US HIGHWAY 98
DADE CITY
PD&E Study

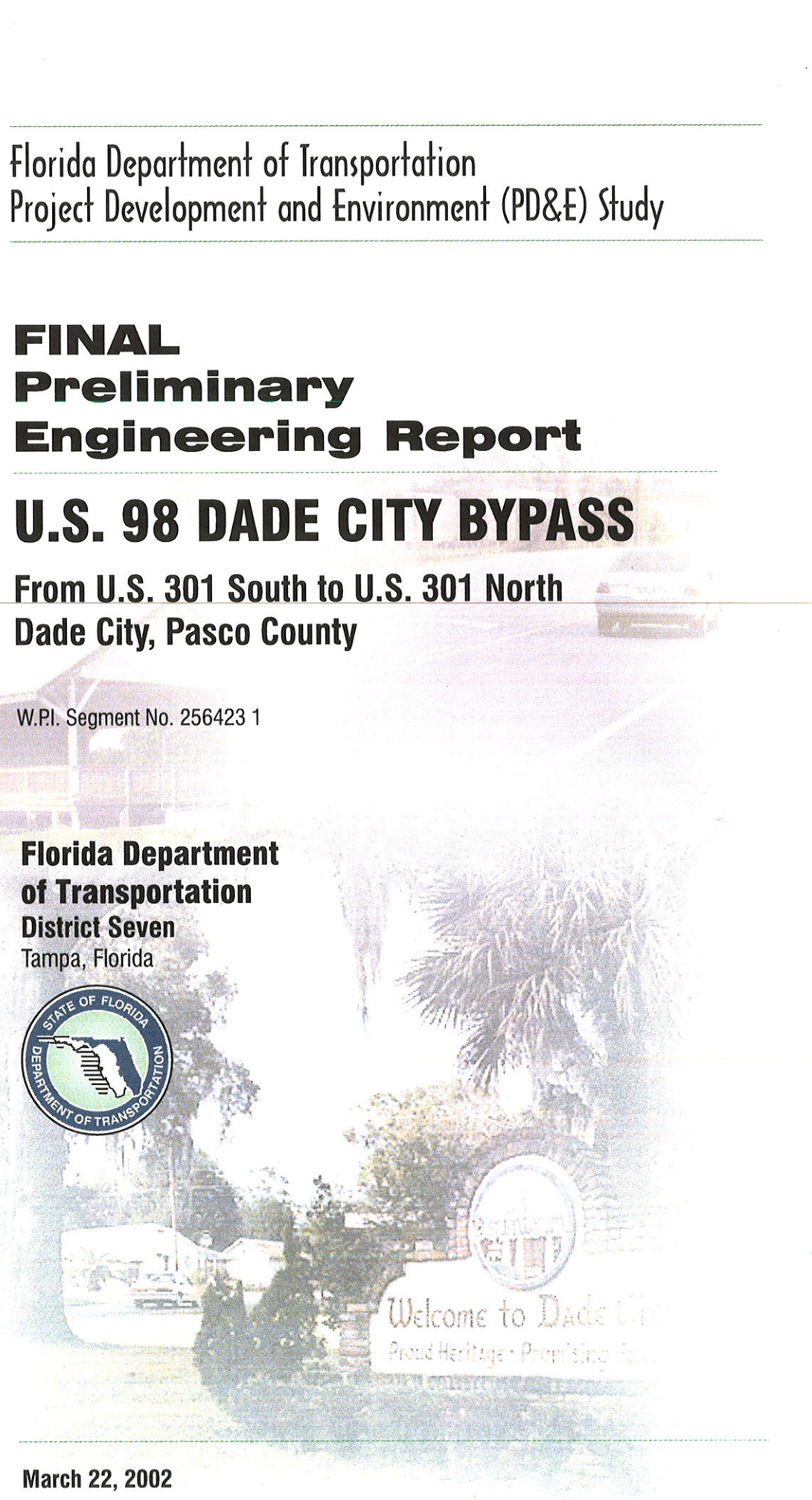
Florida Department of Transportation
Project Development and Environment (PD&E) Study

FINAL
Preliminary
Engineering Report

U.S. 98 DADE CITY BYPASS

From U.S. 301 South to U.S. 301 North
Dade City, Pasco County

W.P.I. Segment No. 256423 1



Florida Department
of Transportation
District Seven
Tampa, Florida

March 22, 2002

PRELIMINARY ENGINEERING REPORT

US 98 Dade City Bypass
(State Road 533)

FROM THE VICINITY OF THE US 301 SOUTH INTERSECTION
TO THE VICINITY OF THE US 301 NORTH INTERSECTION
IN
PASCO COUNTY, FLORIDA

WPI Segment Number: 256423 1
Federal-Aid Project Number: 3112-017P

The proposed action consists of upgrading US 98 from a two-lane to a four-lane divided highway for approximately 1.6 miles.

Florida Department of Transportation
District Seven
Tampa, Florida

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 EXECUTIVE SUMMARY

The FDOT is proposing improvements to the US 98 Dade City Bypass from the vicinity of the US 301 South intersection to the vicinity of the US 301 North intersection, in Dade City, Pasco County, a distance of about 1.6 miles. The proposed improvements consist of widening the existing two-lane rural roadway to an urban four-lane divided highway. The project location is shown in Figure 2-1. A description of the project is found in Section 2.0.

The proposed improvements to the US 98 Dade City Bypass consist of the following:

The recommended alternative for the US 98 Dade City Bypass is a four-lane divided urban typical section. A description of the recommended typical section is found in Section 9.2. The proposed four-lane typical section is shown in Figure 8-1 in Section 8.4.1.

The intersection concepts and recommended alignment is described in Sections 9.3 and 9.4 and shown on the Concept Plans in Section 10.0. An optional intersection concept is provided for River Road.

The minimum right-of-way width for the recommended typical section is 102 feet. Additional right-of-way is required in areas where the roadway profile is elevated above the surrounding topography, at intersections and for stormwater management facilities and floodplain compensation sites. The recommended right-of-way is shown on the Concept Plans in Section 10.0.

The recommended alignment would require seven residential and five business relocations. The relocations are described in Section 9.5 and shown on the Concept Plans in Section 10.0.

The total estimated project costs are estimated to be $24,047,800. A breakdown of the project costs are shown in the evaluation matrices in Section 8.5 and described in Sections 9.6, 9.7 and 9.8.

The Final Design, Right-of-Way Acquisition and Construction phases of this project are not currently funded in the FDOT Five-Year Work Program.

The adopted access classification of the US 98 Dade City Bypass is to be changed from Access Class 3 to Access Class 5.

1.1 Commitments

The FDOT is committed to the following measures:

1. Railroad Crossings - The FDOT is committed to evaluate the need to improve the railroad crossings at Tuskegee Avenue and Martin Luther King Boulevard during the design phase of this project.

2. Willingham Road - The FDOT is committed to coordinate during design with the appropriate local governments to facilitate improvements to Willingham Road.

3. Traffic Signals - The FDOT is committed to evaluate during design or after construction the need for traffic signals at the intersections of CR 35A, Tuskeegee/Buford Avenues, Meridian Avenue (SR 52), River Road, and US 301 North. Monitoring the operation of the build condition is to be undertaken for these intersections to determine if the signals are warranted. A recommendation for a traffic signal installation is conditional on results of signal warrant analysis.

4. Pedestrian Accommodations – The FDOT is committed to provide pedestrian crossings at the signalized intersections of US 301 South and Martin Luther King Boulevard. The FDOT is also committed, during design, to evaluate pedestrian crossings at the intersections of CR 35A, Tuskeegee/Buford Avenues, Meridian Avenue (SR 52), River Road, and US 301 North.

5. Lighting - The FDOT is committed to consider roadway lighting for the length of this project. Dade City will be required to enter into a maintenance agreement for the lighting.

6. CR 35A - The FDOT is committed to consider widening the US 98 Dade City Bypass only from CR 35A to US 301 North during design if Pasco County has studied and committed to construct CR 35A as a bypass from US 98 in Zephyrhills.

7. Gateway Concepts/Landscaping - The FDOT is committed to coordinate with Dade City to evaluate gateway landscaping and signage concepts and provide landscaping within any suitable areas of the right-of-way during the final design of this project. The FDOT will coordinate with Dade City for the placement of irrigation water supply lines and sleeves and feeder lines for reuse water during the design phase.

8. Access Management – The FDOT is committed to evaluate median openings and driveway connections from US 301 South to CR 35A during the design phase of this project. The evaluation will include: 1) a joint driveway to be shared by the Calvary Assembly of God Church and the strip center containing the tractor sales; 2) or a joint driveway to be shared by the strip center containing the tractor sales and the Ford dealership; and 3) eliminating the directional median opening at Connector Road.

1.2 Recommendations

1. Typical Section - The recommended improvements to the US 98 Dade City Bypass consist of upgrading the existing two-lane rural roadway to a four-lane divided urban facility as shown on the attached concept plans. The recommended typical section is a four-lane divided urban section that includes two 12-foot travel lanes each way, a 22-foot raised median, 4-foot bike lanes and 5-foot sidewalks each way. Left turn lanes will be accommodated in the median.

2. Special Features - It is recommended that additional pavement be provided at the southwest quadrants of the intersections with Meridian Avenue (SR 52) and Martin Luther King Boulevard to allow for U-turns.

2.0 INTRODUCTION

This Preliminary Engineering Report is prepared in accordance with the Florida Department of Transportation's (FDOT's) Project Development and Environment (PD&E) Manual, Part One, Chapter 9, and is consistent with the appropriate editions of the standard publications listed in Section 9-2.3.1 of the PD&E Manual.

2.1 Purpose

The purpose of this PD&E Study is to document the preliminary engineering concept for the improvements to the US 98 (SR 533) Dade City Bypass corridor from the vicinity of the US 301 South intersection to the vicinity of the US 301 North intersection, in Dade City, Pasco County, Florida. This report documents information regarding the need for this project and develops and evaluates various improvement alternatives based on the consideration of their socioeconomic, cultural and environmental effects.

The objectives of this report are:

a) identify, research and analyze the various factors which will be instrumental in the formulation of a design concept for the proposed improvements;
b) analyze alternative preliminary engineering concepts; and
c) document the public involvement program to date.

2.2 Project Description

The FDOT is proposing improvements to the US 98 Dade City Bypass from the vicinity of the US 301 South intersection to the vicinity of the US 301 North intersection, in Dade City, Pasco County, a distance of about 1.6 miles. The proposed improvements consist of widening the existing two-lane rural roadway to an urban four-lane divided highway.

To assist in the alternatives analysis, the US 98 Dade City Bypass corridor was divided into project segments as follows:

- Segment 1 – The vicinity of the US 301 South Intersection to Connector Road
- Segment 2 - Connector Road to Tuskeegee/Buford Avenues
- Segment 3 - Tuskeegee/Buford Avenues to Martin Luther King Boulevard
- Segment 4 - Martin Luther King Boulevard to River Road
- Segment 5 - River Road to the vicinity of the US 301 North Intersection

2.3 Study Area

US 98 is an east-west arterial highway across the central and panhandle regions of Florida. US 98 traverses peninsular Florida in a northwesterly direction from Palm Beach to the Panhandle. Through the project area, US 98 runs in a northerly direction bypassing the downtown area of Dade City in Pasco County. The US 98 Dade City Bypass PD&E Study is located within the city limits of Dade City in eastern Pasco County. Typically, it is a two-lane rural roadway through the project area. Turn lanes have been added at certain intersections. The right-of-way contains numerous jogs and setbacks and varies in width from 60 feet to 115 feet. The project location is shown in Figure 2-1.

The topography of this section of Pasco County consists of low rolling hills interspersed with many lakes and low, wet areas. Pasco County is in the central or mid-peninsular physiographic zone of the Florida Peninsula. The county is characterized by discontinuous highlands in the form of ridges separated by broad valleys. The ridges are above the static level of the water in the aquifer, but the broad valleys are below it. Broad shallow lakes are common on the valley floors, and smaller deep lakes are on the ridges.

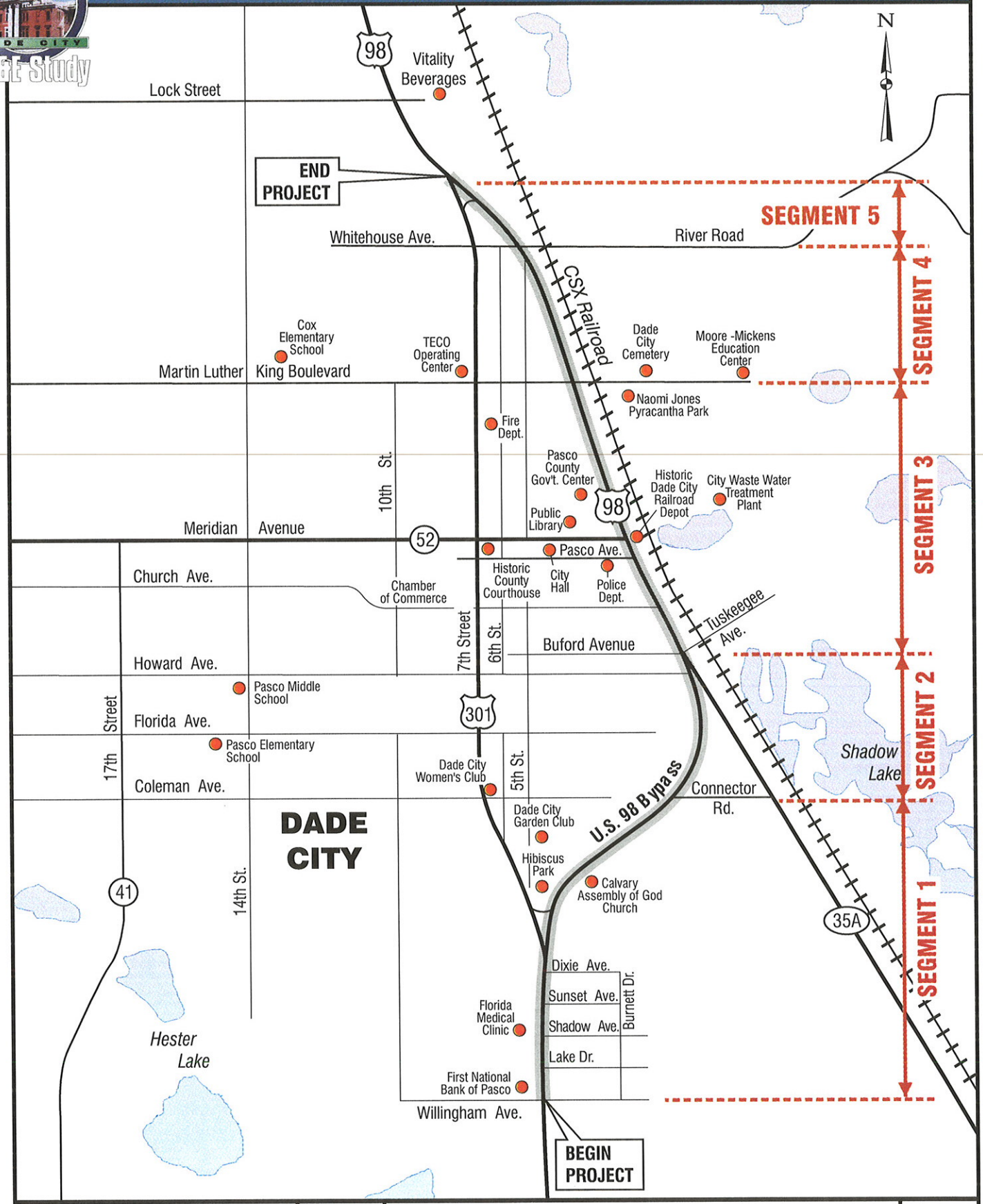
The project area lies along the eastern edge of the Brooksville Ridge and the western edge of the Western Valley regions of Pasco County.

US 301 is considered to be the approximate boundary of the Brooksville Ridge in the project area. Considerable local relief has developed along the ridge with elevations ranging from about 70 feet to 300 feet. Several thousand feet of sedimentary rock, principally various limestone formations, underlie the county. A few feet of sand cover the Brooksville Ridge. There is little surface drainage.

The Western Valley contains the valleys of the Withlacoochee and Hillsborough Rivers and consists mainly of poorly drained sandy soils. Most of the soils have a loamy subsoil, ranging from acid to alkaline over short distances. Outcroppings of limestone are common. Dade City falls within the Withlacoochee River drainage basin.

Elevations throughout the project corridor range from about 75 feet National Geodetic Vertical Datum (NGVD) 1929 at the northern end of the project to about 110 feet at the southern end near Willingham Avenue.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

PROJECT LOCATION MAP

Figure 2-1

3.0 NEED FOR IMPROVEMENT

The FDOT strives for the continuous movement of people and goods with increased safety and efficiency. The proposed project is needed to accommodate anticipated traffic projections, to improve traffic circulation, and to enhance safety conditions. A comparison of the traffic volumes used for the existing design with the current traffic projections through design year 2025 demonstrates the need to increase capacity in the corridor.

The PD&E Study evaluates ways to improve vehicular and pedestrian/bicycle safety along the corridor. Enhancements to aid in the safe access between the neighborhoods to the east of the project and the businesses and services to the west are also considered. Improvements in traffic operations have been analyzed at all the major intersections along the US 98 Dade City Bypass including US 301 South, County Road (CR) 35A, Tuskeegee/Buford Avenues, Meridian Avenue, Martin Luther King Boulevard, River Road and US 301 North.

The Traffic Report prepared for this project recommends that the US 98 Dade City Bypass be widened from a two-lane to a four-lane divided arterial for the entire study limits.

3.1 Deficiencies

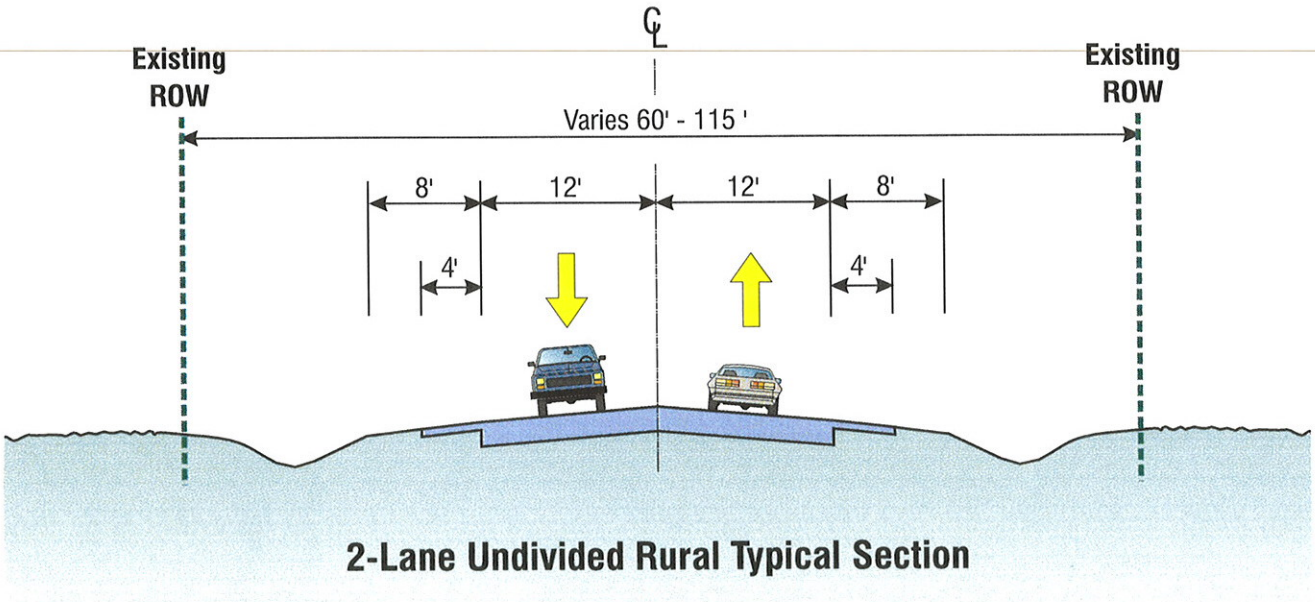
3.1.1 Typical Section

The existing roadway is typically a two-lane rural facility with two 12-foot lanes and 8-foot shoulders (4-foot paved). The roadway cross section varies throughout the length of the project. A continuous two-way left turn lane is provided in the median from Howard Avenue to Church Avenue. Median left turn lanes have been added at the intersections of Pasco Avenue, Meridian Avenue, Martin Luther King Boulevard, and River Road. From Pasco Street to north of Meridian Avenue, the US 98 Dade City Bypass is an urban typical section with a median left turn lane, valley gutters along the west side and vertical curbs along the east side. The existing US 98 Dade City Bypass two-lane typical section is shown in Figure 3-1.

The existing US 98 Dade City Bypass typical section will not provide an acceptable level of service (LOS) for the projected future annual average daily traffic (AADT) volumes of 14,200 vehicles per day (vpd) to 18,700 vpd in the opening year (2005) or 16,800 vpd to 22,200 vpd for the design year (2025).

3.1.2 Horizontal and Vertical Alignment

Horizontal Alignment - The area of the project between Connector Road and Howard Avenue in Segment 3 contains two horizontal curves joined by a tangent 345.59 feet in length. The curves, located at P.I. Stations 69+16.23 and 77+57.08, have degrees of curvature of 9^0 and 8^0, respectively. This "broken back" type of horizontal alignment is contrary to driver expectancy and can contribute to unnecessary vehicle maneuvering.



2-Lane Undivided Rural Typical Section

Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**EXISTING TWO-LANE TYPICAL SECTION**	Figure 3-1

Vertical Alignment - No deficiencies were identified in the vertical alignment for the length of the project, although a section of the existing US 98 Dade City Bypass from Pasco Avenue to south of Martin Luther King Boulevard is below the 100-year base floodplain elevation of 78.8 feet NGVD 1929.

3.1.3 Capacity: Existing and Future Levels of Service

The US 98 Dade City Bypass was designed based on traffic projections made in the early 1970s and subsequently improved based on traffic estimates from the late 1970s through the early 1990s.

Traffic analyses for current conditions were performed for this study. The analyses indicate that the US 98 Dade City Bypass is currently functioning at a LOS C from the US 301 South intersection to CR 35A and at the lowest acceptable LOS D from CR 35A to the US 301 North intersection. The analyses shows that, without improvement, the LOS on the US 98 Dade City Bypass will deteriorate to the lowest acceptable level from the US 301 South intersection to CR 35A and to an unacceptable level from CR 35A to Tuskeegee Avenue. Table 3-1 shows the results of the arterial LOS analyses for the year 1999 existing conditions and the future year 2025 No-Build Alternative.

Table 3-1
Arterial Level of Service Analysis

Project Segment	US 98 Dade City Bypass Description	Year 1999 Existing			Year 2025 No-Build		
		AADT	Peak Hour (both directions)	Peak Hour (peak direction)	AADT	Peak Hour (both directions)	Peak Hour (peak direction)
1	US 301 S. to CR 35A	C	C	C	D	D	D
2	CR 35A to Tuskeegee Ave.	D	D	D	E	E	E
3	Tuskeegee Ave. to Meridian Ave.	D	D	D	D	D	D
4	Meridian Ave. to MLK Blvd.	D	D	D	D	D	D
5	MLK Blvd. to US 301 N.	D	D	D	D	D	D

Three of the four unsignalized intersections (Tuskeegee/Buford Avenue, Meridian Avenue, and US 301 North) have at least one turning movement that is operating below the acceptable LOS D during peak hour conditions. Both signalized intersections (US 98 at US 301 South and US 98 at Martin Luther King Boulevard) are currently operating below the FDOT acceptable LOS D standard during at least one peak hour.

US 301 (7th Street) is typically a two-lane urban roadway through Dade City. The roadway is currently functioning at near capacity during the am and pm peak hours. It is expected that without improvements to the US 98 Dade City Bypass, the peak hour traffic volumes will increase by about 25% contributing to an unacceptable LOS for US 301 through Dade City.

3.1.4 Traffic Operations

US 98 Dade City Bypass/US 301 South Intersection – The existing intersection allows for a single free right turn northbound to the US 98 Dade City Bypass and a single free right turn to US 301 north from the US 98 Dade City Bypass southbound. All other movements are signalized on US 301. There is no provision for a left turn from US 301 southbound to the US 98 Dade City Bypass. The existing lane geometry is shown in Figure 6-3.

US 98 Dade City Bypass/CR 35A Intersection - The skewed, unsignalized intersection of CR 35A creates significant operational difficulties. Northbound traffic on the US 98 Dade City Bypass desiring to turn right onto Tuskeegee Avenue must merge and weave with the northbound traffic on CR 35A within a relatively short distance (about 350 feet) in order to make the turning maneuver. The northbound lane of CR 35A becomes a right turn lane at Tuskeegee Avenue. Therefore, northbound traffic on CR 35A desiring to continue north on the US 98 Dade City Bypass must move left to merge into the US 98 Dade City Bypass traffic in the same short distance. Southbound US 98 traffic desiring to continue south on CR 35A must cross the northbound US 98 traffic at a severe skew. Northbound US 98 Dade City Bypass traffic must simultaneously monitor southbound US 98 traffic and northbound CR 35A traffic to safely continue northbound. Additionally, the unsignalized and unrestricted intersections of four side streets (Howard, Tuskeegee, Buford and Church Avenues) are within 1,000 feet of the CR 35A intersection with the US 98 Dade City Bypass. Traffic exiting these side streets creates additional weaving and lane changing.

Side Street Connections - There are five parallel side street intersections along the west side of US 98 Dade City Bypass and one offset side street intersection on the east side within 1,200 feet from Howard Avenue to Meridian Avenue. These intersections are not signalized. The intersections on the west side of the US 98 Dade City Bypass are slightly skewed (about 70 degrees). An unrestricted center left turn lane is provided on the US 98 Dade City Bypass to access these side streets.

CSX Railroad Crossings - An additional traffic operations complication is in the proximity of the CSX Railroad to the US 98 Dade City Bypass. The short distance from the railroad to US 98 on Tuskeegee Avenue, Martin Luther King Boulevard and River Road allows for the storage of only two or three vehicles at each crossing. With an average of 14 trains per day, this presents a problem with vehicles attempting to enter Tuskeegee Avenue queuing into the exclusive right turn lane of CR 35A. Some of these trains are loading or unloading at the Vitality Beverages, Inc. (former Lykes-Pasco) citrus processing plant at the north end of this project and block the intersections of River Road, Martin Luther King Boulevard and Tuskeegee Avenue for varying lengths of time at various times of the day.

SR 52 (Meridian Avenue)/US 98 Dade City Bypass Intersection - This is an unsignalized, T-intersection skewed at about 70 degrees. An unrestricted northbound center left turn lane is provided on the US 98 Dade City Bypass. The Dade City Police and the Pasco County Sheriff's Office have identified this as a high crash area. The high speed and volume of through traffic on the US 98 Dade City Bypass makes this a difficult left turn maneuver from SR 52 to US 98 northbound.

Whitehouse Avenue and Martin Luther King Boulevard/US 98 Dade City Bypass Intersections - The intersection of Martin Luther King Boulevard is signalized and slightly skewed (about 70 degrees). The signal was placed at this intersection because of the number of school buses, school children, pedestrians and private vehicles accessing the former elementary school located about 0.25 miles east of the intersection. The elementary school was moved to the Rodney B. Cox location about 0.5 miles west of US 98. When the former elementary school was converted to the Moore-Mickens Education Center, the frequent use by school buses, pedestrians and private vehicles decreased dramatically.

The Whitehouse Avenue/River Road intersection with the US 98 Dade City Bypass is unsignalized and skewed about 50 degrees. This intersection serves a more populated area than Martin Luther King Boulevard and provides access to River Road and the popular Withlacoochee River Park, located east of Dade City. An estimated 280 tractor-trailer trucks enter and leave the Vitality Beverages, Inc. citrus processing plant daily also using this intersection. The truck traffic typically doubles to over 500 trucks daily during the winter citrus season. The southern driveway access to the citrus plant is from River Road immediately east of the railroad tracks. Because of the short distances between the driveway, railroad tracks and the US 98 Dade City Bypass, heavy trucks accessing the plant queue into the northbound lane of the US 98 Dade City Bypass.

US 98 Dade City Bypass/US 301 North Intersection - The intersection of the US 98 Dade City Bypass and US 301 North presents an unusual combination of turning movements within about 1,000 feet. The signalized US 98 Dade City Bypass intersection with US 301 is severely skewed. Within the 1,000 feet, 7th Street North (Old Hwy 301) intersects with US 301, and crosses Whitehouse Avenue and the US 98 Dade City Bypass. Whitehouse Avenue intersects with US 301, 7th Street and US 98 within the same 1,000 feet. Gaddis Avenue intersects with US 301 just to the north. The Whitehouse Avenue, 7th Street, and Gaddis Avenue intersections are unsignalized. All of these intersections (except 7th Street and Whitehouse Avenue) are skewed, some severely. To further complicate this combination of unusual intersections, over 150 heavy trucks (semi tractor-trailers) enter and leave the Vitality Beverages, Inc. citrus processing plant daily.

The existing alignment of these intersections is shown on the Concept Plans in Section 10.0.

3.1.5 Pavement Structural Conditions

No deficiencies in pavement structural conditions were identified for the length of the project. See Section 4.1.13 for additional information regarding surface soil and existing pavement conditions.

3.1.6 Evacuation Routes and Emergency Services

Evacuation Routes - Because of its inland location, Dade City is not in a hurricane evacuation zone as shown on the 1999 Hurricane Guide for Pasco County prepared by the Tampa Bay Regional Planning Council. The 1999 Hurricane Guide does show that, in the event of a weather emergency, the US 98 Dade City Bypass is part of the major north-south evacuation route through eastern Pasco County. SR 52 is designated as a major east-west evacuation route through Pasco County and ties to the US 98 evacuation route at the Meridian Avenue intersection.

A section of the existing US 98 Dade City Bypass from Pasco Avenue to south of Martin Luther King Boulevard is below the 100-year base flood elevation of 78.8 feet NGVD.

Emergency Services - Fire and rescue services in the project corridor are provided by the Dade City fire and police departments, the Pasco County Sheriff's Office and the Florida Highway Patrol. Emergency response time to the project corridor is typically three minutes or less from the time of notification.

Refer to Section 4.3.2.B for additional information regarding evacuation routes and emergency services.

3.2 Safety

Traffic crash data for the five-year period between 1993 and 1997 were obtained from the FDOT Roadway Characteristics Inventory database.

The crash analysis revealed that 93 crashes were reported between 1993 and 1997. Three fatalities and 88 injuries were reported for the five-year period. This is an average of 19 crashes per year. The majority of crashes were classified as rear-end type crashes and occurred during dry conditions and daylight off-peak hours. These are the type of crashes often associated with poor LOS.

Both signalized intersections (US 301 South and Martin Luther King Boulevard) are currently operating below the FDOT acceptable LOS D during at least one peak hour. Three of the four unsignalized intersections (Tuskeegee Avenue, Meridian Avenue and US 301 North) have at least one turning movement that is operating below the acceptable LOS D during peak hour conditions.

Safety ratios were calculated for spot and segment locations within the study corridor. The safety ratio calculations are based on the methodology outlined in the FDOT Highway Safety Improvement Program Guideline. Safety ratios above 1.000 indicate that the segment or spot locations experience vehicle collisions above average and, therefore, traffic safety at these locations may need to be improved. No spot locations in the project corridor experienced safety ratios greater than 1.000 during the five-year period from 1993-1997.

Rail-highway crossing safety data for the four railroad crossings within the US 98 Dade City Bypass project corridor were collected from the District Railroad Engineer and are shown in Table 3-2.

Table 3-2
Rail-Highway Crossing Safety Data

	RR Crossing No. 622720	RR Crossing No. 622721	RR Crossing No. 622722	RR Crossing No. 622723
Local Street Name	River Road	MLK Blvd	Tuskeegee Ave	Wilson Street
RR Co. Milepost	0829.65	0829.92	0830.40	0830.71
Crash Potential	3.44700	4.20750	4.21227	4.76512
Predicted Crashes/Yr	000.062	000.029	000.029	000.017
Safety Index Date/ Safety Index*	05/03/99 62.43	05/03/99 66.93	05/03/99 68.01	05/03/99 78.30
Safety Index Rank	0858	1355	1505	3052

*The Safety Index is used to indicate the relative hazard of all public grade crossings in Florida. The grade crossings that exhibit the lowest Safety Index values are given highest priority for installation of warning devices such as flashing lights and gates. Each grade crossing is assigned a statewide priority number based on the Safety Index. The grade crossing with the lowest Safety Index would be assigned priority number one.

For additional information regarding safety and crash data, refer to the Traffic Report prepared for this project and to Section 4.1.9.

3.3 Consistency with Comprehensive Plans

The proposed four-lane widening of the US 98 Dade City Bypass is consistent with the Dade City and Pasco County local government comprehensive plans and the Pasco County 2020 Long-Range Transportation Plan (LRTP).

The Pasco County LRTP, January 1999, lists design and right-of-way acquisition of the US 98 Dade City Bypass widening to four lanes in the Cost Affordable Plan for the years 1998 to 2003. The construction phase is listed in the Cost Affordable Plan for the years 2004 to 2010. The Pasco County 2020 Sidewalk Plan lists the US 98 Dade City Bypass improvements for the years 2004 to 2020. The sidewalk plans call for 5-foot sidewalks on both sides.

The Year 2005 and Year 2010 Future Traffic Circulation Maps show US 301 as a six-lane facility through Dade City. Widening the US 98 Dade City Bypass to four lanes in combination with the two existing lanes on US 301 provides six traffic lanes through the Dade City area allowing this project to be considered consistent with the intent of the plan.

The 1989 Dade City Comprehensive Plan Future Number of Lanes Map shows the US 98 Dade City Bypass as a three and four-lane facility and US 301 as a two and three-lane facility.

3.4 Social/Economic Demands

Improvements to the existing US 98 Dade City Bypass corridor are an integral part of the overall long-range transportation plan for Pasco County and Dade City. Planned improvements to connecting roadways and planned and existing development along the corridor are also tied to the proposed improvements to the US 98 Dade City Bypass in its existing location.

The Pasco County 2020 Long-Range Transportation Plan was reviewed to determine the planned roadway improvements anticipated in the vicinity of the US 98 Dade City Bypass study corridor. The planned roadway improvements include:

Description	Existing	Planned Improvements
US 301 (7th Street) from US 98 South to US 98 North	4-lanes	6-lanes
US 98 (Dade City) Bypass from US 301 South to US 301 North	2-lanes	4-lanes

The proposed improvements to the US 98 Dade City Bypass would benefit the anticipated social and economic demands by enhancing travel mobility, limiting traffic congestion to parallel streets, improving accessibility to the commercial areas in downtown Dade City, and providing for the continuous movement of people and goods with increased safety and efficiency. Amenities which contribute to the overall public acceptability of the proposed improvements include:

- improved level of traffic service and highway safety;
- consistency with future transportation plans and land use;
- improved emergency evacuation; and
- decreased crash potential.

4.0 EXISTING CONDITIONS

4.1 Existing Roadway Conditions

4.1.1 Functional and Access Management Classification

The functional classification of the US 98 Dade City Bypass is an Urban Principal Arterial. US 301 south and north of the US 98 Dade City Bypass is classified as a Rural Principal Arterial. US 301 through Dade City (7th Street) is classified as an Urban Minor Arterial.

The US 98 Dade City Bypass is not a controlled-access facility. It is typically a two-lane undivided rural roadway. Left turn lanes are provided in the median at certain intersections.

The existing US 98 Dade City Bypass is Access Management Class 3.

4.1.2 Typical Sections

The existing roadway is typically a two-lane rural facility with two 12-foot lanes and 8-foot shoulders (4-foot paved). The roadway cross section varies throughout the length of the project. A continuous two-way left turn lane is provided in the median from Howard Avenue to Church Avenue. Median left turn lanes have been added at the intersections of Pasco Avenue, Meridian Avenue, Martin Luther King Boulevard, and River Road. From Pasco Avenue to north of Meridian Avenue, the US 98 Dade City Bypass is an urban typical section with a median left turn lane, valley gutters along the west side and vertical curbs along the east side. The existing US 98 Dade City Bypass two-lane typical section is shown in Figure 3-1.

4.1.3 Pedestrian, Handicapped and Bicycle Facilities

A pedestrian crosswalk is provided at the signalized intersection of Martin Luther King Boulevard. Eight-foot shoulders (with 4-foot paved) are typically provided for the length of the project.

4.1.4 Right-of-Way

The existing US 98 Dade City Bypass right-of-way varies from 60 feet wide to 115 feet wide with numerous jogs and setbacks for the length of the project.

Additional right-of-way is provided at the intersections of US 301 South, CR 35A and US 301 North. A 25-foot wide drainage easement is present at Station 50+00 and a 30-foot wide drainage easement exists at Station 61+50.

Table 4-1 describes the existing right-of-way widths by station from south to north beginning at the US 301 South intersection. The existing right-of-way is shown on the Concept Plans in Section 10.

Table 4-1
Existing Right-of-Way Widths

Station		Location		Right-of-Way Width (feet)		
From	To	From	To	Left	Right	Total
49+35.02	58+00	US 301 South	West of Connector Road	40	40	80
58+00	72+00	West of Connector Road	West of CR 35A	40	50	90
72+00	81+00	West of CR 35A	Tuskeegee/Buford Avenues	40	40	80
81+00	86+00	Tuskeegee/Buford Avenues	South of Church Street	50	40	90
86+00	86+73.72	South of Church Street	Church Street	50	30	80
86+73.72	93+40.70	Church Street	Meridian Avenue	30	30	60
93+40.70	100+00	Meridian Avenue	North of Meridian Ave.	65	40	105
100+00	105+00	North of Meridian Ave.	South of MLK Blvd.	65	50	115
105+00	112+00	South of MLK Blvd.	North of MLK Blvd.	40	40	80
112+00	120+84.73	North of MLK Blvd.	5th Street	40	50	90
120+84.73	1284+47.88	5th Street	US 301 North	50	50	100

4.1.5 Horizontal Alignment

The existing horizontal alignment of the US 98 Dade City Bypass is listed in Table 4-2.

Table 4-2
Existing Horizontal Alignment

Station		Bearing & Distance or Curve Data
P.O.C. P.O.T.	762+91.90 US 301 = 49+35.02 US 98	
		N 55^0 22' 34" E, 1,692.31'
P.C.	66+27.33	
P.I.	69+16.23	Δ = 48^0 49' 00", D = 09^0, T = 288.90', L = 542.41', R = 636.62'
P.T.	71+69.74	
		N 06^0 33' 34" E, 345.59'
P.C.	75+15.33	
P.I.	77+57.08	Δ = 37^0 18' 15", D = 08^0, T = 241.75', L = 466.30', R = 716.20'
P.T.	79+81.63	
		N 70^0 44' 41" E, 181.27'
P.C.	81+62.90	
P.I.	87+45.12	Δ = 11^0 23' 15", D = 00^0 58' 52", T = 582.22', L = 1,160.67', R = 5,839.59'
P.T.	93+23.57	
		N 19^0 21' 26" E, 2,209.69'
P.C.	115+33.26	
P.I.	124+04.58	Δ = 33^0 50' 02", D = 02^0, T = 871.32', L = 1,691.70', R = 2,864.79'
P.T. P.O.C.	132+24.96 US 98 = 836+06.00 US 301	

The area of the project between Connector Road and Howard Street in Segment 3 (Tuskeegee/Buford Avenues to Martin Luther King Boulevard) contains two horizontal curves joined by a tangent 345.59 feet in length. The curves, located at P.I. Stations 69+16.23 and 77+57.08, have degrees of curvature of 90 and 80, respectively. This "broken back" type of horizontal alignment is contrary to driver expectancy and can contribute to unnecessary vehicle maneuvering.

4.1.6 Vertical Alignment

Original design plans describing the existing vertical alignment are not available for the length of the project. However, design plans for resurfacing projects at various locations along the project indicate that the vertical alignment consists of grades no steeper than 1.25 percent. The grades appear to transition with flat vertical curves at some locations and shallow vertical angles at other locations. No design data are available to verify the locations or geometry of the vertical transitions.

Profile grade elevations range from about 79.3 feet NGVD at the US 301 North intersection, 77.4 feet NGVD near the center of the project just north of Meridian Avenue, 98.4 feet NGVD at the US 301 South intersection, and about 110 feet NVGD at the intersection of Willingham Avenue. The 100-year base flood elevation throughout the project area is 78.8 feet NGVD. The profile grade line for the portion of the project from Pasco Avenue to south of Martin Luther King Boulevard is below the base flood elevation, a distance of about 1,500 feet.

4.1.7 Stormwater Drainage Facilities

The US 98 Dade City Bypass was initially designed and constructed in the late 1950s at a time when stormwater management policies were considerably less stringent than current standards. Typically, the roadway drains to the open roadside ditches or directly to the cross drains. Typically, roadside ditches are present for the length of the project. The roadway is an urban typical section with curb and gutters from north of CR 35A to north of Meridian Avenue. The ditches are not well defined in this area. The roadside ditches contained standing water during the period of field investigation (April through July 1999).

Storm sewers are present in four locations in the corridor:

- The US 301 South Intersection - Storm sewers in this area drain to the outlet pipe from a retention pond located along the west side of US 301. The retention pond discharges under the US 301 South intersection to a ditch running east through the Calvary Assembly Church property and into the Shadow Lake drainage basin.

- From CR 35A to North of Meridian Avenue – Storm sewers in this area discharge directly to roadside ditches.

- North and South of Martin Luther King Boulevard - Storm sewers in this area discharge directly to roadside ditches.

- Whitehouse Avenue to US 301 North - Storm sewers in this area discharge directly to roadside ditches.

Storm sewers in the US 98 Dade City Bypass corridor discharge directly to roadside ditches without attenuation or water quality treatment. The suitability for reuse of the existing storm sewer systems will be evaluated during subsequent design phases of this project.

Stormwater Retention/Detention Facilities

The US 98 Dade City Bypass is elevated on fill across three natural depressions. The embankments create areas that tend to function as uncontrolled stormwater detention ponds. These depressions provide floodplain storage by collecting and detaining stormwater runoff from the roadway and from offsite.

The first depression is along the west (left) right-of-way between US 301 South and CR 35A. Stormwater runoff in this area is conveyed under the US 98 Dade City Bypass through a 42-inch reinforced concrete pipe (RCP) (Cross Drain No. 1) into a low wet area east of US 98.

The second depression is along the west (left) right-of-way of US 98 just south of Howard Avenue. Stormwater runoff in this area is conveyed through a 36-inch RCP at the CR 35A

intersection (Cross Drain No. 2) under the US 98 Dade City Bypass to an open ditch and then drains into canals in the Victory neighborhood east of the US 98 Dade City Bypass.

The third depression is located on the west side of the US 98 Dade City Bypass on the East Pasco Government Center (Government Center) property south of Martin Luther King Boulevard. Some of this depression area has been filled for the expansion of the Government Center. The remaining depression is in the form of ditches about 5 feet to 6 feet deep within the right-of-way along the west side of the US 98 Dade City Bypass and outside the right-of-way across the Government Center property. Stormwater runoff in this area is conveyed under the US 98 Dade City Bypass through a 48-inch RCP north of Meridian Avenue (Cross Drain No. 3). Portions of the Government Center property are being used for stormwater management and floodplain compensation areas.

All three of these areas discharge into the Shadow Lake drainage basin and ultimately into the Withlacoochee River.

Cross Drains

A review of the FDOT construction plans, straight line diagrams (SLD) and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) indicates that there are numerous drainage structures within the limits of the US 98 Dade City Bypass project. The locations of these drainage structures were verified by field inspection.

Most of these structures are associated with the right-of-way stormwater systems draining the existing roadway or side drains under driveways and side streets. These storm drain systems do not cause encroachments upon the base floodplain. Five of these drainage structures function as cross drains that were built during the initial highway construction and modified or lengthened during subsequent road widening and resurfacing improvement projects. The existing cross drains are listed in Table 4-3 and displayed in Figure 4-1.

Hydraulic equivalency for replacement or modification of the existing drainage structures will be determined in subsequent design phases of this project.

There is an existing storm sewer system located at the southern end of the project from Willingham Avenue to the intersection of US 301 South. This system collects roadway runoff through a series of ditch bottom inlets and laterals draining to a trunk line on the east side of US 301. The system outfalls at approximately Station 50+75 to an existing ditch. The ditch runs east in the right-of-way of Poinsettia Drive through the Calvary Assembly of God Church parking lot. Other drainage structures include a double 24-inch RCP drain under CR 35A south of the intersection with the US 98 Dade City Bypass. This facility drains the infield area between CR 35A and the US 98 Dade City Bypass. Drainage structures that cross under the US 98 Dade City Bypass and are part of the roadway storm sewer system include a 15-inch RCP at Station 90+40 +/- (at Pasco Street), a 24-inch RCP at Station 92+70 +/- (south of Meridian Avenue), a 24-inch RCP at Station 94+25 +/- (north of Meridian Avenue), and a 24-inch RCP at Station 126+70 +/- (north of Whitehouse Avenue).

Table 4-3
Existing Cross Drains

Cross Drain No.	Milepost (Approximate Station)	Approximate Location	Pipe Size and Material
1	0.230 (61+50 +/-)	Between US 301 South and CR 35A	42-inch RCP
2	0.581 (79+00 +/-)	At the CR 35A Intersection	36-inch RCP
3	0.921 (98+00 +/-)	North of Meridian Avenue	48-inch RCP
4	1.522 (129+75 +/-)	North of Whitehouse Avenue	42-inch RCP
5	1.567 (132+17 +/-)	At the US 301 North Intersection	30-inch RCP

The contributing drainage basin locations are shown in Figure 4-1.

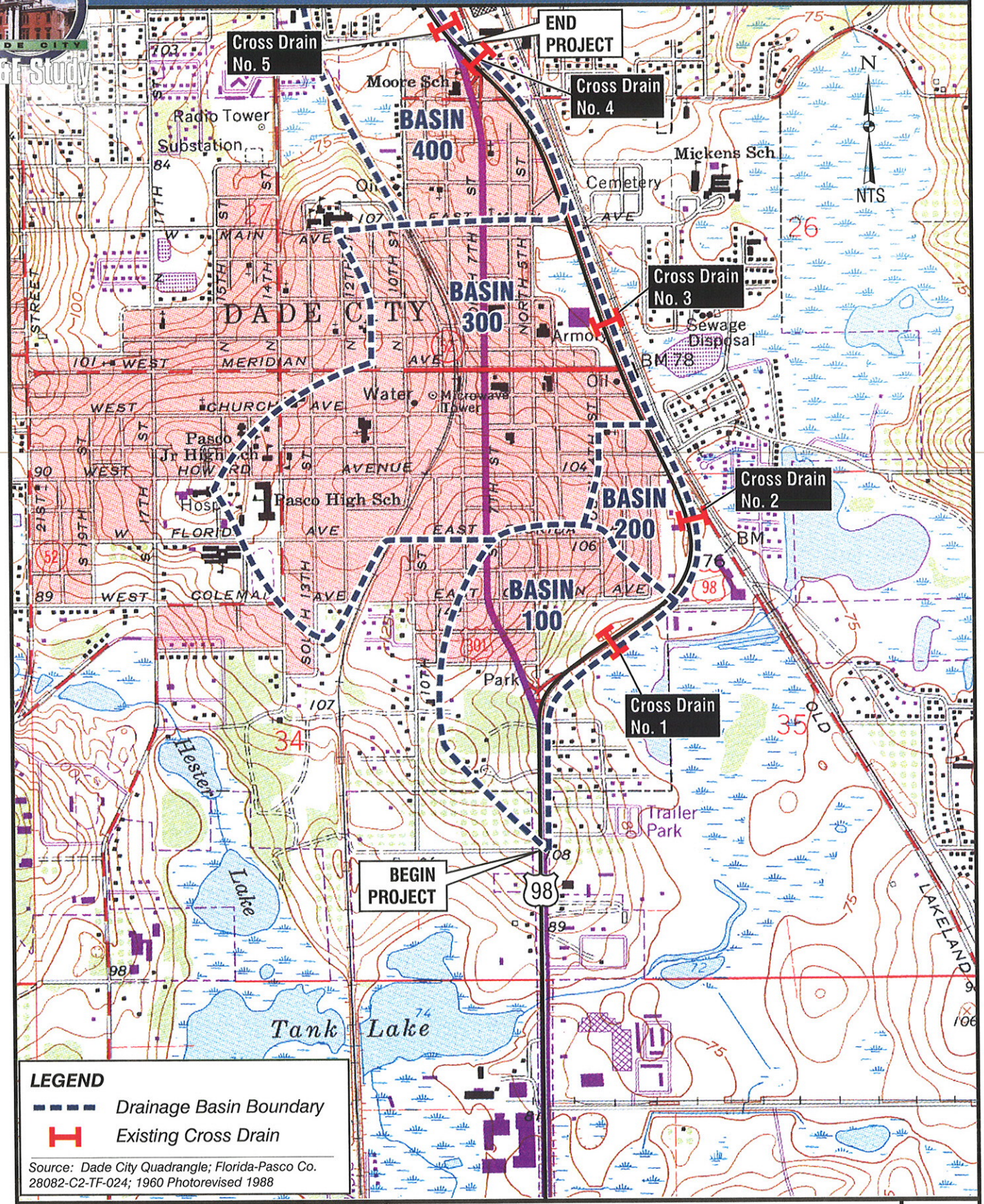
Flooding History

FDOT drainage maps, United States Geological Survey (USGS) Quadrangle maps, Southwest Florida Water Management District (SWFWMD) topographic maps, and FEMA FIRMs were used to identify flood-prone areas within the US 98 Dade City Bypass corridor. A field inspection was conducted to identify obvious drainage problems. Additionally, people knowledgeable about local drainage conditions (residents, FDOT maintenance personnel and Pasco County and Dade City operations personnel) were interviewed.

Drainage generally flows from west to east for the length of the project. Dade City has very few storm sewer systems and as a result, most stormwater runoff flows in the street gutters or overland sheet flow towards the US 98 Dade City Bypass. Heavy rainfall causes ponding to occur in the depression areas and roadside ditches along the west (left) right-of-way of the US 98 Dade City Bypass. However, according to the Dade City Public Works Department, the roadway has not been overtopped in recent memory.

The FEMA designated 100-year base flood is at elevation 78 feet (NGVD 1929) within the project area. The Duck Lake Stormwater Management Master Plan 100-year base flood elevation is at elevation 78.8 feet. Typically, the US 98 Dade City Bypass roadway is perched above the floodplain except in an area between Pasco Avenue to south of Martin Luther King Boulevard.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

DRAINAGE BASIN MAP

Figure 4-1

An area of the US 98 Dade City Bypass from the intersection with Pasco Avenue (about Station 90+00 +/-) to south of Martin Luther King Boulevard (about Station 106+00 +/-) is below the 100-year base flood elevation. The lowest point along the US 98 Dade City Bypass profile grade line is from about Station 95+00 +/- to about Station 104+00+/- at elevation 76.6 feet. Storm sewers and curb and gutter have been installed in this area to alleviate the potential for roadway flooding. No other flooding problems associated with FDOT drainage structures have been identified for the length of this project.

4.1.8 Geotechnical and Generalized Soils Data

The geotechnical data reviewed for this study includes:

- The United States Department of Agriculture, Soil Conservation Service (now Natural Resource Conservation Service (NRCS)), Soil Survey of Pasco County (Soil Survey), June 1982;
- The USGS, Quadrangle Map "Dade City, Florida, 1960 Photo Revised 1988, for the respective sections of this project;
- 1977 SWFWMD aerial photographs of the existing alignment; and
- FDOT roadway construction plans prepared for the existing roadway.

A windshield survey was performed to identify areas where existing pavement conditions indicate the possible presence of unsuitable subsurface conditions (peat, muck) beneath roadways, to observe general topography and soil and groundwater conditions along the alignment and to identify areas where significant pavement distress is present within the mainline roadway.

The Soil Survey was reviewed with respect to near-surface soil conditions along the project. It is generally a reliable and comprehensive published source for information regarding near-surface soil and groundwater conditions. The geology of Pasco County can briefly be described as surficial sands and clay, sandy clays and clayey sands overlying limestone.

The Soil Survey indicates that there are four mapping units within the project area. The predominant soil groups are Tavares-Urban Land Complex and miscellaneous Urban Land in the northern and central portions of the project with Quartzipsamments, Lake and Placid Fine Sands in the southern portion.

Hand auger borings were performed generally every 500 feet offset right and left of the survey baseline to evaluate the subsurface conditions along the proposed roadway alignment. The auger borings were performed to depths of 5 feet below existing grades. In the area of the potential stormwater ponds, hand auger borings were advanced generally 1 to 2 feet below the ground water level encountered in the borings or to a maximum depth of 10 feet.

The groundwater table was not encountered to a depth of 5 feet in any of the shallow borings adjacent to the existing roadway. Groundwater was encountered at about 7 feet below land surface (bls) in the area right of the roadway between Station 58+00 to Station 61+00 and at 4 feet bls about 80 feet left of the roadway at about Station 77+60.

Seasonal high groundwater table (SHGWT) depths were estimated along the roadway alignment from several of the auger borings. Generally, the SHGWT within and adjacent to the existing right-of-way is estimated to be greater than 5 feet bls. In the areas of the potential pond locations, the SHGWT is estimated to range from 3 feet to greater than 10 feet bls. Refer to the Preliminary Geotechnical Report prepared for this project for specific SHGWT locations and depths.

The USGS quadrangle map was reviewed for ground surface features. The natural ground surface elevations along the project vary from about 70 feet to 110 feet (NGVD 1929).

The hydrologic soil groups range from A to D throughout the project length. The soils along the Brooksville Ridge generally fall in hydrologic group A (which includes most of the corridor), while the soils in the Western Valley generally fall into the C and D hydrologic groups. An area of D hydrologic group soil lies to the east of the US 98 Dade City Bypass between the intersections of US 301 South and CR 35A in the southern end of the project corridor. Group A soils have a high infiltration rate (low runoff potential) when thoroughly wet. They are mainly deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission. Group D soils have a very slow infiltration rate (high runoff potential) when thoroughly wet. They consist chiefly of clays having a high shrink-swell potential, a permanent high water table, a claypan or clay layer at or near the surface, and are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The soil groups are summarized in Table 4-4. A copy of the soil survey map for the US 98 Dade City Bypass corridor is shown in Figure 4-2.

Table 4-4
Summary of Soil Groups

Soil Name (Map Unit No.)	Depth (inch)	Classification		Permeability (in/hour)	Seasonal High Water Table Depth (feet)	Hydrologic Group
		AASHTO[1] Group	USCS[2] Group			
Tavares-Urban Land Complex (15)	0 - 86	A-3	SP3, SP-SM4	>20	3.5 - 6	A
Urban Land (38)	Soils so altered that identification is not feasible.					-
Quartzipsamments (24)	0 - 60	A-3	SP, SP-SM	High	>6	-
Lake (32)	0 - 80	A-3/A-2-4	SP-SM	6 - 20	>6	A
Placid (70)	0 - 80	A-3/A-2-4	SP, SP-SM, SM[5]	6 - 20	0-1.0	B/D

Source: Soil Survey of Pasco County, June 1982

Notes: [1]American Association of State Highway and Transportation Officials
[2]Unified Soil Classification System
[3]SP - Poorly graded sand (with gravel)
[4]SP-SM - Poorly graded sand (with sand and gravel)
[5]SM - Silty sand (with gravel)

U.S. 98 DADE CITY BYPASS PD&E STUDY

US HIGHWAY 98 DADE CITY PD&E Study

Map Symbol	Soil Name	Hydrologic Group	Permeability m/hour (in/hr)	SHWT depth m (ft)
15	Tavares-Urban land complex	A	> 0.5 (> 20)	1-1.8 (3.5 - 6.0)
24	Quartzipsamments	-	-	-
28	Pits	-	-	-
32	Lake fine sand	A	0.15 - 0.5 (6.0 - 20)	1.8 (> 6.0)
38	Urban land	-	-	-
52	Samsula muck	B/D	0.15 - 0.5 (6.0 - 20)	+0.6 - 0.3 (+2 - 1.0)
70	Placid fine sand	B/D	0.15 - 0.5 (6.0 - 20)	0 - 0.3 (0 - 1.0)

scale: 1":1666'

N

END PROJECT

BEGIN PROJECT

98

SEABOARD

DADE CITY

Tommytown

Boiler Lake

Ferguson Lake

Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

SOILS MAP

Figure 4-2

4.1.9 Crash Data

To evaluate traffic safety in the study corridor, traffic crash records for the five-year period between 1993 and 1997 were obtained from the FDOT Roadway Characteristics Inventory (RCI) database. The crash data were collected for spot (intersections) and segment locations. The data collected were analyzed to determine the characteristics of crashes that occurred within the study corridor. Based on the crash analyses, 93 crashes occurred along the study corridor during this time period. The majority of the crashes occurred on dry pavement during the daylight and off-peak hours. Three fatalities and 88 injuries occurred within the project limits along the US 98 Dade City Bypass study corridor between 1993 and 1997.

Concerns were expressed by local officials for the safety of pedestrians and bicyclists at the intersection of Tuskeegee/Buford Avenues. Crash data revealed that, in the period analyzed, four crashes with bicyclist/pedestrian were reported at that location. The major cause listed was failure to yield the right-of-way.

Figure 4-3 summarizes the total number of crashes that occurred at spot and segment locations from 1993 to 1997.

As part of the analysis of crash data, safety ratios were also calculated for spot and segment locations within the study corridor. The safety ratio calculations are based on the methodology outlined in the FDOT Highway Safety Improvement Program Guideline. Safety ratios above 1.000 indicate that the segment or spot locations experience vehicle collisions above average and, therefore, traffic safety at these locations may need to be improved. No spot locations or segments within the project limits experienced safety ratios greater than 1.000 during the five-year period from 1993-1997.

4.1.10 Intersections and Signalization

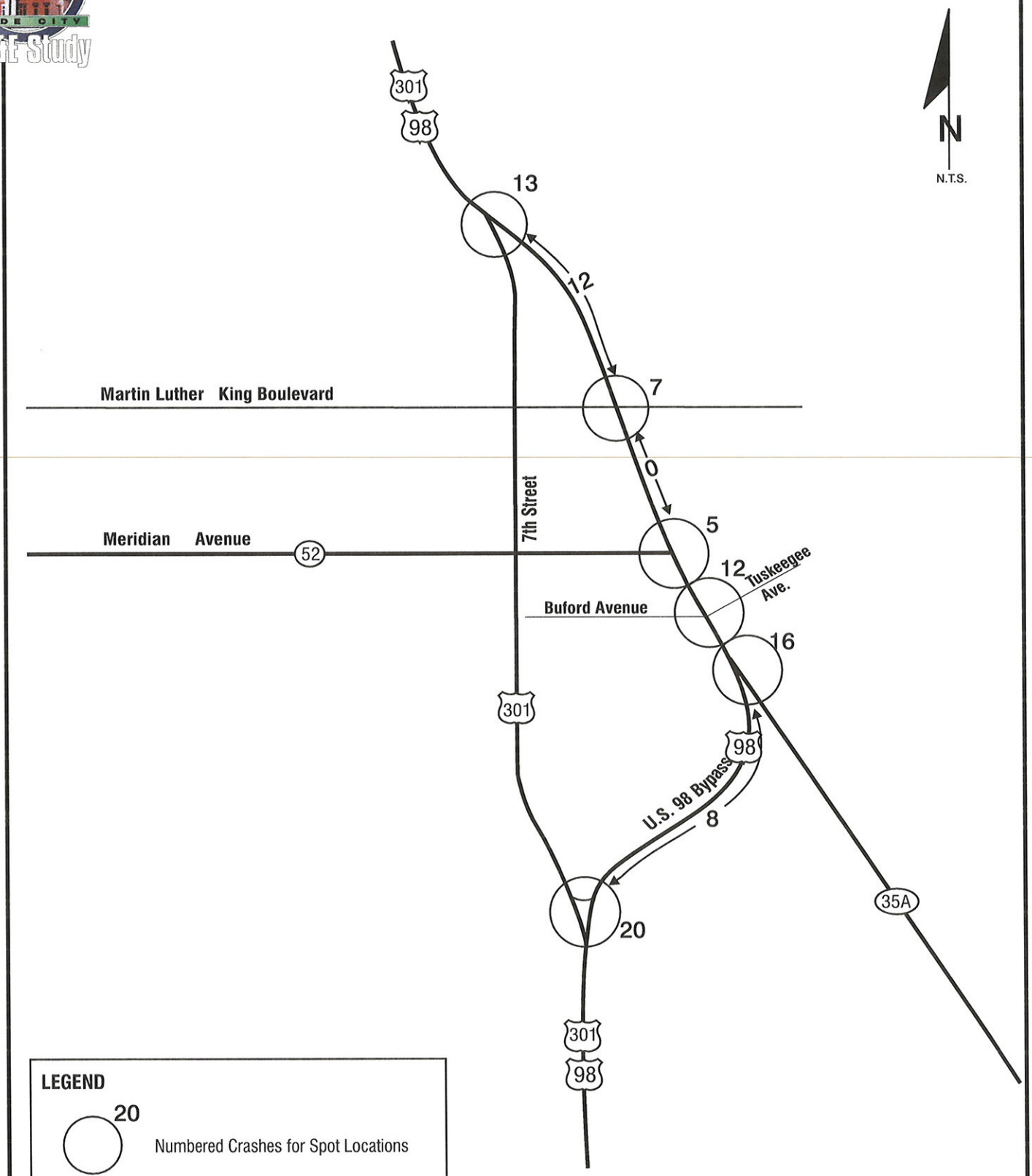
There are 20 intersections within the project limits. Six of the intersections are considered major and 14 are considered minor intersections.

The six major intersections are US 301 South, CR 35A, Meridian Avenue, Martin Luther King Boulevard, Whitehouse Avenue/River Road, and US 301 North. The intersections of US 301 South and Martin Luther King Boulevard are signalized. All of the major intersections are skewed.

The 14 minor intersections are Willingham Avenue, Lake Drive, Shadow Drive, Sunset Drive, Dixie Drive, Connector Road, Howard Avenue, Tuskeegee/Buford Avenues, Church Avenue, Pasco Avenue, unnamed street, Pond Avenue, Meredith Avenue, and 7th Street. Of the 14 minor intersections, only Willingham Avenue, 7th Street, and Tuskeegee/Buford Avenues cross the US 98 Dade City Bypass. Willingham Avenue, Lake Drive, Shadow Drive, Sunset Drive, and Meredith Avenue are T-intersections from the east and the remainder are T-intersections from the west of the US 98 Dade City Bypass. All intersections except Willingham Avenue, Lake Drive, Shadow Drive, Sunset Drive, and Tuskeegee Avenue are skewed.

The locations of the intersections are shown on the Concept Plans in Section 10.0.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**TOTAL NUMBER OF CRASHES FROM 1993 TO 1997**	Figure 4-3

4.1.11 Lighting

Cobra-head style roadway lighting is provided on all legs of the US 301 South and US 301 North intersections with the US 98 Dade City Bypass. Lighting is provided on River Road at the east approach to the US 98 Dade City Bypass and on CR 35A at the south approach to the US 98 Dade City Bypass.

4.1.12 Utilities/Railroads

Utilities

Utility locations were obtained using the Utility Request Package processed through the FDOT District Utility Engineer.

Utility services within the project corridor which have the potential to be affected by the various alternatives analyzed for this proposed action are listed below.

Tampa Electric Company, Inc. (Electric Distribution) – TECO has two distribution circuits within the project limits with numerous lateral lines servicing customers along the US 98 Dade City Bypass and several side streets. These two circuits include two 13,200-volt overhead electric pole lines located approximately 6 feet inside the west right-of-way line of the US 98 Dade City Bypass. The first electric pole line begins at CR 35A and continues north to River Road. The second electric pole line begins at Pond Avenue and extends north beyond the project limits.

There is a street lighting circuit in front of the Calvary Assembly of God Church and strip retail center including the Central Florida Tractor sales. A street lighting circuit also exists at the US 301 South intersection.

The TECO Operations Center is located at the northwest corner of Martin Luther King Boulevard intersection.

Sprint Florida, Inc. (Telephone) - Buried copper telephone cable exists on the east side of the US 98 Dade City Bypass from the southern end of the project at Dixie Avenue north for about 220 feet and on the west side of the US 98 Dade City Bypass from Bougainvillea Avenue to about Palm Avenue.

Crossings in these areas exist at Dixie Avenue, both north and south of the Calvary Assembly Church property, and just north of the Jarrett-Skeen Ford Lincoln Mercury Dealership.

Buried copper telephone cable exists on the east side of the US 98 Dade City Bypass from Tuskeegee Avenue for about 250 feet north where it crosses the US 98 Dade City Bypass and runs on the west side to about 70 feet north of Meridian Avenue. The cable crosses to the east side of the US 98 Dade City Bypass north of Meridian Avenue and runs to just south of East San Francisco Avenue where it crosses the US 98 Dade City Bypass and runs adjacent to the CSX railroad tracks up to just north of Meredith Avenue. The cable then runs west and turns north near the Vitality Beverages, Inc. property.

Buried copper telephone cable runs along the east side of the US 98 Dade City Bypass from about US 301 North to north of Lock Street. A crossing exists at Lock Street.

Dade City Utilities (Water) – Six and 8-inch water mains parallel and cross the US 98 Dade City Bypass throughout the project limits.

Dade City Utilities (Gravity Sewer) – There are gravity sewer manholes at the US 301 South and US 301 North intersections. There is a gravity sewer crossing at the Reliance Tire Auto Center that flows to the lift station behind the former Kash 'n Karry Plaza and a 16-inch line that crosses just north of Meridian Avenue flowing to the Dade City wastewater treatment plant.

Dade City Utilities (Force Main) – Force main facilities parallel the US 98 Dade City Bypass in three areas. One runs along the south side from the Calvary Assembly of God Church to Connector Road where it follows Connector Road to a manhole at CR 35A. Another line originates at the lift station behind the former Kash 'n Karry Plaza and runs north along the east side of the US 98 Dade City Bypass to a junction manhole at the 16-inch gravity sewer north of Meridian Avenue. A third line on Martin Luther King Boulevard turns south on the US 98 Dade City Bypass and runs along the west side to a splitter box at the 16-inch gravity sewer.

TECO Peoples Gas Systems, Inc. – TECO has a 2-inch PE line running north on the east side through the US 301 South intersection. There is a 2-inch steel line along the east side of CR 35A where it crosses to the west side of the US 98 Dade City Bypass and continues north to a tee at Church Avenue. One leg continues north to the Live Oak easement where it turns left away from the project. The other leg crosses to the east side of the US 98 Dade City Bypass and continues north to Meridith Street where it turns west away from the project. A 12-inch steel line enters the project on the east side of CR 35A and continues along the east side of the US 98 Dade City Bypass to the Vitality Beverages, Inc. plant.

Moffat Communications (CATV) – Moffat has two aerial crossings. One is a north-south crossing at the US 301 South intersection and the other is an east-west crossing at Buford Avenue.

Railroads

The CSX Railroad parallels the US 98 Dade City Bypass from the CR 35A intersection to US 301 North. Amtrak operates a rail passenger station at the historic Dade City Atlantic Coast Line Railroad Depot (Dade City Railroad Depot) at the intersection of Meridian Avenue (SR 52) and the US 98 Dade City Bypass. Two passenger trains stop at Dade City daily. Amtrak does not have plans to increase service to Dade City. The passenger train stops closest to Dade City are Wildwood, Florida, about 35 miles to the north, and Lakeland, Florida, about 25 miles to the southeast.

Amtrak's New-York-Florida *Silver Palm* was inaugurated in November 1996 to supplement its sister *Silver Service* trains operating in the same end-point market. The *Silver Palm* operates daily between New York City and Miami via Dade City, making stops at 5:29 a.m. and 11:23 p.m. The train's ridership grew from 187,704 riders in fiscal year (FY) 97 to 219,657 in FY 98. The combined Amtrak *Silver Service* trains, including the New York-Florida *Silver Palm*, *Silver Star* and *Silver Meteor* (cross Florida service), carried 731,981

passengers in FY 98. For the corporation as a whole, Amtrak ridership increased for a record 12th consecutive quarter for the first quarter of FY 2000.

Rail-highway crossing information (November 1999) for the CSX Railroad, Railroad Line Number 370 (SSR GA. Line) was collected. Four railroad crossings are located along the US 98 Dade City Bypass project corridor, including River Road (crossing #622720), Martin Luther King Boulevard (crossing #622721), Tuskeegee Avenue (crossing #622722) and Wilson Street (crossing #622723).

The posted speed of vehicles on roads intersecting the railroad tracks is 30 mph for all four crossing. All four crossings are at-grade, have good crossing surface conditions and have smooth transition types. The stopping sight distance for all four crossings northeast and southwest is 200 feet. Each crossing has one set of mainline track and one set of non-mainline track (the River Road and Tuskeegee Avenue crossings have siding tracks, the Martin Luther King Boulevard crossing is unknown and the Wilson Street crossing has a pass track). Each crossing has two through lanes (number of lanes with active traffic flow over crossing) and only the Martin Luther King Boulevard crossing has one auxiliary lane (number of lanes over crossing used for other than through traffic - example: stop and turn lanes, parking lanes, etc.). The only illuminated crossing is River Road.

Table 4-5 includes additional existing condition information for the four railroad crossings within the US 98 Dade City Bypass project corridor. For additional information regarding rail-highway crossing information, refer to Section 6.2.2.

4.1.13 Pavement Conditions

The FDOT Pavement Condition Forecast, February 2000 shows that the US 98 Dade City Bypass has crack ratings ranging from 9.5 to 10, ride ratings ranging from 7.7 to 8.7 and rut ratings of 9 for year 1999. Pavement conditions ratings range from 0 to 10 with 6 and below being considered critical.

The five-year forecast (year 2004) anticipates crack ratings to range from 9 to 10, ride ratings to range from 7 to 8 and rut ratings to range from 7 to 8.

A windshield survey and a review of the construction plans and preliminary subsurface data were conducted to visually identify areas where the US 98 Dade City Bypass mainline pavement conditions indicate the possible presence of unsuitable subsurface conditions (e.g. peat, muck) beneath the roadway. No deficiencies in pavement structural conditions were identified for the length of the project.

The near surface soils along the US 98 Dade City Bypass project corridor have been grouped into four strata. Each stratum group exhibits a range of engineering properties related to suitability for roadway construction as outlined by FDOT Standard Index 505.

Table 4-5
Existing Railroad Crossings

	RR Crossing No. 622720	RR Crossing No. 622721	RR Crossing No. 622722	RR Crossing No. 622723
RAIL-HIGHWAY CROSSING CLASSIFICATION/LOCATION				
Local Street Name	River Road	MLK Blvd	Tuskeegee Ave	Wilson Street
RR Co. Milepost	0829.65	0829.92	0830.40	0830.71
RAIL-HIGHWAY CROSSING RAIL OPERATIONS				
Effective Date	06/12/88	06/12/88	08/05/92	08/05/92
Thru Trains 6 am - 6 pm	6	6	7	6
Switch Trains 6 am - 6 pm	2	2	0	2
Thru Trains 6 pm - 6 am	0	0	7	0
Switch Trains 6 pm - 6 am	2	2	0	2
Max Train Speed over Xing	050	050	020	020
Max Speed Effective Date	06/12/88	06/12/88	09/28/94	03/17/94
Horizontal Curve	00.0	00.0	00.0	00.0
Type Rail Traffic	Passenger	Freight	Passenger	Passenger
RAIL-HIGHWAY CROSSING WARNING DEVICES				
No. Reflect X-Buck	2	4	2	2
No. Other Signs / Description	3 / 2-TRKS	2 / 2-TRKS	2 / 3-TRKS	2 / 2-TRKS
No. Red/Wht Gates	3	2	2	2
No. of cantilevers with flashing lights which do not extend over traffic lanes	1	1	0	0
No. Mast Flashing / No. Bells	3 / 3	3 / 2	2 / 2	2 / 2
Other Flashing Desc.	None	Yellow Fl	None	None
Special Warning Desc.	None	Beacon Light	None	None
Sidestreet Warning	Yes	Yes	No	Yes
RAIL-HIGHWAY CROSSING PHYSICAL DATA				
Number Posted	Yes	Yes	Yes	Yes
Crossing Angle	80-89 degree	80-89 degree	80-89 degree	90 degree
Pavement Stop **Bar/Pavement RR-Xing**	Yes Yes	Yes Yes	No No	No No
Adv. Warning Signs	Yes	No	Yes	Yes
Adv. Warning Sidestreet	No	No	No	No
Land Use At Crossing	Industrial	Institutional	Residential	Open Space
Shoulder Type / Width	Lawn / 8'	Lawn / 10'	Lawn / 15'	Lawn / 6'

The general soil descriptions and American Association of State Highway and Transportation Officials (AASHTO) classifications are shown in Table 4-6.

Table 4-6
General Soil Descriptions

Stratum	Description	AASHTO Soil Classification
1	Dark brown slightly silty fine sand	A-3
2	Light gray to red brown silty fine sand	A-2-4
3	Light gray to red brown clayey fine sand	A-2-6
4	Black silty organic muck	A-8

The material from stratums 1, 2 and 3 appears satisfactory for use in the embankment when utilized in accordance with FDOT Standard Index 505. However, the material for stratums 2 and 3 is likely to retain excess moisture and be difficult to dry and compact. It should be used in the embankment above the water level existing at the time of construction.

The material from stratum 4 is muck/A-8 material and should be over excavated within the proposed embankment limits. This material may be used in the embankment construction as outlined in FDOT Standard Index 505. This material should not be used in the construction of stormwater pond berms with the exception of muck used as a supplement to construct topsoil as described in Section 162 of the FDOT Standard Specifications.

For further information on roadway conditions, refer to the Geotechnical Report prepared for this project.

4.2 Existing Structures

There are no bridges or bridge culverts for the length of this project.

4.3 Existing Environmental Conditions

4.3.1 Land Use Data

Comparison of aerial photos taken at different years and other historic documentation provided valuable information about current land use in the US 98 Dade City Bypass project corridor and the changes in land use that have occurred over time. To provide a comparison of land use changes, the following information was used:

- The 1989 Pasco County and 1988 Dade City Existing Land Use Maps
- 1977 SWFWMD aerial photography
- 1966, 1974, 1982, 1998 Pasco County Aerial Photography 1:2000 (1"=200')

- 1998 Pasco County Tax Maps
- Dade City Directories - years available 1979, 1991, 1992, 1995, 1996, and 1997
- Field inspections in April through August 1999
- FDOT Construction Plans for US 98: State Project Numbers 14130-3501 July 24, 1979; 14130-3502 January 8, 1985; 14130-3503 June 8, 1988; 14130-3504 March 26, 1987, 14130-3505 October 16, 1992; and US 301 State Project Numbers 14050-3530, March 6, 1985; and 14050-3550, November 19, 1998
- US 98 Dade City Bypass project corridor USGS Quadrangle Maps, Scale 1:24,000 (1" = 2000'): Dade City, FLA, 1960, Photo Revised 1988
- Dade City Storm Water Master Plan, Michaels Engineering, Inc., 1965

Existing Land Use

The following is a brief description of the existing land uses and the general location for these uses.

Residential

Less than 5 percent of the US 98 Dade City Bypass project corridor contains residential areas. Low and medium density residential areas are scattered throughout the project vicinity; however, most residential properties are not adjacent to the US 98 Dade City Bypass right-of-way. Residential properties adjacent to the existing right-of-way are located along the east side of the project from Willingham Avenue to the US 301 South intersection, along the north side between Connector Road and CR 35A, and along the west side of the US 98 Dade City Bypass north of Martin Luther King Boulevard.

Commercial & Services

About 65 percent of the US 98 Dade City Bypass project corridor contains developed commercial uses. Strip commercial areas are located on both sides of the US 98 Dade City Bypass at the intersection with CR 35A, along the west side of the US 98 Dade City Bypass south of Meridian Avenue and along the intersection with US 301 North. Scattered commercial properties are present for the length of the project including a bank, medical clinic, car dealership, restaurants, convenience stores, gasoline stations, and an abandoned fuel depot.

Vacant & Undeveloped

Less than 20 percent of the US 98 Dade City Bypass project corridor contains vacant and undeveloped lands. Vacant areas are scattered along the project corridor intermixed with the residential and commercial properties. The majority of the currently vacant and undeveloped land is shown for commercial uses on the future land use maps.

Industrial

Less than 1 percent of the US 98 Dade City Bypass project corridor contains industrial uses. A large industrial area containing the Vitality Beverages, Inc. citrus processing plant is located east of the US 98 Dade City Bypass at the northern end of the project.

Agricultural

Agricultural land is present along the north side of the US 98 Dade City Bypass between the intersections of US 301 South and CR 35A. This represents less than 1 percent of the project corridor.

Recreation/Open Space

Less than 10 percent of the US 98 Dade City Bypass project corridor contains recreation/open space areas. A portion of an abandoned public ball field is located south of the intersection with Martin Luther King Boulevard. A stormwater management pond and floodplain compensation area for the expansion of the East Pasco County Government Center occupy several acres adjacent to the US 98 Dade City Bypass south of the abandoned ball field. Open space exists between the US 98 Dade City Bypass and the CSX railroad north and south of Meridian Avenue and Martin Luther King Boulevard. The East Pasco County Government Center, located north of Meridian Avenue, contains open space adjacent to the US 98 Dade City Bypass.

Existing Special Land Use Conditions

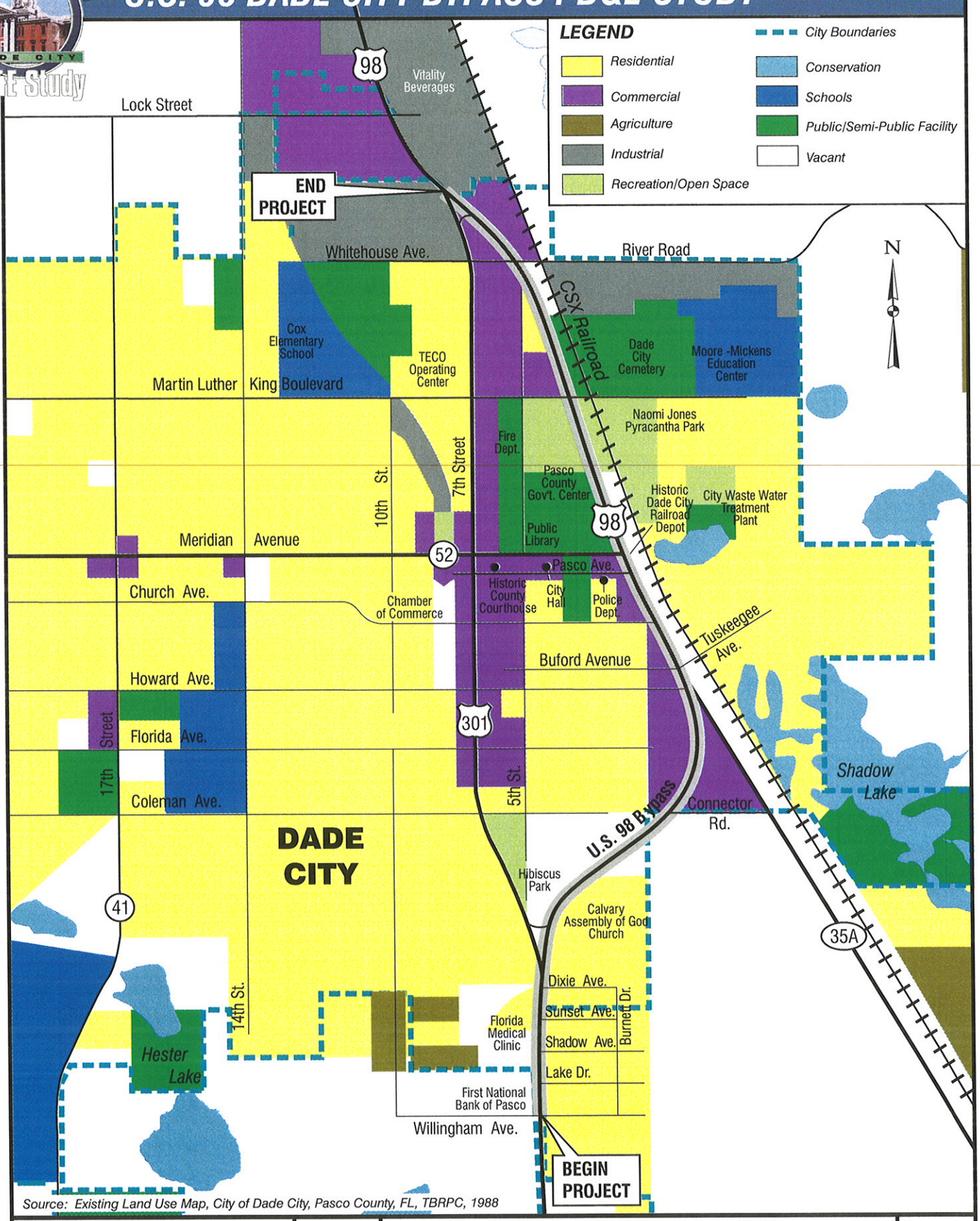
Certain types of land uses are particularly important due to the special conditions surrounding them and the hardships involved in the relocation of such areas. Examples of this found adjacent to the project corridor are the CSX railroad right-of-way to the east of the US 98 Dade City Bypass and the historic Dade City Railroad Depot at Meridian Avenue. The Calvary Assembly of God Church, Hibiscus Park and the Dade City Garden Club (housed in a historic former church) are located near the intersection with US 301 South.

The existing land use is shown in Figure 4-4.

Future Land Use - The 1988 Dade City and 2010 Pasco County Future Land Use Maps show that land use in the US 98 Dade City Bypass corridor will remain predominantly commercial/retail uses with areas of residential, industrial and public lands. The proposed improvements to the US 98 Dade City Bypass would utilize the existing corridor and land use is not anticipated to change significantly as a result of the improvements.

The future land use is shown in Figure 4-5.

U.S. 98 DADE CITY BYPASS PD&E STUDY



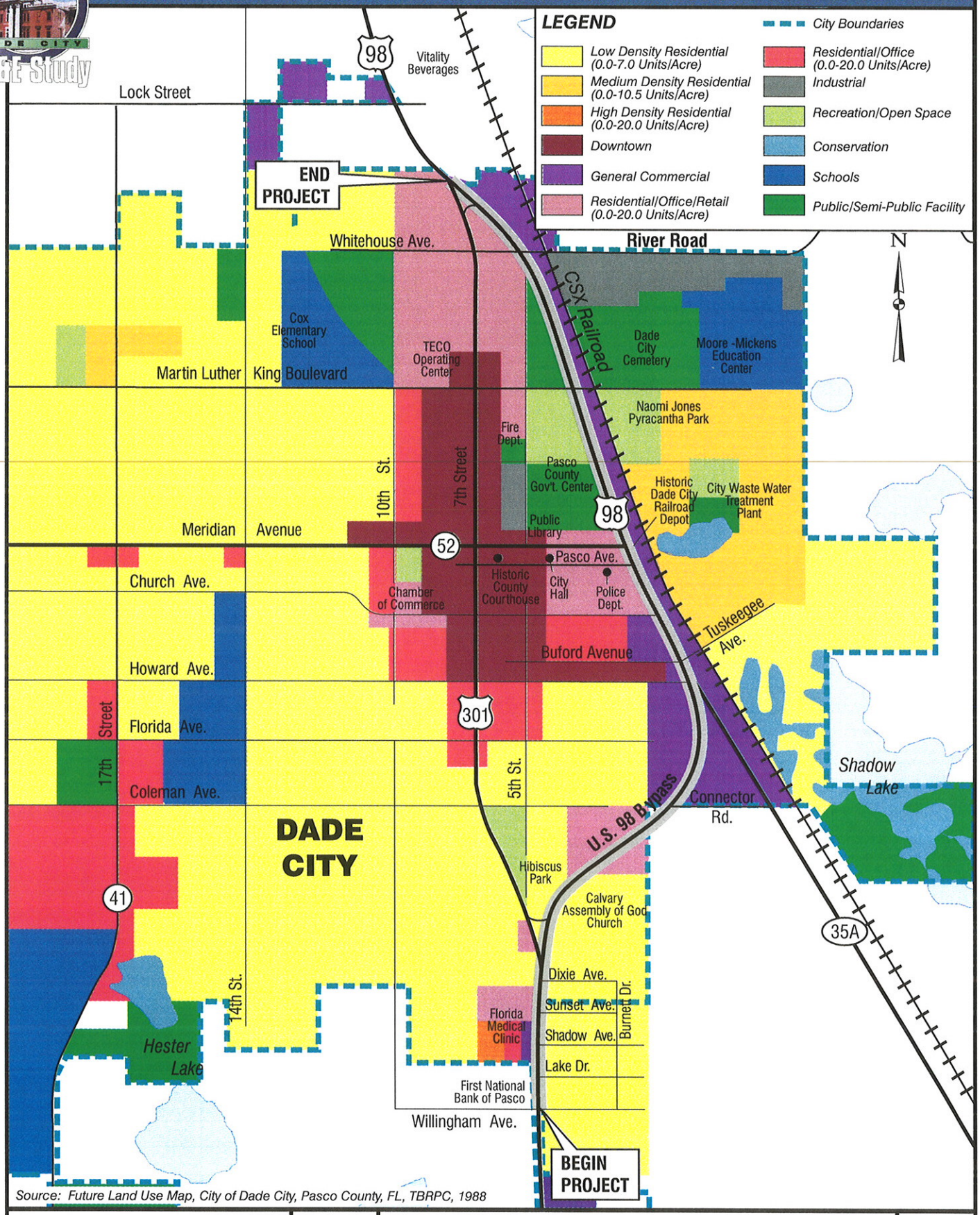
Source: Existing Land Use Map, City of Dade City, Pasco County, FL, TBRPC, 1988

Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

EXISTING LAND USE MAP

Figure 4-4

U.S. 98 DADE CITY BYPASS PD&E STUDY



Source: Future Land Use Map, City of Dade City, Pasco County, FL, TBRPC, 1988

Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

FUTURE LAND USE MAP

Figure 4-5

4.3.2 Cultural Features and Community Services

There are numerous cultural features and community services in or near the project study area, including schools, religious institutions and recreational facilities. Community services are shown in Figure 4-6.

A. Archaeological and Historic Site Field Survey

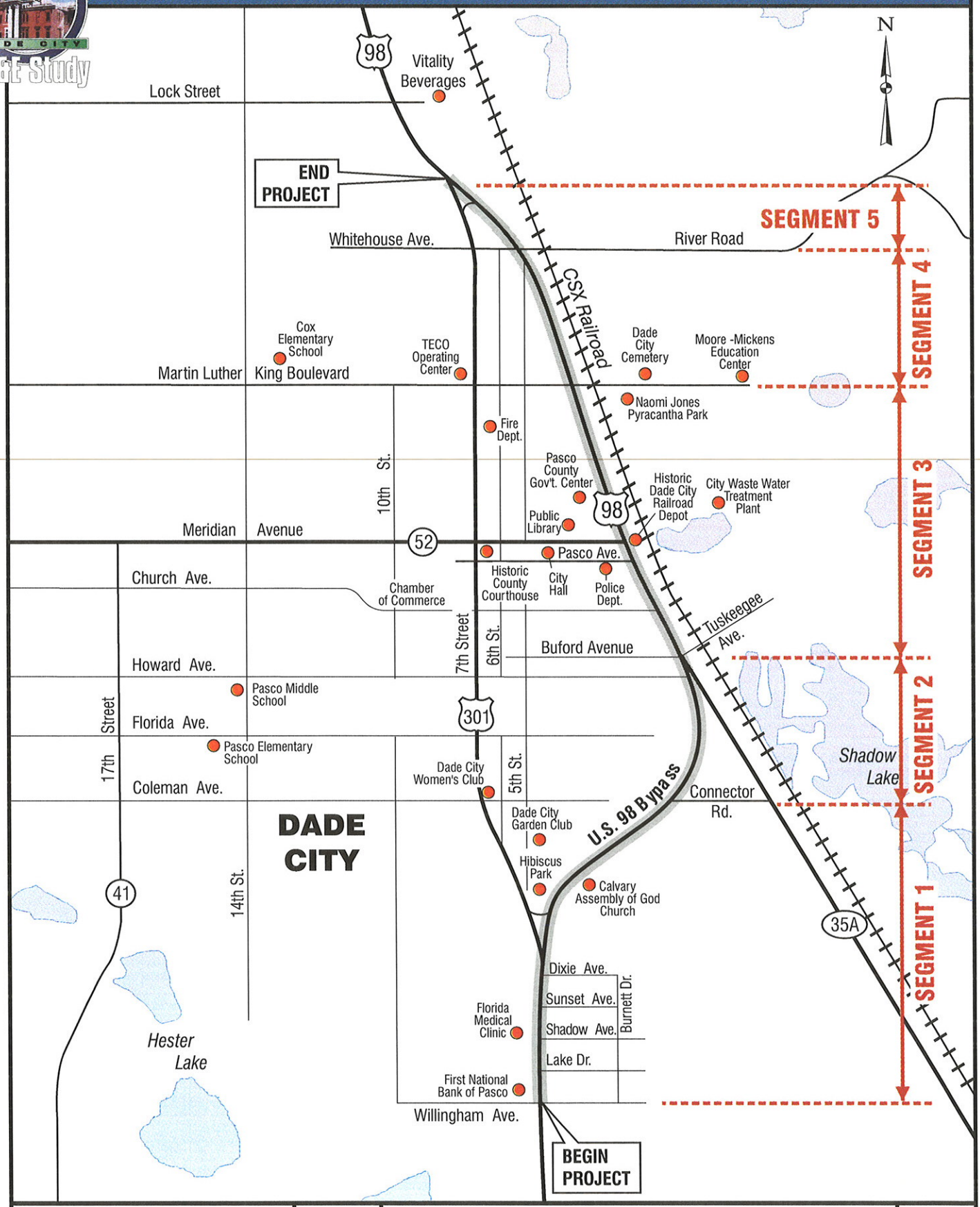
A Cultural Resources Assessment Survey (CRAS) was undertaken to comply with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655), as amended, and the implementing regulations 36 CFR 800 (revised May 1999), as well as the provisions contained in the revised Chapter 267, Florida Statutes. All work was carried out in conformity with Part 2, Chapter 12 - Archaeological and Historical Resources of the FDOT's PD&E Manual (revised January 1999), and the standards contained in the Historic Preservation Compliance Review Program of the Florida Department of State, Division of Historical Resources Manual (revised November 1990).

The purpose of the CRAS was to locate, identify, and bound any cultural resources within the project area of potential effects (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). The historical/architectural and archaeological field surveys were conducted in December 1999 and January 2000.

Archaeological background research, including a review of the Florida Site File (FSF) and the NRHP, indicated that 32 archaeological sites have been recorded previously within 3 miles of the project corridor. None are located within the US 98 Dade City Bypass right-of-way. A review of relevant site locational information for environmentally similar areas within Pasco County and the surrounding region indicated a moderate to high probability for the occurrence of prehistoric sites within portions of the project corridor. The background research also indicated that sites, if present, would most likely be small lithic or artifact scatters. The results of historical research suggested a low to moderate potential for historic period archaeological sites associated with late nineteenth and early twentieth century settlements and roads. As a result of the field survey, no prehistoric or historic period archaeological sites were found.

Historical background research, including a review of the FSF and the NRHP, indicated that one historic resource (50 years of age or older) was recorded previously in the project area. This NRHP-listed property, the Dade City Atlantic Coast Line (ACL) Railroad Depot (8PA415) at 14216 US 98 Dade City Bypass, is located within the US 98 Dade City Bypass PD&E Study project APE. Field surveys resulted in the location and recording of 24 additional historic properties (8PA1207-1227, 8PA1265-67). The 24 newly recorded historic resources represent residential or commercial buildings common to the area. Additionally, the properties are neither distinguished by their architectural features, nor known to be associated with significant events or with the lives of persons significant in the past. Based upon these criteria, none of the 24 appears to be eligible for listing in the NRHP, either independently or as part of a historic district.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

COMMUNITY SERVICES MAP

Figure 4-6

The Vitality Beverages, Inc. citrus processing plant complex located at 15000 US 301 was also examined during this investigation due to its historical importance to the surrounding area. Access to the property was denied by the owner.

Although visual examination from the existing right-of-way and historical research suggests that a portion of this complex may be potentially eligible for listing in the NRHP, the concentration of historic buildings appears to be about 450 feet north of the US 301/US 98 Bypass intersection, outside of the US 98 Dade City Bypass Project APE. Due to the denial of access and the distance from the project's APE, neither a FSF form nor a request for a Determination of Eligibility (DOE) were prepared for this property.

For additional information regarding archaeological and historic site field surveys, refer to the CRAS prepared for this project.

The following cultural resources were identified during the alternate project corridor analysis. These resources fall outside the APE of the US 98 Dade City Bypass corridor.

Twelve structures in the general downtown area are included on the historic registries of the Dade City Historical Advisory Board and the Pasco County Preservation Committee. These locally significant structures have not been deemed eligible for listing in the NRHP. These include six structures in the downtown area on 7th Street and one on 4th Street. Two historic homes, a theater and a church are located along 5th Street and the Dade City Woman's Club is on 7th Street in the residential neighborhoods south of downtown.

Several locally significant historic structures lie along both sides of 7th Street in the downtown area of Dade City. These include the original Pasco County Courthouse, built in 1909; the Florida Telephone Building built in 1924; the Williams Building built in 1926; and the Touchton Building built in1908. The Sikes Home, built in 1916 at 449 North 7th Street, is one of the few residences in the commercial district of North 7th Street. The Mount Zion African Methodist Episcopal Church, built in 1918 at 434 North 7 th Street, is the first Protestant church in Pasco County built of masonry (concrete block).

Dade City Hall, located on the south side of Meridian Avenue at 4th Street, was originally intended to be a hotel. When developers went broke, it was left half finished until 1940, when construction resumed.

Two historic homes are located on the east side of 5th Street between Church and Howard Avenues. The Shofner House is an example of late-19th century Florida architecture. The J. A. Peek House is a Victorian bungalow converted to a commercial building.

The Crescent Theater, built in the spring of 1926 for silent films, vaudeville and local theater productions, is an example of Spanish Mediterranean architecture. This former theater on the northeast corner of 5th Street and Florida Avenue is planned to be renovated using State funds and donated for use as a senior citizen center and performing arts center.

The Dade City Woman's Club, located between 6th and 7th Streets on the south side of Palm Avenue, was built circa 1920 and is an example of Tudor revival architecture.

The former St. Rita's Catholic Church, built in 1913, is located east of 5th Street between Southview Avenue and Bougainvillea Avenue. The former church was renovated and

moved to this location in 1976 and currently serves as the home of the Dade City Garden Club.

B. Evacuation Routes and Emergency Services

Evacuation Routes – Dade City is not in a hurricane evacuation zone as shown on the 1999 Hurricane Guide for Pasco County prepared by the Tampa Bay Regional Planning Council. The 1999 Hurricane Guide does show that, in the event of a weather emergency, the US 98 Dade City Bypass is part of the major north-south evacuation route through eastern Pasco County. SR 52 is designated as an evacuation route through Pasco County in an east-west direction. The SR 52 evacuation route ties to the US 98 Dade City Bypass evacuation route at the Meridian Avenue intersection.

There are three emergency shelters in Dade City in close proximity to the project corridor. St. Rita's Catholic Church located at 14404 North 14th Street, the First Baptist Church at 37511 Church Avenue and the Pasco Elementary School at 37350 Florida Avenue are listed in the 1999 Hurricane Guide. An additional shelter is provided at the Pasco High School west of Dade City. Special needs evacuees are sheltered in the Zephyrhills High School. Shelters are opened one at a time based on need. For Category 1 and 2 storms, as the first shelter reaches 50 percent capacity the second shelter is opened, and so on. For Category 3 and above, all shelters are opened immediately. In the Dade City area, most users are mobile home residents. The Pasco County Office of Emergency Management does not monitor the useage of the shelters in Dade City, but estimates that a local flooding emergency may produce up to 20 evacuees and a major storm may involve 350 or more evacuees. The Pasco County Office of Emergency Management maintains an office in the East Pasco Government Center in Dade City.

Emergency Services – Fire and rescue services in the project corridor are provided by the Dade City fire and police departments, the Pasco County Sheriff's Office and the Florida Highway Patrol. The Dade City Fire/Rescue station is located on the east side 5th Street north of Live Oak Avenue about 0.25 miles west of the US 98 Dade City Bypass via 5th Street and Meridian Avenue or Martin Luther King Boulevard.

The Dade City office of the Pasco County Sheriff is located on the west side of 5th Avenue north of Robinson Avenue about 0.25 miles west of the US 98 Dade City Bypass via 5th Street and Martin Luther King Boulevard.

The Dade City Police Department is located on the south side of Pasco Avenue east of 4th Street about 0.1 mile west of the US 98 Dade City Bypass.

The Tampa Florida Highway Patrol, Troop C office is located at 11305 North McKinley Drive in Tampa.

Emergency response time to the project corridor is typically three minutes or less from the time of notification.

C. Section 4(f) Properties

The project lies within the service areas of one Pasco County community park (John S. Burks Memorial Park with a 3-mile radius service area) and one neighborhood park (Carver Heights Playground with a 1-mile radius service area). Burks Park is located west of Dade

City on SR 52. Carver Heights Playground is located east of the CSX Railroad near River Road. Both of these County parks fall outside the project corridor and would not be affected by improvements to the US 98 Dade City Bypass.

The US 98 Dade City Bypass project lies within the designated service areas of two Dade City community parks (Naomi Jones Pyracantha Park and Mickens Field), two neighborhood parks (Price Park and Rhinesmith Park) and one mini-park (Dade City Apex Park). The Dade City Comprehensive Plan designates service areas of a 1.25-mile radius for community parks and a 0.5-mile radius for neighborhood parks. Pyracantha and Price Parks and Mickens Field lie outside the project corridor and would not be affected by improvements to the US 98 Dade City Bypass. Two of the Dade City Parks are located within the project corridor.

Rhinesmith Park is bounded by US 301 on the west, Bougainvillea Avenue on the south, South 5th Street on the East and Southview Avenue to the North. Rhinesmith Park is designated as a Neighborhood Park. It contains no recreation facilities and encompasses 1.9 acres. The park is municipally owned, well maintained, landscaped and designed for passive recreation use by all age groups. Dade City does not maintain usage records for the park, but notes that local residents occasionally use the park for children's passive play. Improvements to the US 98 Dade City Bypass would have no effect on the physical property, access or function of Rhinesmith Park.

Dade City Apex Park is located immediately south of Rhinesmith Park at the intersection of US 301 South and the US 98 Dade City Bypass. Apex Park is bounded on the north by Bougainvillea Avenue and on the east by South 5th Street. Apex Park is designated as a Mini-Park. It contains four benches, five picnic-type tables and three decorative gaslights situated on 0.3 acres. The park is handicapped accessible. Apex Park is municipally owned, well maintained, landscaped and designed for passive recreation use by all age groups. Dade City does not maintain usage records for the park, but notes that it is used year-round by residents and local business employees for picnic lunches during the Monday to Friday work week and occasionally used by local residents for picnics and passive play on weekends. Dade City and the Dade City Garden Club (located directly across South 5th Street) maintain the appearance of the park as a decorative southern gateway to the city.

Collectively, Dade City Apex and Rhinesmith Parks are known and signed as Hibiscus Park.

Improvements to the US 98 Dade City Bypass could potentially affect the Apex Park portion of Hibiscus Park if right-of-way acquisition were to occur to the north. Improvements on other alignments in the corridor such as one-way or two-way pairs using South 7th Street or South 5th Street would affect the physical property and access of both Apex and Rhinesmith portions of Hibiscus Park.

D. Educational or Religious Institutions

Educational Institutions - The US 98 Dade City Bypass project corridor is served by the Pasco County Board of Education. There are four public schools within 2 miles of the project corridor. Two miles is considered to be within walking distance.

- The Rodney B. Cox Elementary School is located on the north side of Martin Luther King Boulevard at 13th Street (37615 Martin Luther King Boulevard). This location is about 0.5 miles west of the US 98 Dade City Bypass.

- Pasco Elementary School is located on the north side of Florida Avenue between 14th and 15th Streets, about 0.9 miles west of the US 98 Dade City Bypass (37350 Florida Avenue).

- Pasco Middle School is located on the west side of 14th Street at Howard Avenue, about 0.8 miles west of the US 98 Dade City Bypass (13925 14th Street).

- The Moore-Mickens Education Center is located about 0.25 miles east of the US 98 Dade City Bypass at 38301 Martin Luther King Boulevard.

According to the data provided by the Pasco County School Board in June 1999, there are about 600 households with elementary school age children within 2 miles of the Cox and Pasco Elementary schools. About 75 of these homes, or 12.5 percent of the total, are located east of the US 98 Dade City Bypass.

About 400 households with middle school age children are within 2 miles of the Pasco Middle School. Of these, about 60, or 15 percent, are located east of the US 98 Dade City Bypass.

The Pasco County School Board does not have funding to provide bus transportation for school children within 2 miles of the schools. As a courtesy, however, and because of the safety concerns, school buses do stop at select locations within the 2-mile radius to transport children to school. Pasco County Schools data show that as many as 286 school age children potentially walk to school from east of the US 98 Dade City Bypass (143 in grades K-5, 90 in grades 6-8 and 53 in grades 9-12).

Religious Institutions – The Calvary Assembly of God Church is located on the south side of the US 98 Dade City Bypass east of the US 301 South intersection.

E. Other Non-Profit Organizations

The following non-profit organizations are in close proximity to the US 98 Dade City Bypass and have the potential to be affected by the proposed improvements.

Dade City Garden Club, housed in the former St. Rita's Catholic Church, built in 1913, is located east of 5th Street between Southview Avenue and Bougainvillea Avenue. The church was renovated and moved to this location in 1976.

Pioneer Florida Museum is a non-profit organization located at 15602 Pioneer Museum Road. Six buildings house the historic treasures of the Pioneer Florida Museum. Members of the organization use the US 98 Dade City Bypass daily to access the museum and open the depot. The museum maintains a display at the historic Dade City Railroad Depot at the intersection of Meridian Avenue.

Women's Peacepower Foundation is a non-profit organization that makes grants to grassroots projects that are working to bring peace to women and their families. They are located at 38047 Pasco Avenue.

4.3.3 Natural and Biological Features

4.3.3.1 Wetlands

In accordance with Executive Order 11990, Protection of Wetlands, dated May 23, 1977, a study was conducted to assess the potential wetland impacts of the proposed project. The purpose of the study is to: 1) describe the existing wetlands and other surface water features within the US 98 Dade City Bypass corridor; 2) present qualitative and quantitative information regarding potential wetland impacts and conceptual mitigation alternatives; 3) identify permitting and coordination requirements for the project; 4) solicit comments from regulatory agencies with jurisdiction in the study area; and, 5) provide a decision-making tool to aid the project engineers in designating a preferred alignment alternative that will minimize environmental impacts within the project corridor to the greatest extent practicable.

Wetlands within the project limits were initially identified through review of mapping resources including the Soil Survey of Pasco County, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory mapping, and 1:1000 (1"=100') scale project aerial photography. Wetlands were identified in the field utilizing the United States Army Corps of Engineers (USACOE), Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987).

The wetlands were classified according to the USFWS methodology (Cowardin, *et.al.*, 1979). The land use, vegetation cover and land form for each wetland was identified using the FDOT Florida Land Use, Cover and Forms Classification System (FLUCFCS), Second Edition, September 1985.

Sizes of existing wetlands and potential wetland impacts were determined planimetrically from project aerial photographs. Wetlands which may be potentially affected by the project were assessed for functional significance using the Wetland Rapid Assessment Procedure (WRAP) as developed by the South Florida Water Management District and utilized by the USACOE.

Six wetlands were identified within the US 98 Dade City Bypass project study area. They are contained within the Hillsborough-Withlacoochee Regional Drainage Basin. Wetland 1A is a wet field currently being used as a pasture for cattle. Wetland 1B contains the drainageway for Wetland 1A. Wetland 2 is a small depression area filled with shrubby wetland trees. Wetlands 3 and 4 are classified as wet ditches and were created for the conveyance of stormwater. Wetland 5 is a dry ditch created for the conveyance of stormwater.

A summary of the classifications, wetland areas, and anticipated impacts is included in Table 4-7.

Table 4-7
Wetland Summary

Wetland No.	USFWS Classification	FLUCFCS Code	Total Wetland Area (acre)	Area within Existing Right-of-Way (acre)
1A	PEM1C	643	0.44	0.008
1B	$PSS1C_X$	510	0.005[1]	0.002
2	$PSS1C_X$	616	0.41	0
3	$PEM1C_X$	510	0.22	0.2
4	$PSS1C_X$	510	0.91	0.04
5	$PUB2D_X$	510	.06	0

Note: [1]Wetland 1B is a small portion of a larger wetland system draining into Shadow Lake and eventually into the Withlacoochee River. The total wetland area shown is the maximum area potentially affected by the proposed improvements.

The descriptions of the USFWS Classification codes used to identify the wetland areas within the US 98 Dade City Bypass project limits are listed below.

USFWS Classification Code	Description
System - P	Palustrine
Class - EM, SS, UB	Emergent, Scrub-shrub, Unconsolidated bottom
Subclass - 1	Persistent, Broad-leaved deciduous
Subclass - 2	Sand
Water Regime - C, D	Seasonally flooded, Seasonally flooded/well drained
Special Modifier - $_x$	Excavated

The descriptions of the FLUCFCS codes used to identify the wetland areas within the US 98 Dade City Bypass project limits are listed below.

Code	Description
510	Streams and Waterways - This category includes rivers, creeks, canals and other linear water bodies.
616	Inland Ponds and Sloughs - These communities are associated with depressions and drainage areas that are not associated with streams or lakes.
643	Wet Prairies - This classification is composed of dominantly grassy vegetation on wet soils and is usually distinguished from marshes by having less water and shorter herbage.

WRAP analyses were conducted to assess wetland function and values for wetlands within the study area, using Technical Publication REG-001 as a guide. WRAP incorporates concepts from the USFWS Habitat Evaluation Procedures (HEP 1980) and the SWFWMD Save Our Rivers Project, Evaluation Matrix (SOR 1992). The WRAP assessment utilizes a holistic approach to evaluate ecological communities based on the following variables: wildlife utilization, wetland overstory/shrub canopy of desirable species, wetland vegetative

groundcover of desirable species, adjacent upland/wetland buffer, field indicators of wetland hydrology, and water quality input and treatment systems.

The highest score an individual wetland can receive on any one variable is a 3.0 and the lowest is 0.0. The WRAP score is the sum of the scores for the rated variables, divided by the sum of maximum possible scores for the rated variables. The final rating score is expressed numerically with a number between 0 and 1, with one representing the highest quality wetland, and can be calculated as follows:

WRAP Score = $\sum$ scores for rated variable / $\sum$ maximum possible scores for rated variables

Table 4-8 shows the results of the WRAP analysis.

Table 4-8
Results of Wrap Analysis

Wetland No.	Wildlife Utilization Score	Wetland Canopy Score	Wetland Ground Cover Score	Habitat Support Buffer Score	Field Hydrology Score	Water Quality & Treatment Score	Overall Score
1A	0.00	-	0.00	0.38	0.00	1.53	0.127
1B	0.50	-	1.00	0.50	0.50	1.06	0.238
2	1.00	1.00	0.50	0.25	1.00	2.09	0.324
3	0.00	-	0.50	0.00	1.50	0.55	0.170
4	1.00	0.50	0.50	0.00	0.00	0.50	0.139
5	0.00	-	0.00	0.00	0.00	0.50	0.03

For additional information regarding wetlands, refer to the Wetland Evaluation Report prepared for this PD&E Study.

4.3.3.2 Threatened and Endangered Species

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended, the study area was evaluated for the potential occurrence of threatened and endangered species. Literature reviews were conducted and data were requested from the USFWS, Florida Fish and Wildlife Conservation Commission (FFWCC), and the Florida Natural Areas Inventory (FNAI).

An Endangered Species Evaluation Memorandum prepared for this project did not identify any listed species or critical habitat that would be impacted by the proposed improvements. Coordination with the FFWCC indicates that there are no known bald eagle nests within 1 mile of the US 98 Dade City Bypass project site. No occurrence records of listed species or critical habitat are contained within the FFWCC database for the project area.

A field inspection of the US 98 Dade City Bypass project was conducted on November 3, 1999. The purpose of this inspection was to observe any listed species that might be present and to determine if any suitable habitat existed for them and for specific occurrences of listed species within the project corridor.

The field inspection revealed that no habitat existed within the study corridor that would exhibit listed species. No specific occurrences or observations were made for any listed species that would occur within Pasco County. The lack of specific habitat for listed species within the study area is to be expected as the corridor is urban in nature and is highly developed. Additionally, no native upland habitats will be affected as a part of the project.

On April 14, 2000, the USFWS indicated that, "The Proposed Action is not likely to adversely affect the resources protected by the Endangered Species Act of 1974, as amended (16 U.S.C. 1531, et. Seq.). This finding fulfills the requirements of the Act."

4.3.4 Hazardous Materials and Petroleum Site Data

A Level I Contamination Screening of the US 98 Dade City Bypass project corridor was conducted to determine the potential for contamination of the US 98 Dade City Bypass right-of-way from adjacent properties and business operations. Abutting sites were identified based on regulatory standards as potential sources of hazardous materials and petroleum contamination. Sites with suspected or documented contamination were further evaluated for potential contamination risks with respect to impacts to construction and right-of-way acquisition.

A Contamination Screening Evaluation Report (CSER) was prepared pursuant to the Federal Highway Administration's (FHWA's) Technical Advisory T 6640.8A, dated October 30, 1987, and in accordance with the FDOT's PD&E Manual, Part 2, Chapter 22, dated February 8, 1994, as further modified and clarified by the District Contamination Impact Coordinator. The purpose of this report is to present the preliminary findings of a literature and file review of the potential for finding hazardous materials and petroleum contamination on parcels along the proposed alignment which may impact the proposed improvements.

Twenty-five sites were identified as possibly having the potential for contamination. The sites were identified by windshield survey; examination of 1966, 1974, 1982 and 1998 historic aerial photography; and a review of the original US 98 Dade City Bypass construction drawings, local Florida Department of Environmental Protection (FDEP) files and Dade City Directories. Of the 25 sites, four are potential hazardous materials sites and 21 are potential petroleum sites.

The four hazardous materials sites were given a rating of LOW.

Of the 21 petroleum sites, 15 were considered to have a LOW potential for contamination, two sites were considered to have a MEDIUM potential for contamination, two sites were considered to have a HIGH potential for contamination, and two sites were considered to have NO potential for contamination.

5.0 DESIGN CRITERIA

The design criteria for this project are shown in Table 5-1.

Table 5-1
Roadway Design Criteria

Design Criteria	Design Standard	Source: FDOT P.P.M. (Chapter 2)
TYPE OF HIGHWAY	Major Urban Arterial	
DESIGN SPEED	45 mph	
HORIZONTAL ALIGNMENT		
Max. Curvature	8°15'00"	Table 2.8.3
Border Width	12-foot bike lanes at curb	Table 2.5.2
Clear Zone	4 feet from face of outside curb	Section 2.11
Max. Superelevation	5%	Table 2.9.2
Max. Deflection w/o a curve	1°00'00"	Table 2.8.1a
Horizontal Curve Length	675 feet desirable, 400 feet minimum	Table 2.8.2a
Maximum Curvature for Curves (without Superelevation)	2°45'00"	Table 2.9.2
VERTICAL ALIGNMENT		
K Value Crest Vertical Curve	90	Table 2.8.5
Minimum Length (crest)	3(v)	Table 2.8.5
K Value for Vertical Curve (sag)	80	Table 2.8.6
Minimum Length (sag)	3(v)	Table 2.8.6
Maximum Grade	7%	Table 2.6.1
Maximum Change in Grade without Vertical Curve	0.70%	Table 2.6.2
Vertical Clearance (over roadway)	16 feet 6 inches	Table 2.10.1
Vertical Clearance (over railroad)	23 feet 6 inches	Table 2.10.1
SIGHT DISTANCE		
Minimum Stopping	350 feet	Table 2.7.1
ROADWAY ELEMENTS		
No. Through Lanes	4 Lanes (2 in each direction)	
Lane Width	12 feet	Table 2.1.1
Median Width	22 feet	Table 2.2.1
Inside and Outside Shoulders	N/A (Curb and Gutter)	
Clearance above Design High Water	1.0 feet	Table 2.6.3

6.0 TRAFFIC

The technical traffic analysis data in this section is a summary of the data contained in the Traffic Report, US 98 Dade City Bypass, November 1999 (Revised June 2000, and May 2001). The purposes of the Traffic Report are to document the existing conditions along the US 98 Dade City Bypass, including existing traffic characteristics, traffic demand, and LOS; and to provide estimated year 2005 and 2025 conditions including traffic demand, LOS, and geometric requirements.

6.1 Existing Traffic Conditions

6.1.1 Previous Traffic Studies

Traffic studies were conducted for the US 98 Dade City Bypass for previous roadway improvements. The traffic projections provided in the design plans for the improvements made from 1979 to 1992 are listed in Table 6-1.

Table 6-1
Previous Traffic Studies

State Project Number	Job Limits	Date	Traffic Projections ADT	Factors
14130-3501	North 5th Street to US 301 North	1979	1977 – 10,182	Not Available
14130-3502	Martin Luther King Boulevard Intersection	1982	1985 – 13,200 1990 – 15,000 1995 – 15,700 2005 – 15,700	K = 10% D = 55% T = 16% (24 hr)
14130-3503	Old Fort King Hwy. to US 301 South	1989	1991 – 24,257 1992 – 25,400 2001 – 37,560	D = 56.2% T = 25.6% (24 hr) T = 12.8% (design hr)
14130-3505	US 301 South to US 301 North	1992	1992 – 13,385 1993 – 14,370 2003 – 24,000	K = 10.36% D = 58.54% T = 12.10% (24 hr) T = 6.05% (design hr)

6.1.2 Existing Traffic Volumes and Characteristics

Existing Traffic Volumes

Traffic counts were conducted at several locations within the study corridor between August and September 1999. The traffic counts included 24-hour vehicle counts, 7-day vehicle classification counts and 8-hour turning movement counts.

The existing (1999) annual average daily traffic (AADT) volumes for the study corridor were developed from the raw 24-hour traffic count data. The AADT volumes were calculated by applying the current (1998) FDOT seasonal and axle adjustment factors to the raw traffic counts. There is variability in the seasonal adjustment factors during the months the counts were collected that ranged between 1.10 and 1.14 for Pasco County. The 1998 axle adjustment factor also varied during this period. The axle adjustment factor for the US 98 Dade City Bypass ranged between 0.90 and 0.92.

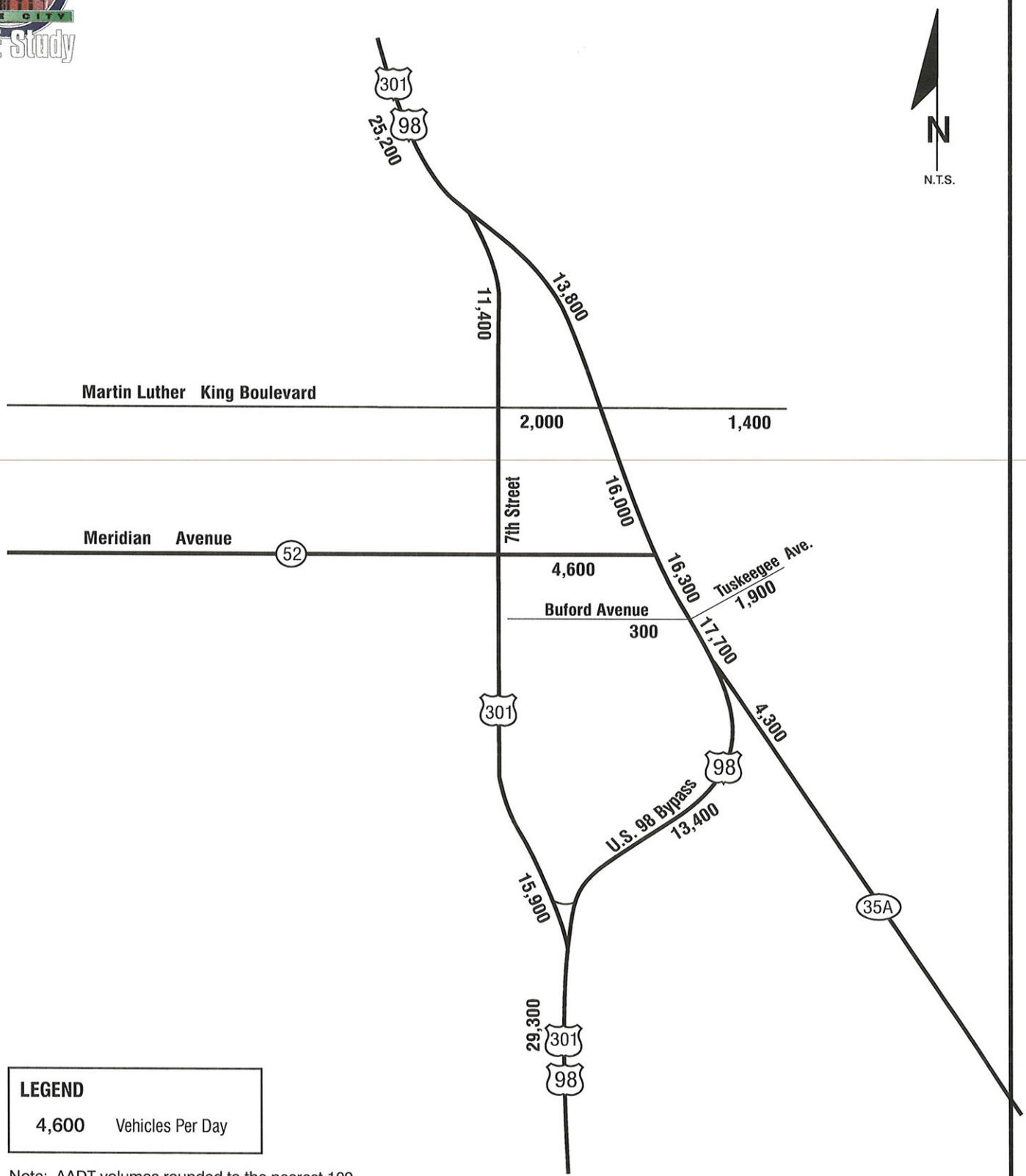
The AADT volumes developed from the counts were compared to the FDOT AADT volumes obtained from the 1998 Florida Traffic Information database. This comparison was used to check the reasonability of the 1999 count data collected for this study.

The reasonability check of the 24-hour traffic counts revealed significant differences in daily traffic counts between a few of the study corridor intersections. Review of the surrounding land use revealed that there are no major generators along the corridor that contribute to the change in traffic between the intersections. Comparison of the traffic counts to the historical AADT data provided in the 1998 Florida Traffic Information database revealed that the traffic counts were comparable to the volumes reported in the database at two locations: 1) US 301 South (7th Street South) south of the US 98 Dade City Bypass and 2) US 301 North (7th Street North) north of the US 98 Dade City Bypass. Therefore, the volumes at these two locations remained constant and engineering judgment was used to adjust the counts along the corridor. The traffic counts were not recollected. The existing (1999) AADT volumes shown in Figure 6-1 reflect both FDOT traffic volumes and the current traffic count data that were specifically conducted for this study.

The data analyses showed that the peak hours vary slightly for each intersection. In general, the a.m. and p.m. peak hours occur from 7:15 a.m. to 8:15 a.m. and from 4:30 p.m. to 5:30 p.m., respectively. The turning movement counts were used to determine the existing peak hour volumes that reflect traffic conditions during the 30th highest hour. The purpose of estimating existing turning movement volumes that reflect the 30th highest hour is to provide an equivalent comparison to the design hour volumes that are developed for future conditions. Because of a variation in through traffic between two intersections, adjustments were made to the count data at Meridian Boulevard and Martin Luther King Boulevard.

Figure 6-2 shows the existing (1999) a.m. and p.m. peak hour volumes that reflect the turning movement adjustments.

U.S. 98 DADE CITY BYPASS PD&E STUDY



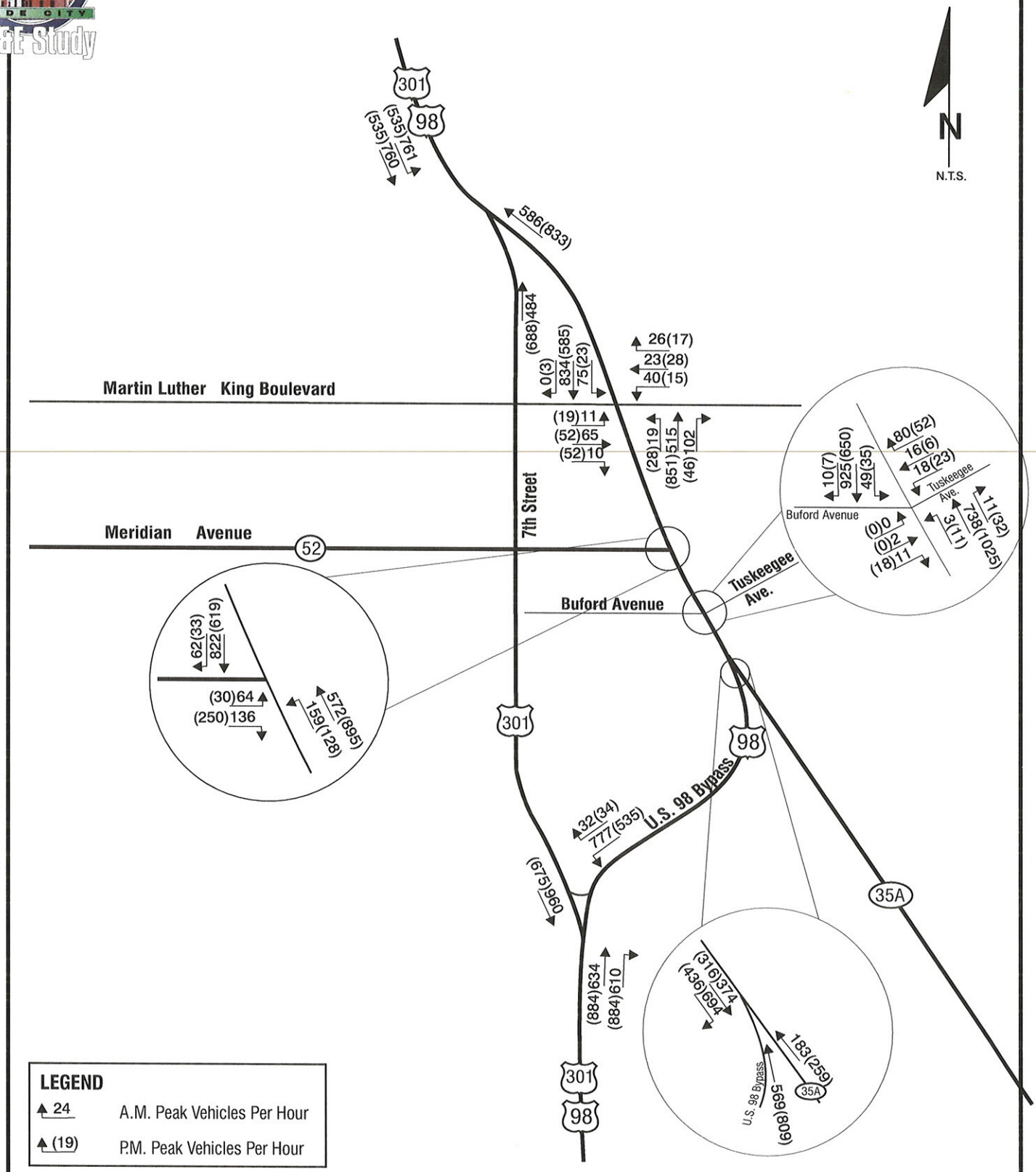
LEGEND

4,600 Vehicles Per Day

Note: AADT volumes rounded to the nearest 100. AADT volumes developed from the traffic counts conducted for the study were adjusted to reflect FDOT AADT volume data.

Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**EXISTING (1999) ANNUAL AVERAGE DAILY TRAFFIC VOLUMES**	Figure 6-1

U.S. 98 DADE CITY BYPASS PD&E STUDY



LEGEND

▲24	A.M. Peak Vehicles Per Hour
▲(19)	P.M. Peak Vehicles Per Hour

Note: The peak hour volumes were adjusted to reflect the 30th highest hour.

Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**EXISTING (1999) PEAK HOUR VOLUMES**	Figure 6-2

Existing Roadway Characteristics

The US 98 Dade City Bypass currently exists as a two-lane highway within the study area. The Traffic Circulation element of the Pasco County Comprehensive Plan indicates LOS E is the acceptable standard along this facility. However, the FDOT's 1998 Level of Service Handbook indicates that LOS D is the minimum acceptable standard for a two-lane state road located in an urbanized area under 500,000 population.

The US 98 Dade City Bypass at US 301 South (7th Street South) and at Martin Luther King Boulevard are the two signalized intersections located along the study corridor. Within the study corridor, CR 35A, Tuskeegee/Buford Avenue, Meridian Avenue and US 301 North (7th Street North) intersect the US 98 Dade City Bypass at unsignalized intersections.

The existing lane geometry for each intersection was collected during a field review and is shown in Figure 6-3.

6.2 Multimodal Transportation System Considerations

6.2.1 Bus Service

The US 98 Dade City Bypass project corridor is served by the Pasco County Public Transportation (PCPT) Division bus system. The PCPT East Route serves the project corridor north and south along US 301 (7th Street) with stops near the intersections with the US 98 Dade City Bypass. The PCPT West Route serves the project corridor along US 301 (7th Street) from the intersection of the US 98 Dade City Bypass South and Meridian Avenue. The West Route travels the US 98 Dade City Bypass from the intersection with CR 35A to Howard Street and from Martin Luther King Boulevard to Meridian Avenue.

Service is provided at designated bus stops along the routes. Service on demand is also offered between designated stops. No signed bus stops are present on the US 98 Dade City Bypass. Service on the East Route begins at 8:00 a.m., runs approximately every two hours and terminates at about 6:15 p.m. Service on the West Route begins at 8:55 a.m., runs about every two hours and terminates about 5:20 p.m.

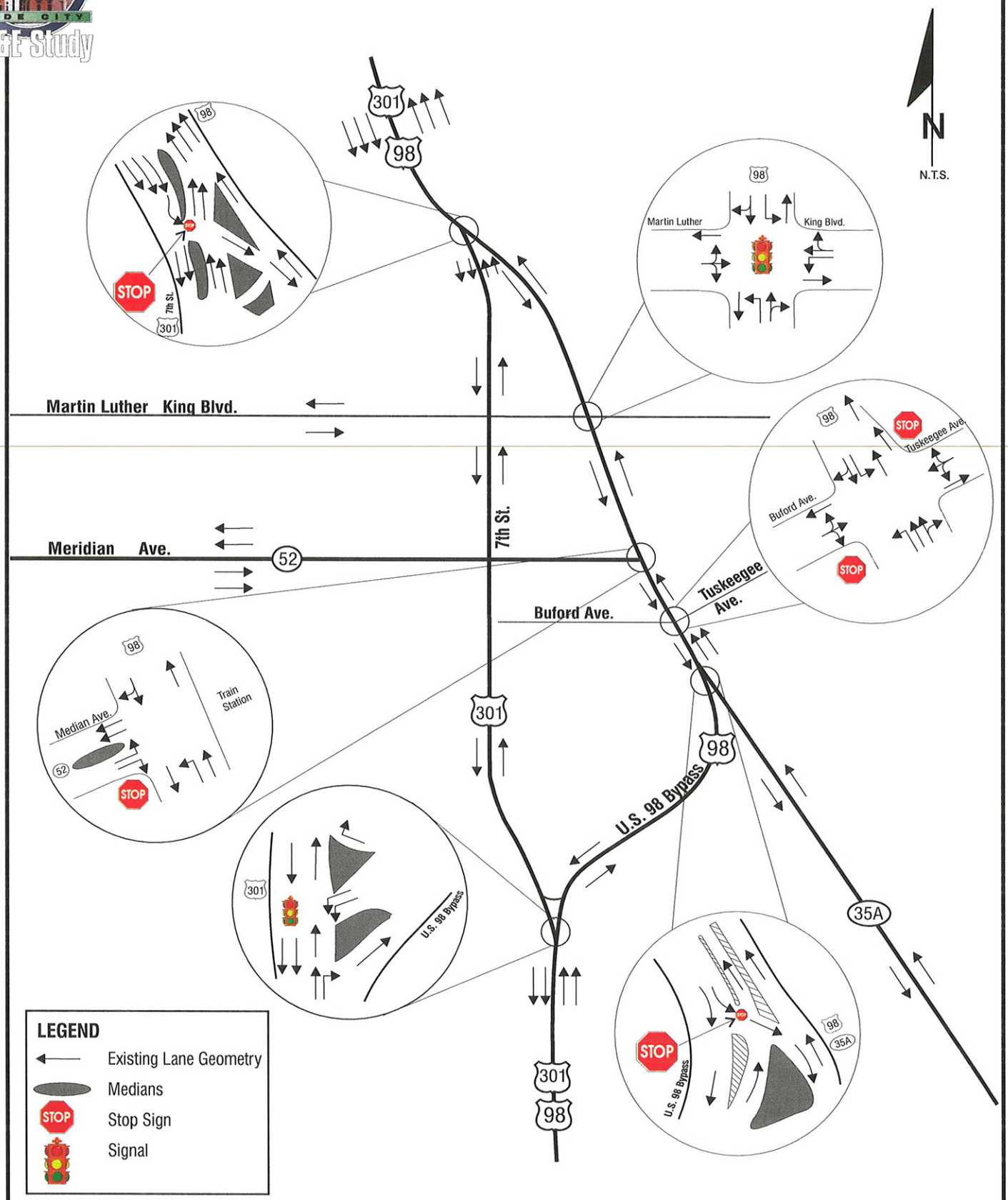
In Dade City, the PCPT runs only on Wednesdays and Fridays with special schedules on holidays. Coordination with the PCPT indicates that current ridership does not warrant additional service.

Currently, bus service in the Dade City area does not draw a significant number of vehicle trips from the US 98 Dade City Bypass and there are no current plans to increase bus service to the area.

6.2.2 Railroad Crossings

The CSX Railroad parallels the US 98 Dade City Bypass from the CR 35A intersection to US 301 North. Amtrak operates a rail passenger station at the historic Dade City Railroad Depot at the intersection of Meridian Avenue (SR 52) and the US 98 Dade City Bypass. Two passenger trains stop at Dade City daily.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

EXISTING LANE GEOMETRY

Figure 6-3

Four railroad crossings are located along the US 98 Dade City Bypass project corridor, including River Road (crossing #622720), Martin Luther King Boulevard (crossing #622721), Tuskeegee Avenue (crossing #622722) and Wilson Street (crossing #622723).

Additional existing rail-highway crossing information is shown in Table 6-2.

Table 6-2
Rail-Highway Crossing Highway Department Information

Item	RR Crossing No. 622720	RR Crossing No. 622721	RR Crossing No. 622722	RR Crossing No. 622723
Local Street Name	River Road	MLK Blvd	Tuskeegee Ave	Wilson Street
Traffic Vol. (ADT)	007369	001586	001847	000835
Date of ADT	05/31/91	05/30/91	03/31/91	05/30/91
Percent Trucks	12%	11%	12%	10%
No. School Buses	010	033	020	000
No. Transit Buses	000	000	000	000

For additional information regarding rail service, refer to Sections 4.1.12 and 8.2.1.

6.2.3 Airports

The nearest commercial passenger air service is Tampa International Airport located in Tampa, Florida, about 50 miles southwest of Dade City. The nearest general aviation public airport is the Hernando County Airport located south of Brooksville, Florida about 28 miles northwest of Dade City. Air travelers to and from the Dade City area must use surface transportation to access the airports.

6.2.4 Park and Ride Facilities

There are no park and ride facilities located within the US 98 Dade City Bypass study area.

6.3 Traffic Analysis Assumptions

Future traffic characteristics were obtained for the study corridor from FDOT District 7 Planning Department. These characteristics are summarized in Table 6-3.

Table 6-3
Future Traffic Characteristics

Segment Locations	Future Traffic Characteristics					
	K_{30}	D	T_{24}	DHT	DH2[a]	DH3[a]
US 98						
Northeast of US 301 S. (7th Street S)	10.28%	58.69%	15%	7.5%	1.7%	5.8%
South of Tuskeegee/Buford Aves.	10.28%	58.69%	14%	7%	1.5%	5.5%
North of Tuskeegee/Buford Aves.	10.28%	58.69%	14%	7%	1.5%	5.5%
North of Meridian Avenue	10.28%	58.69%	13%	6.5%	1.4%	5.1%
North of MLK Blvd.	10.28%	58.69%	13%	6.5%	1.4%	5.1%
US 301 (7th Street)						
South of US 98 Dade City Bypass S.	10.28%	58.69%	9%	4.5%	N/A[b]	N/A[b]
North of US 98 Dade City Bypass S.	10.28%	58.69%	3%	1.5%	N/A[b]	N/A[b]
South of US 98 Dade City Bypass N.	10.28%	58.69%	3%	1.5%	N/A[b]	N/A[b]
North of US 98 Dade City Bypass N.	10.28%	58.69%	8%	4%	N/A[b]	N/A[b]
CR 35A						
Southeast of US 98 Dade City Bypass[d]	10.28%	58.69%	10%	5%	N/A[b]	N/A[b]
Tuskeegee/Buford Avenues						
East of US 98 Dade City Bypass[c]	10.28%	58.69%	4%	2%	N/A[b]	N/A[b]
West of US 98 Dade City Bypass[c]	10.28%	58.69%	4%	2%	N/A[b]	N/A[b]
Meridian Avenue						
West of US 98 Dade City Bypass	10.28%	58.69%	3%	1.5%	N/A[b]	N/A[b]
MLK Boulevard						
East of US 98 Dade City Bypass[d]	10.28%	58.69%	10%	5%	N/A[b]	N/A[b]
West of US 98 Dade City Bypass[d]	10.28%	58.69%	10%	5%	N/A[b]	N/A[b]

Notes: [a] Based on medium and heavy truck split at the US 98 Dade City Bypass between US 301 S. (7th Street S.) and CR 35A at 1.04%; between CR 35A and Meridian Avenue at 0.92%; and between Meridian Avenue and US 301 N. (7th Street N.) at 1.59%.

[b] The break down for medium and heavy trucks was not applicable for this study.

[c] Future truck percentages not provided. Therefore, assumed Highway Capacity Software default value of 2% for design hour truck percentage.

[d] Future truck percentages not provided. Therefore, since the roadway is main route assumed 5% for design hour truck percentage.

6.4 Traffic Volume Projections

The future daily traffic volumes were obtained for the opening year (2005) and design year (2025) for the US 98 Dade City Bypass study corridor. The future daily traffic volumes were used to determine the peak hour traffic projections for this study. The following subsections summarize these data.

The AADT projections for the study corridor were developed for the opening year (2005) and design year (2025). For the No-Build Alternative, the AADT volumes along the US 98 Dade City Bypass study corridor are expected to range from 14,200 vehicles per day (vpd) to 18,700 vpd in the opening year (2005). In the design year (2025) the AADT volumes are expected to range between 16,800 vpd to 22,200 vpd along the corridor.

With the Build Alternative, the future traffic is expected to split 35% on US 301 (7th Street) and 65% on the improved US 98 Dade City Bypass. The future AADT volumes on the US 98 Dade City Bypass with the Build Alternative are expected to increase to about 24,750 vpd in the opening year (2005) and about 29,255 vpd in the design year (2025).

The opening year (2005) and design year (2025) AADT volumes are shown in Figure 6-4. The 2005 peak hour volumes for the No-Build and Build Alternatives are shown in Figure 6-5 and Figure 6-6, respectively. Peak hour volumes for the design year (2025) for the No-Build Alternative are shown in Figure 6-7. The design year (2025) peak hour volumes for the build alternative are shown in Figure 6-8.

6.5 Level of Service

6.5.1 Existing Level of Service

Three of the four unsignalized intersections have at least one turning movement that is operating below the acceptable LOS D standard during peak hour conditions. Only the US 98 Dade City Bypass at CR 35A is currently operating at acceptable LOS conditions. The left-turn movement at this intersection is currently operating at LOS B and LOS C during the a.m. and p.m. peak hours, respectively. Both signalized intersections are operating below the acceptable LOS D conditions during at least one peak hour. The US 98 Dade City Bypass at US 301 South is currently operating overall at LOS F during the a.m. peak hour. The signalized intersection at the US 98 Dade City Bypass and Martin Luther King Boulevard is currently operating at LOS F during both the a.m. and p.m. peak hours.

US 301 South at CR 35A is the only roadway segment along the study corridor that is operating above the acceptable LOS D standard. The other segments of the US 98 Dade City Bypass are operating at LOS D.

6.5.2 Future Level of Service

Review of the design year (2025) No-Build conditions reveals that three of the four unsignalized intersections are expected to have turning movements that operate below the acceptable LOS D conditions. Only the US 98 Dade City Bypass at CR 35A intersection is expected to operate at acceptable LOS conditions. The left-turn movement at this intersection is expected to operate at LOS C during both peak periods.

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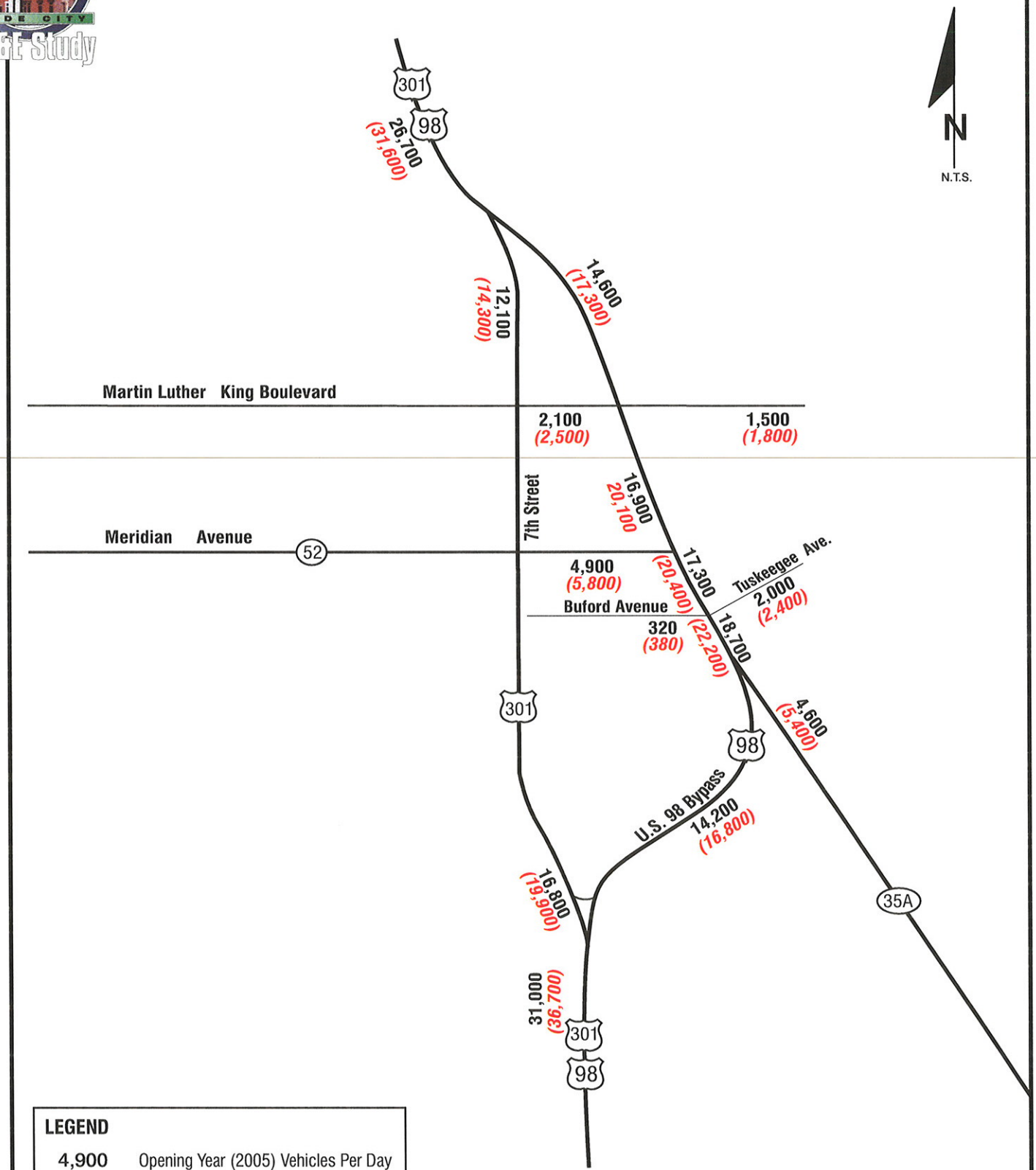


LEGEND

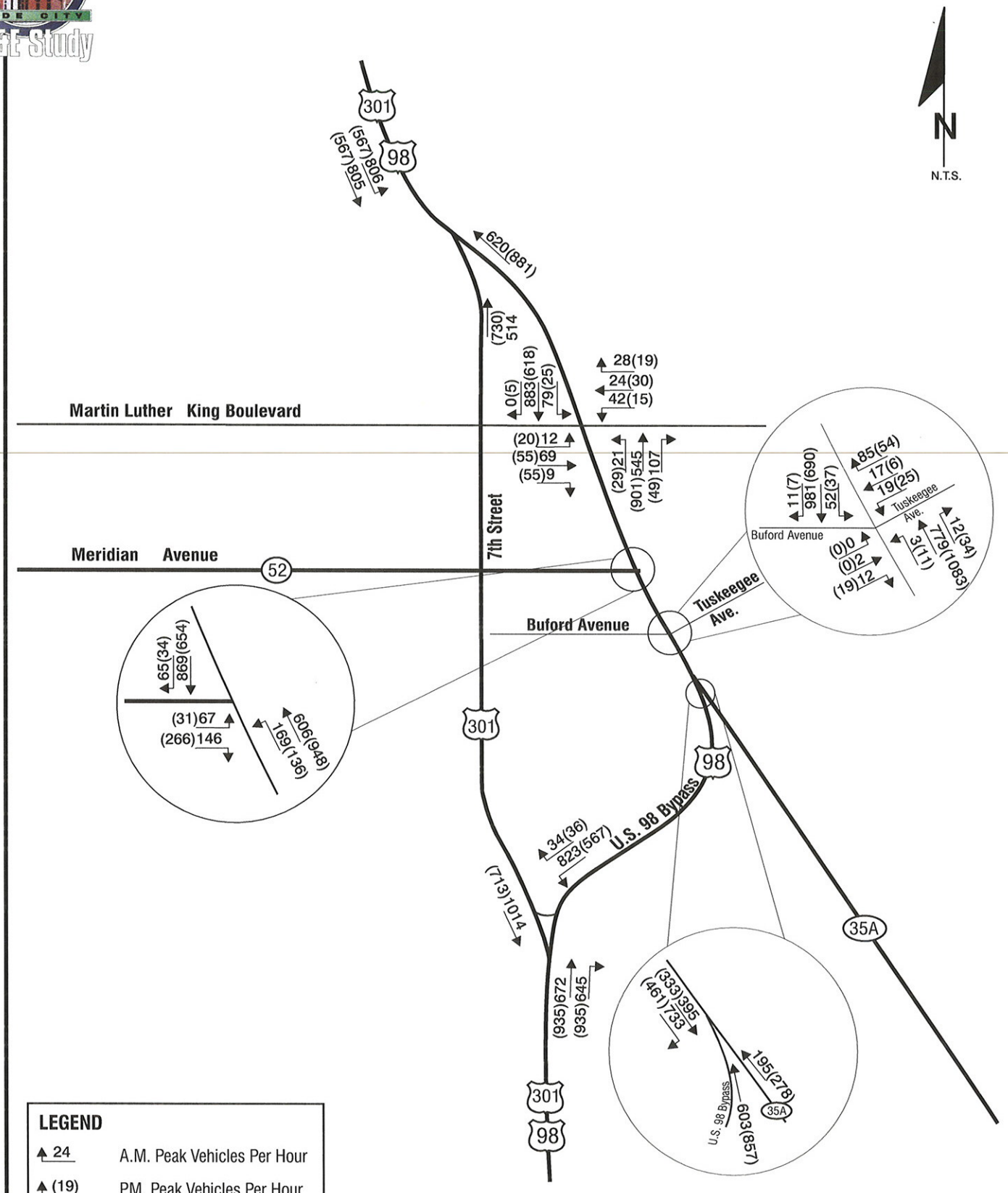
4,900	Opening Year (2005) Vehicles Per Day
(5,800)	Design Year (2025) Vehicles Per Day

Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

FUTURE ANNUAL AVERAGE DAILY TRAFFIC VOLUMES

Figure 6-4

U.S. 98 DADE CITY BYPASS PD&E STUDY

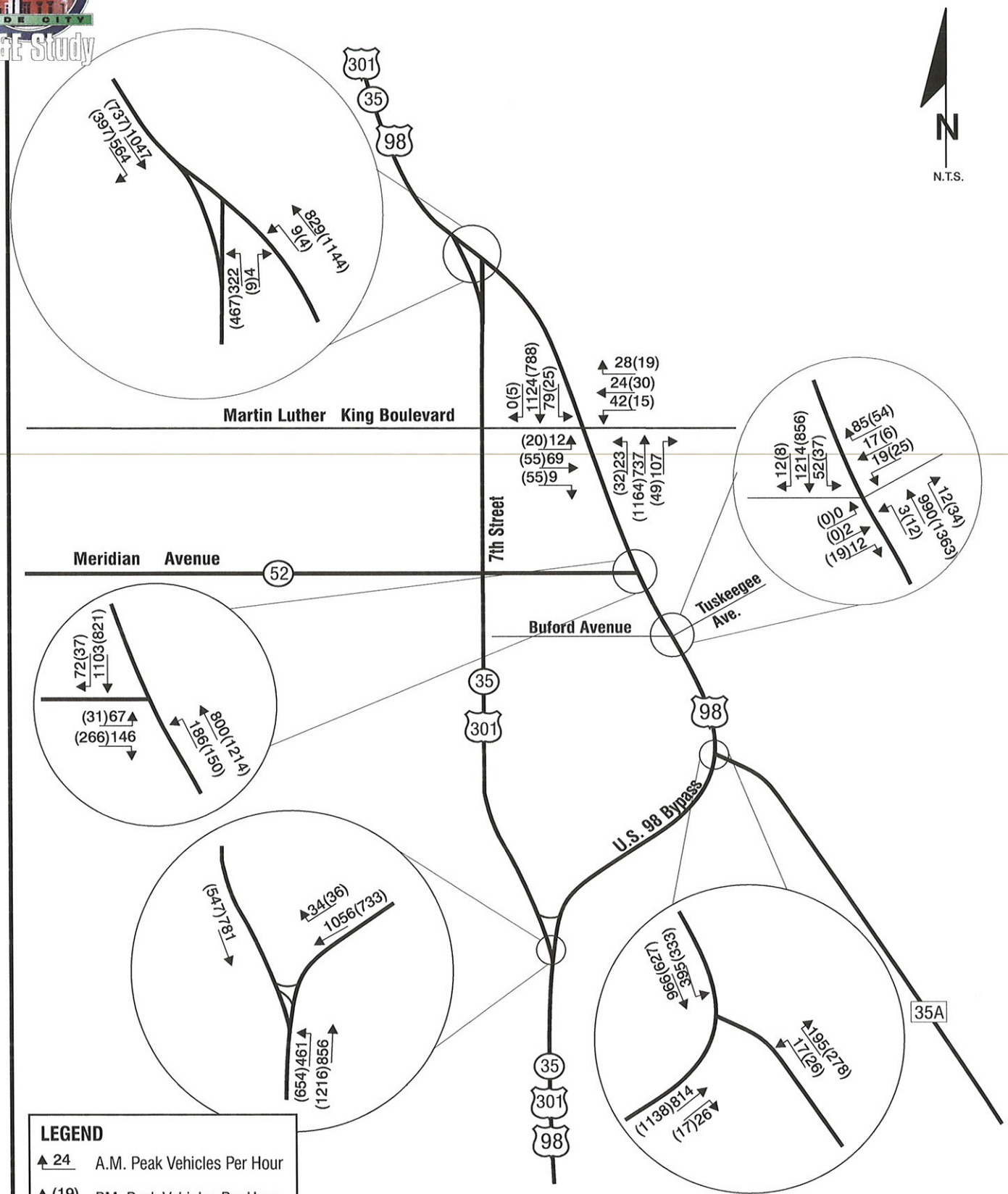


Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

OPENING YEAR (2005) PEAK HOUR VOLUMES - NO BUILD ALTERNATIVE

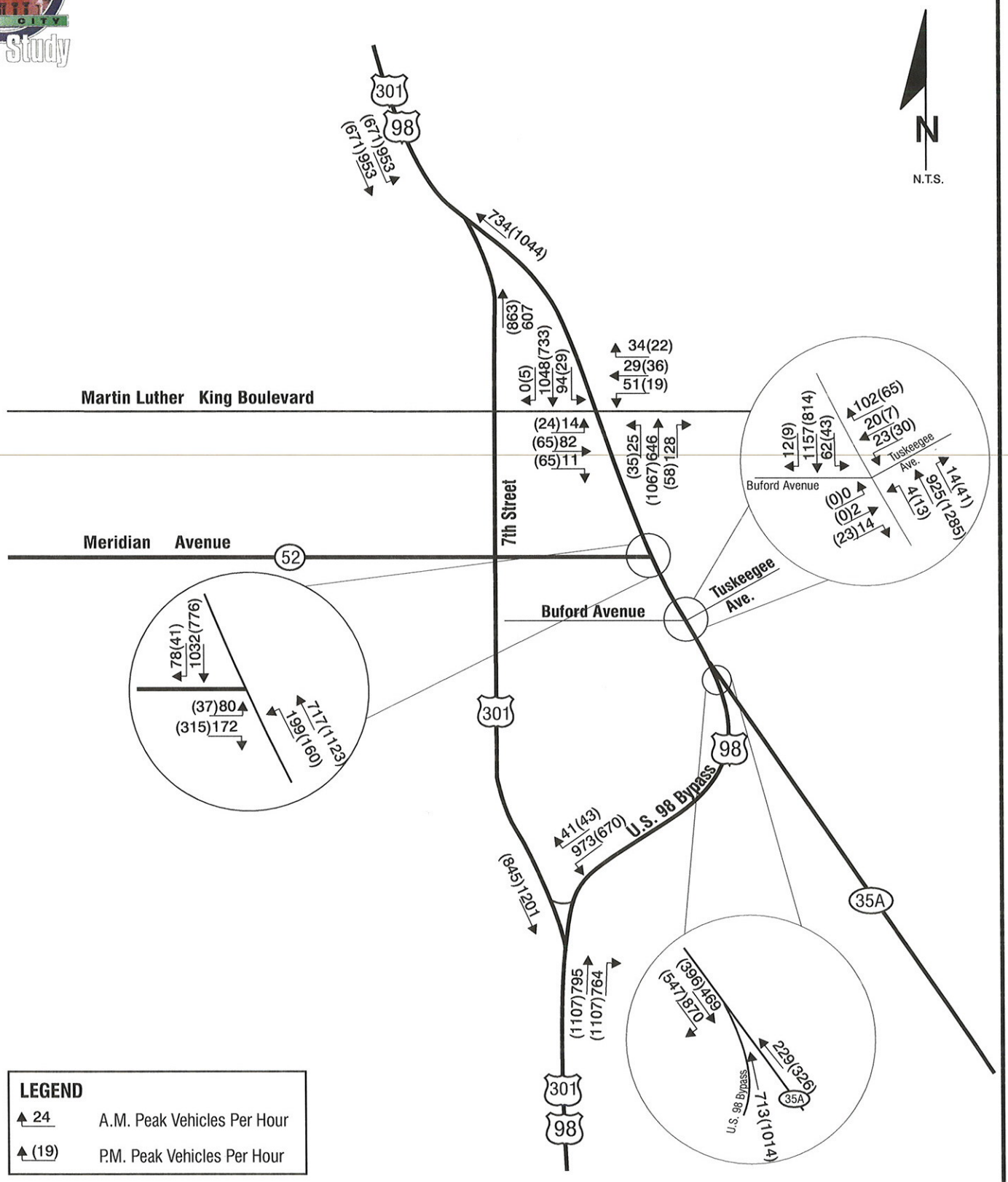
Figure 6-5

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**OPENING YEAR (2005) PEAK HOUR VOLUMES - BUILD ALTERNATIVE**	Figure 6-6

U.S. 98 DADE CITY BYPASS PD&E STUDY

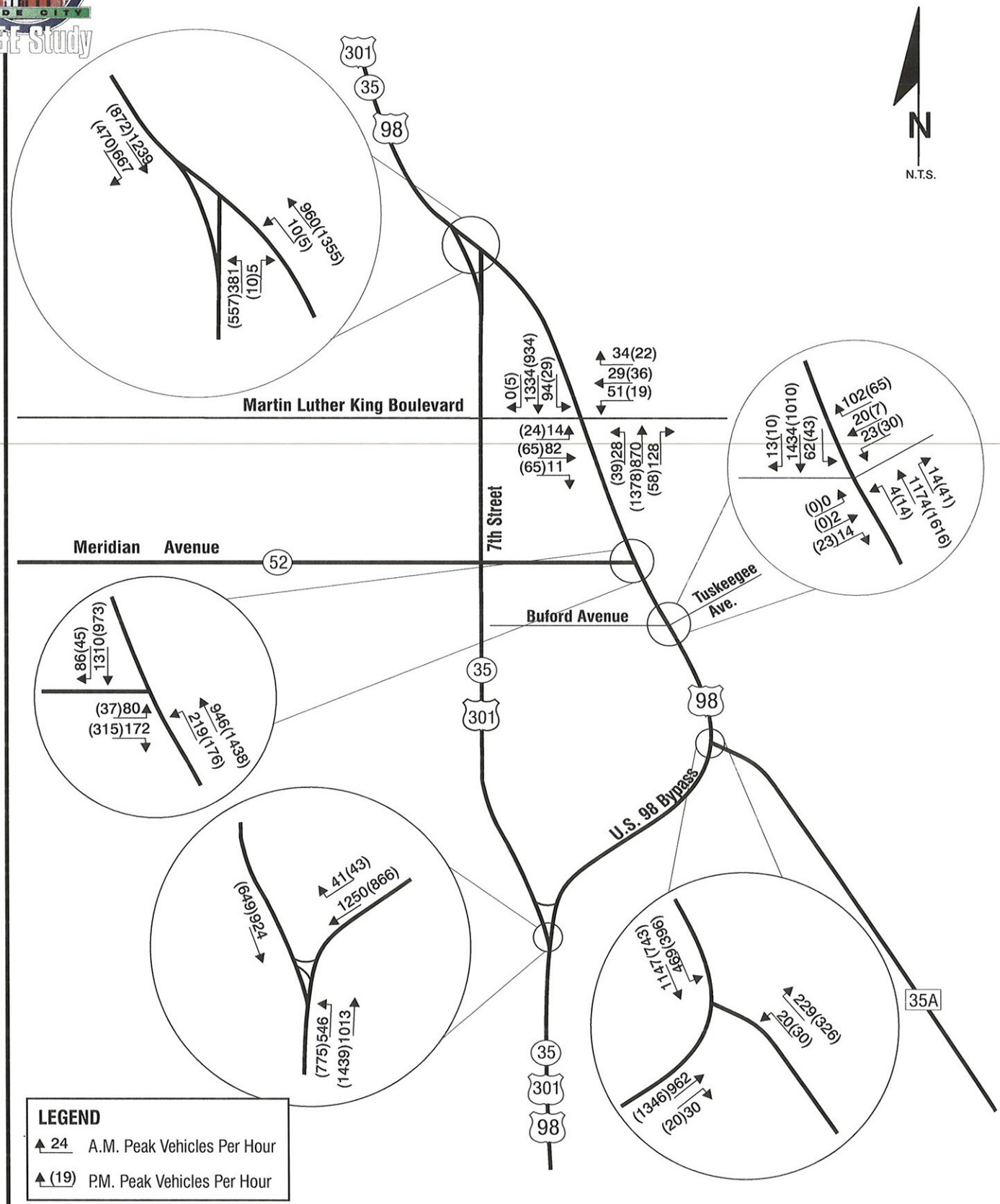


Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

DESIGN YEAR (2025) PEAK HOUR VOLUMES - NO BUILD ALTERNATIVE

Figure 6-7

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

DESIGN YEAR (2025) PEAK HOUR VOLUMES - BUILD ALTERNATIVE

Figure 6-8

In the design year (2025) under the No-Build Alternative, the signalized intersection at the US 98 Dade City Bypass and US 301 South is expected to operate at LOS F during the a.m. and p.m. peak hours. The signalized intersection at the US 98 Dade City Bypass and Martin Luther King Boulevard is expected to operate above the acceptable LOS D conditions assuming the No-Build Alternative. Specifically, the US 98 Dade City Bypass at Martin Luther King Boulevard is expected to operate overall at LOS C during both a.m. and p.m. peak hours with the 2025 No-Build Alternative.

In the design year (2025) under the build condition, the two existing signalized intersections are expected to operate above the acceptable LOS D conditions. However, at least one movement of the unsignalized intersections is expected to operate below the FDOT acceptable LOS D standard.

- US 98 Dade City Bypass at CR 35A - the eastbound left-turn movement is expected to operate at LOS F during the 2025 a.m. and p.m. peak hour build conditions. The southbound left-turn movement is expected to operate at LOS D during the a.m. peak hour and LOS F in the p.m. peak hour during future build conditions. Excessive queue lengths are expected to occur for the southbound left-turn movement during the a.m. and p.m. peak hours.

- US 98 Dade City Bypass at Tuskeegee/Buford Avenues - the westbound left-turn movement is expected to operate at LOS F in the design year (2025) build conditions during the a.m. and p.m. peak hours.

- US 98 Dade City Bypass at Meridian Avenue - the eastbound left-turn movement is expected to operate at LOS F in the design year (2025) build conditions during the a.m. peak hour and LOS E during the p.m. peak hour.

One roadway segment is expected to operate below the FDOT acceptable LOS D condition for the design year No-Build Alternative. The US 98 Dade City Bypass northbound segment between CR 35A and Tuskeegee/Buford Avenues is expected to operate at LOS E assuming the year 2025 No-Build Alternative. The other roadway segments are expected to operate at LOS D under the No-Build condition in the design year. Under the Build Alternative, all roadway segments are expected to operate above the acceptable LOS D standard.

6.6 Recommended Improvements

Based on the design year (2025) build analyses, the following improvements are proposed along the US 98 Dade City Bypass study corridor. These improvements will maintain the operation of the corridor at the FDOT LOS D standard or better in the design year (2025).

- US 98 Dade City Bypass from US 301 South to US 301 North
  - Widen to a four-lane divided arterial.

- US 98 Dade City Bypass at CR 35A
  - Signalize (recommendation conditional on results of signal warrant analysis).

- US 98 Dade City Bypass at US 301 North
  - Signalize (recommendation conditional on results of signal warrant analysis).

The following are recommended for the unsignalized intersections listed below:

- US 98 Dade City Bypass at Tuskeegee/Buford Avenues
  - Monitoring the operation of the build condition is recommended for this intersection to determine if a signal is warranted in the future.

- US 98 Dade City Bypass at Meridian Avenue (SR 52)
  - Monitoring the operation of the build condition is recommended for this intersection to determine if a signal is warranted in the future.

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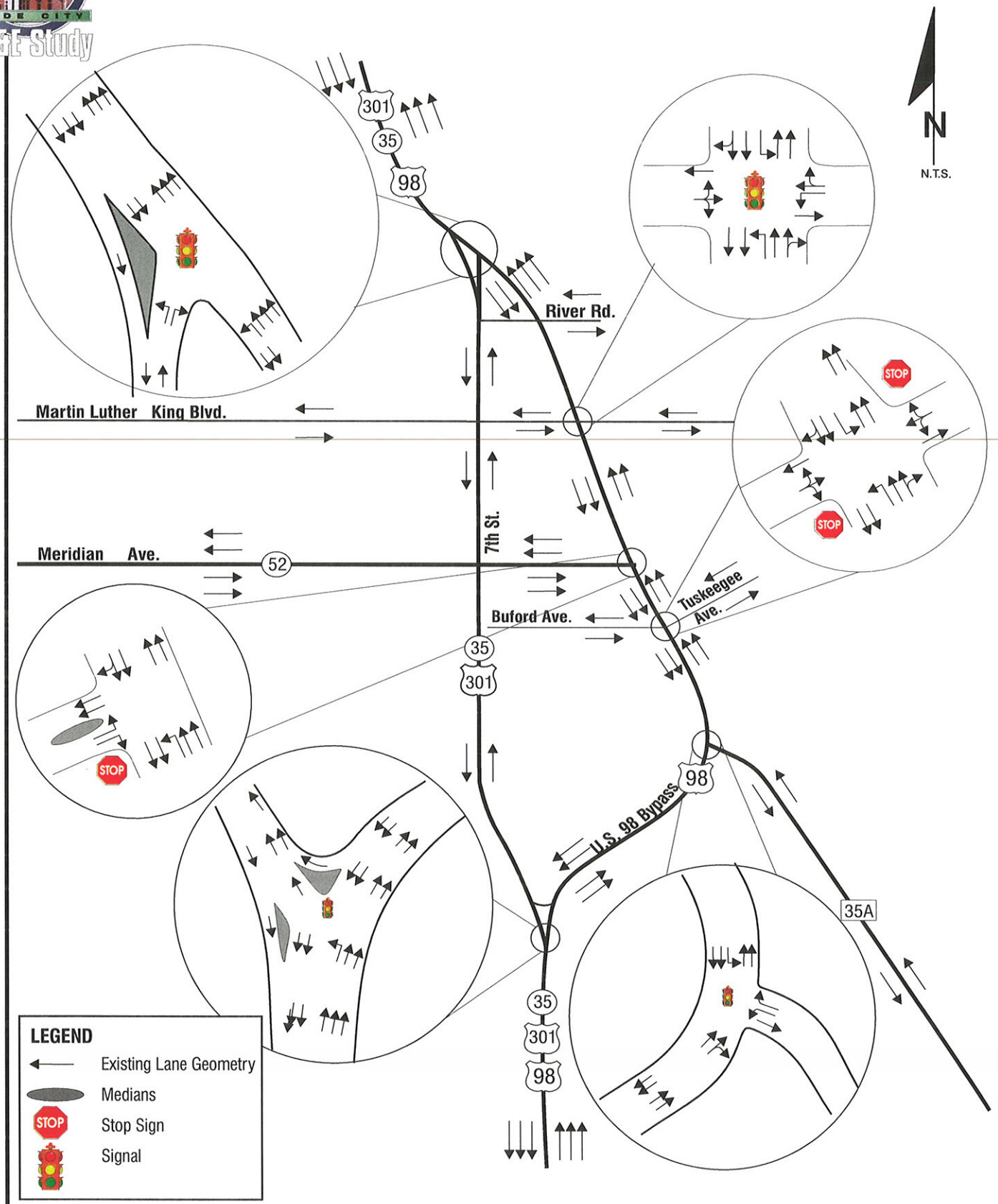


Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**PROPOSED DESIGN YEAR (2025) IMPROVEMENTS**	Figure 6-9

7.0 CORRIDOR ANALYSIS

An alternative corridor analysis was performed for this project. A summary and results of the US 98 Dade City Bypass Corridor Analysis Technical Memorandum prepared for this project are presented in this section.

An overview of the Dade City region was performed to identify potential alternative corridors. Alternative corridors west of 7th Street were considered and rejected. These included 8th, 10th and 14th Streets and the former railroad right-of-way. They are far removed from the existing traffic patterns and commercial development of the Dade City area. Alternative corridors west of 7th Street would pass through predominantly residential neighborhoods, requiring significant numbers of relocations; would divide existing neighborhoods; would introduce heavy traffic; and would require lengthy transitions to connect with US 98/301 north and south of Dade City. The former railroad right-of-way west of 8th Street was considered and rejected as a viable alternative corridor. The majority of the former railroad property is owned by Dade City and has been designated for use as part of the recreational Rails-to-Trails system in Pasco County.

As a result of the overview evaluation, the alternative corridor study area was defined as 7th Street (US 301) on the west and the US 98 Dade City Bypass on the east. The northern and southern limits of the corridor study area are the US 98 Dade City Bypass intersections with US 301 North and US 301 South, respectively. Several alternative corridors were identified and evaluated for comparison with the existing US 98 Dade City Bypass corridor. Alternative corridors within the corridor study area are 5th, 6th and 7th Streets.

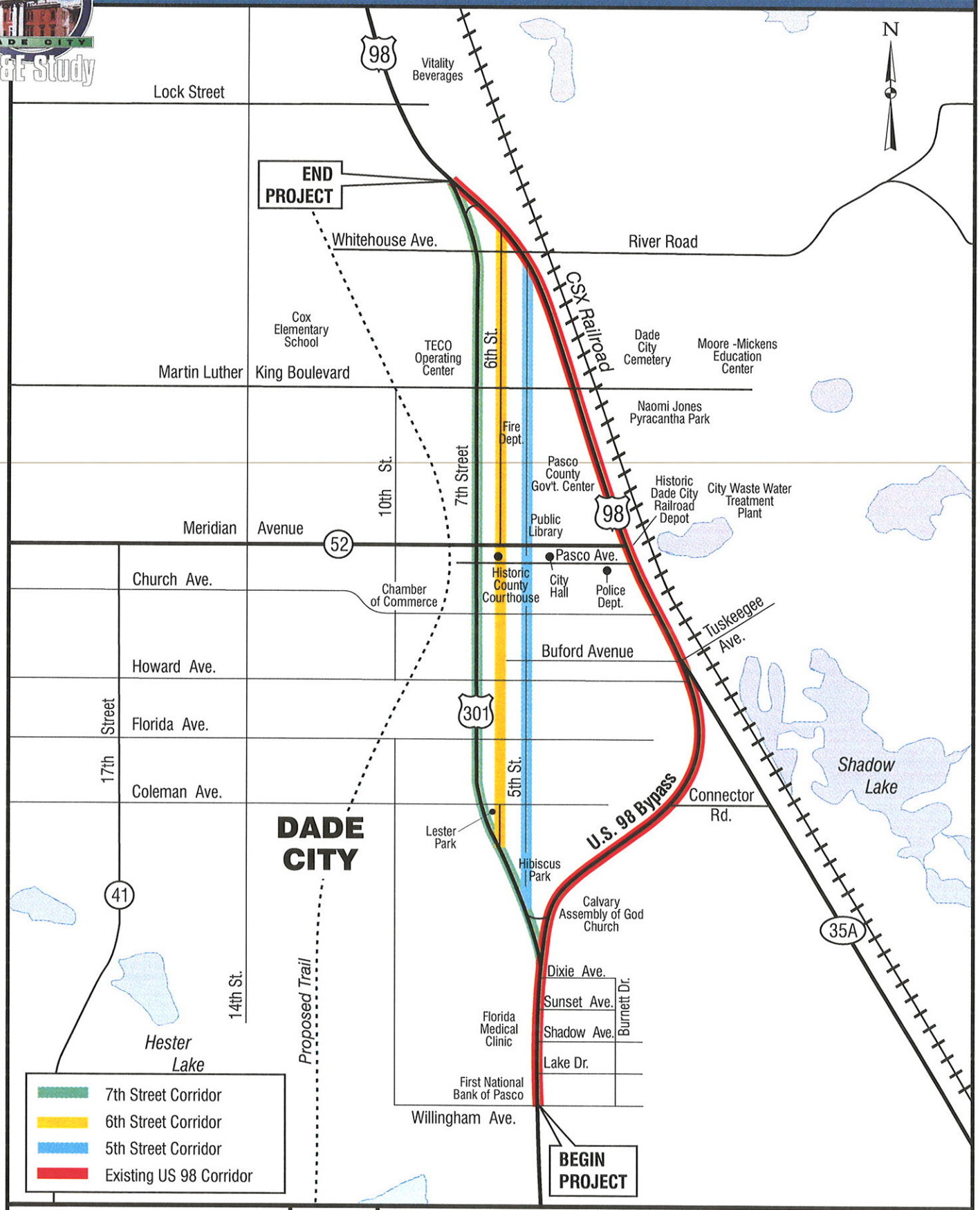
The alternative corridors of 5th, 6th and 7th Streets were evaluated for the effects of relocations, affected parcels, noise sensitive sites, contamination sites, and potential environmental impacts and compared to the existing US 98 Dade City Bypass corridor. The alternative corridor analysis recommended that the proposed improvements use the existing US 98 Dade City Bypass corridor. The details of the alternative corridor comparison are shown in the US 98 Dade City Bypass Corridor Analysis Technical Memorandum.

The existing US 98 Bypass corridor and alternative corridors are shown in Figure 7-1.

7.1 Alternative Typical Sections

The following typical sections were used in the corridor analysis to represent a wide range of right-of-way requirements from 54 feet for a one-way pair system to 102 feet for the four-lane divided roadway. Note: In the US 98 Dade City Bypass Corridor Analysis Technical Memorandum prepared for this project, a 104-foot right-of-way width was used for the four-lane divided typical section. The typical section has since been refined to 102 feet and the potential effects have been adjusted accordingly for this evaluation. The 102 feet is the minimum right-of-way without consideration for front slopes. Additional right-of-way will be required in areas where there is a grade differential from the back-of-sidewalk to existing ground.

U.S. 98 DADE CITY BYPASS PD&E STUDY



Dade City, Pasco County
WPI Segment No. 256423 1
Federal Aid Project Number 3112-017P

ALTERNATIVE CORRIDORS

Figure 7-1

- **Two-Way Pair Systems Alternative** - A two-way pair system could be developed using the existing US 98 Dade City Bypass and either 5th, 6th or 7th Street. The typical section would contain two 12-foot lanes in one direction, one 12-foot lane in the opposite direction, 4-foot bike lanes in both directions and 12-foot borders (each containing a 2-foot curb and gutter, a 3-foot utility strip, a 6-foot sidewalk, and a 2-foot back-of-sidewalk buffer) in each direction, for a total width of 68 feet.

- **One-Way Pair Systems Alternative** - A one-way pair system could be developed using the existing US 98 Dade City Bypass and either 5th, 6th or 7th Street. The typical section for 5th, 6th or 7th Street would have two 12-foot lanes, one 4-foot bike lane, and 12-foot borders (containing a 2-foot curb and gutter, a 3-foot utility strip, a 6-foot sidewalk, and a 2-foot back-of-sidewalk buffer) in both directions, for a total width of 52 feet. This is not a true one-way pair system, because the US 98 Dade City Bypass would require two northbound lanes and one southbound lane, the same typical section as the two-way pair alternative. The heavy truck usage at the Vitality Beverages, Inc. citrus processing plant, the CR 35A traffic and local business access dictate that the southbound lane would be necessary. The right-of-way requirements for US 98 Dade City Bypass in this one-way pair system would be the same as the two-way pair system.

- **Four-Lane Widening Alternative** - A four-lane widening of the existing US 98 Dade City Bypass or 7th Street with a 22-foot raised median, four 12-foot lanes, 4-foot bike lanes in each direction, and 12-foot borders (each containing a 2-foot curb and gutter, a 3-foot utility strip, a 5-foot sidewalk, and a 2- foot back-of-sidewalk buffer) in both directions, would require a typical section width of 102 feet. Where exclusive right turn lanes are necessary, an additional 12 feet would be required.

The alternative typical sections evaluated in the corridor analysis are shown in Figure 7-2.

7.2 Alternative Corridors

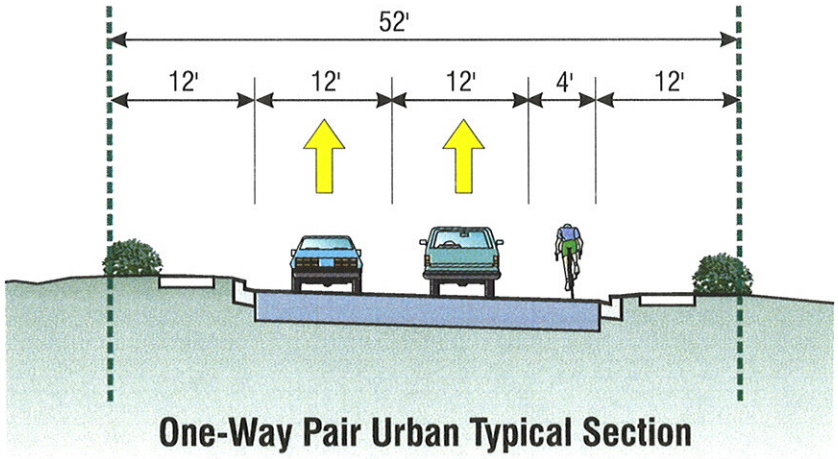
Alternative corridors within the study area were evaluated. They involved the use of 5th Street, 6th Street and 7th Street (US 301) in several combinations of two- and three-lane pairs and four-lane widening scenarios. The alternatives included:

- One-way and two-way pair systems using 5th Street, 6th Street or the US 98 Dade City Bypass for northbound traffic and 5th, 6th or 7th Street for southbound traffic.

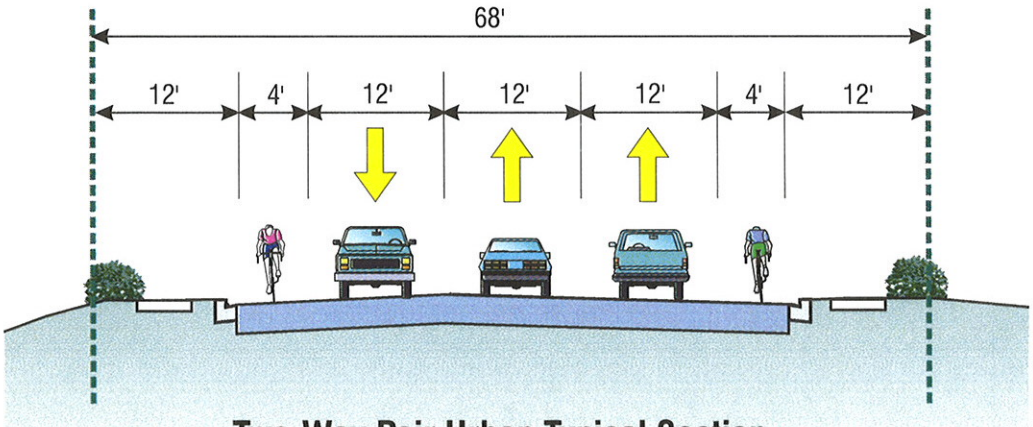
- A two-way pair system using the existing US 98 Dade City Bypass widened to two lanes northbound and one lane southbound and 7th Street restriped for one northbound lane and two southbound lanes.

- US 98 Dade City Bypass as a two-way (two lanes northbound and one lane southbound) and either 5th or 6th Street as a one-way (two lanes southbound), leaving 7th Street as is.

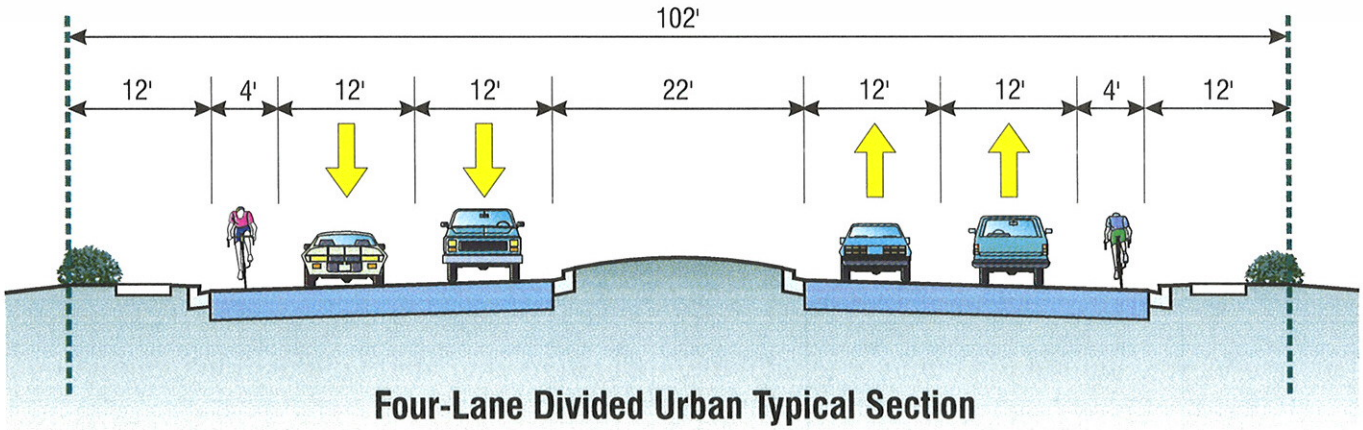
- Other alternatives could widen the US 98 Dade City Bypass to four lanes leaving 5th, 6th and 7th Streets as is or widen 7th Street to four lanes leaving 5th and 6th Streets and the US 98 Dade City Bypass as two-lane facilities.



One-Way Pair Urban Typical Section



Two-Way Pair Urban Typical Section



Four-Lane Divided Urban Typical Section

Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		ALTERNATIVE TYPICAL SECTIONS	Figure 7-2

7.3 US 98 Dade City Bypass Alignment Strategy

The existing US 98 Dade City Bypass corridor was evaluated to develop a strategy to avoid or minimize effects to the human and natural environment by considering the effects of widening to the left (west), right (east) or center. Center widenings typically result in significantly more impacts than left or right side widenings. Often the selected alternative is a combination of left, center, and right widening in different segments along the corridor.

This strategy will continue to evolve using detailed environmental, engineering and cost analyses and the input received from the public and local government throughout the course of the PD&E Study.

Three alignment alternatives (left, right and center) were considered for all project segments. An important component of this study is the comparative evaluation of the environmental effects associated with each alternative. The environmental evaluations are being conducted in accordance with the National Environmental Policy Act and include wetlands, floodplains, threatened and endangered species, and water quality impacts.

Affecting Hibiscus Park at the intersection of US 301 South (7th Street) and the US 98 Bypass can be avoided by widening to the east (right) in the area of the park. Avoiding the park can also be accomplished by configuring the geometry of the US 301 South intersection. The Dade City Railroad Depot can be avoided by widening the US 98 Bypass to the left (west) in the area of the depot. Encroachment into the CSX Railroad right-of-way can be avoided by widening to the west. The former J. H. Williams Fuel depot at the southwest corner of the US 98 Bypass and Meridian Avenue will require further evaluation to determine the best approach for minimizing the potential effects of the existing documented petroleum contamination.

The following alignment strategy has been carried forward for further detailed evaluation for the four-lane widening of the US 98 Bypass:

- Widening to the right (east) through the intersection with US 301 South would avoid affecting Hibiscus Park but would require the relocation of three residences.

- A centered or left widening east of US 301 would minimize encroachment into the Calvary Assembly of God Church property.

- A centered widening through the area of the CR 35A Connector Road intersection would avoid the residence at the eastern end of Coleman Avenue and minimize effects to the commercial properties along the west side of US 98.

- Widening to the right from Connector Road to CR 35A would minimize effects to the commercial business on the left.

- Widening to the left through the Meridian Avenue intersection would avoid the Dade City Railroad Depot and minimize encroachment into the CSX Railroad right-of-way. Several commercial properties would be affected by widening to the left in this area including three potential contamination sites. Two gasoline station/convenience stores and a furniture store would be physically affected. The parking areas of four

commercial properties (one vacant, one auto parts/service, one restaurant and one coin laundry) would be affected.

- A centered or left widening north of Meridian Avenue to Martin Luther King Boulevard would minimize encroachment into the railroad right-of-way and avoid the retail store along the east right-of-way. This alignment would affect three vacant single-family residences along the west side of US 98 between Sumner Avenue and Pond Avenue and encroach into the parking/storage area of the TECO facility at the intersection of Martin Luther King Boulevard.

- A centered or left alignment approaching the US 301 North intersection would avoid the Vitality Beverages, Inc. property. The alignment and configuration of the improved US 301 North intersection would be based on engineering requirements and detailed cost analysis.

This alignment strategy is based on preliminary analysis, field observations and discussions and written comments from local citizens and public officials. The proposed widening of the US 98 Dade City Bypass has been analyzed in more detail including right-of-way, relocation and business damage cost estimates, and quantification of environmental effects including wetland mitigation, contamination, and floodplain compensation in Section 8.5.

8.0 ALTERNATIVE ANALYSIS

The analysis described in this section follows the project development process by examining the various alternatives considered (No-Build, Multimodal, Transportation System Management and Construction) for this project. The need for improvements to the US 98 Dade City Bypass is described in Section 3.0. This section describes the analysis for each alternative and the reasons why they were rejected or accepted for further evaluation.

8.1 No-Build Alternative

No-Build Alternative

The No-Build Alternative examines the possibility of leaving the US 98 Dade City Bypass in its current condition while allowing for routine maintenance. There are distinct advantages and disadvantages associated with the No-Build Alternative. Based on the considerations listed below, the proposed action has been developed as a design alternative. The No-Build Alternative will remain a viable alternative throughout the study process.

8.1.1 Advantages

The advantages of the No-Build Alternative are:

- No inconvenience to traffic flow or development due to construction operations.
- No disruption to commerce.
- No residential or business relocations would be necessary.
- No expenditure of funds for right-of-way acquisition, engineering design, or construction.
- No direct effects to the adjacent natural and human environment.

8.1.2 Disadvantages

The disadvantages of the No-Build Alternative are:

- Users would experience an increase in both traffic congestion and road user cost, unacceptable level of service, decrease in air quality, and an increase in accident potential as traffic volumes increase on an already congested major thoroughfare.
- A continued rise in maintenance costs due to a potential deterioration of the roadway.
- The roadway will not be compatible with the future transportation network as defined in the Pasco County 2020 Long-Range Transportation Plan, and therefore additional improvements to other facilities would be required.

- Increased traffic demand that would exceed roadway capacity.

- There would be no improvement in emergency service response time or in the highway's use as a critical emergency evacuation route through Pasco County.

8.2 Multimodal Alternatives

The Multimodal Alternative utilizes public transportation or alternative transportation modes to substitute for the public use of personal motor vehicles. As discussed below, no further study of multimodal transportation systems will be evaluated in this study because these systems do not address the facility's capacity overload problems as well as serve the public's local or regional transportation needs. The Multimodal Alternative to the proposed improvements to the US 98 Dade City Bypass was eliminated from further consideration because it does not provide the additional capacity needed to accommodate anticipated traffic projections, nor does it improve traffic circulation or safety conditions.

8.2.1 Rail Service

The CSX Railroad parallels the US 98 Dade City Bypass from the CR 35A intersection to US 301 North. Amtrak operates a rail passenger station at the historic Dade City Railroad Depot at the intersection of Meridian Avenue (SR 52) and the US 98 Dade City Bypass. Two passenger trains stop daily at Dade City. Amtrak does not have plans to increase service to Dade City. The passenger train stops closest to Dade City are Wildwood, Florida, about 35 miles to the north, and Lakeland, Florida, about 25 miles to the southeast. This type of rail service primarily provides transportation opportunities for interregional travel. The US 98 Dade City Bypass is used by both interregional and local traffic. However, the majority of north-south interregional traffic in this area is accommodated on I-75, about 9 miles to the west.

Therefore, the rail alternative was rejected as a transportation alternative to the proposed improvements to US 98 Dade City Bypass. For additional information regarding railroads, refer to Sections 4.1.12 and 6.2.2.

8.2.2 Bus Service

The US 98 Dade City Bypass project corridor is served by the Pasco County Public Transportation (PCPT) Division bus system.

Currently, bus service in the Dade City area does not draw a significant number of vehicle trips from the US 98 Dade City Bypass and there are no current plans to increase bus service to the area.

Therefore, the bus alternative was rejected as a transportation alternative to the proposed improvements to the US 98 Dade City Bypass. For additional information regarding bus service, refer to Section 6.2.1.

8.2.3 Airports

The nearest commercial passenger air service is Tampa International Airport located in Tampa, Florida, about 50 miles southwest of Dade City. The nearest general aviation public airport is the Hernando County Airport located south of Brooksville, Florida about 28 miles northwest of Dade City. Air travelers to and from the Dade City area must use surface transportation to access the airports. Therefore, the airport alternative was rejected as a transportation alternative to the proposed improvements to the US 98 Dade City Bypass.

8.2.4 Pedestrian and Bicycle Service

Specifically designated pedestrian and bicycle facilities are not currently provided for the length of the project. A four-lane widening of the existing US 98 Dade City Bypass (or other parallel facility) would provide for 4-foot bike lanes in each direction and a 5-foot sidewalk in both directions.

8.3 Transportation Systems Management (TSM) Alternative

The TSM Alternative involves minor intersection improvements, increased turn lane storage, improvement of existing lane configuration marking, and signalization sequencing. The Traffic Report prepared for this project documented that one of the project segments is expected to operate below the FDOT acceptable LOS D for the design year 2025 No-Build Alternative. Three of the four unsignalized intersections (Tuskeegee/Buford Avenue, Meridian Avenue, and US 301 North) have at least one turning movement that is operating below the acceptable LOS D during peak hour conditions. Both signalized intersections (US 98 at US 301 South and US 98 at Martin Luther King Boulevard) are currently operating below the FDOT acceptable LOS D standard during at least one peak hour.

One roadway segment is expected to operate below the FDOT acceptable LOS D condition for the design year No-Build Alternative. The US 98 Dade City Bypass northbound segment between CR 35A and Tuskeegee/Buford Avenues is expected to operate at LOS E assuming the year 2025 No-Build Alternative. The other roadway segments are expected to operate at LOS D under the No-Build condition in the design year. Under the Build Alternative, all roadway segments are expected to operate above the acceptable LOS D standard.

Without capacity improvements, the US 98 Dade City Bypass would become congested, fail to meet minimum LOS and eventually cause a decrease in the existing air quality. Traffic delays would be extended and accident potential would increase. The TSM Alternative does not provide for additional travel lanes and therefore, under this alternative, the US 98 Dade City Bypass is expected to operate at an unacceptable LOS in design year 2025. The TSM Alternative has been eliminated as a viable alternative.

8.4 Construction Alternatives

The study alternatives considered for the US 98 project are construction alternatives because the No-Build, Multimodal and TSM Alternatives do not meet the future transportation needs of the region. Without improvements to this section of the US 98 Dade City Bypass, transportation congestion will increase as the LOS falls to an unacceptable

level and emergency and social services transportation opportunities eventually deteriorate. The right-of-way and alignment alternatives considered for this project were based on the avoidance strategy (left, right and center analysis) described in the Corridor Analysis Technical Memorandum prepared for this study.

8.4.1 Typical Sections

The improvement proposed for the US 98 Dade City Bypass is a four-lane divided urban typical section. This typical section would contain a 22-foot wide raised median, four 12-foot lanes (two in each direction), 4-foot bike lanes in each direction, and 12-foot borders (containing a 2-foot curb and gutter, a 3-foot utility strip, a 5-foot sidewalk, and a 2-foot back-of-sidewalk buffer) in both directions. This would require a minimum typical section width of 102 feet. Left turn lanes would be accommodated within the median. Where exclusive right turn lanes are necessary, an additional 12 feet would be required for a minimum of 114 feet of right-of-way. The proposed four-lane typical section is shown in Figure 8-1.

8.4.2 Alignments

The existing US 98 Dade City Bypass corridor was evaluated to develop a strategy to minimize or avoid impacts to the human and natural environment by considering widening to the left, right, or center on the existing alignment. This avoidance strategy was used in selecting the proposed alignment alternatives and is intended to minimize impacts to wetlands, hazardous materials and petroleum contamination sites, threatened or endangered species, floodplains, noise sensitive sites, historic and archaeological sites, business and residential relocations, and community services. The alignment configurations considered for this study were based on the avoidance and minimization strategy developed in the corridor analysis described in the Corridor Analysis Technical Memorandum prepared for this study.

For analysis purposes, the project has been separated into five segments. The project segments were defined by assigning logical local termini within the project limits. Three alignment alternatives (left, right and center and) were considered for all five project segments. The five segments are described below.

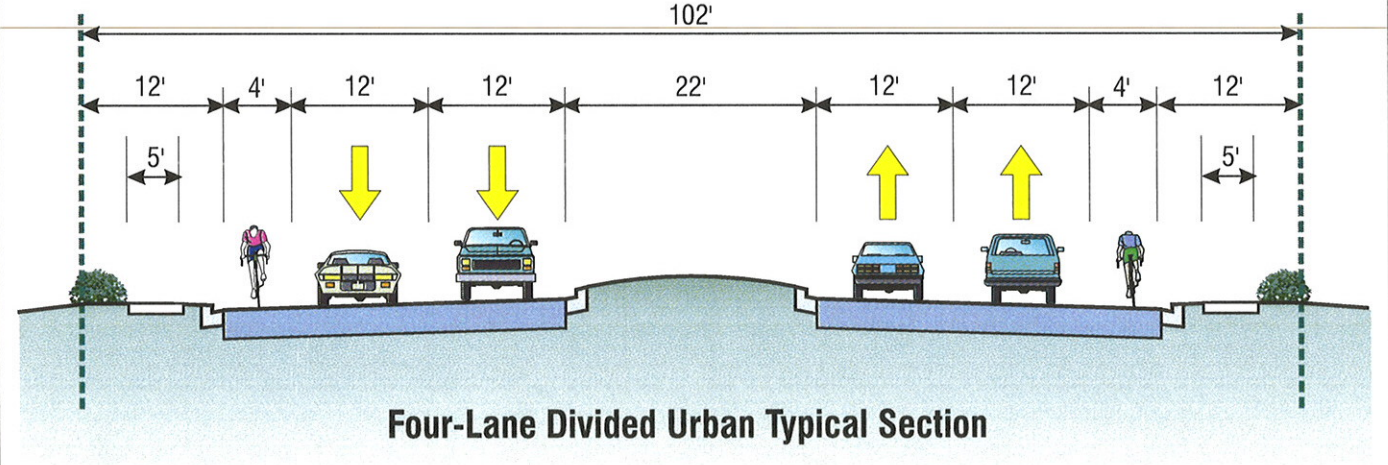
- The south portion of the project from the vicinity of US 301 South to the intersection with Connector Road is Segment 1, a length of 0.30 miles. Segment 1 includes the area of US 301/98 from Willingham Avenue to the US 301 South intersection.

- Segment 2 covers the area from Connector Road to the intersection of Tuskeegee/Buford Avenues, a length of 0.35 miles. Segment 2 includes the realigned intersection of CR 35A.

- Segment 3 is the center portion of the project from the intersection of Tuskeegee/Buford Avenues to Martin Luther King Boulevard, a length of 0.50 miles.

- Segment 4 is from Martin King Boulevard to River Road, a length of 0.30 miles.

- The north portion of the project from River Road to US 301 North is Segment 5, a length of 0.15 miles. Segment 5 includes the transition at River Road and the areas north and south of the US 301 North intersection.



Four-Lane Divided Urban Typical Section

Dade City, Pasco County WPI Segment No. 256423 1 Federal Aid Project Number 3112-017P		**PROPOSED FOUR-LANE TYPICAL SECTION**	Figure 8-1

8.4.3 Intersections

The major intersections along the project have been evaluated to determine if the current configurations meet the LOS requirements of the future traffic projections and provide acceptable traffic operations and safety.

US 301 South - This intersection is currently signalized. In the No-Build Alternative for the design year 2025, the current US 301 South intersection configuration would operate at an overall LOS F during the a.m. and p.m. peak hours. The build alternative would improve traffic operations in the design year 2025 to LOS C.

CR 35A - This intersection is currently not signalized. The current intersection configuration allows only northbound right and southbound left turns. In design year 2025, the southbound left would function at LOS C. The proposed configuration would add the northbound left turn movement. The proposed configuration would function at an overall LOS B/C. The recommended configuration and resultant LOS is conditional on a signal warrant analysis.

Tuskeegee/Buford Avenues - This intersection is currently not signalized. In the design year 2025, two of the movements at this intersection would operate at LOS E/F (eastbound and westbound left turns) in the No-Build Alternative. With the build alternative, all movements would improve to LOS D or better.

Meridian Avenue - This T-intersection is currently not signalized. In the design year 2025, the eastbound left and right turn movements would function at LOS F with the No-Build Alternative. The build alternative would improve the eastbound turning movements to LOS D or better.

Martin Luther King Boulevard - This intersection is currently signalized. In the design year 2025, the No-Build Alternative would operate at an overall LOS C. The build alternative would operate at LOS B.

River Road – This intersection is currently not signalized. It is estimated that up to 280 heavy trucks use this intersection daily to access the Vitality Beverages, Inc. plant. Truck usage typically increases to as much as 500 per day during the citrus season. The plant driveway connection to River Road is immediately east of the CSX Railroad. Adequate accommodation for truck storage in the northbound and southbound turn lanes will be provided.

US 301 North - This intersection is currently not signalized. The existing configuration would operate at LOS F in the design year 2025 with the No-Build Alternative. With the build alternative, the improved, signalized intersection would operate at an overall LOS C.

Two optional intersection alignments were evaluated at River Road and US 301 North.

One option would provide a directional median opening at River Road allowing southbound left-in and westbound left-out turning movements. This option would provide a directional median opening at US 301 North allowing northbound US 301 traffic a left-out turning movement to US 98.

The second option would combine the River Road and US 301 North intersections by directing US 301 northbound traffic to a fully directional median opening at River Road.

Both options would provide a free flow US 98/US 301 southbound movement to US 301 (7th Street) into downtown Dade City.

8.5 Evaluation Matrices

Once the typical sections to be analyzed were selected and the avoidance and minimization strategy was developed, evaluation matrices were prepared for each segment of this project. The matrices quantify effects to the human and natural environment and provide a comparison of impacts and costs for the four-lane widening of the US 98 Bypass. The matrices compare the costs and impacts for widening to the left, right or center using the 102-foot four-lane urban typical section. Costs and impacts were tabulated by segment to enable the mixing and matching of left-right-center where appropriate to select the preferred alternative alignment that is typically a combination of various left-right-center options. The total segment left-right-center costs and impacts are shown on the matrices. The matrices include costs for design, right-of-way for roadway, right-of-way for stormwater management facilities, relocations and business damages, construction, and environmental mitigation. The potential effects shown on the matrices include relocations, contamination sites, wetland areas, cultural resources, and right-of-way area. The matrices allow a decision to be made for the general alignment of the entire segment (left-right-center). The recommended alternative alignments shown in the matrices support and are consistent with the alignment strategy presented in the Corridor Analysis in Section 7.0.

The environmental effects and right-of-way cost estimates for the left-right-center alignment alternatives are shown in the Alternatives Evaluation Matrices in Table 8-1 through Table 8-5. The matrices shown in Table 8-1 through Table 8-5 reflect the initial effects and cost comparison without adjustment for a "best fit" and without consideration for stormwater management facilities.

Table 8-1
Alternatives Evaluation Matrix
Segment 1 – Vicinity of US 301 South to Connector Road

Evaluation Factor	Measure	Alternative			
		No. 1 No-Build	No. 2 Left	No. 3 Right	No. 4 Center
			102 ft Four-Lane Divided Urban Typical Section		
Relocations (Residential)	No.	0	3	3	0
Relocations (Business)	No.	0	0	5	0
Relocations (Non-Profit)	No.	0	0	1	0
Contamination Sites	No.	0	0	0	0
Wetlands	Acres	0	0.43	0.15	0.58
Parcels Within Right-of-Way	No.	0	18	16	18
Cultural Resources	No.	0	0	0	0
Right-of-Way Cost (Roadway)	$ (millions)	$0	$2.07	$5.76	$3.10
Right-of-Way Cost (Stormwater)	$ (millions)	$0	$1.27	$1.29	$1.29
Business Damage Cost	$ (millions)	$0	$0.00	$1.71	$0.19
Relocation Cost	$ (millions)	$0	$0.02	$0.11	$0.07
Design Cost (10% of Const.)	$ (millions)	$0	$0.21	$0.21	$0.21
Construction Cost	$ (millions)	$0	$2.12	$2.12	$2.12
CEI Cost (at 10% of Const.)	$ (millions)	$0	$0.21	$0.21	$0.21
Mitigation Cost	$ (millions)	$0	$0.04	$0.01	$0.05
Total Segment Cost	**$ (millions)**	**$0**	**$5.94**	**$11.42**	**$7.24**

Table 8-2
Alternatives Evaluation Matrix
Segment 2 - Connector Road to Buford/Tuskeegee Avenues

Evaluation Factor	Measure	Alternative			
		No. 1 No- Build	No. 2 Left	No. 3 Right	No. 4 Center
			102 ft Four-Lane Divided Urban Typical Section		
Relocations (Residential)	No.	0	0	0	0
Relocations (Business)	No.	0	2	1	1
Relocations (Non-Profit)	No.	0	0	0	0
Contamination Sites	No.	0	1	1	1
Wetlands	Acres	0	0.48	0.16	0.18
Parcels Within Right-of-Way	No.	0	10	3	8
Cultural Resources	No.	0	0	0	0
Right-of-Way Cost (Roadway)	$ (millions)	$0	$2.81	$1.94	$2.58
Right-of-Way Cost (Stormwater)	$ (millions)	$0	$0.62	$0.62	$0.62
Business Damage Cost	$ (millions)	$0	$0.21	$0.10	$0.08
Relocation Cost	$ (millions)	$0	$0.05	$0.01	$0.01
Design Cost (10% of Const.)	$ (millions)	$0	$0.18	$0.18	$0.18
Construction Cost	$ (millions)	$0	$1.76	$1.76	$1.76
CEI Cost (at 10% of Const.)	$ (millions)	$0	$0.18	$0.18	$0.18
Mitigation Cost	$ (millions)	$0	$0.04	$0.01	$0.15
Total Segment Cost	**$ (millions)**	**$0**	**$5.85**	**$4.80**	**$5.56**

Table 8-3
Alternatives Evaluation Matrix
Segment 3 - Buford/Tuskeegee Avenues to Martin Luther King Boulevard

Evaluation Factor	Measure	Alternative			
		No. 1 No- Build	No. 2 Left	No. 3 Right	No. 4 Center
			102 ft Four-Lane Divided Urban Typical Section		
Relocations (Residential)	No.	0	0		
Relocations (Business)	No.	0	2		
Relocations (Non-Profit)	No.	0	0		
Contamination Sites	No.	0	2		
Wetlands	Acres	0	0.22		
Parcels Within Right-of-Way	No.	0	7		
Cultural Resources	No.	0	0		
Right-of-Way Cost (Roadway)	$ (millions)	$0	$4.34		
Right-of-Way Cost (Stormwater)	$ (millions)	$0	$0.76		
Business Damage Cost	$ (millions)	$0	$0.39		
Relocation Cost	$ (millions)	$0	$0.04		
Design Cost (10% of Const.)	$ (millions)	$0	$0.22		
Construction Cost	$ (millions)	$0	$2.22		
CEI Cost (at 10% of Const.)	$ (millions)	$0	$0.22		
Mitigation Cost	$ (millions)	$0	$0.02		
Total Segment Cost	**$ (millions)**	**$0**	**$8.21**		

Note: Because of the Dade City Railroad Depot, only a left alignment was considered for Segment 3.

Table 8-4
Alternatives Evaluation Matrix
Segment 4 - Martin Luther King Boulevard to River Road

Evaluation Factor	Measure	Alternative			
		No. 1 No- Build	No. 2 Left	No. 3 Right	No. 4 Center
			102 ft Four-Lane Divided Urban Typical Section		
Relocations (Residential)	No.	0	3	0	2
Relocations (Business)	No.	0	0	1	0
Relocations (Non-Profit)	No.	0	0	0	0
Contamination Sites	No.	0	0	0	0
Wetlands	Acres	0	0.0	0.0	0.0
Parcels Within Right-of-Way	No.	0	13	9	16
Cultural Resources	No.	0	0	0	0
Right-of-Way Cost (Roadway)	$ (millions)	$0	$2.20	$1.21	$1.57
Right-of-Way Cost (Stormwater)	$ (millions)	$0	$0.00	$0.00	$0.00
Business Damage Cost	$ (millions)	$0	$0.06	$0.05	$0.03
Relocation Cost	$ (millions)	$0	$0.05	$0.03	$0.04
Design Cost (10% of Const.)	$ (millions)	$0	$0.14	$0.14	$0.14
Construction Cost	$ (millions)	$0	$1.39	$1.39	$1.39
CEI Cost (at 10% of Const.)	$ (millions)	$0	$0.14	$0.14	$0.14
Mitigation Cost	$ (millions)	$0	$0.00	$0.00	$0.00
Total Segment Cost	**$ (millions)**	**$0**	**$3.98**	**$2.96**	**$3.31**

Table 8-5
Alternatives Evaluation Matrix
Segment 5 - River Road to Vicinity of US 301 North

Evaluation Factor	Measure	Alternative			
		No. 1 No- Build	No. 2 Left	No. 3 Right	No. 4 Center
			102 ft Four-Lane Divided Urban Typical Section		
Relocations (Residential)	No.	0	0	0	0
Relocations (Business)	No.	0	1	3	3
Relocations (Non-Profit)	No.	0	0	0	0
Contamination Sites	No.	0	1	1	1
Wetlands	Acres	0	0.06	0.06	0.06
Parcels Within Right-of-Way	No.	0	13	9	16
Cultural Resources	No.	0	0	0	0
Right-of-Way Cost (Roadway)	$ (millions)	$0	$0.76	$2.62	$1.95
Right-of-Way Cost (Stormwater)	$ (millions)	$0	$0.41	$0.41	$0.41
Business Damage Cost	$ (millions)	$0	$0.06	$0.48	$0.43
Relocation Cost	$ (millions)	$0	$0.00	$0.07	$0.04
Design Cost (10% of Const.)	$ (millions)	$0	$0.12	$0.12	$0.12
Construction Cost	$ (millions)	$0	$1.18	$1.18	$1.18
CEI Cost (at 10% of Const.)	$ (millions)	$0	$0.12	$0.12	$0.12
Mitigation Cost	$ (millions)	$0	$0.01	$0.01	$0.01
Total Segment Cost	**$ (millions)**	**$0**	**$2.66**	**$5.01**	**$4.26**

8.6 Utilities

Electric Distribution (TECO) – The TECO distribution circuits are located generally about six feet inside the existing west right-of-way line of the US 98 Dade City Bypass and would be affected by all of the alignment alternatives considered. All alignments would require the relocation of approximately 13,830 linear feet of power line. TECO has not responded to the Utility Request Package processed through the FDOT District Utility Engineer. Therefore, costs associated with any power line relocations are not available.

TECO maintains an operations center at the northwest corner of Martin Luther King Boulevard. A left alignment would encroach into the operations causing TECO to relocate the facility. A centered alignment would encroach into the property parking area, but would not affect the building and would not require the facility to relocate. A left alignment would avoid the property except for a corner clip at Martin Luther King Boulevard.

Telephone (Sprint Florida) – The telephone cables are situated within the existing right-of-way. All of the alignment alternatives would require the relocation of 9,200 linear feet (lf) of cable at a cost of $36,800.

Water and Gravity Sewer (Dade City) – Dade City owned six and eight-inch water mains and a 16-inch gravity sanitary sewer parallel and cross the US 98 Dade City Bypass within the project limits. All of the alignment alternatives would require the relocation of approximately 6,930 lf of 6-inch pipe, 9,760 lf of 8-inch pipe, 200 lf of 16-inch pipe, four manholes, and the removal of 16,890 lf of pipe at a cost of $604,748.

Force Mains (Dade City) – The City-owned force mains along the US 98 Dade City Bypass would not be affected by the proposed improvements.

Natural Gas Distribution (TECO Peoples) – All of the TECO Peoples natural gas facilities would require relocation with a centered or right alignment. A left alignment would avoid the 12-inch steel gas line along the east side of the US 98 Dade City Bypass. The centered and right alignments would require that 3,400 lf of two-inch PE pipe, 10,300 lf of two-inch steel pipe, 10,400 lf of steel pipe be relocated at a cost of $1,343,373. A left alignment would require the relocation of 3,400 lf of two-inch PE pipe and 3,900 lf of two-inch steel pipe at a cost of $139,877.

8.7 Railroads

The CSX Railroad is adjacent to and parallels the US 98 Dade City Bypass from CR 35A to north of River Road (Segments 3 and 4). The Dade City Railroad Depot (an NRHP site) is located in Segment 3 on the east side of the US 98 Dade City Bypass at the intersection with Meridian Avenue (SR 52). Because of the location of the Railroad Depot, only left alignments were considered in Segment 3. A centered or right alignment widening through this area would encroach into the historic Railroad Depot.

In Segment 4, a centered alignment would require right-of-way from the railroad property between Martin Luther King Boulevard and River Road. Corner clips would be required at Martin Luther King Boulevard and about ten feet of railroad property would be required north of Martin Luther King Boulevard and south of River Road.

A right alignment in Segment 4 would require corner clips at Martin Luther King Boulevard and from ten to 25 feet of railroad property from Martin Luther King Boulevard to just south of River Road.

A left alignment would require corner clips at Martin Luther King Boulevard.

None of the railroad property required for any of the alignments would impair the function of or access to the railroad tracks or the Railroad Depot. Rail crossings at Tuskeegee Avenue, Martin Luther King Boulevard and River Road would not be adversely affected by the proposed improvements.

8.8 "Best Fit" Alignment

The alternative left, right and center alignments were analyzed by project segment with regard to potential effects to the human and natural environment and project costs to determine a "best fit" alignment for the project. The right-of-way costs were adjusted to reflect the "best fit" alignment.

Segment 1 - Widening the US 98 Dade City Bypass to the left in Segment 1 would require five fewer business relocations than a right alignment, avoid a non-profit relocation, and project costs are $1.3 million less than a centered alignment and $5.48 million less than a centered alignment. The roadway right-of-way costs for the left alignment in Segment 1 are $2,093,100.

Segment 2 - Widening to the right in Segment 2 would require one less business relocation than a left alignment and project costs are $0.76 million less than a centered alignment and $1.05 million less than a left alignment. The right alignment in Segment 2 was adjusted to provide transitions at either end to tie to the left alignments in Segments 1 and 3. The roadway right-of-way costs for the adjusted right alignment in Segment 2 are $2,326,900.

Segment 3 – Only a left alignment was considered in Segment 3 because of the potential effects to the NRHP-listed Dade City Railroad Depot adjacent to the existing east right-of-way of the US 98 Dade City Bypass. The roadway right-of-way costs for the left alignment in Segment 3 are $3,091,000.

Segment 4 – A left alignment was selected for Segment 4 because of the need to minimize right-of-way into the CSX Railroad. The left alignment was adjusted to avoid the TECO Operations Center building at the northwest corner of the Martin Luther King Boulevard intersection. The roadway right-of-way costs for the adjusted left alignment in Segment 4 are $1,897,200.

Segment 5 – Widening to the left in Segment 5 would require two fewer business relocations and costs $1.66 million less than a centered alignment and $2.41 million less than a right alignment. The roadway right-of-way costs for the "best fit" left alignment in Segment 5 are $1,098,600.

The "Best Fit" recommended alignment is shown on the Concept Plans in Section 10.0.

8.9 River Road Intersection Option

The Vitality Beverages, Inc. plant truck access driveway is located immediately east of the CSX Railroad on River Road. It is estimated that about 280 heavy trucks use this driveway daily. The truck usage increases to over 500 heavy trucks daily during the winter citrus season.

River Road provides the only access route into the Dade City area from the east. It is anticipated that future development in the Dade City area will occur in the area east of the City along the River Road corridor.

An optional intersection alignment was considered at River Road. This option would combine the US 301 North and River Road intersections by redirecting US 301 (7^{th} Street) traffic and providing a fully directional median opening at River Road.

A comparative analysis of the two intersection concepts was performed for Segments 4 and 5 to evaluate project costs and affects on the human and natural environment. The comparison for the two River Road intersection concepts in Segment 4 is shown in Table 8-6. The comparison revealed several notable differences:

- The River Road realignment option with a full median opening would require the same number of residential relocations (two), but would require four additional business relocations (five versus one).

- Business damages would increase from about $120,000 to about $1,020,000. Business relocations would increase from two to five.

- Stormwater management right-of-way costs would decrease from about $410,000 to $0. Stormwater management and floodplain compensation could be accomplished within the infield areas and remainders of properties at the US 301 North intersection.

- Right-of-way costs for the roadway improvements would increase from about $2,995,800 to about $5,790,000.

The River Road optional intersection alignment is shown on the Concept Plans in Section 10.0.

Table 8-6
River Road Intersection Options Comparison
Segments 4 and 5

Evaluation Factor		Intersection Options					
		US 301 & River Road Directional Median Openings			River Road Full Median Opening		
		Seg. 4	Seg. 5	Total	Seg. 4	Seg. 5	Total
Relocations (Residential)	No.	2	0	2	2	0	2
Relocations (Business)	No.	1	1	2	3	2	5
Relocations (Non-Profit)	No.	0	0	0	0	0	0
Contamination Sites	No.	0	1	1	0	1	1
Wetlands	Acres	0.00	0.06	0.06	0.00	0.06	0.06
Right-of-Way (Roadway)	$ x M	$1.90	$1.10	$3.00	$5.01	$0.78	$5.79
Right-of-Way (Stormwater)	$ x M	$0.00	$0.41	$0.41	$0.00	$0.00	$0.00
Business Damages	$ x M	$0.06	$0.11	$0.17	$0.91	$0.11	$1.02
Relocation	$ x M	$0.05	$0.04	$0.09	$0.09	$0.02	$0.11
Design (10% of Const.)	$ x M	$0.14	$0.12	$0.26	$0.17	$0.13	$0.30
Construction	$ x M	$1.39	$1.18	$2.57	$1.65	$1.29	$2.94
CEI (10% of Const.)	$ x M	$0.14	$0.12	$0.26	$0.17	$0.13	$0.30
Mitigation	$ x M	$0.00	$0.01	$0.01	$0.00	$0.01	$0.01
Total Segment Cost	**$ x M**	**$3.68**	**$3.09**	**$6.77**	**$8.00**	**$2.47**	**$10.47**

8.10 Drainage Option at East Pasco Government Center

Two drainage options were evaluated to convey the off-site flow from the East Pasco Government Center property. Off-site flows are currently conveyed by a ditch running east towards US 98. The ditch turns south and parallels US 98 along the west side of the roadway to the existing cross drain north of Meridian Avenue. The proposed four-lane improvements would require that the drainage ditch along the west side of the US 98 Dade City Bypass be relocated or rerouted.

One option would be to move the ditch to the west. This would require conveying the off-site flows under the East Pasco Government Center parking lot. This could be accomplished by installing a culvert in a permanent drainage easement under the parking lot, conveying the flows to the existing cross drain. This option would affect the existing floodplain compensation area for the Government Center and would require the removal and replacement of the parking lot along the east side of the Government Center building.

The second option would be to install a new cross drain under the US 98 Dade City Bypass at the location where the ditch approaches the road. Right-of-way would be required from the CSX railroad to convey the flows south along the east side of the roadway to the existing outfall location. This drainage option represents a right-of-way cost savings of $141,400. The total roadway right-of-way cost for Segment 3 using this drainage option is $3,091,000.

The second drainage option using right-of-way to be acquired from the CSX Railroad was selected for the recommended alignment because of the substantial cost savings in right-of-way.

8.11 Title VI, Title VIII and Executive Order 12898 (Environmental Justice)

Title VI of the 1964 Civil Rights Act, and related statutes, provides that no person shall, on the grounds of race, color, age, religion, sex, national origin, or handicap/disability, be excluded from participation in, or be denied the benefits of, or be otherwise subject to discrimination under any program of the federal, State or local government. Title VIII of the 1968 Civil Rights Act guarantees each person equal opportunity in housing.

On February 11, 1994, President Clinton signed Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Executive Order requests that each Federal agency shall, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid disproportionately high and adverse human health and environmental effects of Federal actions on minority and low-income populations, when such analysis is required by the National Environmental Policy Act (NEPA) of 1969.

In April 1997, the US Department of Transportation issued an Order on Environmental Justice (DOT Order 5610.2) that requires the DOT to implement the principles of Environmental Justice 12898 by incorporating environmental justice principles in all DOT programs, policies and activities. This will be done by fully considering environmental justice principles throughout planning and decision-making processes in the development of programs, policies, and activities, using the principles of the NEPA of 1969, Title VI of the Civil Rights Act of 1964, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (URA), the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and other DOT statutes, regulations and guidance that address or affect infrastructure planning and decision making; social, economic, or environmental matters; public health; and public involvement.

An adverse effect on minority or low-income populations occurs when: 1) the adverse effect is predominately borne by the minority and/or low-income population; or 2) the adverse effect suffered by the minority and/or low-income population is more severe or greater than the adverse effect suffered by the non-minority and/or non-low-income population. If a

disproportionately high and adverse effect on minority and/or low-income populations is determined, then the Federal action may not be carried out unless mitigation measures or "environmental enhancements" are included.

Executive Order 12898 was issued to underscore and complement certain provisions of existing law, including Title VI and Title VIII and related statutes. This project has been developed in accordance with Title VI, Title VIII and Executive Order 12898.

The US 98 Dade City Bypass, through the project area, was constructed at a time when much of the county was rural. However, the route selected for the highway is within 0.5 miles or less of the main north-south route through downtown Dade City (7th Street). The US 98 Dade City Bypass parallels the CSX railroad right-of-way for about half of the project length. Neighborhoods east of the CSX railroad developed independently.

Over the years, the US 98 Dade City Bypass developed as a commercial corridor providing goods and services in close proximity to the neighborhoods east of the railroad. These areas have retained their integrity as cohesive neighborhoods.

The proposed improvements to the US 98 Dade City Bypass in Pasco County involve widening the existing facility on the same alignment to accommodate projected traffic demands, improve the traffic operations at intersections, improve non-motorized transportation opportunities and access and incorporate the latest design and safety standards. As such, additional right-of-way acquisition is anticipated to affect residences and businesses along the existing corridor. A small number of these may be minority, ethnic, elderly, or low-income persons. However, no discriminatory criteria were used during the development and selection of alternatives. The proposed improvements have not been planned to affect any specific groups or individuals, but rather to improve upon the existing facility. A Conceptual Stage Relocation Plan will be prepared for this study that addresses the potential for relocation of residences or businesses and analyzes the availability of replacement dwellings or commercial properties.

Currently, pedestrian/bicycle traffic crosses the US 98 Dade City Bypass at the unsignalized intersections of Tuskeegee Avenue, Meridian Avenue and River Road and the signalized intersection of Martin Luther King Boulevard. Other pedestrian crossings occur at mid-block locations to access the commercial businesses and services located along the west side of the roadway. The mid-block locations are footpath extensions of Hampton and Roosevelt Avenues north of Tuskeegee Avenue and Irwin Avenue north of the Dade City Railroad Depot. All of these locations except Meridian Avenue include the crossing of the CSX Railroad tracks and the US 98 Dade City Bypass. The proposed improvements include improved pedestrian/bicycle/handicapped facilities at the US 98 Dade City Bypass and CSX Railroad crossing locations at Whitehouse Avenue/River Road, Martin Luther King Boulevard, Meridian Avenue and Tuskeegee Avenue. The crossing improvements will provide "Look Both Ways" type pedestrian rail crossings, signalized pedestrian crossings and pedestrian refuges in the proposed median of the US 98 Dade City Bypass. The proposed improvements will enhance motorized and non-motorized access from the residential neighborhoods east of the US 98 Dade City Bypass and the CSX railroad to the commercial businesses and services west of US 98. The US 98 Dade City Bypass improvements will aid in the safe continuation of cohesive ties from the neighborhoods to the east with the businesses and services to the west.

9.0 PRELIMINARY DESIGN ANALYSIS

This section describes the recommended typical section and alignment alternative.

9.1 Design Traffic Volumes

The future traffic characteristics, obtained for the US 98 study corridor, are summarized in Table 6-3 in Section 6.3. The AADT volumes are expected to range from 14,200 vehicles per day (vpd) to 18,700 vpd in the opening year (2005). In the design year (2025) for the No-Build Alternative, the AADT volumes are expected to range between 16,800 vpd to 22,200 vpd. The future volumes are shown in Figure 6-4 in Section 6.4.

With the Build Alternative, the future traffic is expected to split 35% on US 301 (7th Street) and 65% on the improved US 98 Dade City Bypass. The future AADT volumes on the US 98 Dade City Bypass with the Build Alternative are expected to increase to about 24,750 vpd in the opening year (2005) and about 29,255 vpd in the design year (2025).The design year (2025) peak hour volumes for the build alternative are shown in Figure 6-8 in Section 6.4.

9.2 Typical Sections

The recommended alternative for the US 98 Dade City Bypass is a four-lane divided urban typical section. This typical section will contain a 22-foot wide raised median, four 12-foot lanes (two in each direction), 4-foot bike lanes in each direction, and 12-foot borders (containing a 2-foot curb and gutter, a 3-foot utility strip, a 5-foot sidewalk, and a 2-foot back-of-sidewalk buffer) in both directions. This will require a minimum typical section width of 102 feet. Left turn lanes will be accommodated within the median. The proposed four-lane typical section is shown in Figure 8-1 in Section 8.4.1.

9.3 Intersection Concepts and Signal Analysis

Based on the design year (2025) build analyses, the following improvements are proposed along the US 98 study corridor. These improvements will maintain the operation of the corridor at the FDOT LOS D standard or better in the design year (2025).

- Willingham Avenue – A full median opening will be provided. Recent analysis indicates that a traffic signal is not warranted at this time.

- US 301 South – This directional intersection will remain signalized. The signal will control the northbound (NB) left turn and southbound (SB) through movements. A single NB left turn lane will be provided.

- US 98 at CR 35A – A full median opening will be provided. The intersection will be modified to remove the dramatic skew of the existing alignment. This intersection may be signalized in future years. The recommendation for signalization is conditional based on the results of signal warrant analysis.

- Tuskeegee/Buford Avenues – A full median opening will be provided. Monitoring the operation of the build condition is recommended for this intersection to determine if a signal is warranted in the future.

- Meridian Avenue (SR 52) - A full median opening will be provided. Monitoring the operation of the build condition is recommended for this intersection to determine if a signal is warranted in the future.

- Martin Luther King Boulevard – This intersection will remain signalized. A full median opening will be provided.

- River Road – Two intersection options are provided at River Road. The first option is a directional median opening allowing SB and westbound (WB) left turn movements. An exclusive NB right turn lane would be provided on the US 98 Dade City Bypass to accommodate truck storage for the rail crossing. The second option is a full median opening directing all northbound US 301 traffic through this intersection. Both optional intersection alignments would provide a free-flow southbound US 301 movement. Option two would require signalization.

- US 301 North - A directional median opening will be provided allowing US 301 NB left turn movements. This intersection may be signalized in future years. The recommendation for signalization is conditional based on the results of signal warrant analysis. This intersection alignment would depend upon which River Road intersection option is selected.

The intersection concepts are shown on the Concept Plans in Section 10.

9.4 Alignment and Right-of-Way Needs

A corridor analysis was performed for this project (see Section 7.0). The corridor analysis developed an alignment strategy to avoid or minimize potential impacts by shifting the alignment of the proposed improvements left (west), right (east) or center. Typical section and recommended alternative development utilized the alignment strategy recommended in this analysis. The alternatives analysis is documented in Section 8.0 and the environmental impacts evaluation and the cost analysis is documented in Section 8.5.

The recommended alignment is described below for each segment.

- Segment 1, from the vicinity of the US 301 South intersection to Connector Road, will be widened to the left.
- Segment 2, from Connector Road to the intersection of Tuskeegee/Buford Avenues, will be widened to the right.
- Segment 3, from the intersection of Tuskeegee/Buford Avenues to Martin Luther King Boulevard, will be widened to the left.
- Segment 4, from Martin King Boulevard to River Road, will be widened to the left.
- Segment 5, from River Road to US 301 North including the transition at River Road and the areas north and south of the US 301 North intersection will also be widened to the left.

The minimum right-of-way width for the recommended typical section is 102 feet. Additional right-of-way is required in areas where the roadway profile is elevated above the surrounding topography, at intersections and for stormwater management facilities.

An open roadside ditch exists adjacent to the East Pasco Government Center between Live Oak Street and Martin Luther King Boulevard. It is proposed construct a new cross drain at the location where the ditch approaches the roadway and relocate the open roadside ditch to the east side of the US 98 Dade City Bypass.

The recommended alignment and required right-of-way are shown on the Concept Plans in Section 10.

9.5 Relocations and Business Damages

The recommended alignment would require six residential and six business relocations. Four of the residential relocations are in Segment 1 along the east side of the US 98 Dade City Bypass at the US 301 South intersection and two are located in Segment 4 along the west side north of Martin Luther King Boulevard.

Two business relocations (Pat's Food Mart and Sam Slough) are located in Segment 2 on the west side of the US 98 Dade City Bypass at the intersection of Howard Avenue. Two business relocations (Git In Go/Texaco and Dempsey Furniture) are located in Segment 3 along the west side south and north of Pasco Avenue, respectively. One business relocation (Country Store Produce) is located in Segment 4 at River Road. One business relocation (Huckaby, Inc.) is located in Segment 5 along the east side at the US 301 North intersection. Relocation costs for the length of the project are estimated to be $182,000.

Business damages for the recommended alignment length of the project are estimated to be $689,800.

The residential and business relocations are shown on the Concept Plans in Section 10.

9.6 Right-of-Way Costs

The right-of-way costs for the recommended alternative are $10,506,800 for roadway and $3,066,400 for stormwater management facilities for a total right-of-way cost of $13,573,230. The right-of-way costs include business damages, relocation costs, appraisal, attorney fees, administrative fees, etc.

9.7 Construction Costs

The preliminary construction cost estimates are based on the procedures found in the FDOT Long Range Estimates Manual. The estimated construction costs for the recommended alternative (in year 2000 dollars) is $8,669,500.

9.8 Preliminary Engineering Costs

The estimated preliminary engineering cost estimate is based on 10 percent of the estimated total construction cost. The total estimated preliminary engineering cost for the recommended alternative (in year 2000 dollars) is $867,000.

9.9 Total Estimated Project Cost

The total project cost for the recommended alternative including right-of-way, design, construction, construction engineering and inspection and environmental mitigation is estimated to be $24,047,800. A breakdown of project costs by project segment is shown in Table 9-1.

Table 9-1
Recommended Alternative Project Costs

Cost Item	Project Segment					Totals
	1	2	3	4	5	
Right-of-Way (Roadway)	$2,093,100	$2,326,900	$3,091,000	$1,897,200	$1,098,600	**$10,506,800**
Right-of-Way (Stormwater)	$1,274,000	$618,800	$764,400	$0	$409,200	**$3,066,400**
Design (10% of Const.)	$212,000	$176,000	$222,000	$139,000	$118,000	**$867,000**
Construction (LRE Estimate)	$2,120,300	$1,764,300	$2,216,900	$1,391,500	$1,176,500	**$8,669,500**
CEI (10% of Const.)	$212,000	$176,000	$222,000	$139,000	$118,000	**$867,000**
Wetland Mitigation	$35,100	$13,100	$18,000	$0	$4,900	**$71,100**
Total Cost	**$5,946,500**	**$5,075,100**	**$6,534,300**	**$3,566,700**	**$2,925,200**	**$24,047,800**

9.10 User Benefits

The proposed improvements to the US 98 Dade City Bypass project would benefit the anticipated social and economic demands by enhancing travel mobility, improving accessibility to the area, and providing for the continuous movement of people and goods with increased safety and efficiency. Reduced need for repairs, lower repair costs, decreased inconvenience to drivers, and improved ride quality are all amenities which contribute to the overall public acceptability of the proposed improvements. The proposed improvements would also provide peace of mind for Pasco County residents and other travelers with an improved emergency evacuation route, increased safety and overall freedom of movement.

9.11 Pedestrian, Handicapped and Bicycle Facilities

Bicyclist and pedestrian accommodations will be provided for the length of the project. The typical section will contain 4-foot bike lanes and 5-foot sidewalks in both directions. Pedestrian crosswalks and curb cut ramps will be provided at the intersections. Roadway lighting will be provided for the length of the project.

9.12 Safety

An important safety improvement for the US 98 Dade City Bypass is the addition of one 12-foot lane, one 4-foot bike lane in each direction, and a 22-foot median. A 12-foot border (containing a 2-foot curb and gutter, a 3-foot utility strip, a 5-foot sidewalk, and a 2-foot back-of-sidewalk buffer) would also be provided in both directions. Pedestrian crosswalks would be provided at the intersections of US 301 South, CR 35A, Tuskeegee/Buford Avenues, Meridian Avenue (SR 52), Martin Luther King Boulevard, River Road, and US 301 North.

9.13 Economic and Community Development

The proposed four-lane widening of the US 98 Dade City Bypass is consistent with the Dade City and Pasco County long-range transportation plans. The proposed improvements would provide the road network improvements necessary to support the future land uses projected for Pasco County. It is expected that the proposed four-lane widening of the US 98 Dade City Bypass will relieve future traffic congestion in downtown Dade City along 7th Street (US 301).

9.14 Environmental Effects

The environmental effects of the recommended alternative were evaluated and are discussed in the following sections.

9.14.1 Wetlands

Six wetlands were identified within the US 98 Dade City Bypass project study area. They are contained within the Hillsborough-Withlacoochee Regional Drainage Basin. Wetland 1A is a wet field currently being used as a pasture for cattle. Wetland 1B contains the drainageway for Wetland 1A. Wetland 2 is a small depression area filled with shrubby wetland trees. Wetlands 3 and 4 are classified as wet ditches and were created for the conveyance of stormwater. Wetland 5 is a dry ditch created for the conveyance of stormwater. Widening of the US 98 Dade City Bypass on its existing alignment will unavoidably impact these wetland areas. The loss of wetlands will be mitigated during the subsequent final design phase of this project. The mitigation option to be considered is the use of Florida Statute 373.4137 that allows payment of currently $81,727 per affected acre (FY 2001/2002) to the SWFWMD for their use in mitigating the impacts.

All wetlands examined within the project corridor are considered low quality and urban in nature. The wetlands evaluated exhibited WRAP scores of less than 0.35, indicating disturbed systems. These wetlands have little to no wildlife or habitat value.

The estimated wetland effects and mitigation costs of the recommended alternative are listed by project segment in Table 9-2.

Table 9-2
Recommended Alternative Wetland Impacts

Segment	Wetland Number	Area of Impact (acres)			Mitigation Cost @ $81,727/ac
		Roadway	Stormwater Management	Total	
1	1A	0.29	0.14	0.43	$35,143
2	2	0.00	0.16	0.16	$13,076
3	3	0.22	0	0.22	$17,980
4	--	0	0	0	$0
5	5	0.06	0	0.06	$4,904
Totals		**0.57**	**0.30**	**0.87**	**$71,103**

9.14.2 Water Quality

Runoff from the US 98 Dade City Bypass will be collected in curb inlets. The water will be conveyed in an underground storm sewer system to stormwater management ponds for water quality treatment. The stormwater facility design for this project will include, at a minimum, the water quantity requirements for water quality impacts as required by the SWFWMD in Chapters 40D-4 and 40D-40 FAC.

The locations of the stormwater management ponds are shown on the Concept Plans in Section 10.

9.14.3 Farmlands

Provisions of the Farmland Protection Policy Act of 1984 do not apply to this project.

9.14.4 Floodplains

In compliance with Presidential Executive Order 11988, "Floodplain Management," USDOT Order 5650.2, "Floodplain Management and Projection," and Federal-Aid Policy Guide 23 CFR 650A and using assessment methodology, evaluation procedures and document preparation guidance found in Part Two, Chapter 24 of the FDOT's PD&E Manual, Revised 4/22/98, project consideration was given to protect floodplains and floodways.

FDOT drainage maps, USGS Quadrangle maps, SWFWMD topographic maps, FEMA FIRMs, and the Duck Lake Stormwater Management Master Plan, December 1987, were used to identify flood-prone areas within the project corridor. A field inspection was conducted to identify obvious drainage problems. Additionally, people knowledgeable about local drainage conditions were interviewed. These include corridor residents, FDOT

maintenance personnel, SWFWMD, and Dade City and Pasco County operations personnel.

Coordination with SWFWMD indicates the Duck Lake Study 100-year flood elevation of 78.8 feet will be used to determine floodplain encroachment compensation for the widening of the US 98 Dade City Bypass.

Seven locations along the project alignment were identified as having the potential for floodplain encroachment. It is anticipated that the proposed improvements to the US 98 Dade City Bypass would encroach at all seven of the floodplain locations. The total estimated floodplain encroachment volume for the recommended alternative is 24.5 ac-ft. Subsequent design phases of this project will compensate for this loss of floodplain storage through mitigation coordination with the SWFWMD. Properties to be used for potential floodplain compensation mitigation sites have been identified in the Pond Siting Report prepared for this project. The subsequent design phase of this project will further assess the suitability and availability of the identified floodplain compensation sites when additional detailed design, geotechnical and survey information is available. The locations of the floodplain compensation sites are shown on the Concept Plans in Section 10.

The potential floodplain encroachment locations on the US 98 Dade City Bypass improvement project are in Categories 2 or 3. Category 2 locations do not involve the replacement or modification of any drainage structures. Category 3 locations involve modifications to the existing drainage structures. The subsequent final design phase of this project will determine the suitability for modification of the existing cross drains.

Whether the floodplain encroachment Category is 2 or 3, the proposed improvements will not cause significant changes in flood heights or floodplain limits and would result in no significant adverse impacts on natural and beneficial floodplain values. No significant change in the potential for interruption or termination of emergency service or emergency evacuation routes will result from these floodplain encroachments. Therefore, it has been determined that these encroachments are not significant.

For additional information regarding the potential for encroachment into the floodplains in the US 98 Dade City Bypass project corridor, refer to the Location Hydraulic Report prepared for this project.

9.14.5 Wildlife and Habitat

An Endangered Species Evaluation was conducted for the US 98 Dade City Bypass project corridor. The Florida Fish and Wildlife Conservation Commission (FFWCC) was contacted for its information on the occurrence of listed species. In a letter dated March 24, 2000, FFWCC indicated, "No records from the Office of Environmental Service's database were located within the project area." Additionally, in a letter dated March 27, 2000, the FFWCC indicated, "...there are no known bald eagle nests within one mile of the project site."

Review of the Florida Natural Areas Inventory (FNAI) and United States Fish and Wildlife Service's Endangered Species List for Pasco County were also conducted. Since the project is located within the landward extent of Pasco County, all marine species that do occur in Pasco County have not been included in this analysis. Other species listed were American alligator (*Alligator mississippiensis*), red-cockaded woodpecker (*Picoides*

borealis), eastern indigo snake (*Drymarchon corais couperi*), and the wood stork (*Mycteria americana*).

A field inspection of the US 98 Dade City Bypass project was conducted on November 3, 1999. The purpose of this inspection was to observe any listed species that might be present and to determine if any suitable habitat existed for them and specific occurrences for listed species within the project corridor. The field inspection revealed that no habitat existed within the study corridor that would exhibit listed species. No specific occurrences or observations were made for any listed species that would occur within Pasco County. The lack of specific habitat for listed species within the study area is to be expected as the corridor is urban in nature and is highly developed. Additionally, no native upland habitats will be affected as a part of the project.

On April 14, 2000, the FWS indicated, "The Proposed Action is not likely to adversely affect the resources protected by the Endangered Species Act of 1974, as amended (16 U.S.C. 1531, *et. seq.*). This finding fulfills the requirements of the Act."

Therefore, through a literature search, review of the FNAI and FWS databases for Pasco County, field verification, and agency coordination at both the State and federal levels, no threatened and/or endangered species are expected to occur along the project corridor. As a result, the US 98 Dade City Bypass project is expected to have "No Involvement" with listed species/or their critical habitats.

9.14.6 Noise

A Noise Study Report was prepared in accordance with Title 23 CFR, Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise using methodology established by the FDOT in the Project Development and Environment (PD&E) Manual, Part 2, Chapter 17 (January 2001).

Based on the noise contour data, a review of land use data, proximity of noise sensitive sites to the US 98 Dade City Bypass and field verification of noise sensitive locations, a total of 53 receivers representing 77 noise sensitive sites were evaluated for the Build Alternative. East of the US 98 Dade City Bypass, 25 receivers representing 38 noise sensitive sites were modeled. West of the US 98 Dade City Bypass, 28 receivers representing 39 noise sensitive sites were modeled.

In addition to approaching or exceeding the NAC, noise sensitive sites are considered affected if the Build Alternative is predicted to cause a substantial increase in the noise level. The FDOT defines the term "substantial increase" as 15 or more dBA above the existing noise level as a direct result of the transportation improvement project. Comparing the existing to the design year build condition, the range of increase for the predicted noise levels is from 1.1 to 7.5 dBA. Higher traffic volumes and the closer proximity of travel lanes to residences cause most of the increases. Reduced noise shielding from the relocation of front row residences and the replacement of grassed propagation paths with pond locations cause some of the larger increases in specific areas.

For the Build Alternative and year 2025 traffic conditions, 14 residences are predicted to experience noise levels that approach or exceed the NAC. An evaluation of traffic management, alignment modifications and property acquisition indicated that these abatement measures were not feasible or reasonable. Noise barriers were also evaluated.

At 11 of the residences a 5 dBA reduction could not be achieved because of limitations on the barrier length to accommodate side streets and driveways. Noise barriers were not feasible at these locations.

The remaining three residences are either isolated or located in an area with a low density of residential development. Because of the small number of residences that would benefit, noise barriers were determined to not be cost reasonable at these locations.

9.14.7 Air Quality

An air quality evaluation, specifically an analysis of carbon monoxide concentrations (CO) was performed in accordance with FDOT's PD&E Manual. The computerized screening test, COSCREEN98 (Revised) was used. Using worst-case assumptions for meteorological, traffic and site conditions, COSCREEN98 predicts CO concentrations at established receptor locations. The results can be directly compared to the National Ambient Air Quality Standards (NAAQS) to identify the potential for the CO standard to be exceeded.

All predicted CO concentrations for the No-Build and Build conditions in the opening and design years are below the 1-hour NAAQS of 35 parts per million and the 8-hour standard of 9 parts per million. The predicted 1-hour and 8-hour concentrations include a background CO level of 3.3 and 2.0 parts per million, respectively.

The Build concentrations show a slight increase compared to the No-Build concentrations. This increase is a result of the travel lanes being located slightly closer to the receptors.

The project is in an area that has been designated as attainment for all the air quality standards under the criteria provided in the Clean Air Act Amendments of 1990. Therefore, conformity requirements do not apply to this project.

9.14.8 Construction

Construction activities for the project will result in minimal, temporary, yet unavoidable air, noise, water quality, wetlands, traffic flow, and visual impacts for individuals residing or traveling in the immediate vicinity of the project.

Noise generated by roadway construction, haul trucks and other heavy equipment is anticipated. Construction noise will be minimized on this project by the Contractor's adherence to noise control measures discussed in the current edition of the FDOT Standard Specifications for Roadway and Bridge Construction.

Construction activities will also cause minor short term increases in air quality impacts in the form of dust from earthwork and unpaved roads and smoke from open burning. These impacts will be minimized or controlled by adherence to all State and local regulations and to the current edition of the FDOT Standard Specifications for Roadway and Bridge Construction.

Maintenance of traffic and sequence of construction will be planned and scheduled so as to minimize traffic delays throughout the project. Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling.

Visual impacts associated with the storage of construction materials and establishment of temporary construction facilities will occur, but are not considered substantial. Construction impacts from the project will be minimal.

9.14.9 Contamination

A Level I Contamination Screening of the US 98 Dade City Bypass PD&E Study corridor was conducted to determine the potential for contamination of the US 98 Dade City Bypass right-of-way from adjacent properties and business operations.

Twenty-five sites were identified as possibly having the potential for contamination. The sites were identified by windshield survey; examination of historic aerial photography; and a review of the original US 98 Dade City Bypass construction drawings, local FDEP files and Dade City Directories. Of the 25 sites, four are potential hazardous materials sites and 21 are potential petroleum sites.

The four hazardous materials sites were given a rating of LOW.

Of the 21 petroleum sites, 15 sites were considered to have a LOW potential for contamination, two sites were considered to have a MEDIUM potential for contamination, two sites were considered to have a HIGH potential for contamination, and two sites were considered to have NO potential for contamination.

It is recommended that the four sites listed in Table 9-3 be further analyzed through a Level 2 Contamination Assessment prior to the design phase of this project to verify or refute the potential contamination concerns.

Table 9-3
Contamination Sites

Site No.	Name	Ranking	Location on US 98 Dade City Bypass	Required Right-of-Way
23W	Pat's Food Mart	HIGH	Buford Avenue	15 to 65 feet
25W	Git In Go Food Store/Texaco	MEDIUM	Church Avenue	45 to 75 feet
30W	J.H. Williams Oil Company, Inc.	HIGH	Meridian Avenue	50 to 70 feet
36E	La Pasa Dita Restaurant	MEDIUM	River Road	0 feet

The locations of the four contamination sites are shown on the Concept Plans in Section 10.

For additional information regarding contamination, refer to the Contamination Screening Evaluation Report prepared for this project.

9.15 Utility Impacts

Seven utilities are located within the project corridor. The utilities that have the potential to be affected by the preferred alignment of the proposed improvements to the US 98 Dade City Bypass, along with the associated relocation costs are shown in Table 9-4.

Table 9-4
Utility Relocation Costs

Type of Service	Owner	Relocated Facilities	Cost
Electric Distribution	TECO	13830 LF Power Line	Not Available
Telephone	Sprint Florida	9,200 LF Cable	$36,800
Gravity Sewer and Water	Dade City	6,930 LF 6" Pipe 9,760 LF 8" Pipe 200 LF 16" Pipe 4 Manholes 16,890 LF Pipe Removal	$166,320 $312,320 $6,600 $9,892 $109,616
Natural Gas Distribution	TECO Peoples	3,400 LF 2" PE Pipe 3,900 LF 2" Steel Pipe 7,300 LF Pipe Removal	$34,000 $58,500 $47,377
Total Utility Relocation Cost			**$781,425**

9.16 Traffic Control Plan

The recommended alignment will widen the US 98 Dade City Bypass to the left in Segments 1, 3, 4, and 5 and to the right in Segment 2. Typically, Phase 1 of construction will occur outside of the footprint of the existing travel lanes. Phase 1 would construct the stormwater management ponds, floodplain compensation sites, utility relocations, drainage structures, and two new southbound travel lanes with curbs and gutters, bike lane, and sidewalk. In Segments 1, 3, 4, and 5, two-way traffic will be maintained on the existing two lanes during this phase. In Phase 2, two-way traffic will be switched to the newly constructed lanes while the existing lanes are removed and the new northbound lanes are added. Phase 3 would switch traffic to the two outside lanes while the median is completed. Segment 2 will be widened to the right. The traffic control plan would be reversed in Segment 2.

Access to adjacent residences, businesses and side streets would be maintained through all phases of construction. Temporary driveway connections with directional signage may be required.

9.17 Results of Public Involvement Program

A Public Involvement Plan was developed for the US 98 Dade City Bypass PD&E Study in accordance with the FDOT PD&E Manual, Part 1, Chapter 8, to fully inform and involve all interested public officials, citizens and special interest groups in the development of the project. The Public Involvement Plan was developed for the US 98 Dade City Bypass PD&E Study in July 1999. Public involvement has been accomplished during the PD&E Study in accordance with the Public Involvement Plan to keep appropriate agencies and interested citizens informed and to ensure project compliance with local and regional transportation plans.

The project team coordinated with State and local agencies, private land owners along the project corridor and other interested parties through small group meetings, teleconferences and various forms of correspondence throughout the development of the PD&E Study.

Presentations and small group meetings were also made to the Pasco County Metropolitan Planning Organization (MPO) Board of Directors and to the Citizens and Technical Advisory Committees; Redevelopment Advisory Committee, the Dade City Council; Greater Dade City Chamber of Commerce; Downtown Dade City Main Street, Inc., Dade City Rotary Club, and the Dade City Kiwanis Club. The project team was also involved in project meetings with representatives of the FDOT and their respective study consultants.

A series of informative newsletters were prepared and provided to the public through direct mailings. The newsletters presented a summary of previous activities and notification of upcoming events related to this project.

9.17.1 Advance Notification

The FDOT initiated early project coordination on July 23, 1999, by distribution of an Advance Notification (AN) package to the Florida State Clearinghouse, Office of the Governor, Tallahassee, Florida in accordance with Executive Order 83-150. The AN package defined the project and described anticipated issues and impacts. A 45-day comment period (up to 60 days if requested in writing of the FDOT by the State Clearinghouse) was afforded to allow for distribution and receipt of agency responses. The FDOT received notification that the Clearinghouse received the AN package on August 5, 1999 and forwarded the package to the appropriate agencies. The Clearinghouse noted that agency comments will be forwarded to the FDOT no later than September 20, 1999.

No controversial comments were received as a result of the AN process. Responses received are summarized below.

Advance Notification Package Responses

Tampa Bay Regional Planning Council (TBRPC) - While the TBRPC does not find the proposal to be "regionally significant", all member local governments of the TBRPC's full policy board will be notified. The Department will be contacted if any local concerns are identified. "Review of the grant proposal shows the project to be consistent with the Council's Future of the Region: A Strategic Regional Policy Plan of no natural resources of regional significance being impacted along the proposed Dade City Bypass route. In accordance with the State's delegated Intergovernmental Coordination and Review (IC&R) review requirements, this project is considered to have met the requirements of the IC&R process and no further review will be required by our Agency."

Governor's Office of Planning and Budgeting - "The Governor's Office of Planning and Budgeting (OPB) notes that Best Management Practices should be used to minimize impacts to the environmental. OPB also requests to review any environmental documents prepared for this project."

Florida Department of Community Affairs - Florida Coastal Management Program (September 17, 1999) - "The Florida State Clearinghouse has been advised that our reviewing agencies require additional time to complete the review of the above-referenced project. In order to receive comments from all agencies, an additional fifteen days is requested for completion of the state's consistency review in accordance with 15 CFR 930.41(b). We will make every effort to conclude the review and forward the consistency determination to you on or before October 5, 1999."

(October 29, 1999) - "Based on the information contained in the advance notification and the enclosed comments provided by our reviewing agencies, the state has determined that the project is consistent with the Florida Coastal Management Program (FCMP)."

"The Department of Community Affairs (Department), pursuant to its role as the state's land planning agency, has reviewed the referenced project for consistency with the relevant local government comprehensive plan. Based on the information contained in the application, the Department has determined that the project is consistent, to the maximum extent feasible, with the applicable comprehensive plan."

Florida Department of State - Division of Historical Resources - "...conditioned upon the FDOT undertaking a cultural resource survey, and appropriately avoiding, minimizing, or mitigating project impacts to any identified significant archaeological or historic sites, the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register, or otherwise of historical or architectural value. If these conditions are met the project will also be consistent with the historic preservation aspects of Florida's Coastal Management Program."

Southwest Florida Water Management District - Conceptually, the proposal is generally consistent with District activities. The applicant is committed to considering several options to address the area's transportation issues. This action should assist with identifying transportation solutions that meet the needs of the community while minimizing environment impacts." The following comments are specific to the District's permitting for this project:

1. The proposed construction alternative appears to indicate the project would qualify for an Environmental Resource Permit (ERP) pursuant to Chapter 40D-4.041, F.A.C.
2. Depending on the extent of construction and wetland impacts, the project may qualify for a Noticed General, General or Individual ERP.

The applicant should meet with the District's Brooksville Regulation staff, prior to initiating construction drawing preparation, to discuss permitting issues for the project.

9.17.2 Agency Kick-Off Meeting

The Project Team held an agency kick-off meeting with local officials of Dade City and Pasco County in the conference room of the Dade City Chamber of Commerce on June 24, 1999. The purpose of the meeting was to introduce the proposed project to the local officials and to solicit local input regarding potential project issues and concerns. Graphic boards showing an enlarged aerial photograph project location map, existing typical section, existing right-of-way widths and a project schedule were available for viewing. A packet containing a project fact sheet, location map and comment form was distributed.

9.17.3 Public Workshop

A Public Workshop was held on November 13, 2000, at the Moore-Mickens Education Center located at 38301 Martin Luther King Boulevard in Dade City, Pasco County. The Workshop was held from 4:30 p.m. to 7:30 p.m. to present the results of the PD&E Study to date and to obtain comments on the alternatives being considered. A brief continuous-running video presentation about the project aerial photographs, concept plans, and project information were available for public review. FDOT representatives were available during

the Workshop to discuss the project, answer questions and receive comments. Notification was accomplished by direct mail to elected and appointed officials in Pasco County and Dade City; federal, state and local agencies; interested citizens requesting to be on the mailing list; and to property owners whose property lies in whole or in part within 300 feet from the centerline of the proposed project.

A legal display advertisement for the Workshop was published on November 9, 2000 in the Pasco County edition of the St. Petersburg Times.

Approximately 70 persons signed the attendance sheets at the Workshop and six written responses were received.

The Workshop provided interested persons the opportunity to express their views concerning the conceptual design and social, economic, and environmental effects of the proposed improvements.

9.17.4 Informational Meeting

An Informational Meeting was held to inform persons whose property lies in the vicinity of US 301 South to the vicinity of Willingham Avenue of the US 98 Dade City Bypass project. The meeting was held on March 1, 2001 from 6:00 p.m. to 8:00 p.m. at the First National Bank in Dade City. A brief video presentation about the project, aerial photographs, conceptual plans, and project information were available for public viewing. Representatives from the FDOT were available beginning at 6:00 p.m. to discuss the project, answer questions and receive comments.

As a result of the Informational Meeting, there was one request for copies of select pages from the Preliminary Engineering Report. Ten written Comments Sheets were received (some providing more than one comment). A summary of the comments received is provided below.

One written comment received prefers to do nothing to US 301 from the US 98 Dade City Bypass south to Willingham Avenue. If this section does need to be improved, consider making the improvements within 35 feet.

One written comment received expressed concerns regarding property values for the Shadow Lawn Subdivision located along the east side of US 301 at the southern limits of the project. This person would like to see "an attractive landscaped barrier wall" at this location.

Two written comments received are concerned with the solid median proposed for east of Heather Place. "The U turn designed for northbound traffic will be more dangerous than a left turn lane directly into Heather."

Four written comments received would like to see the intersection at the First National Bank (Willingham Avenue at the south end of project) be open so that traffic leaving the bank could choose to head north or south.

One written comment received would like for Calvary Assembly of God Church traffic to be able to travel north or south when leaving the property.

Two written comments received suggest putting a traffic light at Willingham Avenue and 3rd Street and at Meridian Avenue and the US 98 Dade City Bypass.

One written comment received indicated that better access is needed for Dade City at the north and south ends of the City; provide more paved lanes and less grass to cut down on cost and danger to road workers; and provide north and south truck turn lanes to River Road.

9.17.5 Public Hearing

A formal Public Hearing was held on November 29, 2001, at the Moore-Mickens Education Center, located at 38301 Martin Luther King Boulevard, in Dade City, Florida. The Hearing was held from 4:30 p.m. to 7:30 p.m. to present the preliminary results of the PD&E Study and to give the public the opportunity to express their views concerning the conceptual design and social, economic and environmental effects of the proposed improvements. The support documents for the Study were made available for public review prior to and after the Public Hearing beginning November 8, 2001 through December 10, 2001 at the Hugh Embry Library located at 14215 4th Street in Dade City, Florida.

Notification was accomplished by direct mail to elected and appointed officials in Pasco County and Dade City and to property owners whose property lies in whole or in part within 300 feet from the centerline of the proposed project. Other interested citizens were also notified by letter of the Public Hearing.

The Public Hearing was advertised in the November 9th, 2001 edition of the Florida Administrative Weekly. Legal display advertisements for the Hearing were published on November 8, 2001 and November 22, 2001 in the Pasco County edition of the St. Petersburg Times. Approximately 61 persons signed the attendance rosters. Copies of the legal display advertisement, elected and appointed officials, property owner and interested citizen notification letters, handout, attendance rosters, and comment forms received are included in Appendix G.

The formal portion of the Hearing began at 6:00 p.m. Mr. Kirk Bogen, Project Development Engineer for the FDOT, District 7, presided at the Hearing. Following introductory remarks, Mr. Bogen provided a summary of the FDOT's engineering and environmental studies associated with the proposed improvements to the US 98 Dade City Bypass corridor. The recommended "build" alternative - widening the existing two-lane roadway to a four-lane urban roadway with bike lanes and sidewalks for the length of the project - was also described. The next portion of the hearing was devoted to comments and questions.

Persons were able to offer statements as part of the Official Public Hearing Record in one of four ways: (1) make an oral statement during the formal portion of the Hearing; (2) make an oral statement to the court reporter during the informal portion of the Hearing; (3) complete the Comment Form and submit it to the court reporter or drop it in the 'Comment Form' box; or (4) complete and mail the Comment Form to the FDOT - District 7. A copy of the Public Hearing transcript is included in Appendix G.

Four persons gave oral statements to the court reporter during the informal portion of the Hearing.

One person was concerned with being able to travel south on the US 98 Dade City Bypass from Sunset Avenue. "There is a tremendous amount of traffic. And the closest red light is down by the shopping center... A lot of times there is absolutely no break in traffic, and it's extremely hard to get out."

One person was concerned with the River Road alternative. "The main option is to have a light there, because you have to deal with the southbound traffic and northbound traffic on the bypass, crossing traffic, the trucks and the trains that go into the juice plant."

One person was concerned with the ability to enter and leave the Dade City Plaza located near the northern end of the project. "...as presented there is not an opportunity for people coming from the north to readily come out of the shopping center and return north; nor for the people coming from the south to get into the center, even though they may be able to get out right. Now, this is destroying the viability of the shopping center, inasmuch as a large number of our customers are Mexican and black community; and therefore, are living in the outskirts of town and use the highway as principal access in and out..."

One person was concerned with the property owned by the Louversasikes Estate. The property is within approximately 400 feet of the US 98 Dade City Bypass project. The concern is whether or not a new survey and park plans will be required.

Six persons spoke for the public record at the Hearing and three written statements (some providing more than one comment), were received within the time period allotted for comments. There were two requests for copies of the 11x17 concept plans. The following summarizes the substantive oral and written comments made at the Public Hearing.

One speaker stated the project, "Is just a jumbled-up mess." The speaker lives on Lake Drive and to go south on US 301, he has to either go to Shadow Drive or to Willingham. This speaker is also concerned with the proposed CR 35A intersection. "You are going to stop those trucks that would normally not go down and join back up at 301 and because you are causing them to come to a left-turn lane and come to a complete stop and turn left across two lanes of traffic. And when they are northbound, you will cause them to come to a stop sign and make a right-hand turn to head further north." This speaker believes that the proposed improvements will cause the truck traffic to use US 301 and "Further congest that area down there."

One speaker was concerned with the lack of access without being able to make U-turns, why the bike path is being included and why Meridian Avenue, rather than US 301 North and US 301 south, is not being used as a main gateway to the community.

One speaker was concerned with how the words "improvement and bypass" were being used. This speaker, who lives in the Shadow Home subdivision, questioned whether an impact study was done for this area.

One speaker stated, "Why you don't connect the bypass into 35A which connects into the bypass to go around Zephyrhills. Then you truly have a bypass."

One speaker was concerned with the proposed improvements to River Road. "Is there going to be a red light there?"

One speaker was representing Central Florida Tractor located at the southern end of the project. The concern is not having a curb cut into the six businesses located there. Central Florida Tractor is an equipment business and, "At any given time will have two to three deliveries being semi-truck and trailer, during a week between two to three of the business that share that building." The speaker was concerned with the trucks, trailers and customers having to travel south on the US 98 Dade City Bypass past the businesses and use the curb or the U-turn.

Written Comment: "I have a problem with closing off Sunset Ave at 301 to the south. The traffic is extremely heavy and with the highway having a knoll it is extremely difficult to see any distance down the highway."

Written Comment: This person would like the Pasco County Government to return 35A back to the FDOT; would like the project to be tied into the Zephyrhills bypass; and would like to have signs posted to I-75 at Clinton Avenue and US 301 and at Lock Street and I-75. This person also questioned the need for sidewalks and the bike path and does not want all church traffic to go by his house on Wednesdays and Sundays.

Written Comment: This individual is in support of a no-build alternative.

For additional information regarding the Public Involvement Program for the proposed improvements to the US 98 Dade City Bypass, refer to the Comments and Coordination Report prepared for this project.

9.18 Drainage

The proposed drainage system will be designed to convey stormwater runoff away from the roadway in the existing natural basin flow directions. Subsequent design phases of this project will further assess the availability and suitability of the identified stormwater management pond locations when additional detailed design, geotechnical and survey information is available. Suitable properties for potential stormwater ponds and floodplain compensation sites have been investigated in the Pond Siting Report prepared for this project. The locations are shown on the Concept Plans in Section 10.

The recommended alternative is a four-lane divided urban typical section and as such, roadway drainage will be collected in curb inlets and conveyed from the roadway through a closed drainage system. A combination of closed storm sewers and open channels may be used to convey runoff to the ponds. The ponds will be sized accordingly to provide both water quality treatment and attenuation. The stormwater management ponds would typically be situated outside the proposed right-of-way in close proximity to outfall locations.

There will be no discharge of stormwater to non-contiguous receivers.

It is anticipated that all of the existing drainage structures, including the cross drains, would be removed and replaced or modified as part of the improvements to the US 98 Dade City Bypass. Because of the nature of the proposed improvements (total reconstruction of the roadway), it is assumed for purposes of the floodplain evaluation that the cross drains will be replaced with hydraulically equivalent or greater structures. This has been taken into account when selecting the project activity category for each base floodplain encroachment.

The decision to either modify the existing cross drain culvert or replace it with a hydraulically equivalent or superior structure must be based on a combination of findings from a structural inspection of each culvert as well as a detailed hydraulic analysis during the subsequent design phase of this proposed action. Modifications could involve extending the existing structure and adding improved inlets and outlets. Improving the hydraulic capacity may be accomplished by adding more hydraulically efficient end treatments to extended culverts or by adding additional barrels to increase capacity.

For additional information regarding stormwater management facilities, refer to the Pond Siting Report and the Location Hydraulic Report prepared for this project.

9.19 Access Management

The proposed improvements include the addition of a raised median separating northbound and southbound traffic. The FDOT's access management classification is proposed to be changed as part of the improvements. In accordance with Department Rule 14.97.005 Florida Administrative Code, Review and Modification of Access Classifications, it is the department's intent to change the adopted access classification of the US 98 Dade City Bypass from Access Class 3 to Access Class 5. This would allow for more median openings that provide greater access to adjacent land businesses and side streets. Median openings will be provided at appropriate locations that meet FDOT standards. The proposed median openings are listed in Table 9-5.

Table 9-5
Class 5 Access Management Median Openings

Intersection Name / Location	Distance Between Openings	Type	Movements	Signalized	
				Exist.	Future
Willingham Avenue	625	Full	All	No	No
Shadow Drive	800	Directional	WB Left, SB Left	No	No
US 301 South	850	Directional	NB Left	Yes	Yes
Calvary Assembly of God Church	800	Directional	WB Left, SB Left	No	No
Tractor Sales Strip Center	500	Directional	SB Left	No	No
Connector Road	600	Directional	SB Left	No	No
CR 35A Richland Road[1]	700	Full	All	No	Yes[1]
Tuskeegee/Buford Avenues[1]	1,035	Full	All	No	No
SR 52 East Meridian Avenue[1]	1,610	Full	All	No	No
Martin Luther King Boulevard	735	Full	All	Yes	Yes
Wilson's Trading Post	735	Directional	SB Left	No	No
River Road	410	Directional	WB Left, SB Left	No	No
US 301 North[1]	--	Directional	NB Left	No	Yes[1]

Notes: [1] These intersections will be monitored for future traffic conditions. Future signalization is conditional based on signal warrant analyses.

The locations of median openings for the US 98 Dade City Bypass are shown on the Concept Plans in Section 10.

9.20 Lighting

Roadway lighting may be included in this project if a maintenance agreement with Dade City is executed.

9.21 Park Properties

The project lies within the service areas of one Pasco County community park (John S. Burks Memorial Park with a 3-mile radius service area) and one neighborhood park (Carver Heights Playground with a 1-mile radius service area). Burks Park is located west of Dade City on SR 52. Carver Heights Playground is located east of the CSX Railroad near River Road. Both of these County parks fall outside the project corridor and would not be affected by improvements to the US 98 Dade City Bypass.

The US 98 Dade City Bypass project lies within the designated service areas of two Dade City community parks (Naomi Jones Pyracantha Park and Mickens Field), two neighborhood parks (Price Park and Rhinesmith Park) and one mini-park (Dade City Apex Park). The Dade City Comprehensive Plan designates service areas of a 1.25-mile radius for community parks and a 0.5-mile radius for neighborhood parks. Pyracantha and Price Parks and Mickens Field lie outside the project corridor and would not be affected by improvements to the US 98 Dade City Bypass. Two of the Dade City Parks are located within the project corridor.

Rhinesmith Park is bounded by US 301 on the west, Bougainvillea Avenue on the south, South 5th Street on the East and Southview Avenue to the North. Rhinesmith Park is designated as a Neighborhood Park. It contains no recreation facilities and encompasses 1.9 acres. The park is municipally owned, well maintained, landscaped and designed for passive recreation use by all age groups. Dade City does not maintain usage records for the park, but notes that local residents occasionally use the park for children's passive play.

The proposed project would not require right-of-way acquisition from the park. Improvements to the US 98 Dade City Bypass would have no effect on the physical property, access or function of Rhinesmith Park.

Dade City Apex Park is located immediately south of Rhinesmith Park at the intersection of US 301 South and the US 98 Dade City Bypass. Apex Park is bounded on the north by Bougainvillea Avenue and on the east by South 5th Street. Apex Park is designated as a Mini-Park. It contains four benches, five picnic-type tables and three decorative gaslights situated on 0.3 acres. The park is handicapped accessible. Apex Park is municipally owned, well maintained, landscaped and designed for passive recreation use by all age groups. Dade City does not maintain usage records for the park, but notes that it is used year-round by residents and local business employees for picnic lunches during the Monday to Friday work week and occasionally used by local residents for picnics and passive play on weekends. Dade City and the Dade City Garden Club (located directly across South 5th Street) maintain the appearance of the park as a decorative southern gateway to the city.

Collectively, Dade City Apex and Rhinesmith Parks are known and signed as Hibiscus Park.

The proposed project would not require right-of-way acquisition from the park. Improvements to the US 98 Dade City Bypass would have no effect on the physical property, access or function of Dade City Apex Park.

10.0 CONCEPT PLANS

WPI SEGMENT NO.	SHEET NO.
256423-1	1

100'

LEGEND

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- WETLAND BOUNDARY
- FLOODPLAIN BOUNDARY
- PROPERTY LINES
- PROPOSED PAVEMENT / SIDEWALK
- PROPOSED MEDIAN
- POND AND FLOODPLAIN COMPENSATION SITE
- TRAFFIC SIGNAL
- RESIDENTIAL RELOCATION
- BUSINESS RELOCATION
- CONTAMINATION SITE
- HISTORIC SITE

BEGIN PROJECT

KFC

First National Bank of Pasco

Heather Plaza

Florida Medical Clinic

Hillside Trace Apartments

US 98 / US 301

SEE SHEET 2

MATCHLINE SEE

Food Mart Texaco / Quilts, Etc.

WILLINGHAM DRIVE

LAKE DRIVE

SHADOW DRIVE

SUNSET DRIVE

DIXIE DRIVE

D = 6° 30' 00"
L = 854.97'
V = 50 MPH
e = 0.050

R

Road Closed

PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

SEGMENT 1

US 301 SOUTH TO CONNECTOR ROAD

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

$$$$prf$$$

03/24/02

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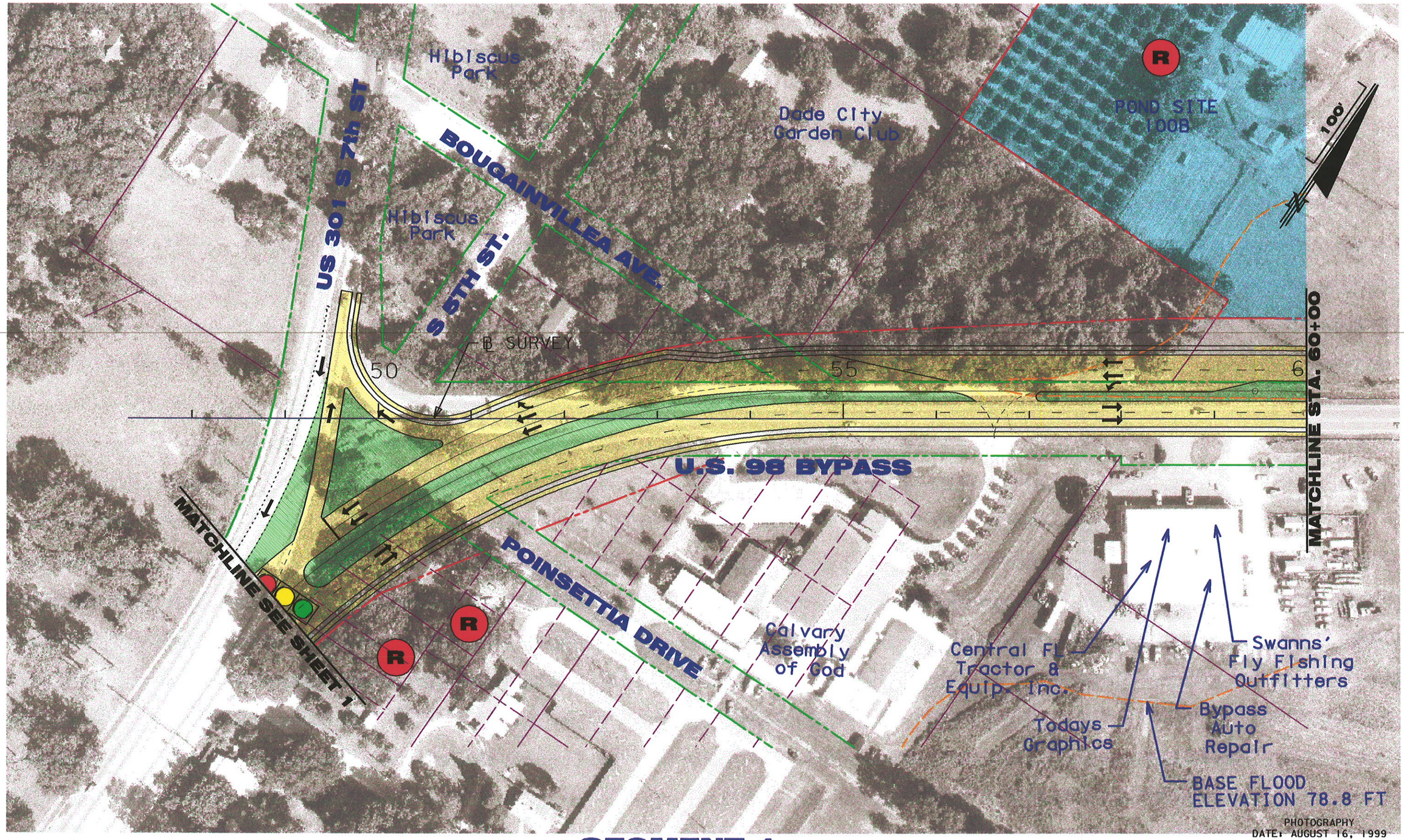
WPI SEGMENT NO.	SHEET NO.
256423-1	2



PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

SEGMENT 1

US 301 SOUTH TO CONNECTOR ROAD

REVISIONS																	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

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03/24/02
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WPI SEGMENT NO.	SHEET NO.
256423-1	3

POND AND FPC SITE 100B

R

WETLAND BOUNDARY

BASE FLOOD ELEVATION 78.8 FT

COLEMAN AVE.

S 2ND ST

S 1ST ST.

100'

Embassy Plaza

Prevention Projects Counseling Center

PC Sta. 66+27.04

PT Sta 71+69.88

MATCHLINE STA. 60+00

MATCHLINE STA. 73+00

B SURVEY

65

70

U.S. 98 BYPASS

D = 1° 00' 00"
L = 412.92'
V = 50 MPH
e = NC

BASE FLOOD ELEVATION 78.8 FT

D = 6° 30' 00"
L = 1413.86
V = 50 MPH
e = 0.050

CONNECTOR RD.

Jarret Ford Lincoln Mercury

Former Kash 'n Karry Shopping Center

SEGMENT 1
US 301 SOUTH TO CONNECTOR ROAD

SEGMENT 2
CONNECTOR ROAD TO TUSKEEGEE ROAD

PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

$$$$prf$$$

03/24/02

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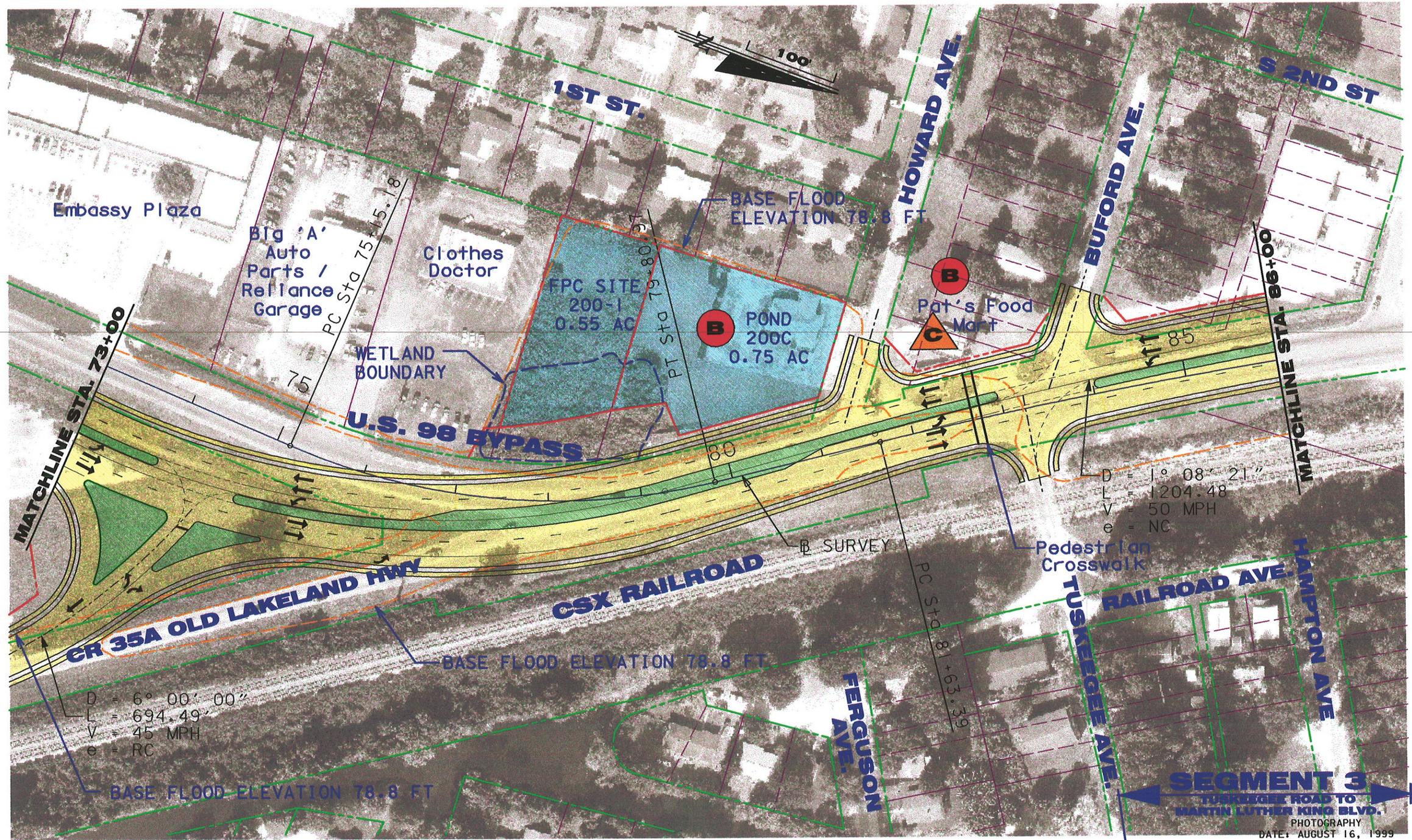
WPI SEGMENT NO.	SHEET NO.
256423-1	4



SEGMENT 2
CONNECTOR ROAD TO TUSKEEGEE ROAD

SEGMENT 3
TUSKEEGEE ROAD TO MARTIN LUTHER KING BLVD.

PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS RECOMMENDED ALIGNMENT

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03/24/02
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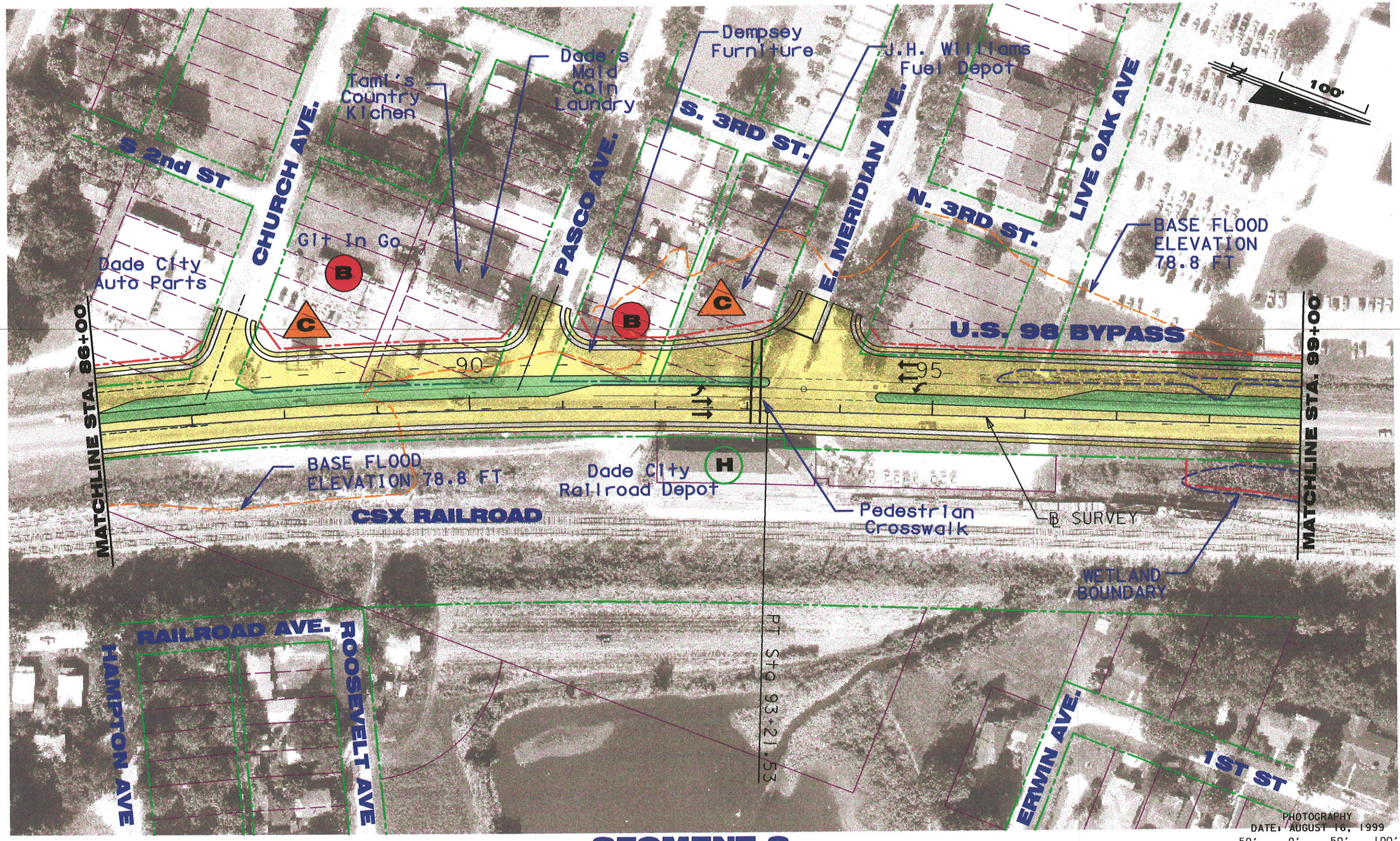
WPI SEGMENT NO.	SHEET NO.
256423-1	5



SEGMENT 3

TUSKEEGEE ROAD TO MARTIN LUTHER KING BLVD.

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

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03/24/02

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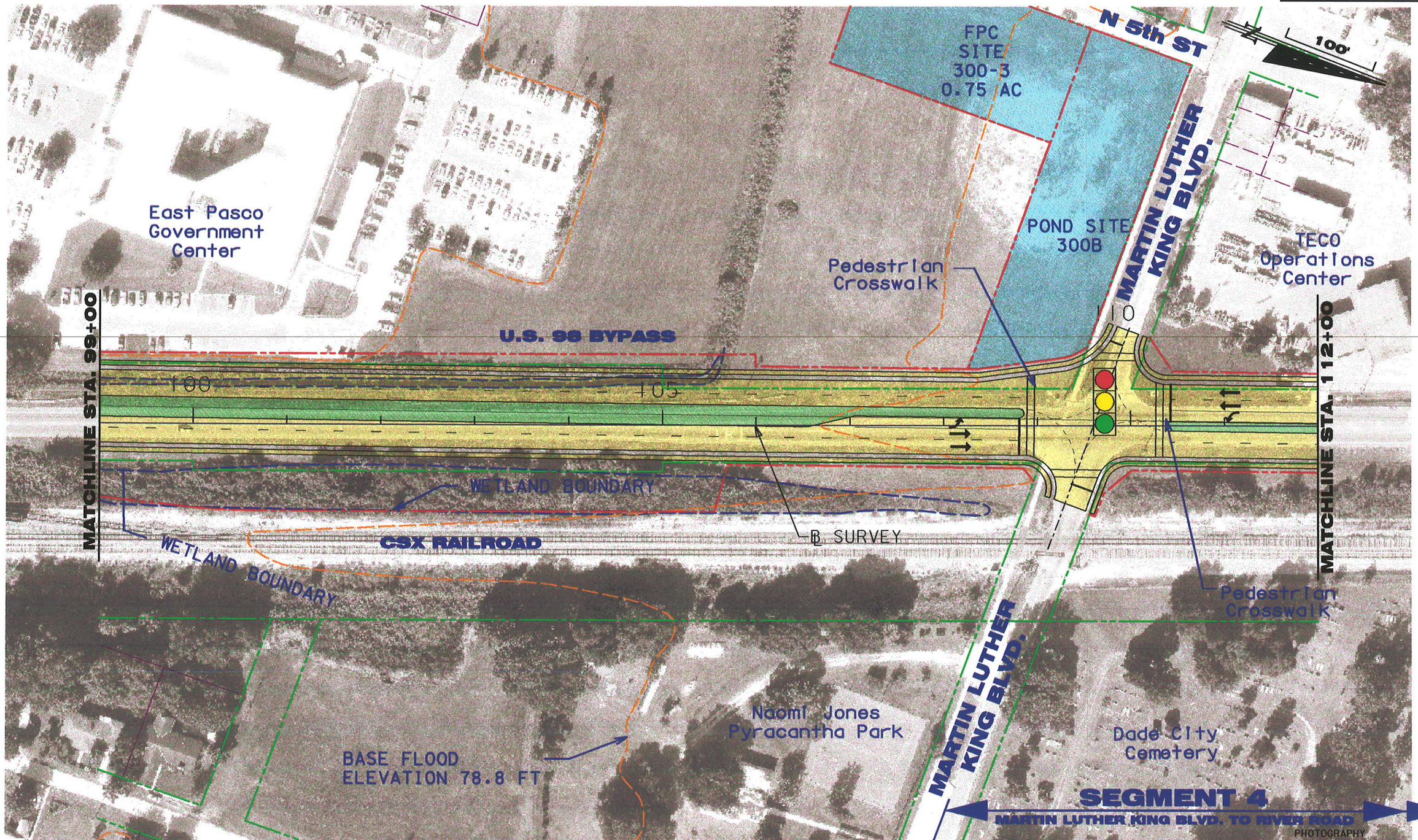
WPI SEGMENT NO.	SHEET NO.
256423-1	6



PHOTOGRAPHY
DATE: AUGUST 18, 1999

50' 0' 50' 100'

SCALE: 1"=100'

REVISIONS														
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS RECOMMENDED ALIGNMENT

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03/24/02

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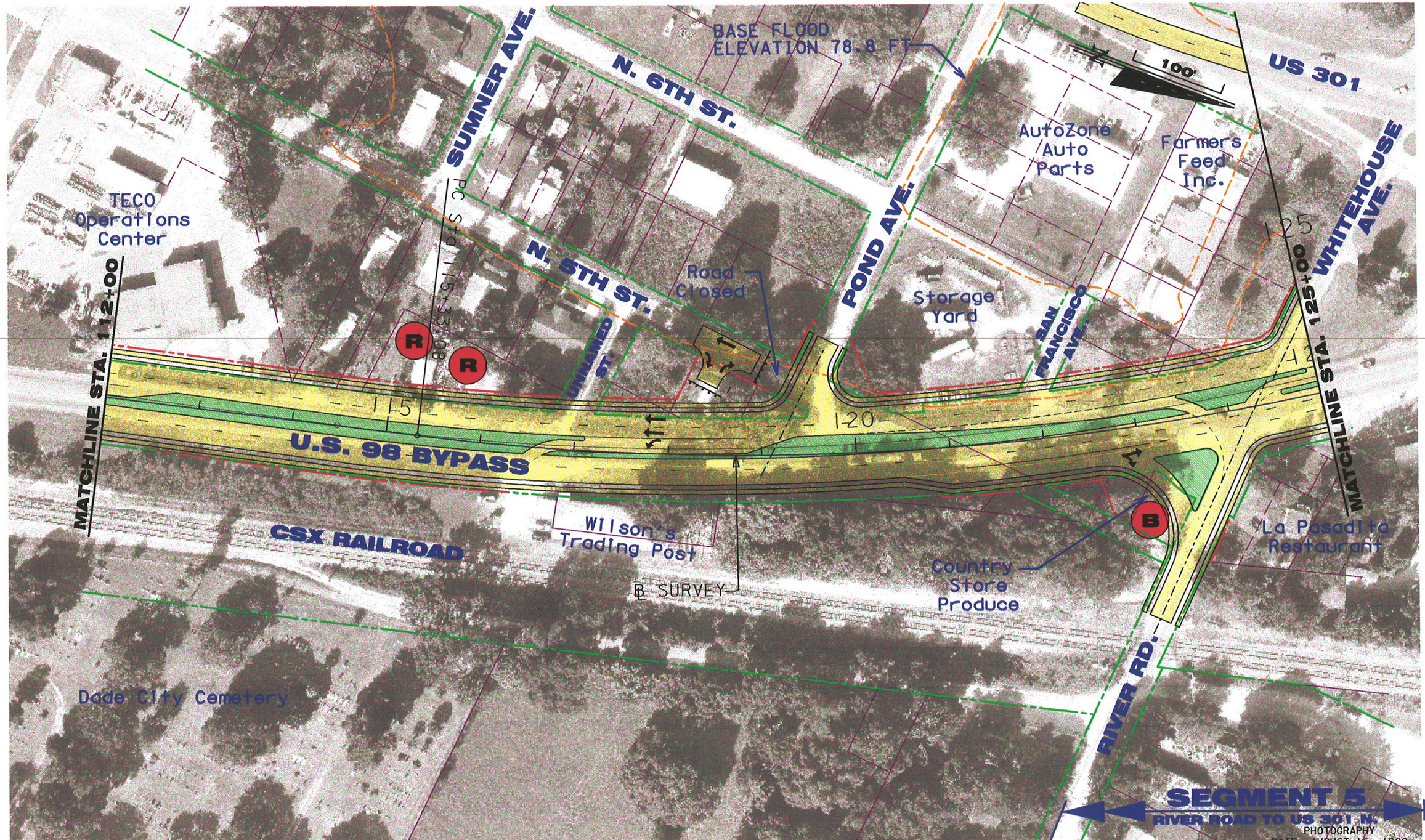
WPI SEGMENT NO.	SHEET NO.
256423-1	7



PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

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WPI SEGMENT NO.	SHEET NO.
256423-1	8

WHITEHOUSE AVE.

Able Body

Check Man

N 7TH ST.

Beverage Chest

U.S. 98 BYPASS

℄ SURVEY

RT Sta 132+24.78

Dade City Plaza

D = 2° 45' 53"
L = 585.00'
V = 50 MPH
e = RC

GADDIS AVE

BASE FLOOD ELEVATION 78.8 FT

Allpro Tires Inc.

100'

MATCHLINE STA. 125+00

C

La Pasadita Restaurant

MEREDITH AVE

Pizza Hut

OLD HWY 301

POND AND FPC SITE 400E

Gibson's Body Shop

CSX RR

Rockin Robin's Inc.

B

Vitality Beverages

N. 7TH ST.

R=200.00'

BASE FLOOD ELEVATION 78.8 FT

Daryl's Muffler Shop and Chris's Window Tinting

Coastal Gas

US 301 / US98

END PROJECT

PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

SEGMENT 5
RIVER ROAD TO US 301 N.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RECOMMENDED ALIGNMENT

$$$$prf$$$$
03/24/02
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WPI SEGMENT NO.	SHEET NO.
256423-1	9

100'

D = 2° 45' 53"
L = 585.00'
V = 50 MPH
e = RC

U.S. 301

WHITEHOUSE AVE.

Able Body

Check Man

N. 6TH ST.

POND AVE.

AutoZone Auto Parts

R=500.00'

Farmers Feed, Inc.

POND SITE

Beverage Chest

U.S. 98 BYPASS

Rockin Robin's, Inc.

WETLAND 2

Vitality Beverages

R=200'

Storage Yard

SAN FRANCISCO AVE.

UNNAMED RD.

Pizza Hut

MEREDITH ST.

Gibson's Body Shop

La Pasadita Restaurant

Country Store Produce

RIVER RD.

Wilson's Trading Post

D = 2° 00' 00"
L = 1435.26'
V = 50 MPH
e = NC

SEGMENT 4
MARTIN LUTHER KING BLVD. TO RIVER ROAD

SEGMENT 5
RIVER ROAD TO US 301 N.

PHOTOGRAPHY
DATE: AUGUST 16, 1999

50' 0' 50' 100'
SCALE: 1"=100'

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03/24/02

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

PB 100 YEARS

U.S. 98 DADE CITY BYPASS
RIVER ROAD INTERSECTION OPTION