MLK
SR 574 BLVD
PD&E Study

Project Development and Environment (PD&E) Study

Final Preliminary Engineering Report

S.R. 574 (Martin Luther King Jr. Boulevard)
from C.R. 579 to McIntosh Road
Hillsborough County, Florida

WPI Segment No. 255893 1
FAP No. 2081-018P

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Florida Department of Transportation - District 7
Tampa, Florida

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Submitted to:

Florida Department of Transportation - District 7
Tampa, Florida

Submitted by:

AYRES ASSOCIATES

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1.0 SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study for the improvement of S.R. 574 (Martin Luther King Jr. Boulevard) between C.R. 579 (Mango Road) (milepost 4.126) and McIntosh Road (milepost 7.748) in central Hillsborough County, Florida.

The objective of the PD&E Study was to provide documented environmental and engineering information as well as analyses necessary for the FDOT and the Federal Highway Administration (FHWA) to reach a decision regarding the type, conceptual design and location of the necessary improvements along the S.R. 574 corridor. The following factors have been considered as part of the Study: accommodating future transportation needs in a safe and efficient manner, and providing consistency with local government plans and environmental regulations. The PD&E Study also satisfies the requirements set forth by the National Environmental Policy Act (NEPA) and the Federal Highway Administration (FHWA), which are required to qualify a project for federal funding for the design, right-of-way acquisition and construction of a "Build" alternative.

This report documents the need for the improvement and presents the procedures utilized to develop and evaluate various improvement alternatives for this roadway facility. Engineering data and information regarding the environmental characteristics of the area, which are essential for the alignment and analytical decision process, were collected. Once sufficient data was available, alignment criteria were established and alternatives were developed. The comparison of alternatives was based on a variety of parameters utilizing a matrix format. This analytical process identified the alternative that would have minimal impacts.

1.1 Recommendations

The recommended alignment generally follows the existing centerline of the roadway with several shifts to reduce impacts to established commercial properties and to avoid a cemetery in the western portion of the project. The recommended alignment for the eastern portion of the project was controlled by a twenty-five foot offset from the proposed right-of-way line to the centerline of the existing, active CSX railroad tracks, which is the minimum dimension that has been acceptable to CSX in previous District Seven projects. The recommended typical sections are described below, and the conceptual plans that provide the alignment, pavement edges and right-of-way limits are contained in Appendix A.

There is a box culvert at Lake Weeks Creek and a bridge (FDOT Bridge No. 100033) over Baker Canal within the eastern portion of the project, which would require modifications to accommodate the multi-laning of S.R. 574 by constructing a longer culvert at Lake Weeks Creek and a new bridge or bridge culvert at Baker Canal.

It is anticipated that minor modifications will be required along the side streets to accommodate the additional lanes on S.R. 574. Right-of-way acquisition is

anticipated for various locations within the project corridor, and for storm water management ponds.

The limits of this Study were evaluated as three segments due to differing traffic and land use characteristics, and a separate recommended typical section was developed for each segment (each recommended typical section has a corresponding design speed and recommended posted speed). The segments and typical sections are as follows:

- Segment "A" proceeds from east of C.R. 579 to east of Parsons Avenue. The recommended typical section for this segment is a 5-lane urban typical section with a 40 mph design speed that contains a two-way left turn lane. This typical section provides a 5' sidewalk and a 4' designated bike lane in each direction, requires 94 feet of right-of-way, and will reduce the existing posted speed limit from 45 mph to 40 mph (per District policy for 5-lane urban typical sections). The alignment for this segment must avoid the St. Mary's AME cemetery west of Taylor Road, and minimize the acquisition within the bank properties (including constructing gravity or retaining walls, as necessary) on the north and south sides of S.R. 574 and west of Parsons Avenue.

- Segment "B" proceeds from east of Parsons Avenue to east of Kingsway Road. The recommended typical section for this segment is a 4-lane suburban typical section with a 45 mph design speed, which contains a raised median on the inside and flush paved shoulders on the outside. This typical section provides a 5' sidewalk beyond the roadside swale in each direction, the paved shoulders will also serve as bicycle facilities, it will require 123.5 feet of right-of-way, and will maintain the existing posted speed limit of 45 mph. The sidewalk on the south side of the roadway is not continuous due to the existence of the CSX railroad tracks near the Kingsway Road intersection.

- Segment "C" proceeds from east of Kingsway Road to east of McIntosh Road. The recommended typical section for this segment is a 4-lane suburban typical section, similar to Segment "B" except that it is designed for a 60 mph design speed. This typical section provides a 5' sidewalk beyond the roadside swale on the north side of the roadway, has paved shoulders in each direction, requires 131.5 feet of right-of-way, and will enable a 55 mph posted speed limit. A predominant feature of this segment is the railroad along the south side of the roadway, and the recommended alignment is based on the acquisition of a 25' wide right-of-way parcel from CSX along the length of the segment (an additional 12' width will be needed for exclusive right turn lanes at eastbound intersection approaches).

Additional recommendations are as follows:

- Prepare a lighting justification study for Segment "A" during the segment's future design phase.

attenuation credits for the ponds. A drainage analysis should be performed to determine the seasonal high water and flooding characteristics of the basin on the west end of the project, and appropriate attenuation requirements (the PD&E is based on near worst case conditions).

- Early utility coordination, particularly for facilities within the CSX right-of-way that need to be acquired, should be performed. It should be noted that extensive utilities exist along the CSX railroad and that the cost to relocate these facilities should be included in the Department's construction funding.

- Side street alignment shifts and reduced curb radii should be considered during design to prevent the need of corner clips in those areas where other right-of-way does not need to be acquired.

1.2 Commitments

The following commitments were made during the PD&E Study for consideration in the design phase(s) of this project:

- During the PD&E Study phase of this project, a decision was taken to adhere to access management guidelines for a Class 5 facility. However, based on public concern expressed at Public Meetings, a commitment was made to reconsider median openings during design particularly to the east and west approaches of the Parsons Avenue intersection and at the commercial properties west of Valrico Road where tractor-trailer access is needed.

- Short islands should be considered within the two way left turn lane to discourage passing and reduce vehicle collisions.

- To further analyze how to safely provide a pedestrian crossing in Segment "B" where the sidewalk ends on the south side.

2.0 INTRODUCTION

FDOT conducted a PD&E Study to document the preliminary engineering concept of S.R. 574 (Martin Luther King Jr. Boulevard) from east of C.R. 579 (Mango Road) to east of McIntosh Road in central Hillsborough County for the multi-laning of the existing roadway facility (See Figure 2-1 for the location and limits of the Study corridor). The purpose of the PD&E Study is to provide documented environmental and engineering information as well as analyses necessary for the FDOT and the Federal Highway Administration (FHWA) to reach a decision regarding the type, design and location of the necessary improvements along the S.R. 574 corridor; and the impacts, if any, associated with the recommended alternative.

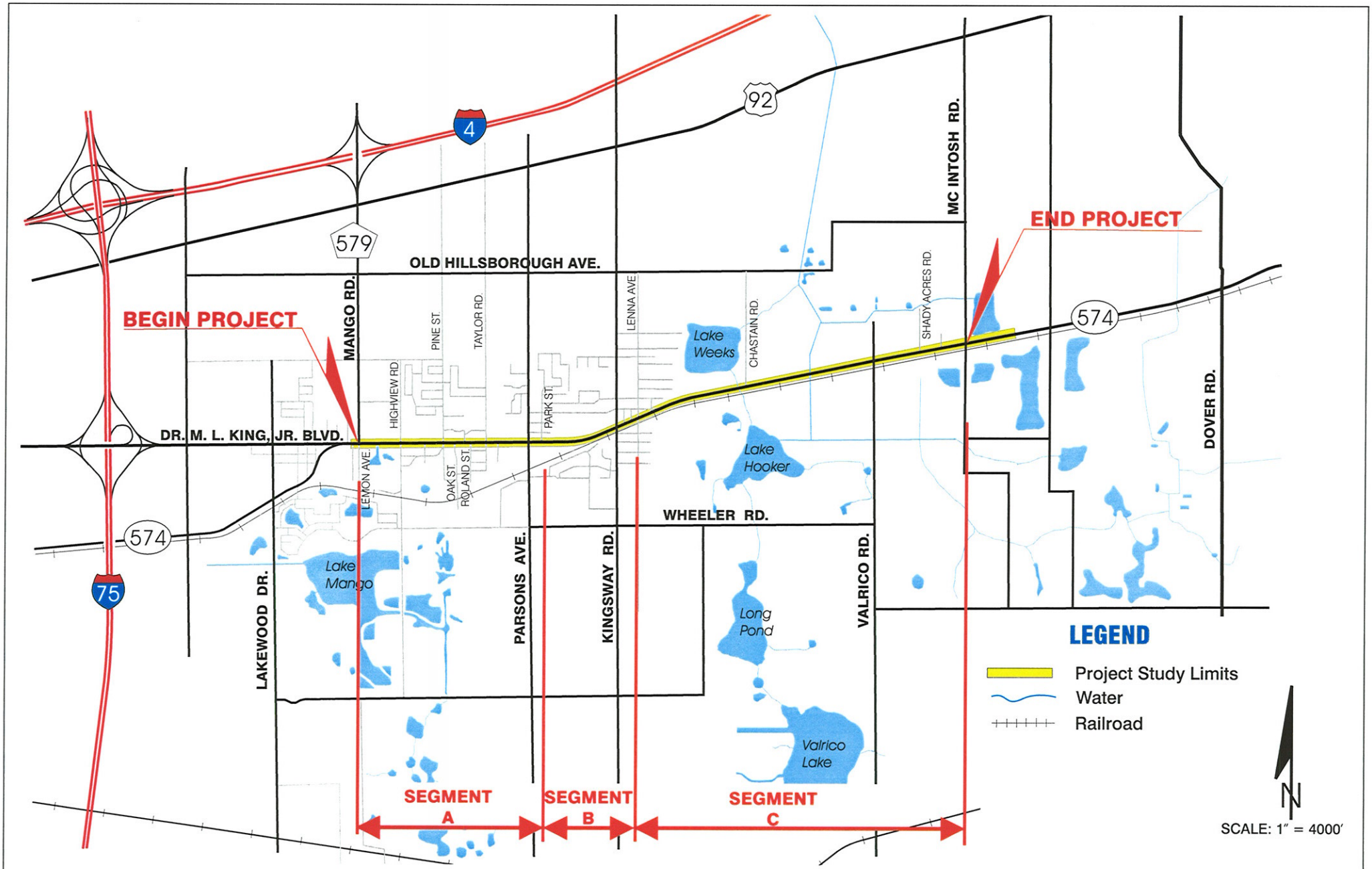
2.1 Project Description

The S.R. 574 corridor is an east/west urban minor arterial facility. The limits of the Study corridor are from C.R. 579 (Mango Road) eastward to McIntosh Road, for a distance of approximately 3.6 miles. The project is located in central Hillsborough County and extends through the communities of Mango, Seffner and Dover (Sections 1, 2, 3, 10 and 11 of Township 29 South, Range 20 East; and Section 6 of Township 29 South, Range 21 East).

The existing land use adjacent to the S.R. 574 corridor transitions through two areas of generalized land use characteristics. In general, from the western terminus eastward the land uses transition from dense development (medium scale shopping centers, office/professional office, medical facilities, service stations, restaurants and community facilities) to low density development (mixture of agricultural, commercial, and planned and residential developments). Although vacant land exists within the Study corridor, future developments are planned for most of this area.

S.R. 574 is currently a six-lane urban section west of C.R. 579, which transitions to a three-lane rural section (with a two-way left-turn lane) east of Highview Road. The three-lane section is retained until Kingsway Road, where the roadway transitions to a two-lane section that proceeds to McIntosh Road. The existing posted speed limits along S.R. 574 are 45 mph and 50 mph.

The S.R. 574 project corridor is divided into three segments for analysis purposes. Segment "A" is approximately 1.1 miles in length, and it consists of the portion of S.R. 574 from C.R. 579 (Mango Road) to east of Parsons Avenue. Segment "B" proceeds eastward along S.R. 574 from east of Parsons Avenue to east of Kingsway Road, and it is approximately 0.6 miles in length. The portion of S.R. 574 from east of Kingsway Road to east of McIntosh Road comprise Segment "C", which is approximately 1.9 miles in length.



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GENERAL PROJECT LOCATION MAP

Figure 2-1

3.0 NEED FOR IMPROVEMENT

3.1 Deficiencies

The current FDOT standards on the quality of traffic operations along facilities such as S.R. 574 require that a Level of Service (LOS) D or better should be provided within the urbanized area of the Study corridor. A LOS C or better is usually required for non-urbanized areas. However, the section of this corridor, from Kingsway Road eastward to the end of the Study's limits, should be considered for LOS D due to the expected transition in the future to an urban environment. As part of the *Final Traffic Technical Memorandum*[1*], a LOS analysis was conducted for the Study corridor to determine the existing and future year 2025 operating conditions at each intersection and segment (see Table 3-1).

The LOS was established for segments along S.R. 574, from C.R. 579 to McIntosh Road, based on the existing and design year 2025 average daily traffic volumes (ADTs). The existing LOS varies from A to F for different segments within the Study corridor. It is anticipated that without improvements along S.R. 574, all of the segments from C.R. 579 to McIntosh Road will be deficient by the design year (2025). Refer to Section 6.6 of this report for a discussion of the projected LOS for 2025.

Based on the results of this analysis, only three of the seven intersections are operating at a LOS C at the present time. Currently, the intersection of S.R. 574 and C.R. 579 is operating at a LOS D, and the intersections of S.R. 574 at Parsons Avenue and at McIntosh Road are currently operating at LOS E. The intersection of S.R. 574 and Highview Road is currently operating at a LOS F. It is anticipated that all seven of the intersections will be operating at a LOS F by the design year (2025) if improvements are not constructed along S.R. 574. However, if a "Build" alternative is constructed, all of the intersections with the exception of S.R. 574 and C.R. 579 would experience an improved LOS.

*Reference numbers correspond to the numbers listed at the end of this section in the Reference chapter.

Table 3-1: Existing HCS Level of Service Summary

Intersections	Existing Year 2000	
	Delay (sec)	LOS
S.R. 574 at C.R. 579	39.3	D
S.R. 574 at Highview Road	271.5	F
S.R. 574 at Pine Street	21.6	C
S.R. 574 at Parsons Avenue	78.5	E
S.R. 574 at Kingsway Road	22.9	C
S.R. 574 at Valrico Road	21.8	C
S.R. 574 at McIntosh Road	65.8	E
Segments Eastbound	**Existing Year 2000**	
	Delay (Seconds)	LOS
C.R. 579 to Highview Road	157.3	F
Highview Road to Pine Street	7.3	B
Pine Street to Parsons Avenue	44.9	D
Parsons Avenue to Kingsway Road	12.4	B
Kingsway Road to Valrico Road	25.6	A
Valrico Road to McIntosh Road	51.0	D
Segments Westbound	**Existing Year 2000**	
	Delay (Seconds)	LOS
McIntosh Road to Valrico Road	17.5	B
Valrico Road to Kingsway Road	23.0	A
Kingsway Road to Parsons Avenue	39.8	D
Parsons Avenue to Pine Street	20.6	C
Pine Street to Highview Road	37.8	E
Highview Road to C.R. 579	35.5	E

3.2 Safety

In order to evaluate the safety of the traffic operations within the Study area, crash records for the five-year period between 1995 and 1999 were reviewed for S.R. 574 and are presented in Section 4.1.9 of this report.

A total of 257 crashes were reported within the Study corridor for this five-year period. These crashes resulted in 139 instances of property damage and 118 injuries. No fatalities resulted from any of these crashes.

Of the seven intersections within the Study corridor, the intersection of S.R. 574 and Highview Road had the greatest frequency of collisions, with 24 collisions in 1995, 17 in 1996, 13 in 1997, 13 in 1998, and 12 in 1999. Rear end collisions were the most frequent crash type at all seven intersections. This type of crash is typical for congested conditions at signalized intersections. Overall the crash

rates (number of collisions per million entering vehicles) are relatively low at all intersections. No safety issues were identified in the crash reports.

The anticipated growth for this area will increase the traffic demand for the roadway. As the traffic volumes continue to increase on this roadway facility, the congestion, delay and number of crashes can be expected to increase. Improvements that are being considered as part of this PD&E Study include widening the existing roadway (additional through and turn lanes), providing adequate and separate pedestrian and bicyclist facilities, and adding a median. These improvements will greatly enhance the corridor's safety and reduce the potential for crashes.

3.3 Consistency with Transportation Plans

The Hillsborough County Metropolitan Planning Organization's (MPO) *2025 Long Range Transportation Plan (LRTP)*[2] and Hillsborough County's *Comprehensive Plan for Unincorporated Hillsborough County Florida (March 1999)*[3] include proposed improvements for portions of the entire Study corridor. Specifically, the MPO's 2025 LRTP recommends widening S.R. 574 from Highview Road to Kingsway Road from a two-lane undivided section to a four-lane divided section. Hillsborough County's *Comprehensive Plan for Unincorporated Hillsborough County Florida (March 1999)* recommended widening S.R. 574 from a two-lane undivided section to a six-lane divided section from U.S. Hwy 301 to McIntosh Road. (The widening of S.R. 574 from U.S. Hwy 301 to west of Highview Road has already been constructed). However, this comprehensive plan was updated in March 2001 to be consistent with the recommendations of the MPO 2025 LRTP.

The *Final Traffic Technical Memorandum* recommends widening S.R. 574 to a six-lane section from the existing six-lane section west of Highview Road to Kingsway Road, and a four-lane section from east of Kingsway Road to McIntosh Road. These recommendations were set forth in order to maintain an acceptable LOS.

3.4 Social/Economic Demands

According to the University of Florida's *Florida Population Studies*[4] Hillsborough County will continue to grow over the next twenty years. Consequently, it is anticipated that the travel demand within the Study corridor will continue to increase in the future.

S.R. 574 extends through central Hillsborough County, Florida. It extends from Dale Mabry Highway (U.S. Hwy. 92) in Tampa east to Thonotosassa Road (S.R. 566) in Plant City. S.R. 574 is therefore a vital link in the region's roadway network and directly affects the capability for future development in this area of Hillsborough County. In the vicinity of the Study corridor, S.R. 574 traverses both commercial and residential areas.

An analysis of social/economic indicators reveals that the S.R. 574 corridor will experience modest growth in the future. Based on population projections from

the University of Florida's population studies, the median population of Hillsborough County from 2000 to 2010 is anticipated to increase by 14.4 percent to an estimated total of 1,124,000 people. Likewise, the median population of Hillsborough County is anticipated to grow by 13.1 percent for a total population of 1,270,800 people between 2010 and 2020. The population growth rate of Hillsborough County is slightly lower, between one and two percent, than the statewide growth rate.

The proposed S.R. 574 improvements will benefit the anticipated social and economic demands within this corridor by enhancing travel mobility, improving accessibility, and relieving congestion while providing a more safe and efficient roadway.

3.5 References

1. Final Traffic Technical Memorandum; MSI/Bayside Engineering, Inc.; Tampa, Florida; August 2000.

2. 2025 Long Range Transportation Plan; Metropolitan Planning Organization; Tampa, Florida; November 9, 1998.

3. Comprehensive Plan for Unincorporated Hillsborough County Florida; Hillsborough County; Tampa, Florida; March 1999.

4. Florida Population Studies. (Volume 33, Number 2, Bulletin 126); University of Florida.

4.0 EXISTING CONDITIONS

4.1 Existing Roadway Characteristics

4.1.1 Functional Classification

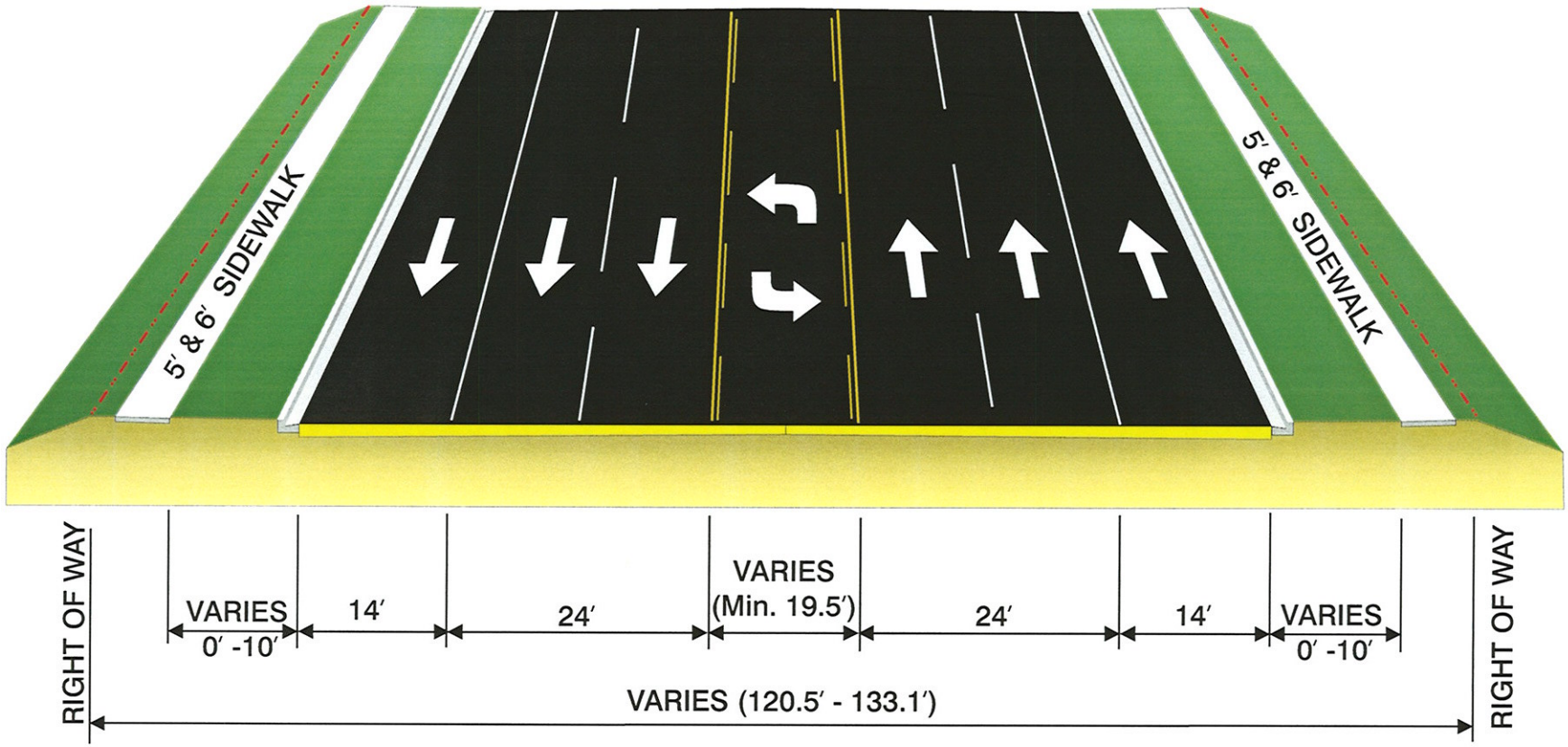
Based on Hillsborough County's *Comprehensive Plan for Unincorporated Hillsborough County* and FDOT's Straight Line Diagrams for Hillsborough County, the section of S.R. 574 from C.R. 579 (Mango Road) to McIntosh Road is classified as an urban minor arterial. The posted speed limit varies between 45 and 50 mph.

S.R. 574 connects C.R. 579 on the western end of the project and McIntosh Road on the eastern end of the project, both of which are arterials. S.R. 60 (Brandon Boulevard/Adamo Drive) and U.S. 92 (Hillsborough Avenue) are the closest parallel arterials to S.R. 574. S.R. 60 and U.S. 92 are located approximately 3.0 miles south and 1.6 miles north of the Study corridor, respectively. U.S. 92 is classified as an urban principal arterial from C.R. 579 to east of Pasadena Drive (approximately 2.9 miles) and a rural principal arterial from east of Pasadena Drive to McIntosh Road (approximately 0.8 miles). S.R. 60 is classified as an urban principal arterial from Falkenburg Road to Valrico Road (approximately 5.2 miles).

Martin Luther King Boulevard is not a designated evacuation route, but it is an important access road to nearby I-75 for emergency situations.

4.1.2 Typical Sections

Throughout the project limits, the S.R. 574 corridor consists of several different typical cross sections. The existing typical section information is provided in Table 4-1. As shown in Figure 4-1, the typical section at the intersection of C.R. 579 and S.R. 574 is a six-lane section, which transitions to a three-lane section east of Highview Road (Figure 4-2). The three-lane section is retained until Kingsway Road where the roadway transitions to a two-lane section that proceeds to McIntosh Road (Figure 4-3). One 0.37-mile section of the roadway, located between C.R. 579 and Lake Drive, has an urban typical section.



C.R. 579 (MANGO ROAD) TO HIGHVIEW ROAD

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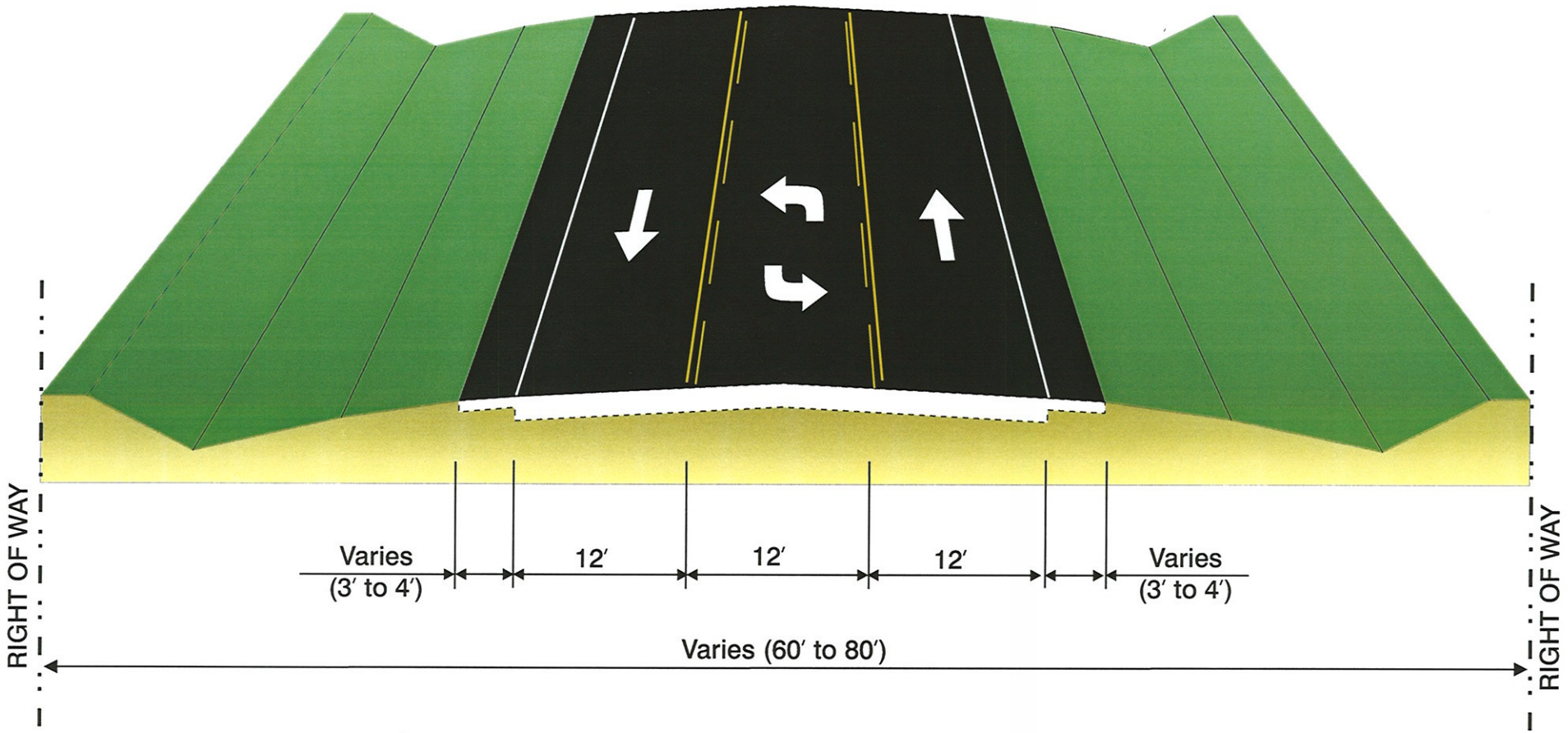
EXISTING ROADWAY TYPICAL SECTION

Figure 4-1



HIGHVIEW ROAD TO KINGSWAY ROAD

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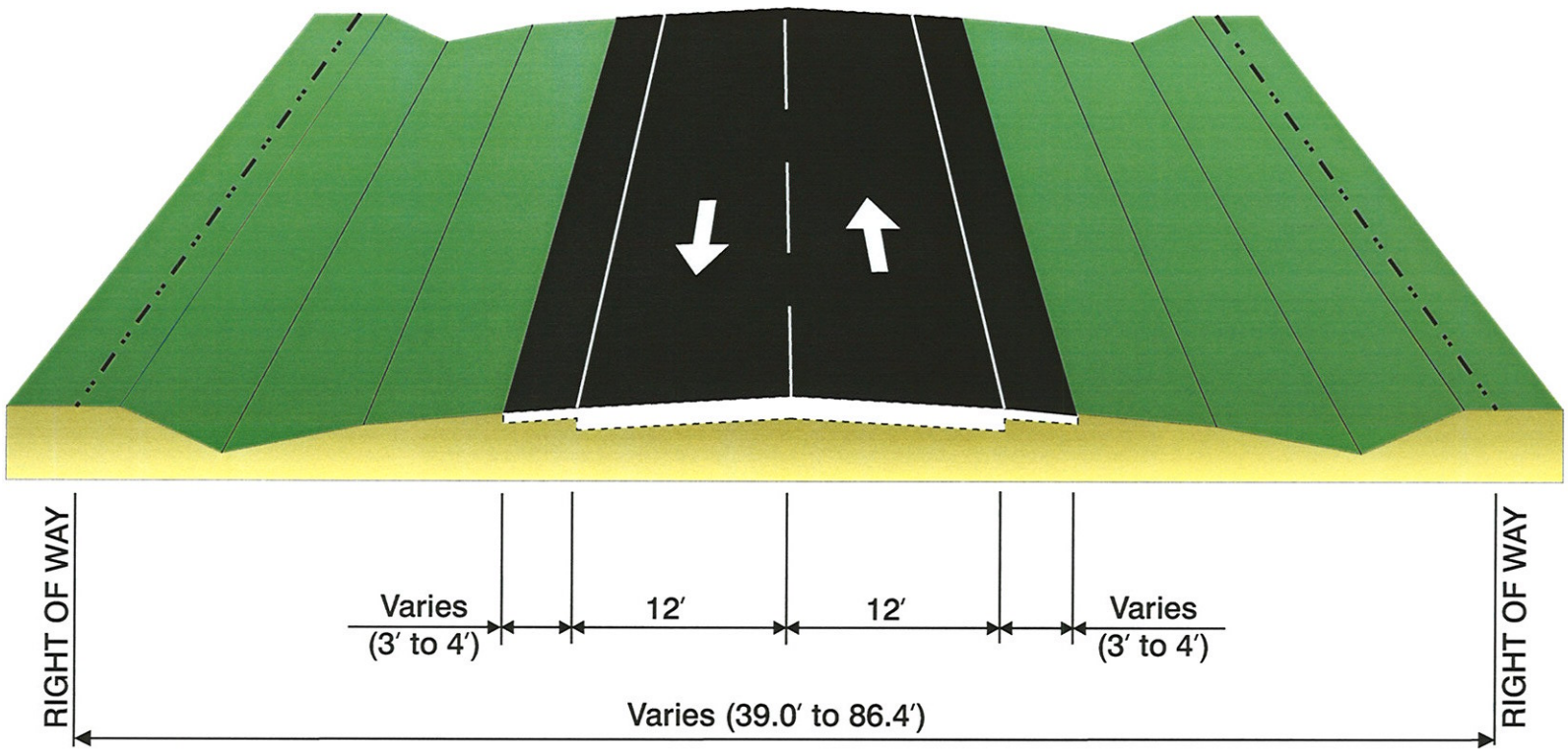
EXISTING ROADWAY TYPICAL SECTION

Figure 4-2



KINGSWAY ROAD TO McINTOSH ROAD

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EXISTING ROADWAY TYPICAL SECTION

Figure 4-3

Table 4-1: Existing Typical Section Data

Segment Mileposts From	To	Number & Width of Lanes (Feet)	Median Type & Width (Feet)	Type of Curb & Gutter or Gutter	Shoulder Type & Width (Feet)
4.126	4.126	4-(12) 2-(14)	Conc.- (6)	Type F	N/A
4.126	4.368	Trans. From 4-(12) & 2-(14) To 3-(12)	N/A	Type F	N/A
4.368	4.622	3-(12)	N/A	Type F	N/A
4.622	4.738	3-(12)	N/A	N/A	Not Continuous
4.738	4.892	3-(12)	N/A	Shoulder Gutter (Lt.)	Not Continuous
4.892	5.034	3-(12)	N/A	Shoulder Gutter (Lt.) & Type F (Rt.)	N/A
5.034	5.135	3-(12)	N/A	Type F (Rt.)	Paved (Lt.-4)
5.135	5.645	3-(12)	N/A	N/A	Paved (4)
5.645	6.824	2-(12)	N/A	N/A	Paved (3 – 4)
6.824	6.830	2-(12)	N/A	N/A	Bridge
6.830	7.748	2-(12)	N/A	N/A	Paved(4)

4.1.3 Pedestrian and Bicycle Facilities

The existing sidewalks along S.R. 574 are limited to one section from C.R. 579 (M.P. 4.126) to east of Highview Road (M.P. 4.326) on the north side and from C.R. 579 (M.P. 4.126) to north of Lake Drive (M.P. 4.622) on the south side. The width of the sidewalk varies between 5 feet (with a 1-foot utility strip) and 6 feet (without a utility strip). In addition, sidewalks are provided along two of the side streets. Parsons Avenue has a sidewalk along both sides of the north and south legs of the intersection, and Kingsway Road has a sidewalk along the east side of the north leg of the intersection.

There are currently no designated bicycle facilities along S.R. 574 between C.R. 579 and McIntosh Road. The locations within the Study corridor where at least a 4-foot paved shoulder is provided can be utilized by bicyclists as an undesignated bicycle lane (refer to Table 4-1, existing typical section data). Table 4-2 shows the signalized intersections in the Study corridor that provide crosswalks and/or pedestrian push buttons.

Table 4-2: Existing Signalized Intersection Data

Cross Street	Crosswalk	Pedestrian Push Button
C.R. 579 (Mango Rd.)	All Four Approaches	All Four Approaches
Highview Rd.	All Four Approaches	All Four Approaches
Pine St.	West Leg of Intersection	West Leg of Intersection
Parsons Ave.	South Leg of Intersection	South Leg of Intersection
Kingsway Rd.	None	None
N. Valrico Rd.	None	None
McIntosh Rd.	None	None

4.1.4 Right-of-Way

The existing right-of-way along S.R. 574 from C.R. 579 to McIntosh Road ranges from 39.0 feet to 133.1 feet. Existing right-of-way width information was obtained from the FDOT Maintenance Maps, Right-of-Way Control Survey and various construction projects for S.R. 574 as well as the Realty Atlas (TRW REDI Property Data).

Table 4-3 summarizes the existing right-of-way widths along the project, which are also shown on the conceptual plans contained in Appendix A.

Table 4-3: Summary of Existing Right-of-Way Widths

Roadway Segment	Right-of-Way Width (Feet)
S.R. 574 from C.R. 579 to Highview Road	64.6 to 133.1
S.R. 574 from Highview Road to Lake Drive	73.7 to 73.8
S.R. 574 from Lake Drive to Pine Street	73.8 to 73.9
S.R. 574 from Pine Street to Oak Street	80.0
S.R. 574 from Oak Street to Roland Street	68.4 to 78.7
S.R. 574 from Roland Street to Taylor Road	68.1 to 68.3
S.R. 574 from Taylor Road to Parsons Avenue	60.0 to 80.0
S.R. 574 from Parsons Avenue to Park Street	80.0
S.R. 574 from Park Street to Kingsway Road	68.0 to 80.0
S.R. 574 from Kingsway Road to Florida Avenue	50.5 to 50.6
S.R. 574 from Florida Avenue to Oak Street	42.1 to 48.8
S.R. 574 from Oak Street to Lenna Avenue	40.6 to 42.3
S.R. 574 from Lenna Avenue to Lakeview Avenue	42.7 to 43.9
S.R. 574 from Lakeview Avenue to Chastain Road	39.0 to 56.8
S.R. 574 from Chastain Road to N. Valrico Road	42.9 to 86.0
S.R. 574 from N. Valrico Road to McIntosh Road	54.8 to 86.4

4.1.5 Horizontal Alignment

Table 4-4 summarizes the existing roadway horizontal alignment characteristics for S.R. 574 based on information obtained from FDOT Maintenance Maps and construction plans. As-built plans for S.R. 574 were limited to miscellaneous construction projects.

Table 4-4: Existing Horizontal Alignment Characteristics

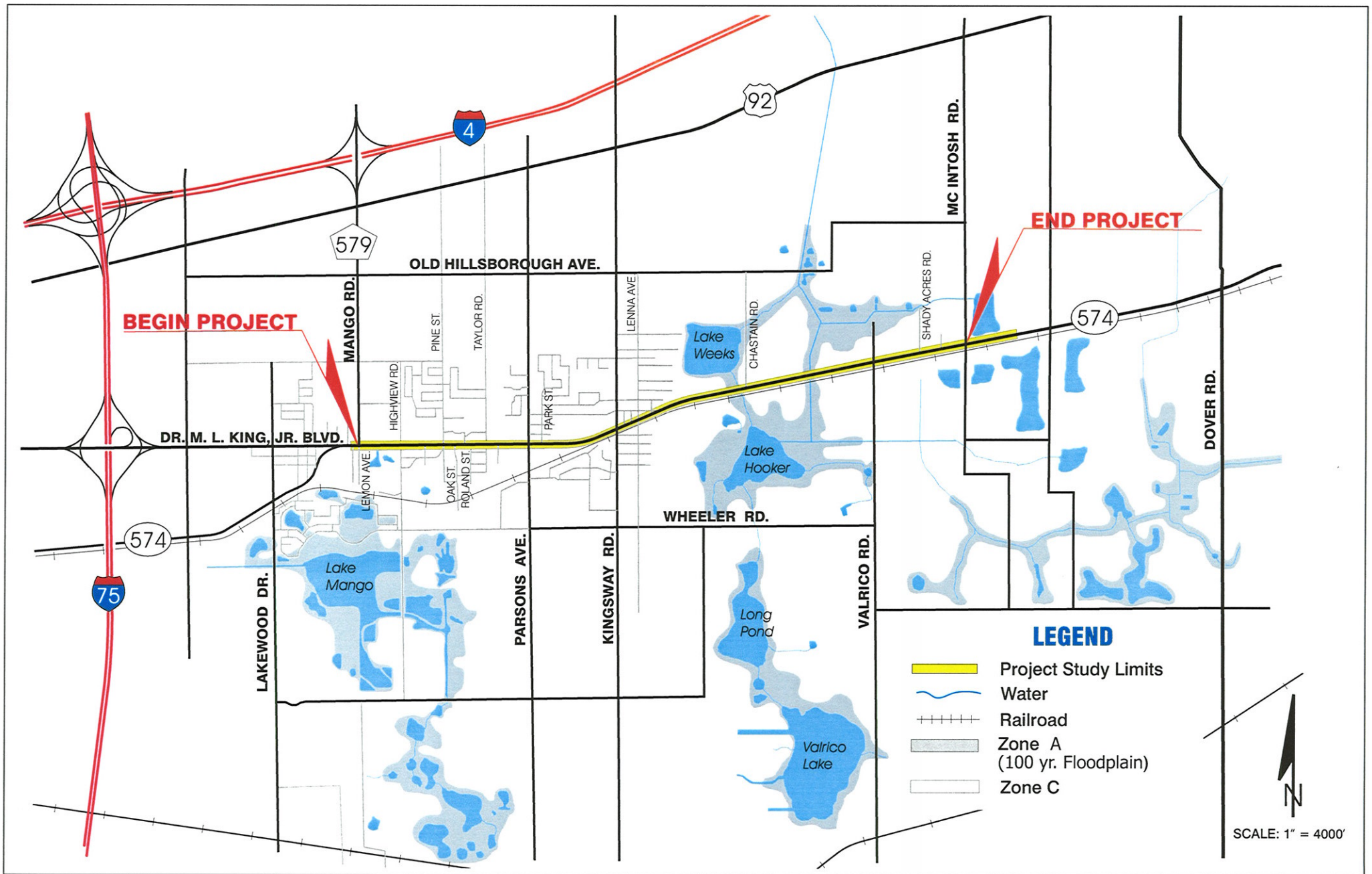
P.I. Station	Location	Degree and Direction of Deflection	Degree of Curvature
320+57.25	Centerline of Pine St.	00°06'11" (Rt.)	No Curve
363+62.12	1077.2 feet west of Kingsway Rd.	22°45'17" (Lt.)	03°50'00"
395+13.01	2072.6 feet east of Kingsway Rd.	12°24'04" (Rt.)	02°50'00"
435+34.18	2146.8 feet west of Valrico Rd.	00°04'06" (Lt.)	No Curve
458+62.38	181.4 feet east of Valrico Rd.	04°34'23" (Lt.)	01°20'00"
464+77.04	796.1 feet east of Valrico Rd.	04°32'11" (Rt.)	01°50'00"
485+33.15	9.8 feet east of McIntosh Rd.	01°29'00" (Rt.)	00°17'00"

4.1.6 Vertical Alignment

The as-built plans that were available for S.R. 574 did not provide vertical alignment information. Therefore, contour maps from the Southwest Florida Water Management District (SWFWMD), dated October 1982 (photography), were utilized to approximate the existing roadway vertical alignment. Table 4-4 summarizes the approximate elevations for the existing roadway near major cross-streets. All elevations are based on the National Geodetic Vertical Datum (1927 NGVD).

The centerline elevation of S.R. 574 varies from a high elevation of approximately 82.5 feet located west of Parsons Avenue, to a low elevation of approximately 43.6 feet located at Chastain Road.

As shown in Table 4-5, several segments of S.R. 574 presently provide grades equal to or less than the minimum standard grade of 0.3 percent (*Plans Preparation-English, January 2000*)[2]. Also, stopping sight distance deficiencies might exist at the locations with high elevations. The existence of these deficiencies will be verified during the design phase and modifications to the roadway geometry will be implemented to provide the standard stopping sight distance, if required.



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FLOODPLAINS

Figure 4-4

Table 4-5: Existing Vertical Alignment Characteristics

Vicinity (Closest Major Cross-Streets)	Approximate Milepost	Approximate Point Elevation (Feet)	Grade to Next Point
S.R. 574 at C.R. 579 (Mango Rd.)	4.126	56.6	-0.8%
S.R. 574 at Highview Rd.	4.368	46.0	-0.01%
S.R. 574 at Lake Dr.	4.495	45.5	+2.1%
S.R. 574 at Pine St.	4.618	59.0	+1.3%
S.R. 574 at Oak St.	4.691	64.0	+0.4%
S.R. 574 at Roland St.	4.778	66.0	+1.5%
S.R. 574 at Taylor Rd.	4.871	73.2	+0.4%
S.R. 574 at Parsons Ave.	5.122	78.3	-0.6%
S.R. 574 at Park St.	5.191	76.0	-0.04%
S.R. 574 at Kingsway Rd.	5.645	75.0	-1.8%
S.R. 574 at Florida Ave.	5.692	70.5	+0.2%
S.R. 574 at Oak St.	5.745	71.0	-0.2%
S.R. 574 at Lenna Ave.	5.782	70.6	-1.7%
S.R. 574 at Lakeview Ave.	5.874	62.5	-0.7%
S.R. 574 at Seffner Rd.	5.914	61.0	-1.3%
S.R. 574 at Commee Cove	6.099	48.5	-0.5%
S.R. 574 at Chastain Rd.	6.442	43.6	+0.3%
S.R. 574 at Valrico Rd.	7.206	55.0	+0.2%
S.R. 574 at Shady Acres Rd.	7.462	58.0	+0.01%
S.R. 574 at McIntosh Rd.	7.748	58.1	-----

4.1.7 Drainage

4.1.7.1 Soils Information

The USDA's *Soil Survey of Hillsborough County, Florida*[3] was reviewed to identify the soil types within the Study corridor. In general, soils are sandy and range from poorly drained to excessively drained depending on elevation. More information regarding the soil types and characteristics is provided in Section 4.1.8.

4.1.7.2 Base Floodplains

Figure 4-4 illustrates the existing floodplains within the Study corridor, as derived from the Flood Insurance Rate Map (FIRM) published by the Federal Emergency Management Agency (FEMA)[4]. Two floodplains exist within the Study corridor and are briefly described below.

Floodplain No. 1 - The Lake Hooker to Lake Weeks crossing, which ultimately discharges into Lake Thonotosassa, is located within the floodplain limits shown on FIRM panel number 120112 0385 B, dated June 18, 1980. This floodplain is located within Flood Zone A. The areas within Flood Zone A are classified as

Parsons Avenue, the project is part of the Tampa Bypass Canal Watershed (portion of the Hillsborough River Watershed). From Parsons Avenue eastward to the end of the corridor, the project is part of the Pemberton Creek/Baker Canal Watershed.

The Tampa Bypass Canal is a wide trapezoidal channel, and a regulated floodway that contains six major control structures operated by SWFWMD. The canal is located 3.2-miles west of the project and flows southward to Palm River, which in turn flows to McKay Bay. Tributaries and outfalls into the canal are controlled by riser structures, which are eighty in number along the canal's length. The total watershed area served by the canal is 45.9 square miles, and the sub-watershed that contains the corridor is identified as "Mango," which has a drainage area of 9.1 square miles. This sub-watershed originates at Lake Mango and flows through a main drainage ditch westward to the bypass canal. This main ditch receives runoff from adjacent areas along its length and includes a crossing beneath I-75. From I-75 the ditch continues through the center of Sabal Business Park to a riser structure at the canal. The open basins within this portion of the Study corridor ultimately discharge via this ditch system to the Tampa Bypass Canal. The closed basins within the Study corridor do not outfall to the Tampa Bypass Canal unless significant flooding and overtopping of the nearby CSX railroad tracks, to the south, occur.

The Pemberton Creek/Baker Canal (PBA) Watershed is 65.0 square miles in size, and contains six major conveyance systems and one outfall. The six conveyance systems are Flint Creek, Campbell Branch, Antioch Branch, Baker Creek, Pemberton Creek, and Baker Canal. Baker Creek receives storm water from the convergence of Pemberton Creek and Baker Canal, and flows one-mile northward into Lake Thonotosassa. This lake is the largest lake in Hillsborough County with a surface area of 819-acres and an average depth of 11.5 feet. The lake outfalls through a control structure operated by SWFWMD into Flint Creek, which flows northward to the Hillsborough River. (Campbell Branch and Antioch Branch flow into Flint Creek, and the Hillsborough River flows southward to Tampa Bay).

The corridor is located in the Baker Canal sub-watershed, which is the southernmost sub-watershed in the PBA system (Pemberton Creek is north of this sub-watershed and east of Lake Thonotosassa, and originates in Plant City six-miles away). Baker Canal originates in Dover, east of the corridor, and flows westward to Lake Hooker. This lake receives storm water from two interconnected lakes to the south, Valrico Lake and Long Pond, and then discharges northward through two crossings beneath S.R. 574. The western most crossing proceeds to nearby Lake Weeks through a triple concrete pipe culvert, and Baker Canal crosses nearby through the bridge opening described in Section

4.2. The outfall of Lake Weeks connects to Baker Canal north of the corridor, and the canal then continues to the before-mentioned convergence with Pemberton Creek and ultimately to Lake Thonotosassa.

Figure 4-5 depicts the water shed and basin boundaries as well as the existing drainage patterns within the Study area. Tables 4-6 and 4-7 summarize the specific basin data.

Table 4-6: Tampa Bypass Canal Watershed

Sub Basin ID Number	Corresponding Study ID Number	25-Year DHW Elevation (Feet)	100-Year DHW Elevation (Feet)	Open/ Closed	Sub Basin Area (Acres)	TOC (min.)	CN
1	615450	40.91	42.73	Closed	107.75	44.53	86.01
2	615660	-----	-----	Closed	151.95	60.00	81.62
15	615500	44.33	45.24	Open	128.72	86.29	79.71

Table 4-7: Baker Canal Watershed

Sub Basin ID Number	Corresponding Study ID Number	25-Year DHW Elevation (Feet)	100-Year DHW Elevation (Feet)	Open/ Closed	Sub Basin Area (Acres)	TOC (min.)	CN
3	0311007	70.62	71.53	Open	50.90	29.00	74.00
4	0309790	64.90	66.22	Closed	67.80	34.00	67.00
5	0309800	46.86	47.42	Open	299.60	41.00	73.00
6	0309596	46.26	47.32	Open	181.50	68.00	80.00
7	0309650	46.26	47.32	Open	75.20	42.00	81.00
8	0309680	58.22	58.41	Open	17.60	44.00	71.00
9	0310075	58.48	58.90	Open	51.90	57.00	72.00
10	0310060	48.52	49.90	Open	124.10	85.00	77.00
11	0310002	47.38	48.85	Open	28.70	53.00	80.00
12	0311000	47.45	48.97	Open	887.50	148.00	80.00
13	0311003	72.33	72.40	Open	29.90	61.00	57.00
14	0311005	66.79	67.66	Open	96.20	29.00	63.00

"areas of 100-year flood, base flood elevations and flood hazard factors not determined".

Floodplain No. 2 – The Baker Canal crossing is located within the floodplain limits shown on FIRM panel number 120112 0385 B, dated June 18, 1980. This floodplain is also located within Flood Zone A.

The remainder of the Study corridor is located within Flood Zone C, which is classified as "areas of minimal flooding".

The corridor's floodplains are narrow areas associated with the slight overtopping of two man-made drainage channels, Lake Weeks Creek and Baker Canal, which traverse S.R. 574. These floodplains are bordered by low-density commercial and residential property and the CSX railroad. Although the channels provide important storm water conveyance, the floodplains beyond the channels do not provide any of the following benefits due to their small areas and their low frequency of inundation: water quality, groundwater recharge, wildlife habitat, natural beauty, recreation, agriculture, aquaculture or forestry. Constructing a longer culvert at Lake Weeks Creek and a wider bridge at Baker Canal will cause small impacts to these floodplains. However, since these floodplains are associated with conveyance and not storage, mitigation for these impacts will be provided by demonstrating hydraulic equivalency for the two crossings in a 100-year storm event (no additional storm water attenuation should be required to compensate for the filled areas). The best management practices should be implemented during construction and maintenance to prevent erosion and siltation. Wetland impacts would be within man-made ditches, and to wetlands of marginal quality that contain nuisance plant species and do not provide adequate wildlife habitats. Therefore, wetland mitigation is not expected to be required for the impacts within the floodplains that will be caused by the improved channel crossings.

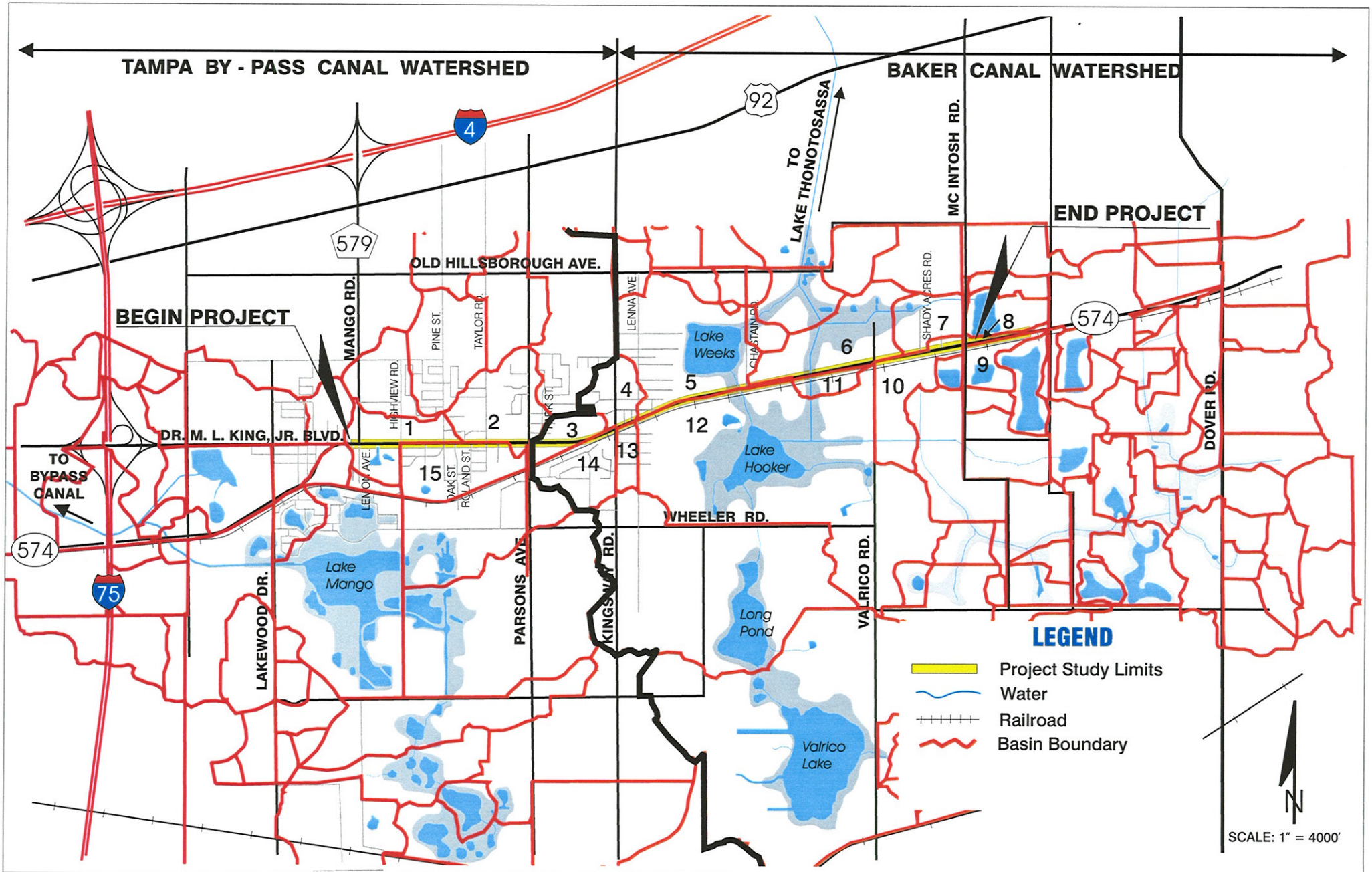
4.1.7.3 Regulated Floodways

There are no regulated floodways within the Study corridor.

4.1.7.4 Drainage Patterns

The existing drainage patterns and basin limits were developed utilizing USGS quadrangle maps, SWFWMD contour aerial photography, data collected during field visits and existing drainage studies (*Hillsborough County Stormwater Management Master Plan*[5] and *Hillsborough River Watershed Management Plan*[6]).

The limits of the Study corridor lie within two significant watersheds. From the beginning of the corridor eastward to



MLK SR 574 BLVD PD&E Study

S.R. 574 (Martin Luther King Jr. Blvd.)
Project Development & Environment (PD&E) Study
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DRAINAGE BASINS

Figure 4-5

4.1.7.5 Drainage Problems

The FDOT Maintenance Department, Hillsborough County and Southwest Florida Water Management District (SWFWMD) were contacted to obtain information regarding existing flood problems in the vicinity of S.R. 574. The following is a list of the problems that were identified by these agencies.

The FDOT Maintenance Department indicated the following drainage problems.

- Conservation Easement (MP 4.254) – the adjacent used car lot experienced significant flooding; however, flooding has not been a problem in the area since spillways were installed.

- Automotive Systems (MP 4.575) – experiences flooding due in part to the lack of roadway shoulder and the existing condition of the privately owned outfall ditch (associated with the Pine Square Village shopping center). The capacity of the outfall ditch is hindered by the amount of vegetation, silt, debris, etc. in it. The ditch has never been cleaned; in addition, the Department does not have an easement for this outfall ditch.

- Pine Street (MP 4.618) – experiences flooding in the general area of the intersection due to the lack of a well defined drainage system. Currently heavy rain causes standing water (ponding) at this intersection, which disappears within a few days due to evaporation.

- Burger King, located west of Parsons Avenue (MP 5.073) – experiences flooding if the sump pump at this location is not utilized during periods of heavy rain. The sump pump is located within FDOT right-of-way; however, it is owned, operated and maintained by Burger King.

- Storage Units, located west of Kingsway Road (MP 5.499) – this area has historically experienced flooding due to its low elevation. Upon removal of the flea market and construction of the storage units, an underdrain system was constructed on the north and south sides of the roadway in an effort to correct the existing flooding problem. During construction of the storage units, a significant amount of silt and debris were deposited into the underdrain system causing significant blockage. The FDOT is looking into the removal and replacement of the existing underdrain system due to its existing condition and the possibility of improper initial construction.

- Bridge #100033 (MP 6.824) – this area experiences restricted flow due to the presence of heavy vegetation and debris, and one of the wingwalls experienced a significant washout that had to be corrected.

- Shady Acres Road (MP 7.462) – flooding of the ditch during heavy rain and constant standing water due to a blocked outfall.

- Railroad Ditch (MP 5.645 to MP 7.748) – experiences poor conveyance due to the presence of heavy vegetation. Maintenance has difficulty maintaining this ditch because of the existing ditch slope, and the possibility of impacting a gas line during maintenance operations.

- Drainage Ditch, located north of McIntosh Road (MP 7.748) – experiences poor conveyance due to the presence of heavy vegetation. The existing cross section is difficult for the FDOT Maintenance Department to maintain.

In response to the flooding problems associated with the weather pattern known as El Nino (Fall 1997 to Spring 1998) and an above average seasonal rainfall over the summer of 1998, Hillsborough County performed the *Lake Valrico/Long Pond Cross Drain Improvement Hydraulic Calculation Report.* Phase I and Phase II improvements were developed, as part of this report, to identify the drainage improvements needed for the Pemberton/Baker Creek watershed on both the north and south sides of S.R. 574. The intention of Phase I was accomplished via the Pemberton Creek "Long Pond Outfall Upgrade" ,CIP No. 49282. This project has been completed. The purpose of this project is to improve the Lake Valrico and Long Pond drainage system (southwest region of the Pemberton/Baker Creek watershed) by the following means:

- Construction of a ditch with a 10-foot bottom width between Valrico Lake and Long Pond

- Addition of a control gate at Long Pond that would enable the lake to be lowered 1.9 feet prior to storm events

- Replacement of an existing 24-inch culvert with a 36-inch culvert at Wheeler Road to improve flows from Long Pond to Lake Hooker

Phase II is currently under consideration. The intention of this phase is to improve the drainage capabilities of this system via:

- Reconstruction of the triple pipe culvert at S.R. 574 for a positive drainage slope

- Cleaning of the channel and replace two side street cross culverts between Lake Weeks and Baker Canal

- Excavation of a storm water attenuation site along Baker Canal near the Pemberton Creek confluence with 75-acre feet of storage.

It should be noted that significant flooding occurred along Baker Canal during the 1988 storm, which closed I-4 for eight days. The flooding in this sub-watershed is caused by Pemberton Creek's hydraulic advantage over Baker Canal, which causes back flooding into the low areas along the canal and reverses the canal's flow. This temporary reversal of flow further impacts areas upstream of the canal, which includes I-4, the Study corridor, and the before-mentioned interconnected lakes. The County's master plan and watershed studies recommend many improvements to reduce the flooding problems within the PBA watershed, some of which have been performed (e.g. dredging Baker Creek near Lake Thonotosassa). Most of these improvements are to install larger cross culverts and widen the existing channels, and if all of the improvements are constructed then the flood levels along Baker Canal are expected to be reduced by up to 2 feet. The only recommendations made by the studies for the Baker Canal sub-watershed are to raise Muck Pond Road and Jaudon Road so that they are not overtopped in a 25-year storm event (these improvements are outside of the Study corridor).

SWFWMD's records indicate three complaints that have been filed within the vicinity of S.R. 574. One of the complaints (CT #48920) pertains to a private residence in the Lakeview Village subdivision (near Wheeler Rd.), which is experiencing flooding due to lack of conveyance within the existing drainage system along the adjacent CSX property. The CSX property is overgrown with vegetation and contains debris. SWFWMD has no jurisdiction regarding this matter; therefore, it is the responsibility of CSX to remedy this situation.

The other two complaints (CT #60611 and CT #60612) pertain to the North Grove Shopping Center that is located on the northwest corner of the S.R. 574 and Parsons Avenue intersection. The residents adjacent to the shopping center are experiencing flooding due to the improper maintenance of the onsite drainage pond and the pumping of the excess water into an alternative offset pond. Since these complaints pertain to a property that was issued a permit prior to 1984, SWFWMD turned these complaints

over to the Department of Environmental Protection (DEP) in September 1999.

4.1.8 Geotechnical Data

The evaluation of the soil conditions within the project focused on a review of published literature (Aerial photography, County and Natural Conservation Services data and United States Geological Survey quadrangle mapping), field reconnaissance, and an inventory of the anticipated soil conditions along S.R. 574. A Preliminary Geotechnical Investigation[7] summarizes the findings from the soils investigation.

The soil survey of Hillsborough County, Florida, published in May , 1989, by USDA SCS was reviewed for general near surface soil information within the general vicinity of the Study. This information indicates that there are ten primary mapping units within the proposed Study area. The soil units encountered consist of shallow fine sands (A-3) and loamy fine sands (A-2-4) extending from the existing ground surface to 80 inches deep.

The Adamsville, Basinger, Myakka, Ona, St. Johns and Seffner soil series represent the portion of the soils within the Study corridor that are poorly drained with seasonal high groundwater levels varying from 2 feet above the existing ground surface to 3.5 feet below the existing surface. These soil types are typically encountered on broad plains on the flatwoods and in swamps and depressions and along the drainage ways of the flatwoods. For this Study, it is anticipated that these soil types would be present between Lenna Avenue and Shady Acres Road.

The remaining soil types within the Study corridor consist of Candler, Gainesville, Lake and Orsino Series. These soil types are moderately to excessively drained with seasonal high groundwater elevations varying from 3.5 feet to 5 feet deep to in excess of 6 feet below the existing ground surface. It should be noted that within the urban portion of the project debris as well as unsuitable material may be encountered.

As part of the preliminary investigation, a preliminary sinkhole/ground subsidence evaluation was conducted that consisted of field reconnaissance of the proposed roadway alignment as well as a Study of available published data and field investigation information. Based on the data available, it was concluded that there was no evidence of sinkhole activity along the Study corridor; however, it should be noted that the ecologic and hydrogeologic conditions within the Study corridor could potentially result in the development of sinkholes.

4.1.9 Crash Data

As part of the *Final Traffic Technical Memorandum*, the annual crash data for each of the Study intersections was obtained from FDOT for the years 1995 through 1999. In conjunction with the review of the crash data,

crash diagrams were prepared at each of the seven Study intersections for all five years.

A summary of the relevant crash data from these reports is presented in Table 4-8. The information provided in this table includes collision type, crash severity (fatal, injury or property damage), time of day, pavement conditions and collision rate for each of the intersections per year.

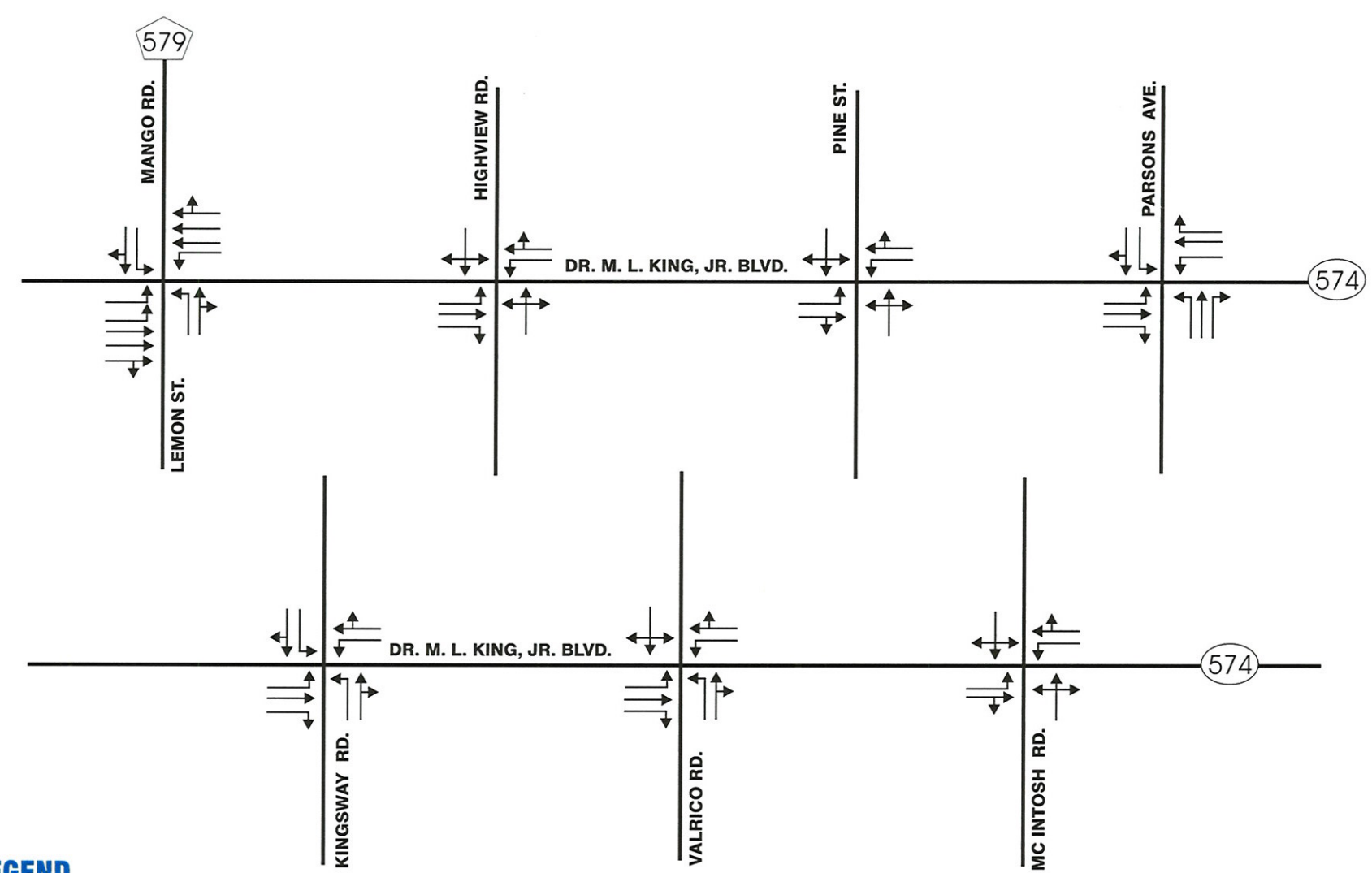
Between 1995 and 1999, a total of 257 crashes were reported at these seven intersections. None of these crashes resulted in any fatalities. Of the seven intersections, the intersection of S.R. 574 at Highview Road had the greatest frequency of collisions, with (24) collisions in 1995, (17) in 1996, (13) in 1997, (13) in 1998, and (12) in 1999. Rear end collisions were the most frequent crash type at all seven intersections. This type of crash is typical for congested conditions at signalized intersections. Overall the crash rates (number of collisions per million entering vehicles) are relatively low at all intersections. There were no safety issues identified in the crash reports or observed during the field reconnaissance.

It should be noted that the Transportation section of the *Comprehensive Plan for Unincorporated Hillsborough County Florida (March 1999)* rated the intersection of S.R. 574 and Parsons Avenue as the twenty-fifth highest accident location within the unincorporated county. This rating was based on accident data collected during the period of January 1992 through December 1992, and the number of accidents during this period totaled (53) at this intersection.

4.1.10 Intersections and Signalization

Table 4-2 previously identified the location of the existing signalized intersections, and Figure 4-6 illustrates the existing lane geometry at each signalized intersection along S.R. 574.

Hillsborough County maintains all of the traffic signals along S.R. 574 from C.R. 579 to McIntosh Road.



LEGEND

Lane Geometry

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EXISTING LANE GEOMETRY

Figure 4-6

Table 4-8: Crash Summary

Intersection	SR 574 at CR 579 (Mango Road)						SR 574 at Highview Road						SR 574 at Pine Street						SR 574 at Parsons Avenue					
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total
Rear End	9	3	8	2	2	24	11	3	5	6	11	36	5	2	4	4	7	22	2	0	1	1	6	10
Left Turn	3	2	0	1	2	8	1	2	1	2	0	6	0	1	1	1	0	3	0	3	0	1	2	6
Angle	3	0	1	1	1	6	12	12	5	3	1	33	0	2	0	2	1	5	1	2	1	0	0	4
Sideswipe	0	0	1	0	1	2	0	0	1	2	0	3	0	0	2	2	0	4	0	0	1	0	1	2
Right Turn	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1
Head On	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Other	1	0	0	2	0	3	0	0	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	1
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injury	5	2	5	6	2	20	9	9	6	7	5	36	3	4	2	4	3	16	2	3	3	1	4	13
Property Damage	12	3	5	1	4	25	15	8	7	6	7	43	2	2	5	6	7	22	3	2	1	1	6	13
Day	13	5	6	5	3	32	18	14	9	12	9	62	4	3	6	8	8	29	4	4	3	2	7	20
Night	4	0	4	2	3	13	6	3	4	1	3	17	1	3	1	2	2	9	1	1	1	0	3	6
Wet	4	1	4	3	2	14	13	3	1	4	4	25	1	2	0	1	2	6	0	0	1	0	2	3
Dry	13	4	6	4	4	31	11	14	12	9	8	54	4	4	7	9	8	32	5	5	3	2	8	23
Collision Rate	2.5	0.7	1.4	0.9	0.5		3.5	2.5	1.8	1.7	1		0.7	0.9	1	1.3	0.9		0.7	0.7	0.6	0.3	1.1	

Intersection	SR 574 at Kingsway Road						SR 574 at Valrico Road						SR 574 at McIntosh Road						Corridor Total
Collision Type	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	1995	1996	1997	1998	1999	Total	Total
Rear End	1	0	0	2	0	3	3	2	1	2	5	13	0	2	2	2	3	9	117
Left Turn	0	0	2	3	2	7	0	0	1	0	1	2	2	1	0	2	1	6	38
Angle	2	2	0	0	1	5	0	0	0	1	0	1	1	1	2	3	2	9	63
Sideswipe	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	13
Right Turn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Ped / Bike	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Head On	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Other	0	0	0	0	1	1	3	0	0	1	0	4	1	0	0	1	2	4	15
Fatal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injury	1	1	0	3	2	7	4	0	0	2	3	9	3	4	3	6	1	17	118
Property Damage	2	2	3	2	3	12	2	2	2	2	3	11	1	0	1	3	8	13	139
Day	2	2	3	4	3	14	4	1	1	4	4	14	4	4	3	8	9	28	199
Night	1	1	0	1	2	5	2	1	1	0	2	6	0	0	1	1	0	2	58
Wet	0	1	0	2	0	3	0	0	1	0	1	2	0	2	2	0	3	7	60
Dry	3	2	3	3	5	16	6	2	1	4	5	18	4	2	2	9	6	23	197
Collision Rate	0.4	0.4	0.4	0.6	0.9		1.9	0.6	0.6	1.1	1.2		1.3	1.2	1.2	2.4	2		

4.1.11 Lighting

No overhead street lighting is provided along S.R. 574 from C.R. 579 to McIntosh Road. The only lighting that would be encountered for this portion of S.R. 574 is overhead lighting associated with private or commercial properties (service provided by TECO).

4.1.12 Utilities

The ownership, type and approximate location of the existing utilities within the Study corridor are summarized in Table 4-9. This utility information is based on information obtained during field reviews as well as information provided by the utility companies.

As shown in Table 4-9, utilities are prevalent throughout the Study area and are located within and directly adjacent to the S.R. 574 right-of-way as well as within the adjacent CSX railroad right-of-way.

Central Florida Pipeline Corporation (now Kinder Morgan) – owns and operates a 10-inch gasoline line within the CSX Railroad right-of-way for the entire length of the project. The location of the 10-inch gas line varies from 22.3 to 39.5 feet north of the railroad centerline.

Central Florida Pipeline Corporation occupies the CSX Railroad Right-of-way through a lease agreement; thus, the cost associated with any relocation of this utility would be included in the right-of-way acquisition or construction costs of a "Build" Alternative.

Hillsborough County Sewer – A 4-inch polyvinyl chloride (PVC) sanitary forcemain is located along both the east and west side of the north leg of Highview Road. There is a 4-inch PVC sanitary forcemain located on the north side of S.R. 574 from west of Parsons Avenue to east of Park Street. Parsons Avenue has a 12-inch PVC sanitary forcemain on the west side of both the north and south legs of the intersection. In addition, a 4-inch PVC sanitary forcemain is located on both the east and west sides of Park Street. All of the sanitary forcemain is located within the existing right-of-way, and there are multiple service connections within the limits of the project.

Hillsborough County Traffic – did not provide utility mark-up plans; however, an area representative stated that they own and operate facilities within the Study corridor. Their facilities consist of aerial communication cable between C.R. 579 and Kingsway Road as part of their computerized traffic control system.

Table 4-9: Existing Utilities

Utility Owner	Utility Type	Aerial (A) Buried (B)	Side	Approximate Location
Central Florida Pipeline Corporation (now Kinder Morgan)	10" Gasoline Line	B	North of R/R	CSX Right-of-Way - C.R. 579 to East of McIntosh Rd.
Hillsborough County	4" PVC Sanitary Forcemain	B	East/West	Highview Rd. - North of S.R. 574
	4" PVC Sanitary Forcemain	B	North	S.R. 574 - West of Parsons Ave. to East of Park St.
	12" PVC Sanitary Forcemain	B	West	Parsons Ave. - South of S.R. 574 to North of S.R. 574
	4" PVC Sanitary Forcemain	B	East/West	Park St. - North of S.R. 574
	Communications - Traffic	A	South	S.R. 574 - C.R. 579 to Kingsway Rd.
	12" DI Watermain	B	East	C.R. 579 - South of S.R. 574 to North of S.R. 574
	8" PVC Watermain	B	North	S.R. 574 - C.R. 579 to east of Highview Road
	Proposed Watermain	B	South	S.R. 574 - C.R. 579 to East Side of Parsons Ave.
	6" PVC Watermain	B	East	Pine St. - North of S.R. 574
	8" PVC Watermain	B	South	S.R. 574 - West of Roland Street to east of Parsons Ave.
	Abandoned 8" PVC Watermain	B	West	Parsons Ave. - South of S.R. 574 to North of S.R. 574
	20" DI Watermain	B	East	Parsons Ave. - South of S.R. 574 to North of S.R. 574
	Proposed Watermain	B	South/North	S.R. 574 - End of Proposed Watermain to Existing 6" Watermain
	6" PVC Watermain	B	West	Kingsway Rd. - North of S.R. 574
	6" PVC Watermain	B	East	Florida Ave. South - North of S.R. 574
	20" PVC Watermain	B	East	Lenna Ave. - South of S.R. 574 to North of S.R. 574
MCI WorldCom Communications	Fiber Optic Cable (WorldCom)	B	North of R/R	CSX Right-of-Way - C.R. 579 to East of McIntosh Rd.
	Fiber Optic Cable (MCI)	B	South of R/R	CSX Right-of-Way - C.R. 579 to East of McIntosh Rd.
	Fiber Optic Cable (WorldCom)	B	West	S.R. 574 - Crossing at C.R. 579
Tampa Electric Company (TECO)	600 KVA	A	South	S.R. 574 - C.R. 579 to East of Kingsway Rd.
	600 KVA & 1200 KVA	A	North	S.R. 574 - East of Kingsway Rd. to East of McIntosh Rd.
TECO/Peoples Gas	4" PE Natural Gas Main	B	North	S.R. 574 - West of Parsons Ave. to West of Park St.
	2" PE Natural Gas Main	B	South	S.R. 574 - East of Parsons Village Square to West of Parsons Ave.
	4" PE Natural Gas Main	B	West	Parsons Ave. - North of S.R. 574 to East of the Railroad Tracks
	Proposed 6" PE Natural Gas Main	B	West	Highview Rd. - North of S.R. 574 to South of S.R. 574
Time Warner Cable	Cable TV	A	East	Highview Rd. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	West	Lake Dr. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	East	Pine St. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	South	S.R. 574 - West of Pine St. to East of Park St.
	Cable TV	A	East	Taylor Rd. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	West	Parsons Ave. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	West	Park St. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	North/South	S.R. 574 - East of Park St. Crossing (North to South) for Approximate 150-ft. run then Crossing (South to North) Continues Along the North Side of S.R. 574 to East of McIntosh Rd.
	Cable TV	A	East	Kingsway Rd. - South of S.R. 574
	Cable TV	A	West	Lenna Ave. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	East	Chastain Rd. - North of S.R. 574
	Cable TV	A	West	N. Valrico Rd. - North of S.R. 574 to South of S.R. 574
	Cable TV	A	East/West	McIntosh Road - North of S.R. 574 Crossing From West to East at the Intersection and Crossing From East to West After Crossing
U.S. Sprint	Communications	A	Varies	S.R. 574 - Taylor Rd. to Parsons Rd. (Attached to TECO Power Poles)
Verizon Florida	Telephone Line	B	South	S.R. 574 - East of C.R. 579 to East of McIntosh Rd.
	Telephone Line	B	South	S.R. 574 - East of C.R. 579 for approximately 450-feet
	Telephone Line	B	South	S.R. 574 - East of Highview Rd. to West of Highview Rd.
	Telephone Line	B	North	S.R. 574 - West of Highview Rd. to West of Pine St.
	Telephone Line	A	South	S.R. 574 - East of Lake Drive to West of Pine St.
	Telephone Line	B	South	S.R. 574 - Taylor Rd. to West of Kingsway Rd.
	Telephone Line	A	South	S.R. 574 - West of Oak Street S. to West of Taylor Rd.
	Telephone Line	B	North	S.R. 574 - East of Park Street for approximately 1000-feet
	Telephone Line	A	South	S.R. 574 - West of Kingsway Rd. for approximately 720-feet
	Telephone Line	A	North	S.R. 574 - East of Florida Ave. S. to West of Chastain Rd.
	Telephone Line	A/B	North/South	Multiple Crossings Throughout Project Corridor
Williams Communications	Fiber-Optic Cable	B	North of R/R	CSX Right-of-Way - CR 579 to East of McIntosh Road

Hillsborough County Water – has a 12-inch ductile iron (DI) water main is located within the existing right-of-way on the east side of C.R. 579, which crosses underneath S.R. 574. There is an 8-inch PVC water main located on the north side of S.R. 574 between C.R. 579 and east of Highview Road, and a 6-inch PVC water main is located along the west side of Pine Street (terminates prior to S.R. 574's right-of-way line). An 8-inch PVC water main is located along S.R. 574 from west of Roland Street to east of Parsons Avenue. There is an abandoned 8-inch PVC water main along the west side of Parsons Avenue. A 20-inch DI water main is located along S.R. 574 from the east side of Parsons Avenue to north of the intersection. There are 6-inch PVC water mains located along Kingsway Road and Florida Avenue South; however, both of these lines terminate prior to S.R. 574's northern right-of-way line. Lenna Avenue has a 20-inch DI water main on the east side of both the north and south leg of the intersection. It should be noted that there are multiple service connections located within the limits of the project corridor, and all of the water mains are located between the existing edge of pavement and right-of-way line.

A water main connection is proposed along the south side of S.R. 574, from the stubout on the southeast corner of the S.R. 574 and C.R. 579 intersection to the existing 20-inch DI water main on the southeast corner of the S.R. 574 and Parsons Avenue intersection. Both of these proposed water mains will be located outside of the existing right-of-way limits. Another section of water main is proposed, which would connected the proposed water main (previously described) to the existing 6-inch PVC water main on the west side of the north leg of Parsons Avenue.

MCI WorldCom Communications – owns and operates a fiber optic cable system within the CSX Railroad right-of-way between Mango and Dover, Florida. The location of this line varies within the CSX Railroad right-of-way; however, it is typically located 16 to 38 feet south of the S.R. 574 right-of-way line (MCI), and 10 to 41 feet south of the railroad centerline (WorldCom).

MCI WorldCom Communications occupy the railroad right-of-way through lease agreements with CSX. Therefore, the relocations of this utility would be at the expense of the Department.

Tampa Electric Company (TECO) – has aerial power distribution facilities (600 and 1200 KVA) within the Study corridor. Although the location of these facilities varies, these facilities are predominately located on the north side of S.R. 574 between the westbound edge of pavement and the right-of-way line. There are also several crossings within the Study area; and a substation is located on the southeast corner of S.R. 574 and Kingsway Road, south of the CSX railroad right-of-way.

Tampa Electric Company has indicated that the relocation of these facilities would be expensive as well as difficult.

TECO/Peoples Gas – has a 4-inch PE natural gas main along the north side of S.R. 574 from 34-feet west of the centerline of Parsons Avenue to 43-feet west of Park Street. This gas main is located between the existing edge of pavement and right-of-way line (varies from 32-feet to 50-feet north of the centerline of S.R. 574). A 2-inch PE natural gas main exists between the southern existing edge of pavement and right-of-way line from 115-feet east of the centerline of the Parsons Village Square Entrance to 42-feet west of the centerline of Parsons Avenue. Another 4-inch PE natural gas line is located on the west side of both the north and south legs of the Parsons Avenue intersection.

A 6-inch PE natural gas main is proposed along the west side of both the north and south leg of Highview Road between the existing edge of pavement and the right-of-way limits.

Time Warner Cable – owns and operates aerial cable television facilities, which are attached to the Tampa Electric Company power poles within the project corridor. Specifically, there is an aerial cable television line on the south side of S.R. 574 from west of Pine Street to east of Park Street. The second run of aerial cable television line along S.R. 574 begins east of Park Street where it crosses from the north side of the roadway to the south side with approximately a 150-foot run at which point it crosses from the south to north side of S.R. 574 and proceeds to east of McIntosh Road. There are aerial cable television lines provided along the east side of the following side streets: Highview Road, Pine Street, Taylor Road, Kingsway Road, Chastain Road and McIntosh Road. Lake Drive, Parsons Avenue, Park Street, Lenna Avenue, North Valrico Road and McIntosh Road have aerial cable television lines along the west side of these intersections.

U.S. Sprint Communications – did not provide utility mark-up plans; however, an area representative stated that they did own and operate facilities within the Study corridor. These facilities consisted of aerial cables that are connected to existing Tampa Electric Company power poles between Taylor Road and Parsons Avenue.

Verizon Florida – has buried and overhead telephone lines on both the north and south sides of S.R. 574, from C.R. 579 to McIntosh Road, within the existing edge of pavement and the right-of-way line. A brief description of these facilities follows.

Buried telephone facilities exist on the south side of S.R. 574 from east of C.R. 579 to west of McIntosh Road. An additional run of buried telephone exists between C.R. 579 and east of Highview Road, with the exception of a 250-foot section between C.R. 579 and Highview Road. A run of buried telephone line is located between west of Highview Road to approximately 600 feet west of Highview Road where the line crosses underneath S.R. 574 to the opposite side of the roadway. Along the south side of S.R. 574, a section of overhead telephone line begins on the east-side of Lake Drive and extends to Taylor Road where the line

becomes buried and extends to approximately 700 feet west of Kingsway Road. A section of buried telephone exists along the north side of S.R. 574 from east of Park Street for approximately 1000 feet, which crosses to the south side of the roadway, where an overhead lines begins and extends to approximately 650 feet west of Kingsway Road. Another overhead line begins on the north side of S.R. 574 at Florida Avenue South and continues to approximately 550 feet west of Chastain Road. Additional buried telephone lines exist along the following side streets: Highview Road (east side), Pine Street (west side), Taylor Road (east side), Parsons Avenue (east and west side), Kingsway Road (east and west sides), Chastain Road (east side), North Valrico Road (east and west sides) and McIntosh Road (west side).

Williams Communication – owns and operates a buried fiber-optic cable as part of their "Daytona-Tampa Route" within the north side of the CSX Railroad Right-of-way for the entire length of the project, which was previously owned and operated by Central Florida Pipeline Corporation.

Williams Communication occupies the CSX Railroad Right-of-way through a lease agreement; thus, the cost associated with any relocation of this utility would be included in the right-of-way acquisition or construction costs of a "Build" Alternative.

4.1.13 Pavement Conditions

The pavement condition ratings for S.R. 574 from C.R. 579 to McIntosh Road for the year 2000 were determined by utilizing the FDOT's Pavement Management Reporting System (PAVMARS) – (Printed 09/19/00). The results of the pavement condition survey are included in Table 4-10, which were also verified during a field reconnaissance.

The pavement conditions are rated on a scale of one to ten, and the higher the rating the better the roadway conditions. In summary, the roadway surface is in good condition within the Study area.

Table 4-10: Results of Pavement Condition Survey

Segment		Ratings			Pavement Condition
Limits	Length (miles)	Crack	Ride	Rut	
West of C.R. 579 (MP 3.990) to West of Highview Rd. (MP 4.306)	0.316	10.0	8.4	10.0	Good
West of Highview Rd. (MP 4.306) to West of Lake Dr. (MP 4.493)	0.187	10.0	8.4	10.0	Good
West of Lake Dr. (MP 4.493) to West of Pine St. (MP 4.524)	0.031	10.0	8.4	10.0	Good
West of Pine St. (MP 4.524) to Kingsway Rd. (MP 5.645)	1.121	10.0	7.2	9.0	Good
Kingsway Rd. (MP 5.645) to West of Florida Ave. (MP 5.686)	0.041	10.0	8.6	10.0	Good
West of Florida Ave. (MP 5.686) to West of N. Valrico Rd. (MP 7.033)	1.347	10.0	8.6	10.0	Good
West of N. Valrico Rd. (MP 7.033) to West of N. Valrico Rd. (MP 7.068)	0.035	10.0	8.4	10.0	Good
West of N. Valrico Rd. (MP 7.068) to N. Valrico Rd. (MP 7.206)	0.138	10.0	8.4	10.0	Good
N. Valrico Rd. (MP 7.206) to West of Shady Acres Rd. (MP 7.385)	0.179	10.0	8.4	10.0	Good
West of Shady Acres Rd. (MP 7.385) to West of McIntosh Rd. (MP 7.625)	0.240	10.0	8.4	10.0	Good
West of McIntosh Rd. (MP 7.625) to McIntosh Rd. (MP 7.748)	0.123	10.0	8.4	10.0	Good

4.1.14 Railroad Crossings

There are no existing railroad crossings on S.R. 574 within the Study limits. However, it should be noted that the northern CSX Railroad right-of-way line is adjacent to the southern right-of-way line for S.R. 574 from just west of Kingsway Road to east of McIntosh Road. This proximity causes many at-grade railroad crossings on side streets to be close to the S.R. 574 pavement edge, which needs to be considered for the build alternatives. Currently, school buses do not have sufficient storage length between the stop bar and the railroad tracks, which can be a safety issue. This issue was discussed with the District's Railroad Coordinator, and a decision was made to proceed with developing the build alternatives based on a 25-foot distance between the railroad tracks and the proposed right-of-way line for S.R. 574.

Should there be a need for a parallel railroad track in the future along the Study corridor, there would be sufficient right-of-way south of the existing railroad, which would also provide the required minimum clearance of 15 ft. between the track centerlines. The side streets of a build alternative should be constructed to flatten the existing profiles at railroad crossings, and should include consideration for the potential 4-inch vertical track adjustments by CSX.

4.1.15 Posted Speed Limits

The posted speed limit along the corridor is 45 mph from C.R. 579 (milepost 4.126) to east of Lakeview Avenue (milepost 5.954) and 50 mph from east of Lakeview Avenue (milepost 5.954) to McIntosh Road (milepost 7.748).

4.2 Existing Bridge

4.2.1 Type of Structure, Current Condition and Year of Construction

Bridge No. 100033, S.R. 574 over Baker Canal, is the only roadway bridge within the limits of the project. The two-lane bridge over this non-navigable waterway was constructed in 1915 and consists of a single span. The parallel, concrete CSX railroad bridge to the south was recently constructed to replace the old timber bridge. It should be noted that the Bridge Inspection Reports refer to the crossing as "Lake Weeks Creek".

As shown in Figure 4-7 the superstructure of the bridge is a cast-in-place slab supported by reinforced concrete T-beams. The deck has a bituminous wearing surface. Abutments are reinforced concrete vertical walls. The bridge is not posted for weight restrictions and has an inventory sufficiency rating of 81.1, which is satisfactory. The bridge is rated scour critical due to problems with scour at the abutments.

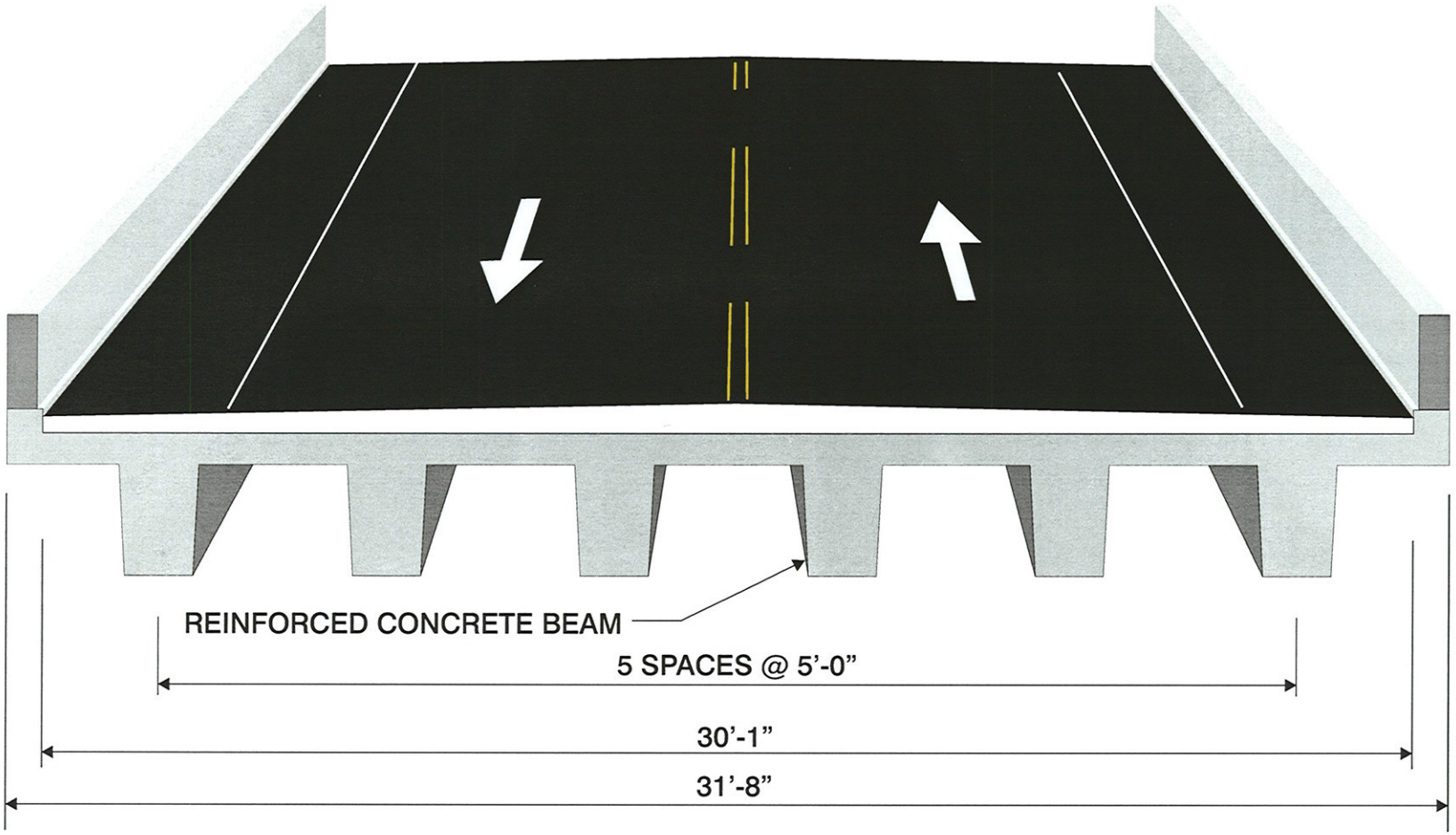
Due to the age of the bridge and the minimal remaining expected service life, bridge replacement is recommended should the bridge become a candidate for widening. It should also be noted that the bridge is not considered to be a historic structure.

4.2.2 Horizontal and Vertical Alignment

The bridge is located tangent to S.R. 574 and does not contain a skew. This bridge is a low-level bridge along a portion of the roadway that does not contain significant longitudinal slopes.

4.2.3 Channel Data

Since this bridge is a low-level bridge over a non-navigable waterway, bridge openings and ship impacts are not applicable. The channel is a man-made ditch that ultimately outfalls northward to Lake Thonotosassa, and this large lake in turn drains to the Hillsborough River. Because the ditch at the bridge is part of a large drainage system, the ditch experiences high storm water flows in major storm events, which must be considered in the structural foundation design and hydraulic design of a build alternative.



BAKER CANAL

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EXISTING BRIDGE TYPICAL SECTION

Figure 4-7

4.3 Environmental Characteristics

4.3.1 Land Use Data

Alternative typical sections and alignments need to be developed for S.R. 574 that are consistent with the existing development patterns as well as the anticipated future development. The existing land use, future land use and approved planned development for the Study area are described in this section.

4.3.1.1 Existing Land Use

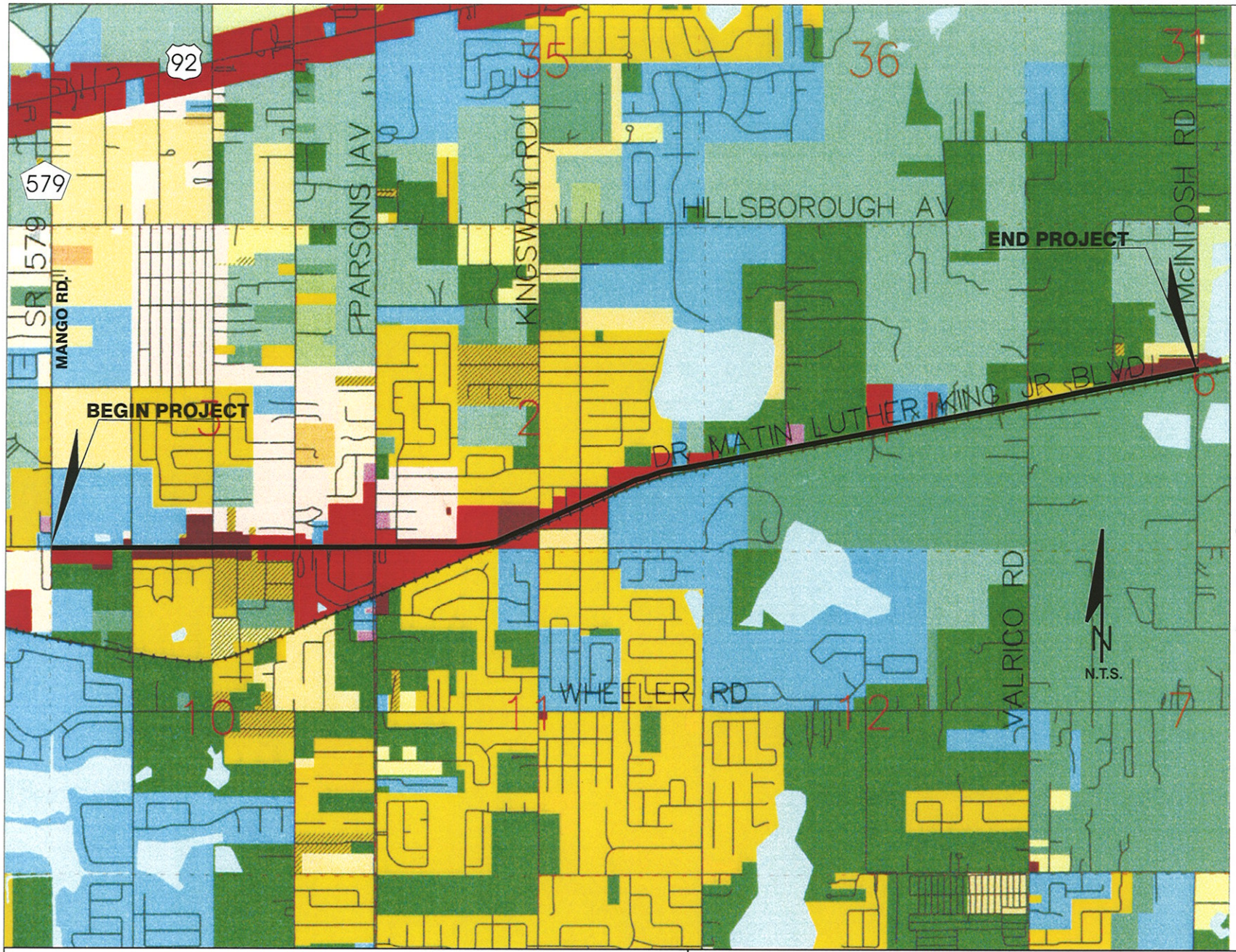
The existing land use adjacent to the S.R. 574 corridor transitions through two areas of generalized land use characteristics. In general, from the western terminus eastward the land uses transition from dense development to low density development. Although vacant land exists within the Study corridor, developments are planned for most of this area (See Section 4.3.1.3). Figure 4-8 depicts the existing land use within the Study corridor.

The predominate land use adjacent to S.R. 574, from C.R. 579 to east of Kingsway Road, is characterized by commercial development such as medium scale shopping centers, office/professional office, medical facilities, service stations, restaurants and community facilities. Other land uses in this section of the project consist of isolated planned developments and residential sites.

The eastern portion of the project, from east of Kingsway Road to McIntosh Road, becomes more rural with low density development. The existing land use consists primarily of a mixture of agricultural, commercial, and planned and residential developments. It should be noted that the development on the south side of S.R. 574 from Kingsway Road to McIntosh Road is isolated from S.R. 574 by the CSX railroad.

4.3.1.2 Future Land Use

Figure 4-9 presents the 2015 future land use information for S.R. 574. The information presented in this figure is important because it identifies how the existing vacant parcels as well as parcels with low densities are expected to be developed in the future. Office-commercial development as well as residential development characterize the future land use for the western portion of the Study area. The eastern portion of the Study area is characterized almost exclusively by residential development except for two areas with the industrial land use designation. The Study area is located in unincorporated Hillsborough County.



LEGEND

AGRICULTURAL
- A
- AI
- AM
- AR
- AS-0.4
- AS-1
- ASC-1

COMMERCIAL
- C-G
- C-I
- C-N

INTERSTATE-75 PD
- IPD-1
- IPD-2
- IPD-3

INDUSTRIAL
- M

OFFICE
- BP-O
- O-R

PLANNED DEVELOPMENT
- PD

RESIDENTIAL
- RDC-6
- RDC-12
- RMC-6
- RMC-9
- RMC-12
- RMC-16
- RMC-20
- RSC-2
- RSC-3
- RSC-4
- RSC-6
- RSC-9
- R
- (MH)

SPECIAL PURPOSE
- (SB)

SPECIAL PUBLIC INTEREST
- SPI-AP-1
- SPI-AP-2
- SPI-AP-3
- SPI-AP-4
- SPI-AP-5
- SPI-AP-3,4
- SPI-AP-V
- SPI-HC
- SPI-UC-1
- SPI-UC-2
- SPI-UC-3
- SPI-RVR
- SPI-NMD

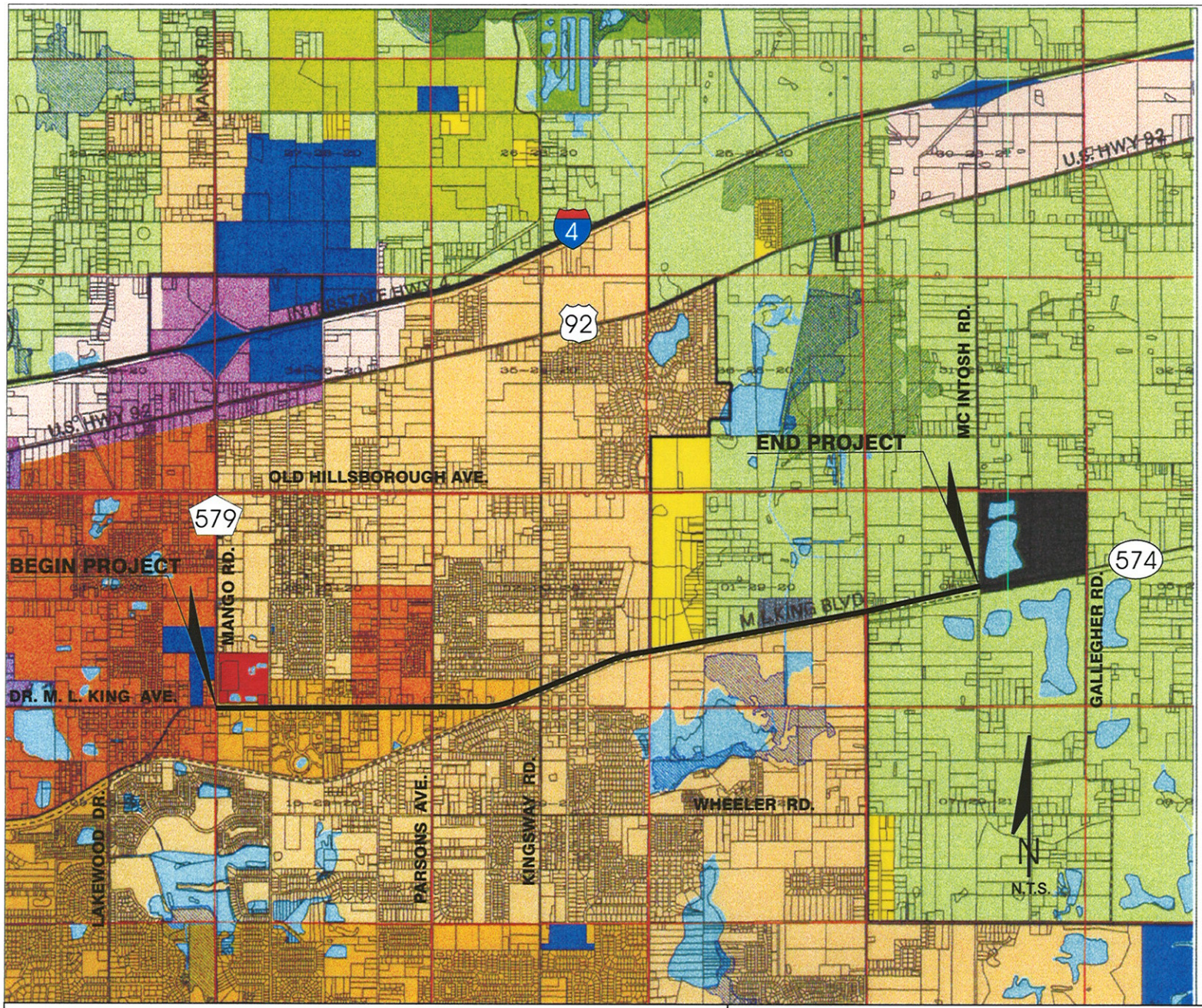
Hillsborough County
Florida
Planning and Growth Management Department
Information Services
OCTOBER 2000

MLK SR 574 BLVD
PD&E Study

S.R. 574 (Martin Luther King Jr. Blvd.)
Project Development & Environment (PD&E) Study
Hillsborough County, Florida
WPI Segment No. 255893 1
FAP No. 2081-018P

EXISTING LAND USE

Figure 4-8



ADOPTED 2015 FUTURE LAND USE

October 27, 1994

Effective: Jul 15, 2000

LEGEND

- AGRICULTURAL/MINING-1/20 (.25 FAR)
- AGRICULTURAL-1/10 (.25 FAR)
- AGRICULTURAL/RURAL-1/5 (.25 FAR)
- AGRICULTURAL ESTATE-1/2.5 (.25 FAR)
- RESIDENTIAL-1 (.25 FAR)
- RESIDENTIAL-2 (.25 FAR)
- RESIDENTIAL PLANNED-2 (.35 FAR)
- RESIDENTIAL-4 (.25 FAR)
- RESIDENTIAL-6 (.25 FAR)
- RESIDENTIAL-9 (.35 FAR)
- RESIDENTIAL-12 (.35 FAR)
- RESIDENTIAL-20 (.35 FAR)
- NEIGHBORHOOD MIXED USE-4 (3) (.35 FAR)
- SUBURBAN MIXED USE-6 (.35 FAR)
- COMMUNITY MIXED USE-12 (.50 FAR)
- URBAN MIXED USE-20 (1.0 FAR)
- REGIONAL MIXED USE-35 (2.0 FAR)
- OFFICE COMMERCIAL-20 (.75 FAR)
- RESEARCH CORPORATE PARK (1.0 FAR)
- LIGHT INDUSTRIAL PLANNED (.50 FAR)
- LIGHT INDUSTRIAL (.50 FAR)
- HEAVY INDUSTRIAL (.50 FAR)
- PUBLIC/QUASI-PUBLIC
- NATURAL PRESERVATION
- WATER

ENVIRONMENTALLY SENSITIVE AREAS

- SIGNIFICANT WILDLIFE HABITAT
- WETLANDS

ROADS AND BOUNDARY LINES

- Cockroach Bay Aquatic Preserve Boundary
- COUNTY BOUNDARY
- JURISDICTION BOUNDARY
- TAMPA SERVICE AREA
- URBAN SERVICE AREA
- EXISTING MAJOR ROAD NETWORK
- LIMITED ACCESS ROADS
- PLANNING AREA BOUNDARY
- COASTAL HIGH HAZARD AREA LIMIT

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FUTURE LAND USE

Figure 4-9

4.3.1.3 Planned Developments

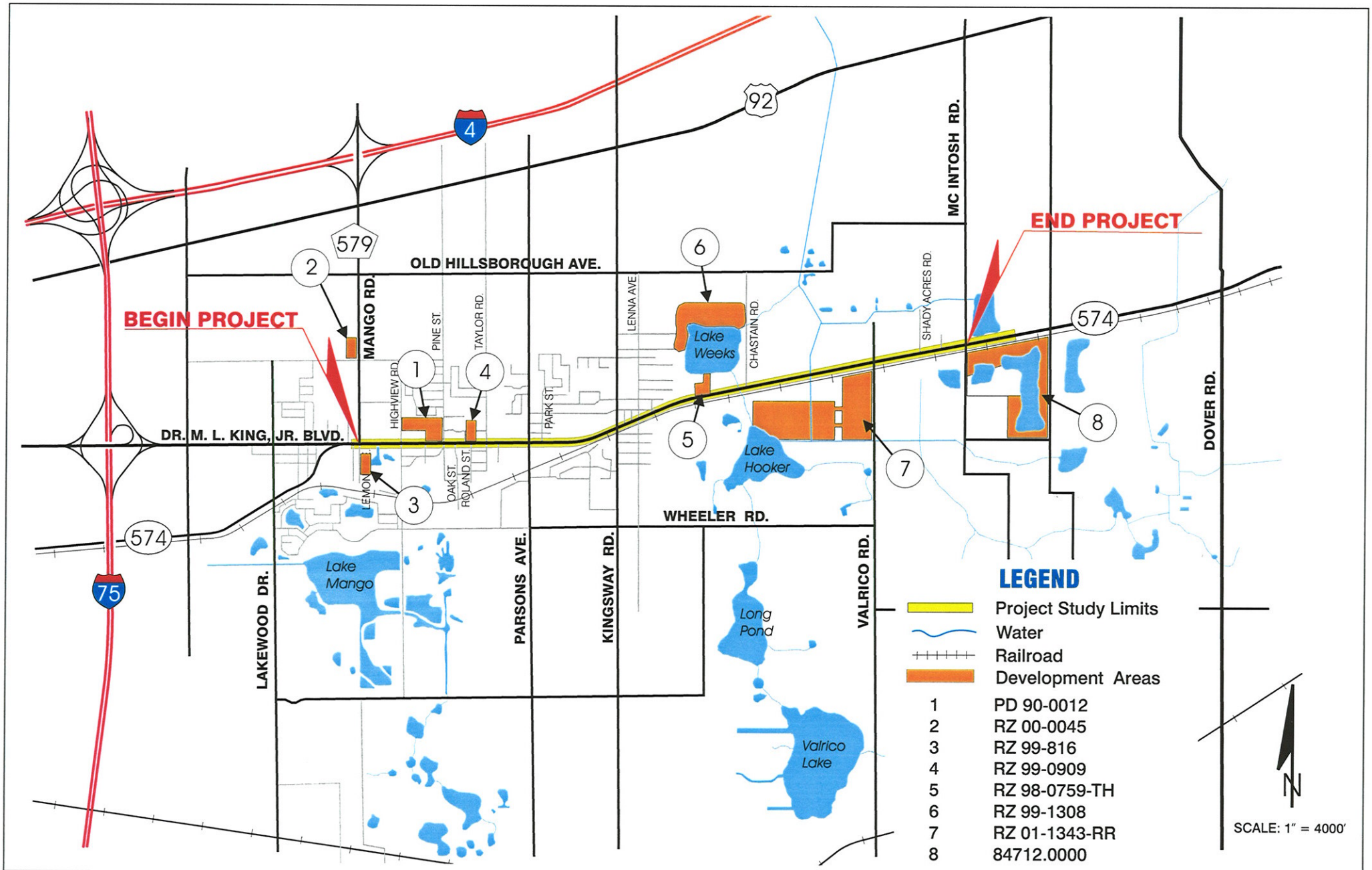
There are five major development sites and one platted subdivision, which are currently being planned for construction on parcels located within the Study area. Four of these parcels are located adjacent to S.R. 574, and the two remaining parcels are located within close proximity to S.R. 574. In general, these developments are proposed on vacant land and have received approval for their future site plan (as part of their effort for the rezoning). The location of these developments is identified in Figure 4-10, and the developments are described in detail below.

Mango Groves (RZ 00-0045) is a 24.75-acre parcel, located on the northwest corner of Clay Pitt Road and C.R. 579, that is currently zoned for low density residential (RSC-4) with lot sizes of 10,000 square feet. The intent of the rezoning is to modify the existing zoning to a Planned Development with lot sizes ranging from 4,000 – 6,000 square feet that will accommodate approximately 117 single-family residences at complete build-out.

The Hillcrest Subdivision (RZ 99-816) is the smallest of the planned developments, which is a 10.05-acre parcel, located south of S.R. 574 on Lemon Avenue. This rezoning would modify the parcel's designation from an Agricultural, Single-Family Conventional (ASC-1) with a minimum lot size of one acre to a Planned Development (PD) that would accommodate a minimum lot size of 5,000 square feet. The Planned Development would accommodate approximately 42 single-family residences.

An unnamed, mixed-use development (PD 90-0012) is located at the northeast corner of the S.R. 574/Highview Road intersection, a 17.58 acre parcel. This parcel is designated by the Comprehensive Plan as a Residential-6, under which a maximum Floor Area Ratio (FAR) of 0.25 for non-residential use may be considered. This mixed-use development would accommodate 125,000 square feet of Commercial, Neighborhood (CN) uses (option for 65,000 square feet of CN and 60,000 square feet for a mini-warehouse or 50,000 square feet for CN uses and the remaining 75,000 square feet for the mini-warehouse facility). 12,625 square feet of the total 125,000 square feet for the CN has been designated for a maximum of two out-parcels; however, it should be noted that 6,800 square feet of the out-parcel designation has already been utilized by the existing auto parts store.

The Lake Weeks Subdivision (RZ 99-1308) is located south of Old Hillsborough Avenue between Lenna Road and Chastain Road around Lake Weeks. The 92.92 acre parcel is currently zoned to accommodate Residential, Single-Family as well as Agricultural uses (lot sizes not to be less than one acre); however, the development of this parcel into a Planned Development would



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PLANNED DEVELOPMENTS

Figure 4-10

accommodate a total of approximately 140 single-family residential units.

Valrico Trails (RZ 01-1343-BR) is located on the southwest corner of the S.R. 574 and North Valrico Road intersection (south of the CSX railroad tracks). The site consists of a 130-acre parcel that is currently undeveloped and is currently zoned AS-1, agricultural and single-family uses with lot sizes not less than one acre. Approximately 50.5-acres of the parcel constitutes developable upland while the remaining 79.5-acres is designated as wetlands. 86 single-family residential units (with a gross density of 1.27 dwelling units per acre) would be accommodated with the development of this parcel into a planned development.

McIntosh Lakes (Folio Number 84712.0000) is classified as a platted subdivision with no improvements. This subdivision consists of a 137.69-acre parcel, which is located on the southeast corner of the S.R. 574 and McIntosh Road intersection (south of the CSX railroad tracks). The development of this parcel did not require rezoning from AS-1 (Agricultural, Single-family) to accommodate the 36 single-family residential units because the proposed development accommodate the 1-acre minimum parcel size for an AS-1 zoning.

Although they are not planned developments, it should be noted that there are two additional parcels adjacent to S.R. 574 that applied for and have been granted rezoning. The 0.38-acre parcel located at 1033 W. Martin Luther King Jr. Boulevard (S.R. 574) was granted rezoning from a Residential Single Family (Mobile Home, RSC-6-MH) to Commercial General (CG, RZ 99-0909). It should be noted that this is the last remaining single family residential structure located along this portion of S.R. 574. The specific type of future development for this parcel is unknown at the present time. In addition, rezoning was granted for a 3.6-acre parcel on the north side of S.R. 574, approximately half-of-a-mile east of Kingsway Road (RZ 98-0759-TH). It should be noted that this parcel is located near the end of a strip of commercially zoned properties extending eastward from Kingsway Road along the north side of S.R. 574. The intention of the property owner was to expand the commercially zoned area on the front portion of the parcel to better accommodate an existing used car lot (2.2 acres). This will be achieved by extending the northern boundary by 220 feet; however, the property owner wants to reserve the rear portion of the parcel for a single-family home (1.4 acres).

4.3.2 Cultural Features and Community Services

4.3.2.1 Cultural Features

Literature review, field reconnaissance and informant interviews were performed along S.R. 574 from C.R. 579 to McIntosh Road in Hillsborough County in order to locate and identify any cultural resources within the project area of potential effects (APE) as well as assess their significance in terms of eligibility for listing in the *National Register of Historic Places (NRHP)*. The findings associated with this effort are documented in the *Cultural Resource Assessment Corridor Analysis Report*[8] and are summarized below.

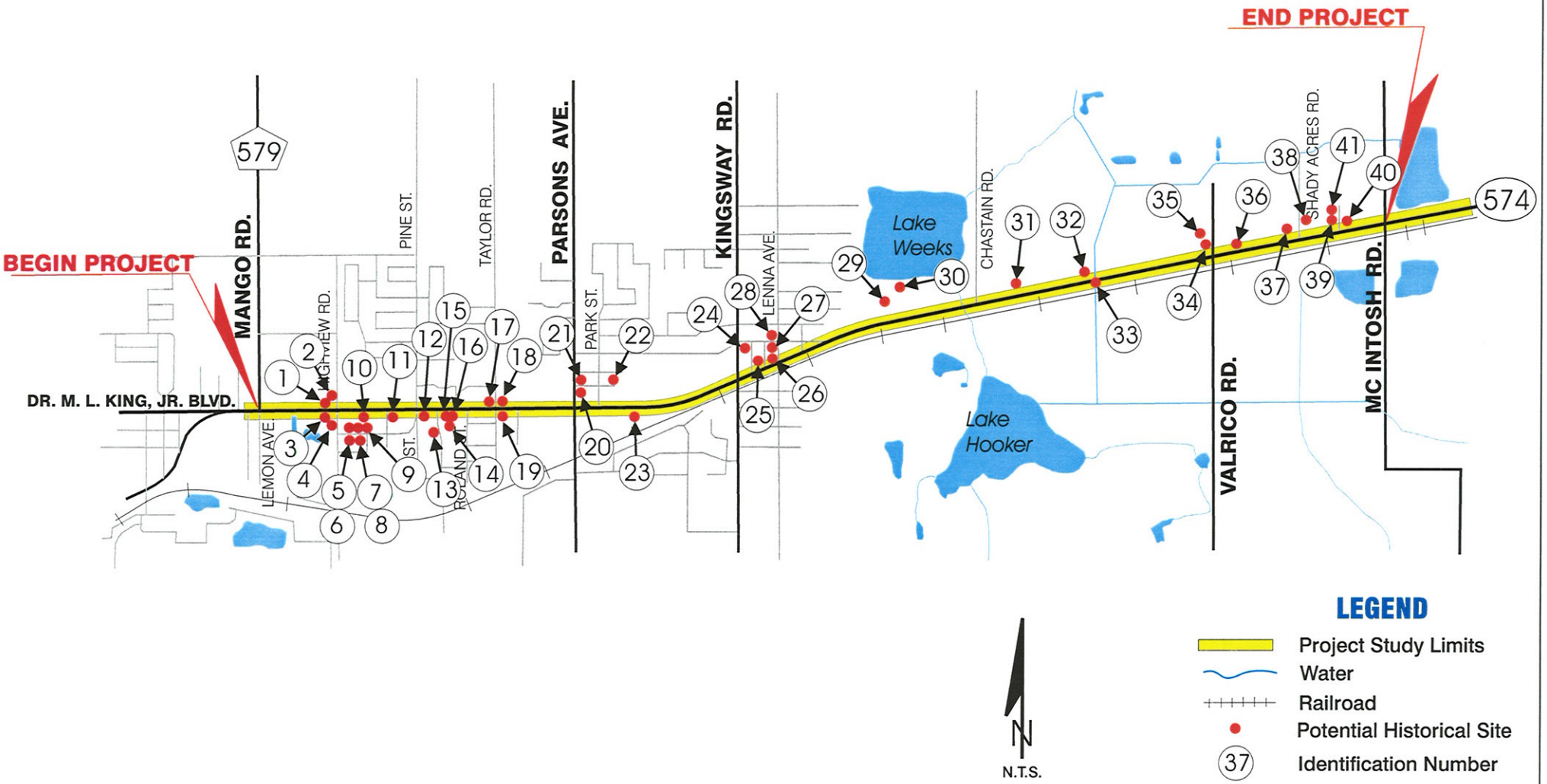
- Section 4(f) Lands

The proposed multi-laning of S.R. 574 will not impact any land from public park and recreation lands or wildlife and waterfowl refuges.

- Potential Historical Sites/Districts

Based on the results of preliminary evaluation, forty potentially eligible historic resources were identified within the Study area (Refer to Figure 4-11 and Table 4-11). Several of these properties may have some involvement with the project. These include The Armwood House (8HI5777) and associated commercial properties (8HI5694-5695); Mediterranean Revival style residence at 808 S.R. 574 (8HI6527); Colonial Revival/Classic Box style residence at 1401 Lenna Avenue (8HI6521) and St. Mary AME Church Cemetery (8HI5689).

The preliminary evaluation and historical research indicated that none of the historic properties of concern appears to be NRHP eligible. The Colonial Revival/Classic Box style residence at 1401 Lenna Avenue (8HI6521) lacks significant historical associations. Furthermore, a large non-historic addition to the rear of the building has resulted in a loss of integrity. The Armwood House at 1118 S.R. 574 (8HI5777) and associated commercial properties at 1120 and 1122 S.R. 574 (8HI5694-5695) did not appear eligible for the NRHP due to a loss of integrity, and lack of direct association with the individuals who made a significant contribution to the development of the African-American community during the period when the individuals made that contribution. However, based on a review of the *Cultural Resource Assessment Survey*[9] (CRAS) by the State Historic Preservation Officer (SHPO), it is her opinion that building 8HI5777 is eligible for listing on the NRHP under criteria B and C.



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POTENTIAL HISTORICAL SITES

Figure 4-11

Likewise, the Mediterranean Revival style residence at 808 S.R. 574 (8HI6527) did not appear eligible for the NRHP since it is a typical example of Mediterranean Revival style architecture which lacks the architectural detail of high style examples. Furthermore, alterations to the setting, an addition to the building, and the lack of historical significance evidenced in available data indicate that the building is not eligible for the NRHP. However, this building is also being considered by SHPO as eligible for listing on the NRHP under criteria B and C.

A *Section 106 Technical Memorandum* was developed for these two properties as part of this Study, and the SHPO concurred with the FHWA's determination "that this proposed undertaking will have no affect on any resources listed or considered eligible for listing in the NRHP".

- Archaeological Sites

Archaeological survey of the S.R. 574 project area, inclusive of proposed pond and pond alternative sites, resulted in the identification of two previously recorded sites (8HI5653 and 8HI3283) within and adjacent to the APE.

The first site, 8HI5653, was evidenced by a single waste flake of thermally altered chert from 2.8 feet below the surface. Because only a single artifact was recovered, site size could not be estimated, nor could the temporal/cultural affiliation be ascertained. This resource probably represents a task specific/limited activity site related to the procurement of locally available resources. HI5653 is not considered potentially significant, and therefore is considered to be not eligible for listing in the *NRHP*.

The second site, 8HI3283, consisted of a total of 65 ceramic sherds of the Pasco Plain and Sand-tempered Plain types, as well as six waste flakes, two flake tools, and an exhausted core. On the basis of these findings, 8HI3283 was estimated to measure approximately five acres in size. Depth of the cultural deposit is about 3.3 feet. Since HI3283 is separated from the S.R. 574 right-of-way by the CSX railroad, it will not be affected by this Study. The site was dated to the Weeden Island period, and evaluated as not significant.

Table 4-11: Potential Historic Resources Located within the S.R. 574 Area of Potential Effects

Map #	FSF #	Address/Site Name
1		11790 S.R. 574
2		4018 Highview Road
3		3942 Highview Road
4		3938 Highview Road
5		11908 Park Avenue
6		11909 Park Avenue
7		11910 Park Avenue
8		11913 Park Avenue
9		4022 Lake Drive
10		11923 S.R. 574
11		12009 S.R. 574
12		1210 S.R. 574
13		1701 Oak Street
14		1118 S.R. 574/Armwood House
15		1120 S.R. 574
16		1122 S.R. 574
17		1013 S.R. 574/St. Mary AME Church Cemetery
18		915 S.R. 574
19		916 S.R. 574
20		1602 Parsons Avenue
21		1506 Parsons Avenue
22		507 Highland Avenue
23		420 S.R. 574/Motor Court
24		111 Seffner Avenue
25		1416 Florida Avenue
26		320 S.R. 574/Gas Station
27	8HI6521	1401 Lenna Avenue/Edee's Tea House
28	8HI6520	1309 Lenna Avenue
29	8HI6527	808 S.R. 574/Mediterranean Revival Style Residence
30		940 S.R. 574
31		1160 S.R. 574
32		1434 S.R. 574
33		Bridge #100033/Lake Weeks Creek Bridge
34		2838 Valrico Road
35		2852 Valrico Road
36		1706 S.R. 574
37		12780 S.R. 574
38		2922 Shady Acres Road
39		2912 McLeroy Place
40		2907 McLeroy Place
41		2918 McLeroy Place

4.3.2.2 Community Facilities

In addition to serving the needs of the surrounding areas, community facilities also provide points of cohesion for adjacent neighborhoods and communities. Community facilities are considered to be churches and other religious institutions, public and private schools, parks and other recreational areas, fire stations, police stations, medical and emergency treatment facilities, cemeteries, and public buildings and facilities. Table 4-12 and Figure 4-12 provide a listing as well as the location of these community facilities, respectively.

- Schools

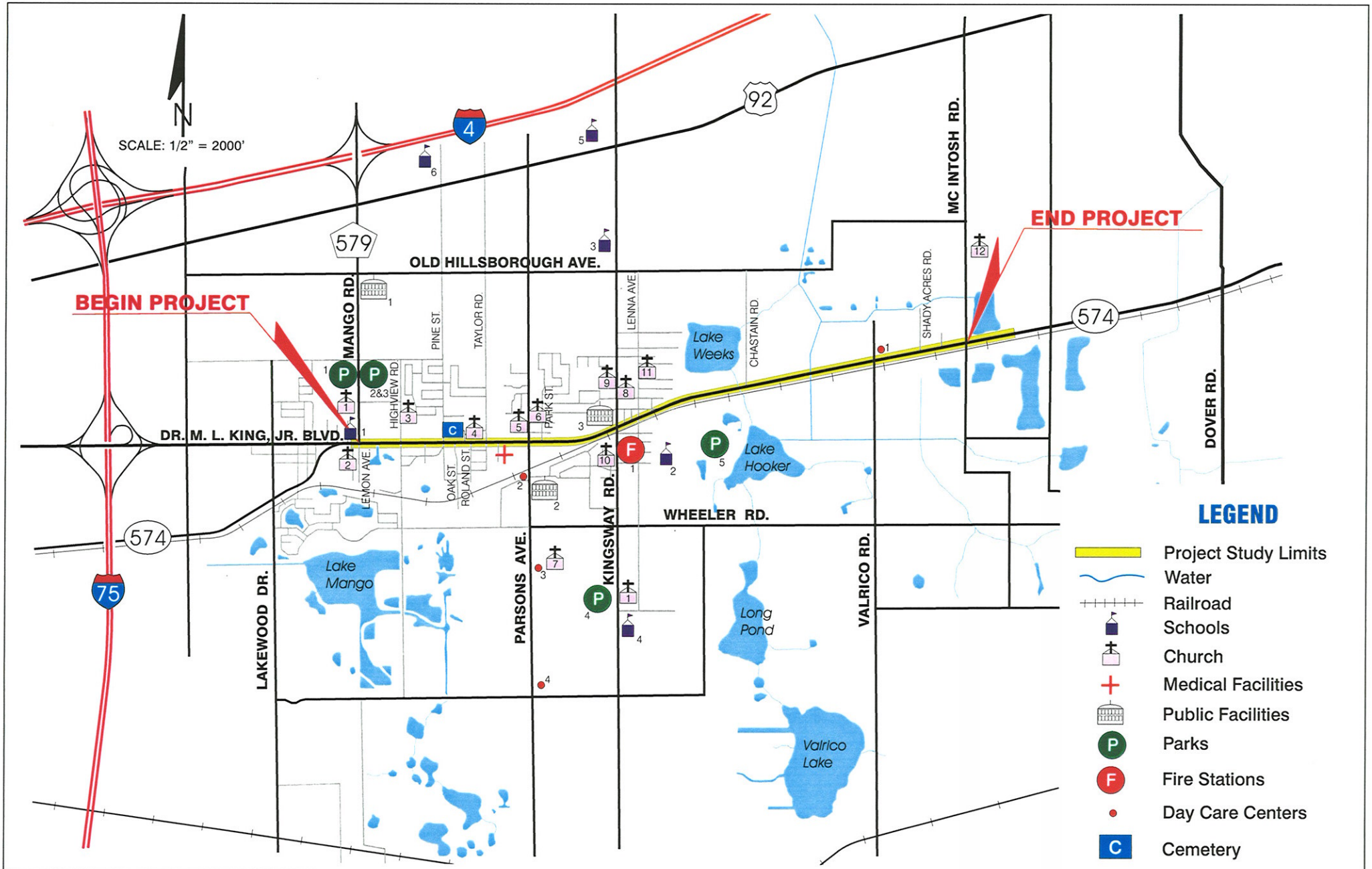
The Study area is located within the Hillsborough County public school district, and there are seven public schools within close proximity to the Study area. Of the seven public schools, five are elementary schools (Mango Elementary School, Rodney Colson Elementary, Lopez Elementary School, Dover Elementary School and Seffner Elementary School), one is a middle school (Burnett Middle School) and one is a senior high school (Armwood High School). Bus service is provided along S.R. 574 for the school zones where the students would otherwise have to cross S.R. 574. None of the schools are located immediately adjacent to the S.R. 574.

- Other Community Facilities

Community facilities such as day care centers; government buildings; civic organizations; hospitals and medical facilities; places of worship; fire stations; and parks and recreation facilities, serve as focal points for a community. Places of worship are the dominant type of community facility adjacent to the S.R. 574 corridor.

- Future Facilities

Based on a review of the Hillsborough County zoning and development records, there are no additional community facilities that are planned within the Study area.



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COMMUNITY FACILITIES

Figure 4-12

Table 4-12: Summary of Community Facilities

Symbol	Name	Location
Schools		
1	Mango Elementary	C.R. 579 – North of S.R. 574
2	Rodney Colson Elementary	Tomberline Ave. – Off of Lenna Avenue
3	Lopez Elementary	NW Corner of Kingsway Rd./Old Hillsborough Ave. Intersection
4	Seffner Elementary	Cactus Rd. – Off of Kingsway Road
5	Burnett Middle	NW Corner of US 92/ Kingsway Rd. Intersection
6	Armwood High	US 92 – East of C.R. 579
Churches		
1	St. Francis of Assisi Catholic Church	C.R. 579 – North of S.R. 574
2	Mango First Baptist Church	SW Corner of Lemon St./S.R. 574 Intersection
3	Christ Center Fellowship	Highview Rd. – South of S.R. 574
4	St. Mary's AME Church	S.R. 574 – West of Taylor Rd.
5	Living Waters Ministry Church	Parsons Ave. – North of S.R. 574
6	Seffner Community Advent Christian Church	Parsons Ave. – North of S.R. 574
7	Faith Baptist Church	Faithway Dr. – East of Parsons Ave. & South of S.R. 574
8	First United Methodist Church of Seffner	Kingsway Rd. – North of S.R. 574
9	The Kingsway Worship Center	Kingsway Rd. – North of S.R. 574
10	Kingsway First Church of God	Kingsway Rd. – South of S.R. 574
11	First Baptist Church	Lenna Ave. – North of S.R. 574
12	Kingdom Hall of Jehovah's Witnesses	McIntosh Rd. – North of S.R. 574
Medical Facility		
1	Doctor's Walk-In Clinic	S.R. 574 – West of Parsons Ave.
Public Facilities		
1	Hillsborough County Cooperative Extension Service	SE Corner of C.R. 579/Old Hillsborough Ave. Int.
2	Sheriff Community Center	Parsons Ave. – South of S.R. 574
3	Seffner Post Office	NW Corner of S.R. 574/ Kingsway Rd. Intersection
Parks and Recreational Areas		
1	East Pointe Baseball Park	SE Corner of C.R. 579/Clay Pit Rd. Intersection
2	Burnett Park	SW Corner of C.R. 579/Clay Pit Rd. Intersection
3	Mango Recreational Center	Clay Pit Rd. – East of C.R. 579
4	North Brandon Park	Parsons Ave. – South of S.R. 574
5	Rodney Colson Park	Gerard Ave. – Off of Lenna Ave.
Fire Department		
1	Mango Volunteer Fire Department	Kingsway Rd. – South of S.R. 574
Day Care Facilities		
1	Aunt Frannies Achievement Cntr.	S.R. 574 – East of Valrico Rd.
2	Quality Child Care	Parsons Ave. – South of S.R. 574
3	Kinder Care	NE Corner of Faithway Dr./ Parsons Ave. Int.
4	Miss Ginny's Child Care Cntr.	Parsons Ave. – North of Windhorst Rd.
Cemetery		
1	St. Mary's AME Cemetery	S.R. 574 – West of Taylor Rd.

4.3.3 Natural and Biological Features

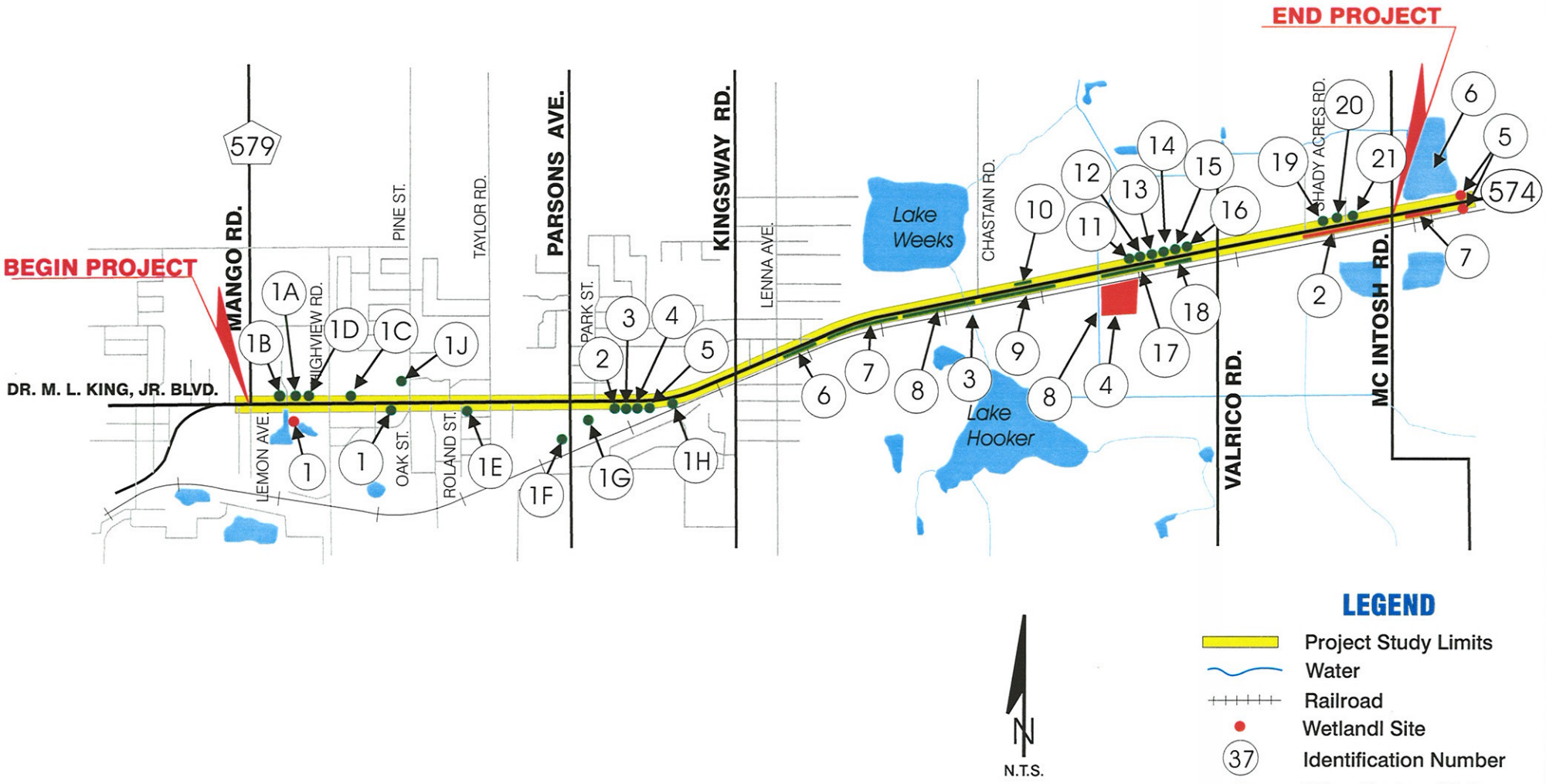
4.3.3.1 Wetland Identification and Delineation

Wetlands within the corridor were initially identified through review of mapping resources including the Natural Resources Conservation Service's (formerly the Soil Conservation Service) *Soil Survey of Hillsborough County, Florida (1989)*, National Wetland Inventory mapping, and 1 inch = 200 feet scale project aerial photography, which was documented in this Study's *Final Wetland Evaluation Report*[10]. Wetlands were identified in the field utilizing the United State Army Corps of Engineer's (USACOE's) *Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1987)*. The wetlands were classified according to the United States Fish and Wildlife Service methodology; and wetlands that may be potentially affected were assessed for functional significance using the Wetland Rapid Assessment Procedure (WRAP), as developed by the South Florida Water Management District (SFWMD) and utilized by the USACOE. Sizes of potential wetland impacts were determined graphically from project aerial photographs and project concept plans.

The surface water systems are incised urban creeks within the S.R. 574 right-of-way that were natural in origin; however, they have been altered to function primarily for flood control. The natural systems in the project right-of-way are either connected to existing storm water management systems or isolated in nature.

Eight wetlands and natural surface waters and thirty other surface waters were identified within and along the project corridor (refer to Figure 4-13). Wetland Rapid Assessment Procedure (WRAP) analyses were conducted for the eight wetland and natural surface waters. These areas consisted primarily of scrub-shrub palustrine systems, palustrine systems with emergent vegetation, and palustrine systems with an unconsolidated bottom. The highest rated wetland, a palustrine scrub/shrub system, received a WRAP score of 0.58.

Lake Weeks Creek, which flows in a triple concrete pipe culvert beneath S.R. 574, is within the FEMA 100-year flood zone and will be impacted by a build alternative. This creek is described as follows in the Wetland Assessment Report: An incised creek/flow way that is approximately 0.65-acres in size within the corridor. This area is classified as a palustrine emergent, persistent, excavated marsh surrounding the creek. Dominant vegetation within this flow way is maidencane, primrose willow, shield ferns, cabbage palm, elderberry and bamboo. This creek connects Lake Weeks and Lake Hooker and was completely inundated at the time of the inspection. The soils in the area are St Johns fine sands, which are not hydric soils. No wildlife was observed in this creek during inspections.



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WETLANDS

Figure 4-13

Baker Canal also flows beneath S.R. 574 (by a bridge) and is described in the Wetland Assessment Report as an incised natural creek that has been altered by man primarily for flood control. The creek flows from south to north and discharges into Pemberton Creek, which outfalls into Lake Thonotosassa and is part of the 100-year floodplain. This area is classified as a palustrine forested broad leaved evergreen surrounding the creek. Vegetation observed within the creek bed and banks consists of sweet gum in the forest canopy with wild taro, torpedo grass, paragrass, dog fennel, primrose willow, and sesbans in the herbaceous stratum. The soils in the area are Basinger-Holopaw-Samsula, which are state and locally listed hydric soils. No wildlife was observed in this creek during inspections.

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, and this evaluation was documented in the Study's *Final Endangered Species Technical Memorandum*[11]. Literature reviews were conducted and data was requested from the Florida Fish and Wildlife Conservation Commission (FWC), U.S. Fish and Wildlife Service (USFWS), and the Florida Natural Areas Inventory (FNAI).

A general qualitative survey was conducted, to determine if adequate habitat and vegetative stratum existed for the species listed by FNAI.

The FWC was contacted regarding the occurrence of any bald eagle nests within or near the corridor. They indicated that there is one bald eagle nest, Nest Number HL 012, located within one mile of the Study area. Based on a review of information from the Florida Geographic Data Library (FGDL), no other listed species are known to occur within the project limits.

Additionally, the Study area was evaluated for the potential of affecting designated "critical habitat" as defined by the USFWS. No "critical habitat" designated for listed species occurs within the project corridor.

Four avian species listed as Species of Special Concern by the FWC were observed in wetlands along the corridor: little blue heron, snowy egret, white ibis, and brown pelican. In addition, one avian species listed as Endangered by the USFWS and FWC, the wood stork, was observed in a wetland within the project corridor. The presence of these species should not be a concern because they are highly mobile in nature.

As a result of the urban nature of the study corridor, and according to a literature search (FNAI, FWC and USFWS databases for Hillsborough County) and field surveys, it was determined that no threatened and/or endangered species are expected to be adversely affected by the project. Consultation occurred with the USFWS and a "no effect" determination was provided by letter on August 14, 2002.

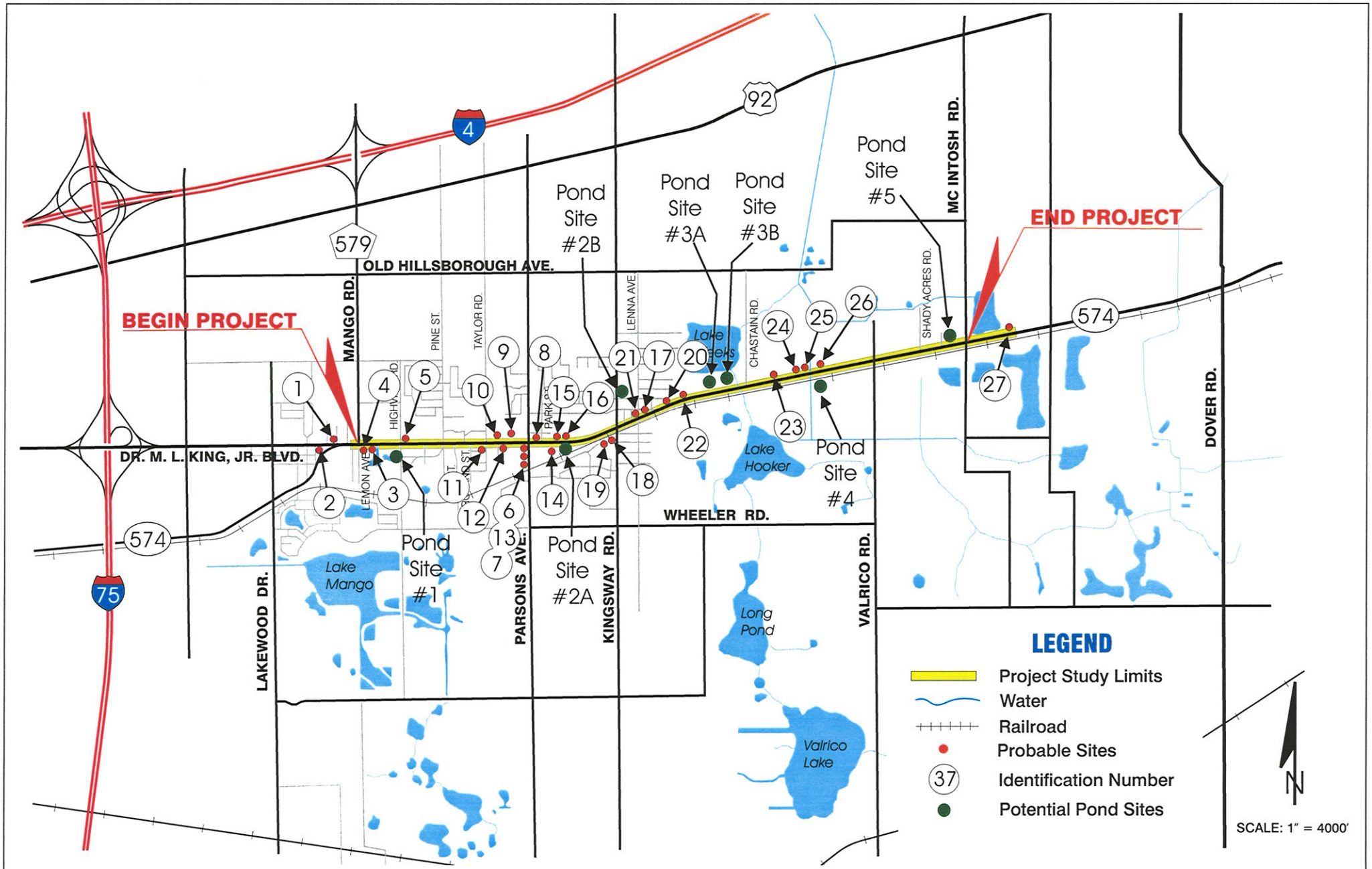
4.3.4 Potential Contamination and Hazardous Material

A *Final Contamination Screening Evaluation Report*[12] has been prepared for this PD&E Study. A summary of the preliminary findings of this evaluation follows.

The first phase of the hazardous materials and petroleum evaluation of properties along the project corridor consisted of data collection. As part of the data collection effort, a review of the available aerial photographs (1966, 1972, 1979, 1985, 1988 and 1997) was conducted with aerials obtained from the Hillsborough County Map Department. Additionally, aerial photographs from the years 1938 and 1952 were reviewed in the University of South Florida archives. A regulatory review of federal and state environmental records was conducted, which included information compiled by the United State Environmental Protection Agency (USEPA) and the Florida Department of Environmental Protection (FDEP). Each site was appraised to determine the potential for concern from the petroleum and/or hazardous materials viewpoint in relation to the guidelines.

During the contamination screening evaluation of the S.R. 574 corridor, 27 sites with a potential for contamination of soil and groundwater were inspected. Of these 27 sites, seven were identified with high or medium rankings for potential contamination and 20 were ranked low or no. There are five sites with a medium ranking and two sites with a high ranking. Five sites potentially have petroleum contamination and two have a combination of petroleum and hazardous waste. Figure 4-14 shows the approximate location of the potentially contaminated sites as well as the sites ranked low or no and includes the site reference number. Table 4-13 provides a breakdown of sites and contamination type by project segment.

Based on the information obtained during the data collection effort, none of the potential contamination sites reduce the viability of the build alternative for S.R. 574. However, a Level II Site Assessment should be performed at proximal boundaries of the sites, which received a high rank during the design phase of the project.



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POTENTIAL CONTAMINATION SITES

Figure 4-14

Table 4-13: Potential Contaminated Sites

Site No.	Site	Rank	Comments
Segment "A"			
1	Amoco Gas Station	Medium	Located adjacent to west end of the corridor
2	Race Trac Gas Station	Low	Located outside alignment
3	Brandon Auto-Paint and Body Shop	Low	Drums have been noted on site
4	Country Food Store (Delta)	Low	No Further Action approved by FDEP in Feb. 1995
5	MPG Auto Mart & Schembris Quality Auto	Low	Hazardous Waste and Petroleum
6	Texaco Gas Station	Low	IRA was completed in 1995, soil along S.R. 574 does not appear to be affected. Deep water table
7	Jiffy Lube (Parsons Avenue)	Low	Locate outside S.R. 574 alignment
8	Farm Store Gas Station	Low	No contamination reported. Deep water table likely.
9	Mango Dry Cleaners	Low	Site is a drop-off center
10	Walgreens	Low	Small Quantity Generator located approximately 300 ft. north of alignment
11	Seffner Oak Cleaners	Low	Site is a drop-off center
12	Village Cleaners	Low	Site is a drop-off center
13	Parsons Cleaners	Low	Site is a drop-off center
Segment "B"			
14	Hahn's Multi-Mile Tire Outlet	Low	Tanks removed in 1989. No reported contamination during excavation of tanks
15	The Exotic Plumeria Nursery & Garden	Low	Listed in FINDS database no additional information available
16	Seffner Pro Hardware	Medium	Site has sodium hypochloride (bleach) and Kerosene on site in ASTs
17	Elite Pool & Spa	Low	Listed as a SQG
18	Ted's Septic Tanks	Medium	Presence of hydrocarbons in soil and groundwater possible
19	Buck's Plumbing and Supply	Medium	Presence of hydrocarbons in soil and groundwater possible
20	New & Used Furniture (Amigo's Used Cars)	High	Remediation of the site underway in 1995. Current status is unknown.
21	Vacant (Former Gas Station)	Medium	Very old former gas station
Segment "C"			
22	Seffner Food Mart (Keenan)	High	Tanks are located very close to alignment area compliance wells have indicated vapors of > 500 ppm
23	American & Import Auto Parts	Low	Both petroleum and hazardous waste possible
24	Quality Precast & Company	Low	ASTs on site no reported discharges
25	Gunter Septic Tank	No	Possible ASTs on site
26	Old Oak Truss Company	Low	Tank closure in 1996, no contamination reported, NFA
27	W.W. Trucking Co.	Low	Oil tank removed in 1998, no impact to groundwater reported

4.4 References

1. A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials; Washington, D.C.; 1990.

2. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2000.

3. Soil Survey of Hillsborough County, Florida; National Cooperative Soil Survey; Florida; 1983.

4. Flood Insurance Rate Map. (Community Panel Numbers 120112 0385 B and 120112 0425 B); U.S. Department of Housing and Urban Development; United States of America; June 18, 1980.

5. Hillsborough County Stormwater Management Master Plan; Hillsborough County Department of Public Works.

6. Hillsborough River Watershed Management Plan; Ayres Associates; Tampa, Florida; August 2000.

7. Preliminary Geotechnical Investigation; Nodarse & Associates, Inc.; July 19, 2000.

8. Cultural Resource Assessment Corridor Analysis Report; Archaeological Consultants,
Inc.; Sarasota, Florida; February 2001.

9. Cultural Resource Assessment Survey Report; Archaeological Consultants, Inc.; Sarasota, Florida; August 2001 (Revised November 2001).

10. Final Wetland Evaluation Report; Parsons, Brinckerhoff Quade & Douglas, Inc.; Tampa, Florida; January 2002.

11. Final Endangered Species Technical Memorandum; Parsons, Brinckerhoff Quade & Douglas, Inc.; Tampa, Florida; January 2002.

12. Final Contamination Screening Evaluation Report; Ayres Associates; Tampa, Florida; November 2001.

5.0 DESIGN CONTROLS AND STANDARDS

The design controls and standards for the development of the build-alternatives are based on the Florida Department of Transportation's *Plans Preparation Manual – English*[1] unless otherwise specified. Table 5-1 summarizes the criteria specified in these standards as it applies to this project.

Table 5-1: Summary of Design Standards' Criteria

Functional Classification		
Urban Minor Arterial		
Access Management Classification		
5 (Restrictive)		
Design Speed		
Urban Typical Section	(Existing Posted 45 mph)	50 mph (40 mph w/ TWLTL)
Rural Typical Section	(Existing Posted 50 mph)	60 mph
Horizontal Alignment	**50 mph**	**60 mph**
Minimum Radius	881 ft. ($D_{max.}$ = 6°30'00")	1,091 ft. ($D_{max.}$ = 5°15'00")
Border Width	14 ft.	40 ft.
Maximum Superelevation	0.05	0.10
Maximum Deflection (Without a Curve)	1°00'00"	0°45'00"
Minimum Horizontal Curve Length	750 ft. (No Less Than 400 ft.)	900 ft.
Minimum Radius for Curves (Without Superelevation)	2865 ft. ($D_{min.}$ = 2°00'00")	22918 ft. ($D_{min.}$ = 0°15'00")
Vertical Alignment	**50 mph**	**60 mph**
Minimum Curve Length (Sag)	200 ft.	300 ft.
Minimum "K" Value (Sag)	90	130
Minimum Curve Length (Crest)	300 ft.	400 ft.
Minimum "K" Value (Crest)	130	230
Maximum Grade	6.0%	3.0%
Maximum Change in Grade Without Vertical Curve	0.6%	0.4%
Minimum Grade	0.3%	0.0%
Sight Distance		
Stopping – Minimum	400 ft.	550 ft.
Roadway Elements		
Through Lane Width	12 ft.	12 ft.
Bike Lane Width	4 ft.	5 ft.
Median Width (Desirable/Minimum)	40 ft./22 ft.	40 ft.
Shoulder Width (Paved/Total)	N/A	5 ft./12 ft.
Sidewalk Width	5 ft. (2 ft. Buffer) or 6 ft. (Without Buffer)	5 ft.

5.1 References

1. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2000.

6.0 TRAFFIC

This section presents key information from the Study's separate *Final Traffic Technical Memorandum*[1].

6.1 Existing Traffic Conditions

In order to determine the current LOS along the Study corridor, traffic counts were conducted within segments along the corridor as well as at specified intersections. Seven signalized intersections were analyzed within the Study area:

- S.R. 574 at C.R. 579 (Mango Road)
- S.R. 574 at Highview Road
- S.R. 574 at Pine Street
- S.R. 574 at Parsons Avenue
- S.R. 574 at Kingsway Road
- S.R. 574 at Valrico Road
- S.R. 574 at McIntosh Road

Bi-directional approach counts and eight-hour turning movement counts were conducted at each of these intersections from Tuesday, March 28, to Tuesday, May 2, 2000, and between March 28 and March 30, 2000, respectively. Peak holiday times were avoided for these counts. In addition, three seven day bi-directional counts were conducted between Tuesday, March 28, and Sunday, April 16, 2000, for the following segments along S.R. 574:

- C.R. 579 (Mango Road) to Highview Road
- Parsons Avenue and Kingsway Road
- Valrico Road and McIntosh Road

The FDOT Systems Planning Office provided the following K, D, and T factors that were utilized to define the traffic characteristics used in the design hour traffic LOS analyses:

K(30) Factor	= 9.89 %
D Factor	= 54.37%
T Factor	= 3.0% peak hour
T Factor	= 6.0% daily
Peak Hour Factor (PHF)	= 0.95

Section 3.2 of this report provides a brief discussion of the existing levels of service within the Study corridor, and the specific LOS information is tabulated in Table 3-1.

6.2 Multimodal Transportation System Considerations

A review of the MPO's *2025 LRTP* and *Transportation Improvement Program (TIP, Fiscal Years 2000/2001 – 2004/2005)*[2], and Hillsborough County's *Comprehensive Plan for Unincorporated Hillsborough County Florida (March 1999)*[3] was undertaken to determine the effect local transit plans would have on the S.R. 574 corridor. A summary of these documents as well as other pertinent data is provided below.

6.2.1 Bus Service

Two separate bus routes, 28X and 38, under the direction of the Hillsborough Area Regional Transit (HART) authority currently serves the Study area. Route 28X provides Park 'N Ride locations with a corresponding express route from the Seffner/Dover area to downtown Tampa. There is one Park 'N Ride lot for Route 28X within the Study corridor, which is located at the North Grove Shopping Center (NW corner of the S.R. 574/Parsons Avenue intersection). Route 38 provides bus service from the Brandon area to Net Park (SE corner of Hillsborough Avenue and 56th Street). Additional destinations served by the bus route include: Brandon Town Center, Wal-Mart (S.R. 574 & C.R. 579), Florida Expo Park, Brandon Hospital, Clayton Plaza and East Gate Shopping Center. There is one bus stop associated with Route 38 within the Study corridor that is located at the Wal-Mart/Publix Shopping Center on the northeast corner of the S.R. 574 and C.R. 579 intersection.

The intention of the *LRTP* is to expand bus service to cover the majority of the urbanized area within Hillsborough County. As part of the LRTP, a new bus route is planned to serve the Dover/Seffner area via S.R. 574 with stations located near Falkenburg Rd., Valrico and Plant City. On the other hand, the *TIP* did not specify any improvements to the existing bus transit system within the project corridor.

6.2.2 Railroads

There are no railroad crossings along S.R. 574. The only active railroad in the vicinity of the corridor is operated by CSX, and it parallels S.R. 574 from west of Kingsway Road beyond the end of the Study corridor (East of McIntosh Road).

Hillsborough County MPO's 2025 LRTP, which was adopted December 5, 1995, mentions the implementation of a rail system from Lakeland to Tampa (23.5 miles); however, it does not specify the preferred route or location of intermediate stations. The *Tampa Bay Regional Commuter Rail Feasibility Study*[4] proposes several options for the location of the proposed commuter rail line. This Study specifies that the proposed "A" line, from Lakeland to Downtown Tampa, would utilize the existing CSX railroad tracks that parallel a portion of S.R. 574 within the Study area. The *Tampa-Hillsborough-Lakeland-Polk Alternatives for Mobility Enhancement Major Investment Study*[5] refined the recommendations

contained in the 2015 LRTP for rail transit improvements to a three-corridor rail system, which eliminated the Lakeland to Tampa corridor. The three-corridor rail system includes approximately 30 miles of rail service connecting Downtown Tampa with the University of South Florida (USF), Port Tampa and Westshore business district and Stadium areas. The Hillsborough County's *Comprehensive Plan for Unincorporated Hillsborough County Florida (March 1999)* proposes a high speed rail system parallel to Interstate-4 and Interstate-275 for the Tampa Bay-Orlando corridor.

6.2.3 Airports and Seaports

The are no airports or seaports directly accessed by S.R. 574. The closest airport to the project corridor is the Vandenberg Airport, which is located approximately 6.5 miles northeast of the Study area. The nearest seaport to the project is the Port of Tampa, which is located approximately 10 miles southwest of the Study area.

6.3 Traffic Analysis Assumptions

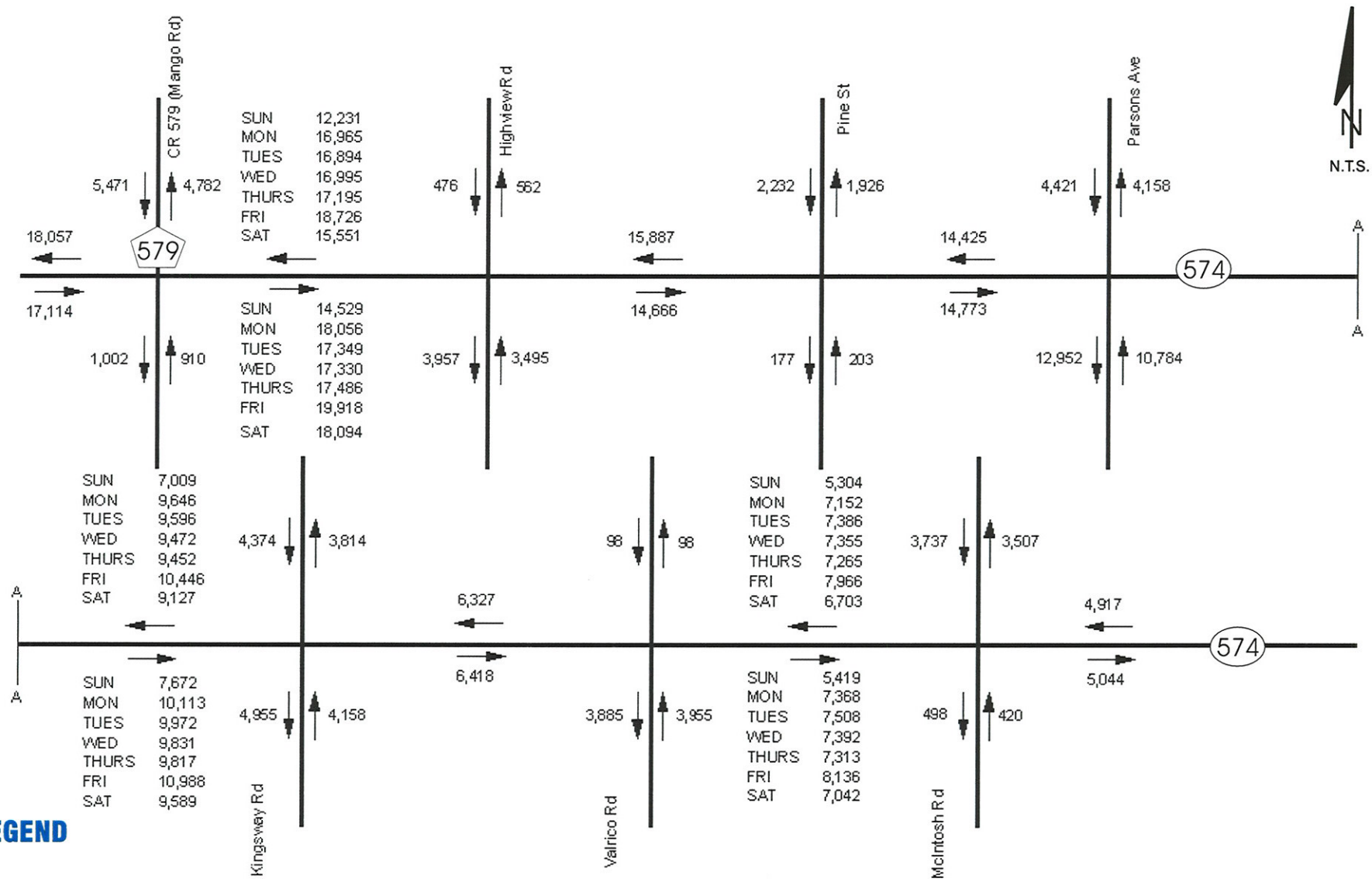
Traffic projections were provided by the District's Planning Department for the portion of S.R. 574 within the Study area and the corresponding signalized intersections. The Tampa Bay Regional Planning Model (TBRPM) was utilized as the basis for the daily traffic projections, and these projections were adjusted utilizing the design traffic procedures adopted by FDOT. For example, the traffic projections for 2025 were extrapolated from the years 2000 and 2020 values. There were no distinctions made in the traffic projections to account for the differences associated with the build and no-build option.

Alternatives developed for this Study are further described and analyzed in Section 8 of this report.

6.4 Existing Traffic Volumes

The typical weekday traffic volumes along S.R. 574 ranged from approximately 10,000 vehicles to in excess of 35,000 vehicles, depending on the count location.

The existing daily traffic volumes for S.R. 574 are illustrated in Figure 6-1, and Figure 6-2 illustrates the existing AM and PM peak turning movement volumes. These traffic volumes were obtained utilizing the methodology discussed in Section 6.1. It should be noted that the existing volumes presented in these figures for daily traffic and the AM and PM peak turning movements are based on raw data counts.



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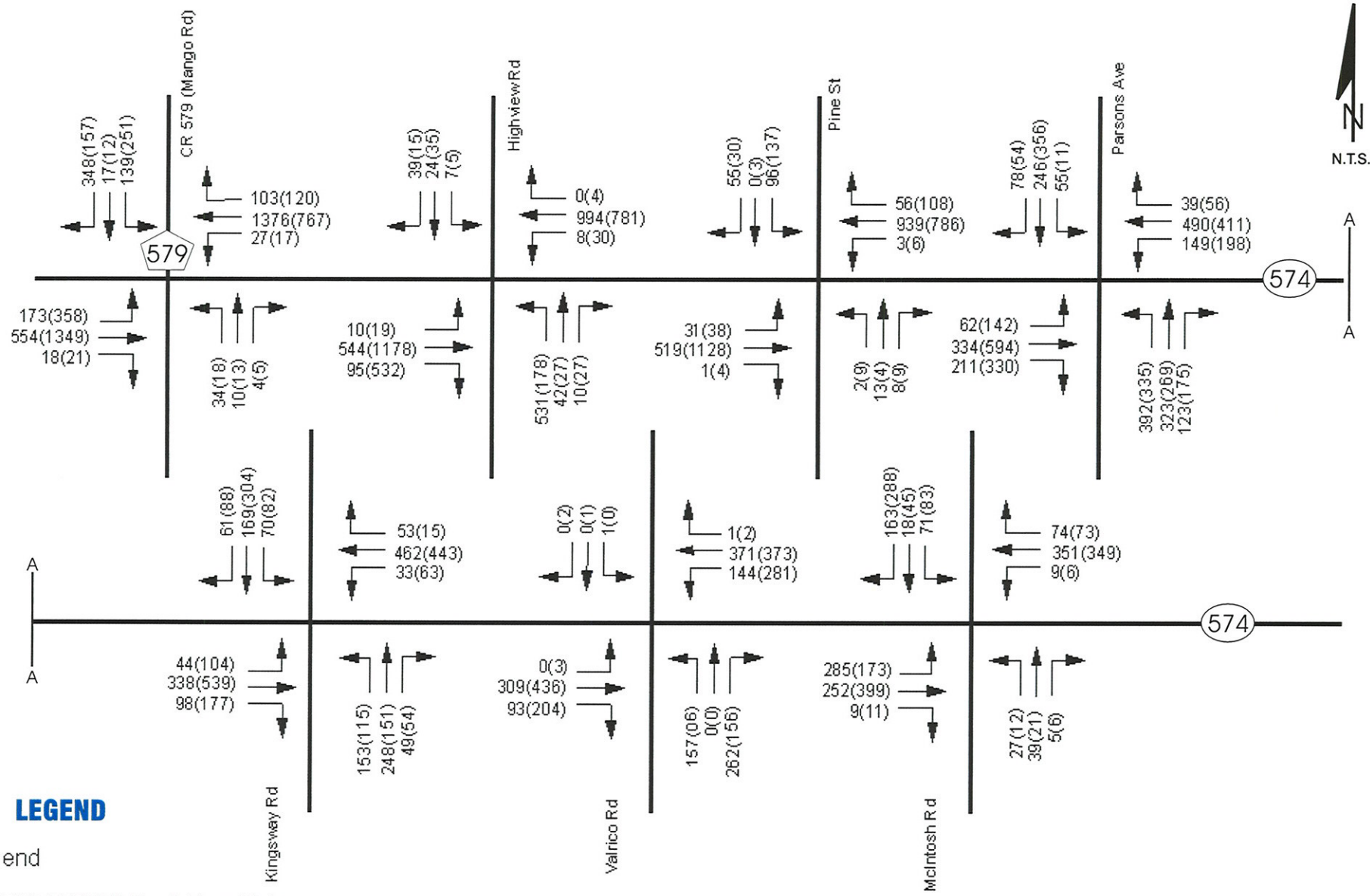
EXISTING TRAFFIC DAILY VOLUMES

Figure 6-1



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EXISTING TRAFFIC - TURNING MOVEMENT VOLUMES

Figure 6-2

6.5 Traffic Volume Projections

Figure 6-3 illustrates the daily traffic projections through the design year (2025), based on the methodology described in Section 6.3.

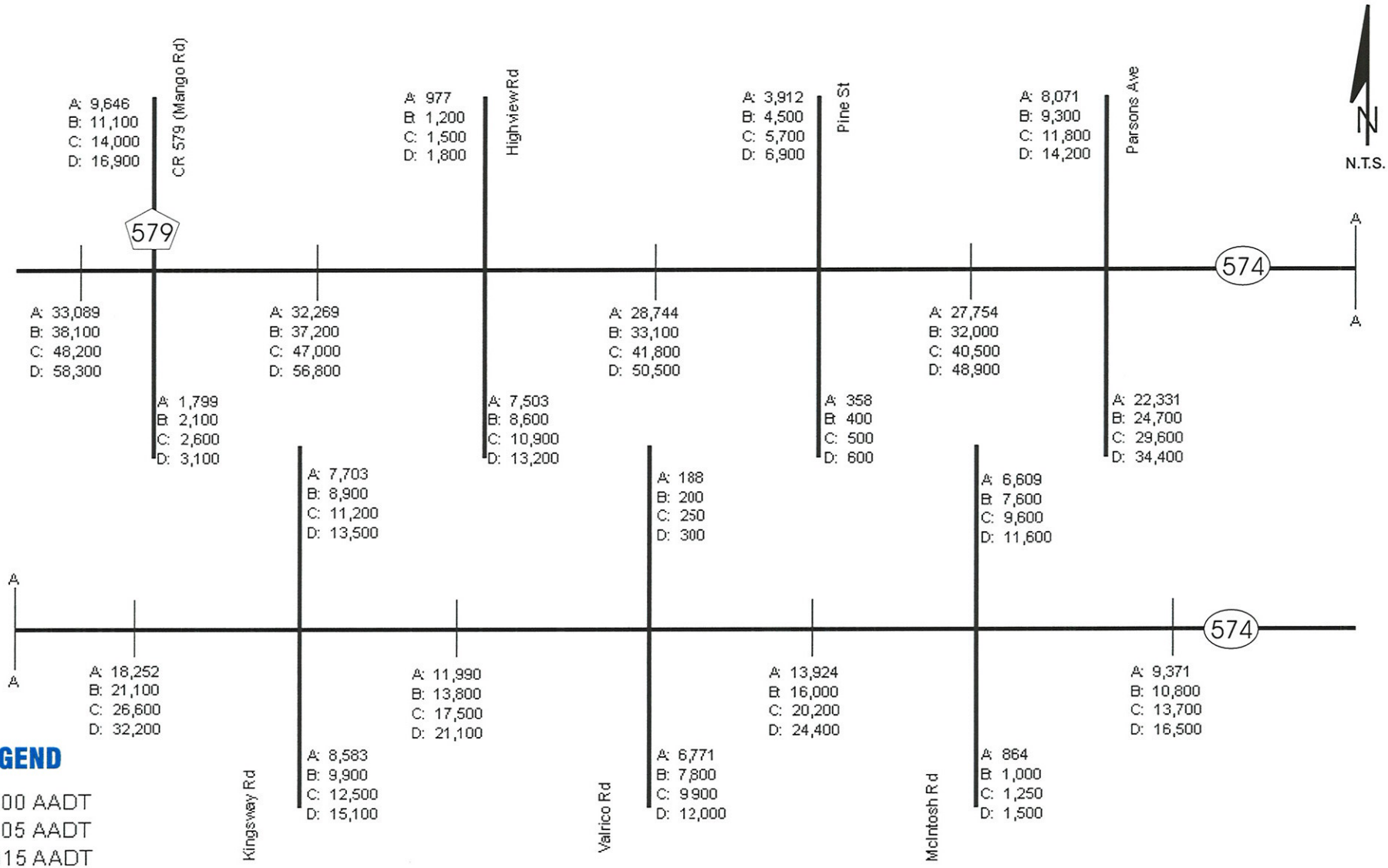
The TURNS4 spreadsheet was utilized to develop design hour turning volumes for the opening year (2005), mid-year (2015) and design year (2025) conditions. TURNS4 is a Lotus 1-2-3 template which develops future year turning movements based on user provided inputs. TURNS4 employs components of the TURNFLOW program (developed by McTrans) with the TURNS3 program, developed by District One. Figure 6-4 illustrates the turning volume projections for the design year developed by TURNS4.

6.6 Level of Service

As previously discussed in Section 3.1, current FDOT standards on the quality of traffic operations along facilities similar to S.R. 574 require a LOS D or better within urbanized areas.

The *Highway Capacity Software (HCS)* analysis was utilized in order to determine the operating conditions at each of the Study intersections for both the Build and No Build alternatives for the design year (2025). The TURNS4 outputs for the design traffic projections for the design year (2025) were used. A summary of the LOS analyses for both the intersections and segments is presented in Table 6-1.

In the design year, each intersection is operating at a LOS D or better based on a four to six lane configuration of S.R. 574. Figure 6-5 illustrates the recommended geometry for each signalized intersection within the Study area. The traffic volume projections for 2025 were utilized in conjunction with the existing lane geometry in order to determine the traffic volumes during the design hour. The intersection improvements were progressively analyzed until LOS D was achieved. In addition to the widening of S.R. 574, geometric improvements for each intersection are recommended in order for the intersections to operate at an acceptable level of service in 2025. Refer to the *Final Traffic Technical Memorandum* for these specific intersection improvements.



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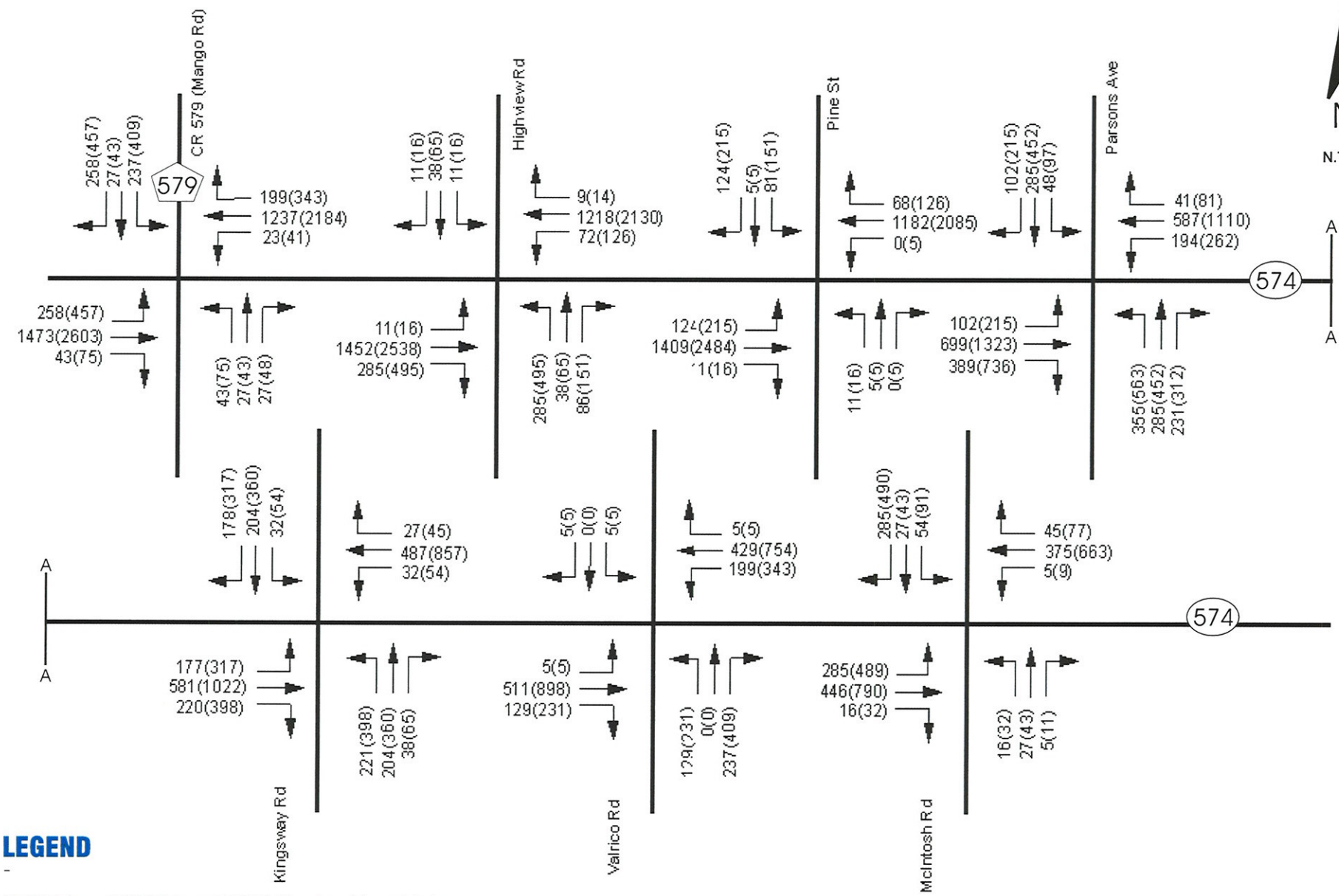
DAILY TRAFFIC PROJECTIONS

Figure 6-3



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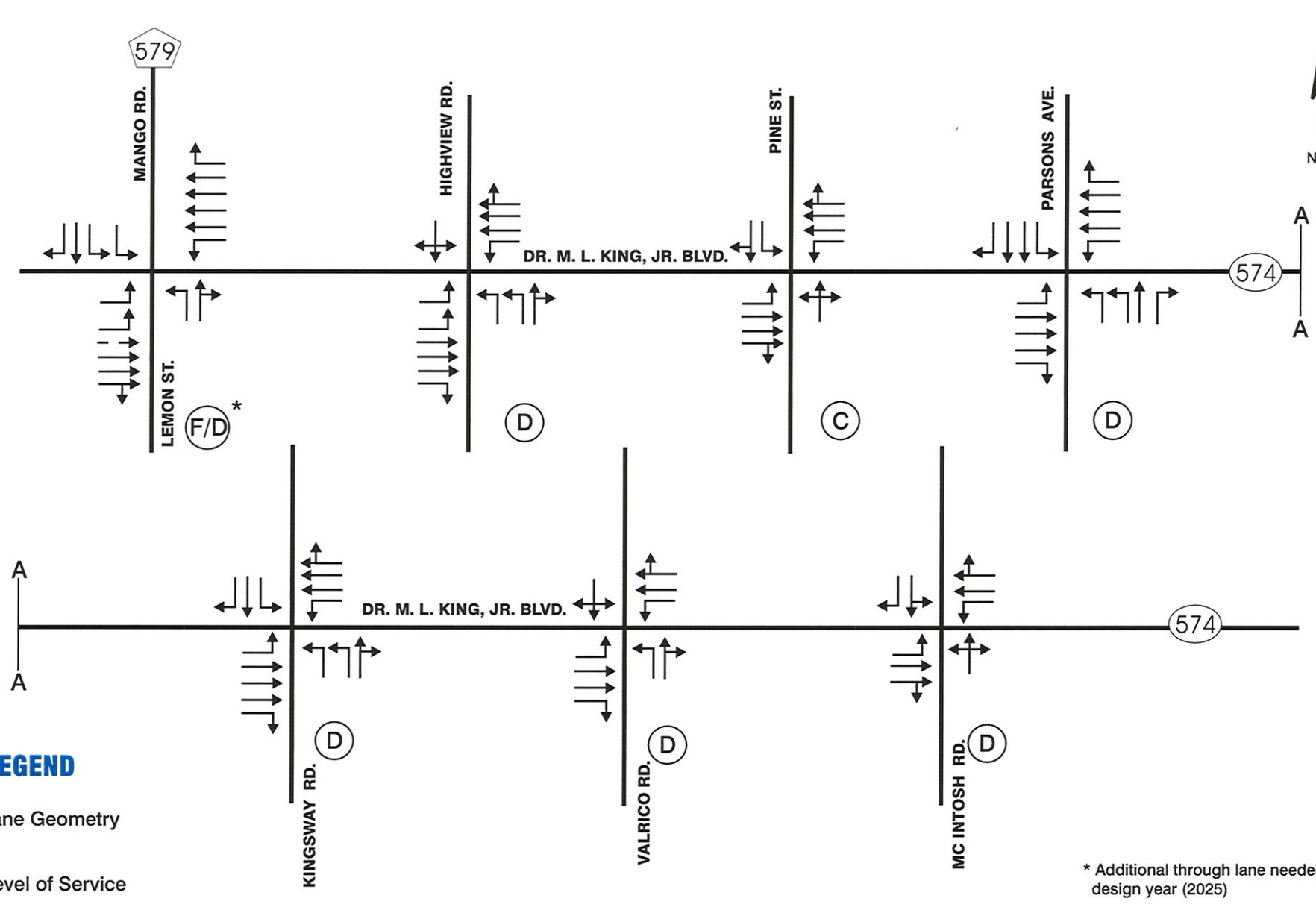
DESIGN HOUR VOLUMES

Figure 6-4



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GEOMETRY RECOMMENDED BY THE STUDY'S TRAFFIC TECHNICAL MEMORANDUM

Figure 6-5

Table 6-1: Future HCS Level of Service Summary

Intersections	No Build Condition (Year 2025)		Build Condition (Year 2025)	
	Delay (sec)	LOS	Delay (sec)	LOS
S.R. 574 at C.R. 579	>200	F	218.6	F
S.R. 574 at Highview Rd.	>200	F	52.0	D
S.R. 574 at Pine St.	>200	F	26.6	C
S.R. 574 at Parsons Ave.	>200	F	46.8	D
S.R. 574 at Kingsway Rd.	>200	F	48.7	D
S.R. 574 at Valrico Rd.	193.5	F	42.0	D
S.R. 574 at McIntosh Rd.	>200	F	44.8	D
Segments Eastbound	**No Build Condition (Year 2025)**		**Build Condition (Year 2025)**	
	Delay (sec)	LOS	Delay (sec)	LOS
C.R. 579 to Highview Rd.	>200	F	33.7	E
Highview Rd. to Pine St.	>200	F	5.6	B
Pine St. to Parsons Ave.	>200	F	45.1	D
Parsons Ave. to Kingsway Rd.	>200	F	47.9	D
Kingsway Rd. to Valrico Rd.	129.4	D	51.6	B
Valrico Rd. to McIntosh Rd.	143.5	F	52.3	D
Segments Westbound	**No Build Condition (Year 2025)**		**Build Condition (Year 2025)**	
	Delay (sec)	LOS	Delay (sec)	LOS
McIntosh Rd. to Valrico Rd.	6.2	B	22.4	B
Valrico Rd. to Kingsway Rd.	>200	E	49.6	B
Kingsway Rd. to Parsons Ave.	>200	F	47.4	D
Parsons Ave. to Pine St.	>200	F	32.9	C
Pine St. to Highview Rd.	>200	F	40.3	E
Highview Rd. to C.R. 579	>200	F	81.3	F

6.7 References

1. Final Traffic Technical Memorandum; MSI/Bayside Engineering, Inc.; Tampa, Florida; August 2000.

2. Transportation Improvement Program (Fiscal Years 2000/2001 – 2004/2005); Metropolitan Planning Organization; Tampa, Florida; June 6, 2000.

3. Comprehensive Plan for Unincorporated Hillsborough County Florida; Hillsborough County; Tampa, Florida; March 1999.

4. Tampa Bay Regional Commuter Rail Feasibility Study; Wilbur Smith Associates; 1993.

5. Tampa-Hillsborough-Lakeland-Polk Alternatives for Mobility Enhancement Major Investment Study; BRW; Tampa, Florida; July 2001.

7.0 CORRIDOR ANALYSIS

7.1 Evaluation of Alternate Corridors

The limits of the Study corridor extend along S.R. 574 between C.R. 579 (Mango Road) to McIntosh Road, a distance of approximately 3.6 miles. As indicated previously in Section 3.1.1, this section of S.R. 574 is classified as an urban minor arterial, which accommodates trips of moderate length that emphasize land access rather than travel mobility.

In addition to S.R. 574, four additional corridors were identified and analyzed to determine if other feasible alternative corridors to improving S.R. 574 exist. S.R. 60 (Brandon Boulevard), Wheeler Road, Old Hillsborough Avenue, and U.S. 92 (Hillsborough Avenue) were analyzed as potential alternative corridors to the south and north of S.R. 574.

Based on the evaluation, Wheeler Road, Old Hillsborough Avenue, and S.R. 60 (Brandon Boulevard) were identified as non-viable alternatives. Wheeler Road and Old Hillsborough Avenue are non-continuous within the Study corridor (between C.R. 579 and McIntosh Road). S.R. 60 was dropped as a viable alternative since the roadway is built-out based on its existing typical section. U.S. 92 is a continuous parallel corridor to S.R. 574 providing access to C.R. 579 and McIntosh Road. It should be noted that S.R. 574 and U.S. 92 accommodate the same type of trip purpose (access to and from the Central Business District and local development). Therefore, S.R. 574 and U.S. 92 (Hillsborough Avenue) are the only viable alternatives that were evaluated further in the corridor analysis.

7.2 Selection of Viable Alternatives

The appropriate corridor should focus on improving S.R. 574 to meet the growing travel demand within the Study area, for the following reasons:

- Improvement of S.R. 574 is an integral part of the overall transportation improvement plan for the area. Improvements to connecting roadways (McIntosh Road, Kingsway Road and C.R. 579) as part of the Hillsborough County MPO's *2025 LRTP*[1] "Needs List" are tied to the improvement of this section of S.R. 574.

- The widening of S.R. 574 to a divided roadway would be consistent with the recommendations provided in the Hillsborough County MPO's *2025 LRTP* and the *Comprehensive Plan for Unincorporated Hillsborough County*[2].

- It is anticipated that without improvements along S.R. 574 that all links between C.R. 579 and McIntosh Road will be deficient in the future (less than LOS D).

- It is anticipated that even if U.S. 92 is widened before S.R. 574, it would not totally alleviate the need to widen S.R. 574 based on the following features: travel cost, travel time, level of service, trip type, trip length and driver preference. Therefore, the potential diversion of traffic from S.R. 574 to U.S. 92 cannot be utilized as a means to alleviate the need to widen S.R. 574.

- The fact that the current Adopted 5-Year Work Program does not include improvements to U.S. 92 within this corridor further supports the need to improve S.R. 574.

7.3 References

1. 2025 Long Range Transportation Plan; Metropolitan Planning Organization; Tampa, Florida.

2. Comprehensive Plan for Unincorporated Hillsborough County Florida; Hillsborough County; Tampa, Florida; March 1999.

8.0 ALTERNATIVE ALIGNMENT ANALYSIS

In order to evaluate the viable build-alternatives for S.R. 574, alignments must be developed that minimize the social, economic and environmental impacts of the project while meeting the needs of the traveling public. These needs include roadway capacity and reduction of congestion, access to adjacent properties and businesses, public safety, transit, and non-motorized modes including pedestrians and bicyclists.

8.1 No-Build Alternative

The No-Build Alternative proposes no roadway improvements within the Study limits other than routine maintenance. This alternative has both advantages and disadvantages, which are summarized below:

Advantages

1. No Design, right-of-way and construction costs
2. No Right-of-way acquisition
3. No business or residential relocations
4. No disruption to traffic during construction activities
5. No disruption to existing land uses due to construction activities
6. No environmental impacts

Disadvantages

1. Increased travel time, and operating speeds will continue to decrease
2. The level of service will continue to deteriorate as congestion increases
3. Potential for accidents will increase due to the increased congestion
4. Air quality will decrease due to the increase in air pollutants as a result of the increased congestion

8.2 Transportation System Management

The purpose of Transportation System Management (TSM) is to investigate the following alternatives to improve the existing roadway conditions:

- Upgrading the existing facility by means of improving areas that experience a high accident rate
- The addition of turn lanes
- Improve the existing signing and pavement markings

TSM is normally applied for small increases in capacity by low expenditures in public funds, such as changing traffic signal operation or extending the storage lengths of turn lanes. However, TSM will not provide enough benefits for this project to obtain an acceptable level-of-service.

8.3 Study Alternatives

The following sub-sections explain the considerations and criteria used to develop the build alternatives, which were compared with the no-build and TSM alternatives. The following process occurred in developing these build alternatives:

A Traffic Study was prepared for the project which identified the need for a divided six-lane roadway from C.R. 579 eastward to Kingsway Road, and a divided four-lane section from Kingsway Road to McIntosh Road. These improvements were needed to provide an acceptable level of service for the projected traffic in design year 2025, which was inconsistent with the long-range transportation plan. The MPO 2020 Plan identified a divided four-lane facility eastward to Kingsway Road as a cost feasible consideration (an enhanced two-lane section from Kingsway Road to McIntosh Road was also identified, but this would not have increased the roadway's traffic capacity).

Alternative six-lane and four-lane typical sections were developed, and a meeting with the MPO occurred to discuss the laneage requirements. From this meeting it was decided to proceed with developing the six-lane and four-lane alternative alignments, and obtain estimated right-of-way costs, while the MPO was updating their traffic analysis for year 2025. It was noted that the alignments and cost estimates would be obtained well before the MPO completed their update, but it was anticipated that the cost difference between the six-lane and four-lane alternatives would not be significant. It was also noted that the MPO update might determine that a six-lane roadway was now appropriate, but not necessarily cost feasible.

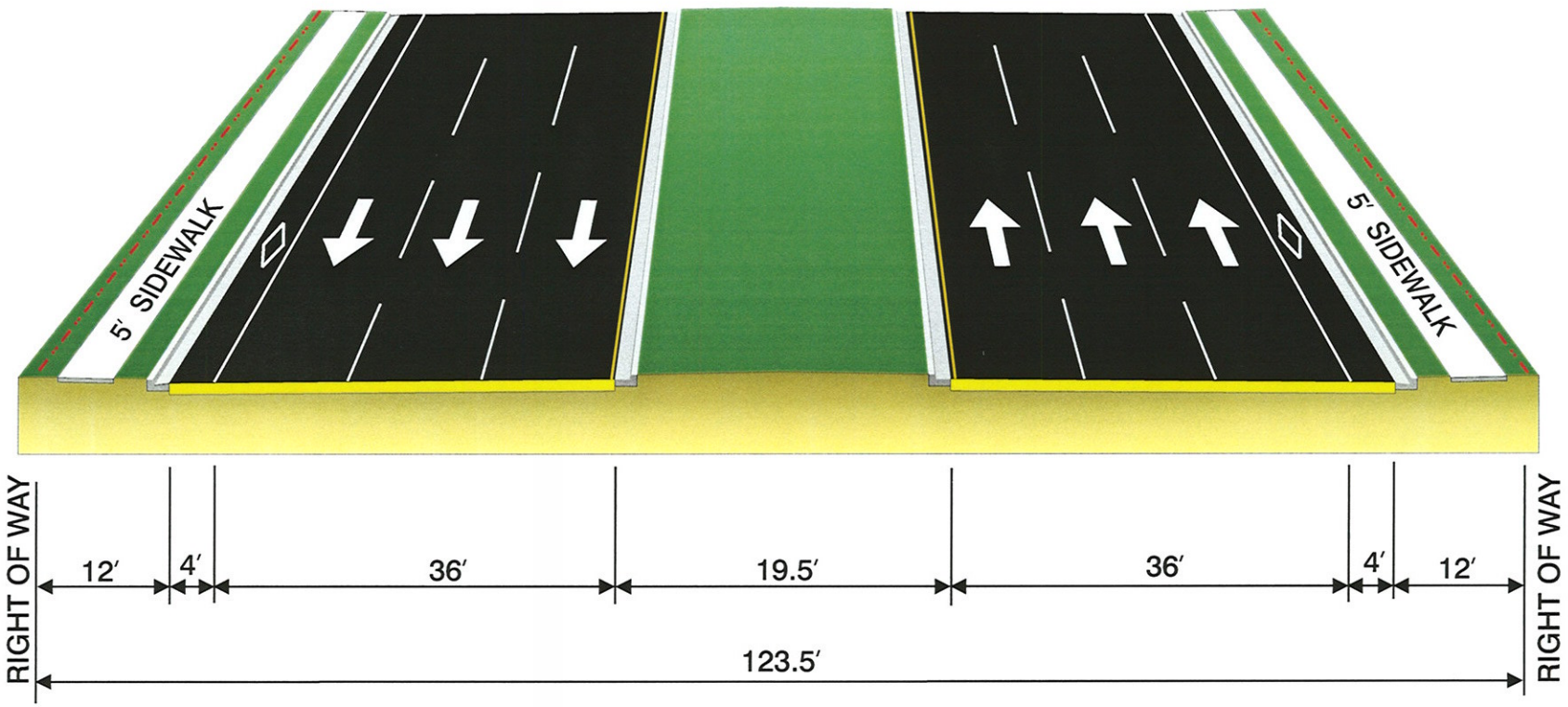
Following the alternative alignment development, and right-of-way cost estimates, a decision was made that the costs were prohibitive. The typical sections were then modified to reduce the proposed right-of-way widths.

8.3.1 Classification and Design Speed

The roadway classification should remain as a minor urban arterial roadway and the design speed should be 50 mph in the portion of the project with urban land uses (C.R. 579 to Kingsway Road). This design speed is appropriate for a roadway that will be posted for 45 mph, which is the highest speed where curb and gutter is still permissible. From east of Kingsway Road to McIntosh Road, the land uses are more rural in nature, and driver expectancy would be for a higher posted speed. This portion of the project should therefore have a 60-mph design speed and be posted at 50 mph, which also maintains the existing speed limit.

8.3.2 Typical Sections

As mentioned at the beginning of Section 8.3, six-lane and four-lane alternative typical sections were developed that contained the Department's standard desirable dimensions. These original typical sections contained bike lanes and sufficient median widths to accommodate future dual left turn lanes (the urban six lane typical section is shown in Figure 8-1). It was



C.R. 579 (MANGO ROAD) TO KINGSWAY ROAD

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PROPOSED
6 - LANE URBAN ROADWAY
TYPICAL SECTION

Figure 8-1

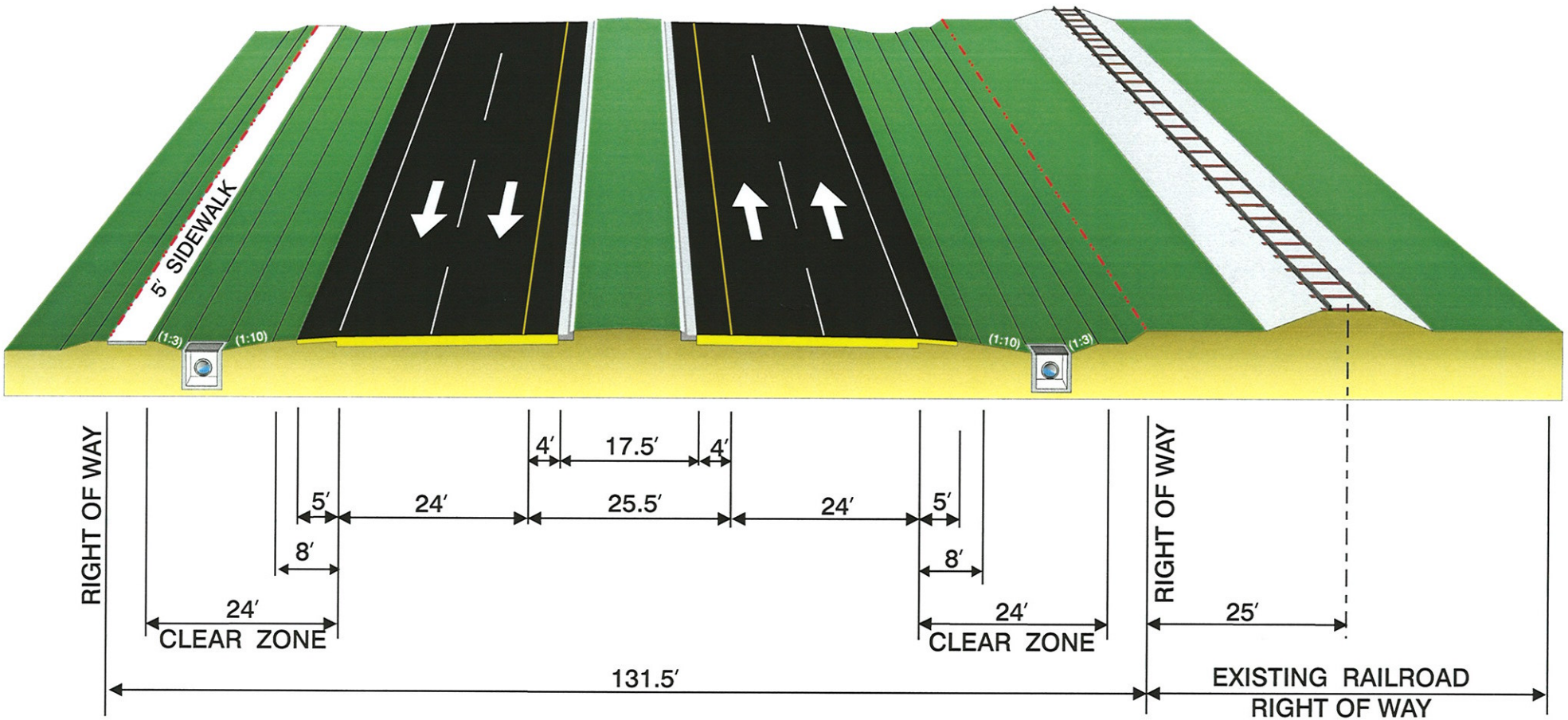
noted that the six-lane rural section was developed for comparison purposes and was not appropriate for the urban portion of the project, and was dropped from further consideration. The suburban section was then modified to the District's guidelines for a four-lane typical section, which reduced the right-of-way requirements and also provided a section that could be expanded to an urban six-lane roadway in the future (refer to Figure 8-2 for this modified typical section). The design speed of the suburban section was also increased from 55 mph to 60 mph, to enable a posted speed of 50 mph. An additional decision was to drop the urban four-lane section from further consideration for the rural portion of the project due to driver expectancy. Projected year 2025 ADT's were also provided for consideration of the typical sections, which were as follows: in the urban portion – 32,200 vehicles west of Kingsway Road to 56,800 vehicles east of C.R. 579, and in the rural portion – 21,100 east of Kingsway Road to 24,400 west of McIntosh Road.

Right, left and center alignments for the remaining typical sections were then developed (refer to sub-section 8.3.5) and submitted for right-of-way cost estimates. From this effort, it was determined that the corridor is fairly constrained and new typical sections needed to be developed for the urban portion of the project. These new sections had reduced lanes (from six to four) and median widths while maintaining standard 4-foot bike lanes and 12-foot travel lanes, and a continuous two-way left turn lane typical section was added. These new urban sections are shown in Figures 8-3 and 8-4, and were continued in the Study along with the former urban six-lane section (Figure 8-1) and the former suburban section (Figure 8-2) for the rural portion of the project.

It should be noted that coordination with the schools in the Study area was performed to determine the sidewalk requirements, and it was determined that no school children would be required to walk on the south side of S.R. 574 east of Kingsway Road due to the school bus service provided by the Hillsborough County School District. Additionally, there are very few access points along the south side of S.R. 574 east of Kingsway Road because of the CSX Railroad; therefore, a sidewalk is only provided on the north side of the road in the rural portion of the Study corridor.

8.3.3 Horizontal Alignment

The horizontal alignment criteria utilized for this study was obtained from Chapter 2 of the Department's *Plans Preparation Manual – English*[1] and is summarized below in Table 8-1.



KINGSWAY ROAD TO McINTOSH ROAD

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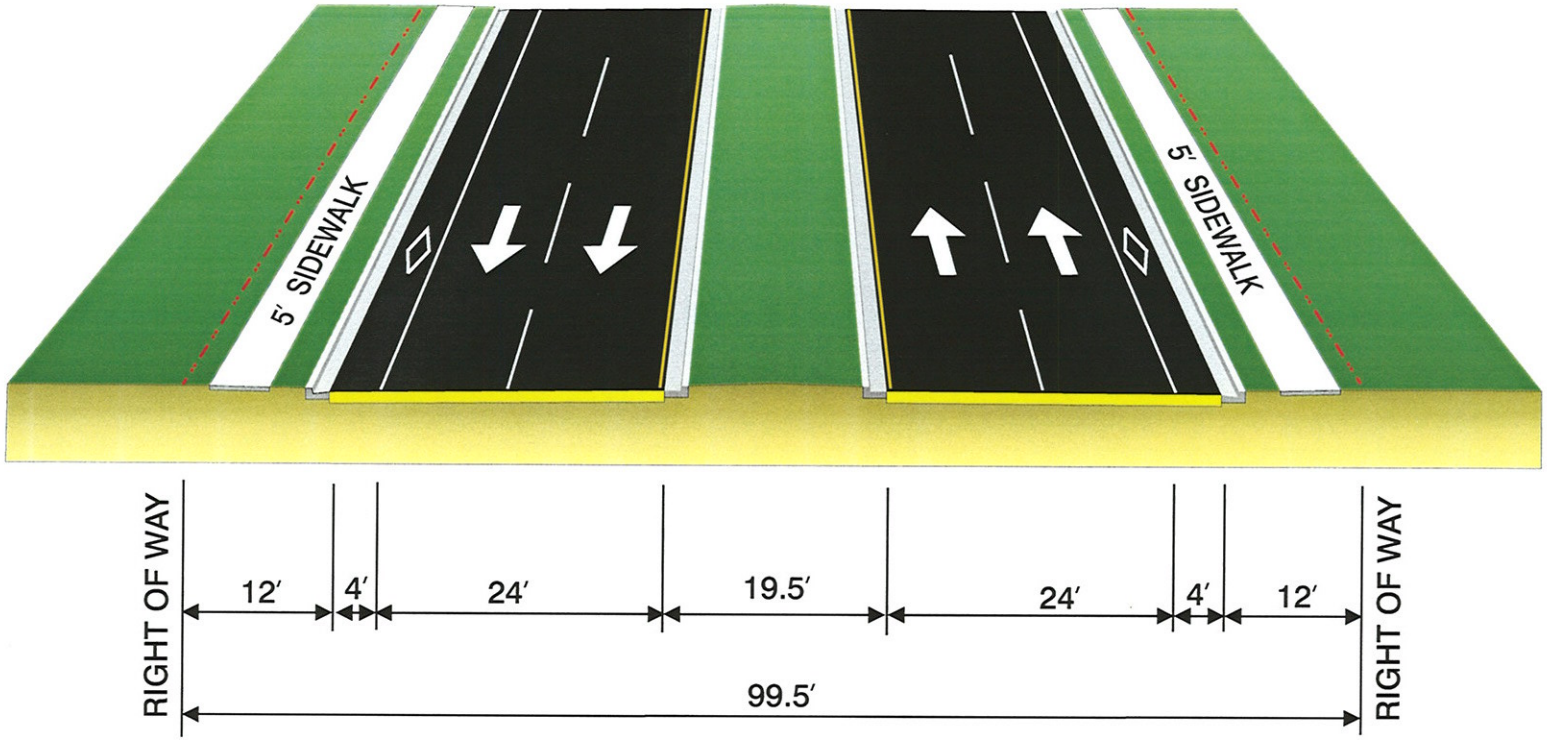
PROPOSED
4 - LANE SUBURBAN ROADWAY
TYPICAL SECTION

Figure 8-2



HIGHVIEW ROAD TO KINGSWAY ROAD

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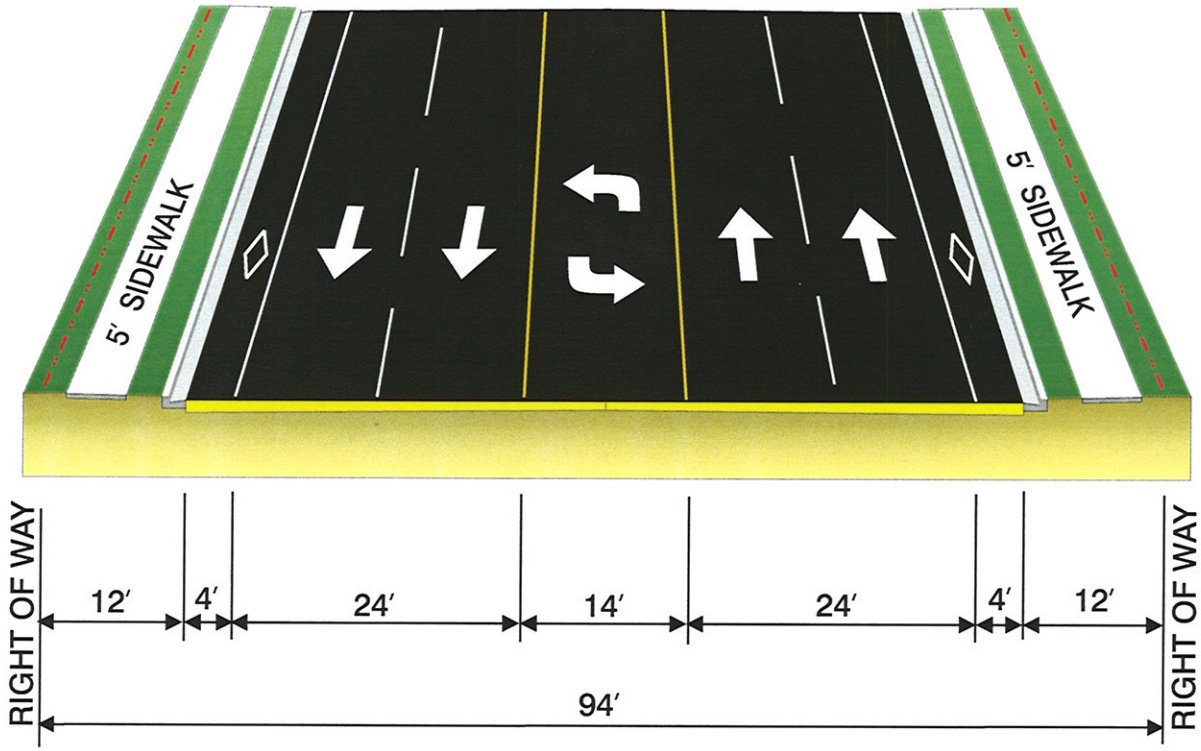
PROPOSED
4 - LANE URBAN ROADWAY
TYPICAL SECTION

Figure 8-3



HIGHVIEW ROAD TO KINGSWAY ROAD

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PROPOSED 5 - LANE URBAN ROADWAY TYPICAL SECTION

Figure 8-4

Table 8-1: Horizontal Alignment Design Criteria

Design Speed		
Urban Typical Section (Existing Posted Speed 45 mph)		50 mph
Rural Typical Section (Existing Posted Speed 50 mph)		60 mph
Horizontal Alignment	**50 mph**	**60 mph**
Maximum Deflection (Without a Horizontal Curve)	1°00'	0°45'
Maximum Degree of Curvature (Without Superelevation)	2°00'	0°15'
Minimum Radius (Without Superelevation)	2,865 feet	22,918 feet
Minimum Superelevated Radius (e_{MAX} = 0.05)	881 feet	N/A
Minimum Superelevated Radius (e_{MAX} = 0.10)	N/A	1,091 feet
Minimum Desirable Curve Length	750 feet	900 feet
Absolute Minimum Curve Length	400 feet	400 feet

Additional horizontal alignment considerations such as tapers for changes in typical section dimensions, lane add and drops, and superelevation transitions between reverse curves are discussed in the development of the alternative alignments in sub-section 8.3.5.

8.3.4 Vertical Alignment

The vertical alignment criteria utilized for this study was obtained from Chapter 2 of the PPM and is summarized in Table 8-2 below.

Table 8-2: Vertical Alignment Design Criteria

Design Speed		
Urban Typical Section (Existing Posted Speed 45 mph)		50 mph
Rural Typical Section (Existing Posted Speed 50 mph)		60 mph
Vertical Alignment	**50 mph**	**60 mph**
Maximum Change in Grade (Without a Vertical Curve)	0.6%	0.4%
Minimum Grade	0.3%	0.0%
Maximum Grade	6.0%	3.0%
Minimum "K" Value (Sag Curve)	90	130
Minimum "K" Value (Crest Curve)	130	230
Minimum Vertical Length (Sag Curve)	200 feet	300 feet
Minimum Vertical Length (Crest Curve)	300 feet	400 feet

8.3.5 Alternative Alignments

Right, left and center alignments were developed for the original and the revised typical sections that are described in sub-section 8.3.2. As part of this effort, coordination with the Department's Railroad Coordinator occurred to determine how much right-of-way could be acquired from CSX, and how close the roadway improvements can be constructed to the existing railroad tracks. From this meeting it was determined that the existing CSX right-of-way from the center of the tracks to the CSX / S.R. 574 right-of-way line (east of Kingsway Road) is 50 feet, and that 25 feet of right-of-way can be acquired. It was also determined that an additional 12 feet of right-of-way can be acquired for exclusive right turn lanes at intersection approaches. Environmental analyses were performed on a corridor basis to determine if there were any significant concerns that could not be mitigated and would thus control the alignments. These preliminary analyses did not reveal any significant constraints, and the alternatives were preliminarily designed and plotted so that right-of-way acquisition would only occur on one side of the roadway for the right and left alternatives. An exception was east of Kingsway Road due to the 25-foot limitation of the railroad, where the center and right alignments are the same. The intersection configurations and turn lane lengths that were recommended in the separate Traffic Study were also incorporated into these alternative alignments.

As previously mentioned, the result of the right-of-way cost estimates on the original alignments caused revisions to the urban typical sections and also affected the alignments. One affect was to divide the Study area into three segments instead of two. The new segments were C.R. 579 to Parsons Avenue (Segment "A"), Parsons Avenue to Kingsway Road (Segment "B"), and Kingsway Road to McIntosh Road (Segment "C"). The Parsons Avenue to Kingsway Road segment contained the same urban alternative typical sections as the C.R. 579 to Parsons Avenue segment, but was separated for future funding and construction scheduling considerations. Another affect was to identify specific controls for the centered alignment, which were to avoid the car sales lot west of Highview Road and south of S.R. 574, the St. Mary's AME cemetery west of Taylor Road, and to minimize the acquisition within the bank properties on the north and south sides of S.R. 574 and west of Parsons Avenue. It was also mentioned that impacts to the parking area at the Discount Auto store east of Highview Road should be minimized, and that small corner clips could probably be removed in the future design phase by sidestreet alignment shifts and reduced curb return radii.

As mentioned in section 4.2 there is one bridge within the Study limits which is a low level, 30-foot span concrete flat slab bridge over a drainage channel. Though the Bridge Development Report that will be prepared in the future design phase will compare widening the bridge against replacement, and will evaluate different bridge types, it is anticipated that the structure will be replaced in kind (Refer to Figure 8-5 for the proposed bridge typical section). None of the alternative alignments will preclude this approach, nor cause a replacement bridge to be constructed on a skew or a different span length. This Study's drainage analysis and Location Hydraulic Report also compared bridge replacement with a box culvert or pre cast arch. Scour will be a concern at the bridge location due to large storm water flows in the channel during major storm events.

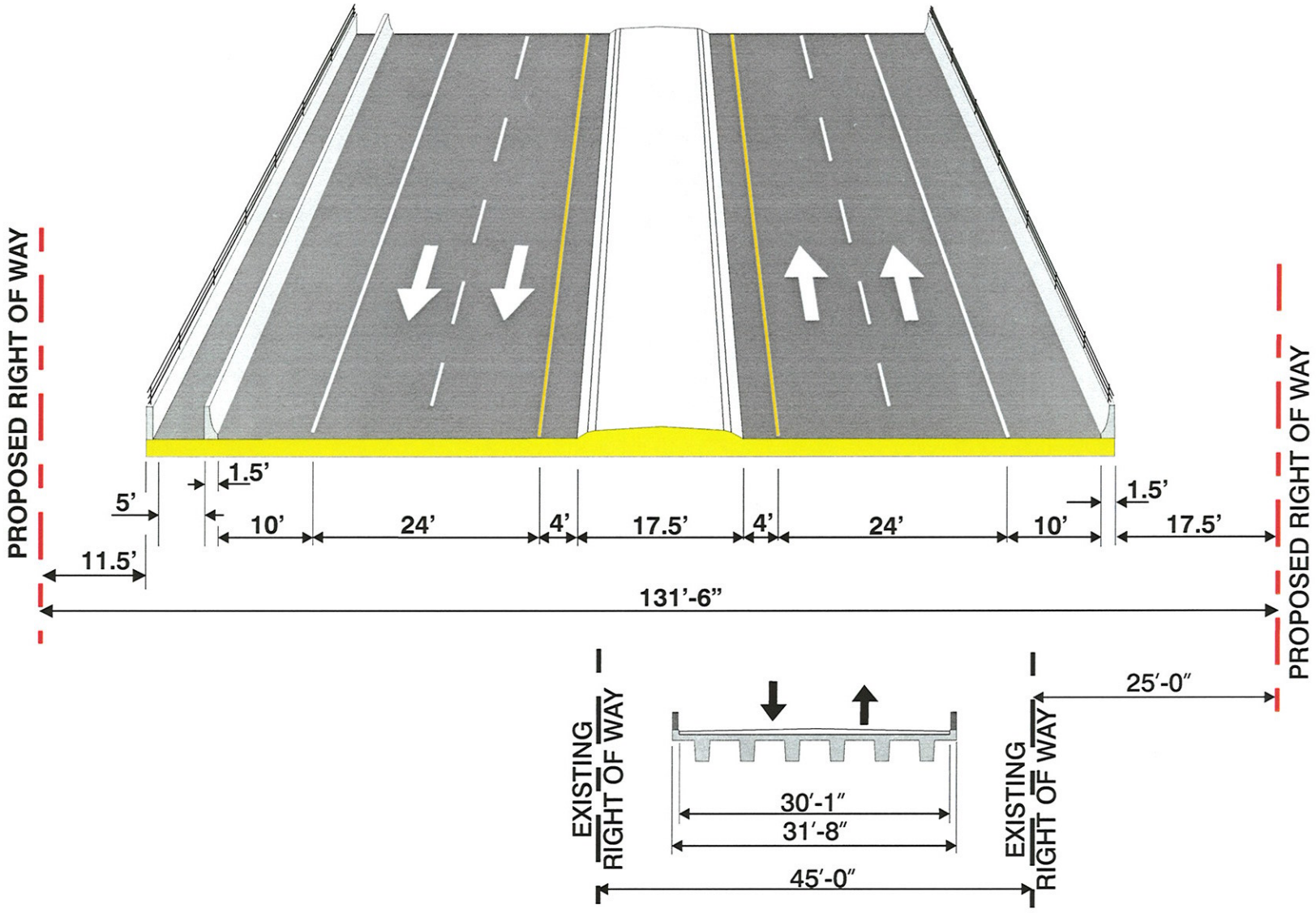
8.3.6 Environmental Considerations

A preliminary geotechnical investigation was performed and it was determined that poorly drained soils only exist in the middle of the project near Lenna Avenue; and that the existing soils throughout the corridor should be able to support a typical embankment pavement after proper subgrade preparation. It was also mentioned that there was no evidence of sinkhole activity along S.R. 574.

A *Cultural Resource Assessment Survey*[2] (CRAS), including background research and a field survey, has been coordinated with the State Historic Preservation Officer (SHPO). As a result of the Assessment, forty historic resources were identified within the Study Project's Area of Potential Effects (APE), including two previously recorded sites (8HI6521 and 8HI6527) and 38 properties (8HI5689-92; 8HI5694-98; 8HI5700; 8HI5702-09; 8HI5777; and 8HI6903-21). Based on the information provided, the SHPO concurred with the determination that the above mentioned sites are considered *ineligible for listing in the National Register of Historic Places* due to their common design, non-historic alterations, and lack of significant historical association.

However, the SHPO determined that the Armwood House (8HI5777) and the Mediterranean Revival residence (8HI6527) are eligible for listing under criteria B and C, and a *Section 106 Technical Memorandum* was prepared as part of this Study. After review of this memo, SHPO concurred with the FHWA determination "that this proposed undertaking will have no affect on any resources listed or considered eligible for listing in the NRHP".

The traffic noise evaluation for the S.R. 574 improvements was performed using the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM-Version 1.0b, July 1999). According to the *Noise Study Report*[3] *(NSR)*, seventy-five noise sensitive sites were identified adjacent to the S.R. 574 corridor, as having the potential to be affected by traffic noise. Of the 75 sites, 3 are religious facilities, 1 is a daycare facility and 71 are single-family residences. Seven of the 71 single-family residences are located on one lot (a single-family home and 5 small cottages) and 14 of



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PROPOSED 4 - LANE SUBURBAN BRIDGE TYPICAL SECTION

Figure 8-5

the 71 residences are mobile homes (Scarab Trailer Park). The residential sites and the daycare facility were evaluated as Activity Category "B". As such, noise abatement measures were considered if predicted exterior traffic noise levels with the proposed improvements were 66 decibels (dB) on the "A" scale (dBA) or higher. The religious facilities were evaluated as Activity Category "E". As such, abatement measures were considered if predicted interior traffic noise levels were 51 dBA or higher.

Based on the results of the analysis, the predicted existing exterior traffic noise levels at the residential sites and the daycare facility range from 51.8 to 68.2 dBA, with levels above the NAC at 5 of the single-family residences. The predicted existing interior traffic noise levels at the religious facilities range from 38.4 to 43.8 dBA (levels are below the NAC), Activity Category "E".

In the year 2025, with the no-build alternative, predicted exterior traffic noise levels at the residential sites and the daycare facility range from 52.4 to 68.0 dBA with levels above the FHWA's Noise Abatement Criteria (NAC), Activity Category "B", at 5 of the single-family residences and the daycare facility. The predicted interior traffic noise levels at the religious facilities range from 38.4 to 43.8 dBA (levels are below the NAC).

In the year 2025, with the S.R. 574 proposed improvements, predicted exterior traffic noise levels at the residential sites and the daycare facility range from 54.7 to 74.0 dBA with levels above the NAC, Activity Category "B" at 19 of the single-family residences and the daycare facility. The predicted interior traffic noise levels at the religious facilities ranges from 41.9 to 47.1 dBA (levels are below the NAC, Activity Category "E". The results also indicate that the maximum increase in either the exterior or interior traffic noise level would be 7.2 dBA when compared to existing levels. As such, traffic noise is not predicted to increase substantially at any of the noise sensitive sites because of the S.R. 574 improvements.

Noise abatement measures were considered for the noise sensitive sites predicted to experience traffic noise levels approaching, meeting or exceeding the NAC. The measures were traffic management, alternative roadway alignment, property acquisition, and noise barriers. The results of the evaluation indicate that none of the measures are feasible or reasonable to reduce predicted traffic noise levels. As such, there are no apparent solutions to abate (reduce) traffic noise levels with the S.R. 574 improvements. Construction of the improvements will have a temporary impact on noise sensitive sites adjacent to the project corridor.

A biological assessment was prepared and though several listed species were observed such as the little blue heron, snowy egret, white ibis and brown pelican. The assessment concluded that no adverse affects to threatened and endangered species or habitats are anticipated by the build alternatives. The assessment also noted that an agency reported the existence of a bald eagle nest east of McIntosh Road and approximately one-mile to the north of the Study corridor.

The biological assessment also addressed wetlands along the corridor, which exist mostly in manmade ditches along the road and in the storm water management facilities of adjacent properties. It is noted in the assessment that the wetlands are low in quality due to the lack of groundcover and buffering habitat, the urban nature of the area, and the inability to provide adequate wildlife habitat. However, a wetland south of S.R. 574 and west of Highview Road is protected by a conservation easement, and storm water flows to the wetlands that are connected to the main drainage ditches to Lake Weeks must be maintained. Potential impacts associated with the recommended alternative includes dredging (extension of existing and proposed cross drains) and filling (proposed roadway bed) of wetlands contained within the project corridor. The recommended alternative includes all practicable measures to minimize impacts to the wetlands that may result from the project.

A hazardous material assessment was conducted for this project, which resulted in the identification of a total of 27 potential contamination sites located along S.R. 574 between C.R. 579 and McIntosh Road. Segment A of the alignment contains a total of 13 sites. No sites in Segment A have a high rank. One site is ranked medium, which is a petroleum and small quantity generator (SQG). The remaining 12 sites in Segment A have a low rank and consist of three petroleum sites, three petroleum and SQG sites and six hazardous waste generator sites.

Segment B contains a total of eight sites with one petroleum site ranked high. Four sites have been ranked as medium (petroleum sites) and three sites are ranked low.

Segment C contains a total of six potential sites with one petroleum site ranked high. The other five sites have a low or no rank, which are petroleum-related sites.

None of the potential contamination sites reduce the viability of the build alignments that have been developed. However, a Level II Site Assessment should be performed, at proximal boundaries of the sites that received a high rank, during the design phase of the project.

8.3.7 Drainage

A preliminary evaluation of the stormwater attenuation and/or treatment system needs was performed for this Study. The following methodology was utilized for this evaluation.

The Study corridor exists in two major watersheds and the existing high-points, as well as bridge #100033 and two existing cross culverts, divide the project area into nine basins (refer to Section 4.1.7). These basin boundaries were in turn utilized to develop potential pond sites and to determine the anticipated storm water attenuation and treatment needs of each pond site.

The Study's conceptual drainage design consists of constructing attenuation ponds to accommodate the additional runoff of the build alternatives. The attenuation requirements are based on retaining the pre-construction/post-construction runoff volume difference in a 100-year, 24-hour storm event (10.6 inches of rainfall) for the project's basins that are closed. This approach is used for the beginning portion of the project and proceeds eastward beyond Parsons Avenue, as well as a portion of the project that is east of McIntosh Road. In the portion of the project that begins west of Kingsway Avenue, the basins drain toward Baker Canal and are considered to be open. The attenuation requirements for the ponds that are conceptually designed in this area of the Study are based on detaining the pre-construction/post-construction peak runoff rate difference in a 25-year, 24-hour storm event (8.2 inches of rainfall).

The 5-Lane Typical Section was utilized for the conceptual pond design in the urban portion of the project because it yielded a larger amount of runoff than the 4-Lane Typical Section. The conceptual ponds considered in the basins were sized utilizing the SCS Runoff Curve Number Method presented in the United States Department of Agriculture Publication, *Urban Hydrology for Small Watersheds*. The attenuation volume of the ponds within a closed basin (100-year, 24-hour storm event) was calculated by averaging the top of pond elevation and the bottom of pond elevation and applying the depth of the pond. The attenuation volume of the ponds within an open basin (25-year, 24-hour storm event) was determined utilizing the same methodology, except that one foot of freeboard was included in the calculations. The pond bottoms were established based on the lowest existing ground elevation within the parcels under consideration. This is a conservative approach to allow sufficient clearance from the water table, but still provided 6 to 7 feet of pond depth due to the existing ground slopes within the parcels (pond berms were applied as needed). The pond cross section was established utilizing the following criteria: 2:1 slope between existing property lines and the top-of-berms, berm widths of 20 feet for maintenance purposes, and a 4:1 slope between the top-of-berm and the bottom-of-pond. The required treatment volumes are based on the first inch of rainfall on the impervious areas.

Table 8-3 provides the approximate pre-construction and post-construction pavement areas, roadway basin areas, and required attenuation volumes for each of the basins.

Table 8-3: Drainage Sub-Basin Characteristics

Sub-Basin/ Segment Number	Sub-Basin Limits (Station)	Roadway Sub-Basin Area (Acres)	Pavement Area (Acres)		Attenuation Required (Acre-Feet)
			Pre-Const.	Post-Const.	
1	303+63.77 To 314+58.69	4.39	2.21	3.19	0.65
2	314+58.69 To 326+00.00	3.11	1.20	2.64	0.96
3	326+00.00 To 340+00.00	3.21	1.56	2.82	0.84
4	340+00.00 To 371+00.00	9.83	4.38	8.48	2.73
5	371+00.00 To 380+88.00	4.80	2.04	3.85	1.21
6	380+88.00 To 414+21.60	9.84	2.59	6.09	1.98
7	414+21.60 To 436+70.90	6.84	1.69	3.99	1.30
8	436+70.90 To 466+22.27	10.22	3.25	5.97	1.54
9	466+22.27 To 502+51.33	11.33	2.90	6.47	2.38

The following descriptions are provided for the conceptual drainage design within each basin:

Subbasin No. 1 originates at the beginning of the Study limits (west of Highview Road) and terminates east of Lake Drive, approximately 0.207 miles (0.344 kilometers). Subbasin No. 2 begins east of Lake Drive and terminates east of Oak Street South. Subbasin No. 3 extends from east of Oak Street to west of Parsons Avenue. These subbasins are considered to be within closed drainage basins. Due to the commercial development in the area, the application of long linear ponds is not practical. Therefore, partial or whole parcel takes within the vicinity of S.R. 574 will be required to provide storm water ponds that will accommodate the additional runoff volumes.

Subbasin No. 4 begins west of Parsons Avenue and terminates west of Kingsway Road. Subbasin No. 5 extends from west of Kingsway Road to east of Oak Street. Subbasin No. 6 originates east of Oak Street and terminates west of Chastain Road. Subbasin No. 7 begins west of Chastain Road and ends west of Valrico Road. Subbasin No. 8 extends from west of Valrico Road to west of McIntosh Road. Subbasin No. 9 originates west of McIntosh Road and terminates at the end of the Study limits, east of McIntosh Road. Subbasins 4 through 9 are considered to be within open drainage basins.

A separate Pond Siting Report was prepared for the Study that contains the conceptual drainage design calculations and the alternative pond sites for all of the segments. Table 8-4 summarizes the proposed pond sites and corresponding areas.

Table 8-4: Summary of Proposed Pond Site Characteristics

Pond Site No.	Segment No.	Required Top of Pond Area (Acres)	Storage Volume Provided (Acre-Ft.)	Treatment Volume Provided (Acre-Ft.)	Right-of-way Acquisition Required Acres
1	1, 2 & 3	0.60	2.5	N/A	None (FDOT Owned Property)
2	4 & 5	1.26	4.0	N/A	1.6
		1.15	4.1	N/A	1.4
3	4 & 5	1.24	3.3	N/A	3.95
		0.99	4.0	N/A	1.1
4	6	4.49	34.1	4.1	4.6
		2.76	27.1	4.2	3.9
5	7	1.97	5.3	2.8	2.7
6	8	3.82	16.7	4.0	4.4
		2.75	12.4	4.1	2.5
7	9	0.86	2.4	N/A	1.1
		0.80	2.4	N/A	1.0

8.3.8 Construction and Engineering Costs

Construction costs were estimated for the build alternatives that were developed at the end of sub-section 8.3.5. The Design costs and CEI costs are estimated to be 30% of the construction costs (15% each), and the total construction and design costs for all three segments are $18,430,000 for the divided 4-lane urban and suburban typical section, $18,560,000 for the 5-lane urban and 4-lane suburban typical section, and $19, 410,000 for the 6-lane urban and 4-lane suburban typical section.

8.3.9 Right-of-Way and Relocation Considerations

As discussed in sub-section 8.3.5, right-of-way cost estimates were prepared for the original typical sections which contained the desired dimensions, laneage, and median widths and were found to exceed $64,000,000 for Segment A. Following coordination with the MPO the typical sections were reduced, and the right-of-way costs were re-estimated to be approximately $31,000,000 for Segment A.

8.4 Evaluation Matrix

Table 8-6 compares the build alternatives that were developed at the end of sub-section 8.3.5. These final alternatives consist of divided six-lane, four-lane and five-lane urban typical sections in segments "A" and "B," and a suburban four-lane section in segment "C," along a "best fit" alignment. The limits of the segments are as follows: Segment "A" is from C.R. 579 to Parsons Avenue, Segment "B" is from Parsons Avenue to Kingsway Road, and Segment "C" is from Kingsway Road to McIntosh Road.

Table 8-5: Evaluation Matrix for the Build Alternatives

EVALUATION FACTORS	Alternative 1		Alternative 2		Alternative 3		Alternatives 1, 2 & 3
	URBAN DIVIDED 6-LANE		URBAN DIVIDED 4-LANE		URBAN 5-LANE		SUBURBAN 4-LANE
	SEGMENT "A"	SEGMENT "B"	SEGMENT "A"	SEGMENT "B"	SEGMENT "A"	SEGMENT "B"	SEGMENT "C"
POTENTIAL RELOCATIONS							
Business	29	6	16	4	16	5	5
Residential	3	0	3	0	2	0	3
COMMUNITY FACILITIES INVOLVEMENT							
Churches, schools, medical facilities, etc.	0	0	0	0	0	0	0
NOISE EFFECTS							
Number of noise sensitive sites*	6	6	6	6	6	6	5
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT							
Number of historic sites/structures adjacent to ROW	2	0	2	0	2	0	1
Number of public parks adjacent to ROW	0	0	0	0	0	0	0
NATURAL ENVIRONMENT INVOLVEMENT							
Total wetland involvement area (acres)	0.2	0.1	0.1	0.1	0.1	0.1	4.1
Area of base floodplain encroachment (acres)	0	0	0	0	0	0	0
POTENTIAL HAZARDOUS MATERIAL AND PETROLEUM POLLUTANT CONTAMINATED SITES (within or adjacent to Right-of-way)							
Number of potential sites adjacent to ROW	1	5	1	5	1	5	1
ESTIMATED COSTS (MILLION DOLLARS, 2001)							
ROW acquisition cost**	56.3	13.4	32.2	9.7	31.0	9.4	21.4
Engineering cost (15%)	0.6	0.4	0.5	0.3	0.6	0.3	1.3
Construction cost	4.0	2.4	3.6	2.1	3.7	2.1	8.5
Construction engineering and inspection cost (15%)	0.6	0.4	0.5	0.3	0.6	0.3	1.3
Total	61.5	16.6	36.8	12.4	35.9	12.1	32.5

*within the 66 dBA Isopleth

**Pond sites, though final locations have not been determined, are included in the estimated right-of-way (ROW) acquisition costs

8.5 Recommended Alternative

An Alternatives Public Workshop was held on June 14, 2001, which enabled the selection and modification of a recommended alternative from the three alternatives that were presented. 119 citizens attended the workshop and 37 written responses were received. Eight of these responses favored Alternative I (6-Lane Urban Typical Section), two favored Alternative II (4-Lane Urban Typical Section) and two responses favored Alternative III (5-Lane Urban Typical Section). Five responses requested improved access to their commercial or residential property (additional median openings), five responses supported the no-build alternative, one response concerned sidewalk and bicycle lanes, and another response concerned existing flooding issues. The remaining responses stated that it was too early to make a decision, or there were requests to be added to the project mailing list.

Following the Alternatives Public Workshop, the public's comments were reviewed and a recommended alternative was selected for further refinement by the FDOT during a meeting on September 27, 2001. As a result of this meeting one additional typical section, a 4-lane suburban typical section (45 mph design speed), was developed for Segment "B".

The recommended alternative for the multi-laning of S.R. 574 from C.R. 579 to east of McIntosh Road consists of three typical sections. The proposed improvements for the portion of the project between C.R. 579 and Parsons Avenue include a 5-lane urban typical section (design speed of 40 mph) that contains a 14-foot, two-way left turn lane (TWLTL) within 94 feet of right-of-way. It also includes bicycle lanes and sidewalks on both sides of the roadway. A 4-lane suburban typical section (45 mph design speed) is proposed for the portion of the project from east of Parsons Avenue to east of Kingsway Avenue and also includes a sidewalk to the north side of the roadway. Similarly, a 4-lane suburban typical section (60 mph design speed) is proposed for the remaining portion of the project from east of Kingsway Road to east of McIntosh Road. Additional right-of-way is required for the recommended typical sections (See Figures 9-1 through 9-3). The recommended alignment generally follows the existing roadway with minor realignment to reduce relocation impacts and to avoid a cemetery in the western portion of the project. A twenty-five foot offset from the proposed right-of-way line to the centerline of the existing CSX railroad tracks controlled the recommended alignment for the eastern portion of the project.

8.6 References

1. Plans Preparation Manual-English; Florida Department of Transportation Roadway Design Office; Tallahassee, Florida; January 2000.

2. Cultural Resource Assessment Survey Report; Archaeological Consultants, Inc.; Sarasota, Florida; August 2001 (Revised November 2001).

3. Noise Study Report; Environmental Science Associates; Tampa, Florida; January 2002.

9.0 PRELIMINARY DESIGN ANALYSIS

After selection of the recommended typical section and alignment for each segment of the project, the next step in the study process is to define/refine the design parameters associated with these choices, including intersection design, drainage design and maintenance of traffic during construction. Defining these parameters will allow for a more comprehensive and accurate evaluation of the project impacts and costs.

The items presented in this section are discussed in regard to the recommended alternative design concepts.

9.1 Design Traffic Volumes

The recommended daily traffic volume projections (design year 2025) and design hour volumes were presented previously in Figures 6-3 and 6-4 of this report, respectively. Background information concerning the traffic analyses that produced these volumes is provided in Section 6.3, Traffic Analysis Assumptions, and also in the separate *Final Traffic Technical Memorandum* (August 2000).

9.2 Design Alternatives

The design alternatives for the various segments of this Study were previously discussed in Section 8.3 of this report, and the recommended alternative is described in Section 8.5 of this report.

9.3 Typical Sections

The recommended typical section for each segment of the project was previously discussed in Section 8.5, and are illustrated in Figures 9-1 through 9-3.

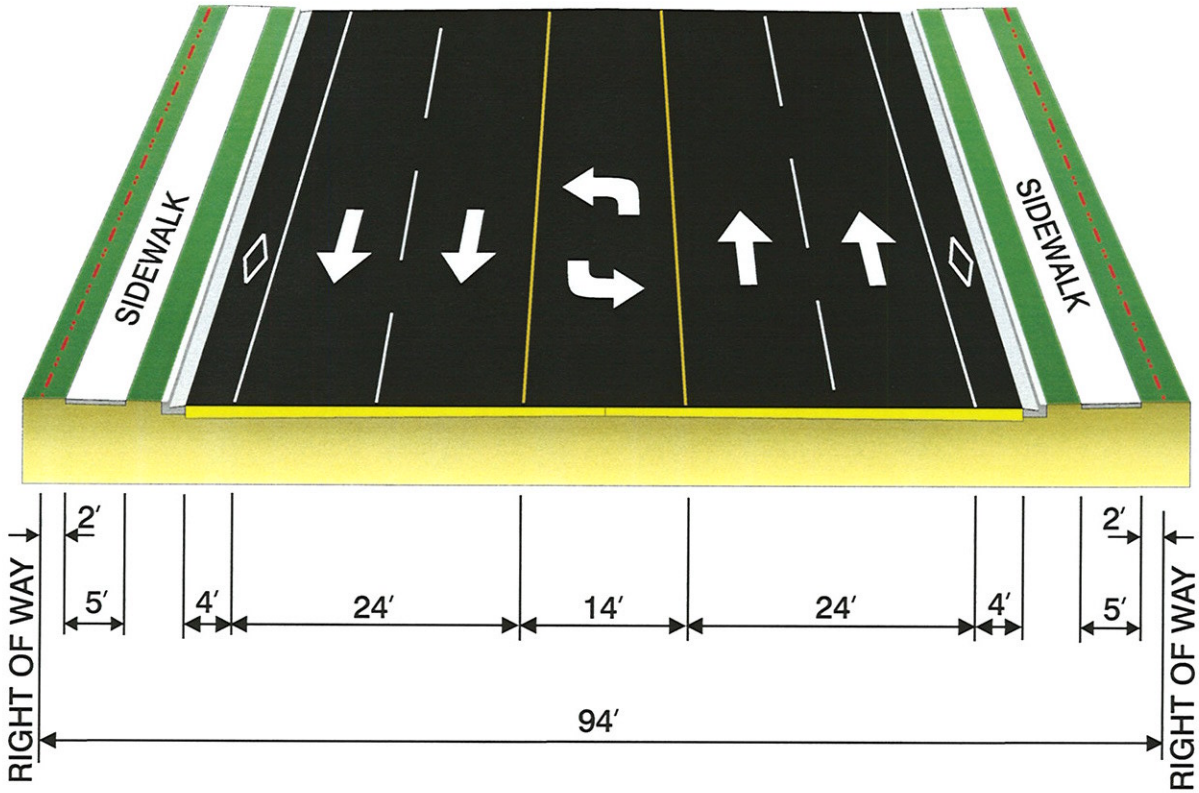
9.4 Intersection Concepts and Signal Analysis

Figure 9-4 illustrates the recommended intersection lane geometry. The signal phasings and timings for the signalized intersections will be analyzed during the design phase of this project.

9.5 Alignment and Right-of-way Needs

Appendix A includes the plan sheets with aerial photography that illustrate the recommended alternative for the project and the anticipated right-of-way needs. As shown in Figures 9-1 through 9-3, the right-of-way requirements for each segment of the proposed roadway improvements vary. A total of approximately 26.4-acres of right-of-way will need to be acquired in order to build the recommended alternative for S.R. 574.

Per FDOT direction, the widths of the median and clear zone were reduced to lessened the right-of-way needs, relocation impacts and project costs. The proposed alignment avoided to the maximum extent possible disruption to



HIGHVIEW ROAD TO PARSONS AVENUE

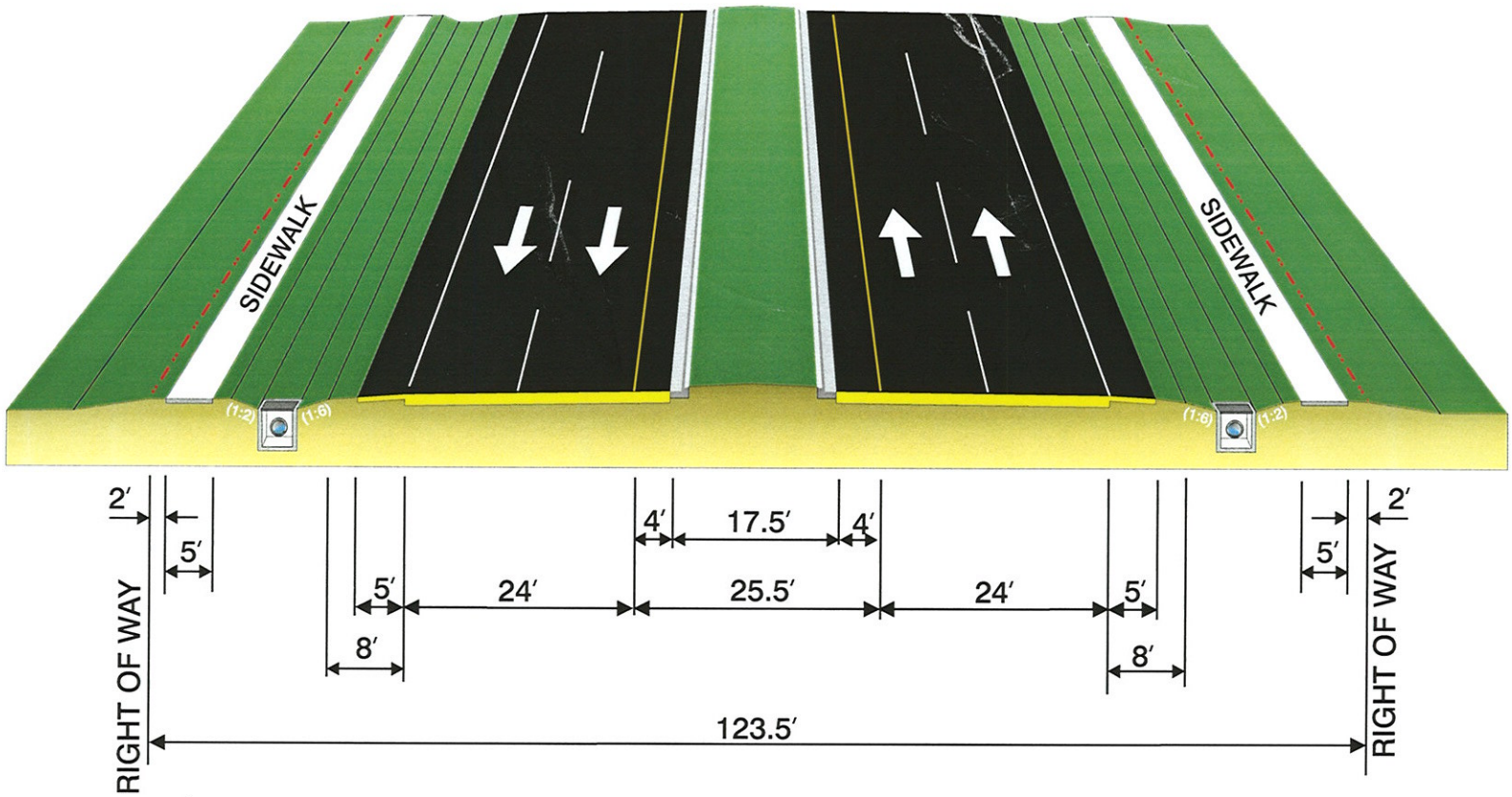
(40 MPH DESIGN SPEED)

MLK SR 574 BLVD
PD&E Study

S.R. 574 (Martin Luther King Jr. Blvd.)
Project Development & Environment (PD&E) Study
Hillsborough County, Florida
WPI Segment No. 255893 1
FAP No. 2081-018P

RECOMMENDED ALTERNATIVE
5 - LANE URBAN ROADWAY
TYPICAL SECTION

Figure 9-1



PARSONS AVENUE TO KINGSWAY ROAD

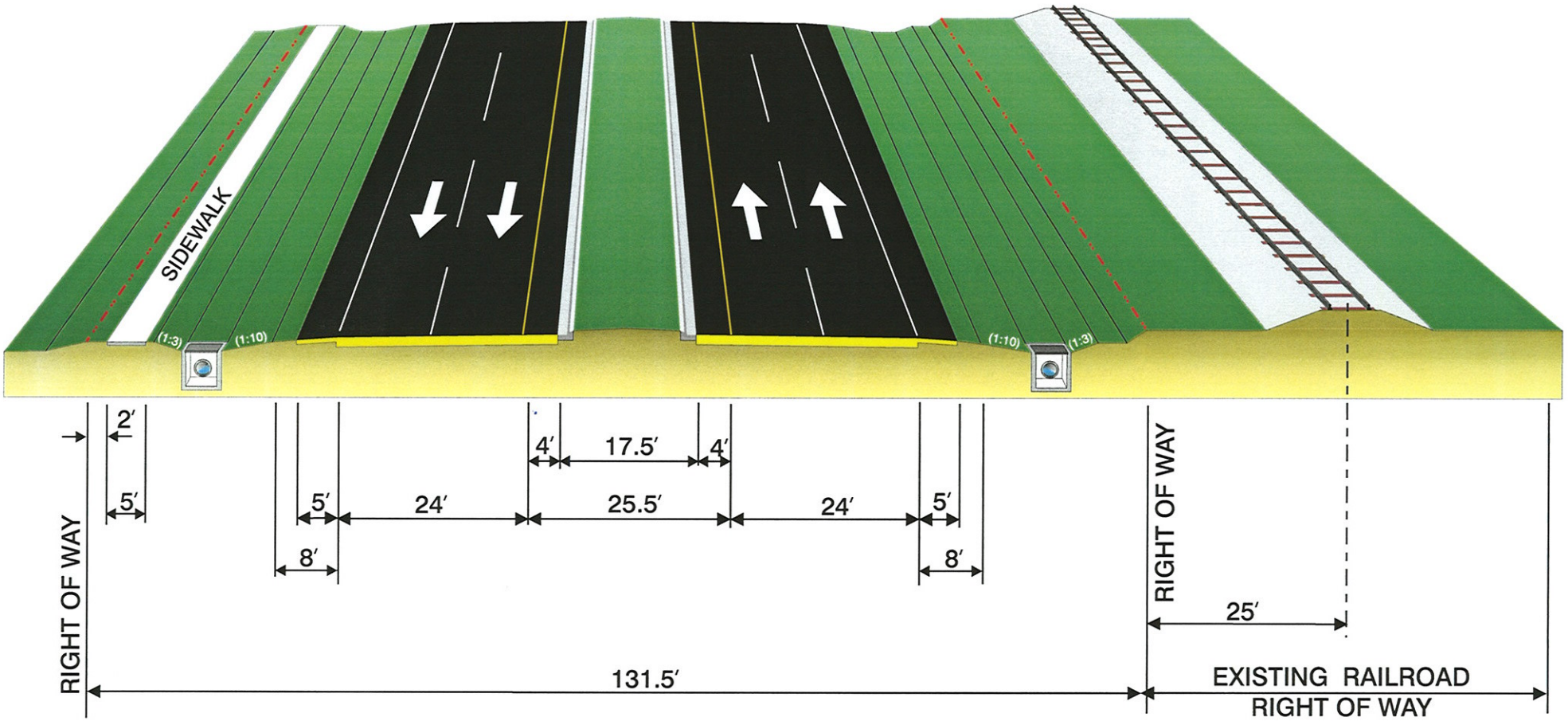
(45 MPH DESIGN SPEED)

MLK SR 574 BLVD
PD&E Study

S.R. 574 (Martin Luther King Jr. Blvd.)
Project Development & Environment (PD&E) Study
Hillsborough County, Florida
WPI Segment No. 255893 1
FAP No. 2081-018P

RECOMMENDED ALTERNATIVE
4 - LANE SUBURBAN ROADWAY
TYPICAL SECTION

Figure 9-2



KINGSWAY ROAD TO McINTOSH ROAD

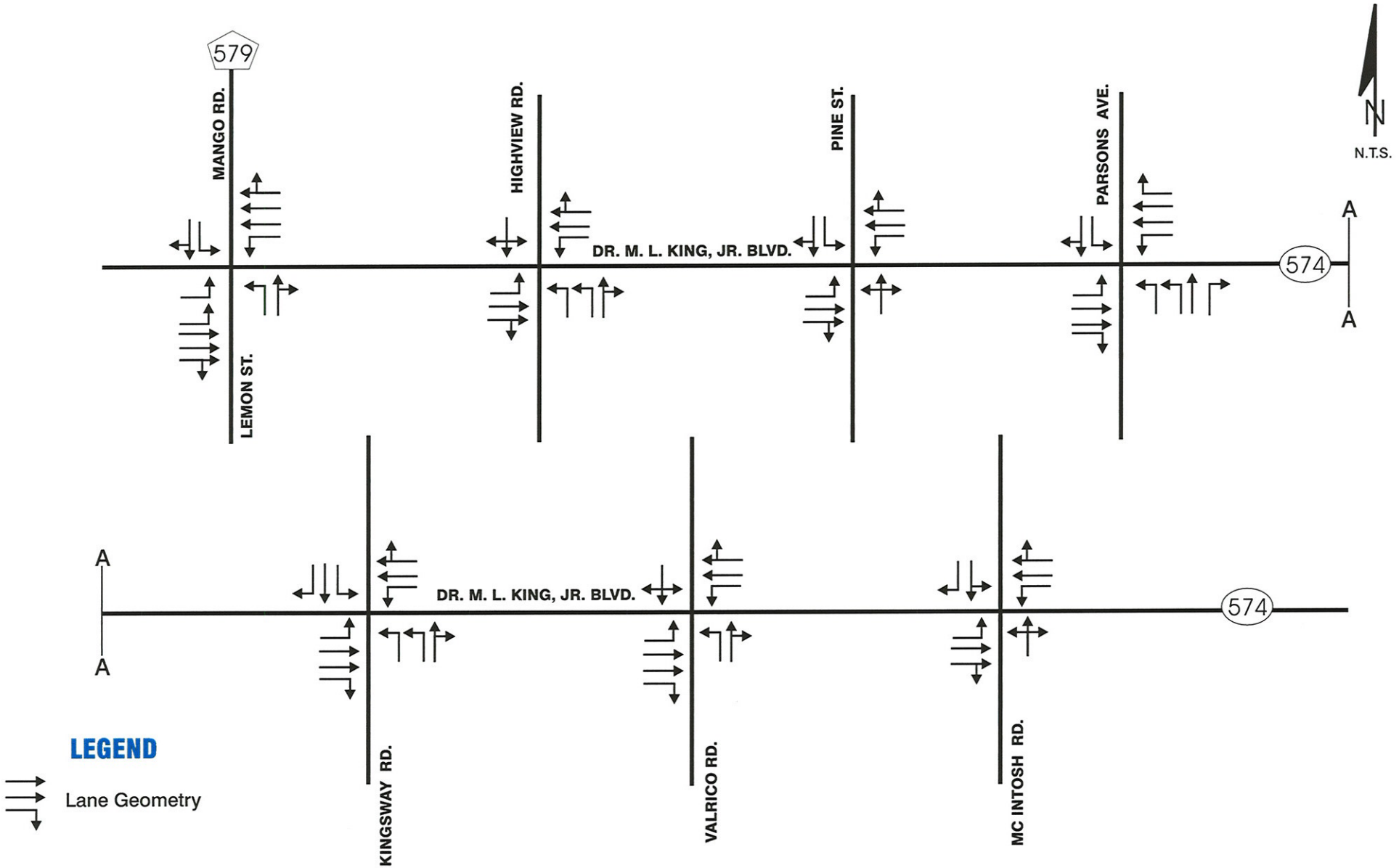
(60 MPH DESIGN SPEED)

MLK SR 574 BLVD
PD&E Study

S.R. 574 (Martin Luther King Jr. Blvd.)
Project Development & Environment (PD&E) Study
Hillsborough County, Florida
WPI Segment No. 255893 1
FAP No. 2081-018P

RECOMMENDED ALTERNATIVE
4 - LANE SUBURBAN ROADWAY
TYPICAL SECTION

Figure 9-3



Note; The laneage and intersection configurations shown are as recommended in the study's *Traffic Technical Memorandum*

MLK SR 574 BLVD PD&E Study

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Hillsborough County, Florida
WPI Segment No. 255893 1
FAP No. 2081-018P

RECOMMENDED GEOMETERY

Figure 9-4

community services by minimizing impacts to churches, day cares and established land uses.

9.6 Relocations

The construction of the proposed project will have minimal effect on the local community and property owners with respect to relocations. It is anticipated that there will be 26 relocations (22 businesses and 4 residential) within Segment "A", 13 relocations (6 businesses and 7 residential) within Segment "B", and 15 relocations (8 businesses and 7 residential) within Segment "C".

In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the FDOT will carry out a right-of-way and relocation program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 (Public Law 91-646 as amended by Public Law 100-17).

A *Conceptual Stage Relocation Report* was prepared for this Study to address the business and residence relocations.

9.7 Right-of-way Costs

The estimated right-of-way acquisition costs by project segment as provided by the Department (May 2002) are approximately 37.8, 26.8 and 29.2 million dollars for Segments "A", "B" and "C", respectively. These costs include right-of-way acquisitions for the placement of drainage retention ponds, which are discussed in Section 9.20 of this report. The total estimated right-of-way acquisition cost is 93.8 million dollars.

9.8 Construction Costs

The estimated construction costs by project segment are as follows:

Segment "A" = 4.3 million dollars

Segment "B" = 2.7 million dollars

Segment "C" = 6.6 million dollars

These costs were calculated with the use of the Department's Long Range Estimate (LRE) method, and include the cost for constructing stormwater retention/detention ponds. The estimated total construction cost is approximately 13.6 million dollars.

9.9 Preliminary Engineering and Construction Engineering Costs

The costs of engineering (final design), and construction engineering and inspection were each estimated as approximately 15 percent of the 13.6 million-dollar construction cost. These two efforts are expected to cost approximately a total of 4.0 million dollars.

9.10 Recycling of Salvageable Materials

During construction of this project, recycling of re-usable materials will occur to the greatest extent possible. Where possible, removal and recycling of the existing pavement for use in the new pavement will be considered. This will help to reduce the volume of the materials that need to be hauled and disposed of from the project and reduce the cost of purchasing materials suitable for pavement construction. Other materials such as guardrail, signs, drainage concrete pipes, etc., will also be salvaged and re-used for regular maintenance operations if they are deemed to be in good condition.

9.11 User Benefits

Numerous benefits will be realized by the public utilizing S.R. 574 after the recommended build alternative is constructed as compared to the existing roadway. User benefits are the cost reductions and other advantages that accrue to highway motor vehicle users through the use of a particular transportation facility as compared with the use of another. The recommended improvements will provide user benefits to the extent that it will reduce delay (energy savings) and vehicle operating expenses as well as some reduction in accident costs. Reduced response times for emergency services are also expected. The increase in roadway capacity will also increase vehicle running speeds and thereby reduce travel times. Bicyclists and pedestrians will be able to share this facility with motorists safely and efficiently. Also, the economic growth of the immediate area will be enhanced due to improved access and reduced traffic congestion.

9.12 Pedestrian and Bicycle Facilities

As illustrated in Figures 9-1 through 9-3, the proposed typical section will provide a 5-foot sidewalk on both sides of the roadway. With the exception of the portion of the project adjacent to the CSX railroad (from just west of Kingsway Road to east of McIntosh Road) where a 5-foot sidewalk will only be provided on the north side of the roadway. In addition, a 4-foot wide bicycle lane will be provided on both sides of the roadway for Segment "A" and a 5-foot wide outside paved shoulder will be provided on both sides of the roadway for Segments "B" and "C". Other facilities such as crosswalks and public sidewalk curb ramps at intersections will be designed to meet the Americans with Disabilities Act (ADA).

9.13 Safety

The proposed improvements upgrade S.R. 574 to a safer and more efficient transportation facility. The increased roadway capacity is expected to result in less congestion, and therefore reduce the probability for accidents. The raised median within Segments "B" and "C" will separate the westbound and eastbound traffic and will reduce the potential for head-on collisions. Addition of a second lane in each direction will allow for safe passing of slow-moving vehicles. The 4-foot wide bicycle lanes will allow bicyclists to share the roadway with motor vehicles while observing the rules of the road. The placement of sidewalks, crosswalks, pedestrian signal flashers and other safety provisions will provide safe pedestrian circulation.

The design and alignment of the roadway will meet applicable safety standards (refer to Section 5.0 for the project's design criteria). Adherence to the design speed as it applies to establishing and setting minimum values on critical roadway design features will be closely followed. Roadway design elements including curvature, sight distance, width and clearance will meet the applicable minimum roadway design standards. The FDOT's Access Control guidelines, to promote safe and sufficient operation, will also be applied.

9.14 Economic and Community Development

As previously presented in Section 3.3, transportation plans developed separately by the Hillsborough County Metropolitan Planning Organization and Hillsborough County call for improvements along S.R. 574 within the project limits. These transportation plans were developed after thorough evaluation of the future population and development growth in the vicinity of the project. The proposed S.R. 574 improvements, developed through the process previously described in Sections 8.3 through 8.5, respond to and accommodate the projected need for upgrading S.R. 574 to a multi-lane facility.

Improved connection with the surrounding area and the resulting reduction of travel time will attract new development and enhance the attractiveness of residential opportunities. New employment opportunities will be generated and the tax base will be enlarged to the benefit of the area's economy.

9.15 Environmental Impacts

9.15.1 Land Use Data

The existing and future land uses in the vicinity of the project were previously shown in Figures 4-8 and 4-9. As discussed in Section 4.3.1 of this report the proposed improvements of S.R. 574 are consistent with Hillsborough County's Local Government Comprehensive Plan and would not impact existing or future land uses within the corridor.

9.15.2 Community Cohesion

Since the project proposes improvements to an existing roadway, which acts as a boundary for the residential areas along the project limits, no splitting or isolation of neighborhoods or other community areas from one another will occur. The project will not isolate any ethnic group or neighborhood, separate residences from community facilities or substantially change travel patterns. The project is not anticipated to adversely affect elderly persons, handicapped individuals, transit-dependent individuals, and low income or minority populations. The project improvements are; therefore, not expected to substantially impact community cohesiveness. The community quality of life may be improved with the added safety features such as bicycle lanes and sidewalks along the project corridor.

9.15.3 Wetland Impact and Mitigation

In accordance with Executive Order 11990, project impacts to wetlands were analyzed. Implementation of the recommended alternative will impact approximately 2.65 acres of wetlands and 1.42 acres of areas designated as "other surface waters". A total of eight wetlands and thirty "other surface waters" have been identified, classified, and characterized within the study corridor. These areas consisted primarily of scrub shrub palustrine systems, palustrine systems with emergent vegetation and palustrine systems with emergent vegetation and palustrine systems with unconsolidated bottom. Potential impacts associated with the proposed alternative includes dredging (extension of existing and proposed crossdrains) and filling (proposed roadway bed) of wetlands contained within the project corridor. The recommended alternative includes all practicable measures to minimize impacts to the wetlands that may result from the project.

9.15.4 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. A literature review and corresponding field reviews were conducted to determined possible threatened and endangered species, which may inhabit the project area. In addition, the USFWS, FWC and FNAI were contacted for list of known or potentially known occurring threatened or endangered species. The FWC was contacted regarding the occurrence of bald eagle nests within the project study area. By letter dated July 11, 2000, FWC indicated that there is one nest (HL 012) within one mile of the project site. No other listed species are known to occur within the project limits.

Additionally, the project study area was evaluated for the potential of affecting designated critical habitat as defined by the USFWS. No "critical habitat" designated for listed species occurs within the project study area. Therefore, it was determined that no threatened and/or endangered species are expected to be adversely affected by the project. Consultation occurred

with the USFWS and a "no effect" determination was provided by letter on August 14, 2002.

9.15.5 Historic Sites/Districts and Archaeological Sites

A *Cultural Resource Assessment Survey* (CRAS)[2], including background research and a field survey, has been coordinated with the SHPO. As a result of the assessment, forty historic resources were identified within the project's APE, including two previously recorded sites (8HI6521 and 8HI6527) and 38 properties (8HI5689-92; 8HI5694-98; 8HI5700; 8HI5702-09; 8HI5777; and 8HI6903-21). Based on the information provided, the SHPO concurred with the determination that the above mentioned sites are considered "ineligible for listing in the National Register of Historic Places" due to their common design, non-historic alterations, and lack of significant historical association.

However, the SHPO determined that the Armwood House (8HI5777) Mediterranean Revival residence (8HI6527) are eligible for listing under criteria B and C, and a *Section 106 Technical Memorandum* was prepared as part of this Study. After review of this memo, the SHPO concurred with the FHWA determination "that this proposed undertaking will have no affect on any resources listed or considered eligible for listing in the NRHP".

The archaeological survey, resulted in the identification and evaluation of two archaeological sites, 8HI3283 and 8HI5653. The former site is situated outside the proposed right-of-way. Neither resource is considered to be among the best examples of its type for the region. The SHPO concurred with the determination that these two sites are considered "ineligible for listing in the National Register of Historic Places".

9.15.6 Potential Hazardous Materials and Petroleum Products Contaminated Sites

A *Final Contamination Screening Evaluation Report* (CSER)[3], which was conducted in April 2000, revealed the existence of 27 potential sites along the corridor. As a result of the evaluation and rating process, 20 sites were rated as low or no risk with respect to the potential of contamination involvement, five sites were rated medium and two sites were rated high. Out of the seven medium and high sites, five sites potentially have petroleum contamination and two sites have a combination of petroleum and hazardous wastes. There are some current occupants engaged in businesses that entail the use, storage or disposal of toxic or hazardous materials in an amount or ways with apparent potential for releases to the environment. Regulatory files indicate there are sites at which problems may exist at this time and are ongoing. It is recommended that all sites ranked as medium or high be further assessed in the design phase.

9.15.7 Noise Impacts

The traffic noise evaluation for the S.R. 574 improvements was performed using the FHWA Traffic Noise Model (TNM – Version 1.0b, July 1999). 75 noise sensitive sites were identified adjacent to the S.R. 574 corridor, as having the potential to be affected by traffic noise. Of the 75 sites, 3 are religious facilities, 1 is a daycare facility and 71 are single-family residences. Seven of the 71 single-family residences are located on one lot (a single-family home and 5 small cottages) and 14 of the 71 residences are mobile homes (Scarab Trailer Park). The residential sites and the daycare facility were evaluated as Activity Category B. Noise abatement measures were considered if predicted exterior traffic noise levels with the proposed improvements were 66 dBA or higher.

The religious facilities were evaluated as Activity Category E. Abatement measures were considered if predicted interior traffic noise levels were 51 dBA or higher. Based on the results of the analysis, the predicted existing exterior traffic noise levels at the residential sites and the daycare facility range from 51.8 to 68.2 dBA, with levels above the FHWA's Noise Abatement Criteria (NAC) at 5 of the single-family residences. The predicted existing interior traffic noise levels at the religious facilities range from 38.4 to 43.8 dBA (levels are below the NAC), Activity Category E.

In the design year 2025, with the no-build alternative, predicted exterior traffic noise levels at the residential sites and the daycare facility range from 52.4 to 68.0 dBA with levels above the NAC, Activity Level B, at 5 of the single-family residences and the daycare facility. The predicted interior traffic noise levels at the religious facilities range from 38.4 to 43.8 dBA (levels are below the NAC).

In the design year 2025, with the S.R. 574 proposed improvements, predicted exterior traffic noise levels at the residential sites and the daycare facility range from 54.7 to 74.0 dBA with levels above the NAC, Activity Category B at 19 of the single-family residences and the daycare facility. The predicted interior traffic noise levels at the religious facilities range from 41.9 to 47.1 dBA (levels are below the NAC, Activity Category E). The results also indicate that the maximum increase in either the exterior or interior traffic noise level would be 7.2 dBA with the improvements. As such, traffic noise is not predicted to increase substantially at any of the noise sensitive sites evaluated when compared to existing levels.

Noise abatement measures were considered for each noise sensitive site with a traffic noise level predicted to approach, meet or exceed the FHWA's NAC. The measures were traffic management, alternative roadway alignment, property acquisition, and noise barriers. The results of the evaluation indicate that none of the measures are feasible or reasonable to reduce predicted traffic noise levels due to the proposed improvements.

9.15.8 Air Quality Impacts

Based on the use of FDOT's air quality screening test (COSCREEN), the recommended alternative will not cause violations of the National Ambient Air Quality Standards for carbon monoxide. Therefore, it will not have a significant impact on air quality.

The project is in an area that has been designated as maintenance for the ozone standards under the criteria provided in the Clean Air Act Amendments of 1990. The project is included in the urban area's current approved conforming TIP, which was signed by the Secretary of the Florida Department of Transportation.

9.15.9 Water Quality Impacts

The storm water facility design will include, at a minimum, the water quality requirements for water quality impacts as required by SWFWMD in rules 40D-4, 40D-40, 40D-400, Florida Administrative Code. Therefore, no further mitigation for water quality impacts will be needed.

9.15.10 Aquatic Preserves

There are no Aquatic Preserves within the project corridor.

9.16 Utility Impacts

As previously discussed in Section 4.1.12 and summarized in Table 4-9 of this report, utilities are prevalent throughout the Study area and are located within and directly adjacent to the S.R. 574 right-of-way as well as within the adjacent CSX railroad right-of-way, including aerial and buried power lines, aerial and buried telephone cables (including fiber optic), aerial cable television lines, potable water mains, force mains, gas mains and a gasoline line. Depending on the location and depth, implementation of the recommended improvements for this project may require adjustment of some of these utilities. It should be also be noted that any relocation of utilities currently in the CSX right-of-way will be at the Department's cost. A set of plans identifying the recommended alternative was sent to the utility companies to provide utility relocation costs. Table 9-1 identifies the costs associated with utility relocations.

It should be noted that utilities within the roadway right-of-way are normally relocated at the utility owner's expense, and that many of the estimated relocations used for cost information can be minimized or avoided in the design process of the project. Hence, these costs are not included in the total estimated project costs presented in Section 9.7, since the utility owners will incur them. An exception is the utilities located in existing CSX right-of-way, as mentioned above.

Table 9-1: Utility Relocation Costs

Utility Company	Cost of Utility Relocation
Hillsborough County (Water)	$276,140.00
Verizon Florida	$1,880,000.00
Tampa Electric Company (TECO)	$390,000.00
TECO Peoples Gas	$4,500.00
Time Warner Cable	$48,342.00
Williams Communications	$95,000.00

9.17 Traffic Control Plan

The maintenance of traffic and sequence of construction will be planned and scheduled so as to minimize traffic delays through the project. Signs will be used as appropriate to provide pertinent information to the traveling public. The local news media will be notified in advance of construction related activities that could excessively inconvenience the community so that motorists can plan travel routes in advance.

S.R. 574 provides access to numerous residences and businesses along the project corridor. Due to its importance, S.R. 574 should remain functional throughout the duration of the construction activities. Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling. The contractor will be required to maintain the existing number of lanes of traffic in each direction at all times. Lane closures, if necessary, should only occur during off peak hours.

The following conceptual construction sequence will help maintain traffic operations along the S.R. 574:

- Relocate existing utilities within the right-of-way.
- Construct temporary pavement as necessary.
- Construct ponds and stormwater sewer trunk lines, including partial culvert and bridge crossings, along portions of the roadway and affected side streets.
- Construct either westbound or eastbound lanes (sidewalks, curb and gutter, travel lanes, etc.) while maintaining the existing traffic on a combination of the existing pavement and adjacent, temporary pavement.
- Temporarily operate two-way traffic on the completed westbound or eastbound lanes, while constructing the remaining travel lanes.
- Shift westbound and eastbound traffic to their respective, completed roadways.

9.18 Results of Public Involvement Program

9.18.1 Kick-off Meeting

On April 25, 2000, local public officials and local government staff were invited to attend the project kick-off meeting at the Old Seffner School House. The purpose of this meeting was to introduce the project and to obtain comments regarding issues and concerns.

9.18.2 Advance Notification

An Advance Notification (AN) package was prepared in accordance with Part I, Chapter 2, of the FDOT PD&E Manual and transmitted to the Florida State Clearinghouse Department of Community Affairs. The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, Section 216.212, Florida Statutes, the Coastal Zone Management Act, 16 U.S.C. 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the S.R. 574 project. Several agencies responded with comments, including the Department of Environmental Protection (DEP), the Department of State (DOS), Southwest Florida Water Management District (SWFWMD), the Department of Community Affairs, Tampa Bay Regional Planning Council the Hillsborough County Metropolitan Planning Organization and HartLine.

Generally, the comments indicated either consistency with applicable requirements, a request for further coordination during the project's final engineering design phase, or no anticipated impacts.

9.18.3 Alternatives Public Workshop

An Alternatives Public Workshop was held on June 14, 2001, which enabled the selection and modification of a recommended alternative from the three alternatives that were presented. 119 citizens attended the workshop and 37 written responses were received. Eight of these responses favored Alternative I (6-Lane Urban Typical Section), two favored Alternative II (4-Lane Urban Typical Section) and two responses favored Alternative III (5-Lane Urban Typical Section). Five responses requested improved access to their commercial or residential property (additional median openings), five responses supported the no-build alternative, one response concerned sidewalk and bicycle lanes, and another response concerned existing flooding issues. The remaining responses stated that it was too early to make a decision, or there were requests to be added to the project mailing list.

9.18.4 Public Hearing

The Public Hearing was held on Thursday, May 23, 2002, from 4:30 p.m. to 7:30 p.m. at Colson Elementary School, 1520 Lakeview Avenue, Seffner, Florida. The Hearing consisted of an informal session and a formal session, and a court reporter transcribed the entire formal portion. Approximately 94 people were in attendance, and only one member of the public provided oral comments during the formal session. Fourteen written comments were received, six stated that the road was not being improved soon enough, three stated that a continuous two way left turn lane should be applied to the entire project length, and two mentioned drainage problems at Roland and Seffner Self Storage. The other comments were concerned about improving the McIntosh Road intersection to better accommodate tractor trailers, providing a median opening for truck traffic into the S&S Boring property, and that a 6-lane section should be constructed instead of a 5-lane section for Segment A (these issues generated one written comment each). Verbal comments made in the informal session included a concern for shortening the eastbound-to-southbound right turn lane at Parsons Avenue, the lack of an exclusive eastbound right turn lane at Highview Road, access for eastbound traffic to the shopping center in the northwest corner of the Parsons Avenue intersection, eastbound access to the Subways property east of Parsons Avenue, and a desire by the owner to cure instead of relocate the McDonalds in the southeast corner of Parsons Avenue.

9.18.5 Other Public Meetings

Coordination and consultation were accomplished through a series of meetings and correspondence over the course of the Study to ensure all appropriate parties were apprised of the project status and provided ample opportunity to submit comments.

Presentations were made through the course of the study to the governing transportation body in Hillsborough County, the Hillsborough County Metropolitan Planning Organization (MPO), and its advisory committees: the Technical Advisory Committee (TAC) and the Citizen Advisory Committee (CAC). These presentations were to provide updates on project development milestones, and were also coordinated with upcoming public involvement activities. This allowed the elected officials to be aware of possible issues their constituents might have regarding the project. Meetings included:

February 21, 2000 - Hillsborough County MPO Technical Advisory Committee (TAC)
February 23, 2000 - Hillsborough County MPO Citizen Advisory Committee (CAC)
March 7, 2000 - Hillsborough County Metropolitan Planning Organization (MPO)
March 13, 2001 - Seffner Chamber of Commerce

March 31, 2001 - The Greater Seffner Area Chamber of Commerce Eighth Annual Jamboree
May 1, 2001 - Taylor Road Civic Association
May 10, 2001 - Seffner Chamber of Commerce

Presentations were also made after the Public Hearing to update the MPO and its committees on the final alternatives of the project.

July 10, 2002 - Hillsborough County MPO Citizen Advisory Committee (CAC)
July 15, 2002 - Hillsborough County MPO Technical Advisory Committee (TAC)
July 16, 2002 - Hillsborough County MPO Policy Committee
August 6, 2002 - Hillsborough County Metropolitan Planning Organization (MPO)

9.19 Value Engineering

A Value Engineering Study was initiated in April 2002 and is underway.

9.20 Drainage

The preliminary evaluation of the storm water attenuation and/or treatment system requirements for the recommended alternative was previously discussed in Section 8.3.7 and summarized in Tables 8-4 and 8-5. These requirements were applied in the Study's separate *Pond Siting Report*, which developed at least two alternative pond sites for each of the project's five drainage sub-basins. A single recommended pond site was then selected for each sub-basin as shown in the exhibits in Appendix A. The right-of-way and construction costs associated with these recommended pond locations are included in the costs provided in Sections 9.7 and 9.8, respectively.

9.21 Structures

As mentioned in section 4.2 there is one bridge within the Study limits which is a low level, 30-foot span concrete flat slab bridge over a drainage channel. A Bridge Development Report will be prepared in the future design phase and will compare widening the bridge against replacement, and will evaluate different bridge types. It is anticipated that the recommendation will be to replace the bridge in kind. None of the alternative alignments will preclude this approach, nor cause a replacement bridge to be constructed on a skew or a different span length. This Study's drainage analysis and Location Hydraulic Report also compared bridge replacement with a box culvert or pre cast arch. Scour was evaluated and it was noted that upstream and downstream protection (e.g. riprap along the channel) will be needed for the abutments of the bridge alternative.

9.22 Street Lighting

Currently, there is no overhead street lighting provided along S.R. 574 from C.R. 579 to McIntosh Road. A lighting justification study should therefore be prepared for Segment "A" in the segment's future design phase, and if any of the overhead lighting associated with private or commercial properties along the project corridor is disturbed it should be restored.

9.23 Access Management

The FDOT's Access Management guidelines (Florida Administrative Rule 14-97) will be applied to this project. As previously identified in Section 5.0, S.R. 574 has an access classification of 5, which accommodates restrictive facility design features.

Class 5 facilities can provide directional median openings every 660 feet or more. The spacing of full median openings for design speeds of more than 45-mph is 2,640 feet or more. For design speeds of 45-mph or less, the spacing of full median openings could be reduced to 1,320 feet. The minimum traffic signal spacing for Class 5 facilities is 2,640 feet although for speeds of 45-mph or less, this spacing can be reduced to an absolute minimum of 1,320 feet.

A median opening layout for this project was prepared and presented to the District's Access Management Committee on April 5, 2001, and the layout was modified in accordance to their recommendations. This modified layout was then included in the exhibits at the Public Alternatives Workshop, and as previously mentioned several business owners expressed concern about property access during the workshop. These businesses are located on the north side of S.R. 574 west of McIntosh Road, and the principal concern was for eastbound truck access into and out of their properties. Though alternative median opening arrangements were developed and evaluated for these sites, it was decided that the openings will remain in conformance to Access Management Class 5 requirements and then be reconsidered in the future design phase.

Access concerns were also expressed during the Study's Public Hearing, which included the above mentioned properties as well as the North Grove Shopping Center (northwest corner of the Parsons Avenue intersection), and the Subway property (east of the Parsons Avenue intersection).

9.24 Aesthetics and Landscaping

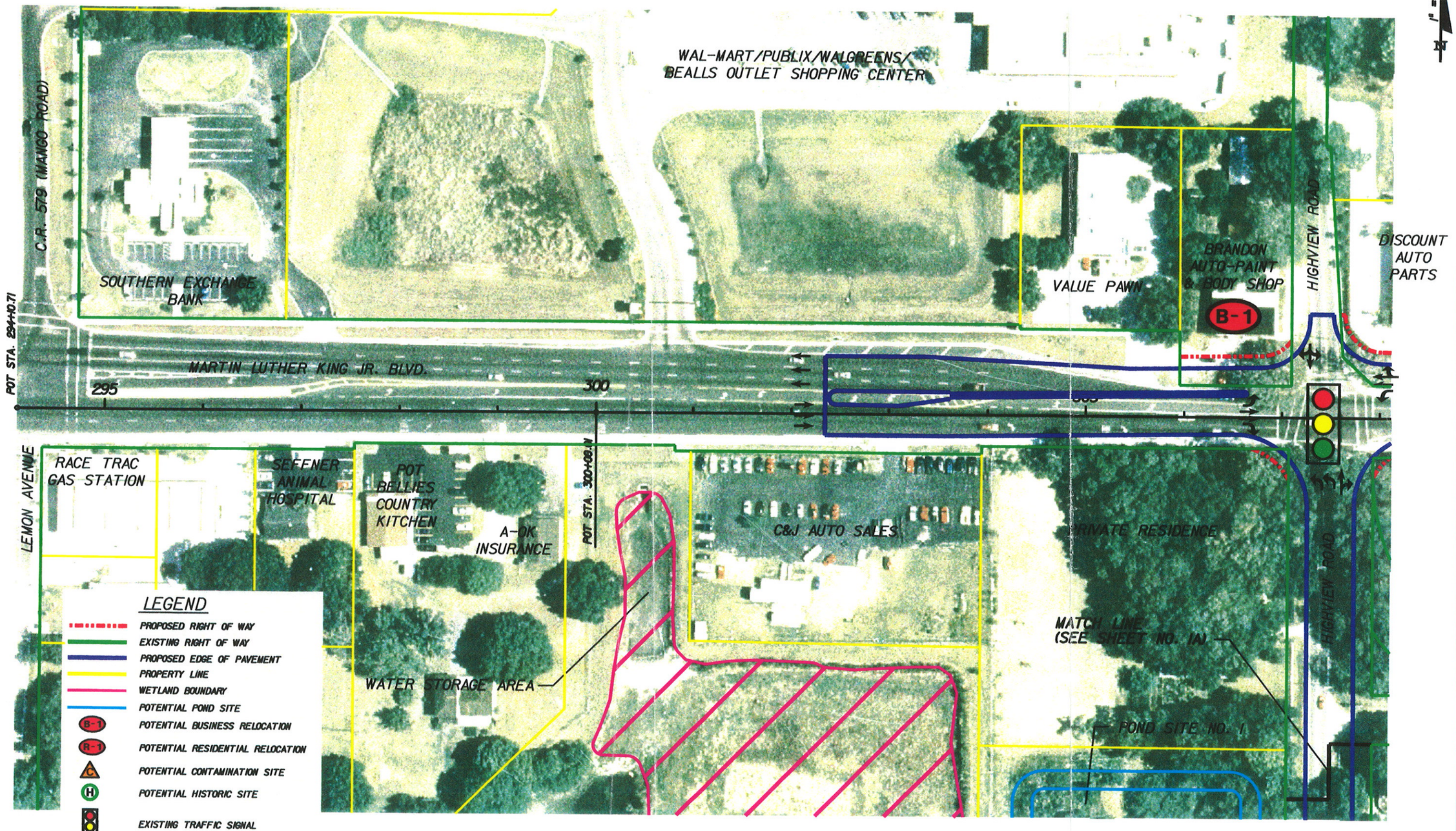
A unique streetscape has not evolved in the project area (e.g. textured pavement, ornamental street lights, and wide sidewalks with planters, etc.), nor is the current or proposed land use conducive to these type of treatments. Existing landscaping is minimal and no agency has expressed an interest in having landscaping installed for their maintenance. It should also be noted that this project does not serve as a gateway, nor does the setting of the bridge over Baker Canal require special aesthetic considerations.

9.25 References

1. Final Traffic Technical Memorandum; MSI/Bayside Engineering, Inc.; Tampa, Florida; August 2000.

2. Cultural Resource Assessment Survey Report; Archaeological Consultants, Inc.; Sarasota, Florida; August 2001 (Revised November 2001).

3. Final Contamination Screening Evaluation Report; Ayres Associates; Tampa, Florida; November 2001.



1" = 100'

SEGMENT "A"

5-LANE URBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

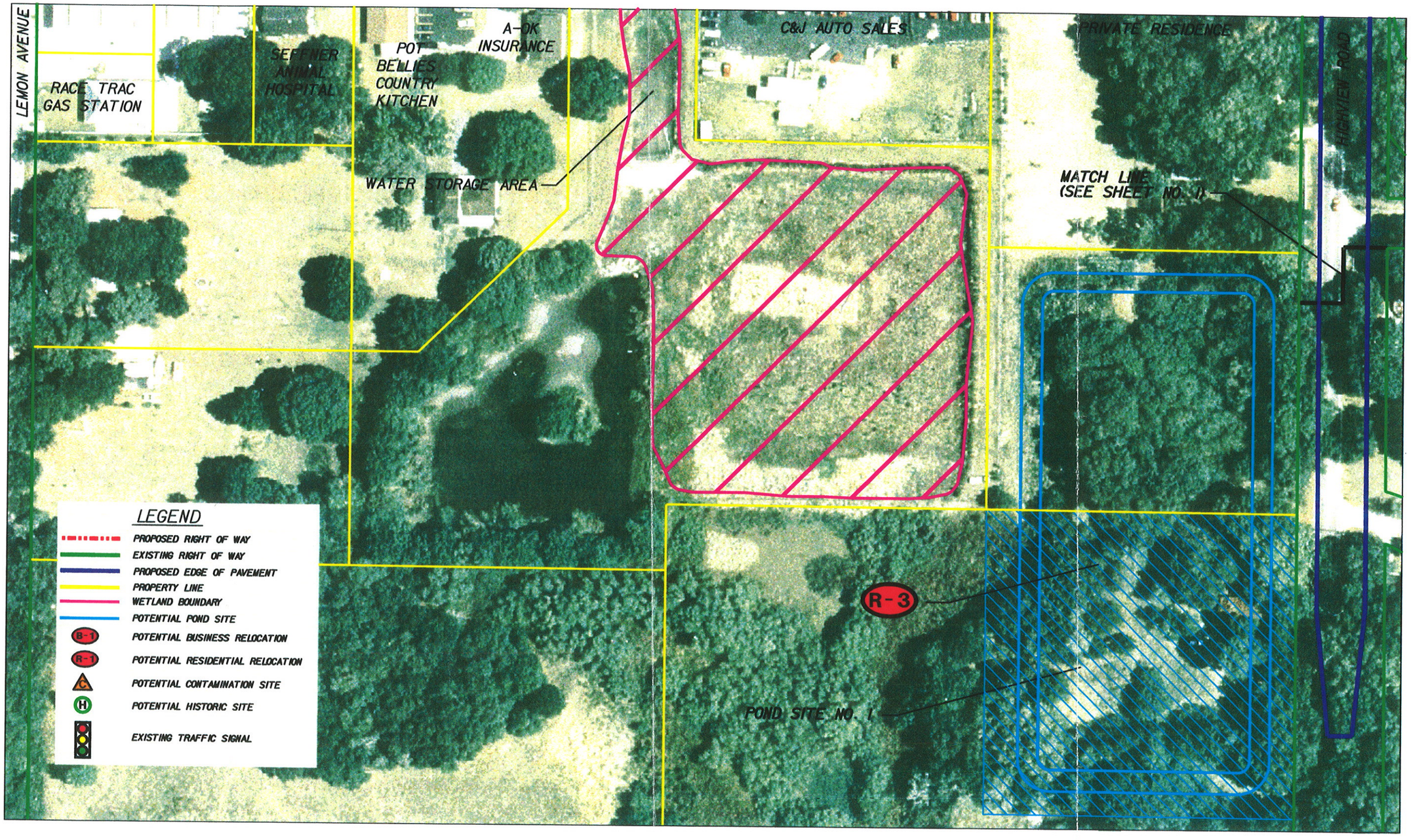
AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
1 of 17



1" = 100'

SEGMENT "A"

5-LANE URBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
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(813) 978-8688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
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ALTERNATIVE ALIGNMENT

SHEET NO.
1A of 17

DATE
PRF NA
DGN NA

SEGMENT "A"

5-LANE URBAN TYPICAL SECTION

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
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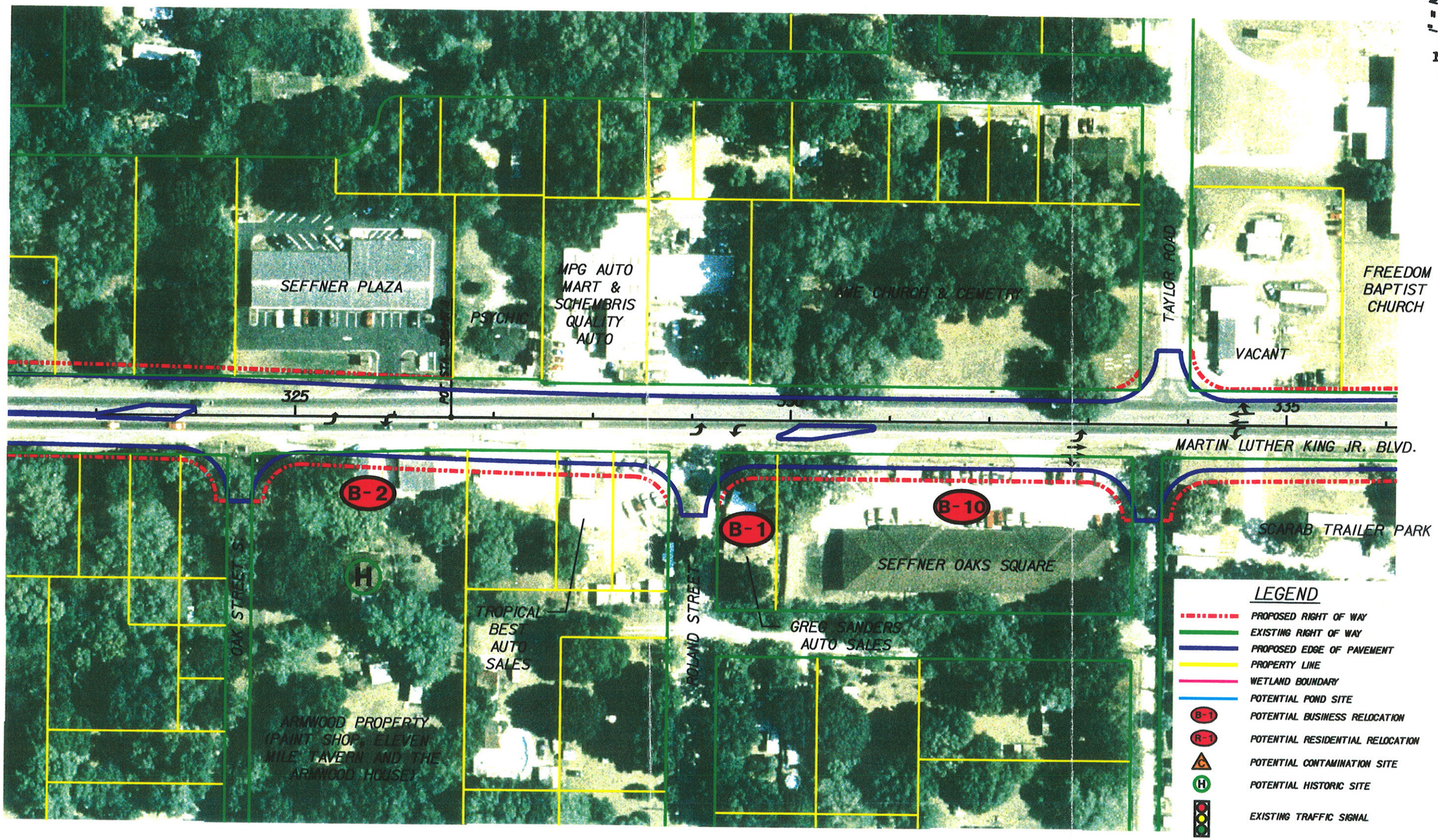
SHEET NO. 2 of 17



1" = 100'

SEGMENT "A"

5-LANE URBAN TYPICAL SECTION

REVISIONS					
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SHEET NO.
3 of 17

1" = 100'

FREEDOM BAPTIST CHURCH

SUNCOAST SCHOOLS FEDERAL CREDIT UNION

SEFFNER PROF. CENTER

KENTUCKY FRIED CHICKEN

DOCTOR'S WALK-IN CLINIC

NORTH GROVE SHOPPING CENTER

SUN TRUST BANK

PARSONS AVENUE

PRIVATE RESIDENCE

MATCH LINE (SEE SHEET NO. 5)

COMPETITIVE RIBBON & SUPPLY CO.

CHECKERS

FARM STORE

340

MARTIN LUTHER KING JR. BLVD.

345

350

NATIONS BANK

SCARAB TRAVEL PARK

PARSONS VILLAGE SQUARE

TACO BELL

BURGER KING

TEXACO GAS STATION

PARSONS AVENUE

McDONALDS

MATCH LINE (SEE SHEET NO. 5)

B-1

JIFFY LUBE

TIRE KINGDOM

COLONIAL BANK

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "A"

5-LANE URBAN TYPICAL SECTION

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
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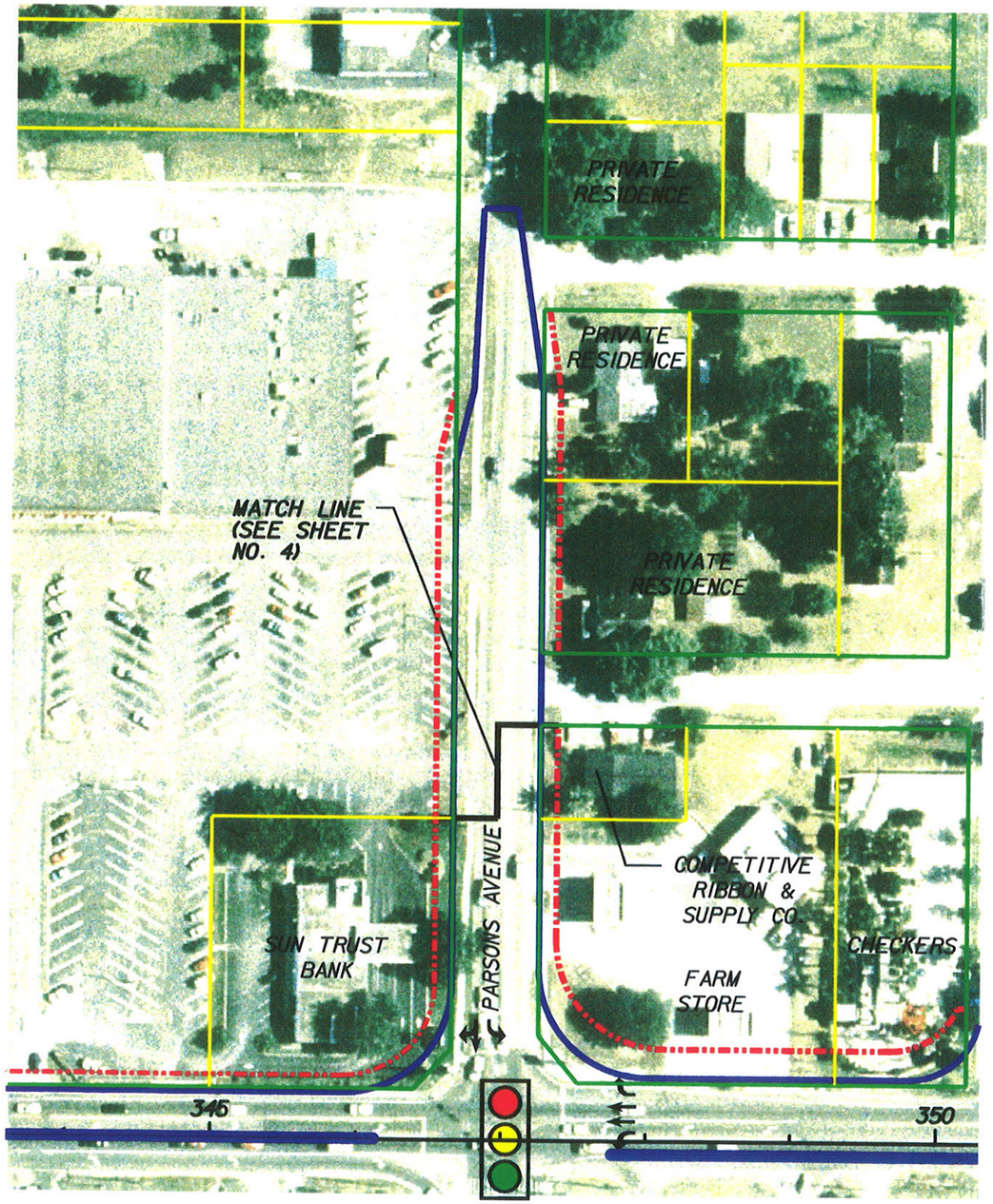
ALTERNATIVE ALIGNMENT

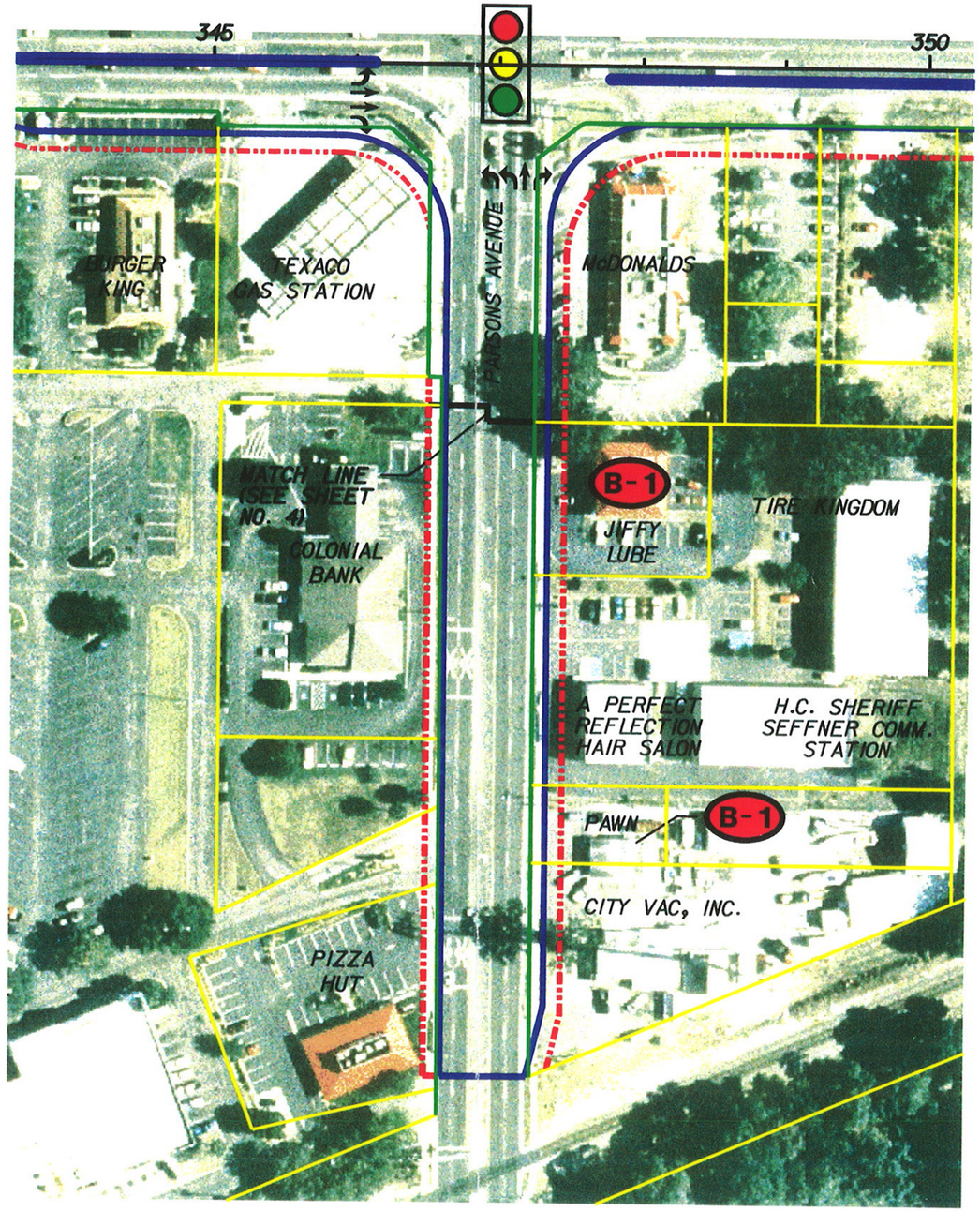
SHEET NO. 4 of 17

DATE
PRF NA
DGN NA

1" = 100'



NORTH LEG OF INTERSECTION



SOUTH LEG OF INTERSECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
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ALTERNATIVE ALIGNMENT

SHEET NO.
5 of 17

1" = 100'

VACANT

PARK STREET

MAHN'S MULTI-MILE TIRE OUTLET

FLORIST

BRANDON TV SALES & SERVICE

B-1

B-1

SUBWAY

THE EXOTIC PLUMERIA NURSERY & GARDEN

VACANT

PRODUCE STAND

SEFFNER PRO HARDWARE

C

R REAL ESTATE

350

SEGMENT "A"

355

SEGMENT "B"

360

PC STA. 380+61.22

MARTIN LUTHER KING JR. BLVD.

ABC LIQUOR LOUNGE

AUTO ZONE

BRANDON RENTAL (NORTH)

FARM BUREAU INSURANCE

B-1

UNNAMED (COTTAGES)

POND SITE NO. 2

SPOT FREE CAR WASH

B-1

R-6

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "A"

SEGMENT "B"

5-LANE URBAN TYPICAL SECTION TRANSITIONS TO A 4-LANE SUBURBAN TYPICAL SECTION (ROW=123.5')

PWP

DATE

PRF NA

DGN NA

REVISIONS					
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID

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RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
6 of 17

1" = 100'

METRO STORAGE UNITS

VACANT

MATCH LINE (SEE SHEET NO. 8)

SEFFNER POST OFFICE

R-1

PRIVATE RESIDENCE

PRIVATE RESIDENCE

PRIVATE RESIDENCE

KINGSWAY ROAD

FLORIDA AVENUE S.

AMIGO AUTO SALES

C

VACANT

B-1

PT STA. 363+54.57

363

370

375

MARTIN LUTHER KING JR. BLVD.

CSX R.R.

B-1

ELITE POOL & SPA

BUCK'S PLUMBING SUPPLY

C

MATCH LINE (SEE SHEET NO. 8)

C

TED'S SEPTIC TANKS

KINGSWAY ROAD

MATHEWS AVENUE

PRIVATE RESIDENCE

PRIVATE RESIDENCE

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "B"

4-LANE SUBURBAN TYPICAL SECTION

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M.L.K. PD&E
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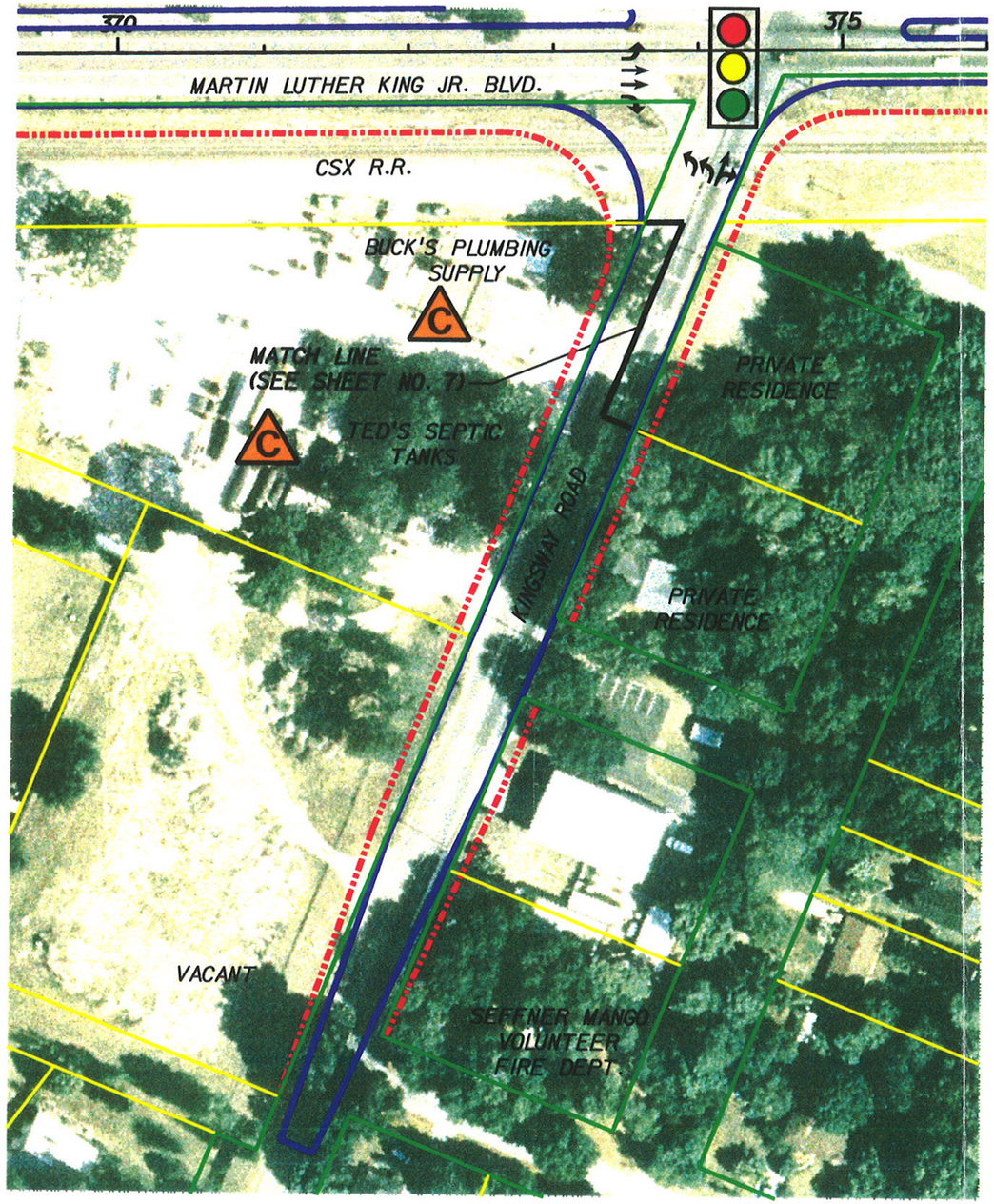
ALTERNATIVE ALIGNMENT

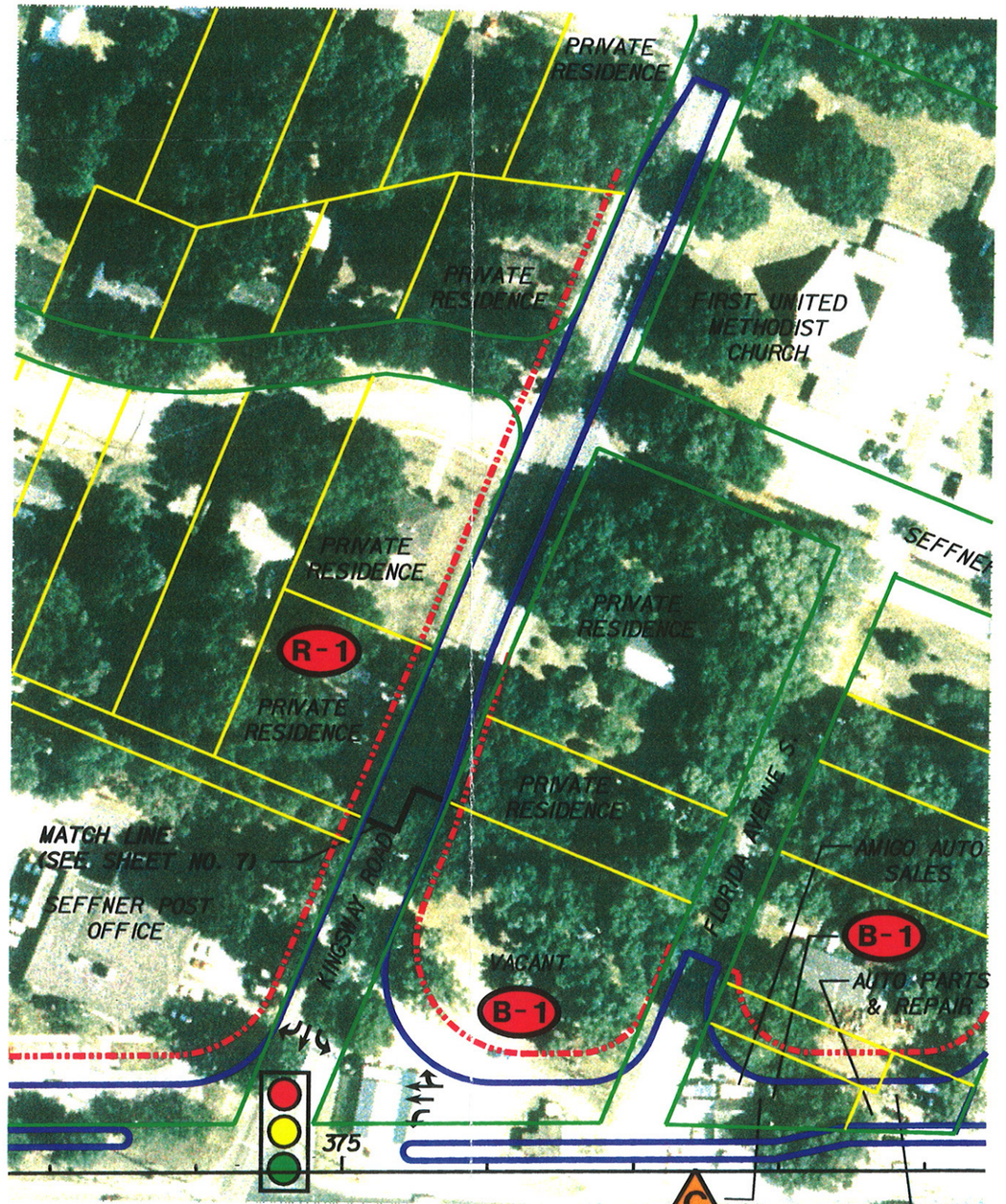
SHEET NO.
7 of 17

#PEW
#DATE
PRF NA
DSN NA



SOUTH LEG OF INTERSECTION

1" = 100'



NORTH LEG OF INTERSECTION

REVISIONS					
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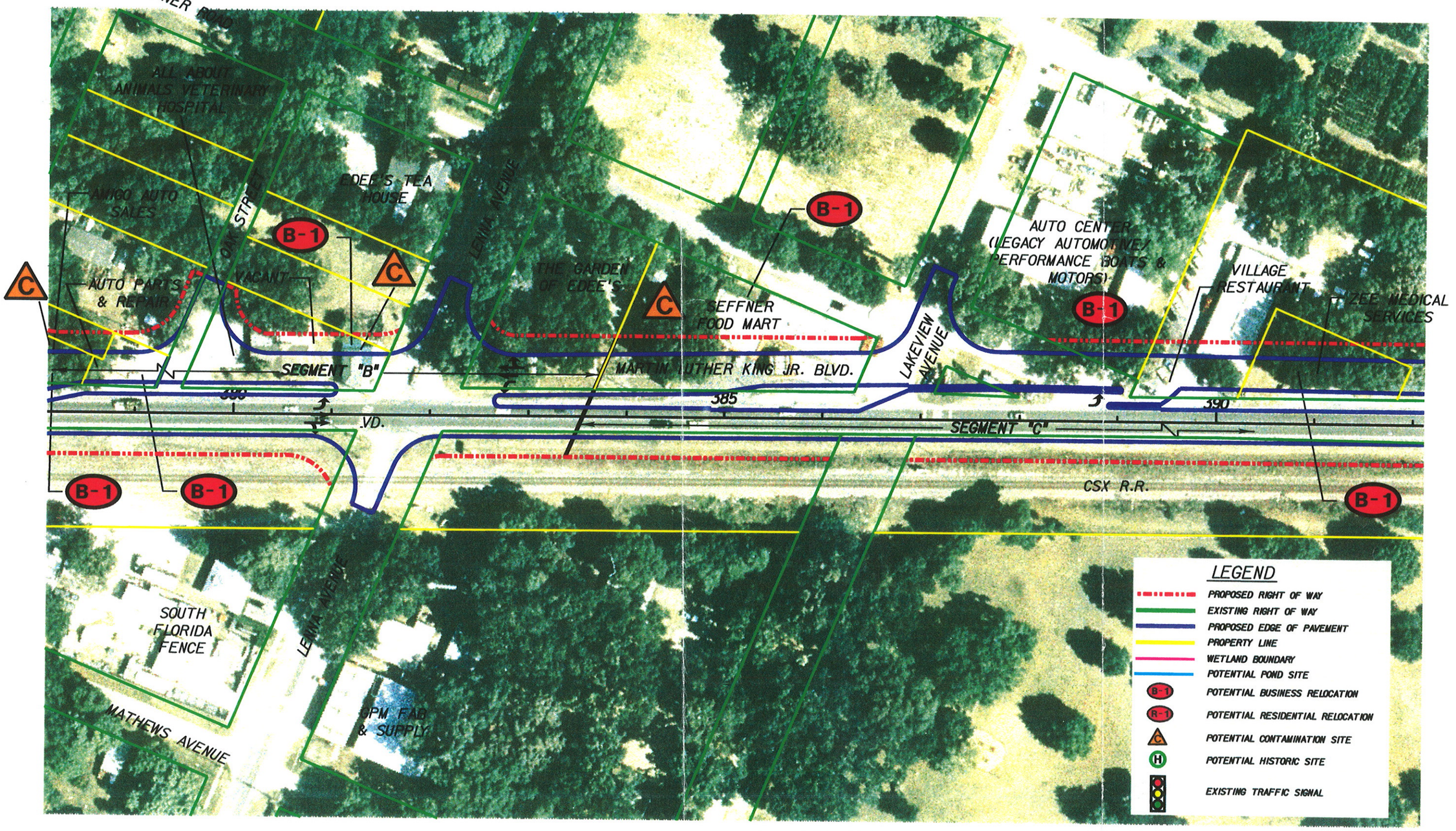
ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
8 of 17

@PEN@
@DATE@
PRF NA
DGN NA



SEGMENT "B" SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION (ROW=123.5') TRANSITIONS TO 4-LANE SUBURBAN TYPICAL SECTION (ROW=131.5')

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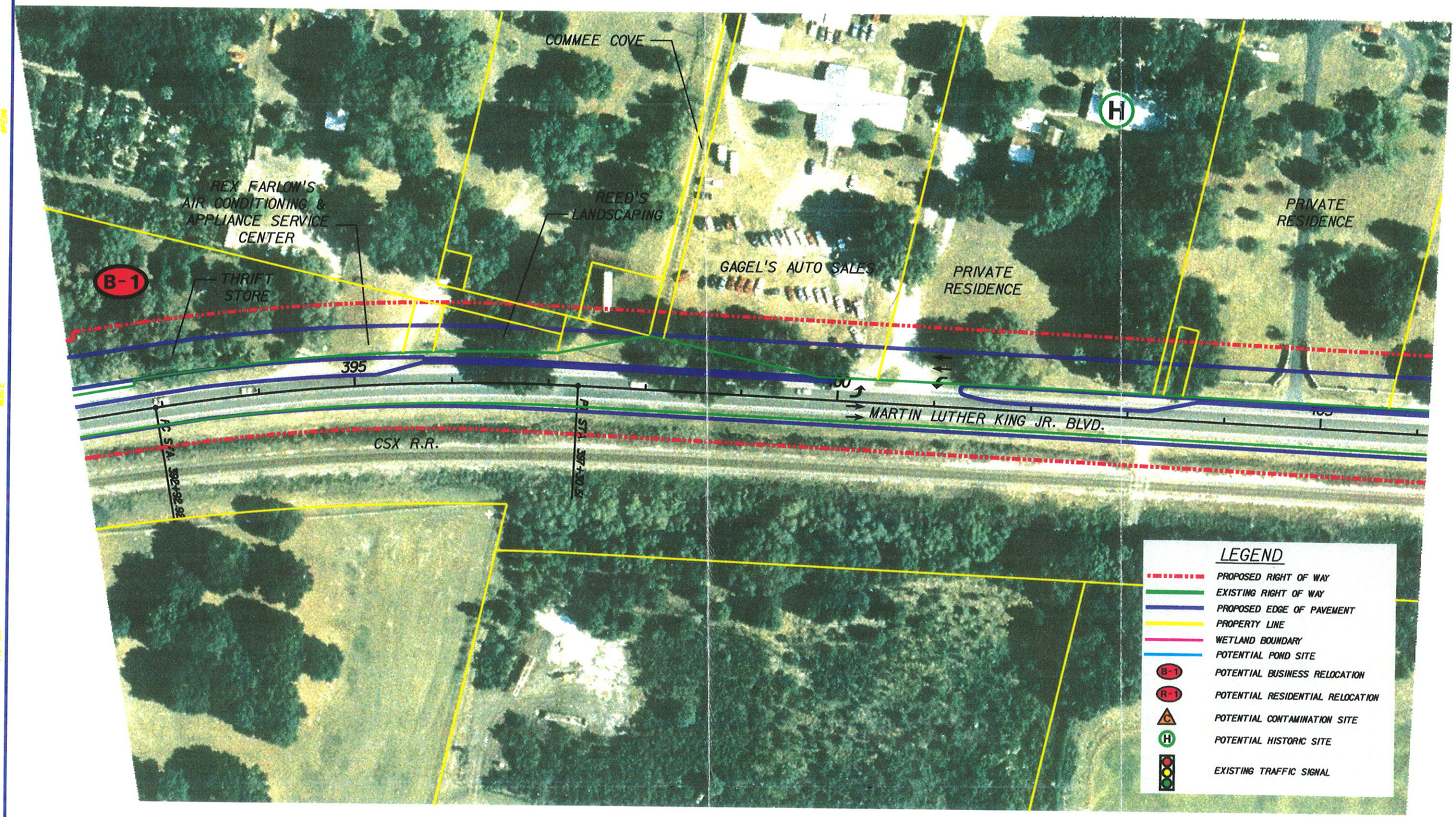
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO. 9 of 17



1" = 100'

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-9688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
10 of 17

PRF NA
DGN NA

1" = 100'

POND SITE NO. 3

C&J TRACTOR SALES

VACANT

PRIVATE RES.

R-1

CHASTAIN ROAD

PRIVATE RESIDENCE

410

MARTIN LUTHER KING JR. BLVD.

CSX R.R.

LAKE WEEKS CREEK

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-9688
BR #4356

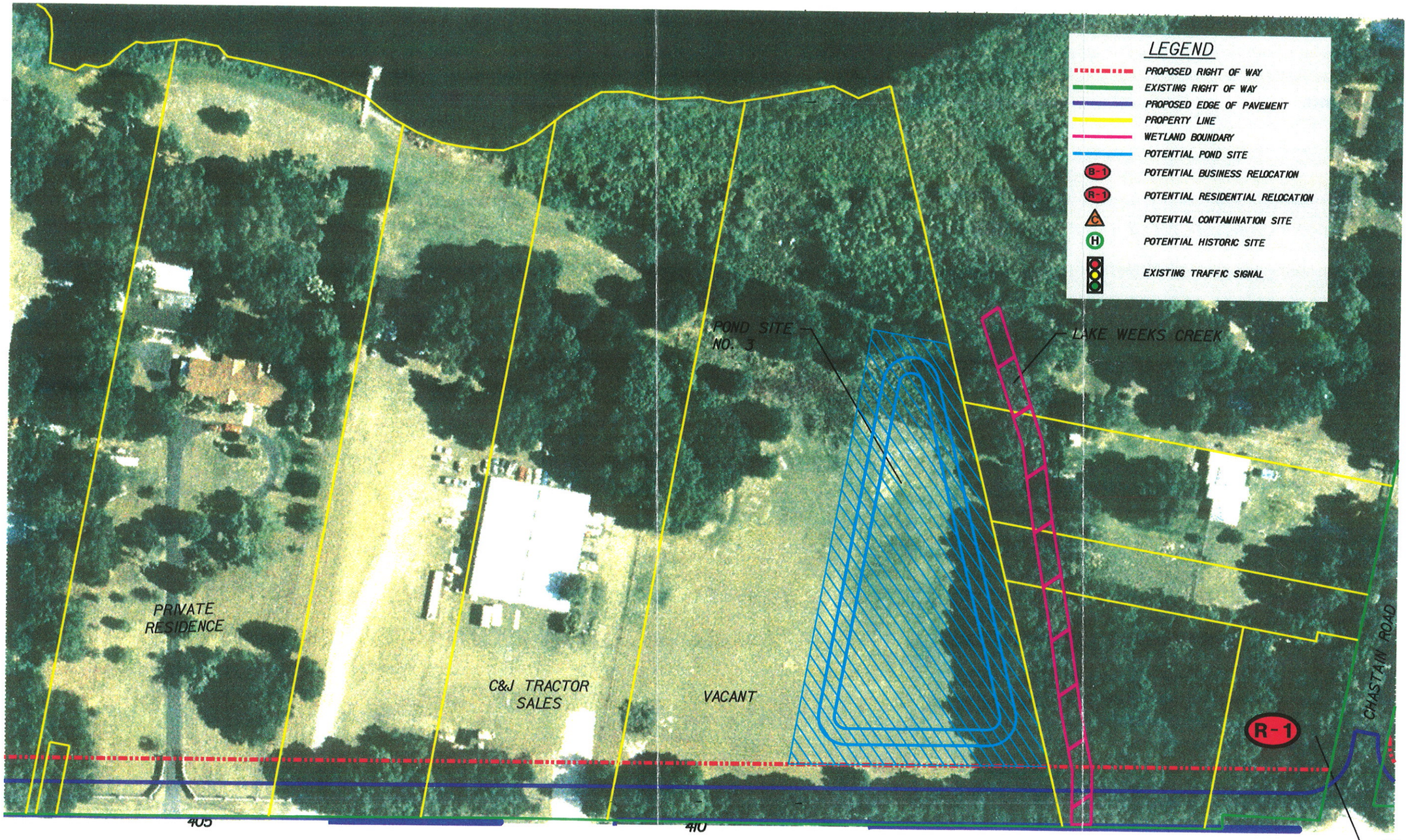
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
11 of 17

#PEN#
#DATE#
PRF MA
DGN MA



1" = 100'

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-1688
BR #4356

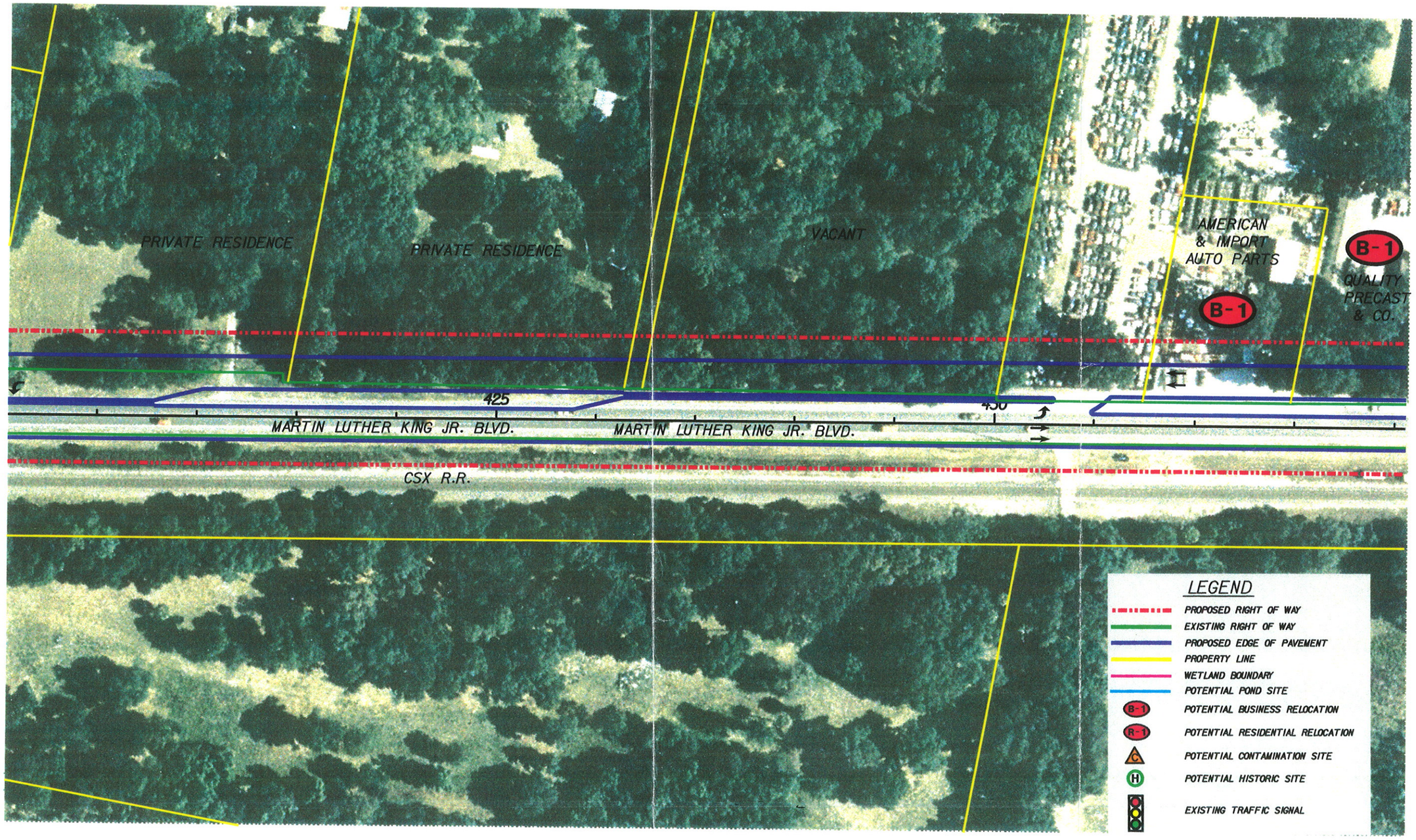
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
IIA of I7

@PEN@
@DATE
PRF HA
DGN HA



SEGMENT "C"

4--LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 976-8688
BR #4356

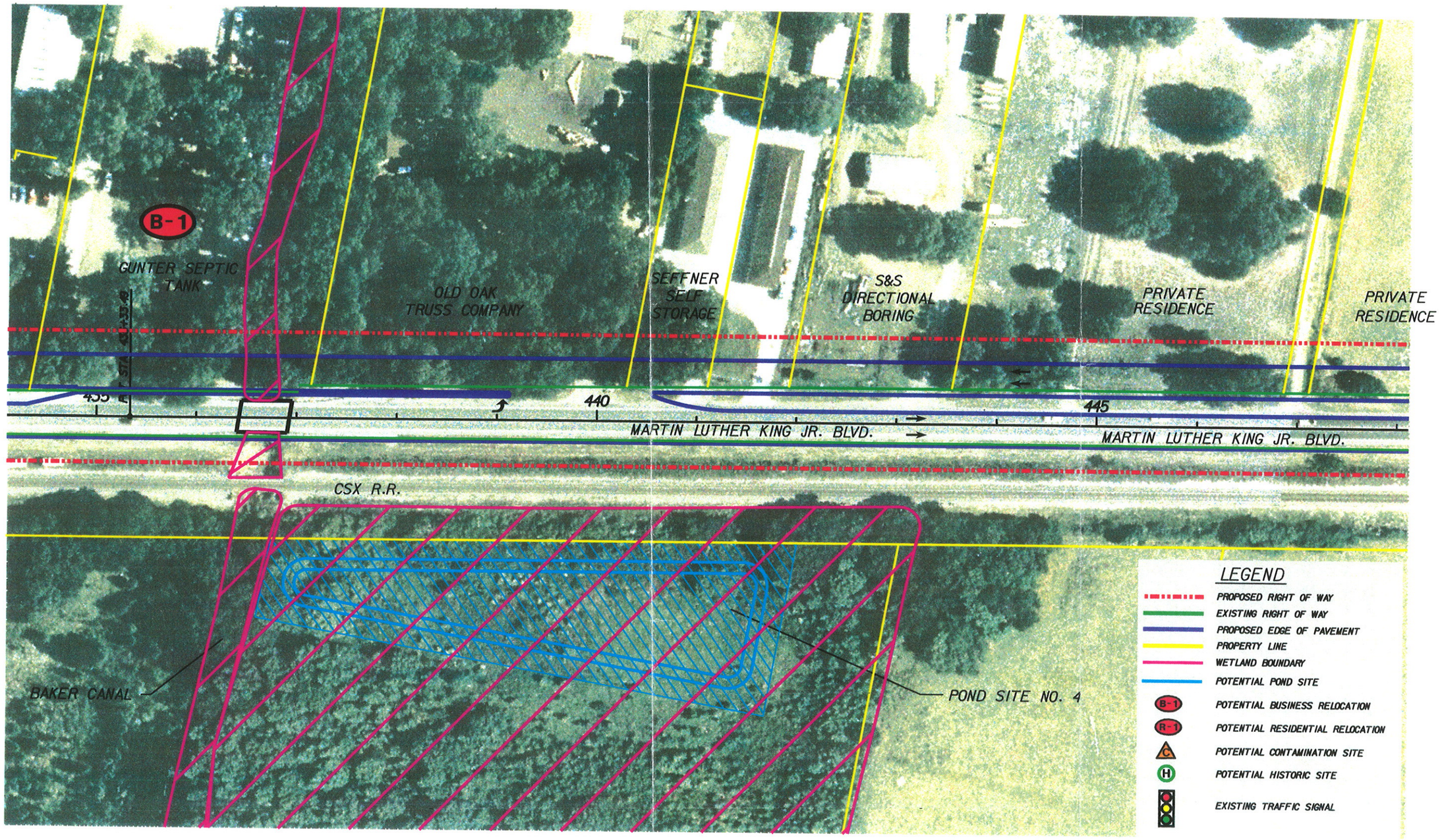
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
12 of 17

@PEN8
@DATE
PRF NA
DGN NA



1" = 100'

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 976-8688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
13 of 17

#PEW
#DATE
PRF WA
DGN WA

1" = 100'

PRIVATE RESIDENCE

PRIVATE RESIDENCE

R-1

PRIVATE RESIDENCE

N. VALRICO ROAD

PRIVATE RESIDENCE

R-1

AUNT FRANNIES ACHIEVEMENT CENTER

PRIVATE RESIDENCE

MARTIN LUTHER KING JR. BLVD.

450

455

PC STA. 456+80.00

460

CSX R.R.

PT STA. 460+92.27

VACANT

N. VALRICO ROAD

PRIVATE RESIDENCE

PRIVATE RESIDENCE

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8588
BR #4356

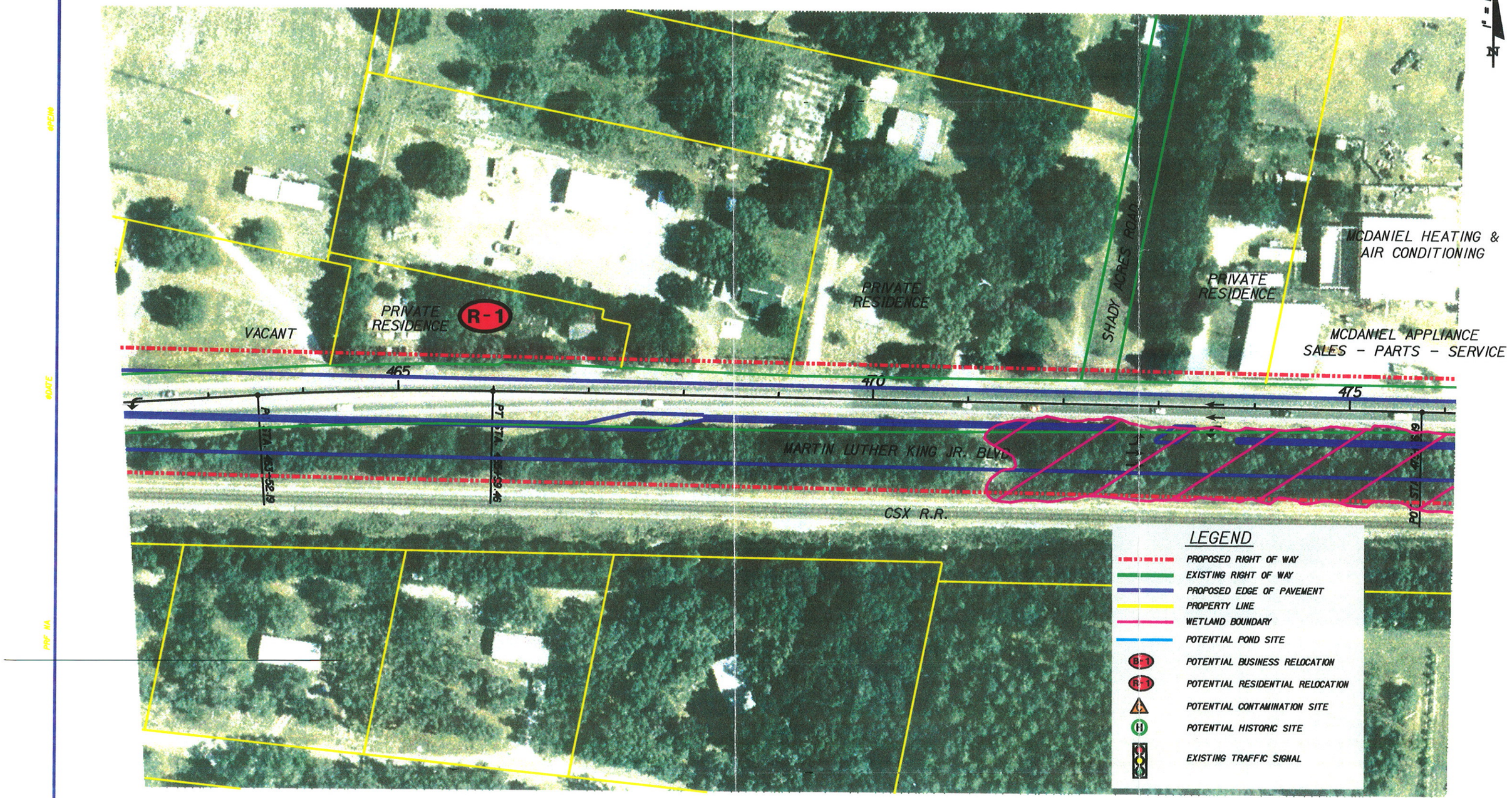
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
14 of 17

PEN
$DATE
PRF NA
DGN NA



SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO. 15 of 17

1" = 100'

W.W. TRUCKING

MARTIN LUTHER KING JR. BLVD.

495

500

CSX R.R.

LEGEND

- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED EDGE OF PAVEMENT
- PROPERTY LINE
- WETLAND BOUNDARY
- POTENTIAL POND SITE
- B-1 POTENTIAL BUSINESS RELOCATION
- R-1 POTENTIAL RESIDENTIAL RELOCATION
- C POTENTIAL CONTAMINATION SITE
- H POTENTIAL HISTORIC SITE
- EXISTING TRAFFIC SIGNAL

SEGMENT "C"

4-LANE SUBURBAN TYPICAL SECTION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

AYRES ASSOCIATES
8875 Hidden River Parkway
Suite 200
Tampa, Florida 33637
(813) 978-8688
BR #4356

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

M.L.K. PD&E
RECOMMENDED
ALTERNATIVE ALIGNMENT

SHEET NO.
17 of 17

#PGN
#DATE
PRF MA
DGN MA