FINAL
PRELIMINARY ENGINEERING REPORT

STATE ROAD 52 PD&E STUDY
FROM I-75 (SR 93) to E. of EMMAUS CEMETERY ROAD

WPI Segment Number: 408827 1

Prepared for:

Pasco County Engineering Services Department

July 2005

WilsonMiller, Inc.
Prepared By

Kirk Bogen, PE, Project Development Engineer
Responsible FDOT Officer

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Name and Title of Engineer

60234
PE Number

7/21/05

In cooperation with the Florida Department of Transportation

FINAL
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STATE ROAD 52 PD&E STUDY
FROM I-75 (SR 93) to E. of EMMAUS CEMETERY ROAD
IN PASCO COUNTY, FLORIDA

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15438 N. Florida Avenue
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July 2005

#35114

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1.0 EXECUTIVE SUMMARY

This Preliminary Engineering Report has been prepared for the Pasco County Engineering Services Department in cooperation with the Florida Department of Transportation (FDOT) as part of the Project Development and Environment (PD&E) Study for the proposed widening of State Road 52 (SR 52) from a two-lane rural section to a six-lane divided urban section. As an interim improvement, a four-lane divided section is proposed to accommodate traffic until the six-lane facility is warranted. The project begins east of the Interstate 75 (I-75) interchange ramps and extends approximately 1.9 miles to the east.

A traffic study was conducted to determine the necessary improvements for an acceptable level of service on the road. The results of the traffic study identified that a six-lane divided facility would be needed prior to the 2030 design year. As an interim improvement, a four-lane divided section is proposed to accommodate traffic until the six-lane facility is warranted.

Typical sections were developed to provide the needed roadway geometry within the project limits. For the four-lane interim project, a suburban section is proposed. It consists of a 22-foot raised median, two 12-foot travel lanes, a 10-foot shoulder (5-foot paved, 5-foot unpaved) and a 5-foot sidewalk in each direction. The section utilizes roadside swales and drainage pipes to convey stormwater. For the future six-lane improvements, an urban curb and gutter section is proposed. The sidewalk and raised median remain, the number of lanes are expanded to three 12-foot travel lanes, and a 4-foot bike lane is added in each direction. The urban section includes Type F curb and gutter on the outside for stormwater conveyance. For both typical sections, the total right-of-way width will vary from 160 to 185 feet.

Three alignments were considered, widening to the North, to the South, and from the Existing Centerline. The Southern alignment provides the best alternative for the following reasons:

- Does not require any residential, commercial, or church relocations
- Minimizes impacts on existing developed properties on the North
- Matches the alignment for the proposed I-75 Interchange Improvements and for the future Clinton Avenue Extension
- Is the most cost effective option

As a result of the public hearing, environmental studies and interagency coordination, the southern alignment has been selected as the recommended alternative for the proposed widening of State Road 52 (SR 52) from a two-lane rural section to an interim four-lane suburban section and ultimate six-lane divided urban section.

2.0 INTRODUCTION

2.1 PURPOSE

This Preliminary Engineering Report was prepared as part of a State Environmental Impact Study prepared for the Pasco County Engineering Services Department in cooperation with the Florida Department of Transportation (FDOT) for the purpose of evaluating and documenting the proposed improvements to SR 52.

2.2 PROJECT DESCRIPTION

The existing roadway is a two-lane undivided section. No traffic signals currently exist within the project corridor. The posted speed limit is 50 mph from I-75 through the project corridor. SR 52 provides east-west mobility for many land uses along the corridor and provides a connection from the communities of San Antonio, St. Leo and Dade City to and from Interstate-75, see Figure 2-1.

The project will result in the widening of SR 52 from east of the Interstate-75 ramps to east of Emmaus Cemetery Road from a two-lane roadway to a six-lane divided roadway, a distance of approximately 1.9 miles, see Figure 2-1. As an interim improvement, a four-lane divided section is proposed to accommodate traffic until the six-lane facility is warranted. The western limits will match the proposed improvement project for SR 93 (I-75), from South of SR 56 to North of SR 52, WPI segment number 2587361, Federal-Aid Project Number NH-75-1(91) 275. The eastern segment will align with the proposed Clinton Avenue Extension, Pasco Work Order Number C 3216.40.

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NOT TO SCALE

FIGURE 2-1
PROJECT LOCATION MAP

3.0 NEED FOR THE PROJECT

The need for the widening project was determined by the Pasco County Metropolitan Planning Organization. The future need for additional improvements to widen to six lanes is identified in the Pasco County MPO's Needs Assessment Plan and in the Draft SR 52 Action Plan prepared for the Florida Department of Transportation, dated August 15, 2003.

Further, a traffic study was conducted to determine the need for improvements in order to provide an acceptable level of service on the road. The results of the traffic study identified that a six-lane divided facility would be needed prior to the 2030 design year. As an interim improvement, a four-lane divided section is proposed to accommodate traffic until the six-lane divided facility is warranted.

3.1 AREA NEEDS

3.1.1 System Linkage

SR 52 provides a connection from I-75 to the communities of San Antonio, St. Leo and Dade City through the central portion of Pasco County.

3.1.2 Transportation Demand

Within the highest volume section of the project corridor between I-75 and McKendree Road, the 2004 Annual Average Daily Traffic (AADT) is approximately 14,700 vehicles per day. Traffic volumes are projected to increase to approximately 44,800 vehicles per day by the 2030 design year.

3.1.3 Federal, State, or Local Government Authority

The Florida Department of Transportation is the jurisdictional authority for the SR 52 project corridor.

3.1.4 Social Demand or Economic Developments

Pasco County has and is experiencing rapid suburban development and growth. This growth is expected to continue as the existing vacant land is developed and the existing land uses are improved.

Currently, there are two large developments proposed along the roadway corridor. The Cannon Ranch (DRI #163) with 6,700 proposed residential units, a golf course/resort, 183,000 square feet of commercial and office. In addition, a pre-application conference was held on June 28, 2004 for a proposed new DRI to be known as The Pasco Town Centre (DRI #257). The project is located at the southeast corner of I-75 and SR 52, and includes 929 acres. Proposed uses include 2,745,000 s.f. retail, 770,000 s.f. office, 410,000 s.f. industrial, 915 multi-family residential units and 640 hotel rooms.

3.1.5 Modal Interrelationships

Vehicular traffic including passenger cars, trucks, and buses dominate the current use of this section of SR 52. There are no sidewalks or bike lanes, and thus these modes of travel are extremely restricted. Improvements to this facility will include sidewalks to enhance pedestrian travel; a 5-foot paved outside shoulder for the interim condition, and a future outside bike-lane in the ultimate condition will be included for bicyclists.

3.2 PROJECT CORRIDOR NEEDS

3.2.1 Capacity

The SR 52 project corridor currently meets the LOS Standard of "D" as a two-lane undivided rural roadway. Within the highest volume section of the project corridor between I-75 and McKendree Road, in 2004, SR 52 carried 779 vehicles in the peak hour, peak direction, peak season. Projections for the same are 901 vehicles in 2006; 1,748 vehicles in 2020; and 2,373 vehicles in 2030.

The results of the PM Peak Hour HCS analysis indicate that the eastbound and westbound movements on SR 52 will operate at an acceptable level of service (LOS) for the year 2004. By 2006, some movements will fall to "F", an unacceptable LOS. With the proposed four-lane improvements, LOS remains at an acceptable "D" through 2020, but by 2030, the LOS declines to an "F". Improvements to a six-lane facility will bring the LOS up to standard.

The Traffic Analysis Report prepared for the project contains detailed data on existing traffic volumes, traffic volume projections, roadway level of service, and intersection level of service.

3.2.2 Safety

SR 52, in its existing condition, is a two-lane undivided roadway. Crash data shows that rear end collisions and left turn movements are the predominate type of incidents. Proposed improvements include providing additional lanes for unobstructed flow of traffic as well as medians that will control access. These improvements should decrease these types of incidents.

3.2.3 Structural

There is an existing FDOT bridge culvert crossing at the Bayou Branch consisting of four 10x10-foot concrete box culverts. A structural analysis of the extension is being prepared and will be submitted during construction plan's preparation process.

4.0 EXISTING CONDITIONS

The following sections describe the existing conditions within the project study limits.

4.1 EXISTING ROADWAY CHARACTERISTICS

4.1.1 Functional Classification

SR 52 is a two-lane undivided roadway and is classified as an arterial in the Pasco County Comprehensive Plan. The Florida Department of Transportation classifies SR 52 as Principal Arterial - other rural. SR 52 serves as an east-west route for the adjacent communities of San Antonio, St. Leo and Dade City in central Pasco County.

4.1.2 Typical Sections

From the I-75 ramps east, SR 52 is a two-lane undivided rural roadway consisting of two twelve-foot wide travel lanes, four foot paved shoulders, and roadside ditches to convey stormwater runoff.

4.1.3 Pedestrian and Bicycle Facilities

There are neither sidewalks nor bicycle facilities along SR 52 within the project limits.

4.1.4 Right-of-Way

The existing right-of-way from I-75 to Bayou Branch is generally 110 feet in total width. From Bayou Branch east to the project limits, the right-of way is generally 100 feet in total width.

4.1.5 Horizontal Alignment

The existing horizontal alignment consists of four curves within the project limits. The curves range from a minimum degree of curve of less than 1.0° to a maximum of 7.5°, which is located at the Bayou Branch.

Table 4-1

Curves	Degree of Curve
SC1	0°54'59.86"
SC2	1°01'00.01"
SC3	3°41'59.78"
SC4	7°30'00.13"

4.1.6 Vertical Alignment

The SR 52 vertical alignment, within the project limits, is relatively flat with some gently rolling terrain from the I-75 ramps to Bayou Branch at which point it begins an uphill ascent.

4.1.7 Drainage

The project corridor is located in Federal Emergency Management Agency (FEMA) Flood Zone "D", which is an area of minimal flooding. Figure 9-4 depicts the FEMA flood zones based on FIRM # 1202300275D. It is located outside of special floodway hazard. The roadway intersects the tributary area bounded by an abandoned CSX right-of-way along the north boundary, I-75 to the west, Tyndall Road to the south, and a geographical ridge to the east towards Dade City. SR 52 provides an east west divide where the direction of flow is from south to north making the area dependent upon existing cross drains. Figure 4-1 shows the topography of the project corridor.

It was determined that the proposed roadway improvement will require the modification of three existing cross drain culverts under SR 52. Three existing 36-inch RCP pipes (reinforced concrete pipes) at Station 103+00 need to be extended upstream of the crossing. The existing 24-inch pipe cross drain at Station 144+48.92 and Station 148+73.66 will be extended and/or replaced. Wetlands along the project area were delineated and it was determined that approximately 1.53 acres would be impacted primarily on the south side of SR 52. These wetlands will be mitigated.

Two areas of possible floodplain encroachment have been identified. The first area is associated with the FDOT cross drain, and the second area is associated with an FDOT bridge crossing at Bayou Branch. The current crossing consists of four 10x10-foot concrete box culverts. The proposed design will extend the existing culverts and bridge. Pond sites adjacent to outfall areas will be created to provide water quality treatment and attenuation of flows for the proposed project.

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N

NOT TO SCALE

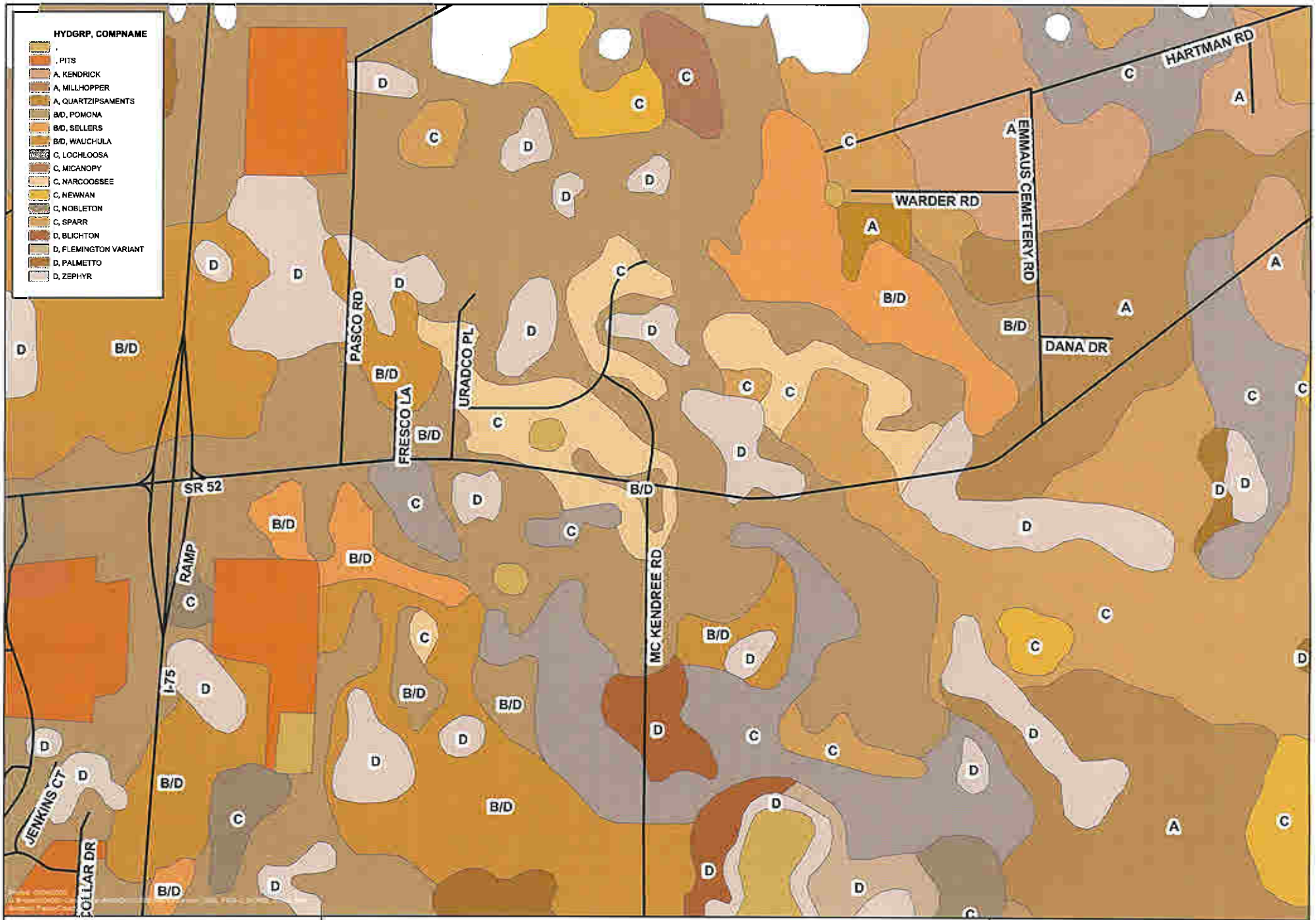
PASCO COUNTY FLORIDA

FIGURE 4-1
5ft TOPO

4.1.8 Geotechnical Data

The Soil Survey of Pasco County, Florida [US Department of Agriculture (USDA) Soil Conservation Service (SCS), November 1981] indicates that eight soil types occur along the project corridor. These soil types and their identification numbers are as follows: Pomona fine sand (2), Lochloosa Fine Sand, 0 to 5 percent slopes (48), Zephyr muck (16), Narcoossee Fine Sand (26), Sparr fine sand, 0 to 5 percent slopes (7), Millhopper Fine Sand, 0 to 5 percent slopes (69), Kendrick Fine Sand, 0 to 5 percent slopes (45), Wauchula Fine Sand, 0 to 5 percent slopes (1), see attached Figure 4-2.

In general, the existing subsurface soils should be acceptable for construction to support a typical embankment pavement section after proper subgrade preparation. For a majority of these soil types within the project area, the seasonal high water table is located within 1.0 to 3.0 feet of the surface.



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0 500 1,000 2,000 3,000 Feet

1 inch equals 1,000 feet

FIGURE 4-2
SOILS MAP

4.1.9 Accident Data

Accident/crash data was collected for this segment of SR 52, from I-75, east of the ramps, east to Emmaus Cemetery Road. The length of this segment is 1.39 miles based upon data from FDOT's Roadway Characteristics Inventory (RCI). The data collected covered years 1999 through 2003 and was taken from FDOT's CAR – Crash Analysis Reporting System.

The total number of reported accidents on this segment was 36 crashes that resulted in no fatalities and 90 injuries. The break down of accidents by year is: five (5) in 1999, eight (8) in 2000, eleven (11) in 2001, seven (7) in 2002, and five (5) in 2003. Accident totals through this segment were consistent, as indicated, from 1999 through 2003. The number of accidents by accident type and by accident location is shown in Tables 4-2 and 4-3 below.

Table 4-2

Accident Type & Number		
Accident Type	Code Description	Number of Accidents
01	Rear-End	10
03	Angle	2
04	Left-Turn	10
06	Sideswipe	2
18	Hit Guardrail	1
22	Hit Tree/Shrubbery	1
26	Collision w/Fixed Object Above Road	1
29	Ran in Ditch/Culvert	5
31	Overturned	2
77	All Other	2
	Total	36

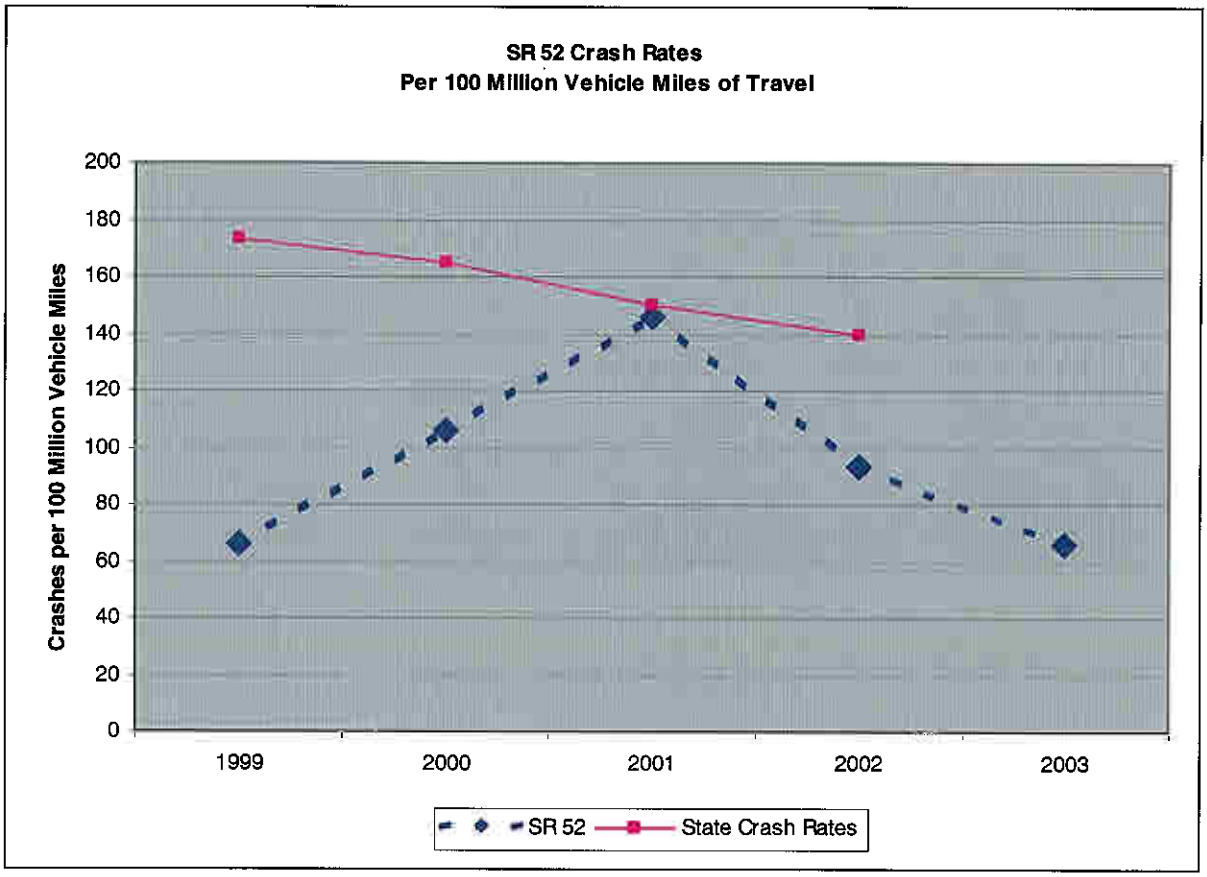
Table 4-3

Accident Location & Numbers		
Location Type	Code Description	Number of Accidents
01	Not at Intersection/RR-crossing/Bridge	12
02	At Intersection	17
03	Influenced by Intersection	1
04	Driveway Access	6
	Total	36

The accident type code and its description and the location type and its description were obtained from the CAR- Crash Analysis Reporting System. These 36 reported accidents have resulted in Property Damages totaling $7,150 and Economic Losses totaling $271,450 for the same time period, 1999-2003.

Five years of crash data was available for this segment of SR 52. Years 1999 through 2003 were summarized into a crash rate per 100 million vehicle miles traveled (RMVM). Figure 4-3 shows the RMVM by year for SR 52 and the comparable statewide crash rate. As shown in the figure, the crash rate trend was below the statewide rate through 2002 and continued at a consistent rate for 2003. Statewide rates were not available for 2003 and a comparison to the statewide trend could not be determined for the year 2003.

Figure 4-3



4.1.10 Intersections and Signalization

There are no existing signalized intersections within the project limits along SR 52.

4.1.11 Lighting

There is no existing street lighting with the exception of the I-75 interchange.

4.1.12 Utilities

It was determined that the following utilities could potentially have facilities located within the project corridor: Bright House Network, Sprint, TECO Peoples Gas, TECO, and Withlacoochee River Electric Cooperative.

The following utilities have provided responses:

- Bright House Network: There are buried F.O.C. from ramps east to approximately Station 615+60 Baseline Survey SR 52. From Station 615+60 to Fresco Lane, the line becomes an overhead F.O.C. located in proximity of the right-of-way line. On the east side of Fresco Lane, the line becomes a buried F.O.C. while a second line crosses SR 52 and continues east as an overhead F.O.C., both located in proximity of the right-of-way line. The two lines continue eastward as such until the Bayou Branch, approximately Station 676+90 Baseline Survey SR 52. At this point the line on the south side of SR 52 crosses overhead to the north side at which point it runs parallel, within 5 feet, to the buried line for the remainder of the project limits. A service connection is provided at Emmaus Cemetery Road.

- Sprint, Inc: There are buried telephone lines on the north side of SR 52 from Ramps to Pasco Road at which point there is a crossing to the south side. From Pasco Road eastward there are three buried lines to east side of Fresco Lane at which point one line crosses under SR 52. From Fresco Lane eastward there are two buried telephone lines to Corporate Lake Boulevard at which point there is another underground crossing to the north side servicing One Pasco Center. From the east side of McKendree Road, continuing eastward, there are three buried telephone lines, one of which is fiber optic. The configuration is constant until Emmaus Cemetery Road where two service lines cross under SR 52. Two lines continue eastward for the remainder of the project limits.

- TECO Peoples Gas: We received a letter dated October 1, 2004 saying they did not have any existing facilities located in the vicinity of the project limits.

- Withlacoochee River Electric Cooperative: There is a 25-kilovolt overhead distribution line located within the right-of-way on the north side of the road to Fresco Lane at which point it crosses overhead to the south side of SR 52. This layout continues to Corporate Lake Boulevard with several overhead crossing in between through the project corridor. A number of overhead and underground taps to this distribution line provide power to the north side of SR 54.

4.1.13 Pavement Conditions

Most of the mainline travel lanes are in poor condition with some areas exhibiting signs of distress. Most of the cracking is classified as Class III, Moderate to Severe Block/Alligator cracking. The wheel ruts seem to be exhibiting moderate distress.

4.2 EXISTING BRIDGES

There is an existing FDOT bridge culvert crossing at the Bayou Branch consisting of four 10x10-foot concrete box culverts (bridge #140022). A report was prepared in 2000 by Cumbey and Fair, Inc to analyze the hydraulic impacts of extending the four box culverts. The existing structure was constructed in 1951 and there are no significant scour problems. The Brooksville maintenance office for District 7 was contacted on July 6, 2004 regarding historic maintenance or flooding problems. There was a report of flooding at the Bayou Branch (Station 675+50) on June 3, 2003. It was concluded that the Bayou Branch flooding was a result of a downstream maintenance problems.

4.3 ENVIRONMENTAL CHARACTERISTICS

4.3.1 Land Use Data

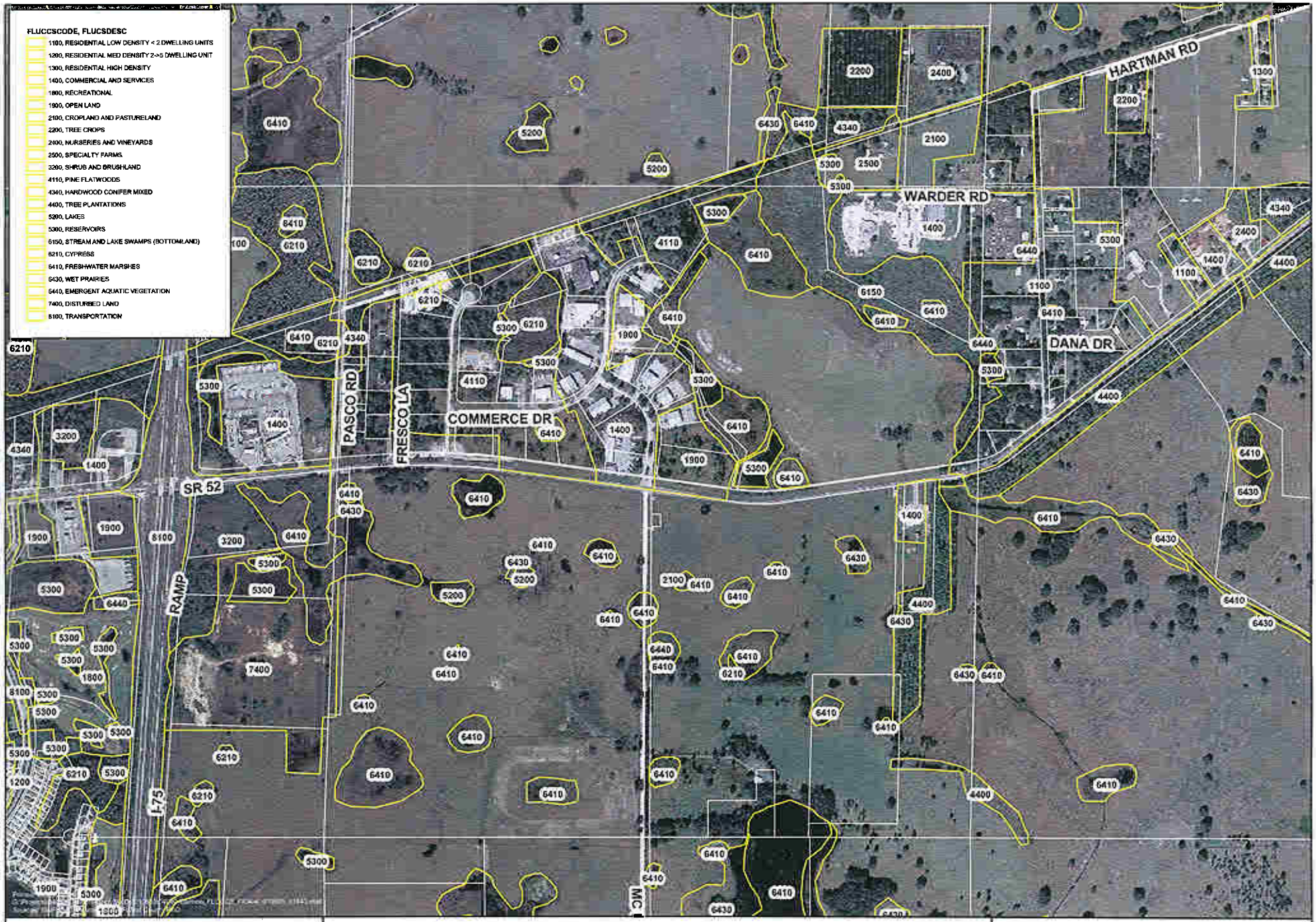
Much of the adjacent property within the project corridor is undeveloped, vacant land with some pasture and silviculture activities. Five parcels front the south side of SR 52. From west to east along the corridor, the land uses for these parcels include vacant-unimproved, pastureland, a welding business, and timber production. There are nineteen parcels fronting the north side of SR 52. From west to east, land uses include a retail truck stop, vacant-unimproved industrially zoned property, a light manufacturing business, single-family residences, mobile homes, a mobile home park and two churches (Piney Grove M.B. Church and San Antonio Community Church). The residential and church uses encompass less than a half-mile of frontage on the north side along the eastern end of the project limits.

4.3.2 Cultural Features and Community Services

There are two churches along the project corridor, Piney Grove M.B. Church and San Antonio Community Church. There are no parks, refuges, schools, hospitals, fire stations, or governmental institutions are located along the corridor. No cultural resources were identified within the project corridor that can be considered significant or eligible for listing on the National Register of Historic Places (NRHP).

4.3.3 Natural and Biological Features

Figure 4-4 depicts the existing land use along the corridor based on the Florida Land Use Cover and Classification System. The existing land cover and uses along this segment of SR 52 are predominantly rural in nature and include unimproved pastureland [Florida Land Use Cover and Forms Classification System (FLUCFCS) code 211], planted pines (441), shrub and brushland (320), and freshwater marshes (641). In the western portion of the project, on the north side of the roadway, there is also a commercial truck stop with retail services and a recreational vehicle commercial facility (141), along with some open land (190). Near the project's eastern terminus on the north, there is some low density residential (110) and a small church (172). At a bend in the road near the eastern terminus, a channelized watercourse known as Bayou Branch is crossed, and this cover type is classified as a stream forest bottomland (615). Except for the narrow floodplain associated with this feature, and other wetlands, there are essentially no natural system habitats within or immediately adjacent to the existing or proposed SR 52 right-of-way (R/W).



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0 500 1,000 2,000 3,000 Feet

1 inch equals 1,000 feet

FIGURE 4-4
EXISTING LAND USE
SWFWMD LAND USE/COVER 1999

5.0 DESIGN CONTROL AND STANDARDS

Design criteria for this study are based upon current design standards established by the FDOT and the American Association of State Highway and Transportation Officials (AASHTO). The following documents were among the principal references used in establishing the design criteria for this study:

- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, State of Florida, FDOT, 2002
- Roadway Plans Preparation Manual, Design Criteria and Process, Roadway Design Office, FDOT, 2003
- A Policy on Geometric Design of Highways and Streets, AASHTO, 2001
- Manual of Uniform Traffic Control Devices for Streets and Highways, FHWA, 2003 with Part VI Standards and Guidelines for Traffic Controls for Street and Highway Construction, Maintenance, Utility, and Incident Management Operations, FHWA, 1993
- Florida Building Code 2001
- FDOT Design Standards, January 2004
- Standard Specification for Road and Bridge Construction, 2000

The following roadway design criteria were used:

Table 5-1

Typical Section	Design Speed (mph)	Classification	Max. Curvature (Degrees)	Max. Curvature In N.C. (Degrees)	Min. Curve Length (ft)	Lane Width (ft)	Min. Border Width (ft)	Median Width (ft)	e-max	Clear Zone (ft)
4-Ln Suburban	50	Suburban Arterial	8°15'	30'	750	12	35	30	0.05	24
6-Ln Urban	45	Urban Arterial	8°15'	2°45'	750	12	14	22	0.05	4

References:

- Design Speed – PPM Vol. 1 Section 2.16.1
- Maximum Horizontal Curvature – PPM Vol. 1 Table 2.8.3
- Maximum Curvature Using e=0.02% - PPM Vol. 1 Table 2.8.4
- Length of Horizontal Curve 750 (Minimum) – PPM Vol. 1 Table 2.8.2a
- Mainline Lane Width – PPM Vol. 1 Table 2.1.1
- Border Width – PPM Vol. 1 Section 2.16.5 and Table 2.5.2
- Median Width – PPM Vol. 1 Section 2.16.3 and Table 2.2.1
- e-max – PPM Vol. 1 Section 2.16.8
- Clear Zone – PPM Vol. 1 Table 2.11.9 and Table 2.11.8

6.0 TRAFFIC

6.1 EXISTING TRAFFIC CONDITIONS

The existing roadway is a two-lane undivided section. No traffic signals currently exist within the project corridor. The posted speed limit is 50 mph from I-75 through the project corridor. The area is currently transitioning from rural to suburban. SR 52 provides east-west mobility for many land uses along the corridor and provides a connection from the communities of San Antonio, St. Leo, and Dade City to and from I-75.

6.2 MULTIMODAL TRANSPORTATION SYSTEM CONSIDERATIONS

Predominate modes of travel on SR 52 consist of motorized vehicular traffic including passenger cars, trucks and buses. A large truck stop is located at the northeast corner of SR 52 and I-75, attracting traffic from I-75. There are no pedestrian or bicycle facilities at present. The interim four-lane divided project will include five-foot wide sidewalks on both sides of the roadway, enhancing pedestrian access. Ten-foot outside shoulders, five-foot paved and five-foot unpaved, will be provided in each direction of travel. The future six-lane section will include bicycle lanes.

6.3 TRAFFIC ANALYSIS ASSUMPTIONS

The traffic analysis for the report is based upon PM peak hour traffic conditions for the following analysis years:

- Existing Conditions – 2004
- Opening Year – 2006
- Interim Year – 2020
- Design Year – 2030

Roadway machine counts were conducted for a 72-hour (three-day) continuous time period on SR 52 at three different locations starting on October 19, 2004, which included the following roadway segments:

- SR 52 between I-75 and McKendree Road
- SR 52 between McKendree Road and Emmaus Cemetery Road
- SR 52 to the east of Emmaus Cemetery Road

The roadway machine counts at each location were averaged together and adjusted using the Peak Season Factor Category Report and the Weekly Axle Factor Category Report from the FDOT's 2003 Florida Traffic Information (FTI) CD.

Peak hour traffic volumes were established by applying the K-30 and D-30 (directional distribution) to the 2004 AADT traffic volumes. The FTI 2003 CD provided a K30 Factor of 9.32 and a D30 of 56.84 for SR 52, east of I-75.

In addition to the 72-hour machine counts, turning movement counts were conducted during the AM (7:00 am to 9:00 am) and PM (4:00 pm to 6:00 pm) peak hours at the following un-signalized intersections:

- SR 52 / Pasco Road
- SR 52 / McKendree Road
- SR 52 / Emmaus Cemetery Road

6.3.1 Existing Traffic Volumes

On the segment of SR 52 from I-75 to McKendree Road, the 2004 Annual Average Daily Traffic (AADT) is approximately 14,669 vehicles per day. Figure 6-1 provides the 2004 Average Annual Daily Traffic (AADT) conditions on the segments of SR 52 in the project corridor.

The existing PM peak hour traffic volume for the segment between I-75 and McKendree is 740 vehicles, and for the segment east of McKendree, the volume is 771 vehicles, see Figure 6-2.

6.3.2 Traffic Volume Projections

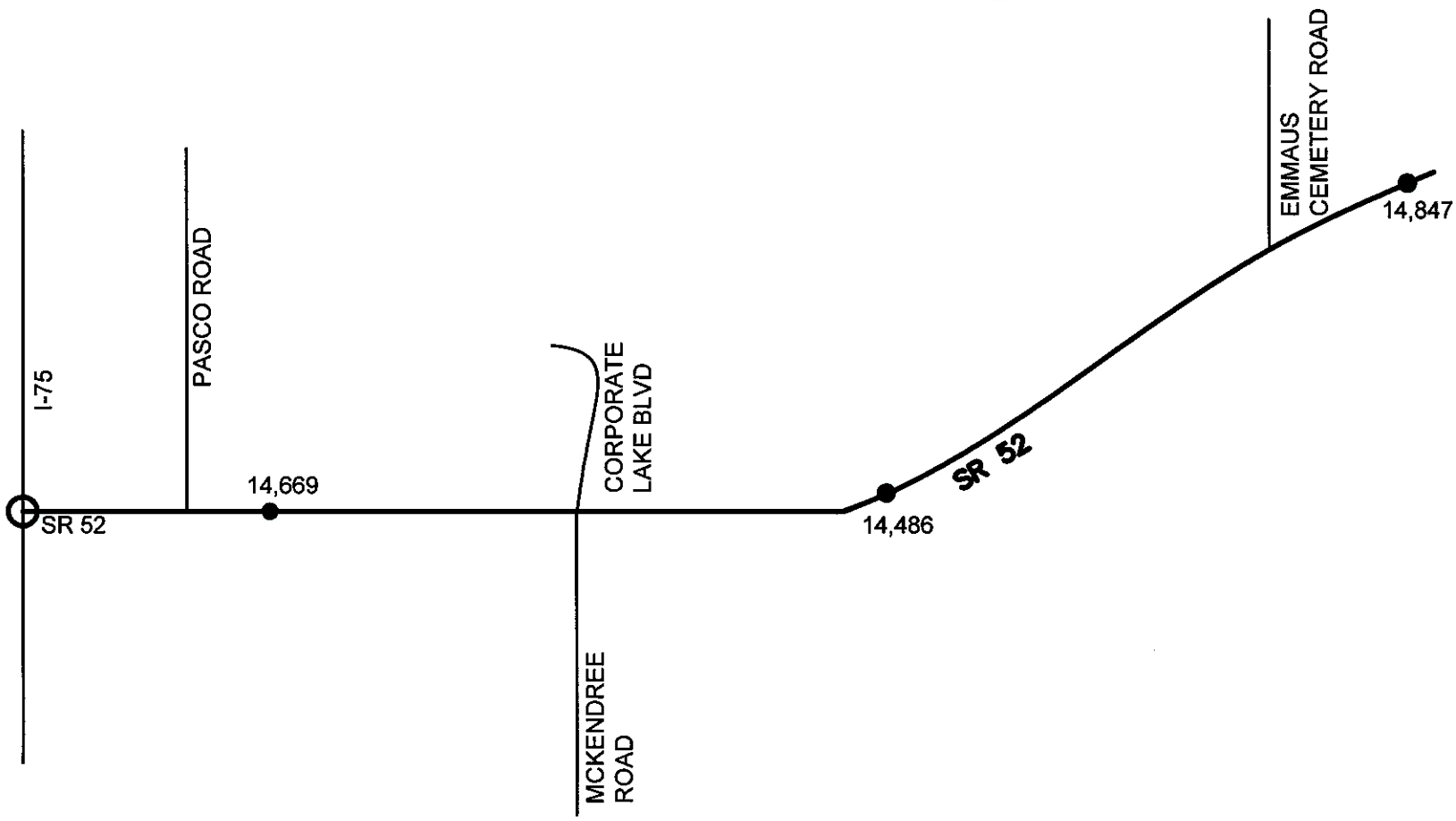
FDOT, District VII, Systems Planning Office, provided future traffic conditions on this segment of SR 52. The 2025 socioeconomic data for the Tampa Bay Regional Planning Model/FSUTMS was adjusted by the Systems Planning Office to ensure that the 2,564 dwelling units and the 1,564 employees associated with the Cannon Ranch DRI development project were incorporated into the 2025 socioeconomic data sets.

The Final Route Study Report for the Clinton Avenue Extension prepared for the Pasco County Engineering Services Department by Reynolds, Smith & Hills, provides additional information on the extension of Clinton Avenue.

For this analysis, the Clinton Avenue forecasted traffic volumes were added to the SR 52 volumes for the eastern most segment of SR 52.

To obtain the peak hour traffic volumes projections for the years 2006, 2020 and 2030, the daily traffic volume projections provided by the Systems Planning Office were multiplied by the K30 Factor (9.32) and D30 (56.84) factors. The percentage of turning movements for both the AM and PM turning movement counts were applied to the appropriate peak traffic volumes forecast. Figures 6-3 through 6-5 depict the results.

Annual Average Daily Traffic (AADT) is projected to increase from approximately 14,700 vehicles per day in 2004 to approximately 44,800 vehicles per day in 2030. For detailed data, see the Traffic Analysis Report.



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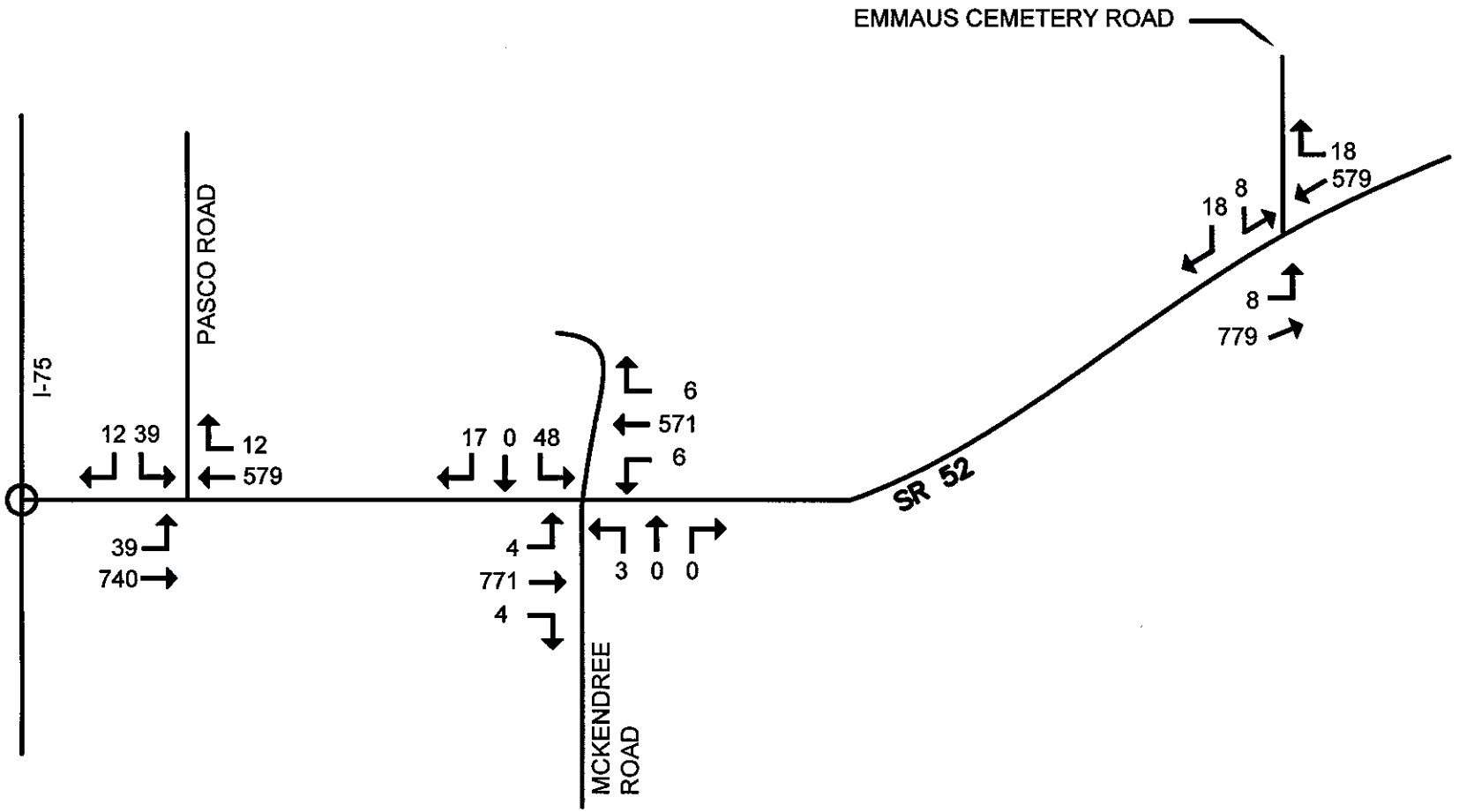
NOT TO SCALE

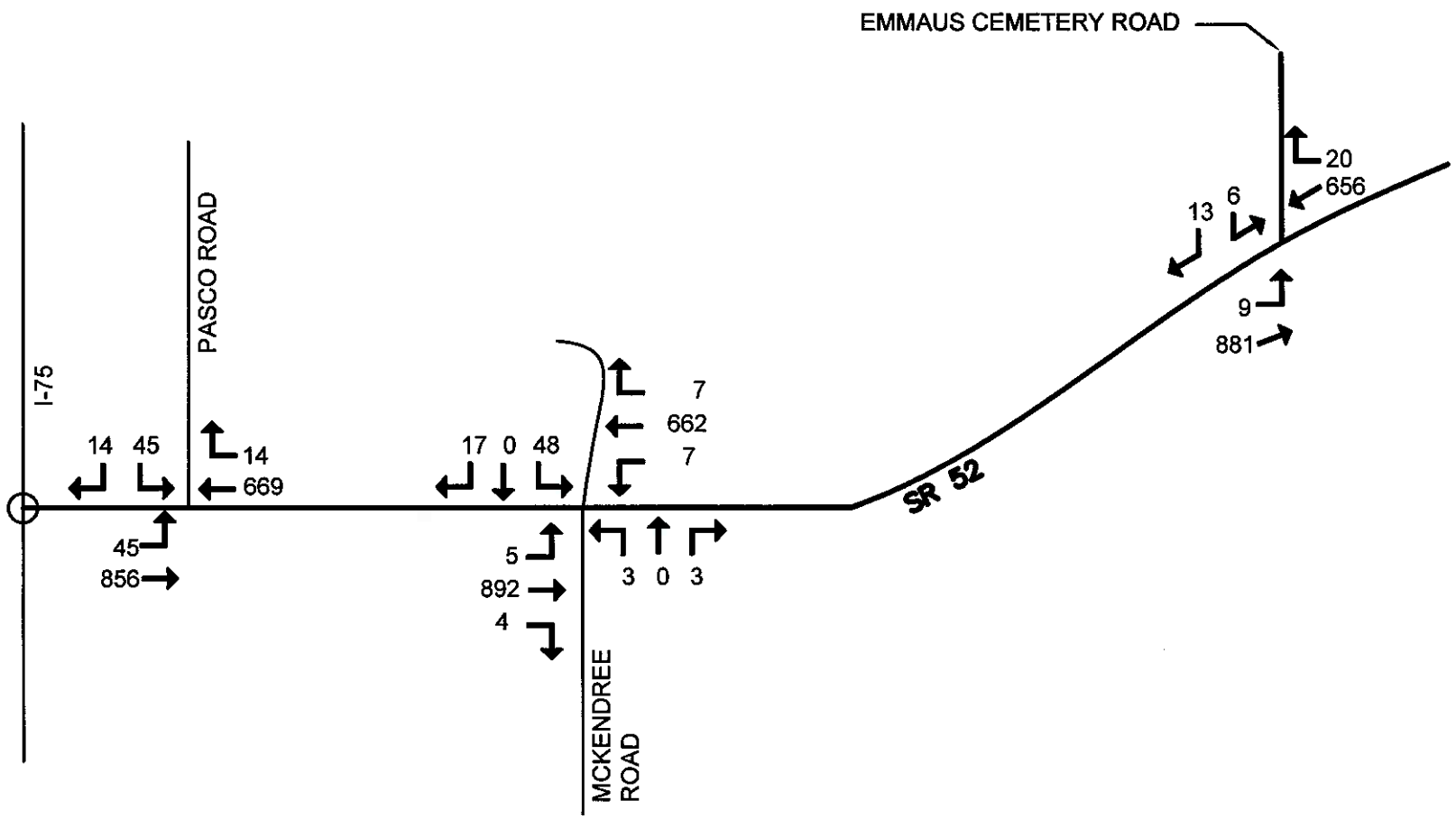
LEGEND
14,782 - 2004
DAILY TRAFFIC VOLUMES

2004 AVERAGE ANNUAL
DAILY TRAFFIC VOLUMES

FIGURE 6-1

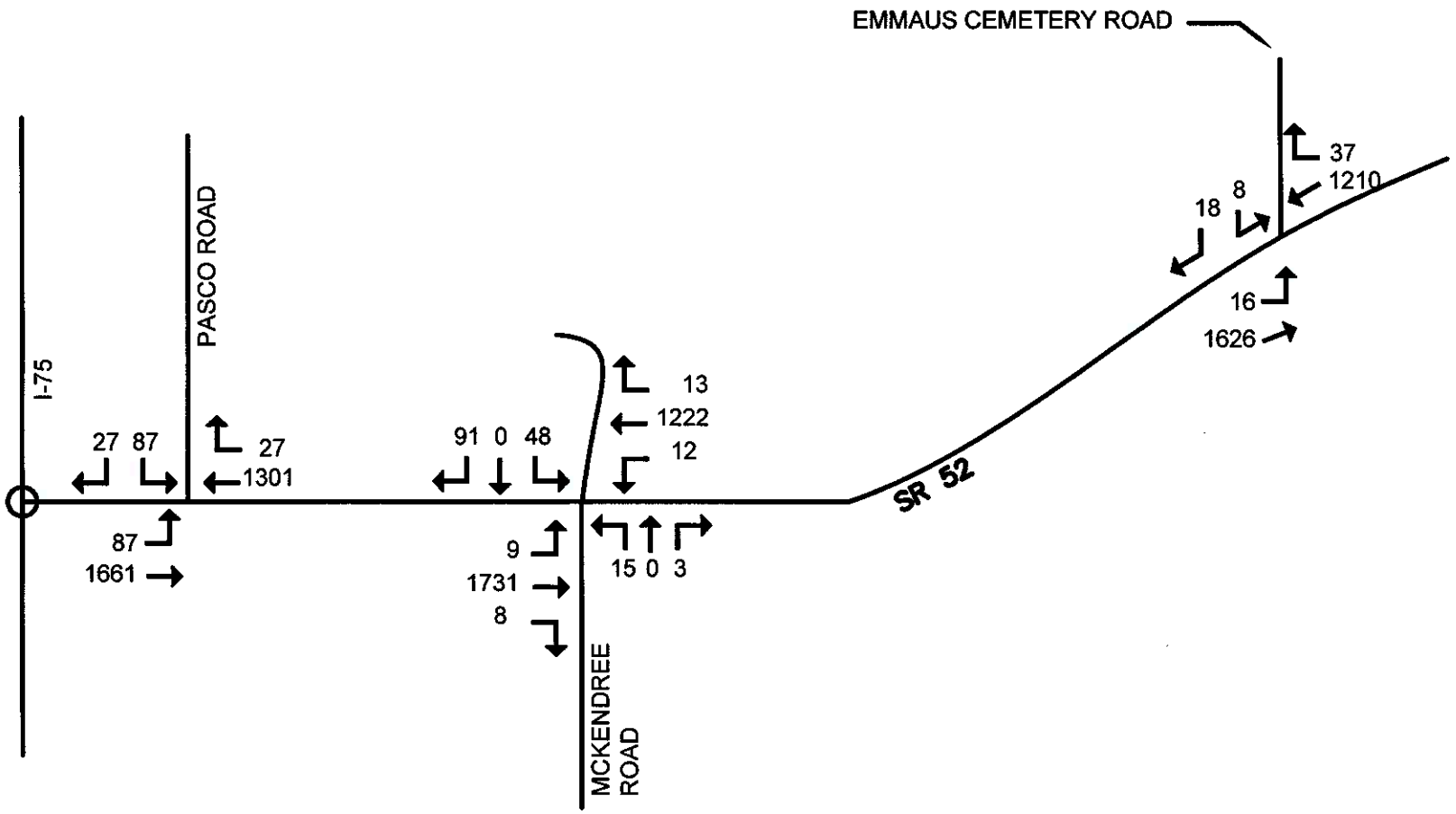


STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C-3623.00 WPI SEGMENT NO. 408827 1	NOT TO SCALE	LEGEND 772 - 2004 PEAK HOUR TRAFFIC VOLUMES	2004 PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 6-2

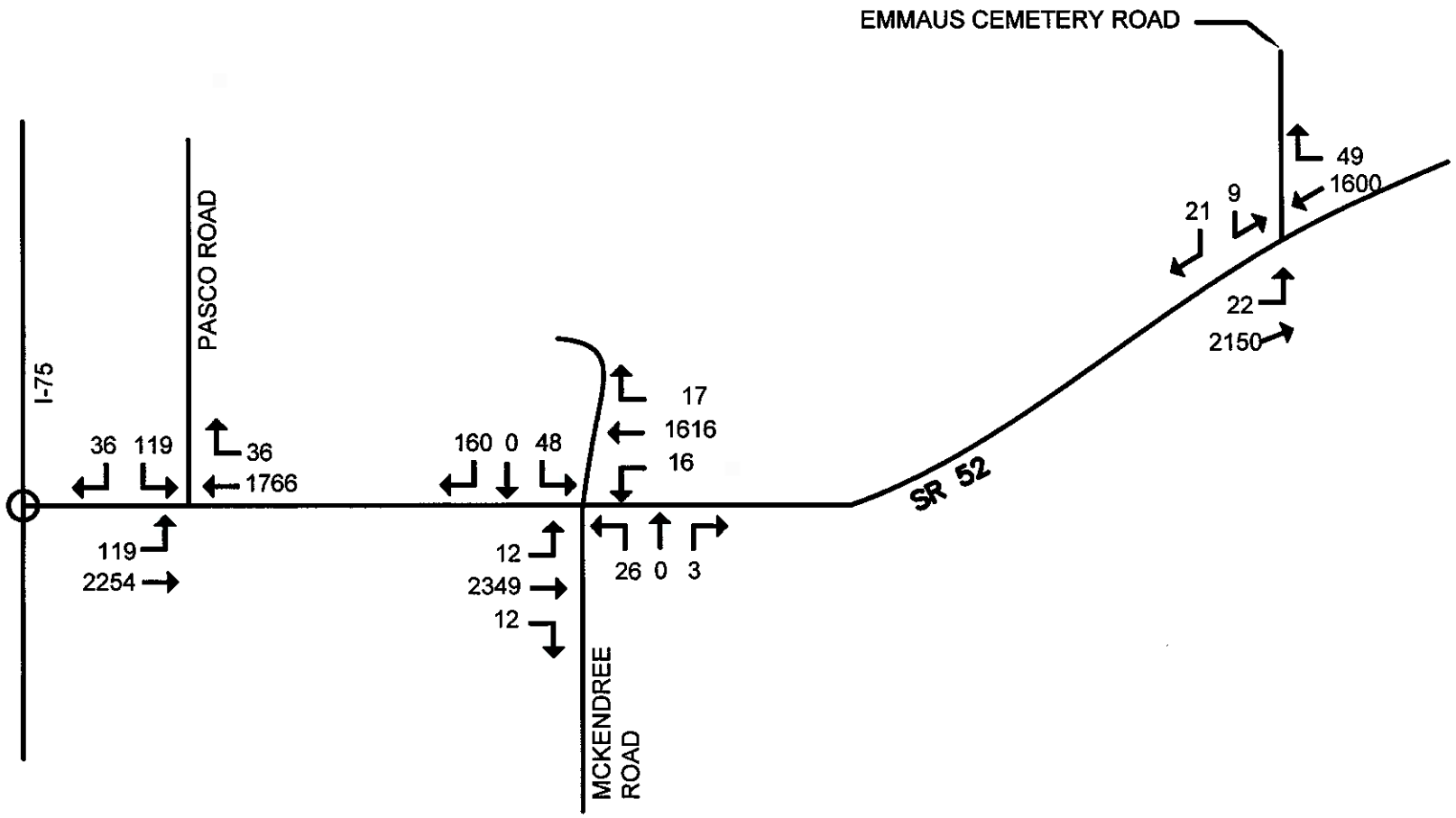


STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C-3623.00 WPI SEGMENT NO. 408827 1	NOT TO SCALE	LEGEND 798 - 2006 PM PEAK HOUR TRAFFIC VOLUMES	2006 PM PEAK HOUR TRAFFIC VOLUMES

FIGURE 6-3



STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C-3623.00 WPI SEGMENT NO. 408827 1	NOT TO SCALE	LEGEND 1003 - 2020 PM PEAK HOUR TRAFFIC VOLUMES	2020 PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 6-4



STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C-3623.00 WPI SEGMENT NO. 408827 1	NOT TO SCALE	LEGEND 1201 - 2030 PM PEAK HOUR TRAFFIC VOLUMES	2030 PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 6-5

6.4 ROADWAY AND INTERSECTION LEVEL OF SERVICE

According to the Pasco County Comprehensive Plan, Transportation Element, the LOS standard is "D" for the segment of SR 52, east of I-75.

6.4.1 Roadway Level of Service

An analysis of the roadway link segments for SR 52 was conducted using the generalized service volumes from the 2002 Quality/Level of Service Handbook (Table 4-8, Areas Transitioning into Urbanized Areas, Class I). The SR 52 project corridor currently meets the LOS Standard of "D" as a two-lane undivided roadway.

Tables 6-1 through 6-5 depict the roadway peak hour traffic conditions using the generalized service volumes. Table 6-1 shows that SR 52 currently meets the LOS Standard of "D" as a two-lane undivided roadway during the K^{30} peak hour. Table 6-2 shows that SR 52 does not meet the LOS Standard as a two-lane undivided roadway for the K^{-30} peak hour in 2006. Table 6-3 shows that the LOS Standard is met with the interim four-lane improvements. Table 6-4 shows that by 2030, the four-lane divided facility no longer meets the LOS standard. Table 6-5 shows that the ultimate 6-lane improvement in 2030 will meet the LOS standard.

Table 6-1

2004 Peak Hour Directional Traffic Conditions

Roadway Link	Existing Geometry	Service Volume[1]	LOS Standard	2004 PM Traffic Volumes		LOS	
				EB	WB	EB	WB
I-75 to Pasco Rd	2LU	820	D	779	591	D	C
Pasco to McKendree	2LU	820	D	779	591	D	C
McKendree to Emmaus	2LU	820	D	767	583	D	C
East of Emmaus	2LU	820	D	787	597	D	C

1 FDOT 2002 Quality/LOS Handbook – Table 4-8

Table 6-2

2006 Peak Hour Traffic Conditions
Existing 2-Lane Undivided Roadway

Roadway Link	Existing Geometry	Service Volume[1]	LOS Standard	2006 PM Traffic Volumes		LOS	
				EB	WB	EB	WB
I-75 to Pasco Rd	2LU	820	D	901	683	F	C
Pasco to McKendree	2LU	820	D	901	683	F	C
McKendree to Emmaus	2LU	820	D	890	676	F	C
East of Emmaus	2LU	820	D	890	676	F	C

1 FDOT 2002 Quality/LOS Handbook – Table 4-8

Table 6-3

2006 Peak Hour Traffic Conditions
With Proposed 4-Lane Divided Interim Improvements

Roadway Link	Geometry	Service Volume[1]	LOS Standard	2006 PM Traffic Volumes		LOS	
				EB	WB	EB	WB
I-75 to Pasco Rd	4LU	1810	D	901	683	B	B
Pasco to McKendree	4LU	1810	D	901	683	B	B
McKendree to Emmaus	4LU	1810	D	890	676	B	B
East of Emmaus	4LU	1810	D	890	676	B	B

1 FDOT 2002 Quality/LOS Handbook – Table 4-8

Table 6-4

2030 Peak Hour Traffic Conditions
With Interim 4-lane Divided Improvements

Roadway Link	Geometry	Service Volume[1]	LOS Standard	2030 PM Traffic Volumes		LOS	
				NB/EB	SB/ WB	NB/EB	SB/ WB
SR 52							
I-75 to Pasco Rd	4LD	1810	D	2,373	1,802	F	D
Pasco to McKendree	4LD	1810	D	2,373	1,802	F	D
McKendree to Emmaus	4LD	1810	D	2,172	1,649	F	C
East of Emmaus	4LD	1810	D	2,172	1,649	F	C

1 FDOT 2002 Quality/LOS Handbook – Table 4-8

Table 6-5
2030 Peak Hour Traffic Conditions
With Ultimate 6-lane Divided Improvements

Roadway Link	Geometry	Service Volume[1]	LOS Standard	2030 PM Traffic Volumes		LOS	
				NB/EB	SB/ WB	NB/EB	SB/ WB
SR 52							
I-75 to Pasco Rd	6LD	2710	D	2,373	1,802	C	B
Pasco to McKendree	6LD	2710	D	2,373	1,802	C	B
McKendree to Emmaus	6LD	2710	D	2,172	1,649	B	B
East of Emmaus	6LD	2710	D	2,172	1,649	B	B

1 FDOT 2002 Quality/LOS Handbook – Table 4-8

6.4.2 Intersection Level of Service

An analysis of the previously identified intersections on SR 52 was conducted using procedures from the 2000 Highway Capacity Manual (HCM) and Highway Capacity Software (HCS) for the AM and PM peak hours. SR 52 was analyzed as a two-lane undivided roadway for the year 2004, as a four-lane divided facility for the years 2006, 2020 and as a six-lane divided facility prior to 2030.

As shown in the following Table 6-6, the results of the PM peak hour HCS un-signalized analysis indicates that the eastbound and westbound movements on SR 52 will operate at an acceptable LOS for the years 2004, 2006 and 2020. For the year 2030, the eastbound and westbound movements on SR 52 do not operate at an acceptable LOS as a four-lane divided facility at the intersections of SR 52/ Pasco Road and SR 52/Emmaus Cemetery Road.

Table 6-6

PM HCS Un-Signalized Intersection Analysis[1]

Intersection	2004 LOS	2006 LOS	2020 LOS	2030 LOS
SR 52 / Pasco Rd	A	B	C	E
SR 52 /McKendree	B	B	C	D
SR 52 / Emmaus Cemetery Rd	B	B	D	F

1. SR 52 LOS

Table 6-7 provides the results of the signalized HCS analysis for the year 2030 for the intersections of SR 52/Pasco Road and SR 52/Emmaus Cemetery Road.

Table 6-7
PM HCS Signalized Intersection Analysis

Intersection	2030 LOS
SR 52 / Pasco Rd	A
SR 52 / Emmaus Cemetery Rd	A

According to this analysis, the intersection of SR 52/Pasco Road needs to be signalized after the year 2020 and prior to the year 2030.

At this time, it is not recommended that the intersection of SR 52/Emmaus Cemetery Road be signalized due to anticipated changes in traffic patterns when the Clinton Avenue Extension is constructed by Pasco County as identified in the Final Route Study Report for the Clinton Avenue Extension.

7.0 CORRIDOR ANALYSIS

A corridor analysis was provided by Pasco County in the development of Pasco County MPO's 2025 Transportation Plan (Cost Affordable Plan), which indicates that SR 52, east of I-75, is to be a 4-lane divided facility. The future need for additional improvements to widen to 6 lanes is identified in the MPO's Needs Assessment Plan and in the Draft SR 52 Action Plan prepared for the Florida Department of Transportation dated August 15, 2003.

The existing SR 52 corridor provides a direct connection between I-75, at an existing interchange, and the communities of San Antonio, St. Leo and Dade City. It also provides an east/west connection between two major north/south highways, I-75 and US 301. The major east/west corridor to the south is SR 54. Improvements to SR 54 have already been planned. To the north, the next east/west connection is from Blanton Road, which does not provide as direct a connection to Dade City and US 301, and is not an existing state facility. Therefore, it was concluded that improvements to the existing SR 52 corridor should be considered.

8.0 ALTERNATIVE ALIGNMENT ANALYSIS

Three alternative alignments were considered, widening to the north, south and from the centerline.

The three alignments were evaluated with regard to social, economic and environmental factors. Table 8-1, Evaluation Matrix, includes the potential number of parcels affected by the right-of-way acquisition, the potential number relocations, the impacted wetland acreage, the impact to floodplains, the potential for involvement with threatened and endangered species, the potential number of archeological sites impacted, the potential number of contaminated sites, the number of noise sensitive sites, the amount of right-of-way to be acquired, and estimates of the design, right-of-way, construction and engineering costs.

As reflected in the matrix, the major differentiating factors between the alternatives are the number of potential relocations, the number of parcels affected and the right-of-way acquisition costs.

There is a potential for relocation of four residences and one church for the North alternative and three residences for the Center alternative, as compared to no relocations necessary for the South alternative. The North and Center alignments impact a greater number of parcels than the South alignment: North – 22; Center – 29; South - 15.

The right-of-way acquisition cost is higher with the North and Center alignments, due primarily to relocation and business damage costs. The estimates are almost $5 million for the North, a little over $4 million for the Center, and just over $2 million for the South. In relation to the South, the North is approximately $2.9 million dollars higher in cost, and Center is approximately $2 million dollars more.

Additionally, the North and Center alternatives would not properly align with the proposed roadway improvement projects on either side of the project. On the west, improvements are proposed to the Interstate-75 interchange. The project is known as SR 93 (I-75), from South of SR 56 to North of SR 52, WPI segment number 2587361, Federal-Aid Project Number NH-75-1(91) 275. On the east, the preferred alignment for the Clinton Avenue Extension is outlined in the Final Route Study Report for Clinton Avenue Extension, Pasco Work Order No. C 3216.40 (June 2004).

In summary, the South alignment is recommended as it does not require any relocations, minimizes impacts on existing developed properties, is the most cost effective option and provides the best connection to the existing as well as the proposed modifications to the right-of-way for I-75 Interchange improvements and the proposed future Clinton Avenue Extension to the east.

Table 8-1
Evaluation Matrix

Evaluation Criteria	Alignment 1 North	Alignment 2 Center	Alignment 3 South	No Build
Number of Lanes Required	4	4	4	0
Project Length (miles)	1.9	1.9	1.9	1.9
Potential Number of Parcels Impacted	22	29	15	0
Potential Relocations	5	3	0	0
Business	0	0	0	0
Church	1	0	0	0
Residential	4	3	0	0
Natural/Physical Impacts				
Wetland Impacts (Acres)	1.8	1.7	1.5	0
Floodways and Floodplain	Low	Low	Low	None
Potential Threatened and Endangered Species Involvement	Low	Low	Low	None
Potential Number of Archeological Sites Impacted	0	0	0	0
Potential Hazardous Materials and petroleum Contaminated sites	9	9	9	0
Noise Sensitive Sites	12	12	12	0
Right-of-Way to be Acquired (Acres)*	30	30	27	0
Estimated Project Cost**				
Design**	$1,100,000	$1,100,000	$1,100,000	$0
Land (R/W)	$4,950,000	$4,150,000	$2,071,000	$0
Land (Ponds)*	$1,366,400	$1,366,400	$1,366,400	$0
Construction**	$12,905,200	$12,905,200	$11,732,000	$0
Engineering CEI(15%)**	$1,935,800	$1,935,800	$1,759,800	$0
Total Project Cost**	$22,257,400	$21,457,400	$18,029,200	$0

* Includes Easements for Ponds
** Design, Construction and CEI estimates for 4-lane Interim Project

For the No Build Alternative, SR 52 would not be widened within the project limits. Without roadway improvements, SR 52 will not be able to handle the projected traffic volumes for this portion of Pasco County.

The Transportation Systems Management (TSM) alternative consists of intersection improvements, signal timing, transit improvements, and improved access.

9.0 PRELIMINARY DESIGN ANALYSIS

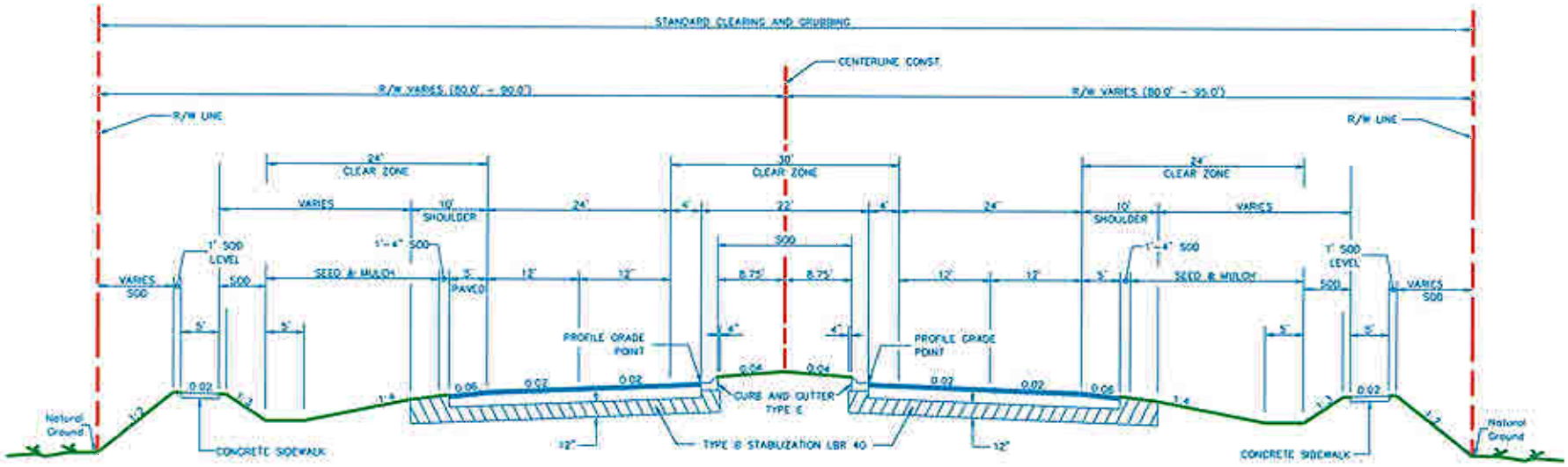
This section describes the design parameters for the SR 52 corridor.

9.1 DESIGN TRAFFIC VOLUMES

Traffic volumes along the project corridor are projected to reach 44,800 vehicles per day. The PM peak hour peak direction peak season volume is projected to be 2,373 vehicles for the 2030 design year.

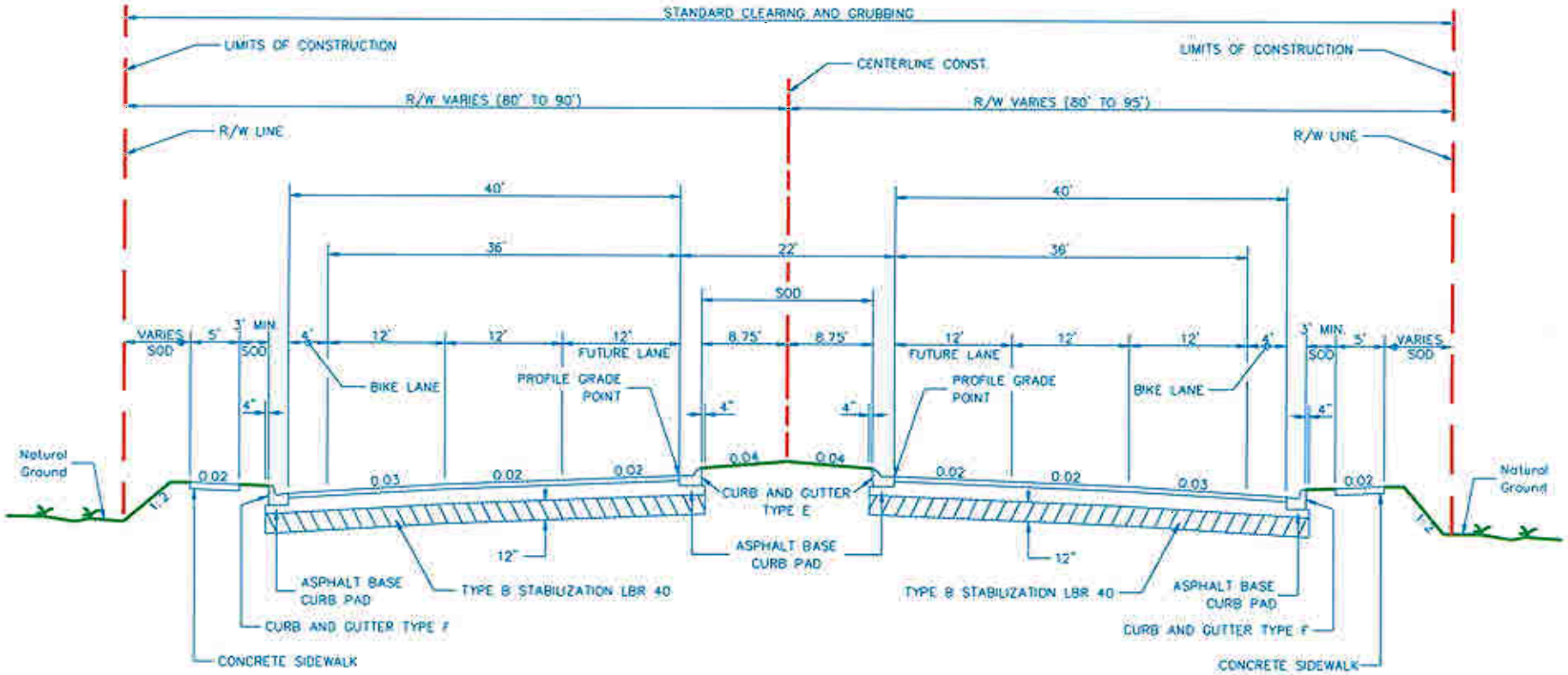
9.2 TYPICAL SECTIONS

Typical sections were developed to provide the needed roadway geometry within the project limits, see Figures 9-1 and 9-2. The four-lane interim project will be a suburban section. It consists of a 30-foot median (22-foot raised), a 4-foot paved section in each direction, two 12-foot travel lanes, a 10-foot outside shoulder (5-feet paved) and a 5-foot sidewalk in each direction. The section utilizes roadside swales to convey stormwater. For the future six-lane improvements, an urban curb and gutter section is proposed. The sidewalk and raised median remain, the lanes are expanded to three 12-foot travel lanes, and a 4-foot bike lane is added to the outside in each direction. The urban section includes Type F curb and gutter on the outside for stormwater conveyance. For both the interim and future ultimate projects, the total right-of-way width will vary from 160 to 185 feet.



TYPICAL SECTION
SR 52
DESIGN SPEED = 50 MPH
STA. 110+00.28 TO STA. 190+48.86

STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C362300 WPI SEGMENT NO. 408827 1	INTERIM TYPICAL SECTION NTS	FIGURE 9-1 PROPOSED 4 LANE TYPICAL CROSS SECTION



ULTIMATE TYPICAL SECTION
SR 52
DESIGN SPEED = 45 MPH
STA 110+00.28 TO STA 190+48.86

STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93) TO EAST OF EMMAUS CEMETERY ROAD PASCO WORK ORDER NO. C362300 WPI SEGMENT NO. 408827 1	ULTIMATE TYPICAL SECTION NTS	FIGURE 9-2 PROPOSED 6 LANE TYPICAL CROSS SECTION

9.3 INTERSECTION CONCEPTS AND SIGNAL ANALYSIS

There are no existing signalized intersections. The interim four-lane divided improvements do not include any signalization. Signalization will be considered in the future if intersection warrants indicate that such improvements are necessary. Introduction of medians will provide access control throughout the project corridor. The majority of the parcels will be provided with a right-in, right-out access.

9.4 ALIGNMENT AND RIGHT-OF-WAY NEEDS

The proposed right-of-way acquisition is primarily located to the south of the existing roadway in order to minimize disturbance to existing businesses, residents and churches and to reduce the cost of acquisition. Additional land will also be required for stormwater ponds and flood plain mitigation.

9.5 RELOCATIONS

There are no relocations proposed. Right-of-way acquisition is primarily limited to unimproved parcels, with the exception of the welding business (E/G Family Enterprises). The area required in front of the welding business will not affect the existing operation, as it is contained within the existing unimproved land area. There will be no displacement of any residents or businesses as a result of the proposed improvements.

9.6 RIGHT-OF-WAY COSTS

The approximate cost to acquire land needed for the preferred alternative right-of-way and the pond sites $3.44 million.

9.7 CONSTRUCTION COSTS

It is expected that the 4-lane interim project will cost approximately $11,732,000 to construct and that construction engineering inspection will cost approximately $1,759,800.

9.8 PRELIMINARY ENGINEERING COSTS

The preliminary engineering and cost to design the project is estimated at $1,100,000.

9.9 RECYCLING OF SALVAGEABLE MATERIAL

Material will be salvaged for reuse where practical.

9.10 USER BENEFITS

Vehicular access will be enhanced as a result of the proposed improvements. Pedestrian safety will be improved through installation of sidewalks along the corridor. The interim project includes ten-foot wide outside shoulders on both sides of the road, 5-foot paved and 5-foot unpaved, increasing bicycle safety. The ultimate project includes bike lanes.

9.11 PEDESTRIAN AND BICYCLE FACILITIES

The interim four-lane divided project will include five-foot wide sidewalks on both sides of the roadway, enhancing pedestrian access. Ten-foot outside shoulders, five-foot paved and five-foot unpaved, will be provided in each direction of travel. The five-foot paved shoulder becomes an undesignated bike line, increasing bicycle safety. It is anticipated that the future six-lane section will include bicycle lanes.

9.12 SAFETY

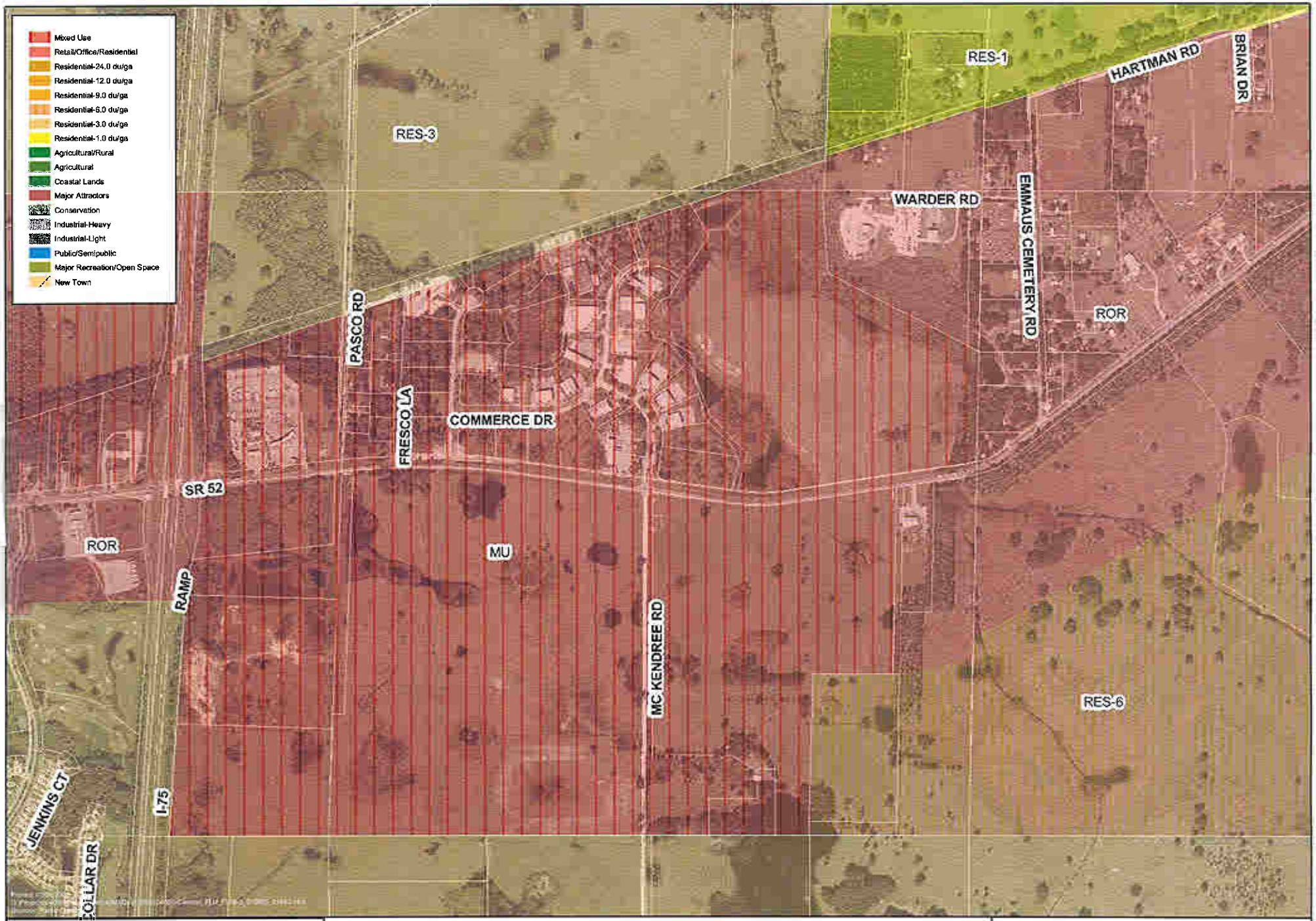
The proposed project will include many safety features. These improvements include a raised median that will separate opposing directions of travel, properly spaced median access points that will control points of conflict for turning vehicles, sidewalks that increase pedestrian safety, turn storage lanes, improved geometry and signalized intersections. These facilities should reduce the likelihood for future left turn and rear end incidents.

9.13 ECONOMIC AND COMMUNITY DEVELOPMENT

Pasco County's Future Land Use Map (2015) indicates that the corridor is classified as mixed use in the western portion of the project area and residential in the eastern portion of the project area as shown in Figure 9-3.

Currently, there are two large developments proposed along the roadway corridor. The Cannon Ranch (DRI #163) with 6,700 proposed residential units, a golf course, 183,000 square feet of commercial and office. A pre-application conference was held on June 28, 2004 for a proposed new DRI to be known as The Pasco Town Centre (DRI #257). The project is located at the southeast corner of I-75 and SR 52, and includes 929 acres. Proposed uses include 2,745,000 s.f. retail, 770,000 s.f. office, 410,000 s.f.

The roadway widening project is consistent with the Department of Community Affairs approved local government comprehensive plan required under Chapter 163, Florida Statutes.



STATE ROAD 52 PD&E STUDY
FROM I-75 (SR 93) TO EAST OF
EMMAUS CEMETERY ROAD
PASCO WORK ORDER NO. C3623.00
WPI SEGMENT NO. 408827 1

0 500 1,000 2,000 3,000 Feet

1 inch equals 1,000 feet

FIGURE 9-3
FUTURE LAND USE MAP

9.14 ENVIRONMENTAL IMPACTS

9.14.1 Cultural Resources

A Cultural Resource Assessment Survey (CRAS) was conducted. The investigation did not encounter any prehistoric or historic sites or historic structures within the project boundaries. No historically significant properties will be affected by the State Road 52 project.

Four archaeological occurrences (defined as fewer than three non-diagnostic artifacts within a 98 ft. radius) were recorded. Because these archaeological occurrences do not meet the minimum definition of a site, no archaeological site forms were completed.

A copy of the report was forwarded to the State Historic Preservation Officer (SHPO) for review. The SHPO has concurred with the determination that there will be no historic properties affected as a result of the proposed project and that the archaeological occurrences do not meet the minimum criteria for listing in the National Register of Historic Places and has found the report complete and sufficient.

9.14.2 Wetlands

A technical memorandum was prepared to serve as documentation of the Wetland impacts. The potential wetland impacts due to the widening of SR 52 from I-75 east to Emmaus Cemetery Road (about 1.9 miles) will be approximately 1.53 acres. The proposed alignment and required additional R/W acquisition have taken into account the location and relative quality of project area wetland resources, and employed impact avoidance and minimization procedures to the extent practicable during preliminary engineering design. Final design may allow for some additional, but very limited impact reduction. Prior to pending state and federal permitting, wetland functional assessment evaluations will be conducted to determine specific mitigation requirements. It is anticipated that mitigation will only be necessary for about 1.28 acres of direct and permanent impacts, and appropriate compensation, as approved though SWFWMD and USACE permitting, will be provided via wetland restoration and/or creation on the adjacent Cannon Ranch property.

9.14.3 Water Quality

The stormwater facility design associated with the proposed project will meet the water quality requirements of the Southwest Florida Water Management District (SWFWMD).

9.14.4 Floodplains

Impacts to the 100-year floodplain are anticipated to be minimal. Floodplain compensation will be provided to offset impacts to the 100-year floodplain. Therefore, the proposed project is anticipated to cause no increase in flood heights and flood limits. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk and there will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. See Figure 9-4 depicting the flood zones based on FEMA data.

Figure 9-2

STATE ROAD 52 FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
PASCO WORK ORDER NO. C3623.00
WPI SEGMENT NO. 408827 1

X A

FIGURE 9- 4
FEMA - FLOOD ZONE
SOURCE: FIRM
PANEL NO.: 1202300275D

9.14.5 Coastal Zone Consistency

It has been determined that the proposed project is consistent with the Florida Coastal Management Program in a letter received from the Florida Department of Environmental Protection dated November 18, 2004.

9.14.6 Wildlife and Habitat

A technical memorandum was prepared to serve as documentation of the wildlife, habitat and listed species considerations for the project using criteria contained in Part 2, Chapter 27 of the Florida Department of Transportation's Project Development & Environment (PD&E) Manual. The analysis of occurrence, quality, impacts and mitigation is provided following database research, field evaluations and agency coordination.

There is no critical habitat for threatened or endangered species occurring within or very near to the project limits. Virtually all native, natural habitat already has been culturally modified and fragmented. The only state or federal listed faunal species observed or expected adjacent to the project are species of Special Concern (SSC) wading birds, such as the White Ibis, Snowy Egret, Little Blue Heron and Tricolored Heron, and foraging Florida Sandhill Cranes, classified as threatened by the State. No gopher tortoises (SSC) have been observed in proximity to the right-of-way. No listed plant species were encountered. None of the three proposed stormwater management pond sites will have any known involvement with listed species, nor will their location have an adverse impact on any significant natural habitat. The potential need for design of a specific wildlife underpass in association with the Bayou Branch crossing was discussed with appropriate representatives of both Pasco County and the Southwest Florida Water Management District (SWFWMD) and a crossing may be included in the final design. This SR 52 roadway-widening project will not result in any significant impact to listed species or their habitat. Appropriate mitigation for minor (approximately 1.5 acres) losses of wetland foraging habitat for wading birds will take place in the immediate project area, as approved in the pending permitting process.

9.14.7 Farmlands

Much of the land necessary for the road widening is currently used as pastureland for cattle grazing. Due to the large size of these parcels, the impact of reducing the property for acquisition of right-of-way is minimal. There is one parcel in use as a tree farm; however, the area where the acquisition is located is not within the planting area. Because impacts are expected to be minor, it was determined that there will be no significant impacts to prime or unique farmland from the construction of the proposed project.

9.14.8 Noise

A Noise Study Report (NSR) was prepared in accordance with the FDOT Project Development and Environment (PD&E) Manual, Part 2, Chapter 17 (October 6, 2003). Prediction of all traffic noise levels was performed using the Federal Highway Administration's (FHWA) computer model, Traffic Noise Model (TNM) Version 2.5.

Predicted noise levels for the Build Alternatives were calculated and compared to the No-Build Alternative and to the existing condition noise levels at all of the noise sensitive sites identified as part of the field review. None of the evaluated sites are predicted to experience a substantial increase (i.e., an increase of 15 or more decibels above the existing noise level as a direct result of the Build Alternative). A single noise sensitive site will experience noise levels that will approach or exceed the Noise Abatement Criteria (NAC) under the Build Alternative while no sites currently approach or exceed the NAC. Likewise, the NAC is not expected to be approached or exceeded under the Future No-Build Alternative

The site that will approach or exceed the NAC is a single-family residence on the north side of SR 52. Abatement alternatives were evaluated for this location. This included traffic management techniques, alignment modifications, property acquisition, land use controls, and noise barriers. The results of the analysis indicate that a barrier would not provide the minimum required reduction in traffic noise at a cost below the cost reasonable criteria.

Because the project does not impact a substantial number of noise sensitive sites, the noise impacts are considered to be minimal. The Noise Study Report contains a complete description of the impacts and study.

9.14.9 Air Quality

An air quality review of the subject project was conducted following standard FDOT procedures. The project is located in Pasco County, which has been designated as attainment for all the air quality standards under the criteria provided in the Clean Air Act Amendments of 1990, and as such, conformity does not apply.

To ensure that no air quality standards will be violated resulting from the construction and operation of this project, the FDOT Air Quality Screening Model, CO Florida 2004, was used. The CO Florida 2004 model uses information from the Environmental Protection Agency's (EPA) MOBILE6 Emissions model and the CALINE3 model to produce an estimate of the carbon monoxide (CO) levels that might result from the operation of the project. The model predicts CO concentrations at default receptors located adjacent to the intersection.

The intersection of State Road 52 and Emmaus Cemetery Road was evaluated under the screening test for the year 2030, the design year for the project.

Using a suburban setting and standard default values for background concentrations and temperatures, the resultant maximum CO concentrations at the ten receptors were predicted to range from 3.8 to 4.9 parts per million (ppm) for 1 hour and from 2.3 to 3.0 ppm for 8 hours. Since these values do not exceed the National Ambient Air Quality Standards (NAAQS) established by the United States Environmental Protection Agency

(USEPA) of 35 ppm for 1 hour and 9 ppm for 8 hours, no adverse air quality impact will result from the operation of this project.

Construction activities may cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts can be minimized by adherence to all applicable State and local regulations and application of appropriate construction specifications. The Air Quality Screening Memorandum is contained in the SEIR project files.

9.14.10 Construction

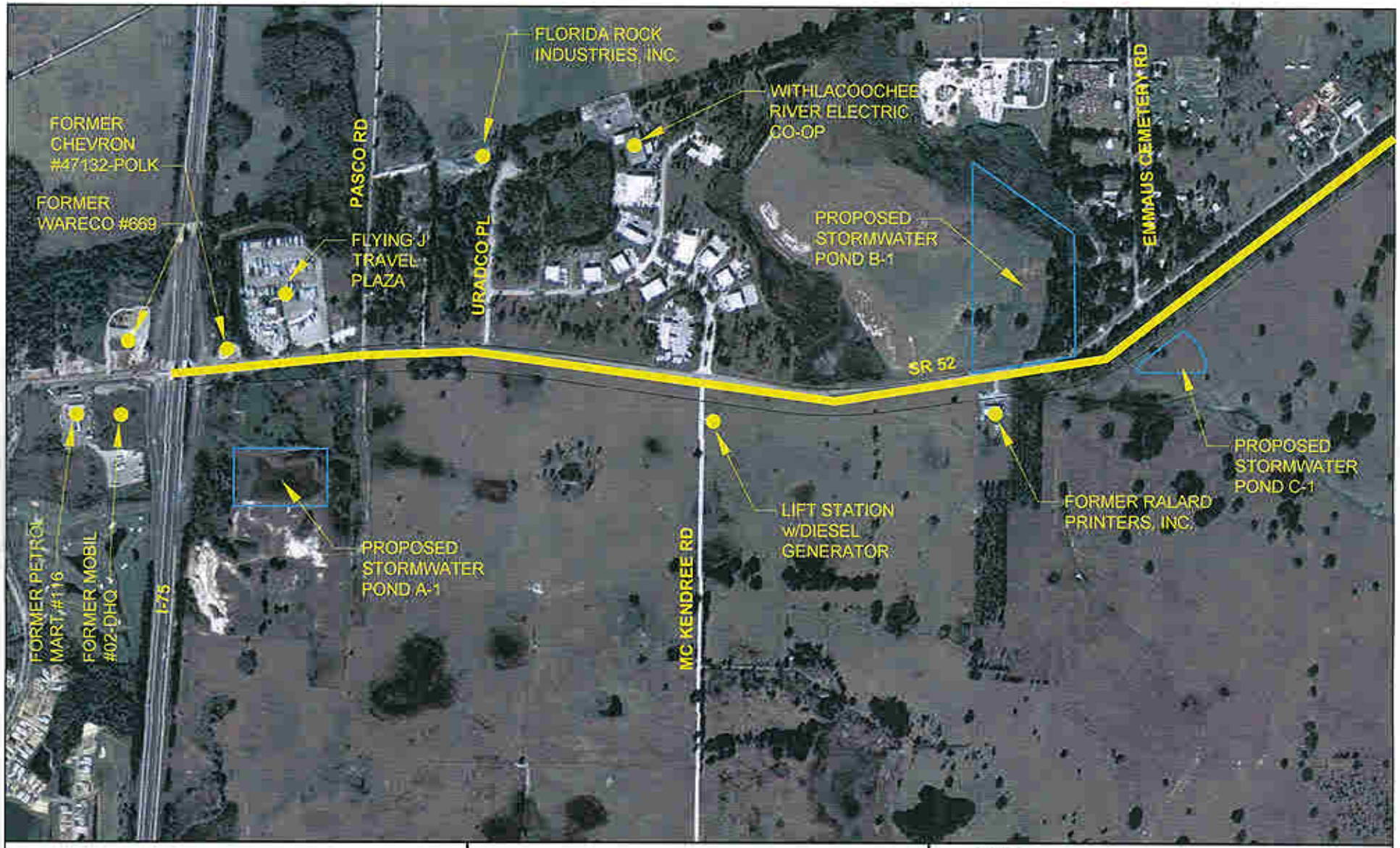
Construction impacts will be minimized through the use of FDOT's Standard Specifications for Road and Bridge Construction and Best Management Practices.

9.14.11 Contamination

A Contamination Screening Evaluation (CSE) was conducted for the project area. Nine sites were evaluated, and eight were ranked as no risk or low risk, having no affect on roadway construction activities, see attached Figure 9-5. The one site with a high risk ranking is the former Chevron located at the northeast corner of the interchange of SR 52 and I-75, which had petroleum contamination documented in the vicinity of the project area. Additional environmental assessment activities, consisting of soil and groundwater testing, are recommended prior to construction to determine the potential impact of these facilities upon proposed construction activities. For further details, please refer to the CSE report in the SEIR project file.

9.15 UTILITY IMPACTS

It was determined that the following utilities could potentially have facilities located within the project corridor. The following companies were contacted for confirmation: BrightHouse, Sprint, TECO Peoples Gas, TECO, Withlacoochee River Electric Cooperative.



STATE ROAD 52 PD&E STUDY FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
PASCO WORK ORDER NO. C3623.00
WPI SEGMENT NO. 408827 1

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NOT TO SCALE

FIGURE 9-5
POTENTIAL
CONTAMINATION SITES

9.16 TRAFFIC CONTROL

The contractor will be responsible for maintaining through traffic and access to adjacent properties during construction of the proposed improvements. It is anticipated that two-way traffic will be maintained on the existing lanes during construction of the future eastbound lanes. Two-way traffic will then be shifted to the new eastbound lanes during construction of the proposed westbound lanes. All driveway entrances will be maintained during the construction period. Drainage will be accommodated during the construction period. A signed and sealed Maintenance of Traffic Plan is currently being developed and will be submitted for review as part of the construction plans.

9.17 RESULTS OF THE PUBLIC INVOLVEMENT PROGRAM

The public involvement program was established to maintain communication with the public at-large and individuals and agencies concerned with the project and its potential impacts. The program consisted of the Advanced Notification and the Public Hearing.

The Advanced Notification (AN) Package was sent to the Florida State Clearinghouse on October 1, 2004 to notify agencies and solicit comments. There were two responses received. The first was from the Seminole Nation of Oklahoma, stating that there is a high probability that cultural resources and materials may be encountered, that they are not currently aware of any such resources, and that if any resources are encountered, they must be immediately notified. The second response was from the Florida Department of Environmental Protection, stating that the project is consistent with the Florida Coastal Management Program. The following agencies responded that they had no comment: Florida Department of Environmental Protection, Southwest Florida Water Management District, Office of Policy and Budget, Environmental Policy Unit.

The public hearing was held on Thursday, April 21st, 2005, from 5:00 p.m. to 7:30 p.m. at the Pasco County Historic Courthouse. A mailing list was compiled which included all property owners within 300-feet of the proposed project, elected and appointed officials. A letter was sent inviting these parties to the public hearing. The legal notice advertising the public hearing and providing information on locations for review of the study and reports was published in the Tampa Tribune, Pasco Edition. A meeting notice was also published in the Florida Administrative Weekly (FAW) on 03/25/2005, Volume 31/12.

A project handout which including information on the project and the recommended alignment along with a project location map were provided at the public hearing. Two large display boards depicting the preferred alignment over an aerial photograph including the 4-lane interim and 6-lane ultimate typical sections were presented at the hearing. There were no formal comments provided during the public hearing.

After the public hearing, eight comment forms, one letter, and five e-mails were received by the project representative at Wilson Miller. The majority of the comments were concerns about the proposed access. A letter from a representative of the E/G Family Enterprise parcel stated that the proposed directional median opening in front of their property will not adequately service the existing business, which includes truck and semi tractor trailer traffic. The remaining correspondence (comment forms and e-mails) concerned access to the San Antonio Community Church. The current design approved by the FDOT access management committee does not include a median opening at the

entrance to the church. Access management issues will be addressed in detail by the FDOT Access Management Committee during the design review process.

9.18 VALUE ENGINEERING

A Value Engineering review was not completed for this project.

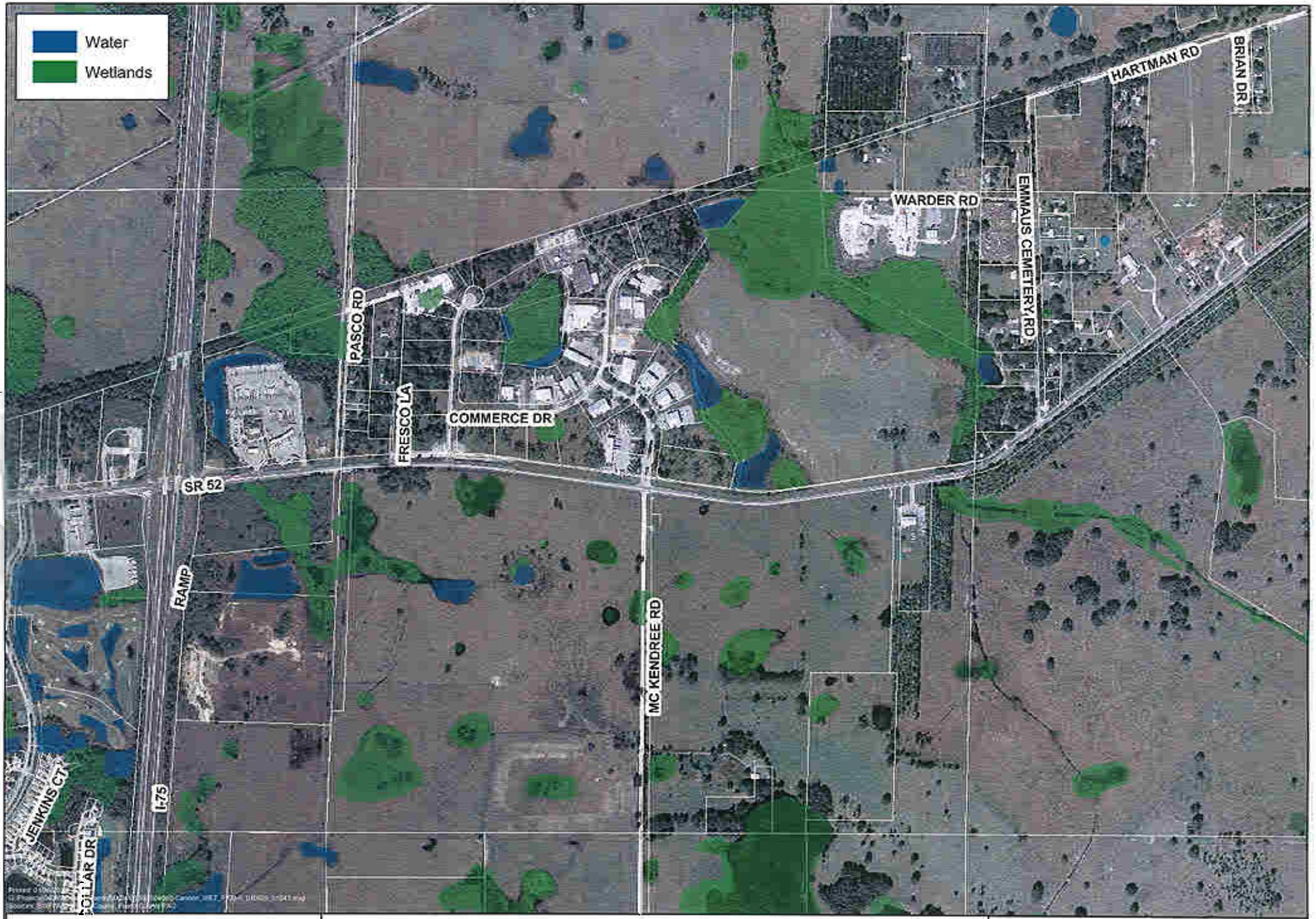
9.19 DRAINAGE

The project corridor is located in Federal Emergency Management Agency (FEMA) Flood Zone "D", which is an area of minimal flooding. Figure 9-4 depicts the FEMA flood zones based on FIRM # 1202300275D. It is located outside of special floodway hazard. The roadway intersects the tributary area bounded by an abandoned CSX right-of-way along the north boundary, I-75 to the west, Tyndall Road to the south, and a geographical ridge to the east towards Dade City. SR 52 provides an east west divide where the direction of flow is from south to north making the area dependent upon existing cross drains.

It was determined that the proposed roadway improvement will require the modification of three existing cross drain culverts under SR 52. Three existing 36-inch RCP pipes (reinforced concrete pipes) at Station 103+00 need to be extended upstream of the crossing. The existing 24-inch pipe cross drain at Station 144+48.92 and Station 148+73.66 will be replaced with a single 6' x 3' CBC. Wetlands along the project area were delineated and it was determined that approximately 1.53 acres would be impacted primarily on the south side of SR 52, see Figure 9-6. These wetlands will be mitigated in accordance with agency requirements.

Two areas of possible floodplain encroachment have been identified. The first area is associated with the FDOT cross drain, and the second area is associated with an FDOT bridge crossing at Bayou Branch. The current crossing consists of four 10x10-foot concrete box culverts. The proposed design will extend the existing culverts and bridge. Pond sites adjacent to outfall areas will be created to provide water quality treatment and attenuation of flows for the proposed project.

Impacts to the 100-year floodplain are anticipated to be minimal. Floodplain compensation will be provided to offset impacts to the 100-year floodplain. Therefore, the proposed project is anticipated to cause no increase in flood heights and flood limits. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk and there will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes.



STATE ROAD 52 PD&E STUDY
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0 500 1,000 2,000 3,000 Feet

1 inch equals 1,000 feet

FIGURE 9-6
WATER WETLANDS MAP

9.20 BRIDGE ANALYSIS

There is an existing FDOT bridge culvert crossing at the Bayou Branch consisting of four 10x10-foot concrete box culverts (bridge #140022). A report was prepared in 2000 by Cumbey and Fair, Inc. analyzing the hydraulic impacts of extending the four box culverts. The analysis indicated that there is no significant impact to the hydraulics of the crossing by extending the bridge culvert.

An updated Bridge Hydraulic Report is currently being prepared and will be submitted with the construction plans for the proposed improvements.

9.21 SPECIAL FEATURES (NOISE BARRIERS, RETAINING WALLS, UNDERDRAINS, ETC.)

No special features are proposed at this time.

9.22 ACCESS MANAGEMENT

The Access Management classification for this section of roadway is proposed to remain a Class 3 facility. There will be a full median opening at Pasco Road, Corporate Lake Boulevard/McKendree Road and at the proposed entrance to Cannon Ranch (North Loop Road). There will be directional median openings at the E/G Family Enterprises parcel (D&D Welding) and Emmaus Cemetery Road.

APPENDIX: PROJECT CONCEPT PLANS

SR 52 FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
PASCO WORK ORDER NO. C3623.00
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FOUR LANE CONCEPT
PROJECT MAP (SHEET 1 OF 5)

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SR 52 FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
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WPI SEGMENT NO. 408827 1

FOUR LANE CONCEPT
PROJECT MAP (SHEET 2 OF 5)

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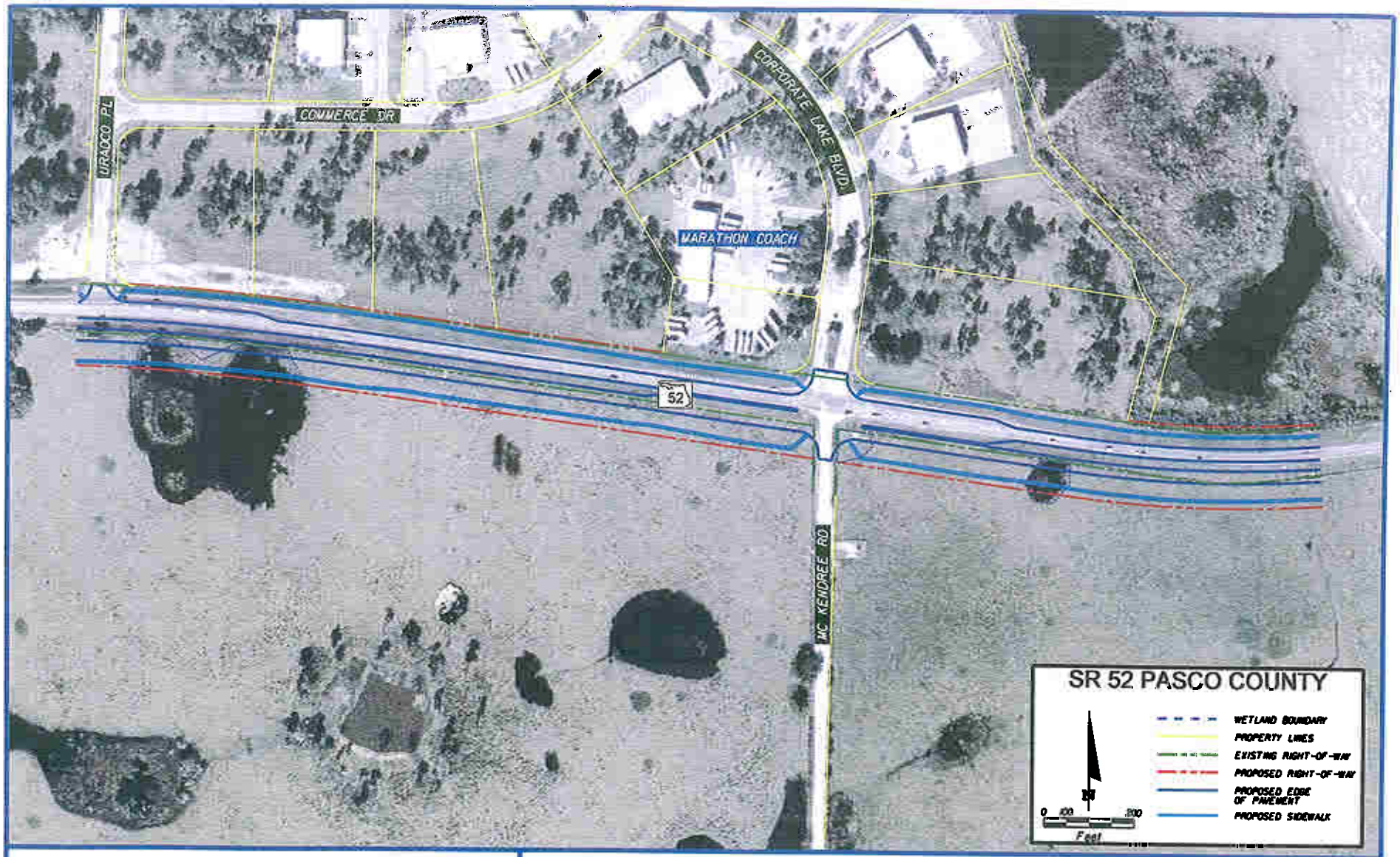

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FOUR LANE CONCEPT
PROJECT MAP (SHEET 3 OF 5)

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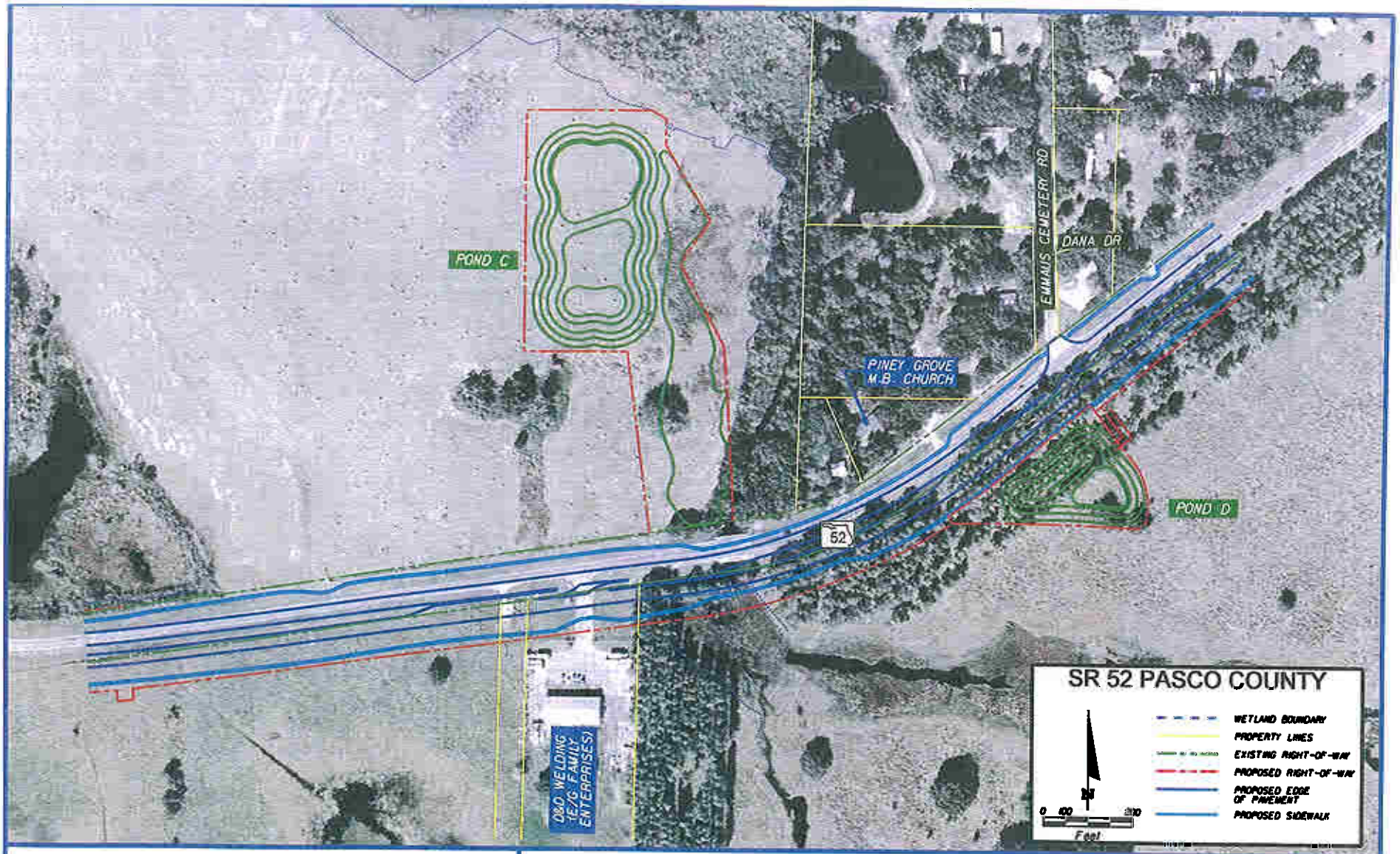

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FOUR LANE CONCEPT
PROJECT MAP (SHEET 4 OF 5)

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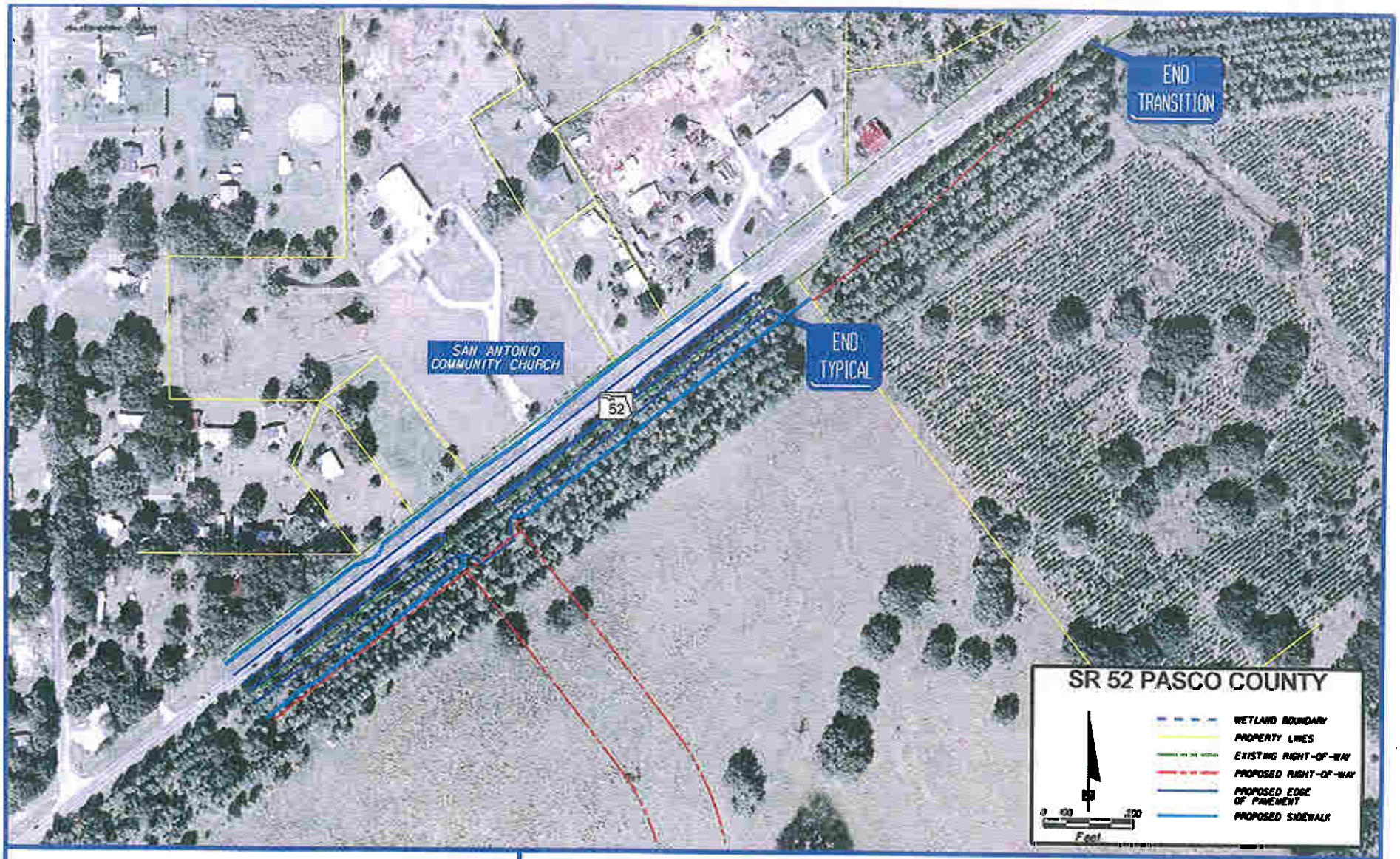

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FOUR LANE CONCEPT
PROJECT MAP (SHEET 5 OF 5)

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SR 52 FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
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WPI SEGMENT NO. 408827 1

SIX LANE CONCEPT
PROJECT MAP (SHEET 1 OF 5)

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SR 52 FROM I-75 (SR 93)
TO EAST OF EMMAUS CEMETERY ROAD
PASCO WORK ORDER NO. C3623.00
WPI SEGMENT NO. 408827 1

SIX LANE CONCEPT
PROJECT MAP (SHEET 2 OF 5)

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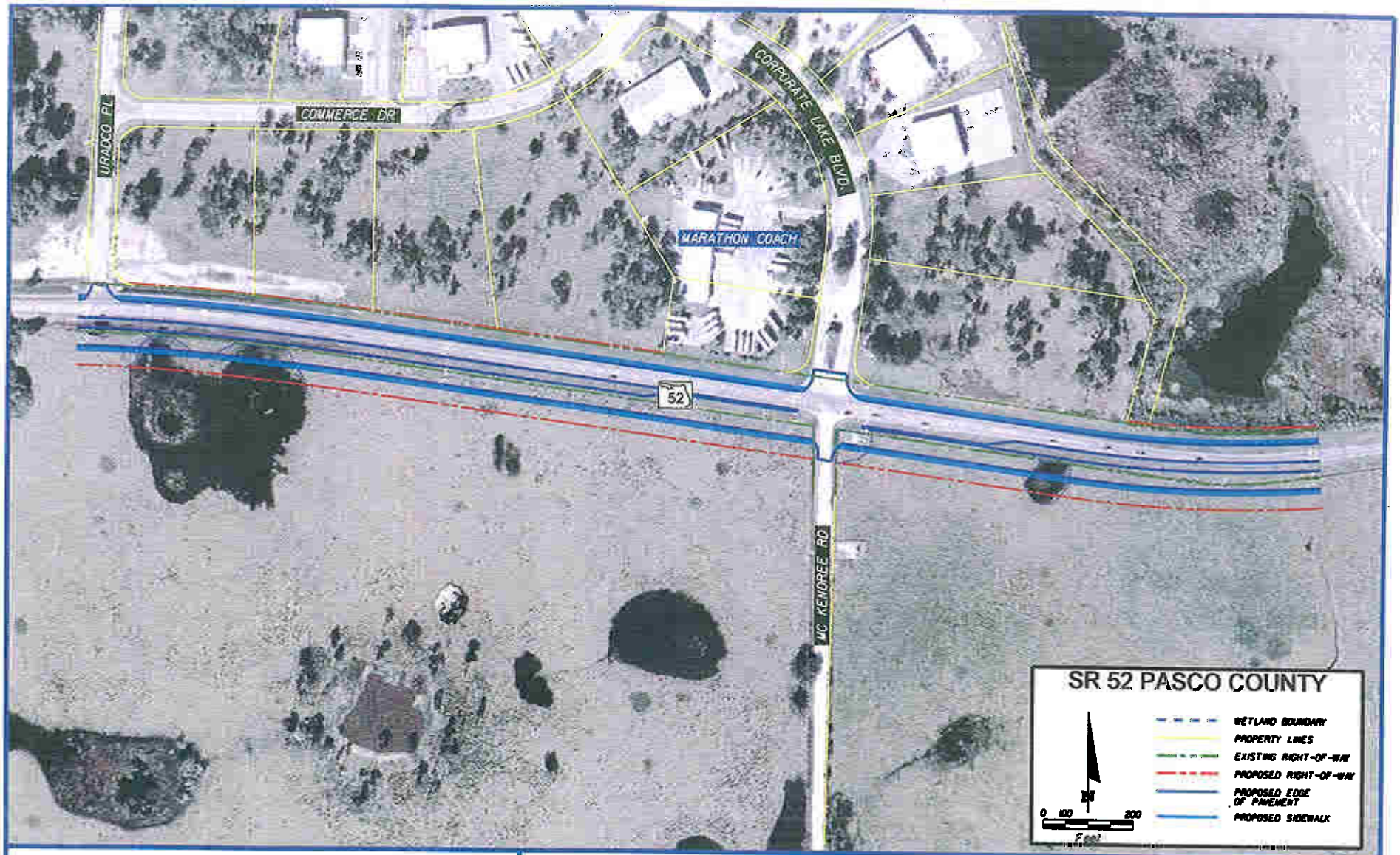

SR 52 FROM I-75 (SR 93)
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SIX LANE CONCEPT
PROJECT MAP (SHEET 3 OF 5)

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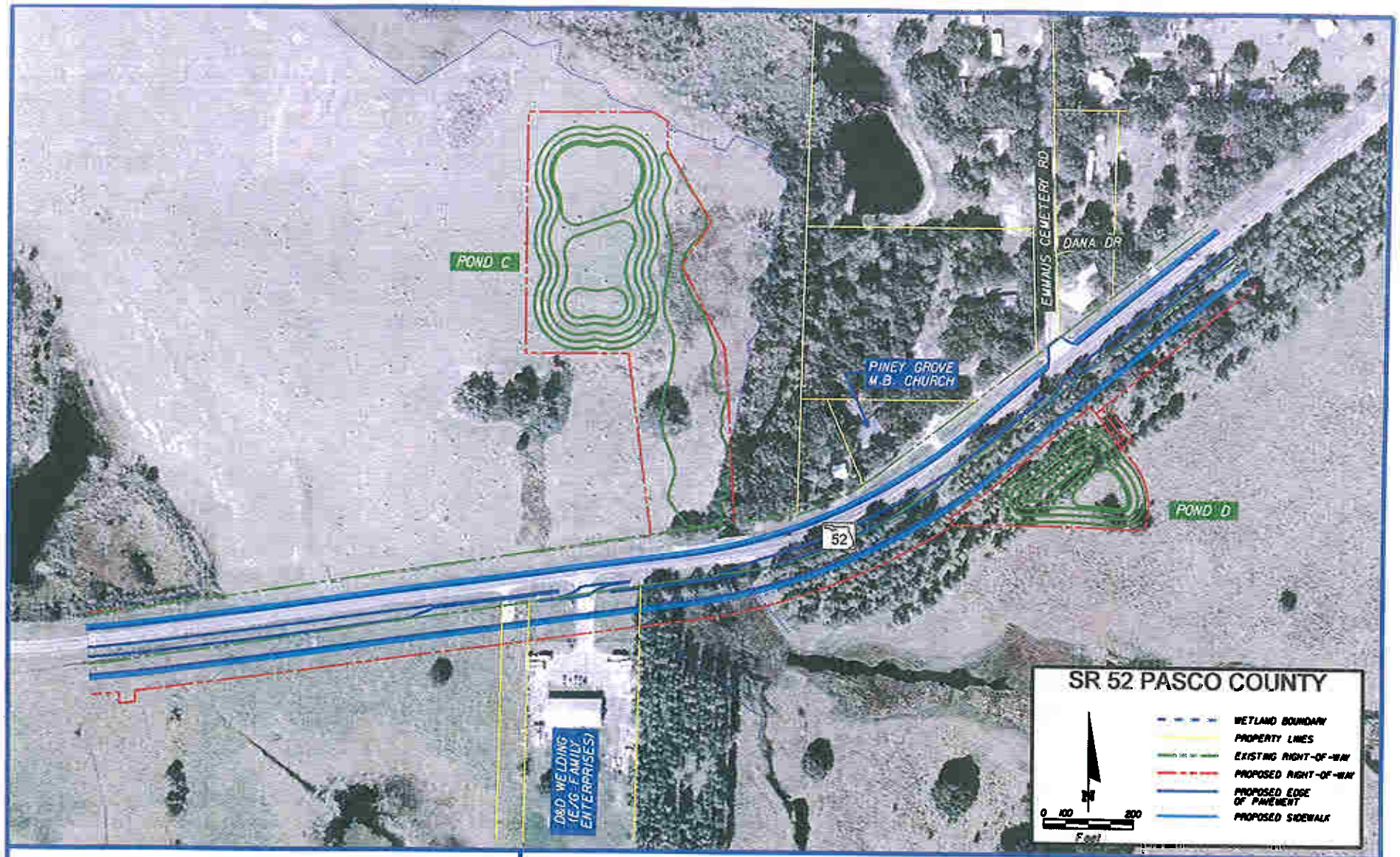

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SIX LANE CONCEPT
PROJECT MAP (SHEET 4 OF 5)

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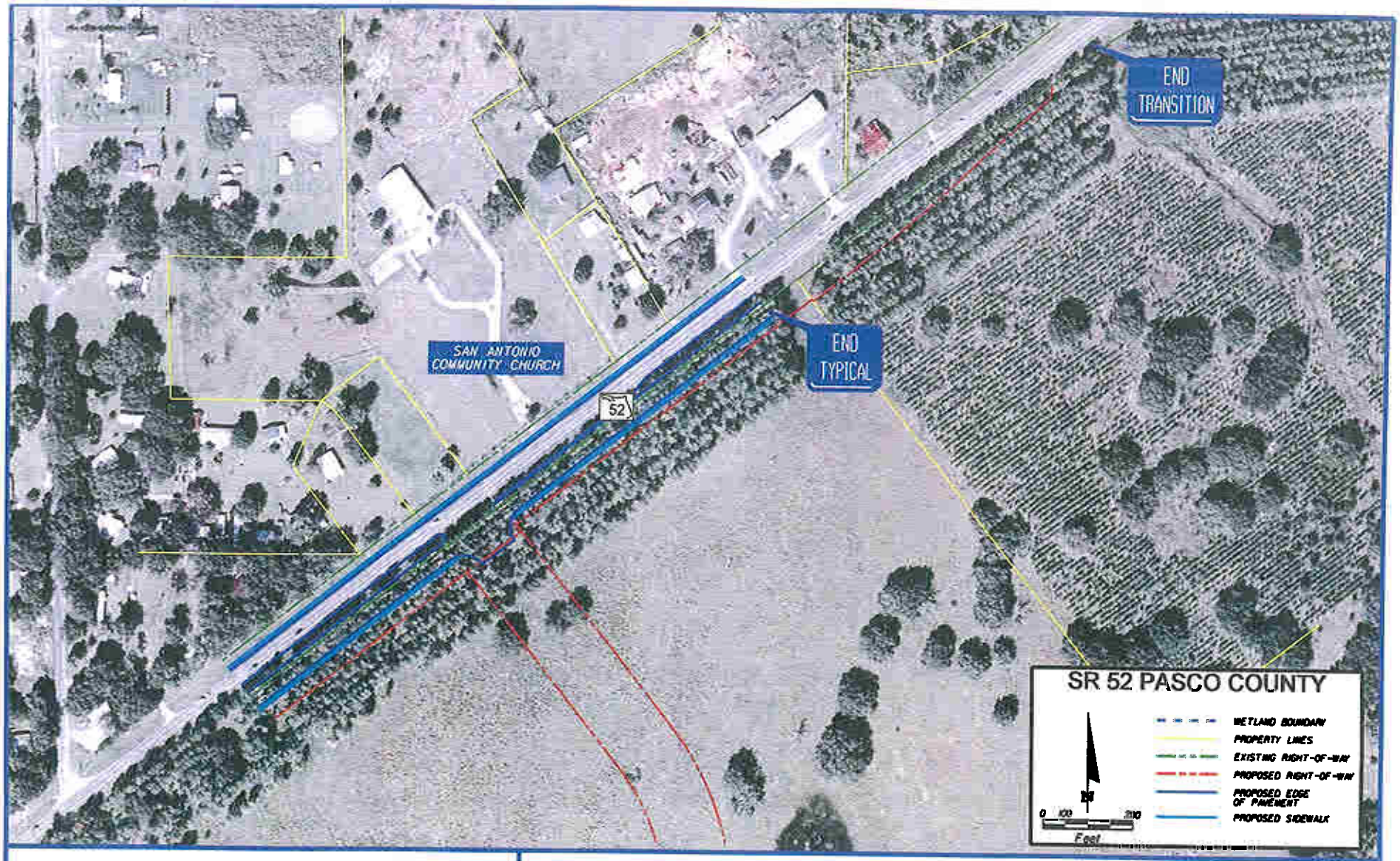

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SIX LANE CONCEPT
PROJECT MAP (SHEET 5 OF 5)

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