

# Alternative Corridor Evaluation Report

Florida Department of Transportation  
District Seven

US 301/US 98/SR 35/SR 700/Clinton Avenue  
Intersection Realignment Study

Pasco County, Florida

Financial Management Number: 443368-1-22-01  
ETDM Number: 14374

December 2020

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

This planning product may be adopted into the environmental review process, pursuant to Title 23 USC § 168, or the state project development process.

# Executive Summary

The Florida Department of Transportation (FDOT) District Seven is utilizing the Alternative Corridor Evaluation (ACE) process as part of the US 301/US 98/Clinton Avenue Intersection Realignment Study. ACE is typically performed as part of the Efficient Transportation Decision Making (ETDM) screening efforts that precede the Project Development and Environment (PD&E) phase and is used to identify, evaluate, and eliminate alternatives. Alternatives advancing to the PD&E phase should support the purpose and need for a project in accordance with all applicable laws and regulations, through the balancing of engineering, environmental, and economic aspects while considering comments received through the ETDM screening efforts.

FDOT District Seven initiated the ACE for the US 301/US 98/Clinton Avenue Intersection Realignment Study in Pasco County, Florida in April 2019. The realignment of the US 98 intersection is listed in both the Needs Plan and the Cost Feasible Plan of the Pasco County Metropolitan Planning Organization's (MPO) 2045 Long Range Transportation Plan (LRTP).

The purpose of this project is to evaluate alternatives that realign US 98 to Clinton Avenue to eliminate the current closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue; facilitate east/west travel; maximize the benefits of the improvements to Clinton Avenue and designation as SR 52 west of US 301; and enhance safety along the corridor. The closely spaced intersections involve roadways with traffic volumes ranging between 6,200 and 25,000 Annual Average Daily Traffic (AADT) and require turning and weaving movements to travel through the area, resulting in congestion and high crash rates. The ACE study area is 3,535 acres in size and is located in Sections 10-15 and 24; Township 25 South, Range 21 East; and Sections 7, 18, and 19, Township 25 South, Range 22 East in Pasco County, Florida. The majority of the study area is located in unincorporated Pasco County with a small area near US 301 and Clinton Avenue being in the City of Dade City.

A *Methodology Memorandum* (MM) that details the process utilized to develop and evaluate corridor alternatives was prepared for this project. Corridors were evaluated to determine if they meet the purpose and need of the project and evaluated for environmental and engineering issues. The MM also describes how alternatives would be eliminated and/or advanced for further analysis.

A land suitability mapping (LSM) analysis was performed. Using the project design criteria and results of the LSM analysis, five corridors (Corridors A-E) with a width of 250 feet were developed. It is anticipated that 4-6 lane divided typical sections will be developed for corridor consistency. The developed corridors will tie into the 4-lane Clinton Avenue extension west of US 301 (to be designated as SR 52) and to US 98. Potential typical sections could include a high speed urban typical section requiring 148 feet of right of way and a rural typical section requiring 192 feet of right of way. The 250-foot corridor width allows for flexibility in developing proposed alignments that avoid potential constraints. If necessary, the corridor width also allows for multimodal accommodations including sidewalks, bike lanes, a recreational trail, and transit. The typical sections and the corridor alignments will be further refined during the PD&E study phase.

Corridors D and E realign US 98 to the south increasing the distance between the intersections of US 301 at US 98 and US 301 at Clinton Avenue. As stated in the approved MM, any corridor that does not satisfy the stated purpose and need criteria will be eliminated. Corridors D and E were eliminated because they do not satisfy the Purpose and Need evaluation. These corridors do not meet the purpose and need criterion of eliminating the closely spaced major intersections. Safety would only be slightly improved as the distance for a weaving movement would be increased.

Corridors A, B, and C realign US 98 to the north to Clinton Avenue, east of the US 301 and Clinton Avenue intersection. The realignments proposed with these corridors eliminate one of the major intersections and a required turning and weaving movement for most routes through the area which will alleviate congestion and improve safety. Corridors A, B, and C satisfy the purpose and need evaluation and were further evaluated using environmental, engineering, and cost considerations.

Corridor A has minimal impacts to the natural environment, no involvement with cultural resources, minimal involvement with physical environmental resources, and moderate social impacts, relative to the corridors advancing from the purpose and need evaluation. The engineering evaluation revealed Corridor A is tied with Corridor B with the fewest engineering issues. Corridor A is the shortest alternative and, therefore, requires the least stormwater pond acreage and right of way acreage, and involves the fewest parcels. Corridor A has the lowest project costs. While comparable to Corridor B in most environmental aspects, the potential social impacts for Corridor A are greater than those for Corridor B. Potential residential relocations are 12 for Corridor A and only six for Corridor B. Potential non-residential relocations are two for Corridor A and none for Corridor B. The potential effects to community cohesion for Harmony Heights and South Clinton Heights is greater for Corridor A than Corridor B. These potential social impacts outweigh the cost savings associated with Corridor A. Taking into account the analysis in this ACE, in particular the social impacts, Corridor A is eliminated from consideration.

Corridor C has the most impacts to the natural environment, involvement with one historic resource, the most involvement with physical environmental resources, and the most potential social impacts, relative to the corridors advancing from the purpose and need evaluation. Corridor C has the most engineering issues. Corridor C is the longest alternative and, therefore, requires the most stormwater pond acreage and right of way acreage, and involves the most parcels. Corridor C has the highest project costs. Taking into account the analysis in this ACE, Corridor C is eliminated from consideration.

Corridor B has minimal impacts to the natural environment, no involvement with cultural resources, minimal involvement with physical environmental resources, and minimal social impacts, relative to the corridors advancing from the purpose and need evaluation. The engineering evaluation revealed Corridor B is tied with Corridor A with the fewest engineering issues. Of the three corridors advancing from the purpose and need evaluation, Corridor B is slightly longer than Corridor A and, therefore, requires slightly more stormwater pond acreage and right of way acreage, and involves slightly more parcels. Project costs associated with Corridor B are slightly higher than for Corridor A. Taking into account the analysis in this ACE, Corridor B is selected to advance to the PD&E study. While slightly more costly than Corridor A, the fewer

potential social impacts justify the selection of Corridor B. Corridor B has half the potential residential relocations as Corridor A and no potential non-residential relocations, compared to two for Corridor A. While Corridor A has greater potential effects to community cohesion for Harmony Heights and South Clinton Heights, potential effects from Corridor B are low. These potential social impacts outweigh the additional costs associated with Corridor B.

# TABLE OF CONTENTS

Section	Page
<b>1.0 Introduction.....</b>	<b>1-1</b>
1.1 Purpose of Alternatives Corridor Evaluation Report (ACER) .....	1-1
1.2 Project Background.....	1-1
1.2.1 ETDM Screening .....	1-1
1.2.2 Project Status.....	1-2
1.3 Project Description.....	1-2
1.4 Other Related Studies and Projects.....	1-3
1.4.1 SR 52 PD&E Study.....	1-4
1.4.2 US 301 PD&E Study.....	1-4
1.4.3 US 98 PD&E Study (North of West Socrum Loop Road to South of CR 54).....	1-4
<b>2.0 Purpose and Need .....</b>	<b>2-1</b>
2.1 Project Purpose .....	2-1
2.2 Project Need.....	2-1
<b>3.0 Existing and Future Conditions.....</b>	<b>3-1</b>
3.1 Description of Environmental Setting .....	3-1
3.1.1 Social Environment.....	3-1
3.1.1.1 Social.....	3-1
3.1.1.2 Economic.....	3-2
3.1.1.3 Land Use .....	3-2
3.1.1.4 Mobility.....	3-3
3.1.1.5 Aesthetic Effects .....	3-3
3.1.1.6 Relocation Potential .....	3-4
3.1.1.7 Farmlands .....	3-4
3.1.2 Cultural Environment.....	3-4
3.1.2.1 Archaeological .....	3-4
3.1.2.2 Historic .....	3-4
3.1.2.3 Section 4(f).....	3-6
3.1.2.4 Recreational.....	3-6
3.1.3 Natural Environment.....	3-6
3.1.3.1 Wetlands.....	3-6
3.1.3.2 Protected Species.....	3-8
3.1.3.3 Floodplains.....	3-9
3.1.4 Water Quality .....	3-10

<b>Section</b>	<b>Page</b>
3.1.5 Special Designations .....	3-10
3.1.6 Physical Environment .....	3-10
3.1.6.1 Noise.....	3-10
3.1.6.2 Air.....	3-11
3.1.6.3 Contamination .....	3-11
3.2 Roadway Characteristics.....	3-13
3.2.1 Vertical and Horizontal Alignment.....	3-13
3.2.2 Pedestrian Accommodations.....	3-14
3.2.3 Bicycle Facilities.....	3-14
3.2.4 Transit Facilities.....	3-15
3.2.5 Pavement Condition.....	3-15
3.2.6 Railroad Crossings .....	3-15
3.2.7 Drainage .....	3-15
3.2.8 Utilities.....	3-17
3.2.9 Lighting.....	3-17
3.2.10 Signs.....	3-18
3.2.11 Bridges and Structures .....	3-18
3.3 Traffic Characteristics.....	3-18
3.3.1 Traffic Volumes and Operational Conditions .....	3-18
3.3.1.1 Traffic.....	3-18
3.3.1.2 Truck Factors.....	3-20
3.3.1.3 Pedestrians and Bicycles .....	3-20
3.3.2 Intersection Layout and Traffic Control .....	3-21
3.4 Crash Data.....	3-22
3.4.1 Crash Data and Safety Analysis.....	3-22
3.4.1.1 Crash Type .....	3-24
<b>4.0 Alternatives Evaluation Methodology.....</b>	<b>4-1</b>
4.1 Land Suitability Mapping .....	4-2
4.1.1 Input Data.....	4-3
4.2 Corridor Analysis and Evaluation Criteria .....	4-4
4.2.1 Purpose and Need Evaluation .....	4-5
4.2.2 Environmental Evaluation.....	4-5
4.2.3 Engineering Considerations .....	4-6
4.2.4 Narrative of Assessment .....	4-7
4.2.5 Public and Agency Considerations .....	4-7
<b>5.0 Initial Corridors and Alternatives.....</b>	<b>5-1</b>

<b>Section</b>	<b>Page</b>
5.1 Design Controls .....	5-1
5.2 Description of Alternatives .....	5-3
<b>6.0 Alternatives Evaluation .....</b>	<b>6-1</b>
6.1 Purpose and Need Evaluation .....	6-1
6.2 Environmental and Engineering Evaluation .....	6-6
6.2.1 Environmental Evaluation.....	6-7
6.2.1.1 Natural Resources Evaluation .....	6-7
6.2.1.2 Social and Economic Evaluation.....	6-9
6.2.1.3 Cultural Resources Evaluation .....	6-11
6.2.1.4 Physical Resources Evaluation.....	6-13
6.2.2 Engineering Evaluation.....	6-14
6.2.2.1 Engineering Feasibility .....	6-14
6.2.2.2 Cost Evaluation .....	6-14
<b>7.0 Public Involvement and Agency Coordination .....</b>	<b>7-1</b>
7.1 Agency Coordination .....	7-1
7.2 Public Comments .....	7-1
7.3 Outstanding Issues .....	7-3
<b>8.0 Recommendations .....</b>	<b>8-1</b>
8.1 Alternatives Eliminated .....	8-1
8.2 Alternatives Recommended for PD&E Study .....	8-4
8.3 Recommended Systems Management and Operational Strategies .....	8-5

# List of Figures

<b>Figure</b>	<b>Page</b>
Figure 1-1	Project Location Map .....1-2
Figure 1-2	ACE Study Area Map.....1-3
Figure 1-3	Previous Studies Map.....1-5
Figure 3-1	Pasco County 2025 Future Land Use .....3-3
Figure 3-2	Cultural Resources Map .....3-5
Figure 3-3	Wetland Map .....3-7
Figure 3-4	FEMA Flood Zones.....3-9
Figure 3-5	Watershed Models .....3-10
Figure 3-6	Noise Sensitive Receptors .....3-11
Figure 3-7	Contamination Map .....3-12
Figure 3-8	Drainage Map .....3-16
Figure 3-9	Crash Density Map.....3-24
Figure 3-10	Crash Type and Severity Map.....3-26
Figure 5-1	Land Suitability Map.....5-5
Figure 5-2	LSM Corridor Overlay Map.....5-6
Figure 5-3	Alternative Corridors.....5-7
Figure 5-4	Corridor A .....5-8
Figure 5-5	Corridor B.....5-9
Figure 5-6	Corridor C.....5-11
Figure 5-7	Corridor D .....5-12
Figure 5-8	Corridor E.....5-13
Figure 6-1	US 98 to/from SR 52 Travel Route through the Project Area – Corridor B .....6-3
Figure 6-2	US 98 to/from SR 52 Travel Route through the Project Area – Corridor D .....6-4
Figure 6-3	Corridors Advancing from Purpose and Need Evaluation .....6-7
Figure 6-4	Natural Environment Evaluation.....6-8
Figure 6-5	Social Environment Evaluation.....6-10
Figure 6-6	Cultural Environment Evaluation.....6-12
Figure 6-7	Physical Environment Evaluation .....6-13



# List of Tables

<b>Table</b>		<b>Page</b>
Table 3-1	Demographic Information .....	3-1
Table 3-2	Wetland Land Use and Cover within the Project Study Area .....	3-7
Table 3-3	Protected Species Potentially Occurring within the Study Area .....	3-8
Table 3-4	Existing Roadway Characteristics .....	3-13
Table 3-5	Pavement Condition Survey Results (2019) .....	3-15
Table 3-6	Existing Utility Agency Owners .....	3-17
Table 3-7	Existing Year (2019) AADT and DDHV .....	3-19
Table 3-8	Existing Year (2019) Intersection Approach Analysis.....	3-20
Table 3-9	Field Measured T <sub>24</sub> Factors .....	3-20
Table 3-10	Existing (2019) Pedestrian and Bicycle Movements .....	3-21
Table 3-11	Crash Ratios (2013 to 2017).....	3-23
Table 3-12	Crash Type for Intersections .....	3-25
Table 3-13	Crash Type for Segments .....	3-25
Table 4-1	ETAT Acknowledgement and Comments on the Methodology Memorandum ...	4-1
Table 4-2	LSM Data Layers .....	4-3
Table 4-3	Evaluation of Purpose and Need .....	4-5
Table 4-4	Evaluation of Environmental Factors.....	4-6
Table 4-5	Evaluation of Engineering Issues .....	4-7
Table 4-6	Evaluation of Costs .....	4-7
Table 5-1	Design Criteria .....	5-2
Table 5-2	GIS Data Layers Utilized in LSM Analysis .....	5-4
Table 6-1	Intersections and Turning Movements for Corridors A, B, and C .....	6-2
Table 6-2	Intersections and Turning Movements for Corridors D and E.....	6-5
Table 6-3	Evaluation of Purpose and Need .....	6-6
Table 6-4	Evaluation of Natural Environmental Factors.....	6-9
Table 6-5	Evaluation of Social and Economic Environmental Factors.....	6-11
Table 6-6	Evaluation of Cultural Resources Factors .....	6-11
Table 6-7	Evaluation of Physical Resources Environmental Factors.....	6-14
Table 6-8	Evaluation of Engineering Issues .....	6-14
Table 6-9	Evaluation of Costs .....	6-15

# List of Appendices

Appendix A	Methodology Memorandum
Appendix B	ETAT Comments on Draft ACER

# 1.0 Introduction

## 1.1 Purpose of Alternatives Corridor Evaluation Report (ACER)

FDOT District Seven is utilizing the ACE process as part of the US 301/US 98/Clinton Avenue Intersection Realignment Study. ACE is typically performed as part of the ETDM screening efforts that precede the PD&E phase and is used to identify, evaluate, and eliminate alternatives. Alternatives advancing to the PD&E phase should support the purpose and need for a project in accordance with all applicable laws and regulations, through the balancing of engineering, environmental, and economic aspects while considering comments received through the ETDM screening efforts.

The ACE process, as defined in the PD&E Manual, Part 1, Chapter 4 and ETDM Manual, meets the intent of the Code of Federal Regulations (CFR), Title 23, Part 450 (Planning Regulations) and 23 U.S. Code (USC) §168 (Integration of Planning and Environmental Review) of streamlining the planning and environmental review process. It is the intent to conduct the corridor study for the proposed US 301/US 98/Clinton Avenue Intersection Realignment so that planning decisions can be directly incorporated into the NEPA process. The goals of the ACE are to eliminate alternative corridors that do not meet the project's purpose and need or that have disproportionate and/or significant impacts and to recommend viable corridors to be carried forward into the PD&E study. The ACE process ensures that all alternatives are evaluated consistently.

The evaluation of the corridors are detailed in this *Alternative Corridor Evaluation Report* (ACER). This ACER and project documents, including the *Methodology Memorandum* (MM) and *Existing Conditions Report*, were made available to the public on the project website (<https://fdotd7studies.com/US301US98INT/>). A Public Information Meeting was held to seek comments and public opinion on the corridors and evaluation. The results in this ACER identify the reasonable alternative for National Environmental Policy Act (NEPA) analysis and will be evaluated in a Project Development and Environment (PD&E) study. Potential cooperating agencies have not yet been identified.

## 1.2 Project Background

### 1.2.1 ETDM Screening

The ETDM Planning Screen for ETDM #14374 (US 98 (SR 35/SR 700)/US 301/(SR 39)/Clinton Avenue (CR 52A) Intersection Realignment Study) was initiated on December 11, 2018 with the Preliminary Planning Screen Summary Report published on April 23, 2019. For the Planning Screen, a single study area (Alternative #1) that would likely encompass all alternative corridors to be developed was screened to help identify sensitive resources and other fatal flaws that should be avoided. Features identified during the ETDM screening as important considerations include, but are not limited to: low income residents, the Withlacoochee (multi-use) State Trail, historic resources, cemeteries, wetlands, water quality, floodplains, wildlife and habitat, contamination, and noise.

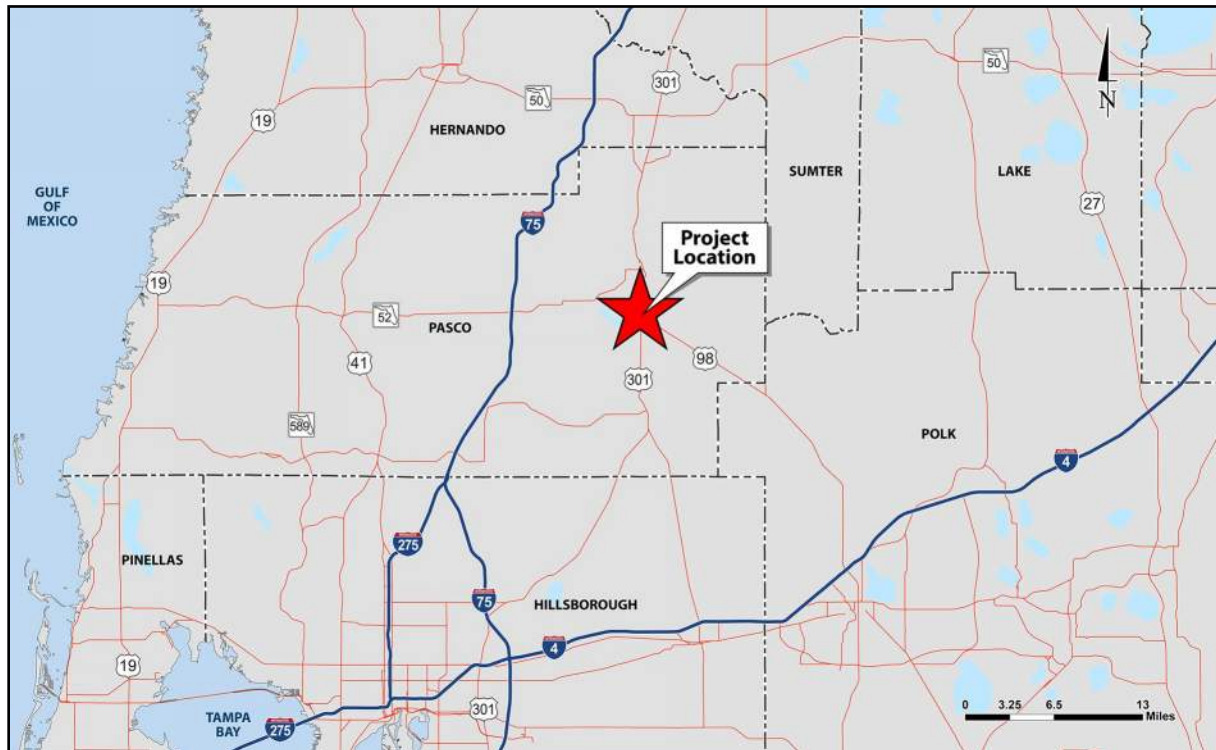
### 1.2.2 Project Status

FDOT District Seven initiated the ACE for the US 301/US 98/Clinton Avenue Intersection Realignment Study in Pasco County, Florida in April 2019. The realignment of the US 98 intersection is listed in both the Needs Plan and the Cost Feasible Plan of the Pasco County MPO's 2045 LRTP. The project is ranked #14 (Work Program Item (WPI) Segment #443368-1) on the Pasco County MPO's 2020 Transportation Improvement Program (TIP) Priority List: *Table 1: Combined Roadway Capacity, Intersection, ITS Projects, and Regional Trails*. The current State Transportation Improvement Plan (STIP) (December 2020) identifies \$1,500,000 in Fiscal Years (FY) <2020 and 2021 for the PD&E Study (WPI #443368-1 and 443368-2) and \$500,000 in FY 2021 for preliminary engineering (WPI #443368-3).

### 1.3 Project Description

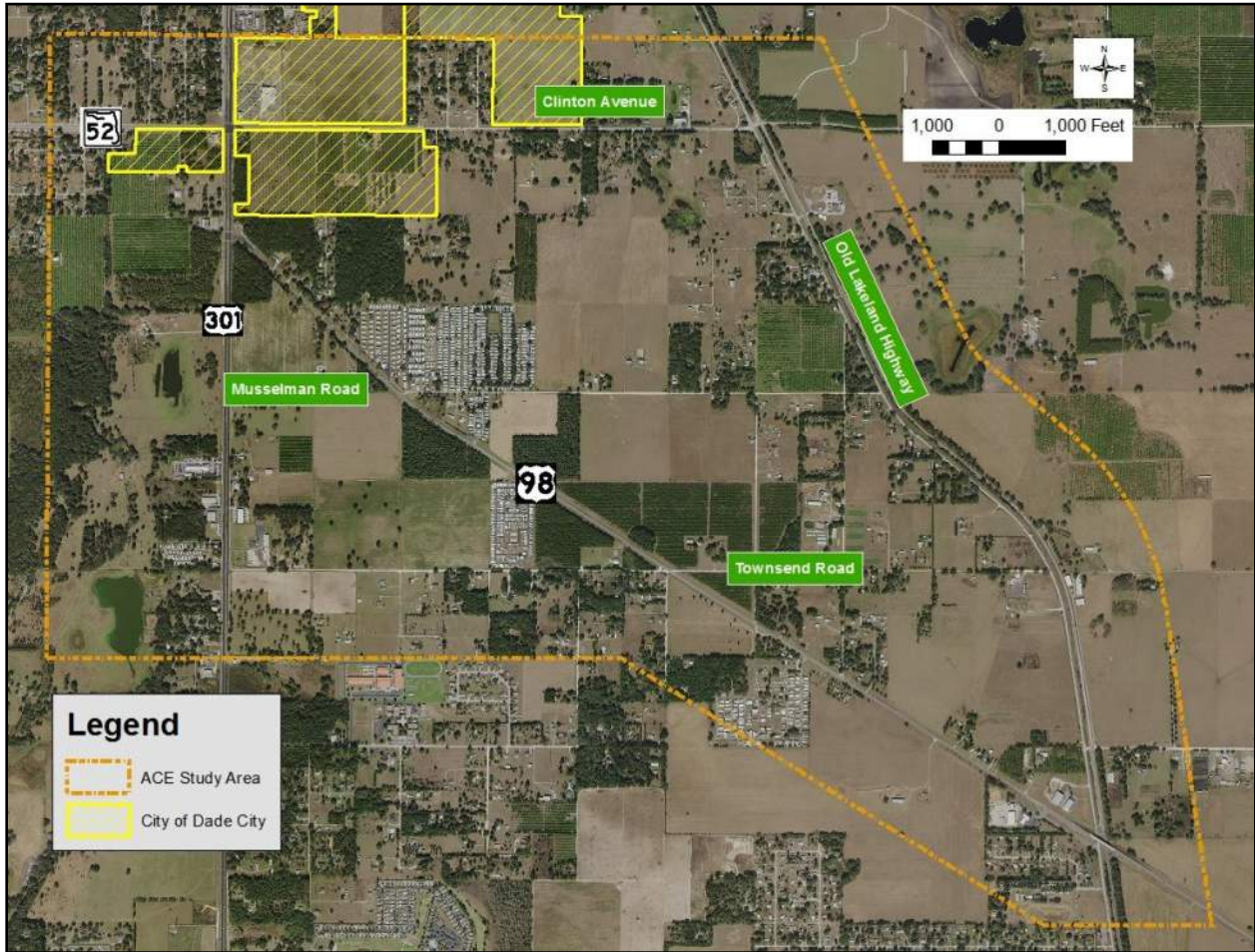
This project evaluates potential alternatives for the realignment of US 98 to Clinton Avenue to eliminate the closely spaced intersections of US 301 at US 98 and US 301/US 98 at Clinton Avenue. The ACE study area is 3,535 acres in size and is located in Sections 10-15 and 24; Township 25 South, Range 21 East; and Sections 7, 18, and 19, Township 25 South, Range 22 East in Pasco County, Florida. The majority of the study area is located in unincorporated Pasco County with a small area near US 301 and Clinton Avenue being in the City of Dade City. A project location map is shown in **Figure 1-1** and an aerial map of the study area in **Figure 1-2**.

**Figure 1-1  
Project Location Map**





**Figure 1-2**  
**ACE Study Area Map**



US 98 is a two-lane undivided facility owned and maintained by FDOT. It is functionally classified as an urban principal arterial between US 301 and Old Lakeland Highway. US 301 is currently a four-lane divided facility throughout the project limits owned and maintained by FDOT. It is functionally classified by FDOT as an urban principal arterial. West of US 301, Clinton Avenue is a four-lane divided roadway. East of US 301, Clinton Avenue is a two-lane undivided roadway owned and maintained by Pasco County. Clinton Avenue is classified as an urban major collector west of the Dade City limits (just west of Curtis Lane) and a rural major collector east of the Dade City limits. Old Lakeland Highway is a two-lane undivided roadway and is classified as a rural minor arterial north of Townsend Road and an urban minor arterial south of Townsend Road.

#### **1.4 Other Related Studies and Projects**

Two previous PD&E studies have been undertaken and one PD&E study is upcoming in the vicinity of the study area. The studies are summarized below and depicted on **Figure 1-3**.

#### **1.4.1 SR 52 PD&E Study**

FDOT District 7 conducted a PD&E study for the proposed realignment of SR 52 from east of McKendree Road to east of US 301, a distance of approximately 8.25 miles (WPI Segment #435142-1). The study recommended segments of new alignment of roadway and upon completion of construction, the SR 52 designation to follow the new alignment to Fort King Road, then along Clinton Avenue to US 301. The existing SR 52 will be designated a county road and will revert to Pasco County. The realignment is proposed as a new four-lane roadway south of the existing SR 52 that will serve as an additional east-west route in the regional transportation network. The new roadway will have pedestrian and bicycle facilities on both sides of the road. The State Environmental Impact Report (SEIR) was signed in August 2015.

Construction began in November 2019 on segments of this project.

#### **1.4.2 US 301 PD&E Study**

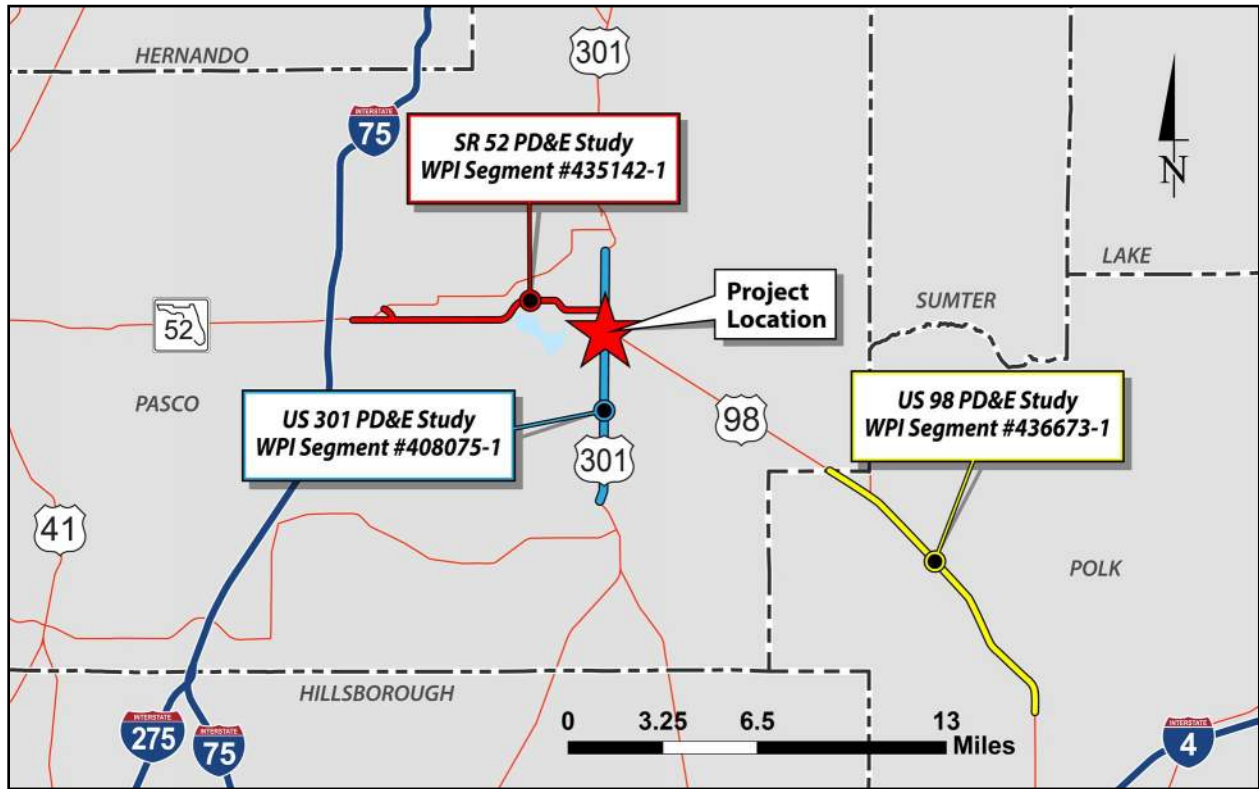
FDOT District 7 conducted a PD&E study to evaluate improvements to US 301 (SR 39) from south of CR 54 (Eiland Boulevard) to the US 98 Bypass (SR 533), a distance of approximately 7.6 miles (WPI Segment #408075-1). US 301 is a four-lane divided north-south arterial that connects the cities of Zephyrhills and Dade City. The US 301 roadway provides an important connection to the regional and statewide transportation network linking the Tampa Bay region to the remainder of the state and nation. The preferred build alternative included the widening of US 301 to a six-lane facility from south of CR 54 to north of Kossik Road (south of the ACE Study Area) and from south of US 98 to CR 52A (Clinton Avenue).

The six lane widening on US 301 from south of US 98 to CR 52A (Clinton Avenue) is not included in the 2045 LRTP.

#### **1.4.3 US 98 PD&E Study (North of West Socrum Loop Road to South of CR 54)**

FDOT District 1 will be conducting a PD&E study for US 98 from north of West Socrum Loop Road to south of CR 54 (WPI Segment #436673-1). The project will evaluate the potential widening of US 98 up to four lanes. The study should commence in the beginning of 2021.

**Figure 1-3  
Previous Studies Map**



## 2.0 Purpose and Need

### 2.1 Project Purpose

The purpose of this project is to provide alternatives that realign US 98 to Clinton Avenue to eliminate the current closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue; facilitate east/west travel; maximize the benefits of the improvements to Clinton Avenue and designation as SR 52 west of US 301; and enhance safety along the corridor.

### 2.2 Project Need

A realignment of US 98 to Clinton Avenue intersection is needed to eliminate the existing closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue, to reduce crashes, and to enhance safety. Construction of the realignment of SR 52 from east of McKendree Road to east of US 301 began in 2019 and when completed, SR 52 will serve as an additional east/west route in the regional transportation network. When completed, this improvement will increase traffic at the US 301 at US 98 and US 301 at Clinton Avenue intersections, exacerbating the current intersection safety concerns.

#### *Safety*

The closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue have crash rates that exceed the statewide average. Between 2013 and 2017, the intersection of US 301 at US 98 experienced a total of 68 crashes. The predominant crash types were angle crashes (57%) followed by rear end crashes (32%). This intersection exhibited a crash rate (0.968 crashes per million entering vehicles) that was consistently higher than the statewide average (0.394) for a similar type of intersection resulting in a crash ratio of 2.457 (crash rate divided by statewide average crash rate).

Between 2013 and 2017, the intersection of US 301 and Clinton Avenue experienced a total of 72 crashes. The predominant crash types were rear end crashes (50%) followed by angle crashes (33%). This intersection exhibited a crash rate (1.052) that was consistently higher than the statewide average (0.587) for a similar type of intersection resulting in a crash ratio of 1.792. A realignment of US 98 to Clinton Avenue to eliminate high traffic volumes at one of the two closely spaced intersections has the potential to reduce crashes and enhance safety.



## 3.0 Existing and Future Conditions

Existing and future conditions that impact the transportation system and network have been identified and are included in the *Existing Conditions Report* developed for this project and summarized below. These conditions influence and impact the development of corridor alternatives. An overview of the existing roadway conditions described in the following section of this report were derived from field observations, GIS data, construction and as-built plan sets, straight line diagrams, and aerial photography from within the US 301/US 98/Clinton Avenue Intersection Realignment Study in Pasco County, Florida. The *Existing Conditions Report* is included in the project file.

### 3.1 Description of Environmental Setting

#### 3.1.1 Social Environment

##### 3.1.1.1 Social

Community features within the project study area include: one religious center located near Old Lakeland Highway and Clinton Avenue (Enterprise Missionary Baptist) and two cemeteries located west of US 301 and Clinton Avenue (Chapel Hill Gardens Cemetery and Floral Memory Gardens Cemetery).

The demographic characteristics of the project study area are provided in **Table 3-1** along with the characteristics for Pasco County. When compared to Pasco County as a whole, the project study area contains a slightly higher percentage of White population, a higher percentage of individuals age 65 and over, a slightly lower percentage of individuals age 18 and under; a slightly lower percentage of households without a vehicle available; and a comparable median family income (\$2,995 less than Pasco County).

**Table 3-1  
Demographic Information**

Demographic	Project Study Area	Pasco County
White (Race)*	93.6%	88.2%
African-American (Race)*	3.5%	4.5%
“Other” ** (Race)*	2.9%	7.4%
Hispanic (Ethnic Group)*	9.6%	11.7%
Age 65+*	32.1%	20.7%
Under age 18*	16.2%	21.2%
Household without car*	4.2%	5.9%
Median Family Income*	\$55,756	\$58,751

\* Source: US Census Bureau (2016 ACS)

\*\* “Other” includes Asian, Native American, Native Hawaiian & Other Pacific Islander Alone, & Other Race.

### **3.1.1.2 Economic**

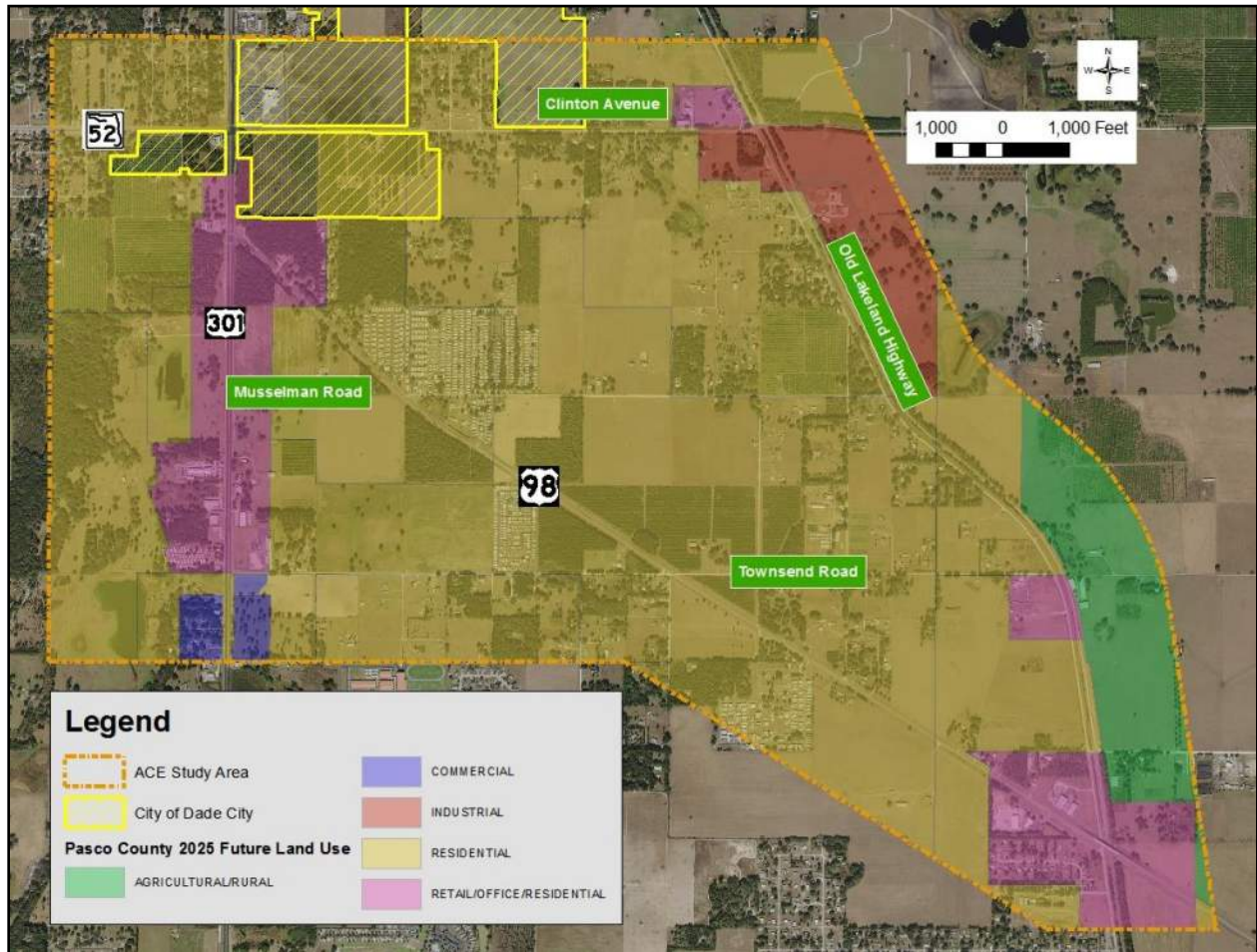
Economic related land uses within the project area include industrial and retail/office. Commercial uses are primarily situated along US 301, Clinton Avenue, and US 98. A Walmart store is planned on the southeast corner of US 301 and Clinton Avenue. There are two freight activity centers located just north and south of the project study area (One Pasco Center Industrial area in Dade City and the area around Zephyrhills Municipal Airport). Additionally, there is an active CSX rail line that runs along Old Lakeland Highway. The project study area is not located in a Rural Area of Opportunity and there are no Developments of Regional Impact (DRI).

### **3.1.1.3 Land Use**

The project study area is located within the Zephyrhills Urbanized area and two Census Designated Places (Dade City and Pasadena Hills) in Pasco County. The project study area consists primarily of agricultural and residential with some retail/office, public/semi-public, industrial, institutional, and recreation land uses. According to the Pasco County 2025 Adopted Future Land Use Unincorporated County-wide Map (revised September 2010), the project study area is primarily planned for residential with some retail/office/residential and a small amount of industrial and agricultural/rural land uses along the eastern limits (**Figure 3-1**). Additionally, within the project study area, there are two Planned Unit Developments (PUDs):

- Triple J (244.95 acres) is located along the southern portion of the project study area along SR 35/US 98.
- Hillside (22.83 acres) is located in the western portion of the project study area along US 301, south of Townsend Road.

**Figure 3-1  
Pasco County 2025 Future Land Use**



**3.1.1.4 Mobility**

The project study area is comprised of four major roadways: US 98, Clinton Avenue, US 301, and Old Lakeland Highway.

Both US 98 and US 301 are designated hurricane evacuation routes by the Florida Division of Emergency Management and Pasco County Emergency Management. The project study area is served by one Transportation Disadvantaged Service Provider (Pasco County Public Transportation (PCPT)). PCPT Route 30 operates on a 40-minute headway and travels along US 301 between downtown Zephyrhills and downtown Dade City and provides connections to Routes 31 and 54.

**3.1.1.5 Aesthetic Effects**

There are no designated scenic highways, viewsheds or other unique features within the project study area.

### **3.1.1.6 Relocation Potential**

The project study area consists primarily of agricultural and residential with some retail/office, public/semi-public, industrial, institutional, and recreation land uses. There are eight mobile home/RV parks within the study area: Blue Jay Mobile Home Park, Burgers Mobile Home Park, Country Aire Manor RV Park, Grove Ridge Estates RV Resort, Harmony Heights Communities LLC, Lake Gilbert RV Park, Lakeview in the Hills Mobile Home Park, and Southfork Mobile Home Community.

### **3.1.1.7 Farmlands**

The Natural Resource Conservation Service (NRCS) Soil Survey database indicates that there are no soils classified as Farmlands of Unique Importance within the study area.

## **3.1.2 Cultural Environment**

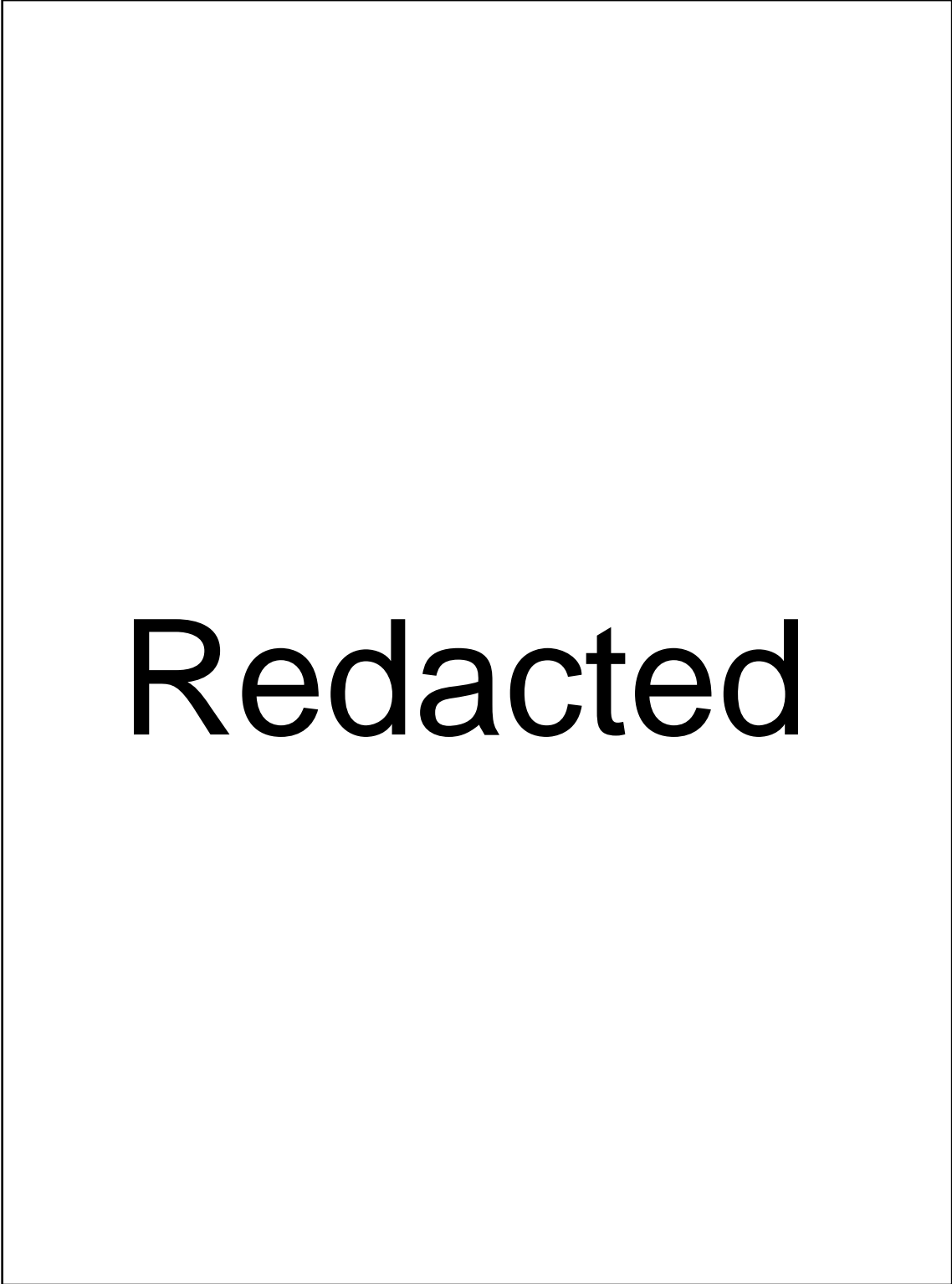
### **3.1.2.1 Archaeological**

One archaeological site is recorded within the study area. Site 8PA02799, a 20th Century homestead (**Figure 3-2**), was determined not eligible for listing in the National Register of Historic Places (NRHP) by the State Historic Preservation Officer (SHPO). In addition to this site, two other sites are located within one half-mile, but are not shown on **Figure 3-2**. These two sites include a historic fort (Ft. Broome, 8PA00024) and a lithic scatter site (8PA02103, Enterprise Lane). Both are located to the northeast of the study area; Ft. Broome has not been evaluated by the SHPO and the Enterprise Lane Site has been determined not eligible for listing in the NRHP.

### **3.1.2.2 Historic**

Nineteen (19) historic resources were previously recorded within the study area (**Figure 3-2**). These historic resources include nine Frame Vernacular style buildings; seven Masonry Vernacular style buildings; two linear resources; and one cemetery. Of these, eleven buildings and one linear resource were determined ineligible for listing in the NRHP by the SHPO. One resource had insufficient information for SHPO to make a determination of eligibility and six resources have not been evaluated by the SHPO. A 2019 review of the Pasco County Property Appraiser data and historic aerial photographs suggested the potential for 170 historic resources, 45 years of age or older (constructed in 1974 or earlier), located within the study area.

**Figure 3-2  
Cultural Resources Map**



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

Within the project study area, there is one potential Section 4(f) resource: the Withlacoochee State Trail (**Figure 3-2**). In 2016, the FDOT constructed a 4.5 mile multi-use trail segment extension at the southern edge of Dade City along US 301 that extends south to the City of Zephyrhills. This newly constructed multi-use trail is located on the west side of US 301 along the length of the project study area within the existing right of way.

### **3.1.2.4 Recreational**

Within the project study area, there is one recreational facility: the Withlacoochee State Trail. See its description in **Section 3.1.2.3** for additional information.

## **3.1.3 Natural Environment**

The project study area varies from rural to suburban in terms of land use and is dominated by large pastures and other agricultural land uses. Upland forested habitats are scattered throughout the study area. These forests have been fragmented by the roadway network as well as the agricultural activities of the area and only limited remnant forests remain. No significant riverine features occur within the study area, although roadside ditches, swales, and culverts occur throughout the study area. Very few wetlands and other surface waters occur within the study area. The topography of the area ranges from 100 feet to 240 feet (NAVD 88) across the study area (USGS 2018), resulting in a relatively rolling terrain. This topography results in the isolation of the wetlands and other surface waters within the study area. No conservation lands occur within the study area. The nearest conservation land is the Green Swamp, which is approximately one mile outside of the study area.

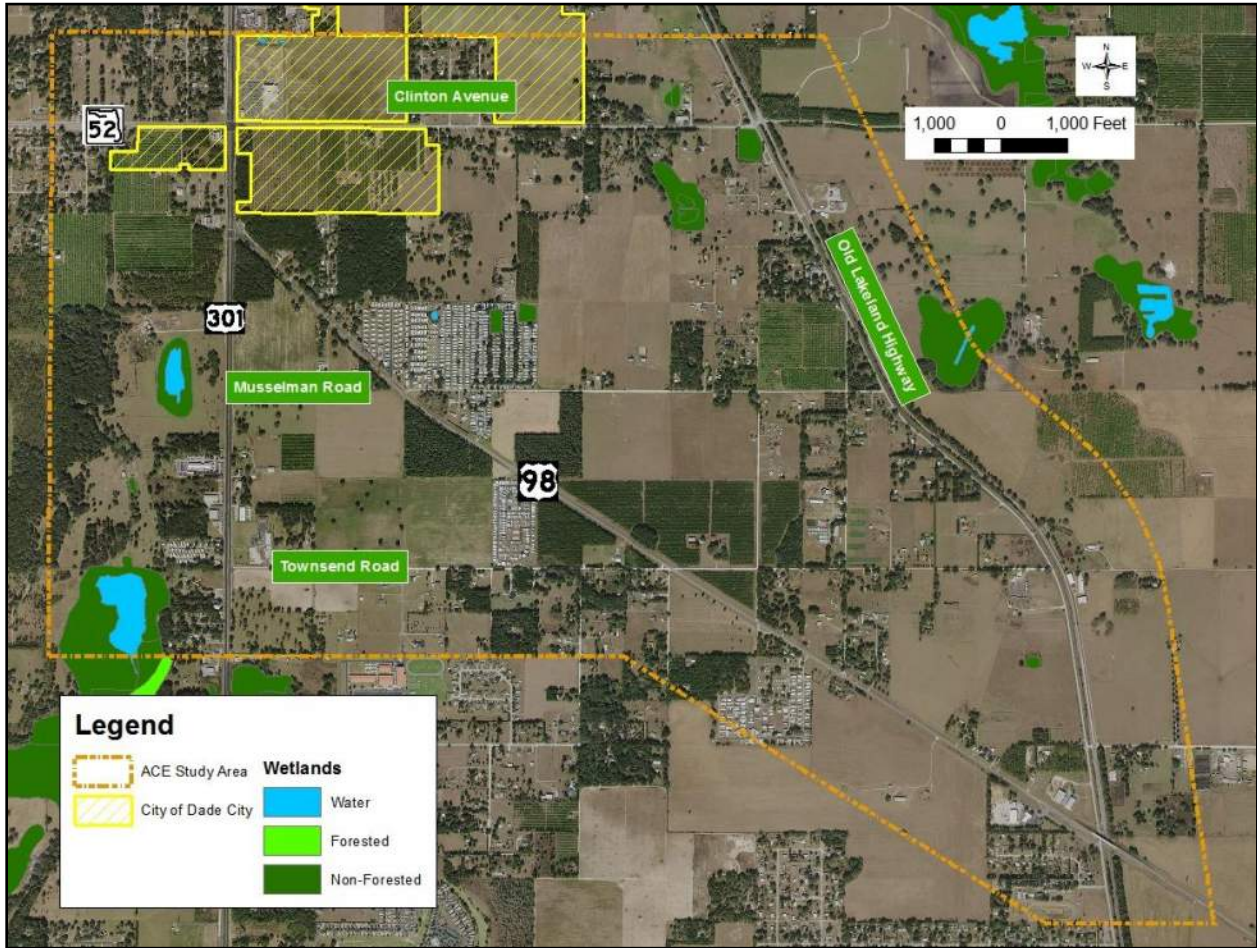
### **3.1.3.1 Wetlands**

Twelve wetlands and seven other surface waters occur within the study area, comprising a total of 71.15 acres, which is 2.2% of the study area. The largest of these systems is an approximately 23-acre wet prairie (Palustrine, Emergent, Persistent, Semipermanently Flooded (PEM1F)) occurring west of US 301. The other eighteen systems are all significantly smaller and scattered throughout the study area. The second largest system is the approximately 10-acre Gilbert Lake (Palustrine, Aquatic Bed, Floating Vascular, Permanently Flooded (PAB4H)) which is bordered on its western side by the previously mentioned 23-acre wet prairie. Of the remaining seventeen systems, only three (wet prairies) are larger than five acres and seven of the other fourteen are larger than one acre.

The wetland land use and cover types found within the project study area are shown in **Figure 3-3** and provided in **Table 3-2**.



**Figure 3-3  
Wetland Map**



**Table 3-2  
Wetland Land Use and Cover within the Project Study Area**

FLUCFCS Code	Description	Size (Acres)	Percent of Study Area
<b><u>Wetlands and Surface Waters</u></b>			
520	Lakes	9.94	0.3%
530	Reservoirs	6.60	0.2%
641	Freshwater Marshes	1.94	0.1%
643	Wet Prairies	44.81	1.3%
644	Emergent Aquatic Vegetation	1.40	0.1%
653	Intermittent Ponds	6.46	0.2%
<b><i>Wetlands and Surface Waters Subtotal</i></b>		<b>71.15</b>	<b>2.2%</b>
<b>TOTAL</b>		<b>3,535.66</b>	<b>100.0%</b>

### 3.1.3.2 Protected Species

A list of potentially occurring protected species was developed and each species was assigned a low, moderate, or high likelihood of occurrence within habitats found within the study area. The list was generated using information from the Florida Natural Areas Inventory (FNAI) and Florida Fish and Wildlife Conservation Commission (FWC), as well as information provided by Environmental Technical Advisory Team (ETAT) members in the ETDM Planning Screen Summary Report. No plants were included on the species list as no federally listed species occur within Pasco County and the Florida Department of Agriculture and Consumer Services (FDACS) stated in the ETDM Planning Screen Summary Report that there would be no involvement with state listed species. **Table 3-3** lists the federal and state protected wildlife species as well as each species' probability of occurrence within the study area.

**Table 3-3  
Protected Species Potentially Occurring within the Study Area**

Species	Listing Status		Probability of Occurrence
	USFWS	FWC	
<b>Reptiles</b>			
Eastern Indigo Snake ( <i>Drymarchon corais couperi</i> )	T	T	Moderate
Florida Pine Snake ( <i>Pituophis melanoleucus mugitis</i> )	NL	T	Moderate
Gopher Tortoise ( <i>Gopherus polyphemus</i> )	C	T	High
<b>Birds</b>			
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	BGEPA		Moderate
Eastern Black Rail ( <i>Laterallus jamaicensis jamaicensis</i> )	NL	T	Moderate
Florida Burrowing Owl ( <i>Athene cunicularia floridana</i> )	NL	T	Moderate
Florida Sandhill Crane ( <i>Antigone canadensis pratensis</i> )	NL	T	High
Florida Scrub-Jay ( <i>Aphelocoma coerulescens</i> )	T	T	None
Little Blue Heron ( <i>Egretta caerulea</i> )	NL	T	High
Southeastern American Kestrel ( <i>Falco sparverius paulus</i> )	NL	T	Moderate
Tricolored Heron ( <i>Egretta tricolor</i> )	NL	T	High
Wood Stork ( <i>Mycteria Americana</i> )	T	T	High
<b>Mammals</b>			
Florida Black Bear ( <i>Ursus americana floridana</i> )	NL	NL	Low

USFWS = U.S. Fish and Wildlife Service

FWC = Florida Fish and Wildlife Conservation Commission

BGEPA = Bald and Golden Eagle Protection Act

T = Threatened

NL = Not Listed

C = Candidate species

None – Project is outside the species' known range or no suitable habitat occurs within or adjacent to the project study area and there are no documented occurrences of the species within the study area.

Low – Species are known to occur in Pasco County or the study area occurs within the species' USFWS consultation area, but suitable habitat is limited within the study area.

Moderate – Species are known to occur in Pasco County and for which suitable habitat is present within the study area, but no observations or positive indications exist to verify the species' presence.

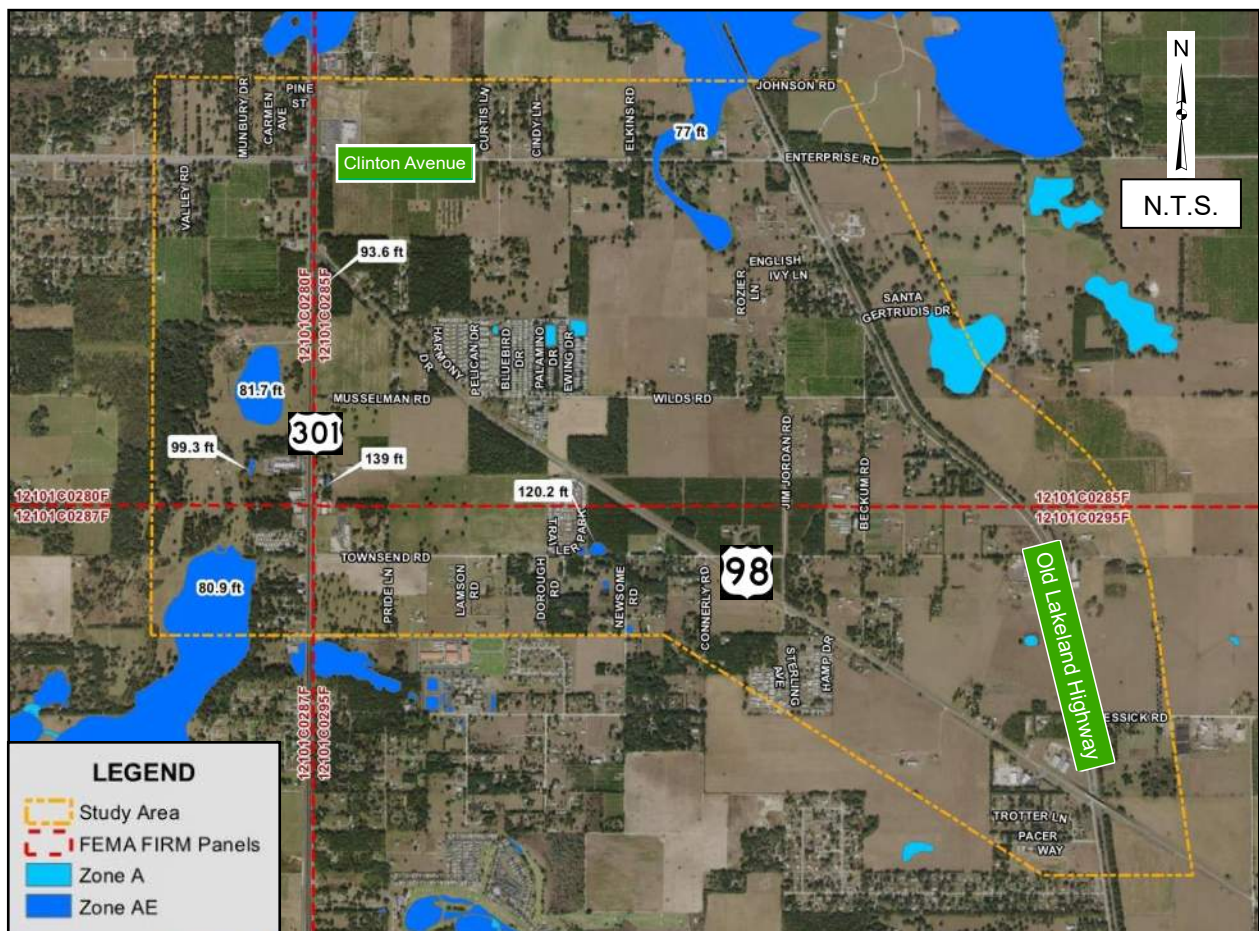
High – Project is within the species' range, suitable habitat exists within or adjacent to the project study area, there is a documented occurrence of the species within the study area, or the potential presence of the species is widely accepted.



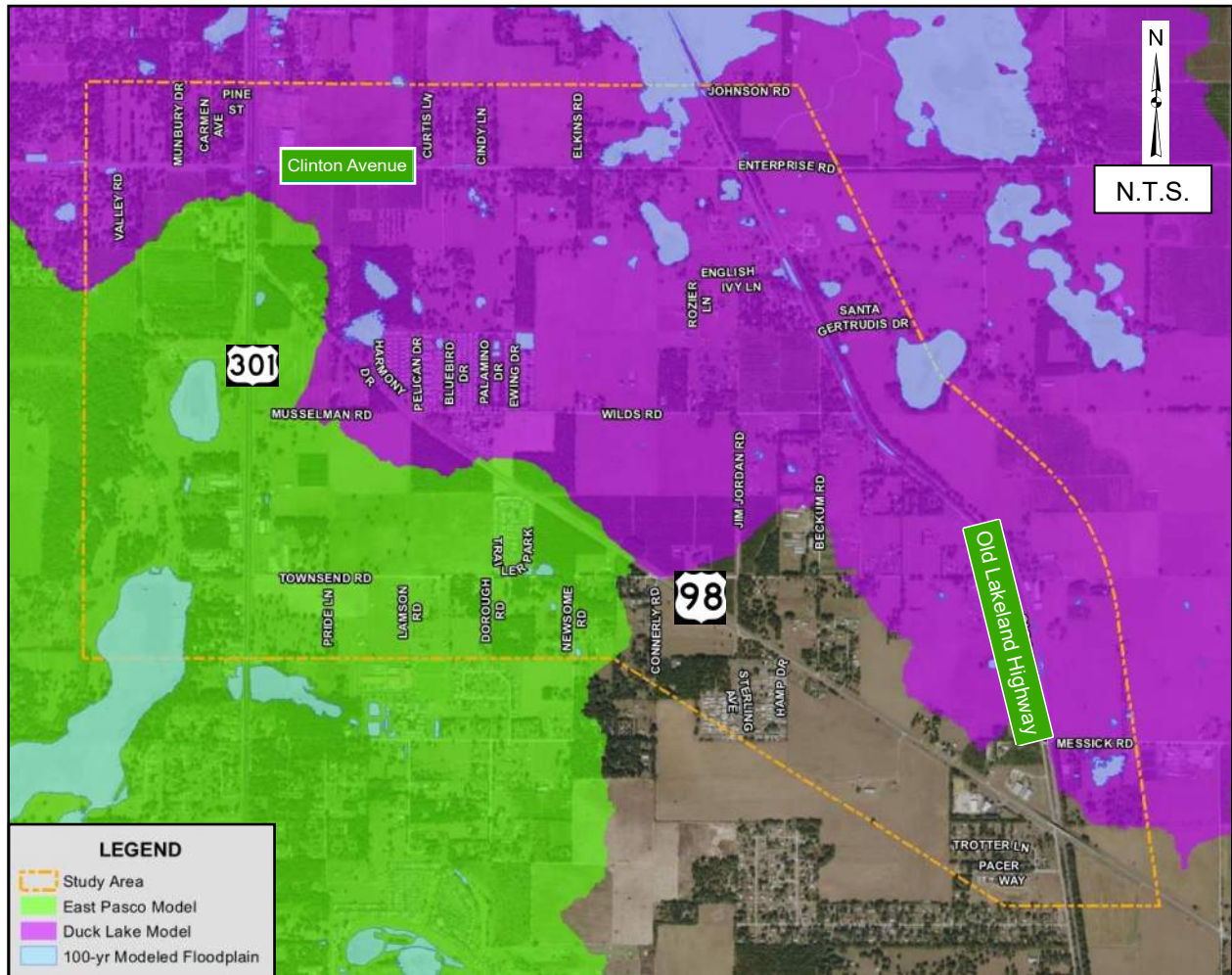
### 3.1.3.3 Floodplains

The study area is within FEMA FIRM Panels 12101C0280F, 12101C0285F, 12101C0287F, and 12101C0295F. All panels are effective September 26, 2014. Floodplains within the study area limits are shown in **Figure 3-4**. No FEMA Floodways are located within the study area limits. The East Pasco Watershed Model was completed in 2010 and was used to define specific Zone AE floodplains in the southwest area of the study area. The Duck Lake Watershed Model was completed in 2015 after the effective date of the FEMA FIRMs. Revised 100-year floodplains based on the watershed model are shown along with the limits of each watershed model in **Figure 3-5**.

**Figure 3-4  
FEMA Flood Zones**



**Figure 3-5  
Watershed Models**



**3.1.4 Water Quality**

There are three drainage basins within the study area: Withlacoochee River, Lake Pasadena Drain, and Clear Lake Outlet. To avoid and minimize water quality impacts to these systems from any roadway improvements, stormwater treatment systems and Best Management Practices (BMPs) would be required.

**3.1.5 Special Designations**

Special Designations include Aquatic Preserves, Outstanding Florida Waters, Wild and Scenic Rivers, and Class I and Class II waters. Based on review of the study area, there are no special designation sites.

**3.1.6 Physical Environment**

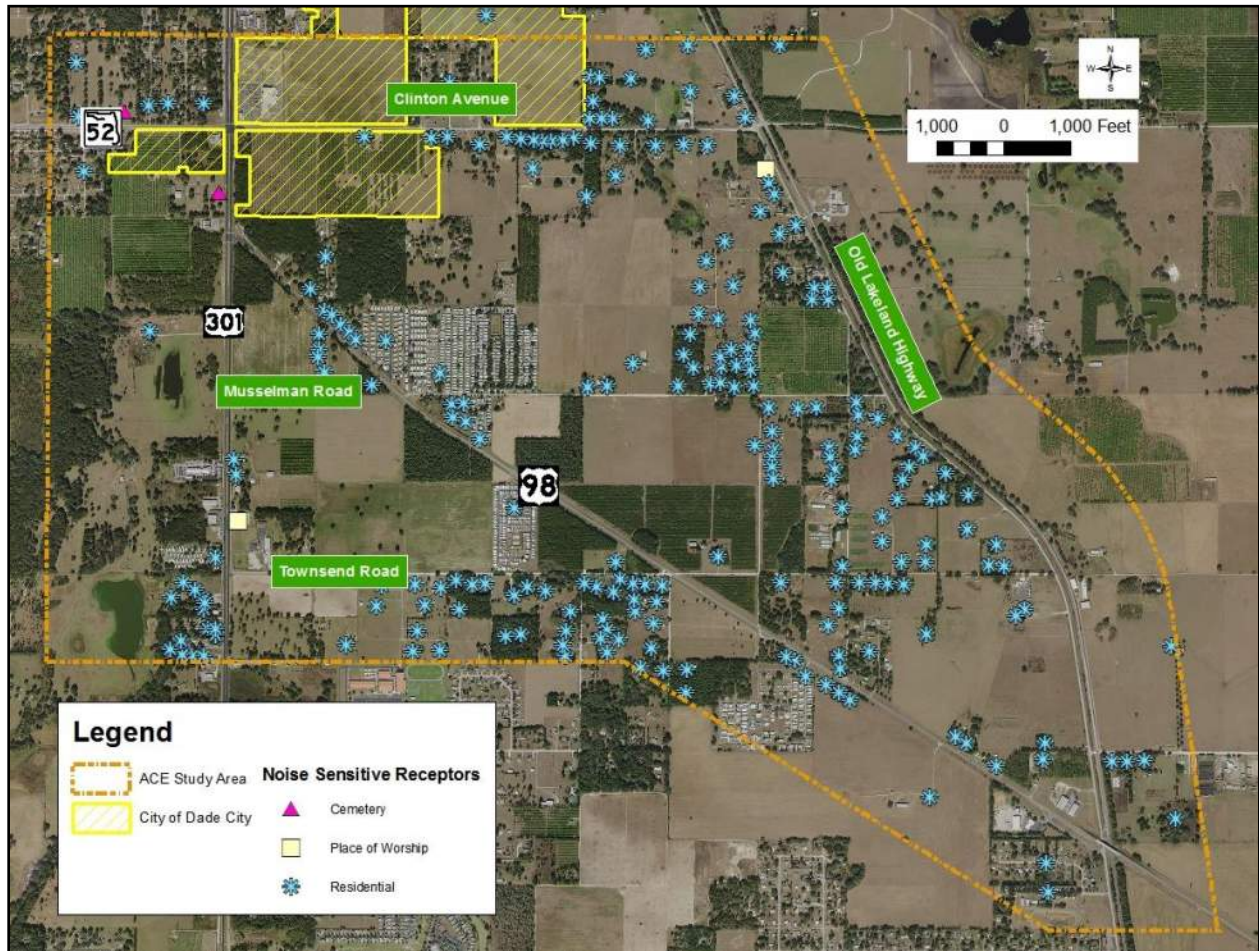
**3.1.6.1 Noise**

A total of four hundred forty (440) potential individual noise sensitive locations have been identified within the project study area. These individual locations within the project area can be organized into cemeteries, places of worship, manufactured home parks



(MHP), RV parks and single family residential homes. The potential noise sensitive receptors are shown in **Figure 3-6**.

**Figure 3-6**  
**Noise Sensitive Receptors**



**3.1.6.2 Air**

The project is located in an area that has been designated as attainment of all National Ambient Air Quality Standards established by the Clean Air Act of 1990 and subsequent amendments.

**3.1.6.3 Contamination**

Within the project study area, a total of thirty (30) contamination sites were identified and evaluated. The sites were categorized to differentiate between sites that do not appear to be a problem (No/Low) and those that have a higher potential for contamination involvement (Medium/High). All recorded and evaluated sites are shown in **Figure 3-7**.

**Figure 3-7  
Contamination Map**





### 3.2 Roadway Characteristics

The project study area is comprised of four major roadways: US 98, Clinton Avenue, US 301, and Old Lakeland Highway. **Table 3-4** provides an overview of the existing transportation system.

**Table 3-4  
Existing Roadway Characteristics**

Roadway Characteristic	US 98	Clinton Avenue	US 301	Old Lakeland Highway
Functional Classification	Rural Principal Arterial – Other (south of Old Lakeland Highway)  Urban Principal Arterial – Other (between US 301 and Old Lakeland Highway)	Urban Major Collector (west of Dade City limits)  Rural Major Collector (east of Dade City limits)	Urban Principal Arterial - Other	Rural Minor Arterial (north of Townsend Road)  Urban Minor Arterial (south of Townsend Road)
Number of Travel Lanes	2	2	4	2
Access Management Classification	3, restrictive	Not applicable (off state roadway system)	3, restrictive	Not applicable (off state roadway system)
Design Speed (Miles per Hour)	65 (Old Lakeland Highway to Jim Jordan Road) 60 (Jim Jordan Road to US 301)	50	55	60
Posted Speed (Miles per Hour)	60 (Old Lakeland Highway to Jim Jordan Road) 55 (Jim Jordan Road to US 301)	45	50	55

#### 3.2.1 Vertical and Horizontal Alignment

##### US 98:

Horizontal: Within the project limits, Old Lakeland Highway is primarily a straight roadway. The general direction of the roadway is from the southeast, at the intersection with Old Lakeland Highway, to the northwest at the intersection with US 301. There is an existing horizontal curve that begins just north of Townsend Road. The curve bends to the north and ends just north of Musselman Road. There is another horizontal curve prior to the intersection of US 98 and US 301. The roadway curves south to intersect US 301 at a 90 degree angle. The two horizontal curves are connected by a tangent section travelling from the southeast to the northwest direction.

Vertical: The topography of the study area is rolling terrain. Within the study area, US 98 follows the natural highs and lows of the rolling topography. There is a crest vertical curve with a high point at Tumbleweed Drive, approximately 0.25 miles south of Musselman Road.

### Clinton Avenue:

Horizontal: Within the project limits, there are no horizontal curves along Clinton Avenue.

Vertical: The topography of the study area is rolling terrain. Within the study area, Clinton Avenue follows the natural highs and lows of the rolling topography. Overall, Clinton Avenue gradually rises in elevation from the eastern limits of the study area to the western limits. There is a sag vertical curve with a low point at Bur Mac Road, approximately 0.33 miles west of the intersection of Clinton Avenue and Old Lakeland Highway. There is a crest vertical curve with a high point approximately 0.25 miles east of the intersection of Clinton Avenue and US 301.

### US 301:

Horizontal: Within the project limits, there are no horizontal curves along US 301.

Vertical: The intersection of US 301 and Clinton Avenue exists near the peak of a crest curve. The high point of the crest curve is approximately 0.10 miles south of the intersection. From this point south, US 301 experiences a steep decline in the profile as it approaches the signalized intersection with US 98.

### Old Lakeland Highway:

Horizontal: Old Lakeland Highway has a general roadway direction of southeast to northwest. There are two horizontal curves along Old Lakeland Highway within the project limits. The first horizontal curve starts approximately 800' south of Townsend Road and it curves to the west. The curve connects to a tangent section approximately 1,500' in length. The second horizontal curve begins just north of Cousin's Way and curves towards the north. Old Lakeland Highway returns to the southeast to northwest direction until it intersects Clinton Avenue.

Vertical: The vertical alignment of Old Lakeland Highway within the study area is relatively flat with little variance in elevation.

### **3.2.2 Pedestrian Accommodations**

There are no sidewalks, crosswalks, or multi-use paths along US 98 or Old Lakeland Highway within the study area.

There are no sidewalks, crosswalks, or multi-use paths along the 2-lane undivided portion of Clinton Avenue, between Old Lakeland Highway and east of US 301. There is an existing six foot wide sidewalk on the north side and an existing five foot wide sidewalk on the south side of Clinton Avenue at the approach to the intersection with US 301. The sidewalks continue along Clinton Avenue on the west side of US 301.

There is an existing five foot wide sidewalk along the east side of US 301, beginning at Clinton Avenue and ending at a bus stop approximately 350 feet to the south. The Withlacoochee State Trail runs along the west side of US 301 within the study area.

### **3.2.3 Bicycle Facilities**

There are no bicycle facilities along US 98 and Old Lakeland Highway within the study area.

There are no existing bicycle facilities along the 2-lane undivided portion of Clinton Avenue, between Old Lakeland Highway and east of US 301. Bicycle lanes begin approximately 1,200 feet east of the Clinton Avenue and US 301 intersection. These bicycle lanes tie into the existing bicycle lanes along Clinton Avenue, west of US 301.

There are existing five foot paved shoulders designated as bicycle lanes, on both the east and west sides of US 301, within the study area. The Withlacoochee State Trail runs along the west side of US 301 within the study limits.

### 3.2.4 Transit Facilities

There are no existing transit facilities along US 98, Clinton Avenue, or Old Lakeland Highway within the study area. There are four existing Pasco County Public Transportation (PCPT) bus stops along US 301 within the study area. This includes stop identification numbers 30121 and 30122 on the east side and stop identification numbers 30241 and 30242 on the west side of US 301.

### 3.2.5 Pavement Condition

According to the 2019 FDOT Pavement Condition Survey for Pasco County, US 98 and US 301 within the study limits are in good condition. Any rating less than 6.0 indicates that the pavement is deficient. **Table 3-5** identifies the existing pavement condition ratings for US 98 and US 301. Pavement conditions are not available for Clinton Avenue and Old Lakeland Highway.

**Table 3-5  
Pavement Condition Survey Results (2019)**

Location	Roadway ID	Direction	Beginning Mile Post	Ending Mile Post	Condition Category	Year 2019 Rating (0-10)
US 98: From Old Lakeland Highway to US 301	14070000	Eastbound and Westbound	5.17	8.18	Cracking	10.0
					Ride	7.7
					Rutting	8.0
US 301: From US 98 to Clinton Avenue	14050000	Northbound and Southbound	11.34	11.64	Cracking	10.0
					Ride	8.3
					Rutting	10.0

### 3.2.6 Railroad Crossings

Within the project study area, a CSX Transportation, Inc. railroad runs along the east side of Old Lakeland Highway. There are no at-grade railroad crossings along US 98, US 301, or Old Lakeland Highway. The railroad crosses underneath the US 98 bridge over Old Lakeland Highway. The railroad crosses on the east side of the intersection of Clinton Avenue and Old Lakeland Highway.

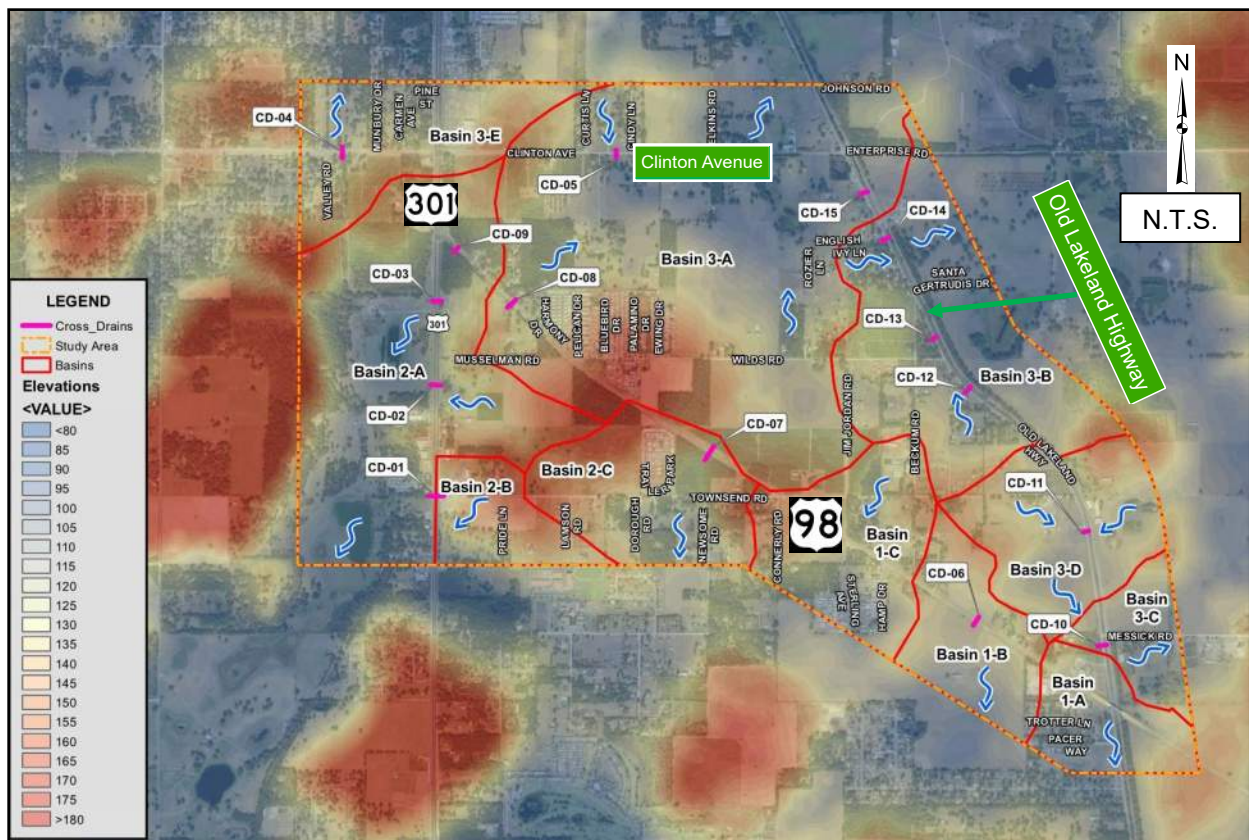
### 3.2.7 Drainage

The study area can be divided into three drain basins with 11 sub-basins, as shown in **Figure 3-8**. None of the associated WBIDs are impaired for nutrients at this time.

Basin One drains south towards the Withlacoochee River within WBID 1329F. Sub-Basin 1-A is the overall outfall for the basin and is not considered volume sensitive. Sub-Basin 1-B drains south into a low area south of the study limits before popping off to the east into Sub-Basin 1-A. Sub-Basin 1-C drains south to a low area in Hampton Court Subdivision before popping off to the east into Sub-Basin 1-B. Sub-Basin 1-C appears to include areas north of US 98 that drain south across US 98, but no cross drain could be found conveying this flow. Without a cross drain, the area north of US 98 could be considered a separate closed sub-basin. Sub-Basins 1-A and 1-C are considered volume sensitive.

Basin Two drains west towards the Lake Pasadena Drain in WBID 1424A, which discharges into the Hillsborough River. Sub-Basin 2-A includes the outfall for Basin Two draining south. Sub-Basin 2-B drains south outside the study area limits and then drains under US 98 into Sub-Basin 2-A. Sub-Basin 2-C includes a low area on the south side of Townsend Road that stages up and pops off to the south into Sub-Basin 2-B. Sub-Basin 2-C is considered volume sensitive.

**Figure 3-8  
Drainage Map**



Basin Three drains north towards the Clear Lake Outlet within WBID 1403B, which discharges into the Withlacoochee River. Sub-Basin 3-A drains to a low area on the south side of Clinton Avenue. In extreme events, Sub-Basin 3-A overtops Clinton Avenue and drains north towards Clear Lake Outlet. Sub-Basin 3-B drains east under Old Lakeland Highway through three cross drains and east towards Clear Lake Outlet. Sub-Basin 3-C drains to a low area



east of Old Lakeland Highway and south of Messick Road before popping off to the northeast towards the Clear Lake Outlet. Sub-Basin 3-D drains to a low area within a pasture on the west side of Old Lakeland Highway before popping off to the south into Sub-Basin 3-C. Sub-Basins 3-A, 3-C and 3-D are considered volume sensitive.

Fifteen cross drains exist within the study area, as shown in **Figure 3-8**, ranging from 18 inches to 36 inches in diameter.

### 3.2.8 Utilities

The following are the Utility Agency Owners (UAO's) that are located within the US 301/US 98/SR 35/Clinton Avenue Intersection Realignment Study Area (**Table 3-6**). A more detailed assessment of potential utility impacts will be provided during the PD&E study when alignment alternatives are developed within the study area and are provided to the UAO's for review.

**Table 3-6  
Existing Utility Agency Owners**

Utility Agency / Owner (UAO)	US 98	Clinton Avenue	US 301	Old Lakeland Highway
Charter Communications – fiber, cable	X	X	X	X
City of Dade City – water, sewer	X	X	X	
CenturyLink Winter Garden – fiber, telephone	X	X	X	X
MDU PRO – CATV	X			
Pasco County Traffic Operations Division – traffic control, streetlights	X	X	X	X
Pasco County Utilities – reclaimed water, water, sewer	X			X
Southfork Mobile Home Community – water, sewer	X			
Tampa Electric Company – electric	X	X	X	
TECO Peoples Gas (Lakeland) – gas	X	X		X
TECO Peoples Gas (Tampa) – gas	X	X	X	X
Withlacoochee River Electric Cooperative – electric	X			X

Notes of Interest:

1. Florida Gas Transmission DOES NOT exist within the study area.
2. Withlacoochee River Electric Cooperative (WREC) has 69 KV transmission structures along Clinton Avenue, across US 301 to Old Lakeland Highway. The transmission structures continue on the east side of Old Lakeland Highway and feed their Richland Substation located on Messick Road. WREC is in the process of extending the transmission from this intersection south to their new Crystal Springs substation, which is south of the Zephyrhills Airport.

### 3.2.9 Lighting

There is no existing lighting along within the project study area, except at the larger intersections, as detailed below:

- US 98 at US 301: The intersection is illuminated by four light poles with LED luminaires. The poles are located at each quadrant of the intersection.

- US 301 at Clinton Avenue: The intersection is illuminated by four light poles with LED luminaires. The poles are located at each quadrant of the intersection.
- US 98 at Old Lakeland Highway: The intersection is illuminated by two conventional light poles with LED luminaires, one on each side of the US 98 overpass.

### **3.2.10 Signs**

There is one overhead traffic sign within the project study area (Sign No. 14S200). It is a steel cantilever overhead sign on southbound US 301 that indicates the upcoming signalized intersection with US 98 on the left. It was last inspected in April 2018 and received a Health Index score of 97.11. There are conventional roadside signs along US 98, Clinton Avenue, US 301, and Old Lakeland Highway.

### **3.2.11 Bridges and Structures**

There is one existing bridge within the project study area. Bridge No. 140025 is located on US 98 at the southeastern limits of the study area and crosses over Old Lakeland Highway and the CSX Transportation, Inc. railroad. The bridge is an 8-span steel beam superstructure bridge with a concrete cast in place deck. The bridge is 362.9 feet in total length, has a deck width (edge to edge) of 43.0 feet, has a 40 degree skew angle, and has 19.7 feet vertical clearance below the bridge. It was reconstructed in 1995. The latest available bridge inspection report (February 2017) classified the bridge as being in good condition with a sufficiency rating of 88.3.

## **3.3 Traffic Characteristics**

### **3.3.1 Traffic Volumes and Operational Conditions**

Traffic counts were collected in April and May of 2019. The AM and PM corridor-wide peak hours were determined to occur from 7:30 AM to 8:30 AM and from 4:45 PM to 5:45 PM, respectively.

#### **3.3.1.1 Traffic**

Existing Year (2019) AADT and Directional Design Hour Volumes (DDHV) are provided in **Table 3-7**.

**Table 3-7  
Existing Year (2019) AADT and DDHV**

<b>Intersection</b>	<b>Leg</b>	<b>AADT</b>	<b>DDHV</b>
US 301 at Clinton Avenue	North	25,000	1,190
	South	24,000	1,170
	East	2,200	130
	West	16,000	870
US 301 at US 98	North	24,000	1,170
	South	23,000	1,180
	East	6,200	320
Clinton Avenue at Old Lakeland Highway	North	8,000	370
	South	8,900	430
	East	1,700	90
	West	2,100	130
US 98 at Old Lakeland Highway	North	8,400	390
	South	7,300	350
	East	6,100	290
	West	4,500	220

Segment level of service analysis was conducted at each of the legs of the study intersections for the existing year (2019) and are provided in **Table 3-8**. AADTs from the count data were compared to Level of Service D Annual Average Daily Volumes from FDOT’s 2012 Generalized Service Volume Tables for Urbanized Areas to identify segments approaches where volume exceeded the LOS D target. The urban service boundary divides the study area, but for consistency and to be conservative, urbanized area values were used for this comparison. There are currently no approach segments which fail this check.

**Table 3-8  
Existing Year (2019) Intersection Approach Analysis**

Intersection	Leg	AADT	LOS D Capacity	Volume Exceeds Capacity
US 301 at Clinton Avenue	North	25,000	41,790	No
	South	24,000	41,790	No
	East	2,200	15,930	No
	West	16,000	35,820	No
US 301 at US 98	North	24,000	41,790	No
	South	23,000	41,790	No
	East	6,200	18,585	No
Clinton Avenue at Old Lakeland Highway	North	8,000	24,200	No
	South	8,900	24,200	No
	East	1,700	15,930	No
	West	2,100	15,930	No
US 98 at Old Lakeland Highway	North	8,400	24,200	No
	South	7,300	24,200	No
	East	6,100	24,200	No
	West	4,500	24,200	No

**3.3.1.2 Truck Factors**

The daily truck ( $T_{24}$ ) factor is the percentage of medium and heavy truck traffic in a 24-hour period. Location specific  $T_{24}$  factors were used for any analysis in the study area. **Table 3-9** shows the location specific  $T_{24}$  factor values observed within the study area.

**Table 3-9  
Field Measured  $T_{24}$  Factors**

Location	Number of Heavy Vehicles	Total Number of Vehicles	$T_{24}$ Factor
US 301 north of Clinton Avenue	1,416	24,724	5.7%
Clinton Avenue west of US 301	1,257	15,994	7.9%
Old Lakeland Highway north of Clinton Avenue	1,615	7,961	20.3%
US 301 south of US 98	1,571	22,745	6.9%
Old Lakeland Highway south of US 98	1,633	7,322	22.3%
US 98 east of Old Lakeland Highway	1,435	6,126	23.4%

**3.3.1.3 Pedestrians and Bicycles**

Pedestrian and bicycle count data for the study intersection were recorded concurrently with the 2-hour AM (7:00 to 9:00) and PM (4:15 to 6:15) turning movement count data during May 2019. **Table 3-10** summarizes the pedestrian and bicycle crossing movements at each of the

study intersections during the AM and PM peak periods. These counts reveal very low numbers of bicyclists or pedestrians at the study area intersections.

**Table 3-10  
Existing (2019) Pedestrian and Bicycle Movements**

Intersection	Leg	AM Peak Period		PM Peak Period	
		Pedestrians	Bicyclists	Pedestrians	Bicyclists
US 301 at Clinton Avenue	North	0	0	0	1
	South	0	0	0	0
	East	0	1	0	3
	West	0	0	0	1
US 301 at US 98	North	0	0	0	0
	South	0	0	0	1
	East	1	1	2	3
Clinton Avenue at Old Lakeland Highway	North	0	0	0	0
	South	0	0	0	0
	East	0	0	0	0
	West	0	0	0	1
US 98 at Old Lakeland Highway	North	0	0	0	0
	South	0	0	0	0
	East	0	0	0	0
	West	0	0	0	0

### 3.3.2 Intersection Layout and Traffic Control

#### US 98 and US 301:

The intersection of US 98 and US 301 is a signalized T-intersection, although US 98 does not intersect US 301 at a clear 90 degree angle. US 98 has a sharp horizontal curve that intersects US 301. From the east, US 98 provides a left turn lane and a right turn lane. From the north, US 301 provides two through lanes and a left turn lane. From the south, US 301 provides two through lanes and a right turn lane.

#### Clinton Avenue and US 301:

The intersection of Clinton Avenue and US 301 is a conventional, four legged signalized intersection with all legs approaching at 90 degree angles. From the east, Clinton Avenue has two through lanes and a left turn lane. From the north, US 301 has two through lanes, a right turn lane, and a left turn lane. The lane geometry is identical on the south leg of the intersection. From the west, Clinton Avenue has two through lanes, two left turn lanes, and a right turn lane.

#### Old Lakeland Highway and Clinton Avenue:

The intersection of Old Lakeland Highway and Clinton Avenue is a conventional four legged intersection. Old Lakeland Highway is a two lane roadway with a free flow condition at the intersection with Clinton Avenue. Vehicles travelling in either the northbound or

southbound direction have the ability to make a left, right, or continue through the intersection from the single travel lane. The eastbound and westbound legs along Clinton Avenue are stop controlled at the intersection with Old Lakeland Highway. From the west, Clinton Avenue provides a through left turn lane and a right turn lane. From the east, Clinton Avenue provides a single lane with the ability to make a left, right, or through movement.

#### Old Lakeland Highway and US 98:

The intersection of US 98 and Old Lakeland Highway is unlike the previous three intersections as it is not an at-grade intersection. US 98 includes a bridge that passes over Old Lakeland Highway as well as the adjacent CSX Transportation, Inc. railroad. Connectivity between US 98 and Old Lakeland Highway is provided via an access road which connects to the south side of US 98 approximately 800' west of the crossing of Old Lakeland Highway, runs parallel to US 98, and connects to the west side of Old Lakeland Highway immediately south of US 98. From the west along US 98, vehicles can exit using the right turn lane onto the access road and turn left or right onto Old Lakeland Highway at a stop condition. From the east along US 98, vehicles can exit onto the access road using the left turn lane and turn right or left onto Old Lakeland Highway at a stop condition. Along Old Lakeland Highway, northbound vehicles can make a left, and southbound make a right, onto the access road, and can then turn left or right onto US 98 under a stop condition.

### **3.4 Crash Data**

Crash data was obtained for the study area from the FDOT Crash Analysis Reporting System (CARS) database (for crashes on FDOT owned roads) and Signal Four Analytics (for crashes on non-state owned roads) for the years 2013-2017.

#### **3.4.1 Crash Data and Safety Analysis**

A total of 217 crashes were reported for the study area over the five-year period, with an average of 43 crashes per year. **Table 3-11** summarizes the crash rate for each location for the five-year analysis period. The intersections of US 98 at Old Lakeland Highway, US 301 at US 98, and US 301 at Clinton Avenue have a crash rate that is significantly higher than the statewide average, indicating safety concerns at these locations.

**Table 3-11  
Crash Ratios (2013 to 2017)**

Location	Total Crashes	Crash Rate <sup>1</sup>	Statewide Average <sup>2</sup>	Crash Ratio	High Crash Confidence <sup>3</sup>
<b>Intersection</b>					
US 98 at Old Lakeland Highway	20	1.218	0.381	3.197	99.99%
US 301 at US 98	68	0.968	0.394	2.457	99.99%
US 301 at Clinton Avenue	72	1.052	0.587	1.792	99.99%
Clinton Avenue at Old Lakeland Highway	5	0.338	0.562	0.601	50.00%
<b>Segment</b>					
US 301 from US 98 to Clinton Avenue	13	1.191	3.412	0.349	50.00%
US 98 from US 301 to Old Lakeland Highway	20	0.702	3.330	0.211	50.00%
Old Lakeland Highway from Clinton Avenue to US 98	17	0.608	3.330	0.183	50.00%
Clinton Avenue from US 301 to Old Lakeland Highway	2	0.417	3.330	0.125	50.00%

<sup>1</sup>Intersection crash rate = number of crashes per million entering vehicles and segment crash rate = number of crashes per million vehicle miles traveled

<sup>2</sup>Source: FDOT CARS Database

<sup>3</sup>High Crash Confidence is the FDOT recommended measure for identifying high crash locations per the FDOT CARS User Manual (Appendix H)

**Figure 3-9** shows the distribution of high crash locations in the study area from 2013 to 2017. The US 98 at 301, US 301 at Clinton Avenue, and US 98 at Old Lakeland Highway intersections have the highest density of crashes, with an additional concentration of crashes on US 301 between Clinton Avenue and US 98.



**Figure 3-9  
Crash Density Map**



**3.4.1.1 Crash Type**

Tables 3-12 and Table 3-13 detail the total number of crashes within the study area intersections and segments by crash type. The most frequent crash types at intersections were angle (48%) and rear end (38%) collisions. The most frequent crash types on segments were rear end (48%) and angle (17%) collisions. The most likely cause of these crash types are permitted left turns and congestion at the intersections. According to the Florida Pedestrian and Bicycle Strategic Safety Plan, the statewide average for bicycle and pedestrian related crashes is 4.8 percent. All study area intersections have a combined bicycle and pedestrian crash proportion lower than the statewide average.



**Table 3-12  
Crash Type for Intersections**

Crash Type	Clinton Avenue at Old Lakeland Highway		US 301 at Clinton Avenue		US 301 at US 98		US 98 at Old Lakeland Highway		Total	
	N	%	N	%	N	%	N	%	N	%
Angle	17	85%	24	33%	39	57%	0	0%	80	48%
Rear End	1	5%	36	50%	22	32%	3	60%	62	38%
Other	1	5%	4	6%	4	6%	0	0%	9	5%
Sideswipe	0	0%	6	8%	3	4%	0	0%	9	5%
Hit Fixed Object	1	5%	1	1%	0	0%	1	20%	3	2%
Pedestrian	0	0%	1	1%	0	0%	0	0%	1	1%
Head On	0	0%	0	0%	0	0%	1	20%	1	1%
<b>Total Crashes</b>	<b>20</b>	<b>100%</b>	<b>72</b>	<b>100%</b>	<b>68</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>165</b>	<b>100%</b>

Note: Due to rounding, percentage totals may not equal 100.

**Table 3-13  
Crash Type for Segments**

Crash Type	US 98 from US 301 to Old Lakeland Highway		US 301 from US 98 to Clinton Avenue		Clinton Avenue from US 301 to Old Lakeland Highway		Old Lakeland Highway from Clinton Avenue to US 98		Total	
	N	%	N	%	N	%	N	%	N	%
Rear End	9	45%	8	62%	0	0%	8	47%	25	48%
Angle	5	25%	1	8%	2	100%	1	6%	9	17%
Other	4	20%	2	15%	0	0%	2	12%	8	15%
Hit Fixed Object	1	5%	1	8%	0	0%	3	18%	5	10%
Sideswipe	1	5%	1	8%	0	0%	2	12%	4	8%
Head On	0	0%	0	0%	0	0%	1	6%	1	2%
Pedestrian	0	0%	0	0%	0	0%	0	0%	0	0%
<b>Total Crashes</b>	<b>20</b>	<b>100%</b>	<b>13</b>	<b>100%</b>	<b>2</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>52</b>	<b>100%</b>

Note: Due to rounding, percentage totals may not equal 100.

The most frequent lighting condition during crashes at both intersections and segments was daylight (75% and 83%, respectively). The most frequent contributing cause at both intersections and segments was careless/negligent driving (34% and 60%, respectively), with failure to yield right of way also contributing significantly to crashes at intersections (25%).

There was one fatal and 30 severe injury crashes reported in the study area. One pedestrian crash also occurred in the study area. Overall, the study area has higher

proportions of severe injury and minor injury crashes compared to the statewide average, and a smaller proportion of property damage only crashes. **Figure 3-10** shows the locations of crashes by severity and type.

**Figure 3-10**  
**Crash Type and Severity Map**



## 4.0 Alternatives Evaluation Methodology

A *Methodology Memorandum* (MM) (**Appendix A**) was prepared for this project and distributed to the ETAT for review and comment through the EST (Environmental Screening Tool). The MM was reviewed by the ETAT in September 2019. The following agencies reviewed the document and provided an acknowledgement of Understood (Final):

**Table 4-1  
ETAT Acknowledgement and Comments  
on the Methodology Memorandum**

ETAT Member	Acknowledgement	Comment
FDOT Office of Environmental Management	Understood (Final)	None
Florida Department of Agriculture and Consumer Services	Understood (Final)	None
Florida Department of Economic Opportunity	Understood (Final)	DEO staff initially reviewed this project in the Planning Screen in late 2018. A review of the Methodology Memorandum was also conducted, and DEO staff has no additional comments at this time.
Florida Department of Environmental Protection	Understood (Final)	None
Florida Department of State	Understood (Final)	We look forward to reviewing the CRAS for this project.
Florida Fish and Wildlife Conservation Commission	Understood (Final)	None
National Marine Fisheries Service	Understood (Final)	NMFS staff has reviewed the Draft Alternative Corridor Evaluation (ACE) Methodology Memorandum for the US 301/US 98/SR 35/SR 700/Clinton Avenue Intersection Realignment in Pasco County (Financial Management Number 443368-1-22-01; ETDM 14374). Although NMFS trust resources will not be affected by the proposed project, NMFS has no objection to the conceptual framework proposed for the ACE in the Memorandum.
Southwest Florida Water Management District	Understood (Final)	The Southwest Florida Water Management District (SWFWMD) has reviewed the Draft Alternative Corridor Evaluation (ACE) Methodology Memorandum (MM) and has no comments on the document. The SWFWMD looks forward to the opportunity to review the future Alternative Corridor Evaluation Report, which will identify the reasonable alternatives for the NEPA analysis.

**Table 4-1 (Continued)  
ETAT Acknowledgement and Comments  
on the Methodology Memorandum**

ETAT Member	Acknowledgement	Comment
U.S. Army Corps of Engineers	Understood (Final)	None
U.S. Environmental Protection Agency	Understood (Final)	<p><u>Social</u> In Table 3-3 Evaluation of Environmental Factors, category Socioeconomic Impact to Special Populations generally means disadvantaged group. There can be various identifications of disadvantaged group based on a respective agency's definition-such as elderly, individuals with disabilities, or individuals without cars, etc. Therefore, consider subcategories such as low-income, minority populations, tribal populations in the evaluation criteria under Socioeconomic Impact to Special Populations to specifically identify potential environmental justice populations. Also, provide a definition of Special Populations so that reviewers can understand the factors that establish the unit of measure for "Potential for disproportionate impact".</p> <p><u>Physical</u> In Table 3-3 Evaluation of Environmental Factors, category Potential Contamination Sites consider subcategories releases/identified presence of subsurface contamination and corrective action has taken place or not.</p>
U.S. Fish and Wildlife Service	Understood (Final)	<p>Fish and Wildlife Habitat Degree of Effect: Minimal</p> <p>The Service has reviewed our Geographic Information System (GIS) database for recorded locations of federally threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources. Based on review of our GIS database, the Service notes that the following federal listed species may occur in or near the project area. (Additional species information was provided for the Florida scub-jay and the wood stork.)</p>

The approved methodology for the ACER is discussed in the following sections.

#### **4.1 Land Suitability Mapping**

LSM is the process used to identify areas of opportunity in which corridors can be developed. GIS data is used to identify the locations of various resources (e.g., historic and archaeological sites, recreational areas, and wetlands) found in the study area. By overlaying the GIS layers on a base map of the study area, the intensity of present resources is identified. The utilization of LSM identifies areas of suitability or areas of constraint to be avoided in the development of the evaluation corridors.

### 4.1.1 Input Data

Geospatial data was obtained from a variety of governmental agencies at the federal, state, and local levels. These data layers include locations of cultural relevance (e.g., cemeteries, historical districts), natural environment (e.g., eagle nests, conservation lands), physical environment (e.g., brownfields, landfills), and social relevance (e.g., developments of regional impact (DRI), existing trails, airports). Data sets from the Florida Geographical Data Library (FGDL), the Southwest Florida Water Management District (SWFWMD), the U.S. Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FWC), the Florida Natural Areas Inventory (FNAI), the National Park Service (NPS), the Federal Emergency Management Agency (FEMA), the U.S. Department of Agriculture’s (USDA), Natural Resource Conservation Service (NRCS), the Florida Department of Environmental Protection (FDEP), the National Wetland Inventory (NWI), and the Pasco County Government (PC) were used. In addition, field and literature reviews were performed to verify key project corridor constraints. **Table 4-2** summarizes the data obtained by type, source, and date. All data was downloaded during December 2019.

**Table 4-2  
LSM Data Layers**

Data Type	Data Description	Source	Year
Cultural	SHPO Cemeteries	FGDL	2019
	SHPO Resource Groups	FGDL	2019
	SHPO Structures	FGDL	2019
	Historical Districts	PC	2018
	Historical Railroads	PC	2018
	Historical Structures	PC	2018
Natural	Critical Wildlife Areas	FWC	2019
	Florida Shorebird Database	FWC	2019
	FWC Managed Lands	FWC	2019
	Red-Cockaded Woodpecker Observation Locations	FWC	2019
	Eagle Nests	FGDL	2016
	Flood Zones	FGDL	2018
	Mitigation Banks	FGDL	2019
	Outstanding Florida Waters	FGDL	2019
	Wildlife Observations	FGDL	2015
	Wood Stork Nesting Colonies	FGDL	2019
	Conservation Lands	FNAI	2019
	Wetlands	NWI	2019
Critical Habitat - Polygon	USFWS	2019	

**Table 4-2 (Continued)  
LSM Data Layers**

<b>Data Type</b>	<b>Data Description</b>	<b>Source</b>	<b>Year</b>
<b>Physical</b>	Hazardous Materials Generator Sites - Large Quantity	FDEP	2017
	Hazardous Materials Generator Sites - Small Quantity	FDEP	2019
	Brownfields (EPA/FDEP)	FGDL	2019
	EPA Air Emissions	FGDL	2019
	EPA Resource Conservation	FGDL	2019
	Petroleum Contamination Monitoring Sites	FGDL	2019
	Solid Waste Facilities	FGDL	2019
	Storage Tank Contamination Monitoring	FGDL	2019
	Superfund sites	FGDL	2019
	Landfills	PC	2018
<b>Social</b>	American Indian Lands	FGDL	2017
	Developments of Regional Impact (DRIs)	FGDL	2018
	Existing Trails	FGDL	2019
	Prime Farmland	FGDL	2018
	State Historical Preservation Officer (SHPO) Bridges	FGDL	2019
	State Parks	FGDL	2018
	Airports	PC	2015
	Cemeteries	PC	2018
	Churches	PC	2018
	Existing Land Use	PC	2018
	Fire Stations	PC	2018
	Future Land Use	PC	2018
	Hospitals	PC	2018
	Local Parks	PC	2018
Low and Moderate Income	PC	2014	
<b>Social</b>	Planned Unit Developments	PC	2018
	Police Stations	PC	2018
	Public Lands	PC	2018
	Schools	PC	2019

## 4.2 Corridor Analysis and Evaluation Criteria

The corridors were evaluated based on consideration of meeting the project purpose and need, avoidance and/or minimization of potential impacts to environmental resources, engineering feasibility, a narrative assessment of the corridors, and agency/public



input. The analysis and assessment for each of these factors are described below.

#### 4.2.1 Purpose and Need Evaluation

Each corridor was evaluated for how well it satisfies the project purpose and need. Each corridor was assessed for its ability to:

- Eliminate the closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue
- Improve the safety at the intersections of US 301 at US 98 and US 301 at Clinton Avenue

Each corridor was assigned a Yes if it satisfies the criterion, Moderate if it is a neutral benefit or does not completely resolve the issue, or No if it does not or unsatisfactorily satisfy the criterion.

Any corridor that does not satisfy the stated purpose and need criteria is eliminated. All remaining viable corridors will be evaluated using environmental, engineering, public and agency input, and cost considerations. **Table 4-3** provides the purpose and need screening criteria. The evaluation matrix tables in this section are shown to provide the evaluation criteria. They will be completed with the corridor data in **Section 6.0 Alternatives Evaluation**.

**Table 4-3  
Evaluation of Purpose and Need**

Corridor	Eliminate Closely Spaced Major Intersections	Improve Safety
A		
B		
C		
D		
E		

Notes: Yes = Highest Benefit, Moderate = Neutral Benefit, No = Unsatisfactory

#### 4.2.2 Environmental Evaluation

The potential effects on the environment were considered for each corridor. **Table 4-4** provides an evaluation matrix table that will be populated with data using the GIS layers identified in **Table 4-2** and the corridor shapes for the corridors to be developed. Quantifiable values for the social, cultural, natural, and physical environment will be shown in the evaluation matrix. Non-quantifiable factors will be given a likelihood of impact rating.

**Table 4-4  
Evaluation of Environmental Factors**

Category	Evaluation Criteria		Unit of Measure	Corridor A	Corridor B	Corridor C	Corridor D	Corridor E
Social	Potential Residential Displacements		Number					
	Potential Non-residential Displacements		Number					
	Community Facilities		Number					
	Neighborhoods		Number					
	Community Cohesion		Effects to residential connectivity and social interaction					
	Socioeconomic Impact	Low Income	Potential for disproportionate impact					
		Minority Populations	Potential for disproportionate impact					
Prime Farmlands		Acres						
Cultural	Historic Resources		Number					
	Archaeological Resources		Number					
	Potential Section 4(f) Resources		Number					
	Recreation Areas/Trails		Number					
Natural	Special Designations (OFW)		Acres					
	Water Quality (Verified impaired waters drainage basin)		Acres					
	100-year Floodplain		Acres					
	Non-Forested Wetlands		Acres					
	Forested Wetlands		Acres					
	Water Features		Acres					
	Listed Species Occurrence Potential		Degree					
Conservation/Managed Lands		Acres						
Physical	Potential Contamination Sites		Number					
	Potential Noise Sensitive Sites		Number					

### 4.2.3 Engineering Considerations

The engineering considerations used to screen corridors are listed in **Table 4-5**. Engineering factors include utility conflicts, involvement of infrastructure items such as bridges and railroad crossings, drainage basins involved, requirements for stormwater ponds, and acres of new

right of way required. Those corridors with greater engineering involvement are likely to have higher design and construction costs.

**Table 4-5  
Evaluation of Engineering Issues**

Evaluation Criteria	Unit of Measurement	Corridor A	Corridor B	Corridor C	Corridor D	Corridor E
Utility Conflicts	Number					
Bridge Involvement	Number					
Railroad Crossings	Number					
Drainage Basins	Number					
Stormwater Ponds	Acres					
Right of Way	Acres					

The estimated construction, wetland mitigation, and right of way costs will be listed in **Table 4-6** below. Construction costs for each corridor will be developed utilizing FDOT Long Range Estimates (LRE). Right of way costs will be estimated based upon general costs of land and buildings in the study area by land use type and unit right of way costs obtained from the FDOT Right of Way Office. Wetland mitigation costs will be based on in-basin mitigation bank credit costs.

**Table 4-6  
Evaluation of Costs**

Costs	Corridor A	Corridor B	Corridor C	Corridor D	Corridor E
Construction Costs					
Wetland Mitigation Costs					
Right of Way Costs					
<b>Total Cost</b>					

#### 4.2.4 Narrative of Assessment

Based on the corridor evaluations described above, a narrative discussion and assessment of each of the corridors was prepared in compliance with elements and issues contained in 23 USC §168(c). This narrative provides a discussion of the affected environment, advantages and limitations of each corridor, potential safety improvements, and highlight any specific factors that may result in an unreasonable corridor. Public and agency input (consideration of input received from the ETAT, project stakeholders and the general public) is summarized in the narrative.

#### 4.2.5 Public and Agency Considerations

Public, agency and ETAT members input received during the screening process was used to refine the purpose and need, corridor constraints and evaluation criteria in order to evaluate the corridors. A complete description of the opportunities for public input into the corridor evaluation process is discussed in **Section 7.0 Public Involvement and Agency Coordination**.

## 5.0 Initial Corridors and Alternatives

### 5.1 Design Controls

Within the project study area, there are four major roadways impacted by the realignment of US 98. The impacted roadways include US 98, Old Lakeland Highway, Clinton Avenue, and US 301. US 98 is classified as an urban principal arterial between US 301 and Old Lakeland Highway and a rural principal arterial south of Old Lakeland Highway. US 301 is classified as an urban principal arterial throughout the project limits. Clinton Avenue is classified as an urban major collector west of the Dade City limits (just west of Curtis Lane) and a rural major collector east of the Dade City limits. Old Lakeland Highway is classified as a rural minor arterial north of Townsend Road and an urban minor arterial south of Townsend Road.

FDOT developed a *Context Classification Memorandum* for the study area that is included in the project file. The majority of the study area is comprised of sparsely settled lands including agricultural land, grassland, woodland, and wetlands. Due to the existing nature of the study area, all four roadways maintain a context classification of C2 (Rural). A small portion of US 98, from Musselman Road to US 301 maintains a context classification of C3R (Suburban Residential). Initial corridor alternatives were developed assuming a future roadway context classification of C2.

Design criteria, adhering to the *Florida Department of Transportation Design Manual* (FDM) 2020, was developed in order to guide the development of corridor alternatives. The design speed of all four roadways varies within the project study area. In order to accommodate various corridor alternatives, a range of design speeds was used during the development of the Design Criteria. US 98 and US 301 maintain an Access Management Classification of 3 (Restrictive). The anticipated Access Management Classification for the divided roadway alternative corridors is Access Class 5 (Restrictive). The design criteria are summarized in **Table 5-1**.

**Table 5-1  
Design Criteria**

Design Element	Design Criteria	Source
<b>Typical Section</b>		
Design Speed	60 MPH 55 MPH 40 MPH	FDM Table 201.5.1
Travel Lane Widths	12 Ft - $\geq$ 50 MPH 11 Ft - 40 MPH 12 Ft - Turn Lanes	FDM Table 210.2.1
Bicycle Lane Widths	7 Ft Buffered (Desired) 4 Ft Minimum	FDM Section 223.2.1.1
Sidewalk Widths	5 Ft	FDM Table 222.1.1
Cross Slope	0.02 Minimum 0.04 Maximum (On Tangents) - $\leq$ 45 MPH 0.03 Maximum (On Tangents) - $>$ 45 MPH	FDM Figure 210.2.1
Shoulders	10 Ft (5 Ft Paved) - Outside 8 Ft - Inside	FDM Table 210.4.1
Shoulder Cross Slope	0.05 Inside 0.06 Outside	FDM Section 210.4.1
Clear Zone	36 Ft - 60 MPH 30 Ft - 55 MPH 18 Ft - 40 MPH	FDM Table 215.2.1
Minimum Lateral Offset Criteria	Outside Clear Zone	FDM Table 215.2.2
<b>Horizontal</b>		
Minimum Stopping Sight Distance	570 Ft - 60 MPH 495 Ft - 55 MPH 305 Ft - 40 MPH	FDM Table 210.11.1
Maximum Deflection Without Curve	0° 45' 00" - $\geq$ 45 MPH 2° 00' 00" - $\leq$ 40 MPH	FDM Section 210.8.1
Length of Horizontal Curve	900 Ft - 60 MPH 825 Ft - 55 MPH 600 Ft - 40 MPH	FDM Table 210.8.1
Maximum Degree of Curve / Minimum Radius	5° 15' / R=1092' - 60 MPH 6° 30' / R=882' - 55 MPH 13° 15' / R=433' - 40 MPH	FDM Table 210.9.1
Superelevation Transition	80% On Tangent (50% Minimum) 20% On Curve (50% Maximum) (Minimum L=50' for 5% $e_{max}$ ) (Minimum L=100' for 10% $e_{max}$ )	FDM Section 210.9.1 & FDM Table 210.9.3
Superelevation Transition Rate	1:225 - 55-60 MPH 1:175 - 25-40 MPH	FDM Table 210.9.3
Maximum Superelevation Rate	10%	FDM Table 210.9.1
Maximum Curvature without Superelevation (Minimum Radii)	11,709 Ft - 60 MPH 9,949 Ft - 55 MPH 5,560 Ft - 40 MPH	FDM Table 210.9.1

**Table 5-1 (Continued)  
Design Criteria**

<b>Design Element</b>	<b>Design Criteria</b>	<b>Source</b>
<b>Vertical</b>		
Minimum K value, Crest Vertical Curves	245 - 60 MPH 185 - 55 MPH 70 - 40 MPH	FDM Table 210.10.3
Minimum Lengths, Crest Vertical Curves	400 - 60 MPH 350 - 55 MPH 120 - 40 MPH	FDM Table 210.10.4
Minimum K value, Sag Vertical Curves	136 - 60 MPH 115 - 55 MPH 64 - 40 MPH	FDM Table 210.10.3
Minimum Lengths of Sag Vertical Curves	300 - 60 MPH 250 - 55 MPH 120 - 40 MPH	FDM Table 210.10.4
Vertical Clearance	17.5 Ft - Overhead Sign & New Signals 19.5 Ft - DMS Sign	FDM Section 210.10.3
	16.5 Ft - Roadway Over Arterial/Collector 23.5 Ft - Roadway Over Railroad	FDM Table 260.6.1
Maximum Profile Grade	3% - 60 MPH 4% - 55 MPH 7% - 40 MPH	FDM Table 210.10.1
Maximum change without Vertical Curve	0.4% - 60 MPH 0.5% - 55 MPH 0.8% - 40 MPH	FDM Table 210.10.2
Minimum Base Clearance	3 Ft	FDM Section 210.10.3

## 5.2 Description of Alternatives

The initial phase of the corridor development was the LSM analysis. Each GIS layer identified in **Table 4-2** was analyzed to determine if there were any features in the study area. If not, that layer was removed from further analysis. A total of 15 GIS layers included features within the study area. The final list of layers included in the LSM analysis is provided in **Table 5-2**.



**Table 5-2  
GIS Data Layers Utilized in LSM Analysis**

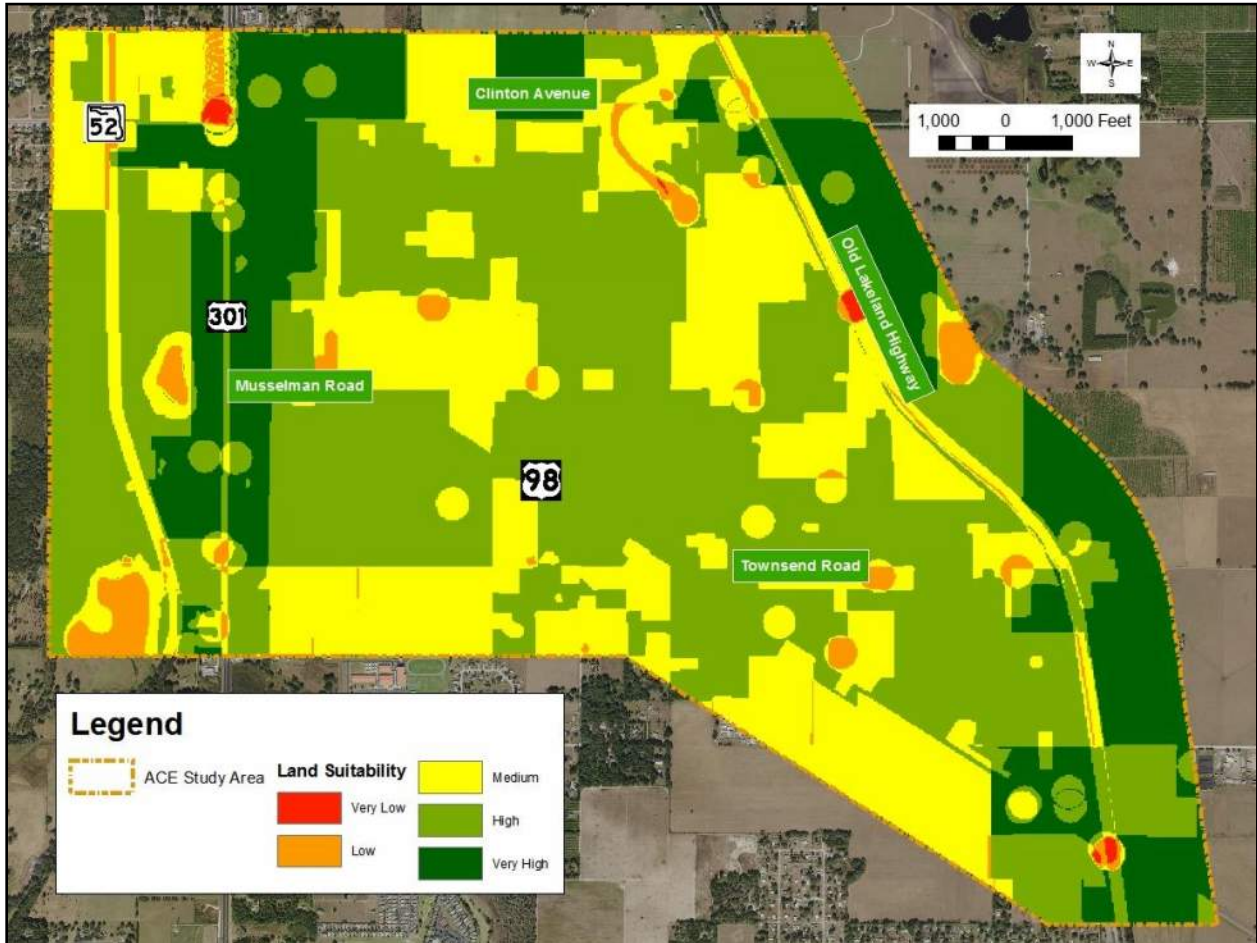
<b>Data Type</b>	<b>Data Description</b>	<b>Source</b>	<b>Year</b>
<b>Cultural</b>	SHPO Resource Groups	Florida Geographic Data Library	2019
	SHPO Structures	Florida Geographic Data Library	2019
	Historical Railroads	Pasco County	2018
<b>Natural</b>	Flood Zones	Florida Geographic Data Library	2018
	Wetlands	National Wetlands Inventory	2019
<b>Physical</b>	EPA Air Emissions	Florida Geographic Data Library	2019
	EPA Resource Conservation	Florida Geographic Data Library	2019
	Petroleum Contamination Monitoring Sites	Florida Geographic Data Library	2019
	Storage Tank Contamination Monitoring	Florida Geographic Data Library	2019
<b>Social</b>	Cemeteries	Pasco County	2018
	Churches	Pasco County	2018
	Existing Land Use	Pasco County	2018
	Future Land Use	Pasco County	2018
	Low and Moderate Income	Pasco County	2014
	Planned Unit Developments	Pasco County	2018

A land suitability map was developed based on the analysis of the GIS layers and is provided in **Figure 5-1**.

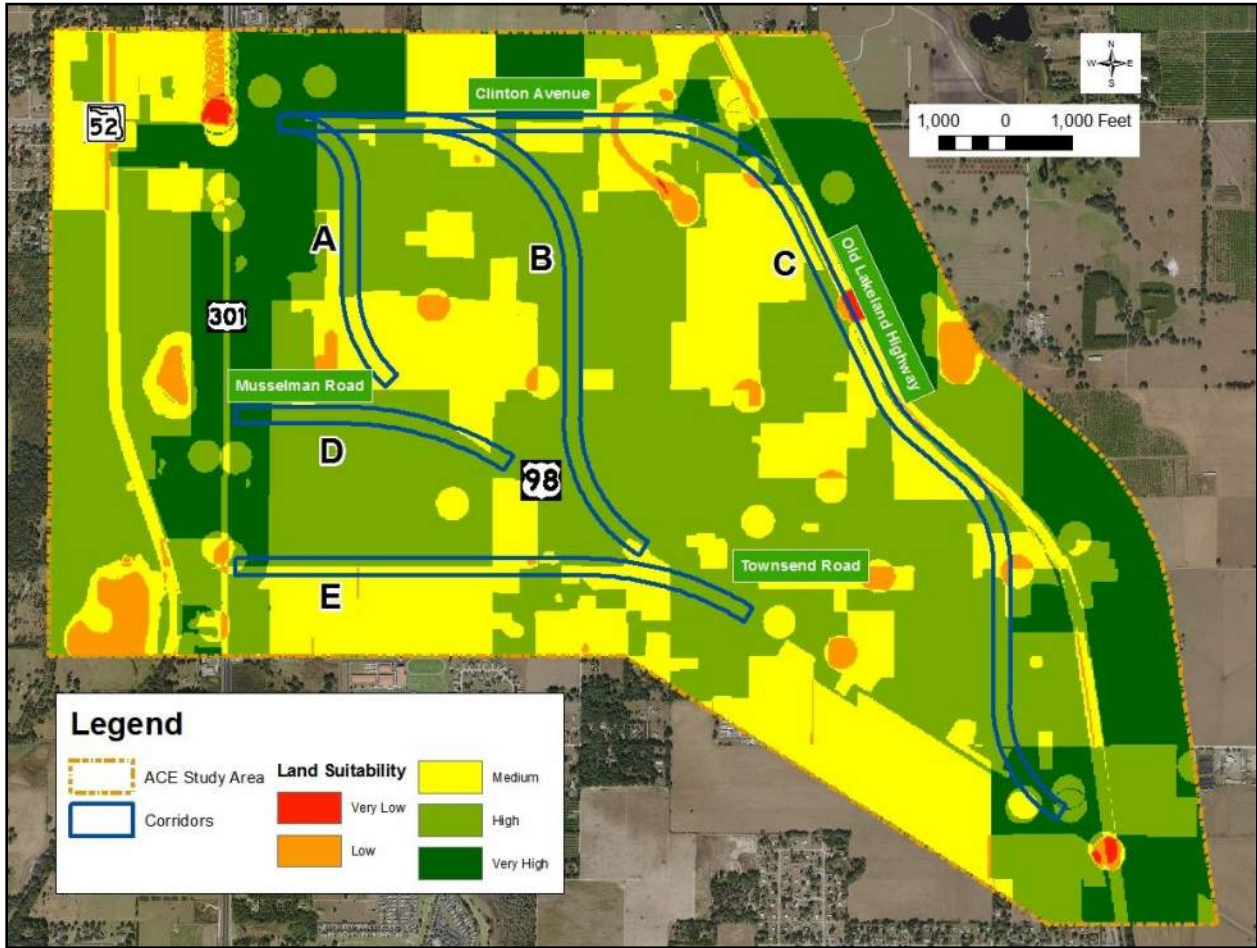
Using the design criteria and results of the LSM analysis, five corridors with a width of 250 feet were developed. It is anticipated that 4-6 lane divided typical sections will be developed for corridor consistency. The developed corridors will tie into the 4-lane Clinton Avenue extension west of US 301 (to be designated as SR 52) or to an intersection with US 301. Potential typical sections could include a high speed urban typical section requiring 148 feet of right of way and a rural typical section requiring 192 feet of right of way. The 250-foot corridor width allows for flexibility in developing proposed alignments that avoid potential constraints. If necessary, the corridor width also allows for multimodal accommodations including sidewalks, bike lanes, a recreational trail, and transit. The typical sections and the corridor alignments will be further refined during the PD&E study phase.

The five developed corridors overlain on the land suitability map are provided in **Figure 5-2**. The five developed corridors shown on an aerial background are shown in **Figure 5-3**.

Figure 5-1  
Land Suitability Map

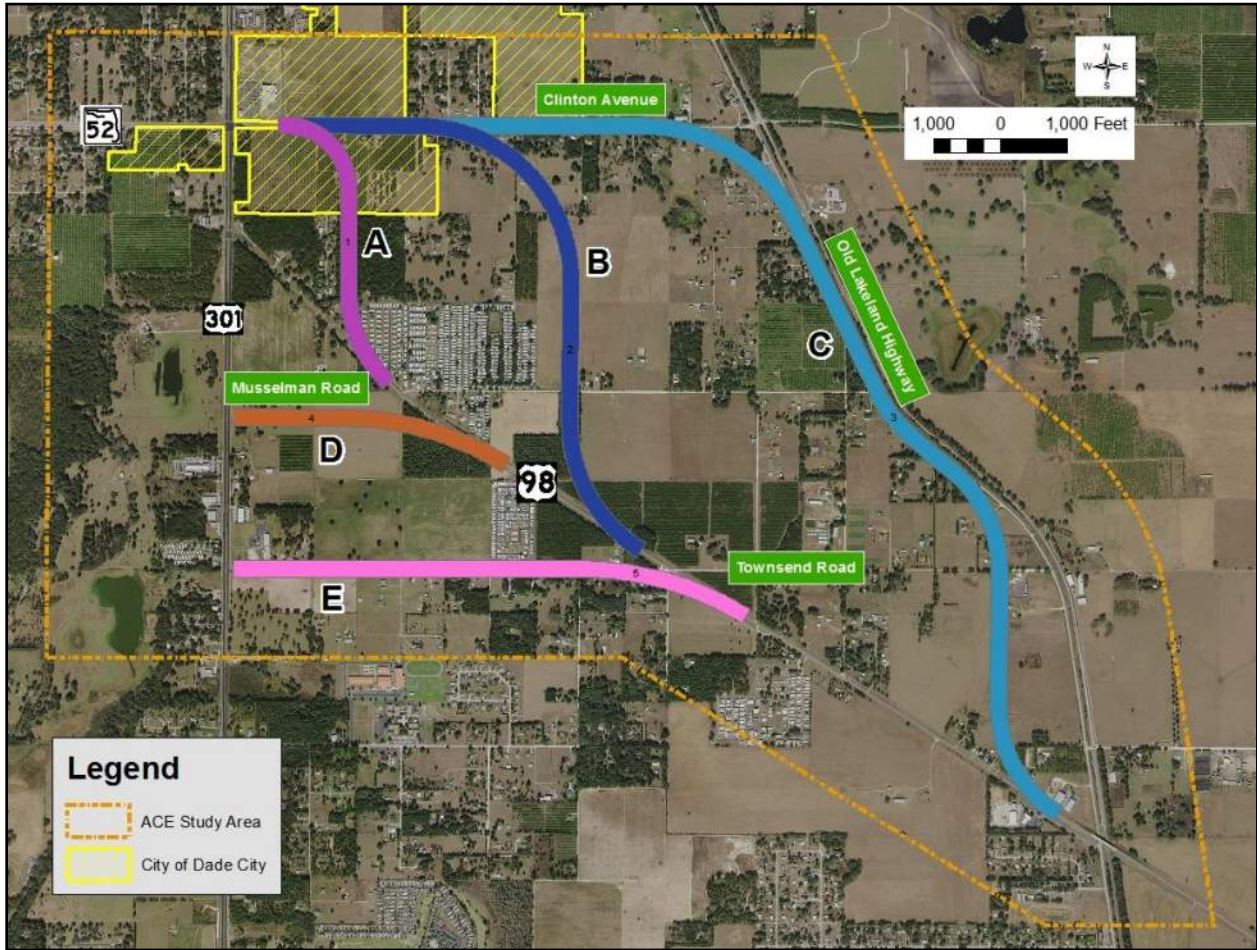


**Figure 5-2  
LSM Corridor Overlay Map**





**Figure 5-3**  
**Alternative Corridors**



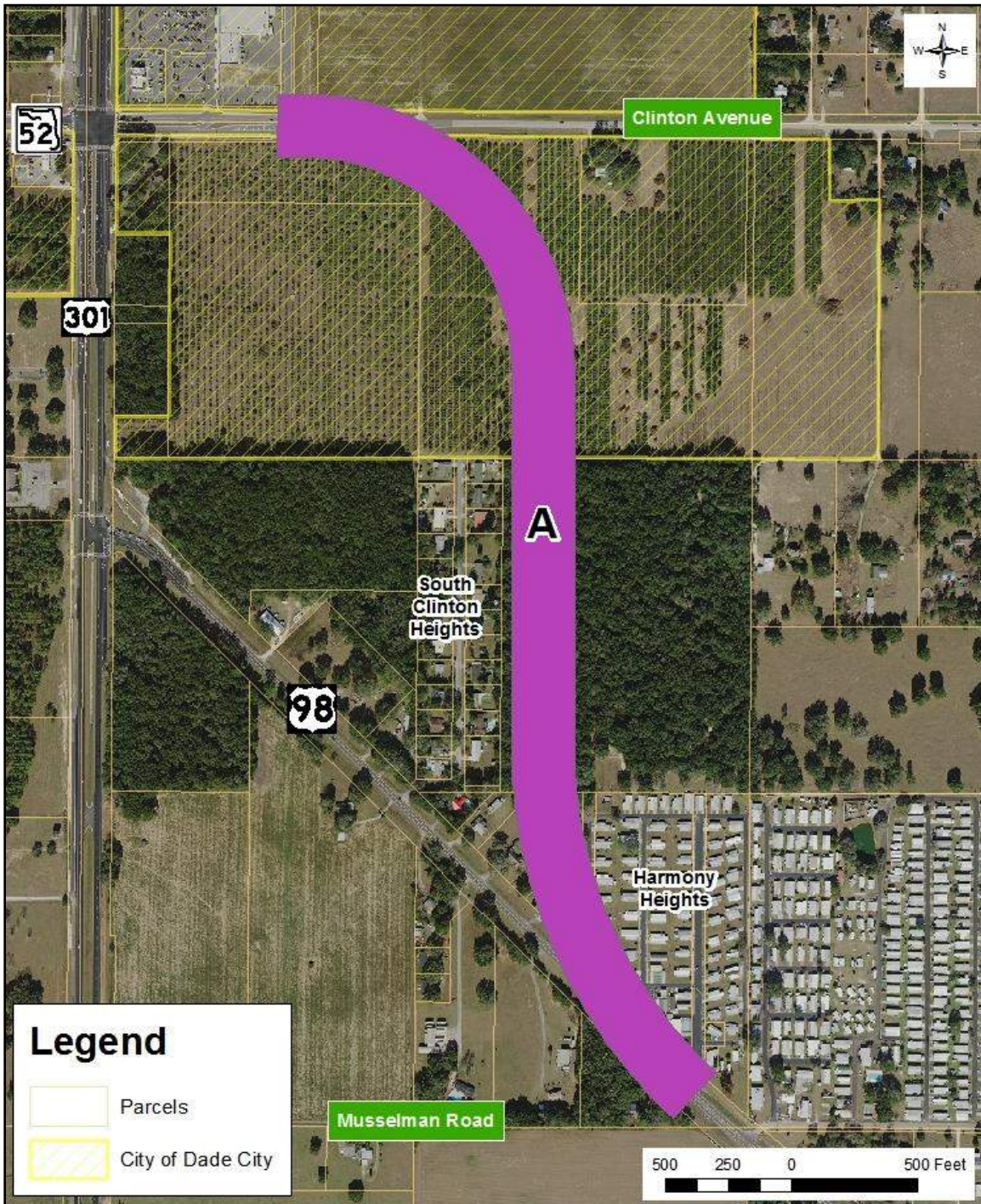
Descriptions of the developed corridors are provided below.

### **Corridor A**

Approximately 3,300 feet southeast of the intersection of US 98 and US 301, US 98 will divert to the north and tie into Clinton Avenue, east of US 301. The alignment will be located along the west side of the Harmony Heights Retirement Community. The realignment will include two horizontal curves with a tangent segment in between. The first horizontal curve will begin north of Wilds Road and have a length of 1,560 feet. The second horizontal curve will have a length of 1,497 feet and tie into Clinton Avenue approximately 750 feet east of the intersection of US 301 and Clinton Avenue. The proposed realignment will impact primarily residential properties as well as a few rural and farmland properties. The majority of the expected residential impacts are concentrated at the southern end of the proposed realignment and are specific to the Harmony Heights Retirement Community. The total corridor length is 4,657 feet. Corridor A is shown in **Figure 5-4**.



Figure 5-4  
Corridor A



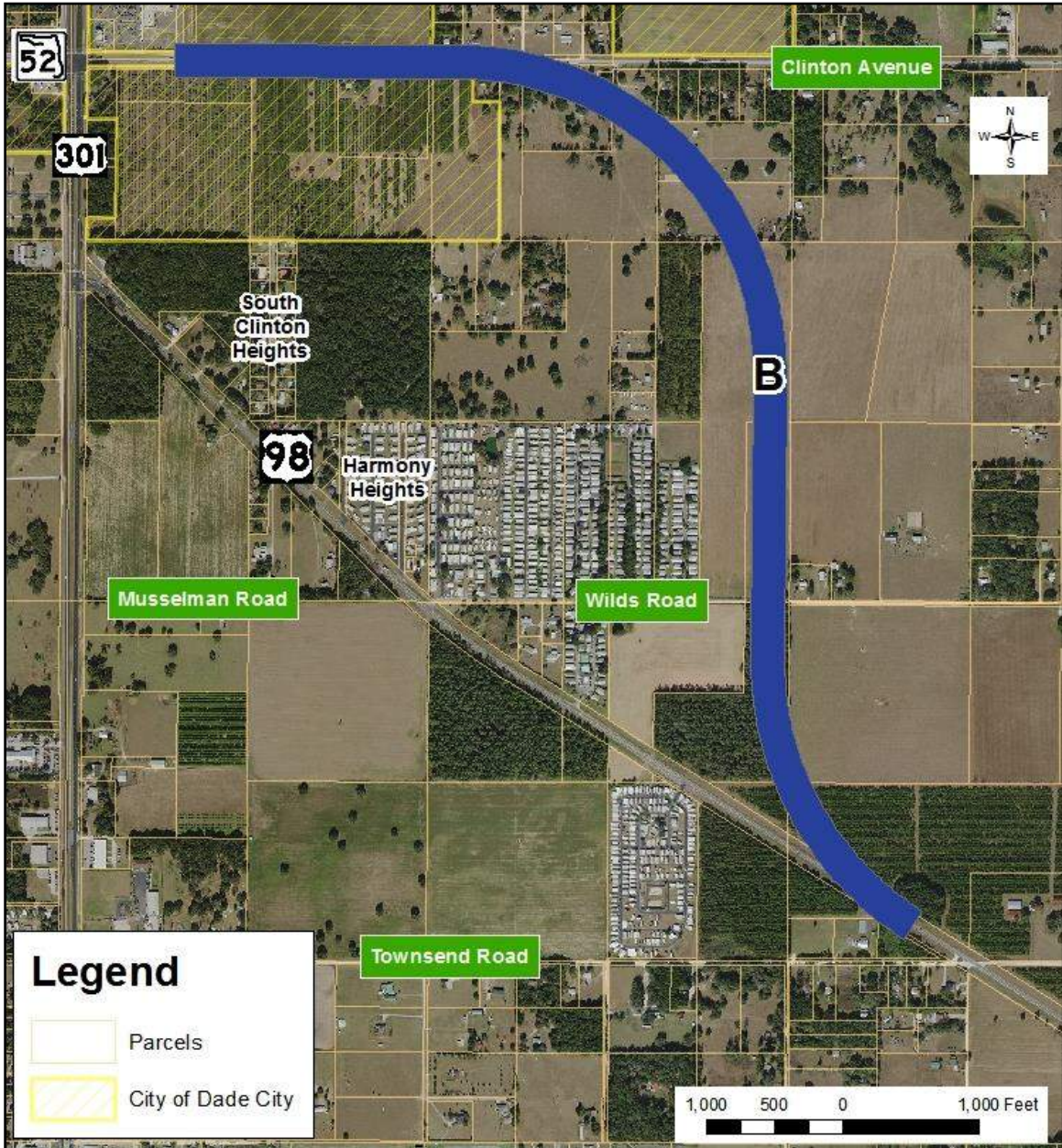
### Corridor B

Approximately 485 feet north of Townsend Road, US 98 will divert to the north. The alignment will continue north, along the east side of the mobile home parks along Wilds Road, until it ties into Clinton Avenue, east of US 301. The realignment will include two



horizontal curves with a tangent segment in between. The first horizontal curve will begin north of Townsend Road and have a length of 2,325 feet. The second horizontal curve will have a length of 1,497 feet and tie into Clinton Avenue at Curtis Lane. The proposed realignment will impact primarily rural and farmland properties as well as a few residential properties, concentrated at the northern end of the proposed realignment. The total corridor length is 10,106 feet. Corridor B is shown in **Figure 5-5**.

**Figure 5-5  
Corridor B**



## Corridor C

Approximately 725 feet northeast of the overpass of US 98 and Old Lakeland Highway, US 98 will divert to the north. The alignment will continue north, mirroring the existing geometry of Old Lakeland Highway, until it ties into Clinton Avenue. Along Old Lakeland Highway, the 250-foot wide corridor holds the eastern right of way line, as the railroad cannot be encroached upon. The alignment will have four horizontal curves with three tangent segments. The first horizontal curve will begin northeast of the overpass of US 98 and Old Lakeland Highway and have a length of 1,932 feet. The second horizontal curve will begin at Townsend Road and have a length of 1,682 feet. The alignment will then mirror the existing geometry of Old Lakeland Highway before the final curve, beginning at Holly Lane with a length of 2,798 feet, ties into Clinton Avenue. The proposed alignment will impact rural, farmland, and residential properties along the west side of Old Lakeland Highway for its entirety. The total corridor length is 18,400 feet. Corridor C is shown in **Figure 5-6**.



Figure 5-6  
Corridor C





## Corridor D

Approximately 350 feet north of the entrance to Grove Ridge RV Resort, US 98 will divert to the west and continue until it intersects US 301 at a 90 degree angle. The proposed realignment will have one horizontal curve and a single tangent segment. The horizontal curve will begin north of the entrance to Grove Ridge RV Resort and have a length of 2,566 feet. The proposed realignment will continue west, parallel to Musselman Road, until it intersects US 301 at an existing median opening. Primarily rural and farmland properties will be impacted. No residential impacts are expected; however, slight adjustments to the entrance of the Southfork Mobile Home Park may be required. The total corridor length is 4,207 feet. Corridor D is shown in **Figure 5-7**.

**Figure 5-7**  
**Corridor D**

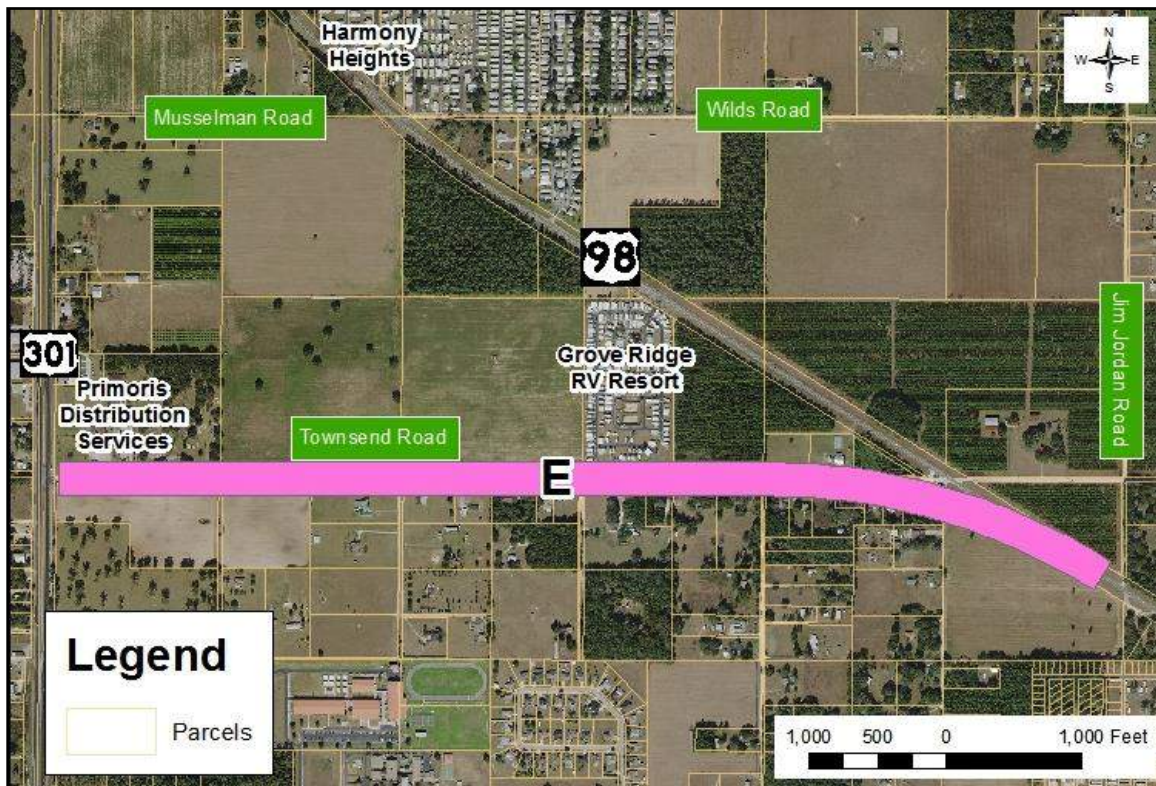




## Corridor E

Approximately at the intersection of US 98 and Jim Jordan Road, US 98 will divert to the west and continue until it intersects US 301 at a 90 degree angle. The proposed realignment will have one horizontal curve and a single tangent segment. The horizontal curve will begin at Jim Jordan Road and have a length of 2,575 feet. The proposed alignment will remain centered along Townsend Road until it intersects US 301 at an existing median opening. The proposed realignment will impact primarily residential properties along both the north and south sides of Townsend Road. Other impacts include Grove Ridge RV Park and Primoris Distribution Services facility at the intersection at US 301 and Townsend Road. The total corridor length is 7,785 feet. Corridor E is shown in **Figure 5-8**.

**Figure 5-8**  
**Corridor E**



Transportation Systems Management and Operations (TSM&O) alternatives may be able to mitigate operational and safety deficiencies. TSM&O alternative may include the examination of implementation of Intelligent Transportation Systems (ITS) strategies, optimizing the existing signal operation, and various multi-modal accommodations as a point of comparison to wholesale capacity improvement alternatives. TSM&O alternatives will be evaluated more during the PD&E study.



## 6.0 Alternatives Evaluation

### 6.1 Purpose and Need Evaluation

The purpose and need of the project is to realign US 98 to Clinton Avenue intersection to eliminate the existing closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue, to reduce crashes, and to enhance safety. The major roadways of US 98, US 301, and SR 52 converge in this portion of Pasco County at two intersections that are only 1,500 feet apart. The closeness of these intersections results in traffic and safety issues. The closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue have crash rates that exceed the statewide average. Between 2013 and 2017, the intersection of US 301 at US 98 experienced a total of 68 crashes, a crash rate (0.968) that was consistently higher than the statewide average (0.394) for a similar type of intersection resulting in a crash ratio of 2.457. The intersection of US 301 and Clinton Avenue experienced a total of 72 crashes, a crash rate (1.052) that was consistently higher than the statewide average (0.587) for a similar type of intersection resulting in a crash ratio of 1.792.

A discussion of each corridor and its evaluation with the purpose and need criteria is provided below.

#### Corridor A

Corridor A eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through one major intersection, instead of two, and requiring fewer turning movements. For purposes of this discussion, a major intersection is considered one in which the feeder and receiver roadway segments have an AADT of 5,000 or greater. While the southern of the two closely spaced intersections on US 301 will likely remain to service local traffic, it will be deprioritized and have lower traffic volumes from the cross street. **Table 6-1** summarizes the number of major intersections and turning movements needed for vehicles taking all potential routes through the area in the existing and proposed conditions.

For the roadway segments evaluated, all exceed 5,000 AADT except for Clinton Avenue, which has an AADT of only 2,200. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic.

Corridor A meets both purpose and need criteria.

**Table 6-1  
Intersections and Turning Movements for Corridors A, B, and C**

Direction of Travel	Feeder Segment AADT	Receiver Segment AADT	Existing		Proposed	
			Major Intersections	Turning Movements	Major Intersections	Turning Movements
NB US 98 to NB US 301	6,200	24,000	2	1	1	1
NB US 98 to SB US 301	6,200	23,000	1	1	1	1
NB US 98 to WB SR 52	6,200	16,000	2	2	1	0
NB US 98 to EB Clinton Avenue	6,200	2,200	2	2	0	1
SB US 301 to SB US 98	24,000	6,200	2	2	1	1
SB US 301 to SB US 301	24,000	23,000	2	0	1	0
SB US 301 to WB SR 52	25,000	16,000	1	1	1	1
SB US 301 to EB Clinton Avenue	25,000	2,200	1	1	1	2
EB SR 52 to SB US 98	16,000	6,200	2	2	1	0
EB SR 52 to SB US 301	16,000	24,000	2	1	1	1
EB SR 52 to NB US 301	16,000	25,000	1	1	1	1
EB SR 52 to EB Clinton Avenue	16,000	2,200	1	0	1	1
WB Clinton Avenue to SB US 98	2,200	6,200	2	2	0	1
WB Clinton Avenue to SB US 301	2,200	24,000	2	1	1	2
WB Clinton Avenue to NB US 301	2,200	25,000	1	1	1	2
WB Clinton Avenue to WB SR 52	2,200	16,000	1	0	1	1

**Corridor B**

Corridor B eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through one major intersection, instead of two, and requiring fewer turning movements. While the southern of the two closely spaced intersections on US 301 will likely remain to service local traffic, it will be deprioritized and have lower traffic volumes from the cross street. **Table 6-1** summarizes the number of major intersections and turning movements needed for vehicles taking all potential routes through the area in the existing and proposed conditions.

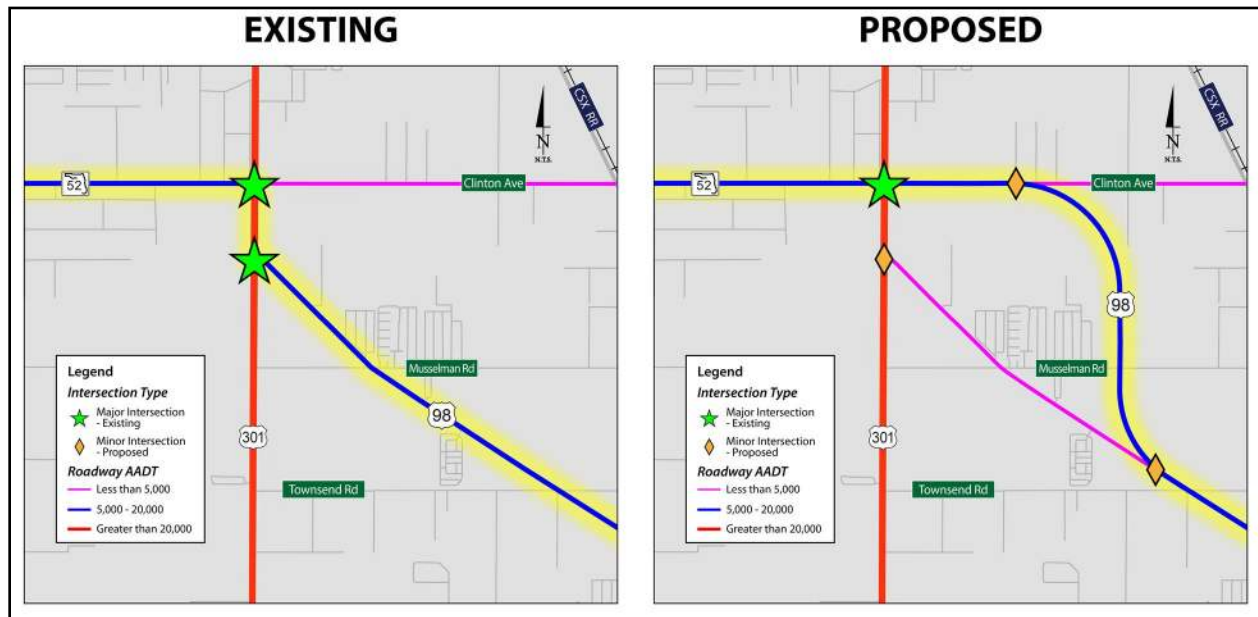
For the roadway segments evaluated, all exceed 5,000 AADT except for Clinton Avenue, which has an AADT of only 2,200. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic. **Figure 6-1** depicts the existing and



proposed US 98 to/from SR 52 travel route through the project area utilizing Corridor B, showing the elimination of a major intersection and reduced turning and weaving movements. While this graphic specifically shows Corridor B, the same applies to Corridors A and C, which are similar, just situated to the west and east of Corridor B.

Corridor B meets both purpose and need criteria.

**Figure 6-1**  
**US 98 to/from SR 52 Travel Route through the Project Area – Corridor B**



### Corridor C

Corridor C eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through one major intersection, instead of two, and requiring fewer turning movements. While the southern of the two closely spaced intersections on US 301 will likely remain to service local traffic, it will be deprioritized and have lower traffic volumes from the cross street. **Table 6-1** summarizes the number of major intersections and turning movements needed for vehicles taking all potential routes through the area in the existing and proposed conditions.

For the roadway segments evaluated, all exceed 5,000 AADT except for Clinton Avenue, which has an AADT of only 2,200. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic.

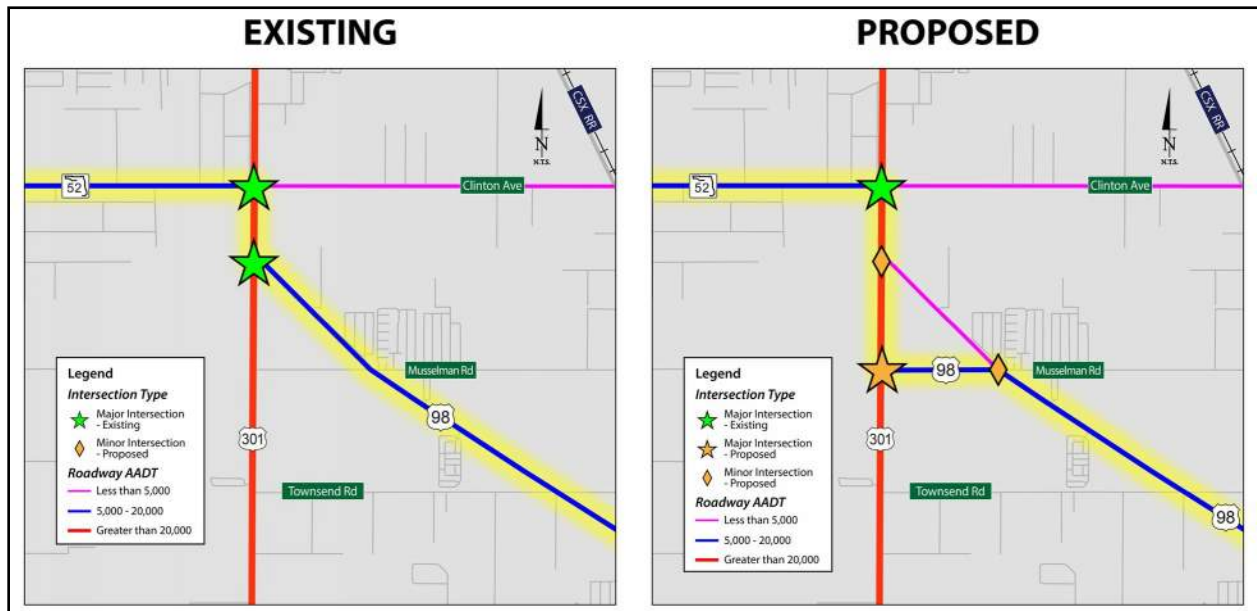
Corridor C meets both purpose and need criteria.

## Corridor D

Corridor D realigns US 98 to the south, south of Musselman Road, increasing the distance between the intersections of US 301 at US 98 and US 301 at Clinton Avenue from approximately 1,500 feet to approximately 4,000 feet. This corridor does not eliminate a major intersection and will maintain the same number of turning and weaving movements as exists in the current configuration. **Table 6-2** summarizes the number of major intersections and turning movements needed for vehicles taking all potential routes through the area in the existing and proposed conditions. **Figure 6-2** depicts the existing and proposed US 98 to/from SR 52 travel route through the project area utilizing Corridor D. There is no elimination of a major intersection and turning and weaving movements are the same in both scenarios. While this graphic specifically shows Corridor D, the same applies to Corridor E, which is similar, just situated to the south of Corridor D.

Corridor D does not meet the purpose and need criterion of eliminating the closely spaced major intersections. Safety would only be slightly improved as the distance for a weaving movement would be increased.

**Figure 6-2**  
**US 98 to/from SR 52 Travel Route through the Project Area – Corridor D**



## Corridor E

Corridor E realigns US 98 to the south along Townsend Road, increasing the distance between the intersections of US 301 at US 98 and US 301 at Clinton Avenue from approximately 1,500 feet to approximately 1.25 miles. This corridor does not eliminate a major intersection and will maintain the same number of turning and weaving movements as exists in the current configuration. **Table 6-2** summarizes the number of major intersections and turning movements needed for

vehicles taking all potential routes through the area in the existing and proposed conditions.

Corridor E does not meet the purpose and need criterion of eliminating the closely spaced major intersections. Safety would only be slightly improved as the distance for a weaving movement would be increased.

**Table 6-2  
Intersections and Turning Movements for Corridors D and E**

Direction of Travel	Feeder Segment AADT	Receiver Segment AADT	Existing		Proposed	
			Major Intersections	Turning Movements	Major Intersections	Turning Movements
NB US 98 to NB US 301	6,200	24,000	2	1	2	1
NB US 98 to SB US 301	6,200	23,000	1	1	1	1
NB US 98 to WB SR 52	6,200	16,000	2	2	2	2
NB US 98 to EB Clinton Avenue	6,200	2,200	2	2	2	2
SB US 301 to SB US 98	24,000	6,200	2	2	2	2
SB US 301 to SB US 301	24,000	23,000	2	0	2	0
SB US 301 to WB SR 52	25,000	16,000	1	1	1	1
SB US 301 to EB Clinton Avenue	25,000	2,200	1	1	1	1
EB SR 52 to SB US 98	16,000	6,200	2	2	2	2
EB SR 52 to SB US 301	16,000	24,000	2	1	2	1
EB SR 52 to NB US 301	16,000	25,000	1	1	1	1
EB SR 52 to EB Clinton Avenue	16,000	2,200	1	0	1	0
WB Clinton Avenue to SB US 98	2,200	6,200	2	2	2	2
WB Clinton Avenue to SB US 301	2,200	24,000	2	1	2	1
WB Clinton Avenue to NB US 301	2,200	25,000	1	1	1	1
WB Clinton Avenue to WB SR 52	2,200	16,000	1	0	1	0

**Table 6-3** shows the results of the purpose and need evaluation of the five developed corridors.



**Table 6-3  
Evaluation of Purpose and Need**

<b>Corridor</b>	<b>Eliminate Closely Spaced Major Intersections</b>	<b>Improve Safety</b>
A	Yes	Yes
B	Yes	Yes
C	Yes	Yes
D	No	Moderate
E	No	Moderate

Notes: Yes = Highest Benefit, Moderate = Neutral Benefit, No = Unsatisfactory

### **Elimination of Alternatives**

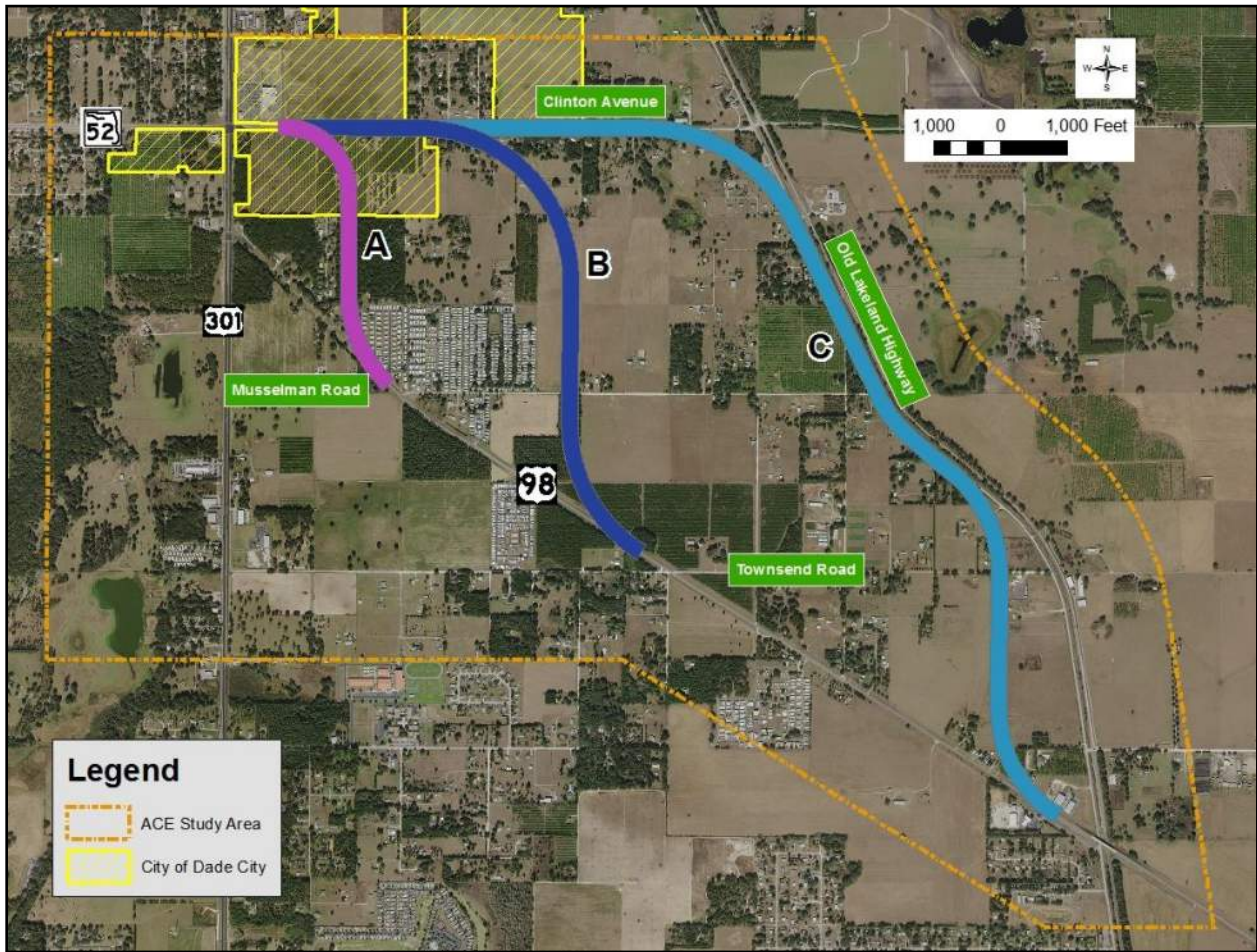
As stated in the approved MM, any corridor that does not satisfy the stated purpose and need criteria will be eliminated. Corridors D and E are being eliminated because they do not satisfy the Purpose and Need criteria. These corridors do not meet the purpose and need criterion of eliminating the closely spaced intersections. Safety would only be slightly improved as the distance for a weaving movement would be increased.

All remaining viable corridors (Corridors A, B, and C) will be evaluated using environmental, engineering, and cost considerations.

## **6.2 Environmental and Engineering Evaluation**

The three corridors advancing from the purpose and need evaluation are shown in **Figure 6-3**. All remaining viable corridors will be evaluated using environmental, engineering, and cost considerations.

**Figure 6-3**  
**Corridors Advancing from Purpose and Need Evaluation**



**6.2.1 Environmental Evaluation**

The potential effects on the natural, social, cultural, and physical environment have been evaluated for each of the corridors.

**6.2.1.1 Natural Environment Evaluation**

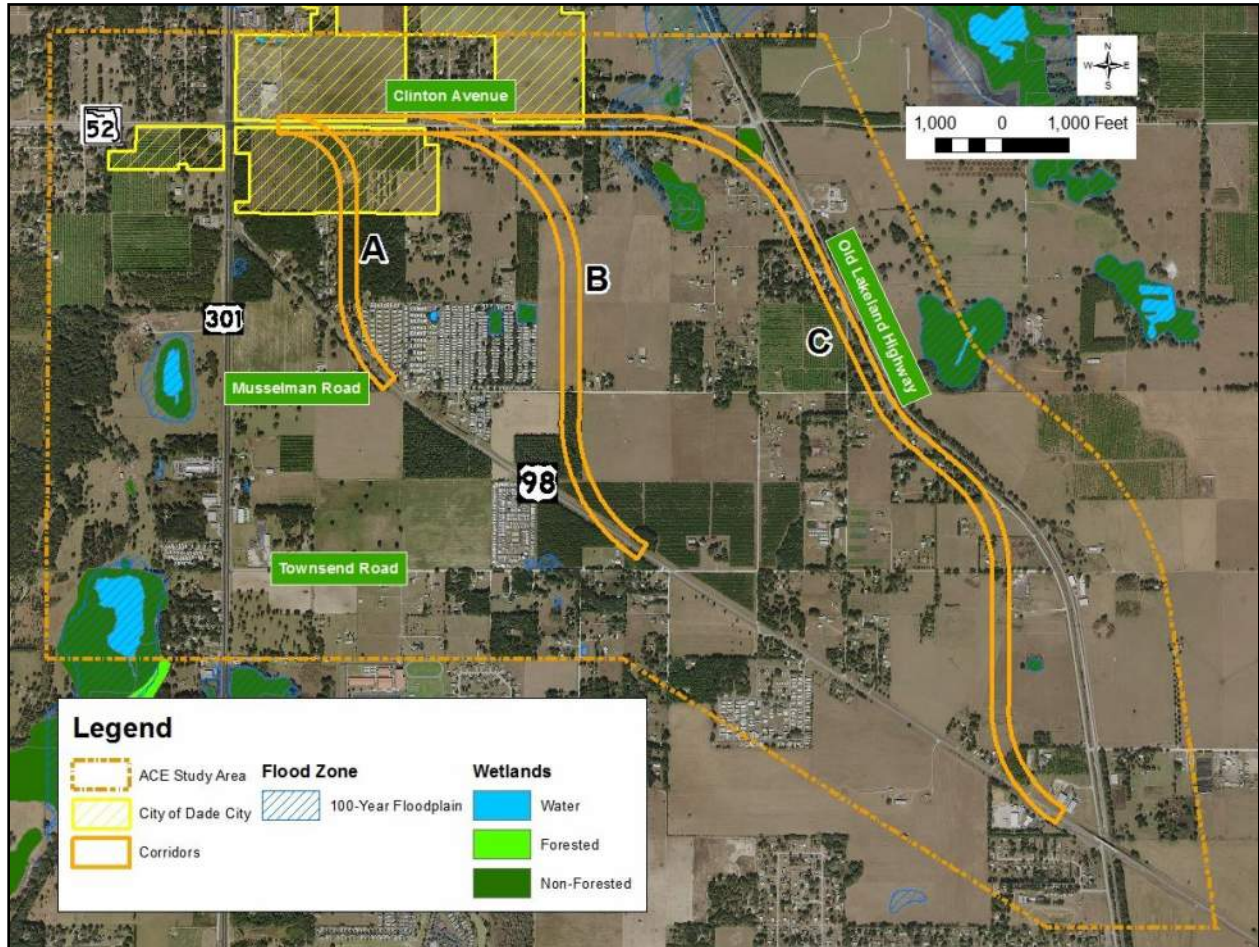
The natural environmental evaluation includes analyzing potential impacts to protected species and habitat, wetlands and surface waters, Essential Fish Habitat (EFH), floodplains, water quality, and Special Designations including Aquatic Preserves, Outstanding Florida Waters, Wild and Scenic Rivers, and Coastal Barrier Resources.

**Figure 6-4** depicts the natural environment features found within the study area and corridor alternatives. There are no Special Designations, verified impaired drainage basins, forested wetlands, water features, or conservation and managed lands within any of the corridors. Corridor C does include 0.6 acres of 100-year floodplain and 0.95 acres of non-forested wetlands. There are no floodplain or non-forested wetlands within Corridor A or B. All three corridors have a moderate potential for involvement with protected species, meaning suitable habitat for protected species is present within the study area, but no observations or positive indications



exist to verify species presence. **Table 6-4** summarizes the natural environment evaluation.

**Figure 6-4**  
**Natural Environment Evaluation**



**Table 6-4  
Evaluation of Natural Environmental Factors**

<b>Evaluation Criteria</b>	<b>Unit of Measure</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>
Special Designations (OFW)	Acres	0	0	0
Water Quality (Verified impaired waters drainage basin)	Acres	0	0	0
100-year Floodplain	Acres	0	0	0.6 acres
Non-Forested Wetlands	Acres	0	0	0.95 acres
Forested Wetlands	Acres	0	0	0
Water Features	Acres	0	0	0
Listed Species Occurrence Potential	Degree	Moderate	Moderate	Moderate
Conservation/Managed Lands	Acres	0	0	0

**6.2.1.2 Social and Economic Evaluation**

The social and economic evaluation includes analyzing potential impacts to social characteristics, economic factors, land use changes, mobility, aesthetic effects, relocation potential, and farmland resources.

**Figure 6-5** depicts the social and economic features found within the study area and corridor alternatives. Corridor C encompasses the greatest number of potential residential relocations (26), non-residential relocations (6), neighborhoods (5), and has an impact to a community facility (a church). Corridor B encompasses the fewest number of potential residential relocations (6) and no non-residential relocations or community facilities. No prime farmlands are included in any of the corridors. Community cohesion is the degree to which residents have a sense of belonging to their neighborhood or community, including commitment to the community or level of attachment to neighbors, institutions in the community, or particular subgroups. Corridors A and C were considered moderate due to the potential residential relocations and proximity to existing neighborhoods. Corridor B was considered low due to few potential relocations and few existing neighborhoods. Potential socioeconomic impacts to special populations (low income, minority, etc.) were deemed to be low for all three corridors. Demographic data available is for the census block groups and all three corridors are within the same block group, not allowing for differentiation between the three. Relative to the County demographics, the corridors should have a low potential for disproportionate impacts.

**Figure 6-5**  
**Social Environment Evaluation**

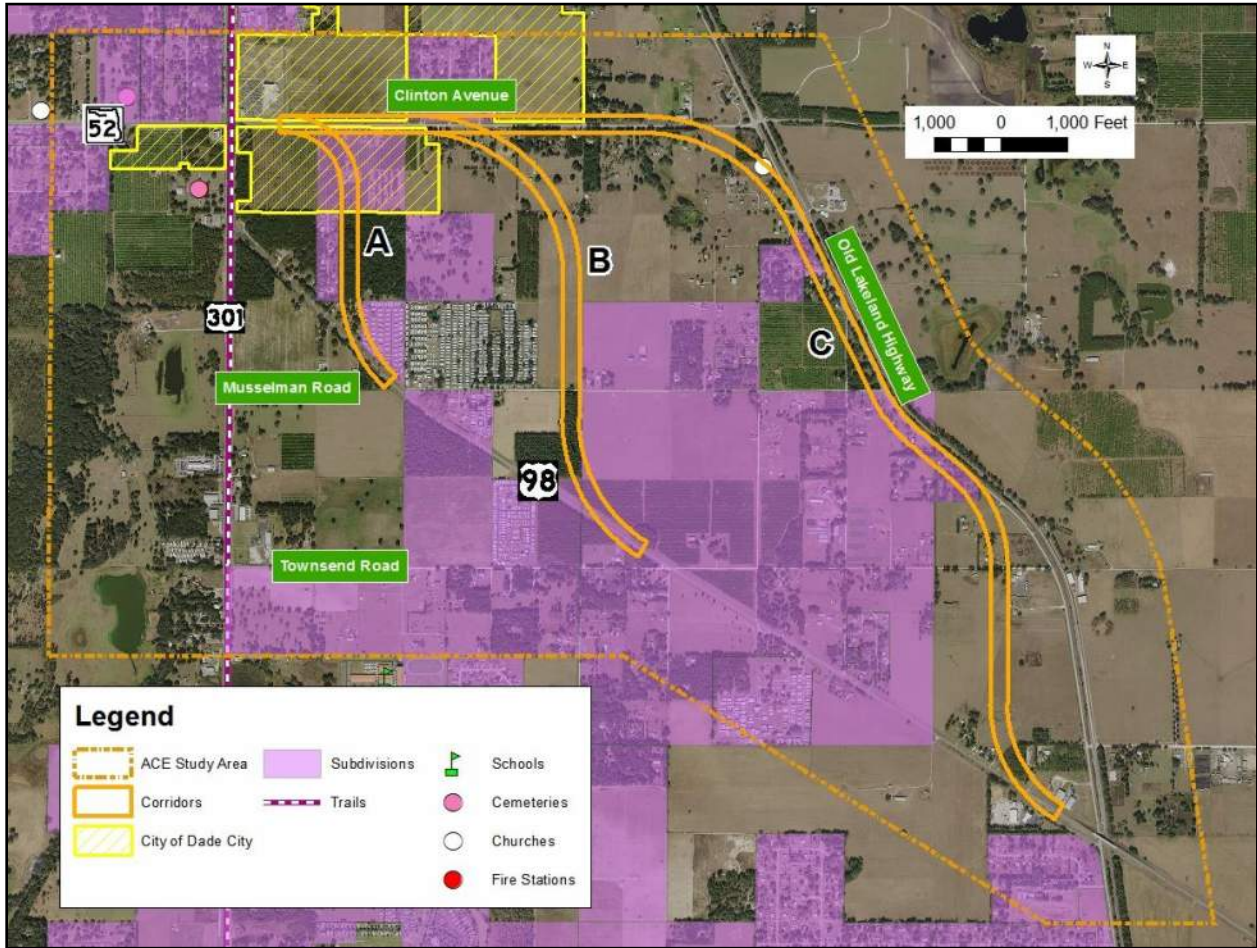


Table 6-5 summarizes the natural environment evaluation.



**Table 6-5  
Evaluation of Social and Economic Environmental Factors**

Evaluation Criteria		Unit of Measure	Corridor A	Corridor B	Corridor C
Potential Residential Displacements		Number	12	6	26
Potential Non-residential Displacements		Number	2	0	6
Community Facilities		Number	0	0	1
Neighborhoods (Subdivisions)		Number	2	3	5
Community Cohesion		Effects to residential connectivity and social interaction	Moderate	Low	Moderate
Socioeconomic Impacts	Low Income	Potential for disproportionate impact	Low	Low	Low
	Minority Population	Potential for disproportionate impact	Low	Low	Low
Prime Farmlands		Acres	0	0	0

**6.2.1.3 Cultural Resources Evaluation**

The cultural resources evaluation includes analyzing potential impacts to historic and archaeological resources and Section 4(f) resources.

**Figure 6-6** depicts the cultural features found within the study area and corridor alternatives. Only Corridor C has involvement with any previously recorded historic, archaeological, or Section 4(f) resources. Linear resource PA02802, the Richloam Railroad, is located within the 250-foot wide corridor. No previously recorded cultural resources are located within Corridor A or B.

**Table 6-6** summarizes the cultural resources evaluation.

**Table 6-6  
Evaluation of Cultural Resources Factors**

Evaluation Criteria	Unit of Measure	Corridor A	Corridor B	Corridor C
Historic Resources	Number	0	0	1
Archaeological Resources	Number	0	0	0
Potential Section 4(f) Resources	Number	0	0	0
Recreation Areas/Trails	Number	0	0	0

**Figure 6-6**  
**Cultural Environment Evaluation**

**Redacted**

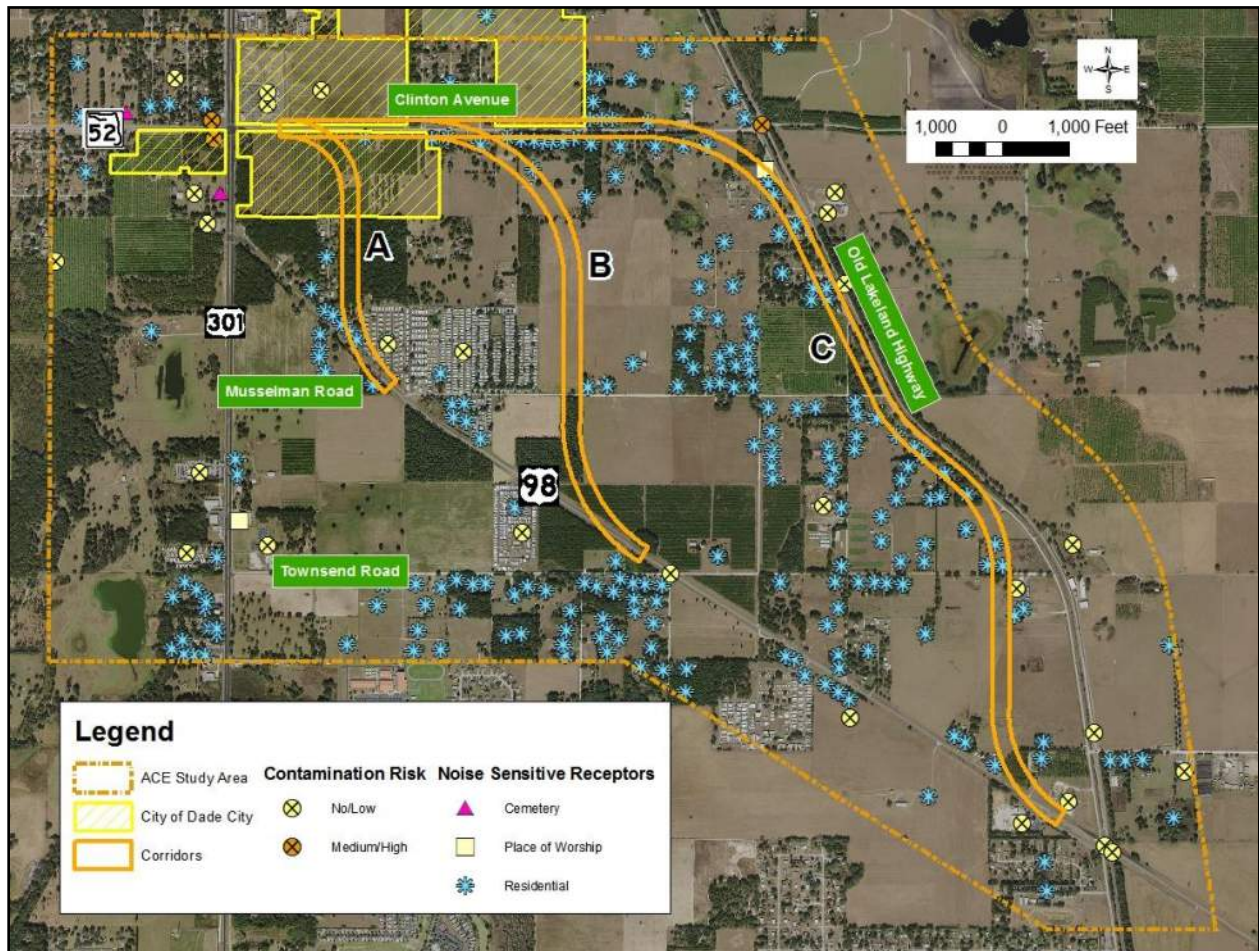
**6.2.1.4 Physical Resources Evaluation**

The physical resources evaluation includes analyzing potential impacts associated with highway noise, air quality, contamination, utilities and railroads, and construction.

**Figure 6-7** depicts the physical features found within the study area and corridor alternatives. Corridor C has the most involvement with potential contamination sites (8 low ranked sites and 1 medium/high ranked site) and 15 potential noise sensitive sites. Corridors A and B have involvement with only 3 low ranked potential contamination sites and 2 and 3, respectively, noise sensitive sites.

**Table 6-7** summarizes the physical resources evaluation.

**Figure 6-7  
Physical Environment Evaluation**



**Table 6-7  
Evaluation of Physical Resources Environmental Factors**

<b>Evaluation Criteria</b>	<b>Unit of Measure</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>
Potential Contamination Sites	Number	3 Low	3 Low	8 Low 1 Medium/High
Potential Noise Sensitive Sites	Number	2	3	15

**6.2.2 Engineering Evaluation**

The engineering considerations used to screen corridors are listed in **Table 6-8**. Engineering factors include utility conflicts, involvement of infrastructure items such as bridges and railroad crossings, drainage basins involved, requirements for stormwater ponds, and acres of new right of way required. Those corridors with greater engineering involvement are likely to have higher design and construction costs.

**6.2.2.1 Engineering Feasibility**

Engineering involvement with each corridor has a direct relationship with project length. Corridor C is the longest corridor at 18,400 feet. Corridor C also has the greatest number of utility conflicts (9), drainage basins (5), stormwater pond acreage needed (13.1 acres), right of way required (101.1 acres), and number of parcels involved (99). Corridors A and B have the same number of utility conflicts (7) and drainage basins (2). But Corridor B is longer than Corridor A (10,106 and 4,657 feet, respectively) and requires more stormwater pond acreage needed (7.2 and 4.7 acres, respectively), right of way required (53.5 and 26.1 acres, respectively), and number of parcels involved (35 and 21, respectively).

**Table 6-8  
Evaluation of Engineering Issues**

<b>Evaluation Criteria</b>	<b>Unit of Measurement</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>
Utility Conflicts	Number	7	7	9
Bridge Involvement	Number	0	0	0
Railroad Crossings	Number	0	0	0
Drainage Basins	Number	2	2	5
Stormwater Ponds	Acres	4.7	7.2	13.1
Right of Way (250')	Acres	26.1	53.5	101.1
Parcels	Number	21	35	99

**6.2.2.2 Cost Evaluation**

The estimated construction, wetland mitigation, and right of way costs are listed in **Table 6-9** below. Construction costs for each corridor were developed utilizing FDOT Long Range Estimates (LRE). For the LRE cost estimate, the realigned portion of US 98 was assumed to be a



4-lane rural typical section. This includes the horizontal curve that diverts from the original US 98 alignment and all of the subsequent horizontal geometry heading north. The horizontal curve that ties into Clinton Avenue and any roadway along Clinton Avenue was assumed to be a suburban typical section. All of the corridors end at the same location on Clinton Avenue, east of the US 301 intersection. All of the corridors were also assumed to be full new construction with a right of way width of 250 feet.

Right of way costs were estimated based upon general costs of land and buildings in the study area by land use type and unit right of way costs obtained from the FDOT Right of Way Office. Wetland mitigation costs were based on in-basin mitigation bank credit costs.

**Table 6-9  
Evaluation of Costs**

<b>Costs</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>
Construction Costs	\$5,923,816	\$12,815,461	\$23,220,483
Wetland Mitigation Costs*	\$0	\$0	\$142,500
Right of Way Costs	\$7,000,000- \$11,600,000	\$15,000,000- \$25,500,000	\$27,600,000- \$46,000,000
<b>Total Cost</b>	\$12,923,816- \$17,523,816	\$27,815,461- \$38,315,461	\$50,962,983- \$69,362,983

\* Assumes a cost of \$200,000 per mitigation credit and an assumed Uniform Mitigation Assessment Method (UMAM) delta of 0.75 Cost formula = UMAM delta (0.75) x impact acreage x cost per credit (\$200,000).

## 7.0 Public Involvement and Agency Coordination

A Public Involvement Plan (PIP) was prepared for this project. The PIP documents the appropriate level of public involvement for this project in compliance with the FDOT PD&E Manual; the FDOT *Public Involvement Handbook*; Section 339.155, Florida Statutes; Executive Orders 11990 and 11988; Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA); and 23 Code of Federal Regulations (CFR) 771. Activities implemented as part of this PIP allow people living and working within the project study area, and other interested parties, to contribute to the decision-making process and to influence the choices that are made for this project. The public is given opportunities to learn about project and potential impacts, and provide input on the project alternatives.

### 7.1 Agency Coordination

Agency coordination began during the ETDM Planning Screen. The ETDM Planning Screen for ETDM #14374 (US 98 (SR 35/SR 700)/US 301/(SR 39)/Clinton Avenue (CR 52A) Intersection Realignment Study) was initiated on December 11, 2018 with the Preliminary Planning Screen Summary Report published on April 23, 2019.

The Draft MM was distributed through the EST to the ETAT for review and comment in September 2019. The ETAT had 30 days in which to comment on the Draft MM. Comments on the Draft MM (as discussed in **Section 4.0 Alternatives Evaluation Methodology**) were incorporated into the methodology utilized for the ACER.

The Draft ACER was distributed to the ETAT for review and comment through the EST. The ETAT review began on October 7, 2020 and concluded on November 6, 2020. ETAT commenters acknowledged the results of the ACER, the elimination of Corridors A, C, D, and E, and the advancement of Corridor B to the PD&E study with no objections. A copy of the ETAT comments on the Draft ACER are included in **Appendix B**.

Pasco County MPO is part of the ETAT and had a separate review of the Draft ACER from November 17, 2020 to December 7, 2020. Pasco County provided three (3) comments which are also included in **Appendix B**. Pasco County's comments addressed specific design items such as intersection arrangement, network connectivity, turn lanes, safety measures, and costs associated with business damages which are beyond the scope of the ACER and will be evaluated as part of the PD&E study.

### 7.2 Public Comments

The PIP outlines the public involvement activities planned as part of the study. They include the following:

## Project Website

A project website (<https://fdotd7studies.com/US301US98INT/>) was created to provide project information to the public. The website includes a map of the project area, project description, public meeting materials, project schedule and other project information. Links are provided to allow the public to:

- Submit comments
- Sign up to be added to the mailing list
- View and download newsletters and other public notices.

## Online Commenting Tool

The study utilized an online public engagement (WikiMapping) website, which can be accessed through the main project website. Use of this site offers the public an opportunity to add location-based notes to a map of the study area at any point during the study process.

One comment was received on the WikiMapping site. It suggested a relocation corridor:

“From US 98 & Townsend Rd, go North thru mostly uninhabited land to connect with Clinton Ave, East of the Publix Center”

## Newsletters

Newsletters were used to communicate directly with those on the project mailing list, including all residences within the study area. The newsletters contained information about the project, upcoming project activities, the project schedule and who to contact to obtain project information.

A newsletter was prepared and distributed prior to the Kick-Off Meeting. A second newsletter was prepared and distributed prior to the Public Information Meeting. It included project updates including data and conclusions from the Draft ACER and an announcement about the Public Information Meeting.

## Public Meetings

Elected/Appointed Officials and Agency Kickoff Meeting: An Elected/Appointed Officials and Agency Kickoff Meeting was held on June 20, 2019 from 10:00 AM to 12:00 PM at the Dade City Hall Council Chambers, 38020 Meridian Avenue, Dade City, FL 33525 for elected officials, agency representatives, and other interested parties. At the Kickoff Meeting, the study team provided an overview of the study process and project schedule in a PowerPoint presentation. They also discussed how they would work cooperatively with attendees to identify community goals and preferences in the project study area. A copy of the project newsletter was also available for attendees to take with them with project and contact information. The meeting was advertised in the *Florida Administrative Register* on June 11, 2019 and invitations were emailed to local, state and federal elected officials representing the area along with stakeholder agency representatives. Approximately 26 people were in attendance along with five elected officials. During the presentation, questions were asked about truck traffic, beautification and

landscaping, and travel patterns. One formal comment was submitted expressing the need to document truck travel on US 98 and SR 35A to US 301 then onto I-75. The formal comment included concerns about the bridge at US 98 and CR 35A needing to be reconstructed.

Public Information Meeting: A Public Information Meeting was held on November 4, 2020. The purpose of the Public Information Meeting was to present the developed corridor alternatives; share the evaluation of the developed corridors; and, seek public comment on the recommendations of this analysis. The meeting was advertised in the *Florida Administrative Register* on October 28, 2020, in the *Tampa Bay Times* on October 28, 2020, and invitations were emailed to local, state and federal elected officials representing the area along with stakeholder agency representatives. A meeting announcement was also included in the newsletter mailed to residences within the study area on October 14, 2020. Due to restrictions associated with COVID-19 safety precautions, the Public Information Meeting was conducted virtually with all information available at the project website. Meeting information included a video that summarized the processes and conclusions of the Draft ACER as well as the project documents. A copy of the meeting documents were also available for viewing at the FDOT District Seven Headquarters in Tampa (11201 N. Malcolm McKinley Drive, Tampa, FL 33612) and the Hugh Embry Public Library in Dade City (14215 4<sup>th</sup> Street, Dade City, FL 33523). The meeting had a 21-day public comment period and all interested people were encouraged to participate and express their views regarding the project and information presented.

During the Public Information Meeting time period, the project website had 163 views by 84 users. Eight (8) people provided multiple comments via the website and/or email. Three (3) comments supported and/or understood the selection of Corridor B while only two (2) were opposed to the project or corridor selection. One (1) comment was also against Corridor E. Five (5) comments questioned intersection and turn lane details, in particular at the County Aire Manor entrance. These details will be evaluated as part of the PD&E study.

### **7.3 Outstanding Issues**

There are no outstanding issues.



## 8.0 Recommendations

The following narrative provides a discussion of the affected environment, advantages and limitations of each corridor, potential safety improvements, and highlights any specific factors that may result in an unreasonable corridor. Public and agency input (consideration of input received from the ETAT, project stakeholders and the general public) are summarized in this narrative.

### 8.1 Alternatives Eliminated

The following corridors are proposed for elimination from consideration.

#### Corridor A

Corridor A realigns US 98 to the north to Clinton Avenue, approximately 1,200 feet east of the US 301 and Clinton Avenue intersection. The alignment will be located along the west side of the Harmony Heights Retirement Community. The proposed realignment will impact primarily residential properties as well as a few rural and farmland properties. The majority of the expected residential impacts are concentrated at the southern end of the proposed realignment and are specific to the Harmony Heights Retirement Community. The total corridor length is 4,657 feet.

Corridor A eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through only one major intersection, instead of two, and requiring fewer turning movements. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic. Corridor A meets both purpose and need criteria.

Corridor A has minimal impacts to the natural environment. There are no Special Designations, verified impaired drainage basins, floodplains, forested wetlands, non-forested wetlands, water features, or conservation and managed lands. Corridor A has a moderate potential for involvement with protected species, meaning suitable habitat for protected species is present within the study area, but no observations or positive indications exist to verify species presence.

From a social environment perspective, Corridor A has moderate impacts, relative to the corridors advancing from the purpose and need evaluation (Corridors A, B, and C). It has 12 potential residential relocations, two potential non-residential relocations, includes two neighborhoods, and has a moderate potential for effects to residential connectivity and social interaction. No prime farmlands or community facilities are located in Corridor A. Potential socioeconomic impacts to special populations (low income, minority, etc.) was deemed to be low.

Corridor A has no involvement with cultural resources.

Corridor A has minimal involvement with physical environmental resources. It includes only three low ranked potential contamination sites and two noise sensitive sites.

The engineering evaluation revealed Corridor A is tied with Corridor B with the fewest engineering issues. Corridor A has seven utilities and two drainage basins. There is no involvement with bridges or railroad crossings. Corridor A is the shortest alternative and, therefore, requires the least stormwater pond acreage and right of way acreage, and involves the fewest parcels of the corridors advancing from the purpose and need evaluation (Corridors A, B, and C).

As Corridor A is the shortest, associated costs are also the least of the corridors evaluated. Total project cost is estimated at \$12,923,816 to \$17,523,816.

Taking into account the analysis in this ACE, in particular the social impacts, Corridor A is eliminated from consideration. While comparable to Corridor B in most environmental aspects, the potential social impacts for Corridor A are greater than those to Corridor B. Potential residential relocations are 12 for Corridor A and only six for Corridor B. Potential non-residential relocations are two for Corridor A and none for Corridor B. The potential effects to community cohesion for Harmony Heights and South Clinton Heights is greater for Corridor A than Corridor B. These potential social impacts outweigh the cost savings associated with Corridor A.

### **Corridor C**

Corridor C realigns US 98 to the north to Clinton Avenue, just to the west of Old Lakeland Highway. Approximately 725 feet northeast of the overpass of US 98 and Old Lakeland Highway, US 98 will divert to the north. The alignment will continue north, mirroring the existing geometry of Old Lakeland Highway, until it ties into Clinton Avenue. Along Old Lakeland Highway, the 250-foot wide corridor holds the eastern right of way line, as the railroad cannot be encroached upon, resulting in substantial impacts to the west. The proposed alignment will impact rural, farmland, and residential properties along the west side of Old Lakeland Highway for its entirety. The total corridor length is 18,400 feet.

Corridor C eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through only one major intersection, instead of two, and requiring fewer turning movements. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic. Corridor C meets both purpose and need criteria.

Corridor C has the most impacts to the natural environment of the corridors advancing from the purpose and need evaluation (Corridors A, B, and C). There are no Special Designations, verified impaired drainage basins, forested wetlands, water features, or conservation and managed lands. Corridor C includes 0.6 acres of 100-year floodplain and 0.95 acres of non-forested wetlands, as well as a moderate potential for involvement with protected species.

From a social environment perspective, Corridor C has the most impacts, relative to the corridors advancing from the purpose and need evaluation (Corridors A, B, and C). It has 26 potential residential relocations, six potential non-residential relocations, includes five neighborhoods, and has a moderate potential for effects to residential connectivity and social interaction. Corridor C included one community facility (a church). No prime farmlands are located in Corridor C. Potential socioeconomic impacts to special populations (low income, minority, etc.) were deemed to be low.

Corridor C has involvement with one historic resource. Linear resource PA02802, the Richloam Railroad, is located within the 250-foot wide corridor.

Corridor C has the most involvement with physical environmental resources of the corridors advancing from the purpose and need evaluation (Corridors A, B, and C). It includes eight low ranked and one medium/high ranked contamination site and 15 potential noise sensitive sites.

The engineering evaluation revealed Corridor C has the greatest engineering issues. Corridor C has nine utilities and five drainage basins. There is no involvement with bridges or railroad crossings. Corridor C is the longest alternative and, therefore, requires the most stormwater pond acreage and right of way acreage, and involves the most parcels of the corridors advancing from the purpose and need evaluation (Corridors A, B, and C).

As Corridor C is the longest, associated costs are also the greatest of the corridors evaluated. Total project cost is estimated at \$50,962,983 to \$69,362,983.

Taking into account the analysis in this ACE (Corridor C has the greatest involvement with the natural, social, cultural, and physical environment, engineering issues, and costs), Corridor C is eliminated from consideration.

### **Corridor D**

Corridor D realigns US 98 to the south, south of Musselman Road, increasing the distance between the intersections of US 301 at US 98 and US 301 at Clinton Avenue from approximately 1,500 feet to approximately 4,000 feet. This corridor maintains the same number of major intersections and will maintain the same number of turning and weaving movements as exists in the current configuration. Corridor D does not meet the purpose and need criterion of eliminating the closely spaced major intersections and safety would only be slightly improved as the distance for a weaving movement would be increased. As stated in the approved MM, any corridor that does not satisfy the stated purpose and need criteria will be eliminated. Corridor D is being eliminated because it does not satisfy the purpose and need criteria.

Taking into account the analysis in this ACE, Corridor D is eliminated from consideration.

### **Corridor E**

Corridor E realigns US 98 to the south along Townsend Road, increasing the distance between the intersections of US 301 at US 98 and US 301 at Clinton Avenue from approximately

1,500 feet to approximately 1.25 miles. This corridor maintains the same number of major intersections and will maintain the same number of turning and weaving movements as exists in the current configuration. Corridor E does not meet the purpose and need criterion of eliminating the closely spaced major intersections and safety would only be slightly improved as the distance for a weaving movement would be increased. As stated in the approved MM, any corridor that does not satisfy the stated purpose and need criteria will be eliminated. Corridor E is being eliminated because it does not satisfy the purpose and need criteria.

Taking into account the analysis in this ACE, Corridor E is eliminated from consideration.

## **8.2 Alternatives Recommended for PD&E Study**

Corridor B realigns US 98 to the north to Clinton Avenue, approximately 3,500 feet east of the US 301 and Clinton Avenue intersection. The alignment will be located along the east side of the Harmony Heights Retirement Community. The proposed realignment will impact primarily rural and farmland properties as well as a few residential properties, concentrated at the northern end of the proposed realignment. The total corridor length is 10,106 feet.

Corridor B eliminates the existing major intersection of US 98 and US 301 by realigning US 98 to Clinton Avenue. This allows the majority of traffic using US 98, US 301, and SR 52 to navigate through only one major intersection, instead of two, and requiring fewer turning movements. With the proposed realignment, only travel routes to and from Clinton Avenue (the fewest vehicles of all roadway segments) require two turning movements. All other routes require only one turning movement. With this proposed realignment, safety will be improved by eliminating the closely spaced major intersections and potential turning and weaving movements for the majority of traffic. Corridor B meets both purpose and need criteria.

Corridor B has minimal impacts to the natural environment. There are no Special Designations, verified impaired drainage basins, floodplains, forested wetlands, non-forested wetlands, water features, or conservation and managed lands. Corridor B has a moderate potential for involvement with protected species, meaning suitable habitat for protected species is present within the study area, but no observations or positive indications exist to verify species presence.

From a social environment perspective, Corridor B has the least impacts, relative to the corridors advancing from the purpose and need evaluation (Corridors A, B, and C). It has six potential residential relocations, includes three neighborhoods, and has a low potential for effects to residential connectivity and social interaction. No non-residential relocations, prime farmlands, or community facilities are located in Corridor B. Potential socioeconomic impacts to special populations (low income, minority, etc.) was deemed to be low.

Corridor B has no involvement with cultural resources.

Corridor B has minimal involvement with physical environmental resources. It includes only three low ranked potential contamination sites and three noise sensitive sites.



The engineering evaluation revealed Corridor B is tied with Corridor A with the fewest engineering issues. Corridor B has seven utilities and two drainage basins. There is no involvement with bridges or railroad crossings. Of the three corridors advancing from the purpose and need evaluation, Corridor B is slightly longer than Corridor A and, therefore, requires slightly more stormwater pond acreage and right of way acreage, and involves slightly more parcels.

Total project cost is estimated at \$27,815,461 to \$38,315,461.

Taking into account the analysis in this ACE, Corridor B is selected to advance to the PD&E study. While slightly more costly than Corridor A, the fewer potential social impacts justify the selection of Corridor B. Corridor B has half the potential residential relocations as Corridor A and no potential non-residential relocations, compared to two for Corridor A. While Corridor A has greater potential effects to community cohesion for Harmony Heights and South Clinton Heights, potential effects from Corridor B are low. These potential social impacts outweigh the additional costs associated with Corridor B.

### **8.3 Recommended Systems Management and Operational Strategies**

TSM&O strategies will be evaluated as part of the PD&E study.

# APPENDICES

# *Appendix A*

## **Methodology Memorandum**

Alternative Corridor Evaluation  
Methodology Memorandum

Florida Department of Transportation  
District Seven

US 301/US 98/SR 35/SR 700/Clinton Avenue  
Intersection Realignment Study

Pasco County, Florida

Financial Management Number: 443368-1-22-01  
ETDM Number: 14374

August 2019

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

This planning product may be adopted into the environmental review process, pursuant to Title 23 USC §168, or the state project development process.



# 1.0 Background

The Florida Department of Transportation (FDOT) District Seven is utilizing the Alternative Corridor Evaluation (ACE) process as part of the US 301/US 98/Clinton Avenue Intersection Realignment Study. ACE is typically performed as part of the Efficient Transportation Decision Making (ETDM) screening efforts that precede the Project Development and Environment (PD&E) phase and is used to identify, evaluate, and eliminate alternatives. Alternatives advancing to the PD&E phase should support the purpose and need for a project in accordance with all applicable laws and regulations, through the balancing of engineering, environmental, and economic aspects while considering comments received through the ETDM screening efforts.

The purpose of this Methodology Memorandum (MM) is to document the evaluation methodology to be utilized for the recommendation and elimination of alternatives. The MM details the goals of the evaluation, the methodology, how coordination with stakeholders will occur, and the basis for decision making. This MM will be reviewed by the Environmental Technical Advisory Team (ETAT) members during a 30-day minimum comment period.

The evaluation of the corridors will be detailed in the Alternative Corridor Evaluation Report (ACER). The results in the ACER will identify the reasonable alternatives for National Environmental Policy Act (NEPA) analysis.

## 1.1 Contact Personnel

Brian Shroyer, FDOT Multimodal Project Manager  
FDOT District Seven  
11201 North McKinley Drive  
Tampa, FL 33612  
(813) 975-6449  
[Brian.Shroyer@dot.state.fl.us](mailto:Brian.Shroyer@dot.state.fl.us)

Craig Fox, EMO Project Manager  
FDOT District Seven  
11201 North McKinley Drive  
Tampa, FL 33612  
(813) 975-6082  
[Craig.Fox@dot.state.fl.us](mailto:Craig.Fox@dot.state.fl.us)

Kris Carson, Public Involvement Officer  
FDOT District Seven  
11201 North McKinley Drive  
Tampa, FL 33612  
(813) 975-6202  
[Kristen.Carson@dot.state.fl.us](mailto:Kristen.Carson@dot.state.fl.us)

## 1.2 Project Information

FDOT District Seven initiated this ACE for the US 301/US 98/Clinton Avenue Intersection Realignment Study in Pasco County, Florida in April 2019. The realignment of the US 98 intersection is listed in both the Needs Plan and the Cost Feasible Plan of the Pasco County Metropolitan Planning Organization's (MPO) 2040 Long Range Transportation Plan (LRTP) and planned for construction between 2030 and 2040 with a total cost of \$23,566,428. Funding for a PD&E study to evaluate the realignment of the US 301/US 98/Clinton Avenue intersection is ranked #8 (WPI Segment #443368-1) on the Pasco County MPO's 2019-2020 Transportation Improvement Program (TIP) Priority List: Table 1: Combined Roadway Capacity, Intersection, and ITS Projects. The PD&E for this project was funded (\$1,000,000) in FY 2019 and is shown on page 50, in the FY 2019-2020 TIP. No additional funding is currently set in the FDOT's Five Year Work Program.

The ETDM Planning Screen for ETDM #14374 (US 98 (SR 35/SR 700)/US 301/(SR 39)/Clinton Avenue (CR 52A) Intersection Realignment Study) was initiated on December 11, 2018 with the Preliminary Planning Screen Summary Report published on April 23, 2019. For the Planning Screen, a single study area (Alternative #1) that would likely encompass all alternative corridors to be developed was screened to help identify sensitive resources and other fatal flaws that should be avoided. Features identified during the ETDM screening as important considerations include, but are not limited to: low income residents, the Withlacoochee (multi-use) Trail, historic resources, cemeteries, wetlands, water quality, floodplains, wildlife and habitat, contamination, and noise. There are previous studies on US 98 in this area and previously identified corridor alternatives.

## 1.3 Project Description

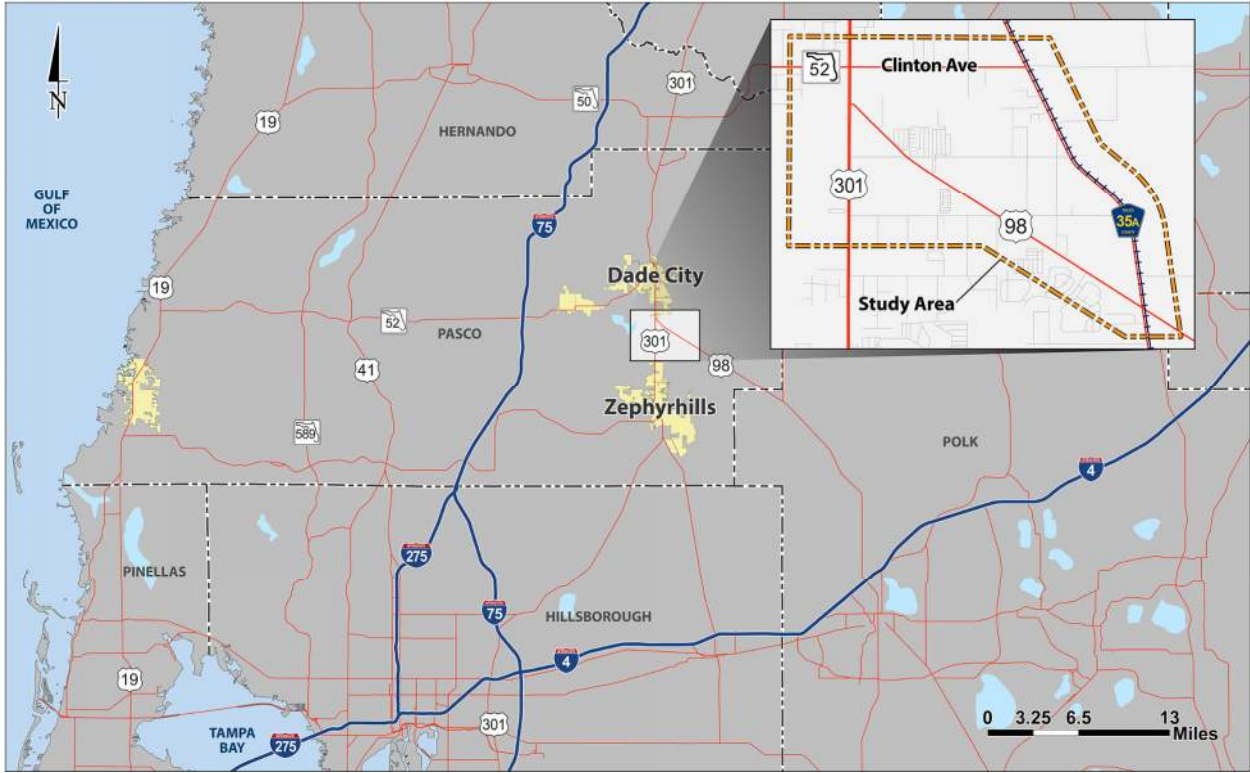
This project will evaluate potential alternatives for the realignment of US 98 to Clinton Avenue to eliminate the closely spaced intersections of US 301 at US 98 and US 301/US 98 at Clinton Avenue, which are currently spaced approximately 1,600 feet apart. US 301 is currently a four-lane divided facility throughout the project limits and is functionally classified by FDOT as an urban principal arterial. A PD&E Study has been approved for the widening of US 301 from four lanes to six lanes in the segment from south of US 98 to Clinton Avenue. US 98 is a two-lane undivided facility and is functionally classified as an urban principal arterial. Clinton Avenue is a four-lane divided roadway and is functionally classified as an urban major collector. A project location map is shown in **Figure 1-1**.

## 1.4 Purpose and Need

### Purpose

The purpose of this project is to provide alternatives that realign US 98 to Clinton Avenue to eliminate the current closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue; facilitate east/west travel; maximize the benefits of the improvements to Clinton Avenue and designation as SR 52 west of US 301; and enhance safety along the corridor.

**FIGURE 1-1  
PROJECT LOCATION MAP**



**Need**

The need for the project is based on the following:

***Safety***

The closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue have crash rates that exceed the statewide average. Between 2013 and 2017, the intersection of US 301 at US 98 experienced a total of 68 crashes. The predominant crash types were angle crashes (57%) followed by rear end crashes (32%). This intersection exhibited a crash rate (crash ratio = 2.457) that was consistently higher than the statewide average for a similar type of intersection.

Between 2013 and 2017, the intersection of US 301 and Clinton Avenue experienced a total of 71 crashes. The predominant crash types were rear end crashes (51%) followed by angle crashes (28%). This intersection exhibited a crash rate (crash ratio = 2.181) that was consistently higher than the statewide average for a similar type of intersection. A realignment of US 98 to Clinton Avenue to eliminate high traffic volumes at one of the two closely spaced intersections has the potential to reduce crashes and enhance safety.

The realignment of SR 52 from east of McKendree Road to east of US 301 will begin in 2019 and will serve as an additional east/west route in the regional transportation network. When completed, this improvement will increase traffic at the US 301 at US 98 and US 301 at Clinton Avenue intersections, exacerbating the current intersection safety concerns.

## 2.0 Goals and Objectives

### 2.1 Goals and Intent of the Alternative Corridor Evaluation

The ACE process, as defined in the PD&E Manual, Part 1, Chapter 4 and ETDM Manual, meets the intent of the Code of Federal Regulations (CFR), Title 23, Part 450 (Planning Regulations) and 23 U.S. Code (USC) §168 (Integration of Planning and Environmental Review) of streamlining the planning and environmental review process. It is the intent to conduct the corridor study for the proposed US 301/US 98/Clinton Avenue Intersection Realignment so that planning decisions can be directly incorporated into the NEPA process. The goals of the ACE are to address ETAT comments, to eliminate alternative corridors that do not meet the project's purpose and need or that have disproportionate and/or significant impacts, and to recommend viable corridors to be carried forward into the PD&E Study. The ACE process ensures that all alternatives are evaluated consistently.

### 2.2 Status in Project Delivery

The ETDM Planning Screen for ETDM #14374 (US 98 (SR 35/SR 700)/US 301/(SR 39)/Clinton Avenue (CR 52A) Intersection Realignment Study) was initiated on December 11, 2018 with the Preliminary Planning Screen Summary Report published on April 23, 2019. For the Planning Screen, a single study area (Alternative #1) that would likely encompass all alternative corridors to be developed for this study was screened to help identify sensitive resources and other fatal flaws that should be avoided. There are no corridor alternatives from any previously completed planning activities. The naming of each corridor or alternative identified in the ACE will remain consistent throughout the ACE process and be carried through the PD&E phase.

### 2.3 Decision Points/Milestones

This Draft MM will be distributed to the ETAT for review and comment through the EST (Environmental Screening Tool). The ETAT has 30 days in which to comment on the Draft MM. Once comments on the Draft MM have been incorporated, the revised MM will be included in the republished Planning Screen Summary Report.

The revised MM and implementation of the ACE process will be documented in the ACER. The results of the ACE will determine which corridors are not feasible or do not meet the purpose and need and should be eliminated from further study. The Draft ACER will be distributed to the ETAT for review and comment through the EST. The ETAT has 30 days in which to comment on the Draft ACER. After ETAT review, the ACER will be submitted to the FDOT Office of Environmental Management (OEM), the Lead Agency under the NEPA Assignment Program, for acceptance and concurrence. After acceptance and concurrence from OEM, the Final Planning Screen Summary Report will be published and will include the MM and ACER.



## 3.0 Alternative Corridor Evaluation Methodology

### 3.1 Data Collection

The data used to evaluate the project corridor’s social, cultural, natural and physical environmental impacts will be derived from (GIS), literature and field reviews, where appropriate. Various GIS datasets within the Florida Geographical Data Library (FGDL), the Southwest Florida Water Management District (SWFWMD), the Florida Fish and Wildlife Conservation Commission (FWC), the Florida Natural Areas Inventory (FNAI), the National Park Service (NPS), the Federal Emergency Management Agency (FEMA), the U.S. Department of Agriculture’s (USDA) Natural Resource Conservation Service (NRCS), the Florida Department of Environmental Protection (FDEP), the National Wetland Inventory (NWI), and the Pasco County Government (PC) will be used as data sources. In addition, field and literature reviews will be performed to verify key project corridor constraints. A preliminary list of GIS data layers that may be used in the assessment of the project study area is provided in **Table 3-1**.

**TABLE 3-1  
GIS DATA LAYERS**

GIS Data Layer	Source (Year)
<b>Social and Economic Layers</b>	
Airports	PC (2018)
Cemeteries	PC (2018)
Churches	PC (2018)
Developments of Regional Impact (DRIs)	FGDL (2018)
Fire Stations	PC (2018)
Future Land Use	PC (2018)
Hospitals	PC (2018)
Low and Moderate Income	PC (2018)
Planned Unit Developments (PUDs)	PC (2018)
Police Stations	PC (2018)
Prime Farmland	NRCS (2018)
Public Housing	PC (2018)
Public Lands	PC (2018)
Residential Land Use	PC (2018)
Schools	PC (2018)

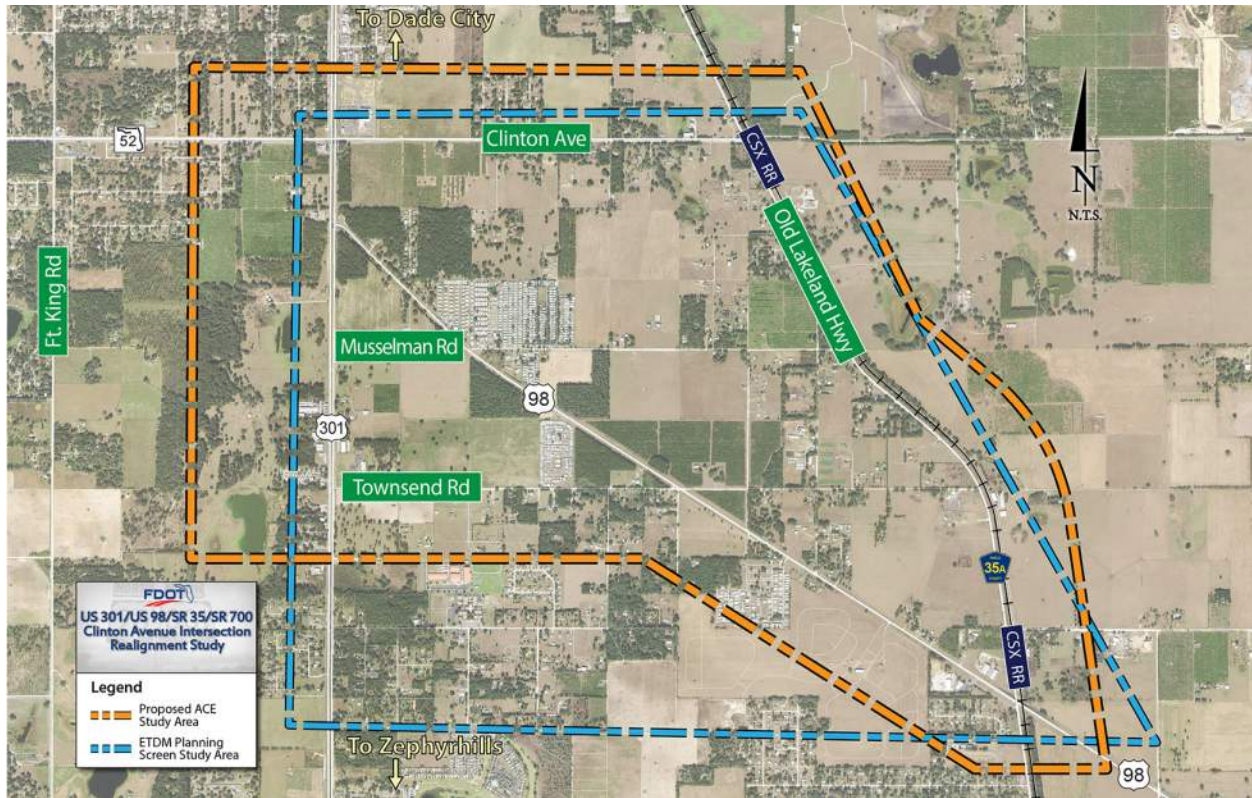
**TABLE 3-2  
GIS DATA LAYERS (CONTINUED)**

GIS Data Layer	Source (Year)
<b>Cultural Layers</b>	
American Indian Lands	FGDL (2017)
Historical (Sites, Railroads, Structures & Districts)	PC (2018)
Local Parks	PC (2018)
National Register of Historic Places	NPS (2014)
State Historic Preservation Officer (SHPO) Bridges	FGDL (2019)
SHPO Cemeteries	FGDL (2019)
SHPO Resource Groups	FGDL (2018)
SHPO Structures	FGDL (2019)
State Parks	FGDL (2017)
Existing Trails	FGDL (2018)
<b>Natural Environment Layers</b>	
Conservation Lands	FNAI (2019)
Critical Wildlife Areas	FWC (2019)
Eagle Nests	FGDL (2016)
Flood Zones	FEMA (2018)
FWC Managed Lands	FWC (2019)
Mitigation Banks	FGDL (2018)
Outstanding Florida Waters (OFWs)	FGDL (2018)
Protected Species Occurrence Potential (multiple layers)	FWC (2017, 2012, 2010, 2003); FNAI (2018)
SWFWMD Owned Lands	SWFWMD (2010)
Wetlands	NWI (2018)
Wetlands and Water Land Uses	SWFWMD (2014)
<b>Physical Environment Layers</b>	
Brownfields (EPA/FDEP)	FGDL (2018)
EPA Pollutant Sites (air, water, RCRA)	FGDL (2018)
Hazardous Materials Generator Sites	FDEP (2017)
Landfills	PC (2018)
Petroleum Contamination Monitoring Sites	FGDL (2019)
Solid Waste Facilities	FGDL (2018)
Storage Tank Contamination Monitoring	FGDL (2019)
Superfund Sites	FGDL (2018)

### 3.2 Study Area

The study area used for the ETDM Preliminary Planning Screen has been refined to standardize and make uniform the buffers along US 301, Clinton Avenue, Old Lakeland Highway, and US 98. **Figure 3-1** shows the proposed ACE study area in comparison to the ETDM Preliminary Planning Screen study area.

**FIGURE 3-1  
PROPOSED ACE STUDY AREA**



### 3.3 Identify Corridor Constraints

The GIS data will be used to identify corridors that avoid and minimize impacts to sensitive environmental features to the extent possible. The data sources included in **Table 3-1** will be used to locate social, cultural, natural, and physical constraints within the study area.

Based on ETAT commentary from the Preliminary Planning Screen, features identified as important considerations include, but are not limited to: low income residents, the Withlacoochee (multi-use) Trail, historic resources, cemeteries, wetlands, water quality, floodplains, wildlife and habitat, contamination, and noise.

### 3.4 Identify Potential Corridors

Corridors with a width of 250 feet will be developed for screening purposes. It is anticipated that 4-6 lane divided typical sections will be developed for corridor consistency and to accommodate the projected future traffic demand. The developed corridors will tie into the 4-lane Clinton Avenue extension west of US 301 (to be designated as SR 52) and to US 98.

Potential typical sections include a high speed urban typical section requiring 148 feet of right of way and a rural typical section requiring 192 feet of right of way. This corridor width allows for flexibility in developing proposed alignments that avoid potential constraints.

If necessary, the corridor width also allows for multimodal accommodations including sidewalks, bike lanes, recreational trail, and transit. The typical sections and the corridor alignments will be further refined during the PD&E Study phase. Traffic analysis is being performed as part of the ACE to verify that traffic operations in developed corridors improve or at a minimum remain the same.

It is anticipated that five (5) to seven (7) alternatives will be developed for evaluation as part of this ACE. The naming of each corridor or alternative identified in the ACE will remain consistent throughout the ACE process and be carried through the PD&E phase.

### 3.5 Corridor Analysis and Evaluation Criteria

The corridors will be evaluated based on consideration of meeting the project purpose and need, avoidance and/or minimization of potential impacts to environmental resources, engineering feasibility, a narrative assessment of the corridors, and agency/public input. The analysis and assessment for each of these factors are described below.

#### 3.5.1 Purpose and Need Evaluation

Each corridor will be evaluated for how well it satisfies the project purpose and need. Each corridor will be assigned a yes or no for its ability to:

- Realign US 98 to Clinton Avenue
- Improve the safety at the intersections of US 301 at US 98 and US 301 at Clinton Avenue

Corridors will be evaluated for their overall ability to satisfy the purpose and need by totaling the number of criteria that are met. Any corridor that does not satisfy the stated purpose and need criteria will be eliminated. All remaining viable corridors will be evaluated using environmental, engineering, and cost considerations. **Table 3-2** provides the purpose and need screening criteria. The evaluation matrix tables in this chapter are examples shown to demonstrate how they may look in the ACER. The number of columns and rows showing corridors will be adjusted to reflect the actual number of corridors created and evaluated.

**TABLE 3-2  
EVALUATION OF PURPOSE AND NEED**

Corridor	Eliminate Intersection Offset	Improve Safety
A		
B		
C		
D		
E		

Notes: Yes = Highest Benefit, Moderate = Neutral Benefit, No = Unsatisfactory



### 3.5.2 Environmental Evaluation

The potential direct, indirect, and cumulative effects on the environment will be considered for each corridor. **Table 3-3** provides an evaluation matrix table that will be populated with data using the GIS layers identified in **Table 3-1** and the corridor shapes for the corridors to be developed. Quantifiable values for the social, cultural, natural, and physical environment will be shown in the evaluation matrix. Non-quantifiable factors will be given a likelihood of impact rating. For listed species occurrence potential, an assessment of likelihood of impact will be made by a qualified biologist through the review of species occurrence databases from the sources identified in **Table 3-1**, as well as limited pedestrian wildlife surveys within the ACE study area shown in **Figure 3-1**.

**TABLE 3-3  
EVALUATION OF ENVIRONMENTAL FACTORS**

Category	Evaluation Criteria	Unit of Measure	Corridor A	Corridor B	Corridor C	Corridor D	Corridor E
Social	Potential Residential Displacements	Number					
	Potential Non-residential Displacements	Number					
	Community Facilities	Number					
	Neighborhoods	Number					
	Community Cohesion	Effects to residential connectivity and social interaction					
	Socioeconomic Impact to Special Populations	Potential for disproportionate impact					
	Prime Farmlands	Acres					
Cultural	Historic Resources	Number					
	Archaeological Resources	Number					
	Potential Section 4(f) Resources	Number					
	Recreation Areas/Trails	Number					
Natural	Special Designations (OFW)	Acres					
	Water Quality (Verified impaired waters drainage basin)	Acres					
	100-year Floodplain	Acres					
	Non-Forested Wetlands	Acres					
	Forested Wetlands	Acres					
	Water Features	Acres					
	Listed Species Occurrence Potential	Degree					
Conservation/Managed Lands	Acres						
Physical	Potential Contamination Sites	Number					
	Potential Noise Sensitive Sites	Number					

### 3.5.3 Engineering Considerations

The engineering considerations used to screen corridors are listed in **Table 3-4**. Engineering factors include utility conflicts, involvement of infrastructure items such as bridges and railroad crossings, drainage basins involved, requirements for stormwater ponds, and acres of new right of way required. Those corridors with greater engineering involvement are likely to have higher design and construction costs.

**TABLE 3-4  
EVALUATION OF ENGINEERING ISSUES**

<b>Evaluation Criteria</b>	<b>Unit of Measurement</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>	<b>Corridor E</b>
Utility Conflicts	Number					
Bridge Involvement	Number					
Railroad Crossings	Number					
Drainage Basins	Number					
Stormwater Ponds	Acres					
Right of Way	Acres					

The estimated construction, wetland mitigation, and right of way costs will be listed in **Table 3-5** below. Construction costs for each corridor will be developed utilizing FDOT Long Range Estimates (LRE). Right of way costs will be estimated based upon general costs of land and buildings in the study area by land use type and unit right of way costs obtained from the FDOT Right of Way Office. Wetland mitigation costs will be based on in-basin mitigation bank credit costs.

**TABLE 3-5  
EVALUATION OF COSTS**

<b>Costs</b>	<b>Corridor A</b>	<b>Corridor B</b>	<b>Corridor C</b>	<b>Corridor D</b>	<b>Corridor E</b>
Construction Costs					
Wetland Mitigation Costs					
Right of Way Costs					
<b>Total Cost</b>					

### 3.5.4 Narrative of Assessment

Based on the corridor evaluations described above, a narrative discussion and assessment of each of the corridors will be prepared in compliance with elements and issues contained in 23 USC §168(c). This narrative will provide a discussion of the affected environment, advantages and limitations of each corridor, potential safety improvements, and highlight any specific factors that may result in an unreasonable corridor. Public and agency input

(consideration of input received from the ETAT, project stakeholders and the general public) will be summarized in the narrative.

### **3.5.5 Public and Agency Considerations**

Public, agency and ETAT members input received during the screening process will be used to refine the purpose and need, corridor constraints and evaluation criteria in order to evaluate the corridors. A complete description of the opportunities for public input into the corridor evaluation process is in **Section 4.0 Stakeholder Coordination**. The results documented in the ACER will be made available to the ETAT through the EST for a 30 calendar day period. Notification of the public meetings will be distributed to all the individuals on the project mailing list including local officials, agencies, appropriate Native American tribes, stakeholders, special interest groups and property owners within the affected study area. If meetings are needed to explain the results of the ACER, they will be scheduled as necessary.

## **3.6 Approach to Eliminating Unreasonable Alternatives**

Any corridor that does not meet the purpose and need for the project or is not considered feasible will be eliminated from further consideration, upon OEM approval. The corridors considered reasonable for detailed study as a result of the Purpose and Need Evaluation will be compared using the evaluation criteria described in **Section 3.5**. The corridor evaluation involves both quantitative and qualitative comparisons of the evaluation criteria. The comparative analysis will include evaluating the following:

- Environmental impacts and construction cost estimates (quantitative)
- Engineering factors (technical feasibility) (quantitative)
- Narrative assessment (advantages and limitations) (qualitative)
- Public support including plan consistency and controversy potential (qualitative)

The rating process is discussed further in **Section 3.6.1**. Upon completion of this assessment and OEM approval, viable corridors will be carried forward into the PD&E Study. The evaluation criteria and units of measure used to evaluate and compare alternatives will include resources issues that are consistent and acceptable to each respective resource agency.

### **3.6.1 Summary Corridor Ratings**

A summary comparative evaluation matrix will be utilized to facilitate the overall comparison of alternatives and identification of corridors to be advanced to the PD&E study. The summary comparative evaluation matrix (**Table 3-6**) will reflect the alternative corridors in each of the evaluation categories.



**TABLE 3-6  
SUMMARY OF COMPARATIVE EVALUATION**

Corridor	Purpose and Need	Evaluation Criteria				Recommended for Further Consideration
		Environmental Impacts	Engineering Performance	Public Support	Cost	
A						
B						
C						
D						
E						

### 3.7 Alternative Corridor Evaluation Report

The results of the analysis described above will be summarized in the ACER. This report will be submitted to the ETAT and interested stakeholders through the EST for a 30 calendar day period. Once comments are addressed, a corridor public workshop will be held to allow the public to provide input. The appropriate decision making matrices will be included in the ACER to substantiate findings, provide reasons for eliminating corridors, and to identify corridors that will be carried forward into the PD&E phase. The ACER will be included in the republished Final Planning Screen Summary Report.

## 4.0 Stakeholder Coordination

Public outreach during the ACE will be used to engage stakeholders to identify community values and concerns that may affect the development and evaluation of corridors. **Table 4-1** lists the public and agency events that will be conducted. In addition, other meetings with the public, elected officials, special interest groups or public agencies may occur, as needed. Other communication aids will be utilized including a project website and newsletters.

**TABLE 4-1  
SCHEDULED PUBLIC MEETINGS**

Meeting	Purpose	Schedule
Elected Officials/Agency Kick-off Meeting	To introduce the project, set expectations for the project, and present the project schedule.	Beginning of ACE Study (June 2019)
Small Group Meetings	To discuss project purpose and progress and to seek project input	Throughout ACE Study
Alternative Corridors Workshop	To present the results of the ACE and seek public opinion on corridor recommendations	End of ACE Study (Winter 2019/2020)

In compliance with the ETDM Master Agreement, agency involvement regarding project needs, issues, evaluation criteria, avoidance, minimization, decisions, and preliminary mitigation concepts will be a continuous effort throughout the ETDM and ACE processes. Agency coordination was initiated with the ETAT review during the Planning Screening. ETAT coordination will continue throughout the ACE process with ETAT reviews of this MM and the ACER.

## 5.0 Conclusion

In conclusion, the purpose of this MM is to document and describe the ACE methodology to be conducted for the US 301/US 98/Clinton Avenue Intersection Realignment Study. The memorandum details the goals of the evaluation, the methodology, the stakeholders coordination process, and the basis for decision-making. The evaluation of the corridors will be detailed in the ACER and the results will identify the reasonable alternatives for NEPA analysis.

# *Appendix B*

## **ETAT Comments on Draft ACER**

# ACE Document Reviews

---

## Review Event

**ETDM Project#:** 14374  
**Project Name:** US 98 (SR 35/SR 700)/US 301/(SR 39)/Clinton Avenue (CR 52A) Intersection Realignment Study  
**Event Type:** ACER  
**Start Date:** 10/07/2020  
**End Date:** 11/06/2020

---

## Methodology Memorandum Documents

Document (PDF)	Size (MB)	Description
<a href="#">443368-1 US 98 Clinton Ave ACER.pdf</a>	14.05	

---

## Review Comments/Responses

### FDOT Office of Environmental Management

Reviewed by Thu-Huong Clark on 10/30/2020

**Status:** Final

**Comments:** OEM has no comments on the ACER.

**Response:**

### FL Department of Agriculture and Consumer Services

Reviewed by Mark Kiser on 11/03/2020

**Status:** Final

**Comments:** For FDACS, Corridor B is the preferred alternative, as there are no impacts to wetlands and no wetland mitigation costs.

**Response:**

### FL Department of Economic Opportunity

Reviewed by Matt Preston on 11/06/2020

**Status:** Final

**Comments:** DEO staff initially reviewed this project in the Planning Screen in late 2018/early 2019. It was found to be compatible with community development goals and consistent with the applicable Comprehensive Plan(s). DEO staff also reviewed the Draft ACE Methodology Memorandum later that same year and had no additional comments. DEO staff reviewed the most recent draft ACE package and has no additional comments to provide at this time.

**Response:**

### FL Department of State

Reviewed by Alyssa McManus on 11/04/2020

**Status:** Final

**Comments:** This office still looks forward to reviewing a CRAS for this project.

**Response:**



## FL Fish and Wildlife Conservation Commission

Reviewed by Jason Hight on 11/03/2020

**Status:** Final

**Comments:**

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the Draft Alternative Corridor Evaluation Report (ACER) for ETDM #14374, in Pasco County in Florida Department of Transportation (FDOT) District 7, and provides the following comments related to potential effects to fish and wildlife resources for this project.

The project involves the realignment for the US 98 and Clinton Avenue intersection in Pasco County. According to FDOT, the closely spaced intersections of US 301 at US 98 and US 301 at Clinton Avenue have experienced crash rates that exceed the statewide average, and the future realignment will improve safety and provide an additional east-west route within the regional transportation network. The size of the ACER study assessment area for this realignment project is approximately 3,535 acres; this is slightly larger than the ETDM project assessment area (approximately 3,523 acres).

This ACER evaluated 5 alternative corridors (A through E), varying in length between 0.80 mile and 3.48 miles. Evaluation criteria included: purpose and need satisfaction, environmental impacts, engineering issues, right-of-way costs, and construction costs. Alternatives D and E do not meet the purpose and need criterion of eliminating the closely spaced major intersections and were removed from further consideration. Alternatives A, B, and C were further evaluated based on the other criteria. Ultimately, the ACER recommended the Alternative B corridor to advance to the Project Development and Environment (PD&E) Study. FWC staff agrees with the FDOT conclusion that Alternative B satisfies the purpose and need, appears to have minimal impacts to the natural environment, and moderate potential for involvement with protected species.

FWC staff previously reviewed ETDM #14374 on January 14, 2019 and October 3, 2019, and our comments in the Environmental Screening Tool (EST) remain applicable. FWC staff continue to recommend that the PD&E Study address natural resources by including those measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area as stated in the EST comments. FWC staff believe that direct and indirect effects of this project to fish and wildlife resources could be in the minimal range if appropriate measures are taken as directed in the comments previously provided in the EST.

FWC staff appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Kristee Booth at (850) 363-6398 or email [kristee.booth@MyFWC.com](mailto:kristee.booth@MyFWC.com) to initiate the process for further overall coordination on this project if necessary.

**Response:**

## National Marine Fisheries Service

Reviewed by David A. Rydene on 10/08/2020

**Status:** Final

**Comments:**

NMFS staff has reviewed the Draft Alternative Corridor Evaluation (ACE) Report for the US 301/US 98/SR 35/SR 700/Clinton Avenue Intersection Realignment in Pasco County (Financial Management Number 443368-1-22-01; ETDM 14374). Although NMFS trust resources will not be affected by the proposed project, NMFS believes that the data and analyses presented in the report are accurate and the conclusions valid.

**Response:**

## Southwest Florida Water Management District

Reviewed by Monte Ritter on 10/09/2020

**Status:** Final

**Comments:**

The Southwest Florida Water Management District (SWFWMD) has reviewed the draft ACER report and has no new comments on the recommendation to carry forward Corridor B for further study as part of the PD&E study. The SWFWMD comments provided as part of the ETDM #14374 planning screen review are still valid.

**Response:**

## US Army Corps of Engineers

Reviewed by Randy Turner on 10/29/2020

**Status:** Final

**Comments:** The Corps has reviewed the Draft Alternative Corridor Evaluation Report (ACER) for the US 301/US 98/SR 35/SR 700/Clinton Avenue Intersection Realignment Study, dated August 2020, and has no comments except the ACER provides the procedures to evaluate the corridor alternatives.

**Response:**

## US Environmental Protection Agency

Reviewed by Roshanna White on 11/06/2020

**Status:** Final

**Comments:** The U.S. Environmental Protection Agency reviewed the Alternative Corridor Evaluation Report for Project# 14374-US 301/US 98/SR 35/SR 700/Clinton Avenue Intersection Realignment Study in Pasco County, Florida. The Florida Department of Transportation (FDOT) Preferred Alternative is Corridor B. The EPA has no comment and awaits the Project Development and Environment (PD&E) for a detailed analysis.

**Response:**

## US Fish and Wildlife Service

Reviewed by Zakia Williams on 11/05/2020

**Status:** Final

**Comments:** The Service commented on this project through the ETDM screening on February 2019. The project area falls within the scrub jay consultation area and within the Core Foraging Area for wood storks. Species of concern that have the potential to occur in this area is the Florida scrub-jay and the wood stork. Dependent upon the alternative(s) selected, the proposed project is expected to result in moderate involvement with wildlife and habitat resources. If it is determined the project will affect federally listed species and/or their habitat, the Department will initiate informal consultation with FWS during the Project Development process.

**Response:**

The following organizations have been notified but have not submitted a review.

Organization	Extension Start Date - End Date
FL Department of Environmental Protection	No extension requested
Hernando-Citrus County MPO	No extension requested
Natural Resources Conservation Service	No extension requested
Pinellas County MPO	No extension requested
Seminole Tribe of Florida	No extension requested

*The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated 12/14/2016 and executed by FHWA and FDOT.*

**From:** Shroyer, Brian <Brian.Shroyer@dot.state.fl.us>  
**Sent:** Tuesday, December 1, 2020 8:30 AM  
**To:** Connor, Kevin  
**Subject:** RE: US 301/US 98/Clinton Avenue Intersection Realignment Study

[EXTERNAL EMAIL] This email originated outside of Lochner. **\*\*NEVER CLICK or OPEN\*\*** unexpected links or attachments. **\*\*NEVER\*\*** provide User ID or Password. If this email seems suspicious, forward the email to spam @ hwlochner.com for inspection.

Here are comments from Pasco county.

*Brian L Shroyer, CPM*

FDOT Multimodal Project Manager  
Certified Public Manager  
Florida Certified Contract Manager

11201 North McKinley Drive  
Tampa, FL 33612  
(813) 975-6449

[Brian.Shroyer@dot.state.fl.us](mailto:Brian.Shroyer@dot.state.fl.us)



Chat with me on Teams

---

**From:** Amir Jamali <[ajamali@pascocountyfl.net](mailto:ajamali@pascocountyfl.net)>  
**Sent:** Monday, November 23, 2020 4:32 PM  
**To:** Shroyer, Brian <[Brian.Shroyer@dot.state.fl.us](mailto:Brian.Shroyer@dot.state.fl.us)>  
**Cc:** Ahsan K. Khalil <[akhalil@pascocountyfl.net](mailto:akhalil@pascocountyfl.net)>; Nima Haghighi Naeini <[nhaghighi@pascocountyfl.net](mailto:nhaghighi@pascocountyfl.net)>; Stacy Y. Burgess <[sburgess@pascocountyfl.net](mailto:sburgess@pascocountyfl.net)>; Nectarios C. Pittos <[npittos@pascocountyfl.net](mailto:npittos@pascocountyfl.net)>; Tania Gorman <[tgorman@pascocountyfl.net](mailto:tgorman@pascocountyfl.net)>  
**Subject:** US 301/US 98/Clinton Avenue Intersection Realignment Study

**EXTERNAL SENDER:** Use caution with links and attachments.

Good Afternoon Mr. Shroyer,

Thank you for giving Pasco County Planning and Development Department this opportunity to review the the subject realignment study. The following are our comments/concerns regard to this project:

1. The main concern that we have is about existing Clinton Ave. (from proposed alignment to Old Lakeland Highway) and US 98 (from US 301 to proposed alignment). If the proposed alignment is constructed, how would be the intersection of existing Clinton Ave. and US 98 with the proposed alignment? If these segments of Clinton Ave. and US 98 are supposed to be eliminated, then the

network connectivity would be reduced in that corner as two east-west major roadways are gone. And the County probably needs to add new collector roadways to mitigate this concern, which can result in monetary cost for Pasco County. If Clinton Ave. is supposed to be remain as how it is today, then it would be a closely spaced intersection to the Clinton Ave. & US 301 intersection and the safety concerns will remain as how they are today.

2. The other comment is about the cheaper safety countermeasures in order to improve the traffic safety. As about 50 percent of crashes are right angle crash, have you ever analyzed the impact of cheaper countermeasures such as signal timing modification, installing dynamic signal warning flashes, increase yellow and all red clearance intervals? One alternative can be realigning US 98 same as Alignment D and installing safety countermeasures to improve safety along US 301. With alignment D, the signal spacing would be about 1 mile, which is a safe spacing as the maximum signal spacing per FDOT Standards is half a mile.

3. The recommended alignment may result in additional improvements i.e. additional Turn lanes/extension of turn lanes, signal mast arm modifications etc. All these items can be very expensive especially considering there are existing businesses at or near the intersection. Aside from just ROW, business damages may have to be paid which can be a very expensive ordeal.

Sincerely,



**Amir Jamali, Ph.D.**

Senior Transportation Planner  
Planning and Development Department

Pasco County

P 727-847-2411 Ext. 8647

8731 Citizens Drive, Suite 360

New Port Richey, FL 34654

[ajamali@pascocountyfl.net](mailto:ajamali@pascocountyfl.net)

[www.pascocountyfl.net](http://www.pascocountyfl.net)

Development Services Branch Social Media:



***On March 12, 2020, the Pasco County Board of County Commissioners declared a Local State of Emergency with regard to the COVID-19 virus. As part of the alternative service model for Continuation of Operations for this type of Local State of Emergency, PDD staff are working remotely and are not available in the office. Please use email or phone to communicate with staff until further notice.***



The information transmitted, including attachments, is intended only for the person(s) or entity to which it is addressed and may contain material that is confidential, privileged and/or exempt from disclosure under applicable law. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and destroy any copies of this information. Under Florida law, email addresses are public records. If you do not want your email address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

CUSA18A7