# FINAL
# STATE ENVIRONMENTAL IMPACT REPORT

**for**
**State Road (SR) 54**
**Project Development and Environment (PD&E) Study**
**from West of SR 589 (Suncoast Parkway)**
**to West of SR 45 (US 41)**
**WPI SEG. NO.: 421140-7**
**Pasco County**

**December 2008**

**PREPARED FOR:**

**Pasco County**

**In Cooperation With**
**Florida Department of Transportation – District 7**

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**Florida Department of Transportation**
**STATE ENVIRONMENTAL IMPACT REPORT**

## 1.0 STATE ENVIRONMENTAL IMPACT REPORT FORM

### 1.1 General Information

Project Name: SR 54 Project Development and Environment (PD&E) Study

Project Limits: From West of SR 589 (Suncoast Parkway) to West of SR 45 (US 41)

Financial Project ID Number: N/A

WPI Segment No.: 421140-7

### 1.2 Project Description

a. Existing Conditions: *See Attachment 1, Section 2.1.1*

b. Proposed Improvements: See Attachment 1, Section 2.1.2

### 1.3 Approved for Public Availability (Before Public Hearing)

Pasco County Responsible Officer — Date: 10-15-08

A Public Hearing was held on **November 6, 2008**
Date

### 1.4 Approval of SEIR

FDOT District Seven Secretary or Designee — Date

## 1.5 Impact Evaluation

| Topical Categories | Sign | Min | None | Noinv | REMARKS |
|---|---|---|---|---|---|
| **A. SOCIAL IMPACTS** | | | | | |
| 1. Land Use Changes | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.1.1 |
| 2. Community Cohesion | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.1.2 |
| 3. Relocation Potential | ☐ | ☐ | ☐ | ☒ | |
| 4. Community Services | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.1.3 |
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| 6. Controversy Potential | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.1.5 |
| 7. Bicycles and Pedestrians | ☐ | ☒ | ☐ | ☐ | See Attachment 2, Section 3.1.6 |
| 8. Utilities and Railroads | ☐ | ☒ | ☐ | ☐ | See Attachment 2, Section 3.1.7 |
| **B. CULTURAL IMPACTS** | | | | | |
| 1. Historic Sites/Districts | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.2.1 |
| 2. Archaeological Sites | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.2.2 |
| 3. Recreation Areas | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.2.3 |
| **C. NATURAL ENVIRONMENT** | | | | | |
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| 2. Aquatic Preserves | ☐ | ☐ | ☐ | ☒ | |
| 3. Water Quality | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.3.2 |
| 4. Outstanding Florida Waters | ☐ | ☐ | ☐ | ☒ | |
| 5. Wild and Scenic Rivers | ☐ | ☐ | ☐ | ☒ | |
| 6. Floodplains | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.3.3 |
| 7. Coastal Barrier Islands | ☐ | ☐ | ☐ | ☒ | |
| 8. Wildlife and Habitat | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.3.4 |
| 9. Farmlands | ☐ | ☐ | ☐ | ☒ | |
| **D. PHYSICAL IMPACTS** | | | | | |
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| 2. Air | ☐ | ☐ | ☒ | ☐ | See Attachment 2, Section 3.4.2 |
| 3. Construction | ☐ | ☒ | ☐ | ☐ | See Attachment 2, Section 3.4.3 |
| 4. Contamination | ☐ | ☒ | ☐ | ☐ | See Attachment 2, Section 3.4.4 |
| 5. Navigation | ☐ | ☐ | ☐ | ☒ | |

**E. PERMITS REQUIRED**

The following permits may be required:

- Southwest Florida Water Management District Individual Environmental Resource Permit
- Florida Fish and Wildlife Conservation Commission – Gopher Tortoise Permit
- United States Army Corps of Engineers Dredge and Fill Nationwide Permit

- Florida Department of Environmental Protection National Pollutant Discharge Elimination System Permit

## 1.6 Commitments and Recommendations

Commitments

To minimize the impacts of this project on local residents and business owners, and optimize the effectiveness of the improvements, the following commitments were made during the PD&E study process:

- Impacts to wetlands shall be avoided to the extent feasible. Unavoidable construction-related wetland impacts will be mitigated through the FDOT Mitigation Program (Chapter 373.4137 F.S.).
- All construction activities shall adhere to the latest edition of the *FDOT Standard Specifications for Road and Bridge Construction*.

Recommendations

The recommended typical section adds one lane in each direction to SR 54 to widen the facility from four lanes to six lanes. To create dual left-turn lanes at the SR 589 (Suncoast Parkway) ramps, outside widening will occur at the beginning of the project. To avoid acquiring additional right-of-way (ROW), median widening will occur for the remainder of the project. The median shoulders will be 12 ft wide and unpaved. The outside shoulders will be slope corrected or newly constructed at 2 percent for 5 ft. An additional extended shoulder will be added at the same cross slope to accommodate bicyclists and pedestrians. The existing swales will be re-graded to accommodate the stormwater and existing drainage structures will be modified as needed.

# ATTACHMENT 1
# (PROJECT DESCRIPTION)

## 2.0 PROJECT INTRODUCTION

### 2.1 Project Description

#### 2.1.1 Existing Conditions

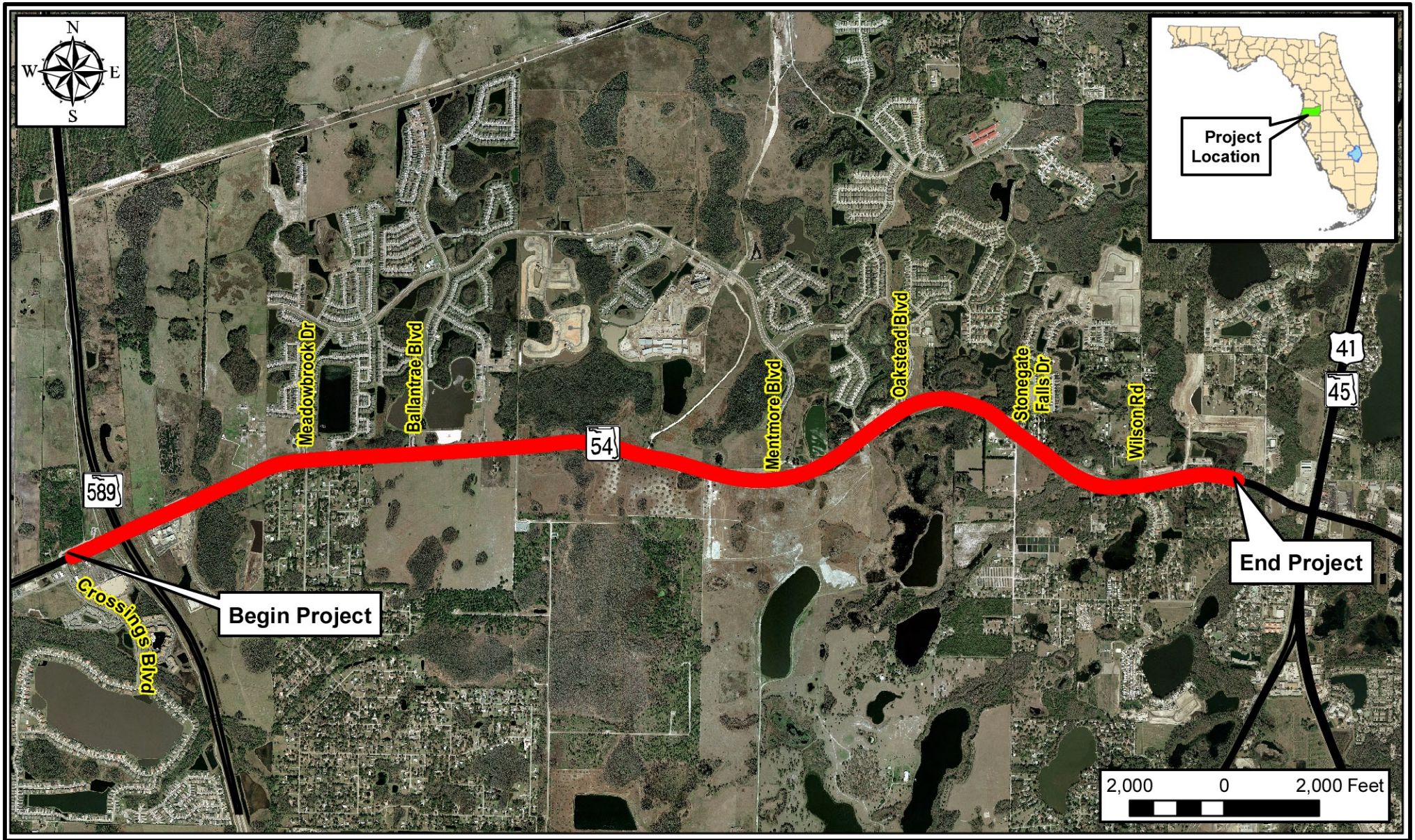
Pasco County, in cooperation with the Florida Department of Transportation (FDOT), conducted a Project Development and Environment (PD&E) Study to evaluate the widening of SR 54 from west of SR 589 (Suncoast Parkway) to west of SR 45 (US 41) in Pasco County, Florida (**Figure 1**). The total project length is approximately 5.3 miles. The proposed project involves adding one through lane in each direction to the existing four-lane, divided facility.

SR 54, within the study limits, is a four-lane divided rural roadway from west of the Suncoast Parkway to west of US 41. **Figure 2** shows the existing typical section, which consists of four 12-foot (ft) travel lanes (two lanes in each direction) with an inside paved shoulder width of two ft (8-ft total) and an outside paved shoulder width of 5-ft (10-ft total). The typical section also includes a varying width grass median (approximately 58 ft to 72 ft) and large grass swales. At the east end of the proposed project (1,848 ft west of US 41), the typical section changes to a curb and gutter section.

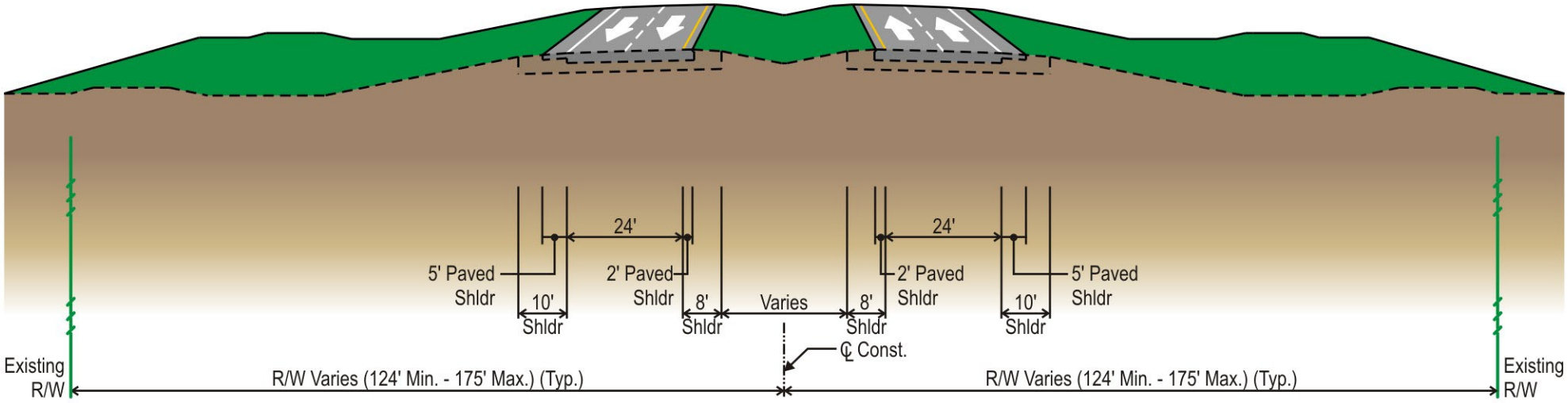
#### 2.1.2 Proposed Improvements

The Build Alternative involves increasing the capacity of SR 54 from four to six lanes (**Figures 3 and 4**). Other improvements include widening the inside and outside shoulders. The proposed roadway improvements will not require acquisition of additional right-of-way (ROW).

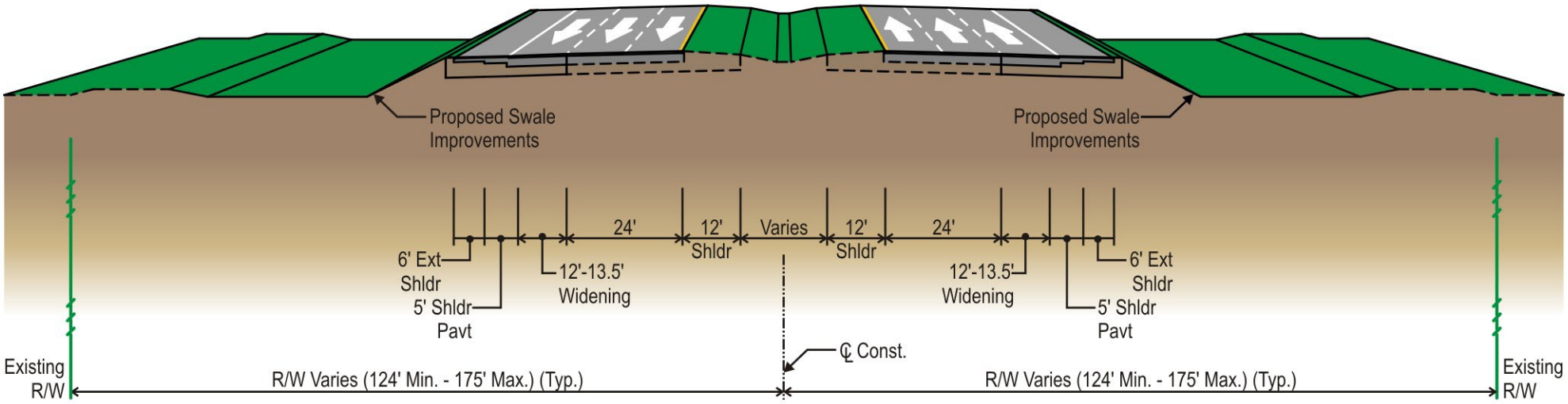
The stormwater management needs for the proposed project will be accommodated in the existing ponds in Basins A through E. Minor modifications to the median area, including median drains will be necessary with the inside widening. However, additional treatment and attenuation volumes will have to be accounted for due to the inclusion of additional left and right turn lanes, and a multi-use path. The additional volume will be provided by various methods. The primary method will be to revise the side slopes from 1:6 to 1:4 to increase the width of the ponds. While this is not a desirable side slope, it will often be necessary due to ROW constraints.




| | | |
|---|---|---|
| SR 54<br>from West of SR 589<br>(Suncoast Parkway) to<br>West of SR 45 (US 41) | **PROJECT LOCATION MAP** | **FIGURE 1** |



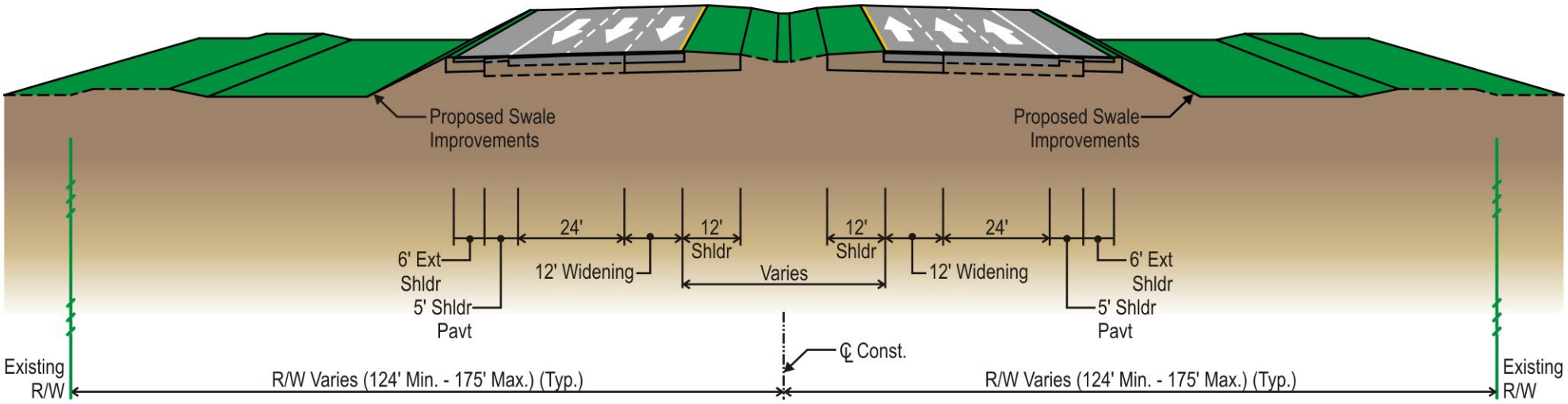

| | | |
|---|---|---|
| SR 54<br>from West of SR 589<br>(Suncoast Parkway) to<br>West of SR 45 (US 41) | **EXISTING TYPICAL SECTION** | **FIGURE 2** |




SR 54
from West of SR 589
(Suncoast Parkway) to
West of SR 45 (US 41)

**PROPOSED TYPICAL SECTION**
**STA. 1714+96.00 - STA. 1769+92.71**

**FIGURE 3**




| | | |
|---|---|---|
| SR 54<br>from West of SR 589<br>(Suncoast Parkway) to<br>West of SR 45 (US 41) | **PROPOSED TYPICAL SECTION**<br>**STA. 1769+92.91 - STA. 1977+86.10** | **FIGURE 4** |

## 2.2 Need for Improvement

### 2.2.1 System Linkage

SR 54 is a principal arterial roadway that provides for east-west travel in southern Pasco County. SR 54 links north-south regional roadways such as SR 55 (US 19), Suncoast Parkway, US 41 and SR 93 (I-75) in Pasco County to the remainder of the state. The proposed project provides continuity between the existing six-lane divided roadway section west of the study limits and the future six-lane divided roadway section which is under construction to the east of the project study limits.

### 2.2.2 Transportation Demand

Motorists in Pasco County are faced with increased traffic congestion and delay as the demands from the County's growth continue to place pressures on the existing transportation system. In particular, within recent years significant growth has occurred in southern Pasco County. Five Developments of Regional Impact (DRI) and nine Master Planned Unit Developments (MPUD) have been approved within the project area over the past eight years.

### 2.2.3 Federal, State, or Local Government Authority

The proposed project is consistent with the Transportation Element of the *Pasco County Comprehensive Plan* and the Pasco County Metropolitan Planning Organization (MPO) *2025 Long Range Transportation Plan (LRTP)*. In addition, the widening project is listed in the Pasco County *Transportation Capital Improvement Program (CIP), FY 2008-2012*.

### 2.2.4 Social Demands or Economic Developments

The proposed project will enhance regional connectivity and preserve sufficient operating conditions within the project's study limits. It will also provide a safe and efficient transportation system for this area of Pasco County. It is also intended to accommodate future traffic volumes, enhance motorist safety and improve hurricane evacuation.

### 2.2.5 Modal Interrelationships

While the automobile continues to be the mode of choice in Pasco County, the County has recognized the need to promote alternative modes of transportation to better accommodate the area's growth. Currently, Pasco County Public Transit (PCPT) does not have an existing transit route that travels within the SR 54 study limits. There are plans for implementation of a SR 54 Cross-County Connector transit route in 2011. The route would provide travel along SR 54 between the existing transit systems located in New Port Richey and the City of Zephyrhills.

The proposed project includes wider outside paved shoulders that will enhance the travel conditions for bicyclists traveling along the SR 54 corridor. Further improvement to modal interrelationships will occur between bicyclists and transit, by the implementation of PCPT's Bikes on Buses program as part of the proposed SR 54 Cross-County Connector transit route.

## 2.2 Project Corridor Needs

### 2.2.1 Capacity

A Traffic Analysis Report (August 2008) was prepared for this project's PD&E Study. The Report documented the existing year (2007) and design year (2030) annual average daily traffic (AADT) volumes for the project. **Table 1** summarizes the existing and design year AADT volumes between Crossings Boulevard and SR 45 (US 41). The *Pasco County Comprehensive Plan* established the adopted minimum operational standard for SR 54 as level of service (LOS) D. Based upon the FDOT's Quality/Level of Service Handbook Generalized Level of Service Tables, the existing LOS D capacity for SR 54 as a four-lane divided roadway facility is 35,700 vehicles per day (vpd). As shown in **Table 1**, traffic volumes on the existing four-lane divided roadway exceed the LOS D capacity for this section of SR 54. Based upon the FDOT's LOS Tables, improving SR 54 to a six-lane divided roadway increases the LOS D capacity to 53,500 vpd. With the proposed six-lane divided roadway improvement, the anticipated 2030 AADT volumes within portions of the study limits exceed the facility's LOS D capacity.

**Table 1**
**Traffic Information**

| SR 54 Roadway Segment | | Existing Year (2007) | | Design Year (2030) | |
|---|---|---|---|---|---|
| From | To | AADT | LOS | AADT | LOS |
| Crossing Blvd | SR 589 (Suncoast Pkwy) | 50,800 | F | 78,900 | F |
| SR 589 (Suncoast Pkwy) | Ashley Glen Blvd/ Northpointe Pkwy | 45,200 | F | 81,900 | F |
| Ashley Glen Blvd/ Northpointe Pkwy | Meadowbrook Dr | 44,200 | F | 54,300 | F |
| Meadowbrook Dr | Ballantrae Blvd | 44,800 | F | 55,200 | F |
| Ballantrae Blvd | Sunlake Blvd | 42,000 | F | 50,400 | C |
| Sunlake Blvd | Mentmore Blvd | 40,200 | F | 46,100 | C |
| Mentmore Blvd | Oakstead Blvd | 45,800 | F | 47,100 | C |
| Oakstead Blvd | Stonegate Falls Blvd/Henley Rd | 46,600 | F | 61,900 | F |
| Stonegate Falls Blvd/Henley Rd | Wilson Rd | 48,400 | F | 63,800 | F |
| Wilson Rd | SR 45 (US 41) | 48,900 | F | 63,000 | F |

### 2.3.2 Safety

The proposed project will help relieve traffic congestion and is expected have a positive effect on reducing the number of accidents along the corridor. The project will also increase the outside

paved shoulder width from 5-ft to 5-ft plus a 6-ft extended paved shoulder, which can better accommodate bicyclists and pedestrians traveling within the project study limits.

### 2.3.3 Structural

The study limits have two existing structures that carry SR 589 (Suncoast Parkway) over SR 54. Each structure consists of two spans. The vertical clearance of the existing bridge number 140072 is 17.25 ft and 18.70 ft for bridge number 140073. The bridges were evaluated using a sufficiency rating from the National Bridge Inventory provided by the Federal Highway Administration (FHWA), which is indicative of bridge sufficiency to remain in service. The result of this method is a percentage in which 100% would represent an entirely sufficient bridge and 0% would represent an entirely insufficient or deficient bridge. The bridge ratings are 99.4 for bridge number 140072, and 99.4 for bridge number 140073. The construction of both bridges was completed in 1999. There will be no modifications made to the existing SR 589 (Suncoast Parkway) bridge structures over SR 54 with the proposed six-lane widening of SR 54. Pertinent information from the bridge inspection reports can be obtained by contacting the FDOT Project Manager.

# ATTACHMENT 2
# (PROJECT IMPACTS)

## 3.0 ENVIRONMENTAL IMPACT ANALYSIS

### 3.1 Social Impacts

#### 3.1.1 Land Use Changes

Existing land use within the project area was determined from the interpretation of 1 inch = 200 feet scale aerial photography and supplemented by field reconnaissance. There is currently a mix of agriculture, residential, and a few economic centers containing commercial and office establishments. The proposed project is not anticipated to alter existing land use patterns.

#### 3.1.2 Community Cohesion

The proposed project will provide improvements along an existing transportation facility where surrounding land use patterns have already been established. It will not divide neighborhoods, cause social isolation, inhibit future development, decrease neighborhood size, or separate residences from community facilities. In addition, elderly persons, handicapped individuals, non-drivers, minorities, and low-income individuals/households will not be adversely affected. Therefore, no impacts to community cohesion are anticipated.

#### 3.1.3 Community Services

Community services include schools, school districts, religious institutions, medical facilities, parks and recreational areas, libraries, community centers, social service agencies, daycare centers, emergency services, elderly or special needs housing and senior centers. The facilities identified within the project area include:

1. Sunlake High School
2. Charles S. Rushe Middle School
3. Church of the Lakes
4. Willow Bend Community Church
5. Suncoast Trail

None of these facilities would be adversely affected if the proposed project is implemented.

#### 3.1.4 Title VI and Title VIII Considerations

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968.

### 3.1.5 Controversy Potential

A Public Involvement Program was conducted for the proposed project in order to obtain comments/input from the public, government officials, and agencies. The Public Involvement Program was developed in accordance with Chapter 8 of the FDOT PD&E Manual. The major elements of this program included the distribution of an Advanced Notification (AN) package and a Public Hearing that was held on November 6, 2008. No substantial public or agency comments were received by the Department during the performance of the Public Involvement Program.

### 3.1.6 Bicycles and Pedestrians

Pedestrian and bicycle facilities are to be provided on an extended shoulder. Currently, a shared use path is only provided for a portion of the project near the Suncoast Parkway. The path will remain along the Suncoast Parkway, but an extended shoulder will be provided along the rest of the proposed project.

## 3.2 Utilities and Railroads

There are no existing railroad facilities in the project area.

Major utility companies along the corridor were contacted to provide information regarding their facilities within the project area. Utility owners provided the following information regarding existing or proposed utilities within the project study limits.

### 3.2.1 Progress Energy - Distribution

This utility has overhead electric lines that run adjacent to the ROW lines on both sides of the road for the length of the project. The lines go underground at the Suncoast Parkway.

### 3.2.2 Progress Energy - Transmission

The transmission lines are overhead and vary from the south to the north ROW lines at several locations within the project study.

### 3.2.3 Pasco County Traffic Operations

While not a utility, there are signalized intersections at Crossings Boulevard, Suncoast Parkway southbound ramp, Suncoast Parkway northbound ramp, and Oakstead Boulevard.

### 3.2.4 Pasco County Utilities

There are several water and force main lines within the project study limits. A six-inch force main and an eight-inch water main run along the south side of the road from the beginning of the project to Meadowbrook Drive. From there, the two lines cross SR 54 and proceed north along Meadowbrook Drive. A 12-inch force main and a 12-inch water main are located on the north side of the road, near the intersection with Ballantrae Boulevard. These two lines also proceed

north along Ballantrae Boulevard. From Oakstead Boulevard to Stonegate Falls Drive, along the north side of SR 54, runs a water main of undetermined size.

### 3.2.5 Bright House Networks

The overhead cable lines are on the same poles as the Progress Distribution lines. They begin east of the Suncoast Parkway, on the south side of SR 54. The lines follow the poles and cross SR 54 underground, near the Progress Distribution overhead crossing. They remain on the north side of SR 54 for the remainder of the project. There are additional underground crossings at Meadowbrook Drive, Ballantrae Boulevard, Henley Road, and Wilson Road/Shirecrest Cove Way.

### 3.2.6 Verizon Florida, Inc.

There is a buried telephone line that runs parallel to the ROW on the south side of SR 54 for the entire project study limits. The buried line consists of two, four, and six four-inch PVC conduits. The conduit runs parallel to the ROW on the north side of SR 54. There are conduit crossings of SR 54 at the major side roads and at Hailey Lane. After Hailey Lane the conduit is located on both side of SR 54 for the remainder of the project's study limits.

### 3.2.7 Withlacoochee River Electric Cooperative

This utility had a crossing that has since been turned over to Progress Energy.

### 3.2.8 Tampa Bay Water

This utility has a 42-inch water main that crosses SR 54 at a location between Ballantrae Boulevard and Mentmore Boulevard.

### 3.2.9 Florida Gas Transmission

This utility has a crossing approximately 1,700 feet east of Sofia Drive which places it outside of the project study limits.

### 3.2.10 TECO People's Gas

There is a six-inch gas main along the north side of the project's ROW that has line crossings at Crossings Boulevard and near Northpointe Parkway. That line goes from the beginning of the project to just after Mentmore Boulevard where it crosses over to the south side ROW line. There are line crossings at Oakstead Boulevard and Stonegate Falls Drive. At Henley Road, the line splits and a six-inch gas main goes down Henley Road and a two-inch gas main continues on the south side of SR 54. The two-inch line crosses over to outside the north side ROW line before Devonoak Boulevard and then continues up that roadway.

## 3.3 Cultural Impacts

### 3.3.1 Historic Sites/Districts

A Historic Structures Survey Technical Memorandum was prepared for the proposed project. The objective of this survey was to identify any cultural resources within the project's Area of Potential Effect (APE) and to assess their eligibility for listing in the National Register of Historic Places (NRHP). This Memorandum was prepared in accordance with the procedures contained in FS 267. No NRHP-eligible or NRHP-listed historic resources were identified within the project's APE. The State Historic Preservation Officer (SHPO) concurred on December 5, 2008 that no historic resources would be affected by the proposed project.

### 3.3.2 Archaeological Sites

An archaeological survey was not prepared for the proposed project since it would be constructed within the existing SR 54 ROW. This ROW area was previously surveyed for any archaeological resources prior to the construction of the existing four lane section within the ROW.

### 3.3.3 Recreation Areas

The Suncoast Trail is the only public recreational area/facility within the project's study limits. It runs along the Suncoast Parkway and it crosses SR 54 to the west of the SR 54/Suncoast Parkway interchange. However, the Trail is not anticipated to be adversely affected as a result of implementing the proposed project.

## 3.4 Natural Environment

### 3.4.1 Wetlands

Field surveys were conducted to evaluate previously approved jurisdictional wetlands and previously permitted Other Surface Water (OSW) features within the proposed project ROW. All existing wetland and OSW features within and immediately adjacent to the ROW were documented. These features include roadside swales, dry retention areas, stormwater ponds and floodplain compensation areas.

A pre-application meeting occurred with the Southwest Florida Water Management District (SWFWMD) in July of 2007 to discuss existing drainage features and the status of previous wetland jurisdictional determinations. Wetland impacts within the ROW were previously quantified and mitigated as part of SWFWMD's Environmental Resource Permit (ERP) no. 43016251.00. The wetland jurisdictional limits were formally approved by the SWFWMD and the U.S. Army Corps of Engineers (USACE) during July 1995.

Twenty-seven jurisdictional wetlands were identified as part of the aforementioned permit. Only two will be impacted by the current SR 54 widening (Wetland 27 and 28). One is to the 0.05 acre edge of Wetland 27; the other impact is along the 0.08 acre sodded edge of Wetland 28. Wetland

27 is believed to be man-made. Total project impact to previously delineated wetlands is estimated to be 0.13 acres.

The proposed project is to be designed to avoid and minimize wetland impacts to the greatest extent possible. It will be constructed within the existing SR 54 ROW. Minor adjustments to the existing stormwater management system are planned in order to offset placement of new impervious surface areas for turn lanes and the multi-use recreational trail. Two minor wetland impacts are anticipated.

### 3.4.2 Water Quality

The proposed project will not have an adverse impact to water quality. The proposed stormwater facility design will meet, at a minimum, the water quality treatment requirements for water quality impacts as required by the SWFWMD.

### 3.4.3 Floodplains

The proposed project's involvement within floodplains was assessed using automated information provided by the Federal Emergency Management Agency (FEMA). Negligible floodplain impacts are anticipated to occur as a result of the proposed project. Additionally, according to language in ERP no. 4316251.00, a floodplain surplus exists (5.29 acre feet) in this area.

The project study limits are within FEMA designated Flood Zones A, AE, and X (see **Figure 5**). Flood Zones A and AE denote areas subject to a one percent or greater chance of flooding annually. Flood zone X denotes areas of minimal flood hazard from the principle flood source in this area. Areas designated as X are determined to be outside the 0.2 percent chance of flooding annually.

Any additional impacts associated with the proposed project are expected to be compensated by expanding the roadside ditches. Areas that fall within Flood Zone X will not result in significant impacts to the FEMA designated 100-year floodplain.

### 3.4.4 Wildlife and Habitat

Habitat within and adjacent to the project study limits was evaluated using aerial photography and subsequently verified in the field. The Florida Fish and Wildlife Conservation Commission (FFWCC), the U.S. Fish and Wildlife Service (USFWS), and the Florida Natural Areas Inventory (FNAI) database records were reviewed prior to the field survey to assess local information for protected wildlife. The state and federally-listed species that may occur in the project study area are listed in **Table 2**. During field reconnaissance on December 19, 2007 and January 16, 2008, no federal or state listed species were observed. However, the proposed project may have some involvement with gopher tortoise habitat. A gopher tortoise permit may be required if further field surveys during the project's design phase indicate that the project's construction limits may include an active gopher tortoise burrow. Adverse impacts to protected species are expected to be minimal, as the quality of the habitat within the ROW is low and the surrounding area is largely developed. Therefore, no mitigation is proposed. Additional

information regarding the project's involvement with any threatened and endangered species is provided in the separately prepared Environmental Technical Compendium.

## 3.5 Physical Impacts

### 3.5.1 Noise

The traffic noise analysis for the proposed project was conducted in accordance with Florida Statute 335.17, and Chapter 17 of the FDOT PD&E Manual, Volume 2. Based on this analysis, a Draft Noise Study Report (NSR) has been prepared.
The objectives of the NSR were to:

- Identify noise sensitive sites adjacent to the proposed project,
- Evaluate future traffic noise levels at the noise sensitive sites based on the proposed project's operating conditions, and
- Evaluate the need for and effectiveness of any noise abatement measures.

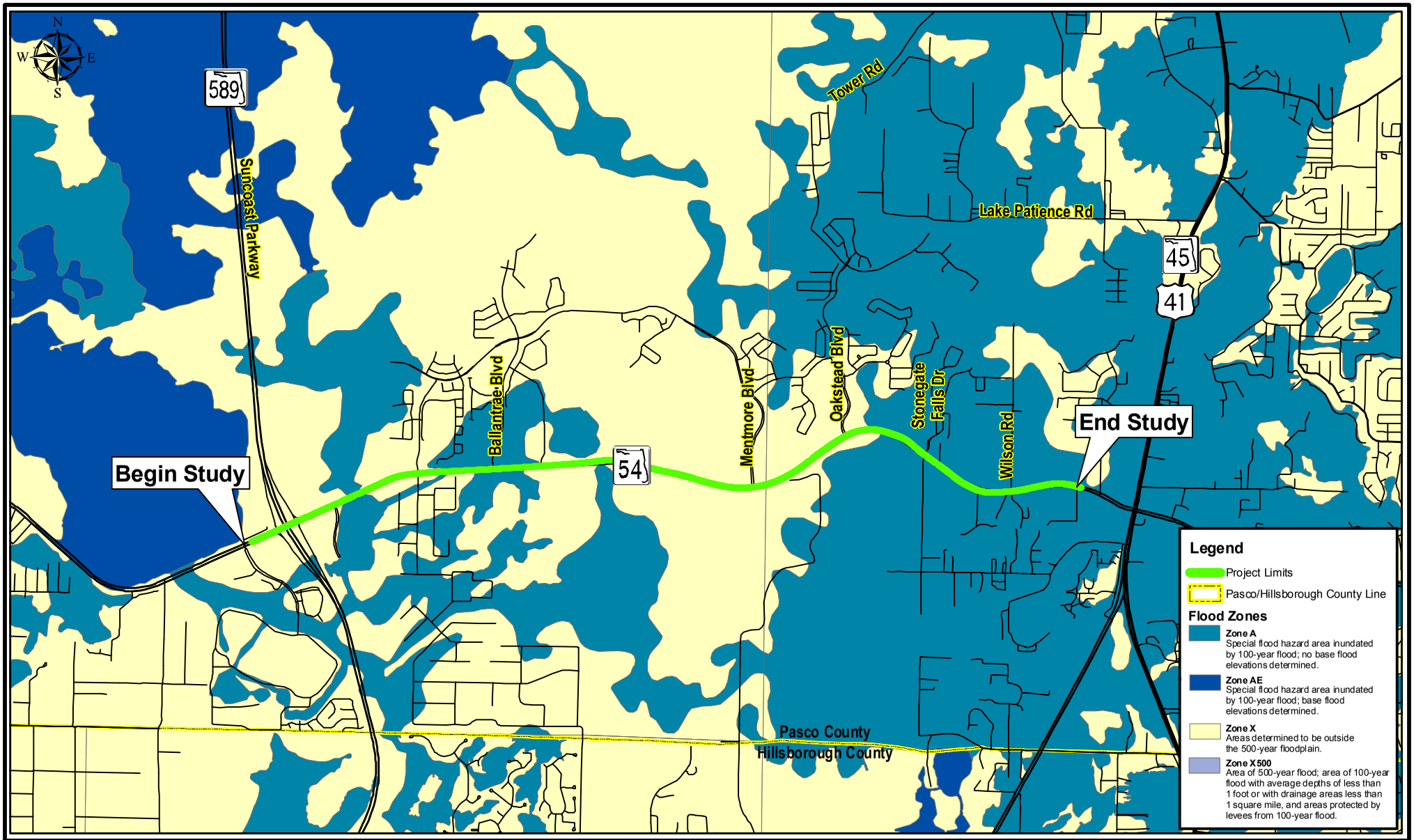
An additional objective was the development of a noise contour (a distance from the roadway that traffic noise levels would be predicted to approach, meet, or exceed the FHWA Noise Abatement Criteria [NAC]).

#### 3.5.1.1 Measured Noise Levels

The traffic noise levels were predicted using the FHWA's computer model for the prediction and analysis of highway traffic noise--the Traffic Noise Model (TNM - Version 2.5). The TNM propagates sound energy, in one-third octave bands, between highways and nearby receivers taking the intervening ground's acoustical characteristic and topography, and intervening structures (i.e., buildings) into consideration.

The noise levels are expressed in decibels (dB) on the A-weighted scale (dBA). The A-weighted scale is widely used in environmental studies because this scale closely resembles the non-linearity of human hearing and correlates well with human perceptions regarding the annoying aspects of noise. All sound and traffic noise levels are reported as one hour equivalent levels ($L_{Aeq1h}$), values which theoretically contain the same amount of acoustic energy as an actual time-varying A-weighted sound level over a period of one hour.

Noise-sensitive sites are defined as properties where frequent human use occurs and where a lowered noise level would be of benefit. When predicted traffic noise levels approach, meet or exceed the NAC or, when predicted noise levels increase substantially when compared to existing levels, the FHWA requires that noise abatement measures be considered. The FDOT defines "approach" to be within 1 dBA of the NAC and considers an increase to be substantial if predicted future levels with roadway improvements increase 15 dBA or more when compared to existing levels. Notably, increases of 15 dBA are not typically predicted to occur for roadway projects that involve widening an existing roadway.




| | | |
|---|---|---|
| SR 54<br>from West of SR 589<br>(Suncoast Parkway) to<br>West of SR 45 (US 41) | **PASCO AND HILLSBOROUGH COUNTY<br>FEMA MAP** | **FIGURE 5** |

**Table 2**
**Protected Species Potentially Found in Proposed Project Area**

| Common Name | Scientific Name | Federal Status | State Status |
|---|---|---|---|
| **REPTILES AND AMPHIBIANS** | | | |
| Eastern indigo snake | *Drymarchon corais couperi* | T | T |
| Gopher frog | *Rana capito* | NL | SSC |
| Gopher tortoise | *Gopherus polyphemus* | NL | T |
| **BIRDS** | | | |
| Bald eagle | *Haliaeetus leucocephalus* | NL | T |
| Florida burrowing owl | *Athene cunicularia floridana* | NL | SSC |
| Florida scrub-jay | *Aphelocoma coerulescens* | T | T |
| Great egret | *Ardea alba* | NL | SSC |
| Little blue heron | *Egretta caerulea* | NL | SSC |
| Sandhill crane | *Grus canadensis pratensis* | NL | T |
| Snail kite | *Rostrhamus sociabilis plumbeus* | E | E |
| Snowy egret | *Egretta thula* | NL | SSC |
| Tri-colored heron | *Egretta tricolor* | NL | SSC |
| White ibis | *Eudocimus albus* | NL | SSC |
| Wood stork | *Mycteria americana* | E | E |
| Limpkin | *Aramus guarauna* | NL | SSC |
| **MAMMALS** | | | |
| Florida black bear | *Ursus americanus floridanus* | NL | T |
| Florida mouse | *Podomys floridanus* | NL | SSC |
| Sherman's fox squirrel | *Sciurus niger shermani* | NL | SSC |
| Short-tailed snake | *Stilosoma extenuatum* | NL | T |
| **PLANTS** | | | |
| Ashe's savory | *Calamintha ashei* | N | T |
| Britton's beargrass | *Nolina brittoniana* | E | E |
| Carter's warea | *Warea carteri* | E | E |
| Celestial lily | *Nemastylis floridana* | NL | E |
| Chapman's sedge | *Carex chapmanii* | NL | E |
| Cutthroat grass | *Paniucm abscissum* | NL | E |
| Florida beargrass | *Nolina atopocarpa* | NL | T |
| Florida bonamia | *Bonamia grandiflora* | LT | E |
| Florida spiny-pod | *Matelea floridana* | NL | E |
| Florida willow | *Salix floridana* | NL | E |
| Giant orchid | *Pteroglossaspis ecristata* | NL | T |
| Many-flowered grass-pink | *Calopogon multiflorus* | NL | E |
| Nodding pinweed | *Lechea cernua* | NL | T |
| Piedmont jointgrass | *Coelorachis tuberculosa* | NL | T |
| Pine-woods bluestem | *Andropogon arctatus* | NL | T |
| Pondspice | *Litsea aestivalis* | NL | E |

| Common Name | Scientific Name | Federal Status | State Status |
|---|---|---|---|
| **PLANTS (Continued)** | | | |
| Pygmy pipes | *Monotropsis reynoldsiae* | NL | E |
| Sand butterfly pea | *Centrosema arenicola* | NL | E |
| Scrub buckwheat | *Eriogonum longifolium var. gnaphalifolium* | T | E |
| Short-leaved rosemary | *Conradina brevifolia* | E | E |
| Yellow fringeless orchid | *Platanthera integra* | NL | E |

Federal Status: E = Endangered: species in danger of extinction throughout all or a significant portion of its range.
T = Threatened: likely to become Endangered within foreseeable future throughout all or a significant portion of range
E(S/A) or T (S/A) Endangered/Threatened due to similarity of appearance to a species which is federally listed, such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
NL = Not Listed

State Status: E = Endangered: species, subspecies, isolated population so few/depleted/restricted and in imminent danger of extinction.
T = Threatened: species, subspecies, or isolated population that is facing a very high risk of extinction in the future.
SSC= Species of Special Concern: species, subspecies, or isolated population that is facing a moderate risk of extinction

### 3.5.1.2 Noise Level Analysis

Within the project study limits, there are 39 noise sensitive sites that have the potential to be affected by traffic noise due to implementing the proposed project. These sites are single-family residences and the Willow Bend Community Church. Notably, all of the sites were evaluated as Activity Category "B". As such, traffic noise levels were determined to affect the residences and the church if predicted exterior traffic noise levels were 66 dBA or more (within 1 dBA of the FHWA NAC for an Activity Category B land use).

### 3.5.1.3 Conclusion

The results of the analysis indicate that with the existing roadway and in the future without the proposed project (the No-Build Alternative), traffic noise levels are predicted to range from 56.5 to 68.7 dBA at the evaluated residences with levels exceeding the NAC at five of the evaluated residences.

With the proposed project, traffic noise levels are predicted to range from 60.7 to 72.4 dBA. This is an increase from existing levels that range from 3.5 dBA (barely perceptible) to 5.4 dBA (readily detectable). Additionally, traffic noise levels are predicted to approach the NAC at one residence, and exceed the NAC at 14 residences. Three of the 15 residences are isolated, five are located within Meadowbrook Estates subdivision, four residences are located within Suncoast Meadows, and three are located adjacent to Hailey Lane.

The noise abatement measures considered for the 15 affected residences were traffic management, alternative roadway alignment, property acquisition, and noise barriers. These measures are not considered feasible or reasonable to reduce the predicted future traffic noise levels at the residences.

## 3.5.2 Air

The proposed project has the potential to alter traffic conditions and influence the air quality within the project study area. The pollutants of primary concern with roadway traffic are ozone (O3), oxides of nitrogen (NOx), hydrocarbons (HC), small particulate matter (PM10) and carbon

monoxide (CO). Because CO is a localized pollutant that is emitted directly into the atmosphere by vehicles, it is analyzed for individual roadway projects where substantial changes to the traffic conditions are anticipated. The National Ambient Air Quality Standard (NAAQS) for CO is 35 parts per million (ppm) for one-hour periods and nine ppm for eight-hour periods.

Based on traffic projections, the worst-case interchange within the project limits of the 2010 Build and 2030 design year is the SR 54/Suncoast Parkway interchange. This interchange was analyzed using the FHWA-approved CO Florida 2004 v.2.0.5, which is the most current version of the FDOT Intersection Air Quality (CO) Screening Model. The CO Florida 2004 model is a PC-based CO screening model, which is used to assess the potential for air quality impacts caused by roadway traffic. A project alternative that passes the CO Florida 2004 model is not expected to result in any violations of the NAAQS for CO and is not likely to have any impact on the air quality of the surrounding area. However, because the very conservative data assumptions built into the screening model, failing the screening analysis does not automatically result in a violation of the NAAQS for CO; rather, failure of a project Build Alternative with the screening analysis dictates that a more detailed air quality analysis must be performed using the MOBILE6 and CAL3QHC models.

Traffic-generated air quality impacts are primarily a concern near signalized intersections, where numerous vehicles are often stopped and idling during the traffic signals' red phase. The CO Florida 2004 model incorporates results developed from the MOBILE6 and CAL3QHC traffic air quality models, which include several worst-case assumptions for traffic characteristics, meteorology and terrain. User inputs to the screening model include project alternative, land use type, analysis year, the volume and speed of peak-hour traffic approaching the intersection on the worst-case link, and distance between receptors and the intersection. Output from the CO Florida 2004 model is the CO level, in parts per million, at the selected receptor location(s).

For 2010, the maximum CO levels at the SR 54/Suncoast Parkway interchange is 8.2 ppm and 4.9 ppm for the one- and eight-hour periods, respectively. For 2030, at this location, the maximum CO levels are 8.3 ppm and 5.0 ppm for the one- and eight-hour periods, respectively. Thus, the project passes the CO screening analysis and air quality impacts due to implementing the proposed project.

### 3.5.3 Construction

Project construction activities could have temporary air, noise, water quality, traffic flow, and visual impacts for residents, visitors, and travelers. Access to all businesses and residences is expected to be maintained to the extent possible through controlled construction scheduling. Traffic delays will also be controlled to the extent possible where many construction operations are in progress at the same time.

### 3.5.4 Contamination

A contamination screening evaluation of the proposed project was conducted. The following methodology was used for this evaluation:

- A search of the files available through the US Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP). The EPA Envirofacts system supplies online information concerning hazardous waste and National Priority List (NPL, Superfund) sites. The FDEP provides online viewing of site-specific contamination files (OCULUS database) and files at their Tampa office.

- A review of information generated by Environmental Data Management (EDM), which includes a search of the following state and federal databases: NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Resource Conservation and Recovery Act (RCRA), Treatment Storage and Disposal facility (RCRA TSD); RCRA generator list (RCRA GEN); Information System (RCRIS); Emergency Response Notification System (ERNS); State Landfill (SWF/LF); Delisted NPL Sites; Facility Index System/Facility Identification Initiative Program Summary Report (FINDS); Underground Storage Tanks (UST); Petroleum Contamination Detail Report (PCT01); Stationary Tank Inventory Facility/Owner/Tank Report (STI02); Leaking Underground Storage Tank Incident Reports (LUST); and Dry Cleaners.

- Visual reconnaissance was performed in June of 2008 to identify sites or areas with indications of past or present contaminant storage, use, generation, or disposal. Potential sites were visually examined to the extent of available access for evidence of possible contaminant presence.

- A determination of the contamination potential for each property within the proposed limits.

- A review of historical aerials.

A Contamination Screening Evaluation Memorandum was prepared for the proposed project. One potential contamination site was identified within the proposed project's study limits. The site is a Shell-Suncoast gas station at 16138 SR 54. It has been assigned a risk evaluation rating of low risk.

If construction activities are to occur in an area with contamination concerns, then a site assessment would be performed to the degree necessary during final design to determine levels of contamination and evaluate clean-up options and associated costs. Excavation and/or dewatering for installation of underground structures or utilities in the vicinity of any contaminated site could potentially encounter or exacerbate contamination conditions. Investigations should not be limited to areas of roadway expansion but should also include the drainage areas located adjacent to the roadway.

Resolution of problems regarding contamination will be coordinated by Pasco County with the appropriate regulatory agencies and action will be taken where applicable. Further coordination with the regulatory agencies, and possibly field surveys involving monitoring wells, soil borings and other site-specific methods, can identify potential contamination issues so that avoidance, minimization, and remediation measures can be taken.

Procedures specifying the contractor's responsibilities in regard to encountering petroleum-contaminated soil and/or groundwater are set forth in FDOT's Standard Specifications for Road and Bridge Construction. Special provisions may be a necessary component of the construction contract if the presence of hazardous or contaminated materials is identified within the project's construction limits. This could impact construction activities.