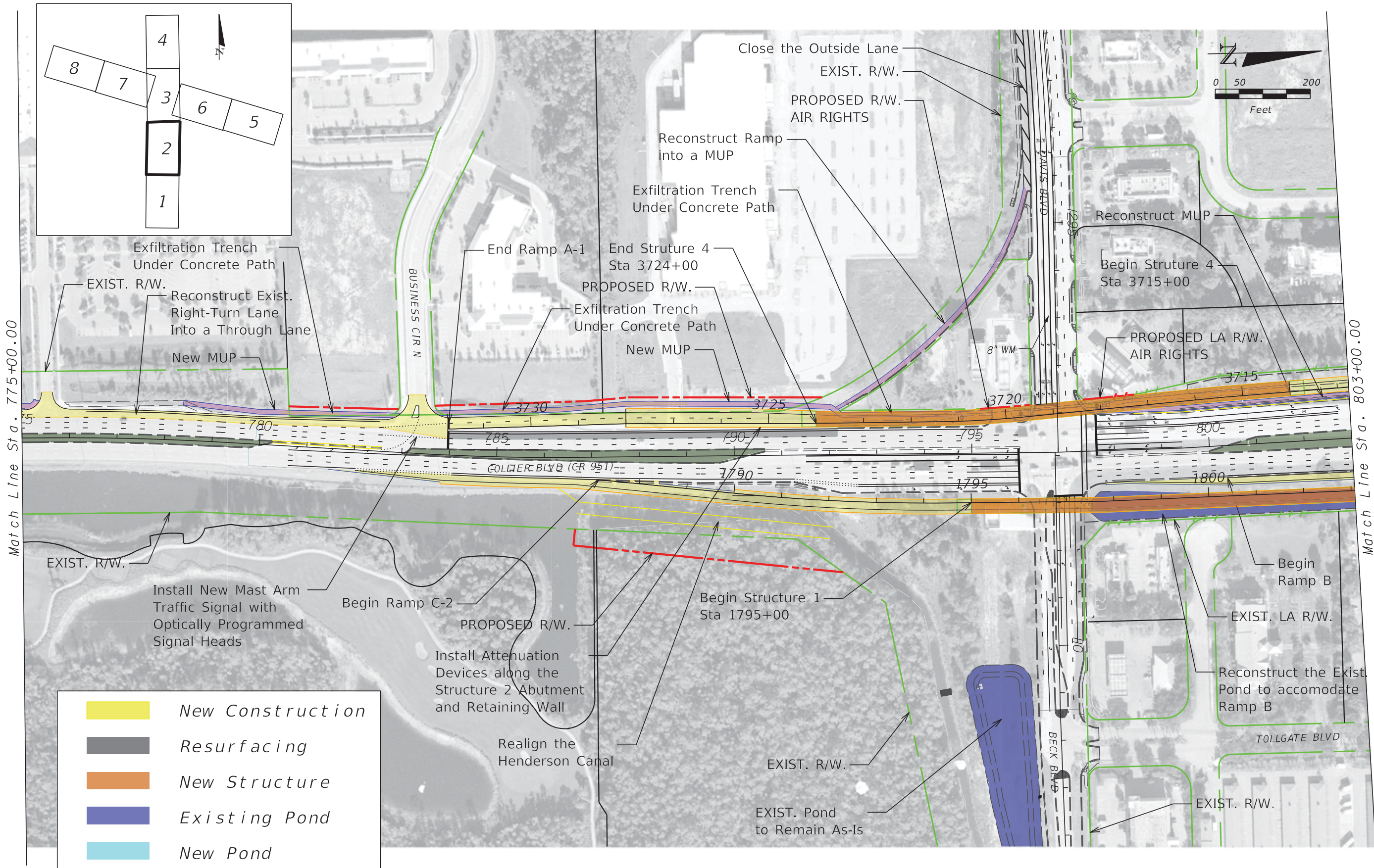




CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC. 225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		I-75 AND SR951 ULTIMATE ICHG. PD&E Recommended Preferred Alternative Horizontal Elements	SHEET NO. 01
DATE	DESCRIPTION		ROAD NO.	COUNTY		
			I-75/SR93 SR/CR951	COLLIER	425843-2-22-01	



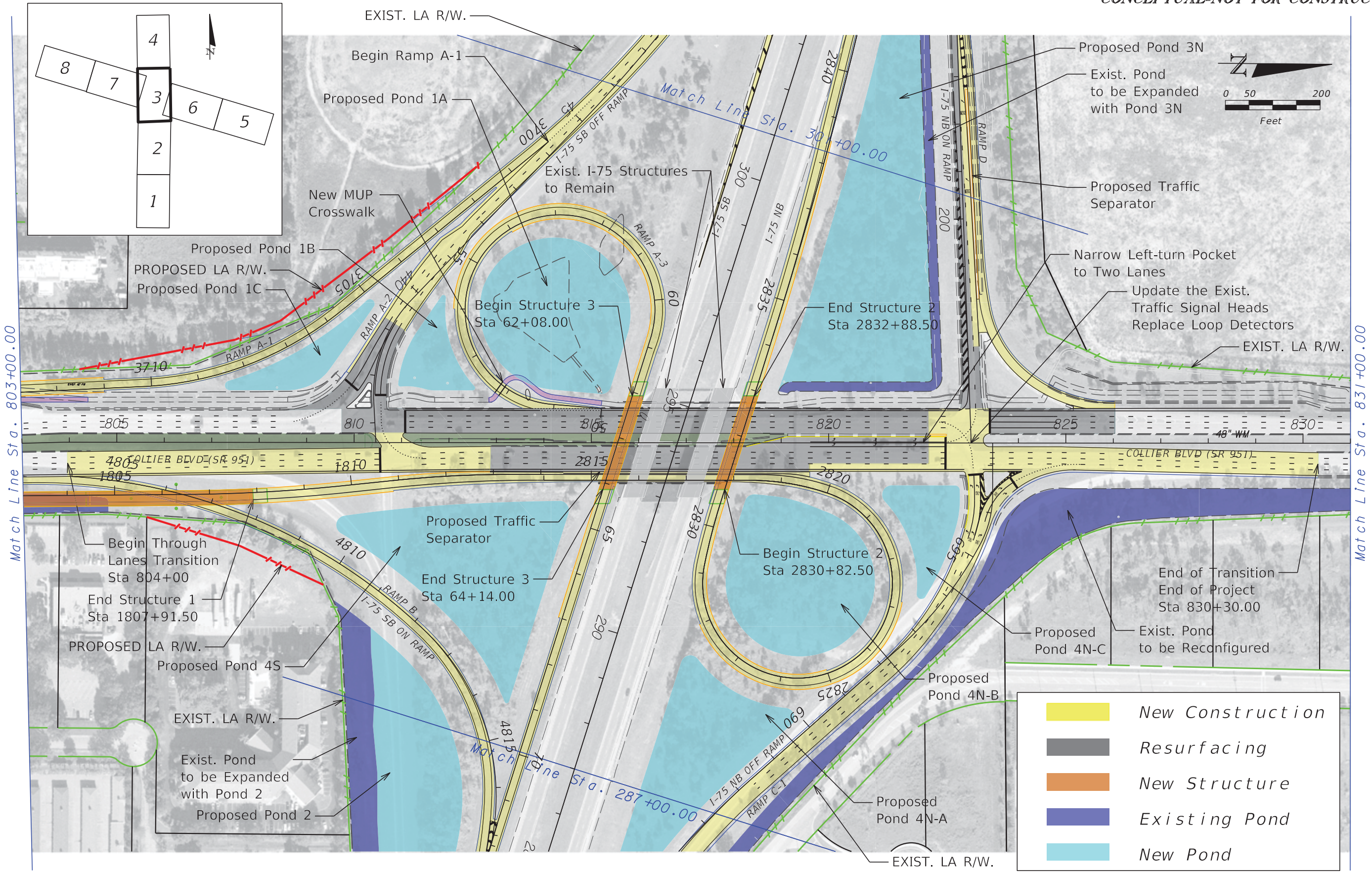


	New Construction
	Resurfacing
	New Structure
	Existing Pond
	New Pond

CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC.	STATE OF FLORIDA		I-75 AND SR951 ULTIMATE ICHG. PD&E	SHEET NO.
DATE	DESCRIPTION		DEPARTMENT OF TRANSPORTATION	FINANCIAL PROJECT ID		
		225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	ROAD NO.	COUNTY	425843-2-22-01	02
			I-75/SR93 SR/CR951	COLLIER		





CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC. 225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		I-75 AND SR951 ULTIMATE ICHG. PD&E Recommended Preferred Alternative Horizontal Elements	SHEET NO. 03
DATE	DESCRIPTION		ROAD NO.	COUNTY		
			I-75/SR93 SR/CR951	COLLIER	425843-2-22-01	





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CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

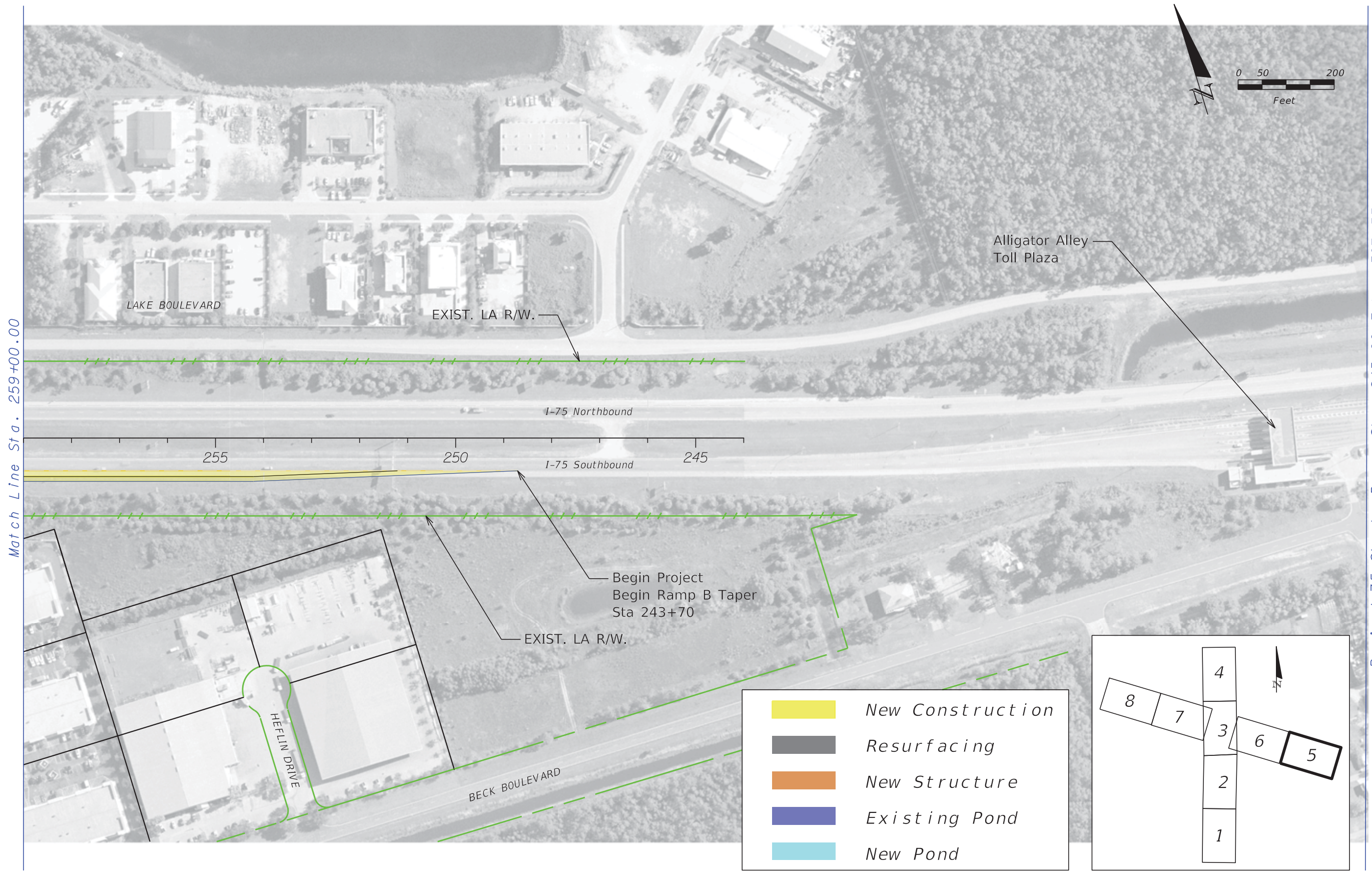
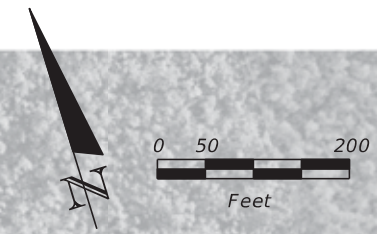
**KITTELSON & ASSOCIATES, INC.**  
 225 E. Robinson St., Suite 450  
 Orlando, Florida 32801  
 (407) 540-0555  
 Certificate of Authorization: 007524  
 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E.  
 P.E. License No.: 25730

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
I-75/SR93 SR/CR951	COLLIER	425843-2-22-01

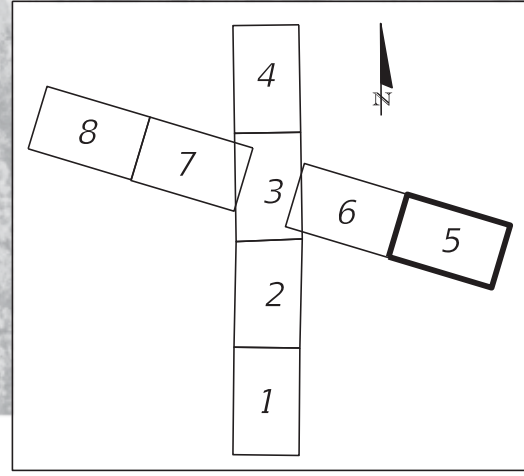
**I-75 AND SR951 ULTIMATE ICHG. PD&E**  
*Recommended Preferred*  
**Alternative Horizontal Elements**

SHEET NO.  
04





	New Construction
	Resurfacing
	New Structure
	Existing Pond
	New Pond



Match Line Sta. 259+00.00

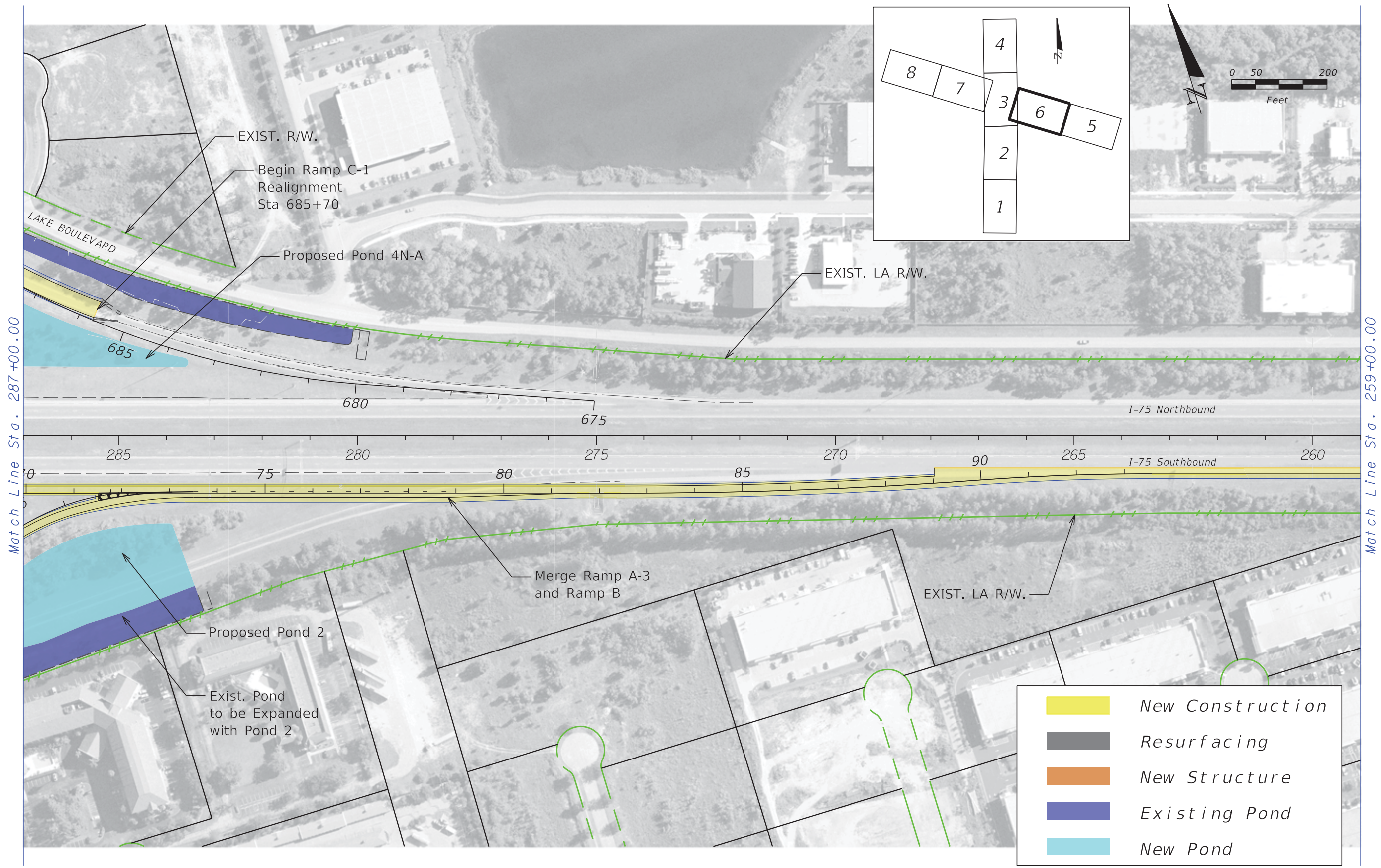
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CONCEPTUAL-NOT FOR CONSTRUCTION

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DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				I-75/SR93 SR/CR951	COLLIER	425843-2-22-01		05

225 E. Robinson St., Suite 450  
Orlando, Florida 32801  
(407) 540-0555  
Certificate of Authorization: 007524  
Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E.  
P.E. License No.: 25730





CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

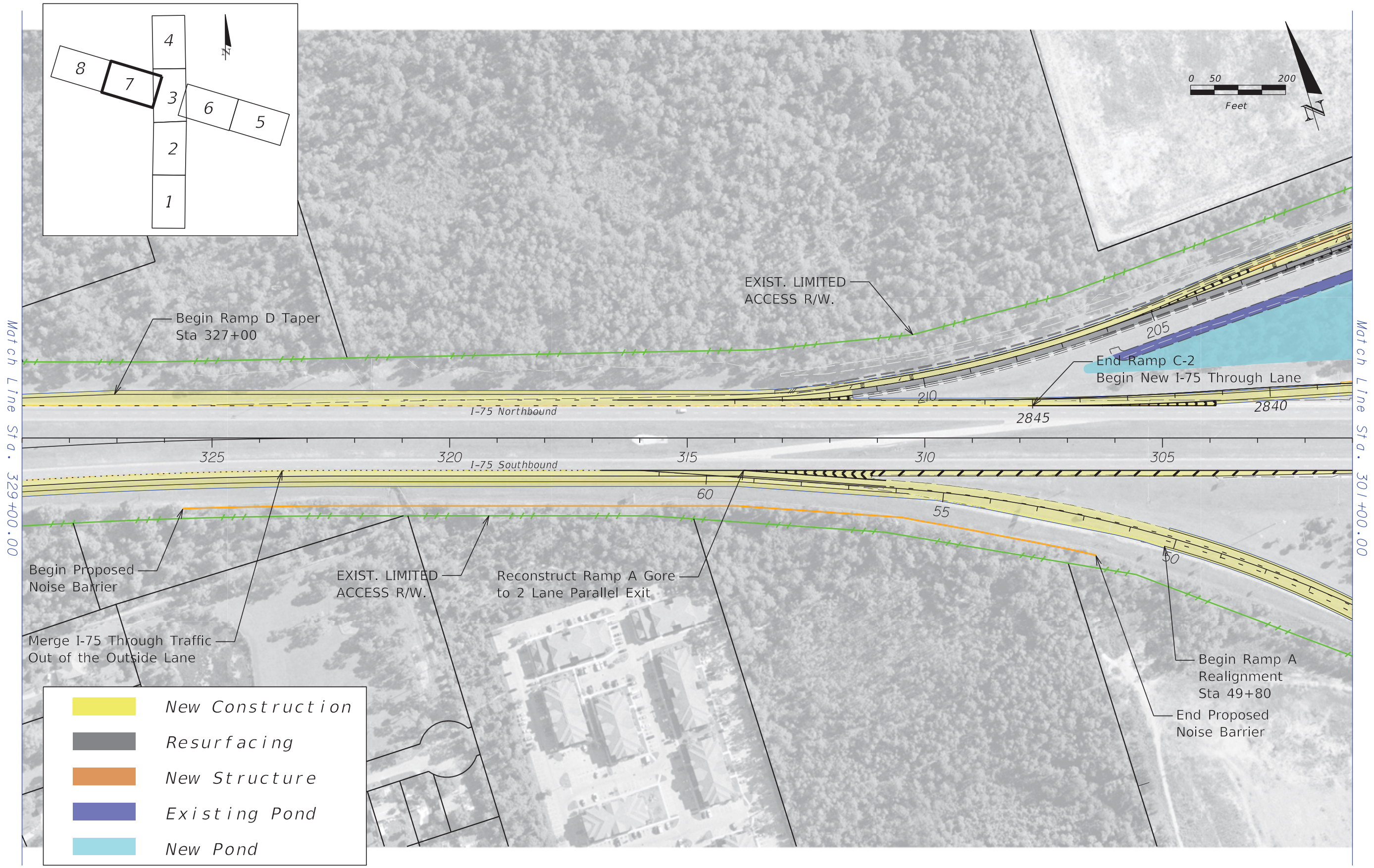
**KITTELSON & ASSOCIATES, INC.**  
 225 E. Robinson St., Suite 450  
 Orlando, Florida 32801  
 (407) 540-0555  
 Certificate of Authorization: 007524  
 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E.  
 P.E. License No.: 25730

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
I-75/SR93 SR/CR951	COLLIER	425843-2-22-01

**I-75 AND SR951 ULTIMATE ICHG. PD&E**  
*Recommended Preferred*  
**Alternative Horizontal Elements**

SHEET NO.  
06

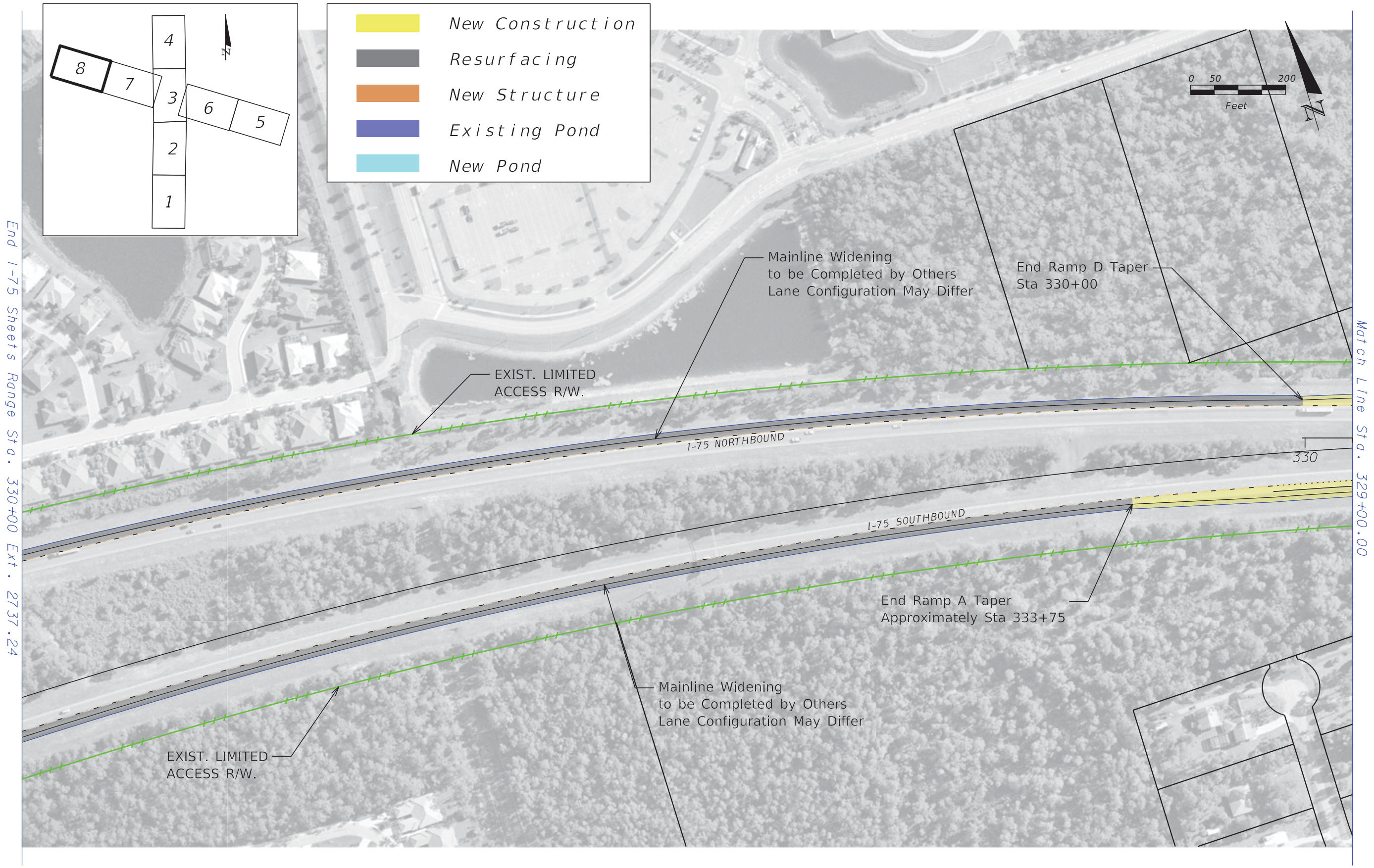




CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC.	STATE OF FLORIDA		I-75 AND SR951 ULTIMATE ICHG. PD&E	SHEET NO.
DATE	DESCRIPTION		DATE	DESCRIPTION		
		225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	07
			I-75/SR93 SR/CR951	COLLIER	425843-2-22-01	

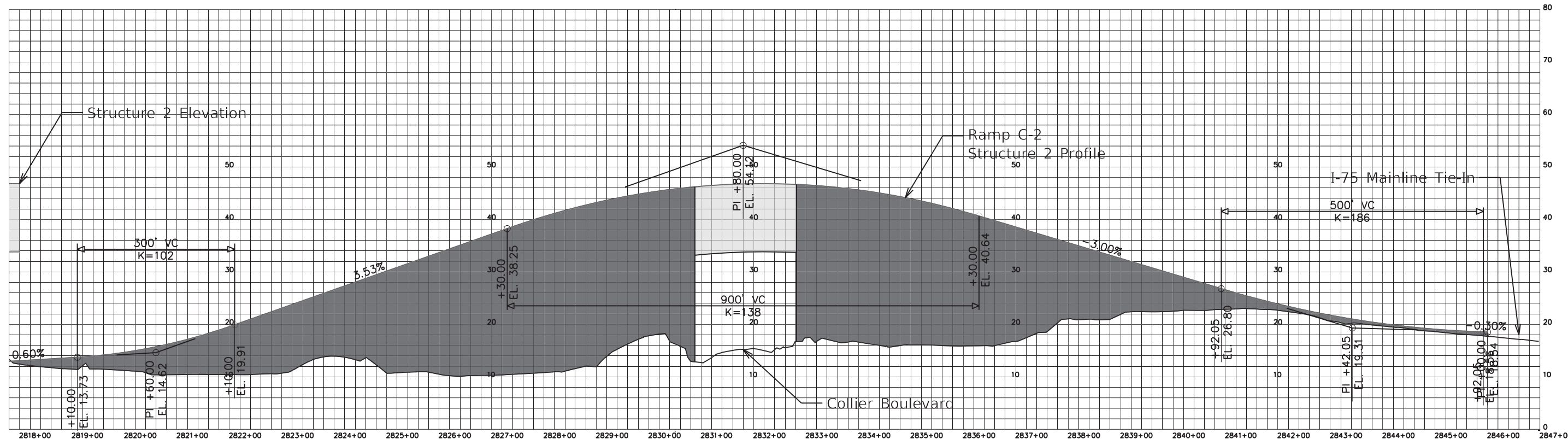
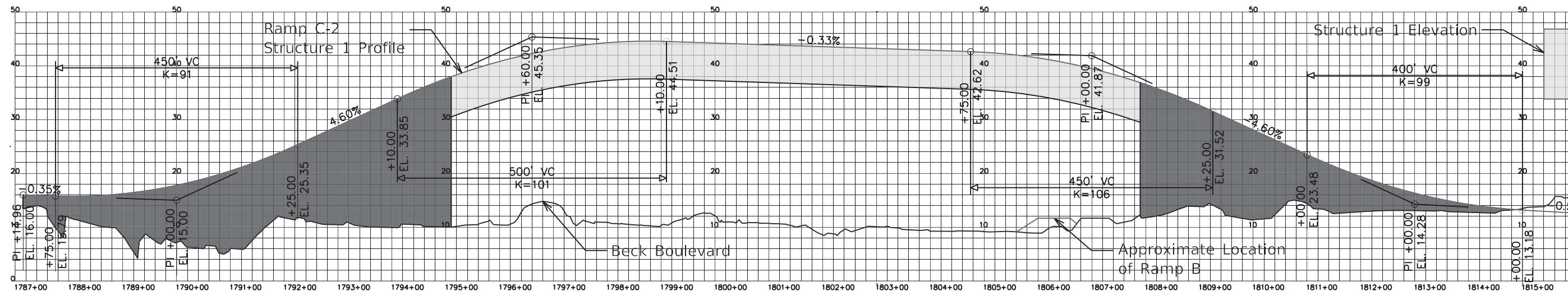




CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC.		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		I-75 AND SR951 ULTIMATE ICHG. PD&E Recommended Preferred Alternative Horizontal Elements	SHEET NO. 08
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY		
				225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	I-75/SR93 SR/CR951	COLLIER	425843-2-22-01





CONCEPTUAL-NOT FOR CONSTRUCTION

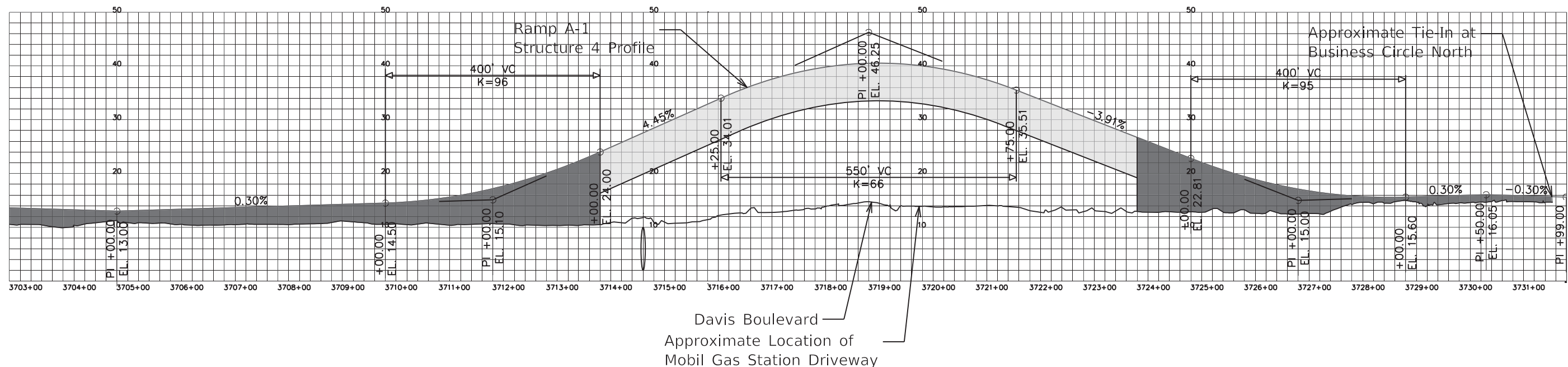
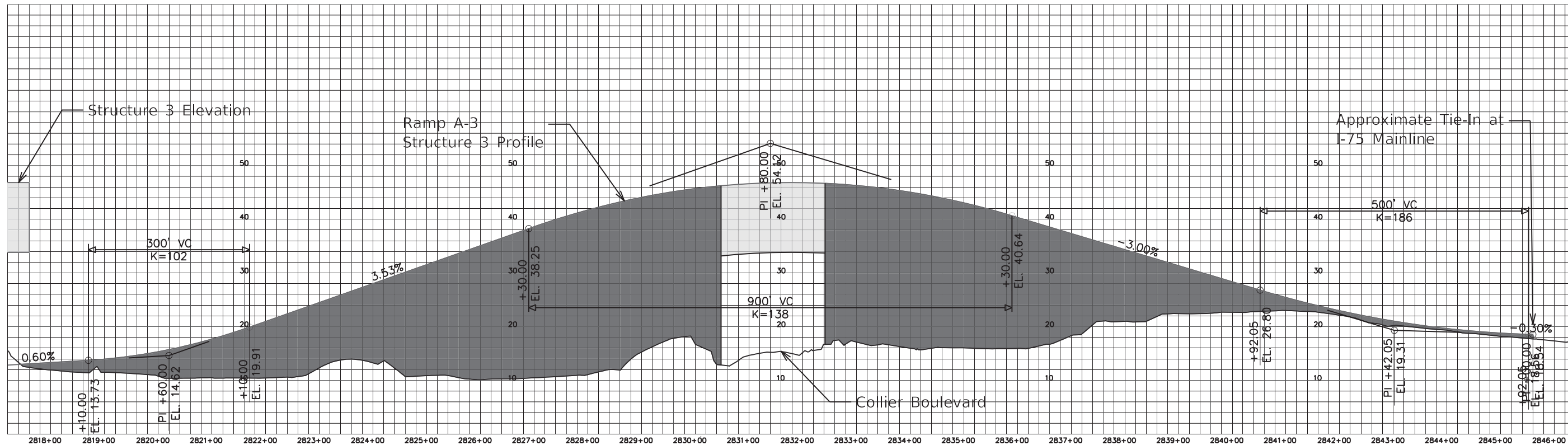
REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

**KITTELSON & ASSOCIATES, INC.**  
 225 E. Robinson St., Suite 450  
 Orlando, Florida 32801  
 (407) 540-0555  
 Certificate of Authorization: 007524  
 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E.  
 P.E. License No.: 25730

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
I-75/SR93 SR/CR951	COLLIER	425843-2-22-01

**I-75 AND SR951 ULTIMATE ICHG. PD&E**  
*Recommended Preferred*  
**Alternative Vertical Elements**

SHEET NO.  
01



CONCEPTUAL-NOT FOR CONSTRUCTION

REVISIONS		KITTELSON & ASSOCIATES, INC.		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		I-75 AND SR951 ULTIMATE ICHG. PD&E		SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	Recommended Preferred Alternative Vertical Elements	
				225 E. Robinson St., Suite 450 Orlando, Florida 32801 (407) 540-0555 Certificate of Authorization: 007524 Engineer of Record: John R. Freeman, Jr. P.E., P.T.O.E. P.E. License No.: 25730	I-75/SR93 SR/CR951	COLLIER	425843-2-22-01	02

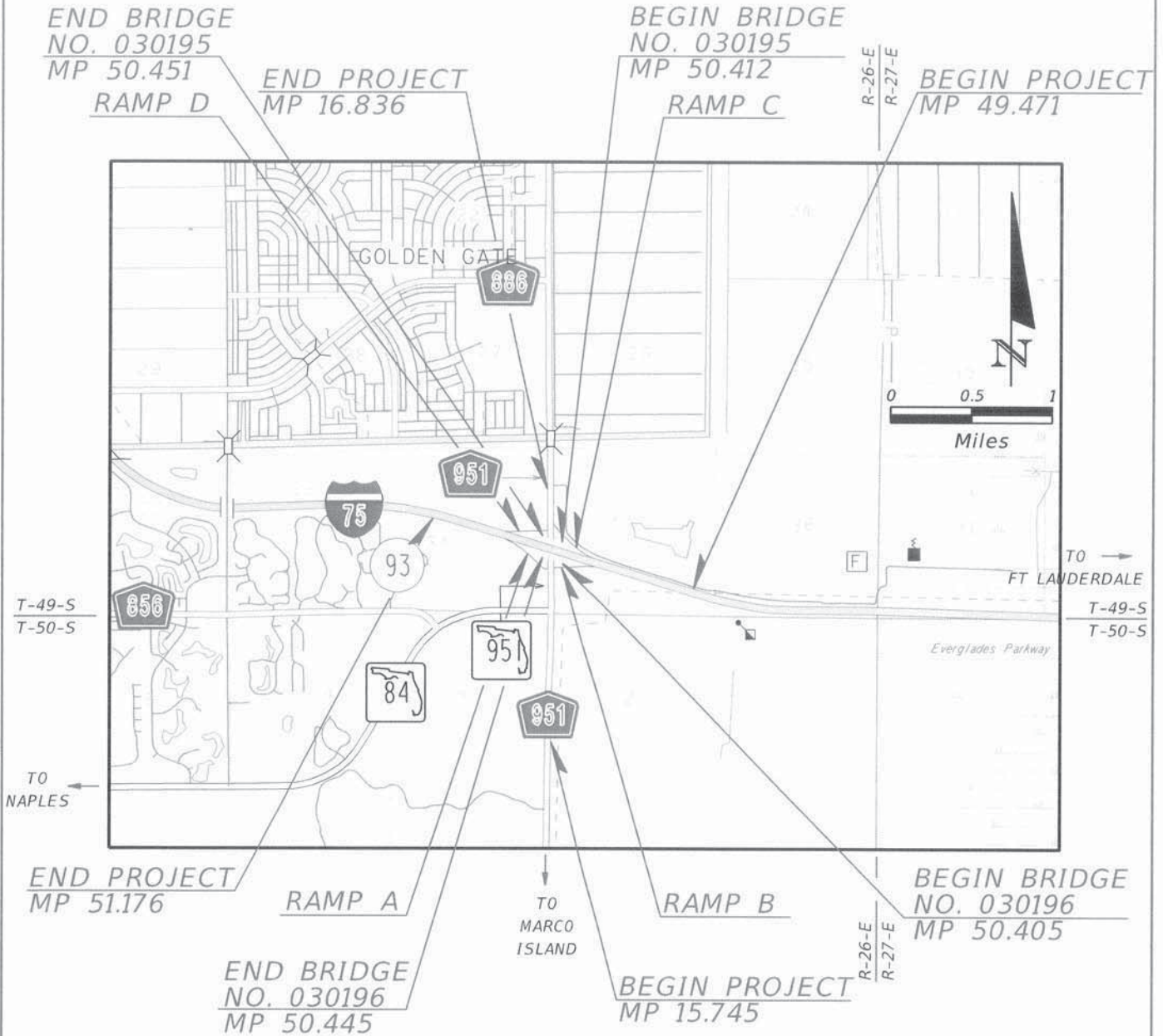




**Appendix B**  
Approved Typical Section  
Package

**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTION PACKAGE**



**LOCATION MAP**

**STATE ROAD NO. 93 (I-75) AND STATE ROAD NO. 951  
 ULTIMATE INTERCHANGE IMPROVEMENTS  
 COLLIER COUNTY**

**FINANCIAL PROJECT ID 425843-2-22-01**

# PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 COUNTY (SECTION) (I-75 RAMP A/D - 03175005/007) COLLIER  
 PROJECT DESCRIPTION I-75 AT SR 95/ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROJECT CONTROLS

<p style="text-align: center;"><u>FUNCTIONAL CLASSIFICATION</u></p> <p style="text-align: center;">( ) RURAL (X) URBAN</p> <p>(X) FREEWAY/EXPWY. ( ) MAJOR COLL.              ( ) PRINCIPAL ART. ( ) MINOR COLL.              ( ) MINOR ART. ( ) LOCAL</p>	<p style="text-align: center;"><u>HIGHWAY SYSTEM</u></p> <p>Yes No</p> <p>(X) ( ) NATIONAL HIGHWAY SYSTEM              (X) ( ) FLORIDA INTRASTATE HIGHWAY SYSTEM              (X) ( ) STRATEGIC INTERMODAL SYSTEM              (X) ( ) STATE HIGHWAY SYSTEM              ( ) (X) OFF STATE HIGHWAY SYSTEM</p>												
<p style="text-align: center;"><u>ACCESS CLASSIFICATION</u></p> <p>(X) 1 - FREEWAY              ( ) 2 - RESTRICTIVE w/Service Roads              ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing              ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing              ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing              ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing              ( ) 7 - BOTH MEDIAN TYPES</p>	<p style="text-align: center;"><u>TRAFFIC</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">YEAR</th> <th style="text-align: center;">AADT (RAMP A/D)</th> </tr> </thead> <tbody> <tr> <td>CURRENT</td> <td style="text-align: center;"><u>2011</u></td> <td style="text-align: center;"><u>10,000/9,900</u></td> </tr> <tr> <td>OPENING</td> <td style="text-align: center;"><u>2015</u></td> <td style="text-align: center;"><u>12,000/11,900</u></td> </tr> <tr> <td>DESIGN</td> <td style="text-align: center;"><u>2035</u></td> <td style="text-align: center;"><u>21,500/21,400</u></td> </tr> </tbody> </table> <p style="text-align: right;"><u>DISTRIBUTION</u></p> <p>DESIGN SPEED <u>45 (30*)</u> K =10.2%              POSTED SPEED <u>45 (25) N/A</u> D =100%              *- Loop ramp A-3 <u>ALL</u> T<sub>24</sub> =14.1%</p>		YEAR	AADT (RAMP A/D)	CURRENT	<u>2011</u>	<u>10,000/9,900</u>	OPENING	<u>2015</u>	<u>12,000/11,900</u>	DESIGN	<u>2035</u>	<u>21,500/21,400</u>
	YEAR	AADT (RAMP A/D)											
CURRENT	<u>2011</u>	<u>10,000/9,900</u>											
OPENING	<u>2015</u>	<u>12,000/11,900</u>											
DESIGN	<u>2035</u>	<u>21,500/21,400</u>											
<p style="text-align: center;"><u>CRITERIA</u></p> <p>(X) NEW CONSTRUCTION / RECONSTRUCTION              ( ) RRR INTERSTATE / FREEWAY              ( ) RRR NON-INTERSTATE / FREEWAY              ( ) TDLC / NEW CONSTRUCTION / RECONSTRUCTION              ( ) TDLC / RRR              ( ) MANUAL OF UNIFORM MINIMUM STANDARDS              (FLORIDA GREENBOOK) (OFF-STATE HIGHWAY SYSTEM ONLY)</p>	<p style="text-align: center;"><u>DESIGN SPEED APPROVALS</u></p> <p style="text-align: center;"><u>B.A. Masing</u> <u>7-22-13</u>              DISTRICT DESIGN ENGINEER DATE</p> <p style="text-align: center;"><u>[Signature]</u> <u>07/22/13</u>              DISTRICT TRAFFIC OPERATIONS ENGINEER DATE</p>												

**LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS:**  
 FREEWAY BORDER WIDTH IS NOT ATTAINED ALONG THE LIMITED ACCESS RIGHT-OF-WAY. A VARIATION IS REQUIRED TO MAINTAIN THE EXISTING RIGHT-OF-WAY OR MINIMIZE THE PROPOSED RIGHT-OF-WAY REQUIRED.

**LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING INDEPENDENT STRUCTURE DESIGN:**  
 A SINGLE LANE RAMP BRIDGE IS REQUIRED PARALLEL TO I-75.  
 RAMP A-3 BRIDGE STA 62+14.5 TO STA 64+08.0

**LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR:**

COLLIER COUNTY TRAFFIC OPERATIONS (A/D)	CENTURYLINK (A/D)
COLLIER COUNTY PUBLIC UTILITIES (A)	FLORIDA POWER & LIGHT (A)
COMCAST (A)	FPL FIBERNET LLC (A)
	TECO PEOPLES GAS (A)
	US METROPOLITAN TELECOM LLC (A)

**LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT:**



## PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 COUNTY (SECTION) I-75 RAMP <sup>COLLIER</sup> B/C - 03175001/003  
 PROJECT DESCRIPTION I-75 AT SR 95 ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROJECT CONTROLS

<p style="text-align: center;"><u>FUNCTIONAL CLASSIFICATION</u></p> <p style="text-align: center;">( ) RURAL (X) URBAN</p> <p>(X) FREEWAY/EXPWY. ( ) MAJOR COLL.              ( ) PRINCIPAL ART. ( ) MINOR COLL.              ( ) MINOR ART. ( ) LOCAL</p>	<p style="text-align: center;"><u>HIGHWAY SYSTEM</u></p> <p>Yes No</p> <p>(X) ( ) NATIONAL HIGHWAY SYSTEM              (X) ( ) FLORIDA INTRASTATE HIGHWAY SYSTEM              (X) ( ) STRATEGIC INTERMODAL SYSTEM              (X) ( ) STATE HIGHWAY SYSTEM              ( ) (X) OFF STATE HIGHWAY SYSTEM</p>												
<p style="text-align: center;"><u>ACCESS CLASSIFICATION</u></p> <p>(X) 1 - FREEWAY              ( ) 2 - RESTRICTIVE w/Service Roads              ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing              ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing              ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing              ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing              ( ) 7 - BOTH MEDIAN TYPES</p>	<p style="text-align: center;"><u>TRAFFIC</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">YEAR</th> <th style="text-align: center;">AADT (RAMP B/C)</th> </tr> </thead> <tbody> <tr> <td>CURRENT</td> <td style="text-align: center;"><u>2011</u></td> <td style="text-align: center;"><u>1,700 /1,800</u></td> </tr> <tr> <td>OPENING</td> <td style="text-align: center;"><u>2015</u></td> <td style="text-align: center;"><u>2,800 /3,000</u></td> </tr> <tr> <td>DESIGN</td> <td style="text-align: center;"><u>2035</u></td> <td style="text-align: center;"><u>7,800 /8,800</u></td> </tr> </tbody> </table> <p style="text-align: right;"><u>DISTRIBUTION</u></p> <p>DESIGN SPEED <u>45 (30*)</u> K =10.2%              POSTED SPEED <u>45 (25*) N/A</u> D =100%              * - Loop ramp C-2 <u>W/B</u> T<sub>24</sub> =14.1%</p>		YEAR	AADT (RAMP B/C)	CURRENT	<u>2011</u>	<u>1,700 /1,800</u>	OPENING	<u>2015</u>	<u>2,800 /3,000</u>	DESIGN	<u>2035</u>	<u>7,800 /8,800</u>
	YEAR	AADT (RAMP B/C)											
CURRENT	<u>2011</u>	<u>1,700 /1,800</u>											
OPENING	<u>2015</u>	<u>2,800 /3,000</u>											
DESIGN	<u>2035</u>	<u>7,800 /8,800</u>											
<p style="text-align: center;"><u>CRITERIA</u></p> <p>(X) NEW CONSTRUCTION / RECONSTRUCTION              ( ) RRR INTERSTATE / FREEWAY              ( ) RRR NON-INTERSTATE / FREEWAY              ( ) TDLC / NEW CONSTRUCTION / RECONSTRUCTION              ( ) TDLC / RRR              ( ) MANUAL OF UNIFORM MINIMUM STANDARDS              (FLORIDA GREENBOOK) (OFF-STATE HIGHWAY SYSTEM ONLY)</p>	<p style="text-align: center;"><u>DESIGN SPEED APPROVALS</u></p> <p style="text-align: center;"><u>B.A. Masing</u> <u>7-22-13</u>              DISTRICT DESIGN ENGINEER DATE</p> <p style="text-align: center;"><u>Wheeler</u> <u>07/22/13</u>              DISTRICT TRAFFIC OPERATIONS ENGINEER DATE</p>												

**LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS:**  
 FREEWAY BORDER WIDTH IS NOT ATTAINED ALONG THE LIMITED ACCESS RIGHT-OF-WAY. A VARIATION IS REQUIRED TO MAINTAIN THE EXISTING RIGHT-OF-WAY OR MINIMIZE THE PROPOSED RIGHT-OF-WAY REQUIRED.

**LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING INDEPENDENT STRUCTURE DESIGN:**

A NEW SINGLE LANE BRIDGE IS REQUIRED PARALLEL TO I-75.  
 RAMP C-2 BRIDGE STA 2830+88.5 TO STA 2832+82.0

**LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR:**

COLLIER COUNTY TRAFFIC OPERATIONS (B/C)	CENTURYLINK (C)
COLLIER COUNTY PUBLIC UTILITIES (B/C)	FLORIDA POWER & LIGHT (B/C)
COMCAST (C)	FPL FIBERNET LLC (C)
	TECO PEOPLES GAS (C)
	US METROPOLITAN TELECOM LLC (C)

**LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT:**

## PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 COUNTY (SECTION) COLLIER (SR 95) - 03030001  
 PROJECT DESCRIPTION I-75 AT SR 95/ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROJECT CONTROLS

<p style="text-align: center;"><u>FUNCTIONAL CLASSIFICATION</u></p> <p>( ) RURAL                  (X) URBAN                  ( ) FREEWAY/EXPWY. ( ) MAJOR COLL.                  (X) PRINCIPAL ART. ( ) MINOR COLL.                  ( ) MINOR ART. ( ) LOCAL</p>	<p style="text-align: center;"><u>HIGHWAY SYSTEM</u></p> <p>Yes No                  ( ) (X) NATIONAL HIGHWAY SYSTEM                  ( ) (X) FLORIDA INTRASTATE HIGHWAY SYSTEM                  ( ) (X) STRATEGIC INTERMODAL SYSTEM                  (X) ( ) STATE HIGHWAY SYSTEM                  ( ) (X) OFF STATE HIGHWAY SYSTEM</p>												
<p style="text-align: center;"><u>ACCESS CLASSIFICATION</u></p> <p>( ) 1 - FREEWAY                  ( ) 2 - RESTRICTIVE w/Service Roads                  ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing                  ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing                  (X) 5 - RESTRICTIVE w/440 ft. Connection Spacing                  ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing                  ( ) 7 - BOTH MEDIAN TYPES</p>	<p style="text-align: center;"><u>TRAFFIC</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">YEAR</th> <th style="text-align: center;">AADT (BTW. I-75 RAMPS)</th> </tr> </thead> <tbody> <tr> <td>CURRENT</td> <td style="text-align: center;"><u>2011</u></td> <td style="text-align: center;"><u>30,225</u></td> </tr> <tr> <td>OPENING</td> <td style="text-align: center;"><u>2015</u></td> <td style="text-align: center;"><u>35,000</u></td> </tr> <tr> <td>DESIGN</td> <td style="text-align: center;"><u>2035</u></td> <td style="text-align: center;"><u>73,500</u></td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 10px;"><u>DISTRIBUTION</u></p> <p>DESIGN SPEED <u>45</u> K =10.2%                  POSTED SPEED <u>45</u> D =56.0%                  T<sub>24</sub>=11.0%</p>		YEAR	AADT (BTW. I-75 RAMPS)	CURRENT	<u>2011</u>	<u>30,225</u>	OPENING	<u>2015</u>	<u>35,000</u>	DESIGN	<u>2035</u>	<u>73,500</u>
	YEAR	AADT (BTW. I-75 RAMPS)											
CURRENT	<u>2011</u>	<u>30,225</u>											
OPENING	<u>2015</u>	<u>35,000</u>											
DESIGN	<u>2035</u>	<u>73,500</u>											
<p style="text-align: center;"><u>CRITERIA</u></p> <p>(X) NEW CONSTRUCTION / RECONSTRUCTION                  ( ) RRR INTERSTATE / FREEWAY                  ( ) RRR NON-INTERSTATE / FREEWAY                  ( ) TDLC / NEW CONSTRUCTION / RECONSTRUCTION                  ( ) TDLC / RRR                  ( ) MANUAL OF UNIFORM MINIMUM STANDARDS                  (FLORIDA GREENBOOK) (OFF-STATE HIGHWAY SYSTEM ONLY)</p>	<p style="text-align: center;"><u>DESIGN SPEED APPROVALS</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 70%;"><u>D.A. Manning</u></td> <td style="text-align: center; width: 30%;"><u>7-22-13</u></td> </tr> <tr> <td style="text-align: center;">DISTRICT DESIGN ENGINEER</td> <td style="text-align: center;">DATE</td> </tr> <tr> <td style="text-align: center; width: 70%;"><u>Hebert</u></td> <td style="text-align: center; width: 30%;"><u>07/22/13</u></td> </tr> <tr> <td style="text-align: center;">DISTRICT TRAFFIC OPERATIONS ENGINEER</td> <td style="text-align: center;">DATE</td> </tr> </table>	<u>D.A. Manning</u>	<u>7-22-13</u>	DISTRICT DESIGN ENGINEER	DATE	<u>Hebert</u>	<u>07/22/13</u>	DISTRICT TRAFFIC OPERATIONS ENGINEER	DATE				
<u>D.A. Manning</u>	<u>7-22-13</u>												
DISTRICT DESIGN ENGINEER	DATE												
<u>Hebert</u>	<u>07/22/13</u>												
DISTRICT TRAFFIC OPERATIONS ENGINEER	DATE												

**LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS:**

**LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING INDEPENDENT STRUCTURE DESIGN:**

SINGLE LANE RAMP BRIDGES ARE REQUIRED ALONG RAMPS A-1 OVER DAVIS BLVD. AND C-2 OVER BECK BLVD.  
 RAMP A-1 BRIDGE STA 3714+00.0 TO STA 3724+00.0  
 RAMP C-2 BRIDGE STA 1795+00.0 TO STA 1807+91.5

**LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR:**

COLLIER COUNTY TRAFFIC OPERATIONS COLLIER COUNTY PUBLIC UTILITIES COMCAST	CENTURYLINK FLORIDA POWER & LIGHT FPL FIBERNET LLC TECO PEOPLES GAS US METROPOLITAN TELECOM LLC
---	---

**LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT:**

A VERTICAL CLEARANCE VARIATION WAS APPROVED ALONG SOUTHBOUND COLLIER BOULEVARD UNDER THE I-75 OVERPASSES NO. 030195 AND 030196.

A TECHNICAL MEMORANDUM DESCRIBING SPECIFIC ATTENUATION TREATMENTS ALONG SOUTHBOUND COLLIER BOULEVARD WAS OBTAINED DURING THE PD&E STUDY PROCESS IN LIEU OF A HORIZONTAL CLEARANCE VARIATION.

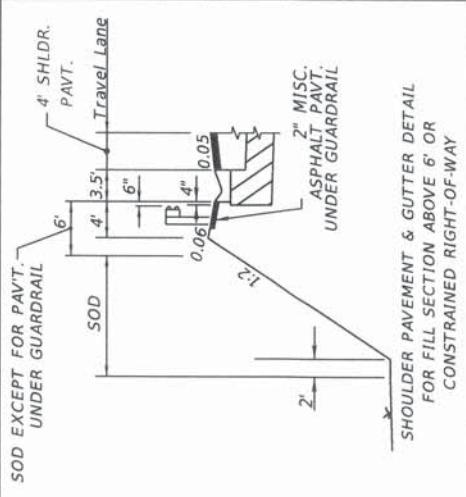
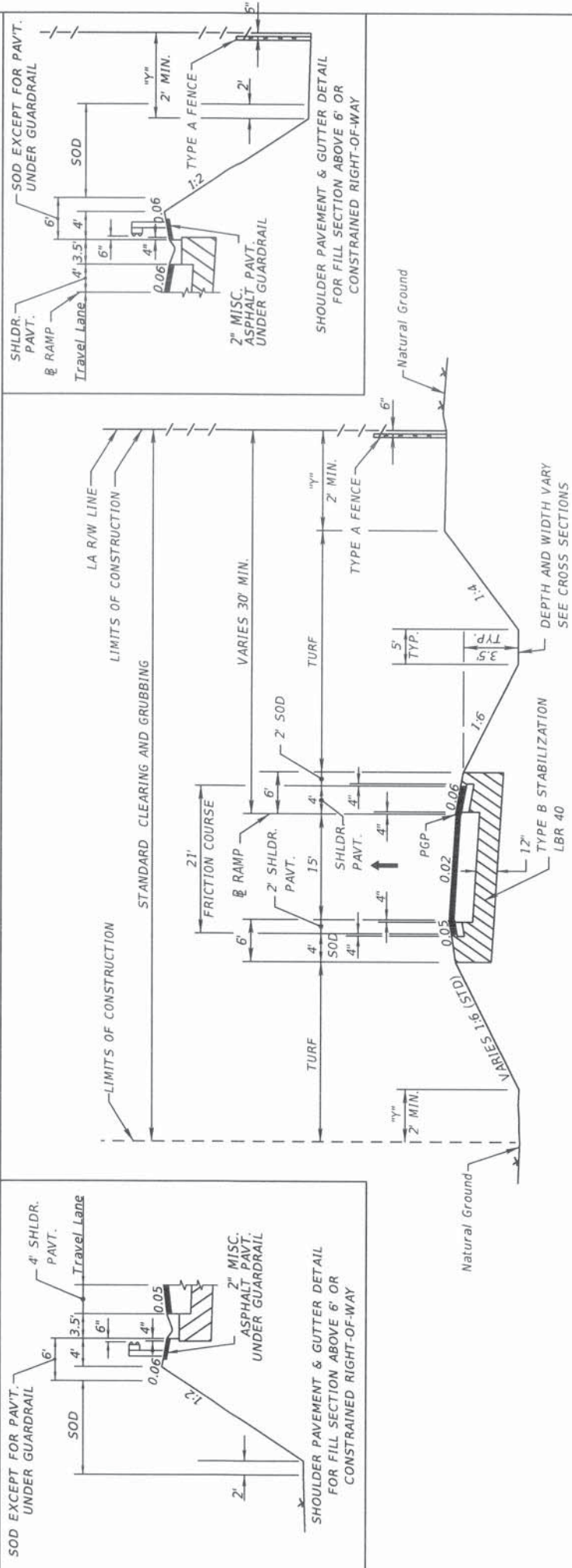


# PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 FEDERAL AID PROJECT NO. SFTL 251R, S129 354 R COUNTY NAME COLLIER  
 SECTION NO. 03175000 ROAD DESIGNATION INTERSTATE 75 LIMITS/MILEPOST 50.338  
 PROJECT DESCRIPTION I-75 AT SR 95/ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROPOSED ROADWAY TYPICAL SECTION

SINGLE LANE TYPICAL SECTION FOR PROPOSED



STA 4805+00 TO STA 4816+00 (NB) RAMP B  
 STA 81+50 TO STA 89+00 (EB) RAMP B  
 STA 2819+50 TO STA 2822+80 (NB) RAMP C-2  
 STA 3701+50 TO STA 3711+00 (EB) RAMP A-1  
 STA 51+50 TO STA 54+00 (SB) RAMP A-3  
 STA 67+00 TO STA 71+00 (EB) RAMP A-3

FDOT CONCURRENCE

*William A. Hartmann*  
 William A. Hartmann, P.E.  
 FDOT Project Development and Environment Engineer

7/16/2013  
 Date

*B.A. Masing*  
 Bernie Masing, P.E.  
 FDOT District Design Engineer

7-22-13  
 Date

*L.K. Mandam*  
 L.K. Mandam, P.E.  
 FDOT District Traffic Operations Engineer

07/24/13  
 Date

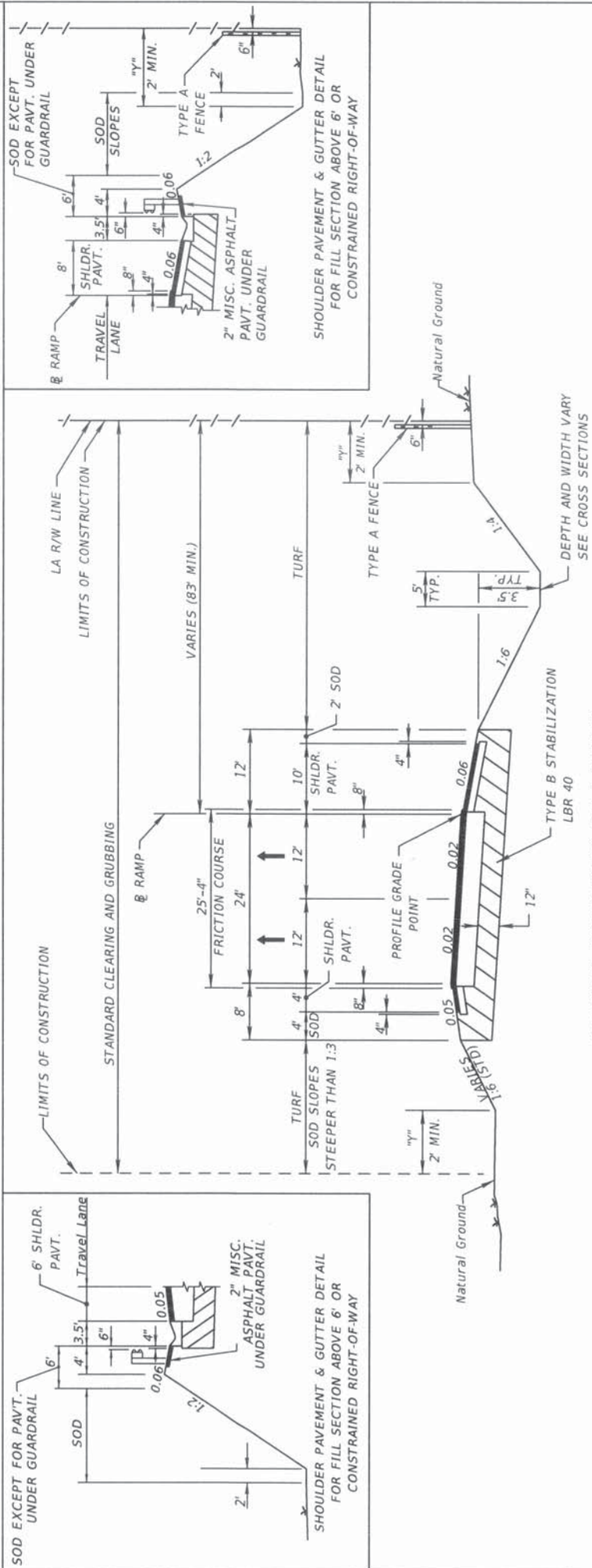


# PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 FEDERAL AID PROJECT NO. SFTL 251R, S129 354 R COUNTY NAME COLLIER  
 SECTION NO. 03175000 ROAD DESIGNATION INTERSTATE 75 LIMITS/MILEPOST 50.338  
 PROJECT DESCRIPTION I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROPOSED ROADWAY TYPICAL SECTION

TWO LANE TYPICAL SECTION FOR PROPOSED



"Y" THE AREA DISTURBED  
BY CONSTRUCTION VARIES.

FDOT CONCURRENCE

*William A. Hartmann*  
 William A. Hartmann, P.E.  
 FDOT Project Development and Environment Engineer

7/16/2003  
 Date

*B.A. Manning*  
 Bernie Manning, P.E.  
 FDOT District Design Engineer

7-22-03  
 Date

*L.K. Nandanam*  
 L.K. Nandanam, P.E.  
 FDOT District Traffic Operations Engineer

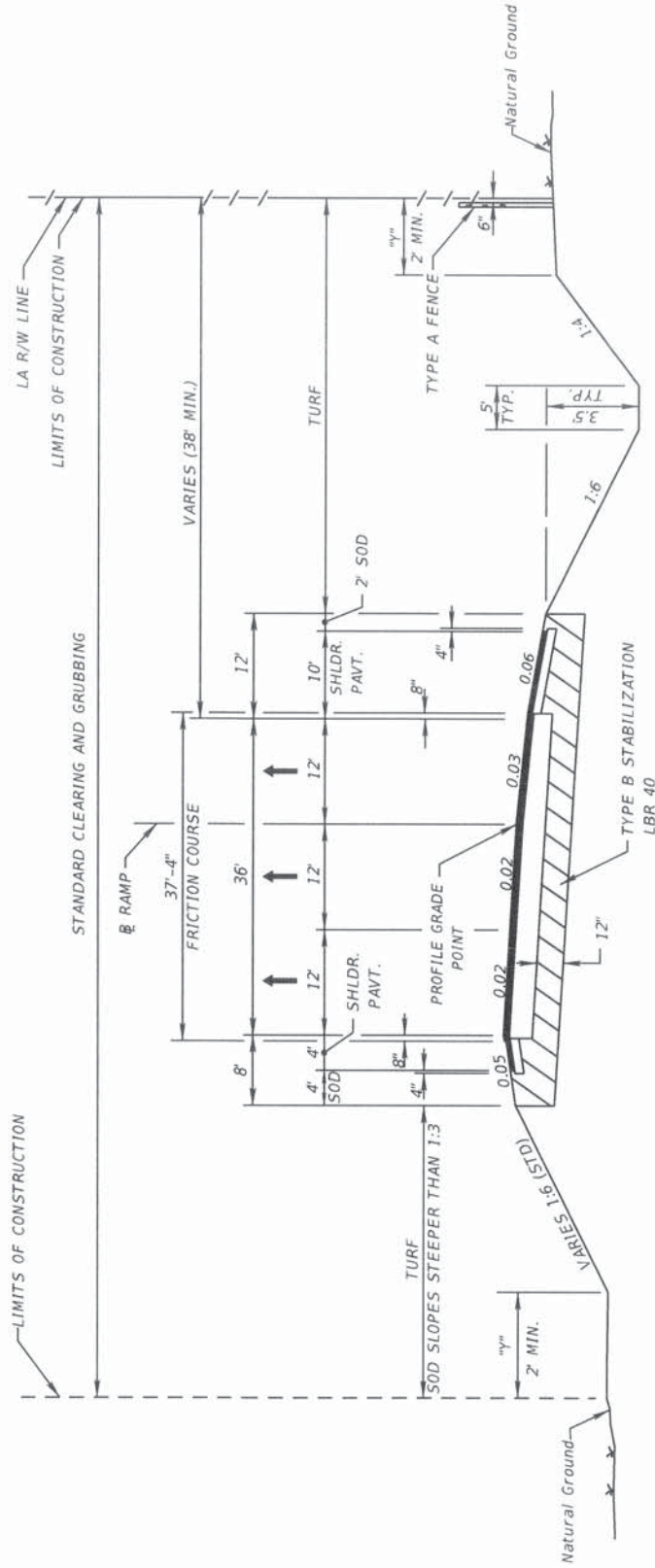
07/22/13  
 Date

# PROJECT IDENTIFICATION

FINANCIAL PROJECT ID 425843-2-22-01 FEDERAL AID PROJECT NO. SFTL 251R, S129 354 R COUNTY NAME COLLIER  
 SECTION NO. 03175000 ROAD DESIGNATION INTERSTATE 75 LIMITS/MILEPOST 50.338  
 PROJECT DESCRIPTION I-75 AT SR 95/ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROPOSED ROADWAY TYPICAL SECTION

THREE LANE TYPICAL SECTION FOR PROPOSED



STA 45+50 TO STA 50+20 (EB) & RAMP A-2  
 STA 685+70 TO STA 693+00 (WB) & RAMP C-1

"Y" THE AREA DISTURBED  
 BY CONSTRUCTION VARIES.

FDOT CONCURRENCE

William A. Hartmann  
 William A. Hartmann, P.E.  
 FDOT Project Development and Environment Engineer

7/14/2013  
 Date

B.A. Manning  
 Bernie Manning, P.E.  
 FDOT District Design Engineer

7-22-13  
 Date

[Signature]  
 L.K. Nandam, P.E.  
 FDOT District Traffic Operations Engineer

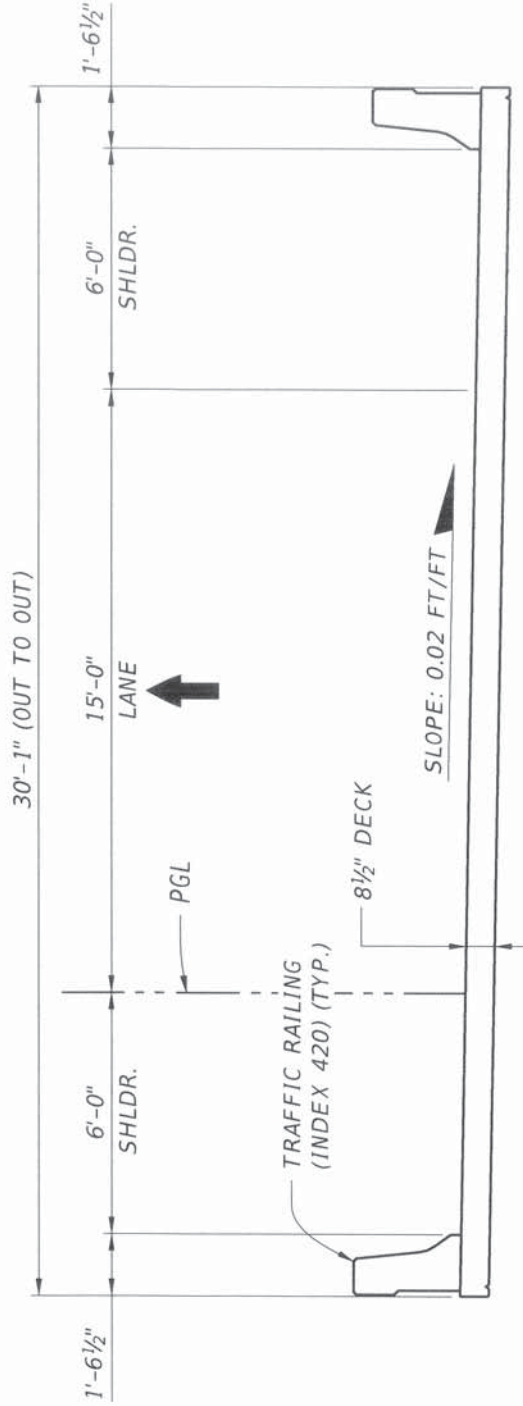
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 SECTION NO. 03175000 ROAD DESIGNATION INTERSTATE 75 LIMITS/MILEPOST 50.338  
 PROJECT DESCRIPTION I-75 AT SR 95/ULTIMATE INTERCHANGE PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

## PROPOSED BRIDGE TYPICAL SECTION

SINGLE LANE RAMP TYPICAL SECTION FOR  
 BRIDGES AND MSE WALL SECTIONS OF PROPOSED RAMPS



STA 3714+00.0 TO STA 3724+00.0 (SB) @ RAMP A-1  
 STA 62+14.5 TO STA 64+08.0 (EB) @ RAMP A-3  
 STA 1795+00.0 TO STA 1807+91.5 (NB) @ RAMP C-2  
 STA 2830+88.5 TO STA 2832+82.0 (WB) @ RAMP C-2

FDOT CONCURRENCE

William A. Hartmann  
 William A. Hartmann, P.E.  
 FDOT Project Development and Environment Engineer

7/16/2013  
 Date

B.A. Masing  
 Bernie Masing, P.E.  
 FDOT District Design Engineer

7-22-13  
 Date

L.K. Nandam  
 L.K. Nandam, P.E.  
 FDOT District Traffic Operations Engineer

07/22/13  
 Date





**Appendix C**  
Construction Cost  
Estimate

Sequence Number	Sequence Type	Description	Affiliation	Sequece Subtotal	Construction Subtotal
Sequence: 1	Se RSU - Resurfacing, Undivided	COLLIER BOULEVARD (SR 951) MILLING & RESURFACING LEFT SOUTHBOUND ROADWAY STA 809+75.00 To STA 822+25.00	Collier	Sequence 1 Total	\$190,125.43
Sequence: 2	Se RSU - Resurfacing, Undivided	COLLIER BOULEVARD (SR 951) MILLING & RESURFACING RIGHT NORTHBOUND ROADWAY STA 804+00.00 To STA 822+25.00.	Collier	Sequence 2 Total	\$208,591.94
Sequence: 3	Se RSU - Resurfacing, Undivided	RAMP D MILLING & RESURFACING STA 196+00.00 To STA 211+50.00.	Ramp D	Sequence 3 Total	\$72,770.89
Sequence: 4	Se RSU - Resurfacing, Undivided	COLLIER BOULEVARD (SR 951) MILLING & RESURFACING LEFT SOUTHBOUND ROADWAY STA 772+75.00 To STA 792+25.00.	Collier	Sequence 4 Total	\$91,640.56
Sequence: 5	Se NUR - New Construction, Undivided, Rural	RAMP A - SINGLE LANE NEW CONSTRUCTION - STA 3700+20.00 TO 3714+00.00	Ramp A	Sequence 5 Total	\$199,137.62
Sequence: 6	Se NUR - New Construction, Undivided, Rural	RAMP A - THREE LANE NEW CONSTRUCTION. STA 44+20.00 To 85+50.00.	Ramp A	Sequence 6 Total	\$1,269,326.09
Sequence: 7	Se NUR - New Construction, Undivided, Rural	RAMP A-1' - TWO LANE NEW CONSTRUCTION. STA 3700+00.00 To 3724+00.00. (1400 LF OF ROADWAY, 1000 LF OF BRIDGE)	Ramp A-1	Sequence 7 Total	\$4,439,269.89
Sequence: 8	Se NUR - New Construction, Undivided, Rural	RAMP A-2' - THREE LANE NEW CONSTRUCTION. STA 439+85.00 To 444+20.00.	Ramp A-2	Sequence 8 Total	\$138,013.88
Sequence: 9	Se NUR - New Construction, Undivided, Rural	RAMP A-3' - SINGLE LANE NEW CONSTRUCTION STA 50+00.00 To Sta 89+00.00 (3710 LF Roadway, 190' Bridge)	Ramp A-3	Sequence 9 Total	\$2,829,107.75
Sequence: 10	Se NUR - New Construction, Undivided, Rural	RAMP B' - SINGLE LANE NEW CONSTRUCTION STA 4799+00.00 RAMP B TO STA 250+00.00 I-75.	Ramp B	Sequence 10 Total	\$803,133.64
Sequence: 11	Se NUR - New Construction, Undivided, Rural	RAMP C-2' - SINGLE LANE NEW CONSTRUCTION STA 1781+50.00 (COLLIER BLVD) TO STA 2887+25.00 (I-75).	Ramp C-2	Sequence 11 Total	\$13,461,767.20
Sequence: 12	Se NUR - New Construction, Undivided, Rural	RAMP C-1' - THREE LANE NEW CONSTRUCTION. STA 685+70.00 To 696+90.00.	Ramp C-1	Sequence 12 Total	\$340,760.15
Sequence: 13	Se NUR - New Construction, Undivided, Rural	RAMP D' - TWO LANE NEW CONSTRUCTION. STA 196+00.00 TO 230+00.00.	Ramp D	Sequence 13 Total	\$830,817.51
Sequence: 14	Se MIS - Miscellaneous Construction	TRAFFIC SIGNALS AT CR 951 (COLLIER BLVD) & SR 84 (DAVIS BLVD/BECK BLVD) & CR 951 (COLLIER BLVD) & RAMP C-1/RAMP D.	Traffic Signals	Sequence 14 Total	\$707,227.48
Sequence: 15	Se MIS - Miscellaneous Construction	RETENTION PONDS	Ponds	Sequence 15 Total	\$1,887,371.63
Sequence: 16	Se NUR - New Construction, Undivided, Rural	COLLIER BOULEVARD (SR 951) RECONSTRUCTION LEFT SOUTHBOUND ROADWAY STA 3724+00.00 TO 3732+20.00	Collier	Sequence 16 Total	\$193,452.29
Sequence: 17	Se NUR - New Construction, Undivided, Rural	COLLIER BOULEVARD (SR 951) RECONSTRUCTION LEFT SOUTHBOUND ROADWAY STA 822+10.00 TO 826+00.00	Collier	Sequence 17 Total	\$141,139.97
Sequence: 18	Se NUR - New Construction, Undivided, Rural	COLLIER BOULEVARD (SR 951) RECONSTRUCTION RIGHT NORTHBOUND ROADWAY STA 822+10.00 TO 830+30.00	Collier	Sequence 18 Total	\$288,433.17
Sequence: 19	Se MIS - Miscellaneous Construction	Shared Use Paths - 5 Segments Totalling 3100 LF	SUP	Sequence 19 Total	\$228,026.91
Sequence: 20	Se MIS - Miscellaneous Construction		ITS	Sequence 20 Total	\$21,089.45
				<b>Rounded Subtotal \$</b>	<b>100,000</b>
				<b>Roadway Construction Cost</b>	<b>\$ 9,800,000</b>
				<b>Structures Construction Cost</b>	<b>\$ 16,200,000</b>
				<b>SW Construction Cost</b>	<b>\$ 2,400,000</b>
				<b>Utility Relocations</b>	<b>\$ 300,000</b>
				<b>Noise Wall Construction</b>	<b>\$ 1,300,000</b>
				<b>Construction Subtotal</b>	<b>\$30,000,000</b>
				Maintenance of Traffic	\$3,000,000
				Mobilization	\$3,300,000
				Project Unknowns	\$5,400,000
				INITIAL CONTINGENCY AMOUNT (DO NOT BID)	\$150,000
				<b>Project Construction Grand Total</b>	<b>\$41,850,000</b>
				Final Design Fees	\$4,200,000
				C.E.I.	\$6,300,000
				Right-of-way Acquisition	\$2,900,000
				Mitigation	\$500,000
				<b>Preferred Alternative Project Grand Total Cost</b>	<b>\$55,750,000</b>



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# FDOT Long Range Estimating System - Production

## R3: Project Details by Sequence Report

**Project:** 425843-2-22-01

**Letting Date:** 07/2021

**Description:** I-75 AT SR 951

**District:** 01      **County:** 03 COLLIER      **Market Area:** 10      **Units:** English

**Contract Class:** 1      **Lump Sum Project:** N      **Design/Build:** N      **Project Length:** 0.650 MI

**Project Manager:** CES-WAH-ADK

**Version 10 Project Grand Total**

**\$39,586,784.60**

**Description:** Unit Cost Update from Version 6P - Preferred Alternate - 4/17/14

**Sequence:** 1 RSU - Resurfacing, Undivided

**Net Length:** 0.308 MI  
1,626 LF

**Description:** COLLIER BOULEVARD (SR 951) MILLING & RESURFACING LEFT SOUTHBOUND ROADWAY  
STA 809+75.00 To STA 822+25.00

### ROADWAY COMPONENT

**User Input Data**

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	25.00 / 25.00
Structural Spread Rate	220
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	9,034.67	SY	\$2.45	\$22,134.94
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	993.81	TN	\$92.30	\$91,728.66
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	361.39	TN	\$103.93	\$37,559.26

**Turnouts/Crossovers Subcomponent**

Description	Value
Asphalt Adjustment	15.00
Milling Code	Y
Friction Course Code	Y

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	1,355.20	SY	\$2.45	\$3,320.24
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	149.07	TN	\$92.30	\$13,759.16
337-7-43	ASPH CONC FC,TRAFFIC C,FC-	54.21	TN	\$103.93	\$5,634.05

12.5,PG 76-22

**Pavement Marking Subcomponent**

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	42.00	EA	\$5.23	\$219.66
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.62	NM	\$847.33	\$525.34
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.92	GM	\$350.34	\$322.31
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.62	NM	\$3,957.74	\$2,453.80
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.92	GM	\$1,171.15	\$1,077.46
<b>Roadway Component Total</b>					<b>\$178,734.88</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	4.00	AS	\$301.22	\$1,204.88
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	\$873.36	\$4,366.80
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	\$136.09	\$136.09
700-1-60	SINGLE POST SIGN, REMOVE	4.00	AS	\$10.67	\$42.68
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	\$4,889.99	\$4,889.99
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	\$750.11	\$750.11
<b>Signing Component Total</b>					<b>\$11,390.55</b>

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<b>Sequence 1 Total</b>	<b>\$190,125.43</b>
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**Sequence:** 2 RSU - Resurfacing, Undivided**Net Length:** 0.346 MI  
1,825 LF**Description:** COLLIER BOULEVARD (SR 951) MILLING & RESURFACING RIGHT NORTHBOUND  
ROADWAY STA 804+00.00 To STA 822+25.00.**ROADWAY COMPONENT****User Input Data**

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	25.00 / 25.00
Structural Spread Rate	220
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	10,137.60	SY	\$2.45	\$24,837.12
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	1,115.14	TN	\$92.30	\$102,927.42
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	405.50	TN	\$103.93	\$42,143.62

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE <b>Comment:</b> 660' + 35' = 685'	685.00	LF	\$22.74	\$15,576.90

**Turnouts/Crossovers Subcomponent**

Description	Value
Asphalt Adjustment	10.00
Milling Code	Y
Friction Course Code	Y

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	1,013.76	SY	\$2.45	\$2,483.71
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	111.51	TN	\$92.30	\$10,292.37
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	40.55	TN	\$103.93	\$4,214.36

**Pavement Marking Subcomponent**

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3



**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	233.00	EA	\$5.23	\$1,218.59
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.69	NM	\$847.33	\$584.66
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.04	GM	\$350.34	\$364.35
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.69	NM	\$3,957.74	\$2,730.84
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.04	GM	\$1,171.15	\$1,218.00
<b>Roadway Component Total</b>					<b>\$208,591.94</b>
<b>Sequence 2 Total</b>					<b>\$208,591.94</b>

**Sequence:** 3 RSU - Resurfacing, Undivided**Net Length:** 0.294 MI  
1,550 LF**Description:** RAMP D MILLING & RESURFACING STA 196+00.00 To STA 211+50.00.**ROADWAY COMPONENT****User Input Data**

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	4,133.89	SY	\$2.45	\$10,128.03
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	454.73	TN	\$92.30	\$41,971.58
337-7-43	ASPH CONC FC, TRAFFIC C, FC-12.5, PG 76-22	165.36	TN	\$103.93	\$17,185.86

**Turnouts/Crossovers Subcomponent**

Description	Value
Asphalt Adjustment	0.00
Milling Code	N
Friction Course Code	N

**Pavement Marking Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	40.00	EA	\$5.23	\$209.20
710-11-111	PAINTED PAVT MARK, STD, WHITE, SOLID, 6" PAINTED PAVT	0.59	NM	\$847.33	\$499.92

710-11-131	MARK,STD,WHITE,SKIP, 6"	0.29 GM	\$350.34	\$101.60
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.59 NM	\$3,957.74	\$2,335.07
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.29 GM	\$1,171.15	\$339.63

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<b>Roadway Component Total</b>				<b>\$72,770.89</b>
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<b>Sequence 3 Total</b>				<b>\$72,770.89</b>
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**Sequence:** 4 RSU - Resurfacing, Undivided**Net Length:** 0.369 MI  
1,950 LF**Description:** COLLIER BOULEVARD (SR 951) MILLING & RESURFACING LEFT SOUTHBOUND ROADWAY  
STA 772+75.00 To STA 792+25.00.**ROADWAY COMPONENT****User Input Data**

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	18.00 / 0.00
Structural Spread Rate	220
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	3,899.81	SY	\$2.45	\$9,554.53
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	428.98	TN	\$92.30	\$39,594.85
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	155.99	TN	\$103.93	\$16,212.04

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-70	CONCRETE TRAFFIC SEPARATOR, SP- VAR WIDT	253.30	SY	\$49.17	\$12,454.76
	<b>Comment:</b> $(380' \times (4' + 8')/2) / 9 = 253.3 \text{ SY}$				

**Turnouts/Crossovers Subcomponent**

Description	Value
Asphalt Adjustment	15.00
Milling Code	Y
Friction Course Code	Y

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	584.97	SY	\$2.45	\$1,433.18
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	64.35	TN	\$92.30	\$5,939.50
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	23.40	TN	\$103.93	\$2,431.96

**Pavement Marking Subcomponent**

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

Skip Stripe No. of Stripes 0

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.74	NM	\$847.33	\$627.02
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.74	NM	\$3,957.74	\$2,928.73
<b>Roadway Component Total</b>					<b>\$91,176.58</b>

**SHOULDER COMPONENT**

**User Input Data**

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Erosion Control**

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	36.93	LF	\$6.73	\$248.54
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	36.93	LF	\$4.97	\$183.54
107-1	LITTER REMOVAL	0.44	AC	\$27.48	\$12.09
107-2	MOWING	0.44	AC	\$45.03	\$19.81
<b>Shoulder Component Total</b>					<b>\$463.98</b>

**Sequence 4 Total** \$91,640.56

**Sequence:** 5 NUR - New Construction, Undivided, Rural**Net Length:** 0.261 MI  
1,380 LF**Description:** RAMP 'A' - SINGLE LANE NEW CONSTRUCTION - STA 3700+20.00 TO 3714+00.00**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.261
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	3.16	AC	\$10,761.05	\$34,004.92
120-6	EMBANKMENT	3,838.21	CY	\$7.36	\$28,249.23
<b>Earthwork Component Total</b>					<b>\$62,254.15</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	4,140.58	SY	\$3.55	\$14,699.06
285-709	OPTIONAL BASE,BASE GROUP 09	2,350.93	SY	\$18.08	\$42,504.81
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	316.29	TN	\$92.30	\$29,193.57
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	92.01	TN	\$103.93	\$9,562.60

**Pavement Marking Subcomponent**

<b>Description</b>	<b>Value</b>
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1



Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.52 NM	\$847.33	\$440.61
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.52 NM	\$3,957.74	\$2,058.02
<b>Roadway Component Total</b>				<b>\$98,458.67</b>

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,021.34 SY	\$9.44	\$9,641.45
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	101.21 TN	\$92.30	\$9,341.68
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	36.81 TN	\$103.93	\$3,825.66
570-1-2	PERFORMANCE TURF, SOD	920.13 SY	\$1.89	\$1,739.05

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,939.33 LF	\$0.50	\$2,469.66
104-11	FLOATING TURBIDITY BARRIER	89.95 LF	\$6.73	\$605.36
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	89.95 LF	\$4.97	\$447.05
107-1	LITTER REMOVAL	0.43 AC	\$27.48	\$11.82
107-2	MOWING	0.43 AC	\$45.03	\$19.36
<b>Shoulder Component Total</b>				<b>\$28,101.10</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
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700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	\$250.60	\$250.60
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	8.00 AS	\$838.68	\$6,709.44
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	\$3,363.66	\$3,363.66
<b>Signing Component Total</b>				<b>\$10,323.70</b>
<hr/>				
<b>Sequence 5 Total</b>				<b>\$199,137.62</b>
<hr/>				

**Sequence:** 6 NUR - New Construction, Undivided, Rural**Net Length:** 0.782 MI  
4,130 LF**Description:** RAMP 'A' - THREE LANE NEW CONSTRUCTION. STA 44+20.00 To 85+50.00.**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.782
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	9.48 AC	\$10,761.05	\$102,014.75
120-6	EMBANKMENT	25,789.18 CY	\$7.36	\$189,808.36
<b>Earthwork Component Total</b>				<b>\$291,823.11</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	3
Roadway Pavement Width L/R	18.00 / 18.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	25,697.88 SY	\$3.55	\$91,227.47
285-709	OPTIONAL BASE,BASE GROUP 09	16,822.93 SY	\$18.08	\$304,158.57
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	2,271.51 TN	\$92.30	\$209,660.37
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	660.80 TN	\$103.93	\$68,676.94

**Turnouts/Crossovers Subcomponent**



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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,569.79 SY	\$3.55	\$9,122.75
285-709	OPTIONAL BASE,BASE GROUP 09	1,682.29 SY	\$18.08	\$30,415.80
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	227.15 TN	\$92.30	\$20,965.94
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	66.08 TN	\$103.93	\$6,867.69

**Pavement Marking Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	422.00 EA	\$5.23	\$2,207.06
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.56 NM	\$847.33	\$1,321.83
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.56 GM	\$350.34	\$546.53
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.56 NM	\$3,957.74	\$6,174.07
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.56 GM	\$1,171.15	\$1,826.99

**Roadway Component Total**

\$753,172.02

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	6,727.34 SY	\$9.44	\$63,506.09
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	706.69 TN	\$92.30	\$65,227.49
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	256.98 TN	\$103.93	\$26,707.93
570-1-2	PERFORMANCE TURF, SOD	2,753.34 SY	\$1.89	\$5,203.81

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,107.42 LF	\$0.50	\$2,053.71
104-11	FLOATING TURBIDITY BARRIER	74.80 LF	\$6.73	\$503.40
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	74.80 LF	\$4.97	\$371.76
107-1	LITTER REMOVAL	0.36 AC	\$27.48	\$9.89
107-2	MOWING	0.36 AC	\$45.03	\$16.21

**Shoulder Component Total**

\$163,600.29

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	5.39 CY	\$1,322.03	\$7,125.74
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	240.00 LF	\$42.41	\$10,178.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	56.00 LF	\$99.13	\$5,551.28
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	12.00 EA	\$966.00	\$11,592.00
570-1-1	PERFORMANCE TURF	210.64 SY	\$0.79	\$166.41

**Box Culvert 1**

Description	Value
Size	8 x 5
Length	5.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	24.70 CY	\$607.80	\$15,012.66
415-1-1	REINF STEEL- ROADWAY	2,194.50 LB	\$1.12	\$2,457.84

**Drainage Component Total**

\$52,084.33

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**SIGNING COMPONENT****Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	\$250.60	\$250.60
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	6.00	AS	\$838.68	\$5,032.08
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	\$3,363.66	\$3,363.66
<b>Signing Component Total</b>					<b>\$8,646.34</b>

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**Sequence 6 Total****\$1,269,326.09**

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**Sequence:** 7 NUR - New Construction, Undivided, Rural**Net Length:** 0.265 MI  
1,400 LF**Description:** RAMP 'A-1' - TWO LANE NEW CONSTRUCTION. STA 3700+00.00 To 3724+00.00. (1400 LF OF ROADWAY, 1000 LF OF BRIDGE)**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.265
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	3.21	AC	\$10,761.05	\$34,542.97
120-6	EMBANKMENT	4,426.14	CY	\$7.36	\$32,576.39
<b>Earthwork Component Total</b>					<b>\$67,119.36</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	5,445.44	SY	\$3.55	\$19,331.31
285-709	OPTIONAL BASE,BASE GROUP 09	2,385.10	SY	\$18.08	\$43,122.61
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	320.89	TN	\$92.30	\$29,618.15
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	93.35	TN	\$103.93	\$9,701.87

**X-Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
515-1-1	PIPE HANDRAIL - GUIDERAIL, STEEL	400.00	LF	\$39.88	\$15,952.00

**Pavement Marking Subcomponent**

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.53 NM	\$847.33	\$449.08
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.53 NM	\$3,957.74	\$2,097.60

**Peripherals Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	50.67 TN	\$187.16	\$9,483.40
536-1-1	GUARDRAIL- ROADWAY	1,500.00 LF	\$16.04	\$24,060.00
536-85-22	GUARDRAIL END ANCHORAGE ASSEMBLY- FLARED	2.00 EA	\$1,408.59	\$2,817.18
536-85-25	GUARDRAIL END ANCHORAGE ASSEM- TYPE II	2.00 EA	\$428.19	\$856.38

**Roadway Component Total**

\$157,489.58

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	2.00 / 2.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	725.02 SY	\$9.44	\$6,844.19
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	68.46 TN	\$92.30	\$6,318.86
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	24.89 TN	\$103.93	\$2,586.82
570-1-2	PERFORMANCE TURF, SOD	830.82 SY	\$1.89	\$1,570.25

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-1-11	CONC CLASS I, RETAINING WALLS <b>Comment:</b> 400' x 0.32 (SCHEME 1) CY/LF = 128 CY	128.00 CY	\$1,305.18	\$167,063.04

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,800.00 LF	\$0.50	\$1,400.00
104-11	FLOATING TURBIDITY BARRIER	84.28 LF	\$6.73	\$567.20
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	84.28 LF	\$4.97	\$418.87
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,707.61	\$1,707.61
107-1	LITTER REMOVAL	0.40 AC	\$27.48	\$10.99
107-2	MOWING	0.40 AC	\$45.03	\$18.01
<b>Shoulder Component Total</b>				<b>\$188,505.84</b>

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.77 CY	\$1,322.03	\$6,306.08
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	216.00 LF	\$42.41	\$9,160.56
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	48.00 LF	\$99.13	\$4,758.24
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	11.00 EA	\$966.00	\$10,626.00
570-1-1	PERFORMANCE TURF	186.70 SY	\$0.79	\$147.49
<b>Drainage Component Total</b>				<b>\$30,998.37</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	\$301.22	\$301.22
700-1-12	SINGLE POST SIGN, F&I GM, 12-20	6.00 AS	\$873.36	\$5,240.16



	SF			
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	\$4,889.99	\$4,889.99
<b>Signing Component Total</b>				<b>\$10,431.37</b>

### BRIDGES COMPONENT

#### Bridge 030004

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,000.00
Width (LF)	30.08
Type	Overpass Bridge
Cost Factor	1.00
Structure No.	030004
Removal of Existing Structures area	0.00
Default Cost per SF	\$122.00
Factored Cost per SF	\$122.00
<b>Final Cost per SF</b>	<b>\$123.15</b>
<b>Basic Bridge Cost</b>	<b>\$3,669,760.00</b>
Description	

#### Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.84 CY	\$377.51	\$25,232.77
415-1-9	REINF STEEL- APPROACH SLABS	11,697.00 LB	\$0.80	\$9,357.60
<b>Bridge 030004 Total</b>				<b>\$3,704,350.37</b>
<b>Bridges Component Total</b>				<b>\$3,704,350.37</b>

### RETAINING WALLS COMPONENT

#### Retaining Wall 1

Description	Value
Length	300.00
Begin height	5.00
End Height	14.00
Multiplier	1

#### Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,850.00 SF	\$22.43	\$63,925.50

#### Retaining Wall 2

<b>Description</b>	<b>Value</b>
Length	300.00
Begin height	5.00
End Height	14.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,850.00 SF	\$22.43	\$63,925.50

**Retaining Wall 3**

<b>Description</b>	<b>Value</b>
Length	400.00
Begin height	15.00
End Height	2.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,400.00 SF	\$22.43	\$76,262.00

**Retaining Wall 4**

<b>Description</b>	<b>Value</b>
Length	400.00
Begin height	15.00
End Height	2.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,400.00 SF	\$22.43	\$76,262.00

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**Retaining Walls Component Total** \$280,375.00

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**Sequence 7 Total** \$4,439,269.89

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**Sequence:** 8 NUR - New Construction, Undivided, Rural

**Net Length:** 0.082 MI  
435 LF

**Description:** RAMP 'A-2' - THREE LANE NEW CONSTRUCTION. STA 439+85.00 To 444+20.00.

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**EARTHWORK COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.082



Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.99 AC	\$10,761.05	\$10,653.44
120-6	EMBANKMENT	2,704.24 CY	\$7.36	\$19,903.21
<b>Earthwork Component Total</b>				<b>\$30,556.65</b>

**ROADWAY COMPONENT**

**User Input Data**

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	18.00 / 18.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,707.11 SY	\$3.55	\$9,610.24
285-709	OPTIONAL BASE,BASE GROUP 09	1,772.19 SY	\$18.08	\$32,041.20
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	239.29 TN	\$92.30	\$22,086.47
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	69.61 TN	\$103.93	\$7,234.57

**Pavement Marking Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	44.00 EA	\$5.23	\$230.12
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.16 NM	\$847.33	\$135.57
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.16 GM	\$350.34	\$56.05

711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.16 NM	\$3,957.74	\$633.24
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.16 GM	\$1,171.15	\$187.38
<b>Roadway Component Total</b>				<b>\$72,214.84</b>

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	708.68 SY	\$9.44	\$6,689.94
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	74.45 TN	\$92.30	\$6,871.74
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	27.07 TN	\$103.93	\$2,813.39
570-1-2	PERFORMANCE TURF, SOD	290.05 SY	\$1.89	\$548.19

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,131.19 LF	\$0.50	\$565.60
104-11	FLOATING TURBIDITY BARRIER	20.60 LF	\$6.73	\$138.64
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	20.60 LF	\$4.97	\$102.38
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,707.61	\$1,707.61
107-1	LITTER REMOVAL	0.10 AC	\$27.48	\$2.75
107-2	MOWING	0.10 AC	\$45.03	\$4.50
<b>Shoulder Component Total</b>				<b>\$19,444.74</b>

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	1.48 CY	\$1,322.03	\$1,956.60
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	72.00 LF	\$42.41	\$3,053.52

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00 LF	\$99.13	\$1,586.08
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00 EA	\$966.00	\$3,864.00
570-1-1	PERFORMANCE TURF	58.01 SY	\$0.79	\$45.83
<b>Drainage Component Total</b>				<b>\$10,506.03</b>

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**SIGNING COMPONENT****Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	\$250.60	\$250.60
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	2.00 AS	\$838.68	\$1,677.36
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	\$3,363.66	\$3,363.66
<b>Signing Component Total</b>				<b>\$5,291.62</b>

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**Sequence 8 Total** **\$138,013.88**

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**Sequence:** 9 NUR - New Construction, Undivided, Rural

**Net Length:** 0.703 MI  
3,710 LF

**Description:** RAMP 'A-3' - SINGLE LANE NEW CONSTRUCTION STA 50+00.00 To Sta 89+00.00 (3710 LF Roadway, 190' Bridge)

**EARTHWORK COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.231
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	130.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.150
Top of Structural Course For Begin Section	130.00
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.322
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	4.26 AC	\$10,761.05	\$45,842.07
120-6	EMBANKMENT	126,375.22 CY	\$7.36	\$930,121.62
 <b>Earthwork Component Total</b>				<b>\$975,963.69</b>

**ROADWAY COMPONENT**

**User Input Data**

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,130.77	SY	\$3.55	\$39,514.23
285-709	OPTIONAL BASE,BASE GROUP 09	6,319.80	SY	\$18.08	\$114,261.98
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	850.27	TN	\$92.30	\$78,479.92
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	247.35	TN	\$103.93	\$25,707.09

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-1-1	GUARDRAIL- ROADWAY	2,153.00	LF	\$16.04	\$34,534.12
536-85-22	GUARDRAIL END ANCHORAGE ASSEMBLY- FLARED	4.00	EA	\$1,408.59	\$5,634.36

**Pavement Marking Subcomponent**

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.41	NM	\$847.33	\$1,194.74
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.41	NM	\$3,957.74	\$5,580.41
<b>Roadway Component Total</b>					<b>\$304,906.85</b>

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,745.59	SY	\$9.44	\$25,918.37
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	272.09	TN	\$92.30	\$25,113.91
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	98.94	TN	\$103.93	\$10,282.83
570-1-2	PERFORMANCE TURF, SOD	2,473.50	SY	\$1.89	\$4,674.92

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	1,900.00	LF	\$20.35	\$38,665.00

**Erosion Control****Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,939.33	LF	\$0.50	\$2,469.66
104-11	FLOATING TURBIDITY BARRIER	89.95	LF	\$6.73	\$605.36
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	89.95	LF	\$4.97	\$447.05
107-1	LITTER REMOVAL	0.43	AC	\$27.48	\$11.82
107-2	MOWING	0.43	AC	\$45.03	\$19.36
<b>Shoulder Component Total</b>					<b>\$108,208.29</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00	AS	\$250.60	\$250.60
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	8.00	AS	\$838.68	\$6,709.44
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00	AS	\$3,363.66	\$3,363.66
<b>Signing Component Total</b>					<b>\$10,323.70</b>

**BRIDGES COMPONENT****Bridge 030003**

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	193.50
Width (LF)	30.08
Type	Elevated Roadway
Cost Factor	1.05
Structure No.	030003



Removal of Existing Structures area	0.00
Default Cost per SF	\$130.00
Factored Cost per SF	\$136.50
<b>Final Cost per SF</b>	<b>\$142.44</b>
<b>Basic Bridge Cost</b>	<b>\$794,495.52</b>
Description	RAMP A3 OVER CR 951 (COLLIER BLVD)

**Bridge Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.84 CY	\$377.51	\$25,232.77
415-1-9	REINF STEEL- APPROACH SLABS	11,697.00 LB	\$0.80	\$9,357.60
<b>Bridge 030003 Total</b>				<b>\$829,085.89</b>
<b>Bridges Component Total</b>				<b>\$829,085.89</b>

**RETAINING WALLS COMPONENT**

**Retaining Wall 1**

Description	Value
Length	400.00
Begin height	5.00
End Height	22.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,400.00 SF	\$22.43	\$121,122.00

**Retaining Wall 2**

Description	Value
Length	615.00
Begin height	15.00
End Height	30.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	13,837.50 SF	\$22.43	\$310,375.12

**Retaining Wall 3**

Description	Value
Length	290.00
Begin height	30.00
End Height	22.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
548-12	RET WALL SYSTEM, PERM, EX BARRIER	7,540.00	SF	\$22.43	\$169,122.20

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<b>Retaining Walls Component Total</b>					<b>\$600,619.33</b>
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<b>Sequence 9 Total</b>					<b>\$2,829,107.75</b>
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**Sequence:** 10 NUR - New Construction, Undivided, Rural**Net Length:** 1.029 MI  
5,435 LF**Description:** RAMP 'B' - SINGLE LANE NEW CONSTRUCTION STA 4799+00.00 RAMP B TO STA  
250+00.00 I-75.**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.029
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	12.47	AC	\$10,761.05	\$134,190.29
120-6	EMBANKMENT	15,132.25	CY	\$7.36	\$111,373.36
<b>Earthwork Component Total</b>					<b>\$245,563.65</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	16,305.70	SY	\$3.55	\$57,885.24
285-709	OPTIONAL BASE,BASE GROUP 09	9,258.01	SY	\$18.08	\$167,384.82
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	1,245.57	TN	\$92.30	\$114,966.11
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	362.35	TN	\$103.93	\$37,659.04

**Pavement Marking Subcomponent**

<b>Description</b>	<b>Value</b>
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt



Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.06 NM	\$847.33	\$1,745.50
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	2.06 NM	\$3,957.74	\$8,152.94
<b>Roadway Component Total</b>				<b>\$387,793.65</b>

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,022.07 SY	\$9.44	\$37,968.34
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	398.58 TN	\$92.30	\$36,788.93
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	144.94 TN	\$103.93	\$15,063.61
570-1-2	PERFORMANCE TURF, SOD	3,623.49 SY	\$1.89	\$6,848.40

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	14,131.60 LF	\$0.50	\$7,065.80
104-11	FLOATING TURBIDITY BARRIER	257.35 LF	\$6.73	\$1,731.97
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	257.35 LF	\$4.97	\$1,279.03
104-15	SOIL TRACKING PREVENTION DEVICE	2.00 EA	\$1,707.61	\$3,415.22
107-1	LITTER REMOVAL	12.48 AC	\$27.48	\$342.95
107-2	MOWING	12.48 AC	\$45.03	\$561.97
<b>Shoulder Component Total</b>				<b>\$111,066.22</b>

**DRAINAGE COMPONENT****X-Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
430-175-115	PIPE CULV, OPT MATL, ROUND, 15"S/CD <b>Comment:</b> 1 x 64' Extension	64.00 LF	\$70.30	\$4,499.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD <b>Comment:</b> 2 x 6' Extensions	16.00 LF	\$99.13	\$1,586.08

**Box Culvert 1**

<b>Description</b>	<b>Value</b>
Size	5 x 4
Length	24.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
400-4-1	CONC CLASS IV, CULVERTS	25.96 CY	\$607.80	\$15,778.49
415-1-1	REINF STEEL- ROADWAY	2,618.00 LB	\$1.12	\$2,932.16

**Drainage Component Total** \$24,795.93

**SIGNING COMPONENT****Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00 AS	\$301.22	\$903.66
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	21.00 AS	\$873.36	\$18,340.56
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	3.00 AS	\$4,889.99	\$14,669.97

**Signing Component Total** \$33,914.19

**Sequence 10 Total** \$803,133.64

**Sequence:** 11 NUR - New Construction, Undivided, Rural**Net Length:** 1.624 MI  
8,575 LF**Description:** RAMP 'C-2' - SINGLE LANE NEW CONSTRUCTION STA 1781+50.00 (COLLIER BLDV) TO  
STA 2867+25.00 (I-75).**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.133
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	110.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.095
Top of Structural Course For Begin Section	110.00
Top of Structural Course For End Section	128.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	3
Distance	0.095
Top of Structural Course For Begin Section	125.00
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %



Roadway Cross Slope L/R 2.00 % / 2.00 %

Alignment Number 4  
 Distance 0.244  
 Top of Structural Course For Begin Section 103.50  
 Top of Structural Course For End Section 130.00  
 Horizontal Elevation For Begin Section 100.00  
 Horizontal Elevation For End Section 100.00  
 Front Slope L/R 6 to 1 / 6 to 1  
 Outside Shoulder Cross Slope L/R 6.00 % / 6.00 %  
 Roadway Cross Slope L/R 2.00 % / 2.00 %

Alignment Number 5  
 Distance 0.108  
 Top of Structural Course For Begin Section 130.00  
 Top of Structural Course For End Section 112.00  
 Horizontal Elevation For Begin Section 100.00  
 Horizontal Elevation For End Section 100.00  
 Front Slope L/R 6 to 1 / 6 to 1  
 Outside Shoulder Cross Slope L/R 6.00 % / 6.00 %  
 Roadway Cross Slope L/R 2.00 % / 2.00 %

Alignment Number 6  
 Distance 0.095  
 Top of Structural Course For Begin Section 112.00  
 Top of Structural Course For End Section 103.50  
 Horizontal Elevation For Begin Section 100.00  
 Horizontal Elevation For End Section 100.00  
 Front Slope L/R 6 to 1 / 6 to 1  
 Outside Shoulder Cross Slope L/R 6.00 % / 6.00 %  
 Roadway Cross Slope L/R 2.00 % / 2.00 %

Alignment Number 7  
 Distance 0.123  
 Top of Structural Course For Begin Section 103.50  
 Top of Structural Course For End Section 103.50  
 Horizontal Elevation For Begin Section 100.00  
 Horizontal Elevation For End Section 100.00  
 Front Slope L/R 6 to 1 / 6 to 1  
 Outside Shoulder Cross Slope L/R 6.00 % / 6.00 %  
 Roadway Cross Slope L/R 2.00 % / 2.00 %

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	19.68 AC	\$10,761.05	\$211,777.46
120-6	EMBANKMENT	185,257.61 CY	\$7.36	\$1,363,496.01

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
120-5	CHANNEL EXCAVATION	1,852.00 CY	\$19.39	\$35,910.28
	<b>Comment:</b> REALIGN CHANNEL FOR 500 FEET BY 25 WIDE 4 FEET DEEP.			

**Earthwork Component Total**

\$1,611,183.75

**ROADWAY COMPONENT****User Input Data**

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	25,725.74 SY	\$3.55	\$91,326.38
285-709	OPTIONAL BASE,BASE GROUP 09	14,606.51 SY	\$18.08	\$264,085.70
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	1,965.16 TN	\$92.30	\$181,384.27
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	571.68 TN	\$103.93	\$59,414.70

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	650.00 LF	\$22.74	\$14,781.00
536-1-1	GUARDRAIL- ROADWAY	2,153.00 LF	\$16.04	\$34,534.12
536-85-22	GUARDRAIL END ANCHORAGE ASSEMBLY- FLARED	4.00 EA	\$1,408.59	\$5,634.36

**Pavement Marking Subcomponent**

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.25 NM	\$847.33	\$2,753.82
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	3.25 NM	\$3,957.74	\$12,862.66

**Roadway Component Total**

\$666,777.01

**SHOULDER COMPONENT****User Input Data**

Description	Value
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Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 2.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	6,345.68 SY	\$9.44	\$59,903.22
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	628.85 TN	\$92.30	\$58,042.86
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	228.67 TN	\$103.93	\$23,765.67
570-1-2	PERFORMANCE TURF, SOD	5,716.83 SY	\$1.89	\$10,804.81

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	5,509.00 LF	\$20.35	\$112,108.15

**Erosion Control**

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	22,295.64 LF	\$0.50	\$11,147.82
104-11	FLOATING TURBIDITY BARRIER	406.02 LF	\$6.73	\$2,732.51
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	406.02 LF	\$4.97	\$2,017.92
104-15	SOIL TRACKING PREVENTION DEVICE	2.00 EA	\$1,707.61	\$3,415.22
107-1	LITTER REMOVAL	19.68 AC	\$27.48	\$540.81
107-2	MOWING	19.68 AC	\$45.03	\$886.19

**Shoulder Component Total** \$285,365.18

**DRAINAGE COMPONENT**

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
430-175-115	PIPE CULV, OPT MATL, ROUND, 15"S/CD <b>Comment:</b> 1 x 45', 1 x 32', 1 x 40' = 117 LF	120.00 LF	\$70.30	\$8,436.00
530-3-3	RIPRAP- RUBBLE, BANK AND SHORE <b>Comment:</b> 550 x 10'	715.00 TN	\$80.27	\$57,393.05

**Box Culvert 1**

Description	Value
Size	8 x 5
Length	24.00



Multiplier

1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	39.52 CY	\$607.80	\$24,020.26
415-1-1	REINF STEEL- ROADWAY	4,126.80 LB	\$1.12	\$4,622.02
<b>Drainage Component Total</b>				<b>\$94,471.33</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	3.00 AS	\$250.60	\$751.80
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	21.00 AS	\$838.68	\$17,612.28
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	3.00 AS	\$3,363.66	\$10,090.98
<b>Signing Component Total</b>				<b>\$28,455.06</b>

**BRIDGES COMPONENT****Bridge 030001**

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,291.00
Width (LF)	30.08
Type	Elevated Roadway
Cost Factor	1.65
Structure No.	030001
Removal of Existing Structures area	0.00
Default Cost per SF	\$130.00
Factored Cost per SF	\$214.50
<b>Final Cost per SF</b>	<b>\$215.39</b>
<b>Basic Bridge Cost</b>	<b>\$8,329,738.56</b>
Description	RAMP C-2 VIADUCT OVER BECK BOULEVARD AND RAMP B

**Bridge Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.84 CY	\$377.51	\$25,232.77
415-1-9	REINF STEEL- APPROACH SLABS	11,697.00 LB	\$0.80	\$9,357.60
<b>Bridge 030001 Total</b>				<b>\$8,364,328.93</b>

**Bridge 03002A**

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES

Length (LF)	193.50
Width (LF)	30.08
Type	Elevated Roadway
Cost Factor	1.05
Structure No.	030002
Removal of Existing Structures area	0.00
Default Cost per SF	\$130.00
Factored Cost per SF	\$136.50
<b>Final Cost per SF</b>	<b>\$142.44</b>
<b>Basic Bridge Cost</b>	<b>\$794,495.52</b>
Description	RAMP C-2 OVER SR 951

**Bridge Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.84 CY	\$377.51	\$25,232.77
415-1-9	REINF STEEL- APPROACH SLABS	11,697.00 LB	\$0.80	\$9,357.60
<b>Bridge 03002A Total</b>				<b>\$829,085.89</b>
<b>Bridges Component Total</b>				<b>\$9,193,414.82</b>

**RETAINING WALLS COMPONENT****Retaining Wall 1**

Description	Value
Length	500.00
Begin height	6.00
End Height	28.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	8,500.00 SF	\$22.43	\$190,655.00

**Retaining Wall 2**

Description	Value
Length	500.00
Begin height	4.00
End Height	10.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,500.00 SF	\$22.43	\$78,505.00

**Retaining Wall 3**

Description	Value
Length	600.00
Begin height	10.00
End Height	28.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	11,400.00 SF	\$22.43	\$255,702.00

**Retaining Wall 4**

Description	Value
Length	300.00
Begin height	25.00
End Height	10.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,250.00 SF	\$22.43	\$117,757.50

**Retaining Wall 5**

Description	Value
Length	500.00
Begin height	25.00
End Height	0.50
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	6,375.00 SF	\$22.43	\$142,991.25

**Retaining Wall 6**

Description	Value
Length	500.00
Begin height	12.00
End Height	24.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	9,000.00 SF	\$22.43	\$201,870.00

**Retaining Wall 7**

Description	Value
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Length	590.00
Begin height	20.00
End Height	30.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	14,750.00 SF	\$22.43	\$330,842.50

**Retaining Wall 8**

Description	Value
Length	560.00
Begin height	30.00
End Height	12.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	11,760.00 SF	\$22.43	\$263,776.80

**Retaining Walls Component Total** \$1,582,100.05

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**Sequence 11 Total** \$13,461,767.20

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**Sequence:** 12 NUR - New Construction, Undivided, Rural**Net Length:** 0.212 MI  
1,120 LF**Description:** RAMP 'C-1' - THREE LANE NEW CONSTRUCTION. STA 685+70.00 To 696+90.00.**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.212
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	2.57 AC	\$10,761.05	\$27,655.90
120-6	EMBANKMENT	7,160.59 CY	\$7.36	\$52,701.94
<b>Earthwork Component Total</b>				<b>\$80,357.84</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	3
Roadway Pavement Width L/R	18.00 / 18.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	6,968.19 SY	\$3.55	\$24,737.07
285-709	OPTIONAL BASE,BASE GROUP 09	4,561.68 SY	\$18.08	\$82,475.17
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	615.94 TN	\$92.30	\$56,851.26
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	179.18 TN	\$103.93	\$18,622.18

**Pavement Marking Subcomponent**

<b>Description</b>	<b>Value</b>
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	115.00 EA	\$5.23	\$601.45
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.42 NM	\$847.33	\$355.88
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.42 GM	\$350.34	\$147.14
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.42 NM	\$3,957.74	\$1,662.25
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.42 GM	\$1,171.15	\$491.88
<b>Roadway Component Total</b>				<b>\$185,944.28</b>

**SHOULDER COMPONENT**

**User Input Data**

Description	Value
Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 4.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	828.72 SY	\$9.44	\$7,823.12
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	82.13 TN	\$92.30	\$7,580.60
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	29.86 TN	\$103.93	\$3,103.35
570-1-2	PERFORMANCE TURF, SOD	746.59 SY	\$1.89	\$1,411.06

**Erosion Control**

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,911.71 LF	\$0.50	\$1,455.86
104-11	FLOATING TURBIDITY BARRIER	53.03 LF	\$6.73	\$356.89
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	53.03 LF	\$4.97	\$263.56
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,707.61	\$1,707.61
107-1	LITTER REMOVAL	2.57 AC	\$27.48	\$70.62
107-2	MOWING	2.57 AC	\$45.03	\$115.73



**Shoulder Component Total**

\$23,888.40

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	3.82 CY	\$1,322.03	\$5,050.15
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	176.00 LF	\$42.41	\$7,464.16
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00 LF	\$99.13	\$3,965.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	9.00 EA	\$966.00	\$8,694.00
570-1-1	PERFORMANCE TURF	149.32 SY	\$0.79	\$117.96

**Box Culvert 1**

Description	Value
Size	8 x 5
Length	5.00
Multiplier	1

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-4-1	CONC CLASS IV, CULVERTS	24.70 CY	\$607.80	\$15,012.66
415-1-1	REINF STEEL- ROADWAY	2,194.50 LB	\$1.12	\$2,457.84

**Drainage Component Total**

\$42,761.97

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	1.00 AS	\$250.60	\$250.60
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	5.00 AS	\$838.68	\$4,193.40
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	1.00 AS	\$3,363.66	\$3,363.66

**Signing Component Total**

\$7,807.66

**Sequence 12 Total**

\$340,760.15

**Sequence:** 13 NUR - New Construction, Undivided, Rural

**Net Length:** 0.644 MI  
3,400 LF

**Description:** RAMP 'D' - TWO LANE NEW CONSTRUCTION. STA 196+00.00 TO 230+00.00.

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**EARTHWORK COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.212
Top of Structural Course For Begin Section	103.50
Top of Structural Course For End Section	103.50
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	7.81 AC	\$10,761.05	\$84,043.80
120-6	EMBANKMENT	6,991.44 CY	\$7.36	\$51,457.00
<b>Earthwork Component Total</b>				<b>\$135,500.80</b>

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**ROADWAY COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	3
Roadway Pavement Width L/R	18.00 / 18.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	21,154.26 SY	\$3.55	\$75,097.62
285-709	OPTIONAL BASE,BASE GROUP 09	13,848.49 SY	\$18.08	\$250,380.70
334-1-23	SUPERPAVE ASPH CONC, TRAF C, PG76-22,PMA	1,869.89 TN	\$92.30	\$172,590.85
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	543.97 TN	\$103.93	\$56,534.80

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	440.00 LF	\$22.74	\$10,005.60

**Pavement Marking Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	348.00 EA	\$5.23	\$1,820.04
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.29 NM	\$847.33	\$1,093.06
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.29 GM	\$350.34	\$451.94
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.29 NM	\$3,957.74	\$5,105.48
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	1.29 GM	\$1,171.15	\$1,510.78

**Roadway Component Total**

\$574,590.87

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	11.59 CY	\$1,322.03	\$15,322.33
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	520.00 LF	\$42.41	\$22,053.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	112.00 LF	\$99.13	\$11,102.56
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	26.00 EA	\$966.00	\$25,116.00
570-1-1	PERFORMANCE TURF	453.31 SY	\$0.79	\$358.11

**Box Culvert 1**



<b>Description</b>	<b>Value</b>
Size	8 x 5
Length	24.00
Multiplier	1

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
400-4-1	CONC CLASS IV, CULVERTS	39.52 CY	\$607.80	\$24,020.26
415-1-1	REINF STEEL- ROADWAY	4,126.80 LB	\$1.12	\$4,622.02
<b>Drainage Component Total</b>				<b>\$102,594.48</b>

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**SIGNING COMPONENT**

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-20-11	SINGLE POST SIGN, F&I, LESS THAN 12 SF	2.00 AS	\$250.60	\$501.20
700-20-12	SINGLE POST SIGN, F&I, 12-20 SF	13.00 AS	\$838.68	\$10,902.84
700-21-11	MULTI- POST SIGN, F&I, 50 OR <	2.00 AS	\$3,363.66	\$6,727.32
<b>Signing Component Total</b>				<b>\$18,131.36</b>

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**Sequence 13 Total** **\$830,817.51**

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**Sequence:** 14 MIS - Miscellaneous Construction

**Net Length:** 0.474 MI  
2,500 LF

**Description:** TRAFFIC SIGNALS AT CR 951 (COLLIER BLVD) & SR 84 (DAVIS BLVD/BECK BLVD) & CR 951 (COLLIER BLVD) & RAMP C-1/RAMP D.

**SIGNALIZATIONS COMPONENT**

**Signalization 1**

<b>Description</b>	<b>Value</b>
Type	6 Lane Mast Arm
Multiplier	1
Description	CR 951 (COLLIER BLVD) AT SR 84/DAVIS BLVD/BECK BLVD. One (1) Mast Arm Anchored To Bridge, One Standard Single Arm Pole, EB & WB Signals On Bridges

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-1-12	CONDUIT, F& I, UNDERGROUND	700.00 LF	\$2.01	\$1,407.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00 LF	\$14.24	\$4,272.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00 PI	\$4,488.02	\$4,488.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00 EA	\$594.74	\$13,084.28
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00 AS	\$1,810.65	\$1,810.65
639-2-1	ELECTRICAL SERVICE WIRE	60.00 LF	\$1.63	\$97.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00 EA	\$842.15	\$842.15
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/O LUM-78	1.00 EA	\$37,746.31	\$37,746.31
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00 AS	\$953.02	\$19,060.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00 AS	\$609.66	\$4,877.28
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	\$176.34	\$3,526.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	\$984.35	\$19,687.00
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00 EA	\$194.76	\$1,558.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	\$22,896.59	\$22,896.59
699-1-1	INTERNAL ILLUM SIGN, FURNISH & INST, NA	4.00 EA	\$3,208.02	\$12,832.08
700-48-18	SIGN PANELS, F & I, 15 OR <	4.00 EA	\$329.49	\$1,317.96

**X-Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
649-31-999	M/ARM,F&I, CUSTOM WIND SPEED, CUSTOM ARM	1.00 EA	\$37,503.33	\$37,503.33
	<b>Comment:</b> WS 150			

**Signalization 2**

<b>Description</b>	<b>Value</b>
Type	6 Lane Mast Arm
Multiplier	1
Description	CR 951 (COLLIER BLVD) AT RAMP C-1 AND RAMP D.

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-1-12	CONDUIT, F& I, UNDERGROUND	700.00 LF	\$2.01	\$1,407.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00 LF	\$14.24	\$4,272.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00 PI	\$4,488.02	\$4,488.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	18.00 EA	\$594.74	\$10,705.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00 AS	\$1,810.65	\$1,810.65
639-2-1	ELECTRICAL SERVICE WIRE	60.00 LF	\$1.63	\$97.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00 EA	\$842.15	\$842.15
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00 EA	\$760.46	\$760.46
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/O LUM-78	4.00 EA	\$37,746.31	\$150,985.24
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	22.00 AS	\$953.02	\$20,966.44
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00 AS	\$609.66	\$4,877.28
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00 EA	\$176.34	\$3,526.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00 AS	\$984.35	\$19,687.00
665-11	PED DET, F&I, DET STA POLE OR CAB MTD	8.00 EA	\$194.76	\$1,558.08
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	\$22,896.59	\$22,896.59
699-1-1	INTERNAL ILLUM SIGN, FURNISH & INST, NA	4.00 EA	\$3,208.02	\$12,832.08
700-48-18	SIGN PANELS, F & I, 15 OR <	4.00 EA	\$329.49	\$1,317.96

**Signalization 3**

<b>Description</b>	<b>Value</b>
Type	6 Lane Mast Arm
Multiplier	1
Description	CR 951 Collier Blvd & Business Circle North

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	\$5.11	\$3,577.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	\$14.24	\$4,272.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	\$4,488.02	\$4,488.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	14.00	EA	\$594.74	\$8,326.36
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	\$1,810.65	\$1,810.65
639-2-1	ELECTRICAL SERVICE WIRE	60.00	LF	\$1.63	\$97.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	\$842.15	\$842.15
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/O LUM-78	3.00	EA	\$37,746.31	\$113,238.93
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	16.00	AS	\$953.02	\$15,248.32
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	\$609.66	\$4,877.28
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	\$176.34	\$2,116.08
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	\$984.35	\$11,812.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	6.00	EA	\$177.28	\$1,063.68
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	\$22,896.59	\$22,896.59
700-5-21	INTERNAL ILLUM SIGN, F&I OM, UP TO 12 SF	3.00	EA	\$3,000.00	\$9,000.00

**Interconnect Subcomponent**

Description	Value
Type	U
Length of Fiber Run	2,500.00
Number of Intersections	3
Percentage of Underpavement Conduit	25.00

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-1-12	CONDUIT, F& I, UNDERGROUND	1,875.00	LF	\$2.01	\$3,768.75
630-1-13	CONDUIT, F&I, UNDER EXIST PAVT	625.00	LF	\$41.20	\$25,750.00
633-123-2	CAB-FIB OPT, F&I, UG, COMP, 26-50 PR	2,500.00	LF	\$3.87	\$9,675.00
635-1-15	PULL & JUNCTION BOX, F&I, FIBER OPTICS	3.00	EA	\$1,066.91	\$3,200.73
635-1-16	PULL & JUNCTION BOX, F&I, SPECIAL	2.00	EA	\$2,682.67	\$5,365.34
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	8.00	AS	\$720.25	\$5,762.00
<b>Signalizations Component Total</b>					<b>\$707,227.48</b>



**Sequence 14 Total**

**\$707,227.48**

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**Sequence:** 15 MIS - Miscellaneous Construction**Net Length:** 0.568 MI  
3,000 LF**Description:** RETENTION PONDS**DRAINAGE COMPONENT****Retention Basin 1**

Description	Value
Size	2 AC
Multiplier	1
Depth	2.00
Description	POND 1A

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00 AC	\$10,761.05	\$21,522.10
120-1	REGULAR EXCAVATION	6,453.33 CY	\$3.42	\$22,070.39
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00 EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00 LF	\$9.62	\$11,351.60
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00 SY	\$0.79	\$7,647.20

**Retention Basin 2**

Description	Value
Size	.5 AC
Multiplier	1
Depth	2.00
Description	POND 1B

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.50 AC	\$10,761.05	\$5,380.52
120-1	REGULAR EXCAVATION	1,613.33 CY	\$3.42	\$5,517.59
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00 EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	600.00 LF	\$9.62	\$5,772.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	\$2,671.64	\$2,671.64

570-1-1	PERFORMANCE TURF	2,420.00 SY	\$0.79	\$1,911.80
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**Retention Basin 3**

<b>Description</b>	<b>Value</b>
Size	.5 AC
Multiplier	1
Depth	2.00
Description	POND 1C

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.50 AC	\$10,761.05	\$5,380.52
120-1	REGULAR EXCAVATION	1,613.33 CY	\$3.42	\$5,517.59
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00 EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	600.00 LF	\$9.62	\$5,772.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	2,420.00 SY	\$0.79	\$1,911.80

**Retention Basin 4**

<b>Description</b>	<b>Value</b>
Size	2.5 AC
Multiplier	1
Depth	2.40
Description	POND 2

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50 AC	\$10,761.05	\$26,902.62
120-1	REGULAR EXCAVATION	9,680.00 CY	\$3.42	\$33,105.60
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$1,322.03	\$23,796.54
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00 EA	\$4,361.76	\$4,361.76
425-2-71	MANHOLES, J-7, <10'	1.00 EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00 LF	\$9.62	\$12,842.70
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	12,100.00 SY	\$0.79	\$9,559.00

**Retention Basin 6**

<b>Description</b>	<b>Value</b>
Size	5 AC
Multiplier	1
Depth	2.50
Description	POND 3N

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00 AC	\$10,761.05	\$53,805.25
120-1	REGULAR EXCAVATION	20,166.67 CY	\$3.42	\$68,970.01
400-2-2	CONC CLASS II, ENDWALLS	30.00 CY	\$1,322.03	\$39,660.90
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00 EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	2.00 EA	\$5,623.48	\$11,246.96
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00 LF	\$224.69	\$89,876.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00 LF	\$9.62	\$17,893.20
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00 EA	\$2,671.64	\$5,343.28
570-1-1	PERFORMANCE TURF	24,200.00 SY	\$0.79	\$19,118.00

**Retention Basin 7**

<b>Description</b>	<b>Value</b>
Size	2.5 AC
Multiplier	1
Depth	3.00
Description	POND 4S

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50 AC	\$10,761.05	\$26,902.62
120-1	REGULAR EXCAVATION	12,100.00 CY	\$3.42	\$41,382.00
400-2-2	CONC CLASS II, ENDWALLS	18.00 CY	\$1,322.03	\$23,796.54
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00 EA	\$4,361.76	\$4,361.76
425-2-71	MANHOLES, J-7, <10'	1.00 EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00 LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00 LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00 LF	\$9.62	\$12,842.70
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	12,100.00 SY	\$0.79	\$9,559.00

**Retention Basin 8**



<b>Description</b>	<b>Value</b>
Size	2 AC
Multiplier	1
Depth	2.60
Description	POND 4N-A

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	\$10,761.05	\$21,522.10
120-1	REGULAR EXCAVATION	8,389.33	CY	\$3.42	\$28,691.51
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	\$9.62	\$11,351.60
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00	SY	\$0.79	\$7,647.20

**Retention Basin 9**

<b>Description</b>	<b>Value</b>
Size	2 AC
Multiplier	1
Depth	2.60
Description	POND 4N-B

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	\$10,761.05	\$21,522.10
120-1	REGULAR EXCAVATION	8,389.33	CY	\$3.42	\$28,691.51
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	\$9.62	\$11,351.60
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00	SY	\$0.79	\$7,647.20

**Retention Basin 10**

<b>Description</b>	<b>Value</b>
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Size	1 AC
Multiplier	1
Depth	2.60
Description	POND 4N-C

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.00	AC	\$10,761.05	\$10,761.05
120-1	REGULAR EXCAVATION	4,194.67	CY	\$3.42	\$14,345.77
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	840.00	LF	\$9.62	\$8,080.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	4,840.00	SY	\$0.79	\$3,823.60

**Retention Basin 11**

<b>Description</b>	<b>Value</b>
Size	2 AC
Multiplier	1
Depth	6.00
Description	

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	\$10,761.05	\$21,522.10
120-1	REGULAR EXCAVATION	19,360.00	CY	\$3.42	\$66,211.20
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	\$9.62	\$11,351.60
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00	SY	\$0.79	\$7,647.20

**Retention Basin 12**

<b>Description</b>	<b>Value</b>
Size	1 AC
Multiplier	1

Depth 2.00  
Description

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.00	AC	\$10,761.05	\$10,761.05
120-1	REGULAR EXCAVATION	3,226.67	CY	\$3.42	\$11,035.21
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	840.00	LF	\$9.62	\$8,080.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	4,840.00	SY	\$0.79	\$3,823.60

**Retention Basin 13**

Description	Value
Size	1 AC
Multiplier	1
Depth	2.00
Description	

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.00	AC	\$10,761.05	\$10,761.05
120-1	REGULAR EXCAVATION	3,226.67	CY	\$3.42	\$11,035.21
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	\$1,322.03	\$23,796.54
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	\$2,372.50	\$2,372.50
425-2-71	MANHOLES, J-7, <10'	1.00	EA	\$5,623.48	\$5,623.48
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	\$117.95	\$6,605.20
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	\$224.69	\$44,938.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	840.00	LF	\$9.62	\$8,080.80
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	\$2,671.64	\$2,671.64
570-1-1	PERFORMANCE TURF	4,840.00	SY	\$0.79	\$3,823.60
<b>Drainage Component Total</b>					<b>\$1,887,371.63</b>

**Sequence 15 Total****\$1,887,371.63**

**Sequence:** 16 NUR - New Construction, Undivided, Rural

**Net Length:** 0.155 MI  
820 LF

**Description:** COLLIER BOULEVARD (SR 951) RECONSTRUCTION LEFT SOUTHBOUND ROADWAY STA 3724+00.00 TO 3732+20.00

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**EARTHWORK COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.155
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	0.94 AC	\$10,761.05	\$10,115.39
120-6	EMBANKMENT	8,476.81 CY	\$7.36	\$62,389.32
<b>Earthwork Component Total</b>				<b>\$72,504.71</b>

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**ROADWAY COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275



Friction Course Spread Rate

80

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,008.81 SY	\$3.55	\$14,231.28
285-709	OPTIONAL BASE,BASE GROUP 09	2,246.76 SY	\$18.08	\$40,621.42
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	300.66 TN	\$90.89	\$27,326.99
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	87.46 TN	\$103.93	\$9,089.72

**Pavement Marking Subcomponent**

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

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	21.00 EA	\$5.23	\$109.83
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.31 NM	\$847.33	\$262.67
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.16 GM	\$350.34	\$56.05
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.31 NM	\$3,957.74	\$1,226.90
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.16 GM	\$1,171.15	\$187.38
<b>Roadway Component Total</b>				<b>\$93,112.24</b>

**DRAINAGE COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	2.80 CY	\$1,322.03	\$3,701.68
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	128.00 LF	\$42.41	\$5,428.48
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	32.00 LF	\$99.13	\$3,172.16
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00 EA	\$966.00	\$6,762.00
570-1-1	PERFORMANCE TURF	109.33 SY	\$0.79	\$86.37
<b>Drainage Component Total</b>				<b>\$19,150.69</b>

**SIGNING COMPONENT****Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	\$301.22	\$301.22
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	4.00	AS	\$873.36	\$3,493.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	\$4,889.99	\$4,889.99
<b>Signing Component Total</b>					<b>\$8,684.65</b>

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<b>Sequence 16 Total</b>					<b>\$193,452.29</b>
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**Sequence:** 17 NUR - New Construction, Undivided, Rural

**Net Length:** 0.074 MI  
390 LF

**Description:** COLLIER BOULEVARD (SR 951) RECONSTRUCTION LEFT SOUTHBOUND ROADWAY STA 822+10.00 TO 826+00.00

**EARTHWORK COMPONENT**

**User Input Data**

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.074
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.90 AC	\$10,761.05	\$9,684.94
120-6	EMBANKMENT	5,086.60 CY	\$7.36	\$37,437.38
<b>Earthwork Component Total</b>				<b>\$47,122.33</b>

**ROADWAY COMPONENT**

**User Input Data**

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,948.12 SY	\$3.55	\$10,465.83
285-709	OPTIONAL BASE,BASE GROUP 09	2,109.64 SY	\$18.08	\$38,142.29
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	286.14 TN	\$90.89	\$26,007.26
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	83.24 TN	\$103.93	\$8,651.13

**Pavement Marking Subcomponent**

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

Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

**Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	50.00 EA	\$5.23	\$261.50
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.15 NM	\$847.33	\$127.10
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.22 GM	\$350.34	\$77.07
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.15 NM	\$3,957.74	\$593.66
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.22 GM	\$1,171.15	\$257.65
<b>Roadway Component Total</b>				<b>\$84,583.49</b>

**SHOULDER COMPONENT****User Input Data**

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	4.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Erosion Control****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,014.50 LF	\$0.50	\$507.25
104-11	FLOATING TURBIDITY BARRIER	18.47 LF	\$6.73	\$124.30
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	18.47 LF	\$4.97	\$91.80
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,707.61	\$1,707.61
107-1	LITTER REMOVAL	0.90 AC	\$27.48	\$24.73
107-2	MOWING	0.90 AC	\$45.03	\$40.53
<b>Shoulder Component Total</b>				<b>\$2,496.22</b>

**SIGNING COMPONENT****Pay Items**

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12	1.00 AS	\$301.22	\$301.22



	SF			
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00 AS	\$873.36	\$1,746.72
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00 AS	\$4,889.99	\$4,889.99
	<b>Signing Component Total</b>			<b>\$6,937.93</b>
<hr/>				
	<b>Sequence 17 Total</b>			<b>\$141,139.97</b>
<hr/>				

**Sequence:** 18 NUR - New Construction, Undivided, Rural**Net Length:** 0.155 MI  
820 LF**Description:** COLLIER BOULEVARD (SR 951) RECONSTRUCTION RIGHT NORTHBOUND ROADWAY  
STA 822+10.00 TO 830+30.00**EARTHWORK COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.155
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
110-1-1	CLEARING & GRUBBING	1.88 AC	\$10,761.05	\$20,230.77
120-6	EMBANKMENT	10,654.36 CY	\$7.36	\$78,416.09
<b>Earthwork Component Total</b>				<b>\$98,646.86</b>

**ROADWAY COMPONENT****User Input Data**

<b>Description</b>	<b>Value</b>
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	80

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
160-4	TYPE B STABILIZATION	6,195.43 SY	\$3.55	\$21,993.78
285-709	OPTIONAL BASE,BASE GROUP 09	4,433.38 SY	\$18.08	\$80,155.51
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	601.32 TN	\$90.89	\$54,653.97
337-7-43	ASPH CONC FC,TRAFFIC C,FC- 12.5,PG 76-22	174.93 TN	\$103.93	\$18,180.47

**Pavement Marking Subcomponent**

<b>Description</b>	<b>Value</b>
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt

Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	105.00 EA	\$5.23	\$549.15
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.31 NM	\$847.33	\$262.67
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.47 GM	\$350.34	\$164.66
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.31 NM	\$3,957.74	\$1,226.90
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.47 GM	\$1,171.15	\$550.44
<b>Roadway Component Total</b>				<b>\$177,737.55</b>

**SHOULDER COMPONENT**

**User Input Data**

<b>Description</b>	<b>Value</b>
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	0.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

**Erosion Control**

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
104-10-3	SEDIMENT BARRIER	2,131.96 LF	\$0.50	\$1,065.98
104-11	FLOATING TURBIDITY BARRIER	38.82 LF	\$6.73	\$261.26
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	38.82 LF	\$4.97	\$192.94
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	\$1,707.61	\$1,707.61
107-1	LITTER REMOVAL	1.88 AC	\$27.48	\$51.66
107-2	MOWING	1.88 AC	\$45.03	\$84.66
<b>Shoulder Component Total</b>				<b>\$3,364.11</b>

**SIGNING COMPONENT**

**Pay Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	\$301.22	\$301.22
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	4.00	AS	\$873.36	\$3,493.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	\$4,889.99	\$4,889.99
<b>Signing Component Total</b>					<b>\$8,684.65</b>
<hr/>					
<b>Sequence 18 Total</b>					<b>\$288,433.17</b>
<hr/>					



**Sequence:** 19 MIS - Miscellaneous Construction

**Net Length:** 0.587 MI  
3,100 LF

**Description:** Shared Use Paths - 5 Segments Totaling 3100 LF

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**ROADWAY COMPONENT**

**Peripherals Subcomponent**

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	10.00 / 0.00
Bike Path Structural Spread Rate	200
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

**Pay Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,822.05	SY	\$3.55	\$17,118.28
285-701	OPTIONAL BASE,BASE GROUP 01	3,444.32	SY	\$12.64	\$43,536.20
334-1-11	SUPERPAVE ASPHALTIC CONC, TRAFFIC A	344.43	TN	\$141.19	\$48,630.07
<b>Roadway Component Total</b>					<b>\$109,284.55</b>

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**DRAINAGE COMPONENT**

**X-Items**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
443-70-3	FRENCH DRAIN, 18"	844.00	LF	\$140.69	\$118,742.36
<b>Drainage Component Total</b>					<b>\$118,742.36</b>

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**Sequence 19 Total** **\$228,026.91**

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**Sequence:** 20 MIS - Miscellaneous Construction**Net Length:** 0.000 MI  
1 LF**Description:** ITS**INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT****Description of Work****X-Items**

<b>Pay item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Extended Amount</b>
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,450.00	LF	\$5.11	\$7,409.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	225.00	LF	\$14.24	\$3,204.00
633-1-122	FIBER OPTIC CABLE, F&I, UG,13-48	1,100.00	LF	\$1.98	\$2,178.00
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	1.00	EA	\$660.94	\$660.94
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	3.00	EA	\$594.74	\$1,784.22
782-1-11	ITS CCTV CAMERA, F&I, DOME ENCL-PRES.	1.00	EA	\$5,852.79	\$5,852.79

<b>Intelligent Traffic System (ITS) Component Total</b>					<b>\$21,089.45</b>
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<b>Sequence 20 Total</b>					<b>\$21,089.45</b>
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Date: 4/17/2014 12:35:16 PM

## FDOT Long Range Estimating System - Production R3: Project Details by Sequence Report

**Project:** 425843-2-22-01

**Letting Date:** 07/2021

**Description:** I-75 AT SR 951

**District:** 01      **County:** 03 COLLIER

**Market Area:** 10      **Units:** English

**Contract Class:** 1      **Lump Sum Project:** N

**Design/Build:** N      **Project Length:** 0.650 MI

**Project Manager:** CES-WAH-ADK

**Version 10 Project Grand Total**

**\$39,586,784.60**

**Description:** Unit Cost Update from Version 6P - Preferred Alternate - 4/17/14

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**Project Sequences Subtotal** **\$28,341,203.45**

102-1	Maintenance of Traffic	10.00 %	\$2,834,120.34
101-1	Mobilization	10.00 %	\$3,117,532.38

**Project Sequences Total** **\$34,292,856.17**

Project Unknowns 15.00 % \$5,143,928.43

**Justification for high %:** High Unknowns% due to high traffic volume and multiple phase construction at the interchange and bridge construction

Design/Build 0.00 % \$0.00

**Non-Bid Components:**

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	\$150,000.00	\$150,000.00

**Project Non-Bid Subtotal**

**\$150,000.00**

**Version 10 Project Grand Total**

**\$39,586,784.60**



**Appendix D**  
Design Variations

TO: **Bernie Masing, P.E.**

Date: January 29, 2014

Financial Project ID: 425843-2-22-01

New Const. (  )

RRR (  )

Federal Aid Number: SFTL 251 R, S129 354 R

Project Name: I-75 at SR 951 Ultimate Interchange Project Development and Environment Study

State Road Number: SR 93 (I-75)

Co./Sec./Sub. 03175000

Begin Project MP:

End Project MP:

Full Federal Oversight: Yes (  ) No (  )

Request for Design Exception (  ), Design Variation (  )

(For Design Exception or Variations Requiring Central Office Approval )

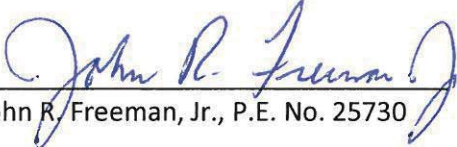
Re-submittal: Yes (  ) No (  ) Original Ref. # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Requested for the following element(s):

- |   |  |   |   |
|---|--|---|---|
| ( <input type="checkbox"/> ) Design Speed         | ( <input type="checkbox"/> ) Lane Widths                   | ( <input type="checkbox"/> ) Shoulder Width     | ( <input type="checkbox"/> ) Bridge Widths        |
| ( <input type="checkbox"/> ) Structural Capacity  | ( <input type="checkbox"/> ) Vertical Clearance            | ( <input type="checkbox"/> ) Grades             | ( <input type="checkbox"/> ) Cross Slope          |
| ( <input type="checkbox"/> ) Superelevation       | ( <input type="checkbox"/> ) Horizontal Alignment          | ( <input type="checkbox"/> ) Vertical Alignment | ( <input type="checkbox"/> ) Stopping Sight Dist. |
| ( <input type="checkbox"/> ) Horizontal Clearance | ( <input checked="" type="checkbox"/> ) Other-Border Width |   |   |

A Design Variation is requested to allow a minimum of 25 feet of border width along the new or improved interchange ramps at the interchange between I-75 and SR 951 (Collier Boulevard).

**Recommended by:**

  
 \_\_\_\_\_  
 John R. Freeman, Jr., P.E. No. 25730

Date January 29, 2014

Kittelson & Associates, Inc.  
225 East Robinson Street, Suite 450  
Orlando, Florida 32801  
Cert. of Authorization No. 7524

**Approvals:**

B.A. Masing Date 1-30-14  
 \_\_\_\_\_  
 District Design Engineer

N/A Date \_\_\_\_\_  
 \_\_\_\_\_  
 District Structures Design Engineer

N/A Date \_\_\_\_\_  
 \_\_\_\_\_  
 State Roadway Design Engineer

N/A Date \_\_\_\_\_  
 \_\_\_\_\_  
 State Structures Design Engineer

N/A Date \_\_\_\_\_  
 \_\_\_\_\_  
 State Chief Engineer

N/A Date \_\_\_\_\_  
 \_\_\_\_\_  
 FHWA Division Administrator

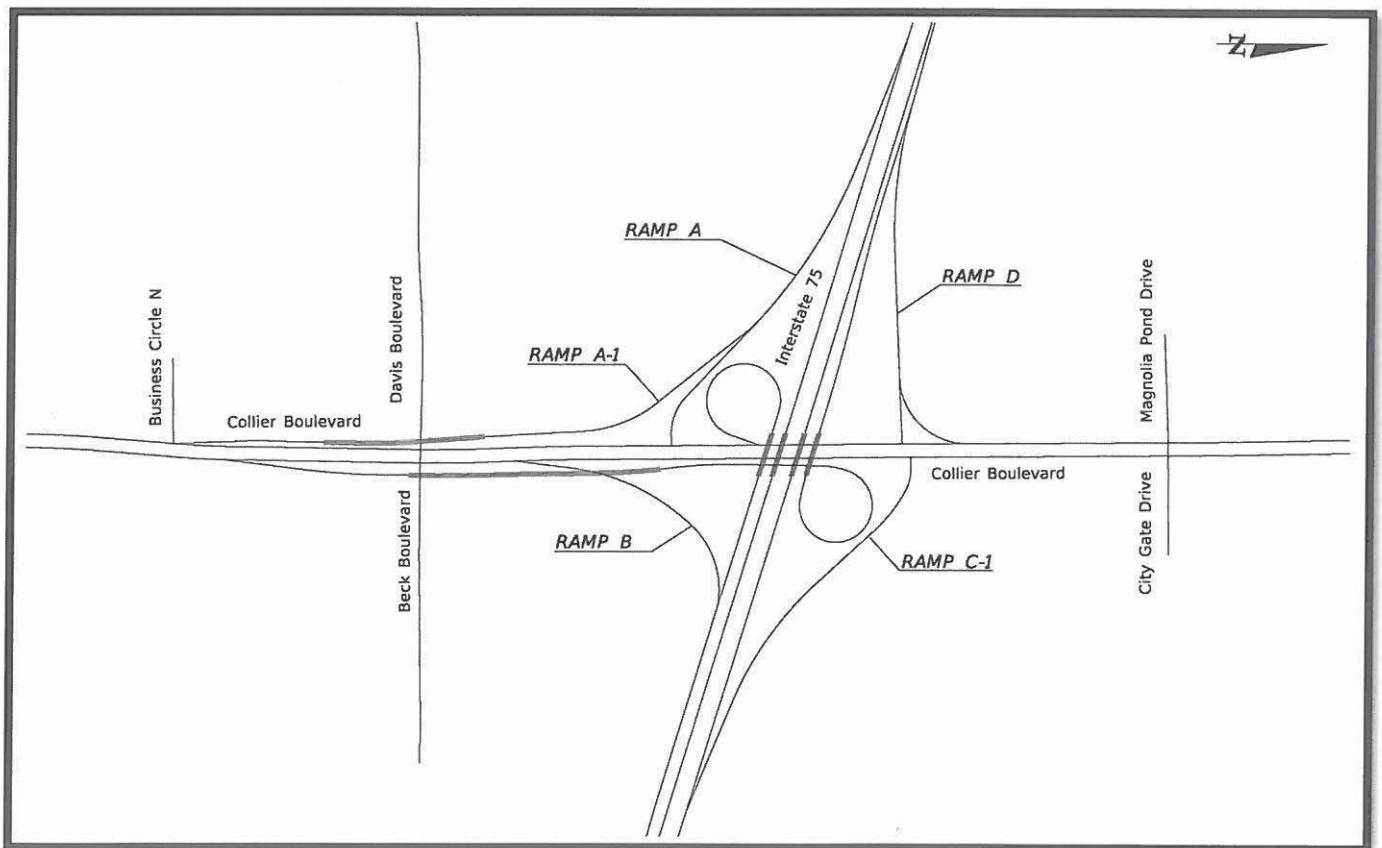
## Project Background & Description

The I-75 interchange at SR 951 (Collier Boulevard) is located at the eastern edge of the Naples metropolitan urban area in Collier County, Florida. The I-75 at SR 951 Ultimate Interchange PD&E Study extends along Collier Boulevard between the intersections with Business Circle South and Magnolia Pond Drive, approximately 6,800 feet. The I-75 ramp tie-in locations were evaluated approximately 3,000 feet west and east of existing ramp gore areas.

The recommended preferred alternative for the I-75 at Collier Boulevard interchange proposes to reconstruct the I-75 southbound on- and off-ramp connections and the northbound on-ramp connection to the mainline lanes. The southbound (Ramp A) and northbound (Ramp C-1) off-ramps would be reconstructed to create additional infield space to install single-lane, 200-foot radius loop ramps in the southwest and northeast quadrants. The new ramp configuration is illustrated below.

The northeast quadrant loop ramp would be connected to and accessible only by a direct flyover ramp from northbound Collier Boulevard with a starting point south of the Davis Boulevard intersection. This single-lane flyover ramp would carry traffic over Beck Boulevard and a reconstructed I-75 southbound on-ramp (Ramp B).

A single-lane flyover ramp extension (Ramp A-1) would carry I-75 southbound traffic over Davis Boulevard to a new signalized intersection at Collier Boulevard and Business Circle South. This ramp would extend along the western side of Collier Boulevard.





## **Design Criteria**

The required border width for a freeway ramp is 94 feet from the edge of travel lane to the limited access right-of-way line per the Plans Preparation Manual, 2013 (PPM) Table 2.5.3. Section 2.5.1 of the PPM states that the border width may be reduced in the area of a crossroad terminal, as long as the design meets the requirements for clear zone, horizontal clearance, drainage, maintenance access, and other design criteria.

## **Proposed Criteria**

Three ramp components will replace the current single exit southbound off-ramp A in the southwest quadrant of the interchange. The addition of a loop ramp and a direct connection to southbound Collier Boulevard (Ramp A-1) extends the ramp construction to the edge of the available limited access right-of-way. Due to existing right-of-way constraints and development surrounding the ramp terminals, the PD&E team recommends narrowing the border width to a general 40 feet and a minimum of 25 feet. This border width does not meet PPM Section 2.5.1 criteria but exceeds the minimum eight foot criteria from A Policy on Geometric Design of Highways and Streets 6<sup>th</sup> Edition (Green Book) by the American Association of State Highway and Transportation Officials (AASHTO).

## **Impacts to Safety and Operations**

Crash statistics for the I-75 freeway mainline and three main signalized intersections along Collier Boulevard at Davis Boulevard, the I-75 southbound ramp terminal, and the I-75 northbound ramp terminal were obtained for years 2006 through 2011. During these six years, 50 crashes occurred along mainline I-75, 30 of which resulted in injuries. One-third of crashes do not have a defined crash type. One-third of the total crashes were rear-end collisions and one-fifth were crashes with fixed objects. No fatalities were recorded within the study area between 2006 and 2011. No crashes were reported along the Interstate ramps; however, a total of 69 crashes were reported at the two ramp termini along SR 951.

Over the six years analyzed, there were a total of 125 intersection crashes between the three major signalized intersections outlined above. No fatalities were reported at these locations between 2006 and 2011; however, 65 crashes resulted in injuries. The majority of the crashes were rear-end collisions, which are expected at signalized intersections. It is noteworthy there have been no pedestrian or bicycle crashes at these three intersections over the six-year period.

In summary, the crashes recorded in the areas where a proposed narrower border width is proposed were related to the signalized intersections and the transition from the free flow highway environment to the ramp terminal. The majority of the crashes were rear-end collisions, taking place on the roadway surface and do not appear to be related to border width.

## **Justification**

An additional 177,558 square feet of right-of-way at an approximate cost of \$10,652,000 is required to provide a 94-foot border width along all four interchange quadrants. A section of a local street, White Lake Boulevard, approximately 1,000 feet long would have to be relocated due to the limited access right-of-way expansion.

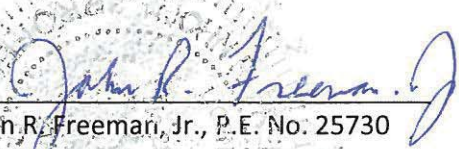


Reconstructing this facility is estimated to cost approximately \$700,000. The total cost of meeting PPM Section 2.5.1 border width criteria exceeds \$11,352,000.

### Recommendation

We recommend a Design Variation to allow a minimum 25-foot and a general 40-foot border width along the reconfigured interchange ramps be approved. The Recommended Preferred Alternative interchange improvements meet or exceed the minimum design criteria for horizontal clearances or make use of standard protective treatments for approaches to structures, such as overpass abutments. Crash statistics for the period between 2006 and 2011 do not indicate a pattern related to the border width. The project improvements remove traffic from the ramp terminal and adjacent intersection where most of the collisions occurred; therefore reducing the overall potential for crashes at these locations.

### Recommended by:

  
John R. Freeman, Jr., P.E. No. 25730

Date: January 29, 2014

Kittelsohn & Associates, Inc.  
225 East Robinson Street, Suite 450  
Orlando, Florida 32801  
Cert. of Authorization No. 7524

TO: **Bernie Masing, P.E.**

Date: February 24, 2014

Financial Project ID: 425843-2-22-01 New Const. (  ) RRR (  )

Federal Aid Number: SFTL 251 R, S129 354 R

Project Name: I-75 at SR 951 Ultimate Interchange Project Development and Environment Study

State Road Number: SR 93 (I-75) Co./Sec./Sub. 03175000

Begin Project MP: End Project MP:

Full Federal Oversight: Yes (  ) No (  )

Request for Design Exception (  ), Design Variation (  )

(For Design Exception or Variations Requiring Central Office Approval )

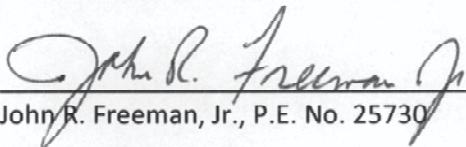
Re-submittal: Yes (  ) No (  ) Original Ref. # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Requested for the following element(s):

- (  ) Design Speed                      (  ) Lane Widths                      (  ) Shoulder Width                      (  ) Bridge Widths
- (  ) Structural Capacity                      (  ) Vertical Clearance                      (  ) Grades                      (  ) Cross Slope
- (  ) Superelevation                      (  ) Horizontal Alignment                      (  ) Vertical Alignment                      (  ) Stopping Sight Dist.
- (  ) Horizontal Clearance                      (  ) Other

A Design Variation is requested to allow a minimum of eight feet of horizontal clearance along the new interchange ramp A-1 tie-in along Collier Boulevard (SR 951). The narrower horizontal clearance between the Collier Boulevard outside travel lane and the ramp retaining wall would be mitigated with standard protective barrier treatments for approaches to structures.

**Recommended by:**

  
John R. Freeman, Jr., P.E. No. 25730

Date February 24, 2014

Kittelson & Associates, Inc.  
225 East Robinson Street, Suite 450  
Orlando, Florida 32801  
Cert. of Authorization No. 7524

**Approvals:**

B.A. Masing Date 2-25-14  
District Design Engineer

N/A Date \_\_\_\_\_  
District Structures Design Engineer

N/A Date \_\_\_\_\_  
State Roadway Design Engineer

N/A Date \_\_\_\_\_  
State Structures Design Engineer

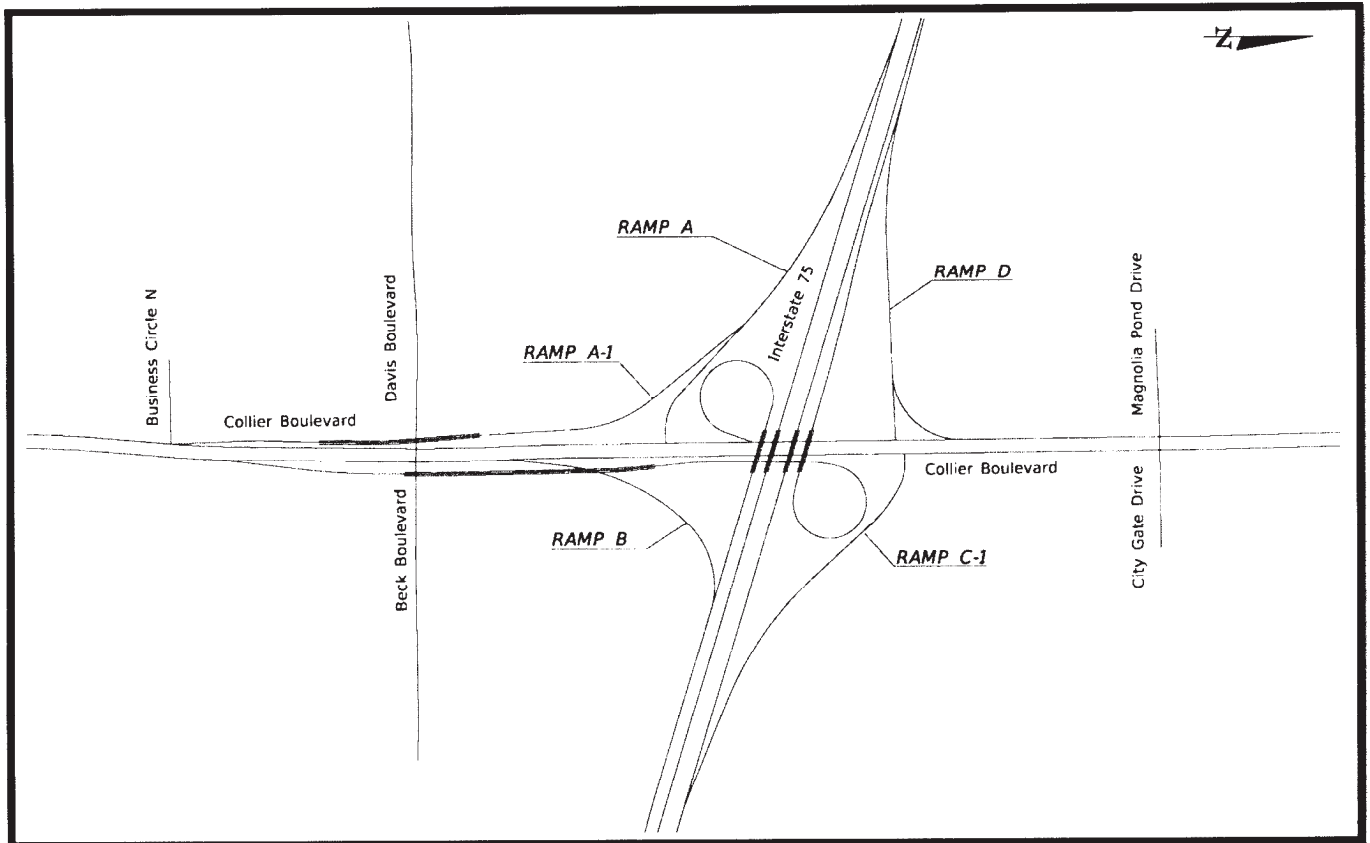
N/A Date \_\_\_\_\_  
State Chief Engineer

\_\_\_\_\_  
FHWA Division Administrator



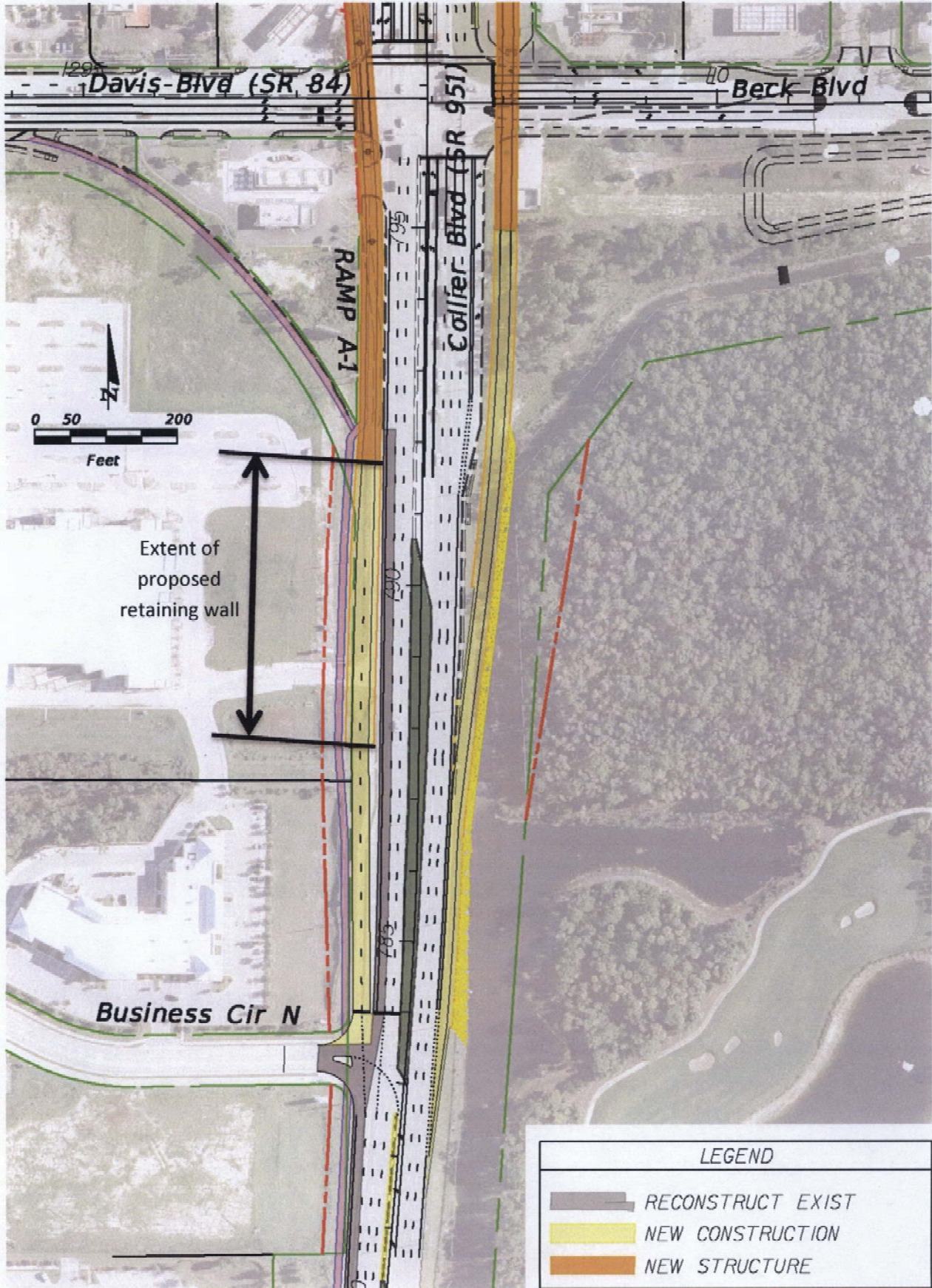
## Project Background & Description

The I-75 interchange at SR 951 (Collier Boulevard) is located at the eastern edge of the Naples metropolitan urban area in Collier County, Florida. The I-75 at SR 951 Ultimate Interchange PD&E Study extends along Collier Boulevard between the intersections with Business Circle South and Magnolia Pond Drive, approximately 6,800 feet. The recommended preferred alternative for the I-75 at Collier Boulevard interchange proposes to reconstruct the I-75 southbound on- and off-ramp connections and the northbound on-ramp connection to the mainline lanes and reconfigure the interchange into a Partial Cloverleaf (Parclo) A.



Collier Boulevard south of Davis Boulevard has the characteristics of a primary arterial Class Five with three through lanes, a four-foot bike lane, and Type F curb and gutter on the outside of the roadway. The design and posted speed limit along this section of Collier Boulevard is 45 mph. The state facility designation ends at the intersection with Davis Boulevard (SR 84). South of this location Collier Boulevard becomes a Collier County facility CR 951.

The proposed flyover ramp from southbound I-75 to southbound Collier Boulevard transitions from a bridge section to a walled fill abutment approximately 500 feet south of Davis Boulevard and ends at the intersection with Business Circle N. The horizontal distance between the outside travel lane along Collier Boulevard and the proposed ramp retaining wall varies between eight and twelve feet and extends for a distance of approximately 400 feet. The section in question is illustrated on the next page.





## **Design Criteria**

The FDOT Plans Preparation Manual (PPM), Volume 1 Table 2.11.6 Horizontal Clearance to Bridge Piers and Abutments requires a minimum distance of 16 feet from the edge of the travel lane to a pier or abutment for urban curb and gutter facilities with a design speed  $\leq 45$  mph. The ramp bridge abutment and retaining wall can be protected from the approaching traffic following FDOT Design Standard Index 410 for concrete barriers.

## **Proposed Criteria**

Three ramp components will replace the current single exit southbound off-ramp in the southwest quadrant of the interchange. The addition of a direct connection to southbound Collier Boulevard (Ramp A-1) extends the ramp construction along the west side of Collier Boulevard. Due to existing right-of-way constraints and development surrounding the ramp terminal, the PD&E team recommends narrowing the horizontal clearance to the bridge abutment and ramp retaining wall to a minimum of eight (8) feet and protecting such structures with a concrete barrier for the entire length of the structure as outlined in the FDOT Design Index 410. This horizontal clearance distance does not meet PPM Table 2.11.6 criteria but exceeds the suggested six (6) foot shy-line offset to roadside barriers outlined in the Roadside Design Guide 4<sup>th</sup> Edition by the American Association of State Highway and Transportation Officials (AASHTO).

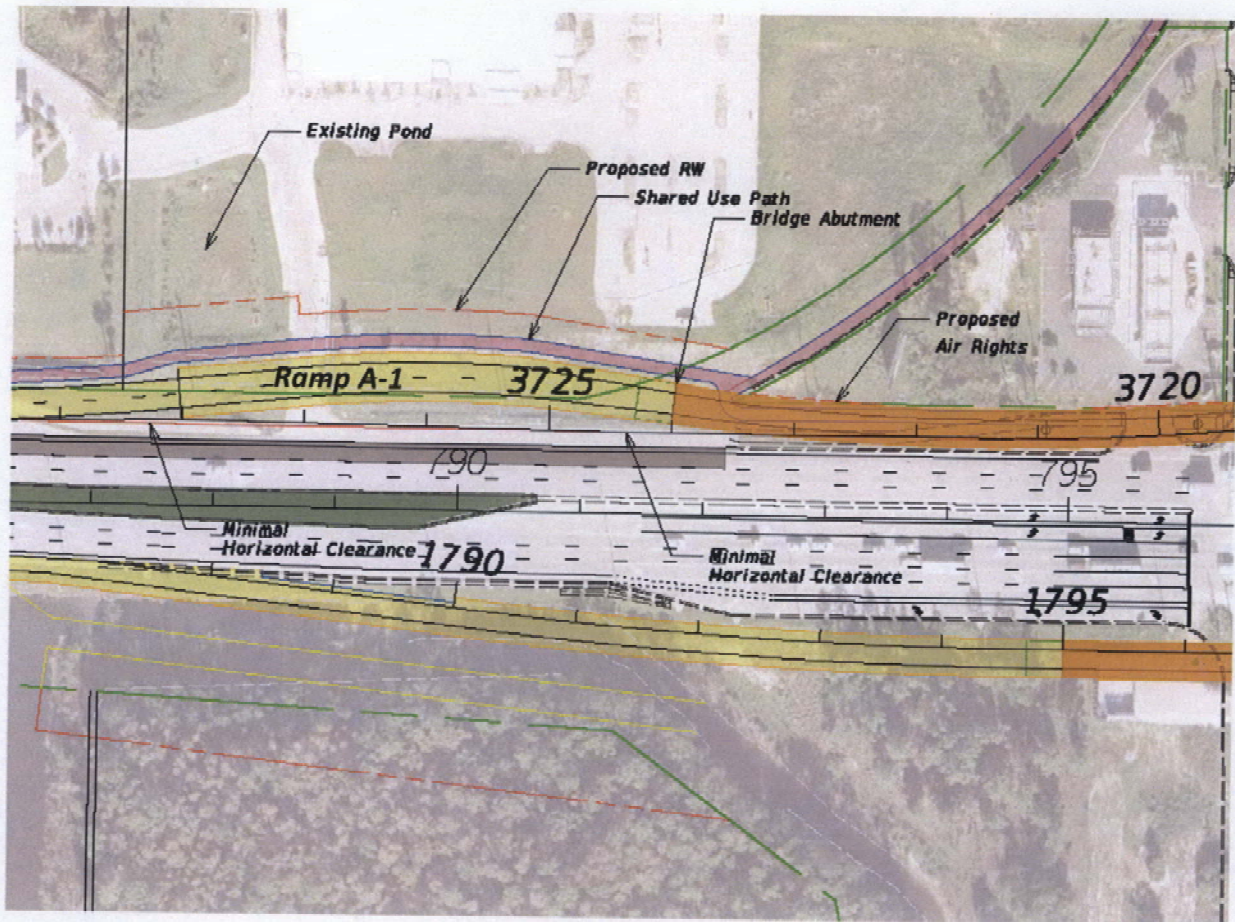
## **Impacts to Safety and Operations**

Crash statistics for the signalized intersection at Collier Boulevard and Davis Boulevard were obtained for years 2006 through 2011. During these six years, 56 crashes occurred at this intersection, 25 of which resulted in injuries. One-third of the total crashes were rear-end collisions and approximately 18 percent were angled crashes. A small percentage, approximately 1.8 percent were crashes with fixed objects. No fatalities were recorded within the study area between 2006 and 2011. The majority of the crashes took place during daylight hours on dry pavement surface.

In summary, the crashes recorded in the vicinity of the proposed ramp structure with a narrower horizontal width were related to the signalized intersection. The majority of the crashes were rear-end collisions, taking place on the roadway surface and do not appear to be related to run-off the road or fixed object impacts.

## **Justification**

An additional 17,567 square feet of right-of-way at an approximate cost of \$ \$1,065,000 is required to provide a 16-foot horizontal clearance along the ramp down-slope retaining wall. The ramp horizontal alignment would need to include additional curvature in order to shift the retaining wall further east and away from the outside lane on Collier Boulevard. Illustrated on the next page is a horizontal alignment alternative for Ramp A-1 that would further encroach into the adjacent property in order to meet the PPM standard separation between the structure and outside travel lane. This ramp alternative would impact a private detention/retention pond that would have to be reconstructed. The total cost of meeting PPM Table 2.11.6 Horizontal Clearance to Bridge Piers and Abutments exceeds \$1,065,000.



**Recommendation**

We recommend a Design Variation to allow a minimum eight-foot horizontal clearance from the edge of travel lane to the face of the abutment and Ramp A-1 retaining wall. The narrower distance should be mitigated by installing standard protective treatments for approaches to structures. Crash statistics for the period between 2006 and 2011 do not indicate a pattern related to run-of-the-road or fixed objects. FDOT Design Standards Index 410 includes a variety of curb and gutter transitions to traffic barrier treatments. A combination of abutment attenuation in form of a curb to traffic barrier transition and a continuous traffic barrier installation along the ramp retaining wall could mitigate the narrower horizontal clearance to the travel lane. The proposed horizontal clearance of eight feet exceeds the AASHTO Roadside Design Guide for shy-line offset to barriers.

**Recommended by:**

*John R. Freeman, Jr.*  
 John R. Freeman, Jr., P.E. No. 25730

Date: *February 24, 2014*

Kittelson & Associates, Inc., 225 East Robinson Street, Suite 450 Orlando, FL 32801 | Cert. of Authorization No. 7524

**Appendix E**  
Value Engineering Report



I-75 AT 951 ULTIMATE INTERCHANGE

FPID: 425843-2

Collier County; VE# 14-001-03

Implementation of Value Engineering Recommendations (See VE report and document for full explanation of ideas)			
Recommendations	VE Estimated Savings (+) Value Added Cost (-)	Decision*	Comments**
<b>1:</b> Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area. (c)	\$3,794,528 (+)	Accepted/ with contingency	Further evaluations will be required during the initial design phase. Consideration should also be given to the bridge length over Davis Blvd.
<b>2:</b> Use a single span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path. (c)	\$1,232,653 (+)	Declined	Severance damages for loss of site circulation on businesses.
<b>3:</b> Utilize the original PD&E study is the most viable option for stormwater management. (o)	\$0	Accepted	
<b>4A:</b> Revise the proposed interchange layout by eliminating both the northbound and southbound flyover bridges. (c)	\$20,415,604 (+)	Declined	Technical memorandum on "operational analyses and cost of delay" indicate that the preferred alternative from the PD&E has the lowest economic impact with respect to vehicle delay.
<b>4B:</b> Revise the proposed interchange layout by eliminating the southbound flyover bridges. (c)	\$12,569,692 (+)	Declined	Technical memorandum on "operational analyses and cost of delay" indicate that the preferred alternative from the PD&E has the lowest economic impact with respect to vehicle delay.

Notes:

- FHWA reporting requires that each value engineering alternative be classified as concerning safety (s), operations (o), environment (e), construction (c), and/or other (ot).
- Maximum concurrent savings is the sum of recommendations which can be simultaneously implemented and would produce the maximum savings. Maximum coincident and value added include those costs indicated with an asterisk (\*) to exclude overlapping costs or alternatives that are mutually exclusive.

\* Decision to accept, decline, or accept with modifications  
 \*\* Reason for declining or explanation of modification if required.



Director's signature

1/21/14

Date



**VALUE ENGINEERING STUDY**  
***OF***  
***I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E***  
***FPID NOS. 425843-2-22-01***

**STUDY NUMBER: 14-001-03**

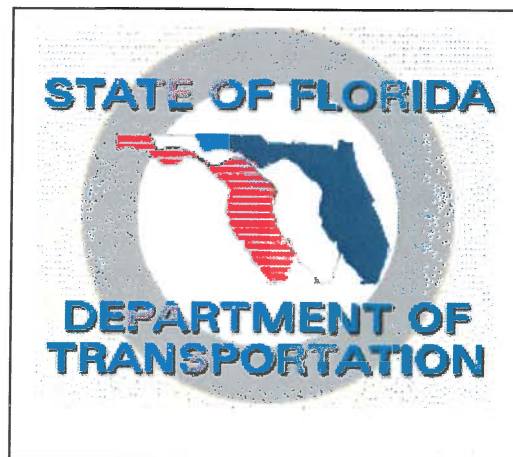
**Bartow, Florida**

***October 28 – November 1, 2013***

**FINAL REPORT**

**THE FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 1**

This report includes a summary of data collection, alternative analysis, and Value Engineering recommendations. I acknowledge that the procedure and reference used to develop the results contained in the report are standard to the Professional Practice of Value Engineering, as applied through Professional Judgment and Experiences. I hereby certify that I am a Registered Professional Engineer in the State of Florida and that this study has been performed in the accordance with current applicable FDOT Value Engineering Procedures.



# VALUE ENGINEERING STUDY

*OF*

*I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E  
FPID NOS. 425843-2-22-01*

**STUDY NUMBER: 14-001-03**

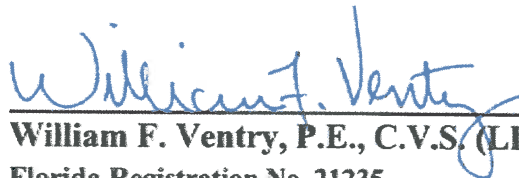
**Bartow, Florida**

*October 28 – November 1, 2013*

**FINAL REPORT**

**THE FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 1**

This report includes a summary of data collection, alternative analysis, and Value Engineering recommendations. I acknowledge that the procedure and reference used to develop the results contained in the report are standard to the Professional Practice of Value Engineering, as applied through Professional Judgment and Experiences. I hereby certify that I am a Registered Professional Engineer in the State of Florida and that this study has been performed in the accordance with current applicable FDOT Value Engineering Procedures.

  
\_\_\_\_\_  
**William F. Ventry, P.E., C.V.S. (LIFE)**  
**Florida Registration No. 21235**

December 10, 2013

DATE

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# I. EXECUTIVE SUMMARY

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## INTRODUCTION

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This Value Engineering report summarizes the results of the Value Engineering Study performed by VE Group for the Florida Department of Transportation District 1. The study was performed during the week of *October 28 – November 1, 2013*.

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## CONDENSED PROJECT DESCRIPTION

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The purpose of this project is to improve operational capacity and enhance overall traffic operations at I-75 and Collier Boulevard/CR 951 and on the surrounding roadway network. Collier Boulevard/CR 951 from Davis Boulevard/SR 84 to I-75 is funded for widening from 4 to 8 lanes. The project includes capacity improvements within one quarter-mile of Davis Boulevard/SR 84 and the I-75 interchange ramps. Similarly, Davis Boulevard/SR 84 from Radio Road to Collier Boulevard/CR 951 is funded for widening from 2 to 6 lanes. This project includes a bypass ramp for the eastbound to southbound movement at the Davis Boulevard/SR 84 and Collier Boulevard/CR 951 intersection. The interchange improvement will increase operational capacity to meet the local current and future traffic demand.

The total estimated **Construction Cost** from LRE that was provided to VE team is *\$35,115,100*.

The **Right of Way** cost is approximately *\$2,757,000*.

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## METHODOLOGY

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The Value Engineering Team followed the basic Value Engineering procedure for conducting this type of analysis.

This process included the following phases:

1. Investigation
2. Functional Analysis
3. Speculation
4. Evaluation
5. Development
6. Presentation
7. Report Preparation/Resolution



# **I. EXECUTIVE SUMMARY**

## **AREAS OF FOCUS**

A Pareto Chart and a Functional Analysis Worksheet are tools of the Value Engineering Process and are only used for determining the areas that the Value Engineering Team may focus on for possible alternatives. After development of the Pareto Chart and Functional Analysis Worksheet, the Value Engineering Team focused on the following Areas of Focus:

- A. RAMP C- 2 BRIDGE**
- B. RAMP A-1 BRIDGE**
- C. RETENTION PONDS**
- D. INTERCHANGE CONFIGURATION**

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# I. EXECUTIVE SUMMARY

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## RESULTS – AREAS OF FOCUS

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The following areas of focus were analyzed by the Value Engineering team and from these areas the following Value Engineering alternatives were developed and are recommended for Implementation. It should also be understood that the calculated savings shown in this Value Engineering Report are *potential* cost savings and are the best projections based on the conceptual data available at this time. Actual savings would have to be based on detailed quantity calculations that could not be made unless final design plans, with detailed quantities, were to be developed for both the original concept and the VE concept. Once the VE concept is adopted, however, the cost estimate for the original concept is no longer updated which precludes a detailed comparison with the VE concept estimate. Also, the cost estimate represents the amount needed to construct the project in present day cost. This does not necessarily mean that there are available funds for this amount and thus, any amount saved by a VE concept is not necessarily available for other projects.

***If the current interchange configuration is retained, then the Value Engineering Team recommends the following:***      **RECOMMENDATION NUMBER 1:**      **RAMP C-2 BRIDGE**

The Value Engineering Team recommends that Value Engineering Alternative No. 1 be implemented. ***Value Engineering Alternative No. 1 uses a two span Florida I Beam bridge over Beck Boulevard, then eliminates bridge and uses MSE retaining walls with fill and pavement, then uses a two span steel bridge over Ramp B and relocates the existing retention area.***

If this recommendation can be implemented, there is a possible savings of **\$3,794,528**.

If this recommendation can be implemented, there is a possible Life Cycle Cost savings of **\$3,816,388**.

***If the current interchange configuration is retained, then the Value Engineering Team recommends the following:***      **RECOMMENDATION NUMBER 2:**      **RAMP A-1 BRIDGE**

The Value Engineering Team recommends that the Value Engineering Alternative No. 2 be implemented. ***Value Engineering Alternative No. 2 uses a three span bridge over Davis Boulevard with Florida I Beams, then eliminates bridge and uses MSE retaining walls with fill and pavement and accommodates the multiuse path.***

If this recommendation can be implemented, there is a possible savings of **\$1,232,653**.

The Value Engineering team concluded that 100% of Life Cycle Cost is captured by the initial savings, therefore there is a possible Life Cycle Costs savings of **\$1,232,653**.

Total Possible Savings if the current interchange configuration is retained and Value Engineering Alternative No. 1 and No. 2 are implemented is **\$5,027,181**.

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I. EXECUTIVE SUMMARY

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RESULTS – AREAS OF FOCUS - continued

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***If it is decided to change the interchange configuration, then the Value Engineering Team recommends the following:***

**RECOMMENDATION NUMBER 3: INTERCHANGE CONFIGURATION**

The Value Engineering Team recommends that Value Engineering Alternative No. 4B be implemented. ***Value Engineering Alternative No.4B revises the proposed interchange layout by eliminating the southbound flyover bridges.***

If this recommendation can be implemented, there is a possible savings of **\$12,569,692.**

The Value Engineering team concluded that 100% of Life Cycle Cost is captured by the initial savings, therefore there is a possible Life Cycle Costs savings of **\$12,569,692.**

***If Value Engineering Alternative No. 4B is implemented, then the Value Engineering Team also recommends that Value Engineering Alternative No. 2 be implemented.***

The Value Engineering Team recommends that the Value Engineering Alternative No. 2 be implemented. ***Value Engineering Alternative No. 2 uses a three span bridge over Davis Boulevard with Florida I Beams, then eliminates bridge and uses MSE retaining walls with fill and pavement and accommodates the multiuse path.***

If this recommendation can be implemented, there is a possible savings of **\$1,232,653.**

The Value Engineering team concluded that 100% of Life Cycle Cost is captured by the initial savings, therefore there is a possible ***Life Cycle Costs savings of \$1,232,653.***

***Total Possible Savings if it is decided to change the current interchange configuration and Value Engineering No. 4B and No. 2 are implemented is \$13,802,345.***

# I. EXECUTIVE SUMMARY

## RESOLUTION/FHWA CHART

The following Value Engineering Alternatives were developed and are recommended for Implementation:

VALUE ENGINEERING RECOMMENDATIONS	RECOM- MEND ACCEPT	RECOM- MEND REJECT	STUDY FURTHER/ COMMENTS	FHWA CATEGORIES	
<p><b>RECOMMENDATION NUMBER 1:</b> <b>RAMP C-2 BRIDGE</b></p> <p><u>Value Engineering Alternative No. 1:</u></p> <p>Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.</p> <p>(See pg. 30 for details)</p> <p>Possible savings of \$3,794,528</p> <p>Life Cycle Cost savings: \$3,816,388</p>				SAFETY: Recommendations that mitigate or reduce hazards on the facility.	
				ENVIRONMENT: Recommendations that successfully avoid or mitigate impacts to natural and/or cultural resources.	
				OPERATION: Recommendations that improve real-time service and/or local corridor or regional levels of service.	
				CONSTRUCTION: Recommendations that improve work zone conditions, or expedite the project delivery.	X
				OTHER: Recommendations not readily categorized by above performance indicators.	
<p><b>RECOMMENDATION NUMBER 2:</b> <b>RAMP A-1 BRIDGE</b></p> <p><u>Value Engineering Alternative No. 2:</u></p> <p>Use a three span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.</p> <p>(See pg. 38 for details)</p> <p>Possible savings of \$1,232,653</p> <p>Life Cycle Cost savings: \$1,232,653</p>				SAFETY: Recommendations that mitigate or reduce hazards on the facility.	
				ENVIRONMENT: Recommendations that successfully avoid or mitigate impacts to natural and/or cultural resources.	
				OPERATION: Recommendations that improve real-time service and/or local corridor or regional levels of service.	
				CONSTRUCTION: Recommendations that improve work zone conditions, or expedite the project delivery.	X
				OTHER: Recommendations not readily categorized by above performance indicators.	
<p><b>RECOMMENDATION NUMBER 3</b> <b>INTERCHANGE CONFIGURATION</b></p> <p><u>Value Engineering Alternative No.4B:</u></p> <p>Revise the proposed interchange layout by eliminating the southbound flyover bridges.</p> <p>(See pg. 49 for details)</p> <p>Possible savings of \$12,569,692</p> <p>Life Cycle Cost savings: \$12,569,692</p> <p>(Continued)</p>				SAFETY: Recommendations that mitigate or reduce hazards on the facility.	
				ENVIRONMENT: Recommendations that successfully avoid or mitigate impacts to natural and/or cultural resources.	
				OPERATION: Recommendations that improve real-time service and/or local corridor or regional levels of service.	X
				CONSTRUCTION: Recommendations that improve work zone conditions, or expedite the project delivery.	X
				OTHER: Recommendations not readily categorized by above performance indicators.	

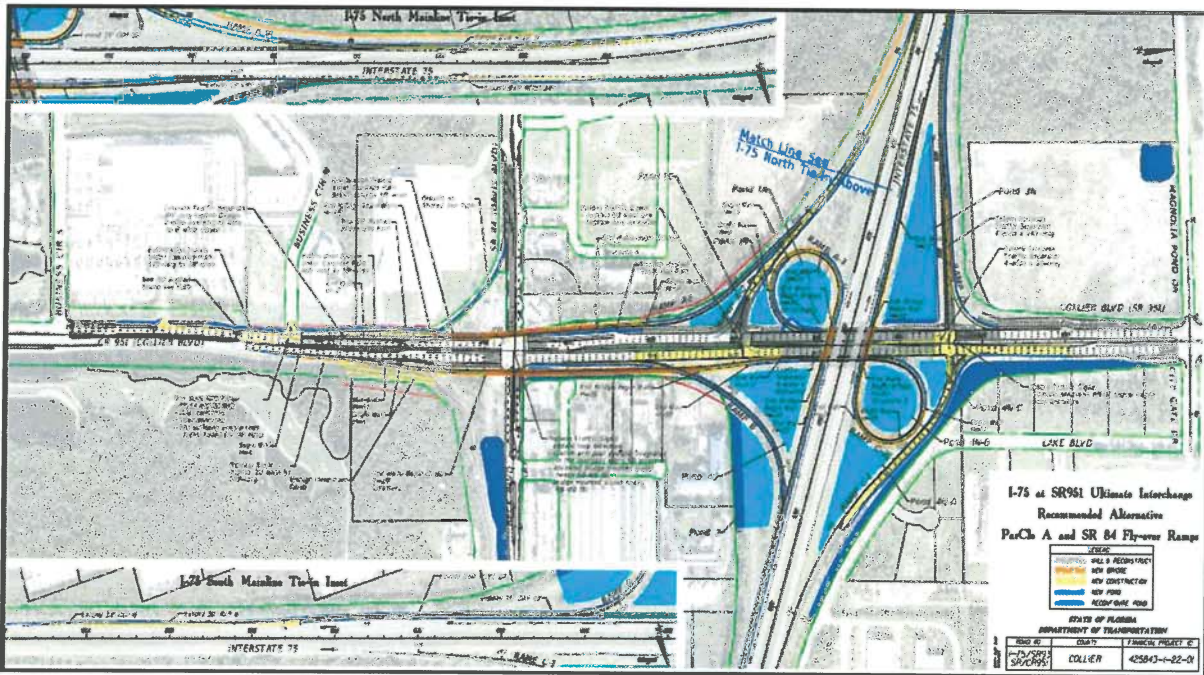


# I. EXECUTIVE SUMMARY

## RESOLUTION/FHWA CHART

VALUE ENGINEERING RECOMMENDATIONS	RECOM- MEND ACCEPT	RECOM- MEND REJECT	STUDY FURTHER/ COMMENTS	FHWA CATEGORIES	
<p><b>RECOMMENDATION NUMBER 3</b> <b>INTERCHANGE CONFIGURATION</b> <i>(Continued)</i></p> <p><i>If Value Engineering Alternative No. 4B is implemented, then the Value Engineering Team also recommends that Value Engineering Alternative No. 2 be implemented.</i></p> <p><i>Value Engineering Alternative No. 2 uses a three span bridge over Davis Boulevard with Florida I Beams, then eliminates bridge and uses MSE retaining walls with fill and pavement and accommodates the multiuse path.</i> <i>(See pg. for details)</i></p> <p><i>Possible savings of \$1,232,653</i></p>				SAFETY: Recommendations that mitigate or reduce hazards on the facility.	
				ENVIRONMENT: Recommendations that successfully avoid or mitigate impacts to natural and/or cultural resources.	
				OPERATION: Recommendations that improve real-time service and/or local corridor or regional levels of service.	
				CONSTRUCTION: Recommendations that improve work zone conditions, or expedite the project delivery.	<b>X</b>
				OTHER: Recommendations not readily categorized by above performance indicators.	
<b>TOTAL</b>				SAFETY	
				ENVIRONMENT	
				OPERATION	<b>1</b>
				CONSTRUCTION	<b>4</b>
				OTHER	

## II. LOCATION OF PROJECT



The I-75 interchange at SR 951 is located at the eastern edge of the Naples metropolitan urban area in Collier County, Florida, as illustrated in Figure 1. The I-75 at SR 951 Ultimate Interchange PD&E Study extends along Collier Boulevard between the intersections with Business Circle South and Magnolia Pond Drive, approximately 6,800 feet. The I-75 ramp tie-in locations were evaluated approximately 3,000 feet west and east of existing ramp gore areas.

### III. TEAM MEMBERS AND PROJECT DESCRIPTION

### III. TEAM MEMBERS

#### *I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E*

#### VALUE ENGINEERING TEAM MEMBERS

*October 28 – November 1, 2013*

NAME	AFFILIATION	EXPERTISE	PHONE NUMBER
William F. Ventry, P.E., C.V.S.~LIFE	VE GROUP, L.L.C.	Team Leader	850/627-3900
Ronald E. Wishon	VE GROUP, L.L.C.	Estimator	850/627-3900
Janet Middleton, P.E.	FDOT District 1	Roadway	863/519-2309
Mary Wiley	FDOT District 1	Construction	239/656-7866
Dave Morgan	FDOT District 1	Maintenance	239/656-7853
Ed Brekhus, P.E.	Volkert	Structures	813/875-1365
Rax Jung, P.E.	FDOT District 1	ISD	863/519-2562
Steve Jones, C.G.A.	FDOT District 1	Right-of-Way	863/519-2434
Kisan Patel, E.I.	FDOT District 1	Materials	863/519-4253
Rovindra Churaman, P.E.	FDOT District 1	Traffic Operations	863/519-2511
Rob Bullinger, P.E.	FDOT District 1	Drainage	863/519-2236
Selina Carroll	FDOT District 1	Access Management	863/519-2258
Frank Ventry, A.V.S.	VE GROUP, L.L.C.	Asst. Team Leader/CADD	850/627-3900
James Buckingham, E.I.	FDOT District 1	PE Trainee	863/519-2666



### III. TEAM MEMBERS AND PROJECT DESCRIPTION

#### PROJECT DESCRIPTION

The Preferred Alternative combines a classic Partial Cloverleaf (ParClo) A interchange form with two flyover ramp connections to and from Collier Boulevard south of the Davis Boulevard intersection. As such, the highest volume traffic movement to and from I-75 do not have to travel through the Collier Boulevard and Davis Boulevard signalized intersection, extending this busy location's design life. A separated exit lane would be added to northbound Collier Boulevard under I-75 overpasses and could be constructed within the existing bridge span width.

The proposed ParClo A interchange would include two new loop ramps in the southwest and northeast quadrants. Two new bridges would provide acceleration lanes to I-75 and would be built south and north of the existing I-75 overpasses. The I-75 southbound on-ramps from southbound and northbound Collier Boulevard first merge to one lane joining the I-75 mainline southeast of the current interchange gore. The proposed I-75 northbound on-ramp gore will be rebuilt in the approximate same location as the existing gore and will provide a parallel merge auxiliary lane to mainline I-75. The southbound off-ramp gore would be rebuilt to provide a parallel two-lane exit. Both southbound and northbound off-ramps would be relocated to accommodate the new loop ramps.

Two flyovers would convey Collier Boulevard traffic over Beck Boulevard and Davis Boulevard to the proposed northbound loop on-ramp and from the southbound off-ramp respectively. These flyovers would connect with Collier boulevard at the Business Circle North intersection, south of Davis Boulevard.



## IV. INVESTIGATION PHASE

### *I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E*

#### *STUDY BRIEFING*

*October 28, 2013*

NAME	AFFILIATION	PHONE
Bill Ventry	VE GROUP, L.L.C.	850/627-3900
Ronald E. Wishon	VE GROUP, L.L.C.	850/627-3900
Frank Ventry	VE GROUP, L.L.C.	850/627-3900
Janet Middleton	FDOT District 1	863/519-2309
Mary Wiley	FDOT District 1	239/656-7866
Dave Morgan	FDOT District 1	239/656-7853
Ed Brekhus	Volkert	813/875-1365
Rax Jung	FDOT District 1	863/519-2562
Greg Bohde	FDOT District 1	863/519-2434
Kisan Patel	FDOT District 1	863/519-4253
Mario Dipola	FDOT District 1	863/519-2396
Rovindra Churaman	FDOT District 1	863/519-2511
Rob Bullinger	FDOT District 1	863/519-2236
Selina Carroll	FDOT District 1	863/519-2258
Frank Ventry	VE GROUP, L.L.C.	850/627-3900
James Buckingham	FDOT District 1	863/519-2666
William Hartmann	FDOT District 1	863/519-2263
Aaron Kaster	FDOT District 1	863/519-2495
Chad Croft	DRMP	407/896-0594
Steve Jones	FDOT District 1	863/519-2613
Radu Nan	Kittelsohn & Assoc.	407/373-1111
Kevin Lee	FDOT District 1	863/519-2283

## IV. INVESTIGATION PHASE

### *I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E*

#### *STUDY RESOURCES*

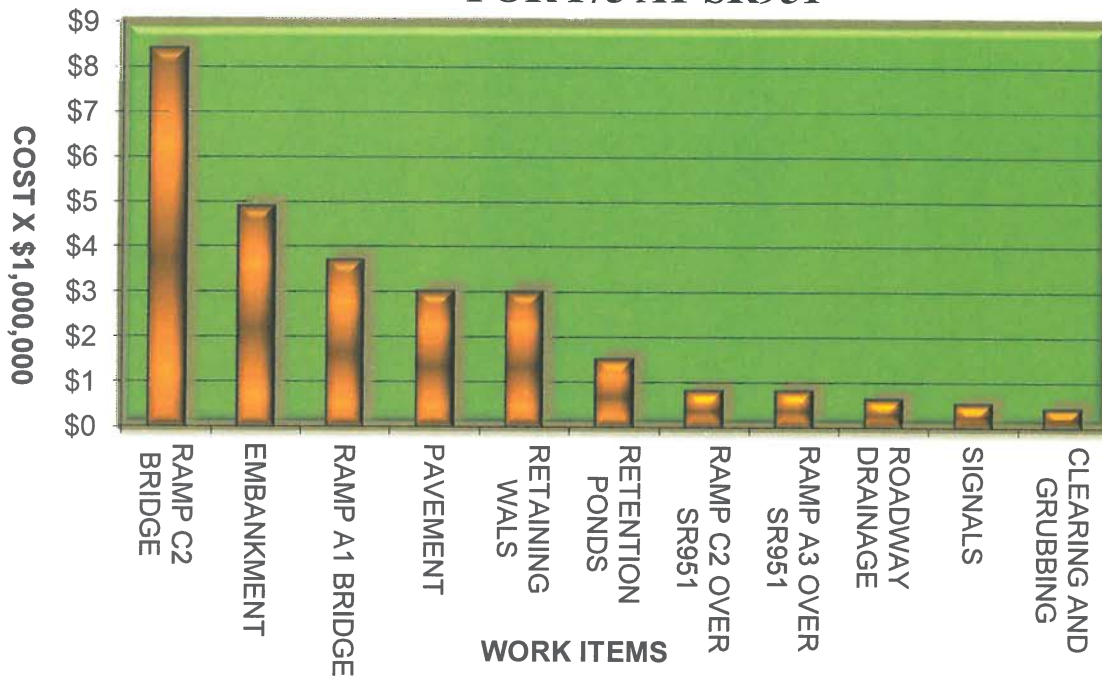
*October 28 – November 1, 2013*

NAME	AFFILIATION	PHONE
Brent Setchell	FDOT – Permitting	863/519-2557
James Carr	Agnoli Barber & Brundidge PM	239/597-3111
Marlene Massan	Collier Co. SPE	239/252-8192-
Lisa Koehler	Big Cypress Basin Service Center	239/263-7615
John Vliet	Collier Co. Director Maintenance	239/252-5824
Bill Muscleyway	Youngquist Brother, Inc. Deep Well PM	239/489-4444
Nathan Beales	Collier Co. Utilities	239/252-2853
Chris Libby	Atkins	239/330-3413
Gary Beagles	FDOT – Utilities	863/519-2526
Ivan Sakolic	FDOT – Geotech	863/519-4225
Joe Harper	FDOT – Right-of-Way	863/519-2486
Bill Sullivan	FDOT – Right-of-Way	863/519-2428
Gena Batman	FDOT – Cost Estimator	863/519-2558
Bernie Masing	FDOT - Design	863/519-2543
Andy Richardson	FDOT-Atkins-Structures	863/519-2370
Quan-Yang Yao	FDOT - Structures	863/519-2733

## V. FUNCTIONAL ANALYSIS PHASE

### PARETO ANALYSIS WORKSHEETS

#### PARETO CHART FOR I75 AT SR951



**\*\* Note:** *This worksheet is a tool of the Value Engineering Process and is only used for determining the areas that the Value Engineering Team should focus on for possible alternatives.*

## V. FUNCTIONAL ANALYSIS PHASE

### FUNCTIONAL ANALYSIS WORKSHEET I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E

October 28 – November 1, 2013

ITEM	FUNCT. VERB	FUNCT. NOUN	*TYPE	COST	WORTH	VALUE INDEX
Ramp C-2 Bridge	Span Span	Beck Blvd. Retention Area	B S	\$8,400,000	\$4,100,000	2.05
Ramp A-1 Bridge	Span Facilitate	Davis Blvd. Traffic	B S	\$3,700,000	\$1,500,000	2.47
Ramp C-2 over SR 951	Span Facilitate	SR 951 Traffic	B S	\$800,000	\$100,000	8.00
Ramp A-3 over SR 951	Span Facilitate	SR 951 Traffic	B S	\$800,000	\$100,000	8.00
Embankment	Establish Provide	Grades Grades	B S	\$4,900,000	\$3,500,000	1.40
Pavement	Support Provide	Vehicles Lanes	B S	\$3,000,000	\$2,200,000	1.40
Retaining Walls	Retain Reduce	Material Typical	B S	\$3,000,000	\$3,000,000	1.00
Retention Ponds	Retain Treat	Water Water	B S	\$1,500,000	\$1,000,000	1.50
Roadway Drainage	Collect Convey	Water Water	B S	\$600,000	\$600,000	1.00
Signals	Avoid Control	Conflicts Traffic	B S	\$500,000	\$500,000	1.00
Clearing & Grubbing	Remove	Objects	B	\$400,000	\$400,000	1.00

\*B – Basic      S – Secondary

\*\* Note: This worksheet is a tool of the Value Engineering process and is only used for determining the areas that the Value Engineering team should focus on for possible alternatives. The column for COST indicates the approximate amount of the cost as shown in the cost estimate. The column for WORTH is an estimated cost for the lowest possible alternative that would provide the FUNCTION shown. Many times the lowest cost alternatives are not considered implementable but are used only to establish a worth for a function. A value index greater than 1.00 indicates the Value Engineering team intends to focus on this area of the project.



## **V. FUNCTIONAL ANALYSIS PHASE**

The following areas have a value index greater than 1.00 on the preceding Functional Analysis Worksheet and therefore have been identified by the Value Engineering Team as areas of focus and investigation for the Value Engineering process:

- A. RAMP C-2 BRIDGE**
- B. RAMP A-1 BRIDGE**
- C. RETENTION PONDS**
- D. INTERCHANGE CONFIGURATION**

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## VI. SPECULATION PHASE

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Ideas generated, utilizing the brainstorming method, for performing the functions of previously identified areas of focus.

### A. RAMP C-2 BRIDGE

- Reduce bridge length
- Use a different type of girder
- Use a single span bridge over Beck Boulevard
- Relocate the existing retention area
- Use Florida I Beam
- Eliminate bridge and use MSE retaining walls with fill and pavement
- Use a single span steel bridge over Ramp B
- Change alignment to avoid retention area
- Put retention area underground
- Move utility substation
- Lower ramp grade between Beck Boulevard and Ramp B bridges

### B. RAMP A-1 BRIDGE

- Reduce bridge length
- Use a different type of girder
- Use a single span bridge over Davis Boulevard
- Use Florida I Beam
- Eliminate bridge and use MSE retaining walls with fill and pavement
- Change alignment to avoid multiuse path
- Change alignment to avoid Right of Way air rights issues
- Accommodate multiuse path

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## VI. SPECULATION PHASE

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### C. RETENTION PONDS

- Use French drain to reduce retention area
- Use off site ponds
- Use new injection wells
- Use existing injection wells with local authority
- Reduce pond by comingling water
- Eliminate retention ponds and transfer water to a canal district
- Reduce pond size by co-mingling offsite water with onsite water per Rule 1099 – do not accommodate more area than required
- Use off site compensatory
- Reduce pavement area

### D. INTERCHANGE CONFIGURATION

- Use a diverging diamond interchange
- Use a typical diamond interchange
- Use a modified diamond interchange with one loop ramp
- Use a full cloverleaf interchange
- Use a direct connector to westbound I-75
- Revise the proposed interchange layout

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## VII. EVALUATION PHASE

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### ALTERNATIVES

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The following alternatives were formulated during the "eliminate and combine" portion of the Evaluation Phase.

**A. RAMP C-2 BRIDGE**

*Value Engineering Alternative No. 1:*      *Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.*

**B. RAMP A-1 BRIDGE**

*Value Engineering Alternative No. 2:*      *Use a three span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.*

**C. RETENTION PONDS**

*Value Engineering Alternative No. 3:*      *Eliminate ponds, if possible.*

**D. INTERCHANGE CONFIGURATION**

*Value Engineering Alternative No.4A:*      *Revise the proposed interchange layout by eliminating both the northbound and southbound flyover bridges.*

*Value Engineering Alternative No.4B:*      *Revise the proposed interchange layout by eliminating the southbound flyover bridges.*



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## VII. EVALUATION PHASE

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### ADVANTAGES AND DISADVANTAGES

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The following Advantages and Disadvantages were developed for the Value Engineering Alternatives previously generated during the speculation phase. It also includes the Advantages and Disadvantages for the "As Proposed".

#### A. RAMP C-2 BRIDGE

"Current Design":                      1,291 foot steel plate girder bridge.

##### Advantages

- Maintains the existing retention area
- Better visibility for local businesses
- Spans Beck blvd. and Ramp B
- Spans existing brackish water well

##### Disadvantages

- High construction cost
- High future maintenance cost of steel bridge

##### Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES

#### A. RAMP C-2 BRIDGE

Value Engineering Alternative No. 1:

*Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.*

Advantages

- Lower construction cost
- Lower future bridge maintenance cost
- Spans Beck Boulevard and Ramp B

Disadvantages

- More visual impact to businesses
- Requires moving existing retention pond

Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES - continued

#### B. RAMP A-1 BRIDGE

"Current Design":                    1,000 ft. Florida I beam bridge.

##### Advantages

- Spans Davis Boulevard
- Spans 48 inch pipe
- Spans multi-use path

##### Disadvantages

- High construction cost
- High right of way cost(business damages)

##### Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES

#### B. RAMP A-1 BRIDGE

Value Engineering Alternative No. 2:

*Use a three span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.*

Advantages

- Lower construction cost
- Lower maintenance because less bridge
- Accommodates water line
- Spans multi-use path
- Spans Davis Boulevard

Disadvantages

- Right of way cost(business damages)

Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**



## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES

#### C. RETENTION PONDS

"Current Design":                    10 ponds within existing interchange.

##### Advantages

- Provides for stormwater retention
- No right of way required for new ponds

##### Disadvantages

- High construction cost

##### Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES

#### C. RETENTION PONDS

Value Engineering Alternative No. 3:      *Eliminate ponds, if possible.*

##### Advantages

- May be lower construction cost
- May be lower maintenance cost

##### Disadvantages

- May be difficult to eliminate ponds
- May require an interlocal agreement

##### Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

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## VII. EVALUATION PHASE

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### ADVANTAGES AND DISADVANTAGES

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#### D. INTERCHANGE CONFIGURATION

"Current Design":

Partial cloverleaf.

Advantages

- Improves operation
- Reduces incidents
- Better access

Disadvantages

- Higher construction cost

Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**

## VII. EVALUATION PHASE

### ADVANTAGES AND DISADVANTAGES

#### D. INTERCHANGE CONFIGURATION *(Continued)*

*Value Engineering Alternative No.4A:*

*Revise the proposed interchange layout by eliminating both the northbound and southbound flyover bridges.*

*Value Engineering Alternative No.4B:*

*Revise the proposed interchange layout by eliminating the southbound flyover bridges.*

Advantages

- Lower construction cost
- Improves operation
- Reduces incidents

Disadvantages

- Medium construction cost
- Some movements may be lower LOS

Conclusion

**CARRY FORWARD FOR FURTHER EVALUATION.**



## VII. EVALUATION PHASE

### *I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E*

#### *MID POINT MEETING*

*October 30, 2013*

<i>NAME</i>	<i>AFFILIATION</i>	<i>PHONE</i>
Bill Ventry	VE Group, Team Leader	850/627-3900
Ron Wishon	VE Group, L.L.C.	850/627-3900
Frank Ventry	VE Group, L.L.C.	850/627-3900
Janet Middleton	FDOT District 1	863/519-2309
Mary Wiley	FDOT District 1	239/656-7866
Dave Morgan	FDOT District 1	239/656-7853
Ed Brekhus	Volkert	813/875-1365
Rax Jung	FDOT District 1	863/519-2562
Steve Jones	FDOT District 1	863/519-2613
Kisan Patel	FDOT District 1	863/519-4253
Mario Dipola	FDOT District 1	863/519-2396
Rovindra Churaman	FDOT District 1	863/519-2511
Rob Bullinger	FDOT District 1	863/519-2236
Selina Carroll	FDOT District 1	863/519-2258
Nicole Mills	FDOT District 1	863/519-2277
Bernie Masing	FDOT District 1	863/519-2543
Sharon Harris	FDOT District 1	863/519-2315
Kevin Ingle	FDOT District 1	863/519-2740
James Buckingham	FDOT District 1	863/519-2666
Kevin Lee	FDOT District 1	863/519-2283
William Hartmann	FDOT District 1	863/519-2263
Aaron Kaster	FDOT District 1	863/519-2495
Radu Nan	Kittelson & Assoc.	407/373-1111

## **VIII. DEVELOPMENT PHASE**

### **A. RAMP C-2 BRIDGE**

- CURRENT DESIGN
- VALUE ENGINEERING ALTERNATIVE NO. 1

### **B. RAMP A-1 BRIDGE**

- CURRENT DESIGN
- VALUE ENGINEERING ALTERNATIVE NO. 2

### **C. RETENTION PONDS**

- CURRENT DESIGN
- VALUE ENGINEERING ALTERNATIVE NO. 3 (DROPPED)

### **D. INTERCHANGE CONFIGURATION**

- CURRENT DESIGN
- VALUE ENGINEERING ALTERNATIVE NO. 4A
- VALUE ENGINEERING ALTERNATIVE NO. 4B

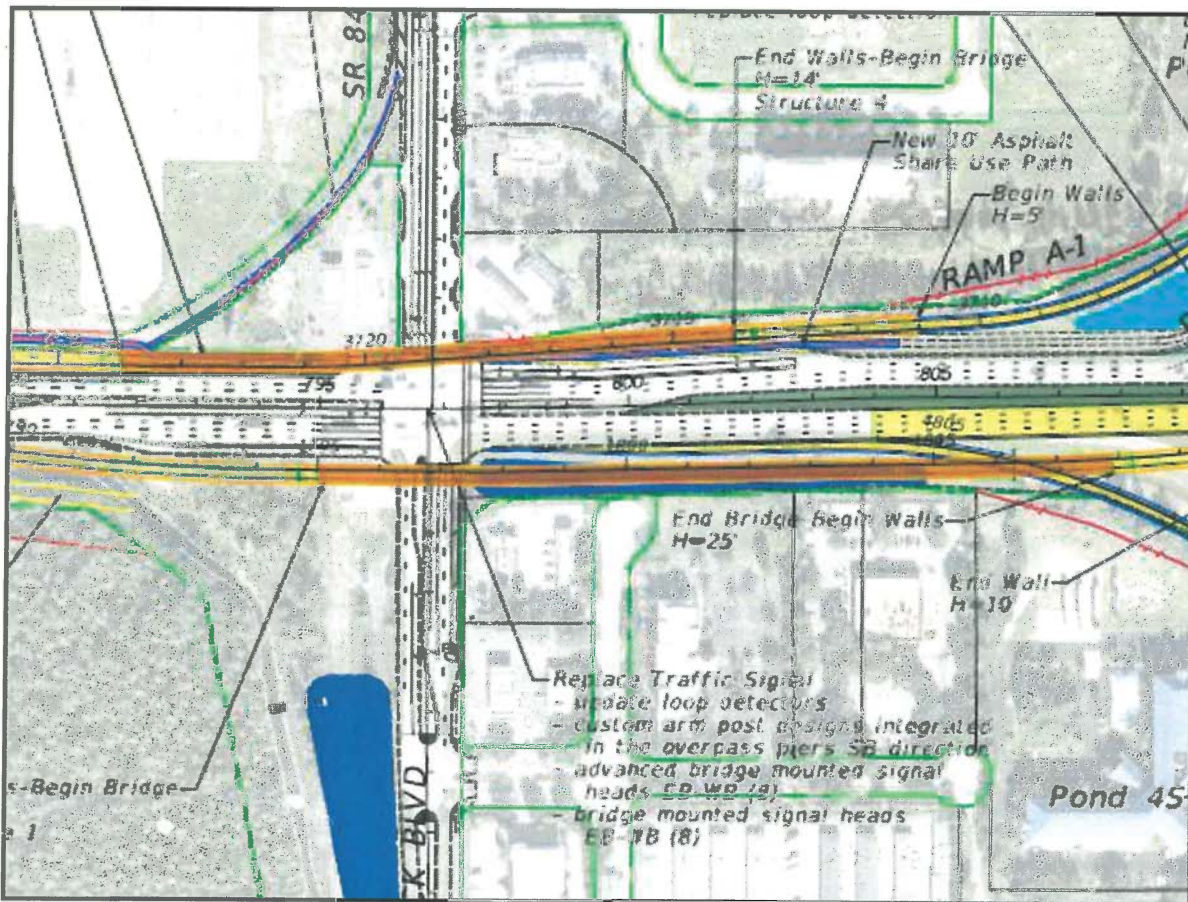
## VIII. DEVELOPMENT PHASE

### A. RAMP C-2 BRIDGE

#### “Current Design”

The current design calls for a one lane 1,291 foot ramp crossing over Beck Blvd. beginning along northbound SR951 (Collier Blvd) just south of the intersection crossing over the southbound I-75 ramp access and terminating prior to the clover leaf northbound I-75 access ramp. The south end of the bridge is set to span over a brackish well and then the next span passes over Beck Blvd. The north end of the bridge spans over ramp B at a high skew utilizing a straddle bent to be able to span across the southbound I-75 access ramp. Between Beck Blvd. and Ramp B the structure remains elevated providing area for a retention pond beneath the bridge.

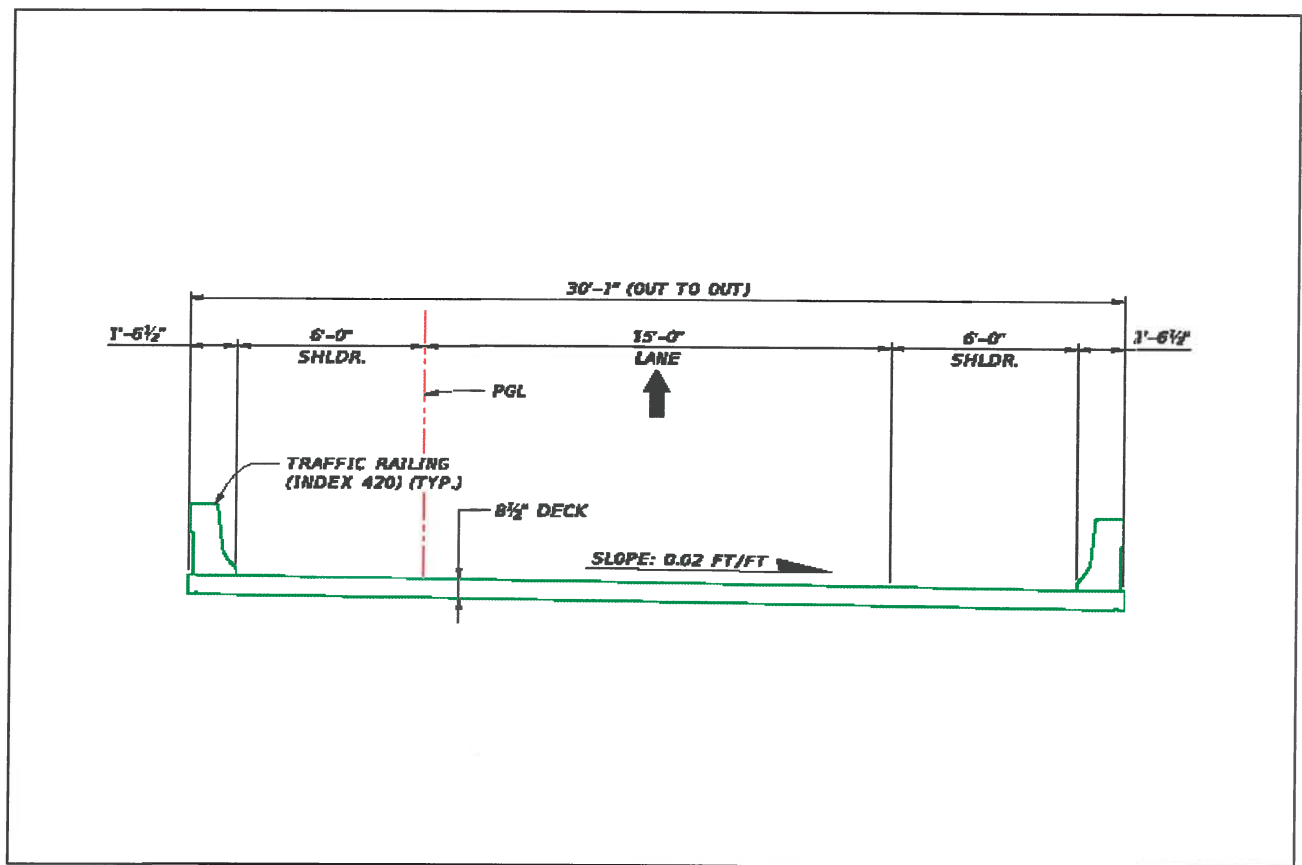
The current bridge design section typical calls for a single 15-foot roadway lane width and six foot shoulders. The ramp approach begins just south of Beck Blvd at Sta 1783+00 and ends at approximately Sta 1807+91. The bridge will meet the minimum vertical clearance of 16.5 feet from the superstructure and straddle pier.



# VIII. DEVELOPMENT PHASE

## A. RAMP C-2 BRIDGE

“Current Design”



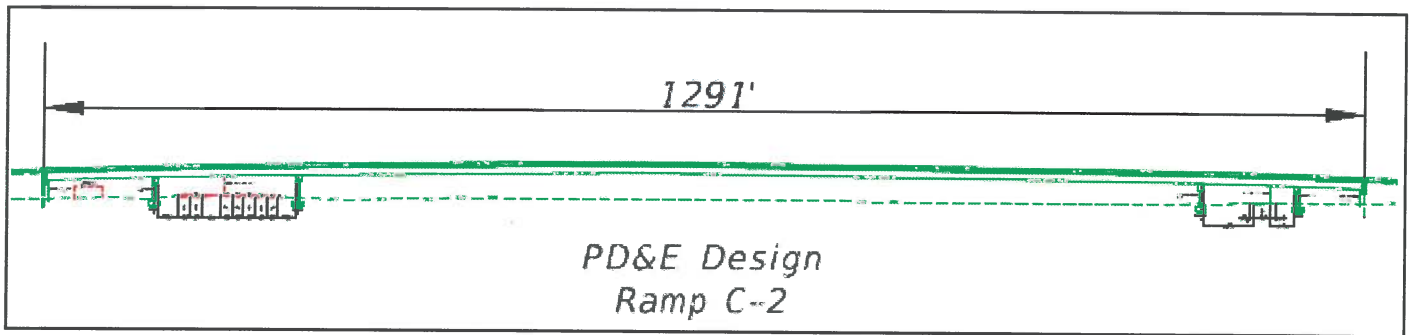
BRIDGE TYPICAL SECTION



VIII. DEVELOPMENT PHASE

A. RAMP C-2 BRIDGE

"Current Design"



BRIDGE ELEVATION

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## VIII. DEVELOPMENT PHASE

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### A. RAMP C-2 BRIDGE

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*Value Engineering Alternative No. 1: Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.*

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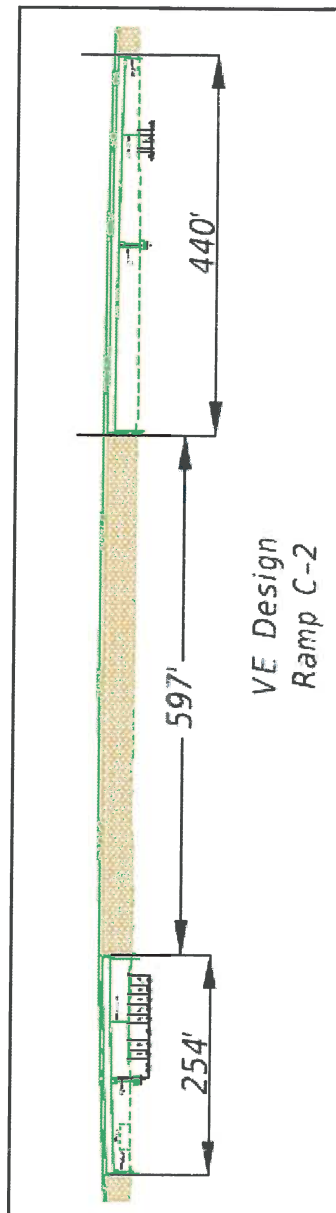
The recommendation from the Value Engineering team is to retain the south and north ends of the bridge in the current design while changing the center portion of the design from an elevated structure to a Mechanically Stabilized Earthwall (MSE) wall. This would enable the southern structure to change from a steel plate girder to a Florida I-beam superstructure. The current 1,291 ft. long bridge would now comprise of a 254 ft. long bridge on the south end to span Beck Blvd and the existing brackish brine well, and a 440 ft. long structure on the north end with a center section of MSE wall that is 597 ft. in length.

The retention pond under the current design will be relocated to Pond 2 extending the total area of the pond further to the east and utilizing existing Right-of-Way.

## VIII. DEVELOPMENT PHASE

### A. RAMP C-2 BRIDGE

*Value Engineering Alternative No. 1: Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.*

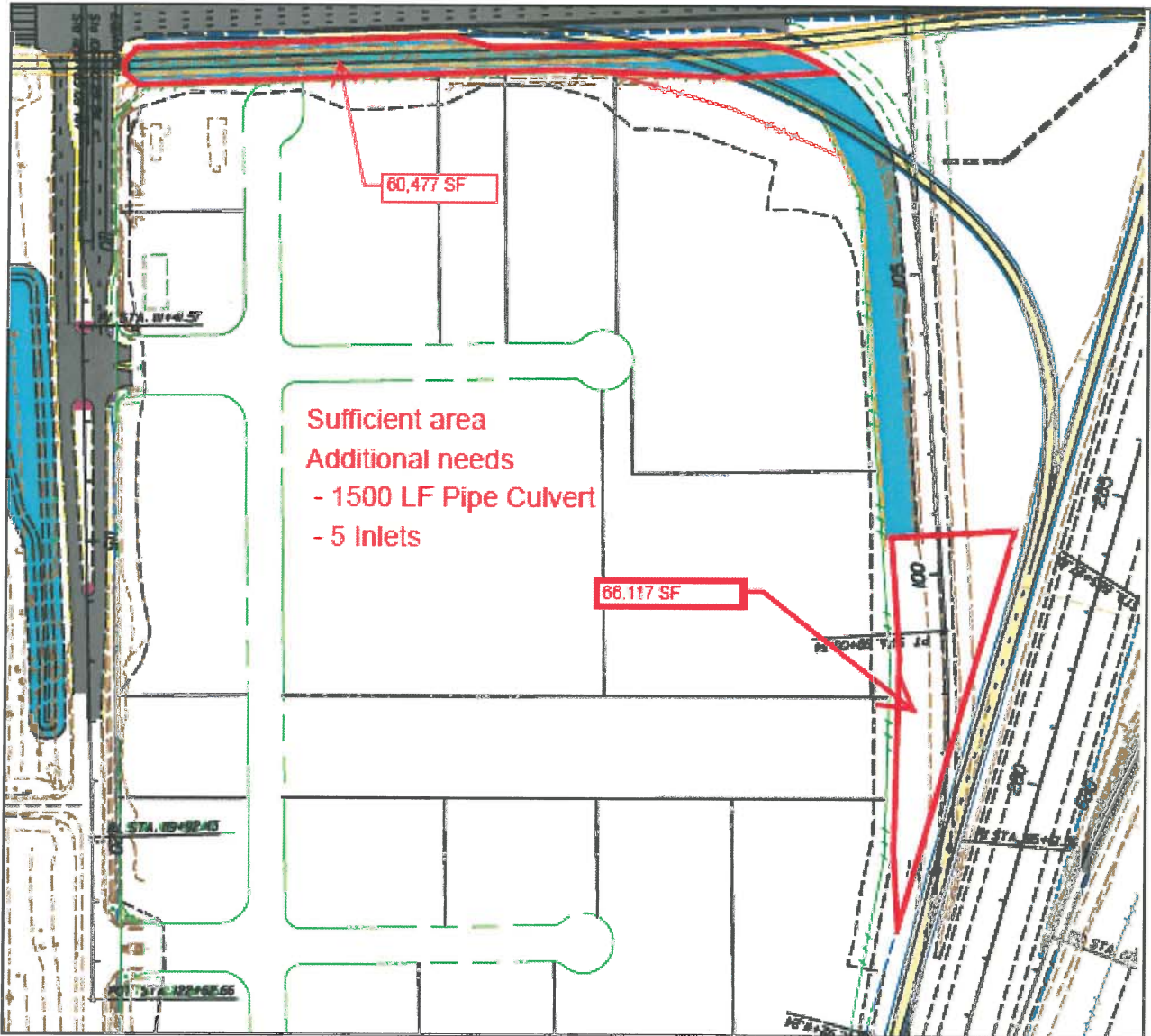


## VIII. DEVELOPMENT PHASE

### A. RAMP C-2 BRIDGE

*Value Engineering Alternative No. 1:*

*Use a two span Florida I Beam bridge over Beck Boulevard, then eliminate bridge and use MSE retaining walls with fill and pavement, then use a two span steel bridge over Ramp B and relocate the existing retention area.*





**RAMP C-2 BRIDGE  
VALUE ENGINEERING ALTERNATIVE NO. 1  
COST COMPARISON SHEET**

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
Clearing and Grubbing	AC	\$8,500	13	\$107,440	12.64	\$107,440
Embankment	CY	\$12.20	185258	\$2,260,143	207,479.27	\$2,531,247
Mainline Pavement	SY	\$30.00	9384	\$281,518	10,378.92	\$311,368
Shoulder Pavement	SY	\$25.00	4077	\$101,919	4,872.77	\$121,819
Channel Excav., Erosion Control, Guardrail and Ancors & Traffic Sep.	Lump	\$162,240.43	1	\$162,240	1	\$162,240
Drainage	Lump	\$180,936.93	1	\$180,937	1	\$180,937
Erosion Control	Lump	\$22,003.17	1	\$22,003	1	\$22,003
Retaining Wall	SF	\$26.82	71535	\$1,918,569	111,534	\$2,991,342
Bridge C-2 over Beck & Ramp B	SF	\$214.50	38833	\$8,329,739	0	\$0
Bridge C-2 over Beck	SF	\$122.00	0	\$0	7,640	\$932,119
Bridge C-2 over Ramp B	SF	\$214.50	0	\$0	13,235	\$2,838,950
18" Pipe	LF	\$43.00	0	\$0	600	\$25,800
24" Pipe	LF	\$58.20	0	\$0	900	\$52,380
Type 5 Inlets	EA	\$2,400.00	0	\$0	5	\$12,000
<b>SUBTOTAL</b>				<b>\$13,364,507</b>		<b>\$10,289,646</b>
MOBILIZATION (THIS IS SUB+CONTIN. X % =)		<b>5.0%</b>		\$721,714		\$555,665
MAINTENANCE OF TRAFFIC		<b>10.00%</b>		\$1,336,451		\$1,028,965
ENGINEERING & CONTINGENCIES		<b>8.0046%</b>		\$1,069,775		\$823,645
RIGHT OF WAY	Lump	\$876,000	1	\$876,000	1	\$876,000
<b>GRAND TOTAL</b>				<b>\$17,368,448</b>		<b>\$13,573,920</b>

**POSSIBLE SAVINGS**

**\$3,794,528**

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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**RAMP C-2 BRIDGE**

**“Current Design”**

**NOTE:**                    *See spreadsheet*

Clearing and Grubbing – 12.64 AC

Embankment – 185,257.61 CY

Mainline Pavement – 9383.92 SY

Shoulder Pavement – 4076.77 SY

Channel Excavation, Guardrail and Anchors and Traffic Separators - \$162,240.43

Erosion Control - \$22,003.17

Drainage - \$180,936.93

Signing and Striping - \$40,756.22

Ramp C-2 Bridge over Beck and Ramp B - \$8,329,738.56

Ramp C-2 Bridge over S.R. 951 - \$794,495.52

Retaining Wall - \$1,918,568.70

**VE NO. 1 –FIB OVER BECK BLVD. & STEEL BRIDGE OVER RAMP B**

Additional Embankment calculated from VE Drawings - 22,221.66 CY

Additional Pavement –  $597' \times 15' / 9 = 995$  Additional Mainline Pavement (from VE Drawings)

Additional Shoulder Pavement =  $597' \times 12' / 9 = 796$  Additional Shoulder Pavement (from VE Drawings)

Additional Drainage = 600 LF 18” Pipe + 900 LF 24” Pipe + 5 Type 5 Inlets

600 x 43 = \$25,800

900 x 58.20 = \$52,380

5 x 2400 = \$12,000

New Bridge over Beck =  $7640.32 \times \$122 = \$932,119.04$

New Bridge over Ramp B =  $13,235.20 \times \$214.50 = \$2,838,950.40$

Additional Retaining Wall = 39,999 SF

**RAMP C-2 BRIDGE**

**COMPARISON**

**75 Year Life Cycle Cost Comparison**

**Enter the Interest Rate = 5%**

**AS PROPOSED**

**VE ALTERNATIVE 1**

Year		Total	Present Worth	Total	Worth
0	INITIAL COST	\$17,368,448	-\$17,368,448	\$13,573,920	-\$13,573,920
20	Maintenance	\$97,000	-\$36,558	\$39,000	-\$14,699
40	Maintenance	\$97,000		\$39,000	
60	Maintenance	\$97,000		\$39,000	
75	SALVAGE	\$0	\$0	\$0	\$0

**-\$17,405,006**

**-\$13,588,619**

**LCC SAVINGS**

**\$3,816,388**

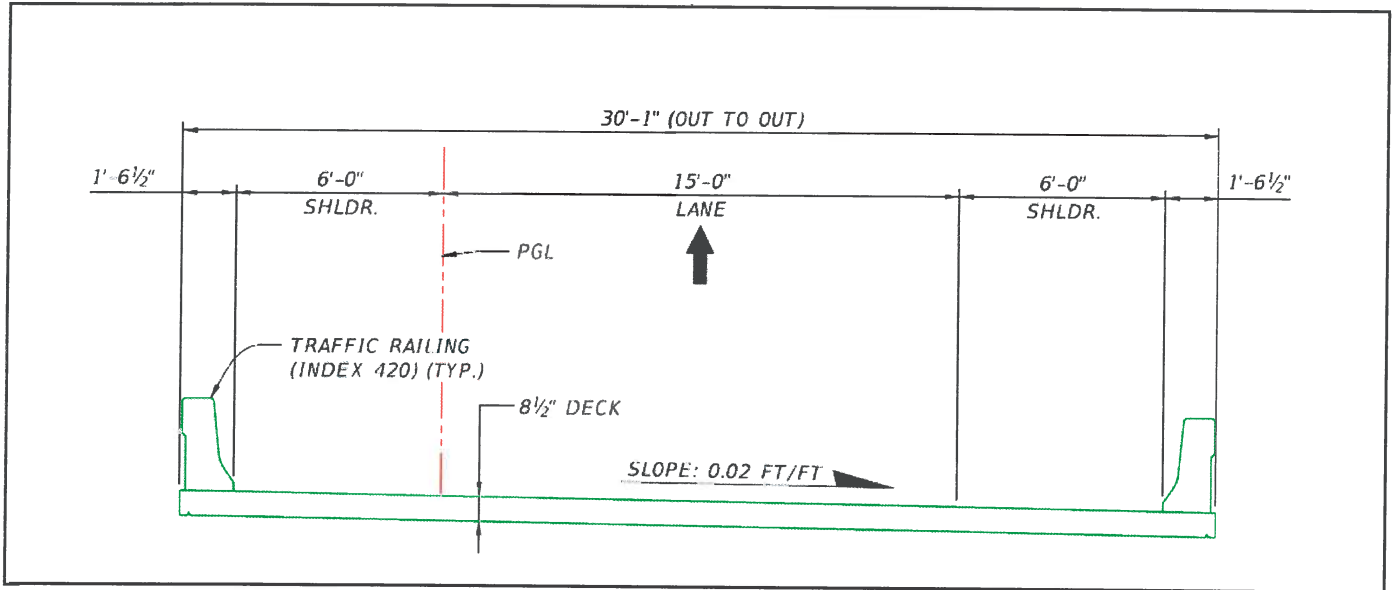




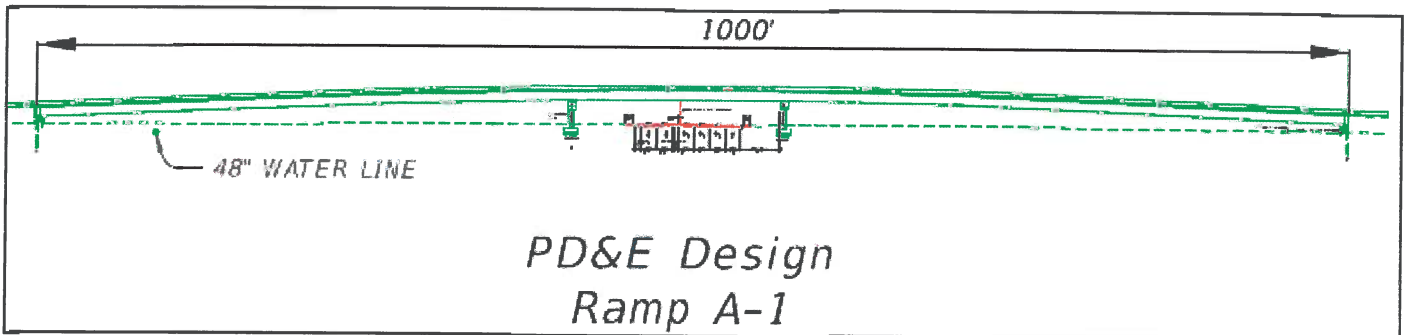
# VIII. DEVELOPMENT PHASE

## B. RAMP A-1 BRIDGE

“Current Design”



BRIDGE TYPICAL SECTION



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## VIII. DEVELOPMENT PHASE

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### B. RAMP A-1 BRIDGE

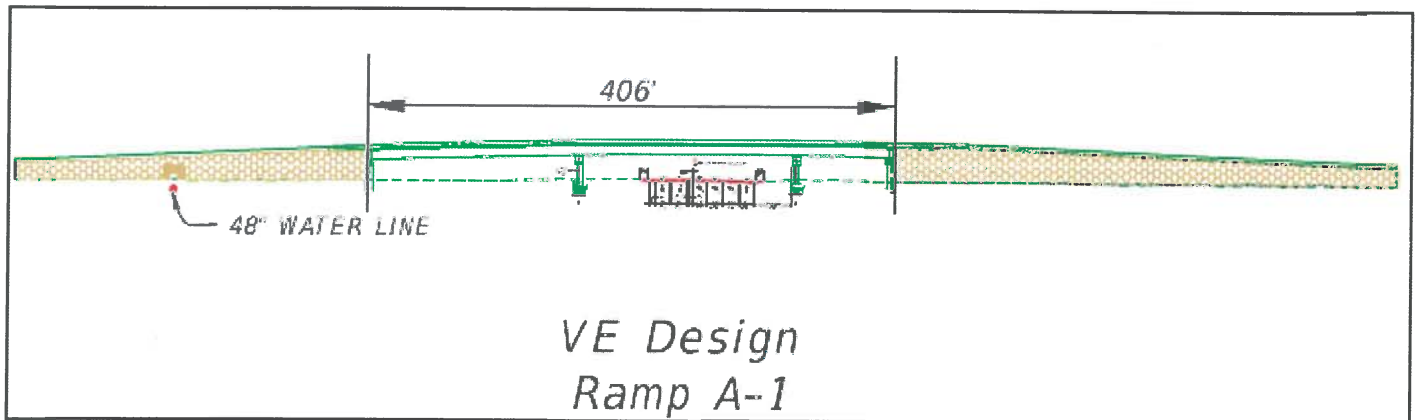
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*Value Engineering Alternative No. 2:*      *Use a single span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.*

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The recommended design from the Value Engineering team is to reduce the 1,000 ft. bridge to a 406 ft. bridge which spans across the Mobile Gas Station driveway entrance and Davis Blvd. and allows the multi-use trail to pass beneath it. Additional Right-of-Way would be purchased on the south end to accommodate the multi-use path alignment.



On the north end a three-sided culvert would be provided directly above the 48 inch Collier County owned Water Main to provide maintenance access and to shield the MSE wall volume from a local pipe failure.

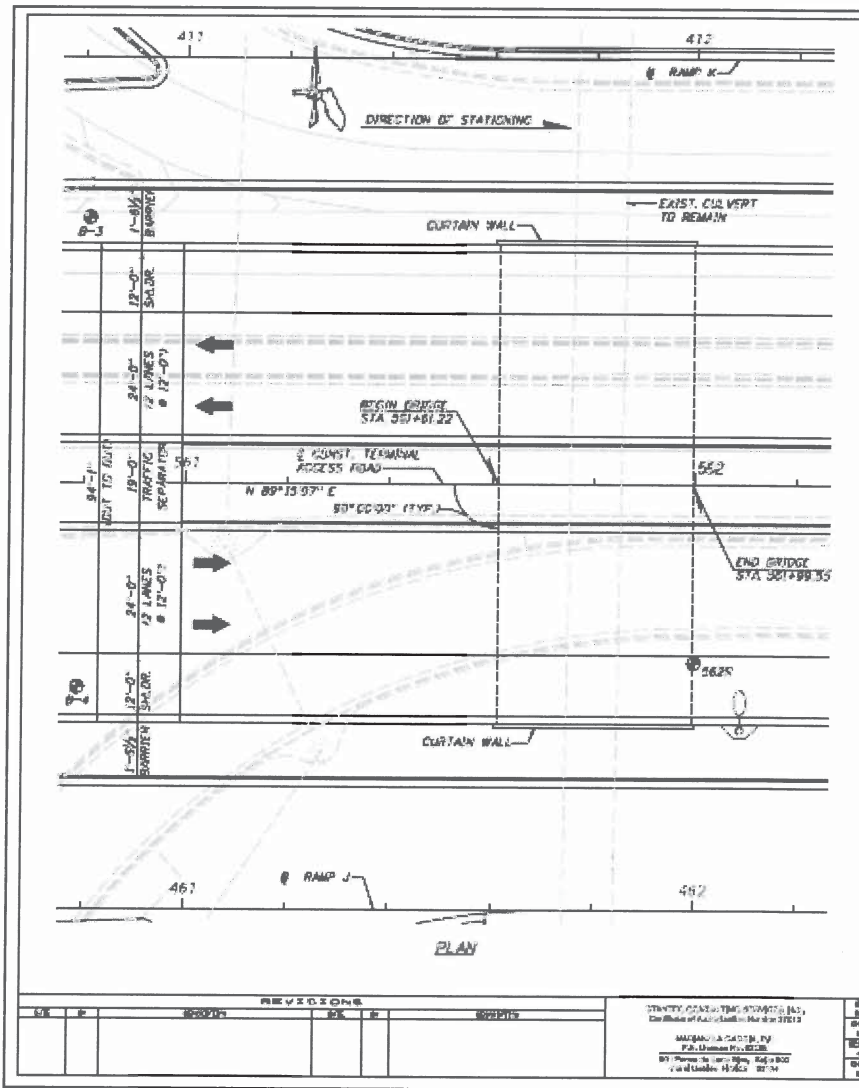
Two possible alternatives were considered to provide a fill slope above the pipe instead of a MSE wall. This would allow easier maintenance access and not undermine the structural integrity in the event of a pipe failure. Another was to relocate the Collier County 48 inch Water Main. The Water Main is constructed of a proprietary pipe material. These alternatives would require either additional Right-of-Way acquisition or funding allocation to handle this proprietary pipe.

# VIII. DEVELOPMENT PHASE

## B. RAMP A-1 BRIDGE

*Value Engineering Alternative No. 2:*

*Use a three span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.*



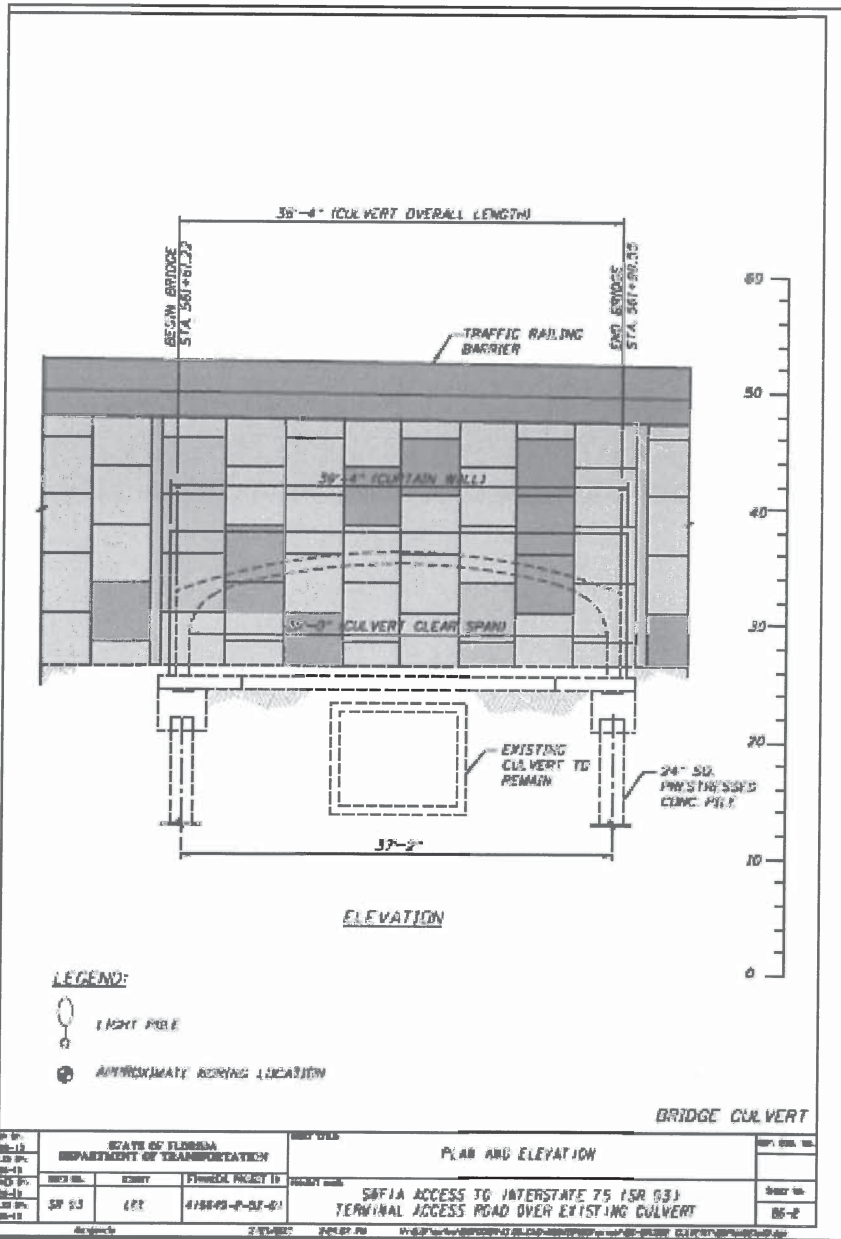
PLAN VIEW OF PREVIOUS BOX OVER PIPE IN FDOT DISTRICT 1

# VIII. DEVELOPMENT PHASE

## B. RAMP A-1 BRIDGE

Value Engineering Alternative No. 2:

Use a three span bridge over Davis Boulevard with Florida I Beams, then eliminate bridge and use MSE retaining walls with fill and pavement and accommodate the multiuse path.



ELEVATION VIEW OF PREVIOUS BOX OVER PIPE IN FDOT DISTRICT 1



**RAMP A-1 BRIDGE  
VALUE ENGINEERING ALTERNATIVE NO. 2  
COST COMPARISON SHEET**

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
Clearing and Grubbing	AC	\$8,500	4	\$34,680	4.08	\$34,680
Embankment	CY	\$12.20	46,963	\$572,945	66,777.14	\$814,681
Mainline Pavement	SY	\$30.00	9,227	\$276,810	10,223	\$306,690
Shoulder Pavement	SY	\$25.00	2,899	\$72,475	3,695	\$92,375
Drainage	Lump	\$92,579.08	1	\$92,579	1.00	\$92,579
Striping, Erosion Control, Signing, & Approach Slabs	Lump	\$52,113.40	1	\$52,113	1.00	\$52,113
Bridge A-1 over Davis Blvd.	SF	\$122.00	30,080	\$3,669,760	12,212.48	\$1,489,923
Retaining Wall	SF	\$26.82	12,500	\$335,250	35,666	\$956,562
Culvert Concrete	CY	\$541.48	0	\$0	34.44	\$18,649
Reinf Steel	LB	\$0.93	0	\$0	6,888	\$6,406
18" Piles	LF	\$75.00	0	\$0	540	\$40,500
<b>SUBTOTAL</b>				<b>\$5,106,612</b>		<b>\$3,905,158</b>
MOBILIZATION (THIS IS SUB+CONTIN. X % =)		<b>5.0%</b>		\$275,769		\$210,887
MAINTENANCE OF TRAFFIC		<b>10.00%</b>		\$510,661		\$390,516
ENGINEERING & CONTINGENCIES		<b>8.0046%</b>		\$408,764		\$312,592
RIGHT OF WAY	Lump	\$1,881,000.00	1	\$1,881,000	1	\$2,131,000
<b>GRAND TOTAL</b>				<b>\$8,182,806</b>		<b>\$6,950,153</b>

**POSSIBLE SAVINGS**

**\$1,232,653**

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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**RAMP A-1**

**“Current Design”**

**NOTE:**      *See spreadsheet*

Clearing and Grubbing – 4.08 AC

Embankment – 46,962.70 CY

Mainline Pavement – 9227.73SY

Shoulder Pavement – 2899.24SY

Erosion Control - \$7,562.65

Drainage - \$92,579.08

Signing and Striping - \$15,182.59

Ramp A-1 Bridge over Davis Blvd. - \$3,669,760

Retaining Wall - \$335,250

**VE NO. 2 – SINGLE SPAN FIB OVER DAVIS BLVD.**

Additional Embankment calculated from VE Drawings – 19,814.44 CY

Additional Pavement –  $597' \times 15' / 9 = 995$  Additional Mainline Pavement (from VE Drawings)

Additional Shoulder Pavement =  $597' \times 12' / 9 = 796$  Additional Shoulder Pavement (from VE Drawings)

New Bridge over Davis Blvd. =  $12212.48 \text{ SF} \times \$122/\text{SF} = \$1,489,922.56$

Additional Retaining Wall = 23,166 SF

Additional Culvert

34.44 CY Culvert Concrete

6,888 LB Reenf. Steel

540' 18" Piles

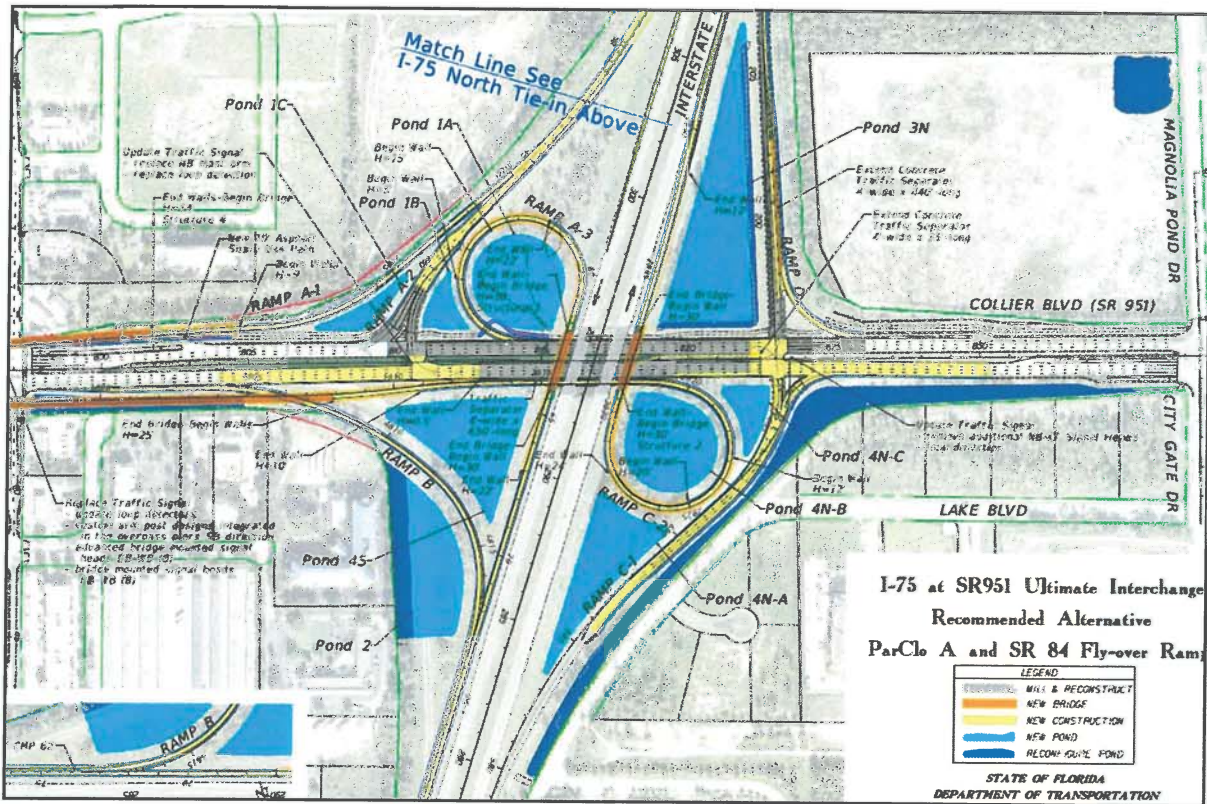
Additional Right of Way = \$250,000

# VIII. DEVELOPMENT PHASE

## C. RETENTION PONDS

### “Current Design”

The proposed stormwater management facilities for the ultimate interchange configuration include ten shallow dry-detention ponds all located in the interchange infield areas or existing right-of-way and three ex-filtration trenches located within Collier Boulevard right-of-way. The ponds are sized to treat all impervious/pavement areas (existing and proposed) contained within each pond basin. Runoff will be conveyed to the ponds through sheet flow off the roadway and paved shoulders or ditch flow.



## VIII. DEVELOPMENT PHASE

### C. RETENTION PONDS

*Value Engineering Alternative No. 3: Eliminate ponds, if possible.*

The Value Engineering Team investigated the following option that may allow the elimination of the ten shallow dry-detention ponds that are located in the interchange infield areas or existing right-of-way.

- **Henderson Canal and Golden Gate Main Canal**

Runoff would be conveyed directly to the Henderson Canal & Golden Gate Main Canal through storm water drainage and ditch flow.

After contacting the South Florida Water Management District (SFWMD) Lisa Koehler, Inter-GOV Rep-Chief; this option will not be viable due to both the Henderson Canal and Golden Gate Main Canal being at full capacity. There are no plans for future improvements by the SFWMD for these canals.

- **Deep Injection Wells**

Runoff would be conveyed to a deep injection well.

Existing deep injection wells are approximately 4 miles from project sight and cannot be utilized.

After contacting Collier County and Youngguist Brothers Inc.; this option is not viable because the construction cost for a 24" deep injection well is approximately 4 to 5 million dollars.

- **Reduce Pond Size by Comingling Water.**

Reduce pond size by comingling water with adjacent developments. After contacting James Carr with Agnoli Barber and Brundage; both adjacent developments are at capacity and cannot comeingle water.

#### CONCLUSION:

*After the investigation of utilizing the Henderson and Golden Gate Main Canals, deep injection wells, and comingling water with off site development; it is the value engineering team's recommendation that the original PD&E study is the most viable option for stormwater management.*



## VIII. DEVELOPMENT PHASE

### D. INTERCHANGE CONFIGURATION

#### “Current Design”

Both Davis and Collier boulevards have restrictive access and are designated as Access Class 5. The existing Collier and Davis boulevards cross-sections are in the process of changing from the existing condition to wider, higher capacity arterials. Construction of the improvements started in late 2011 with completion scheduled in 2014. For the purpose of this study, these improvements are considered to be part of the existing and No-Build conditions. Collier Boulevard is being widened to eight lanes, four in each direction of travel, between the intersection with Davis Boulevard and City Gate Boulevard. Davis Boulevard is being widened to six lanes from west of Radio Road to Collier Boulevard. Collier Boulevard and Davis Boulevard intersection turn lane improvements include:

- A second southbound left-turn lane
- A third eastbound left-turn lane
- An eastbound right-turn bypass lane to southbound Collier Boulevard
- A second westbound left-turn lane

The Collier Boulevard south intersection leg with the I-75 northbound on-ramp is being widened to include a third northbound left-turn lane. Both I-75 off-ramps at Collier Boulevard are being widened to make full use of the additional arterial capacity. As such, the southbound off-ramp will be five lanes wide with three right-turn lanes toward southbound Collier Boulevard and two northbound left-turn lanes. The I-75 northbound off-ramp is being widened to four lanes, two per turning direction at the Collier Boulevard intersection. The northbound I-75 on-ramp is being widened to three lanes for consistency with the new three left-turn lanes off Collier Boulevard. I-75 mainline is designed and posted at a speed limit of 70 mph. Both Collier Boulevard and Davis Boulevard are designed and posted at a speed limit of 45 mph.

The current proposal includes the reconstruction of the existing diamond ramps to configure a Partial Cloverleaf interchange with 200-foot radii loop ramps in the southwest and northeast quadrants; construction of a new ramp connection from Collier Boulevard northbound to the proposed northeast quadrant loop ramp with a flyover structure at Beck Boulevard and the new I-75 southbound on-ramp in the southeast quadrant; construction of a new ramp connection from the I-75 southbound off-ramp to the intersection of Collier Boulevard and Business Circle South. The proposed ramp would include a structure over Davis Boulevard. The current proposal enhances the 2035 design year traffic operations by maintaining an acceptable level of service at the interchange ramp terminals and the Collier Boulevard and Davis Boulevard major intersection.



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## VIII. DEVELOPMENT PHASE

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### D. INTERCHANGE CONFIGURATION

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*Value Engineering Alternative No.4A: Revise the proposed interchange layout by eliminating both the northbound and southbound flyover bridges.*

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Two alternative concepts were studied based on the traffic perspective. The intent was to identify the potential interchange & intersection configuration, with compatible traffic operational performance as PD&E preferred alternative, and within the existing right of way, while meeting the goal of Value Engineering process. The PD & E preferred Alternative 1 concept was thus modified to reflect the following choices:

- *VE-4A – ParClo with no flyovers*
  - Reconstruct the existing diamond ramps to configure a Partial Cloverleaf interchange with 200-foot radii loop ramps in the southwest and northeast quadrants.
  - Eliminate the construction of a new ramp connection from Collier Boulevard northbound to the proposed northeast quadrant loop ramp with a flyover structure at Beck Boulevard and the new I-75 southbound on-ramp in the southeast quadrant. Use existing roadway geometry.
  - Eliminate the construction of a new ramp connection from the I-75 southbound off-ramp to the intersection of Collier Boulevard and Business Circle South, which includes a structure over Davis Boulevard. Use existing roadway geometry.





**INTERCHANGE CONFIGURATION  
VALUE ENGINEERING ALTERNATIVE NO. 4A  
COST COMPARISON SHEET**

DESCRIPTION	UNITS	UNIT COST	PROP'D QTY.	PROP'D COST	V.E. QTY.	V.E. COST
Clearing & Grubbing	AC	\$8,500.00	25.69	\$218,365.00	20.00	\$170,000
Embankment	CY	\$12.20	250,079.20	\$3,050,966.24	196,981.74	\$2,403,177
Pavement (Mainline)	SY	\$30.00	30,054.69	\$901,640.70	0.00	\$0
Pavement (Shoulders)	SY	\$25.00	11,663.78	\$291,594.50	0.00	\$0
Drainage	Lump	\$367,383.39	1.00	\$367,383.39	1.00	\$367,383
Signing & Striping	Lump	\$87,493.87	1.00	\$87,493.87	1.00	\$87,494
Channel Excav., Guardrail, Erosion Control & Traf Separator	Lump	\$204,082.36	1.00	\$204,082.36	1.00	\$204,082
Bridge C-2 over Beck Blvd & Ramp B	SF	\$214.50	38,833.28	\$8,329,738.56	0.00	\$0
Bridge C-2 over S.R. 951	SF	\$136.50	5,820.48	\$794,495.52	5,820.48	\$794,496
Bridge A-1 over Davis Blvd	SF	\$122.00	30,080.00	\$3,669,760.00	0.00	\$0
Retaining Wall	SF	\$26.82	84,035.00	\$2,253,818.70	41,885	\$1,123,356
<b>SUBTOTAL</b>				<b>\$20,169,339</b>		<b>\$5,149,988</b>
MOBILIZATION (THIS IS SUB+CONTIN. X % =)		<b>5.0%</b>		\$1,089,191		\$278,111
MAINTENANCE OF TRAFFIC		<b>10.00%</b>		\$2,016,934		\$514,999
ENGINEERING & CONTINGENCIES		<b>8.0046%</b>		\$1,614,475		\$412,236
RIGHT OF WAY	Lump	\$2,757,000	1	\$2,757,000	1	\$876,000
<b>GRAND TOTAL</b>				<b>\$27,646,938</b>		<b>\$7,231,334</b>

**POSSIBLE SAVINGS**

**\$20,415,604**



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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**RAMP A-1 and C-2 BRIDGE**

**“Current Design”**

**Clearing and Grubbing**

4.36 AC (Ramp A Single Lane) + 3.62 AC (Ramp A Three Lane) + 4.08 AC (Ramp A-1) + 0.99 AC (Ramp A-2) + 12.64 AC = 25.69 AC

**Embankment**

5,294.08 CY (Ramp A Single Lane) + 9,860.57 CY (Ramp A Three Lane) + 46,962.70 CY (Ramp A-1) + 2,704.24 CY (Ramp A-2) + 185,257.61 CY (C-2) = 250,079.20 CY x \$12.20/CY = **\$3,050,966.24**

**Pavement Costs for Mainline**

Type B Stabilization = \$2.58/SY

Opt Base, Group 9 = \$9.52/SY

Asphalt = 275#/SY = 0.138 TN/SY x \$93.26/TN = \$12.87/SY for Superpave, Type C

Asphalt = 80#/SY = 0.04 TN/SY x \$119.94/TN = \$4.80/SY for Asphalt FC

\$2.58/SY+\$9.52/SY+\$12.87+\$4.80 = \$29.77/SY --- **Use: \$30/SY**

From LRE --- **Use: 3,235.90 SY** (Opt Base Qty for Ramp A One Lane)

From LRE --- **Use: 6,434.95 SY** (Opt Base Qty for Ramp A Three Lane)

From LRE --- **Use 9,227.73 SY** (Opt Base Qty for Ramp A-1 Two Lane)

From LRE --- **Use 1,772.19 SY** (Opt Base Qty for Ramp A-2 Three Lane)

From LRE --- **Use: 9,383.92 SY** (Opt Base Qty for Ramp C-2)

Total = **30,054.69 SY** x \$30/SY = **\$901,640.70**

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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**RAMP A-1 and C-2 BRIDGE**

**“Current Design”**

*(Continued)*

**Pavement Costs for Shoulders**

Opt Base, Group 4 = \$9.18/SY

Asphalt = 220#/SY = 0.11 TN/SY x \$93.26/TN = \$10.26/SY for Superpave, Type C

Asphalt = 80#/SY = 0.04 TN/SY x \$119.94/TN = \$4.80/SY for Asphalt FC

$\$9.18 + \$10.26 + \$4.80/\text{SY} = \$24.24/\text{SY}$  --- *Use: \$25/SY*

From LRE and Spreadsheet Total SY Shoulder Pavement = **11,663.78 SY**

$11,663.78 \text{ SY} \times \$25/\text{SY} = \$291,594.50$

**Drainage**

From LRE and spreadsheet for Ramp A Single Lane, Ramp Three Lane, Ramp A-1 Two Lane, Ramp A-2 Three Lane and Ramp C-2 = **\$367,383.39**

**Signing and Striping**

\$ From LRE and spreadsheet for Ramp A Single Lane, Ramp Three Lane, Ramp A-1 Two Lane, Ramp A-2 Three Lane and Ramp C-2 = **\$87,493.87**

**Channel Excavation, Guardrail, Erosion Control and Traffic Separator**

Total from LRE & Spreadsheet = **\$204,082.36**

**Bridges**

Bridge A-1 over Davis Blvd. = 30,080 SF x \$122/SF = \$3,669,760

Bridge C-2 over Beck Blvd. = 38,833.28 SF x \$214.50 = \$8,329,738.56

Bridge C-2 over S.R.951 = 5820.48 SF x \$135.6/SF = \$794,495.52

Total = **\$12,793,994.08**

**Retaining Walls**

12,500 SF for A-1

71,535 SF for C-2

$84,035 \text{ SF} \times \$26.82/\text{SF} = \$2,253,818.70$

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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**RAMP A-1 and C-2 BRIDGE**

**VE NO. 4A – ELIMINATE BRIDGE A-1 & C-2**

The VE Alternate eliminates Ramp A, A-1 & A-2 (lengths x widths of new pavement -SF)

A-----28,500 SF less C&G (one lane)

A-----56,880 SF less C&G (three lane)

A-1-----64,080 SF less C&G (two lane)

A-2-----15,660 SF less C&G (three lane)

C-2-----82,635 SF less C&G (one lane)

Total = 247,755 SF less C&G / 43,560SF/AC = 5.69 Acres less C&G

25.69 – 5.69 = 20 AC

**Retaining Walls to Delete:** A-1 Wall No. 1 = 2,850 SF  
A-1 Wall No. 2 = 2,850 SF  
A-1 Wall No. 3 = 3,400 SF  
A-1 Wall No. 4 = 3,400 SF  
C-2 Wall No. 1 = 9,500 SF  
C-2 Wall No. 2 = 3,500 SF  
C-2 Wall No. 3 = 11,400 SF  
C-2 Wall No. 4 = 5,250 SF

Total = 42,150 less Retaining Wall

**Embankment to Delete**

300' long x 56' wide x 9.5' avg height / 27 = 5,911.11 CY for A-1 Ramp – Retaining Walls 1 & 2

400' long x 56' wide x 8.5' avg height / 27 = 7,051.85 CY for A-1 Ramp – Retaining Walls 3 & 4

500' long x 30.08' wide x 19' avg height / 27 = 10,583.7 CY for Ramp C-2 Retaining Wall 1

500' long x 30.08' wide x 7' avg height / 27 = 3,899.26 CY for Ramp C-2 Retaining Wall 2

600' long x 30.08' wide x 19' avg height / 27 = 12,700.44 CY for Ramp C-2 Retaining Wall 3

300' long x 30.08' wide x 17.5' avg height / 27 = 5,848.88 CY for Ramp C-2 Retaining Wall 4

500' long x 30.08' wide x 12.75' avg height / 27 = 7,102.22 CY for Ramp C-2 Retaining Wall 5

250,079.2 – 53,097.46 = 196,981.74 = 196,981.74

*Total = 53,097.46 CY less Embankment = 196,981.74 for VE Alternative*

Assume all existing pavement will be adequate for this VE Alternate. There would not be a need for any A-1 Pavement

Right of Way for the east side of S.R. 951 would still be acquired

## VIII. DEVELOPMENT PHASE

### D. INTERCHANGE CONFIGURATION

*Value Engineering Alternative No.4B: Revise the proposed interchange layout by eliminating the southbound flyover bridges.*

- *VE-4B – ParClo with 1 flyover (at Davis Blvd.)*
  - Reconstruct the existing diamond ramps to configure a Partial Cloverleaf interchange with 200-foot radii loop ramps in the southwest and northeast quadrants.
  - Eliminate the construction of a new ramp connection from Collier Boulevard northbound to the proposed northeast quadrant loop ramp with a flyover structure at Beck Boulevard and the new I-75 southbound on-ramp in the southeast quadrant. Use existing roadway geometry.
  - Construct a new ramp connection from the I-75 southbound off-ramp to the intersection of Collier Boulevard and Business Circle South. The proposed ramp would include a structure over Davis Boulevard.







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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**INTERCHANGE CONFIGURATION**

**“Current Design for Ramp C-2”**

**Clearing and Grubbing**

From LRE and spreadsheet

$$12.64 \text{ AC} \times \$8500/\text{AC} = \$107,440$$

**Pavement Costs for Mainline**

Type B Stabilization = \$2.58/SY

Opt Base, Group 9 = \$9.52/SY

Asphalt = 275#/SY = 0.138 TN/SY x \$93.26/TN = \$12.87/SY for Superpave, Type C

Asphalt = 80#/SY = 0.04 TN/SY x \$119.94/TN = \$4.80/SY for Asphalt FC

$$\$2.58/\text{SY} + \$9.52/\text{SY} + \$12.87 + \$4.80 = \$29.77/\text{SY} \text{ --- Use: } \$30/\text{SY}$$

From LRE and spreadsheet --- 5509 ft x 15/9 = 9182 SY --- Use: 9,383.92 SY (Opt Base Qty)

$$9383.92 \text{ SY} \times \$30/\text{SY} = \$281,517.60$$

**Pavement Costs for Shoulders**

Opt Base, Group 4 = \$9.18/SY

Asphalt = 220#/SY = 0.11 TN/SY x \$93.26/TN = \$10.26/SY for Superpave, Type C

Asphalt = 80#/SY = 0.04 TN/SY x \$119.94/TN = \$4.80/SY for Asphalt FC

$$\$9.18 + \$10.26 + \$4.80/\text{SY} = \$24.24/\text{SY} \text{ --- Use: } \$25/\text{SY}$$

From LRE --- 5509 ft x 6/9 = 3673 SY --- Use: 4076.77 SY (Opt Base Qty)

$$4076.77 \text{ SY} \times \$25/\text{SY} = \$101,919.25$$

**Embankment**

$$185,257.61 \text{ CY} \times \$12.20/\text{CY} = \$2,260,142.84$$

**Drainage**

From LRE --- C-2 = \$180,936.93

**Signing and Striping**

$$\$29,040.66 + \$1734.80 + \$9980.75 = \$40,756.21 \text{ (for C-2)}$$

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**COST COMPARISON SHEET BACK UP CALCULATIONS**

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**INTERCHANGE CONFIGURATION**

**“Current Design for Ramp C-2”**

**Channel Excavation, Guardrail, Erosion Control and Traffic Separator**

Total = *\$162,240.43 from Spreadsheet*

**Bridges**

Bridge C-2 over Beck Blvd. = 38,833.28 SF x \$214.50/SF = **\$8,329,738.56**

Bridge C-2 over S.R.951 = 5,820.48 SF x \$136.50/SF = **\$794,495.52**

**Retaining Walls**

71,535 SF for C-2

71,535 SF x \$26.82/SF = **\$1,918,568.70**

Right of Way --- \$427,000 (Canal Relocation) + \$449,000 for Ramp B (hotel) miter = **\$876,000**

**VE NO. 4B – DELETE C-2 BRIDGE OVER BECK BLVD. AND RAMP B**

The VE Alternate eliminates Ramp C-2 (lengths x widths of new pavement -SF)

Clearing and Grubbing (Mainline)

9383.92 SY less Clearing and Grubbing

9383.92 x 9 = 84,455.28 SF = **1.94 AC less Clearing and Grubbing**

From LRE --- Delete Retaining Wall 1, 2, 3, 4, and 5

9500 SF + 3500 SF + 11,400 SF + 5250 SF + 6375 SF = **36,025 SF less Retaining Wall**

71535 SF – 36,025 SF = **35,510 SF**

From LRE volume of Embankment for 5 walls = 40,154.24 CY

185,257.61 CY – 40,154.24 = **145,103.36 CY**

Right of Way --- \$427,000 (Canal Relocation) + \$449,000 for Ramp B (hotel) miter = **\$876,000**

## VIII. DEVELOPMENT PHASE

### D. INTERCHANGE CONFIGURATION

#### *Value Engineering Alternative No.4A vs. 4B*

Performance measures including control delay, LOS and v/c ratio obtained from the Synchro analysis were compared for the three study alternatives. The analysis results show, from an operational point of view, the VE-4B alternative generally outperform the VE-4A alternative while the later realize greater cost savings. Especially for the most critical signalized intersections in the study, SR 951/SR 84 intersection and SR 951/I-75 SB ramp terminal, the VE-4A alternative might create potential traffic backup to I-75 mainline and along SR 951. Comparing PD&E preferred alternative and VE-4B alternative, the performance between two are relatively equitable, with one exception at SR 951/SR 84 intersection. However, the LOS deficiency at this intersection with estimated average control delay of 59.8 seconds per vehicle is just slightly over the required LOS D delay threshold of 55 seconds.

The analysis results were based on the deterministic analysis tool (i.e., Synchro) which considered each individual intersection in the study area as an isolated intersection. The interaction of traffic flow between adjacent intersections was not taken into consideration. To evaluate the system impact of the suggested two VE Alternatives on this relatively congested urban corridor, a more detail traffic analysis using the stochastic analysis tool (such as CORSIM micro-simulation) should be performed.



## VIII. DEVELOPMENT PHASE

### D. INTERCHANGE CONFIGURATION

*Value Engineering Alternatives No.4A vs. 4B*

#### LEVEL OF SERVICE

Control Delay Per Vehicle (s)	LOS by Volume to Capacity Ratio	
	≤1	>1
≤10	A	F
>10 and ≤20	B	F
>20 and ≤35	C	F
>35 and ≤55	D	F
>55 and ≤80	E	F
>80	F	F

#### FUTURE 2035 AM PEAK HOUR SIGNALIZED INTERSECTION ANALYSIS

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	7.7	8.0	7.1
	LOS	A	A	A
	v/c	0.76	0.73	0.77
Collier Blvd @ Business Cir N	Delay	20.0	4.4	22.1
	LOS	B	A	C
	v/c	0.88	0.75	0.93
Collier Blvd @ SR 84	Delay	46.2	72.1	59.8
	LOS	D	E	E
	v/c	0.93	1.16	1.06
Collier Blvd @ I-75 SB Ramp	Delay	12.9	49.4	11.2
	LOS	B	D	B
	v/c	0.70	1.07	0.71
Collier Blvd @ I-75 NB Ramp	Delay	20.5	15.0	13.3
	LOS	C	B	B
	v/c	0.81	0.68	0.68
Collier Blvd @ Magnolia Pond	Delay	169.5	158.5	160.8
	LOS	F	F	F
	v/c	1.40	1.42	1.42
Collier Blvd @ Golden Gate Pkwy	Delay	49.2	49.2	49.2
	LOS	D	D	D
	v/c	0.99	0.99	0.99

## VIII. DEVELOPMENT PHASE

### D. INTERCHANGE CONFIGURATION

*Value Engineering Alternatives No.4A vs. 4B*

#### FUTURE 2035 PM PEAK HOUR SIGNALIZED INTERSECTION ANALYSIS

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	10.9	9.5	8.4
	LOS	B	A	A
	v/c	0.71	0.71	0.71
Collier Blvd @ Business Cir N	Delay	17.2	4.4	17.7
	LOS	B	A	B
	v/c	0.90	0.76	0.88
Collier Blvd @ SR 84	Delay	54.9	82.1	72.0
	LOS	D	F	E
	v/c	0.95	1.13	1.10
Collier Blvd @ I-75 SB Ramp	Delay	13.6	55.3	14.8
	LOS	B	E	B
	v/c	0.66	1.11	0.80
Collier Blvd @ I-75 NB Ramp	Delay	20.7	13.0	14.5
	LOS	C	B	B
	v/c	0.71	0.70	0.71
Collier Blvd @ Magnolia Pond	Delay	116.1	100.9	92.9
	LOS	F	F	F
	v/c	1.18	1.17	1.14
Collier Blvd @ Golden Gate Pkwy	Delay	37.4	37.4	37.4
	LOS	D	D	D
	v/c	0.90	0.90	0.90

## X. FINAL PRESENTATION ATTENDEE SHEET

### *I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E*

#### *VALUE ENGINEERING STUDY PRESENTATION*

*November 1, 2013*

NAME	AFFILIATION	PHONE/EMAIL
Bill Ventry	VE Group, L.L.C., Team Leader	850/627-3900
Ron Wishon	VE Group, L.L.C.	850/627-3900
Frank Ventry	VE Group, L.L.C.	850/627-3900
James Buckingham	FDOT/Trainee	863/519-2637
Rax Jung	FDOT District 1	863/519-2562
Ed Brekhus	Volkert	813/875-1365
Janet Middleton	FDOT – Project Manager	863/519-2309
Mary Wiley	FDOT – Const./Proj. Manager	239/656-7866
Steve Jones	FDOT – Right-of-Way	863/519-2613
Kisan Patel	FDOT - Geotech	863/519-4253
Rob Bullinger	FDOT - Drainage	863/519-2236
Dave Morgan	FDOT - Maintenance	239/656-7853
Kevin Lee	FDOT - Design	863/519-2283
Selina Carroll	FDOT – Access Management	863/519-2258
William Hartmann	FDOT – D1 - EMO	863/519-2263
Amy Blair	FDOT – Project Manager	863/519-2272
Don Cashdollar	FDOT – Traffic Op	863/519-2553
Bernie Masing	FDOT – Design	863/519-2543
Chris Smith	FDOT	863/533-2611
Brent Setchell	FDOT – Permits	863/519-2557
Anthony Khawaja	Collier County	239/252-8260
Gerry Molie're	FDOT	863/519-2260
Nicole Mills	FDOT	863/519-2277
Quan-Yang Yao	FDOT	863/519-2733

## X. FINAL PRESENTATION ATTENDEE SHEET

*(Continued)*

***I-75 AT SR 951 ULTIMATE INTERCHANGE PROJECT PD&E  
VALUE ENGINEERING STUDY PRESENTATION  
November 1, 2013***

<b>NAME</b>	<b>AFFILIATION</b>	<b>PHONE/EMAIL</b>
Shawn Harris	FDOT – District Manager	863/519-2315
Kevin Ingle	FDOT	863/519-2740
Providance Nagy	FDOT	239/461-4322
Radu Nan	Kettelson & Assoc.	407/373-1111
Jack Freeman	Kettelson & Assoc.	407/373-1103



## XI. APPENDICES

### Cost Estimate Backup Calculations for Current Design from LRE

Ramp A --- Single Lane Construction						
Clearing and Grubbing		AC	4.36	8500.00	\$37,060.00	
Embankment		CY	5294.08	12.20	\$64,587.78	
Pavement (Mainline)		SY	3235.90	30.00	\$97,077.00	
Pavement (Shoulder)		SY	1405.81	25.00	\$35,145.25	
White Striping		NM	0.72	830.05	\$597.64	
Thermo. White		NM	0.72	4775.48	\$3,438.35	
<b>STRIPING</b>						<b>4,035.9816</b>
Sed. Barrier		LF	4939.33	0.70	\$3,457.53	
Float Turb. Barrier		LF	89.95	7.33	\$659.33	
Staked Barrier		LF	89.95	3.59	\$322.92	
Litter Rem		AC	0.43	28.81	\$12.39	
Mowing		AC	0.43	19.90	\$8.56	
Sod		SY	1266.50	1.77	\$2,241.71	
<b>EROSION CONTROL</b>						<b>6,702.4353</b>
Class A Conc		CY	24.70	541.48	\$13,374.56	
Reinf Steel		LB	0.93	2194.50	\$2,040.89	
<b>DRAINAGE</b>						<b>15,415.441</b>
Sing. Post Sign, < 12 SF		AS	1.00	259.29	\$259.29	
Sing. Post Sign, 12-20 SF		AS	8.00	829.68	\$6,637.44	
<b>SIGNING</b>						<b>6896.73</b>
<b>TOTAL FOR RAMP A SINGLE LANE</b>					<b>\$266,920.61</b>	

## XI. APPENDICES

### Cost Estimate Backup Calculations for Current Design from LRE

RAMP A --- THREE LANE CONSTRUCTION				
Clearing and Grubbing	AC	3.62	8500.00	\$30,770.00
Embankment	CY	9860.57	12.20	\$120,298.95
Pavement (Mainline)	SY	6434.95	30.00	\$193,048.50
Pavement (Shoulder)	SY	2573.28	25.00	\$64,332.00
Retro Reflect Pvmt Markers	EA	162.00	3.35	\$542.70
Paint Pvmt Solid White, 6"	NM	0.60	830.05	\$498.03
Paint Pvmt Skip White, 6"	GM	0.60	351.83	\$211.10
Thermo. White, Solid	NM	0.60	4775.48	\$2,865.29
Thermo. White, Skip	GM	0.60	1345.13	\$807.08
<b>STRIPING</b>				<b>4,924.194</b>
Sed. Barrier	LF	4107.42	0.70	\$2,875.19
Float Turb. Barrier	LF	74.80	7.33	\$548.28
Staked Barrier	LF	74.80	3.59	\$268.53
Litter Rem	AC	0.36	28.81	\$10.37
Mowing	AC	0.36	19.90	\$7.16
Sod	SY	1053.18	1.77	\$1,864.13
<b>EROSION CONTROL</b>				<b>5,573.6742</b>
Class II Conc Endwalls	CY	5.39	1256.40	\$6,772.00
24" Pipe, Round	LF	240.00	58.20	\$13,968.00
36" Pipe, Round	LF	56.00	77.28	\$4,327.68
24" Mitered End Section	EA	12.00	949.32	\$11,391.84
Turf	SY	210.64	0.29	\$61.09
Class IV Conc, Culverts	CY	24.70	541.48	\$13,374.56
Reinf Steel	LB	2194.50	0.93	\$2,040.89
<b>DRAINAGE</b>				<b>51,936.043</b>
Sing. Post Sign, < 12 SF	AS	1.00	259.29	\$259.29
Sing. Post Sign, 12-20 SF	AS	6.00	829.68	\$4,978.08
Multi-Post Sign, <50	AS	1.00	3613.17	\$3,613.17
<b>SIGNING</b>				<b>8,850.54</b>
<b>TOTAL FOR RAMP A THREE LANE CONSTRUCTION</b>				<b>\$479,733.90</b>

## XI. APPENDICES

<b>RAMP A-1 TWO LANE CONSTRUCTION</b>				
Clearing and Grubbing	AC	4.08	8500.00	\$34,680.00
Embankment	CY	46962.70	12.20	\$572,944.94
Pavement (Mainline)	SY	9227.73	30.00	\$276,831.90
Pavement (Shoulder)	SY	2899.24	25.00	\$72,481.00
Retro Reflect Pvmt Markers	EA	182.00	3.35	\$609.70
Paint Pvmt Solid White, 6"	NM	0.67	830.05	\$556.13
Paint Pvmt Skip White, 6"	GM	0.67	351.83	\$235.73
Thermo. White, Solid	NM	0.67	4775.48	\$3,199.57
Thermo. White, Skip	GM	0.67	1345.13	\$901.24
<b>STRIPING</b>				<b>5,502.3683</b>
Sed. Barrier	LF	4627.71	0.70	\$3,239.40
Float Turb. Barrier	LF	84.28	7.33	\$617.77
Staked Barrier	LF	84.28	3.59	\$302.57
Soil Tracking Prevent Device	EA	1.00	1283.17	\$1,283.17
Litter Rem	AC	0.40	28.81	\$11.52
Mowing	AC	0.40	19.90	\$7.96
Sod	SY	1186.59	1.77	\$2,100.26
<b>EROSION CONTROL</b>				<b>7,562.6529</b>
Class II Conc Endwalls	CY	5.39	1256.40	\$6,772.00
24" Pipe, Round	LF	240.00	58.20	\$13,968.00
36" Pipe, Round	LF	56.00	77.28	\$4,327.68
24" Mitered End Section	EA	12.00	949.32	\$11,391.84
Turf	SY	210.64	0.29	\$61.09
French Drains	LF	844.00	66.42	\$56,058.48
<b>DRAINAGE</b>				<b>92,579.082</b>
Sing. Post Sign, < 12 SF	AS	1.00	259.29	\$259.29
Sing. Post Sign, 12-20 SF	AS	7.00	829.68	\$5,807.76
Multi-Post Sign, <50	AS	1.00	3613.17	\$3,613.17
<b>SIGNING</b>				<b>9,680.22</b>

**Cost Estimate Backup Calculations for Current Design from LRE**

<b>RAMP A-1 TWO LANE CONSTRUCTION (Continued)</b>				
Bridge A-1 over Davis Blvd	SF	30080.00	122.00	\$3,669,760.00
Retaining Walls	SF	12500.00	26.82	\$335,250.00
Class II Conc, Appr Slabs	CY	66.84	304.63	\$20,361.47
Reinf Steel, Appr Slabs	LB	11697.00	0.77	\$9,006.69
<b>TOTAL RAMP A-1 TWO LANE CONSTRUCTION</b>				<b>\$5,106,640.32</b>



**Cost Estimate Backup Calculations for Current Design from LRE**

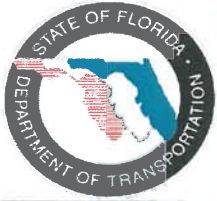
<b>Ramp A-2 --- Three Lane Construction</b>				
Clearing and Grubbing	AC	0.99	8500.00	\$8,415.00
Embankment	CY	2704.24	12.20	\$32,991.73
Pavement (Mainline)	SY	1772.19	30.00	\$53,165.70
Pavement (Shoulder)	SY	708.68	25.00	\$17,717.00
Retro Reflect Pvmt Markers	EA	44.00	3.35	\$147.40
Paint Pvmt Solid White, 6"	NM	0.16	830.05	\$132.81
Paint Pvmt Skip White, 6"	GM	0.16	351.83	\$56.29
Thermo. White, Solid	NM	0.16	4775.48	\$764.08
Thermo. White, Skip	GM	0.16	1345.13	\$215.22
<b>STRIPING</b>				<b>1,315.7984</b>
Sed. Barrier	LF	1131.19	0.70	\$791.83
Float Turb. Barrier	LF	20.60	7.33	\$151.00
Staked Barrier	LF	20.60	3.59	\$73.95
Soil Tracking Prevent Device	EA	1.00	1283.17	\$1,283.17
Litter Rem	AC	0.10	28.81	\$2.88
Mowing	AC	0.10	19.90	\$1.99
Sod	SY	290.05	1.77	\$513.39
<b>EROSION CONTROL</b>				<b>2,818.2145</b>
Class II Conc Endwalls	CY	1.48	1256.40	\$1,859.47
24" Pipe, Round	LF	72.00	58.20	\$4,190.40
36" Pipe, Round	LF	16.00	77.28	\$1,236.48
24" Mitered End Section	EA	4.00	949.32	\$3,797.28
Turf	SY	58.01	0.29	\$16.82
Class IV Conc, Culverts	CY	24.70	541.48	\$13,374.56
Reinf Steel	LB	2194.50	0.93	\$2,040.89
<b>DRAINAGE</b>				<b>26,515.896</b>
Sing. Post Sign, < 12 SF	AS	1.00	259.29	\$259.29
Sing. Post Sign, 12-20 SF	AS	2.00	829.68	\$1,659.36
Multi-Post Sign, <50	AS	1.00	3613.17	\$3,613.17
<b>SIGNING</b>				<b>5,531.82</b>
<b>TOTAL RAMP A-2 THREE LANE CONSTRUCTION</b>				<b>\$148,471.16</b>

**Cost Estimate Backup Calculations for Current Design from LRE**

<b>RAMP C-2 --- SINGLE LANE CONSTRUCTION</b>				
Clearing and Grubbing	AC	12.64	8500.00	\$107,440.00
Embankment	CY	185257.61	12.20	\$2,260,142.84
Pavement (Mainline)	SY	9383.92	30.00	\$281,517.60
Pavement (Shoulder)	SY	4076.77	25.00	\$101,919.25
Channel Excavation	CY	1852.00	11.70	\$21,668.40
Gurardrail	LF	2153.00	17.03	\$36,665.59
Gurardrail Anchor	EA	4.00	1815.37	\$7,261.48
Traffic Separator	LF	650.00	26.30	\$17,095.00
Shoulder Gutter	LF	5509.00	14.44	\$79,549.96
<b>CHAN EXCAV, GR, ANCHOR, TRAF SEP</b>				<b>162,240.43</b>
Sed. Barrier	LF	14323.80	0.70	\$10,026.66
Float Turb. Barrier	LF	260.85	7.33	\$1,912.03
Staked Barrier	LF	260.85	3.59	\$936.45
Soil Tracking Prevent Device	EA	2.00	1283.17	\$2,566.34
Litter Rem	AC	1.25	28.81	\$36.01
Mowing	AC	1.25	19.90	\$24.88
Sod	SY	3672.77	1.77	\$6,500.80
<b>EROSION CONTROL</b>				<b>220,03.172</b>
Class II Conc Endwalls	CY	18.78	1256.40	\$23,595.19
24" Pipe, Round	LF	840.00	58.20	\$48,888.00
36" Pipe, Round	LF	176.00	77.28	\$13,601.28
24" Mitered End Section	EA	42.00	949.32	\$39,871.44
Turf	SY	734.55	0.29	\$213.02
Rip Rap	TN	600.00	91.28	\$54,768.00
<b>DRAINAGE</b>				<b>180,936.93</b>
Sing. Post Sign, < 12 SF	AS	3.00	259.29	\$777.87
Sing. Post Sign, 12-20 SF	AS	21.00	829.68	\$17,423.28
Multi-Post Sign, <50	AS	3.00	3613.17	\$10,839.51
<b>SIGNING</b>				<b>29,040.66</b>
Bridge C-2 over Beck Blvd & Ramp B	SF	38833.28	214.50	\$8,329,738.56
Bridge C-2 over S.R. 951	SF	5820.48	136.50	\$794,495.52
Retaining Wall	SF	71535.00	26.82	\$1,918,568.70
Class II Conc, Appr Slabs	CY	66.84	304.63	\$20,361.47
Reinf Steel, Appr Slabs	LB	11697.00	0.77	\$9,006.69
Class II Conc, Appr Slabs	CY	66.84	304.63	\$20,361.47
Reinf Steel, Appr Slabs	LB	11697.00	0.77	\$9,006.69
White Striping	NM	2.09	830.05	\$1,734.80
Thermo White, 6"	NM	2.09	4775.48	\$9,980.75
<b>STRIPING</b>				<b>11,715.558</b>
<b>TOTAL RAMP C-2 SINGLE LANE CONSTRUCTION</b>				<b>\$14,258,495.54</b>

**Cost Estimate Backup Calculations for Current Design from LRE**

TOTALS						
	25.69	C&G	AC	X 8500		
	250,079.2	EMBKMT	CY	X 12.2		
	30,054.69	ML PVMT	SY	X 30		
	11,663.78	SHLD PVMT	SY	X 25		
	27,493.9	STRIPING				
	59,999.97	SIGNING				
	367,383.3926	DRAINAGE				
	84035	RET WALL	SF	X 26.82		
	12,793,994.08	BRIDGES				
	204,082.3648	EROSION CONTROL, GUARDRAIL, CHANNEL EXCAVATION & TRAFFIC SEPARATOR				



FLORIDA DEPARTMENT OF TRANSPORTATION  
**DISTRICT 1**

**I-75/SR 951 Interchange**

Study Conducted in  
 Bartow Florida  
 October 28-November 1, 2013

Prepared By:  
 Florida Department of Transportation & V E Group, LLC

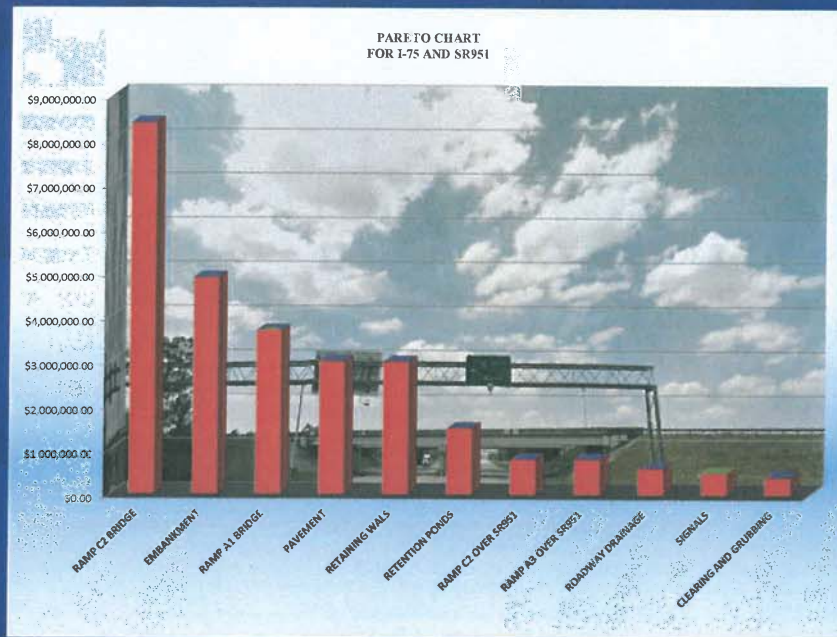
**Team Members**

NAME	AFFILIATION	EXPERTISE
Bill Ventry, P.E., C.V.S.	VE Group	Team Leader
Ron Wishon	VE Group	Roadway/Estimates
Frank Ventry, A.V.S.	VE Group	CADD/ Asst. Team Leader
Kevin Lee	FDOT	Design/Value Engineering
Rax Jung, P.E.	FDOT	Planning/Traffic
Kisan Patel, E.I.	FDOT	Geotechnical
Ed Brekhus, P.E.	Volkert	Structures
James Buckingham, E.I.	FDOT	PE Trainee
Selina Carroll	FDOT	Access Management
Janet Middleton, P.E.	FDOT	Project Management
Rob Bullinger, P.E.	FDOT	Drainage
Dave Morgan	FDOT	Maintenance
Rovindra Churaman, P.E.	FDOT	Traffic Operations
Mary Wiley	FDOT	Construction
Stephen Jones, C.G.A	FDOT	Right of Way





## Areas of Focus



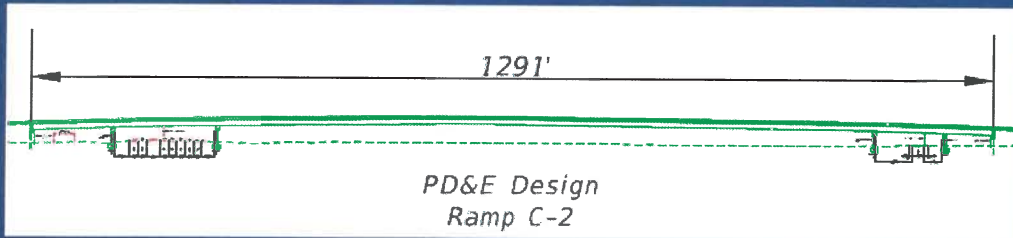
## Areas of Focus

- A. Ramp C-2 Bridge
- B. Ramp A-1 Bridge
- C. Retention Ponds
- D. Interchange Configuration

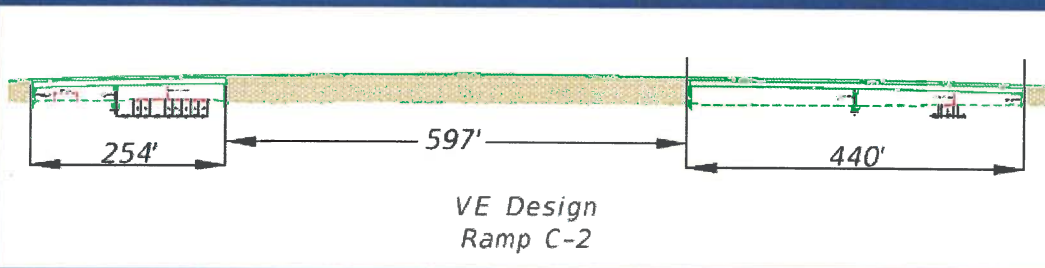




## A. Ramp C-2 Bridge Current Design

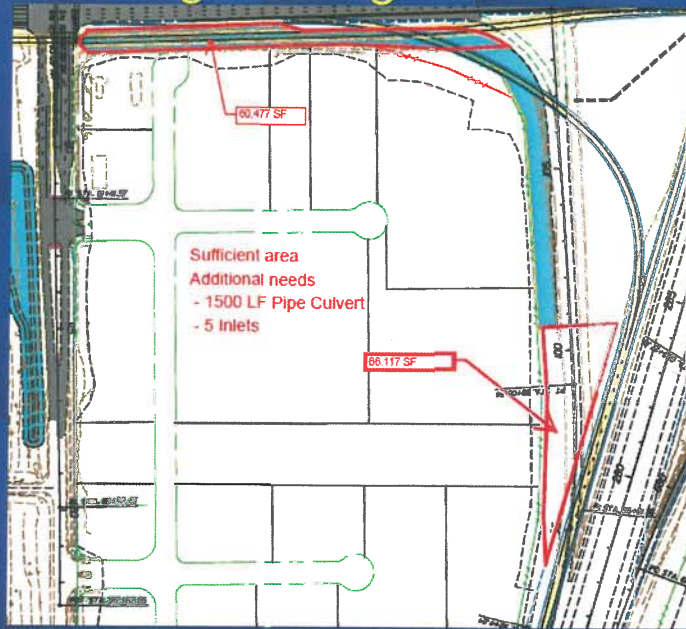


## A. Ramp C-2 Bridge Value Engineering Alternative No. 1





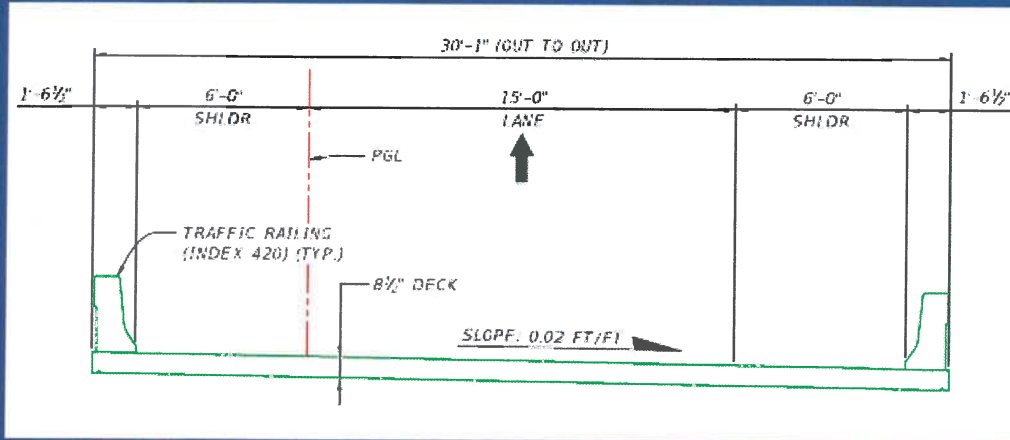
## A. Ramp C-2 Bridge Value Engineering Alternative No. 1



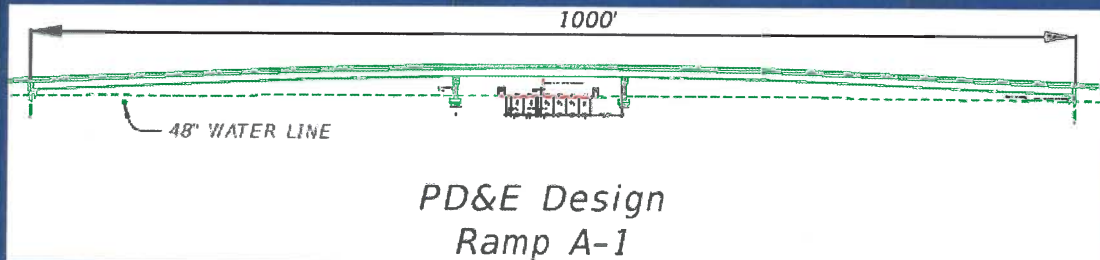
## A. Ramp C-2 Bridge Value Engineering Alternative No. 1

Current Design Cost	\$ 17,368,448
VE Alternative Cost	<u>\$ 13,573,920</u>
Possible Savings	\$ 3,794,528
Life Cycle Cost Savings	\$ 3,816,388

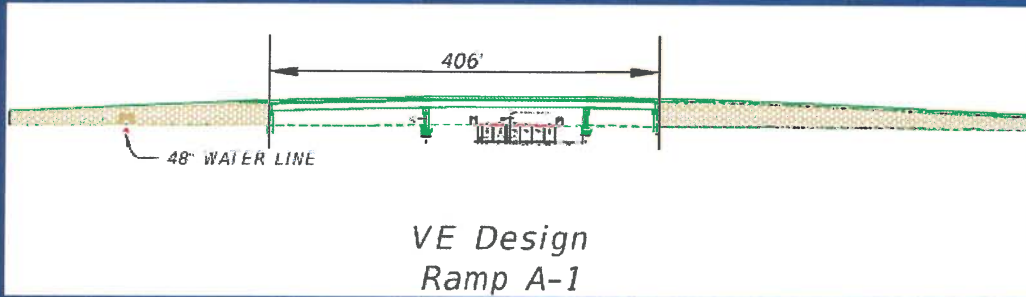
## B. Ramp A-1 Bridge Current Design



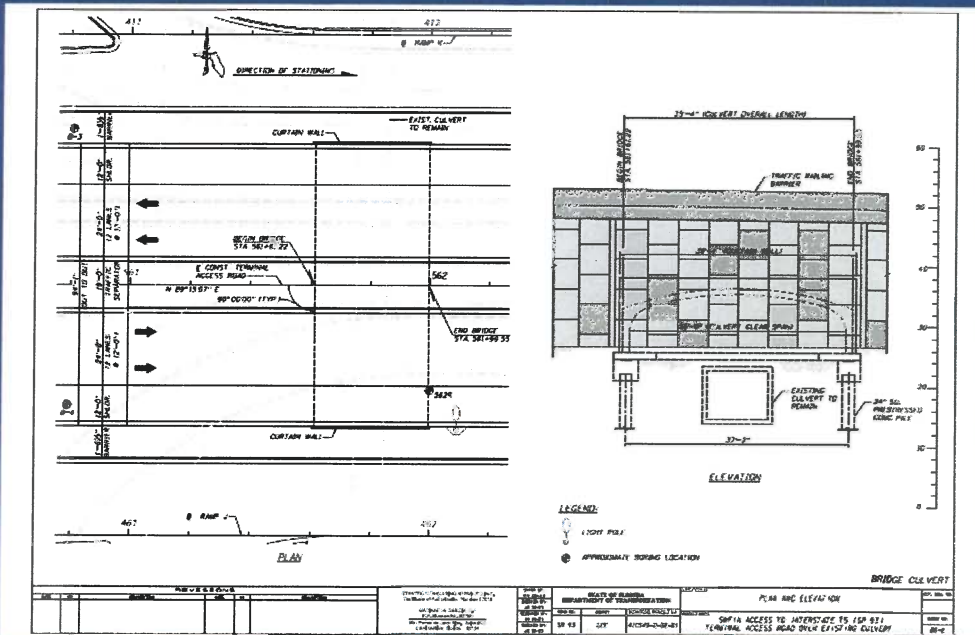
## B. Ramp A-1 Bridge Current Design



# B. Ramp A-1 Bridge Value Engineering Alternative No. 2

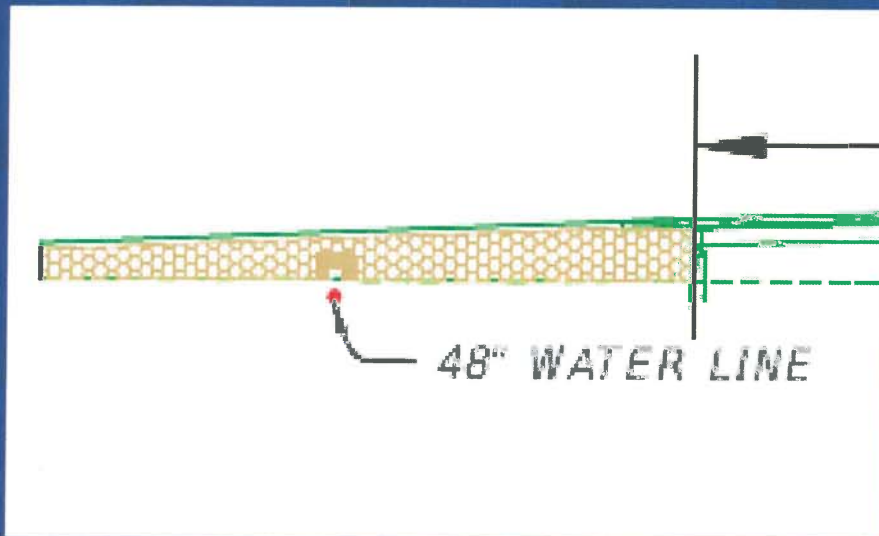


# B. Ramp A-1 Bridge Value Engineering Alternative No. 2





## B. Ramp A-1 Bridge Value Engineering Alternative No. 2

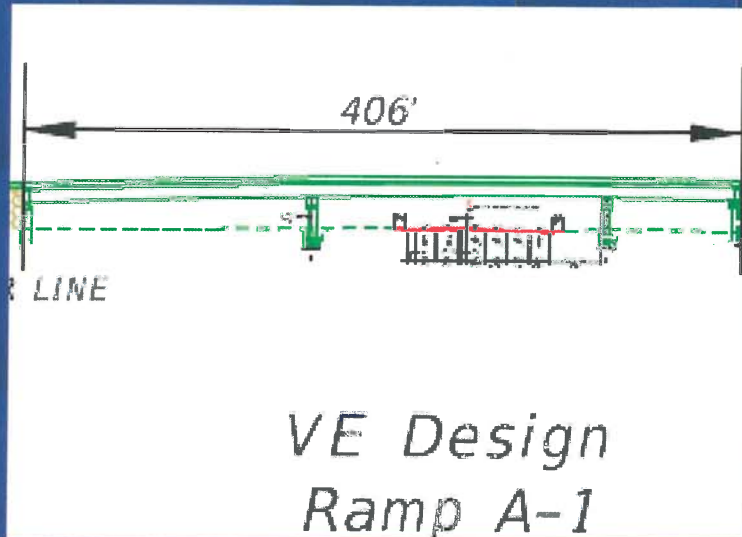


## B. Ramp A-1 Bridge Value Engineering Alternative No. 2





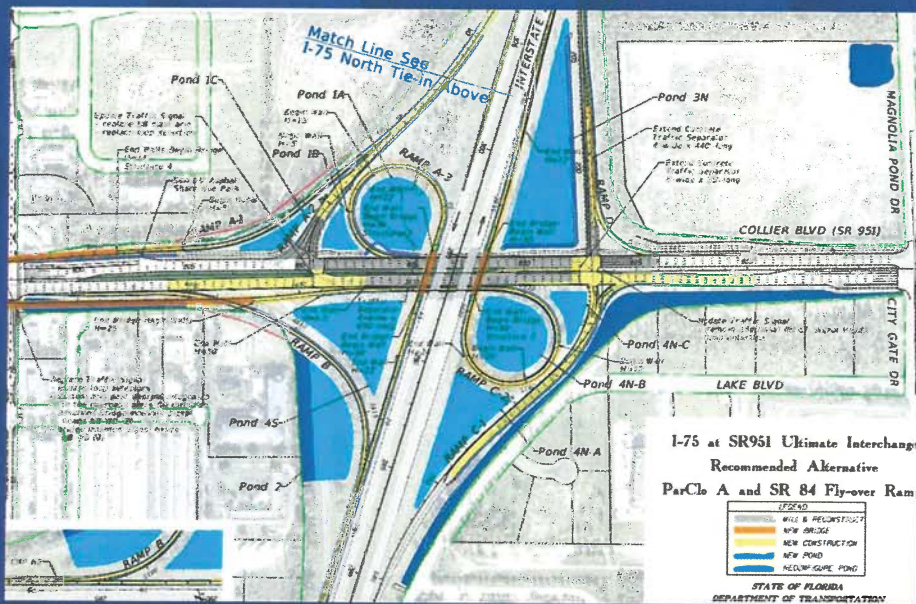
## B. Ramp A-1 Bridge Value Engineering Alternative No. 2



## B. Ramp A-1 Bridge Value Engineering Alternative No. 2

Current Design Cost	\$ 8,182,806
VE Alternative Cost	<u>\$ 6,950,153</u>
Possible Savings	\$ 1,232,653

## C. Retention Ponds Current Design



## C. Retention Ponds Value Engineering Alternative No. 3

- Utilize Henderson Canal and Golden Gate Main Canal.
- Utilize Deep Injection Wells
- Reduce Pond Size by Comingling Water with off site developers

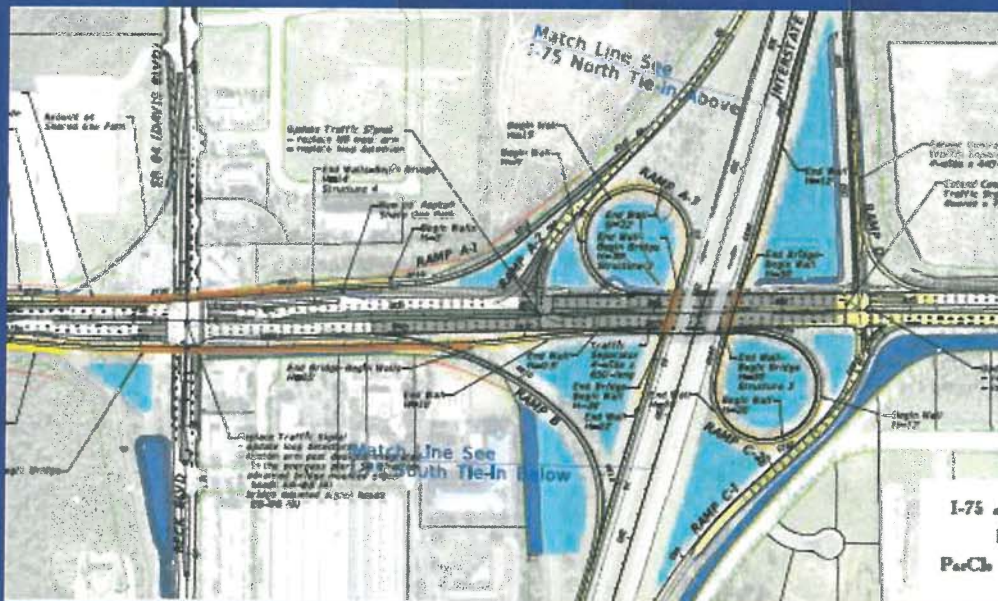


## C. Retention Ponds Value Engineering Alternative No. 3

### •Conclusion:

After the investigation of utilizing the Henderson and Golden Gate Main Canals, deep injection wells, and comingling water with off site development; it is the value engineering team's recommendation that the original PD&E study is the most viable option for stormwater management.

## D. Interchange Configuration Current Design



## D. Interchange Configuration Value Engineering Alternative No. 4A



## D. Interchange Configuration Value Engineering Alternative No. 4A

### Levels of Service

Control Delay Per Vehicle (s)	LOS by Volume to Capacity Ratio	
	$\leq 1$	$> 1$
$\leq 10$	A	F
$> 10$ and $\leq 20$	B	F
$> 20$ and $\leq 35$	C	F
$> 35$ and $\leq 55$	D	F
$> 55$ and $\leq 80$	E	F
$> 80$	F	F



## D. Interchange Configuration Value Engineering Alternative No. 4A

**Future 2035 AM Peak Hour Signalized Intersection Analysis**

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	7.7	8.0	
	LOS	A	A	
	v/c	0.76	0.73	
Collier Blvd @ Business Cir N	Delay	20.0	4.4	
	LOS	B	A	
	v/c	0.88	0.75	
Collier Blvd @ SR 84	Delay	46.2	72.1	
	LOS	D	E	
	v/c	0.93	1.16	
Collier Blvd @ I-75 SB Ramp	Delay	12.9	49.4	
	LOS	B	D	
	v/c	0.70	1.07	
Collier Blvd @ I-75 NB Ramp	Delay	20.5	15.0	
	LOS	C	B	
	v/c	0.81	0.68	
Collier Blvd @ Magnolia Pond	Delay	169.5	158.5	
	LOS	F	F	
	v/c	1.40	1.42	
Collier Blvd @ Golden Gate Pkwy	Delay	49.2	49.2	
	LOS	D	D	
	v/c	0.99	0.99	

## D. Interchange Configuration Value Engineering Alternative No. 4A

**Future 2035 PM Peak Hour Signalized Intersection Analysis**

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	10.9	9.5	
	LOS	B	A	
	v/c	0.71	0.71	
Collier Blvd @ Business Cir N	Delay	17.2	4.4	
	LOS	B	A	
	v/c	0.90	0.76	
Collier Blvd @ SR 84	Delay	54.9	82.1	
	LOS	D	F	
	v/c	0.95	1.13	
Collier Blvd @ I-75 SB Ramp	Delay	13.6	55.3	
	LOS	B	E	
	v/c	0.66	1.11	
Collier Blvd @ I-75 NB Ramp	Delay	20.7	13.0	
	LOS	C	B	
	v/c	0.71	0.70	
Collier Blvd @ Magnolia Pond	Delay	116.1	100.9	
	LOS	F	F	
	v/c	1.18	1.17	
Collier Blvd @ Golden Gate Pkwy	Delay	37.4	37.4	
	LOS	D	D	
	v/c	0.90	0.90	

## D. Interchange Configuration Value Engineering Alternative No. 4A

Current Design Cost	\$ 27,646,938
VE Alternative Cost	<u>\$ 7,231,334</u>
Possible Savings	\$ 20,415,604

## D. Interchange Configuration Value Engineering Alternative No. 4B





## D. Interchange Configuration Value Engineering Alternative No. 4B

**Future 2035 AM Peak Hour Signalized Intersection Analysis**

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	7.7	8.0	7.1
	LOS	A	A	A
	v/c	0.76	0.73	0.77
Collier Blvd @ Business Cir N	Delay	20.0	4.4	22.1
	LOS	B	A	C
	v/c	0.88	0.75	0.93
Collier Blvd @ SR 84	Delay	46.2	72.1	59.8
	LOS	D	E	E
	v/c	0.93	1.16	1.06
Collier Blvd @ I- 75 SB Ramp	Delay	12.9	49.4	11.2
	LOS	B	D	B
	v/c	0.70	1.07	0.71
Collier Blvd @ I- 75 NB Ramp	Delay	20.5	15.0	13.3
	LOS	C	B	B
	v/c	0.81	0.68	0.68
Collier Blvd @ Magnolia Pond	Delay	169.5	158.5	160.8
	LOS	F	F	F
	v/c	1.40	1.42	1.42
Collier Blvd @ Golden Gate Pkwy	Delay	49.2	49.2	49.2
	LOS	D	D	D
	v/c	0.99	0.99	0.99

## D. Interchange Configuration Value Engineering Alternative No. 4B

**Future 2035 PM Peak Hour Signalized Intersection Analysis**

Intersection	Performance Measures	PD&E	VE-4A	VE-4B
Collier Blvd @ Business Cir S	Delay	10.9	9.5	8.4
	LOS	B	A	A
	v/c	0.71	0.71	0.71
Collier Blvd @ Business Cir N	Delay	17.2	4.4	17.7
	LOS	B	A	B
	v/c	0.90	0.76	0.88
Collier Blvd @ SR 84	Delay	54.9	82.1	72.0
	LOS	D	F	E
	v/c	0.95	1.13	1.10
Collier Blvd @ I- 75 SB Ramp	Delay	13.6	55.3	14.8
	LOS	B	E	B
	v/c	0.66	1.11	0.80
Collier Blvd @ I- 75 NB Ramp	Delay	20.7	13.0	14.5
	LOS	C	B	B
	v/c	0.71	0.70	0.71
Collier Blvd @ Magnolia Pond	Delay	116.1	100.9	92.9
	LOS	F	F	F
	v/c	1.18	1.17	1.14
Collier Blvd @ Golden Gate Pkwy	Delay	37.4	37.4	37.4
	LOS	D	D	D
	v/c	0.90	0.90	0.90

## D. Interchange Configuration Value Engineering Alternative No. 4B

Current Design Cost	\$ 18,372,036
VE Alternative Cost	<u>\$ 5,802,343</u>
Possible Savings	\$ 12,569,692

## Summary, if the interchange configuration is not changed;

Possible Savings VE Alt. No. 1	\$ 3,794,528
Possible Savings VE Alt. No. 2	\$ 1,232,653
Total Possible Savings	\$ 5,027,181



Summary, if the interchange configuration is changed;

Possible Savings VE Alt. No. 4B	\$12,569,692
Possible Savings VE Alt. No. 2	\$ 1,232,653
Total Possible Savings	\$13,802,345

QUESTIONS  
COMMENTS  
???????

**Appendix F**  
Planning Consistency



## I-75 and SR 951 Interchange Improvement PD&E Study

### Collier County

FPID 425843-1-22-01

### Planning Consistency

Table 1 summarizes planning consistency for the I-75 and SR 951 Interchange Improvement with the FDOT State Transportation Improvement Program (STIP) for fiscal years 2014-2017 and the Collier County Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP) for fiscal years 2014-2018.

### FDOT

The full PD&E project limits are included in the approved FDOT STIP document for preliminary engineering in fiscal year 2015. The project is also shown in the FDOT Five Year Work Program 2014-2019 for preliminary engineering in fiscal year 2015 and the Tentative Five Year Work Program for right-of-way in fiscal year 2019.

### Collier County MPO

The I-75 and SR 951 Interchange Improvement is included in the Cost Feasible Plan (CFP) of the Collier County MPO's 2035 Long Range Transportation Plan (LRTP) for preliminary engineering and construction. The project is included in the currently adopted TIP for preliminary engineering (final design) in fiscal year 2014/15. The project is also included in the proposed FY2014/15 thru FY2018/19 TIP for right-of-way in fiscal year 2018/19.

**Table 1**

PHASE	Currently Approved TIP	Currently Approved STIP	TIP/STIP	TIP/STIP	COMMENTS
			\$	FY	
PE (Final Design)	Y	Y	\$5,575,120	FY 2014/15	Project shown in Collier MPO currently adopted FY 2013/14 - FY 2017/18 TIP and the proposed FY 2014 - 2019 TIP, FDOT 5-year work program and FDOT STIP for FY 2014/15.
R/W	Y	Y	\$7,898,656	FY 2018/19	Project shown in Collier MPO proposed FY 2014 - 2019 TIP and FDOT Tentative 5-year work program
Construction	N	N	\$0	N/A	Project shown in LRTP Cost Feasible Plan in fiscal years 2030/2031 - 2034/2035 at \$82.280 million.

### Project Funding

The project is currently funded for the preliminary engineering phase using a combination of state and federal funds. The construction phase is not currently funded in the FDOT's Adopted Five Year Work Program. Documentation of funding can be found in the adopted Collier County TPO's Fiscal Year 2014-2016 TIP, the FDOT STIP for FY 2014-2017 and the Collier MPO's 2035 LRTP. The right-of-way phase is currently funded in the FDOT's Tentative Five-Year Work Program in FY 2019. The TIP and STIP will be updated to include this funding in October 2014 subsequent to the adoption of the Five-Year Work Program. Although construction is not yet funded in the FDOT's Adopted Five-Year Work Program, the



Collier MPO 2035 LRTP was amended to include construction in FY 2031-2035. Based on recent guidance by FHWA dated January 2013, Planning Consistency Requirements have been met for this project as the next phase for the entire PD&E project limits are reflected in the STIP/TIP, i.e. design. This project is also funded in the TPO's 2035 LRTP CFP with the exception of right-of-way. District One Planning Office staff will coordinate the needed LRTP amendments when appropriate. Table 2 summarizes the planned implementation schedule of this project.

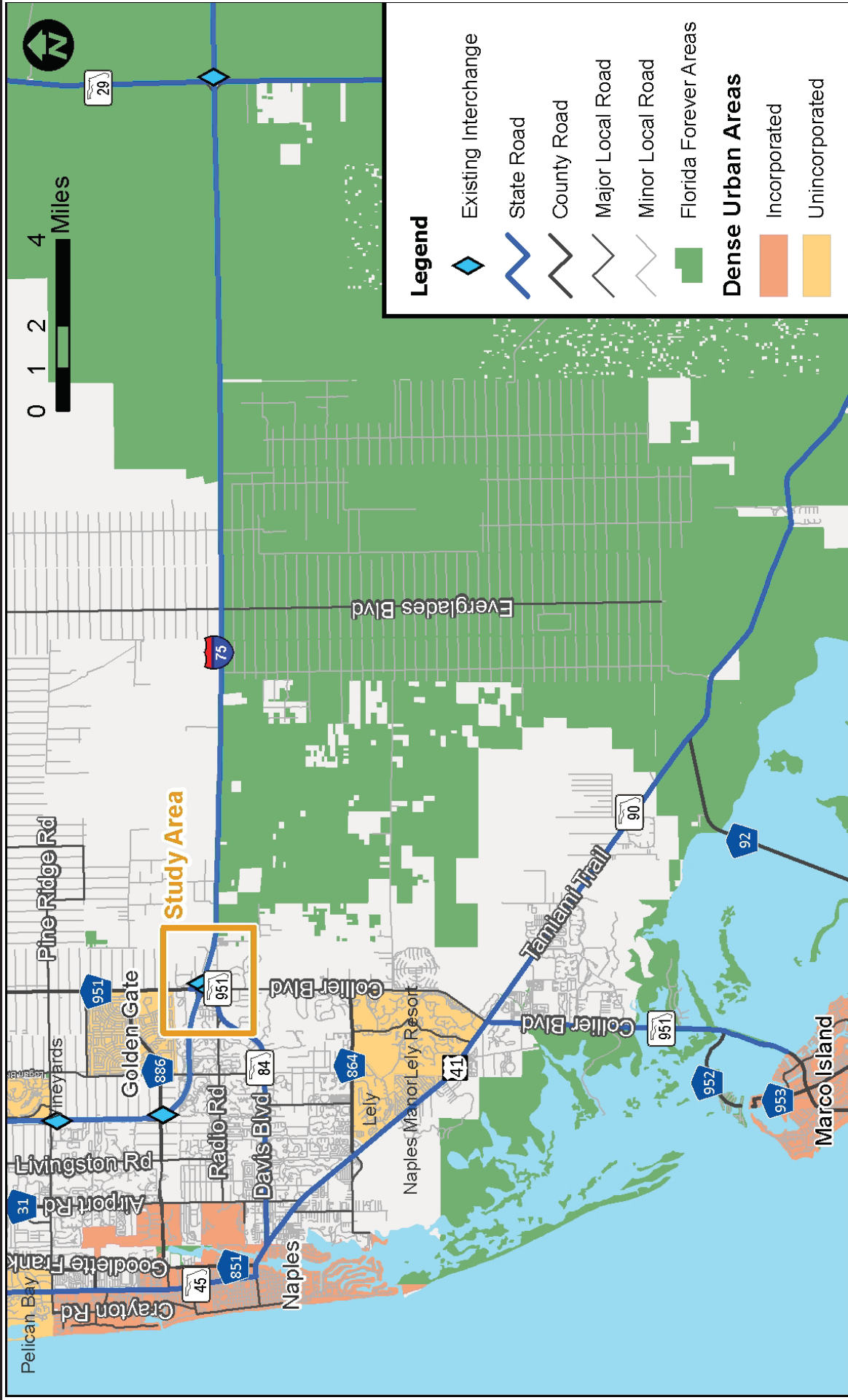
**Table 2**  
**Funding Summary**

<b>Phase</b>	<b>Estimate Cost</b>	<b>Time Frame (Fiscal Year)</b>	<b>Funding Source</b>
<b>Preliminary Engineering (Final Design)</b>	<b>\$5,575,120</b>	<b>2015</b>	<b>State and Federal</b>
<b>Right-of-Way</b>	<b>\$7,898,656</b>	<b>2019</b>	<b>State and Federal</b>
<b>Construction</b>	<b>\$82,280,000</b>	<b>2031-2035</b>	<b>State and Federal</b>
<b>TOTAL</b>	<b>\$95,753,776</b>		

Sources: Adopted Collier TPO 2013/14-2017/18 TIP, Approved FDOT STIP, Adopted Collier MPO 2035 LRTP and FDOT's Five-Year Work Program.

# I-75 AT SR 951 ULTIMATE INTERCHANGE

## PRELIMINARY ENGINEERING REPORT



Project Vicinity    FIGURE 1  
April 2014



# I-75 AT SR 951 ULTIMATE INTERCHANGE PRELIMINARY ENGINEERING REPORT



Project Location and Termini **FIGURE**





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**Web Application**

**Office of Work Program and Budget** Lisa Saliba - Director

**Five Year Work Program**

Selection Criteria	
District 01 (Updated: 3/5/2014-21:15:01) Category:Highways Item Number:425843-2	2014-2019 G1 Collier County Phase:Preliminary Engineering

Transportation System Description	District	Length		Type of Work	Item					
		Fiscal Year:	2014			2015	2016	2017	2018	2019
INTRASTATE INTERSTATE	District 01 - Collier County		0.651	PRELIM ENG FOR FUTURE CAPACITY	425843-2					
I-75 AT SR 951									<b>SIS</b>	
	<b>Highways /PD &amp; E</b>		\$95,611							
	<b>Highways /Preliminary Engineering</b>		\$108,143	\$5,575,120						
	<b>Highways /Right of Way</b>									\$7,898,656

This site is maintained by the Office of Work Program and Budget, located at 605 Suwannee Street, MS 21, Tallahassee, Florida 32399. For additional information please e-mail questions or comments to: (Lisa Saliba: [Lisa.Saliba@dot.state.fl.us](mailto:Lisa.Saliba@dot.state.fl.us) or call 850-414-4622)  
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Florida Department of Transportation  
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FLORIDA DEPARTMENT OF TRANSPORTATION  
 OFFICE OF WORK PROGRAM  
 STIP REPORT  
 =====  
 HIGHWAYS  
 =====

DATE RUN: 07/24/2013  
 TIME RUN: 13.13.43  
 MBRSTIP-1

-----  
 ITEM NUMBER: 425843 1 PROJECT DESCRIPTION: I-75 AT SR 951 \*SIS\*  
 DISTRICT: 01 COUNTY: COLLIER TYPE OF WORK: INTERCHANGE IMPROVEMENT  
 ROADWAY ID: 03175000 PROJECT LENGTH: .733MI LANES EXIST/IMPROVED/ADDED: 4/ 0/ 0  
 -----  
 LESS THAN 2014 2015 2016 2017 2017 ALL  
 FUND CODE 2014 2015 2016 2017 YEARS  
 -----

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: Managed by FDOT  
 DIH 32,959 0 0 0 32,959  
 PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: Managed by FDOT  
 DIH 42,955 263 0 0 43,218  
 DS 4,068 0 0 0 4,068  
 TOTAL <N/A> 79,982 263 0 0 80,245

FEDERAL PROJECT NUMBER: SFTL 325 R

PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: Managed by FDOT  
 DDR 159,920 0 0 0 159,920  
 EB 159 0 0 0 159  
 SA 98,909 0 0 0 98,909  
 TIMP 2,950,292 0 0 0 2,950,292  
 TOTAL SFTL 325 R 3,209,280 0 0 0 3,209,280

FEDERAL PROJECT NUMBER: TCSP 037 U

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: Managed by FDOT  
 EB 44,804 0 0 0 44,804  
 SA 70,100 0 0 0 70,100  
 TCSP 533,520 0 0 0 533,520

PHASE: ENVIRONMENTAL / RESPONSIBLE AGENCY: Managed by FDOT

EB 11,000 0 0 0 11,000  
 TOTAL TCSP 037 U 659,424 0 0 0 659,424  
 TOTAL 425843 1 3,948,686 263 0 0 3,948,949

FLORIDA DEPARTMENT OF TRANSPORTATION  
 OFFICE OF WORK PROGRAM  
 STIP REPORT  
 =====  
 HIGHWAYS  
 =====

DATE RUN: 07/24/2013  
 TIME RUN: 13.13.43  
 MBRSTIP-1

-----  
 ITEM NUMBER: 425843 2 PROJECT DESCRIPTION: I-75 AT SR 951 \*SIS\*  
 DISTRICT: 01 COUNTY: COLLIER TYPE OF WORK: PRELIM ENG FOR FUTURE CAPACITY  
 ROADWAY ID: 03175000 PROJECT LENGTH: .651MI LANES EXIST/IMPROVED/ADDED: 4/ 0/ 2  
 -----

FUND CODE	LESS THAN 2014	2014	2015	2016	2017	GREATER THAN 2017	ALL YEARS
DIH	16,468	338	0	0	0	0	16,806

FEDERAL PROJECT NUMBER: <N/A>

PHASE: P D & E / RESPONSIBLE AGENCY: Managed by FDOT

DIH	16,468	338	0	0	0	0	16,806
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PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: Managed by FDOT

DDR	0	0	2,438,704	0	0	0	2,438,704
DIH	0	150,000	0	0	0	0	150,000
IMD	0	95,922	0	0	0	0	95,922
SA	0	0	3,136,416	0	0	0	3,136,416

PHASE: RIGHT OF WAY / RESPONSIBLE AGENCY: Managed by FDOT

ACNP	0	0	0	0	0	3,112,895	3,112,895
TOTAL <N/A>	16,468	246,260	5,575,120	0	0	3,112,895	8,950,743

FEDERAL PROJECT NUMBER: 0754 161 I

PHASE: P D & E / RESPONSIBLE AGENCY: Managed by FDOT

ACSU	35,403	0	0	0	0	0	35,403
IMD	109,067	0	0	0	0	0	109,067
SU	50,633	0	0	0	0	0	50,633
TCSP	754,574	0	0	0	0	0	754,574
TOTAL 0754 161 I	949,677	0	0	0	0	0	949,677
TOTAL 425843 2	966,145	246,260	5,575,120	0	0	3,112,895	9,900,420



# Web Application

**Federal Aid Management Office** James Jobe - Manager

## STIP Report

Selection Criteria	
Approved STIP	Detail Report
County/MPO Area: Collier	Financial Project: 425843 2

HIGHWAYS							
Item Number: 425843 2		Project Description: I-75 AT SR 951					
District: 01	County: COLLIER	Type of Work: PRELIM ENG FOR FUTURE CAPACITY					
Extra Description: ULTIMATE INTERCHANGE IMPROVEMENT PE TO ALLOW FOR PHASED CONST RUCTION							
Roadway ID: 03175000		Project Length: .651MI			Lanes Exist/Improved/Added: 4/0/2		
		Fiscal Year					
Phase / Responsible Agency	<2014	2014	2015	2016	2017	>2017	All Years
<b>P D &amp; E / MANAGED BY FDOT</b>							
Fund Code:	ACSU - ADVANCE CONSTRUCTION (SU)	35,403					35,403
	DIH - STATE IN-HOUSE PRODUCT SUPPORT	16,468	338				16,806
	IMD - INTERSTATE MAINTENANCE DISCRET	109,067					109,067
	SU - STP, URBAN AREAS > 200K	50,633					50,633
	TCSP - TRANS, COMMUNITY & SYSTEM PRES	754,574					754,574
Phase: P D & E Totals		966,145	338				966,483
<b>PRELIMINARY ENGINEERING / MANAGED BY FDOT</b>							
Fund Code:	DDR - DISTRICT DEDICATED REVENUE			2,438,704			2,438,704
	DIH - STATE IN-HOUSE PRODUCT SUPPORT		150,000				150,000
	IMD - INTERSTATE MAINTENANCE DISCRET		95,922				95,922
	SA - STP, ANY AREA			3,136,416			3,136,416
Phase: PRELIMINARY ENGINEERING Totals			245,922	5,575,120			5,821,042
<b>RIGHT OF WAY / MANAGED BY FDOT</b>							
Fund Code:	ACNP - ADVANCE CONSTRUCTION NHPP					3,112,895	3,112,895
Item: 425843 2 Totals		966,145	246,260	5,575,120			3,112,895 9,900,420
Project Totals		966,145	246,260	5,575,120			3,112,895 9,900,420
HIGHWAYS Totals		966,145	246,260	5,575,120			3,112,895 9,900,420
Grand Total		966,145	246,260	5,575,120			3,112,895 9,900,420

This site is maintained by the Federal Aid Management Office, located at 605 Suwannee Street, MS 21, Tallahassee, Florida 32399. For additional information please e-mail questions or comments to:  
(James Jobe: [james.jobe@dot.state.fl.us](mailto:james.jobe@dot.state.fl.us) or call 850-414-4448)

Office Home: [Office of Work Program](#)

# I-75

FPN # 4258432

Description: Preliminary Engineering for Future Capacity, SIS

Lead Agency: FDOT

Project Limits: at Collier Blvd (SR 951)

Project Length: 0.651 miles

LRTP Page #: 2035 LRTP Minor Update, SIS, Page 24



FPN: 4258432      Project: I-75  
 AT SR 951  
 Desc: PRELIM ENG FOR FUTURE CAPACITY  
 Project Length: 0.651      Begin Mile Post: 50.096      End Mile Post: 50.747  
 Comments: ULTIMATE INTERCHANGE IMPROVEMENT

Phase	Fund	2013/14	2014/15	2015/16	2016/17	2017/18
PDE	DIH	\$338				
PE	DDR		\$2,438,704			
PE	DIH	\$150,000				
PE	IMD	\$95,922				
PE	SA		\$3,136,416			
<b>Project Total:</b>		\$246,260	\$5,575,120			

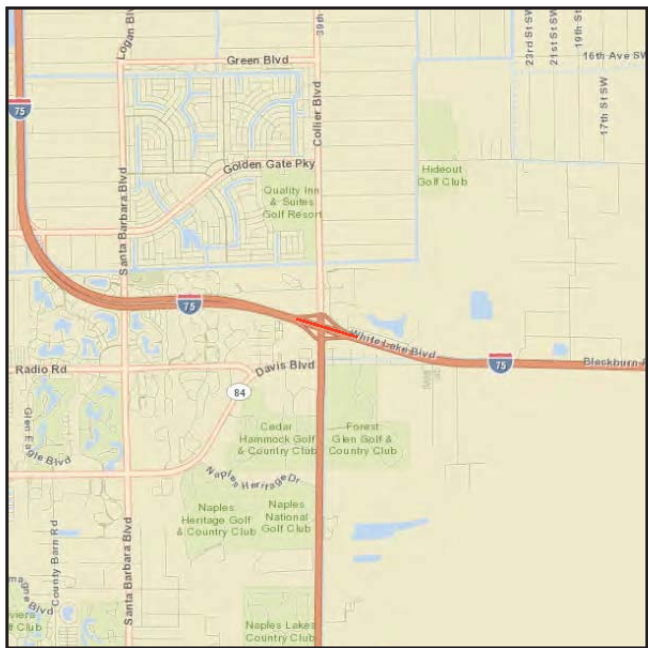
**Total Project Costs:**  
 Prior to FY2013-14 Costs      \$ 924,756 Previous PD&E and PE Costs  
 FY2013-14 – 2017-18 Costs      \$ 5,821,380  
 After FY2017-18 Costs      \$47,112,895 Future ROW and Construction Costs  
**Total Costs**      **\$53,859,031**



**I-75 AT SR 951**

**4258432**

**SIS**



**Project Description:** Ultimate Interchange Improvement. This is one segment of a larger project. For total project costs, see Appendix F in the FY2014/15 - FY2018/19 TIP.

**Work Summary:** PRELIM ENG FOR FUTURE CAPACITY

**From:**

**To:**

**Lead Agency:** Managed by FDOT

**Length:** .651 MI

Phase	Fund Source	2014/15	2015/16	2016/17	2017/18	2018/19	Total
PE	DDR	2,438,704	0	0	0	0	<b>2,438,704</b>
PE	SA	713,916	0	0	0	0	<b>713,916</b>
PE	DS	2,422,500	0	0	0	0	<b>2,422,500</b>
ROW	ACNP	0	0	0	0	7,898,656	<b>7,898,656</b>
<b>Total</b>		<b>5,575,120</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,898,656</b>	<b>13,473,776</b>

**Prior Year Cost:** 1,170,536  
**Future Year Cost:** 7,898,655  
**Total Project Cost:** 22,542,967  
**LRTP:** Highway Cost Feasible

S1 - fdot - BlueZone Mainframe Display

File Edit Session Options Transfer View Script Help

Connect: FDOT\_Session Attention PA1 PA2 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF09 PF10 PF11 PF12 System Request

WP04 D Display Item\_Seg\_def Phase\_Est Phase\_Sum

FDOT- Work Program Administration 04-24-2014  
 Item Segment Phase 10:50:30  
 Requested Version: G1 Include Candidates: Y (Y/N) MORE: +  
 Item/Segment: 425843 2 Status: 010 PRE-CONST.UNDERWAY Old Item Nbr: \_\_\_\_\_  
 Desc: I-75 AT SR 951  
 Trans System: 01 INTRASTATE INTERSTATE Man Dist: 01 Box Item: N  
 Begin Search At Phase: \_ \_ FP Seq: \_ \_ Project Total: 18,353,944

Ver	Phase	FP	Seq	Year	Fund	Pgm	PDC	Total	All	Dstr	Bud	Apr	St
							Amount	Amount	Typ	Typ/Area	Dist	Cat	
AD	2 C	01		2014	DS_	00			1		01		4
	2 1	01		2011	DIH_	00	499	499	1		01		5
				2012	DIH_	00	516	516	1		01		5
				2013	DIH_	00	16,091	16,091	1		01		5
				2014	DIH_	00	52,341	52,341	1		01		4
	2 2	01		2011	IMD_	00	109,067	109,067	1		01	L020	4
				2011	SU_	00	31,115	31,115	1	T X12_	01	L230	4
				2011	TCSP	00	754,574	754,574	1		01	L68E	4
				2013	ACSU	00	35,403	35,403	1	T X12_	01	L23E	4
				2013	SU_	00	19,518	19,518	1	T X12_	01	L23E	4
				2014	SU_	00	15,998	15,998	1	T X12_	01	L23E	4

AAA090-E: Top of page - Invalid backward request.  
 F1=Help F3=Exit F7=Bkwd F8=Frwd F15=Logoff

S1 Ready (1) LTIP9D12 10:51:20 4/24/2014 NUM 01.012

S1 - fdot - BlueZone Mainframe Display

File Edit Session Options Transfer View Script Help

Connect: FDOT\_Session Attention PA1 PA2 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF09 PF10 PF11 PF12 System Request

WP04 D Display Item\_Seg\_def Phase\_Est Phase\_Sum

FDOT- Work Program Administration 04-24-2014  
 Item Segment Phase 10:52:25  
 Requested Version: G1 Include Candidates: Y (Y/N) MORE: - +  
 Item/Segment: 425843 2 Status: 010 PRE-CONST.UNDERWAY Old Item Nbr: \_\_\_\_\_  
 Desc: I-75 AT SR 951  
 Trans System: 01 INTRASTATE INTERSTATE Man Dist: 01 Box Item: N  
 Begin Search At Phase: \_ \_ FP Seq: \_ \_ Project Total: 18,353,944

Ver	Phase	FP	Year	Fund	Pgm	PDC	Total	All	Dstr	Bud	Apr	St
		Seq				Amount	Amount	Typ	Typ/Area	Dist	Cat	
AD	2	2	02	2014	DS_	00	35,296	35,296	1		01	4
	2	9	01	2011	DIOH	00	38	38	1		01	4
				2012	DIOH	00	50	50	1		01	4
				2012	DIOH	00	9,340	9,340	1	G OH	01	4
				2013	DIOH	00	506	506	1		01	4
				2013	DIOH	00	23,738	23,738	1	G OH	01	4
				2014	DIOH	00	4,757	4,757	1		01	4
				2014	DIOH	00	22,658	22,658	1	G OH	01	4
	3	1	01	2014	DIH_	00	10,000	10,000	1		01	5
				2014	IMD_	00	98,143	98,143	1		01	L020 2
	3	2	01	2015	DDR_	00	2,438,704	2,438,704	1		01	2

AAA250-I: Successfully displayed.  
 F1=Help F3=Exit F7=Bkwd F8=Frwd F15=Logoff

S1 Ready (1) LTIP9D12 10:52:38 4/24/2014 NUM 01.012



S1 - fdot - BlueZone Mainframe Display

File Edit Session Options Transfer View Script Help

Connect: FDOT\_Session Attention PA1 PA2 Reset PF01 PF02 PF03 PF04 PF05 PF06 PF07 PF08 PF09 PF10 PF11 PF12 System Request

WP04 D Display Item\_Seg\_def Phase\_Est Phase\_Sum

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FDOT- Work Program Administration 04-24-2014  
 Item Segment Phase 10:53:22  
 Requested Version: G1 Include Candidates: Y (Y/N) MORE: - +  
 Item/Segment: 425843 2 Status: 010 PRE-CONST.UNDERWAY Old Item Nbr: \_\_\_\_\_  
 Desc: I-75 AT SR 951  
 Trans System: 01 INTRASTATE INTERSTATE Man Dist: 01 Box Item: N  
 Begin Search At Phase: \_ \_ FP Seq: \_ \_ Project Total: 18,353,944

Ver	Phase	FP	Year	Fund	Pgm	PDC	Total	All	Dstr	Bud	Apr	St
		Seq				Amount	Amount	Typ	Typ/Area	Dist	Cat	
AD	3	2	01	2015	DS__	00	2,422,500	2,422,500	1		01	2
				2015	SA__	00	713,916	713,916	1		01	2
	3	9	01	2014	DIOH	00	537	537	1		01	4
				2014	DIOH	00	5,270	5,270	1	G OH	01	4
				2015	DIOH	00	267,367	267,367	1		01	2
				2015	DIOH	00	39,265	39,265	1	G OH	01	2
G1	4	B	01	2016	DDR_	00	195,736	195,736	1		01	2
				2017	DDR_	00	65,245	65,245	1		01	2
	4	1	01	2016	DIH_	00	53,045	53,045	1		01	2
				2017	DIH_	00	53,045	53,045	1		01	2
	4	2	01	2016	DDR_	00	157,013	157,013	1		01	2

AAA250-I: Successfully displayed.  
 F1=Help F3=Exit F7=Bkwd F8=Frwd F15=Logoff

S1 Ready (1) LTIP9D12 10:53:32 4/24/2014 NUM 01.012



WP04 D Display Item\_Seg\_def Phase\_Est Phase\_Sum

FDOT- Work Program Administration 04-24-2014  
 Item Segment Phase 10:54:12  
 Requested Version: G1 Include Candidates: Y (Y/N) MORE: -  
 Item/Segment: 425843 2 Status: 010 PRE-CONST.UNDERWAY Old Item Nbr: \_\_\_\_\_  
 Desc: I-75 AT SR 951

Trans System: 01 INTRASTATE INTERSTATE Man Dist: 01 Box Item: N  
 Begin Search At Phase: \_ \_ FP Seq: \_ \_ Project Total: 18,353,944

Ver	Phase	FP	Seq	Year	Fund	Pgm	PDC	Total	All	Dstr	Bud	Apr	St
							Amount	Amount	Typ	Typ/Area	Dist	Cat	
G1	4	3	01	2016	DDR_	00	2,579,897	2,579,897	1		01		2
				2017	DDR_	00	1,105,670	1,105,670	1		01		2
	4	9	01	2016	DIOH	00	168,224	168,224	1		01		2
				2017	DIOH	00	68,862	68,862	1		01		2
CA	6	2	01	2031	ACNP	00	4,000,000	6,780,000	1		01		1

AAA602-I: Successfully displayed. Candidate phases are Unfunded.  
 F1=Help F3=Exit F7=Bkwd F8=Frwd F15=Logoff



*Florida Department of Transportation*

RICK SCOTT  
GOVERNOR

10041 Daniels Parkway  
Fort Myers, FL 33913

ANANTH PRASAD, P.E.  
SECRETARY

March 13, 2014

Ms. Lucilla Ayer, AICP, Executive Director  
Collier Metropolitan Planning Organization  
2885 S. Horseshoe Drive  
Naples, Florida 34104

**RE: Florida Department of Transportation Request for Amendments to the Collier Metropolitan Planning Organization's 2035 Long-Range Transportation Plan**

Dear Ms. Ayer:

This letter is to formally request the Collier Metropolitan Planning Organization (MPO) to amend its 2035 Long Range Transportation Plan (LRTP) consistent with recent updates to the Department's 2040 Strategic Intermodal Systems Plan (SIS) for the following projects:

1) **SR 29 from I-75 to Oil Well Road: FPN 434490-1**  
[SIS ID No. 1379]

- Project Development and Environmental Study (PD&E): Funded in fiscal year 2015/2016 at \$2.015 million.
- Design (PE): Funded in fiscal year 2018/2019 at \$17.470 million.
- Right-of-Way (ROW): Funding identified as \$7.986 million for fiscal years 2035/36-2039/2040. Include as an "informational project" in the LRTP.
- Construction: Include in the MPO's LRTP "Unfunded Needs List" at an estimated cost of \$53.215 million. This phase is currently unfunded in the SIS Cost Feasible Plan.

2) **SR 29 from SR 82 to the Hendry County Line: FPN 417878-4**  
[SIS ID No. 1381]

- Design (PE): Funded in fiscal year 2018/2019 at \$3.150 million.
- Right of Way (ROW): Funded in fiscal year 2020/2021 at \$0.874 million.
- Construction: Funded in fiscal year 2022/2023 at \$9.072 million.

Ms. Lucilla Ayer, AICP, Executive Director  
March 13, 2014  
Page Two of Two

These two projects have been incorporated in the Department's SIS 1<sup>st</sup> Five and 2<sup>nd</sup> Five-Year Plans covering fiscal years 2014 through 2023 and the 2040 SIS Cost Feasible Plan covering fiscal years 2024 through 2040.

**3) I-75 at SR 951 Interchange: FPN 425843-2**  
[SIS ID No. 1387]

Currently, the Collier MPO's 2035 LRTP Cost Feasible Plan, Table 13 identifies the improvement to this interchange as I-75 (SR 93) and Collier Boulevard (CR 951). Within the influence of this interchange Collier Boulevard is a State Road (SR951); therefore, the project description needs to be identified as "I-75 at SR 951". In addition, Table 13 identifies this project as unfunded; consequently, Table 13 needs to be revised to reflect the following information.

- Design: Funded in fiscal year 2015 at \$5.568 million.
- Construction: Funded in fiscal years 2030/2031 – 2034/35 at \$82.280 million.

**4) I-75 from north of SR 951 to north of Golden Gate Parkway: FPN 406313-4**

Currently, the Collier MPO's 2035 LRTP Cost Feasible Plan, Table 13 does not reflect the construction costs associated with this improvement, which is to reconstruct existing roadway and add 2-lanes to build six. This project is programmed in the Department's current Five-Year Work Program in fiscal year 2015 and also identified in the 1<sup>st</sup> Five-Year SIS Plan covering fiscal years 2014 through 2018.

- Construction: Funded in fiscal year 2015 at \$31.273 million.

Thank you for your attention to this request. If you have any questions, please feel free to contact me at (239) 461-4307.

Sincerely,



Suzanne K. Lex, AICP  
Community Liaison

Enclosure: Department of Transportation District One 2024-2040 SIS Table and Map

cc: Laura Lockwood, Community Liaison Administrator, FDOT





# DISTRICT 1

# STRATEGIC INTERMODAL SYSTEM COST FEASIBLE PLAN 2024-2040



ID	FACILITY	FROM	TO	PDE	Design		District Managed Funds		State Managed Funds		State Managed P3 Funds		Other Funds		IMPR/TYPE	Project Phasing		
					PE	TOTAL	ROW	CON	TOTAL	ROW	CON	TOTAL	CON	Begin Yr		Yrs	TOTAL	PDE
907	I-75	at University Pkwy	(Manatee County)												M-INCH	1st 5	1st 5	
1252	US 17	West 9th St	N of West 3rd St (Zolfo Springs)							21,200	37,234	58,434			M-INCH	1st 5	1st 5	
1259	SR 710	US 441	L-63 Canal				28,369	28,369							NR	COMP	1st 5	
1260	SR 710	L-63 Canal	Sherman Wood Ranches		3,500	3,500									A2-4	COMP	1st 5	
1384	SR 29	Whidden Rd (CR 731)	Bermont Rd (CR 74)		750	750									A2-4	COMP	2nd 5	
1402	I-4	at CSX Railroad Bridge													BRIDGE			
1407	I-4	at SR 557													M-INCH			
1687	I-75	at University Pkwy	(Sarasota County)												M-INCH	1st 5	1st 5	
908	I-75	at SR 70 interchange													M-INCH	1st 5	1st 5	
909	I-75	at Fruitville Rd													M-INCH	1st 5	1st 5	
1248	SR 82	Homestead Rd 5	Henry C/L							29,498	80,232	109,730			A4-6	COMP	1st 5	
1250	SR 82	Henry C/L	Gator Slough Ln							8,215	55,000	55,000			A2-4	COMP	1st 5	
1256	SR 29	Collier C/L	CR 832 (Keri Rd)								19,998	28,213			A2-4	COMP	1st 5	
1257	SR 29	CR 832 (Keri Rd)	Spencer		7,335	7,335									A2-4	COMP	1st 5	
1258	SR 29	Spencer	N of Cowboy Way		7,125	7,125									A2-4	COMP	1st 5	
1287	I-75	at Bee Ridge Rd													A2-4	COMP	1st 5	
1288	I-75	at SR 72 (Clark rd)													M-INCH	1st 5	1st 5	
1381	SR 29	SR 82	Henry C/L		3,000	3,000									M-INCH	1st 5	1st 5	
1385	SR 29	Bermont Rd (CR 74)													M-INCH	1st 5	1st 5	
1390	I-75	at SR 64			3,500	3,500									A2-4	COMP	1st 5	
1392	US 27	CR 630A	Presidents Dr		5,600	5,600									A2-6	1st 5		
1393	US 27	Presidents Dr	SR 60		6,950	6,950									A2-6	1st 5		
1383	SR 29	CR 80-A (Cowboy Way)	Whidden Rd (CR 731)		7,500	7,500									M-INCH	1st 5	2nd 5	
1387	I-75	at SR 951													A2-4	COMP	1st 5	
1391	US 27	Highlands C/L	CR 630A		8,100	8,100									M-INCH	1st 5	2nd 5	
1689	I-4	SR 570 (Polk Pkwy)			3,750	3,750									A2-6	1st 5		
969	US 17	N of CR 74 (Bermont Rd)			1,045	1,045									A2-4	COMP	1st 5	
1261	SR 710	Copley Drive	CR 714 (Marlin C/L)		6,500	6,500									A2-4	COMP	1st 5	
1379	SR 29	Sherman Wood Ranches	Oil Well Rd		6,000	6,500									A2-4	COMP	1st 5	
1386	SR 70	I-75	Jefferson Ave		2,015	6,000	8,015	3,630	3,630						A2-4	COMP	1st 5	
1403	I-4	SR 570 (Polk Pkwy)			4,000	4,000									A4-SUL	1st 5		
1589	SR 70	Lorraine Rd	US 98		1,625	1,625									A4-SUL	1st 5		
1590	SR 70	Singletery Rd (Myakka City)	Singletery Rd (Myakka City)		3,000	8,500	11,500	316,329	316,329						A2-4			
1591	SR 70	American Legion Dr (Arcadia)	American Legion Dr (Arcadia)		3,000	10,500	13,500								A2-4			
1592	SR 70	Jefferson Ave	Jefferson Ave		5,000	17,900	22,900								A2-4			
1593	SR 60	CR 29	US 98 (Eagle Bay Dr)		5,000	18,000	23,000								A2-4			
1688	I-4	SR 680	Kissimmee River Bridge		750	4,500	5,250								A4-SUL			
		US 98	SR 570 (Polk Pkwy)		2,500	2,500									A4-SUL			
<b>Funded CFP Totals</b>						<b>157,045</b>			<b>830,349</b>		<b>1,565,771</b>		<b>476,914</b>					

**LEGEND**

FF 2023/2024 - 2024/2025	Mega Projects/Phase Over Time
FF 2025/2026 - 2029/2030	Programmed/Planned/ or Completed
FF 2030/2031 - 2034/2035	Ultimate/Planned/Phase
FF 2035/2036 - 2039/2040	Ultimate/Planned/Phase

**NOTES**

- (1) All values in thousands of Present Day Dollars (2013).
- (2) All phase costs shown as supplied by each District.
- (3) CON includes both construction (CONSD) and Construction Support (CEI).
- (4) ROW includes both Right-of-Way Acquisition/Mitigation (ROWA/MS) and Right-of-Way Support.
- (5) Project costs are subject to change.
- (6) Revenue forecast provides separate values for PDE and PE than for ROW and CON. Therefore these phases have been separated in this table.
- (7) Other Funds - assumed to be toll revenue or partner funded.
- (8) Project Phasing - "COMP" - project underway or complete.

**IMPROVEMENT TYPES**

A2-4: Add 2 Lanes to Build 4	M-INCH: Modify Interchange
A2-6: Add 2 Lanes to Build 6	M-INCH: New Interchange
A2-8: Add 2 Lanes to Build 8	M-INCH: Managed Lanes
A4-6: Add 4 Lanes to Build 6	M-INCH: Managed Lanes
A4-8: Add 4 Lanes to Build 8	MP: New Right Connector
A4-SUL: Add 2 Special Use Lanes	UP: Ultimate Improvement
A4-SUL: Add 4 Special Use Lanes	
BRIDGE: Bridge	







**EXECUTIVE SUMMARY**  
**Board Action (Roll Call Required)**  
**Item 7A**  
**Approval of the 2035 LRTP Amendment**

**Objective:**

For the Board to approve the 2035 LRTP Amendment.

**Considerations:**

Following the 2035 Long-Range Transportation Plan (LRTP) update and adoption on March 8, 2013, the Florida Department of Transportation updated their 2040 Cost Feasible Plan for the Strategic Intermodal Systems (SIS). In order to be consistent, the MPO needs to amend the 2035 LRTP to include four projects shown in the SIS.

The four projects are:

1. SR 29 from I-75 to Oil Well Road (FPN # 4344901) – expand from 2 lanes to 4 lanes
2. SR 29 from SR 82 to the Hendry County Line (FPN # 418784) – expand from 2 lanes to 4 lanes
3. I-75 at SR 951 Interchange (FPN # 4258432) – Modify interchange with ultimate improvements
4. I-75 from north of SR 951 to north of Golden Gate Parkway (FPN # 4063134) – reconstruct to add 2 lanes to build a total of 6 lanes.

The 2035 LRTP Amendment was available for a 21-day public comment period March 14 through April 4, 2014.

**Committee Recommendations:**

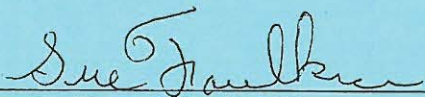
The TAC, CAC, and CMS/ITS Committees all endorsed the 2035 LRTP Amendment.

**Staff Recommendations:**

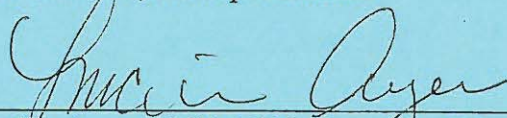
Approve the 2035 LRTP Amendment.

**Attachment(s):**

- A. Description of the 2035 LRTP Amendment
- B. 2035 LRTP Amendment

Prepared by:   
Sue Faulkner, Principal Planner

Date: 3-31-14

Reviewed /  
Approved by:   
Lucilla Ayer, AICP, MPO Executive Director

Date: 3/31/14

# Description of Collier Metropolitan Planning Organization's (MPO's) 2035 Long Range Transportation Plan (LRTP) Amendment for MPO Board Approval on April 11, 2014

The Collier Metropolitan Planning Organization (MPO) has announced a 21-day public comment period for an Amendment to the 2035 Long Range Transportation Plan (LRTP). In order to be consistent with the FDOT's 2040 Strategic Intermodal Systems Plan (SIS) that was recently updated, the following projects must be shown in the Collier MPO's 2035 LRTP Cost Feasible Plan. The MPO Board will consider adoption of this amendment following public comments at their regularly scheduled meeting on April 11, 2014.

## LRTP Projects:

### 1. **SR 29 from I-75 to Oil Well Road: FPN # 4344901**

*This proposed project is moving from the adopted Need List to the Cost Feasible Plan.*

Project Development and Environmental Study (PD&E): Funded in fiscal year 2015/2016 at \$2.015 million.

Design (PE): Funded in fiscal year 2018/2019 at \$17.470 million.

Right-of-Way (ROW): Funding identified as \$7.986 million for fiscal years 2035/2036 – 2039/2040. This is noted as an “informational project” in the comments section of the Amended 2035 LRTP Cost Feasible Plan.

Construction (CST): Added to the MPO's 2035 LRTP's Unfunded Needs List at an estimated cost of \$53.215 million. This phase is currently unfunded in the SIS Cost Feasible Plan.

### 2. **SR 29 from SR 82 to the Hendry County Line: FPN # 4178784**

*This proposed project is moving from the adopted Need List to the Cost Feasible Plan.*

Design (PE): Funded in fiscal year 2018/2019 at \$3.150 million.

Right-of-Way (ROW): funded in fiscal year 2020/2021 at \$0.874 million.

Construction (CST): Funded in fiscal year 2022/2023 at \$9.072 million

### 3. **I-75 at SR 951 Interchange: FPN # 4258432**

*This project is already in the adopted Cost Feasible Plan. With this proposed amendment, it is now listed under the SIS projects section with the following changes to this project.*

SR 951 name was corrected with this proposed amendment. It was previously shown as CR 951 in the adopted Cost Feasible Plan.

Design (PE): Now Funded with SIS funding in fiscal year 2015 at \$5.568 million.

Construction (CST): Now Funded in fiscal years 2030/2031 – 2034/2035 at \$82.280 million. This was previously shown as an unfunded phase.

### 4. **I-75 from north of SR 951 to north of Golden Gate Parkway: FPN # 4063134**

*This proposed project is moving from the adopted Need List to the Cost Feasible Plan.*

Construction (CST): Funded in fiscal year 2015 at \$31.273 million.


# Collier MPO's Long-Range Transportation Plan (LRTP) Amendment

Adopted April 11, 2014

Priority Ranking	Facility	Limit From	Limit To	Final Proposed Improvement - 2035 Needs Plan Update	Link In Miles	Construction Time Frame	5-Year Window in Which CST (Unless Otherwise Noted) is Funded by Source															Projects Funded in CFP (YOE)	Comment
							2015			2016-20			2021-25			2026-30			2031-35				
							Phase	Source	YOE Cost	Phase	Source	YOE Cost	Phase	Source	YOE Cost	Phase	Source	YOE Cost	Phase	Source	YOE Cost		
<b>Projects Funded in the SIS Cost Feasible Plan</b>																							
SR 29	I-75 (SR-93)	Oil Well Road	Expand from 2-Lane Undivided to 4-Lane Divided Arterial	10.2	Construction unfunded				PDE	DDR, DIH, DS	\$2,015,000										\$19,485,000	Informational project: ROW will be programmed in FY2035/36-2039/40 in the amount of \$7,986,000. Construction estimated cost of \$53,215,000 is unfunded in the SIS CF Plan.	
SR 29	North of SR-82	Collier/Hendry County Line	Expand from 2-Lane Undivided to 4-Lane Divided Arterial	2.4	2021-2025				PE	ACNP	\$3,150,000	ROW	ACNP	\$874,000							\$13,096,000	PDE is complete	
8	I-75 at SR 951 (Collier Boulevard)/SR B4 Interchange		Modify Interchange with ultimate improvements	0.0	2031-2035	PE	ACSU, DDR, DIH, DS, IMD, SA, SU, TCSP, ACNP	\$5,568,000										CST		\$82,280,000	\$87,848,000	PDE is complete	
	I-75 SR 951	Golden Gate Pkwy	Reconstruct to add 2 lanes to build a total of six lanes	3.3	2015	CST	D, DDR, DIH, DS	\$31,273,000													\$31,273,000	PE and RRU are complete	

## Collier Metropolitan Planning Organization

By:  Date: 4/14/14  
 Lucilla Ayer, AICP  
 Collier MPO Executive Director

By:  Date: 4-11-14  
 Sam J. Saad, III  
 City of Naples Councilman  
 Collier MPO Chairman



## Auto

### MOTOR HOMES

**Storage: motorhomes** RVs, boat, auto. Covered available. (239) 643-0447

### MOTORCYCLES

**2009 Bash Scooter** 49cc. AS IS. \$375. 239-776-4804

**HD Heritage Softail** 02. 10K mi. Very clean. \$8,800. 239-348-9550

**HARLEY DAVIDSON '07 Softail Deluxe** Tuxedo Black/Pearl White. MINT CONDITION Less than 2500 miles! \$14,500. Call 239-707-0450

**2000 Harley Heritage** Softtail. Red. 5K mi. \$6500 obo. Call 239-595-2459



**2009 Harley-Davidson Sportster Nightster XL 1200N** Detachable windshield, luggage rack. Only 2k miles. \$5,993. Call 239-253-8828

### PASSENGER

**'98 Towncar** 150K mi. Runs everyday. \$500 FIRM. 443-517-7472, In Naples

**Star Electric Vehicle** 2013 (street legal) AM-FM radio, CD player, blue with saddle interior, 4 passenger. Approx. 300 mi. \$8500/obo. Call Martha, 239-370-2227

**Cadillac CTS Coupe** 2012. 5,500 mi. Premium Model. Gorgeous cond. \$34,900. 239-821-7440

**Cadillac CTS Coupe** 2012. 5,500 mi. Premium Model. Gorgeous cond. \$34,900. 239-821-7440

**Cutlass Supreme '95 convertible**, 76K mi., looks and runs great, a great condo or beach car. \$7300 OBO. Mike, 239-253-3457.

**'03 Cadillac Sedan** DeVille. Red w/shale hard canvas top. Exc cond. 107K mi. \$5,200. 239-642-7116

**1995 CADILLAC** Seville SLS, 97K mi. great cond. \$2,150. 516-965-3064

**GRAND MARQUIS '06** Exc. cond. 50K mi. all the extras. \$7500. Call 617-980-3393

**'96 Mercury Sable** Sedan. 90K mi. Good cond. New tires. \$2,000. 304-545-2374, on Marco Island

### SERVICE & PARTS

**TIRES \$15. UP, FREE mount/balance** Bargain Cars 330-0119

### SPORT UTILITY VEHICLES



**JEEP WRANGLER YJ** 1993, 119,000 miles - runs great - Perfect for mud! \$4500. 239.687.8277

**SUBARU BAJA 03** rare yellow, autom., 75K miles, new tires, great condition. \$12,500. Call (603) 253-7526

### SPORTS & FOREIGN

**2001 Porche 911** Carrera convertible, Guards Red, 24K mi., auto with manual option, \$31,000. In Naples, (937) 673-6121.

**WE BUY LUXURY CARS TOP DOLLAR PAID**

Germain BMW of Naples

Call 239-643-2220

**CORVETTE 2011 Grand Sport Conv.** Jet Stream Blue, autom, 3300 mi., Loaded, MSRP \$72,000 plus \$5,000 in show parts; GM full warranty 2/16; \$52,900. No dealers (239) 370-8118 Marco.

**FERRARI MONDIAL** CABRIOLET 1984. A/C, garage kept. Owner since 1985. Under 18K mi. 239-821-8607

**MUSTANG SALLY** Like Brand new, '06 Convertible. Black/black. ONLY 7900 Actual mi. V6- Auto, Leather, Power. Impeccable. \$16,500. 917-860-4345, In Naples

**Ford Thunderbird 2002** with hardtop. Red. Premium. One Owner. New tires, 25,500 mi. Always garaged. Excellent cond. \$18K. Call 239-643-3502

**HYUNDAI ELANTRA** 2000. 50K mi. white. Excellent cond. \$2,350. 239-595-5871

**JAGUAR S 2007** 68K miles. BRG/Tan. Exc. cond. \$9500. 239-464-3220

**'10 Lexus ES350** Black. 23,400 mi. Excellent cond. \$24,900. 812-276-8812 or 239-261-0605

**LEXUS ES 350 2009** Mica gray with gray leather. Prem. Plus Pkg. Loaded. Nav., parking sensors, etc. 59K mi. MINT. \$22,500. 239-262-1055

**Lexus LS430 34k mi.** 2002, local vehicle, well kept, \$17,500. 239-398-7302

## Auto

### SPORTS & FOREIGN

**Toyota Solara Conv.** '06. V6, SLE, 52K mi. Red, Black top. \$12,900. 213-0957

**VW Cabriolet 1985 convertible**, in good shape, only 76K mi., runs like a charm with great tires, \$4200 OBO. Mike, 239-253-3457.

**Classic MG TD 1952** Fiber Glass Replica, on VW Frame and Engine. British racing green. \$7,500. 304-545-2374, on Marco Island

### TRANSPORT/STORAGE

**LOCALLY OWNED - Enclosed Auto Transport & Auto Storage** 239-784-6090

### TRUCKS & TRACTORS

**2010 DODGE RAM 1500 SLT BIGHORN CREW CAB**

46,2xx Miles, 5.7L V8 Hemi 4X4. Extended Warranty until July 15, 2015. 2 Owner no accident clear title. Fully loaded. All power seats, windows, sliding rear window & mirrors. Sirius Satellite radio, aux in/out, CD player, AM/FM radio. The interior is like new. 20" chrome wheels on Nitto Terra Grapplers with only 6,000 miles. Asking \$25,000/OBO. 239-825-9343.

**Ford F150 '03.** Xcab, Lariat. Loaded! Extras! Mint! \$9800. GCAS, 239-250-6428

### VANS

**'95 Ford Aerostar**, 105K, Exc. cond. \$1,895obo. 413-822-2084, In Naples

**Chrysler '02 Handicap** Ramp Mini Van. 67K mi. \$11,500. Naples 252-728-9593

### VEHICLES WANTED

**We Buy Cars** Local Buyer. Any Make, Year, Mileage. GCAS. 239-250-6428

**AFFORDABLE AUTO** Consign or sell your car for cash. 239-775-6500

**CORVETTES WANTED! Top dollar. Cash today** 239 963 6311

**WANTED: STOW & Go** type van. late model, \$12K cash. Call 239-280-0775.

**AAAAA JUNK CARS TOP \$\$ GUARANTEED** 239-289-7430

**LARGEST BUYER IN FL** Autos, trucks, RV's, cycles. \$1K to \$100K. Dave, 239-250-2000

**MOST TRUSTED** Buyer Since 1977. **STEARNS MOTORS** All Vehicles wanted Rod or Jim 239-774-7360.

**Absolutely All Autos** Wanted! Dead or Alive Top \$ FREE PICK UP 239-265-6140

## Legals

### NOTICE

09-265-DP-EVK  
IN THE CIRCUIT COURT  
OF THE TWENTIETH JUDICIAL CIRCUIT  
IN AND FOR  
COLLIER COUNTY, FLORIDA.  
JUVENILE DIVISION  
CASE NO. 09-265-DP-EVK

IN THE INTEREST OF:  
KAYLA SMITH, DOB: 05-22-08  
ANTHONY GRECO, DOB: 11-27-09

CHILDREN  
THE STATE OF FLORIDA - TO:  
Casey Smith, Natural Father  
Address Unknown

**NOTICE**  
You are hereby notified that a Petition to Terminate Parental Rights has been filed in the above styled Court in behalf of Kayla Smith, a female child, born on the 22nd day of May, 2008, in Collier County, Naples, Florida, and Anthony Greco, a male child, born on the 27th day of November, 2009, in Collier County, Naples, Florida, by the State of Florida, Department of Children and Families, and you are hereby commanded to be and appear before the Honorable Elizabeth V. Krier, Judge of the Circuit Court in the above Court at:

Collier County Courthouse Complex  
3315 East Tamiami Trail  
Naples, Florida 34112

at 11:00 a.m. o'clock, on the 28th day of April 2014, for an Advisory/Adjudicatory Hearing, to show cause why said Petition should not be granted.

Pursuant to Sections 39.804(4)(d) and 63.082(6)(g), Florida Statutes, you are hereby informed of the availability of private placement with an adoption entity, as defined in Section 63.032(3), Florida Statutes.

**FAILURE TO PERSONALLY APPEAR AT THIS ADVISORY HEARING CONSTITUTES CONSENT TO THE TERMINATION OF PARENTAL RIGHTS OF THIS CHILD OR THESE CHILDREN. IF YOU FAIL TO APPEAR ON THE DATE AND TIME SPECIFIED, YOU MAY LOSE ALL LEGAL RIGHTS AS A PARENT TO THE CHILD OR CHILDREN NAMED IN THE PETITION ATTACHED TO THIS NOTICE.**

**WITNESS BY HAND** as the Clerk of Said Court and the seal thereof, this 07 day March, 2014.

DWIGHT BROCK  
CLERK OF THE CIRCUIT COURT  
BY: Ybana Silva  
DEPUTY CLERK  
March 17, 24 & 31 and April 7, 2014  
No. 2019985

### NOTICE TO CREDITORS

14-549-CP  
IN THE CIRCUIT COURT  
FOR COLLIER COUNTY, FLORIDA  
PROBATE DIVISION  
File No. 14-549-CP

IN RE: ESTATE OF  
SARA FELDMAN  
Deceased. Division Probate

**NOTICE TO CREDITORS**  
(Summary Administration)  
TO ALL PERSONS HAVING CLAIMS OR DEMANDS AGAINST THE ABOVE ESTATE:

## Legals

### NOTICE TO CREDITORS

You are hereby notified that an Order of Summary Administration has been entered in the estate of Sara Feldman, deceased, File Number 14-549-CP, by the Circuit Court for Collier County, Florida, Probate

Division, the address of which is 3315 Tamiami Trail East, Suite 102, Naples, Florida 34112-5324; that the decedent's date of death was November 25, 2013; that the total value of the estate is \$53,283.54 and

that the names of those to whom it has been assigned by such order are:

NAME  
Steven M. Feldman

ADDRESS  
4051 Gulf Shore Boulevard North,  
Apartment 303

NAME  
Stuart L. Feldman

ADDRESS  
12805 Lamp Post Lane  
Potomac, MD 20854

ALL INTEREST PERSONS ARE NOTIFIED  
THAT:

All creditors of the estate of the decedent and persons having claims or demands against the estate of the decedent other than those for whom

### NOTICE OF MEETING

**NOTICE OF PUBLIC MEETING**  
Notice is hereby given that the Collier Metropolitan Planning Organization (MPO) Board will conduct a roll-call vote to formally adopt the 2035 Long-Range Transportation Plan (LRTP) Amendment on April 11 at 10 a.m. The meeting will be held at Everglades City Hall, 102 Broadway Avenue East, Everglades City, 34139. The LRTP identifies highway, transit, pathways and other transportation projects in Collier County that are needed and are expected to be cost-feasible over the next 25 years.

The 2035 LRTP Amendment is posted on the Collier MPO's Website at www.colliermpo.com for the public to review prior to the scheduled meeting. To access the amendment, click on the "Latest News" section on the left side of the web site. A hard copy of the amendment will be provided upon request by contacting MPO Principal Planner Sue Faulkner at 239-252-8192.

One or more members of the following government bodies may be in attendance at the meeting: Collier County BCC, Naples City Council, Marco Island City Council, Everglades City, and the Florida Department of Transportation (FDOT). The subject matter of this meeting may be an item for discussion and action at a future meeting of those Boards, Councils or agencies.

Interested parties are invited to attend and to register to speak. All registered public speakers will be limited to three (3) minutes unless permission for additional time is granted by the chairman. Citizens can also submit their inquiries or comments, in writing, to the MPO staff prior to the meeting

The MPO's planning process is conducted in accordance with Title VI of the Civil Rights Act of 1964 and related statutes. Any person or beneficiary who believes that he or she has been discriminated against because of race, color, religion, sex, age, national origin, disability, or familial status may file a complaint with the Collier MPO Title VI Specialist Lorraine Lantz at 239-252-5779 or by writing to Ms. Lantz at 2885 South Horseshoe Drive, Naples, FL 34104.

Any person requiring special accommodations at this meeting because of a disability or physical impairment should contact MPO Principal Planner Ms. Lorraine Lantz up to 72 hours prior to the meeting by calling at 239-252-5779.

For more information, call MPO Executive Director, AICP, Lucilla Ayer, at 239-252-8192.  
April 7, 2014 No. 2022780

### NOTICE OF SALE

**NOTICE OF PUBLIC SALE**  
FIBBER MCGEE'S CLOSET WILL SELL THE PROPERTY OF THE FOLLOWING PEOPLE ON MONDAY APRIL 21ST, 2014 AT 10:00 AM. SAID PROPERTY IS BELIEVED TO CONSIST OF THE FOLLOWING: PERSONAL PROPERTY, EQUIPMENT, MATERIALS, MOTORIZED VEHICLES, AND HOUSEHOLD ITEMS.

1. UNIT R0037  
2. UNIT C0077  
3. UNIT Y0015  
4. UNIT G0014  
5. UNIT X0022  
6. UNIT S0246  
7. UNIT S0361  
8. UNIT W7272  
9. UNIT T0025  
10. UNIT M0001  
11. UNIT W6139

JENNIFER COOPER  
LEE HOFMAN  
BETTY ROBERTSON  
MAX HOLCHER  
BARBARA LUNA  
BRITTANY STREADY  
CATRINA ARNOLD  
BENTON WILLIAMS  
TIMOTHY CYR  
MICHELE MONIGHETTI  
BONNIE WOLFE

THE SALE WILL TAKE PLACE AT FIBBER MCGEE'S CLOSET, 571 AIRPORT ROAD NORTH, NAPLES FL 34104

THIS IS PUBLIC SALE.  
March 31 and April 7, 2014 No. 2021293

### NOTICE OF SALE

**REQUEST FOR BID**  
The School Board of Collier County, Florida, will accept Request for Proposals in the Office of the Director of Purchasing until 2:00 p.m. on the date noted below for the following:

RFP # TITLE OPEN  
93-3/14 Food & Supply Distributor April 25, 2014

RFP Document available at:  
http://www.demandstar.com/buyer/bids/Bid\_Detail.asp?\_PU=%2Fbuyer%2Fbids%2FDefault%2Easp%3F%5FRF%3D18bi=251205  
for additional information call 239-377-0047.

The School Board of Collier County, Florida  
By: /s/ Dr. Kamela Patton  
Superintendent of Schools  
Authorized by:  
Nancy Sirko, Director of Purchasing  
April 6 & 7, 2014 No. 2022459

### REQUEST FOR BID

**REQUEST FOR BID**  
The School Board of Collier County, Florida, will accept Sealed Bids in the Office of the Director of Purchasing until 2:00 p.m. on the date noted below for:

BID # TITLE OPEN  
98-3/14 Occupational & Physical Therapy April 22, 2014

Scope of work and requirements @ http://www.demandstar.com/supplier/bids/agency\_inc/bid\_list.asp?search&LP=BB&mi=10202 or call 239-377-0047.

The School Board of Collier County, Florida  
By: /s/Dr. Kamela Patton  
Superintendent of Schools  
Authorized by:  
Nancy Sirko, Director of Purchasing  
April 6 & 7, 2014 No. 2022463

### REQUEST FOR BID

**REQUEST FOR BID**  
The School Board of Collier County, Florida, will accept Sealed Bids in the Office of the Director of Purchasing until 2:00 p.m. on the date noted below for:

BID # TITLE OPEN  
99-3/14 Interpreters For The Hearing Impaired April 22, 2014

Scope of work and requirements @ http://www.demandstar.com/supplier/bids/agency\_inc/bid\_list.asp?search&LP=BB&mi=10202 or call 239-377-0047.

The School Board of Collier County, Florida  
By: /s/Dr. Kamela Patton  
Superintendent of Schools  
Authorized by:  
Nancy Sirko, Director of Purchasing  
April 6 & 7, 2014 No. 2022464

### REQUEST FOR BID

**REQUEST FOR BID**  
The School Board of Collier County, Florida, will accept Sealed Bids in the Office of the Director of Purchasing until 2:00 p.m. on the date noted below for:

BID # TITLE OPEN  
101-3/14 Speech Therapy Services April 22, 2014

Scope of work and requirements @ http://www.demandstar.com/supplier/bids/agency\_inc/bid\_list.asp?search&LP=BB&mi=10202 or call 239-377-0047.

The School Board of Collier County, Florida  
By: /s/Dr. Kamela Patton  
Superintendent of Schools  
Authorized by:  
Nancy Sirko, Director of Purchasing  
April 6 & 7, 2014 No. 2022467

### REQUEST FOR BID

**REQUEST FOR BID**  
The School Board of Collier County, Florida, will accept Sealed Bids in the Office of the Director of Purchasing until 2:00 p.m. on the date noted below for:

BID # TITLE OPEN  
102-3/14 Annual Safety Inspections & Consulting Services April 22, 2014

Scope of work and requirements @ http://www.demandstar.com/supplier/bids/agency\_inc/bid\_list.asp?search&LP=BB&mi=10202 or call 239-377-0047.

The School Board of Collier County, Florida  
By: /s/Dr. Kamela Patton  
Superintendent of Schools  
Authorized by:  
Nancy Sirko, Director of Purchasing  
April 6 & 7, 2014 No. 2022468

# Classified

**CONTACT US**

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1100 Immokalee Rd.  
Naples, FL, 34110

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**Naples Daily News and The Daily News**  
Tuesday through Friday  
2PM, one day prior  
Saturday, Sunday & Monday  
5PM Friday

**Free Merchandise Ads**  
Email, Fax or Mail. We offer FREE classified ads for non-commercial items less that \$500 in value (price must be included in the ad). The ads are up to 3 lines and run for 7 days one time only.

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**Corrections:** Please check your ad for errors on the first day it appears. Naples News Media Group will not be responsible for incorrect ads after the first day of publication.



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2885 South Horseshoe Drive, Naples, FL 34104 • (239) 252-8192 • Fax (239) 252-5815

Mr. Aaron Kaster, Project Manager  
The Florida Department of Transportation  
801 N. Broadway Ave.  
P.O. Box 1249  
Bartow, Florida 33830

April 18, 2014

**RE: The Ultimate Interchange Improvement at I-75 Interchange and SR 951**

Dear Mr. Kaster:

The Ultimate Interchange Improvement at I-75 Interchange and SR 951 in Collier County is consistent with the adopted Collier Metropolitan Planning Organization's *2035 Long Range Transportation Plan* (LRTP). The improvement is reflected in the Collier MPO 2035 Cost Feasible Plan that was recently amended on April 11, 2014. Please contact Sue Faulkner at (239) 252-5715, if you have any questions.

Sincerely,

Lucilla Ayer, AICP  
MPO Executive Director